

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 PAV. LINE	=====	CATCH BASIN	
LIMITED ACCESS	=====	MANHOLE	
PROPERTY LINE (LUMP PAV.)	=====	POOP HOLE	
DECATED PLANTED PROPERTY	=====	FIRE HYDRANT	
CORPORATE OR CITY LIMITS	=====	Gas Lamp	
TRUNK HIGHWAY CENTER LINE	=====	OTHER LAMPS (SHOW PAV.)	
RETAINING WALL	=====	RAILROAD CROSSING SIGN	
STEAM RAILROAD	=====	RAILROAD CROSSING BELL	
RAILROAD RIGHT OF WAY LINE	=====	ELECTRIC WARNING SIGN	
CREEK	=====	CROSSING SAFE	
RAPIDS OR WATERFALL	=====	"AT-LIE SLAKE"	
DRY RUN	=====	OVERHEAD (SHOW OVER)	
DRAINAGE DITCH	=====	UNDERPASS (SHOW UNDER)	
HIGH TENSION LINE	=====	ABUTMENT, WALL & PIER	
POWER POLE LINE	=====	BRIDGE	
TELEPHONE OR TELEGRAPH LINE	=====	CONVERT	
TELEPHONE CONDUIT	=====	BUILDING (SHOW SIGN FRAME)	
GUARD RAIL	=====	CONCRETE & STONE T. FILE & BRICK SET STUCCO	
WIRE FENCE	=====	EDGE	
RAILROAD SNOW FENCE	=====	ROCK QUARRY	
BOARD OR HIGHWAY SNOW FENCE	=====	SPRINGS	
STONE WALL OR FENCE	=====	MARSH	
WOOD STAKE OR P. B.	=====		
MEANDER CORNER	=====		

NOTE: SECTION NUMBERS READ FROM THE SOUTH

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

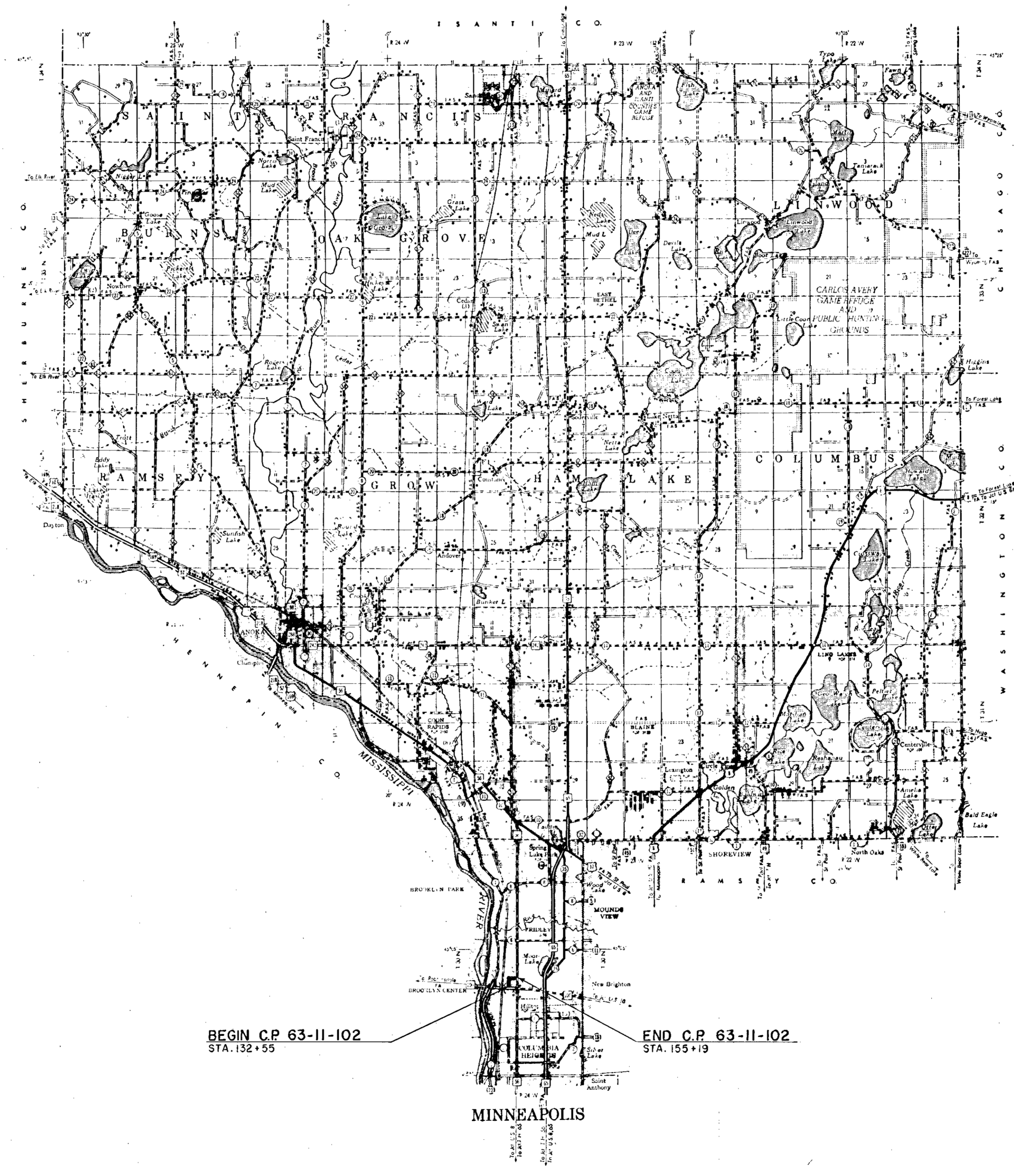
CONSTRUCTION PLAN FOR GRADING, BIT. STAB. BASE & BIT. SURF

