

S. H. 462 SEC. B,
FAIRFIELD COUNTY

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
LANCASTER-KIRKERSVILLE ROAD
S. H. 462 SECTION B,
FAIRFIELD COUNTY.

MARCH 1931

THE STANDARD SPECIFICATION OF THE STATE OF OHIO
DEPARTMENT OF HIGHWAYS IN FORCE ON DATE OF CON-
TRACT WILL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE
MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING
TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE
PROVIDED AS SHOWN ON THE PLANS AND ESTIMATES AND
THAT ALL RIGHT OF WAY WILL BE PROVIDED BY THE STATE

CONVENTIONAL SIGNS

COUNTY LINE	---
TOWNSHIP LINE	----
SECTION LINE	-----
CENTER LINE	-----
CORPORATION LINE	-----
RAILROAD	—+—+—+—+—+—+—
TELEPHONE OR POWER POLES	•••••
FENCE	×××××
GUARD RAIL	•••••

INDEX OF SHEETS

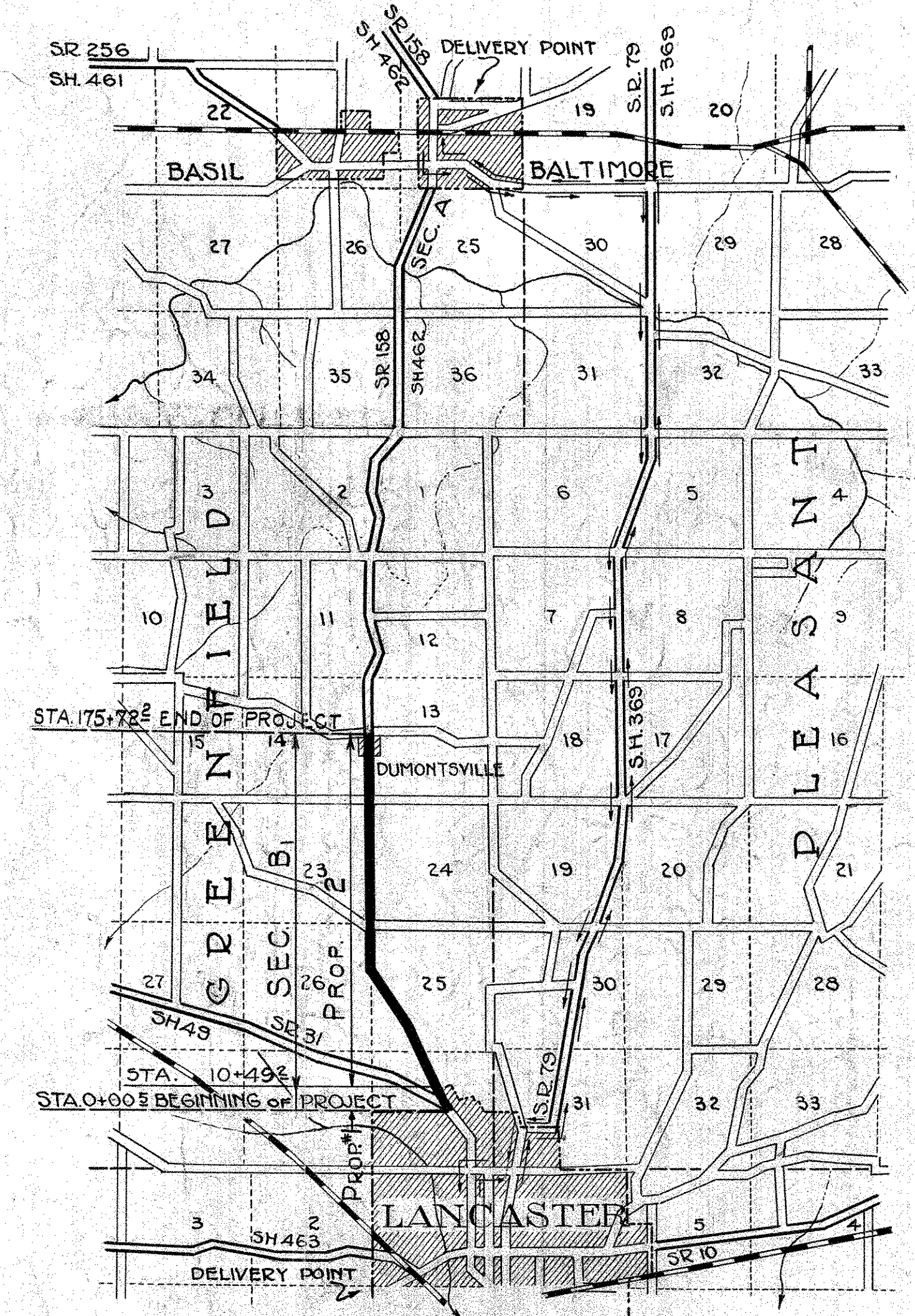
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SUPPLEMENTAL PRINTS

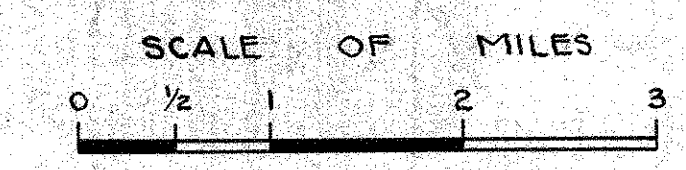
STANDARD DRAWING	95
" "	98
" "	100
" "	105
" "	300
" "	SC-A
" "	BC-A

SCALES

PLAN	1"=100'
PROFILE VERTICAL	1"= 10'
PROFILE HORIZONTAL	1"=100'
CROSS SECTIONS	1"= 5'



LOCATION PLAN



PORTION TO BE IMPROVED
DETOUR SHOWN

APPROVED Leon E. Wolford
DATE 3/11/31 RESIDENT DISTRICT
DEPUTY DIRECTOR

APPROVED B. H. Tranel
DATE 3/13/31 RESIDENT DIVISION
DEPUTY DIRECTOR

APPROVED Elmer Hilty
DATE 3/22/31 CHIEF ENGINEER
BUREAU OF CONSTRUCTION

APPROVED _____
DATE _____ CHIEF ENGINEER
BUREAU OF MAINTENANCE

APPROVED _____
DATE _____ CHIEF ENGINEER
BUREAU OF BRIDGES

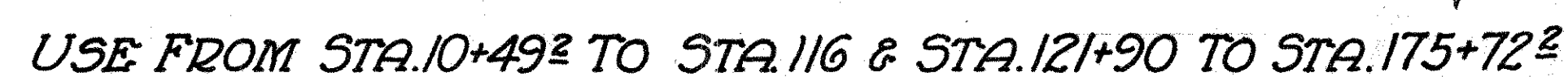
APPROVED H. P. Chapman
DATE 3-14-31 CHIEF ENGINEER &
FIRST ASST. DIRECTOR

APPROVED Q. W. Merrill
DATE 3-14-31 DIRECTOR OF HIGHWAYS

CONSTRUCTION
BUREAU
NOV 30 1935
GROUND PHOTOLAB

Indicated
A-15

TYPICAL SECTIONS
TYPE "C" CONCRETE



ve ditch section, unless shown on cross sections, underdrain is used.

As shown, 12' min.

6"

15'-0"

10'-0"

MACHINE FINISH Crown as per 20 section

Profile Elev.

10'-0"

6"

1'-0"

1 1/2:1 unless otherwise shown

2 1/2" Crown

1 1/4" Crown

5'-6"

Center plate and dowels as per Drawing No. 100; middle 20' to be placed first with dowels bent along forms, outer 5 1/2' to be placed after 24 hours with dowels straightened.

Concrete, 1:5 1/2 Mix Use Std. Const. Dr. 95 with 9B or 100 (100 shown).

2'-0"

2'-0"

All corners edged with 1" radius.

6"x6" curb, monolithic 1:5 1/2 Mix

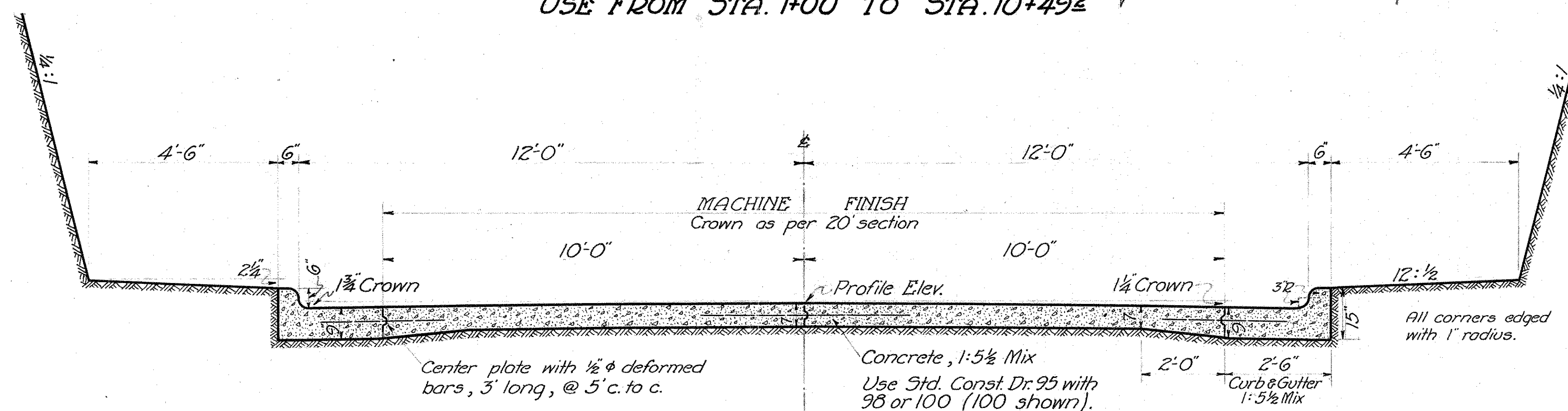
1 1/2:1

OK HAW ch. 2/31

Transverse Construction Joints in concrete pavement shall be provided with Metal Joint and $\frac{1}{2}\phi$ smooth bars, 4' long, spaced 5 c. to c., with neat fitting sliding metal sleeves on one end. Sleeves shall be placed with bulkhead. Payment included in price paid per sq. yd. of concrete pavement.

Attention is called to special treatment of earthwork on Sheet No 7.

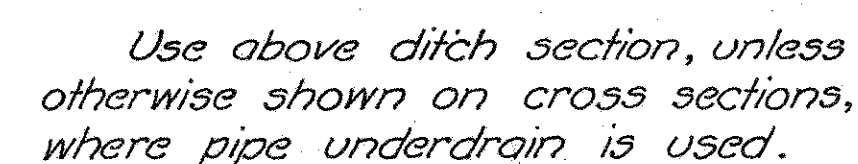
Pavement to be Superelevated according to Department of Highway Standards, as shown on alignment sheets.



USE FROM STA. 116+00 TO STA. 121+90



TYPICAL SECTIONS
TYPE "B" BRICK

[illegible]

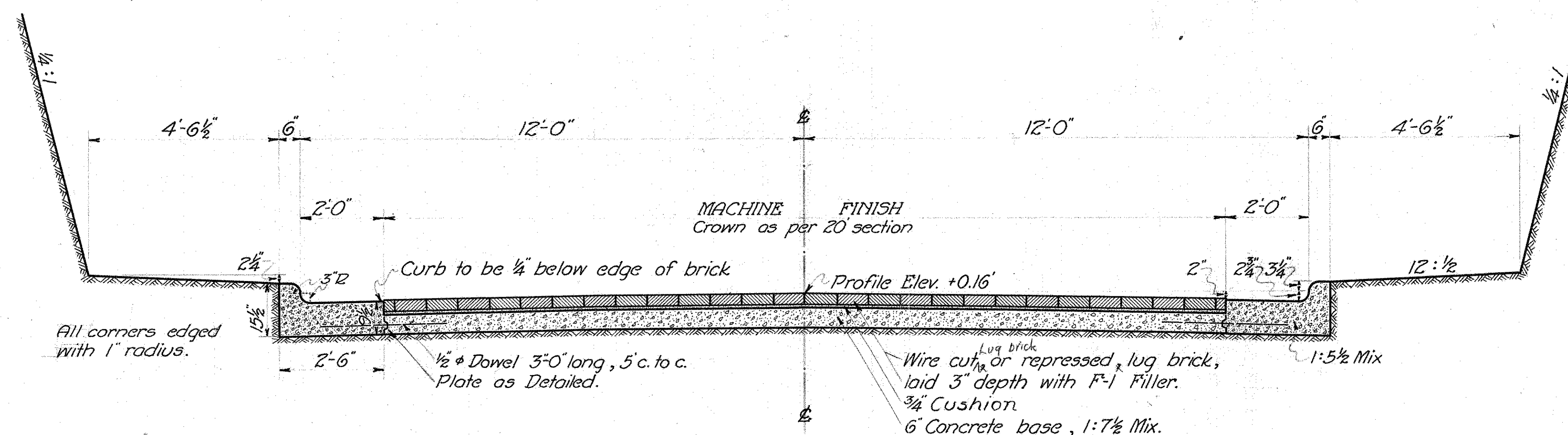
Attention is called to special treatment of earthwork on Sheet No 7.

All present guard rail will be removed by the State's forces.

Transverse Construction Joints in concrete base shall be provided with Metal Joint as detailed and $\frac{1}{2}$ " ϕ smooth bars, 4' long, spaced 5' c to c, with neat fitting sliding metal sleeves on one end. Sleeves shall be placed with bulkhead. Payment included in price paid per sq.yd. of concrete base.

Pavement to be Superelevated according to Department of Highway Standards, as shown on alignment sheets.

USE FROM STA. 1+00 TO STA. 10+49.2



USE FROM STA. 116+00 TO STA. 121+90

Earthwork on cross-sections is calculated for Type "C" and if Type "B" is used grade line shall be adjusted as follows:-

Using nomenclature of Std. Dr. No 120:-

Concrete - End Area = $2 \left(\frac{9+1}{2} \times 24' \right) + (7' \times 192') = 1728 \text{ sq. ins.}$

Concrete - Area below curb elev. = $1728 - 178 = 1550$ sq. ins.

Concrete - Av depth below curb elev. = $1550 \div 240 = 6.458' = 0.538'$

Brick - End Area = $240'' \times 9\frac{3}{4}'' = 2340 \text{ sq in}$

Brick Area below curb clay = 2340 - 285 =

Brick - Area below curb elev. = $2340 - 285 = 2055 \text{ sq. ins.}$
Brick: 2" depth below curb elev. = $2055 \div 210 = 9.783 = 0.71'$

Brick - Av. depth below curb elev. = $2055 \div 2 = 1027.5$

$$16x = 20y \quad \text{or } 16x - 20y = 0$$
$$x + 0.538y = 0.714 \text{ or}$$
$$x+y=0.714'-0.538'=0.176' \quad \text{or} \quad \frac{20x+20y=3.52}{36x=3.52}$$
$$36x = 3$$
$$\therefore x = 0$$

Difference in crown = $\frac{3}{4}'' = 0.0625'$

$$0.0978' + 0.0625' = 0.1603'$$

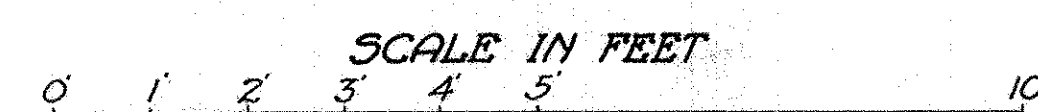
If Brick Type is used $\frac{1}{2}$ and curb elevatio

used 0.16' above profile and tabulated e

with elevations to remain the same and the

quantities shall remain the same

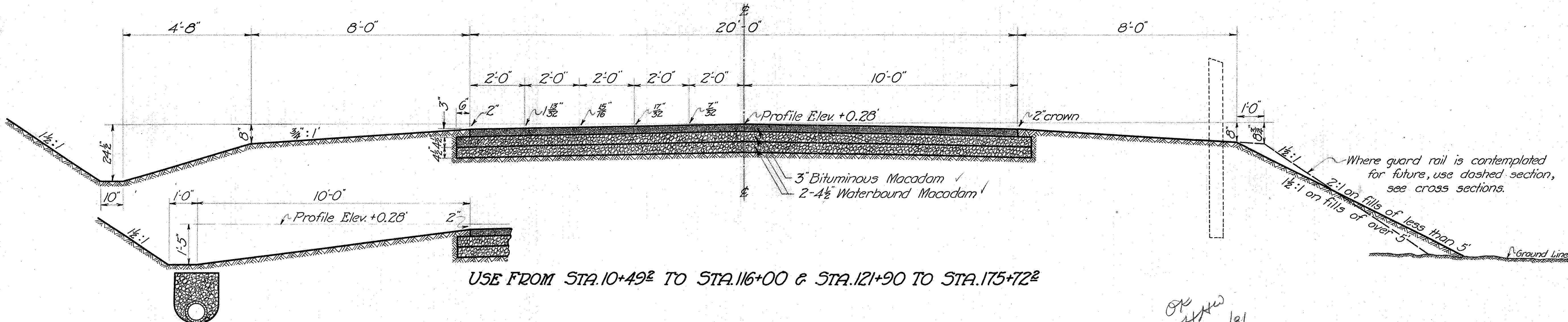
quantities shall remain the same.



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TYPICAL SECTIONS

TYPE M(B)



Use above ditch section, unless otherwise shown on cross sections, where pipe underdrain is used.

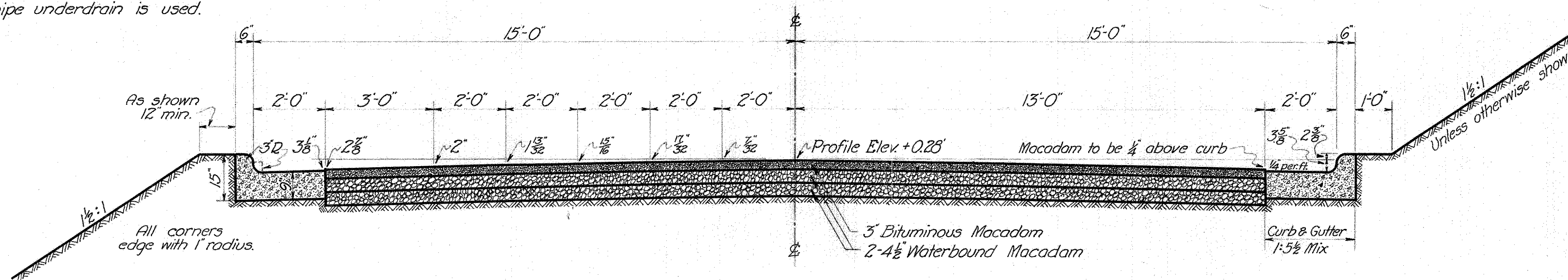
OK
HAW
5/22/31

Pipes for approaches, unless otherwise shown, shall be laid on line of ditch and 6" below the typical ditch grade in case of ditch section and at toe of slope at surface elevation in case of fill section. Payment for pipe includes furnishing pipe and placing same including excavation for pipe and necessary inlet and outlet and backfilling same with a minimum of 7' cover over pipe.

Attention is called to special treatment of earthwork on Sheet No. 7.

All present guard rail will be removed by the State's forces.

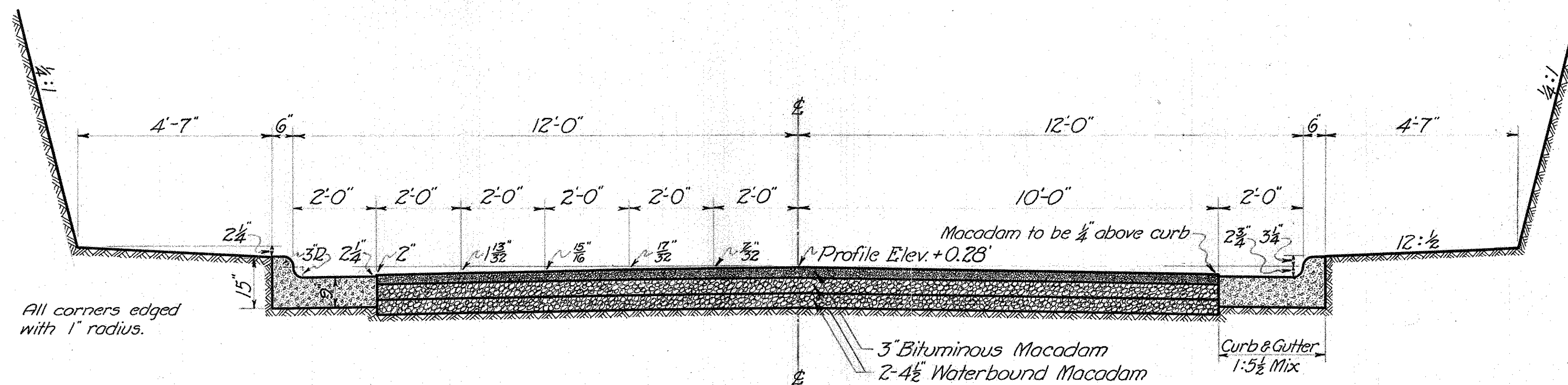
Pavement to be Superelevated according to Department of Highway Standards, as shown on alignment sheets.



As shown
12 min.

All corners
edge with 1" radius.

USE FROM STA. 1+00 TO STA. 10+49²



All corners
edged
with 1" radius.

Earthwork on cross sections is calculated for Type C" and if Type M(B) is used grade line shall be adjusted as follows:-
Using nomenclature of Std. Drs. No. 120 & 121.

Concrete-Av. depth of pavement below curb elev.=0.538'

Macadam-Av. depth of pavement below curb elev.=0.901'

$$16x = 21y + \{2[0.5(0.75-y)]\}$$

$$16x = 21y + 0.75 - y \quad \text{or} \quad 16x - 20y = 0.75'$$

$$x + y + 0.538 = 0.901' \quad \text{or} \quad x + y = 0.363'$$

$$20x + 20y = 7.26'$$

$$16x - 20y = 0.75'$$

$$36x = 8.01'$$

$$x = 0.2225'$$

$$0.2225 + 0.0625 (\text{Difference in crown}) = 0.28'$$

∴ If Type M(B) is used & curb elevations shall be raised 0.28' above profile and tabulated elevations, ditch elevations to remain the same and the earthwork quantities shall remain the same.

SCALE IN FEET
0' 1' 2' 3' 4' 5' 10'

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TABLE OF SUPERELEVATION.			
ELEV.	STA.	PROFILE	ELEV.
943.59	30+71	R. EDGE	943.59
950.19	31+21	R. EDGE	950.33
950.79	31+71	R. EDGE	951.07
951.39	32+21	R. EDGE	951.81
951.74	32+50	R. EDGE	952.16
952.21	33+00	R. EDGE	952.63
952.47	33+50	R. EDGE	952.84
952.36	34+00	R. EDGE	952.78
952.05	34+50	R. EDGE	952.47
951.47	35+00	R. EDGE	951.89
950.62	35+50	R. EDGE	951.04
949.52	36+00	R. EDGE	949.94
948.15	36+50	R. EDGE	948.25
946.32	37+00	R. EDGE	946.94
944.76	37+50	R. EDGE	945.18
943.00	38+00	R. EDGE	943.42
941.24	38+50	R. EDGE	941.66
939.48	39+00	R. EDGE	939.90
937.72	39+50	R. EDGE	938.14
936.76	40+00	R. EDGE	937.18
935.00	40+24	R. EDGE	935.28
933.24	40+74	R. EDGE	933.34
931.45	41+24	R. EDGE	931.45

DI = 36
Ex = 21.4
R = 429
P = 0.97
L = 14

② Sta. 39+50 - Build new std. 12" x 49" enc. VP Hillside Culvert. See Sheet 32.

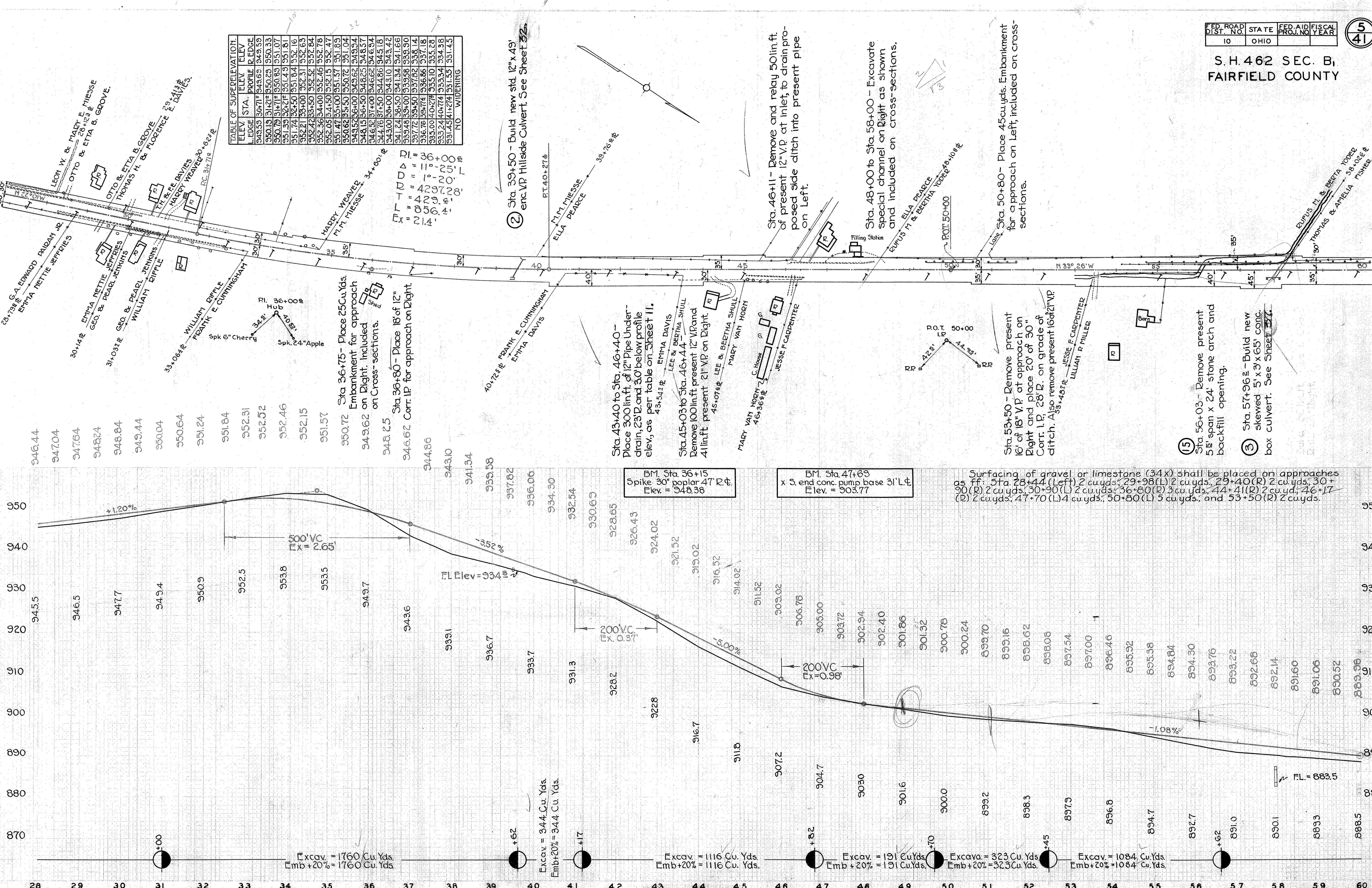
Sta. 46+11 - Remove and relay 50 lin. ft. of present 12" V.P. at inlet, to drain proposed side ditch into present pipe on Left.

Sta. 48+00 to Sta. 58+00 - Excavate special channel on Right as shown and included on cross-sections.

Sta. 50+80 - Place 45 cu. yds. Embankment for approach on Left, included on cross-sections.

⑤ Sta. 56+03 - Remove present 55' span x 24' stone arch and backfill opening.

③ Sta. 57+36 - Build new skewed 5' x 3' x 65' conc. box culvert. See Sheet 37.



Sta. 43+40 to Sta. 46+40 - Place 300 lin. ft. of 12" Pipe Under-drain, 23' 2" and 30' below profile elev., as per table on Sheet 11.

Sta. 45+03 to Sta. 46+44 - Remove 100 lin. ft. present 12" V.P. and 41 lin. ft. present 21" V.P. on Right

Sta. 53+50 - Remove present 16' of 18" V.P. at approach on Right and place 20' of 30" Corr. I.P. 28' 2" on grade of ditch. Also remove present 16' of 21" V.P.

Sta. 56+03 - Remove present 55' span x 24' stone arch and backfill opening.

Sta. 57+36 - Build new skewed 5' x 3' x 65' conc. box culvert. See Sheet 37.

BM. Sta. 36+15
Spike 30" poplar 47' R.P.
Elev. = 948.38

BM. Sta. 47+63
x S. end conc. pump base 31' L.P.
Elev. = 903.77

Surfacing of gravel or limestone (34x) shall be placed on approaches as follows: Sta. 28+44 (Left) 2 cu. yds., 29+98 (L) 2 cu. yds., 29+40 (R) 2 cu. yds., 30+90 (R) 2 cu. yds., 30+90 (L) 2 cu. yds., 36+80 (R) 3 cu. yds., 44+41 (R) 2 cu. yds., 46+17 (R) 2 cu. yds., 47+70 (L) 4 cu. yds., 50+80 (L) 5 cu. yds., and 53+50 (R) 2 cu. yds.

Excav. = 1760 Cu. Yds.
Emb+20% = 1760 Cu. Yds.

Excav. = 344 Cu. Yds.
Emb+20% = 344 Cu. Yds.

Excav. = 1116 Cu. Yds.
Emb+20% = 1116 Cu. Yds.

Excav. = 191 Cu. Yds.
Emb+20% = 191 Cu. Yds.

Excav. = 323 Cu. Yds.
Emb+20% = 323 Cu. Yds.

Excav. = 1084 Cu. Yds.
Emb+20% = 1084 Cu. Yds.

Surfacing of gravel or limestone (34 X) shall be placed on approaches as follows: - Sta. 63+50(L) 5cu yds., 70+70 (R) 2cu yds., 74+70(L) 2cu yds., 77+50(L) 2 cu yds., 78+50(L) 2cu yds., 83+56(L) 2 cu yds., 90+88(L) 5cu yds., 90+88(L) 5cu yds.

Sta. 63+50 Place 45cu yds. embankment for approach on Left, included on cross-sections.

Station - 63+61
④ Remove parts of present 5' x 12' x 27' stone box and extension of 3'-12' x 6' V.P. - Build new std. 18' x 45' enclosed V.P. culvert. See Sheet 32.

Sta. 62+61 - Place new 12' x 18' Corr. I.P. for approach on Right.

Spk. in side 8" Locust, 4' above ground.
Spike in 8" Maple
PC. 65+25° - Hub -

⑤ Sta. 68+25 Build new std. 12" x 43' enclosed V.P. culvert with special inlet headwall. See Sheet 34.

TABLE OF SUPERELEVATION			
ELEV.	STA.	ELEV.	ELEV.
EDGE.		PROFILE	EDGE.
890.64	64+25	890.74	890.64
891.14	64+50	891.07	890.97
891.64	64+75	891.39	891.29
892.14	65+00	891.72	891.62
892.62	65+25	892.04	891.94
893.14	65+50	892.37	892.27
893.63	65+70	892.69	892.59
894.16	66+00	893.02	892.92
894.61	66+50	893.37	893.27
895.16	67+00	894.32	894.22
895.61	67+50	894.37	894.87
896.36	68+00	895.62	895.32
897.21	68+50	896.27	896.17
897.86	69+00	896.92	896.82
898.51	69+50	897.57	897.47
899.16	70+00	898.22	898.12
899.81	70+50	898.87	898.77
899.97	70+75	899.20	899.10
900.11	71+00	899.52	899.42
900.27	71+25	899.85	899.75
900.43	71+50	900.18	900.08
900.57	71+75	900.50	900.40
900.72	72+00	900.82	900.72
NO WIDENING			

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Sta. 122+00~Place 50 Cu. Yds.
Embankment for approach
on Left, as directed.

Sta. 95+50 to Sta. 97+00~Excavate
Special Channel on Left as shown
and Included on Cross Sections.

Sta. 100+00~Place new
12"x18" Corr. I.P. for approach
on Left.

⑨ Sta. 96+18~Remove present 30"x36" Boiler
Pipe at Sta. 96+14; Build new Standard
18"x50' Encased V.P. Culvert. See Sheet 34.

⑩ Sta. 97+11.5~Extend present 7'x4'x45.5'
Skewed Concrete Box with 7'x4'x26.5'
Skewed Slab Top Culvert on Left. See Sheet 39.

Sta. 106+88~Place 150 Cu. Yds.
Embankment for approach
on Right.

Sta. 111+88~Place 2400 Cu. Yds.
Embankment for approach
on Right, as directed.

Sta. 122+00~Place new
12"x18" Corr. I.P. as
directed for approach
on Left.

Surfacing of gravel or limestone (34 X)
shall be placed on approaches as
follows:~ Sta. 96+40 (R) 2 cu. yds.,
106+88 (R) 3 cu. yds., 111+88 (R) 15 cu.
yds., and 122+00 (L) 15 cu. yds.

Sta. 98+~ Place new 12"x18"
Corr. I.P. for approach on Right.

Sta. 97+90 to Sta. 100+30~
Place 240 lin. ft. 10" Vit. Pipe
Underdrain with caution Left on ditch
line and at toe of fill slope to grade
shown on profile; upper end to turn
and tap spring as directed.

John R. Bright
101+26.2
Frances Kern

⑪ Sta. 106+31~Remove present
18"x33" V.P. at Sta. 106+21; build
new 18"x33" standard encased V.P.
culvert. See Sheet 35.

Sta. 111+88~Place new
18"x72" Corr. I.P. for
approach on Right.

111+49.8
Frances Kern
Erma A. Schadel

Sta. 116~Place 48 lin. ft. 12" V.P. storm
sewer with 2 curb inlets. See Sheet 10.
For pavement details see Sheet 10.
Extra pavement = 6.3 sq. yds.

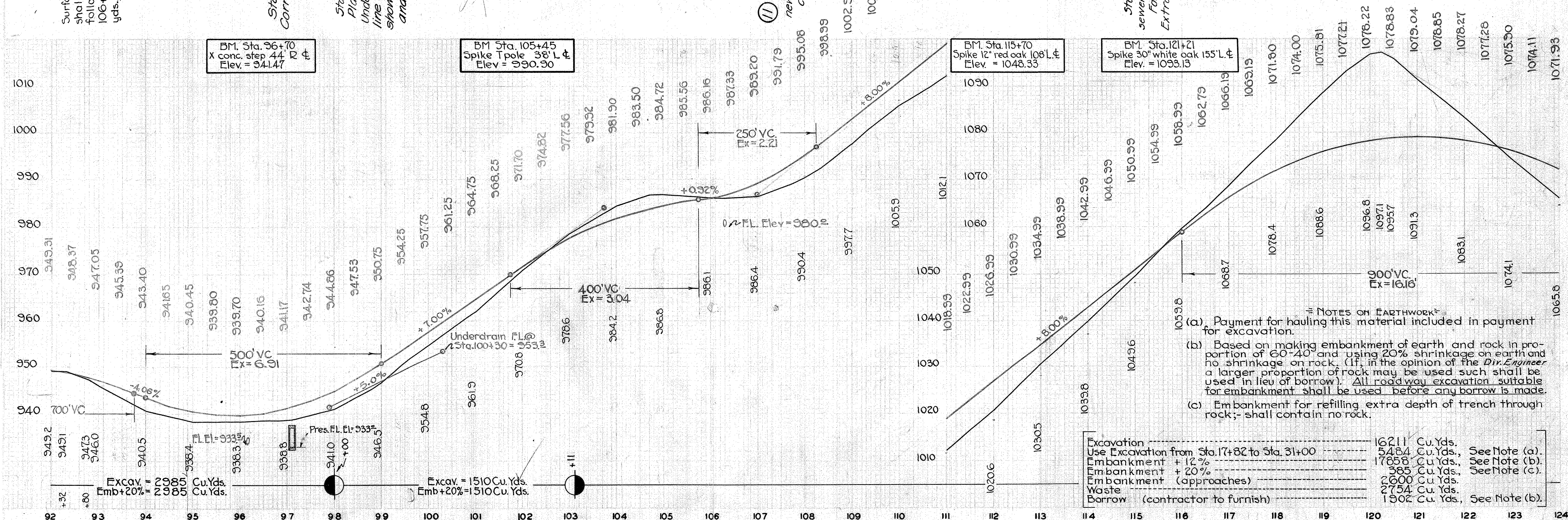
Sta. 122~ Place 76 lin. ft. 12"
V.P. storm sewers with 2 curb inlets. See Sheet 10.
See Sheet 10 for pavement details. Extra pavement = 6.3 sq. yds.

B.M. Sta. 96+70
x Conc. step 44" R &
Elev. = 941.47

B.M. Sta. 105+45
Spike Tpole 38" L &
Elev. = 990.90

B.M. Sta. 115+70
Spike 12" red oak 106" L &
Elev. = 1048.33

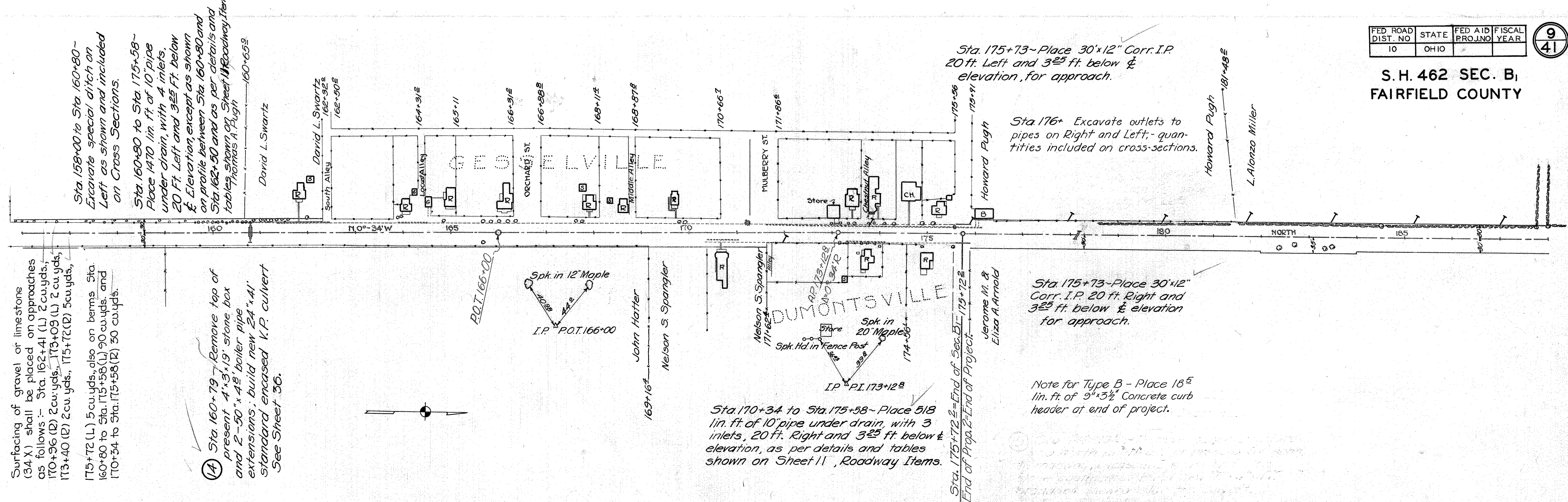
B.M. Sta. 121+21
Spike 30" white oak 155" L &
Elev. = 1093.13



- = NOTES ON EARTHWORK =
- Payment for hauling this material included in payment for excavation.
 - Based on making embankment of earth and rock in proportion of 60-40 and using 20% shrinkage on earth and no shrinkage on rock. (If, in the opinion of the Dir. Engineer, a larger proportion of rock may be used such shall be used in lieu of borrow). All roadway excavation suitable for embankment shall be used before any borrow is made.
 - Embankment for refilling extra depth of trench through rock; shall contain no rock.

Excavation	16211 Cu. Yds.	
Use Excavation from Sta. 17+82 to Sta. 31+00	5484 Cu. Yds.	See Note (a).
Embankment + 12%	17858 Cu. Yds.	See Note (b).
Embankment + 20%	385 Cu. Yds.	See Note (c).
Embankment (approaches)	2600 Cu. Yds.	
Waste	2754 Cu. Yds.	
Borrow (contractor to furnish)	1902 Cu. Yds.	See Note (b).

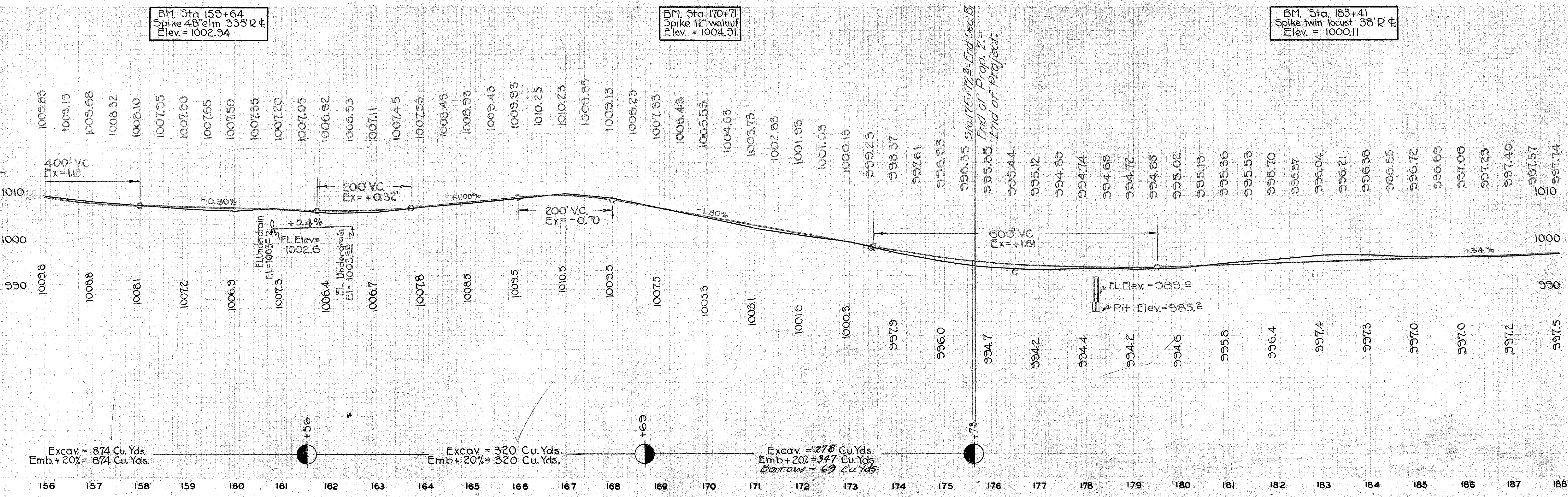
S. H. 462 SEC. B,
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BM. Sta. 159+64
Spike 48" elm 335' R &
Elev. = 1002.94

BM. Sta. 170+71
Spike 12" walnut
Elev. = 1004.91

BM. Sta. 183+41
Spike twin locust 38' R &
Elev. = 1000.11



Excav. = 874 Cu. Yds.
Emb + 20% = 874 Cu. Yds.

Excav. = 320 Cu. Yds.
Emb + 20% = 320 Cu. Yds.

Excav. = 278 Cu. Yds.
Emb + 20% = 347 Cu. Yds.
Borrow = 69 Cu. Yds.

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FAIRFIELD COUNTY

PAVEMENT QUANTITIES STA. 0+00.5 TO 1+00

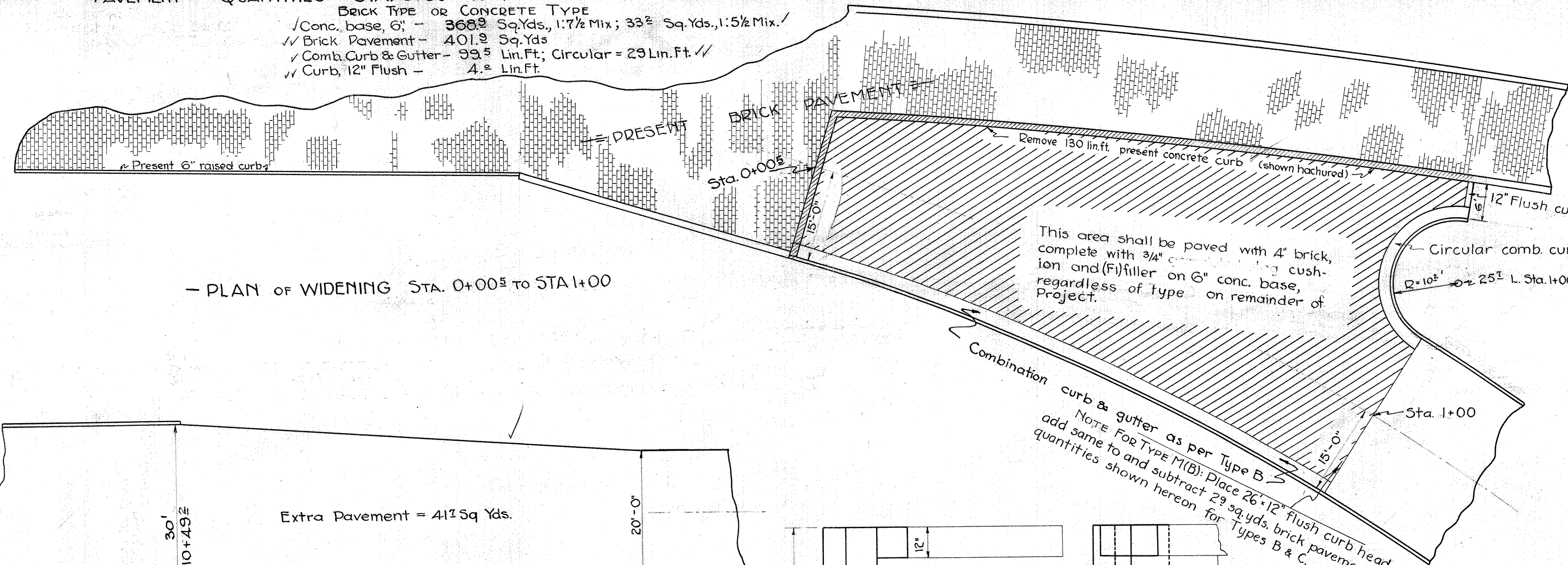
BRICK TYPE OR CONCRETE TYPE

✓ Conc. base, 6" - 368.9 Sq.Yds., 1:7½ Mix; 33.2 Sq.Yds., 1:5½ Mix.

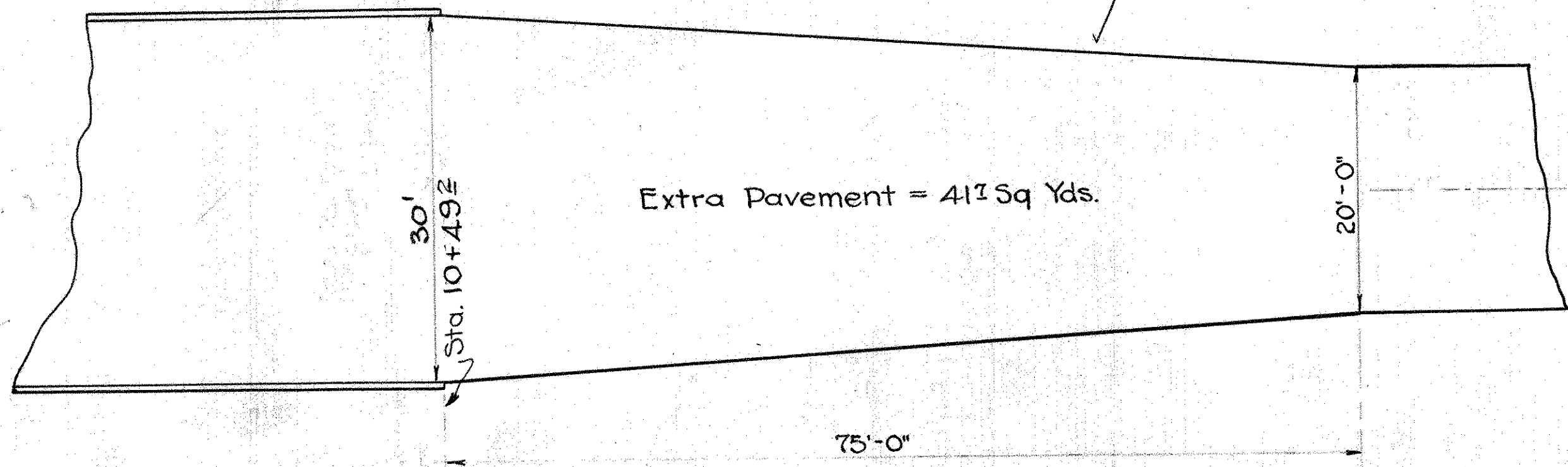
✓ Brick Pavement - 401.9 Sq.Yds.

✓ Comb. Curb & Gutter - 99.5 Lin.Ft.; Circular = 29 Lin.Ft.

✓ Curb, 12" Flush - 4.2 Lin.Ft.



PLAN OF WIDENING STA. 0+00.5 TO STA. 1+00

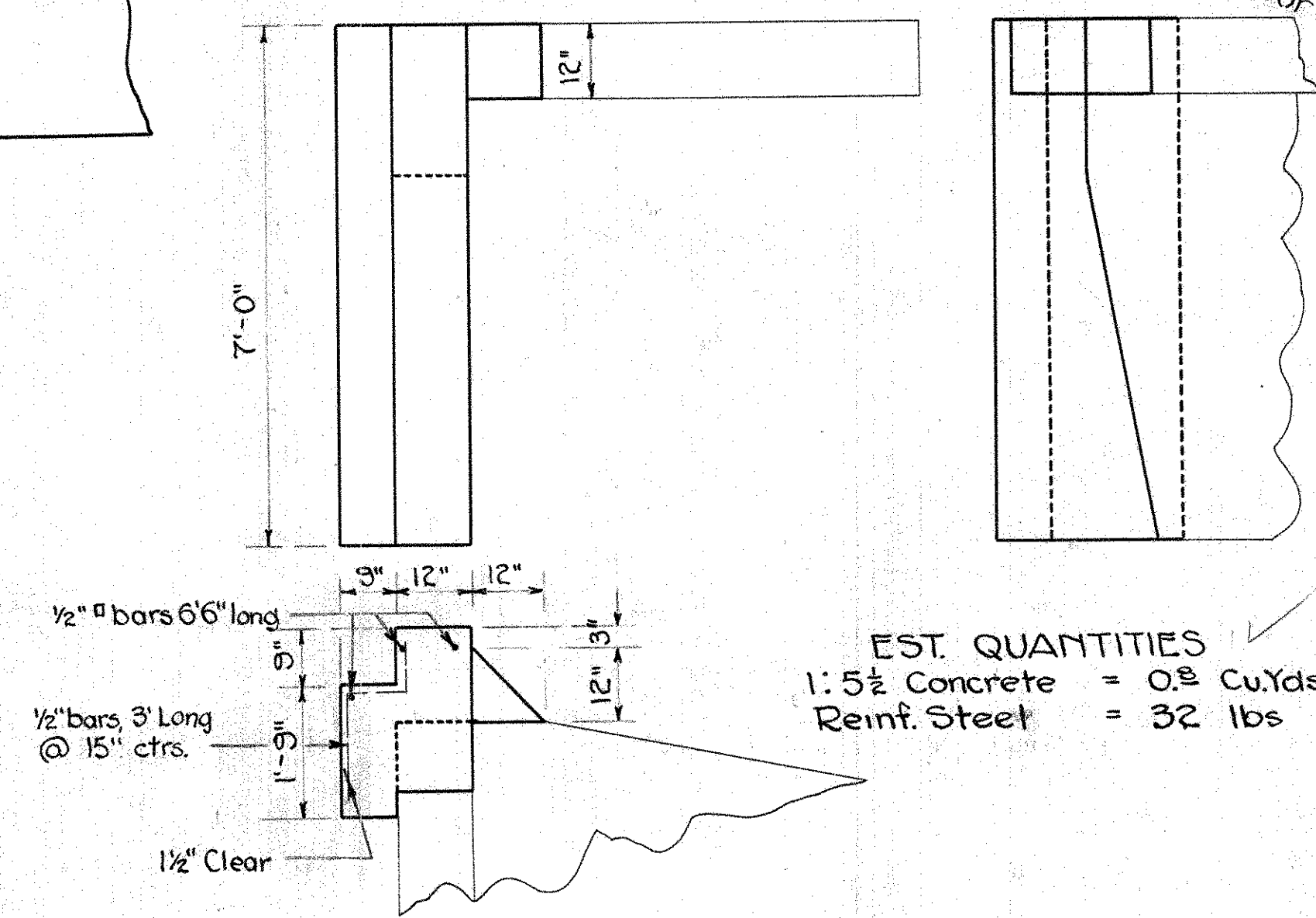
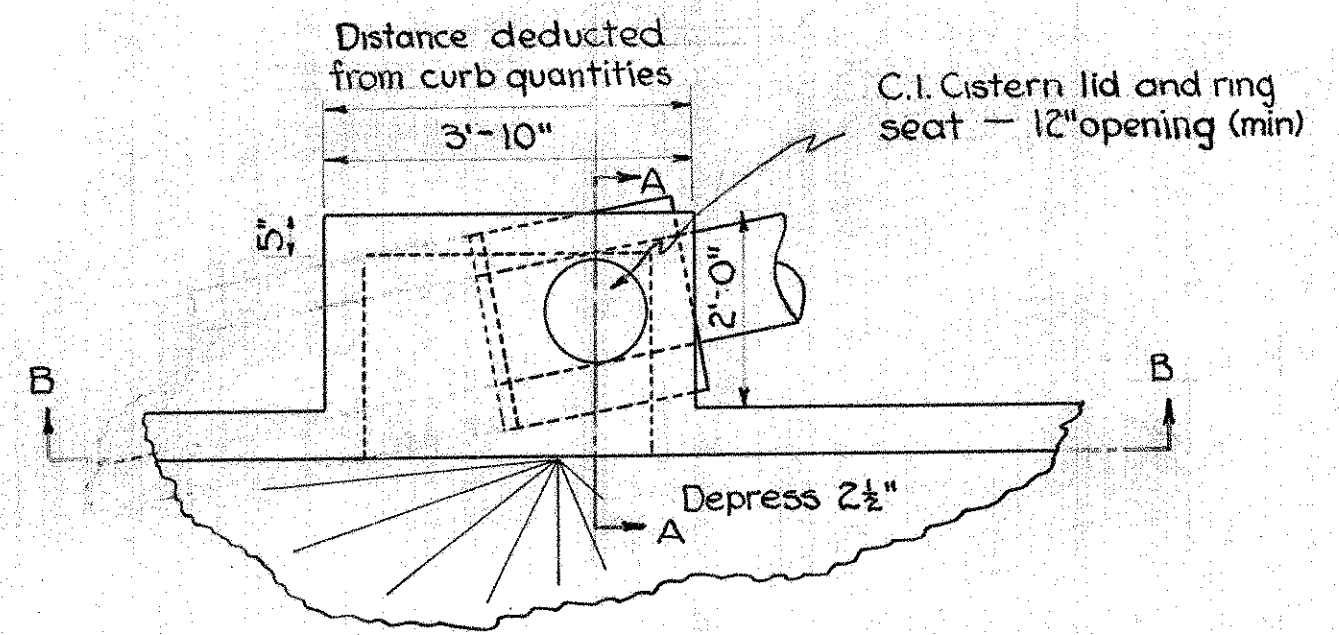


PLAN OF WIDENING STA. 10+ TO STA. 11+00

STEEL LIST
- ONE INLET -

Size	No.	Length	Weight
½" x 12"	1	6'-0"	5*
½" x 12"	3	3'-6"	9*
½" x 12"	6	2'-3"	12*
Total			26*

(All steel ¾" clear of inner faces)

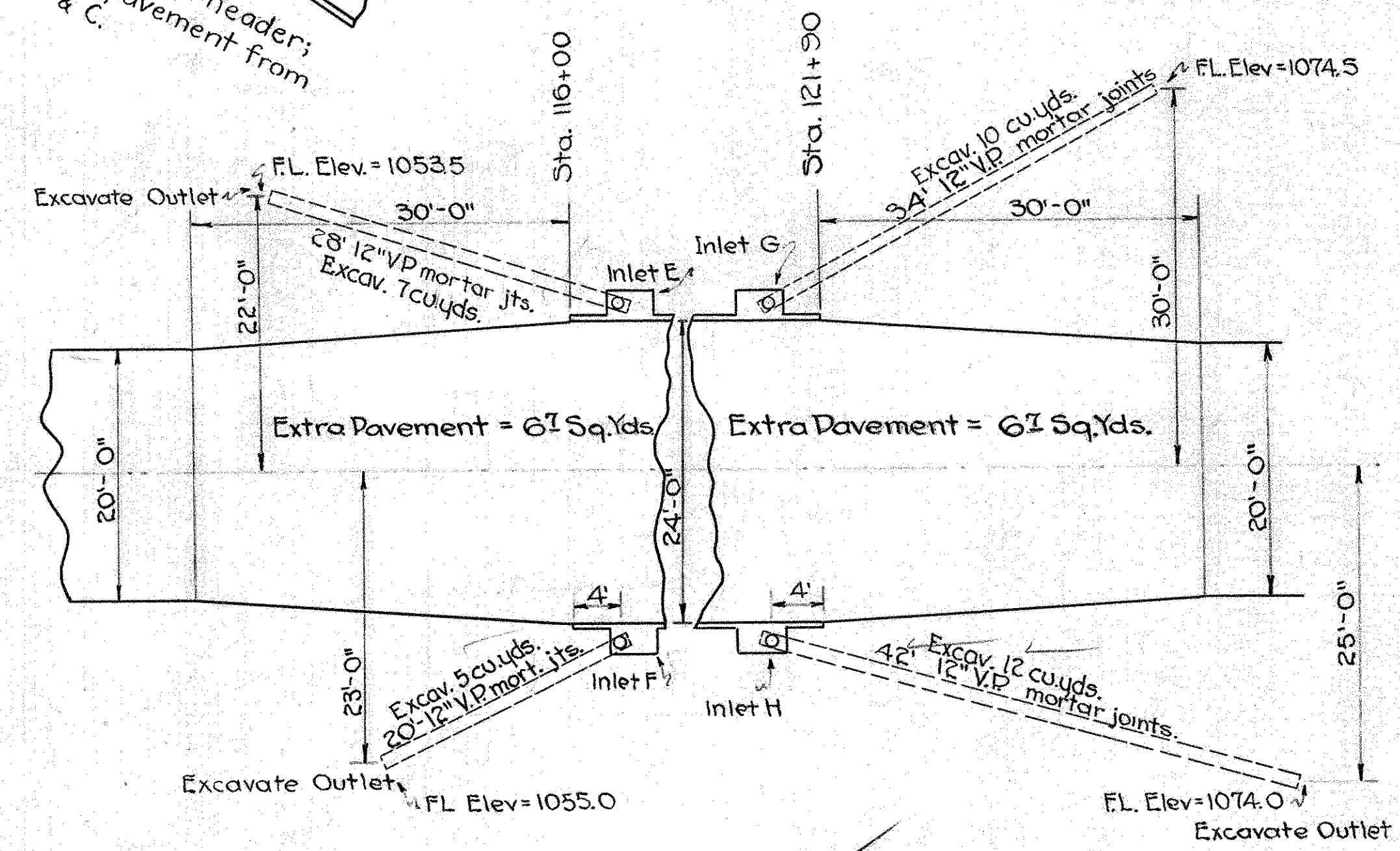


CAP FOR PRESENT HEADWALL
Right STA. 13+65

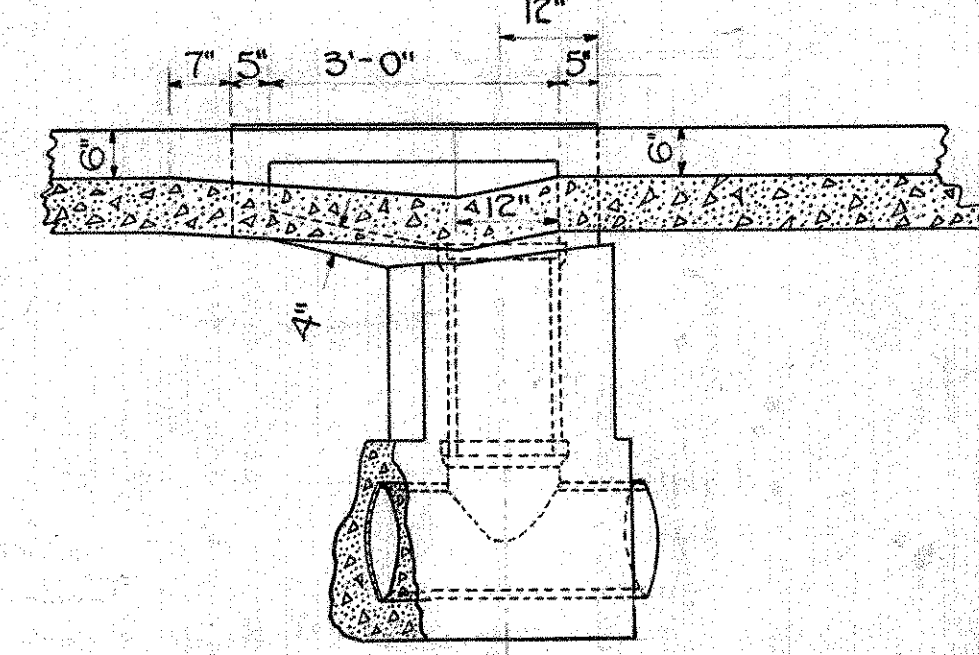
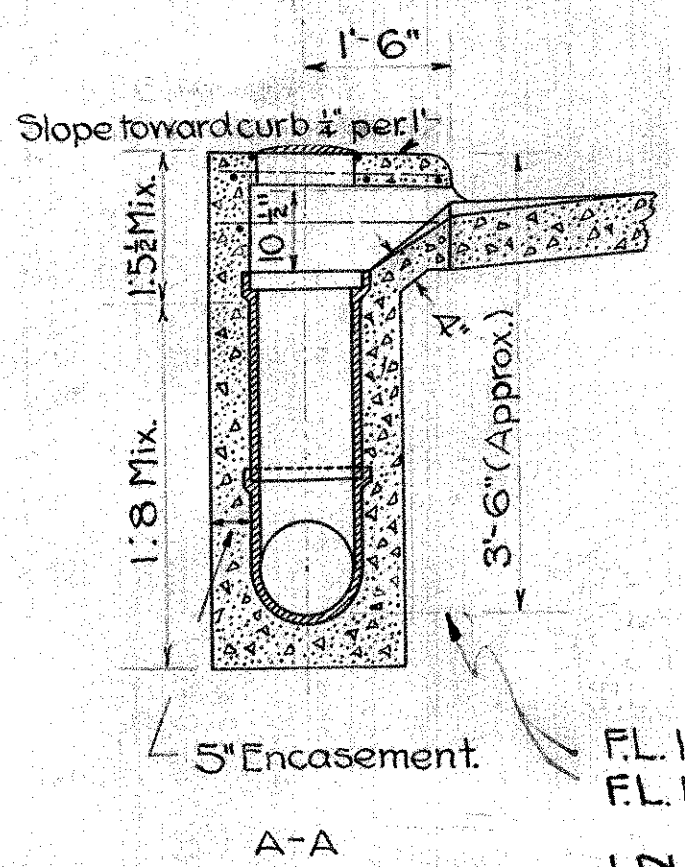
EST. QUANTITIES

1:5½ Concrete = 0.8 Cu.Yds.

