

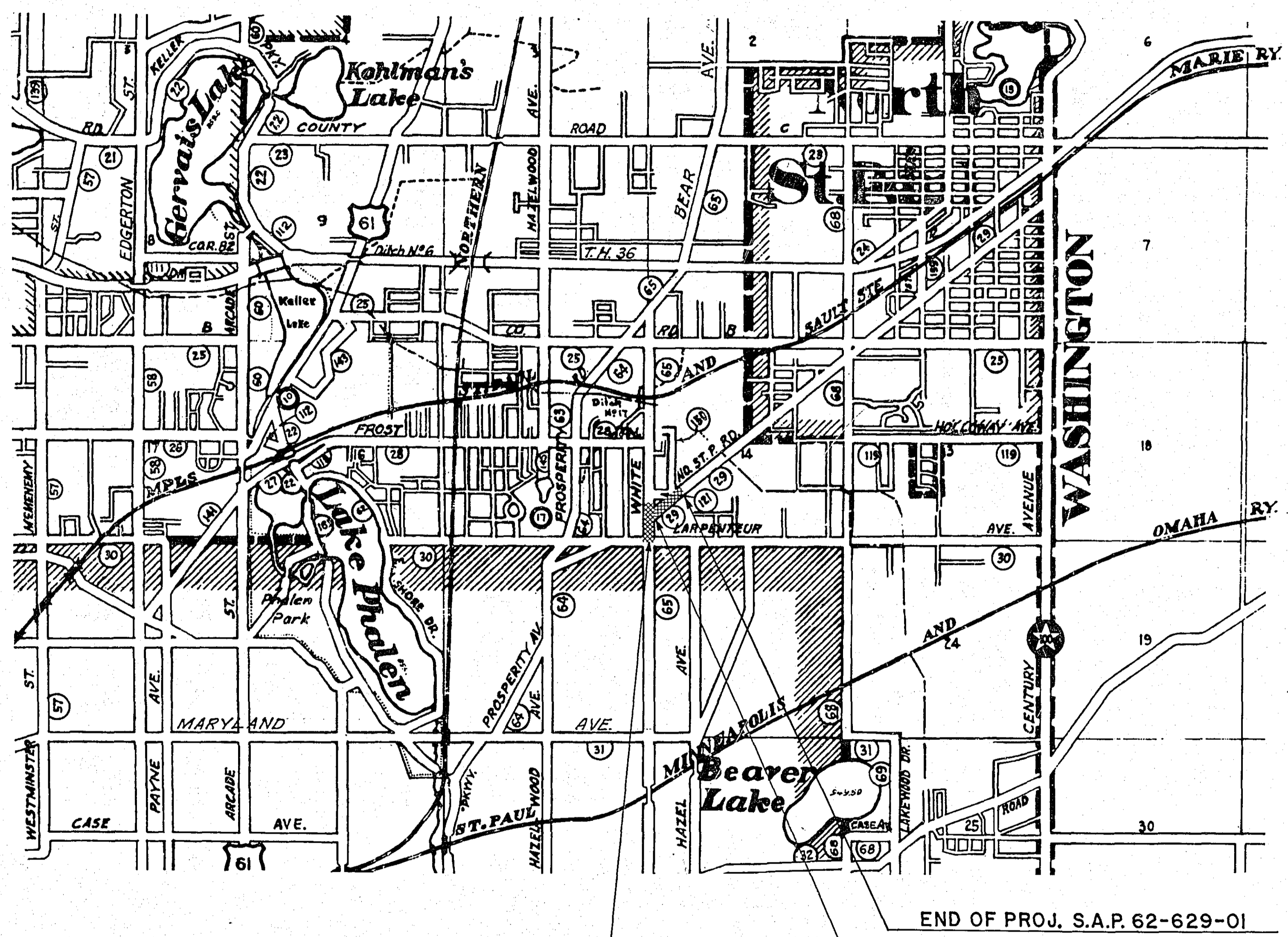
CONVENTIONAL SIGNS

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 1/4 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 (Traffic 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	-----	HEDGE	-----
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
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----



**OFFICE OF COUNTY ENGINEER
RAMSEY COUNTY**

CONSTRUCTION PLAN FOR GRADING AND PAVING
WHITE BEAR AVE. S.A.P. 62-665-03
 FROM LARPEUR AVE. (C.S.A.H. 30) TO 600' NORTH
 AND
NORTH ST. PAUL ROAD S.A.P. 62-629-01
 FROM WHITE BEAR AVE. (C.S.A.H. 65) TO RIPLEY ST. (CO. RD. 121)

GROSS LENGTH	2411.59 FEET	0.457 MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	2411.59 FEET	0.457 MILES

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS & ESTIMATED QUANTITIES
3	DRAINAGE STRUCTURE CHART
4	PANEL LAYOUT
5	PLAN & PROFILE
6	SIGNAL SYSTEM
7 TO 11	CROSS SECTIONS

SCALES

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.
LAYOUT, 1 inch = 2640 Feet

DESIGN SPEED 30 M.P.H.

TRAFFIC COUNT:
 NORTH ST. PAUL RD. 3,893 V.P.D.
 WHITE BEAR AVE. 7,231 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.
Dean S. Padilla REG. NO. 5081 DATE 6-5-61
 COUNTY ENGINEER

RECOMMENDED FOR APPROVAL *Dean S. Padilla* DATE 6-5-61
 COUNTY ENGINEER
 APPROVED *Paul J. ...* DATE JUNE 5, 1961
 CHAIRMAN OF RAMSEY COUNTY BOARD

MINNESOTA STATE HIGHWAY DEPARTMENT
 RECOMMENDED FOR APPROVAL *Gaydon R. Beck* DATE 6-8-61
 ASST. DISTRICT ENGINEER
 APPROVED *R. J. ...* DATE 6-15-61
 ASST. STATE-AD. ENGINEER

