

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, BASE, BITUMINOUS SURF, STORM SEWER & CHANNELIZATION

County Highway No. 116

Between 1,200' W. OF CSAH 9 And CSAH 7

A POINT 594' N. & 23' E. OF THE N. 1/4 COR. A POINT 159.74' NORTH & 1,004.17' EAST OF
From OF SEC. 31, T. 32 N., R. 24 W. To THE E. 1/4 COR. OF SEC. 32, T. 32 N., R. 24 W.

Give proper reference to Sections, Township and Range

GROSS LENGTH	5,821	FEET	1.10	MILES
BRIDGES-LENGTH	-0-	FEET	-0-	MILES
EXCEPTIONS-LENGTH	-0-	FEET	-0-	MILES
NET LENGTH	5,821	FEET	1.10	MILES

INDEX OF SHEETS

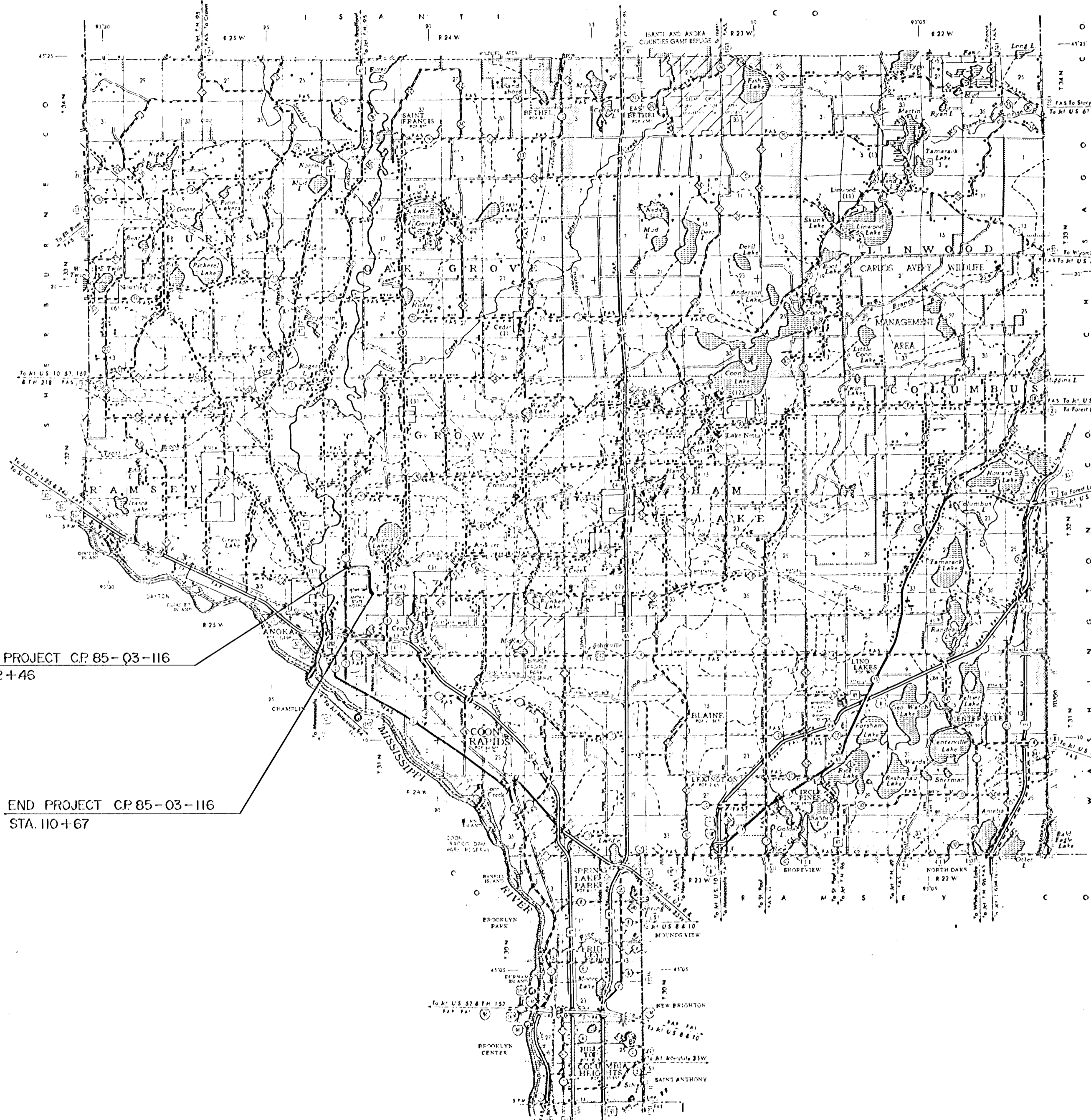
- Sheet No 1 Title Sheet & Layout Map
- " No 2 Est. Quantities & Typical Sec
- " No 3 Typical Grading Section
- " No 4 Typical Bituminous Section
- " No 5 Drainage & Erosion Control
- " No 6-10 Plan & Profile
- " No 11 Road Approach Const.
- " No 12 Drainage Ditch Const.
- " No 13 Super-elevation
- " No 14-20 Cross Sections
- " No 21 Road Approach Cross Sections

SCALE

INDEX MAP	2 MI.
PLAN & PROFILE	VERT. 5'
	HORIZ. 50'
CROSS SECTION	10'

CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SECTION CORNER
- RIGHT OF WAY LINE
- PRESENT POINT OF WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Etc.)
- UNPLATTED PROPERTY
- COORDINATE OF CITY LIMITS
- TRANS. HIGHWAY CENTER LINE
- BEARING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RIVER OR CREEK
- 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
- CONCRETE
- ROCK
- GRAVEL
- WOODEN
- BRIDGE
- RAILROAD CROSSING SIGN
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE BOARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Etc.)
- FRAME
- CONCRETE
- STONE
- TILE
- BRICK
- ST. STUDIO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN MUD
- GRAVEL PIT
- SAND PIT
- WOODEN PIT
- POCK QUARRY
- WATER CORNER



BEGIN PROJECT CP 85-03-116
STA 52+46

END PROJECT CP 85-03-116
STA 110+67

DESIGN DESIGNATION

ADT (CURRENT YEAR) 0
ADT (FUTURE YEAR) 11,300
T (HEAVY COMMERCIAL) H.C.A.D.T. 600-1,100
9 Ton Design Soil Factor A-3, 50%
Design Speed 50 MPH
Design Speed not achieved at:
STA _____ TO STA _____ MPH
STA _____ TO STA _____ MPH

SPECIFICATIONS

"THE STANDARD SPECIFICATIONS FOR CONSTRUCTION," 1983 EDITION AND SUPPLEMENTAL SPECIFICATIONS, DATED MARCH 7, 1985 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 REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Paul K. Lund COUNTY ENGINEER DATE 6/9/86

ANOKA COUNTY REG NO 6549

RECOMMENDED FOR APPROVAL _____ 19____
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL _____ 19____

APPROVED _____ 19____
STATE AID ENGINEER

Minn. Proj. No. _____ County Proj. No. 85-03-116
State Proj. No. _____ S.A.P. _____

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM C.P. 85-03-116	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE TYPE D	EACH	1	
2101.501	CLEARING	ACRE	4.4	
2101.502	CLEARING	TREE	17	
2101.506	GRUBBING	ACRE	3.6	
2101.507	GRUBBING	TREE	10	
2101.501	REMOVE CULVERT PIPE	LIN. FT.	66	
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ. YD.	5622	
2104.513	SAWING BITUMINOUS PAVEMENT	LIN. FT.	74	
2104.521	SALVAGE FENCE	LIN. FT.	397	
0557.603	INSTALL FENCE	LIN. FT.	252	
2104.521	SALVAGE CULV. PIPE	LIN. FT.	112	
2105.000	CONSTRUCTION FABRIC	SQ. YD.	17,800	
2105.501	COMMON EXCAVATION	CU. YD.	50,261	
2105.505	MUCK EXCAVATION	CU. YD.	8,778	
2105.511	COMMON CHANNEL EXCAVATION	CU. YD.	2537	
2105.521	GRANULAR BORROW (E.V.)	CU. YD.	72,721	
2105.535	SALVAGE TOPSOIL (L.V.)	CU. YD.	3,673	
2130.501	WATER	M-GAL.	100	
2211.503	AGGREGATE BASE PLACED, CLASS 5	CU. YD.	6164	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	486	
2331.510	BINDER COURSE MIXTURE	TON	4000	
2331.514	BASE COURSE MIXTURE	TON	6115	
2331.531	TEMPORARY LANE MARKING	ROAD STATION	500	
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	184	
2341.508	WEARING COURSE MIXTURE	TON	2975	
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL.	3670	
2501.511	15" CM PIPE CULVERT	LIN. FT.	196	
2501.515	15" CM PIPE APRONS	EACH	4	
2501.515	15" RC PIPE APRONS	EACH	3	
2501.515	48" RC PIPE APRONS	EACH	2	
2501.525	22" SPAN RC PIPE-ARCH APRONS	EACH	2	
2501.525	44" SPAN RC PIPE-ARCH APRONS	EACH	2	
2501.525	51" SPAN RC PIPE-ARCH APRONS	EACH	2	
2501.561	48" RC PIPE CULVERT DESIGN 3006 D	LIN. FT.	82	
2501.521	22" SPAN RC PIPE-ARCH CULVERT	LIN. FT.	78	
2501.521	44" SPAN RC PIPE-ARCH CULVERT	LIN. FT.	81	
2501.521	51" SPAN RC PIPE-ARCH CULVERT	LIN. FT.	88	
2503.541	12" RC PIPE SEWER, DESIGN 3006 D CL III	LIN. FT.	67	
2503.541	15" RC PIPE SEWER, DESIGN 3006 D CL III	LIN. FT.	143	
2506.507	CONSTRUCT CATCH BASINS, DESIGN C OR G	LIN. FT.	17.5	
2506.511	RECONSTRUCT MANHOLE	LIN. FT.	3	
2506.516	CASTING ASSEMBLIES	EACH	4	
2506.522	ADJ. FRAME AND RING CASTINGS	EACH	1	
2521.501	4" CONCRETE WALK	SQ. FT.	2730	
2531.501	CONCRETE CURB & GUTTER DESIGN B-612	LIN. FT.	3417	
2531.503	CONCRETE MEDIAN	SQ. YD.	27	
2545.521	3" RIGID STEEL CONDUIT - SIGNAL	LIN. FT.	70	
2545.553	PULL BOXES - SIGNALS	EACH	1	
2575.501	ROADSIDE SEEDING	ACRE	11	
2575.502	SEED MIXTURE #3	POUND	500	
2575.505	SODDING	SQ. YD.	4025	
2575.511	MULCH MATERIAL TYPE #1	TON	22	
2575.519	DISC. ANCHORING	ACRE	11	
2575.531	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10	TON	3	
0575.602	HAY OR STRAW BALES	EACH	40	

- INCLUDES 3728 C.Y. SUB CUT FOR COMPACTION AND 3351 C.Y. SURCHARGE REMOVAL.
- FOR DITCH CONSTRUCTION RT. STATION 108+26
- INCLUDES 6702 C.Y. FOR SURCHARGE STA. 70+00 TO 82+00
- FROM EXCESS MUCK MATERIAL FOR USE AS TOPSOIL COVERING
- PROVIDED FOR DUST CONTROL AS DIRECTED BY THE ENGINEER
- INCLUDES 348 C.Y. FOR 38TH AVE CONNECTION AND 159 C.Y. FOR RT. TURN LANE
- INCLUDES 135 TON FOR 38TH AVE CONNECTION AND 98 TON FOR RT. TURN LANE
- INCLUDES 207 TON FOR 38TH AVE CONNECTION AND 152 TON FOR RT. TURN LANE
- INCLUDES QUANTITY FOR 2341 WEARING COURSE
- INCLUDES 120 TON FOR 38TH AVE CONNECTION AND 70 TON FOR RT. TURN LANE
- FOR MEDIAN CONSTRUCTION
- FOR MEDIAN NOSE
- PROVIDED FOR FUTURE SIGNAL CONSTRUCTION
- PROVIDED FOR EROSION CONTROL

STANDARD PLATES

PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000 I	REINFORCED CONCRETE PIPE
3006 D	GASKET JOINT FOR R.C. PIPE
3014 J	REINFORCED CONCRETE PIPE ARCH DETAIL
3100 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110 F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
2145 C	CONCRETE PIPE TIES
4002 E	MANHOLE OR CATCH BASIN
4006 K	MANHOLE OR CATCH BASIN
4101 C	RING CASTING FOR MANHOLE OR CATCH BASIN
4126 E	CATCH BASIN FRAME CASTING
4140 D	SPECIAL GRATE CASTINGS FOR CATCH BASIN
4149 C	GRATE CASTING FOR CATCH BASIN
4161 F	CURB BOX CASTING FOR CATCH BASIN
7100 F	CONCRETE CURB & GUTTER
7111 G	INSTALLATION & REINFORCEMENT OF CATCH BASIN CASTINGS
8000 I	STANDARD BARRICADES
9102 C	SODDING AT PIPE CULVERT ENDS

BASIS OF PLANNED QUANTITIES

- 2331 PLANT MIXED BASE COURSE. BITUMINOUS MIXTURE 110 LBS./S.Y. PER 1" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 4.8% BY WT.
- 2331 PLANT MIXED BINDER COURSE. BITUMINOUS MIXTURE 110 LBS./S.Y. PER 1" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 4.8% BY WT.
- 2341 PLANT MIXED WEARING COURSE. BITUMINOUS MIXTURE 110 LBS./S.Y. PER 1" THICKNESS. BITUMINOUS MATERIAL FOR MIXTURE 6.2% BY WT.
- 2357 BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER S.Y.
- 2575 COMMERCIAL FERTILIZER, ANALYSIS 10-10-10, 500#/AC. ON ALL SOD AREAS & SEED AREAS.
- 2575 ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT PLUS 10% SEED MIXTURE NO. 3 45 LBS. PER ACRE.

SPECIAL DETAILS

EXCAVATED MUCK MATERIAL SHALL BE USED TO CONSTRUCT SLOPES ADJACENT TO MUCK EXCAVATION AREAS AND AS TOPSOIL COVERING THROUGHOUT THE PROJECT.

APPROXIMATELY 3,673 C.Y. OF EXCESS MUCK MATERIAL SHALL BE SPREAD TO A UNIFORM 3" TO 4" DEPTH OVER THE LENGTH OF THE PROJECT. THIS WORK WILL BE COMPENSATED FOR UNDER ITEM 2105.535 SALVAGE TOPSOIL.

ANY MUCK MATERIAL STOCKPILED ADJACENT TO EXCAVATION AREAS DURING CONSTRUCTION, SHALL BE REMOVED BY THE CONTRACTOR FROM LOW LANDS AND WET LANDS PRIOR TO FINISHING OPERATIONS TO APPROXIMATELY THE ORIGINAL GROUND ELEVATIONS.

THE CONTRACTOR SHALL DISPOSE OF EXCESS MUCK MATERIAL IN OTHER AREAS AS APPROVED BY THE ENGINEER. THIS SHALL BE CONSIDERED AS INCIDENTAL TO MUCK EXCAVATION OR CHANNEL EXCAVATION.

EXCESS GRANULAR MATERIAL FROM CHANNEL EXCAVATION SHALL BE REMOVED FROM SITE AND BE USED AS FILL IN ROADWAY CONSTRUCTION. THIS SHALL BE CONSIDERED AS INCIDENTAL TO CHANNEL EXCAVATION.

MATERIAL TO SURCHARGE SUBGRADE FROM STA. 69+00 TO STA. 82+70 IS INCLUDED IN GRANULAR BORROW QUANTITY. REMOVAL OF EXCESS SURCHARGE MATERIAL IS INCLUDED IN GRANULAR BORROW QUANTITY. REMOVAL OF EXCESS SURCHARGE MATERIAL IS INCLUDED WITH COMMON EXCAVATION QUANTITY AND WILL BE USED ON SLOPES AND SUBGRADE STATION 64+00 TO 80+00 AT THE DISCRETION OF THE ENGINEER.

SUGGESTED PROCEDURE FOR ROADWAY CONSTRUCTION AND FABRIC PLACEMENT STA. 69+00 TO 83+00. (CONTRACTOR MAY MODIFY THIS PROCEDURE WITH ENGINEERS APPROVAL)

- PLACE FABRIC AND FIRST LIFT OF FILL TO STA. 70+65
- EXCAVATE MUCK FOR CULVERT FOUNDATION STA. 70+75
- PLACE CONSTRUCTION FABRIC IN TRENCH AND BACK FILL WITH GRANULAR MATERIAL.
- PLACE CONSTRUCTION FABRIC 70+85 TO 72+35 AND FILL WITH GRANULAR MATERIAL TO GROUND LEVEL ELEVATION.
- PLACE FABRIC 71+00 TO 82+20 AND COMPLETE FIRST LIFT OF FILL FROM 70+65 TO 82+20.
- Place fill 69+00 TO 83+00 IN 4 LIFTS, ALLOWING 5 TO 10 DAYS SETTLEMENT BETWEEN LIFTS (SEE SPECIAL PROVISIONS).
- PLACE TEMPORARY 15" C.M.P. CULVERT STA. 70+75 AFTER FIRST LIFT HAS BEEN PLACED, AT DIRECTION OF ENGINEER.
- REMOVE TEMPORARY 15" C.M.P. CULVERT AND INSTALL PERMANENT 48" R.C.P. CULVERT AFTER ROADWAY IS CONSTRUCTED TO GRADING GRADE.

