

CONVENTIONAL SIGNS & ABBREVIATIONS

STATE LINE	-----	EXCAVATION	.....	F
COUNTY LINE	-----	EMBANKMENT	-----	H
TOWNSHIP LINE	-----	OVERHAUL	-----	S
SECTION LINE	-----	SURFACING	-----	GR
CITY, VILLAGE, OR BOROUGH	-----	GRAD RAIL	-----	R
FENCE LINE	-----	INTERSECTION ANGLE	.....	B
RIGHT-OF-WAY LINE	-----	RADIUS	.....	R
TRAVELLED WAY	-----	ELEVATION	.....	EI
RAILROADS	-----	VERTICAL CURVE	.....	YC
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.L.H.
SAND PIT	.....	TON MILES	.....	T.M.
CLAY PIT	.....	PLACE	.....	P
ROCK QUARRY	.....	IN PLACE	.....	INP
CULVERTS	.....	REPLACE	.....	Rep
PLAIN	-----	RIGHT	.....	R
WITH FACE WALLS	-----	LEFT	.....	L
WITH WING WALLS	-----	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.
HERD, BRUSH, OR TIMBER	.....	SPECIAL FLOWING	.....	S.F.
GROUND ELEVATION	.....	TELEPHONE POLE	.....	Tel.P.
GRADE ELEVATION	.....		

OFFICE OF COUNTY SURVEYOR

RAMSEY COUNTY
CONSTRUCTION PLAN FOR GRADING-STABILIZED GRAVEL BASE (BITUMWEARING SURFACE & DITCH NO. 5)
CLEVELAND AVENUE FROM LARPEUTEUR AVE. TO NEW BRIGHTON RD.
 From A point on the West line of Sec. 16-T29N-R23W, 10 Feet North of the S.W. Corner. To A point on the East line of the S.W. 1/4 of N.E. 1/4 of Sec. 29-T30N-R23W, 628.7 Feet North of the S.E. Corner.

GROSS LENGTH 25,532.40 FEET 4.836 MILES
 LENGTH OF EXCEPTIONS 209.7 FEET 0.040 MILES
 NET LENGTH 25,322.7 FEET 4.796 MILES
 PLAN, 1 Inch = 100 Feet
 PROFILE, Horiz. 1 Inch = 100 Feet, Vert. 1 Inch = 10 Feet
 WORKING PLANS Horiz. 1 Inch = 100 Feet, Vert. 1 Inch = 10 Feet, Cross-Sections, 1 Inch = 10 Feet
 LAYOUT SCALE, 1 Inch = 2640 Feet

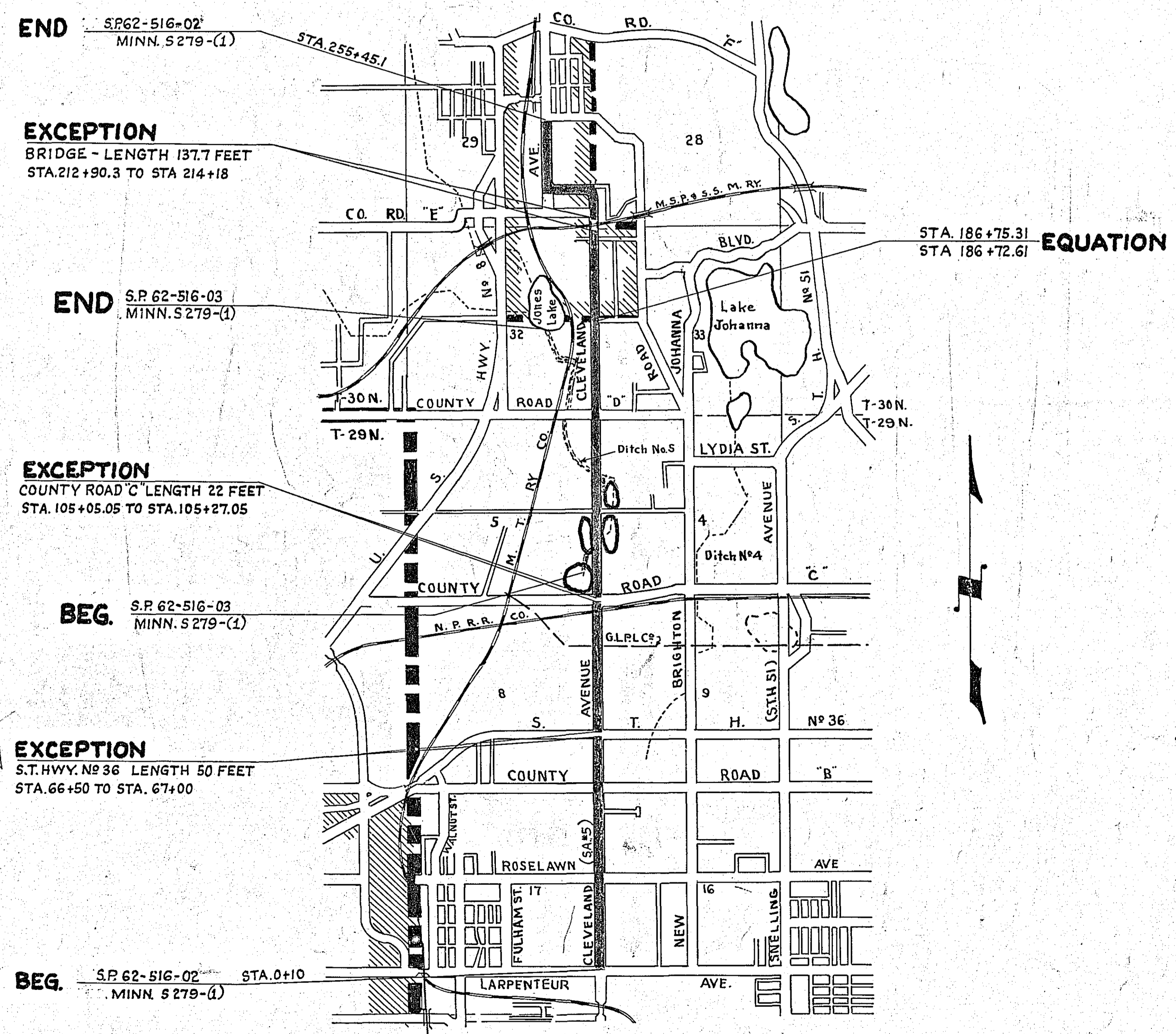
FEDERAL AID SECONDARY PROJECT
 S.P. 62-516 MINNESOTA PROJECT S279-(1)

INDEX OF SHEETS

Sheet No. 1	Title Sheet
2	Estimate & Grading Details
3	Miscellaneous Details Ditch No. 5
4 to 14	Plan Sheets
15 to 17	Plan Sheets Ditch No. 5 (Also Sheet 9 where noted.)
18 to 30	Cross Sections
31	Cross Sections Ditch No. 5

The Minnesota Highway Department Specifications For Highway Construction dated July 1, 1938 and Supplement No. 3 approved by the Public Roads Administration Nov. 15, 1939 as modified by Supplement dated March 1, 1940 and approved by the Public Roads Administration April 28, 1941, shall govern.

BORROW PIT "A" Located in S 1/2 of S 1/2 of SE 1/4 of SW 1/4 of Section 29, T30N, R23W, Dead Haul County Road "E" 0.75 Miles to Sta. 216+60



Planned By W. J. Bremer SENIOR ENGINEERING-OFTSM. May 20 1946
 Approved Randy S. Branson COUNTY SURVEYOR May 20 1946
 Approved May 20 1946 Savage CHAIRMAN RAMSEY COUNTY BOARD
 Recommended for Approval H. E. Chad DISTRICT ENGINEER 6-26 1946
 Recommended for Approval S. M. Evans ENGINEER OF COUNTY DIVISION 6-26 1946
 Approved 6/25 1946 T. T. Sullivan ENGINEER OF SURVEYS & DESIGN

RECOMMENDED FOR APPROVAL
 DISTRICT ENGINEER
 PUBLIC ROADS ADMINISTRATION
 FEDERAL WORKS AGENCY
 APPROVED
 DIVISION ENGINEER
 PUBLIC ROADS ADMINISTRATION
 FEDERAL WORKS AGENCY

STATEMENT OF ESTIMATED QUANTITIES

SPEC. REF.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2103.4	Removing Portable Culverts	Lin. Ft.	268
2104.4I	Removing Guard Rail	Lin. Ft.	1701
2105.4C	Class "C" Excavation	Cu. Yd.	4133
(b) 2105.4C	Class "C" Excavation - Borrow From Borrow Pit For Grade Lift	Cu. Yd.	18,067
2116.5J	Sand Fill In Place	Cu. Yd.	2,200
2116.5J	Gravel Fill In Place	Cu. Yd.	2,200
2418.5C.30	Furnish & Install Corrugated Metal Pipe 30"	Lin. Ft.	188
2417.5C.24	Furnish & Install S.C. Pipe Culverts 24"	Lin. Ft.	230
2418.5C.24	Furnish & Install Corrugated Metal Pipe 24"	Lin. Ft.	22
2568.5	Project Markers	Markers	2
101	Replace Guard Rail	Lin. Ft.	1073
* 2205.5B	Bituminous Stabilized Base	Sq. Yds.	27,620
* 2205.5A	Bituminous Material (For Stabilization) M.C.1	Gal.	41,430
* 2331.5A	Bituminous Material (For Subcut Stabilization) M.C.1	Gal.	7,334
* 2331.5A	Bituminous Material For Prime Coat (R.T.-1 or M.C.1)	Gal.	6,853
* 2331.5B	Bituminous Material Tack Coat (M.C. 2-3 or 4)	Gal.	4,360
* 2331.5C	Bituminous Material For Mixture	Gal.	73,430
* 2331.5E	Bituminous Mixture	Ton	5088
* 2331.5F	Bituminous Surface	Sq. Yd.	63,852
2103.4	Removing Portable Culverts	Lin. Ft.	50
2104.4K	Removing Manhole	Each	1
2104.4R	Remove Old Sewer	Lin. Ft.	1,646
2108.4	Hand Ditch Excavation	Cu. Yd.	1,521
2121.5E	Class "U" Excavation (Control Structure)	Cu. Yd.	14
2401.5B	Grade A Concrete (Control Structure)	Cu. Yd.	7.3
2407.5M9	Structural Steel Plates & Angles (Control Structures)	Lbs.	325
2408.5A	Reinforcement Bars (Control Structures)	Lbs.	171
2524.5D-2-24	Furnish & Install Reinforced Concrete Sewer Pipe 24"	Lin. Ft.	4251
2417.5C.36	Furnish & Install Sectional Concrete Pipe Culvert 36"	Lin. Ft.	30
2425.5	Removal of old structure	Lump Sum	
2524.5A.1a	Trench Excavation 0' to 6' Deep	Lin. Ft.	2158
2524.5A.1b	Trench Excavation 0' to 10' Deep	Lin. Ft.	1641
2524.5A.1c	Trench Excavation 0' to over 10' Deep	Lin. Ft.	786
2524.5C	Sand-Gravel Backfill In Place	Cu. Yd.	275
2524.5F(21)	Relaying Vitrified Clay Pipe 21"	Lin. Ft.	338
2530.5A	Excavation Manholes	Cu. Yd.	255
2530.5B	Construct Manholes	Cu. Yd.	-46.1
(a) 2530.5F	Furnish & Install Casting Assemblies	Casting Assembly	12
2524.5D-2-18	Furnish & Install Reinforced Conc. Sewer Pipe 18"	Lin. Ft.	60

(a) This item includes 12 Castings No. 707 and 12 Castings No. 712
* See Special Provisions
Note: Standard Detail: Plates issued March 1, 1941, with revisions and additions Approved by the Public Roads Administration on Dec. 27, 1941, shall govern.

