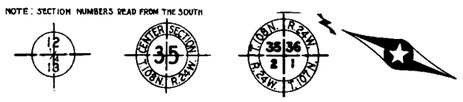
## Conventional Signs

STATE LINE
COUNTY LINE
TWP OR RANGE LINE
SECTION LINE
RIGHT OF WAY LINE
CORPORATE OR CITY LIMITS
ROAD CENTER LINE
RETAINING WALL
RAILROADS
CREEK
DRY RUN
DRAINAGE DITCH
POWER POLE LINE
TELEPHONE OR TELEGRAPH LINE
CULVERTS - PLAIN
WITH ENDWALLS
WITH WINGWALLS
DROP INLET
FENCE LINE
GRAVEL PIT (G)
SAND PIT (S)
CLAY PIT (C)
ROCK QUARRY (R)
SPRINGS
MARSH
BRUSH OR TIMBER
HEDGE
ROCK LEDGE
SAND
EDGE OF CUT
TOE OF EMBANKMENT
RAILROAD R/W LINE
BUILDING (One Story Frame) 1.37

## Abbreviations

| | |
|---|---|
| EXCAVATION | EXC. |
| EARTH | E. |
| LOOSE ROCK | L.R. |
| SOLID ROCK | S.R. |
| EMBANKMENT | F. |
| OVERHAUL | H. |
| SURFACING | S. |
| HAND DITCHING | H.D. |
| SPECIAL EXCAVATION | S.E. |
| SPECIAL PLOWING | S.P. |
| GUARD RAIL | G.R. |
| CORRUGATED METAL CULVERT | C.M.CULV. |
| SECTIONAL CONCRETE CULVERT | R.CULV. |
| SECTIONAL CONCRETE CULVERT (Heavy Type) | R.CULV. |
| TON MILES | T.M. |
| TELEPHONE POLE | TEL. P. |
| POWER POLE | P. P. |
| PLACE | P. |
| INPLACE | INP. |
| REPLACE | REP. |
| RIGHT | RT. |
| LEFT | LT. |
| INTERSECTION ANGLE | Δ |
| RADIUS | R. |
| TANGENT | T. |
| LENGTH OF CURVE | L. |
| POINT OF CURVE | P.C. |
| POINT OF TANGENT | P.T. |
| POINT OF INTERSECTION | P.I. |
| VERTICAL CURVE | V.C. |
| BENCH MARK | B.M. |
| ELEVATION | EL. |
| ACRES | A. |

NOTE: SECTION NUMBERS READ FROM THE SOUTH



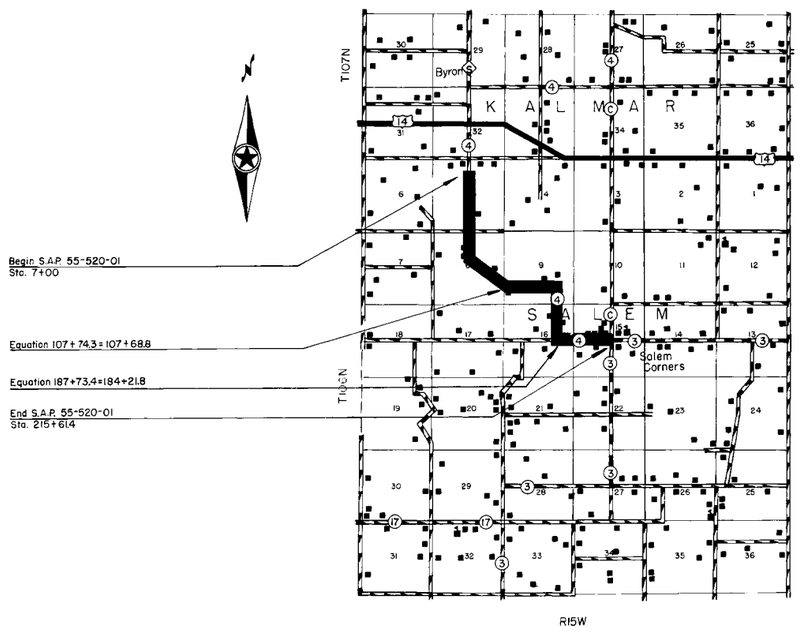

# STATE OF MINNESOTA
# DEPARTMENT OF HIGHWAYS
## Plan and Profile of State Aid Road No. 4

**From** 700 feet South of the N¼ Corner Section 5 T106N R15W **To** Center Section 15 T106N R15W
Give proper reference to Sections, Township and Range

