

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 1/2 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 (Same 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	-----	HEBGE	-----
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	-----		

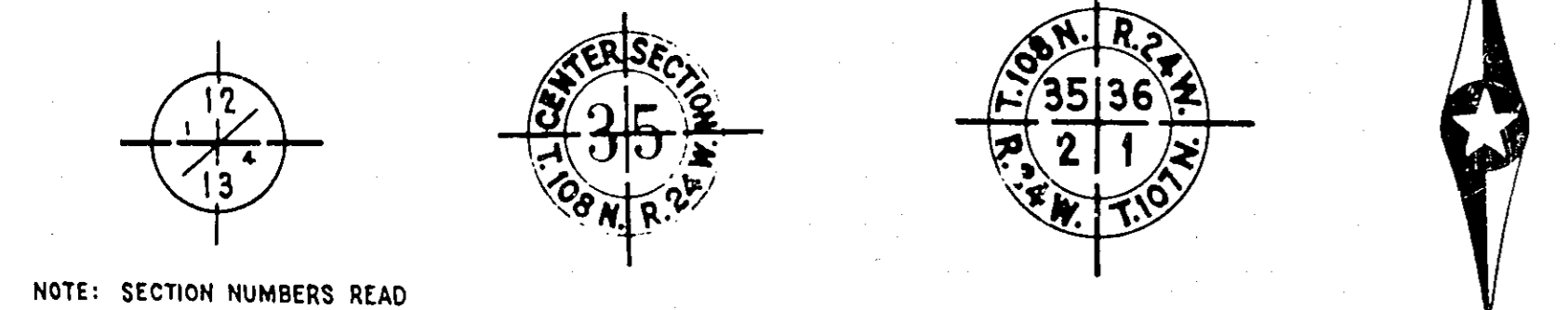
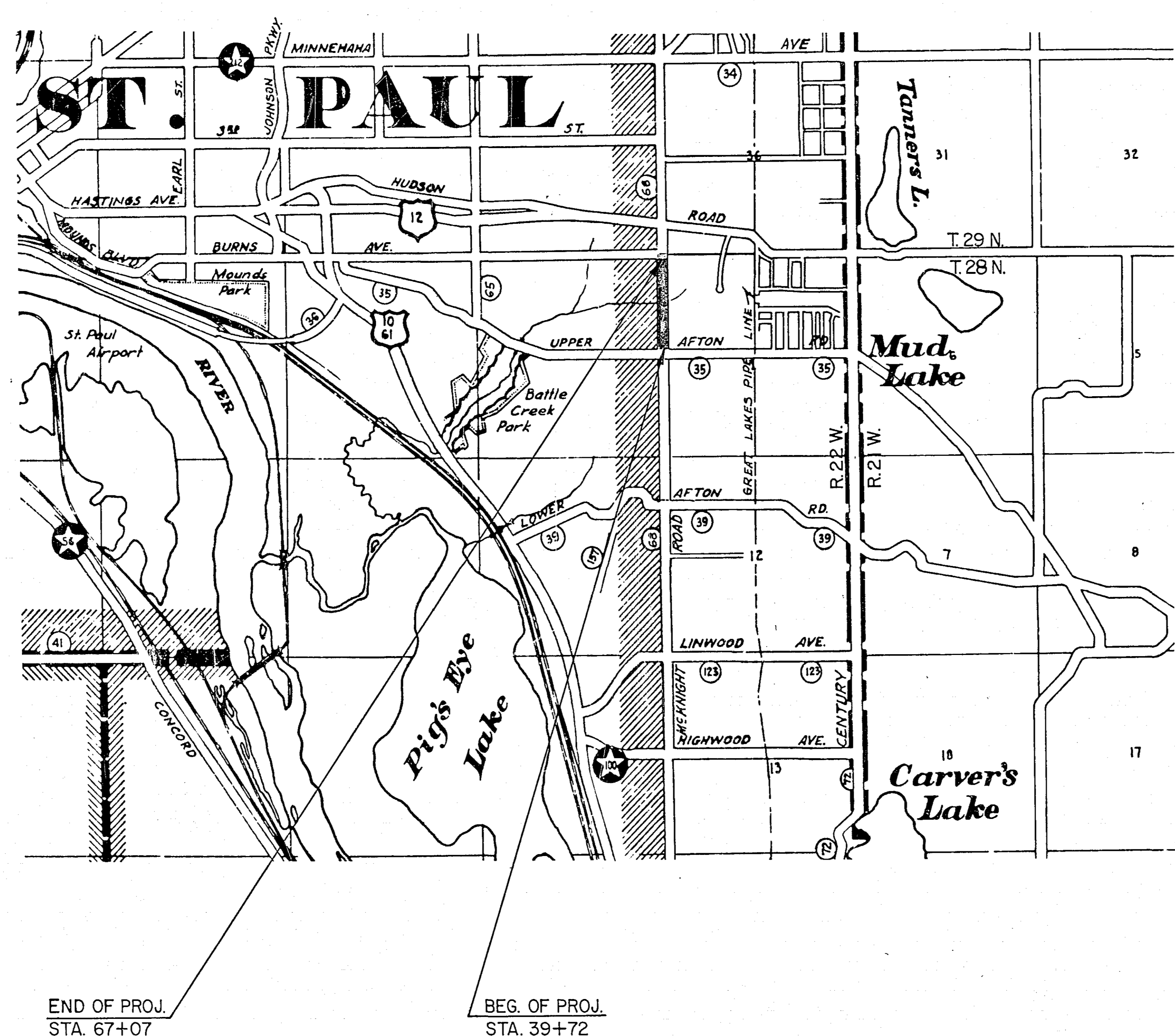
OFFICE OF COUNTY ENGINEER
RAMSEY COUNTY
CONSTRUCTION PLAN FOR GRADING & SURFACING
McKNIGHT ROAD
FROM UPPER AFTON ROAD (C.S.A.H. 35) TO BURNS AVE.
PROJECT NO. S.A.P. 62-668-04

GROSS LENGTH	2735 FEET	0.518 MILES
BRIDGES-LENGTH	0 FEET	0 MILES
EXCEPTIONS-LENGTH	0 FEET	0 MILES
NET LENGTH	2735 FEET	0.518 MILES

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS & ESTIMATED QUANTITIES
3-4	PLAN SHEETS
5-10	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
Cross-Sections 1 inch = 10 Feet
LAYOUT, 1 inch = 2640 Feet



PIT DATA

PIT NO. _____	Located in _____
PIT NO. _____	Dead Haul _____
PIT NO. _____	Located in _____
PIT NO. _____	Dead Haul _____
PIT NO. _____	Located in _____
PIT NO. _____	Dead Haul _____

DESIGN SPEED—40 M.P.H.
DESIGN LOAD—9 TON
PROJECTED TRAFFIC COUNT—2000 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.
Alfred M. Smythes REG. NO. 6334 DATE 4/2/62

RECOMMENDED FOR APPROVAL *Dave S. Padden* DATE 4/13/62
COUNTY ENGINEER
APPROVED *Edmund W. Lang* DATE 4/9/62
CHAIRMAN OF RAMSEY COUNTY BOARD

MINNESOTA STATE HIGHWAY DEPARTMENT
RECOMMENDED FOR APPROVAL *J. L. McMillan* DATE 4/13/62
ASST. DISTRICT ENGINEER
RECOMMENDED FOR APPROVAL *Raymond R. Doock* DATE 4-3-62
ASST. DISTRICT ENGINEER
APPROVED _____ DATE 4-5-62
STATE AID ENGINEER