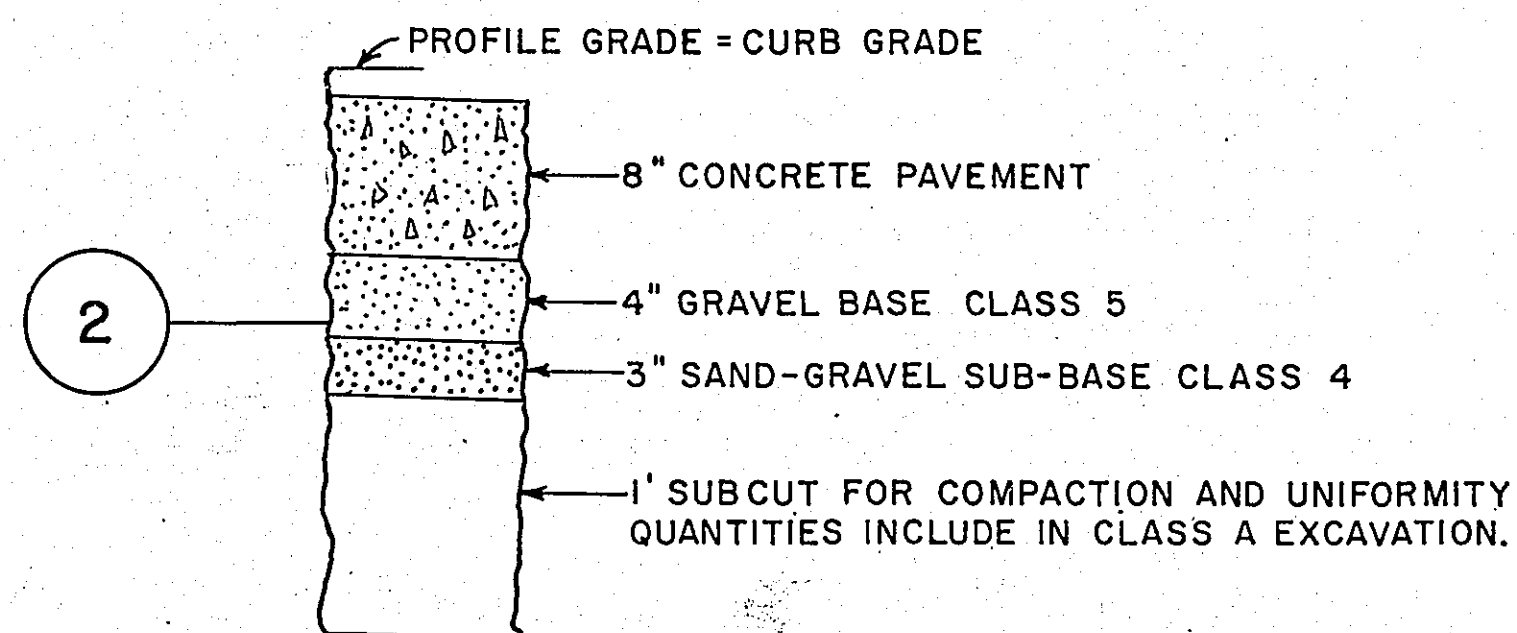
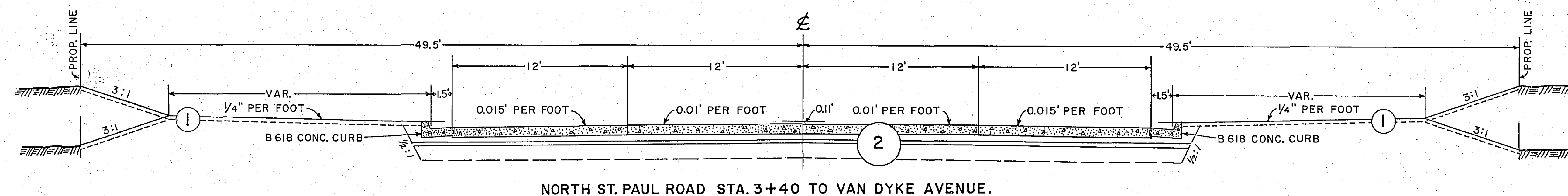
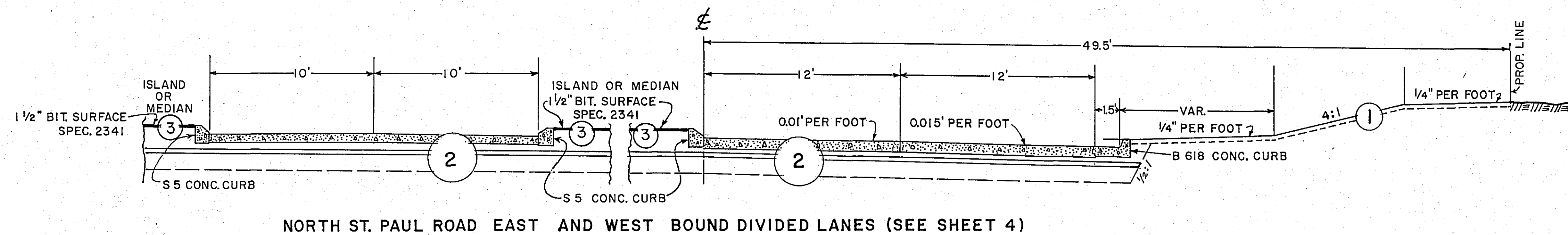
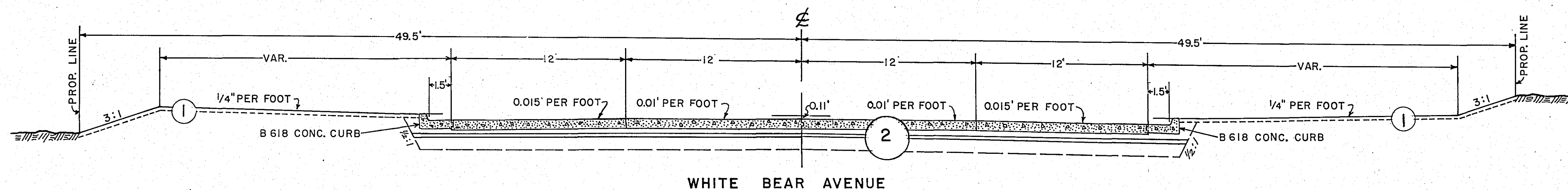
--- SPECIFICATIONS ---
 THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959 SHALL GOVERN.

MICRO-FILMED

ESTIMATED QUANTITIES					
SPEC. NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES		
			S.A.P. 62-665-03	S.A.P. 62-629-01	COMBINED TOTAL
2101.502	CLEARING	TREE	0	4	4
2101.507	GRUBBING	TREE	1	4	5
2104.502	REMOVE PAVEMENT	SQ. YD.	1659	3623	5282
2105.501	CLASS "A" EXCAVATION	CU. YD.	5017	8958	13975
2130.501	WATER	(M) GAL.	50	50	100
2104.510	REMOVE FENCE	LIN. FT.	820	0	820
2201.526	GRAVEL SUB-BASE IN PLACE (CLASS 4)	TON	612	1800	2412
2202.526	GRAVEL BASE IN PLACE (CLASS 5)	TON	816	3400	4216
2301.511	CONCRETE PAVEMENT (STD. STR. 7" THICK ENTRANCES)	SQ. YD.	40	156	196
2301.511	" " (STD. STR. 8" THICK)	SQ. YD.	3072	7950	11,022
2301.521	" " (H.E. STR. 7" THICK ENTRANCES)	SQ. YD.	29.3	63	92.3
2301.521	" " (H.E. STR. 8" THICK)	SQ. YD.	283	75	358
2301.531	REINFORCEMENT BARS	POUND	2481	3772	6253
2301.536	DOWEL BAR ASSEMBLIES	LIN. FT.	0	576	576
2301.549	CONCRETE TREATING OIL	GALLON	216	385	601
2341.501	BITUMINOUS MATERIAL FOR PRIME COAT	GALLON	0	850	850
2341.504	" " " MIXTURE	TON	0	13	13
2341.505	" " " FOG SEAL COAT	GALLON	0	150	150
2341.511	" " MIXTURE (WEARING COURSE)	TON	0	223.5	223.5
2341.531	AGGREGATE FOR FOG SEAL COAT	CU. YD. (V.M.)	0	10	10
2503.512-12	F. & I. R.C.P. SEWER 12" (CLASS 2)	LIN. FT.	361	0	361
2503.512-15	F. & I. R.C.P. SEWER 15" (CLASS 2)	LIN. FT.	534	352	886
2503.512-24	F. & I. R.C.P. SEWER 24" (CLASS 2)	LIN. FT.	0	54	54
2503.514-12	F. & I. C.M.P. CULVERT 12"	LIN. FT.	27	0	27
2503.521-15	INSTALL CONCRETE PIPE SEWER 15"	LIN. FT.	49	0	49
2515.531-12	F. & I. C.M.P. APRON 12"	APRON	2	0	2
2506.506	CONSTRUCT MANHOLE TYPE A	LIN. FT.	19	0	19
2506.511	RECONSTRUCT MANHOLE	LIN. FT.	19.5	23.9	43.4
2506.516	F. & I. CASTING ASSEMBLIES	ASSEMBLY	3	0	3
2506.521	INSTALL CASTING ASSEMBLIES	ASSEMBLY	3	5	8
2506.522	ADJUST FRAME AND RING CASTING	ASSEMBLY	3	5	8
2521.501	CONCRETE WALK 4" THICK	SQ. FT.	725	0	725
2531.501	CONCRETE CURB & GUTTER DESIGN B 618	LIN. FT.	814	1800	2614
2531.502	CONCRETE CURB DESIGN B 6	LIN. FT.	63	95	158
2531.502	CONCRETE CURB DESIGN S 5	LIN. FT.	0	680	680
2574.501	ROADSIDE SEEDING	ACRE	0	0.2	0.2
2574.511	SEED (CLASS 15)	POUND	0	24	24
2576.501	SODDING	SQ. YD.	2000	4400	6400
2565.501	RELOCATE SIGNAL SYSTEM	SIG. SYSTEM	1	0	1