Reinf. Steel = 32 lbs



PLAN OF WIDENING AND STORM SEWERS
STA. 116+00 & STA. 122+00



F.L. Inlets E & F = 1056.1
F.L. Inlets G & H = 1075.3

INLET DETAILS
(INLET "F" SHOWN OTHERS SIMILAR)

Payment for inlet includes payment for all labor and materials, including castings reinforcing steel, vit. pipe and tee. Blind ends of tees shall be capped with a 3" plank.

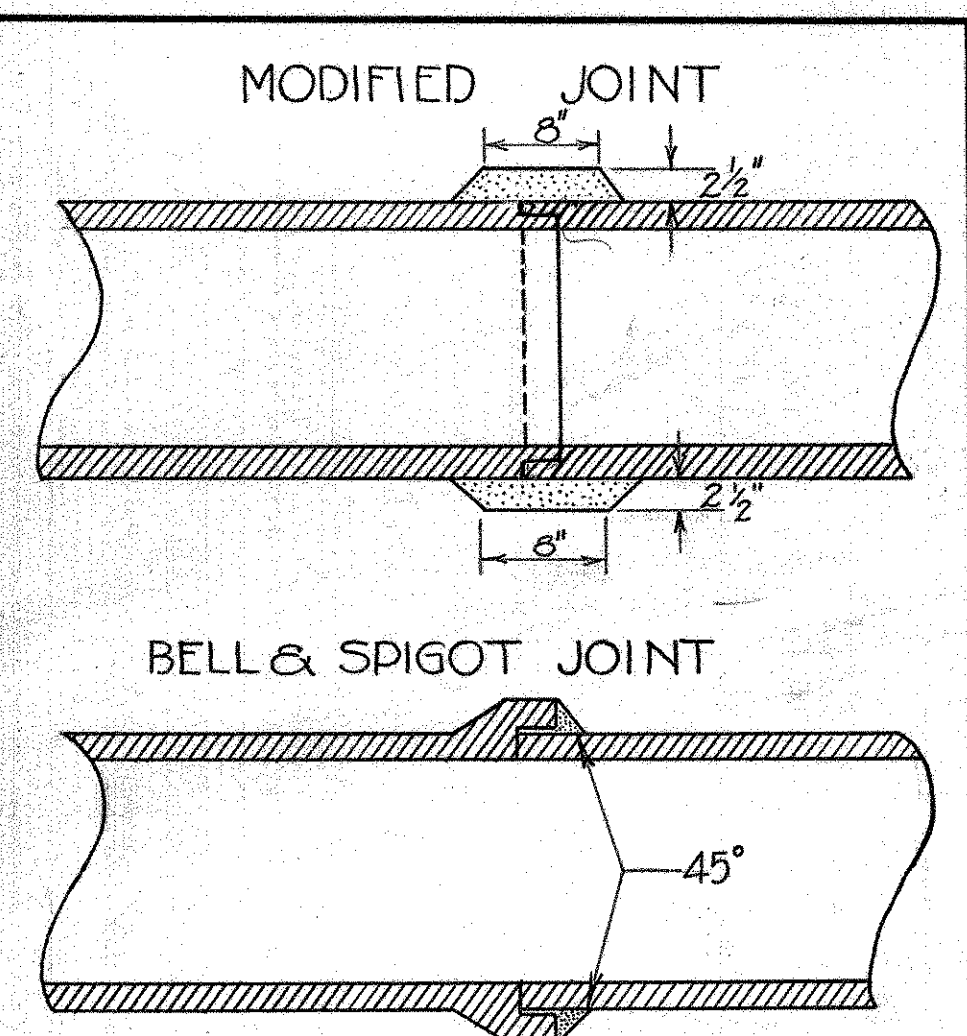
Note for Brick Type - Payment for gutter opposite inlets included in price paid for inlets.

DETAILS - WIDENING, STORM INLETS, ETC.
SHOWN FOR CONCRETE TYPE (BRICK SIMILAR)
S.H. 462
FAIRFIELD COUNTY, OHIO

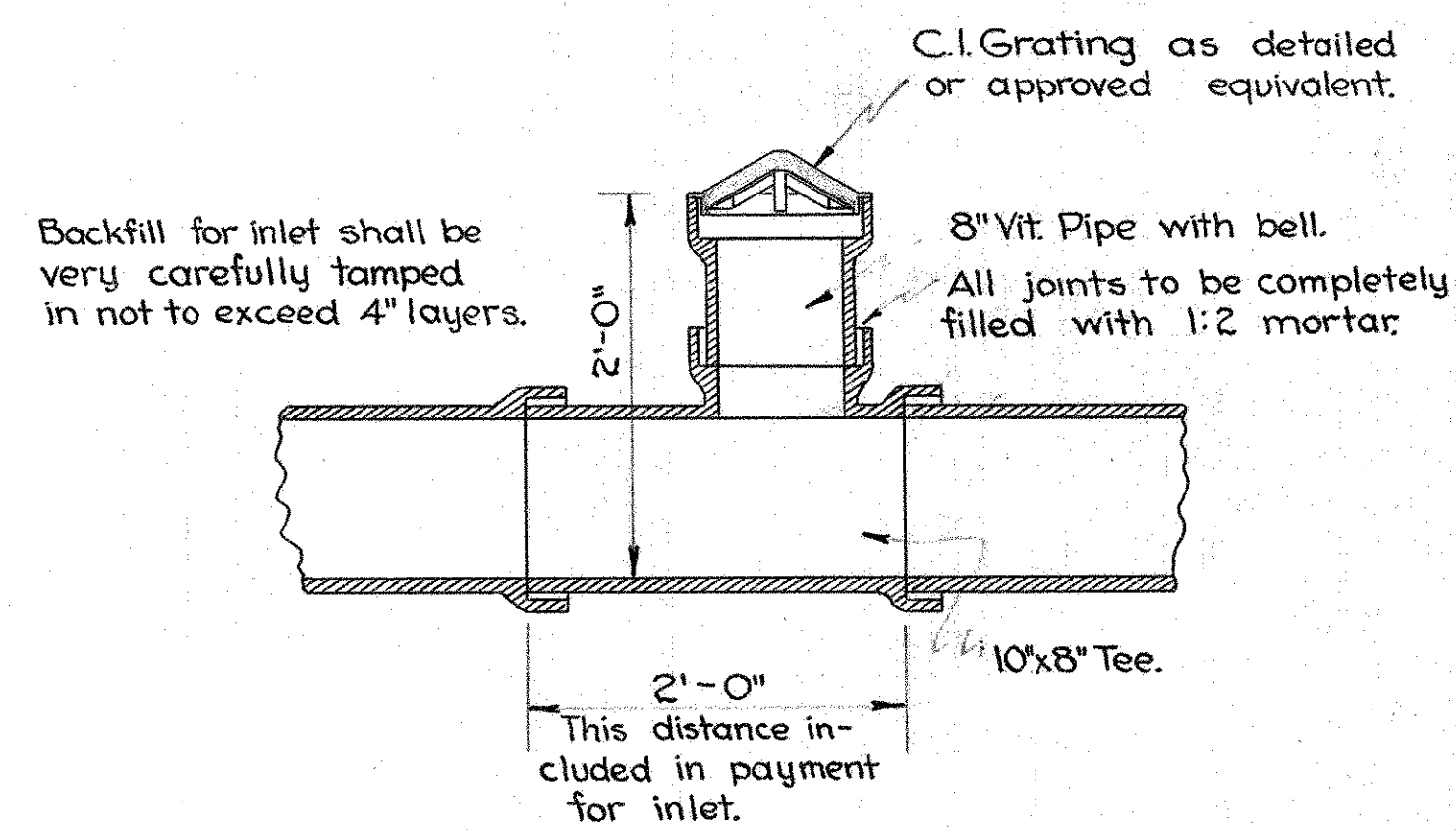
S. H. 462 SEC. B,
FAIRFIELD COUNTY

FROM STATION	TO STATION	SIDE	DIST. OUT	10" V.P. - MORTAR JOINTS	10" V.P. - WITH COVER	10" CORR. I.P. WITH COVER	10" x 8" INLET
14+93	16+91	LEFT	20'	198'		30'	
16+91	17+21	"	"		118'		
17+21	18+39	"	"				1
18+39	18+41	"	"		178'		
18+41	20+19	"	"				1
20+19	20+21	"	"		128'		
20+21	21+49	"	"				1
21+49	21+51	"	"		150'		
21+51	23+01	"	"				1
23+01	23+03	"	"		198'		
23+03	25+01	"	"				1
25+01	25+03	"	"		76'		
25+03	25+79	"	"			18'	
25+79	25+97	"	"		62'	18'	
25+97	26+59	"	"			18'	
26+59	26+77	"	"		22'		
26+77	26+99	"	"				1
26+99	27+01	"	"		134'		
27+01	28+35	"	"			18'	
28+35	28+53	"	"		6'		
28+53	28+59	"	"				1
28+59	28+61	"	"		128'		
28+61	29+89	"	"			18	
29+89	30+07	"	"		8'		
30+07	30+15	"	"				1
30+15	30+17	"	"		64'		
30+17	30+81	"	"			18'	
30+81	30+99	"	"		60'		
30+99	31+59	"	"				1
31+59	31+61	"	"		88'		
31+61	32+49	"	"				1
32+49	32+51	"	"				1
TOTAL			=	198'	1420'	120'	10
15+17	17+99	RIGHT	20'	282'		40'	
17+99	18+39	"	"		60'		1
18+39	18+41	"	"			18'	
18+41	19+01	"	"		80'		
19+01	19+19	"	"				1
19+19	19+99	"	"		148'		
19+99	20+01	"	"				1
20+01	21+49	"	"		128'		
21+49	21+51	"	"				1
21+51	22+79	"	"		110'		
22+79	22+81	"	"			18'	
22+81	23+91	"	"		6'		1
23+91	24+09	"	"				
24+09	24+15	"	"		224'		
24+15	24+17	"	"			18'	
24+17	26+41	"	"				1
26+41	26+53	"	"		272'		
26+53	29+31	"	"			18'	
29+31	29+49	"	"		50'		
29+49	29+99	"	"				1
29+99	30+01	"	"		80'		
30+01	30+81	"	"			18'	
30+81	30+99	"	"				1
30+99	31+01	"	"		148'		
31+01	32+49	"	"				1
32+49	32+51	"	"				1
TOTAL			=	282'	1306'	130'	8

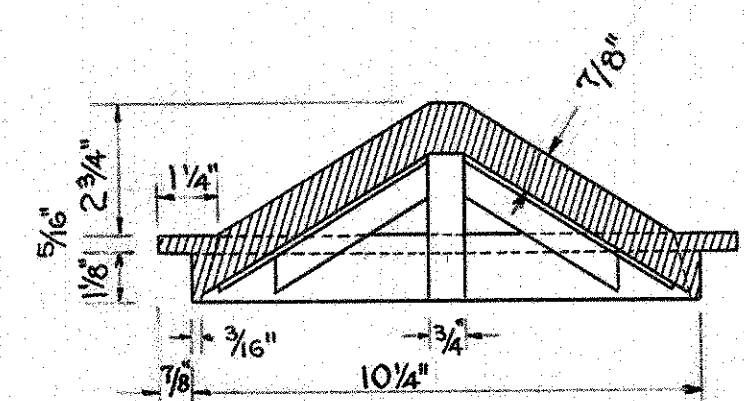
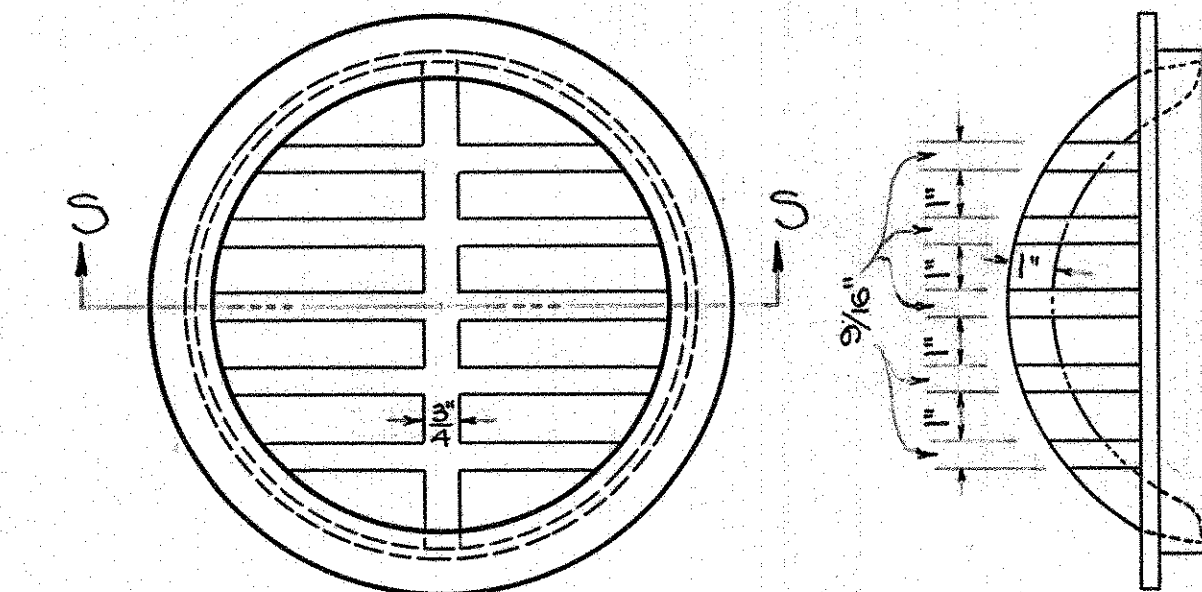
FROM STATION	TO STATION	SIDE	DIST. OUT	10" V.P. - MORTAR JOINTS	10" V.P. - WITH COVER	10" CORR. I.P. WITH COVER	10" x 8" INLET	12" V.P. - WITH COVER	12" CORR. I.P. WITH COVER
43+40	44+32	RIGHT	23'					92'	18'
44+32	44+50	"	"					158'	18'
44+50	46+08	"	"					14'	36'
46+08	46+26	"	"						
46+26	46+40	"	"						
TOTAL								264'	36'
160+80	162+32	LEFT	20'		152'				
162+32	162+50	"	"			18'			
162+50	162+52	"	"				1		
162+52	171+30	"	"		878'				
171+30	171+32	"	"				1		
171+32	172+84	"	"		152'				
172+84	173+34	"	"			50'			
173+34	173+56	"	"		22'				
173+56	173+58	"	"				1		
173+58	175+56	"	"		198'				
175+56	175+58	"	"						
TOTAL =				1402'	68'		4		
170+34	170+36	RIGHT	20'				1		
170+36	173+30	"	"		294'				
173+30	173+32	"	"				1		
173+32	175+56	"	"		224'				
175+56	175+58	"	"				1		
TOTAL =				518'			3		



Reinf. conc. pipe used as an alternate for V. S. P. encased shall be cemented as shown in the pertinent accompanying sketch. Where V. S. P. is not to be encased rein. conc. pipe will not be cemented.



- UNDERDRAIN INLET DETAILS -

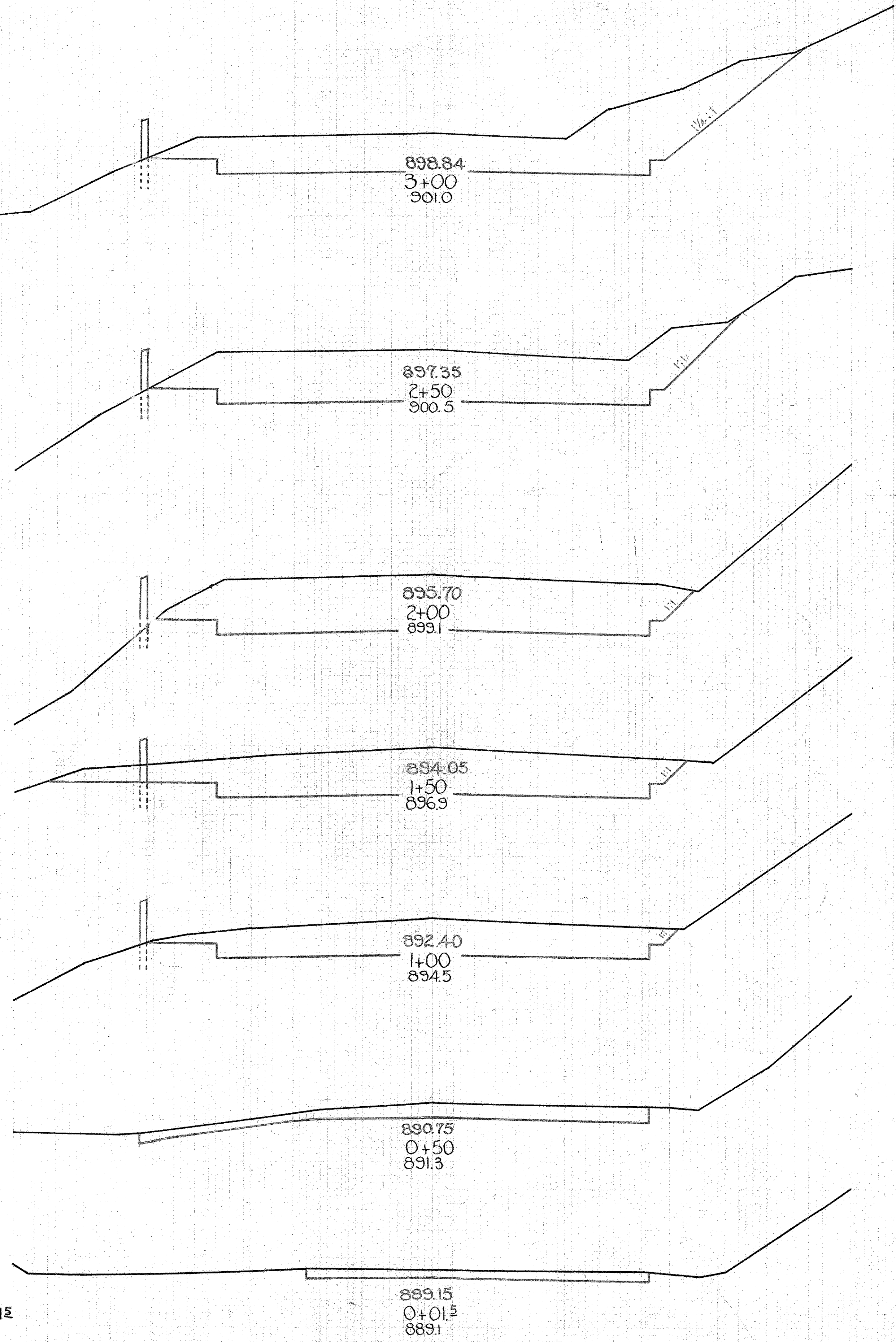
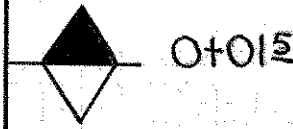


SECTION S-S
- GRATING DETAILS -

DETAILS & TABLES
- OF -
PIPE UNDERDRAINS
S.H. 462 SECTION B,
FAIRFIELD COUNTY

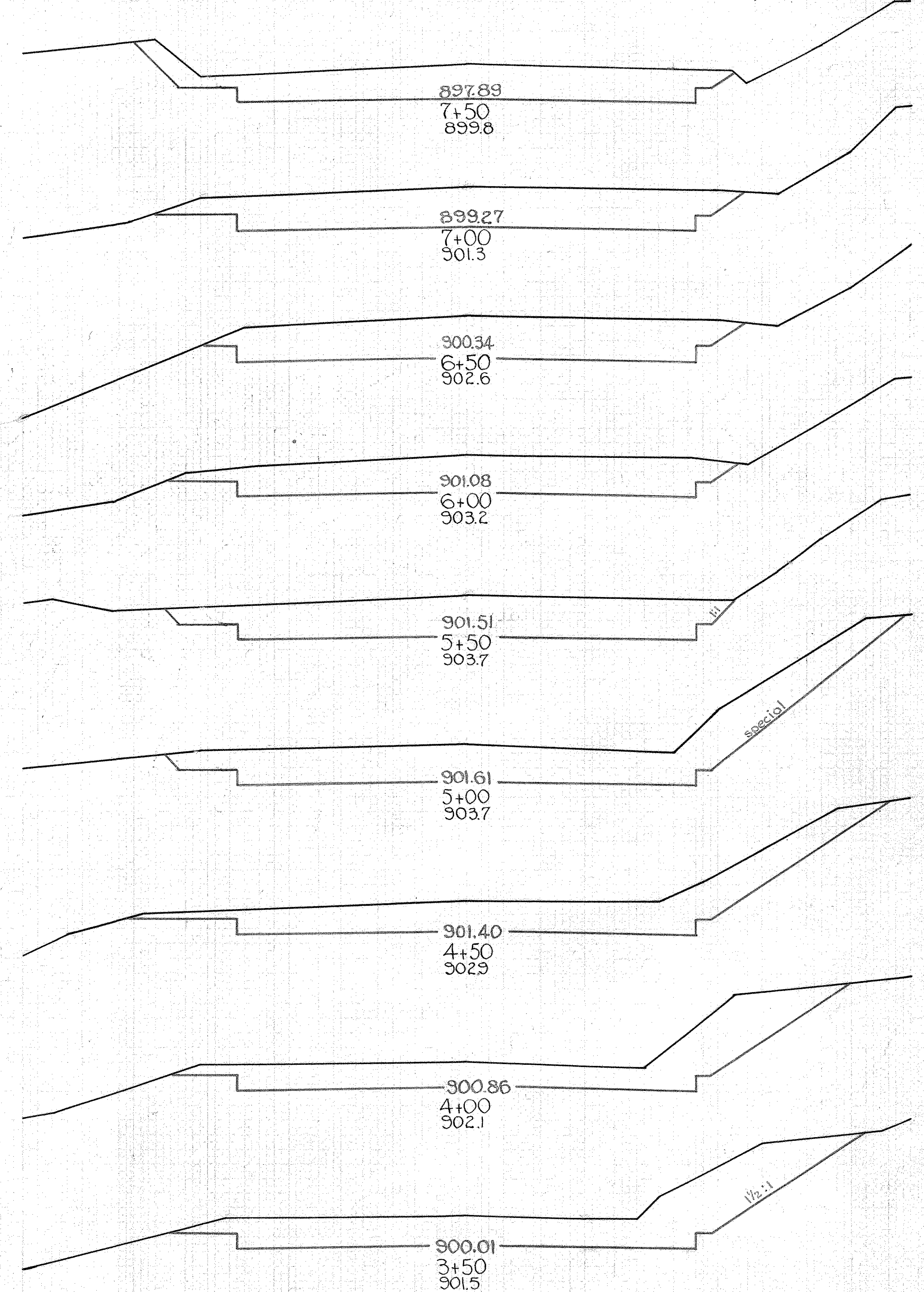
S.H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA		QUANTITY	
CUT	FILL	EXC	EMB
129		215	
		243	
133			
		244	
130			
		226	
114			
		174	
75			
		100	
34			
		44	
15			

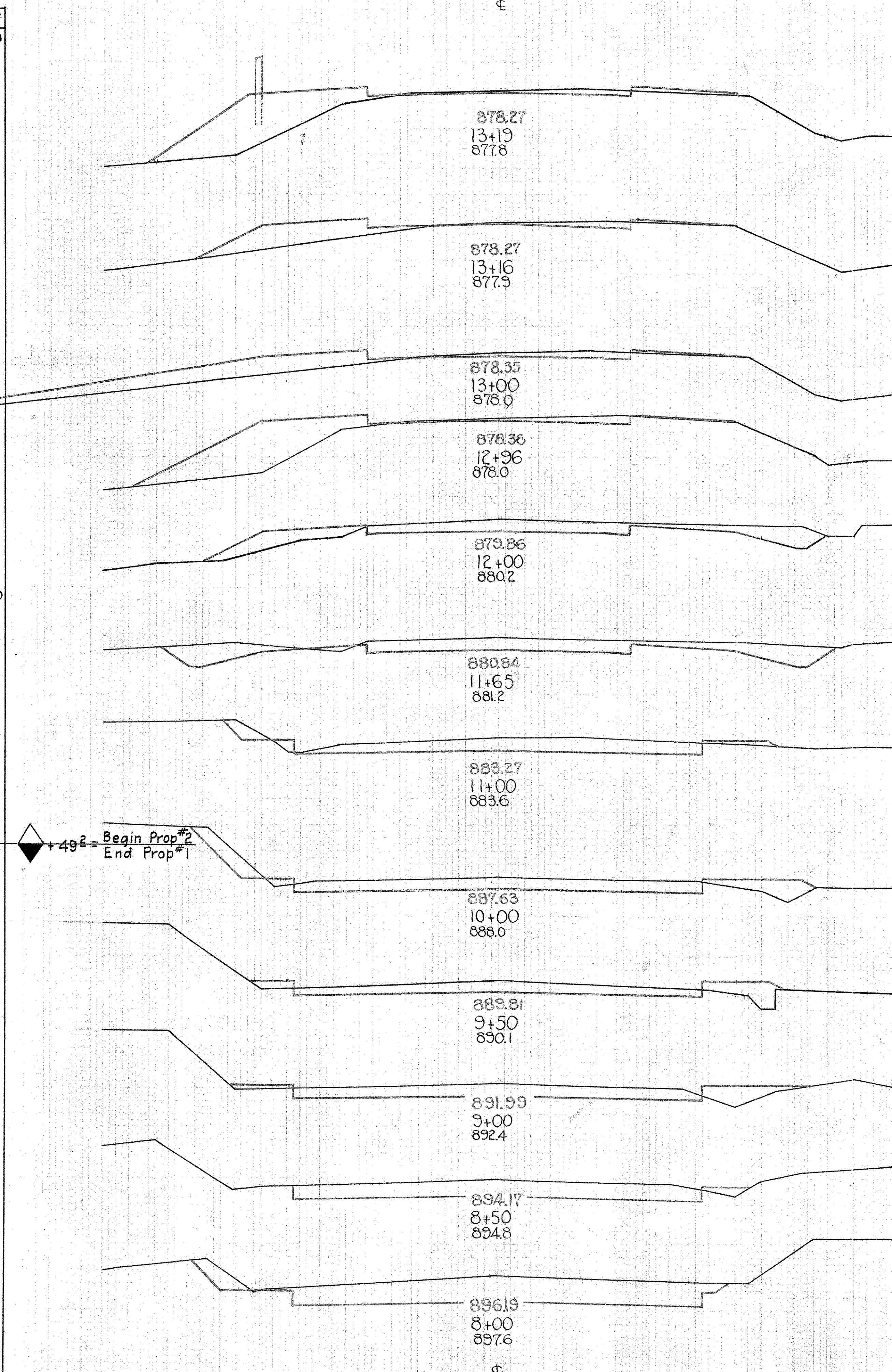


END AREA		QUANTITY	
CUT	FILL	EXC	EMB
173		120	
		148	
87			
		163	
90			
		159	
81			
		154	
86			
		185	
115			
		191	
31			
		165	
87			
		178	
104			

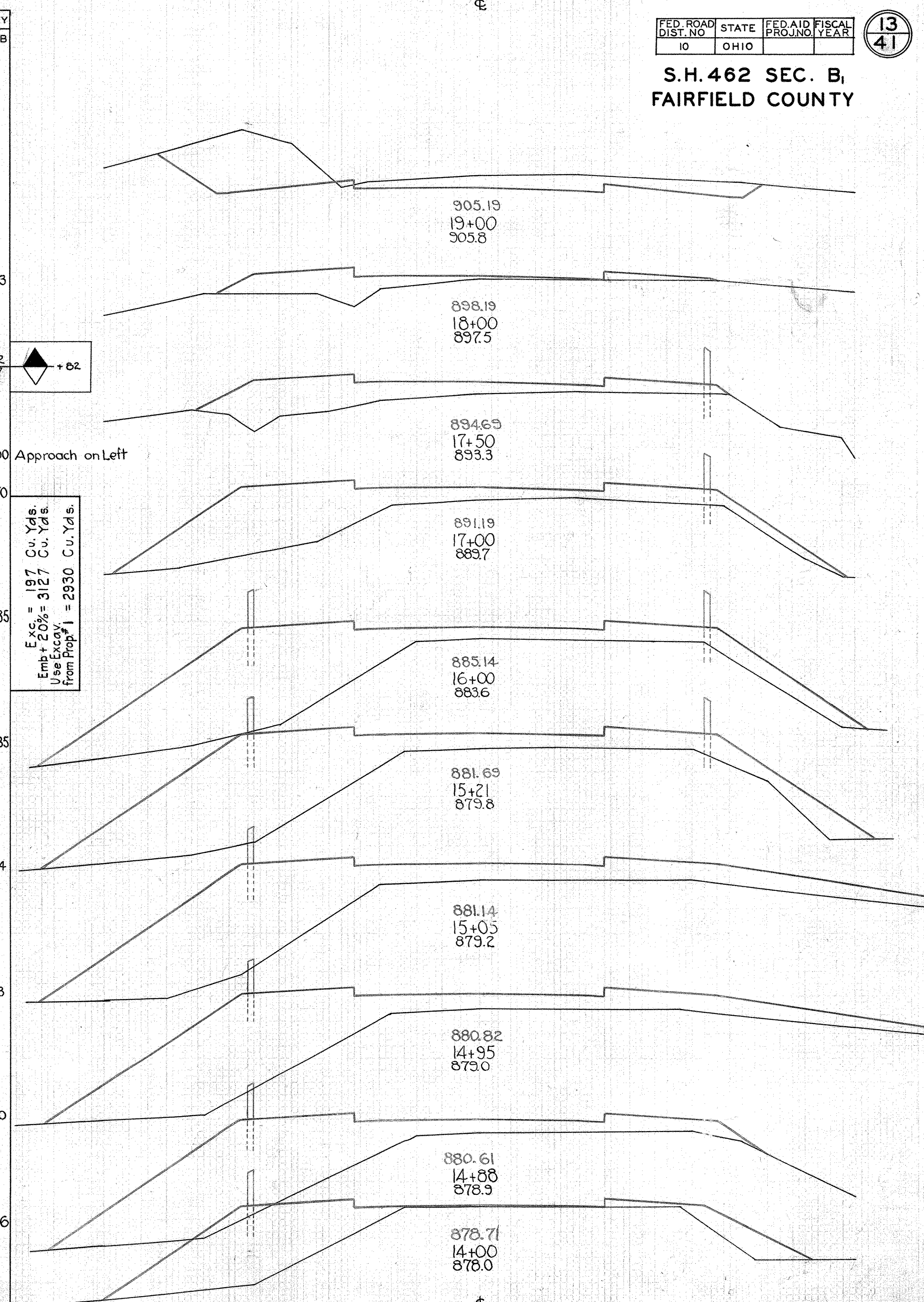
Exc = 2995 Cu. Yds.
Emb + 20% = 65 " "
Use on Prop. #2 = 2930 " "



END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		4	217
3	41		
		4	
4	21		
		4	17
6	37		
		6	
5	38		
		46	119
21	29		
		30	20
26	3		
		63	7
27	3		
50	11		
50	11		
27	9		
		46	17
22	9		
		44	15
27	8		
		59	9
37	2		
		87	2
57			



END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		65	
75	1		
		139	63
33			
32	57		
		63	
		100	Approach on Left
170			
121			
		585	
195			
		585	
205			
124			
		211	
		78	
		204	
		50	
176			
		456	
104			



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		

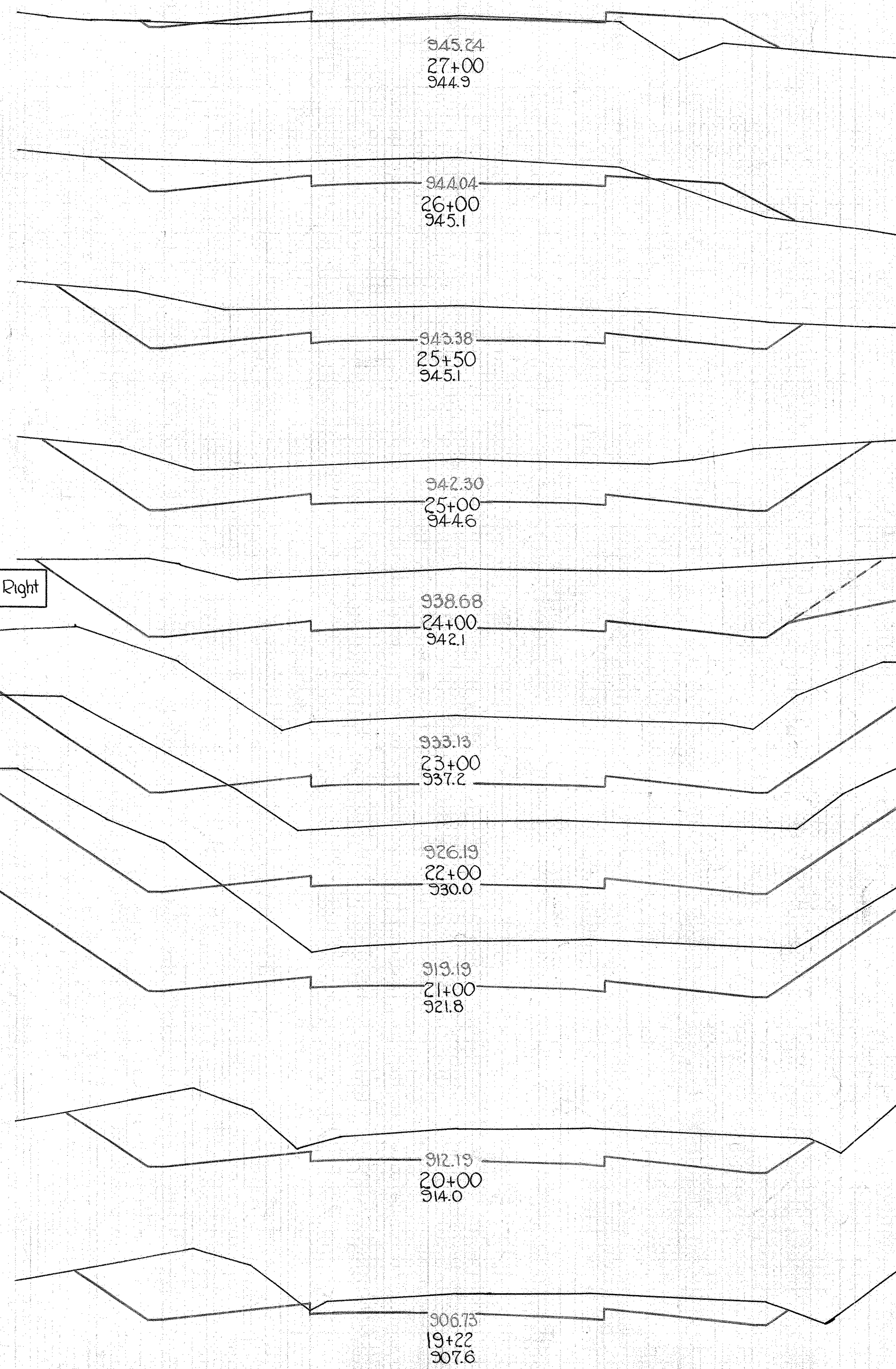
S.H. 462 SEC. B,
FAIRFIELD COUNTY

13
41

S.H. 462 SEC. B)
FAIRFIELD COUNTY

END AREA		QUANTITY	
CUT	FILL	EXC	EMB
3	21	6	103
		107	54
55	8		
		150	7
106			
		235	
143			
		657	30
206			
		1011	
340			
		1330	
378			
		1333	
342			
		857	
121			
		236	
84			

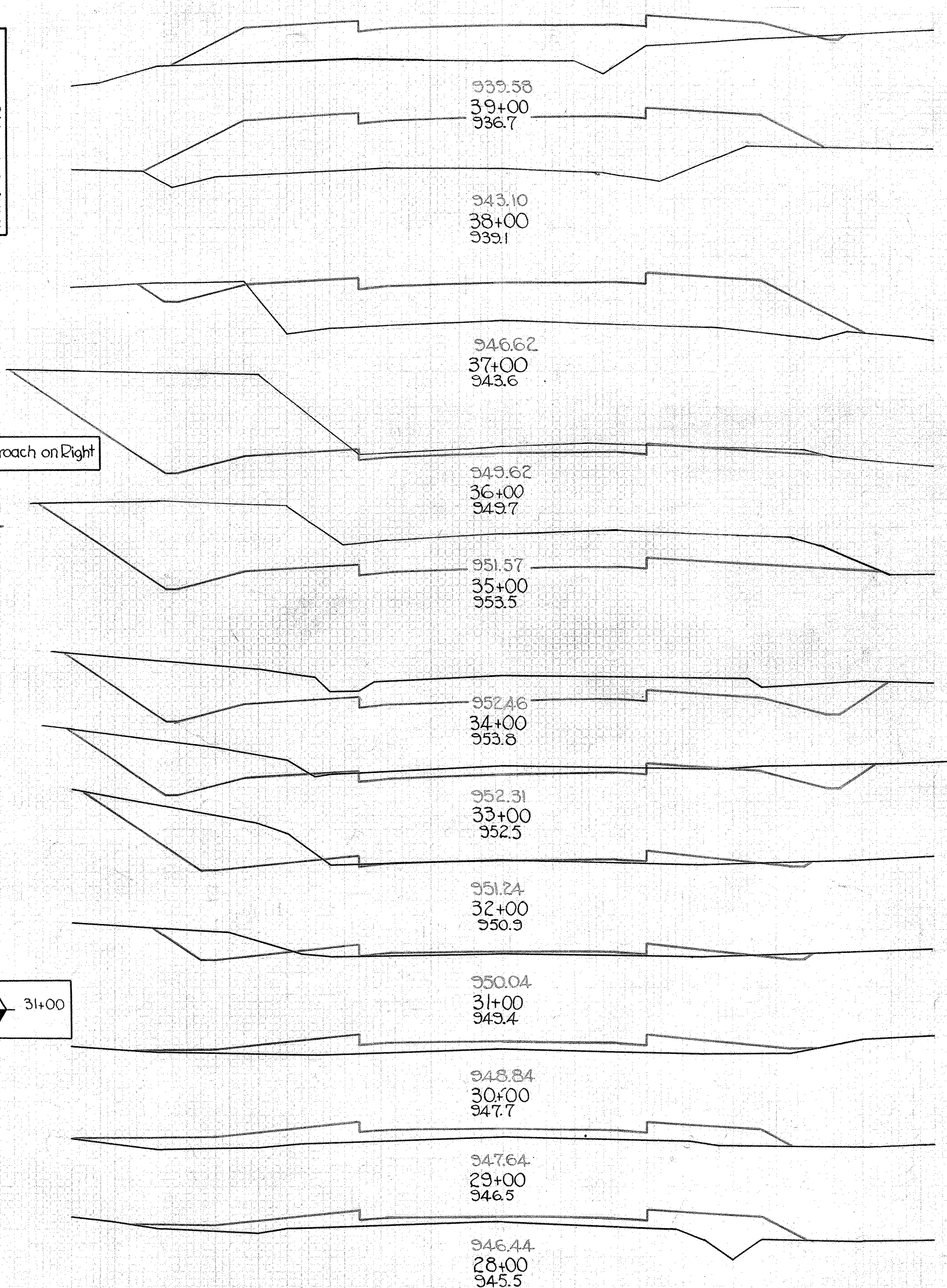
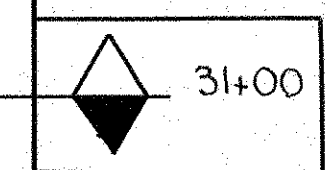
Exc. = 6236 Cu.Yds
Emb + 20% = 752
Use at Sta. = 5484
103+11 to 130+00
See note on sheet No. 7



END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		11	159
		90	
		456	
		156	
		11	503
6	119		
		215	220
110			25
		493	
		156	
		476	
101			
		283	4
52	2		
		172	15
41	6		
		96	33
11	12		
		20	81
		32	
		41	
		146	
38			

Excavation = 1760 Cu.Yds.
Emb + 20% = 1760

Approach on Right



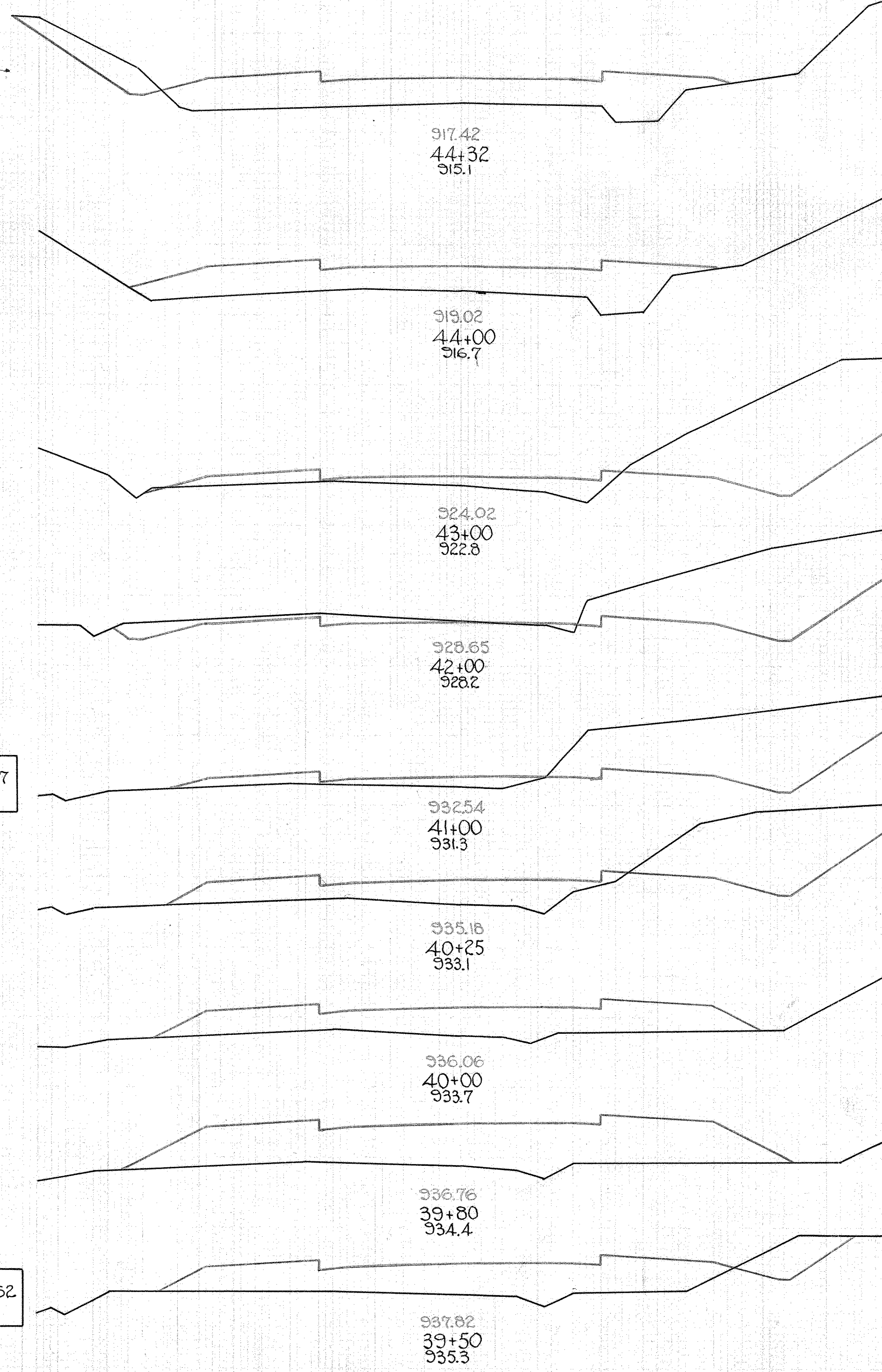
S.H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		2	11
14	82		
		7	94
	77		
	217	185	
117	23		
	428	44	
114	1		
	328	26	
100	16		
	239	83	
12	44		
	33	56	
	75		
	74		
	125		
	4	69	
13	82		

+17

Exc = 344 Cu Yds.
Emb + 20% = 344

+62

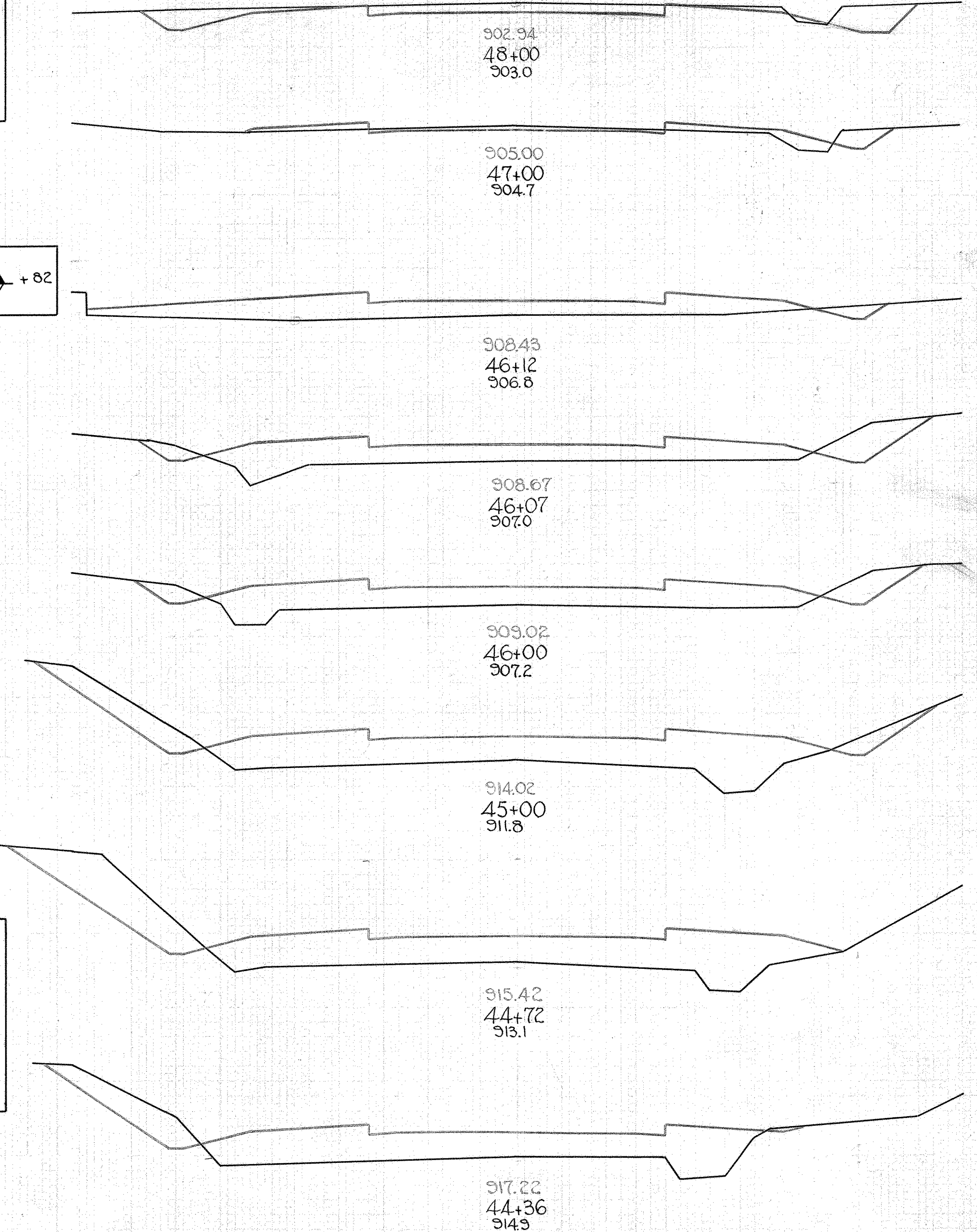


END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		83	41
31			
	70	15	
7	8		
	3	21	
12	79		
2	53		
	2	9	
12	54		
	4	15	
11	61		
	53	269	
21	84		
	26	89	
30	88		
	31	109	
16	75		

Exc = 191 Cu Yds.
Emb + 20% = 191

+82

Exc = 1116 Cu Yds.
Emb + 20% = 1116



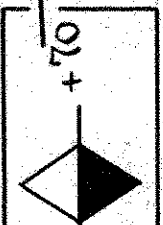
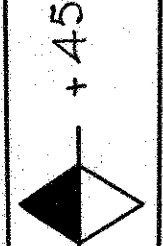
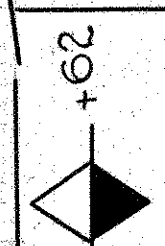
S.H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA QUANTITY		CUT FILL EXC EMB	
41	83	19	43
44	102	39	93
47	116	45	489
51	148	104	196
57	123	74	137
47	130	39	96
25	140	20	76
80	66	194	381
101	17	335	154
63	6	304	43
53	10	118	16
24	21	143	57
13	42	68	117
14	22	15	36
		35	82

Exc = 1084 Cu Yds
Emb + 20% = 1084

Exc = 323 Cu Yds
Emb + 20% = 323

Approach on Left



S.H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA QUANTITY		CUT	FILL	EXC	EMB
225	87				507 154
187	82				763 313
109	81				313 172
129	75				189 124
19	34				45 Approach on Left
19	37				274 313
25	41				70 243
21	32				41 57
39	40				43 54
38	65				111 133
					143 194
					94 185

Exc. = 3460 Cu Yds
Emb + 20% = 3460 Cu Yds

Approach on Left

893.02
66+00
890.1

891.72
65+00
888.0

890.98
64+43
887.7

890.42
64+00
887.1

889.42
63+00
886.8

889.01
62+00
887.3

889.03
61+50
887.6

889.20
61+00
887.9

889.58
60+00
888.5

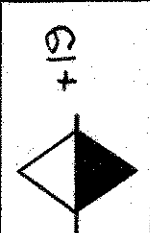
891.06
59+00
889.3

S.H. 462 SEC. B,
FAIRFIELD COUNTY

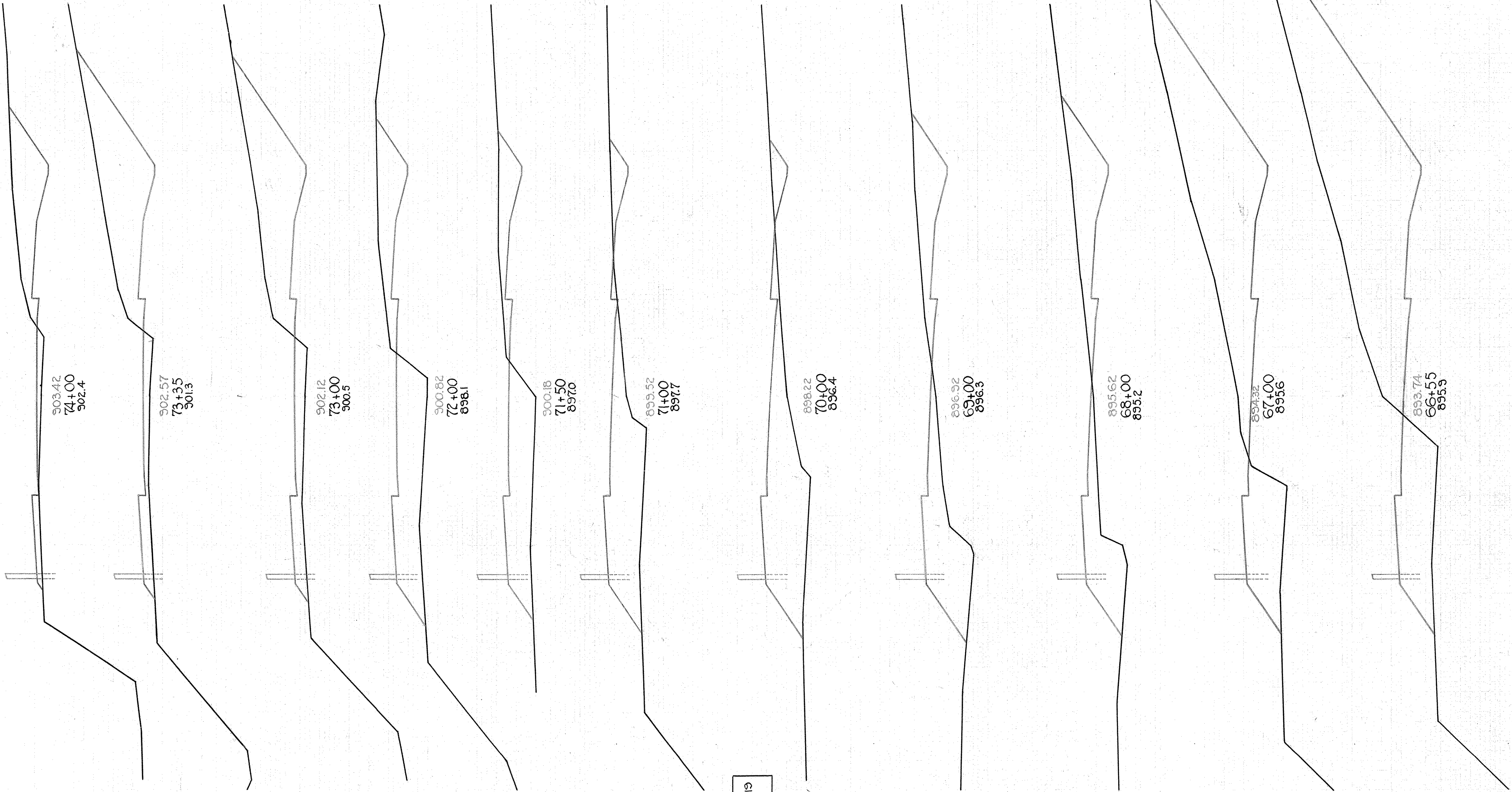
END AREA	QUANTITY	
CUT	FILL	EXC. EMB.
43	12	239 24
91	20	161 39
89	26	117 30
38	67	235 172
26	58	59 117
11	80	33 128
8	97	87 293
39	61	213 194
73	44	436 180
189	53	89 23
273	64	296 75

Exc. = 936 Cu Yds.
Emb+20% = 936

Exc. = 898 Cu Yds.
Emb+20% = 898



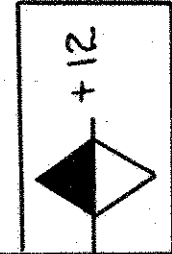
STA. 66+55 TO 74+00



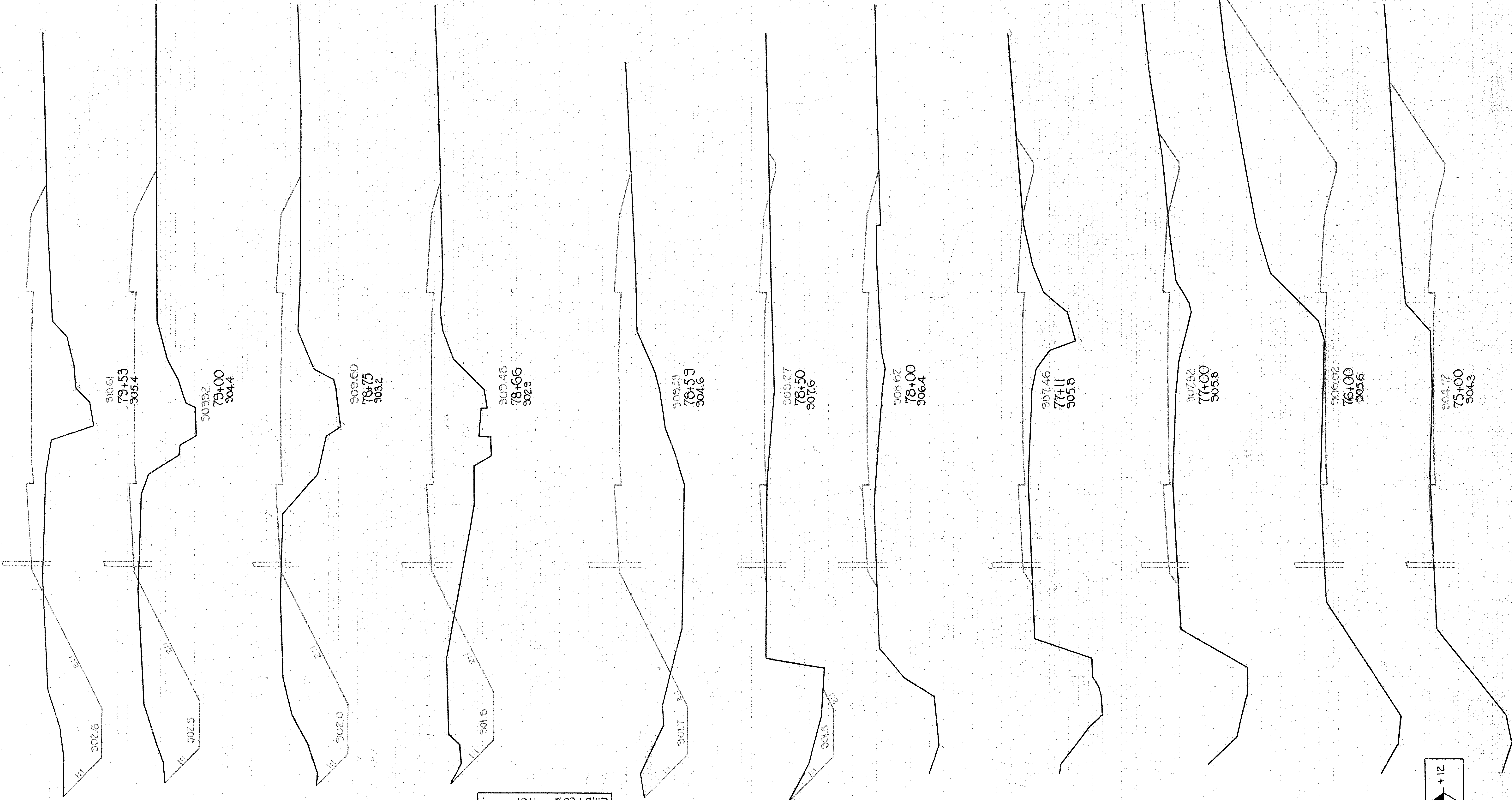
S.H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA	QUANTITY	
	CUT	FILL
63	0	105
67	112	128
77	104	213
51	129	39
29	196	100
17	23	43
52	69	37
7	59	183
8	37	20
196	378	68
86	458	2
	64	0

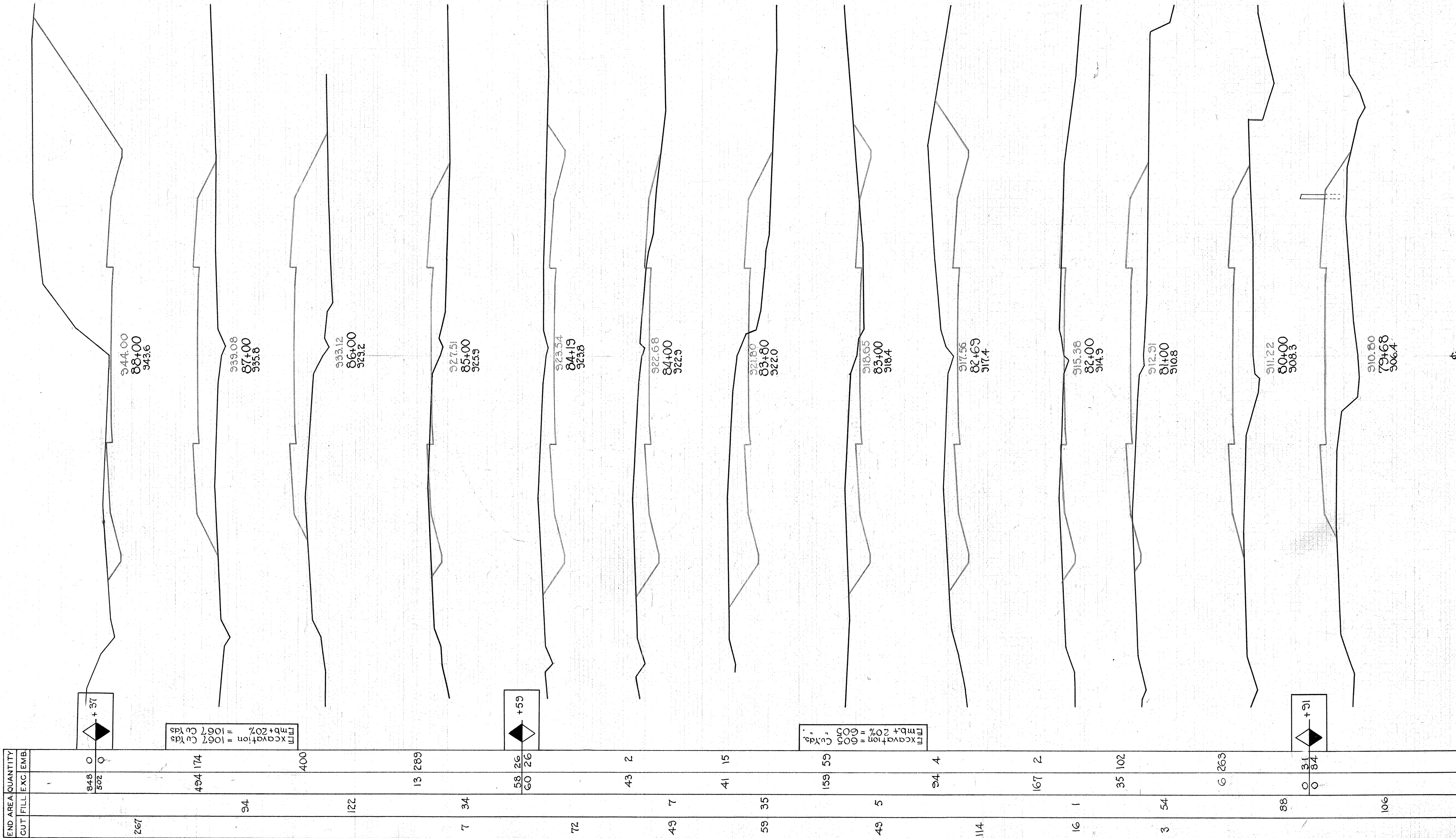
1101 Cu Yds. excavation = 1101 Mb + 20% = 1101 Cu Yds.



