

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS

LOCATED ON CTY. RD. # 83 FROM U.S. # 10 TO A POINT 40' BEYOND E OF 161ST AVE. N.

CTY. PROJ. NO. 87-04-83

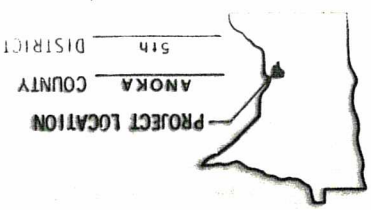
GROSS LENGTH	10419 FEET	1.97 MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	10419 FEET	1.97 MILES
NET LENGTH	10419 FEET	1.97 MILES
MILE POINT	N/A	TO MILE POINT

STATE PROJ. NO. MINN. PROJ. NO.

GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	FEET	MILES
MILE POINT	TO MILE POINT	

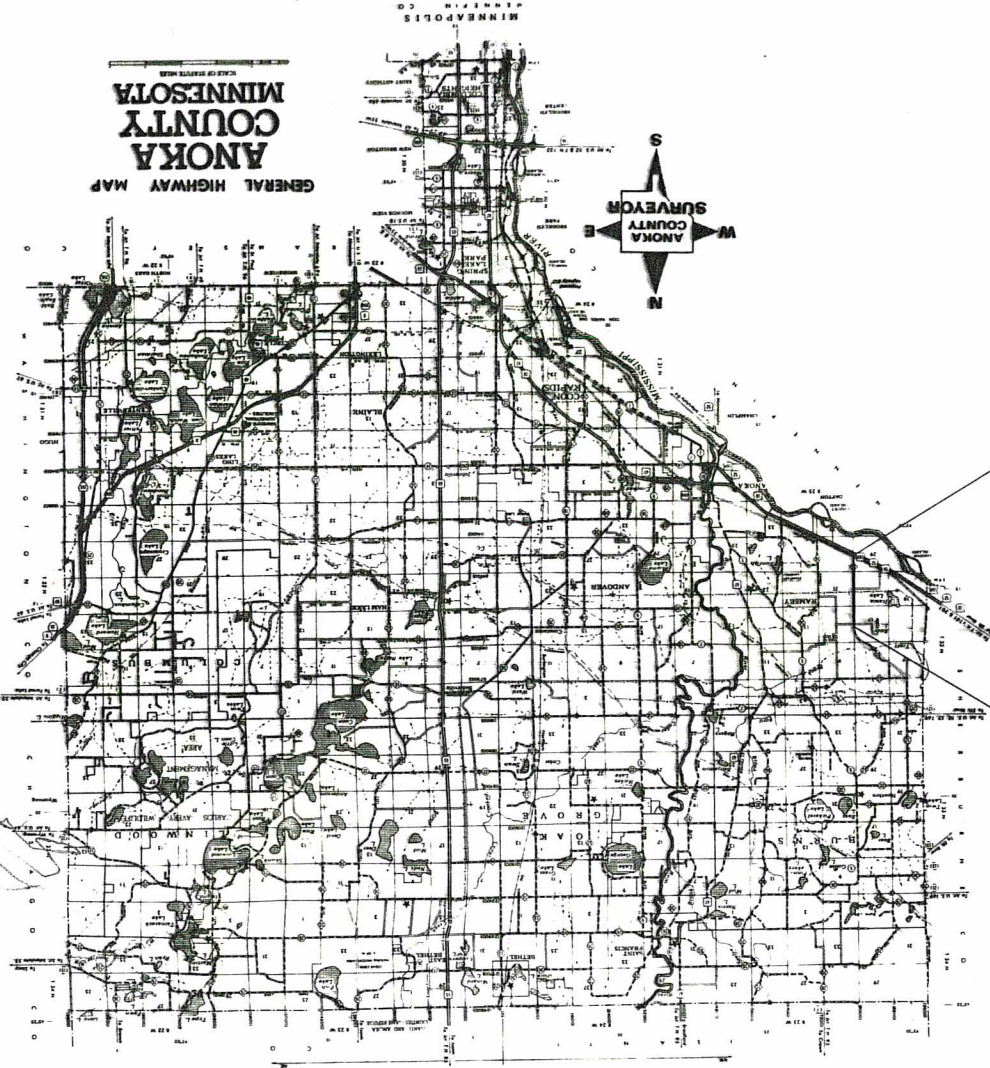
ADT (Current Year) 4372
 ADT (Future Year) 6995
 DMV (Design Hr. Vol.)
 D (Directional Distr.)
 I (Heavy Commercial)
 Soil Factor

DESIGN DATA Design 9 Ton
 Design Speed 55 MPH
 Based on STOPPING 6.995
 Sight Distance
 Height of eye 3.5'
 Height of object 0.50'
 Design Speed not achieved at:
 STA. TO STA. MPH
 STA. TO STA. MPH
 A-3 50%
 STA. TO STA. MPH



DATE	
APPROVED BY	
SHEET NO.	
PLAN REVISIONS	

SCALE
 2.00 MI.
 100'
 10'
 10'
 INDEX MAP
 PLAN & PROFILE
 VERT.
 CROSS SECTIONS



FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO. AREA JOB

STATE AID PROJ. NO. COUNTY PROJ. NO. SHEET NO. 1 OF 35 SHEETS

DATE REG. NO.
 I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

APPROVED
 FEDERAL HIGHWAY ADMINISTRATION
 DEPARTMENT OF TRANSPORTATION

- Approved 19 ASSISTANT DIVISION DIRECTOR TECHNICAL SERVICES DIVISION
- Recommended for Approval 19 DESIGN SERVICES DIRECTOR
- Recommended for Approval 19 TRANSPORTATION PLANS ENGINEER
- Recommended for Approval 19 DISTRICT ENGINEER
- Recommended for Approval 19
- Recommended for Approval 19
- Right of Way Approval 19 DIRECTOR, RIGHT OF WAY OPERATIONS

DESIGN SQUAD
 DATE Apr 13, 1988 REG. NO. 549 ENGR. James K. [Signature]
 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.

cleared grub
 42' left
 52' right

SHEET NO. 1	TITLE SHEET & INDEX MAP
2	ESTIMATED QUANTITIES & MISC. CHARTS
3	DRAINAGE & MISC. CHARTS
4	TYPICAL SECTIONS & CONST. DETAILS
5	EROSION CONTROL
6-14	PLAN & PROFILE
15	DITCH CONSTRUCTION STA. 65+77 RT.
16-35	CROSS SECTIONS

INDEX

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS, DATED MAY 19, 1987, SHALL GOVERN

FED. PROJ. NO.

DRAINAGE CHART

STATION	LOC.	INPLACE	REMARKS	SODDING	CULVEND	REMOVE	SALVAGE	INSTALL	CULVERT	FURNISH AND INSTALL CULVERTS													
										15" CMP	18" CMP	18" RCP	24" RCP	22" RCP-A	LNFT	AP	LNFT	AP	LNFT	AP	LNFT	AP	
2+15	C/L																						
3+13	LT.		COMMERCIAL ENT.																				
5+27	LT.		COMMERCIAL ENT.																				
6+88	LT.		COMMERCIAL ENT.																				
8+23	LT.		15"x66' CMP																				
13+01	RT.		FIELD ENT.																				
13+23	LT.		15"x66' CMP																				
13+25	LT.		147 AVE.																				
22+65	LT.		15"x48' CMP																				
23+86	C/L		24"x32' RCP																				
25+93	RT.		FIELD ENT.																				
26+50	RT.		12"x30' CMP																				
29+04	RT.		15"x44' CMP																				
37+57	RT.		150 LANE																				
38+00	LT.		FIELD ENT.																				
41+38	LT.		NO CULVERT REQ'D																				
47+72	LT.		152 LANE NO CULVERT REQ'D																				
47+74	RT.		152 LANE NO CULVERT REQ'D																				
50+44	C/L		18"x50' CMP																				
52+34	LT.		12"x24" CMP																				
53+32	LT.		15"x102' CMP																				
55+58	RT.																						
55+58	RT.																						
61+78	LT.																						
62+25	RT.																						
64+74	LT.		154 LANE																				
67+96	RT.																						
67+96	RT.		C/L																				
73+05	RT.		156 AVE.																				
73+88	LT.		FIELD ENT.																				
75+61	LT.																						
77+40	LT.																						
79+60	RT.		157 AVE.																				
80+31	LT.																						
88+27	RT.		158 AVE.																				
90+73	LT.		18"x60' CMP																				
92+96	LT.		FIELD ENT.																				
97+38	RT.		159 A. NO CULV. REQ'D																				
99+33	LT.		NO CULV. REQ'D																				
106+37	LT.		161 AVE.																				
106+37	RT.																						

STATION	LOCATION	SALVAGE	INSTALL	REMARKS
6+27 TO 22+50	40' RT.	1623'	1623'	
35+25 TO 36+60	33' RT.	135'	135'	
38+34 TO 39+85	37' RT.	197'	197'	
51+89 TO 52+95	35' LT.	106'	106'	PICKET FENCE
53+21	33' RT.	27'	-	LINE FENCE
54+52 TO 61+26	34' RT.	474'	474'	
64+83 TO 66+46	36' RT.	163'	163'	
66+42 TO 74+35	36' LT.	817'	793'	INCLUDES GATE
73+81	35' LT.	25'	-	LINE FENCE
78+30 TO 84+29	34' LT.	599'	20'	INCLUDES GATE
94+42 TO 94+62	20' RT.	20'	20'	SPLIT RAIL WOOD
TOTAL		4264'	4064'	

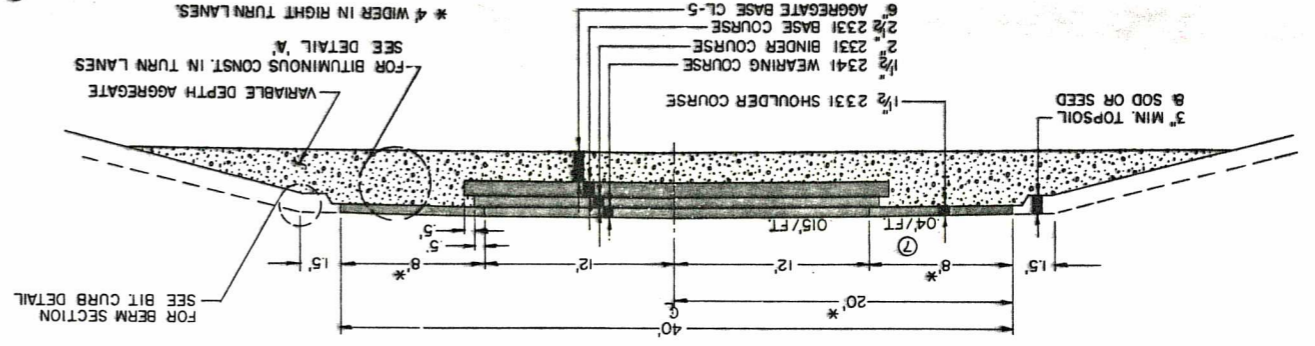
STATION	LOCATION	REMARKS	LN.	FT.
2+64	C/L X-ING	BEG./CONST.	24	
5+27	LT.	ENT.	24	
5+88	LT.	ENT.	24	
8+25	LT.	146 AVE.	40	
13+25	LT.	147 AVE.	40	
29+04	RT.	149 AVE.	24	
37+57	RT.	150 AVE.	24	
41+83	LT.	ENT.	14	
47+72	RT.	152 AVE.	24	
47+74	RT.	152 LANE	20	
53+32	LT.	153 LANE	32	
64+74	LT.	154 LANE	25	
73+05	RT.	156 AVE.	25	
97+38	RT.	159 LANE	30	
106+37	LT.	161 AVE.	30	
106+37	RT.	161 AVE.	20	
TOTAL		454 LIN. FT.		

QUANTITIES & CHARTS

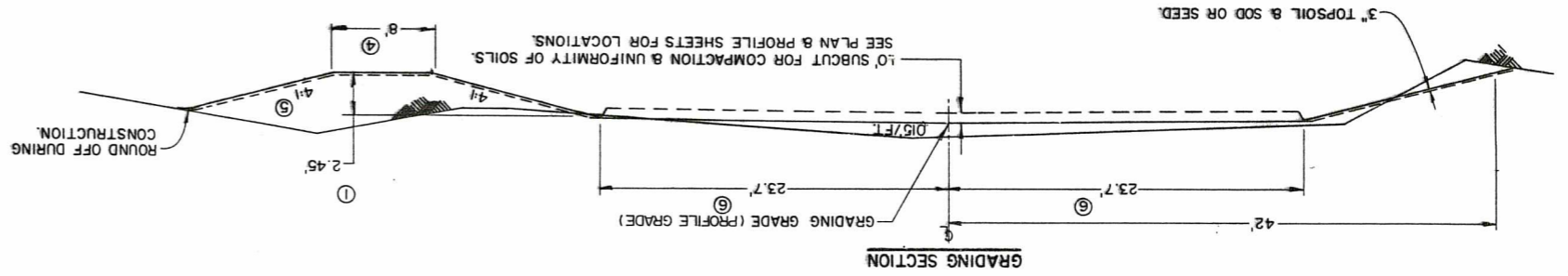
TYPICAL SECTIONS

REVISIONS	DATE	BY	DATE	BY

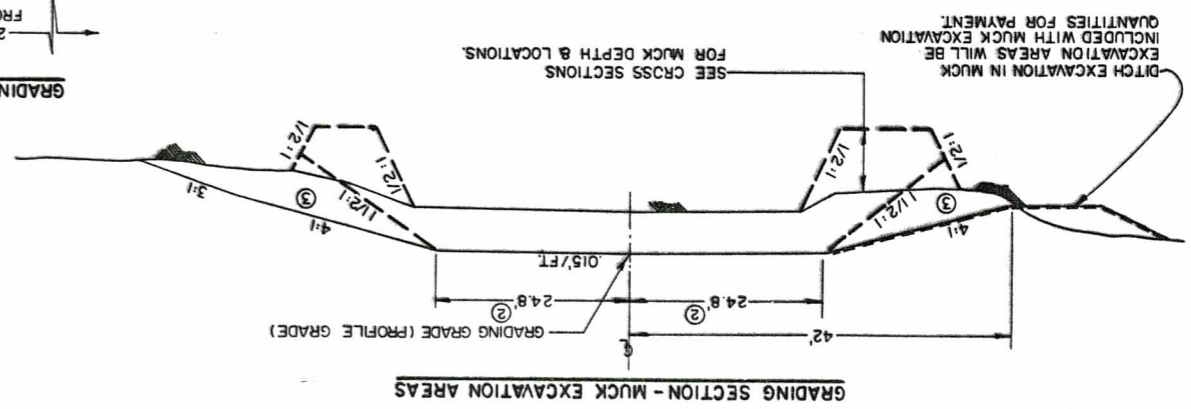
- ① FOR SPECIAL DITCHES SEE PLAN & CROSS SECTIONS.
- ② 4.8' WIDER IN TURN LANE AREAS.
- ③ FILL WITH SWAMP EXCAVATION MATERIAL.
- ④ FOR MODIFIED DITCH WIDTHS SEE CROSS SECTIONS.
- ⑤ SEE CROSS SECTIONS FOR MODIFIED DITCH SLOPES.
- ⑥ 28.3' FOR RIGHT TURN LANES.
- ⑦ .02'/FT. IN RIGHT TURN LANES.



