

CONVENTIONAL SIGNS & ABBREVIATIONS

STATE LINE	-----	EXCAVATION	.....	E
COUNTY LINE	-----	EMBANKMENT	-----	F
TOWNSHIP LINE	-----	OVERHAUL	-----	H
SECTION LINE	-----	SURFACING	-----	S
CITY, VILLAGE, OR BOROUGH	-----	GUARD RAIL	-----	GR
FENCE LINE	-----	INTERSECTION ANGLE	.....	A
RIGHT-OF-WAY LINE	-----	RADIUS	.....	R
TRAVELLED WAY	-----	ELEVATION	.....	EI
RAILROADS	-----	VERTICAL CURVE	.....	VC
RETAINING WALL	-----	BECHM MARK	.....	B.M.
BASE OR SURVEY LINE	-----	SECTIONAL CONCRETE CULVERT	.....	P.C.
LEVEE	-----	CORRUGATED METAL CULVERT	.....	C.M.
GRAVEL PIT	.....	CULVERT HAUL	.....	P.H.
SAND PIT	.....	TON MILES	.....	T.M.
CLAY PIT	.....	PLACE	.....	P
ROCK QUARRY	.....	IN PLACE	.....	INP
CULVERTS	.....	REPLACE	.....	REP
PLAIN	.....	RIGHT	.....	R
WITH FACEWALLS	.....	LEFT	.....	L
WITH WINGWALLS	.....	HAND DITCHING	.....	H.D.
DROP INLET	.....	POINT OF CURVE	.....	P.C.
POWER POLE LINE	.....	POINT OF TANGENT	.....	P.T.
TELEPHONE OR TELEGRAPH LINE	.....	POINT OF INTERSECTION	.....	P.I.
MARSH	.....	SPECIAL EXCAVATION	.....	S.E.
HEDGE, BUSH, OR TIMBER	.....	SPECIAL FLOWING	.....	S.F.
GROUND ELEVATION	.....	TELEPHONE POLE	.....	T.E.P.
GRADE ELEVATION	.....		

STATE HIGHWAY DEPARTMENT

OF MINNESOTA

Plan and Profile of State Road No. 2

COUNTY OF RAMSEY

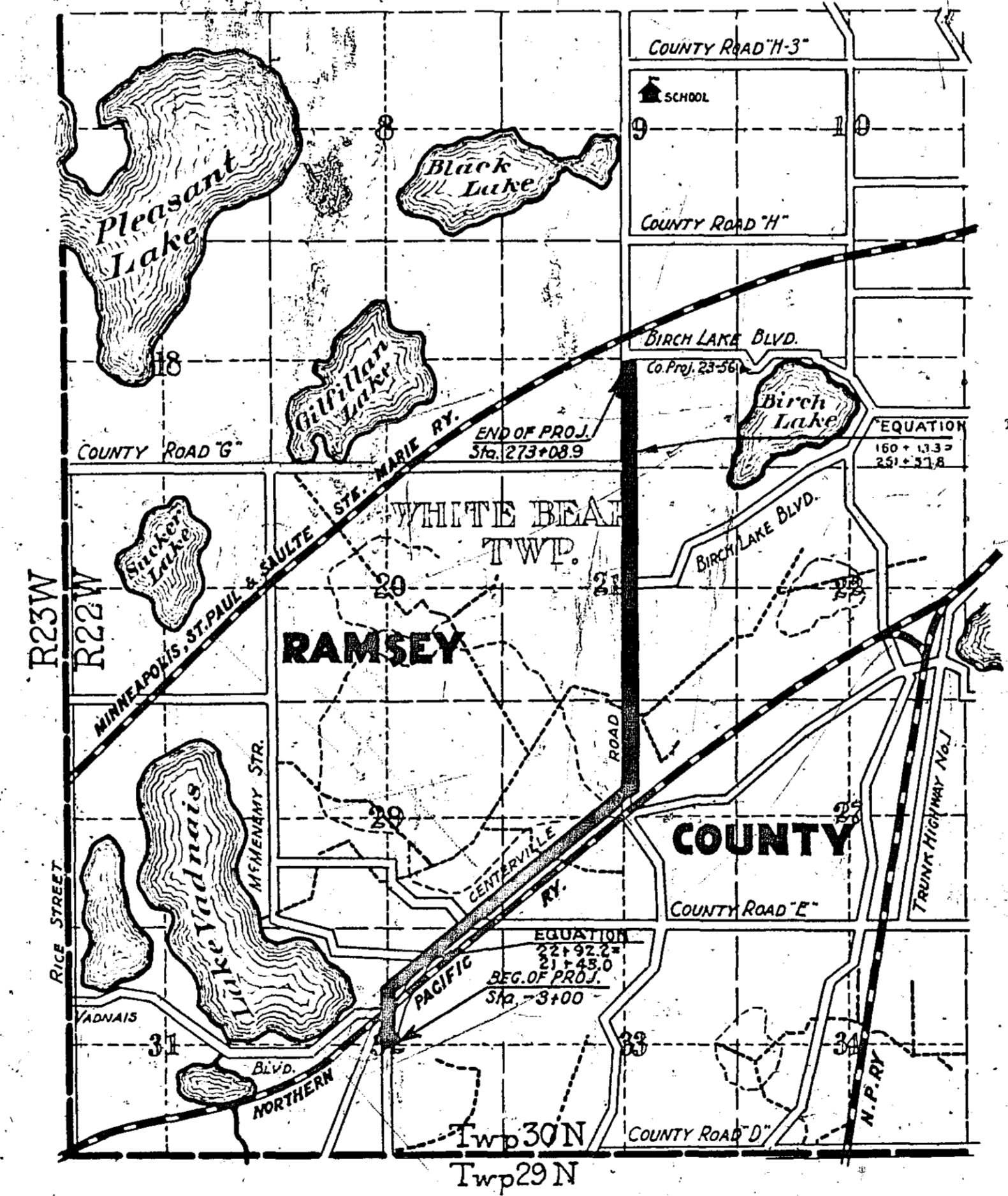
From a point 5074 feet S. of the Ctr. of Sec. 32 Twp. 30N-R22W To a point 1991 feet S. of the Ctr. of Sec. 16 Twp. 30N-R22W