County State Aid Highway No. 102

BETWEEN T.H. 100 (97 I-694) AND T.H. 47
A POINT 1656.55' NORTH OF SW COR.
From SEC. 23, T. 30 N., R. 24 W. To 1316.92' E. OF THE W. 1/4 COR. SEC. 23, T. 30 N., R. 24 W.

GROSS LENGTH	2,264 FEET	0.43 MILES
BRIDGES LENGTH	0.0 FEET	MILES
EXCEPTIONS LENGTH	0.0 FEET	MILES
NET LENGTH	2,264 FEET	0.43 MILES

SCALES
Plan 1 inch = 200 Feet
PROFILE: Horiz. 1 inch = 200 Feet, Vert. 1 inch = 20 Feet
WORKING PLANS: Horiz. 1 inch = 100 Feet, Vert. 1 inch = 10 Feet
Cross Section, 1 inch = 10 FEET
LAYOUT
Scale 1 inch = Feet



BEGIN C.P. 63-11-102 STA. 132+55
END C.P. 63-11-102 STA. 155+19

MINNEAPOLIS

MINN. PROJ.

INDEX OF SHEETS

Sheet No. 1	Title Sheet & Layout Map
No. 2	Est. Quantities & Typical Sec.
No. 3	Plan & Profile
No. 4 & 5	Cross Sections

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.

Ervin J. Swellman COUNTY ENGINEER DATE Feb. 14, 1963

ANOKA COUNTY REG. NO. 2551

RECOMMENDED FOR APPROVAL _____ DISTRICT ENGINEER 19__

RECOMMENDED FOR APPROVAL _____ DISTRICT ENGINEER 19__

APPROVED _____ STATE AID ENGINEER 19__

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

DISTRICT ENGINEER

DATE

Minn. Project No. _____
S.A.P. _____
State Project No. _____

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.