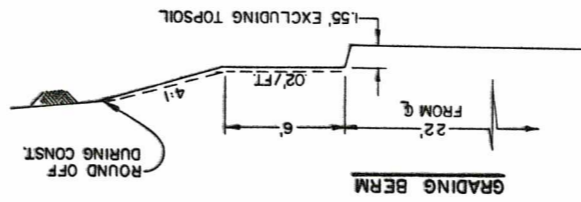
TYPICAL BASE & SURFACING SECTION



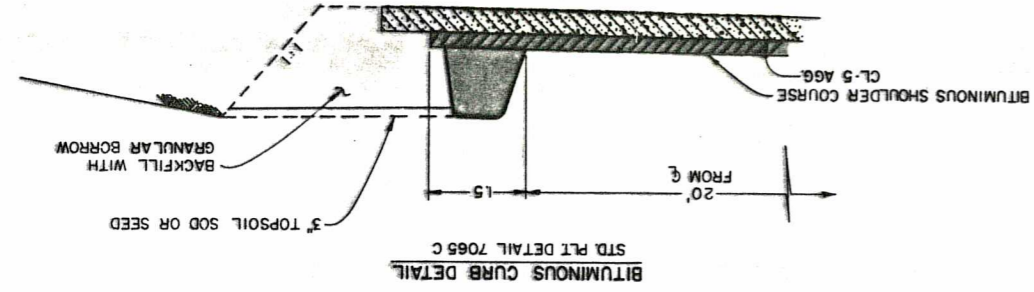
GRADING SECTION



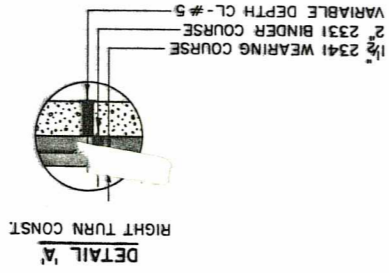
GRADING SECTION - MUCK EXCAVATION AREAS



GRADING BERM



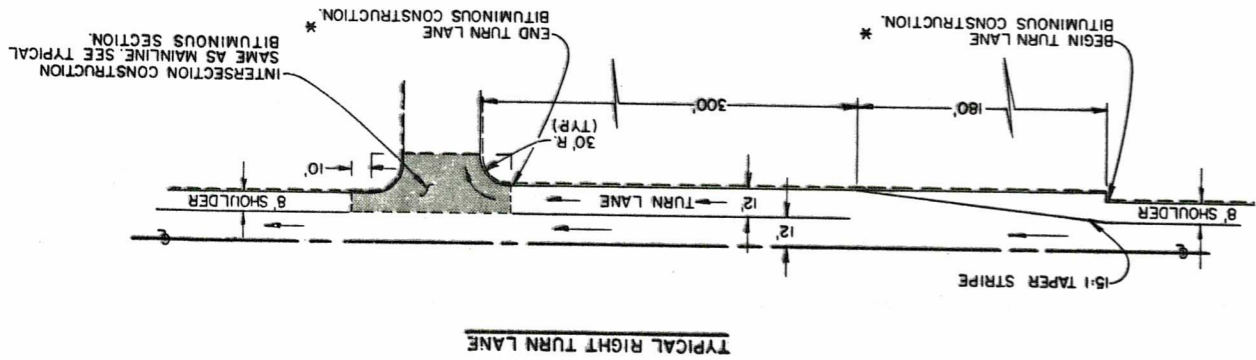
BITUMINOUS CURB DETAIL



DETAIL 'A'

- STA. 2+63 - STA. 18+25 LT. RIGHT TURN LOCATIONS
- STA. 2+63 - STA. 18+25 RT.
- STA. 24+12 - STA. 28+90 RT.
- STA. 32+65 - STA. 37+44 RT.
- STA. 42+84 - STA. 47+58 RT.
- STA. 47+85 - STA. 58+28 RT.
- STA. 64+88 - STA. 69+67 LT.
- STA. 64+88 - STA. 69+67 RT.
- STA. 83+31 - STA. 88+10 RT.
- STA. 83+31 - STA. 88+10 LT.
- STA. 90+87 - STA. 95+65 LT.
- STA. 90+87 - STA. 95+65 RT.
- STA. 92+42 - STA. 97+23 RT.
- STA. 101+42 - STA. 106+22 RT.

* SEE DETAIL 'A' FOR BASE AND BITUMINOUS CONSTRUCTION.



TYPICAL RIGHT TURN LANE

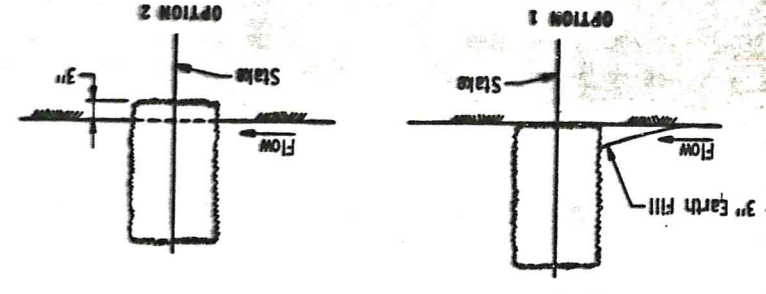
EROSION CONTROL

REVISIONS
DATE BY

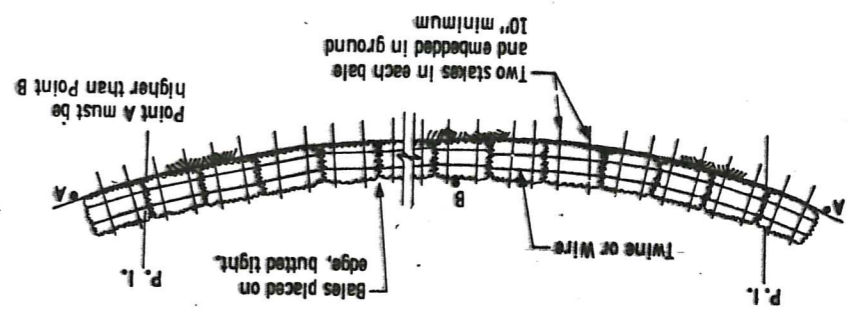
S.P.
C.P. 37-44-83

STATION	LOCATION	QUANTITY
22+00	LT. GAT	10
25+00	RT.	5
27+25	LT.	5
50+25	LT.	5
50+75	LT.	5
54+00	LT.	5
7+50	OFF TAKE DITCH	5

DITCH CHECK SECTIONS



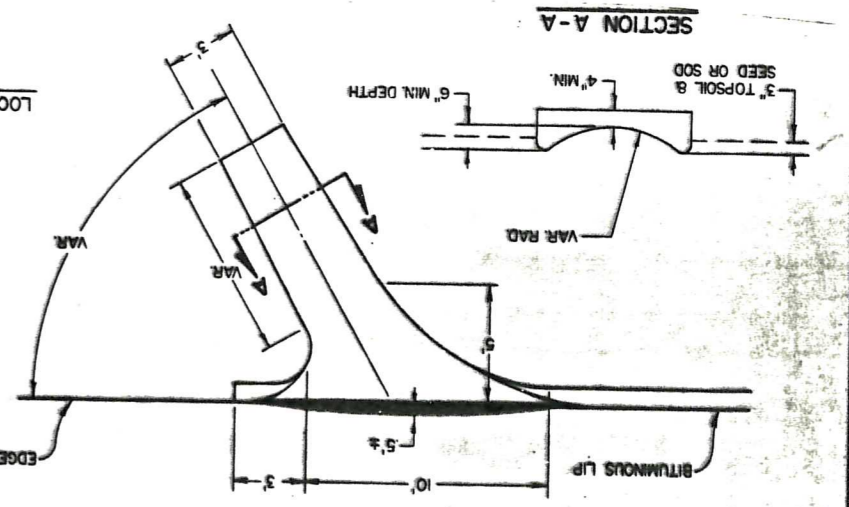
BALE HAY OR STRAW DITCH CHECK



STATION	LOCATION	SQ. YD.
8+00	LT.	7
8+50	LT.	7
13+00	LT.	7
13+50	LT.	7
39+00	LT.	7
52+20	LT.	7
TOTAL		42

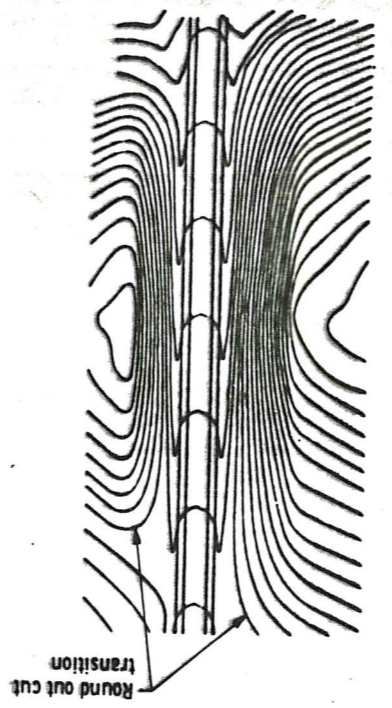
BIT. DRAINAGE FLUMES

* LOCATIONS ARE APPROX. EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD DURING CONST. APPROVAL OF THE ENGINEER. FUME DESIGN MAY BE MODIFIED TO MATCH EXISTING CONDITIONS UPON

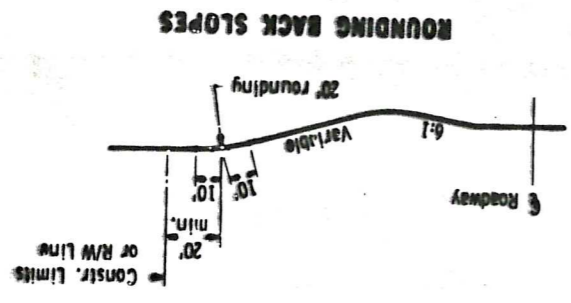
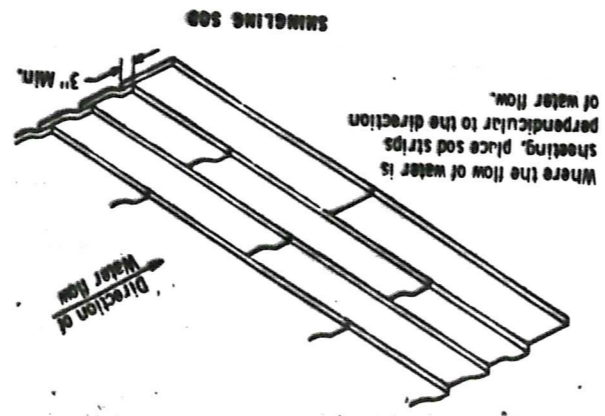
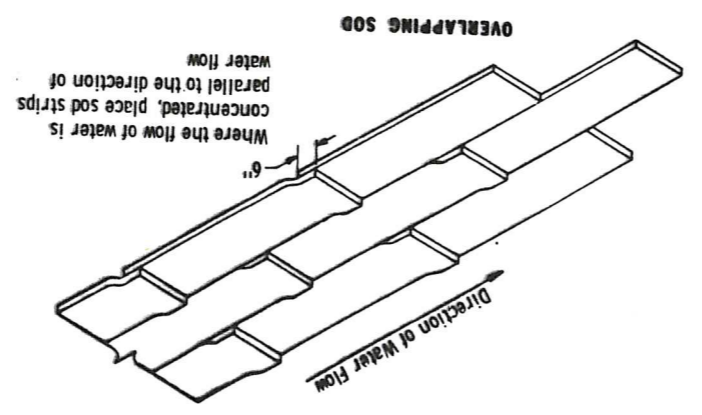


