

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	-----	KC
RETAINING WALL	-----	BECH 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 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.P.
GROUND ELEVATION	-----	TELEPHONE POLE	-----	Tel.P.
GRADE ELEVATION	-----			

OFFICE OF COUNTY SURVEYOR
RAMSEY COUNTY

Plan and Profile of County Project No. 27-04

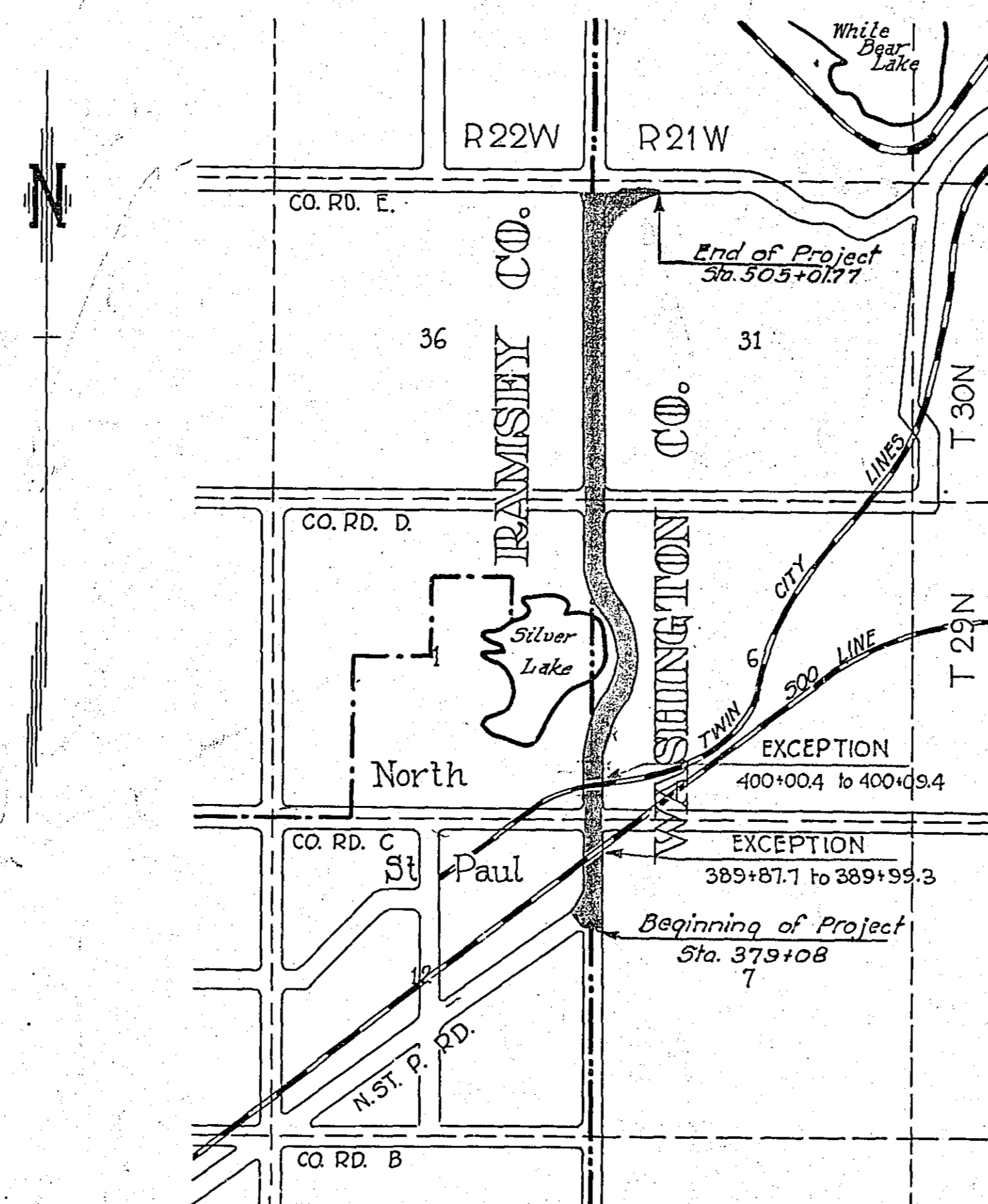
From a point 899.5 ft. north of E. 1/4 Cor. of Sec. 12 - T.29N - R.22W. To a point 304.76 ft. East of NE. Cor. Sec. 36 - 30-22

GROSS LENGTH 12,594.5 FEET 2.38 MILES
LENGTH OF EXCEPTIONS 206 FEET MILES
NET LENGTH 12,388.5 FEET 2.38 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 = 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. 379+07.3 to Sta. 467+29
- " No. 4. " " " " " 467+29 " " 504+85.74
- No. 5 to 8, inc. Cross Sections
- No. 9. Detail of intersection at E. Co. Line & Co. Rd. E.
- No. 10. " " " " " E. Co. Line & No. 51, Paul Rd.
- No. 11. " " " " " Co. Rd. E.
- No. 12. Pavement Construction Details
- No. 13. Miscellaneous Standards



