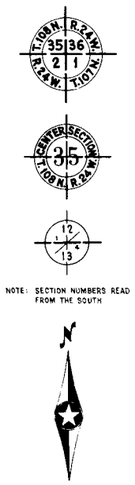
Form 413 Rev. 1959

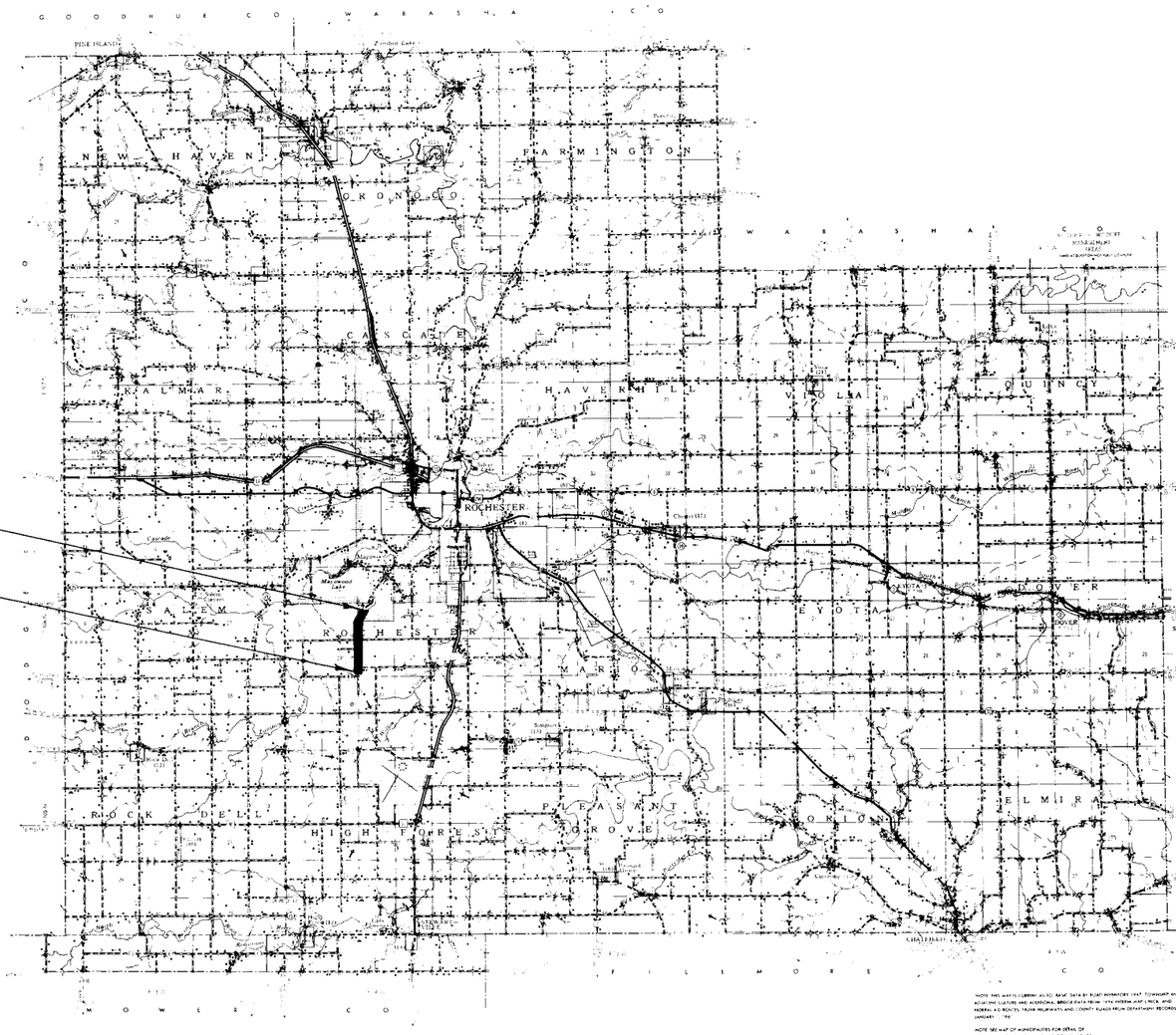
CONVENTIONAL SIGNS

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 MUD
MEANDER CORNER



NOTE: SECTION NUMBERS READ FROM THE SOUTH



End S.A.P. 55-608-02
Sta. 434+40.48

Begin S.A.P. 55-608-02
Sta. 343+77.2

—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 and Cr. Rock Base

County State Aid Highway No. 8

BETWEEN 576.2' N. of S.W. Cor. Sec. 28 T106N R15W AND 1/4 Cor. Sec. 21 T106N- R14W
1512.5' N. and 846' E. of W.

From 576.2' N. of S.W. Cor. Sec. 28 T106N - To 1512.5' N. and 846' E. of W. 1/4 Cor. Sec. 21 T106N- R14W
Give proper reference to Sections, Township and Range R14W

GROSS LENGTH 9063.28 FEET 1.7165 MILES
BRIDGES LENGTH 0.00 FEET 0.00 MILES
EXCEPTIONS LENGTH 0.00 FEET 0.00 MILES
NET LENGTH 9063.28 FEET 1.7165 MILES

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=10560 Feet

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map
" No. 2. Est. Quantities & Typical Sec.
" No. 3. To 6 Plan & Profile
" No. 7 To 19 Cross Sections

DESIGN SPEED 55 M.P.H.

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.

COUNTY ENGINEER _____ DATE _____

COUNTY _____ REG. NO _____

RECOMMENDED FOR APPROVAL _____ 19 ___
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL J. O. McMillan 5/24 1961

APPROVED 5-25 1961
STATE AID ENGINEER

State Aid Project No. 55-608-02