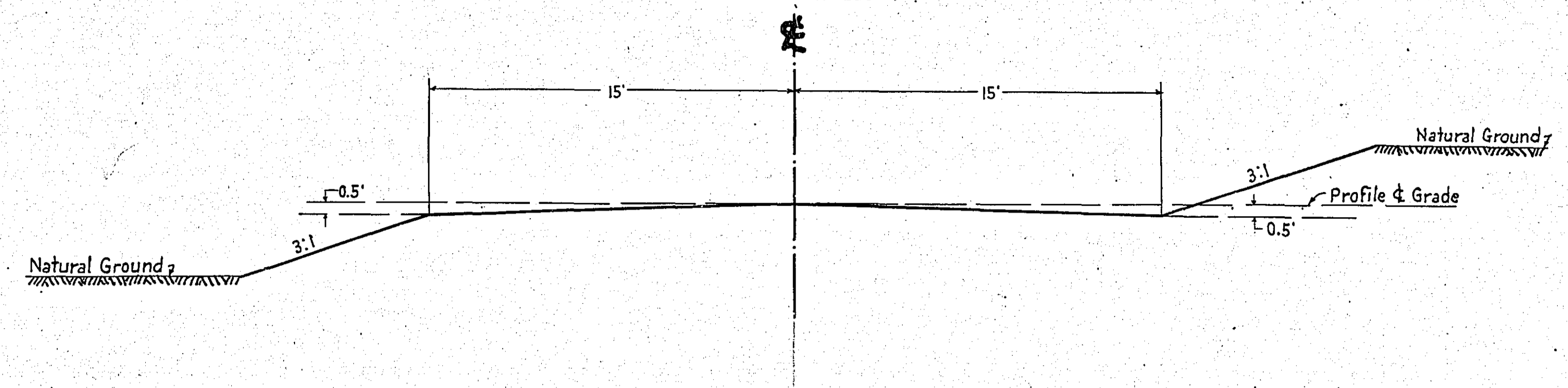
(b) This item includes 639 Cu. Yds. Material for Shoulders.

Bituminous Material For Bituminous Stabilized Base (M.C.1) Estimated on Basis of 1.5 Gal. per Sq. Yd.
Bituminous Material For Subcut Stabilization (M.C.1) Estimated on Basis of 1.0 Gal. per Sq. Yd.
Bituminous Material For Prime Coat (R.T.1 or M.C.1) Estimated on Basis of 0.30 Gal. per Sq. Yd.
Bituminous Material For Wearing Course (M.C.4) Estimated on Basis of 1.15 Gal. per Sq. Yd.
Bituminous Material For Tack Coat (M.C. 2-3 or 4) Estimated on Basis of 0.1 Gal. per Sq. Yd.
Mineral Aggregate For Wearing Course Estimated on Basis of 150 Lbs. per Sq. Yd.

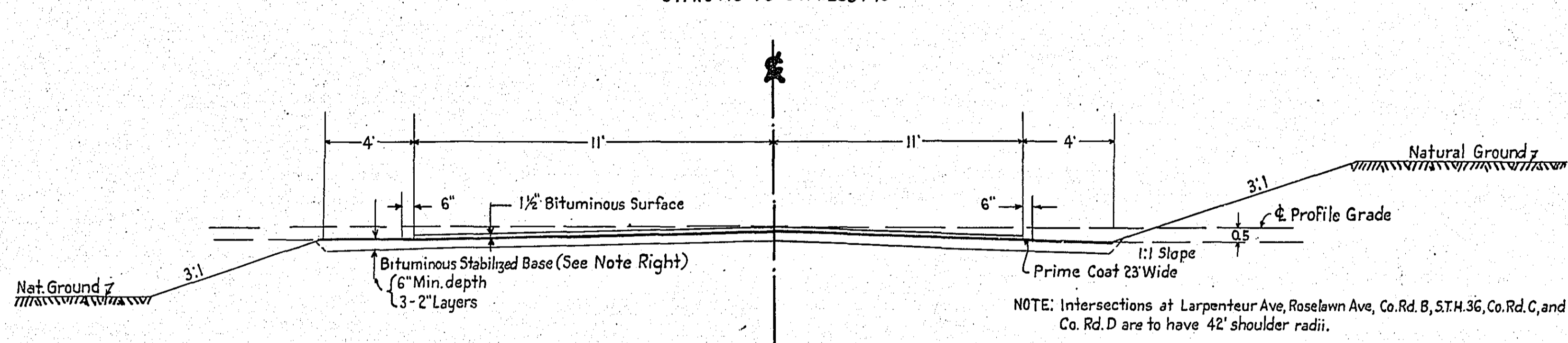
STANDARD DETAILS	PLATE No.
Sectional Concrete Culvert Pipe	2007 & 2008
Manhole Ring Casting No. 707	3033
Manhole Cover Casting No. 712	3035
Manhole Step Casting No. 880	3052
Federal Project Field Marker	3079

SPECIAL DETAILS	SHEET No.
Typical Section	2
Typical Bituminous Surfacing Section	2
Subcut Section	2
Subcut	2
Special Section	2
Manhole Detail	3
Control Structure	3
Ditch Section	3

TYPICAL GRADING SECTION
STA. 0+10 TO STA. 255+45.



TYPICAL BITUMINOUS SURFACING SECTION
STA. 0+10 TO STA. 255+45



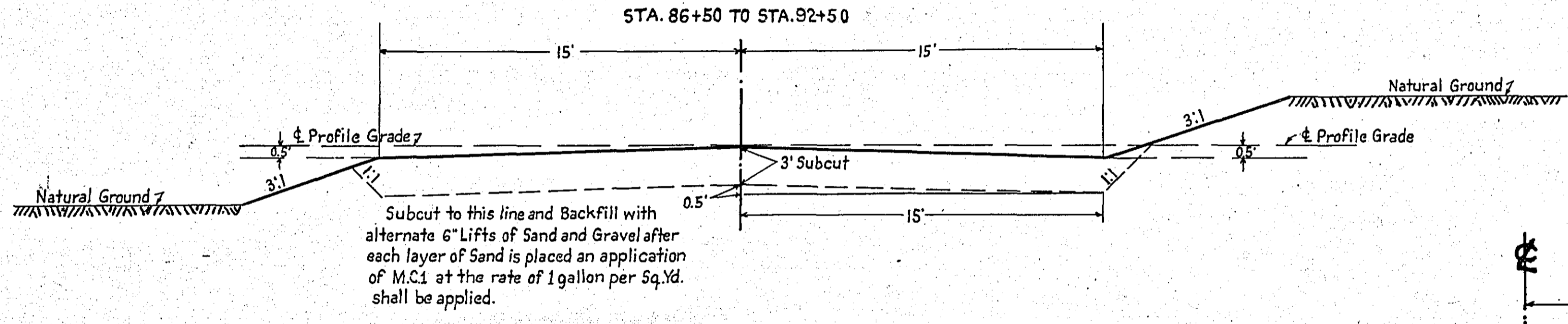
NOTE: Bituminous Stabilized Base to Be Placed Between The Following Stations.

STA. 52+84 TO 67+70	TO STA. 61+89 TO 71+64
" 74+00 TO 123+50	" 82+30 TO 133+50
" 136+50 TO 167+00	" 140+50 TO 178+45
" 178+50 TO 207+50	" 212+90 TO 245+00
" 245+00 TO * 187+00	" 196+00 TO 42+50
" 42+50 TO 86+50	" 92+50 TO 214+28
" 86+50 TO 214+28	" 216+00

* Bituminous Treatment Only (No Sand Required)

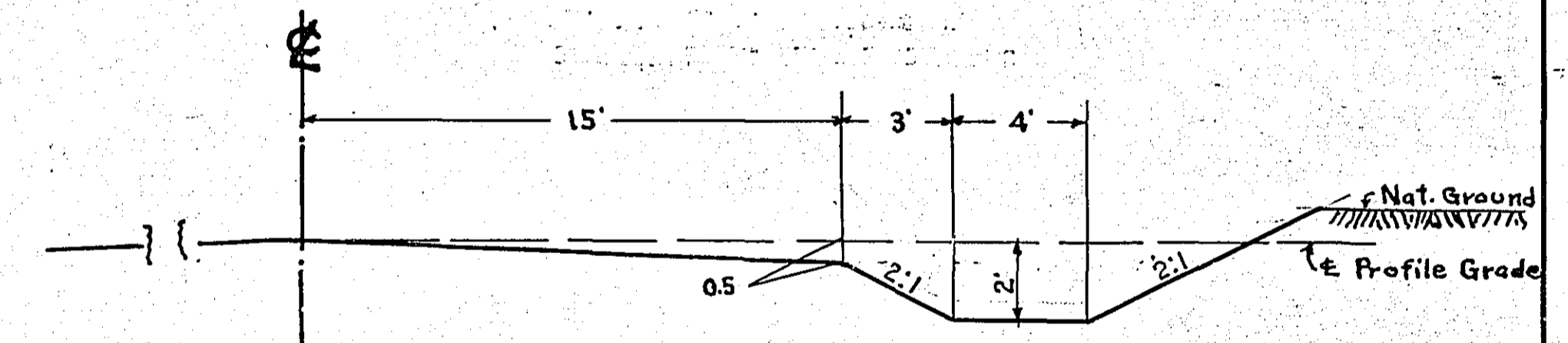
NOTE: Intersections at Larpenteur Ave, Roselawn Ave, Co. Rd. B, S.T.H. 36, Co. Rd. C, and Co. Rd. D are to have 42' shoulder radii.

SUBCUT SECTION
STA. 42+50 TO STA. 47+50
STA. 86+50 TO STA. 92+50

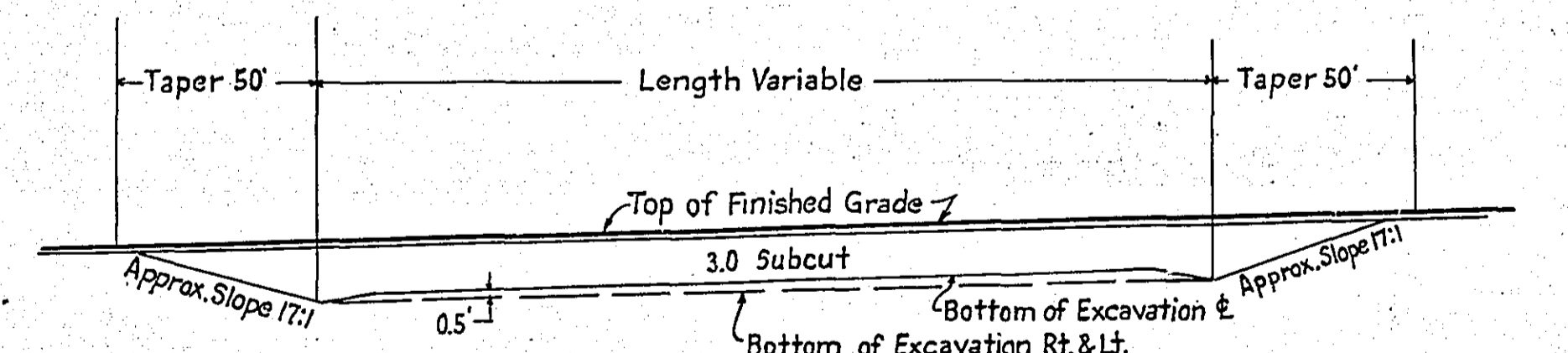


Subcut to this line and Backfill with alternate 6" Lifts of Sand and Gravel after each layer of Sand is placed an application of M.C.1 at the rate of 1 gallon per Sq. Yd. shall be applied.

SPECIAL SECTION
STA. 208+00 TO 210+00 LT. & RT.



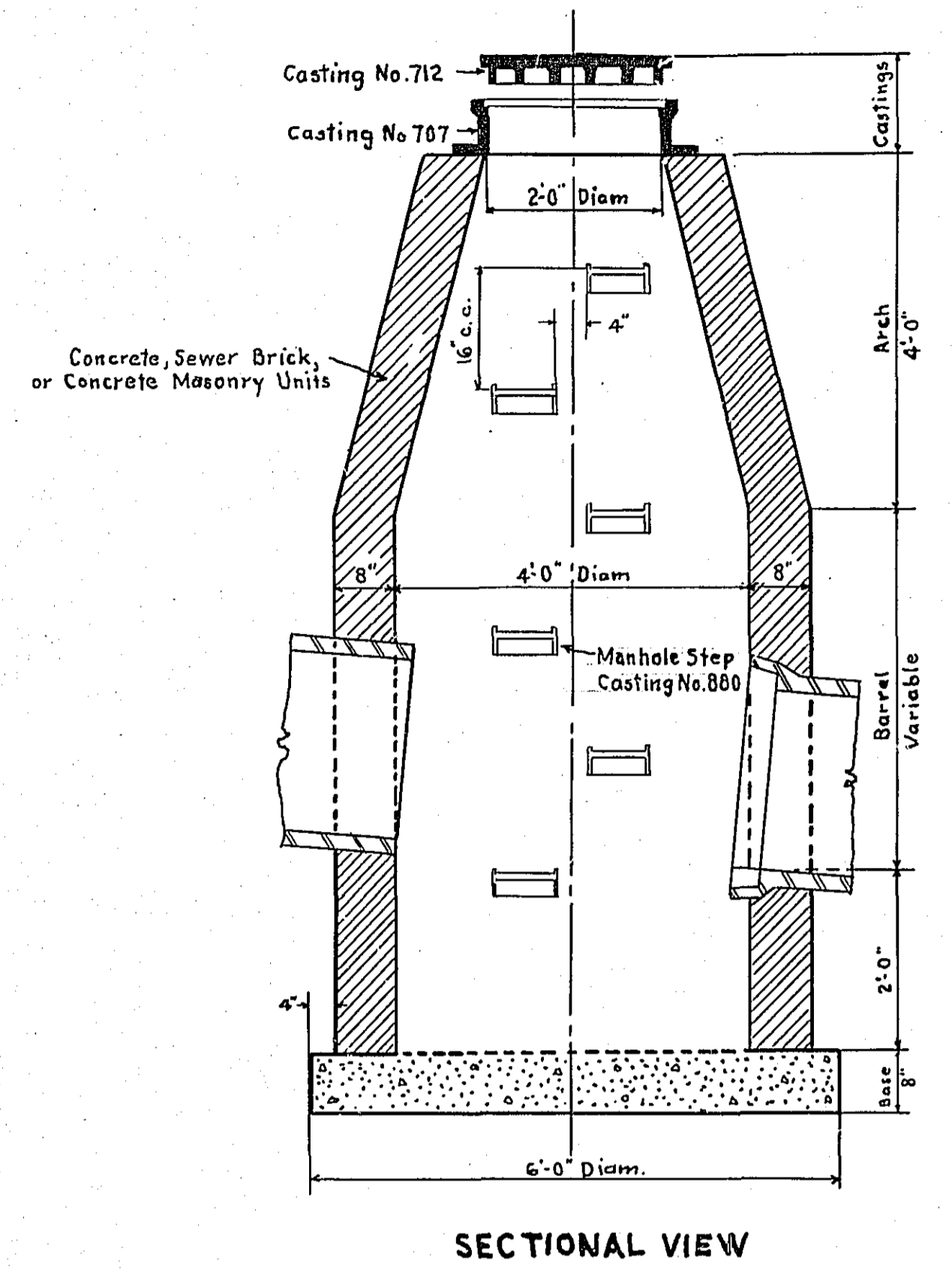
SUBCUT
GENERAL LONGITUDINAL SECTION ON C OF SUBCUT



