

PLANS SYMBOLS

STATE LINE	----
COUNTY LINE	----
TOWNSHIP OR RANGE LINE	----
SECTION LINE	----
QUARTER LINE	----
SIXTEENTH LINE	----
RIGHT-OF-WAY LINE	----
SLOPE EASEMENT	----
PRESENT RIGHT-OF-WAY LINE	----
CONTROL OF ACCESS LINE	----
PROPERTY LINE (Except Land Lines)	----
VACATED PLATTED PROPERTY	----
CORPORATE OR CITY LIMITS	----
TRUNK HIGHWAY CENTER LINE	----
RETAINING WALL	----
RAILROAD	----
RAILROAD RIGHT-OF-WAY LINE	----
RIVER OR CREEK	----
DRY RUN	----
DRAINAGE DITCH	----
DRAIN TILE	----
CULVERT	----
DROP INLET	----
GUARD RAIL	----
BARBED WIRE FENCE	----
WOVEN WIRE FENCE	----
CHAIN LINK FENCE	----
RAILROAD SNOW FENCE	----
STONE WALL OR FENCE	----
HEDGE	----
RAILROAD CROSSING SIGN	----
RAILROAD CROSSING BELL	----
ELECTRIC WARNING SIGN	----
CROSSING GATE	----
MEANDER CORNER	----
SPRINGS	----
MARSH	----
TIMBLR	----
ORCHARD	----
BRUSH	----
NURSERY	----
CATCH BASIN	----
FIRE HYDRANT	----
CATTLE GUARD	----
OVERPASS (Highway Over)	----
UNDERPASS (Highway Under)	----
BRIDGE	----
BUILDING (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	----

UTILITIES SYMBOLS

POWER POLE LINE	----
TELEPHONE OR TELEGRAPH POLE LINE	----
JOINT TELEPHONE AND POWER ON POWER POLES	----
ON TELEPHONE POLES	----
ANCHOR	----
STEEL TOWER	----
STREET LIGHT	----
PEDESTAL (TELEPHONE CABLE TERMINAL)	----
GAS MAIN	----
WATER MAIN	----
CONDUIT	----
TELEPHONE CABLE IN CONDUIT	----
ELECTRIC CABLE IN CONDUIT	----
TELEPHONE MANHOLE	----
ELECTRIC MANHOLE	----
BURIED TELEPHONE CABLE	----
BURIED ELECTRIC CABLE	----
AERIAL TELEPHONE CABLE	----
SEWER (SANITARY OR STORM)	----
SEWER MANHOLE	----

SCALES

PLAN	100'
PROFILE	10'
INDEX MAP	2.7 MILES
GENERAL LAYOUT	

MINNESOTA DEPARTMENT OF TRANSPORTATION

ANOKA COUNTY

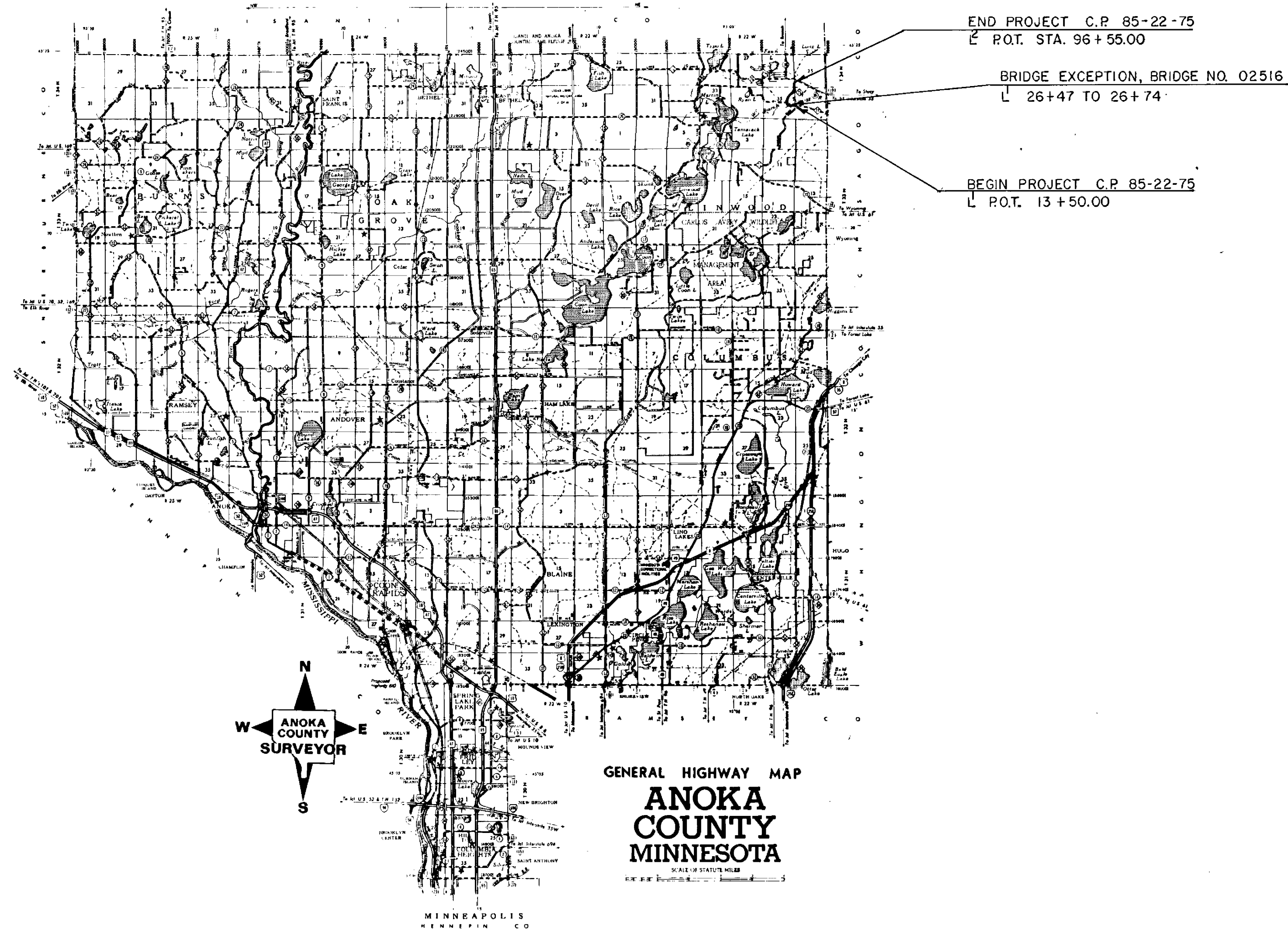
CONSTRUCTION PLAN FOR GRADING, BASE, BITUMINOUS SURFACING

LOCATED ON C.R. # 75 BETWEEN C.R. # 77 AND C.S.A.H. # 36 (Geographic Description)

CO. PROJECT NO. 85-22-75 FROM A POINT 343.62' SOUTH & 100.29' EAST OF THE EAST 1/4 COR. SEC. 35, T 34 N, R 22 W TO A POINT 1,451.57' NORTH & 59.50' EAST OF THE N.E. COR. SEC. 35, T 34 N, R 22 W (Legal Description)

STATE AID PROJ. NO. STATE AID PROJ. NO.

GROSS LENGTH	6547.00	FEET	1.240	MILES	GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	28	FEET	0.005	MILES	BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	28	FEET	0.005	MILES	EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	6519.00	FEET	1.235	MILES	NET LENGTH	FEET	MILES



MINN. PROJ. NO. _____
MINN. PROJ. NO. _____

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

INDEX

SHEET NO.	DESCRIPTION
1	Title Sheet
2	Statement of Estimated Quantities & General Notes
3	Typical Sections
4	Guardrail Details & General Notes
5	Super-Elevation Chart
6-8	Plan & Profile Sheets
9-19	Cross-Section Sheets

THIS PLAN CONTAINS 19 SHEETS

DESIGN DESIGNATION

≤N18₂₀
R Value _____
ADT (1986) = 274
Proj. ADT (19) = _____
Proj. HCADT (2006) = 438
Soil Factor A3-, 50%
7 Ton Design
Shoulder Width 4'

Design Speed 40 MPH
Based on STOPPING Sight Distance
Height of eye 3.5' Height of object 0.5'
Design Speed not achieved at:
STA. 51+29 TO STA. 53+21 MPH 20
STA. _____ TO STA. _____ MPH _____
STA. _____ TO STA. _____ MPH _____

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.

DATE 1/5/89 REG. NO. 6549 ENGR. *Lane K. Lund*
COUNTY Anoka

Recommended for Approval _____ 19 _____
DISTRICT STATE AID ENGINEER
Recommended for Approval _____ 19 _____
STATE AID PLANS AND SPECS ENGINEER
Approved _____ 19 _____
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. _____
STATE PROJ. NO. _____ C.P. 85-22-75 SHEET NO. 1 OF 19 SHEETS

STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITY
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE, TYPE 'D'	EACH	1	
2101.501	CLEARING	ACRE	1.65	
2101.502	CLEARING	TREE	1	
2101.506	GRUBBING	ACRE	1.65	
2101.507	GRUBBING	TREE	1	
2104.513	SAVING BITUMINOUS PAVEMENT	LIN. FT.	162	
2104.521	SALVAGE CULVERT PIPE	LIN. FT.	70	
2104.521	SALVAGE FENCE	LIN. FT.	237	
2104.521	SALVAGE TRAFFIC BARRIER DESIGN PLATE BEAM	LIN. FT.	54	
0557.603	INSTALL FENCE	LIN. FT.	237	
2105.501	COMMON EXCAVATION (P)	CU. YD.	16,565	
2105.521	GRANULAR BORROW (EV)	CU. YD.	3,746	
2105.525	TOPSOIL BORROW (LV)	CU. YD.	183	
① 2123.509	DOZER	HOUR	10	
2130.501	WATER	M-GAL.	50	
2211.503	AGGREGATE BASE PLACED, CLASS 5A (P)	CU. YD.	3,248	
② 0211.503	4" THICK AGG. BASE COURSE PLACED, CL 5A	SQ. YD.	296	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	80	
2331.514	BASE COURSE MIXTURE	TON	1,500	
2580.501	TEMPORARY LANE MARKING	RD. STA.	62	
④ 0331.601	2" THICK WEARING COURSE PLACED	SQ. YD.	448	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	130	
2341.508	WEARING COURSE MIXTURE	TON	2,000	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	950	
2511.501	RANDOM RIPRAP, CLASS II	CU. YD.	27	
2501.511	15" CM PIPE CULVERT	LIN. FT.	420	
2501.511	18" CM PIPE CULVERT	LIN. FT.	242	
2501.511	30" CM PIPE CULVERT	LIN. FT.	66	
2501.515	15" CM PIPE APRONS	EACH	26	
2501.515	18" CM PIPE APRONS	EACH	8	
2501.515	30" CM PIPE APRONS	EACH	2	
2535.501	BITUMINOUS CURB	LIN. FT.	1,142	
2554.501	TRAFFIC BARRIER, DESIGN 8307N	LIN. FT.	400	
2554.511	INSTALL TRAFFIC BARRIER, DESIGN 8307N	LIN. FT.	54	
2554.523	TWISTED END TREATMENT	EACH	4	
⑤ 2573.501	BALE CHECKS	EACH	50	
⑥ 2573.503	SILT FENCE, PREASSEMBLED	LIN. FT.	700	
2573.508	BITUMINOUS LINED FLUME	SQ. YD.	42	
⑦ 2575.501	SEEDING (P)	ACRE	5.7	
2575.502	SEED, MIXTURE #900	POUND	256	
2575.505	SODDING, TYPE EROSION CONTROL	SQ. YD.	3,091	
2575.511	MULCH MATERIAL, TYPE #1	TON	11.4	
⑧ 2575.519	DISC ANCHORING (P)	ACRE	5.7	
⑨ 2575.523	WOOD FIBER BLANKETS, TYPE REGULAR	SQ. YD.	227	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	1.4	

- PROVIDED FOR THE OBLITERATION OF THE OLD ROAD BED, STA. 74+00 TO STA. 78+00 RT., AT THE DIRECTION OF THE ENGINEER.
- PROVIDED FOR DUST CONTROL, AT THE DIRECTION OF THE ENGINEER.
- PROVIDED FOR FIELD ENTRANCE CONSTRUCTION.
- PROVIDED FOR RESIDENTIAL ENTRANCE CONSTRUCTION. PAYMENT BY SQUARE YARD INCLUDES 2" (MINIMUM, COMPACTED THICKNESS) BITUMINOUS WEAR COURSE, BITUMINOUS MATERIAL FOR MIXTURE, AND 4" (COMPACTED THICKNESS) AGGREGATE BASE, CLASS 5A.
- PROVIDED FOR EROSION CONTROL, AT THE DIRECTION OF THE ENGINEER.
- INCLUDES 0.75 ACRE FOR THE RESTORATION OF THE OLD ROADBED, STA. 74+00 TO 78+00 RT.
- PROVIDED FOR TURF ESTABLISHMENT AT PIPE CULVERT ENDS.

BASIS OF PLANNED QUANTITIES

- 2331 PLANT MIXED BASE COURSE
BITUMINOUS MIXTURE, 110 LBS. / SQ. YD. PER 1" THICKNESS
BITUMINOUS MATERIAL FOR MIXTURE, 5.3% BY WEIGHT.
- 2341 PLANT MIXED WEARING COURSE
BITUMINOUS MIXTURE, 110 LBS. / SQ. YD. PER 1" THICKNESS
BITUMINOUS MATERIAL FOR MIXTURE, 6.5% BY WEIGHT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT
0.05 GALLON / SQ. YD.
- 2575 ROADSIDE SEEDING ACREAGE BASED ON HORIZONTAL MEASUREMENTS PLUS 10% FOR SLOPES
SEED MIXTURE NO. 3, 45 LBS. / ACRE
MULCH MATERIAL TYPE 1, 2 TONS / ACRE
COMMERCIAL FERTILIZER ANALYSIS 10-10-10, 500 LBS. / ACRE ON ALL SEED & SOD AREAS

DRAINAGE CHART														
STATION	LOC	INPLACE	REMARKS	WOOD FIBER	SALVAGE	RIPRAP		FURNISH AND INSTALL CULVERTS						
				BLANKET	CULV PIPE	INLET	OUTLET	15' CMP	18' CMP	30' CMP				
				SQ. YD.	LIN FT	AP	CU YD	CU YD	LIN FT	AP	LIN FT	AP	LIN FT	AP
17+81	LT		FIELD ENTRANCE	17					28	2				
19+28	LT		FIELD ENTRANCE	17					28	2				
21+43	LT		FIELD ENTRANCE	17					30	2				
25+39	LT	12' x 30' CMP	FIELD ENTRANCE	17		30			28	2				
29+72	LT		NEW ENTRANCE	17					44	2				
51+48	C/L	24' x 40' CMP				40	5.00	5.00					66	2
53+00	RT		FIELD ENTRANCE	17					24	2				
65+21	RT			17					24	2				
65+38	LT			17					28	2				
69+42	LT		NO CULV. REQ'D											
69+69	LT			17					28	2				
72+60	RT		DITCH BLOCK ENT.				1.70	1.70	48	2				
73+00	C/L						2.30	2.30					58	2
75+00	RT			17					40	2				
81+11	C/L						2.30	2.30					76	2
81+78	RT		NO CULV. REQ'D											
83+11	LT		NO CULV. REQ'D											
84+62	RT		NO CULV. REQ'D											
89+00	C/L			23									52	2
85+81	LT			17					32	2				
85+87	RT		NO CULV. REQ'D											
90+87	RT		NO CULV. REQ'D											
90+91	LT		NO CULVERT REQ'D											
93+61	LT		ENTRANCE	17					38	2				
94+00	C/L						2.30	2.30					56	2
95+63	LT		NO CULV REQ'D											
TOTALS				227	70		13.60	13.60	420	26	242	8	66	2

NOTE: WOOD FIBER BLANKET TO BE PLACED AROUND CULVERT ENDS AS PER STANDARD PLATE 9102C.

SPECIAL DETAILS

APPROXIMATELY 1,998 CU. YDS. OF TOPSOIL IS REQUIRED TO PROVIDE A MINIMUM 3" TOPSOIL DRESSING OVER THE NEW SLOPES AND DITCH BOTTOMS. THE 183 CU. YDS. OF TOPSOIL BORROW, ITEM NO. 2105.525, IS TO BE USED AS TOPSOIL DRESSING IN THE YARD AREAS TO BE SODDED. THE REMAINING 1,815 CU. YDS. OF TOPSOIL DRESSING REQUIRED SHALL COME FROM INPLACE TOPSOIL TO BE REMOVED AND REPLACED DURING CONSTRUCTION. HANDLING OF THIS MATERIAL WILL BE CONSIDERED AS INCIDENTAL TO COMMON EXCAVATION, ITEM NO. 2105.501, AND NO ADDITIONAL COMPENSATION WILL BE MADE.

BITUMINOUS SAVING		
STATION	LIN. FT.	REMARKS
6+50	25	BEGIN CONSTRUCTION
13+50	25	BEGIN CONSTRUCTION
96+55	112	END CONSTRUCTION
TOTAL	162	

BITUMINOUS CURB LOCATIONS			
STA. TO STA.	LOC.	LIN. FT.	
81+85 86+00	RT.	463	
82+25 83+05	LT.	116	
90+65 92+50	LT.	201	
90+65 92+50	RT.	201	
94+40 95+85	LT.	161	
TOTAL		1,142	

NOTE: AT ENTRANCES, RADIUS BIT. CURB.

EARTHWORK SUMMARY

BALANCE #1 L3 STA. 6+25 TO STA. 7+08, L1 STA. 13+48 TO STA. 26+48

REGULAR CUT (PAY QUANT., INCLUDES SUBCUT) 2,539 CU. YDS.
EMBANKMENT 2,511 CU. YDS.
-1,275 CU. YDS. (SUBCUT)
1,236 X 150% SHRINKAGE = 1,848 CU. YDS.
SUBCUT 1,275 X 125% SHRINKAGE = +1,594 CU. YDS.
3,442 CU. YDS. FILL REQUIRED

TOPSOIL 354 CU. YDS.
REGULAR CUT 3,796 CU. YDS. TOTAL FILL
-2,539 CU. YDS.
1,257 CU. YDS. GRANULAR BORROW

BALANCE #2 L1 STA. 26+74 TO STA. 32+00, L2 STA. 50+16 TO STA. 96+55

REGULAR CUT (PAY QUANT., INCLUDES SUBCUT) 14,026 CU. YDS.
EMBANKMENT 10,757 CU. YDS.
-4,325 CU. YDS. (SUBCUT)
6,432 X 150% SHRINKAGE = 9,648 CU. YDS.
SUBCUT 4,325 X 125% SHRINKAGE = +5,406 CU. YDS.
15,054 CU. YDS.
+1,461 CU. YDS.
16,515 CU. YDS. TOTAL FILL
REGULAR CUT -14,026 CU. YDS.
2,489 CU. YDS. GRANULAR BORROW

PAY QUANTITIES:
COMMON EXCAVATION 2,539 + 14,026 = 16,565 CU. YDS.
GRANULAR BORROW 1,257 + 2,489 = 3,746 CU. YDS.
TOPSOIL BORROW = 183 CU. YDS.

