

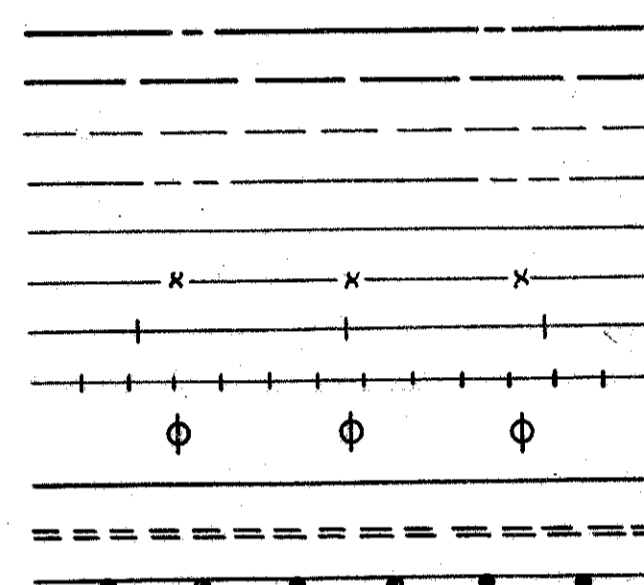
STATE OF OHIO DEPARTMENT OF HIGHWAYS

BEACH CITY-BOLIVAR-SHERRODSVILLE ROAD S.H. 712 SEC. N (PT) & O (PT) TUSCARAWAS COUNTY LAWRENCE-SANDY-& FAIRFIELD TOWNSHIPS

CONVENTIONAL

- COUNTY LINE
- TOWNSHIP LINE
- SECTION LINE
- CORPORATION LINE
- PROPERTY LINE
- FENCE LINE
- CENTER LINE
- STEAM RAILROAD
- POLE LINE
- DRAIN PIPE (NEW)
- DRAIN PIPE (OLD)
- GUARD RAIL (NEW)

SIGNS

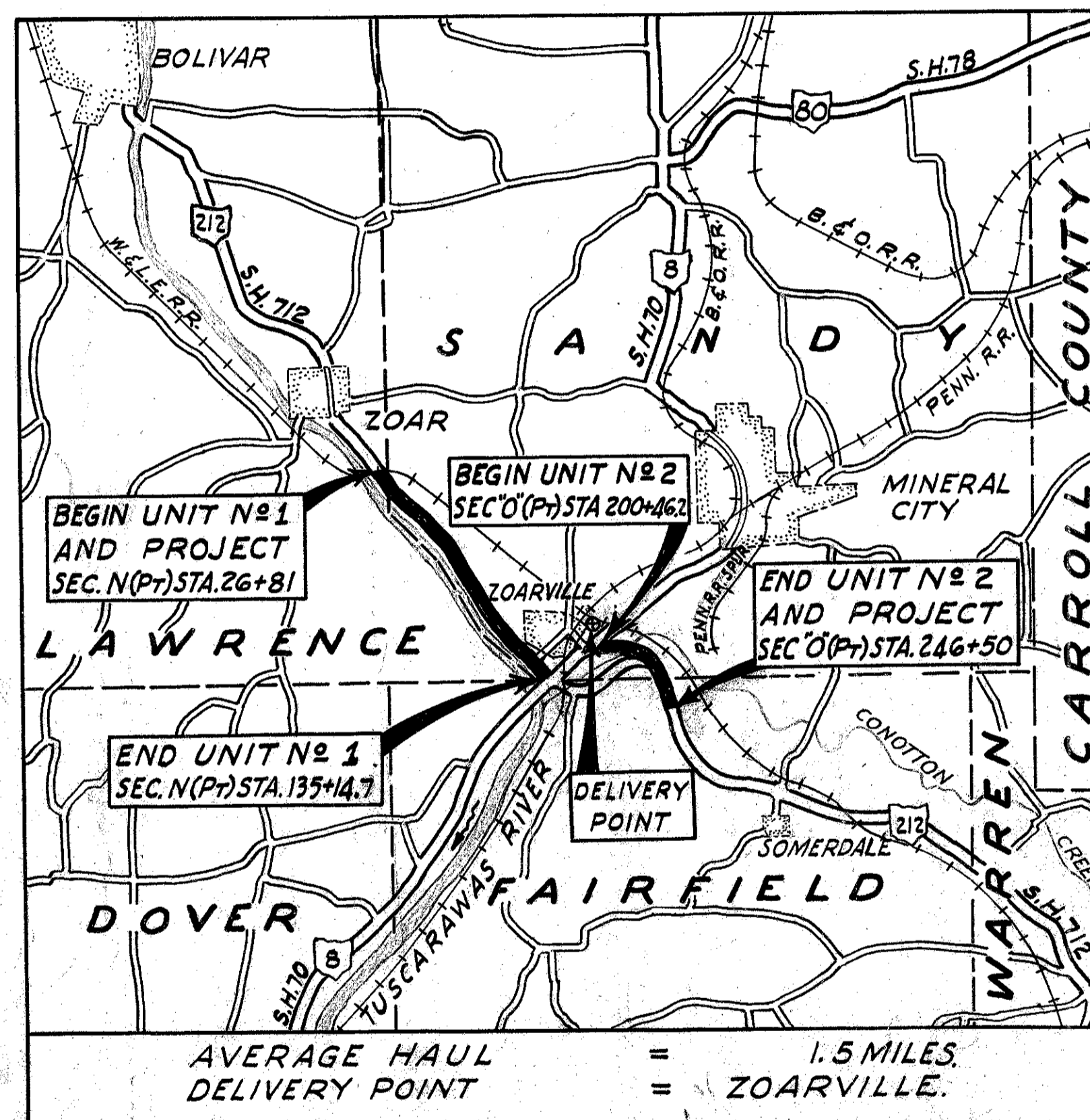


INDEX OF SHEETS

TITLE SHEET	SHEET	1
TYPICAL SECTION AND GENERAL NOTES	"	2
TYPICAL DETAILS AND GENERAL NOTES	"	3
PLAN & PROFILE	"	4-12
CURVE TABLES	"	13-14
CROSS SECTIONS	"	15-33
APPROACHES	"	34
STRUCTURES 20' SPAN & UNDER	"	35-47
STRUCTURES OVER 20' SPAN	"	48-54
SUMMARY OF QUANTITIES	"	55-56

LINE DATA

BEGIN PROJECT AND UNIT N ^o 1.	STA. 26+81
END UNIT N ^o 1.	STA. 135+14.7
NO ADDITIONS OR DEDUCTIONS	
NET LENGTH OF UNIT N ^o 1.	10,833.70 LIN. FT. = 205.1 MILES
BEGIN UNIT N ^o 2.	STA. 200+46.2
END UNIT N ^o AND PROJECT.	STA. 246+50
GROSS LENGTH UNIT N ^o 2.	4,603.80 LIN. FT.
DEDUCTIONS :- RAILROAD CROSSING	18.00 LIN. FT.
NET LENGTH UNIT N ^o 2.	4,585.80 LIN. FT. = 0.868 MILES
NET LENGTH OF PROJECT.	15,419.50 LIN. FT. = 2.920 MILES



LOCATION PLAN

Scale 1" = 1 Mile
PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS

SCALES

PLAN	1" = 100'
PROFILE HORIZONTAL	1" = 100'
PROFILE VERTICAL	1" = 10'
CROSS SECTIONS	1" = 10'

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, AND THAT TRAFFIC WILL BE MAINTAINED AS PROVIDED IN THESE PLANS AND ESTIMATES.

THE RIGHT OF WAY NECESSARY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

APPROVED Harvey F. Brown
DATE 12-10-43 RESIDENT DEPUTY DIRECTOR.

APPROVED E. R. McCullough
DATE 2/14/44 DIVISION DEPUTY DIRECTOR.

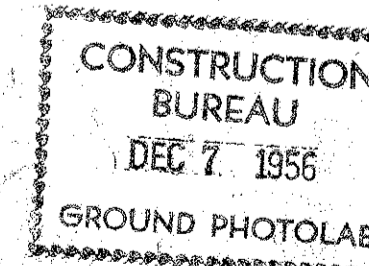
APPROVED _____
DATE _____ CHIEF ENGINEER BUREAU OF MAINTENANCE.

APPROVED G. P. DeLoe
DATE 9-24-47 CHIEF ENGINEER BUREAU OF BRIDGES & R.R. CROSSINGS.

APPROVED Wm. J. Therman
DATE 9/30/47 CHIEF ENGINEER, BUREAU OF LOCATION & DESIGN.

APPROVED _____
DATE _____ FIRST ASST, DIRECTOR & CHIEF ENGINEER.

APPROVED Murray Thayer
DATE 10-1-47 DIRECTOR OF HIGHWAYS.



APPROVED
U.S. ENGINEERING DEPARTMENT
BY _____

DISTRICT ENGINEER

STANDARD DRAWINGS

G-3.07	2-1-47	S-27 P.C. 1	3-1-39	I-15 N ^o 6	2-1-47
I-1, 2, 3, 4 & 5	2-20-45	S-27 P.C. 2	12-1-41	I-15 N ^o 7	2-1-47
I-8 C. B. 1-2 A & B	12-15-41	S-27 P.C. 3	2-20-45	I-15 N ^o 9	2-1-47
I-8 C. B. 2-2 A & B	12-15-41	STC-3A	3-8-39	L-3	2-1-47
I-15 N ^o 1.	3-1-47	AS-41-F	3-31-41		
I-15 N ^o 2.	2-1-47	I-15 N ^o 4	2-1-47		
		I-15 N ^o 5	2-1-47		

SUPPLEMENTAL SPECIFICATIONS

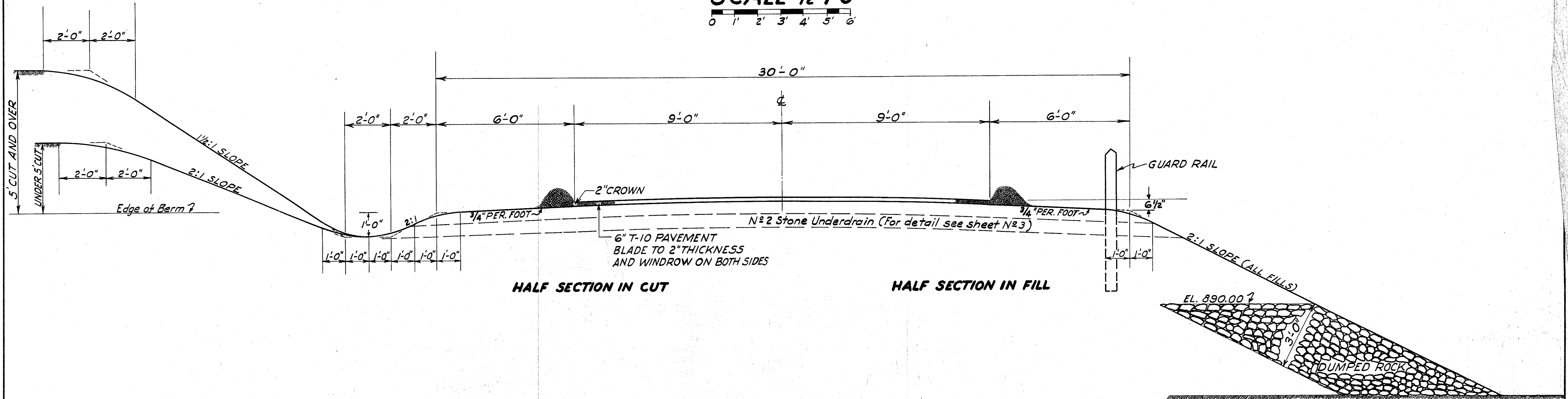
E-401	11-1-44
T-110 Revised	8-3-36

FILE N ^o	TUSCARAWAS COUNTY S.H. 712 SEC. N (PT) & O (PT) UNIT N ^o 1 & N ^o 2 DATE OF LETTING _____ 194____ CONTRACT N ^o _____
---------------------	---

TUSCARAWAS COUNTY
S.H. 712 SEC. N (Pt) & O (Pt)
DOVER BASIN.
UNIT N^o 1 AND N^o 2

TYPICAL SECTION FOR TYPE T-10

SCALE 1/2" = 1'-0"
0 1' 2' 3' 4' 5' 6'



GENERAL NOTES

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

TREES:-No tree shall be removed unless specifically marked for removal by the Engineer.

STONE UNDERDRAIN:- Stone underdrain shall be placed at the junction of cuts and fills and at the low points on vertical curves. Actual locations shall be determined by the Engineer.

PIPE:- All existing pipe marked "Remove and Store" shall be neatly stored within the right of way and left at the disposal of the State forces.

SEEDING:- Seeding on this project shall be performed in accordance with Item L-9, on back slopes ditches and fill slopes except where sodding or dumped rock fill is specified.

COMPACTION:- Compaction will not be required on the top three inches (3") of areas to be seeded.

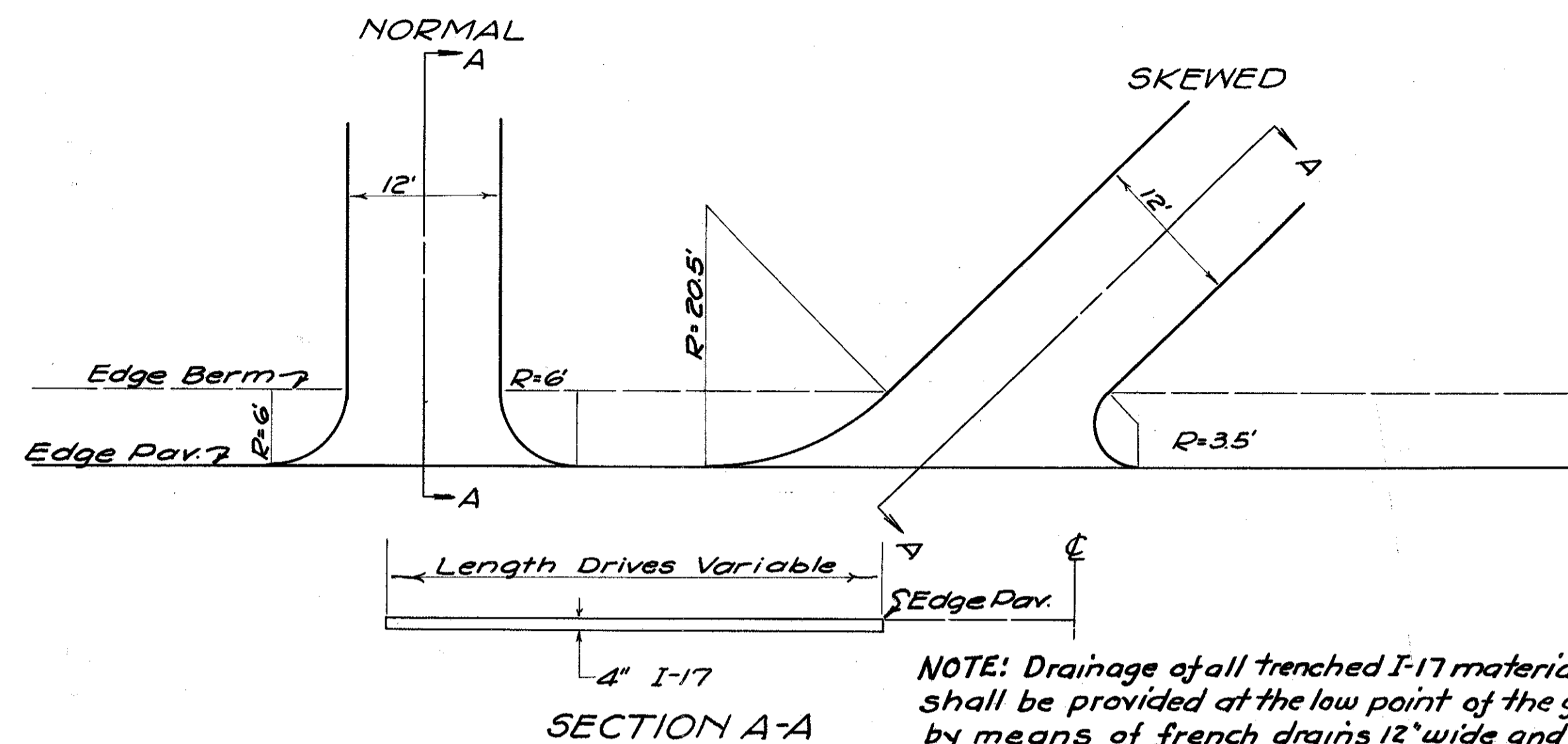
FERTILIZER:- Fertilizer of 10-6-4 formula shall be used on all seeded areas at the rate of twenty (20) pounds per thousand (1000) square feet.

SODDING:- Areas to be sodded shall be loosened to a depth of two (2) inches just prior to laying the sod. This work shall be included for payment in the price bid per square yard for sodding.

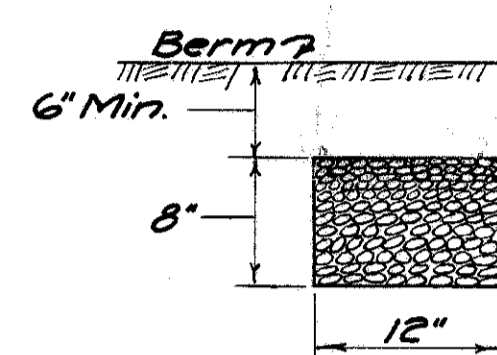
NOTE:- For continuation of notes (see sheet N^o 3)

TYPICAL DETAILS

PRIVATE DRIVES



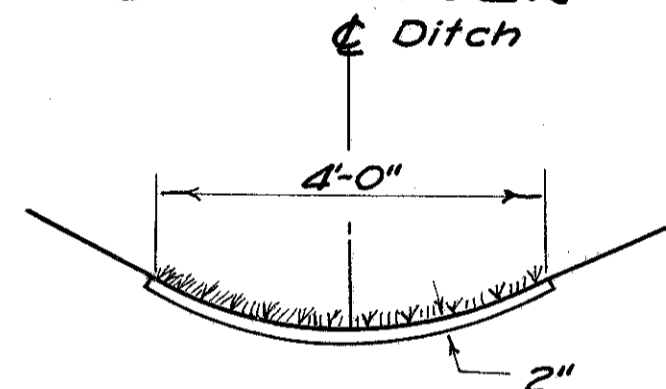
No. 2 STONE UNDERDRAIN



NOTE: Drainage of all trenched I-17 material shall be provided at the low point of the grade by means of french drains 12" wide and 8" deep. Cost of drains to be included in price bid for Item I-17.

CONTINUATION OF GENERAL NOTES (See Sheet No. 2)

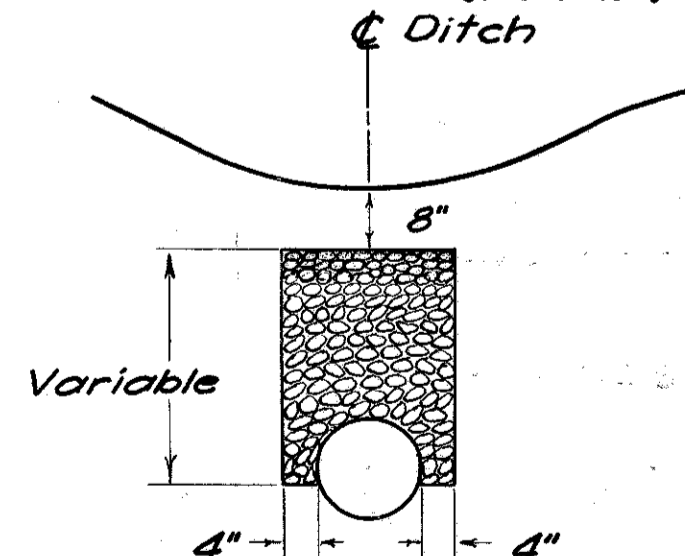
SOD GUTTER



SALVAGE TRAFFIC BOUND SURFACE COURSE:- Ballast on old railroad fill shall be removed to elevation indicated by the heavy dashed lines on cross sections and stock piled for later use as salvaged traffic bound material. This material shall be placed on the finished grade to a depth of six (6) inches and then bladed to a depth of two (2) inches and wind rowed on both sides as indicated on the typical section. All sod, weeds and other foreign material shall be removed during the blading operations. The unit price bid for Item T-10 Salvaged Traffic Bound Surface Course shall include the removal of material from the old railroad embankment stock piling and final placing on the finished grade.

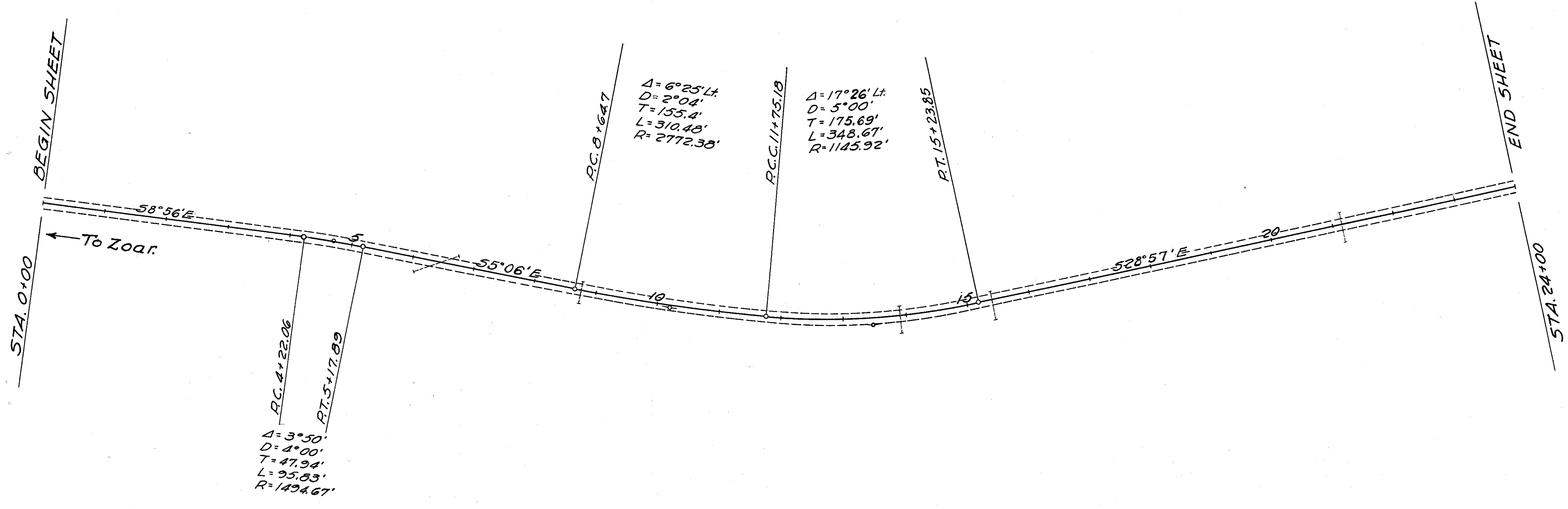
In lieu of the requirements of Sec. T-10.08, the quantities of salvaged material to be paid for shall be the actual number of cubic yards placed, measured loose in the vehicle at the point of delivery, completed and accepted.

ROADWAY DRAINAGE



TRAFFIC:- Two way traffic shall be maintained on the portions of existing pavement lying outside the limits of new construction. The portions of existing pavement being used for traffic lanes shall be kept free of stored materials, equipment, employees autos and other obstructions. In all cases where the new construction limits include the existing pavement or berms, the cuts, fills and connecting ramps shall be built in such a manner as to provide for two way traffic lanes with a surface not less than twenty (20) feet in width and embankment need not be constructed full cross section width. Two way traffic shall be maintained at all times unless permission is granted by the Engineer in writing for one way traffic between specified stations for a definite period of time. In event one way traffic is permitted, the surfacing material shall be not less than twelve (12) feet in width. Watchmen shall be posted at each end of the one way traffic zone and maintained twenty four (24) hours daily. All temporary traffic lanes shall be surfaced with T-110 material; treated with calcium chloride and the surface maintained daily to the satisfaction of the Engineer. When it becomes necessary to relocate temporary traffic lanes, the T-110 material shall be salvaged and re-used on each succeeding location where practicable. The contractor will be required to maintain trucks or tractors in the vicinity of all temporary traffic lanes at all times to render the necessary assistance in the movement of traffic. The lump sum bid for maintaining traffic, including lights, signs, barricades and watchmen for twenty four (24) hour service shall include all the foregoing and all the labor, material and equipment necessary to complete this item, except calcium-chloride and T-110 material which items are included in the estimate.

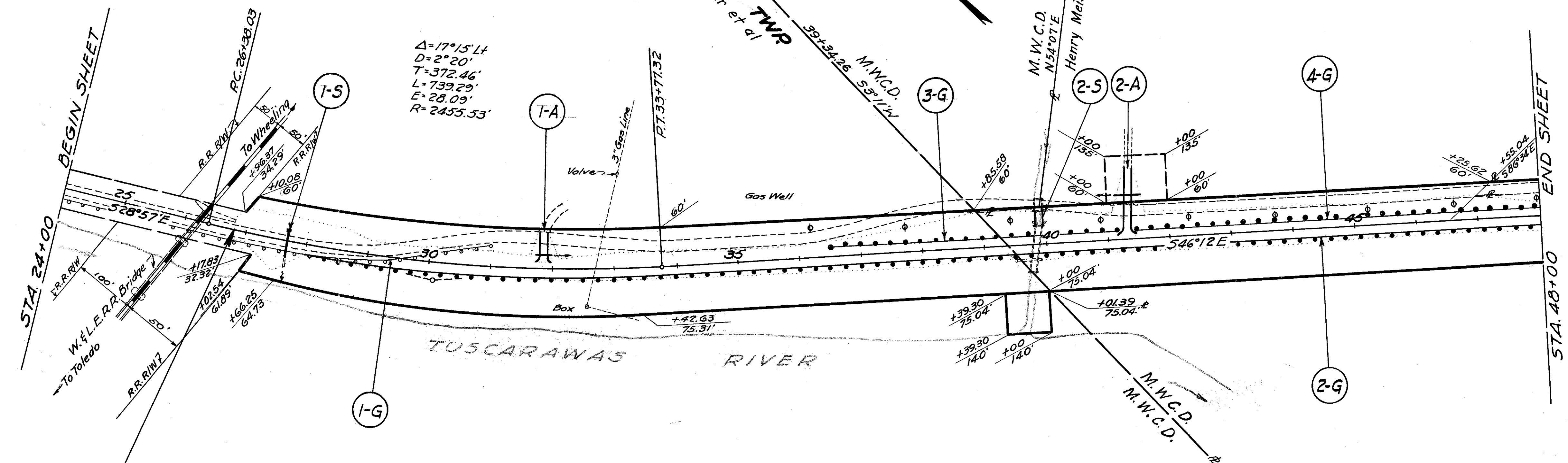
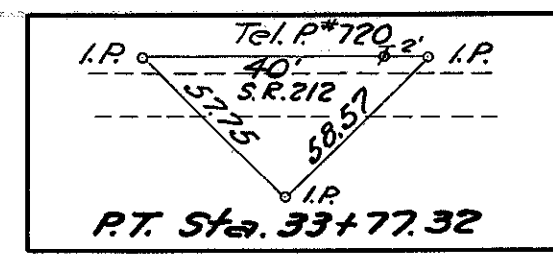
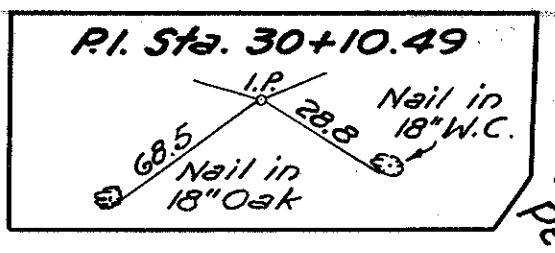
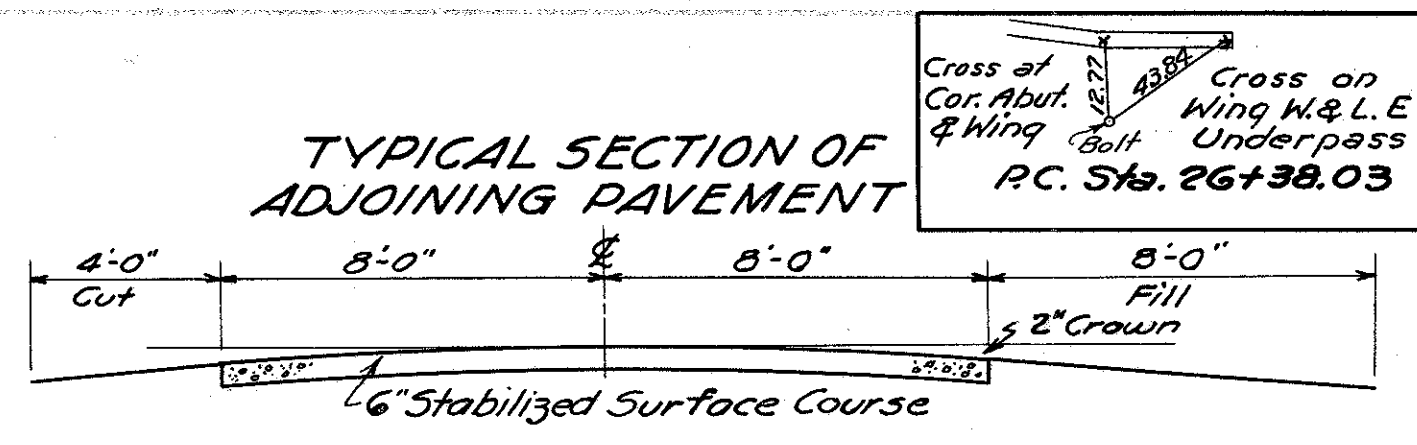
TUSCARAWAS COUNTY
 S.H. 712 SEC. N(Pt) & O(Pt)
 DOVER BASIN UNIT No. 1



B.M. Station 2+20
 Spike in 15" Apple
 70' Left
 Elevation 922.34

B.M. Station 11+04
 x on Rock Ledge
 15' Left
 Elevation 901.56

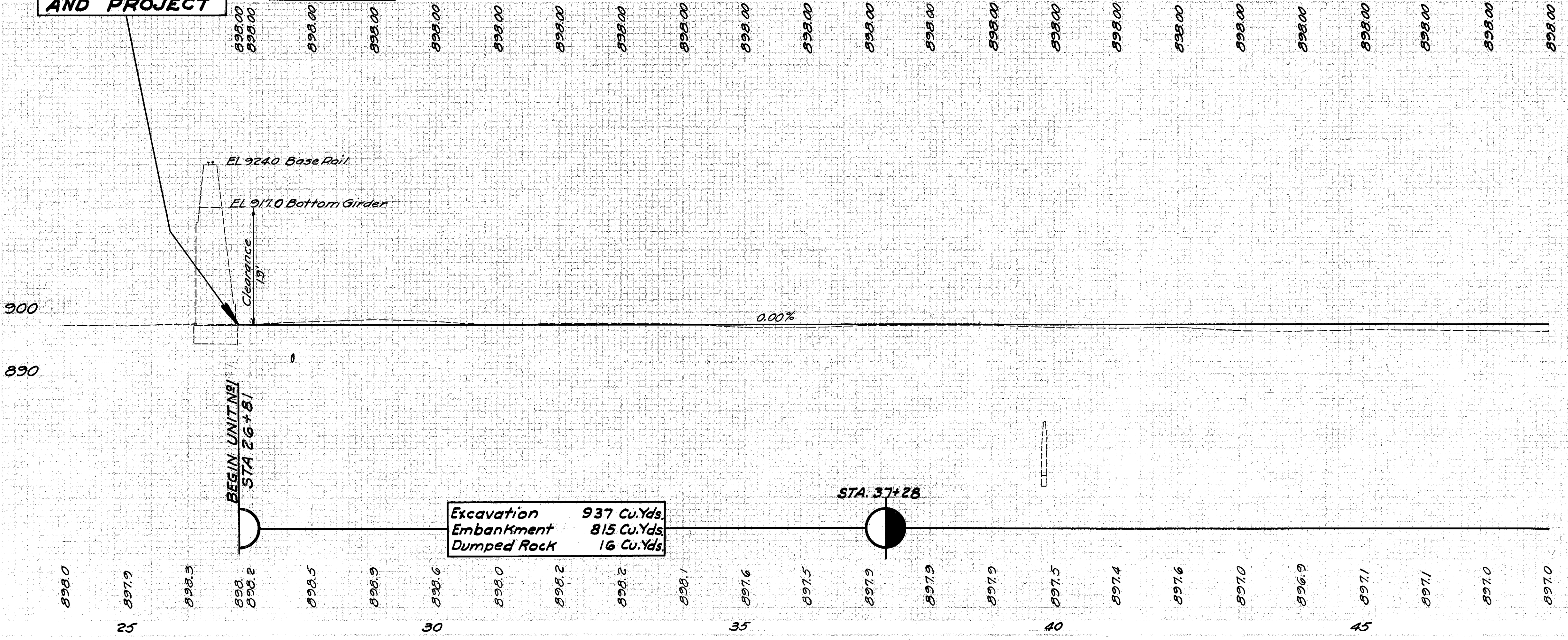




**STA. 26+81
 BEGIN UNIT No. 1
 AND PROJECT**

B.M. EL 901.53
 x On E. End N. Wing
 W.F.L.E.R.R. Br.
 Lt. Sta. 26+80

B.M. EL 899.15
 Spike in 10" W. Cherry
 120' Lt. Sta. 42+00



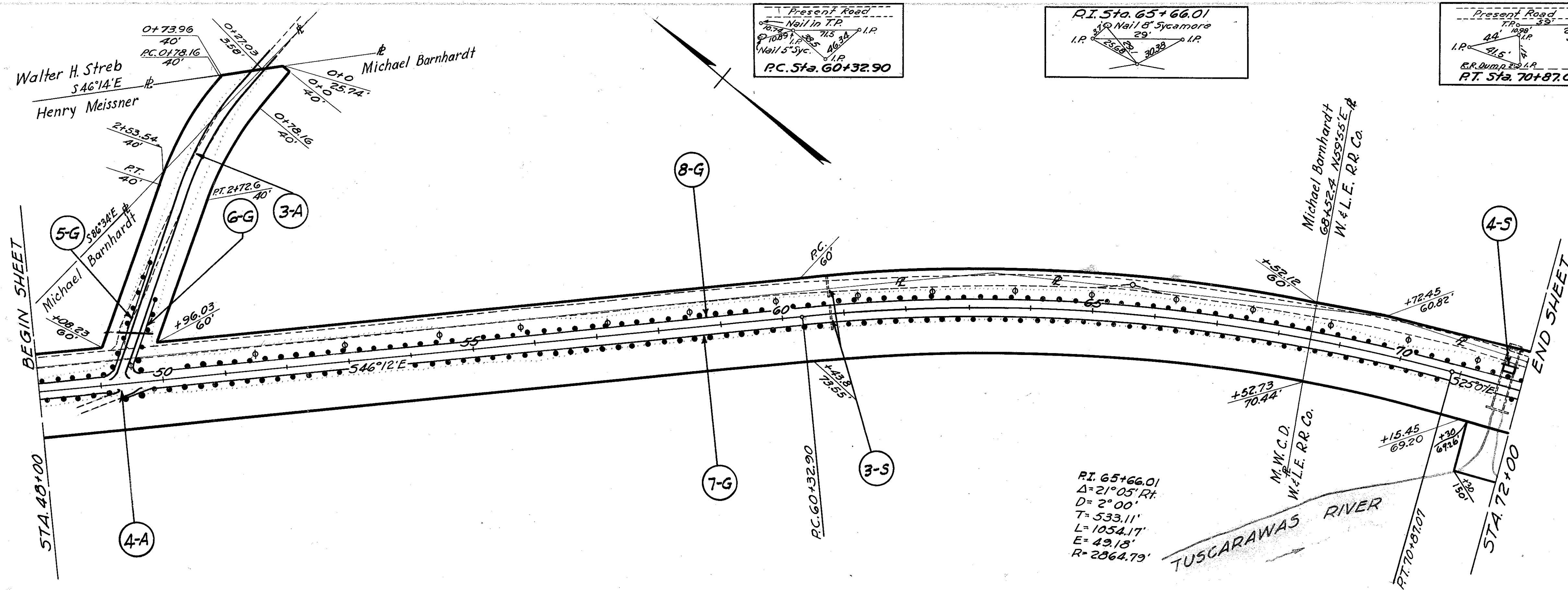
**Excavation 937 Cu.Yds.
 Embankment 815 Cu.Yds.
 Dumped Rock 16 Cu.Yds.**

APPROACHES					
REF. NO.	STATION	SIDE	SEE SHEET	PIPE FOR DRIVEWAYS LIN. FT.	I-17 AGGR. CU. YDS.
1-A	31+85	LT.	15	26	4
2-A	41+42	LT.	16	44	15
TOTALS				26	19

STRUCTURES-20' SPAN & UNDER								
REF. NO.	STATION	SHEET	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH
1-5	27+69	35	V.S.P.	12"	60'	PIPE	15"	46'
2-5	39+83.9	36	Masonry			S.T.C.	9'x8'	20'-9"

GUARD RAIL					
REF. NO.	STATION FROM	STATION TO	SIDE	REMOVE AND STORE LIN. FT.	PLACE NEW LIN. FT.
1-G	28+20	31+00	RT.	280	
2-G	28+25	40+18	RT.		2096
3-G	36+50	41+30	LT.		480
4-G	41+54	49+06	LT.		752
TOTALS				280	3328

ROADSIDE IMPROVEMENT				
STATION FROM	STATION TO	SIDE	SEEDING SQ. YDS.	FERTILIZER LB'S.
26+81	48+00	BOTH	6500	1170
TOTALS			6500	1170



Present Road
 Nail in T.P.
 10' Nail 8' Sycamore
 29' Nail 5' Syc.
 R.C. Sta. 60+32.90

R.I. Sta. 65+66.01
 10' Nail 8' Sycamore
 29' Nail 5' Syc.
 R.C. Sta. 60+32.90

Present Road
 10' Nail 8' Syc.
 29' Nail 5' Syc.
 R.T. Sta. 70+87.07

APPROACHES

REF. No.	STATION	SIDE	SEE SHEET No.	PIPE FOR DRIVEWAYS LIN. FT.	I-17 AGGR. CU. YDS.
3-A	49+25	LT.	34	52	170
4-A	49+50	RT.	16		3
TOTALS				52	173

STRUCTURES-20' SPAN & UNDER

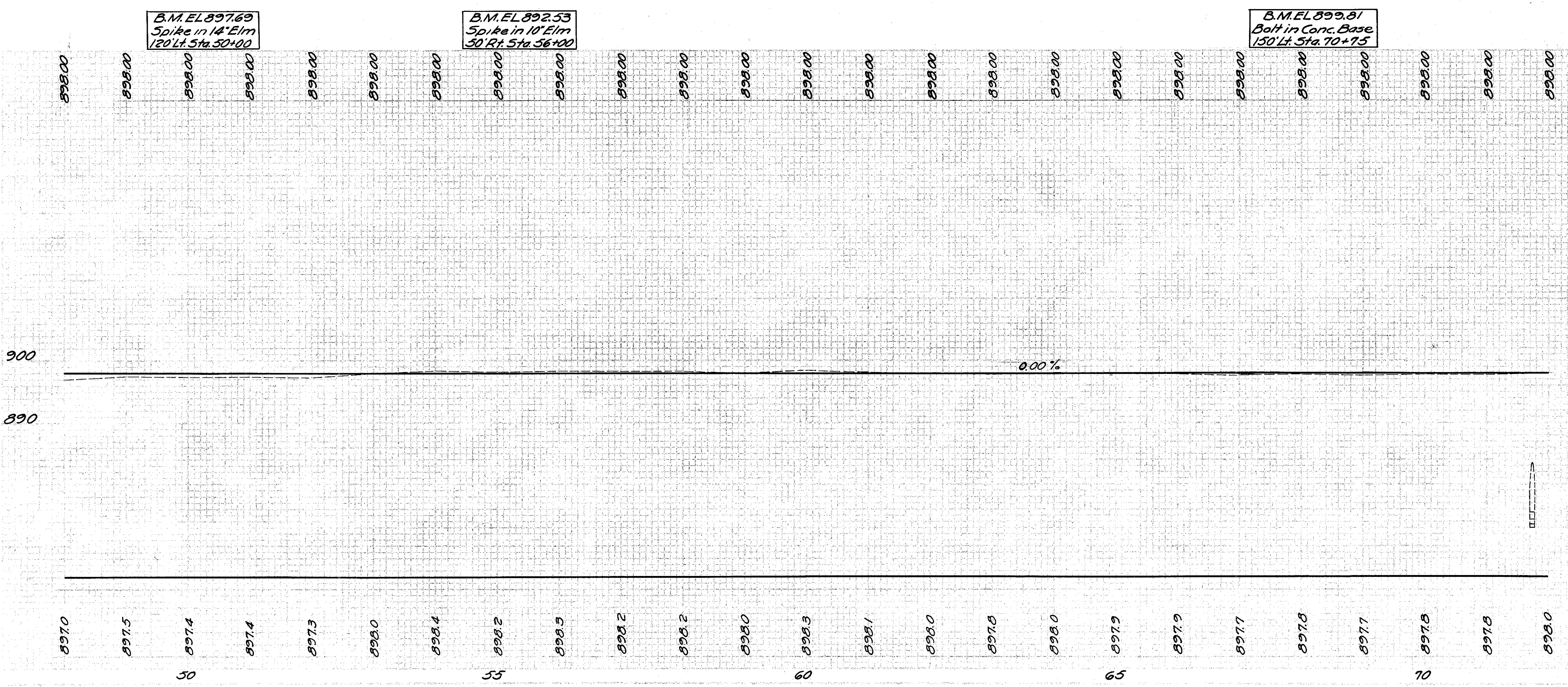
REF. No.	STATION	SEE SHEET	REMOVALS		NEW WORK			
			TYPE	SIZE	LENGTH	TYPE	SIZE	LENGTH
3-S	60+79	6	G.M.R.	15"	75'			
4-S	71+73.7	37				CONC. CAP	12'-6"	6'

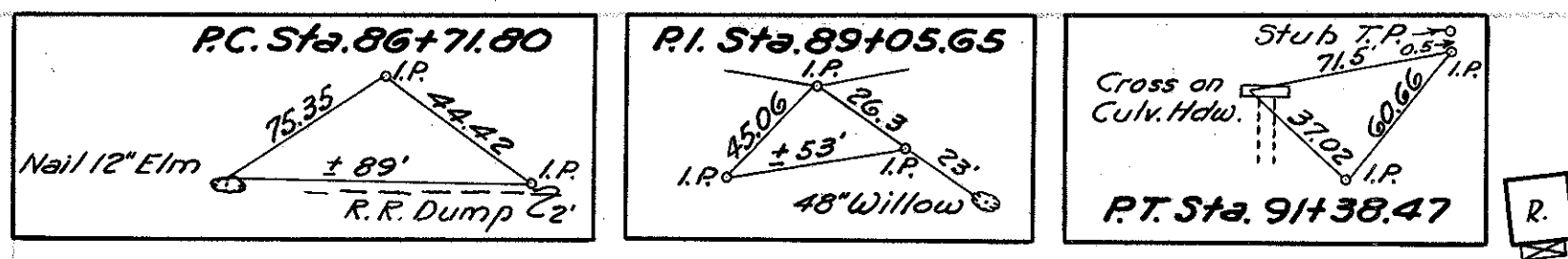
GUARD RAIL

REF. No.	STATION		SIDE	PLACE NEW LIN. FT.	REMARKS
	FROM	TO			
5-G	3+92	5+90	RT.	208	ON APPR 3-A
6-G	4+50	5+73	LT.	128	ON APPR 3-A
7-G	49+40	72+00	RT.	2256	
8-G	49+64	73+59	LT.	2400	
TOTALS				4992	

ROADSIDE IMPROVEMENT

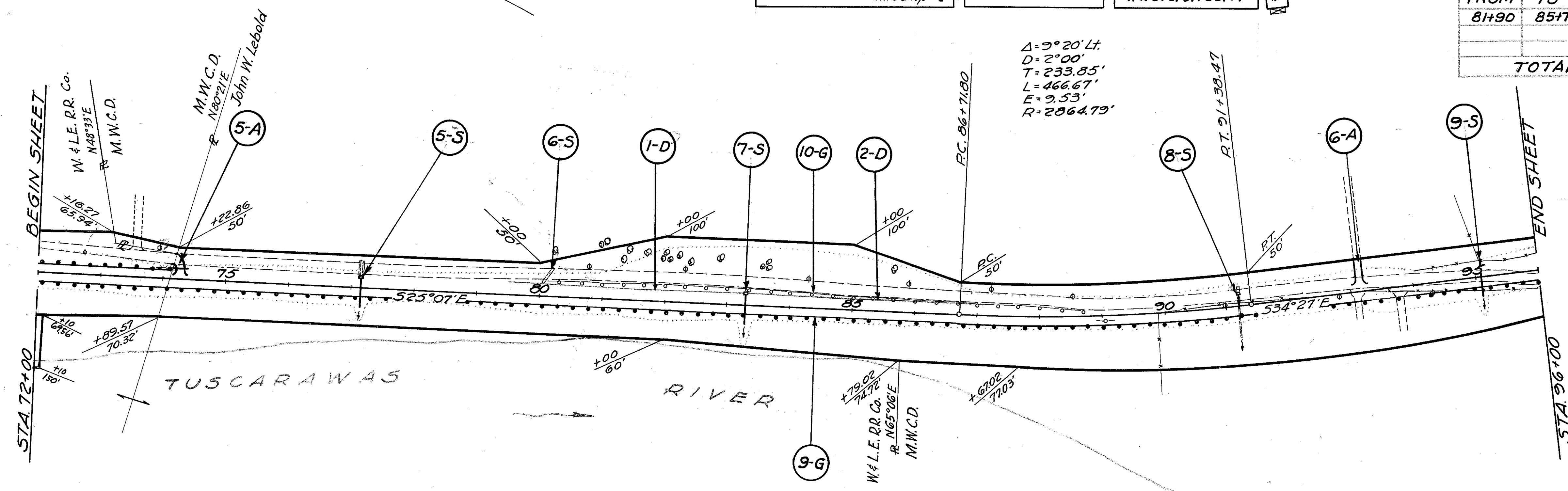
STATION			SEEDING SQ. YDS.	FERTILIZER LB'S.
FROM	TO	SIDE		
48+00	72+00	BOTH	8000	1440
TOTALS			8000	1440





TREE REMOVAL			
STATION	REMOVAL		
FROM TO	SIDE	EACH	
81+90 85+70	Lt.	10	
TOTAL		10	

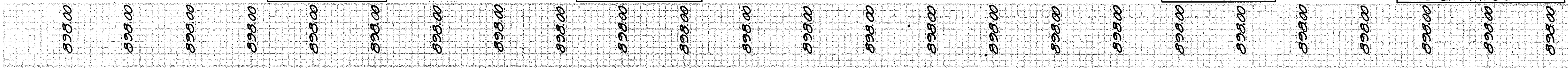
DIV. 2 OHIO 1947 56
 TUSCARAWAS COUNTY
 S.H. 712 SEC. N(PT) & O(PT)
 DOVER BASIN UNIT No. 1



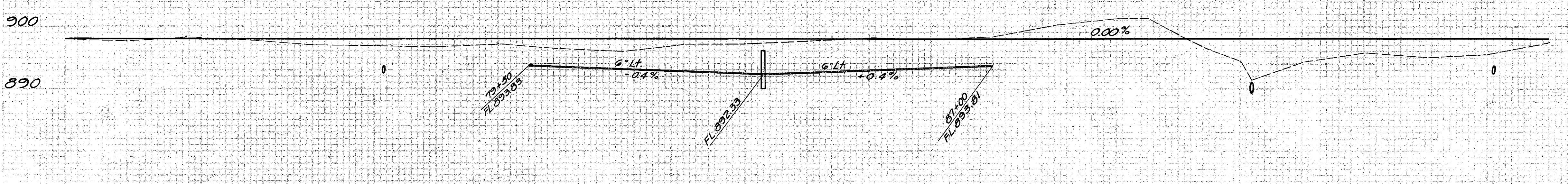
APPROACHES				
REF. NO.	STATION	SIDE	PIPE FOR DRIVEWAYS LIN. FT.	I-17 AGGR. CU. YDS.
5-A	74+25	Lt.	17	3
6-A	93+12	Lt.	20	3
TOTALS			22	6

STRUCTURES 20' SPAN & UNDER							
REF. NO.	STATION	SEE SHEET	REMOVALS TYPE SIZE	LENGTH	NEW WORK TYPE SIZE	LENGTH	
5-S	77+15	38	STONE BOX 1'-6" x 1'-6"	26'-6"	PIPE 15"	48	
6-S	80+10	7	C.M.P. 12"	28'	PIPE 15"	48	
7-S	83+28	38			PIPE 18"	20	
8-S	91+19	39	CONC. BOX 1.8 x 2.0'	24'	PIPE 15"	54	
9-S	95+10	39			PIPE 15"	54	

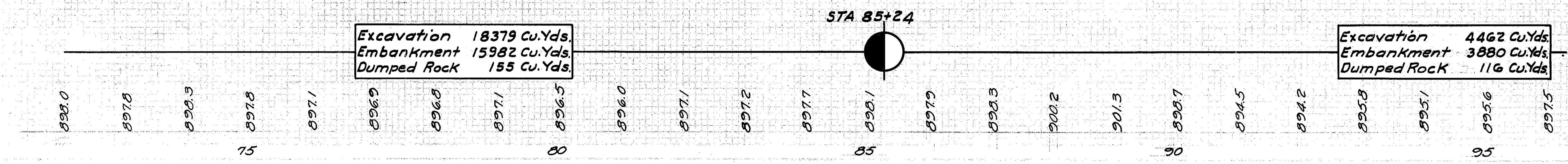
B.M. EL 896.98 Spike in 30" Oak 50' Rt. Sta. 76+00
 B.M. EL 896.78 Spike in 36" Oak 35' Rt. Sta. 80+80
 B.M. EL 898.36 N. Cor. E. Hwy 11 30' Lt. Sta. 91+30
 B.M. EL 901.60 Spike in Root 24" Walnut 115' Lt. Sta. 95+00



GUARD RAIL					
REF. NO.	STATION FROM TO	SIDE	REMOVE & STORE LIN. FT.	PLACE NEW LIN. FT.	REMARKS
9-G	72+00 96+00	Rt.		2402	Continuation of 7-G
10-G	80+10 88+80	Lt.	870		
TOTALS			870	2402	



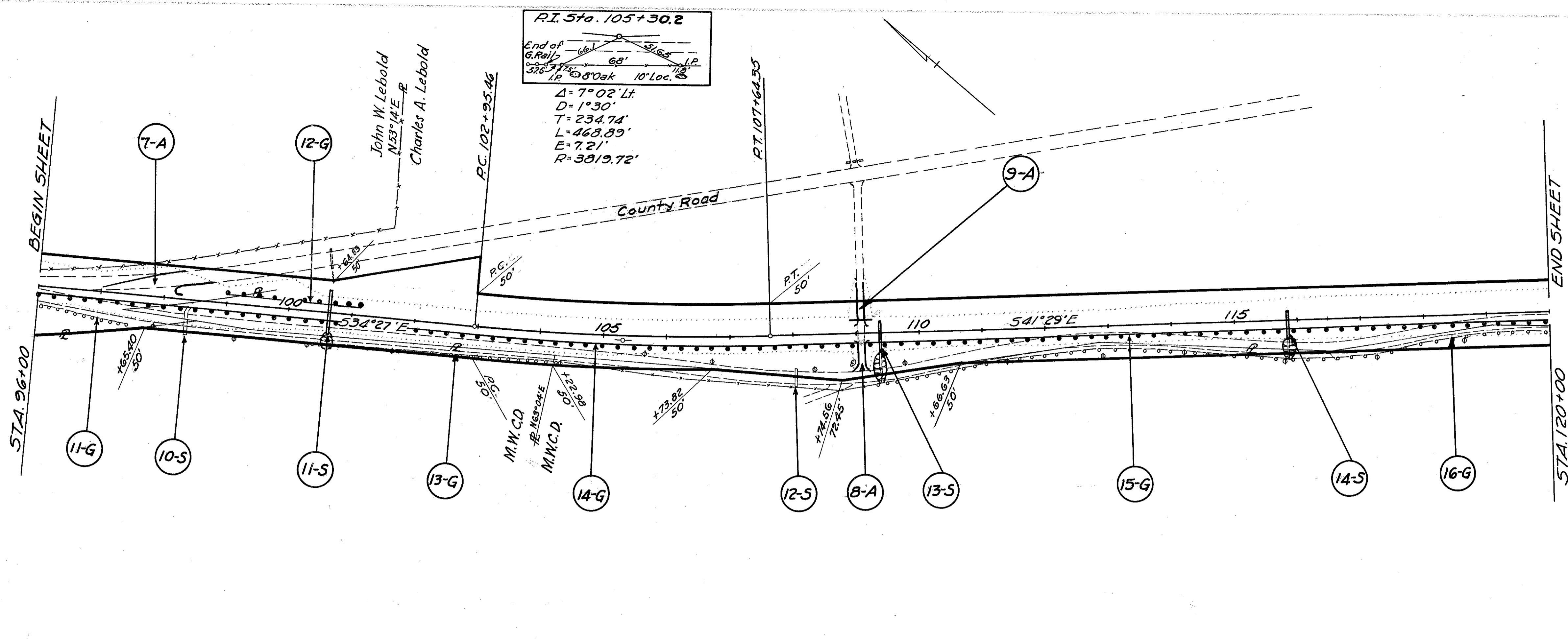
ROADWAY DRAINAGE				
REF. NO.	STATION FROM TO	SIDE	PIPE INCL. POROUS BACKFILL LIN. FT.	
1-D	79+50 83+27	Lt.	377	
2-D	83+29 87+00	Lt.	371	
TOTALS			748	



Excavation 18379 Cu. Yds.
 Embankment 15982 Cu. Yds.
 Dumped Rock 155 Cu. Yds.
 STA. 85+24
 Excavation 4462 Cu. Yds.
 Embankment 3880 Cu. Yds.
 Dumped Rock 116 Cu. Yds.