NOTE: For Cross-Section of Subcut See Grading Section above. Excavated Material from Subcuts to be placed in Embankment outside of Roadbed.

MANHOLE

Specifications Reference: 2530

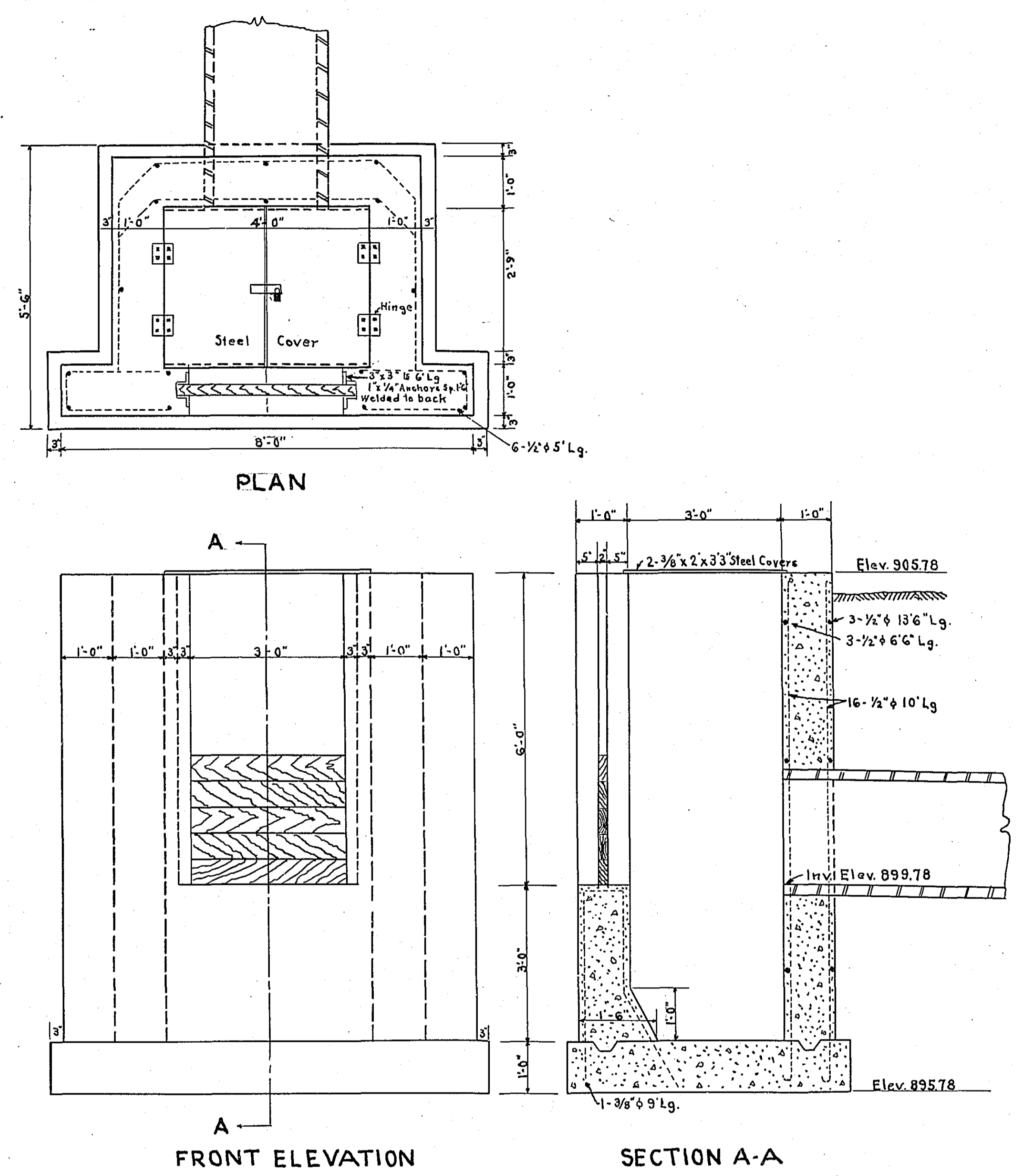


SECTIONAL VIEW

NOTES:
 Unit price bid for manhole to include manhole step casting
 Space manhole steps 16' c.c. beginning at bottom

CONTROL STRUCTURE

DITCH No. 5



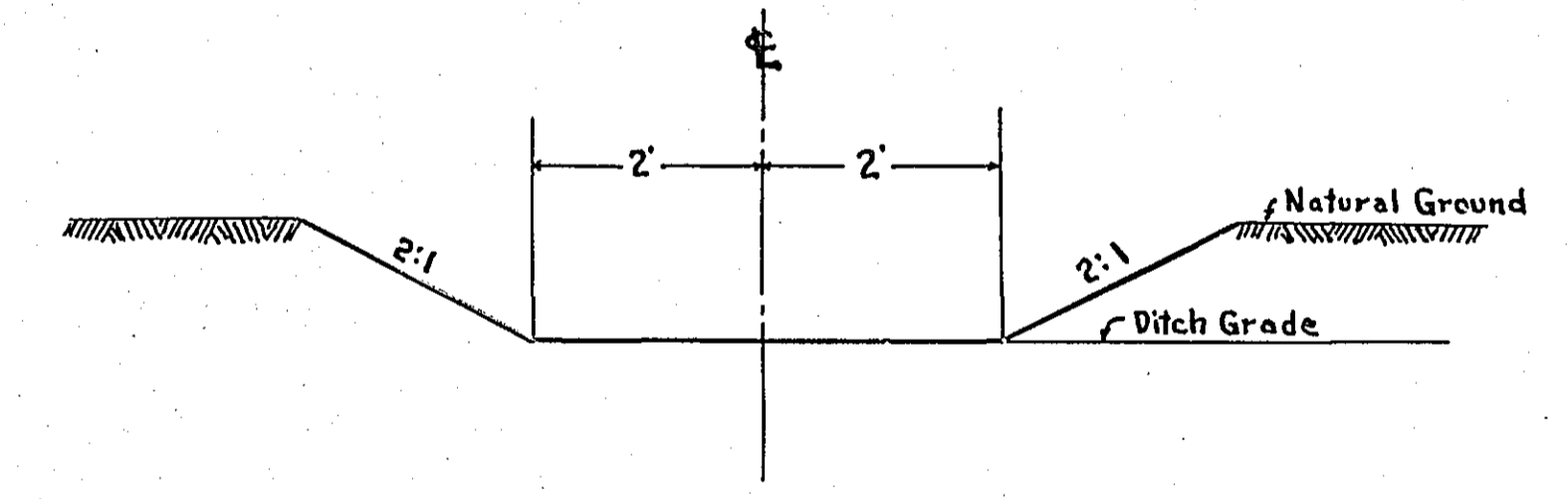
PLAN

FRONT ELEVATION

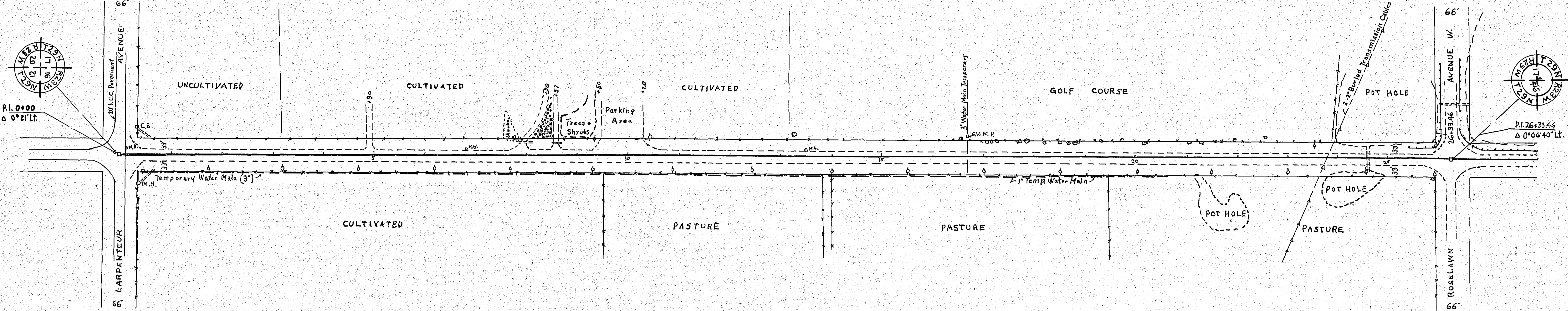
SECTION A-A

DITCH SECTION

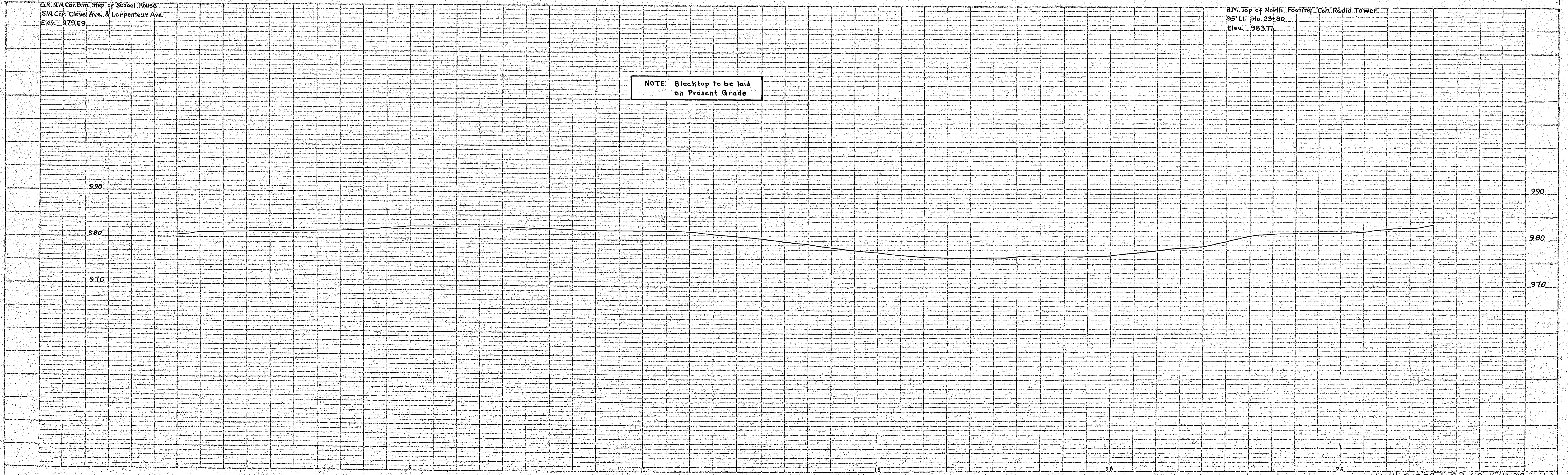
DITCH No. 5
 Sta. 44+63 to Sta 57+00



PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNED CHECKED	
	BY	
	NO.	