GROSS LENGTH 21218.5 FEET 4.02 MILES
LENGTH OF EXCEPTIONS- FEET MILES
NET LENGTH 21218.5 FEET 4.02 MILES

SCALES
- PLAN, Inch = 100 Feet.
- PROFILE, Horz. Inch = 100 Feet. Vert. Inch = 10 Feet
- WORKING PLANS: Horz. Inch = 100 Feet; Vert. Inch = 10 Feet; Cross-Section, Inch = 10 Feet

LAYOUT
Scale, Inch = 5280 Feet




### INDEX OF SHEETS


Sheet No. 1. Title Sheet and Layout Map
" No. 2. Typical Cross-Sections and Statement
" No. 3. Tabulation of Est. Quantities
" No. 4. Plan and Profile Sta. 0+00 to Sta. 31+00
" No. 5. Plan and Profile Sta. 31+00 to Sta. 63+00
" No. 6. Plan and Profile Sta. 63+00 to Sta. 95+00
" No. 7. Plan and Profile Sta. 93+00 to Sta. 125+00
" No. 8. Plan and Profile Sta. 124+00 to Sta. 156+00
" No. 9. Plan and Profile Sta. 155+00 to Sta. 187+00
" No. 10. Plan and Profile Sta. 186+00 to Sta. 215+61.4
" No. 11 to 24 Cross Sections


**SPECIFICATION REFERENCE:**
The specifications for Highway Construction, dated July 1, 1947, and submitted for approval by the Division Engineer of the Bureau of Public Roads October 15, 1947, as modified by "Supplement 1" thereto dated April 15, 1953, and submitted for approval by the Division Engineer of the Bureau of Public Roads on March 25, 1953, shall govern.

**DETAIL PLATE REFERENCE:**
Standard detail plates issued October 1, 1947 and approved by the Bureau of Public Roads April 1, 1948, with revisions approved February 24, 1949, shall govern.

Designated S.A.R. No. 4

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
H. J. Sullivan
DATE 6-3-53 REG. NO. 1207

Planned By H. J. Sullivan
HIGHWAY ENGINEER FOR OLMSTED COUNTY.
Recommended for Approval _____ DISTRICT ENGINEER
Recommended for Approval _____
Approval 6-4-53 _____

FORM 129 C - #2 Rev. '46

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SEC | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|
| 5N | MINN. | | | | | |

