

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	-----	EL
RAILROADS	-----	VERTICAL CURVE	-----	VC
RETAINING WALL	-----	BEACH MARK	-----	B.M.
BASE OR SURVEY LINE	-----	SECTIONAL CONCRETE CULVERT	-----	P.C.
LEVEE	-----	CORRUGATED METAL CULVERT	-----	C.M.
GRAVEL PIT	-----	CULVERT HAUL	-----	P.L.H.
SAND PIT	-----	TON MILES	-----	T.M.
CLAY PIT	-----	PLACE	-----	P
ROCK QUARRY	-----	IN PLACE	-----	Inp.
CULVERTS	-----	REPLACE	-----	Rep.
PLAIN	-----	RIGHT	-----	R
WITH FACE WALLS	-----	LEFT	-----	L
WITH WING WALLS	-----	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, BRUSH, OR TIMBER	-----	SPECIAL FLOWING	-----	S.P.
GROUND ELEVATION	-----	TELEPHONE POLE	-----	Tel.P.
GRADE ELEVATION	-----			

OFFICE OF COUNTY SURVEYOR
RAMSEY COUNTY

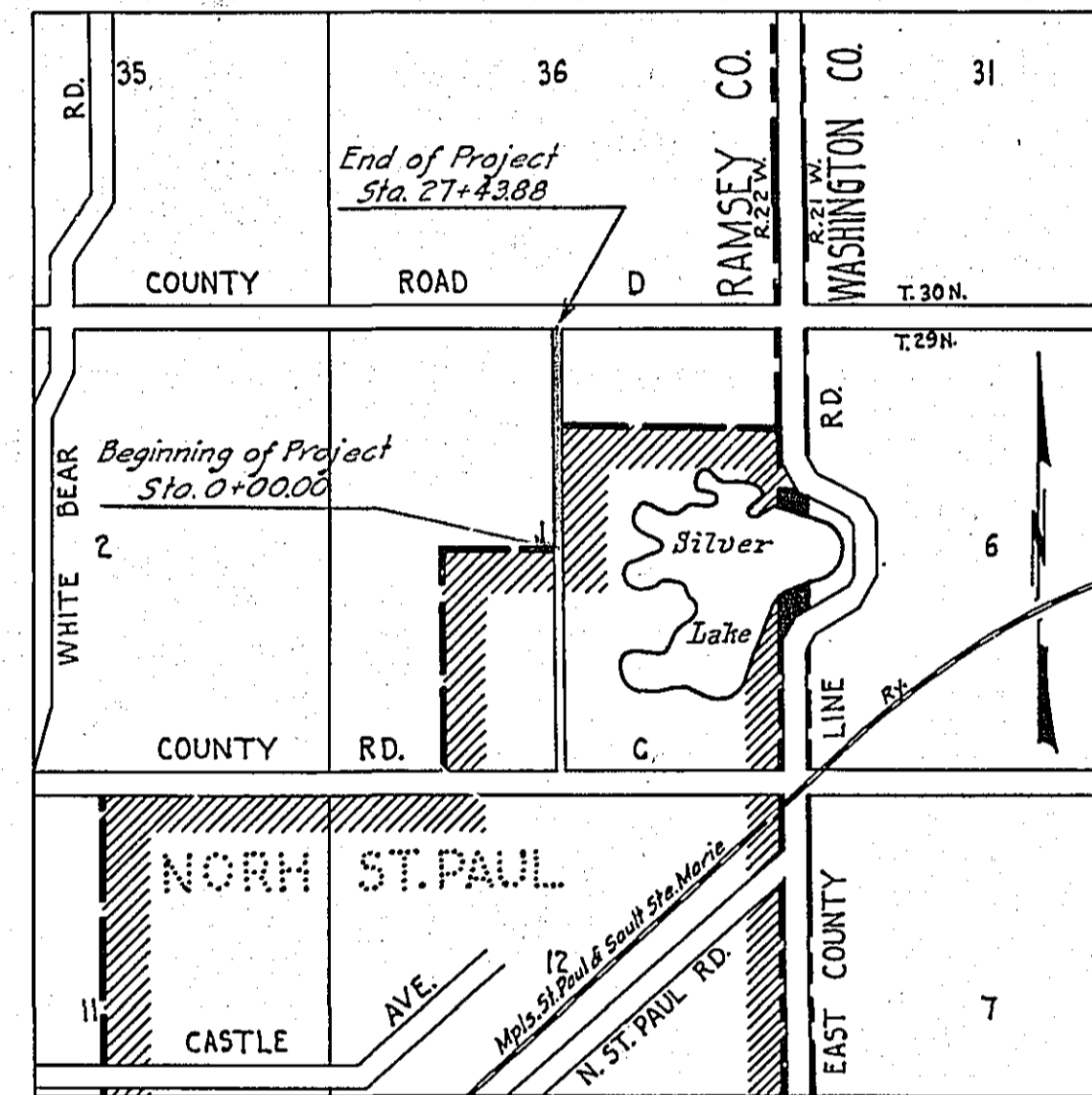
Plan and Profile of County Aid Road (HELEN ST.) PROJECT 29-N1