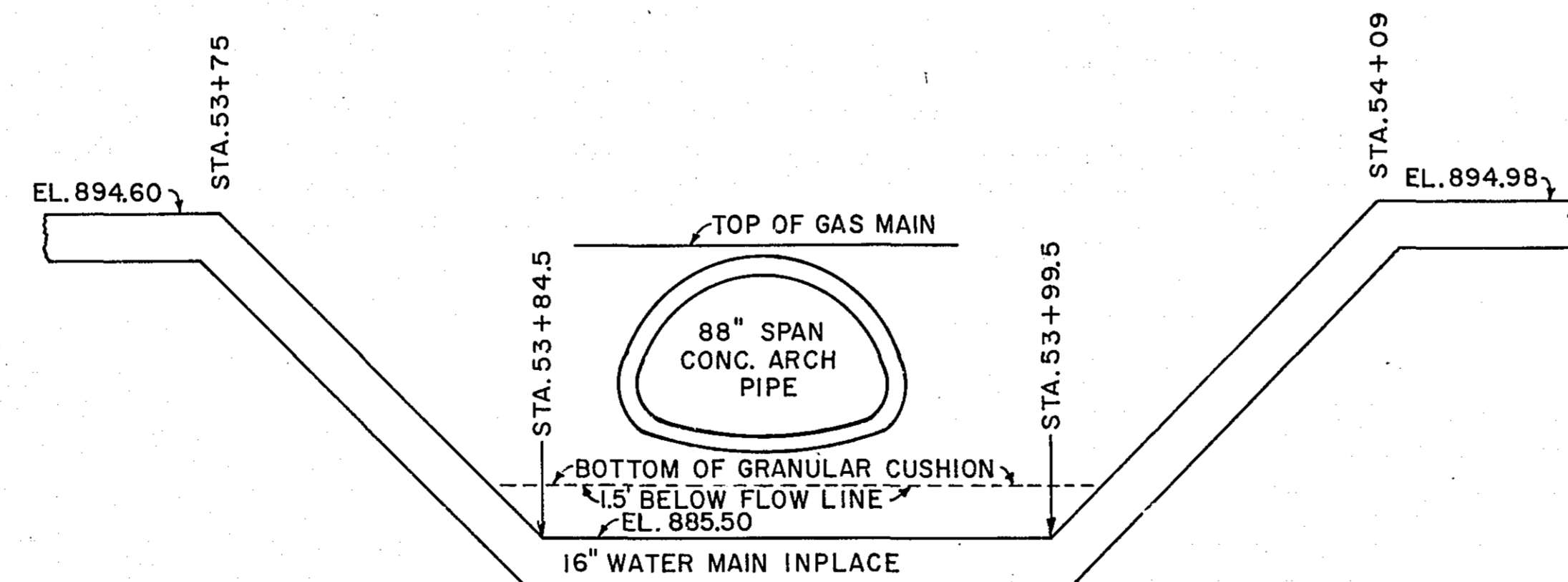
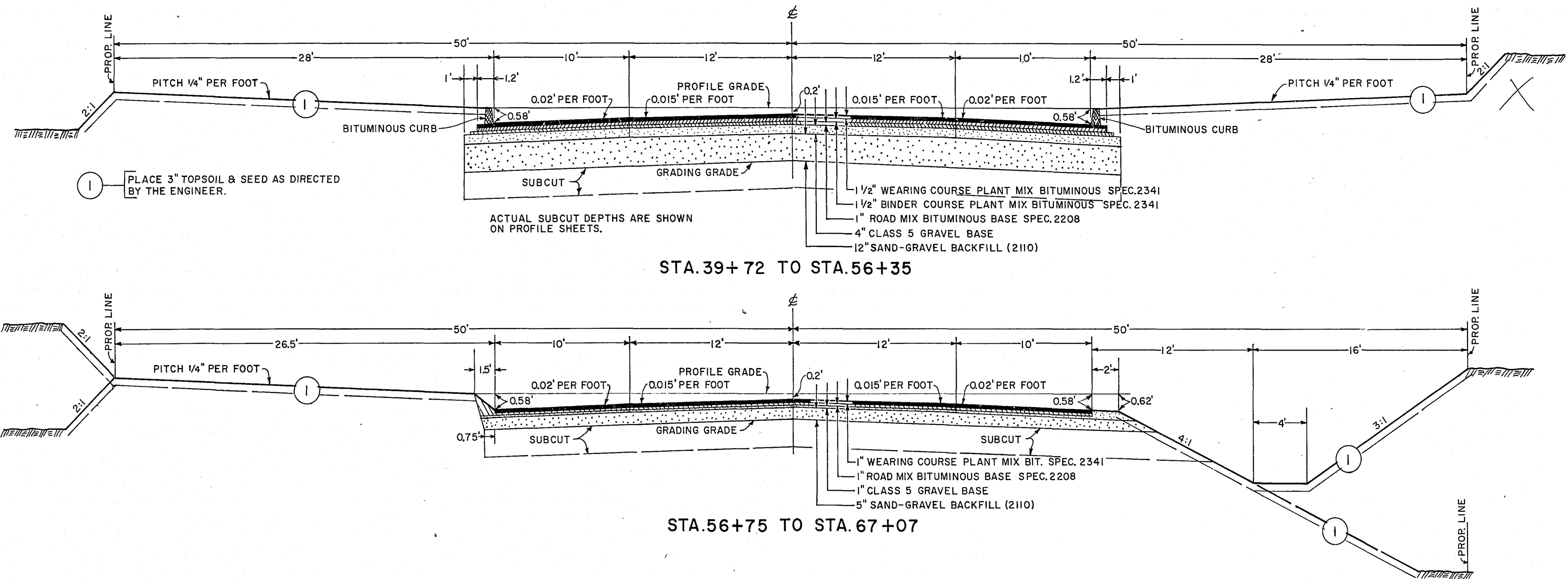
—SPECIFICATIONS—
THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959 SHALL GOVERN.

ESTIMATED QUANTITIES			
SPEC. NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE	3
2101.507	GRUBBING	TREE	4
2104.501	REMOVE PORTABLE CULVERTS	LINEAR FOOT	30
2105.501	CLASS A EXCAVATION (INCLUDES 1,463 CU.YD. TOPSOIL)	CUBIC YARD	21,280
2108.511	CHANNEL EXCAVATION (CLASS A)	CUBIC YARD	600
2110.503	SAND-GRAVEL FILL IN PLACE	CUBIC YARD	6,003
2202.502	GRAVEL MATERIAL CLASS 5	TON	2,300
2208.501	BITUMINOUS MATERIAL FOR PRIME COAT	GALLON	4,400
2208.503	BITUMINOUS MATERIAL FOR MIXTURE	GALLON	9,400
2208.506	AGGREGATE	TON	780
2341.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	700
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	88
2341.511	BITUMINOUS MIXTURE (BINDER COURSE)	TON	720
2341.511	BITUMINOUS MIXTURE (WEARING COURSE)	TON	1,000
2357.505	BITUMINOUS MATERIAL FOR SEAL COAT	GALLON	1,600
2357.507	SEAL COAT AGGREGATE	TON	100
2501.501	PIPE CULVERT EXCAVATION	CUBIC YARD	470
2501.522	F. & I. S.C.P. ARCH CULVERT 88" SPAN	LINEAR FOOT	78
2503.512-15	F. & I. R.C.P. SEWER (CLASS 2)	LINEAR FOOT	42
2503.512-18	F. & I. R.C.P. SEWER (CLASS 2)	LINEAR FOOT	42
2515.542	F. & I. CONC. APRONS FOR S.C.P.-A. (88" SPAN)	APRON	2
2506.506	CONSTRUCT CATCH BASIN DESIGN G	LINEAR FOOT	8.9
2506.507	CONSTRUCT CATCH BASIN SPECIAL	LINEAR FOOT	13.5
2506.516	F. & I. CASTING ASSEMBLIES	ASSEMBLY	2
2506.521	INSTALL CASTINGS	ASSEMBLY	4
2506.512	RECONSTRUCT MANHOLES	LINEAR FOOT	24
2531.502	CONCRETE CURB DESIGN B-6	LINEAR FOOT	48
2535.501	BITUMINOUS CURB	LINEAR FOOT	3,320
2574.501	ROADSIDE SEEDING	ACRE	5.8
2574.511	SEED (CLASS 15)	POUND	700

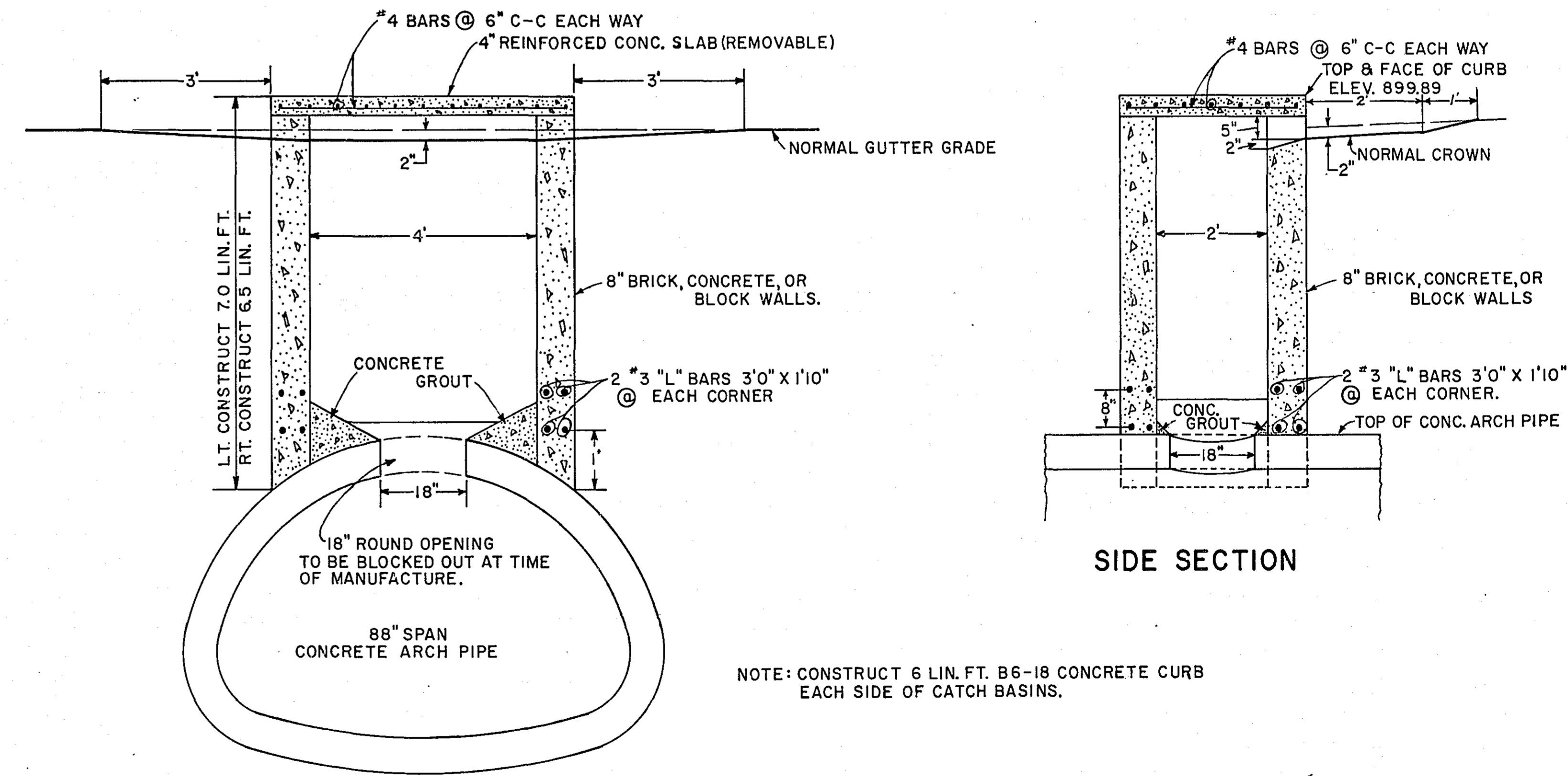
2 RING CASTINGS NO. 801
 2 GRATE CASTINGS NO. 810
 2 CURB BOX CASTINGS NO. 821B

STANDARD DETAIL PLATES	
3000B	REINFORCED CONCRETE PIPE
4006C	MANHOLE OR CATCH BASIN DESIGN G
4126C	CATCH BASIN FRAME CASTING (801)
4149B	GRATE CASTING FOR CATCH BASIN (821)
7020C	CONCRETE CURB
7065B	BITUMINOUS CURB
7111	INSTALLATION OF CATCH BASINS
8001	STANDARD SECONDARY BARRICADE
8003-8008A	WARNING SIGNS
8009	STANDARD BARRICADE

TYPICAL SECTIONS



WATER MAIN & ARCH PIPE DETAIL



NOTE: CONSTRUCT 6 LIN. FT. B6-18 CONCRETE CURB EACH SIDE OF CATCH BASINS.