STA. 75+00 TO 79+53



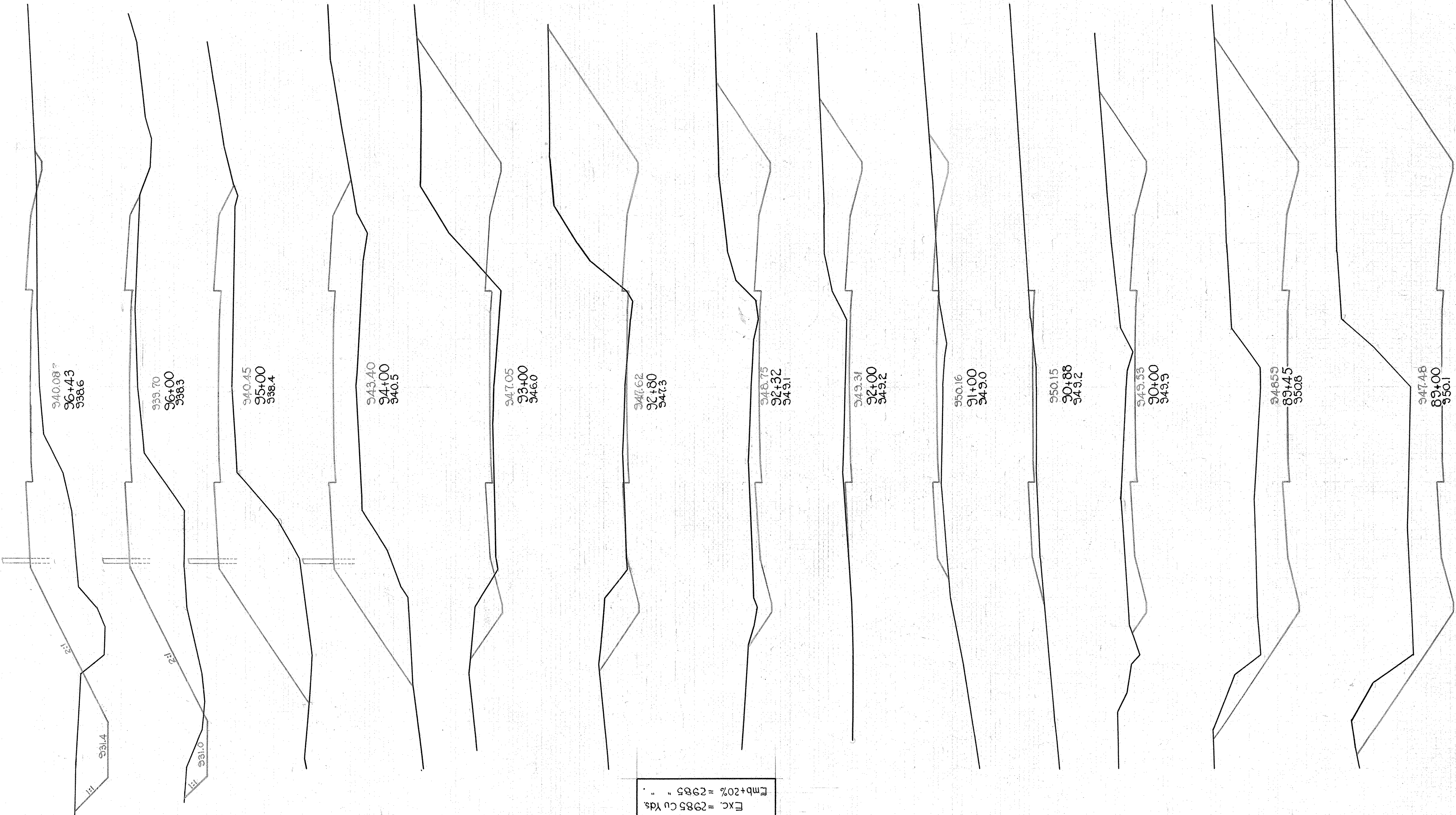
S. H. 462 SEC. B,
FAIRFIELD COUNTY



S.H. 462 SEC. B,
FAIRFIELD COUNTY

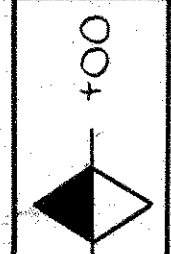
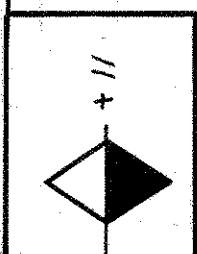
END AREA	QUANTITY		
	CUT	FILL	EMB
36	119		57
			181
			37
			194
10	125		19
			554
			174
			167
			228
			344
123	19		107
			7
160	1		
			241
103			100
			66
			139
9	21		
			2
			7
2	14		
			161
			22
97			
			394
291			
			628
462			

Exc. = 2985 Cu Yds
Emb+20% = 2985 "

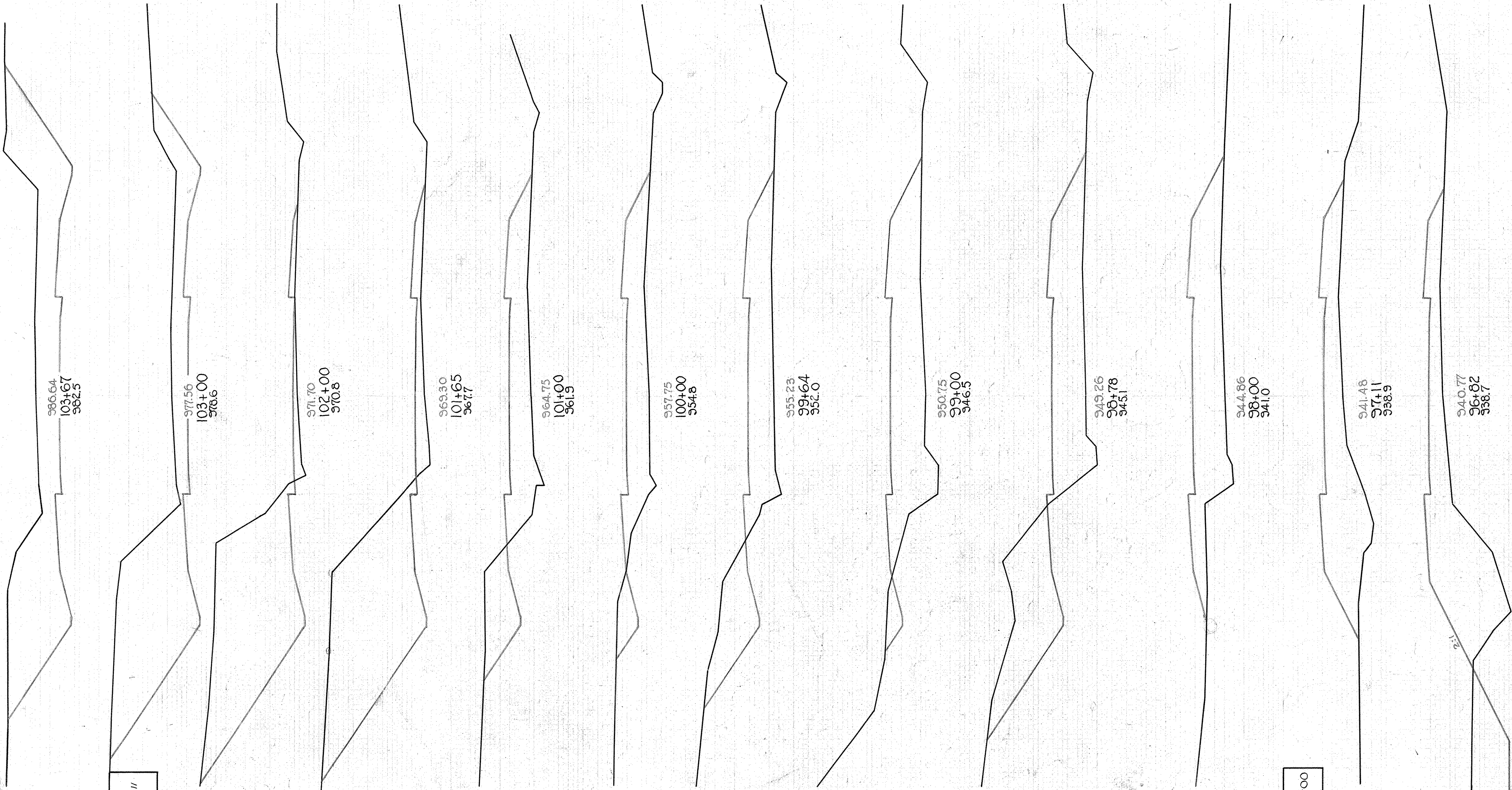


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FAIRFIELD COUNTY

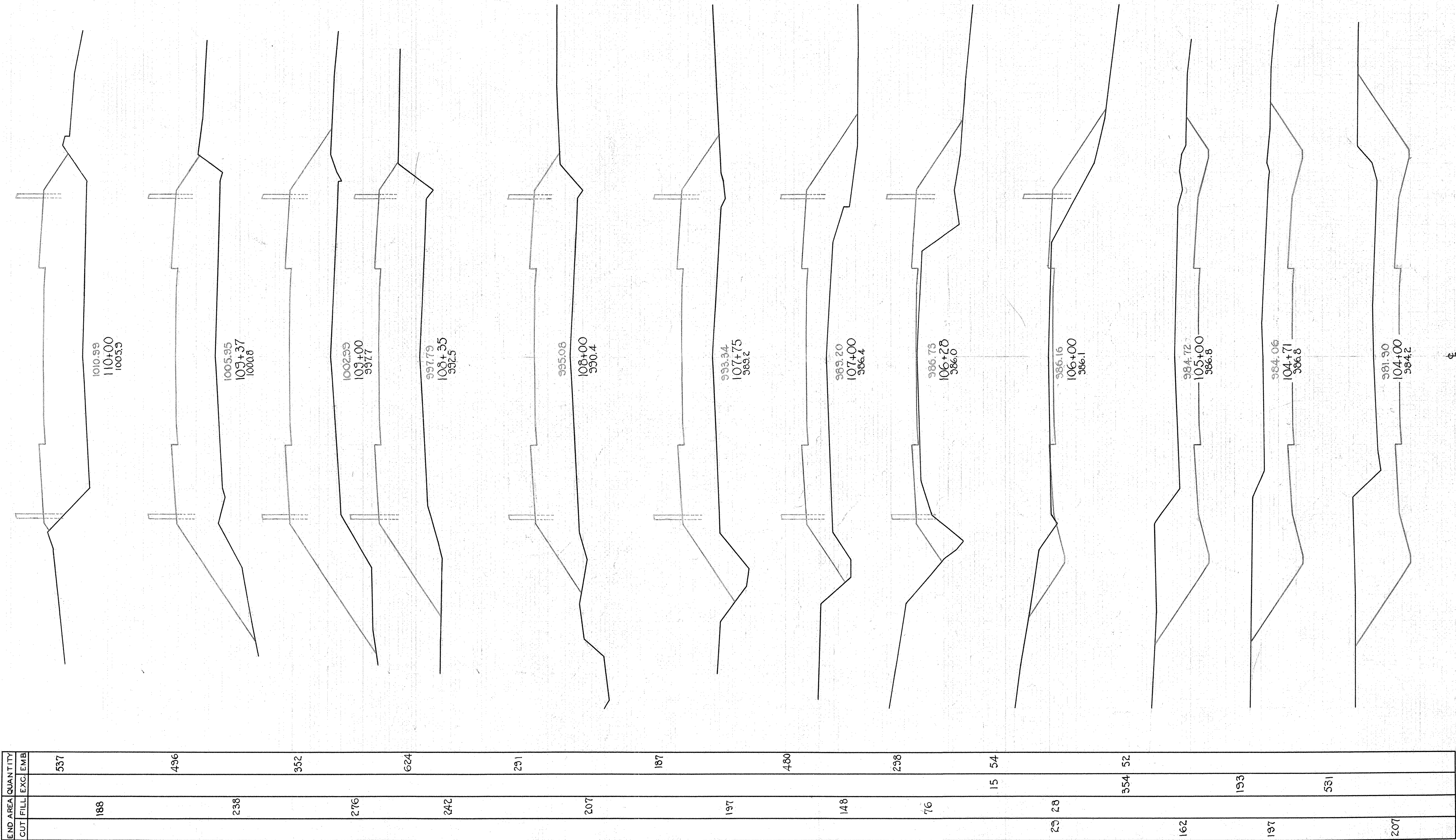
END AREA	QUANTITY	
	CUT	FILL
254	208	198
663	163	167
215	30	11
237	82	33
76	80	86
54	125	75
33	106	107
119	113	44
24	133	



$\frac{1}{2}mb + 20\% = 1510 \text{ Cu Yds.}$
 $\frac{1}{2}FAC = 1510 \text{ Cu Yds.}$



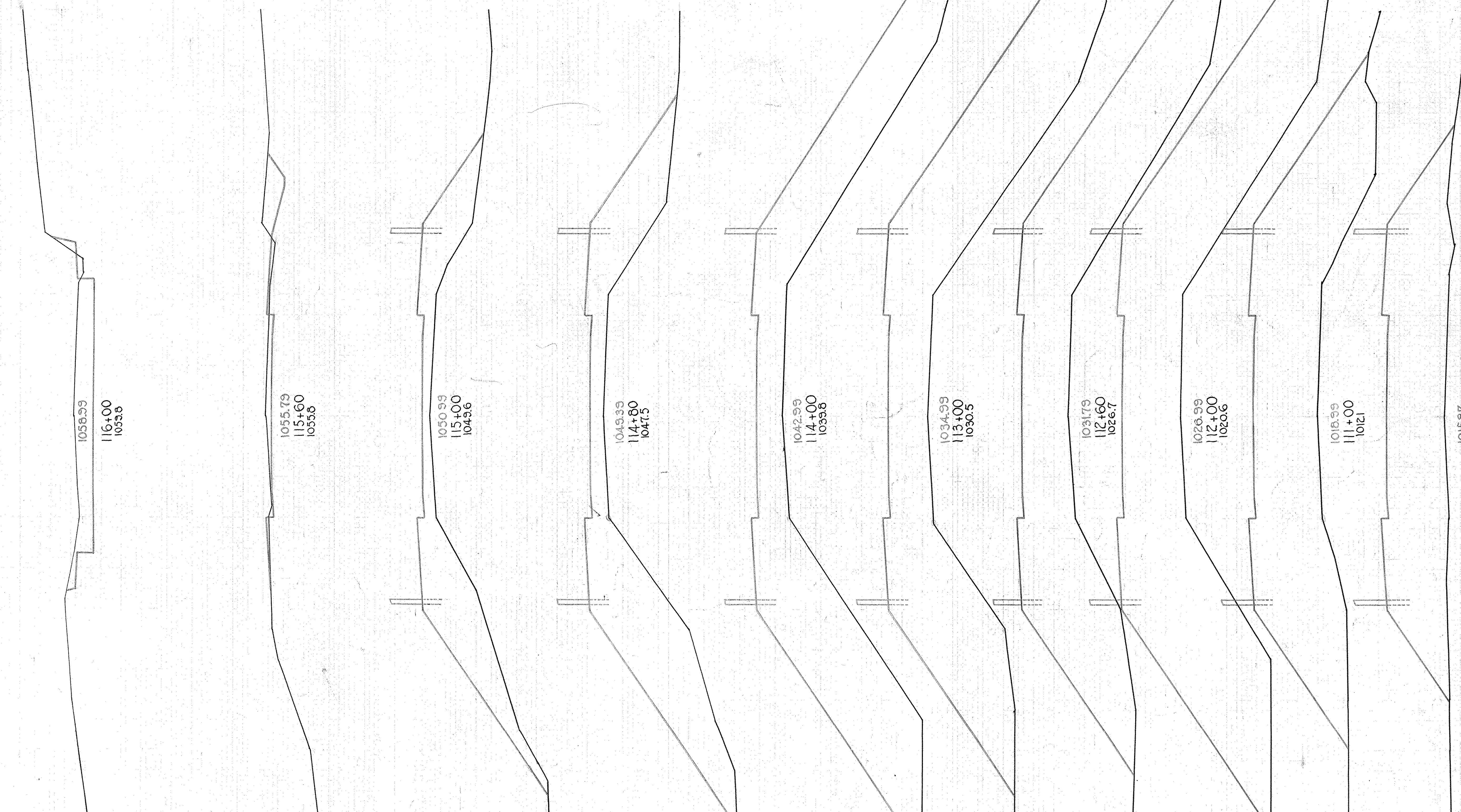
S. H. 462 SEC. B,
FAIRFIELD COUNTY



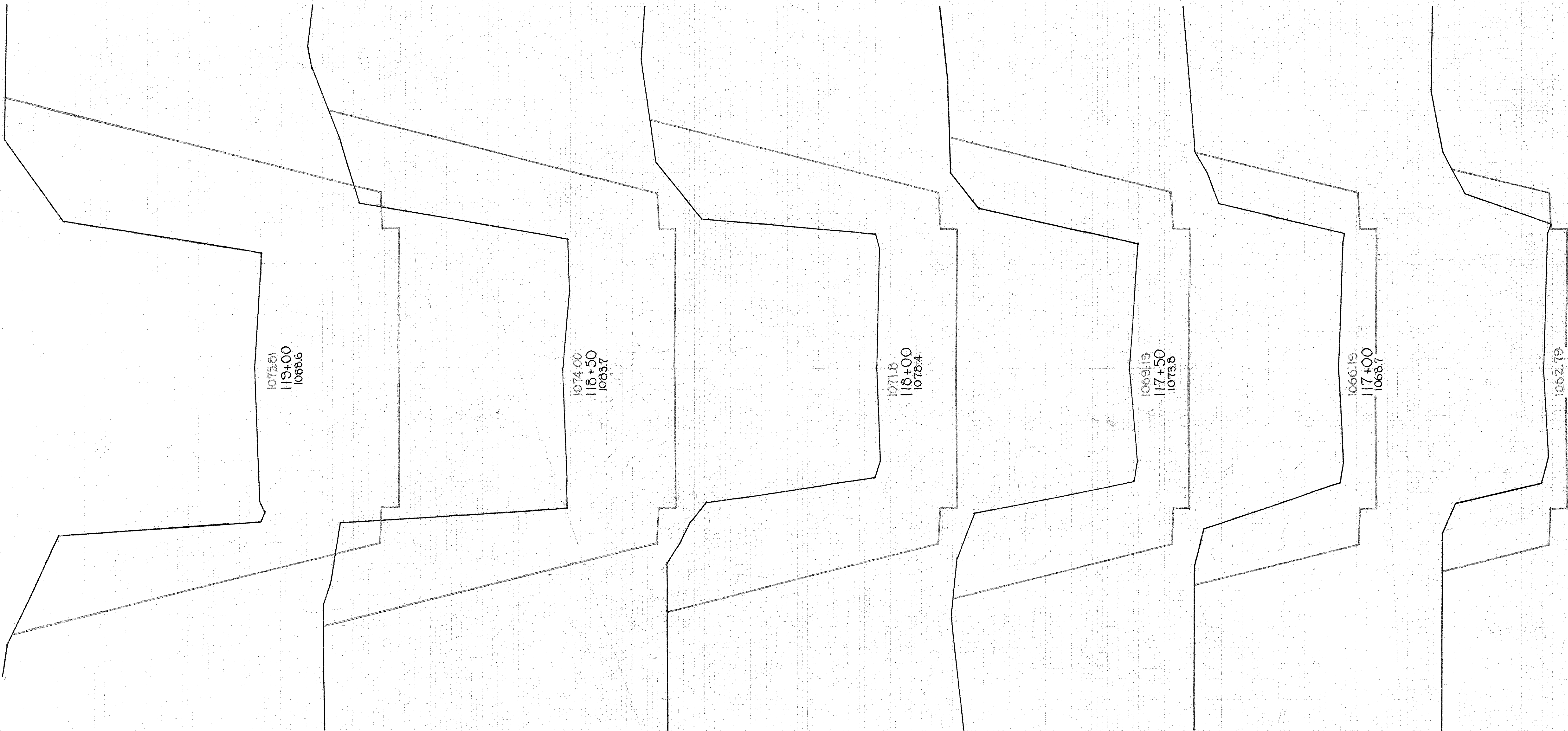
S. H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA	QUANTITY		
	CUT	FILL	EXC. EMB.
176			
52	4		
20	170		
154			
1063			
1057			
783			
1231			
2017			
522			
436			
288			

STA. 110+61 TO 116+00



S. H. 4 62 SEC. B₁
FAIRFIELD COUNTY



Excavation	16211	Cu.Yds.
Use Excavation from Sta. 17+82 to Sta. 31+00	5484	
Embankment + 12%	17858	
Embankment + 20%	385	
Embankment (approaches)	2600	
Waste	2754	
Borrow (contractor to furnish)	1902	

END AREA QUANTITY			
CUT	FILL	EXC	EMB
855	1661		
699	1439		
575	1180		
399	902		
243	594		
139	354		

S. H. 462 SEC. B,
FAIRFIELD COUNTY

END AREA QUANTITY			
CUT	FILL	EXC.	EMB.
238		441	367
212		83	
320		394	
515		772	
853		1272	
847		791	
958		835	
939		1756	

1078.27
122+00
1083.1

1078.43
121+50
1084.0

1078.85
121+50
1087.4

1079.04
121+00
1091.3

1078.83
120+50
1095.7

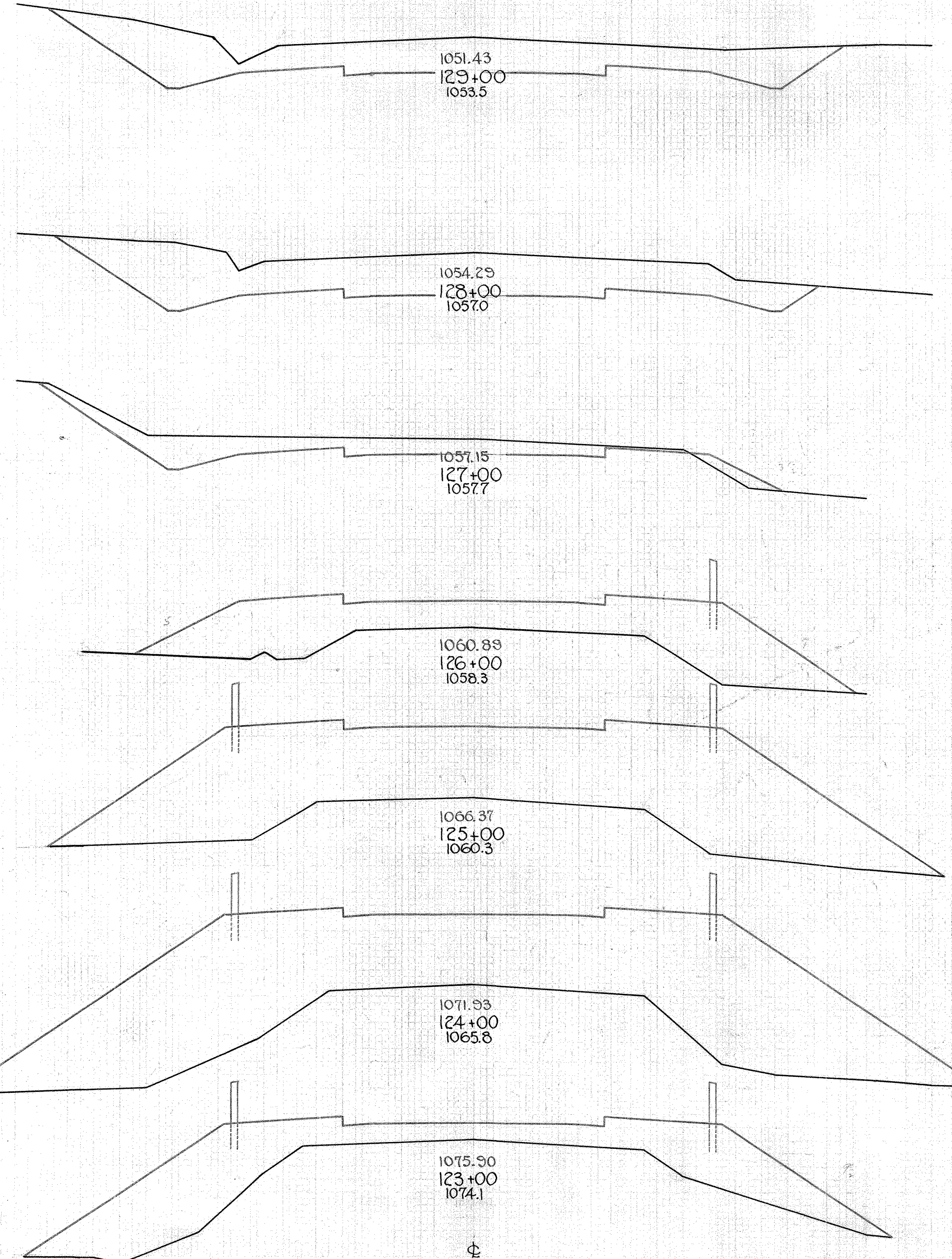
1078.57
120+25
1097.1

1078.22
120+00
1096.8

1077.21
119+50
1093.2

STA. 119+50 TO 122+00

END AREA		QUANTITY	
CUT	FILL	EXC	EMB
137		296	13
		737	
261			
		587	9
56	5		
		104	313
164			
		1035	
395			
		1670	
507			
1306			
198			

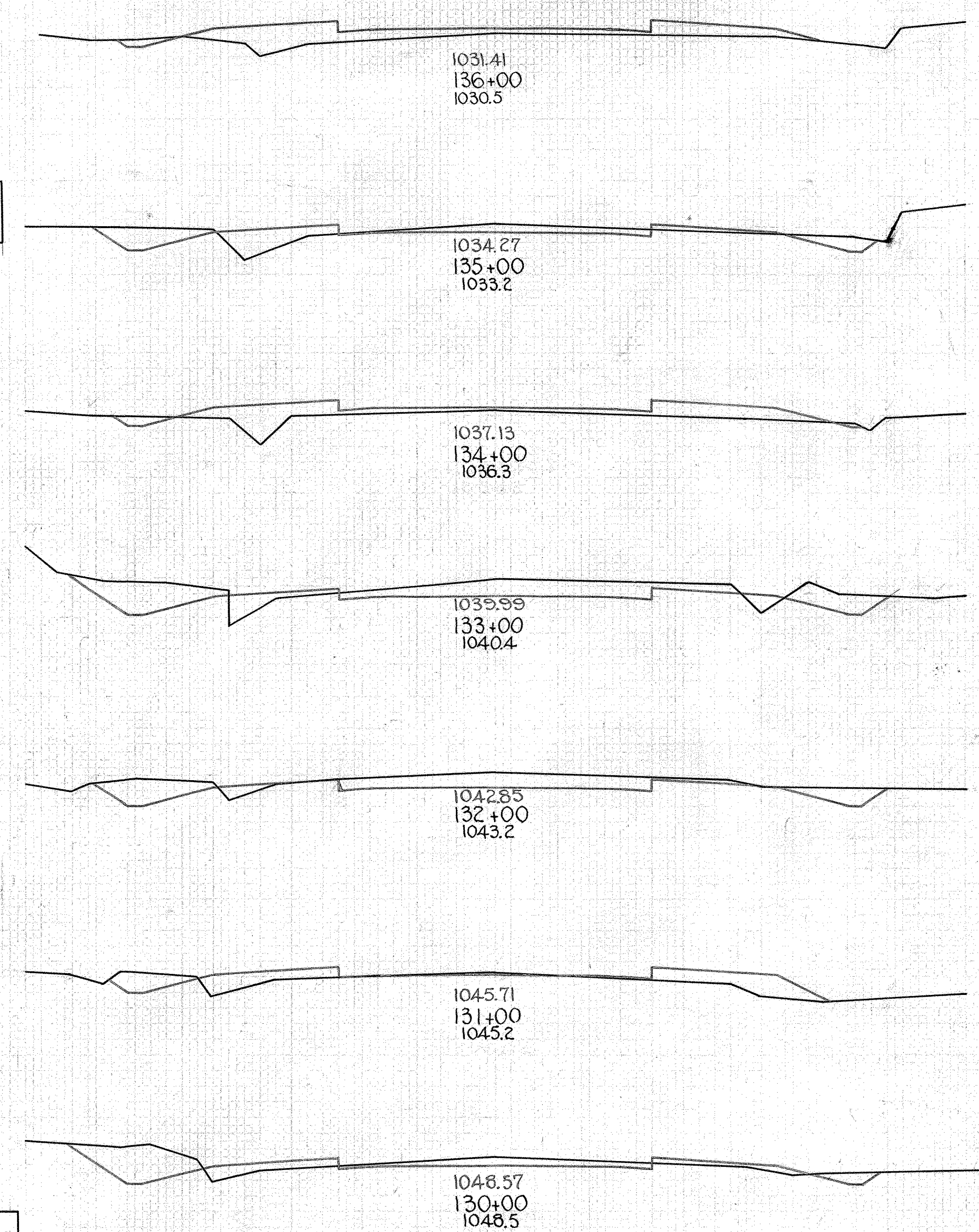


END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		15	68
2	26		
		24	44
		13	23
18	10		
		37	104
2	46		
		78	98
40	7		
		135	17
33	2		
		70	35
5	17		
		52	44
23	7		

34

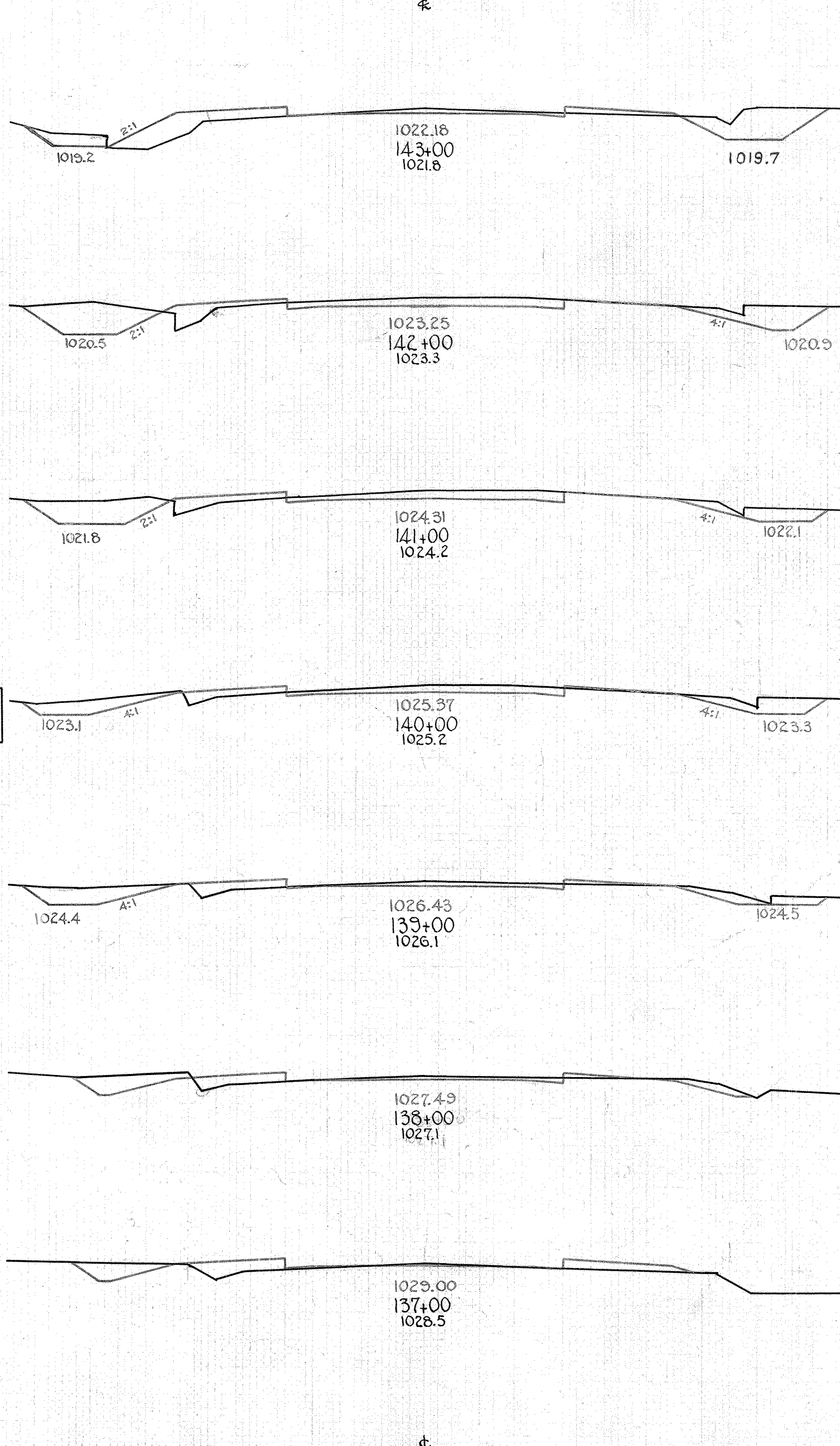
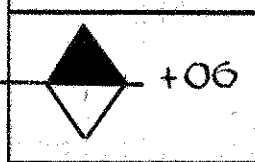
Excavation = 385 Cu.Yds.
Emb + 20% = 385

+00



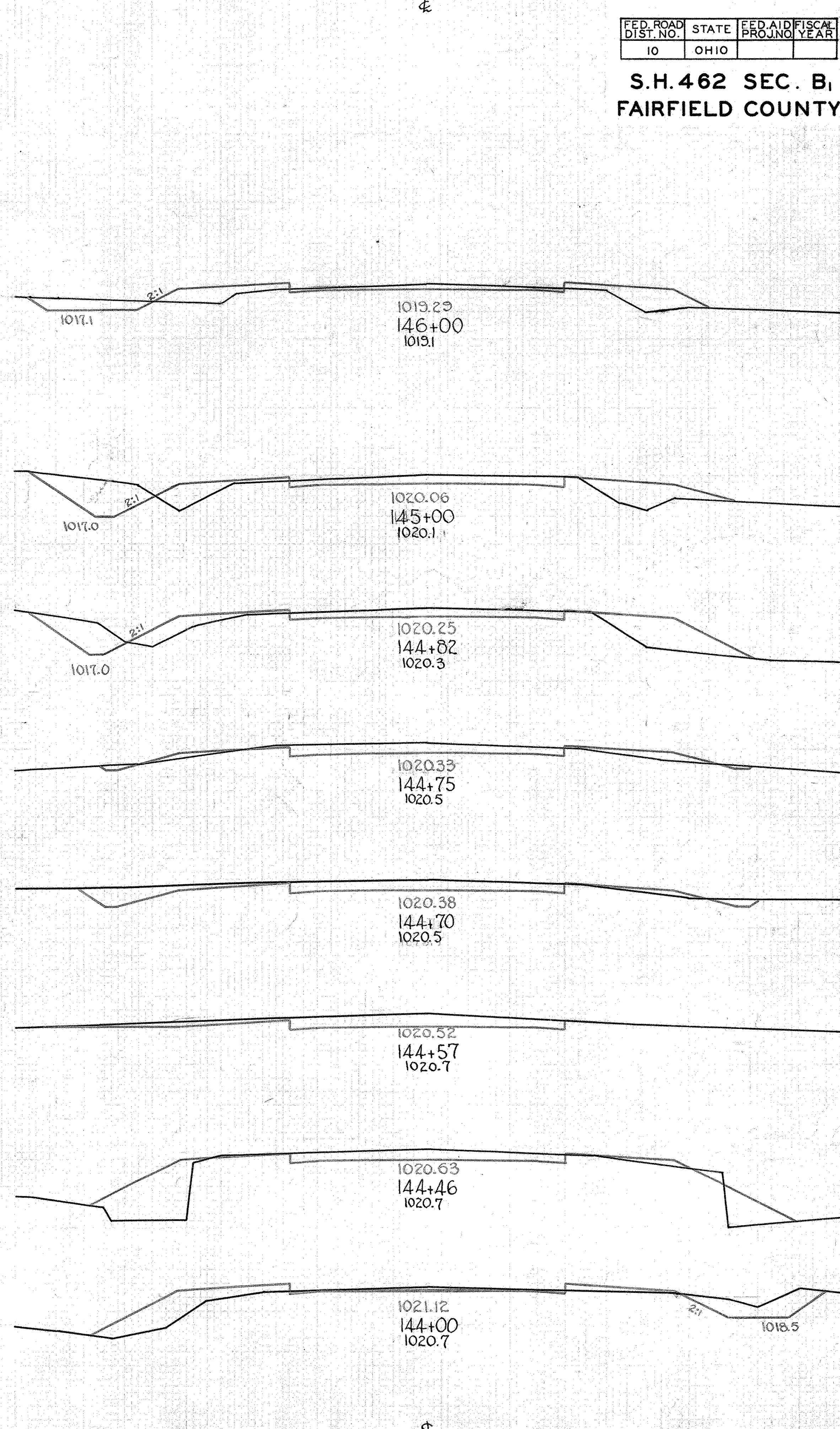
END AREA		QUANTITY	
CUT	FILL	EXC	EMB
23	17	63	67
		117	43
40	6		
		137	20
34	5		
25	4	102	16
		80	19
18	6		
		59	22
14	6		
		37	31
6	11		

Excav = 222 Cu Yds.
Emb+20% = 222 Cu Yds.



END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		24	74
12	17		
		72	67
27	19		
		15	15
20	24		
		4	4
15	6		
		4	2
25	2		
		11	
22			
		7	6
15	28		
		24	41
14	19		

Excavation = 694 Cu Yds.
Emb+20% = 694 Cu Yds.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		

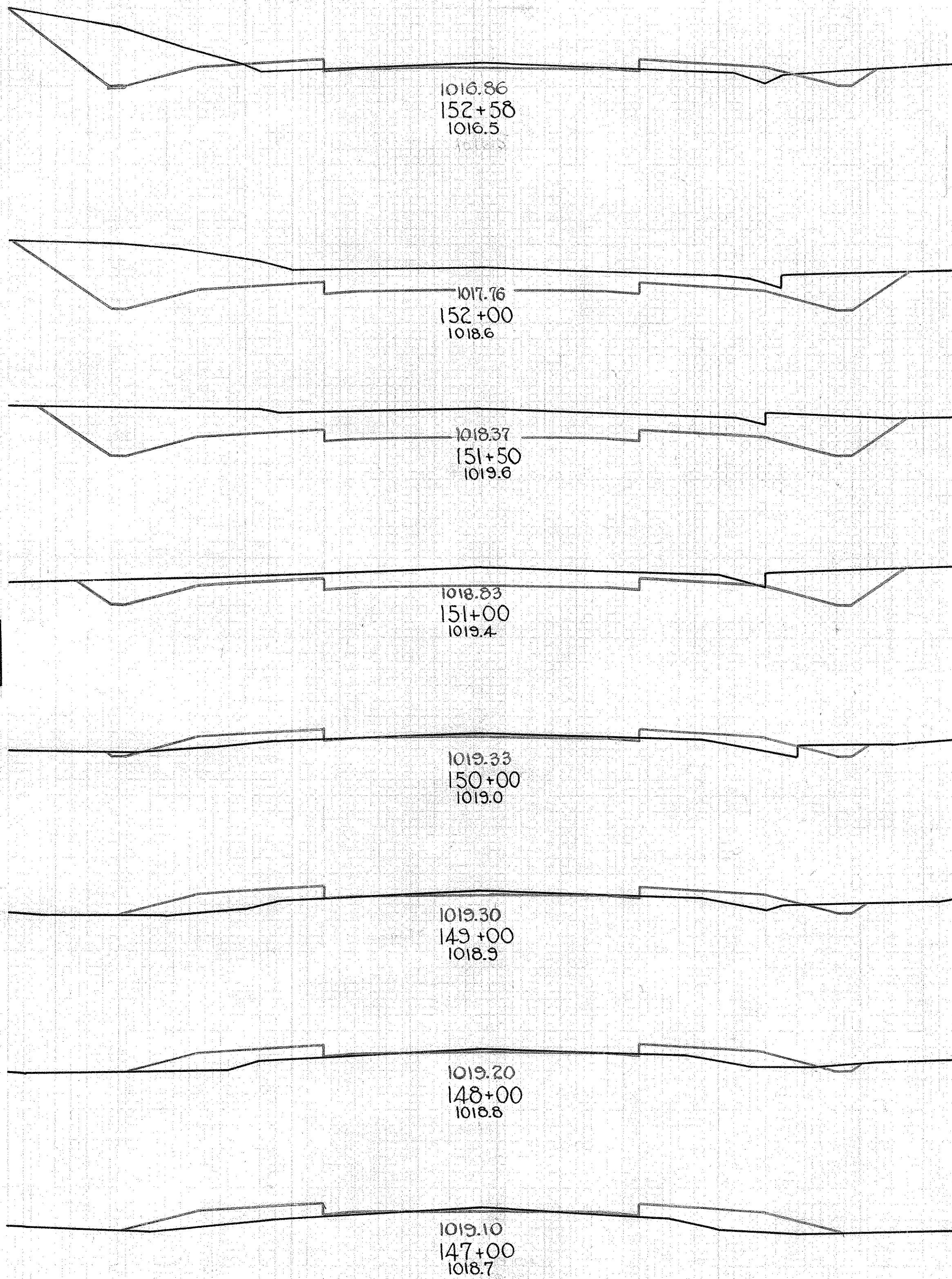
S.H. 462 SEC. B,
FAIRFIELD COUNTY

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41

STA. 137+00 TO 146+00

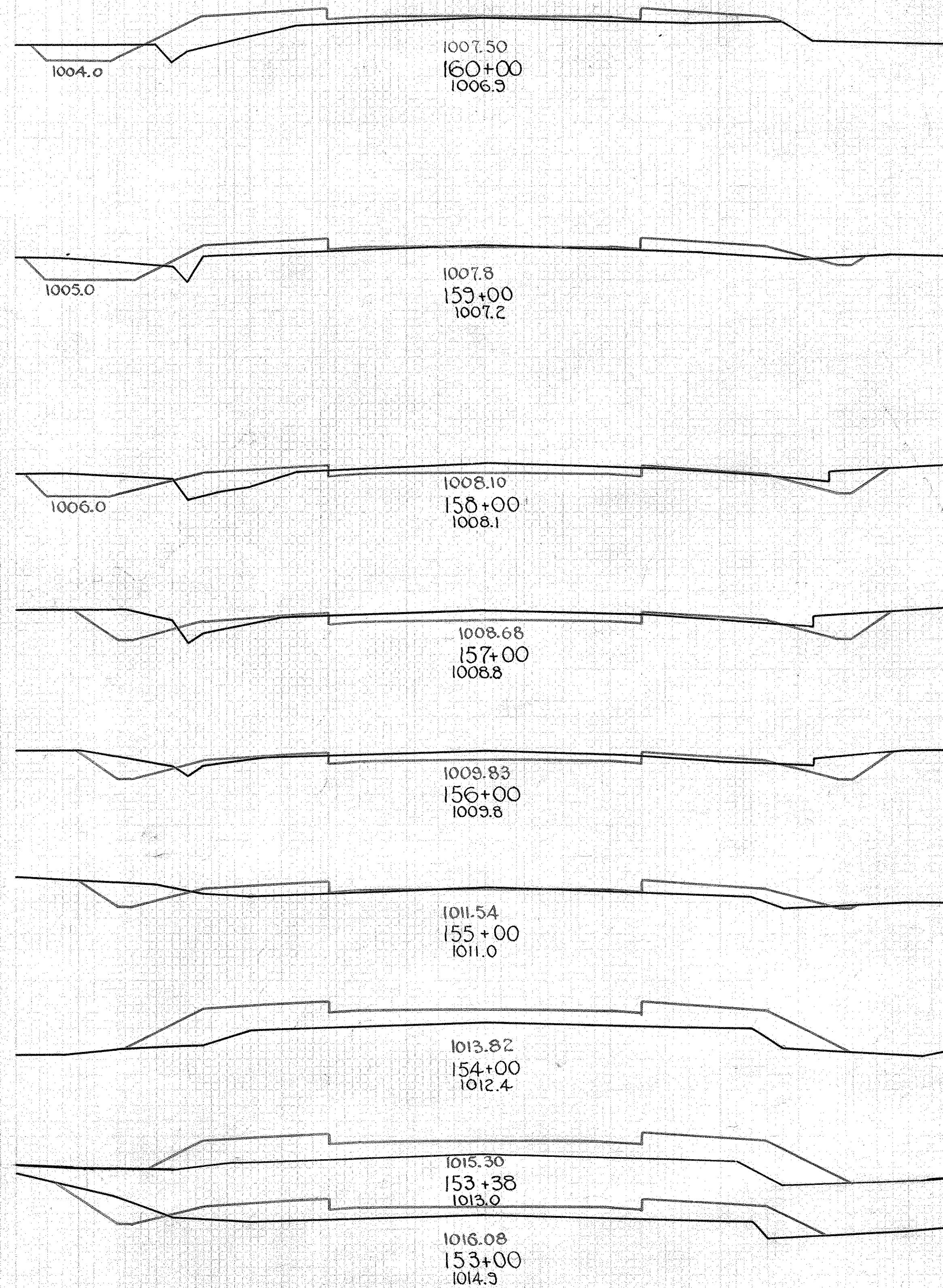
END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		33	37
37	9		
		135	9
89			
		169	
93			
		131	
49			
		7	2
		89	22
3	13		
		9	56
2	17		
		6	67
1	19		
		4	78
1	23		

 +93



END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		30	93
6	27		
		31	81
11	17		
		67	48
25	9		
		94	26
26	5		
		89	19
22	5		
		56	37
8	15		
		15	131
		56	
			130
		57	
		6	67
7	39		

Excavation = 874 Cu.Yds.
 Emb + 20% = 874



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		

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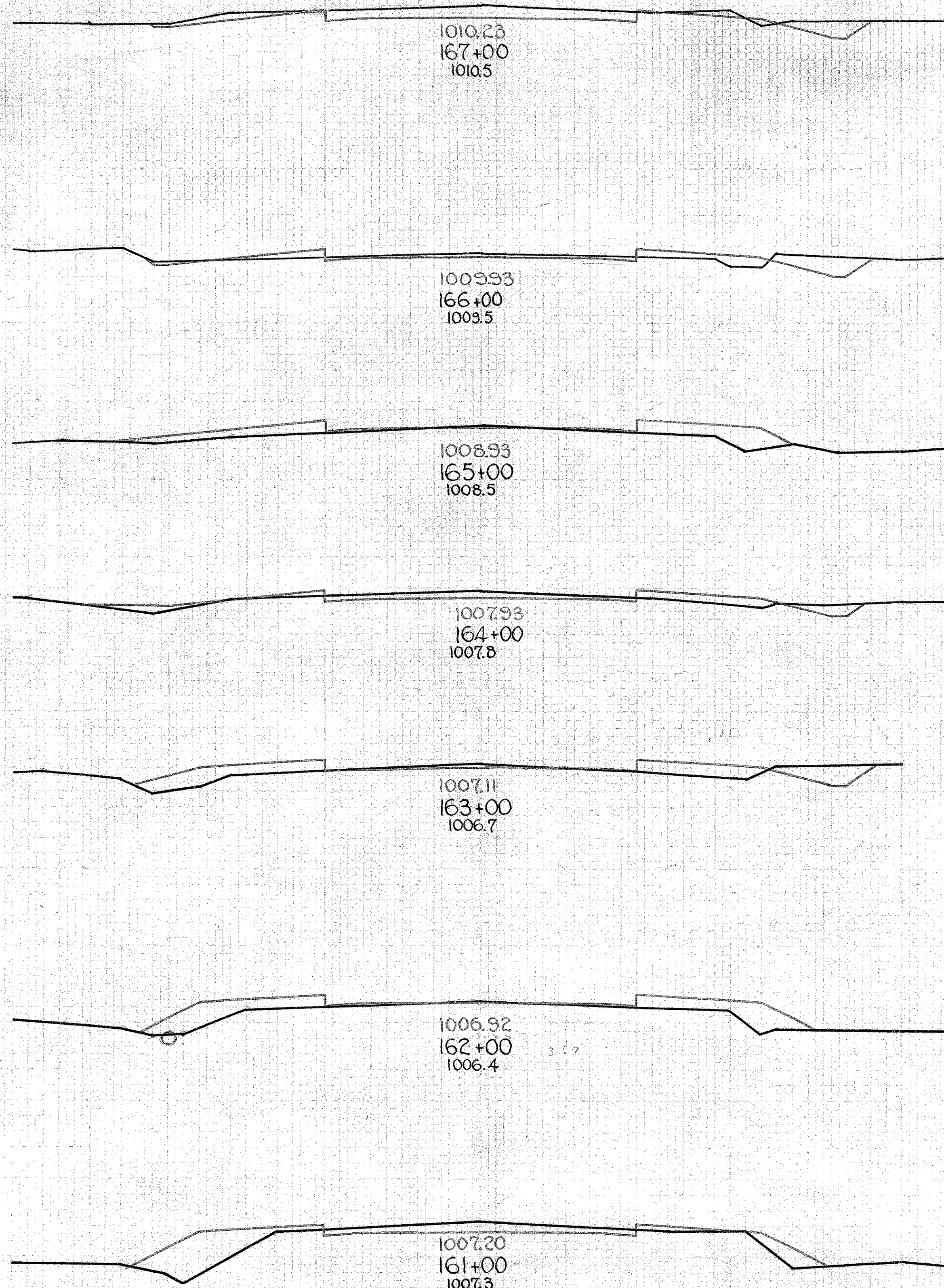
29
 41

STA. 147+00 TO 160+00

END AREA		QUANTITY	
CUT	FILL	EXC	EMB
23	1	104	2
		63	13
11	6	20	44
		18	15
8	8	28	46
		13	74
7	17		
		23	
		8	37
		11	48
10	23		

Excavation = 320 Cu.Yds.
Emb. + 20% = 320 "

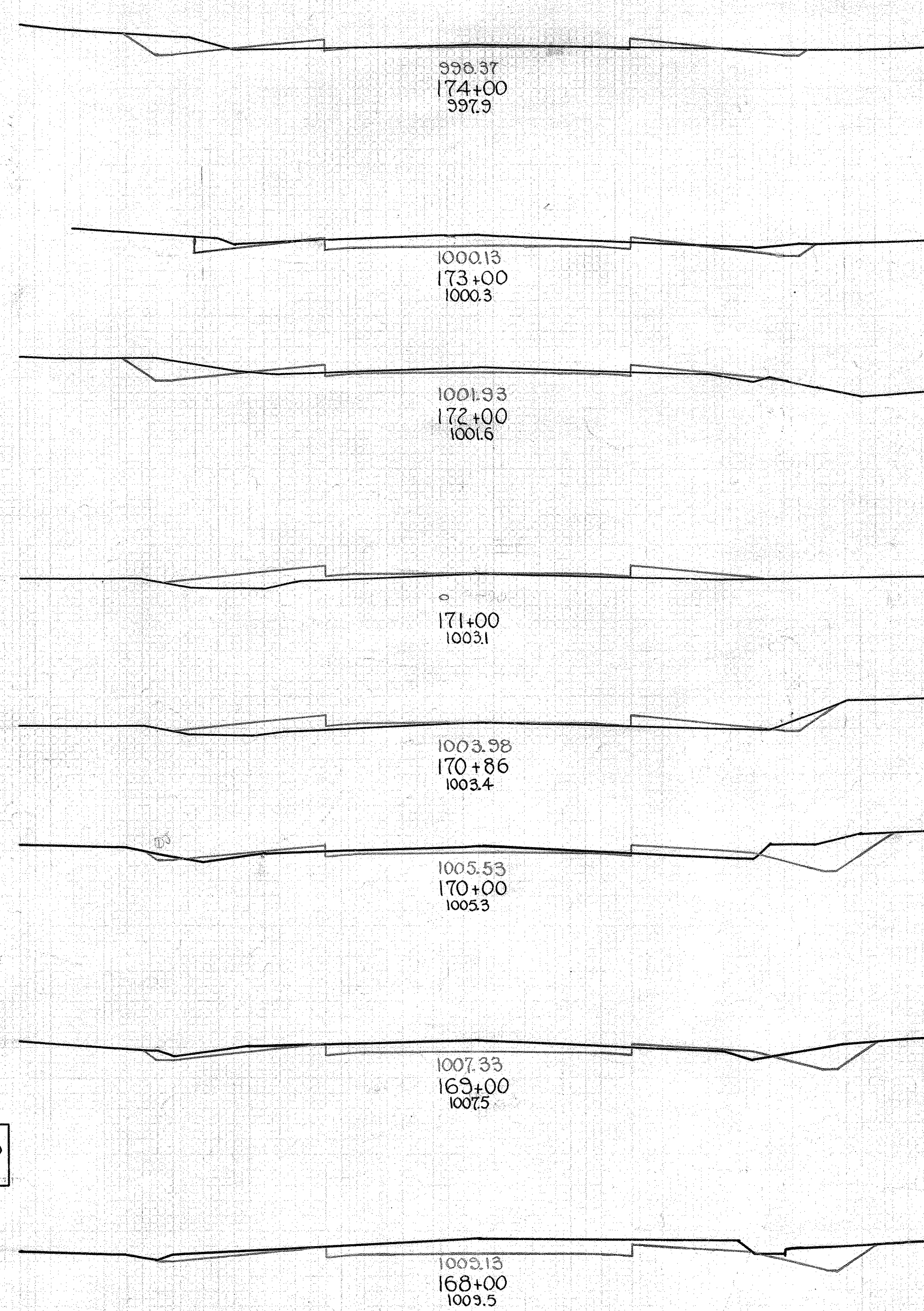
▲ +56



END AREA		QUANTITY	
CUT	FILL	EXC	EMB
6	3	15	50
		39	7
15	3	52	9
13	4	24	41
		18	9
2	16	31	35
		18	6
		72	15
21	2		
		31	1
		69	3
33			

Excavation = 278 Cu.Yds.
Emb. + 20% = 347 "
Borrow = 69 "

▲ +69

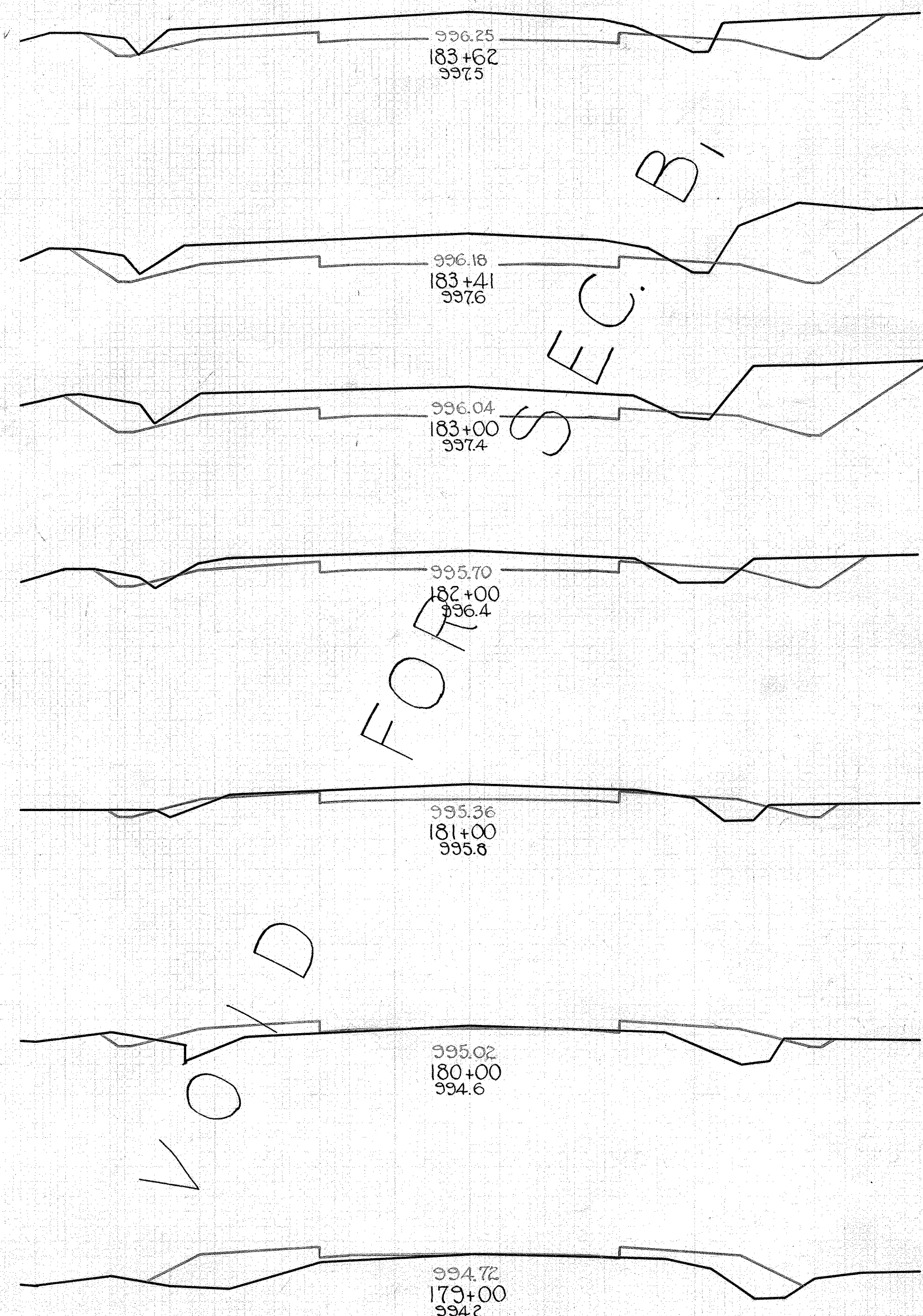


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		

S.H. 462 SEC. B,
FAIRFIELD COUNTY

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END AREA		QUANTITY	
CUT	FILL	EXC	EMB
		78	4
63	3		
		63	2
100	2		
		152	2
99	1		
		254	13
38	6		
		113	24
23	7		
		50	56
4	23		
		7	109
	36		



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR
10	OHIO		

S.H. 462 SEC. B,
FAIRFIELD COUNTY

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STA. 175+00 TO 175+73

**S.H. 462 SEC. B,
FAIRFIELD COUNTY**

CULVERT DATA

Type - Std. Slab Top Cul. - Dr. No. 5C-A
 Size - 8'-8 1/2" x 5' x 14'-7 1/2" & 7'-5" x 49"
 Work Req'd - Extend present culvert
 on left, place new superstructure on pres. abuts. after removing
 pres. superstructure wing on right; pave entire culvert.

EST. QUANTITIES

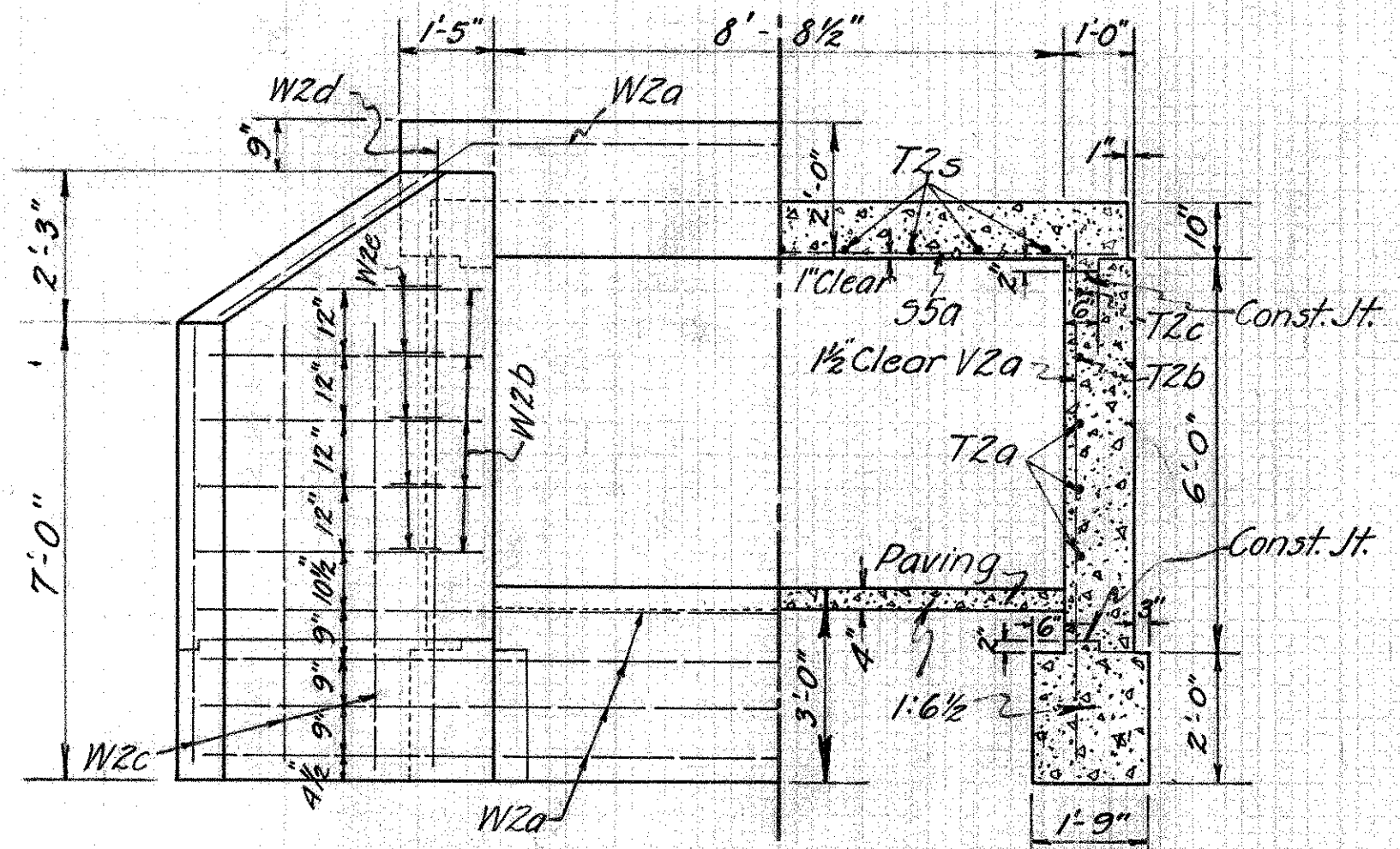
Excav.	25	Cu. Yds.
Conc. - 1-5 1/2"	28.0	Cu. Yds.
Conc. - 1-6 1/2"	7.6	Cu. Yds.
Reinf. Steel	2835	Lbs.
Dowel Holes 5/8"	6	Lin. Ft.
Remove Present Superstructure	Lump Sum	

Reference is made to Notes and placing of steel on Std. Drawing No. 5C-A.

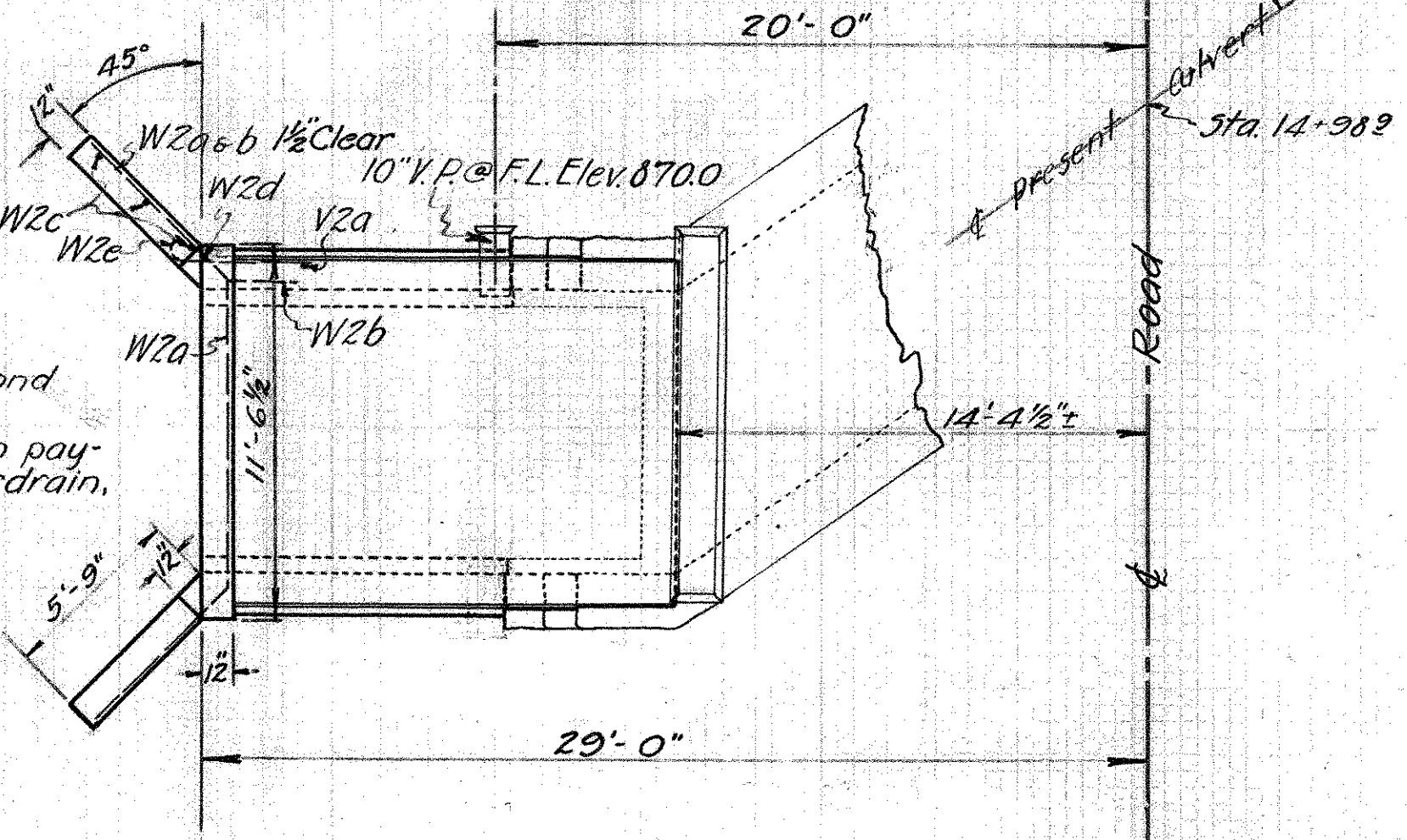
Entire culvert (present and extension) to be paved with 4" of 1-6 1/2" concrete.

