

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO	ITEM	UNIT	ESTIMATED QUANTITIES	UNIT COST	TOTAL VALUE
2021.501	MULCHING	LUMP SUM	1.00		
2031.501	FIELD OFFICE, TYPE 'D'	EACH	1.00		
2101.501	CLEARING	ACRE	0.60		
2101.502	CLEARING	TREE	5.00		
2101.506	GRUBBING	ACRE	0.60		
2101.507	GRUBBING	TREE	5.00		
2104.501	REMOVE CULVERT PIPE	LN. FT.	126.00		
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YD.	8620.00		
2104.513	SAVING BITUMINOUS PAVEMENT	LN. FT.	470.00		
2104.521	SALVAGE CULVERT PIPE	LN. FT.	78.00		
2105.501	COMMON EXCAVATION	CU. YD.	9,243		
① 2105.525	TOPSOIL BORROW (LV)	CU. YD.	387		
② 2130.501	WATER	M-GAL	100.00		
③ 2211.503	AGGREGATE BASE PLACED, CLASS SA (P)	CU. YD.	2519.00		
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	252		
④ 2331.510	BINDER COURSE MIXTURE	TON	1715.00		
2331.514	BASE COURSE MIXTURE	TON	3035.00		
⑤ 2331.601	2" WEARING COURSE PLACED	SQ. YD.	450.00		
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	83.00		
⑥ 2341.508	WEARING COURSE MIXTURE	TON	1270.00		
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	2150.00		
2501.511	15" C.M. PIPE CULVERT	LN. FT.	250.00		
2501.515	15" C.M. PIPE APRONS	EACH	16.00		
2501.521	22" SPAN R.C. PIPE-ARCH CULVERTS	LN. FT.	180.00		
2501.525	22" SPAN R.C. PIPE-ARCH APRONS	EACH	4.00		
2501.571	INSTALL 15" C.M.P. CULVERT	LN. FT.	36.00		
⑦ 2521.501	4" CONCRETE WALK	SQ. FT.	800.00		
⑧ 2531.501	CONCRETE CURB AND GUTTER DES. B-612	LN. FT.	600.00		
⑨ 2545.521	3" RIGID STEEL CONDUIT	LN. FT.	166.00		
⑩ 2545.553	PULL BOXES	EACH	6.00		
2554.505	PERMANENT BARRICADES	LN. FT.	80.00		
2573.501	BALE CHECK	EACH	15.00		
⑪ 2564.513	CONCRETE FOOTING	EACH	3.00		
2575.501	ROADSIDE SEEDING	ACRE	2.00		
2575.502	SEED, MIXTURE 500	POUND	100.00		
2575.505	SODDING, TYPE (LAWN & BLVD.) SOD	SQ. YD.	3436.00		
2575.511	MULCH MATERIAL, TYPE #1	TON	4.00		
2575.519	DISC ANCHERING	ACRE	2.00		
⑫ 2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	0.50		
⑬ 2580.501	TEMPORARY LANE MARKING	RD. STA.	69.00		

- ① FOR USE IN AREAS TO BE SODDED.
- ② FOR DUST CONTROL
- ③ INCLUDES 115 CU. YDS. FOR COMMERCIAL ENTRANCES
- ④ INCLUDES 20 TON FOR STREET APPROACHES AND 90 TON FOR COMMERCIAL ENTRANCES.
- ⑤ INCLUDES 2341 WEARING COURSE
- ⑥ PROVIDED FOR RESIDENTIAL DRIVEWAY RESTORATION. PAYMENT BY SQ. YD. INCLUDES BITUMINOUS MATERIAL FOR MIXTURE AND 3" THICK (COMPACTED THICKNESS) AGGREGATE BASE.
- ⑦ INCLUDES 15 TON FOR STREET APPROACHES AND 75 TON FOR COMMERCIAL ENTRANCES.
- ⑧ FOR MEDIAN CONSTRUCTION.
- ⑨ FOR FUTURE SIGNALS AT TH 47
- ⑩ FOR SEED AND SOD AREAS
- ⑪ FOR SIGN POST LOCATIONS IN MEDIAN (SIGNS TO BE INSTALLED BY COUNTY)

BASIS OF PLANNED QUANTITIES

2331	PLANT MIXED BASE AND BINDER 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 PER SQ. YD.
2575	MULCH MATERIAL, TYPE #1 2 TONS PER ACRE
2575	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 500 LBS. / ACRE ON ALL SEED AND SOD AREAS
2575	ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT PLUS 10% SEED MIXTURE NO. 500 @ 50 LBS. / ACRE.