CLEARING AND GRUBBING

STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
54+27	2'LT			1	
54+30	6'RT	1			
54+34	9'RT	1			
54+42	C	1			
54+54	8'LT	1			
54+58	51'LT	1			
54+66	2'RT	1			
54+75	11'RT	3			
55+18	45'LT	1			
66+12 - 66+40	30-75'LT		0.05		
67+39 - 67+62	33-37'LT		0.05		
67+82 - 69+63	0-66'LT-		0.60		
	0-59'RT				
70+80	20'LT	1			
70+82	50'LT	1			
71+25	25'RT				
71+25	30'RT				
71+25	40'RT	1			
71+73	45'LT	1			
71+75	48'LT	1			
74+90 - 75+20	45-58'LT		0.05		
79+39 - 81+65	0-66'LT-		0.65		
	0-55'RT				
84+12	31'LT	1		1	
84+10 - 84+50	30-40'RT		0.05		0.05
84+90 - 92+72	74'LT90'RT		2.45		2.45
104+00 - 104+25	36-43'LT		0.05		0.05
111 9+52 - 111 9+72	30-40'LT		0.05		0.05
7+20 - 8+80	DITCH CON.		0.15		0.15
11+00 - 13+35	RT, 108'26'		0.25		0.25
	TOTALS	17	4.40	10	3.60

SALVAGE & INSTALL FENCE

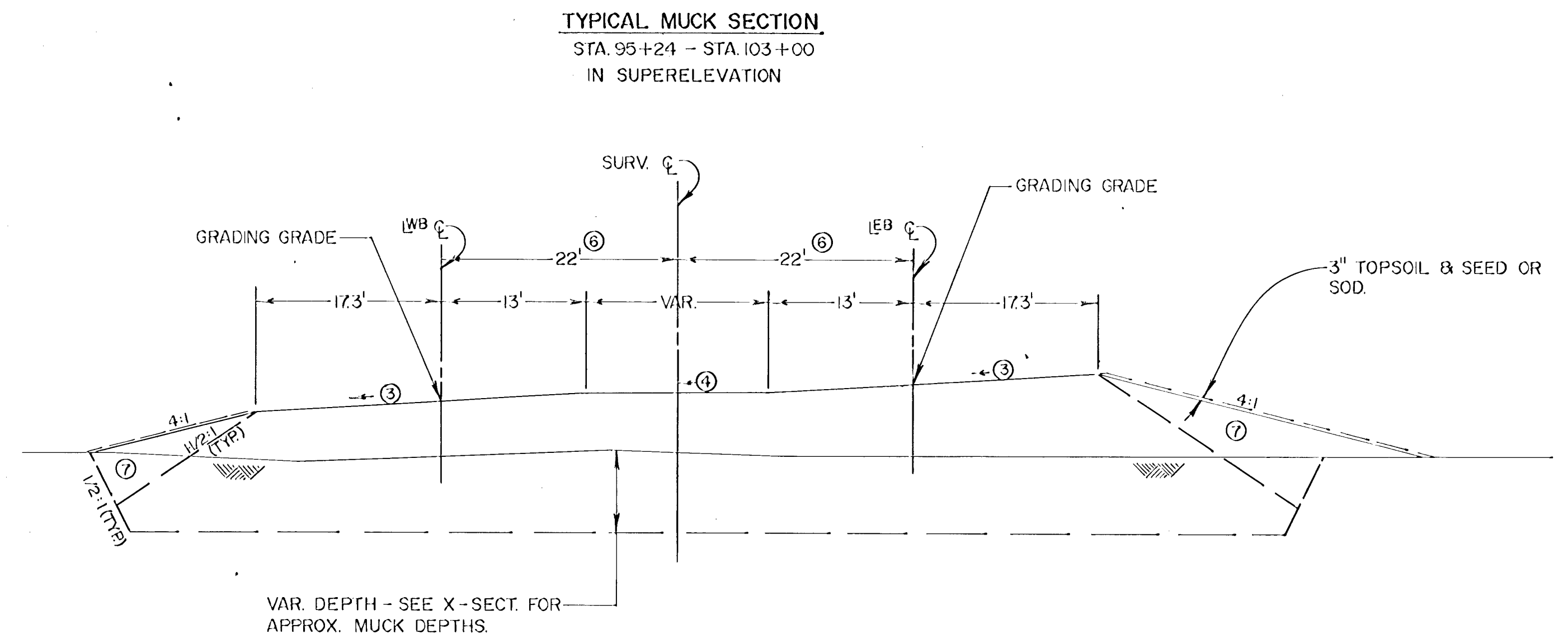
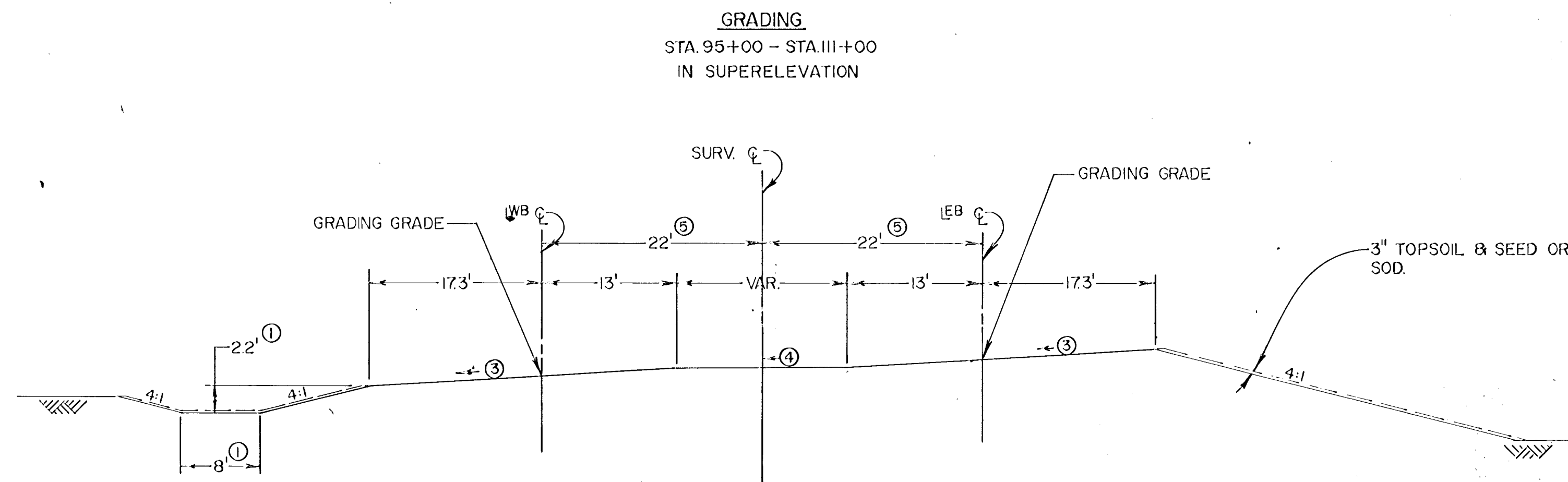
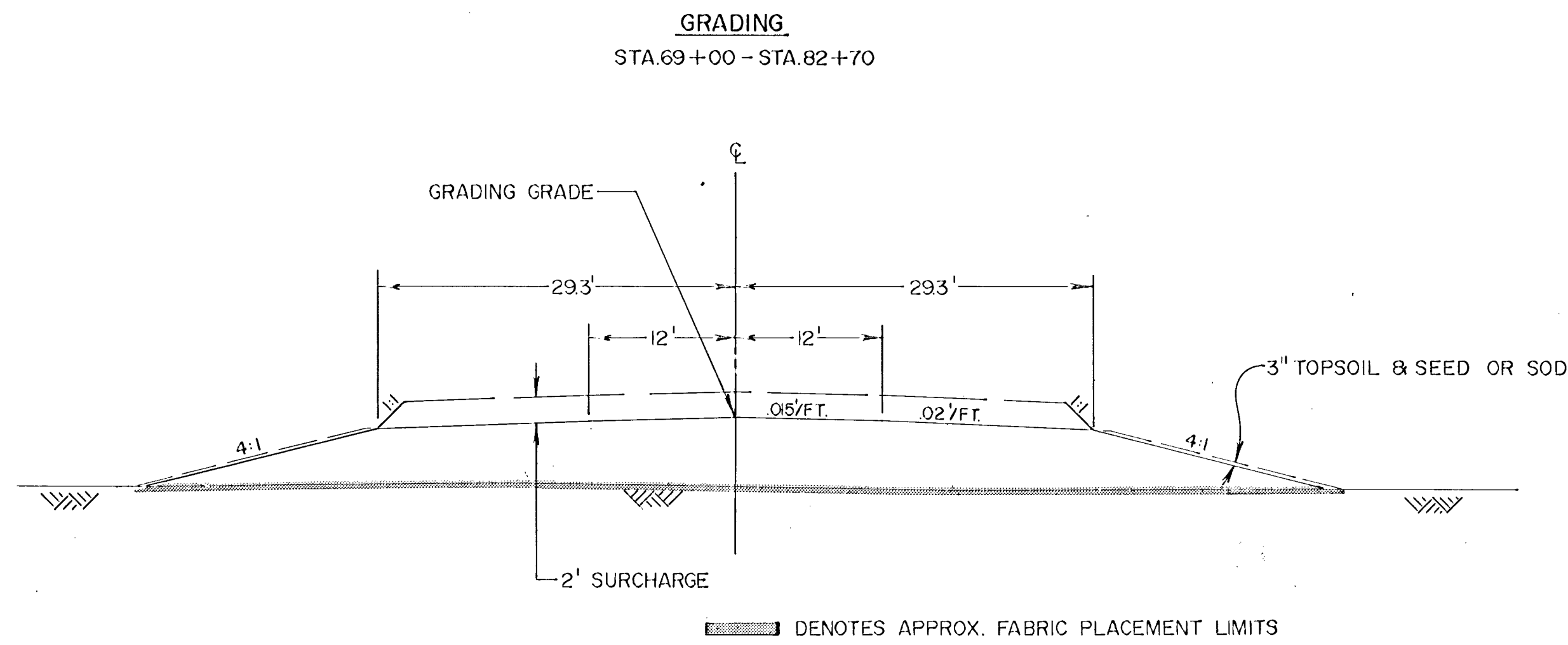
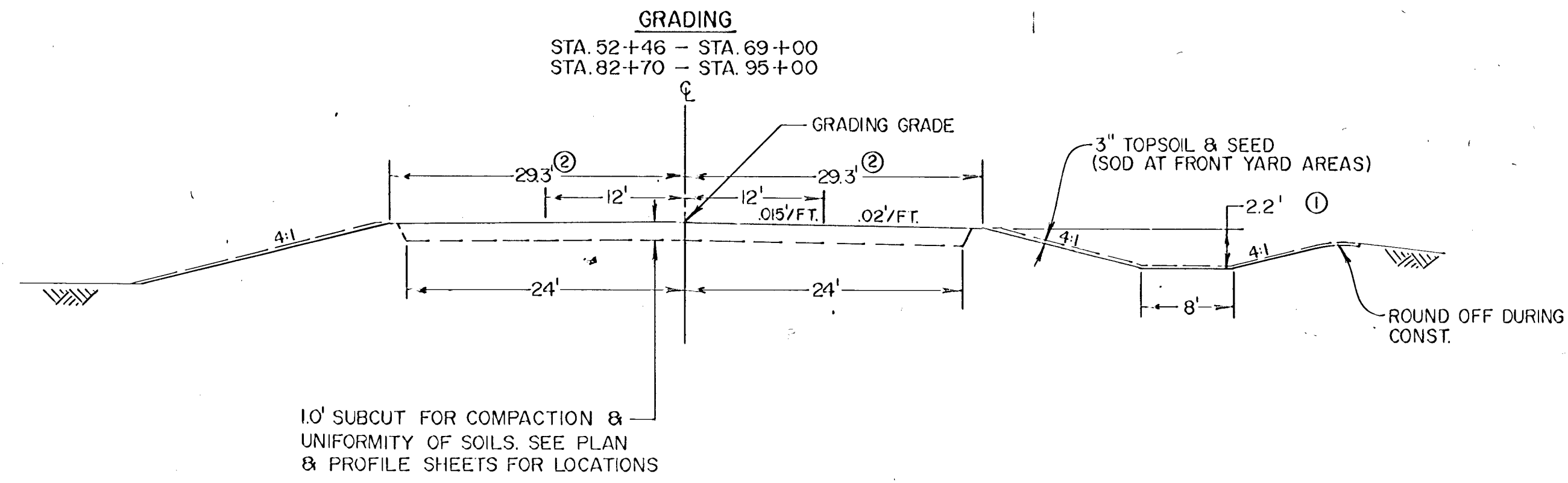
STATION	LOC.	SALVAGE	INSTALL	REMARKS
52+84	70'LT 75'RT	145'	0'	LINE FENCE
52+75 TO 52+84	75'RT	9'	9'	
52+75 TO 55+18	75'RT	243'	243'	
TOTALS=		397'	252'	

SODDING

STATION	LOC.	S Y
56+40 TO 59+00	MEDIAN	445
69+00 TO 88+00	1	1267
92+00 TO 109+00	1	1133
98+80 TO 100+55	MEDIAN	235
105+30 TO 108+81	MEDIAN	465
1+50 TO 5+30	1 RT TURN LANE	255
CULV. ENDS		225
TOTALS		4025

TYPICAL SECTIONS

ALL DIMENSIONS NOMINAL

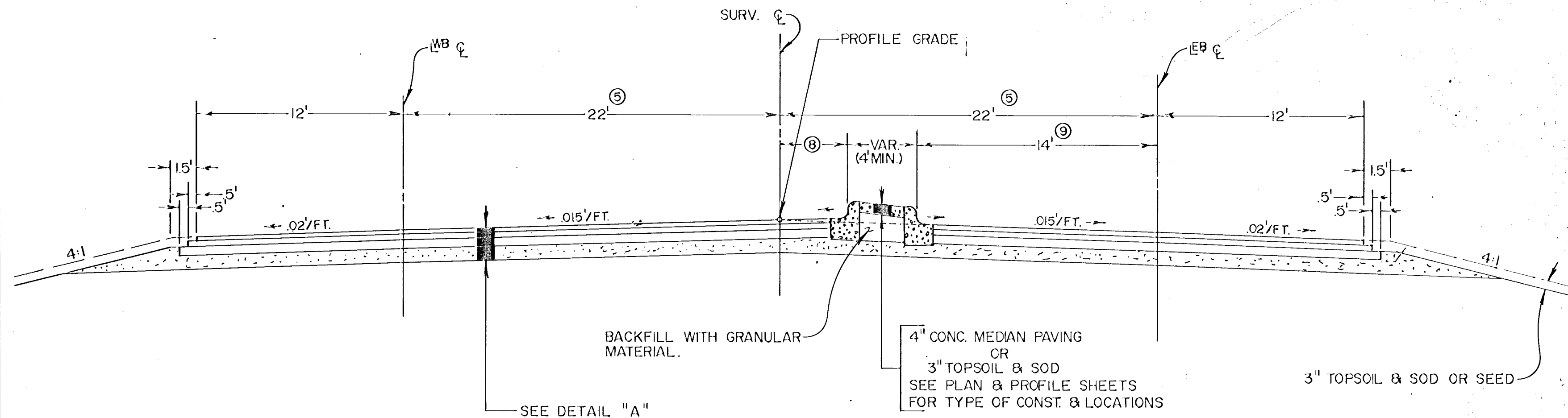


- ① FOR SPECIAL DITCHES SEE PLANS & CROSS SECTIONS
- ② VAR. WIDTH IN ISLAND CONST. AREAS SEE PLAN & PROFILE SHEETS FOR GEOMETRICS & E.B. OR W.B. ALIGN.
- ③ SEE SUPER CHART FOR SLOPE
- ④ VAR. - .015'/FT. IN LT. TURN LN. AREA
- ⑤ TAPERS FROM 22' - 12'
 STA. 95+00 - STA. 100+00
 STA. 106+46.5 - STA. 110+67
- ⑥ SEE PLAN & PROFILE SHEETS FOR GEOMETRICS
 TAPERS FROM 22' - 12'
 STA. 95+00 - STA. 100+00
- ⑦ SEE PLAN & PROFILE SHEETS FOR GEOMETRICS.
 FILL WITH SWAMP EXCAVATION MATERIAL.