From CENTER OF SECTION 1-29-22 To N. 1/4 CORNER OF SECTION 1-29-22
Give proper reference to Sections, Township and Range

GROSS LENGTH- 2743.88 FEET 0.520 MILES
LENGTH OF EXCEPTIONS- 0.00 FEET 0.00 MILES
NET LENGTH- 2743.88 FEET 0.520 MILES
PLAN, 1 Inch = 100 Feet
PROFILE, Horz. 1 Inch = 100 Feet. Vert. 1 Inch = 10 Feet
WORKING PLANS { Horz. 1 Inch = 100 Feet
Vert. 1 Inch = 10 Feet
Cross-Sections, 1 Inch = 10 Feet
LAYOUT
SCALE, 1 Inch = 2640 Feet

INDEX OF SHEETS

Sheet No. 1. Title Sheet and Layout Map
" No. 2. Typical Cross-Sections and Statement
" No. 3. Plan and Profile, Sta. 0+00 to Sta. 27+43.88
" No. 4. Cross Sections



Date of Resolution for Preparation of Plans September 11, 1929

Planned by [Signature] ASSISTANT ENGINEER

Recommended for Approval [Signature] CONSTRUCTION ENGINEER

Plans Approved and Recommended for Consideration [Signature] COUNTY SURVEYOR

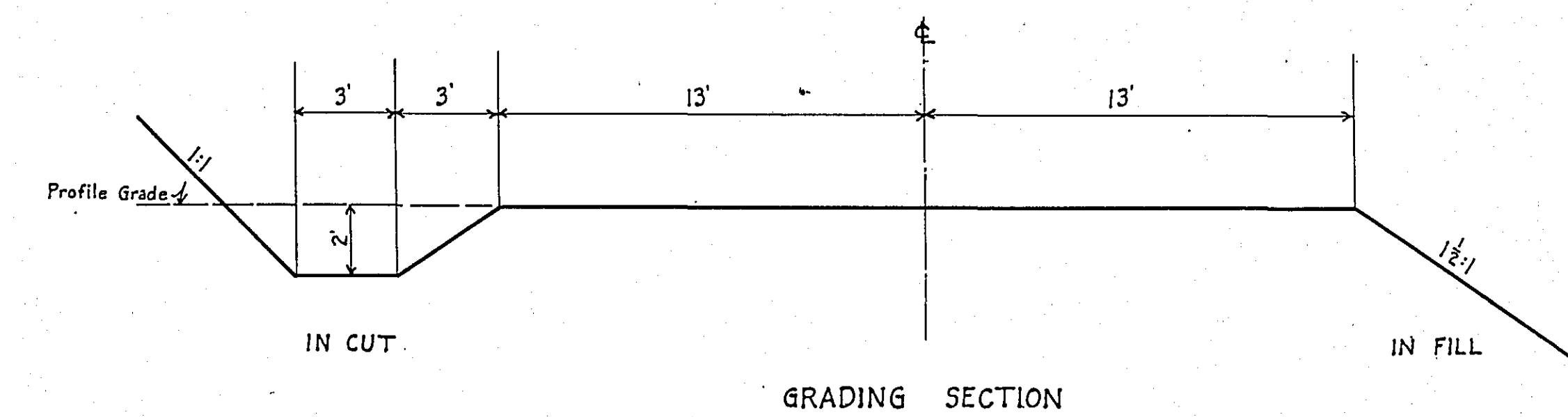
Approved by Town Board Oct 4 1929 [Signature] CHAIRMAN OF TOWN BOARD
Approved by County Board 10/7 1929 [Signature] CHAIRMAN OF COUNTY BOARD

STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

ITEM	UNIT	MILE		MILE		MILE		MILE		MILE		MILE		MILE		TOTAL ESTIMATED QUANTITIES	ESTIMATED UNIT PRICES	AMOUNTS	TOTALS
		Sta. 0+00 to Sta. 21+43.66	to	Sta. to	to	Sta. to	to	Sta. to	to	Sta. to	to	Sta. to	to	Sta. to	to				
1	Clearing	Acre	0.2													0.2			
2	Clearing	Tree																	
3	Grubbing	Acre																	
4	Grubbing	Tree																	
5	Excavation - Earth	Cu. Yd.	3398													3398			
6	Excavation - Loose Rock	Cu. Yd.	20													20			
7	Excavation - Solid Rock	Cu. Yd.	10													10			
8	Excavation - Overhaul	Cu. Yd.	6054													6054			
9	Special Excavation	Lin. Ft.																	
10	Hand Ditching	Cu. Yd.																	
11	Tile Drain	in. Lin. Ft.																	
12	Tile Drain	in. Lin. Ft.																	
13	Tile Drain	in. Lin. Ft.																	
14	Porous Back Fill Material	Cu. Yd.																	
15	Stone Rip - Rap	Cu. Yd.																	
16	Heaving Rip - Rap or Stone Drain Material	Cu. Yd. mile																	
17	Install 12" C.M.	Lin. Ft.	80													80			
18	Install 24" C.M.	Lin. Ft.	80													80			
19	Install	Lin. Ft.																	
20	Install	Lin. Ft.																	
21	Replace Old Culv.	Lin. Ft.	52													52			
22	Remove Old Culv.	Lin. Ft.	52													52			
23	Install	Lin. Ft.																	
24	Install	Lin. Ft.																	
25	Install 24" P ₃	Lin. Ft.																	
26	Install 30" P ₃	Lin. Ft.																	
27	Install 36" P ₃	Lin. Ft.																	
28	P ₁ Culvert Haul	Ton Mile																	
29	P ₃ Culvert Haul	Ton Mile																	
30																			
31																			
32																			
TOTAL ESTIMATED COST OF GRADING (IN 'TOTALS' COLUMN)																			
33	C.M. Culv. Material 12"	Lin. Ft.	80													80			
34	C.M. Culv. Material 24"	Lin. Ft.	80													80			
35	Culv. Material	Lin. Ft.																	
36	Culv. Material	Lin. Ft.																	
37	Culv. Material	Lin. Ft.																	
38	Culv. Material	Lin. Ft.																	
39	P ₃ Culv. Material 24"	Lin. Ft.																	
40	P ₃ Culv. Material 30"	Lin. Ft.																	
41	P ₃ Culv. Material 36"	Lin. Ft.																	
TOTAL ESTIMATED COST OF PORTABLE CULVERT MATERIAL (IN 'TOTALS' COLUMN)																			
42	Gravel Pit Stripping	Cu. Yd.																	
43	Screening	Cu. Yd.																	
44	Loading	Cu. Yd.																	
45	Hauling	Cu. Yd. Mile																	
46	Shaping & Compacting	Man Hour																	
47	Shaping & Compacting	Man & Team Hour																	
48																			
49																			
50																			
51																			
TOTAL ESTIMATED COST OF GRAVEL HAUL (IN 'TOTALS' COLUMN)																			
52	Gravel Material F. O. B. Pit	Cu. Yd.																	
53	Freight (if any)	Cu. Yd.																	
54	Unloading from Cars	Cu. Yd.																	
TOTAL ESTIMATED COST OF GRAVEL MATERIAL (IN 'TOTALS' COLUMN)																			
55	Fine Grading - Exo. & Emb.	Cu. Yd.																	
56	Shoulders - Earth	Cu. Yd.																	
57																			
58																			
59	Pavement	Sq. Yd.																	
60	Integral Curb (One Course Concrete)	Lin. Ft.																	
61	Sloping Curb	Lin. Ft.																	
62	Surface Drain	Lin. Ft.																	
63	Surface Drain Basins	Basin																	
64	Bridge Approach Slabs (Square)	Slab																	
65	Bridge Approach Slabs (Rect)	Slab																	
66																			
67																			
68																			
TOTAL ESTIMATED COST OF PAVEMENT CONSTRUCTION (IN 'TOTALS' COLUMN)																			
69	Concrete	Cu. Yd.																	
70	Reinforcing Steel	Lb.																	
71	Excavation - Earth	Cu. Yd.																	
72	Excavation - Loose Rock	Cu. Yd.																	
73	Excavation - Solid Rock	Cu. Yd.																	
74	Bridge	* Bridge No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.	Br. No.
75	Station																		
76	Concrete	Cu. Yd.																	
77	Reinforcing Steel	Lb.																	
78	Structural Steel	Lb.																	
79	Piling	Lin. Ft.																	
80	Temporary Crossing	Lump Sum																	
81	Removing old Bridge	Lump Sum																	
82	Bituminous Surface	Sq. Yd.																	
83																			
84																			
TOTAL ESTIMATED COST OF STRUCTURES (IN 'TOTALS' COLUMN)																			
85	Guard Rail	Lin. Ft.																	
86	Gutter	Lin. Ft.																	
87	Excavation for Gutter	Cu. Yd.																	
TOTAL ESTIMATED COST OF MISCELLANEOUS ITEMS (IN 'TOTALS' COLUMN)																			