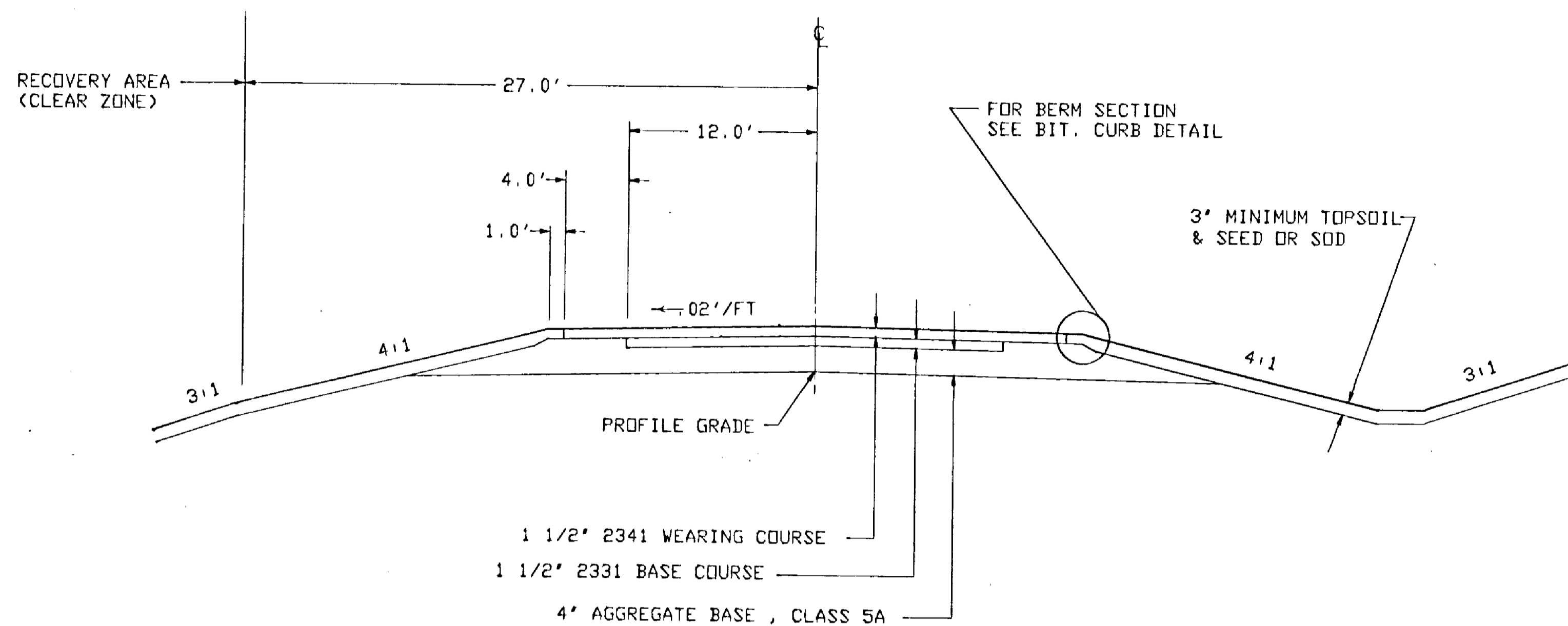
SALVAGE AND INSTALL FENCE				
STATION	LOC.	SAL.	INSTALL	REMARKS
83+15 TO 85+32	29' LT.	237'	237'	INSTALL. @ R/W

STANDARD PLATES	
PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3040 F	CORRUGATED METAL PIPE CULVERT
3123 I	METAL APRON FOR C.S. PIPE
3134 B	RIPRAP AT C.M.P. OUTLETS
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
7065 C	BITUMINOUS CURB
8000 I	STANDARD BARRICADES
8307 N	STEEL PLATE BEAM GUARDRAIL
8319 G	TWISTED END TREATMENT

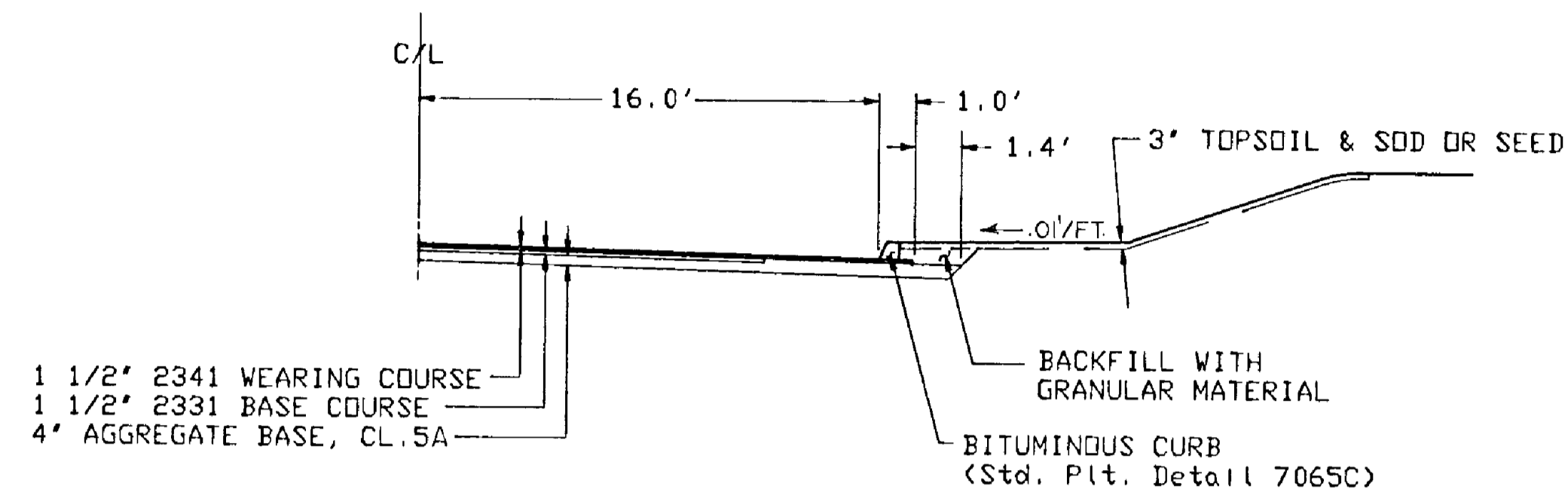
REVISIONS			
DATE	BY	DATE	BY

S.A.P. S.P. C.P. 85-22-75

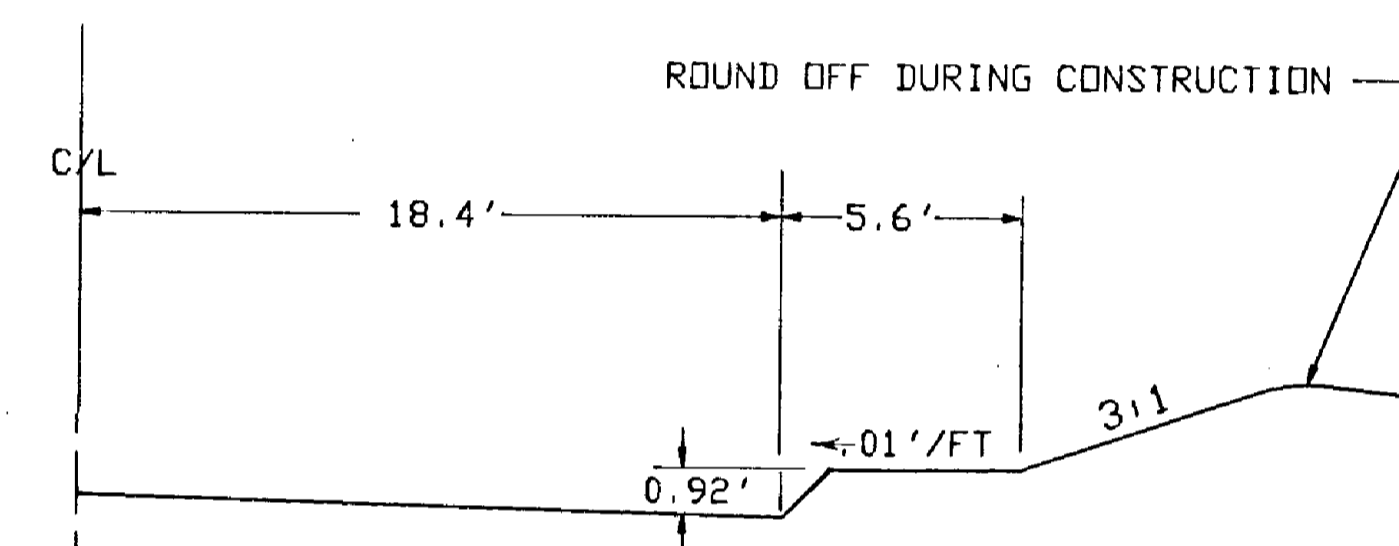
BASE & SURFACING SECTION



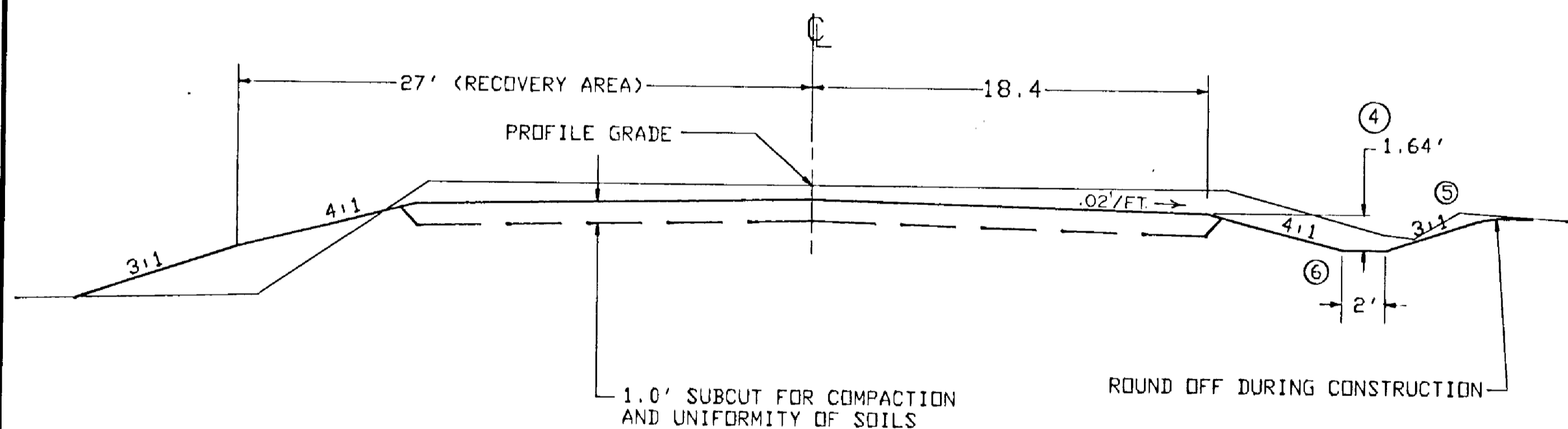
FINISHED BERM



GRADING BERM

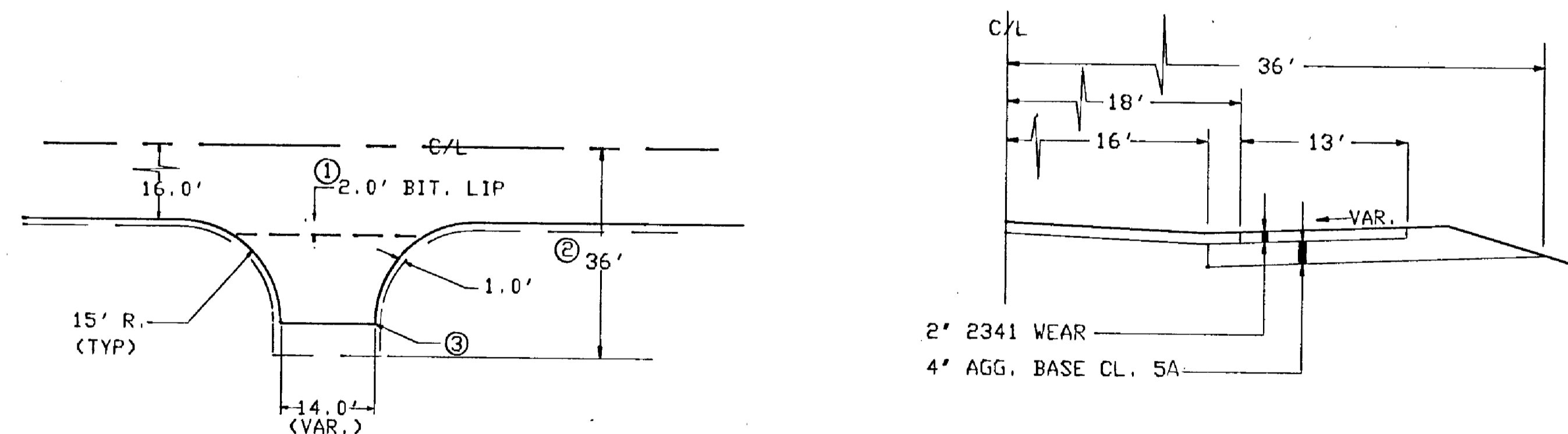


GRADING SECTION



BERM LOCATIONS		
STA TO	STA	LOC
81+85	86+00	RT.
82+25	83+05	LT.
90+65	92+50	LT.
90+65	92+50	RT.
94+40	95+85	LT.

TYPICAL ENTRANCE



- ④ FOR SPECIAL DITCHES SEE PROFILE AND CROSS SECTION SHEETS
- ⑤ SEE CROSS SECTIONS FOR MODIFIED BACKSLOPES
- ⑥ SEE CROSS SECTIONS FOR MODIFIED WIDTHS

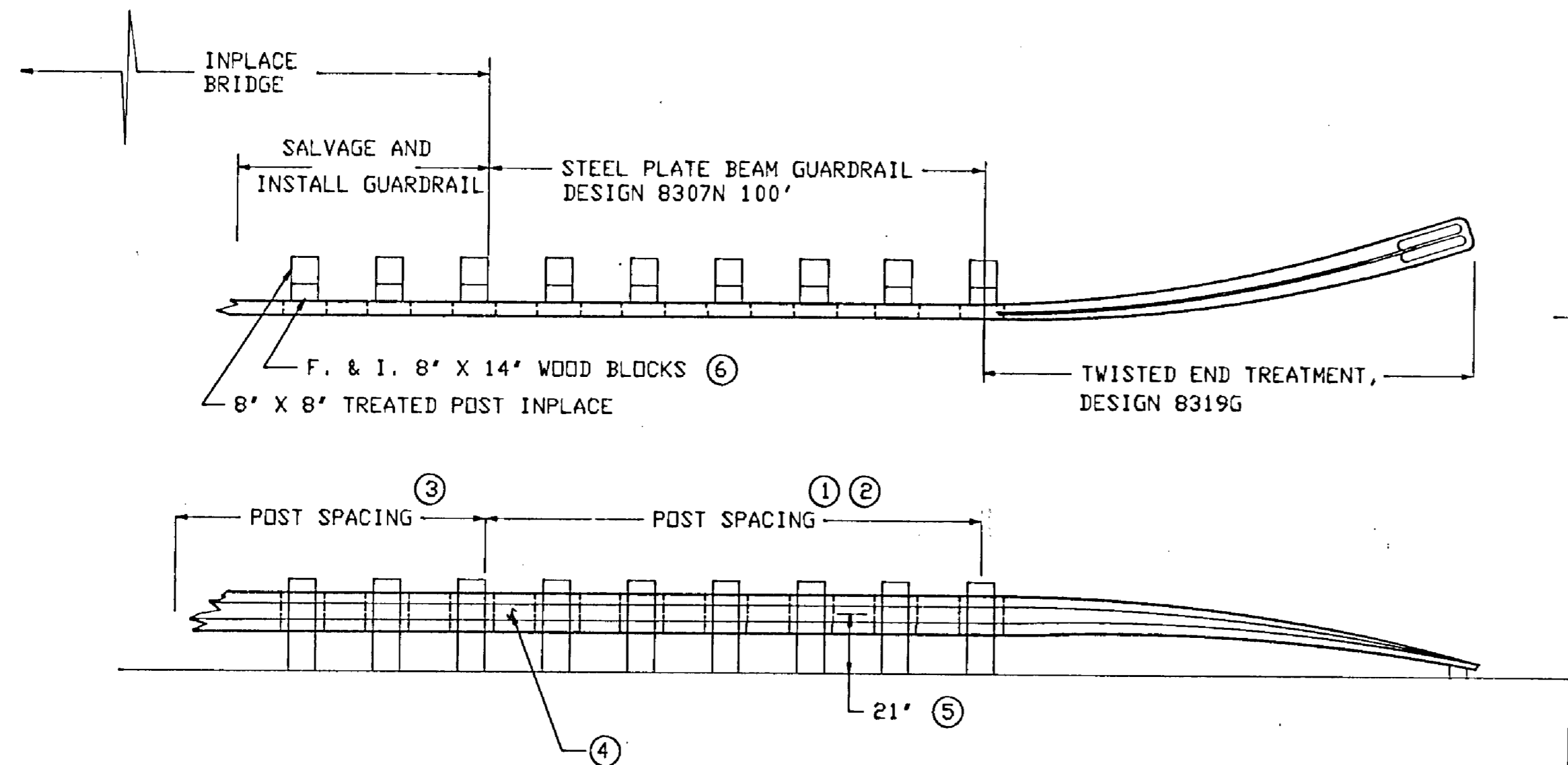
NOTE:

SPECIAL DITCH ELEVATIONS ON THE PLAN AND PROFILE AND THE CROSS SECTION SHEETS ARE GRADING GRADE ELEVATIONS

- ① FIELD ENTRANCES ONLY
 - ② CLASS 5 LIMITS FIELD ENTRANCES AND PAVED ENTRANCES.
 - ③ PAVE TO THE END OF RADIUS, RESIDENTIAL ENTRANCES
- NOTE: ENTRANCE SLOPES SHALL BE 6:1