ESTIMATED QUANTITIES				
SPECIFICATION NO.	ITEM	UNIT		TOTAL ESTIMATED QUANTITIES
2101.502	CLEARING	TREE		8
2101.507	GRUBBING	TREE		8
2105.501	CLASS A EXCAVATION	CU. YD.		3938
110.621	EMBANKMENT INPLACE	CU. YD.		4518
(CROSS-SECTION MEASURE IN PIT)				
2130.501	WATER	M-GAL		25
2207.503	BITUMINOUS MATERIAL (AC-1200-300P)	GAL.		25,160
2207.503	BITUMINOUS MATERIAL FOR FOG (MC-O,1)	GAL.		1258
2207.512	BITUMINOUS STAB. BASE (4" THICK)	SQ. YD.		12,580
2341.502	BITUMINOUS MATERIAL FOR TACK	GAL.		630
2341.504	BITUMINOUS MATERIAL FOR MIXTURE	TON		35
2341.511	BITUMINOUS MIXTURE (WEARING COURSE)	TON		630
2501.501	PIPE CULVERT EXCAVATION	CU. YD.		11
2501.511-18	F&I. C.M.P. CULV. (18")	LIN. FT.		78
2515.531-18	F&I. APRONS FOR C.M.P. (18")	APRON		2
2506.511	RECONSTRUCT MANHOLES	LIN. FT.		4.6
2506.522	ADJUST FRAME & RING CASTINGS	ASSEMBLY		2
504.685	ADJUST WATER GATE HOUSING	ASSEMBLY		2
2501.512-29	F&I. C.M.P.-A CULV. (29" SPAN)	LIN. FT.		70
2515.532-29	F&I. APRON FOR C.M.P.-A CULV. (29")	APRON		2
2574.501	ROADSIDE SEEDING	ACRE		0.85
2576.501	SODDING	SQ. YD.		564

