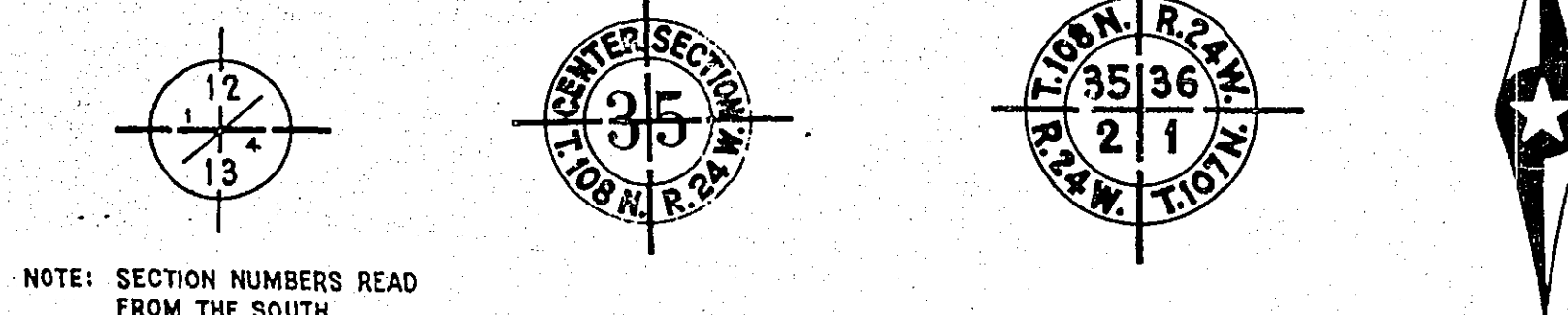


CONVENTIONAL SIGNS

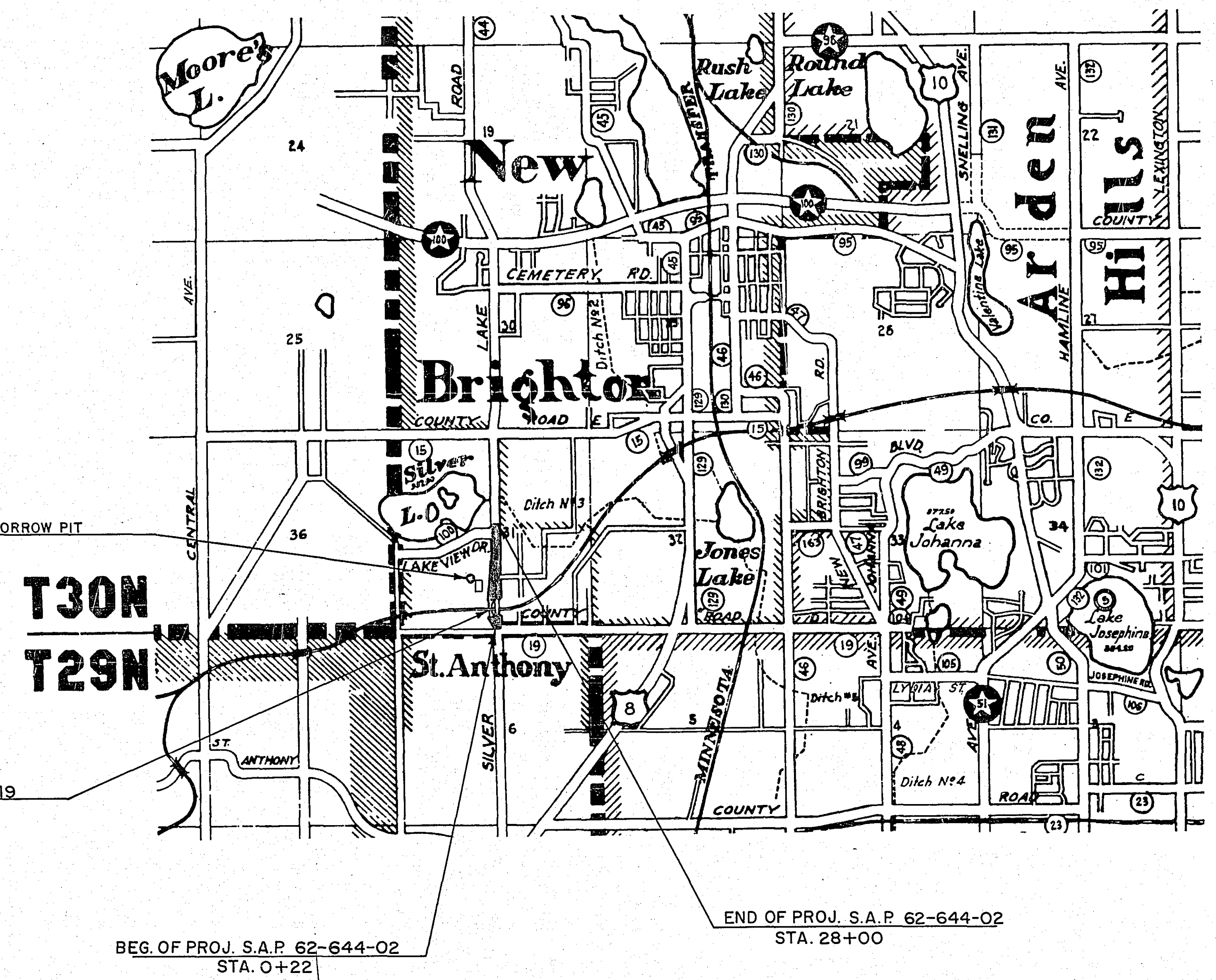
STATE LINE	-----	TIMBER	-----
COUNTY LINE	-----	BRUSH	-----
TOWNSHIP OR RANGE LINE	-----	ORCHARD	-----
SECTION LINE	-----	ROCK LEDGE	-----
QUARTER LINE	-----	SAND	-----
SIXTEENTH LINE	-----	EDGE OF CUT	-----
RIGHT-OF-WAY LINE	-----	TOE OF EMBANKMENT	-----
PRESENT ROAD P.W. LINE	-----	CATCH BASIN	-----
LIMITED ACCESS	-----	MANHOLE	-----
PROPERTY LINE (Except Land Lines)	-----	DROP INLET	-----
VACATED PLATTED PROPERTY	-----	FIRE HYDRANT	-----
CORPORATE OR CITY LIMITS	-----	ARC LAMP	-----
TRUNK HIGHWAY CENTER LINE	-----	OTHER LAMPS (Tale Kind)	-----
RETAINING WALL	-----	RAILROAD CROSSING SIGN	-----
STEAM RAILROAD	-----	RAILROAD CROSSING BELL	-----
ELECTRIC RAILROAD	-----	ELECTRIC WARNING SIGN	-----
RAILROAD RIGHT-OF-WAY LINE	-----	CROSSING GATE	-----
CREEK	-----	CATTLE GUARD	-----
RAPIDS OR WATERFALL	-----	OVERHEAD (Highway Over)	-----
DRY RUN	-----	UNDERPASS (Highway Under)	-----
DRAINAGE DITCH	-----	ABUTMENT, WALL & PIER	-----
HIGH TENSION LINE	-----	BRIDGE	-----
POWER POLE LINE	-----	CULVERT	-----
TELEPHONE OR TELEGRAPH LINE	-----	BUILDING (One Story Frame)	-----
TELEPHONE CONDUIT	-----	C-CONCRETE S-STONE T-TILE B-BRICK ST-STUCCO	-----
GUARD RAIL	-----	MESSE	-----
WIRE FENCE	-----	IRON PIPE	-----
RAILROAD SNOW FENCE	-----	STONE MONUMENT	-----
BOARD OR HIGHWAY SNOW FENCE	-----	WOOD STAKE OR HUB	-----
STONE WALL OR FENCE	-----	MEANDER CORNER	-----
GAS MAIN	-----		
WATER PIPE	-----		
SEWER PIPE	-----		
DRAIN TILE	-----		
GRAVEL PIT	-----		
SAND PIT	-----		
CLAY PIT	-----		
ROCK QUARRY	-----		
SPRINGS	-----		
MARSH	-----		



PIT DATA

COUNTY	PIT NO.	Located in	-----
		Dead Haul	-----
	PIT NO.	Located in	-----
		Dead Haul	-----
	PIT NO.	Located in	-----
		Dead Haul	-----
	PIT NO.	Located in	-----
		Dead Haul	-----

EXCEPTION NO. BOUND LANE STA. 3+66.77 TO 4+80.19
SO. BOUND LANE STA. 3+55 TO 4+83



OFFICE OF COUNTY ENGINEER
RAMSEY COUNTY

CONSTRUCTION PLAN FOR GRADING AND SURFACING
SILVER LAKE ROAD
FROM COUNTY ROAD "D" (C.S.A.H. 19) TO NO. OF LAKEVIEW DRIVE (CO. RD. 100)
SO. 1/4 COR. SECTION 31, T. 30N., R. 23 W. 186.12' NO. OF CTR. SECTION 31, T. 30N., R. 23 W.
S.A.P. 62-644-02

GROSS LENGTH	2778.00 FEET	0.526 MILES
BRIDGES-LENGTH	123.42 FEET	0.023 MILES
EXCEPTIONS-LENGTH	123.42 FEET	0.023 MILES
NET LENGTH	2654.58 FEET	0.503 MILES

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES & DRAINAGE STRUCT. CHART
3	TYPICAL SECTIONS
4 & 5	DETAIL SHEET-MEDIAN LAYOUT ETC.
6	PLAN SHEET
7 TO 12	CROSS-SECTIONS

PLAN, 1 inch = 100 Feet
PROFILE, Horiz. 1 inch = 100 Feet. Vert. 1 inch = 10 Feet.
WORKING PLANS - Horiz. 1 inch = 100 Feet
Vert. 1 inch = 10 Feet
Cross-Sections 1 inch = 10 Feet
LAYOUT, 1 inch = 2640 Feet

DESIGN SPEED 30 M.P.H

TRAFFIC COUNT 2,876 V.P.D.