TYPICAL CROSS SECTIONS AND DETAILS

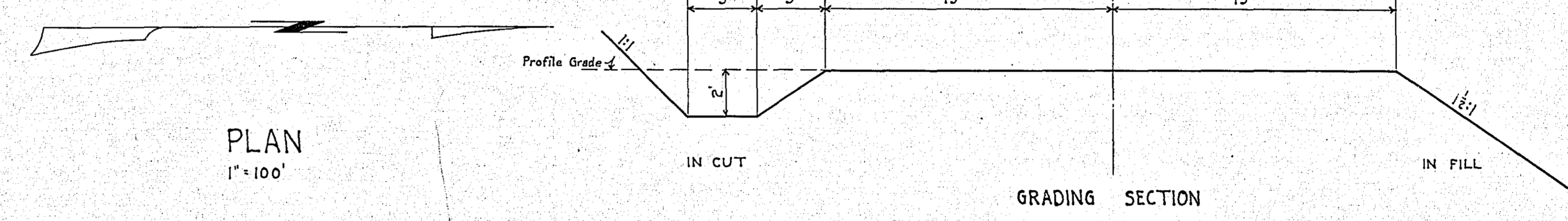
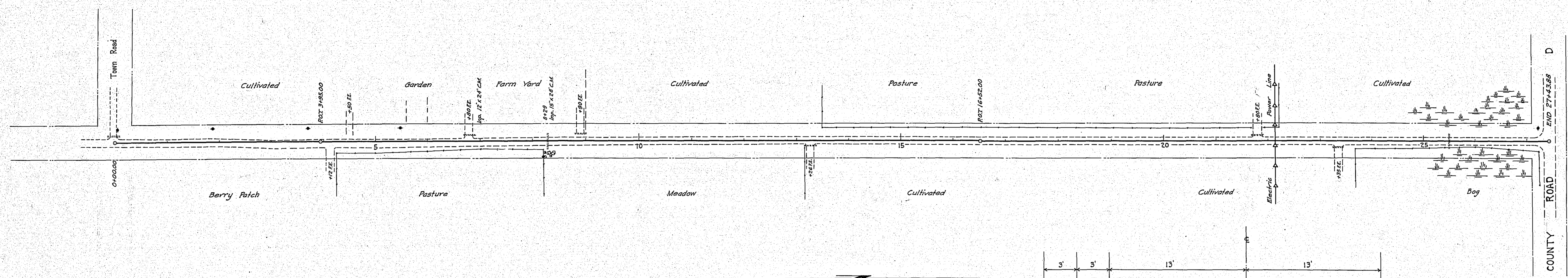
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SEC.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
4	MINN.					