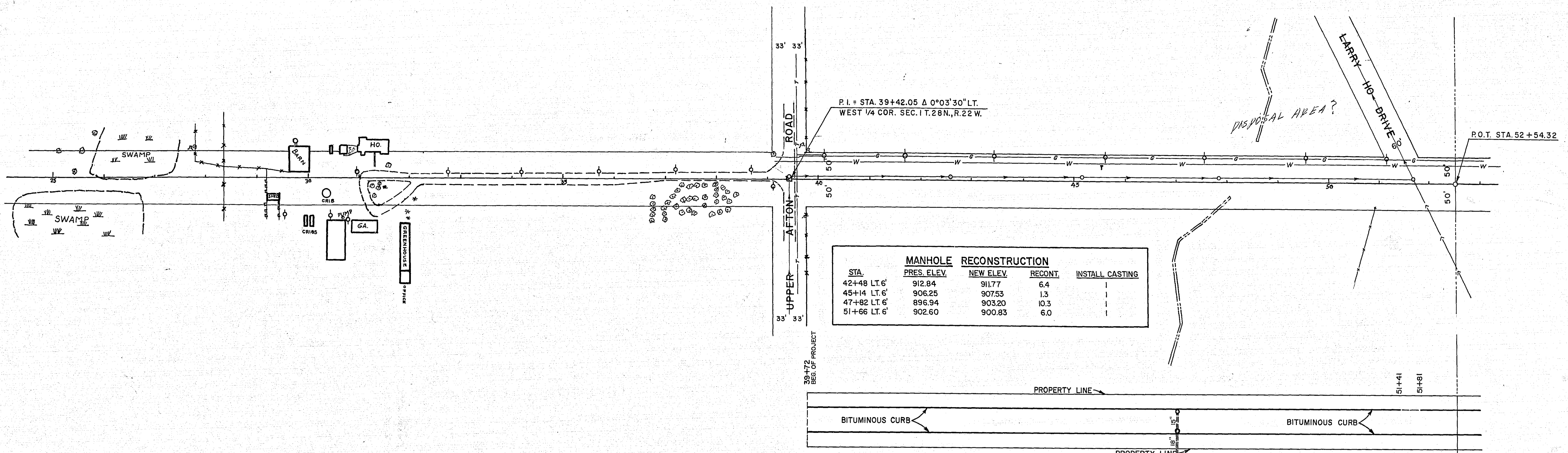
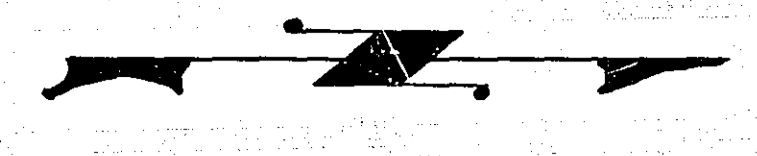
SPECIAL CATCH BASIN DETAIL

STA 47+00 LT. 21' CONSTRUCT C.B.
 TYPE "G" 4.2 LIN. FEET.
 CONSTRUCT 12 L.F. B-6 CURB.

STA 47+00 RT. 21' CONSTRUCT
 TYPE "G" 4.7 LIN. FEET.
 CONSTRUCT 12 L.F. B-6 CURB.

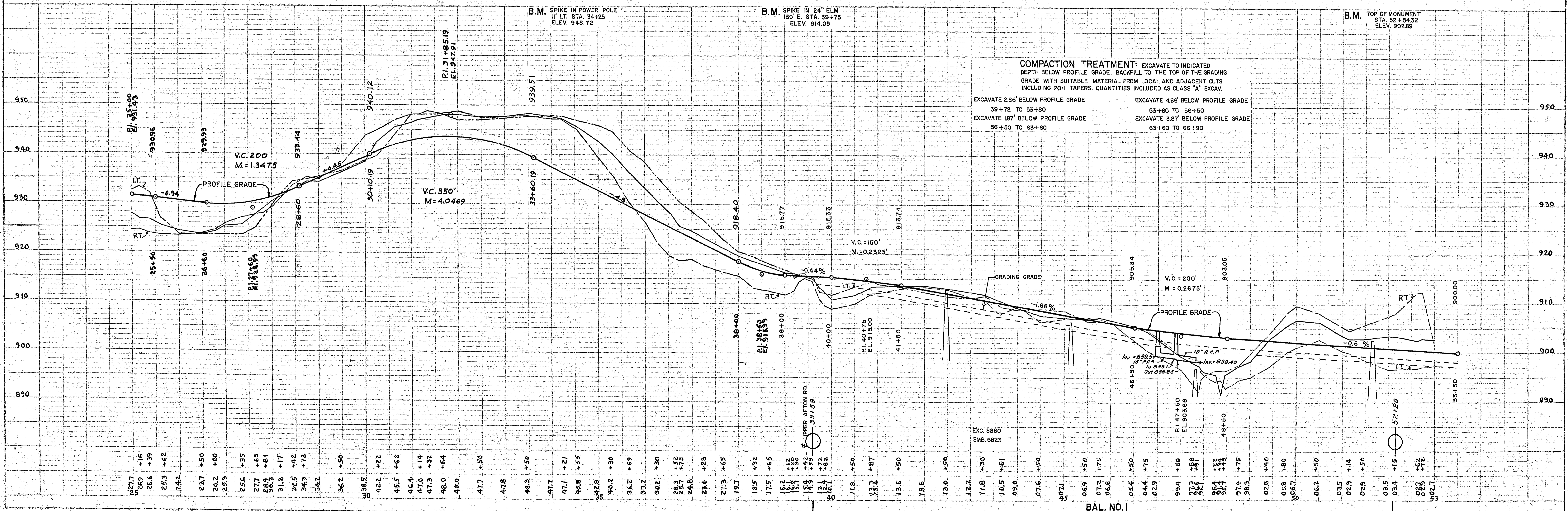
STA 47+00 RT. 63' TO RT. 21'
 F&I. 42"x18" R.C. PIPE CLASS 2

STA 47+00 RT. 21' TO LT. 21'
 F&I. 42"x15" R.C. PIPE CLASS 2



PLAN
 SURVEYED, PLANNED, DESIGNED, CHECKED, DRAWN, DATE, BY, NO., PROJECT, SHEET NO., CONTRACT NO., DRAWING NO., DATE, BY