All bars 1 1/2" clear from faces unless shown otherwise.

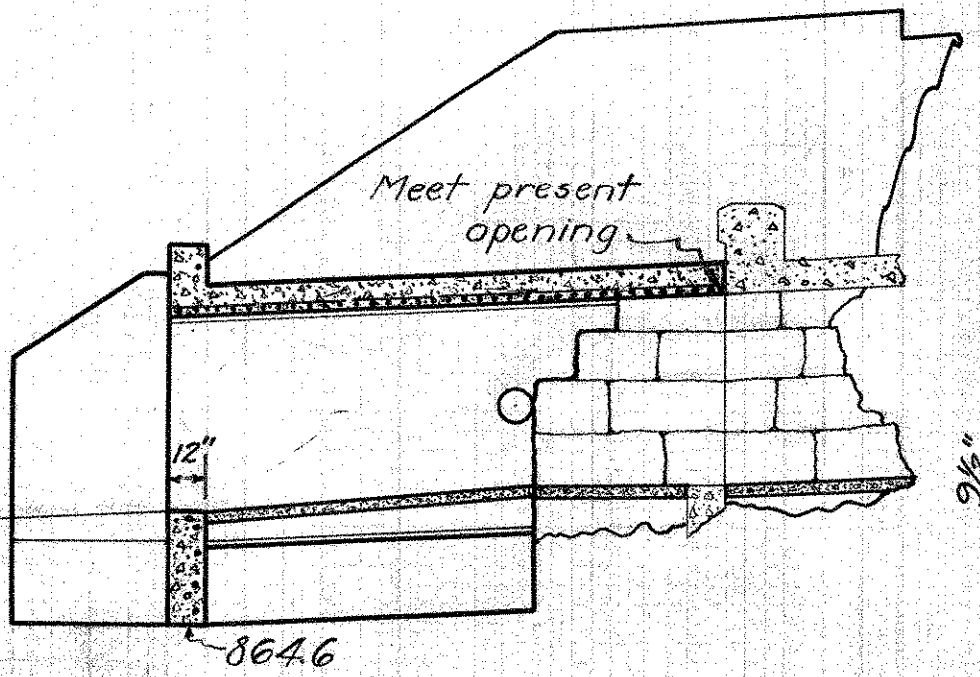
FOR DETAILS OF NEW SUPERSTRUCTURE AND CAP FOR WING OF PRESENT CULVERT SEE SHEET NO 48a.



HALF END VIEW
(OUTLET END)



PLAN



LONGITUDINAL SECTION

STEEL LIST

BAR	SIZE	NO.	LENGTH	SPACING	WEIGHT
W2a	1/2"	10	11'-9"	Shown	78
W2b	1/2"	10	8'-0"	Shown	53
W2c	1/2"	6	7'-0"	Shown	28
W2d	1/2"	2	9'-6"	Shown	13
W2e	1/2"	10	5'-0"	Shown	33
V2a	1/2"	24	8'-0"	12"	128
T2a	1/2"	6	9'-3"	12"	37
T2b	1/2"	2	10'-3"	12"	14
T2c	1/2"	2	11'-3"	12"	15
T2s	1/2"	9	14'-3"	12"	86
S5a	3/4"	37	10'-3"	4 1/2"	570
From Sheet 48a					1780
Total					2835

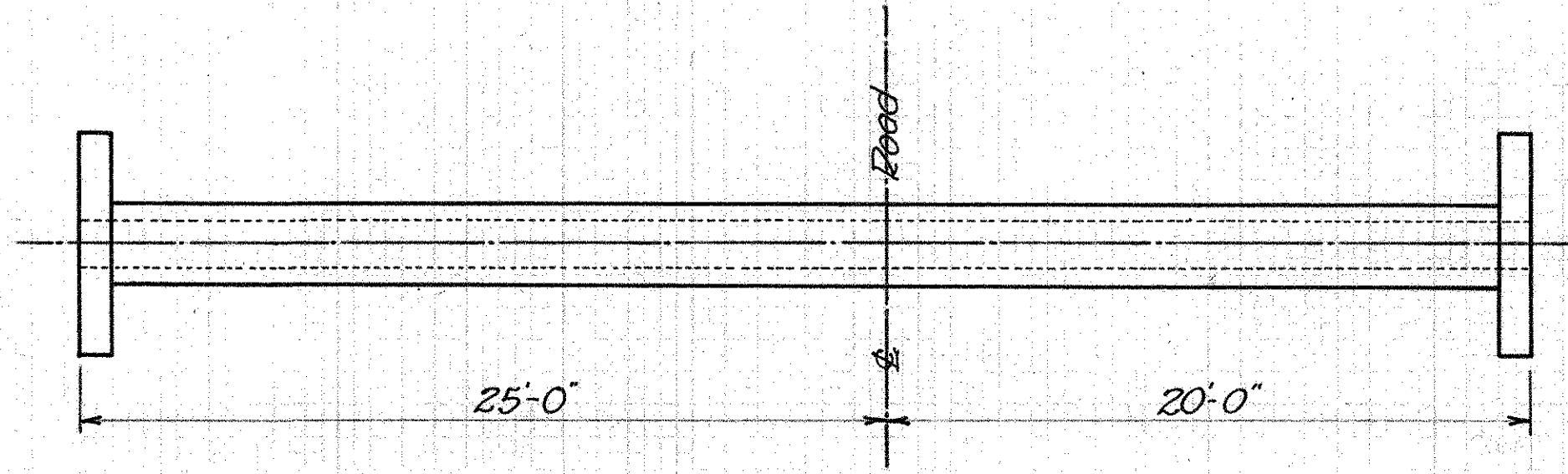
STA. 14+98.2

CULVERT DATA

Type - Std. Enc. V.P. - Dr. No. 300
 Size - 18" x 45"
 Work Required - Build new.

EST. QUANTITIES

Excav.	35	Cu. Yds.
Conc. - 1-5 1/2"	2.7	Cu. Yds.
Conc. - 1-8"	6.6	Cu. Yds.
Reinf. Steel	80	Lbs.
18" Vit. Pipe	45	Lin. Ft.



Excavation includes removal of parts of present 5x12x27 stone box with extension of 3-12" V.P. x 6'.

Drawn M.H.
 Traced G.W.P.
 Checked G.W.P.

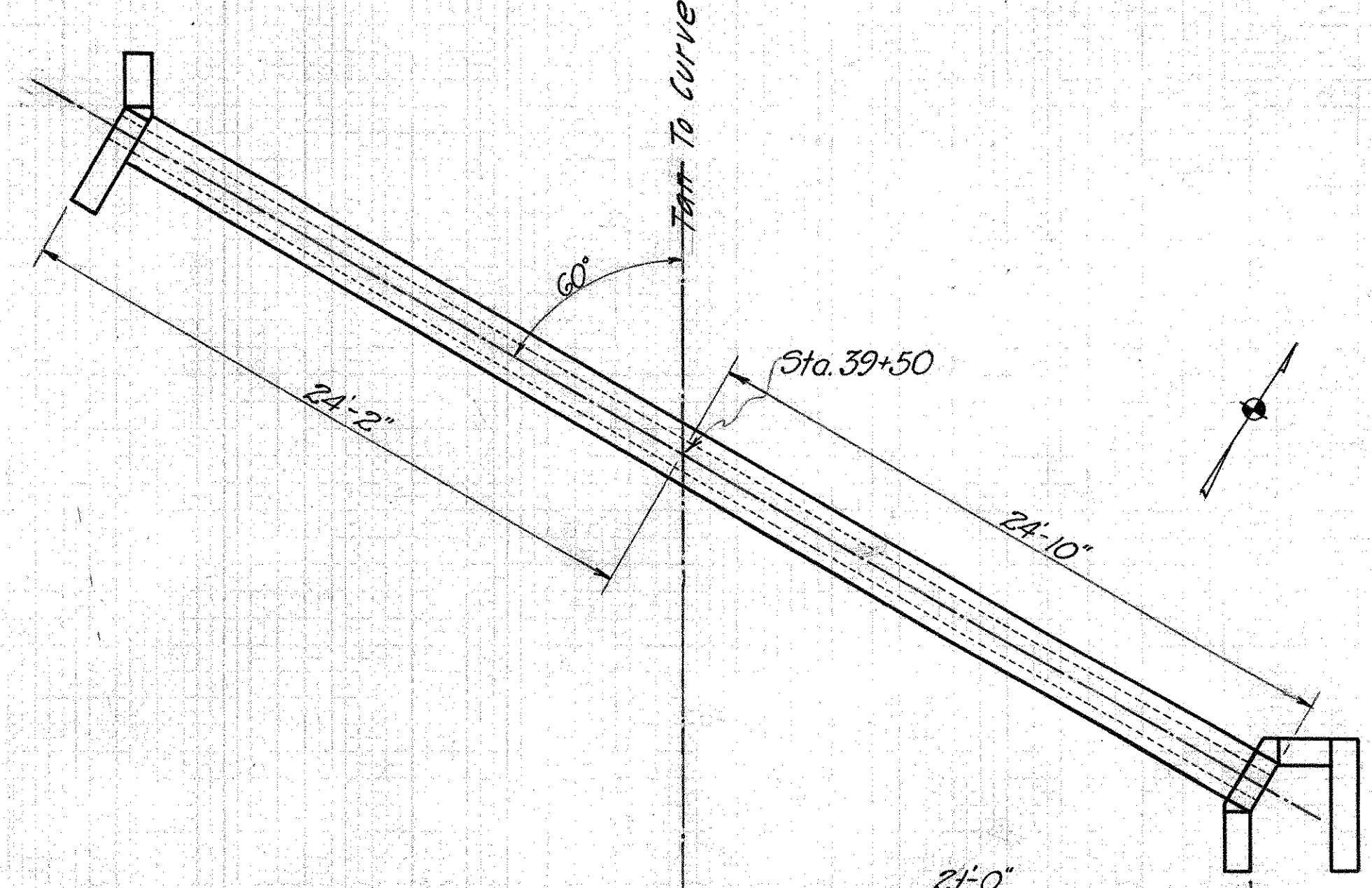
STA. 63+61

CULVERT DATA

Type - Std. Enc. V.P. - Hillside - Dr. No. 300
 Size - 12" x 49"
 Work Req'd - Build new.

EST. QUANTITIES

Excav.	15	Cu. Yds.
Conc. - 1-5 1/2"	2.7	Cu. Yds.
Conc. - 1-8"	5.1	Cu. Yds.
Reinf. Steel	40	Lbs.
12" Vit. Pipe	49	Lin. Ft.



Drawn M.H.
 Traced G.W.P.
 Checked G.W.P.

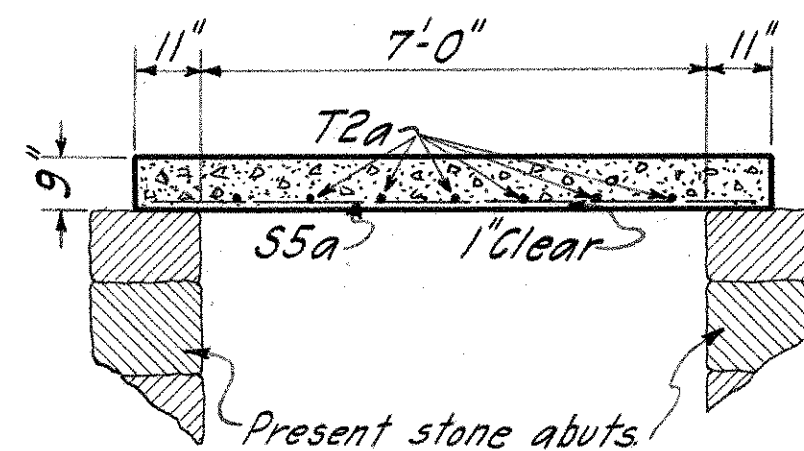
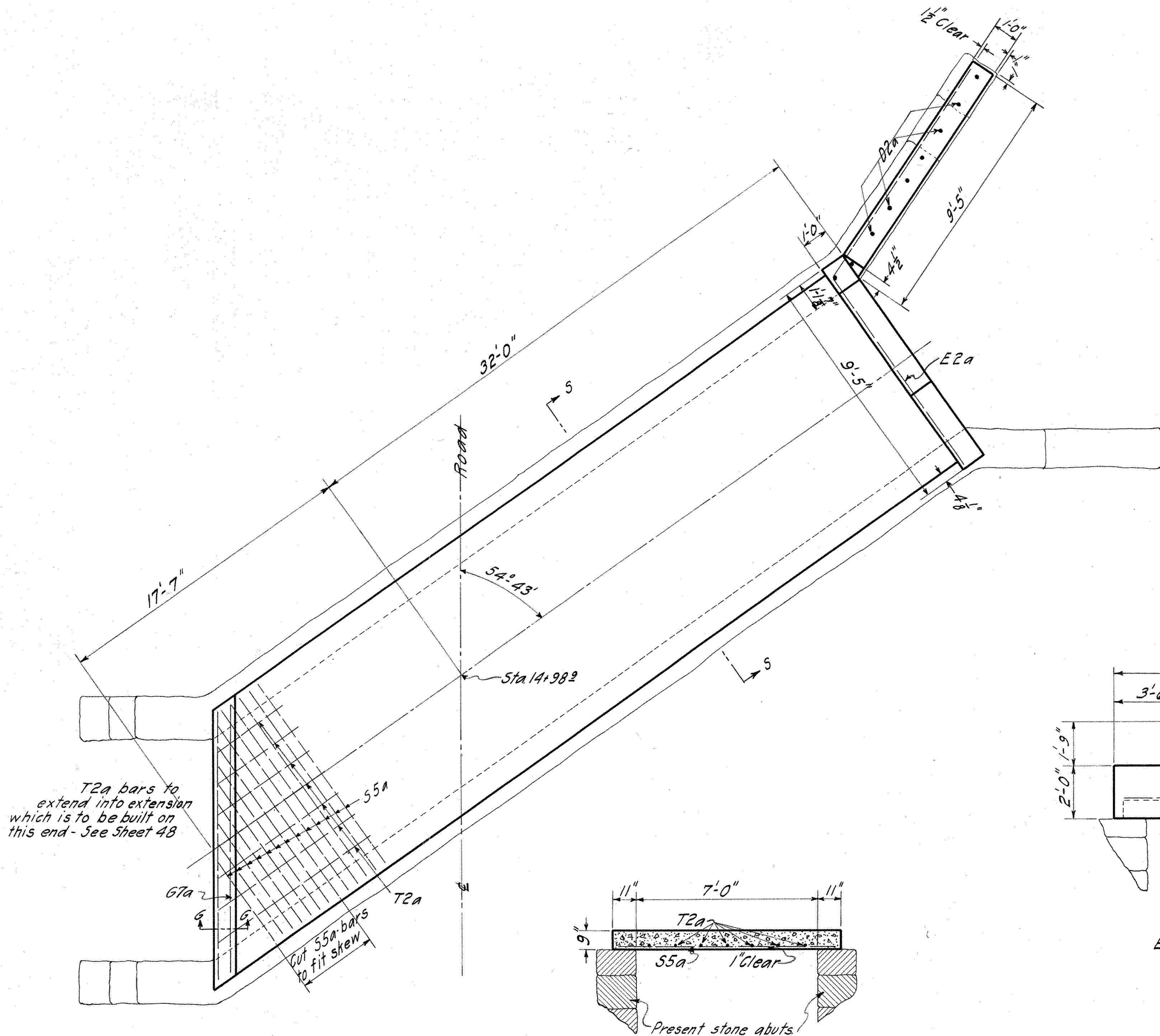
STA. 39+50

STEEL LIST					
MARK	NO.	SIZE	LENGTH	SPACING	WEIGHT
S5a	113	3/4" Ø	8'-6"	5 1/2" c.c.	1443
G7a	2	1" Ø	10'-3"	5" c.c.	55
T2a	7	1/2" Ø	51'-6"	12" c.c.	241
E2a	2	1/2" Ø	18'-0"	As shown	24
D2a	9	1/2" Ø	26'-0"	15"	17
			TOTAL		1780

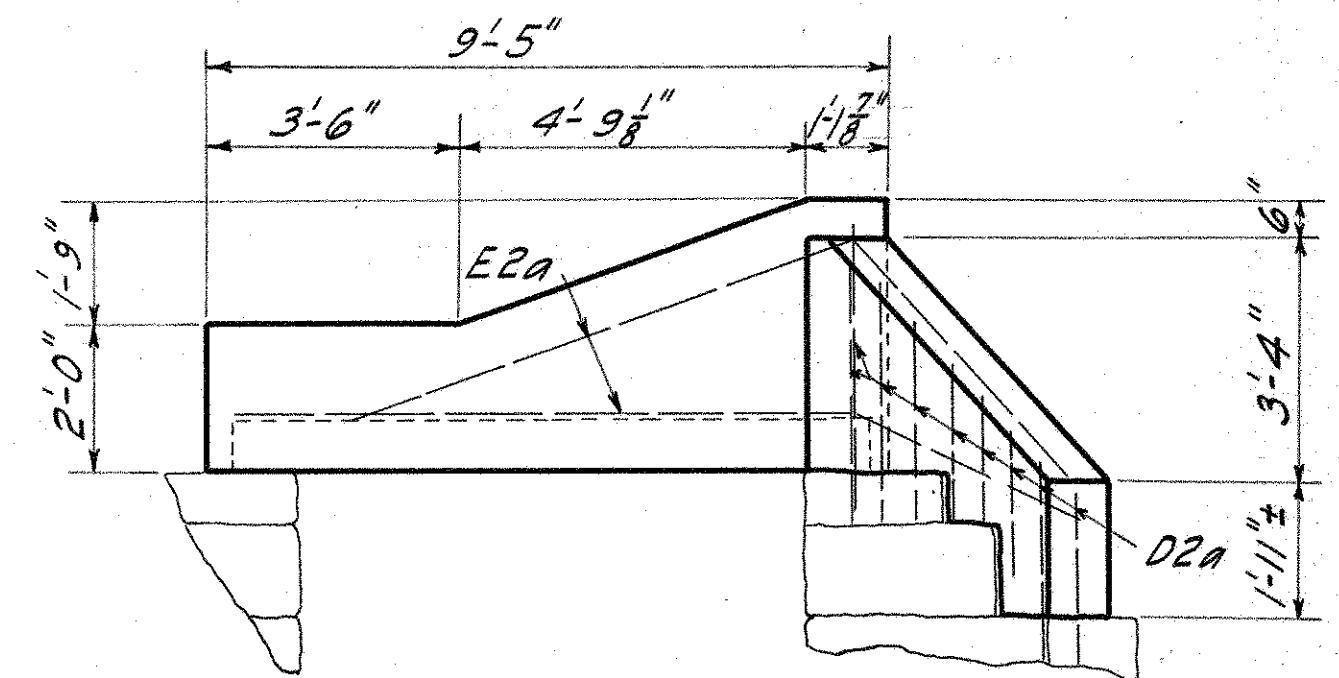
5/8" dowel holes to be drilled for D2a bars to a min. depth of 9".
D2a bars to be cut to fit in field.
REMOVAL of present structure includes removal of cone superstructure of present 7x5x49 1/2 culvert and necessary excavation.
CONCRETE MIX shall be 1:5 1/2.
EXPOSED EDGES shall have 3/4" bevel.
SPlicing of bars permitted only for T2a which shall have a minimum lap of 2'-0".
HDWLL shall be cast integrally with slab; wing cap may be cast integrally with or separately from hawl, as desired.

EST. QUANTITIES			
concrete 1:5 1/2	13.9	Cu. Yds.	
Reinf. Steel	1780	Lbs.	
Dowel Holes	6	Lin. ft.	
Remove Present Superstructure		Lump Sum	

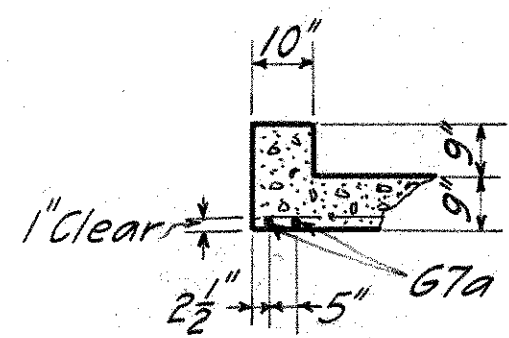
Note:- These quantities included in Est. Quantities for Structure #1 sheet 48.



SEC. S-S



END VIEW - INLET HDWLL



SEC. G-G

All work shown on this sheet supplement and are a part of Structure No. 1 on sheet 48 and should be performed prior to or at same time as the work shown thereon. Quantities on this sheet are carried to and contained in the quantities shown on sheet 48.

PART (1)

PLANS FOR SUPERSTRUCTURE
7x5x49 1/2 SLAB TOP CULVERT

STA. 14 + 98.2

S.H. 462 SEC.-B
FAIRFIELD COUNTY

DRAWN SLF	TRACED JLM	CHECKED JLM	REVIEWED
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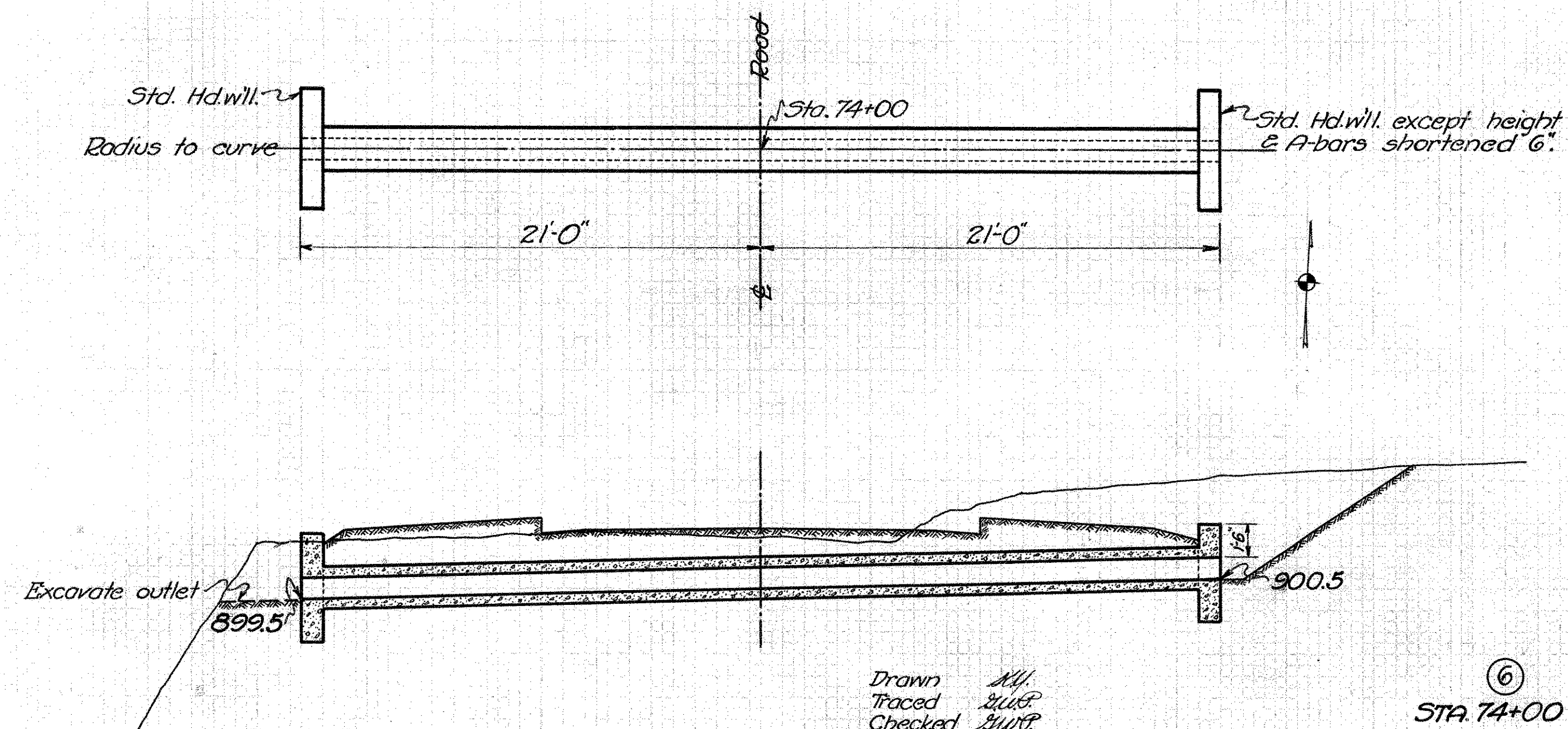
**S.H. 462 SEC. B,
FAIRFIELD COUNTY**

CULVERT DATA

Type - Std. Enc. V.P. - Dr. No. 300
Size - 12" x 42"
Work Req'd - Build new with special inlet hd.wll.

EST. QUANTITIES

Excav.	24. Cu.Yds.
Conc. 1-5½	1.9 Cu.Yds.
Conc. 1-8	4.3 Cu.Yds.
Reinf. Steel	64. Lbs.
12" Vit. Pipe	42. Lin.Ft.



⑥
STA 74+00

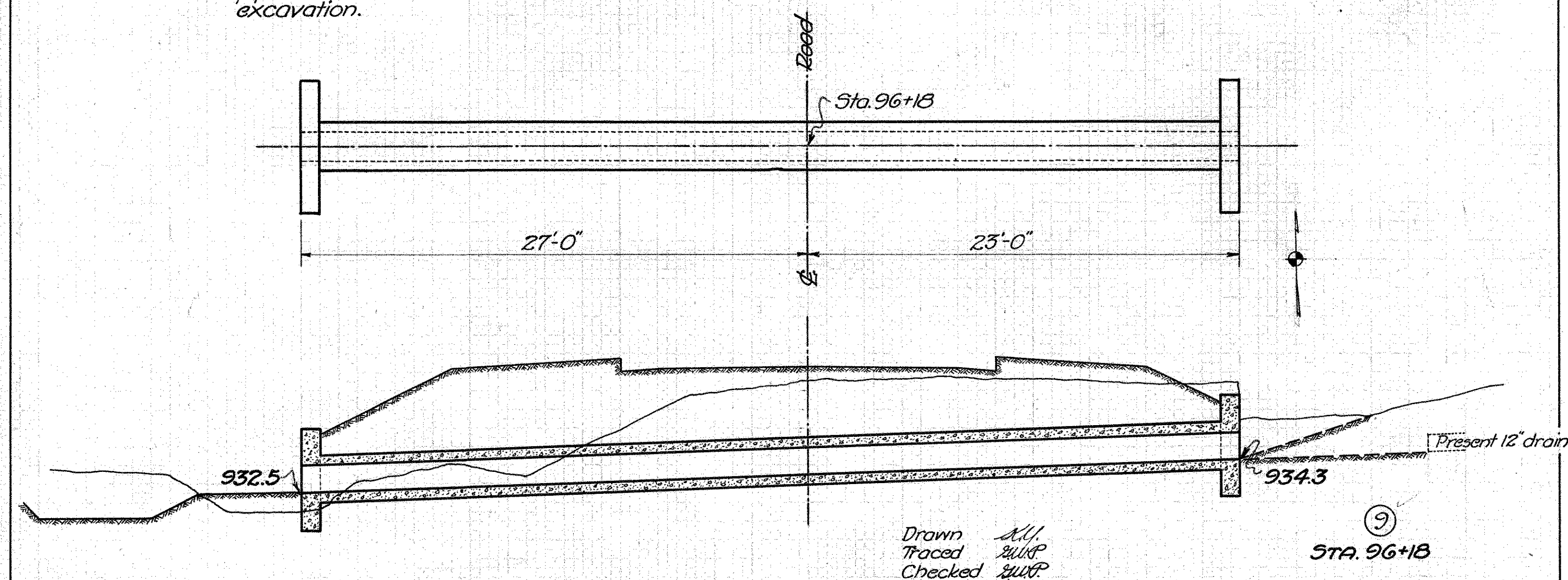
CULVERT DATA

Type - Std. Enc. V.P. - Dr. No. 300
Size - 18" x 50"
Work Req'd - Remove present 30"x36" boiler pipe; build new.

EST. QUANTITIES

Excav.	50. Cu.Yds.
Conc. 1-5½	2.7 Cu.Yds.
Conc. 1-8	7.4 Cu.Yds.
Reinf. Steel	80. Lbs.
18" Vit. Pipe	50. Lin.Ft.

Removal of present 30"x36" boiler pipe at Sta. 96+14 included in excavation.



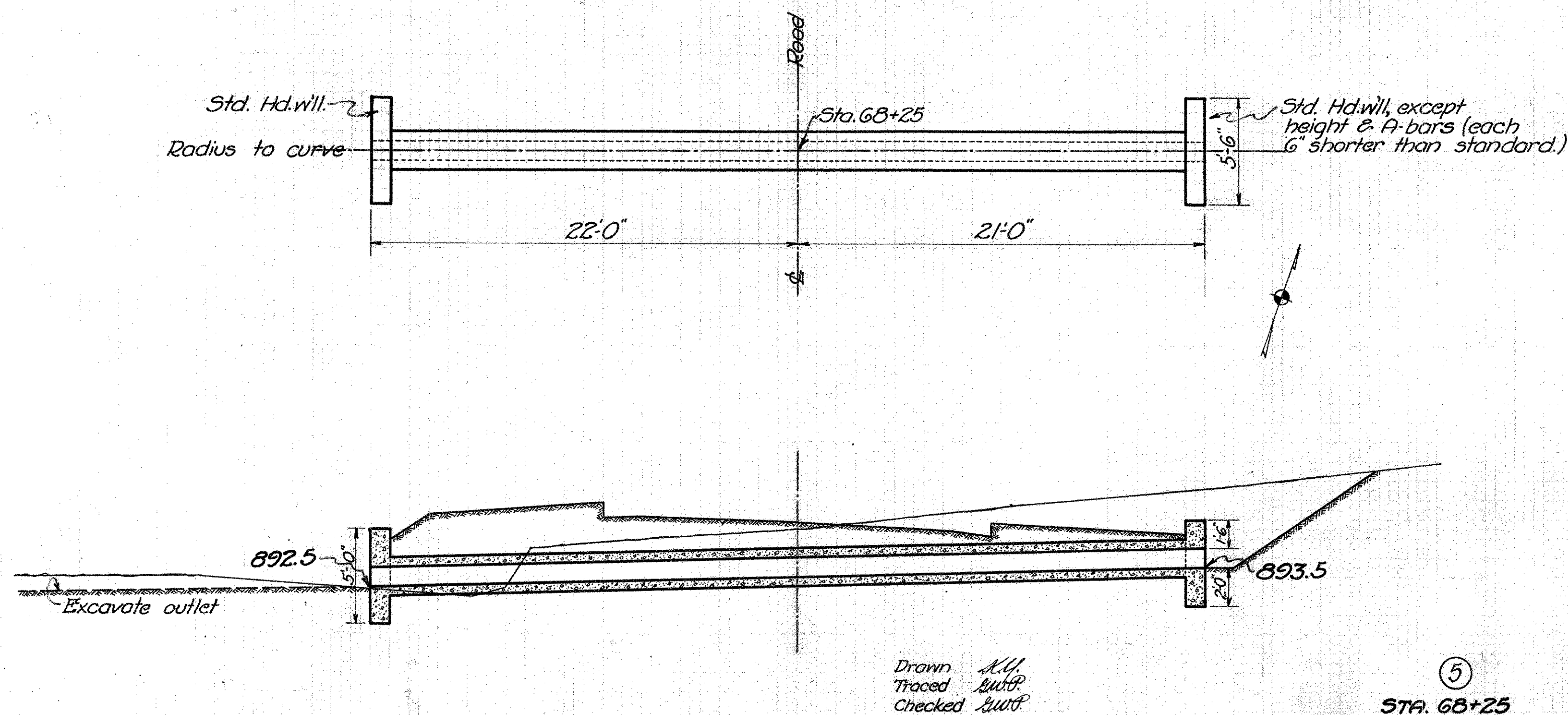
⑨
STA 96+18

CULVERT DATA

Type - Std. Enc. V.P. - Dr. No. 300
Size - 12" x 43"
Work Required: Build new with special inlet hd.wll.

EST. QUANTITIES

Excav.	17. Cu.Yds.
Conc. 1-5½	1.9 Cu.Yds.
Conc. 1-8	4.4 Cu.Yds.
Reinf. Steel	64. Lbs.
12" Vit. Pipe	43. Lin.Ft.



⑤
STA 68+25

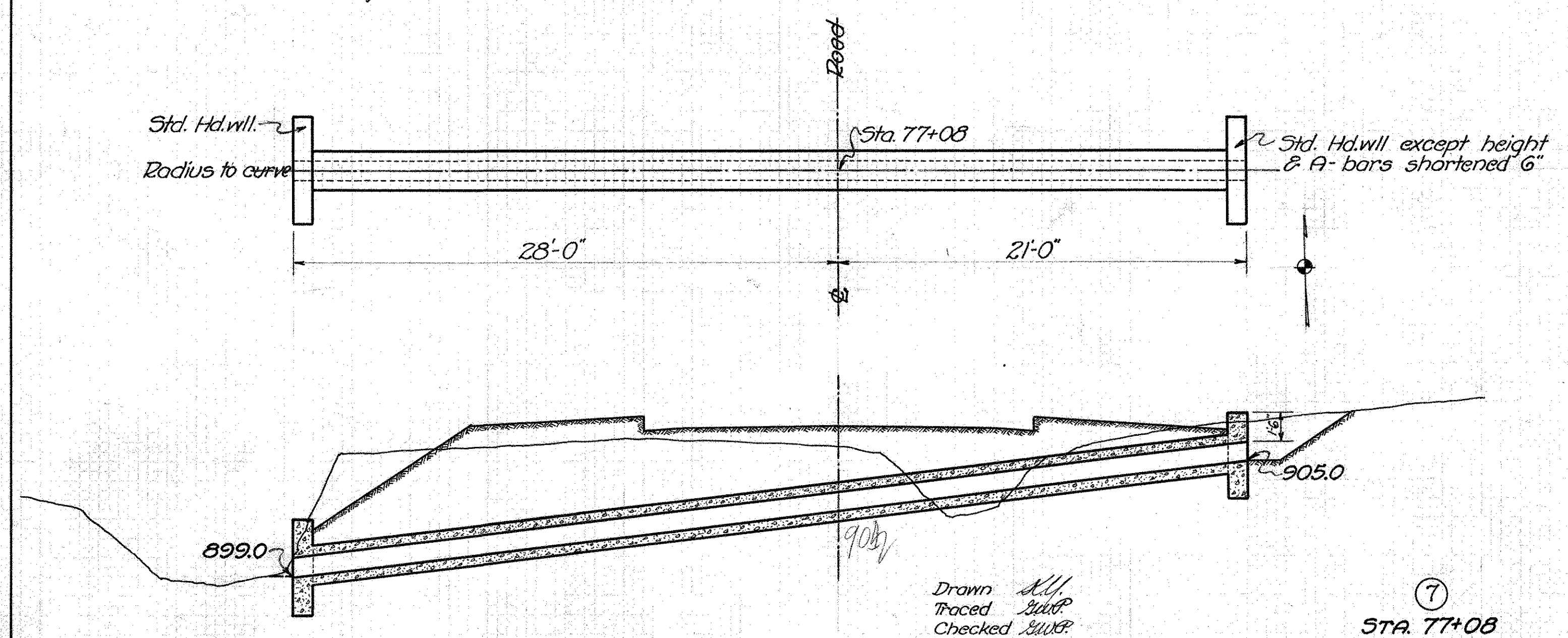
CULVERT DATA

Type - Std. Enc. V.P. - Dr. No. 300
Size - 12" x 49"
Work Req'd - Remove pres. 15"x26" V.P. with 19"x18"x4" stone box extension; build new with special inlet hd.wll.

EST. QUANTITIES

Excav.	43. Cu.Yds.
Conc. 1-5½	1.9 Cu.Yds.
Conc. 1-8	5.1 Cu.Yds.
Reinf. Steel	64. Lbs.
12" Vit. Pipe	49. Lin.Ft.

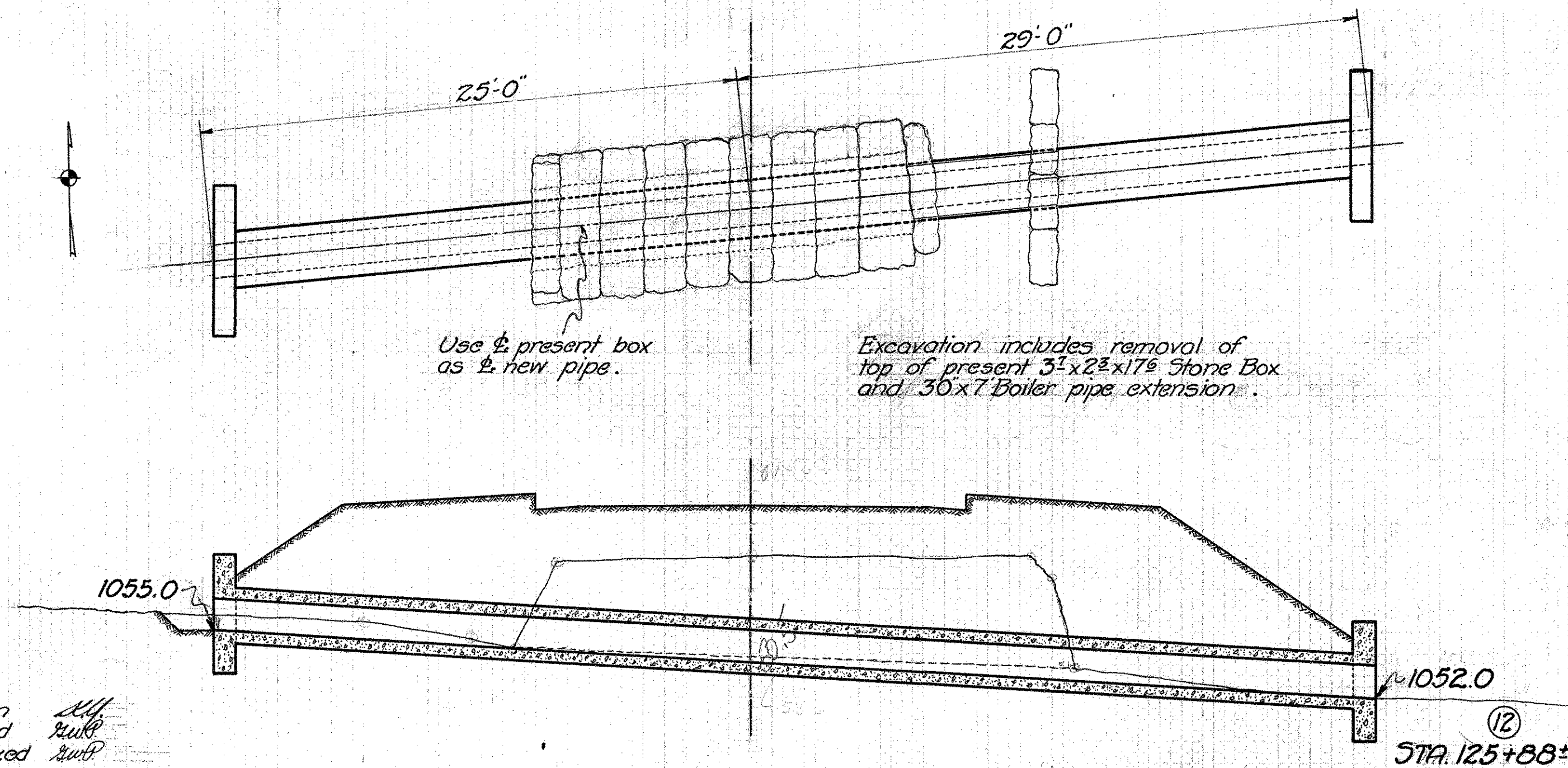
Removal of present 15"x26" V.P. with 19"x18"x4" stone box extension, at Sta. 77+11, included in excavation.



⑦
STA 77+08

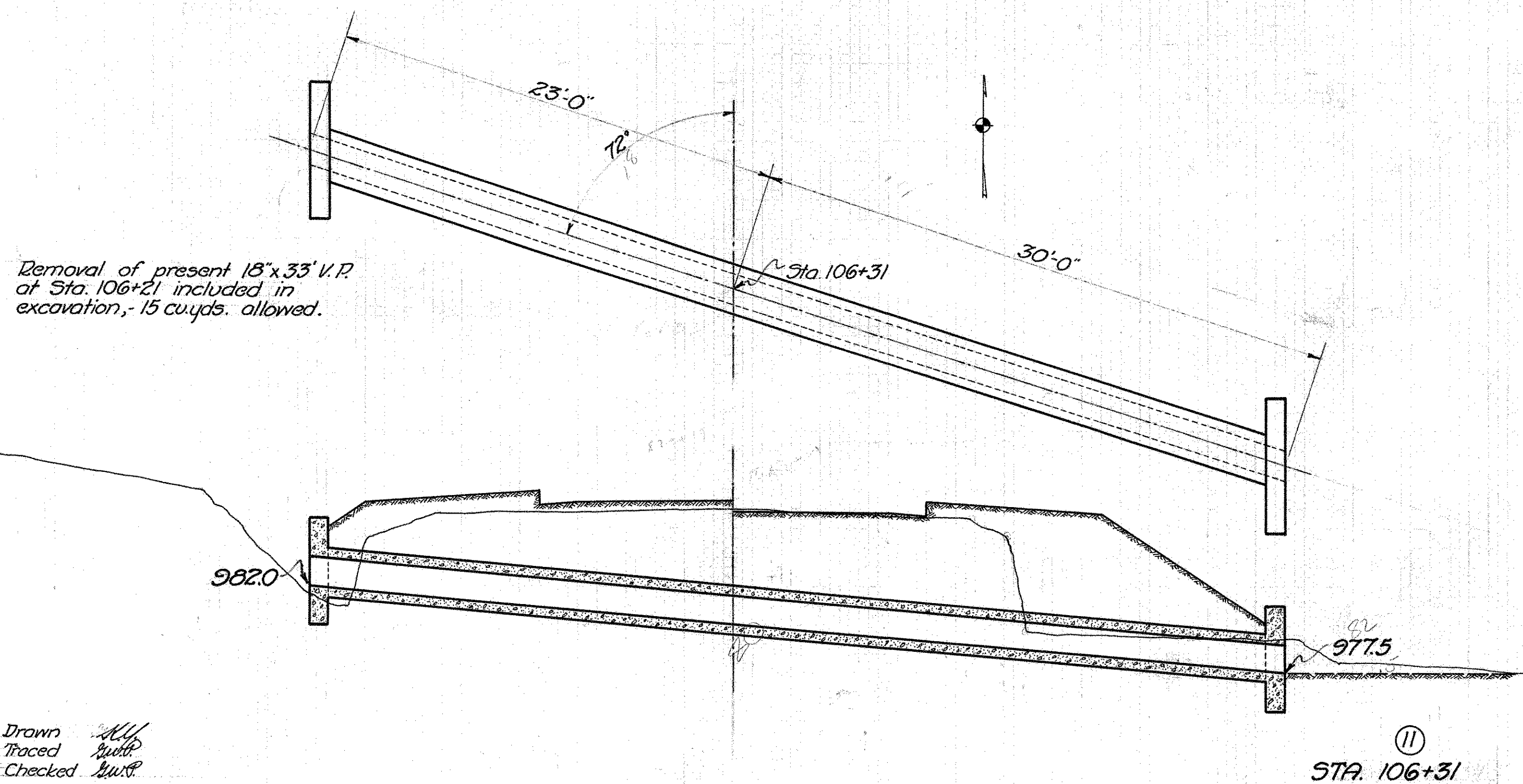
CULVERT DATA
 Type - Std. V.P. Enc. - Dr. No. 300
 Size - 18" x 54"
 Work Required - Build new.

EST. QUANTITIES
 Excav. 25. Cu.Yds.
 Conc. 1-5 2.7 Cu.Yds.
 Conc. 1-8 8.0 Cu.Yds.
 Reinf. Steel 80. Lbs.
 18" Vit. Pipe 54. Lin.Ft.



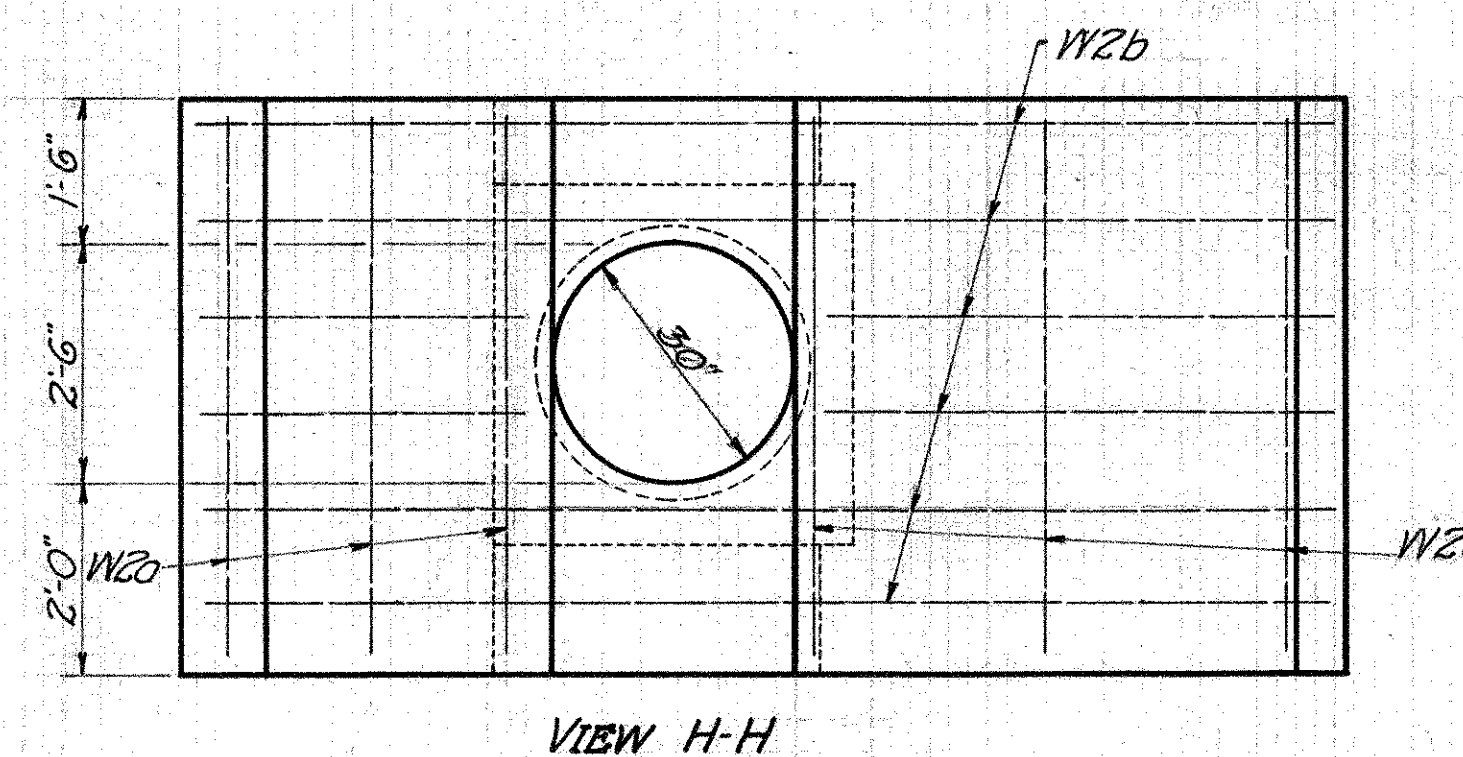
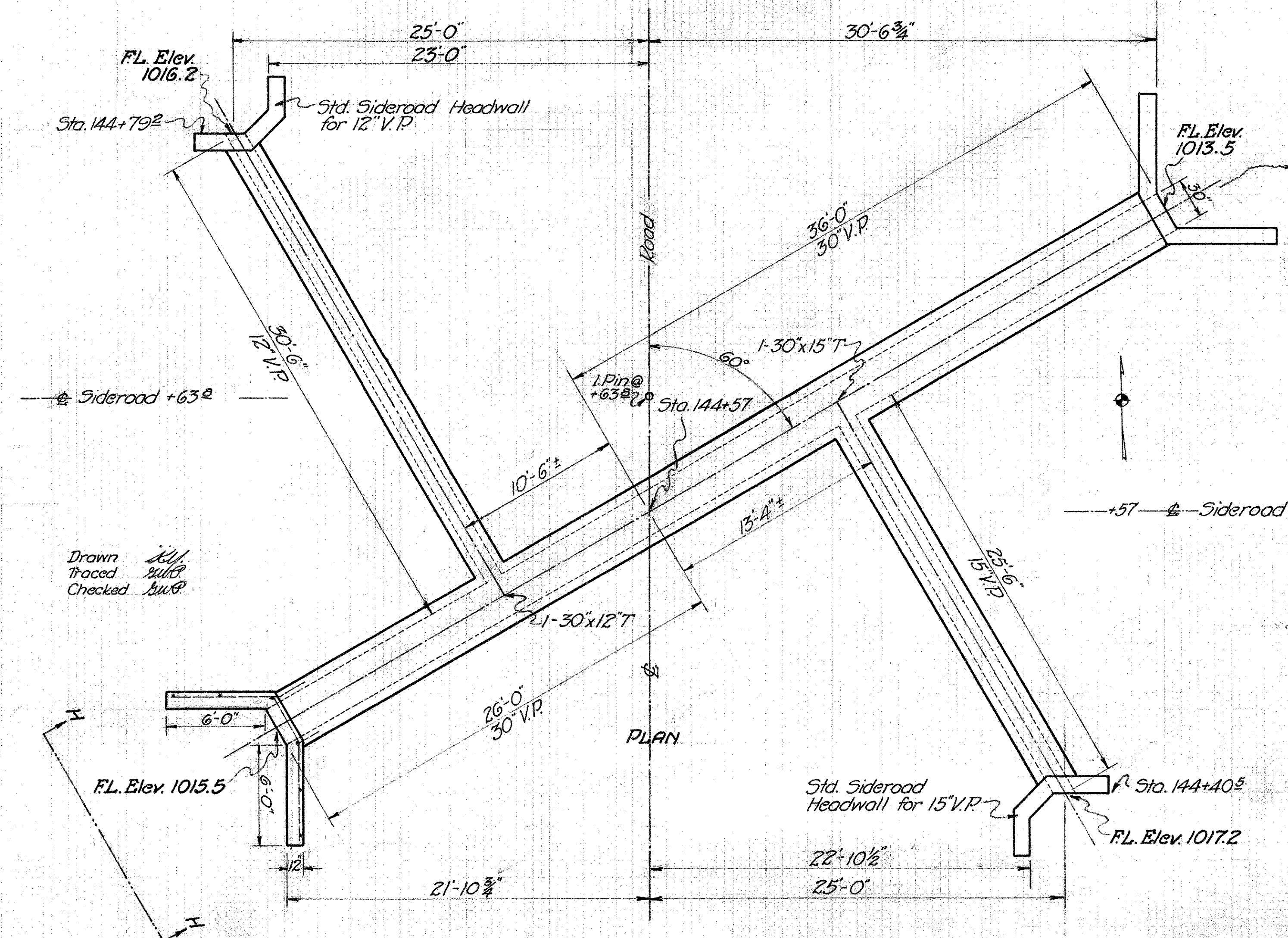
CULVERT DATA
 Type - Std. Enc. V.P. - Dr. No. 300
 Size - 18" x 53"
 Work Required - Remove present 18x53 V.P.; build new.

EST. QUANTITIES
 Excav. 55. Cu.Yds.
 Conc. 1-5 2.7 Cu.Yds.
 Conc. 1-8 7.8 Cu.Yds.
 Reinf. Steel 80. Lbs.
 18" Vit. Pipe 53. Lin.Ft.



CULVERT DATA
 Type - Special V.P. Enc. - Dr. No. 300
 Size - 30" x 62" with 12" x 30" & 15" x 25" spurs.
 Work Required - Remove present 48x39 & 48x28 Boiler pipes; build new.

EST. QUANTITIES
 Excav. 150. Cu.Yds.
 Conc. 1-5 2.1 Cu.Yds.
 Conc. 1-8 22.4 Cu.Yds.
 Reinf. Steel 229. Lbs.
 30" Vit. Pipe 57. Lin.Ft.
 12" Vit. Pipe 30. Lin.Ft.
 15" Vit. Pipe 25. Lin.Ft.
 30"x12" V.P.T. 1.
 30"x15" V.P.T. 1.



STEEL LIST

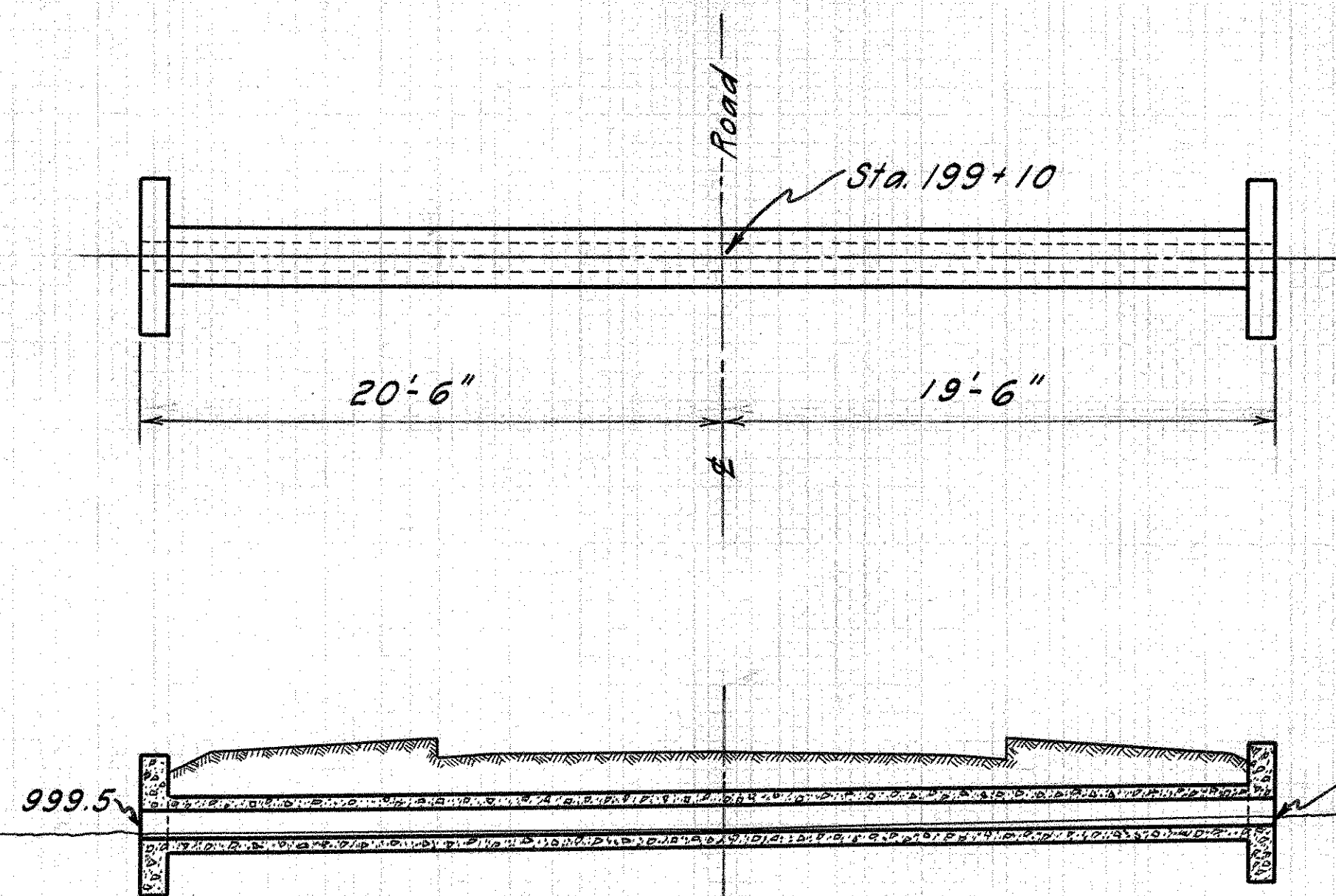
Bar	Size	No	Length	Weight	Location
W2a	1/2"	12	5'-6"	4.4	30" Hdwall
W2b	1/2"	12	15'-0"	120	30" Hdwall
A2a	1/2"	1	7'-0"	5	12" Hdwall
B2a	1/2"	1	8'-0"	5	12" Hdwall
C2a	1/2"	8	4'-0"	21	15" Hdwall
A2b	1/2"	1	7'-6"	5	15" Hdwall
B2b	1/2"	1	8'-6"	6	15" Hdwall
C2b	1/2"	8	4'-3"	23	15" Hdwall
TOTAL				229	

CULVERT DATA

Type - Std. V.P. Enc. Dr. No. 300
Size - 12" X 40"
Work Req'd. Build new

Est. Quantities

Excav. - 8 Cu. Yds.
Conc. 1:5½ 2.0 Cu. Yds.
Conc. 1:8 4.1 Cu. Yds.
Reinf. Steel 6.5 Lbs.
12" Vit. Pipe 40 Lin. Ft.



Drawn *ML*
Traced *W.D.W.*
Checked *SWP*

Sta. 199+10

VOID FOR SEC. B1

CULVERT DATA

Type - Std. V.P. Enc. Dr. No. 300
Size - 30" X 61"
Work Req'd. Remove top of present 28" X 2' X 30' stone box culvert; build new.

Est. Quantities

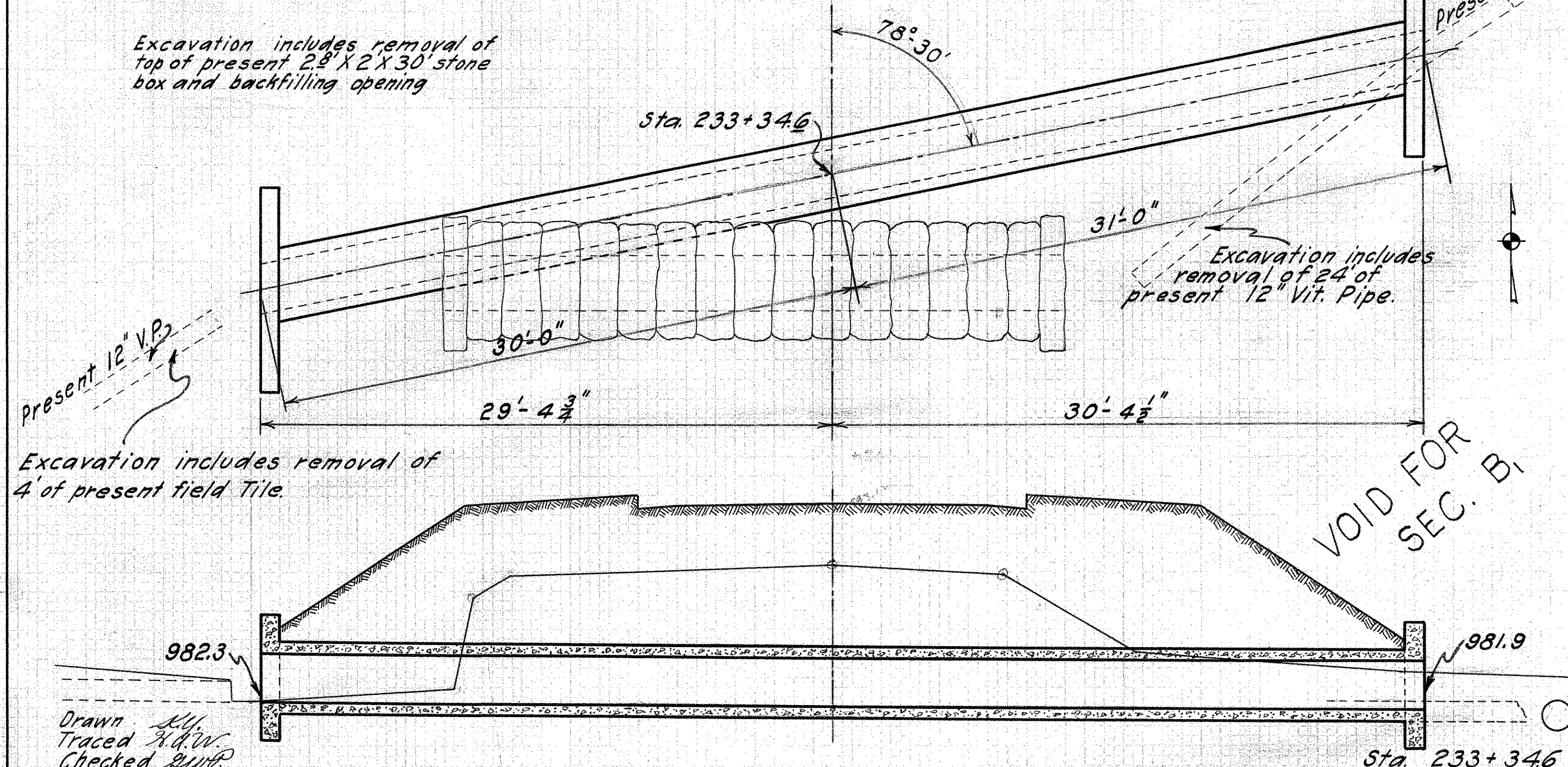
Excavation 100 Cu. Yds.
Conc. 1:5½ 4.6 Cu. Yds.
Conc. 1:8 15.8 Cu. Yds.
Reinf. Steel 125 Lbs.
30" Vit. Pipe 61 Lin. Ft.