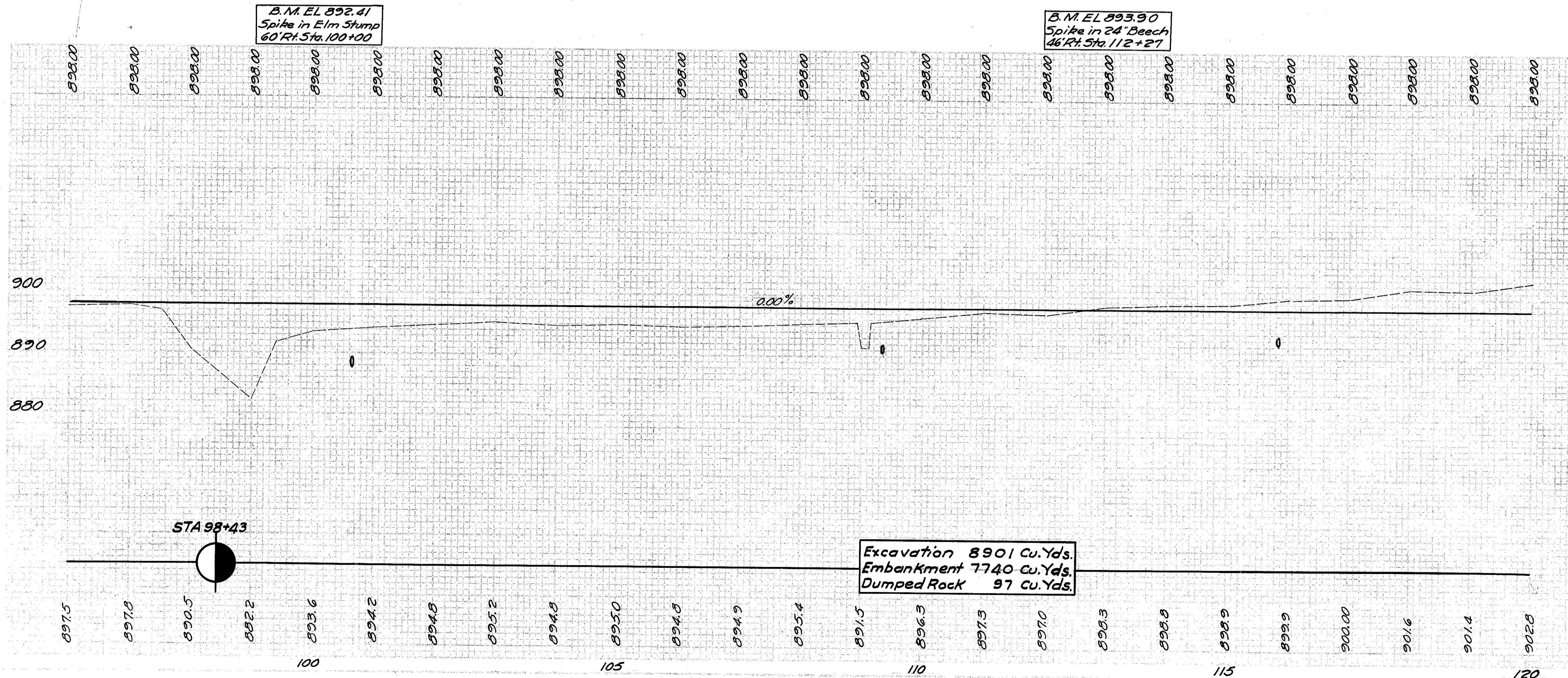
ROADSIDE IMPROVEMENT			
STATION FROM TO	SIDE	SEEDING FERTILIZER SQ. YDS. LB'S.	
72+00 96+00	BOTH	11400	2052
TOTALS		11,400	2,052

TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt)
DOVER BASIN UNIT No. 1



APPROACHES					
REF No	STATION	SIDE	SEE SHEET No	PIPE FOR DRIVEWAYS LIN. FT. 12"	I-17 AGGR CU. YDS
7-A	97+75	Lt.	20		30
8-A	109+06	Rt.	21		12
9-A	109+06	Lt.	21	30	12
TOTALS				30	54

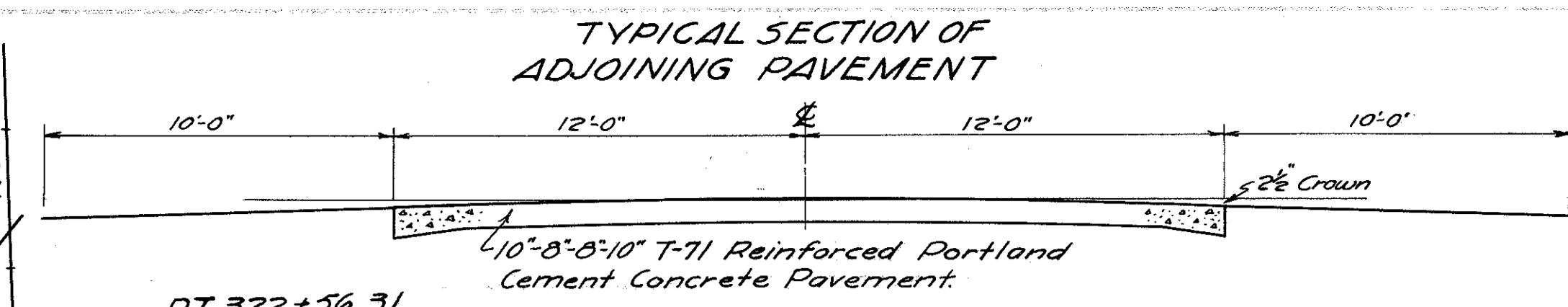
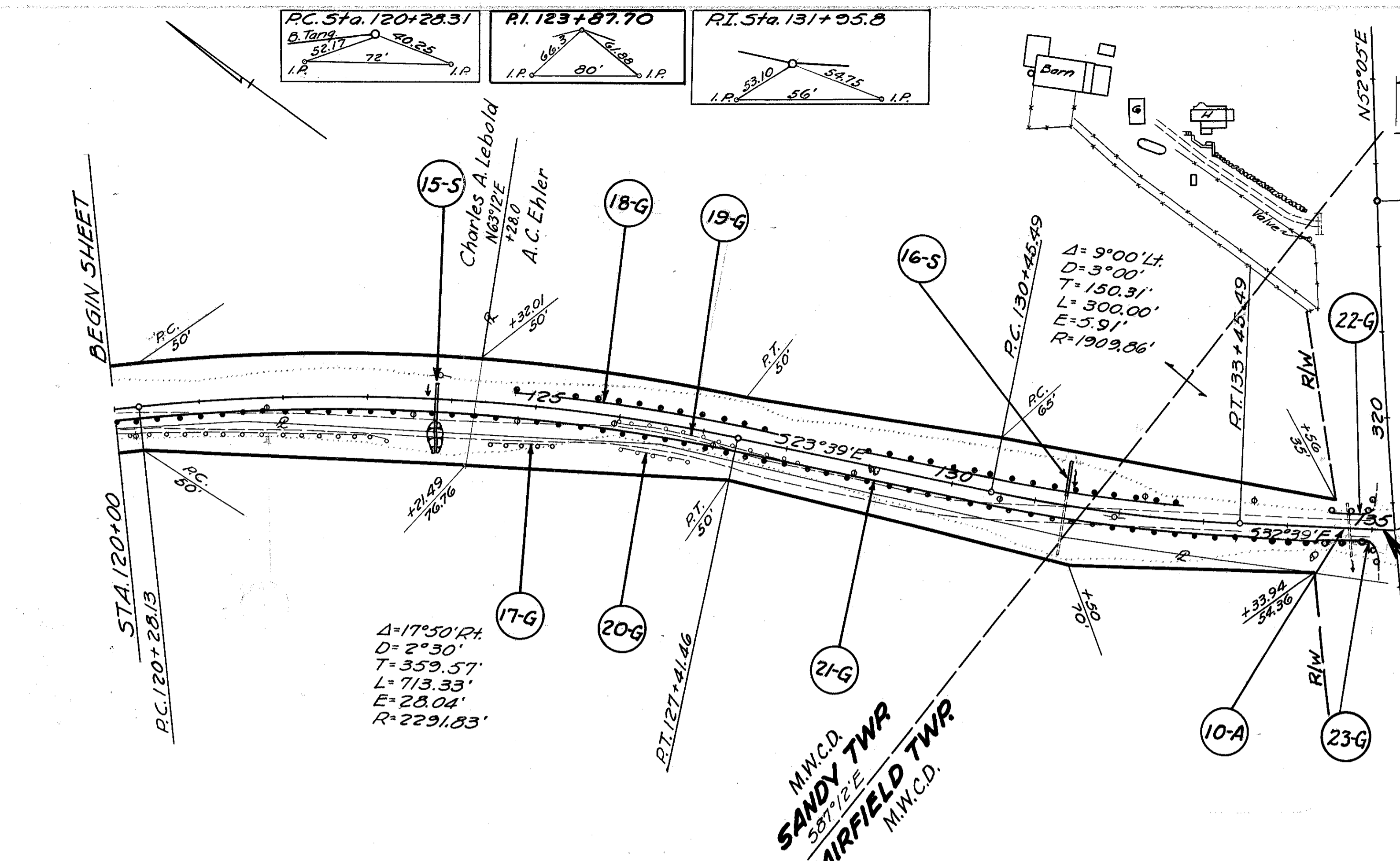
STRUCTURES 20' SPAN & UNDER								
REF No	STATION	SEE SHEET	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH
10-S	98+44	8	C.M.P.	18"	44'	PIPE	24"	72'
11-S	100+62	40				PIPE	24"	72'
12-S	108+05	8	C.M.P.	12"	24'	PIPE	18"	51'
13-S	109+37	40	C.M.P.	12"	24'	PIPE	18"	51'
14-S	115+84	41	C.M.P.	12"	24'	PIPE	18"	46'



GUARD RAIL						
REF No	STATION FROM	STATION TO	SIDE	REMOVE & STORE LIN. FT.	PLACE NEW LIN. FT.	REMARKS
11-G	96+00	97+50	Rt.	150		
12-G	99+00	101+08	Lt.		208	
13-G	100+40	104+30	Rt.	390		
14-G	96+00	108+92	Rt.		1294	Continuation of 3-G
15-G	109+16	120+00	Rt.		1084	
16-G	109+30	124+10	Rt.	1480		
TOTALS				2020	2586	

ROADSIDE IMPROVEMENT				
STATION FROM	STATION TO	SIDE	SEEDING SQ. YDS.	FERTILIZER LBS.
96+00	120+00		8300	1494
TOTALS			8300	1494

TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt)
DOVER BASIN UNIT No. 1



APPROACHES

REF No	STATION	SIDE	SEE SHEET No	PIPE FOR DRIVEWAYS LIN. FT.
10-A	134+72	Lt+Rt	24	16
TOTALS				16

STRUCTURES 20' SPAN & UNDER

REF No	STATION	SEE SHEET	REMOVALS		NEW WORK			
			TYPE	SIZE	LENGTH	TYPE	SIZE	LENGTH
15-S	123+82	41				PIPE	15"	45'
16-S	131+36	35				PIPE	18"	43'
TOTALS								

GUARD RAIL

REF No	STATION		SIDE	REMOVE AND PLACE		REMOVE & RESET
	FROM	TO		STORE LIN. FT.	NEW LIN. FT.	
17-G	124+50	125+30	Rt.	80'		
18-G	124+75	132+75	Lt.		800	
19-G	126+00	128+20	Rt.	220'		
20-G	126+10	128+90	Rt.	80'		
*21-G	120+00	134+14	Rt.		14.12	
22-G	134+14	135+08	Rt.			96
23-G	134+59	135+02	Lt.			48
TOTALS				380	2212	144

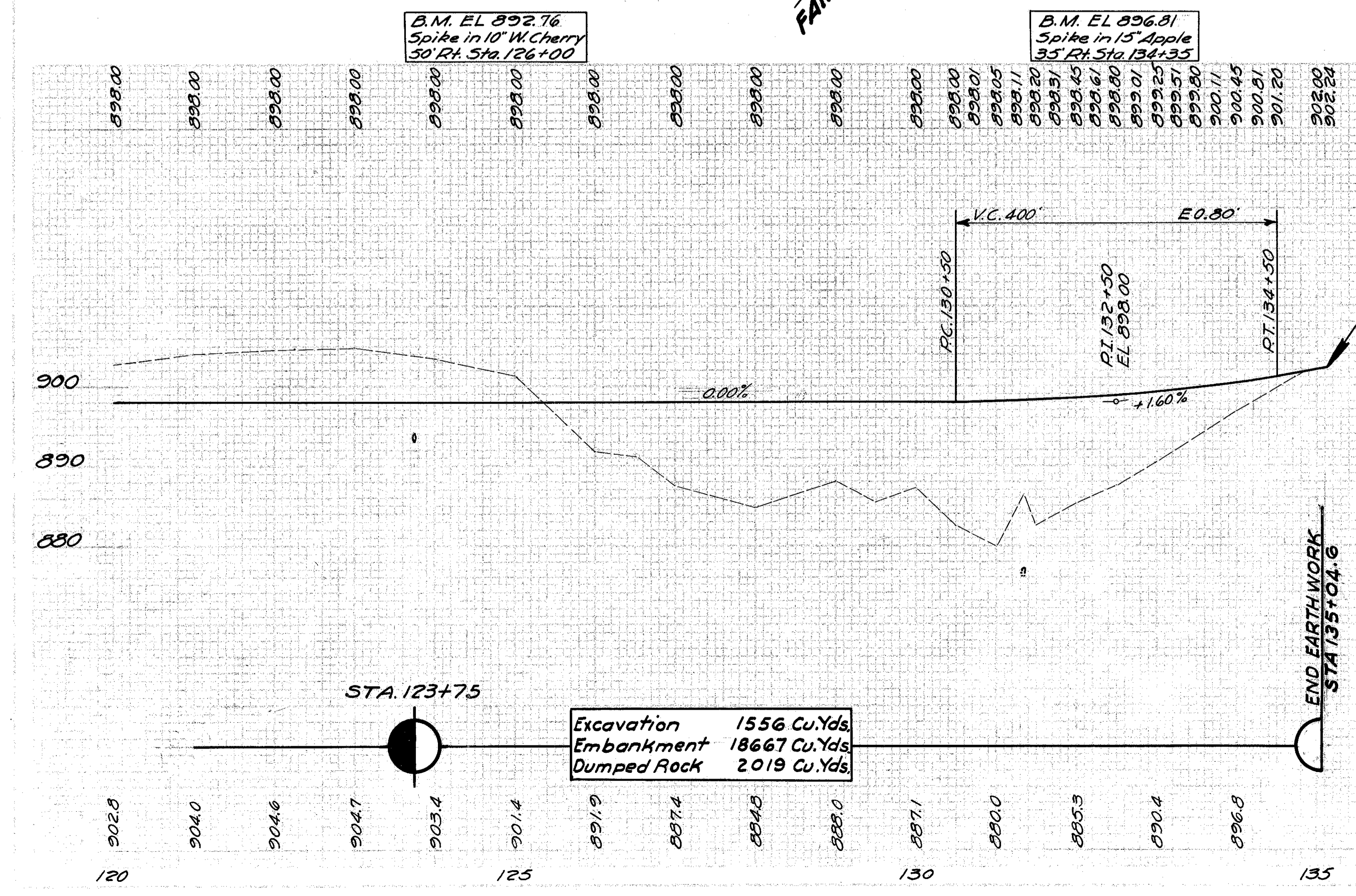
*(21-G is continuation of 15-G)

ROADSIDE IMPROVEMENT

STATION FROM	STATION TO	SIDE	SEEDING SQ. YDS.	FERTILIZER LB'S.
120+00	135+14.7	BOTH	6700	1206
TOTALS			6700	1206

TREE REMOVAL

STATION FROM	STATION TO	SIDE	REMOVAL EACH
129+00	129+50	Rt.	2
TOTAL			2



TREE REMOVAL			
STATION	TO	SIDE	REMOVAL EACH
202+50	220+50	Lt.	30
208+60	219+30	Rt.	12
TOTAL			42

DIV. 2 OHIO 1947 50
TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt)
DOVER BASIN UNIT No. 2

APPROACHES			
REF No	STATION	SIDE	PIPE FOR DRIVEWAYS LIN. FT.
1-A	213+64	Rt.	28
2-A	216+00	Lt.	28
3-A	218+75	Rt.	28
4-A	222+50	Rt.	29
5-A	222+50	Lt.	29
TOTALS			100

REF No	STATION	SIDE	PIPE FOR DRIVEWAYS LIN. FT.	I-17 AGGR. CU.YDS.
1-A	213+64	Rt.	28	23
2-A	216+00	Lt.	28	5
3-A	218+75	Rt.	28	8
4-A	222+50	Rt.	29	3
5-A	222+50	Lt.	29	2
TOTALS			114	41

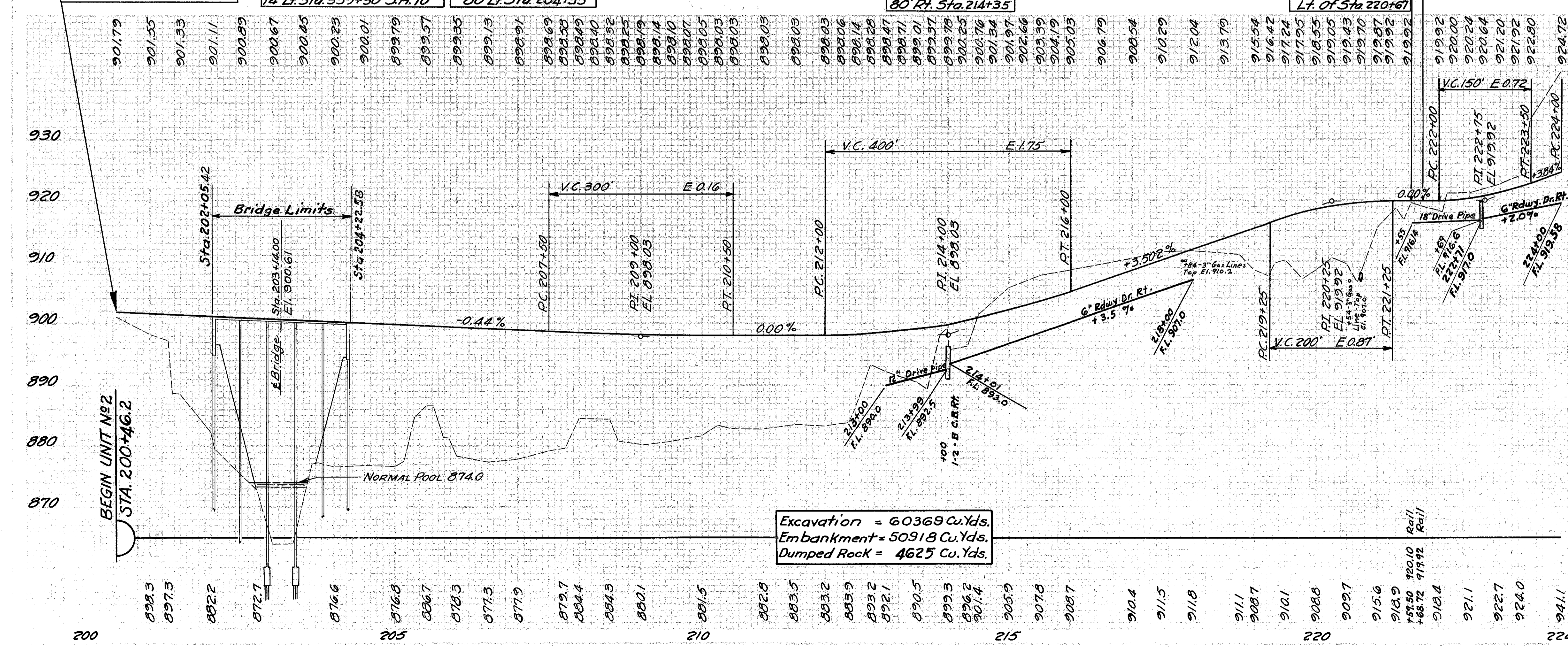
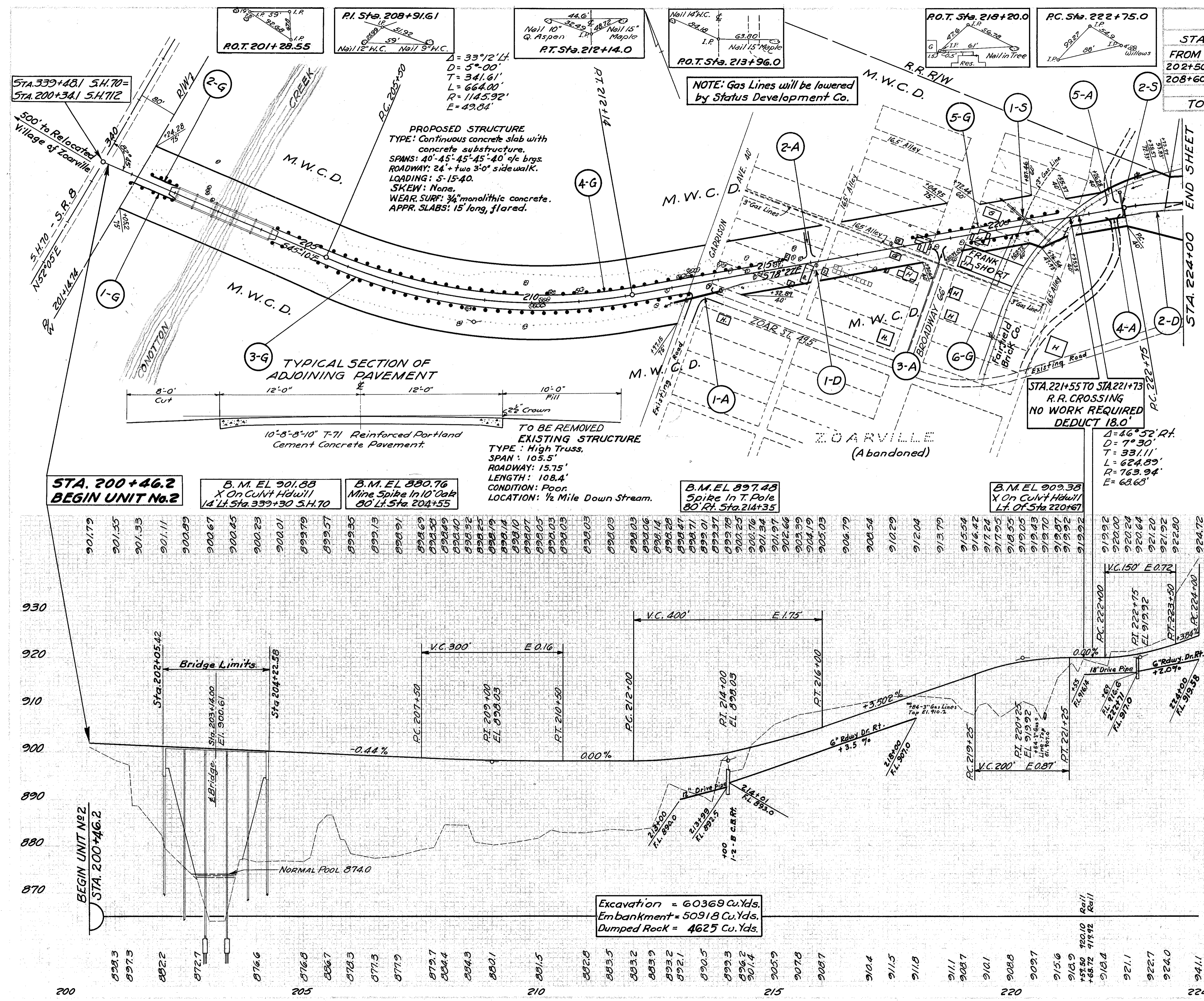
STRUCTURE 20' SPAN & UNDER			
REF No	STATION	SEE SHEET	NEW WORK TYPE
1-S	220+71.8		PIPE 18" 55'
2-S	222+70		PIPE 15" 52'

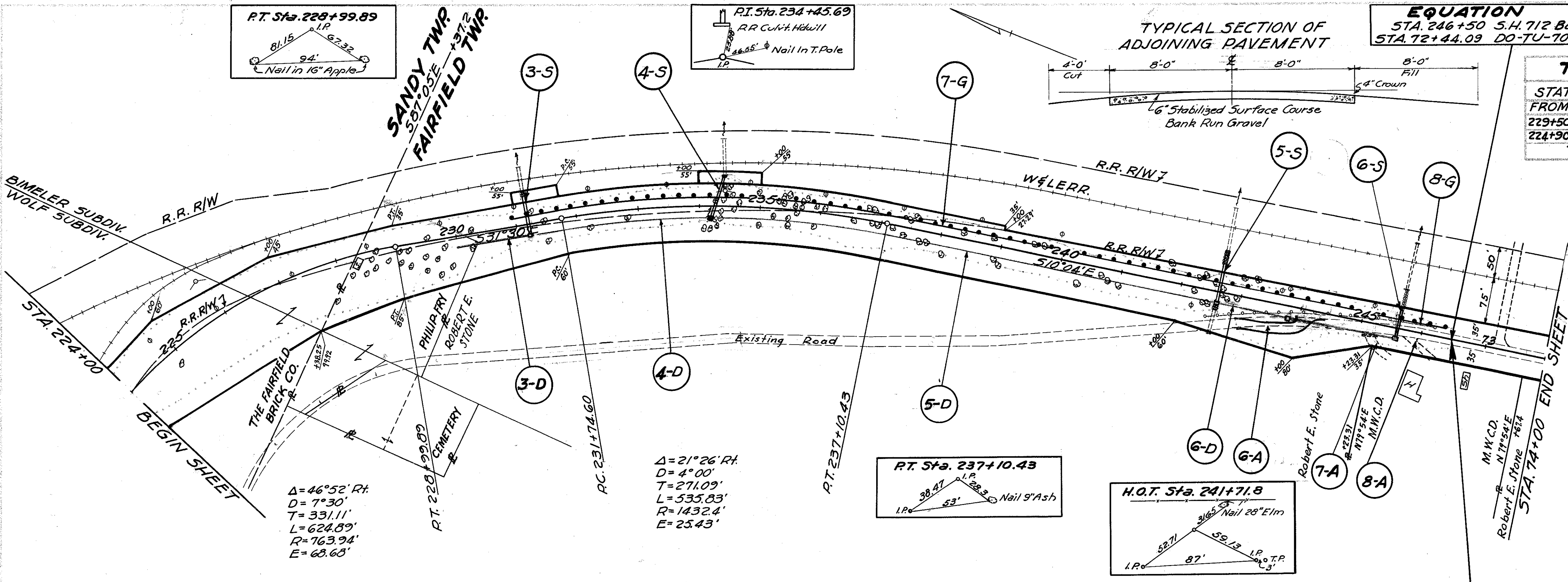
ROADWAY DRAINAGE				
REF No	STATION	FROM TO	SIDE	PIPE INCLUDING POROUS BACKFILL LIN. FT.
1-D	214+01	218+00	Rt.	400
2-D	222+71	224+00	Rt.	126
TOTALS				526

REF No	STATION	FROM TO	SIDE	CATCH BASINS I-2 B EACH
1-D	214+01	218+00	Rt.	1
2-D	222+71	224+00	Rt.	1
TOTALS				1

GUARD RAIL				
REF No	STATION	FROM TO	SIDE	PLACE NEW LIN. FT.
1-G	201+06	202+02	Rt.	96
2-G	201+38	202+02	Lt.	64
3-G	204+26	213+299	Rt.	912
4-G	204+26	215+392	Lt.	1104
5-G	218+20	221+40	Lt.	320
6-G	219+40	220+84	Rt.	144
TOTALS				2640

ROADSIDE IMPROVEMENT				
STATION	FROM TO	SIDE	SEEDING SQ. YDS.	FERTILIZER LB'S.
200+46.2	224+00	Both	9400	1692
TOTALS			9400	1692





EQUATION
 STA. 246+50 S.H. 712 Back=
 STA. 72+44.09 DO-TU-70A Ahead.

TREE REMOVAL

STATION	REMOVAL
FROM TO	SIDE EACH
229+50 242+75	Lt. 30
224+90 243+00	Rt. 53
TOTAL	83

APPROACHES

REF NO	STATION	SIDE	SEE SHEET No	PIPE REMOVED & REPLACED LIN. FT.	I-17 AGG'R CU. YDS.
6-A	244+00	Rt.	33	12"	24
7-A	245+20	Rt.	33	22	2
8-A	245+85	Rt.	33		2
TOTALS				22	28

STRUCTURES 20'SPAN & UNDER

REF NO	STATION	SEE SHEET	REMOVALS		NEW WORK	
			TYPE	SIZE LENGTH	TYPE	SIZE LENGTH
3-S	231+17	44			Pipe	18" 70'
4-S	234+20.5	45			Pipe	18" 75'
5-S	242+61.4	46			Pipe	18" 63'
6-S	245+58	47	C.M.P.	18" 42	Pipe	18" 51'

GUARD RAIL

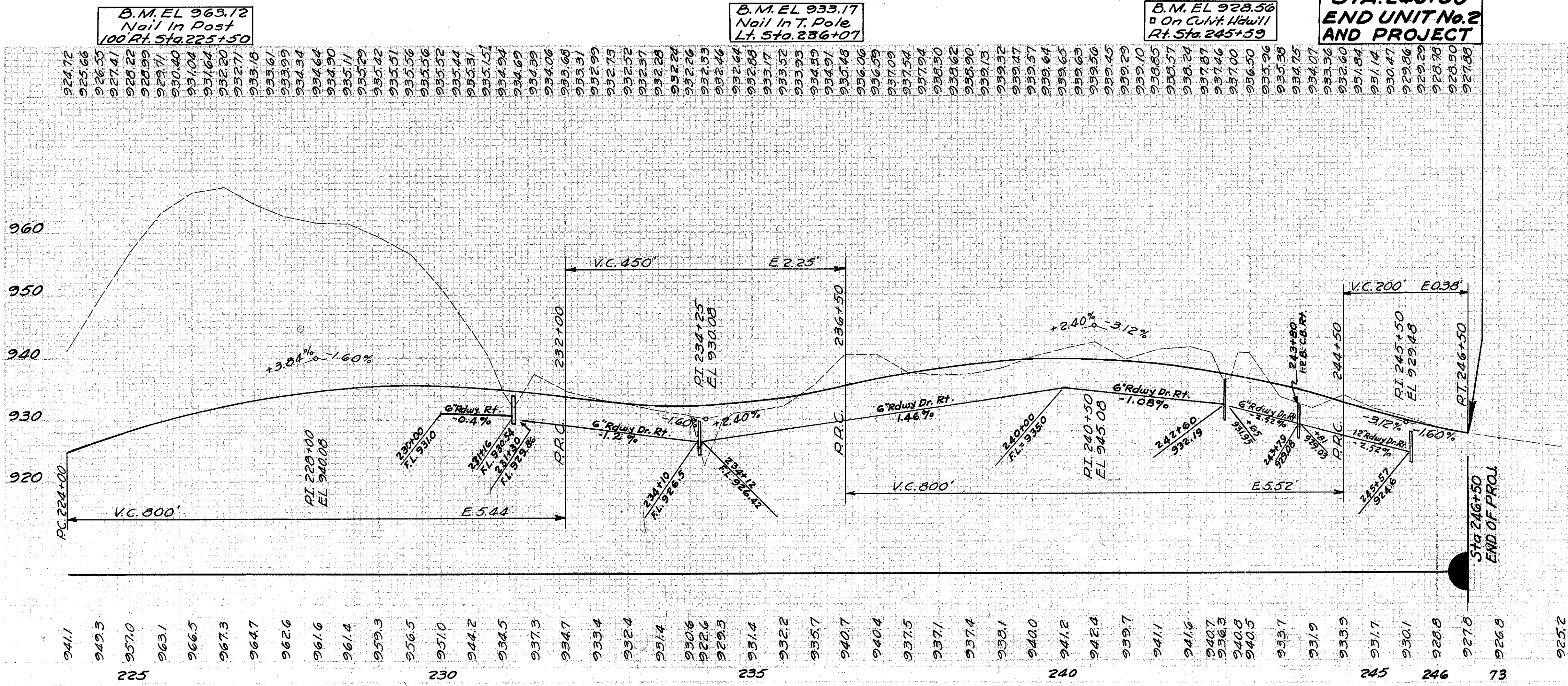
REF NO	STATION	SIDE	REMOVE AND STORE LIN. FT.	PLACE NEW LIN. FT.
7-G	230+83.2 246+30	Lt.		1552
8-G	242+90 246+22	Rt.+Lt.	340	
TOTALS			340	1552

ROADSIDE IMPROVEMENT

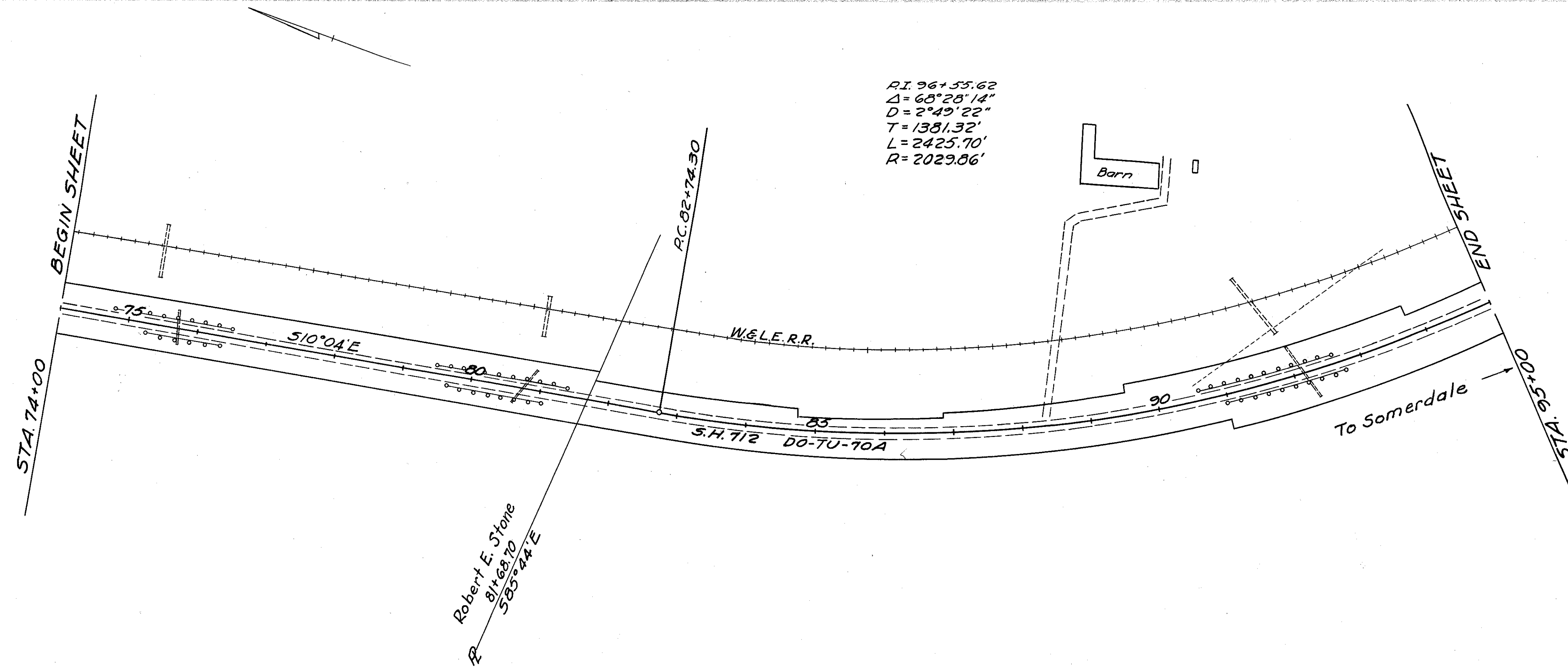
STATION	SEEDING	FERTILIZER
FROM TO	SQ. YDS.	LB'S.
224+00 246+50	Both	13,800 2,484
Total		13800 2484

ROADWAY DRAINAGE

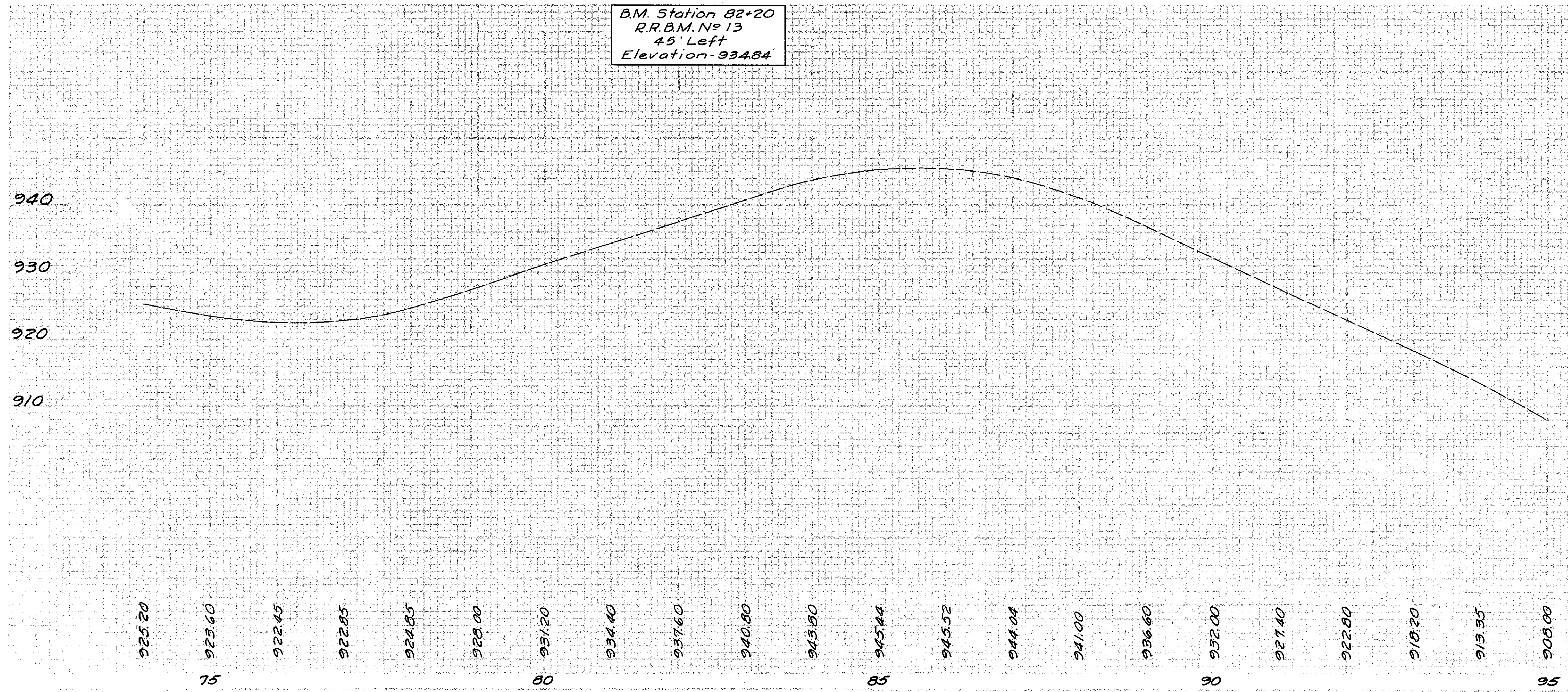
REF NO	STATION	SIDE	PIPE INCLUDING POROUS-BACKFILL LIN. FT.		CATCH BASINS I-2B EACH
			12"	6"	
3-D	230+00 231+16	Rt.	116		
4-D	231+30 234+10	Rt.	278		
5-D	234+12 242+60	Rt.	844		
6-D	242+65 245+57	Rt.	176	114	1
TOTALS			176	1352	1



TUSCARAWAS COUNTY
 S.H. 712 SEC. N(Pt) & O(Pt)
 DOVER BASIN UNIT No. 2



B.M. Station 82+20
 R.R. B.M. No 13
 45' Left
 Elevation 934.84



CURVE TABLES

TUSCARAWAS COUNTY
S.H. 712 SEC'S. N (Pt.) & O (Pt.)
DOVER BASIN UNIT N# 2

P.C. 205+50.00 D=5°-00'LT. P.T. 212+14.00							
LEFT				RIGHT			
EDGE OF PAV'T	DEDUCT CROWN	WIDTH	STATION	GRADE ELEV.	WIDTH	ADD SUPER	EDGE OF PAV'T
899.84	0.17'	9.00'	204+50	900.01	9.00'	0.00'	899.84
899.73		9.07		+75 899.90		0.18	899.91
899.62		9.27	205+00	899.79		0.36	899.98
899.55		9.46		+15 899.72		0.47	900.02
899.51		9.61		+25 899.68		0.54	900.05
899.48		9.71		+31 899.65		0.58	900.06
899.40		10.15		+50 899.57		0.72	900.12
899.34		10.48		+63 899.51		0.81	900.15
899.29		10.73		+75 899.46		0.90	900.19
899.28		10.78		+78 899.45		0.92	900.20
899.23		10.92		+88 899.40		0.99	900.22
899.18		11.00	206+00	899.35		1.08	900.26
899.07				+25 899.24			900.15
898.96				+50 899.13			900.04
898.85				+75 899.02			899.93
898.74			207+00	898.91			899.82
898.63				+25 898.80			899.71
898.52				+50 898.69			899.60
898.41				+75 898.58			899.49
898.41				+77 898.58			899.49
898.32			208+00	898.49			899.40
898.23				+25 898.40			899.31
898.15				+50 898.32			899.23
898.11				+63 898.28			899.19
898.08				+75 898.25			899.16
898.02			209+00	898.19			899.10
897.97				+25 898.14			899.05
897.93				+50 898.10			899.01
897.90				+75 898.07			898.98
897.88			210+00	898.05			898.96
897.86				+25 898.03			898.94
897.86				+50 898.03			898.94
897.86				+75 898.03			898.94
897.86			211+00	898.03			898.94
897.86				+25 898.03			898.94
897.86				+50 898.03			898.94
897.86		11.00		+64 898.03		1.08'	898.94
897.86		10.93		+75 898.03			898.93
897.86		10.50	212+00	898.03			898.84
897.87		10.15		+14 898.04			898.76
897.89		9.87		+25 898.06			898.68
897.93		9.59		+40 898.10			898.58
897.97		9.45		+50 898.14			898.54
898.11		9.16		+75 898.28			898.55
898.30		9.02	213+00	898.47			898.62
898.43		9.00		+14 898.60			898.67
898.54		9.00		+25 898.71			898.72
898.84		9.00		+50 899.01			898.84
899.04	0.17'	9.00		+64 899.21	9.00'		899.04

151 Sq. Yds. Extra Pavement.

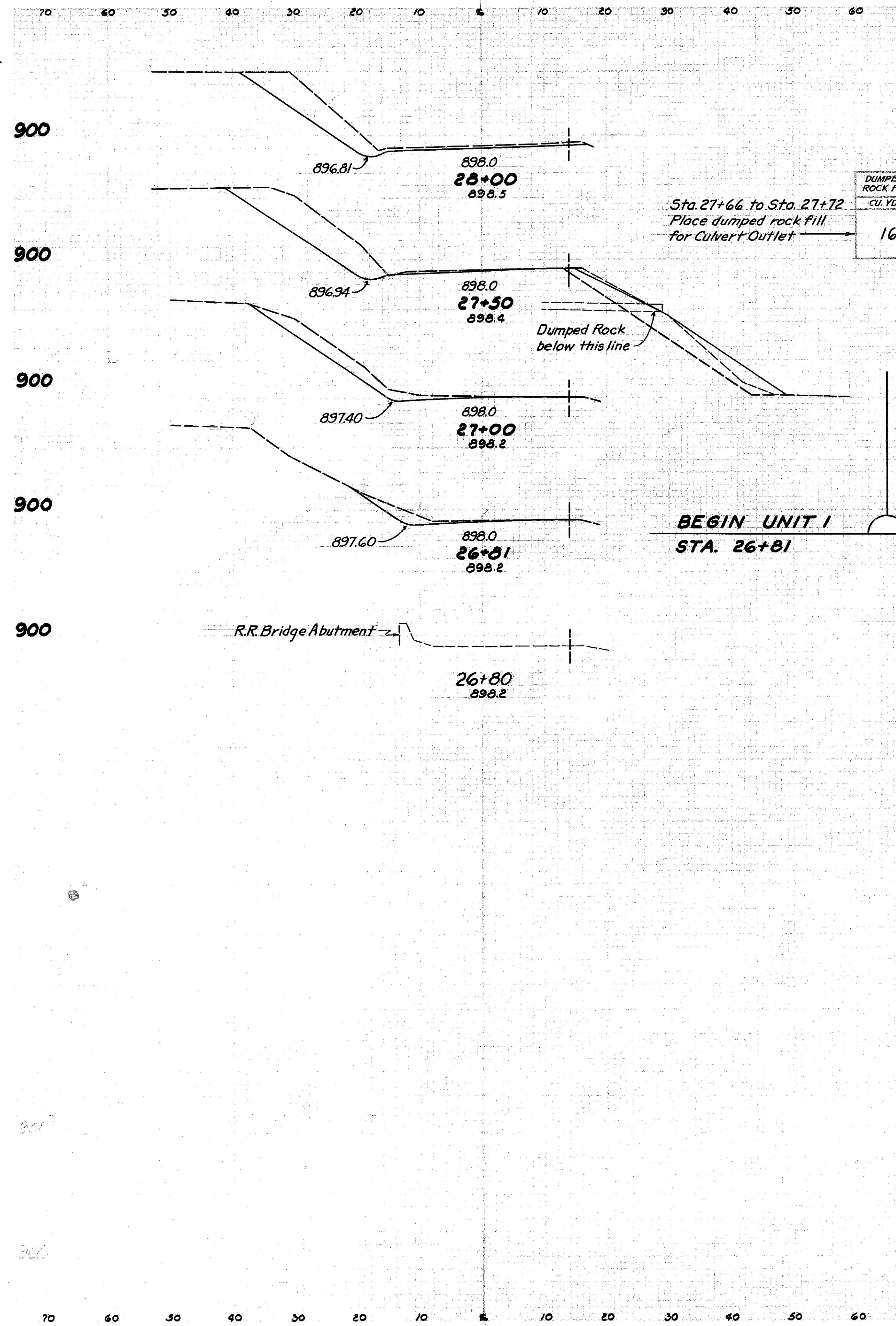
P.C. 222+75.00 D=7°-30'RT. P.T. 228+99.89							
LEFT				RIGHT			
EDGE OF PAV'T	ADD SUPER	WIDTH	STATION	GRADE ELEV.	WIDTH	DEDUCT CROWN	EDGE OF PAV'T
919.75	0.00'	9.00'	221+75	919.92	9.00'	0.17'	919.75
919.82	0.07			+83 919.92	9.02		919.75
919.97	0.22		222+00	919.92	9.10		919.75
920.04	0.28			+07 919.93	9.16		919.76
920.13	0.35			+14 919.95	9.23		919.78
920.27	0.44			+25 920.00	9.37		919.83
920.73	0.66			+50 920.24	9.84		920.07
921.36	0.89			+75 920.64	10.55		920.47
922.14	1.11		223+00	921.20	11.21		921.03
923.08	1.33			+25 921.92	11.50		921.75
923.41				+35 922.25			922.08
923.96				+50 922.80			922.63
924.88				+74 923.72			923.55
924.92				+75 923.76			923.59
925.88			224+00	924.72			924.55
926.82				+25 925.66			925.49
927.71				+50 926.55			926.38
928.57				+75 927.41			927.24
929.38			225+00	928.22			928.05
930.15				+25 928.99			928.82
930.87				+50 929.71			929.54
931.56				+75 930.40			930.23
932.20			226+00	931.04			930.87
932.80				+25 931.64			931.47
933.36				+50 932.20			932.03
933.87				+75 932.71			932.54
934.34			227+00	933.18			933.01
934.77				+25 933.61			933.44
935.15				+50 933.99			933.82
935.50				+75 934.34			934.17
935.80			228+00	934.64			934.47
936.06				+25 934.90			934.73
936.27	1.33			+49.89 935.11	11.50		934.94
936.27				+50 935.11	11.50		934.94
936.40				+75 935.29	11.20		935.12
936.43				+99.89 935.42	10.55		935.25
936.43			229+00	935.42	10.55		935.25
936.40				+25 935.51	9.84		935.34
936.32				+50 935.56	9.37		935.39
936.20				+75 935.56	9.10		935.39
936.04				+99.89 935.52	9.00		935.35
936.04			230+00	935.52			935.35
935.87				+25 935.44			935.27
935.67		9.00'		+50 935.31	9.00	0.17'	935.14

178 Sq. Yds. Extra Pavement.

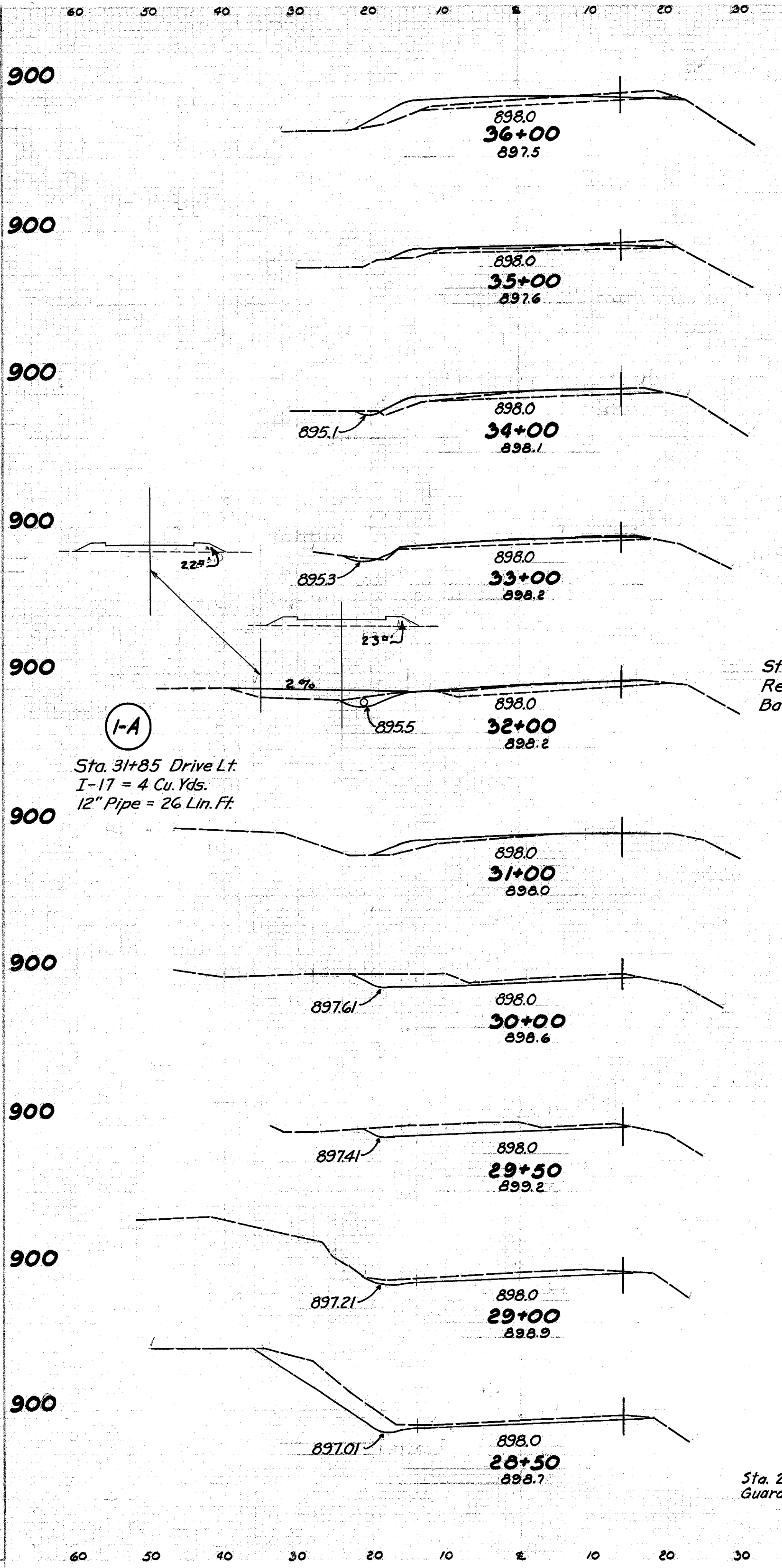
P.C. 231+74.60 D=4°-00'RT. P.T. 237+10.43							
LEFT				RIGHT			
EDGE OF PAV'T	ADD SUPER	WIDTH	STATION	GRADE ELEV.	WIDTH	DEDUCT CROWN	EDGE OF PAV'T
935.67		9.00'	230+50	935.31	9.00'	0.17'	935.14
935.47				+74.60 935.16			934.99
935.46				+75 935.15			934.98
935.24			231+00	934.94			934.77
935.07				+17 934.78			934.61
935.01				+25 934.69			934.52
934.75				+50 934.39			934.22
934.51				+74.60 934.07			933.90
934.50				+75 934.06			933.89
934.22			232+00	933.68			933.51
933.96	0.81'			+24.60 933.32			933.15
933.95				+25 933.31			933.14
933.63				+50 932.99			932.82
933.37				+75 932.73			932.56
933.16			233+00	932.52			932.35
933.01				+25 932.37			932.20
932.92				+50 932.28			932.11
932.88				+75 932.24			932.07
932.90			234+00	932.26			932.09
932.97				+24 932.33			932.16
932.97				+25 932.33			932.16
933.10				+50 932.46			932.29
933.24				+70 932.60			932.43
933.28				+75 932.64			932.47
933.52			235+00	932.88			932.71
933.81				+25 933.17			933.00
934.16				+50 933.52			933.35
934.57				+75 933.93			933.76
935.03			236+00	934.39			934.22
935.55				+25 934.91			934.74
936.12				+50 935.48			935.31
936.37	0.81'			+60.43 935.73			935.56
936.62	0.73			+75 936.06			935.89
937.02	0.60		237+00	936.59			936.42
937.17	0.54			+10.43 936.80			936.63
937.38	0.46			+25 937.09			936.92
937.70	0.33			+50 937.54			937.37
937.96	0.19			+75 937.94			937.77
938.19	0.06		238+00	938.30			938.13
938.27	0.00	9.00'		+10.43 938.44	9.00'	0.17'	938.27

No Extra Pavement.

NOTE:- Superelevation and widening computed from old Standard Construction Drawing N# 116-18 (9-26-27).



END AREA	CU. YDS.	CUT	FILL	CUT	FILL
		145	0		
90	0				
201	0				
16	14	4			
127	0				
166	0				
52	0				
25	0				
19	0				



END AREA	CU. YDS.	CUT	FILL	CUT	FILL
0	40				
0	20				
0	111				
0	20				
2	98				
1	33				
6	104				
2	23				
13	89				
5	25				
0	20				
9	70				
0	13				
65	24				
35	0				
67	0				
37	0				
56	0				
24	0				
84	0				
67	0				

Excavation 937 Cu. Yds.
 Embankment 815 Cu. Yds.
 Dumped Rock 16 Cu. Yds.

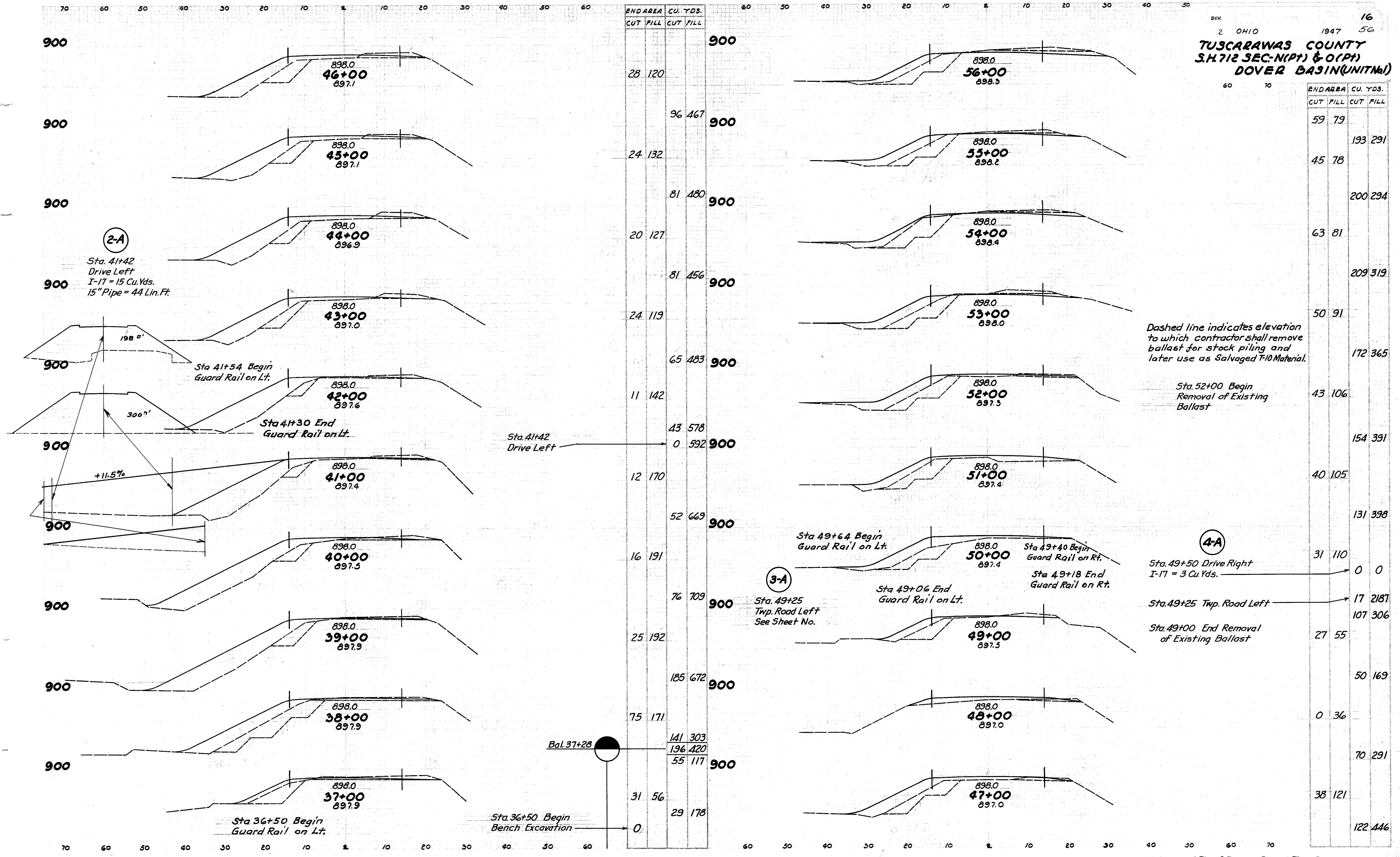
Dashed line indicates elevation to which contractor shall remove ballast for stock piling and later use as Salvaged T-10 Material.