Olmsted County, Minnesota — County Proj. No. 55-608-02 Plan No. _____ Sheet No. 1 of 19 Sheets

H. A. ROGERS CO. Minneapolis

FORM 129 C - # 1 Rev. '46

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

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
	2101.502	Clearing	Tree	254
	2101.507	Grubbing	Tree	289
	2104.501	Remove Portable Culverts	Linear Foot	556.5
	2105.501	Class A Excavation	Cubic Yard	31 663
	2105.502	Class B Excavation	Cubic Yard	5322
	2501.511 – 18"	F & I C.M.P. Culverts – 18"	Linear Foot	484
	2501.511 – 60"	F & I C.M.P. Culverts – 60"	Linear Foot	64
	2501.521 – 24"	F & I S.C.P. Culverts – 24" Class III	Linear Foot	68
	2501.521 – 30"	F & I S.C.P. Culverts – 30" Class IV	Linear Foot	4
	2501.521 – 36"	F & I S.C.P. Culverts – 36" Class III	Linear Foot	76
	2501.521 – 42"	F & I S.C.P. Culverts – 42" Class III	Linear Foot	52
	2413.501	Excavation For Timber Box Culvert	Cubic Yard	60
	2515.531 – 18"	F & I Metal Aprons For C.M.P. – 18"	Apron	32
	2515.541 – 24"	F & I Conc. Apron For S.C.P. – 24"	Apron	2
	2515.541 – 30"	F & I Conc. Apron For S.C.P. – 30"	Apron	2
	2515.541 – 36"	F & I Conc. Apron For S.C.P. – 36"	Apron	2
	2515.541 – 42"	F & I Conc. Apron For S.C.P. – 42"	Apron	2
	2511.502	Random Rip-Rap Class B	Cubic Yard	12
	2130.501	Water	M-Gallon	107
*	2210.527	Crushed Rock Wearing Course In Place	Cubic Yard (V.M.)	4284
	2413.511	Timber Box Culvert 48"x 60"	Linear Foot	46
	2413.512	Timber Box Culvert End Sections 48"x 60"	Section	2