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10	OHIO		

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Excavation includes removal of top of present 28" X 2' X 30' stone box and backfilling opening



Drawn *ML*
Traced *W.D.W.*
Checked *SWP*

Sta. 233+34.6

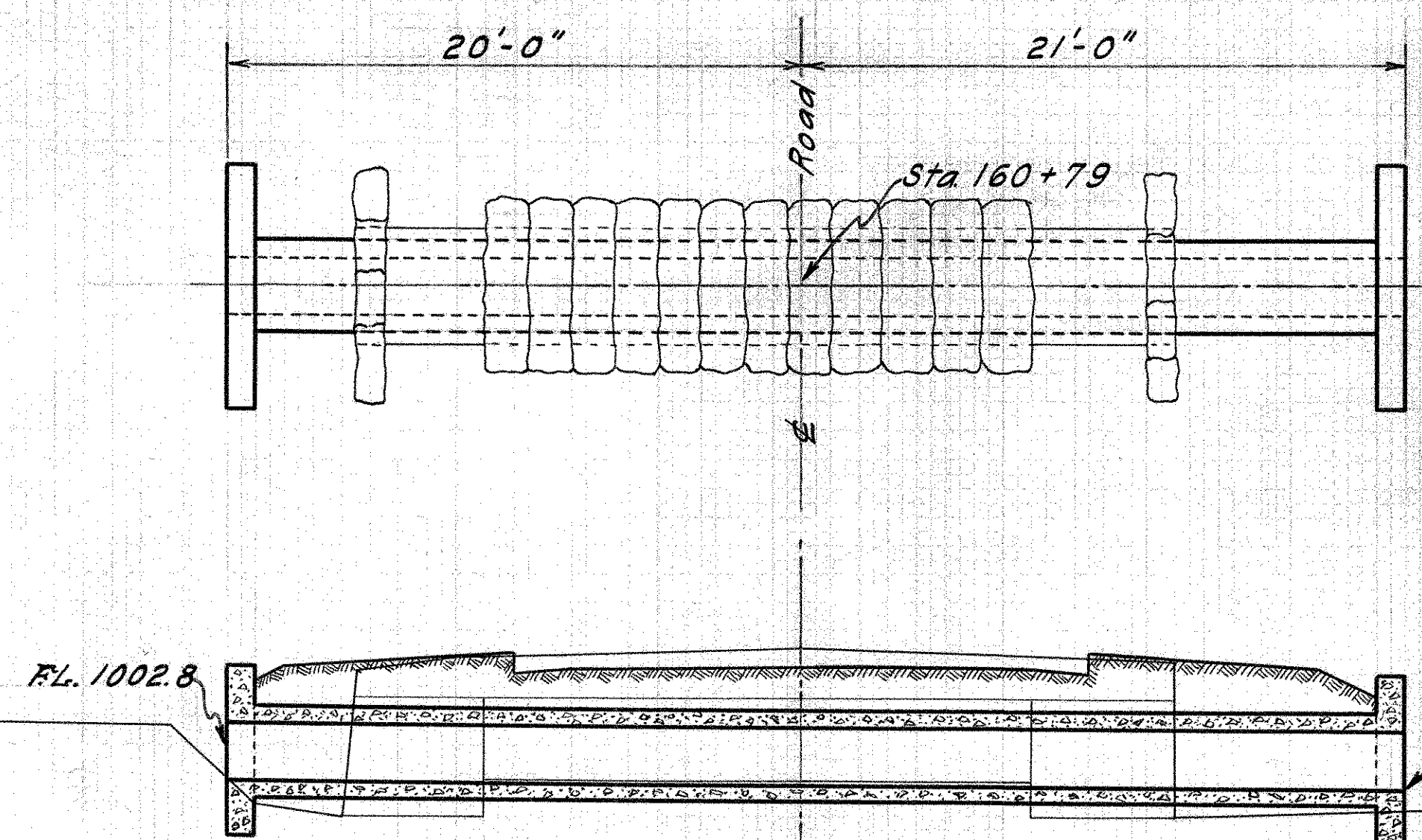
VOID FOR SEC. B1

CULVERT DATA

Type - Std. V.P. Enc. Dr. No. 300
Size - 24" X 41"
Work Req'd. Remove top of present 4' X 3' X 19' Stone box, and 2-50' X 4.8' Boiler pipe extensions; build new.

Est. Quantities

Excav. - 20 Cu. Yds.
Conc. 1:5½ 3.5 Cu. Yds.
Conc. 1:8 8.0 Cu. Yds.
Reinf. Steel 105 Lbs.
24" Vit. Pipe 41 Lin. Ft.



Drawn *ML*
Traced *W.D.W.*
Checked *SWP*

Sta. 160+79

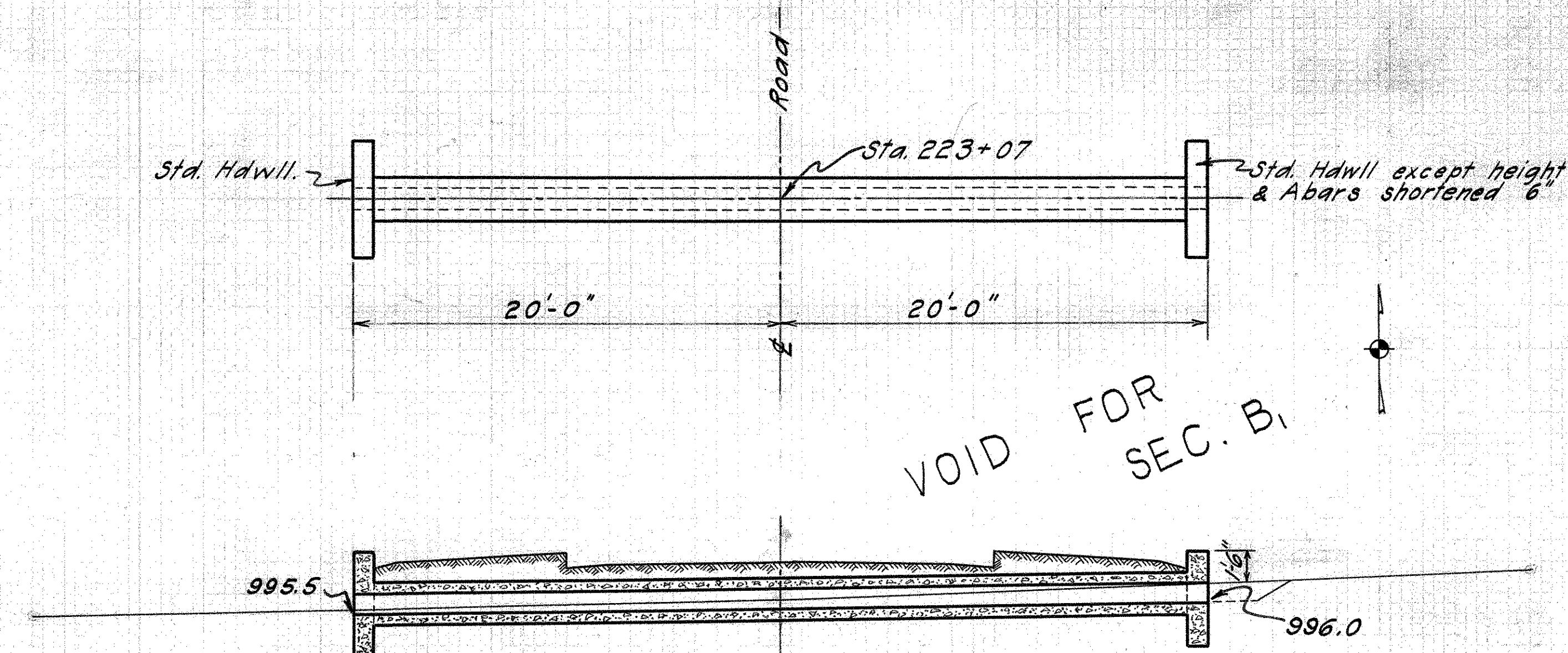
Excavation includes removal of Top of Present 4' X 3' X 19' Stone Box, and 2-50' X 4.8' Boiler Pipe extensions.

CULVERT DATA

Type - Std. V.P. Enc. Dr. No. 300
Size - 12" X 40"
Work Req'd. Build new with special inlet headwall

Est. Quantities

Exc. 10 Cu. Yds.
Conc. 1:5½ 1.9 Cu. Yds.
Conc. 1:8 4.1 Cu. Yds.
Reinf. Steel 64 Lbs.
12" Vit. Pipe 40 Lin. Ft.

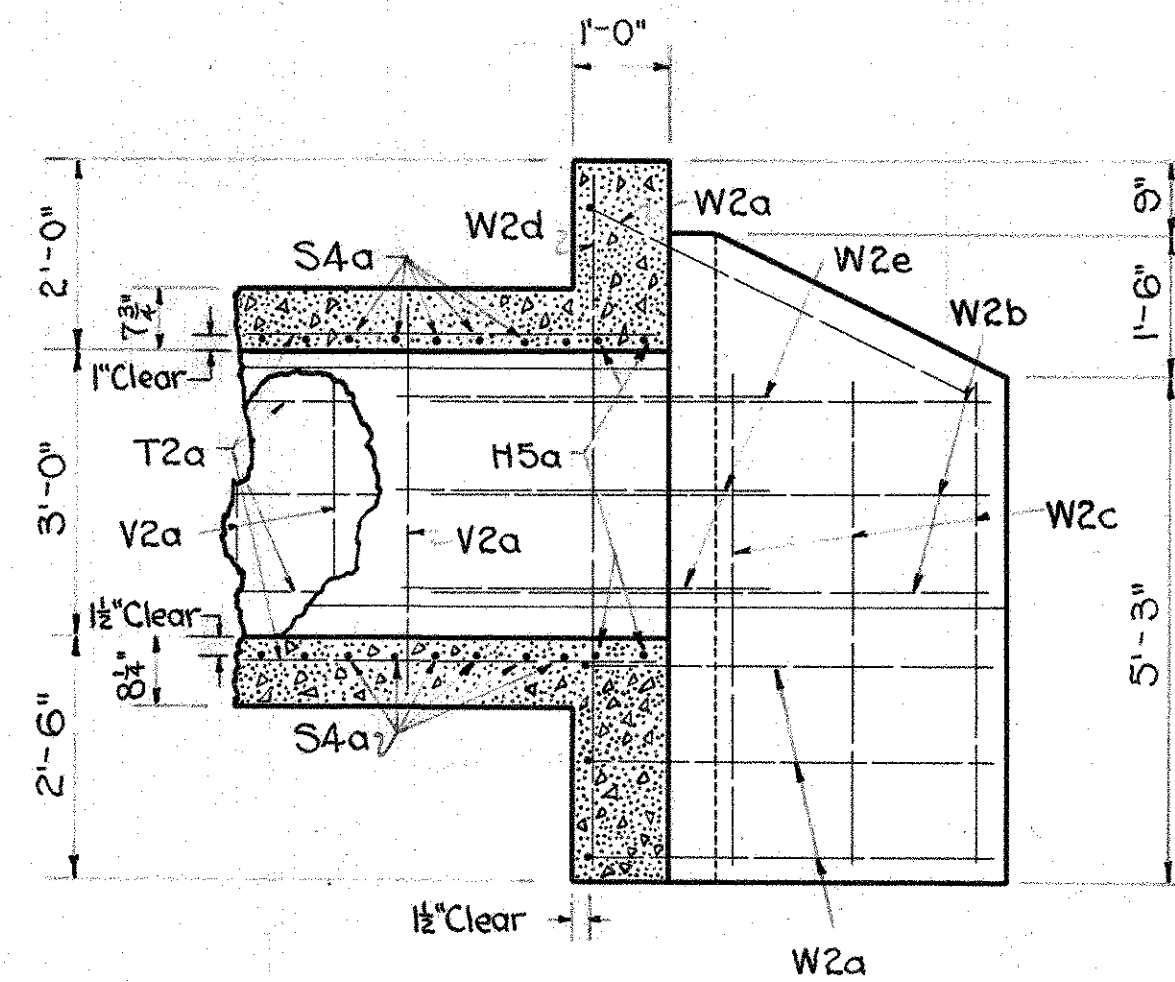


Drawn *ML*
Traced *W.D.W.*
Checked *SWP*

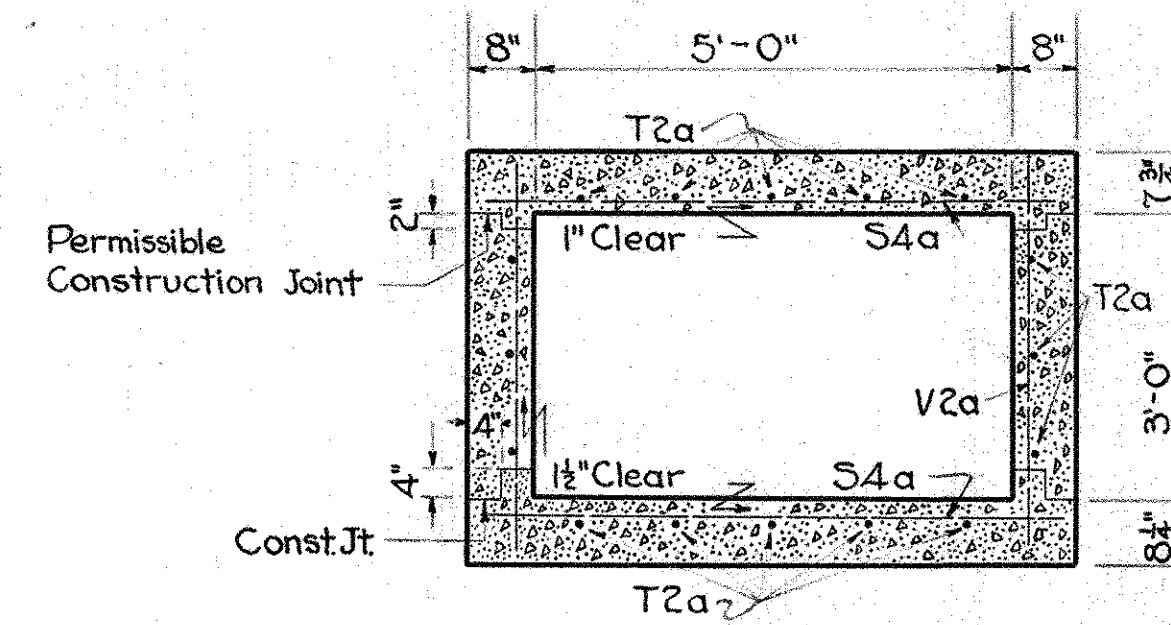
Sta. 223+07

VOID FOR SEC. B1

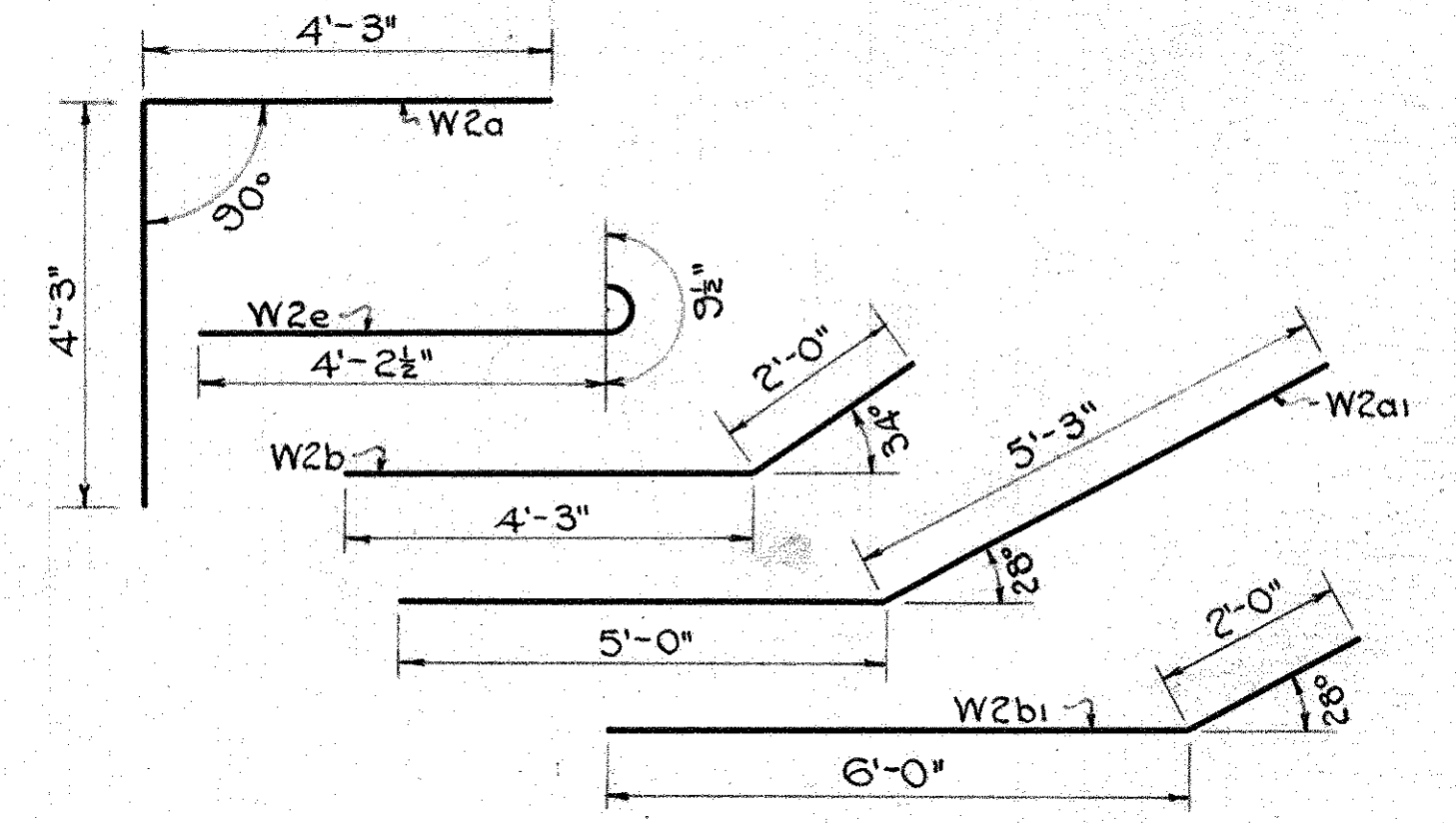
S. H. 462 SEC. B, FAIRFIELD COUNTY



SEC. H-H



Sec. B-B



- STEEL LIST -

MARK	No.	SIZE	LENGTH	SPACING	WEIGHT
W2a	8	1/2" #	8'-6"	12"	45lbs
W2a1	8	1/2" #	10'-3"	12"	55lbs
W2b	6	1/2" #	6'-3"	12"	25lbs
W2b1	6	1/2" #	8'-0"	12"	32lbs
W2c	6	1/2" #	5'-3"	15"	21lbs
W2c1	6	1/2" #	5'-3"	15"	23lbs
W2d	4	1/2" #	7'-0"	shown	19lbs
W2e	12	1/2" #	5'-0"	12"	40lbs
H5a	8	3/4" #	9'-3"	6"	111lbs
V2a	132	1/2" #	4'-1"	12"	360lbs
S4a	346	3/8" #	6'-1"	4 1/2"	2194lbs
T2a	16	1/2" #	6'-6"	12"	689lbs
Total =					3614lbs

CONSTRUCTION JOINTS will be permitted as indicated. They shall be very carefully made and shall be entirely free of laitance, dirt, shavings, sawdust, etc. Vertical joints in barrel are permissible but shall be provided with keys and the T2a bars shall be continuous through the joints. Headwalls and wings shall be cast integrally with end of barrel.

EXPOSED EDGES shall have 3/4" bevel.
SPLICING of bars permitted only for T2a which shall have a minimum lap of 2'-0".

CONCRETE MIX. shall be 1:5 1/2

- EST. QUANTITIES -

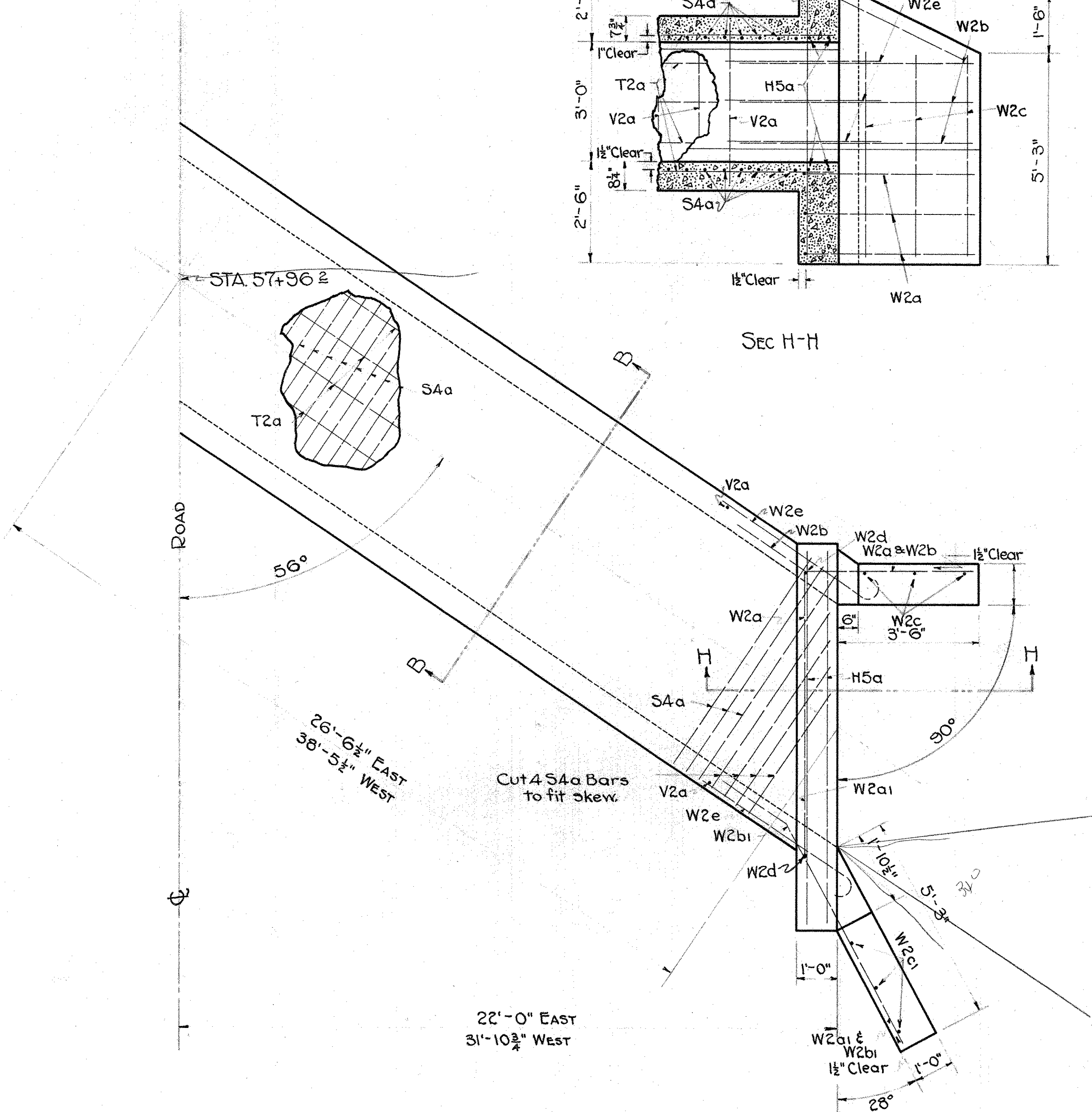
Excavation	146.0 cu. yds
Concrete 1:5 1/2	36.5 cu. yds
Reinf. Steel	3614 lbs.

③

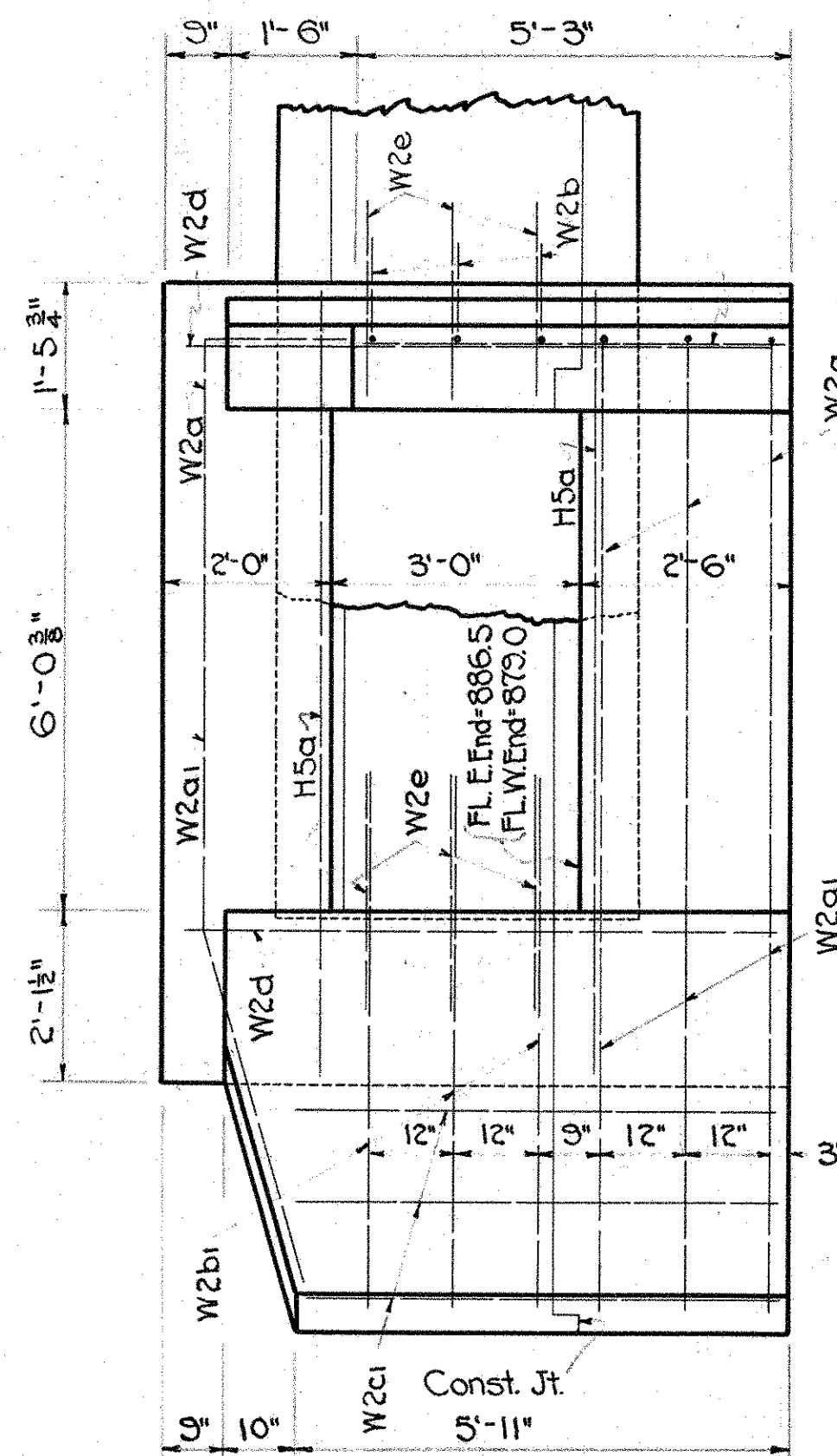
PLANS
STA. 57 + 96 1/2
5'x3'x65' BOX CULVERT.

S. H. 462 SEC. B.
FAIRFIELD COUNTY

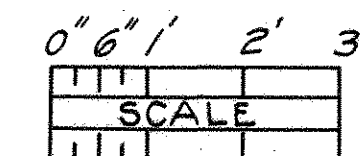
DRAWN *ML* TRACED *aca* CHECKED *hwp*



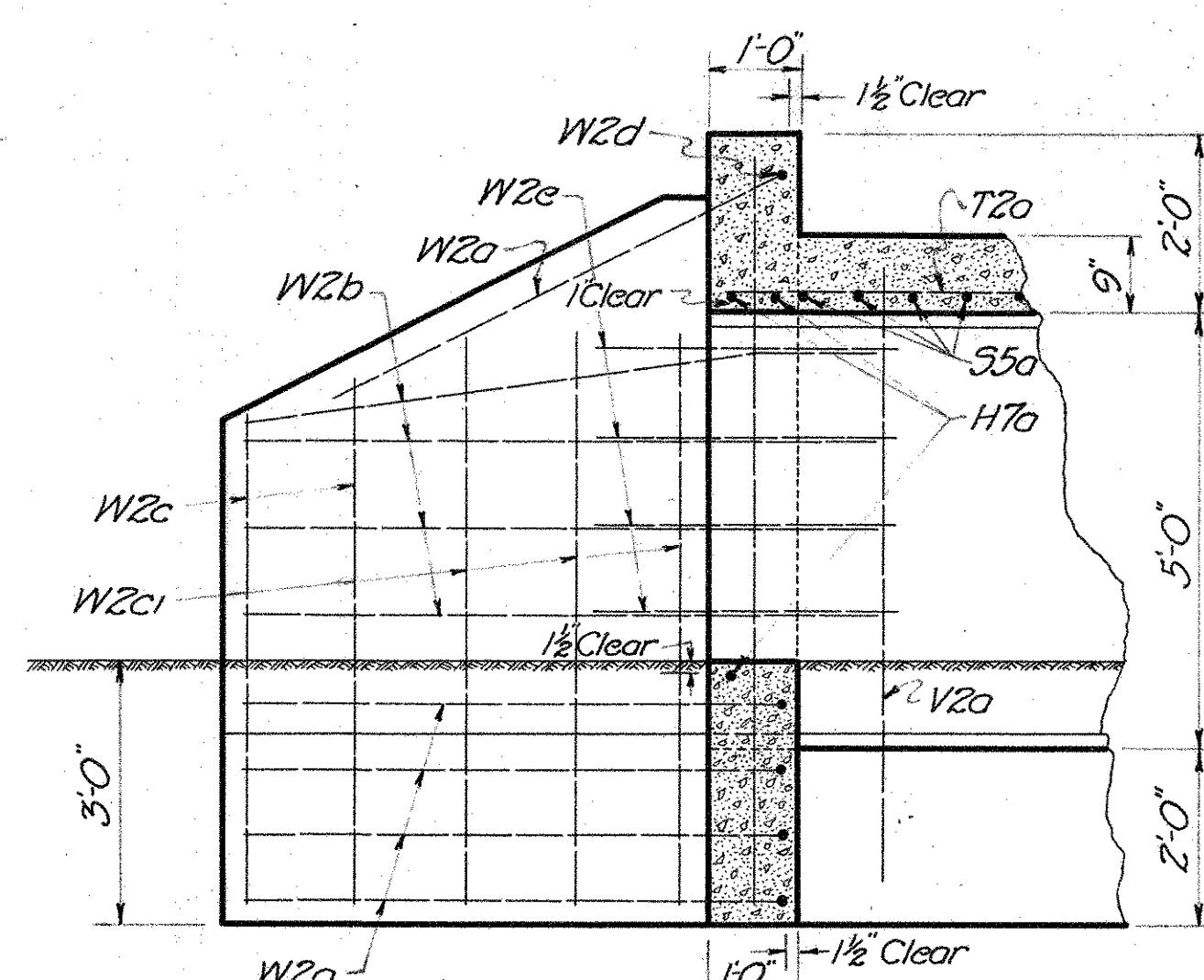
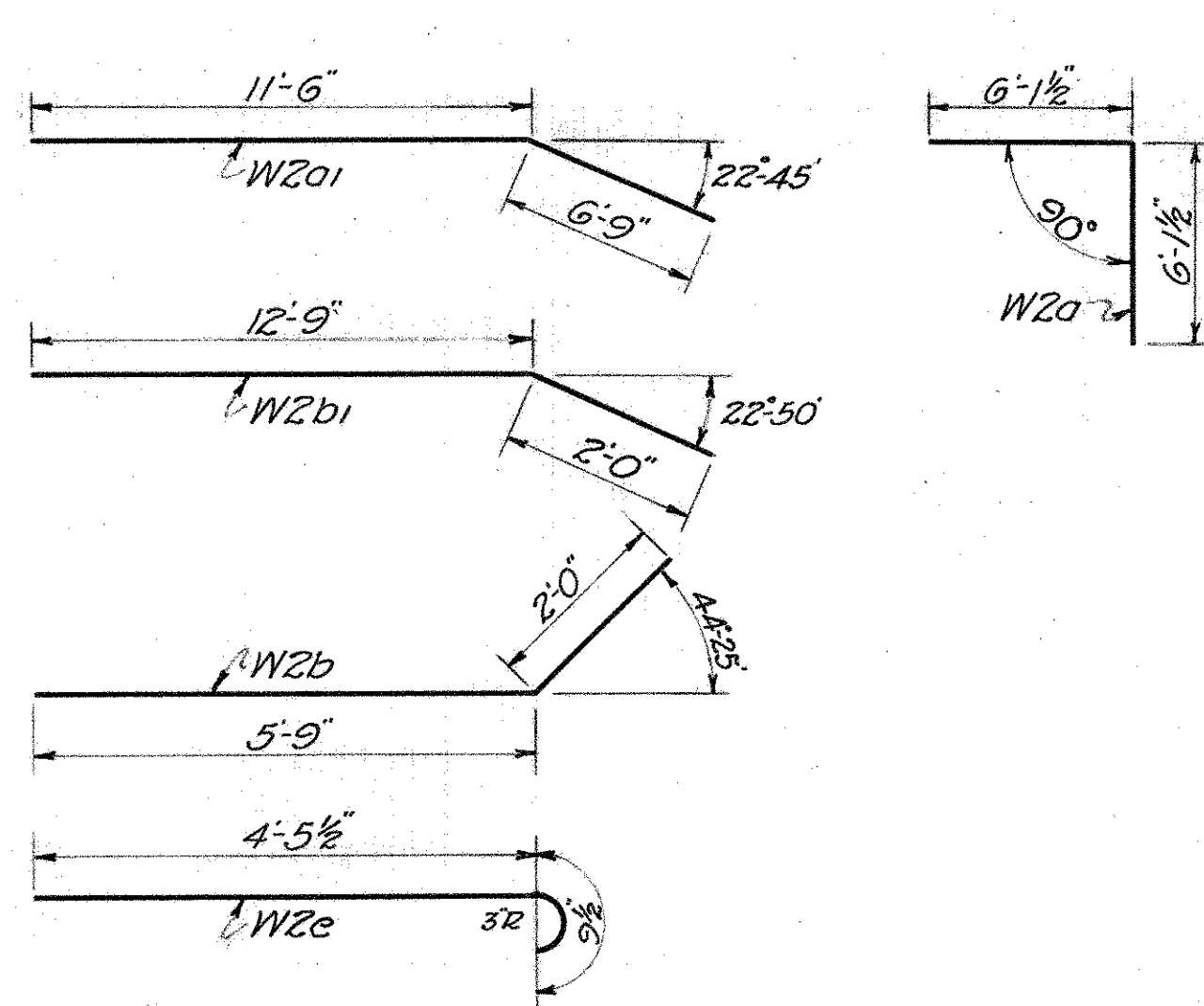
- HALF PLAN -



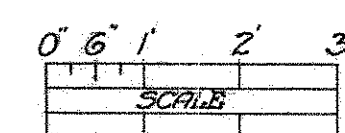
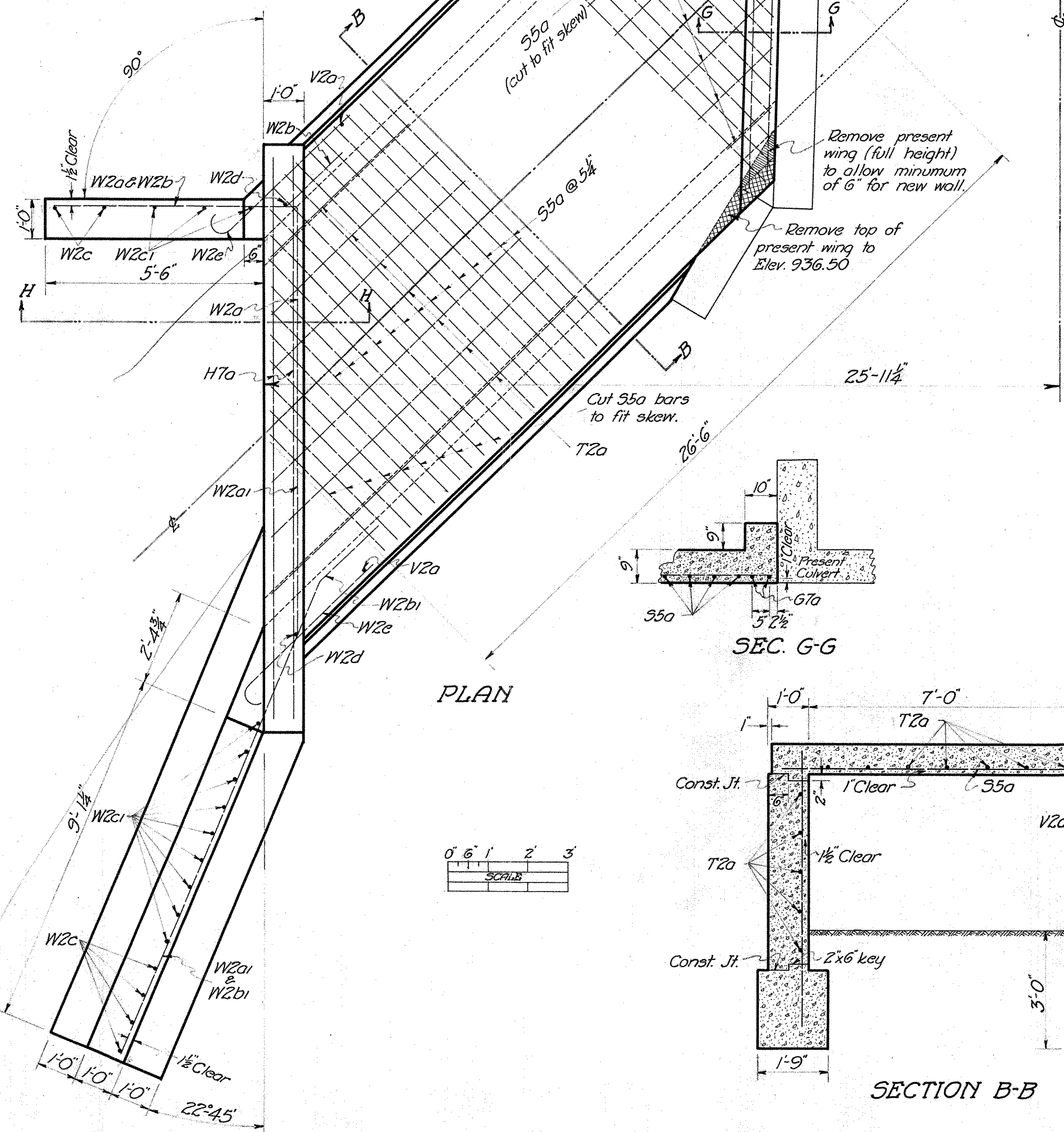
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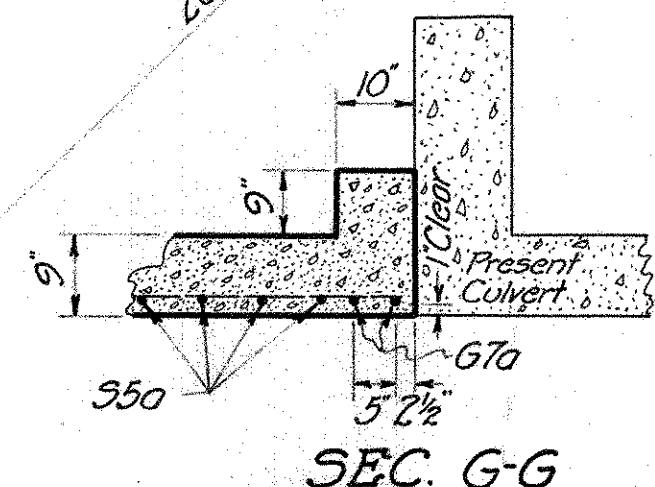
S.H.462 SEC. B,
FAIRFIELD COUNTY



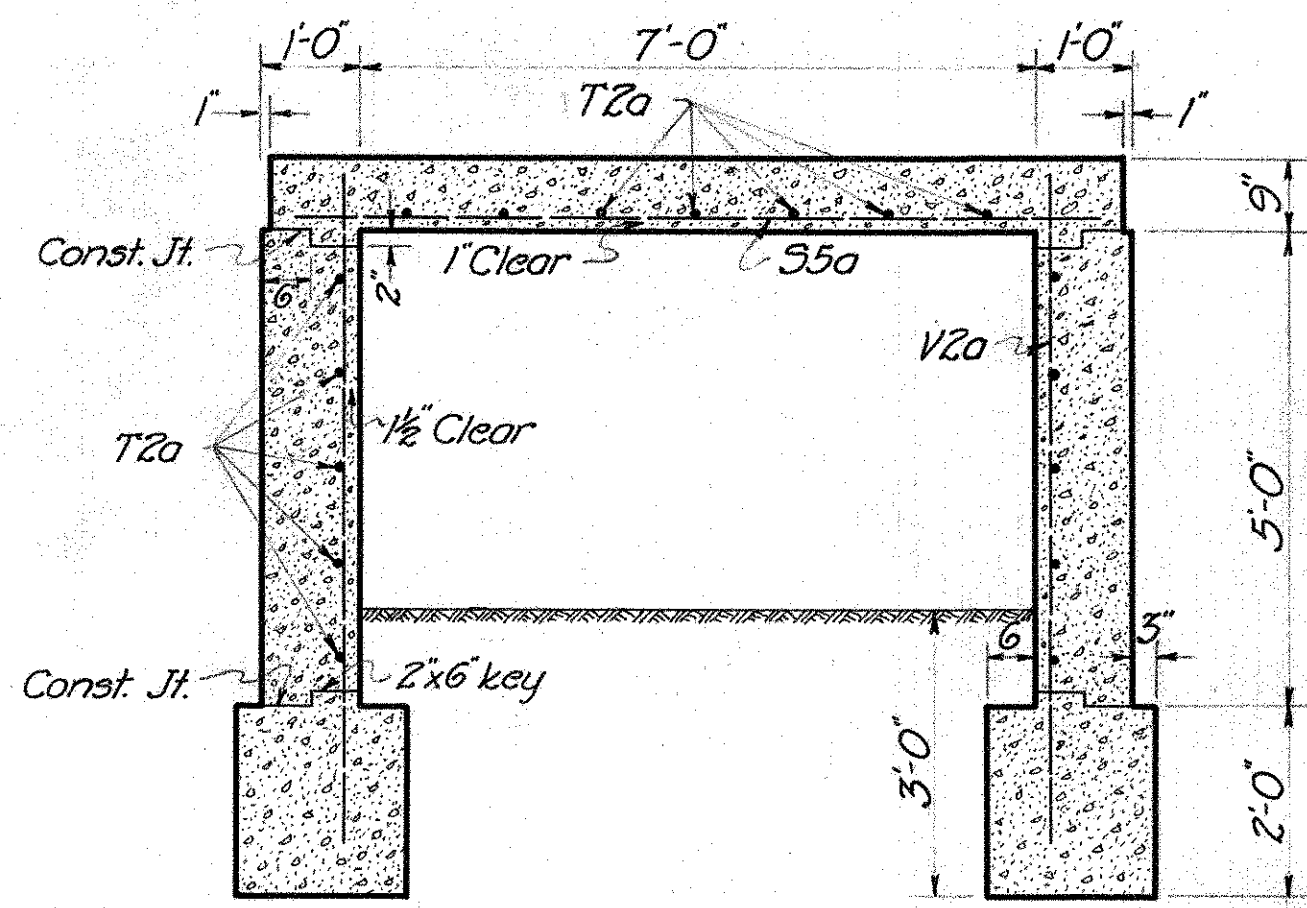
SECTION H-H



PLAN



SEC. G-G



SECTION B-B

STEEL LIST					
Mark	No	Size	Length	Spacing	Weight
W2a	5	1/2" φ	12'-3"	9" c.c.	

S.H. 462 SEC. B,
FAIRFIELD COUNTY

SUMMARY OF QUANTITIES

SURFACING APPROACHES GRAVEL LIMESTONE SIZE 34X			
STATION	SIDE	CU.YDS.	
11+10	R	4	
13+10	L	4	
15±	R	3	
17+06	L	3	
18+15	R	2	
19+10	R	2	
24+00	R	3	
25+88	L	2	
26+68	L	2	
28+44	L	2	
29+98	L	2	
29+40	R	2	
30+90	R	2	
30+90	L	2	
36+80	R	3	
44+41	R	2	
46+17	R	2	
47+70	L	4	
50+80	L	5	
53+50	R	2	
63+50	L	5	
70+70	R	2	
74+70	L	2	
77+50	R	2	
78+50	R	2	
83+56	L	2	
90+88	R	5	
90+88	L	5	
96+40	R	2	
106+88	R	3	
111+88	R	15	
122+00	L	15	
126+40	L	3	
126+60	L	3	
132+65	R	2	
134+02	L	2	
144+64	L	5	
144+64	R	5	
147+50	R	2	
151+60	L	3	
155+49	L	2	
160+80	L	90	
170+34	R	30	
162+41	L	2	
170+96	R	2	
173+09	L	2	
173+40	R	2	
175+72	R	5	
175+72	L	5	
TOTAL		278	

NO.	STATION	TYPE	SIZE	LENGTH	EXCAV.	CONCRETE			REINF.	VIT. PIPE					TEES		REMOVAL	DOWEL	REMOVAL	REMARKS
					UNCLAS.	1:5 1/2	1:6 1/2	1:8	STEEL	12"	15"	18"	24"	30"	1:31	1:31		HOLE	PRES. CONC.	
					R-2	5-1	5-1	5-1	5-4	5-8	5-8	5-8	5-8	5-8	30"x12"	30"x15"		1-15	1-18	
					CU.YDS.	CU. YDS.			LBS.	LIN. FT.							NO.	LIN.FT.	CU.YDS.	
~ STRUCTURES UNDER 20' SPAN ~																				
1	14+98.2	SC-A	8'-8 1/2"	14'-7 1/2"	25	28.0	7.6		2835								1	6		Ext'd. pres. on L, new superstr. pave cul.
2	39+50	VP-300HS	12"	49'	15	2.7		5.1	40	49										Build new - hillside
3	57+96.2	BC-A	5'-3"	65'	146	36.5			3614											Build new - skewed
4	63+61	VP-300	18"	45'	35	2.7		6.6	80			45								Remove present, build new
5	68+25	"	12"	43'	17	1.9		4.4	64	43										Build new, - spc'l inlet hdwl.
6	74+00	"	12"	42'	24	1.9		4.5	64	42										" " " "
7	77+08	"	12"	49'	43	1.9		5.1	64	49										" " " "
8	79+61	SC-A	9'-5"	55'	190	55.6	22.8		4477											Remove present, - build new
9	96+18	VP-300	18"	50'	50	2.7		7.4	80			50								Build new
10	97+11.5	SC-A	7'-4"	26 1/2'	75	21.9	9.6		1794										0.5	Remove present, - build new
11	106+31	VP-300	18"	53'	55	2.7		7.8	80			53								Extend present on Left
12	125+88.1	"	18"	54'	25	2.7		8.0	80			54								Remove present, - build new
13	144+57	"	30"	62'	150	9.1		22.4	229	130	25			57	1	1				Build new
14	160+79	"	24"	41'	20	3.5		8.0	105			41								Remove present, build new, spc'l.
15	56+03	Removal															1			Remove part present, build new
16	78+63	"															1			Remove present, see Sheet 5
17	91+04	"															1			" " " " 6
TOTALS					870	173.8	40.0	79.1	13606	213	25	202	41	57	1	1	4	6	0.5	

EARTHWORK							
FROM STATION	TO STATION	EXCAV.	EMB. +20%	EMB. +12%	OTHER EMB.	WASTE	BORROW
CUBIC YARDS							
18+22	19+42	3192	3192				
17+82	31+00	6236	752				
31+00	39+62	1760	1760				
39+62	41+17	344	344				
41+17	46+82	1116	1116				
46+82	49+70	191	191				
49+70	52+45	323	323				
52+45	56+62	1084	1084				
56+62	66+90	3460	3460				
66+90	70+19	898	898				
70+19	75+12	936	936				
75+12	79+91	1101	1101				
79+91	84+59	605	605				
84+59	88+37	1067	1067				
88+37	98+00	2985	2985				
98+00	103+11	1510	1510				
103+11	130+00	16211	385	17858	2600	2754	1902
130+00	135+34	385	385				
135+34	140+06	222	222				
140+06	150+93	694	694				
150+93	161+56	874	874				
161+56	168+69	320	320				
168+69	175+73	278	347				69
PROJECT TOTAL		45792	24551	17858	2600	2754	1971
PROP. 1 TOTAL		2995	65				
PROP. 2 TOTAL		42797	24486	17858	2600	2754	1971

PIPE ON APPROACHES													
STATION	SIDE	CORR. I. PIPE - NEW			REMOVE V.P.					REMOVE & RELAY 12" V.P.			
		12"	18"	30"	6"	8"	12"	18"	21"				
11+10	R	40											
36+80	R	18											
45+03	R						100		41				
46+11	L									50			
53+50	R			20				16	16				
62+61	R	18											
70+75	R	18											
77+44	R				20								
77+47	R	18											
78+50	R	18											
78+53	R					24							
83+56	L	18											
87+25	R	18											
90+88	R						28						
98±	R	18											
100±	L	18											
111+88	R		72										
122+00	L	18											
132+62	R	18											
134+02	L	18											
151+60	L	18											
155+49	L	18											
175+73	L	30											
175+73	R	30											
TOTALS		352	72	20	20	24	128	16	57	50			

UNDERDRAIN									
FROM STATION	TO STATION	SIDE	10" V.P. MORT. JTS.	10" V.P. WITH COVER	10" CORR. I.P. WITH COVER	10" 8" INLETS	12" V.P. WITH COVER	12" CORR. I.P. WITH COVER	
				LIN. FT.		UNITS		LIN. FT.	
14+93	32+51	L	✓ 198	✓ 1420	✓ 120	✓ 10	✓		
15+17	32+51	R	✓ 282	✓ 1306	✓ 130	✓ 8	✓		
43+40	46+40	R	✓					264	✓ 36
97+90	100+30	L	✓	240	✓				
160+80	175+58	L	✓	1402	✓ 68	✓ 4	✓		
170+34	175+58	R	✓	518		✓ 3	✓		
TOTALS			480	4886	318	25		264	✓ 36

All items tabulated on this sheet (except note earthwork) apply to Proposal No. 2 only, and so apply regardless of type.

S.H. 462 SEC. B,
FAIRFIELD COUNTY

SUMMARY OF QUANTITIES

— ITEMS NOT TABULATED —

TYPE - C

PROPOSAL NO-1-

(STA. 0+00[±] TO STA. 10+49[±])

EXCAVATION, UNCLASSIFIED
REMOVE PRESENT CONCRETE CURB
SHOULDERS, SLOPES, AND DITCHES (BOTH SIDES)
C.I. MONUMENT BOX, COMPLETE,

CONCRETE PAVEMENT - 9"-7"-9" - 1:5½ MIX
CONCRETE CURB, 6"x 6", INTEGRAL, 1:5½ MIX
CONCRETE BASE, 6" - 1:7½ MIX.
CONCRETE BASE, 6" - 1:5½ MIX.
CONCRETE COMBINATION CURB AND GUTTER
CONCRETE COMBINATION CURB AND GUTTER, CIRCULAR,
CONCRETE FLUSH CURB 12"x4½" - 1:7½ MIX.
BRICK PAVEMENT, 4", COMPLETE

2995	CU. YDS.	✓✓
130	LIN. FT.	✓✓
1049	LIN. FT.	✓✓
2	BOXES	✓✓
3269.5	SQ. YDS.	✓✓
1898.4	LIN. FT.	✓✓
368.2	SQ. YDS.	✓✓
33.2	SQ. YDS.	✓✓
39.5	LIN. FT.	✓✓
29.	LIN. FT.	✓✓
4.	LIN. FT.	✓✓
401.2	SQ. YDS.	✓✓

PROPOSAL NO-2-

STA. 10+49[±] TO STA. 175+72[±]

SHOULDERS, SLOPES, AND DITCHES (BOTH SIDES)
CURB INLETS, COMPLETE
VIT. PIPE, 12", WITH MORTAR JOINTS, STORM SEWER
CONCRETE, 1:5½ MIX
REINF. STEEL,
C.I. MONUMENT BOX, COMPLETE,
CONCRETE PAVEMENT, - 9"-7"-9", 1:5½ MIX
CONCRETE COMBINATION CURB AND GUTTER
EXCAVATION, STORM SEWERS

16523	LIN. FT.	✓✓
4	INLETS	✓✓
124	LIN. FT.	✓✓
0.8	CU. YDS.	✓✓
32.	LBS.	✓✓
1	BOX	✓✓
36772.2	SQ. YDS.	✓✓
1164.1	LIN. FT.	✓✓
34	CU. YDS.	✓✓

TYPE - B

PROPOSAL NO-1-

STA. 0+00[±] TO STA. 10+49[±]

EXCAVATION, UNCLASSIFIED
REMOVE PRESENT CONCRETE CURB
SHOULDERS, SLOPES, AND DITCHES (BOTH SIDES)
C. I. MONUMENT BOX, COMPLETE

CONCRETE BASE, 6" - 1:7½ MIX.
CONCRETE BASE, 6" - 1:5½ MIX.
CONCRETE COMBINATION CURB AND GUTTER
CONCRETE COMBINATION CURB AND GUTTER, CIRCULAR.
CONCRETE FLUSH CURB, 12"x4½", 1:7½ MIX.
BRICK PAVEMENT, 4", COMPLETE
BRICK PAVEMENT, 3", COMPLETE

2995	CU. YDS.	✓✓
130	LIN. FT.	✓✓
1049	LIN. FT.	✓✓
2	BOXES	✓✓
2478.2	SQ. YDS.	✓✓
666.	SQ. YDS.	✓✓
1997.2	LIN. FT.	✓✓
29.5	LIN. FT.	✓✓
4.5	LIN. FT.	✓✓
401.2	SQ. YDS.	✓✓
2742.1	SQ. YDS.	✓✓

PROPOSAL NO-2-

STA. 10+49[±] TO STA. 175+72[±]

SHOULDERS, SLOPES, AND DITCHES (BOTH SIDES)
CURB INLETS, COMPLETE
VIT. PIPE, 12", WITH MORTAR JOINTS, STORM SEWER
CONCRETE, 1:5½ MIX,
REINF. STEEL,
C.I. MONUMENT BOX
CONCRETE BASE - 6" - 1:7½ MIX
CONCRETE COMBINATION CURB AND GUTTER 1:5½ MIX
CONCRETE CURB, 9" x 3½" - 1:7½ MIX
BRICK PAVEMENT 3", COMPLETE
EXCAVATION, STORM SEWER

16523	LIN. FT.	✓✓
4	INLETS	✓✓
124	LIN. FT.	✓✓
0.8	CU. YDS.	✓✓
32	LBS.	✓✓
1	BOX	✓✓
36772.2	SQ. YDS.	✓✓
1164.1	LIN. FT.	✓✓
3188.4	LIN. FT.	✓✓
34.15	SQ. YDS.	✓✓
34	CU. YDS.	✓✓

— FOR OTHER ITEMS OF PROPOSAL -2- SEE SHEET 40 —

SUMMARY OF QUANTITIES

— ITEMS NOT TABULATED —

TYPE - M (B)

PROPOSAL NO-1-

(STA. 0+00[±] TO STA. 10+49[±])

Excavation, Unclassified	2995.	Cu. Yds.	✓
Remove Present Concrete Curb	130.	Lin. Ft.	✓
Shoulders, Slopes, and Ditches (Both Sides)	1049.	Lin. Ft.	✓
C.I. Monument Box, Complete	2.	Boxes	✓
Concrete Base, 6", 1-7½ Mix	368.9	Sq. Yds.	✓
Concrete Base, 6", 1-5½ Mix	33.2	Sq. Yds.	✓
Concrete Combination Curb and Gutter	1997.9	Lin. Ft.	✓
Concrete Combination Curb and Gutter Circular	29.	Lin. Ft.	✓
Concrete Flush Curb, 12"x4½", 1-7½ Mix	30.	Lin. Ft.	✓
Brick Pavement, 4", Complete	399.0	Sq. Yds.	✓
W.B. Macadam 1 st Base Course, 4½"	2742.1	Sq. Yds.	✓
W.B. Macadam 2 nd Base Course, 4½"	2742.1	Sq. Yds.	✓
Bit. Macadam Surface Course, 3"	2742.1	Sq. Yds.	✓

PROPOSAL NO-2-

(STA. 10+49[±] TO STA. 175+72[±])

Shoulders, Slopes, and Ditches (Both Sides)	16,523.	Lin. Ft.	✓
Curb Inlets, Complete	4.	Inlets	✓
Vit. Pipe, 12", With Mortar Joints, Storm Sewer	124.	Lin. Ft.	✓
Excavation, Storm Sewer	34.	Cu. Yds.	✓
Concrete, 1-5½ Mix,	0.8	Cu. Yds.	✓
Reinforcing Steel,	32.	Lbs.	✓
C.I. Monument Box	1.	Box	✓
Concrete Combination Curb and Gutter, 1-5½ Mix	1164.7	Lin. Ft.	✓
W.B. Macadam 1 st Base Course, 4½"	38,543.2	Sq. Yds.	✓
W.B. Macadam 2 nd Base Course, 4½"	38,543.2	Sq. Yds.	✓
Bit. Macadam Surface Course, 3"	36,772.9	Sq. Yds.	✓

STATE OF OHIO

DEPARTMENT OF HIGHWAYS

FAI-158-(1.75-9.46)

FAIRFIELD COUNTY

GREENFIELD & LIBERTY TOWNSHIPS

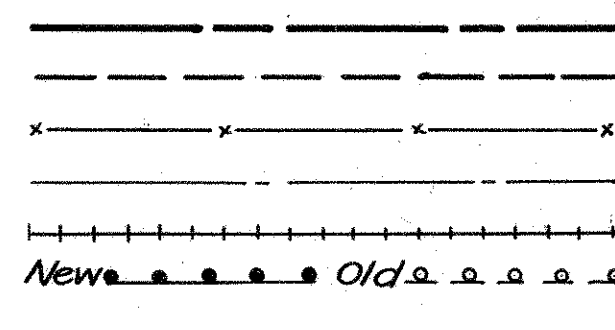
VILLAGE OF BALTIMORE & CITY OF LANCASTER

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	STATE	

FAI-158-(1.75-9.46)

CONVENTIONAL SIGNS

County Line
Township Line
Fence Line
Center Line
Railroad
Guard Rail
Construction Limits



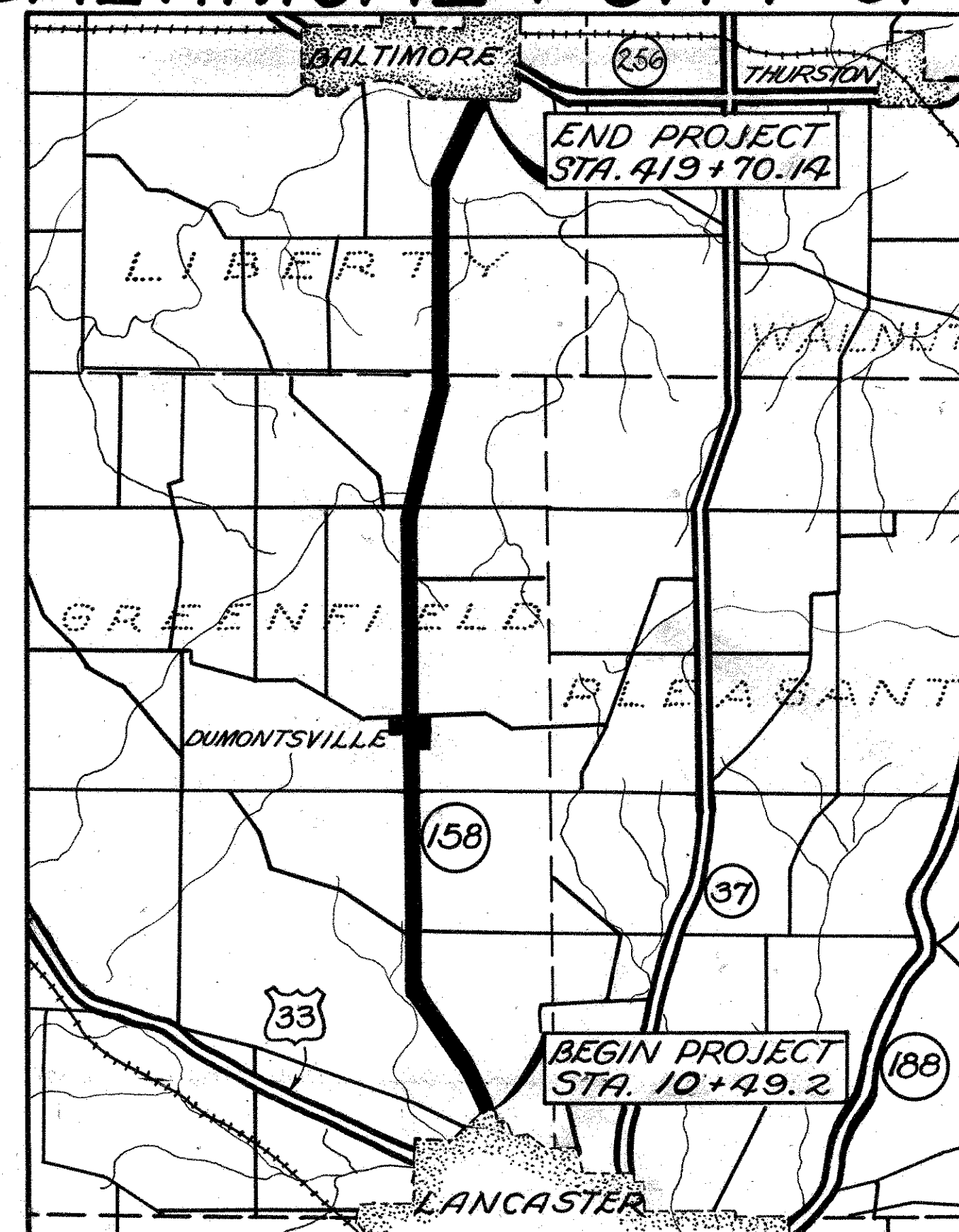
INDEX OF SHEETS

Title Sheet
Typical Sections
General Notes
Calculations and Summary
Plan and Profile
Cross Sections
Approach
Structures 20' Span and Under
Right of Way

1
2
3
4
5-10
11-28
29
30-33
34-36

LINE DATA

Begin Project Sta. 10+49.2
End Project Sta. 419+70.14
Gross Length of Project 40,920.94 Lin. Ft.
Deduct Bridge FA-158-0887 134.00
Net Length of Project and Work 40,786.28 Lin. Ft.
or 7.724 Miles



Delivery Point: Lancaster Average Haul: 4 Miles

LOCATION PLAN



Scale of Miles
Portion To Be Improved
State Highways
Other Roads

SCALES

Plan 1" = 50'
Profile Horizontal 1" = 50'
Profile Vertical 1" = 5'
Cross Sections 1" = 5'

STANDARD DRAWINGS

G-7.07	1-2-53	S-27 P.C. 3	2-20-45
DR-1	1-3-55	S-27 P.C. 4	1-4-54
RI-1	1-3-55	S.B.C. 4.5 (25hts)	9-18-47
T-35	1-2-56	STC-47	9-18-47
L-1	4-1-50	SP-53	7-21-53
L-3	4-1-50	I-8 C.B. No. 7	5-1-52
L-3A	4-1-50	I-15 No. 1	8-1-53
I-1,2,3,4 & 5	2-20-45	I-15 No. 2	12-1-54

SUPPLEMENTAL SPECIFICATIONS

B-119	Rev. 12-14-55
G	12-28-55
L-209.12	7-17-54

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 of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

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

Approved Charles F. Schellberg
Date: 3-21-56 Division Deputy Director

Approved John Heier
Date: 4-11-56 Deputy Director of Planning & Programming

Approved Richard Orth
Date: 4-3-56 Engineer of Bridges

Approved E. J. Preston
Date: 4-5-56 Engineer of Location & Design

Approved W. F. Arnold
Date: 4-6-56 Deputy Director of Design & Construction

Approved P. J. Schaeffer
Date: 4-11-56 First Assistant Director

Approved J. H. Haggell
Date: 4-16-56 Director of Highways

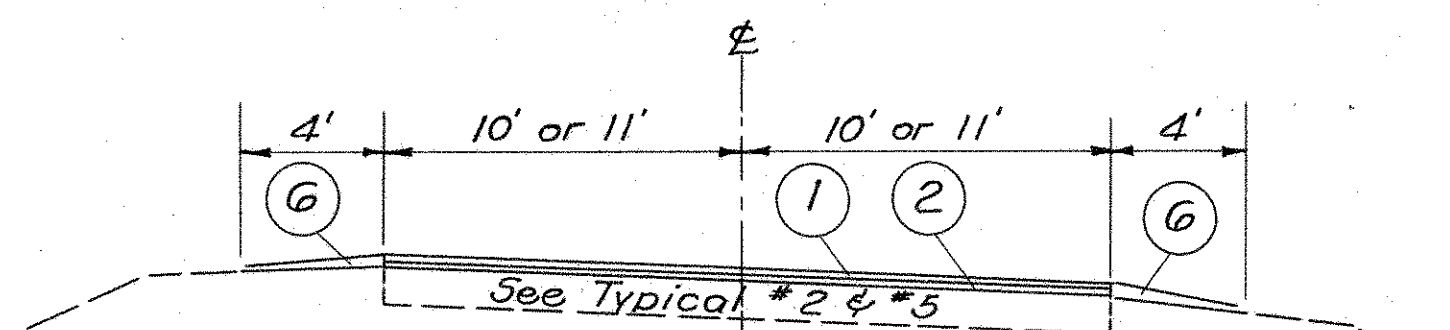
FILE FAIRFIELD COUNTY S.R. 158
NO. SEC. FAI-158-(1.75-9.46)
Date of Letting
Contract No.

