Form 413 Rev. 1959

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT ROAD R/W LINE
LIMITED ACCESS
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
STEAM RAILROAD
ELECTRIC RAILROAD
RAILROAD RIGHT-OF-WAY LINE
CREEK
RAPIDS OR WATERFALL
DRY RUN
DRAINAGE DITCH
HIGH TENSION LINE
POWER POLE LINE
TELEPHONE OR TELEGRAPH LINE
TELEPHONE CONDUIT
GUARD RAIL
WIRE FENCE
RAILROAD SNOW FENCE
BOARD OR HIGHWAY SNOW FENCE
STONE WALL OR FENCE
GAS MAIN
WATER PIPE
SEWER PIPE
DRAIN TILE
GRAVEL PIT
SAND PIT
CLAY PIT
ROCK QUARRY
SPRINGS
MARSH

TIMBER
BRUSH
ORCHARD
ROCK LEDGE
SAND
EDGE OF CUT
TOE OF EMBANKMENT
CATCH BASIN
MANHOLE
DROP INLET
FIRE HYDRANT
ARC LAMP
OTHER LAMPS (State Kind)
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
CATTLE GUARD
OVERHEAD (Highway Over)
UNDERPASS (Highway Under)
ABUTMENT, WALL & PIER
BRIDGE
CULVERT
BUILDING (One Story Frame)
C-CONCRETE S-STONE T-TILE B-BRICK ST.-STUCCO
HEDGE
IRON PIPE
STONE MONUMENT
WOOD STAKE OR HUB
MEANDER CORNER

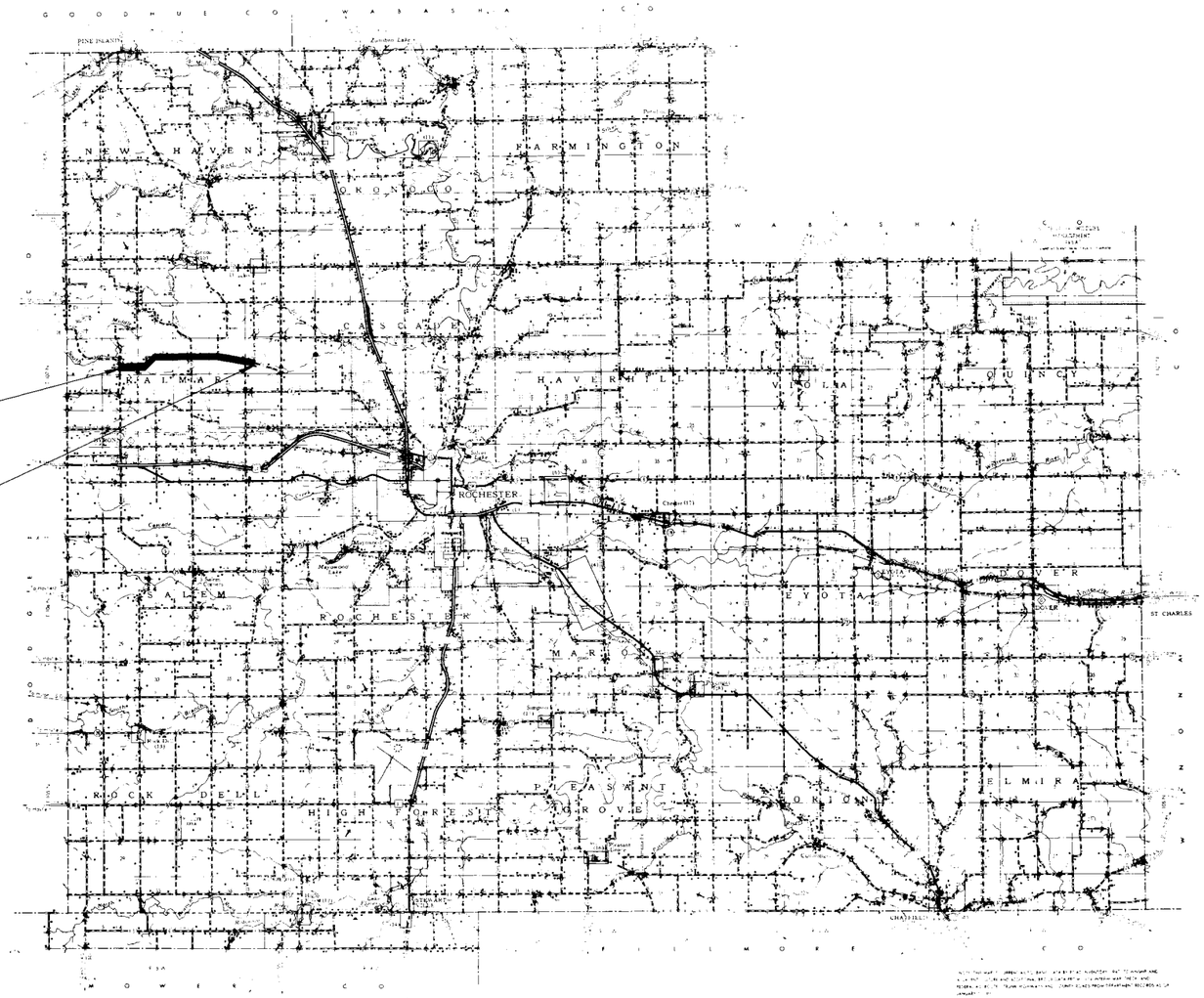
T.108 N. R.24 W. | T.108 N. R.23 W. | 35 | 36 | 2 | 1 | T.107 N. R.24 W. | T.107 N. R.23 W.

CENTER SECTION 35 T.108 N. R.24 W.

12 | 13

NOTE: SECTION NUMBERS READ FROM THE SOUTH

N



Begin S.A.P 55-604-01
Sta. 0+00

End S.A.P 55-604-01
Sta. 204+00.38

—SPECIFICATIONS—

THE "SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959, AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959, SHALL GOVERN.

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR Grading, Box Culverts and Crushed Rock Wearing Course

County State Aid Highway No. 4

BETWEEN C.S.A.H. No. 5 AND C.S.A.H. No. 3

From S1/2 of SE1/4 Sec.17 T-107N-R15W. To 1621.6' N. & 1401.0' W. S1/4 Cor. Sec.13 T-107-N. R-15-W.