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.
Mark R. Smith REG. NO. 5031 DATE 4/18/61
COUNTY ENGINEER

RECOMMENDED FOR APPROVAL *Dwight R. Smith* DATE 4/18/61
COUNTY ENGINEER
APPROVED *Ed. W. Mason* DATE APRIL 10, 1961
VICE-CHAIRMAN OF RAMSEY COUNTY BOARD

MINNESOTA STATE HIGHWAY DEPARTMENT
RECOMMENDED FOR APPROVAL *Harold K. Brock* DATE 4-18-61
ASST. DISTRICT ENGINEER
APPROVED *Ed. W. Mason* DATE 4-18-61
ASST. ENGINEER OF COUNTY DIVISION

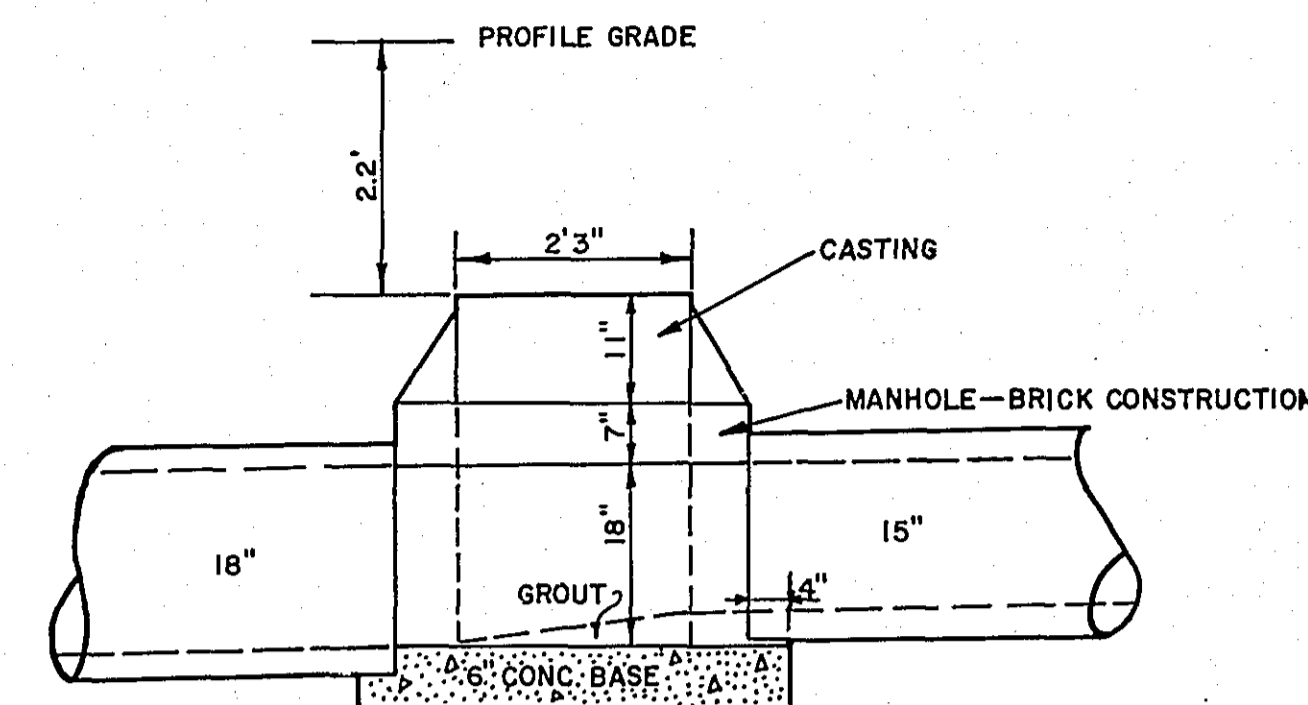
SPECIFICATIONS
THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959 SHALL GOVERN.

MICRO-FILMED

ESTIMATED QUANTITIES			
SPEC NO	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE	1
2101.507	GRUBBING	TREE	4
2104.509	REMOVE GUARD RAIL	LINEAL FEET	1180
2104.510	REMOVE FENCE	LINEAL FEET	451
2105.501	CLASS "A" EXCAVATION	CUBIC YARD	25,350
* 2105.506	BORROW EXCAVATION - CLASS "A"	CUBIC YARD	8,850
2130.501	WATER	(M) GALLON	50
2201.526	GRAVEL SUB-BASE IN PLACE (CLASS 4)	TON	20,500
2202.526	GRAVEL BASE IN PLACE (CLASS 5)	TON	12,300
2208.501	BITUMINOUS MATERIAL FOR PRIME COAT	GALLON	10,000
2208.503	BITUMINOUS MATERIAL FOR MIXTURE	GALLON	16,500
2208.506	AGGREGATE	TON	1,600
2301.549	CONCRETE TREATING OIL	GALLON	55
2341.501	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	3,025
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	320
2341.511	BITUMINOUS MIXTURE (BINDER COURSE)	TON	4,860
2341.511	BITUMINOUS MIXTURE (WEARING COURSE)	TON	1,800
2503.512-12	F.B.I. R.C. PIPE SEWER - CLASS 2 - 12"	LINEAL FEET	16
2503.512-15	F.B.I. R.C. PIPE SEWER - CLASS 2 - 15"	LINEAL FEET	383
2503.512-18	F.B.I. R.C. PIPE SEWER - CLASS 2 - 18"	LINEAL FEET	234
2503.512-24	F.B.I. R.C. PIPE SEWER - CLASS 2 - 24"	LINEAL FEET	21
2506-507	CONSTRUCT CATCH BASINS (TYPE G & SPECIAL)	LINEAL FEET	58
2506-507	CONSTRUCT CATCH BASINS (TYPE H)	LINEAL FEET	12
2506-511	RECONSTRUCT MANHOLE	LINEAL FEET	29.5
2506.516	F.B.I. CASTING ASSEMBLIES	ASSEMBLY	19
2506.522	ADJUST FRAME & RING CASTINGS	ASSEMBLY	12
2531.501	CONCRETE CURB & GUTTER, DESIGN B 624	LINEAL FEET	640
2531.502	CONCRETE CURB, DESIGN B6	LINEAL FEET	5,370
2556.501	STRUCTURAL PLATE BEAM GUARD RAIL	LINEAL FEET	1,142
2574.501	ROADSIDE SEEDING	ACRE	1.6
2574.511	SEED (CLASS 15)	POUND	192
2575.501	SURFACE MULCHING, TYPE 1	TON	1.5
2575.506	SURFACE MULCHING, TYPE 6	GALLON	150
2576.501	SODDING	SQUARE YARD	12,159
563.641	F.B.I. FLASHER SIGNAL	SIGNAL	2

* MATERIAL FREE TO CONTRACTOR AT PIT.

STANDARD DETAIL PLATES	
3000	REINFORCED CONCRETE PIPE
4006 C	CATCH BASIN
4007 A	CATCH BASIN
4101 B	RING CASTING FOR MANHOLE OR CATCH BASIN
4126 B	CATCH BASIN FRAME CASTING
4129	CATCH BASIN FRAME CASTING
4149 B	GRATE CASTING FOR CATCH BASIN
4151	GRATE CASTING FOR CATCH BASIN
4160	CURB BOX CASTING FOR CATCH BASINS
4161 C	CURB BOX CASTING FOR CATCH BASINS
4163 B	CURB PLATE CASTING FOR CATCH BASINS
4164 A	COVER & FRAME CASTING FOR CATCH BASINS
4180 D	MANHOLE STEP CASTING
7020 C	CONCRETE CURB (DESIGN B)
7100 C	CONCRETE CURB & GUTTER (DESIGN B624)
8003	WARNING SIGNS
8112	CONCRETE FOUNDATION
8307 B	STRUCTURAL PLATE BEAM GUARD RAIL