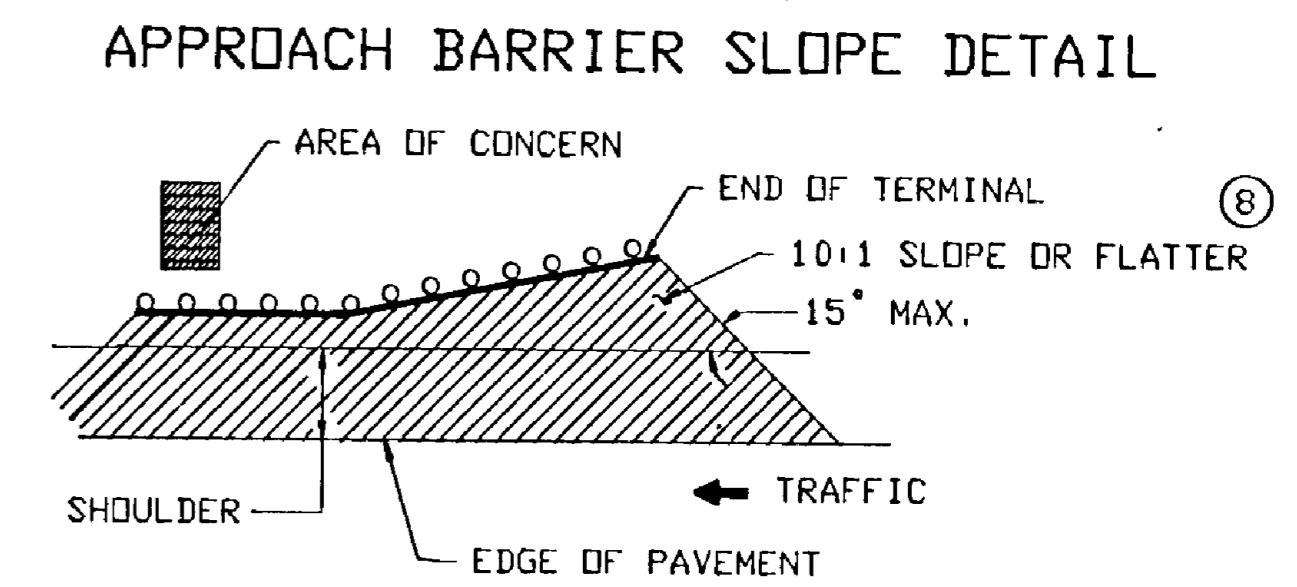
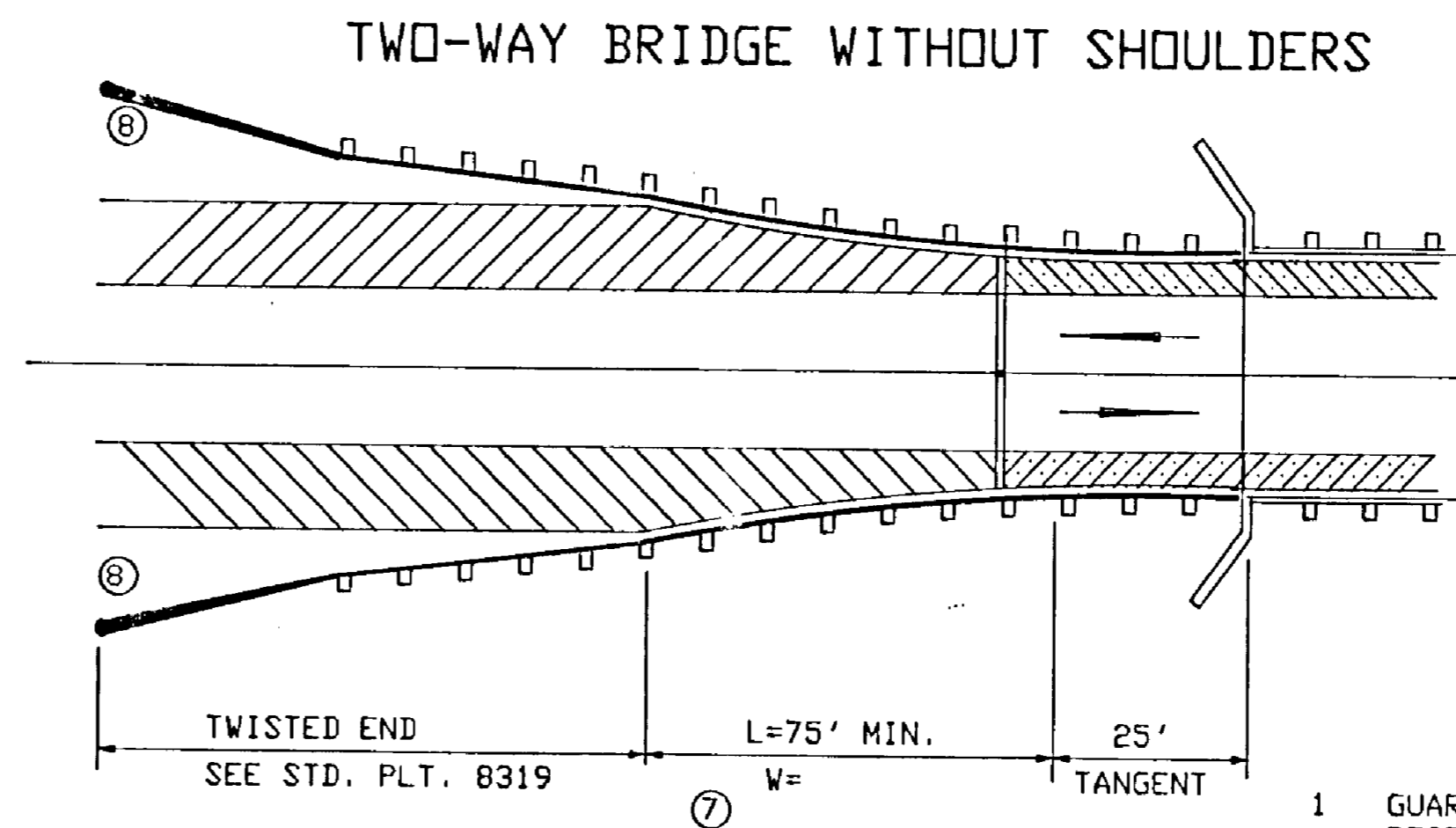
REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. _____ C.P. 85-22-75



SEE PLAN SHEET 7 OF 20 FOR GUARDRAIL LOCATIONS

SODDING			
STATION TO STATION	LOCATION	SQ. YD.	TOPSOIL
6+68 TO 7+08	16'-18' LT. & RT.	28	0
21+00 TO 25+50	23'-29' RT.	300	0
22+00 TO 26+00	16'-18' RT.	89	0
50+16 TO 50+56	16'-18' LT. & RT.	28	0
52+00 TO 53+00	21'-27' LT.	67	0
69+00 TO 71+00	16'-33' LT.	380	30
72+00 TO 74+00	24'-30' LT.	133	0
73+25 TO 79+25	16'-18' LT.	133	0
81+85 TO 86+50	16'-33' RT.	880	70
82+00 TO 82+50	16'-33' LT.	285	23
90+50 TO 92+50	16'-24' LT.	180	15
90+50 TO 92+50	16'-24' RT.	180	15
94+50 TO 96+50	16'-33' LT.	380	30
96+15 TO 96+55	16'-18' LT. & RT.	28	0
TOTAL		3091	183

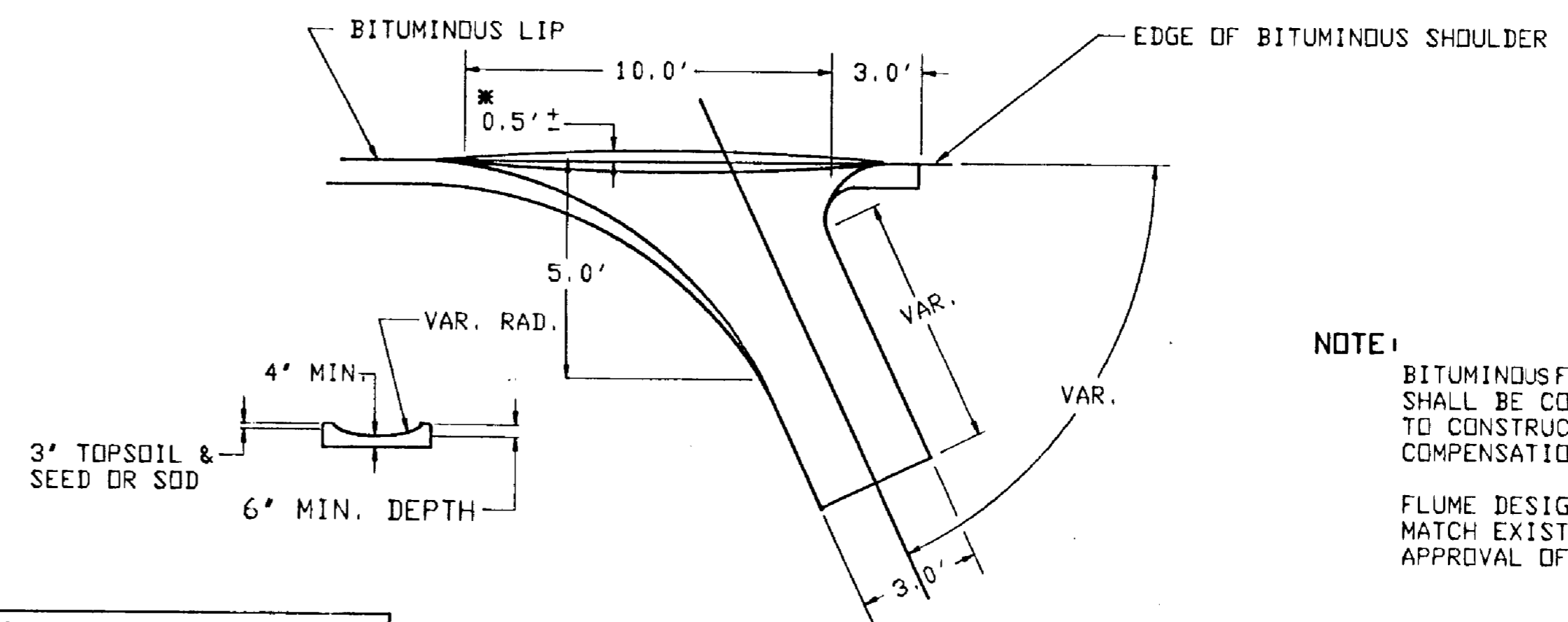


GUARDRAIL CONSTRUCTION NOTES

- GUARDRAIL POST SPACING ON APPROACH ENDS OF BRIDGE: POSTS SPACED AT 3'-1 1/2' FOR A DISTANCE OF 25' FROM BRIDGE, POST SPACED AT 6'-3' FOR THE REMAINDER OF THE STEEL PLATE BEAM.
- GUARDRAIL POST SPACING ON OFF ENDS OF BRIDGE: POSTS SPACED AT 6'-3' FOR THE LENGTH OF THE STEEL PLATE BEAM.
- INPLACE POSTS SPACED AT APPROXIMATELY 5'-9'.
- DOUBLE PLATE BEAM GUARDRAIL FOR THE FIRST 25'-0" (APPROACH END ONLY). THE COST OF FURNISHING AND INSTALLING THE DOUBLE PLATE BEAM GUARDRAIL AS SHOWN ON THE PLANS SHALL BE INCLUDED IN THE BID PRICE FOR TRAFFIC BARRIER, LINEAR FOOT, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.
- DISTANCE FROM TOP OF BITUMINOUS SURFACE TO CENTER OF PLATE BEAM GUARDRAIL, 21" TYPICAL.
- PAYMENT FOR ITEM, INSTALL TRAFFIC BARRIER, AT THE CONTRACT PRICE PER LINEAR FOOT SHALL INCLUDE THE COST OF ALL MATERIALS, INCLUDING THE WOOD BLOCKS AND FASTENING HARDWARE AS SHOWN IN STANDARD PLATE 8307N.
- 'W' DIMENSION, 4' TO 6', TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- SEE CROSS-SECTIONS FOR MODIFIED SLOPES.

CLEARING AND GRUBBING					
STATION TO STATION	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
19+52 TO 21+00	26'-33' RT.		0.10		0.10
25+90 TO 26+44	26'-27' LT.		0.05		0.05
26+00 TO 26+36	26'-27' RT.		0.05		0.05
27+17 TO 28+30	26'-32' LT.		0.05		0.05
27+24 TO 28+24	23'-31' RT.		0.05		0.05
29+63 TO 30+67	30'-33' RT.		0.05		0.05
30+47 TO 32+00	31'-33' RT.		0.05		0.05
50+25 TO 51+55	25'-33' RT.		0.05		0.05
50+95 TO 56+77	22'-33' LT.		0.40		0.40
52+90 TO 55+30	27'-33' RT.		0.15		0.15
69+00 TO 69+26	15'-29' LT.		0.05		0.05
72+78 TO 73+00	36'-44' LT.		0.05		0.05
81+98	15' RT.	1		1	
82+00 TO 82+23	24'-27' LT.		0.05		0.05
84+70 TO 85+15	17'-33' RT.		0.05		0.05
85+94 TO 86+72	25'-31' LT.		0.05		0.05
90+00 TO 92+45	26'-40' LT.		0.15		0.15
93+68 TO 95+67	16'-28' RT.		0.10		0.10
94+40 TO 95+96	14'-28' LT.		0.10		0.10
TOTAL		1	1.65	1	1.65

ENTRANCE CONSTRUCTION					
LOCATION	INPLACE	NEW WIDTH	BIT. SQ. YD.	AGG. SQ. YD.	REMARKS
17+81 LT	12' GRAVEL	14'	0	37	FIELD ENTRANCE
19+28 LT	12' SAND	14'	0	37	FIELD ENTRANCE
21+43 LT	14' SAND	14'	0	37	FIELD ENTRANCE
25+39 LT	12' SAND	14'	0	37	FIELD ENTRANCE
29+72 LT	-	14'	0	37	NEW ENTRANCE
53+00 RT	12' SAND	14'	0	37	FIELD ENTRANCE
65+21 RT	12' SAND	14'	37	0	RESIDENTIAL ENTRANCE
65+38 LT	14' SAND	14'	37	0	RESIDENTIAL ENTRANCE
69+42 LT	10' SAND	14'	0	37	FIELD ENTRANCE
69+69 LT	10' SAND	14'	37	0	FIELD ENTRANCE
72+75 RT	-	14'	0	37	FIELD ENT. - DITCH B
75+00 RT	-	14'	0	37	CONSTRUCT NEW ENTRAN
81+78 RT	12' SAND	14'	37	0	RESIDENTIAL ENTRANCE
83+11 LT	12' SAND	14'	37	0	RESIDENTIAL ENTRANCE
84+62 RT	12' SAND	14'	37	0	RESIDENTIAL ENTRANCE
85+81 LT	14' SAND	14'	37	0	RESIDENTIAL ENTRANCE
85+87 RT	10' SAND	14'	37	0	RESIDENTIAL ENTRANCE
90+87 RT	12' SAND	14'	37	0	RESIDENTIAL ENTRANCE
90+91 LT	16' SAND	16'	41	0	RESIDENTIAL ENTRANCE
93+61 LT	12' SAND	14'	37	0	RESIDENTIAL ENTRANCE
95+63 LT	14' SAND	14'	37	0	RESIDENTIAL ENTRANCE
TOTAL		448		333	



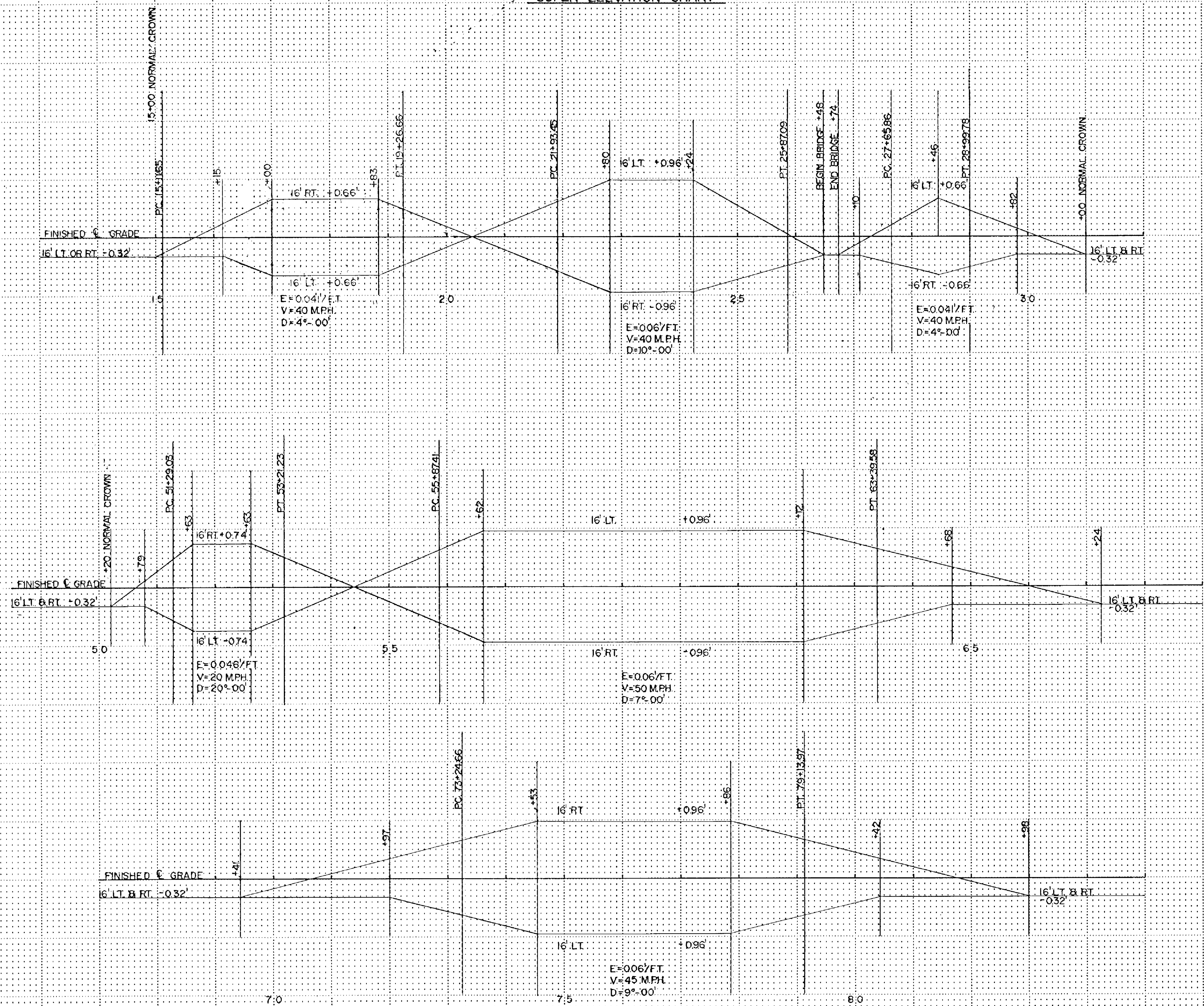
BITUMINOUS FLUME LOCATIONS		
STA.	LOC.	SQ. YDS.
81+85	RT.	7
82+25	LT.	7
86+00	RT.	7
90+65	LT.	7
90+65	RT.	7
94+40	LT.	7
TOTAL		42

NOTE:
BITUMINOUS FLUME CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO ADDITIONAL COMPENSATION SHALL BE MADE.
FLUME DESIGN MAY BE MODIFIED TO MATCH EXISTING CONDITIONS UPON APPROVAL OF THE ENGINEER.
* THIS AREA OF INCREASED SLOPE TO DIVERT WATER FLOW INTO FLUME. THIS MUST BE ACCOMPLISHED DURING THE SHOULDER PAVING OPERATION.

REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. _____ C.P. 85-22-75

SUPER ELEVATION CHART



BM. #3 ELEV. 906.36
DBL. SPIKE IN 10" PINE
STA. 19+40 LT. 50'

BM. #5 ELEV. 896.42
DBL. SPIKE IN 10" MAPLE
STA. 31+00 LT. 42'

STA. 24+97 TO STA. 28+24
F&I. 400' OF TRAFFIC BARRIER, DESIGN 8307N
F&I. 4 TWISTED END TREATMENT, DESIGN 8319G
SEE SHEET 4 FOR GUARDRAIL CONSTRUCTION DETAILS

1st OR P.O.T. 6+50.00 = A POINT
500' RT. & LT. TO SURVEY STA. 6+50

1st OR P.O.T. 7+24.89 =
1st P.O.T. 14+59.86

1st OR P.O.T. 7+24.00 =
1st P.O.T. 14+43.32

BEGIN PROJECT C.P. 85-22-75
1st P.O.T. 13+50.00

1st P.I. 17+20.62
 $\Delta = 16^\circ 36' 02''$ LT.
D = 4' 00'
R = 1432.39'
T = 208.97'
L = 415.01'
E = 15.16'

1st P.I. 23+98.40
 $\Delta = 39^\circ 21' 50''$ RT.
D = 10' 00'
R = 572.96'
T = 204.95'
L = 393.64'
E = 35.55'

1st P.I. 28+32.87
 $\Delta = 5^\circ 21' 24''$ RT.
D = 4' 00'
R = 1432.39'
T = 67.01'
L = 133.92'
E = 1.57'

1st P.I. 52+28.91
 $\Delta = 38^\circ 26' 26''$
D = 20' 00'
R = 286.48'
T = 99.88'
L = 192.20'
E = 16.91'

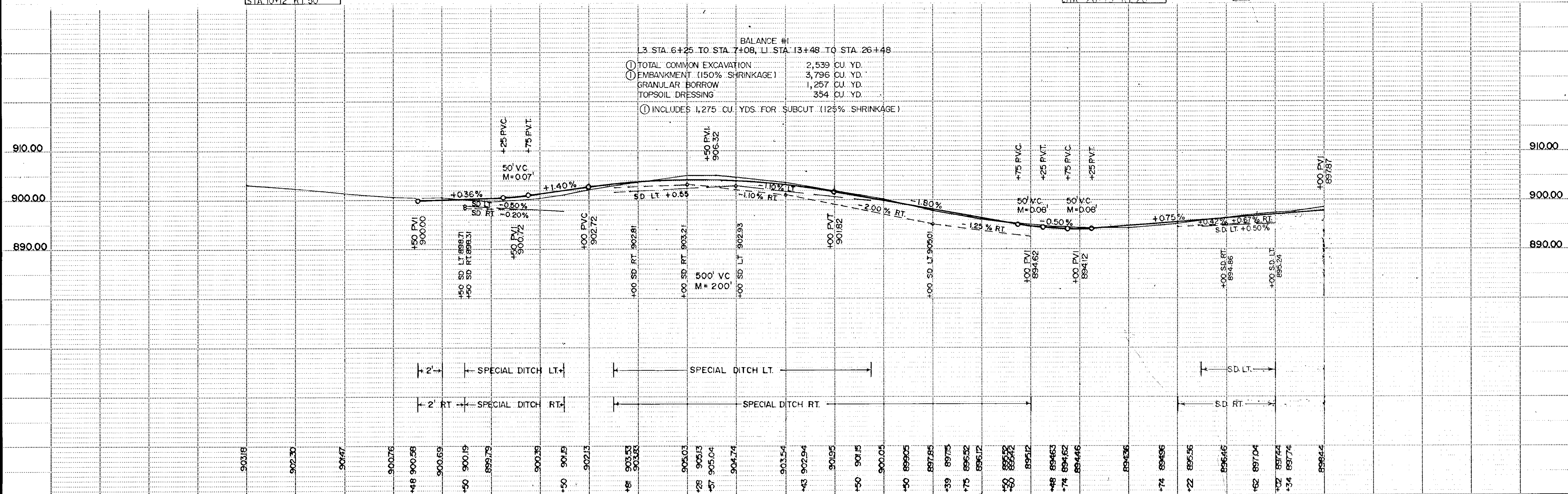
STA. 26+47 TO STA. 26+74, SALVAGE 54' OF PLATE BEAM GUARDRAIL.
ATTACH THE GUARDRAIL TO THE INPLACE POSTS PER STANDARD PLATE 8307N.
PAYMENT FOR ITEM, INSTALL TRAFFIC BARRIER, AT THE CONTRACT PRICE PER LINEAR FOOT
SHALL INCLUDE THE COST OF ALL MATERIALS REQUIRED TO CONSTRUCT THE BARRIER
AS SHOWN IN THE DETAILS AND NO ADDITIONAL COMPENSATION SHALL BE MADE.

BM. #2 ELEV. 901.14
DBL. SPIKE IN 12" OAK
STA. 10+12 RT. 50'

■ DENOTES AGGREGATE & BITUMINOUS CONSTRUCTION

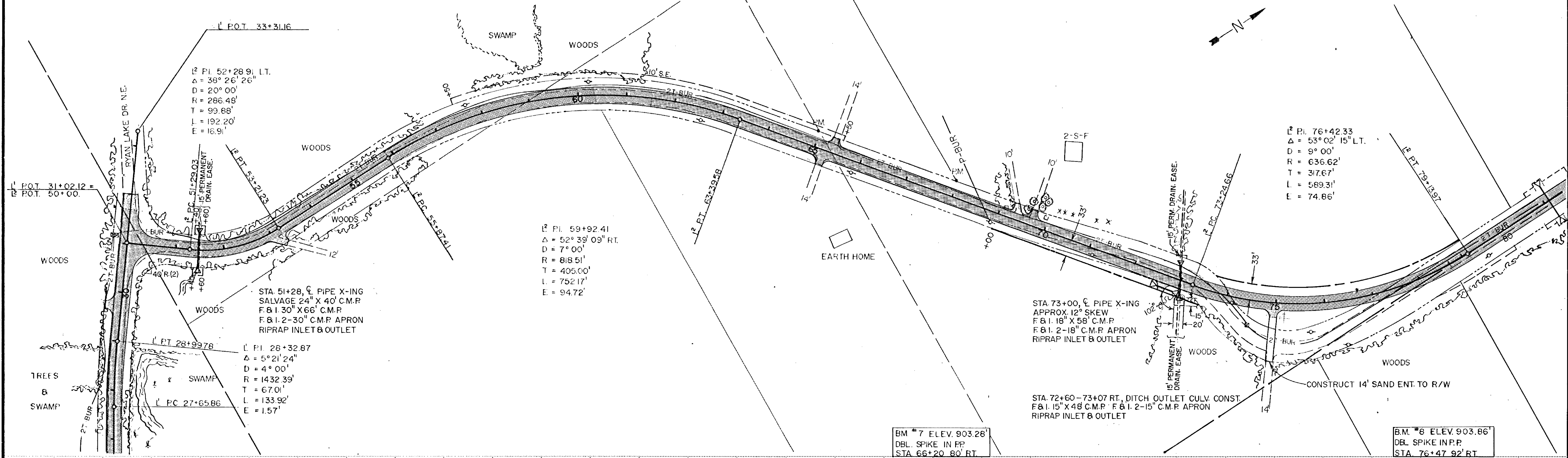
■ DENOTES AGGREGATE CONSTRUCTION ONLY

BM. #4 ELEV. 894.18
SPIKE IN NW. WING WALL
STA. 26+75 RT. 20'



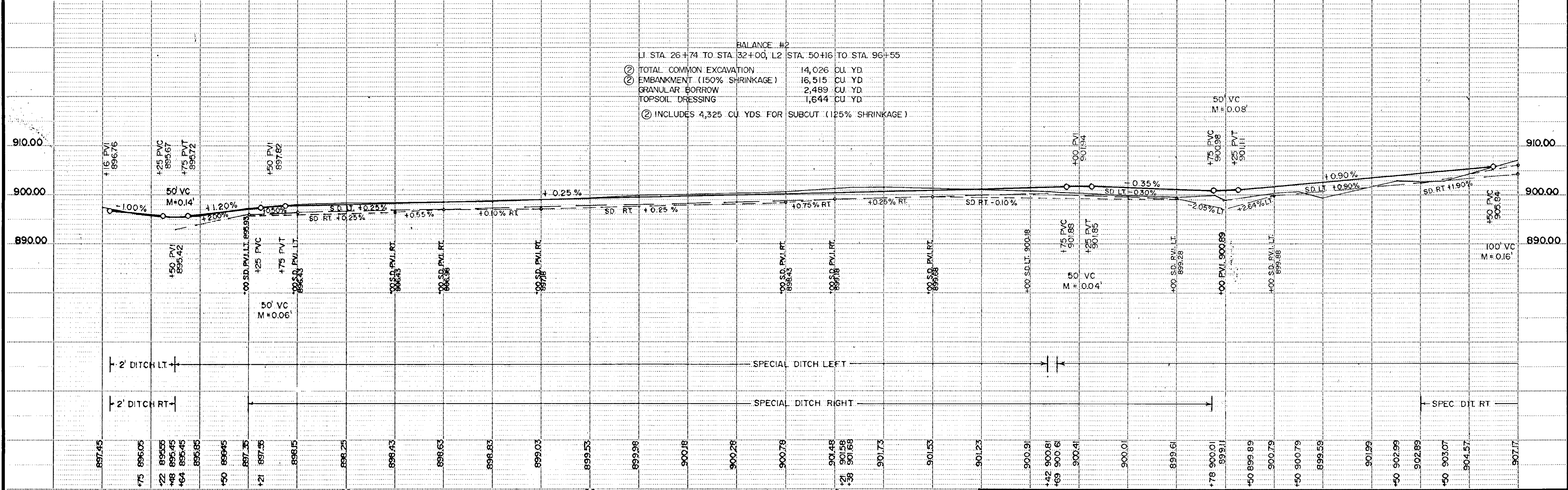
BM #5 ELEV. 896.42'
DBL. SPIKE IN 10" MAPLE
STA. 31+00 42' LT.

BM #6 ELEV. 899.65'
DBL. SPIKE IN 19" OAK
STA. 57+00 90' LT.



BM #7 ELEV. 903.26'
DBL. SPIKE IN PP
STA 66+20 80' RT.

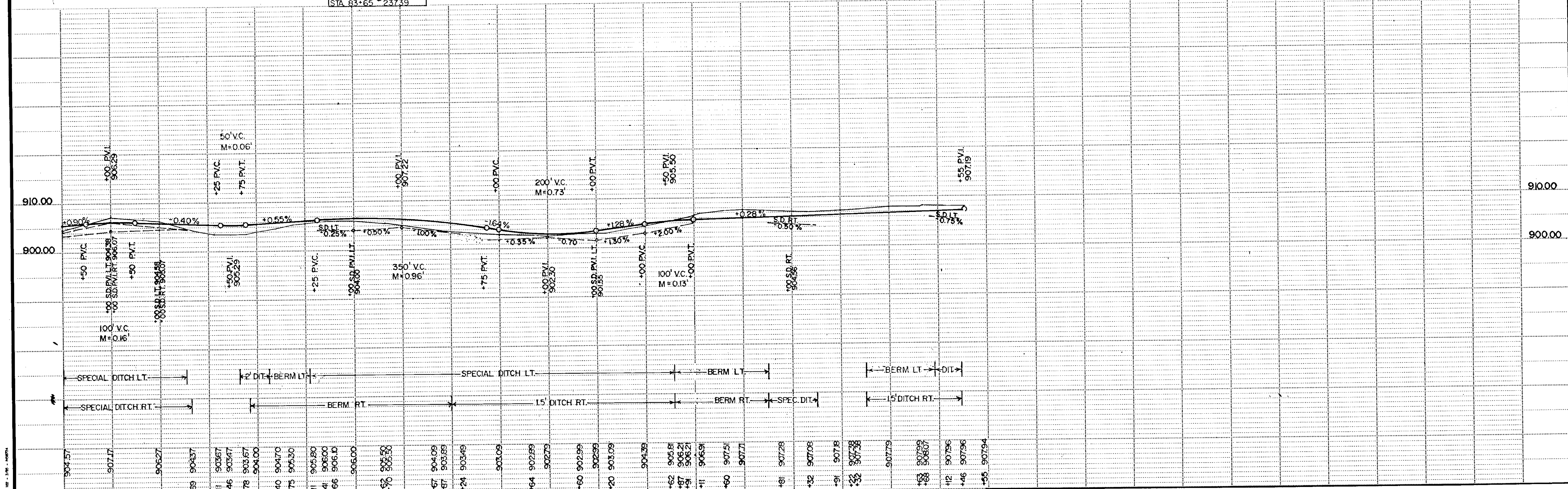
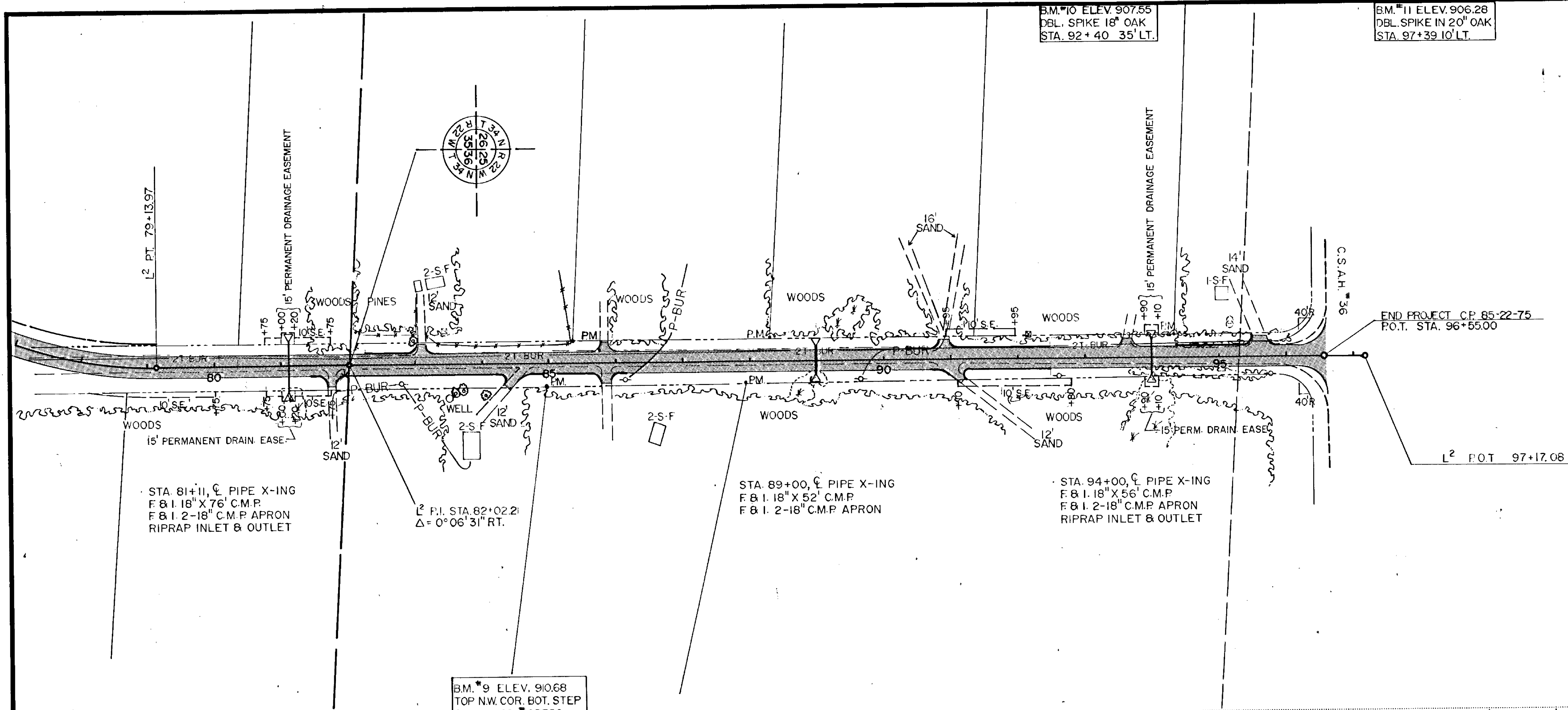
BM #8 ELEV. 903.86'
DBL. SPIKE IN P.P.
STA 76+47 92' RT.