GROSS LENGTH 18211.6 FEET 3.449 MILES
 LENGTH OF EXCEPTIONS FEET MILES
 NET LENGTH 18211.6 FEET 3.449 MILES
 PLAN 1 Inch = 200 Feet
 PROFILE Horz. 1 Inch = 200 Feet Vert. 1 Inch = 20 Feet
 WORKING PLANS Horz. 1 Inch = 100 Feet Vert. 1 Inch = 10 Feet
 Cross-Sections 1 Inch = 10 Feet
 LAYOUT SCALE 1 Inch = 1460 Feet

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No. 2.	Typical Cross-Sections and Statement
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No. 4.	" " " " " 35+13.4 " " 44+00
No. 5.	" " " " " 44+00 " " 273+08.9
No. 6 to 12 incl.	Cross Sections
No. 13	Miscellaneous Standards
No. 13 A	Underpass

Co. Auditor's Copy

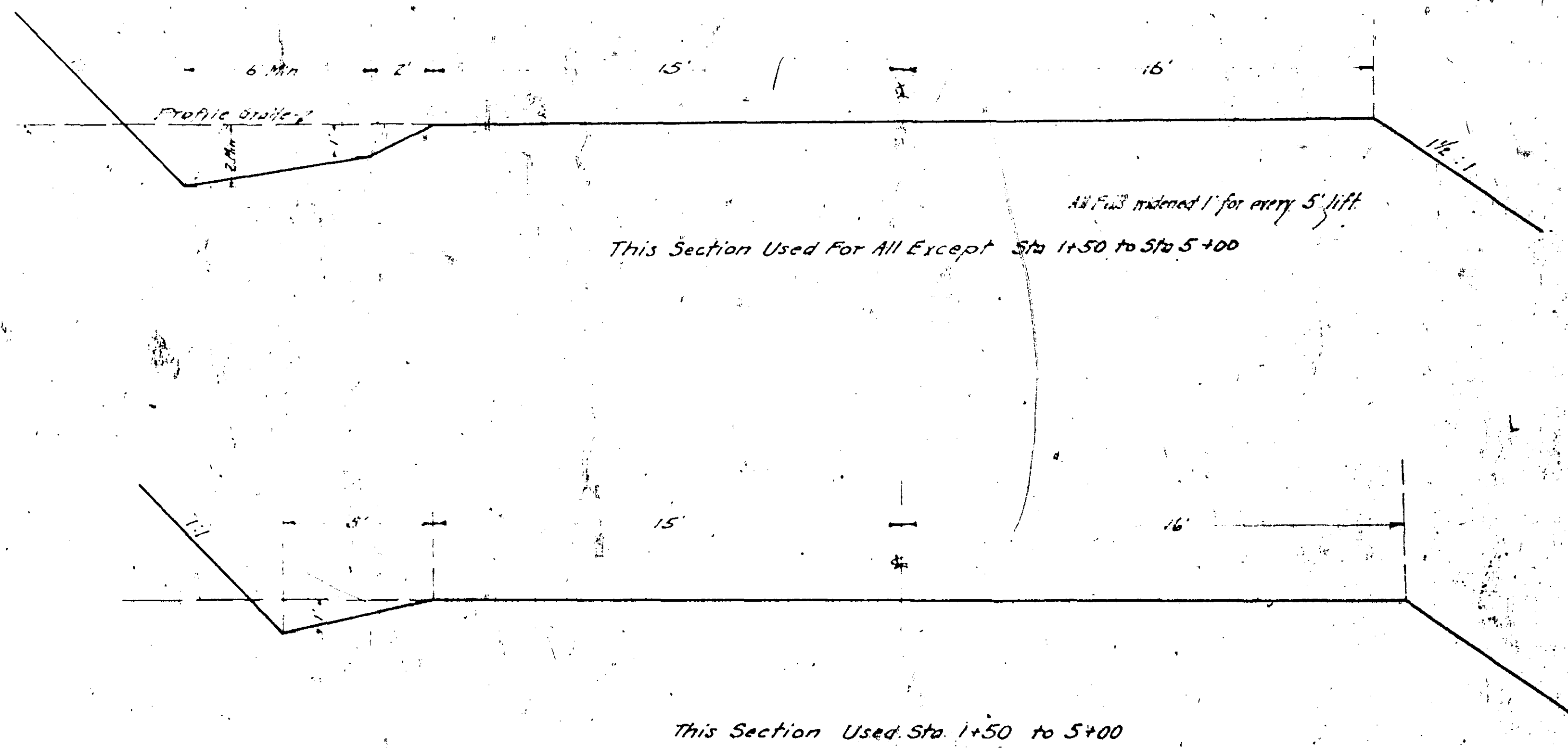


Planned by W. H. Coates
 HIGHWAY ENGINEER FOR Ramsey COUNTY.
 Recommended for Approval _____ DIVISION ENGINEER
 Recommended for Approval _____ CONSTRUCTION ENGINEER
 Approved _____ 192 _____
 CHIEF ENGINEER & DEPUTY COMMISSIONER

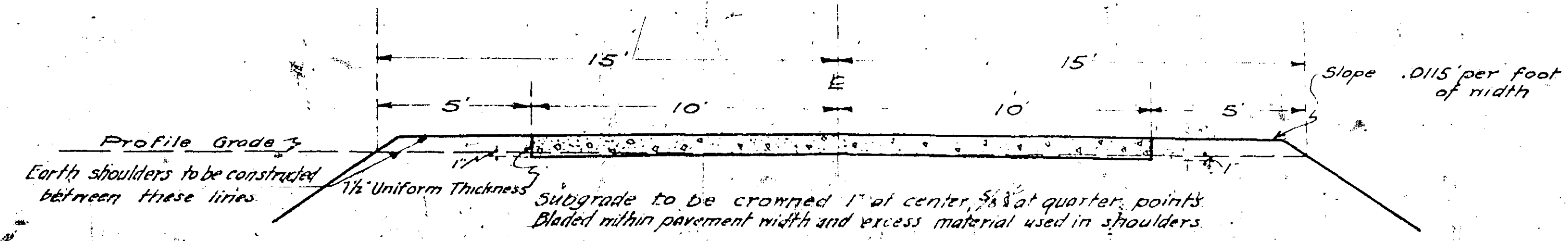
2016

TYPICAL CROSS-SECTIONS AND DETAILS.