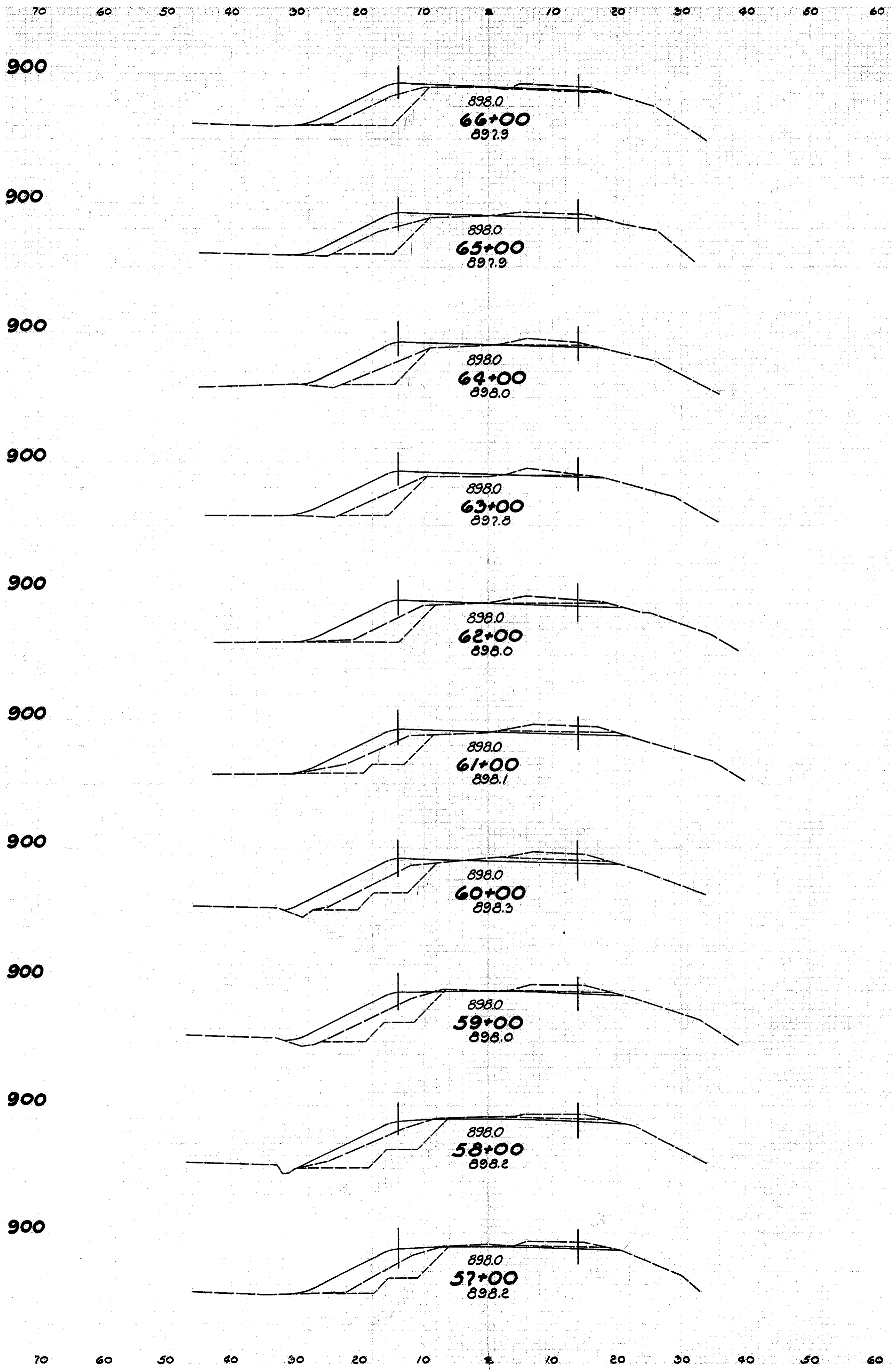
Sta. 32+00 Begin Removal of Existing Ballast

Drive Left 31+85

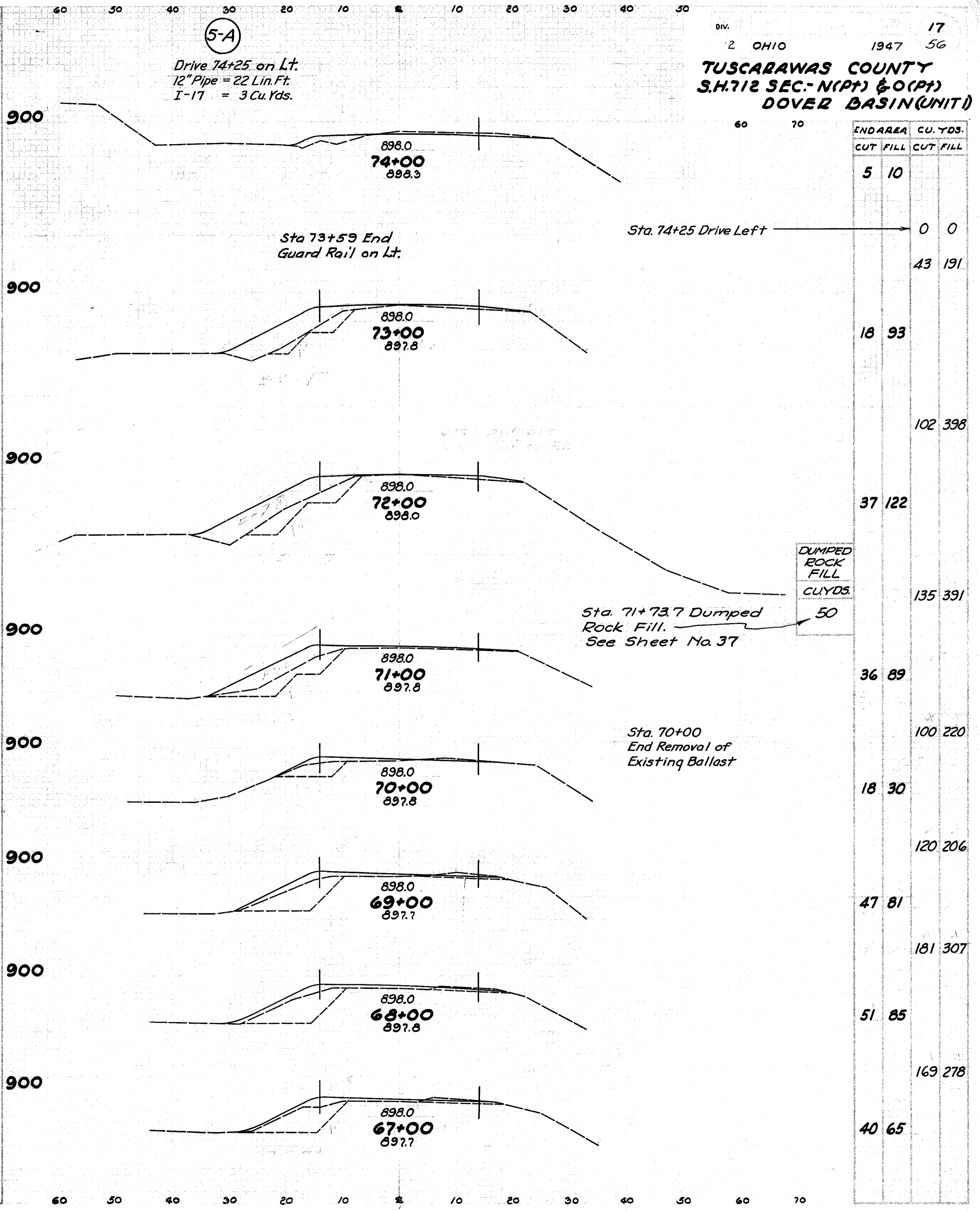
(1-A)
 Sta. 31+85 Drive Lt.
 I-17 = 4 Cu. Yds.
 12" Pipe = 26 Lin. Ft.

Sta. 28+25 Begin Guard Rail on Rt.





END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		141	244
36	67		
		126	239
32	62		
		107	248
26	72		
		96	261
26	69		
		106	252
31	67		
		137	246
43	66		
		167	281
47	86		
		169	306
44	79		
		189	283
58	74		
		174	265
36	69		
		176	274



DIV. 2 OHIO 1947 56
 TUSCARAWAS COUNTY
 S.H. 712 SEC. N(PT) & O(PT)
 DOVER BASIN (UNIT)

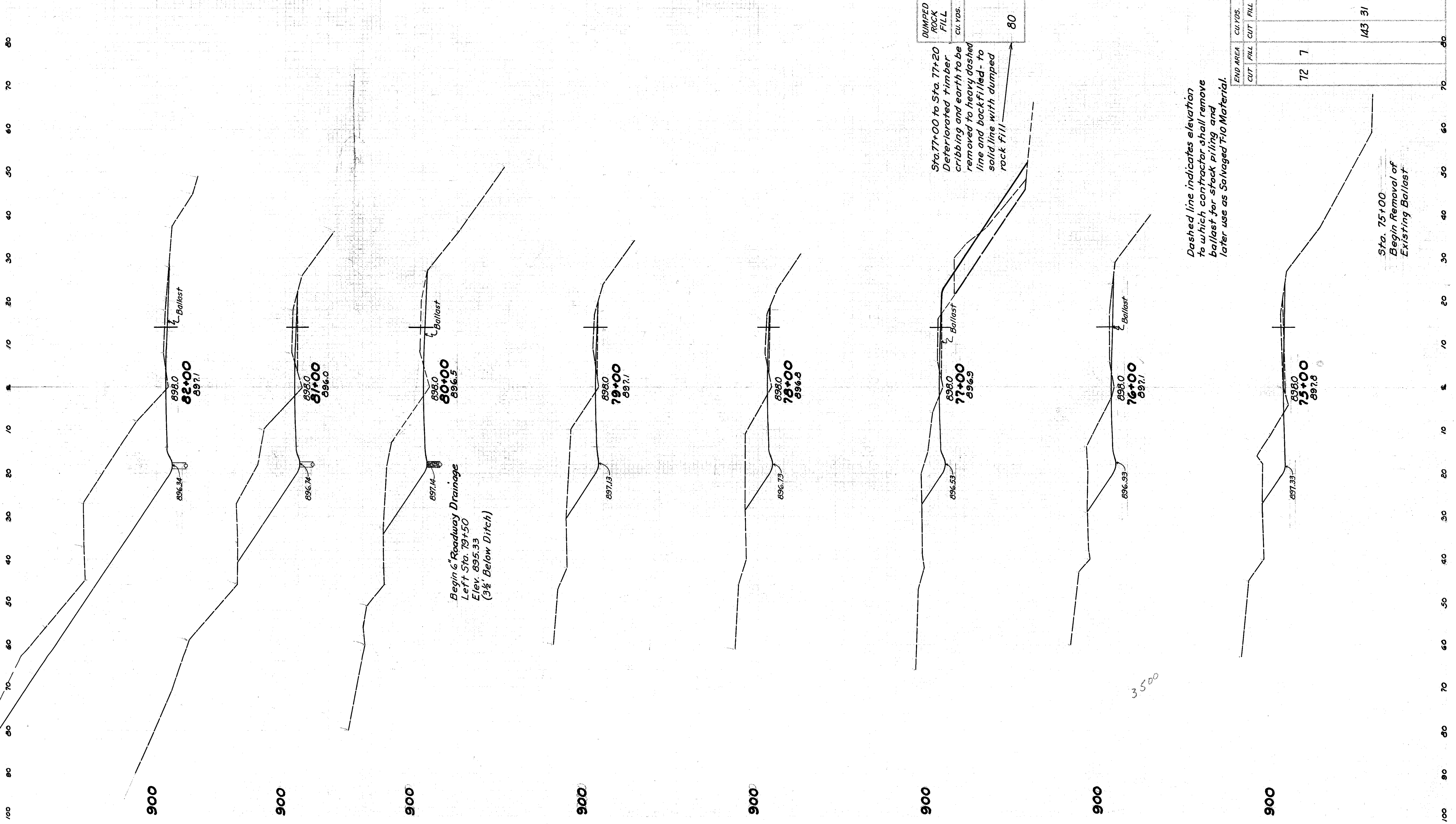
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
5	10		
		0	0
		43	191
18	93		
		102	398
37	122		
		135	391
36	89		
		100	220
18	30		
		120	206
47	81		
		181	307
51	85		
		169	278
40	65		

FROM STA. 57+00 TO STA. 74+00

END AREA	CUT	FILL	CUT	FILL
			2811	11
			620	2
			159	22
			242	10
			752	28
			164	5
			528	22
			121	7
			409	28
			100	8
			302	28
			60	
			302	19
			100	3
			319	19

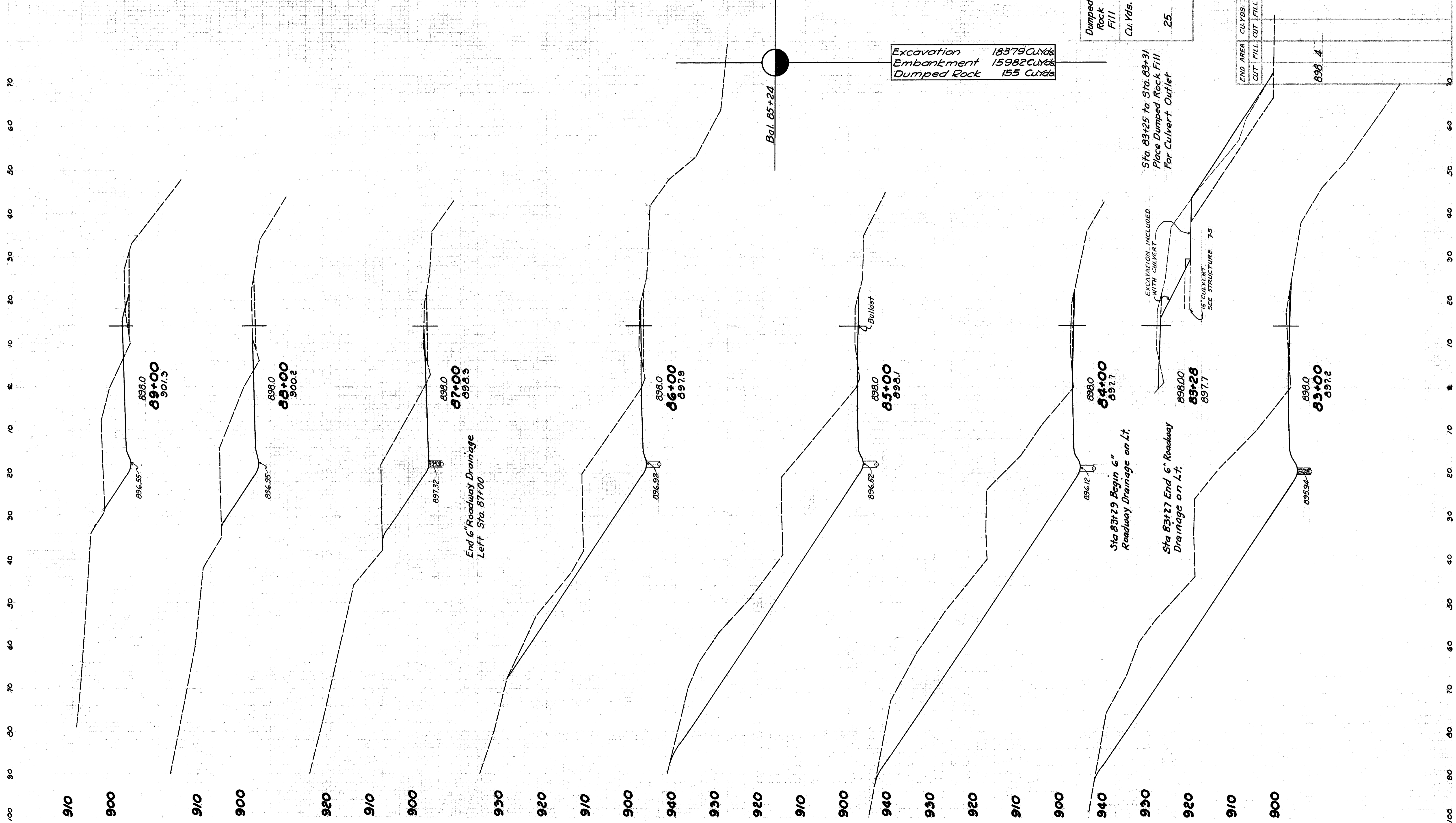
DIV. 2 OHIO 1947 18 56
TUSCARAWAS COUNTY
S.H. 712 SEC-N (PT) & O (PT)
DOVER BASIN (UNIT)

END AREA	CUT	FILL	CUT	FILL
			72	7
			143	31



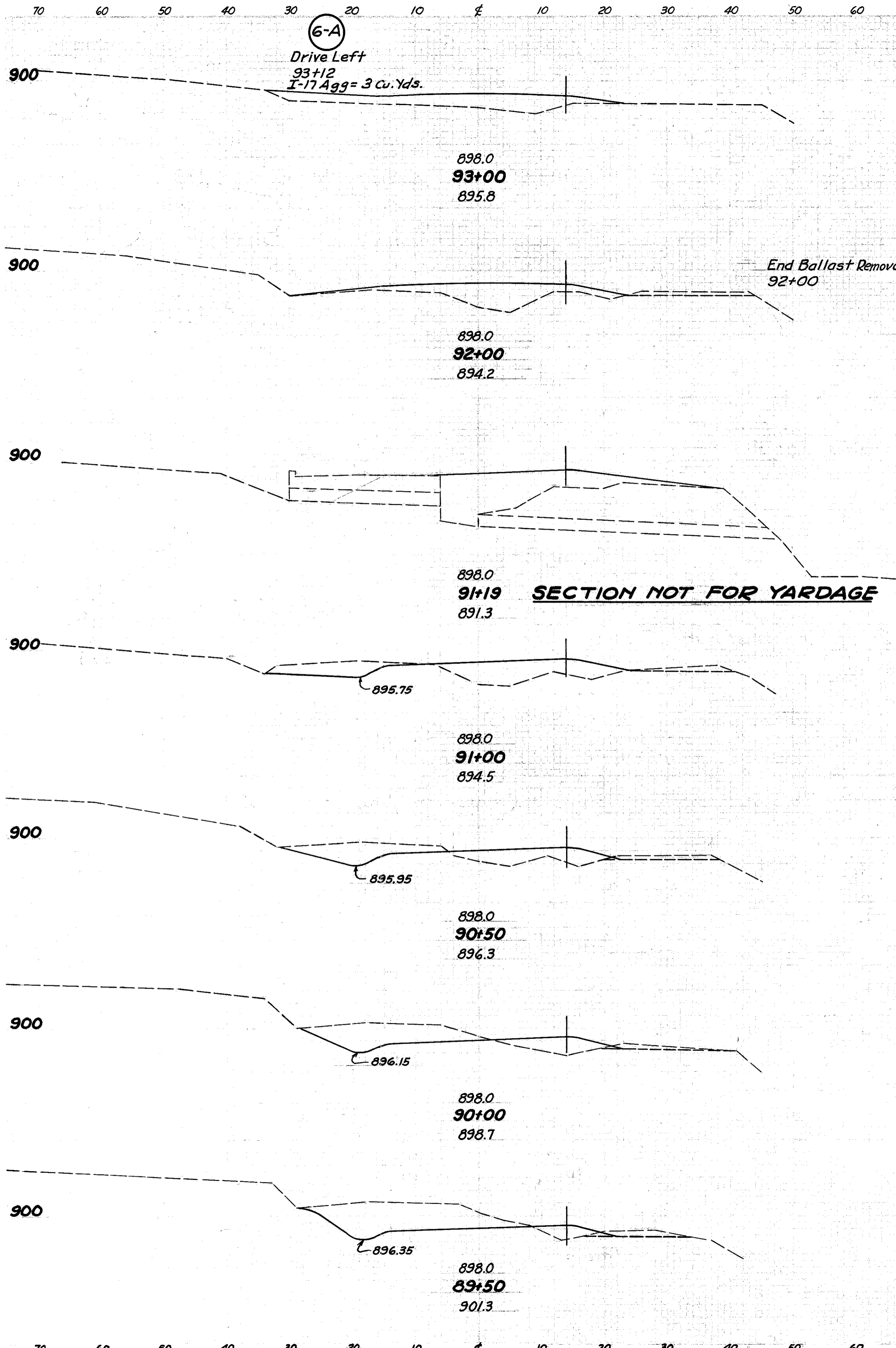
FROM STA. 75+00 TO STA. 82+00

END AREA	CUT	FILL	CUT	FILL
			236	28
	140	14		
			594	54
	181	15		
			707	48
	201	11		
			1000	39
	339	10		
			668	1
			2793	4
			20	
			3219	9

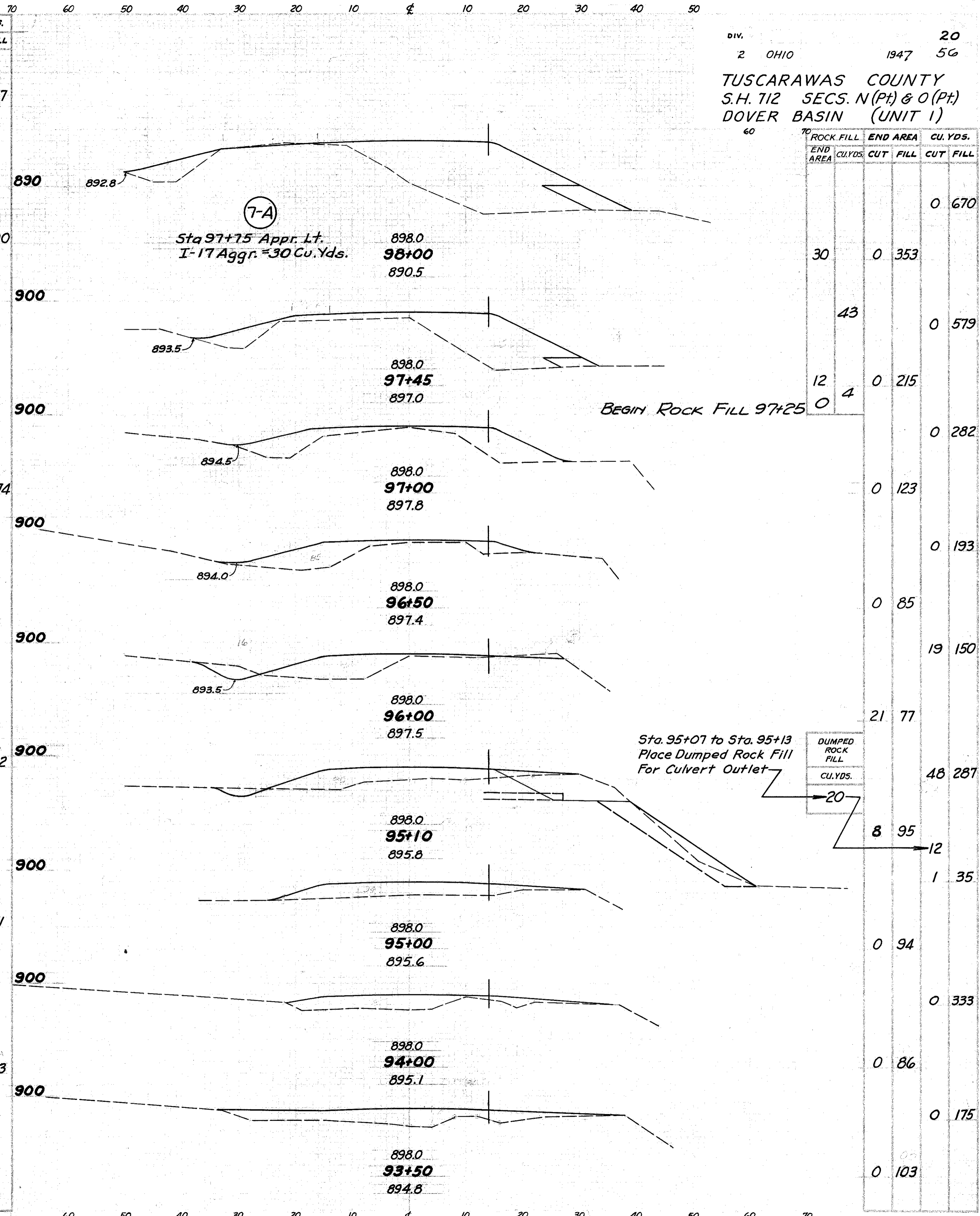


FROM STA. 83+00 TO STA. 89+00

DIV. 2 OHIO 1947 20 56
 TUSCARAWAS COUNTY
 S.H. 712 SECS. N (Pt) & O (Pt)
 DOVER BASIN (UNIT 1)



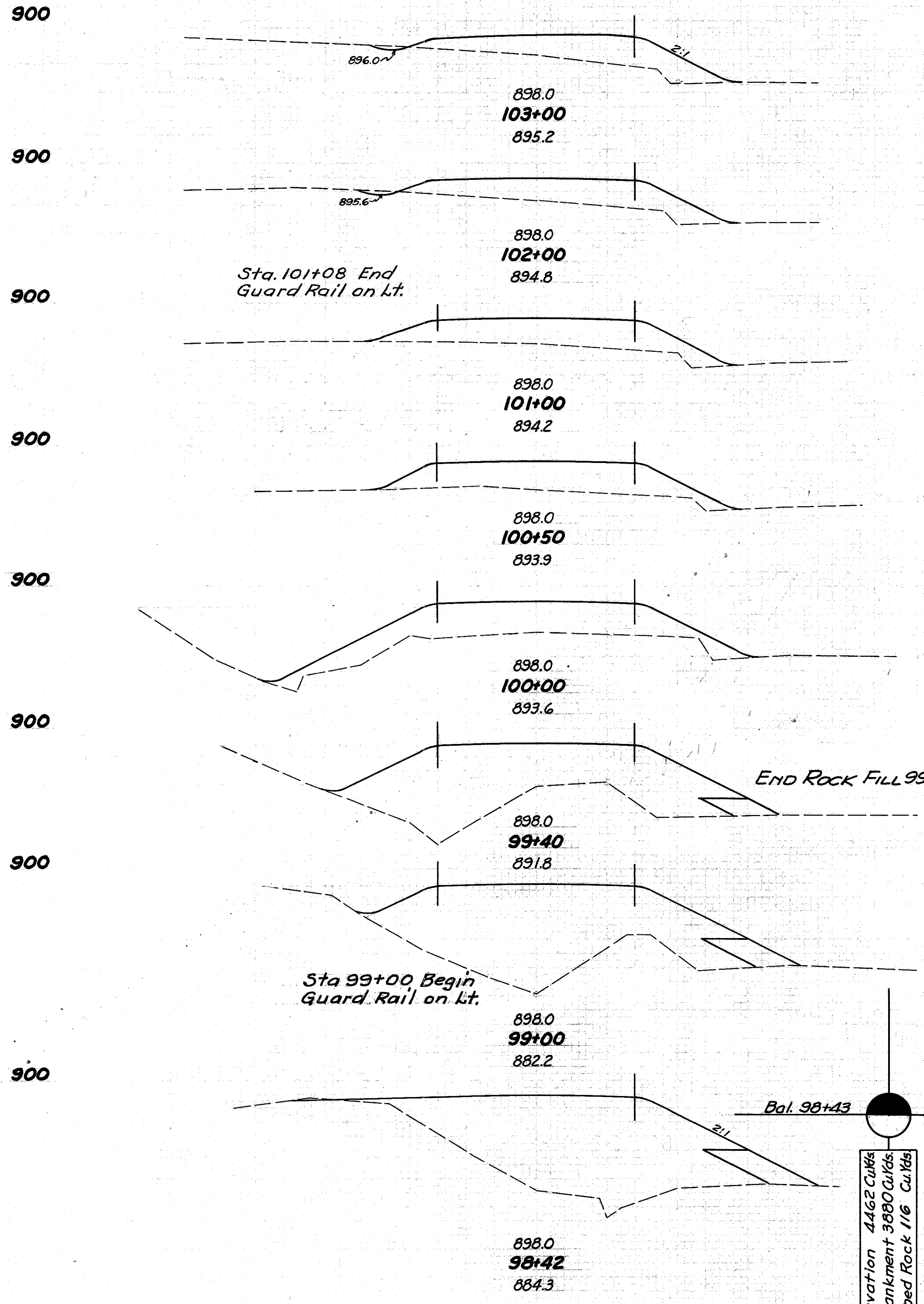
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	177	0	177
0	88	0	88
0	300	0	300
0	74	0	74
61	274	61	274
33	74	33	74
73	112	73	112
46	47	46	47
112	71	112	71
75	30	75	30
176	43	176	43
115	16	115	16



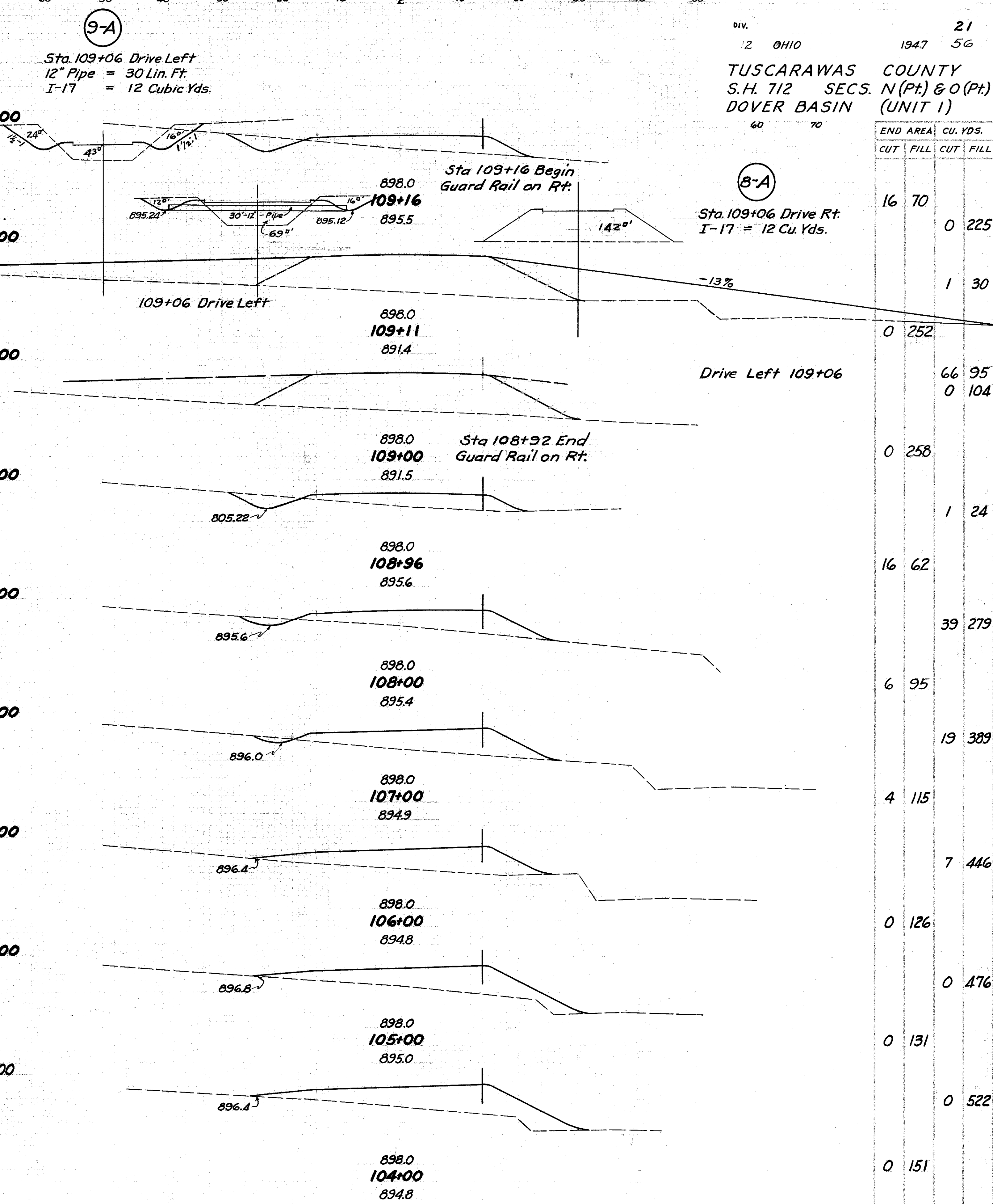
ROCK FILL		END AREA		CU. YDS.	
END AREA	CU. YDS.	CUT	FILL	CUT	FILL
					0 670
30		0	353		
	43				0 579
12		0	215		
	4				0 282
					0 123
					0 193
					0 85
					19 150
					21 77
					48 287
20					8 95
					12 35
					0 94
					0 333
					0 86
					0 175
					0 103

FROM STA. 89+50 TO STA. 98+00

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



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
4	502		
2	120		
7	457		
2	127		
4	517		
0	152		
0	287		
0	158		
0	359		
0	230		
0	711		
7	0		
15	0		
30	0		
25	0		
60	0		
0	1046		
0	1061		
0	15		
32	0		
48	0		



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
16	70		
		0	225
		1	30
0	252		
		66	95
		0	104
0	258		
		1	24
16	62		
		39	279
6	95		
		19	389
4	115		
		7	446
0	126		
		0	476
0	131		
		0	522
0	151		

9-A

Sta. 109+06 Drive Left
 12" Pipe = 30 Lin. Ft.
 I-17 = 12 Cubic Yds.

DIV. 21
 12 OHIO 1947 56
 TUSCARAWAS COUNTY
 S.H. 712 SECS. N (Pt.) & O (Pt.)
 DOVER BASIN (UNIT 1)

B-A

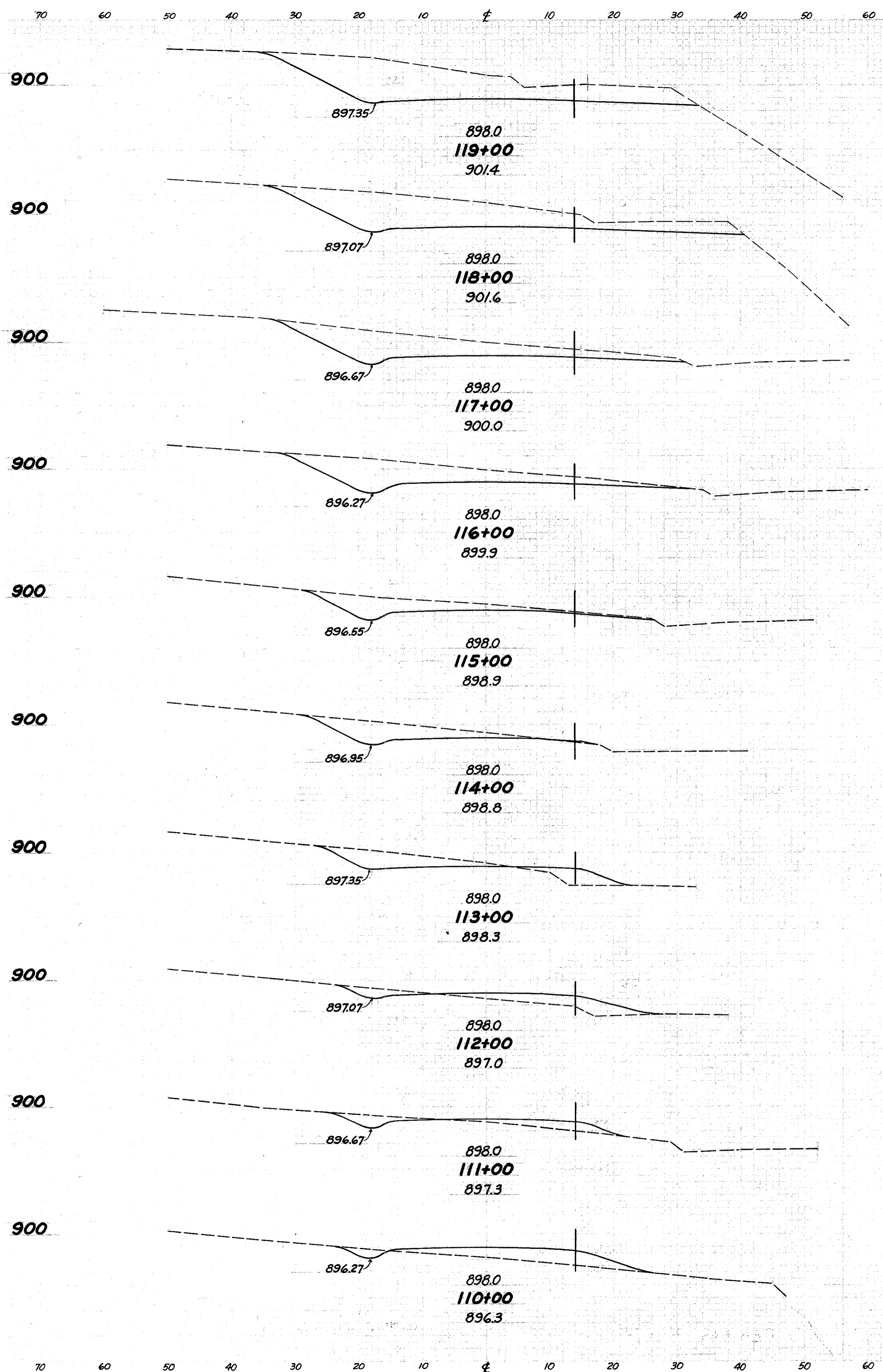
Sta. 109+06 Drive Rt.
 I-17 = 12 Cu. Yds.

ROCK FILL
 END AREA
 CU. YDS.

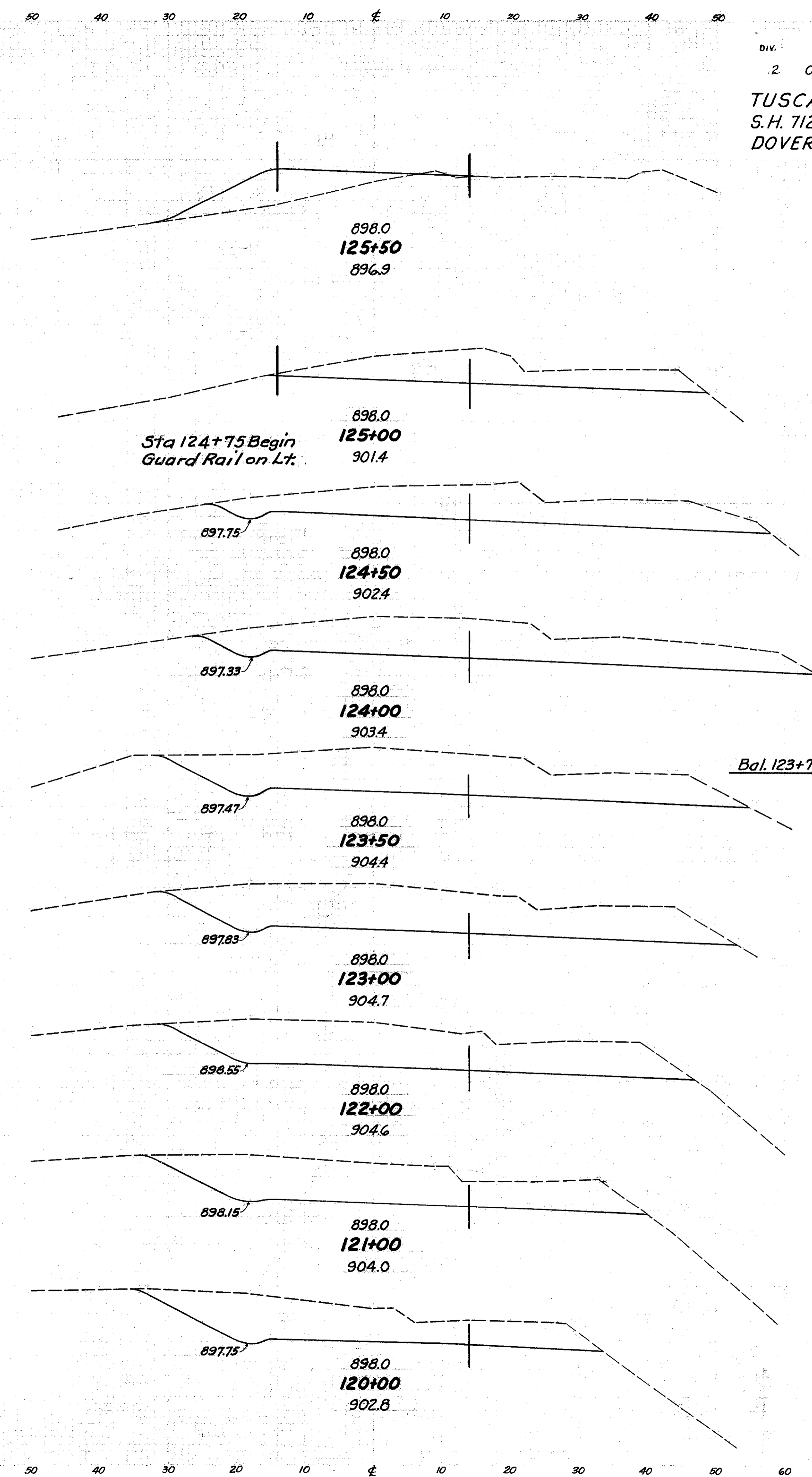
Excavation 4462 Cu Yds
 Embankment 3880 Cu Yds
 Dumped Rock 116 Cu Yds

FROM STA. 98+42 TO STA. 109+16

DIV. 22
 2 OHIO 1947 56
 TUSCARAWAS COUNTY
 S.H. 712 SECS. N(PH) & O(PH)
 DOVER BASIN (UNIT 1)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
222	0		
804	0		
212	0		
633	0		
130	0		
467	0		
122	0		
341	0		
62	0		
219	2		
56	1		
181	44		
42	23		
100	117		
12	40		
48	115		
14	22		
37	141		
6	54		
34	193		



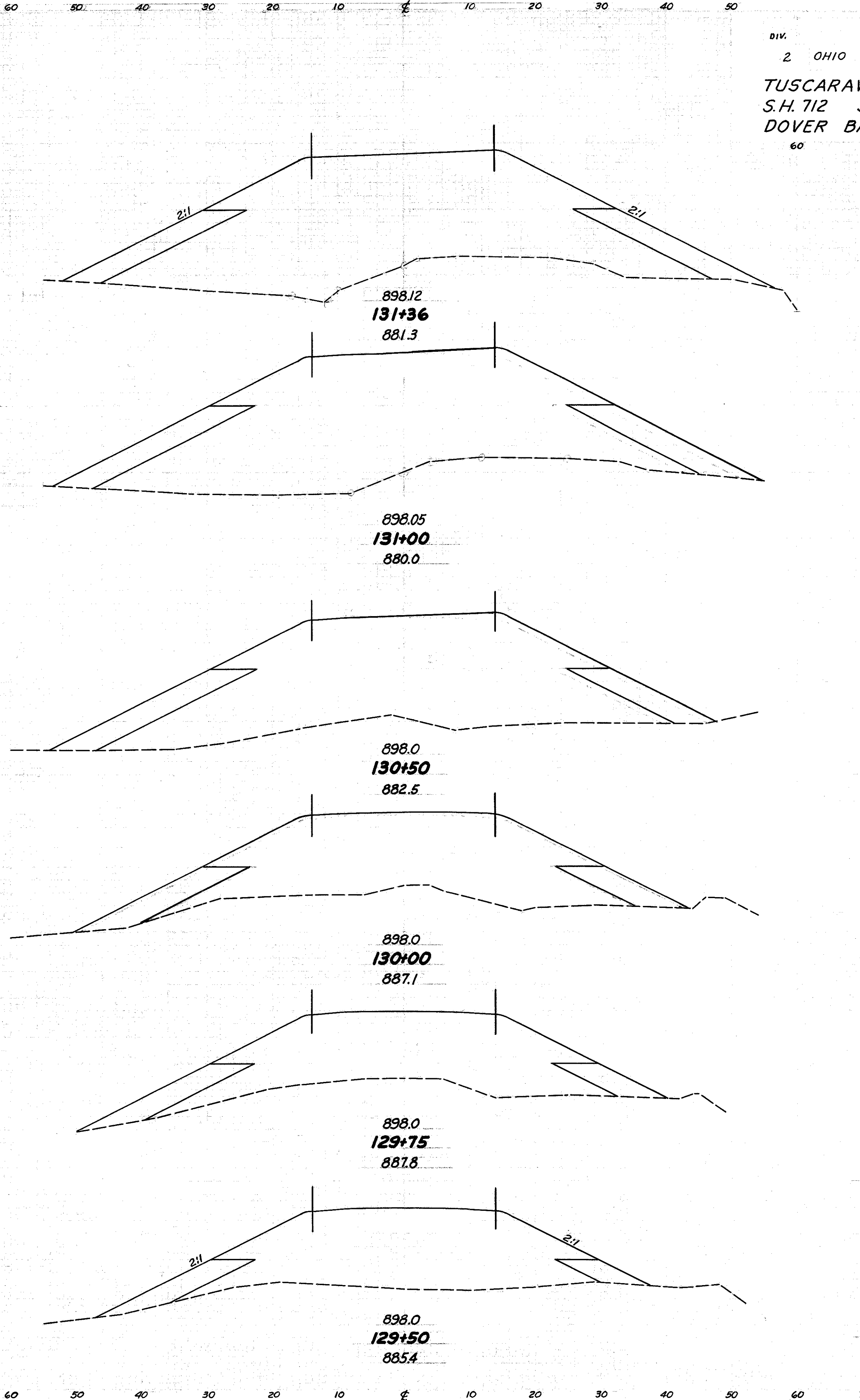
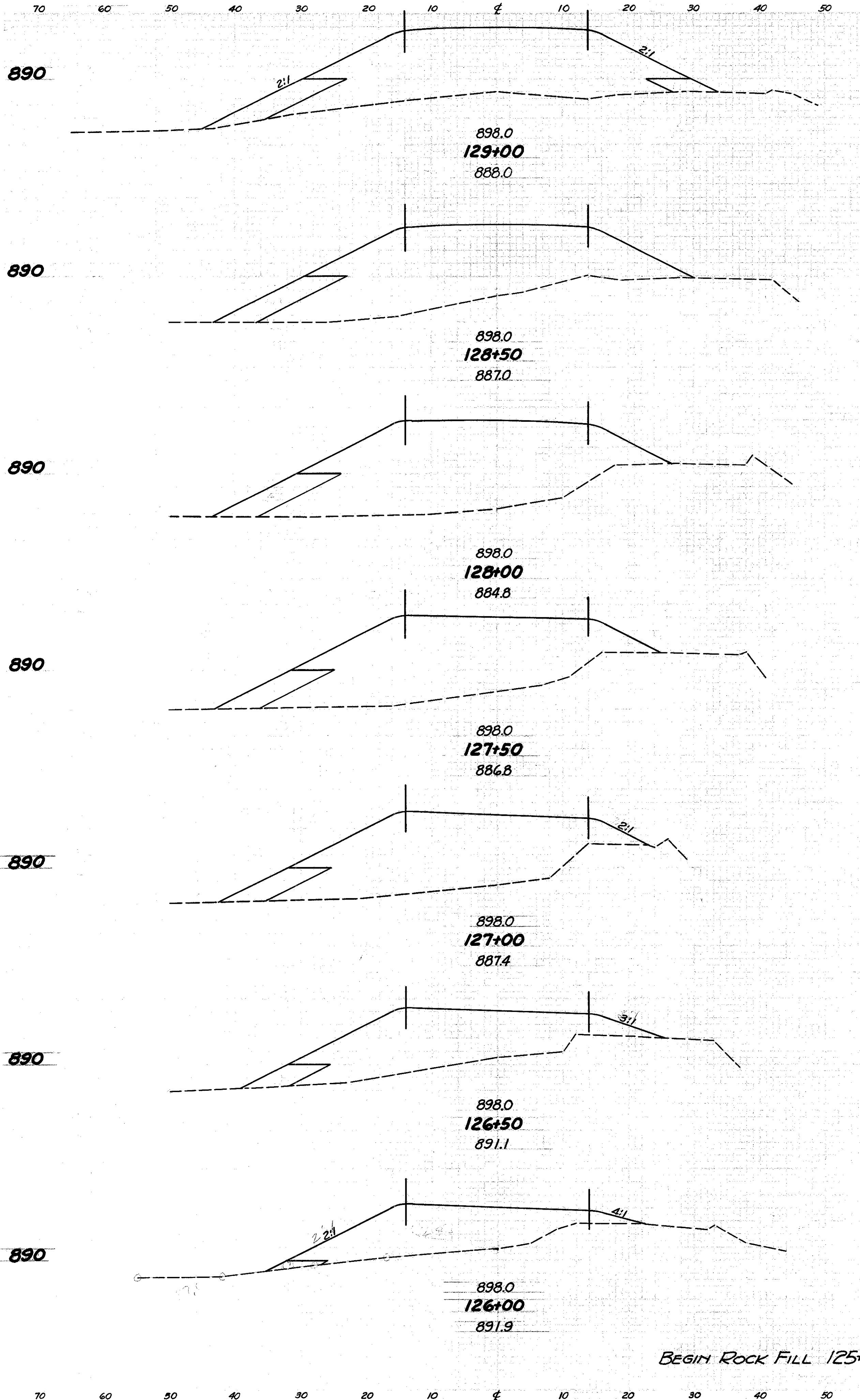
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1	93		
		168	86
180	0		
435	0		
290	0		
606	0		
365	0		
346	0		
699	0		
353	0		
390	0		
727	0		
395	0		
1435	0		
380	0		
1333	0		
340	0		
1130	0		
270	0		
911	0		

Excavation 890 Cu.Yds.
 Embankment 7140 Cu.Yds.
 Dumped Rock 97 Cu.Yds.

FROM STA. 110+00 TO STA. 125+50

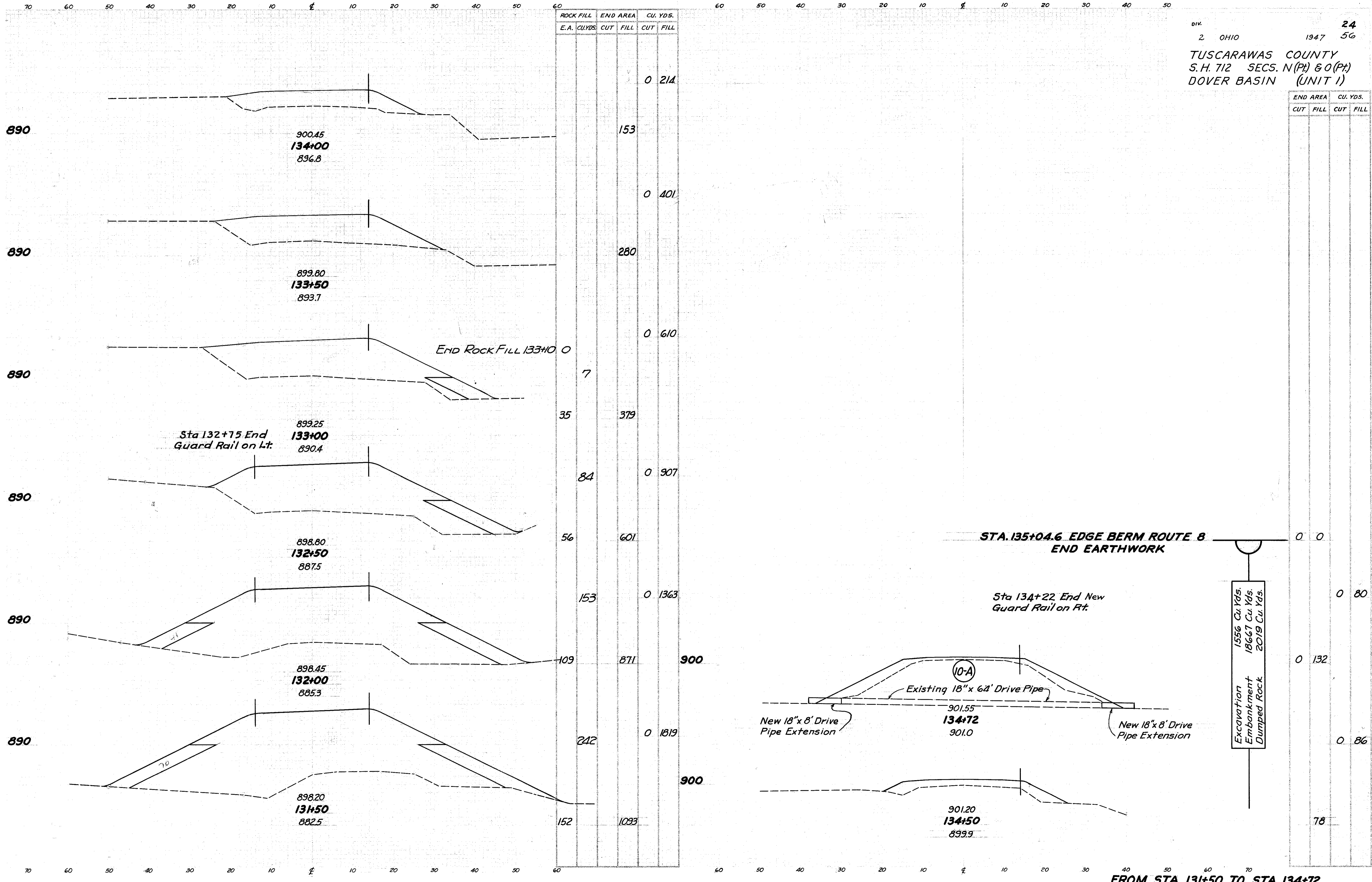
DIV. 2 OHIO 1947 56
 TUSCARAWAS COUNTY
 S.H. 712 SECS. N(Pt) & O(Pt)
 DOVER BASIN (UNIT 1)

ROCK FILL END AREA	CU. YDS.		END AREA		CU. YDS.
	CUT	FILL	CUT	FILL	
142	0	1012			
68	0	526			
107	0	1003			
47	0	557			
82	0	1058			
42	0	586			
74	0	1024			
38	0	520			
71	0	894			
39	0	445			
57	0	718			
22	0	330			
27	0	532			
7	0	245			
1	0	313			



ROCK FILL END AREA	CU. YDS.		END AREA		CU. YDS.
	CUT	FILL	CUT	FILL	
78	0	571			
150	0	1110			
210	0	1481			
165	0	1112			
281	0	1920			
138	0	962			
223	0	1496			
103	0	654			
94	0	560			
100	0	555			
86	0	519			
85	0	567			

FROM STA. 126+00 TO STA. 131+36



900.45
134+00
 896.8

899.80
133+50
 893.7

END ROCK FILL 133+10 0

899.25
133+00
 890.4

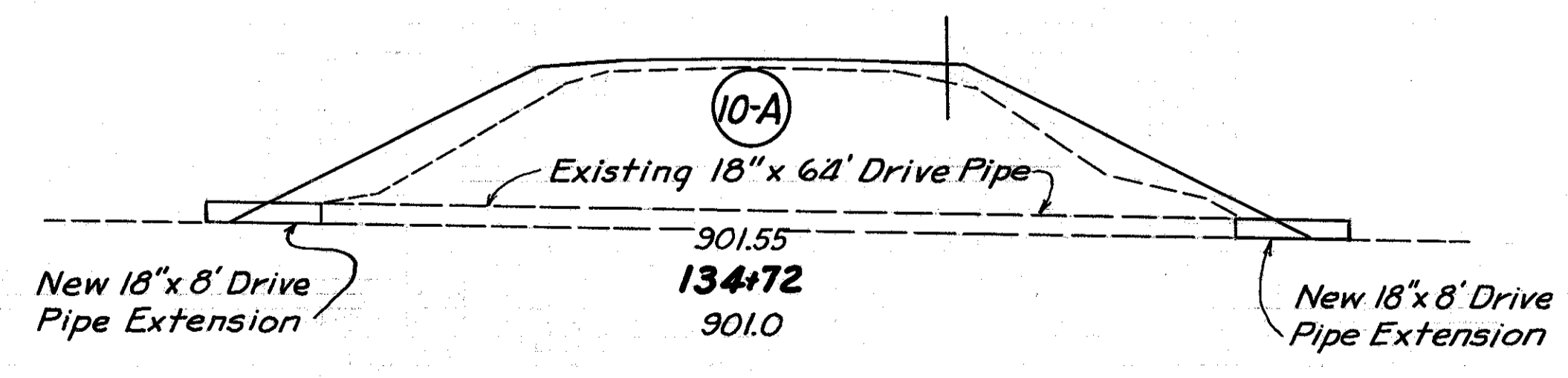
898.80
132+50
 887.5

898.45
132+00
 885.3

898.20
131+50
 882.5

STA. 135+04.6 EDGE BERM ROUTE 8
END EARTHWORK

Sta 134+22 End New
 Guard Rail on Rt.