3-31-27
"A"

PLAN
27-111
INDEX

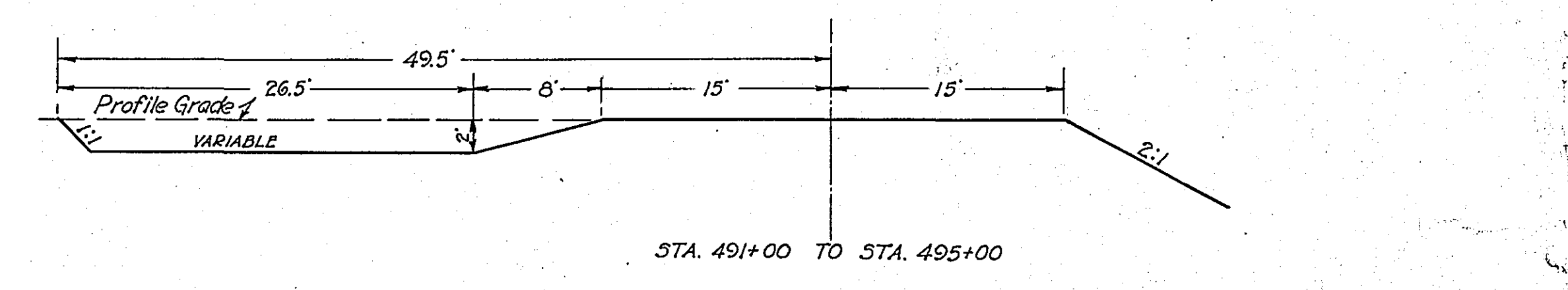
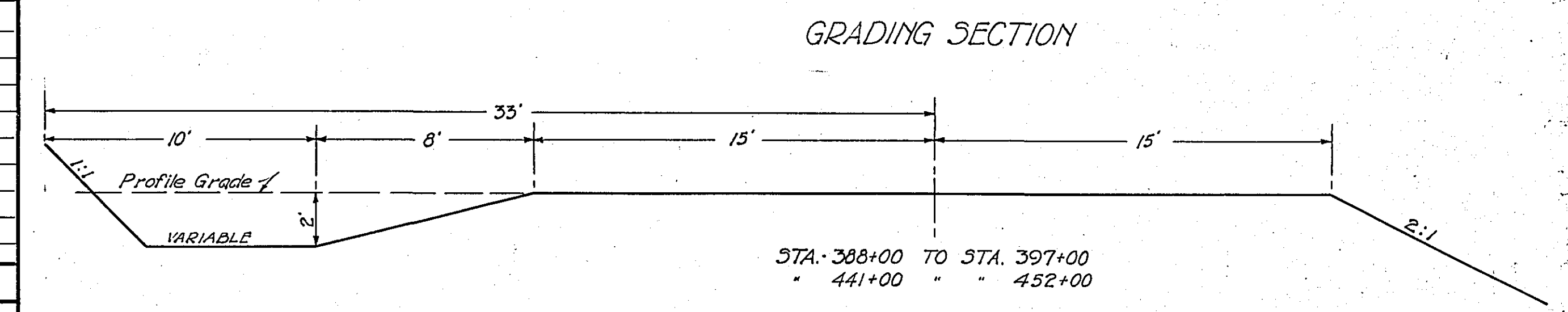
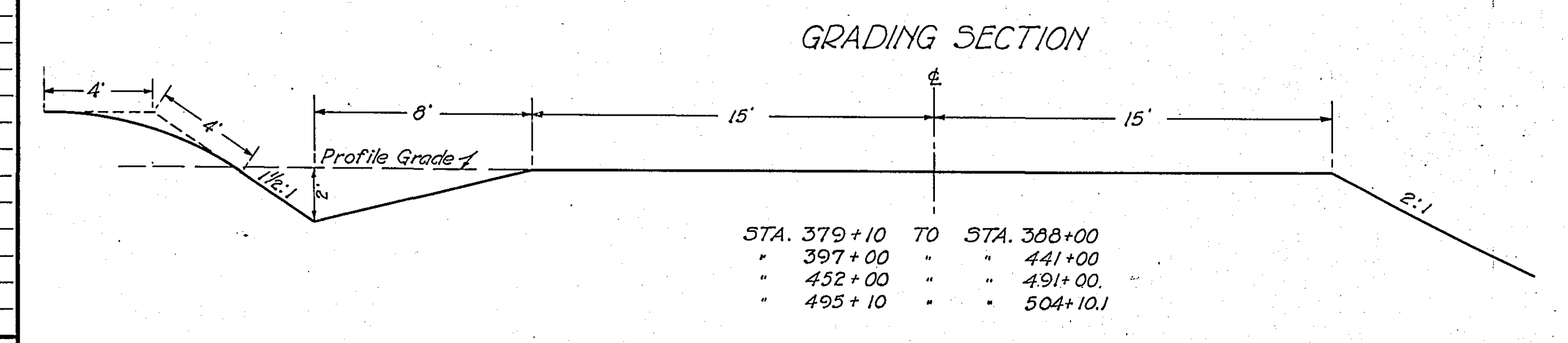
Planned by *C. W. Carter*
County Engineer for RAMSEY County
Recommended for approval _____ Division Engineer
Recommended for approval *O. L. Kipp* Construction Engineer
Approved April 8, 1927 *J. M. Williams* Chief Engineer and Deputy Commissioner

STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

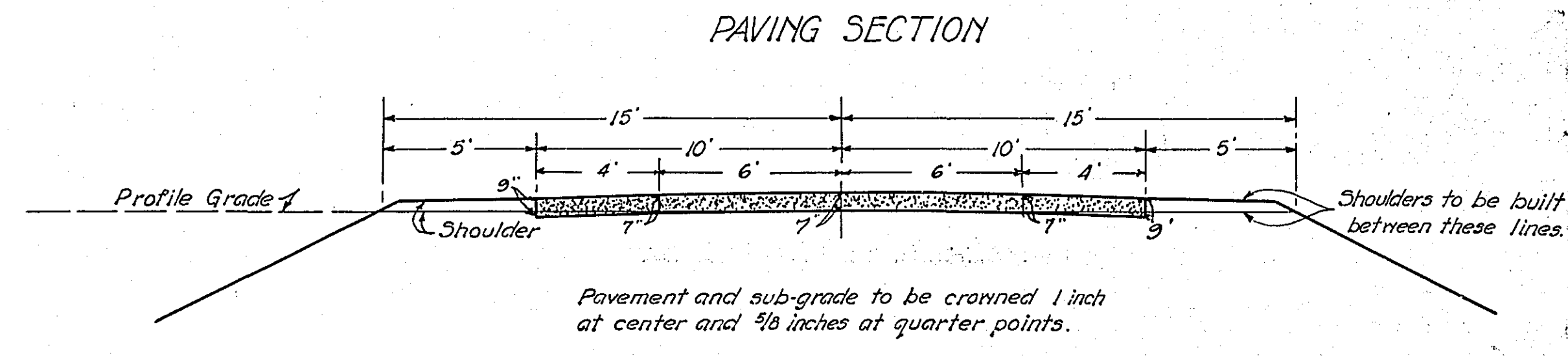
ITEM	UNIT	MILE												TOTAL ESTIMATED QUANTITIES	ESTIMATED UNIT PRICES	AMOUNTS	TOTALS	
		1	2	3	4	5	6	7	8	9	10	11	12					
1	Clearing	Acre																
2	Clearing	Tree	82	57	99												238	
3	Grubbing	Acre																
4	Grubbing	Tree	78	49	87												214	
5	Excavation - Earth	Cu. Yd.	3791	3056	5273												12120	
6	Excavation - Loose Rock	Cu. Yd.	50	50	50												150	
7	Excavation - Solid Rock	Cu. Yd.	25	25	25												75	
8	Excavation - Overhaul	Cu. Yd.	2529	18127	38890												59546	
9	Special Excavation	Lin. Ft.																
10	Hand Ditching	Cu. Yd.	30														30	
11	Tile Drain	in.																
12	Tile Drain	in.																
13	Tile Drain	in.																
14	Porous Back Fill Material	Cu. Yd.																
15	Stone Rip - Rap	Cu. Yd.																
16	Remove Conc. Steps	Lump Sum															Lump Sum	
17	Remove Conc. Wall	Lump Sum															Lump Sum	
18	Remove Old G.R.	Lin. Ft.			300												300	
19	Replace Old G.R.	Lin. Ft.			150												150	
20	Scarifying	Stations	43.81	44.41	35.95												124.17	
21	Install 15" CM	Lin. Ft.	492	48	144												684	
22	Install 24" P3	Lin. Ft.	246	228	126												600	
23	Install 30" P3	Lin. Ft.																
24	Install 36" P3	Lin. Ft.																
25	P1 Culvert Haul	Ton Mile	33.49	73.99	52.99												160.47	
26	P2 Culvert Haul	Ton Mile	362	107	163												632	
27	Remove Old Culv.	Lin. Ft.	80		10												90	
28	Replace Old Culv.	Lin. Ft.																
TOTAL ESTIMATED COST OF GRADING (IN 'TOTALS' COLUMN)																		
33	CM Culv. Material 15"	Lin. Ft.	492	48	144												684	
34	Culv. Material	Lin. Ft.																
35	Culv. Material	Lin. Ft.																
36	Culv. Material	Lin. Ft.																
37	Culv. Material	Lin. Ft.																
38	Culv. Material	Lin. Ft.																
39	P3 Culv. Material 24"	Lin. Ft.	246	228	126												600	
40	P3 Culv. Material 30"	Lin. Ft.																
41	P3 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	Sq. Yd.	4381	4441	3757												12579	
57																		
58																		
59	Pavement I.C.C.	Sq. Yd.	9966.80	9953.39	8813.34												28733.53	
60	Integral Curb 2"	Lin. Ft.	1680	5258	5192												12130	
61	Integral Curb 4"	Lin. Ft.	963	412	500												2175	
62	Surface Drain	Lin. Ft.	26	48	20												94	
63	Surface Drain Basins	Basin	3	3	2												8	
64	Bridge Approach Slabs (Square)	Slab																
65	Bridge Approach Slabs (Rect)	Slab																
66	Bituminous Filled Joint	Lin. Ft.	25		189												214	
67	3" x 10" Fir Header	Lin. Ft.	270	90													360	
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.																
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 - Cable	Lin. Ft.	1998	2305	1307												5610	
86	Guard Rail Anchor	Each	11	17	18												46	
87	Rolling & Seeding	100 Sq. Yd.	137.87	140.31	123.62												404.00	
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.					