TYPICAL SECTIONS T-35

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

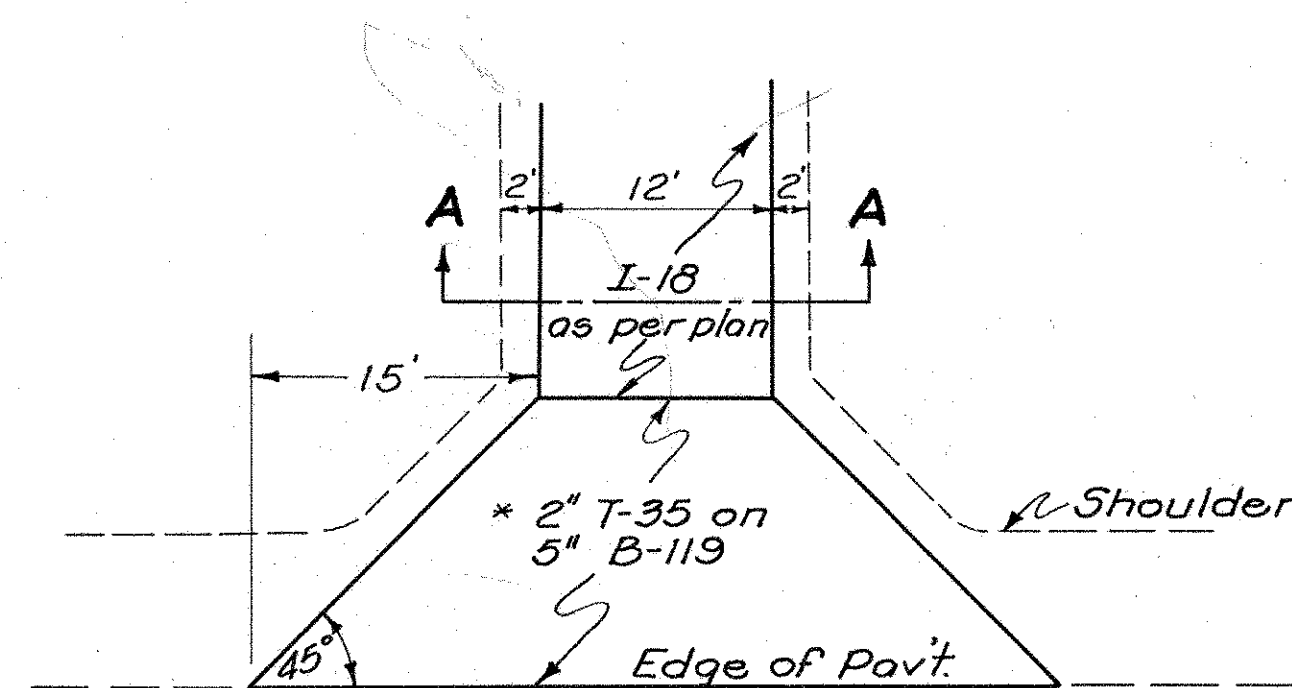
2
36

FAI-158-(1.75-9.40)

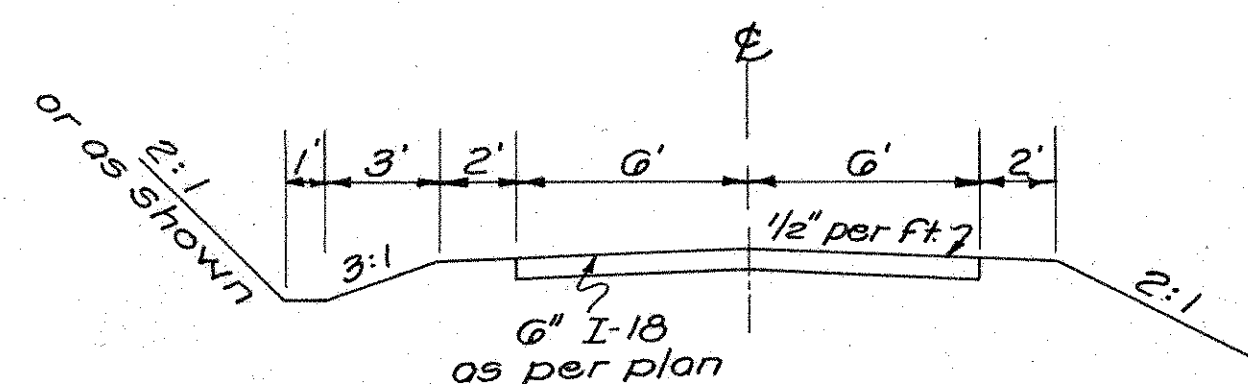


SUPERELEVATION SECTION

Slope of proposed surface shall be approximately the same as that of the existing surface.
Superelevation ample for 50 M.P.H. design speed, except as indicated on cross sections for curve of P.I. Station 391+64.4.

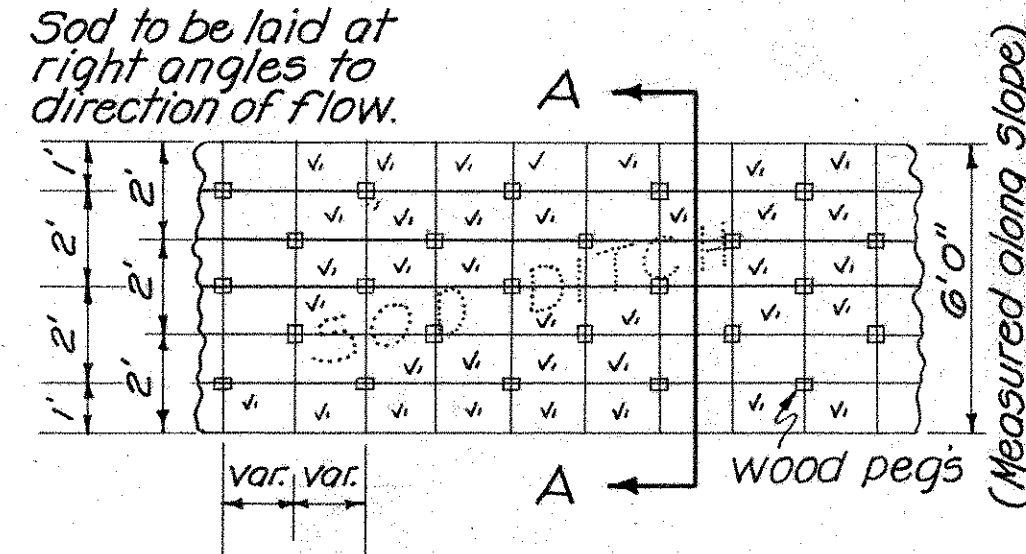


* Field Drives - Use 6" I-18 as per plan in this area.



SECTION A-A DRIVES

NOTE:-
Sod to be laid at right angles to direction of flow.

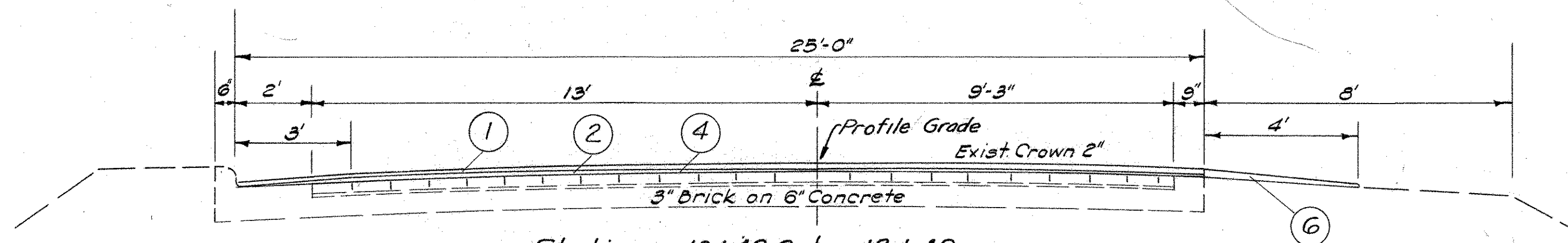


NOTE:-
Variable distance depending upon width of sod strip.

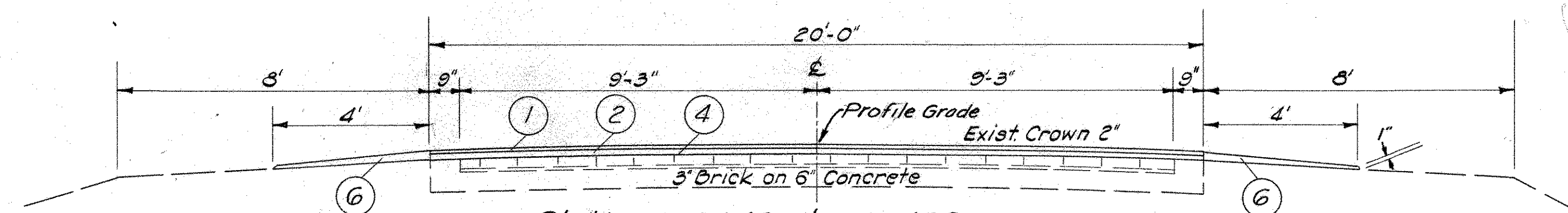
PLAN

DETAIL OF L-10 SODDING, AS PER PLAN

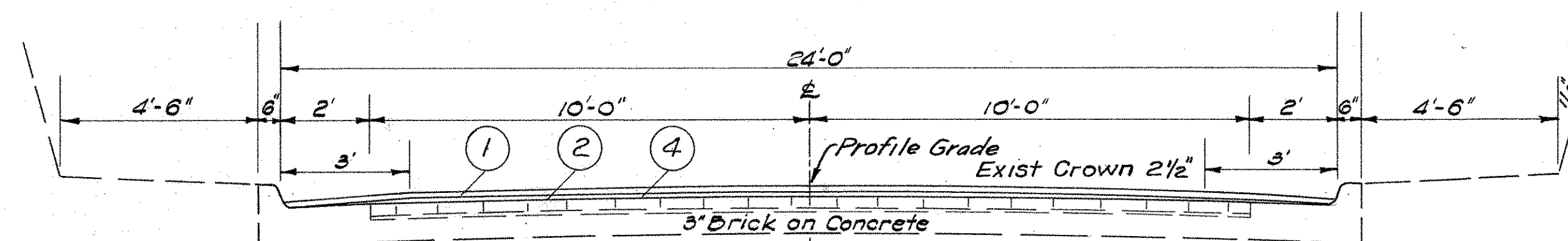
Showing location of pegs. All other requirements of Item L-10 Sodding, of the Construction and Materials Specifications shall be adhered to.



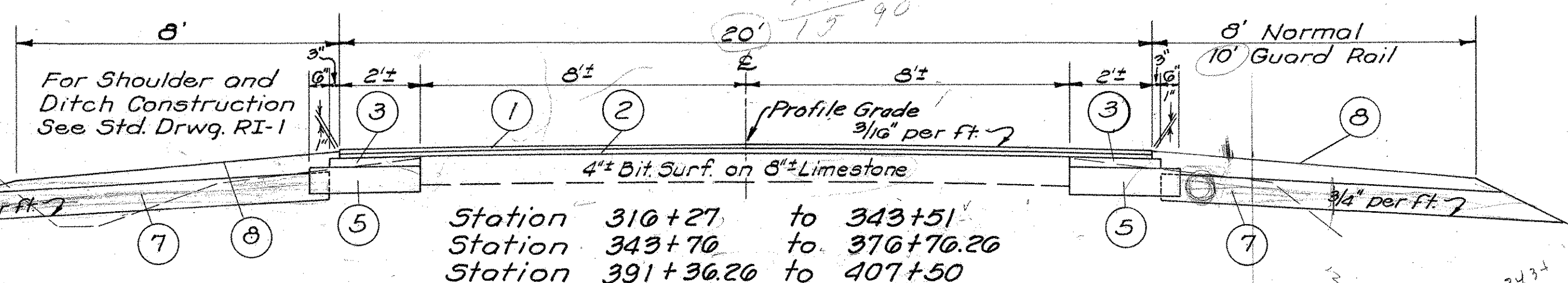
Station 10+49.2 to 13+49



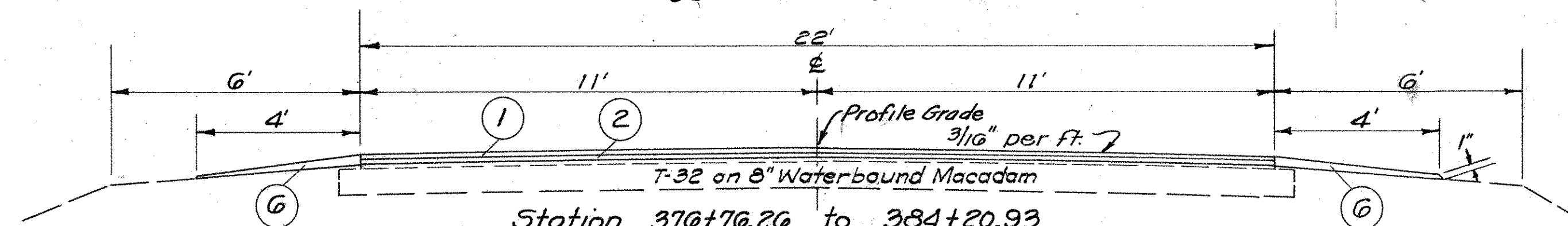
Station 13+49 to 110+00
Station 121+90 to 310+27



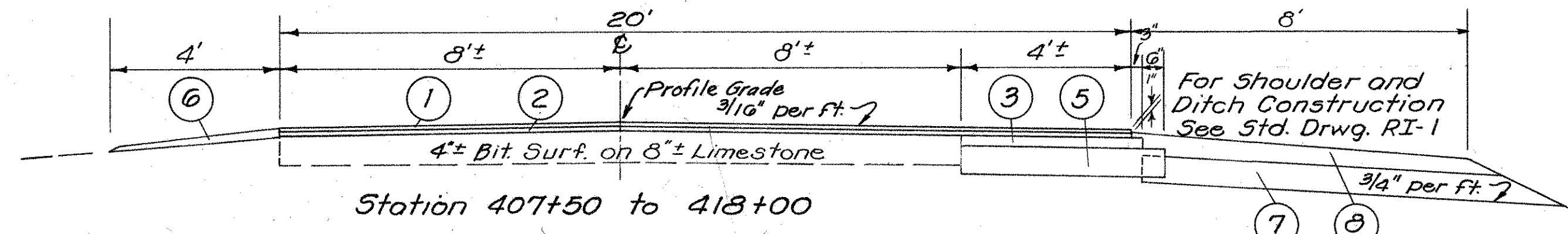
Station 116+00 to 121+90



Station 310+27 to 343+51
Station 343+70 to 376+70.20
Station 391+30.20 to 407+50



Station 376+70.20 to 384+20.93
Station 385+55.59 to 391+30.20



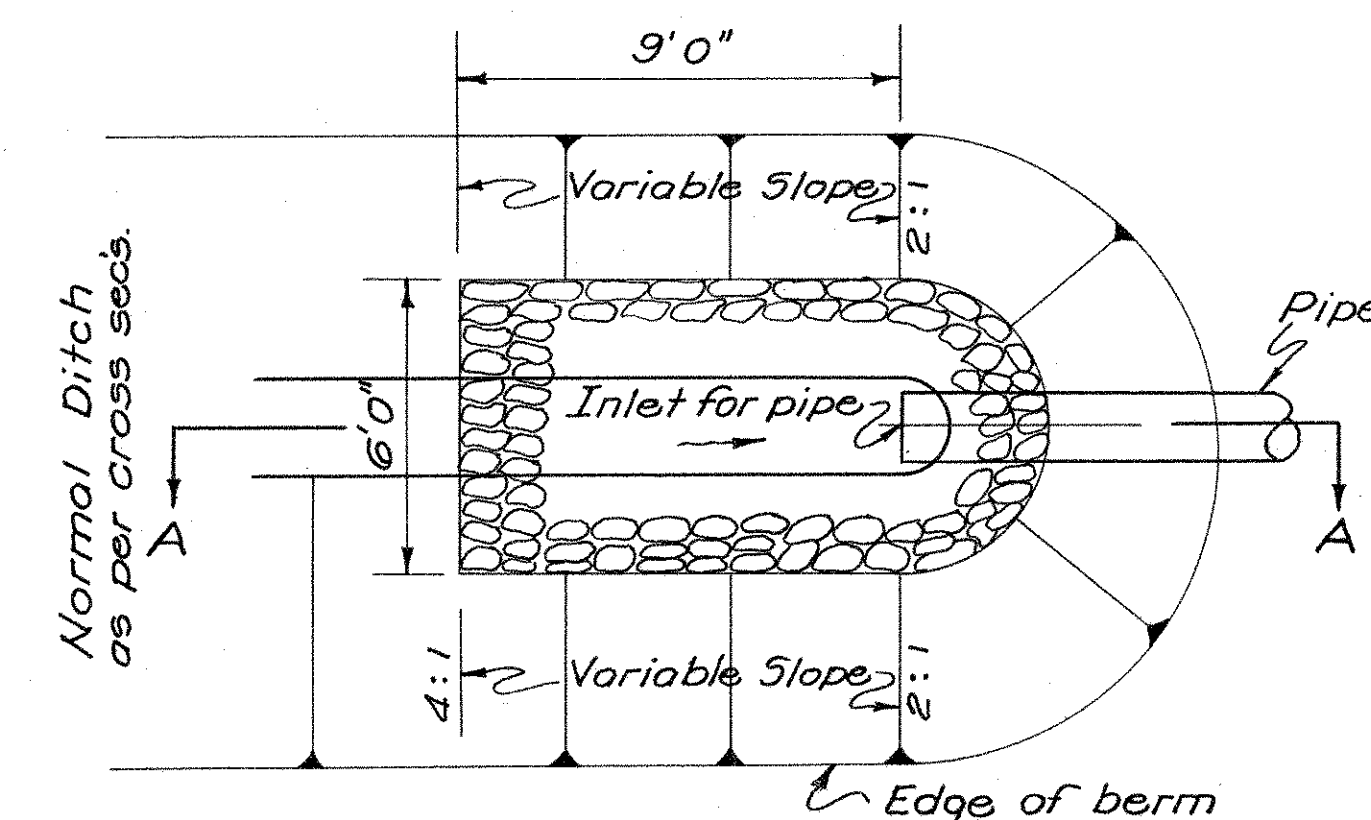
Station 407+50 to 418+00

- ① T-35 1 1/4" Asphaltic Concrete Surface Course, Type 'A' (70-80)
- ② B-35 1 1/4" Minimum Asphaltic Concrete Leveling Course (70-80)
- ③ B-35 3" Asphaltic Concrete Leveling Course (70-80)
- ④ T-30 Bituminous Tack Coat, Sec. M-5.5, M-5.2 or R-5.1, or Sec. M-5.2 R-5.1 or R-5.2 applied at the rate of 0.1 gal. per Sq. Yd. (See Note in Proposal)
- ⑤ B-119 8" Crushed Aggregate Base Course
- ⑥ I-18 Stabilized Crushed Aggregate Shoulders and Approaches, (3" ave. thickness)
- ⑦ I-9 Stone Underdrain, No. 2
- ⑧ L-9 Seeding and Protecting

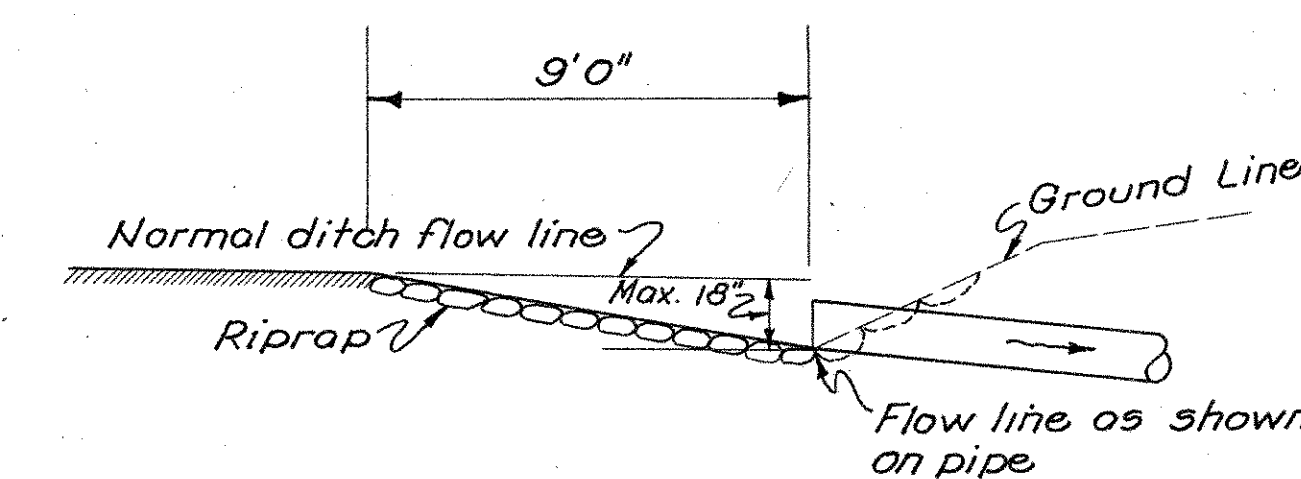
NOTE:-

The plan and profile of existing road for that portion of this contract not shown in these plans, are on file in the central office of the Department of Highways and are identified as follows:

Fairfield Co. S.H. 402 Sec. B1
Fairfield Co. S.H. 402 Sec. B2
FAI-158-8.72



PLAN



SECTION A-A

DETAIL OF RIPRAP INLET FOR ROADWAY DRAINAGE

Estimated Quantity for one inlet
I-10 Riprap, Type A, Grout Filled, 8 Sq. Yds.

Approved *[Signature]*
Date *12/1/55* Field Eng.

Approved *[Signature]*
Date *Dec 14, 1955*

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

FAI-158-(1.75-9.46)

3
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DESIGN SPEED :~

The design speed is 50 miles per hour.

PROFILE :~

The profile of the proposed surface course shall be approximately two and one half inches above that of the existing pavement.

TRAFFIC :~

Two-way traffic shall be maintained on the existing pavement at all times except during the placing of the asphaltic concrete when one-way traffic will be permitted consistent with the requirements of Section T-35.23. Watchmen shall be placed at each end of one-way traffic zones, for the duration of one-way traffic.

In areas where widening is indicated the trenching operation including the placement of B-119 Base and 3" B-35 Leveling shall be completed before any trenching is performed on the opposite side. The placing of the B-119 Crushed Aggregate Base and B-35 three inch Leveling shall be kept as close as possible to the trenching operation in order to keep the open-trench hazard to traffic to a minimum. The operation of the contractor's construction equipment shall be in accordance with Sec. G-5.11 of the Specifications.

The cost of maintaining traffic including lights, signs, barricades, watchmen, temporary guard rail, embankment, drainage structures and the removal of the above items to conform to plan lines shall be included in the lump sum bid for the item of Maintaining Traffic.

Temporary traffic lanes shall be constructed across each end of the new structure at Sta. 343+62.95 before the existing structure is removed. North bound traffic shall be carried over the East side of the structure and South bound traffic shall be carried over the West side of the structure. Minimum surface width of temporary lanes shall be 12 ft. with a roadway width of 18 ft. as shown on sheets G and 31.

ESTIMATED QUANTITIES

100 cu. Yds. T-10 Traffic Compacted Surface Course.
100 cu. Yds. T-10 Traffic Compacted Surface Course, as per plan.
4 Tons Calcium Chloride.

The above method of handling traffic may be varied, subject to approval of the Engineer, providing there is no additional inconvenience to the traveling public or additional cost to the State.

REMOVALS :~

All items marked for removal unless otherwise noted on these plans shall become the property of the contractor and shall be disposed of by him.

SUPERELEVATION :~

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 super-elevation equals twice the crown.

FILLING MAJOR DEPRESSIONS :~

Major depressions in the existing pavement shall be filled and compacted with asphaltic concrete leveling material in advance of placing the regular leveling course. These depressions shall be filled in layers not to exceed three inches in depth when compacted.

SURPLUS EXCAVATION :~

Surplus excavation shall be disposed of in accordance with Sec. E-1.06. Care shall be exercised by the contractor in the disposal of excess excavation so as not to damage or impede the existing drainage.

The Engineer shall designate areas within the project limits for disposal of excess excavation where placement would improve the facility before any material is wasted off the job.

I-18 STABILIZED CRUSHED AGGREGATE, AS PER PLAN :~

At all locations where drives are rebuilt and crushed aggregate is specified for the surface, the aggregate and method of placement as specified in Item I-18 shall be met except the use of crushed gravel or crushed slag will not be permitted. Crushed Limestone only shall be used.

DRIVE LOCATIONS :~

The location of drives which are being rebuilt may be varied at the direction of the Engineer provided there is no additional cost to the State.

SUBGRADE COMPACTION :~

The subgrade under B-119 material used on new drives, approaches and mailbox turnouts shall be compacted for a depth of six inches to the pertinent density shown in Table III, Sec. E-1.09. Payment shall be included in the unit price bid for the Item E-1 Roadway Excavation.

I-9 STONE UNDERDRAINS, NO. 2 :~

The outlets of all stone underdrains shall be cleaned of all straw or loose earth after the placing of materials as required to complete Item L-9, Seeding and Protecting. Payment for cleaning outlets shall be included in the price bid per square yard for Item L-9, Seeding and Protecting.

I-9 Stone Underdrains shall be placed in areas where their use is indicated on the typical section at 50 foot centers and staggered on opposite sides of the pavement, except on superelevated curves where the underdrains shall be omitted on the high side and spaced on 25 foot centers on the low side.

An additional amount, 300 lineal feet of I-9 Stone Underdrains, has been provided for placement at the direction of the Engineer in areas other than those indicated on the typical section. Care shall be exercised in the location of all I-9 Stone Underdrains to insure positive drainage of the base course. Payment to be made on final measurement.
Estimated - 3500 Lin. Ft.

SEEDING :~

Quantities for seeding, where seeding is indicated, are calculated for the soil areas within the construction limits as shown on the cross sections, and payment for seeding beyond these limits will not be allowed. All areas outside these limits where vegetative growth has been injuriously disturbed or destroyed, as determined by the Engineer, due to the contractor's operations, shall be restored and seeded in accordance with the provisions of Item L-9, Seeding and Protecting, by the contractor at his own expense. Seeding for channels is calculated between the limits of construction and a point 2 feet above the flowline.

PREPARATION OF AREAS TO BE SODDED :~

Payment for earthwork necessary for the preparation of areas to be sodded according to Sec. L-10.05 and L-10.06 is included in the unit price bid per square yard of sod. Commercial Fertilizer shall be applied at the rate of 20 lbs. per 1000 square feet of area, and Liming Materials, as per Supplemental Specification No. 6, shall be applied at the rate of 100 lbs. per 1000 square feet of area and worked into the soil prior to laying the sod. The sod bed shall have two inches of loose soil on which sod is laid after excavation for sod thickness.

L-10 SODDING, AS PER PLAN :~

All sod strips shall be laid at right angles to the direction of flow, and shall be staked with stakes of the size described in Sec. L-10.07. The stakes shall be staggered on two foot centers, and the rows shall be two feet apart as detailed on sheet 2.

RIPRAP AND SODDING :~

Riprap and sodding have been provided for in areas in which erosion may occur. If rock or hard shale is encountered in these areas during construction, the riprap or sodded ditches may be non-performed at the direction of the Engineer. Minor relocation of riprap or sodded ditches may be made by the Engineer to fit conditions found in the field during construction. Payment to be made on final measurement.

UTILITIES :~

Any and all work required for Public or Private Utilities shall be done by and at the expense of their respective owners.
Electric - R.E.A.
Telephone - Ohio Consolidated

EXISTING PIPES :~

The location and sizes of existing pipes are shown as accurately as available information will permit. The State, however, will not be responsible for any variations found during construction. Drain tile encountered in areas where excavation is indicated shall be outletted into the nearest roadside ditch, but in no case, shall any sanitary sewerage be outletted into the roadside ditch. Care shall be exercised by the contractor to avoid undue damage to existing pipe lines.

EXISTING PIPES CONT'D.

The following quantities and sizes of I-3 Roadway Drainage Pipe have been provided for outlets as described above, and shall be used at the direction of the Engineer.

4" = 100 lin. ft. 6" = 100 lin. ft. 8" = 100 lin. ft.

10" = 100 lin. ft. 12" = 100 lin. ft.
Payment to be made on final measurement.

REMOVAL OF TREES & STUMPS :~

Payment for removal of trees and stumps shall be by lump sum bid for all trees and stumps designated for removal by the Engineer.

SIZE	12"-18"	18"-24"	24"-30"	30"-36"	36"-42"	Over 42"
Trees	18	4	3	2		2
Stumps	4					

The above estimated number of trees and stumps was arrived at by diligent effort, but the State does not guarantee the accuracy thereof.

APPROACHES & DRIVES :~

The T-35 Surface Course shall be feathered approximately 3' on existing paved approaches and drives where there is no widening.
Estimated T-35 = 12 Cu. Yds.

MAIL BOX APPROACHES :~

Mail Box Approaches in area to be widened shall be constructed of 2" T-35 on 5" B-119 as per Standard Drawing DR-1.
12 Approaches ~ T-35 = 20 Cu. Yds. B-119 = 51 Cu. Yds.

FIELD OFFICE :~

The contractor shall provide a suitable field office in accordance with Section 5-0.01 having a minimum floor area of 150 square feet. The contractor shall have a telephone installed in this office and maintained during the construction of this project.

T-10 TRAFFIC COMPACTED SURF. CRSE., AS PER PLAN :~

The item of T-10 Traffic Compacted Surface Course, as per plan shall consist of furnishing No 3 or No 34 aggregate. All other provisions of Item T-10 shall apply.

ITEM SPECIAL, DRAIN BASIN, AS PER PLAN :~

The item special, drain basin as per plan shall be constructed in accordance with the details shown on sheet 10. The drain basins to be paid for shall be the actual number of each, completed and accepted.

FEATHERING

No work will be performed on Bridge No FA-158-0887. Feathering will be accomplished off the bridge at the direction of the Engineer.

STABILIZED CRUSHED AGGREGATE SHOULDERS & APPROACHES

Subgrade compaction requirements under this material as specified in Sec. I-18.03 is hereby waived where this material is used as a wedge course on the existing shoulders.

CONTINUED

CALCULATIONS & GEN. SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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1 STRUCTURES 20' SPAN & UNDER

Struc. No.	Station	Excavation Cu. Yds.		Concrete Cu. Yds.		5-4 Steel lbs.	5-24 Rem. Ex. St. As per plan	5-23 Dowel H. Lin. Ft.	5-27 24" Pipe Lin. Ft.	5-28 10'-8" x 6'-11" S.C. Metal Lin. Ft.	I-10 Dumped Rock Fill Cu. Yds.	5-22 Removal Portions Ex. Str.
		Struct.	Chan.	C	E							
1	325+94.83	15		11.6		1325		28		72	40	Lump
2	343+62.95	50	20		10.7		Lump					
3	340+31.25	10	10		1.4	18		6	26			Lump
4	374+47.24	85			26.0	2377		55				Lump
Totals		160	30	11.6	38.1	3720	Lump	89	26	72	40	Lump

9' = 30' 3" = 36' 4"

3 DRIVES & APPROACHES

Sheet No.	I-18 Aggreg. Per Plan Cu. Yds.	T-35 Surface Crse. Cu. Yds.	B-119 Base Crse. Cu. Yds.	B-35 Leveling Cu. Yds.	I-1 Pipe Lin. Ft.			I-10 Riprap Sq. Yds.	I-3 Pipe Lin. Ft.			I-8 No. 7 C. Basin Each
					12"	15"	24"		15"	15"	15"	
5	15	7.5	18.9		24	26	28	8				
6	3	7.5	18.9		24							
7	24	5.0	12.6		24							
29	5	12.7	81.4	43.3				13	112			
9	29	5.0	12.6	* 18	64	24						1
3		32	51.0									
Totals	76	69.7	195.4	61.3	136	50	28	21	112			1

* Superlevation Material

4

Station		Length	WIDTHS								SQ. YDS.							
From	To		1/4" T-35	1/4" B-35	1/2" Ext. B-35	3" B-35	8" B-119	T-30 Tack	I-18 Aggr.	T-35 1/4" Surf.	B-35 1/4" Level.	B-35 1/2" Extra	B-35 3" Level.	B-119 8" C. Aggr.	T-30 Tack	I-18 Aggr.		
10+49.2	13+49	299.80	25	23.5	25			25	4	* 853.8	* 803.8	* 853.8			* 853.8	133.2		
13+49	116+00	10,251.00	20	20	20			20	8	22,780.0	22,780.0	22,780.0			22,780.0	9,112.0		
116+00	121+90	590.00	24	21	24			24	0	1,573.3	1,376.7	1,573.3			1,573.3			
121+90	316+27	19,437.00	20	20	20			20	8	43,193.3	43,193.3	43,193.3			43,193.3	17,277.3		
316+27	343+51	2,724.00	20	20	16	4.5	5.5	0	0	6,053.3	6,053.3	4,842.7	1,302.0	1,664.7				
343+51	343+76	25.00	20	20	0	20.5	21.5	0	0	55.6	55.6		56.9	59.7				
343+76	376+76.26	3,300.26	20	20	16	4.5	5.5	0	0	7,333.9	7,333.9	5,867.1	1,650.1	2,016.3				
376+76.26	384+20.93	744.67	22	22	22			0	8	1,820.3	1,820.3	1,820.3				661.9		
384+20.93	385+55.59	134.66	Bridge															
385+55.59	391+36.26	580.67	22	22	22			0	8	1,419.4	1,419.4	1,419.4				516.2		
391+36.26	407+50	1,613.74	20	20	16	4.5	5.5	0	0	3,586.1	3,586.1	2,868.9	806.9	986.2				
407+50	418+00	1,050.00	20	20	16	4.25	4.75	0	4	2,333.3	2,333.3	1,866.7	495.8	554.2		466.7		
418+00	419+70.14	170.14	20	20	16	Ave. 2.75	Ave. 3.25	0	4	378.1	378.1	302.5	52.0	61.4		75.6		
* 21 Sq. Yds. Added for transition to 30' pavement.			Totals								91,380.4	91,133.8	87,388.0	4,423.7	5,343.0	68,400.4	28,242.5	

CALCULATIONS

	Quantity	Unit
T-35 ASPHALTIC CONCRETE SURFACE		
(1/4") 91,330.4 x .0347 = 3170.9 + 69.7 = 3240.6	3241	Cu. Yds.
B-35 ASPHALTIC CONCRETE LEVELING		
(1/4") 91,133.8 x .0347 = 3162.3		
(1/2") 87,388.0 x .0139 = 1,214.7		
(3") 4,423.7 x .0833 = 368.5 + 61.3 = 429.8		
Total 4806.8	4,807	Cu. Yds.
B-119 CRUSHED AGGREGATE BASE		
(8") 5,343 x .2222 = 1187.2 + 195.4 = 1382.6	1,383	Cu. Yds.
T-30 BITUMINOUS TACK COAT		
68,400.4 x .10 = 6,840	6,840	Gals.
I-18 STABILIZED CRUSHED AGGREG. SHOULDER		
28,242.9 x .0833 + 85 = 2,437.6	2,438	Cu. Yds.
E-11 WATER		
[(6202 + 2353 + 76) x .005] + (1383 x .015) = 64	64	M-Gal.
L-9 COMMERCIAL FERTILIZER (10-6-4)		
(46384 + 873) x .00009 = 4.25	4.25	Tons
L-9 AGRICULTURAL LIMING MATERIALS		
(46384 + 873) x .00045 = 21.26	21.26	Tons

EXCAVATION & SEEDING 5

From Sheet	Excav. Cu. Yds.	Embank. Cu. Yds.	Emb.+20% Cu. Yds.	Seeding Sq. Yds.
5	1564	1,133	1,360	8,940
6	1471	2,386	2,863	8,696
7	1,891	508	610	8,499
8	1,829	918	1,101	8,234
9	1,456	550	660	7,001
10	810	707	848	5,014
Totals	9021	6,202	7,442	46,384

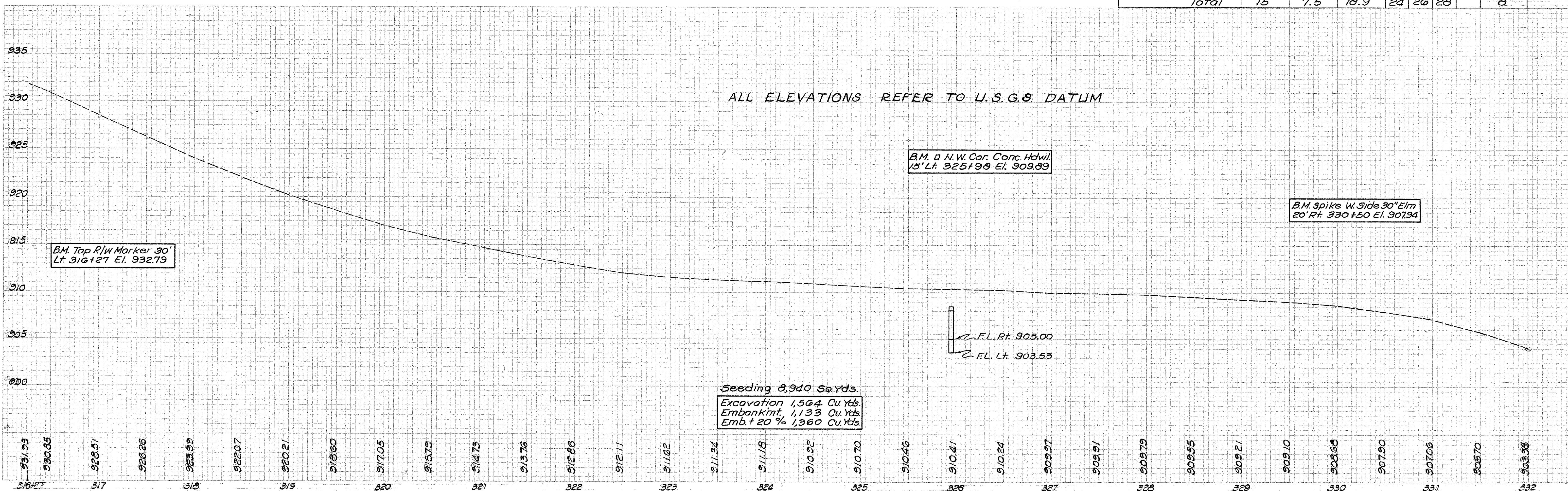
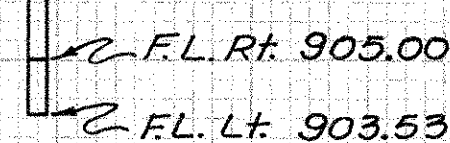
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Sheet No.	E-12 Pipe Removal Lin. Ft.		I-3 Rdwy. Drainage Lin. Ft.			I-15 Guard Rail Lin. Ft.		L-10 Sod Sq. Yds.
	15" & under		10"	12"	15"	Removal	New	
5	52							374
6	21					606	450	147
7	14			110				
8							50	225
9	17		66					127
Totals	104		66	110		606	500	873

GENERAL SUMMARY

Item No.	Quantity	Unit	Description	From
ROADWAY				
E-1	9021	Cu. Yds.	Roadway Excavation, as per plan	Table 5
E-9	Lump	LUMP	Removal of Trees and Stumps	Sheet 3
E-11	64	M-Gal.	Water	Calcul.
E-12	104	Lin. Ft.	Pipe Removed (15" & under)	Table 2
I-15	606	Lin. Ft.	Guard Rail removed and disposed of	Table 2
I-15	500	Lin. Ft.	Guard Rail steel beam type (shallow) or Flexible Steel Plate Tension Type, Std. Strength	Table 2
T-10	100	Cu. Yds.	Traffic Compacted Surface Course for Maintaining Traffic	Sheet 3
T-10	100	Cu. Yds.	Traffic Compacted Surface Course, as per plan for Maintaining Traffic	Sheet 3
M-10	4	Tons	Calcium Chloride, Furnished & Applied for Maintaining Traffic	Sheet 3
L-9	46,384	Sq. Yds.	Seeding and Protecting	Table 5
L-9	4.25	Tons	Commercial Fertilizer (10-6-4)	Calcul.
L-9	21.26	Tons	Agricultural Liming Materials	Calcul.
L-10	873	Sq. Yds.	Sodding, as per plan	Table 2
I-18	2438	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches	Calcul.
I-18	76	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches, as per plan	Table 3
DRAINAGE				
E-2	160	Cu. Yds.	Excavation for Structures	Table 1
E-3	30	Cu. Yds.	Channel Excavation	Table 1
I-1	136	Lin. Ft.	12" Pipe for driveways, Sec. M-6.4(a)	Table 3
I-1	50	Lin. Ft.	15" Pipe for driveways, Sec. M-6.4(a)	Table 3
I-1	28	Lin. Ft.	24" Pipe for driveways, Sec. M-6.4(a), 12 Gage	Table 3
I-3	166	Lin. Ft.	10" Roadway drainage	53 & T 2
I-3	110	Lin. Ft.	15" Roadway drainage	Table 2
I-3	112	Lin. Ft.	15" Bituminous coated corr. metal pipe for roadway drainage, Sec. M-6.4(c)	Table 3
I-3	100	Lin. Ft.	4" Roadway drainage	Sheet 3
I-3	100	Lin. Ft.	6" Roadway drainage	Sheet 3
I-3	100	Lin. Ft.	12" Roadway drainage	Sheet 3
I-3	100	Lin. Ft.	8" Roadway Drainage	Sheet 3
I-8	1	Each	Standard No. 7 side ditch catch basin	Table 3
I-9	3,500	Lin. Ft.	Stone Underdrains, No. 2	Sheet 3
I-10	21	Sq. Yds.	Riprap, Type 'A' Grout Filled	Table 3
I-10	40	Cu. Yds.	Dumped Rock Fill, As Per Plan	Table 3
S-1	11.6	Cu. Yds.	Concrete for Structures, Class 'C'	Table 1
S-1	38.1	Cu. Yds.	Concrete for Structures, Class 'E'	Table 1
S-4	3720	lbs.	Reinforcing Steel	Table 1
S-22	Lump	LUMP	Removal of Portions of Existing Structures	Table 1
S-23	89	Lin. Ft.	Dowel Holes	Table 1
S-24	Lump	Lump	Removal of Existing Structure, As Per Plan	Table 1
S-27	26	Lin. Ft.	24" Pipe for Roadway Culvert	Table 1
S-28	72	Lin. Ft.	10'-8" x 6'-11" Sectional Corr. Metal Structure, 10'-8" gage, Sec. M-6.4(g)	Table 1
Special	2	Each	Drain Basin, As Per Plan	Sheet 10
PAVEMENT				
T-35	3,241	Cu. Yds.	Asphaltic Concrete Surface Course, Type 'A' (70-80)	Calcul.
B-35	4,807	Cu. Yds.	Asphaltic Concrete Leveling Course (70-80)	Calcul.
T-30	6,840	Gals.	Bituminous Tack Coat, as per plan	Calcul.
B-119	1,383	Cu. Yds.	Crushed Aggregate Base Course	Calcul.

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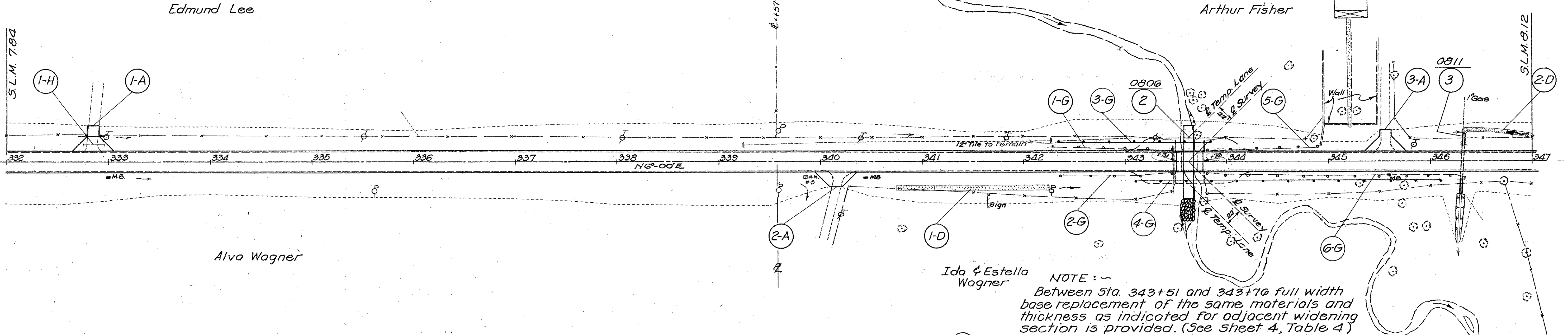
Begin Project S.L.M. 175
End Project S.L.M. 950



FED. RD. DIVISION	STATE	PROJECT	TYPE
2	OHIO		PURSES

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FAI-158 (1.75-9.46)



STRUCTURES 20' SPAN & UNDER

No.	Station	Type	Size	Length	Detail Sht. No.
2	343+62.95	Sec. Corr. Pipe	10' 8" x 6' 11"	72'	31
3	346+31.24	Pipe Ext.	24"	59.29'	32

D DITCHES

No.	From	To	Side	L-10 6' Wide Sq. Yds.
1-D	340+75	342+25	Rt.	100
2-D	346+30	347+00	Lt.	47
Total				147

H PIPE REMOVAL

No.	Station	Side	E-12 15" & Under Lin. Ft.
1-H	332+85	Lt.	21
Total			21

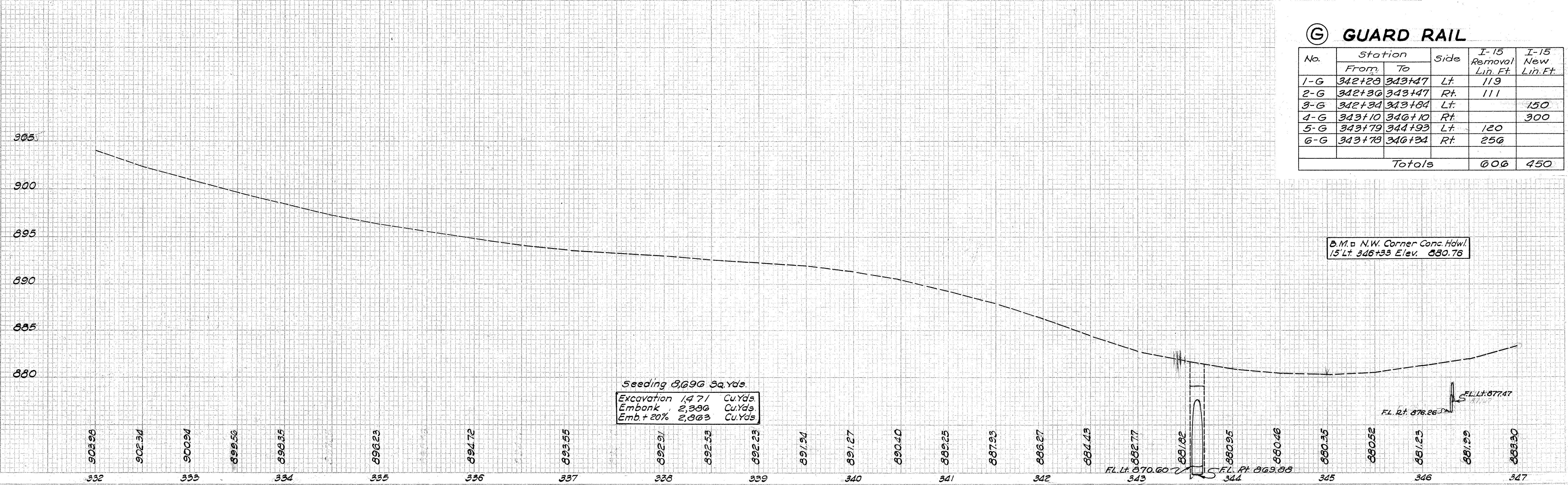
A DRIVES & APPROACHES

No.	Station	Side	I-18 Aggregate Cu. Yds.	T-35 Surface Cu. Yds.	B-119 Base Cu. Yds.	I-1 Pipe Lin. Ft.	I-10 Riprap Sq. Yds.	Detail on Sheet
1-A	332+85	Lt.	2	2.5	6.3	24		15
2-A	340+15	Rt.		2.5	6.3			16
3-A	345+57	Lt.	1	2.5	6.3			17
Total			3	7.5	18.9	24		

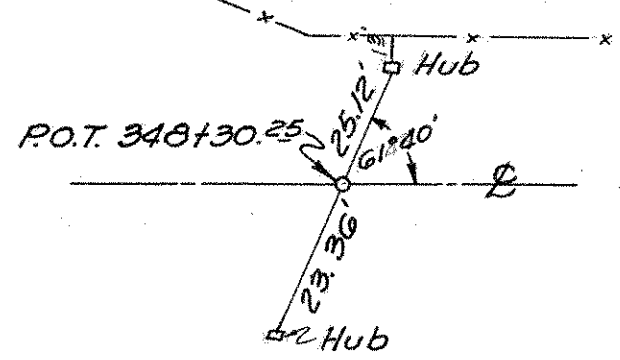
NOTE: ~
Between Sta. 343+51 and 343+76 full width base replacement of the same materials and thickness as indicated for adjacent widening section is provided. (See Sheet 4, Table 4)

G GUARD RAIL

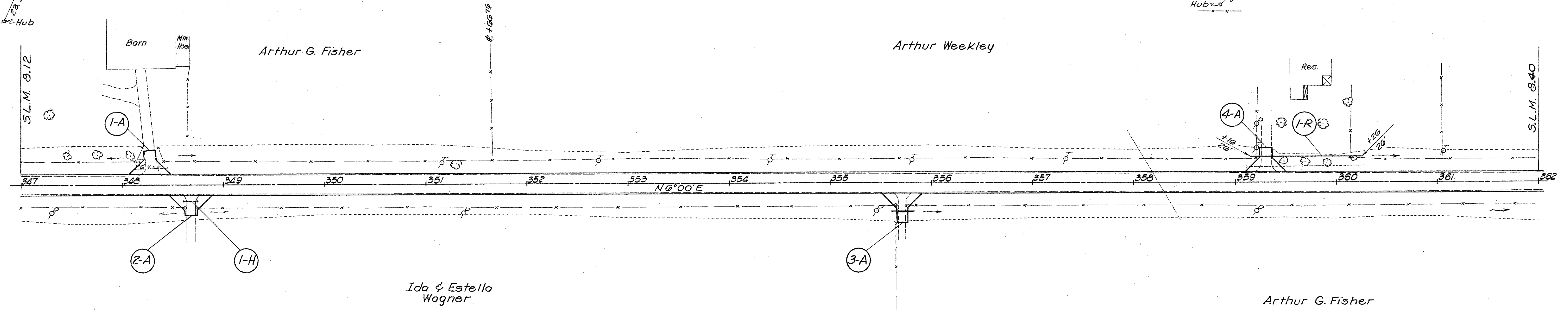
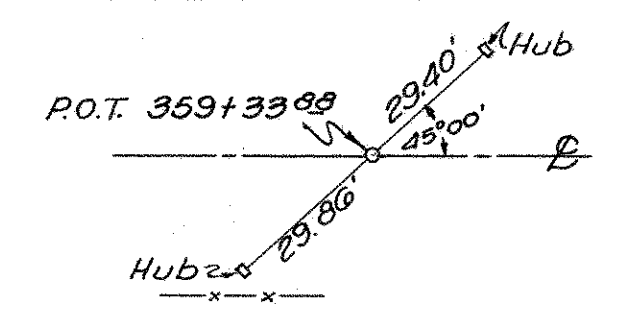
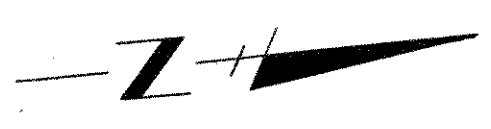
No.	Station From	To	Side	I-15 Removal Lin. Ft.	I-15 New Lin. Ft.
1-G	342+28	343+47	Lt.	119	
2-G	342+30	343+47	Rt.	111	
3-G	342+34	343+84	Lt.		150
4-G	343+10	346+10	Rt.		300
5-G	343+79	344+93	Lt.	120	
6-G	343+78	346+34	Rt.	256	
Totals				606	450



Seeding 8,696 Sq. Yds.
Excavation 1,471 Cu. Yds.
Embank. 2,386 Cu. Yds.
Emb. + 20% 2,863 Cu. Yds.



Begin Project S.L.M. 1.75
End Project S.L.M. 9.50



(R) ROADWAY DRAINAGE

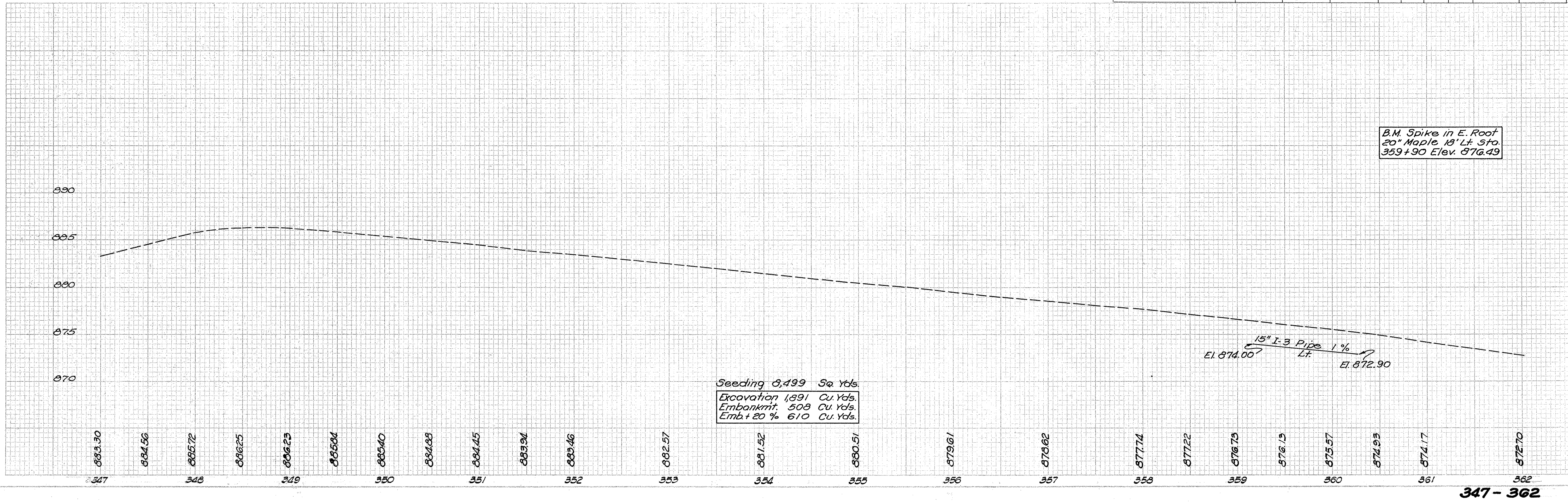
No.	Station		Side	I-3 Pipe Lin. Ft.	
	From	To		12"	15"
I-R	359+16	360+20	Lt.		110
Total					110

(H) PIPE REMOVAL

No.	Station	Side	E-12 15" & Under Lin. Ft.	
I-H	348+69	Rt.	14	
Total			14	

(A) DRIVES & APPROACHES

No.	Station	Side	I-18 Aggregate Cu. Yds.	T-35 Surface Cu. Yds.	B-119 Base Cu. Yds.	I-1 Pipe Lin. Ft.		I-10 Riprap Sq. Yds.	Detail on Sheet
						12"	15"		
1-A	348+32	Lt.	2	2.5	6.3				18
2-A	348+69	Rt.	9						18
3-A	355+73	Rt.	11			24			19
4-A	359+30	Lt.	2	2.5	6.3				20
Total			24	5.0	12.6	24			



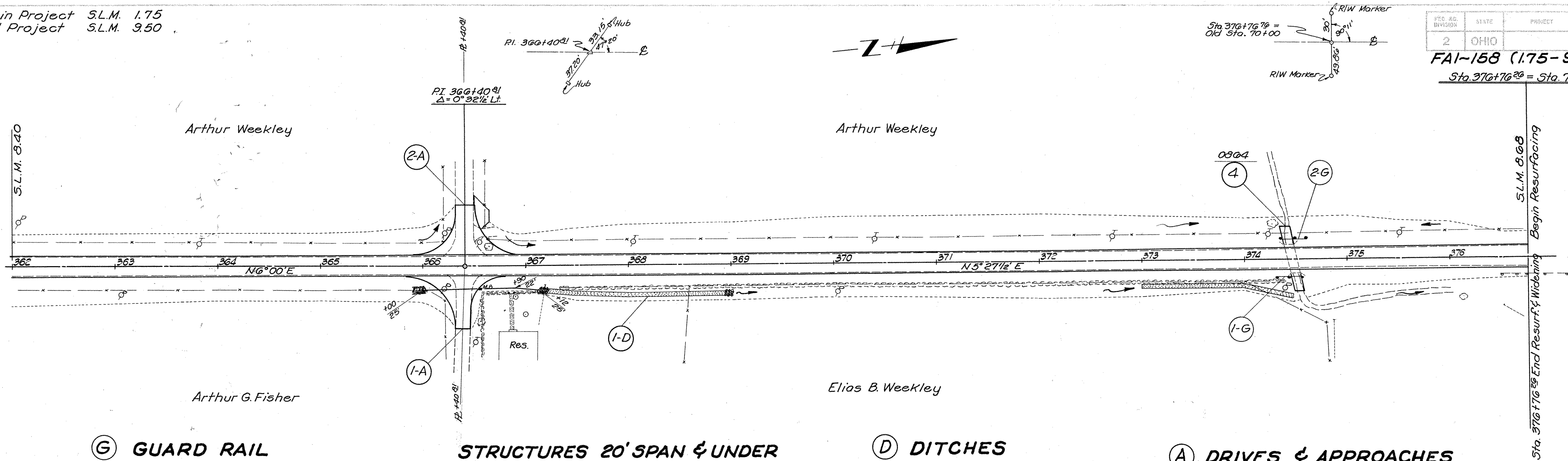
Begin Project S.L.M. 1.75
End Project S.L.M. 9.50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO		

FAI-158 (1.75-9.46)

Sta. 376+76.20 = Sta. 70+00

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36



Ⓒ GUARD RAIL

No.	Station		Side	I-15 New G.R. Lin. Ft.
	From	To		
1-G	374+31	374+50	Rt	25
2-G	374+30	374+61	Lt	25
Total				50

STRUCTURES 20' SPAN & UNDER

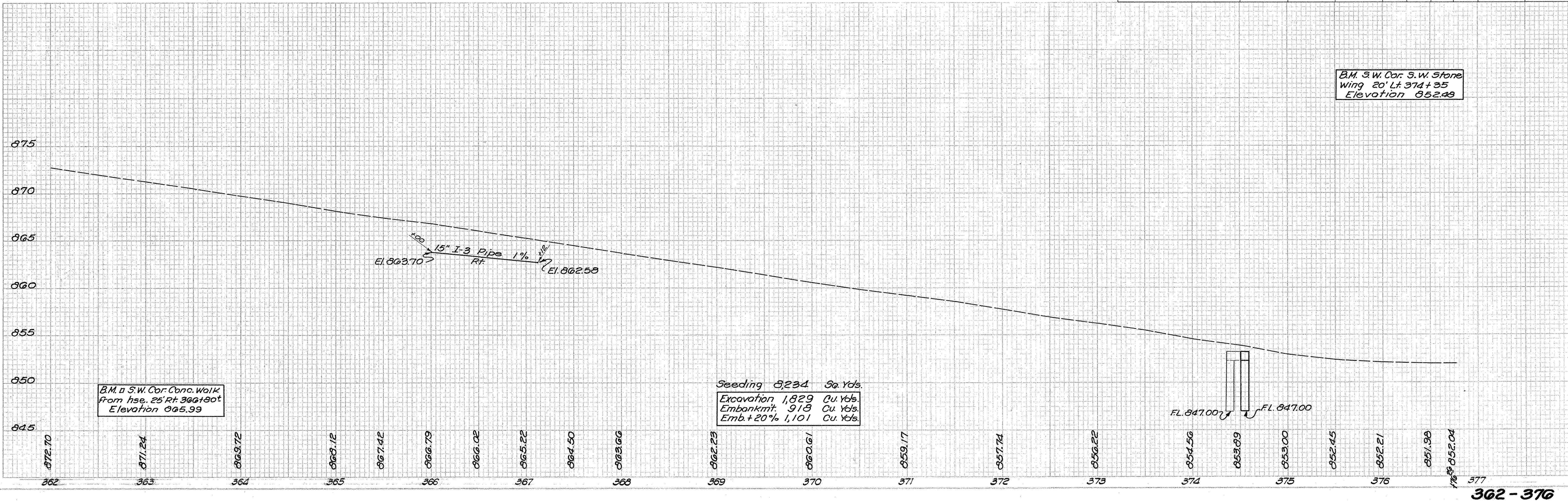
No.	Station	Type	Size	Length	Detail Sht. No.
4	374+47.24	STC. Ext.	9x5.5	60.7'	33

Ⓓ DITCHES

No.	From	To	Side	L-10 6' Wide Sq. Yds.
1-D	367+05	369+02.5	Rt.	125
2-D	373+00	374+50	Rt.	100
Total				225

Ⓐ DRIVES & APPROACHES

No.	Station	Side	Detail on Sheet
1&2-A	366+40.91	Rt. & Lt.	Quantities carried to Summary from detail. 29

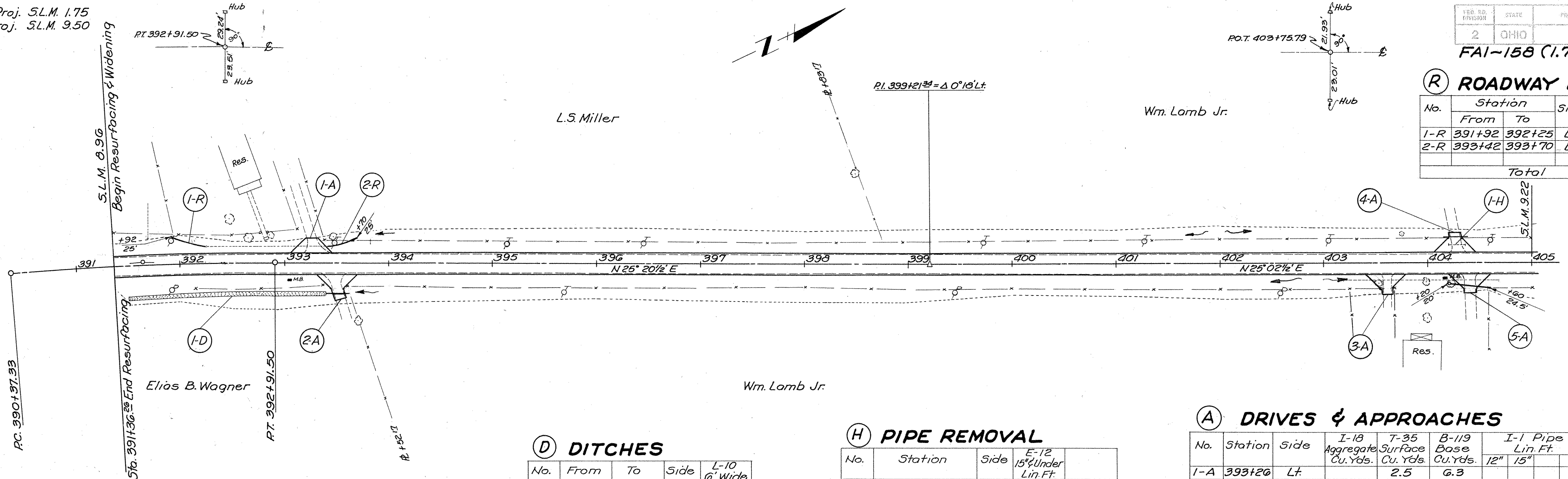


Begin Proj. S.L.M. 1.75
End Proj. S.L.M. 9.50

FAI-158 (1.75-9.46)

(R) ROADWAY DRAINAGE

No.	Station		Side	I-3 Pipe	
	From	To		10"	Lin. Ft.
1-R	391+92	392+25	Lt.	36	
2-R	393+42	393+70	Lt.	30	
Total				66	



PC 390+57.33
Sta. 391+36.26 End Resurfacing
S.L.M. 8.96
Begin Resurfacing & Widening
PT 392+91.50
L = 254.17'
E = 2.81'
T = 127.17'
R = 2864.79'
D = 2°00' Rt.
Δ = 5°05' Rt.
PI = 391+64.41

NOTE: ~
Superelevate this curve to
standard 0.66% ~ see sheet 23
B-35 = 18 Cu. Yds.