901.20
134+50
 899.9

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

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

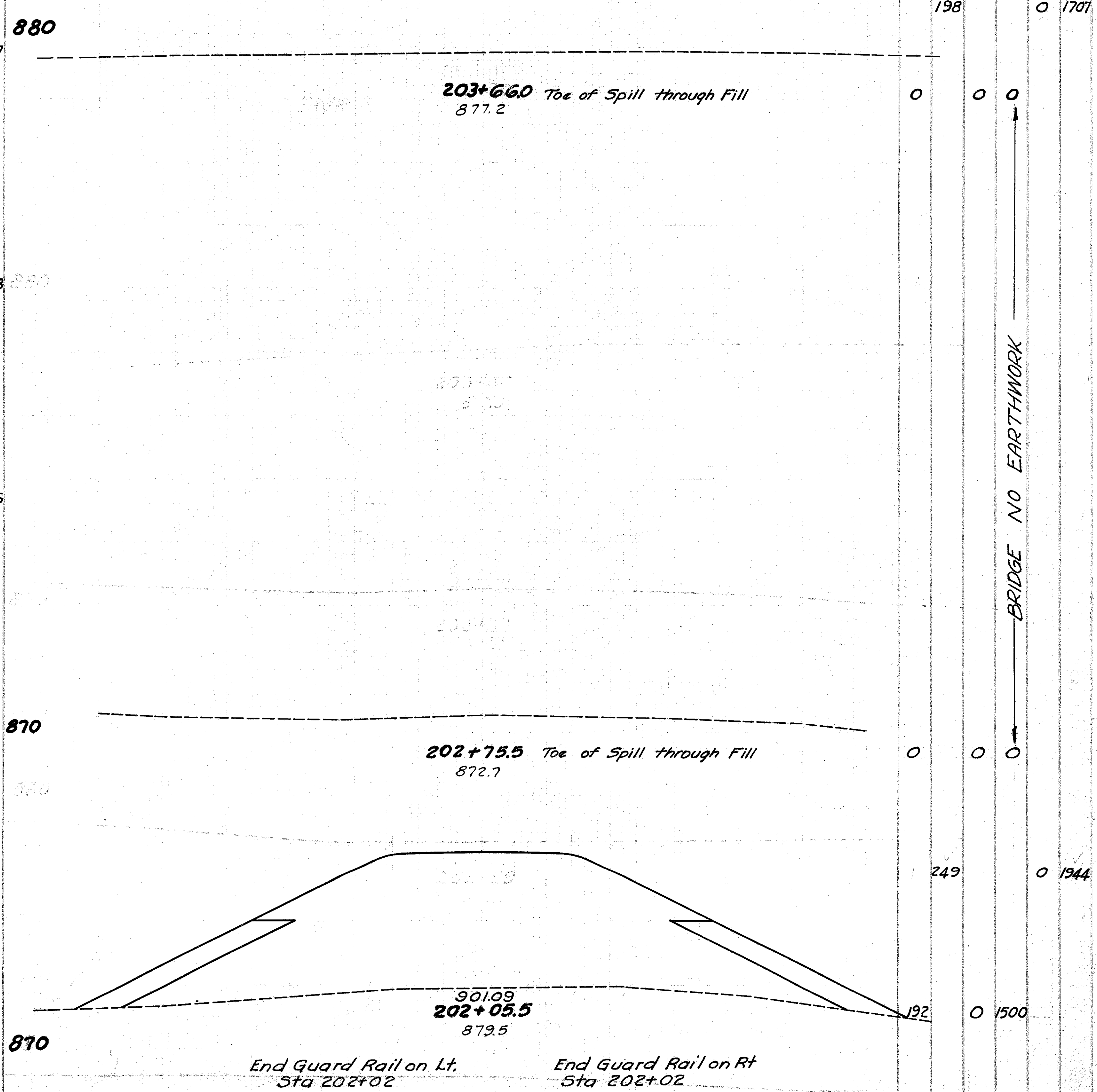
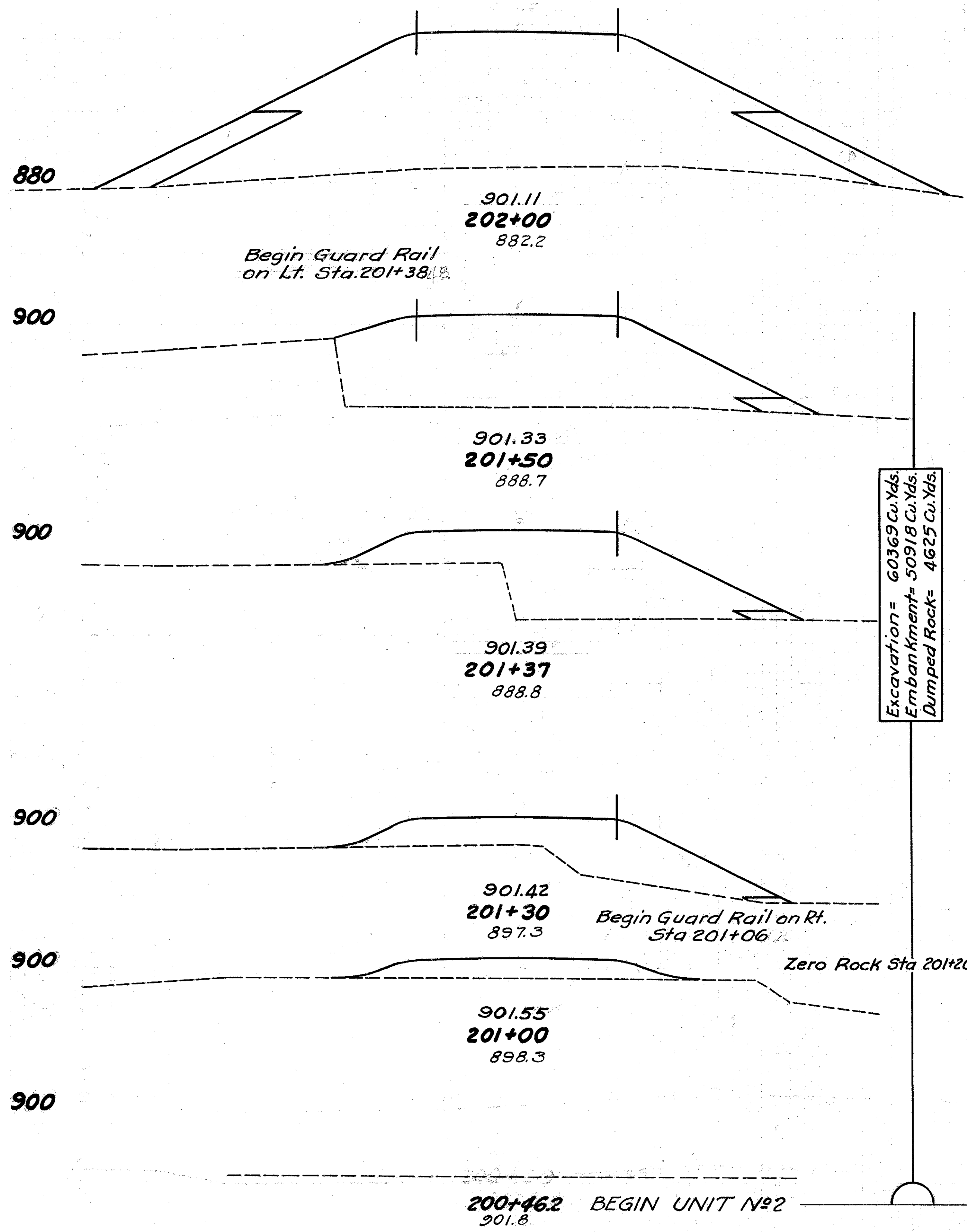
DIV. 2 OHIO 1947 25 56
TUSCARAWAS COUNTY
S.H. 712 SEC-N(PT) 60(PT)
DOVER BASIN UNIT No. 2

DUMPED ROCK FILL		END AREA		CU. YDS.	
END AREA	CU. YDS.	Cut	Fill	Cut	Fill
34	0	0	277		
144	0	0	1216		
146	0	0	1728		
14	0	0	650		
5	0	0	256		
8	0	0	415		
2	0	0	90		
4	0	0	282		
1	0	0	217		
0	0	0	108		
0	0	0	108		
0	0	0	0		

DUMPED ROCK FILL		END AREA		CU. YDS.	
END AREA	CU. YDS.	Cut	Fill	Cut	Fill
198	0	0	1707		
0	0	0	0		
0	0	0	0		
0	0	0	0		
0	0	0	0		
0	0	0	0		
0	0	0	0		
249	0	0	1344		
192	0	0	1500		

880
880
900
900
900
900
900

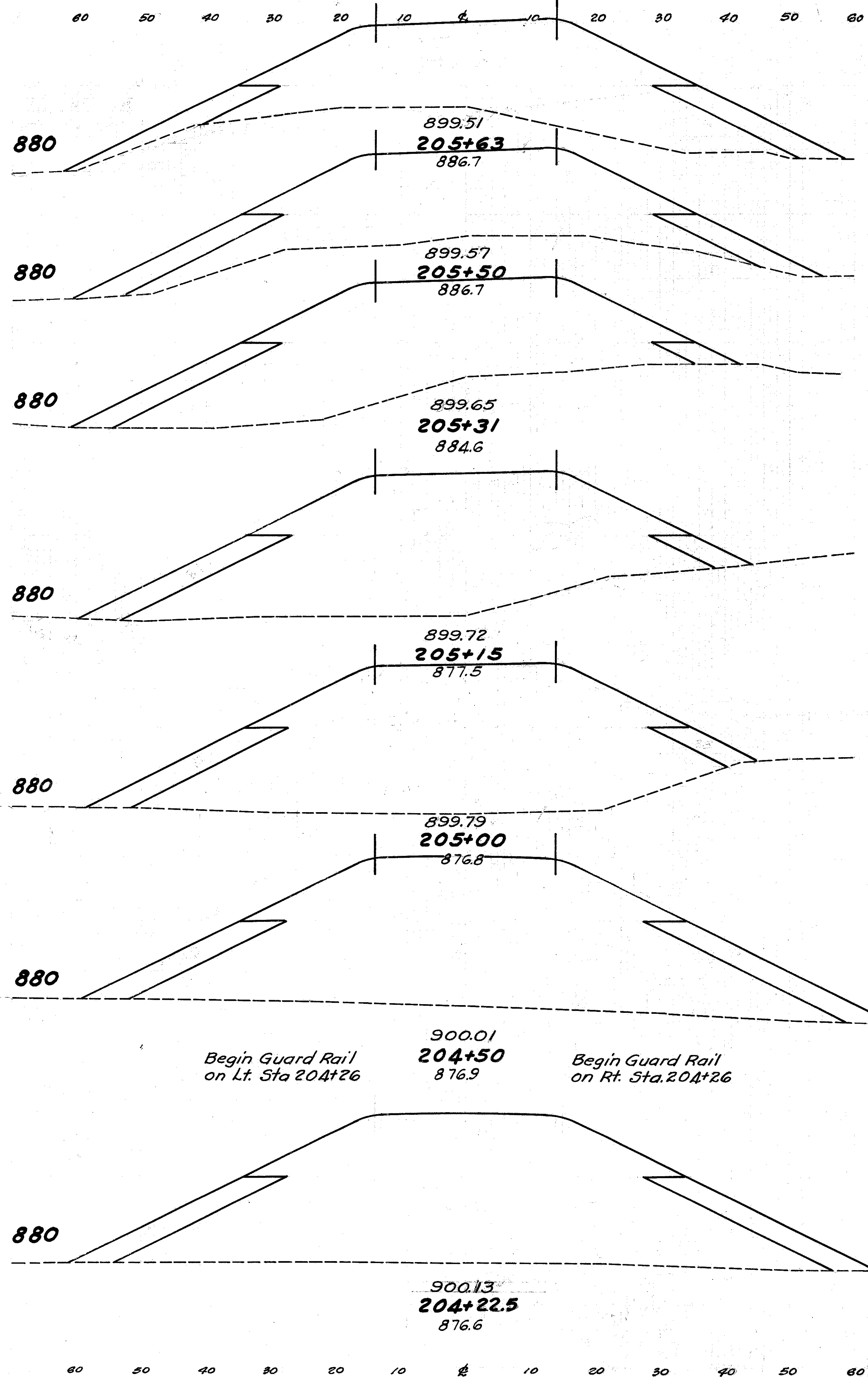
880
880
880
870
870
870



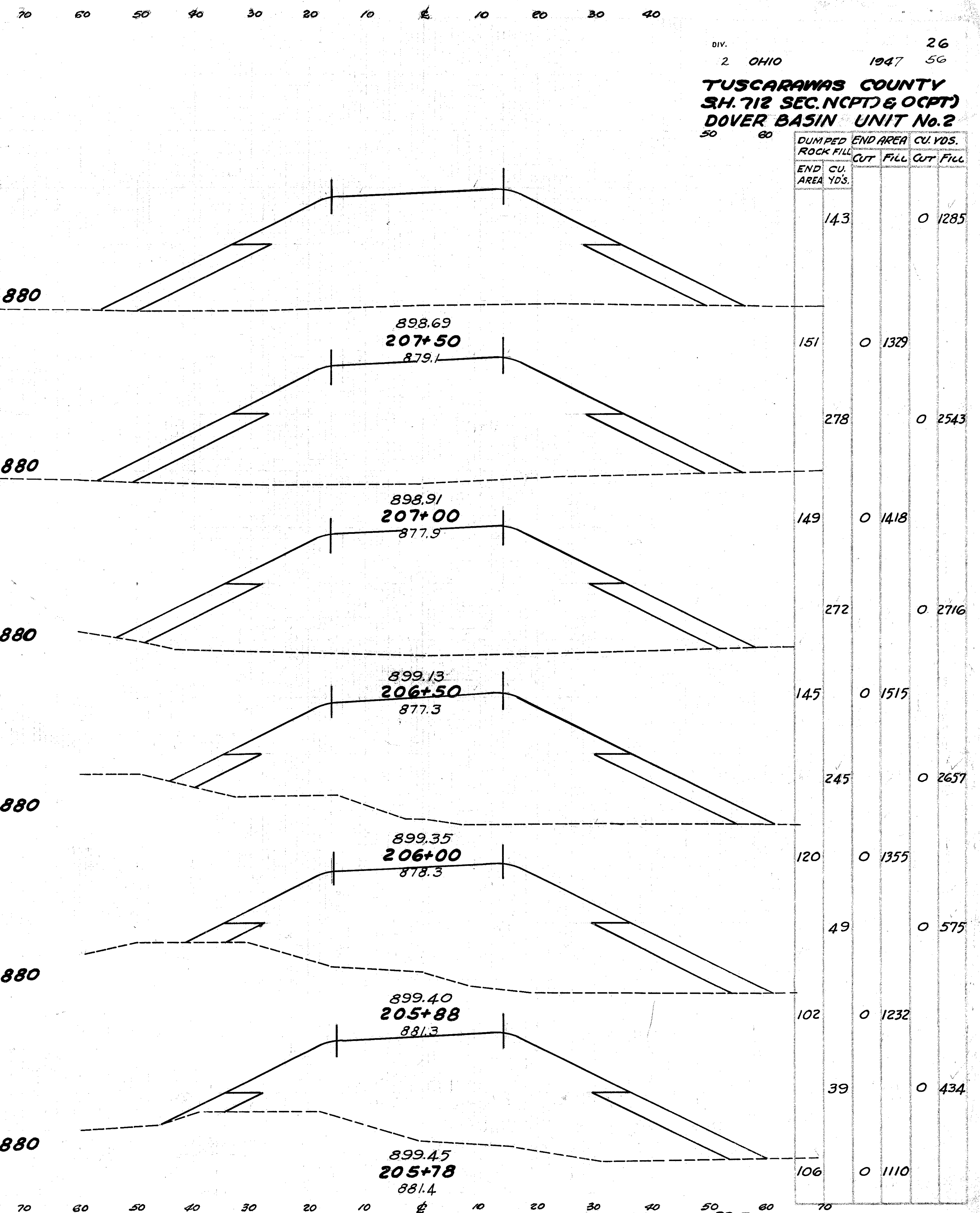
Excavation = 60369 Cu.Yds.
 Embankment = 50918 Cu.Yds.
 Dumped Rock = 4625 Cu.Yds.

BRIDGE NO EARTHWORK

STA. 200+46.2 TO STA. 203+66



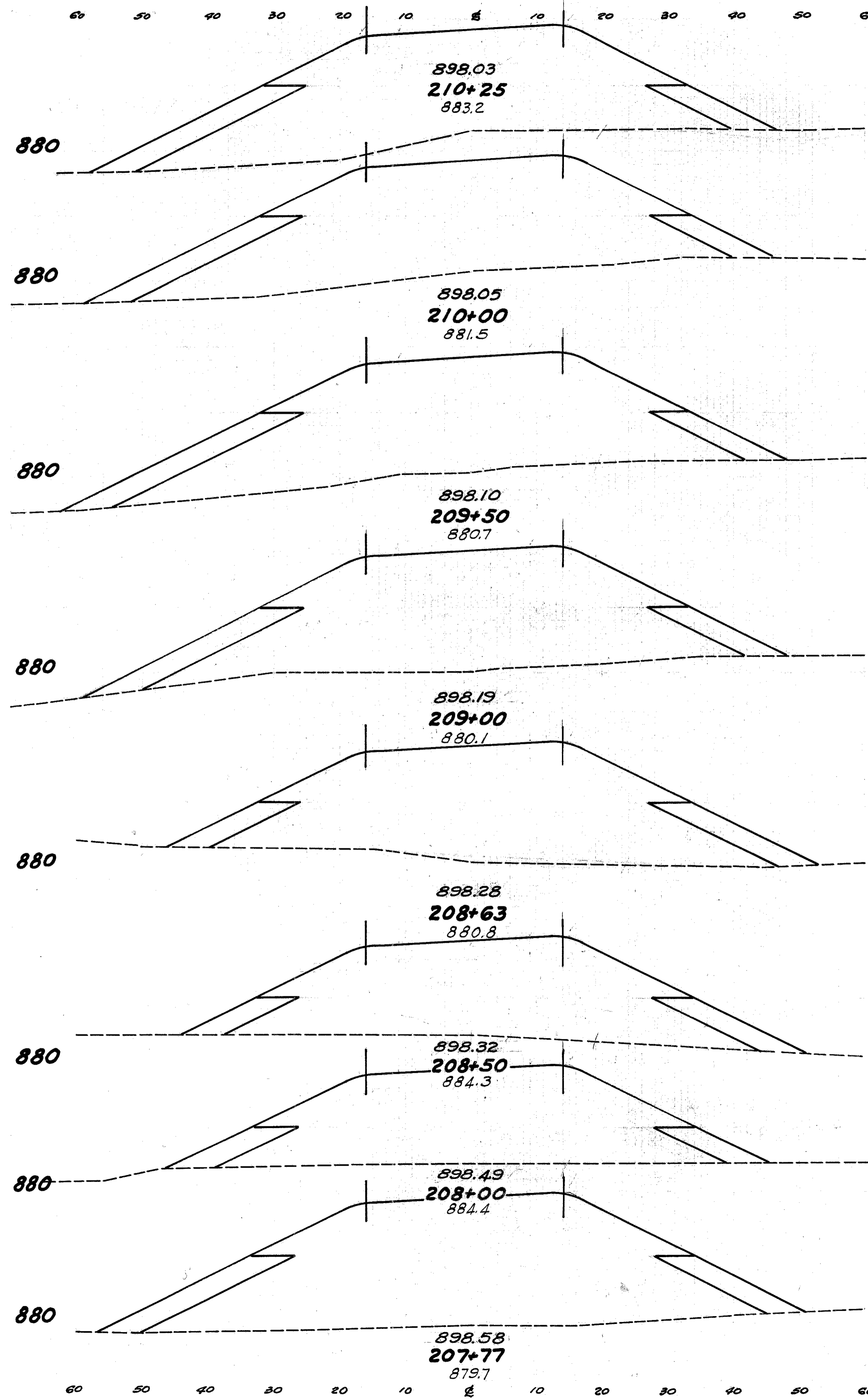
END STA.	CO. AREA YDS.	END AREA		CU. YDS.	
		CUT	FILL	CUT	FILL
71				0	569
149		0	937		
71				0	432
147		0	857		
91				0	683
112		0	1085		
69				0	708
121		0	1304		
67				0	759
120		0	1428		
284				0	2827
187		0	1625		
191				0	1658
189		0	1632		



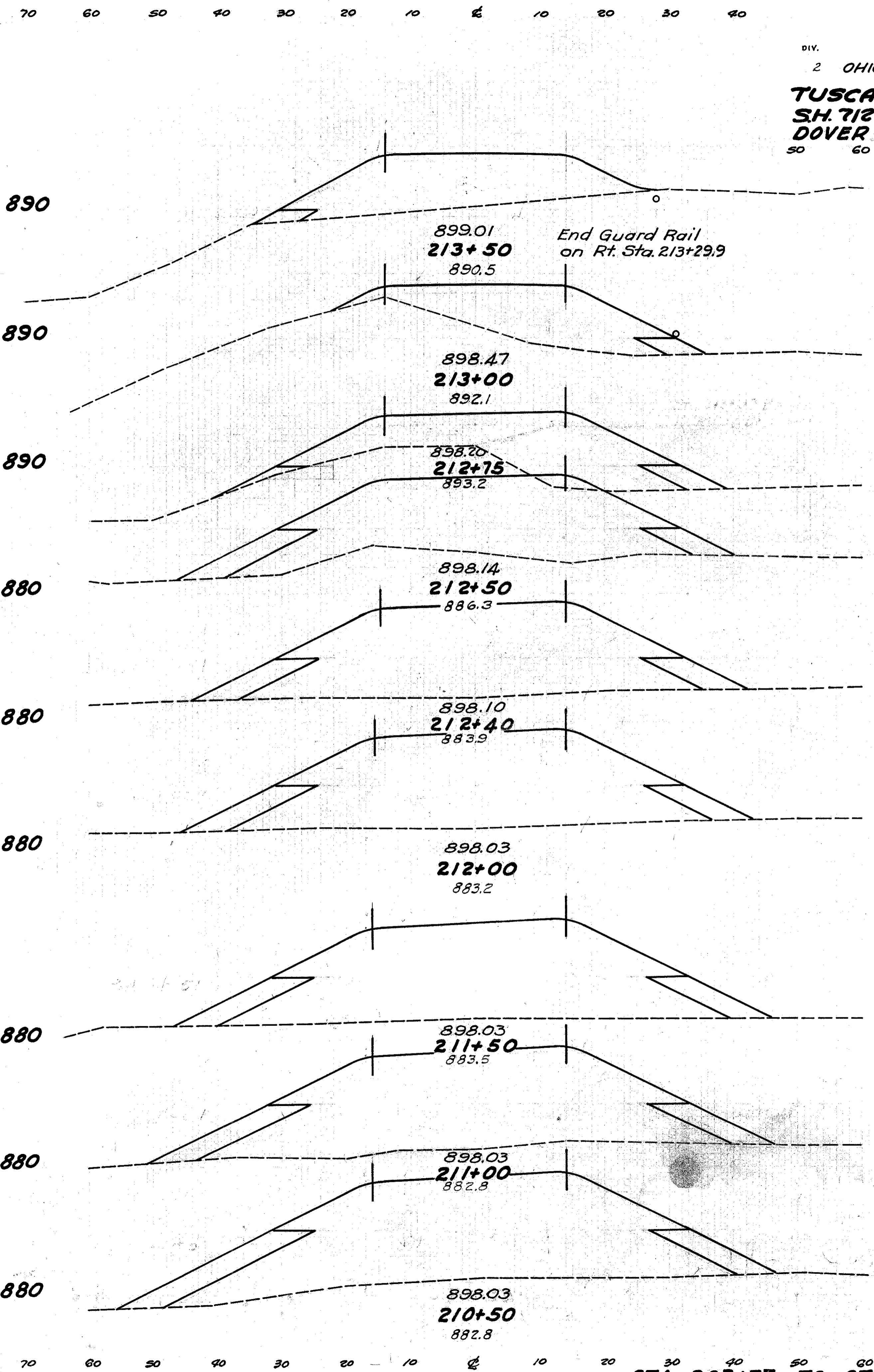
END STA.	CO. AREA YDS.	END AREA		CU. YDS.	
		CUT	FILL	CUT	FILL
143				0	1285
151		0	1329		
278				0	2543
149		0	1418		
272				0	2716
145		0	1515		
245				0	2657
120		0	1355		
49				0	575
102		0	1232		
39				0	434
106		0	1110		

Begin Guard Rail on Lt. Sta. 204+26
 900.01
204+50
 876.9
 Begin Guard Rail on Rt. Sta. 204+26

STA. 204+22.5 TO STA. 207+50



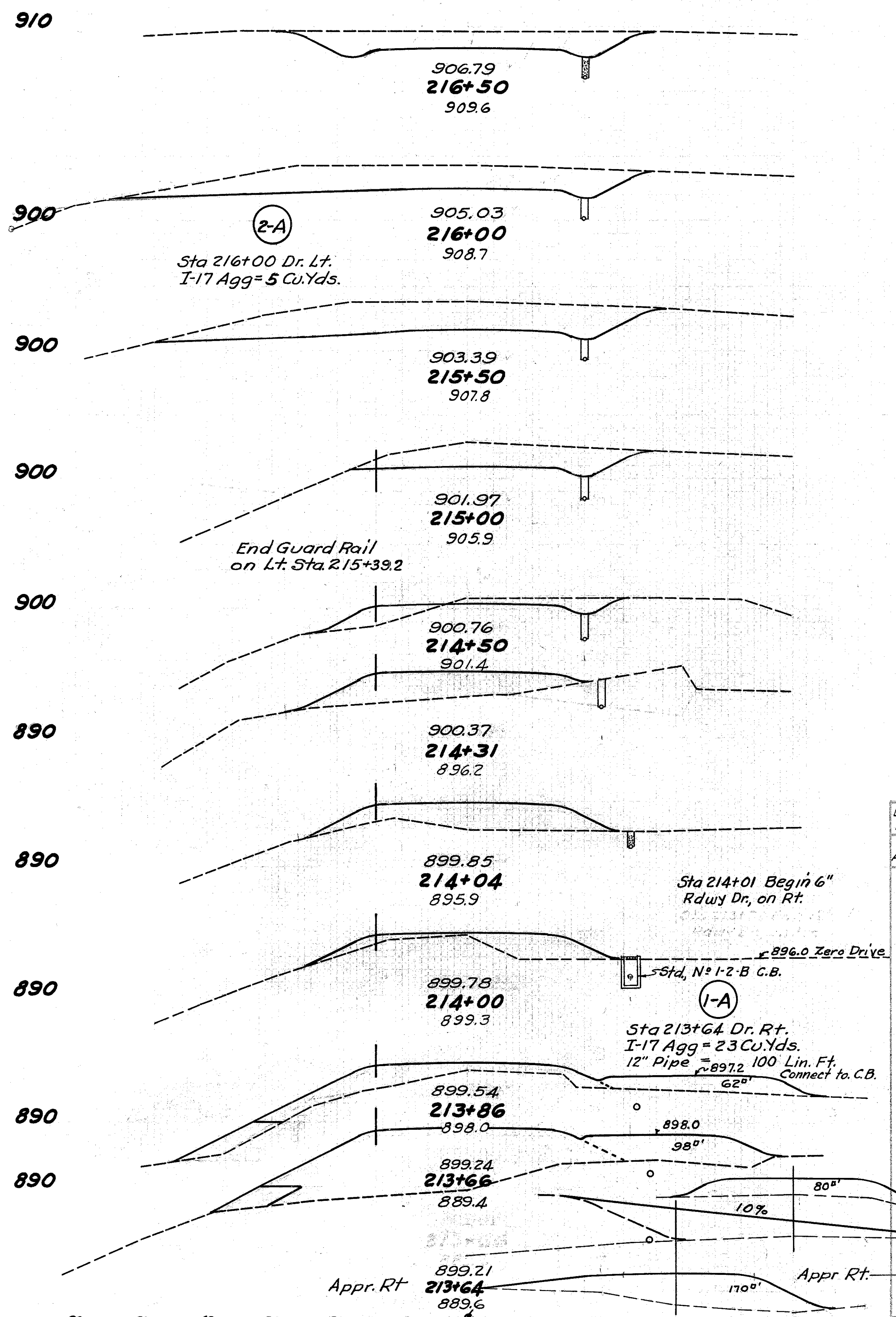
DUMPED ROCK FILL	END AREA		CU. YDS.	
	Cut	Fill	Cut	Fill
119			0	925
132	0	1024		
122			0	984
131	0	1101		
260			0	2069
150	0	1134		
268			0	2071
139	0	1103		
173			0	1468
114	0	1039		
50			0	455
94	0	850		
160			0	1564
79	0	839		
91			0	886
134	0	1241		



DUMPED ROCK FILL	END AREA		CU. YDS.	
	Cut	Fill	Cut	Fill
9			0	218
10	0	363		
23			0	606
15	0	292		
23			0	314
34	0	386		
52			0	476
79	0	643		
29			0	257
77	0	747		
120			0	1155
85	0	813		
167			0	1543
95	0	853		
184			0	1622
104	0	899		
213			0	1734
126	0	974		

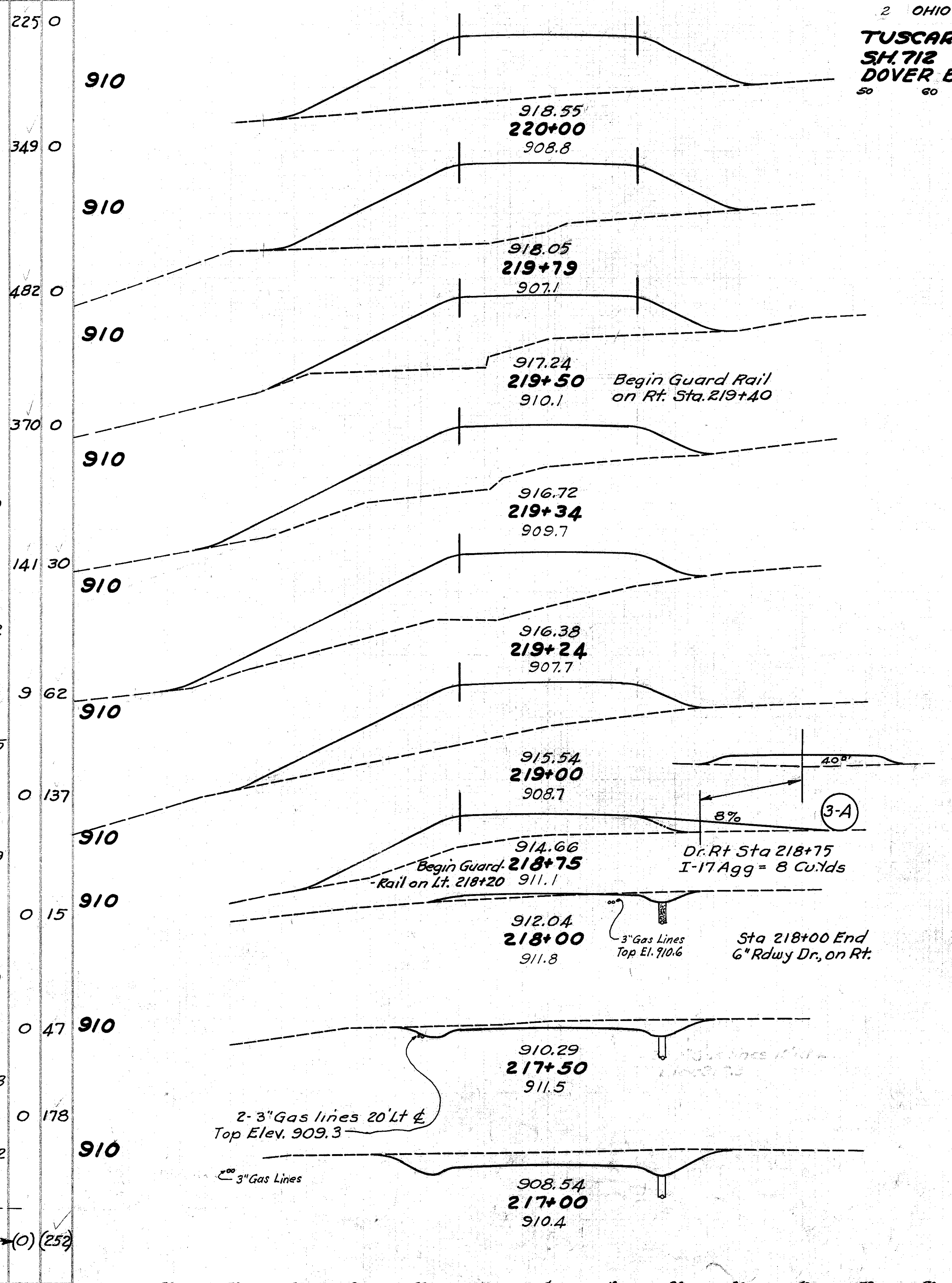
60 50 40 30 20 10 2 10 20 30 40 50 60 70

END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
0	0	225	0
130	0	349	0
247	0	482	0
274	0	370	0
126	0	141	30
26	32	9	62
0	145	0	137
0	129	0	15
0	73	9	47
36	108	21	178
21	372	21	372
0	0	0	0



DUMPED ROCK FILL
END AREA CU. YDS.

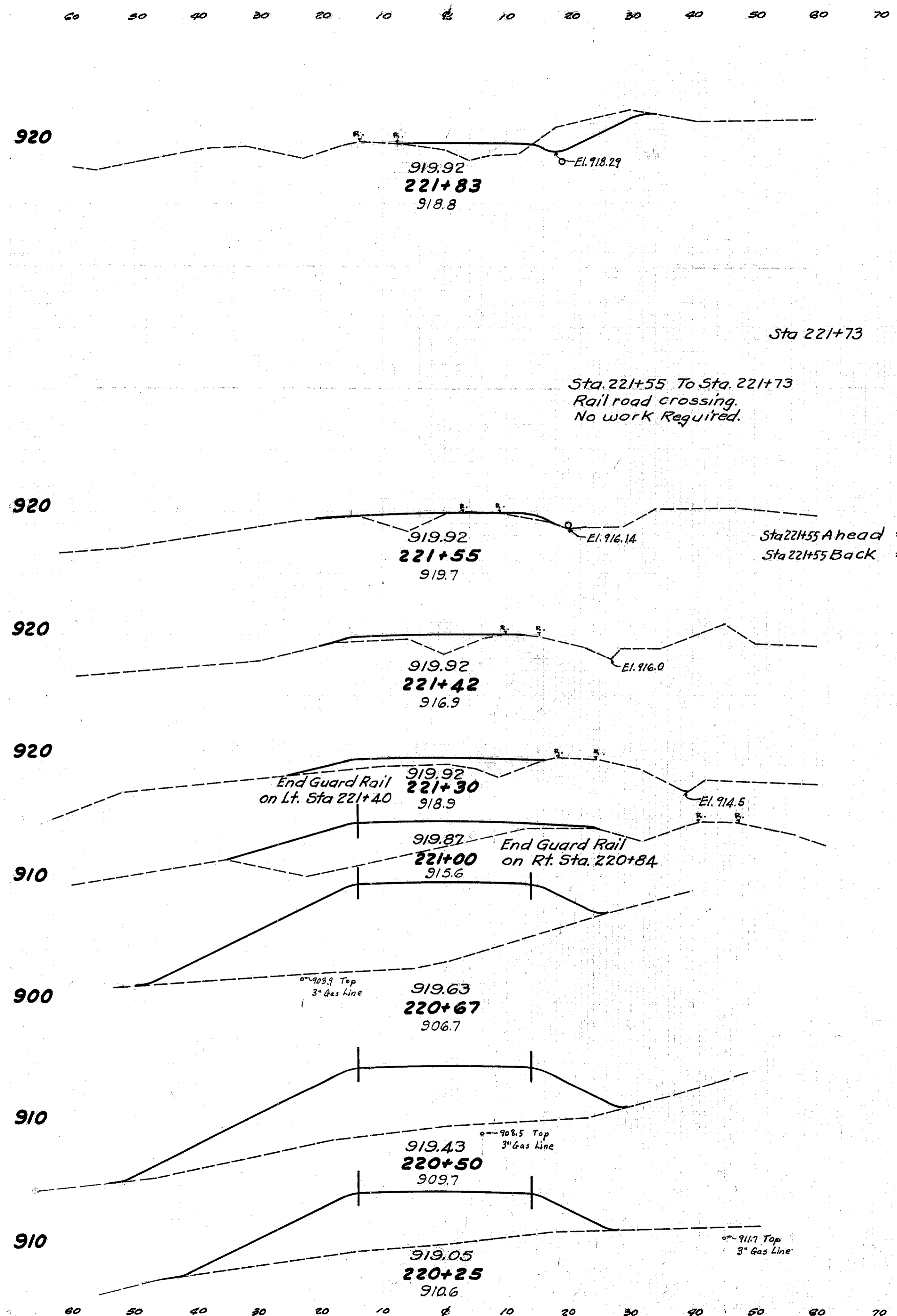
70 60 50 40 30 20 10 2 10 20 30 40



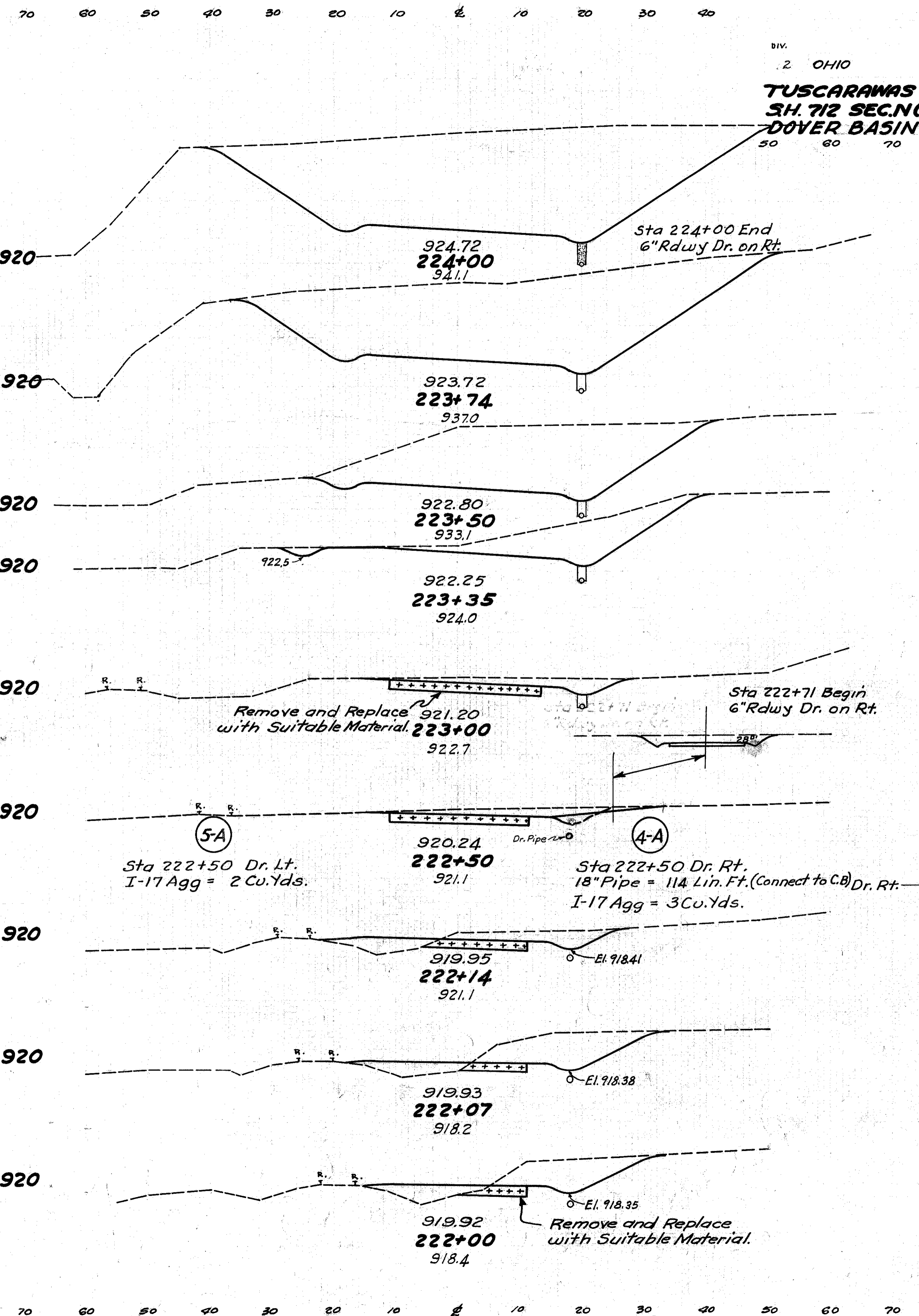
DIV. 2 OHIO 1947 56
TUSCARAWAS COUNTY
SH. 712 SEC. N (PT) & O (PT)
DOVER BASIN UNIT No. 2

END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
0	519	0	423
0	568	0	531
0	420	0	249
0	419	0	166
0	480	0	395
0	408	0	272
0	180	0	22
14	268	14	268
10	13	10	13
61	12	61	12
56	0	56	0
113	0	113	0

STA. 213+66 TO STA. 220+00



END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
		43	23
47	30		
9	5		
0	0		
0	0		
0	0		
0	15		
0	29		
0	18		
0	52		
0	154		
0	226		
0	536		
0	651		
0	385		
0	571		
0	457		
0	415		
0	432		

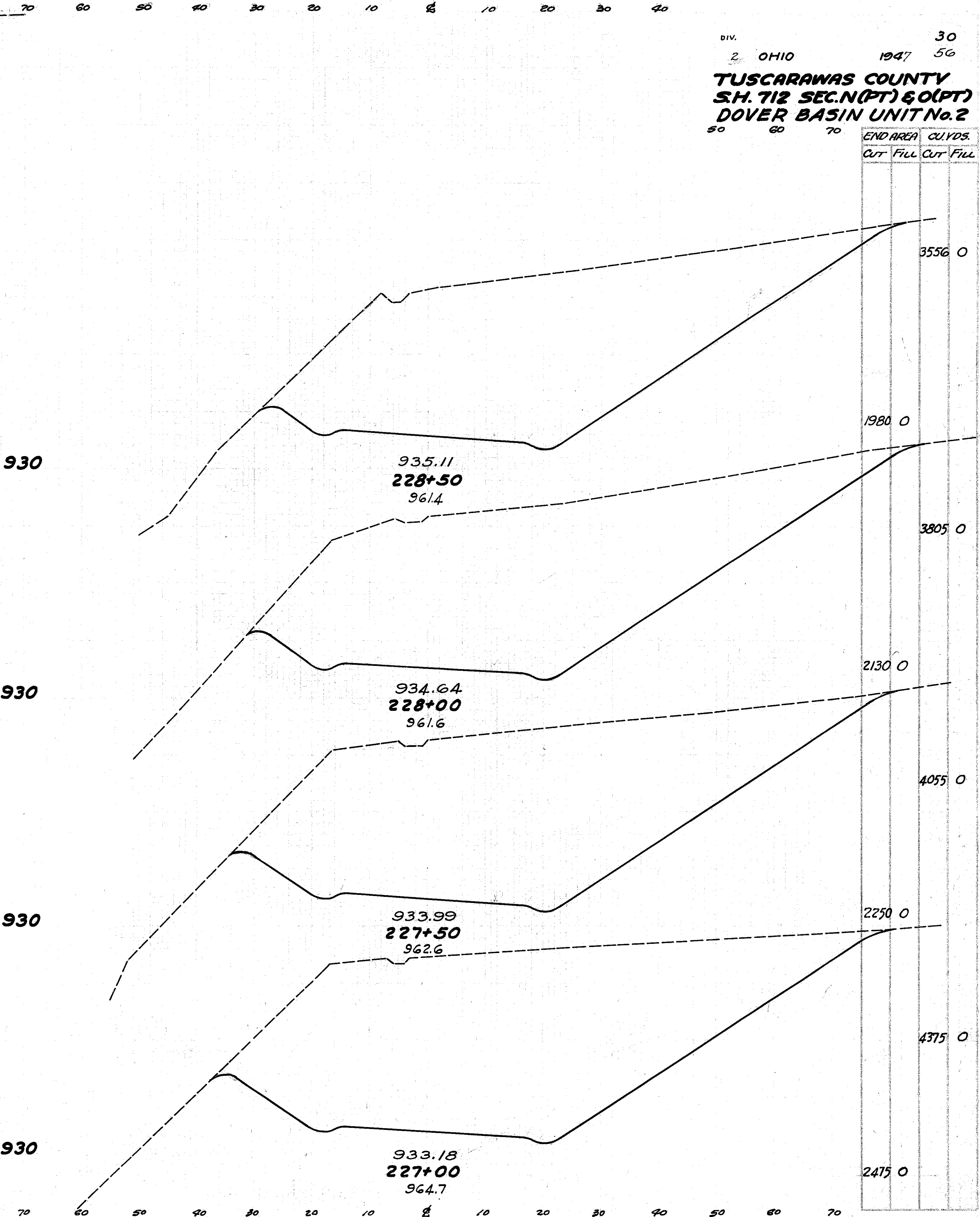
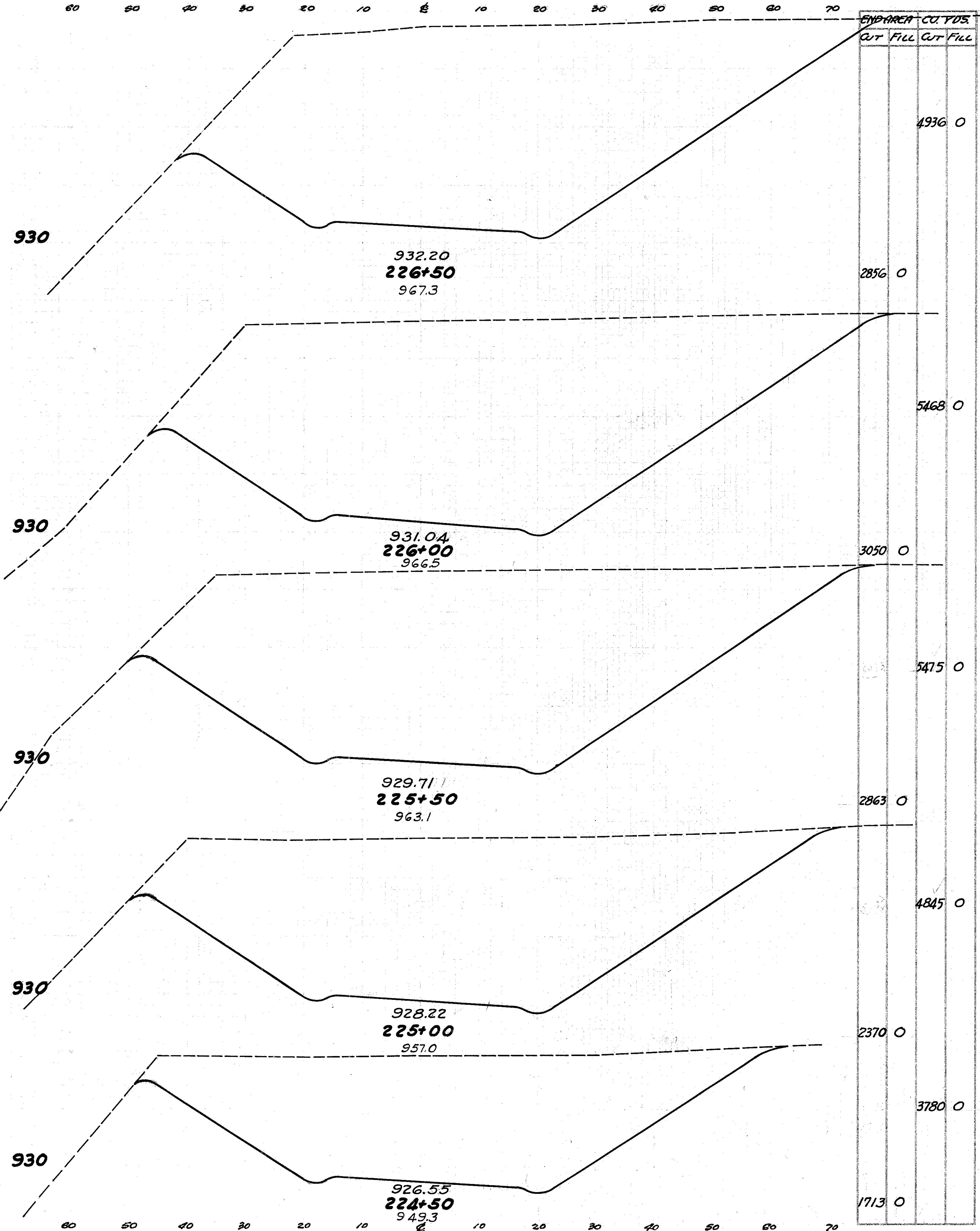


END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
		2592	0
1086	0		
		941	0
868	0		
		597	0
475	0		
177	0		
161	0		
		154	25
76	38		
		135	66
70	33		
		90	55
		65	50
		24	13
		119	48
		27	12
		91	44

DIV. 2 OHIO
 TUSCARAWAS COUNTY
 SH. 712 SEC. N (PT) & O (PT)
 DOVER BASIN UNIT No. 2

STA. 220+25 TO STA. 224+00

DIV. 30
 2 OHIO 1947 56
TUSCARAWAS COUNTY
S.H. 712 SEC. N (PT) & O (PT)
DOVER BASIN UNIT No. 2

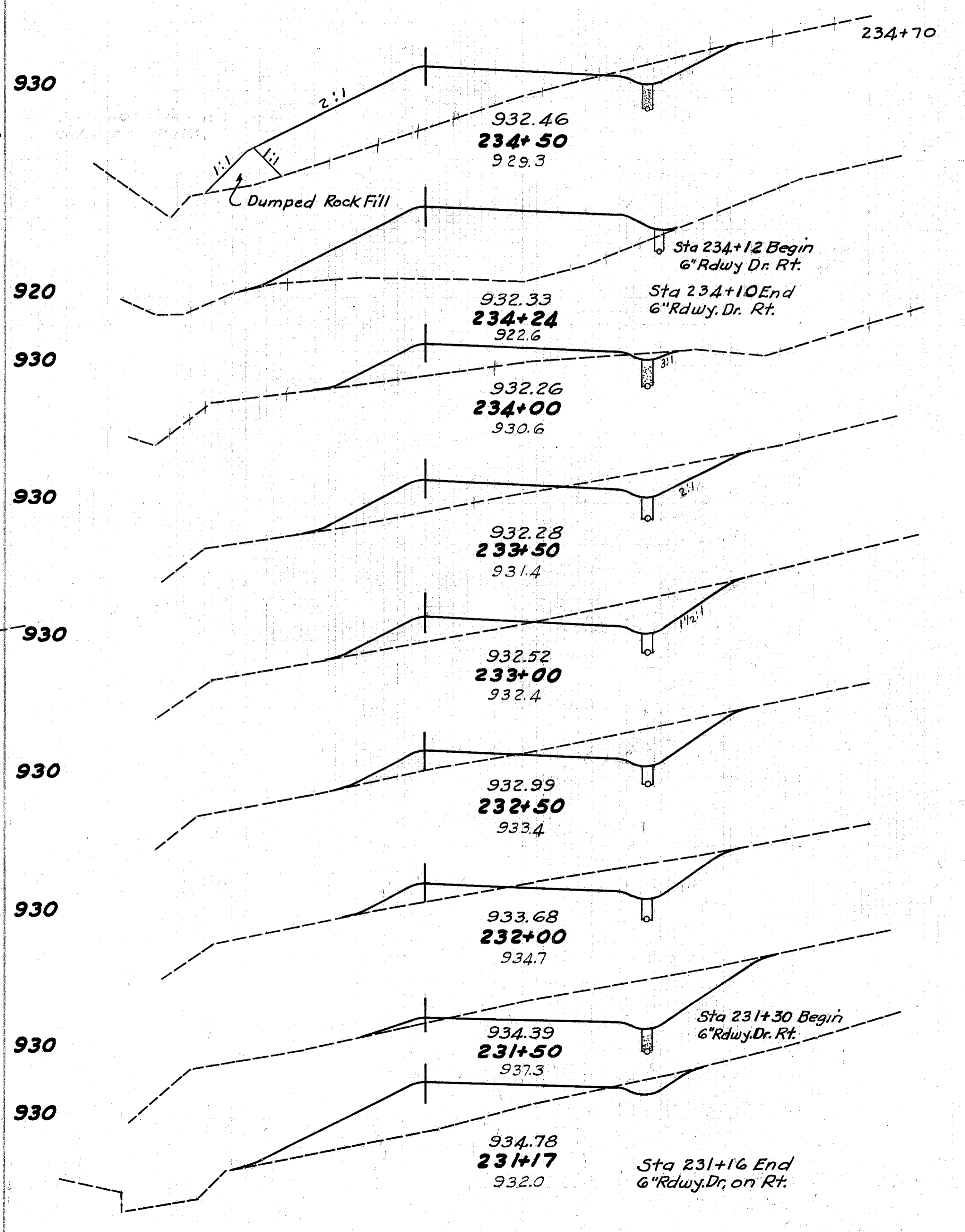
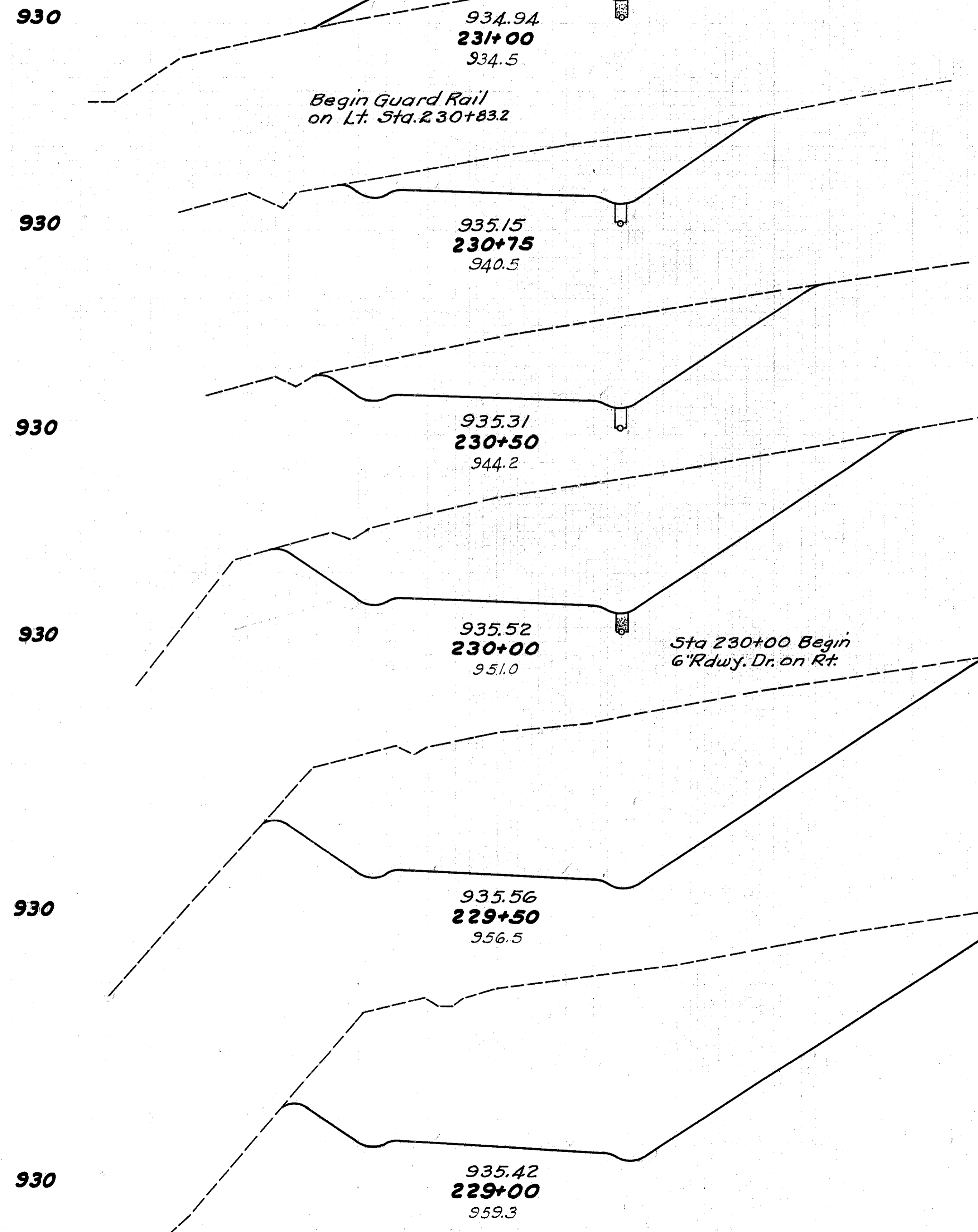


STA. 224+50 TO STA. 228+50

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

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		22	76
55	56		
161	26		
293	0		
381	0		
529	0		
1434	0		
1020	0		
2408	0		
1581	0		
3187	0		
1861	0		

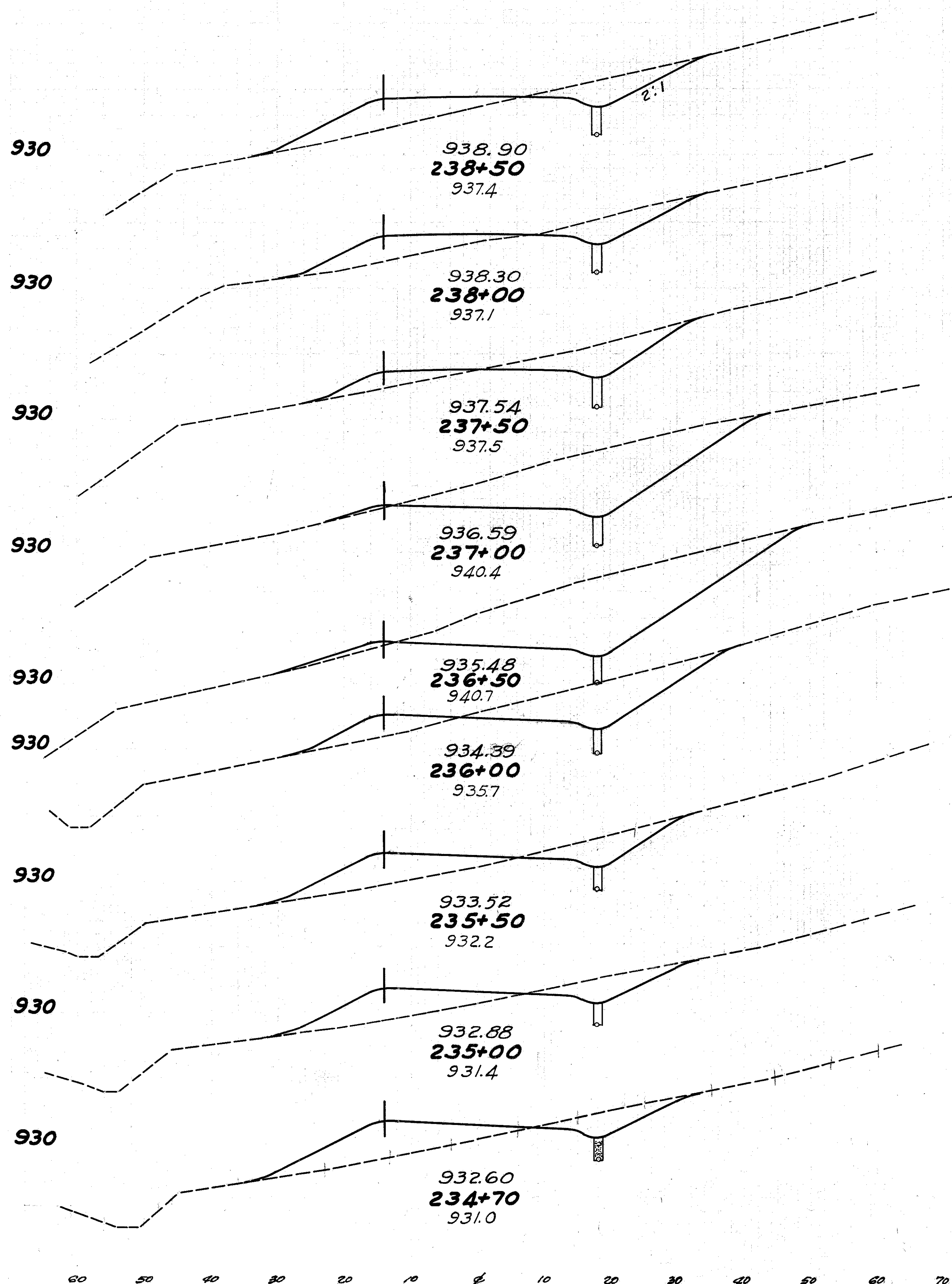
DIV. 2 OHIO 1947 56
TUSCARAWAS COUNTY
S.H. 712 SEC. N(PT) 60(PT)
DOVER BASIN UNIT No. 2