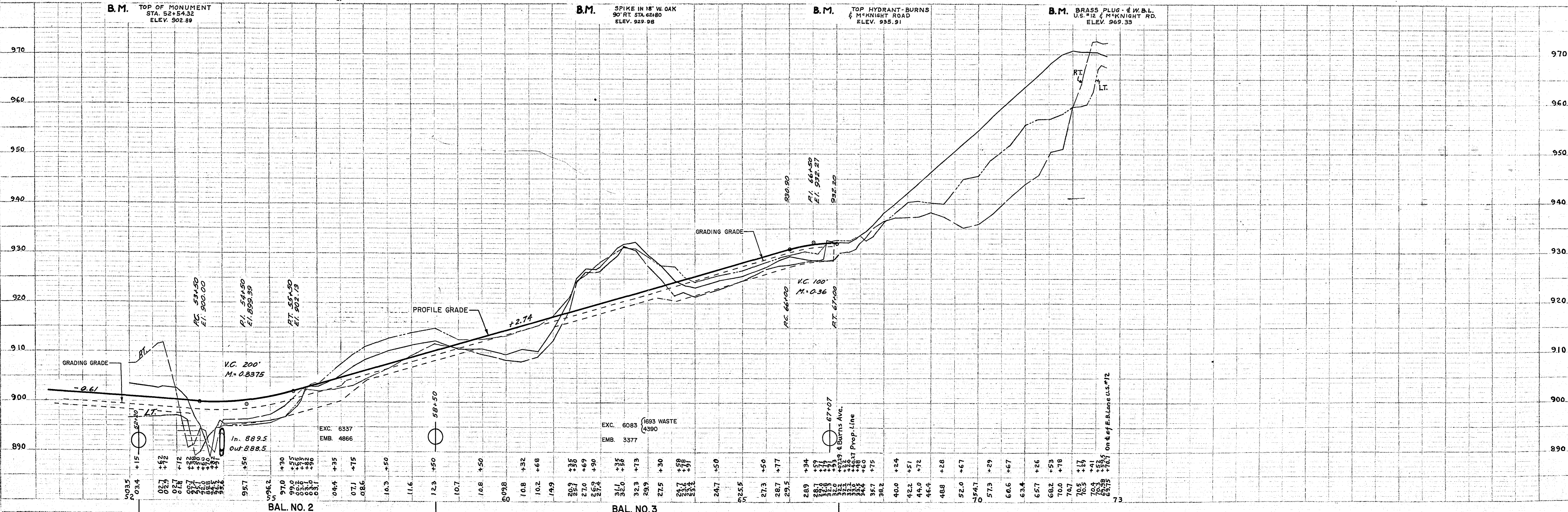
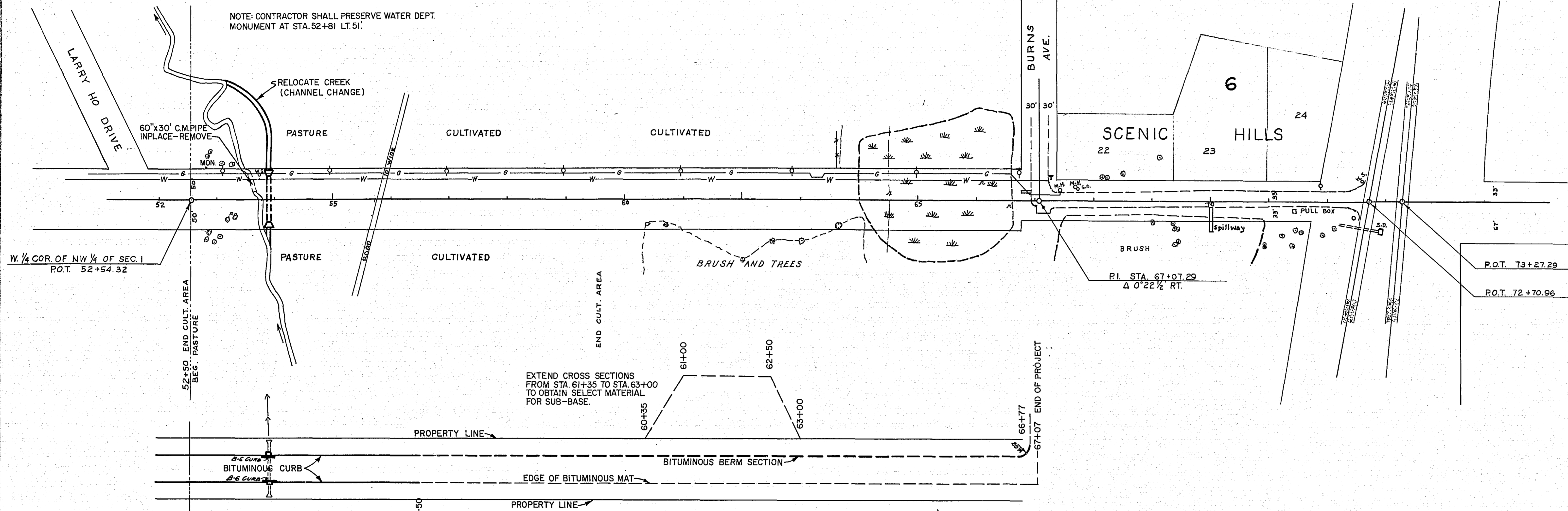
PROFILE
 SURVEYED, PLANNED, DESIGNED, CHECKED, DRAWN, DATE, BY, NO., PROJECT, SHEET NO., CONTRACT NO., DRAWING NO., DATE, BY



STA. 53+91 RT. 23.67' TO STA. 53+91 LT. 23.67'
 CONSTRUCT SPECIAL CATCH BASINS - 47.34 L.F.
 CONSTRUCT 24 LIN. FEET OF B-6 CURB.
 SEE DETAIL SHEET 2.

STA. 53+91 RT. 46' TO STA. 53+91 LT. 48'
 F. & I. S.C. PIPE ARCH CULVERT - 54' RISE x 88" SPAN x 78 L.F.
 2 APRONS - 470 CUBIC YARDS CULVERT EXCAVATION.

NOTE: CONTRACTOR SHALL PRESERVE WATER DEPT.
 MONUMENT AT STA. 52+81 LT. 51'.



STATION-ELEVATION
+50 12.9

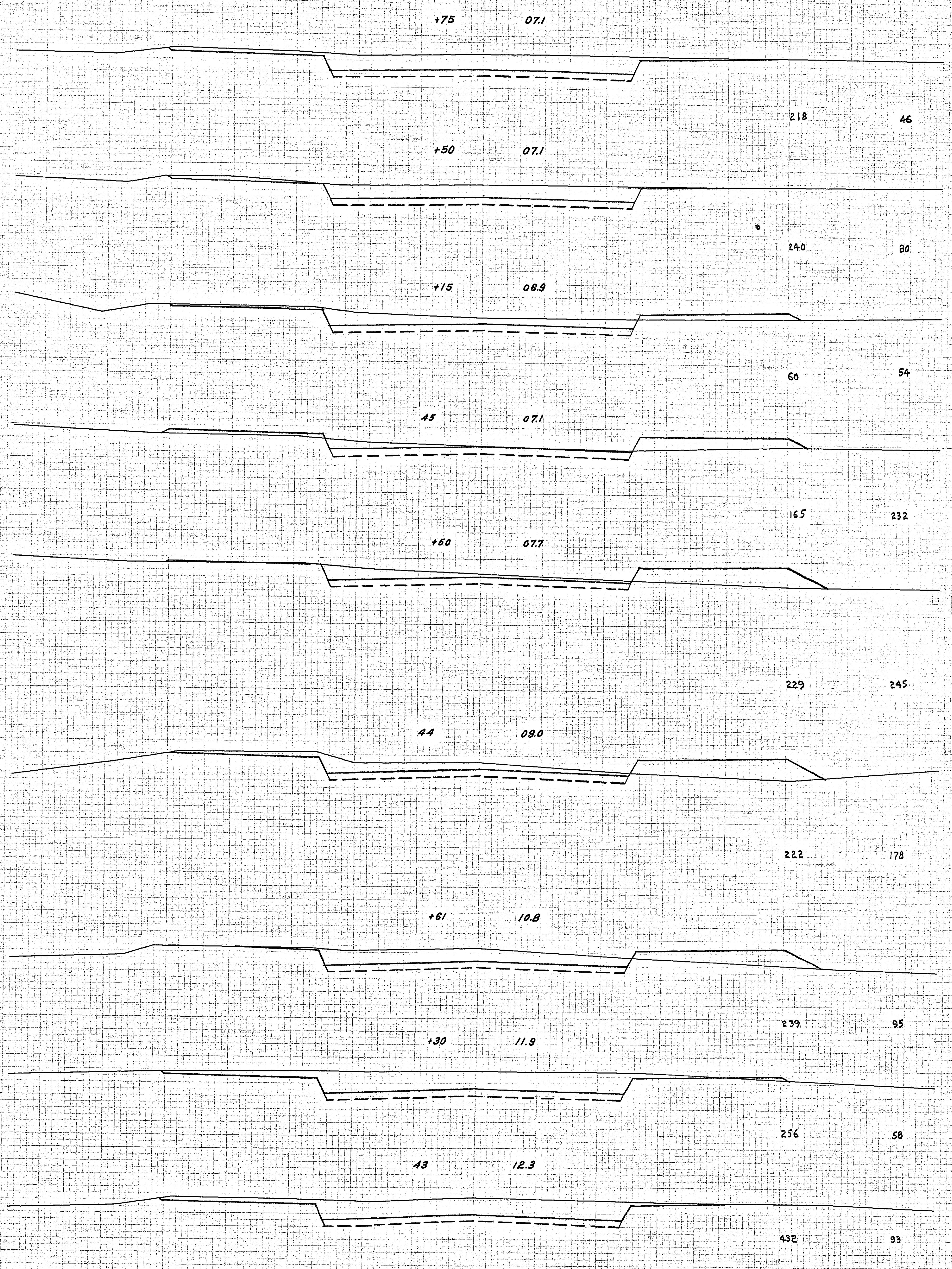
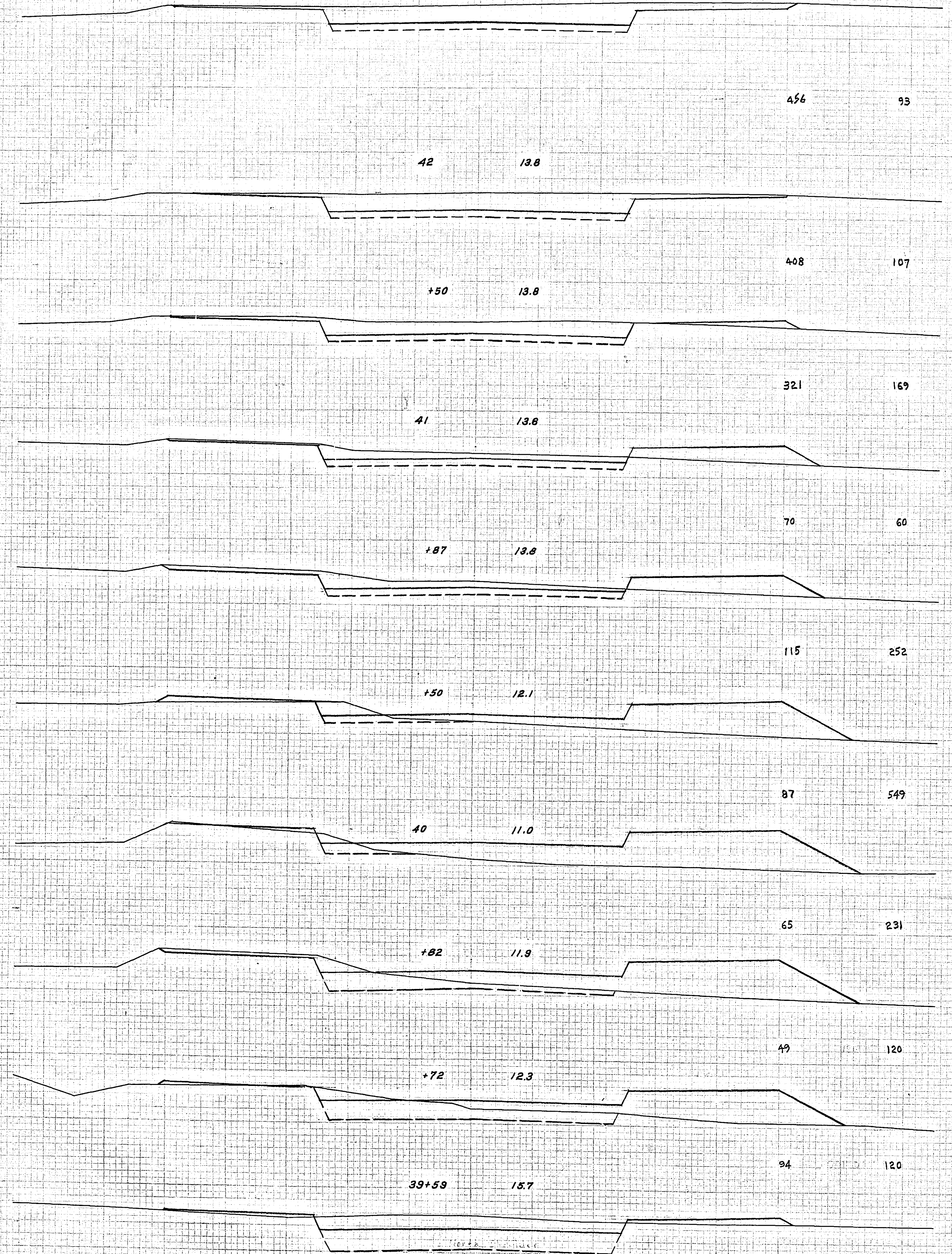
EXCAVATION | EMBANKMENT
SUB TOTALS CU. YDS. CU. YDS. SUB TOTALS

