

CONVENTIONAL SIGNS

STATE LINE	---
COUNTY LINE	---
TOWNSHIP OR RANGE LINE	---
SECTION LINE	---
QUARTER LINE	---
SIXTEENTH LINE	---
RIGHT-OF-WAY LINE	---
PRESENT RIGHT-OF-WAY LINE	---
CONTROL OF ACCESS LINE	---
PROPERTY LINE (Except Land Lines)	---
VACATED RELATED PROPERTY	---
CORPORATE OR CITY LIMITS	---
TRUNK HIGHWAY CENTER LINE	---
RETAINING WALL	---
RAILROAD	---
RAILROAD RIGHT-OF-WAY LINE	---
RIVER OR CREEK	---
DRY RUN	---
DRAINAGE DITCH	---
ELECTRIC POWER LINE	---
TELEPHONE OR TELEGRAPH LINE	---
JOINT TELEPHONE AND POWER	---
CONDUIT	---
TELEPHONE CABLE-AERIAL	---
TELEPHONE CABLE-UNDERGROUND	---
POWER CABLE-UNDERGROUND	---
GAS MAIN	---
CULVERT	---
DROP INLET	---
GUARD RAIL	---
BARBED WIRE FENCE	---
WOVEN WIRE FENCE	---
CHAIN LINK FENCE	---
RAILROAD SNOW FENCE	---
STONE WALL OR FENCE	---
HEDGE	---
WATER PIPE	---
SEWER PIPE	---
DRAIN TILE	---
SPRINGS	---
MARSH	---
TIMBER	---
ORCHARD	---
BRUSH	---
NURSERY	---
CATCH BASIN	---
MANHOLE	---
FIRE HYDRANT	---
STREET LIGHT	---
RAILROAD CROSSING SIGN	---
RAILROAD CROSSING BELL	---
ELECTRIC WARNING SIGN	---
CROSSING GATE	---
CATTLE GUARD	---
OVERPASS (Highway Over)	---
UNDERPASS (Highway Under)	---
BRIDGE	---
BUILDINGS (One Story Frame)	---
F. FRAME C. CONCRETE	---
S. STONE T. TILE	---
B. BRICK ST. STUCCO	---
IRON PIPE OR ROD	---
MONUMENT (STONE, CONCRETE, OR METAL)	---
WOODEN HUB	---
GRAVEL PIT	---
SAND PIT	---
BORROW PIT	---
ROCK QUARRY	---
MEANWER CORNER	---

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS SURFACING

County State Aid Highway No. 18

Between T.H. # 65 And C.S.A.H. # 17
A PT. 246.57' E. AND 1,321.80' N. A PT. 1,359.14' S. OF N.1/4 COR.
From OF S1/4 COR. OF SEC. 5, T32N, R23W To SEC. 12, T32N, R23W

Give proper reference to Sections, Township and Range

GROSS LENGTH 21,603.91 FEET 4.092 MILES
BRIDGES-LENGTH FEET MILES
EXCEPTIONS-LENGTH FEET MILES
NET LENGTH 21,603.91 FEET 4.092 MILES

INDEX OF SHEETS

- Sheet No. 1. Title Sheet & Layout Map
- No. 2. To 3 Est. Quantities & Typical Sec.
- No. 4. To 8 Plan & Profile
- No. 9 Super-elevation Chart
- No. 10 To 11 Road Approach Profile & Cross Sections
- No. 12 To 28 Cross Sections

PLAN - 1" = 100'

SCALE: PROFILE - HORIZ. = 1" = 100'
VERT. = 1" = 10'
CROSS SECTIONS - 1" = 10'

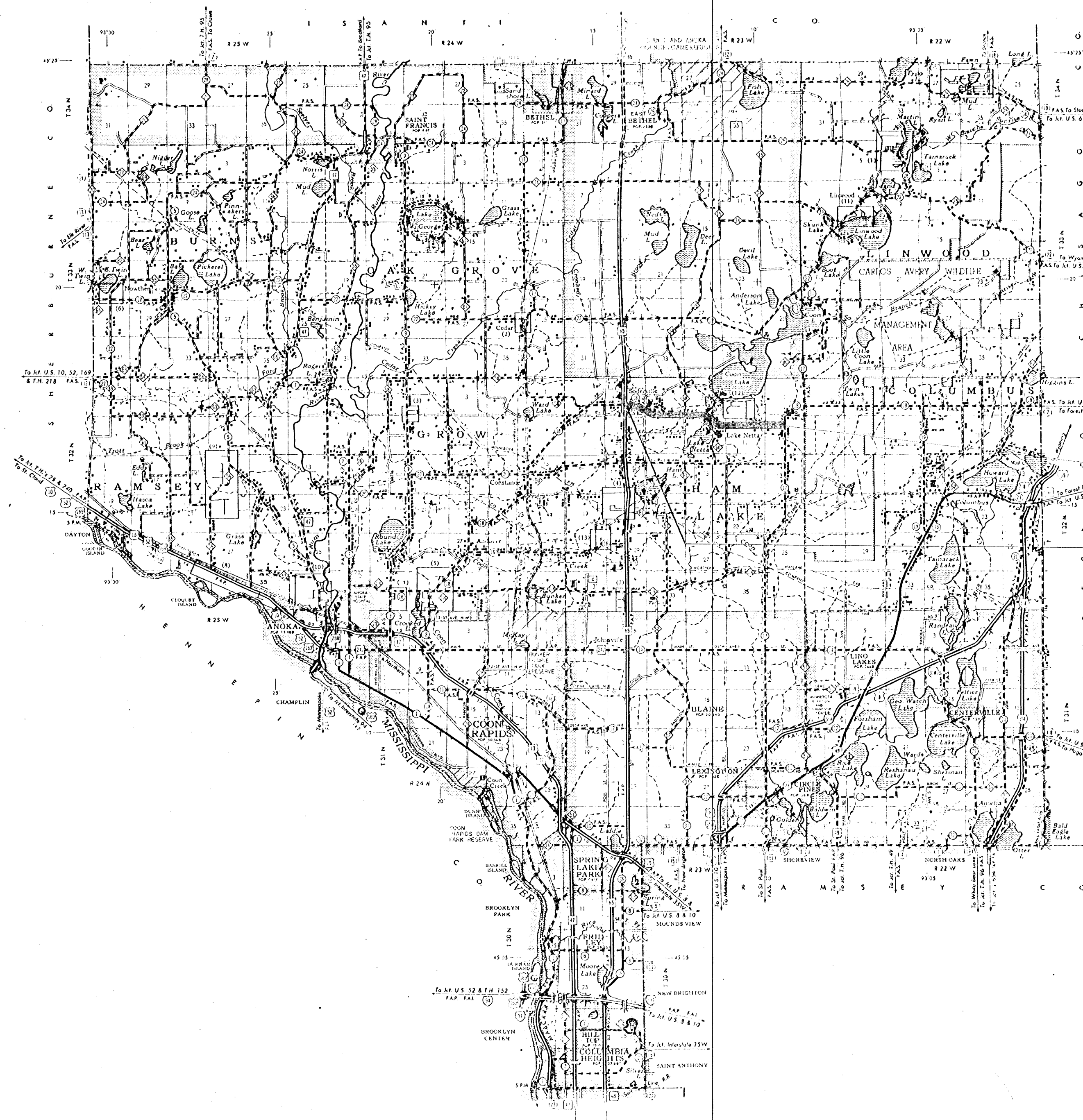
END PROJECT SP 02-618-09
STA. 238+46

BEGIN PROJECT SP 02-618-09
STA. 0+00

E.Q. OR P.O.T. 19+09.63 =
P.T. 19+09.24

E.Q. 79+63.10 ±
100+00.00

E.Q. 183+50.57 ±
185+56.20



DESIGN DESIGNATION

ADT (CURRENT YEAR) 1,300
 ADT (ANTICIPATED) 2,600 (20YR.)
 T (H. C. A. D. T.) 65-78
 9 Ton Design A-3.30IL FACTOR
 Design Speed 60 MPH
 Design Speed not achieved at:
 STA. 57+00 TO STA. 62+00 MPH 50
 STA. TO STA. MPH

SPECIFICATIONS

THE "STANDARD" SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, DATED JAN. 1, 1972, SHALL GOVERN.
AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED APRIL 1, 1976 SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Paul K. Ruedl COUNTY ENGINEER DATE 12-28-76

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL [Signature] 1-6-77 STATE AID DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL [Signature] 2-11-77

APPROVED [Signature] 2/12/77 STATE AID ENGINEER

County Proj. No.

State Proj. No. 02-618-09 S.A.P.

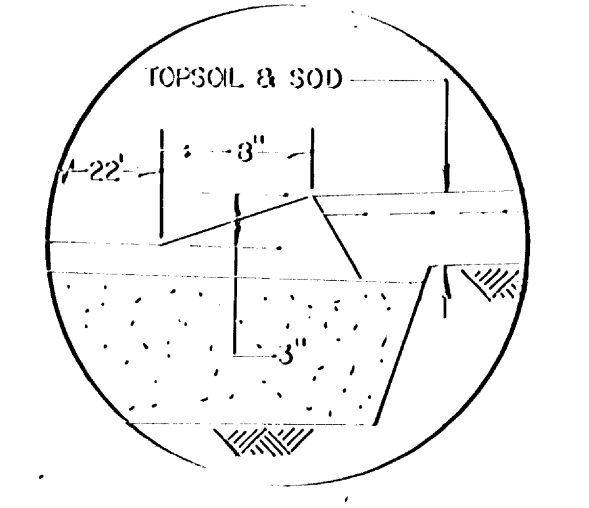
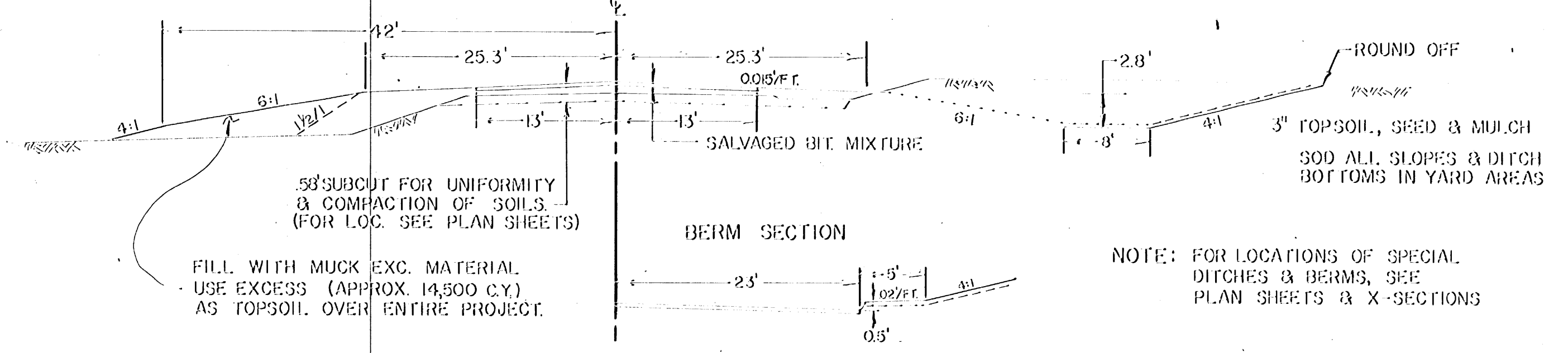
STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2031.503	FIELD LABORATORY, TYPE B	EACH	1	
2101.501	CLEARING	ACRE	10.5	
2101.502	CLEARING	FREE	132	
2101.506	GRUBBING	ACRE	10.5	
2101.507	GRUBBING	FREE	135	
2104.501	REMOVE PIPE CULVERTS	LIN. FT.	630	
2104.505	REMOVE CONCRETE PAVEMENT	SQ. YD.	79	
2104.507	REMOVE MASONRY AND CONC. STRUCTURES	CU. YD.	3	
2104.521	SALVAGE PIPE CULVERT	LIN. FT.	184	
2104.521	SALVAGE FENCE	LIN. FT.	6919	
2105.604	INSTALL FENCE	LIN. FT.	6417	
2105.501	COMMON EXCAVATION	CU. YD.	126,246	
2105.505	MUCK EXCAVATION	CU. YD.	85,512	
2105.523	COMMON BORROW (E.V.)	CU. YD.	74,687	
2105.531	SALVAGED BITUMINOUS MIXTURE (E.V.)	(P) CU. YD.	3,871	
2105.535	SALVAGED TOPSOIL	CU. YD.	11,500	
2123.503	MOTOR GRADER	HOUR	20	
2123.507	DOZER	HOUR	30	
2130.501	WATER	1000 M GAL.	300	
2341.501	AGGREGATE BASE, CLASS-5	TON	36,365	
2351.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	485	
2351.510	BINDER COURSE MIXTURE	TON	7,000	
2351.516	SHOULDER MIXTURE	TON	1,930	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	92	
2341.508	WEARING COURSE MIXTURE	TON	2,960	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	1,652	
2501.501	CULVERT EXCAVATION, CLASS U	CU. YD.	254	
2501.511	15" C.M. PIPE CULVERT	LIN. FT.	1,194	
2501.511	18" C.M. PIPE CULVERT	LIN. FT.	238	
2501.511	24" C.M. PIPE CULVERT	LIN. FT.	460	
2501.511	36" C.M. PIPE CULVERT	LIN. FT.	74	
2501.511	48" C.M. PIPE CULVERT	LIN. FT.	106	
2501.511	60" C.M. PIPE CULVERT	LIN. FT.	92	
2501.561	24" R.C. PIPE CULVERT DES 3006	LIN. FT.	216	
2501.515	15" G.S. PIPE APRONS	EACH	64	
2501.515	18" G.S. PIPE APRONS	EACH	10	
2501.515	24" G.S. PIPE APRONS	EACH	14	
2501.515	36" G.S. PIPE APRONS	EACH	2	
2501.515	48" G.S. PIPE APRONS	EACH	6	
2501.515	60" G.S. PIPE APRONS	EACH	2	
2501.515	24" R.C. PIPE APRONS	EACH	6	
2501.521	29" RC P-A CULV	CL IV LIN. FT.	56	
2501.525	29" RC PIPE-ARCH APRONS	EACH	2	
2501.571	INSTALL METAL CULVERTS	LIN. FT.	198	
2575.501	ROADSIDE SEEDING	ACRE	41	
2575.502	SEED, MIXTURE 3	POUND	4640	
2575.505	SODDING	SQ. YD.	15,275	
2575.511	MULCH MATERIAL, TYPE I	TON	82	
2575.512	DISC ANCHORING	ACRE	41	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	10.3	

- ① INCLUDES 6,911 CU. YD. SUB-CUT FOR COMPACTION & UNIFORMITY OF SOILS.
- ② FOR ADDITIONAL WORK OUTSIDE OF GRADING AREAS.
- ③ FOR DUST CONTROL.
- ④ INCLUDES 2,860 TON FOR SHOULDERS, 600 TON FOR ENTRANCES, & 1,300 TON FOR ROAD APPROACHES.
- ⑤ INCLUDES 446 TON FOR ENTRANCES & 115 TON FOR ROAD APPROACHES.
- ⑥ INCLUDES 400 TON FOR ROAD APPROACHES AND TURN LANES.

NOTE: ALL DIMENSIONS NOMINAL

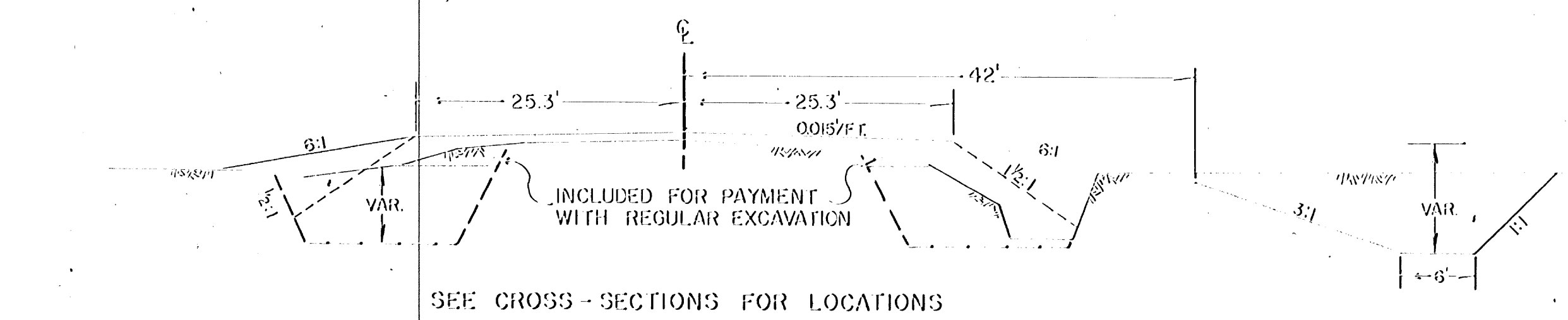
TYPICAL GRADING SECTION



NOTE: CONTRACTOR MAY MODIFY DESIGN IF APPROVED BY THE ENGINEER.

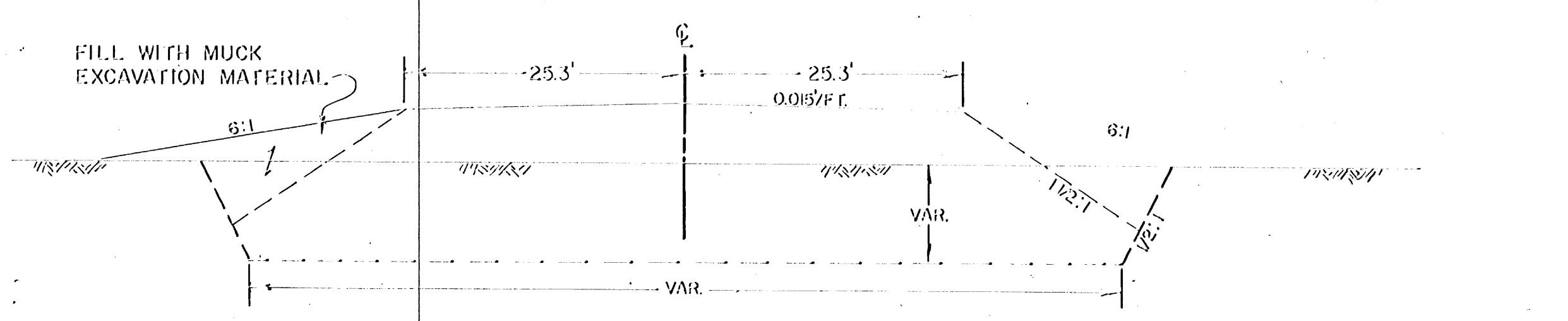
MUCK EXCAVATION

FOR AREAS ADJACENT TO EXISTING ROAD

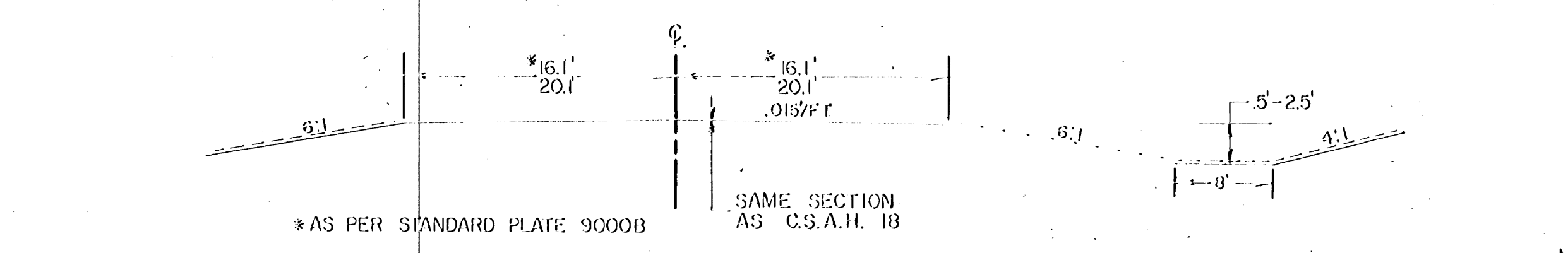


MUCK EXCAVATION

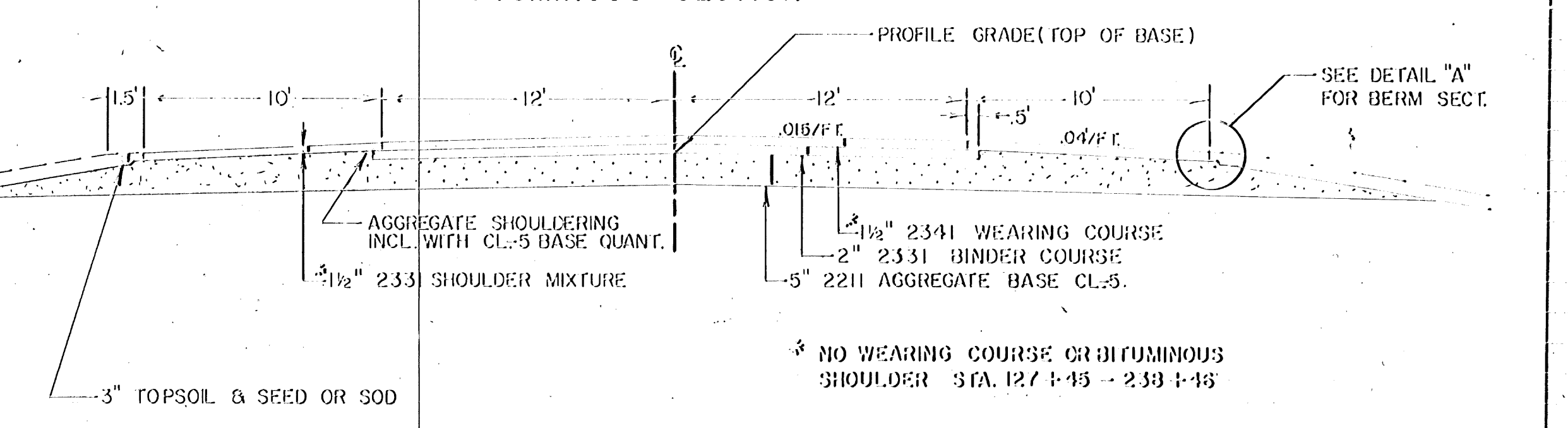
FOR SWAMPS IN NEW ALIGNMENT



ROAD APPROACH SECTION



BITUMINOUS SECTION



SPECIAL DETAILS

APPROXIMATELY 14,500 CU. YD. OF THE EXCESS MUCK SHALL BE UTILIZED AS TOPSOIL. THE MATERIAL SHALL BE SPREAD TO A UNIFORM 3" MIN. DEPTH OVER THE LENGTH OF THE PROJECT. THIS WORK SHALL BE COMPENSATED FOR UNDER ITEM 2105.535 SALVAGED TOPSOIL. MUCK MATERIAL MAY BE STOCKPILED ADJACENT TO THE EXCAVATION AREAS DURING CONSTRUCTION OPERATIONS, BUT PRIOR TO COMPLETION OF GRADING OPERATIONS ALL EXCAVATED MATERIAL SHALL BE REMOVED BY THE CONTRACTOR FROM SWAMPS AND PEAT FIELDS TO APPROXIMATELY THE ORIGINAL ELEVATIONS. THE CONTRACTOR SHALL DISPOSE OF THE EXCESS MUCK IN OTHER AREAS AS APPROVED BY THE ENGINEER. THIS WILL BE CONSIDERED AS INCIDENTAL TO MUCK EXCAVATION.

SALVAGE BITUMINOUS MIXTURE QUANTITIES ARE COMPUTED AS THE VOLUME OF BITUMINOUS IN ITS ORIGINAL POSITION BASED ON AVERAGE DEPTH OF 0.3' AND AVERAGE WIDTH OF 22'. PAYMENT FOR SALVAGED BITUMINOUS MIXTURE WILL BE MADE ON THE BASIS OF PLANNED QUANTITIES.