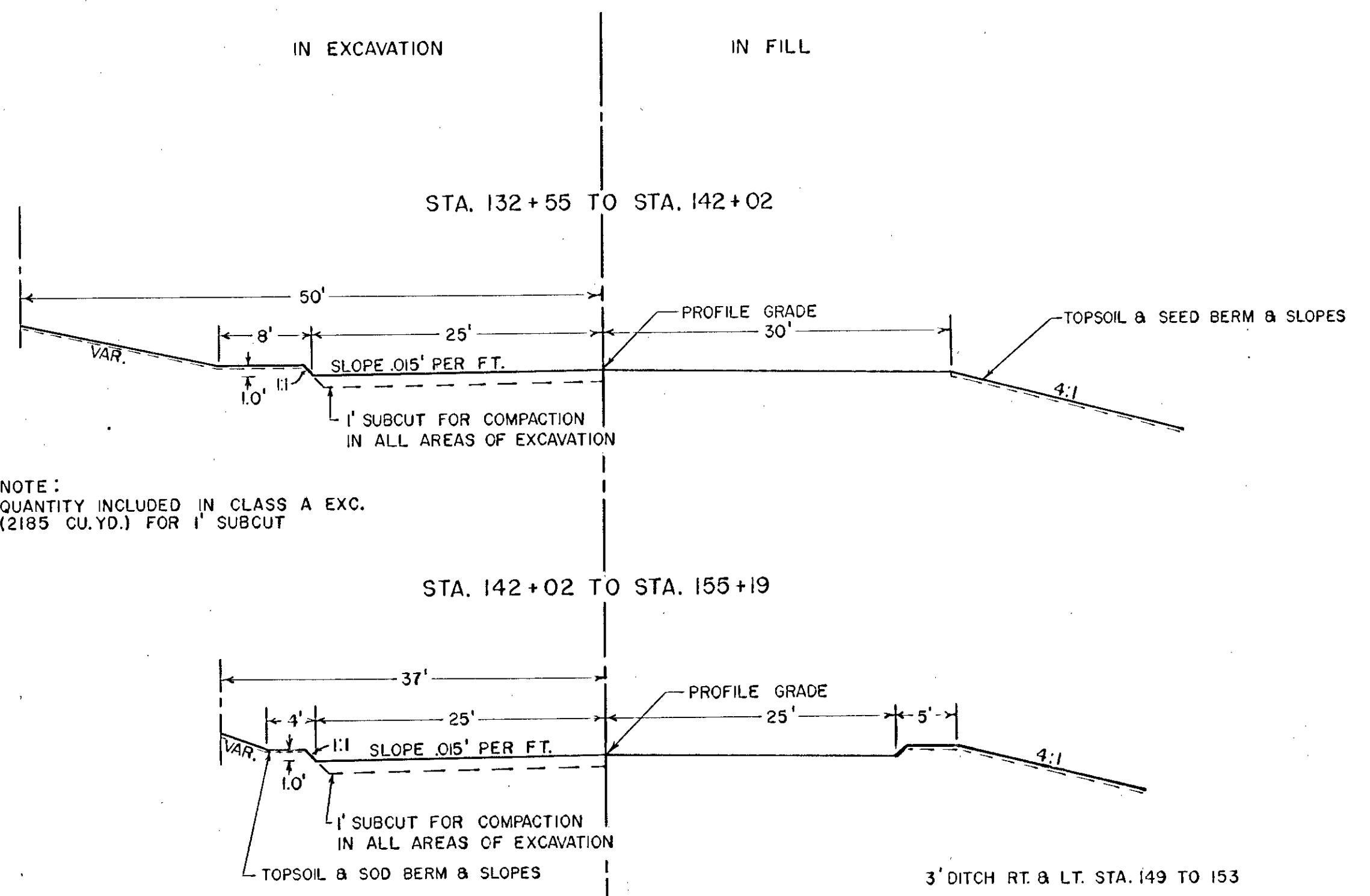
0 COUNTY WILL FURNISH SEED

STANDARD DETAIL PLATES

THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3122 B	METAL APRON FOR C.M. PIPE - ARCH CULVERTS
3123 B	METAL APRON FOR CM PIPES
8000A, 8001	STANDARD SIGNS & BARRICADES
8003, 8008A	