Give proper reference to Sections, Township and Range

GROSS LENGTH 20,400.38 FEET 3.8637 MILES
BRIDGES LENGTH 0.00 FEET 0.00 MILES
EXCEPTIONS LENGTH 0.00 FEET 0.00 MILES
NET LENGTH 20,400.38 FEET 3.8637 MILES

MINN. PROJ. _____

SCALES
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-Section 1 Inch=10 Feet

LAYOUT
Scale, 1 inch=10,560 Feet

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map
" No. 2. Est. Quantities & Typical Sec.
" No. 3. To 9 Plan & Profile
" No.10 To 44 Cross Sections
" No.44A-44B Channel Change
" No.44C-44D Borrow Pits

Design Speed 50 MPH

ALL FEDERAL, STATE AND LOCAL LAWS WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

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

_____ DATE _____
COUNTY ENGINEER

_____ COUNTY REG. NO _____

RECOMMENDED FOR APPROVAL _____ 19__
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL H. M. Smith Jr. 1961

APPROVED _____ 19__
STATE AID ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

_____

Minn. Proj. No. _____ State Proj. No. _____ State Aid Project No. 55-604-01

OLMSTED County, Minnesota County Proj. No _____ Plan No. _____ Sheet No. 1 of 44 Sheets

H. A. ROGERS CO. Minneapolis

FORM 129 C - 1 REV. '59

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES
2101.501	Clearing	Acre			.34
2101.502	Clearing	Tree			406
2101.506	Grubbing	Acre			.34
2101.507	Grubbing	Tree			322
2104.501	Remove Portable Culverts	Linear Foot			840
2104.520	Remove Old Structure Sta. 2+72	Structure			1
2104.520	Remove Old Structure Sta. 105+55	Structure			1
2105.501	Class A Excavation	Cu.Yds.			175,756
2105.502	Class B Excavation	Cu. Yds.			13,543
109.621	Obliterate Old Road	Acre			26
2130.501	Water	M-Gal.			257
2252.527	Crushed Rock Wearing Course Inplace	Cu. Yd. (V.M.)			10,270
2411.501	Concrete	Cu. Yd.			211.34
2411.525	Class U Excavation	Cu. Yd.			860
2411.541	Reinforcement Bars	lbs.			35,571
2414.501	Cattle Pass Excavation	Cu. Yd.			50
2414.511-60"	F.&I. P-C Conc. Cattle Pass - 60"	Linear Foot			84
2414.512-60"	F.&I. P-C Conc. Cattle Pass End Sect. "60"	Section			2
2441.502	Single Lane By-Pass	By-Pass			2
2501.511-18"	F.&I. C.M.P. Culverts - 18"	Linear Foot			1188
2501.511-24"	F.&I. C.M.P. Culverts - 24"	Linear Foot			120
2501.521-24"	F.&I. S.C.P. Culvert - 24" Class III	Linear Foot			~~432~~ 36
2501.521-30"	F.&I. S.C.P. Culvert - 30" Class III	Linear Foot			90
2515.531-18"	F.&I. Metal Aprons for C.M.P. - 18"	Apron			78
2515.531-24"	F.&I. Metal Aprons for C.M.P. - 24"	Apron			2
2515.541-24"	F.&I. Conc. Aprons for S.C.P. - 24"	Apron			~~14~~ 13
2515.541-30"	F.&I. Conc. Aprons for S.C.P. - 30"	Apron			2
2108.511	Channel Excavation (Class A)	Cu. Yd.			2,805

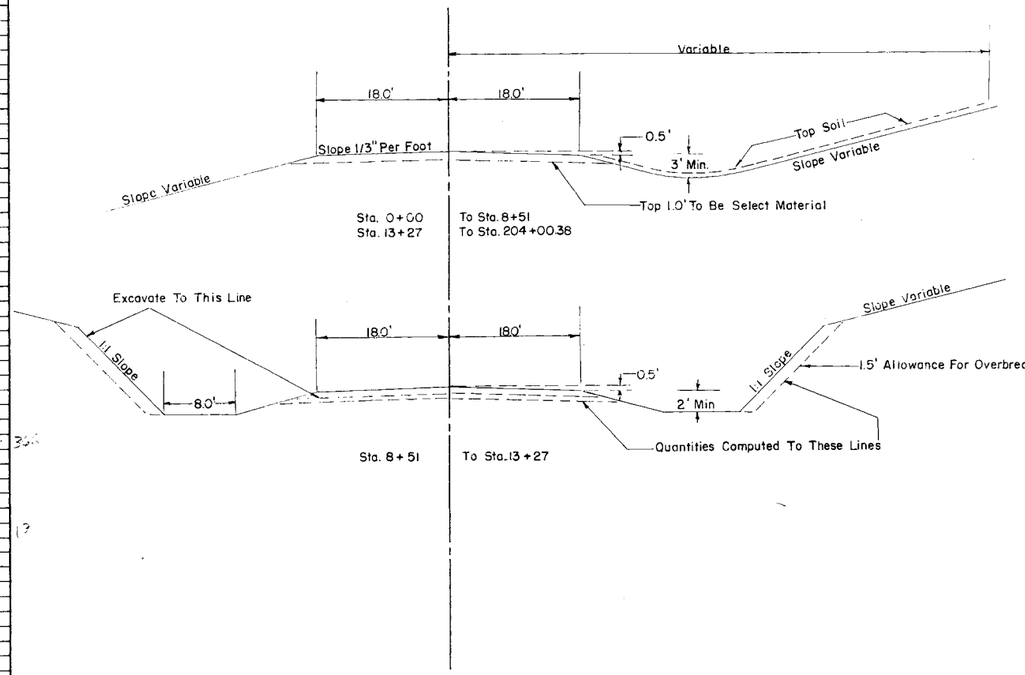
Note: Item 2252.527 Includes 770 Cu. Yds. For Approaches, 198 Cu.Yds. For T.W.P. Rds. And 47 Cu. Yds. For Co.Rd.

