

31+85
 10p. 30"x30" C.M.
 Ext. 30"x12" C.M. Rt.
 Ext. 30"x8" C.M. Lt.
 2'-30" Connecting Bonds

37+75 Rt.
 R15'x20' C.M.

39+37 Lt.
 R15'x30' C.M.

39+53 Rt.
 10p. 10"x30" C.M.
 Remove
 R15'x30' C.M.

40+89 Lt.
 R15'x24' C.M.

42+72 Rt.
 No Culv. Req'd.

42+76 Lt.
 No Culv. Req'd.

43+40 Lt.
 No Culv. Req'd.

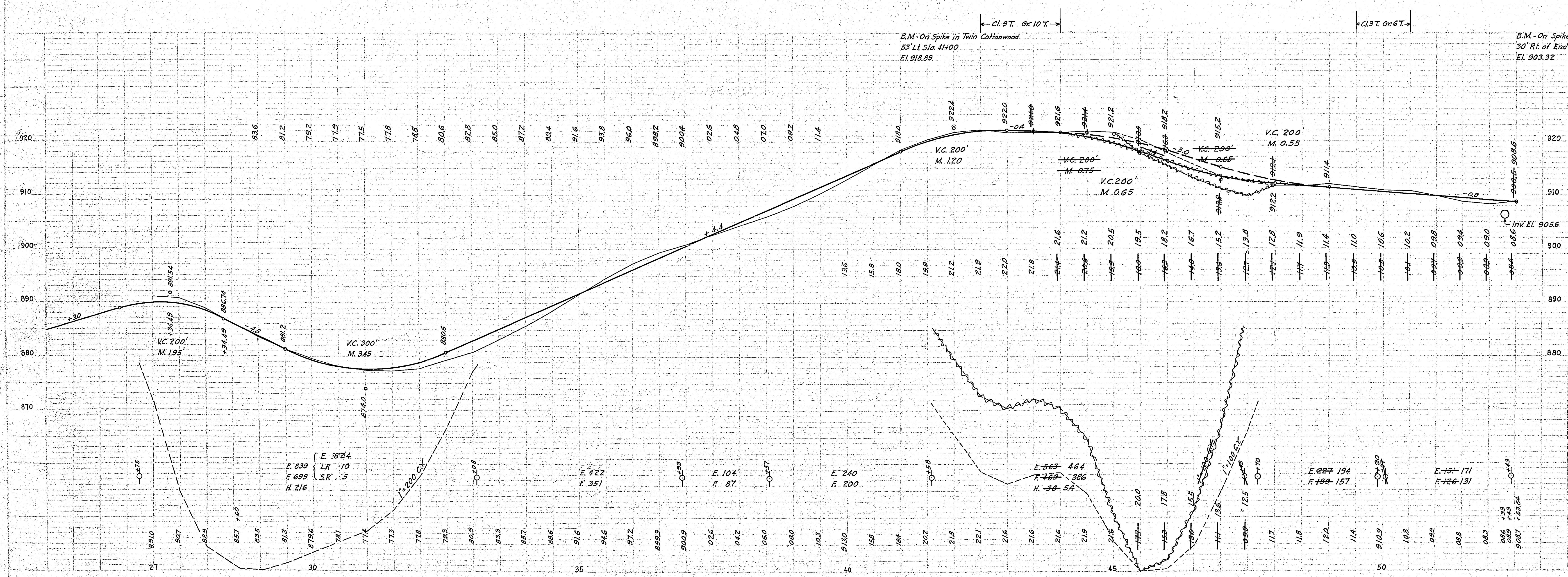
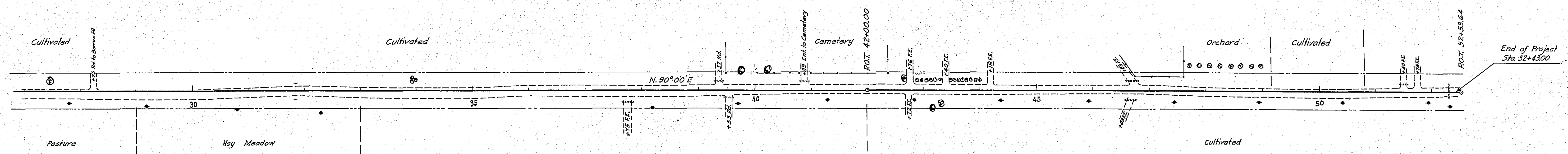
44+19 Lt.
 No Culv. Req'd.

