

STATE OF MINNESOTA  
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, BASE & BITUMINOUS SURFACING

ANOKA County Highway No. 71

Between CASH 28 And A POINT 1000' SOUTH

A POINT 3' NORTH & 811' WEST  
From OF THE N.E. COR. SEC. 35, T.34N, R.25W To OF THE N.E. COR. SEC. 35, T.34N, R.25W  
Give proper reference to Sections, Township and Range

GROSS LENGTH	987.00	FEET	0.19	MILES
BRIDGES LENGTH	72.00	FEET	0.02	MILES
EXCEPTIONS LENGTH	72.00	FEET	0.02	MILES
NET LENGTH	915.00	FEET	0.17	MILES

INDEX OF SHEETS

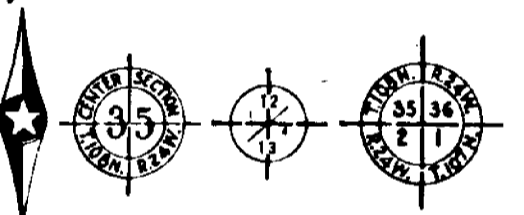
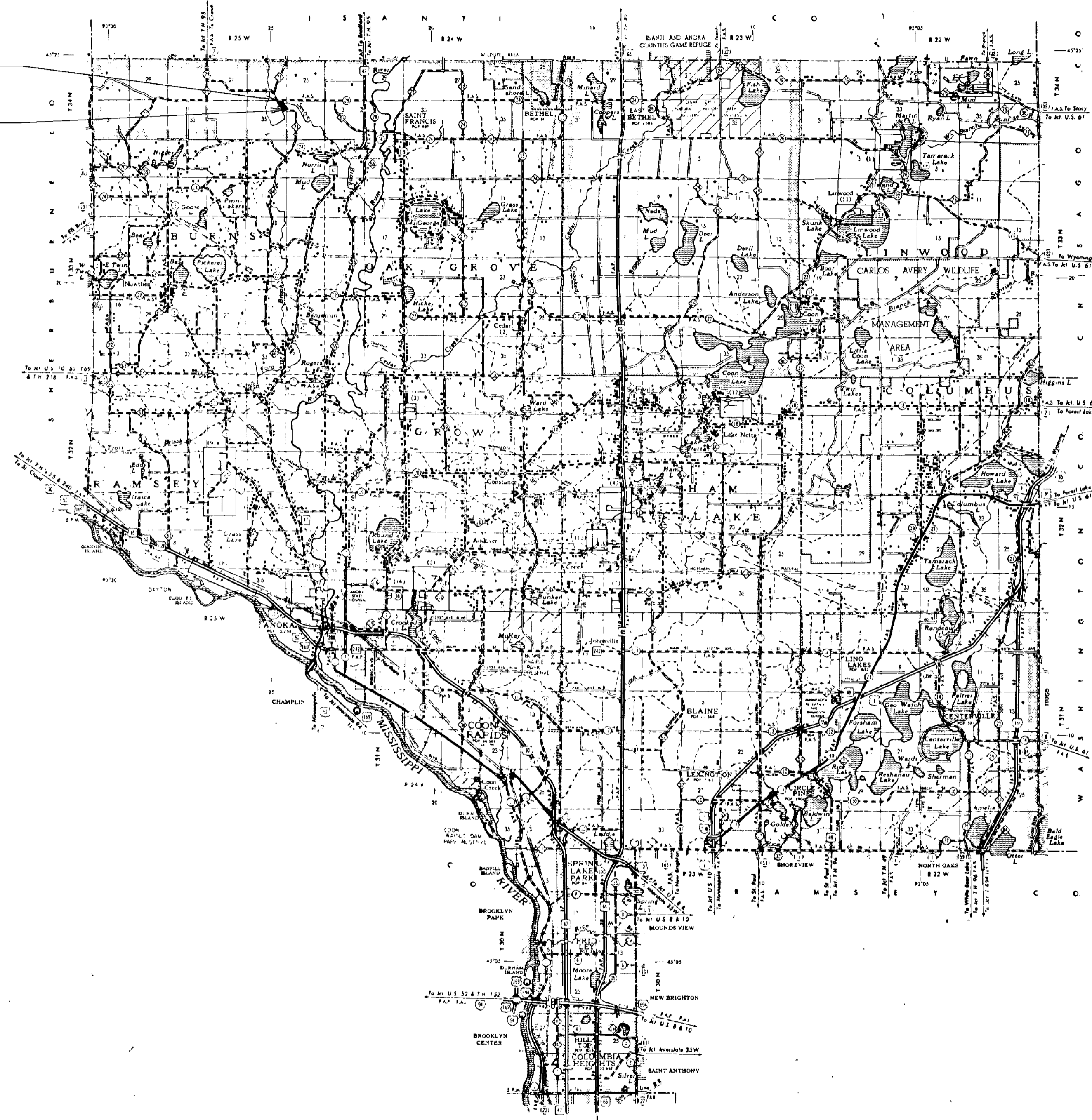
Sheet No. 1	Title Sheet & Layout Map
No. 2	Est. Quantities & Typical Sec.
No. 3	TYPICAL SEC.
No. 4	PLAN & PROFILE
No. 5 TO 6	CROSS SECTIONS

CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- PRESENT RIGHT OF WAY LINE
- CONTROL OF ACCESS LINE
- PROPERTY LINE (Except Lines)
- VACATED PLATTED PROPERTY
- CORPORATE OF CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- RAILROAD RIGHT OF WAY LINE
- RIVER OR CREEK
- DRY RIVER
- DRAINAGE DITCH
- ELECTRIC POWER LINE
- TELEPHONE OR TELEGRAPH LINE
- JOINT TELEPHONE AND POWER
- CONDUIT
- TELEPHONE CABLE-AERIAL
- TELEPHONE CABLE UNDERGROUND
- PUMP
- GAS MAIN
- CULVERT
- PROPANE
- GUARD RAIL
- BARRIED WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- RAILROAD SAWN FENCE
- STONE WALL OR FENCE
- MEGGE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPLINGS
- BARNSH
- TIMBER
- ORCHARD
- BRUSH
- NURSERIES
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE GUARD
- OVERPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F FRAME
- S CONCRETE
- B BRICK
- ST STUCCO
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN PILE
- GRAVEL PIT
- SAND PIT
- BORROW PIT
- ROCK QUARRY
- MEANDER CORNER

BEGIN PROJECT C.P. 86-04-71

END PROJECT C.P. 86-04-71



DESIGN DESIGNATION

ADT (CURRENT YEAR) 267  
 ADT (FUTURE YEAR) 427  
 T (HEAVY COMMERCIAL) LESS THAN 150  
 9 Ton Design  
 Design Speed 45 MPH  
 Design Speed not achieved at:  
 STA. 0+25 TO STA. 3+75 MPH 40  
 STA. \_\_\_\_\_ TO STA. \_\_\_\_\_ MPH \_\_\_\_\_

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION," 1983 EDITION AND SUPPLEMENTAL SPECIFICATIONS, DATED AUGUST 29, 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 FULLY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Paul K. Rind*  
 COUNTY ENGINEER DATE 5/8/86

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. 86-04-71

State Proj. No. \_\_\_\_\_ S.A.P. \_\_\_\_\_

**STATEMENT OF ESTIMATED QUANTITIES**

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	1	
2031.501	FIELD OFFICE, TYPE D	EACH	1	
2101.502	CLEARING	TREE	18	
2101.507	GRUBBING	TREE	15	
① 2105.501	COMMON EXCAVATION (P)	CU. YD.	2,174	
② 2105.525	TOP SOIL BORROW	CU. YD.	120	
③ 2130.501	WATER	M. GAL.	20	
④ 2211.503	ACG. BASE PLACED, CL-5A	CU. YD.	555	
2331.504	BIT. MATERIAL FOR MIXTURE	TON	12.0	
⑤ 2331.514	BASE COURSE MIXTURE	TON	250	
2331.531	TEMPORARY LANE MARKING	RD. STA.	20	
2341.504	BIT. MATERIAL FOR MIXTURE	TON	15.0	
2341.508	WEARING COURSE MIXTURE	TON	240	
⑥ 2357.502	BIT. MATERIAL FOR TACK	GAL.	150	
2501.511	15" CM PIPE CULVERT	LIN. FT.	58	
2501.515	15" CM PIPE APRON	EACH	4	
⑦ 2573.501	BALE CHECK	EACH	24	
2575.501	ROADSIDE SEEDING	ACRE	0.9	
2575.502	SEED, MIXTURE #3	POUND	41	
2575.505	SODDING	SQ. YD.	2,590	
2575.511	MULCH MATERIAL, TYPE 1	TON	1.8	
2575.519	DISC ANCHORING	ACRE	0.9	
2575.531	COM. FERT. ANAL. 10-10-10	TON	0.36	

- ① INCLUDES INPLACE BITUMINOUS PAVEMENT TO BE EXCAVATED AND DISPOSED OF IN EMBANKMENTS.
- ② PROVIDED FOR FRONT YARD AREAS TO BE SODDED, AS DIRECTED BY THE ENGINEER.
- ③ PROVIDED FOR DUST CONTROL, AS DIRECTED BY THE ENGINEER.
- ④ INCLUDES 32 CU. YDS. FOR STREET APPROACH & 15 CU. YDS. FOR ENTRANCES.
- ⑤ INCLUDES 10 TONS FOR STREET APPROACH.
- ⑥ INCLUDES 10 TONS FOR STREET APPROACH & 12 TONS FOR ENTRANCES.
- ⑦ PROVIDED FOR EROSION CONTROL, AS DIRECTED BY THE ENGINEER.

**BASIS OF PLANNED QUANTITIES**

2331	PLANT MIXED BASE COURSE BITUMINOUS MIXTURE 110LBS./S.Y. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 4.3% BY WEIGHT
2341	PLANT MIXED WEARING COURSE BITUMINOUS MIXTURE 110 LBS./S.Y. PER 1" THICKNESS BITUMINOUS MATERIAL FOR MIXTURE 6.2% BY WEIGHT
2357	BITUMINOUS MATERIAL FOR TACK COAT 0.05 GAL. PER S.Y.
2575	COMMERCIAL FERTILIZER ANALYSIS 10-10-10 500 LBS./ACRE ON ALL SOD AREAS AND SEED AREAS
2575	ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENTS PLUS 10% SEED MIXTURE NO. 3, 45 LBS. PER ACRE

MHD 21166 (9/73)

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

STANDARD PLATES	
PLATE NO.	DESCRIPTION
0004 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3040 F	CORRUGATED METAL PIPE CULVERT
3123 I	METAL APRON FOR C.M. PIPE
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
8000 I	STANDARD BARRICADES
9102 C	SODDING AT PIPE CULVERT ENDS

FORM 21167 - 2-65

CLEARING AND GRUBBING					
STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
4+00	58' RT	1		1	
4+07	43' RT	1		1	
4+45	33' LT	1		1	
4+47	27' LT	1		1	
4+52	32' LT	1		1	
4+53	34' LT	1		1	
5+29	37' LT	1		1	
6+45	33' LT	5		5	
7+16	34' LT	3		1	
7+20	40' LT	1		1	
7+20	45' LT	2		1	
TOTALS:		18		15	