DETAIL SPECIAL MANHOLE

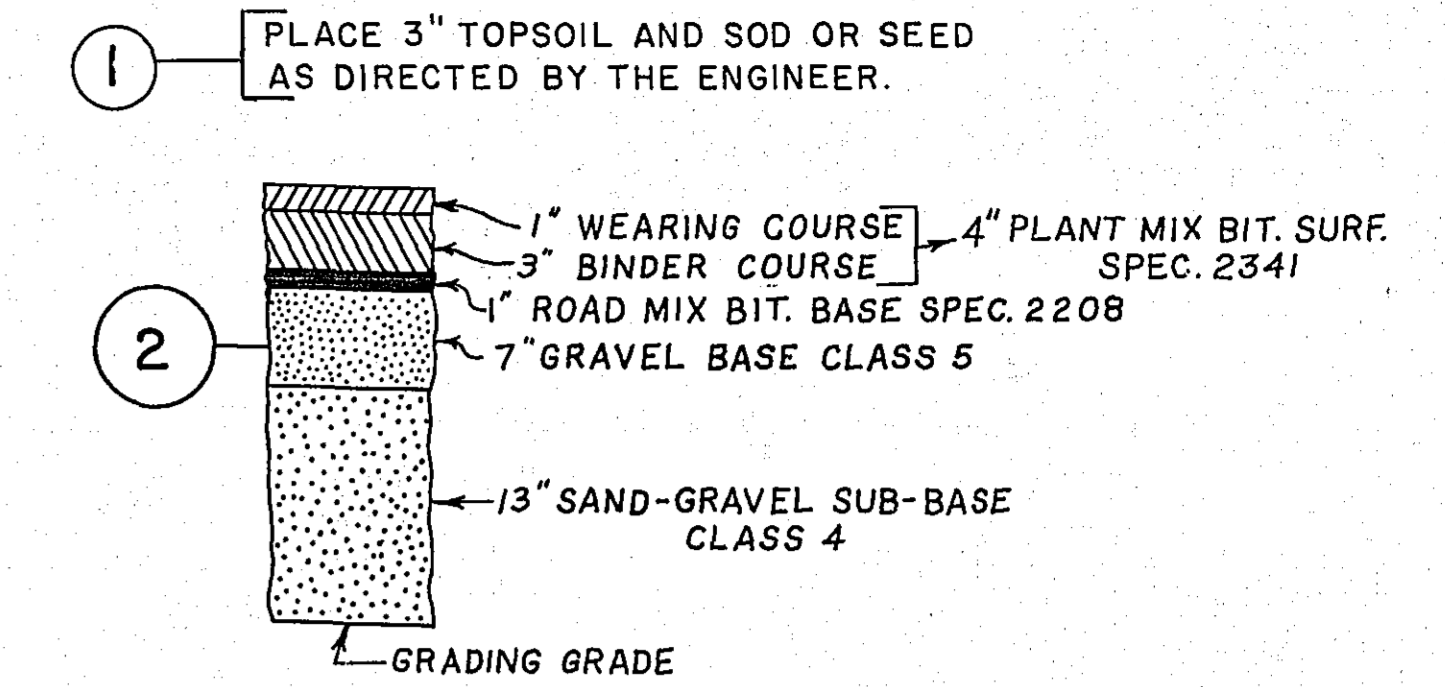
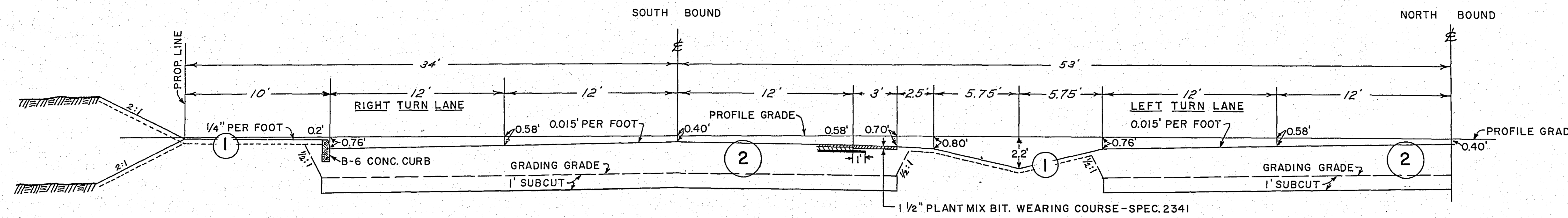
ALL PIPE SHALL BE INSTALLED WITH THE REQUIREMENTS OF CLASS "C" BEDDING.

CASTINGS REQUIRED

- TYPE "G" & SPECIAL { 2 RING CASTINGS NO. 801
12 GRATE CASTINGS NO. 810
2 GRATE FRAMES NO. 802
2 GRATE FRAMES NO. 811
12 CURB BOX CASTINGS NO. 821 B
2 CURB BOX CASTINGS NO. 823 B
- TYPE "H" { 4 CURB PLATE CASTINGS NO. 874
4 COVER CASTINGS NO. 876 C
4 FRAME CASTINGS NO. 876 F

DRAINAGE STRUCTURES										REINFORCED CONCRETE PIPE SEWER						TRENCH EXCAV				
STATION	LOCATION	NO	TYPE	DESIGN	CONST HEIGHT LIN. FT	F.B.I. CASTING ASSEMBLY	ELEVATION		ADJUST CASTING ASSEMBLY	RECONSTRUCT M.H. OR C.B	LINEAR FEET						TO STRUCTURE NO	F.B.I. APRON	TRENCH EXCAV	
							GRATE OR RING	OUTLET			12"	15"	18"	24"	30"	36"			0'-6"	0'-10"
0+11	LT. 30.5'	1	M.H.							O.K.										
3+01	LT. 87'	2	M.H.				961.4			14.0										
3+30	LT. 53'	3	C.B.	G	6.1	I	71.82	965.5												
3+40	RT. 13'	4	C.B.	G	4.8	I	71.2	966.18												
4+37	LT. 84'	5	M.H.							EXCEPTION										
4+79	LT. 60'	6	M.H.							EXCEPTION										
6+36	RT. 13'	7	C.B.	G	4.8	I	67.47	62.55												
6+36	LT. 29.5'	8	C.B.	SPEC.	3.43	I	65.97	62.12												
6+45	LT. 66'	9	C.B.	G	5.26	I	67.18	61.67												
6+90	LT. 65'	10	M.H.				65.95													
9+70	RT. 13'	11	C.B.	G	4.8	I	57.3													
9+79	LT. 64'	12	M.H.				57.16													
9+79	LT. 68'	13	C.B.	H	3.0	I	57.71	55.21												
12+03	LT. 15'	14	M.H.				53.34													
12+54	RT. 13'	15	C.B.	G	3.82	I	52.7	48.63												
12+54	LT. 29.5'	16	C.B.	SPEC.	2.6	I	51.7	48.2												
12+61	LT. 120'	17	C.B.							O.K.										
12+67	LT. 64'	18	M.H.				52.69													
12+67	LT. 68'	19	C.B.	H	3	I	53.24	50.74												
12+83	LT. 92'	20	C.B.							O.K.										
13+02	LT. 158'	21	M.H.							O.K.										
13+07	LT. 43'	22	M.H.				52.15													
13+07	RT. 20'	23	M.H.				52.0													
13+27	LT. 93'	24	C.B.							O.K.										
13+53	LT. 118'	25	C.B.							O.K.										
14+10	RT. 20'	26	M.H.				51.14			8.45										
15+40	RT. 13'	27	C.B.	G	4.8	I	47.98	43.06												
15+50	LT. 64'	28	M.H.				47.93													
15+50	LT. 68'	29	C.B.	H	3	I	48.5	46.0												
18+10	RT. 20'	30	M.H.				43.97			7.0										
18+24	RT. 13'	31	C.B.	G	3.82	I	42.95	38.88												
18+24	LT. 29.5'	32	C.B.	SPEC.	2.6	I	41.45	38.45												
18+31	LT. 64'	33	M.H.				42.97													
18+31	LT. 68'	34	C.B.	H	3	I	43.55	41.05												
18+56	LT. 90'	35	C.B.							O.K.										
19+00	LT. 90'	36	C.B.							O.K.										
19+05	LT. 64'	37	M.H.				42.02													
22+09	RT. 20'	38	M.H.				40.56													
23+57	LT. 65'	39	M.H.				39.79													
24+45	RT. 22.5'	40	C.B.	G	3.92	I	39.07	34.90												
24+45	LT. 10'	41	C.B.	SPEC.	2.6	I	37.57	34.57												
24+45	LT. 43'	42	C.B.	G	4.8	I	39.07	34.0												
24+55	LT. 15'	43	M.H.				39.43													
26+45	LT. 49'	44	M.H.				40.5													

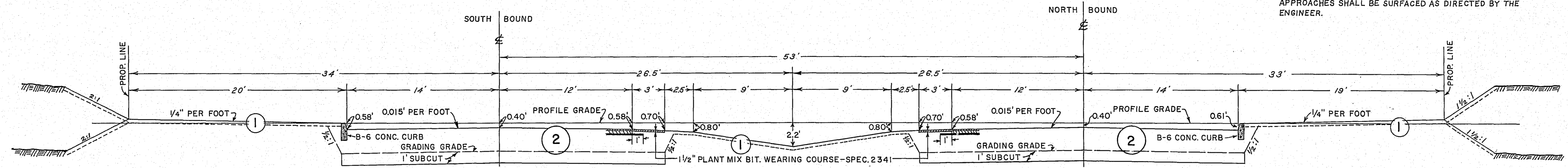
TYPICAL SECTIONS



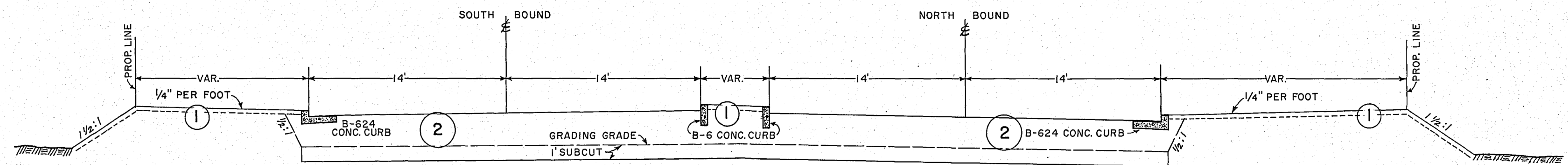
SEE SHEET 6 FOR LOCATION OF TURNING LANES

ALL DIMENSIONS AND SLOPES SHOWN ON THE TYPICAL SECTIONS ARE APPROXIMATE.