* NOTE: BRIDGE ITEMS LISTED UNDER BRIDGE NUMBERS IN MILE COLUMNS REGARDLESS OF LOCATION

- 5603

0+00 Lt. Rep. 15'x28' C.M. From Sta. 8+29
 4+12 Rt. No Cult. Reqd.
 4+50 Lt. No Cult. Reqd.
 6+80 Lt. Imp. 12'x24' C.M. Rem. & Rep.
 8+29 Imp. 15'x28' C.M. Remove P. 24'x40' C.M.
 8+90 Lt. P. 12'x20' C.M.
 13+26 Rt. P. 12'x20' C.M.
 21+80 Lt. P. 12'x20' C.M.
 23+35 Rt. P. 12'x20' C.M.
 25+50 P. 24'x40' C.M.



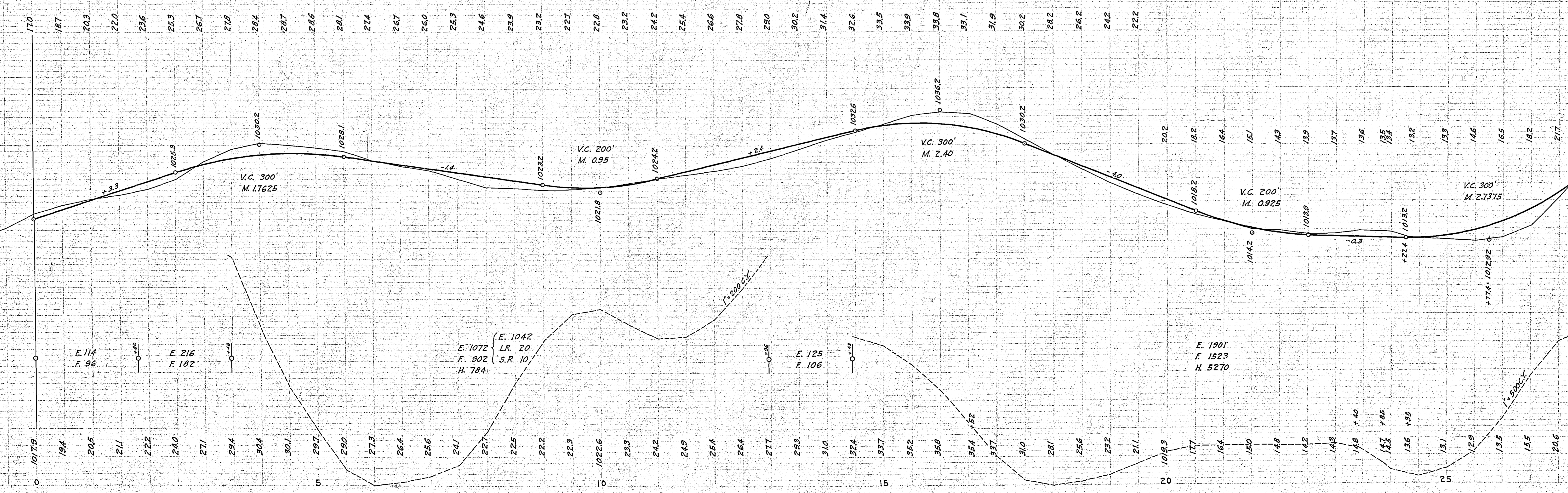
PLAN
1" = 100'

GRADING SECTION

B.M. - On Sp. in 24" Oak 45' Rt. Sta. 0+50 EL. 1017.34
 B.M. - On Sp. in 12" Oak 75' Lt. Sta. 11+00 EL. 1034.25
 B.M. - On Sp. in P.P. Rt. Sta. 27+70 EL. 1028.04

PROFILE

Hor. 1" = 100'
Vert. 1" = 10'



ESTIMATED QUANTITIES

Clearing Acres	0.2
Exc. Earth	CY 3358
Exc. O.H.	CY 6054
Install 12" C.M. Lin. Fr.	80
Install 24" C.M. Lin. Fr.	80
Rem. Old Cult.	Lin. Fr. 52
Rep.	52
Exc. L.R.	CY 20
Exc. S.R.	CY 10

PLAN REVIEW
 DATE: 10/15/11
 BY: [Signature]

PROFILE REVIEW
 DATE: 10/15/11
 BY: [Signature]