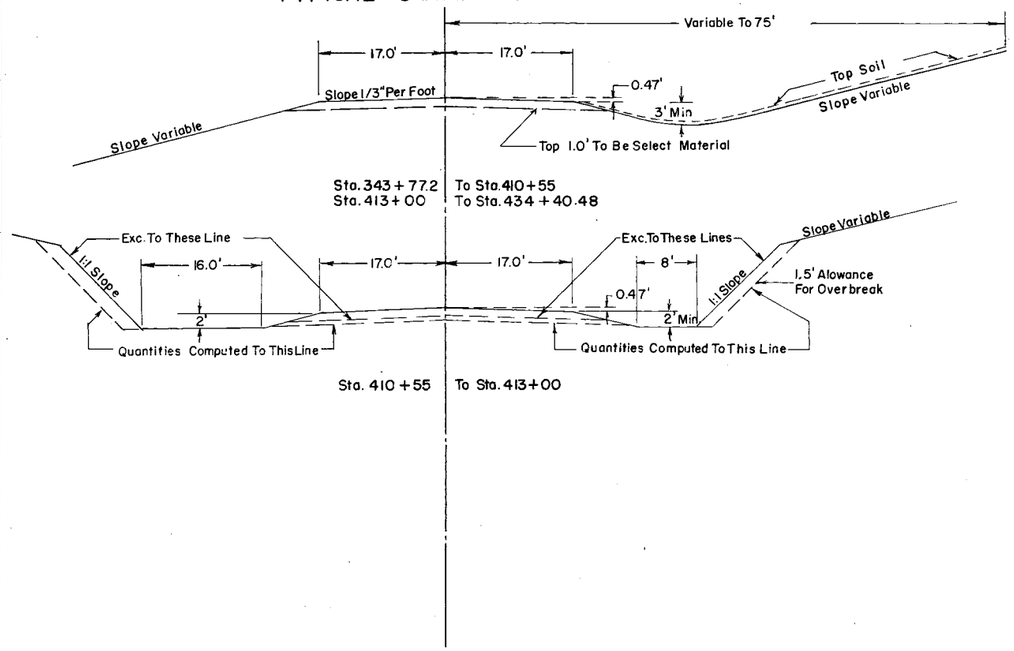
* NOTE: Item 2210.527 Includes 165 Cu.Yds. For Approaches, and 120 Cu.Yds. For Twp. Rds.

STANDARD DETAIL PLATES

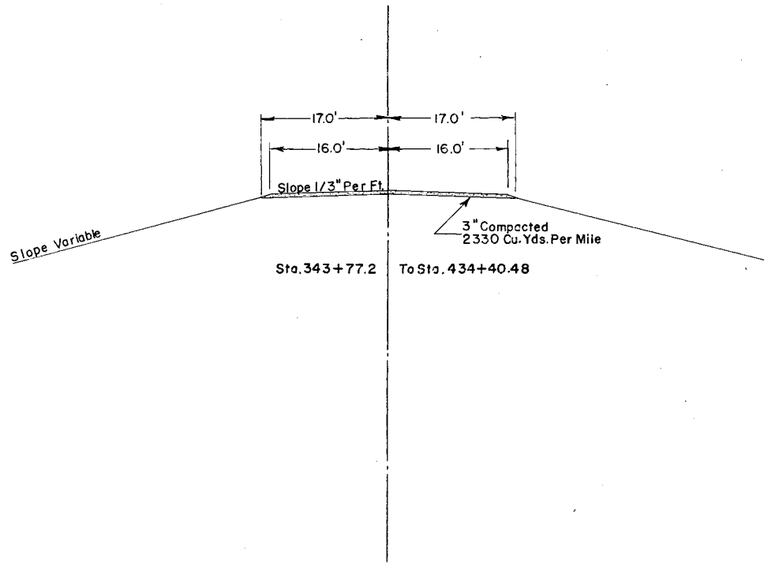
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3100 B	Conc. Apron For Reinforced Conc. Pipes
3123 A	Metal Apron For C.M. Pipes
3054	Bevel Detail For 60" C.M.P. (3:1 Bevel)
3060	Timber Box Culvert

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 roadway. 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 & 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.

S.A.P. 55-608-02

Olmsted County, Minn. Proj. No. 55-608-02 Plan No. Sheet No. 2 of 19 Sheets.