STANDARD DETAIL PLATES	
1011C	CONCRETE PAVEMENT 8" UNIFORM X 24
1100D	EXPANSION JOINTS PLAIN
1103A TO 1109B	DOWEL BAR ASSEMBLY
1120E	CONTRACTION JOINTS
1140F	LONGITUDINAL JOINTS
1141A	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150E	CONSTRUCTION OF HEADER JOINT
3000B	REINFORCED CONCRETE PIPE
3123A	METAL APRON FOR C.M. PIPE
4000D	MANHOLE OR CATCH BASIN
4101A	RING CASTING FOR MANHOLE OR CATCH BASIN
4111C	COVER CASTING FOR MANHOLE
4180D	MANHOLE STEP CASTING
7020C & 7022B	CONCRETE CURB
7035D	CURB RETURNS AT ENTRANCES (SLOPE TO BE MODIFIED AS DIRECTED BY ENGINEER)
7100C	CONCRETE CURB AND GUTTER
7200B	CONCRETE WALK
8000A & 8009	STANDARD BARRICADE
8003 TO 8008A	ADVANCE WARNING SIGN
8110 TO 8116	TRAFFIC SIGNALS
9102A	SODDING AT PIPE CULVERT ENDS
1075F	PANELS ADJACENT TO PAVEMENT HEADERS

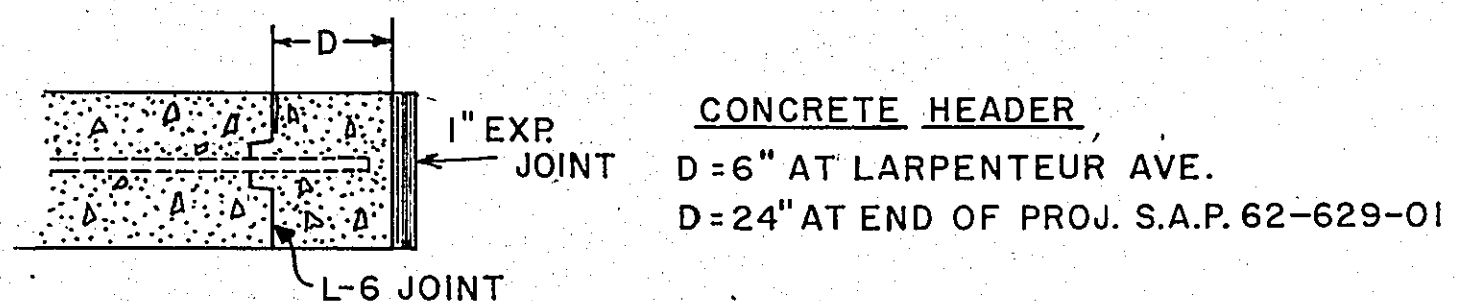
TYPICAL SECTIONS



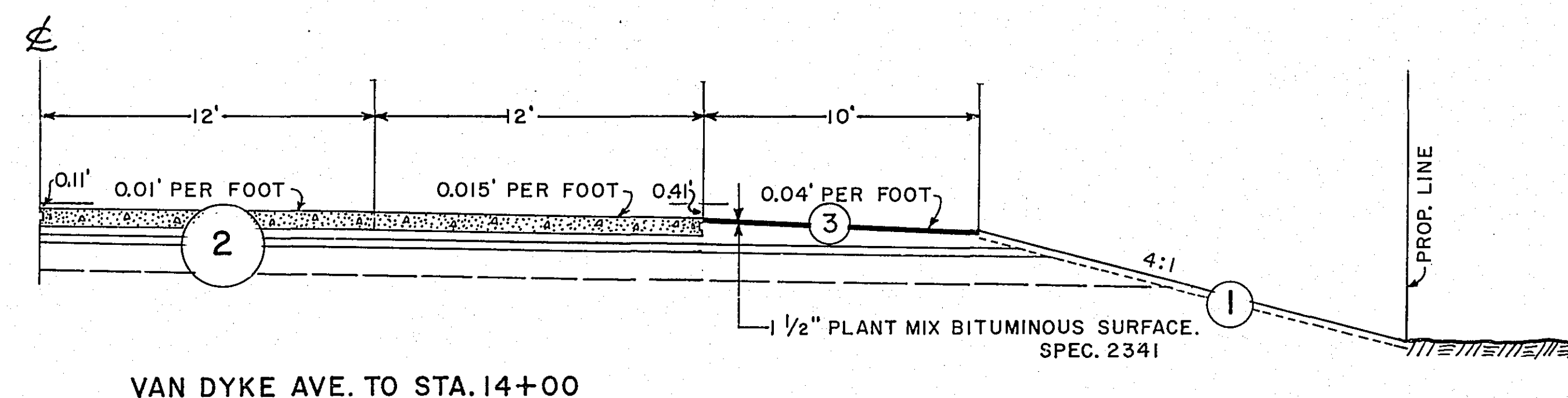
1 PLACE 3" TOPSOIL AND SOD OR SEED AS DIRECTED BY THE ENGINEER. QUANTITIES INCLUDED IN CLASS A EXCAVATION.

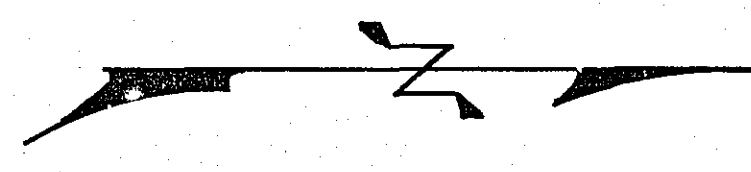
PRIVATE ENTRANCE RADIUS = 5'
ALLEY & COMMERCIAL ENTRANCE RADIUS = 10'
STREET INTERSECTION RADIUS = 20'
APPROACHES TO BE SURFACED AS DIRECTED BY THE ENGINEER.