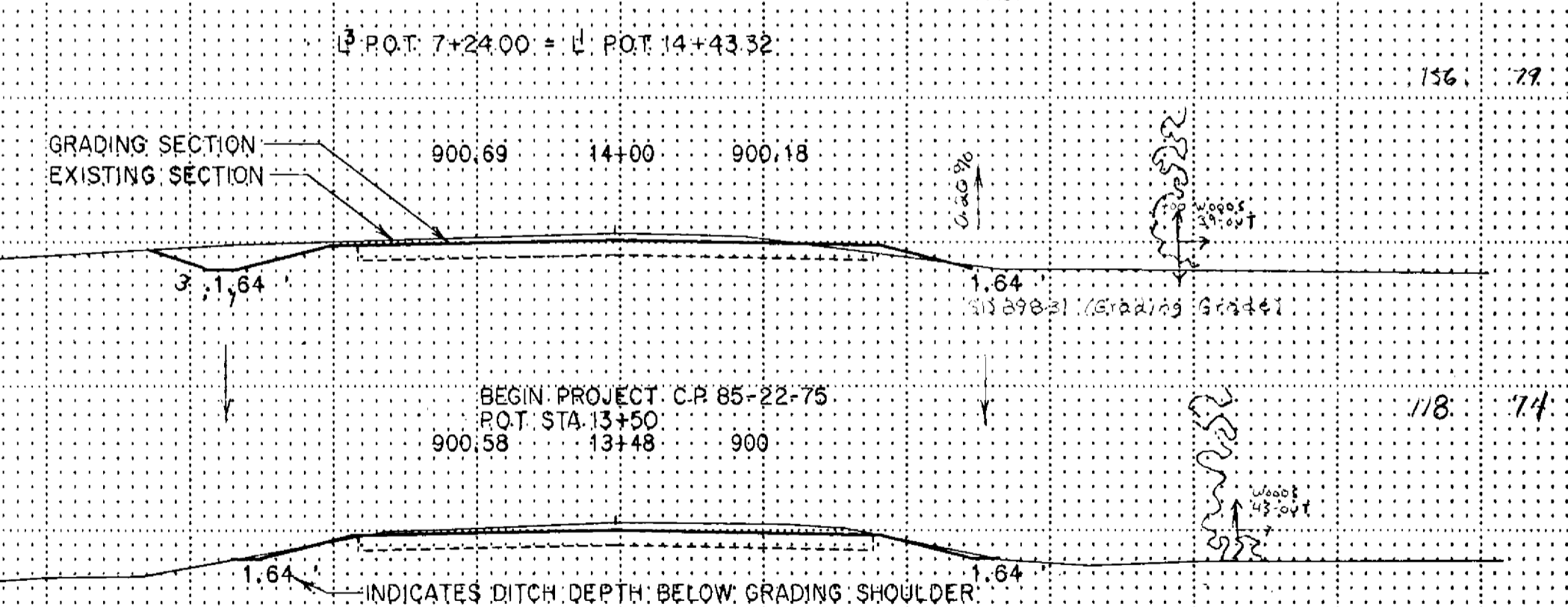
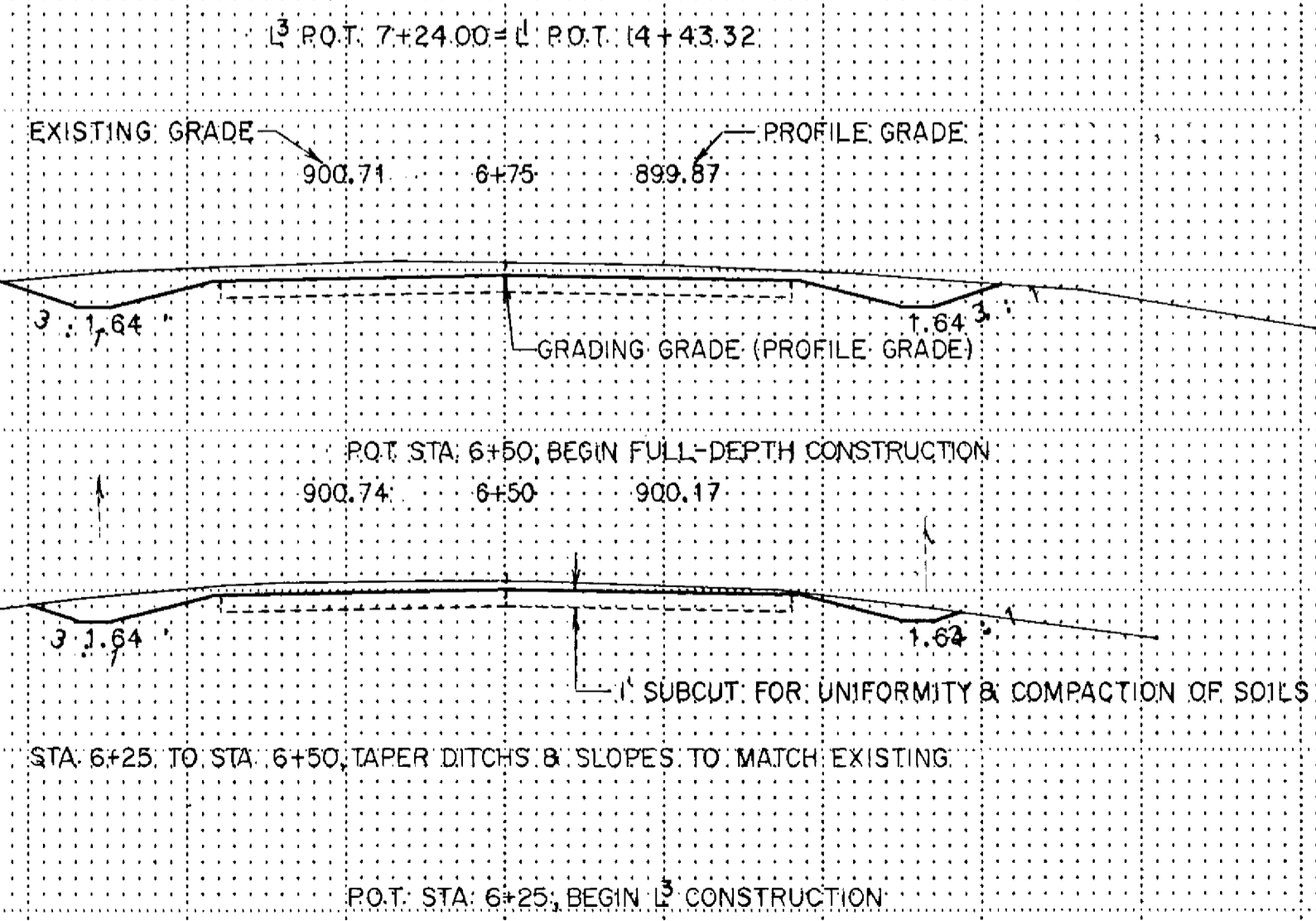
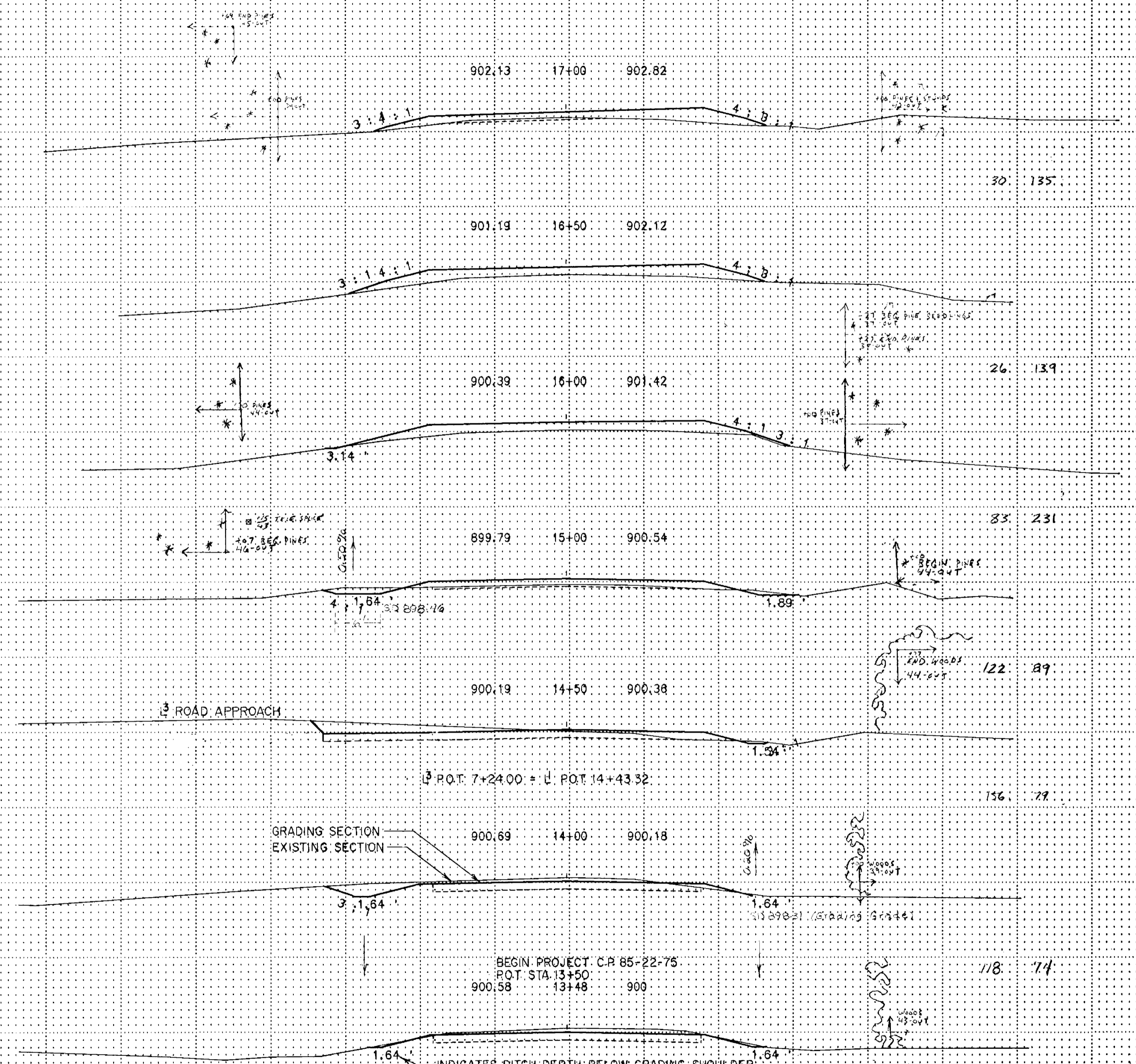
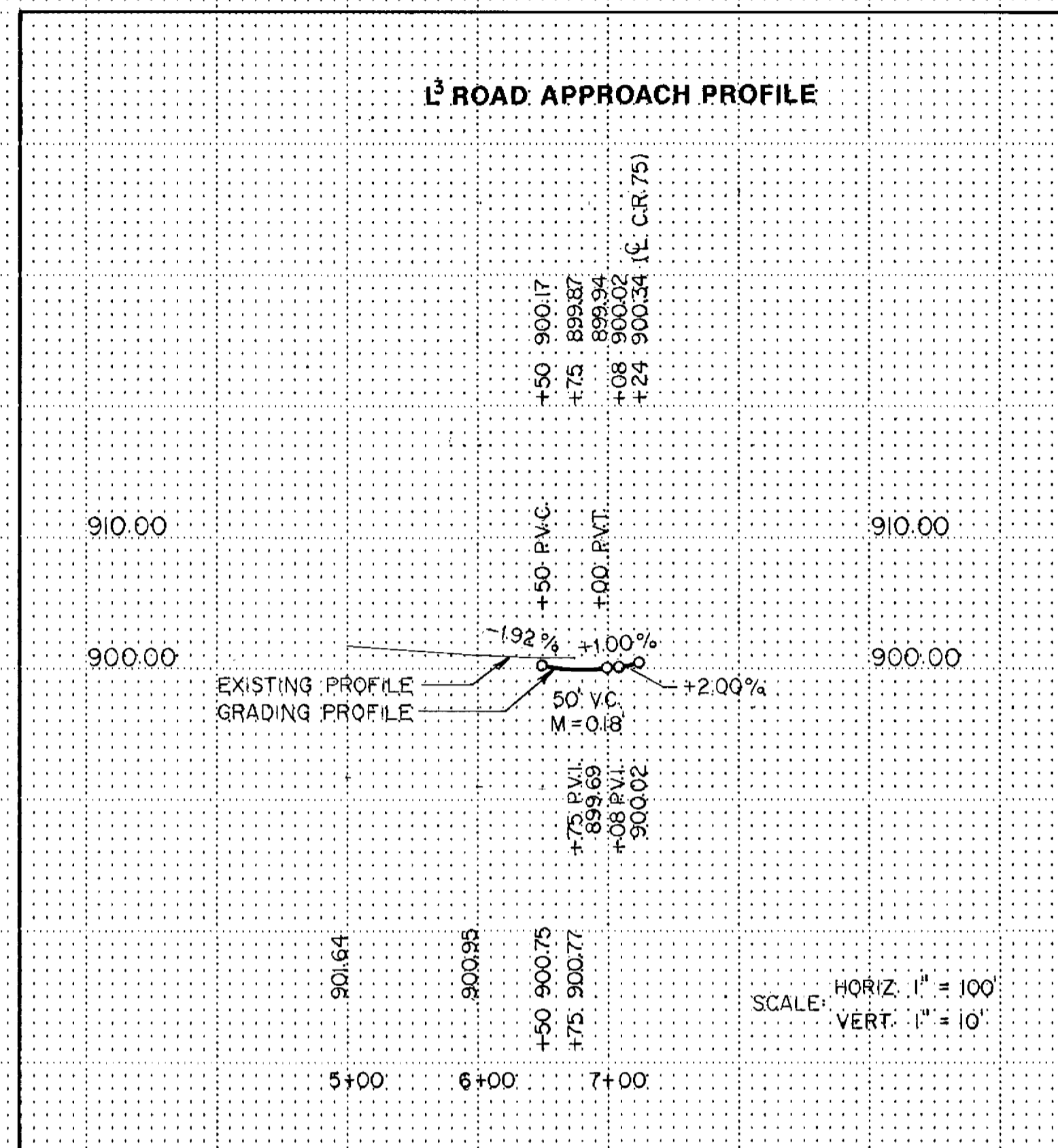


B.M. #10 ELEV. 907.55
DBL. SPIKE 18" OAK
STA. 92+40 35' LT.

B.M. #11 ELEV. 906.28
DBL. SPIKE IN 20" OAK
STA. 97+39 10' LT.

B.M. #9 ELEV. 910.68
TOP NW COR. BOT. STEP
STA. 83+65 23739





SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA. 6+50 TO STA. 6+75
 STA. 13+48 TO STA. 17+00

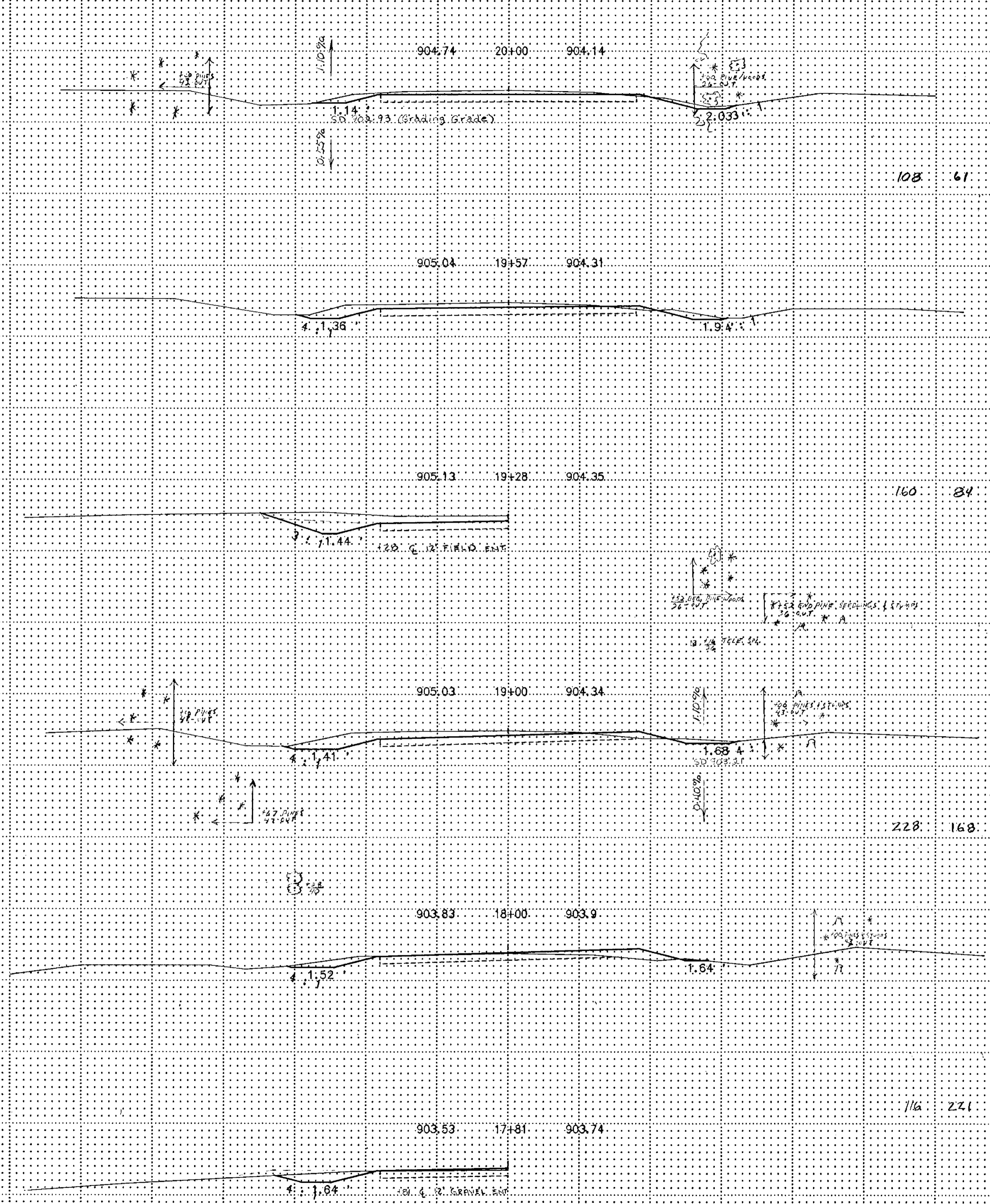
EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