## ESTIMATED QUANTITIES

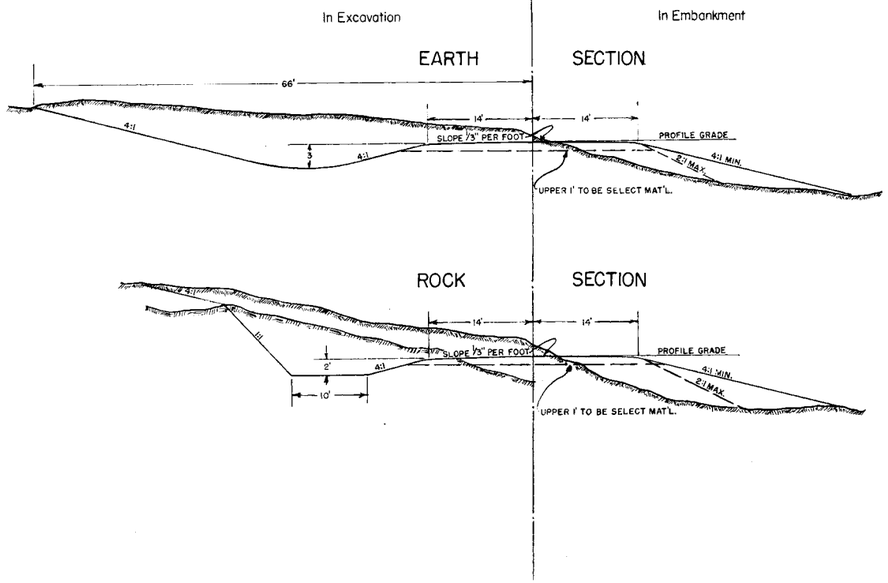
| SPECIFICATION NO | ITEM | UNIT | MILE ONE Sta. 7+00 To Sta 57+00 | MILE TWO Sta. 57+00 To Sta 101+40 | MILE THREE Sta 101+40 To Sta 157+00 | MILE FOUR Sta 157+00 To Sta 215+61 | MILE Sta To Sta | MILE Sta To Sta | MILE Sta To Sta | MILE Sta To Sta | MILE Sta To Sta | MILE Sta To Sta | TOTAL ESTIMATED QUANTITIES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2101.502 | Clearing | Tree | 0 | 13 | 18 | 61 | | | | | | | 92 |
| 2101.507 | Grubbing | Tree | 0 | 16 | 21 | 57 | | | | | | | 94 |
| 2104.501 | Remove Portable Culverts | Lin. Feet | 81.5 | 70 | 114 | 96 | | | | | | | 361.5 |
| 2105.501 | Class "A" Excavation | Cu. Yd. | 14,613 | 15,619 | 19,054 | 13,757 | | | | | | | 63,043 |
| 2105.502 | Class "B" Excavation | Cu. Yd. | 466 | 0 | 0 | 0 | | | | | | | 466 |
| 2501.511-18" | F. and I. C.M.P. Culvs. 18" | Lin. Feet | 116 | 224 | 168 | 224 | | | | | | | 732 |
| 2501.521-24" | F. and I. S.C.P. Culvs. 24" | Lin. Feet | 0 | 88 | 182 | | | | | | | | 270 |
| 2501.521-48" | F. and I. S.C.P. Culvs. 48" | Lin. Feet | 0 | 0 | 0 | 60 | | | | | | | 60 |
| 2414.511-60" | F. and I. P-C. Conc. Cattle Pass 60" | Lin. Feet | 32 | 0 | 0 | 0 | | | | | | | 32 |
| 2414.512-60" | F. and I. P-C. Conc. Cattle Pass End Sections 60" | End Section | 2 | 0 | 0 | 0 | | | | | | | 2 |
| 2414.501 | Cattle Pass Excavation | Cu. Yd. | 50 | 0 | 0 | 0 | | | | | | | 50 |
| 2515.531-18" | F. and I. Metal Aprons for C.M.P. Culvs. 18" | Apron | 8 | 16 | 12 | 16 | | | | | | | 52 |
| 2515.541-24" | F. and I. Conc. Aprons for S.C.P. Culvs. 24" | Apron | 0 | 4 | 8 | 2 | | | | | | | 14 |
| 2515.541-48" | F. and I. Conc. Aprons for S.C.P. Culvs. 48" | Apron | 0 | 0 | 0 | 4 | | | | | | | 4 |
| 2442.501 | Remove Old Structure Sta. 55+31℄ | Structure | 1 | 0 | 0 | 0 | | | | | | | 1 |
| 2442.501 | Remove Old Structure Sta. 166+11℄ | Structure | 0 | 0 | 1 | 0 | | | | | | | 1 |
| 2442.501 | Remove Old Structure Sta. 200+32℄ | Structure | 0 | 0 | 0 | 1 | | | | | | | 1 |
| 2109.501 | Obliterating Old Road | Acre | 0 | 0.6 | 0.8 | 0 | | | | | | | 1.4 |
| 2251.527 | Gravel Wearing Course Inplace | Cu. Yd.(V.M) | 1830 | 1640 | 2020 | 2125 | | | | | | | 7615 |

## STANDARD DETAIL PLATES

Standard Detail Plates issued October 1, 1947, and approved by the Public Roads Administration April 1, 1948, with revisions approved Feb. 24, 1949, shall govern.

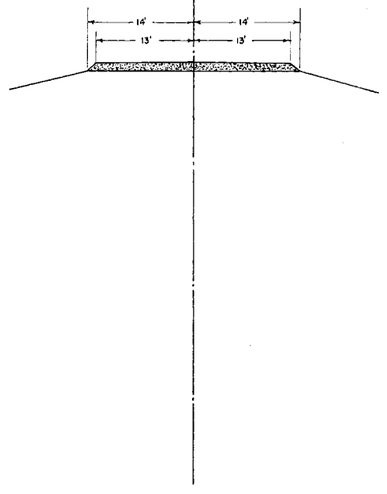
| PLATE NO. | STANDARD DETAIL PLATES |
|---|---|
| 3001 | S.C. Culv. Pipe |
| 3021 | Precast Conc. Cattle Pass |
| 3100A | Conc. Apron for S.C. Culv. Pipe |
| 3123 | Metal Apron for C.M. Culv. Pipe |

## TYPICAL GRADING SECTIONS




## SPECIAL DETAILS

## TYPICAL BASE & SURFACE SECTIONS






DAHMS PHOTO PRINT CO
MPLS 1, MINN.

# TABULATION OF ESTIMATED QUANTITIES

## CLEARING & GRUBBING

| Plan Sheet No. | STATION TO STATION | | CLEAR Tree | GRUB Tree |
|---|---|---|---|---|
| 5 | 57+50 | 61+50 | 6 | 6 |
| 6 | 92+50 | 95+00 | 7 | 9 |
| 7 | 104+50 | 107+50 | 17 | 17 |
| 8 | 134+00 | 135+00 | 1 | 4 |
| 9 | 165+00 | 166+00 | 4 | 3 |
| 9 | 168+00 | 170+00 | 13 | 11 |
| 10 | 199+40 | 204+76 | 44 | 44 |
| | TOTAL | | 92 | 94 |