PLACE 1/2" ϕ x 10' BARS 2'0" C-C IN PAVEMENT OVER LATERAL TRENCH EXCAVATIONS.

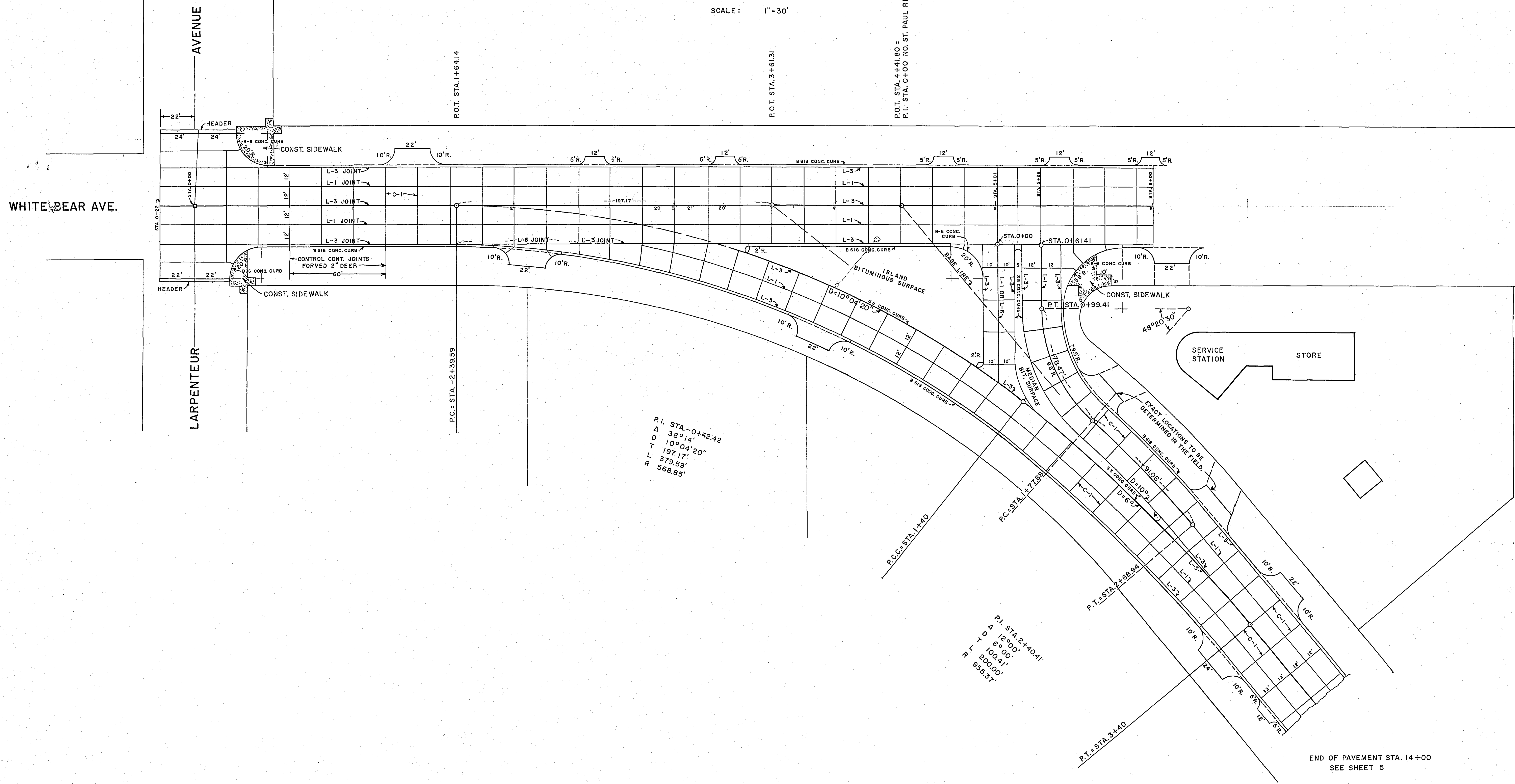


3 COMPACTION SHALL BE DONE IN ACCORDANCE WITH THE PROCEDURE GIVEN IN SPEC. 2331.3H2A.





SCALE: 1" = 30'



P.O.T. STA. 1+64.14

P.O.T. STA. 3+61.31

P.O.T. STA. 4+41.80 =
P.I. STA. 0+00 NO. ST. PAUL RD.

WHITE BEAR AVE.

AVENUE

LARPENNEUR

P.C. STA. -2+39.59

P.I. STA. -0+42.42
Δ 38°14'
D 10°04'20"
T 197.17'
L 379.59'
R 568.85'