DAHMS PHOTO PRINT CO.
MPLS. 1, MINN.

P.C. 334+74.7

T 10S N R 4 W
29 28
32 33
T 9S N R 4 W

78.09

31.25

44.51

Pl. 340 + 50.9
Δ Lt. 90°15'
D 10°
T 576.2
L 902.5

Begin SAP 55-608-02

351+09 F.E.Lt.
Inpl. 15"x24" C.M.P.
Remove
F&I 18"x 28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

357+50 Double F.E. Lt.
No Culv. Inpl.
F&I 18"x 28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

358+00 F.E. Lt.
F&I 18"x 28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

365+13 School Ent. Lt.
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.

366+29 School Ent. Lt.
Inpl. 18"x 32' C.M.P.
Remove
F&I 18"x 32' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

Water Tank

U.S.C.&G.S. MARK

Ho.

Base Ho.

Barn

Twp. Rd. 33

County Project P-56-C

Pt. 343+77.2

Pt. 364+40.25
Δ Rt. 0°1'30"

34.0 1/2" Iron Rod

348+97 F.E.Rt.
Inpl. 18"x 30' C.M.P.
Remove
F&I 18"x 32' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

351+23 Twp. Rd. Rt.
Inpl. 18"x 36' C.M.P.
Remove
F&I 18"x 36' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

355+84 ℄ Culv.
Inpl. 30"x 35' S.C.P.
Remove 2 ½ Section Lt.
F&I 30"x 4" S.C.P. Class IV Ext. Lt.
F&I 2-30" Conc. Aprons
For S.C.P.

357+98 ℄ Pipe
Inpl. 1¼" Dia. Water Pipe
Save

358+19 F.E. Rt.
No Culv. Inpl.
F&I 18"X 32' C.M.P.
F&I 2-18" Metal Apons
For C.M.P.

B.M. Elev. 1263.56
Spk. in P.P.
32' Rt. Sta. 344+59

B.M. Elev. 1264.10
Spk in P.P.
33' Rt. Sta. 350 +91

B.M. Elev. 1260.32
U.S.C.&G.S. Monument
32' Lt. Sta. 365+90

Cl. 1 Gr. 2

Cl. 15 Gr. 50

Cl. 2 Gr. 2

Finished ℄ Grade

Profile 75' Lt.

Profile 75' Rt.

Elev. 65.7

Elev. 67.5

Elev. 68.27

Elev. 66.17

Elev. 57.2

+0.2%

+0.7%

-1.3%

P.V.C. +00

P.I. +00
Elev. 66.1
400' V.C.
M = 0.25

P.V.T. +00

P.V.C. +10

Inlet 65.5
Outlet 65.0

P.I. +60.0
Elev. 70.72
700' V.C.
M = 1.75

P.V.T. +10

P.V.C. +00

+77.2 +00

EXC. 280
EMB. 97

+51

EXC. 2183
EMB. 983

Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 344+71 to Sta. 380+11

EXC. 5467
EMB. 2453

+55

Recent ℄ Elevations

80
70
60
50
40
1230

345 350 355 360 365 370

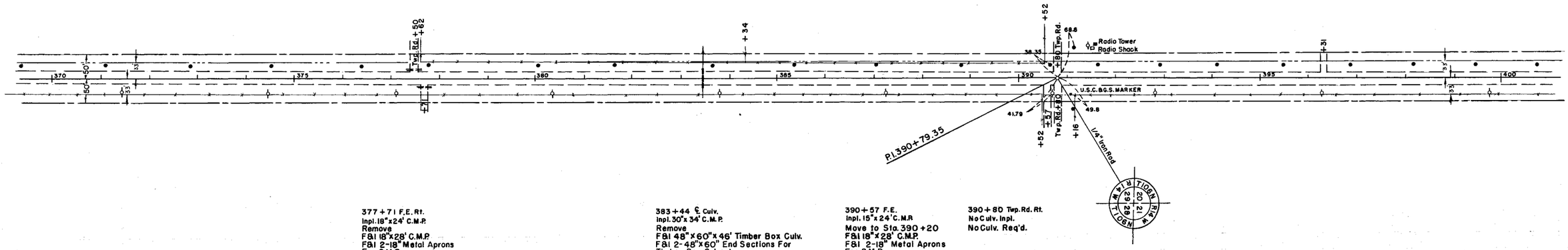
S.A.P. 55-608-02

Sheet 3 of 19

377+50 Twp.Rd, Lt.
Inpl. 18"x48' C.M.P.
Remove
F&I 18"x 36' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

390+80 Twp.Rd. Lt.
No Culv.Inpl.
No Culv. Req'd.