73 99

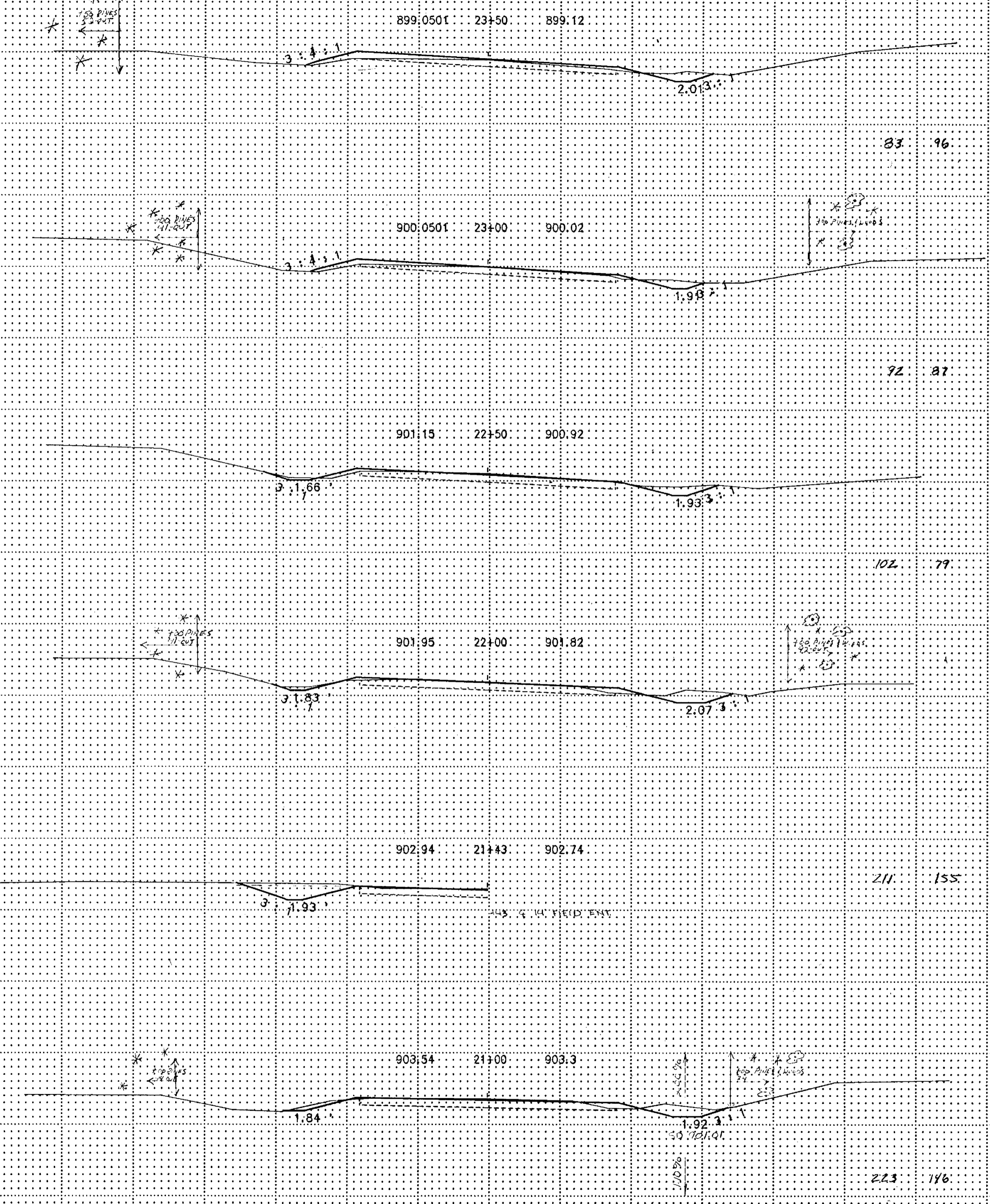


103 61

160 84

228 168

116 221



83 96

72 87

102 77

211 155

223 196

SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA. 17+81 TO STA. 23+50

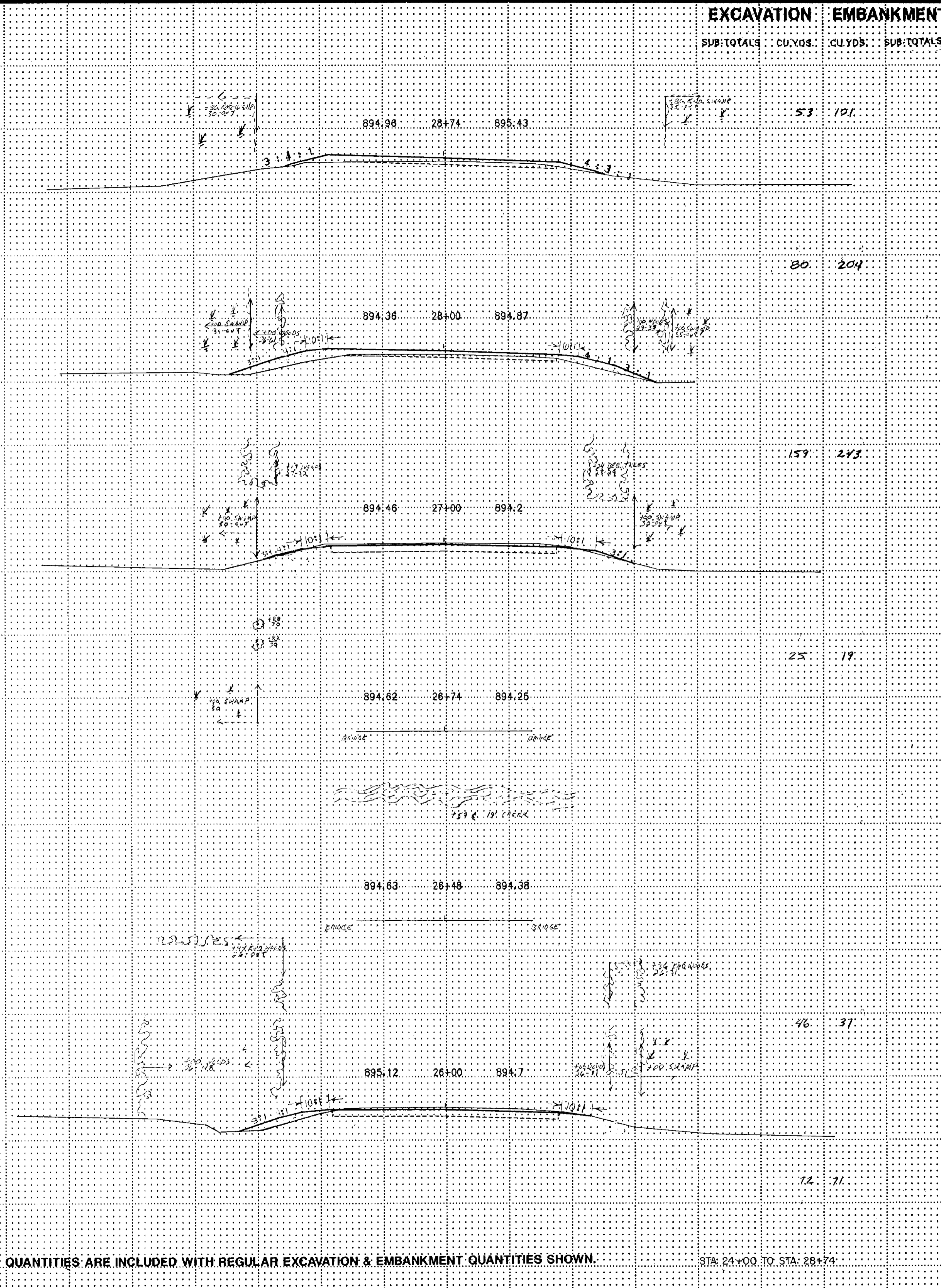
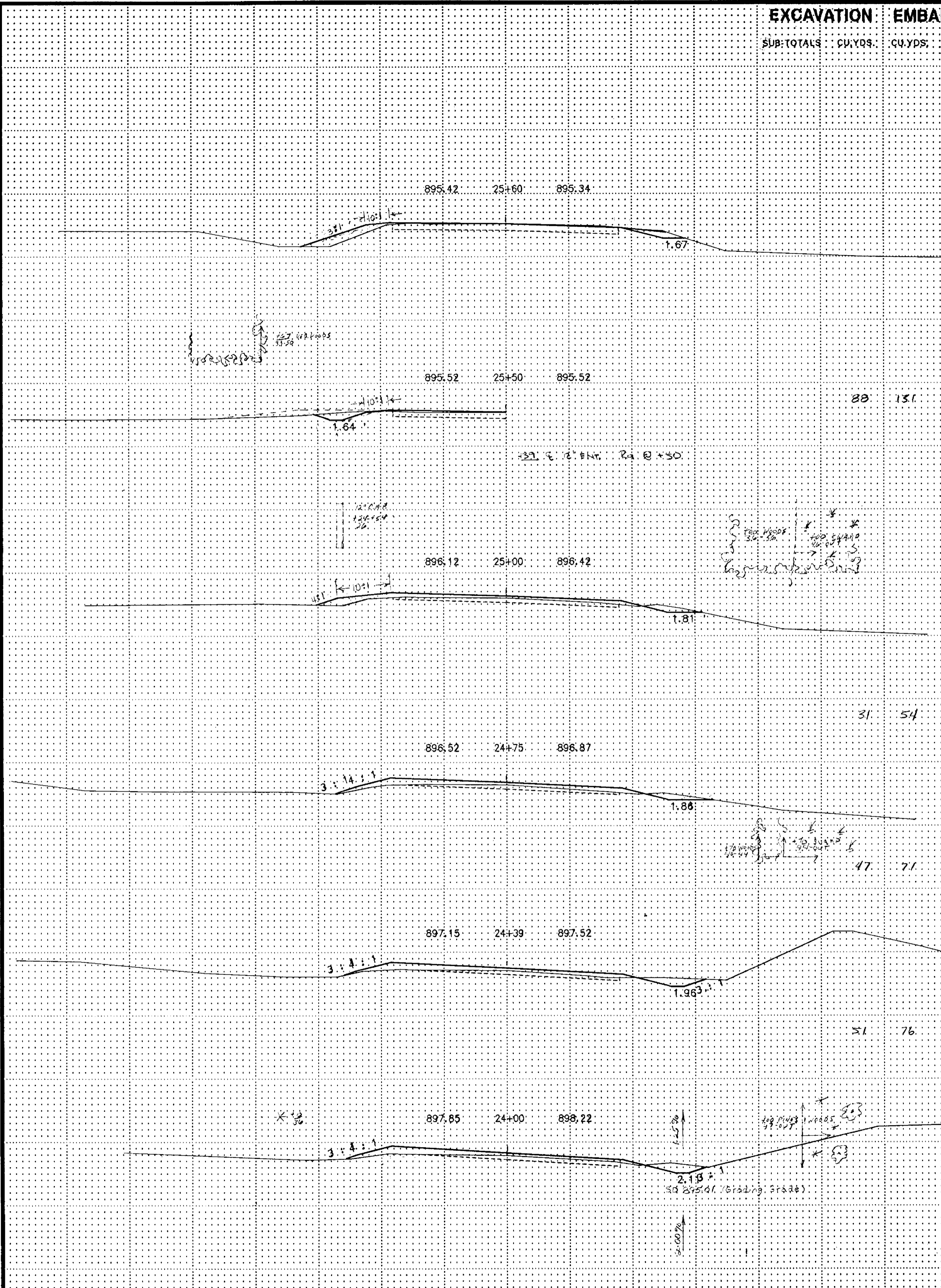
VERTICAL CURVE CROSS SECTION UNIT 114P 114050

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. SUB-TOTALS



SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA: 24+00 TO STA: 28+74

PLANETARY ROAD CROSS SECTION 1957 11/27 1958

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

P.O.T. STA. 32+00; END. CONSTRUCTION
898.44 32+00 897.87

2.0% (Grading) 1.8% 276.70 (Grading)

STA. 31+68; END. BIT & AGG. CONST.; BEGIN AGG. CONST.
TAPER AGGREGATE TO MATCH INPLACE ROAD AT STA. 32+00

897.74 31+34 897.38

3.1% 895.47 (Grading) 1.1% 824.75 (Grading)

P.O.T. 31+02.12 = P.O.T. 50+00.00

897.44 31+02 897.14

2.1% 895.44 2.4% 824.75 (Grading)

897.04 30+62 896.84

2.1% 895.44 2.7% 824.75 (Grading)

896.46 30+00 896.37

3.1% 897.14 1.1% 824.75 (Grading)

895.56 29+22 895.79

3.4% 897.14 1.0% 824.75 (Grading)

805.85 52+00 806.02

3.1% 812.75 (Grading)

895.45 51+64 895.62

3.4% 895.45 (Grading)

895.45 51+48 895.58

INLET 889.63
STA. 51+48; PIPE X-ING
R.O.I. 30" X 66" C.M.P.
R.O.T. 2-30" C.M.P. APRON, RIPRAP INLET & OUTLET
OUTLET 889.43

895.55 51+22 895.7

3.4% 895.55 (Grading)

896.05 50+75 896.17

3.6% 896.05 (Grading)

897.45 50+00 896.77

STA. 50+16; BEGIN CONSTRUCTION

SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

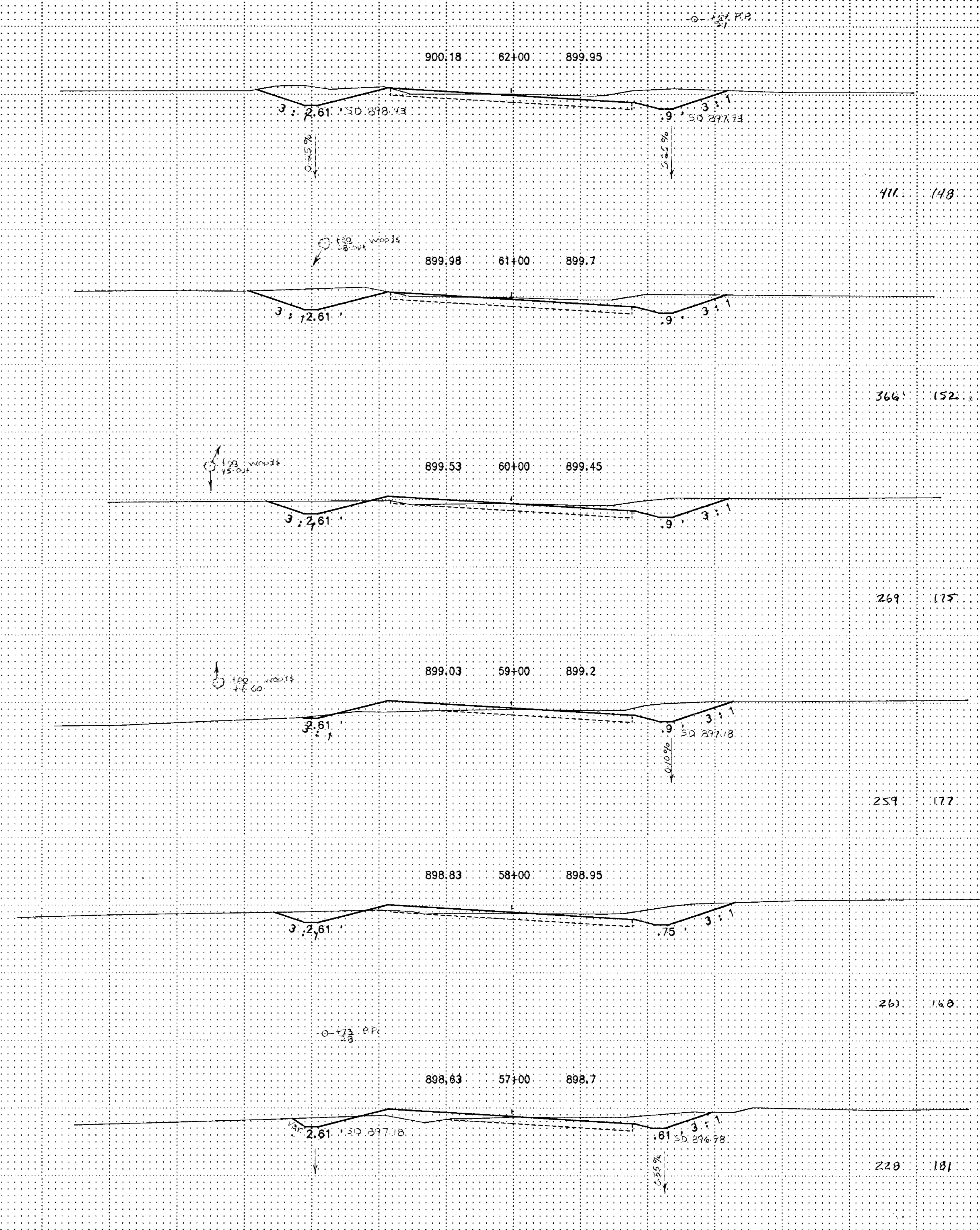
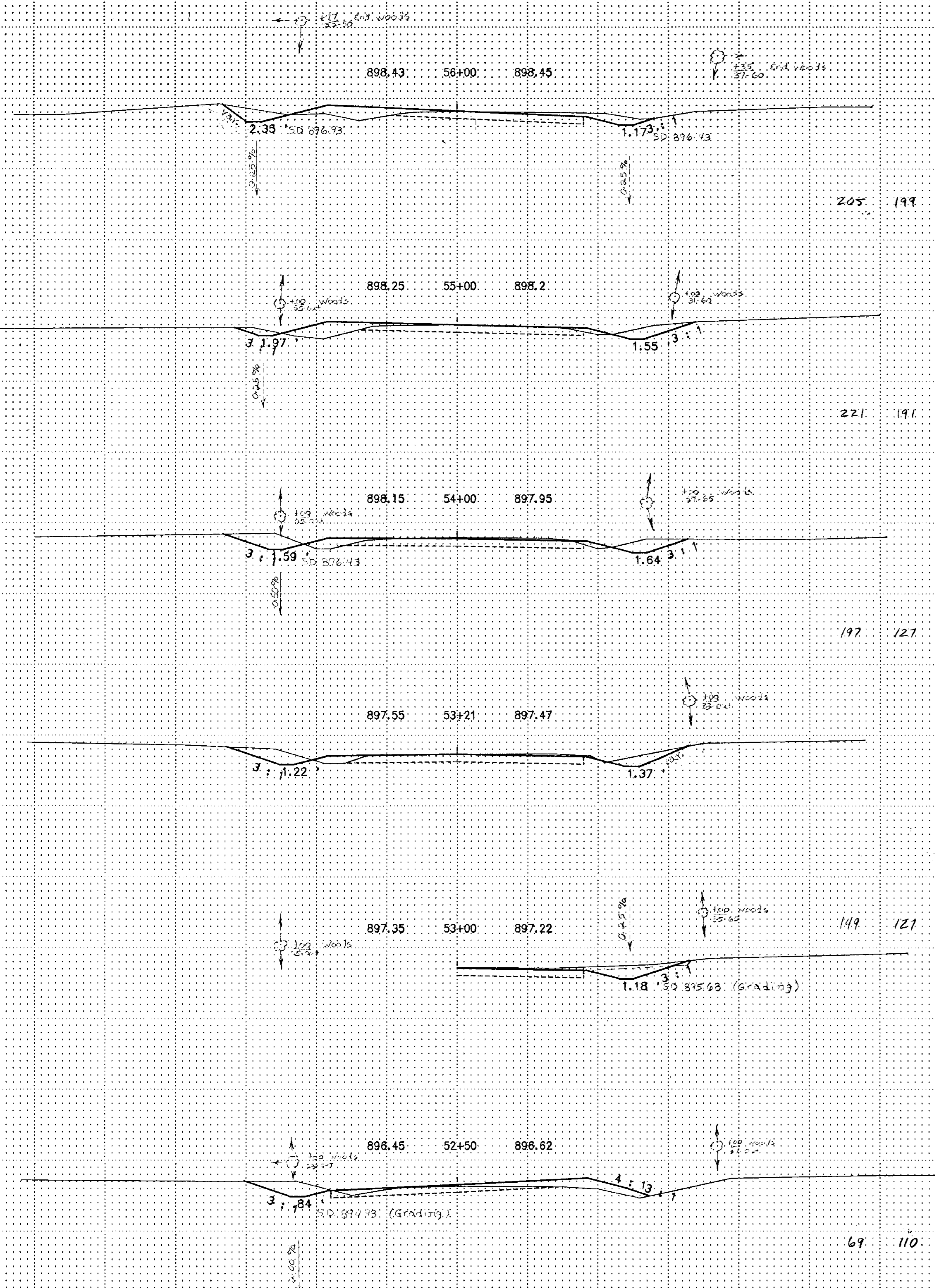
STA. 29+22 TO STA. 32+00
STA. 50+00 TO STA. 52+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