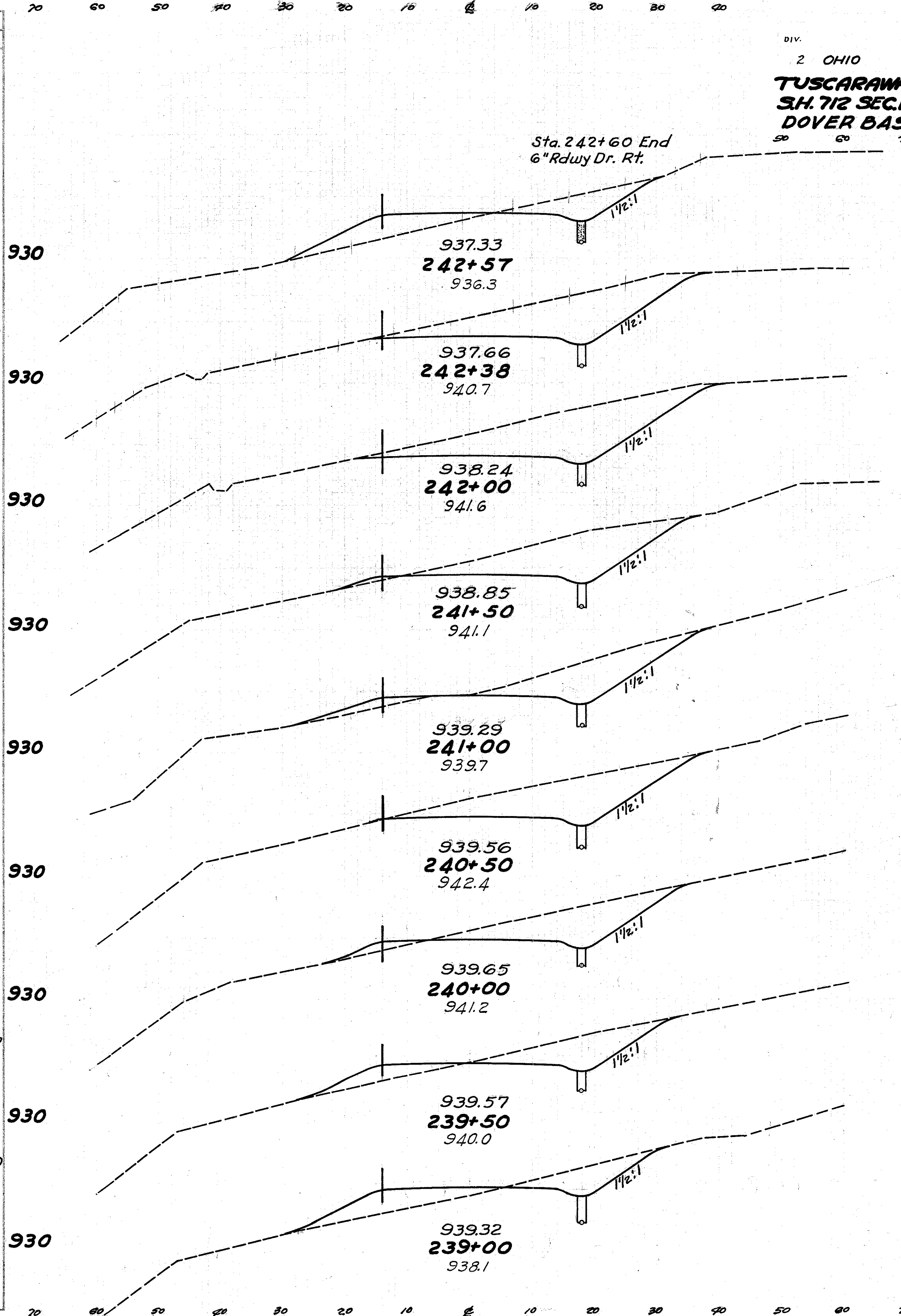
Dumped Rock Fill E.A. C.Y.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
0			24	170
12				
32	29	335		
15			14	354
0	0	400		
			2	224
	4	103		
			50	176
	50	87		
			111	129
	70	52		
			145	81
	87	36		
			155	63
	80	32		
			219	34
	156	5		
			104	116
	14	185		

STA. 229+00 TO STA. 234+50

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



END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
102	154		
55	100		
94	156		
47	68		
111	96		
73	36		
315	37		
267	4		
571	13		
350	10		
444	48		
129	42		
164	130		
48	98		
85	176		
44	92		
45	120		
37	124		

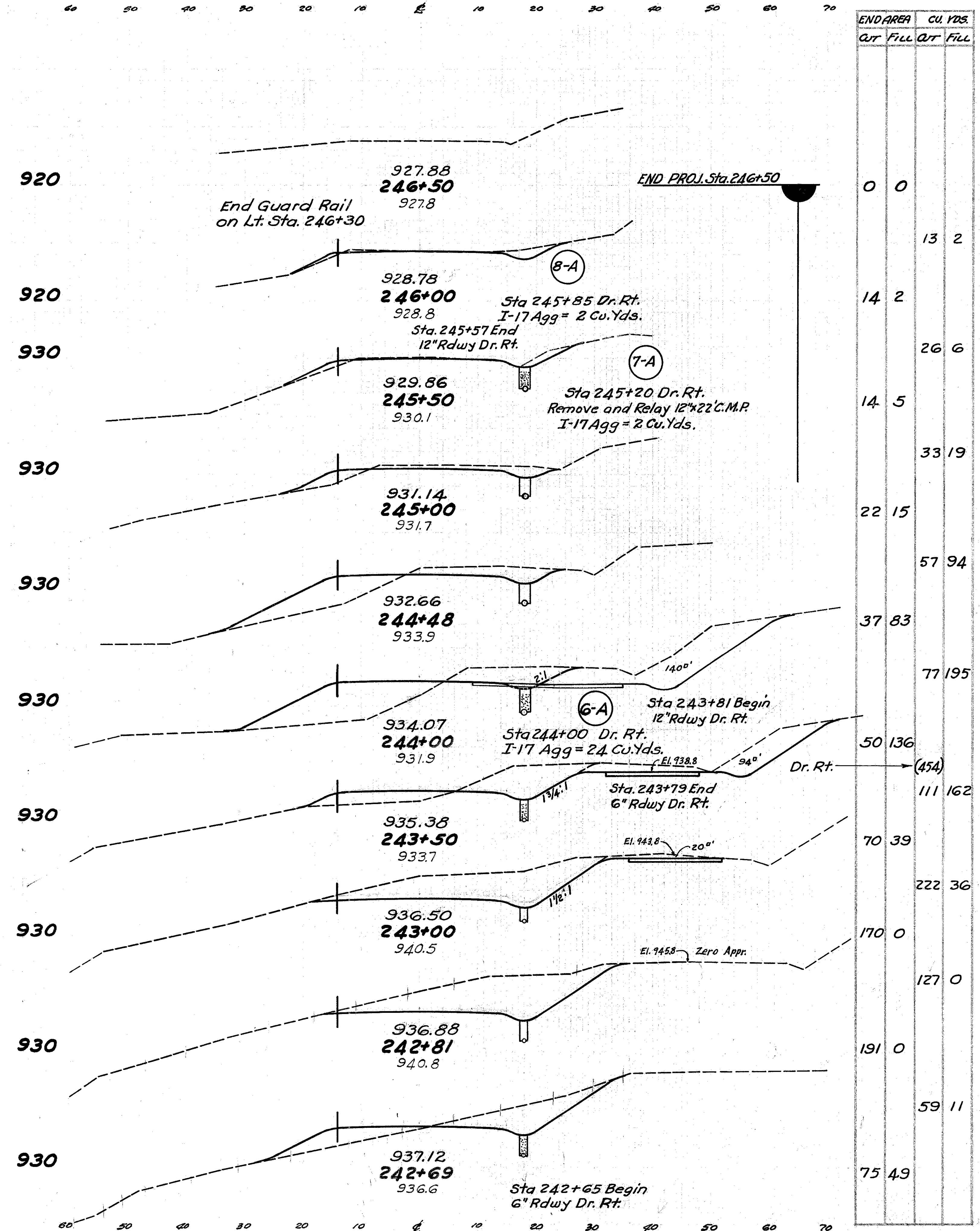


DIV. 2 OHIO
 TUSCARAWAS COUNTY
 SH. 712 SEC. N(PT) 60(F)
 DOVER BASIN UNIT No. 2

END AREA		CU. YDS.	
Cut	Fill	Cut	Fill
		29	26
55	68		
		88	24
196	0		
		298	0
227	0		
		368	3
170	3		
		271	19
123	18		
		281	18
181	1		
		286	10
128	10		
		196	43
84	36		
		129	94
55	66		

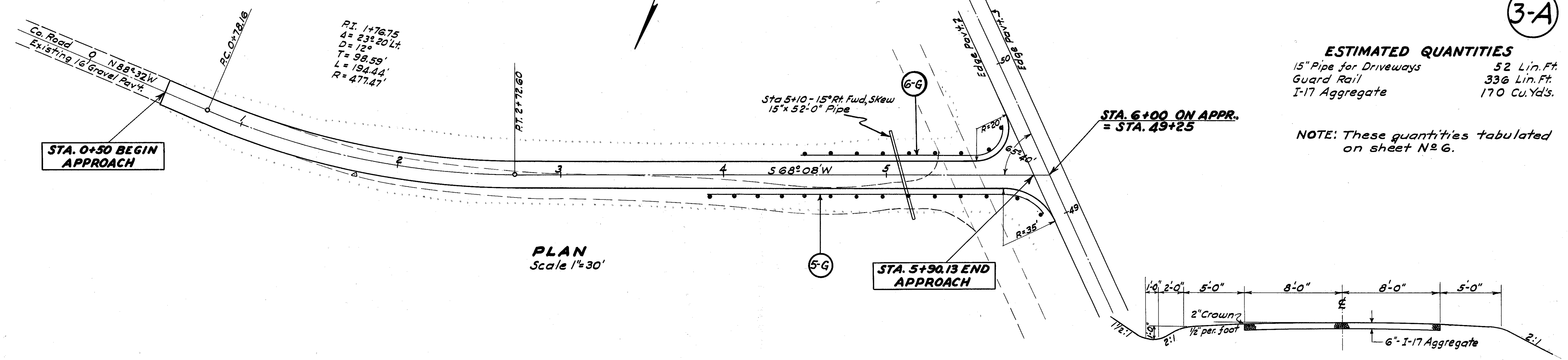
STA. 234+70 TO STA. 242+57

32
1947 56



TUSCARAWAS COUNTY
S.H. 712 SECS. N(Pt) & O(Pt).
DOVER BASIN UNIT No. 1.

3-A

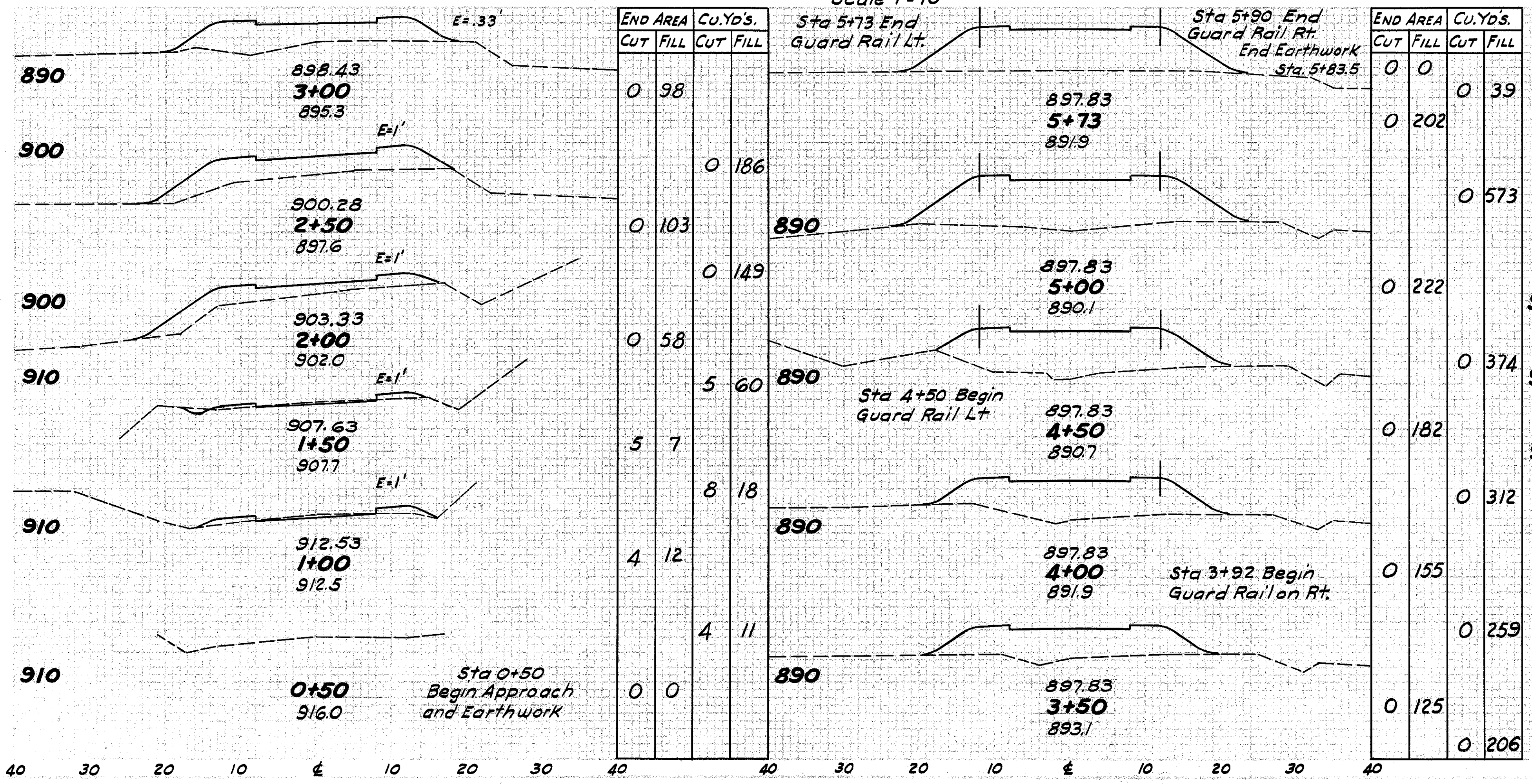


ESTIMATED QUANTITIES

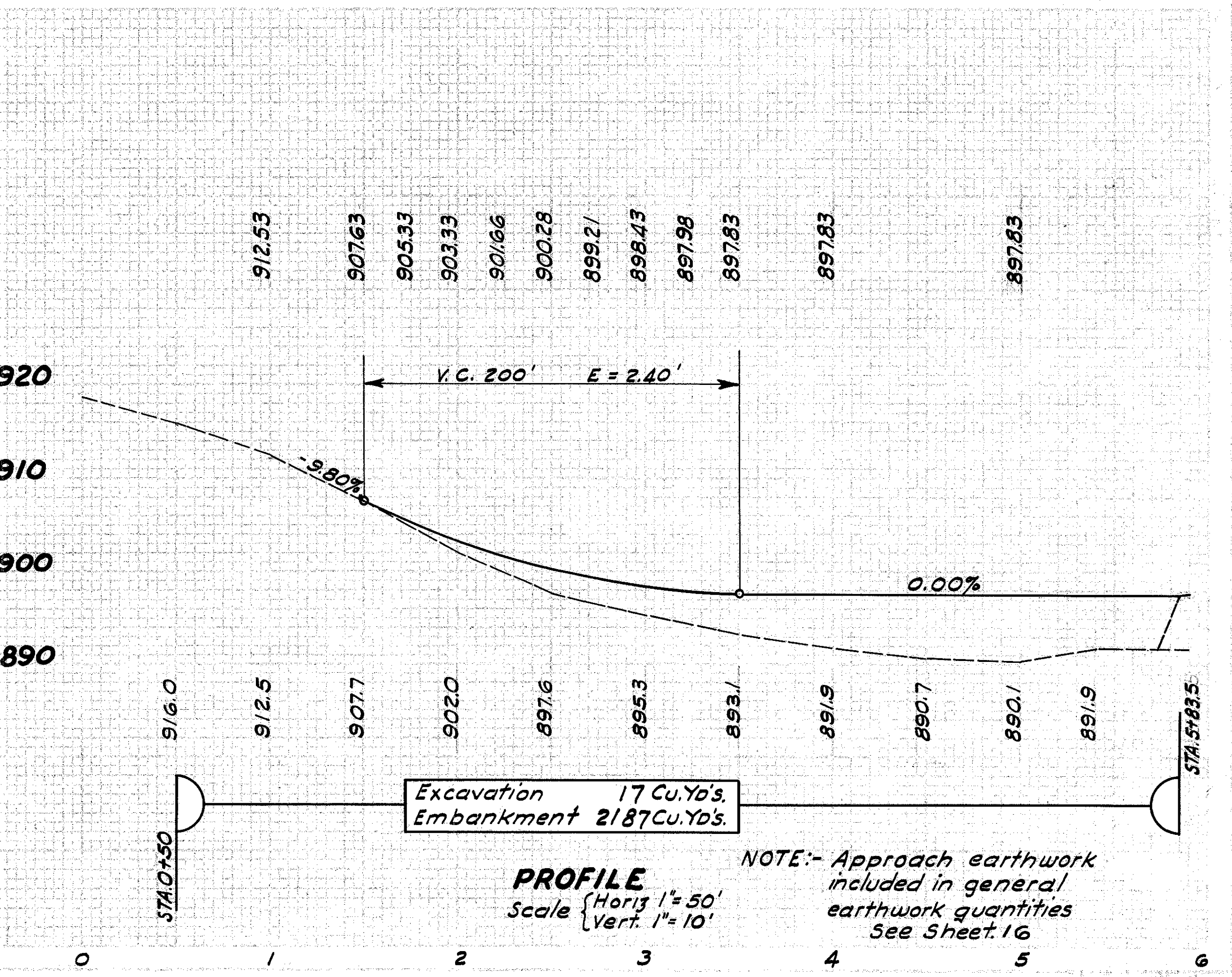
15" Pipe for Driveways	52 Lin. Ft.
Guard Rail	336 Lin. Ft.
I-17 Aggregate	170 Cu. Yd's.

NOTE: These quantities tabulated on sheet No. 6.

CROSS SECTION
Scale 1"=10'



TYPICAL SECTION FOR APPROACH
Scale 1"=4'

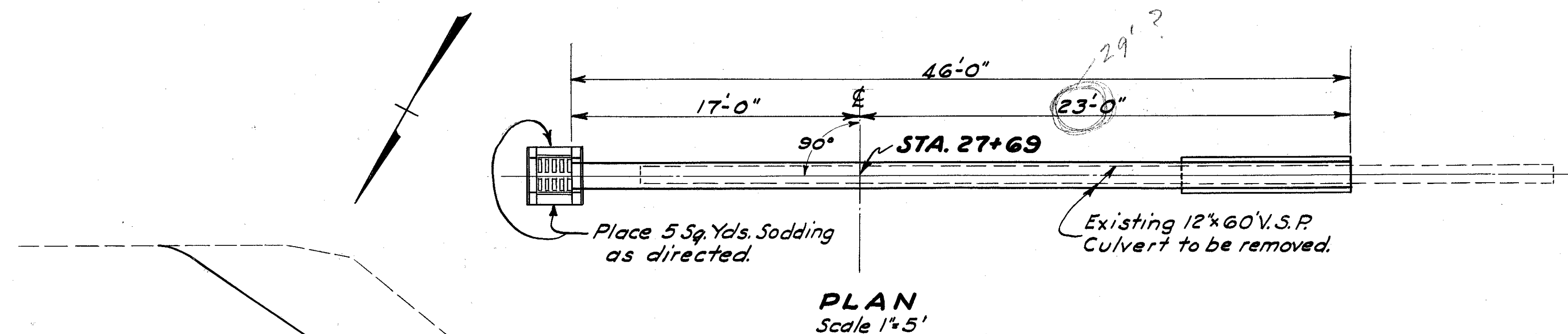


PROFILE
Scale { Horiz 1"=50'
Vert. 1"=10'

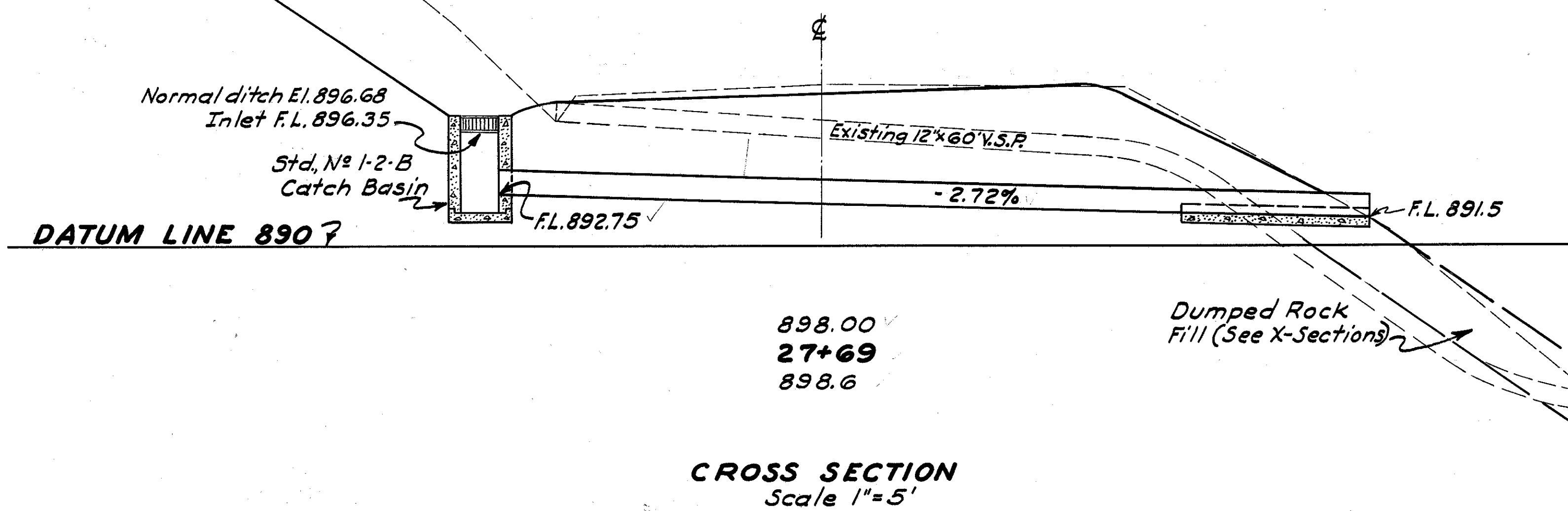
NOTE: Approach earthwork included in general earthwork quantities See Sheet 16

ROAD APPROACH LEFT STA 49+25

TUSCARAWAS COUNTY
S.H. 712 SEC. N (PT) & O (PT).
DOVER BASIN UNIT No. 1.



PLAN
Scale 1"=5'



CROSS SECTION
Scale 1"=5'

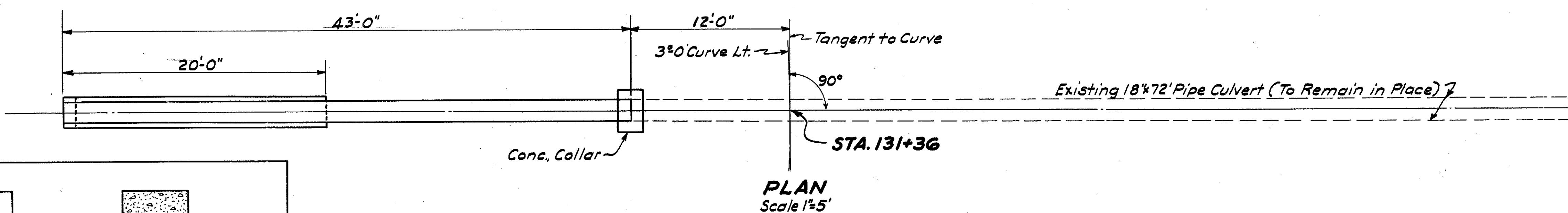
• STRUCTURE DATA •
Type :- Std. Pipe Culvert.
Size :- 15" x 46'-0"
Work Req. :- Remove 12" x 60' V.S.P. Pipe Culvert (not encased). Build Std. Pipe Culvert with Std. No. 1-2-B Catch Basin at inlet and Std. Cradle at outlet end.

• REFERENCE DRAWINGS •
S-27 P.C. 2- Pipe Culvert Ends.
I-8 C.B. 1-2-A & B- Catch Basins.

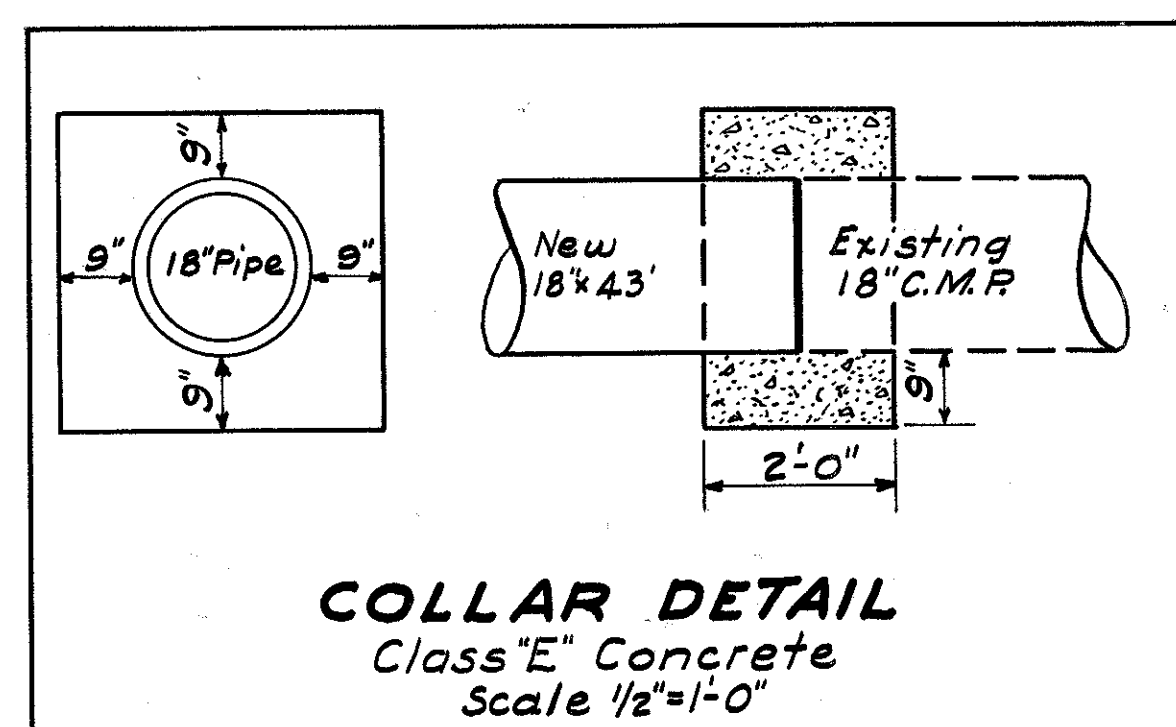
• ESTIMATED QUANTITIES •
12" V.S.P. Removed and Disposed of. 60 Lin. Ft.
* Structure Excavation. 35 Cu. Yds.
Std. No. 1-2-B- Catch Basin. 1 Only
Concrete Class "E" 0.6 Cu. Yds.
15" Pipe for Roadway Culverts. 46 Lin. Ft.
Sodding. 5 Sq. Yds.
* Note :- Existing Structure has been deducted from Structure Excavation.

15" x 46'-0" PIPE CULV.
STA. 27+69

1-5

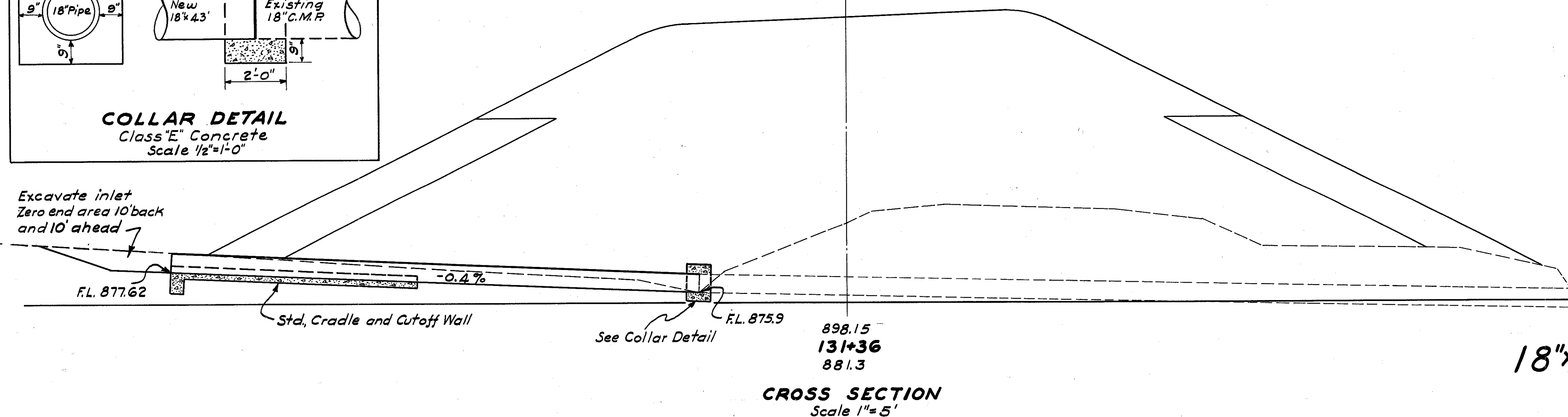


PLAN
Scale 1"=5'



COLLAR DETAIL
Class "E" Concrete
Scale 1/2"=1'-0"

Excavate inlet
Zero end area 10' back
and 10' ahead



CROSS SECTION
Scale 1"=5'

• STRUCTURE DATA •
TYPE :- Std. Pipe Culvert (Extension).
SIZE :- 18" x 43'-0"
WORK REQUIRED :- Build Std. Pipe Culvert Extension with concrete Collar at connection with existing pipe. Build Std. Cradle and Cutoff Wall at inlet end. Excavate Inlet as shown.

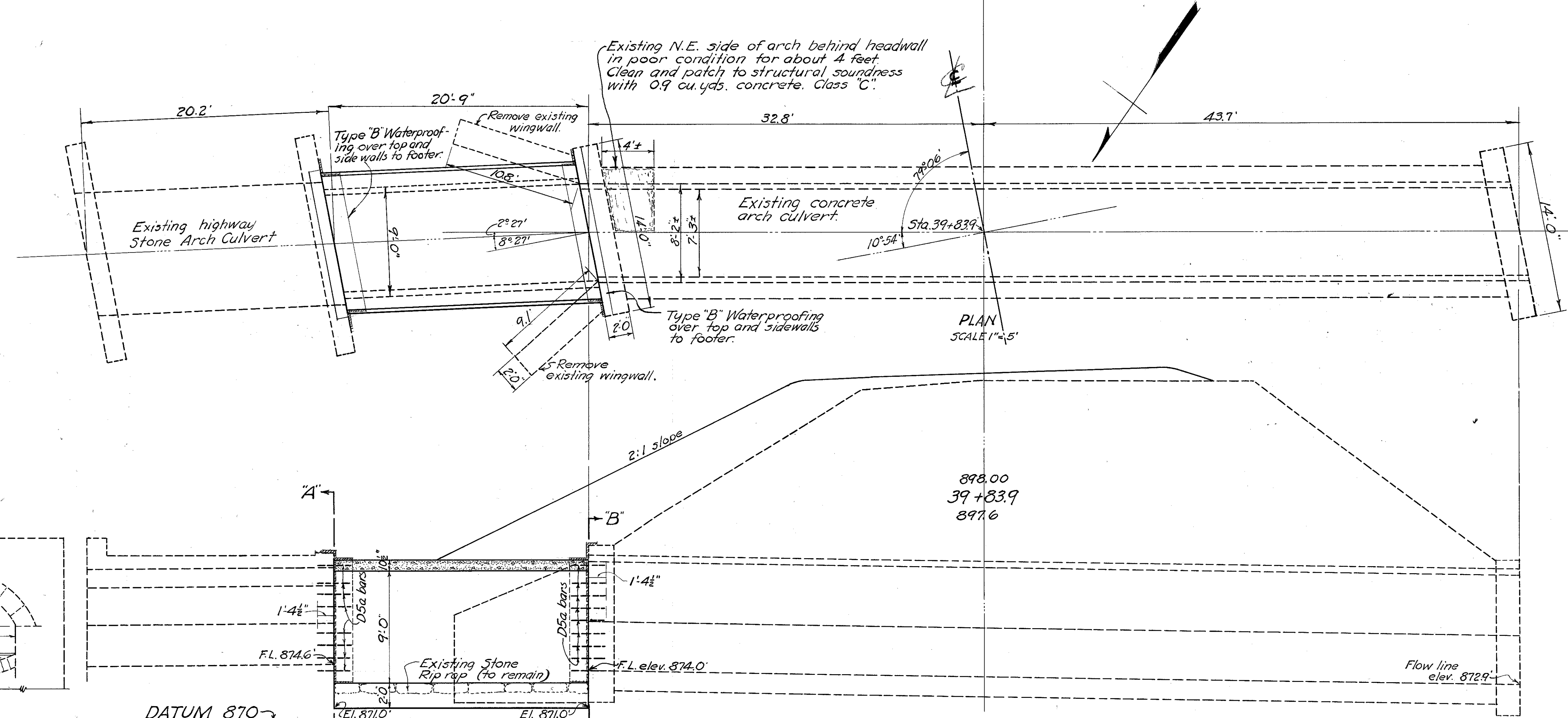
• REFERENCE DRAWINGS •
Pipe Culvert Ends. S-27 P.C. 2

• ESTIMATED QUANTITIES •
18" Pipe for Roadway Culverts. 43 Lin. Ft.
Structure Excavation. 10 Cu. Yds.
Channel Excavation. 5 Cu. Yds.
Concrete Class "E" (Cradle, Cutoff Wall, and Collar) 2.3 Cu. Yds.

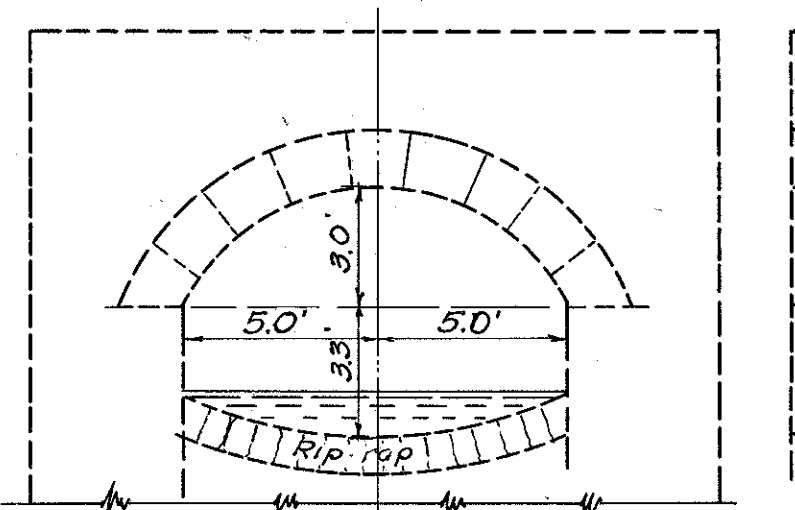
18" x 43' PIPE CULV. (EXT)
STA. 131+36

16-5

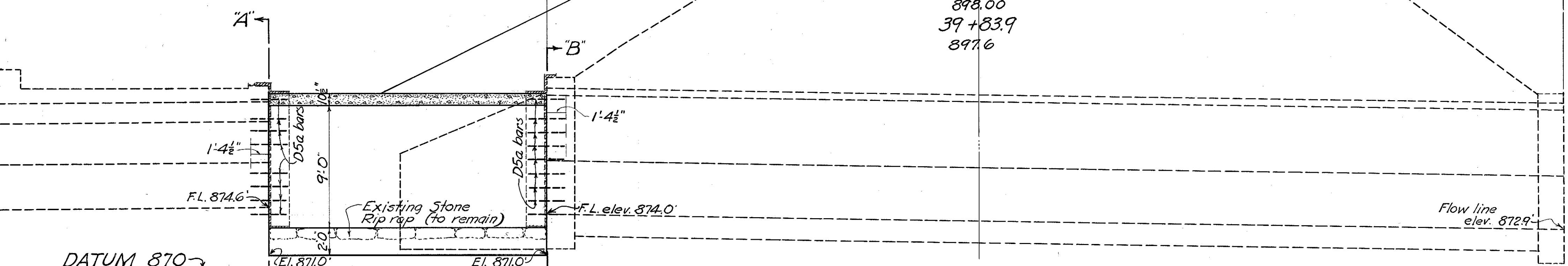
TUSCARAWAS COUNTY
S.H. 712, SEC. N(PR) & O(PR)
DOVER BASIN, UNIT No. 1



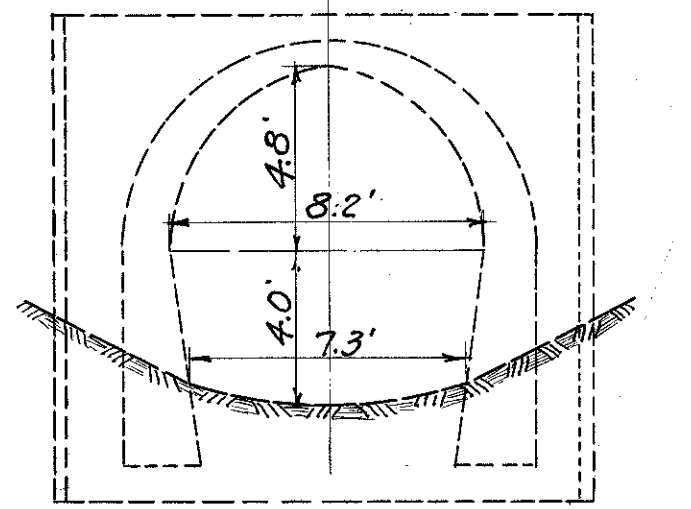
STEEL LIST					
No.	MARK	SIZE	SPACING	LENGTH	WEIGHT
44	D5a	3/4"	as shown	2'-9"	182
50	S5a	"	0'-4 1/2"	10'-6"	884
42	W4a	3/8"	1'-0"	11'-0"	482
27	T2a	1/2"	"	20'-3"	365
1	R5a	3/4"	"	7'-0"	11
1	R4a	1/2"	"	6'-6"	7
1	R2a	1/2"	"	6'-0"	4
TOTAL POUNDS					1935



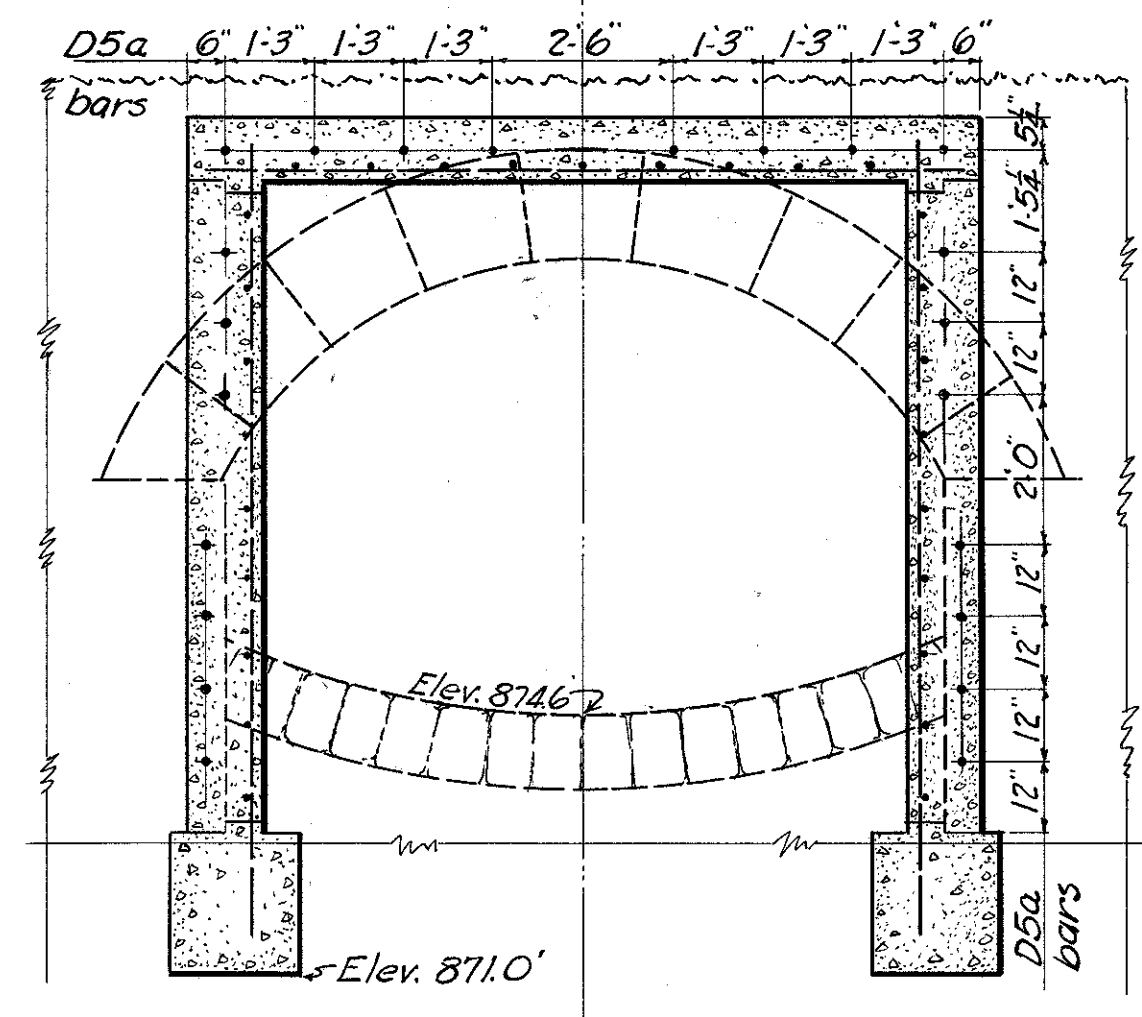
END VIEW OF EXISTING STONE ARCH HIGHWAY CULVERT



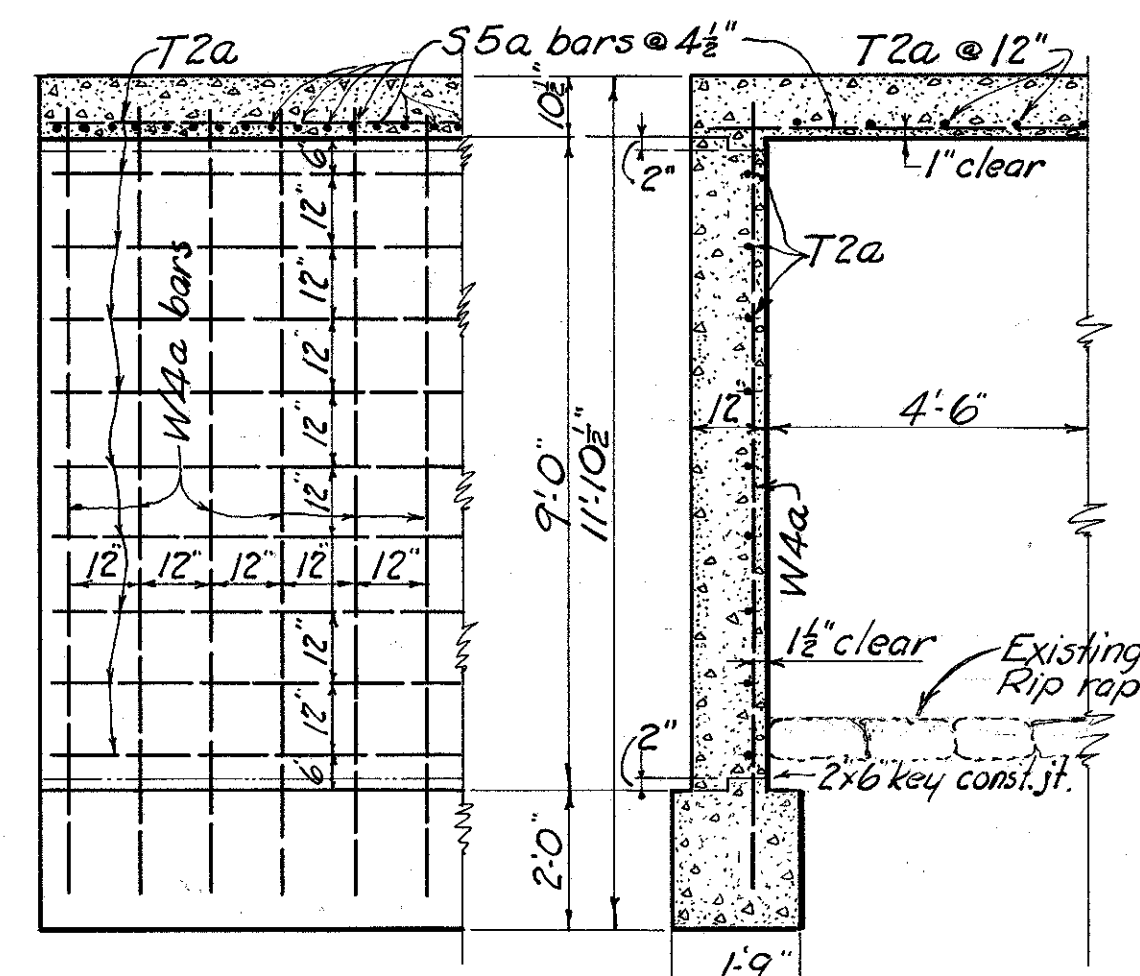
LONGITUDINAL SECTION ON C
Scale 1/4"=1'-5"



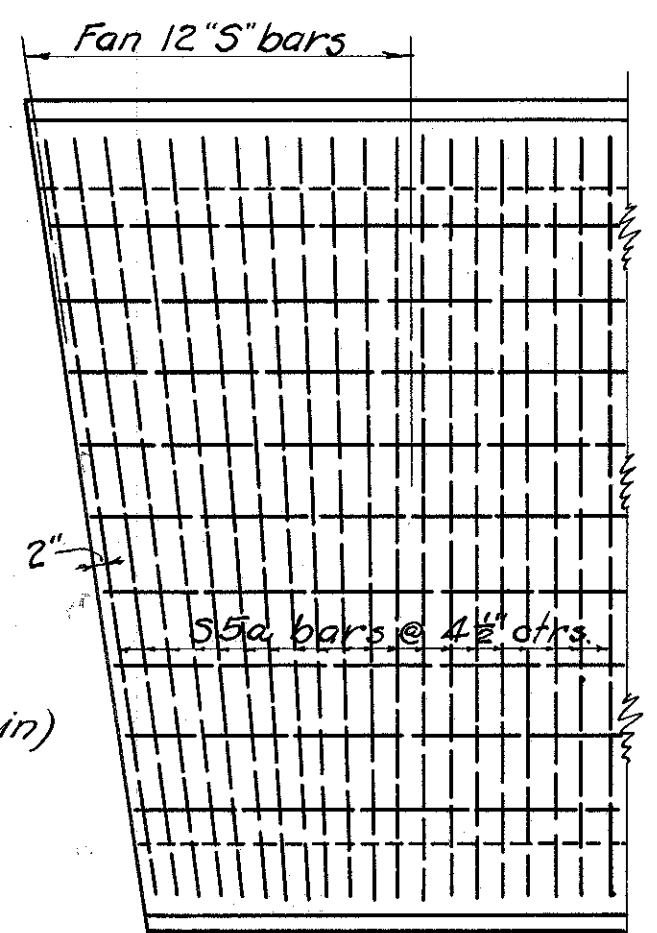
END VIEW OF EXISTING CONCRETE ARCH CULVERT



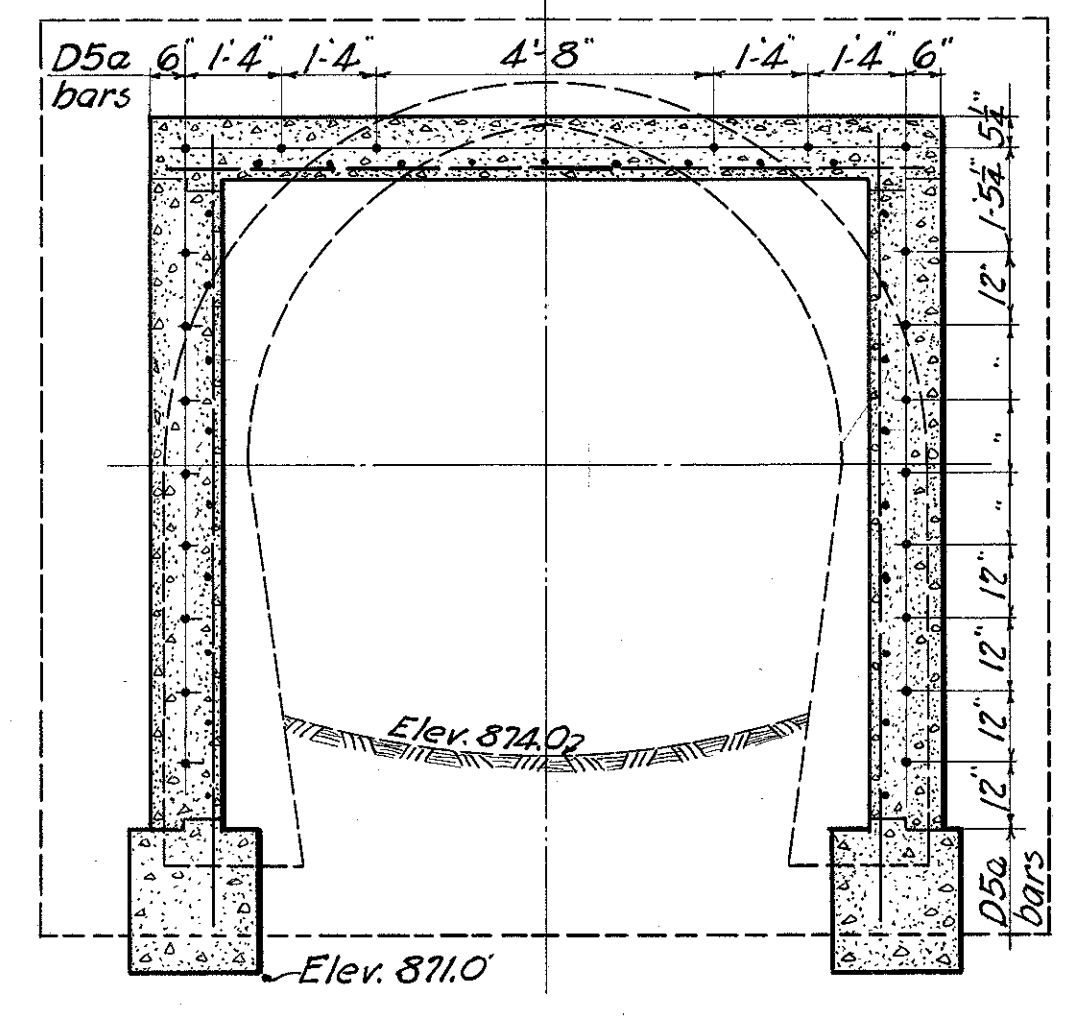
SEC. "A-A" DOWEL SPACING



PART LONGTL. SECTION HALF SECTION



PART PLAN



SEC. "B-B" DOWEL SPACING

Scale 3/8"=1'-0"

STRUCTURE DATA
 Type:- Slab Top Culvert Extension
 Size:- 9'x8'x20'9"
 Work Reqd:- Join existing 10'x6' stone arch culvert to existing 8'x8'9" concrete arch culvert by building connecting section of Sta. 9'x8' Slab Top Culvert. Remove existing wing walls at inlet end from face of headwall. Remove disintegrated concrete in exposed north east corner of existing concrete arch culvert for a length of four feet or more, if the condition so warrants, and clean and patch with Class "C" Concrete. Place Type "B" Waterproofing over joints between existing and new work.

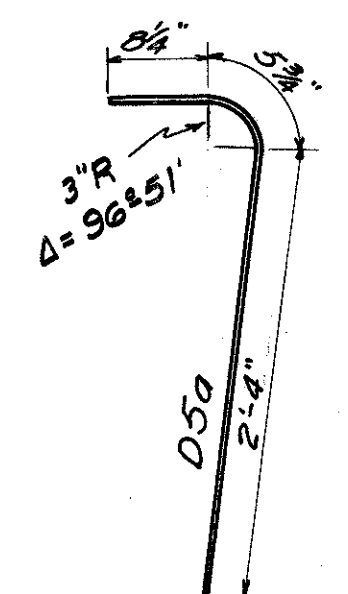
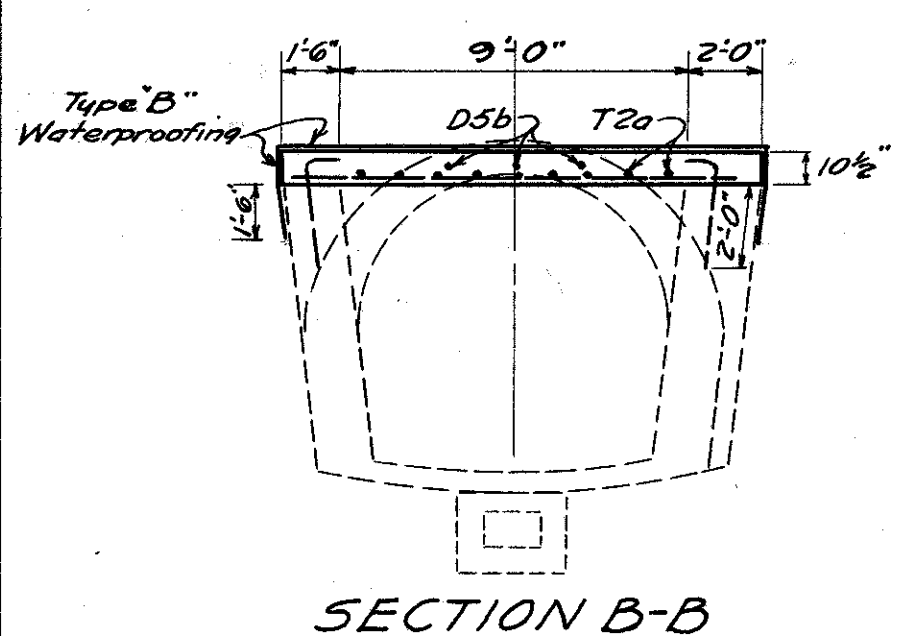
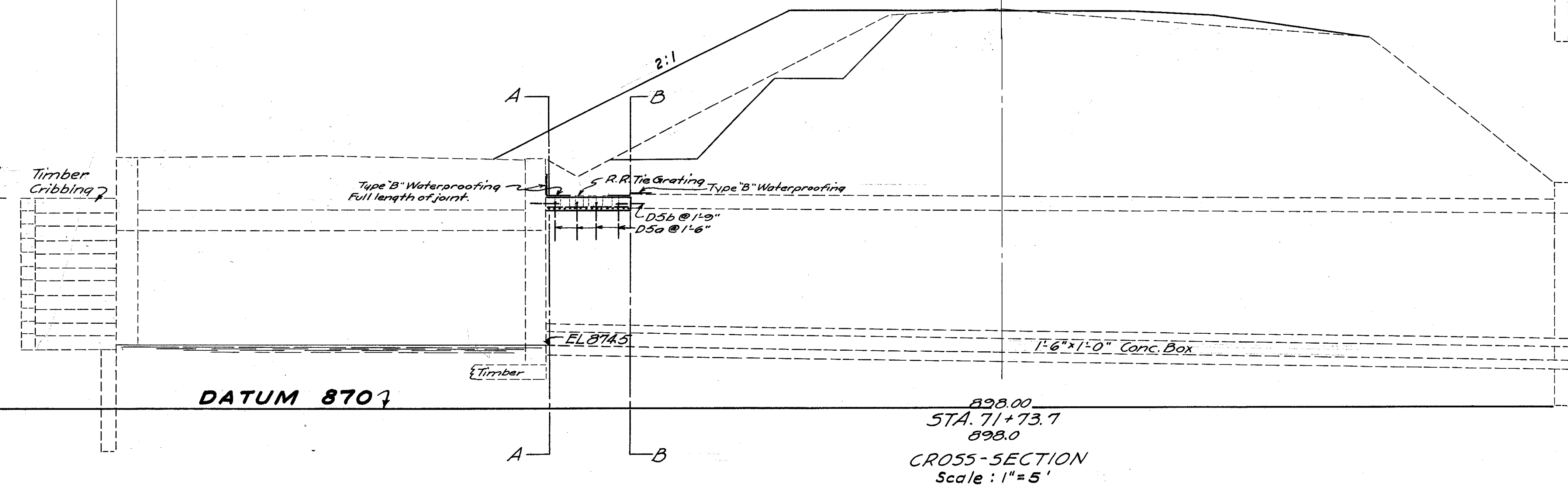
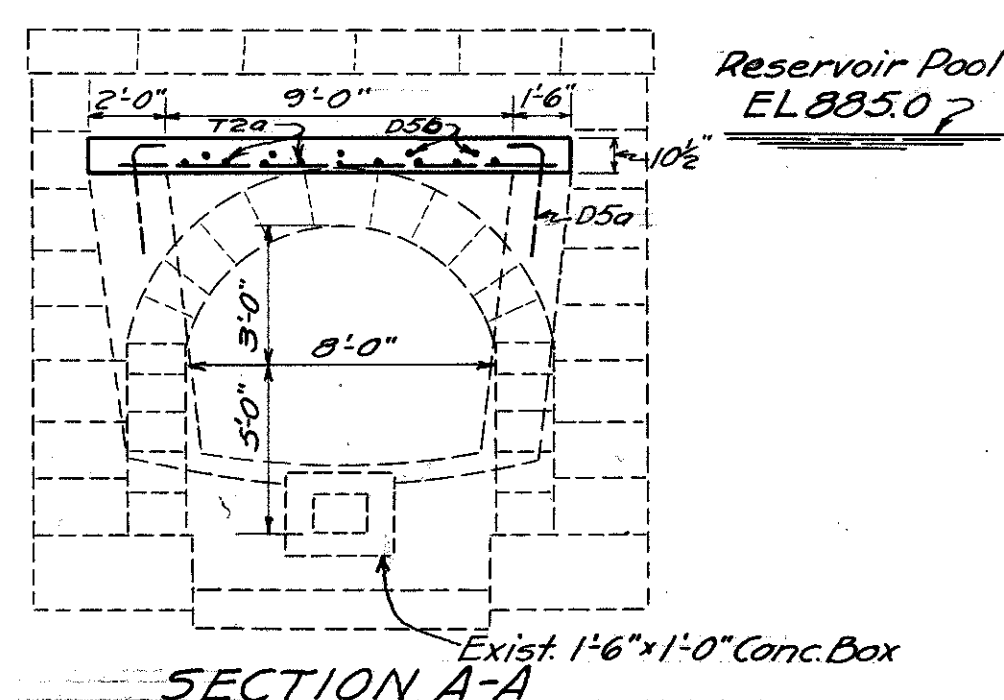
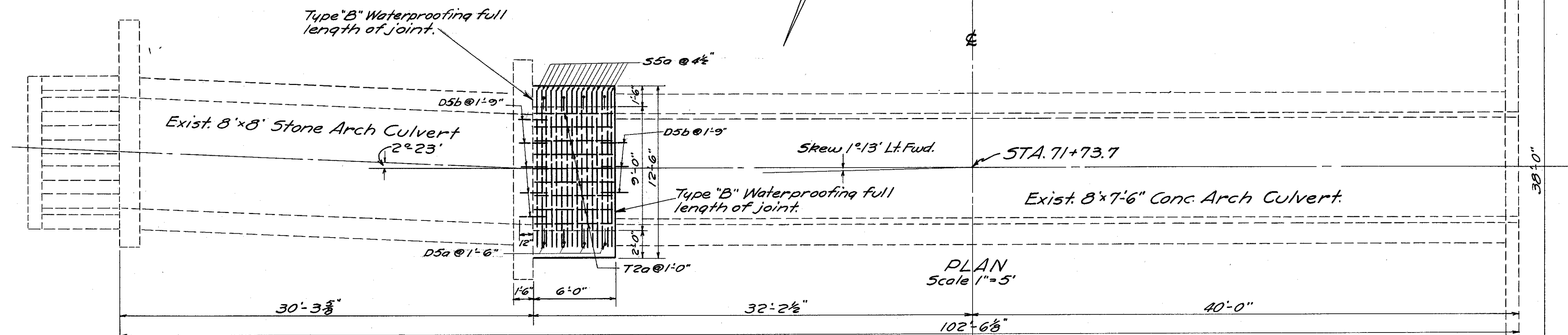
REFERENCE DRAWINGS
 STC - 34 Slab Top Culverts

ESTIMATED QUANTITIES

Dowel Holes	61 lin. feet
Concrete, Class "E"	5.5 cu. yds.
Concrete, Class "C"	22.0 cu. yds.
Reinforcing Steel	1935 pounds
Structure Excavation	20 cu. yds.
Removal of portions of existing structure	15 cu. yds.
Type "B" Waterproofing, 36" wide	21 sq. yds.

