

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 3/4 LINE	-----	CATCH BASIN	-----
LIMITED ACCESS	-----	MANHOLE	-----
PROPERTY LINE (Except and Lines)	-----	DROP INLET	-----
VACATED PLATTED PROPERTY	-----	FIRE HYDRANT	-----
CORPORATE OR CITY LIMITS	-----	ARC LAMP	-----
TRUNK HIGHWAY CENTER LINE	-----	OTHER LAMPS (Table 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	-----		



NOTE: SECTION NUMBERS READ FROM THE SOUTH

PIT DATA

BORROW PIT NO. 1	LOCATE IN NW 1/4 of NE 1/4 SECTION 17, T. 30 N., R. 23 W. POSSIBLE SOURCE OF GRANULAR MATERIAL. OWNER: FANKHANEL, ELLSWORTH, PROPERTIES. TEL. FE. 2-1889
PIT NO.	Located in Dead Haul
PIT NO.	Located in Dead Haul
PIT NO.	Located in Dead Haul

**OFFICE OF COUNTY ENGINEER
RAMSEY COUNTY**

**CONSTRUCTION PLAN FOR GRADING AND BITUMINOUS SURFACING
COUNTY ROAD "H" CO. PROJ. 65-88**

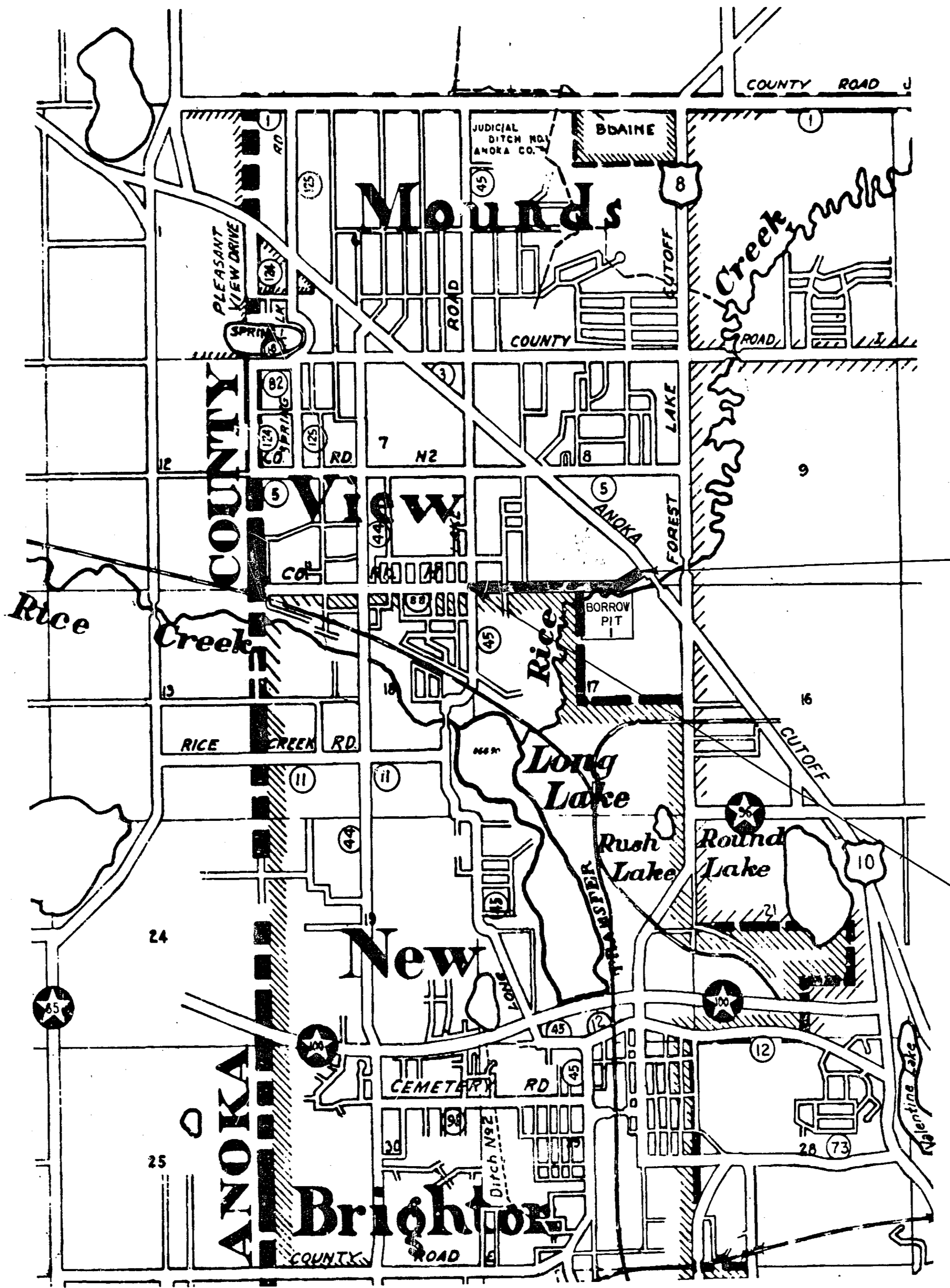
BETWEEN: LONG LAKE ROAD AND: T.H. 10-62

From A POINT 50' WEST OF THE SOUTHWEST CORNER OF SEC. 8 T. 30 N., R. 23 W. To A POINT 1492.92' EAST AND 314.44' NORTH OF SOUTH 1/4 CORNER OF SEC. 8 T. 30 N., R. 23 W.

GROSS LENGTH	4272.0 FEET 0.809 MILES
BRIDGES-LENGTH	0 FEET 0 MILES
EXCEPTIONS-LENGTH	0 FEET 0 MILES
NET LENGTH	4272.0 FEET 0.809 MILES

SCALES

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



INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION & ESTIMATED QUANTITIES
3	DRAINAGE STRUCTURE CHART
4&5	PLAN & PROFILE
6 TO 12	CROSS SECTIONS

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.
Walter Baker REG. NO. 2042 DATE 10-8-65
ENGINEER

RECOMMENDED FOR APPROVAL *Dwight Apple* DATE 10-11-65
COUNTY ENGINEER
APPROVED *H. F. Goodrich* DATE 10/11/65
CHAIRMAN OF RAMSEY COUNTY BOARD