P.C. STA. 1+140

P.C. STA. 1+78.91

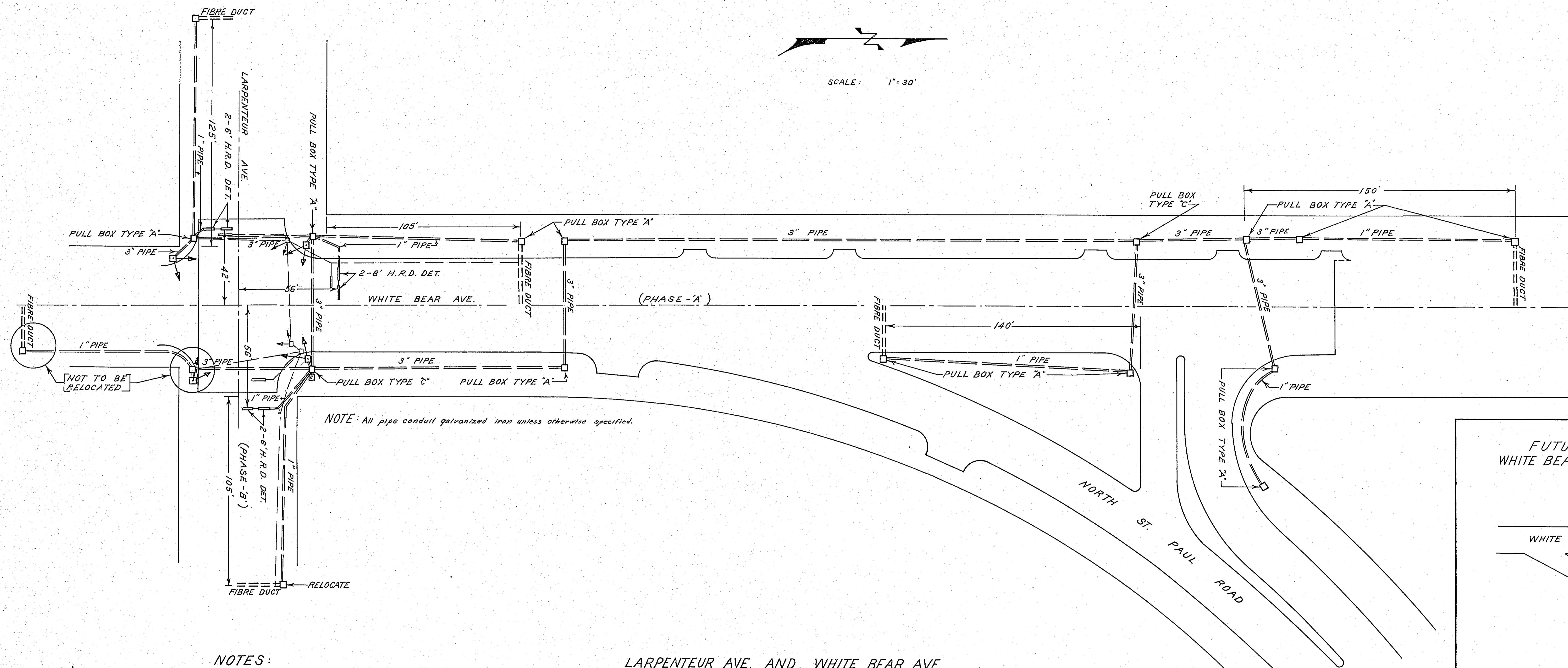
P.T. STA. 2+68.94

P.I. STA. 2+40.41
Δ 12°00'
D 6°00'
T 100.41'
L 200.00'
R 555.37'

P.T. STA. 3+40

END OF PAVEMENT STA. 14+00
SEE SHEET 5

SCALE: 1" = 30'



NOTE: All pipe conduit galvanized iron unless otherwise specified.

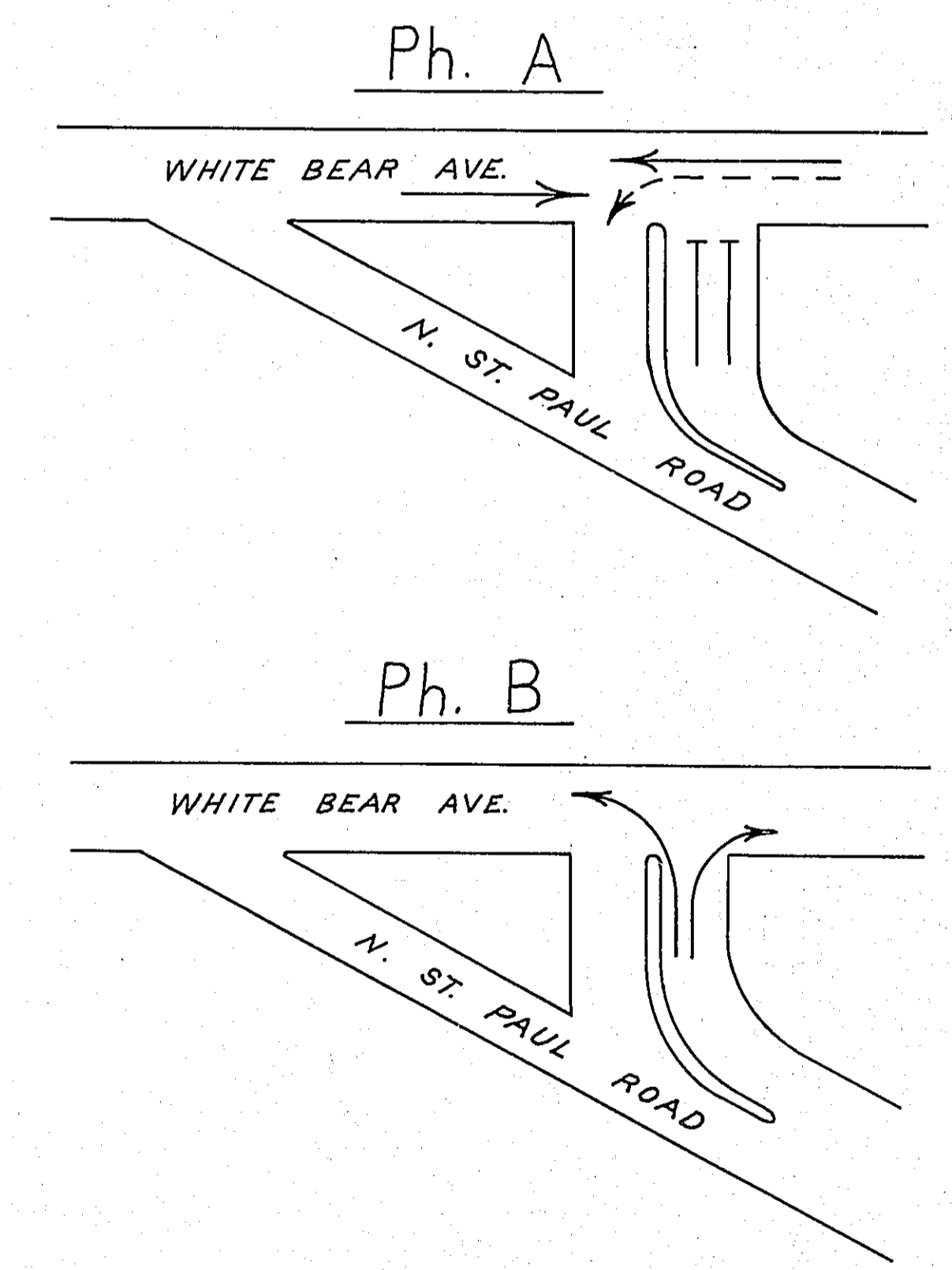
NOTES:

1. SIGNAL HEAD (2 WAY - 3 LIGHT)
2. STOP STRIPE (PAINTED YELLOW) to be painted by Ramsey County
3. PULL BOX - TYPE "A" - "C" AS SHOWN ON PLAN
4. #12 CABLE (DETECTOR CIRCUIT) ADD ONE SPARE FOR EACH DETECTOR
5. CONTROLLER (TYPE 1804N-ELECTRO-MATIC) or equal
6. CONDUIT - GALVENIZED IRON, SIZE AS SHOWN ON PLAN
7. PRESSURE PLATES, SIZE AS SHOWN ON PLAN
8. MINIMUM WIRE SIZE SIGNAL CIRCUIT #12 (3 SPARES TO EACH SIGNAL STANDARD)
9. UNDERGROUND SERVICE CONNECTION #8 WIRE
- 10.

LARPELVEUR AVE. AND WHITE BEAR AVE.

- REMOVE: Existing signal standards, concrete bases, pressure plates, pull boxes, control cabinet, stub pole and underground conduits where necessary.
- RELOCATION: Relocate signal as shown on plan, use all available equipment possible from dismantled installation.
- RETURN: All wire, control cabinets and other signal equipment that is not utilized in the reconstruction shall be turned over to the Ramsey county engineers department.
- INSTALL: Model SR-A Electromatic relay or equal in signal circuits. One relay required for each circuit. Relays shall be installed on cabinet wall.
- NOTICE: The signal standard and pull box located at the South East corner, plus the South MK Detector location has been relocated (Do not disturb this installation.)
- CONNECTIONS: Safety switch and meter box shall be attached to power pole. Underground cable shall be run up the power pole in a 1-inch rigid galvanized conduit to the switch. From the switch to a conduit near the top of the power pole, two No. 8 A.W.G. rubber covered soft drawn solid copper wires shall be run through the meter box and beyond the conduit.