STANDARD DETAIL PLATES

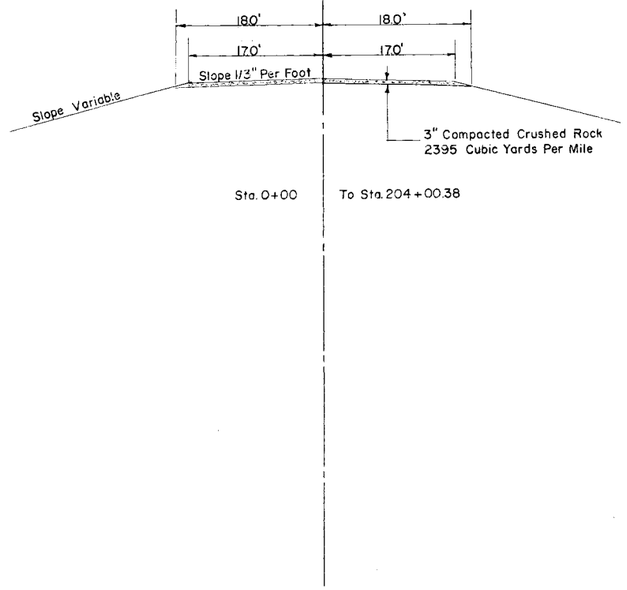
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3100 & 3102A	Conc. Apron For Reinforced Conc. Pipes
3123 A	Metal Apron For C.M. Pipes
3000B	Reinforce Concrete Pipe
3021	Precast Conc. Cattle Pass 60"
8000A, 8001	
8003 & 8008A	Signs & Barricades

TYPICAL GRADING SECTIONS



TYPICAL BASE & SURFACE SECTIONS



SPECIAL DETAILS

Note: Material from the upper 1.0' of the natural topsoil, shall not be used in the upper 1.0' of the roadbed. Part of this material shall be uniformly spread on slopes and ditch bottoms, to a depth of 3". No payment in addition to the contract price for Class "A" excavation, will be made for spreading the topsoil as above provided, nor will any undercutting made in excavation prior to placing the topsoil, be measured for payment.

Note: Corrugated Metal and Sectional Concrete pipe culvert excavation will be considered incidental, and will be under unit price for "Furnish and Install Culvert Pipe".

Note: Subgrade Treatment:
Excavate 1.0' below profile grade for compaction, as shown on the plan and profile sheets. Excavation has been computed and is included in balanced quantities. Backfill with select material from R.O.W. Tapers shall be 50:1 in all cases.

Note: Place sectional concrete pipe on Class C bedding.

Note: All dimensions and slopes shown on typical sections are approximate.

Minn. Project No. _____ S.A.P. 55-604-01 State Project No. _____

Olmsted County, Minn. Proj. No. _____ Plan No. _____ Sheet No. 2 of 44 Sheets

24MMS PHOTO PRINT CO. MPLS. 1, MINN.

0+62 ℄ Culv.
Inpl. 30"x32' C.M.P.

Remove
No Culv. Req'd.

1+23 Twp. Rd. Lt.
No Culv Inpl.

No Culv. Req'd

1+53 ℄ Culv.
Inpl. 30"x40' C.M.P.

Remove
No Culv. Req'd.

4+19 F.E. Lt.
No Culv.Inpl.

F. & I. 18"X 28' C.M.P.
F.&I. 2-18" Metal Aprons For C.M.P.

8+00 F.E. Lt
No Culv.Inpl.

F.&I. 18"x28' C.M.P.
F.&I. 2-18" Metal Aprons For C.M.P.

11+77 F.E. Lt.
No Culv. Inpl.

Remove
No Culv. Req'd.

15+89 F.E. Lt.
No Culv.Inpl.

No Culv. Req'd

23+38 F.E. Lt.
Inpl. 24"x20' C.M.P.

Remove
F.&I. 18"x28' C.M.P.
F.&I. 2-18" Metal Aprons For C.M.P.

P.I. 25+12.55
Δ Lt. 0°43'
D 0°5'
T 429.6171
L 859.2342

P.C. 20+82.9329

P.T. 29+42.1617

Construct Channel Change
Channel Excavation
800 Cu.Yds.(Class A)

Rock Quarry

Rock Quarry

Obliterate old Road 0.3 acres

Begin S.A.P. 55-604-01
Sta. 0+00

0+84 ℄ Pl. C106 D X 54'
Class "A" Concrete 132.2 Cu. Yds.
Reinforcement Bars 21,705 lbs.
Class "U" Exc. 630 Cu. yds.
Single Lane By-Pass

P.I. +60.95
Δ Rt. 13°15'
D 6°00'
T 111.0
L 220.83

P.C. 0+49.95

P.T. 2+70.78

Construct Channel Change
Channel Excavation 2,005 Cu.Yds. (Class A)

4+15 F.E. Rt.
No Culv Inpl.

F.&I. 18"x 28' C.M.P.
F.&I. 2-18" Metal Aprons For C.M.P.

P.C. 7+47.01

2+72 ℄ Culv.
Inpl. 8.2'x 7'x 16' Masonery Box

Remove
No Culv. Req'd

P.I. 11+62.17
Δ Rt. 2°46'
D 0°20'
T 415.16
L 830.08

P.T. 15+77.09

16+28 F.E. Rt.
No Culv. Inpl.

F.&I. 18"x 28' C.M.P.
F.&I. 2-18" Metal Aprons For C.M.P.

22+37 ℄ Culv.
Inpl. 60"x 30' C.M.P.

Remove
Pl. C106 x 56'
Class "A" Concrete 79.14 Cu. Yds.
Reinforcement Bars 13,866 Lbs.
Class "U" Exc. 230 Cu. Yds.
Single Lane By-Pass

22+44 ℄ Culv.
Inpl. 60"x 30' C.M.P.

Remove

No Culv. Req'd

27+67 Twp. Rd. Rt.
Inpl. 18"x 30' C.M.P.

Remove
F.&I. 18"x 64' C.M.P.
F.&I. 2-18" Metal Aprons For C.M.P.

B.M. Elev. 1047.48
Spk. in P.P.
47' Rt. Sta. 0+59

B.M. Elev. 1084.88
Spk. in Box Elder
28' Lt. Sta. 11+93

B.M. Elev. 1091.44
Spk. in P.P.
42' Rt. Sta. 28+05

Cl. 30 Gr. 21

Cl. 99 Gr. 103

Profile 75' Lt.
Profile 75' Rt.