STANDARD PLATES

PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3014 J	REINFORCED CONCRETE PIPE-ARCH DETAIL
3040 F	CORRUGATED METAL PIPE CULVERT
3110 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3123 I	METAL APRON FOR C.S. PIPE
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
7100 F	CONCRETE CURB AND GUTTER
8000 I	STANDARD BARRICADES
8002 F	PERMANENT BARRICADE
8117 F	PRECAST CONCRETE HANDHOLE
9000 B	APPROACHES AND ENTRANCES
9102 C	SODDING AT PIPE CULVERT ENDS

SPECIAL DETAILS

THE CONTRACTOR SHALL REMOVE SUFFICIENT TOPSOIL MATERIAL WITHIN THE EXCAVATION AREAS AND AREAS ON WHICH EMBANKMENT WILL BE PLACED, STOCKPILE IF NECESSARY, AND USE IT FOR TOPSOIL COVERING ON THE NEW SLOPES AND DITCH BOTTOMS TO PROVIDE A MINIMUM COVER COVER OF THREE (3) INCHES. SALVAGING AND REPLACING TOPSOIL SHALL BE CONSIDERED INCIDENTAL TO COMMON EXCAVATION. EXCESS COMMON EXCAVATION MATERIAL WILL BE STOCKPILED BY THE CONTRACTOR FOR FUTURE USE BY THE COUNTY. LOCATION FOR THE STOCKPILE WILL BE ON THE OLD ROAD ALIGNMENT BETWEEN STATION 94+00 AND T.H. #47 THIS WORK WILL BE CONSIDERED INCIDENTAL TO COMMON EXCAVATION.

REVISIONS	
DATE	BY

S.A.P. _____ S.P. _____ C.P. 88-08-116

DRAINAGE CHART																
STATION	LDC	INPLACE	REMARKS	SODDING	REMOVE	SALVAGE	INSTALL CULVERTS				FURNISH AND INSTALL CULVERTS					
				CULV END SQ YD	CULV PIPE	CULV PIPE	15' CMP	15' CMP			15' CMP		22' RCP-A			
					LIN FT	AP	LIN FT	AP	LIN FT	AP	LIN FT	AP	LIN FT	AP	LIN FT	AP
80+48	RT			17							36	2				
81+22	RT		NO CULV REQ'D													
81+54	LT		NO CULV REQ'D													
82+37	RT	12' x 32' CMP		17	32						32	2				
84+33	LT			17							32	2				
85+39	LT			17							36	2				
87+30	LT	18' x 30' CMP	TD REMAIN INPL													
87+80	RT			17							36	2				
90+55	LT			17							36	2				
91+82	RT	15' x 36' CMP	RELOCATE CULV	17		36	36									
93+60	LT	12' x 30' CMP		17							42	2				
93+60	RT	15' x 42' CMP	NO CULV REQ'D			42										
97+00	C/L			21									80	2		
99+68	C/L	15' x 64' RCP				64										
99+85	C/L			21									100	2		
100+30	RT		NO CULV REQ'D													
100+76	LT		NO CULV REQ'D													
TOTAL				178	126	78	36				250	16	180	4		

CLEARING AND GRUBBING					
STATION (TO STATION)	LDC	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
80+85	33' LT	1		1	
82+69 TO 83+54	RT		.05		.05
84+70 TO 86+59	RT		.15		.15
87+21	32' RT	1		1	
96+52 TO 98+56	LT & RT		.4		.4
98+77	26' RT	1		1	
98+86	23' LT	1		1	
98+88	6' RT	1		1	
TOTALS		5	.60	5	.60

SAWING BITUMINOUS PAVEMENT		
STATION	LOCATION	LIN. FT.
78+20	C/L X-ING	70
80+48	RT.	24
81+22	RT.	20
81+54	LT.	34
82+37	RT.	20
90+55	LT.	14
91+82	LT.	20
93+60	LT.	14
99+38	C/L X-ING	170
100+30	RT.	30
100+76	LT.	30
DRIG. ALIGN.	160' W. TH 47	24
TOTAL		470

SODDING		
STATION	LDC	SQ. YDS.
78+20 TO 80+36	RT.	408
80+60 TO 81+12	RT.	184
81+32 TO 82+60	RT.	252
81+00 TO 81+37	LT.	68
81+71 TO 83+00	LT.	267
84+00 TO 84+28	LT.	75
84+40 TO 85+30	LT.	250
99+38 TO 100+15	RT.	342
99+38 TO 100+61	LT.	424
100+45 TO 102+00	RT.	576
100+91 TO 102+00	LT.	412
CULVERT ENDS		178
TOTAL		3436