## FENCE

| Plan Sheet No. | STATION TO STATION | | LT. | RT. | REMOVE Lin. Ft. | RESET Lin. Ft. |
|---|---|---|---|---|---|---|
| | TOTAL | | | | | |

## MISCELLANEOUS

| Plan Sheet No. | STATION | ITEM | QUAN. |
|---|---|---|---|
| 5 | 55+31 L | Remove Old Structure | 1 |
| 9 | 166+11 L | Remove Old Structure | 1 |
| 10 | 200+32 L | Remove Old Structure | 1 |

## EXCAVATION

| Plan Sheet No. | STATION TO STATION | | CU.YD. |
|---|---|---|---|
| 4 | 7+00 | 20+70 | 3366 |
| 4 | 20+70 | 32+00 | 1263 |
| 5 | 32+00 | 36+60 | 3791 |
| 5 | 36+60 | 57+00 | 6659 |
| 5 | 57+00 | 61+00 | 974 |
| 6 | 61+00 | 75+50 | 4053 |
| 6 | 75+50 | 77+65 | 509 |
| 6 | 77+65 | 82+00 | 1098 |
| 6 | 82+00 | 95+43 | 5727 |
| 7 | 95+43 | 101+43 | 3258 |
| 7 | 101+40 | 112+70 | 3463 |
| 7 | 112+70 | 115+75 | 984 |
| 7 | 115+75 | 120+18 | 1643 |
| 7 | 120+18 | 122+00 | 813 |
| 7 | 122+00 | 126+50 | 3047 |
| 8 | 126+50 | 142+00 | 5354 |
| 8 | 142+00 | 157+00 | 3750 |
| 9 | 157+00 | 164+00 | 1258 |
| 9 | 164+00 | 167+11 | 624 |
| 9 | 167+11 | 175+75 | 2439 |
| 9 | 175+75 | 188+00 | 2866 |
| 10 | 188+00 | 190+00 | 463 |
| 10 | 190+00 | 197+00 | 1490 |
| 10 | 197+00 | 199+35 | 456 |
| 10 | 199+35 | 215+35 | 4161 |
| | TOTAL | | 63,509 |

## PORTABLE CULVERT REQUIREMENTS

| Plan Sheet No. | STATION | LOCATION C. | LT. | RT. | REMOVE Size | Length | Type | * Install C.M.Culvert Size | Length | * Install S.C.Culvert Size | Length | Install Corrugated Metal Pipe Diameter and Length of Barrell 18" | C.M. Apron | Pipe Culvert Excav. | Install Sectional Concrete Pipe Diameter and Length of Barrel 24" | 48" | 60" Cattle Pass | 60" Conc. Apron | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 29+56 | | | x | | | | | | | | 26' | 2 | | | | | | |
| 5 | 34+57 | | x | | 12" | 26' | C.M. | | | | | 26' | 2 | | | | | | |
| 5 | 52+18 | | | x | 15" | 27.5' | S.C. | | | | | 32' | 2 | | | | | | |
| 5 | 52+18 | | x | | 12" | 28' | C.M. | | | | | 32' | 2 | | | | | | |
| 5 | 55+31 | x | | | | | | | | | | | | | | | 32' | 2 | |
| 6 | 65+41 | | x | | 15" | 16' | C.M. | | | | | | | | | | | | |
| 6 | 65+45 | | | x | 18" | 24' | C.M. | | | | | 30' | 2 | | | | | | |
| 6 | 71+00 | | x | | | | | | | | | 26' | 2 | | | | | | |
| 6 | 71+00 | | | x | | | | | | | | 30' | 2 | | | | | | |
| 6 | 74+00 | x | | | | | | | | | | | | | 34' | | | 2 | |
| 6 | 74+55 | | | x | 24" | 30' | C.M. | | | | | | | | | | | | |
| 6 | 81+61 | | x | | | | | | | | | 26' | 2 | | | | | | |
| 6 | 81+61 | | | x | | | | | | | | 30' | 2 | | | | | | |
| 6 | 88+57 | | | x | | | | | | | | 26' | 2 | | | | | | |
| 7 | 95+00 | | x | | | | | | | | | 30' | 2 | | | | | | |
| 7 | 96+91 | | | | | | | | | | | 26' | 2 | | | | | | |
| 7 | 101+00 | x | | | | | | | | | | | | | 54' | | | 2 | |
| 7 | 101+82 | | x | | 18" | 32" | C.M. | | | | | | | | | | | | |
| 7 | 107+46 | | x | | | | | | | | | 26' | 2 | | | | | | |
| 7 | 107+46 | | | x | | | | | | | | 30' | 2 | | | | | | |
| 7 | 117+53 | x | | | 24" | 32' | C.M. | | | | | | | | 52' | | | 2 | |
| 7 | 119+50 | | | x | | | | | | | | 26' | 2 | | | | | | |
| 7 | 123+37 | x | | | 18" | 30' | C.M. | | | | | | | | 62' | | | 2 | |
| 8 | 132+50 | | x | | | | | | | | | 26' | 2 | | | | | | |
| 8 | 135+17 | | x | | 15" | 20' | C.M. | | | | | 30' | 2 | | | | | | |
| 8 | 140+00 | x | | | | | | | | | | | | | 34' | | | 2 | |
| 8 | 141+86 | | x | | | | | | | | | 30' | 2 | | | | | | |
| 9 | 162+91 | | x | | 15" | 26' | C.M. | | | | | 26' | 2 | | | | | | |
| 9 | 166+11 | x | | | | | | | | | | | | | 34' | | | 2 | |
| 9 | 169+85 | | x | | 15" | 24' | C.M. | | | | | 30' | 2 | | | | | | |
| 9 | 169+85 | | | x | | | | | | | | 26' | 2 | | | | | | |
| 10 | 189+37 | | x | | | | | | | | | 26' | 2 | | | | | | |
| 10 | 198+00 | | | x | | | | | | | | 26' | 2 | | | | | | |
| 10 | 200+32 | x | | | | | | | | | | | | | | 60' | | 4 | |
| 10 | 202+12 | | | x | 15" | 18' | C.M. | | | | | 30' | 2 | | | | | | |
| 10 | 205+02 | | x | | | | | | | | | 30' | 2 | | | | | | |
| 10 | 212+77 | | | x | 15" | 28' | C.M. | | | | | 30' | 2 | | | | | | |
| | TOTAL | | | | 361.5 | | | | 732 | | | | 52 | | 270 | 60 | 32 | 18 | |