(D) DITCHES

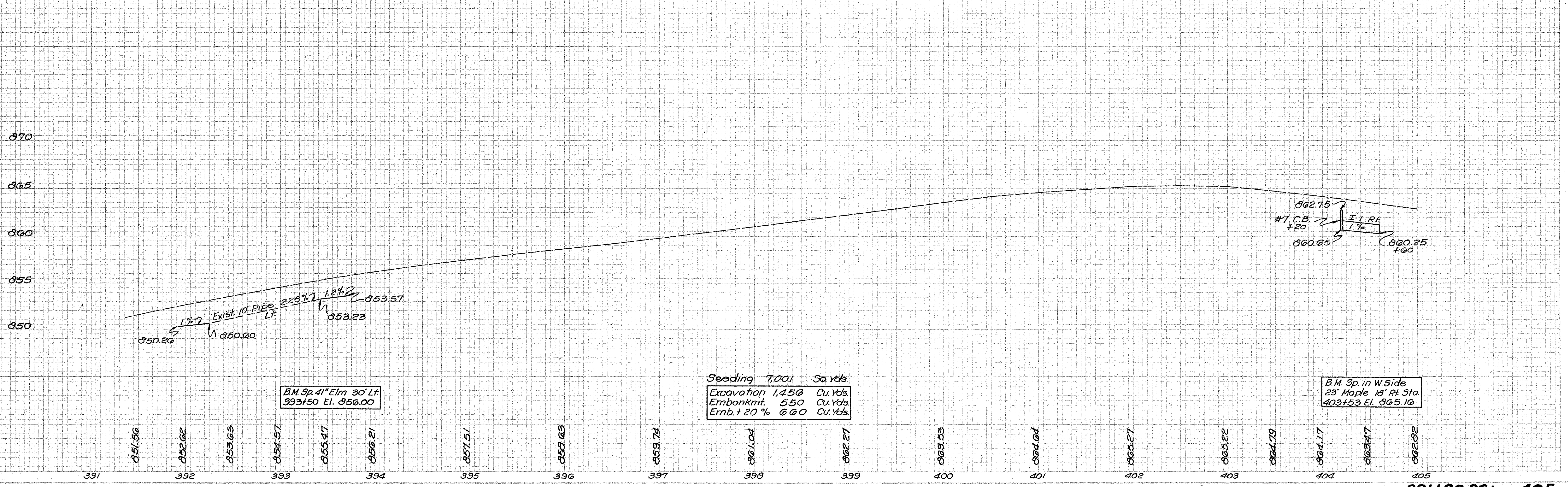
No.	From	To	Side	L-10 6' Wide Sq. Yds.
1-D	391+50	393+40	Rt.	127
Total				127

(H) PIPE REMOVAL

No.	Station	Side	E-12 15' Under Lin. Ft.
1-H	404+27	Lt.	17
Total			17

(A) DRIVES & APPROACHES

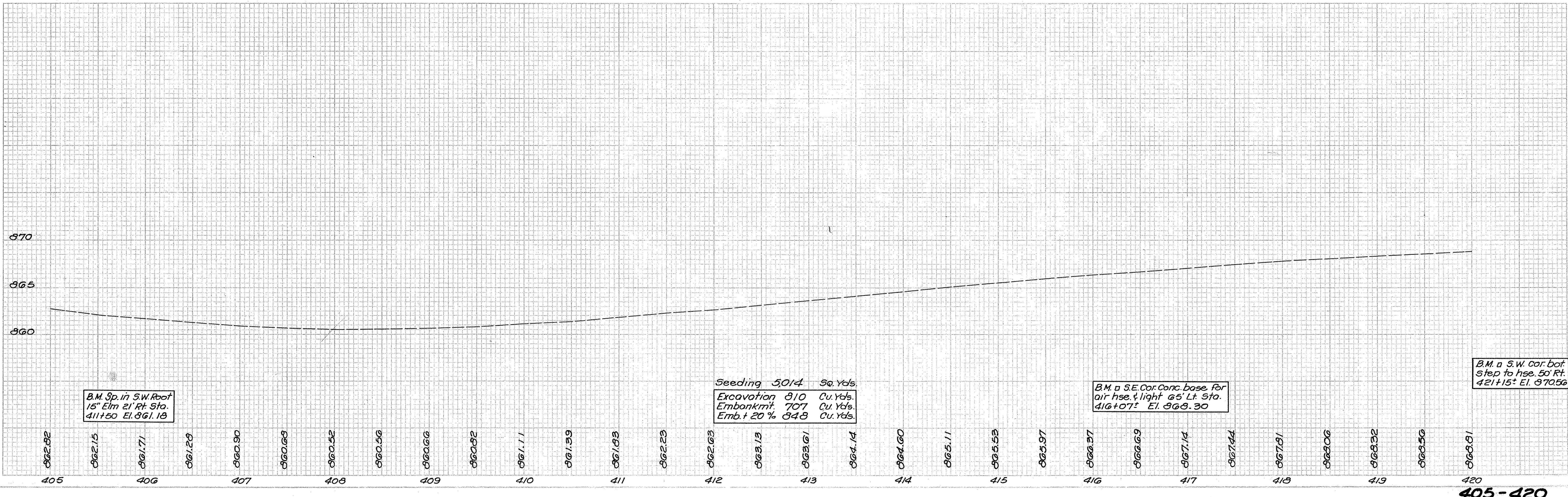
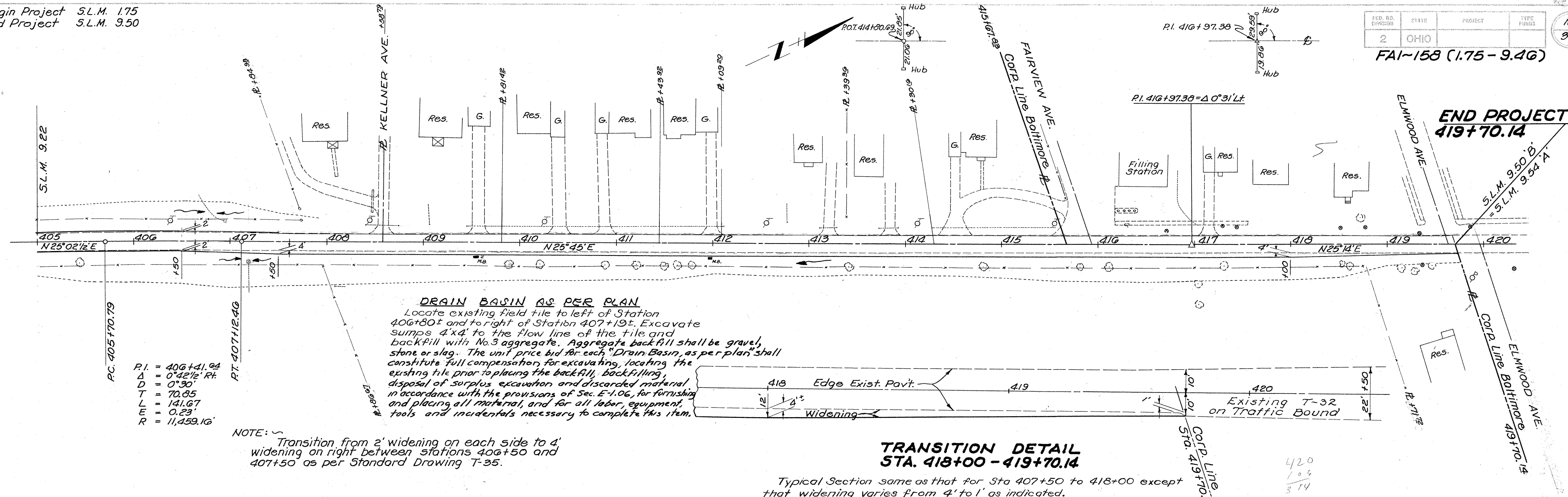
No.	Station	Side	I-18 Aggregate Cu. Yds.	7-35 Surface Cu. Yds.	B-119 Base Cu. Yds.	I-1 Pipe Lin. Ft.		I-8 #7 C.B. Each	Detail on Sheet
						12"	15"		
1-A	393+26	Lt.		2.5	6.3				23
2-A	393+51	Rt.	10				24		23
3-A	403+62	Rt.	9						25
4-A	404+27	Lt.	9			24			25
5-A	404+40	Rt.	1	2.5	6.3	40		1	25
Total			29	5.0	12.6	64	24	1	



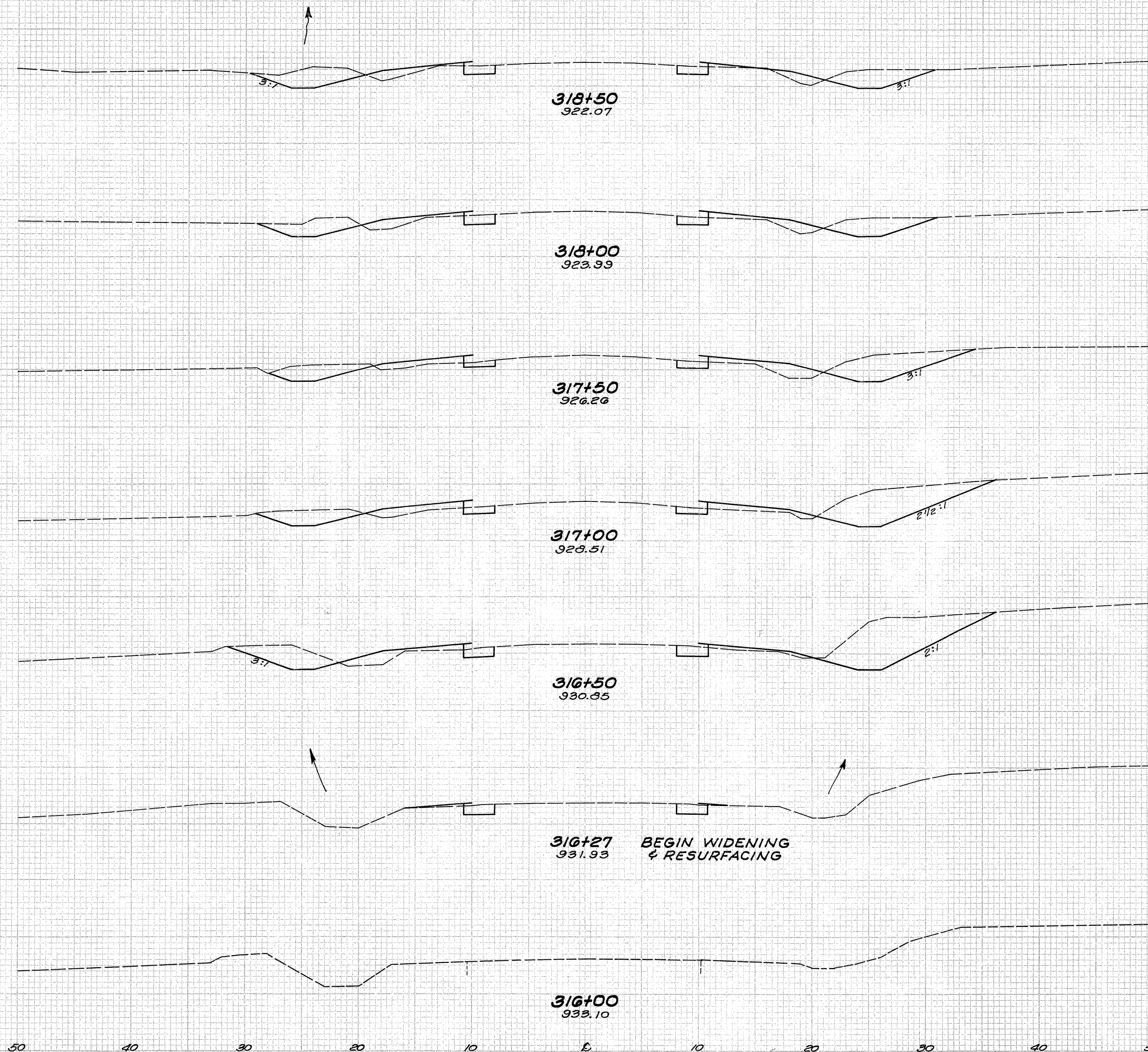
Seeding 7.001 Sq. Yds.
Excavation 1,456 Cu. Yds.
Embankmt. 550 Cu. Yds.
Emb. + 20% 660 Cu. Yds.

B.M. Sp. in W. Side
23' Maple 18' Rt. Sta.
403+53 El. 865.16

Begin Project S.L.M. 1.75
End Project S.L.M. 9.50



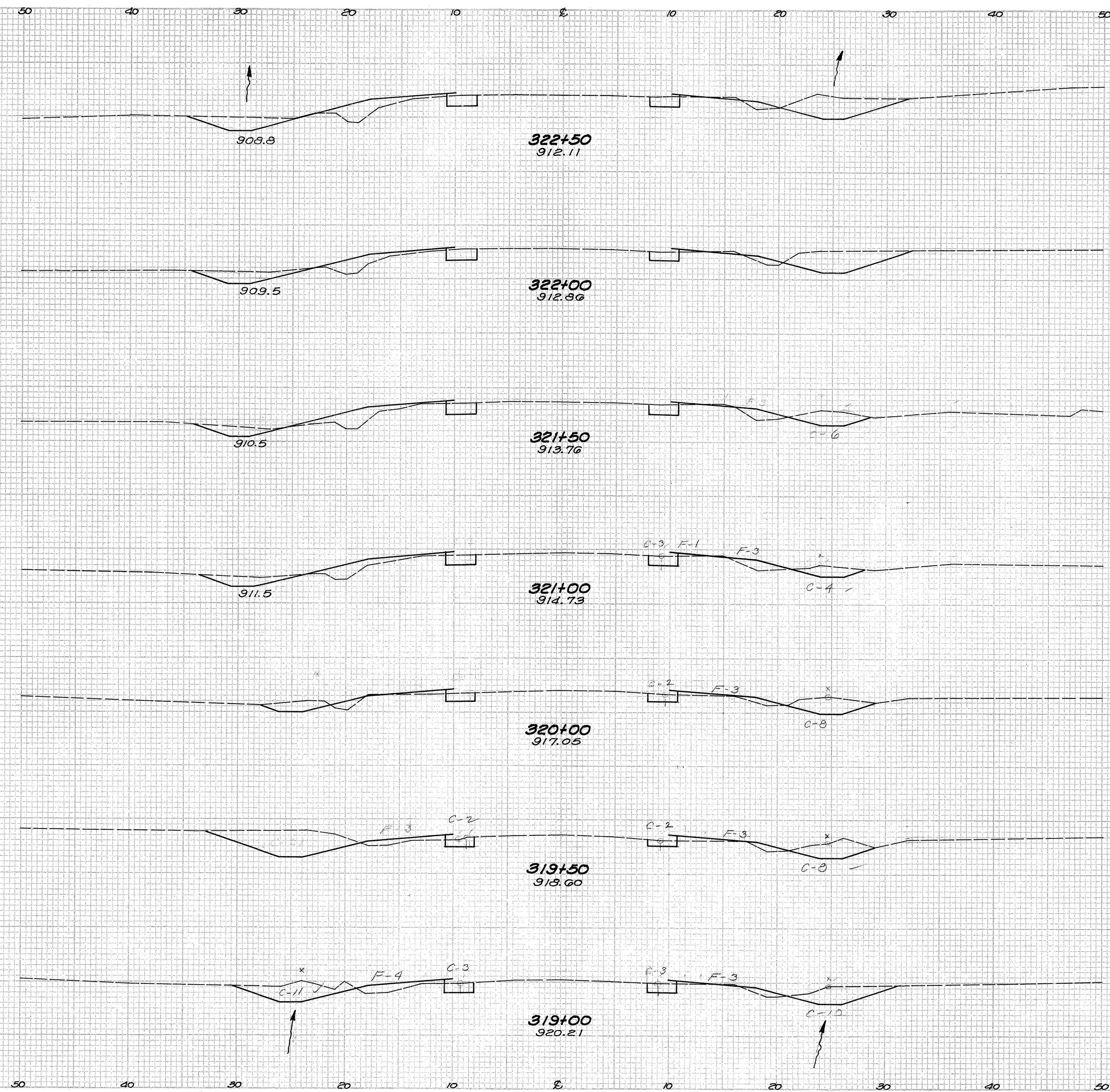
FA1-158-(1.75-9.46)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
24	7		
		44	13
23	7		
		49	15
30	9		
		65	17
40	9		
		84	15
51	7		
		23	3
4	1		

316+00 ~ 318+50

FA1-158~(1.75-9.46)

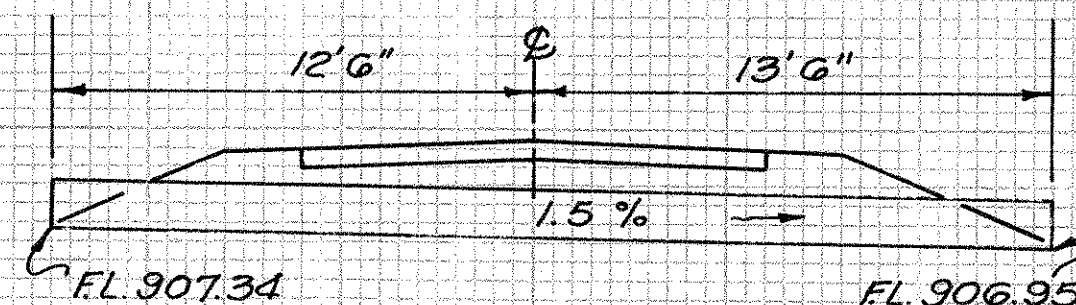
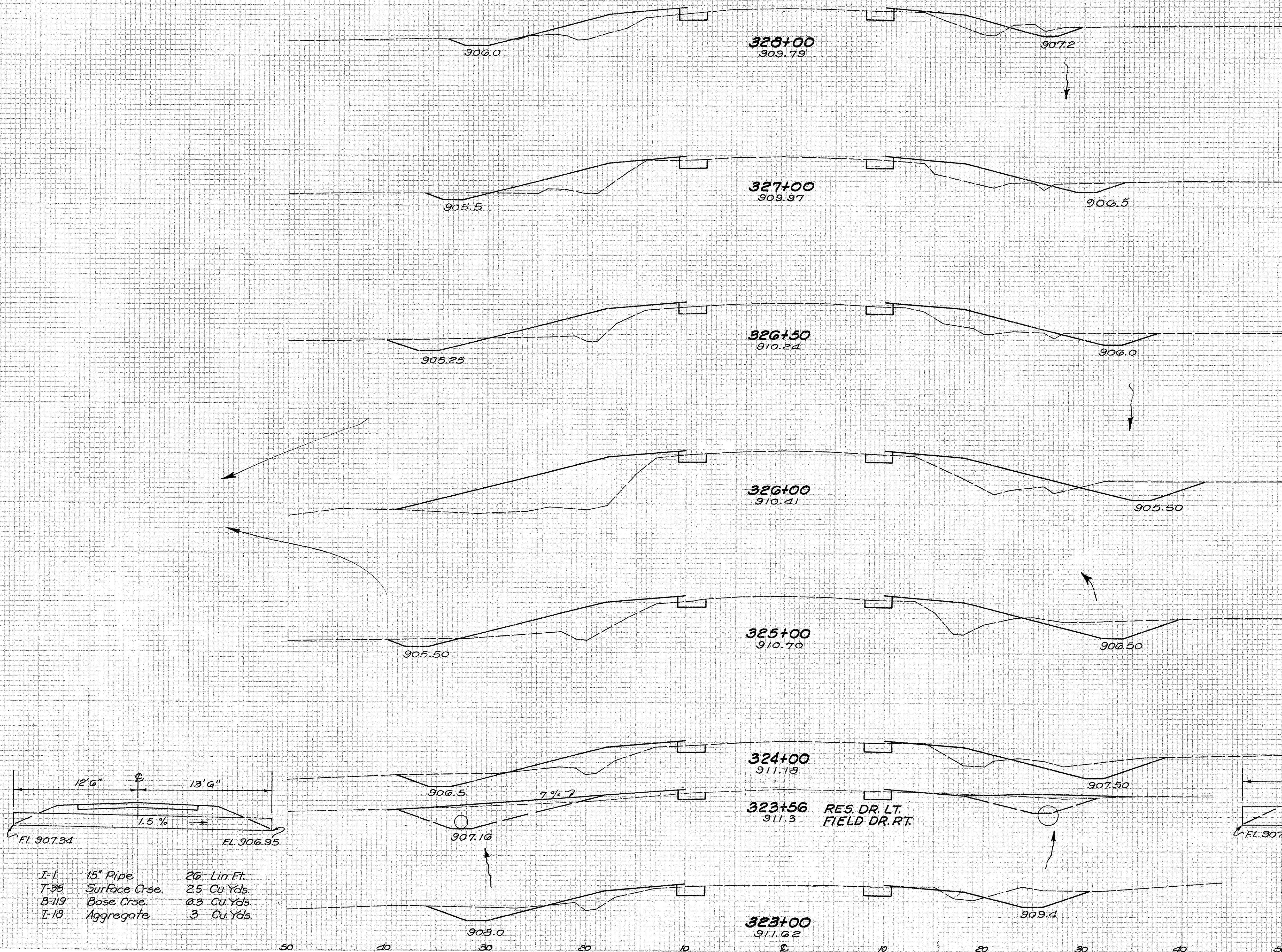


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
29	11		
		54	19
29	10		
		42	19
10	11		
		28	20
14	11		
		57	30
17	5		
		40	10
33	0		
		50	12
27	7		
		47	13

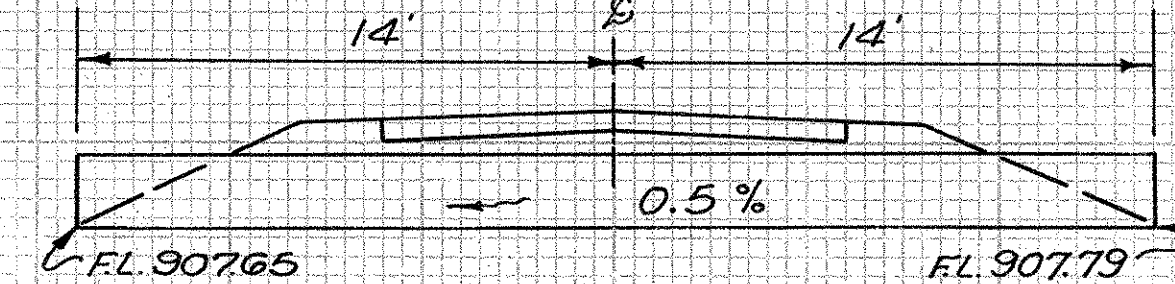
319+00 ~ 322+50

NO 2-7-56

FAI-158~(1.75-9.40)



- I-1 15" Pipe 26 Lin. Ft.
- T-35 Surface Crse. 25 Cu. Yds.
- B-119 Base Crse. 0.3 Cu. Yds.
- I-18 Aggregate 3 Cu. Yds.

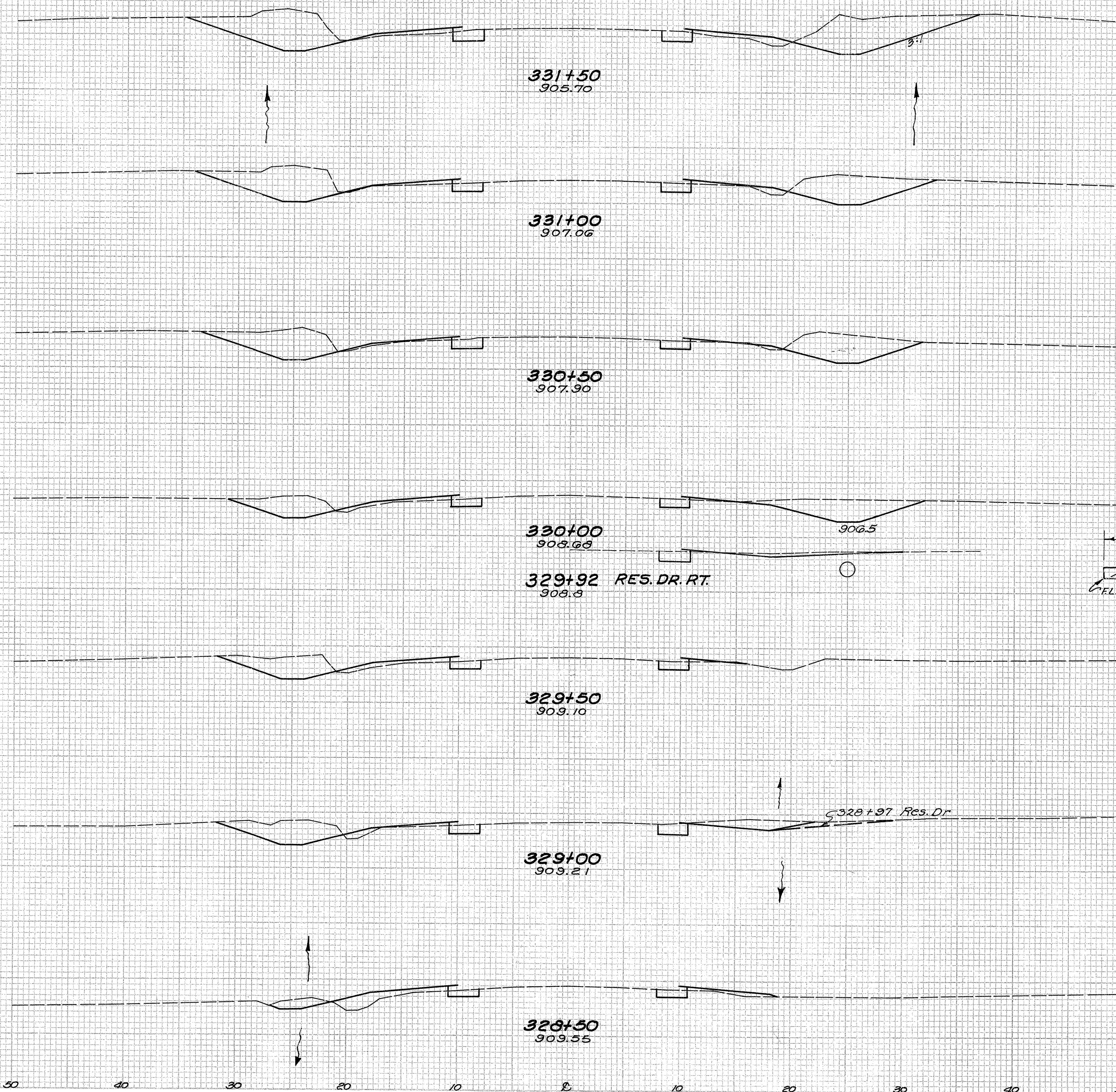


- I-1 24" Pipe 28 Lin. Ft.
- I-18 Aggregate 10 Cu. Yds.
- I-10 Riprap 8 Sq. Yds.

END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
11	25		
		41	117
11	38		
		27	70
18	44		
		33	133
18	100		
		74	287
22	55		
		69	150
26	20		
		100	70
28	12		
		53	21

323+00~328+00

FAI-158~(1.75-9.40)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
64	7		
		104	11
48	5		
		86	6
45	2		
		73	6
34	5		
		48	9
18	5		
		43	7
		10	
23	3		
		33	12
8	10		
		18	32

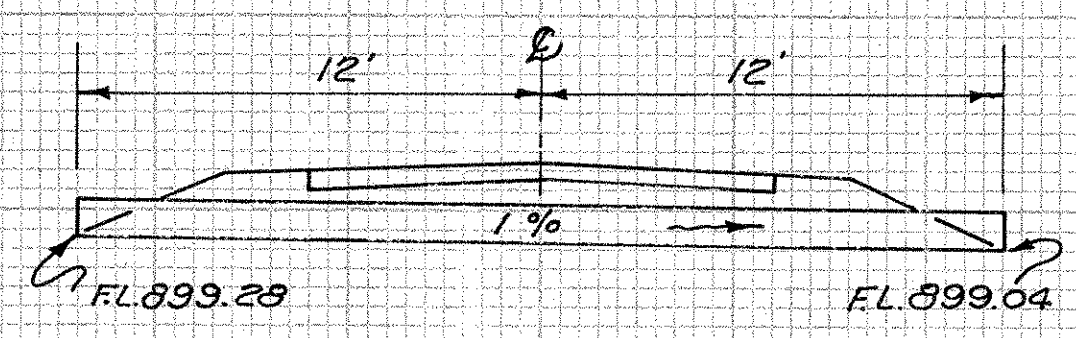
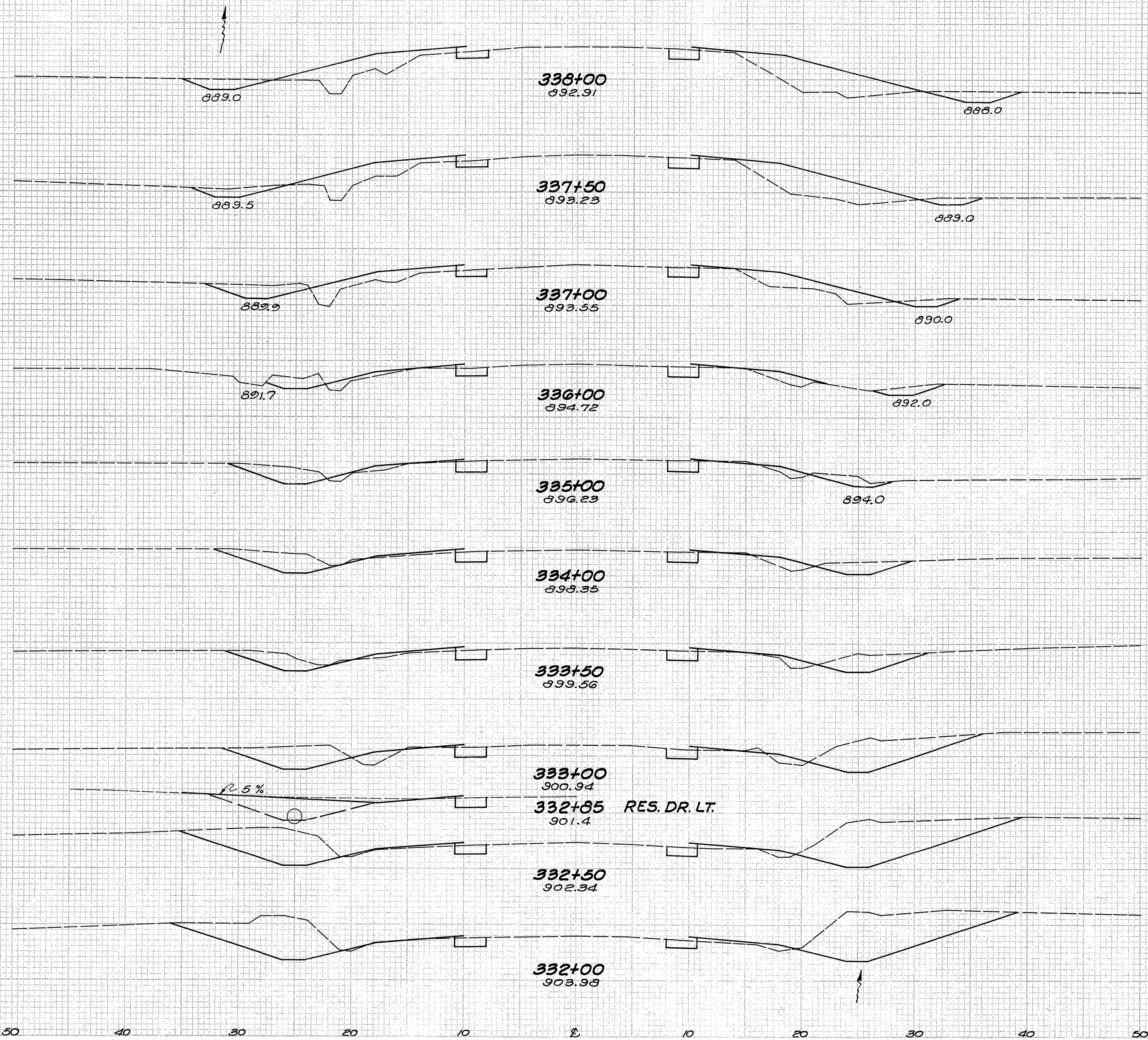
Dr. Rt. 328+27

RES. DRIVE 328+97

T-35 Surface 2.5 Cu. Yds.
B-119 Base 6.3 Cu. Yds.
I-18 Aggregate 1 Cu. Yds.

328+50~331+50

FAI-158~(1.75-9.46)

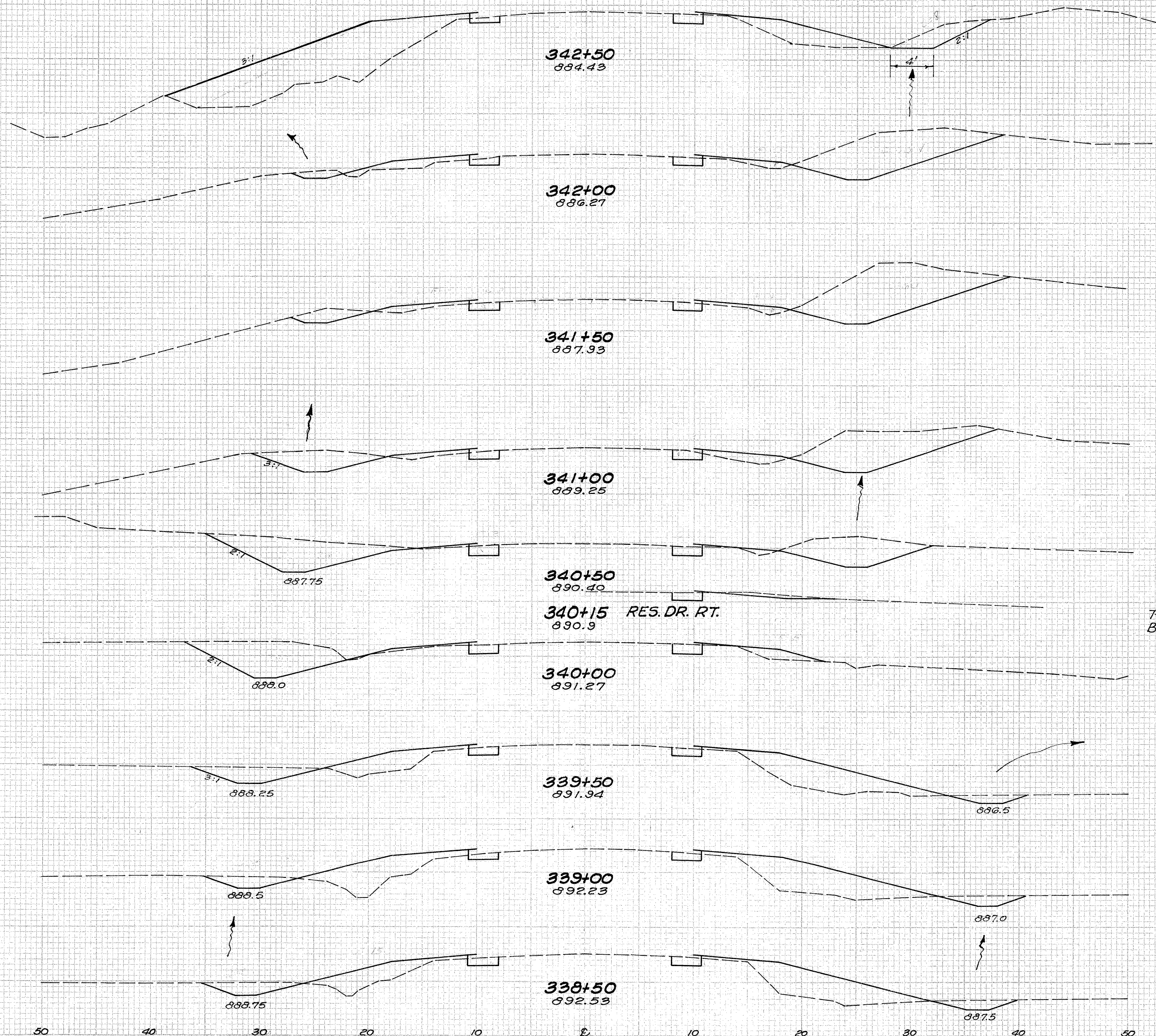


- I-1 12" Pipe 24 Lin. Ft.
- T-35 Surface 2.5 Cu. Yds.
- B-119 Base 6.3 Cu. Yds.
- I-18 Aggregate 2 Cu. Yds.

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
15	47		
		24	80
11	39		
		33	57
25	23		
		87	57
22	8		
		74	24
18	5		
		74	20
22	6		
		41	10
22	5		
		62	10
45	0		
		113	10
77	5		
		149	8
84	4		
		137	10

332+00~338+00

FAI-158~(1.75-9.46)

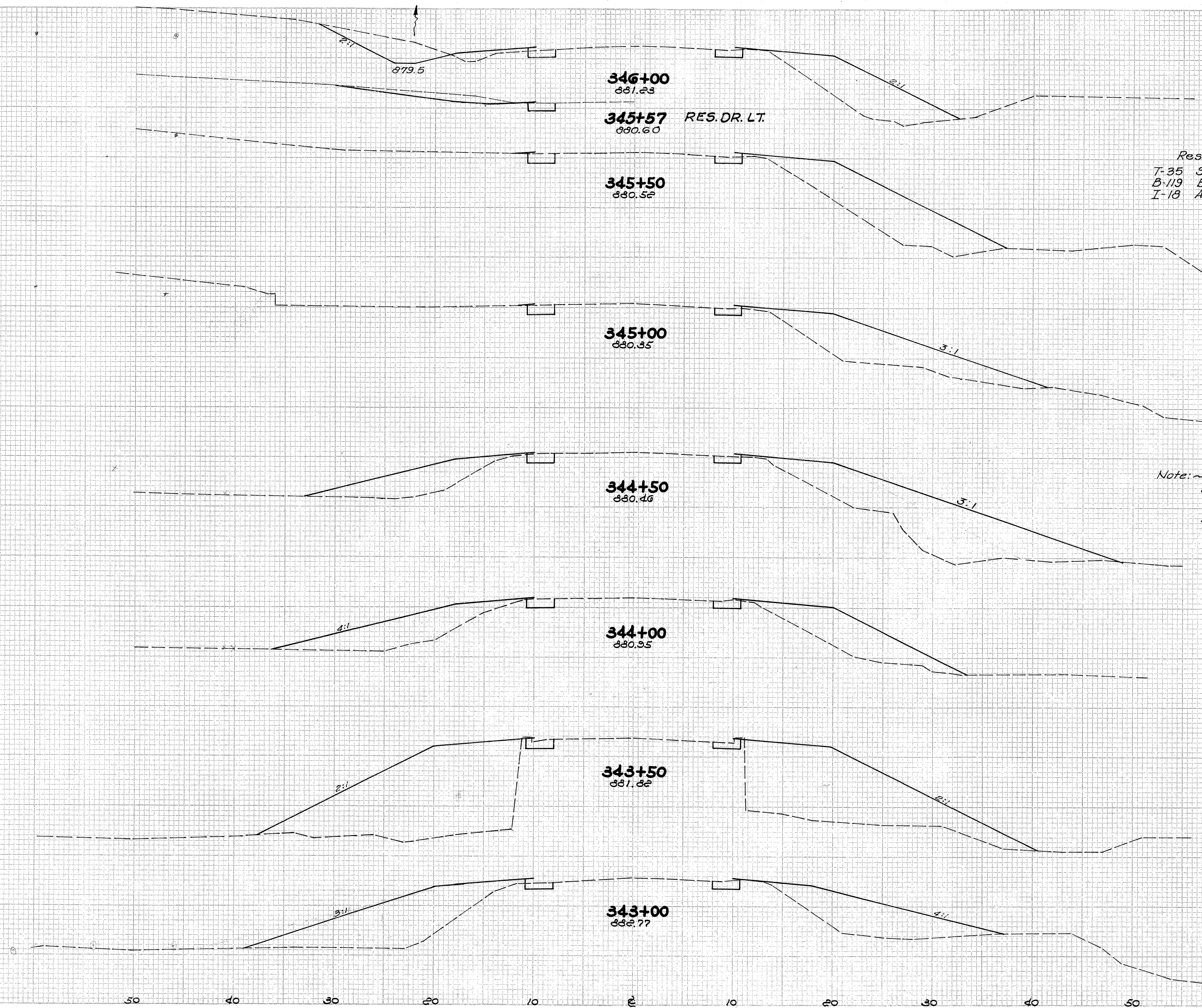


Res. Drive 340+15
 T-35 Surface 2.5 Cu. Yds.
 B-119 Base 6.3 Cu. Yds.

END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
11	100		
		60	102
54	10		
		115	13
70	3		
		123	17
63	9		
		114	11
60	3		
		7	
		87	7
34	5		
		48	47
18	46		
		29	39
13	61		
		25	101
14	48		
		27	88

338+50 ~ 342+50

FA1-158-(1.75-9.46)



Res. Drive 345+57
 T-35 Surface 2.5 Cu. Yds.
 B-119 Base 6.3 Cu. Yds.
 I-18 Aggregate 1 Cu. Yds.

Note: ~Begin 3:1 Slope on Rt
 at Sta 344+40 and
 continue forward to
 345+20

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
23	57		
		10	
		26	122
5	75		
		9	107
5	67		
		9	132
5	149		
		9	181
5	94		
		9	354
5	288		
		9	387
5	130		
		15	213

343+00 ~ 346+00

FAI-158-(1.75-9.46)

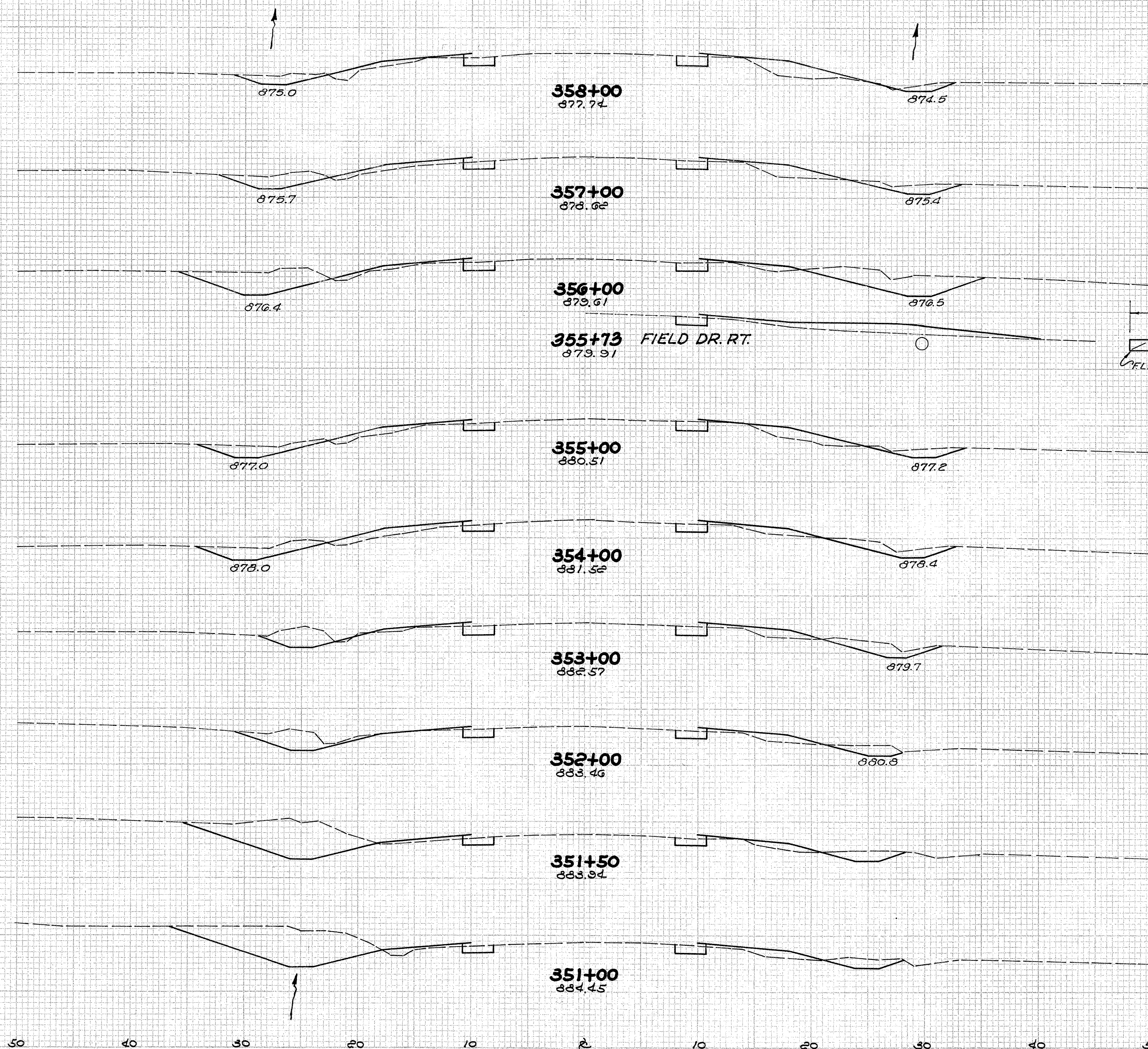
Res. Drive 348+42
 T-35 Surface 2.5 Cu.Yds.
 B-119 Base 6.3 Cu.Yds.
 I-17 Aggregate 2 Cu.Yds.

Field Drive 348+69
 I-18 Aggregate 9 Cu.Yds.

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
48	9		
		92	10
51	8		
		98	15
55	8		
		108	10
62	3		
		121	8
69	6		
		153	12
96	7		
		172	15
90	9		
		126	19
46	11		
		52	41
10	33		
		31	83

346+50 ~ 350+50

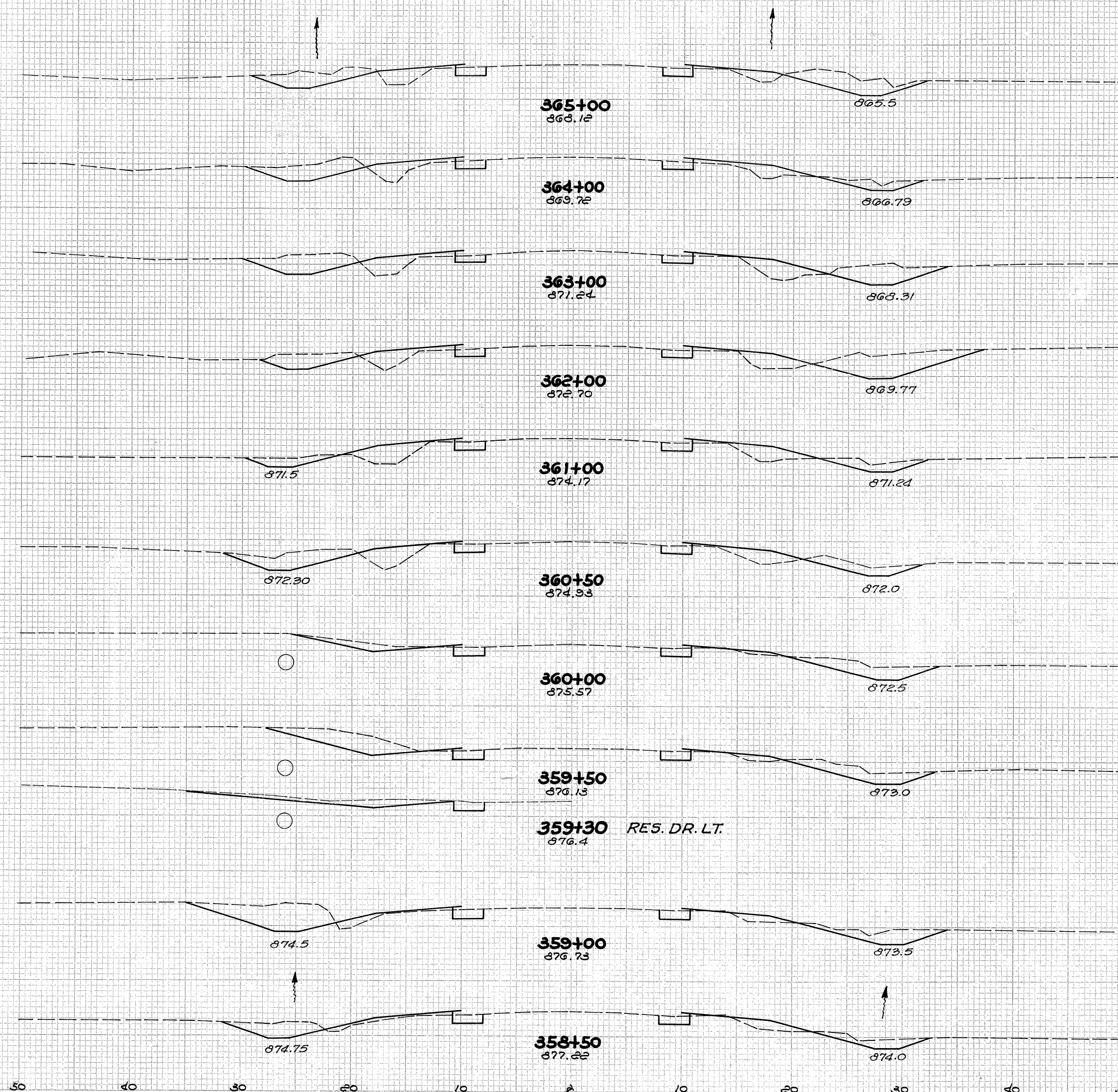
FAI-158-(1.75-9.46)



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
11	15		
		52	50
17	12		
		100	33
40	0		
		104	33
10	12		
		63	43
13	11		
		70	35
20	0		
		70	20
13	0		
		54	11
40	0		
		80	13
10	0		
		87	10

351+00 ~ 358+00

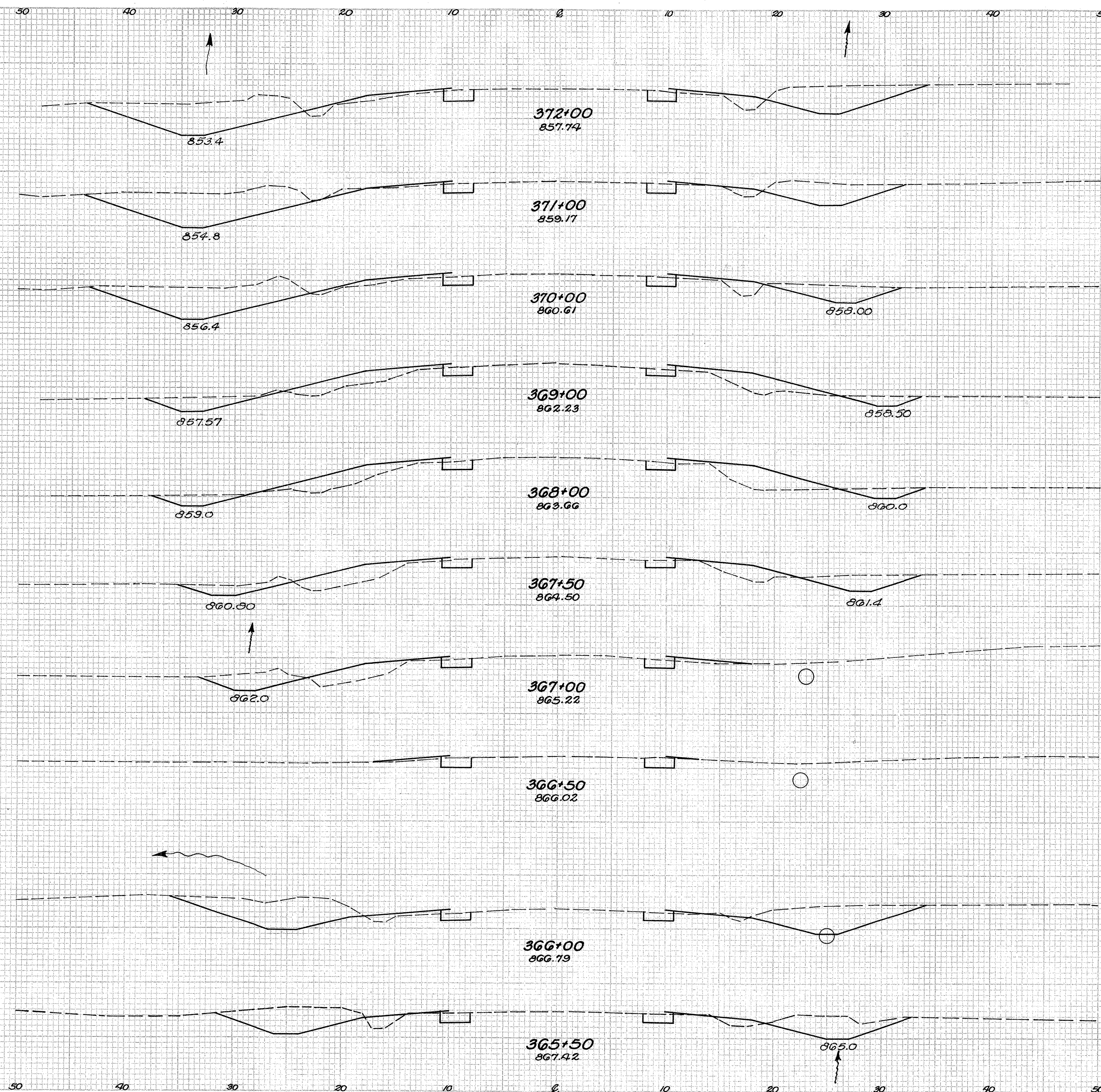
FA1-158-(1.75-9.46)



Res Drive 359+30
T-35 Surface 2.5 Cu. Yds.
B-119 Base 6.3 Cu. Yds.
I-18 Aggregate 2 Cu. Yds.

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
28	10		
		91	43
21	13		
		93	56
29	17		
		115	59
33	15		
		89	61
15	18		
		34	31
22	15		
		37	17
18	3		
		43	6
28	4		
		50	10
33	7		
		48	15
19	9		
		28	13

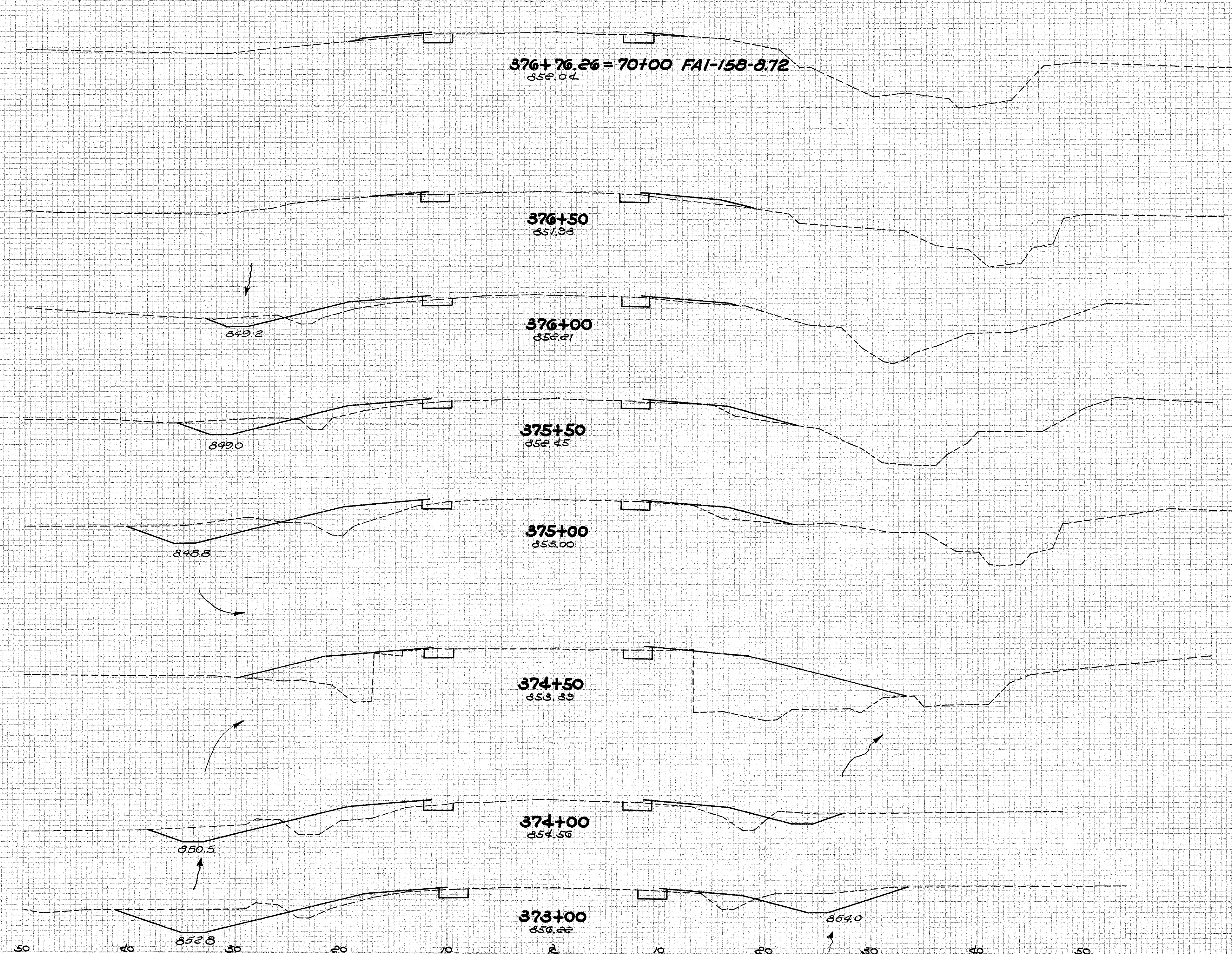
358+50 - 365+00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
63	11		
		252	26
68	3		
		226	24
54	10		
		131	07
17	20		
		57	107
14	32		
		32	48
21	20		
		32	31
14	13		
2	120	13	
		17	13
4	1		
		60	5
61	4		
		95	9
42	0		
		65	15

365+50-372+00

FAI-158~(1.75-9.46)

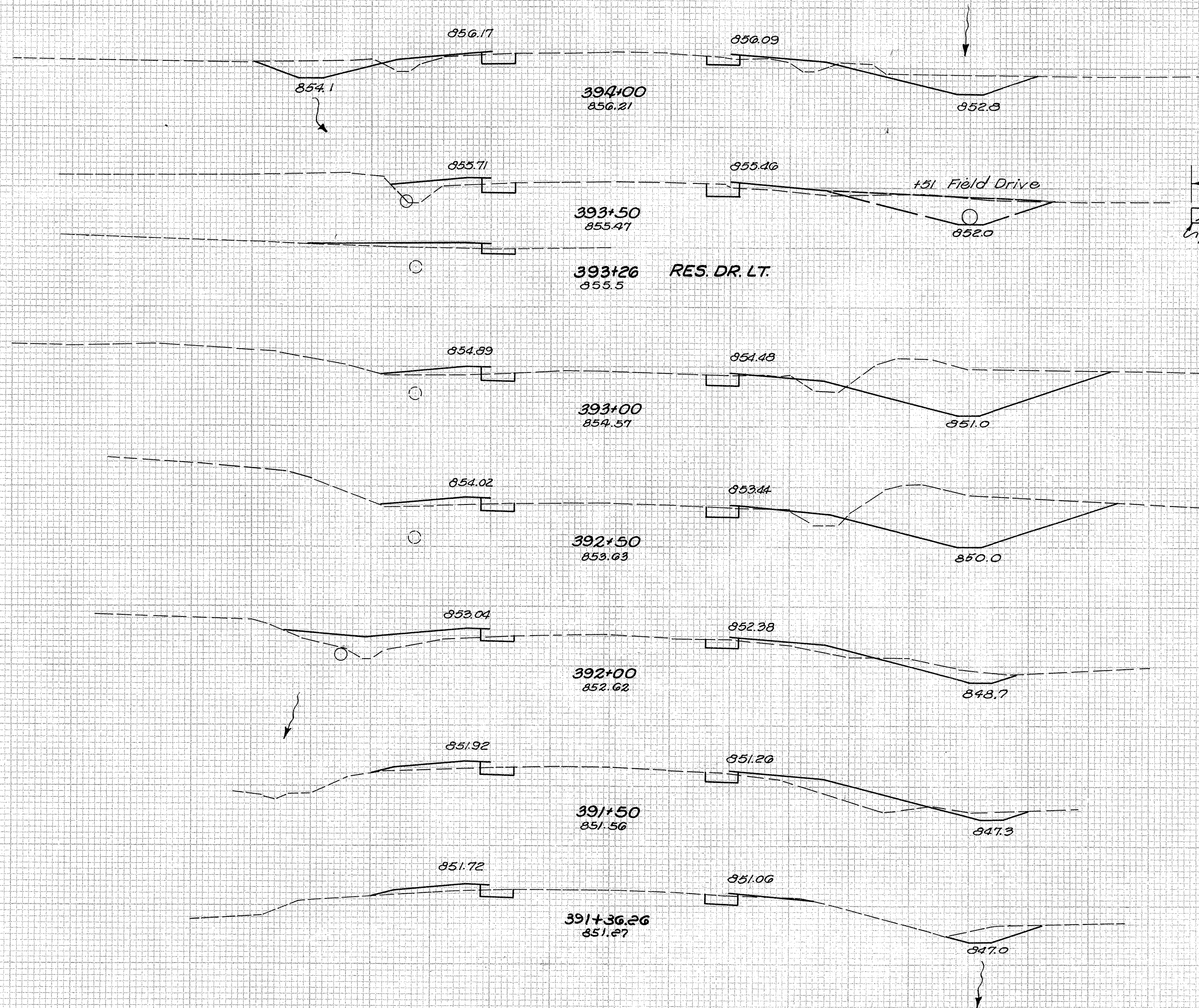


End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
4	1		
		4	2
4	4		
		12	13
9	10		
		20	20
		13	12
		31	32
20	23		
		22	114
4	100		
		23	115
21	24		
		122	65
45	11		
		209	41

373+00 ~ 376+76.26

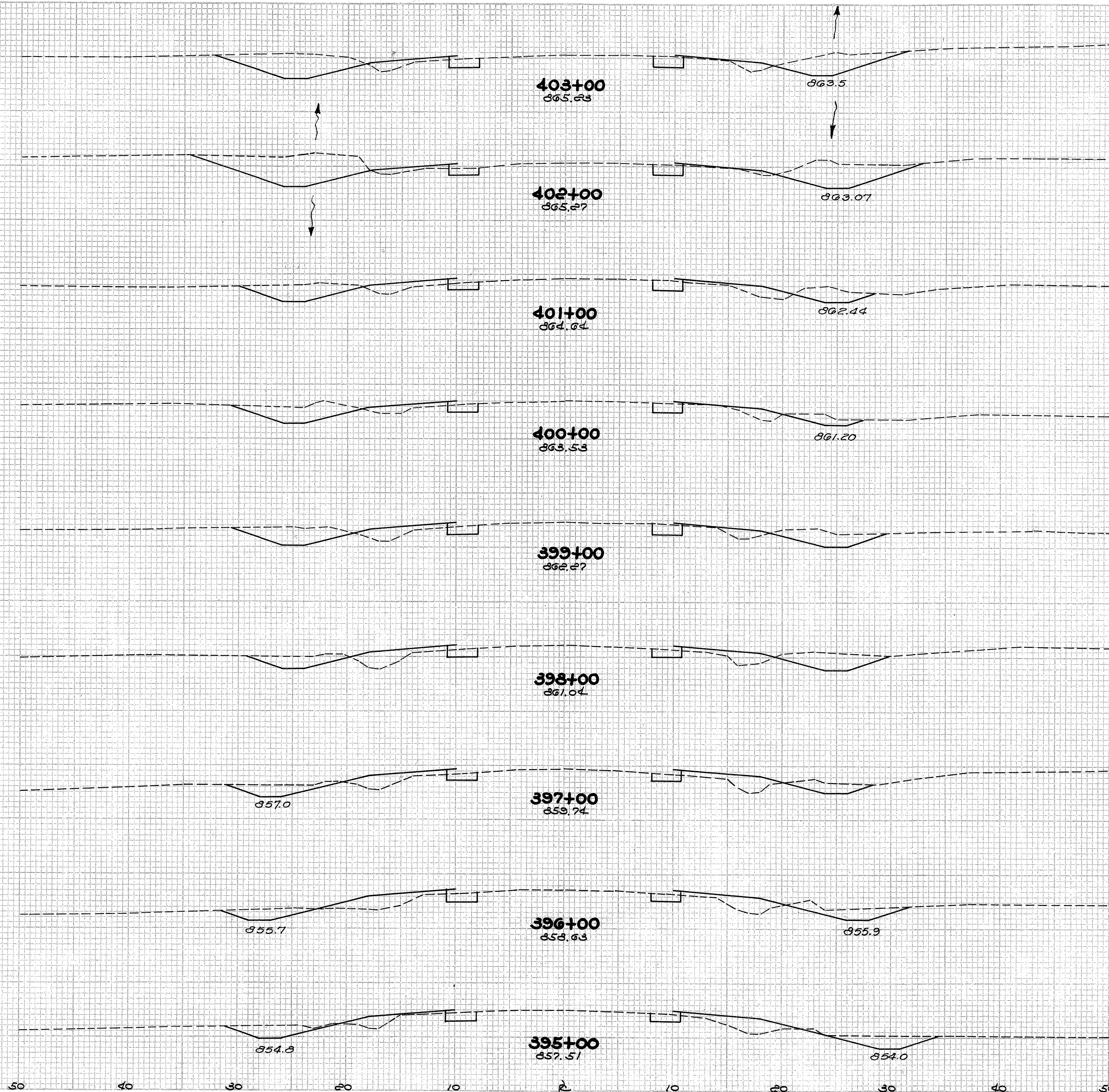
FAI-158-(1.75-9.46)

Res. Drive 393+26
T-35 Surface 2.5 Cu. Yds.
B-119 Base 6.3 Cu. Yds.