BALE CHECKS		
STATION	LDC	QUANTITY
88+00	RT.	5.00
101+66	LT./RT.	10.00
TOTAL		15.00

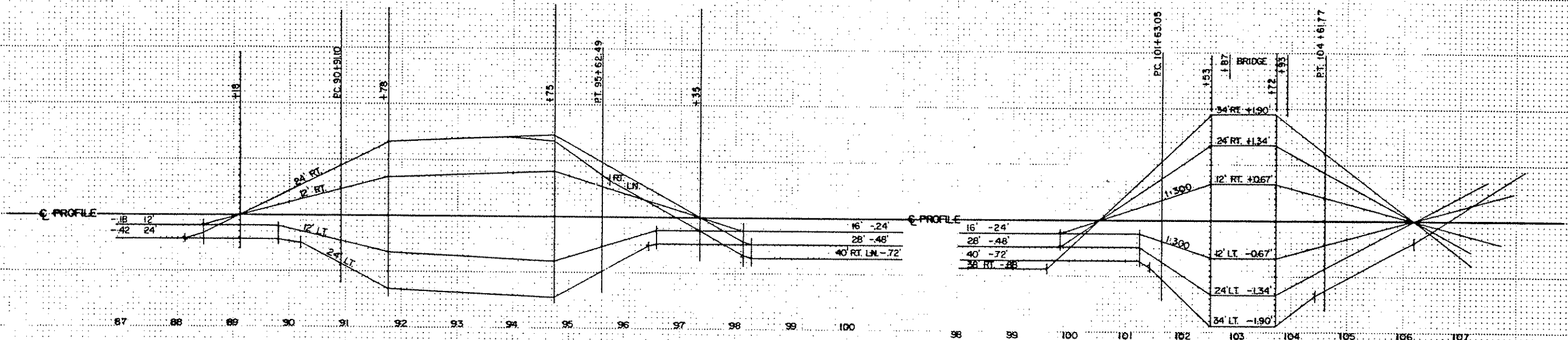
REVISIONS			
DATE	BY	DATE	BY

S.A.P. _____ S.P. _____ C.P. 88-08-116

Sheet No. 3 of 12 Sheets

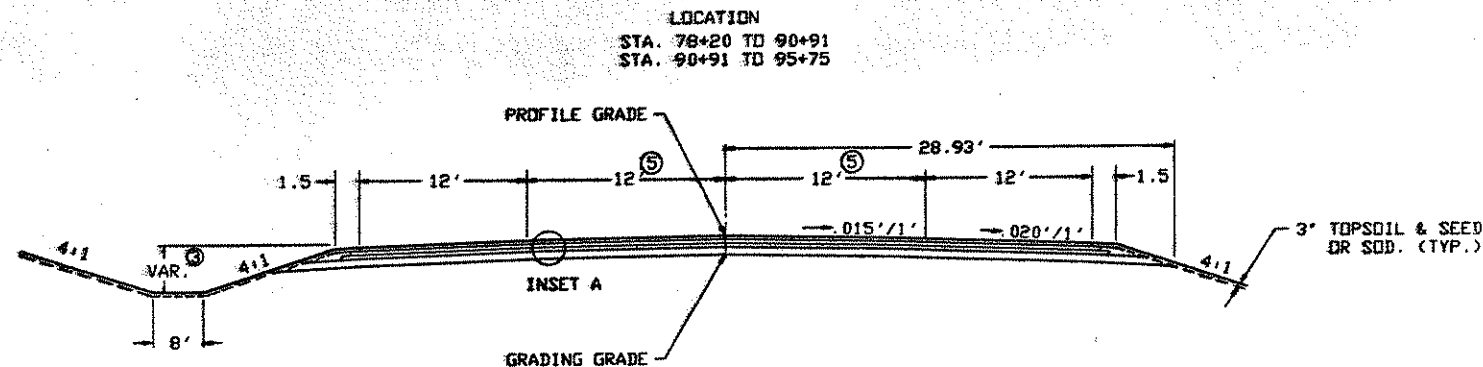
D= 6°-45'
MAX. SUPER .053'/FT.

D= 8°-30'
MAX SUPER .056'/FT.



SUPER ELEVATION CHART
DESIGN SPEED 40 MPH.

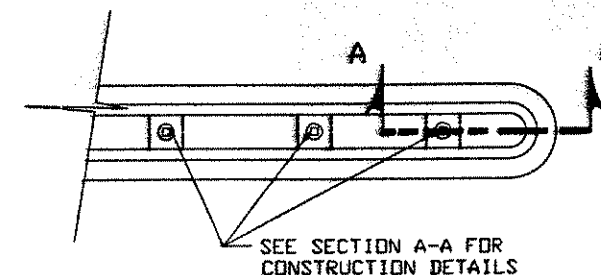
TYPICAL BASE AND SURFACING SECTION



INSET 'A'
 1 1/2" 2341 WEARING COURSE
 2" 2331 BINDER COURSE
 4" 2331 BASE COURSE
 5" CL-5A AGGREGATE BASE
 4" 2331 BASE COURSE

INSET 'B'
 1 1/2" 2341 WEARING COURSE
 2" 2331 BINDER COURSE
 9" CL-5A AGG. BASE

ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATION



NOTE:

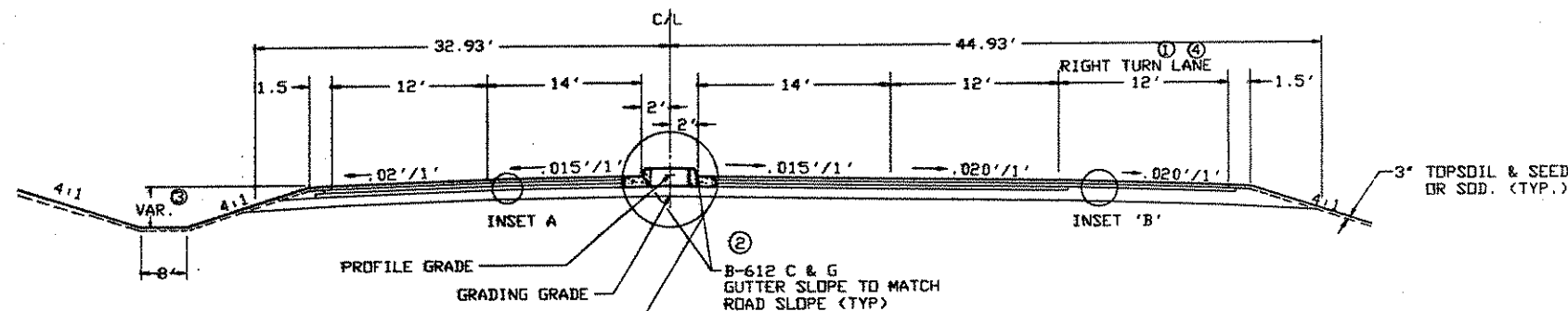
DASHED LINES REPRESENTS APPROXIMATE LIMITS OF THE CONCRETE FOOTINGS TO BE POURED FOR EACH ISLAND MOUNT SIGN POST INSTALLATION. (32' WIDTH x 36' LENGTH x 5' HEIGHT)