TYPICAL GRADING SECTIONS

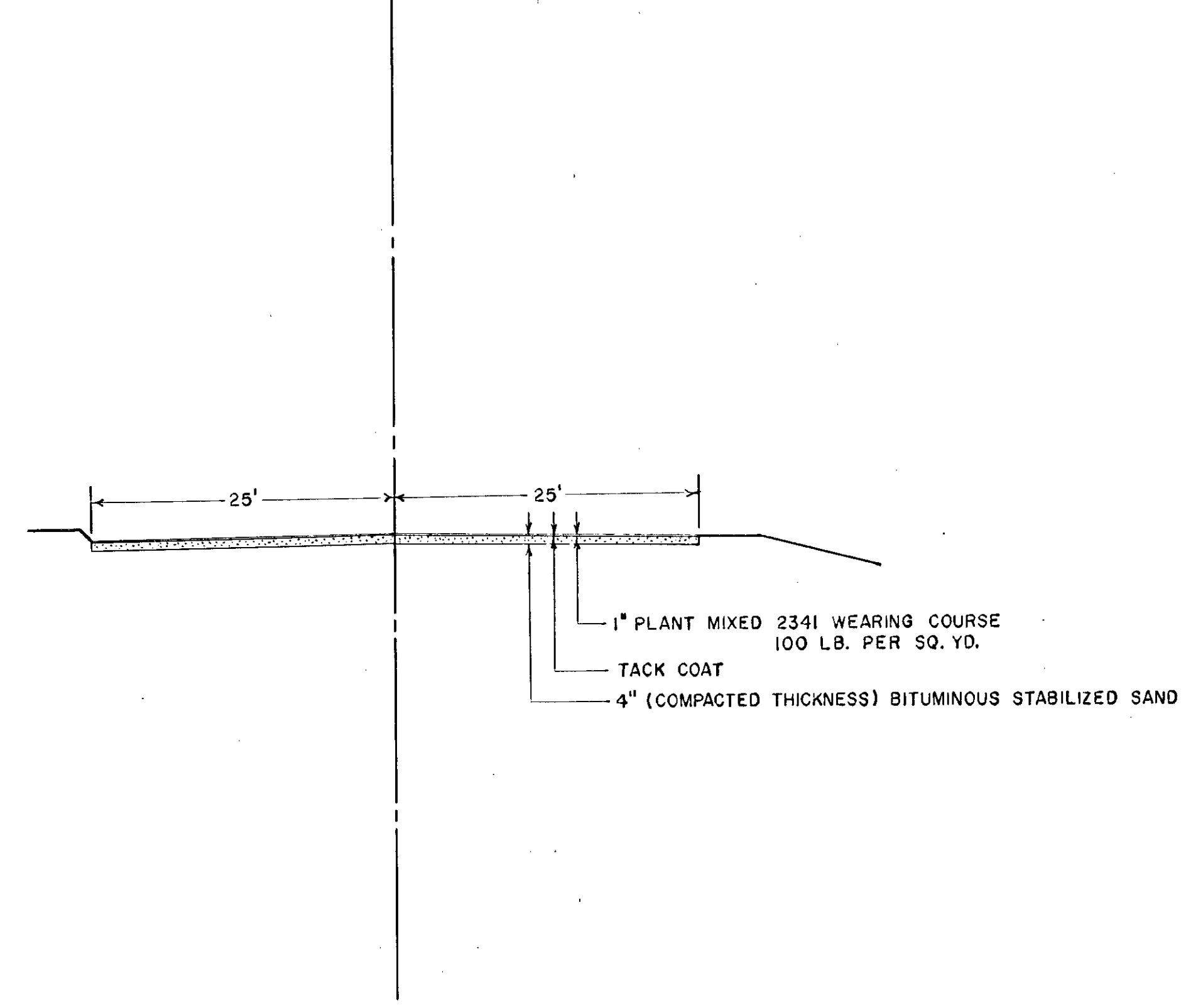


NOTE:
QUANTITY INCLUDED IN CLASS A EXC.
(2185 CU.YD.) FOR 1' SUBCUT

SPECIAL DETAILS

TOPSOIL WILL BE REMOVED FROM THE ROADBED PRIOR TO CONSTRUCTING SLOPES OR PLACING EMBANKMENT. THIS MATERIAL SHALL BE SAVED AND USED AS TOPSOIL COVERING ON BERMS & SLOPES. THIS WILL BE CONSIDERED INCIDENTAL TO CLASS A EXCAVATION.
SLOPES & BERMS WILL BE SODDED LT. OF STA. 142+00 TO 153+00 ALL OTHER SLOPES WILL BE SEEDED.