TYPICAL BITUMINOUS FLUME

CONTOURING ROAD CUTS

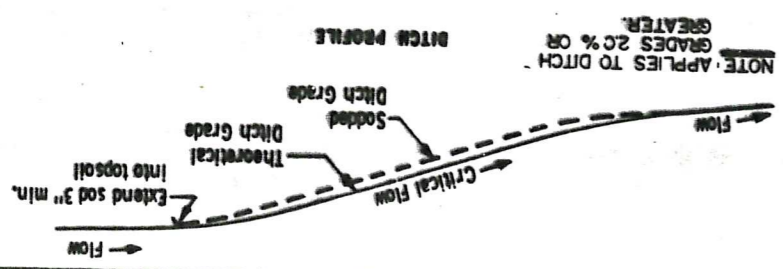


SPECIAL SOD PLACEMENT TECHNIQUES

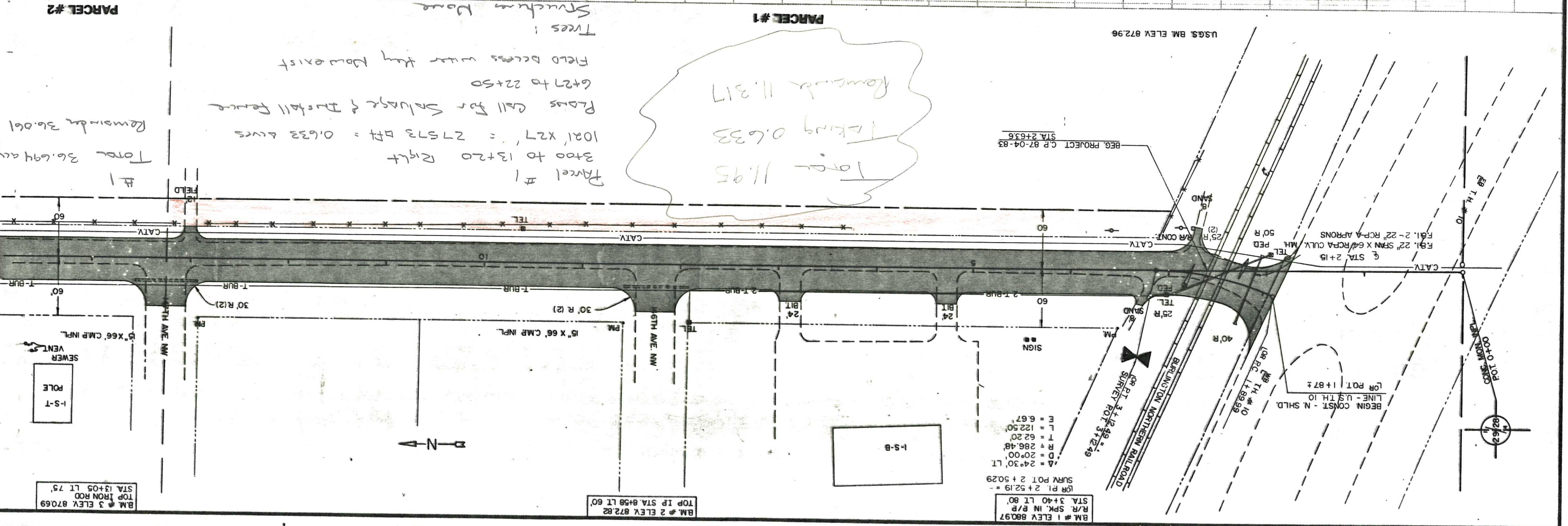
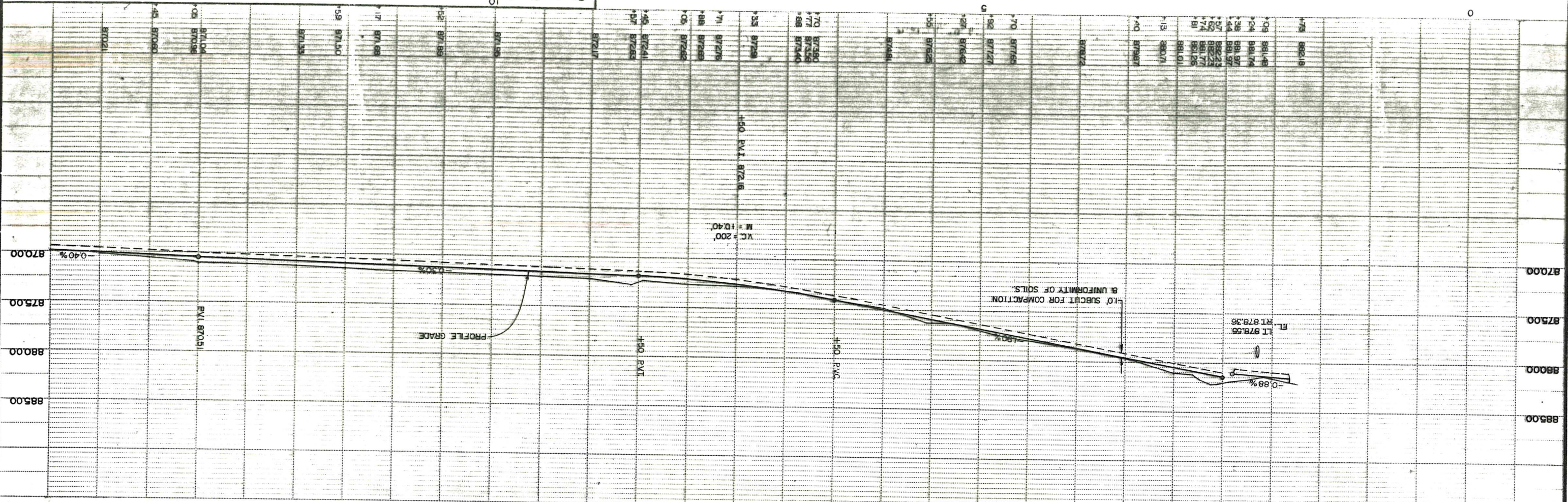


STATION	LOCATION	SQ. YD.
4+90 TO 7+15	LT.	650
37+69 TO 39+50	RT.	504
41+00 TO 42+50	LT.	417
46+00 TO 47+60	LT.	379
51+75 TO 53+00	LT.	313
55+00 TO 56+50	RT.	506
64+07 TO 66+40	LT.	472
67+00 TO 68+50	RT.	504
75+00 TO 76+50	LT.	393
95+50 TO 97+25	RT.	417
98+00 TO 100+00	LT.	343
2-00 TO 5+50	OFF TAKE DITCH	622
TOTAL		6154

SODDED DITCH DETAILS



Fed Project No.



BM # 3 ELEV. 87069
TOP IRON ROD
STA 13+05 LT 75

BM # 2 ELEV. 87282
TOP IP STA 8+58 LT 60

BM # 1 ELEV. 88097
R/R SPK. IN R/R
STA 3+40 LT 80

LR P.I. 2+52.19 =
SURV. P.O.T. 2+50.29

Δ = 24°30' LT
D = 20°00'
R = 286.48'
T = 62.20'
L = 122.50'
E = 6.67'

LR P.O.T. 1+87 ±
LINE - U.S. TH. 10
BEGIN CONST. - N. SHLD.

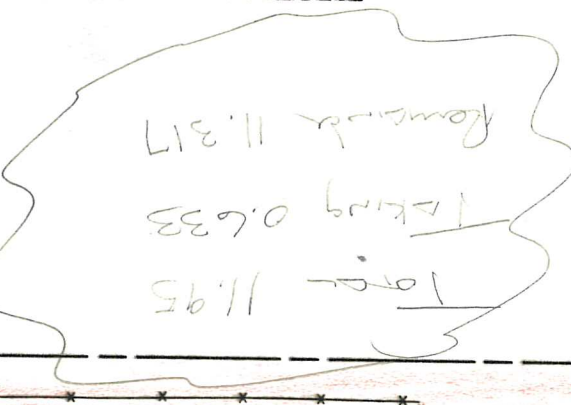
LR P.C. 1+89.99

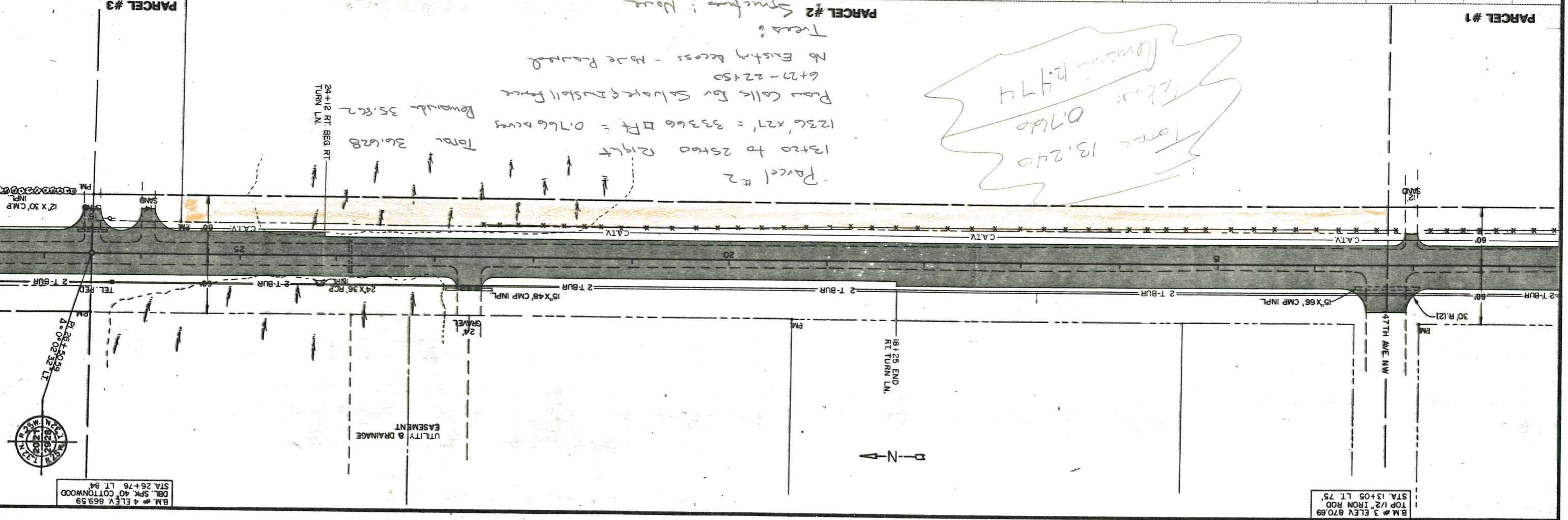
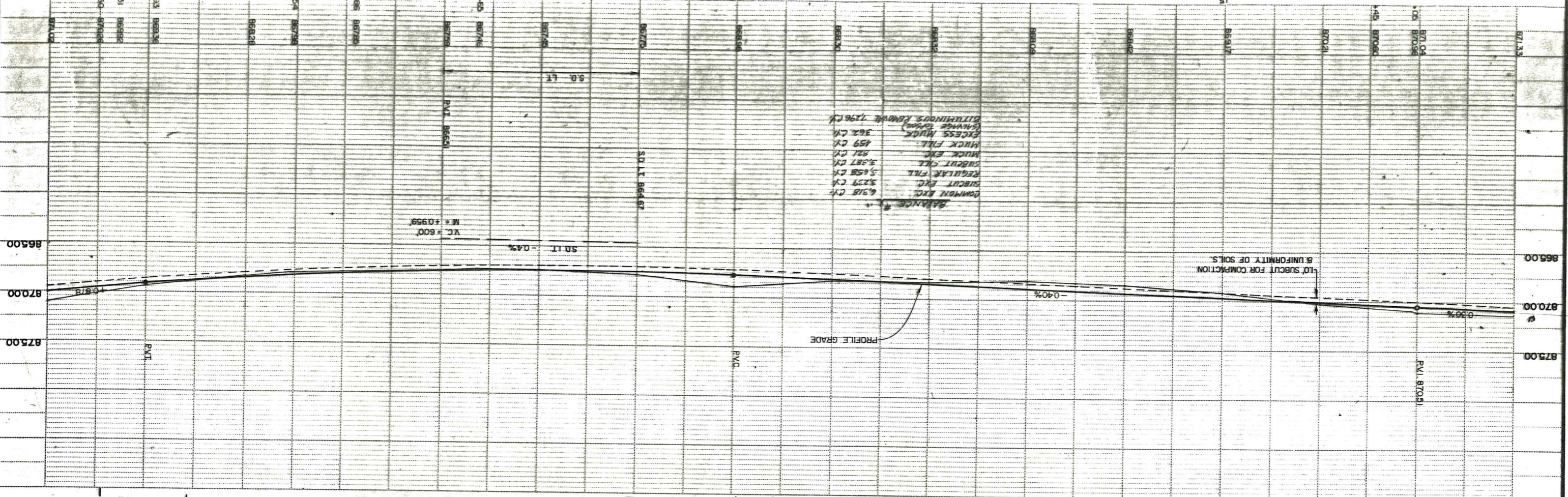
LR P.T. 3+29.99 =
SURV. P.O.T. 3+27.99