THE WIDTH OF THE FOOTING SHALL EQUAL THE WIDTH OF THE ISLAND IF THE WIDTH OF THE ISLAND IS UNDER 4'. IF MORE THAN ONE POST IS REQUIRED FOR INSTALLATION SEE DETAIL '2'.

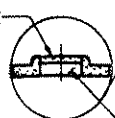
SECTION A-A THE SOLID GALVANIZED SQUARE TUBING FOR THE 'DO NOT ENTER' SIGNS SHALL BE SET AT PROPER ANGLE. REFER TO THE MINNESOTA MANUAL ON UNIFORM CONTROL DEVICES.

FOR PAYMENT OF CONCRETE FOOTINGS, REFER TO THE STATEMENT OF ESTIMATED QUANTITIES, ITEM 2564.513 CONCRETE FOOTINGS.

LOCATION
 STA. 95+75 TO 101+25

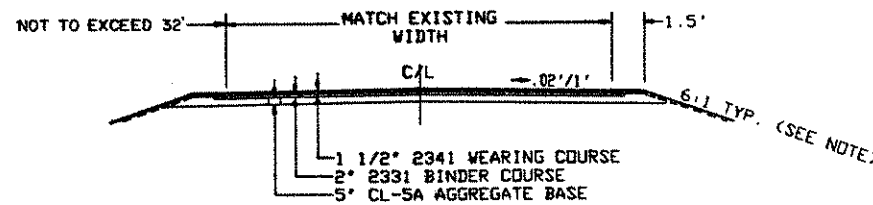


4" CONCRETE



COMPACTED GRANULAR MATERIAL (INCIDENTAL TO COMMON EXCAVATION)
 MEDIAN LOCATION 95+75 - 98+75
 (MEDIAN 99+75 - 101+25 TO BE CONST. WITH FUTURE PROJECT)

COMMERCIAL ENTRANCES

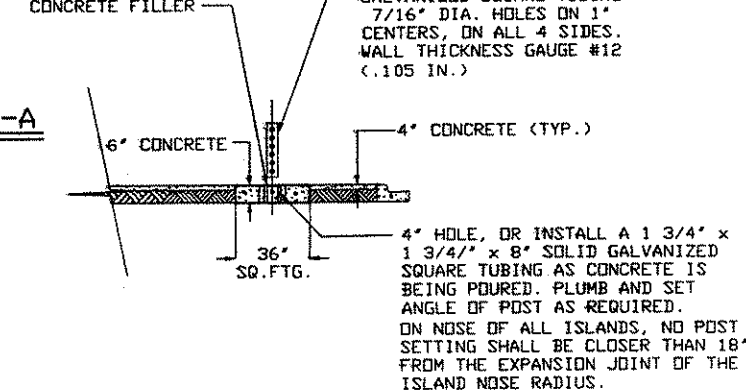


- ① SEE PLAN FOR LOCATION
- ② NO MEDIAN CONSTRUCTION 99+75 TO 101+25
- ③ SEE CROSS SECTIONS
- ④ CONSTRUCT 10' SHOULDER RIGHT 99+38 TO 101+15 SAME BITUMINOUS CONSTRUCTION AS RIGHT TURN LANE
- ⑤ WIDTH TAPERS 12'-16'

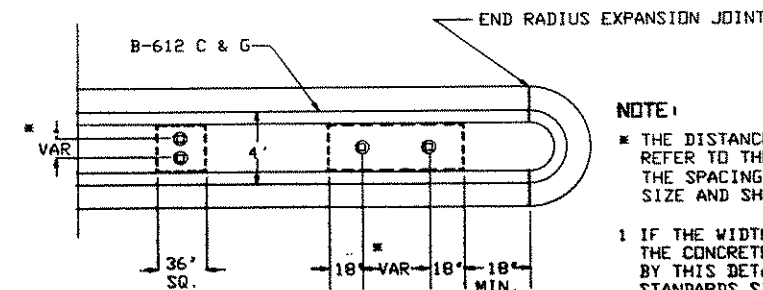
NOTE: CONSTRUCT ALL SIDE STREET APPROACHES AND ENTRANCES WITH 6:1 SLOPES.

1 1/2" x 1 1/2" x 8' GALVANIZED SQUARE TUBING 7/16" DIA. HOLES ON 1" CENTERS, ON ALL 4 SIDES. WALL THICKNESS GAUGE #12 (.105 IN.)

SECTION A-A



ISLAND MOUNT BREAK-AWAY INSTALLATIONS REQUIRING MORE THAN ONE POST



NOTE:

THE DISTANCE BETWEEN SIGN POST VARIES REFER TO THE STANDARD SIGNS MANUAL FOR THE SPACING CHART THAT RELATES TO THE SIZE AND SHAPE OF THE INSTALLATION.