SODDING

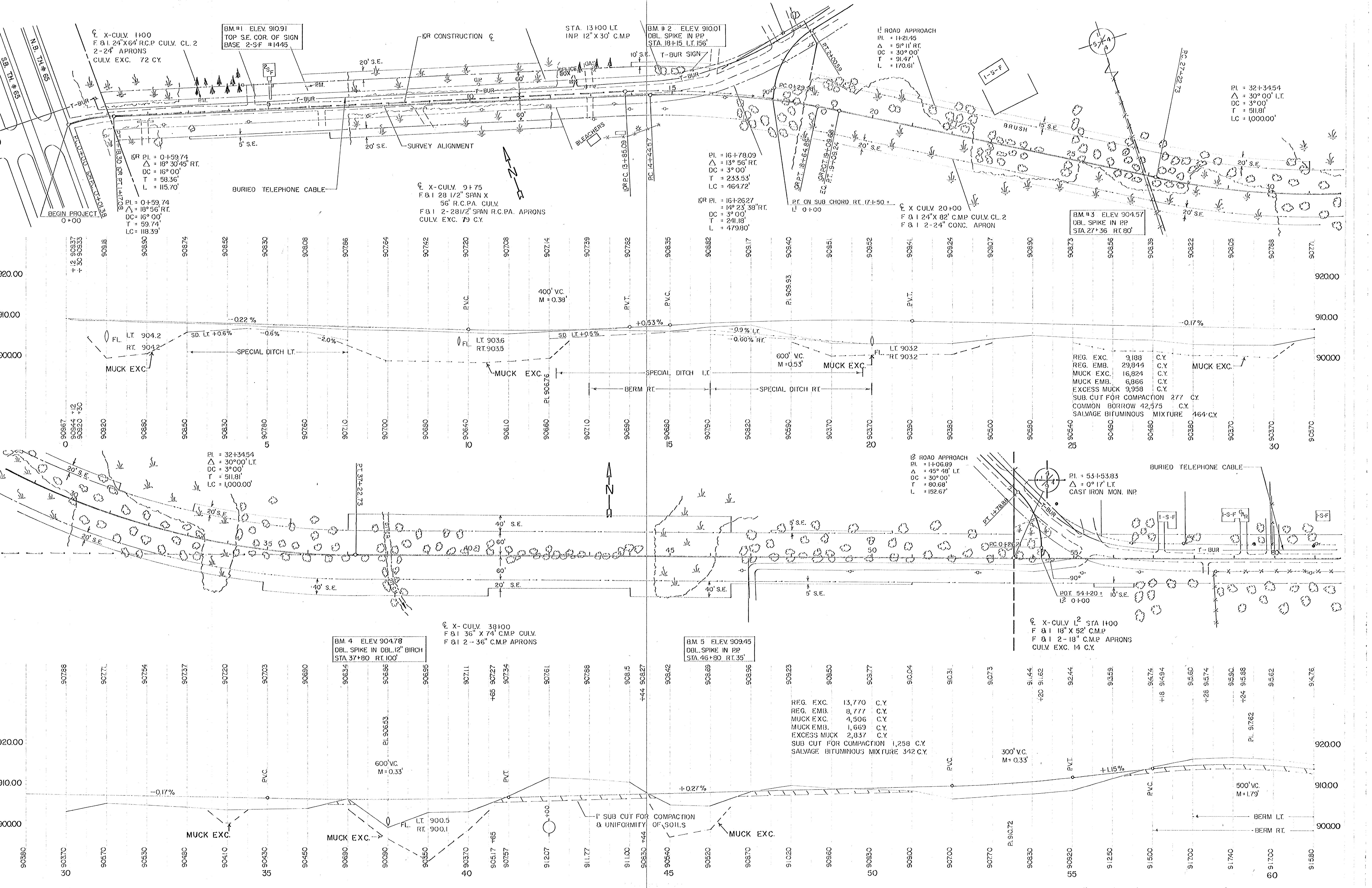
STATION	LOC.	S.Y.	PIPE CULVERT ENDS	S.Y.
41+30 - 41+50	L.T.	44	15" C.M.P., 32 X 17 S.Y.	544
41+82 - 61+00	L.T.	258	18" C.M.P., 5 X 23 S.Y.	115
11+75 - 15+30	L.T.	1,163	24" C.M.P., 7 X 31 S.Y.	217
12+50 - 17+00	R.T.	1,200	36" C.M.P., 1 X 53 S.Y.	53
56+40 - 64+00	L.T.	1,233	48" C.M.P., 3 X 82 S.Y.	246
56+50 - 58+50	R.T.	450	60" C.M.P., 1 X 102 S.Y.	102
61+90 - 64+00	R.T.	318	24" R.C.P., 2 X 29 S.Y.	58
68+38 - 69+88	L.T.	312	28 1/2" SPAN R.C.P.	29
108+20 - 116+00	R.T.	1,494	1 X 29 S.Y.	59
156+00 - 158+00	R.T.	1,083		
186+00 - 188+00	R.T.	900		
190+70 - 198+00	L.T.	2,356		
204+50 - 206+00	L.T.	494		
224+00 - 228+20	R.T.	712		
225+00 - 233+50	L.T.	1,239		
234+70 - 236+50	R.T.	649		
TOTAL		13,905		

TOTAL SODDING 15,269 S.Y.

MHD 21166 (9/73)

The following Standard Plates, approved by the Federal Highway Administration, shall apply on this project.

PLATE NO.	STANDARD PLATES DESCRIPTION
0002 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 G	REINFORCED CONCRETE PIPE
3006 B	GASKET JOINT FOR R.C. PIPE
3014 G	REINFORCED CONCRETE PIPE - ARCH
3010 D	CORRUGATED METAL PIPE
3100 F	CONC. APRON FOR REINFORCED CONCRETE PIPE
3110 D	CONC. APRON FOR REINFORCED CONC. PIPE - ARCH
3123 G	METAL APRON FOR C.M.P.
8000 F	STANDARD BARRICADES
9000 B	APPROACHES AND ENTRANCES
9102 C	SODDING AT PIPE CULVERT ENDS



X-CULV. 1100
 F & I 24" X 64" R.C.P. CULV. CL. 2
 2-24" APRONS
 CULV. EXC. 72 CY.

BM #1 ELEV. 910.91
 TOP S.E. COR. OF SIGN
 BASE 2-SF #1445

STA. 13+00 LT.
 INP. 12" X 30" C.M.P.

BM #2 ELEV. 910.01
 DBL. SPIKE IN PP
 STA. 18+15 LT. 136'

ROAD APPROACH
 PI = 14+21.45
 Δ = 51° 11' RT.
 DC = 30° 00'
 T = 91.47'
 L = 170.61'

PL = 32+34.54
 Δ = 30° 00' LT.
 DC = 3° 00'
 T = 511.81'
 LC = 1,000.00'

OR PI = 0+59.74
 Δ = 18° 30' 45" RT.
 DC = 16° 00'
 T = 58.36'
 L = 115.70'

BURIED TELEPHONE CABLE

X-CULV. 9+75
 F & I 28 1/2" SPAN X
 56" R.C.P.A. CULV.
 F & I 2-28 1/2" SPAN R.C.P.A. APRONS
 CULV. EXC. 79 CY.

OR PI = 16+78.09
 Δ = 13° 56' RT.
 DC = 3° 00'
 T = 233.53'
 LC = 464.72'

OR PI = 16+26.27
 Δ = 14° 23' 38" RT.
 DC = 3° 00'
 T = 241.18'
 L = 479.80'

X-CULV. 20+00
 F & I 24" X 82" C.M.P. CULV. CL. 2
 F & I 2-24" CONC. APRON

BM #3 ELEV. 904.57
 DBL. SPIKE IN PP
 STA. 27+36 RT. 80'

REG. EXC. 9,188 C.Y.
 REG. EMB. 29,844 C.Y.
 MUCK EXC. 16,824 C.Y.
 MUCK EMB. 6,866 C.Y.
 EXCESS MUCK 9,958 C.Y.
 SUB CUT FOR COMPACTION 277 C.Y.
 COMMON BORROW 42,575 C.Y.
 SALVAGE BITUMINOUS MIXTURE 164 C.Y.

PL = 32+34.54
 Δ = 30° 00' LT.
 DC = 3° 00'
 T = 511.81'
 LC = 1,000.00'

ROAD APPROACH
 PI = 14+08.89
 Δ = 45° 48' LT.
 DC = 30° 00'
 T = 80.68'
 L = 152.67'

PI = 53+53.83
 Δ = 0° 17' LT.
 CAST IRON MON. INP.

X-CULV. 38+00
 F & I 36" X 74" C.M.P. CULV.
 F & I 2-36" C.M.P. APRONS

BM. 4 ELEV. 904.78
 DBL. SPIKE IN DBL. 12" BIRCH
 STA. 37+80 RT. 100'

BM. 5 ELEV. 909.45
 DBL. SPIKE IN PP
 STA. 46+80 RT. 35'

X-CULV. L² STA 1+00
 F & I 18" X 52" C.M.P.
 F & I 2-18" C.M.P. APRONS
 CULV. EXC. 14 CY.

REG. EXC. 13,770 C.Y.
 REG. EMB. 8,777 C.Y.
 MUCK EXC. 4,506 C.Y.
 MUCK EMB. 1,669 C.Y.
 EXCESS MUCK 2,837 C.Y.
 SUB CUT FOR COMPACTION 1,258 C.Y.
 SALVAGE BITUMINOUS MIXTURE 342 C.Y.

MUCK EXC.

MUCK EXC.

MUCK EXC.

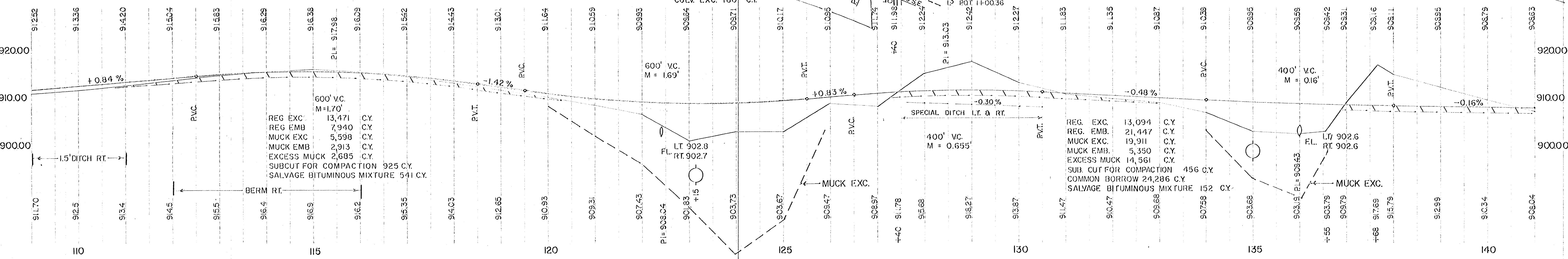
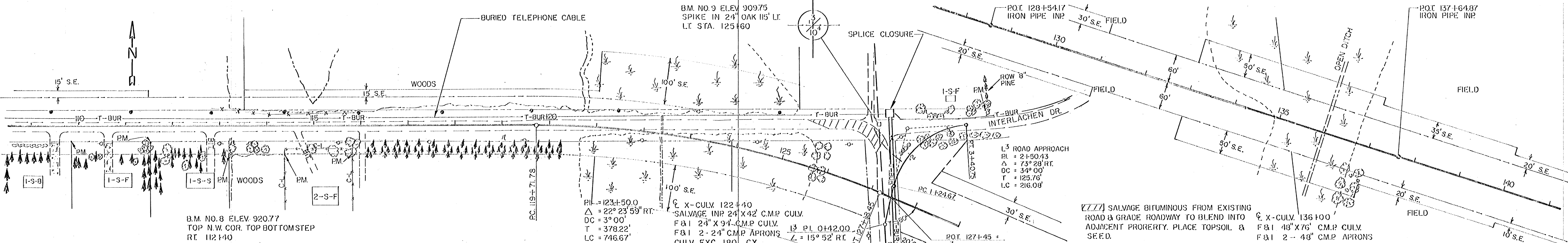
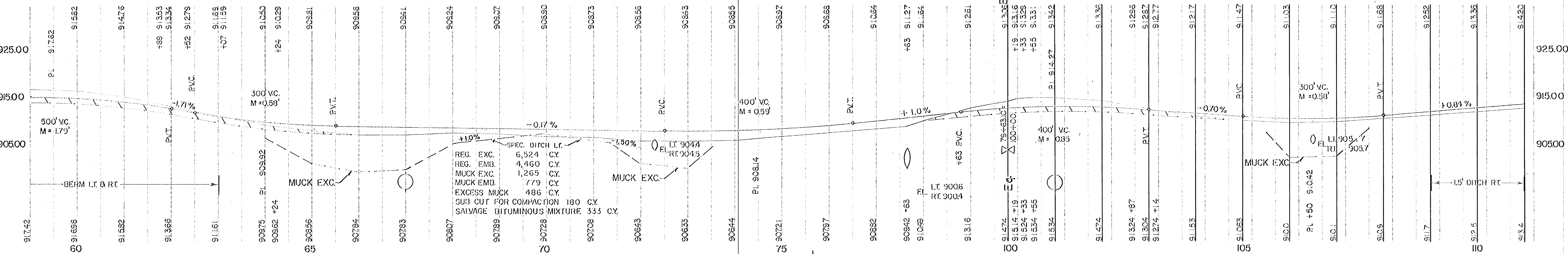
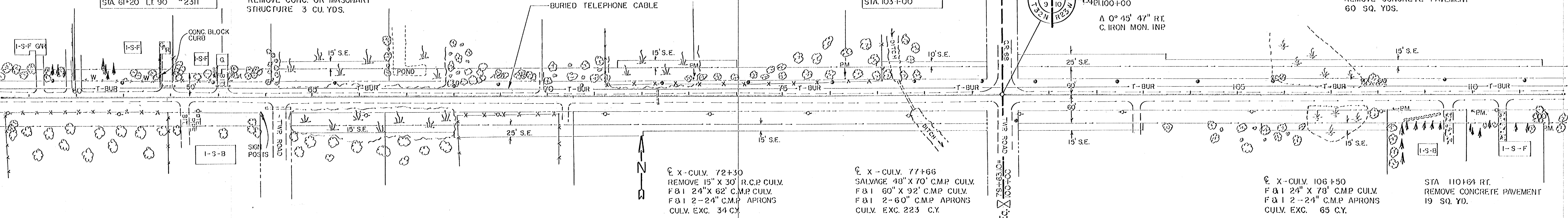
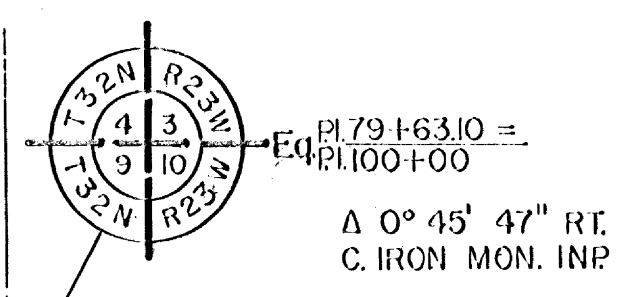
BERM LT.
BERM RT.

BM. 6 ELEV. 915.88
TOP SW COR. BOT WLY STEP
STA. 61+20 LT 90° 23'11"

STA 61+73 LT.
REMOVE CONC. OR MASONRY
STRUCTURE 3 CU. YDS.

BM. #7 ELEV. 915.22
NAIL IN OAK 102' RT.
STA. 103+00

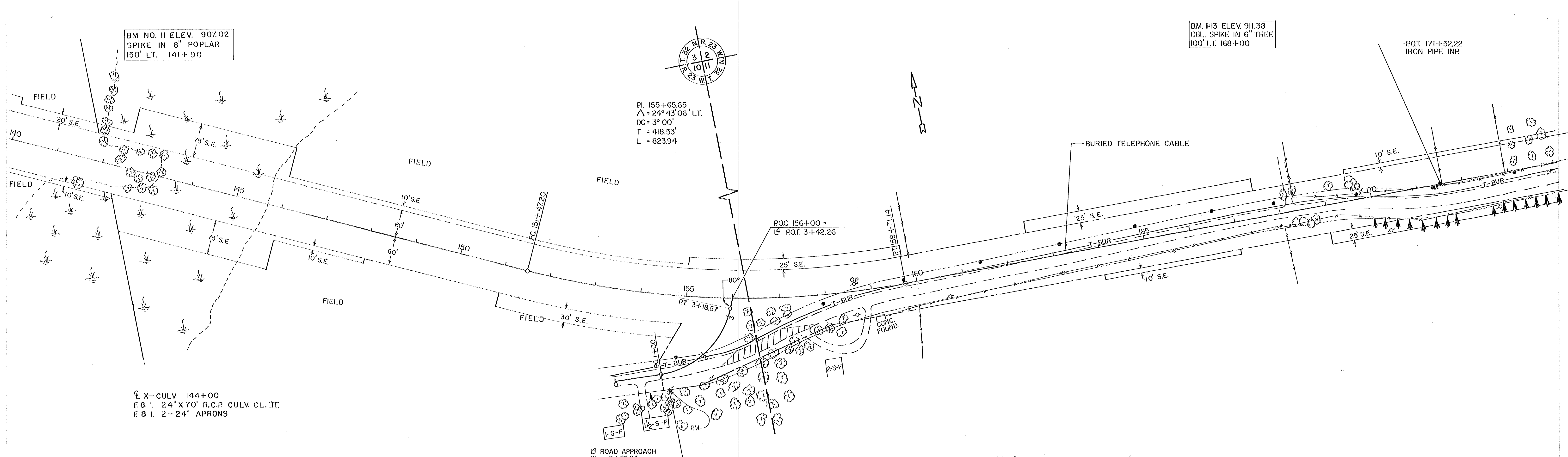
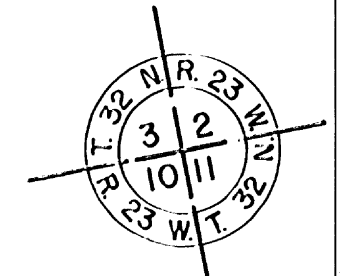
STA 109+50 RT.
REMOVE CONCRETE PAVEMENT
60 SQ. YDS.



BM NO. 11 ELEV. 907.02
SPIKE IN 8" POPLAR
150' L.T. 141+90

BM #13 ELEV. 911.38
DBL. SPIKE IN 6" TREE
100' L.T. 168+00

PI. 155+65.65
 $\Delta = 24^\circ 43' 06''$ LT.
DC = 3° 00'
T = 418.53'
L = 823.94

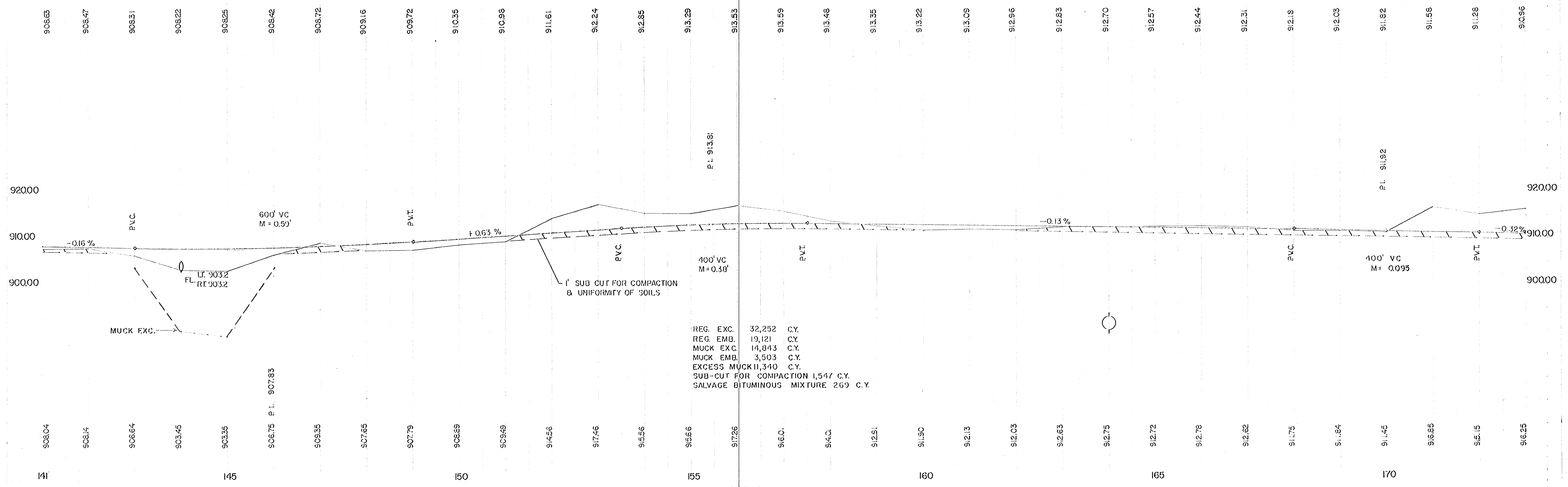


CL X-CULV. 144+00
F&I. 24" X 70' R.C.P. CULV. CL. II
F&I. 2-24" APRONS

ROAD APPROACH
PI = 2+25.24
 $\Delta = 69^\circ 56' 30''$
DC = 32° 00'
T = 125.24'
L = 218.57'

BM NO. 12 ELEV. 915.42
RR SPIKE IN DBL 24" OAK
100' RT. OF PI 155+65

Salvage bituminous from existing road and grade roadway to blend into adjacent property. Place topsoil and seed.

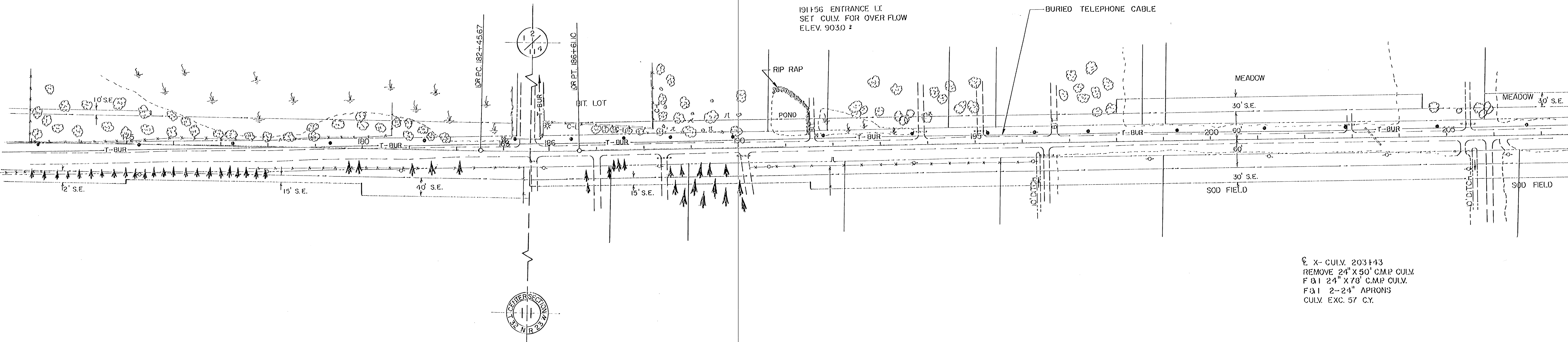
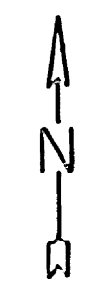


REG. EXC. 32,252 C.Y.
REG. EMB. 19,121 C.Y.
MUCK EXC. 14,843 C.Y.
MUCK EMB. 3,503 C.Y.
EXCESS MUCK 11,340 C.Y.
SUB-CUT FOR COMPACTION 1,547 C.Y.
SALVAGE BITUMINOUS MIXTURE 269 C.Y.

E 4. Δ PI 183+50.57 =
 PI 185+56.20
 $\Delta = 2^{\circ} 05' 52''$ LT.
 OR DC = $1^{\circ} 00'$
 T = 104.90'
 LC = 209.78'

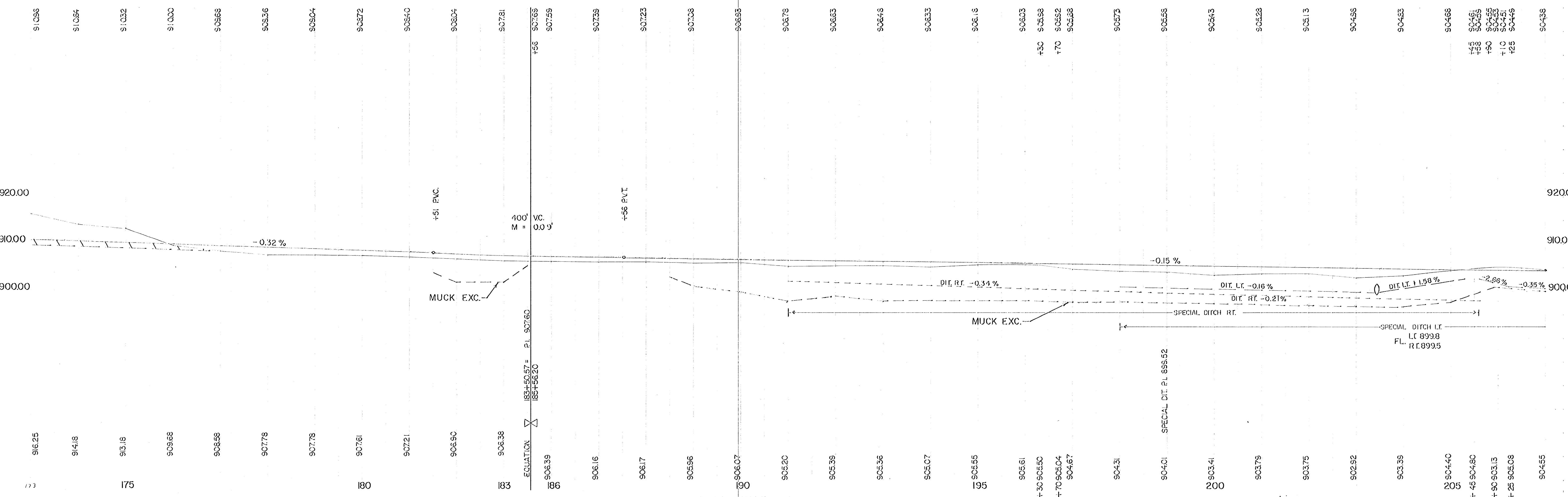
B.M. NO. 15 ELEV. 908.42
 TOP S.W. COR. BOTTOM STEP
 FRONT # 3953 LT. 196 F95

B.M. NO. 16 ELEV. 905.44
 SPIKE IN ROOT OF 24" OAK
 60' LT. 204 F80



Δ X- CULV. 203 F43
 REMOVE 24" X 50' CMP CULV.
 F & I 24" X 78' CMP CULV.
 F & I 2-24" APRONS
 CULV. EXC. 57 C.Y.