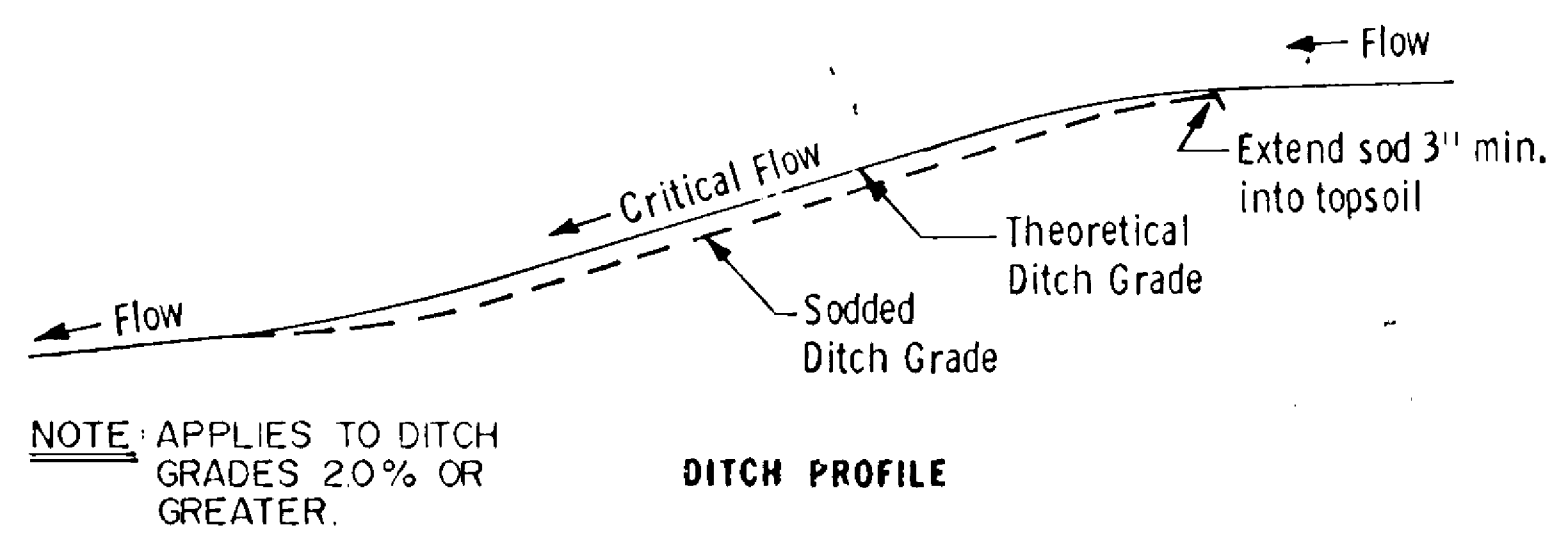
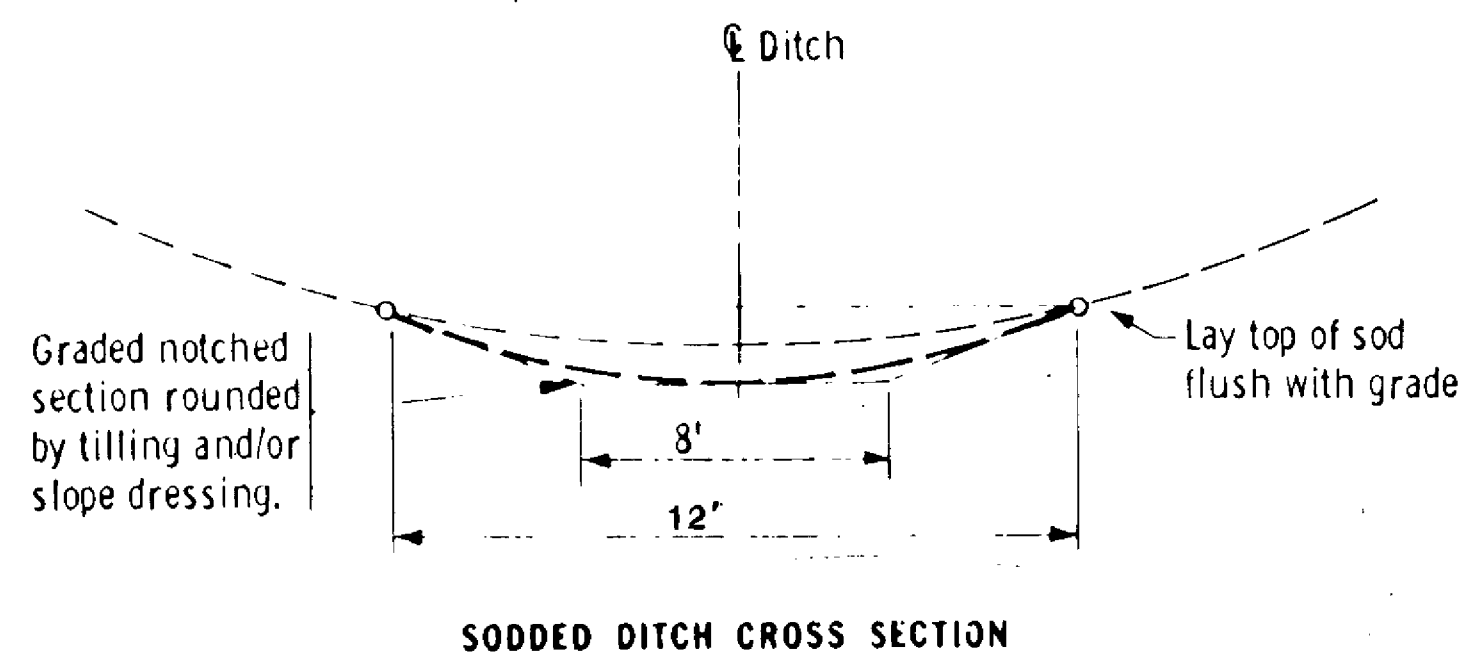