46+83 Lt.
 R15'x20' C.M.

46+83 Rt.
 R15'x20' C.M.

51+50 Lt.
 R15'x20' C.M.

52+30
 R24'x42' Ps.
 Ps. H. 351 T.M.



ESTIMATED QUANTITIES

Clearing Acres	0.46
Grubbing Acres	0.22
Clearing Trees	12
Grubbing Trees	16
Exc. Earth	Cu Yds. 8245
- L.R.	90
- S.R.	35
- O.H.	1023
Install 15" C.M.	Lin. Ft. 304
" 30" C.M.	20
" 24" Ps.	144
Ps Culv. Haul	Ton/Mile 26.14
Remove Old Culv.	Lin. Ft. 30

PLAN
 29-MI
 SHEET 4 OF 7 SHEETS
 DATE: 1-15-1914
 BY: J. H. ...
 CHECKED: ...
 APPROVED: ...

PROFILE
 29-MI
 SHEET 4 OF 7 SHEETS
 DATE: 1-15-1914
 BY: J. H. ...
 CHECKED: ...
 APPROVED: ...

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	-----	G.R.
FENCE LINE	-----	INTERSECTION ANGLE	-----	A
RIGHT-OF-WAY LINE	-----	RADIUS	-----	R
TRAVELLED WAY	-----	ELEVATION	-----	EI
RAILROADS	-----	VERTICAL CURVE	-----	V.C.
RETAINING WALL	-----	BENCH 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	-----	Imp
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, BRUSH, OR TIMBER	-----	SPECIAL FLOWING	-----	S.F.
GROUND ELEVATION	-----	TELEPHONE POLE	-----	Tel.P.
GRADE ELEVATION	-----			