B.M. NO. 14 ELEV. 907.52
 SPIKE IN PP RT 60'
 STA. 185+85

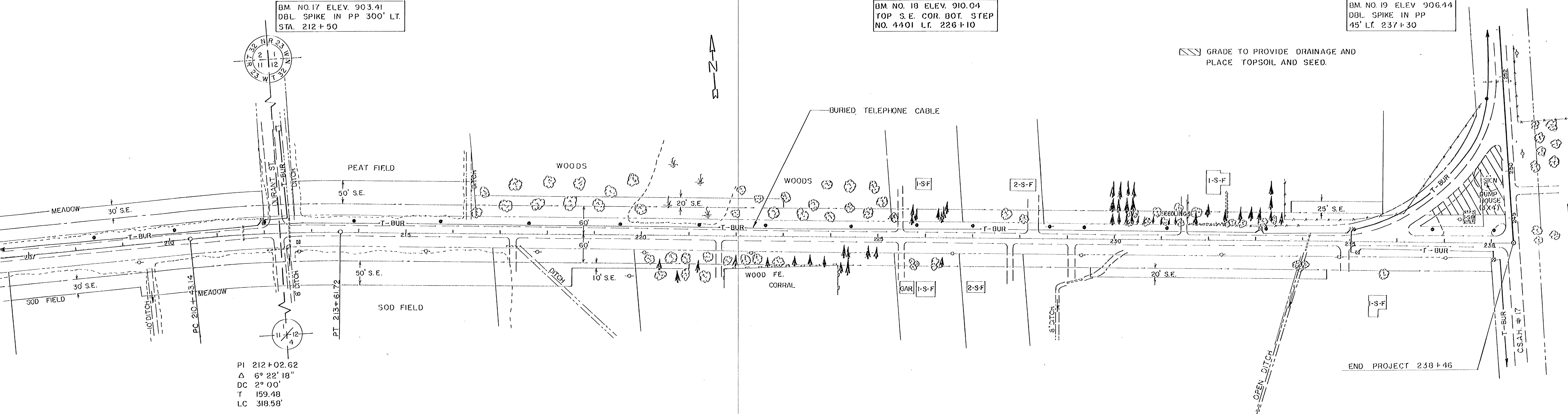


BM. NO. 17 ELEV. 903.41
DBL. SPIKE IN PP 300' LT.
STA. 212+50

BM. NO. 18 ELEV. 910.04
TOP S.E. COR. BOT. STEP
NO. 4401 LT. 226+10

BM. NO. 19 ELEV. 906.44
DBL. SPIKE IN PP
45' LT. 237+30

GRADE TO PROVIDE DRAINAGE AND
PLACE TOPSOIL AND SEED.



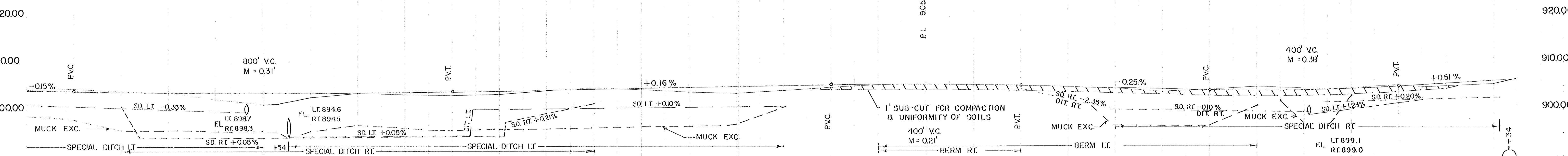
PI 212+02.62
Δ 6° 22' 18"
DC 2° 00'
T 159.48
LC 318.58'

CL X - CULV. 211+65
REMOVE 18" X 30' C.M.P. CULV.
F&I 24" X 76' C.M.P. CULV.
F&I 2-24" C.M.P. APRONS
CULV. EXC. 60 C.Y.

CL X - CULV. 212+54
SALVAGE 48" X 60' C.M.P.
INSTALL 48" X 60' C.M.P.
F&I 48" X 30' C.M.P.
F&I 2-48" C.M.P. CULV.
CULV. EXC. 76 C.Y.

CL X - CULV. 234+11
REMOVE 24" X 40' C.M.P. CULV.
F&I 24" X 72' C.M.P. CULV.
F&I 2-24" C.M.P. APRONS
CULV. EXC. 94 C.Y.

90438 90423 90410 90406 +42 90401 90396 90394 90394 +65 90395 90395 +30 90395 90395 +62 90397 90403 90413 90427 90432 +33 90443 90445 +10 90459 90475 90491 90507 90523 90539 90555 90566 90566 90557 90537 90512 90487 90462 90437 90421 90425 +06 90426 +15 90427 +60 90434 90447 90469 90515 90540 90591 +14 90596 +34 90608



REG. EXC. 25,769 C.Y.
REG. EMB. 14,650 C.Y.
MUCK EXC. 11,639 C.Y.
MUCK EMB. 4,954 C.Y.
EXCESS MUCK 6,685 C.Y.
SUBCUT FOR COMPACTION 1,114 C.Y.
SALVAGE BITUMINOUS MIXTURE 1,126 C.Y.

REG. EXC. 1,205 C.Y.
REG. EMB. 5,286 C.Y.
MUCK EXC. 8,462 C.Y.
MUCK EMB. 2,923 C.Y.
EXCESS MUCK 5,539 C.Y.
COMMON BORROW 7,826 C.Y.
SALVAGE BITUMINOUS MIXTURE 220 C.Y.

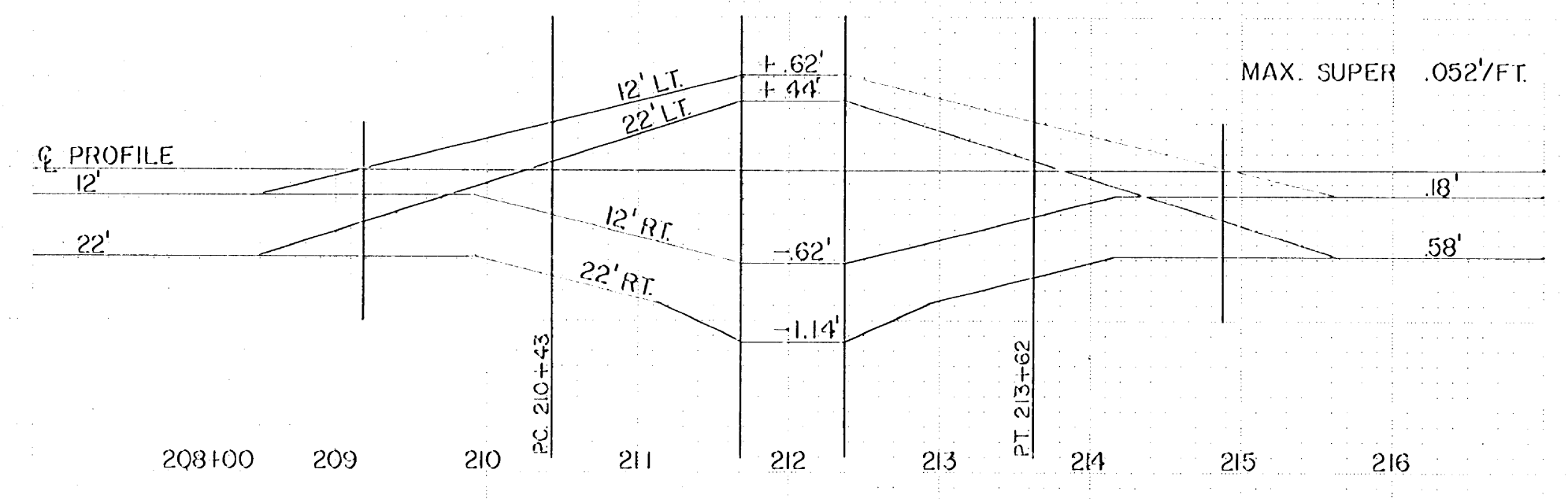
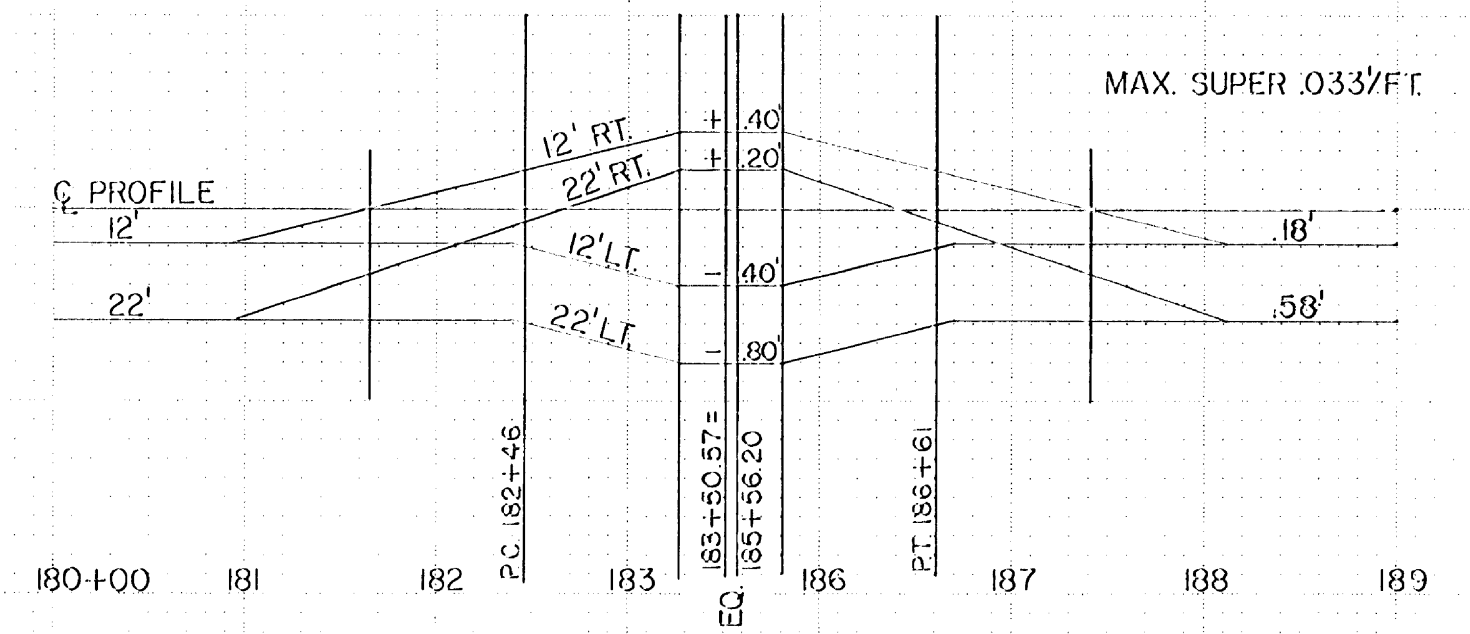
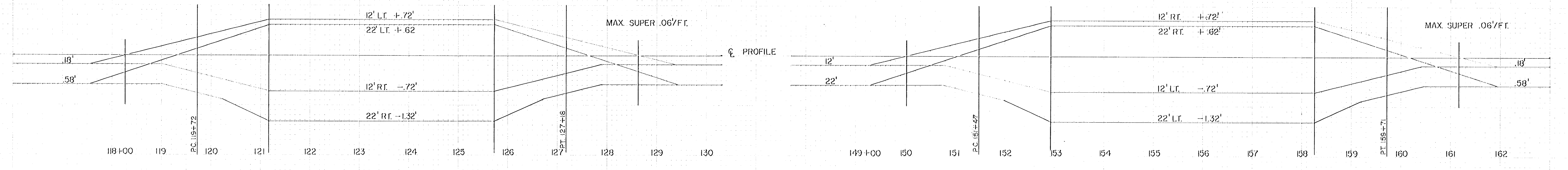
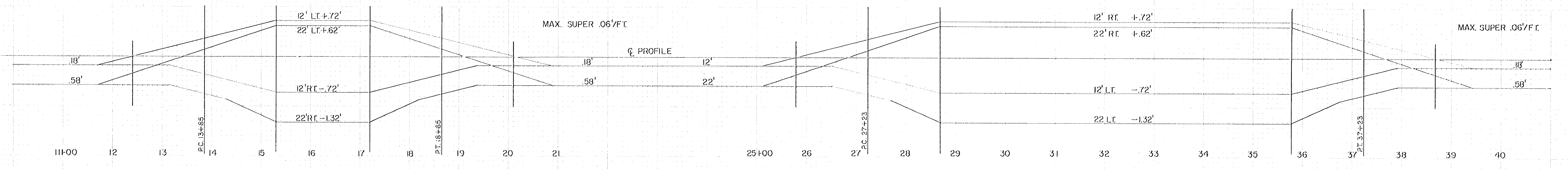
REG. EXC. 4,062 C.Y.
REG. EMB. 2,731 C.Y.
MUCK EXC. 2,464 C.Y.
MUCK EMB. 994 C.Y.
EXCESS MUCK 1,470 C.Y.
SUB-CUT FOR COMPACTION 1,154 C.Y.
SALVAGE BITUMINOUS MIXTURE 424 C.Y.

90455 90467 90453 90391 90245 90135 90163 +30 90292 90376 90355 90330 90356 90430 90482 90451 90394 90365 90415 90457 90540 90563 90551 90531 90495 90459 90403 90432 90492 90447 90441 +60 90465 90532 90453 90487 90544 90616 +34 90642

SUPERELEVATION FOR CURVES

SCALE: VERT. 1"=1'
HORIZ. 1"=100'

DATE 2/13/09
BY [Signature]
CHECKED BY [Signature]
DESIGNED BY [Signature]
DRAWN BY [Signature]



EXCAVATION EMBANKMENT

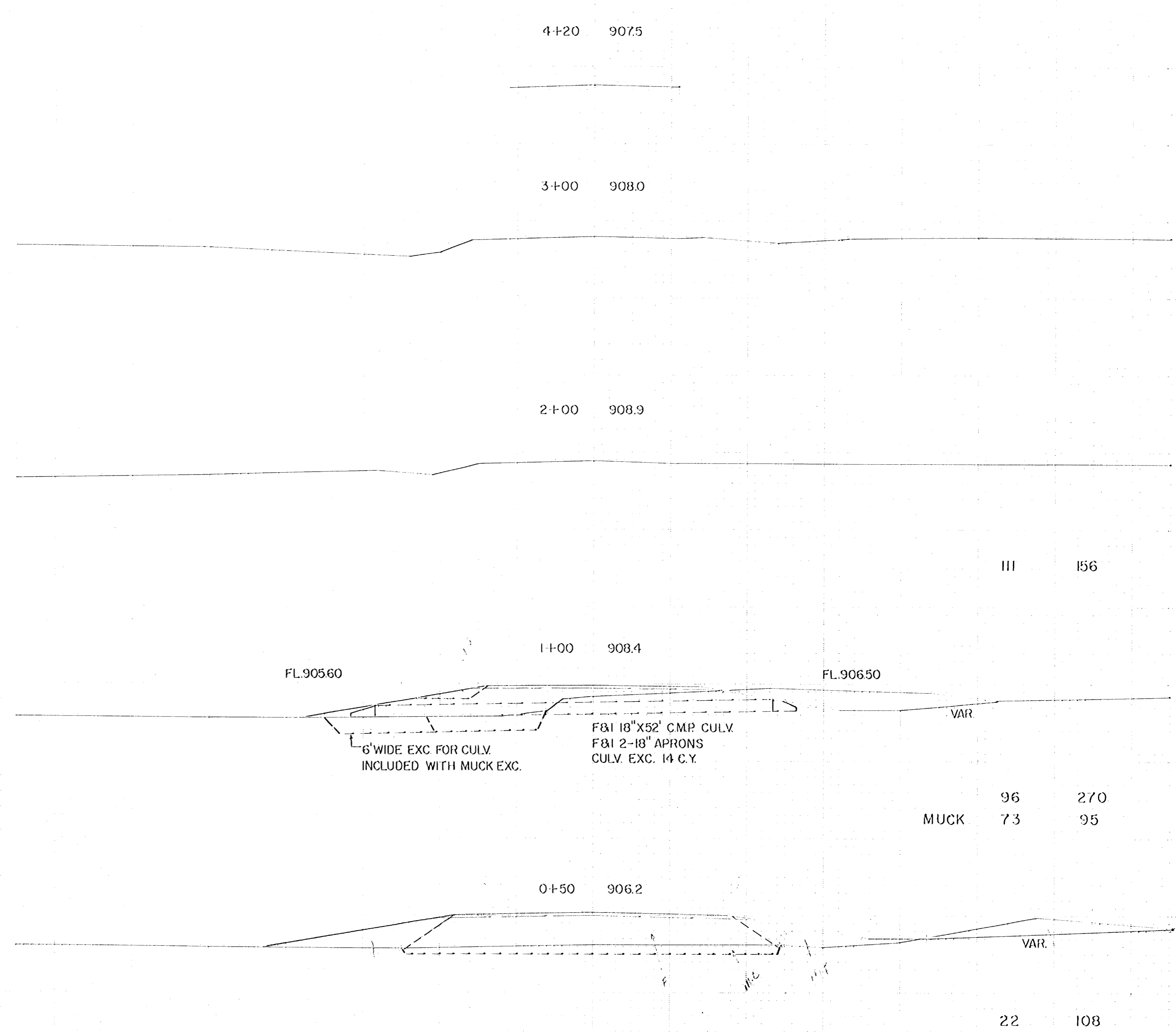
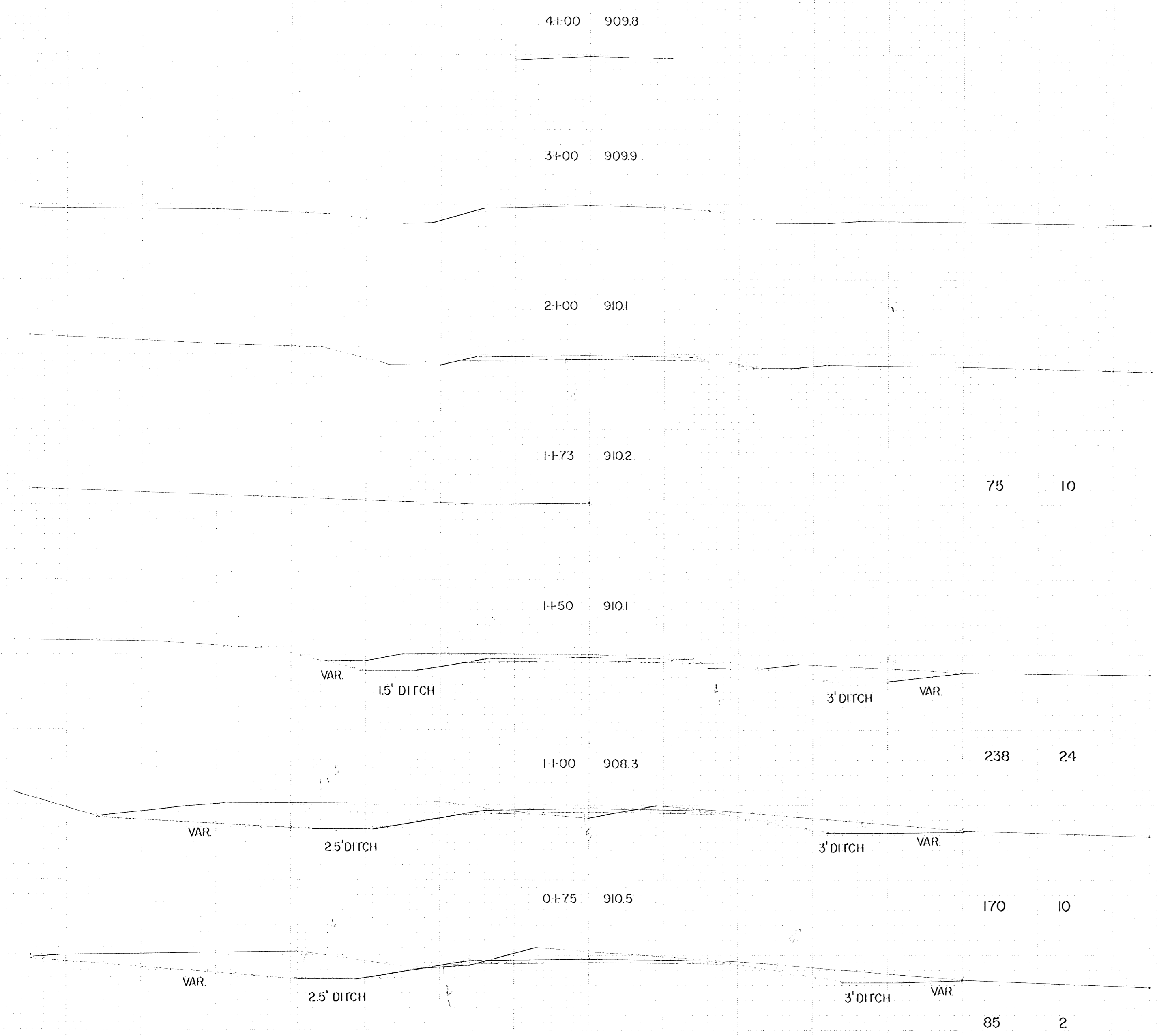
EXCAVATION EMBANKMENT