BEG. PROJECT C.P. 87-04-83
STA 2+63.6

USGS. BM. ELEV. 87296

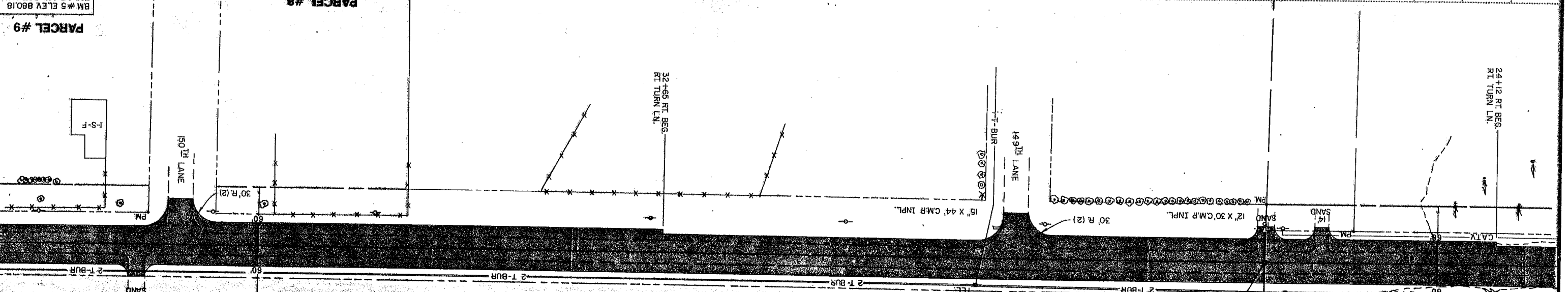
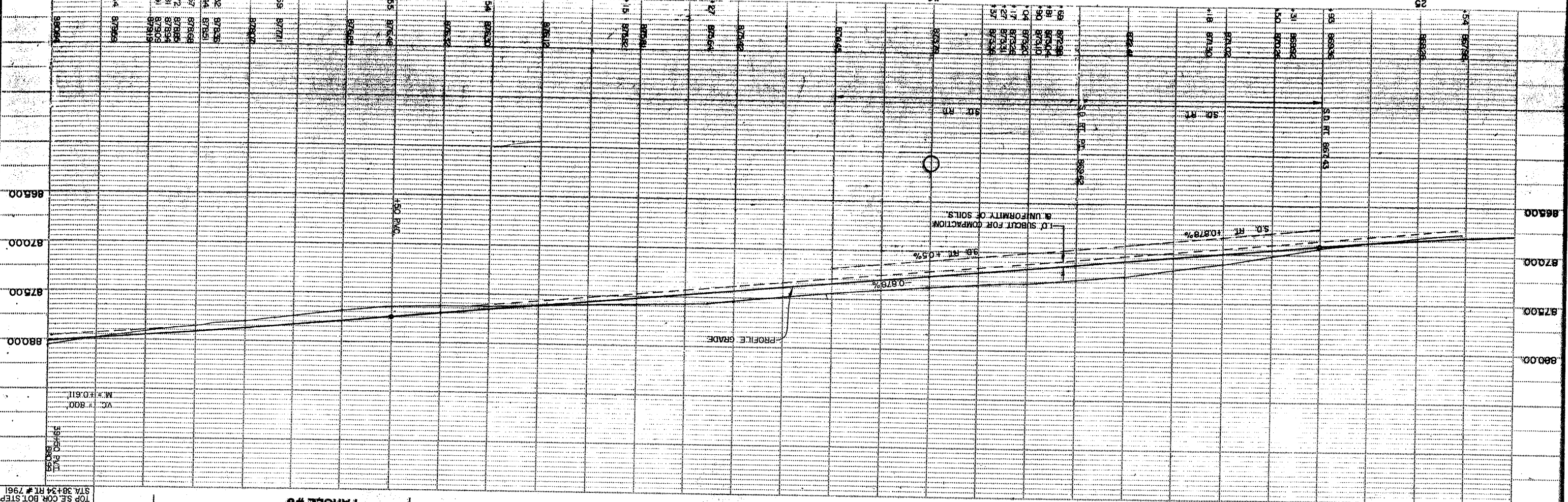
Parcel #1
300 to 13+20 Right
102' x 27' = 27573 SF = 0.633 acres
Rais call for Salvage & Install Fence
6+27 to 22+50
Field access with key how exist
Trees:
Structure Home





B.M. # 4 ELEV. 869.59
 DEL. SPK. 40' COTTONWOOD
 STA. 26+76 LT. 94

B.M. # 3 ELEV. 870.69
 TOP 1/2" IRON ROD
 STA. 13+05 LT. 75



PARCEL #4

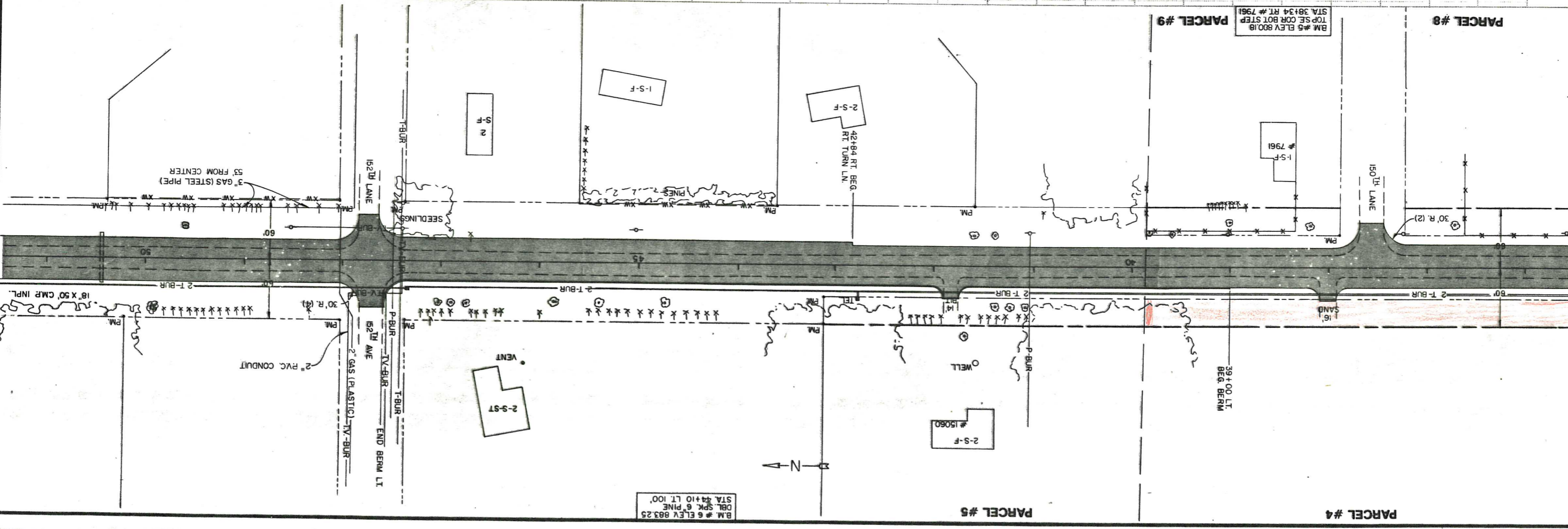
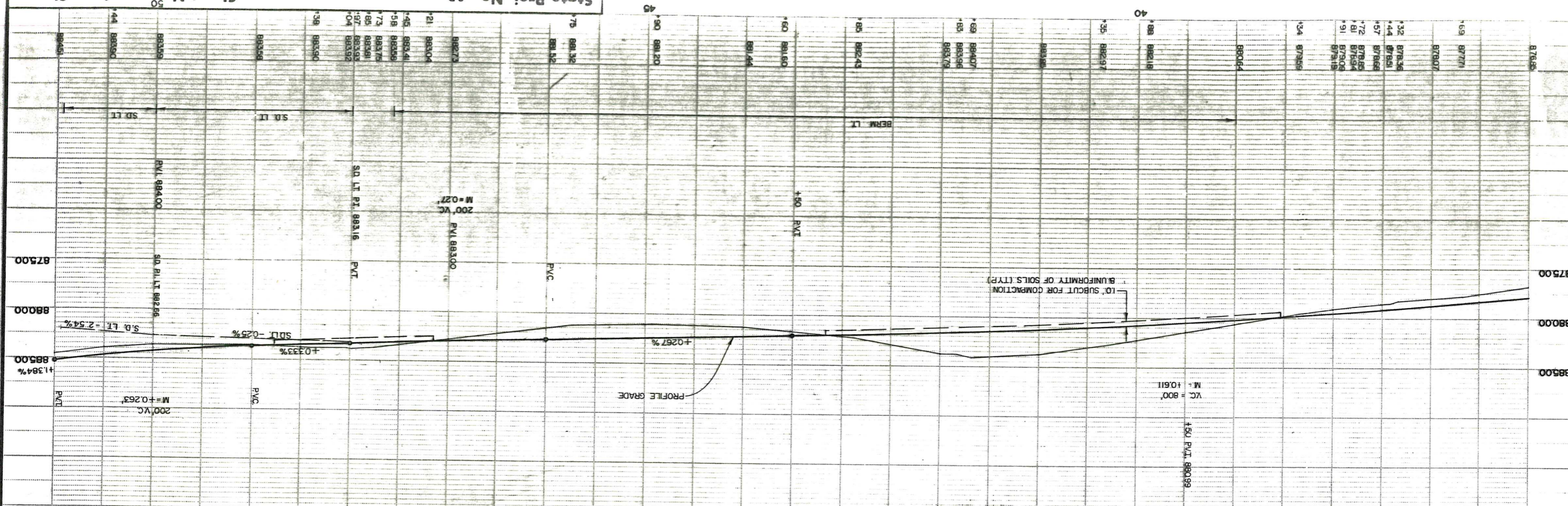
Parcel by 26+50 - 39+90 Left
 1335' x 27' = 36,008 sq' = 0.828 Acres
 No fences
 Field access when they now exist
 Trees:
 Structures: None
 Remarks: 38.666
 Total 39.494

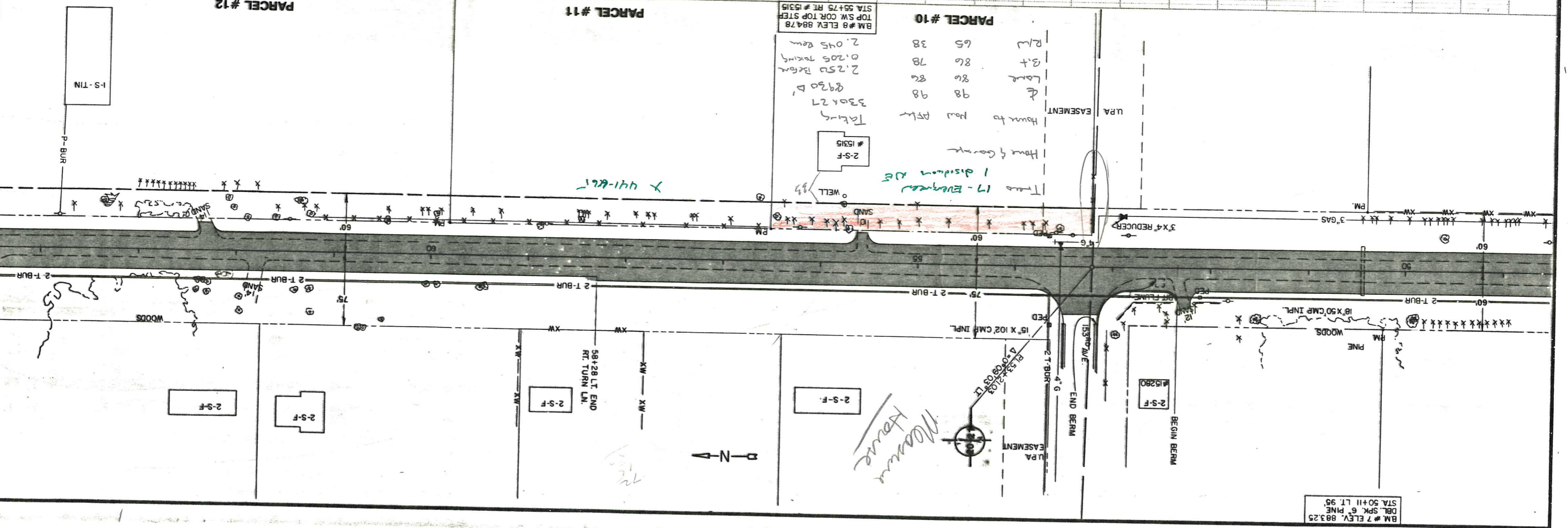
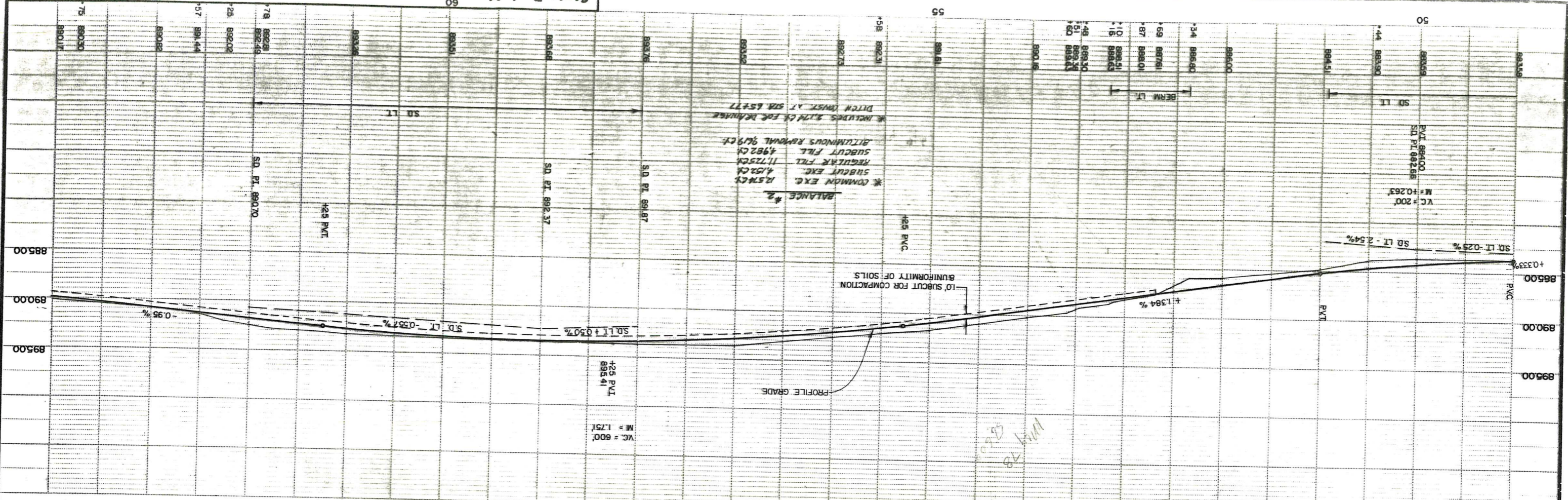
PARCEL #8