396+31 F.E, Lt.
No Culv. Inpl.
F&I 18"x 28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.



377+71 F.E. Rt.
Inpl. 18"x24' C.M.P.
Remove
F&I 18"x28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

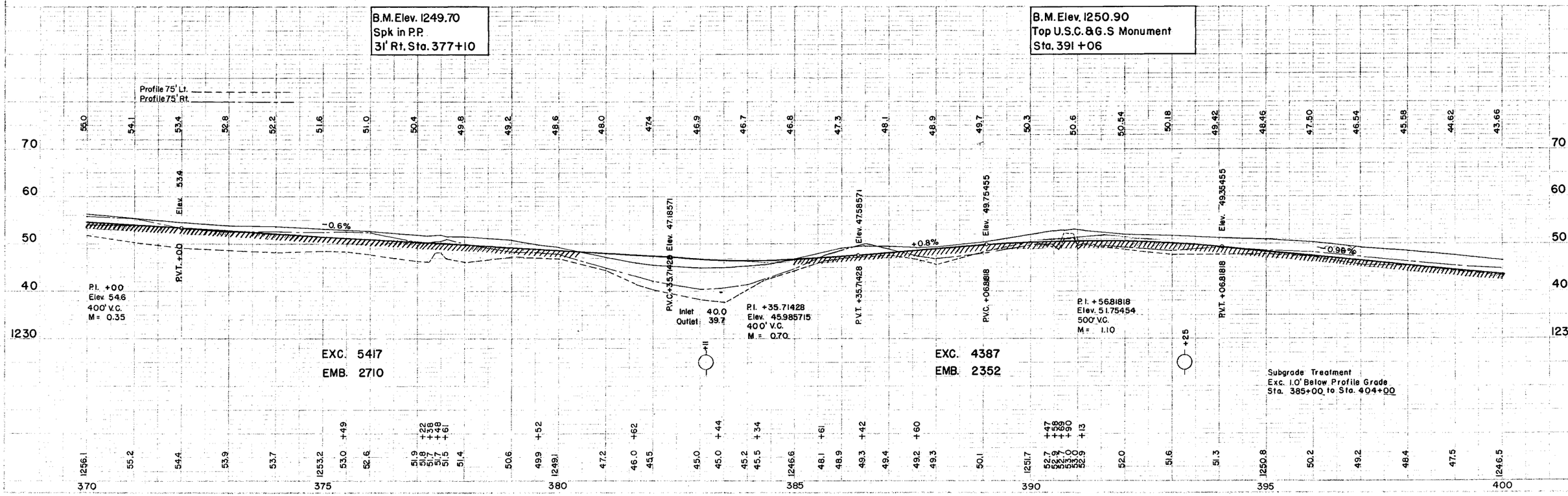
383+44 ℄ Culv.
Inpl. 30"x 34' C.M.P.
Remove
F&I 48"x60"x46' Timber Box Culv.
F&I 2-48"x60" End Sections For
Timber Box Culvert
Exc. for Timber Box Culv. - 60 cu. yd.

390+57 F.E.
Inpl. 15"x24' C.M.P.
Move to Sta. 390+20
F&I 18"x28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

390+80 Twp. Rd. Rt.
No Culv. Inpl.
No Culv. Req'd.