9'x8'x20'9" S.T.C. EXT.
STA. 39+83.9 (2-5)

TUSCARAWAS COUNTY
S.H. 712 SEC. N (PT) & O (PT)
DOVER BASIN UNIT No. 1



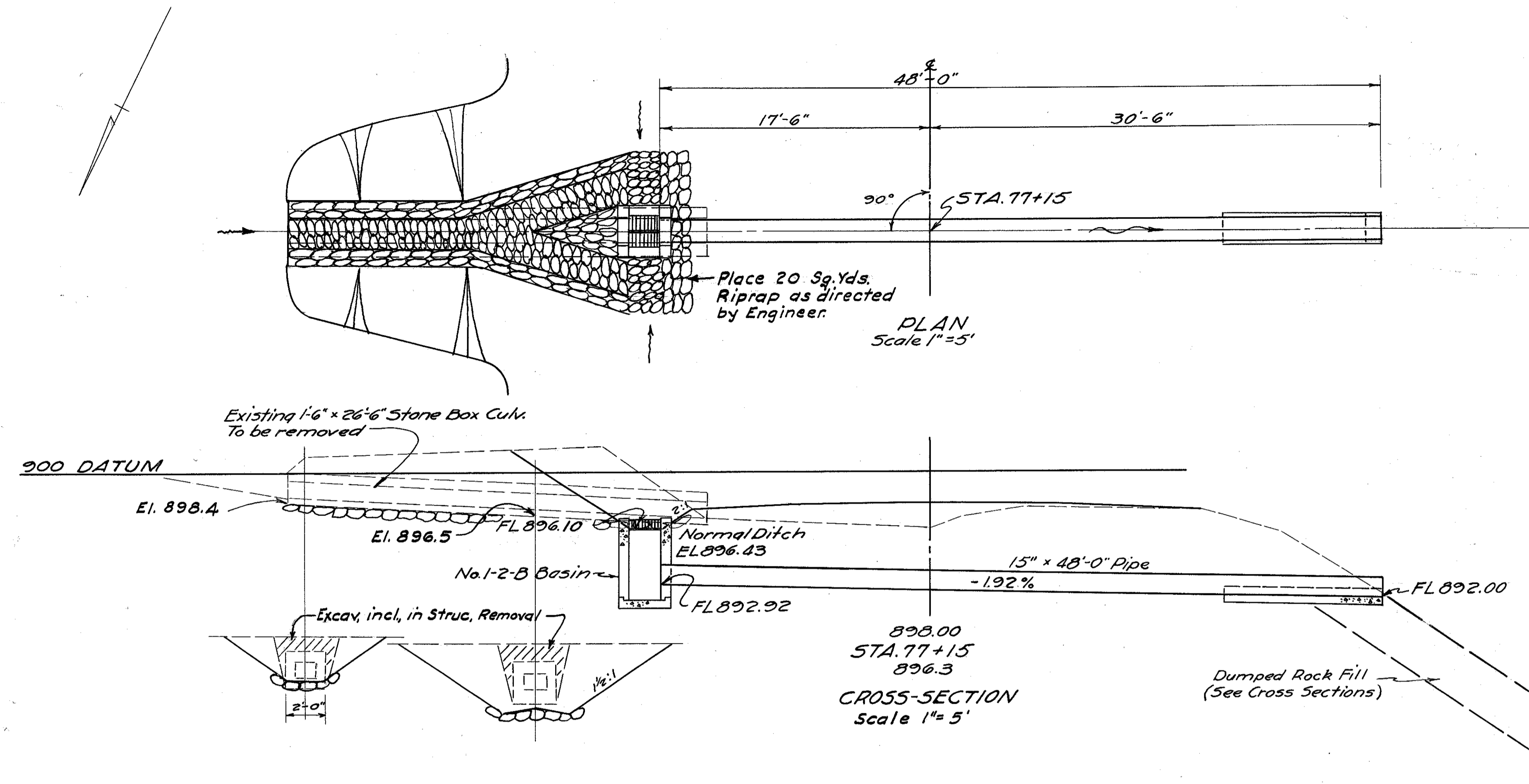
STEEL LIST					
No.	Mark	Size	Spacing	Length	Weight
8	D50a	3/4"	1'-6"	3'-6"	42
8	D50b	3/4"	1'-9"	2'-0"	24
16	S50a	3/4"	0'-4 1/2"	11'-6"	277
9	T20a	1/2"	1'-0"	5'-9"	35
TOTAL					378

• STRUCTURE DATA •
 TYPE - Reinforced Concrete Cap
 SIZE - 12'-6" x 6'-0" x 0'-10 1/2"
 WORK REQUIRED - Build reinforced concrete cap on sidewalls of existing structure as detailed hereon.
 Fill outlet as directed by Engineer.

• ESTIMATED QUANTITIES •
 Structure Excavation 12 Cu.Yds.
 Concrete, Class "C" 2.5 Cu.Yds.
 Reinforcing Steel 378 Lbs.
 Dowel Holes 24 Lin. Ft.
 Type "B" Waterproofing, 36" wide 12 Sq.Yds.

12'-6" x 6'-0" x 0'-10 1/2" REINF. CONC. CAP STA. 71 + 73.7

TUSCARAWAS COUNTY
S.H. 712 SEC. N(pt) & O(pt)
DOVER BASIN UNIT No. 1



• STRUCTURE DATA •
 TYPE - Standard Pipe Culvert.
 SIZE - 15" x 48'-0"
 WORK REQUIRED - Build 15" x 48'-0" Pipe Culvert with No. 1-2-B Catch Basin at inlet end and Std. Cradle at outlet end. Remove existing Stone Box Culvert. Excavate inlet and rip rap as shown.

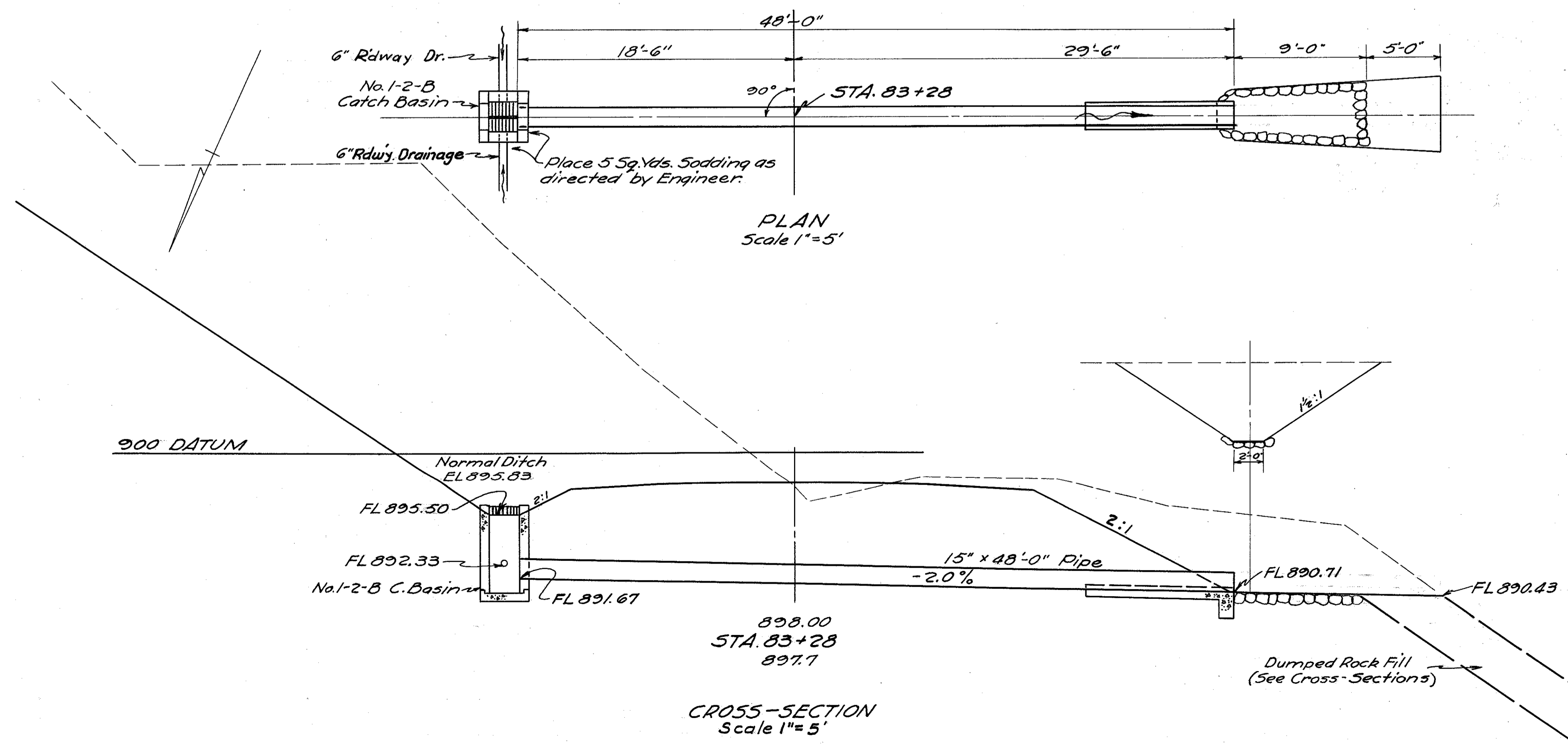
• ESTIMATED QUANTITIES •

Channel Excav.	15 Cu. Yds.
Structure Excav.	24 Cu. Yds.
Rip Rap Type "A" (Grouted)	20 Sq. Yds.
Concrete Class "E" (Cradle)	0.6 Cu. Yds.
No. 1-2-B Catch Basin	1 Each
15" Pipe for Roadway Culverts.	48 Lin. Ft.
Removal of Portions of Existing Structure	5 Cu. Yds.

• REFERENCE DRAWINGS •
 Pipe Culvert Ends. 5-27 P.C. 2
 Catch Basins I-8 C.B. No. 1-2-B

15" x 48'-0" PIPE CULV. STA. 77+15

(5-5)



• STRUCTURE DATA •
 TYPE - Standard Pipe Culvert.
 SIZE - 15" x 48'-0"
 WORK REQUIRED - Build 15" x 48'-0" Pipe Culvert with No. 1-2-B Catch Basin at inlet end and Std. Cradle and Cutoff Wall at outlet. Pave outlet with Type "A" (Grouted) Rip Rap. Sod ditch around Catch Basin at inlet.

• ESTIMATED QUANTITIES •

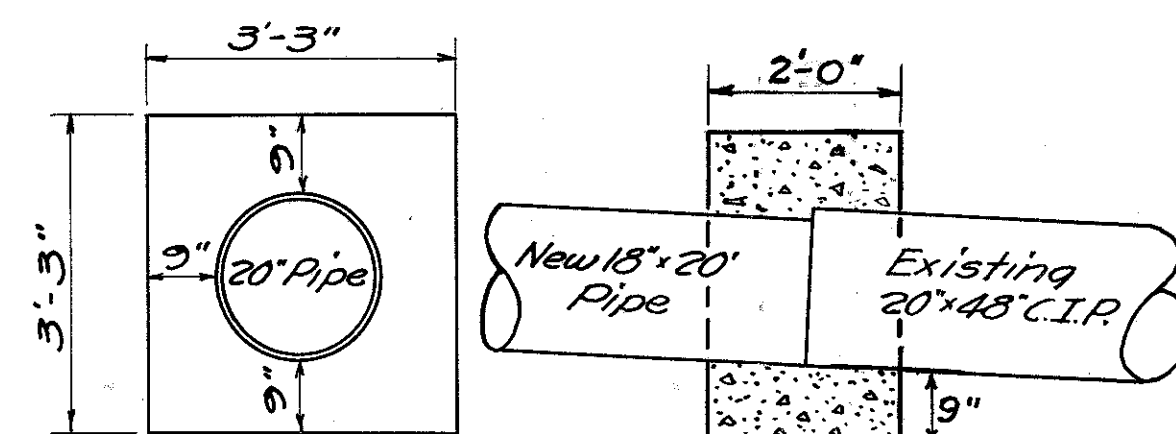
Channel Excavation	15 Cu. Yds.
Structure Excav.	50 Cu. Yds.
Rip Rap Type "A" (Grouted)	4 Sq. Yds.
Concrete Class "E"	0.7 Cu. Yds.
No. 1-2-B Catch Basin	1 Each
Sodding	5 Sq. Yds.
15" Pipe for Roadway Culverts	48 Lin. Ft.

• REFERENCE DRAWINGS •
 Pipe Culvert Ends. 5-27 P.C. 2
 Catch Basins I-8 C.B. 1-2-B

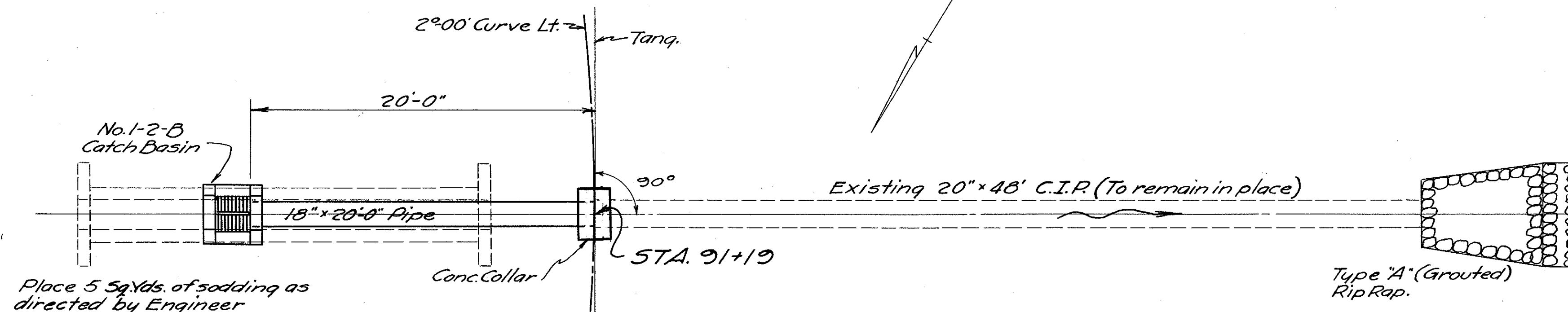
15" x 48'-0" PIPE CULV. STA. 83+28

(7-5)

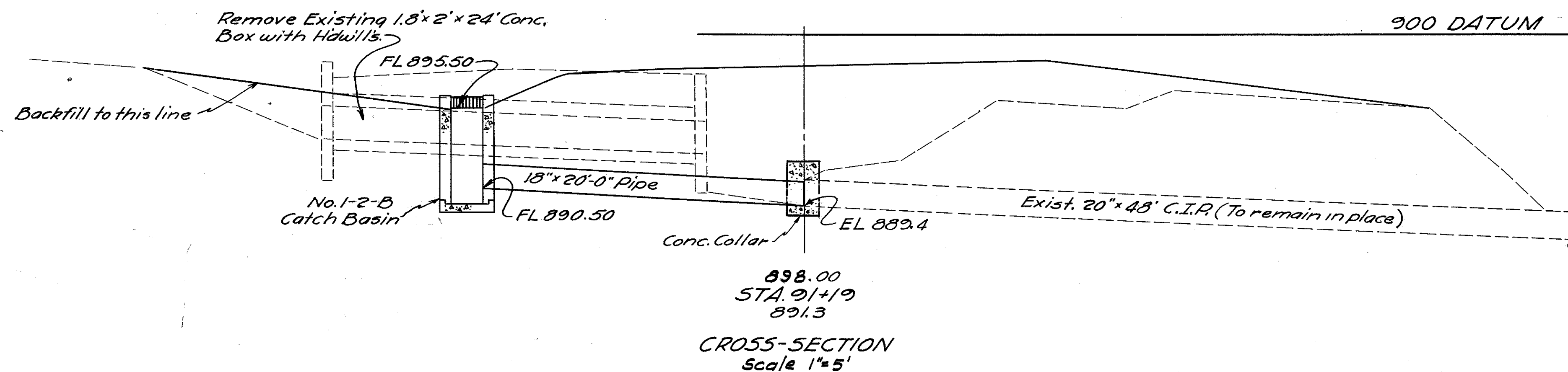
TUSCARAWAS COUNTY
S.H. 712 SEC. N (PT) & O (PT)
DOVER BASIN UNIT No. 1



• COLLAR DETAIL •
Class "E" Concrete



PLAN
Scale 1"=5'



CROSS-SECTION
Scale 1"=5'

• STRUCTURE DATA •

TYPE - Standard Pipe Culvert. (Extension)
SIZE - 18" x 20'-0"
WORK REQUIRED - Remove existing 1.8 x 2 x 24' Conc. Box with headwalls. Extend existing 20" x 48' C.I.P. with new 18" x 20' pipe. Build Std. No. 1-2-B C. Basin at inlet end and connect existing pipe to new pipe with concrete collar as shown. Pave outlet of existing C.I.P. with Type "A" (Grouted) Rip Rap. Sod ditch around C. Basin at inlet.

• ESTIMATED QUANTITIES •

18" Pipe for Roadway Culverts	20 Lin. Ft.
Removal of exist. structure	9 Cu. Yds.
Structure excavation	2 Cu. Yds.
Type "A" (Grouted) Rip Rap	5 Sq. Yds.
Concrete, Class "E" (Collar)	0.6 Cu. Yds.
Sodding	5 Sq. Yds.
No. 1-2 B Catch Basin	1 Each.

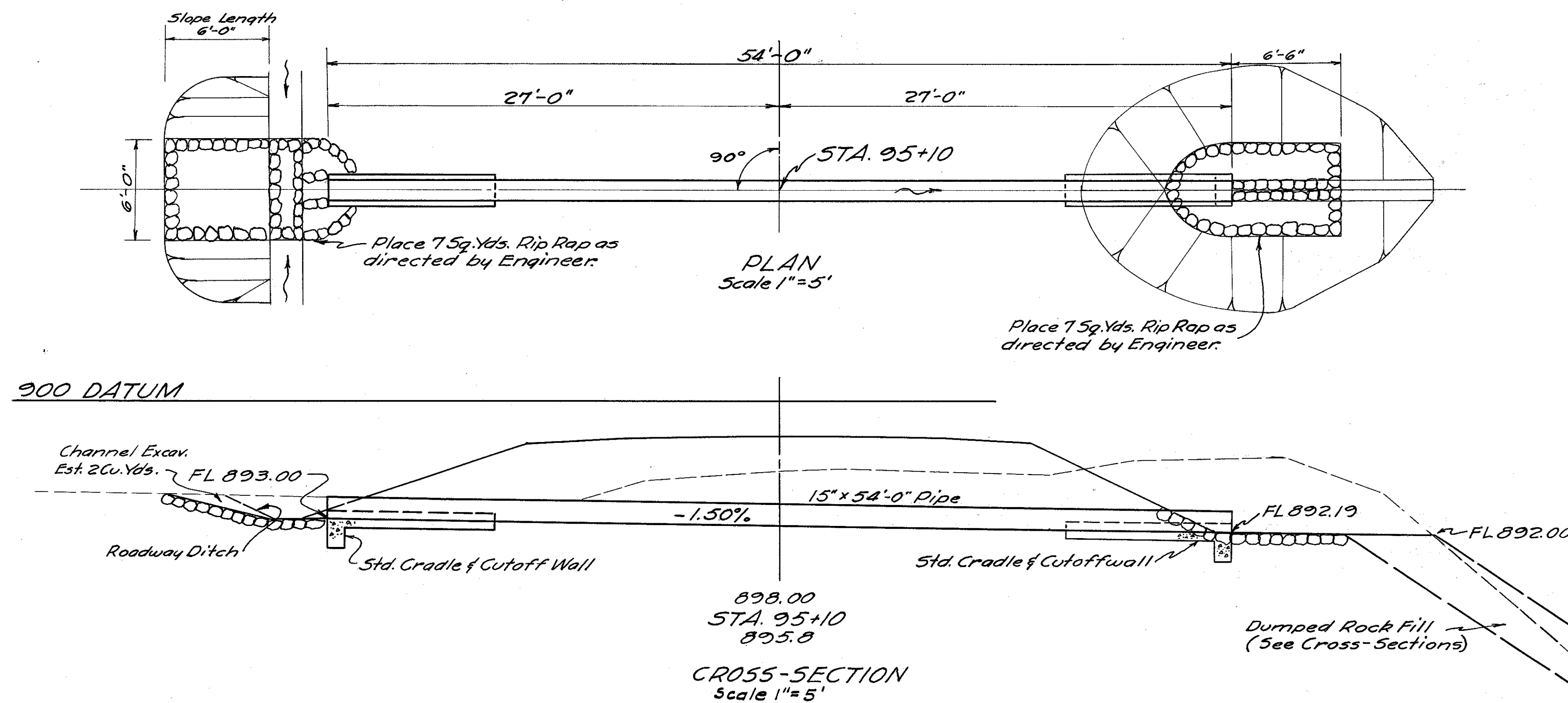
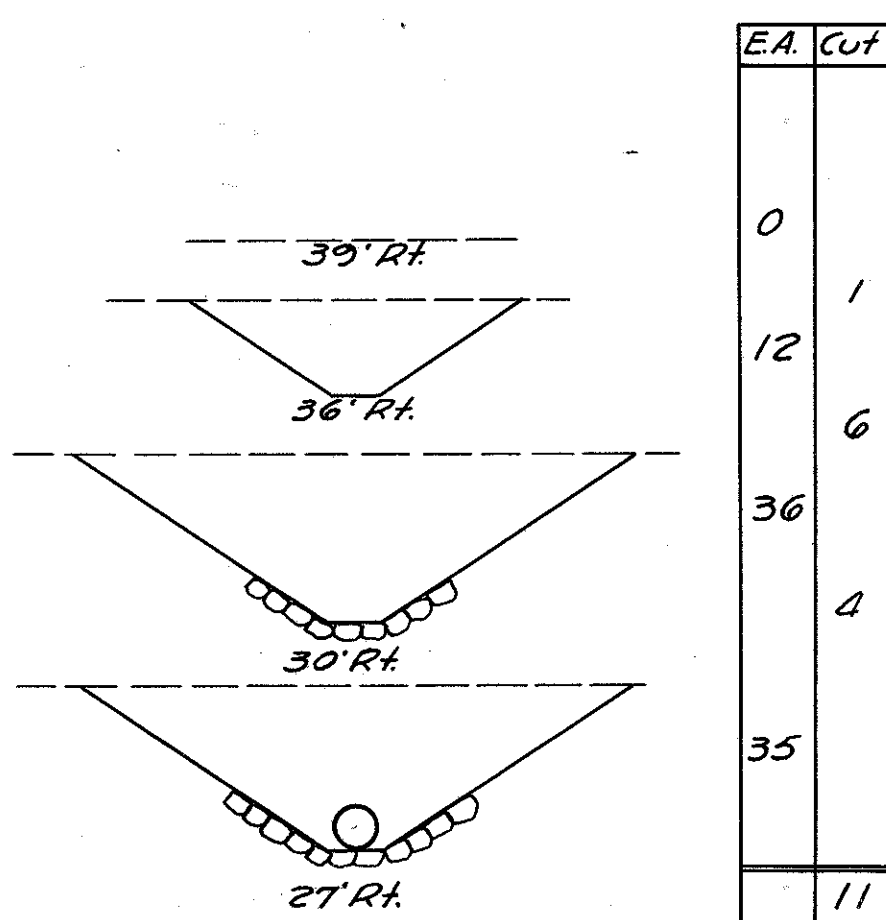
• REFERENCE DRAWINGS •

Catch Basins I-8.C.B. 1-2-B

18" x 20'-0" PIPE CULV. STA. 91+19

8-5

CHANNEL EXCAV.



CROSS-SECTION
Scale 1"=5'

• STRUCTURE DATA •

TYPE - Standard Pipe Culvert.
SIZE - 15" x 54'-0"
WORK REQUIRED - Build 15" x 54'-0" Std. Pipe Culvert with Std. Cradles and Cutoff Walls at inlet and outlet ends. Pave inlet and outlet with Type "A" (Grouted) Rip Rap as shown. Excavate channel at inlet and outlet as shown.

• ESTIMATED QUANTITIES •

15" Pipe for Roadway Culverts.	54 Lin. Ft.
Structure Excavation	15 Cu. Yds.
Channel Excavation	13 Cu. Yds.
Type "A" (Grouted) Rip Rap.	14 Sq. Yds.
Concrete, Class "E" (Cradles & Cutoff Walls)	1.4 Cu. Yds.

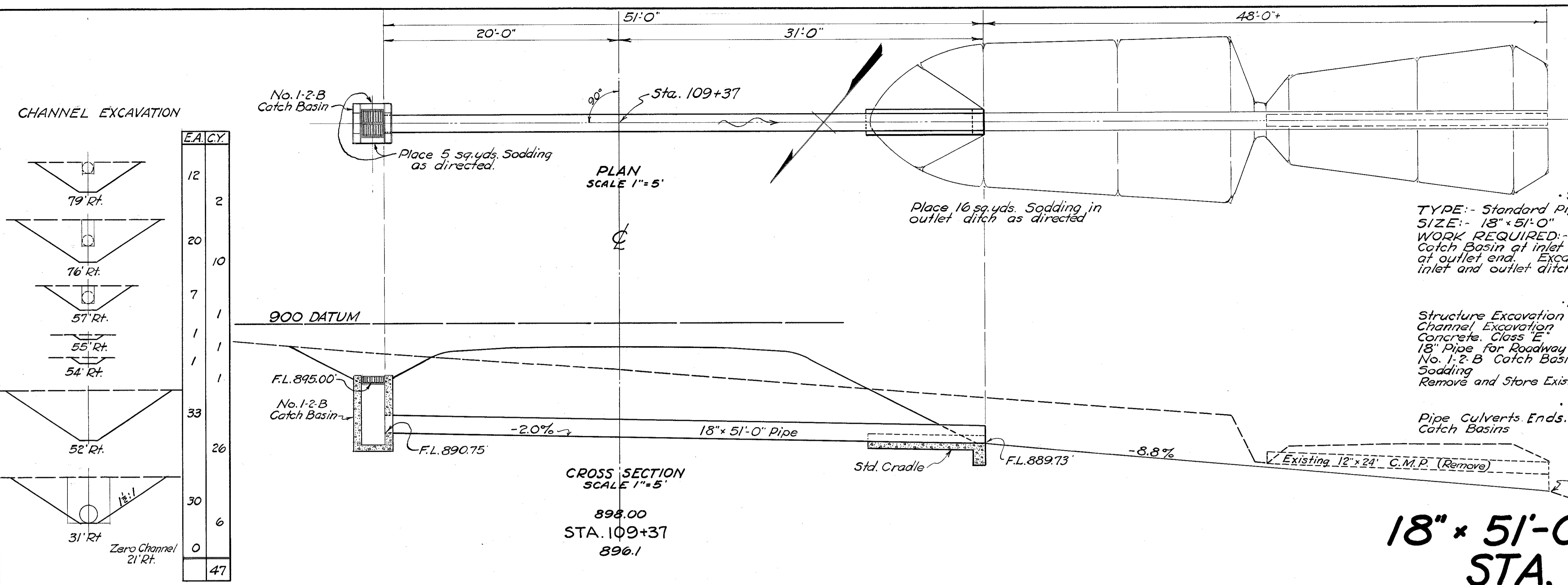
• REFERENCE DRAWINGS •

Pipe Culvert Ends. 5-27 RC. 2

15" x 54'-0" PIPE CULV. STA. 95+10

9-5

TUSCARAWAS COUNTY
S.H. 712, SEC. N(pt) & O(pt)
DOVER BASIN, UNIT No.1



STRUCTURE DATA
 TYPE: - Standard Pipe Culvert
 SIZE: - 18" x 51'-0"
 WORK REQUIRED: - Build 18" x 51'-0" Pipe Culvert with No. 1-2-B Catch Basin at inlet end and Std. Cradle and Cut off Wall at outlet end. Excavate outlet channel. Sod around C.B. at inlet and outlet ditch. Remove existing 12" x 24" C.M.P. under present road.

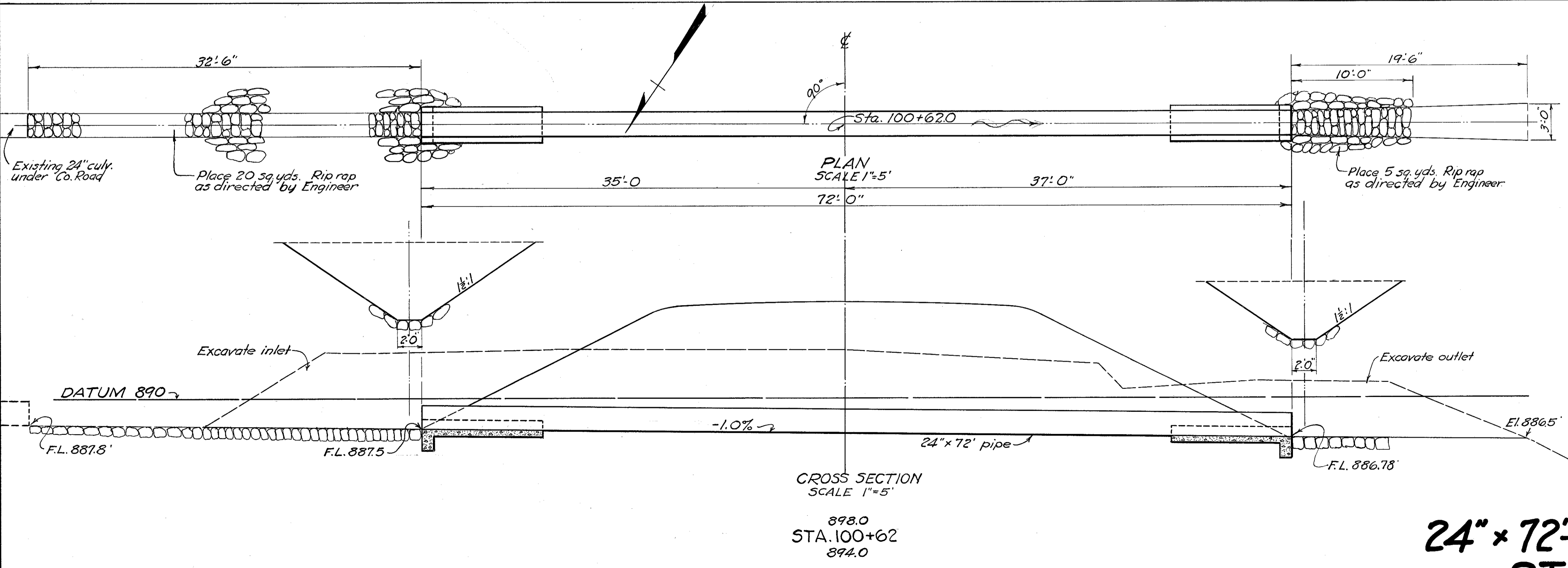
ESTIMATED QUANTITIES

Structure Excavation	31 cu. yds.
Channel Excavation	47 cu. yds.
Concrete, Class "E"	09 cu. yds.
18" Pipe for Roadway Culverts	51 lin. ft.
No. 1-2-B Catch Basin	1 each
Sodding	21 sq. yds.
Remove and Store Existing 12" C.M. Pipe	24 lin. ft.

REFERENCE DRAWINGS
 Pipe Culverts Ends, Catch Basins: S-27 PC.2, I-B.C.B No. 1-2-B

18" x 51'-0" PIPE CULV. STA. 109+37

13-S



STRUCTURE DATA
 TYPE: - Standard Pipe Culvert.
 SIZE: - 24" x 72"
 WORK REQUIRED: - Build Std. Pipe Culvert including Std. Pipe Culvert Ends. Excavate channel at inlet and outlet ends and rip rap as directed.

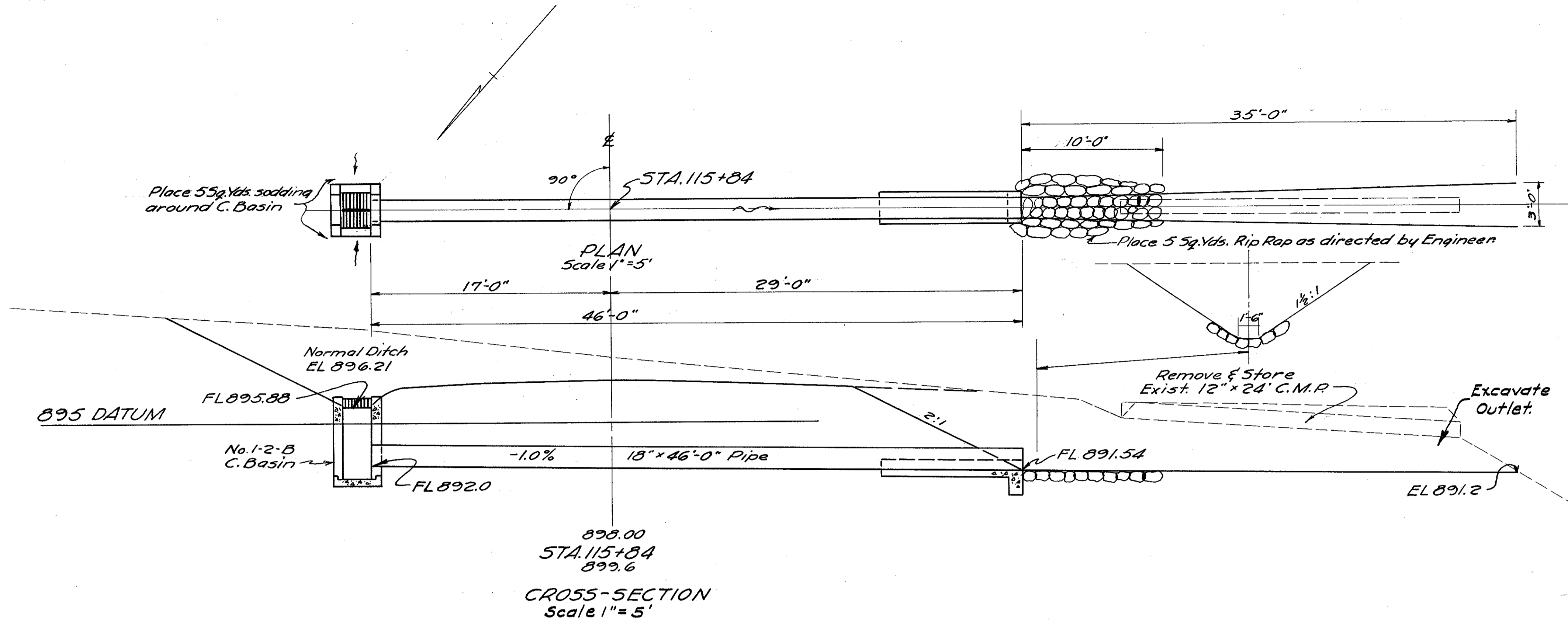
ESTIMATED QUANTITIES

Structure Excavation	90 cu. yds.
Channel Excavation	55 cu. yds.
24" Pipe for Roadway Culverts	72 lin. ft.
Concrete, Class "E"	22 cu. yds.
Rip-rap Type "A" Grouted	25 sq. yds.

REFERENCE DRAWINGS
 Pipe Culvert Ends: S-27 PC.2

24" x 72'-0" PIPE CULV. STA. 100+62

11-S



• STRUCTURE DATA •
 TYPE - Standard Pipe Culvert.
 SIZE - 18"x46'-0"
 WORK REQUIRED - Build 18"x46'-0" Std. Pipe Culvert with Std. No.1-2-B C.Basin at inlet end and Std. Cradle and Cutoff Wall at outlet. Excavate outlet channel and place rip rap as directed. Place 5 Sq.Yds. of sodding around C.Basin. Remove and store exist. 12"x24" C.M.R.

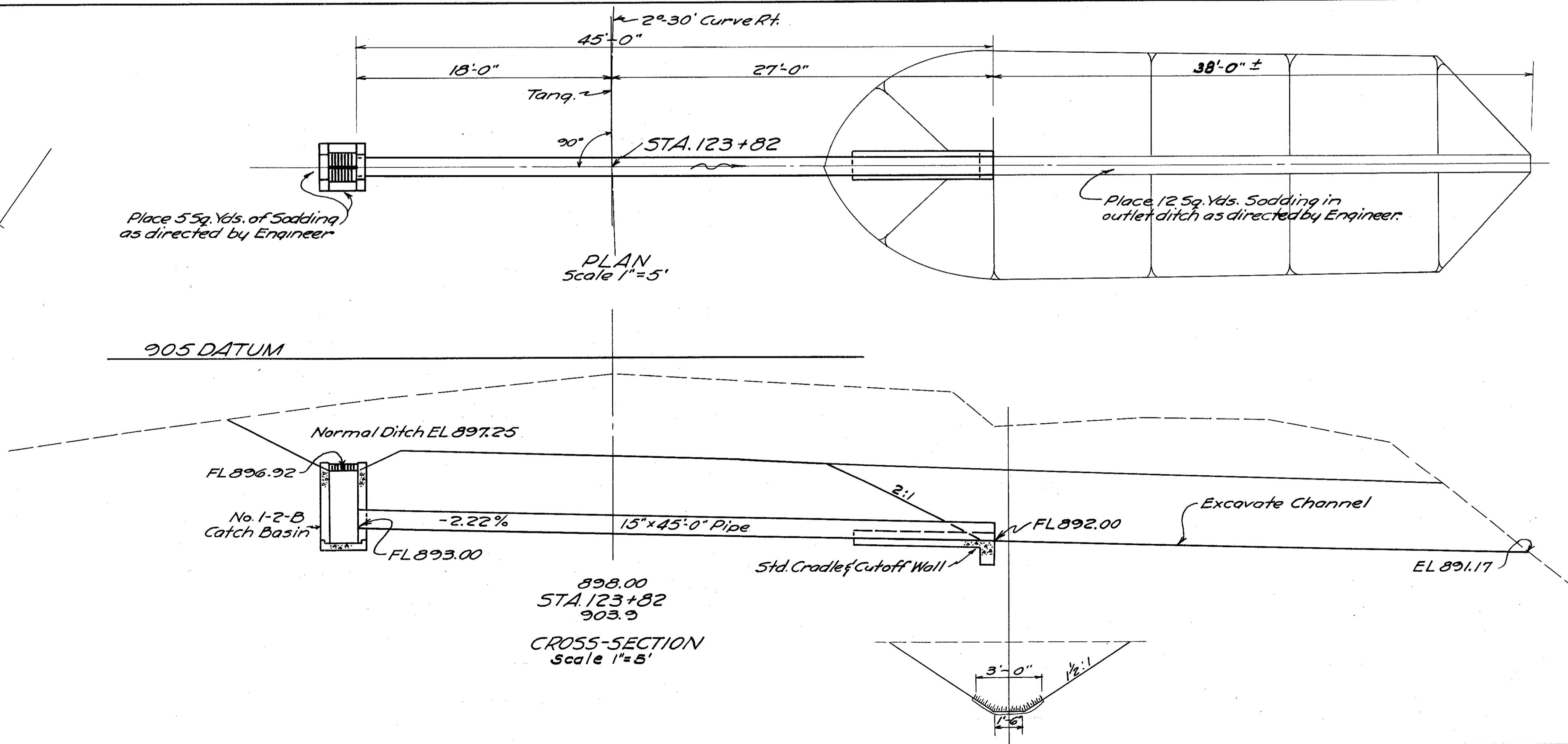
• REFERENCE DRAWINGS •
 Pipe Culvert Ends. 5-27 P.C.2
 Catch Basins I-8 C.B. No.1-2-B

• ESTIMATED QUANTITIES •

Structure Excavation	45 Cu.Yds.
Channel Excavation	50 Cu.Yds.
18" Pipe for Roadway Culvert	46 Lin. Ft.
Std. No.1-2-B Catch Basin	1 Each
Concrete, Class "E"	0.9 Cu.Yds.
Type "A" (Grouted) Rip Rap	5 Sq.Yds.
Sodding	5 Sq.Yds.
Remove & Store Exist. 12" C.M.R.	24 Lin. Ft.

**18"x46'-0" PIPE CULV.
STA. 115+84**

14-5



• STRUCTURE DATA •
 TYPE - Standard Pipe Culvert.
 SIZE - 15"x45'-0"
 WORK REQUIRED - Build 15"x45'-0" Std. Pipe Culvert with Std. No.1-2-B C.Basin at inlet end and Std. Cradle and Cutoff Wall at outlet. Excavate channel as shown. Sod ditch around C.Basin at inlet and outlet ditch.

• REFERENCE DRAWINGS •
 Pipe Culvert Ends. 5-27 P.C.2
 Catch Basins I-8 C.B. No.1-2-B

• ESTIMATED QUANTITIES •

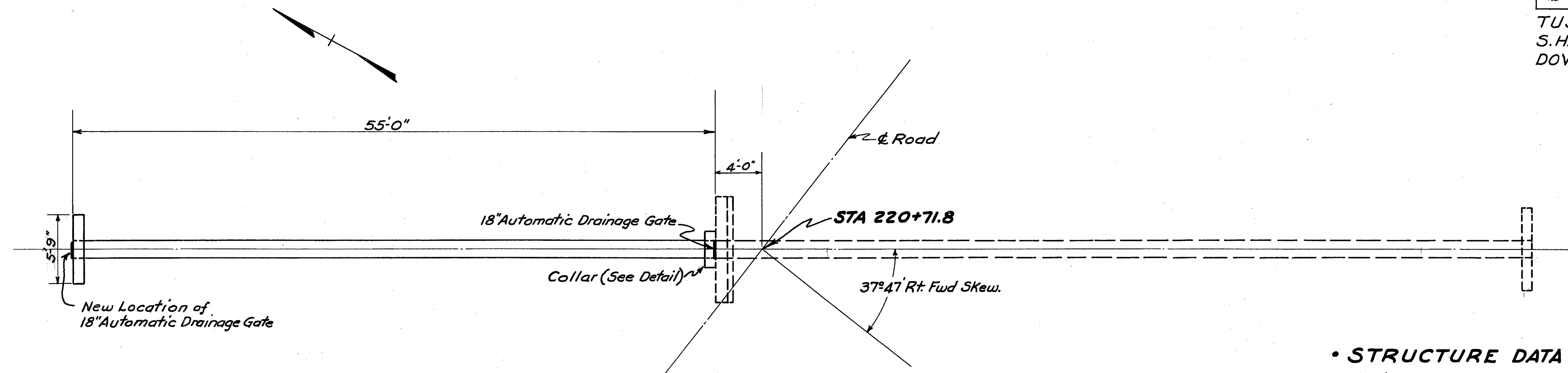
Channel Excavation	75 Cu.Yds.
Structure Excavation	25 Cu.Yds.
15" Pipe for Roadway Culvert	45 Lin. Ft.
Concrete, Class "E"	0.7 Cu.Yds.
Sodding	17 Sq.Yds.
Std. No.1-2-B Catch Basin.	1 Each

**15"x45'-0" PIPE CULV.
STA. 123+82**

15-5

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	42 56
2	OHIO		1947	

TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt)
DOVER BASIN UNIT No 2



PLAN
Scale 1"=5'

• STRUCTURE DATA •

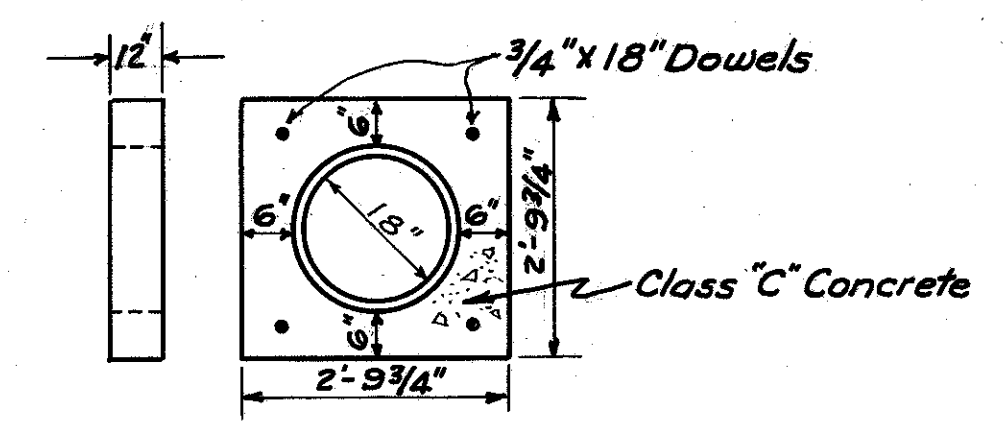
TYPE:- Standard Pipe Culvert.
SIZE:- 18"x 55'-0"
WORK REQUIRED:- Build 18"x 55'-0" Pipe Culvert Extension as shown. Dowel Concrete Collar at inlet to existing structure. Build std. headwall at outlet. Remove 18" Automatic Drainage Gate at existing headwall and reset same in new outlet headwall. Cost of resetting drainage gate to be included in price bid per cu. yd. for class "C" concrete.

• REFERENCE DRAWINGS •

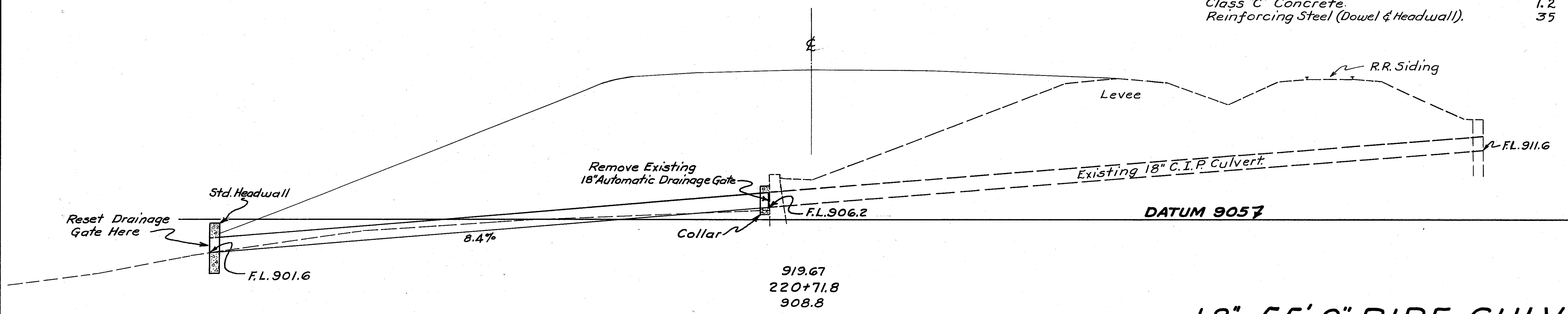
Pipe Culverts. S-27 P.C.1
Pipe Culverts. S-27 P.C.3

• ESTIMATED QUANTITIES •

Structure Excavation. 5 Cu.Yds.
Dowel Holes. 3 Lin. Ft.
18" Pipe for Roadway Culvert. 55 Lin. Ft.
Class "C" Concrete. 1.2 Cu.Yds.
Reinforcing Steel (Dowel & Headwall). 35 Lb's.



DETAIL OF COLLAR FOR CONNECTING NEW PIPE TO EXISTING PIPE
Scale 1/2"=1'-0"



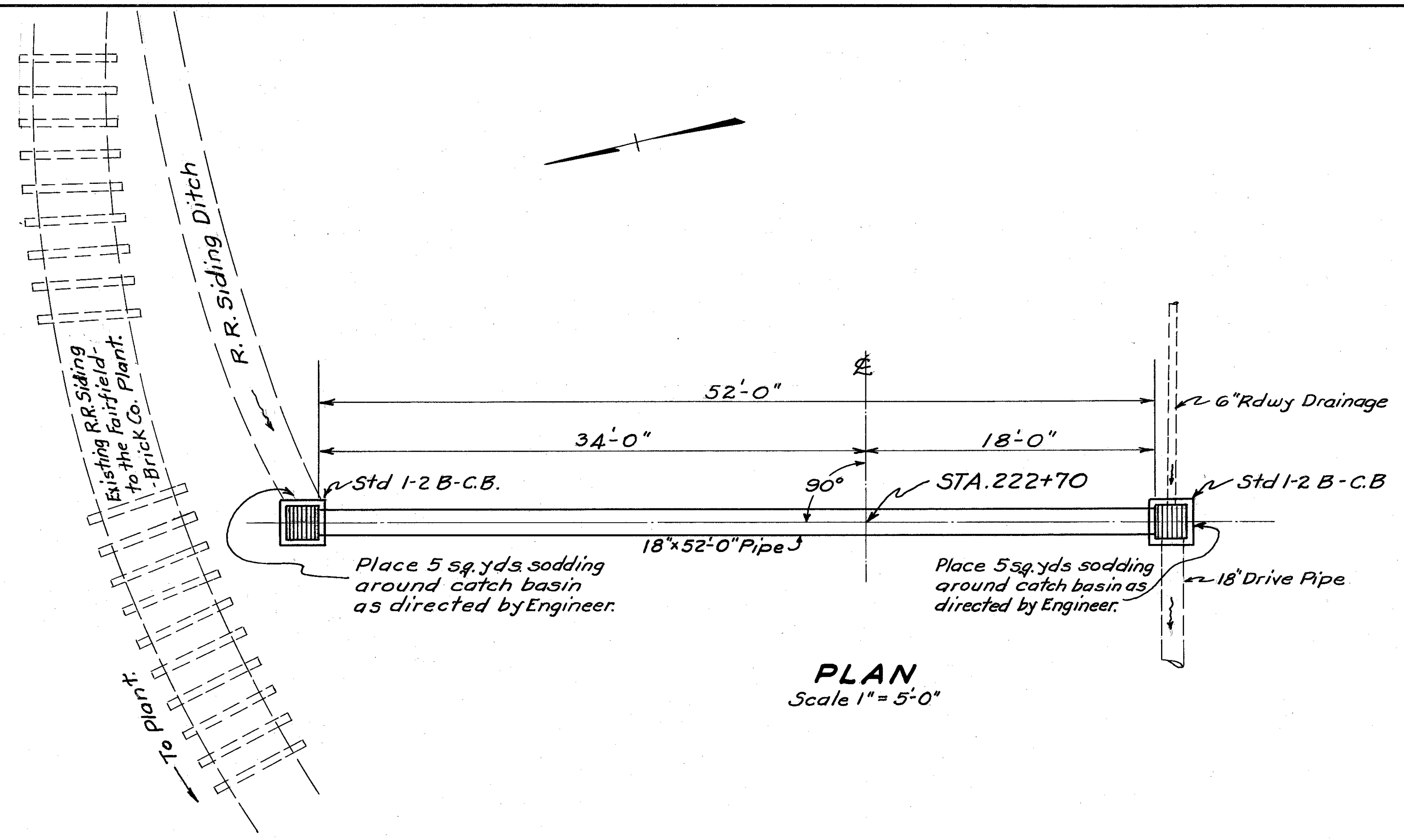
CROSS SECTION
Scale 1"=5'

18" x 55'-0" PIPE CULV.
STA. 220+71.8

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR
2	OHIO		1947

43
56

TUSCARAWAS COUNTY
S.H. 712 SEC. N (Pt) & O (Pt)
DOVER BASIN UNIT No 2



PLAN
Scale 1" = 5'-0"

• STRUCTURE DATA •

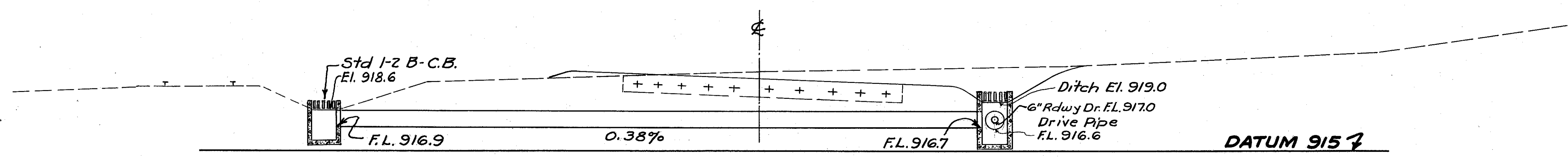
TYPE:- Standard Pipe Culvert.
 SIZE:- 15" x 52'-0"
 WORK REQUIRED:- Build 15" x 52'-0" pipe culvert with 1-2 B catch basin at inlet and outlet. Connect 6" roadway drainage and 18" drive pipe to catch basin on Rt. as shown. Place sodding as directed.

• STANDARD DRAWINGS •

Pipe Culverts. S 27- P. C. 3
 Catch Basins. I-8 C.B. I-2 A. & B.

• ESTIMATED QUANTITIES •

Structure Excavation. 20 Cu. Yds.
 15" Pipe for Roadway Culverts. 52 Lin. Ft.
 1-2 B. Catch Basins. 2 Each.
 Sodding 10 Sq. Yds.



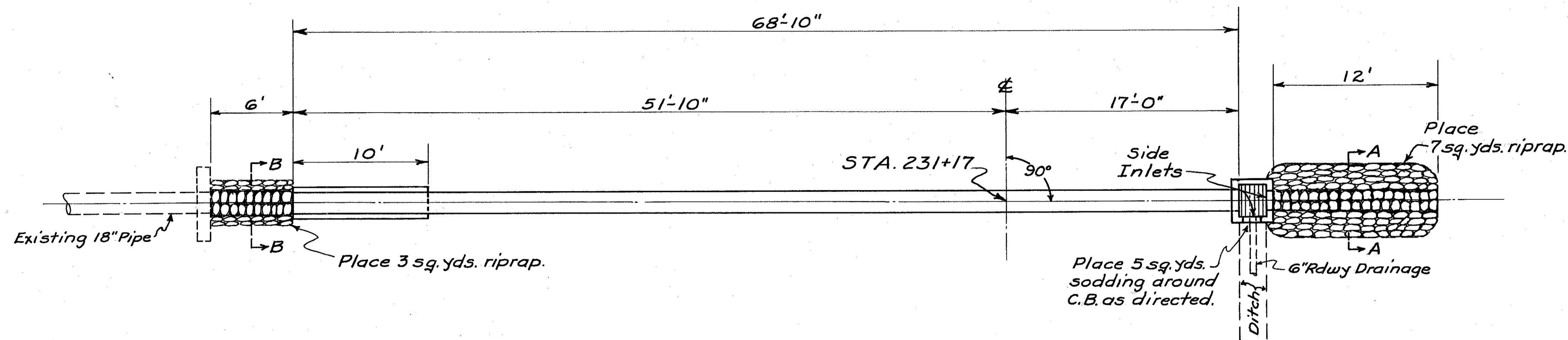
920.56
 222+70
 921.5
CROSS SECTION
 Scale 1" = 5'-0"

15" x 52'-0" PIPE CULV.
STA. 222+70

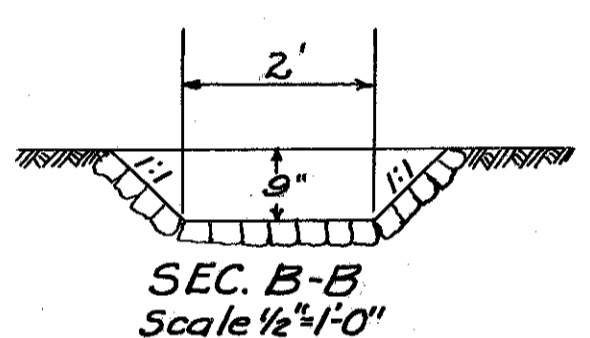
2-5

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	44 56
2	OHIO		1947	

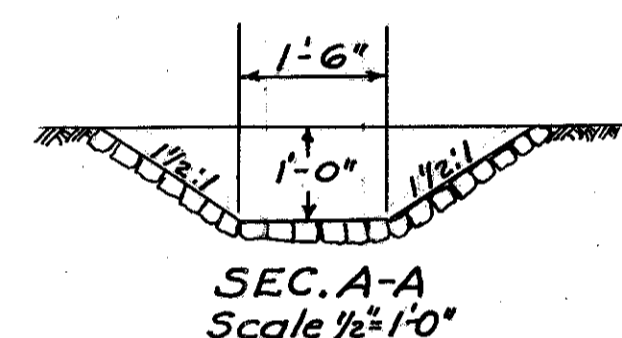
TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt).
DOVER BASIN UNIT No. 2.