1 IF THE WIDTH OF THE ISLAND IS LESS THAN THE CONCRETE FOOTING MEASUREMENT REQUIRED BY THIS DETAIL AND SPACING CHART IN THE STANDARDS SIGNS MANUAL, THE LENGTH OF THE CONCRETE WILL EQUAL THE WIDTH OF THE IS.

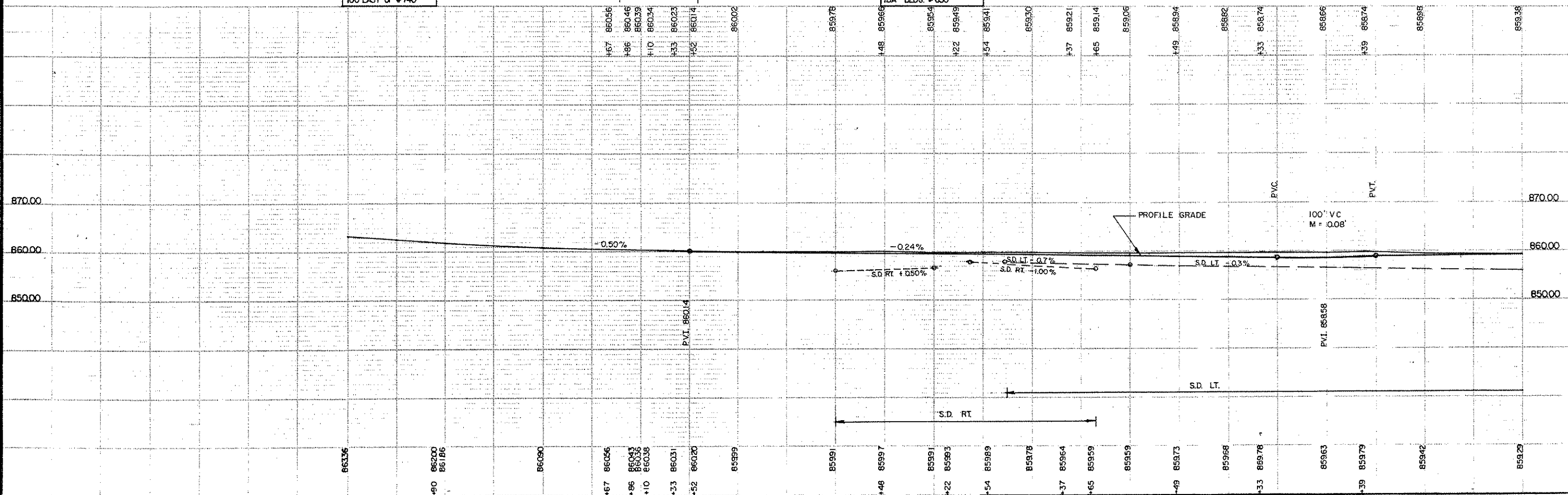
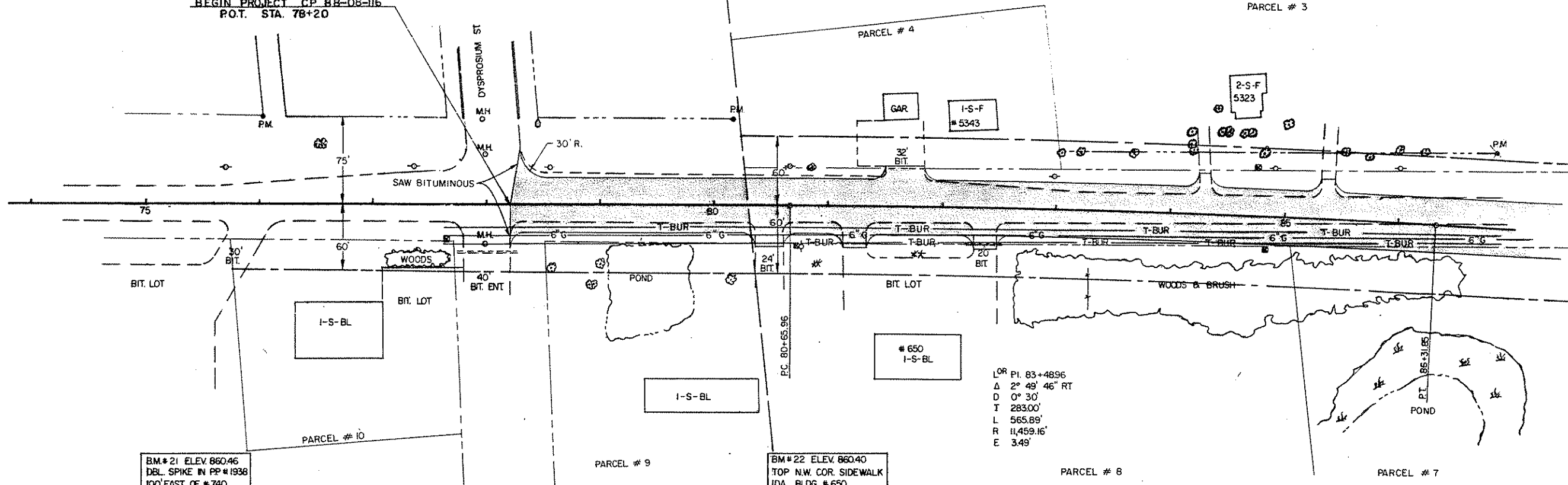
2 THE DIMENSIONS OF THE CONCRETE FOOTINGS FOR ANY ISLAND MOUNT SIGN INSTALLATION REQUIRING MORE THAN ONE POST WILL BE 36' WIDTH x * LENGTH x 5' HEIGHT.