FUTURE SIGNAL SEQUENCE
WHITE BEAR AVE - N. ST. PAUL RD.



	SIGNALS	Ph. A		Ph. B		EMERG. FLASH
		R/W	CL	R/W	CL	
WHITE BEAR AVE.	S.B. 1	G	Y	R	R	Y
	S.B. 2	G	Y	R	R	Y
	N.B. 3, 4	G	Y	R	R	Y
N. ST. PAUL RD.	WB. to S.B. 5	R	R	G	Y	R
	WB. to N.B. 6	R	R	G	Y	R

- NOTES: 1. Signals 3 & 4 connect in parallel.
Signals 1, 2, 5 & 6 connect separately for future change in signal sequence if required.
2. Additional information will be given at time of actual signal installation.

STATION-ELEVATION

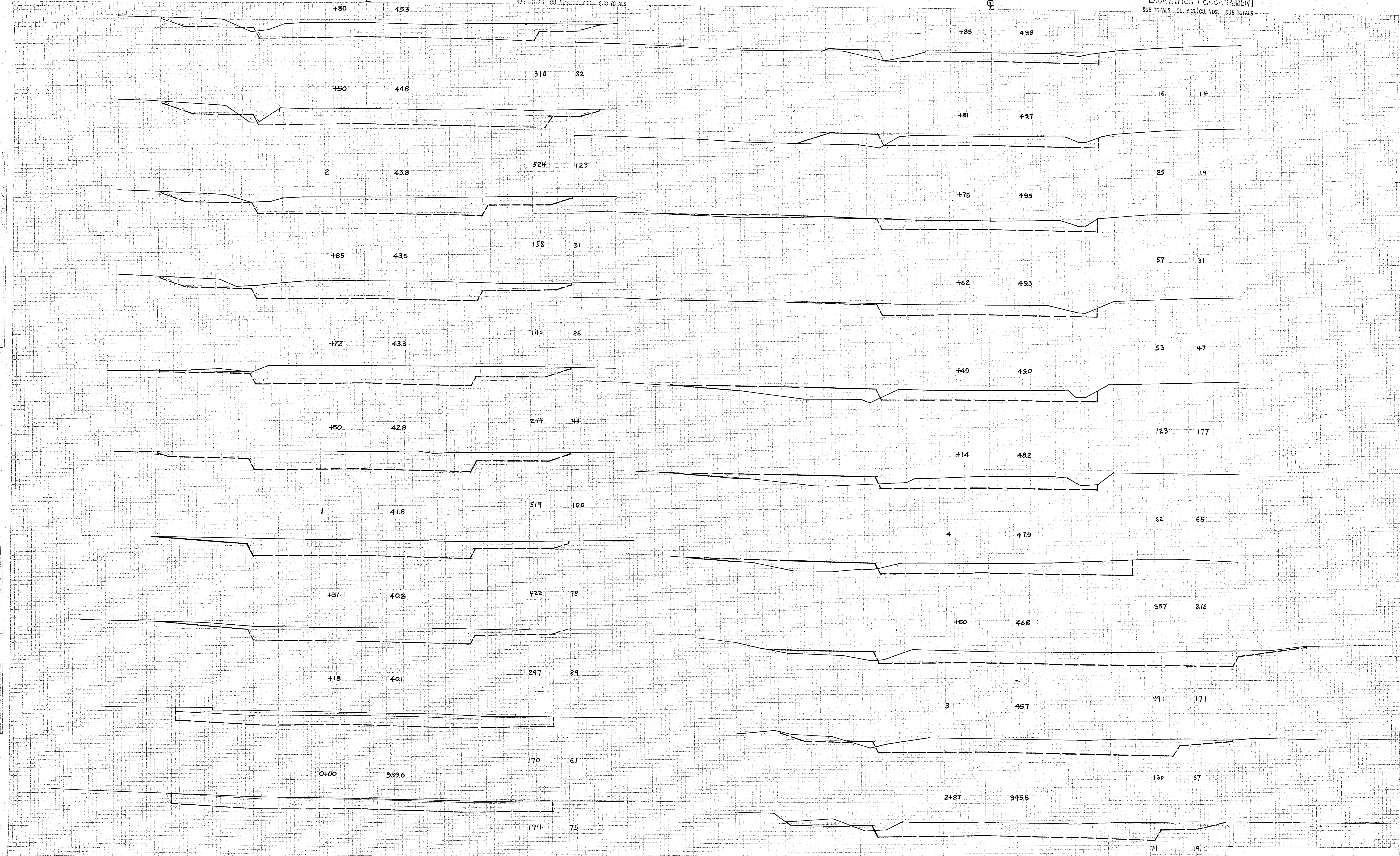
EXCAVATION | EMBANKMENT
SUB-TOTALS - CU. YDS. CU. YDS. - SUB-TOTALS

STATION-ELEVATION

EXCAVATION | EMBANKMENT
SUB-TOTALS - CU. YDS. CU. YDS. - SUB-TOTALS

NO. OF PAGES	11
NO. OF SHEETS	11
NO. OF SECTIONS	11
NO. OF LINES	11
NO. OF POINTS	11
NO. OF STATIONS	11
NO. OF ELEVATIONS	11
NO. OF TOTALS	11
NO. OF SUB-TOTALS	11
NO. OF CROSS SECTIONS	11
NO. OF SCALE	11
NO. OF SHEETS	11
NO. OF SECTIONS	11
NO. OF LINES	11
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NO. OF CROSS SECTIONS	11
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NO. OF STATIONS	11
NO. OF ELEVATIONS	11
NO. OF TOTALS	11
NO. OF SUB-TOTALS	11
NO. OF CROSS SECTIONS	11
NO. OF SCALE	11



CROSS SECTIONS SCALE 1" = 10'