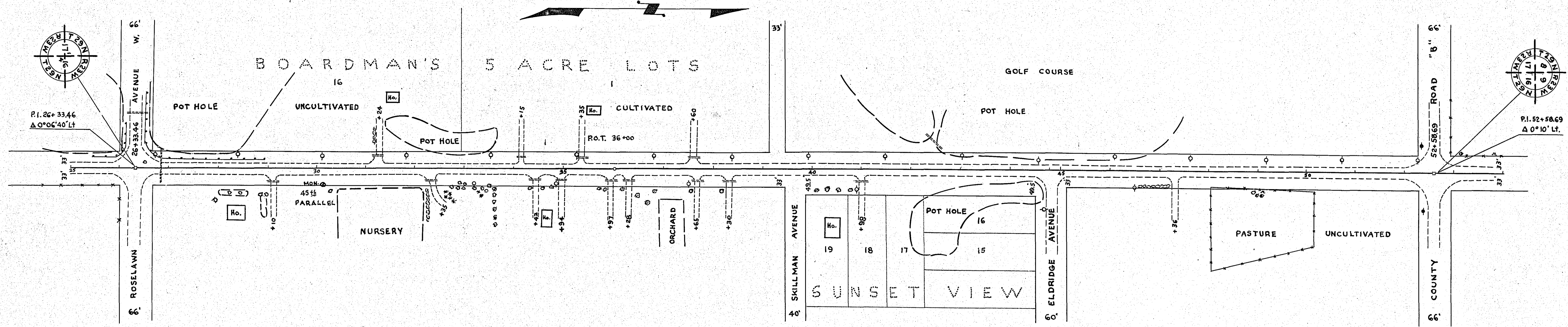


PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	BY	
	STRUCTURE NOT IN CHARGE	

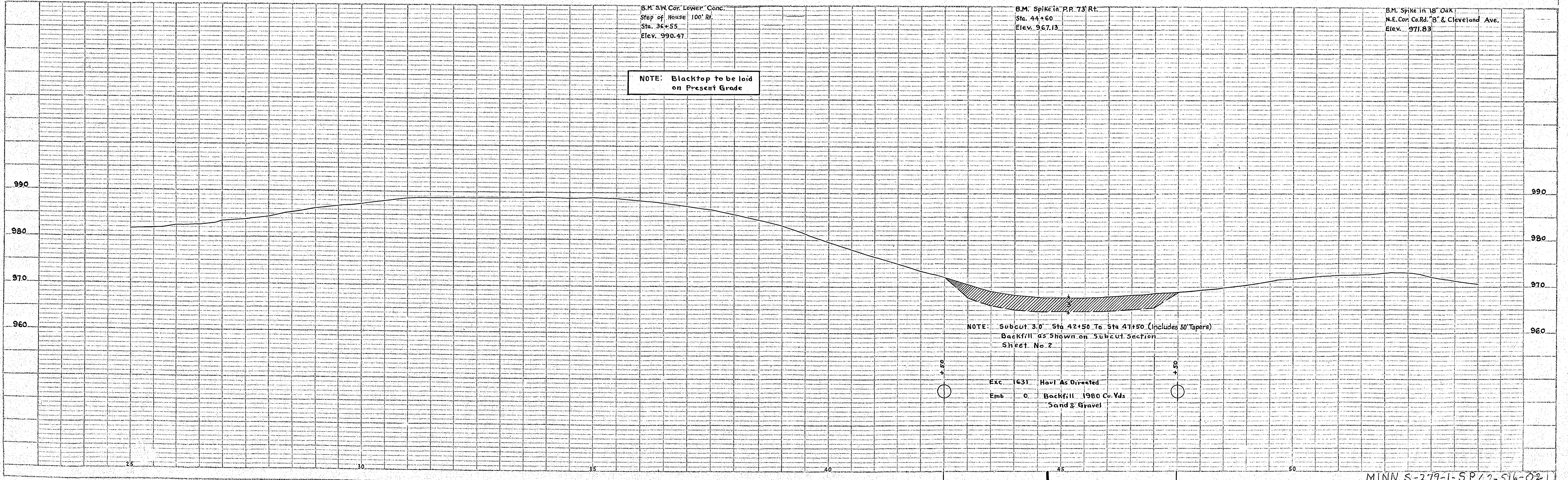


MINN.S-279-1-SP 62-576-02

PLAN	SURVEYED	DATE
BY		
NO. 1		
NO. 2		
NO. 3		
NO. 4		
NO. 5		
NO. 6		
NO. 7		
NO. 8		
NO. 9		
NO. 10		



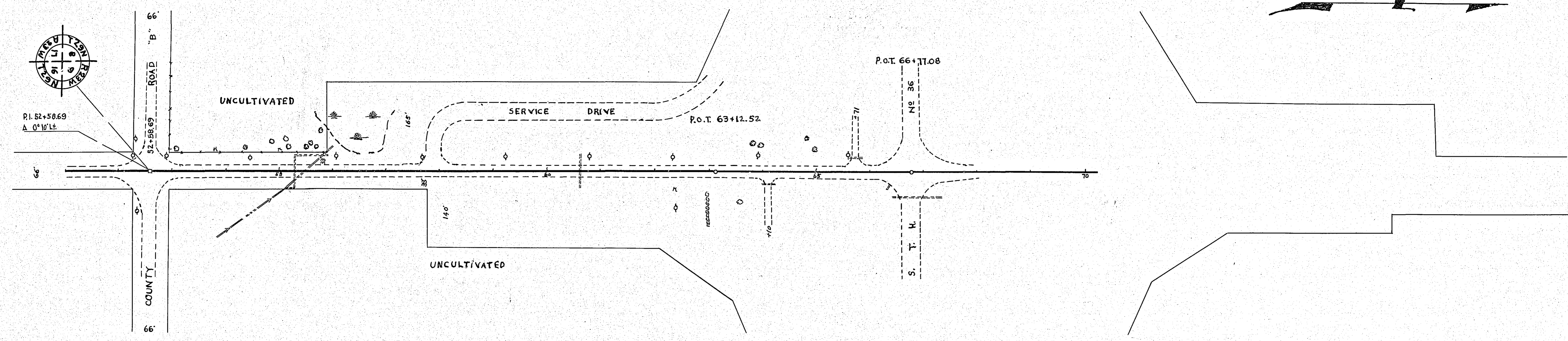
PROFILE	SURVEYED	DATE
BY		
NO. 1		
NO. 2		
NO. 3		
NO. 4		
NO. 5		
NO. 6		
NO. 7		
NO. 8		
NO. 9		
NO. 10		



MINN. S-279-1-5P. 62-516-021

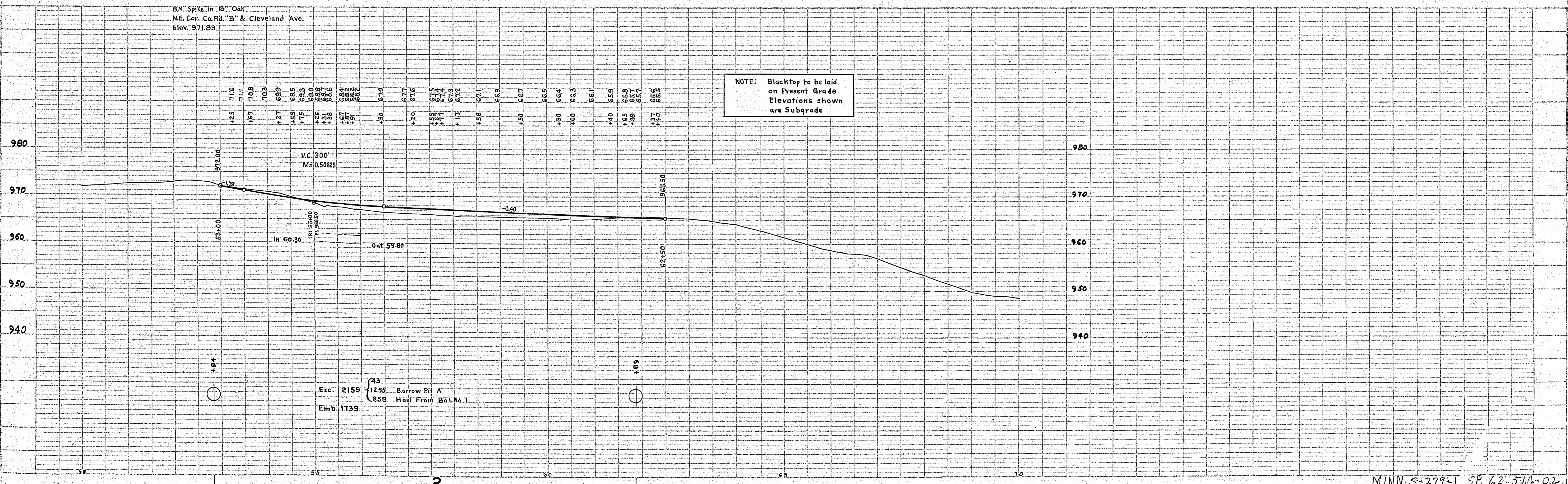
55+29 ± Inp. 24" x 54" C.M. Rem.
 55+60 Lt. Inp. 24" x 60" C.M. Rem.
 60+60 ± Inp. 24" x 68" C.M. OK Leave

Sta. 55+00 Rt. 45' to Sta. 56+00 Lt. 45'
 Place 24"x134" S.C. Pipe



PLAN
 SURVEYED BY
 NOTE BOOK NO.
 CALCULATED BY
 CHECKED BY
 DATE

B.M. Spike in 18" Oak
 N.E. Cor. Co. Rd. "B" & Cleveland Ave.
 Elev. 971.83

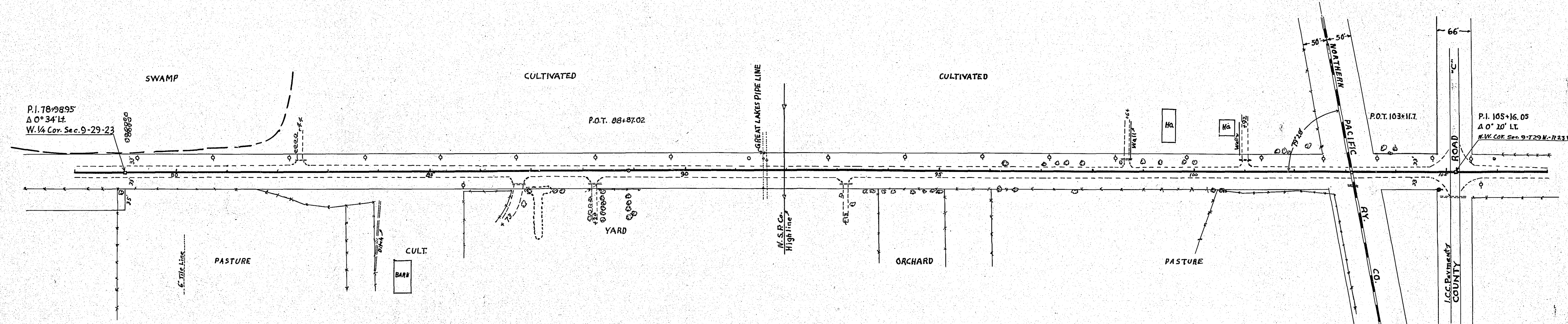


Exc. 2159 (43) Borrow Pit A
 Emb. 1139 (858) Haul From Bal. No. 1

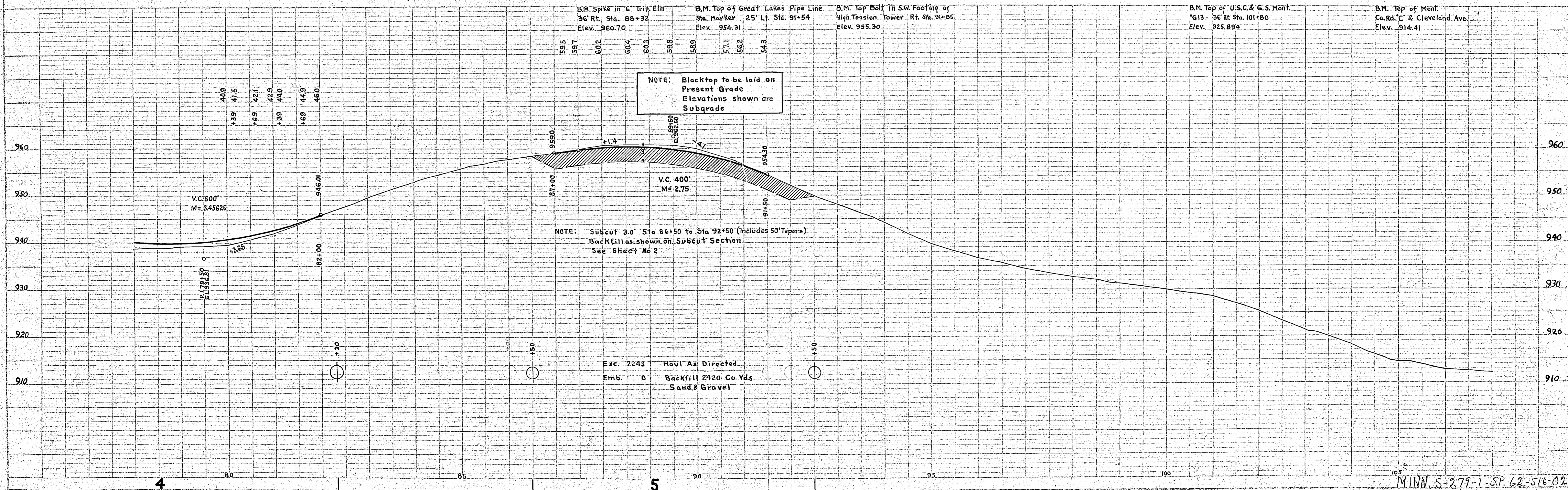
PROFILE
 SURVEYED BY
 NOTE BOOK NO.
 B.M. NOTED
 DATE

86+73 Rt.
Inp. 12" x 32" C.M.
Remove
No Culv. Req'd.