3 DASHED LINE REPRESENTS THE APPROXIMATE LIMITS OF CONCRETE FOOTINGS TO BE POURED FOR ISLAND MOUNT BREAK-AWAY SIGN POST INSTALLATIONS REQUIRING MORE THAN ONE POST WITHIN SPECIAL MEDIAN AREAS. (ALT. 1-1, ALT. 1-2, ALT. 1-3)

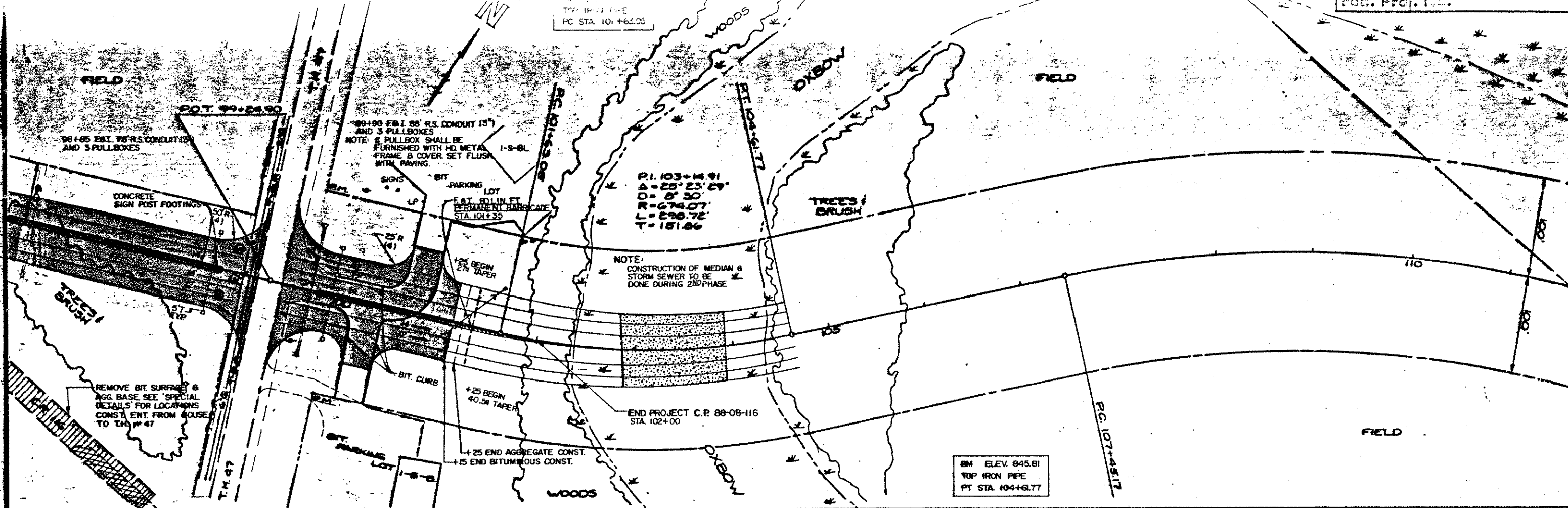
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DATE	BY	DATE	BY

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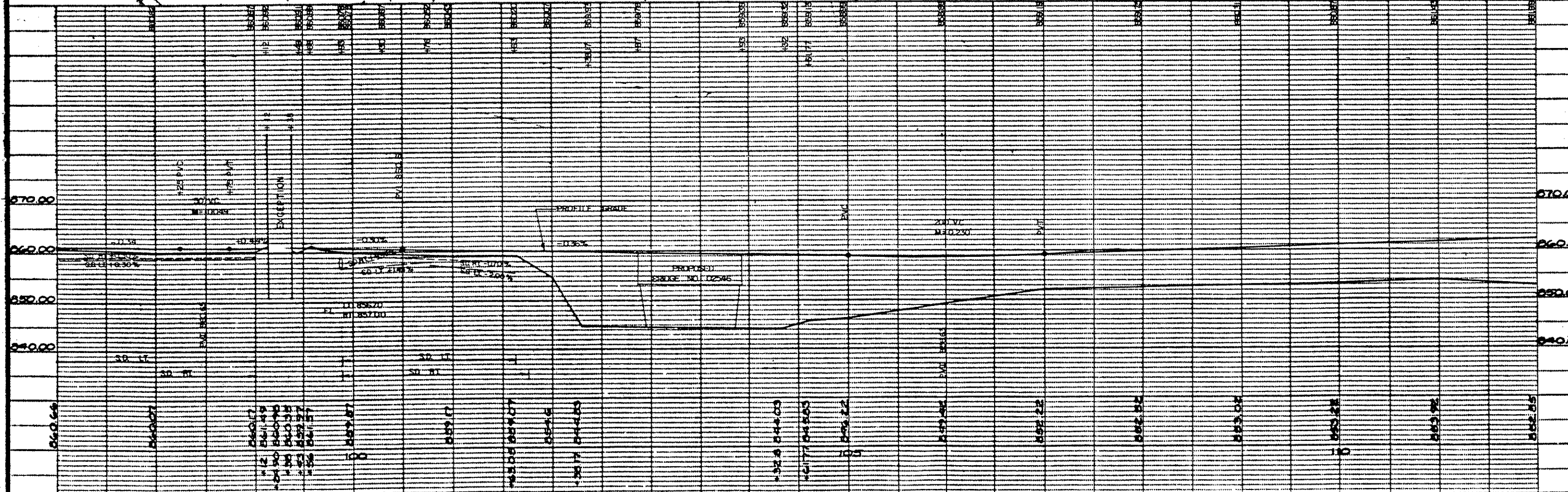
BEGIN PROJECT CP 88-08-116
P.O.T. STA. 78+20