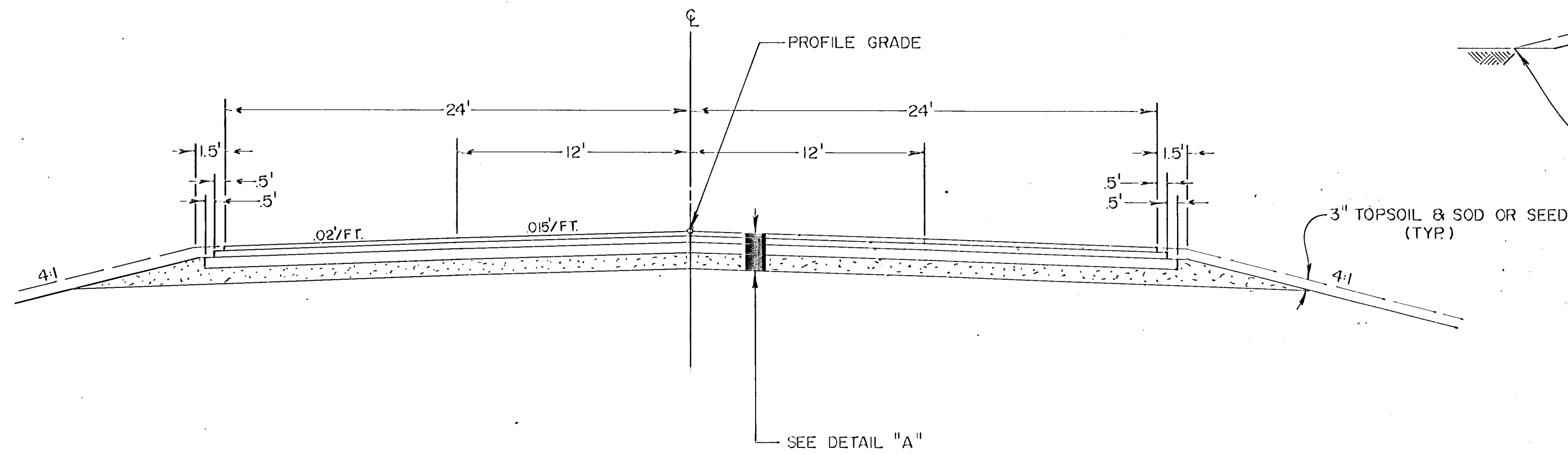
ALL DIMENSIONS NOMINAL

TYPICAL SECTIONS

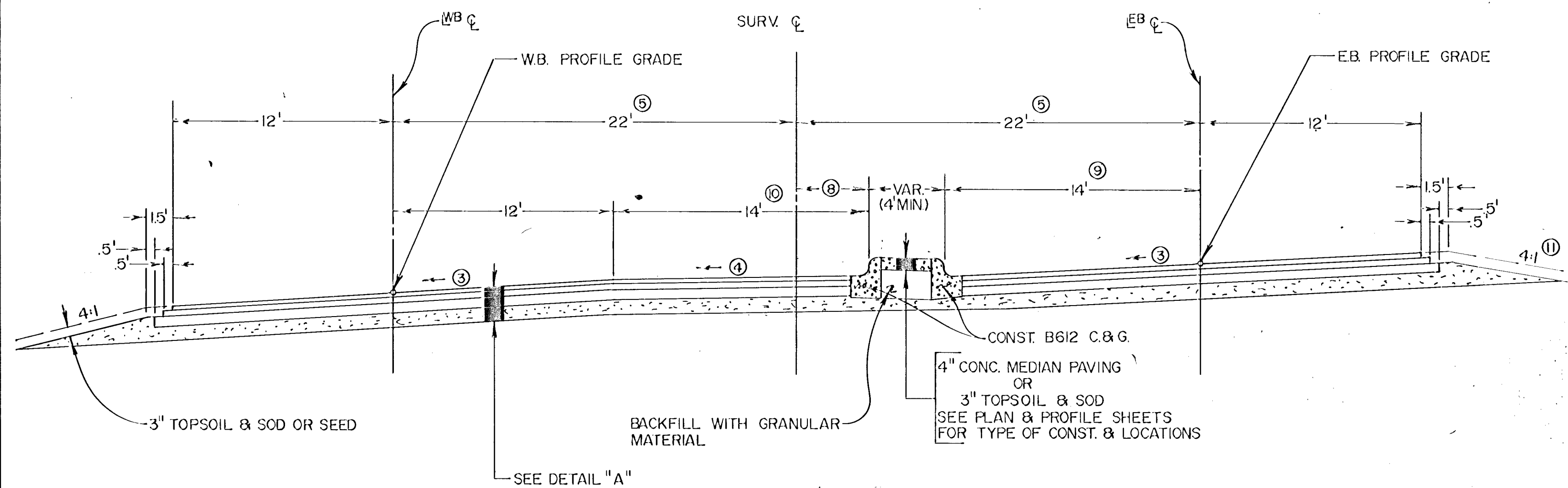
BASE & BITUMINOUS SECTION
STA. 52+46 - STA. 63+75



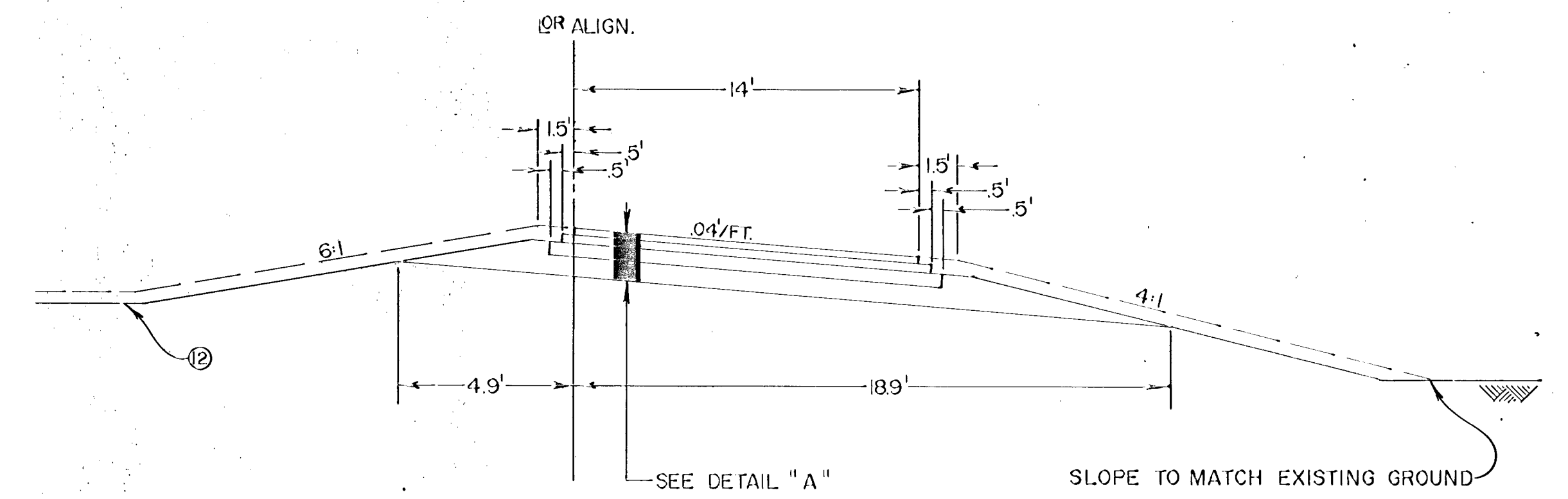
BASE & BITUMINOUS SECTION
STA. 63+75 - STA. 95+00



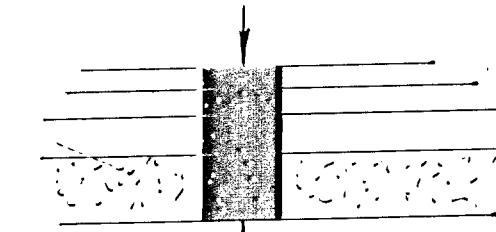
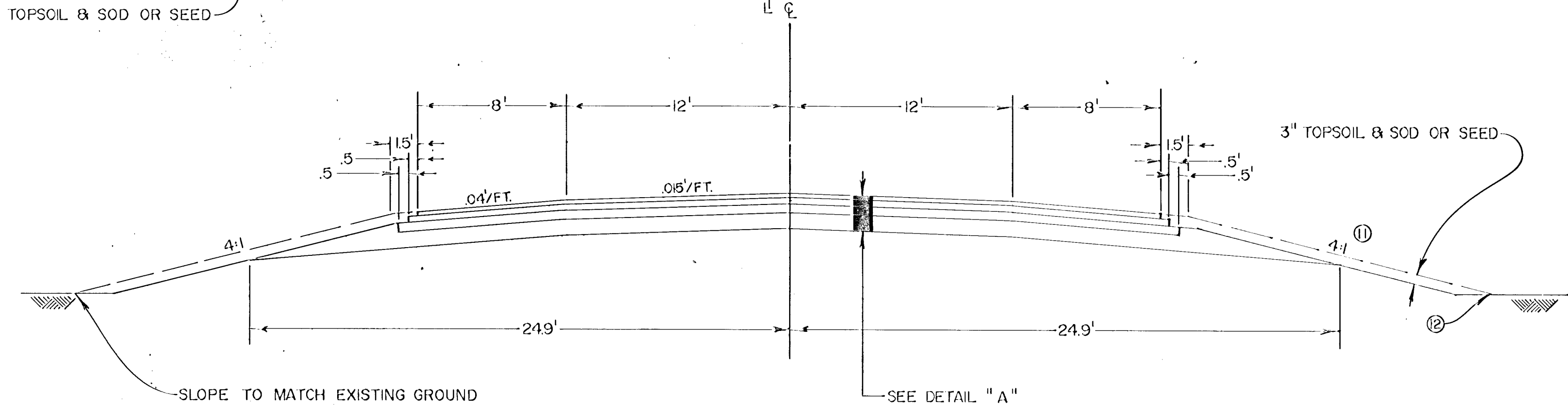
BASE & BITUMINOUS SECTION
STA. 95+00 - STA. 111+00



OR FREE RIGHT LANE
GRADING, BASE & BITUMINOUS SECTION



ROAD APPROACH
GRADING, BASE & BITUMINOUS SECTION
STA. 101+00 RT.

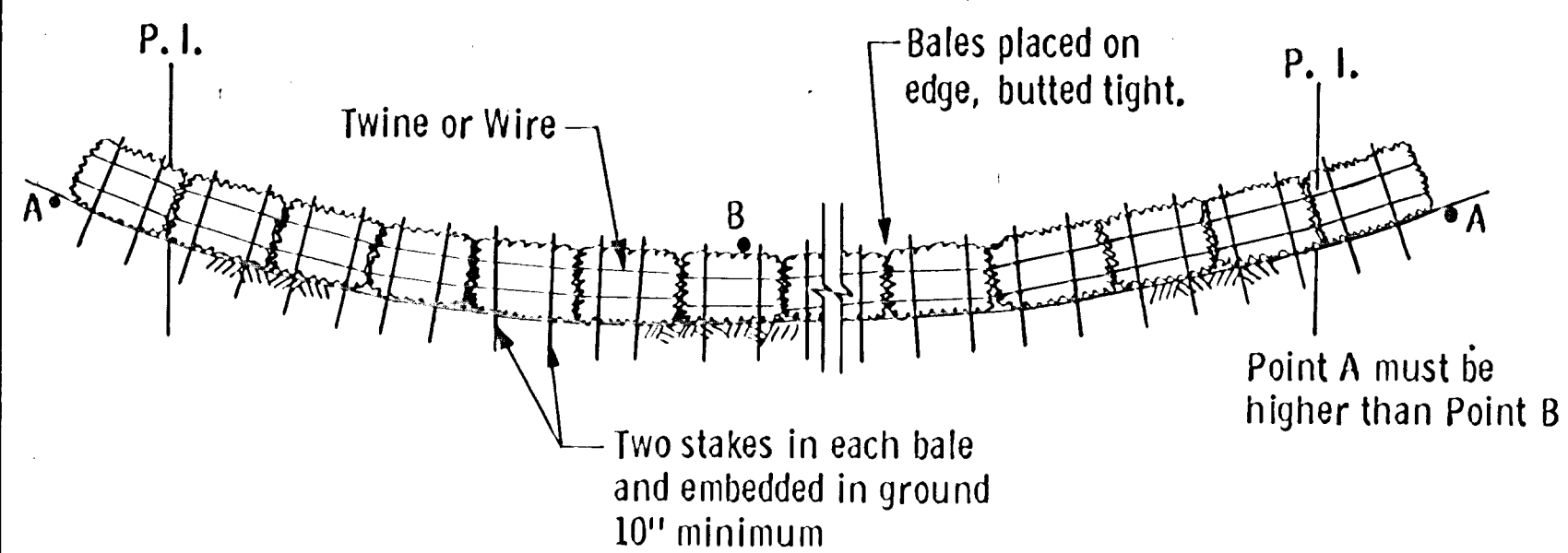


- 1 1/2" 2341 WEARING COURSE
- 2" 2331 BINDER COURSE
- 3" 2331 BASE COURSE
- 5" 2211 AGGREGATE BASE CL-5A

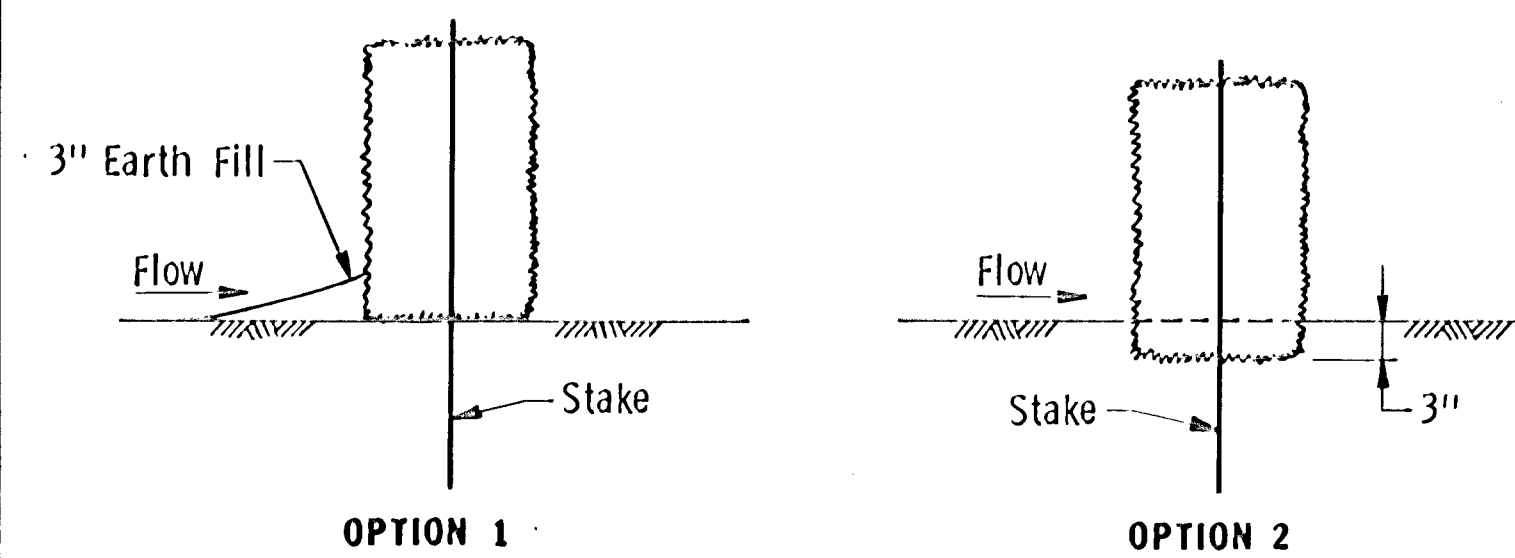
DETAIL "A"

- ③ SEE SUPER CHART FOR SLOPE
- ④ VAR. - .015%/FT. IN LT. TURN LN. AREA
- ⑤ TAPERS FROM 22' - 12'
STA. 95+00 - STA. 100+00
STA. 106+46.5 - STA. 110+67
SEE PLAN & PROFILE SHEETS FOR GEOMETRICS

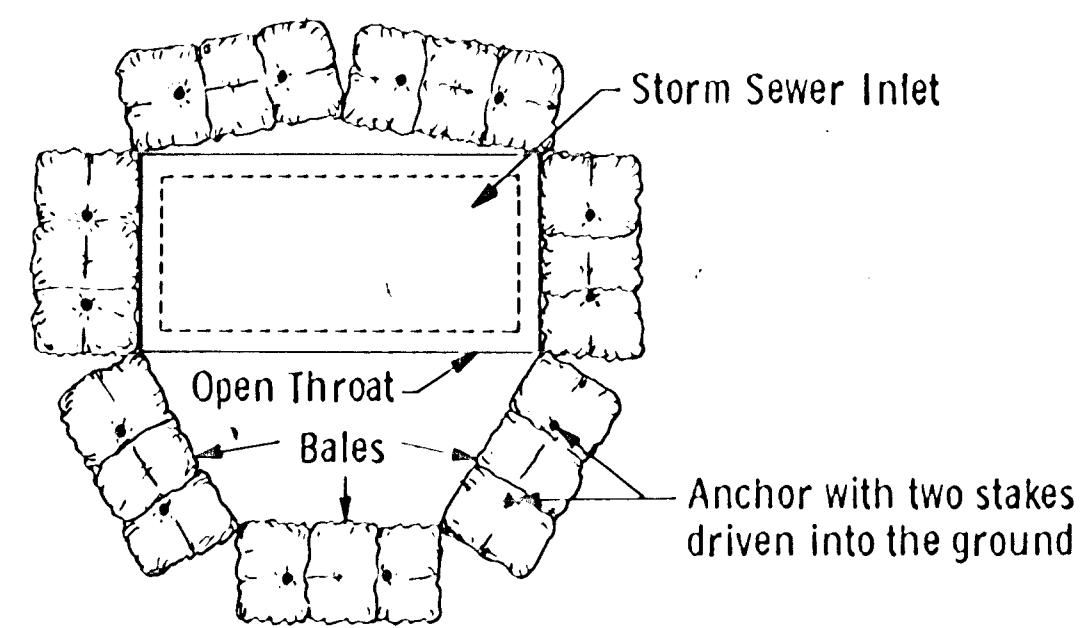
- ⑧ VARIES FROM 4' RT. TO 8' LT.
SEE PLAN & PROFILE SHEETS
FOR ISLAND GEOMETRICS.
- ⑨ APPLIES IN ISLAND CONST. AREAS ONLY.
- ⑩ VARIES FROM 2' TO 14'
- ⑪ 6:1 IN DEPRESSED MEDIAN CONST. AREA.
- ⑫ SLOPE TO MATCH EXISTING GROUND
SEE ROAD APPROACH X-SECTIONS
FOR DEPRESSED MEDIAN CONST.