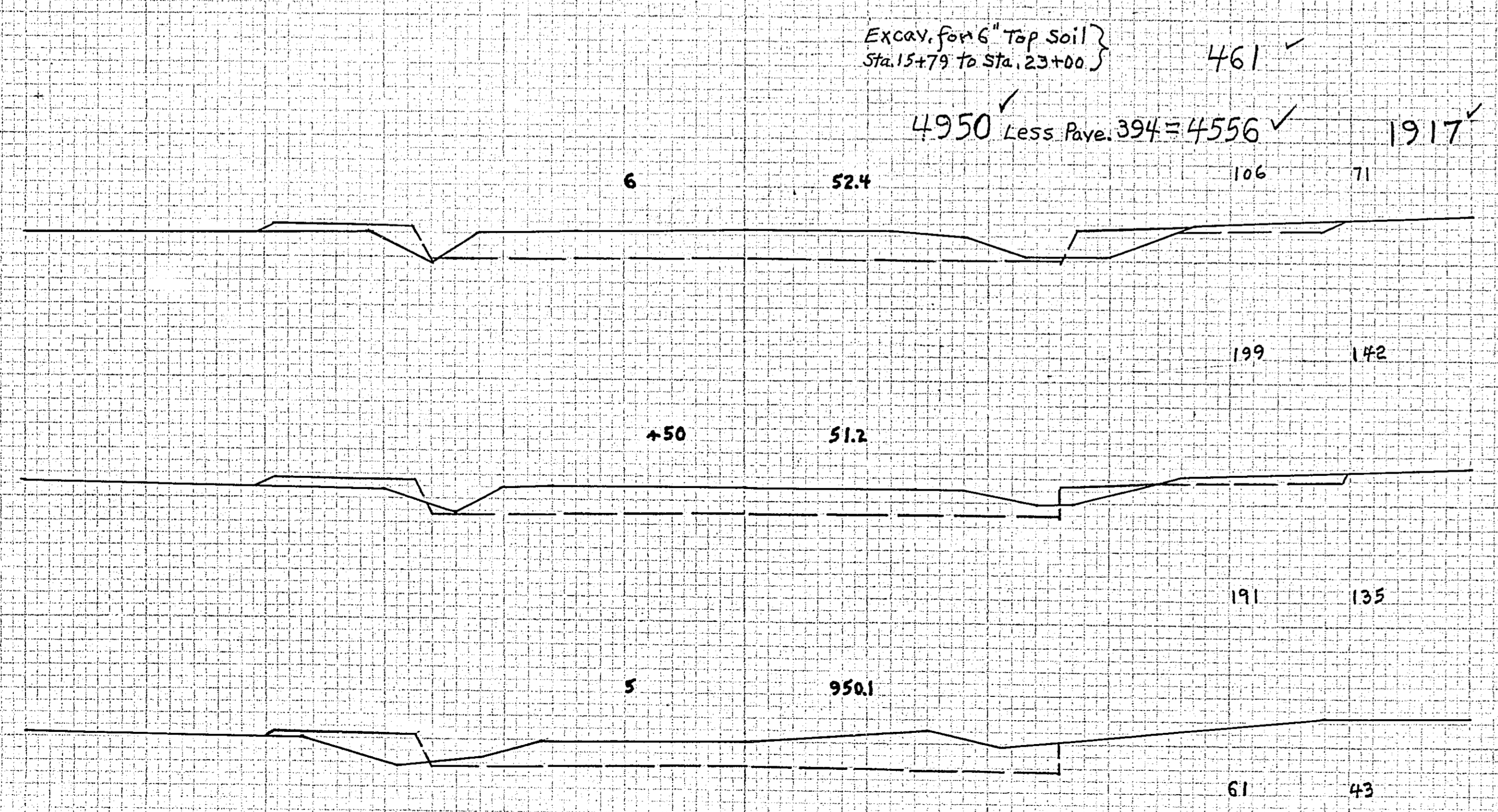
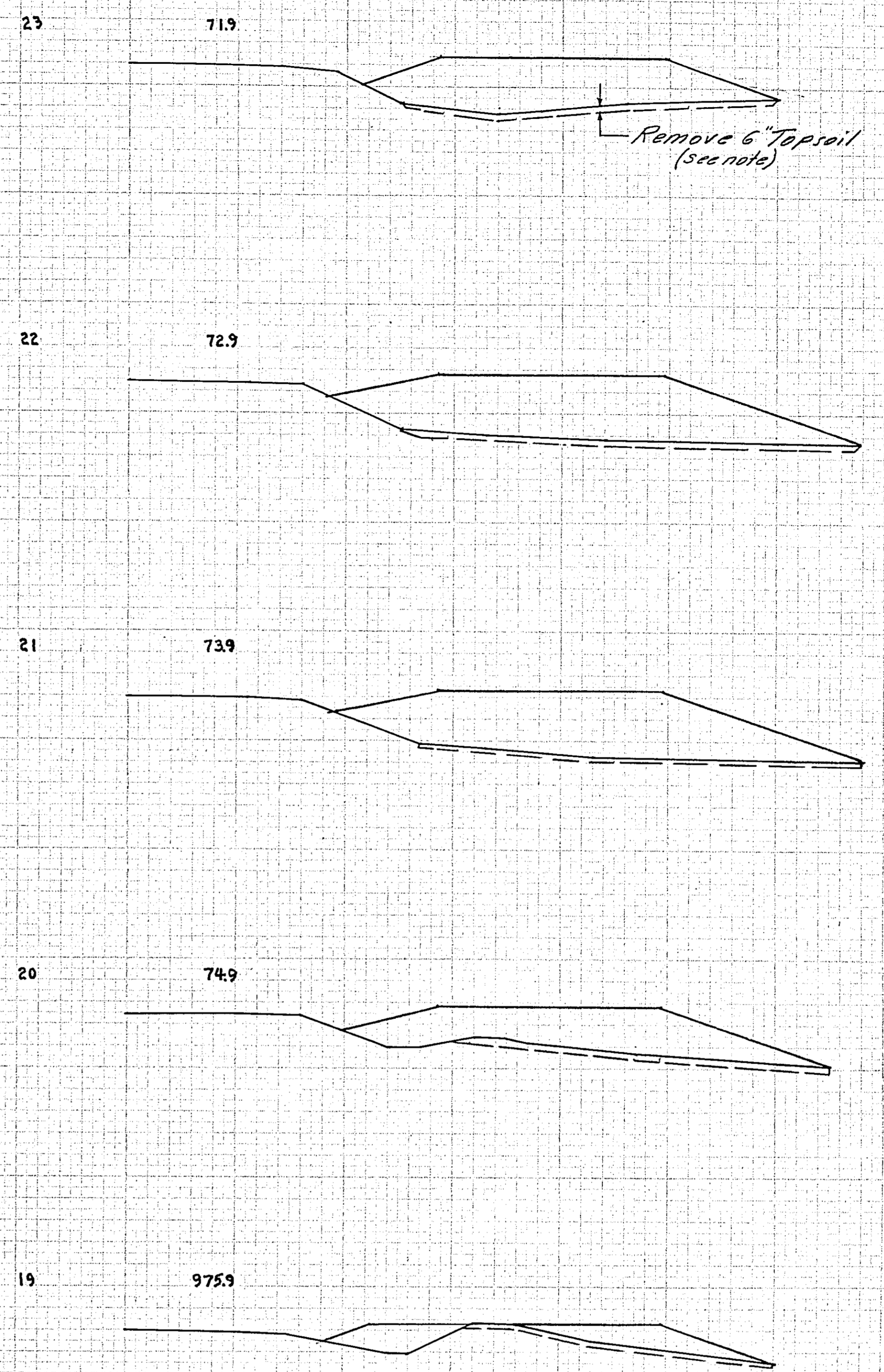
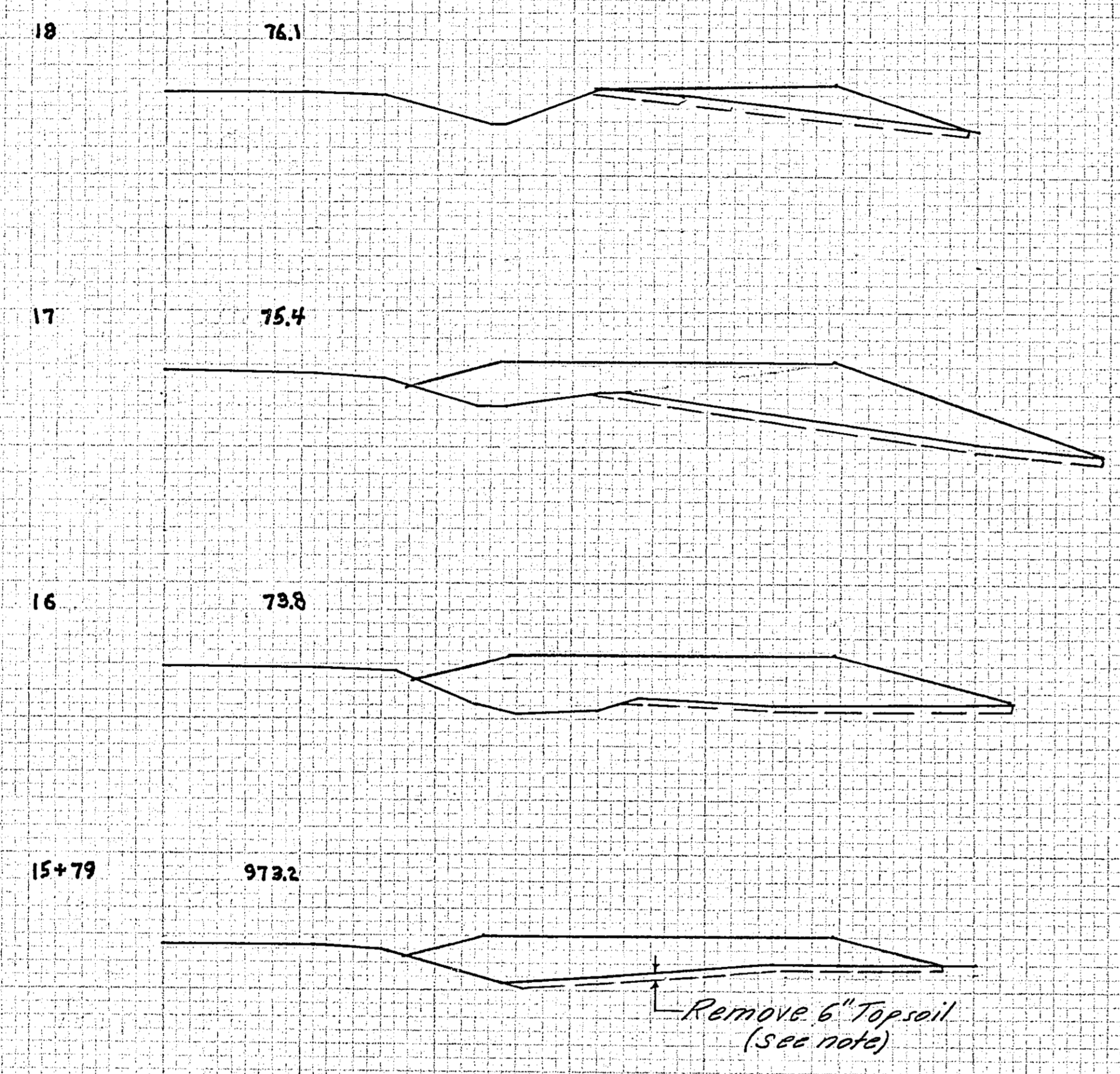
STATION-ELEVATION