Pl. +85.1852
Elev. 50.0
500' V.C.
M = 3.375

Elev. 50.0

-0.0 %

Inlet 42.1
Outlet 41.8

P.V.C. +35.1852

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 0+29 To Sta. 2+00

Elev. 63.50001

Elev. 64.43334

+5.4 %

P.V.T. +35.1852

P.V.C. +70.98765

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 7+50 To Sta. 8+10

Pl. +20.98765
Elev. 89.73333
900' V.C.
M = 9.1125

Elev. 77.58333

Elev. 76.20154

-2.7 %

P.V.T. +70.98765

P.V.C. +22.1649

Pl. +72.1649
Elev. 58.6516
1300' V.C.
M = 15.7625

P.V.T. +22.1649

+7.0 %

Inlet 63.5
Outlet 62.5

EXC. "A" 702
"B" 8730
EMB 7455

EXC. "A" 451
"B" 965
EMB 1086

EXC. "A" 43662
"B" 3848
EMB 31252

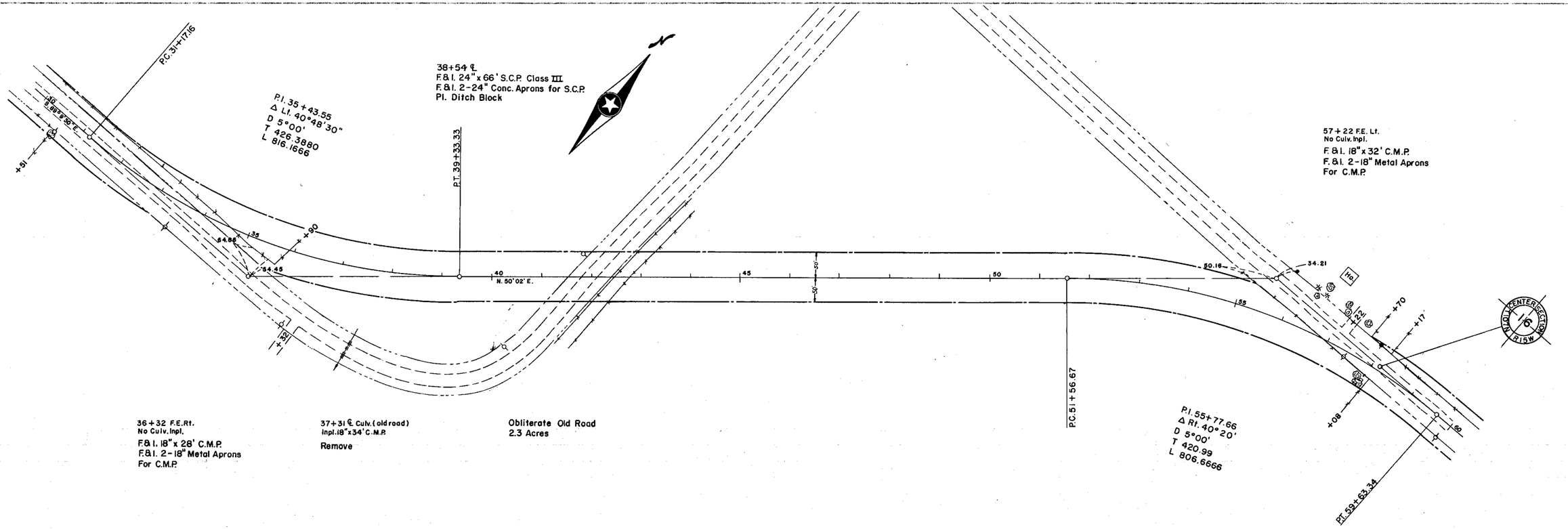
Finished ℄ Grade

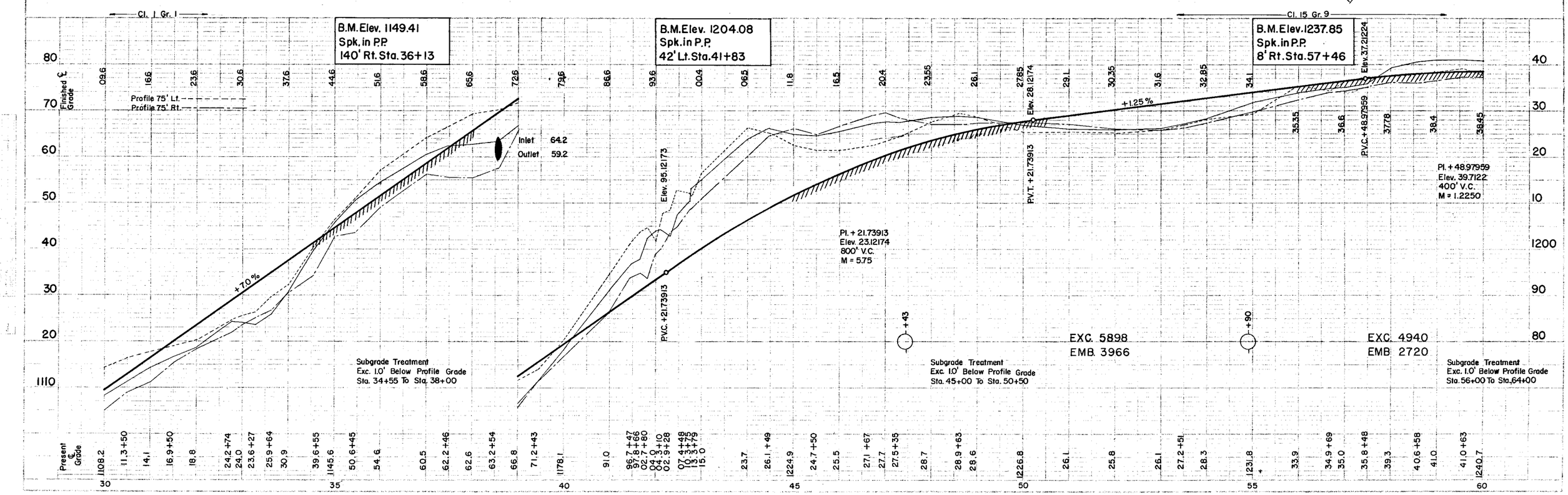
Present ℄ Grade

1100
90
80
70
60
50
40

0 5 10 15 20 25 30

CSAH 4 SAP 55-604-01 3 44


P.C. 31+17.16
P.I. 35+43.55
Δ Lt. 40°48'30"
D 5°00'
T 426.3880
L 816.1666
38+54 ℄
F.&I. 24" x 66' S.C.P. Class III
F.&I. 2-24" Conc. Aprons for S.C.P.
Pl. Ditch Block
P.T. 39+33.33
N. 50°02' E.
57+22 F.E. Lt.
No Culv. Inpl.
F.&I. 18" x 32' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
36+32 F.E.Rt.
No Culv. Inpl.
F.&I. 18" x 28' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
37+31 ℄ Culv. (old road)
Inpl. 18" x 34' C.M.P.
Remove
Obliterate Old Road
2.3 Acres
P.C. 51+56.67
P.I. 55+77.66
Δ Rt. 40°20'
D 5°00'
T 420.99
L 806.6666
P.T. 59+63.34
N. JCT. CENTERSECTION
15
R15W