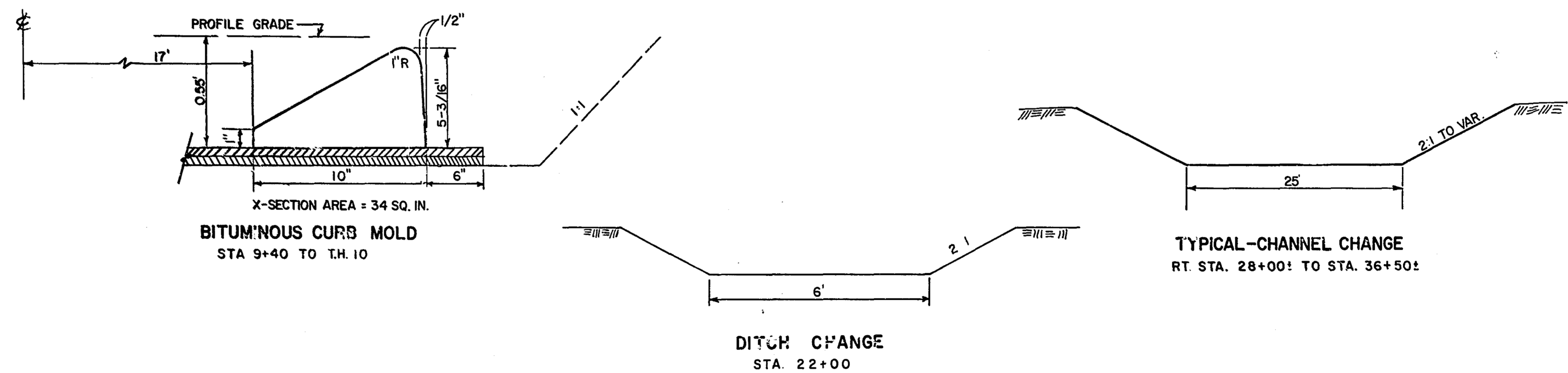
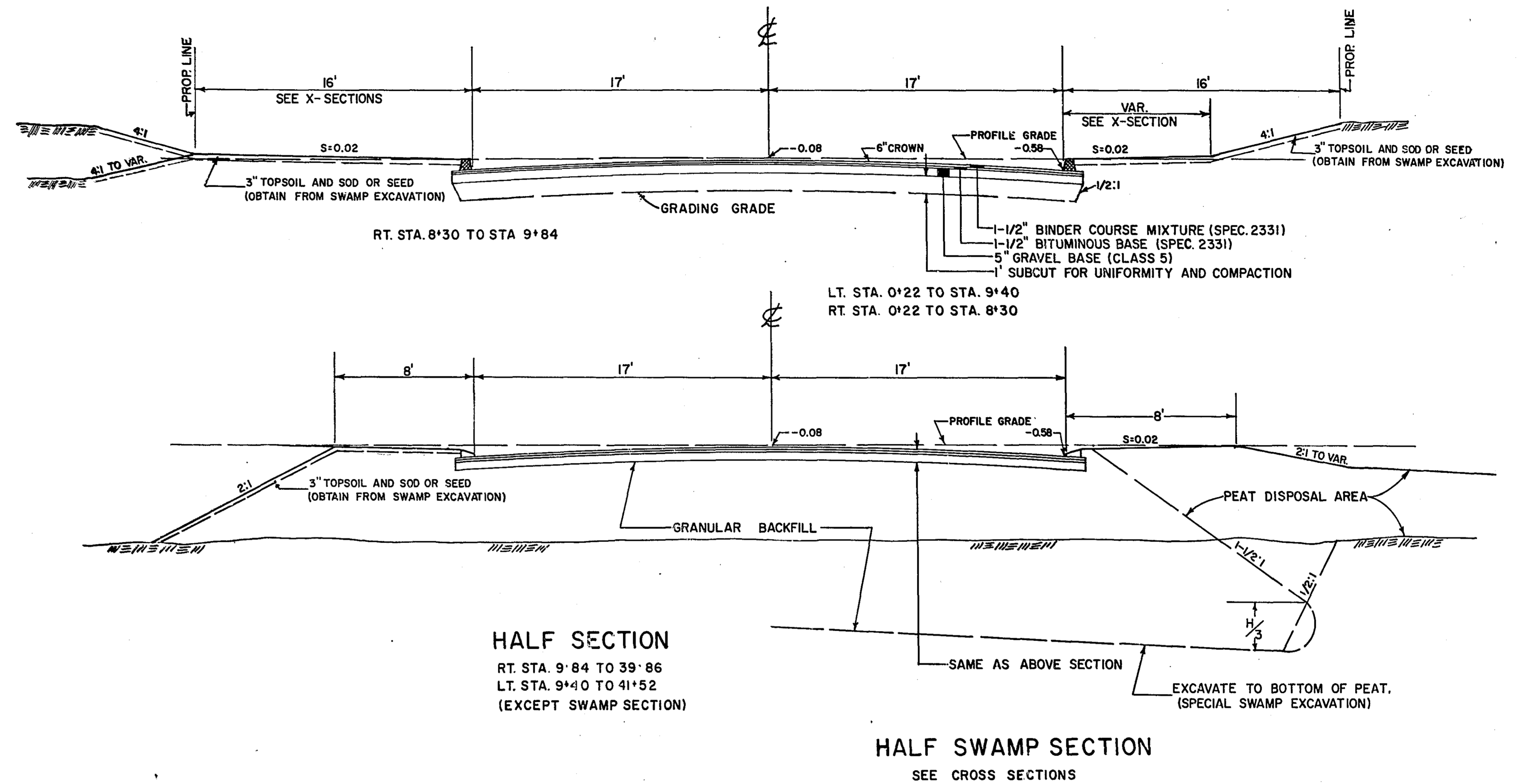
SPECIFICATIONS

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JAN. 1, 1964 SHALL GOVERN.