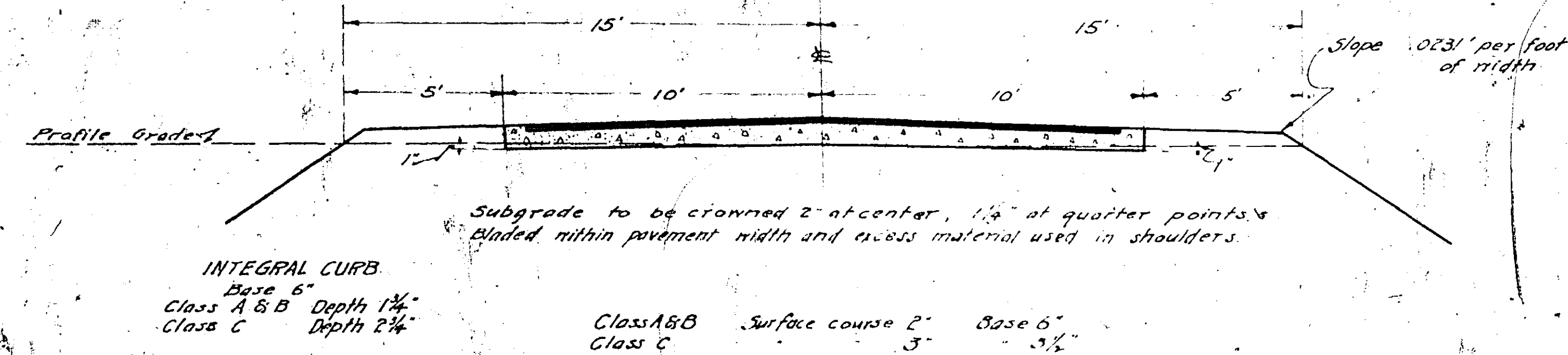
GRADING SECTIONS



ONE COURSE CONCRETE PAVEMENT



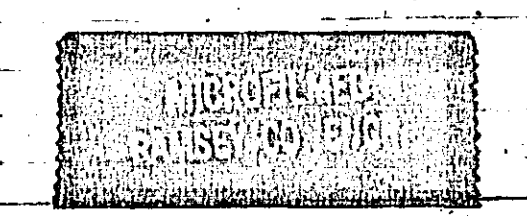
ASPHALTIC CONCRETE PAVEMENT

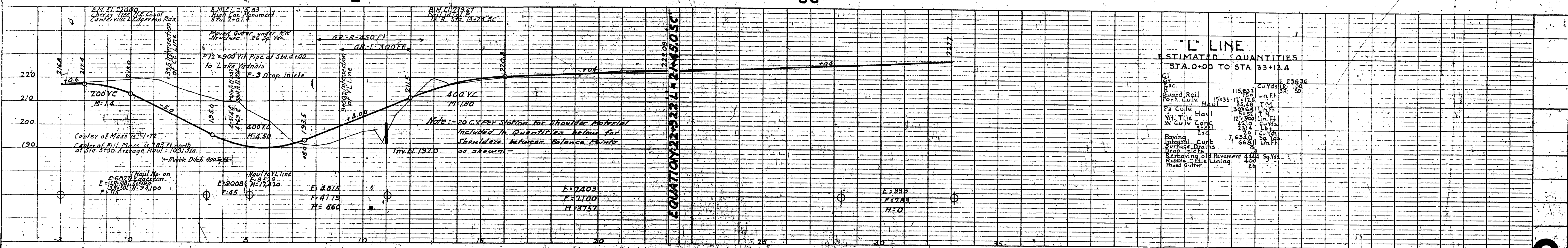
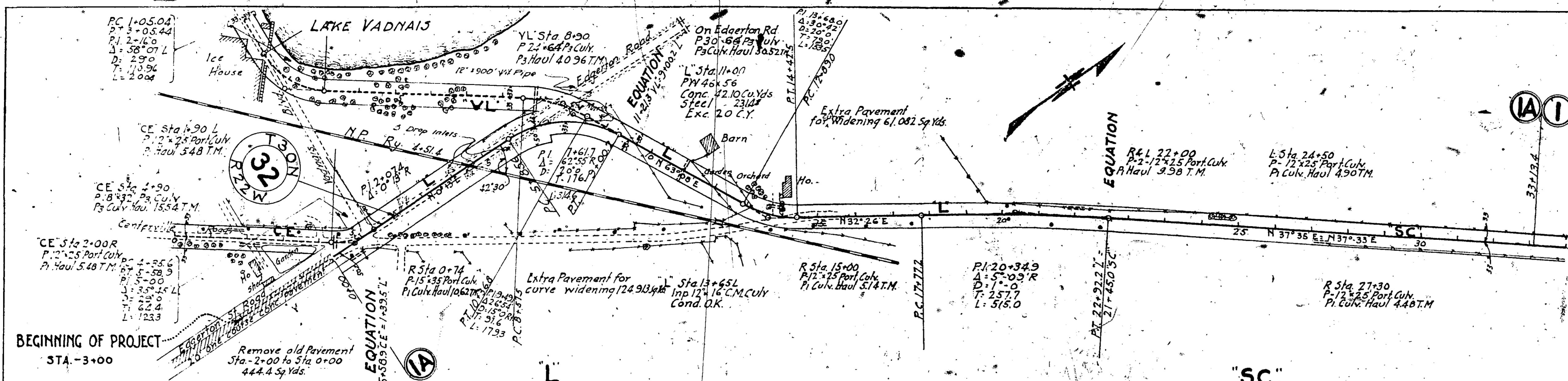


STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

SHEET NO.	STATION TO STATION	EXCAVATION	GRADING ITEMS										TOTAL COST GRADING	PAVING SQ. YDS.	INTERM. CURB LIN. FT.	SURFACE DRAINS	PAVING ITEMS	TOTAL COST PAVING	STATION NO.	STANDARD	BRIDGES & CULVERTS				TOTAL COST STRUCTURES	ESTIMATED COST GRAND TOTAL		
			CU. YDS.	LOOSE ROCK	SOLID ROCK	HAUL	OVER MAUL	GUARD	RAIL	OVER	DROP	VIT. PIPE									REMOVE OLD BASE	TILE DRAIN	12 IN.	15 IN.			18 IN.	24 IN.	30 IN.	36 IN.	PL.	CONCRETE	ASPH.	EXCAVATION	PILE	TEMPORARY CROSSING	REMOVE OLD BRIDGE
Mile 1A	3 -3+00 33+134	18	23,436	100	50	15,832	750	400	3	900	444.4	125.58	25.75	96	66	35.48	50.52	7654	668	4	26	11+00	N 46	55	42.10	23.14	20	
Mile 1	4 33+134 81+56	18	8,210			7,052						25.75	96	66	28.17	135.94	1074	1824	3									
Mile 2	4 81+56 144+00	20	6,831			23,685						125.115	42	20	44.65	27.02	1404	1222	3									
Mile 3	5 144+00 273+00	25	5,961			6,248	1175					100	270	64	12.17	152.64	8205											
V.L. Line	0+00 11+21.5	25	569				1140									40.96												
C.R. Line	0+00 5+58.9		2,502			40,860						50	32	64	10.96	15.54												
Total Quantities	Proj. 23-03	63	47,509	100	50	193,677	400	3	900	444.4	475.225	32.472	64	66	20	133.43	422.62	40,662	3714	70	26			42.10	23.14	20		
Unit Cost																												
Total Est. Cost	Proj. 23-03																											

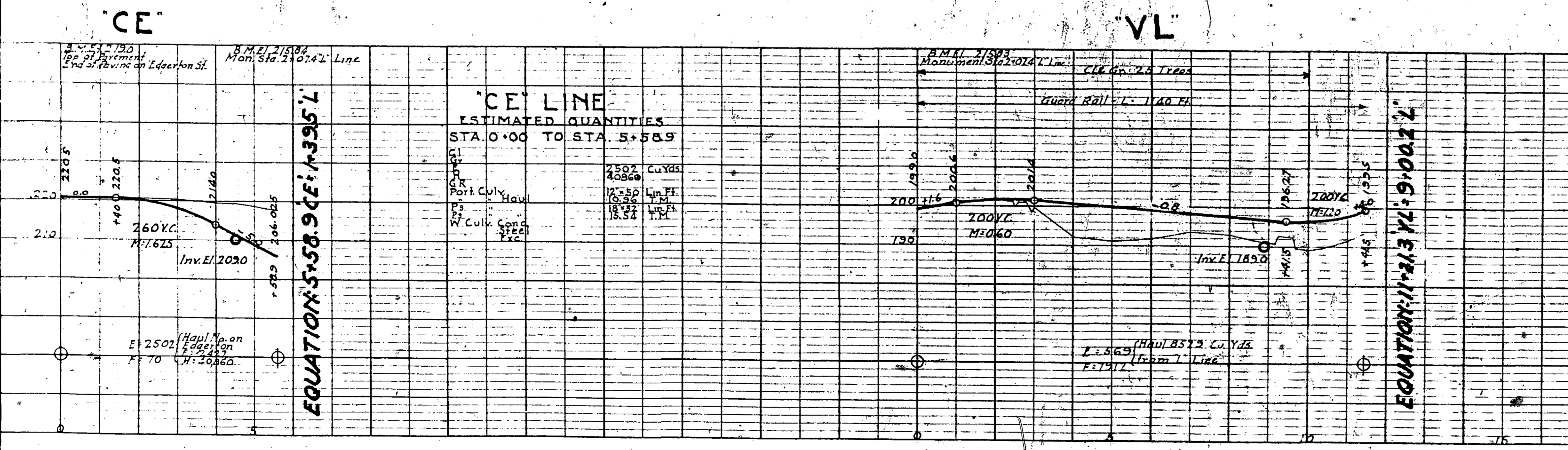
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"L" LINE ESTIMATED QUANTITIES STA 0+00 TO STA 33+13.4