TOP IRON PIPE
PC STA. 101+64.05



BM ELEV. 845.81
TOP IRON PIPE
PT STA. 104+61.77



860.2 78+52 859.1

860.31 78+33 859.19

860.38 78+10 866

860.3601 78+00 865.44

860.43 77+86 864.88

860.56 77+67 864.32

Handwritten: 860 x 32
870

Handwritten: 860 x 32
870

.37 6

0 0

0 0

0 0

0 0

0 -14708

859.89 81+54 858.37

859.93 81+22 858.45

859.91 81+00 858.5

859.97 80+48 858.62

859.91 80+00 858.74

859.9901 79+00 858.98

0 0

1%

0.50%

S.D. 856.50

0.50%

S.D. 856.00

Handwritten: +72/34
+92/51
668
51

-354 -122

.222 .84

.95 .32

STA. 77+67 - 81+54

859.5709 84+00 857.78

SD 856.80
0.30%

167 27

858.5967 83+49 857.9

SD 856.95
0.30%

859.59 83+00 858.02

35

S.D. 857.10

859.59 82+65 858.1

39 27

SD 857.35

859.64 82+37 858.17

120 244

0.70%

SD 856.35
1%

-1002 -207

859.78 82+00 858.26

SD 857.00
1%

1002 207

SD 857.80
0.70%

858.38 87+30 858.46

-2740 -716

859.29 87+00 858.34

SD 855.90
0.30%

859.42 86+00 857.94

355 26

SD 856.20
0.30%

859.7642 85+39 857.7

229 63

0.30%

859.605 85+00 857.62

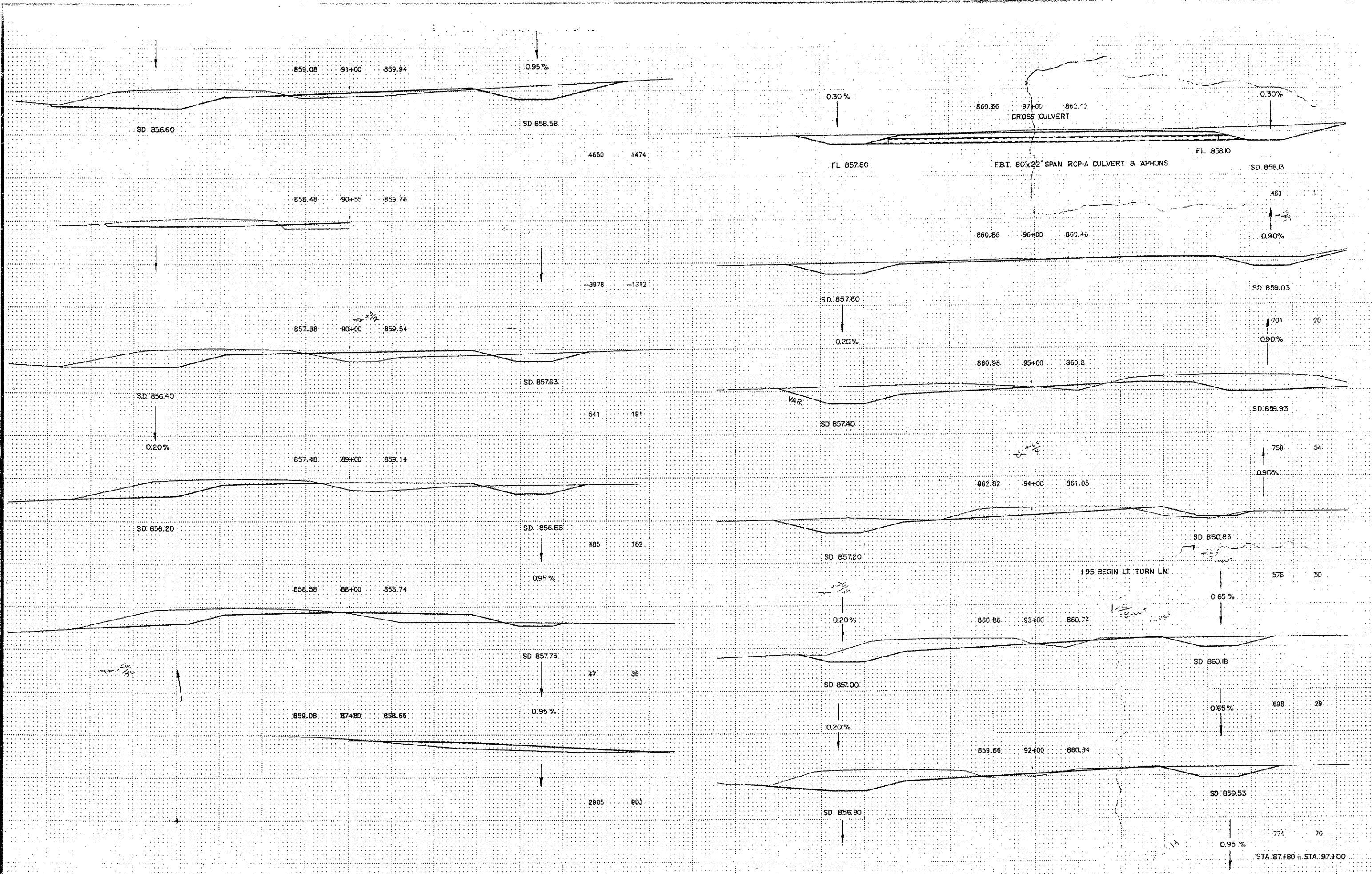
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SD 856.50