L₁
ROAD APPROACH LT. 17+50

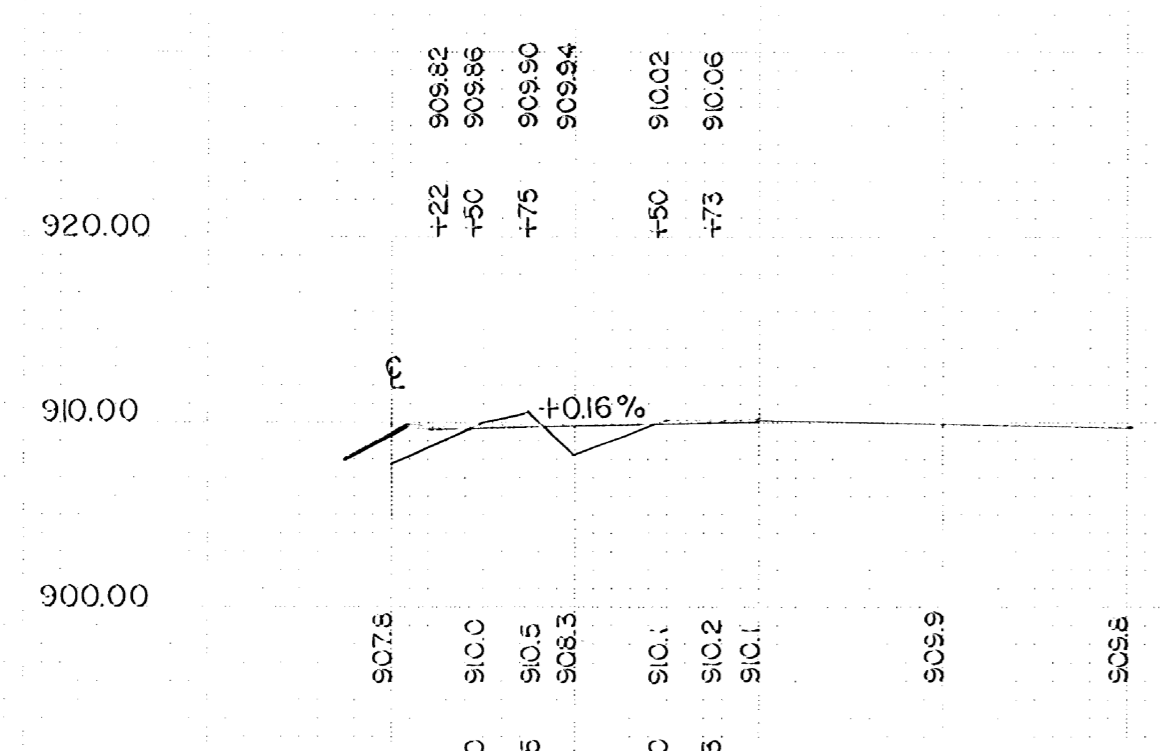
L₂
ROAD APPROACH LT. 54+20

Excavation Embankment

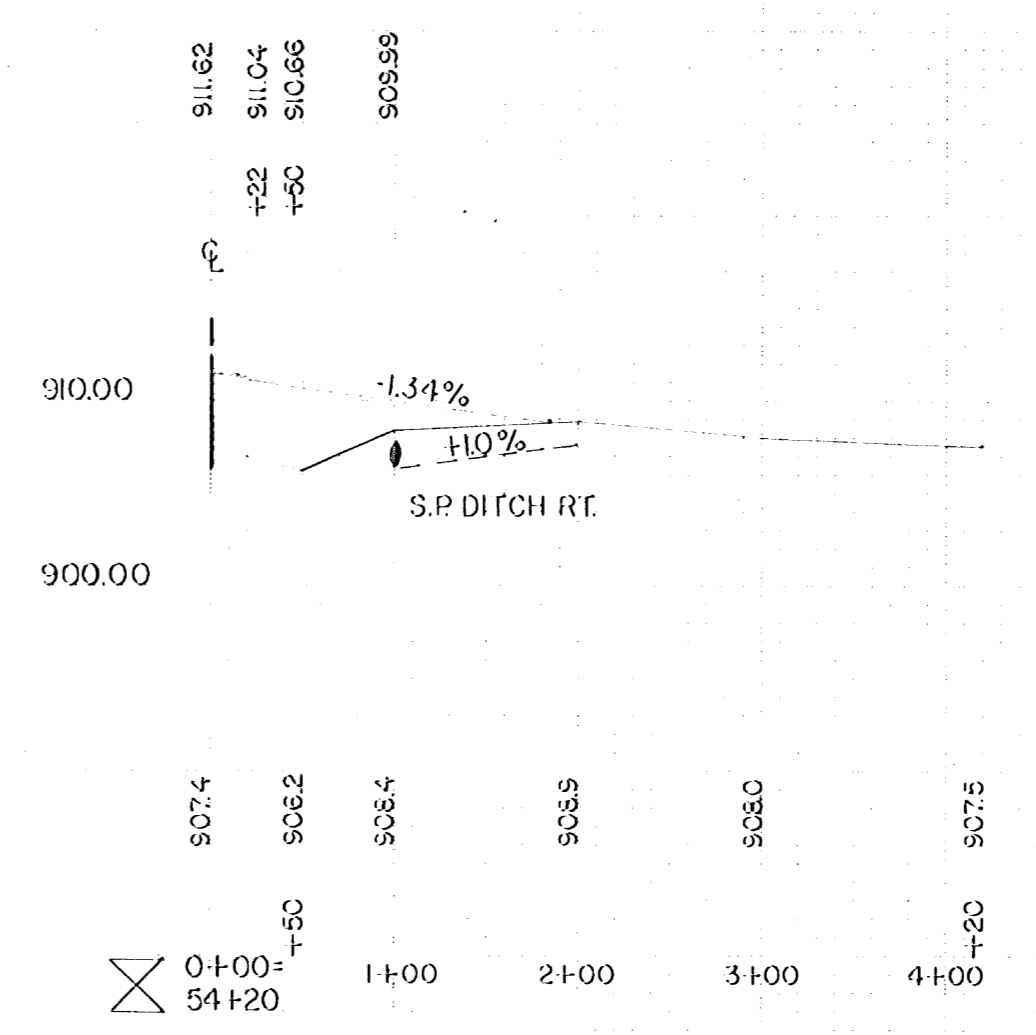
Excavation Embankment



PROFILE



PROFILE



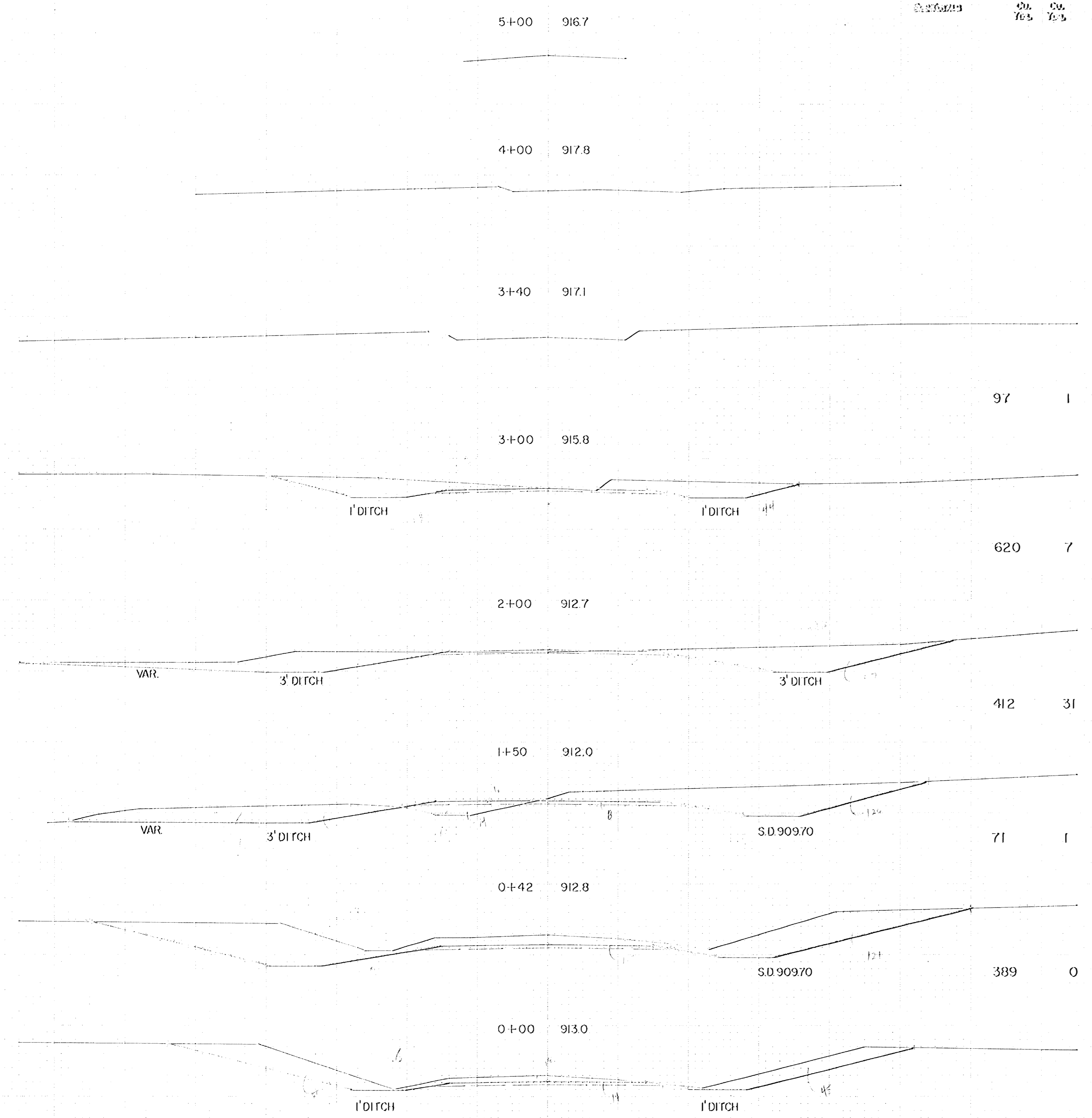
NOTE: QUANTITIES INCLUDED WITH ADJACENT BALANCES

L₃
ROAD APPROACH 127+45

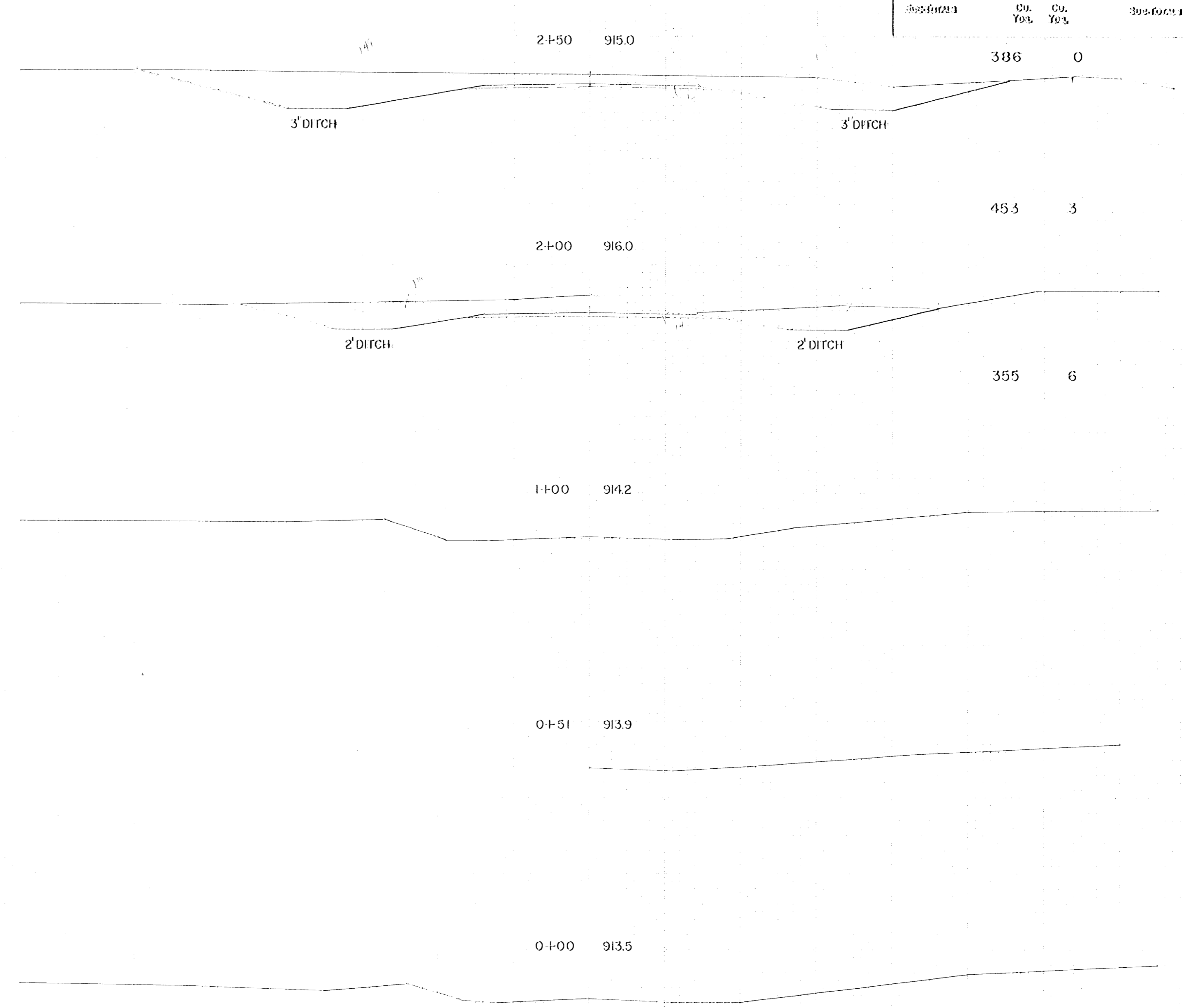
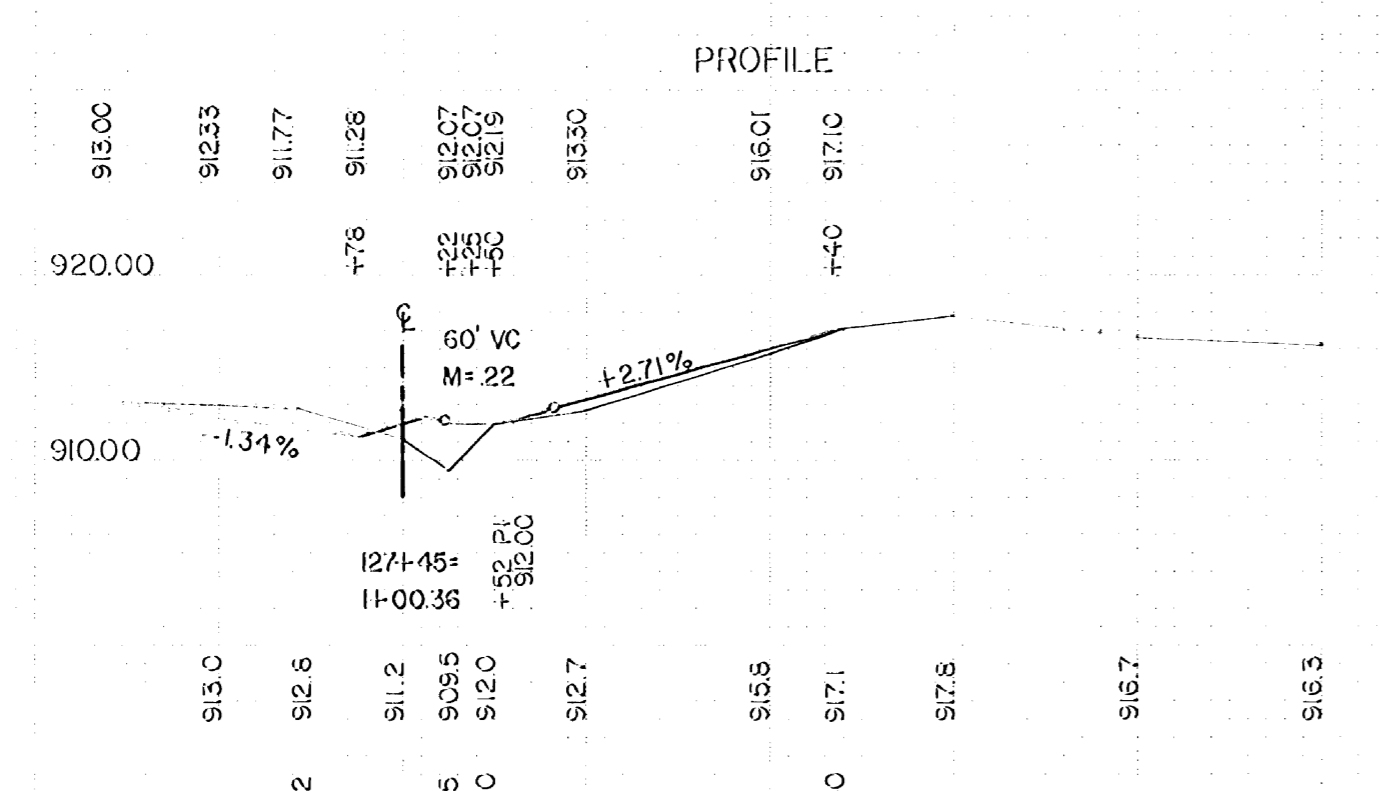
EXCAVATION EMBANKMENT

L₄
ROAD APPROACH RT. 156+00

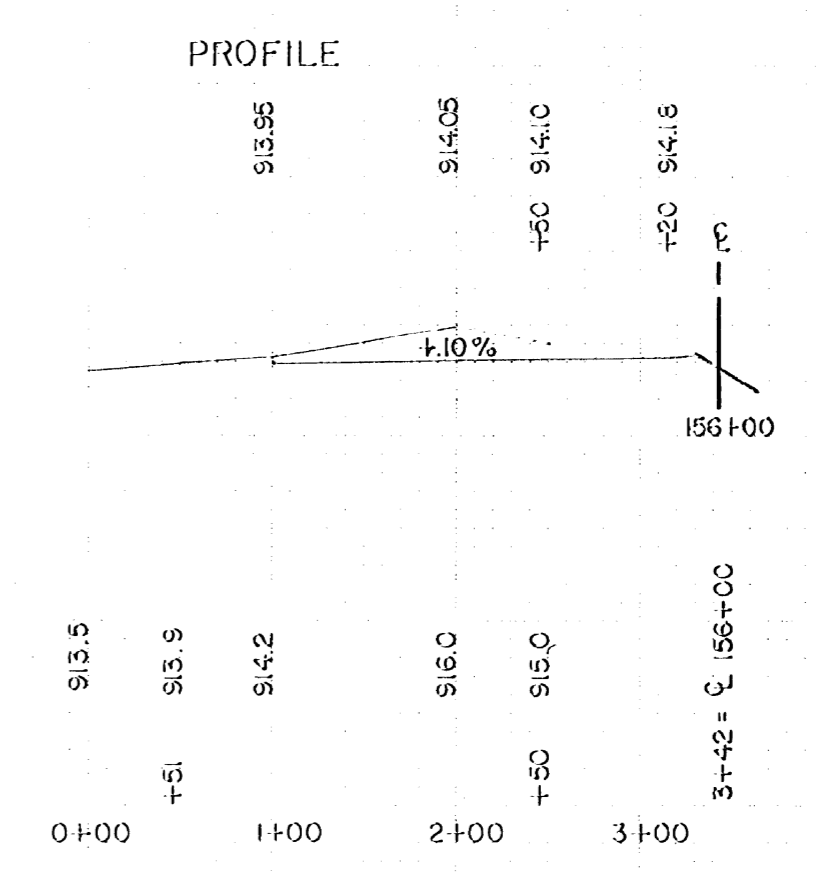
EXCAVATION EMBANKMENT



97	1
620	7
412	31
71	1
389	0



386	0
453	3
355	6
913.9	
913.5	



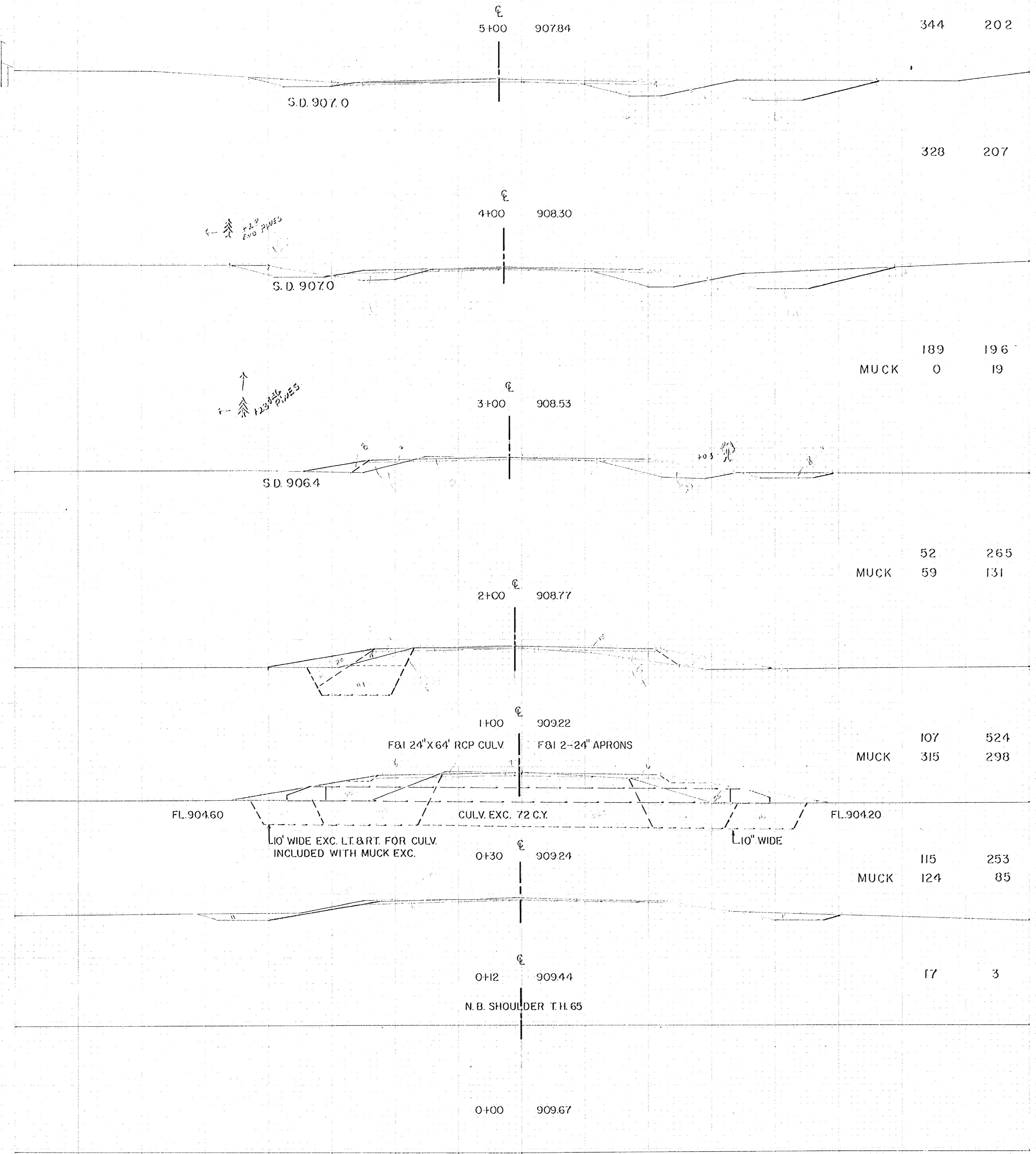
NOTE: QUANTITIES INCLUDED WITH ADJACENT BALANCES