Exc.	115,832	Cu Yds	236,36
Gravel	15,935	Lim. Ft.	18,180
Port. Culv.	35,548	Lim. Ft.	35,548
Pa. Culv. Haul	30,582	Lim. Ft.	30,582
W. Tile Haul	12,290	Lim. Ft.	12,290
W. Culv. Comp.	3,210	Cu Yds	3,210
Paving	7,682	Cu Yds	7,682
Integral Curb	668	Lim. Ft.	668
Surface Drains	2	Lim. Ft.	2
Drop Inlets	2	Lim. Ft.	2
Removing old Pavement	4,487	Sq Yds	4,487
Rubble Over Lining	400	Sq Yds	400
Shoulder Paving	24	Sq Yds	24



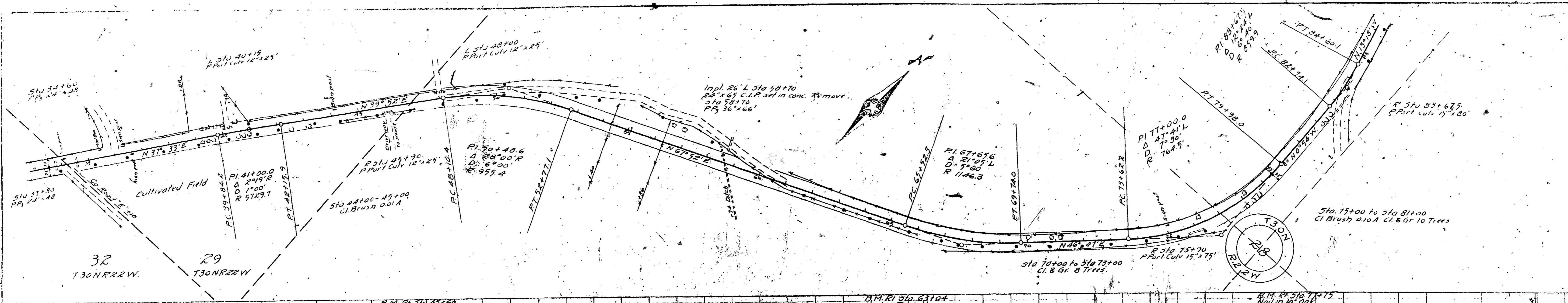
"CE" LINE ESTIMATED QUANTITIES STA 0+00 TO STA 5+58.9

Exc.	2,502	Cu Yds	2,502
Port. Culv.	4,086	Lim. Ft.	4,086
Pa. Culv. Haul	17,550	Lim. Ft.	17,550
W. Culv. Comp.	18,232	Lim. Ft.	18,232
W. Culv. Haul	18,524	Lim. Ft.	18,524

"VL" LINE ESTIMATED QUANTITIES STA 0+00 TO STA 11+100.0

Exc.	25	Trees	25
Gravel	563	Cu Yds	563
Port. Culv.	1,140	Lim. Ft.	1,140
Pa. Culv. Haul	7,166	Lim. Ft.	7,166
W. Culv. Comp.	4,886	Lim. Ft.	4,886
W. Culv. Haul	4,886	Lim. Ft.	4,886