TYPICAL BASE & SURFACE SECTIONS



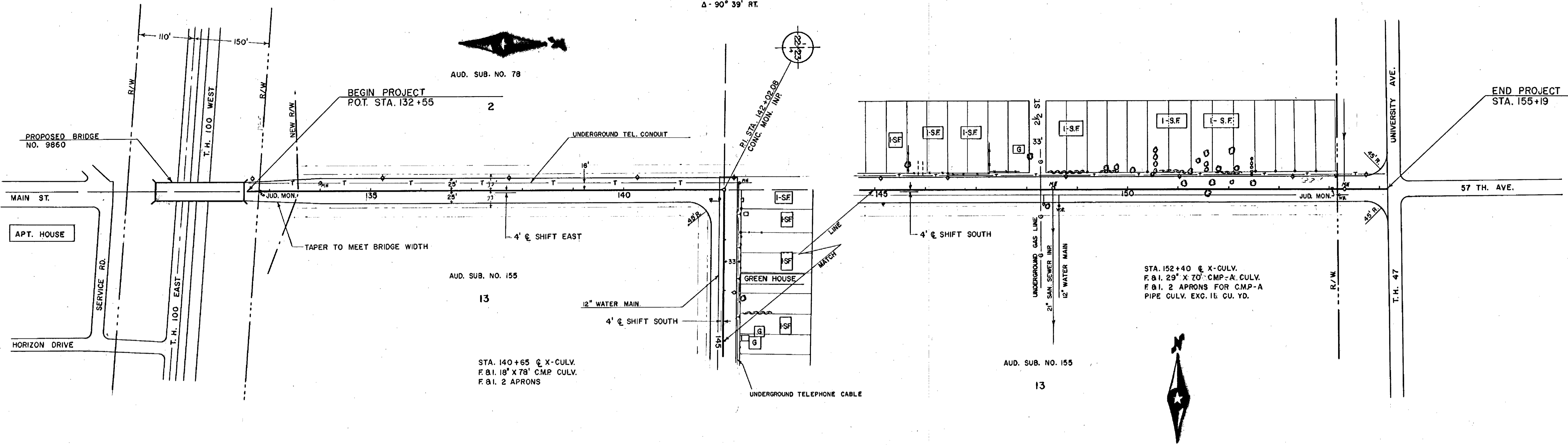
COMPUTATION OF QUANTITIES

- 2207.503 BIT. MATERIAL 0.5 GAL. PER SQ. YD. PER INCH OF DEPTH
- 2207.503 BIT. MATERIAL FOR FOG 0.10 GAL. PER SQ. YD.
- 2341.502 BIT. MATERIAL FOR TACK 0.05 GAL. PER SQ. YD.
- 2341.504 BIT. MATERIAL FOR MIXTURE 5.5% OF MIXTURE BY WT.
- 2341.511 BIT. MIXTURE (WEARING COURSE) 100 LB. PER SQ. YD.

S.A.P. _____
Minn. Project No. _____ State Project No. _____

DANMS PHOTO PRINT CO. MILES 1, MINN.