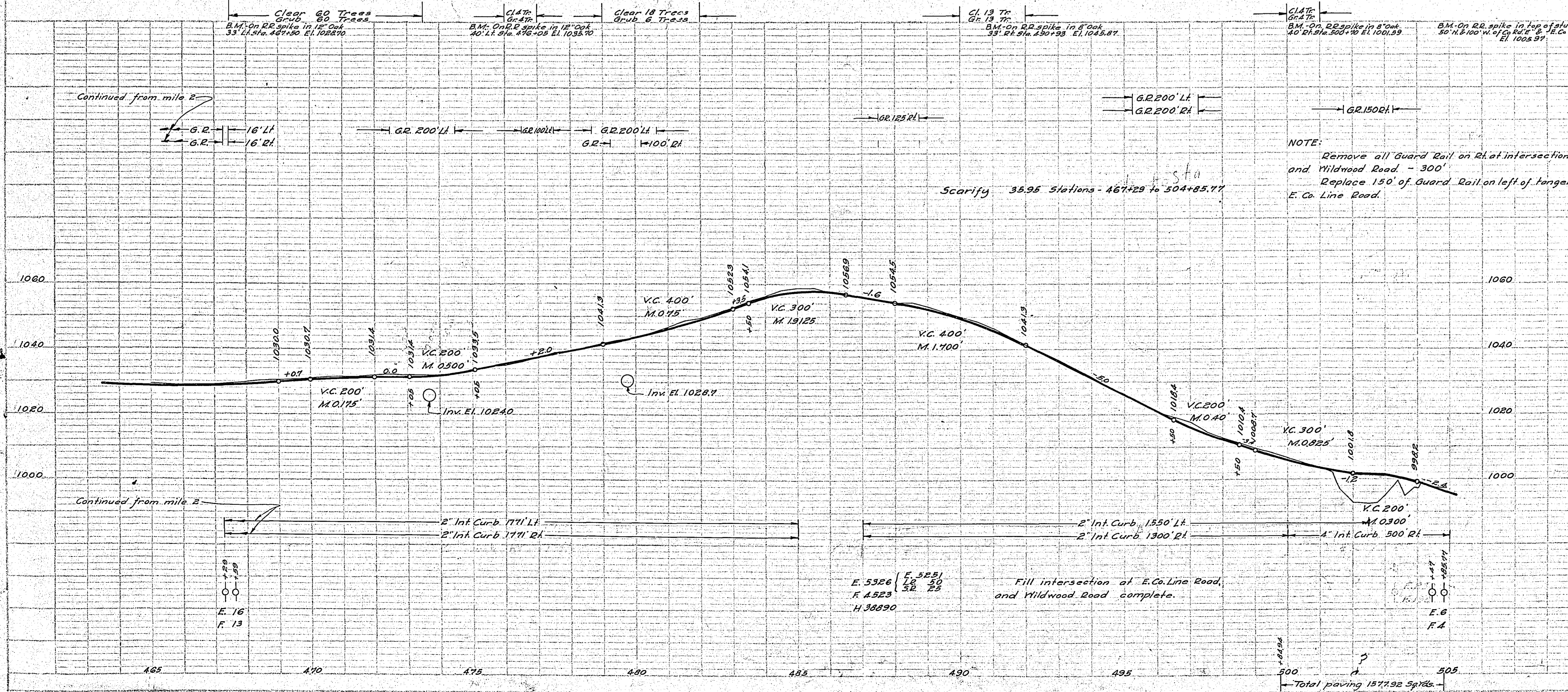
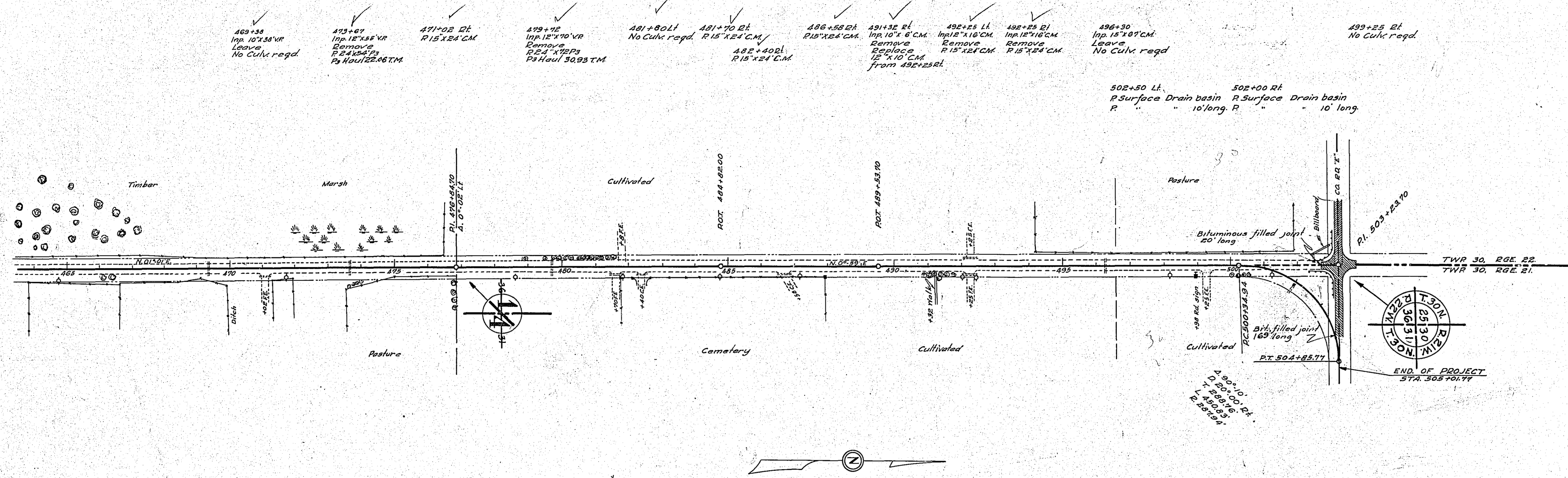
NOTE: ALL SECTIONS TO CONFORM TO 33' ROW ON RIGHT