STATION-ELEVATION
+75 07.1

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

PROJECT NO. 62-668-04
SHEET NO. 5
DATE 10/1/54

SCALE 1" = 10'
CROSS SECTIONS



CROSS SECTIONS SCALE 1" = 10'

STATION-ELEVATION

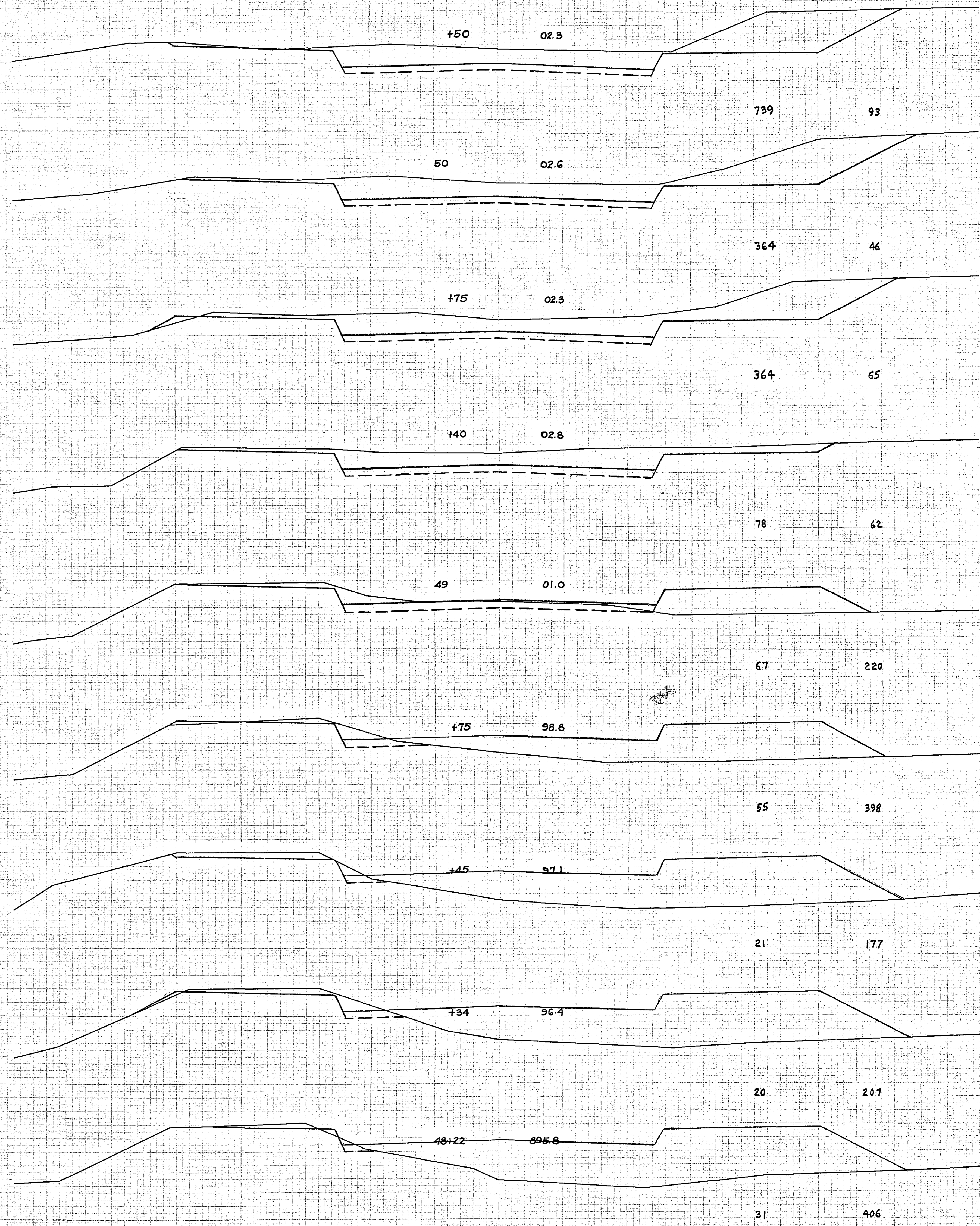
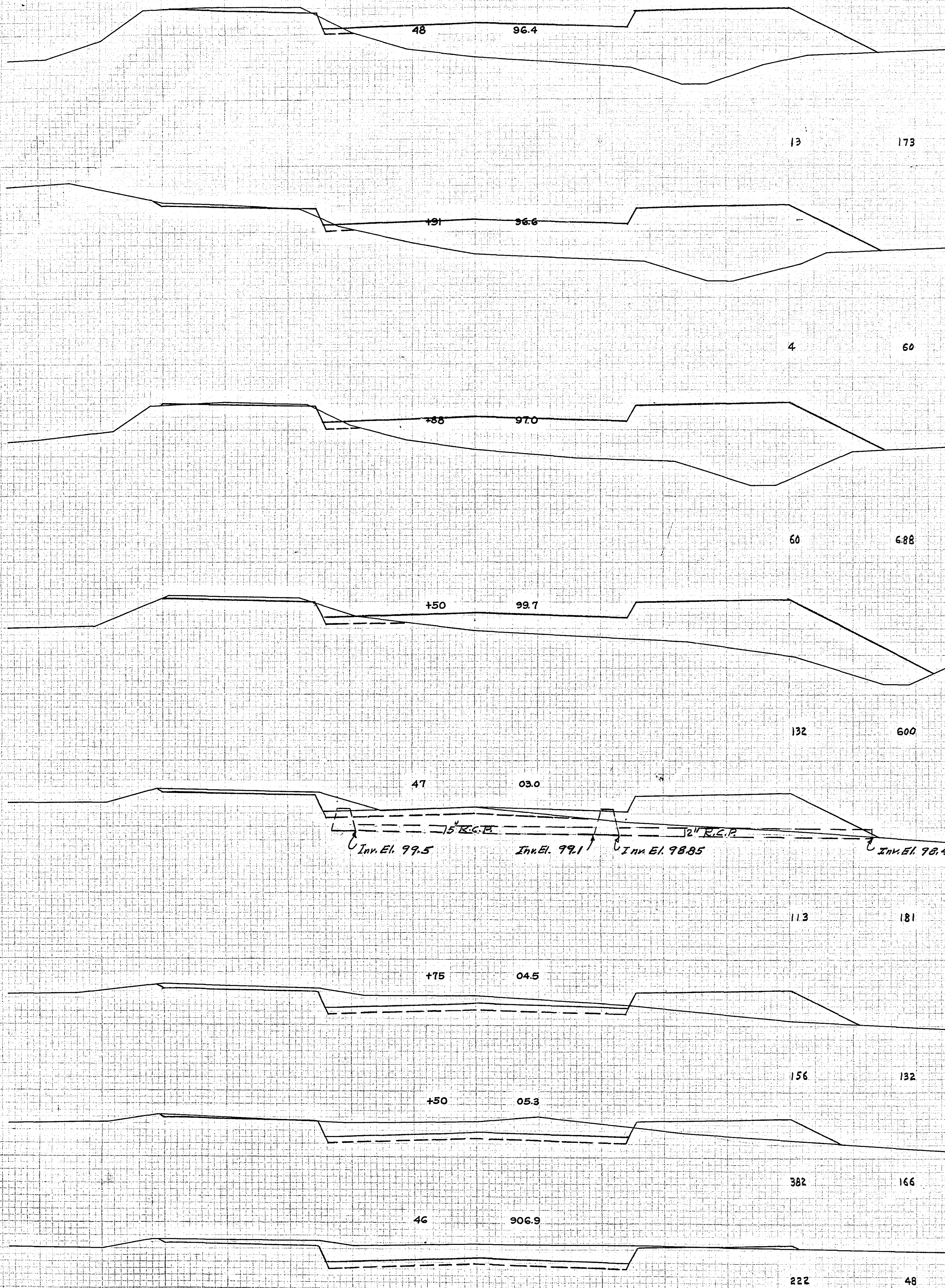
EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

STATION-ELEVATION

EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS



15" R.C.P. 12" R.C.P.