EXCAVATION | EMBANKMENT
SUB TOTALS - CU. YDS. - SUB TOTALS

STATION-ELEVATION

DATE: 11/15/11
PROJECT: ST. 15+00 TO ST. 23+00
SHEET: 8 OF 11

DATE: 11/15/11
PROJECT: ST. 15+00 TO ST. 23+00
SHEET: 8 OF 11



Sta. 15+00 Rht. to Sta. 23+20 Rht.
Remove 820 Linear Feet Fence
Note: Topsoil to be used for topsoiling on project if needed or stock piled near site of removal. Quantities included in Class A Excavation.

CROSS SECTIONS SCALE 1" = 10'

STATION-ELEVATION

EXCAVATION / EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUB TOTALS

STATION-ELEVATION

EXCAVATION / EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUB TOTALS

NO. 100
SCALE BOOK
SHEET NO.
DATE
BY

NO. 100
SCALE BOOK
SHEET NO.
DATE
BY

+75 56.8

+50 56.1

+53 53.3

+75 52.3

+50 51.6

+34 49.8

+29 47.6

+24 49.3

0+00 94.9

297 59

775 190

443 118

387 99

206 54

58 15

54 15

224 61

4 63.0

+79 62.6

+57 62.1

+35 61.6

3 60.7

+94 60.5

+62 59.4

+31 58.4

2 95.6

168 41

183 43

180 43

329 69

63 12

292 65

321 68

268 56

3561 - 150 Pav. = 3411 $\frac{65}{246}$ } 311 $\frac{65}{53}$ } 853

CROSS SECTIONS SCALE 1" = 10'

STATION-ELEVATION

±

EXCAVATION / EMBANKMENT

SUB-TOTALS - CU. YDS. CU. YDS. - SUB-TOTALS

STATION-ELEVATION

±

EXCAVATION / EMBANKMENT

SUB-TOTALS - CU. YDS. CU. YDS. - SUB-TOTALS

+82 649

35 22

+71 649

92 24

+59 648

61 16

+51 648

357 100

51 644

192 59

+70 640

20 6

+67 639

247 71

+31 634

195 53

4104 9631

30 8

8 647

59 39

+87 647

183 102

+50 648

297 119

7 649

274 87

+60 649

336 90

+15 650

56 14

+08 650

65 16

6 650

71 18

5191 9650

70 18

CROSS SECTIONS

SCALE 1" = 10'

DATE: 11/11/54
BY: J. H. BROWN
CHECKED: J. H. BROWN
APPROVED: J. H. BROWN

DATE: 11/11/54
BY: J. H. BROWN
CHECKED: J. H. BROWN
APPROVED: J. H. BROWN

STATION-ELEVATION
②

EXCAVATION | EMBANKMENT
SUB-TOTALS CU. YDS. CU. YDS. SUB-TOTALS

STATION-ELEVATION
②

EXCAVATION | EMBANKMENT
SUB-TOTALS CU. YDS. CU. YDS. SUB-TOTALS

K. O. E. CO. - 20' 0" 1913
REPLACES 1913 CO. 25' 0" 1913
BY THE 1913 CROSS SECTION OF THE P. E. R. H. ROAD

9623 ✓ 665 ✓ 8958 ✓ 5120 ✓
+50
15 774 6062-515 PAV. = 5547 ✓ 70 2 4267 ✓

12+ 689

+50 676

11+ 664

+50 655

10+ 647

+50 643

9+ 642

+63 643

8+50 643

162 296

131 299

96 313

77 357

73 354

81 296

74 146

33 38

184 155

+50 760

14 744

+54 730

+35 724

+25 722

+17 719

13 715

12+50 9102

195 3

216 3

328 156

109 72

54 38

44 36

81 82

198 260

178 279

NO. 1
HOLE BOOK
SURVEY
ORIGIN

NO. 2
HOLE BOOK
SURVEY
LIMIT

CROSS SECTIONS SCALE 1" = 10'