88+20 Rt.
Inp. 12" x 16" C.M.
Remove
No Culv. Req'd.



DATE: _____
BY: _____
SUPERVISOR: _____
PLANNED: _____
NOTED: _____
NOTE BOOK ALIGNMENT CHECKED: _____
NO. _____
DATE: _____



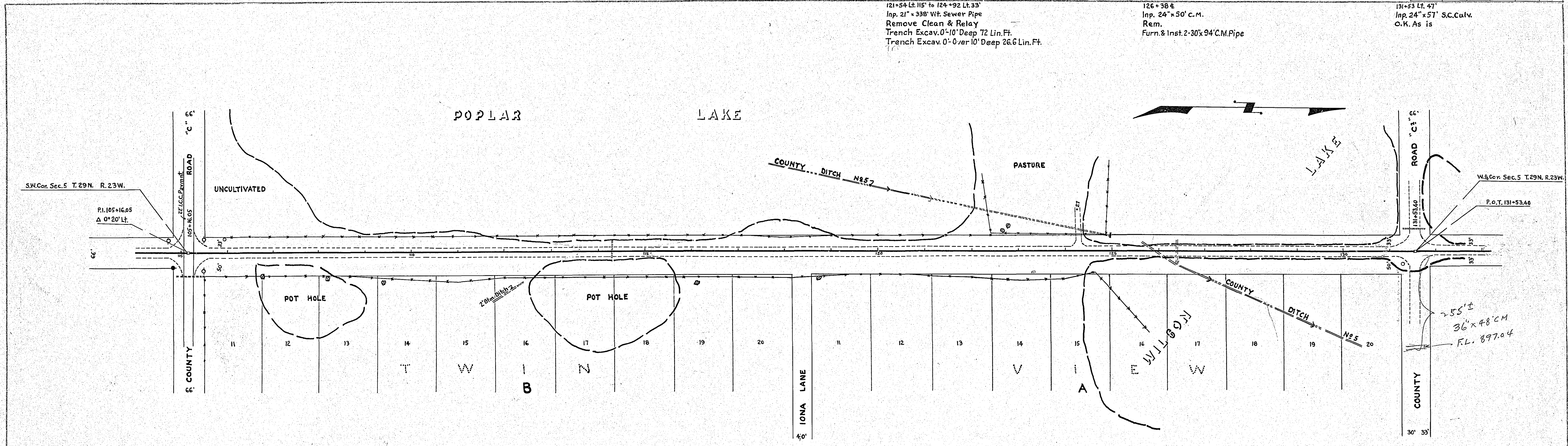
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BY: _____
SUPERVISOR: _____
PLANNED: _____
NOTED: _____
NOTE BOOK GRADES CHECKED: _____
NO. _____
DATE: _____

121+54 Lt. 115' to 124+92 Lt. 33'
 Inp. 21" x 338' Vit. Sewer Pipe
 Remove Clean & Relay
 Trench Excav. 0'-10" Deep 72 Lin. Ft.
 Trench Excav. 0'-0" over 10" Deep 26.6 Lin. Ft.

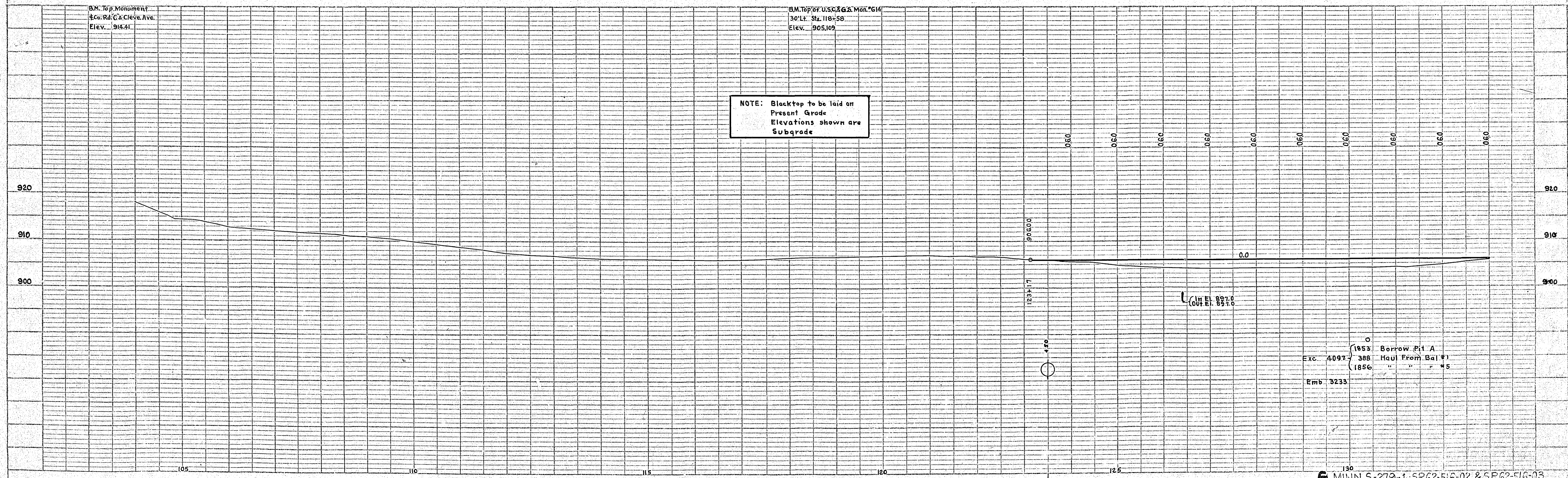
126+38 ±
 Inp. 24" x 50' C.M.
 Rem.
 Furn. & Inst. 2-30" x 94' C.M. Pipe

131+53 Lt. 47'
 Inp. 24" x 57' S.C. Culv.
 O.K. As is

PLAN	REVISIONS	DATE
NO. 1	AS SHOWN	
NO. 2	NOTED	
NO. 3	NOTED	
NO. 4	NOTED	
NO. 5	NOTED	
NO. 6	NOTED	
NO. 7	NOTED	
NO. 8	NOTED	
NO. 9	NOTED	
NO. 10	NOTED	

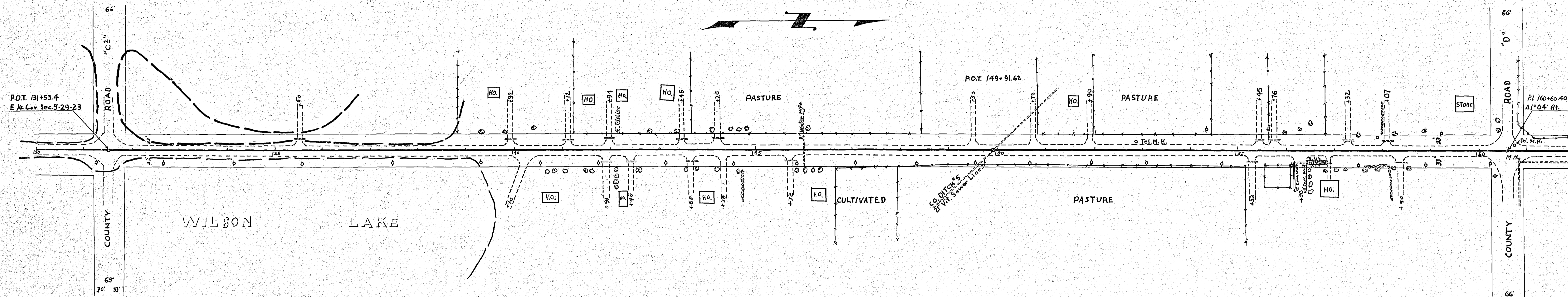


PROFILE	REVISIONS	DATE
NO. 1	AS SHOWN	
NO. 2	NOTED	
NO. 3	NOTED	
NO. 4	NOTED	
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NO. 6	NOTED	
NO. 7	NOTED	
NO. 8	NOTED	
NO. 9	NOTED	
NO. 10	NOTED	

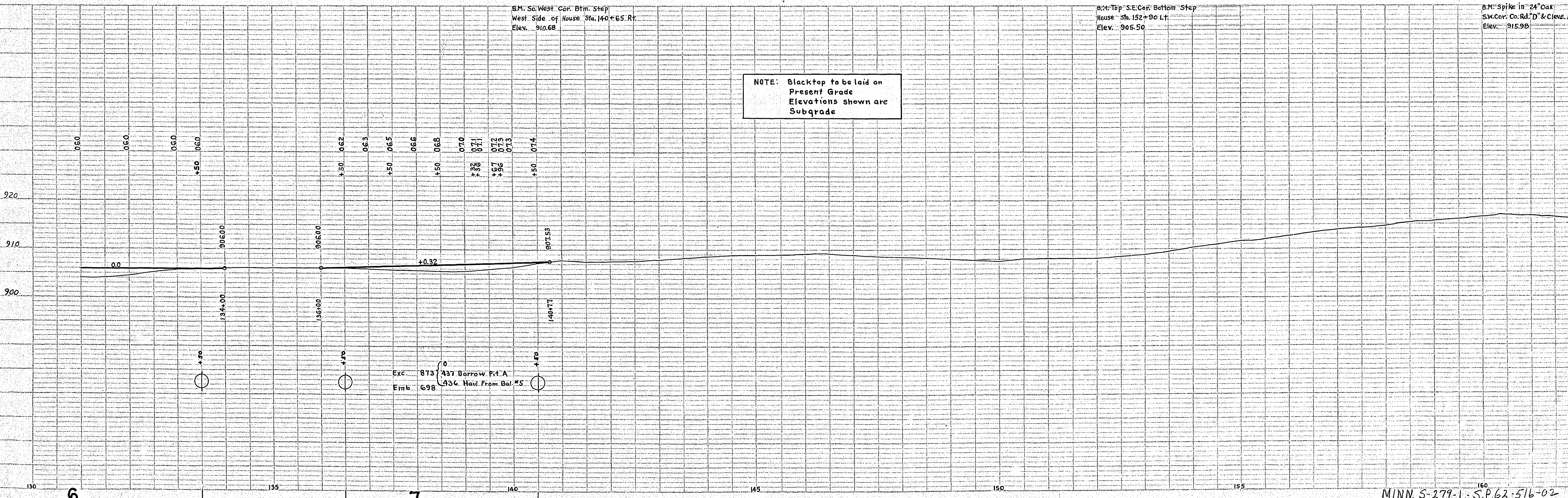


6 MINN S-279-1-5P62-516-02 & 5P62-516-03

139+92 Lt.
 Inp. 15" x 20" C.M.
 Remove
 No Culv. Req'd.



DATE	
BY	
SURVEYED	
PLANNED	
NOTED BOOK	
ALIGNMENT CHECKED	
SET OF WAY CHECKED	
NO.	

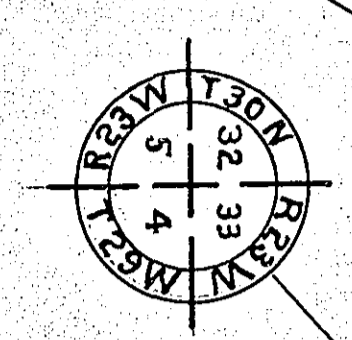


DATE	
BY	
SURVEYED	
PLANNED	
NOTED BOOK	
GRADES CHECKED	
E. M. A. NOTED	
STANDARD PRACTICES RECEIVED	
NO.	