PRIVATE ENTRANCE RAD. = 5'
ALLEY & COMMERCIAL ENT. RAD. = 10'
STREET INTERSECTIONS RAD. = 20'
UNLESS OTHERWISE NOTED ON THE PLANS.
APPROACHES SHALL BE SURFACED AS DIRECTED BY THE ENGINEER.

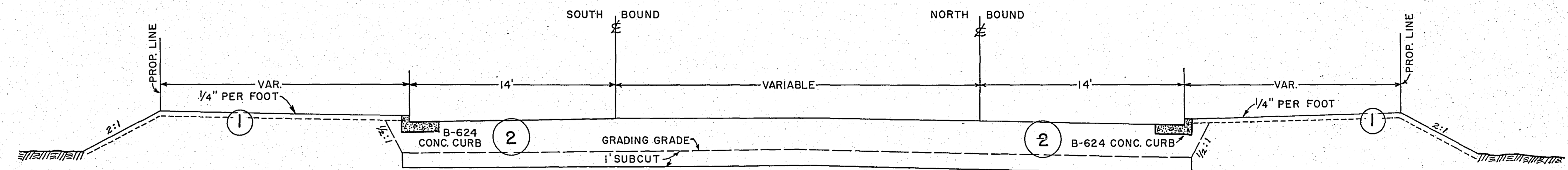


NORTH END OF BRIDGES TO STA. 19+14
STA. 19+14 TO STA. 21+30 LT. R/W VARIES.
STA. 21+30 TO STA. 26+56 SEE SHEET 4 FOR LANE LOCATIONS.

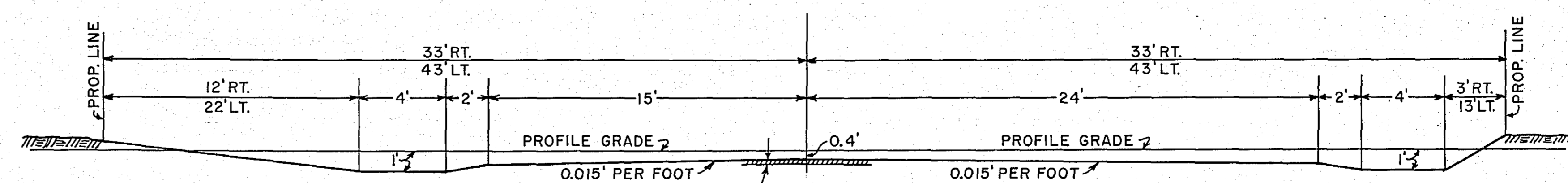


STA. 2+15 TO SOUTH END OF BRIDGES

SEE SHEET 4 FOR ALINEMENT, MEDIAN, AND CURB LOCATIONS.



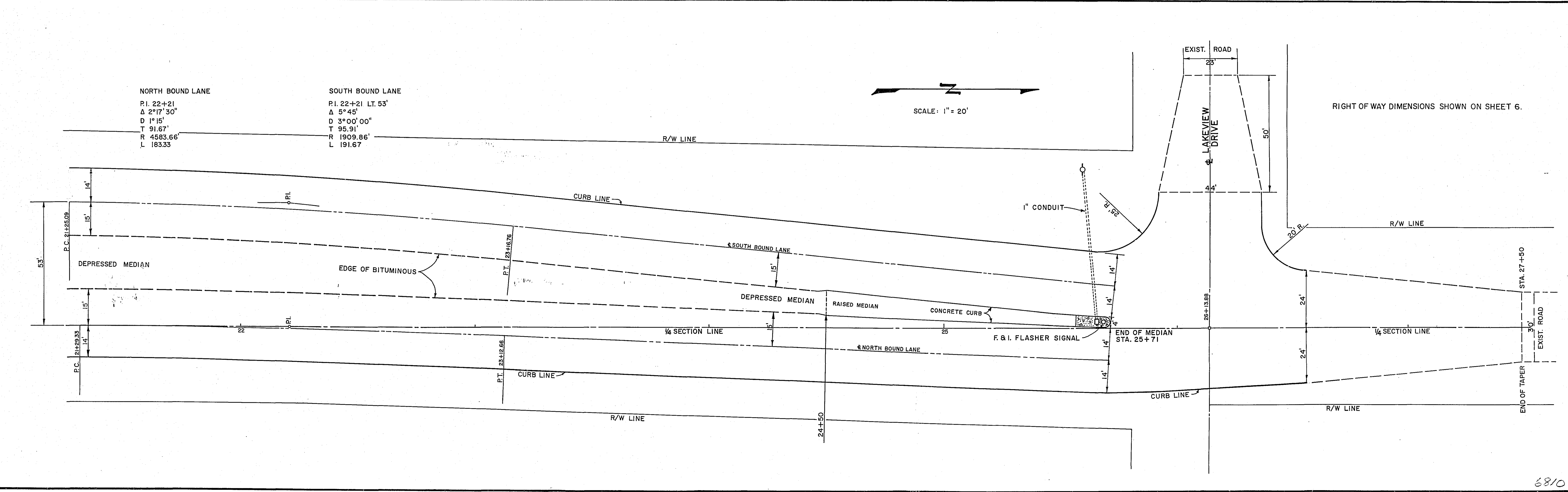
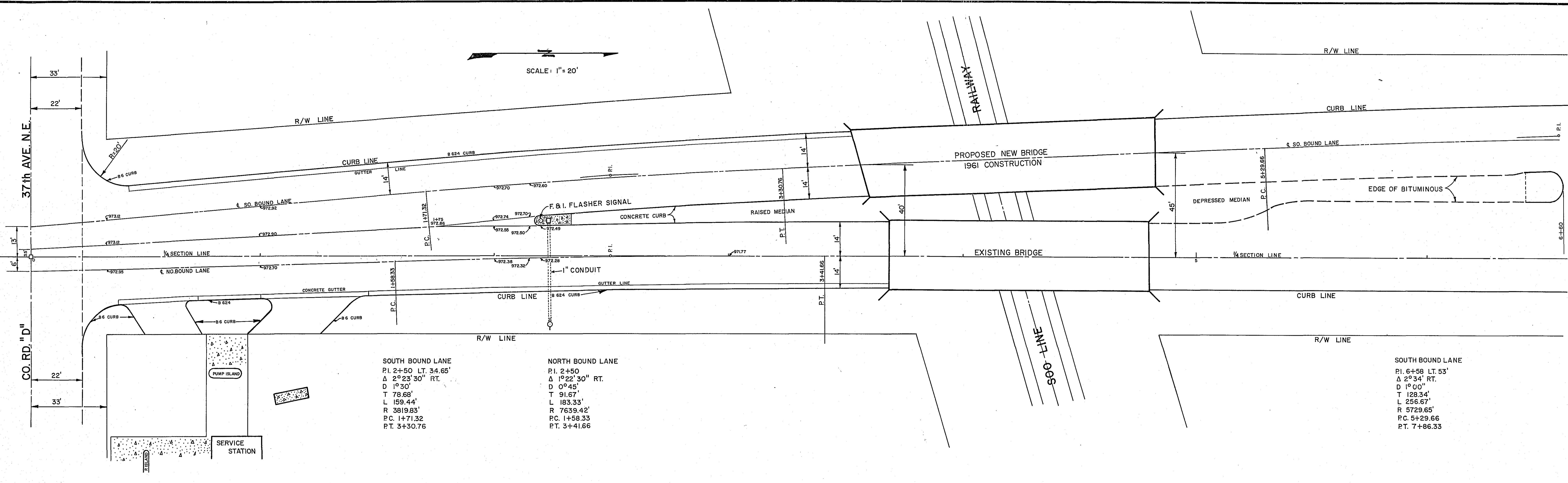
STA. 0+22 TO STA. 2+00



STA. 27+50 TO STA. 28+00 RT. & LT.