* Length Includes Aprons.

0+00 Lt.
Twp. Road
No Culv. inpl.

CULTIVATED

ASSUMED BEARING DUE NORTH AND SOUTH

CULTIVATED

PASTURE

CULTIVATED

CULTIVATED

0+00 Rt.
Twp. Road
No Culv. inpl.

F.E. 1+19 Rt.
inpl. 15" X 28' C.M.P.

F.E. 29+56 Rt.
No Culv. inpl.
F. and I. 18" X 26' C.M.P.
F. and I. 2-18" Metal Aprons

Begin S.A.P. 55-520-01 Sta. 7+00

B.M. Elev. 1235.55
Spike in Tel. Pole
33' Lt. 0+20

B.M. Elev. 1172.39
Spike in Tel. Pole
45' Lt. 29+16

Profile 75' Left
Profile 75' Right

E. 3366
F. 2479

E. 1263
F. 1056

A 836
B 427

S.A.P. 55-520-01

OLMSTED COUNTY, MINN.

Sheet No. 4 of 24 Sheets

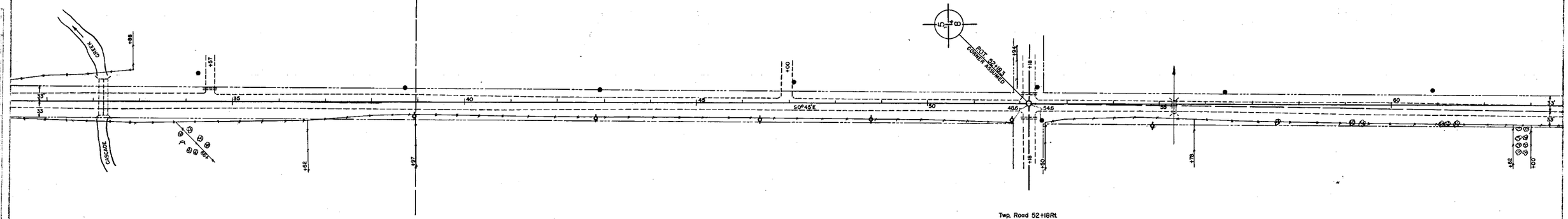
32+24 ℄
Inpl. C10SDHX72'
Conc. Culv.
No Change

F.E. 34+57 Lt.
Inpl. 12"X26' C.M.P.
Remove
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 47+00 Lt.
No Culv. inpl.
No Culv. reqd.