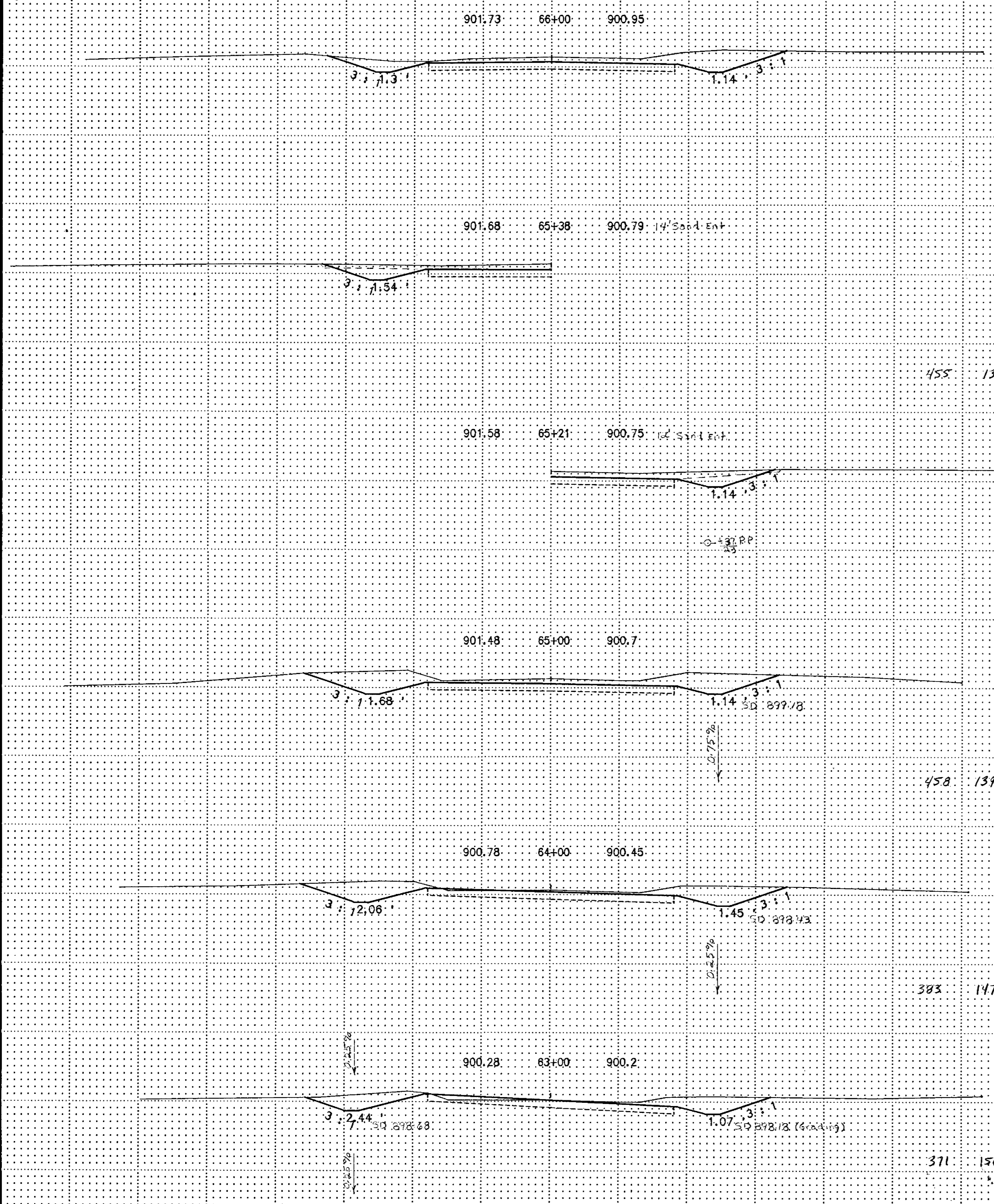
SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN. STA. 52+50 TO STA. 62+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

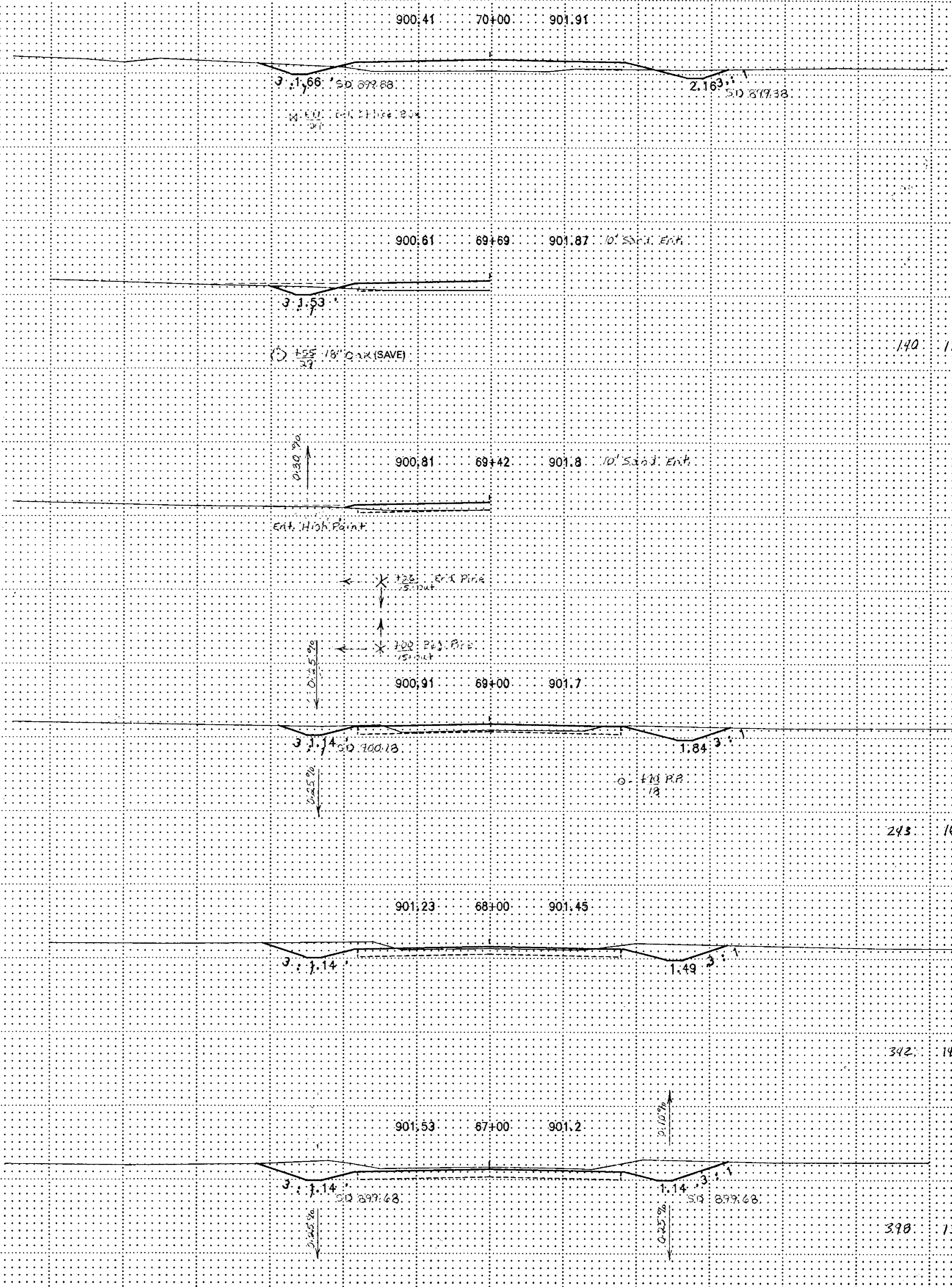


455 137

458 139

383 147

371 150



140 175

243 162

342 148

398 137

SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA. 63+00 TO STA. 70+00

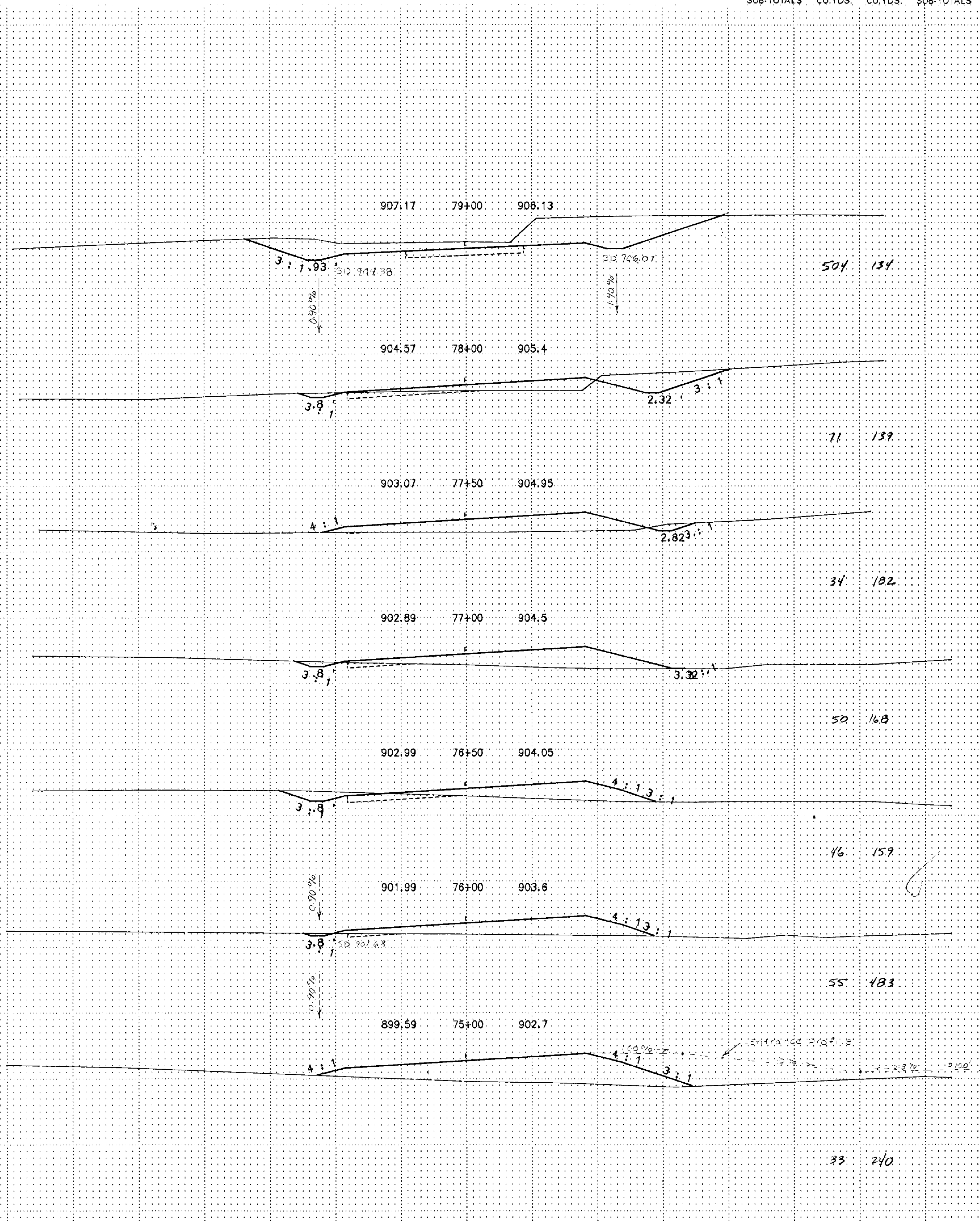
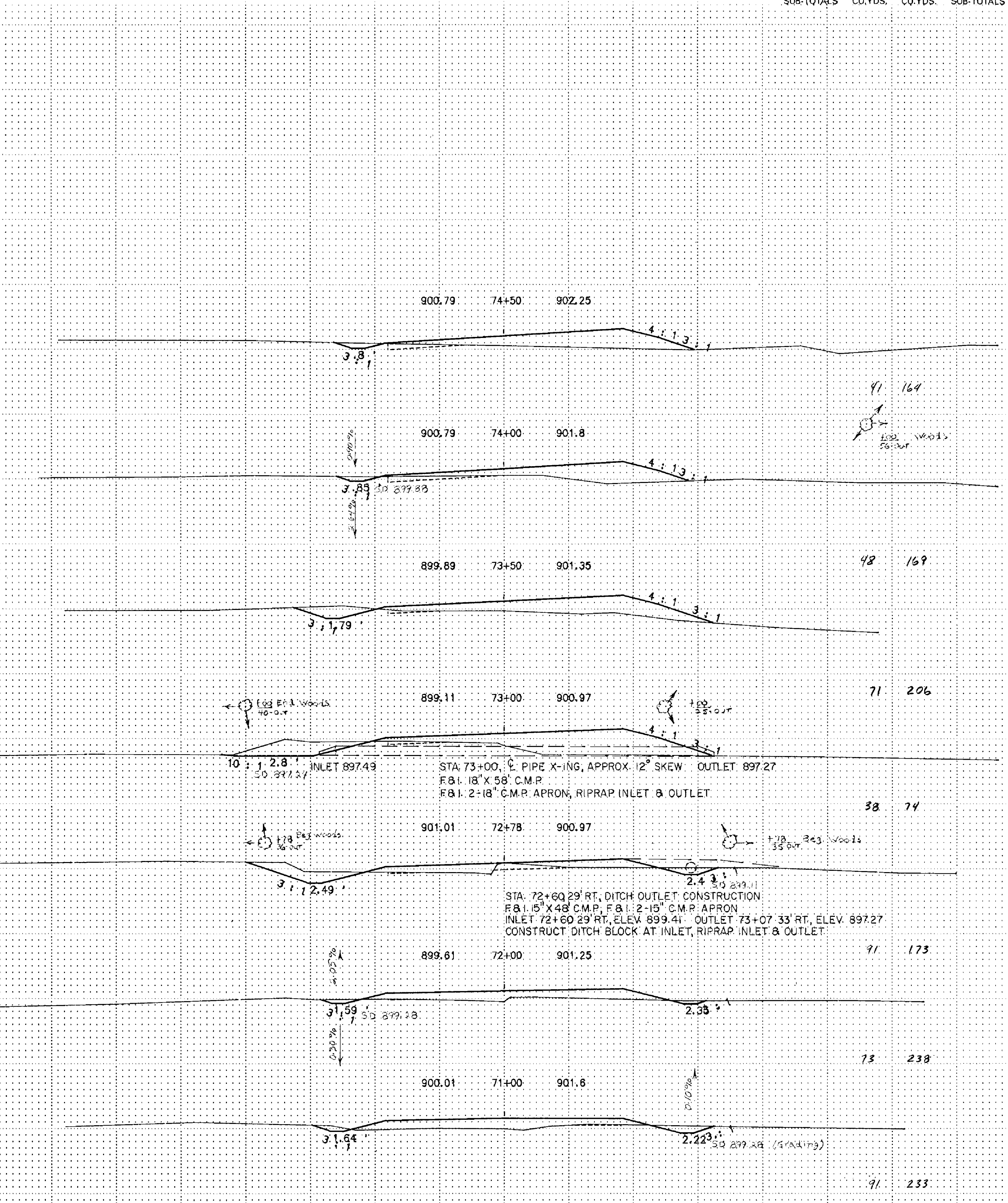
ILLUSTRATION FOR CROSS SECTION NOT TO SCALE

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



STA. 73+00, 1/2 PIPE X-ING, APPROX. 12° SKEW. INLET 897.49 OUTLET 897.27
 F&I. 18" X 58" C.M.P. F&I. 2-15" C.M.P. APRON
 F&I. 2-18" C.M.P. APRON, RIPRAP INLET & OUTLET

STA. 72+60 29' RT, DITCH OUTLET CONSTRUCTION
 F&I. 15" X 48" C.M.P. F&I. 2-15" C.M.P. APRON
 INLET 72+60 29' RT, ELEV. 899.41. OUTLET 73+07 33' RT, ELEV. 897.27
 CONSTRUCT DITCH BLOCK AT INLET, RIPRAP INLET & OUTLET

SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

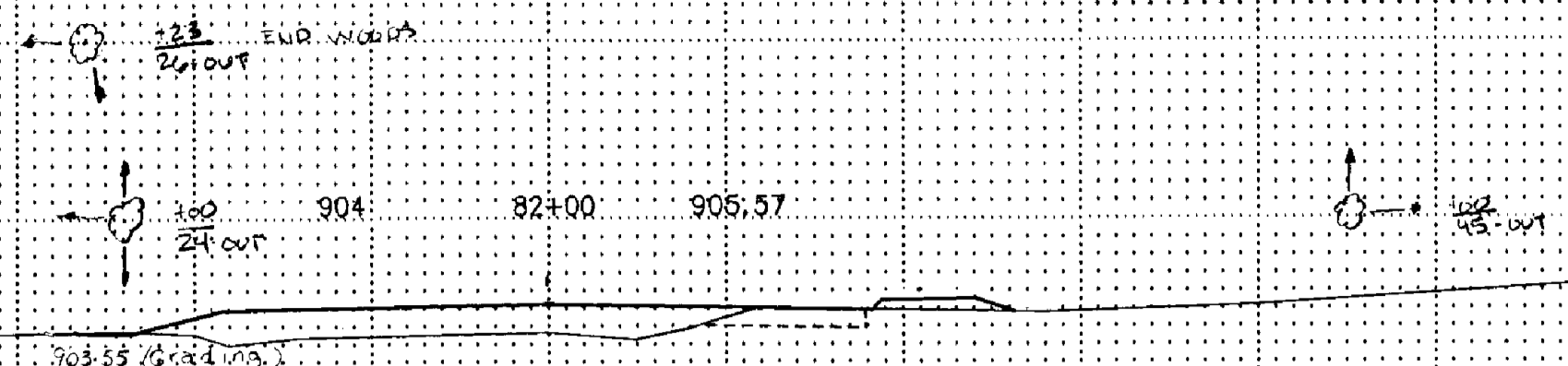
STA. 71+00 TO STA. 79+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

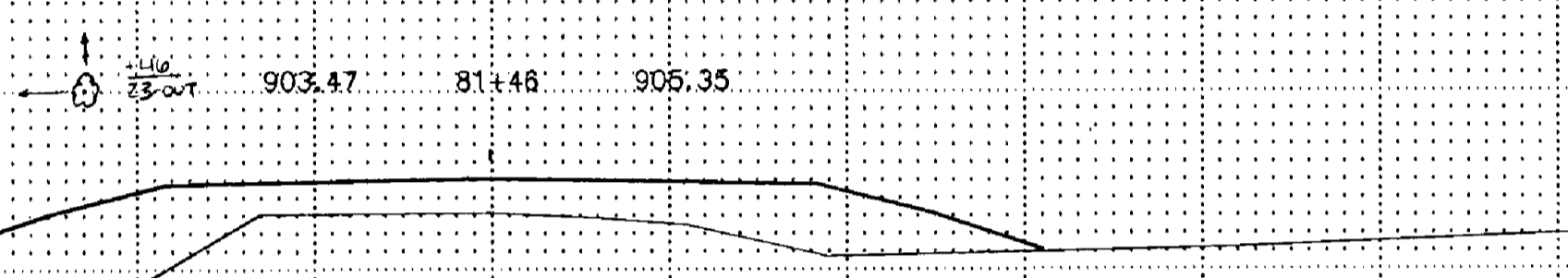
SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