STATEMENT OF ESTIMATED QUANTITIES

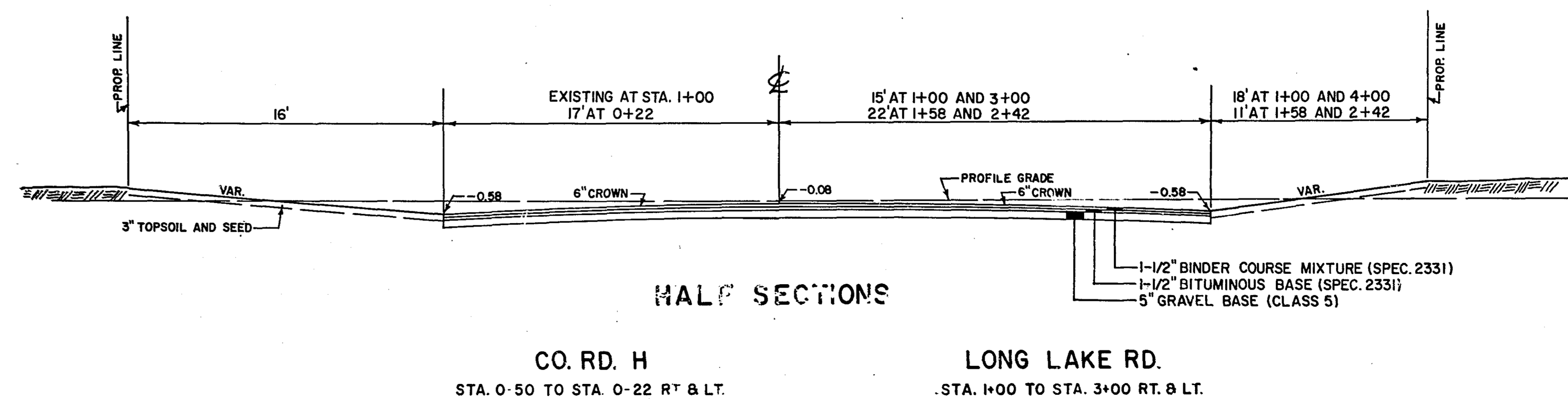
ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2101.501	CLEARING	ACRE	0.7
2101.506	GRUBBING	ACRE	0.7
2104.501	REMOVE PORTABLE CULVERTS	L.F.	6
2104.510	REMOVE FENCE	L.F.	60
2105.501	CLASS A EXCAVATION	C.Y.	5501
2106.501	SPECIAL SWAMP EXCAVATION	C.Y.	12320
2108.511	CHANNEL EXCAVATION, CLASS A	C.Y.	6273
2110.519	GRANULAR MATERIAL DELIVERED	C.Y.	37023
2130501	WATER	(M) GAL.	100
2202.526	GRAVEL BASE IN PLACE (CLASS 5)	TON	4700
2331.502	BITUMINOUS MATERIAL FOR TACKCOAT	GAL.	850
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	135
2331.509	WEARING COURSE MIXTURE & FILLER	TON	1590
2331.514	BASE COURSE MIXTURE	TON	1350
2356.505	BITUMINOUS MATERIAL FOR FOG SEALCOAT	GAL.	2307
2356.611	SEALCOAT AGGREGATE, FA2	TON	80
2501.511	F&I 15" C.M.P. CULV.	L.F.	24
2501.511	F&I 30" C.M.P. CULV.	L.F.	20
2501.521	F&I 15" R.C.P. CULV., CLASS 4	L.F.	32
2501.521	F&I 18" R.C.P. CULV., CLASS 4	L.F.	70
2501.521	F&I 30" R.C.P. CULV., CLASS 2	L.F.	78
2501.522	F&I 22" SPAN R.C.P.-A CULV., CLASS 4	L.F.	52
2501.522	F&I 28" SPAN R.C.P.-A CULV., CLASS 4	L.F.	46
2503.512	F&I 27" R.C.P. SEWER, CLASS 2	L.F.	44
2503.521	INSTALL CONC. PIPE SEWER (APRON)	L.F.	6
2506.507	CONSTRUCT CATCH BASINS, DESIGN A OR C	L.F.	7.2
2506.507	CONSTRUCT CATCH BASINS, DESIGN LP 4-H	L.F.	17.3
2506.507	CONSTRUCT CATCH BASINS, DESIGN LP 6-H	L.F.	8.8
2506.511	RECONSTRUCT MANHOLES	L.F.	57.9
2506.516	F&I CASTING ASSEMBLIES	ASSEMBLY	2
2506.521	INSTALL CASTINGS	ASSEMBLY	9
2506.522	ADJUST FRAME AND RING CASTING	ASSEMBLY	6
2515.531	F&I METAL APRONS FOR 30" C.M.P.	APRON	1
2515.541	F&I CONC. APRONS FOR 30" S.C.P.	APRON	2
2515.542	F&I CONC. APRONS FOR 22" SPAN S.C.P.-A	APRON	1