EXCAVATION EMBANKMENT

300-00000 00. 00. 300-00000

EXCAVATION EMBANKMENT

300-00000 00. 00. 300-00000



344 202

328 207

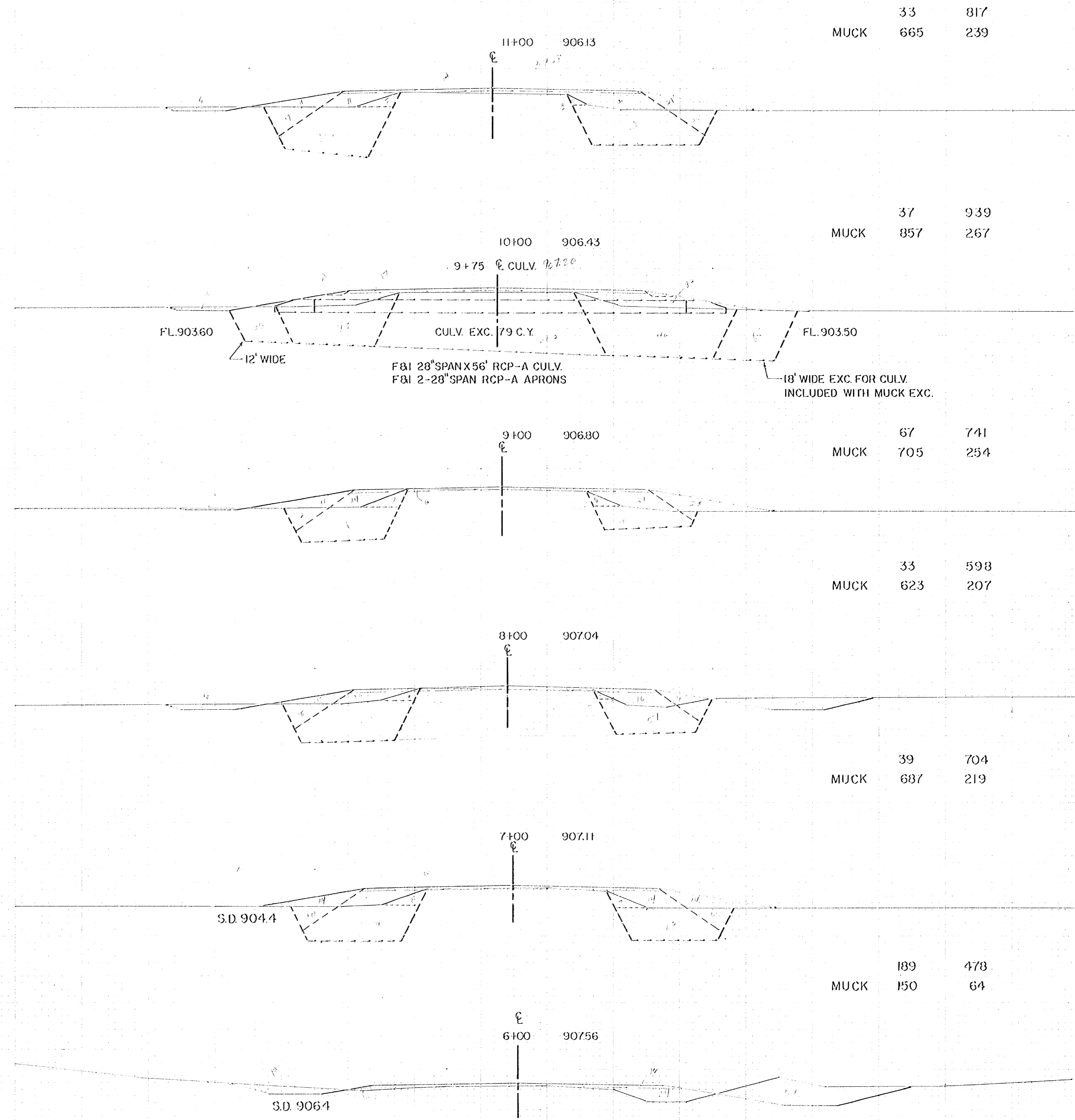
189 196
MUCK 0 19

52 265
MUCK 59 131

107 524
MUCK 315 298

115 253
MUCK 124 85

17 3



33 817
MUCK 665 239

37 939
MUCK 857 267

67 741
MUCK 705 254

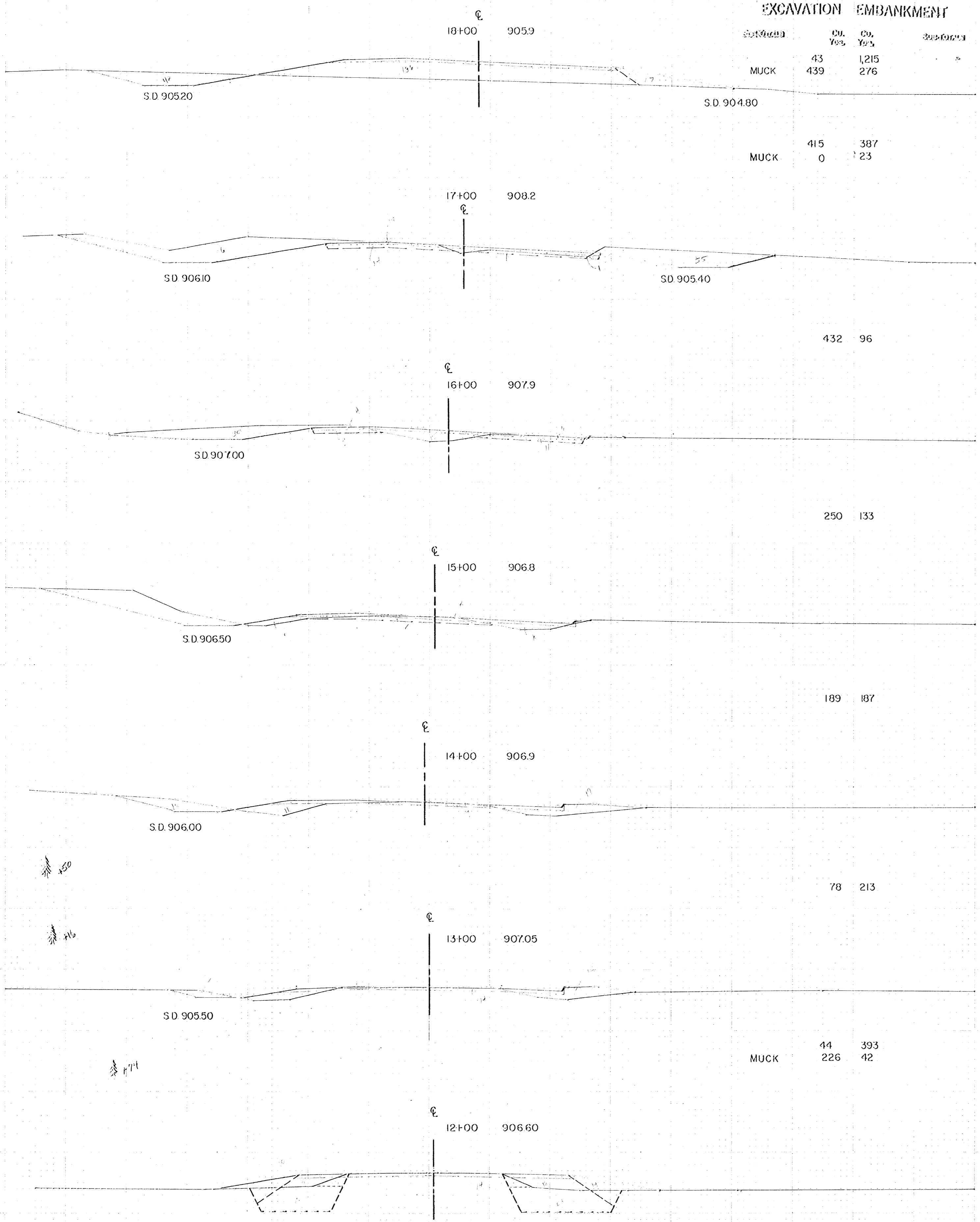
33 598
MUCK 623 207

39 704
MUCK 687 219

189 478
MUCK 150 64

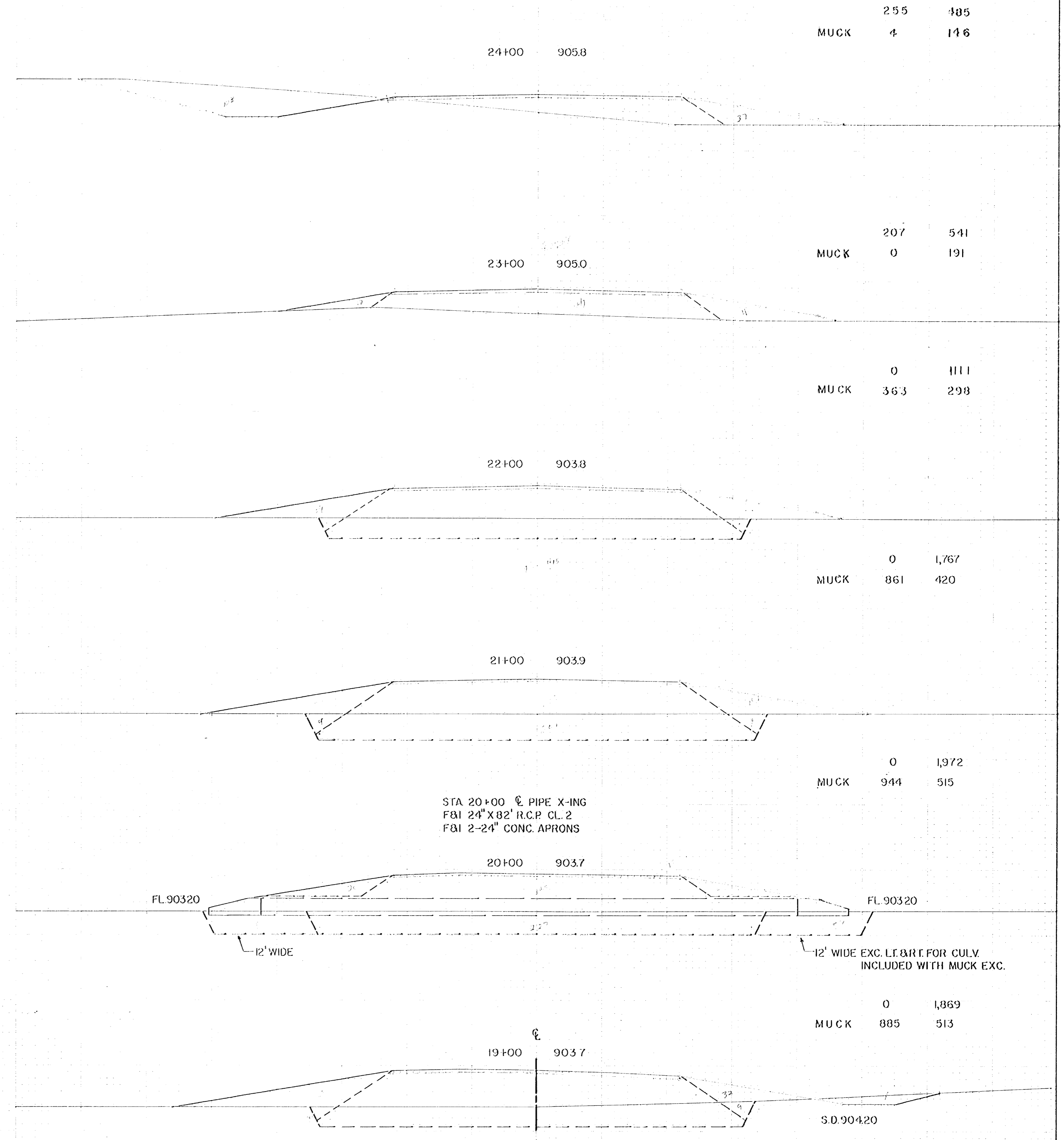
EXCAVATION EMBANKMENT

EXCAVATION	CU. YDS.	EMBANKMENT	CU. YDS.
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EXCAVATION EMBANKMENT

EXCAVATION	CU. YDS.	EMBANKMENT	CU. YDS.
MUCK	43	1,215	
	439	276	
MUCK	415	387	
	0	23	



STA 20+00 ϕ PIPE X-ING
 FBI 24" X 82' R.C.P. CL. 2
 FBI 2-24" CONC. APRONS

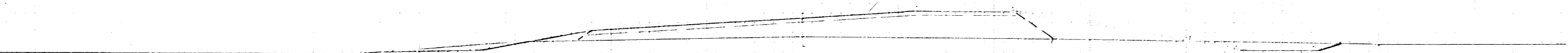
12' WIDE

12' WIDE EXC. LT. & RT. FOR CULV. INCLUDED WITH MUCK EXC.

EXCAVATION EMBANKMENT

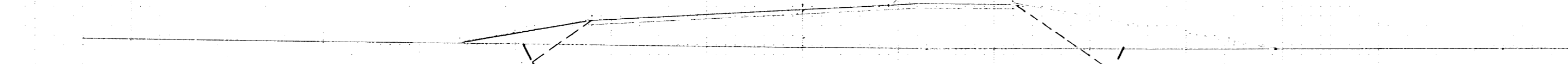
EXCAVATION Cu. Yds. EMBANKMENT Cu. Yds. SUB-TOTAL

31+00 905.7



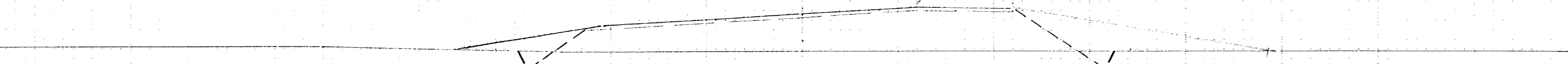
MUCK 18 857
169 178

30+00 903.8



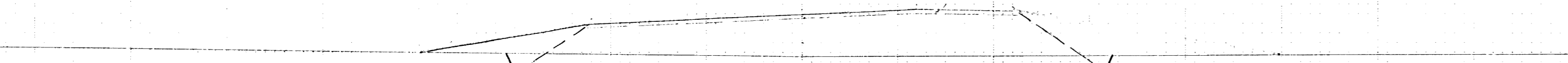
MUCK 0 1341
670 259

29+00 903.8



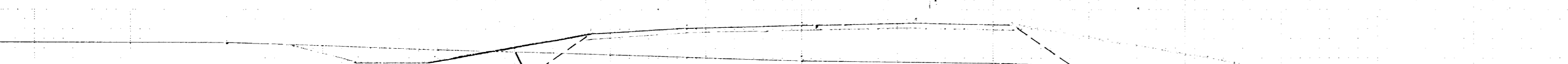
MUCK 0 1370
659 274

28+00 903.9



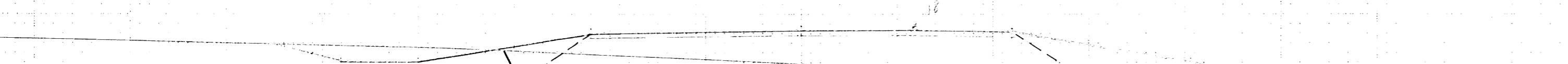
MUCK 0 1333
706 276

27+00 904.8



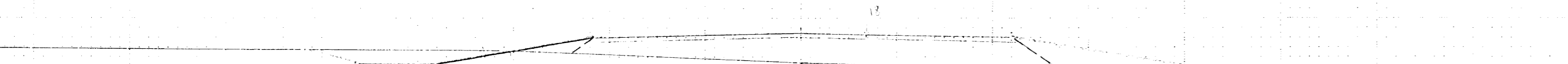
MUCK 0 1248
780 250

26+00 904.9



MUCK 0 878
443 187

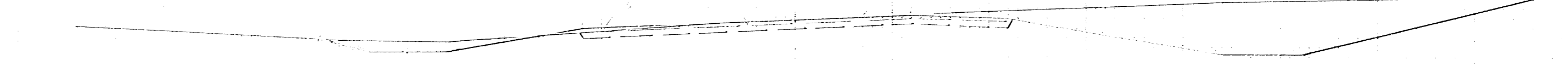
25+00 905.4



EXCAVATION EMBANKMENT

EXCAVATION Cu. Yds. EMBANKMENT Cu. Yds. SUB-TOTAL

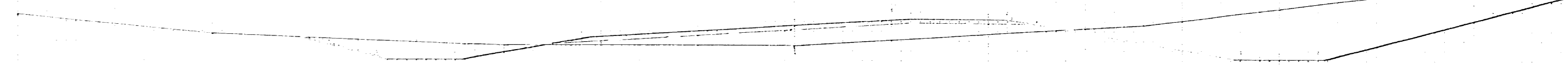
37+00 906.9



MUCK 186 965
302 105

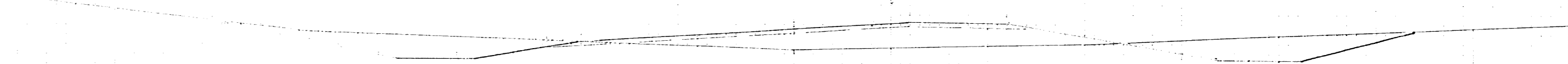
859 159

36+00 904.5



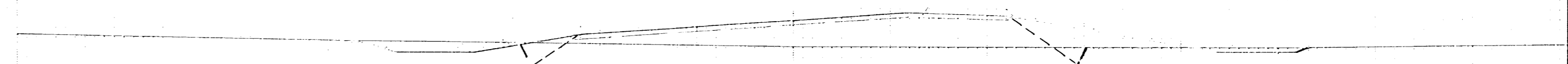
657 324

35+00 904.3

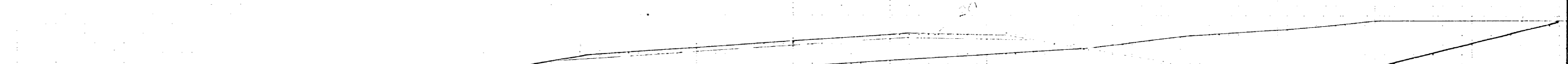


MUCK 104 722
188 33

34+00 904.1



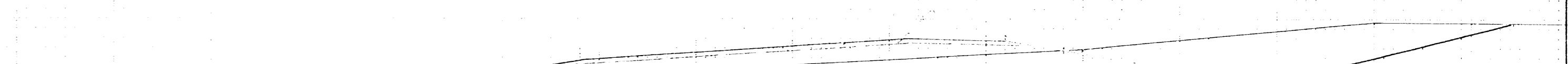
33+00 904.8



MUCK 153 782
188 33

583 398

32+00 905.3



MUCK 315 346
0 22

EXCAVATION EMBANKMENT

SECTION	CU. YDS.	CU. YDS.	SUBTOTAL
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EXCAVATION EMBANKMENT

SECTION	CU. YDS.	CU. YDS.	SUBTOTAL
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41+00 907.6

2226 1

45+00 905.4

	0	2092
MUCK	1793	298

	307	56
MUCK	0	25

40+65 905.2

	291	574
MUCK	529	84

	80	550
MUCK	241	88

44+44 908.3

	829	0
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40+00 903.7

44+00 911.0

	0	2517
MUCK	2259	424

	2837	0
--	------	---

39+00 903.5

43+00 911.8

	0	2772
MUCK	2278	531

	3044	0
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38+00 900.9

42+00 911.2

FL 900.50

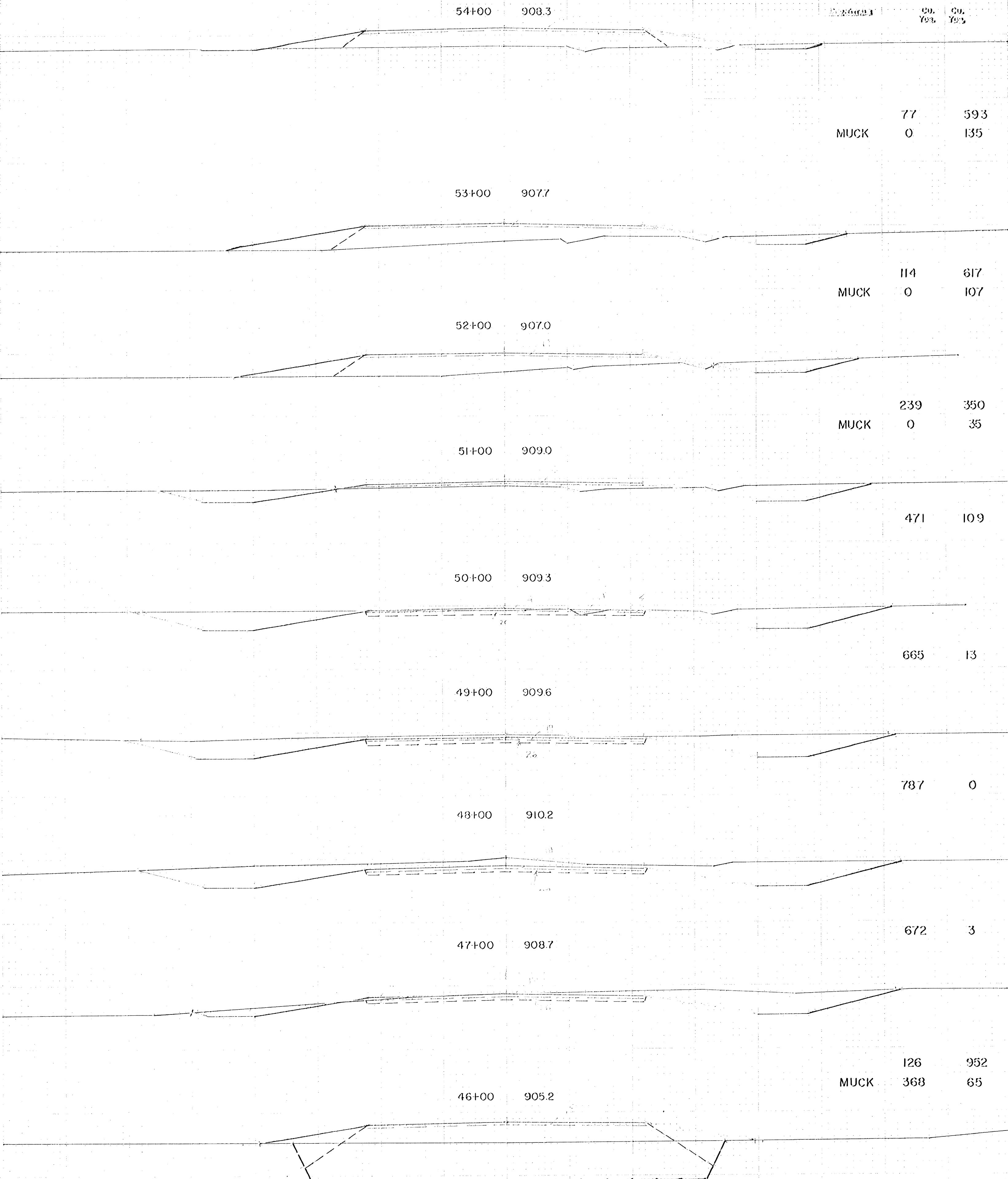
12' WIDE

FL 900.10

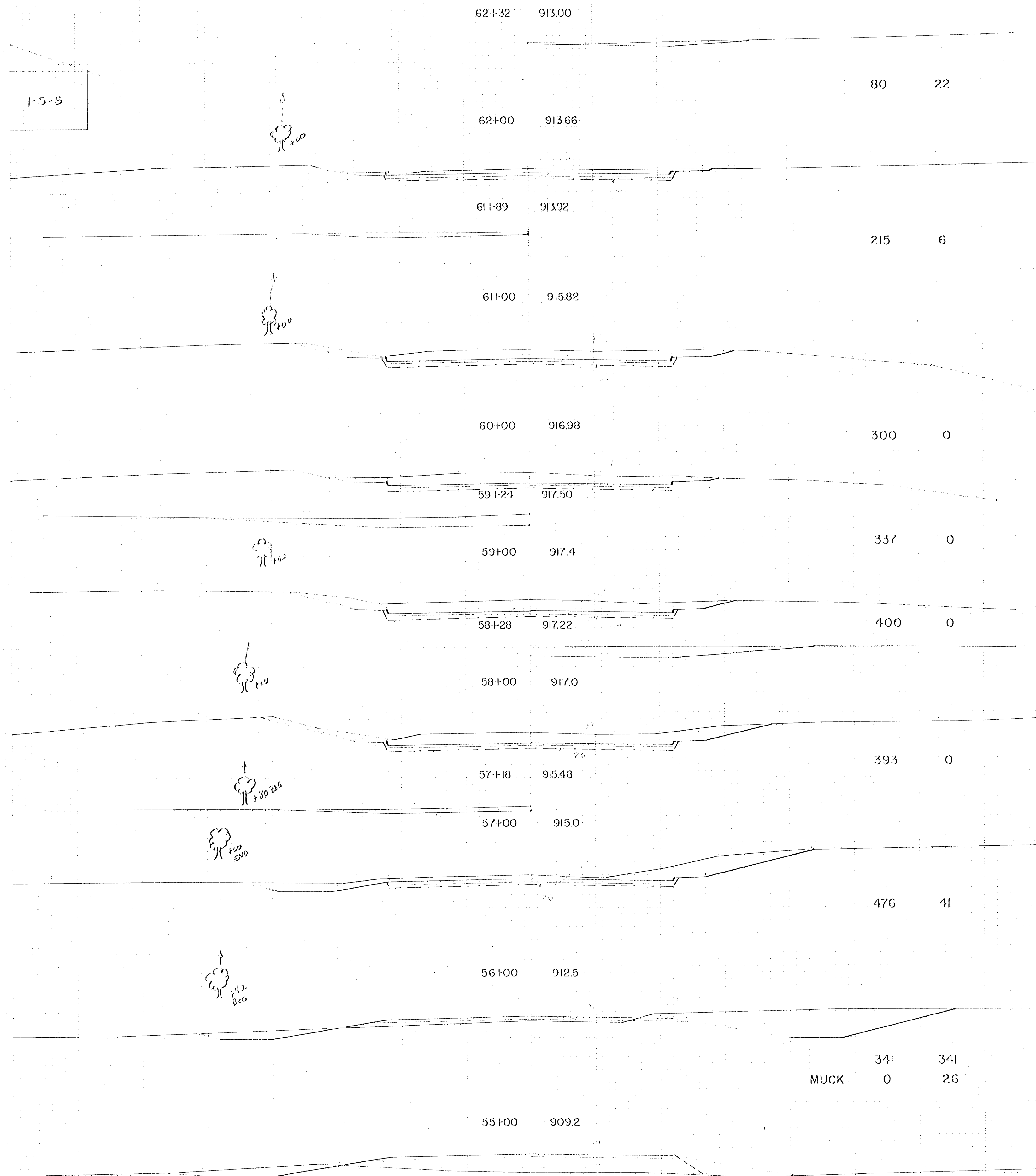
12' WIDE EXC. LT. & RT. FOR CULV. INCLUDED WITH MUCK EXC.

38+00 C. DITCH
F&I 36" X 74" C.M.P. CULV.
F&I 2-36" METAL APRONS

EXCAVATION EMBANKMENT

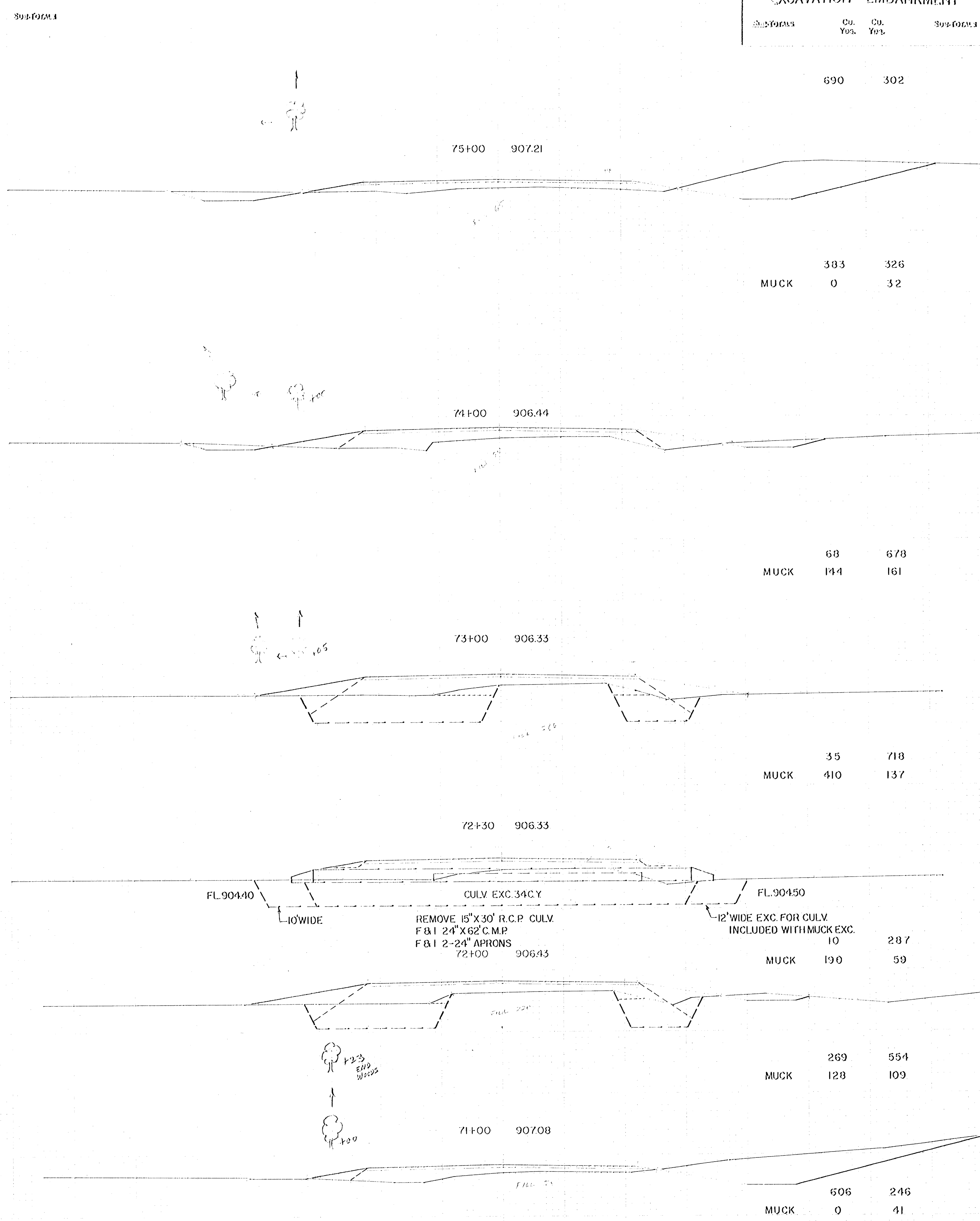
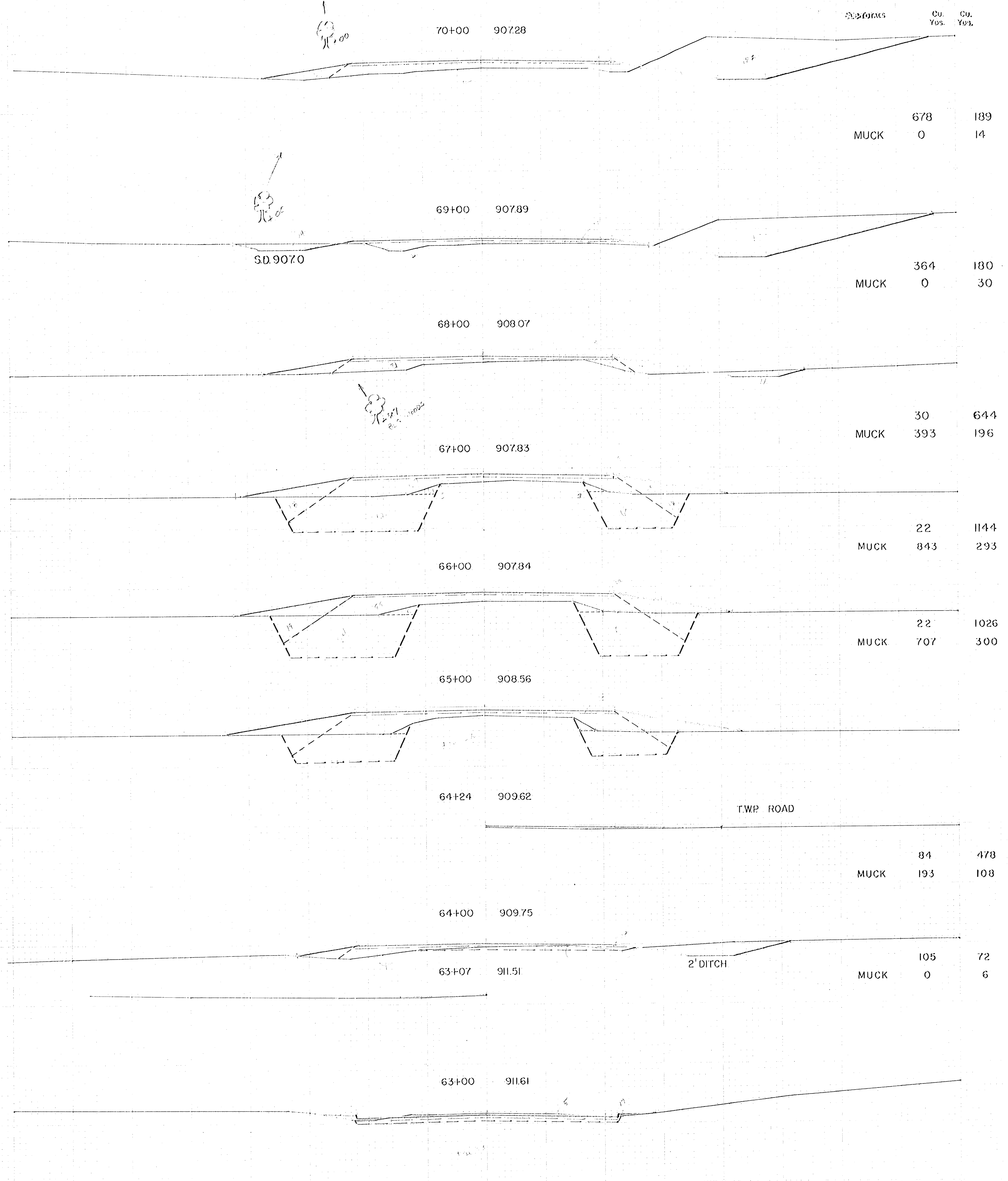