Twp. Road 52+18 Lt.
Inpl. 12"X28' C.M.P.
Remove
F. and I. 18"X32' C.M.P.
F. and I. 2-18" Metal Aprons

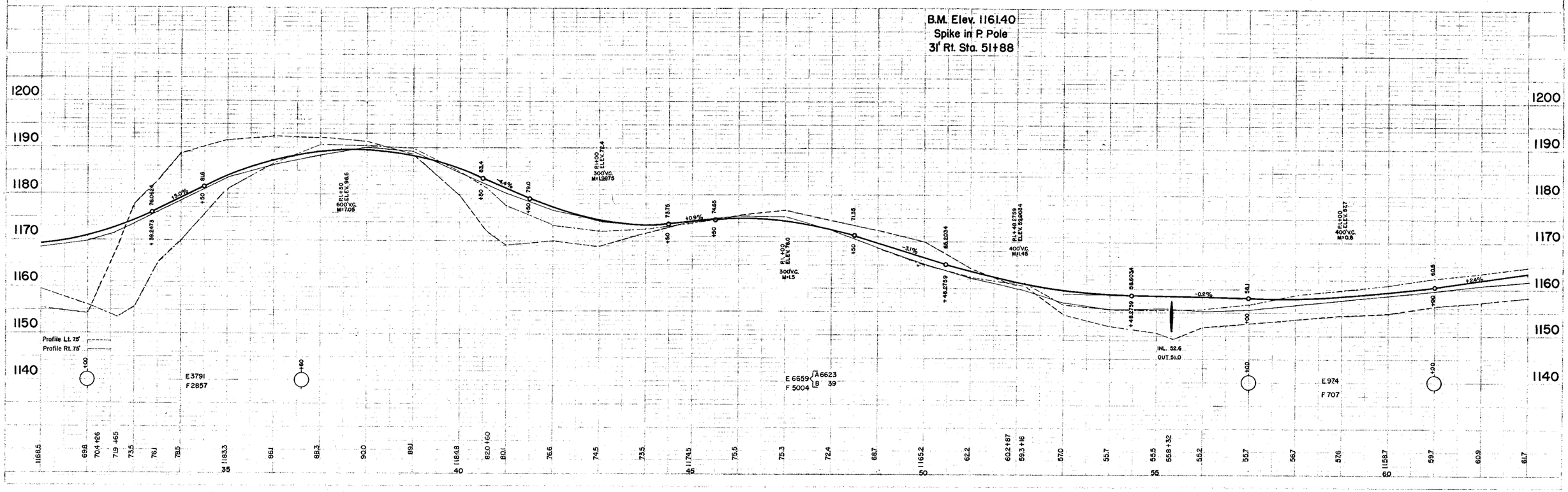
55+31 ℄
Inpl 4'X2'X24'
Conc. Culv.
Remove
F. and I. 60" X32' P.C. C. Pass
F. and I. 2-60" P.C. End Sections
Excavation 50 Cu. Yds.




Twp. Road 52+18 Rt.
Inpl. 15" X22.5' S.C.P.
F. and I. 18"X32' C.M.P.
F. and I. 2-18" Metal Aprons

Sta. 57+50 to 61+50
Clear 6 Trees Grub 6 Trees

B.M. Elev. 1161.40
Spike in P. Pole
31' Rt. Sta. 51+88




S.A.P. 55-520-01

OLMSTED COUNTY, MINN. Sheet No. 5 of 24 Sheets

F.E. 65+41 Lt.
Inpl. 15"X16' C.M.P.
Remove
No Culv. req'd.

Pl. F.E. 71+00 Lt.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

74+00 ℄
F. and I. 24"X34' S.C.P.
F. and I. 2-24" Conc. Aprons

74+55 Rt.
Inpl. 24"X30' C.M.P.
Remove

F.E. 81+61 Lt.
No Culv. inpl.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 91+17 Lt.
No Culv. inpl.
No Culv. req'd.

P.C. 66+55.7

Pl. 66+55.7
Δ 49°56' Lt.
D 5°00'
T 533.7
L 998.7

R 1145.92

S 50°41' E

F.E. 65+45 Rt.
Inpl. 18"X24' C.M.P.
Remove
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 81+61 Rt.
No Culv. inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 88+57 Rt.
No Culv. inpl.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

Pl. F.E. 71+00 Rt.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

67+00 to 75+00 Rt.
Obliterating Old Road 0.60 Acre

92+50 to 95+00
Clear 7 Trees Grub 9 Trees

B.M. Elev. 1164.72
Spike in P. Pole
48' Rt. Sta. 73+00

Profile Lt. 75' ----
Profile Rt. 75' ——

+1.4%
-2.6%
+1.9%
+10.1%
+5.0%

Pl. +00 ELEV. 71.7
400' V.C. M=2.0

Pl. +00 ELEV. 58.7
400' V.C. M=2.25

OUT 56.8
INL. 58.5

Pl. +00 ELEV. 72.0
400' V.C. M=0.9

Pl. +00 ELEV. 72.7
400' V.C. M=2.45

Pl. +50 ELEV. 86.2
600' V.C. M=6.0

F. 4053
F. 3006

E. 509
F. 384

E. 1098
F. 821

E. 5727
F. 4406

| | | |

F.E. 95+00 Lt.
No Culv. Inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 96+91 Lt.
No Culv. Inpl.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