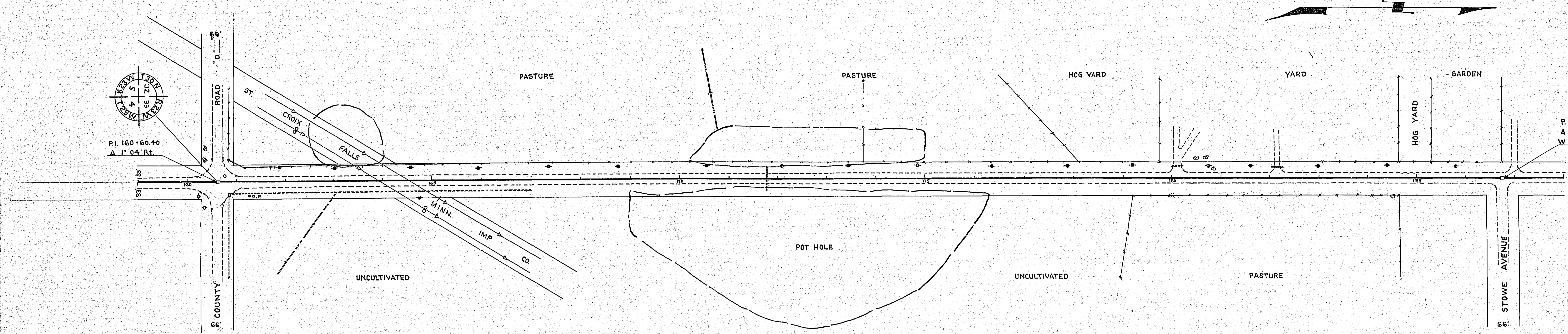
NOTE: Blacktop to be laid on Present Grade
 Elevations shown are Subgrade

MINN. S-279-1-S.P. 62-516-02

160+73 Lt. 13' Imp. Tele. M.H. O.K. Leave
 160+84 Rt. 21.3' Imp. Sewer M.H. O.K. Leave
 160+84 Rt. 21' to Sta. 167+00 Rt. 20' Imp. 4" Conc. Tile Line
 163+01 Rt. 21' to 163+06.5 Rt. 20' Imp. 4" x 9" Tile Line O.K. Leave
 171+78 & Imp. 24" x 52" C.M. O.K. Leave
 Ext. with 24" 8" C.M. Culv. Lt.
 Ext. with 24" x 14" C.M. Culv. Rt.
 180+11 Lt. Imp. 15" x 20" C.M. O.K. Leave
 182+14 Lt. Imp. 12" x 20" Dredge Pipe O.K. Leave



PLAN	BY	DATE
SURVEYED		
ALIGNED		
CHECKED		
NO. OF SHEETS		



B.M. Spk. 24" Oak
 S.W. Cor. Co. Rd. D & Cleve. Ave.
 Elev. 915.98

B.M. Spk. in T.P.
 Sta. 177+84 Lt.
 Elev. 910.05

B.M. Top of Mon.
 Stowe Ave & Cleve. Ave.
 Elev. 928.09

NOTE: Blacktop to be laid on Present Grade
 Elevations shown are Subgrade

PROFILE	BY	DATE
GRADED		
CHECKED		
NO. OF SHEETS		

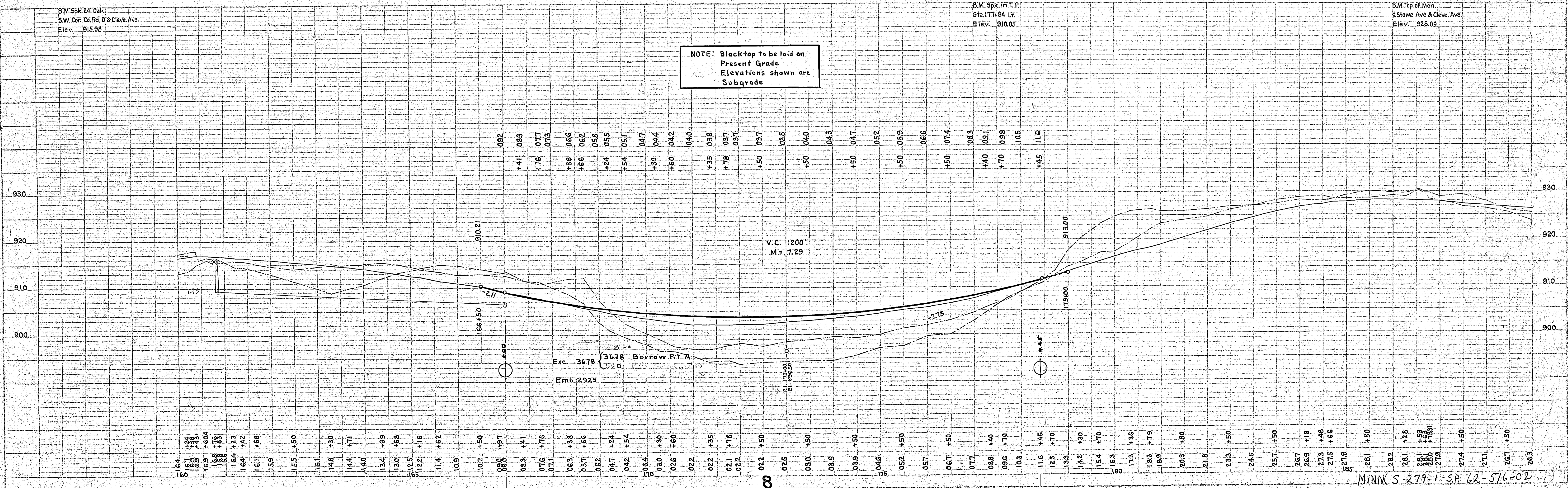


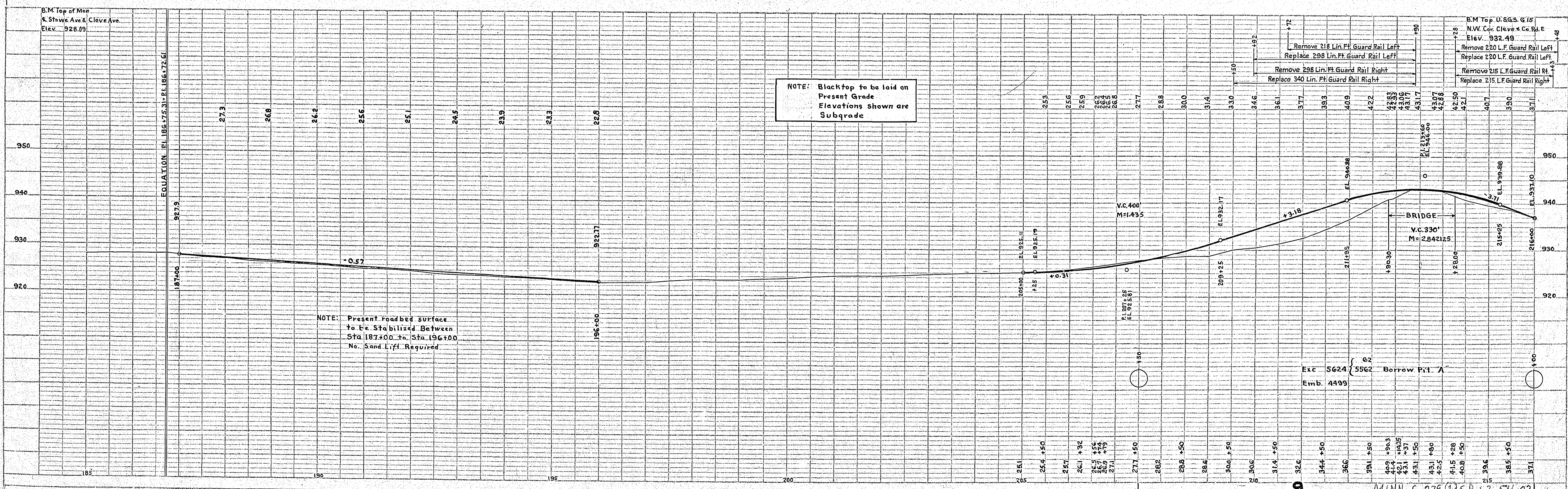
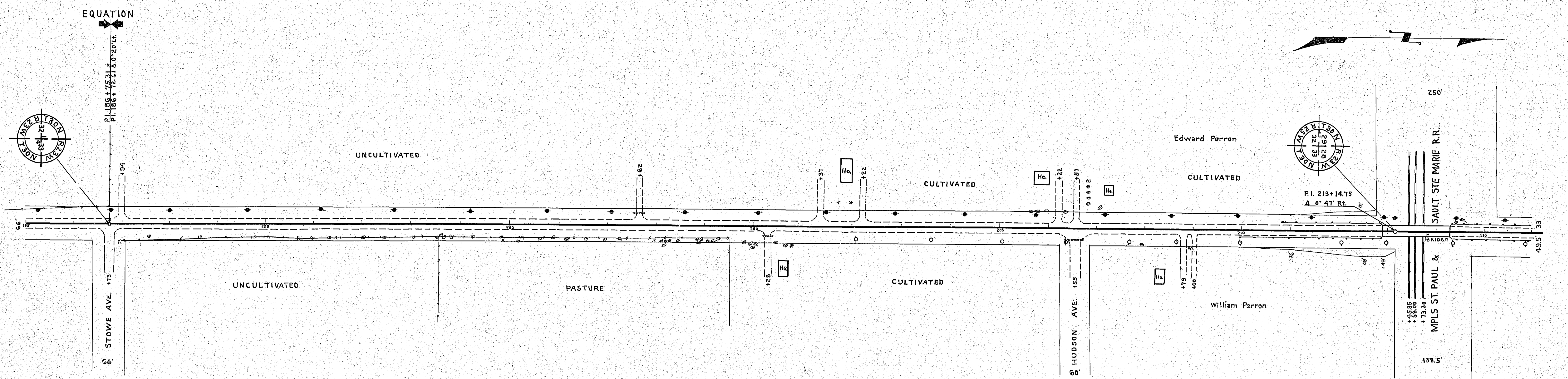
PLATE 1 - PLAN-PROFILE 2 - B. S. R. C. 1913

MINN. S-279-1-SP. 62-516-02

Cleveland Ave 650'

PLAN	DESIGNED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	BY	
	NOTE BOOK	
	NO. OF WAY CHECKED	
	NO.	

PROFILE	DESIGNED	DATE
	PLOTTED	
	ALIGNED	
	CHECKED	
	BY	
	NOTE BOOK	
	NO. OF WAY CHECKED	
	NO.	



NOTE: Blacktop to be laid on Present Grade Elevations shown are Subgrade

NOTE: Present roadbed surface to be stabilized between Sta. 187+00 to Sta. 196+00 No. Sand Liff Required

Exc 5624
Emb 4499

MINN. S. 279 (1) S.P. 62-576-02

221+74.6
Inp. 30% 60' S.C.P.
O.K. Leave

Sta. 228+72 Rt.
No Culv. Req'd.

234+00 Lt. 40' to R1.20'
Inp. 24% 60' S.C.P.
O.K. Leave

PLAN

DATE

BY

REVISIONS

NO.

DATE

BY

REVISIONS

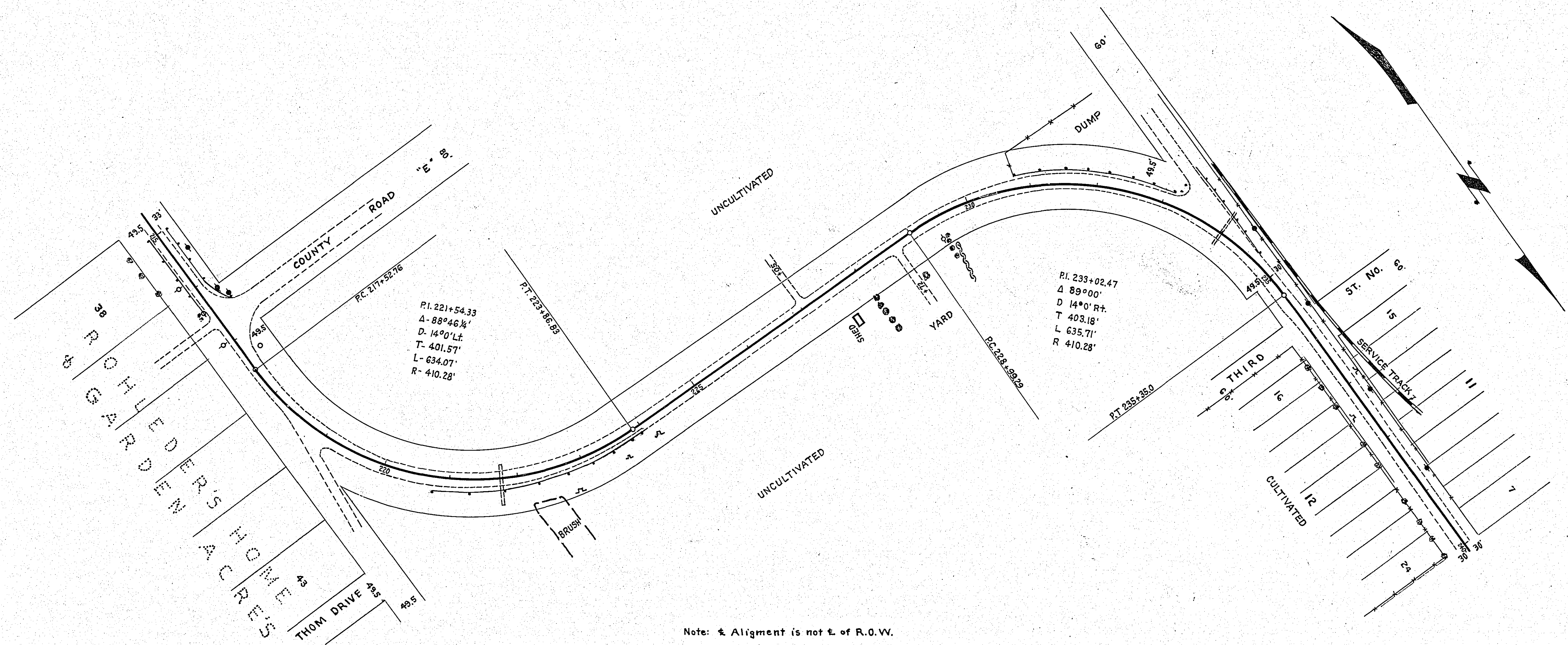
NO.