Inn. El. 99.5 Inn. El. 99.1 Inn. El. 98.85 Inn. El. 98.40

CROSS SECTIONS SCALE 1" = 10'

STATION-ELEVATION

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EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

STATION-ELEVATION

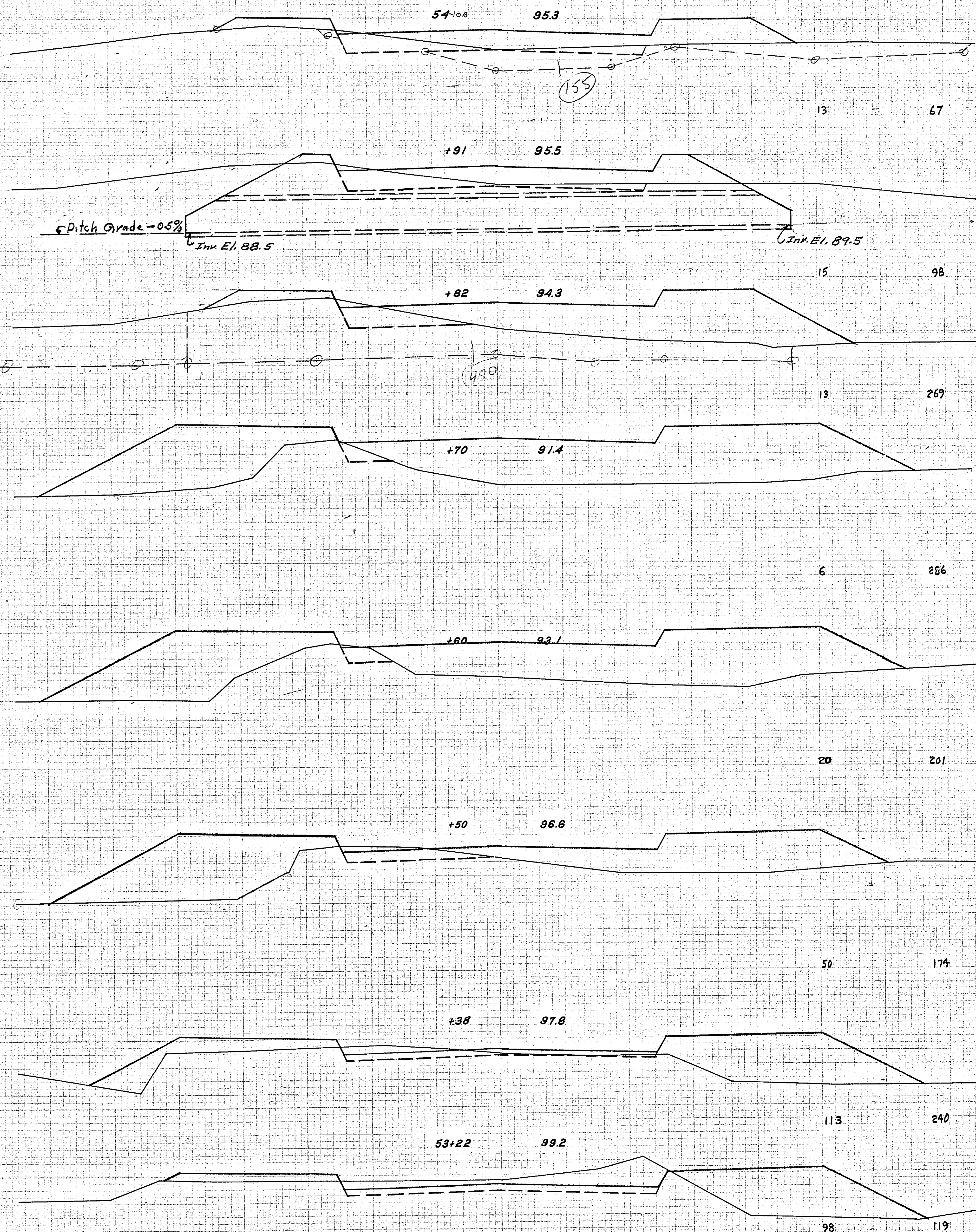
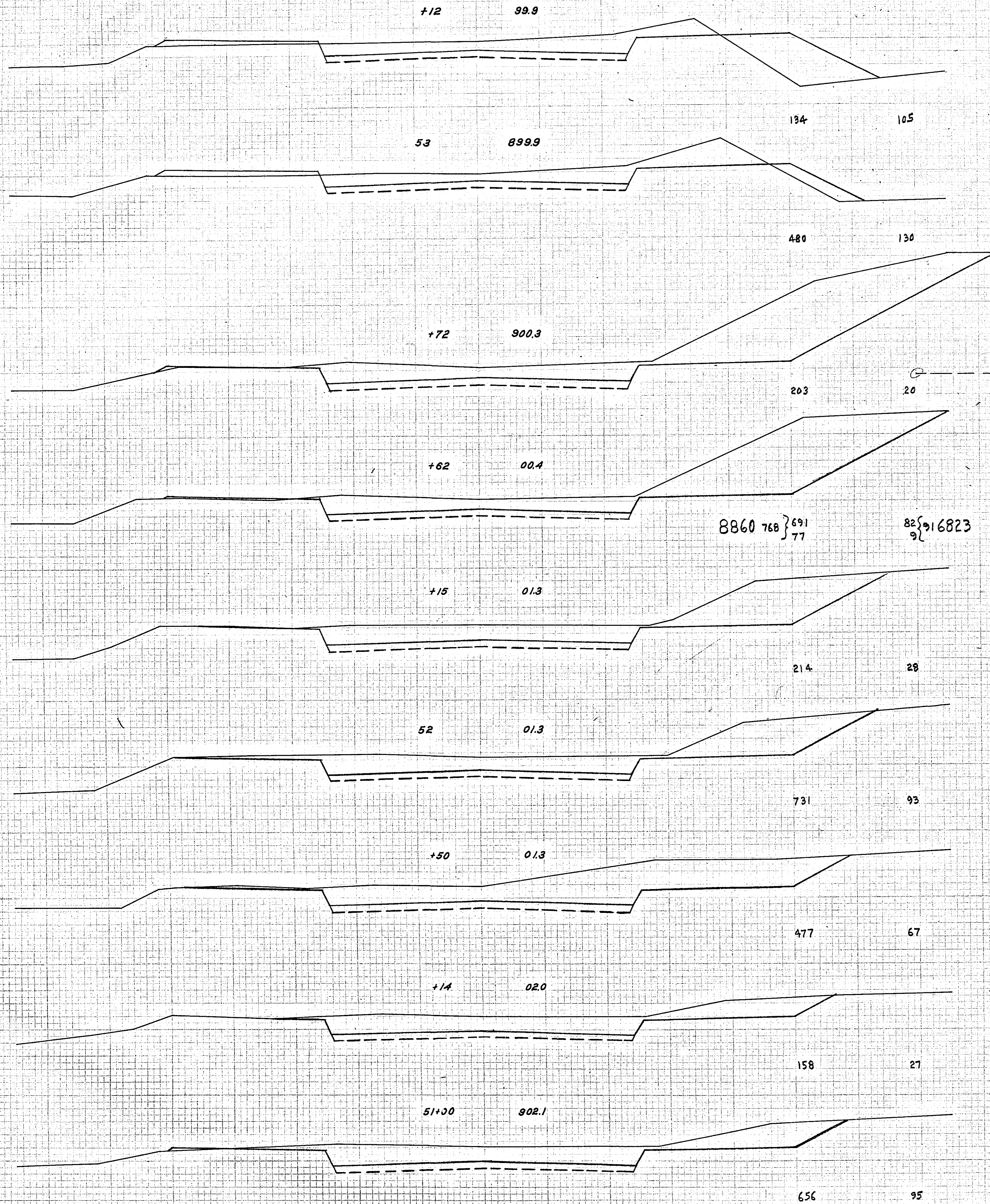
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EXCAVATION | EMBANKMENT

SUB TOTALS CU. YDS. | CU. YDS. SUB TOTALS

REVISIONS
NO. DATE BY

DATE
DRAWN BY
CHECKED BY



CROSS SECTIONS SCALE 1" = 10'