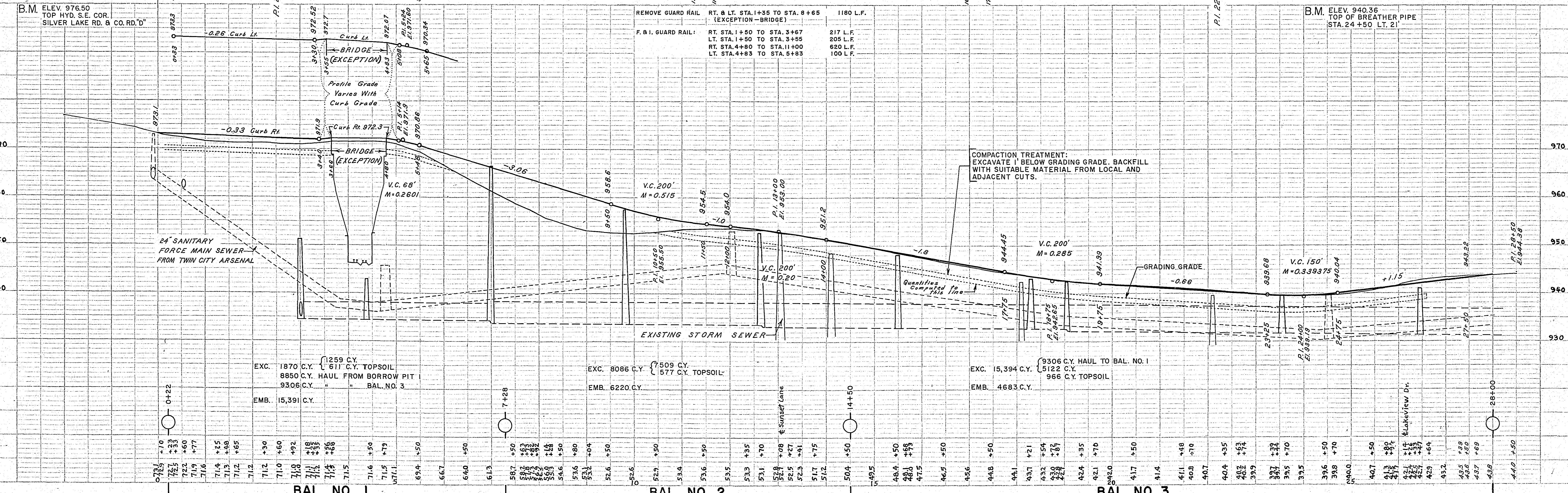
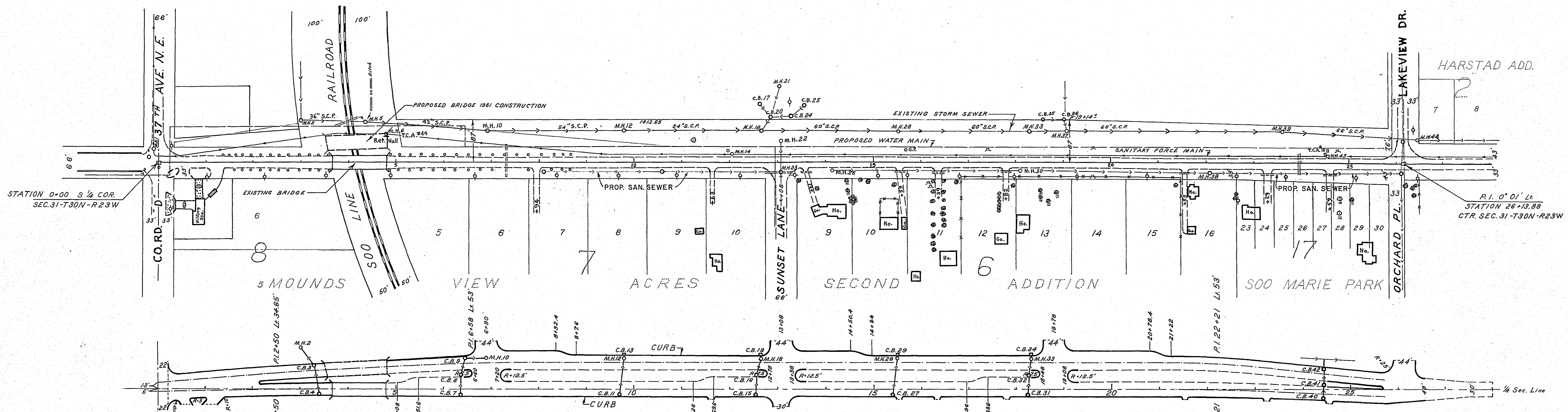
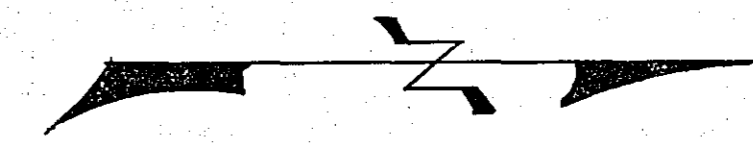
STA. 26+56 RT. & LT.

1 1/2" PLANT MIX WEARING COURSE - SPEC. 2341



Sta. 3+73 Lt. 76' to Sta. 4+18 Lt. 92' Imp. 24" x 48" S.C.P. Culv. O.K. Leave
 Sta. 7+32 Lt. 36' to Rt. 32' Imp. 24" x 68" C.M.P. Culv. O.K. Leave
 Sta. 12+87 to Sta. 13+28 Rt. 21' Imp. 15" x 41" C.M.P. Culv. Remove
 Sta. 13+61 Rt. 21' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 15+59 Rt. 20' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 16+39 Rt. 21' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 17+82 Rt. 21' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 21+55 Rt. 21' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 23+29 Rt. 24' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 24+59 Rt. 24' Imp. 15" x 20" C.M.P. Culv. Remove
 Sta. 23+95 Lt. 21' to Rt. 23' Imp. 18" x 44" S.C.P. Culv. Remove

APACHE PLAZA BUILDING



PLAN
 NOTE FROM SHEET 5 OF 12 SHEETS
 NO. 1

PROFILE
 NOTE FROM SHEET 5 OF 12 SHEETS
 NO. 1

REMOVE GUARD RAIL RT. & LT. STA. 1+35 TO STA. 8+65 (EXCEPTION - BRIDGE) 1180 L.F.
 F.B.I. GUARD RAIL: RT. STA. 1+50 TO STA. 3+67 217 L.F.
 LT. STA. 1+50 TO STA. 3+55 205 L.F.
 RT. STA. 4+80 TO STA. 11+00 620 L.F.
 LT. STA. 4+83 TO STA. 5+83 100 L.F.

COMPACTION TREATMENT: EXCAVATE 1' BELOW GRADING GRADE. BACKFILL WITH SUITABLE MATERIAL FROM LOCAL AND ADJACENT CUTS.

EXC. 1870 C.Y. { 1259 C.Y. TOPSOIL
 8850 C.Y. HAUL FROM BORROW PIT
 9306 C.Y. " " BAL. NO. 3
 EMB. 15,391 C.Y.

EXC. 8086 C.Y. { 7509 C.Y. TOPSOIL
 577 C.Y. TOPSOIL
 EMB. 6220 C.Y.

EXC. 15,394 C.Y. { 9306 C.Y. HAUL TO BAL. NO. 1
 5122 C.Y. TOPSOIL
 966 C.Y. TOPSOIL
 EMB. 4683 C.Y.