DATE

BY

REVISIONS

NO.



Note: Alignment is not E. of R.O.V.

PROFILE

DATE

BY

REVISIONS

NO.

DATE

BY

REVISIONS

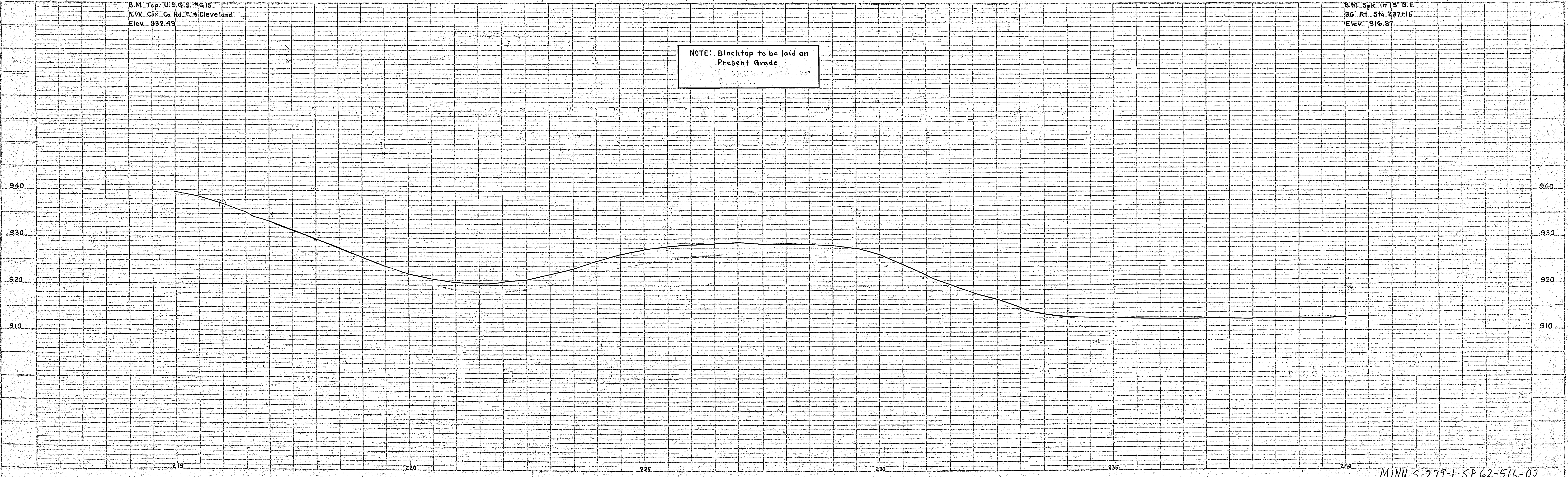
NO.

DATE

BY

REVISIONS

NO.



NOTE: Blacktop to be laid on Present Grade

ON ARRIVAL TO CUT

PLATE I-PLAN-PROFILE - D. P. R. STANDARD
MUSHE BIERSEN CO., Chicago, Ill. U.S.A.

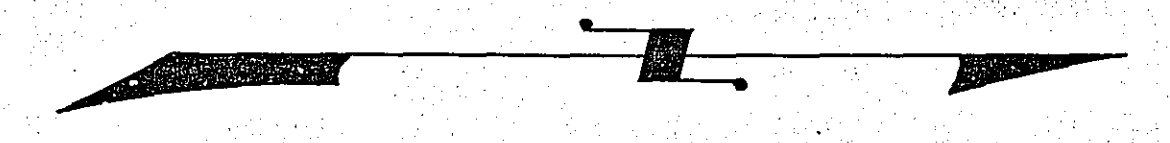
MINN. S-279-1-S.P. 62-516-02

SHEET 13 OF 31 SHEETS
Cleveland Ave 6507

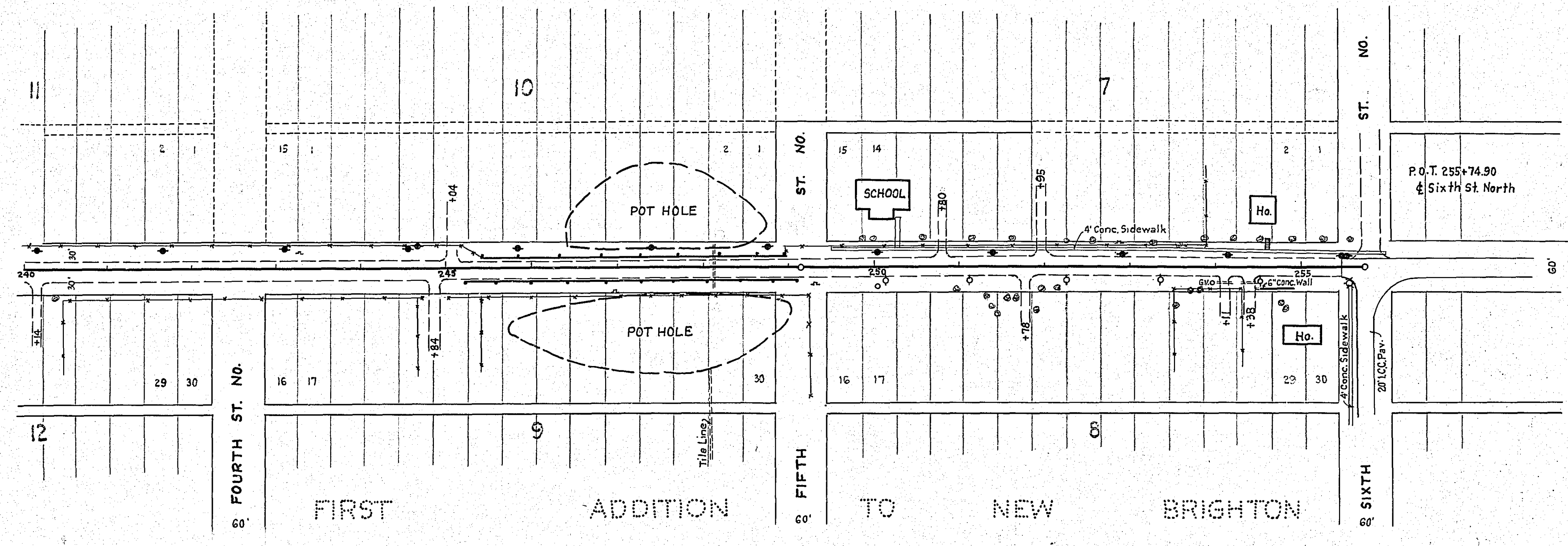
248+10.6
 Imp. Buried Tile Line N.G.
 Furn. & Inst. 24" S.C. Pipe

254+11.1 Rt.
 Imp. 12" x 16" C.M.
 Remove
 No Culv. Req'd.

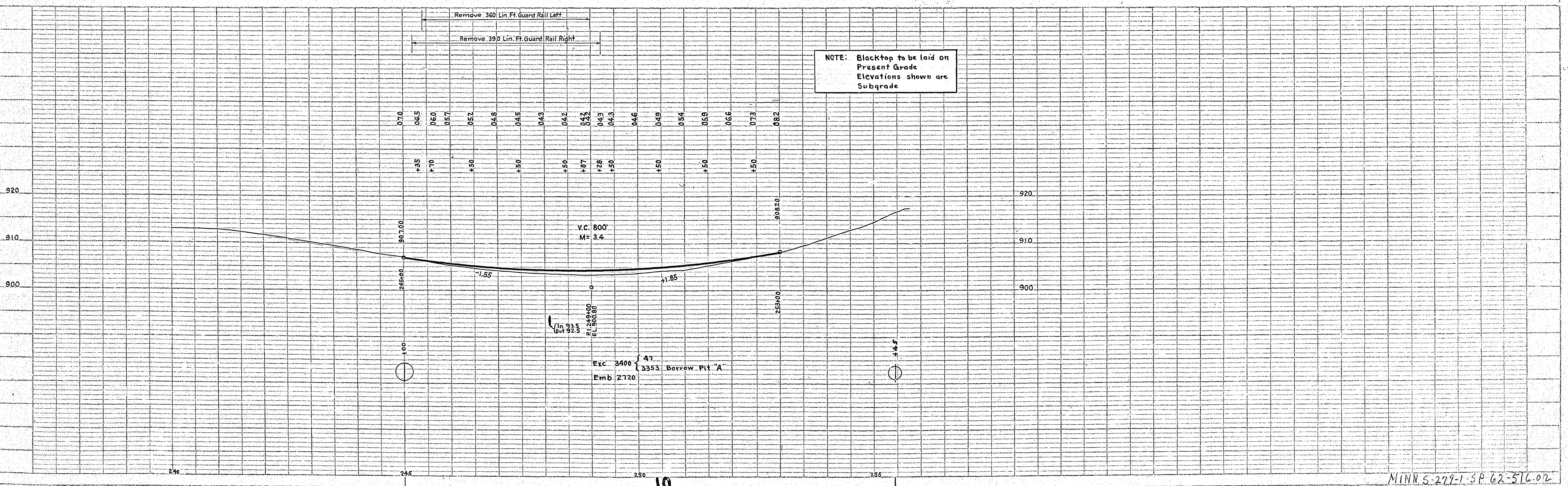
254+38.8 Rt.
 Imp. 12" x 20" C.M.
 Remove
 No Culv. Req'd.



PLAN APPROVED
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 PLANNED
 PLOTTED
 CHECKED
 NOTE BOOK NO.



PROFILE
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 BY DATE
 PLANNED
 PLOTTED
 CHECKED
 NOTE BOOK NO.

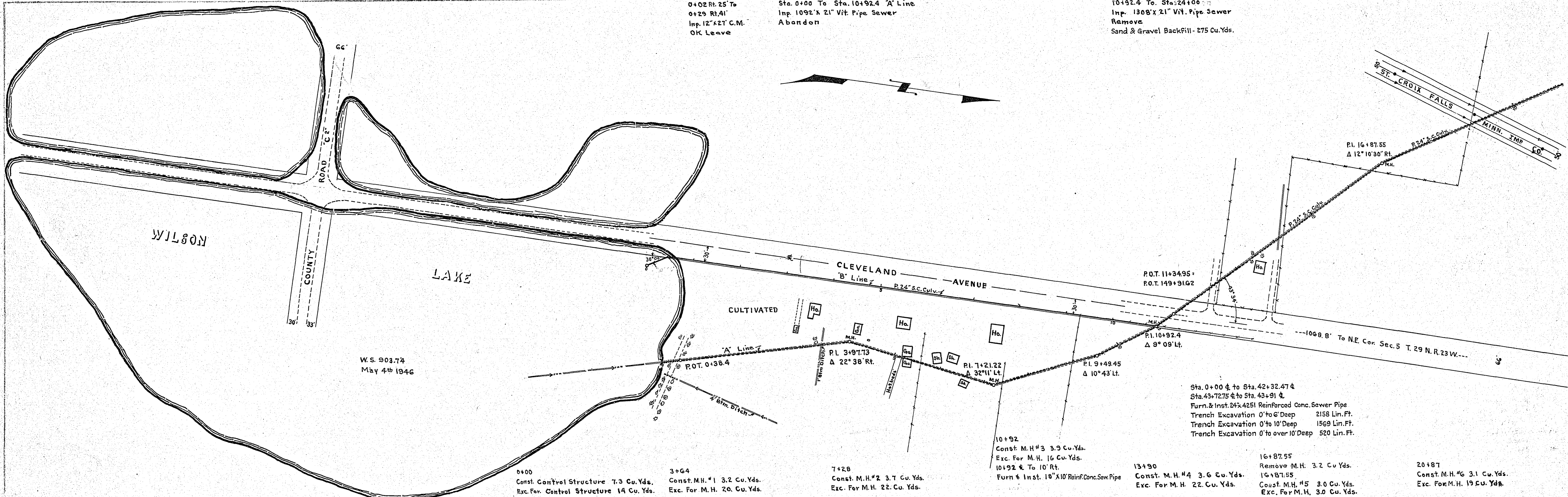


MINN. S. 279-1 SP. 62-516.02

0+02 Rt. 25 To 0+29 Rt. 41
Imp. 12" x 21" VIT. Pipe Sewer
OK Leave

Sta. 0+00 To Sta. 10+92.4 'A' Line
Imp. 1092' x 21" VIT. Pipe Sewer
Abandon

10+92.4 To Sta. 24+00
Imp. 1308' x 21" VIT. Pipe Sewer
Remove
Sand & Gravel Backfill - 275 Cu. Yds.