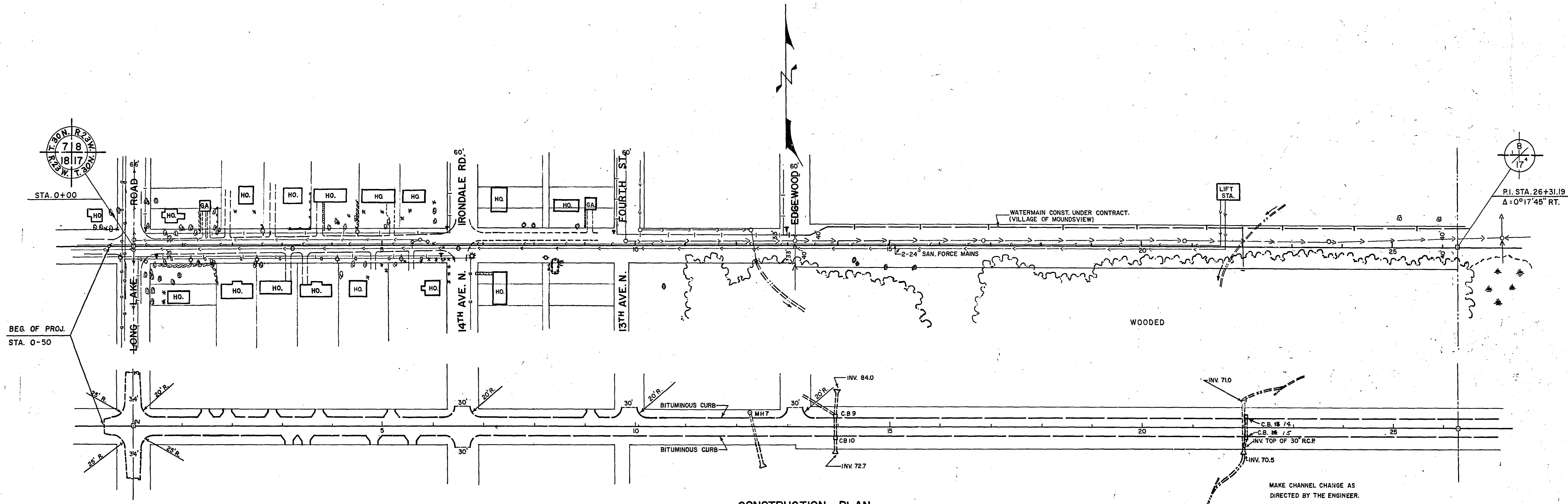
TYPICAL SECTIONS



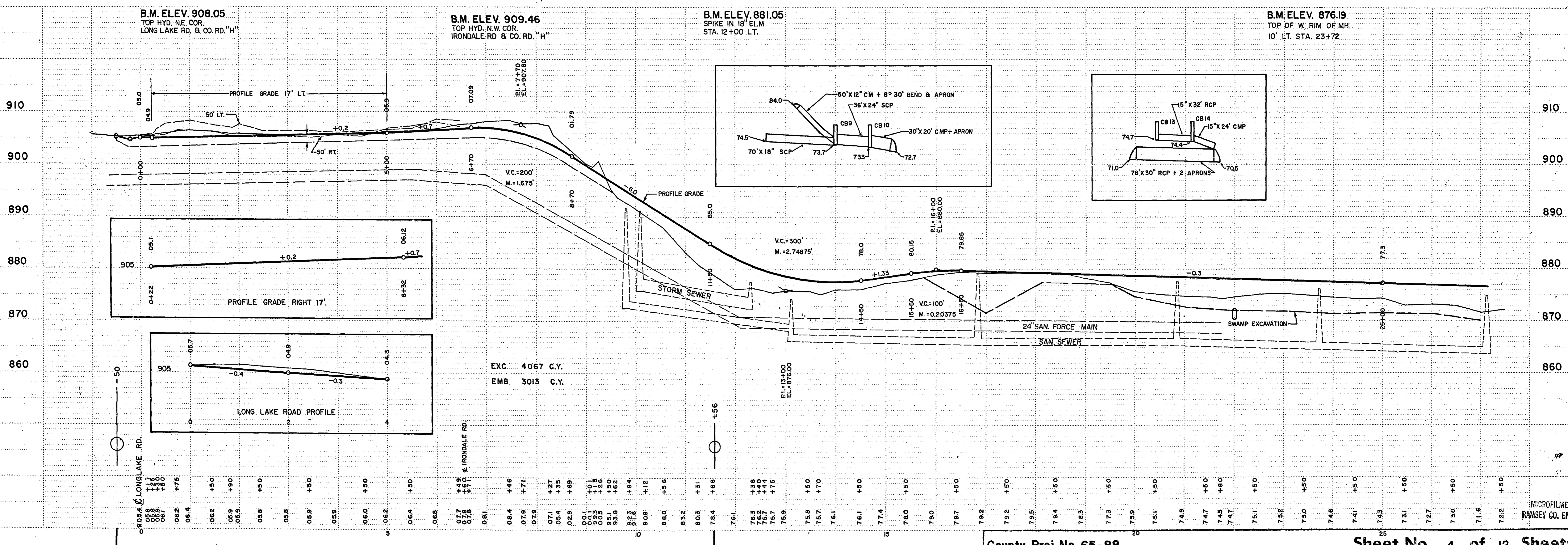
STANDARD DETAIL PLATES

3000 C	REINFORCED CONCRETE PIPE
3014 B	REINFORCED CONCRETE PIPE - ARCH
3102 B	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3112 B	CONCRETE APRON FOR REINFORCED CONCRETE PIPE - ARCH
3123 B	METAL APRON FOR C.M. PIPES
4000 E	MANHOLE OR CATCH BASIN
4002 C	MANHOLE OR CATCH BASIN
4016	CURB OPENING CATCH BASIN
4108 B	AUXILIARY CASTING FOR MANHOLE RING EXTENSION
4126 C	CATCH BASIN FRAME CASTING
4149 B	GRATE CASTING FOR CATCH BASIN
4161 C	CURB BOX CASTING FOR CATCH BASIN (CASTING NO. 8218)
4181	MANHOLE STEP CASTING
7065 B	BITUMINOUS CURB
7111 C	INSTALLATION OF CATCH BASIN CASTINGS
8000A & 8009	STANDARD BARRICADE
9102 A	SODDING AT PIPE CULVERT ENDS