BAL. NO. 1

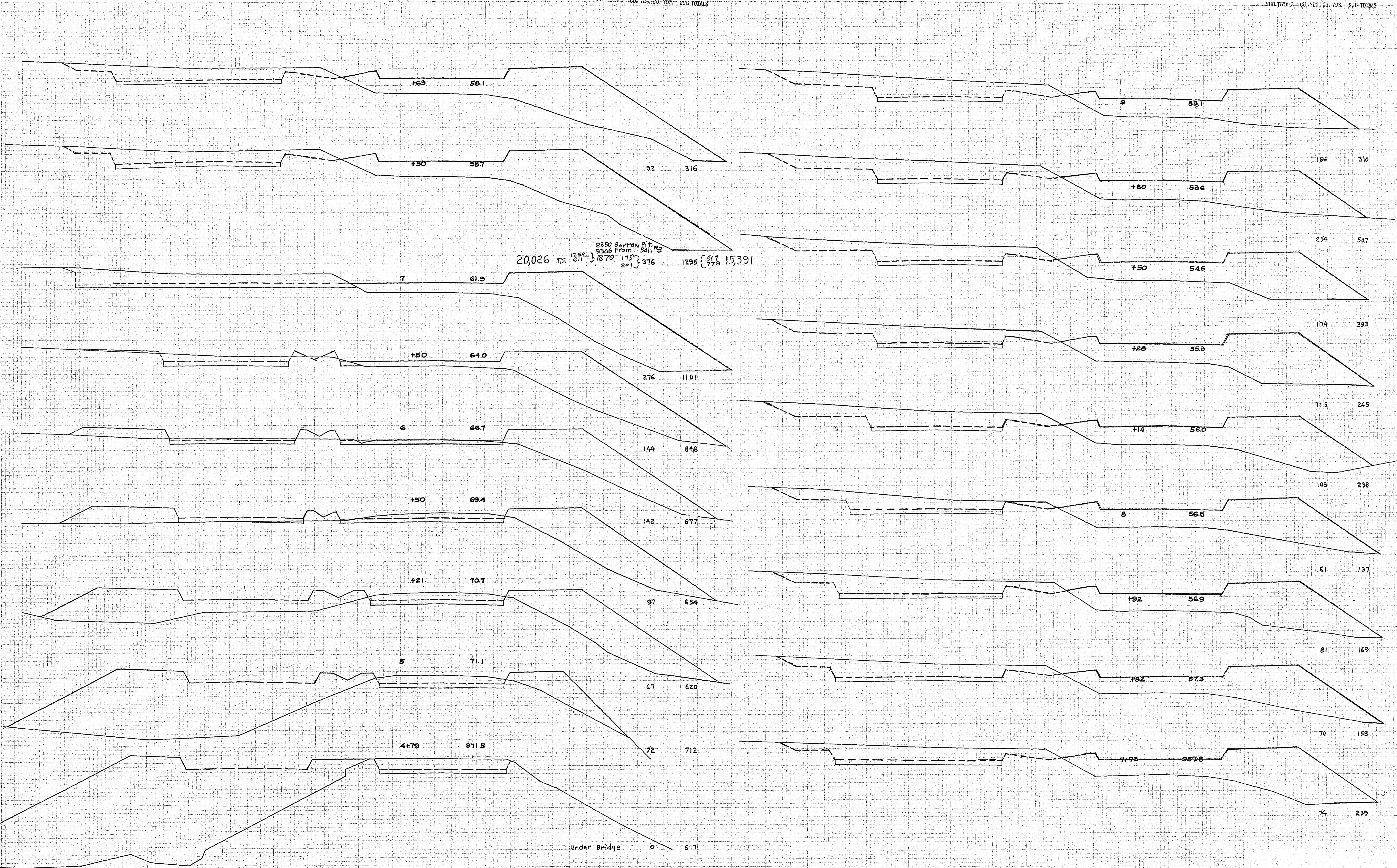
BAL. NO. 2

BAL. NO. 3

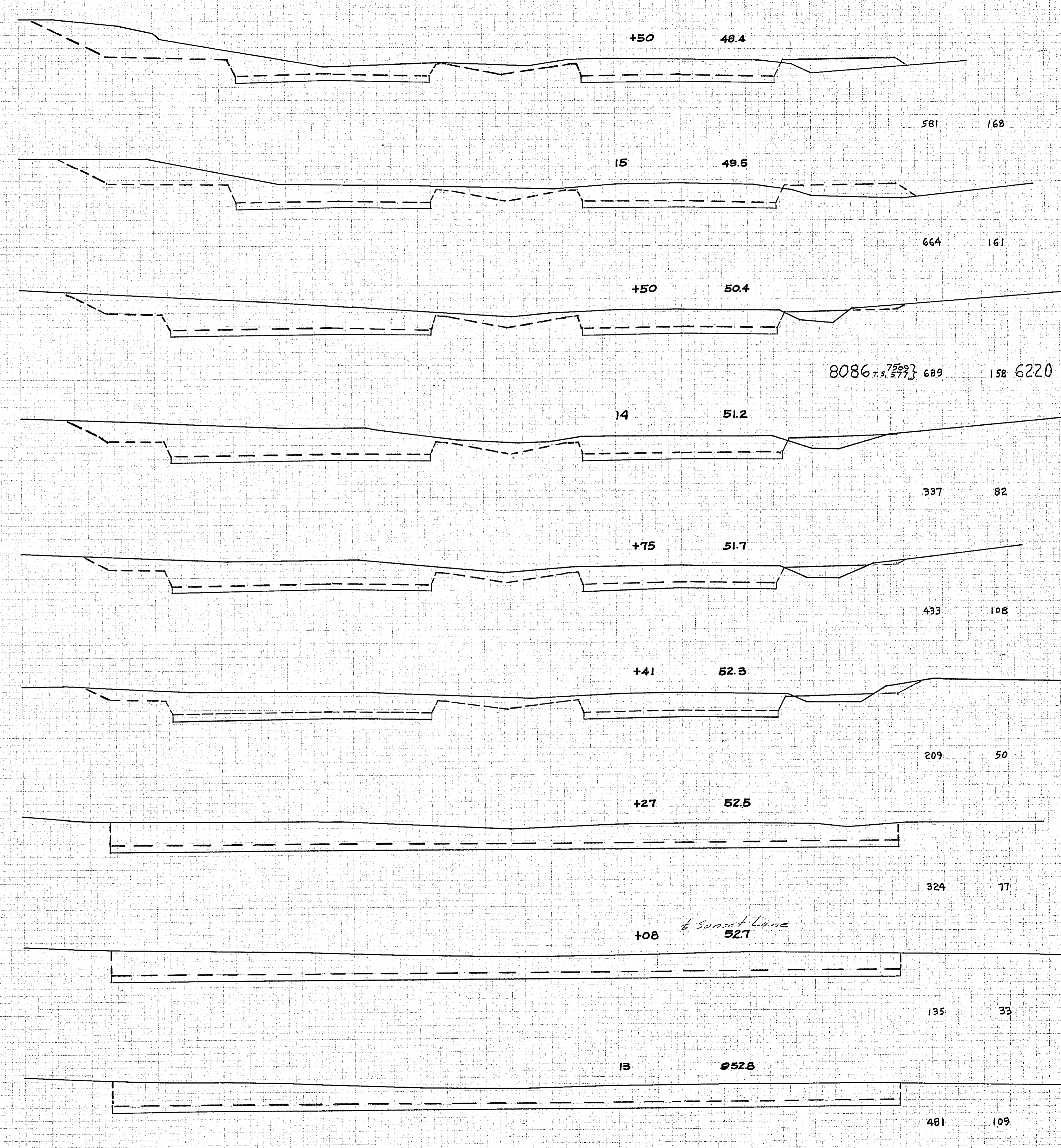
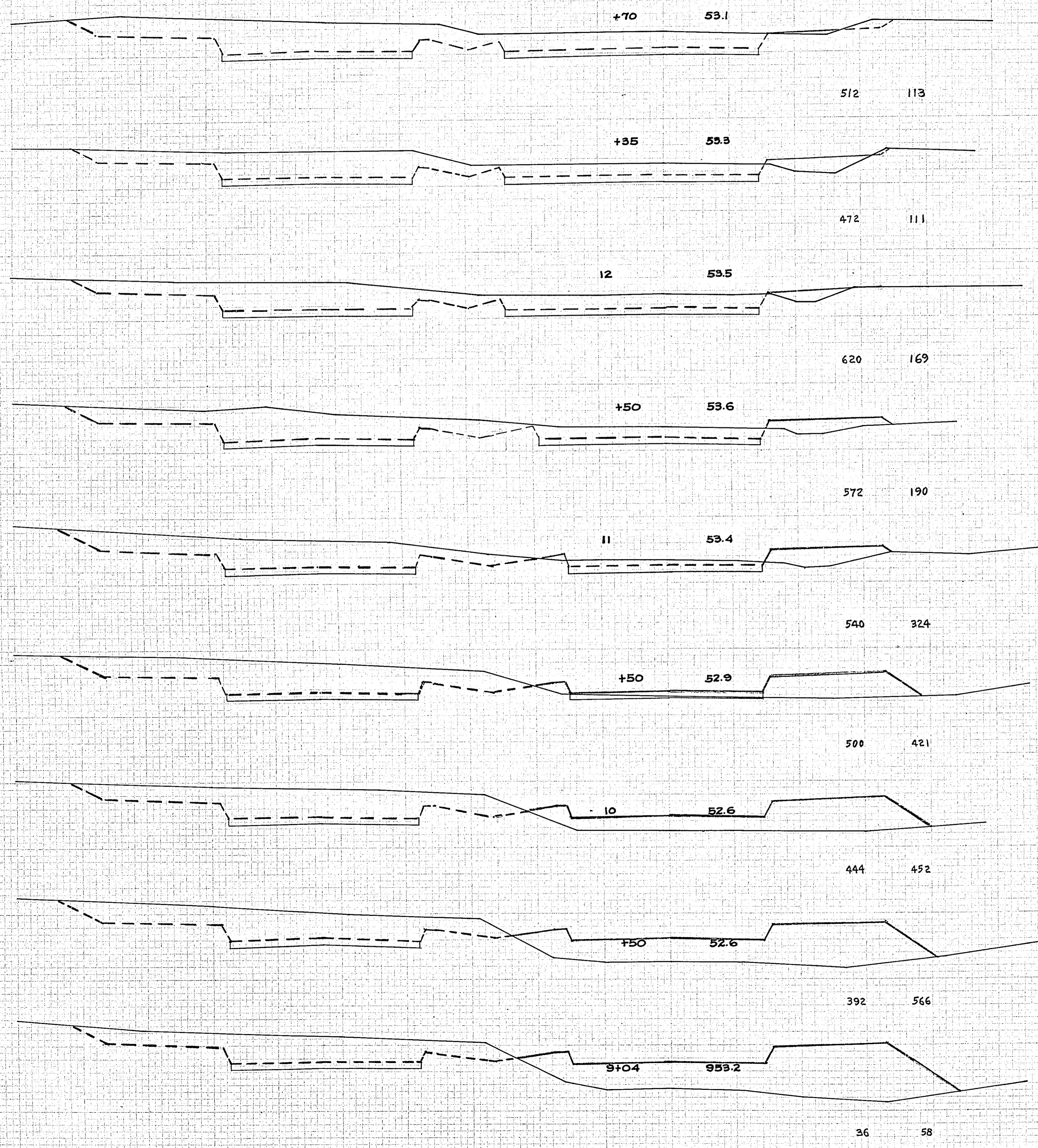
DATE: 12/15/59
 DRAWN BY: J. W. BROWN
 CHECKED BY: J. W. BROWN