Cl. 1 Gr. 1
B.M. Elev. 1149.41
Spk. in P.P.
140' Rt. Sta. 36+13
Cl. 15 Gr. 9
B.M. Elev. 1204.08
Spk. in P.P.
42' Lt. Sta. 41+83
B.M. Elev. 1237.85
Spk. in P.P.
8' Rt. Sta. 57+46
Finished ℄ Grade
Profile 75' Lt.
Profile 75' Rt.
+70 %
Inlet 64.2
Outlet 59.2
Elev. 95.12173
P.V.C. +21.73913
Pl. +21.73913
Elev. 23.12174
800' V.C.
M = 5.75
Elev. 28.12174
P.V.T. +21.73913
+1.25%
Elev. 37.21224
P.V.C. +48.97959
Pl. +48.97959
Elev. 39.7122
400' V.C.
M = 1.2250
EXC. 5898
EMB. 3966
EXC. 4940
EMB 2720
Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 34+55 To Sta. 38+00
Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 45+00 To Sta. 50+50
Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 56+00 To Sta. 64+00
Present ℄ Grade

PLAN

66+81 F.E.Lt.
Inpl. 12"x 24' C.M.P.
Remove
F. & I. 18"x 32' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

76+27 F.E. Lt.
No Culv. Inpl.
F. & I. 18"x 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

83+92 F.E. Lt.
No Culv. Inpl.
F. & I. 18"x 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

Pl. 84+18.47
Δ Rt. 0°16'

16°15'

Woods & Brush

S.89°38' E.

S.89°22' E.

37.18

43.40

43.87

Hog Ho.

Ho.

Ho.

66+48 F.E. Rt.
Inpl. 12"x 24 C.M.P.
Remove
F. & I. 18"x 32' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

69+50 ℄
F. & I. 24"x 50' S.C.P. Class III
F. & I. 2-24" Conc. Aprons
For S.C.P.

76+77 ℄ Culv.
Inpl. 18"x 32' C.M.P.
Remove
F. & I. 24"x 54' S.C.P. Class III
F. & I. 2-24" Conc. Aprons
For S.C.P.

77+62 F.E. Rt.
Inpl. 15"x 24" C.M.P.
Remove
F. & I. 18"x 32' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

84+32 F.E. Rt.
No Culv. Inpl.
F. & I. 18"x 28' C.M.P.
F. & I. 2-18" Metal Aprons
For C.M.P.

89+77 ℄ Culv.
Inpl. 12"x 26' C.M.P.
Remove
F. & I. 30"x 90' S.C.P. Class III
F. & I. 2-30" Conc. Aprons
For S.C.P.

Cl. 9 Gr. 2 — Cl. 0.34 acre Gr. 0.34 acre — Cl. 3 Gr. 3

B.M. Elev. 1227.84
Spk. in P.P.
31' Rt. Sta. 77+41

B.M. Elev. 1236.97
Spk. in T.P.
32' Lt. Sta. 84+00

Finished ℄ Grade

Profile 75' Lt.
Profile 75' Rt.

Elev. 37.36224

P.V.T. +48.97959

-12%

Elev. 30.75

P.V.C. + 00

+ 74

Pl. + 00
Elev. 28.35
400' V.C.
M = 0.7

Elev. 28.75

P.V.T. +00

Inlet 24.8
Outlet 22.5

+ 0.2%

Elev. 30.68888

P.V.C. +69.44444

Inlet 25.8
Outlet 23.8

Pl. +69.44444
Elev. 31.28889
600' V.C.
M = 1.35

+ 81

Elev. 26.48888

P.V.T. +69.44444

-1.6%

Inlet 08.2
Outlet 02.0

EXC. 8824
EMB 5587

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 69+00 To Sta. 76+00

EXC. 10409
EMB. 7135

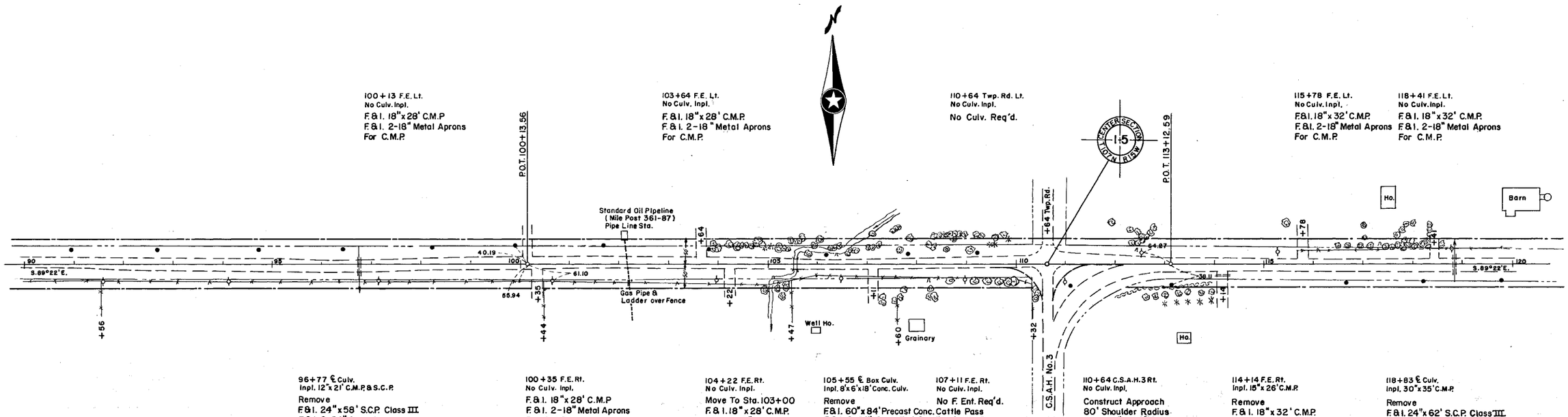
Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 79+50 To Sta. 86+75