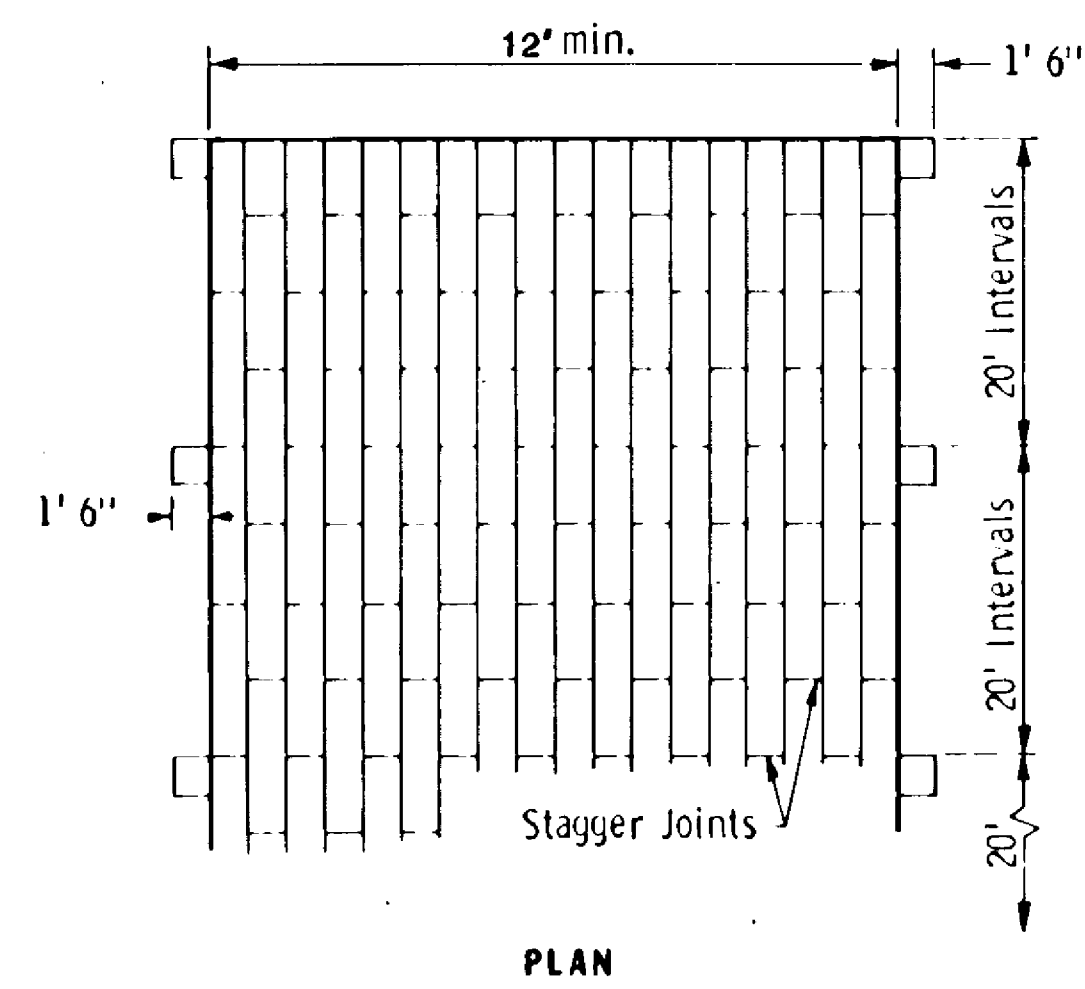
**SPECIAL DETAILS**