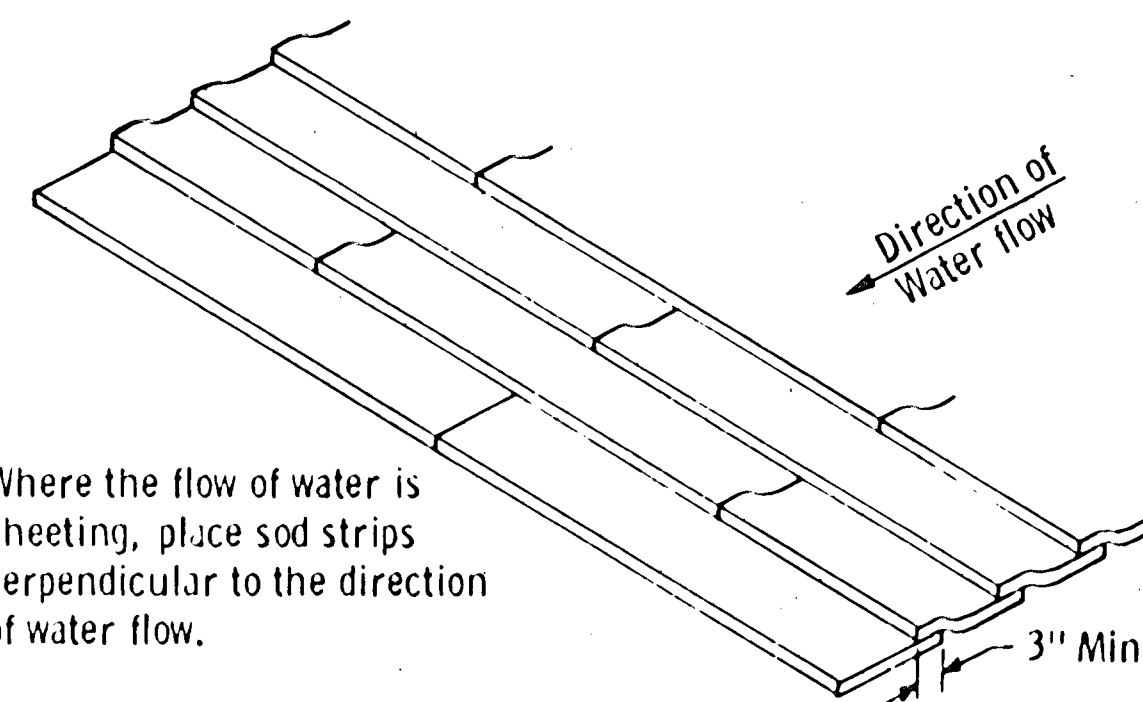
BALE HAY OR STRAW DITCH CHECK



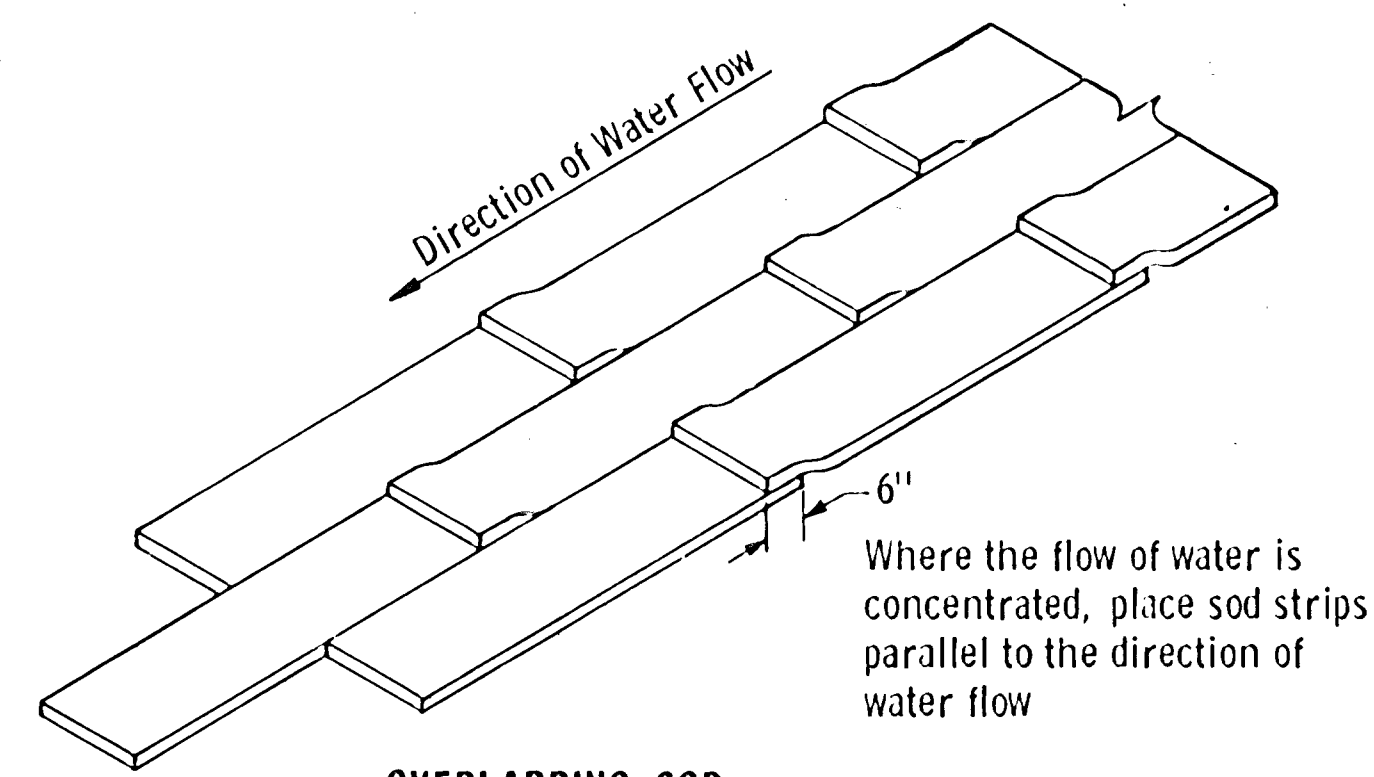
DITCH CHECK SECTIONS



BALE DIVERSION TO PROTECT STORM SEWER INLETS



SHINGLING SOD



OVERLAPPING SOD

SPECIAL SOD PLACEMENT TECHNIQUES

STORM SEWER SYSTEM

NO.	STATION	LOCATION	REMARKS	TYPE	DESIGN	LIN. FT.	REMOVE SEWER PIPE	TOP	OUTLET	F&I CASTING ASSEMBLY	DRAINS TO	RCP SEWER			
												12" CL. I.I.	15" CL. I.I.		
1	100+00	12.9' LT EBL	F&L 15" RC APRON	CB	C OR G	4.2	-	868.83	864.50	B	PONDING AREA			44'	
2	101+50	12.9' LT EBL	F&L 15" RC APRON	CB	C OR G	5.0	-	869.31	864.14	B	PONDING AREA			58'	
3	101+50	54' RT EBL	CONST. CB IN DEPRESSED MEDIAN	CB	C OR G	3.8	-	868.35	864.68	A	CB 2	67'			
4	108+00	12.9' LT EBL	F&L 15" RC APRON	CB	C OR G	4.5	-	868.71	864.00	B	DITCH			41'	
						TOTALS	17.5					67'		143'	

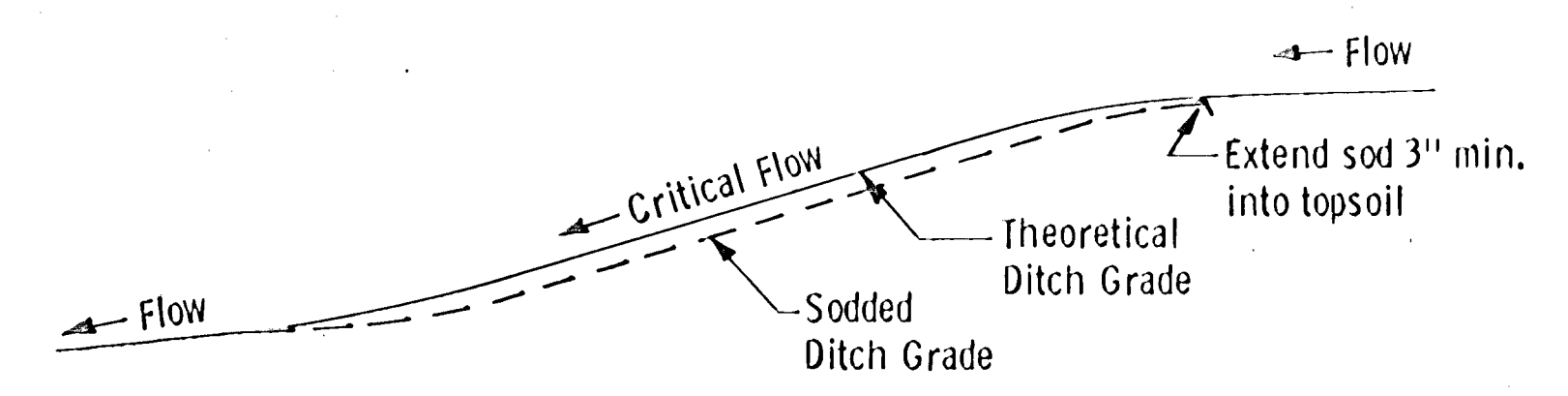
CASTING ASSEMBLIES

ASSEMBLY	ITEM	CASTING NO.	QUANTITY
A	FRAME GRATE	700-7 721	1
B	FRAME GRATE CURB BOX	801 810 821 B	3

DRAINAGE

STATION	LOCATION	IN PLACE	REMARKS	REMOVE		PORTABLE CULVERTS														
				PORT. CULV.	CONC. STRUCT.	SALVAC. CULV.	SOD-DING	RIP-RAP	22" SPAN RCP-A	48" RCP	11" SPAN RCP-A	51" SPAN RCP-A	15" CMP							
				LIN. FT.	CU. YD.	LIN. FT.	SQ. YD.	CU. YD.	LIN. FT.	AP.	LIN. FT.	AP.	LIN. FT.	AP.	LIN. FT.	AP.	LIN. FT.	AP.		
53+50	℄	-					29		78	2										
61+00	LT.	-	ENT.				17								12	2				
68+00	LT.	-	ENT. NO CULV. REQ.																	
70+75	℄	-					112	50							112					
81+90	LT.	-	ENT.				17								12	2				
90+17	LT.	-	RD. APR. NO CULV. REQ.																	
97+00	℄	-					50					81	2	SALVAGE	℄ PIPE	CULV.				
108+26	℄	36" X 66" CMP				66		58						88	2					
81+00	℄	-	SALVAGE FROM STA. 97+00									128	2							
TOTALS						96		112	221		78	2	82	2	81	2	88	2	196	4

Ⓢ FOR TEMPORARY USE UNTIL ROADWAY CONSTRUCTED TO GRADING GRADE AND PERMANENT PLACEMENT OF 48" RCP CULV.
 NOTE: TIE ALL SECTIONS RCP & RCP-A CULVERT EXCEPT 22" SPAN RCP-A TIE APRON AND 2 SECTIONS OF 22" SPAN RCP-A CULVERT.



NOTE: APPLIES TO DITCH GRADES 20% OR GREATER.

DITCH PROFILE

SODDED DITCH DETAILS

BEGIN PROJECT C.P. 85-03-116
STA. 52+46

OR W.B. PI 62+60.09 = A PT. 12' LT. & L TO SURVEY STA. 62+60.00
 $\Delta = 1^\circ 08' 45''$ LT.
 $D = 0^\circ 30'$
 $R = 11,459.16'$
 $T = 114.59'$
 $L = 229.17'$
 $E = 0.57'$

OR WB. PI. 57+60.00 A PT. 22' LT. & L TO SURVEY STA. 57+60
 $\Delta = 1^\circ 08' 45''$ RT.
 $D = 0^\circ 30'$
 $R = 11,459.16'$
 $T = 114.59'$
 $L = 229.17'$
 $E = 0.57'$

OR W.B. PT. 63+74.67 = A PT. 12' LT. & L TO SURVEY STA. 63+74.67

62579

P.O.T. 52+22.57
 STA. 52+90 F&I. 1-PULL BOX & 70', 3" RSC.
 FOR FUTURE SIGNAL SYSTEM. ENDS OF CONDUIT
 SHALL BE THREADED AND CAPPED WITH
 STANDARD PIPE CAPS.

P.O.T. 59+659.1
 CONST. ENT. STA. 61+00
 LT.

NOTE: 2 GAS MAIN INPLACE
 1- 8" STA. 52+55
 1- 16" STA. 52+78

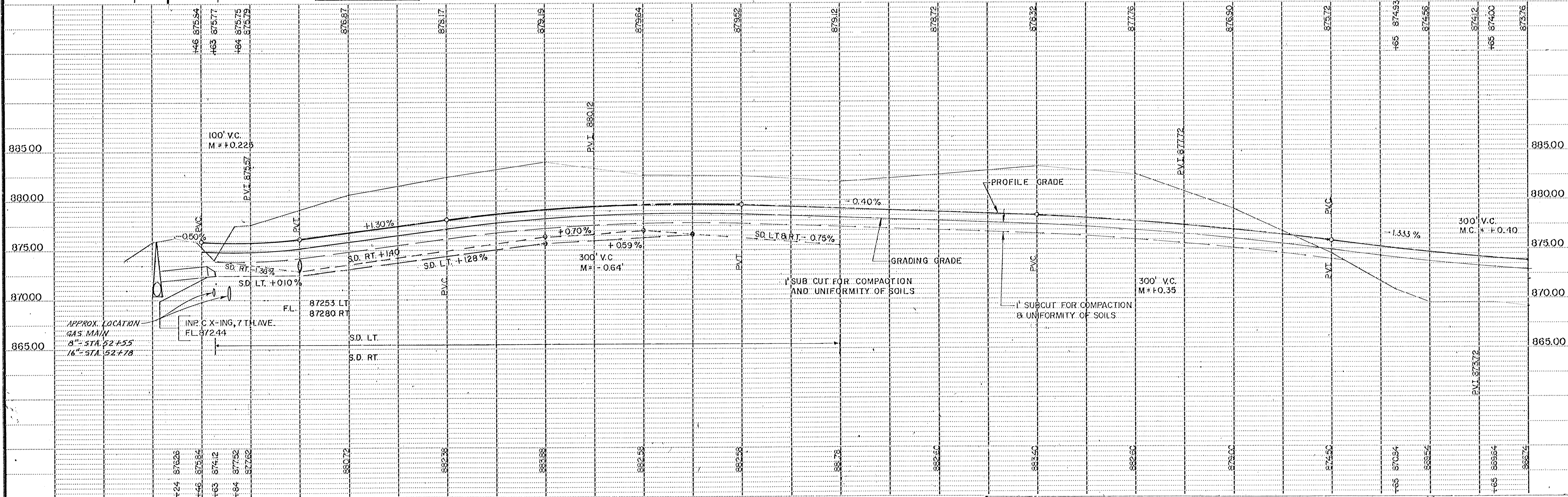
BM # 18 ELEV. 878.31
 R.R. SPIKE IN PP
 STA. 52+60 RT. 75'

■ DENOTES 4" CONC. MEDIAN PAVING

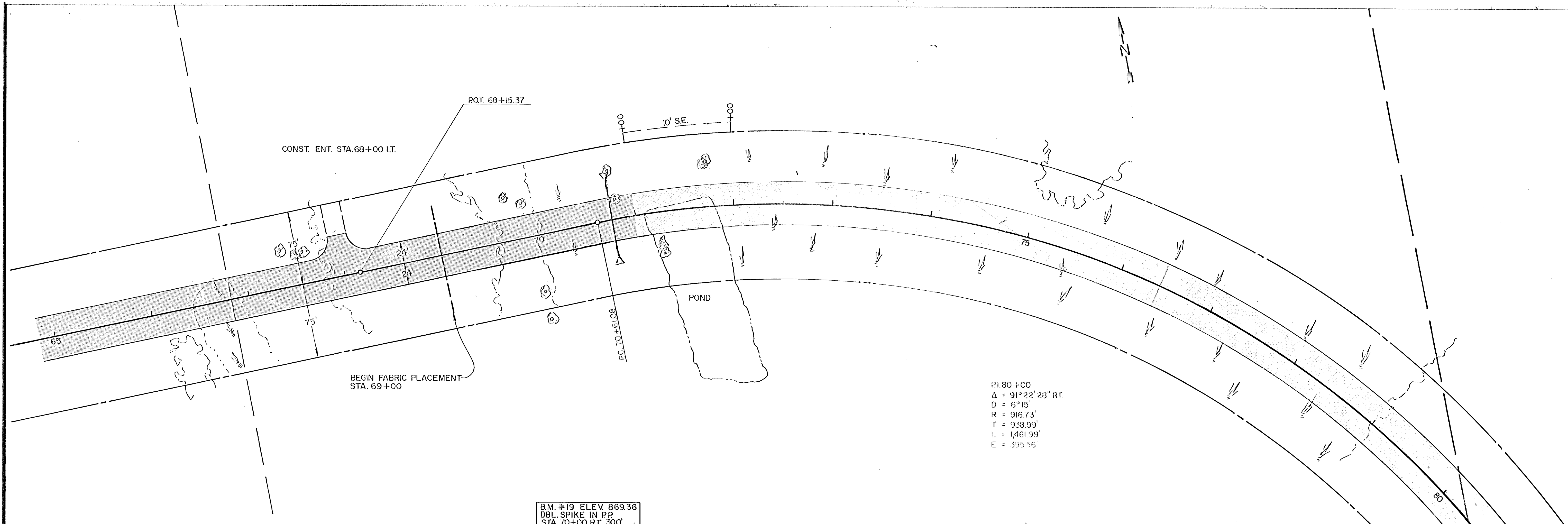
OR E.B. PI. 59+20.00 A PT. 22' RT. & L TO SURVEY STA. 59+20.00
 $\Delta = 1^\circ 08' 45''$ LT.
 $D = 0^\circ 30'$
 $R = 11,459.16'$
 $T = 114.59'$
 $L = 229.17'$
 $E = 0.57'$

OR E.B. PT. 64+20.09 = A PT. 12' RT. & L TO SURVEY STA. 64+20.00
 $\Delta = 1^\circ 08' 45''$ RT.
 $D = 0^\circ 30'$
 $R = 11,459.16'$
 $T = 114.59'$
 $L = 229.17'$
 $E = 0.57'$