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

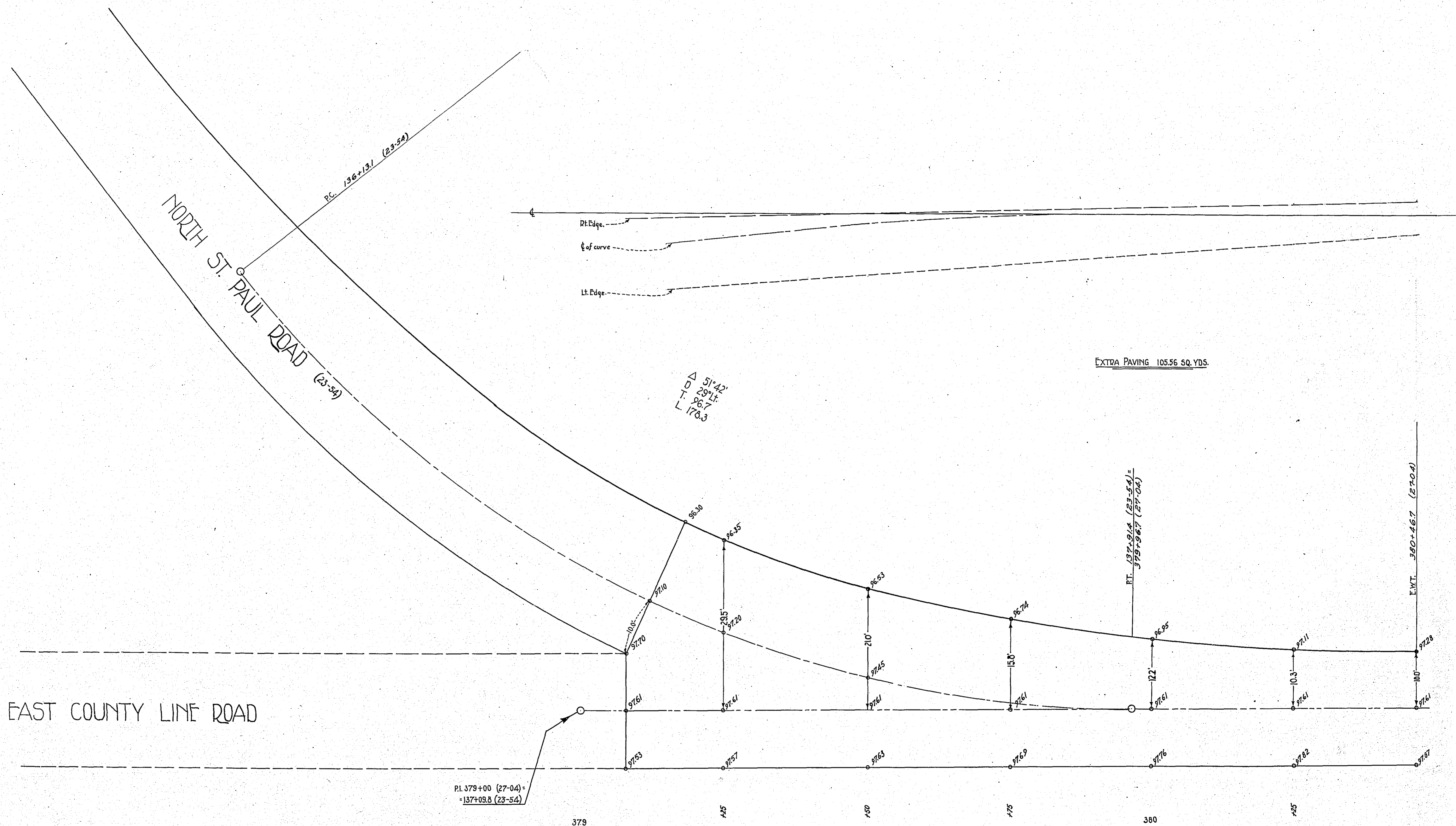
PLAN	SURVEYED	DATE
	PLACED	
	ALIGNED	
	CHECKED	
	BY	
	DATE	