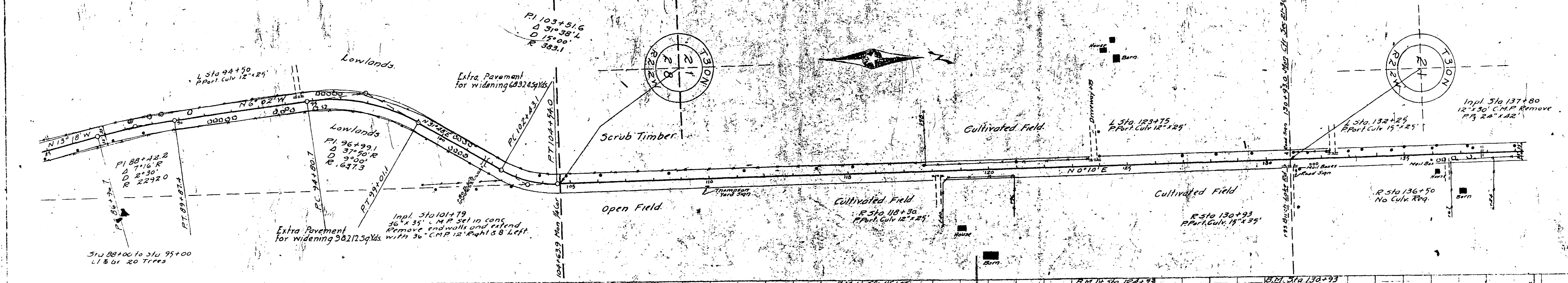
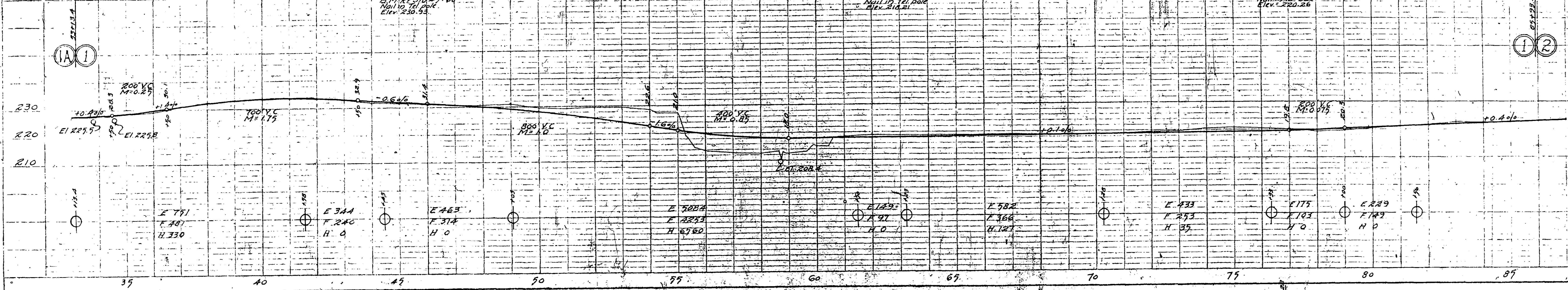
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MILE ONE
STA 33+13.4 TO STA 81+56

ESTIMATED QUANTITIES

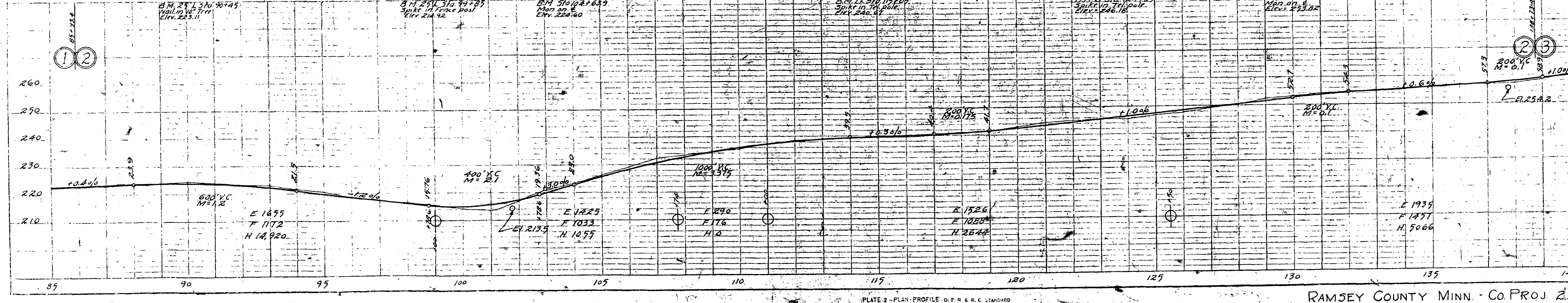
Cl. Brush	0.71	A
Cl.	18	Trees
Gr.	18	Trees
E	82.10	Cy
H	707R	Sy
Part Curb	18' x 12"	Lin. Ft.
Curb H	23.11	TM
P. Curb	23' x 28"	Lin. Ft.
P. Curb H	137.92	TM
Guard Rail	0	Lin. Ft.
Paving	14.74	Sq. Yds
Curbing	1824	Lin. Ft.
Surface Drains	3	