THE CONTRACTOR SHALL REMOVE SUFFICIENT TOPSOIL MATERIAL WITHIN THE EXCAVATION AREAS ON WHICH EMBANKMENTS WILL BE PLACED, STOCKPILE IF NECESSARY, AND USE IT FOR TOPSOIL COVERING ON THE NEW SLOPES AND DITCH BOTTOMS TO THE FULLEST EXTENT POSSIBLE, PRIOR TO THE USE OF TOPSOIL BORROW. THIS WILL REQUIRE APPROXIMATELY 510 CU. YDS. TO PROVIDE A MINIMUM COVER OF 3". SALVAGING AND REPLACING TOPSOIL SHALL BE CONSIDERED AS INCIDENTAL TO THE EXCAVATION ITEMS, AND NO ADDITIONAL COMPENSATION SHALL BE MADE.

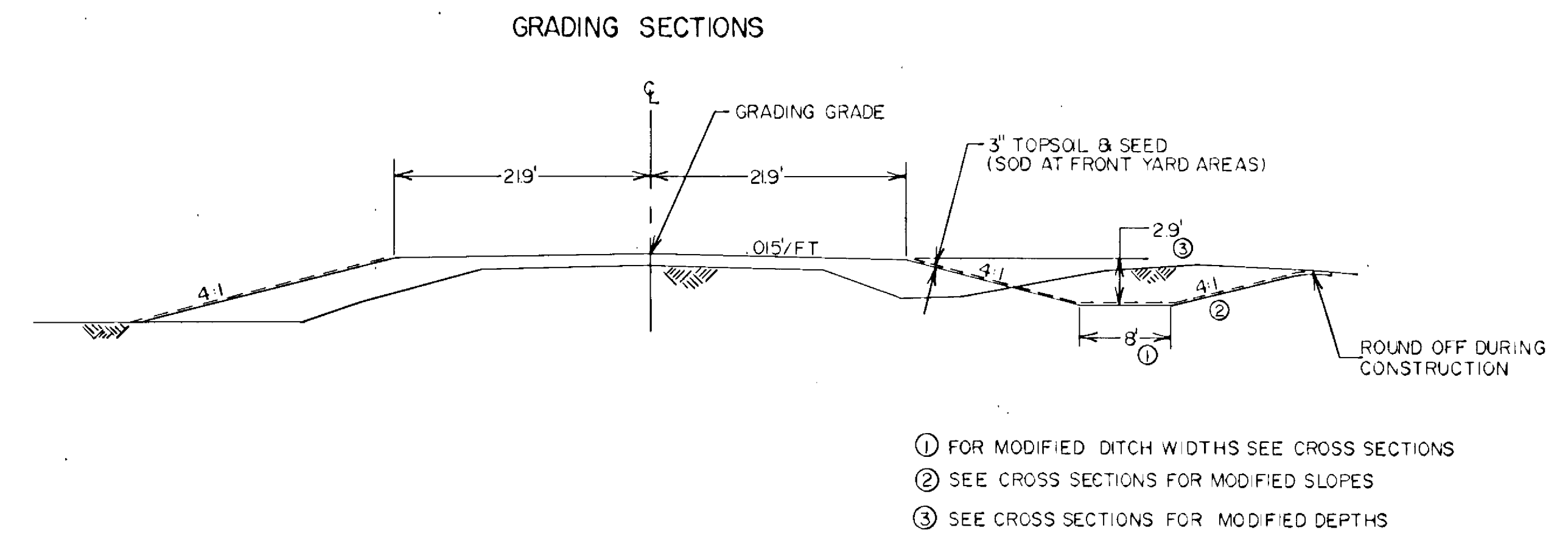
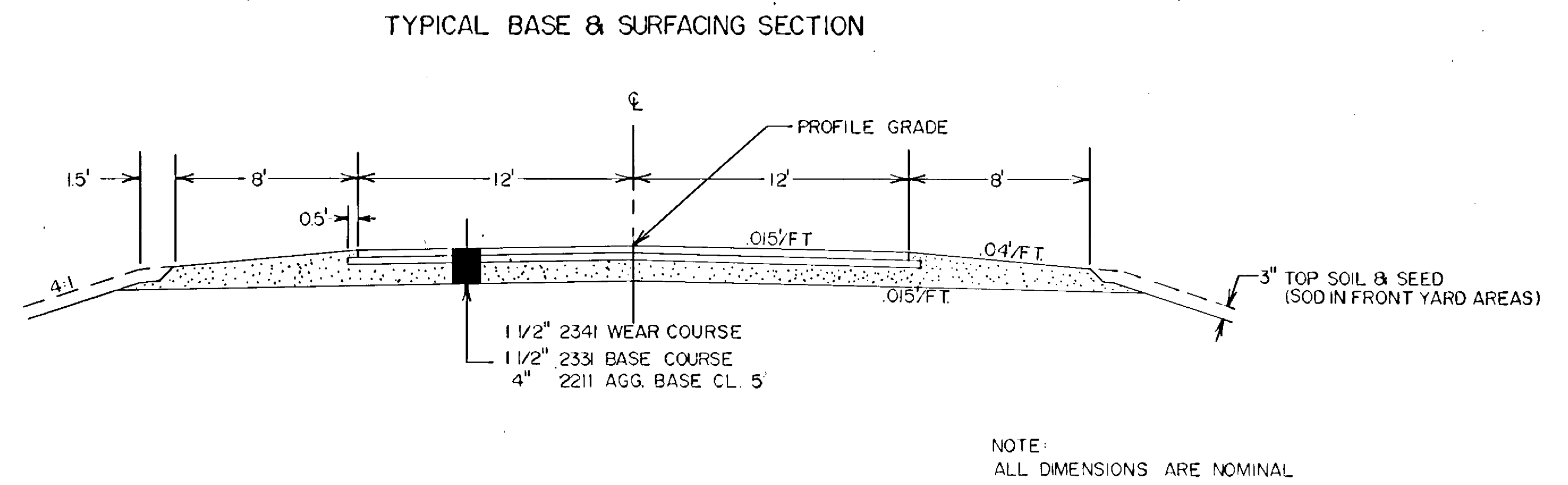
DISPOSAL OF ANY EXCESS EXCAVATED MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE PROVISIONS OF 2104.

SODDING			
STATION	LOC.	S.Y.	
* 0+13 - 1+97	RT	20'-54'	649
* 1+97 - 2+03	RT	20'-104'	56
0+13 - 0+63	LT	20'-60'	83
* 2+28 - 2+34	RT	20'-104'	56
* 2+34 - 2+57	RT	20'-51'	112
2+51 - 5+00	LT	33'-45'	340
* 5+00 - 5+95	LT	20'-48'	272
2+57 - 3+85	RT	30'-42'	171
3+85 - 4+05	RT	20'-57'	70
6+29 - 6+50	RT	30'-50'	47
6+50 - 10+00	RT	30'-42'	452
8+00 - 8+15	LT	26'-47'	35
8+15 - 10+00	LT	26'-38'	247
TOTALS:			2,590