OFFICE OF COUNTY SURVEYOR
RAMSEY COUNTY

Plan and Profile of County Aid Road (CEMETERY ROAD) PROJECT N^o 29-M1

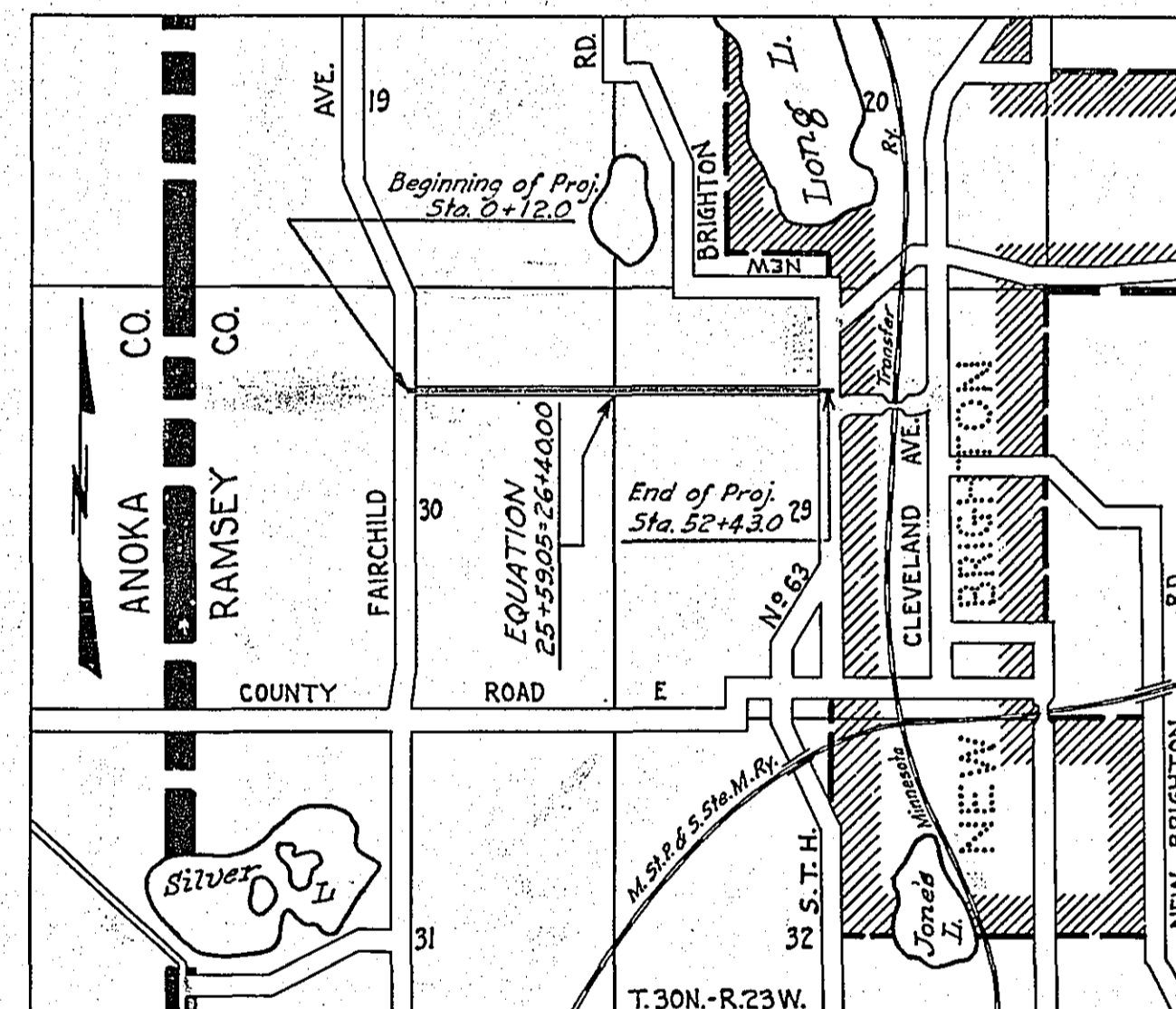
From FAIRCHILD AVE To LONG LAKE ROAD

GROSS LENGTH 5166.05 FEET 0.982 MILES
 LENGTH OF EXCEPTIONS 0.00 FEET 0.00 MILES
 NET LENGTH 5166.05 FEET 0.982 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+12 to Sta. 29+00
 " No. 4. " " " " 29+00 " " 52+43
 " No. 5-6-7 Cross Sections



Date of Resolution for Preparation of Plans September 3, 1929

Planned by *[Signature]* ASSISTANT ENGINEER

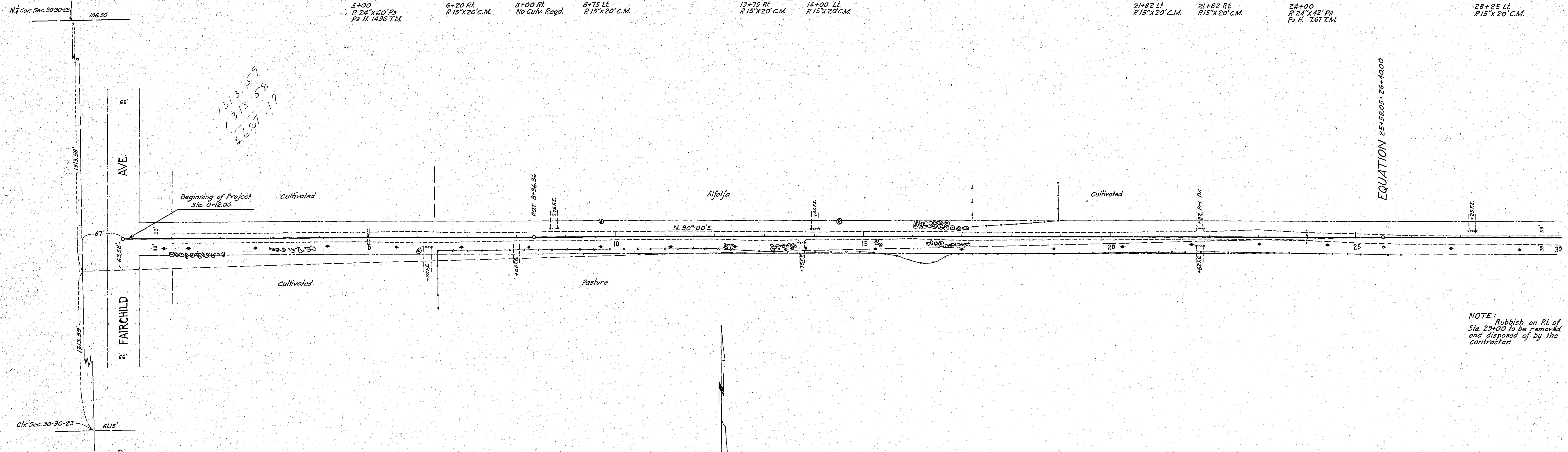
Recommended for Approval *[Signature]* CONSTRUCTION ENGINEER