DATE: 12/15/59
 DRAWN BY: J. W. BROWN
 CHECKED BY: J. W. BROWN

20,026
 8850 BORROW PIT #2
 9306 FROM BAL. #2
 1759 611' } 1870
 1752 201' } 376
 1295 { 517 } 15,391



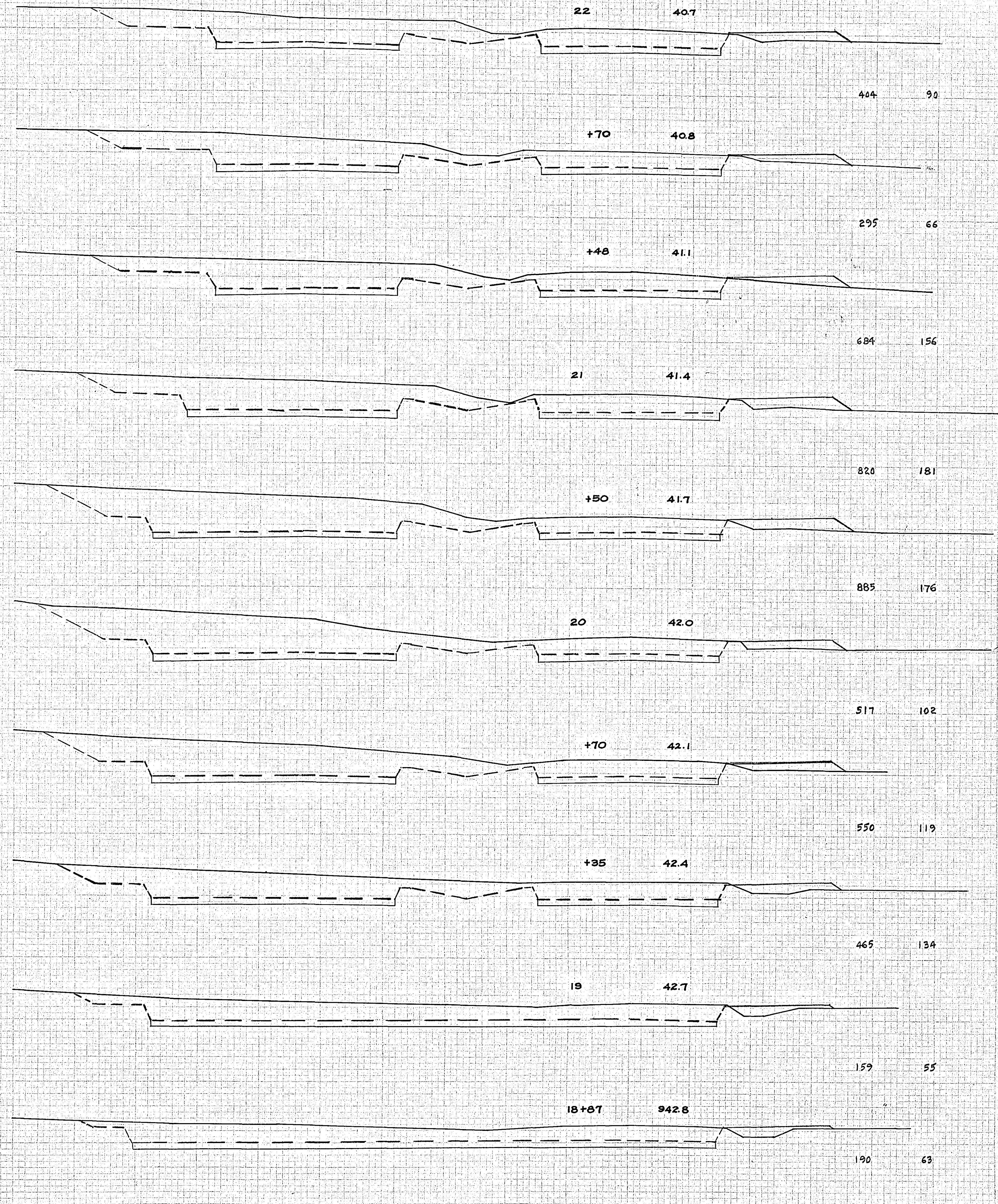
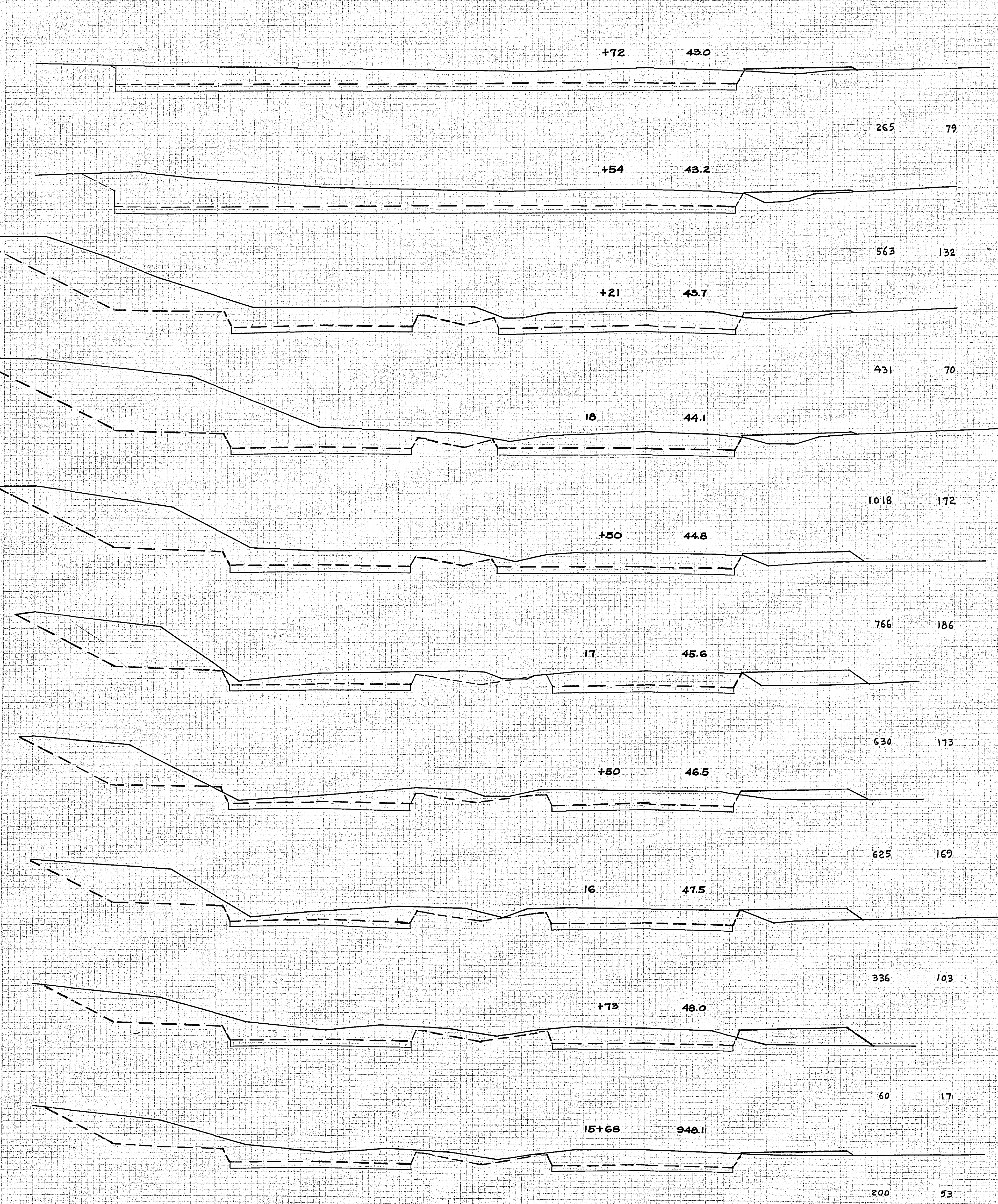
Under Bridge 0 617