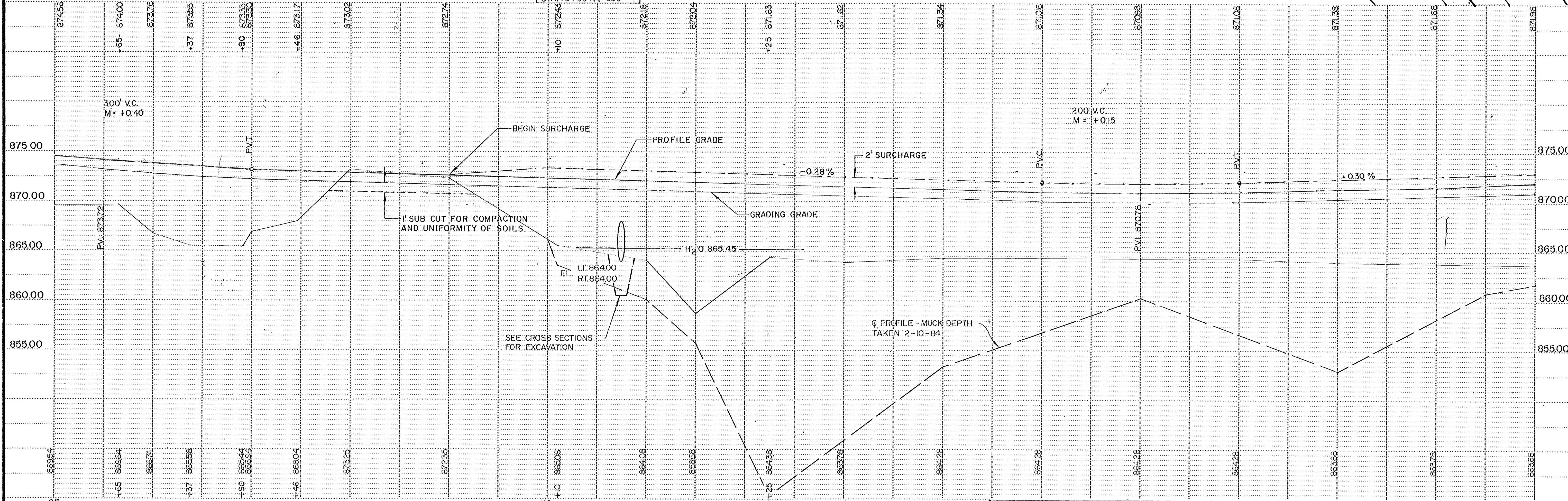
OR E.B. PT. 65+34.97 = A PT. 12' RT. & L TO SURVEY STA. 65+34.97



TELETYPE POST - SINGLE PLAN - PROFILE - 1024



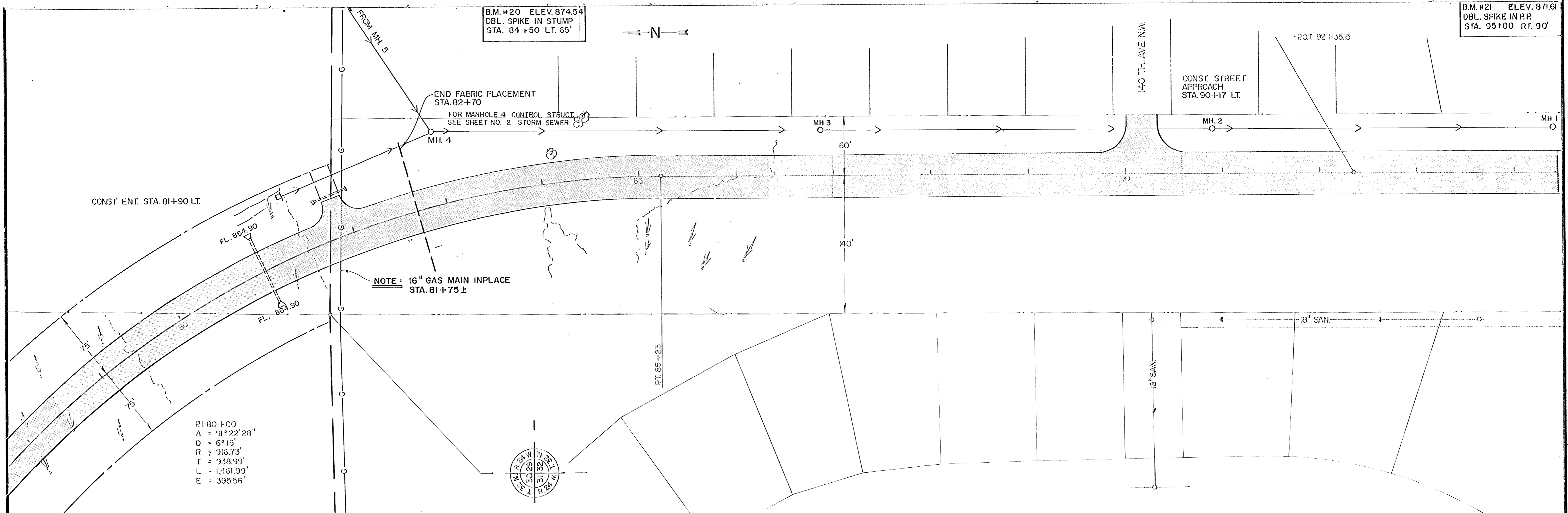
B.M. #19 ELEV 869.36
 DBL SPIKE IN PP
 STA. 70+00 RT 300'



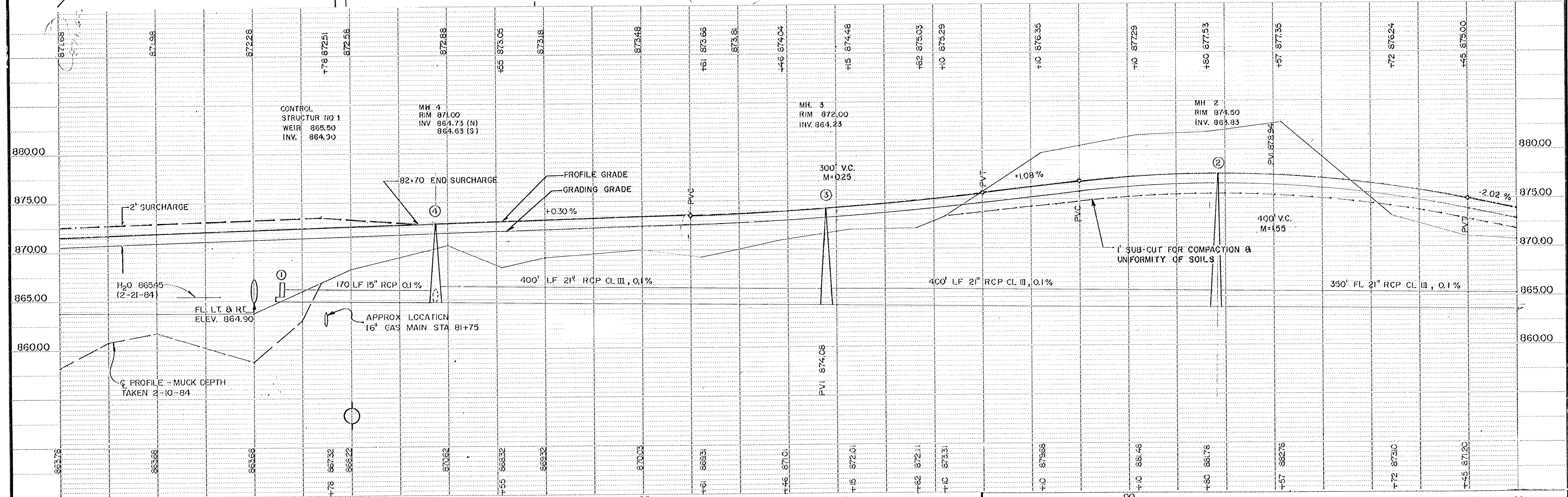
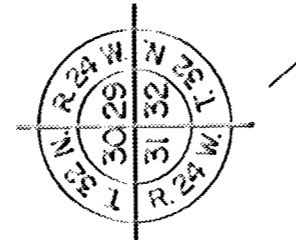
TALLEYNE POST - SINGLE PLAN - 1/4" = 100'

B.M. #20 ELEV. 874.54
 DBL. SPIKE IN STUMP
 STA. 84+50 LT. 65'

B.M. #21 ELEV. 871.61
 DBL. SPIKE IN P.P.
 STA. 95+00 RT. 90'

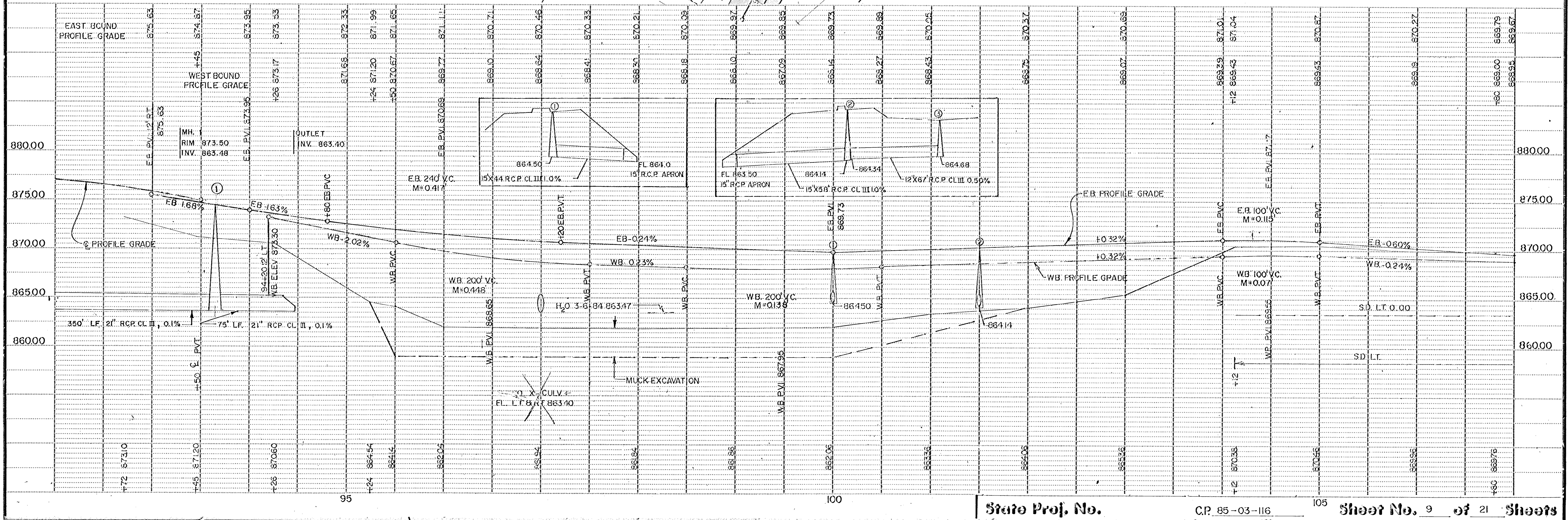
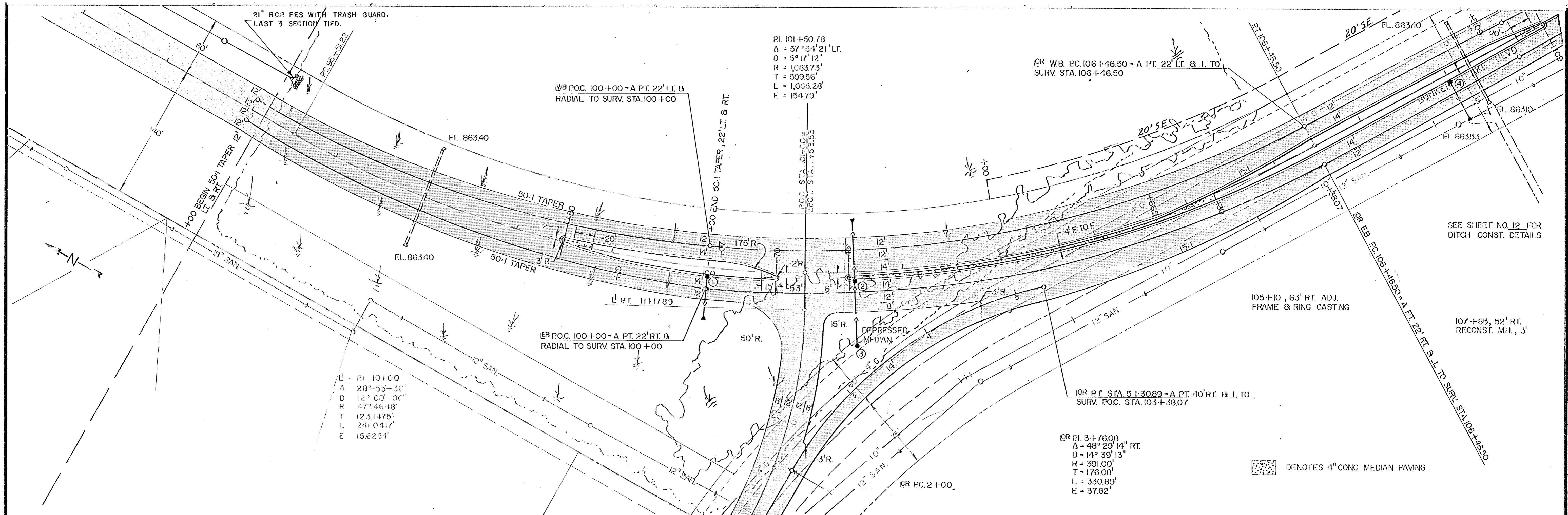


PI 80+00
 $\Delta = 91^\circ 22' 28''$
 $D = 6^\circ 15'$
 $R = 916.73'$
 $L = 1,461.99'$
 $E = 395.56'$



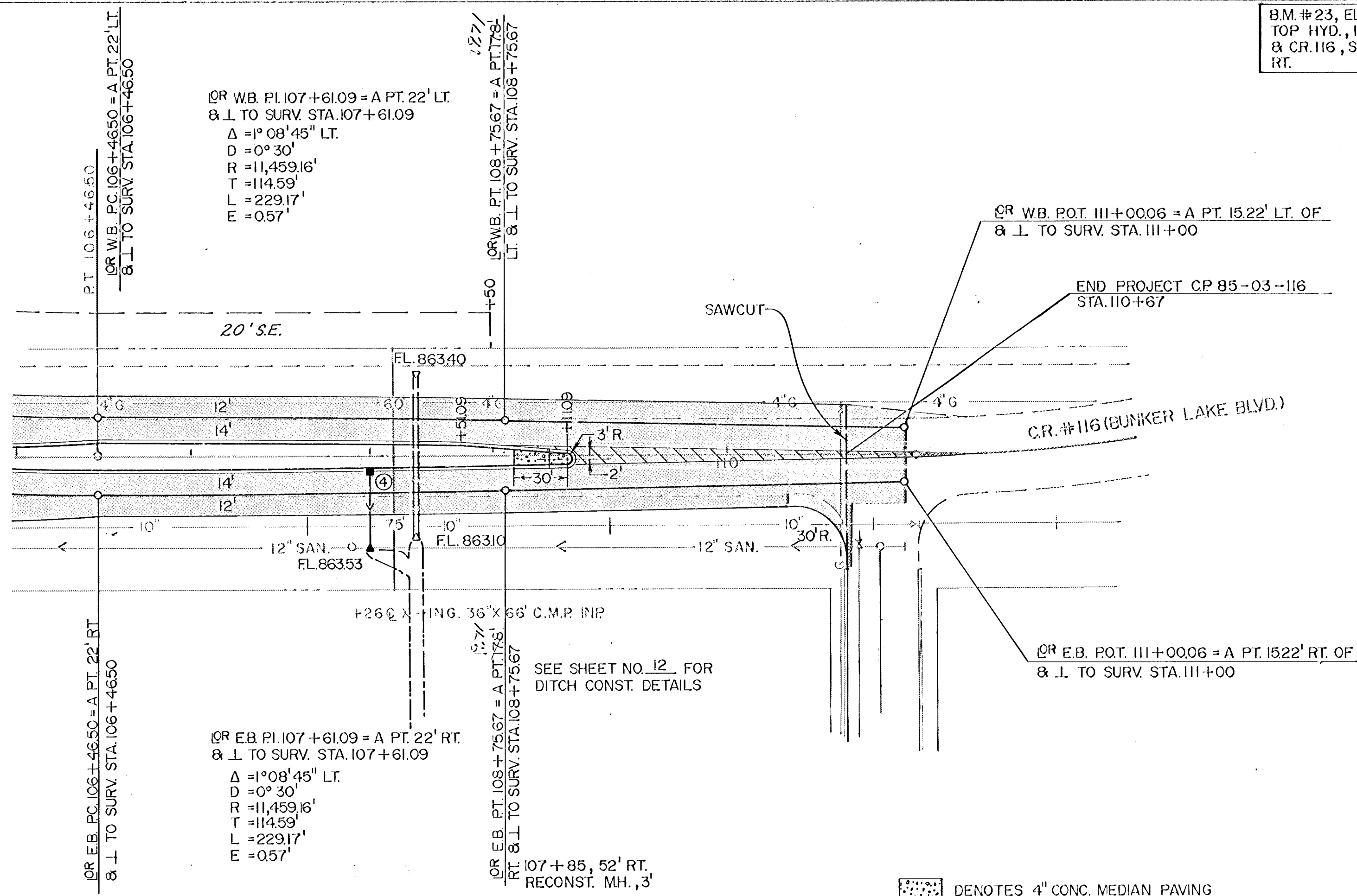
TELLETYPE POST - SINGLE PLAN - PROFILE - 1/2\"/>