Plans Approved and Recommended for Consideration *[Signature]* COUNTY SURVEYOR

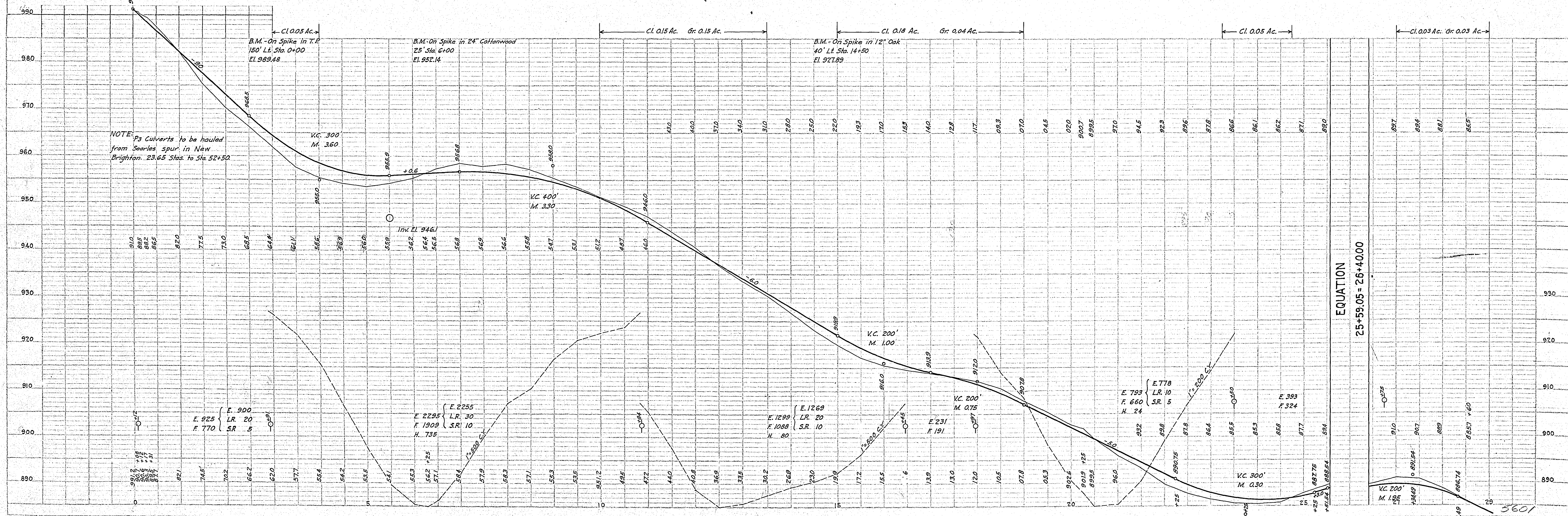
Approved by Town Board 10/3 1929 *[Signature]* CHAIRMAN OF TOWN BOARD
 Approved by County Board 10/7 1929 *[Signature]* CHAIRMAN OF COUNTY BOARD

PLAN	DATE
REVISION	BY
NOTED	BY
REVISION	BY
NOTED	BY
REVISION	BY
NOTED	BY

PROFILE	DATE
REVISION	BY
NOTED	BY
REVISION	BY
NOTED	BY
REVISION	BY
NOTED	BY



NOTE: Rubbish on Rt. of Sta. 23+00 to be removed, and disposed of by the contractor.



CURTIS BUFFINGTON, ENGINEER, N. Y.