CONSTRUCTION PLAN



BAL. NO. 1

BAL. NO. 2

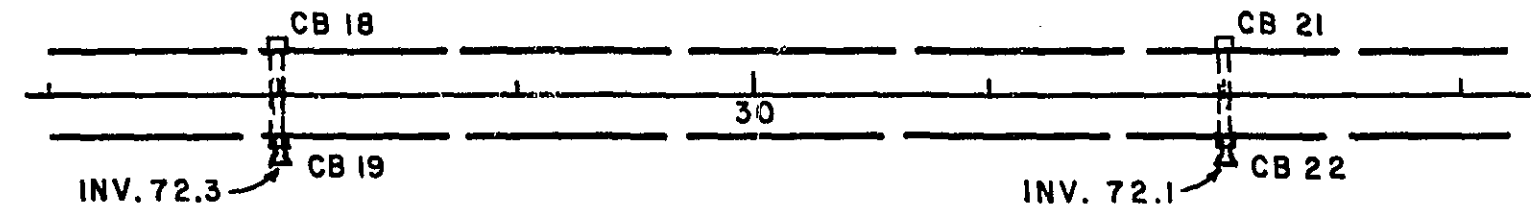
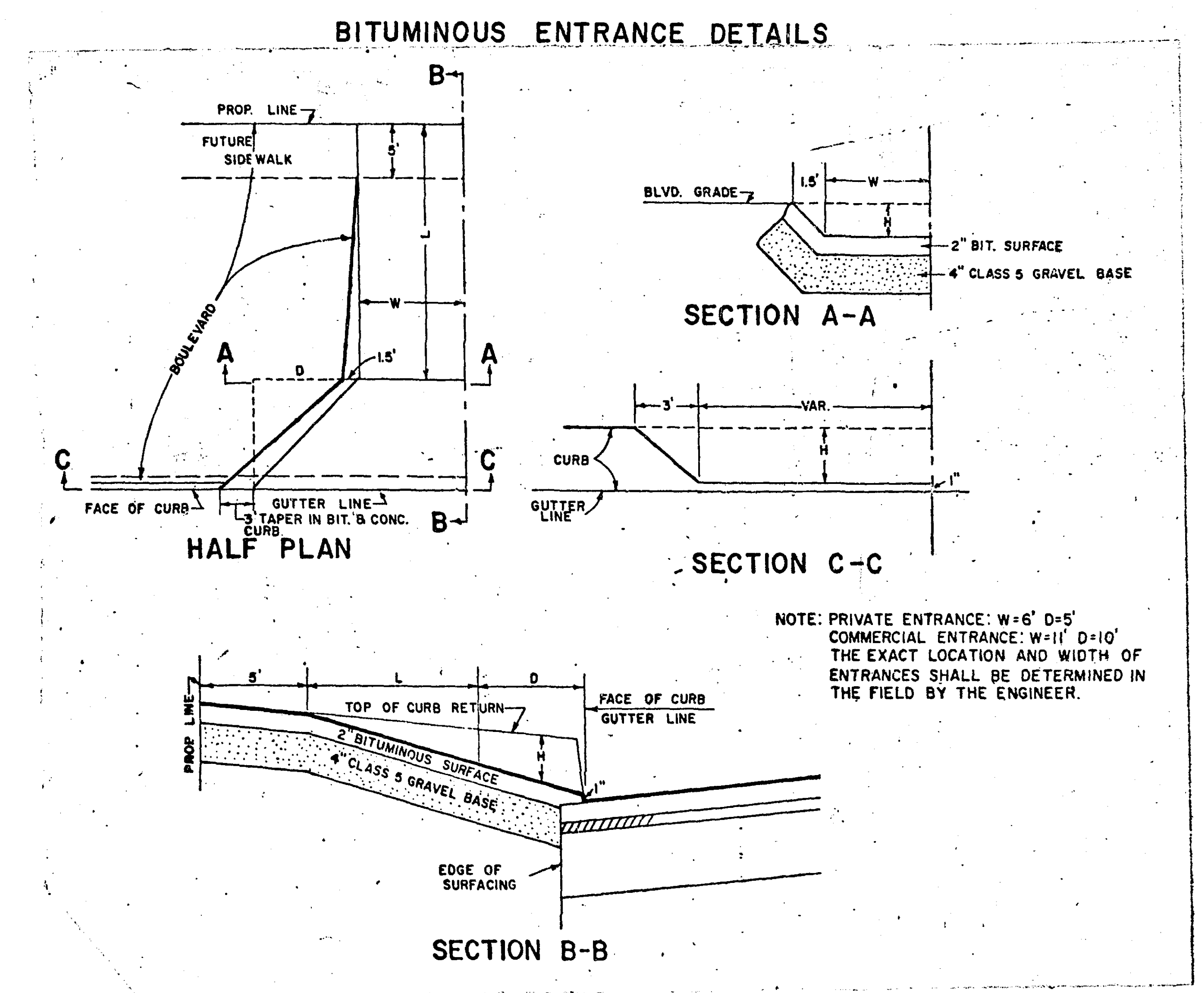
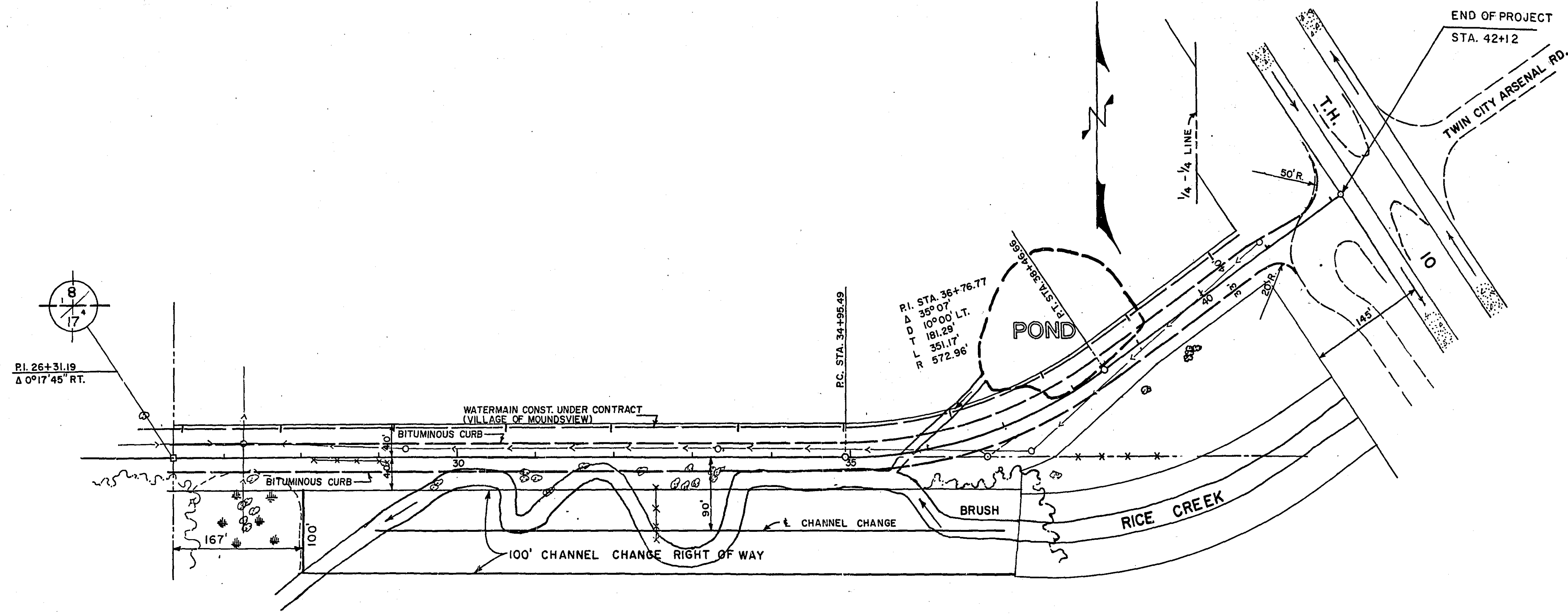
County Proj. No. 65-88