B.M. Elev. 1249.70
Spk in P.P.
31' Rt. Sta. 377+10

B.M. Elev. 1250.90
Top U.S.C. & G.S Monument
Sta. 391+06



405+81 F.E. Lt.
Inpl. 15"x30' C.M.P.
Remove
F&I 18"x28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

PC. 413+02.57

407+37 ℄ Culv.
Inpl. 24"x34' C.M.P.
Remove
F&I 24"x 68' S.C.P. Class III
F&I 2-24" Conc. Aprons
For S.C.P.

410+95 F.E. Rt.
Inpl. 12"x20' S.C.P.
Remove
F&I 18"x32' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

PI. 415+28.55
Δ Rt. 26°37'
D 6°
T 225.98'
L 443.61'

420+17 F.E. Rt.
Inpl. 18"x30' C.M.P.
Remove
F&I 18"x28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

422+35 ℄ Culv.
Inpl. 36"x48' C.M.P.
Remove
F&I 36"x[illegible] S.C.P. Class III
F&I 2-36" Conc. Aprons
For S.C.P.

P.T. 417+46.18

417+00 F.E. Lt.
Inpl. 18"x20' C.M.P.
Remove
F&I 18"x28' C.M.P.
F&I 2-18" Metal Aprons
For C.M.P.

427+50 ℄ Culv.
Inpl. 42" x 56' C.M.P.
Skewed 45° N.W.
Remove
F&I 42"x52' S.C.P. Class III
F&I 2-42" Conc. Aprons
For S.C.P.
Skew. 30°

Cl. 236 Gr. 235

B.M. Elev. 1177.78
Spk in T.P.
29' Lt Sta. 417+25

-0.96%
P.V.C. +20.4280
Elev. 39.62389
Inlet 28.8
Outlet 21.9
Profile 75' Lt.
Profile 75' Rt.
P.I. +70.4280
Elev. 35.30390
900' V.C.
M = 5.78250
P.V.T. +20.4280
Elev. 07.85389
-6.1%
Elev. 79.31596
P.V.C. +88.2629
-6.1%
Inlet 47.5
Outlet 42.8
P.I. +38.76291
Elev. 51.86591
900' V.C.
M. = 4.7925
Elev. 43.58596
P.V.T. +88.2629
-1.84%
Inlet 36.0
Outlet 35.5

EXC. 8054
EMB. 4440

EXC. A 5875
B 5322
EMB. 8438

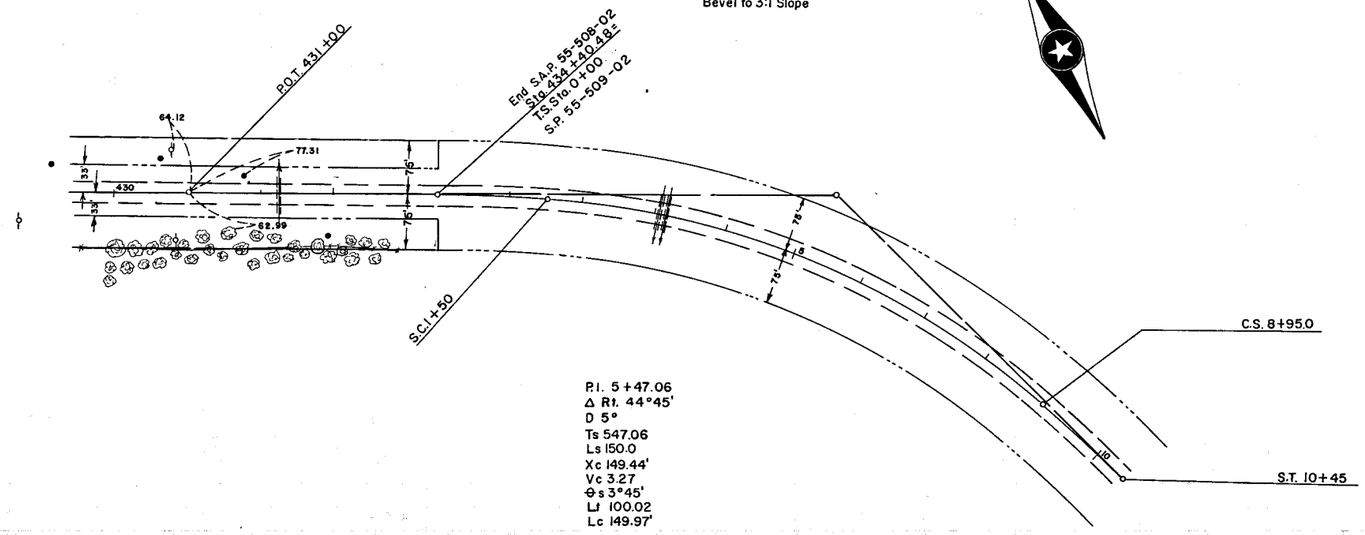
Subgrade Treatment
Exc. 1.0' Below Profile Grade
Sta. 421+00 to Sta. 434+00