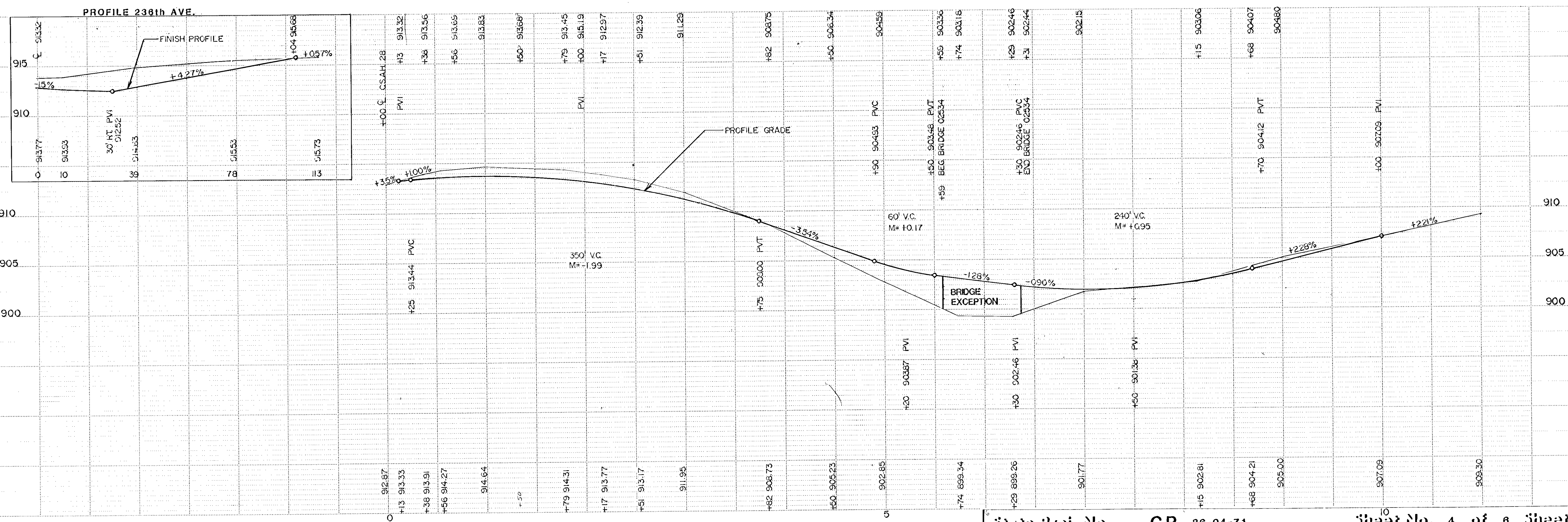
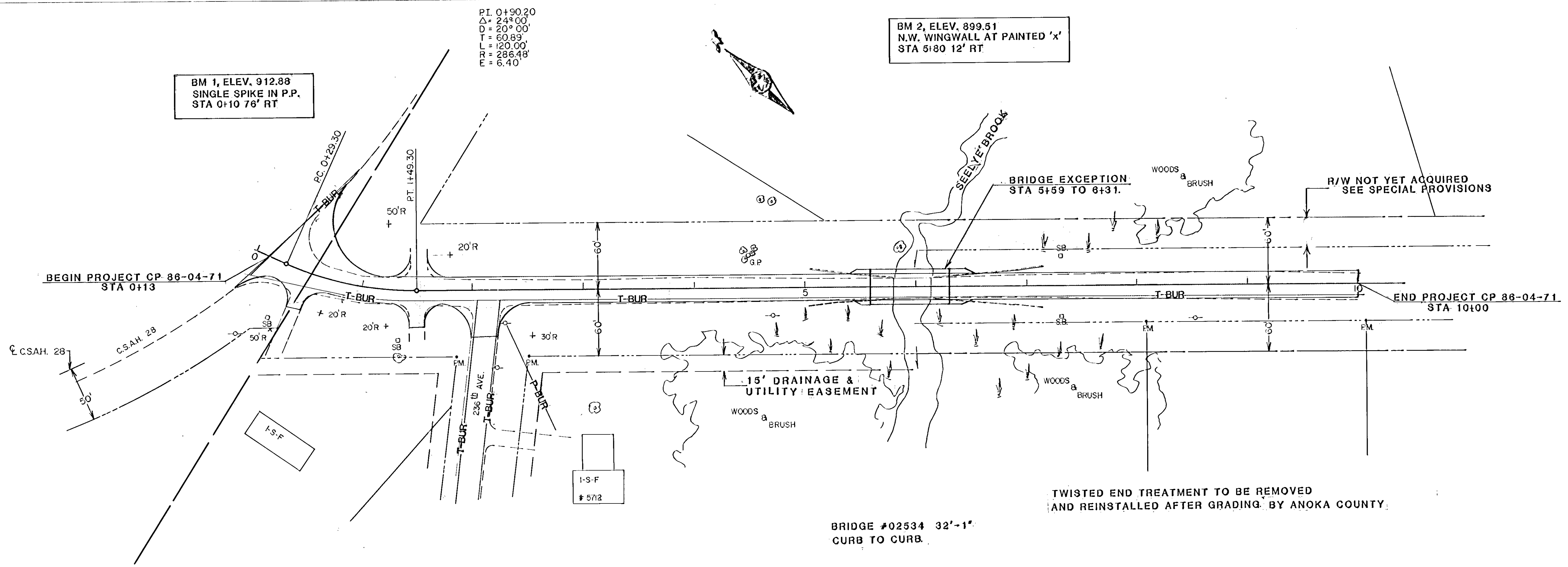
\* INDICATES AREAS WHERE 3" TOPSOIL BORROW IS TO BE PLACED.