101+00 E
F. and I. 24"X54' S.C.P.
F. and I. 2-24" Conc. Aprons

101+82 Lt.
Inpl. 18"X32' C.M.P.
Remove

Pl. F.E. 107+46 Lt.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

117+53 E
Inpl. 24"X32' C.M.P.
Remove
F. and I. 24"X52' S.C.P.
F. and I. 2-24" Conc. Aprons

123+37 E
Inpl. 18"X30' C.M.P.
Remove
F. and I. 24"X62' S.C.P.
F. and I. 2-24" Conc. Aprons

N

HOUSE

GARAGE

PC 96+05

Pl. 102+31.3
Δ Lt. 39°41'
D 3°30'
T 590.8
L 1133.8

Pt. 107+13.3 = Equation Pos. 107+68.8

N89°56'E

F.E. 97+23 Rt.
No Culv. Inpl.
No Culv. reqd.

F.E. 107+46 Rt.
No Culv. Inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

104+50 to 107+50
Clear 17 Trees Grub 17 Trees

F.E. 119+50 Rt.
No Culv. Inpl.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

B.M. Elev. 1195.58
Spike in P. Pole
71' Lt. Sta. 96+60

B.M. Elev. 1182.41
Spike in Tel. Pole
28' Rt. Sta. 112+02

Profile Lt. 75' ——
Profile Rt. 75' ——

Pl. +50 ELEV. 1186.2
600' V.C.
M=1.60

Pl. +00 ELEV. 1195.7
400' V.C.
M=2.5

INL. 83.7
OUT. 80.7

Pl. +00 ELEV. 1195.7
500' V.C.
M=2.5625

Pl. +50 ELEV. 1184.15
400' V.C.
M=1.35

Pl. +50 ELEV. 1180.15
400' V.C.
M=3.35

INL. 59.0
OUT. 55.8

Pl. +00 ELEV. 1168.8
300' V.C.
M=0.875

INL. 59.0
OUT. 54.4

E 3258
F 2504

E 3463
F 2619

E 984
F 718

E 1643
F 1188

E 813
F 609

E 3047
F 2242

S.A.P. 55-520-01

OLMSTED COUNTY, MINN. Sheet 7 of 24 Sheets

PI. F.E. 132+50 Lt.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

F.E. 135+17 Lt.
Inpl 15"X20' C.M.P.
Remove
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

HOUSE
E-S-F

PI. F.E. 141+86 Lt.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

N 89°38' E

P.C. 135+43.6

140+00 Ł
F. and I. 24"X34' S.C.P.
F. and I. 2-24" Conc. Aprons

PI. 143+61.9
Δ rt. 89°57'
D 7°00'
T 818.3
L 1285.0

Sta. 138+00 to 146+00 Rt. Obliterate Old Road 0.8 Acre

P.T. 149+28.6

Sta. 134+00 to 135+00
Clear 1 Tree Grub 4 Trees

N 80°25' E

PLAN

SURVEYED
DRAWN
TRACED
CHECKED

NOTE: BOLDFACE FIGURES INDICATE ELEVATIONS AT TOP OF CURB

B.M. Elev. 1132.01
Spike in Tel. Pole
27' Rt. Sta. 133+32

B.M. Elev. 1103.97
Spike in P. Pole
28' Rt. Sta. 153+18

Profile Lt. 75' ----
Profile Rt. 75' —·—

PI 100 ELEV. 1160.8
400' V.C. M=1.6
PI 100 ELEV. 1150.98
400' V.C. M=0.85
PI 100 ELEV. 1116.6
400' V.C. M=1.7
INL. 14.9
OUT. 13.3
400' V.C. M=1.45
PI 100 ELEV. 1096.7
400' V.C. M=0.6

-3.9%
-2.9%
+0.5%
-2.4%

E. 5354
F. 3913

E. 3750
F. 2762

59.5 | 1161.5 | 63.4+60 | 63.4 | 58.9 | 52.7 | 49.4+55 | 46.9 | 1142.4 | 39.0 | 35.6 | 32.8 | 30.5 | 1127.6 | 26.2+44 | 24.4 | 20.4 | 17.3 | 15.6 | 1115.0 | 15.3 | 16.5 | 17.6 | 17.7 | 1117.4 | 17.9 | 17.2 | 15.4 | 14.4+28 | 12.4 | 1109.5 | 07.1 | 05.1 | 02.8 | 02.0+35 | 1100.6 | 1098.6 | 96.6

125 130 135 140 145 150 155

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OLMSTED COUNTY, MINN. Sheet No. 8 of 24 Sheets

166+11E
Inpl. 2'X2'X20' Conc. Culv.
Remove
F. and I. 24"X34' S.C.P.
F. and I. 2-24" Conc. Aprons
Pl. Ditch Check Rt.