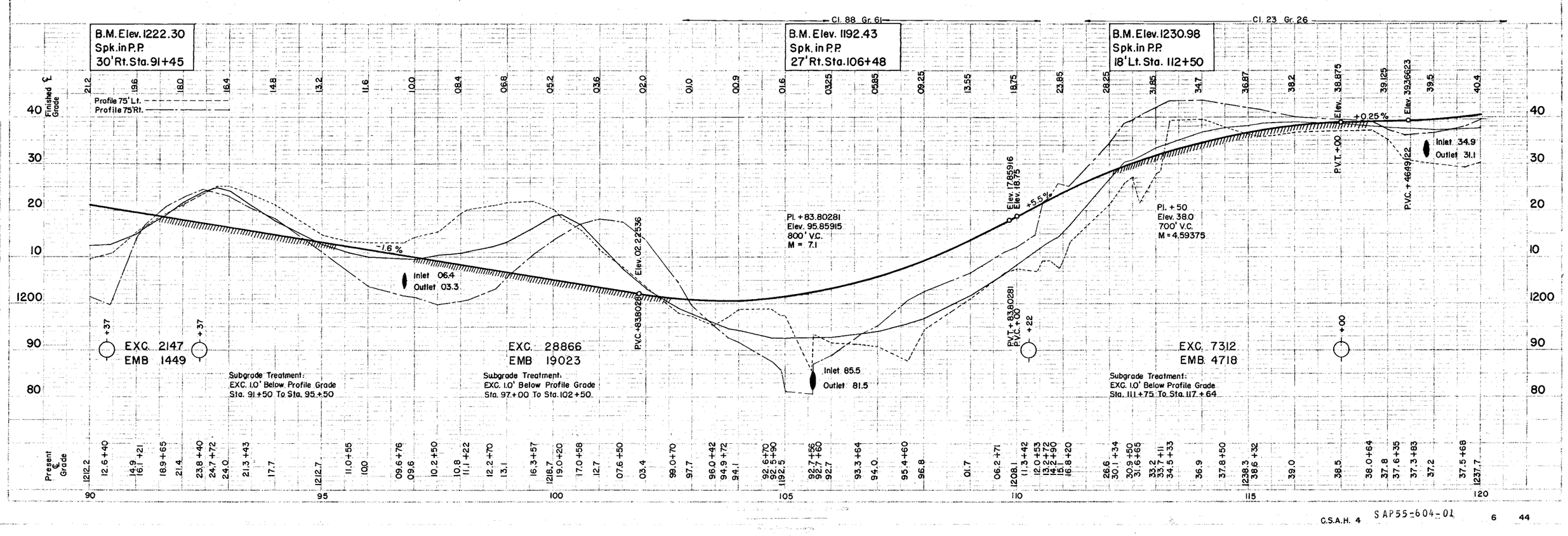
Present ℄ Grade

1240.7 40.0 +50 39.2 37.4 36.1 +68 35.4 33.7 1232.4 31.1 30.7+44 30.0 29.1 +64 28.8 28.4 1228.5 28.5 28.2 28.7 29.1 +50 29.5 29.6+40 1229.6 29.3+53 29.1 28.5+76 28.3 28.5 28.7+40 29.3 1230.5 32.4 34.8 35.9+50 36.9 37.6+43 38.2 38.0+18 37.0+66 1235.6 33.3+50 30.9 27.8+54 24.5 21.5+40 17.5 15.3+45 13.6 12.2+76 12.2

60 65 70 75 80 85 90

CSAH 4 SAP 55-604-01 5 44


100+13 F.E. Lt.
No Culv. Inpl.
F.&I. 18"x28' C.M.P
F.&I. 2-18" Metal Aprons
For C.M.P.
103+64 F.E. Lt.
No Culv. Inpl.
F.&I. 18"x28' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
110+64 Twp. Rd. Lt.
No Culv. Inpl.
No Culv. Req'd.
115+78 F.E. Lt.
No Culv. Inpl.
F.&I. 18"x32' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
118+41 F.E. Lt.
No Culv. Inpl.
F.&I. 18"x32' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
P.O.T. 100+13.56
P.O.T. 113+12.59
I-5
CENTER SECTION
W. 1/2 OF N.E. 1/4 SEC. 15 T.18 N. R.15 W.
+64 Twp. Rd.
Standard Oil Pipeline
(Mile Post 361-87)
Pipe Line Sta.
Gas Pipe & Ladder over Fence
Well Ho.
Grainary
Ho.
Barn
S.89°22'E.
S.89°22'E.
40.19
61.10
86.94
64.87
38.11
96+77 ℄ Culv.
Inpl. 12"x21' C.M.P. & S.C.P.
Remove
F.&I. 24"x58' S.C.P. Class III
F.&I. 2-24" Conc. Aprons
For S.C.P.
Pl. Ditch Block
100+35 F.E. Rt.
No Culv. Inpl.
F.&I. 18"x28' C.M.P
F.&I. 2-18" Metal Aprons
For C.M.P.
104+22 F.E. Rt.
No Culv. Inpl.
Move To Sta. 103+00
F.&I. 18"x28' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
105+55 ℄ Box Culv.
Inpl. 8'x6'x18' Conc. Culv.
Remove
F.&I. 60"x84' Precast Conc. Cattle Pass
F.&I. 2-60" Conc. End Sec. For Cattle Pass
Cattle Pass Exc. 50 Cu. Yds.
107+11 F.E. Rt.
No Culv. Inpl.
No F. Ent. Req'd.
110+64 C.S.A.H. 3 Rt.
No Culv. Inpl.
Construct Approach
80' Shoulder Radius
F.&I. 24"x120' C.M.P.
F.&I. 2-24" Metal Aprons
For C.M.P.
C.S.A.H. No. 3
114+14 F.E. Rt.
Inpl. 15"x26' C.M.P.
Remove
F.&I. 18"x32' C.M.P.
F.&I. 2-18" Metal Aprons
For C.M.P.
118+83 ℄ Culv.
Inpl. 30"x35' C.M.P.
Remove
F.&I. 24"x62' S.C.P. Class III
F.&I. 2-24" Conc. Aprons
For S.C.P.
Pl. Ditch Block