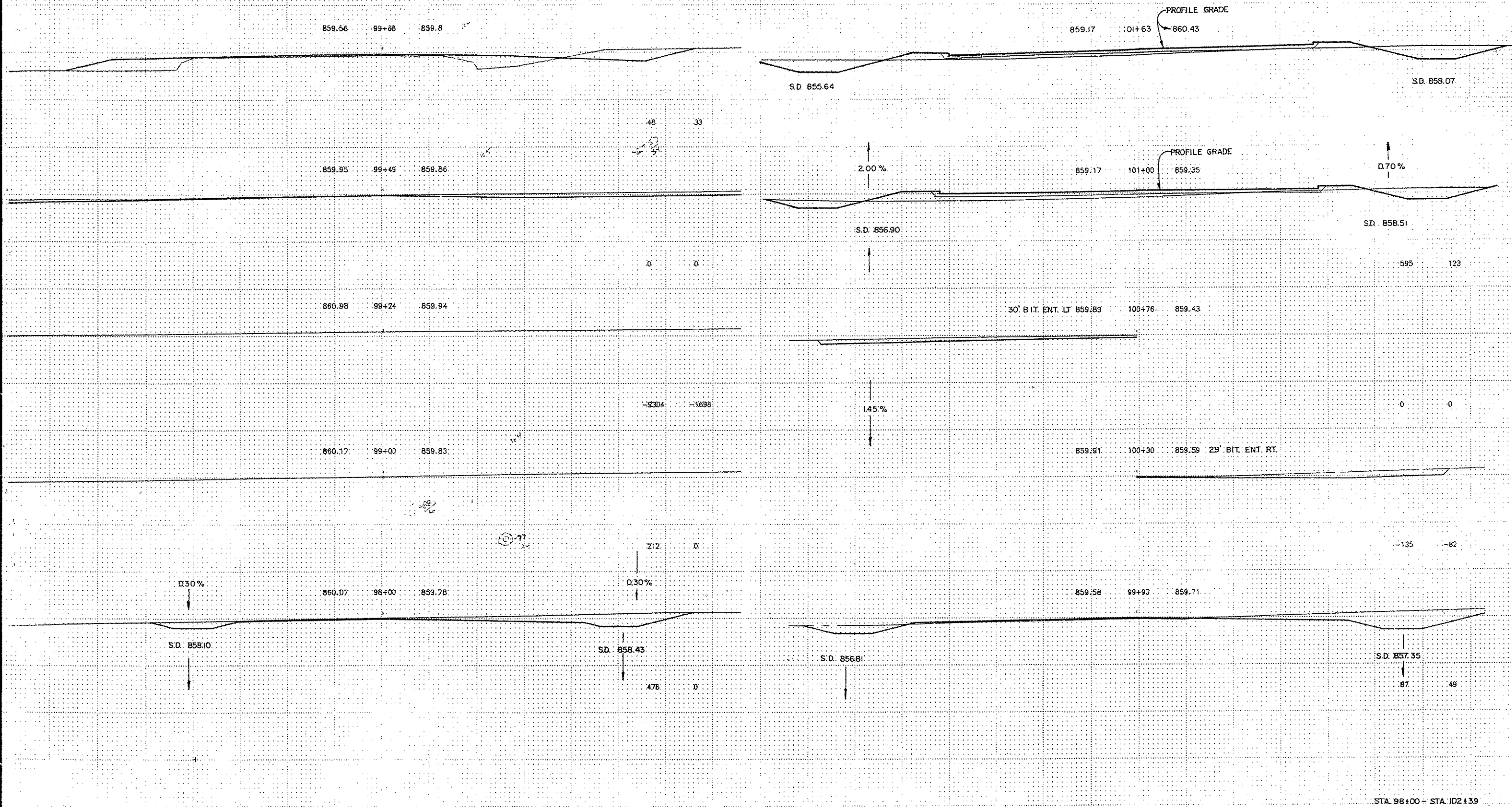
859.78 84+33 857.7

269 28

STA. 82+00—STA. 87+30



STA. 87+80 - STA. 97+00



STA. 98+00 - STA. 102+39