1-5-5



EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

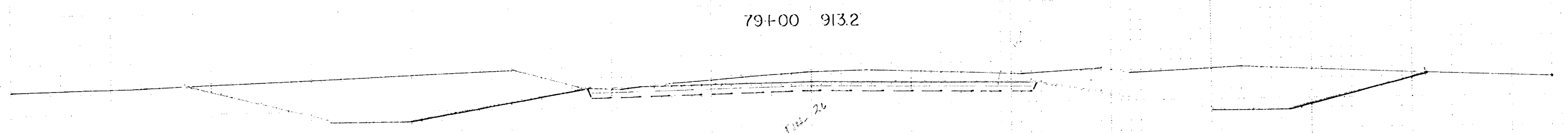


FL. 904.40
 10' WIDE
 REMOVE 15' X 30' R.C.P. CULV.
 F&I 24" X 62" C.M.P.
 F&I 2-24" APRONS
 72+00 906.43
 CULV. EXC. 34 CY
 12' WIDE EXC. FOR CULV.
 INCLUDED WITH MUCK EXC.
 10
 287
 MUCK 190 59
 FL. 904.50

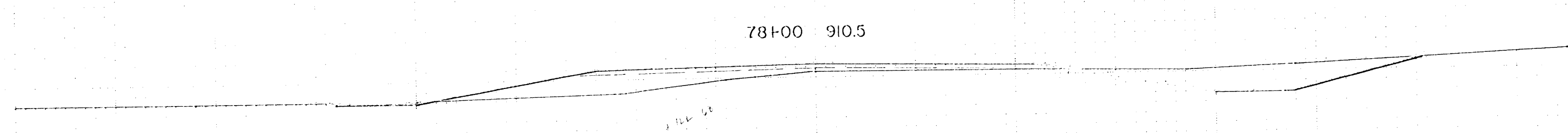
EXCAVATION EMBANKMENT

SECTION	CU. YDS.	CU. YDS.	SUB-TOTAL
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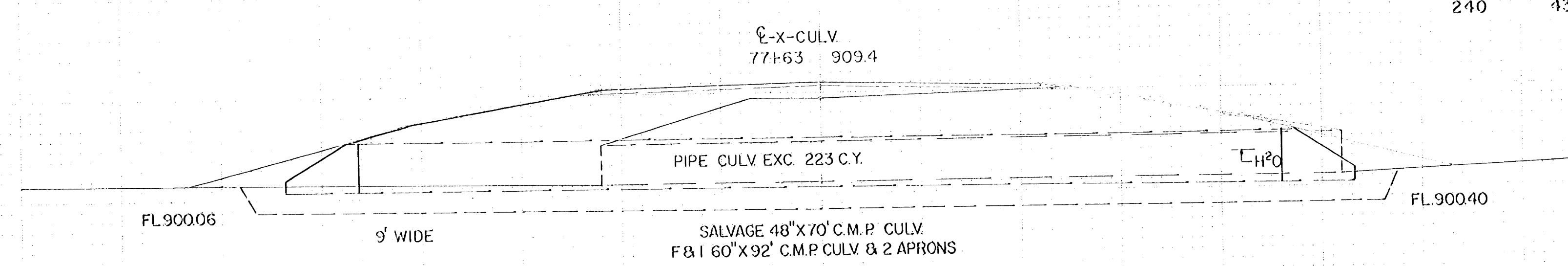
SECTION	CU. YDS.	CU. YDS.	SUB-TOTAL
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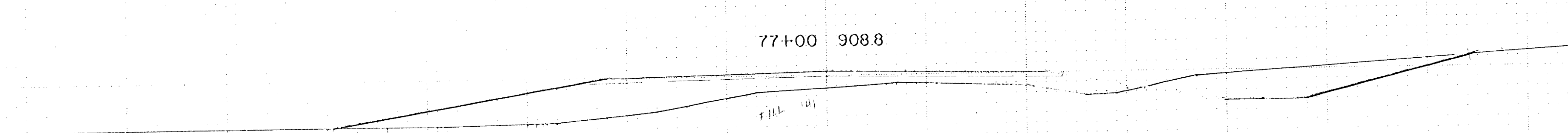
498 1



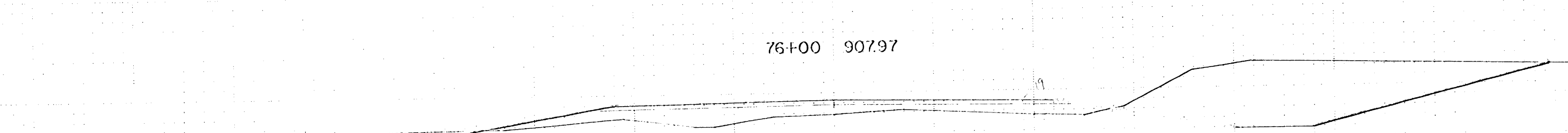
616 141



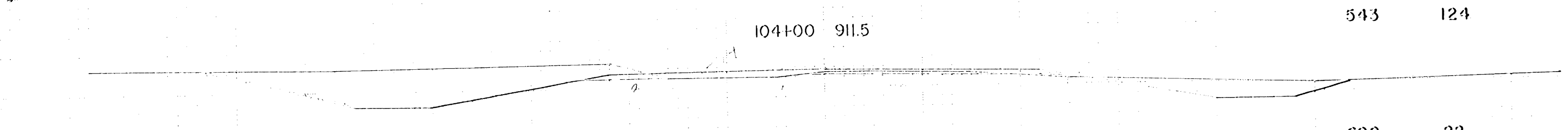
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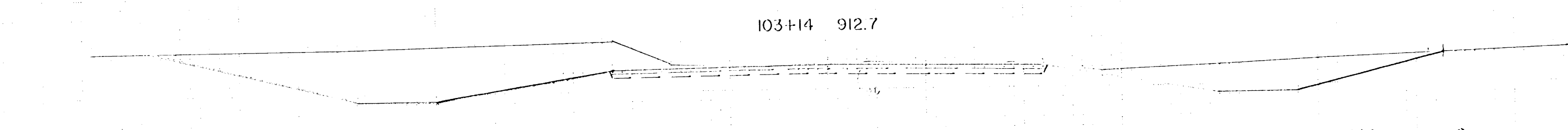
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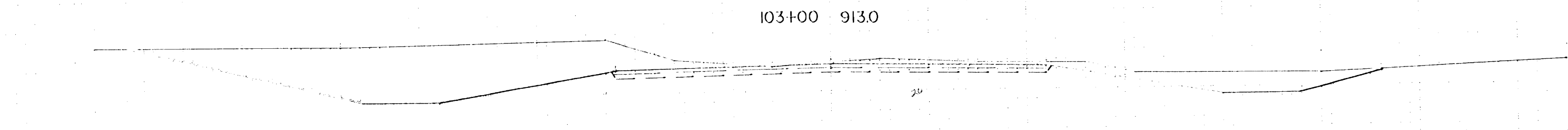
76+00 907.97



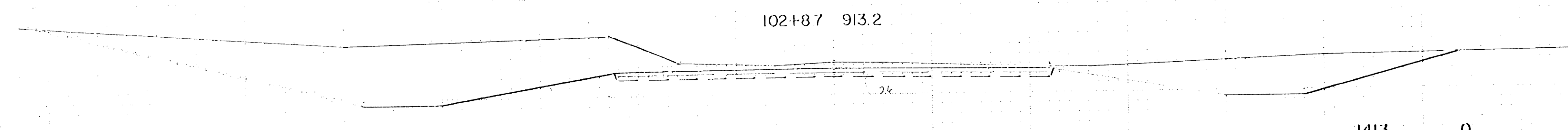
543 124



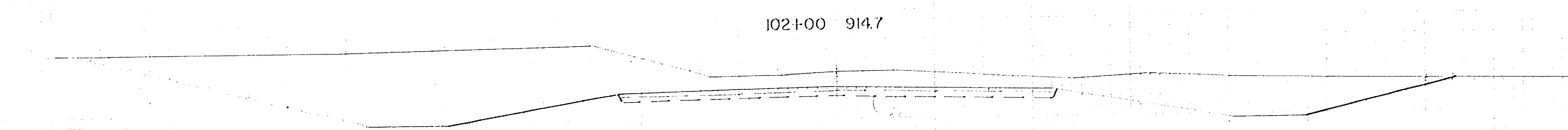
698 22



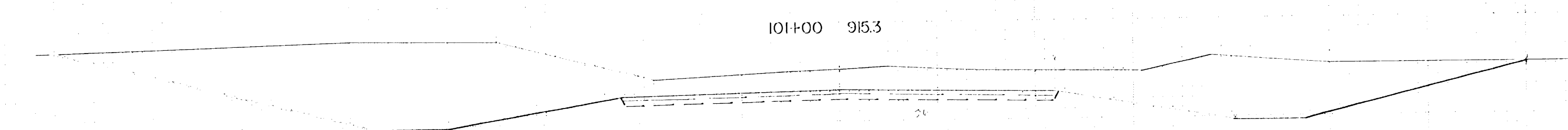
148 0



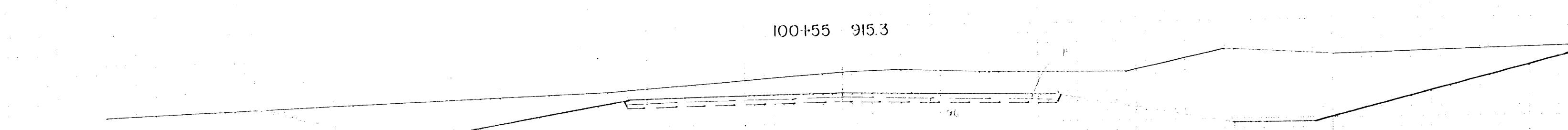
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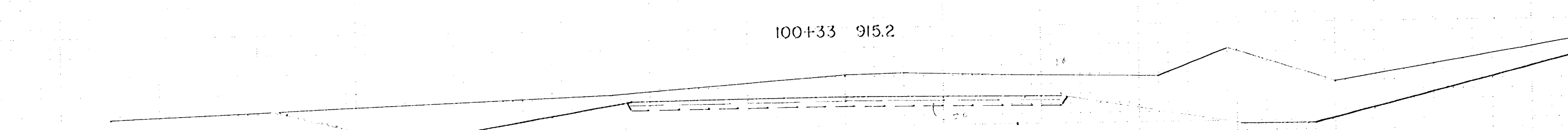
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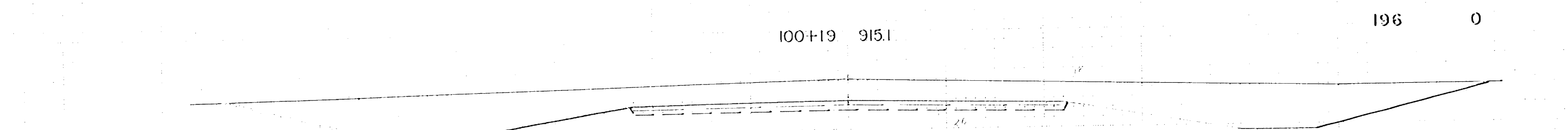
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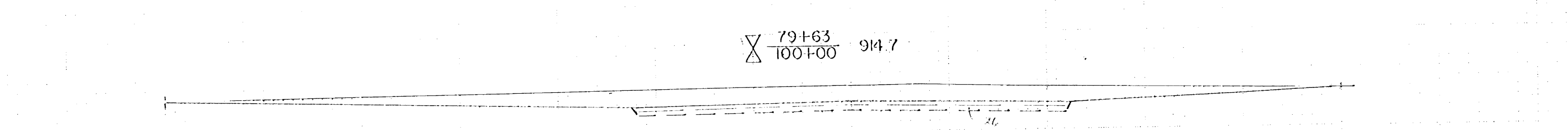
369 0



332 0



196 0



187 0

79+63
100+00 914.7

SECTION

SECTION

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

112+84	915.35			
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120+00	9109			
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224	424
40	227

112+00	914.5			
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198	206
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111+00	913.4			
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346	231
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110+62	912.96			
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110+00	912.5			
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109+52	912.12			
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435	237
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109+00	911.7			
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108+00	910.9			
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MUCK	274	241
	0	32

107+00	910.1			
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MUCK	50	533
	191	298

106+50	910.0			
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FL 905.7

PIPE CULV. EXC. 65 CY.

8' WIDE

F & I 24" X 78' CMP CULV. & 2 APRONS

106+00 910.0

FL 905.7

8' WIDE EXC. LT & RT FOR CULV INCLUDED WITH MUCK EXC.

MUCK 33 789

MUCK 531 361

105+00	910.6			
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MUCK	137	469
	157	64

119+00	912.7			
--------	-------	--	--	--

1422	119
------	-----

118+00	914.0			
--------	-------	--	--	--

1302	69
------	----

117+00	915.4			
--------	-------	--	--	--

847	19
-----	----

116+00	916.2			
--------	-------	--	--	--

911	0
-----	---

115+00	916.9			
--------	-------	--	--	--

876	2
-----	---

114+68	917.0			
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774	7
-----	---

114+00	916.4			
--------	-------	--	--	--

441	43
-----	----

113+00	915.5			
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159	141
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EMU Woods

WOODS

WOODS

Big 3 Rows of PINE

BIT. ENT.

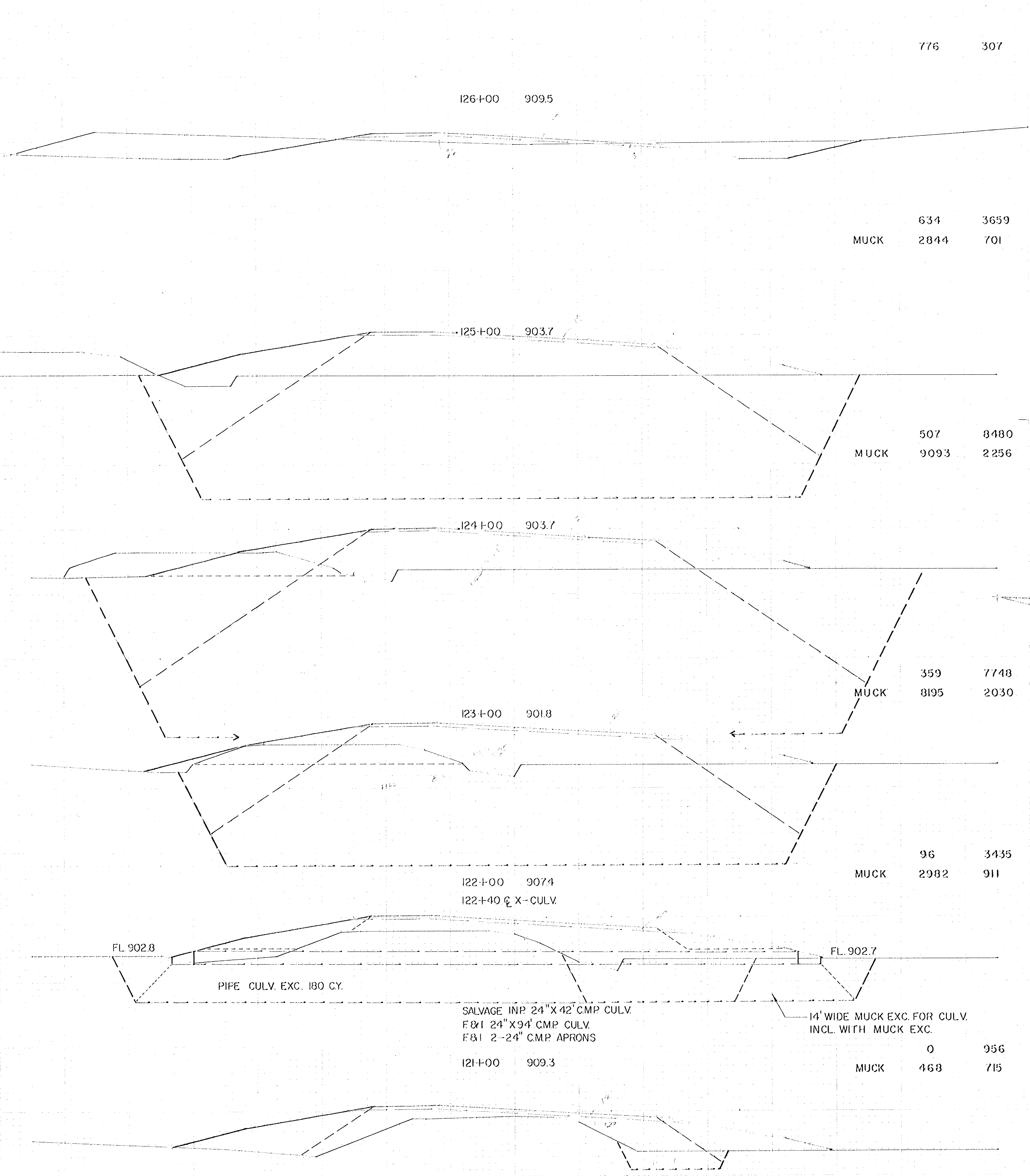
BIT. ENT.

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Excavation	Emb.	Total
776	307	

Excavation	Emb.	Total
376	143	



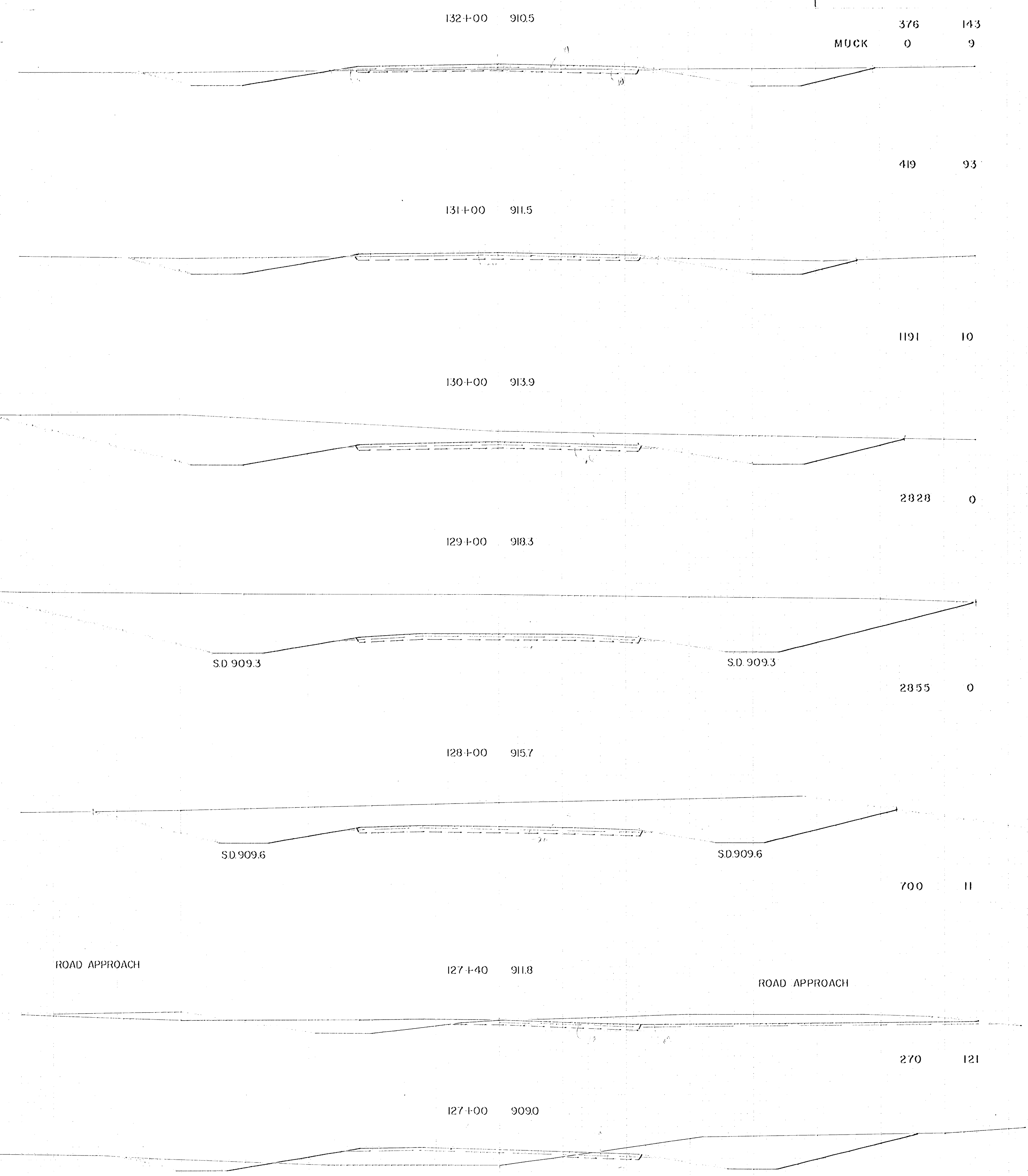
MUCK	634	3659
	2844	701

MUCK	507	8480
	9093	2256

MUCK	359	7748
	8195	2030

MUCK	96	3435
	2982	911

MUCK	0	956
	468	715



MUCK	0	9
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	419	93
--	-----	----

	1191	10
--	------	----

	2828	0
--	------	---

	2855	0
--	------	---

	700	11
--	-----	----

	270	121
--	-----	-----

EXCAVATION EMBANKMENT

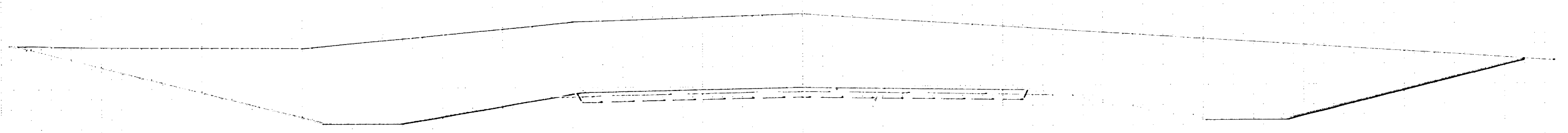
EXCAVATION	CU. YDS.	CU. YDS.	SUB-TOTAL
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EXCAVATION EMBANKMENT

EXCAVATION	CU. YDS.	CU. YDS.	SUB-TOTAL
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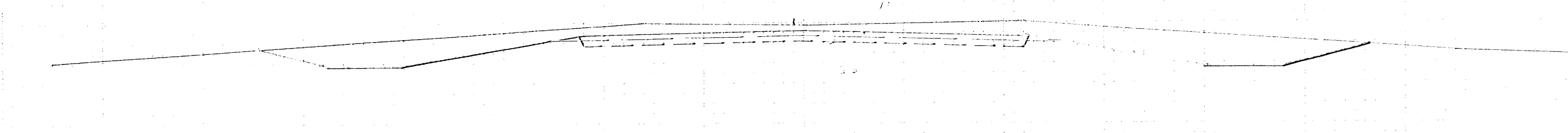
137+68 917.2

1170 0



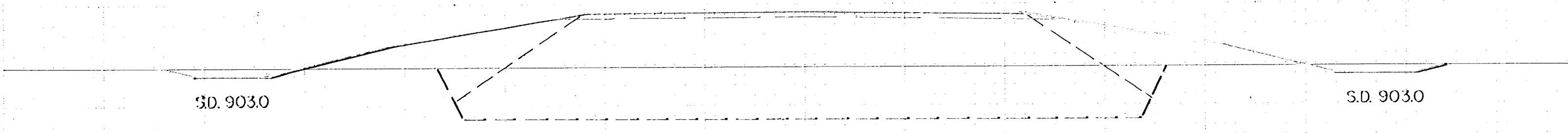
137+00 909.8

1413 0



136+55 903.8

MUCK 70 287
295 52



136+00 903.2

F&I 48" X 76" CMP CULV.
F&I 2'-48" CMP APRONS

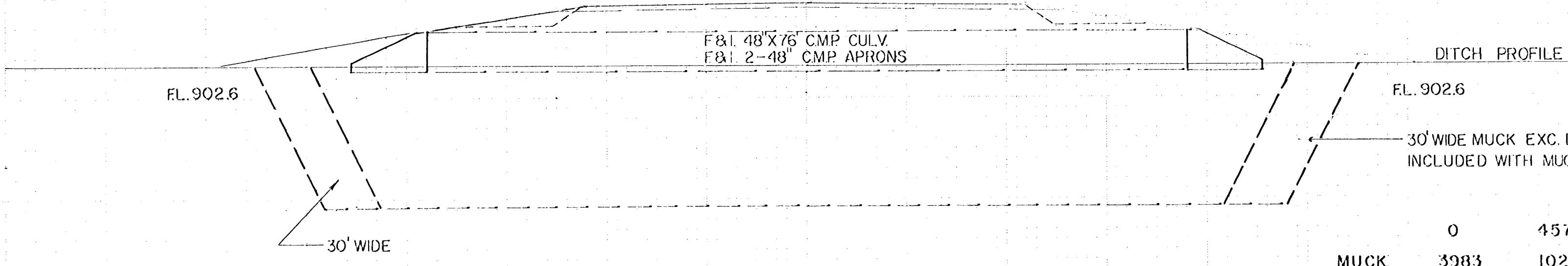
0 2082
MUCK 1653 496

FL. 902.6

FL. 902.6

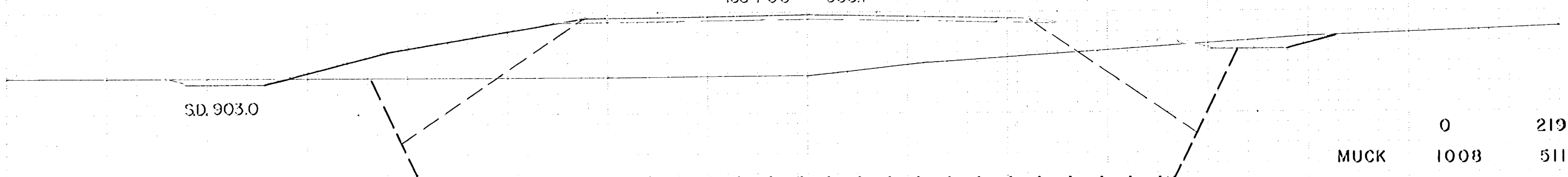
30' WIDE MUCK EXC. LT & RT FOR CULV.
INCLUDED WITH MUCK EXC.