**SODDED DITCH DETAILS**



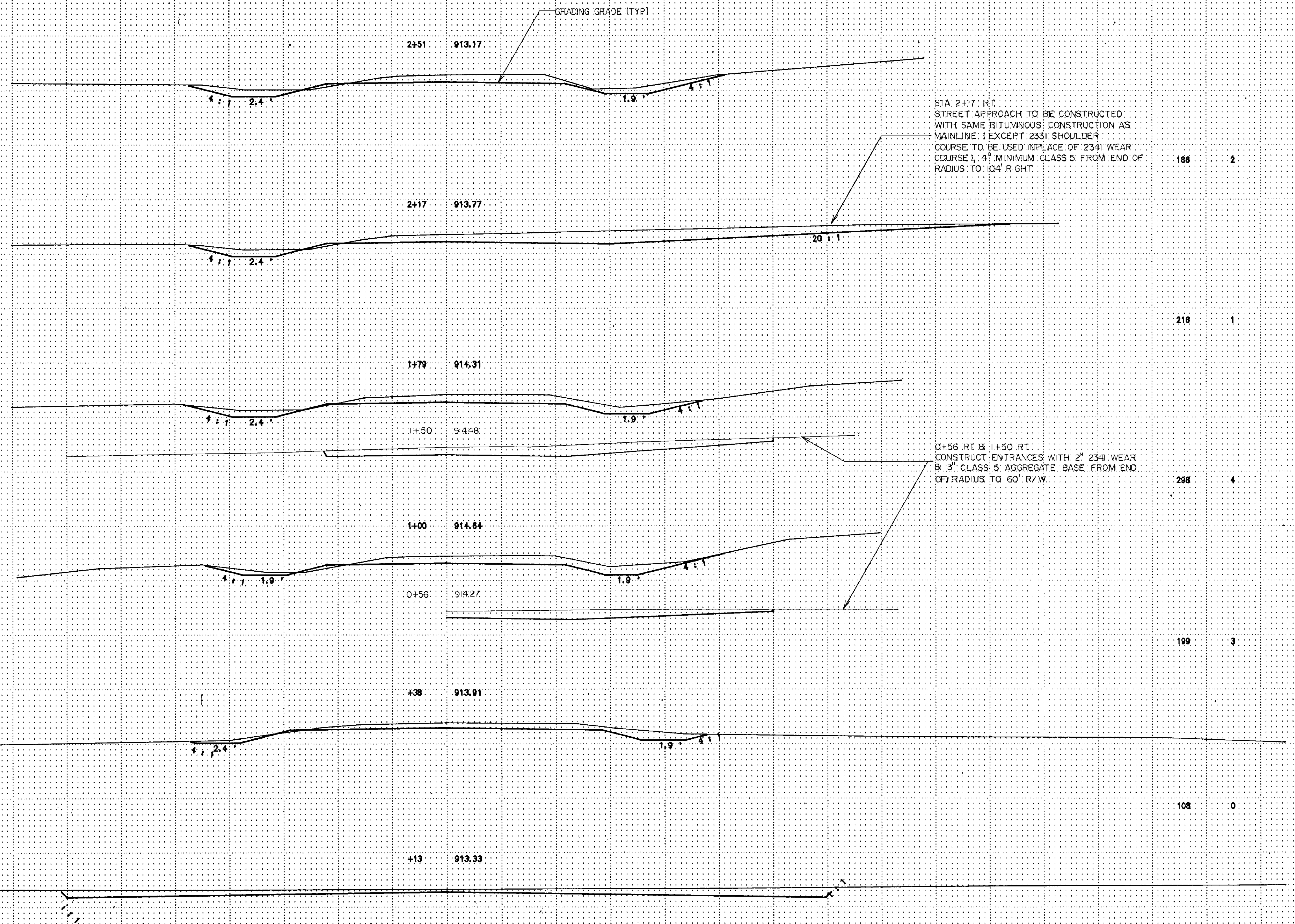






EXCAVATION  
CU. YDS.

EMBANKMENT  
CU. YDS.



STA. 2+17 RT.  
STREET APPROACH TO BE CONSTRUCTED  
WITH SAME BITUMINOUS CONSTRUCTION AS  
MAINLINE EXCEPT 2331 SHOULDER  
COURSE TO BE USED IN PLACE OF 2341 WEAR  
COURSE 1" 4" MINIMUM CLASS 5 FROM END OF  
RADIUS TO 104' RIGHT.

0+56 RT & 1+50 RT  
CONSTRUCT ENTRANCES WITH 2" 2341 WEAR  
& 3" CLASS 5 AGGREGATE BASE FROM END  
OF RADIUS TO 60' R/W.

ILLINOIS ROAD CONSTRUCTION UNIT 108 10/20/97



EXCAVATION  
cu. yds.

EMBANKMENT  
cu. yds.

PROJECT TOTALS:  
COMMON EXCAVATION: 2174 CU. YDS.  
REGULAR EMBANKMENT: 1401 CU. YDS. x 65% = 2174 CU. YDS.

EXCAVATION  
cu. yds.

EMBANKMENT  
cu. yds.