UPDATE STORM SEWER BY REVISION 1-30-10

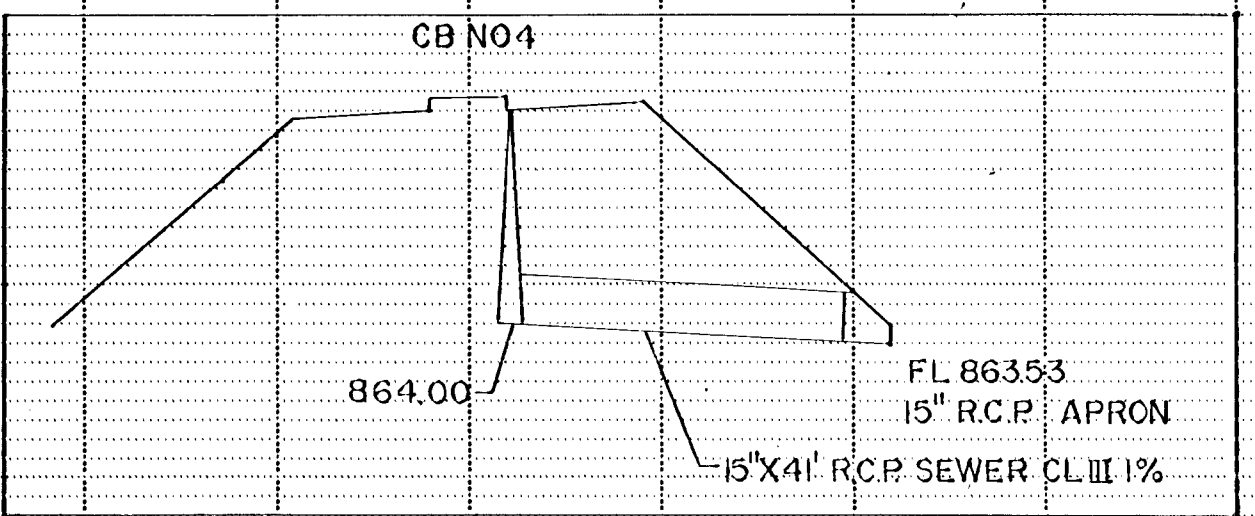
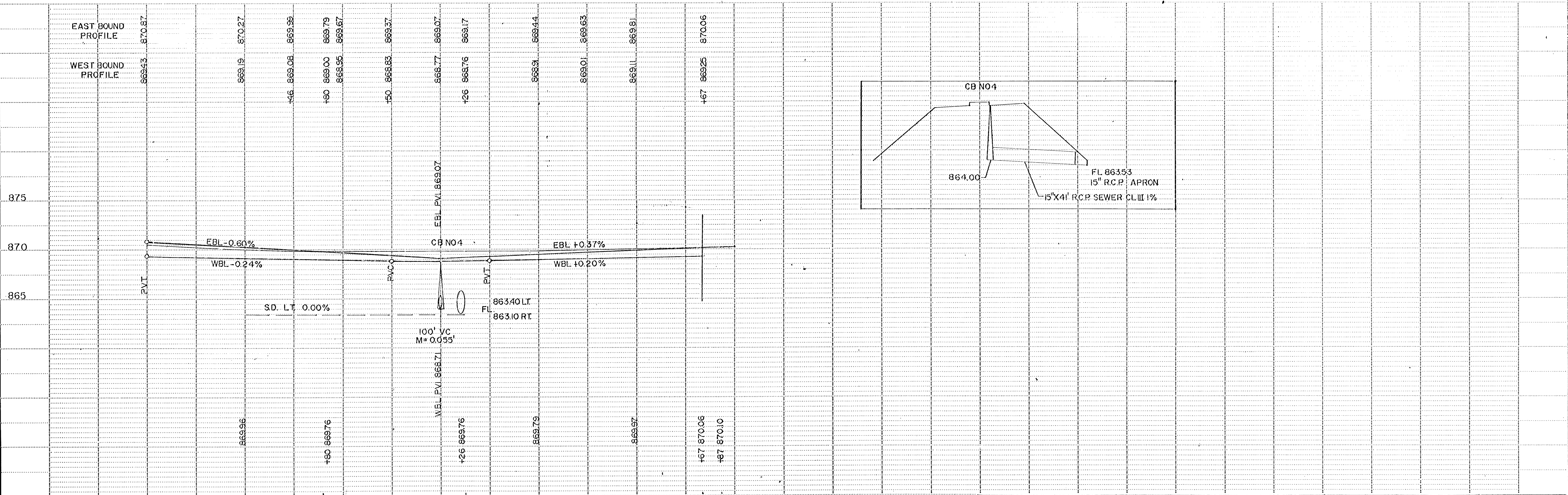


TELEPHONE POST - SINGLE PLAN - PROFILE - 1024

B.M. #23, ELEV. 871.82
 TOP HYD., 112th AVE.
 & CR. 116, STA. 112+00
 RT.



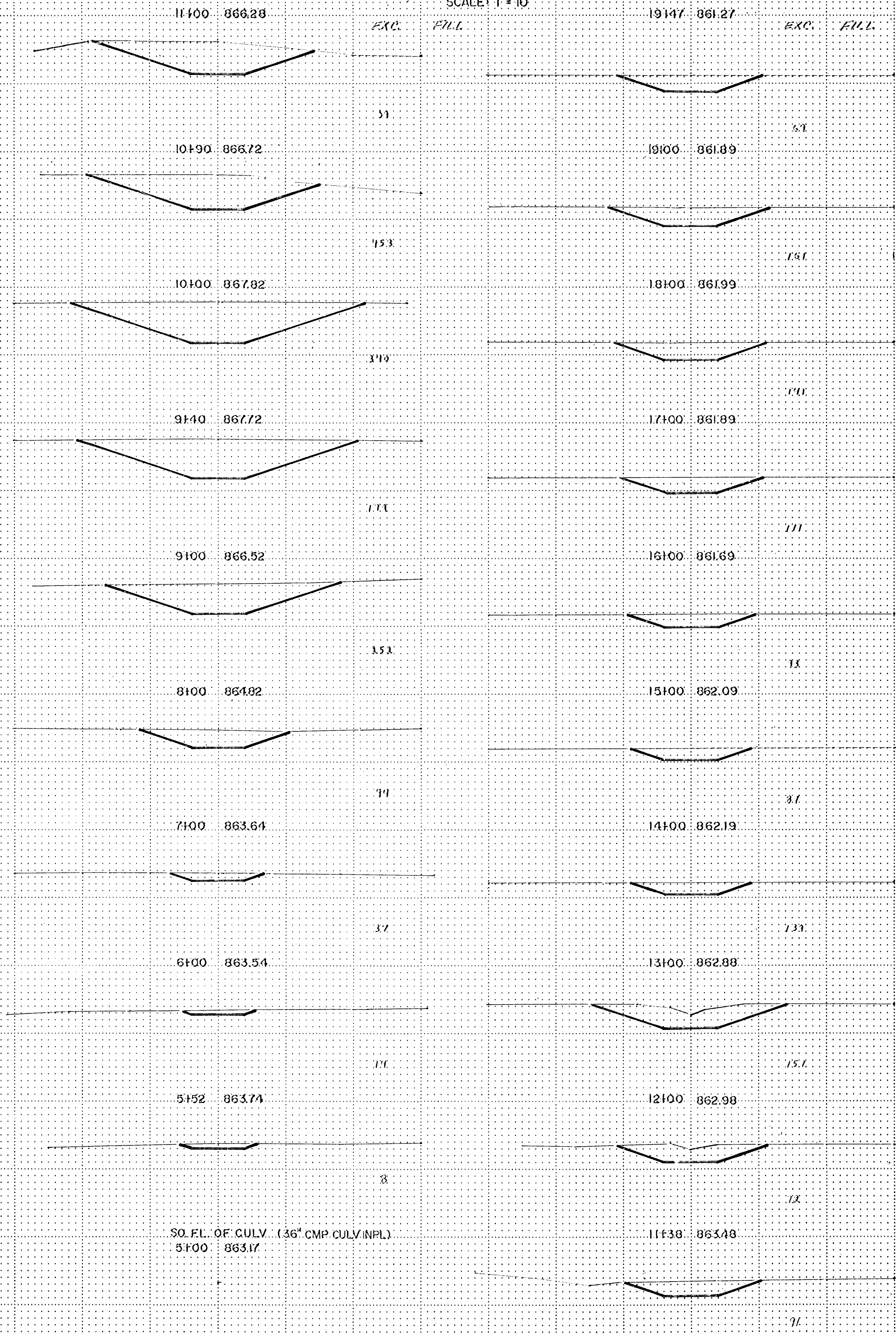
□ DENOTES 4" CONC. MEDIAN PAVING



TELETYPE POST - SINGLE PLAN - INCHES - 1/8\"/>

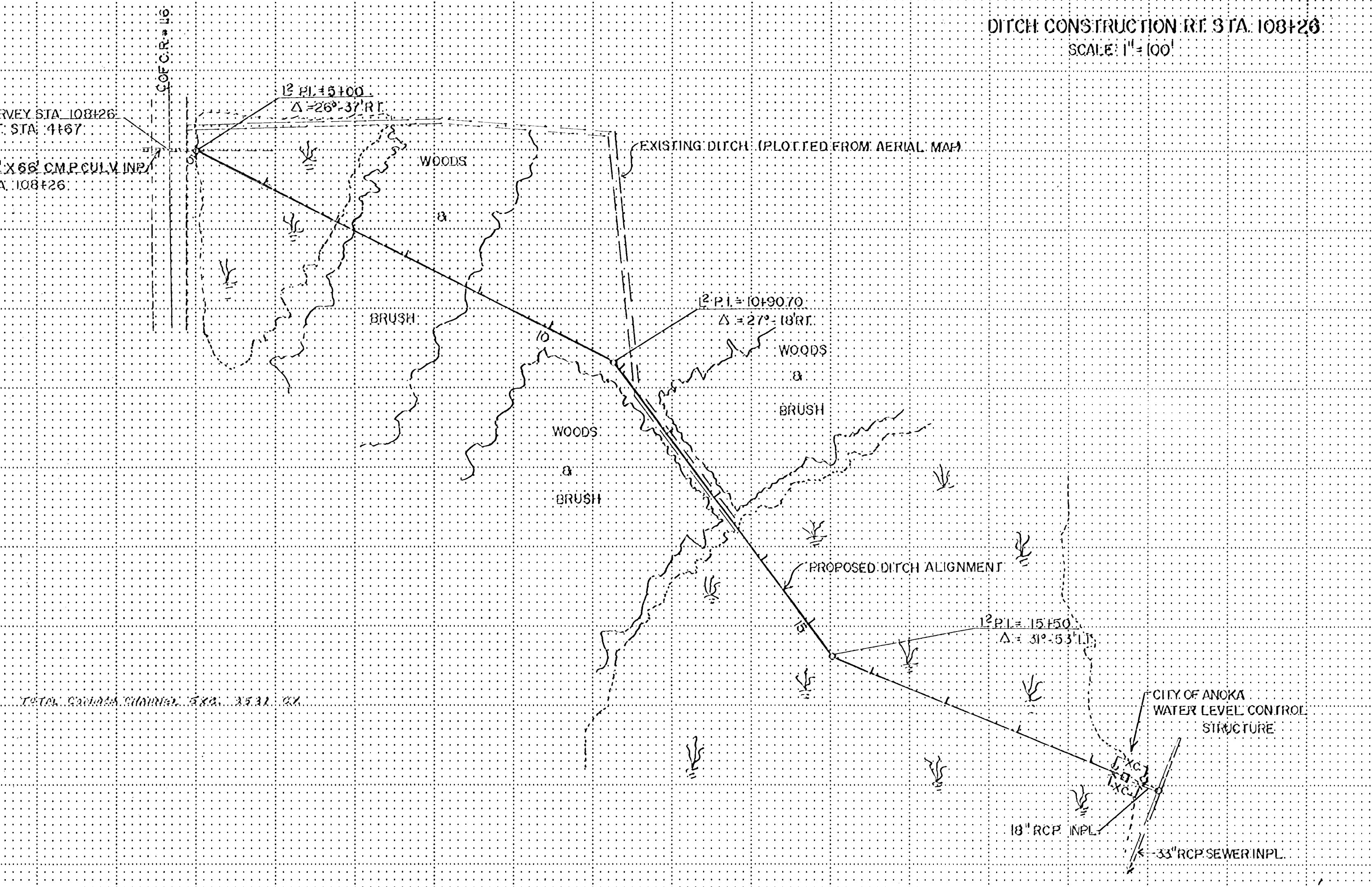
DITCH CROSS SECTIONS

SCALE: 1" = 10'

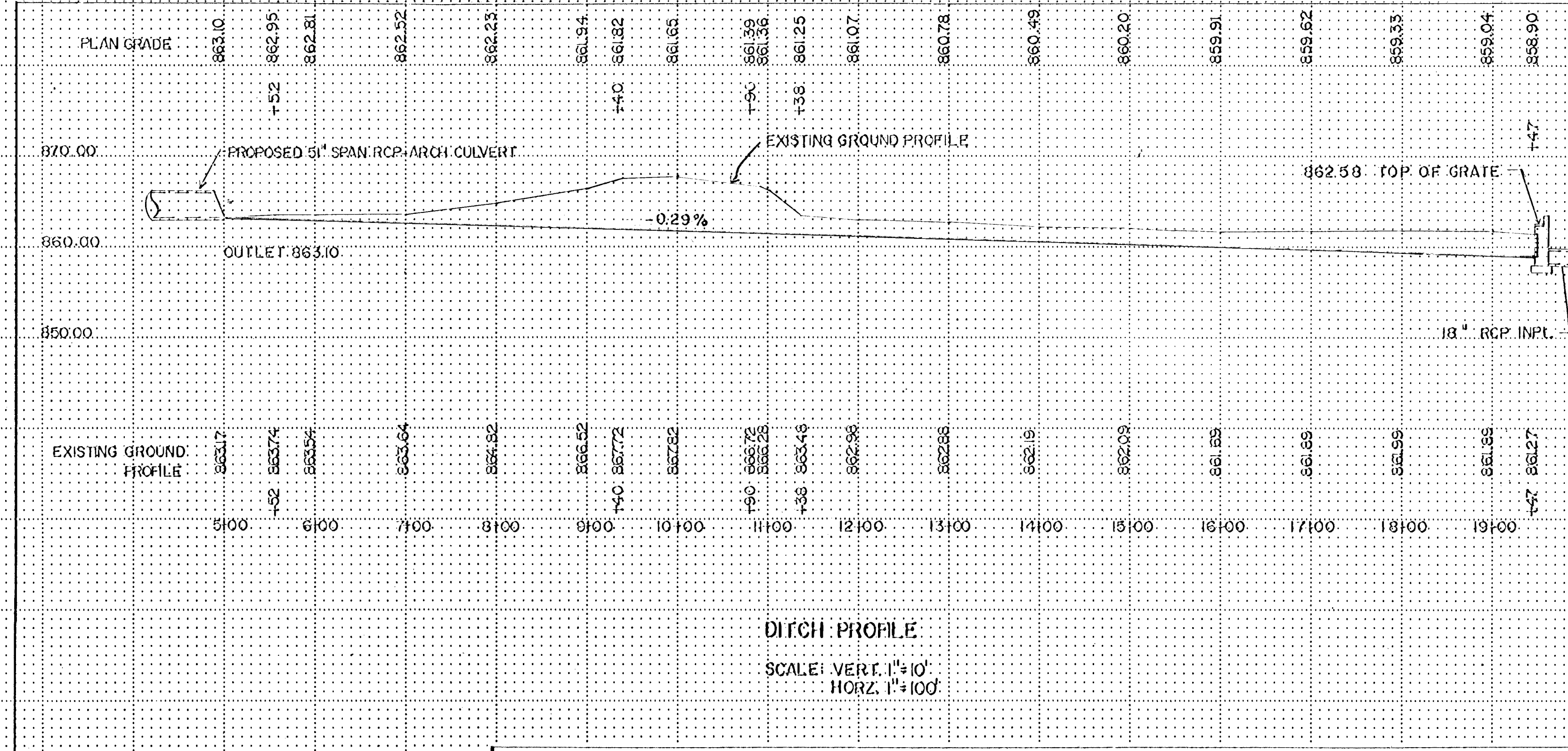


SO. FL. OF CULV. (36" CMP CULV. INPL.)
5+00 863.17

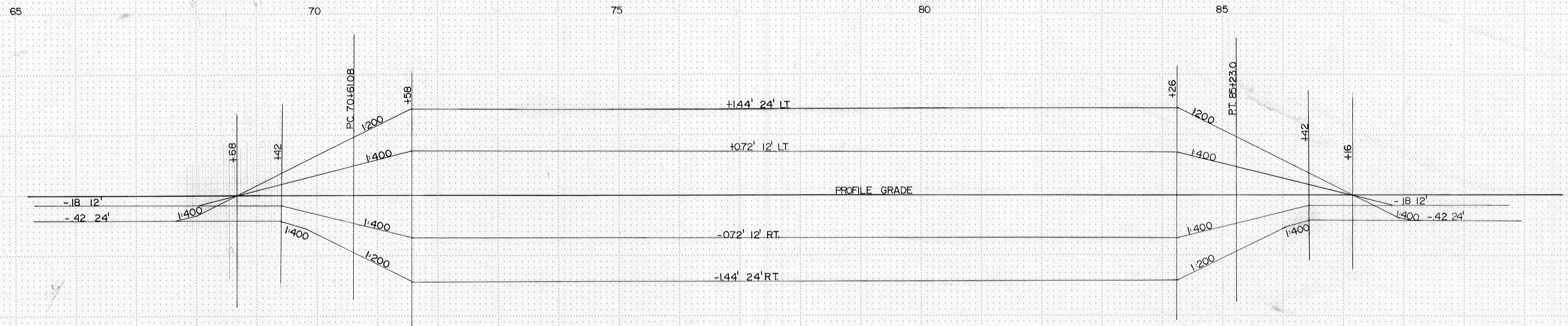
SURVEY STA. 108+26
DIT. STA. 4+67
36" X 66" CMP CULV. INPL.
STA. 108+26