PARCEL #9

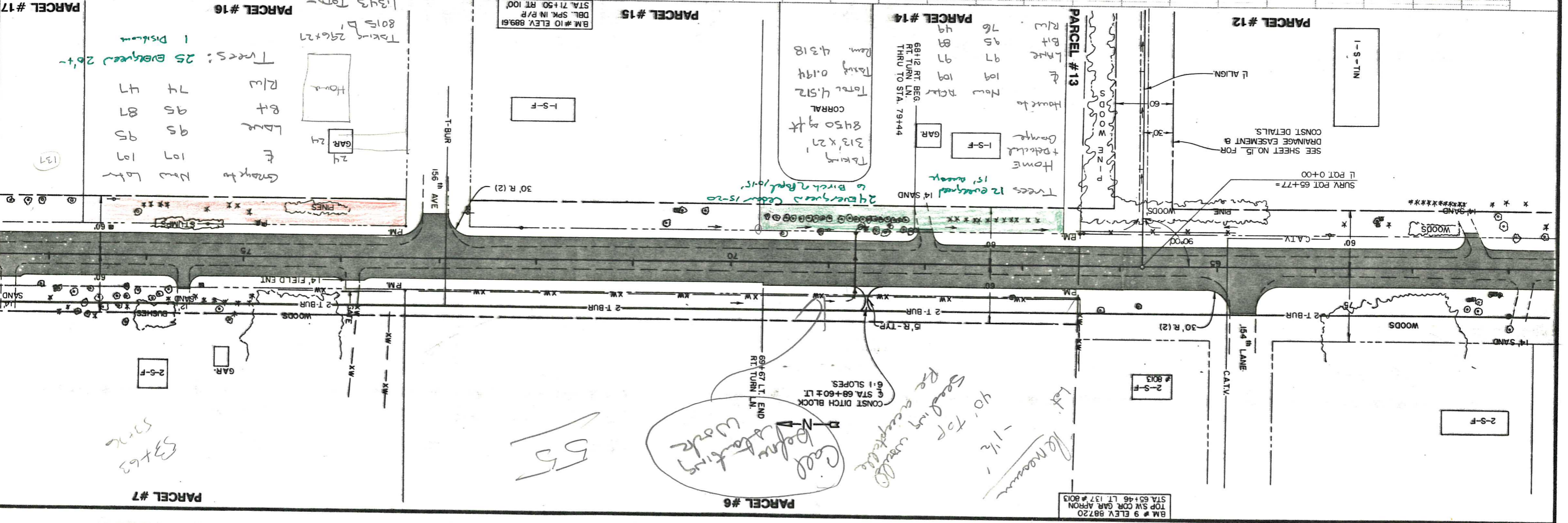
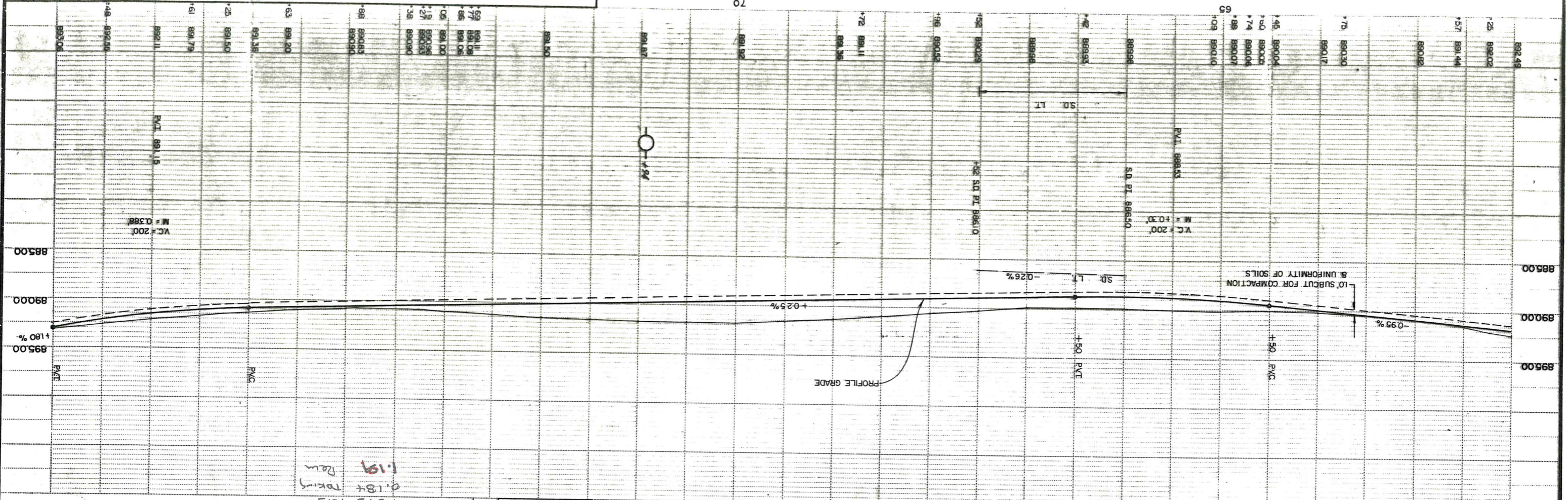
BM # 4 ELEV 869.59
 DBL. SPK. DBL. 40' COTTONWOOD
 STA. 26+76 LT. 84
 P.I. 26+40.59
 Δ = 0° 02' 32" L

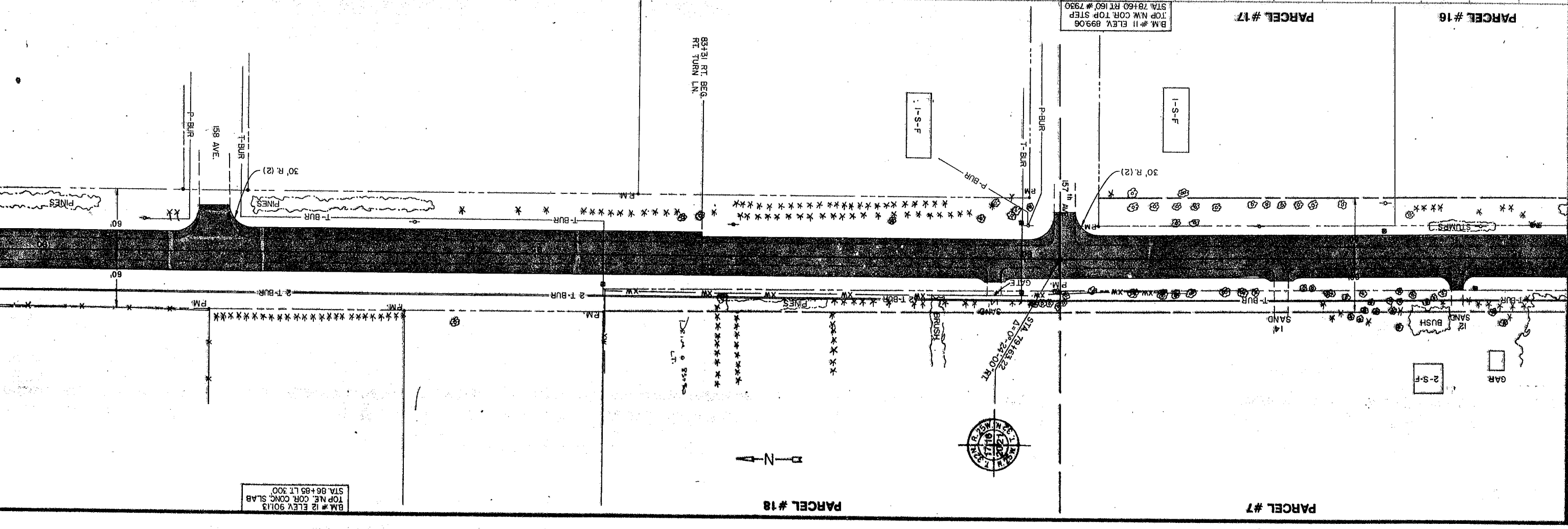
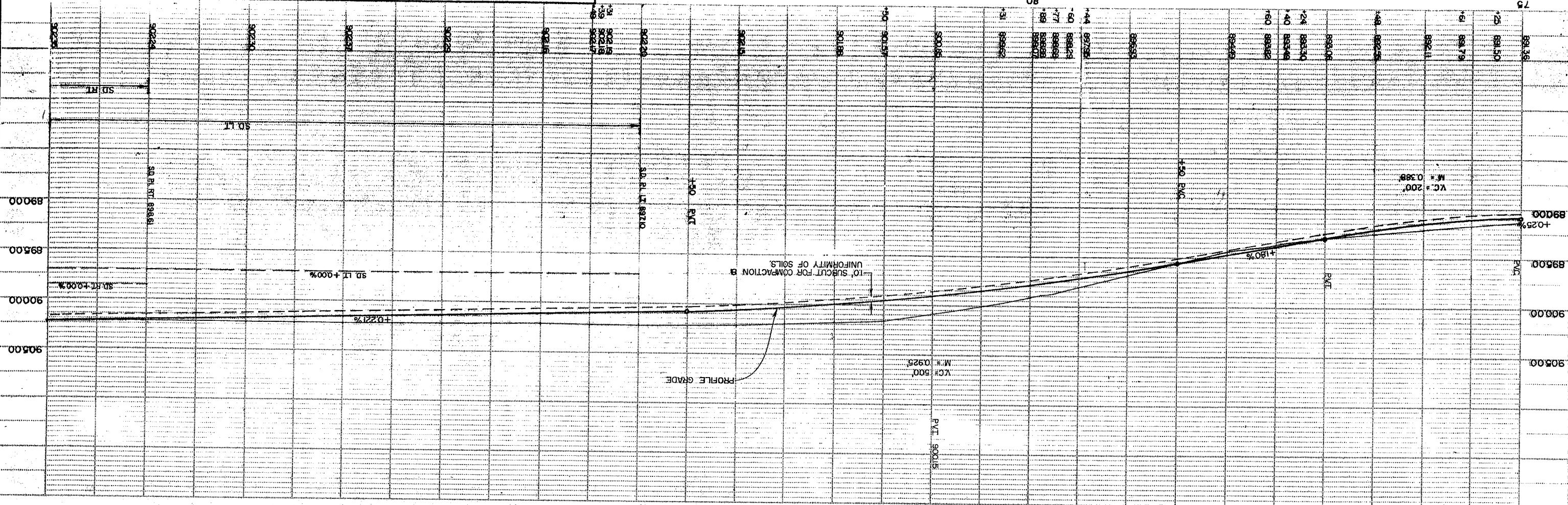
BM # 9 ELEV 880.18
 TOP SE COR. POT. STEP
 STA. 38+34 RT. # 7961





B.M. # 7 ELEV. 883.25
DBL SPK 6" PINE
STA. 50+111 LT. 95





BM # 12 ELEV 90113
TOP NE COR CONC SLAB
STA. 86+85 LT 300

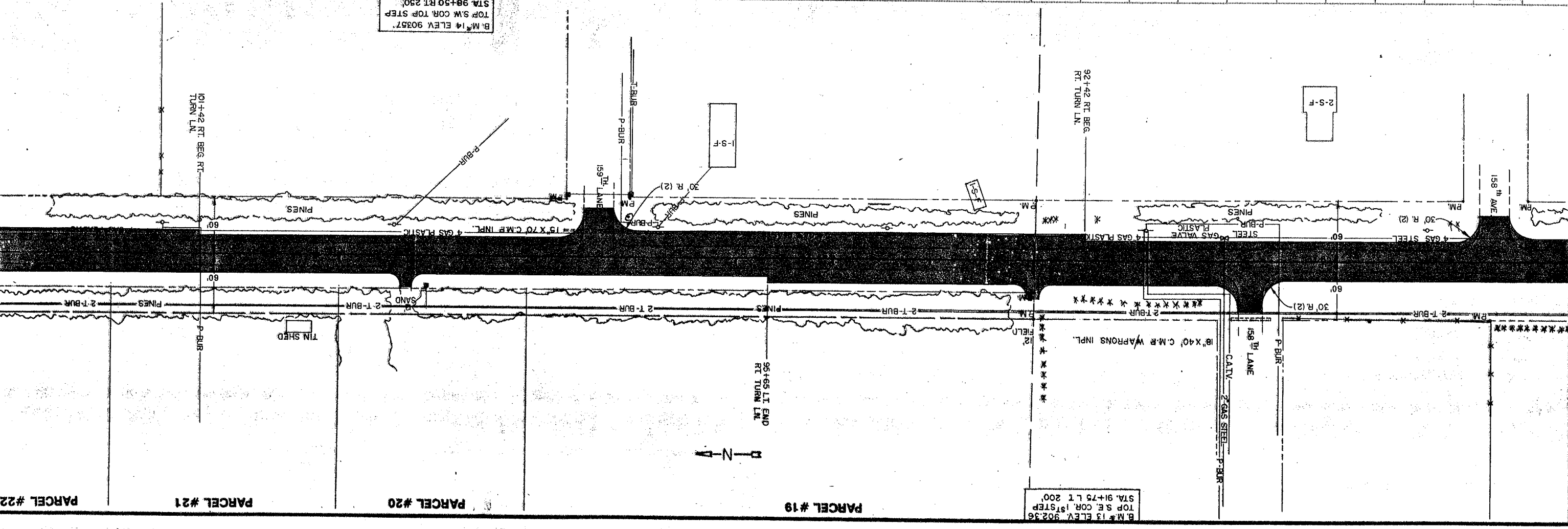
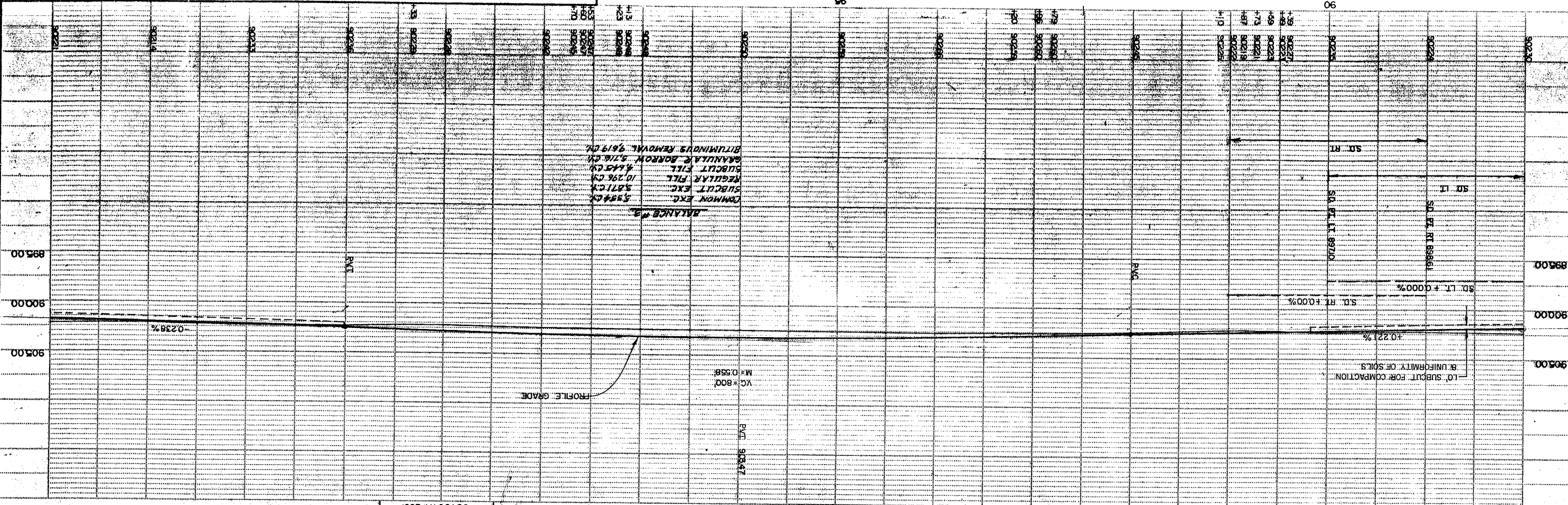
BM # 11 ELEV 89906
TOP NW COR TOP STEP
STA 78+60 RT 160 # 7930