B.M. Elev. 1222.30
Spk. in P.P.
30' Rt. Sta. 91+45
B.M. Elev. 1192.43
Spk. in P.P.
27' Rt. Sta. 106+48
B.M. Elev. 1230.98
Spk. in P.P.
18' Lt. Sta. 112+50
Cl. 88 Gr. 61
Cl. 23 Gr. 26
Finished ℄ Grade
Present ℄ Grade
Profile 75' Lt.
Profile 75' Rt.
-1.6 %
+5.5 %
+0.25 %
Inlet 06.4
Outlet 03.3
Inlet 85.5
Outlet 81.5
Inlet 34.9
Outlet 31.1
Pl. +83.80281
Elev. 95.85915
800' V.C.
M = 7.1
Pl. +50
Elev. 38.0
700' V.C.
M = 4.59375
P.V.C. +8380281
P.V.T. +8380281
P.V.C. +4649.22
P.V.T. +00
Elev. 02.22536
Elev. 17.85916
Elev. 18.75
Elev. 38.875
Elev. 39.36623
EXC. 2147
EMB 1449
EXC. 28866
EMB 19023
EXC. 7312
EMB 4718
Subgrade Treatment:
EXC. 1.0' Below Profile Grade
Sta. 91+50 To Sta. 95+50
Subgrade Treatment:
EXC. 1.0' Below Profile Grade
Sta. 97+00 To Sta. 102+50.
Subgrade Treatment:
EXC. 1.0' Below Profile Grade
Sta. 111+75 To Sta. 117+64

PLAN

137+68 ℄ Culv.
Inpl. 15"x33' C.M.P.
Remove
F & I. 24"x72' S.C.P. Class III
F & I. 2-24" Conc. Aprons
For S.C.P.

144+21 F.E. Lt.
Inpl. 15"x26' C.M.P.
Remove
F & I. 18"x28' C.M.P.
F & I. 2-18" Metal Aprons
For C.M.P.

P.O.T. 137+05.86
COR. ASSUMED

P.O.T. 147+70.34

134+21 F.E. Rt.
No Culv. Inpl.
F & I. 18"x32' C.M.P.
F & I. 2-18" Metal Aprons
For C.M.P.

136+75 F.E. Rt.
No Culv. Inpl.
F & I. 18"x28' C.M.P.
F & I. 2-18" Metal Aprons
For C.M.P.

P.C. 138+94.03

144+21 F.E. Rt.
No Culv. Inpl.
No Culv. Req'd.

P.I. 141+86.83
Δ Rt. 8°46'30"
D 1°30'00"
T 292.80
L 584.44

P.T. 144+78.47

144+36 ℄ Culv.
Inpl. 15"x34' C.M.P.
Remove
No Culv. Req'd.

B.M. Elev. 1254.31
Spk. in T.P.
30' Rt. Sta. 124+53

Cl. 71 Gr. 24

B.M. Elev. 1268.57
Spk. in P.P.
8' Lt. Sta. 141+25

Profile 75' Lt.
Profile 75' Rt.

Pl. +46.49122
Elev. 39.74122
400' V.C.
M = 1.4250

Pl. +00
Elev. 56.9
400' V.C.
M = 0.75

Pl. +00
Elev. 71.3
400' V.C.
M = 0.6500

Pl. +00
Elev. 74.6
400' V.C.
M= 0.0500

+3.1%
+1.6%
+0.3%
+0.4%

Inlet 66.0
Outlet 60.6

EXC. 7820
EMB. 4481

EXC. 3364
EMB. 2134

EXC. 9907
EMB. 6229

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 123+50 To Sta. 135+60

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 142+00 To Sta. 159+75

150+51 Twp. Rd. Lt.
No Culv. Inpl.

No Culv. Req'd

153+64 F.E.Lt.
No Culv. Inpl.

F&I. 18"x32' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

154+43 F.E. Lt.
No Culv. Inpl.

F&I. 18"x32' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

157+23 F.E. Lt.
No Culv. Inpl.

F&I. 18"x28' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

157+94 F.E Lt.
No Culv. Inpl.

F&I. 18"x28' C.M.P.
F&I. 2-18" Metal Aprons
For C.M.P.

159+04 F.E.Lt.
Inpl. 12"x24' C.M.P.

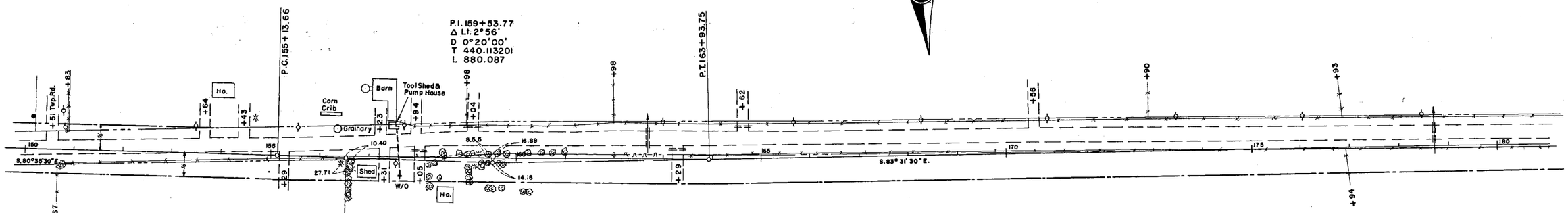
Remove
F&I. 18"x28' C.M.P.
F&I. 2-18" Metal Aprons
For C.M.P.

164+62 F.E. Lt.
Inpl. 15"x20' C.M.P.

Remove
No Culv. Req'd

170+56 F.E. Lt.
No Culv. Inpl.

F&I. 18"x28' C.M.P.
F&I. 2-18" Metal Aprons
For C.M.P.



155+29 F.E.Rt.
No Culv.Inpl.

F&I. 18"x28' C.M.P.
F&I. 2-18" Metal Aprons
For C.M.P.

157+31 F.E.Rt.
No Culv. Inpl.

F&I. 18"x32' C.M.P.
F&I. 2-18" Metal
For C.M.P.

158+05 F.E.Rt.
Inpl. 12"x20' C.M.P.