30' WIDE



135+00 903.7

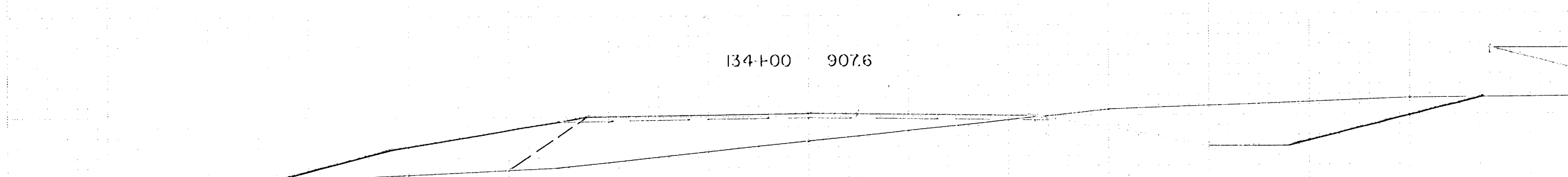
0 4572
MUCK 3983 1022



134+00 907.6

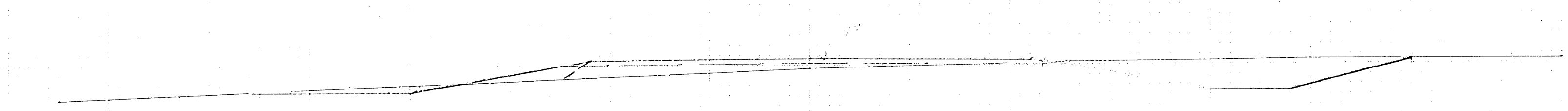
0 2193
MUCK 1008 511

SD. 903.0



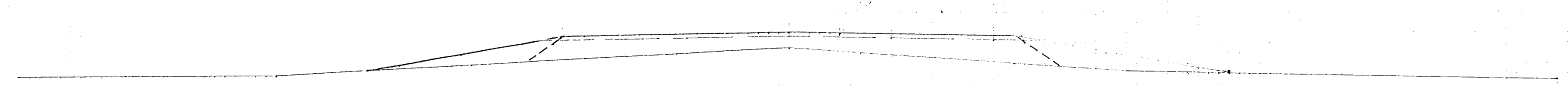
133+00 909.7

381 348
MUCK 0 148



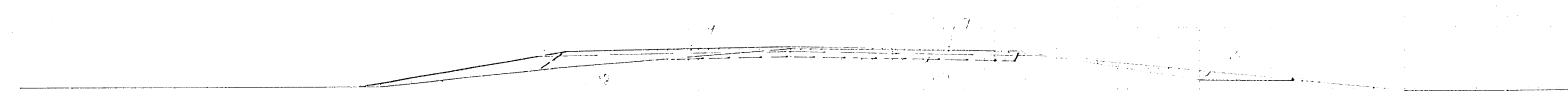
143+00 906.6

0 2806
MUCK 2234 507



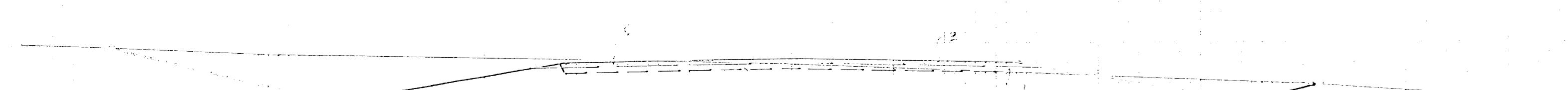
142+00 908.1

11 344
MUCK 0 119



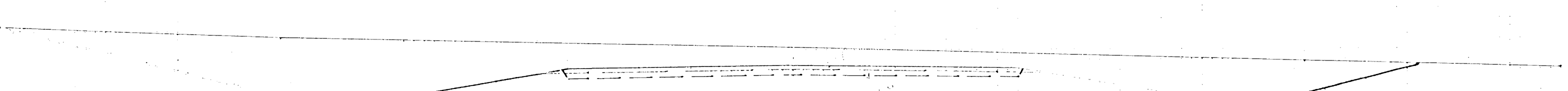
141+00 908.0

282 135
MUCK 0 19



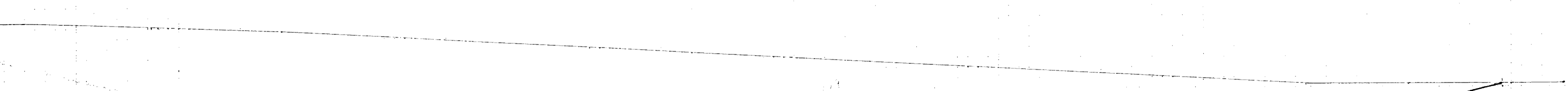
140+00 910.3

1043 25



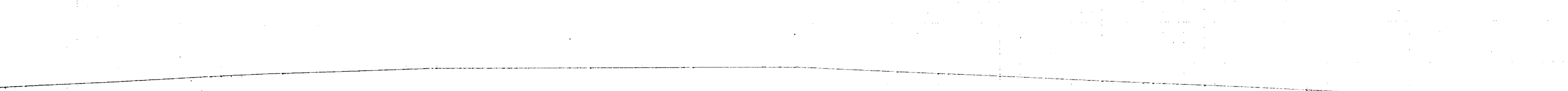
139+00 913.0

2402 0



138+00 915.8

3532 0



EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

EXCAVATION CU. YDS. EMBANKMENT CU. YDS. SUB-TOTAL

EXCAVATION CU. YDS. EMBANKMENT CU. YDS. SUB-TOTAL

150+00 908.9

335 224

149+00 907.8

362 243

148+00 907.7

401 231

147+00 909.4

784 51

146+00 906.8

811 48

145+00 903.4

62 2782
MUCK 2274 369

144+00 903.5

0 5232
MUCK 4404 919

157+00 916.0

1826 0

156+00 917.3

2348 0

155+00 915.7

2103 0

154+00 915.6

1876 0

153+00 917.5

2531 0

152+00 914.6

2460 0

151+00 909.5

1056 22

ROAD APPROACH

SD.903.0

SD.903.0

FL.903.0

FL.903.0

E&I 24" X 70" RCP CULV. CL. II
E&I 2'-24" APRONS

28' WIDE MUCK EXC. LT. & RT. FOR CULV. INCLUDED WITH MUCK EXC.

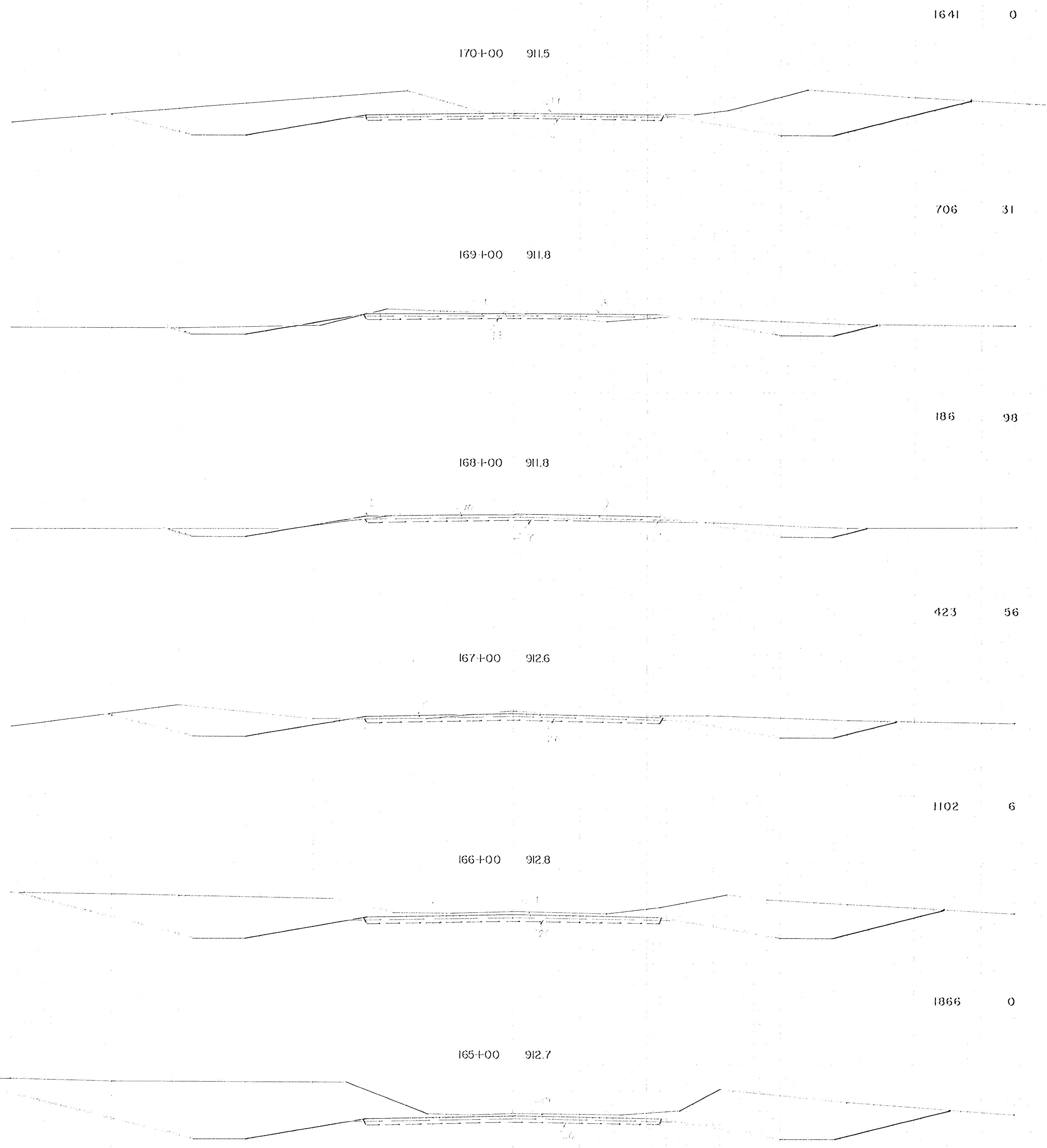
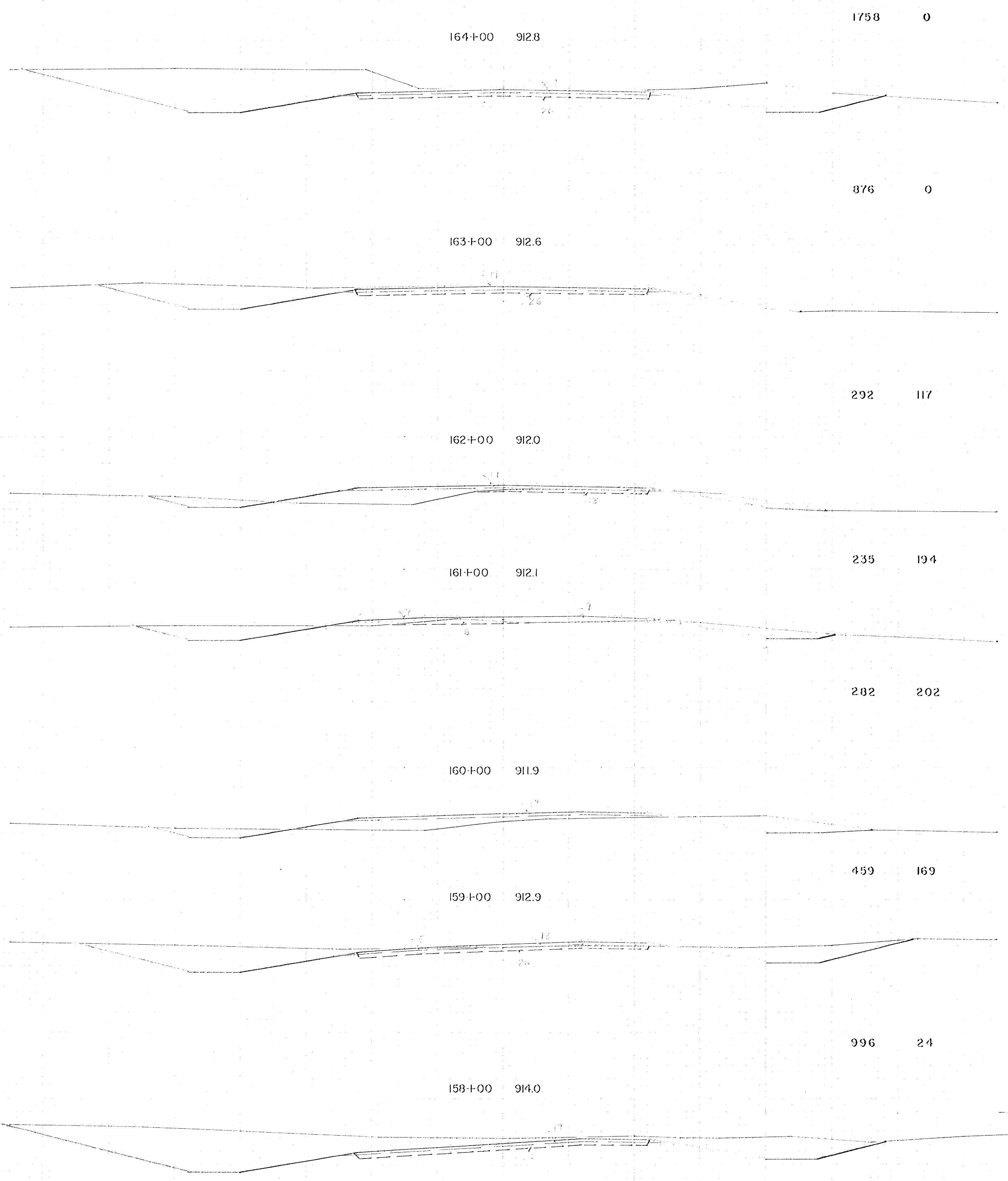
28' WIDE

EXCAVATION EMBANKMENT

Sub-TOTALS	Cu. Yds.	Cu. Yds.	Sub-TOTALS
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EXCAVATION EMBANKMENT

Sub-TOTALS	Cu. Yds.	Cu. Yds.	Sub-TOTALS
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EXCAVATION EMBANKMENT

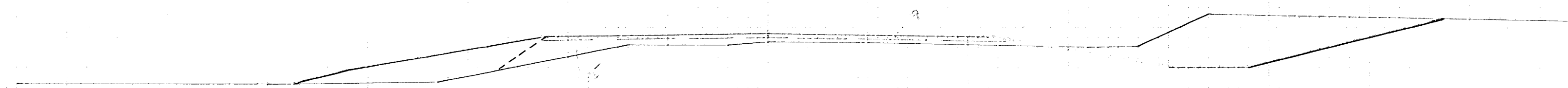
SUB-FOOTING	CU. YDS.	CU. YDS.	SUB-FOOTING
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EXCAVATION EMBANKMENT