PROFILE	SURVEYED	DATE
	PLACED	
	ALIGNED	
	CHECKED	
	BY	
	DATE	



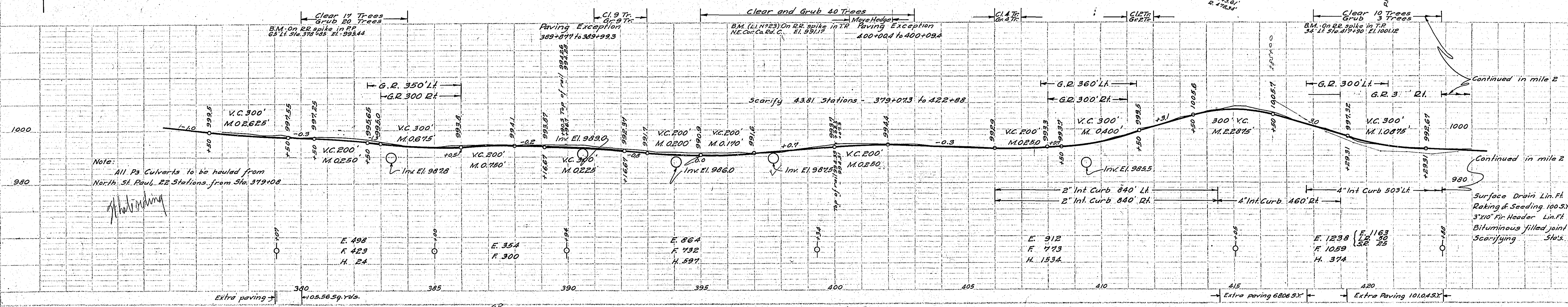
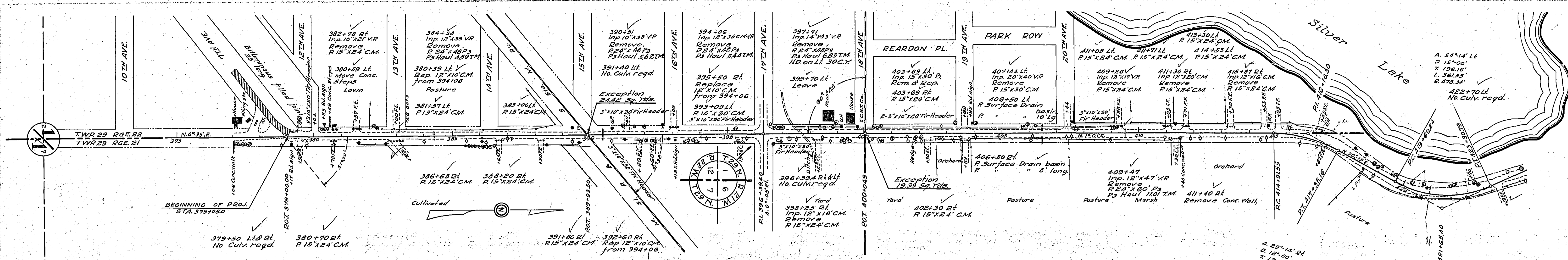
MILE THREE

ESTIMATED QUANTITIES	QUANTITIES
STA. 467+29 TO STA. 504+85.77	
Clearing Trees	99
Grubbing	87
Exc. Earth	Cu Yds. 5213
L.R.	50
S.R.	23
A.H.	38890
Install 15" CM	Lin. Ft. 144
24" P.S.	126
P.S. Curb Haul	T.M. 52.99
Remove old Curb	Lin. Ft. 163
Replace "	10
Guard Rail-Cable	1307
Anchors Each	18
Remove Old G.R. Lin. Ft.	300
Replace "	150
Shoulders Earth	Sq. Yds. 3797
1" C.C. Pavement	8813.34
2" Int. Curb	Lin. Ft. 5192
"	500
Surface Drain basin	2
Lin. Ft.	22
Bituminous filled joint	Lin. Ft. 189
Rolling & Seeding	100 SY. 125.82
Scarifying	Stds. 35.95