PLAN
Scale 1"=5'



SEC. B-B
Scale 1/2"=1'-0"



SEC. A-A
Scale 1/2"=1'-0"

•STRUCTURE DATA•

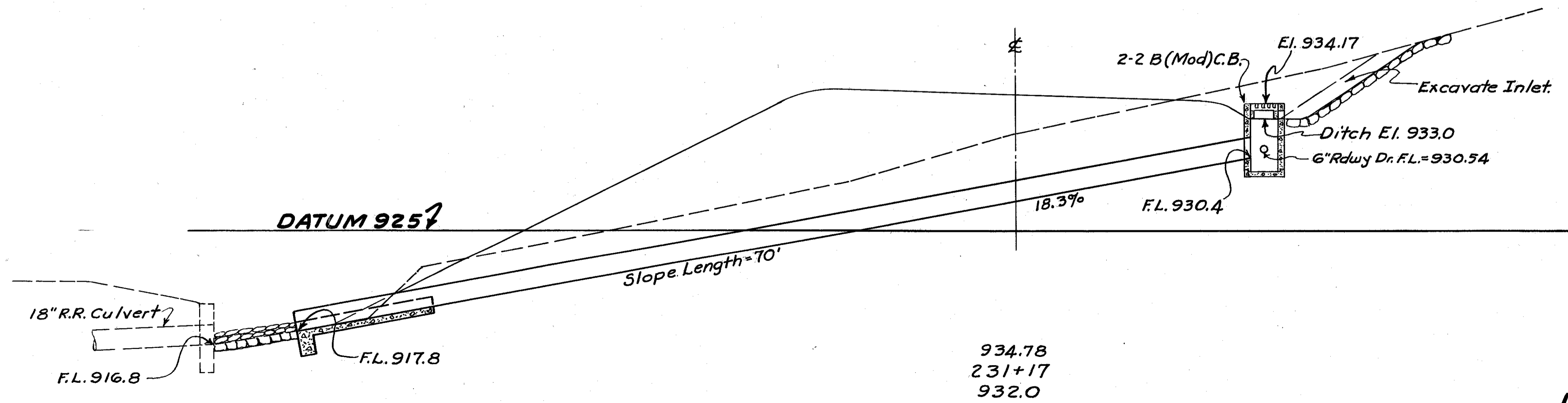
TYPE:- Standard Pipe Culvert.
SIZE:- 18"x70'-0"
WORK REQUIRED:- Build standard 18"x70'-0" pipe culvert with a 2-2 B (Mod) catch basin at inlet and connect 6" roadway drainage to catch basin. Build standard culvert end at outlet. Place riprap and sodding as shown.

•REFERENCE DRAWINGS•

Pipe Culverts. 5-27 P.C. 2
Catch Basins. I-8 C.B. 2-2 A & B.

•ESTIMATED QUANTITIES•

Structure Excavation.	35 Cu. Yds.
18" Pipe for Roadway Culvert.	70 Lin. Ft.
No. 2-2 B (Mod) Catch Basin.	1 Each.
Concrete Class "E".	0.9 Cu. Yds.
Riprap (Type A, (Grout Filled)).	10 Sq. Yds.
Sodding.	5 Sq. Yds.

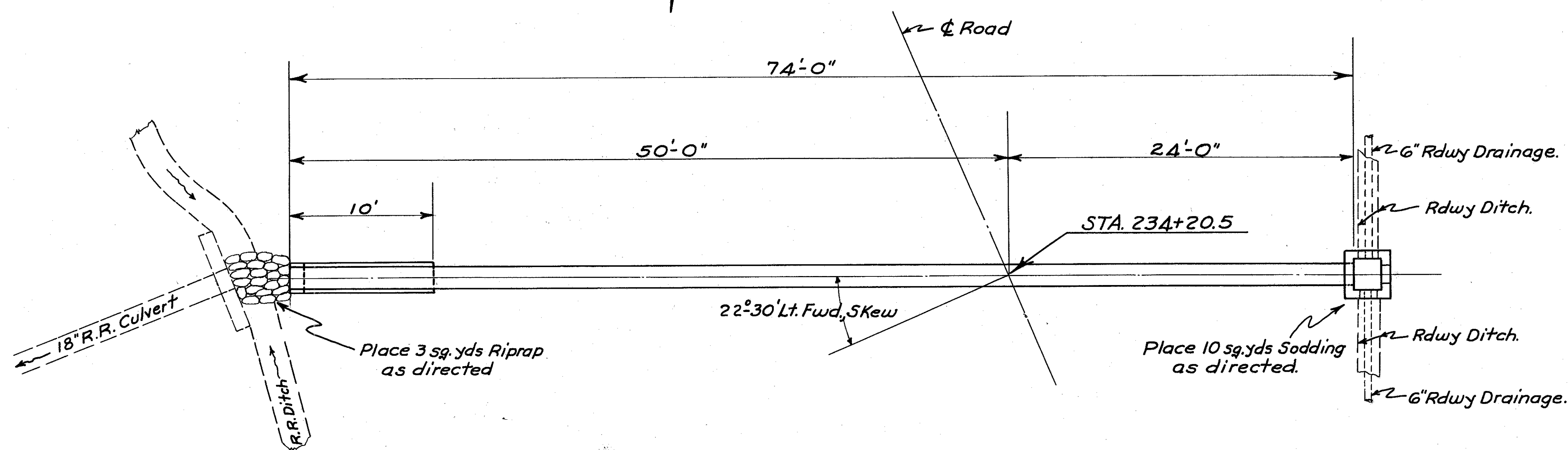


CROSS SECTION
Scale 1"=5'

18"x70'-0" PIPE CULV.
STA. 231+17

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	45 56
2	OHIO		1947	

TUSCARAWAS COUNTY
S. H. 712 SEC. N(Pt) & O(Pt).
DOVER BASIN UNIT N^o2



PLAN
Scale 1"=5'-0"

• STRUCTURE DATA •

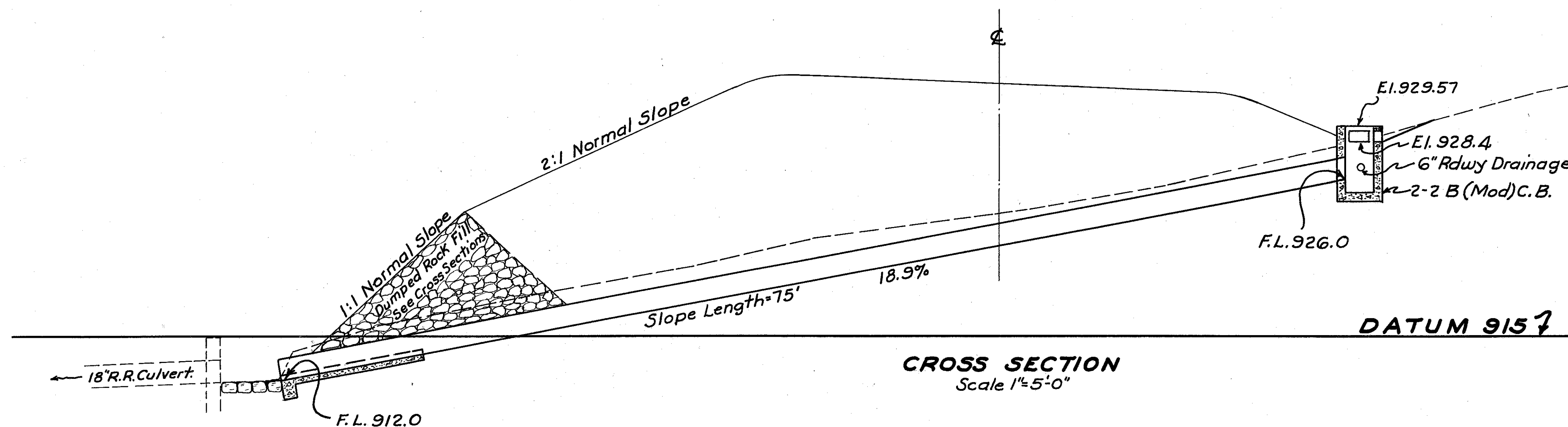
TYPE:- Standard Pipe Culvert.
SIZE:- 18"x 75'-0"
WORK REQUIRED:- Build std, 18"x75 pipe culvert with a 2-2 B (Mod) catch basin at inlet and std, cradle and cut-off wall at outlet. Connect 6" rdwy, drainage to catch basin. Sod inlet, and riprap outlet as directed.

• STANDARD DRAWINGS •

Pipe Culvert Ends. S-27- P.C. 2.
Catch Basins. I-8-C.B-22-A&B.

• ESTIMATED QUANTITIES •

Structure Excavation.	25 Cu. Yds.
18" Pipe for Roadway Culvert.	75 Lin. Ft.
Concrete Class "E".	0.9 Cu. Yds.
Riprap (Type "A") Grouted.	3 Sq. Yds.
2-2 B (Mod) Catch Basin.	1 Each.
Sodding.	10 Sq. Yds.



CROSS SECTION
Scale 1"=5'-0"

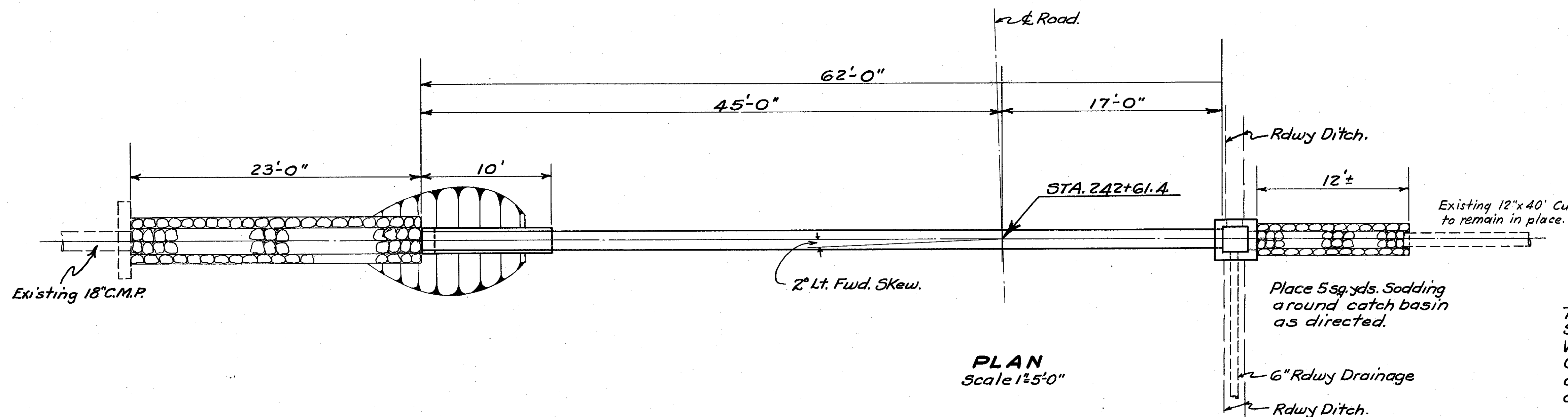
932.32
234+20.5
923.7

18"x 75'-0" PIPE CULV.
STA. 234+20.5

4-5

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	46
2	OHIO		1947	56

TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt).
DOVER BASIN UNIT N^o 2.



• STRUCTURE DATA •

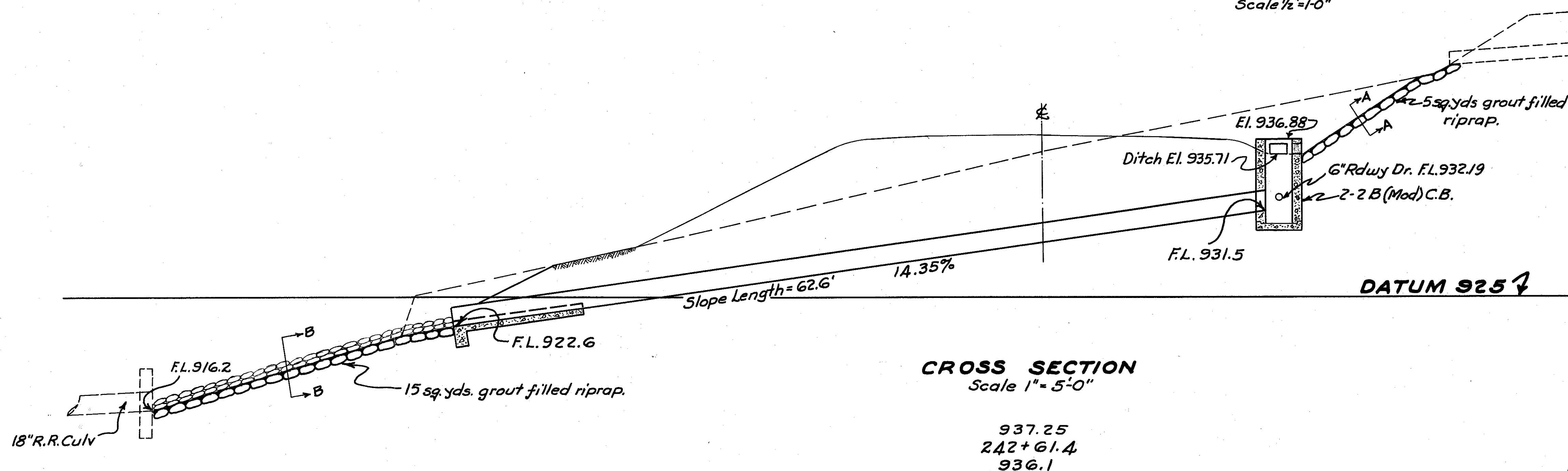
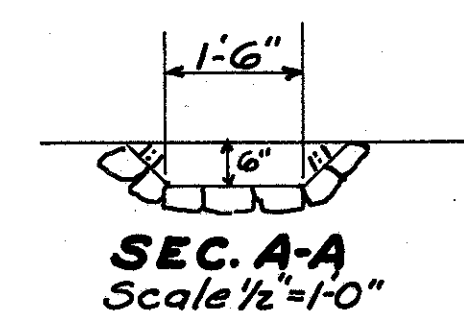
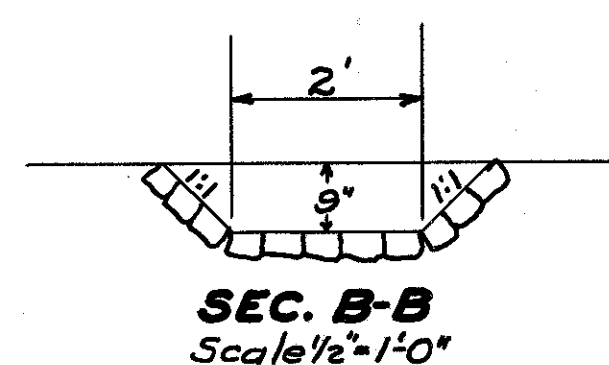
TYPE:- Standard Pipe Culvert.
SIZE:- 18" x 63'-0"
WORK REQUIRED:- Build std 18" x 63' pipe culvert. Construct 2-2 B (Mod) catch basin at inlet end and std, cradle and cut-off wall at out let end. Riprap inlet and outlet, and sod inlet as directed. Connect 6" Rdwy Dr. to C.B.

• STANDARD DRAWINGS •

Pipe Culvert Ends. S-27 P.C. 2
Catch Basins. I-8 C.B. N^o 2-2B.

• ESTIMATED QUANTITIES •

Structure Excavation.	50 Cu. Yds.
18" Pipe for Roadway Culvert.	63 Lin. Ft.
Std. N ^o 2-2 Catch Basin (Modified).	1 Each.
Concrete Class "E."	0.9 Cu. Yds.
Type "A" Riprap (Grouted).	20 Sq. Yds.
Sodding.	5 Sq. Yds.



CROSS SECTION
Scale 1" = 5'-0"

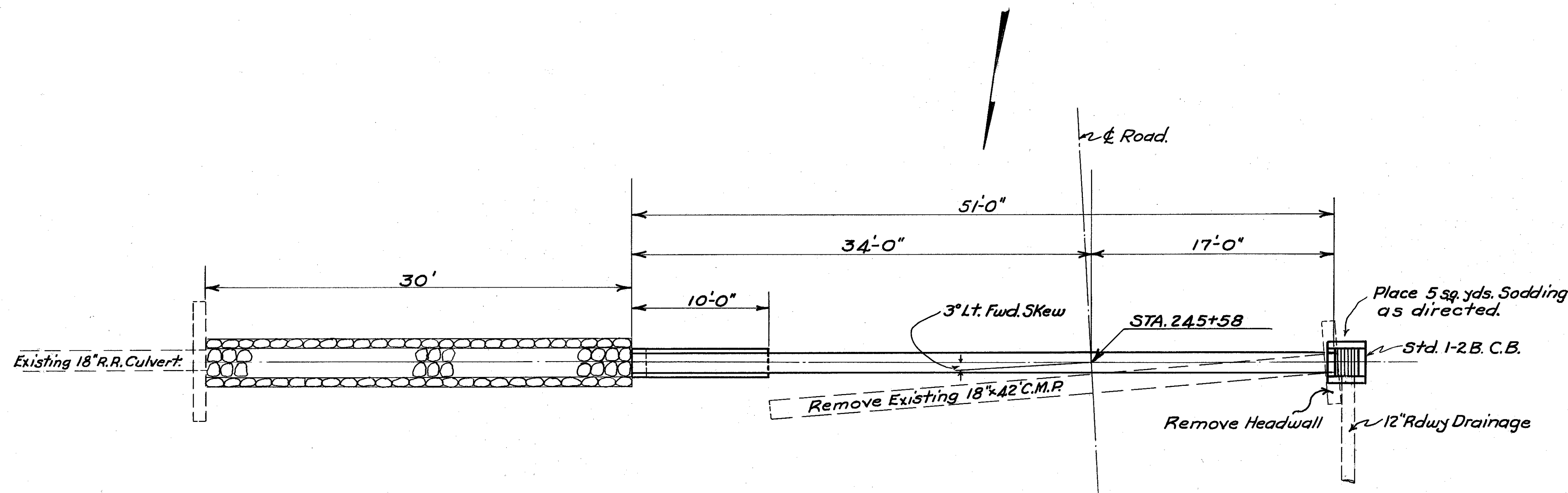
937.25
242+61.4
936.1

18" x 63'-0" PIPE CULV.
STA. 242+61.4

(5-S)

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	47 56
. 2	OHIO		1947	

TUSCARAWAS COUNTY
S. H. 712 SEC. N(Pt) & O(Pt).
DOVER BASIN UNIT N^o 2



PLAN
Scale 1"=5'-0"

•STRUCTURE DATA•

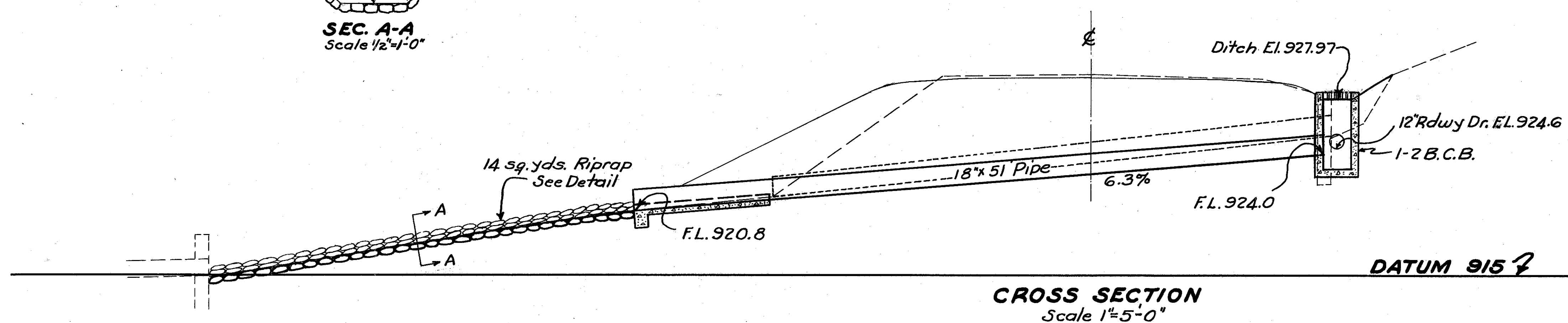
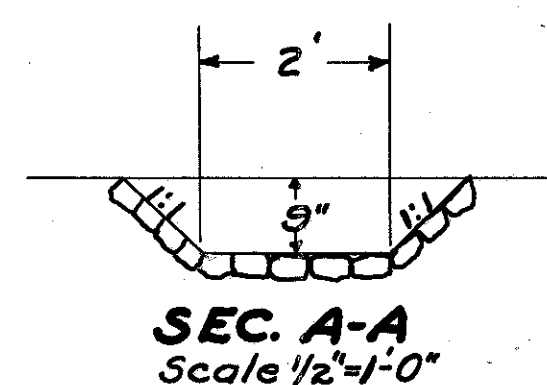
TYPE :- Standard Pipe Culvert.
SIZE :- 18" x 51'-0"
WORK REQUIRED :- Build 18" x 51' Pipe Culvert with Std. 1-2 B catch basin at inlet, and Std. cradle and cut-off wall at out let. Sod inlet and riprap outlet. Remove and store 18" x 42" C.M.P. Connect rdwy, dr. to C.B.

•STANDARD DRAWINGS•

Pipe Culvert Ends. S-27 P.C.2
Catch Basins. I-8. C.B. N^o 1-2-B.

•ESTIMATED QUANTITIES•

Structure Excavation	30 Cu.Yds.
Class "E" Concrete.	0.9 Cu.Yds.
18" Pipe for Roadway Culvert.	51 Lin.Ft.
Remove Existing Headwall (Str.).	1 Cu.Yds.
Riprap (Type "A" Grout Filled).	14 Sq.Yds.
Remove and Store 18" C.M.P.	4.2 Lin.Ft.
Std 1-2 B Catch Basin.	1 Each.
Sodding.	5 Sq.Yds.



CROSS SECTION
Scale 1"=5'-0"

929.68
245+58
929.9

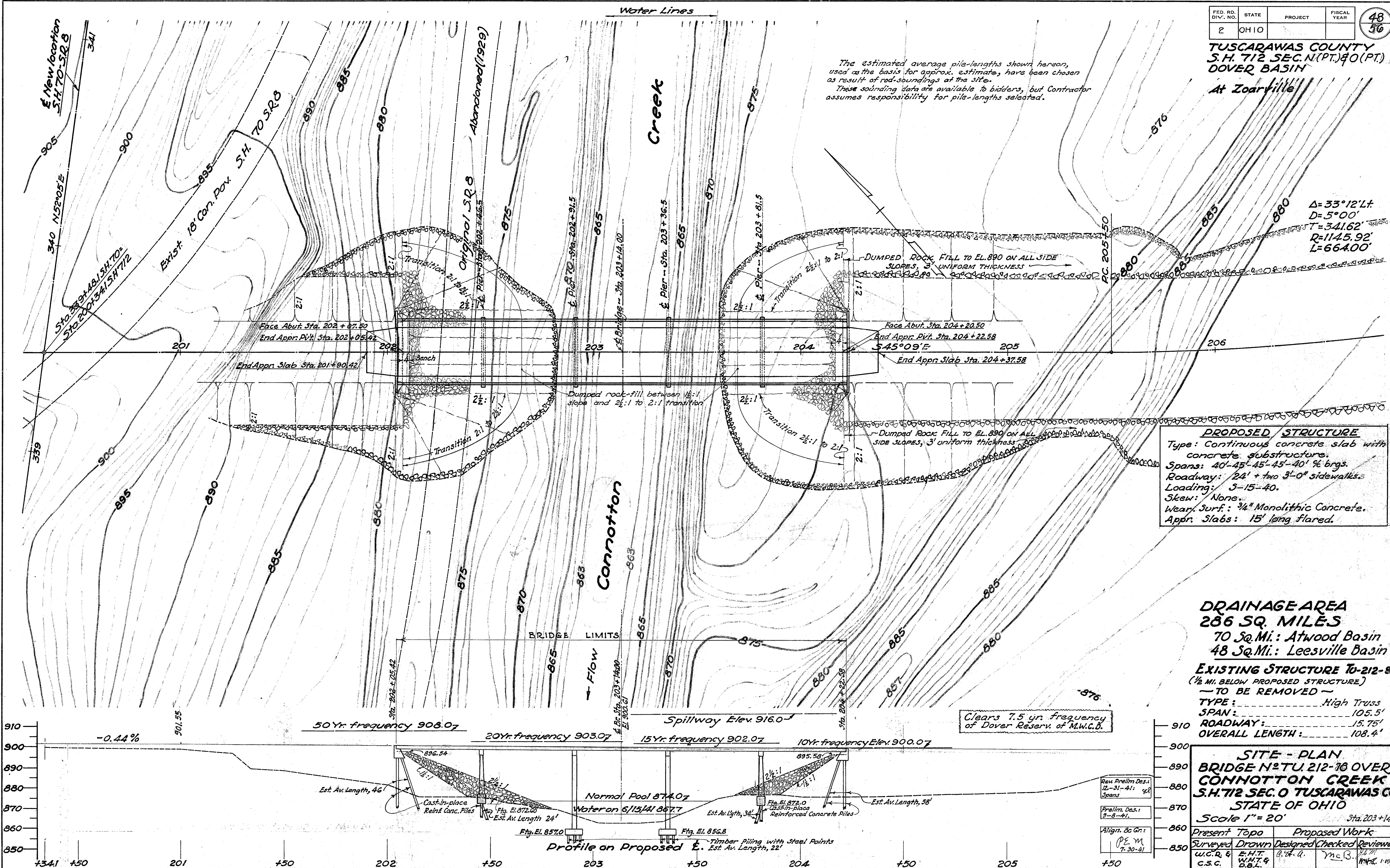
18" x 51'-0" PIPE CULV.
STA. 245+58

6-5

TUSCARAWAS COUNTY
S.H. 712 SEC. N(PT.) 80(PT.)
DOVER BASIN
At Zoarville

The estimated average pile-lengths shown hereon, used as the basis for approx. estimate, have been chosen as result of rod-soundings at the site. These sounding data are available to bidders, but Contractor assumes responsibility for pile-lengths selected.

$\Delta = 33^{\circ}12'14''$
 $D = 5^{\circ}00'$
 $T = 341.62'$
 $R = 1145.92'$
 $L = 664.00'$



PROPOSED STRUCTURE
Type: Continuous concrete slab with concrete substructure.
Spans: 40'-45'-45'-45'-40' % brgs.
Roadway: 24' + two 3'-0" sidewalks.
Loading: S-15-40.
Skew: None.
Wear. Surf.: 3/4" Monolithic Concrete.
Appr. Slabs: 15' long flared.

DRAINAGE AREA
286 SQ. MILES
70 Sq. Mi.: Atwood Basin
48 Sq. Mi.: Leesville Basin

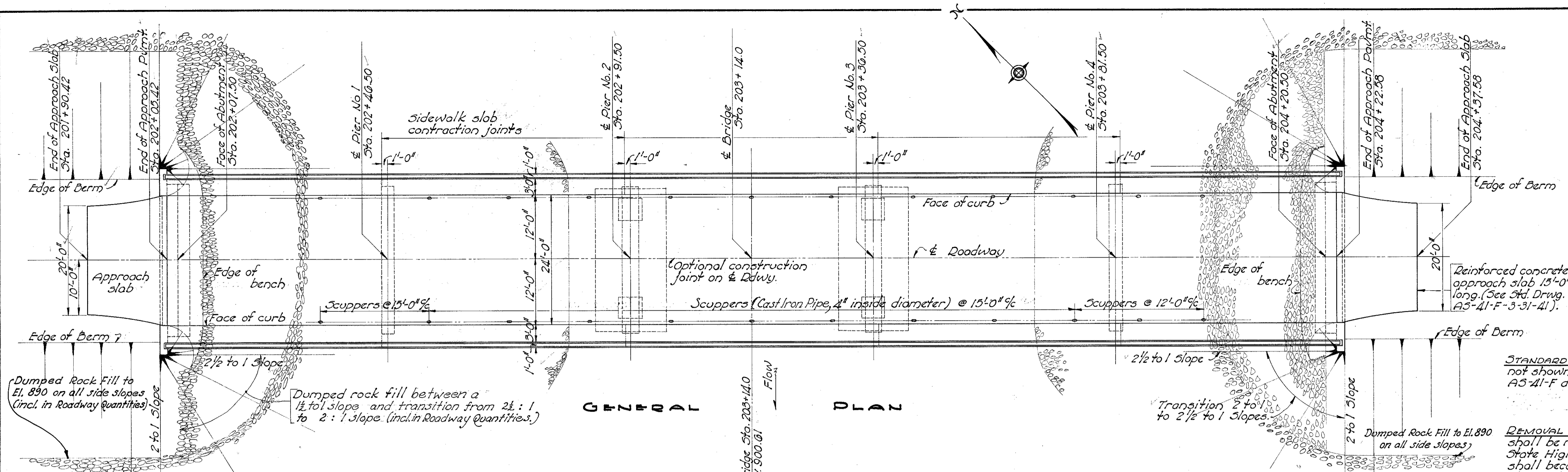
EXISTING STRUCTURE TO-212-81
(1/2 MI. BELOW PROPOSED STRUCTURE)
— TO BE REMOVED —
TYPE: High Truss
SPAN: 105.5'
ROADWAY: 15.75'
OVERALL LENGTH: 108.4'

SITE - PLAN
BRIDGE N^o TU. 212-76 OVER
CONNOTTON CREEK
S.H. 712 SEC. 0 TUSCARAWAS CO.
STATE OF OHIO
Scale 1" = 20' Sta. 203 + 14.0

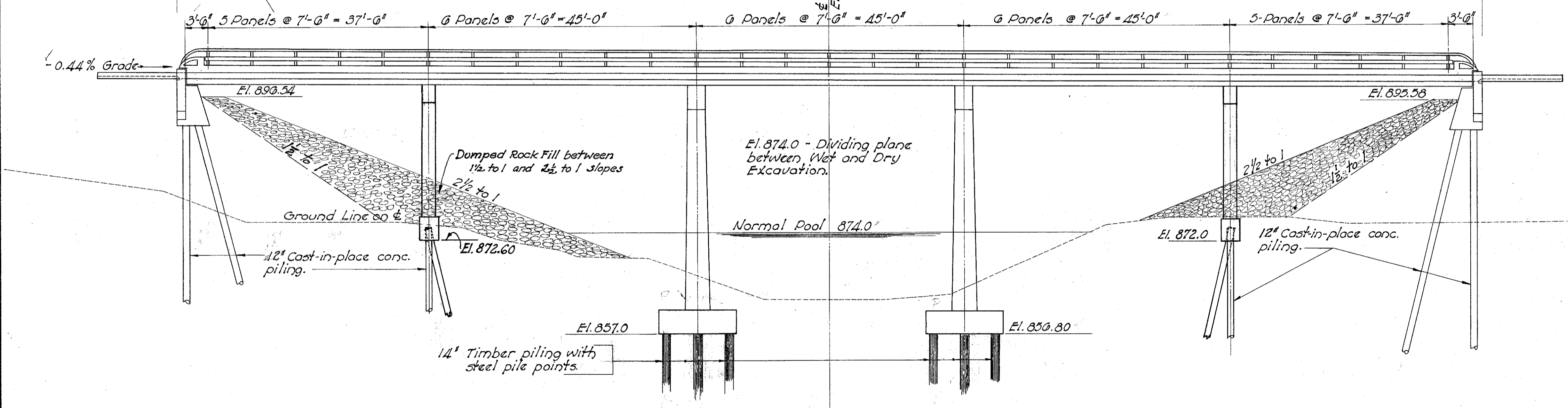
Present Topo		Proposed Work	
Surveyed	Drawn	Designed	Checked
W.C.R. & G.S.C.	E.H.T. & W.H.T. & D.B.Z.	B. G. G.	Mc.B.

Approx. P.A. to be 7.16 18 inch, Banning

TUSCARAWAS, COUNTY
S. H. 712 SEC. N (PT.) & O (PT.)



GENERAL PLAN



GENERAL ELEVATION

GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:—For details not shown on these drawings, reference shall be made to Std. Dwg. A5-41-F dated 3-31-41.

REMOVAL OF EXISTING STRUCTURE:—The existing superstructure shall be removed. Floor beams and stringers shall be delivered to the State Highway Garage at New Philadelphia, Ohio. The remainder shall become property of contractor as part payment for removal. The existing substructure is to remain in place.

EXCAVATION: quantity includes the removal of fill material between top of bench and bottom of abutment cap. If bottom forms are used for abutment cap they shall be left in place.

FALSE WORK PLANS:—Not less than 15 days prior to beginning of falsework construction the contractor shall submit 3 blue prints of false work plans to the Director for approval by the Bureau of Bridges. False work shall be supported on piling designed to carry the superimposed loads and driven in accordance with an accepted pile driving formula.

DUMPED ROCK FILL is included with Roadway Quantities.

PILING:—Timber piling shall be driven to a minimum bearing capacity of 25 tons. Cast-in-place reinforced concrete piling shall be driven to a minimum bearing capacity of 30 tons at abuts & 35 tons at piers.

STEEL END FINISH:—All elements of end finish, except bent anchors, shall be copper-bearing steel.

ESTIMATED QUANTITIES AS BUILT

Item No.	Description	West Abut.	Pier No. 1	Pier No. 2	Pier No. 3	Pier No. 4	East Abut.	Superstructure	General	Total	Change Orders	Final Quantity
E-2	Cofferdams and pumping								lump	lump sum		Lump
E-2	Excavation for structures, wet		10	100	130	15				315 Cu.Yds.		315
E-2	Excavation for structures, dry	40	10			20	40			110 Cu.Yds.		110
5-1	Class "C" concrete, superstructure							442		442 Cu.Yds.		442
5-1	Class "E" concrete, walls, columns & caps	30	22	50	50	22	30			216 Cu.Yds.		216
5-1	Class "E" concrete, footings		15	50	50	15				130 Cu.Yds.		130
5-3	Type "D" waterproofing (30" wide)	12					12		1	25 Sq.Yds.		25
5-4	Reinforcing steel	2080	9072	10624	10624	9072	2080	113232	170	158,154 Lbs.	#1, +589	158,743
5-9	1/4" Premolded expansion joint filler	55	27	27	27	27	55		1	219 Sq.Ft.		219
5-9	1/2" Cast leaded bronze sliding plates	285					285			570 Lbs.		570
5-9	Structural steel end finish (copper bearing)	1400					1400			2800 Lbs.		2800
5-14	Bridge railing (steel)							434.8		434.8 Lin.Ft.		434.8
5-16	First test pile (concrete or timber)								lump	lump sum		Lump
5-18	14" Timber piling (untreated)			600	600					1200 Lin.Ft.	#2, -10	1190
5-18	Steel pile points			27	27					54 each	#4, -1	53
5-18	12" Reinforced concrete piling (cast in place)	450	250			350	550			1600 Lin.Ft.	#2, -321	1279
5-17	First test load (concrete pile)								lump	lump sum		Lump
5-17	Subsequent test load (concrete pile)								1	each	#2, -1	0
5-24	Removal of existing superstructure								lump	lump sum	#3,	Non-performed
5-29	Cast-iron-pipe scuppers, 4" dia. (Sec. M-6.3)							20		20 each	#4, -2	24
E-401	Dumped rock or slag fill									#1, 1500ft ³ /791		2291

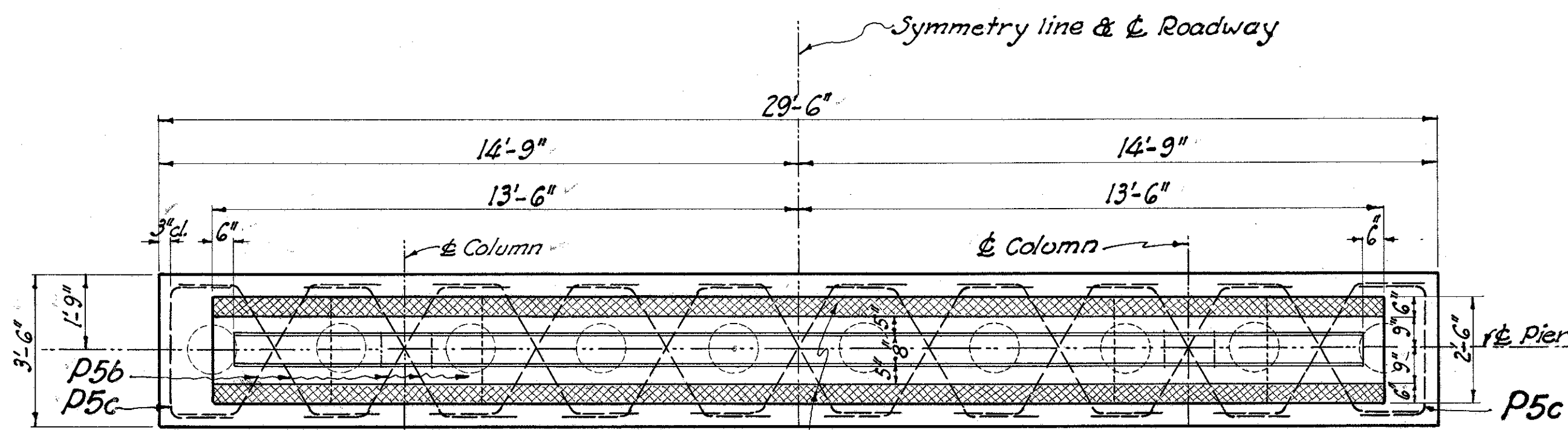
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES

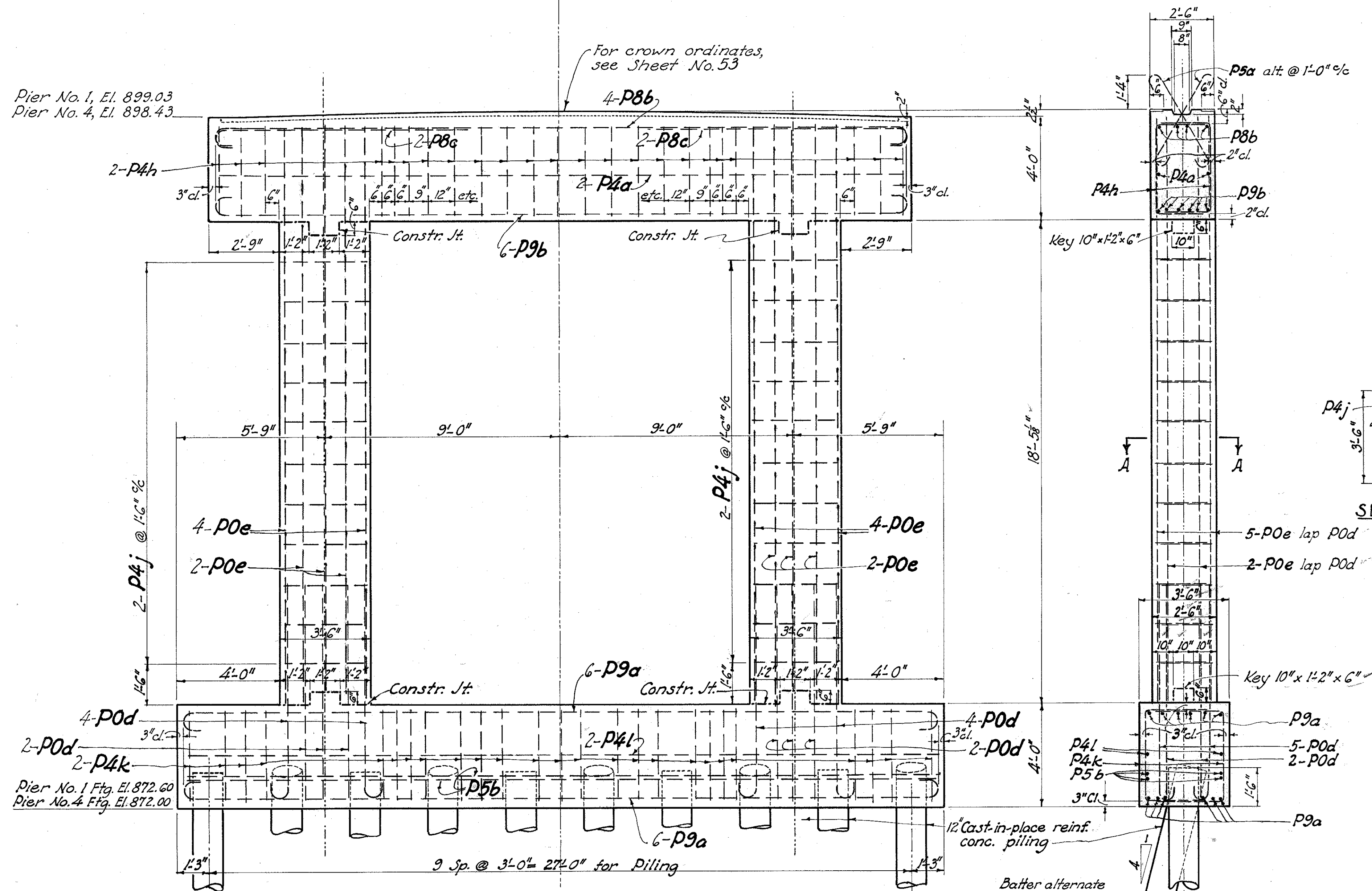
Bridge No. TU-212-78
over Connocton Creek
Tuscarawas County S. H. 712
Sta. 203+14.0

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.E.S.	P.E.S.	E.J.	H.S.P.	M.B.	1-15-45	9-5-47

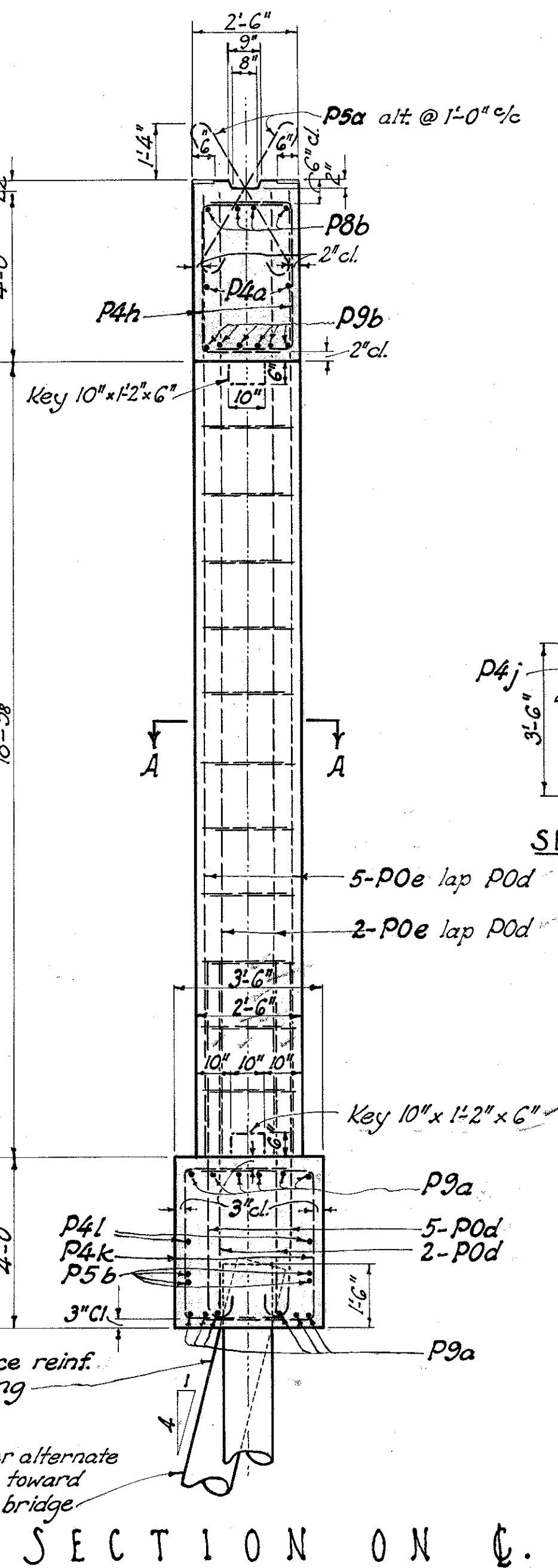
Revised As-Built



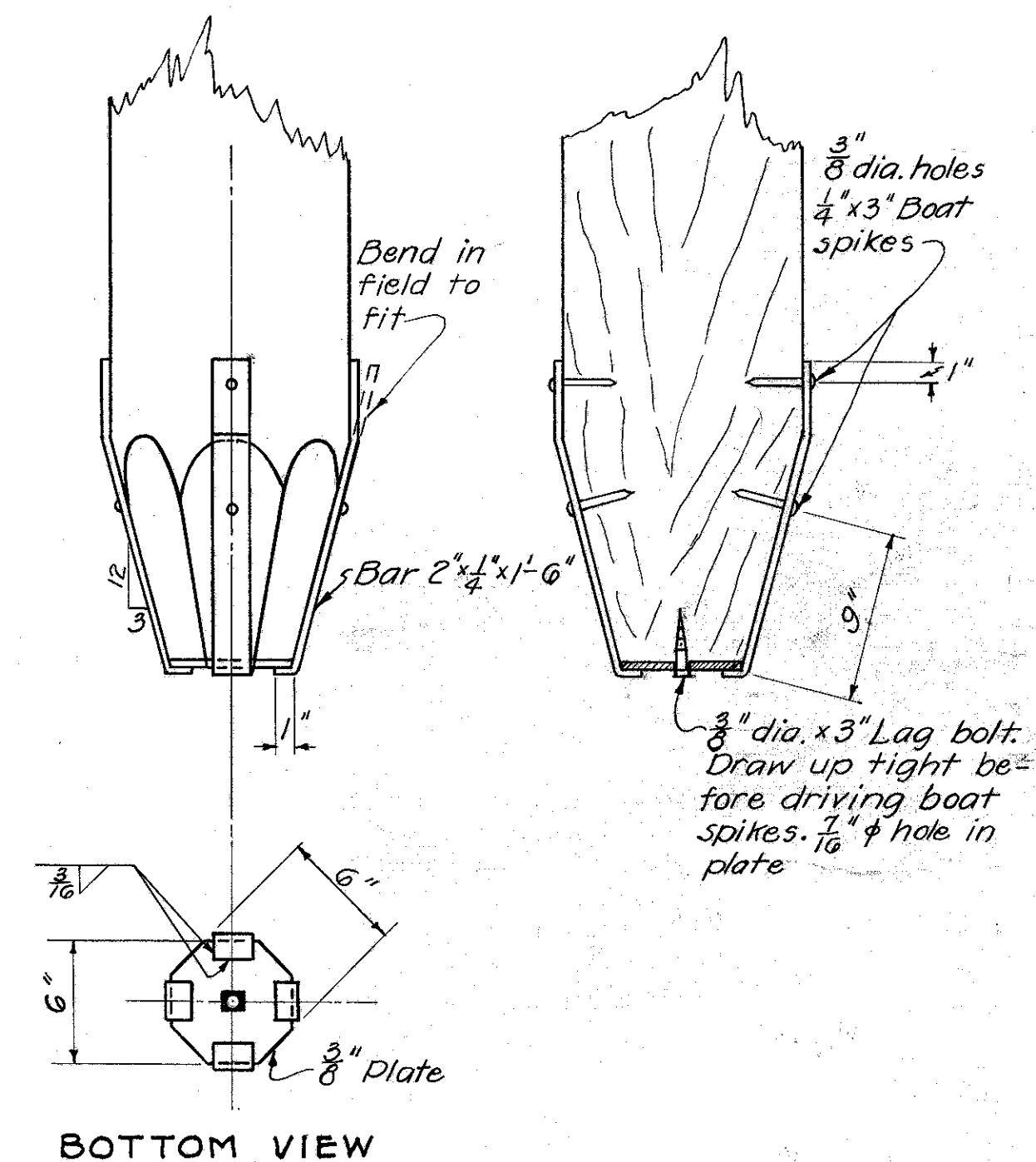
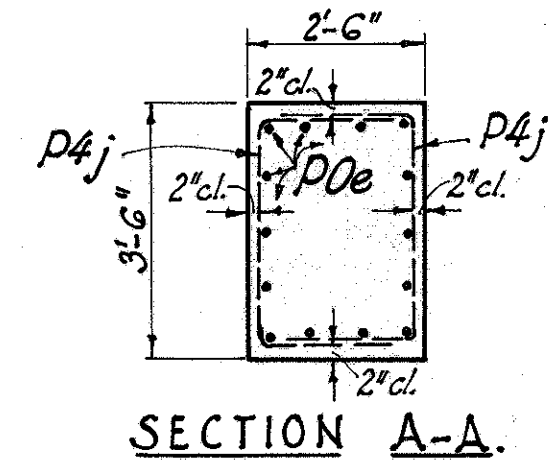
PLAN OF PIERS NO 1 & 4.



ELEVATION OF PIERS NO. 1 & 4.



SECTION ON C.



STEEL PILE POINT

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
PIERS NO. 1 & 4 BRIDGE NO. TU-212-78 CONNOTTON CREEK TUSCARAWAS CO. S.H. 712 SEC. 'O' STA. 203+14.					
DESIGNED P.E.S.	DRAWN P.E.S.	TRACED V.E.	CHECKED M.S.	REVIEWED N.B. H.W.C.	DATE 1-15-45
					REVISED 9-5-47

TUSCARAWAS, COUNTY
S.H. 712 SEC. N (PT.) & O (PT.)

REINFORCING STEEL LIST

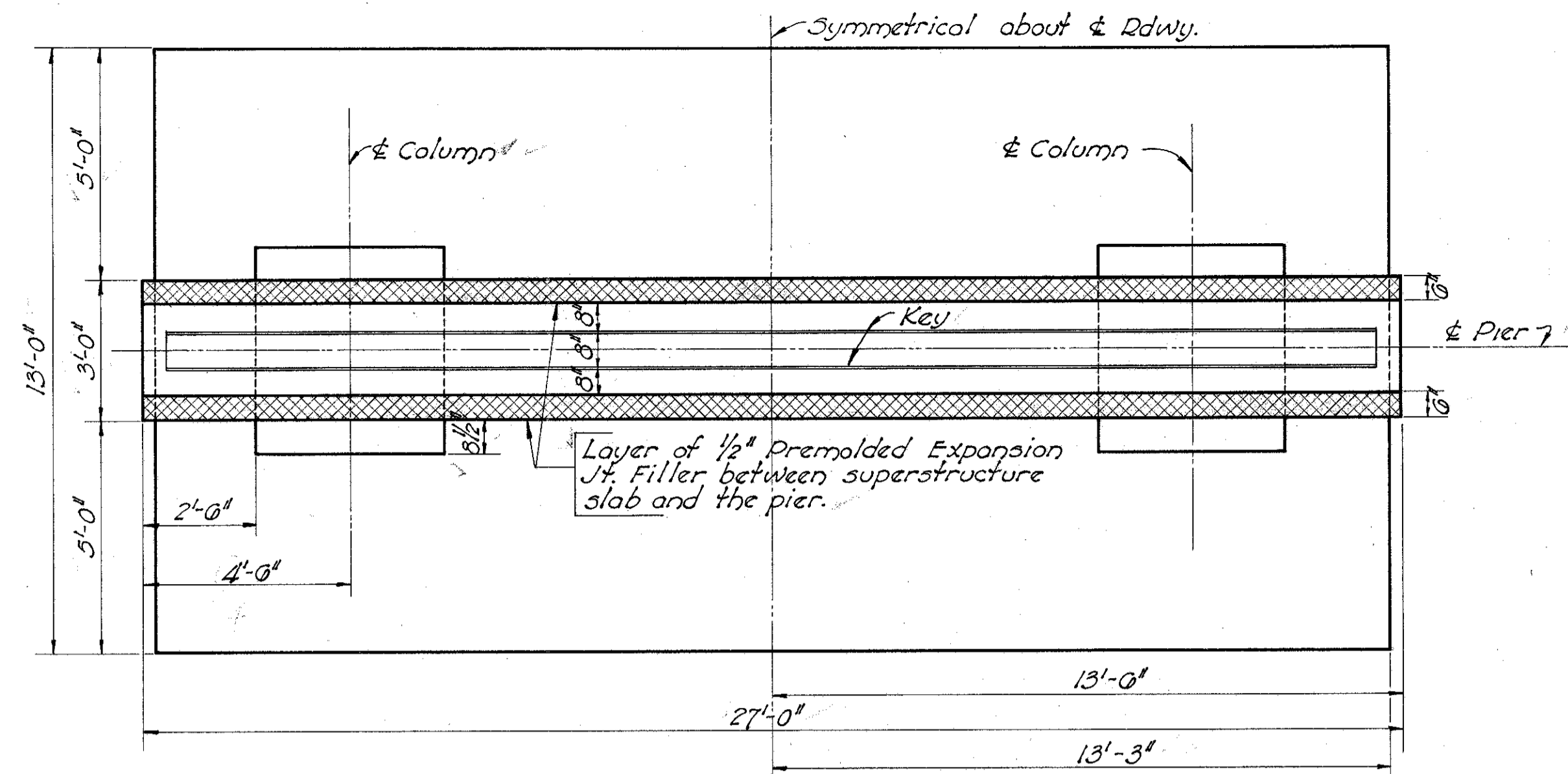
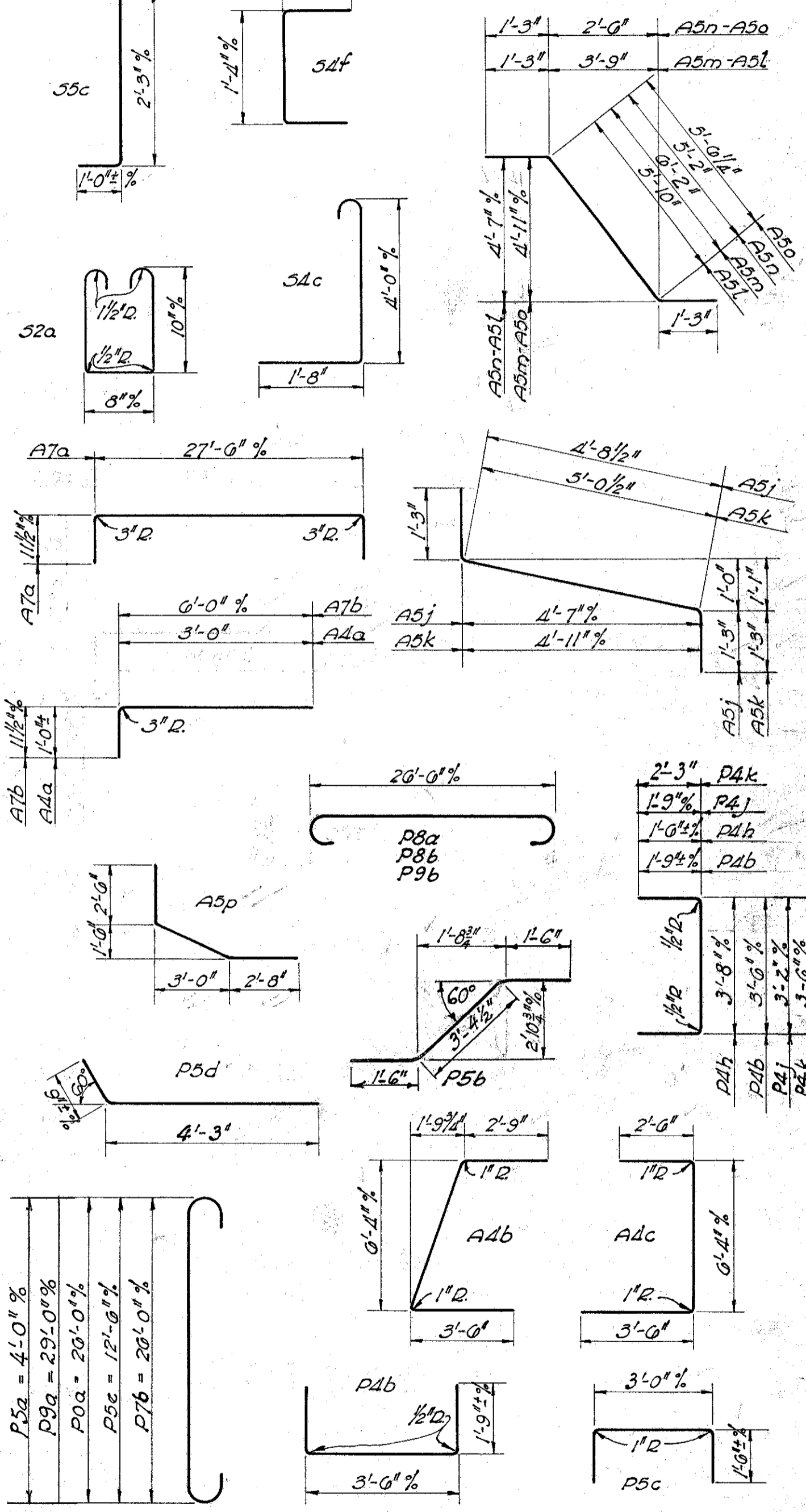
Mark	Size	No.	Length	Weight	Sh.
<i>Piers (Cont'd)</i>					
P0d	1 1/4"	56	91'-3"	2752	Bt
P0e	1 1/4"	56	22'-0"	6546	Str.
P9a	1 1/8"	24	31'-0"	3201	Bt
P9b	1 1/8"	12	28'-6"	1470	Bt
P8b	1"	8	28'-6"	775	Bt
P8c	1"	8	11'-0"	299	Bt
P4h	3/8"	32	6'-6"	624	Bt
P4j	3/8"	88	6'-6"	597	Bt
P4k	3/8"	100	8'-0"	836	Bt
P4L	3/8"	4	29'-0"	12.1	Str.