PARCEL # 18

PARCEL # 7

PARCEL # 16

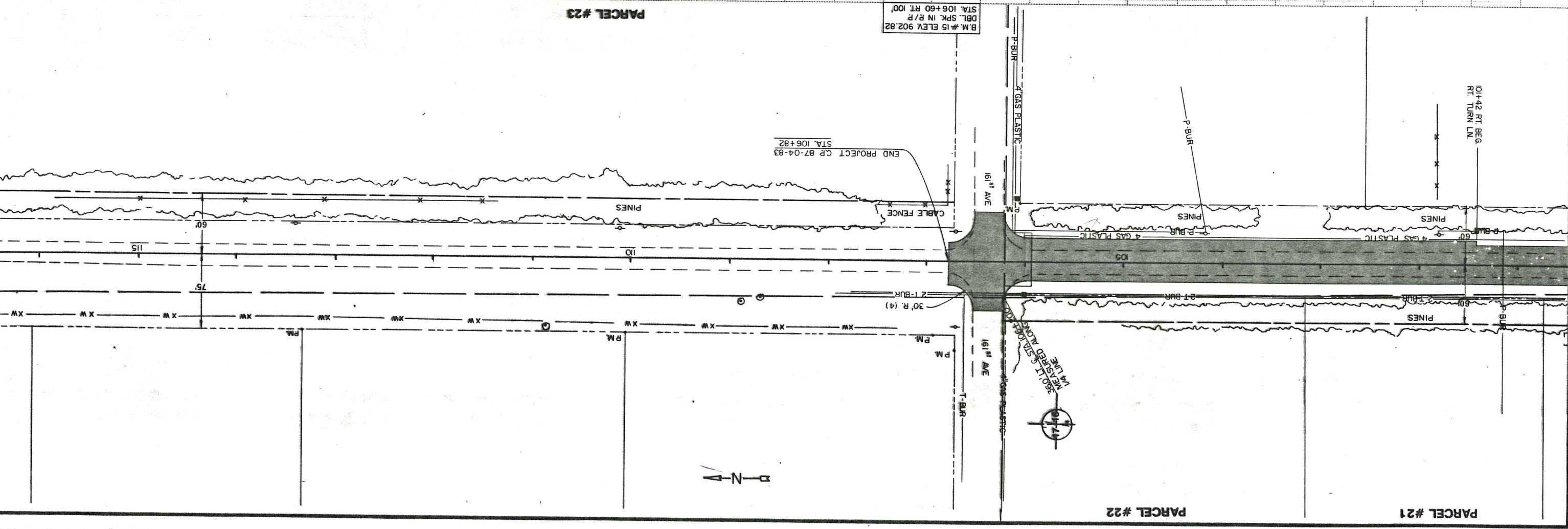
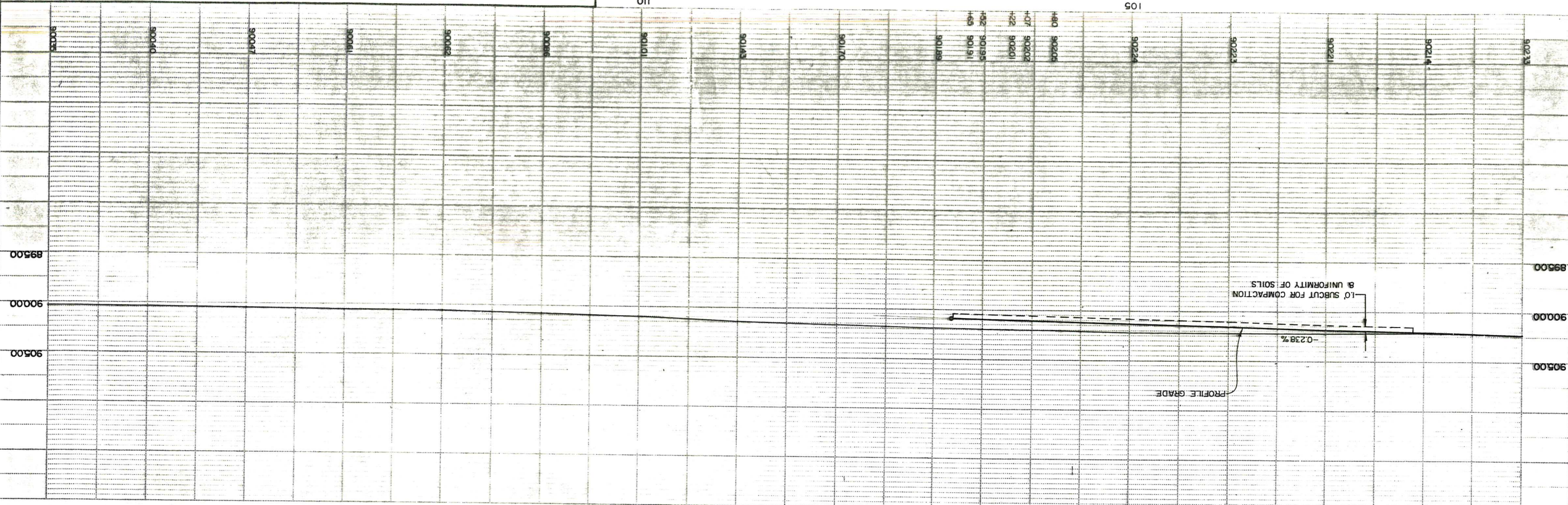
PARCEL # 17



PARCEL #22 PARCEL #21 PARCEL #20 PARCEL #19

B.M. #14 ELEV. 903.57
TOP S.W. COR. TOP STEP
STA. 98+50 RT. 250

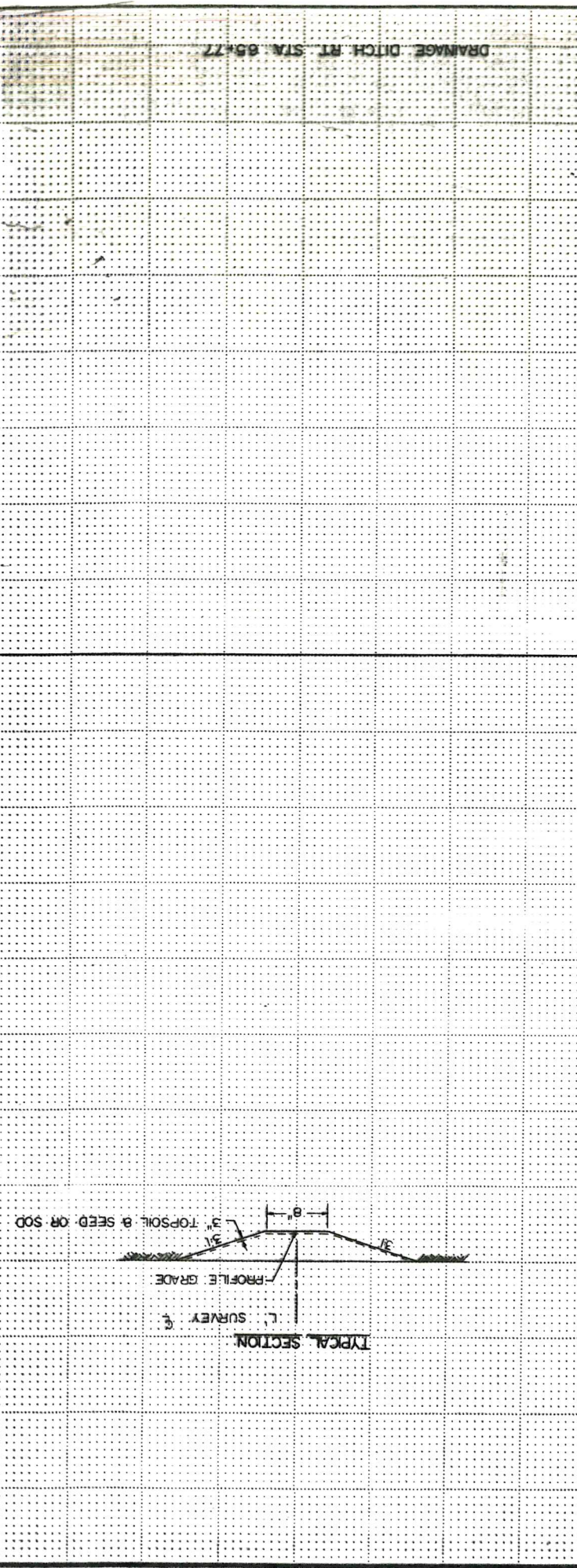
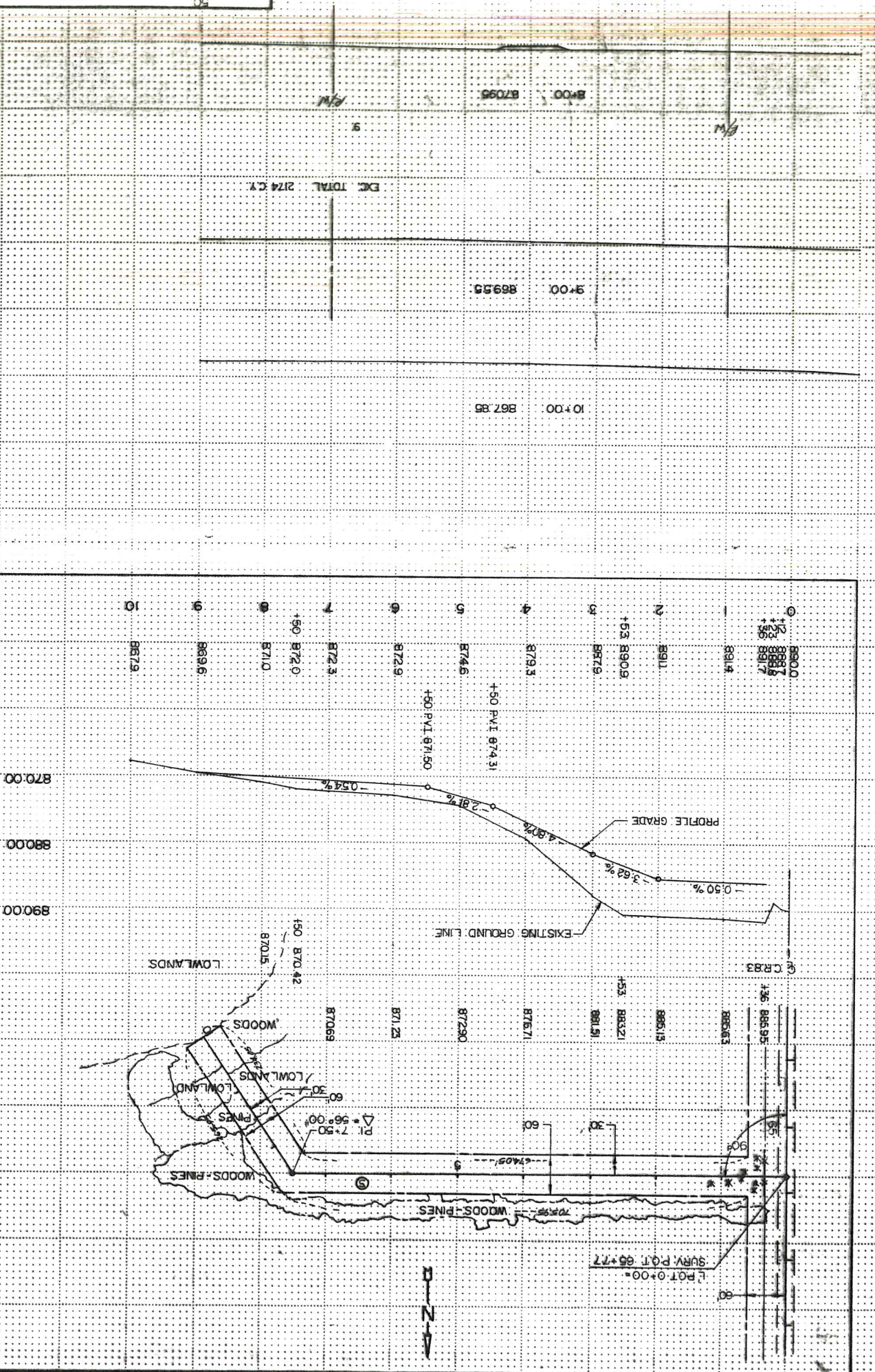
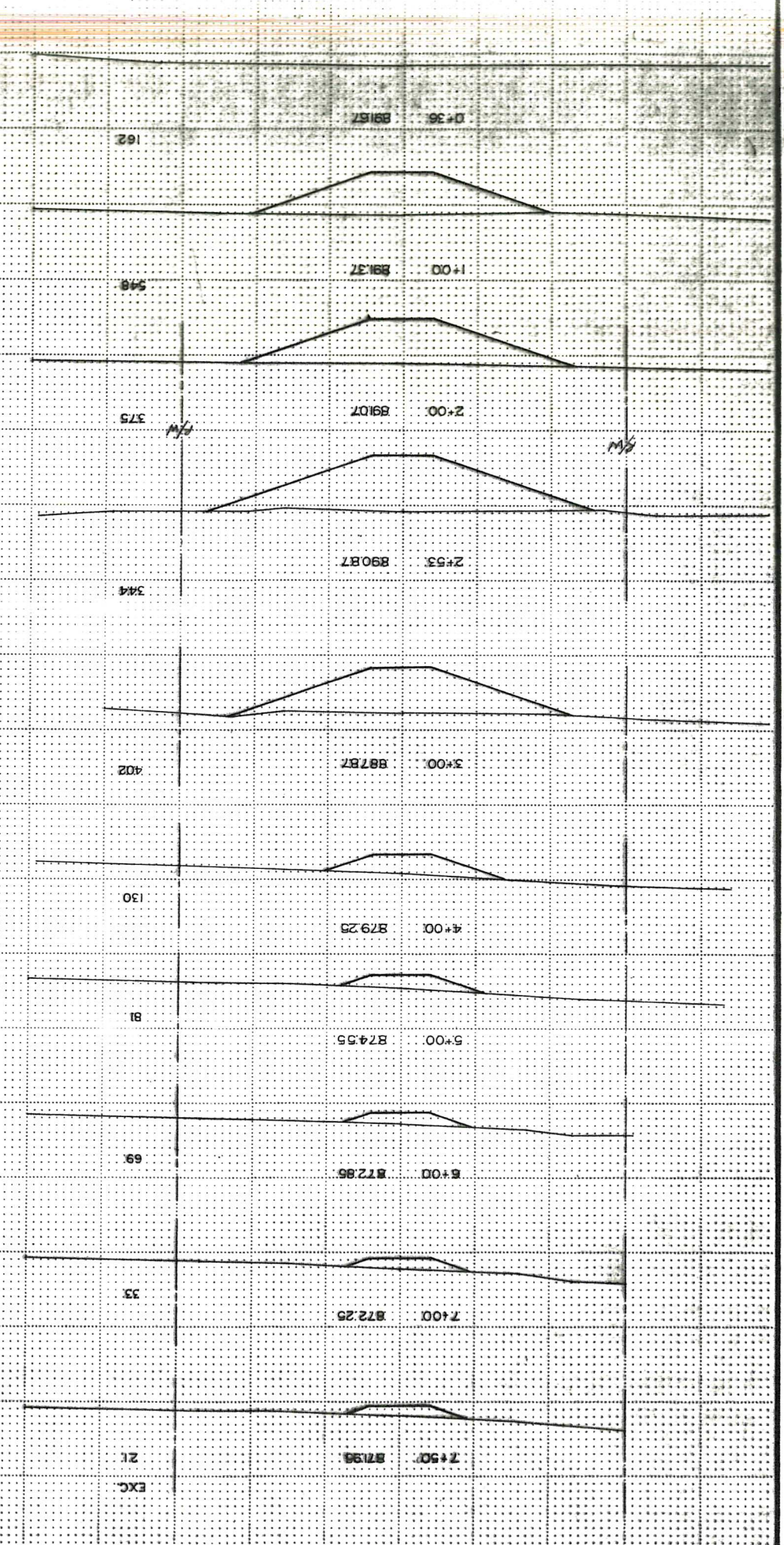
B.M. #13 ELEV. 902.36
TOP S.E. COR. 1ST STEP
STA. 91+75 L.T. 200