NOTE---ELEVATIONS AS SHOWN
ARE PAVEMENT ELEVATIONS

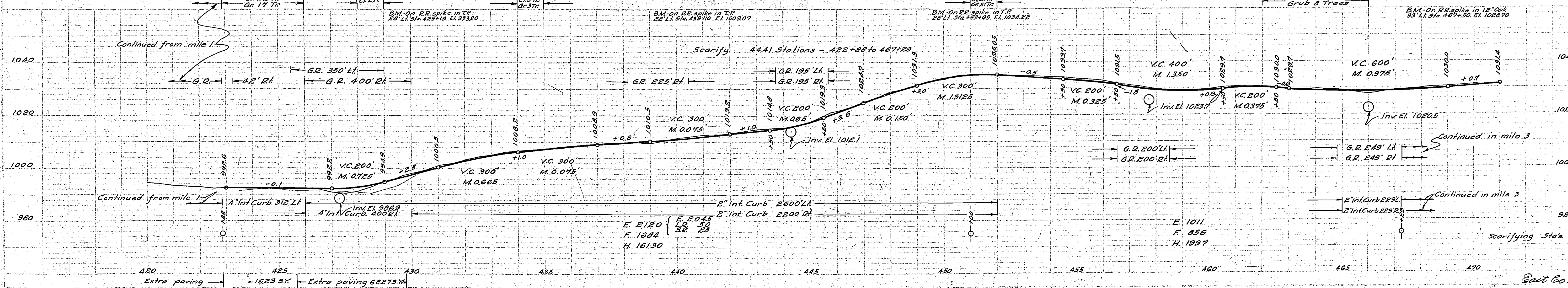
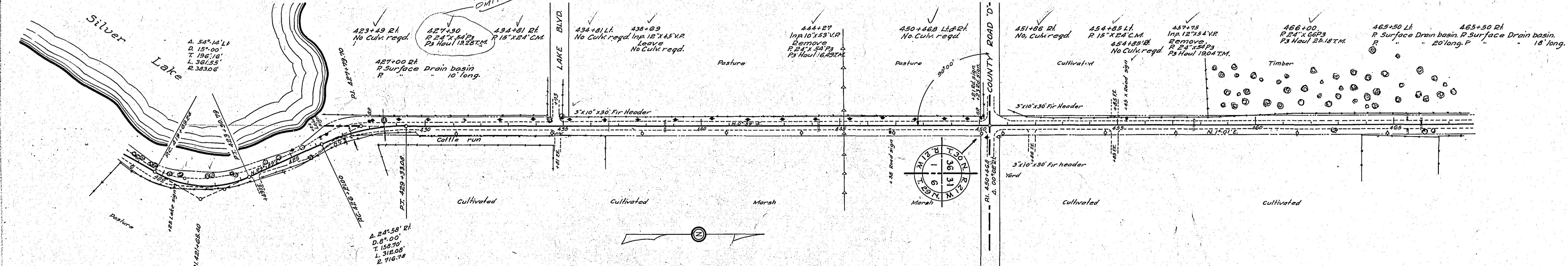
DETAIL OF
INTERSECTION
EAST COUNTY LINE ROAD & NO. ST. PAUL ROAD.
DAMSEY CO. PD0J. 27-04
SCALE 1" = 10'



MILE ONE

ESTIMATED QUANTITIES
STA 379+00 TO STA 422+88

Clearing Trees	82
Grubbing	78
Exc. Earth Cuyds	3191
LR	50
SR	25
OH	2529
HD	30
Install 15" CM Lin. Ft	492
24" Ps	246
Ps Culv. Haul T.M.	38.49
Replace old Culv. Lin. Ft	80
Remove Conc. wall Lump sum	
Remove Conc. steps Lump sum	
Remove old Culv. Lin. Ft	362
Guard Rail Cable	1998
Bituminous filled joint Lin. Ft	25
Scarifying Sta's	4381
Anchors Each	11
Shoulders Earth Sp. Yds	4381
ICC Pavement	9966.80
2" Int. Curb Lin. Ft	1690
4"	963
Surface Drain basin	3