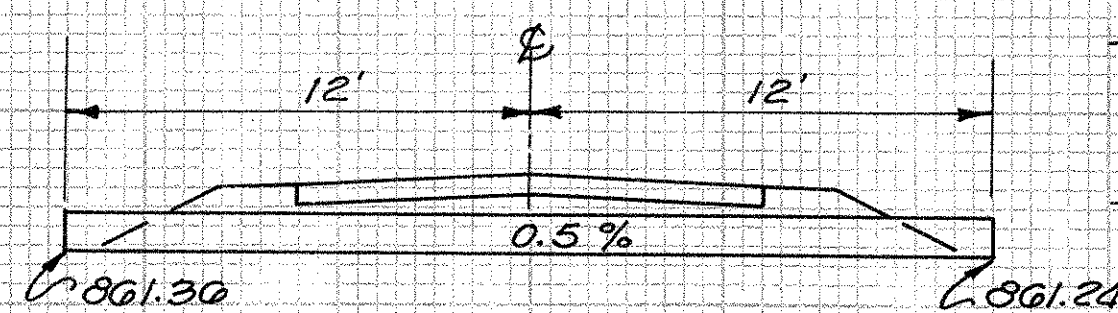
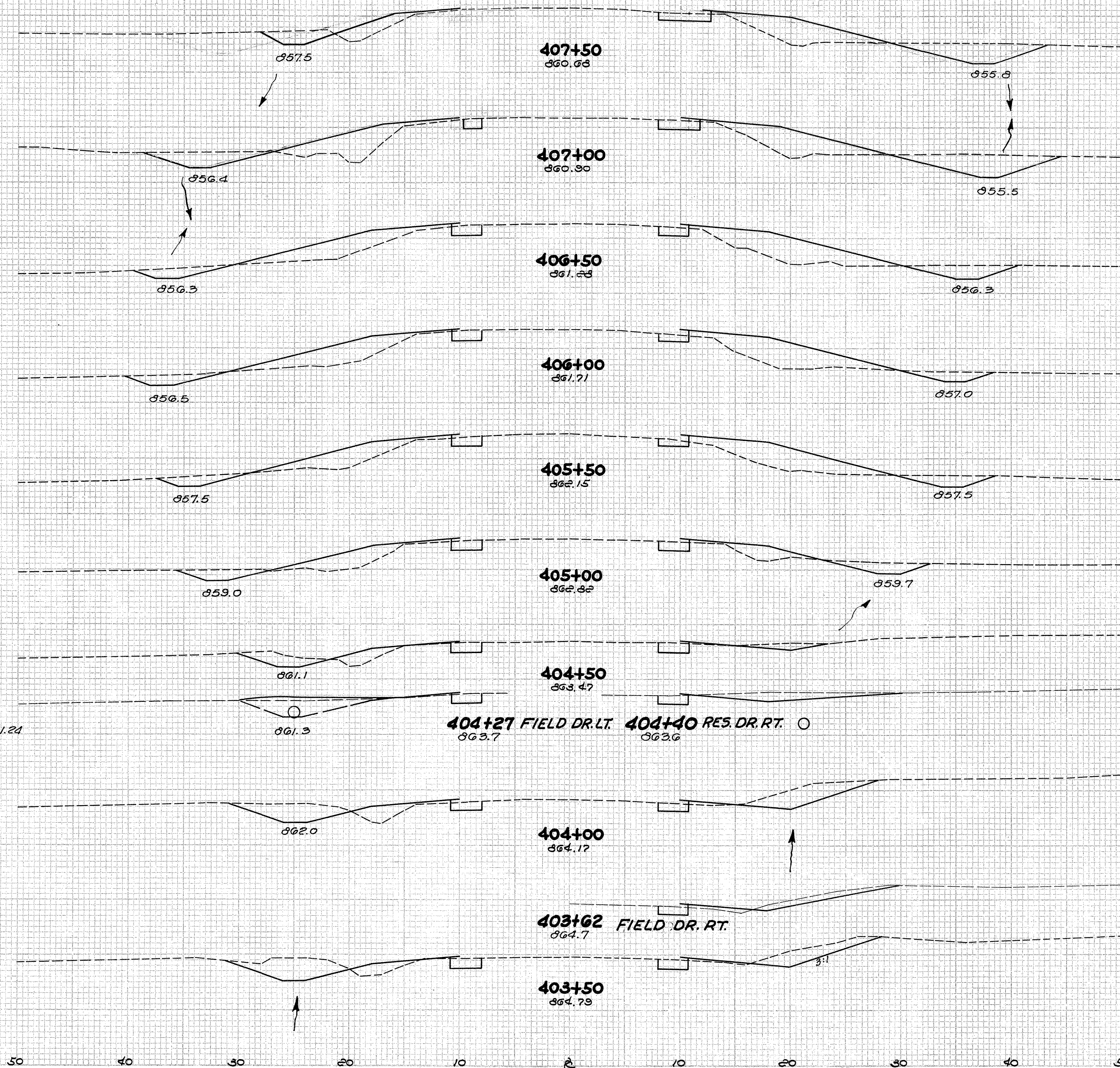
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
30	8		
		52	13
26	11		
		2	0
		52	17
63	7		
		121	15
68	9		
		74	23
12	21		
		18	36
7	13		
		4	0
10	5		

391+36.26 ~ 394+00



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
40	9		
		170	24
55	4		
		150	20
26	10		
		87	35
21	9		
		93	33
29	9		
		90	39
23	12		
		74	50
17	15		
		65	59
18	17		
		67	57
18	14		
		89	41

395+00 ~ 403+00

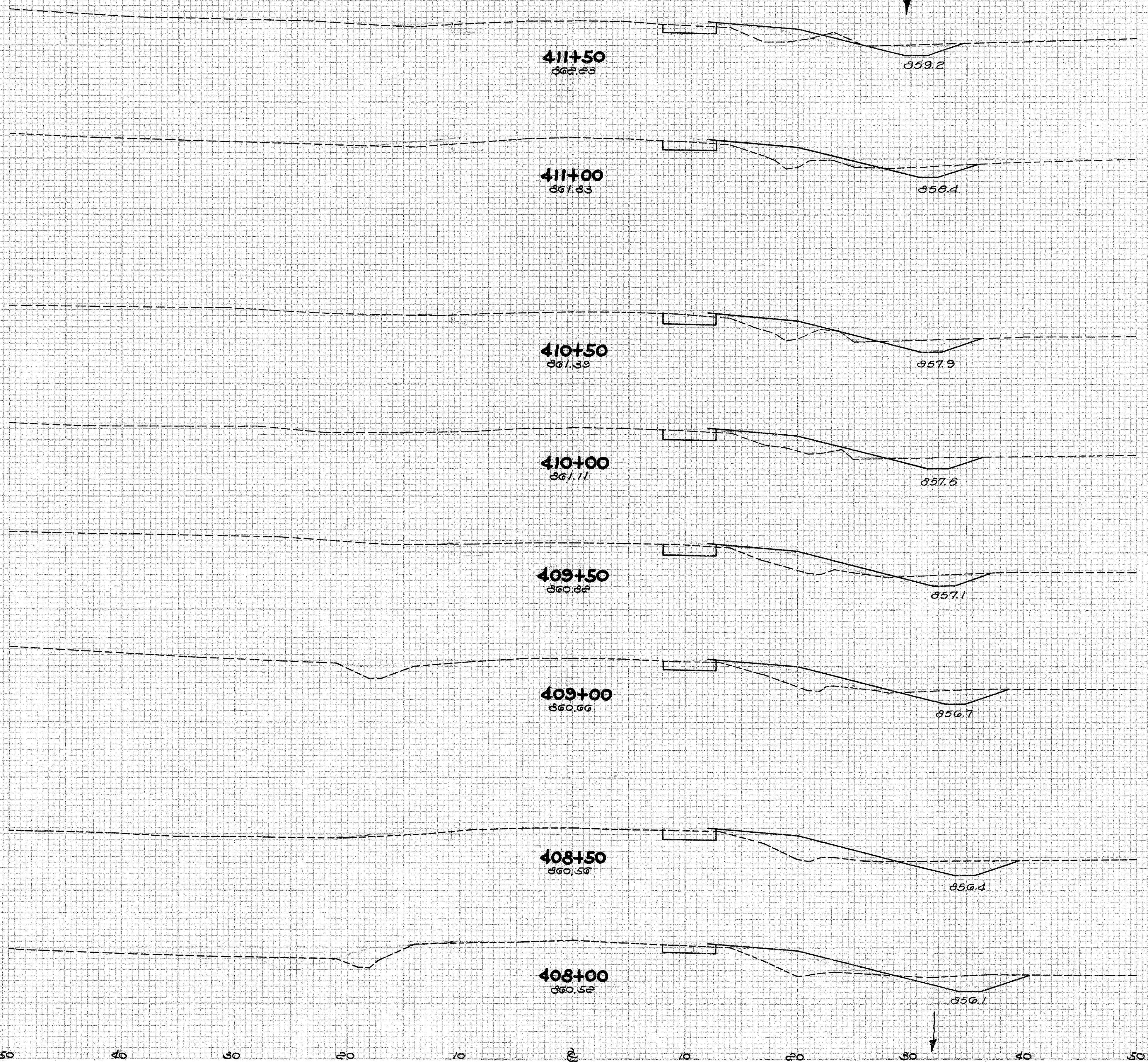


I-1 12" Pipe 24 Lin. Ft.
I-18 Aggregate 9 Cu. Yds.

Res. Drive 404+40
T-35 Surface 2.5 Cu. Yds.
B-119 Base 6.3 Cu. Yds.
I-18 Aggregate 1 Cu. Yds.
I-1 12" Pipe 40 Lin. Ft.
I-8 No. 7 Catch Basin 1 Each

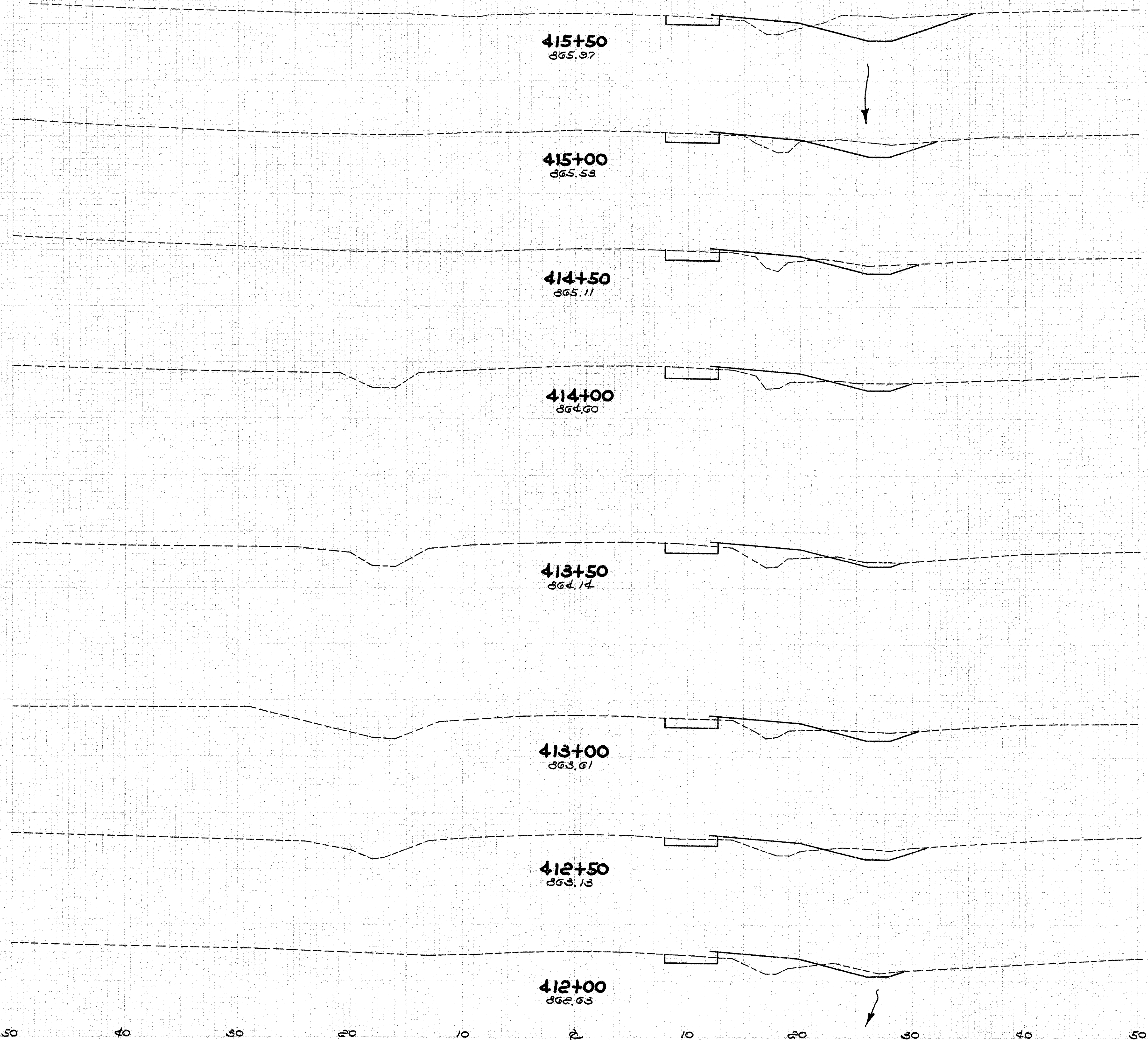
Field Drive 403+62
I-18 Aggregate 9 Cu. Yds.

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
23	25		
		52	59
33	39		
		48	77
19	44		
		32	81
16	43		
		29	80
15	43		
		30	80
17	22		
		31	80
16	6		
		43	13
		9	
30	8		
		56	13
30	6		
		65	14



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
9	8		
		17	19
9	12		
		18	20
10	10		
		18	19
9	11		
		17	23
9	14		
		19	27
11	15		
		21	28
12	15		
		22	28
12	15		
		32	37

FAI-158-(1.75-9.46)



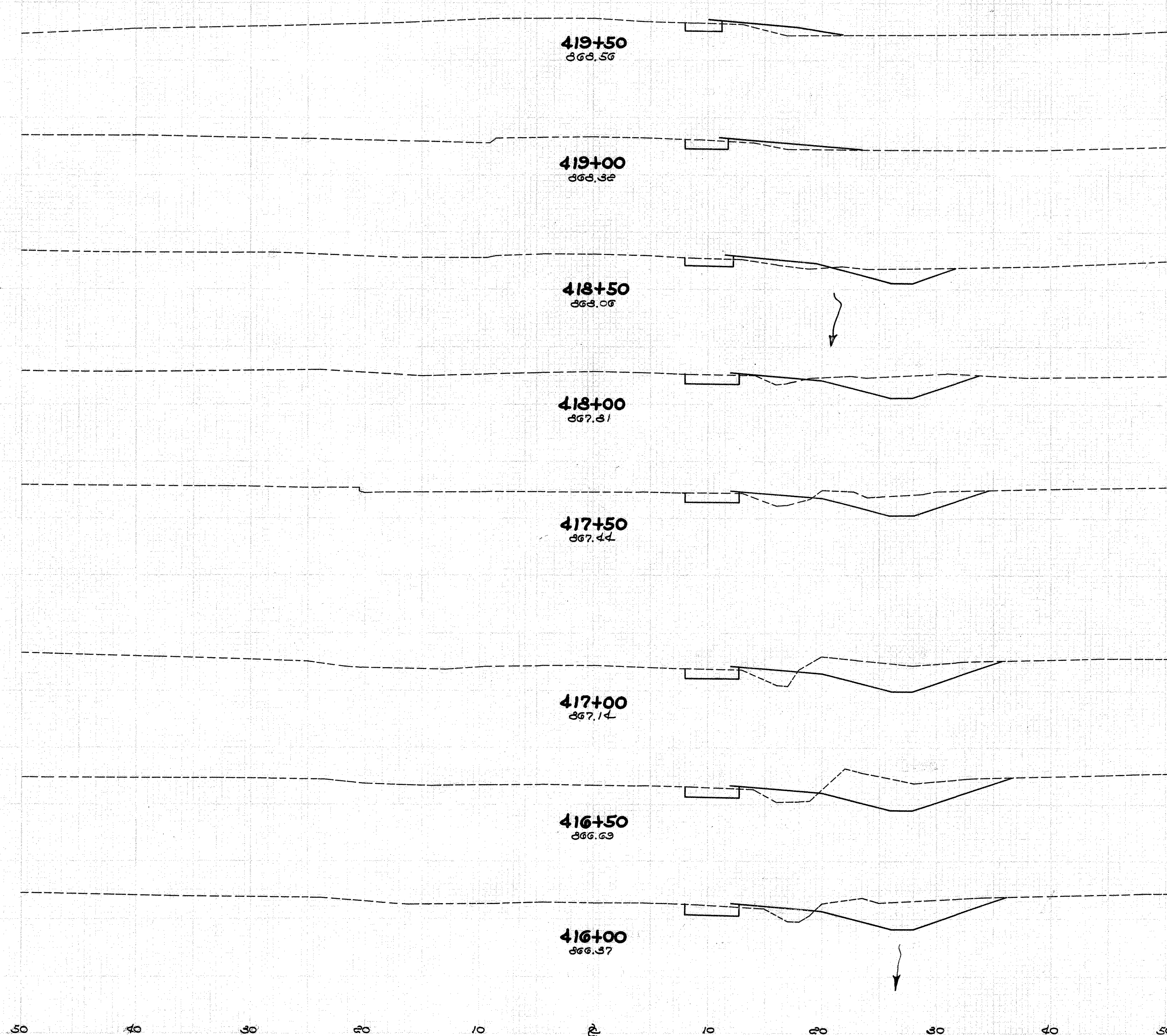
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
22	5		
		32	8
13	4		
		20	7
9	4		
		10	10
8	7		
		13	15
6	9		
		13	15
8	7		
		10	13
9	7		
		14	14
6	8		
		14	15

412+00 ~ 415+50

FAI D 2-10-36

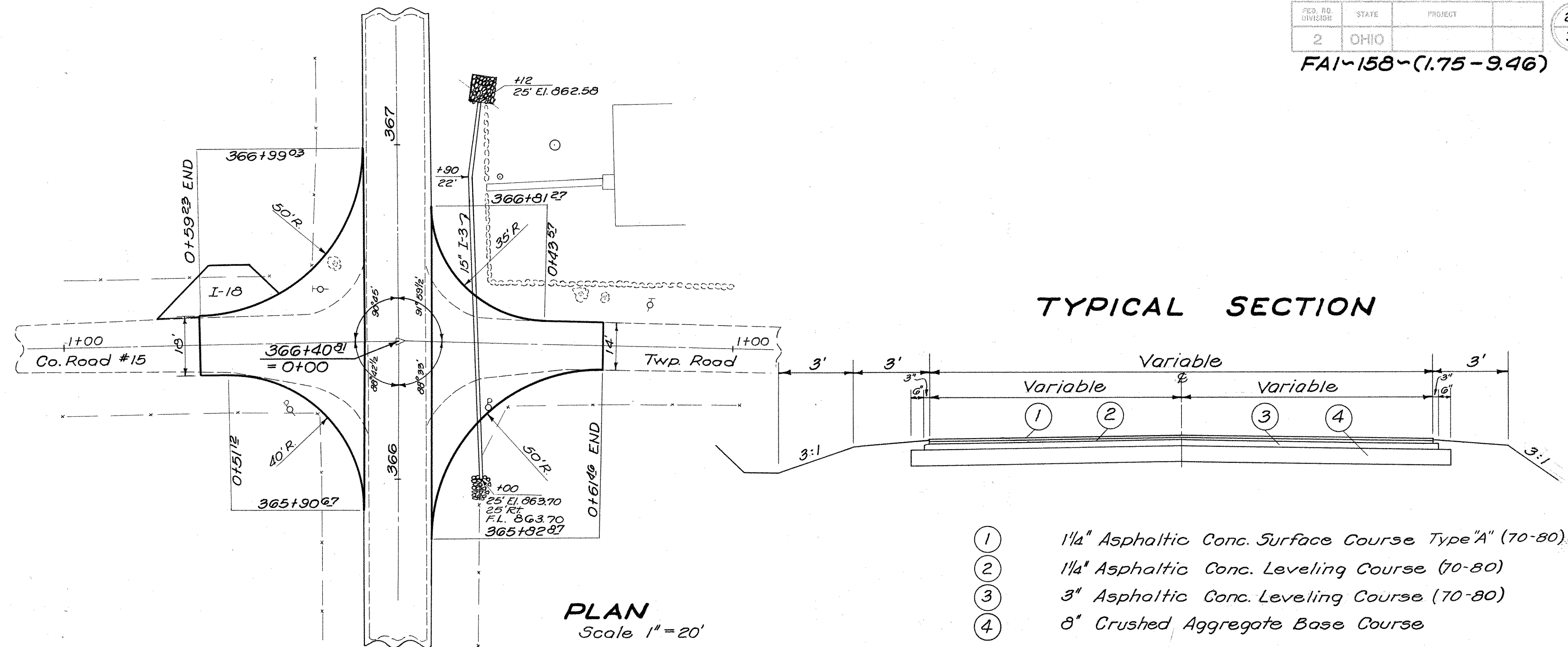
END PROJECT
419+70.14

FAI-158-(1.75-9.46)



Station	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
419+70.14	1	2	2	2
	3	4	6	6
	3	3	13	6
	11	3	29	5
	20	2	42	5
	25	3	53	6
	32	4	63	7
	36	4	61	7
	30	4	48	8

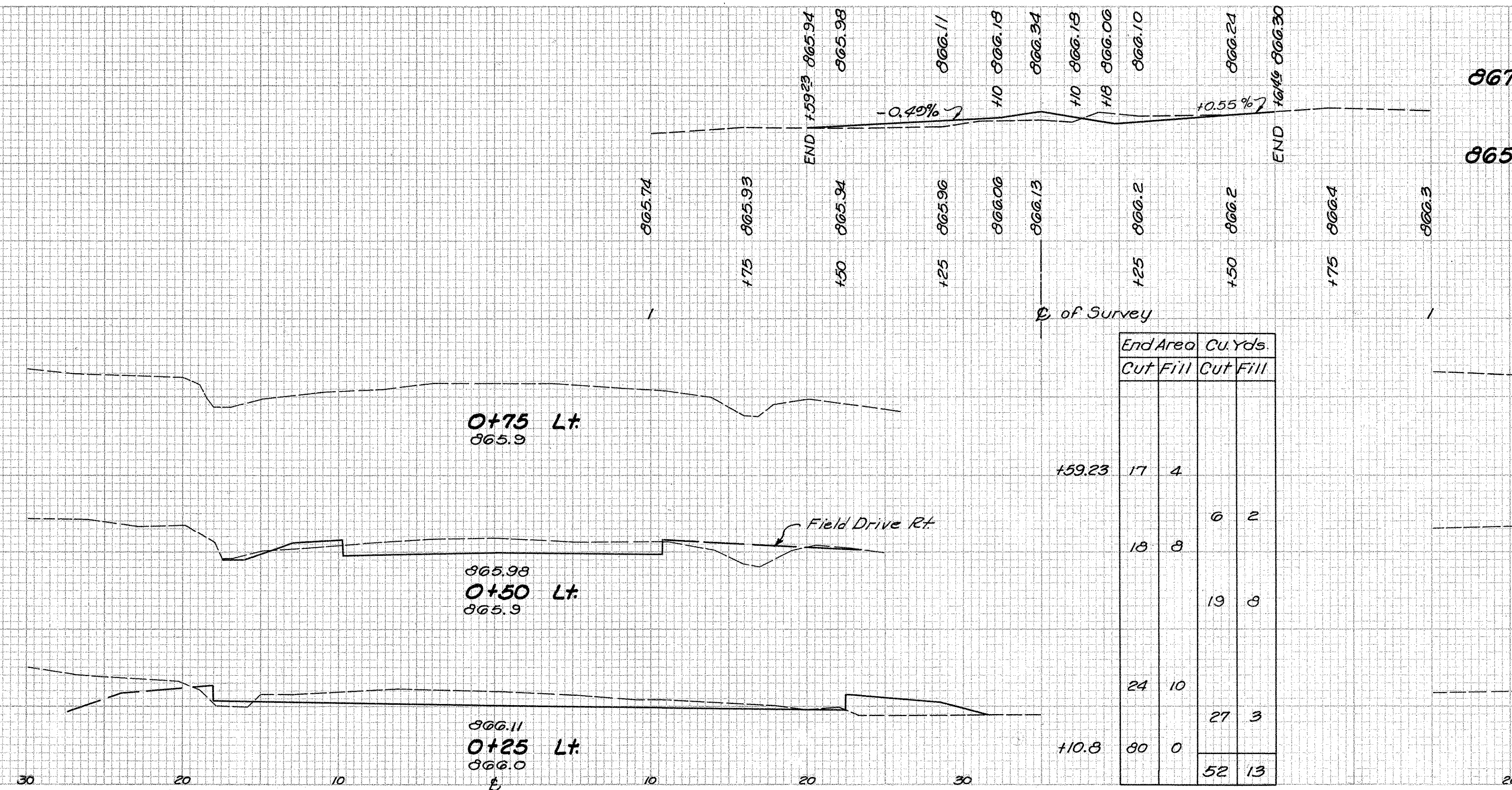
416+00 ~ 419+70.14



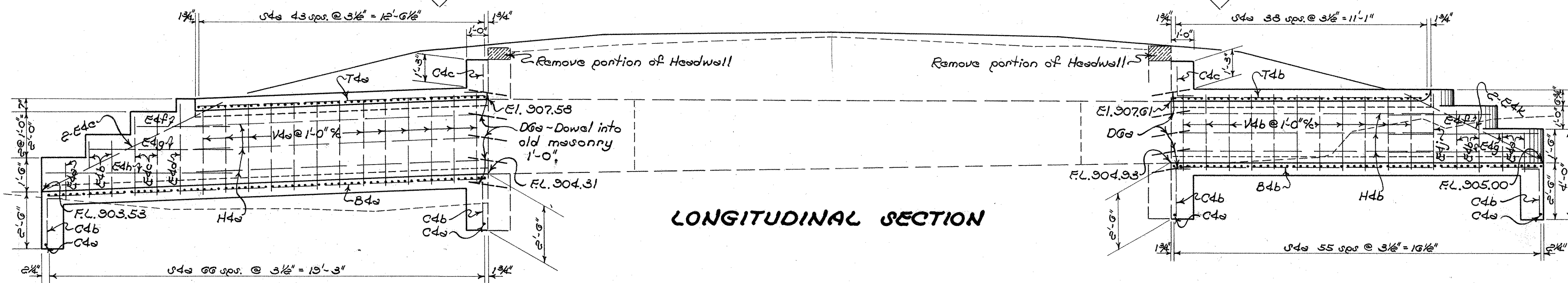
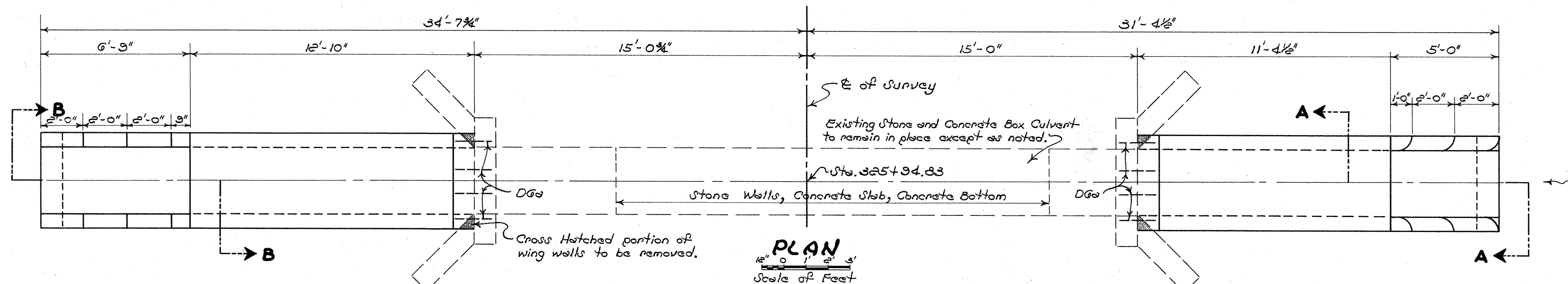
ESTIMATED QUANTITIES

	LEFT	RIGHT	TOTAL	
E-1 Excavation	52	68	120	Cu. Yds.*
E-1 Embankment	13	0	13	Cu. Yds.*
T-35 1 1/4" Surface Course	6.8	5.9	12.7	Cu. Yds.
B-35 1 1/4" Leveling Course	6.8	5.9	12.7	Cu. Yds.
B-35 3" Leveling Course	16.4	14.2	30.6	Cu. Yds.
B-119 8" Aggregate	43.6	37.8	81.4	Cu. Yds.
I-18 6" Aggregate	5		5	Cu. Yds.
I-3 15" Pipe, M-a-4(c)		112	112	Lin. Ft.
I-10 Riprap		13	13	Sq. Yds.

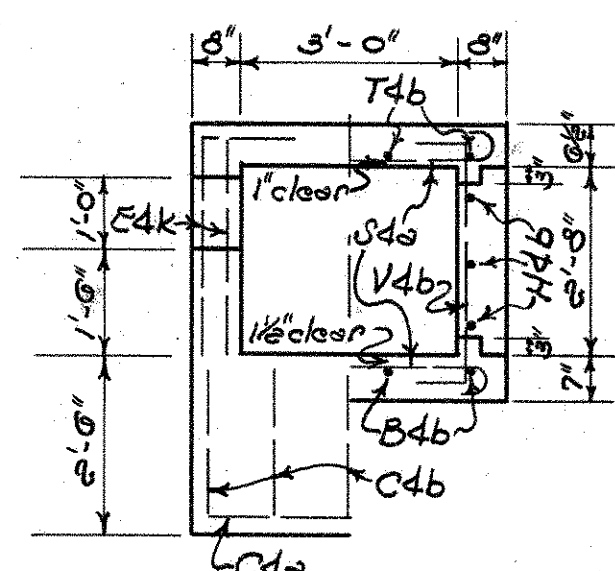
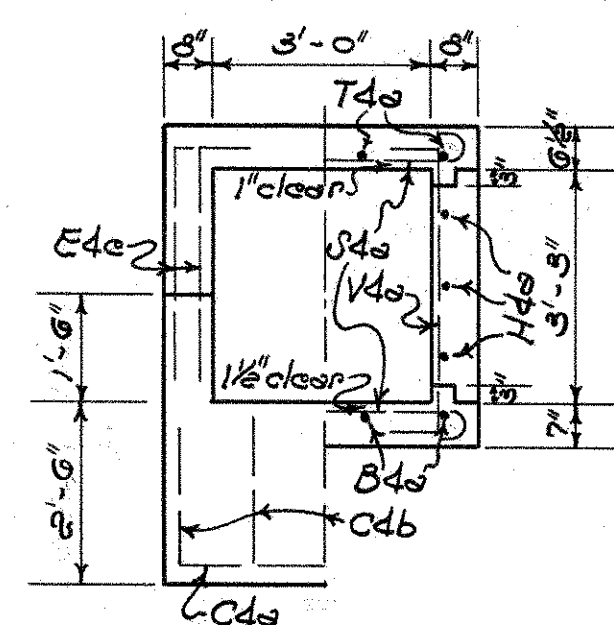
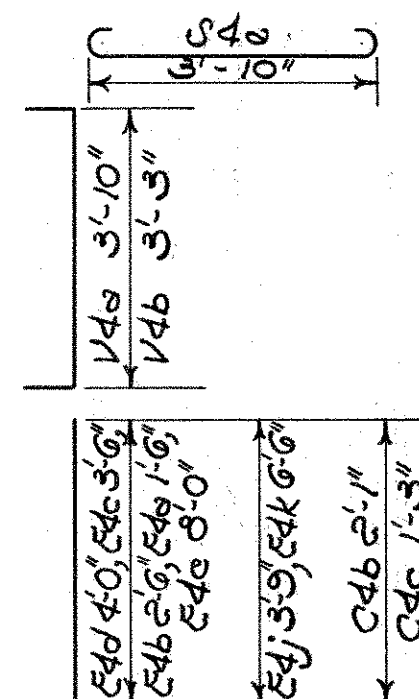
* Carried to X Sections.



APPROACH STA. 366+40.81 RT. & LT.



STEEL LIST				
Mark	Nº	Shape	Length	Wt.
S4a	206	Bent	4'-10"	665
T4a	4	Stnt.	12'-6"	33
T4b	4	Stnt.	11'-4"	30
B4a	4	Stnt.	13'-3"	51
B4b	4	Stnt.	16'-0"	43
V4a	26	Bent	4'-8"	51
V4b	22	Bent	4'-1"	60
E4a	6	Bent	1'-11"	3
E4b	3	Bent	2'-11"	16
E4c	4	Bent	3'-11"	10
E4d	2	Bent	4'-5"	6
E4e	4	Bent	3'-5"	22
E4f	4	Stnt.	4'-0"	11
E4g	6	Stnt.	6'-0"	24
E4h	2	Stnt.	3'-0"	11
E4i	2	Bent	4'-2"	6
E4j	4	Bent	6'-11"	13
C4a	4	Stnt.	3'-10"	10
C4b	20	Bent	2'-6"	33
C4c	10	Bent	1'-3"	11
D6a	23	Stnt.	2'-0"	34
H4a	6	Stnt.	12'-0"	43
H4b	6	Stnt.	11'-0"	44
Total				1325



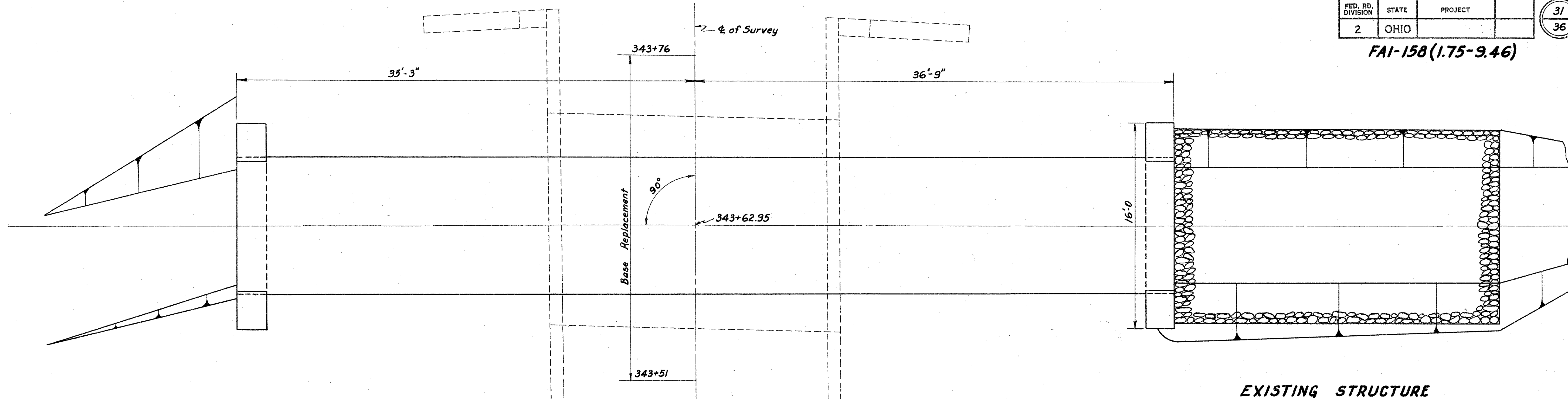
CULVERT DATA

TYPE :- Small Box Culvert Std. Drwg. Nº. SBC-45
 SIZE :- 3'X3'± X 66'
 WORK REQUIRED :- Extend existing small box culvert as per plan. Remove portions of existing headwalls and wing walls as shown and dowel into existing structure.

ESTIMATED QUANTITIES

Item	Quantity	Description
E-2	15 C.Y.	Excavation for Structure
S-1	116 C.Y.	Concrete for Structure Class "C"
S-4	1325 Lbs.	Reinforcing Steel
S-23	23 L.F.	Dowel Holes
S-22	Lump	Removal of Portions of Exist. Str.

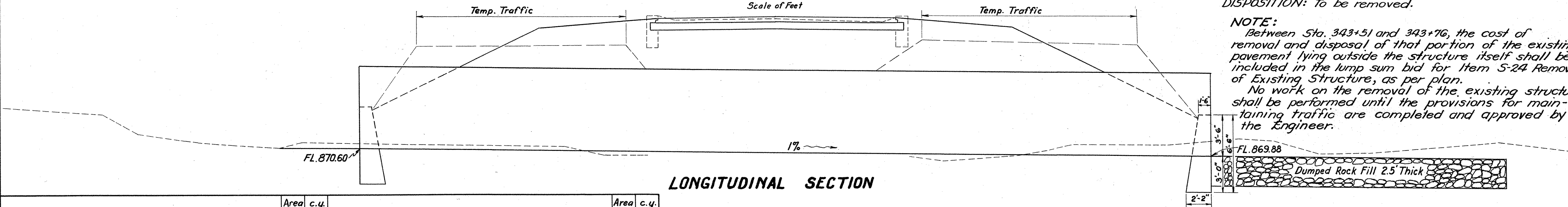
FAI-158(1.75-9.46)



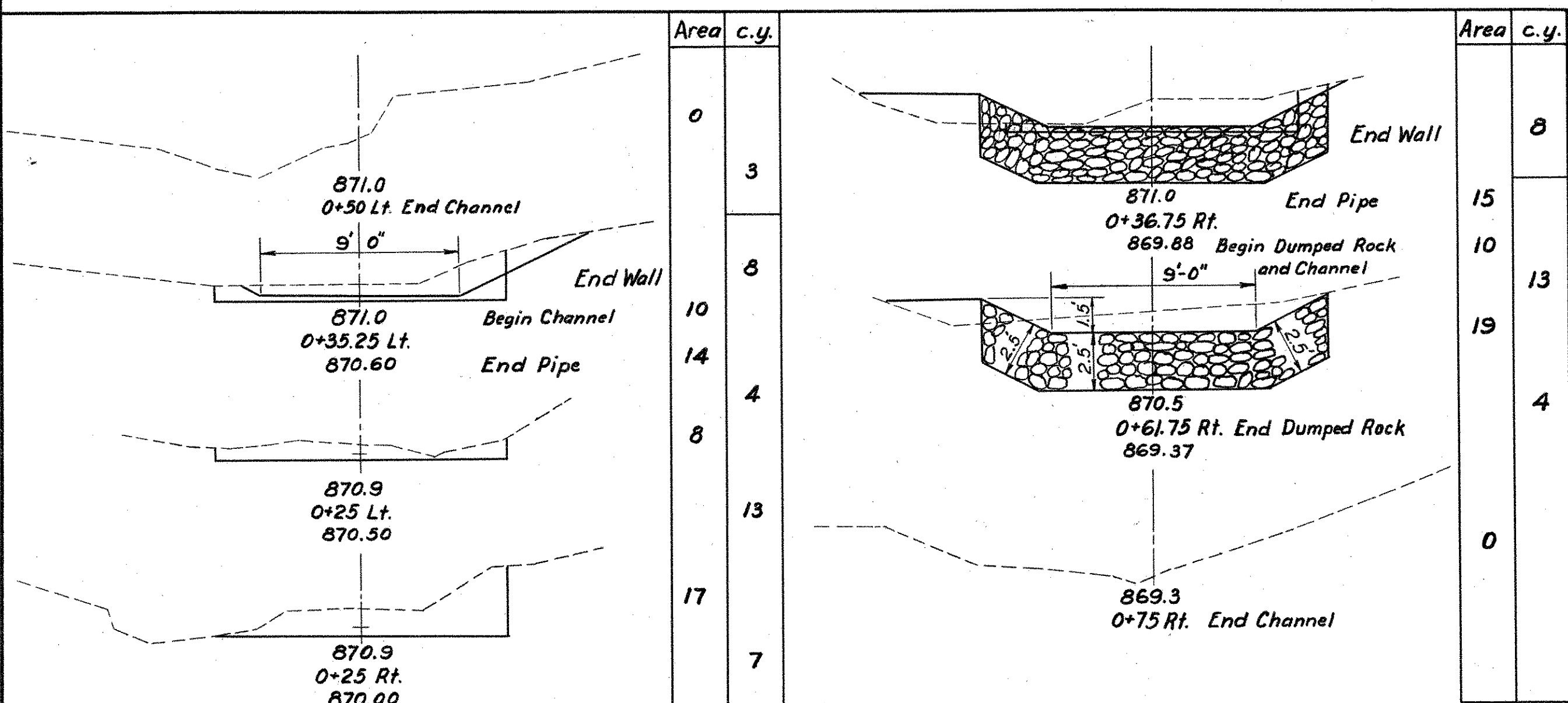
PLAN
Scale of Feet

EXISTING STRUCTURE
 TYPE: Steel Beam on Conc. & Stone Abut.
 SPAN: 15'-6" RDWY: 20'
 FLOOR: Bit. W.C. on Concrete
 DISPOSITION: To be removed.

NOTE:
 Between Sta. 343+51 and 343+76, the cost of removal and disposal of that portion of the existing pavement lying outside the structure itself shall be included in the lump sum bid for Item S-24 Removal of Existing Structure, as per plan.
 No work on the removal of the existing structure shall be performed until the provisions for maintaining traffic are completed and approved by the Engineer.



LONGITUDINAL SECTION



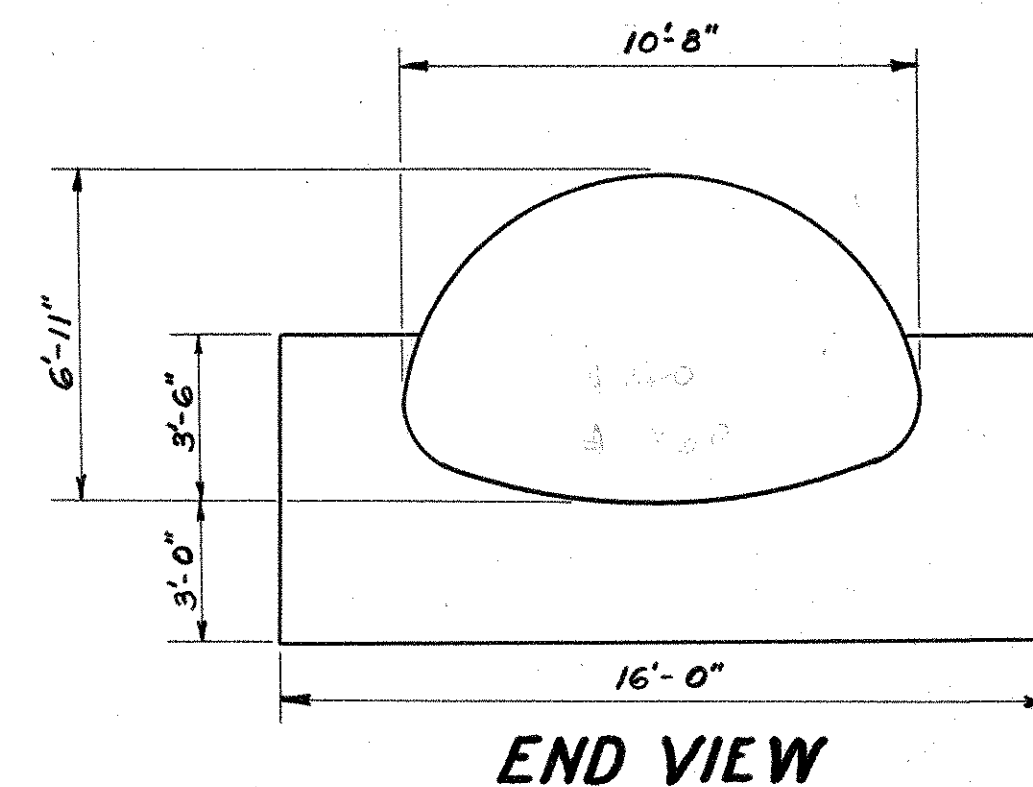
CROSS SECTIONS
Scale of Feet

STRUCTURE DATA

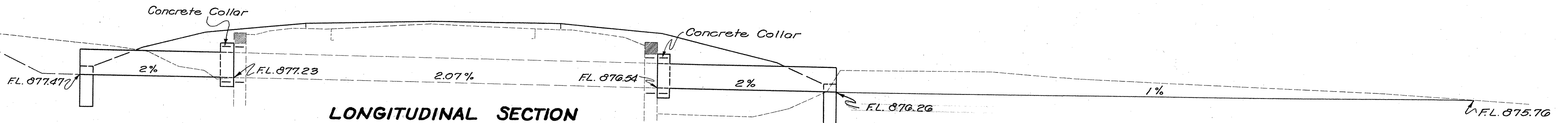
TYPE - Pipe Arch STD. DWG. N° SP 53
 SIZE - 10'-8" x 6'-11" x 72
 NOTE: WORK REQUIRED - Install new structure as per plan.
 Remove existing structure as per Sec. S-24.02.
 Excavate inlet and outlet Channels. Maximum dimensions of dumped rock fill material is waived to permit use of existing superstructure stone in outlet Channel.
 The bottom and corner plates shall be 8 gage; the balance of the plates shall be 10 gage.
 The cost of additional excavation necessary to place the dumped rock fill to the lines and grades shown, hereon shall be included in the unit price bid for Item I-10 Dumped Rock Fill.

ESTIMATED QUANTITIES		
Item	Quantity	Description
E-2	50c.y.	Excavation for Structure
E-3	20c.y.	Channel Excavation
S-1	10.7c.y.	Concrete for End Walls Class E
I-10	40c.y.	Dumped Rock Fill as per Plan
S-24	Lump Sum	Removal of Existing Structures as per plan
S-28	72 lin. ft.	10'-8" x 6'-11" Sectional Corrugated Metal Pipe Arch

Drainage Area 1.2 sq. mi.			
2	STA. 343+62.95	RA. 10'-8" x 6'-11" x 72	FAI-158-0806



END VIEW



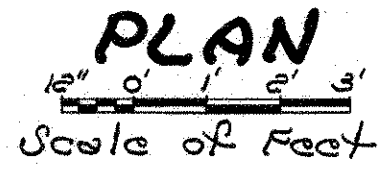
The drawing consists of two views of a concrete collar.
SECTION A-A (left): A top-down view of a square concrete collar with a side length of 3'-6". It features a central circular hole with a diameter of 24". The collar is 6" thick. A 3/4" diameter dowel is shown passing through the collar, with a 1'-6" section of the dowel embedded in the old masonry. The label "Class 'E' Concrete" points to the collar material.
SECTION B-B (right): A side view of the collar, showing its 6" thickness and a 1'-0" section of the dowel passing through it. The section is labeled "SECTION B-B".
DETAIL OF CONCRETE COLLAR (bottom): A title for the drawing.



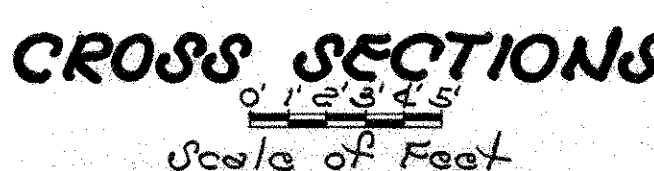
TYPE ~ Pipe Culvert Std. Drwg. No. S-27 RC 344
 SIZE ~ 24" x 59.29'
 WORK REQUIRED ~ Extend existing pipe
 culvert as per plan. Remove a
 portion of existing headwalls as
 shown. Excavate outlet channel
 as shown. *See plan for details of outlet*

Drainage Area. 13 Ac. $Q_{10} = .65 \times .6 \times .86 \times 50 = 17 \text{ c.f.s.}$

3	STA 346+31.25	P.C. 24" x 59.29'	FAI-158-0811
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STEEL LIST				
Monk	Shape	N2	Lengths	WT.
S7a	Bent	13	11'-7"	308
S7b	Bent	11	11'-10"	266
L4a	Stnt.	22	7'-9"	114
L4b	Stnt.	22	6'-6"	96
E4a	Stnt.	24	13'-0"	209
E4b	Stnt.	3	11'-0"	59
E4c	Stnt.	3	9'-0"	48
E4d	Stnt.	3	7'-0"	37
E5a	Stnt.	3	8'-10"	74
E5a	Bent	3	9'-5"	79
E5b	Stnt.	3	8'-0"	67
E5b	Bent	3	8'-7"	72
E5c	Stnt.	3	7'-0"	58
E5c	Bent	3	7'-7"	63
E5d	Stnt.	3	6'-0"	50
E5d	Stnt.	3	6'-7"	55
E5e	Stnt.	3	5'-0"	42
E5e	Bent	3	5'-7"	47
E5f	Stnt.	4	4'-0"	17
E5f	Bent	4	4'-7"	19
E5g	Stnt.	3	13'-0"	108
W4a	Bent	32	9'-3"	198
C4a	Bent	2	17'-6"	23
C4b	Stnt.	6	9'-9"	39
C4c	Bent	2	17'-9"	24
C4d	Stnt.	6	10'-0"	40
D6a	Stnt.	44	2'-6"	165
Total				2377



<u>ESTIMATED QUANTITIES</u>		
Item	Quantity	Description
E-2	85 C.Y.	Excavation for Structure
S-1	26 C.Y.	Concrete for Structure Class "E"
S-4	2372 Lb.	Reinforcing Steel
S-23	55 L.F.	Dowel Holes
S-25	Lump	Removal of Portions of Exist. Str.
Drainage Area 160 AS. Q = .65 x .93 x .36 x 260 = 120 c.f.s.		
4	\$16,374 + \$2,224	B.T.C. 3x55' @ 66¢ / FAL 158 - 0364

ESTIMATED QUANTITIES		
Item	Quantity	Description
E-2	85 C.Y.	Excavation for Structure
S-1	26 C.Y.	Concrete for Structure Class "E"
S-4	2372 Lb.	Reinforcing Steel
S-23	55 L.F.	Dowel Holes
S-25	Lump	Removal of Portions of Exist. Str.
Drainage Area 160 AS. $Q = .65 \times .83 \times .86 \times 120 = 120 \text{ c.f.s.}$ 4 Sta. 374+47.24 S.T.C. $3 \times 55 \times 66.7'$ FAL 158-0364		

Fairfield Co. Liberty Twp.
Sec. 35 T.16 R.19

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

34
36

FAI ~ 158 ~ 1.75, 9.46
R/W PLAN

Lorenza O. & Pearl I. Whittington
① Cont. 0.09 Ac.±
P.R.O. 0.24 Ac.±

Forest G. & Maud A. Ketner
② Cont. 0.23 Ac.±
P.R.O. 0.43 Ac.±

Edmund M. Lee
④ Cont. 0.47 Ac.±
P.R.O. 0.93 Ac.±

TD & Clara A. Ketner
③ Cont. 0.35 Ac.±
P.R.O. 0.63 Ac.±

Alva H. Wagner et al.
⑤ Cont. 0.43 Ac.±
P.R.O. 0.67 Ac.±

Fairfield Co. Liberty Twp.
Sec. 36 T.16 R.19

Fairfield Co. Liberty Twp.
Sec. 35 T.16 R.19

Edmund M. Lee
④ Cont. 0.47 Ac.±
P.R.O. 0.93 Ac.±

Arthur G. Fisher
⑦ Cont. 0.39 Ac.±
P.R.O. 0.83 Ac.±

⑦X Cont. 0.02 Ac.±

Alva H. Wagner et al.
⑤ Cont. 0.43 Ac.±
P.R.O. 0.67 Ac.±

Ida & Estella Wagner
⑥ Cont. 0.55 Ac.±
P.R.O. 1.11 Ac.±

⑥X Cont. 0.05 Ac.±

⑥Y Cont. 0.05 Ac.±

Fairfield Co. Liberty Twp.
Sec. 36 T.16 R.19

Fairfield Co. Liberty Twp.
Sec. 35 T.16 R.19

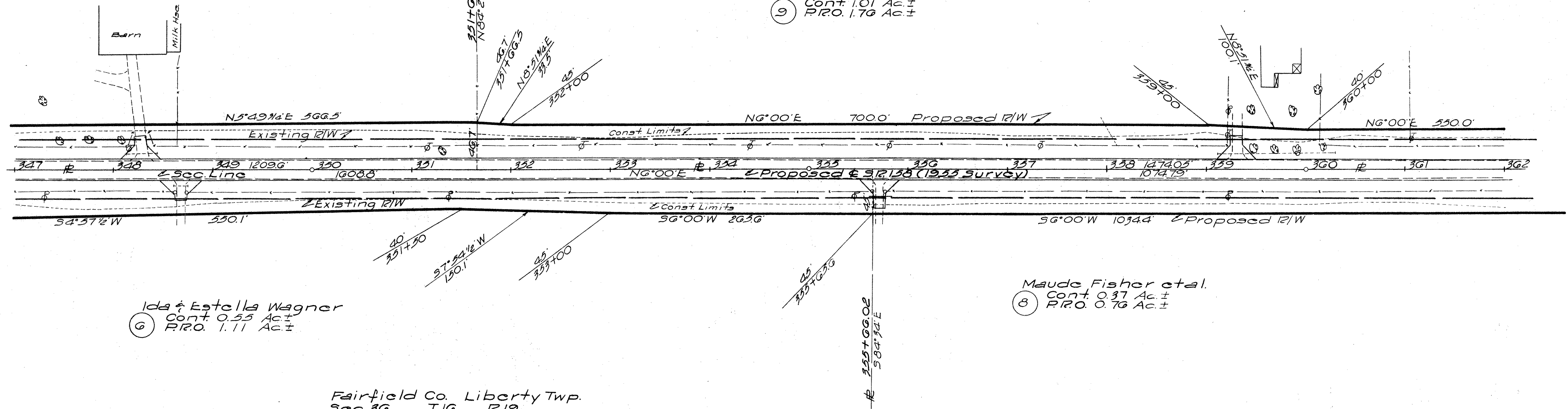
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

35
36

FAI. ~ 158 ~ 1.75, 9.46
R/W PLAN

Arthur Fisher
Cont. 0.39 Ac.±
P.R.O. 0.83 Ac.±
7

Arthur A. Weakley
Cont. 1.01 Ac.±
P.R.O. 1.76 Ac.±
9



Ida & Estella Wagner
Cont. 0.55 Ac.±
P.R.O. 1.11 Ac.±
6

Maude Fisher et al.
Cont. 0.37 Ac.±
P.R.O. 0.76 Ac.±
8

Fairfield Co. Liberty Twp.
Sec. 36 T.16 R.19

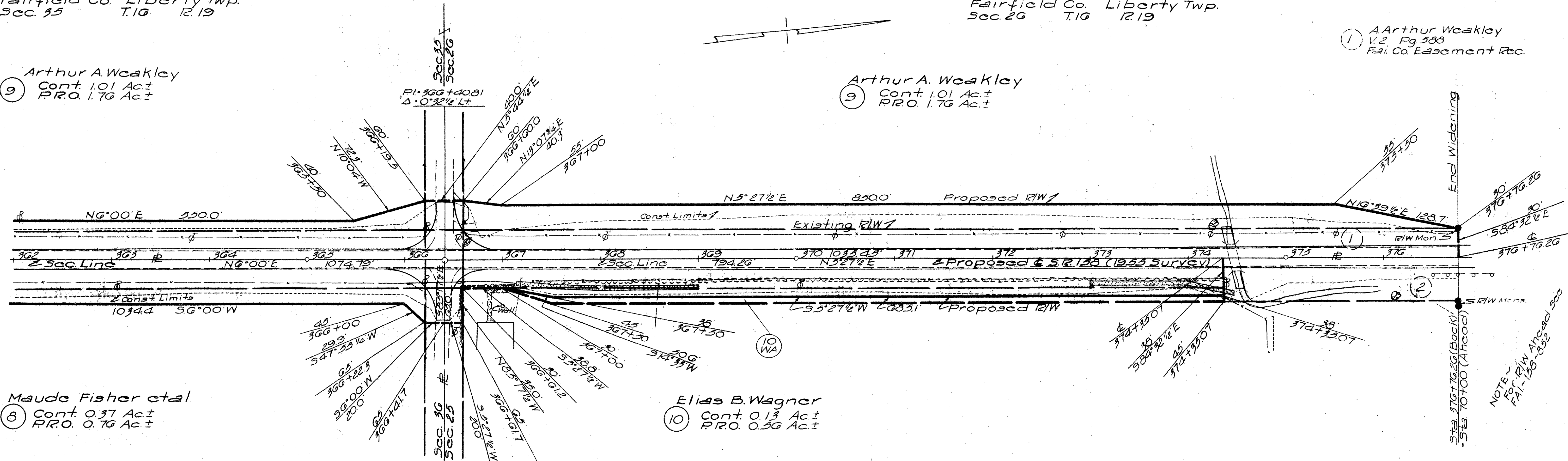
Fairfield Co. Liberty Twp.
Sec. 35 T.16 R.19

Fairfield Co. Liberty Twp.
Sec. 26 T.16 R.19

Arthur A. Weakley
Cont. 1.01 Ac.±
P.R.O. 1.76 Ac.±
9

Arthur A. Weakley
Cont. 1.01 Ac.±
P.R.O. 1.76 Ac.±
9

1 Arthur Weakley
V.2 Pg. 588
Fai. Co. Easement Rec.



Maude Fisher et al.
Cont. 0.37 Ac.±
P.R.O. 0.76 Ac.±
8

Elias B. Wagner
Cont. 0.13 Ac.±
P.R.O. 0.56 Ac.±
10

Fairfield Co. Liberty Twp.
Sec. 36 T.16 R.19

Fairfield Co. Liberty Twp.
Sec. 25 T.16 R.19

2 Elias B. Wagner
V.2 Pg. 588
Fai. Co. Easement Rec.