PARCEL #22

PARCEL #21

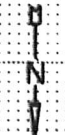
PARCEL #23

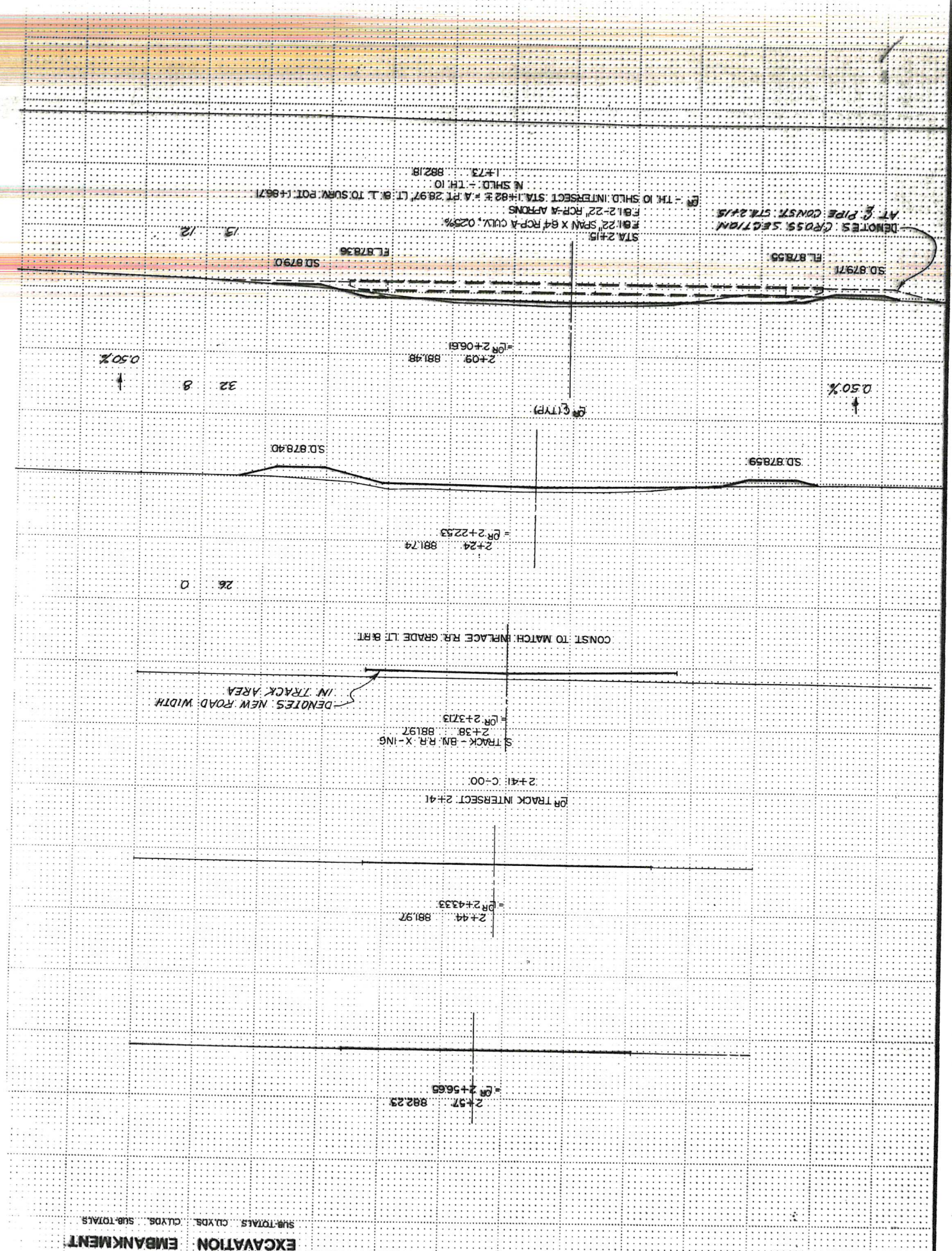


DRAINAGE DITCH RT. STA. 65+77

Exc. TOTAL 2174 C.Y.