MILE TWO

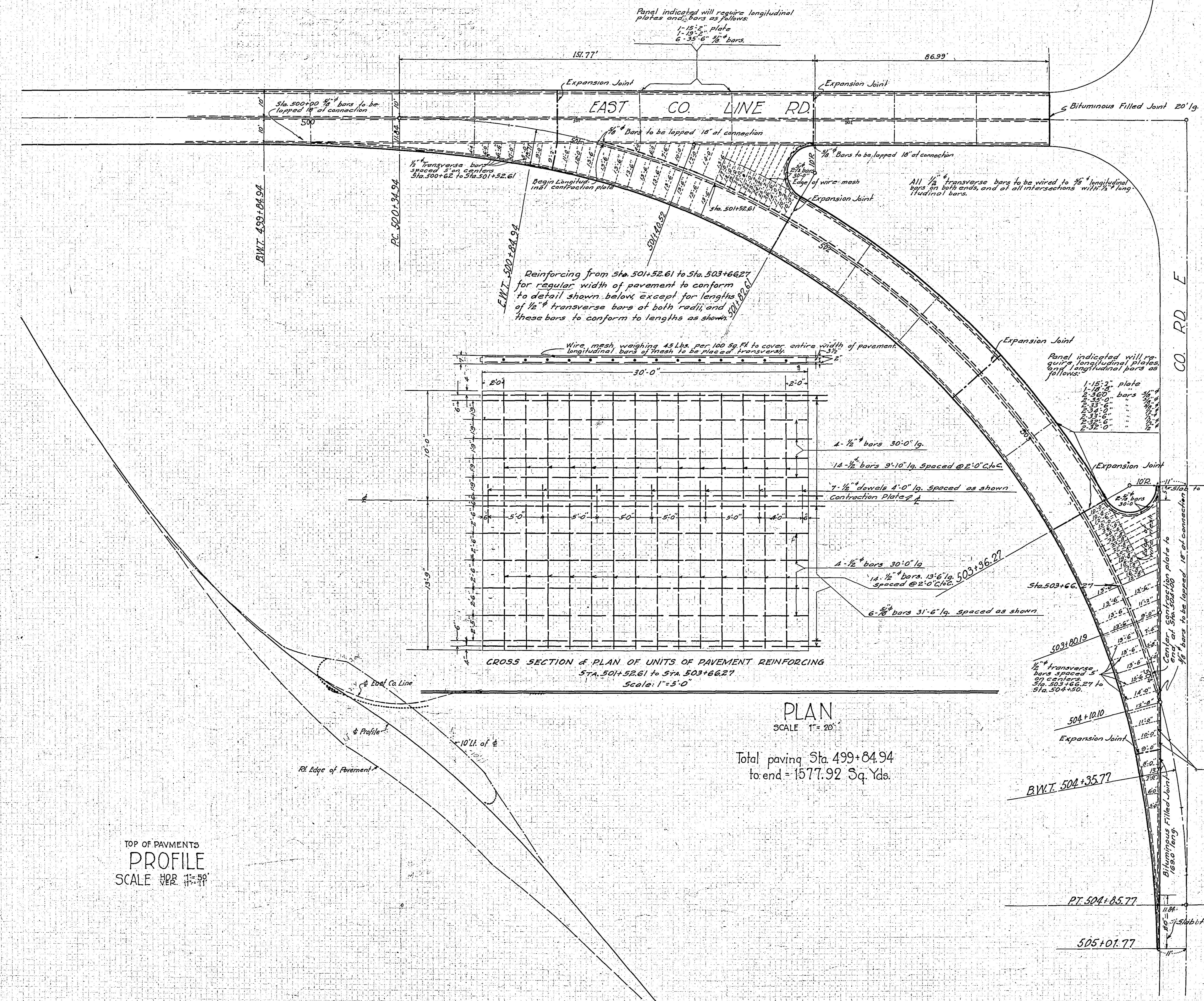
ESTIMATED QUANTITIES
STA 422+88 TO STA 467+29

Clearing Trees	57
Grubbing	49
Exc. Earth Cuyds	3056
LR	50
SR	25
OH	18127
Install 15" CM Lin. Ft	48
24" Ps	228
Ps Culv. Haul T.M.	73.99
Remove old Culv. Lin. Ft	107
Replace	0
Guard Rail Cable	2305
Anchors Each	17
Shoulders Earth Sp. Yds	4441
ICC Pavement	9953.99
2" Int. Curb Lin. Ft	5258
4"	712
Surface Drain basin	3
3" x 10" Fir Header Lin. Ft	90
Raking & Seeding 100 Spd. 140.31	

1009
08
07
06
1005
04
03
02
01
1000
99
98
97

TOP OF PAVEMENTS
PROFILE
SCALE 1" = 10'

499 500 501 502 503 504 505



Panel indicated will require longitudinal plates and bars as follows:
1-1/2" plate
6-3/8" 1/2" bars

Reinforcing from Sta. 501+52.61 to Sta. 503+66.27 for regular width of pavement to conform to detail shown below, except for lengths of 1/2" transverse bars of both radii, and these bars to conform to lengths as shown.

CROSS SECTION & PLAN OF UNITS OF PAVEMENT REINFORCING
STA. 501+52.61 TO STA. 503+66.27
SCALE: 1" = 5'-0"

PLAN
SCALE 1" = 20'
Total paving Sta. 499+64.94
to end = 1577.92 Sq. Yds.

DETAIL OF
CO. RDE' INTERSECTION
SCALES AS SHOWN