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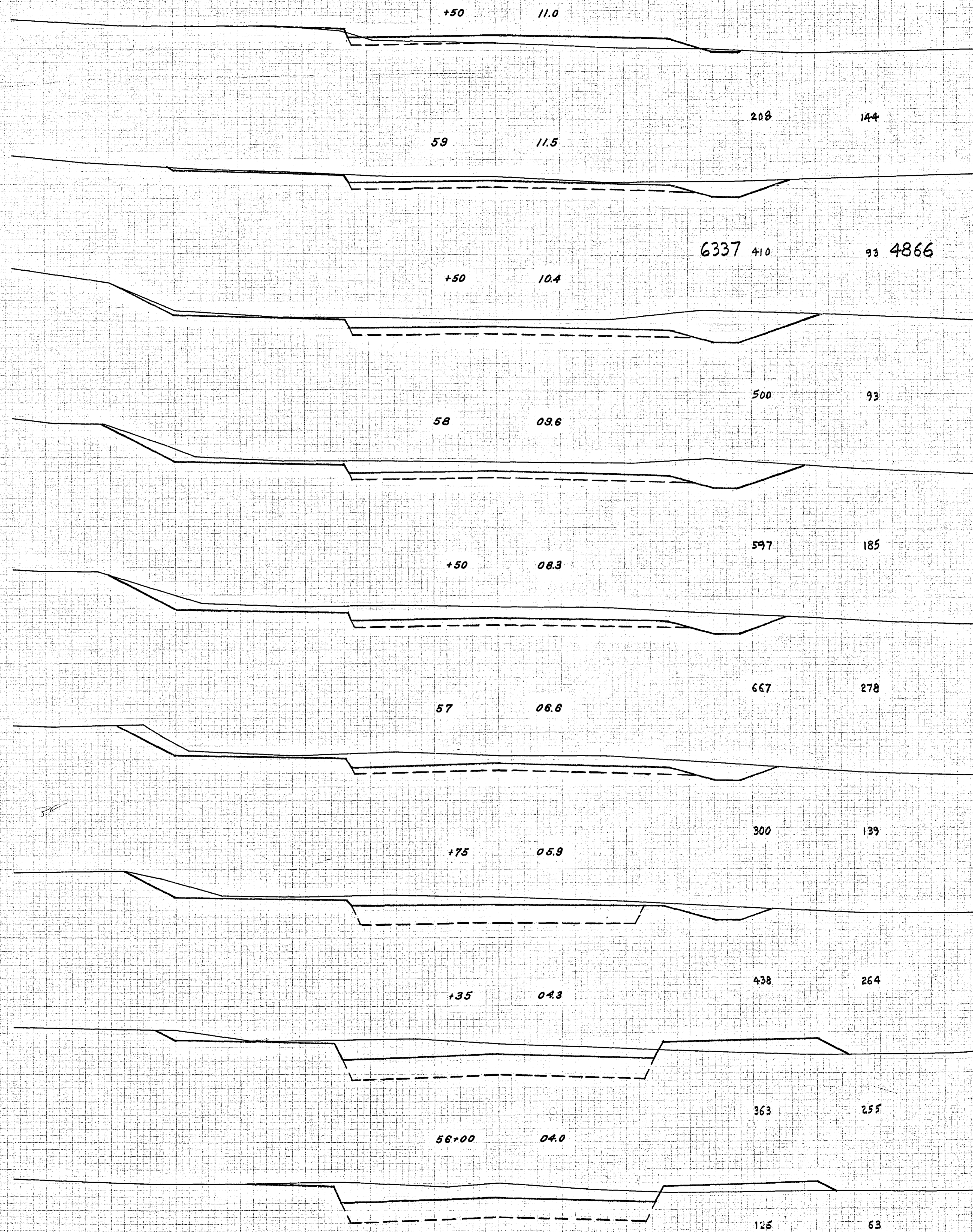
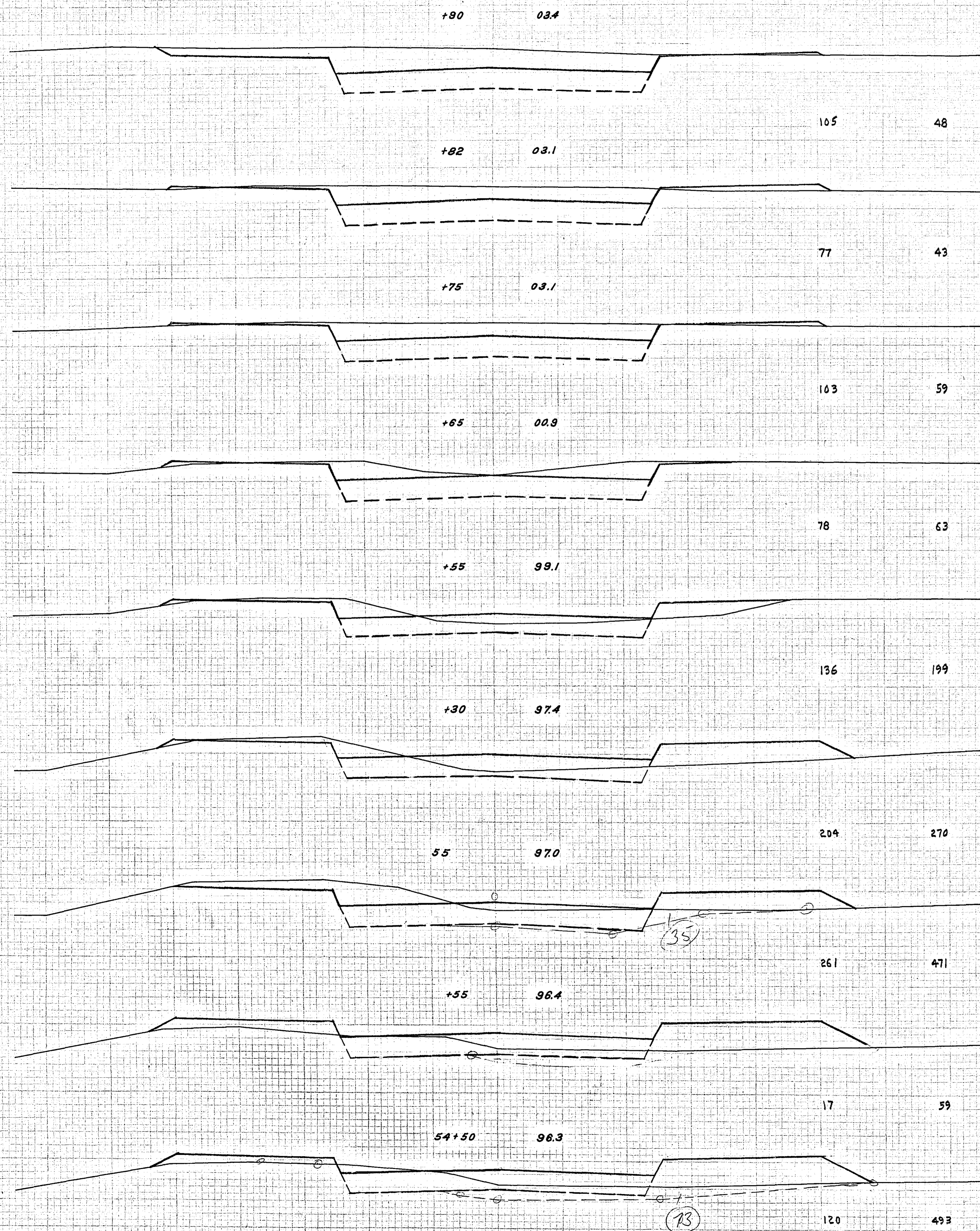
EXCAVATION | EMBANKMENT
SUB TOTALS - CU. YDS. | CU. YDS. | SUB TOTALS

STATION-ELEVATION
☉

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

DATE: _____
DRAWN BY: _____
CHECKED BY: _____
SCALE: _____

DATE: _____
DRAWN BY: _____
CHECKED BY: _____
SCALE: _____



GROSS SECTIONS SCALE 1" = 10'

S.A.P. 62-668-04

Sheet No. 8 of 10 Sheets

68-26

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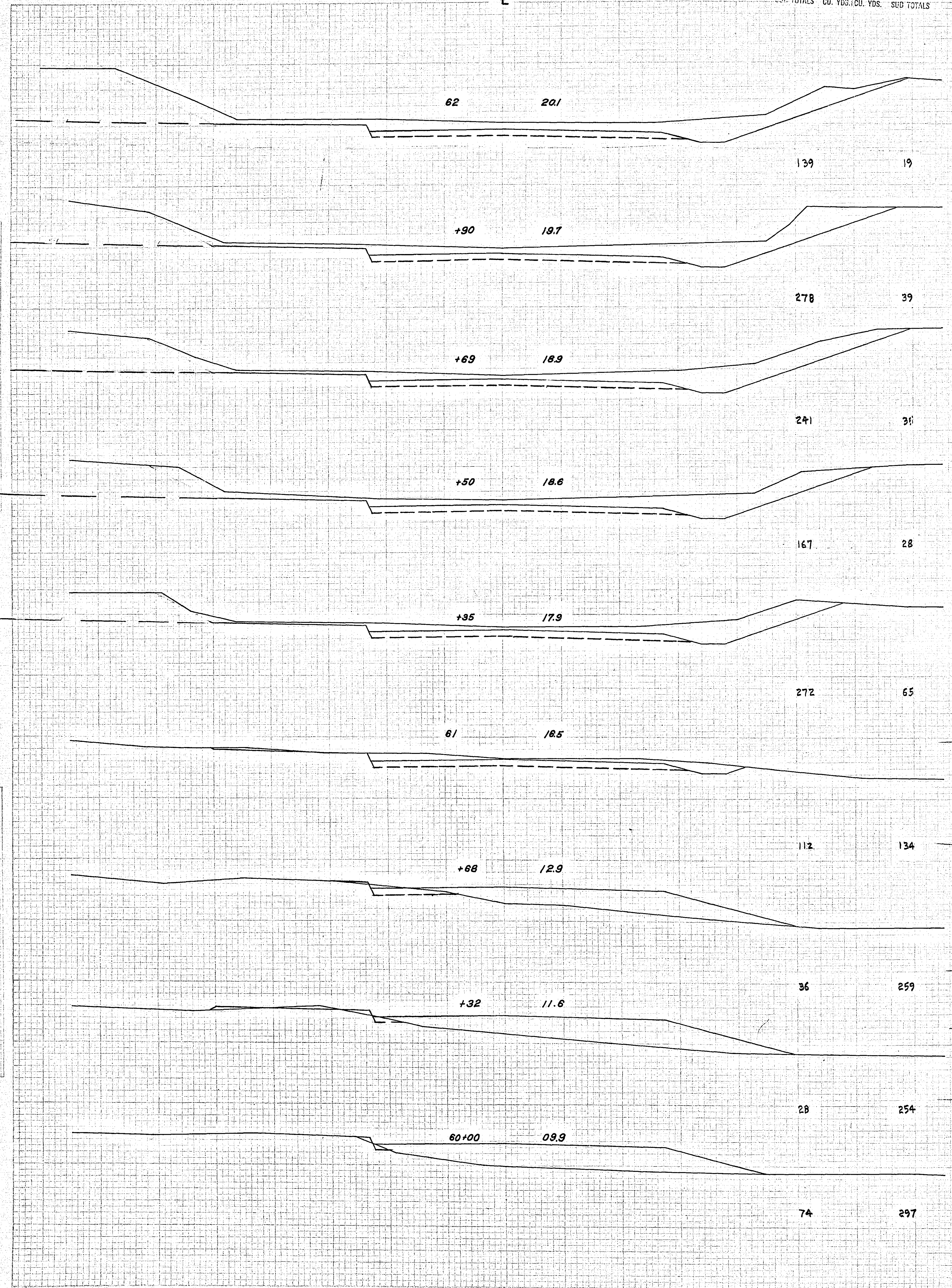
EXCAVATION | EMBANKMENT
SUB-TOTALS CU. YDS. CU. YDS. SUB-TOTALS