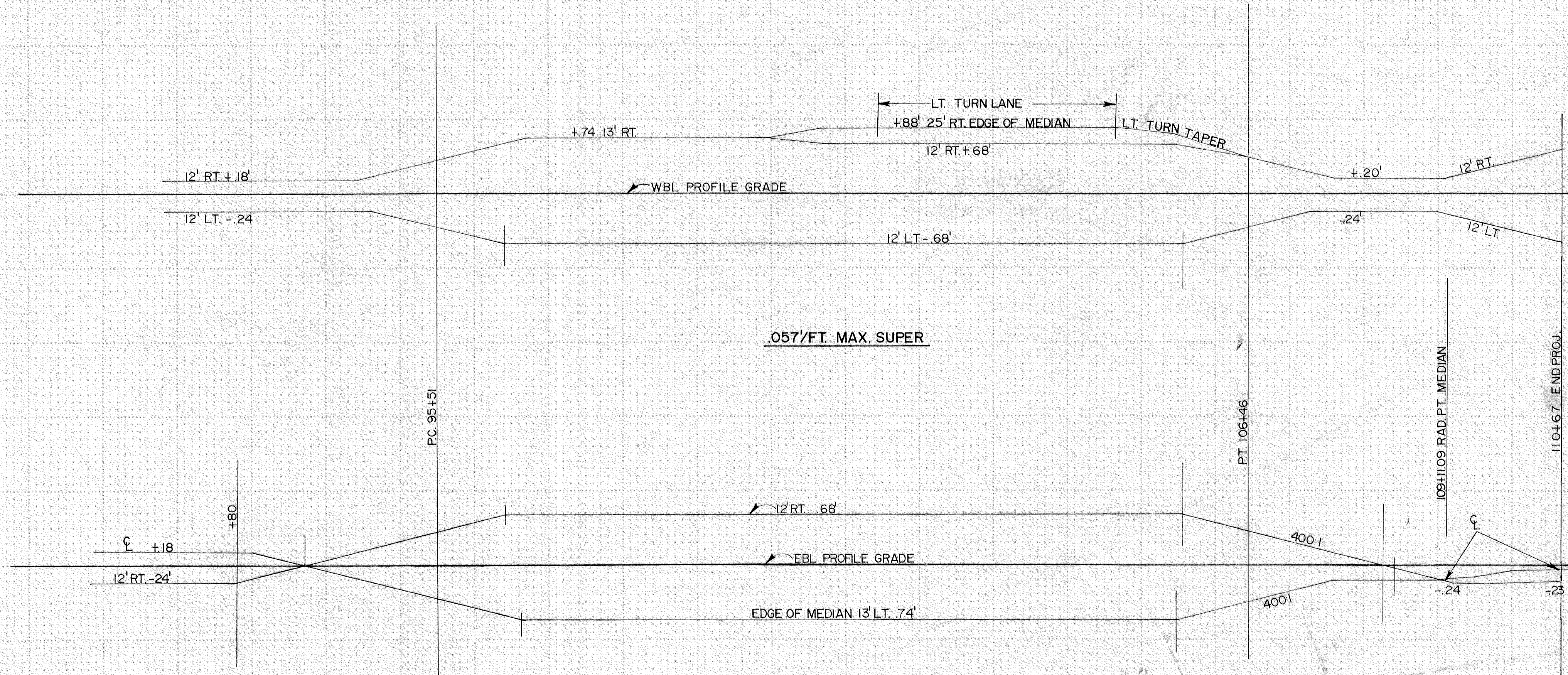
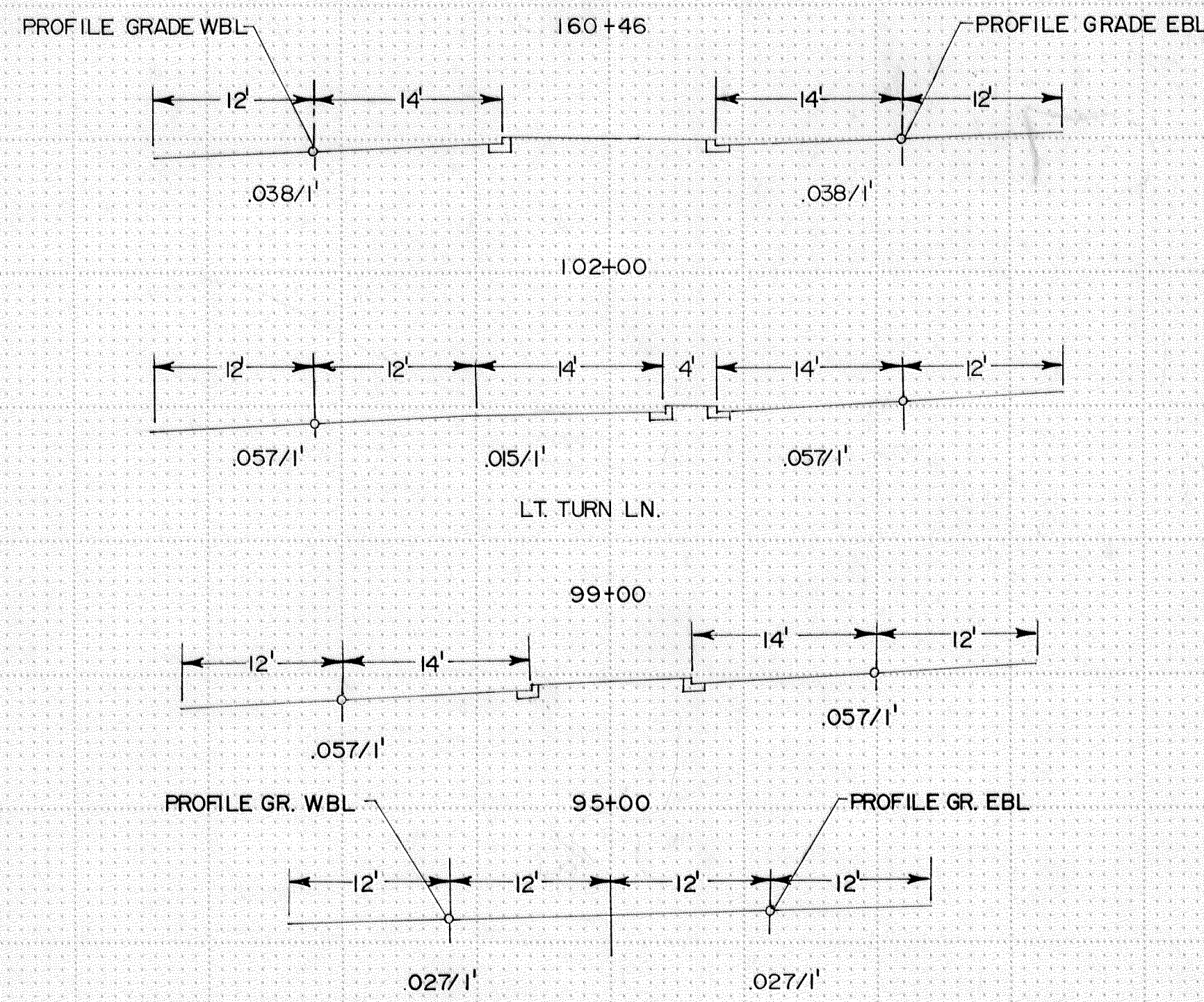
DITCH CONSTRUCTION REF STA. 108+26
SCALE: 1" = 100'



SUPER ELEV. CHARTS

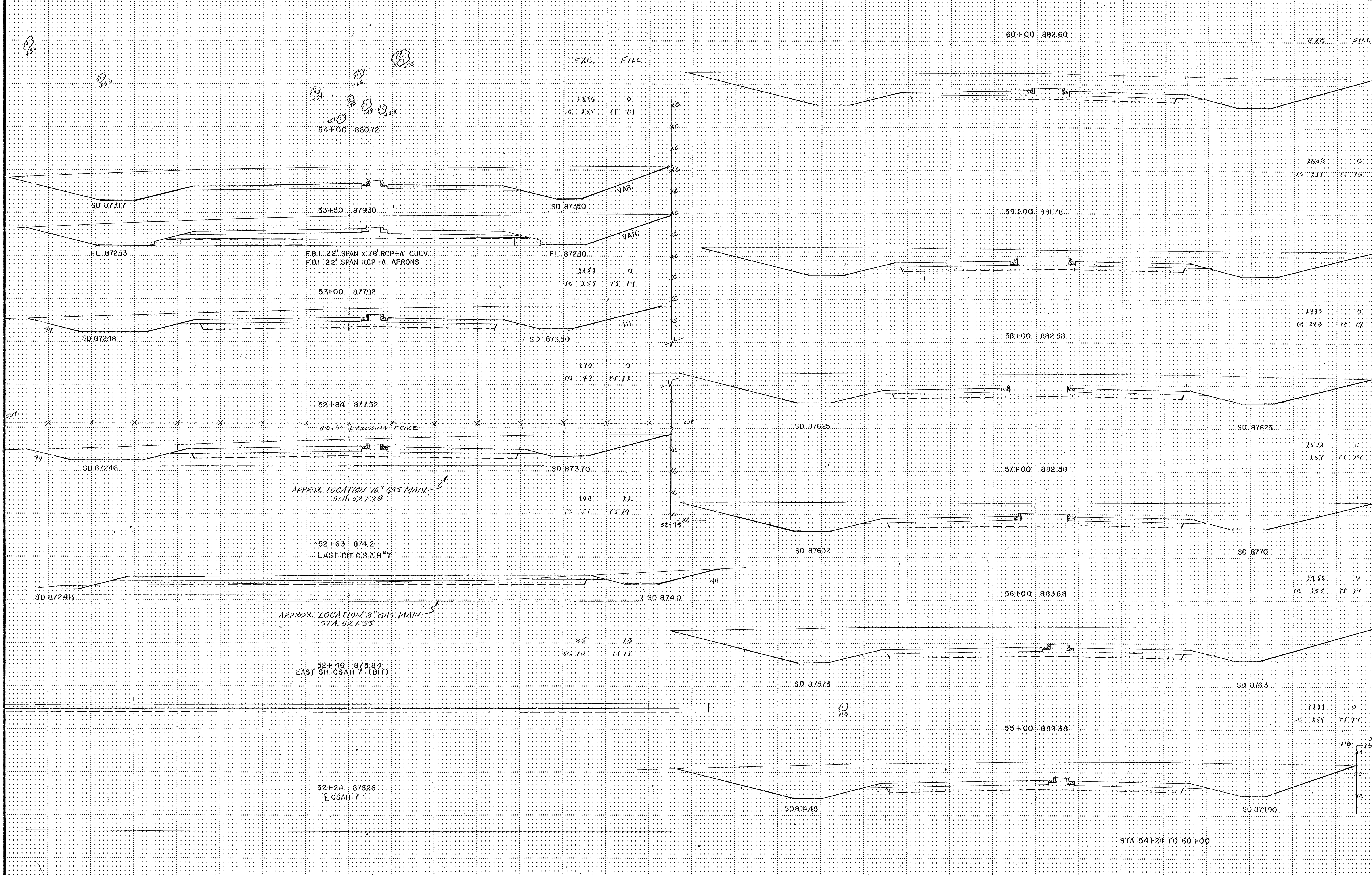


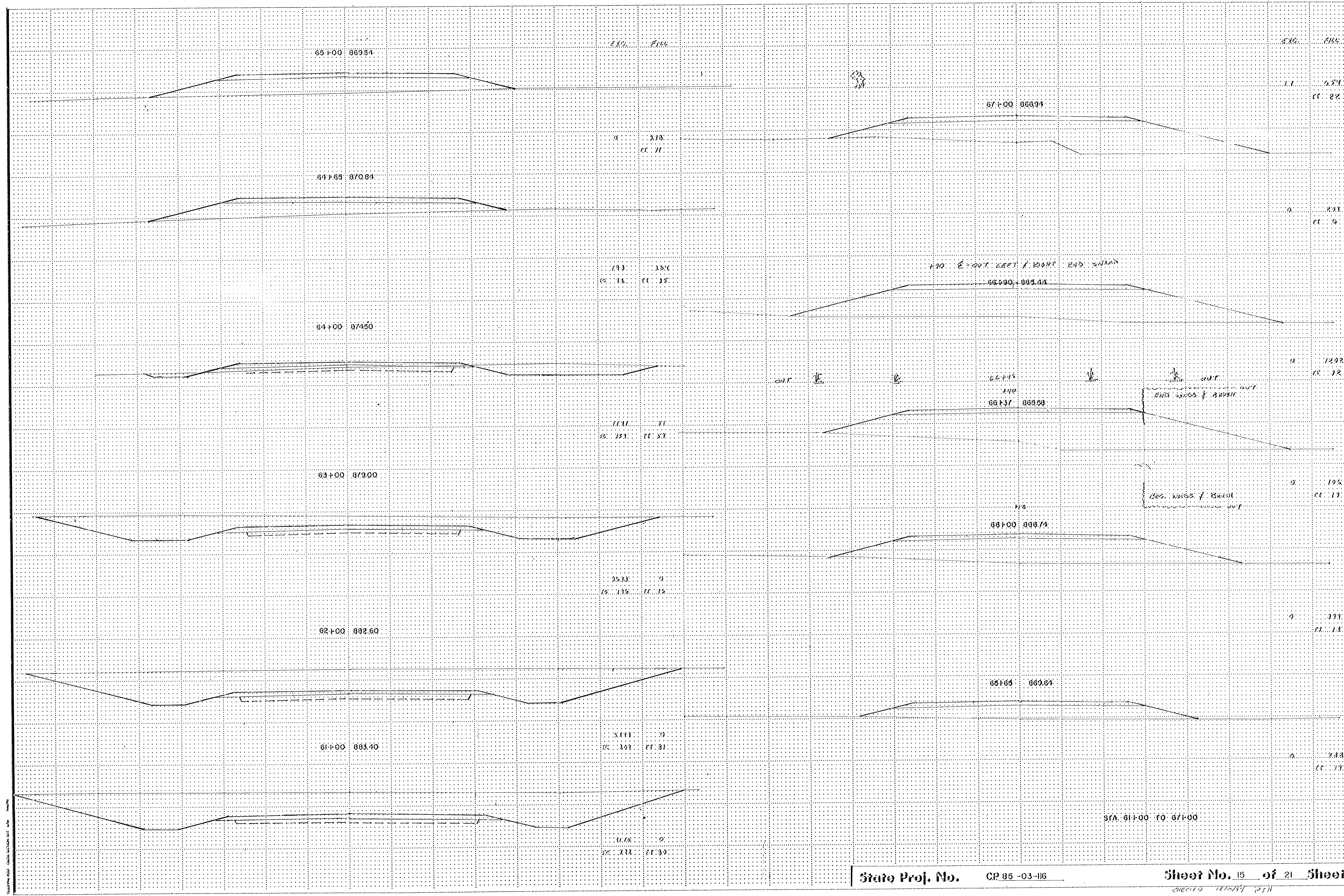
.06'/FT. MAX. SUPER



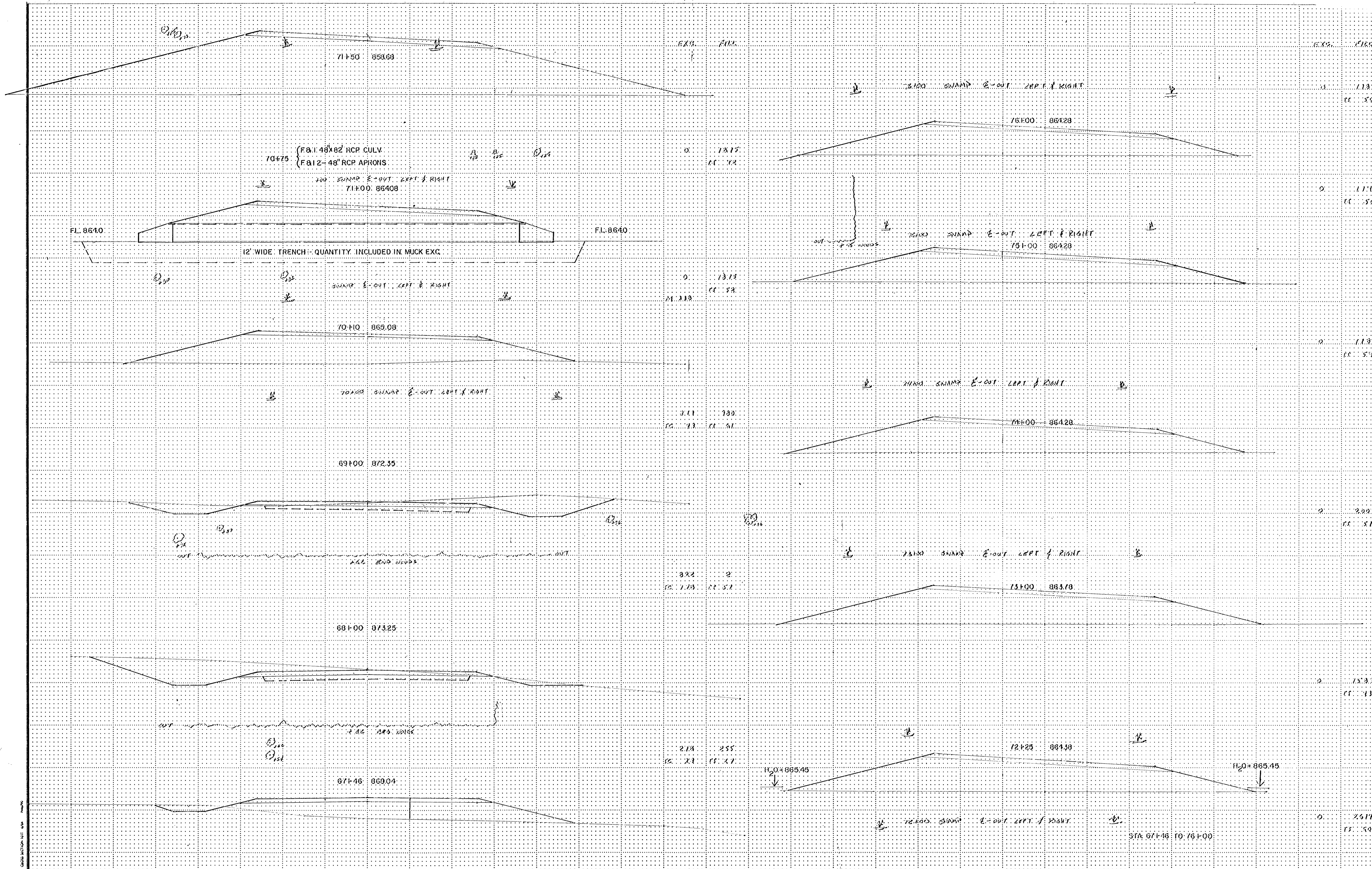
.057'/FT. MAX. SUPER

.057'/FT. MAX. SUPER





VERTICAL CURVE CROSS SECTION UNIT: 1" = 10'



81+65 END WOODS F. BRUSH

81+50 SWAMP E-OUT LEFT & RIGHT

81+00 863.68

EXC. FILL

0.11

800.00 WOODS F. BRUSH

EXC. FILL

81+00 869.32

10.1

83+50 868.32

12

80+00 SWAMP E-OUT LEFT & RIGHT

80+00 863.68

0 232.1
EX 62

83+00 870.62

5.1

81+00 WOODS F. BRUSH

79+00 SWAMP E-OUT LEFT & RIGHT

79+00 863.78

0 235.4
EX 63

82+00 868.22

9

78+00 SWAMP E-OUT LEFT & RIGHT

78+00 863.88

0 215.6
EX 57

QUANTITY DATA TO 82+00

	QUANTITY	SHRINKAGE	ADJUSTED
FILL	31,578 CY	7.5%	= 29,414 CY
SUBSOIL	1,985 CY	7.5%	= 1,838 CY
SURCHARGE	1,422 CY	17.5%	= 1,172 CY
TOTAL FILL REQUIRED			= 32,424 CY
EXCAVATION			= 31,500 CY
IRREGULAR BORROW			31,150 CY
REPLACE 50% OF SURCHARGE			3,451 CY
GRAVEL FILL 1047 CY		13.5%	= 914 CY
MUCK EXCAVATION			338 CY