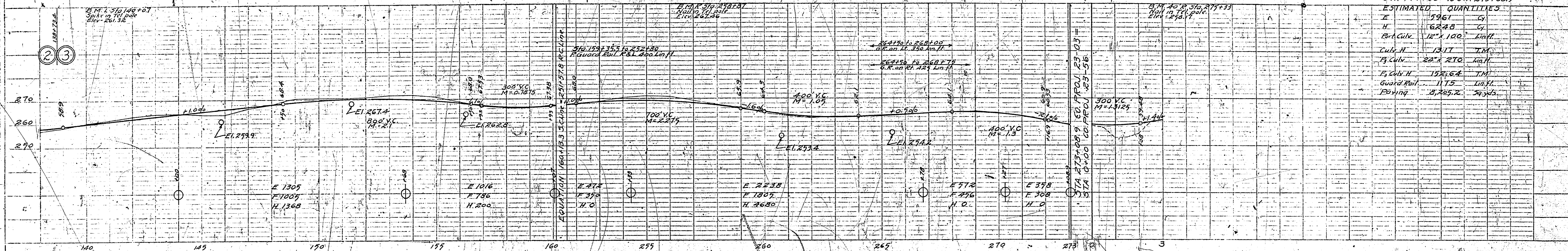
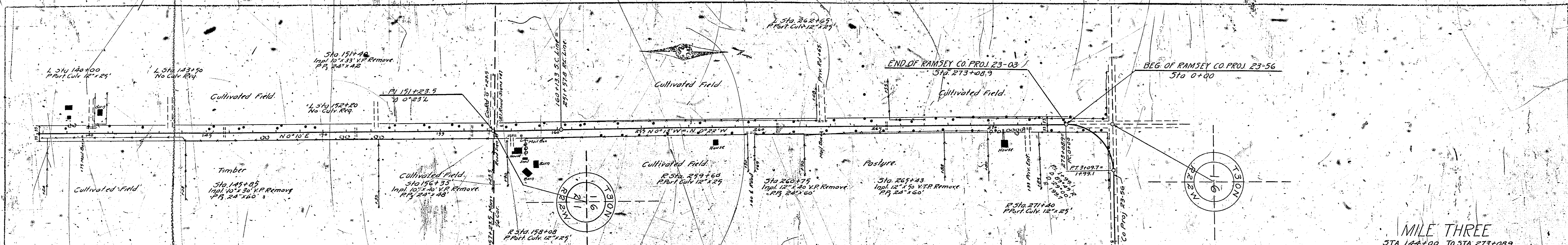
MILE TWO
STA 81+56.0 TO STA 144+00

ESTIMATED QUANTITIES

Cl.	20	Trees
Gr.	20	Trees
E	68.31	Cy
R.	23.64	Sy
Part Curb	36' x 20"	Lin. Ft.
Part Curb	18' x 12"	Lin. Ft.
Curb H	22.65	TM
P. Curb	22' x 28"	Lin. Ft.
P. Curb H	21.06	TM
Guard Rail	0	Lin. Ft.
Paving	14.22	Sq. Yds
Curbing	1222	Lin. Ft.
Surface Drains	3	



2016



MILE THREE
STA 144+00 TO STA 273+08.9

ESTIMATED	QUANTITIES
E	2961 CY
H	6248 CY
Part. Culv.	12' x 100' 1 unit
Culv. H.	13.17 T.M.
P. Culv.	22' x 270' 1 unit
P. Culv. H.	158.64 T.M.
Guard Rail	1175 L.H.F.
Rowing	8,265.2 Sq.Yds.

2016