TYPICAL SECTION



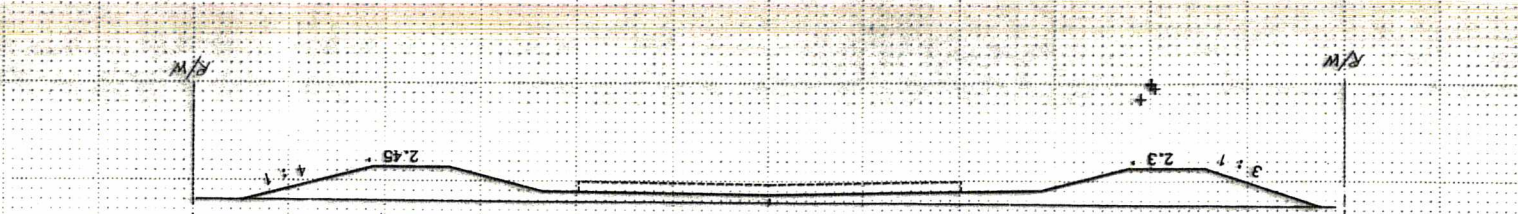
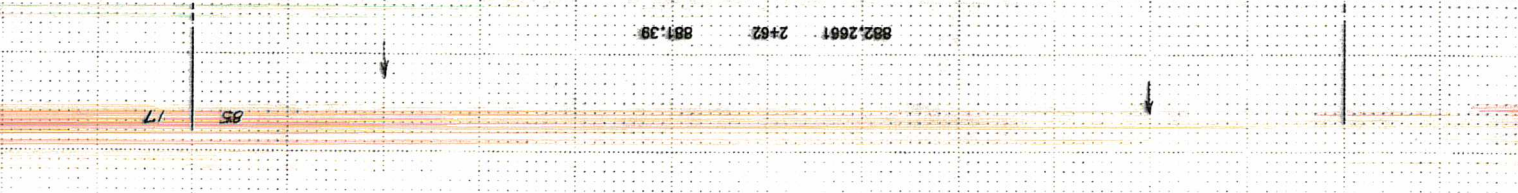
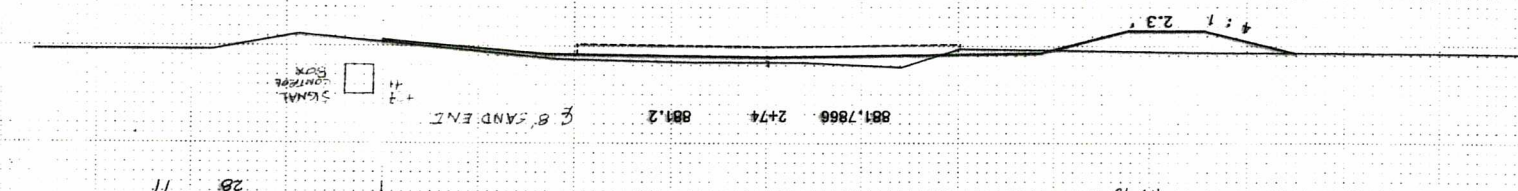
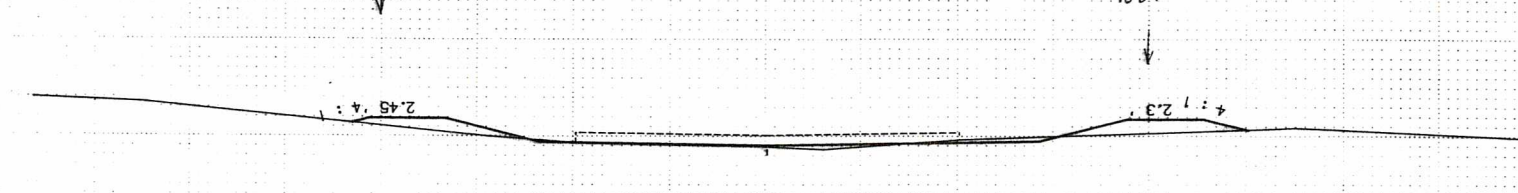
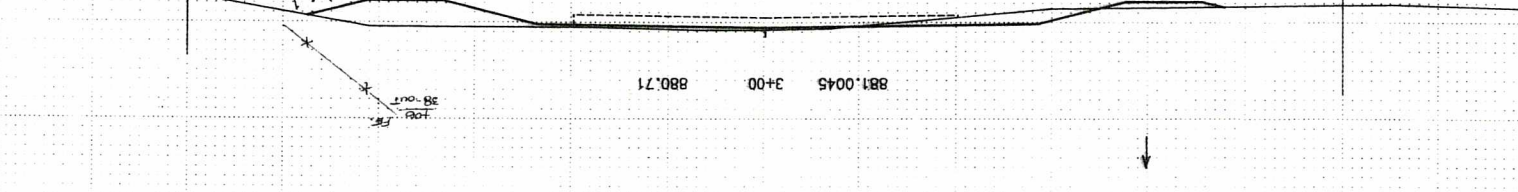
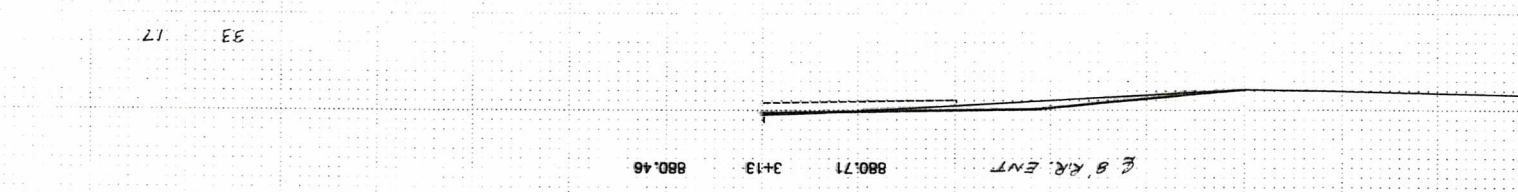
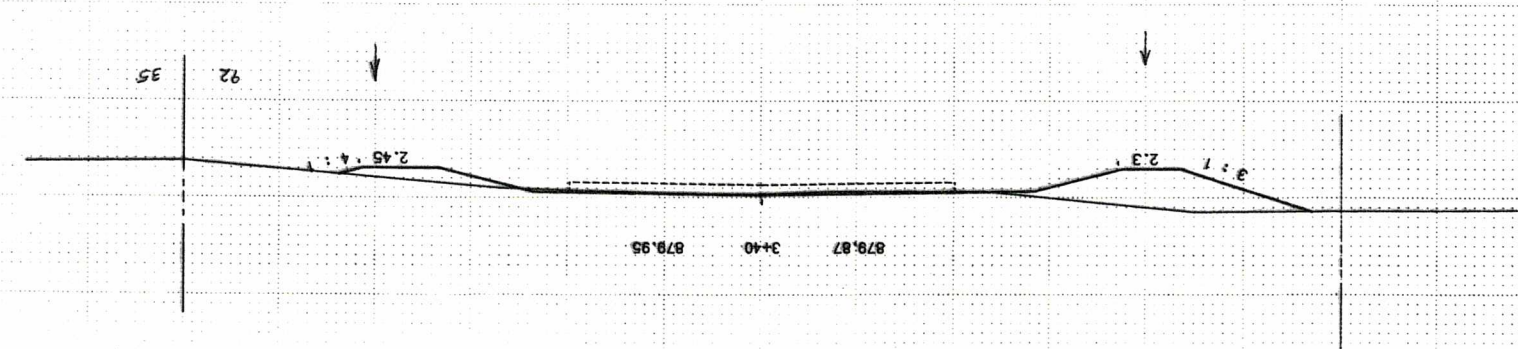
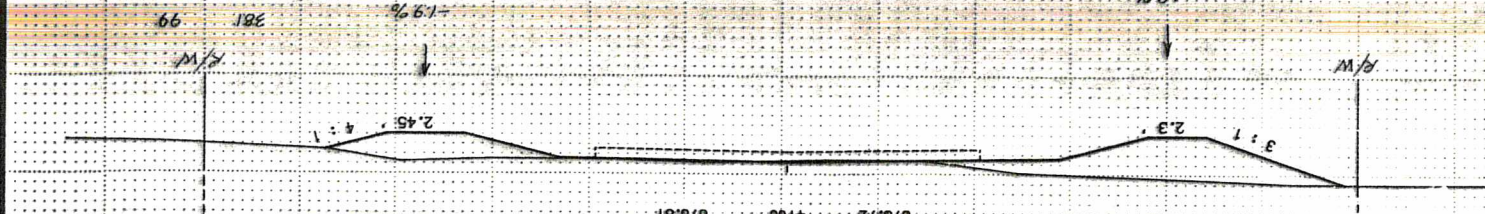
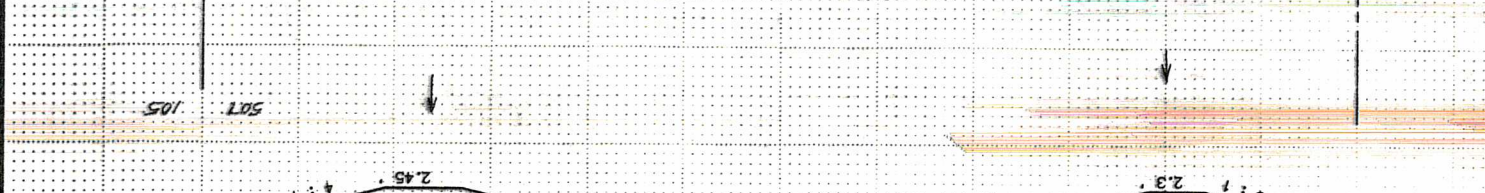
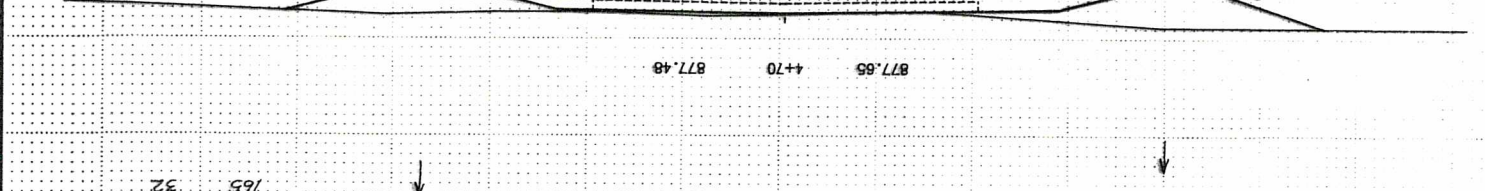
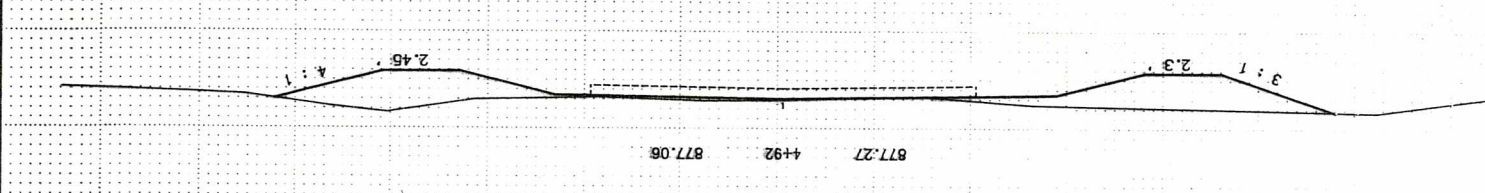
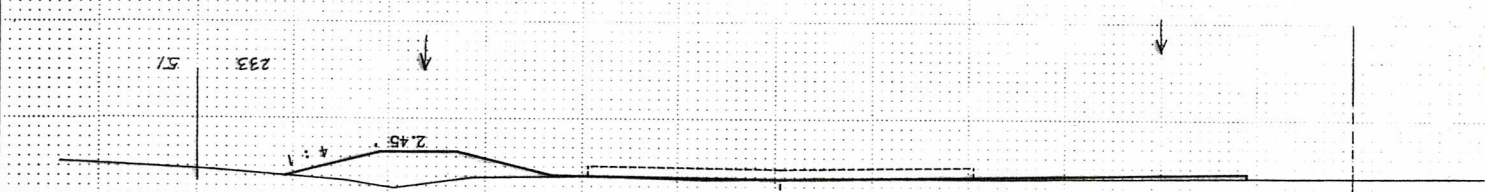
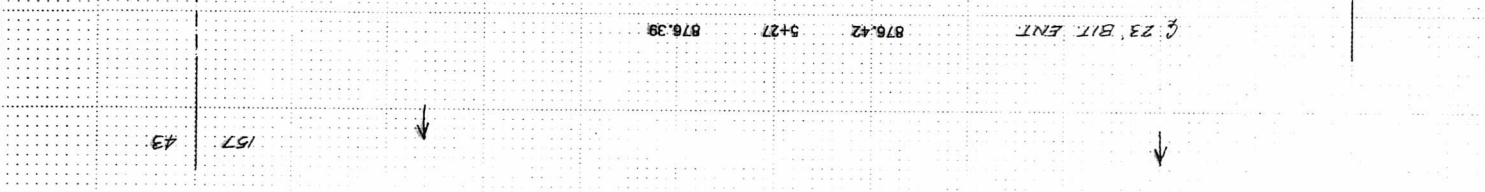
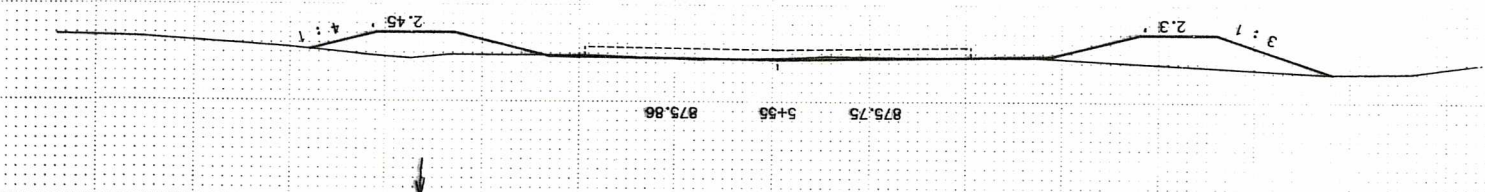
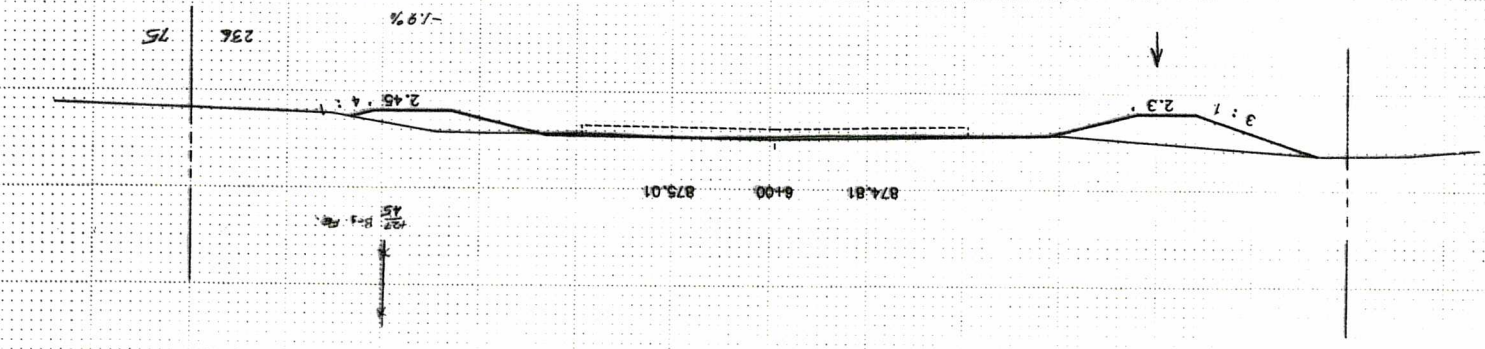


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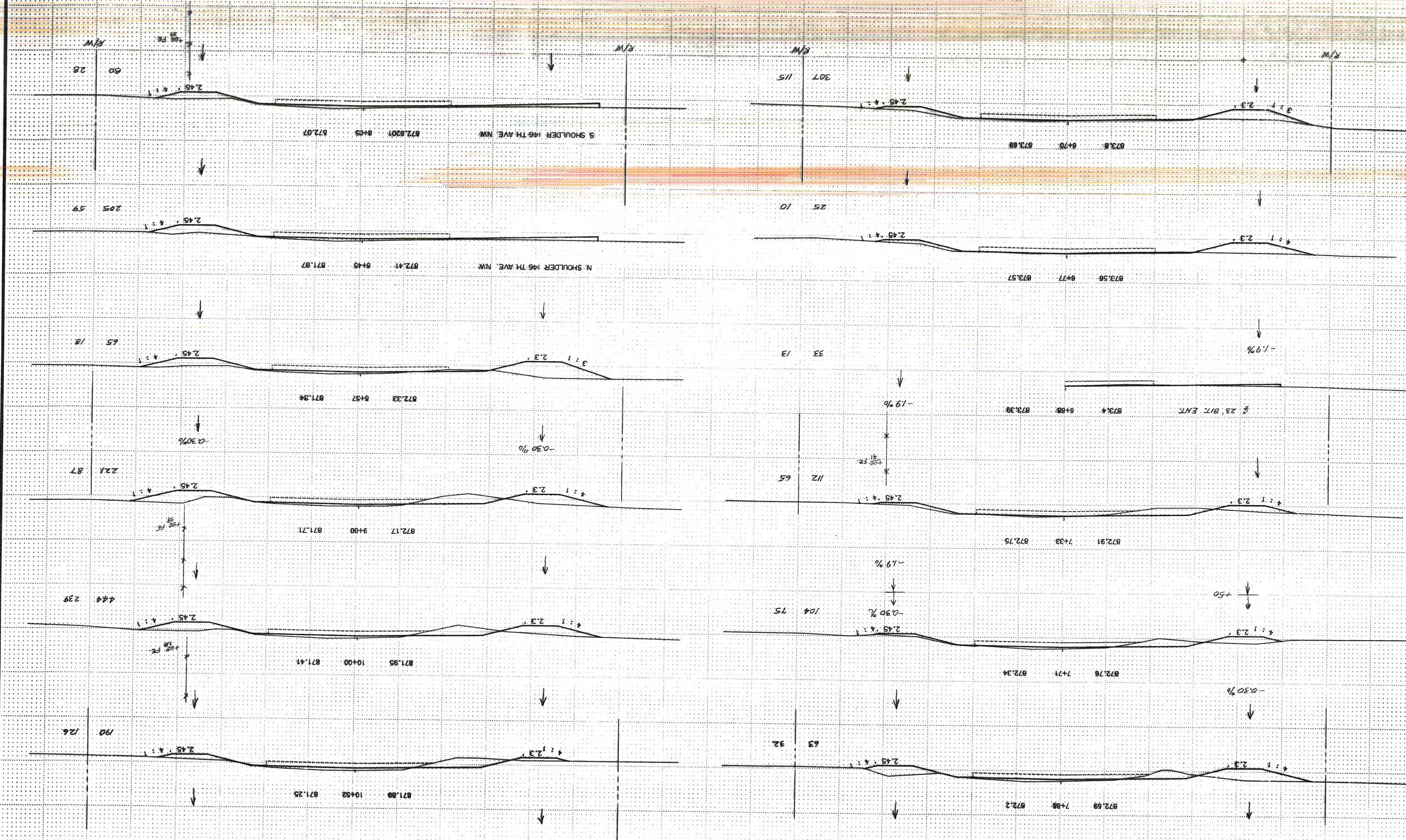
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18 of 35