SUB-FOOTING	CU. YDS.	CU. YDS.	SUB-FOOTING
-------------	----------	----------	-------------

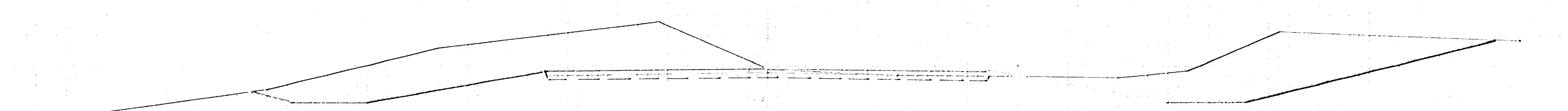
177+00 908.6

MUCK	418	320
MUCK	0	178



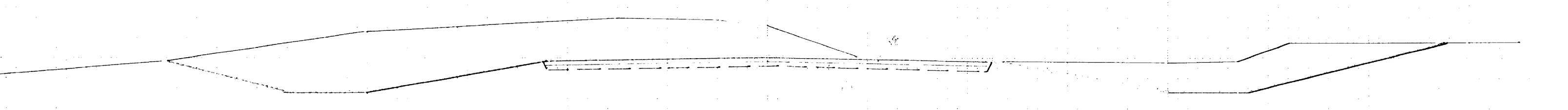
176+00 909.7

MUCK	860	137
MUCK	0	22



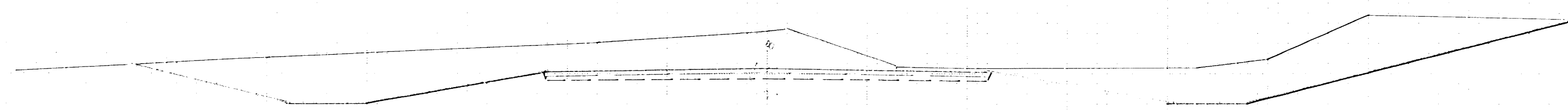
175+00 913.2

1358 15



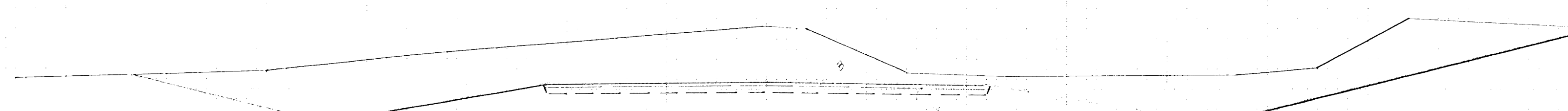
174+00 914.2

1596 0



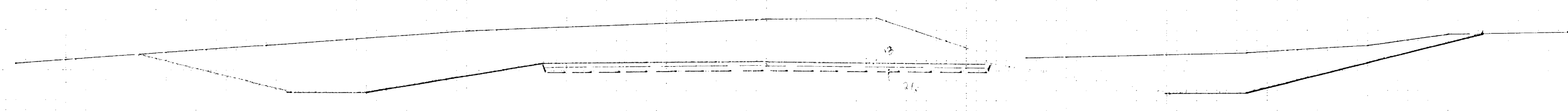
173+00 906.3

1922 0



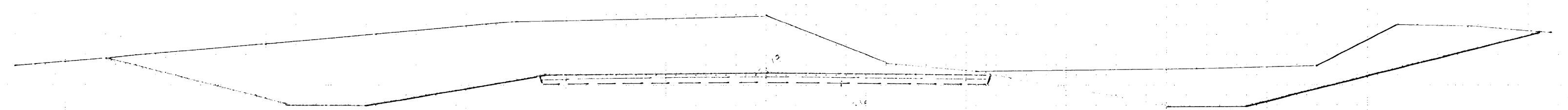
172+00 915.2

1959 0



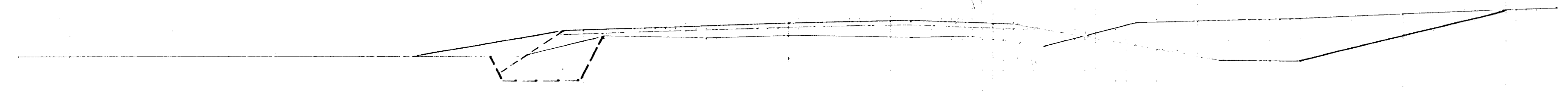
171+00 916.9

1960 0



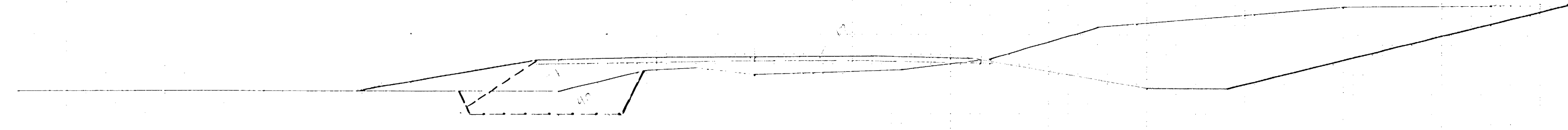
183+00 906.4

MUCK	178	142
MUCK	16	12



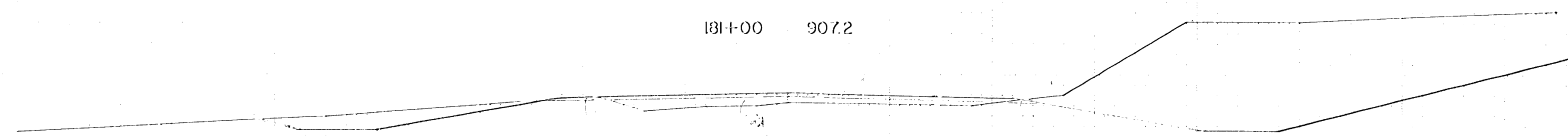
182+00 905.9

MUCK	716	385
MUCK	139	93



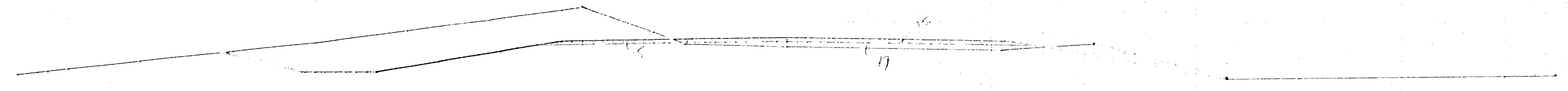
181+00 907.2

MUCK	1419	309
MUCK	43	26



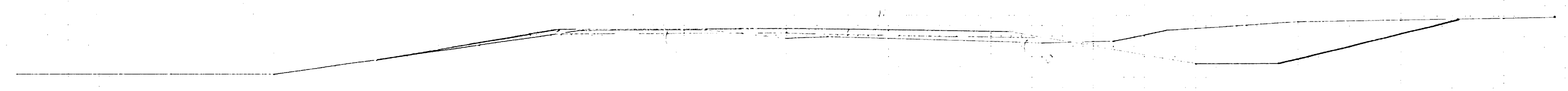
180+00 907.6

1204 144



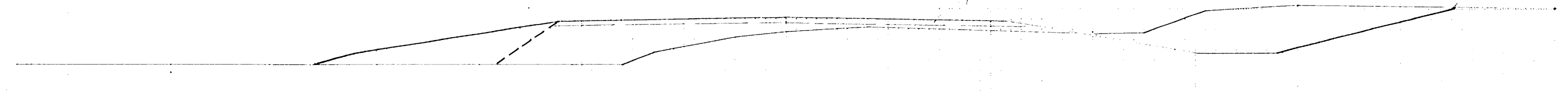
179+00 907.8

469 130



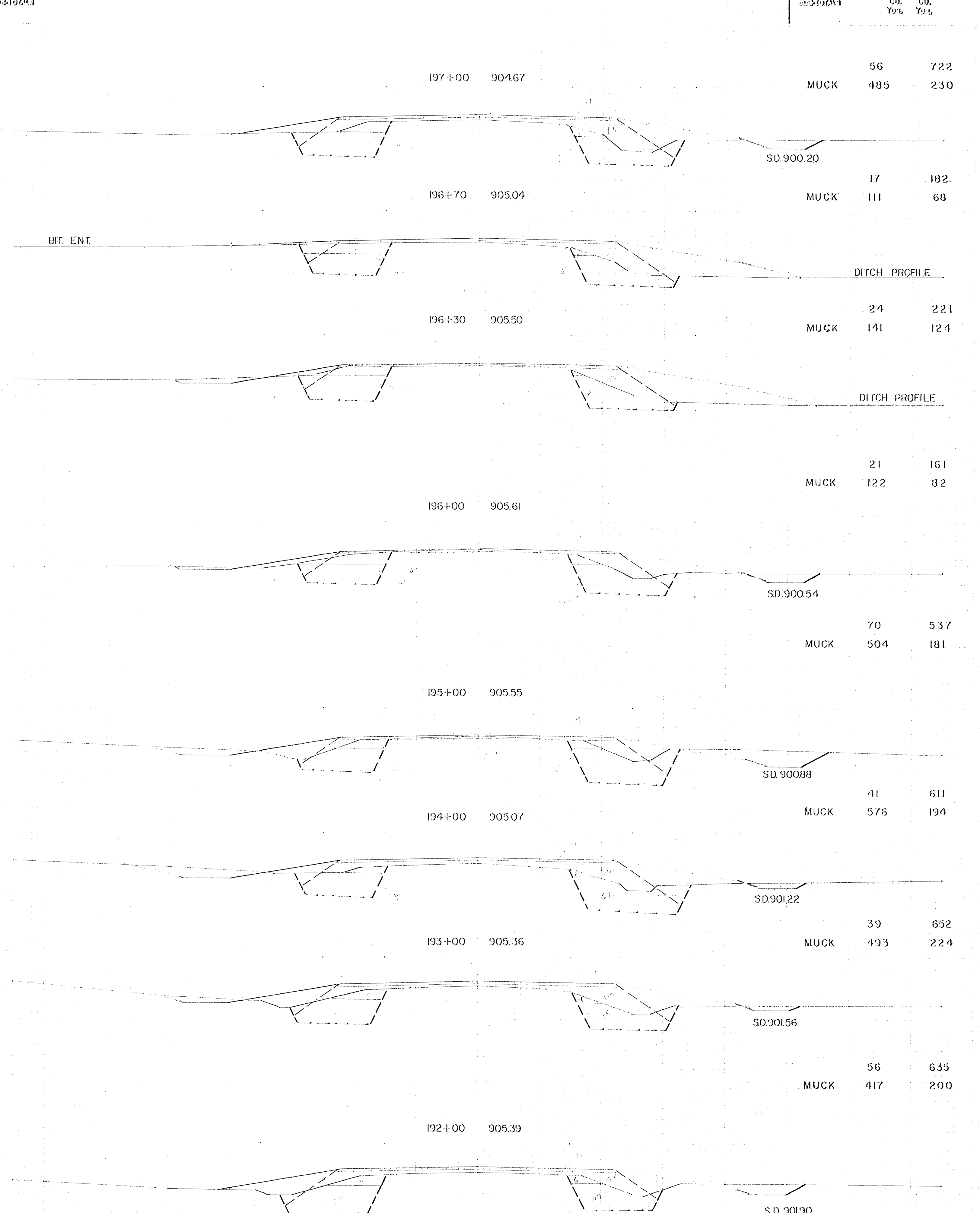
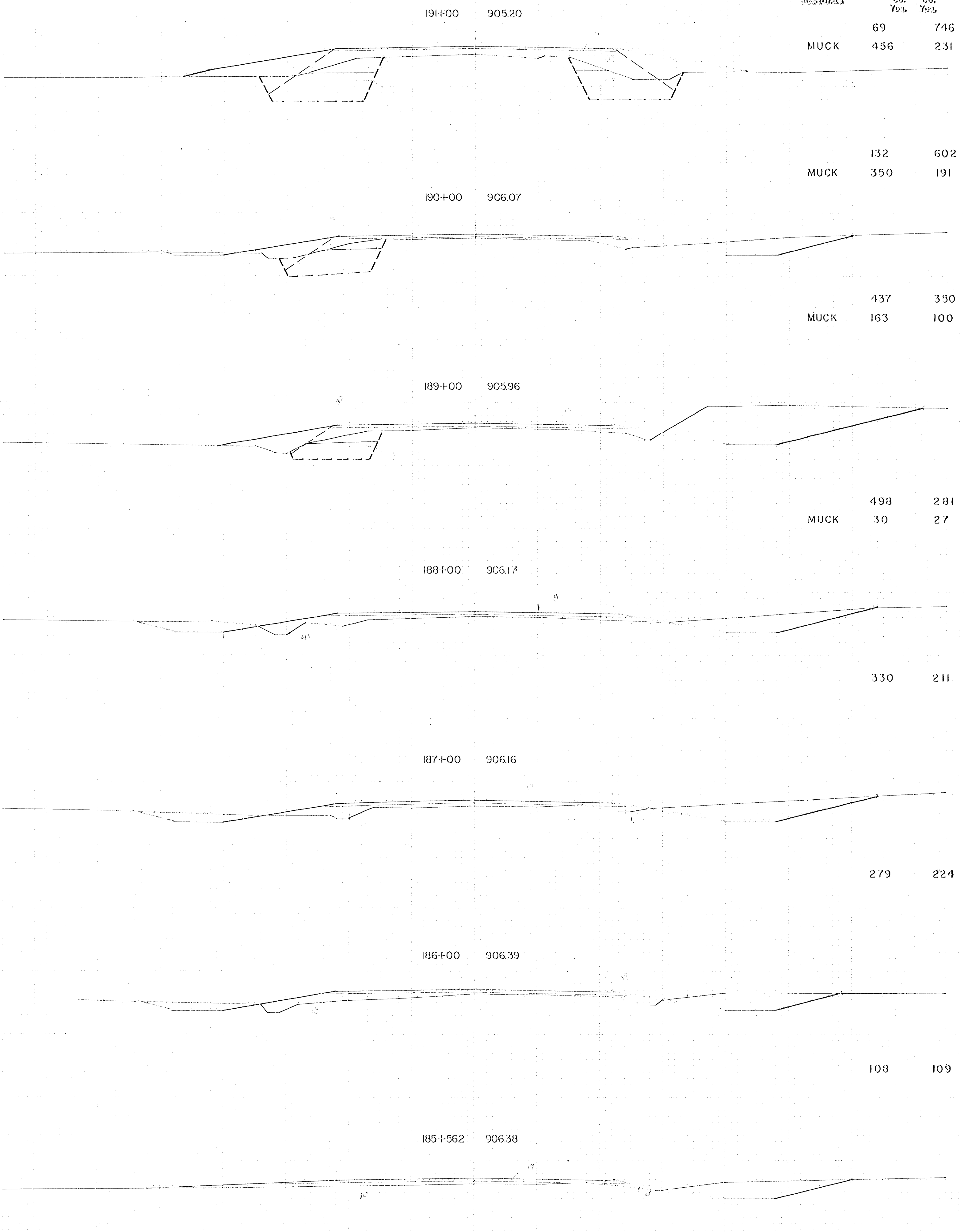
MUCK	363	269
MUCK	0	67

178+00 907.8



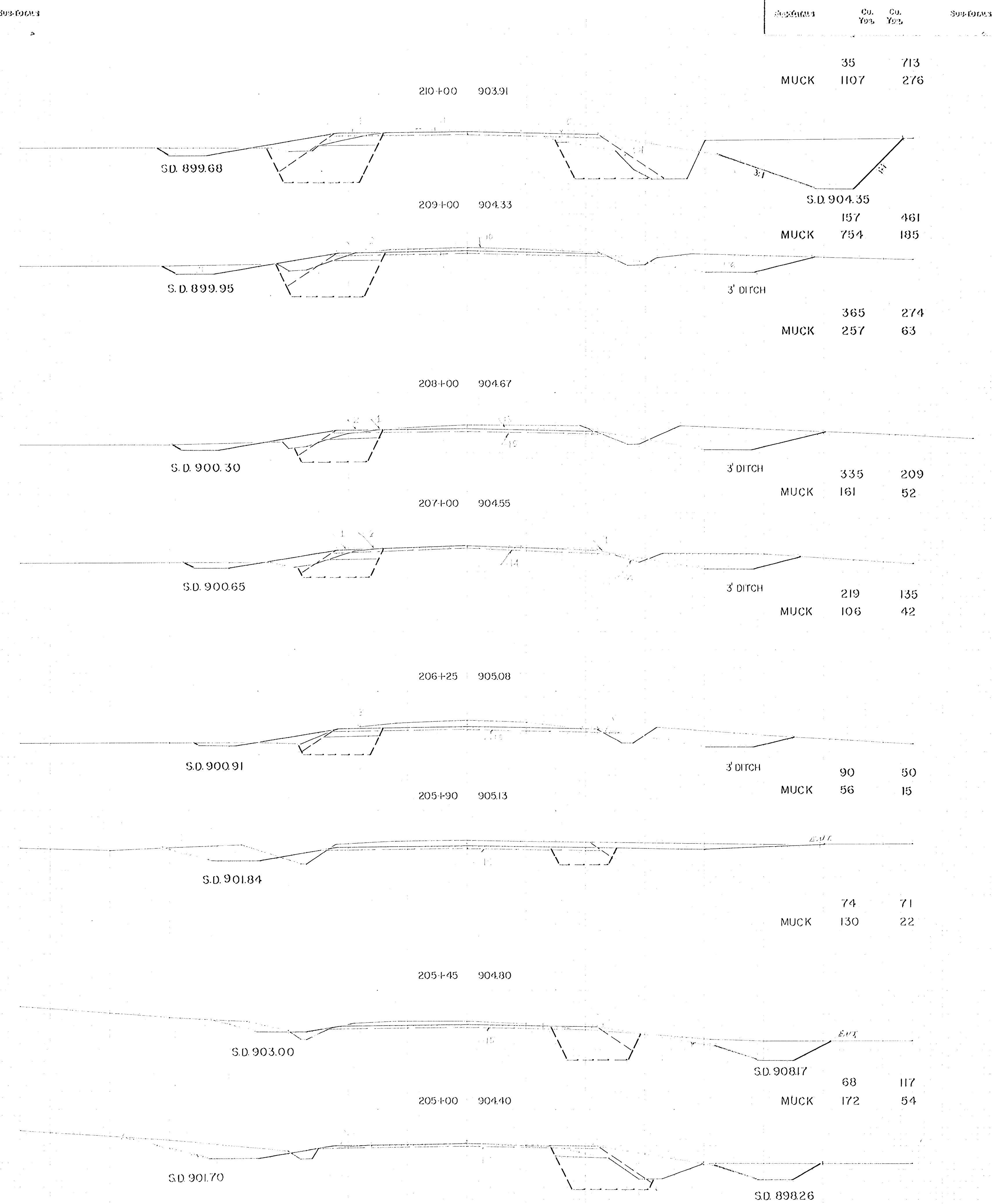
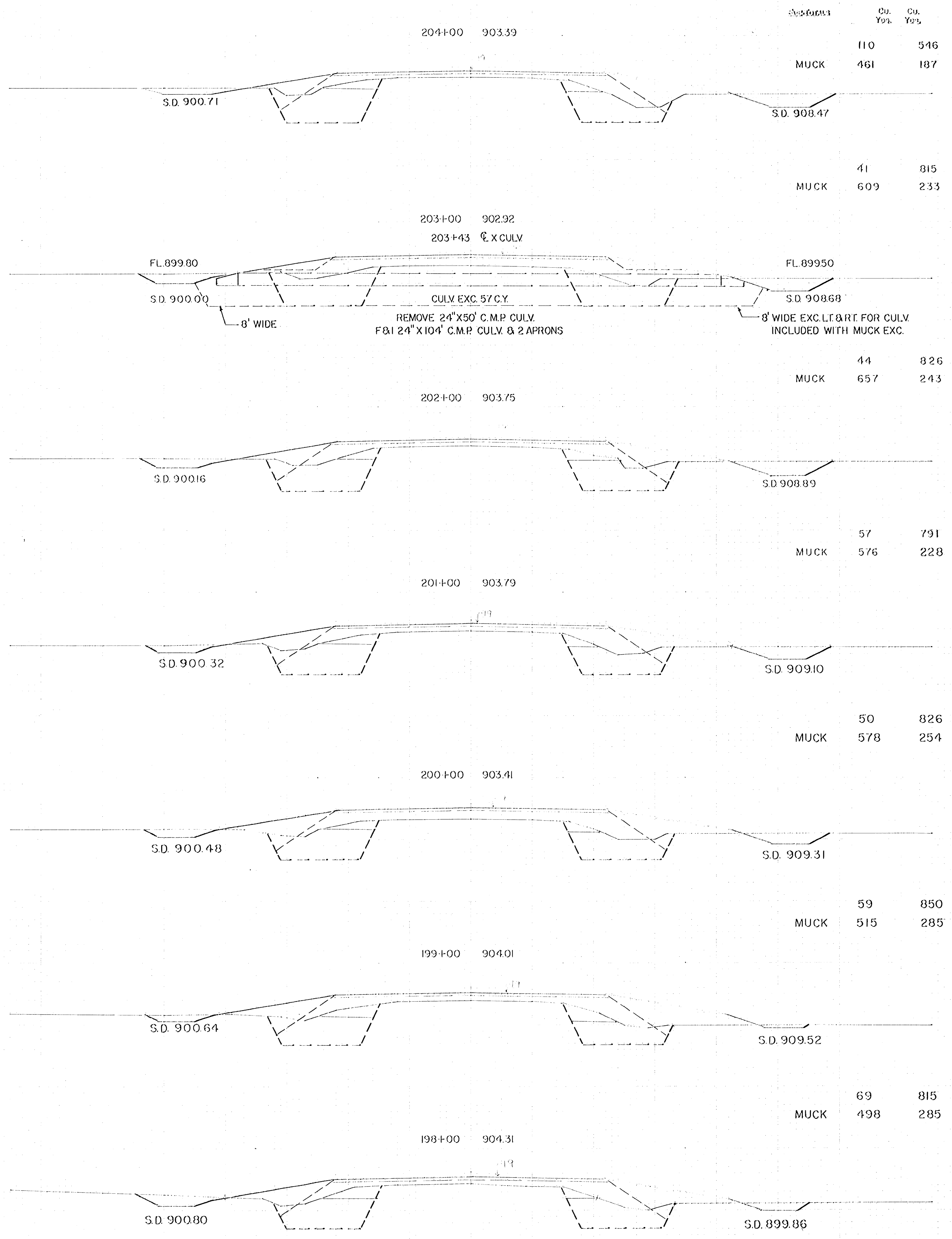
EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT



203+43 CULV
 REMOVE 24' X 50' C.M.P. CULV. F&I 24' X 104' C.M.P. CULV. & 2 APRONS
 CULV. EXC. 57 CY.
 8' WIDE EXC. LT. & RT. FOR CULV. INCLUDED WITH MUCK EXC.

3' DITCH

3' DITCH

3' DITCH

3' DITCH

3' DITCH

3' DITCH

EXCAVATION EMBANKMENT

Excavation
Cut
Vol. Yds

Embankment
Cut
Vol. Yds

Surf Elev.

0

237

85

182

250

108

9

MUCK

224+00

2' DITCH

2' DITCH

90497

90415

90365

90394

90451

90482

90430

225+00

90340

224+00

90497

223+00

90415

222+00

90365

221+00

90394

220+00

90451

220+00

90451

446

694

MUCK

333

154

231

431

MUCK

272

111

219+00

90482

219+00

90482

SD 900.60

3' DITCH

SD 900.60

517

190

MUCK

587

211

SD 899.20

SD 900.50

EXCAVATION EMBANKMENT

Excavation
Cut
Vol. Yds

Embankment
Cut
Vol. Yds

Surf Elev.

726

304

780

398

57

MUCK

1261

733

511

90355

SD 894.75

215+00

90376

491

624

MUCK

1287

74

214+00

90376

SD 894.70

213+00

90292

691

SD 894.55

212+54

EX CULV.

1235

419

MUCK

83

213+00

90292

SD 894.50

212+30

90163

865

50

MUCK

1133

324

212+00

90138

870

30

MUCK

956

280

211+00

90245

SD 894.40

SALVAGE 48"X60" C&M&E CULV
INSTALL 48"X60" C&M&E TO LOWER GRADE
EXTEND WITH 48"X30" C&M&E & APRONS
CULV EXC. 76 C.Y.
FL 89450

8' WIDE EXC LT & RT FOR CULV
INCLUDED WITH MUCK EXC
DURANT ST. NF.

REMOVE 18"X30" C&M&E CULV & APRONS
F 81'24"X76" C&M&E CULV & APRONS
INCLUDED WITH MUCK EXC.

217+00

90356

216+00

90330

SD 894.7

216+00

90330

SD 900.4

217+00

90356

215+00

90355

SD 894.65

214+00

90376

SD 894.70

213+00

90292

SD 894.55

212+54

EX CULV.

1235

419

MUCK

83

213+00

90292

SD 894.50

212+30

90163

865

50

MUCK

1133

324

212+00

90138

870

30

MUCK

956

280

211+00

90245

SD 894.40

211+00

90245

SD 909.20

211+00

FL 89830

SD 894.45

211+00

90245

SD 899.25

211+00

90245

SD 894.40

211+00

90245

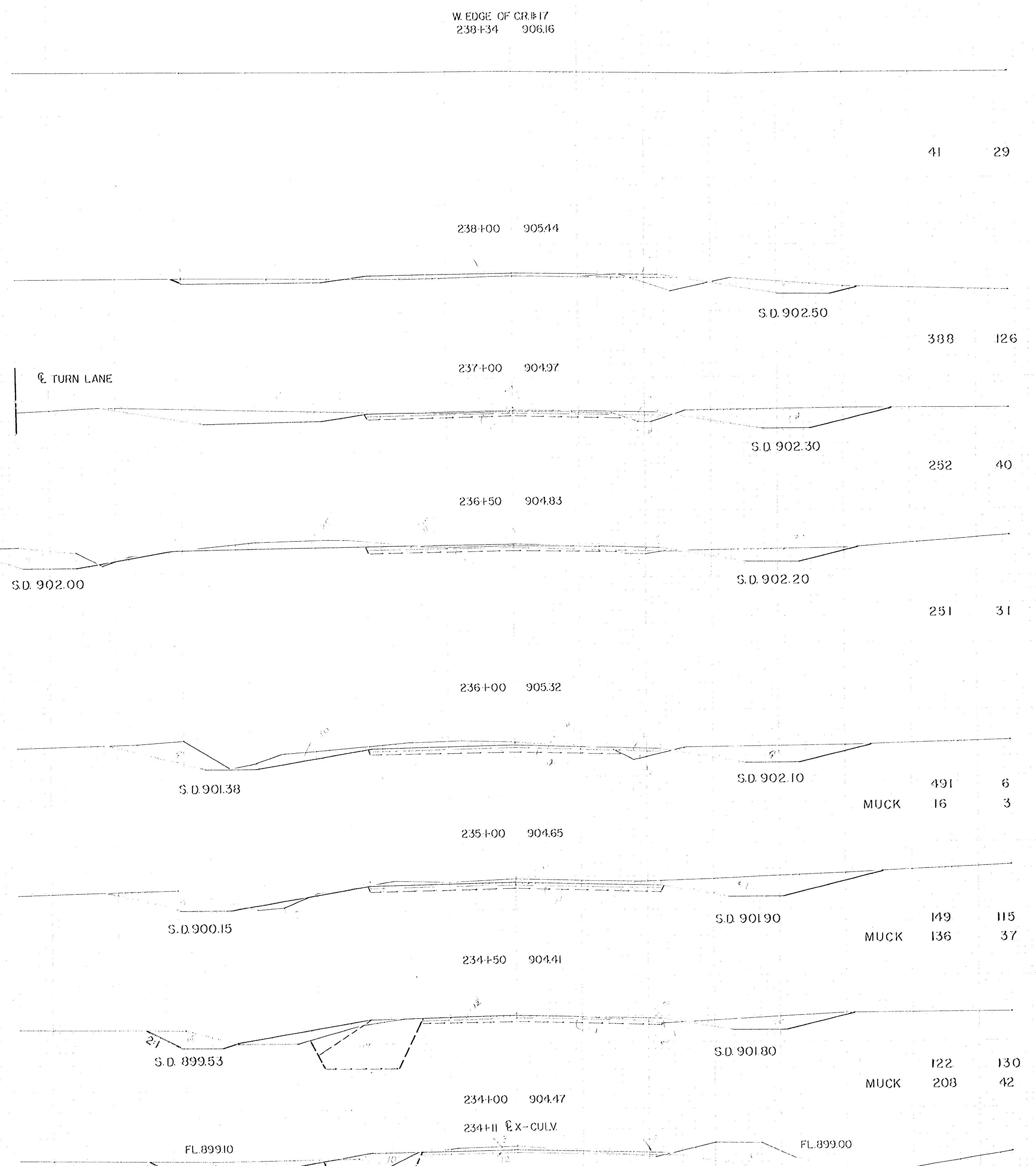
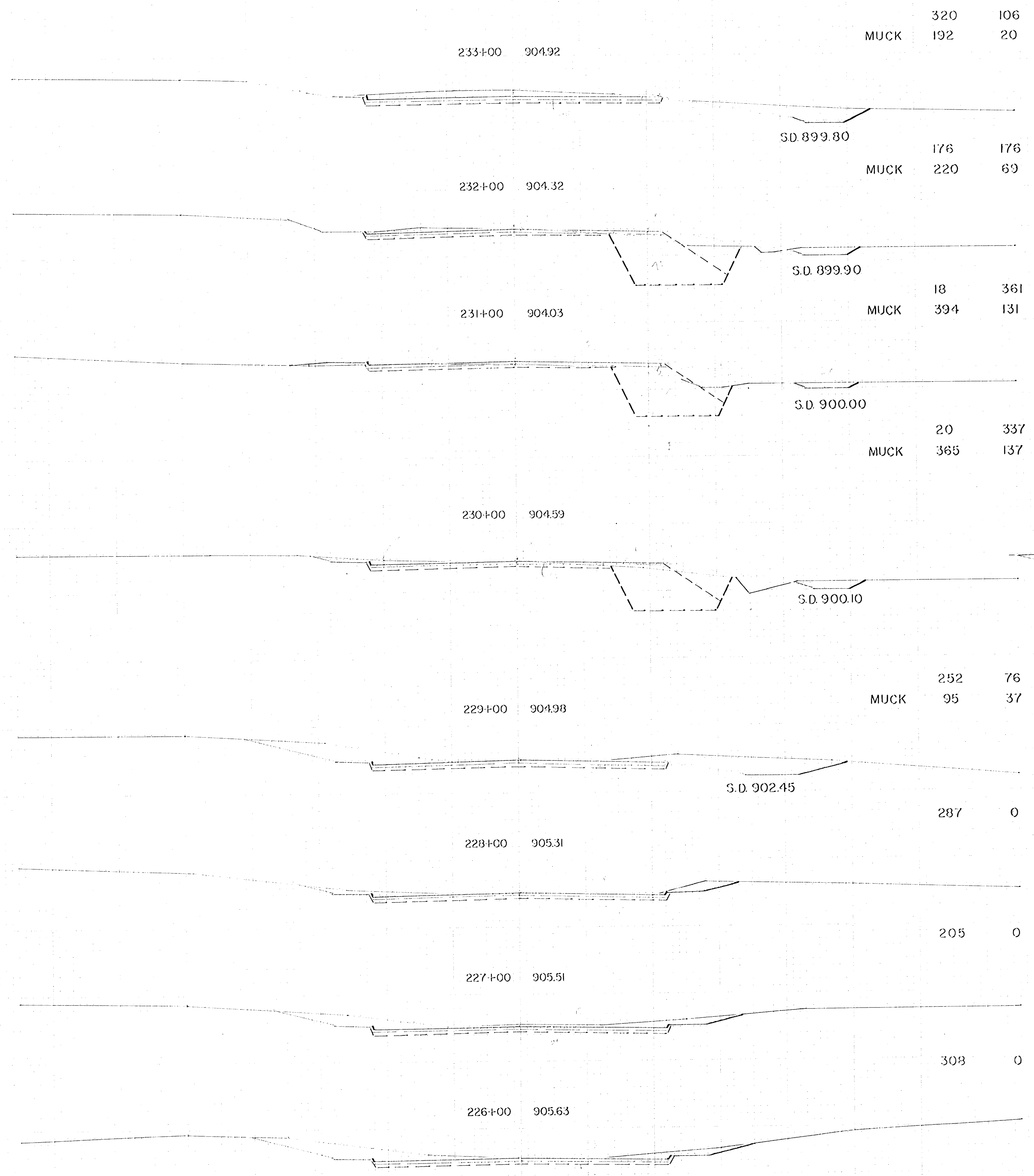
DRAWING NO. 100-100-100-100
 SHEET NO. 27 OF 28 SHEETS
 DATE 10/10/00
 PROJECT NO. 100-100-100-100

EXCAVATION EMBANKMENT

EXCAVATION EMBANKMENT

Excavation	CU. Yds.	Emb.	CU. Yds.
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Excavation	CU. Yds.	Emb.	CU. Yds.
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W. EDGE OF CR.#17
238+34 906.16

TURN LANE

FL.89910
FL.89900
S.D. 899.50
S.D. 899.70
8' WIDE CULV. EXC. LT. INCLUDED WITH MUCK EXC.
REMOVE 24"X40' C.M.P. CULV. F&I 24"X72' C.M.P. CULV. & 2 APRONS
CULV. EXC. 94 C.Y.