PLATE PLAN-PROFILE S. P. & STANDARD

Proj. No. 29-MI

Ink El. 879.5

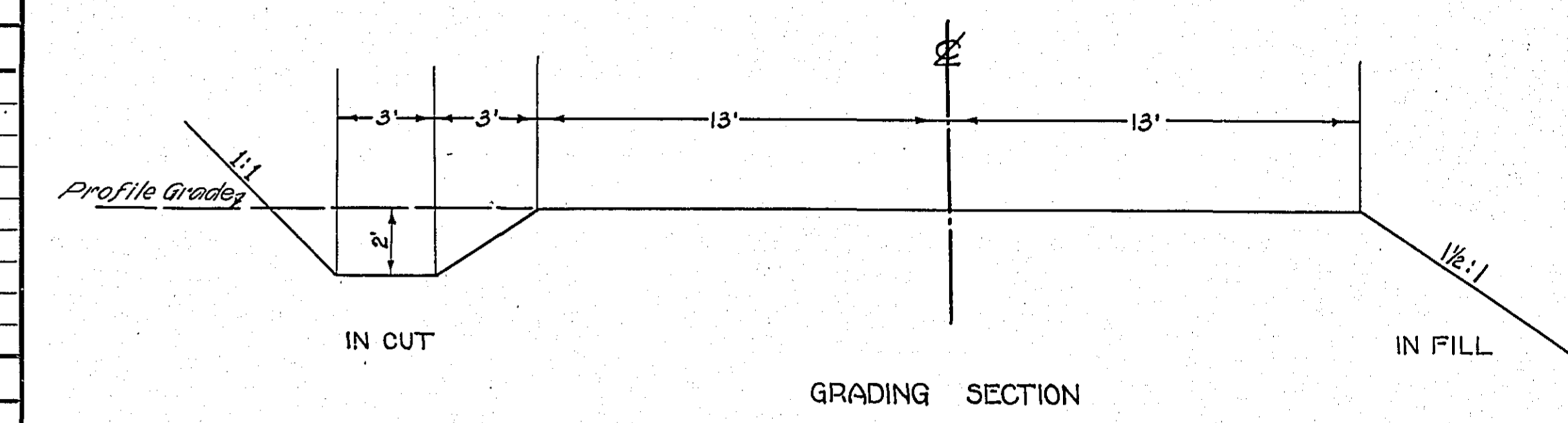
Sheet 3 of 7 Sheets

STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

ITEM	UNIT	MILE														TOTAL ESTIMATED QUANTITIES	ESTIMATED UNIT PRICES	AMOUNTS	TOTALS	
		Sta. 0+22 to Sta. 0+430	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.	Sta. to Sta.					
1	Clearing	Acre	0.46															0.46		
2	Clearing	Tree	12															12		
3	Grubbing	Acre	0.22															0.22		
4	Grubbing	Tree	16															16		
5	Excavation - Earth	Cu. Yd.	8357															8357		
6	Excavation - Loose Rock	Cu. Yd.	90															90		
7	Excavation - Solid Rock	Cu. Yd.	35															35		
8	Excavation - Overhaul	Cu. Yd.	1093															1093		
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	Hauling Rip-Rap or Stone Gravel Material	Cu. Yd. mile																		
17	Install 15" C.M.	Lin. Ft.	304															304		
18	Install 30" C.M.	Lin. Ft.	20															20		
19	Install	Lin. Ft.																		
20	Install	Lin. Ft.																		
21	Install	Lin. Ft.																		
22	Install	Lin. Ft.																		
23	Install	Lin. Ft.																		
24	Install	Lin. Ft.																		
25	Install 24" P ₃	Lin. Ft.	144															144		
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	26.14															26.14		
30	Remove Old Culv.	Lin. Ft.	30															30		
31																				
32																				
TOTAL ESTIMATED COST OF GRADING (IN 'TOTALS' COLUMN)																				
33	C.M. Culv. Material 15"	Lin. Ft.	304															304		
34	C.M. Culv. Material 30"	Lin. Ft.	20															20		
35	C.M. Culv. Material 30"	Conn. Bands	2															2		
36	Culv. Material	Lin. Ft.																		
37	Culv. Material	Lin. Ft.																		
38	Culv. Material	Lin. Ft.																		
39	P ₃ Culv. Material 24"	Lin. Ft.	144															144		
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 - Exc. & 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 (Concrete)	Slab																		
65	Bridge Approach Slabs (Steel)	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: See cross sections for wide ditch. - From 0+12 to 12+50

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