S.A.P. 55-608-02 Sheet 5 of 19

PLAN

432+25 L Culv.
Inpl. 30"x38' C.M.P.
Remove

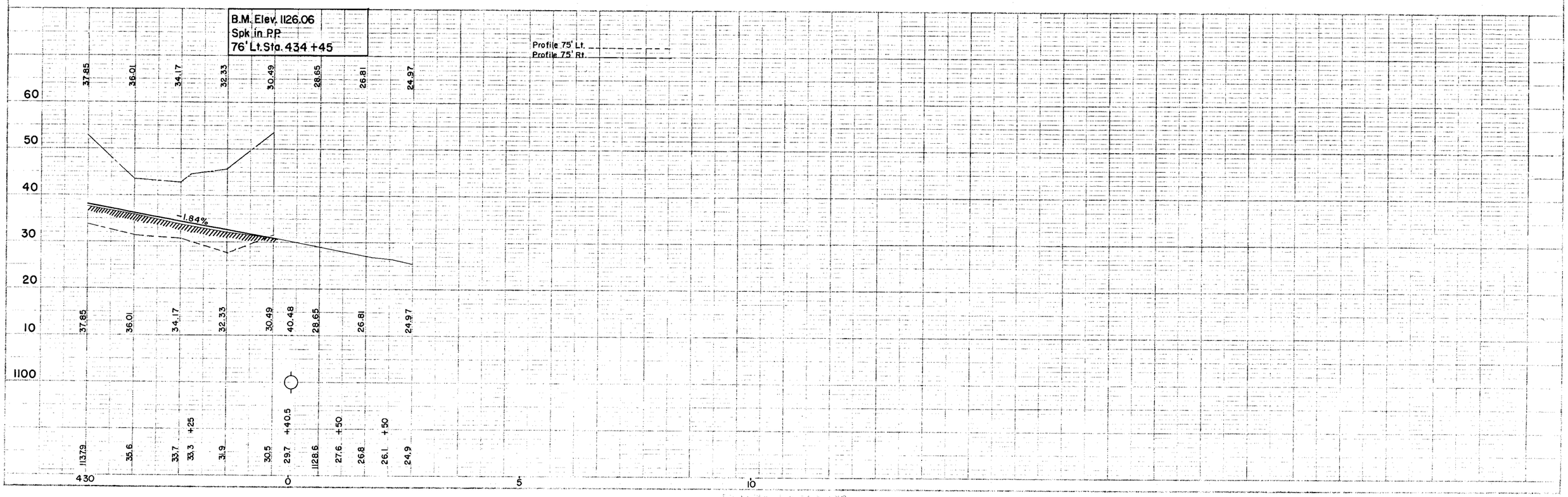
3+06 ℄ Culv.
Inpl. 2-60"x48' C.M.P.
F & I 4-60"x16' C.M.P. Extentions
Bevel to 3:1 Slope



P.I. 5+47.06
Δ Rt. 44°45'
D 5°
Ts 547.06
Ls 150.0
Xc 149.44'
Vc 3.27
~~θ~~s 3°45'
Lf 100.02
Lc 149.97'

B.M. Elev. 1126.06
Spk in P.P.
76' Lt. Sta. 434+45

Profile 75' Lt. _____
Profile 75' Rt. - - - - -



S.A.P. 55-608-02

Sheet 6 of 19.