81+70 867.32

0 173.1
EX 54

APPROX. LOCATION - 16" GAS MAIN
STA. 81+15

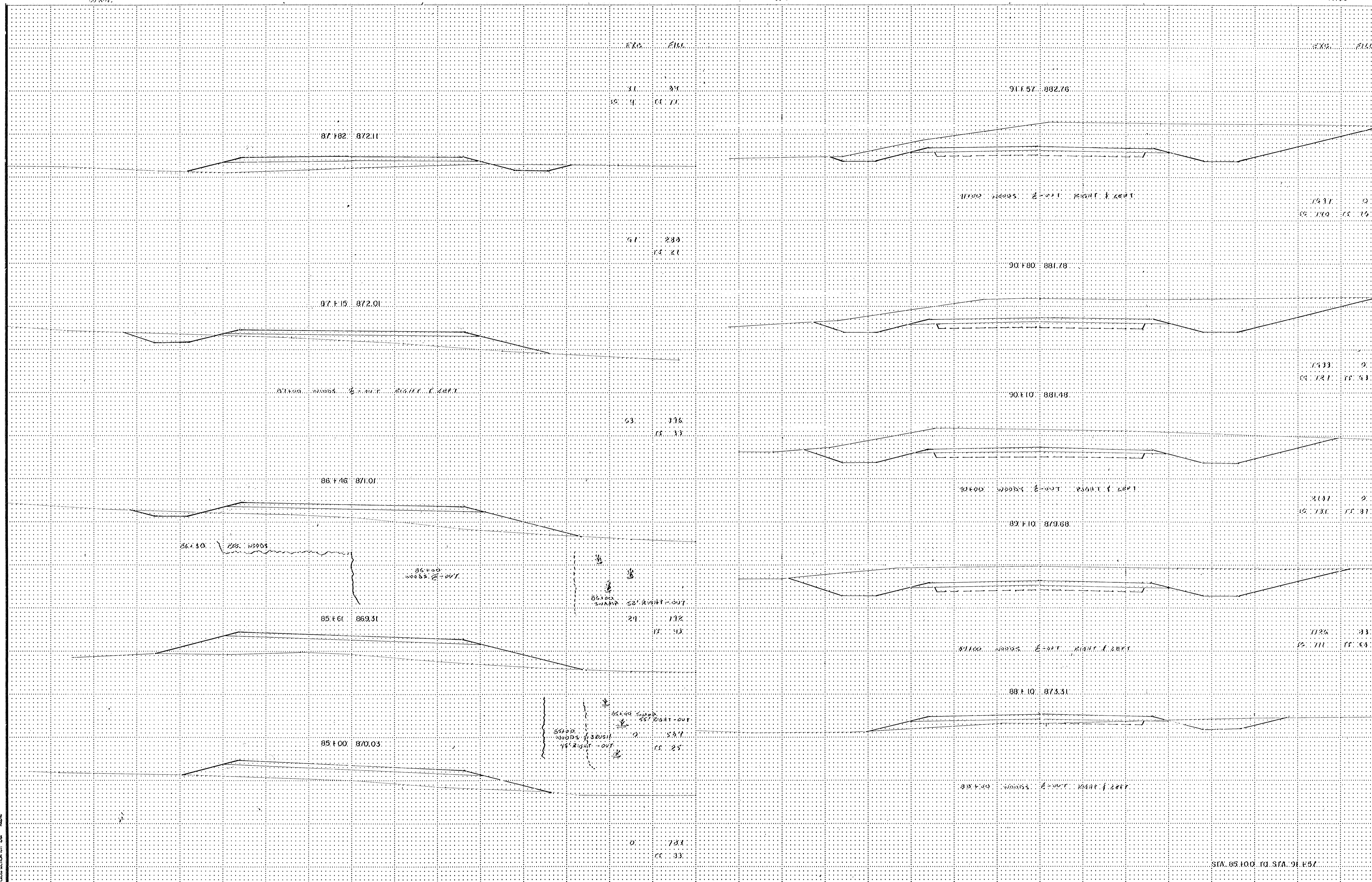
9

77+00 SWAMP E-OUT LEFT & RIGHT

77+00 864.28

STA. 77+00 TO 84+00

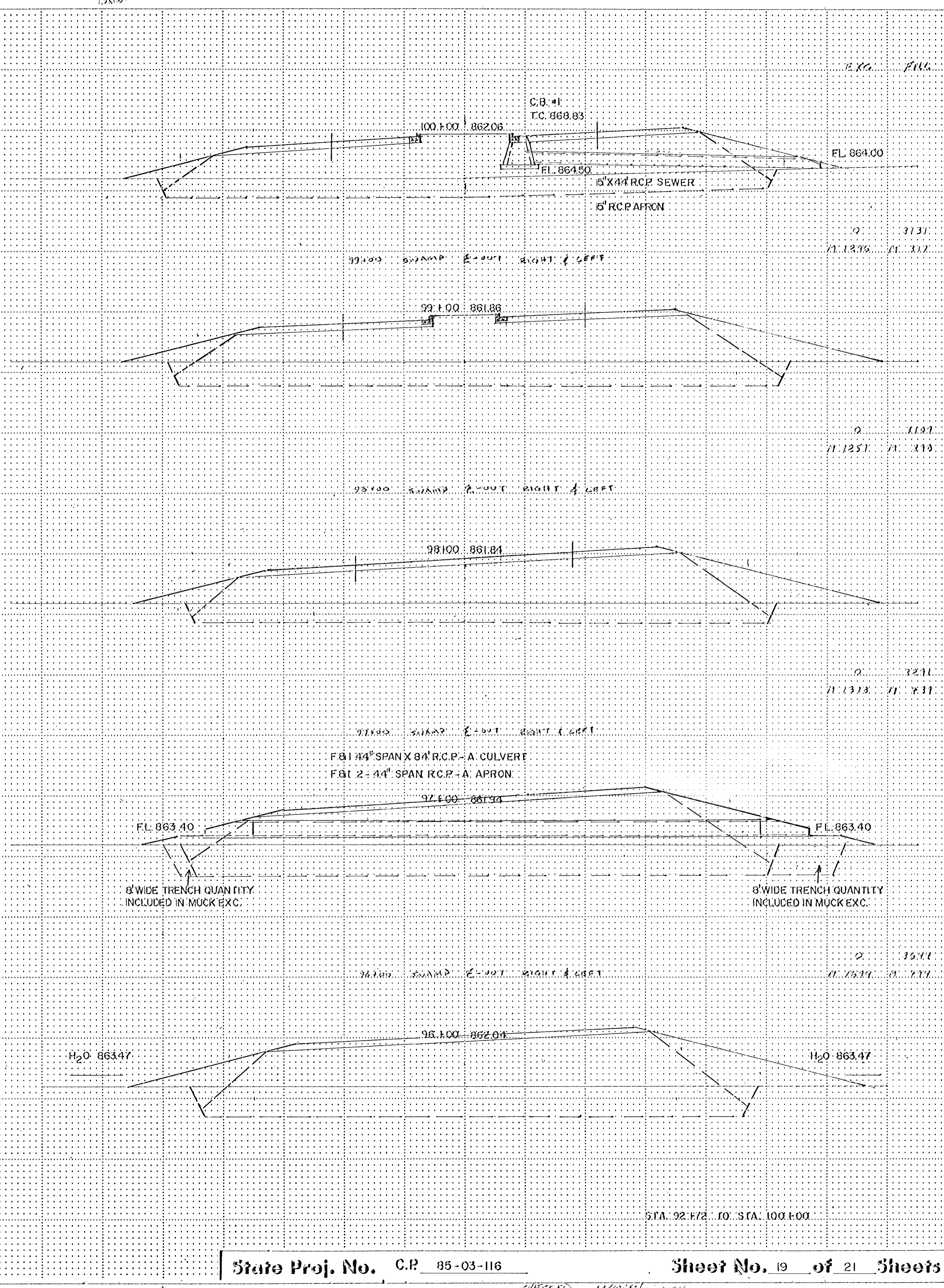
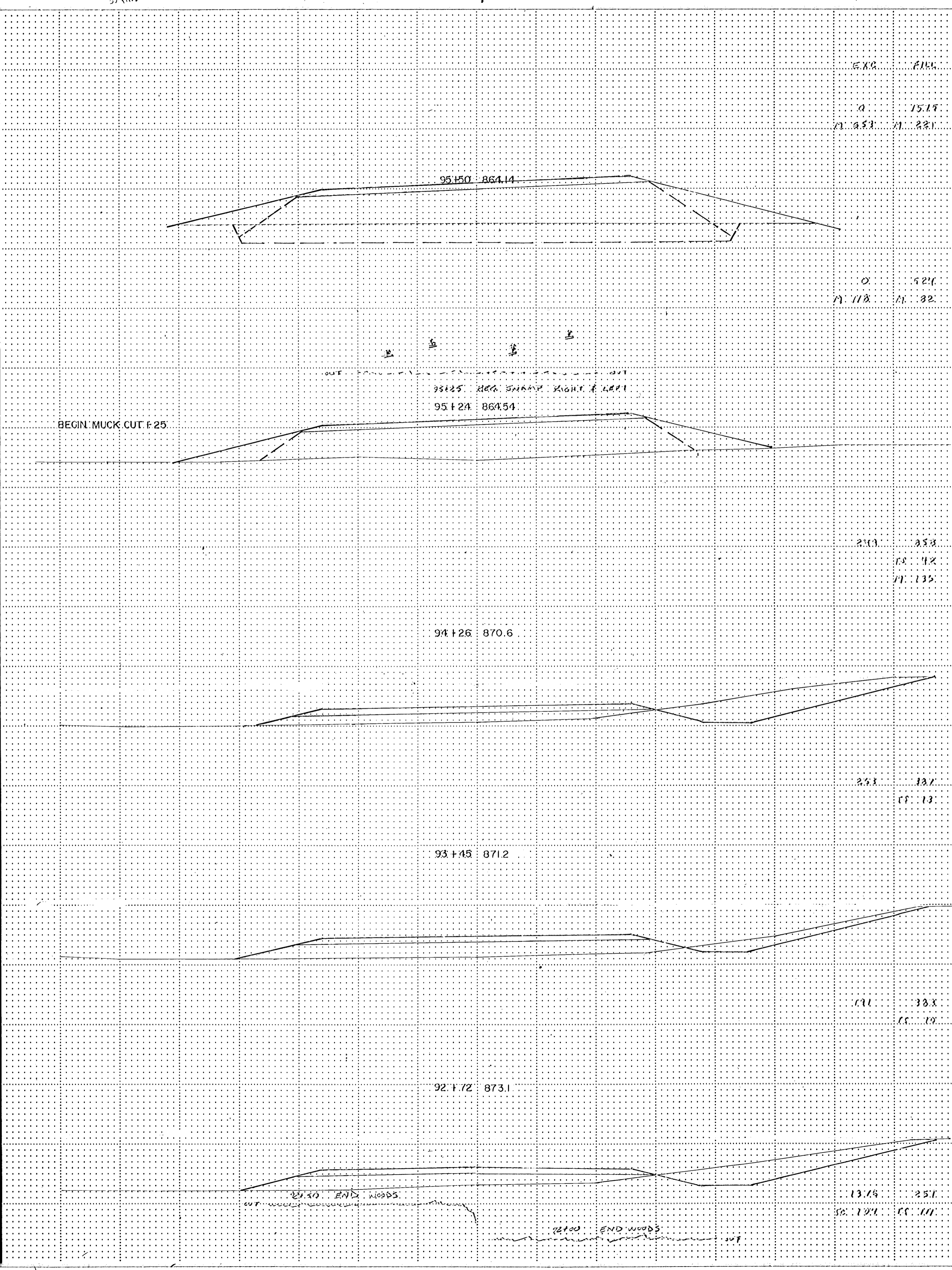
12.1

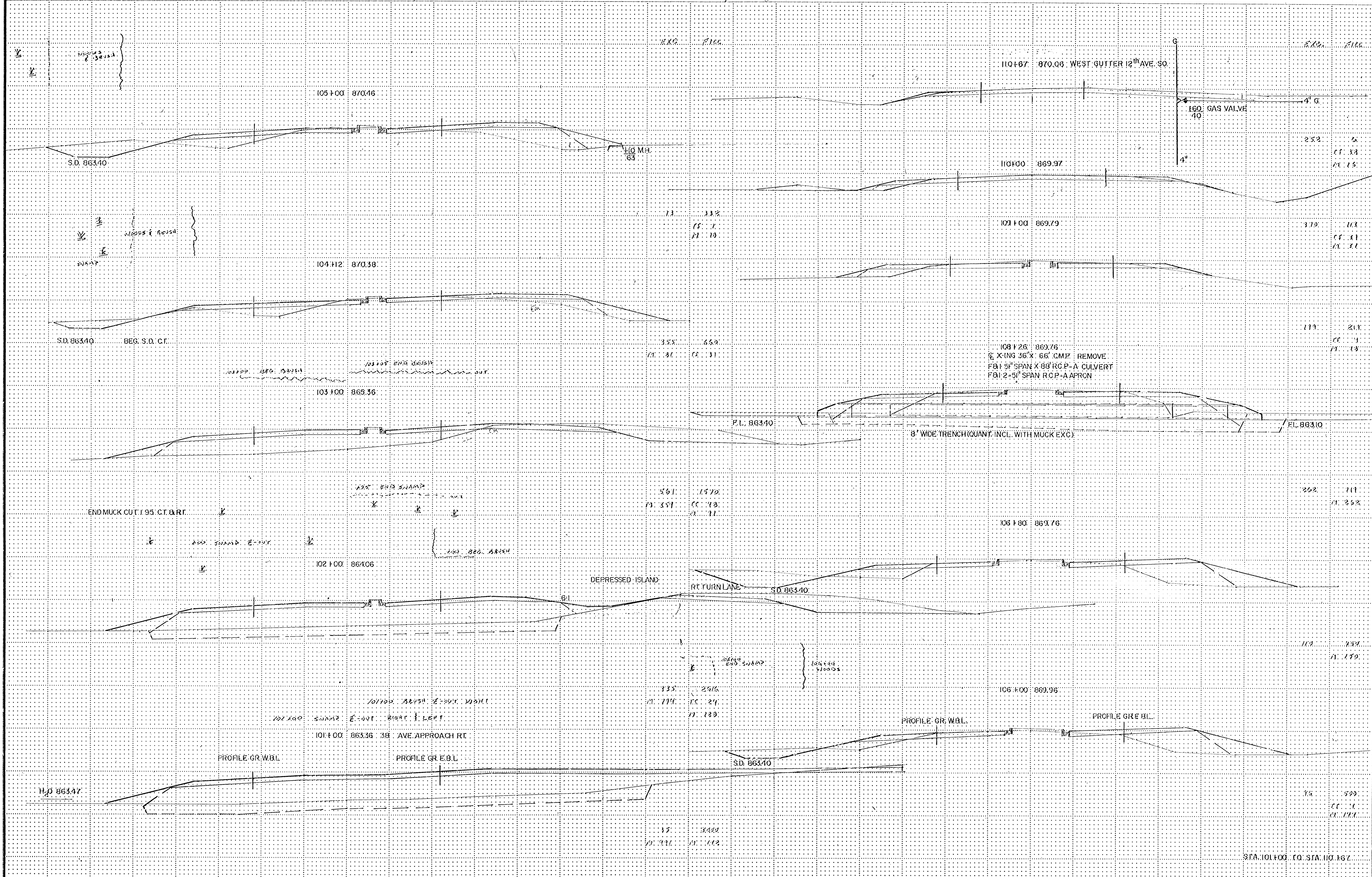


STA. 85+00 TO STA. 91+50

12/10/57

TRAVERSE POST OCCUPATION LIST





12/10/51 211

L 11+00 865.05

FREE RIGHT TURN LANE

DEPRESSED MEDIAN

L 10+25 871.85

DEPRESSED MEDIAN

FREE RT. TURN LANE

L 10+00 870.25

DEPRESSED MEDIAN

FREE RT. TURN LN.

L 9+50 872.61

VAR

L 9+00 872.57

BALANCE BOUND TO 110+00
(CONCLUDES 30th AVE. CROSSING)

ITEM	QUANTITY	UNIT	PRICE	TOTAL
PAVEMENT	31,630	SQ. YD.	2.75	86,982.50
CONCRETE	1,111	SQ. YD.	1.50	1,666.50
TOTAL PAVEMENT				88,649.00
EXCAVATION	13,178	CY	1.50	19,767.00
GRANULAR BASE	11,121	CY	1.50	16,681.50
PAVEMENT	1,071	SQ. YD.	1.25	1,338.75
MASK EXCAVATION				8,500.00
MASK PAVEMENT				23,111.00

① BIG PAVEMENT REMOVAL AND UNDER 110+00

PROPOSED TOTALS (CONCRETE IN PLACE)

CONCRETE EXCAVATION	13,178	CY	3.25	42,830.50
MASK EXCAVATION	8,778	CY	1.50	13,167.00
GRANULAR BASE	11,121	CY	1.50	16,681.50
PAVEMENT	3,613	SQ. YD.	(FOR EXCAV. PAV.)	

L 8+65 872.44

L 8+50 872.45 18" BIT. ENT. RT.

30th AVE. APPROACH
L STA: 8+50 - L STA: 11+00

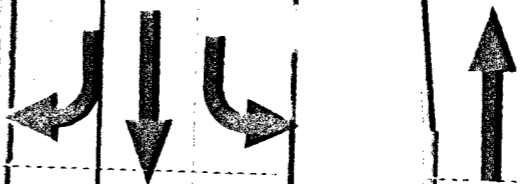
50

ACCESS CLOSED

30

18

30



HWY. 65 SR



HWY. 65 NB