Remove Ent.

162+67 ℄ Culv.
Inpl. 18"x38' C.M.P.

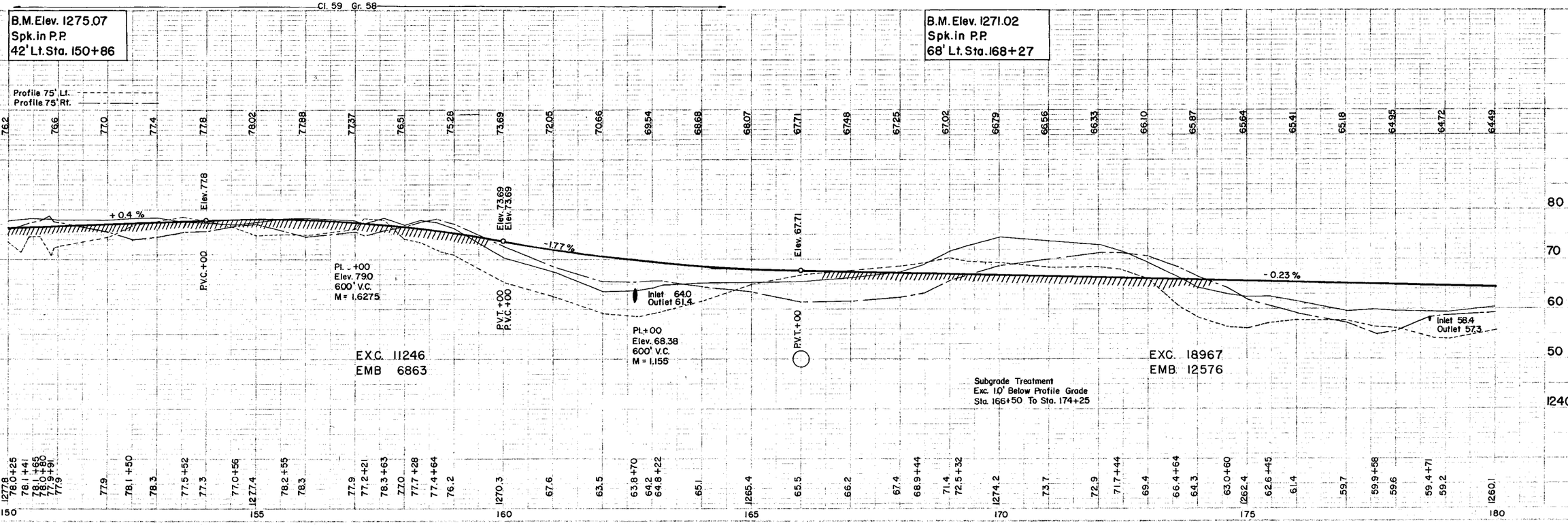
Remove
F&I. 24"x70' S.C.P. Class III
F&I. 2-24" Conc. Aprons
For S.C.P.

163+29 F.E.Rt.
Inpl. 15"x20' C.M.P.

Remove
No Culv. Req'd.

178+70 ℄ Culv.
Inpl. 18"x35' C.M.P.

Remove
No Culv. Req'd.



180+86 F.E.Lt.
Inpl. 15"x24' C.M.P.
Remove
No Culv. Req'd

182+54 F.E.Lt.
No Culv. Inpl.
F&I. 18"x 32' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

183+97 F.E. Lt.
No Culv. Inpl.
F&I. 18"x 32' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

185+92 F.E.Lt.
No Culv. Inpl.
F&I. 18"x 28'
F&I. 2-18" Metal
Aprons For C.M.P.

187+91 F.E. Lt.
No Culv. Inpl.
No Ent. Requ'd

190+93 ℄ Culv.
Inpl. 18"x46' C.M.P.
Remove
No Culv. Requ'd

192+67 F.E. Lt.
No Culv. Inpl.
No Culv. Requ'd

195+62 F.E.Lt.
Inpl. 15"x28' C.M.P.
Remove
F&I. 18"x32' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

182+51 F.E.Rt.
No Culv. Inpl.
F&I. 18"x 28' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

189+72 ℄ Culv.
Inpl. 18"x 44' C.M.P.
Remove
No Culv. Requ'd

P.O.S.T. 186+99.49
P.C. 186+83.16
P.T. 192+93.93

P.I. 189+89.73
Δ Rt. 12° 13'
D 2°00'
T 306.56999
L 610.8335

190+34 Twp. Rd. Rt.
No Culv. Inpl.
No Culv. Requ'd.

191+73 F.E.Rt.
No Culv. Inpl.
F&I. 18"x 32' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

200+31 F.E. Rt.
Inpl. 15"x 20' C.M.P.
Remove
F&I. 18"x 28' C.M.P.
F&I. 2-18" Metal
Aprons For C.M.P.

204+19 F.E.Rt.,
Inpl. 18"x 28' C.M.P.
No Change

Ho. Gar. Windmill Barn Bldg. Bldg. Ho. Barn Shed B. Pole Cemetery Hog Ho. Corn Crib Barn

BORROW AREA BORROW AREA

C.S.A.H. No. 3

S. 83°31'30" E. S. 71°18'30" E.

Pl. 204+00.38

END S.A.P. 55-604-01
STA. 204+00.38

B.M. Elev. 1256.80
Spk. in T.P.
46' Rt. Sta. 190+85

B.M. Elev. 1225.86
Spk. in P.P.
27' Rt. Sta. 204+01

Cl. 8 Gr. 14

Finished ℄ Grade
Present ℄ Grade
Profile 75' Lt.
Profile 75' Rt.

-0.23%
-0.2%
-4.5%

P.V.C. +00 Elev. 64.26
P.V.T. +00 Elev. 63.4
Elev. 62.25349
P.V.C. +73.2558
P.V.T. +73.2558 Elev. 45.80348
Elev. 35.6
P.V.C. +00
P.V.T. +00 Elev. 25.6

Pl. 0+00
Elev. 63.8
400' V.C.
M = 0.0150

Pl. +23.25581
Elev. 61.55349
700' V.C.
M = 3.7625

Pl. 202+00
Elev. 26.6
400' V.C.
M = 2.0000

EXC. 11219 (Borrow 8199 Cu. Yds.)
EMB. 7739

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 180+50 To Sta. 185+65

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 200+50 To Sta. 204+04