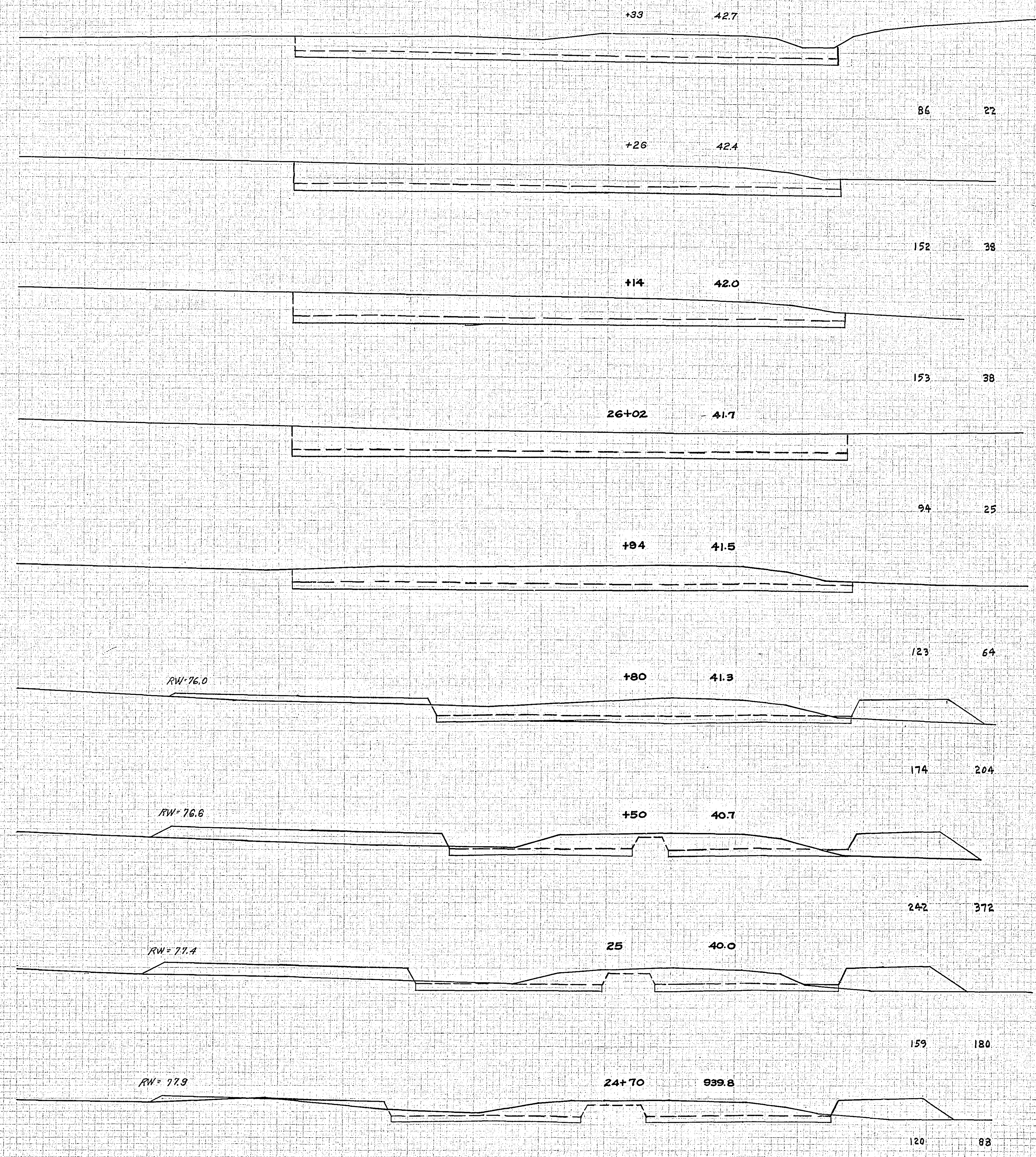
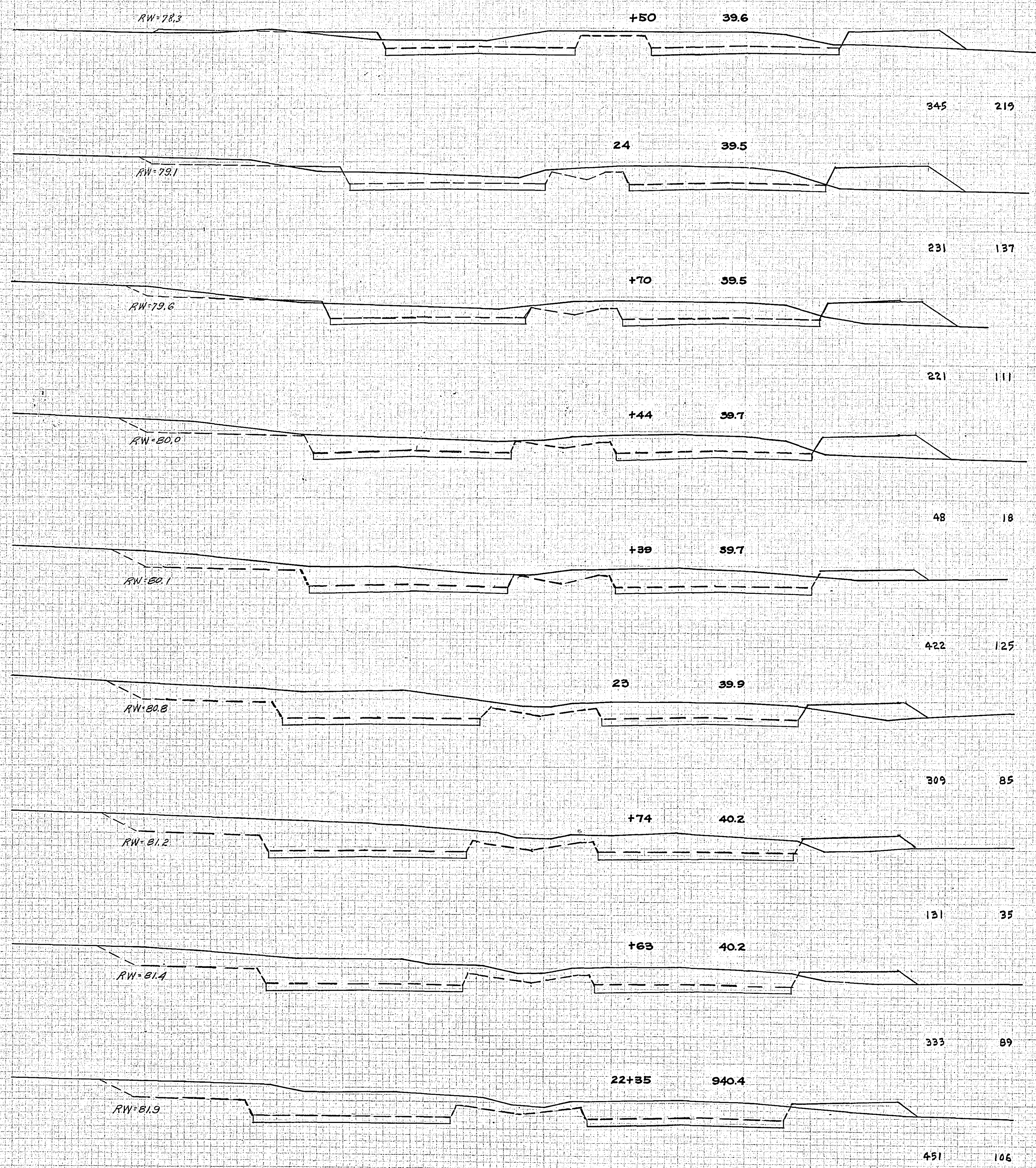
8086 + 7259 } 689 158 6220

CROSS SECTIONS SCALE 1" = 10'

LIMIT
 EMBANKMENT
 EXCAVATION
 DISTANCE
 STATION
 ELEVATION
 GRADE
 FINISH
 ELEVATION
 DISTANCE
 STATION
 ELEVATION
 GRADE
 FINISH



CROSS SECTIONS SCALE 1" = 10'

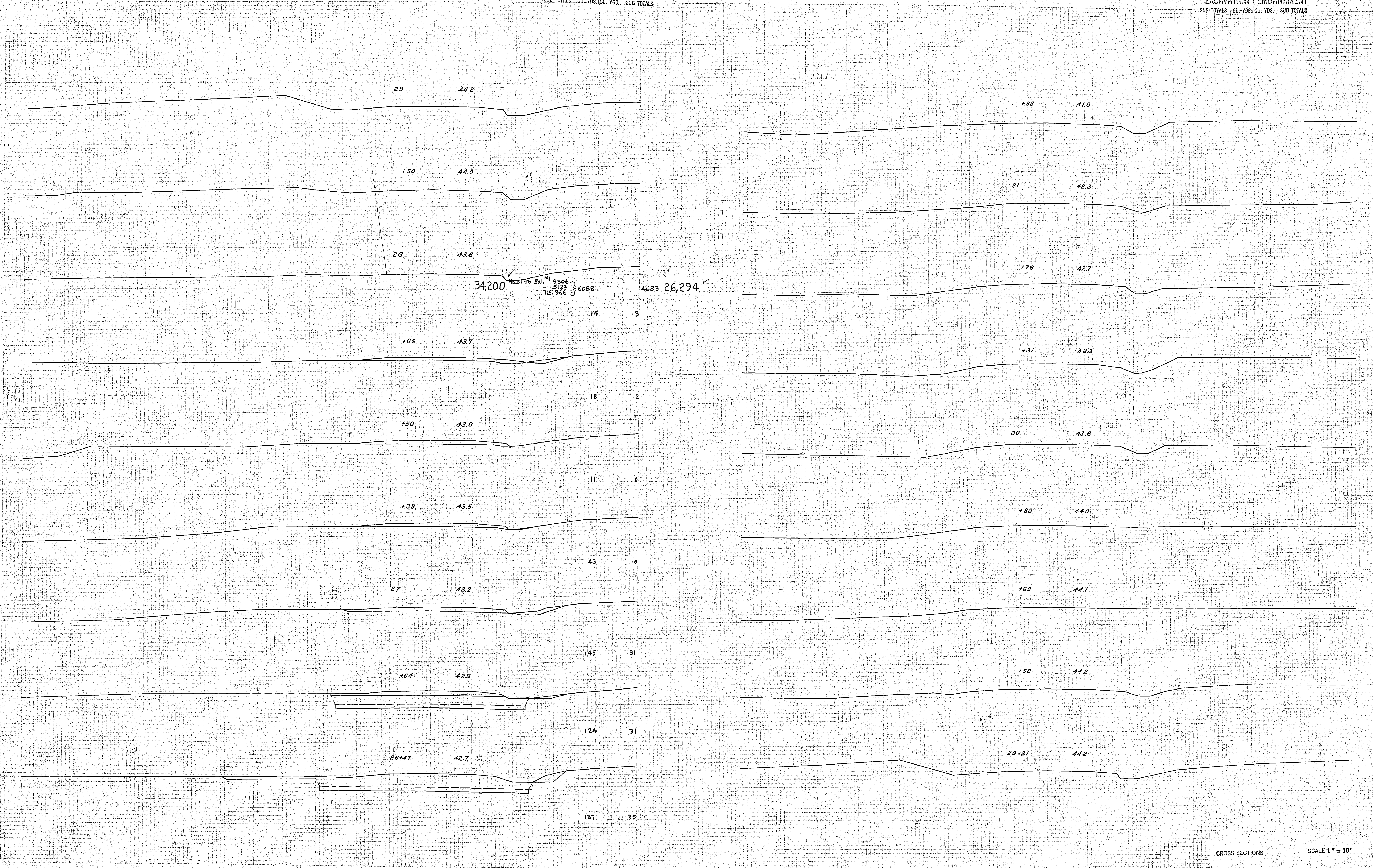


PART 1
 EXCAVATION
 PART 2
 EMBANKMENT
 PART 3
 SUB TOTALS

CROSS SECTIONS SCALE 1" = 10'

DATE: 10/1/66
 DRAWN BY: J. W. WEAVER
 CHECKED BY: J. W. WEAVER

DATE: 10/1/66
 DRAWN BY: J. W. WEAVER
 CHECKED BY: J. W. WEAVER



CROSS SECTIONS SCALE 1" = 10'