STATION-ELEVATION
⊕

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

DATE
BY
CHECKED
SCALE 1" = 10'

DATE
BY
CHECKED
SCALE 1" = 10'



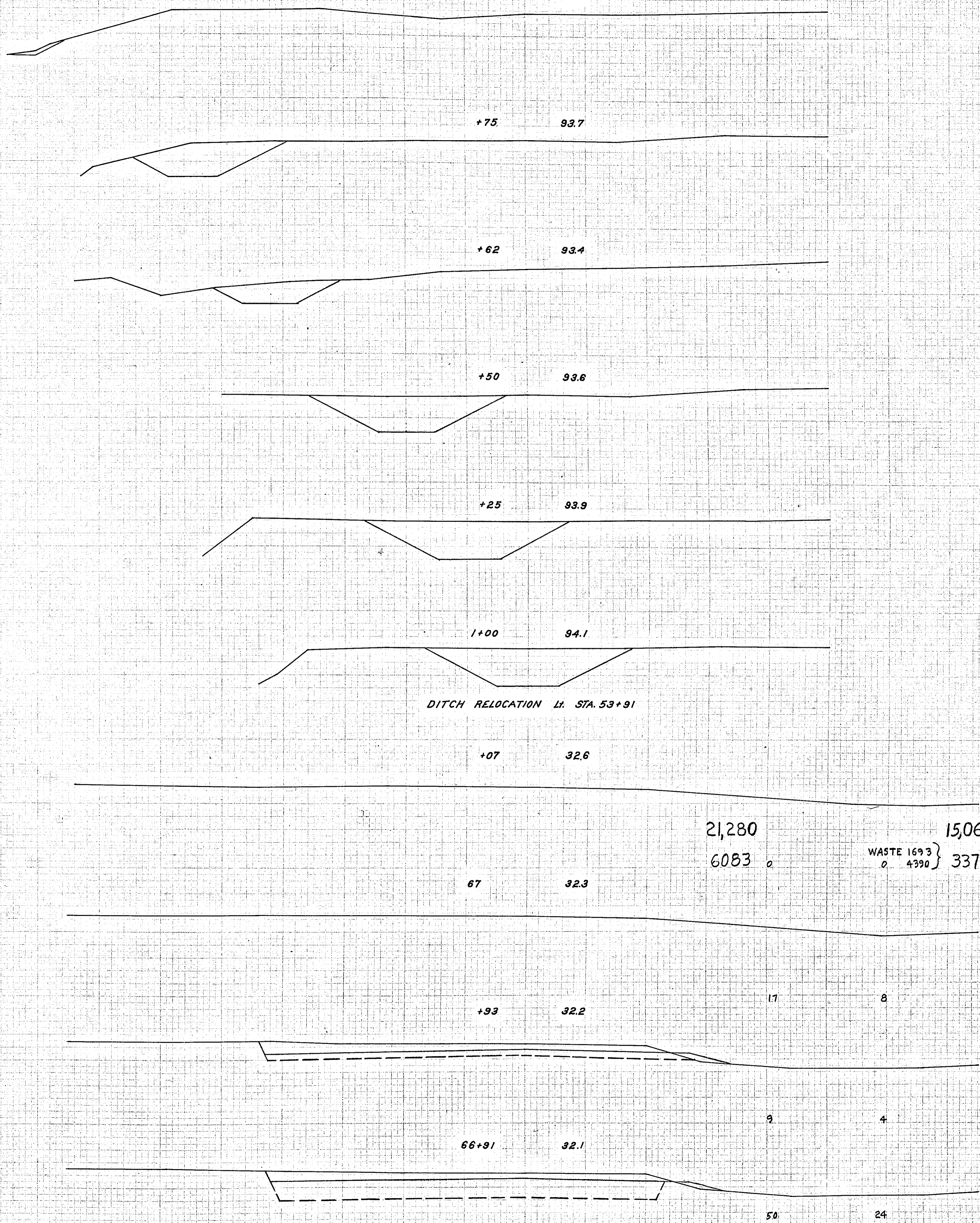
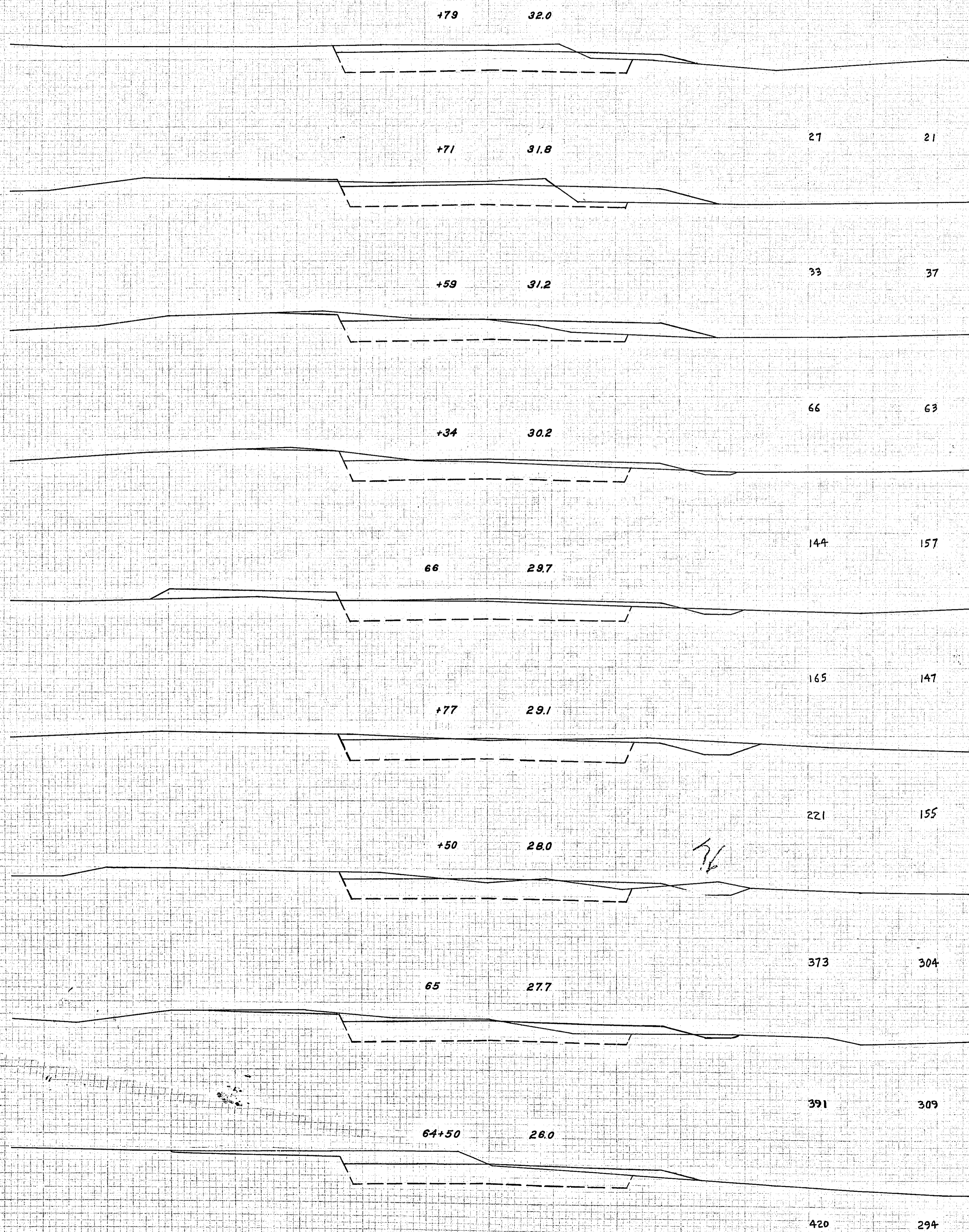
CROSS SECTIONS SCALE 1" = 10'

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

STATION-ELEVATION
E

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



21,280
6083

15,066
WASTE 1693 }
0 4390 } 3377

CROSS SECTIONS SCALE 1" = 10'