Sheet No. 4 of 12 Sheets

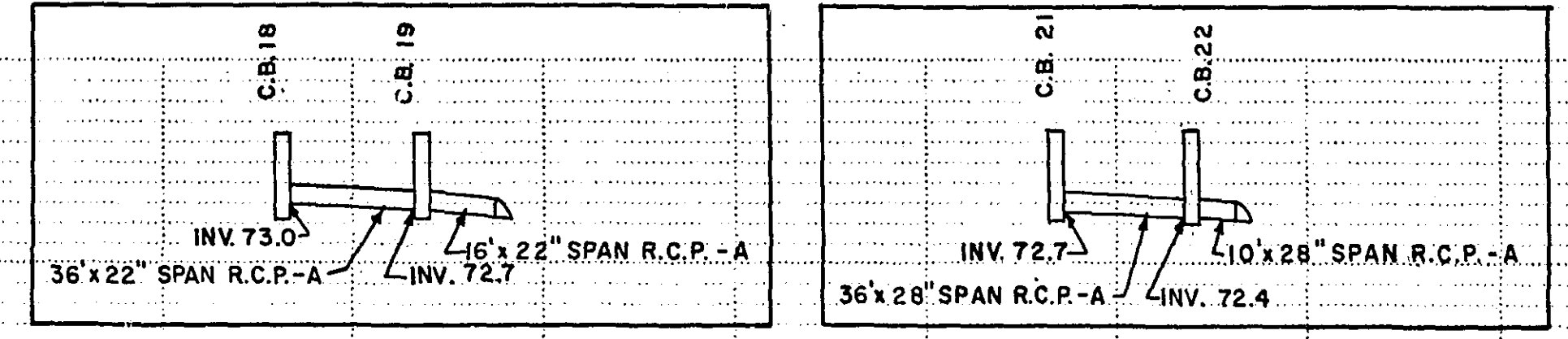
6854

MICROFILMED
RAMSEY CO. ENGR.

NORSTAR 7 No. 105 ST. PAUL, MINNEAPOLIS, MINNESOTA



CONSTRUCTION PLAN



B.M. ELEV. 878.85
 TOP W. COR. OF HEADWALL
 RICE CREEK BOX CULVERT.