F.E. 169+85 Lt.
Inpl. 15"X24' C.M.P.
Remove
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

Equation 187+73.4=184+21.8

F.E. 162+91 Lt.
Inpl. 15" X26' C.M.P.
Remove
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

Pl. F.E. 169+85 Rt.
F. and I. 18" X26' C.M.P.
F. and I. 2-18" Metal Aprons

Pl. 179+55.1 Construct T Intersection
Δ Lt. 89°57'
Construct 2-100' Radius Shoulder Curves

Sta. 165+00 to 166+00
Clear 4 Trees Grub 3 Trees

Sta. 168+00 to 170+00
Clear 13 Trees Grub 11 Trees

B.M. Elev. 1075.91
Spike in P. Pole
50' Rt. Sta. 173+00

Pl. +00 ELEV. 1087
400' V.C. M=0.8

Pl. +00 ELEV. 1091
300' V.C. M=0.3375

Pl. +50 ELEV. 1085.9
400' V.C. M=1.1

Pl. +50 ELEV. 1074.85
400' V.C. M=1.5

-1.8%
-0.3%
-0.5%
-0.1%

INL. 83.0
OUT. 82.3

Profile Lt. 75'
Profile Rt. 75'

E 1258
F 944

E 624
F 448

E 2439
F 1803

E 2866
F 2171

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1098.6 | 96.6 | 95.1 | 93.5 | 92.2 | 1091.2 | 90.3 | 88.9 | 87.8 | 86.8 | 1085.8 | 86.5 | 86.5+10 | 86.2 | 85.8 | 83.0 | 81.4+50 | 1079.4 | 76.0 | 75.2+36 | 74.6 | 73.9 | 73.8 | 1073.1 | 72.5 | 73.4 | 72.3 | 72.5 | 1073.3 | 72.0 | 73.2 | 72.7 | 72.8 | 72.7+22 | 1072.5 | 72.3 | 72.5 |
| 155 | | | | | 160 | | | | | 165 | | | | | | | 170 | | | | | | 175 | | | | | 180 | | | | | | 185 | | |

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OLMSTED COUNTY, MINN. Sheet No. 9 of 24 Sheets

FE. 189+37 Lt.
No Culv. inpl.
F. and I. 18"X26' C.M.P.
F. and I. 2-18" Metal Aprons

200+32 ℄
Inpl. W64X24' Conc. Culv.
Remove
F. and I 2-48"X30' S.C.P.
F. and L 4-48" Conc. Aprons.

202+12 Lt.
Inpl. 15"X18' C.M.P.
Remove
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

FE. 212+77 Lt.
Inpl. 15"X26'C.M.P.
Remove
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

PASTURE
CULTIVATED
FARMYARD
BARNYARD
SHED
SHED
SHED
N89°38'E
S.A.R.3
S.A.R.C.
S.A.R.3
16¼,15
CENTER SECTION 15 T.106 N. R.15 W.
T 106 N
Pl. 215+61.4 IRON STAKE

Pl. F.E. 198+00 Rt.
F. and I. 18"X26' C.M.P.
F. and L 2-18" Metal Aprons

F.E. 205+02 Rt.
No Culv. Inpl.
F. and I. 18"X30' C.M.P.
F. and I. 2-18" Metal Aprons

END S.A.P. 55-520-01 Sta. 215+61.4

Clear and Grub 44 Trees

B.M. Elev. 1071.73
Spike in P. Pole
33' Rt. Sta. 193+93

B.M. Elev. 1077.30
□ in Conc. Pump Stand
46' So. & 98' Ea. Sta. 215+61.4

Profile Lt. 75' ------
Profile Rt. 75' ——

E 463
F 344

E 1490
F 1146

E456
F350

E 4161
F 3043

-0.1%
-0.3%
+1.2%
-0.4%
+0.93%
0.0%

400' V.C. M=0.1
400' V.C. M=0.75
400' V.C. M=0.8
400' V.C. M=0.65
300' V.C. M=0.3375

INL. 67.0
OUT 66.2

1100
1090
1080
1070
1060
1050
1040
1030

1072.3 72.5 72.4 72.2 1071.3 70.6 70.8 71.0 70.3 1070.4 70.5 70.2 69.8 69.4 1068.9 706+33 71.3 73.8 75.2 75.0 1075.4 73.7 73.7 73.3 73.5 1073.9 74.5 76.0 77.1 77.2 1077.0 773+24 774+35 777+61

190 195 200 205 210 215

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RENSTED COUNTY, MINN. Sheet No. 10 of 24 Sheets