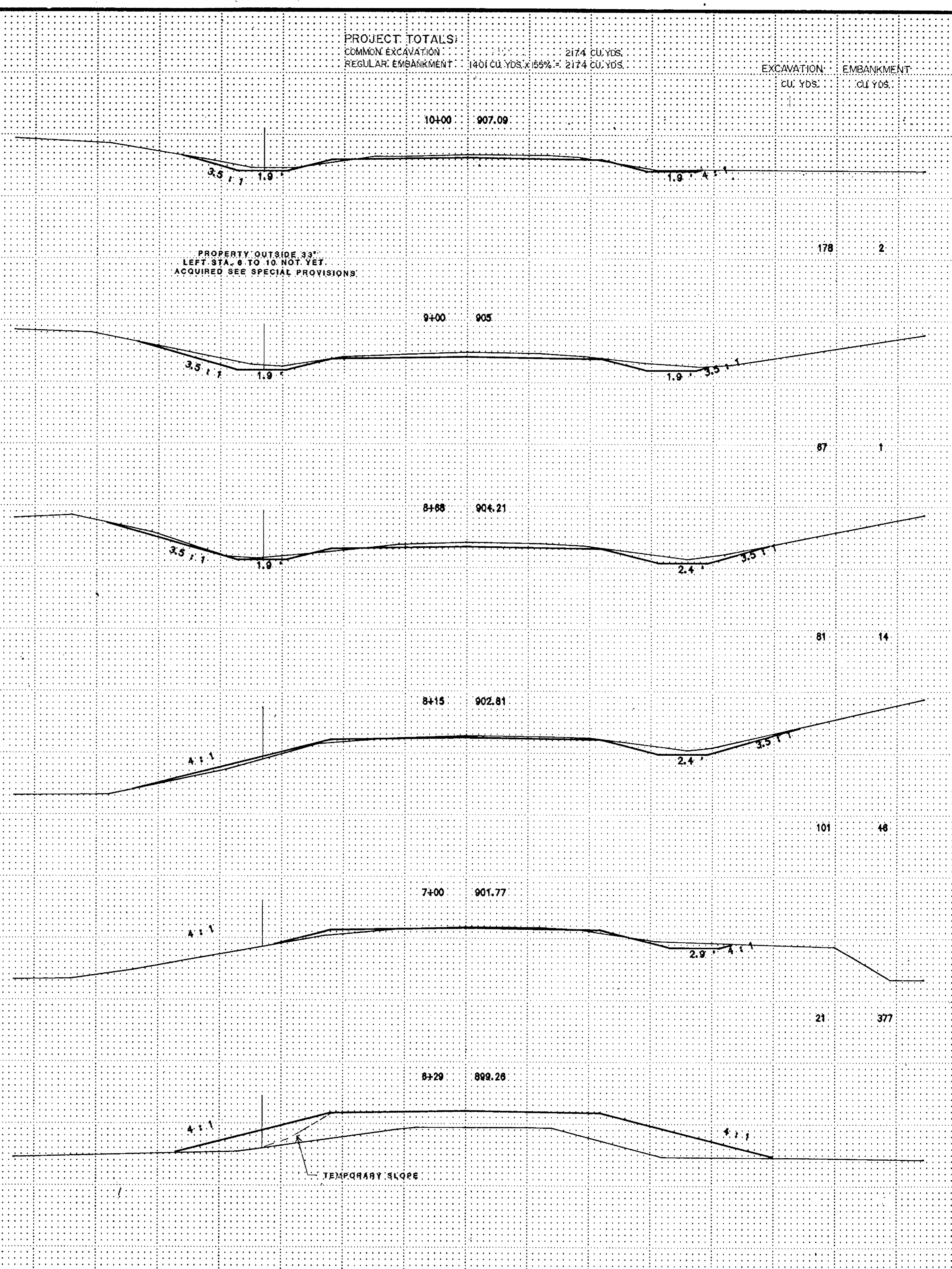
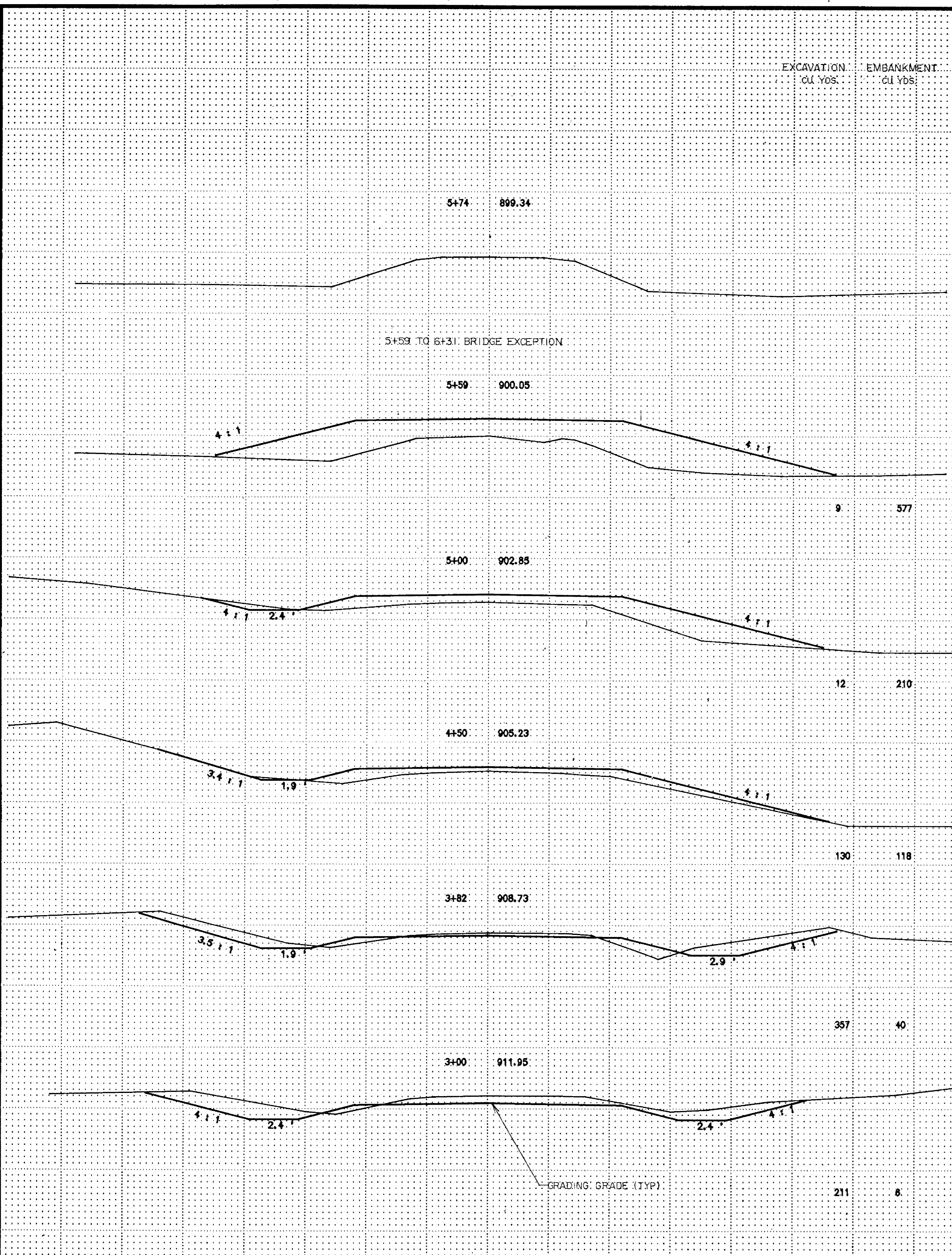


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