PI. 142+02.08
 $\Delta - 90^\circ 39' RT.$



BM NO. 1 ELEV. 854.39
 SPIKE IN RR 24' LT. 135+24

BM NO. 2 ELEV. 852.00
 S.W. FLANGE BOLT FIRE HYD.
 29' RT. STA. 148+35

BM NO. 3 ELEV. 848.28
 S.W. FLANGE BOLT FIRE HYD.
 23' LT. STA. 154+15

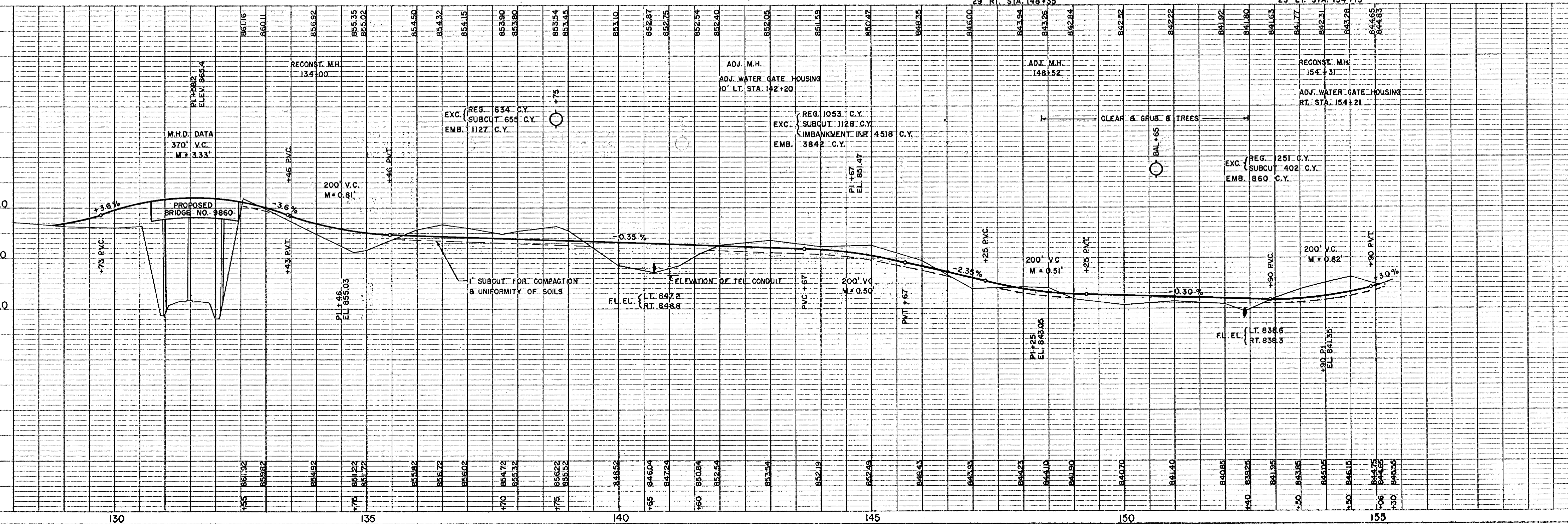
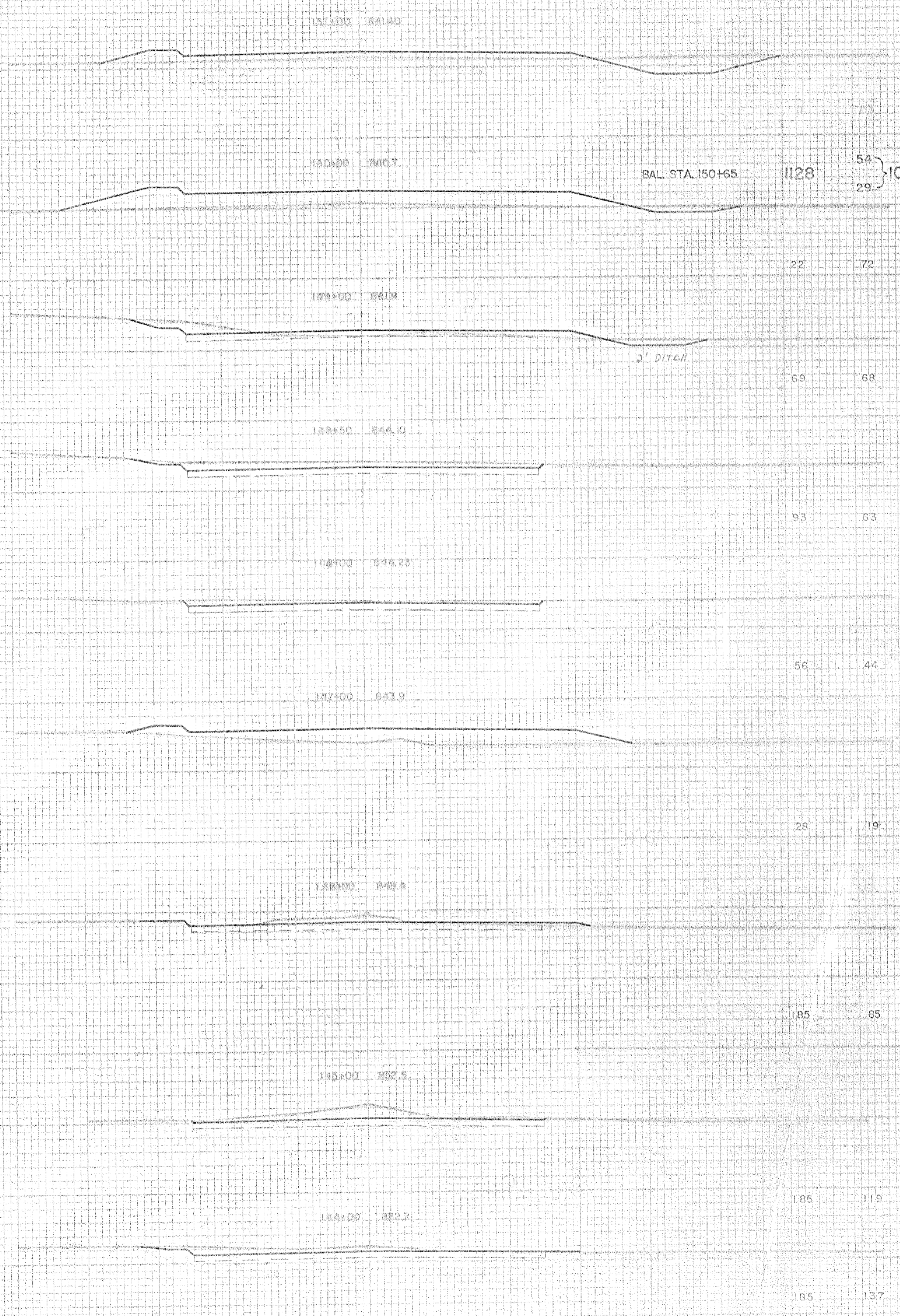


PLATE 1 - PLAN - PROFILE O.P.R. & R.E. STANDARD
 KEUFFEL & ESSER CO., NEW YORK

M & E CO. No. 348-10
 ENGINEERING
 2004

SUB-CUT EXC. EMB.

SUB-CUT EXC. EMB.



BAL. STA. 150+65 1128 } 1053 3942 } 266
29 } 143