Mark	Size	No.	Length	Weight	Sh.
<i>Superstructure</i>					
50a	1 1/4"	80	32'-6"	13814	Str.
50b	1 1/4"	40	14'-0"	2975	Str.
50c	1 1/4"	32	52'-0"	8841	Str.
50d	1 1/4"	28	53'-10"	8008	Bt
50e	1 1/4"	42	24'-3"	5411	Str.
59a	1 1/8"	36	53'-10"	6339	Bt
59b	1 1/8"	54	24'-3"	5635	Str.
59c	1 1/8"	68	32'-6"	9510	Str.
59d	1 1/8"	32	14'-0"	1928	Str.
58a	1"	34	52'-0"	6011	Str.
58b	1"	66	47'-0"	10659	Str.
58c	1"	33	29'-3"	3282	Str.
57a	1 1/2"	72	28'-3"	5431	Str.
57b	1 1/2"	28	14'-0"	1047	Str.
55a	3/4"	34	28'-3"	1442	Str.
55b	3/4"	105	16'-3"	2503	Bt
55c	3/4"	24	3'-0"	108	Bt
54a	3/8"	118	29'-3"	3600	Str.
54b	3/8"	226	20'-0"	6247	Str.
54c	3/8"	288	6'-3"	1877	Bt
54d	3/8"	90	22'-0"	2205	Str.
54e	3/8"	84	23'-6"	2059	Str.
54f	3/8"	288	3'-3"	976	Bt
50a	7/8"	28	12'-0"	687	Str.
52a	1/2"	288	3'-0"	577	Bt
A7a	1 1/2"	26	29'-0"	2015	Bt
A7b	1 1/2"	8	6'-9"	144	Bt
A5a	3/4"	92	3'-0"	415	Str.
A5b	3/4"	4	24'-0"	144	Str.
A5c	3/4"	8	6'-0"	78	Str.
A5d	3/4"	8	7'-0"	84	Str.
A5e	3/4"	8	7'-0"	90	Str.
A5f	3/4"	8	8'-0"	96	Str.
A5g	3/4"	16	8'-6"	204	Str.
A5h	3/4"	24	6'-0"	216	Str.
A5i	3/4"	24	4'-6"	162	Str.
A5j	3/4"	8	7'-3"	88	Bt
A5k	3/4"	8	7'-6"	90	Bt
A5l	3/4"	4	8'-6"	51	Bt
A5m	3/4"	4	8'-9"	53	Bt
A5n	3/4"	8	7'-9"	93	Bt
A5o	3/4"	8	8'-0"	96	Bt
A5p	3/4"	8	8'-0"	102	Bt
A4a	3/8"	24	3'-10"	96	Bt
A4b	3/8"	40	12'-9"	332	Bt
A4c	3/8"	40	12'-3"	312	Bt

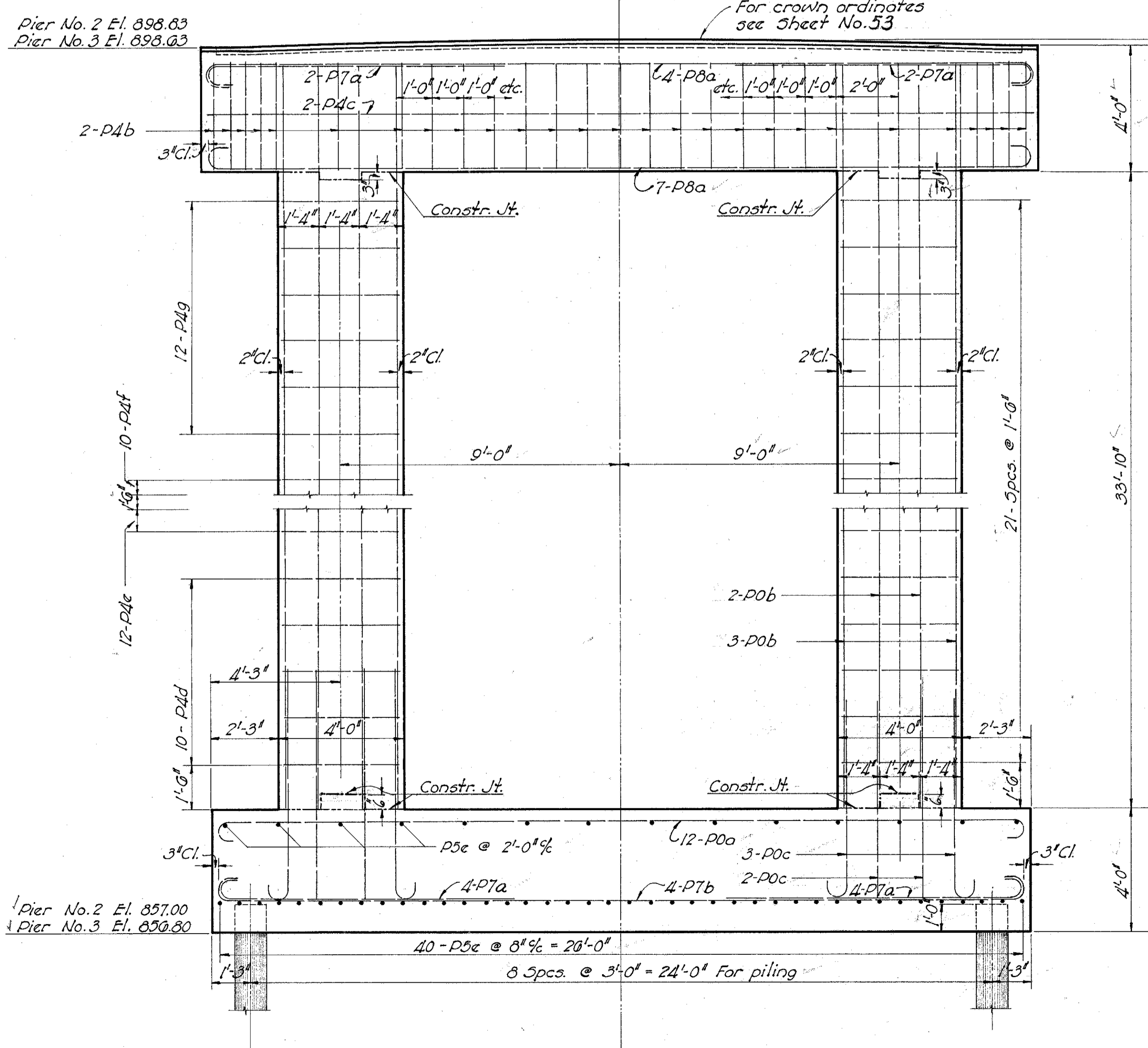
Mark	Size	No.	Length	Weight	Sh.
<i>Abutments</i>					
A7a	1 1/2"	26	29'-0"	2015	Bt
A7b	1 1/2"	8	6'-9"	144	Bt
A5a	3/4"	92	3'-0"	415	Str.
A5b	3/4"	4	24'-0"	144	Str.
A5c	3/4"	8	6'-0"	78	Str.
A5d	3/4"	8	7'-0"	84	Str.
A5e	3/4"	8	7'-0"	90	Str.
A5f	3/4"	8	8'-0"	96	Str.
A5g	3/4"	16	8'-6"	204	Str.
A5h	3/4"	24	6'-0"	216	Str.
A5i	3/4"	24	4'-6"	162	Str.
A5j	3/4"	8	7'-3"	88	Bt
A5k	3/4"	8	7'-6"	90	Bt
A5l	3/4"	4	8'-6"	51	Bt
A5m	3/4"	4	8'-9"	53	Bt
A5n	3/4"	8	7'-9"	93	Bt
A5o	3/4"	8	8'-0"	96	Bt
A5p	3/4"	8	8'-0"	102	Bt

Mark	Size	No.	Length	Weight	Sh.
<i>Piers</i>					
P0a	1 1/4"	24	28'-3"	3003	Bt
P0b	1 1/4"	40	37'-0"	7970	Str.
P0c	1 1/4"	40	8'-6"	1807	Bt
P8a	1"	22	28'-6"	2130	Bt
P7a	1 1/2"	24	10'-6"	673	Bt
P7b	1 1/2"	8	26'-0"	598	Bt
P5a	3/4"	54	5'-3"	426	Bt
P5b	3/4"	36	6'-6"	351	Bt
P5c	3/4"	4	5'-9"	35	Bt
P5d	3/4"	54	5'-0"	406	Bt
P5e	3/4"	80	14'-0"	1682	Bt
P4a	5/8"	4	26'-0"	111	Str.
P4b	5/8"	108	6'-9"	760	Bt
P4c	5/8"	4	20'-0"	109	Str.
P4d	5/8"	40	9'-0"	375	Bt
P4e	5/8"	48	8'-0"	420	Bt
P4f	5/8"	40	8'-0"	334	Bt
P4g	5/8"	48	7'-0"	375	Bt

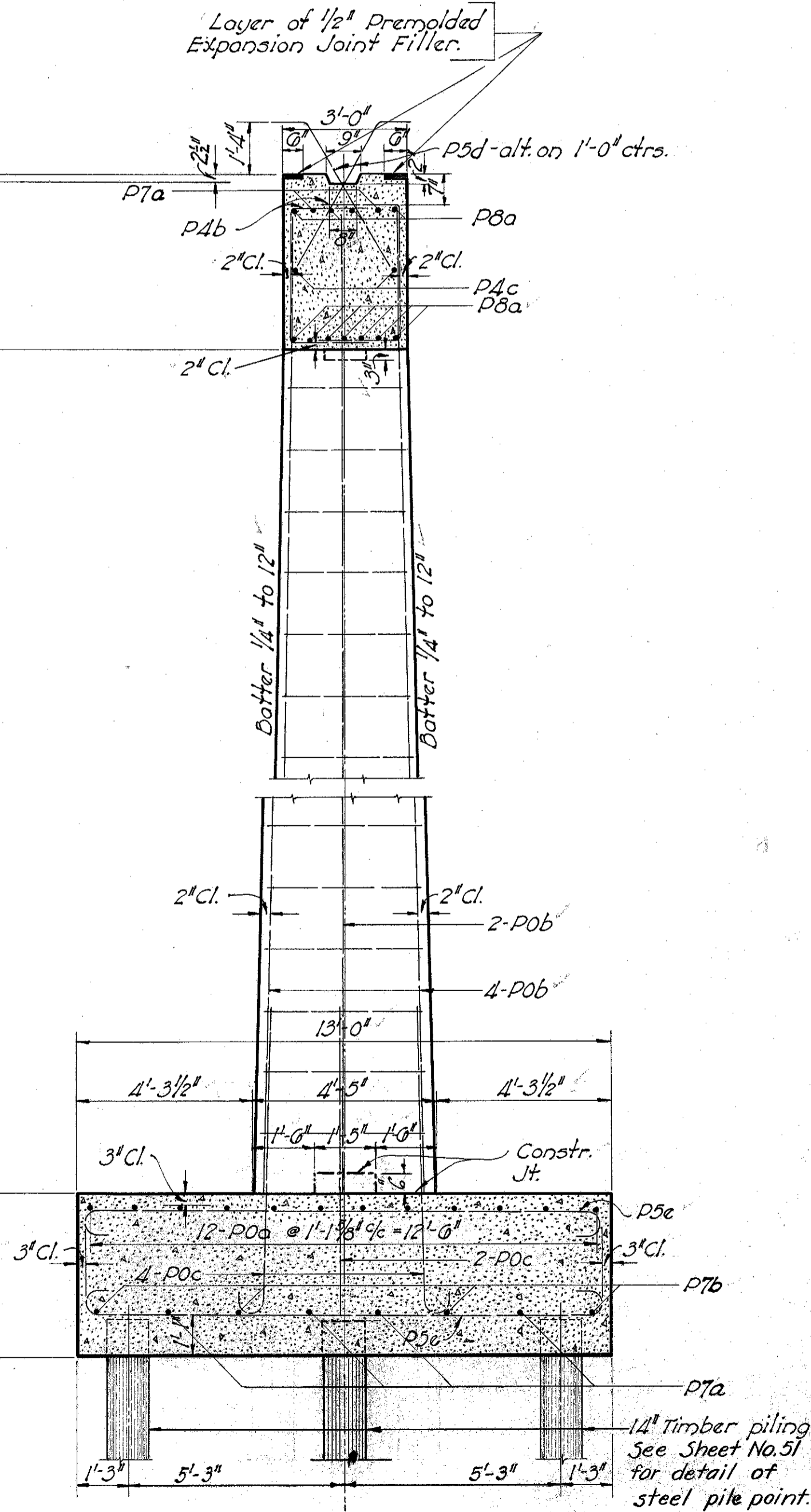
Mark	Size	No.	Length	Weight	Sh.
<i>Replacement Steel</i>					
DE0	1 1/2"	1	9'-0"	48	Str.
DE9	1 1/2"	1	8'-6"	37	Str.
DE8	1"	1	8'-0"	27	Str.
DE7	1 1/8"	1	8'-0"	21	Str.
DE6	3/4"	1	7'-0"	15	Str.
DE5	3/4"	1	7'-0"	11	Str.
DE4	3/8"	1	6'-0"	7	Str.
DE2	1/2"	1	6'-0"	4	Str.



PLAN OF PIERS No. 2 & 3



ELEVATION OF PIERS No. 2 & 3



SECTION ON &

P7a	9'-6"
P0c	7'-4 1/2" ± 1/2"
P0d	8'-0" ± 1/2"
P8c	10'-0" ± 1/2"

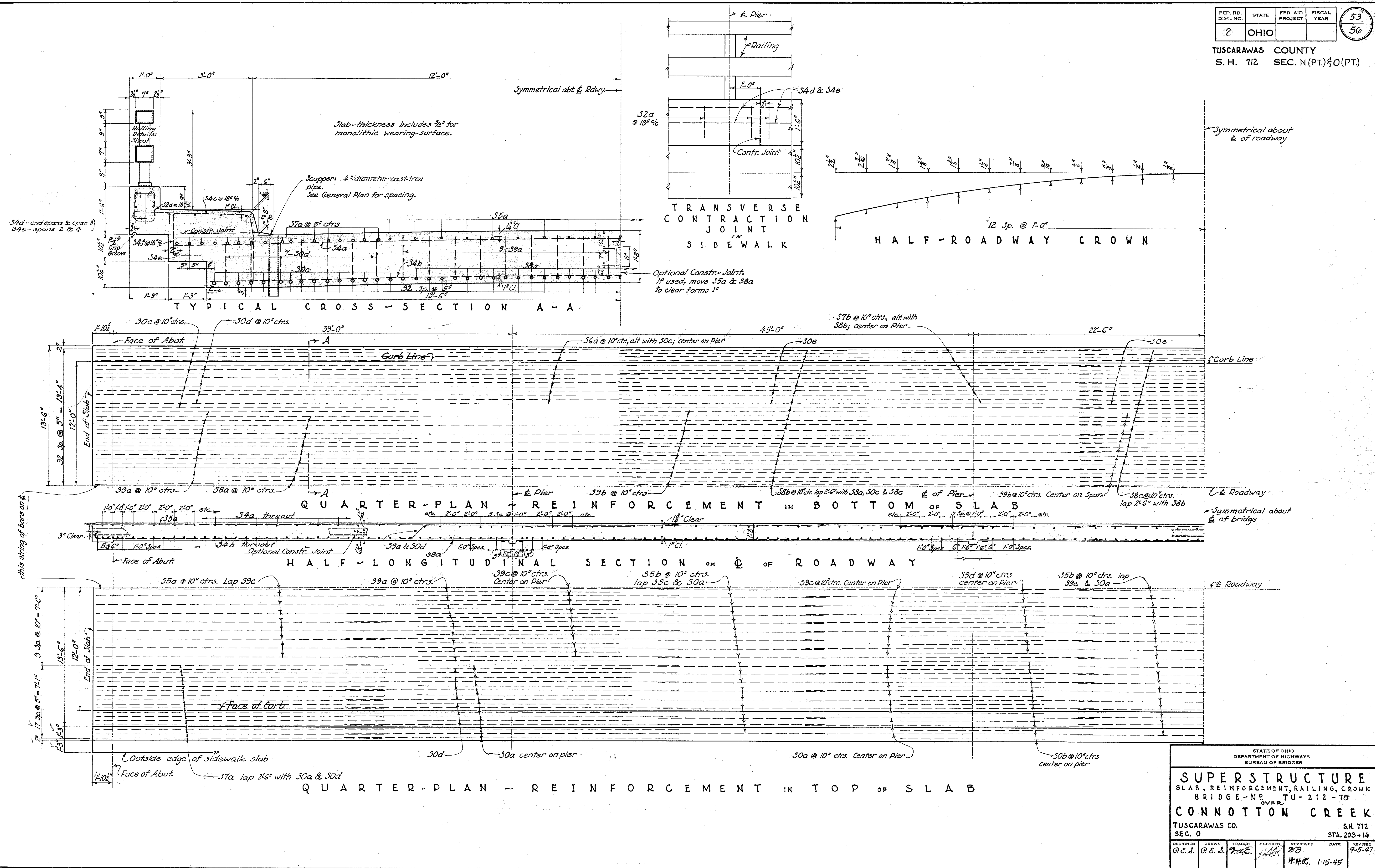
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

DETAILS OF PIERS No. 2 & 3 AND REINFORCING STEEL LIST
Bridge No. TU-212-78
Over Connotton Creek

Tuscarawas County
Section 203 + 14

DESIGNED: P.E.S.
DRAWN: P.E.S.
TRACED: E.J.
CHECKED: H.H.
REVIEWED: W.B.
DATE: 1-15-45

S.H. 712
Sta. 203 + 14
REVISED: 9-5-47



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

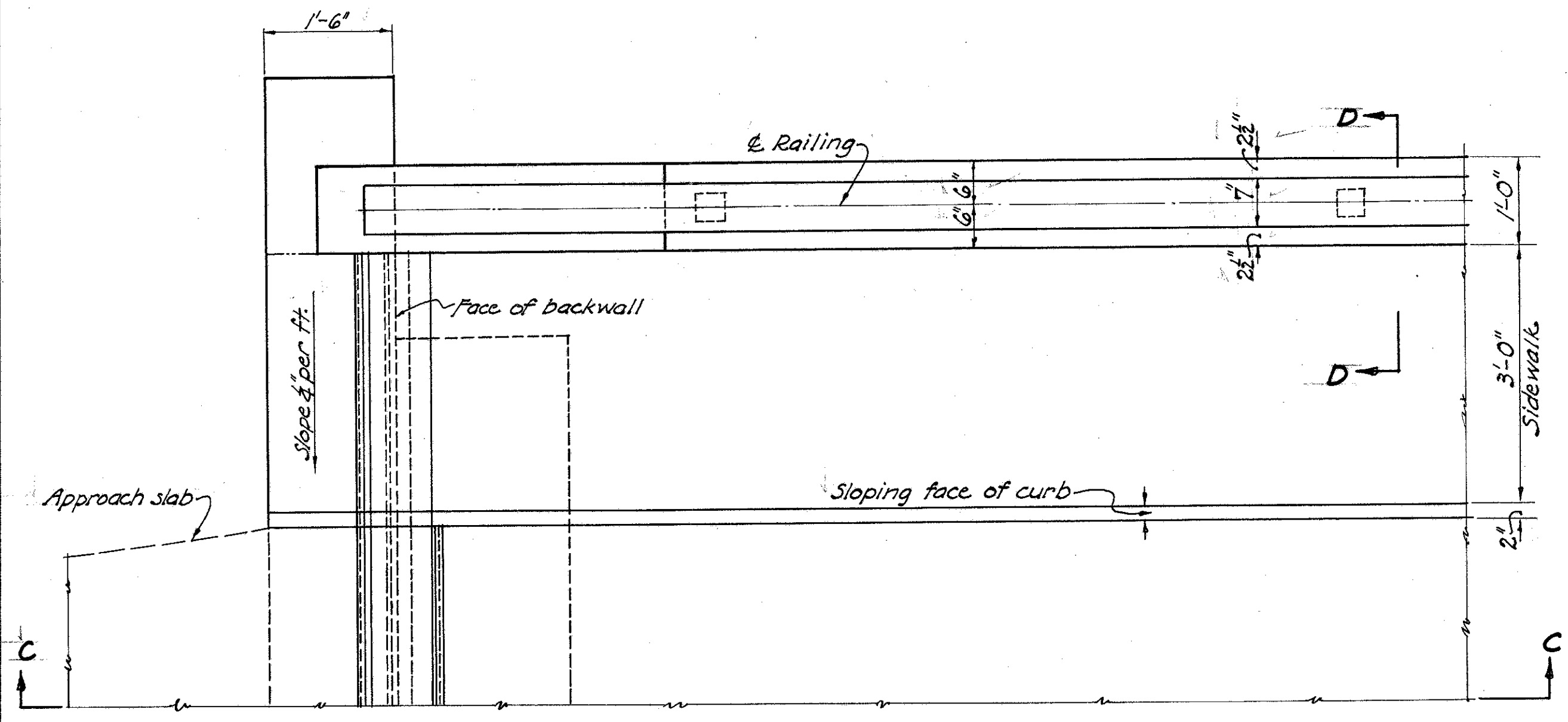
SUPERSTRUCTURE
SLAB, REINFORCEMENT, RAILING, CROWN
BRIDGE NO. TU-212-78
OVER CONNOTON CREEK

TUSCARAWAS CO. S.H. 712
SEC. 0 STA. 203+14

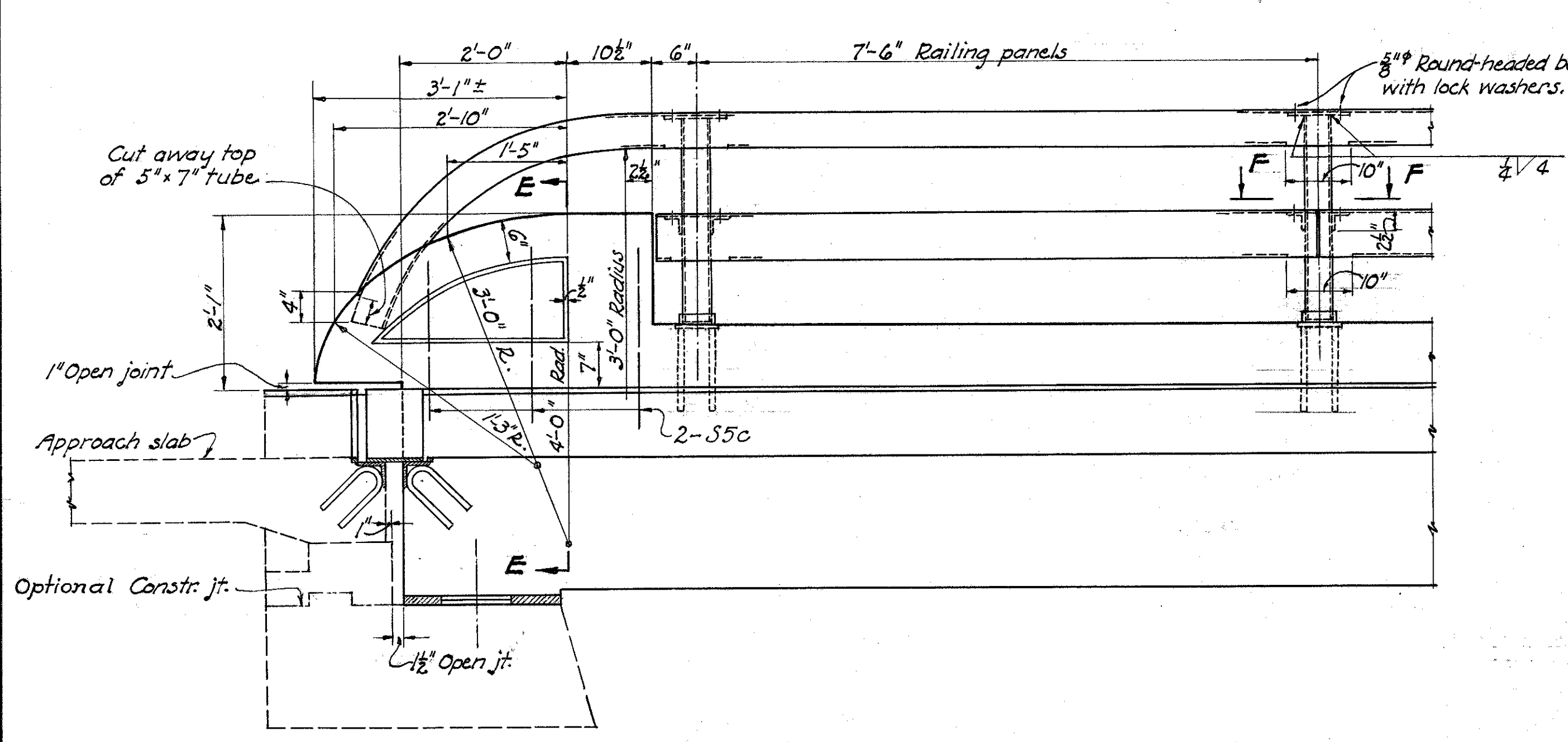
DESIGNED P.E.S.	DRAWN P.E.S.	TRACED P.E.S.	CHECKED P.E.S.	REVIEWED P.E.S.	DATE 9-5-47	REVISED 1-15-45
--------------------	-----------------	------------------	-------------------	--------------------	----------------	--------------------

FED. RD. DIV. NO.	STATE	FED. AID PROJECT	Y.
2	OHIO		

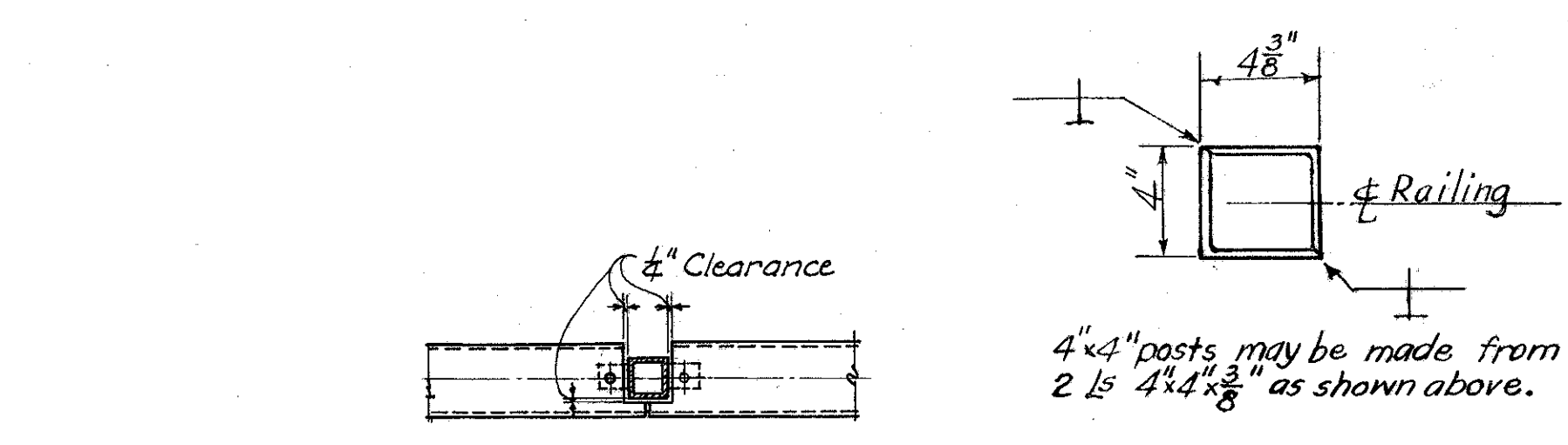
TUSCARAWAS COUNTY
S. H. 712 SEC. N (PT) & O.



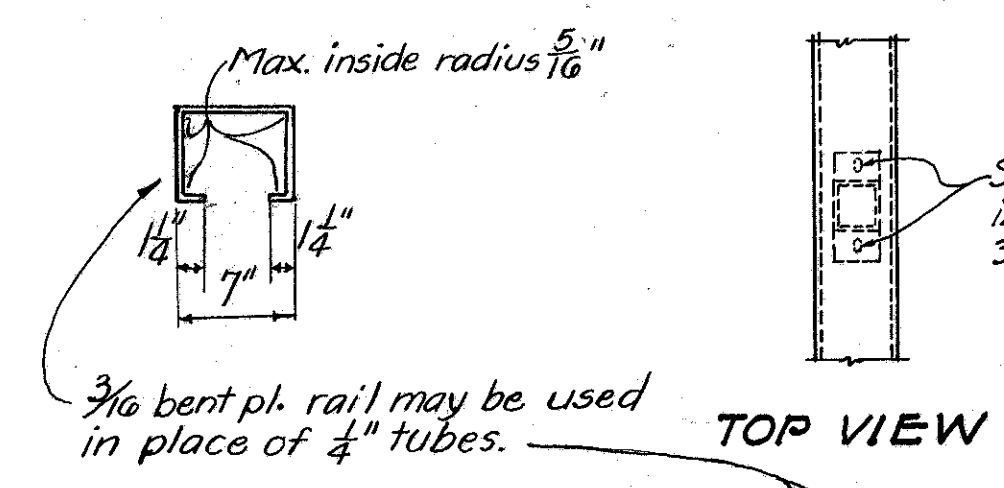
PART PLAN OF SUPERSTRUCTURE



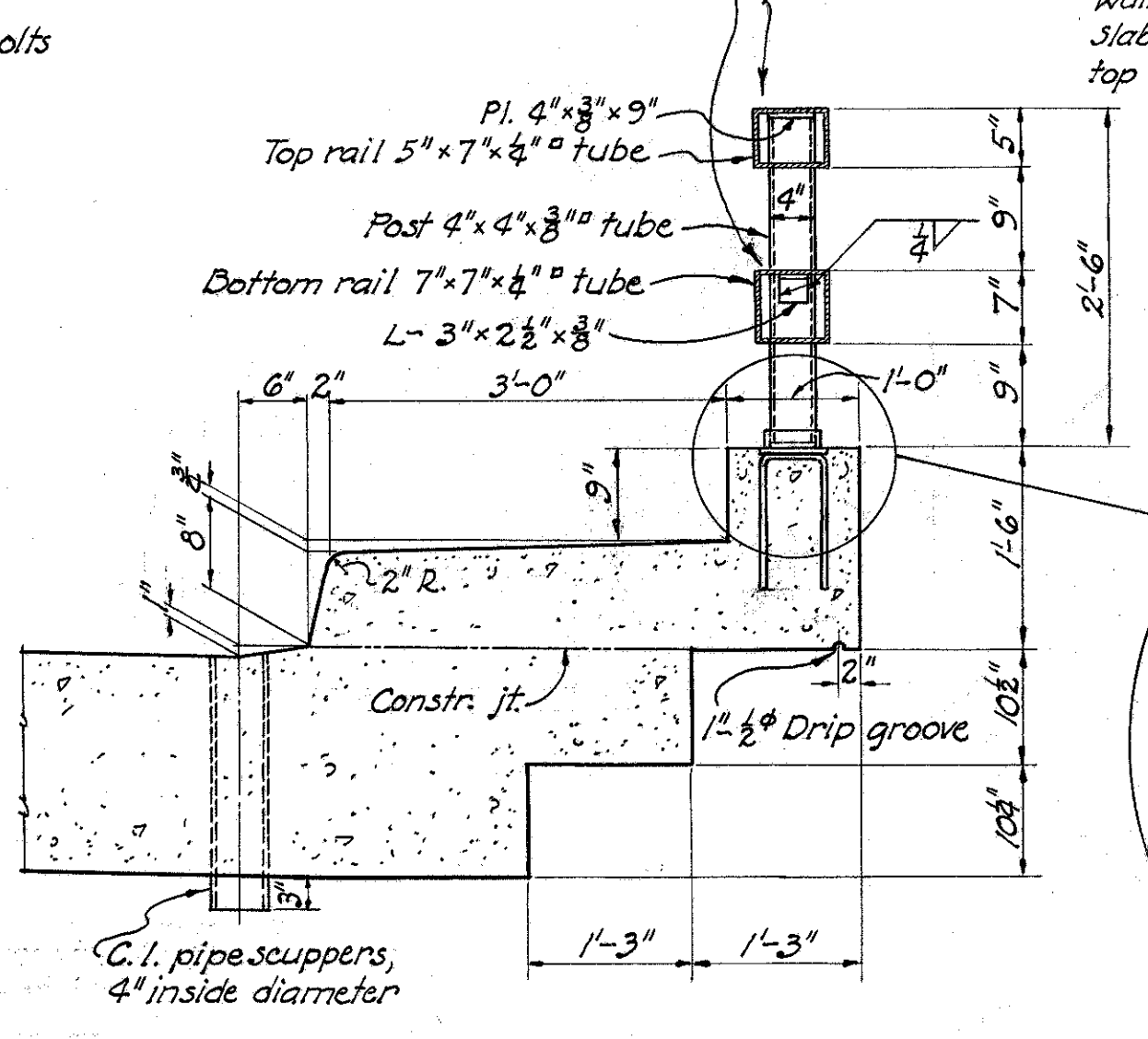
SECTION C-C
RAILING DETAILS



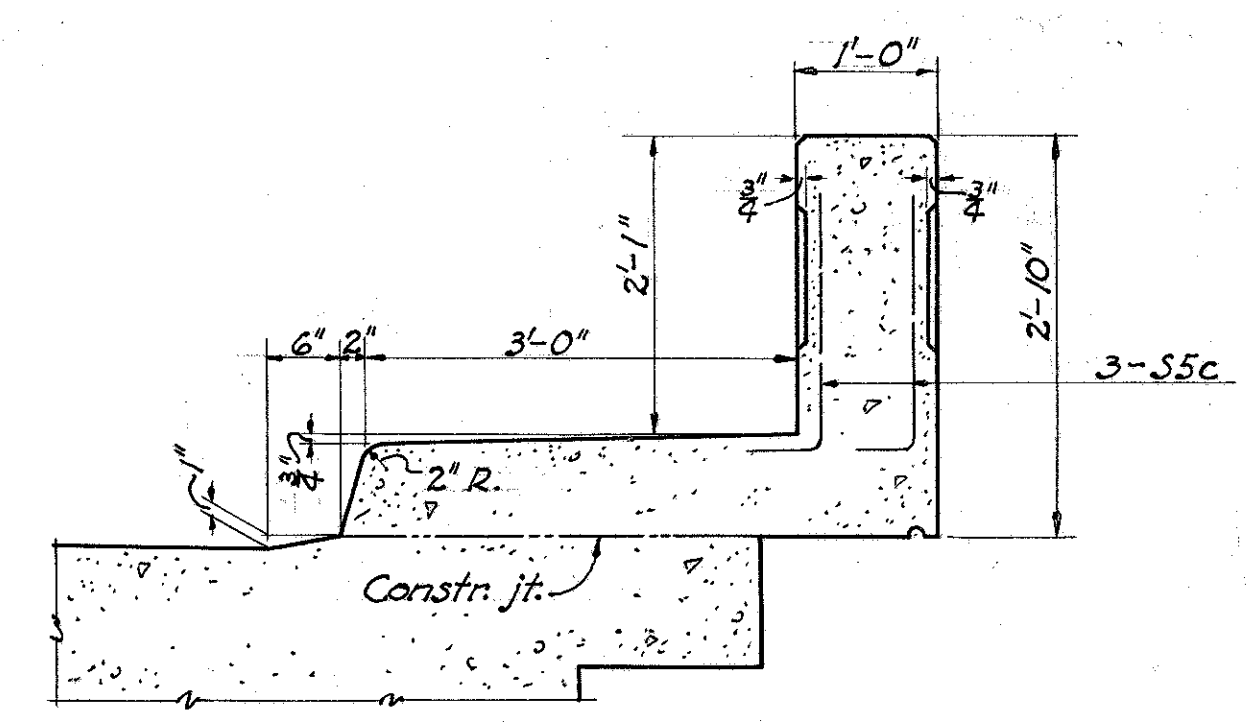
SECTION F-F



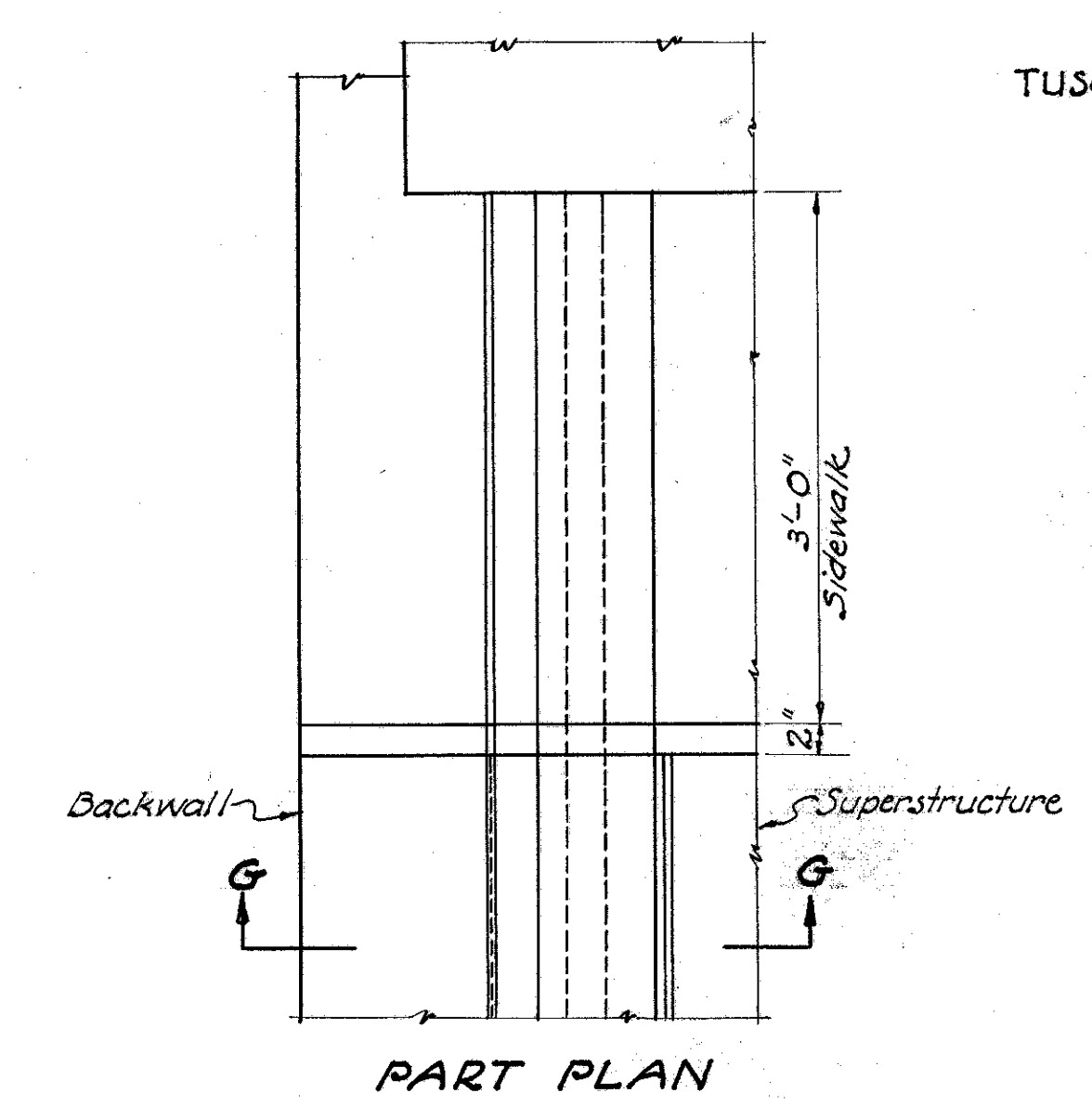
TOP VIEW



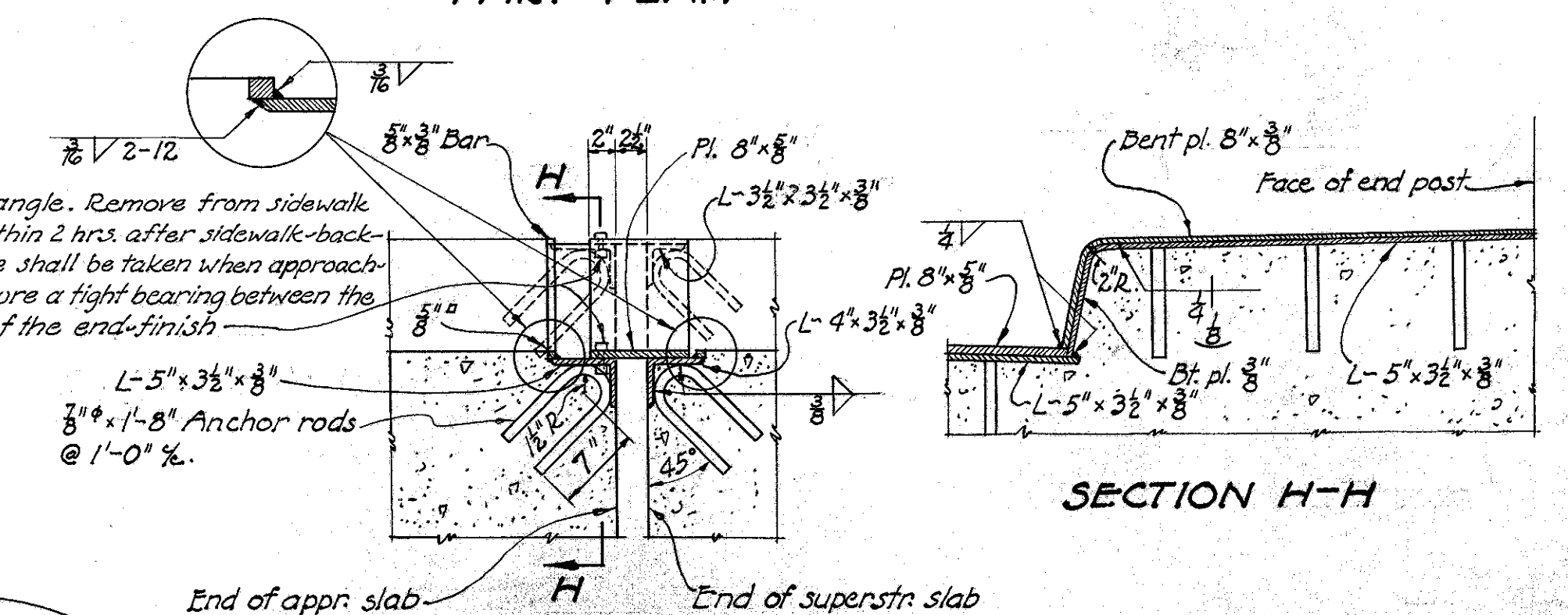
SECTION D-D



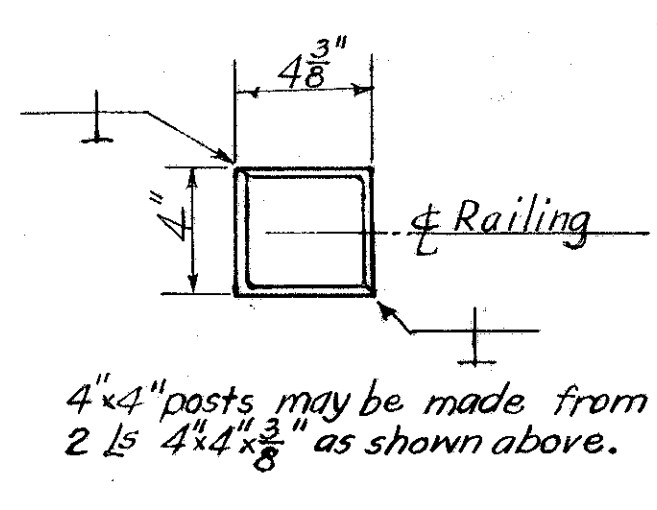
SECTION E-E



PART PLAN

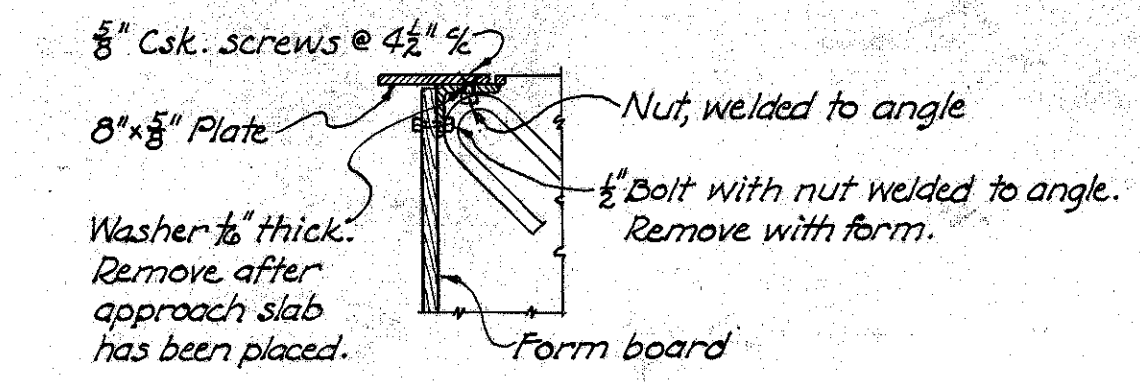


SECTION G-G



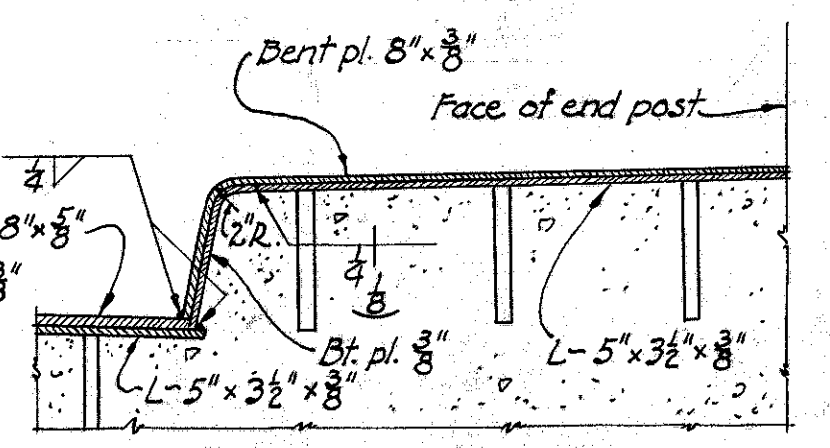
4" x 4" posts may be made from 2 1/2 4" x 1 1/2" as shown above.

3/8" bolt with nut welded to angle. Remove from sidewalk and roadway end-finish, within 2 hrs after sidewalk-backwall concrete is placed. Care shall be taken when approach slab concrete is placed, to insure a tight bearing between the top and bottom elements of the end-finish.



METHOD OF SUPPORTING
8" x 8" PLATE

END FINISH DETAILS



SECTION H-H

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES						
SUPERSTRUCTURE DETAILS						
BRIDGE NO. TU-212-78 OVER CONNOTTON CREEK						
TUSCARAWAS COUNTY					S. H. 712	
SECTION 0					STA. 203+14.00	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.E.S.	P.E.S.	Jep.	HLP	WB	1-15-45	9-5

SUMMARY OF QUANTITIES

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR
2	OHIO		1947

TUSCARAWAS COUN.
S.H. 712 SEC N(P7) & O(P7).
DOVER BASIN-UNIT N^o 1 & UNIT N^o 2.

STRUCTURES 20' SPAN & UNDER																			
REF N ^o	STATION	DETAIL ON SHEET N ^o	REMOVALS			EXCAVATION CU. YDS.	CONCRETE CU. YDS.		WATERPROOFING SQ. YDS.	REINF. STEEL LB'S.	PIPE FOR ROADWAY-CULVERTS - LIN. FT.			CATCH BASINS-EACH		GROUTED RIPRAP TYPE "A" SQ. YDS.	SODDING SQ. YDS.		
			STORE PIPE 18" UNDER LIN. FT.	DISPOSE PIPE 18" UNDER LIN. FT.	EXISTING MASONRY CU. YDS.		STRUCTURE	CHANNEL			CLASS "C"	CLASS "E"	TYPE "B"	15"	18"			24"	STD 1-2-B
UNIT N^o 1																			
1-S	27+69	35		60		35		0.6			46			1			5		
2-S	39+839	36			15	20	22.0	5.5	21		1935				61				
3-S	60+79	6	75																
4-S	71+737	37				12	2.5		12		378				24				
5-S	77+15	38			5	24	15	0.6			48		1			20			
6-S	80+10	7	28																
7-S	83+28	38				50	15	0.7			48		1			4	5		
8-S	91+19	39			9	2		0.6				20	1			5	5		
9-S	95+10	39				15	13	1.4			54					14			
10-S	98+44	8	44																
11-S	100+62	40				90	55	2.2				72				25			
12-S	108+05	8	24																
13-S	109+37	40	24			31	47	0.9				51	1				21		
14-S	115+84	41	24			45	50	0.9				46	1			5	5		
15-S	123+82	41				25	75	0.7			45		1				17		
16-S	131+36	35				10	5	2.3				43							
SUB-TOTAL			219	60	29	359	275	24.5	16.4	33	2313	241	160	72	7	85	73	58	
UNIT N^o 2																			
1-S	220+71.8	42				5		1.2				55						3	
2-S	222+70	43				20						52		2				10	
3-S	231+17	44				35		0.9				70		1		10	5		
4-S	234+205	45				25		0.9				75		1		3	10		
5-S	242+61.4	46				50		0.9				63		1		20	5		
6-S	245+58	47	42		1	30		0.9				51	1			14	5		
SUB-TOTAL			42		1	165		1.2	3.6		35	52	314	3	3	3	47	35	
GRAND-TOTAL			261	60	30	524	275	25.7	20.0	33	2348	293	474	72	10	3	88	120	93

APPROACHES						
TOTAL OF SHEET N ^o	PIPE FOR DRIVEWAYS LIN. FT.			12" PIPE REMOVE FOR AGGR. CU. YDS.	12" PIPE RE-LAYED LIN. FT.	
	12"	15"	18"			
UNIT N^o 1						
5	26	44		19		
6		52		173		
7	22			6		
8	30			54		
9			16			
SUB-TOTAL				252		
UNIT N^o 2						
10	100		114	41		
11				28	22	22
SUB-TOTAL				69	22	22
GRAND-TOTAL				321	22	22

ROADSIDE IMPROVEMENT		
TOTAL OF SHEET N ^o	SEEDING SQ. YDS.	FERTILIZER LBS.
UNIT N^o 1		
5	6500	1170
6	8000	1440
7	11400	2052
8	8300	1494
9	6700	1206
SUB-TOTAL		7362
UNIT N^o 2		
10	9400	1692
11	13800	2484
SUB-TOTAL		4176
GRAND-TOTAL		11538

★ Lumped in General Summary.

EXCAVATION & EMBANKMENT				
STATION FROM	STATION TO	EXCAVATION CU. YDS.	EMBANKMENT CU. YDS.	DUMPED ROCK FILL CU. YDS.
UNIT N^o 1				
26+81	37+28	937	815	937
37+28	85+24	18379	15982	18379
85+24	98+43	4462	3880	4462
98+43	123+75	8901	7740	8901
123+75	135+04.6	1556	18667	2019
SUB-TOTAL		34235	47084	2403
UNIT N^o 2				
200+46.2	246+50	60369	50918	58556
* 223+30	230+50	271	271	312
SUB-TOTAL		60640	51189	4625
GRAND-TOTAL		94875	98273	7028

GUARD RAIL			
TOTAL OF SHEET N ^o	NEW LIN. FT.	REMOVE & REBUILD LIN. FT.	REMOVE & STORE LIN. FT.
UNIT N^o 1			
5	3328		280
6	4992		
7	2402		870
8	2586		2020
9	2212	144	380
SUB-TOTAL		15520	3550
UNIT N^o 2			
10	2640		
11	1552		340
SUB-TOTAL		4192	340
GRAND-TOTAL		19712	3890

ROADWAY DRAINAGE			
TOTAL OF SHEET N ^o	PIPE INCL. POROUS BACKFILL - LIN. FT.	CATCH BASINS EACH	
UNIT N^o 1			
7	748		
SUB-TOTAL			
UNIT N^o 2			
10	526	1	
11	1352	176	1
SUB-TOTAL		1878	176
GRAND-TOTAL		2626	176

REMOVAL OF TREES & STUMPS	
TOTAL OF SHEET N ^o	NUMBER EACH
UNIT N^o 1	
7	10
9	2
SUB-TOTAL	
UNIT N^o 2	
10	42
11	83
SUB-TOTAL	
GRAND-TOTAL	

* Estimated shale cut under subgrade.
 • Excess excavation to be used in last balance on unit 1 = 1772 cu. yds.
 Net Borrow, Unit N^o 1 = 54146 - (34235 + 1772) = 18,139 cu. yds.

SUMMARY OF QUANTITIES

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	56
2	OHIO		1947	56

TUSCARAWAS COUNTY
S.H. 712 SEC. N(Pt) & O(Pt).
DOVER BASIN
UNIT No 1 & UNIT No 2

PAVEMENT CALCULATIONS

UNIT No 1
Begin Pavement: Sta. 26+81
End Pavement: Sta. 135+14.7
Net Length of Pavement: 10833.70 Lin.Ft.
Total volume of pavement = $10,833.70 \times 18 \times 0.5 \div 27 = 3611$ Cu.Yds.
Salvaged Traffic Bound Surface Course (Est. from X-Sec's): 2000 Cu.Yds.
Traffic Bound Surface Course (3611-2000): 1611 Cu.Yds.

UNIT No 2
Begin Pavement: Sta. 200+46.2
End Pavement: Sta. 246+50
Gross Length of Pavement: 4603.80 Lin.Ft.
Deduct for R.R. Crossing: 18.0 Lin.Ft.
Deduct for bridge & Appr. Slabs: 247.0 Lin.Ft.
Total deductions: 265.00 Lin.Ft.
Net Length of Pavement: 4338.80 Lin.Ft.
Area of pavement $4338.8 \times 18 \div 9 = 8677.6$ Sq.Yds.
Add for curve widening (see Sheet No 14): 329 Sq.Yds.
Total area of pavement: 9006.6 Sq.Yds.
Volume of pavement $9006.6 \times 6 \div 36 = 1501$ Cu.Yds.

WATER CALCULATIONS

UNIT No 1
Total Embankment, $47084 \times 5 \div 1000 = 235$ M.Gals.
UNIT No 2
Total Embankment, $51189 \times 5 \div 1000 = 256$ M.Gals.

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT No 1	UNIT No 2	GRAND TOTAL	UNIT	ITEM	DESCRIPTION	UNIT No 1	UNIT No 2	GRAND TOTAL	UNIT
•ROADWAY•						•ROADWAY CONTINUED•					
E-1	ROADWAY EXCAVATION	34235	60640	94875	CU.YDS.	L-10	SODDING.	58	35	93	SQ.YDS.
E-401	DUMPED ROCK OR SLAG FILL	2403	4625	7028	CU.YDS.	M-10	CALCIUM CHLORIDE FOR MAINTAINING TRAFFIC	27	3	30	TONS.
E-41	BORROW.	18139		18139	CU.YDS.	T-110	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC	1350	150	1500	CU.YDS.
E-3	CHANNEL EXCAVATION.	275		275	CU.YDS.	•PAVEMENT•					
E-9	REMOVAL OF TREES AND STUMPS.	LUMP	LUMP	LUMP	LUMP	T-10	TRAFFIC BOUND SURFACE COURSE, No 46 AGGREGATE.	1611	1501	3112	CU.YDS.
E-11	WATER.	235	256	491	M.GALS.	T-10	SALVAGED TRAFFIC BOUND SURFACE COURSE, AS PER PLAN	2000		2000	CU.YDS.
E-12	PIPE REMOVED AND STORED, 18" AND UNDER.	219	42	261	LIN.FT.	I-7	9" REINFORCED CONCRETE APPROACH SLABS.		72	72	SQ.YDS.
E-12	PIPE REMOVED AND DISPOSED OF, 18" AND UNDER.	60		60	LIN.FT.	•STRUCTURES 20' SPAN & UNDER•					
E-12	12" PIPE REMOVED FOR RE-USE.		22	22	LIN.FT.	E-2	EXCAVATION FOR STRUCTURES	359	165	524	CU.YDS.
I-1	12" PIPE FOR DRIVEWAYS.	78	100	178	LIN.FT.	S-1	CONCRETE, CLASS "C" FOR STRUCTURES	24.5	1.2	25.7	CU.YDS.
I-1	15" PIPE FOR DRIVEWAYS.	96		96	LIN.FT.	S-1	CONCRETE, CLASS "E" FOR STRUCTURES	16.4	3.6	20	CU.YDS.
I-1	18" PIPE FOR DRIVEWAYS.	16	114	130	LIN.FT.	S-3	TYPE "B" WATERPROOFING.	33		33	SQ.YDS.
I-3	6" PIPE FOR ROADWAY DRAINAGE INCLUDING POROUS BACKFILL.	748	1878	2626	LIN.FT.	S-4	REINFORCING STEEL.	2313	35	2348	LBS.
I-3	12" PIPE FOR ROADWAY DRAINAGE INCLUDING POROUS BACKFILL.		176	176	LIN.FT.	S-22	REMOVAL OF PORTIONS OF EXISTING STRUCTURE.	29	1	30	CU.YDS.
I-6	RELAYING 12" PIPE FOR DRIVEWAYS		22	22	LIN.FT.	S-23	DOWEL HOLES.	85	3	88	LIN.FT.
I-8	STANDARD No 1-2-B CATCH BASINS.	7	5	12	EACH.	S-27	15" PIPE FOR ROADWAY CULVERTS.	241	52	293	LIN.FT.
I-8	STD. No 2-2-B CATCH BASINS MODIFIED AS PER PLAN		3	3	EACH.	S-27	18" PIPE FOR ROADWAY CULVERTS.	160	314	474	LIN.FT.
I-9	STONE UNDERDRAIN No 2	1250	1250	2500	LIN.FT.	S-27	24" PIPE FOR ROADWAY CULVERTS.	72		72	LIN.FT.
I-10	TYPE "A" RIPRAP, GROUT FILLED.	73	47	120	SQ.YDS.	•STRUCTURES OVER 20' SPAN• See Sheet No 49					
I-15	GUARD RAIL, WOVEN WIRE TYPE 3 TAPES, STANDARD STRENGTH	15520	4192	19712	LIN.FT.						
I-15	GUARD RAIL REMOVED AND STORED.	3550	340	3890	LIN.FT.						
I-15	GUARD RAIL REMOVED AND REBUILT.	144		144	LIN.FT.						
I-17	SIDE APPROACHES, MAIL BOX TURNOUTS AND BERM MATERIAL	252	69	321	CU.YDS.						
L-9	SEEDING AND PROTECTING, TYPE "A"	40900	23200	64100	SQ.YDS.						
L-9	COMMERCIAL FERTILIZER 10-6-4	3.68	2.09	5.77	TONS						