42 253

903.67 81+78 905.45

6" SAND FINT. Note: Pitch entrance left to right per drainage



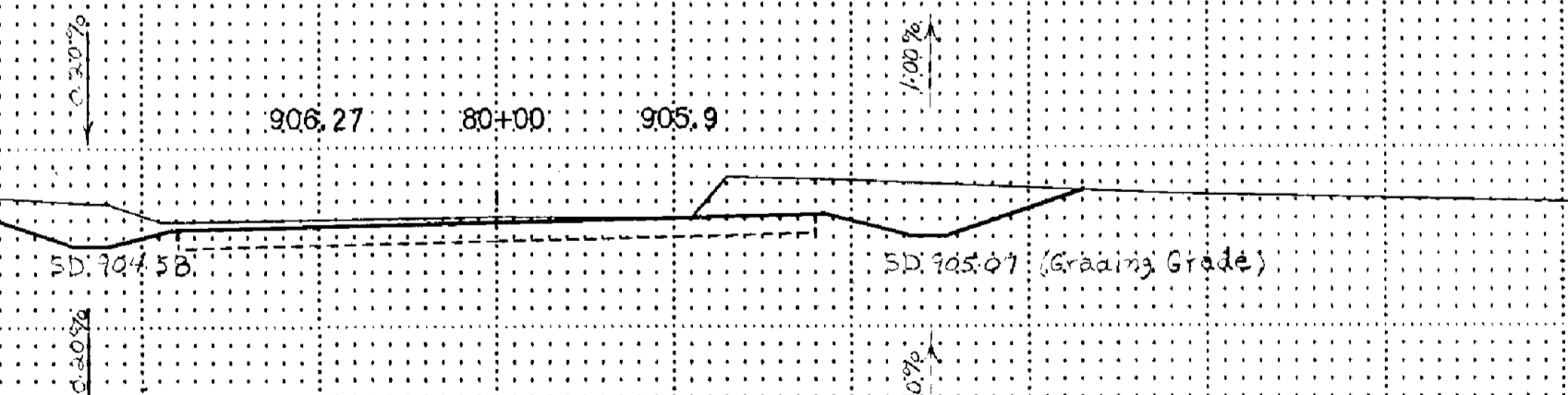
24 261

903.67 81+11 905.45

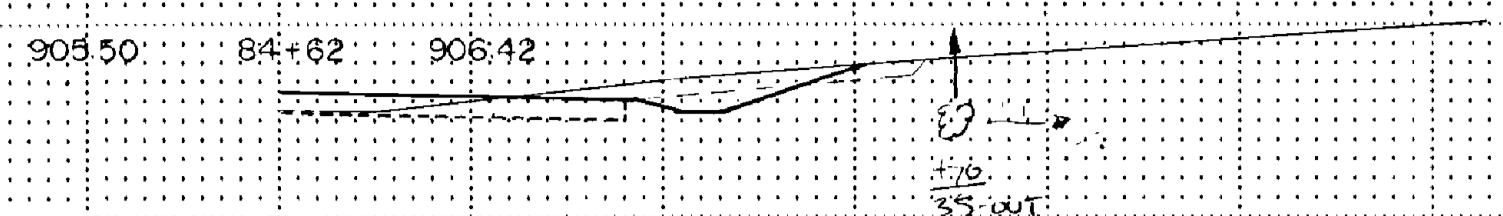
INLET 898.00 STA. 81+11 1/2 PIPE X-ING R&I: 18" X 78" C.M.P. R&I: 2-18" C.M.P. APRON, RIPRAP INLET & OUTLET OUTLET 898.00

26 228

904.37 80+69 905.62



66 66



83 58

906 84+00 906.5

1 1/2 3/10 4" ASH

906.1 83+68 906.43

1 1/2 3/10 4" ASH

74 39

906 83+41 906.34

1 1/2 3/10 4" C&G

223 107

905.8 83+11 906.18

905.3 82+75 905.98

121 58

904.7 82+40 905.79

86 83

SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

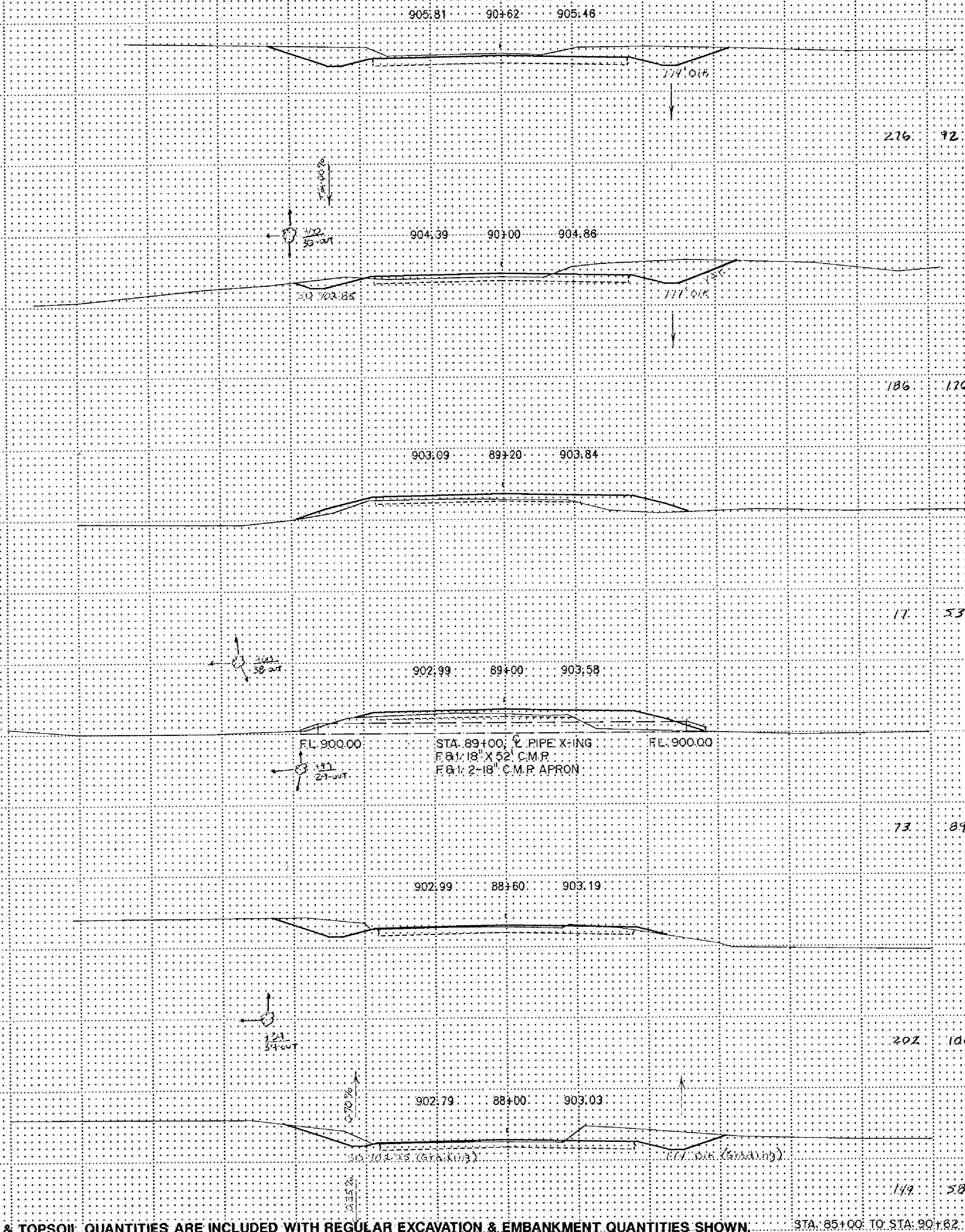
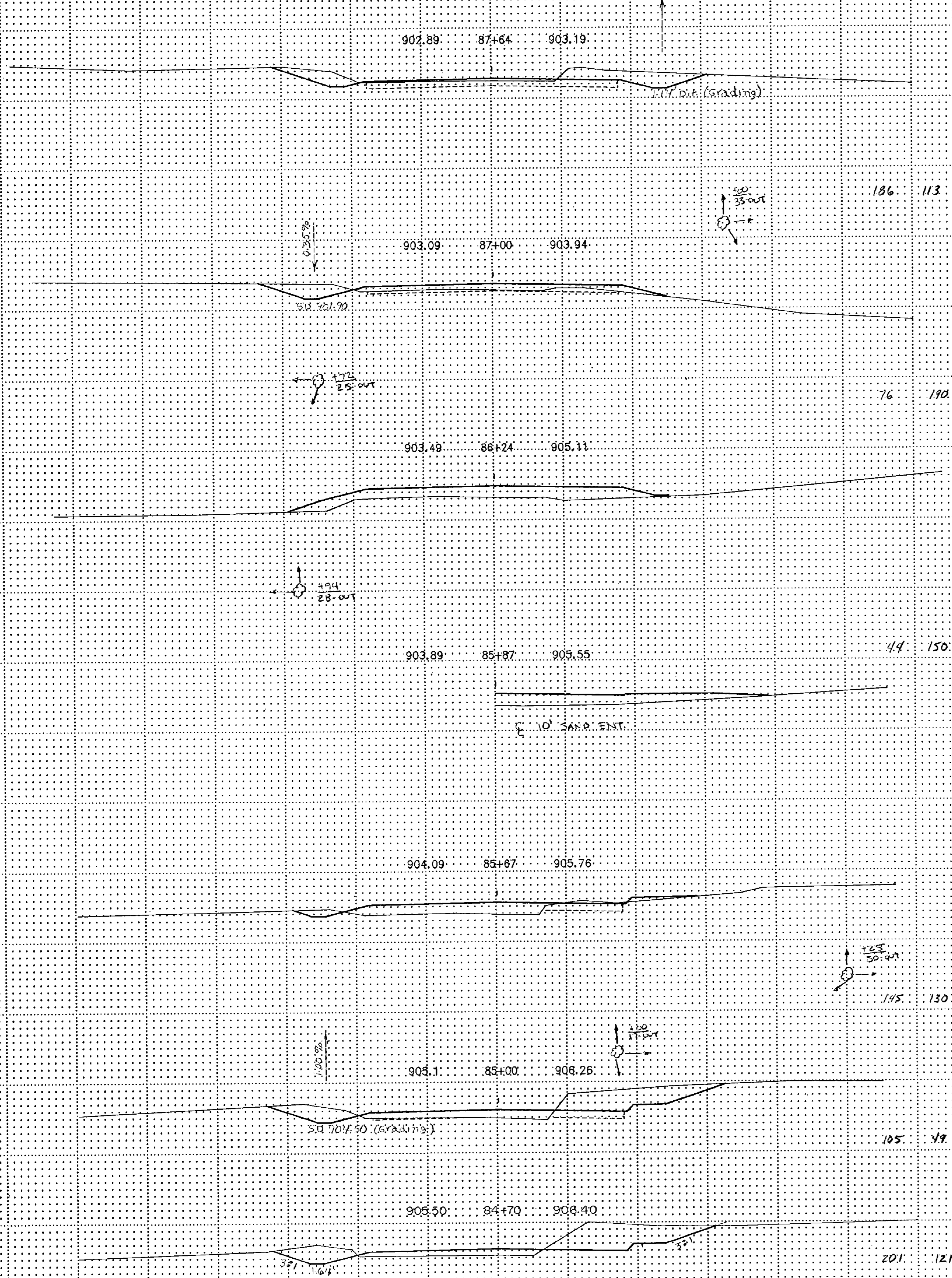
STA. 80+00 TO STA. 84+00

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA. 85+00 TO STA. 90+62

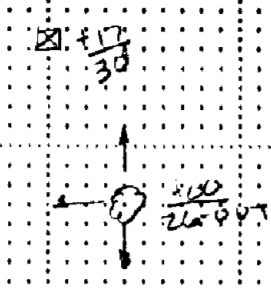
ILLUSTRATION: ROAD CROSS SECTION, 1/2" = 10' HORIZ. 1/4" = 1' VERT.

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

EXCAVATION EMBANKMENT

SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



907.71 92+00 905.92

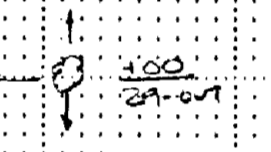
354 54

907.51 91+80 903.81

415 62

908.91 91+11 905.67

308 67

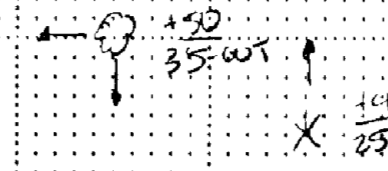


906.21 90+91 905.61

1/2 SAND ENT
42' ENT. SPLITS

906.21 90+87 903.5

1/2 SAND ENT

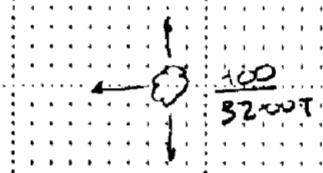


907.38 94+32 906.57

25 13

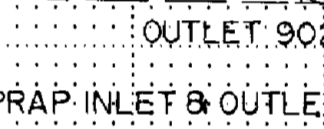
907.38 94+22 906.54

81 48



907.18 93+91 906.46

INLET 903.28 STA. 94+00 PIPE X-ING
F.B. 18" X 56" C.M.P.
F.B. 2-18" G.M.P. APRON, RIPRAP INLET & OUTLET



93+61 907.13

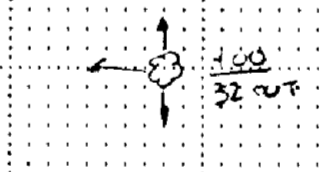
OUTLET 902.30
1/2 SAND ENT
16' ENT.

181 93

93+32 907.08

30' 907.40 (ROAD HG)

194 69



907.28 92+81 906.15

500 110

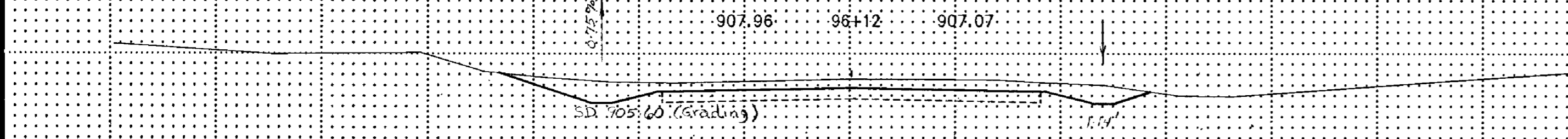
SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA. 90+87 TO STA. 94+32

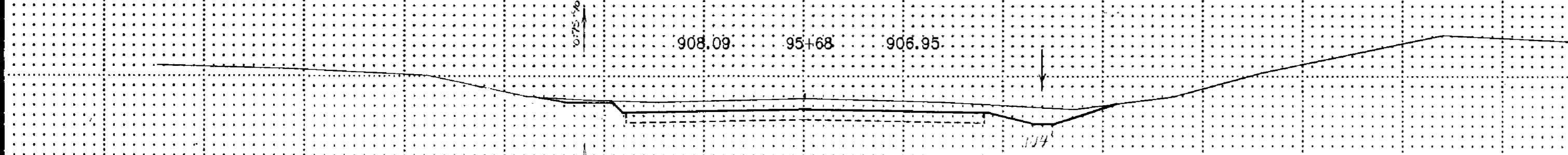
STATE PROJECT NO. 85-22-75

EXCAVATION EMBANKMENT
 SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS

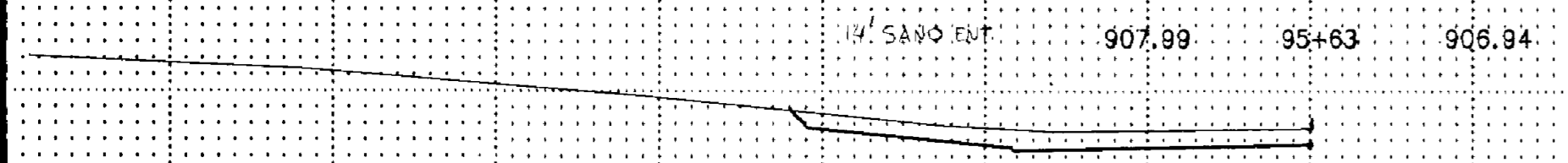
EXCAVATION EMBANKMENT
 SUB-TOTALS CU.YDS. CU.YDS. SUB-TOTALS



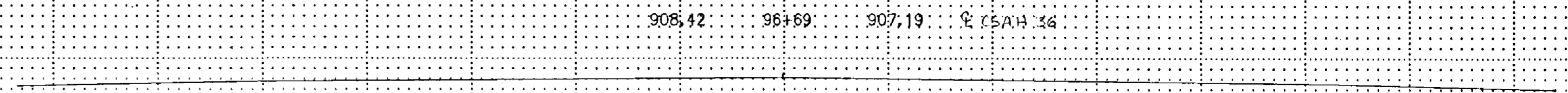
189 60



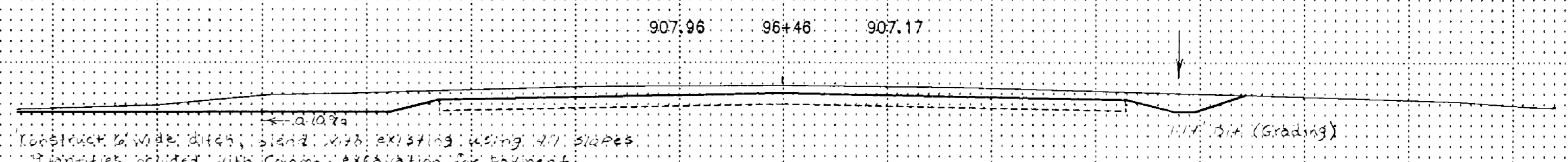
285 73



218 73



END PROJECT C.P. 85-22-75
 P.O.T. STA. 96+55
 907.94 96+55 907.2 SOUTH SAULDER CSAH 36



38 12

142 46

NOTE: SAVE ALL TREES BEYOND 27 FT. STA. 94+40 TO STA. 95+96

SUBCUT & TOPSOIL QUANTITIES ARE INCLUDED WITH REGULAR EXCAVATION & EMBANKMENT QUANTITIES SHOWN.

STA. 95+00 TO STA. 96+69

ILLUSTRATION FOR CHECK SECTION UNIT TYPE, MESH