PLAN
DRAWING
CHECKED
DATE

NOTE BOOK
NO. OF SHEETS
NO.

PROFILE
SUBMITTER
DATE

NOTE BOOK
NO. OF SHEETS
NO.

0+00 Const. Control Structure 7.3 Cu. Yds.
Exc. For Control Structure 14 Cu. Yds.

3+64 Const. M.H. #1 3.2 Cu. Yds.
Exc. For M.H. 20 Cu. Yds.

7+28 Const. M.H. #2 3.7 Cu. Yds.
Exc. For M.H. 22 Cu. Yds.

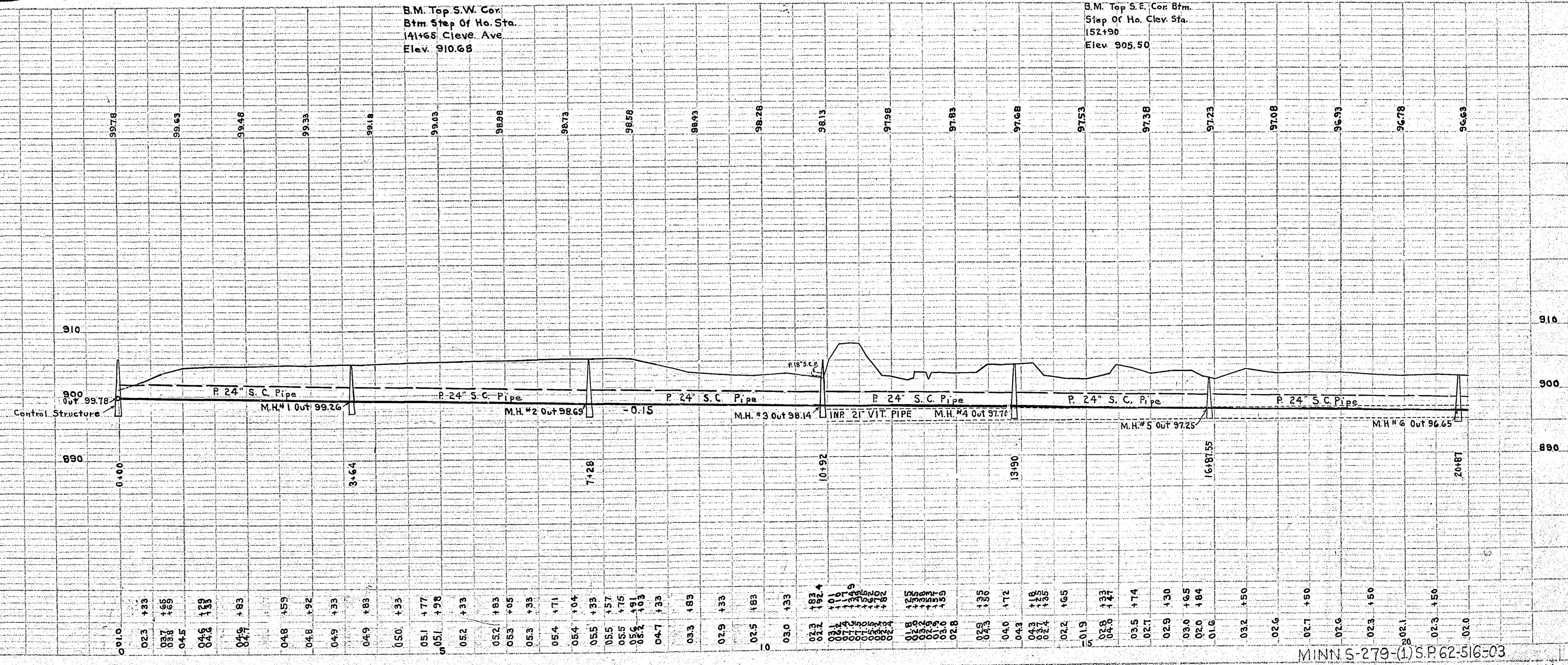
10+92 Const. M.H. #3 3.9 Cu. Yds.
Exc. For M.H. 16 Cu. Yds.
10+92 & To 10' Rt.
Furn & Inst. 18" x 10' Reinforced Conc. Sew. Pipe

13+90 Const. M.H. #4 3.6 Cu. Yds.
Exc. For M.H. 22 Cu. Yds.

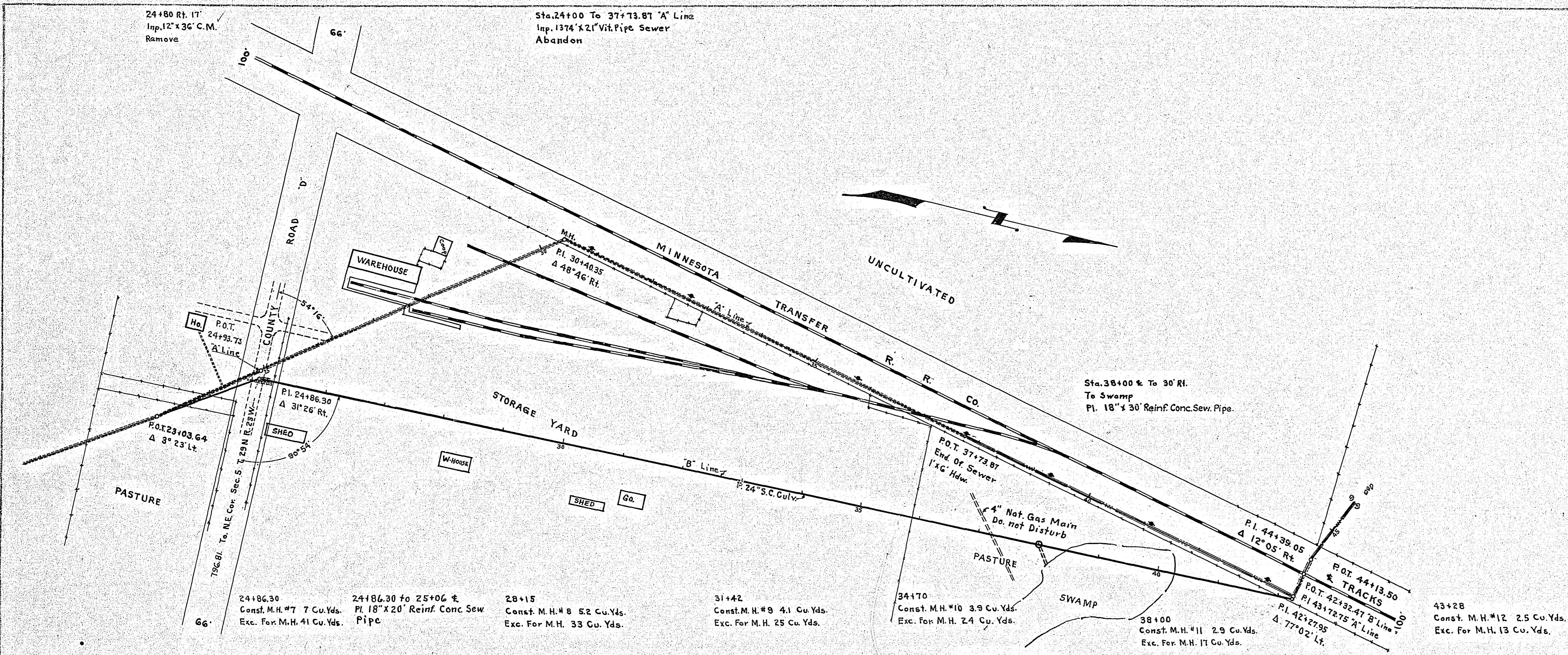
16+87.55 Remove M.H. 3.2 Cu. Yds.
16+87.55 Const. M.H. #5 3.0 Cu. Yds.
Exc. For M.H. 3.0 Cu. Yds.

20+87 Const. M.H. #6 3.1 Cu. Yds.
Exc. For M.H. 19 Cu. Yds.

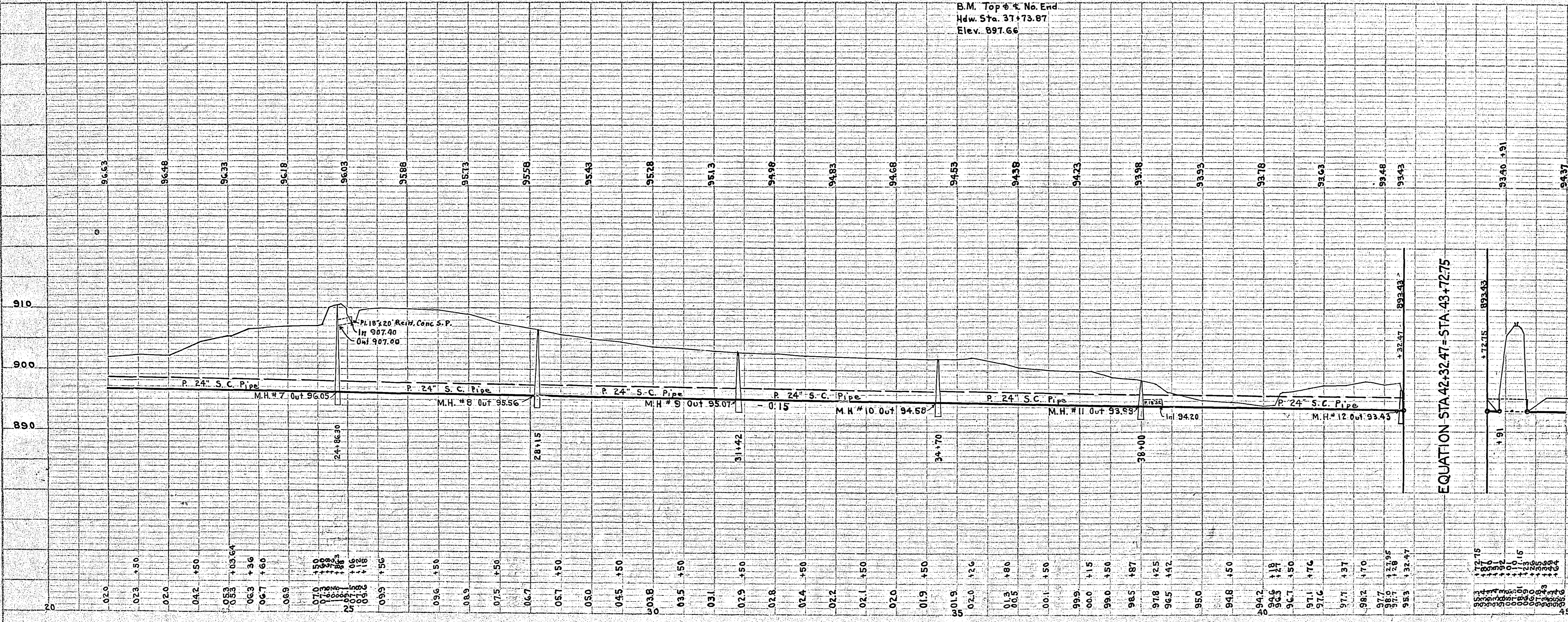
Sta. 0+00 & to Sta. 42+32.47 &
Sta. 43+72.75 & to Sta. 43+91 &
Furn. & Inst. 24" x 4251 Reinforced Conc. Sewer Pipe
Trench Excavation 0' to 6' Deep 2158 Lin. Ft.
Trench Excavation 0' to 10' Deep 1569 Lin. Ft.
Trench Excavation 0' to over 10' Deep 520 Lin. Ft.



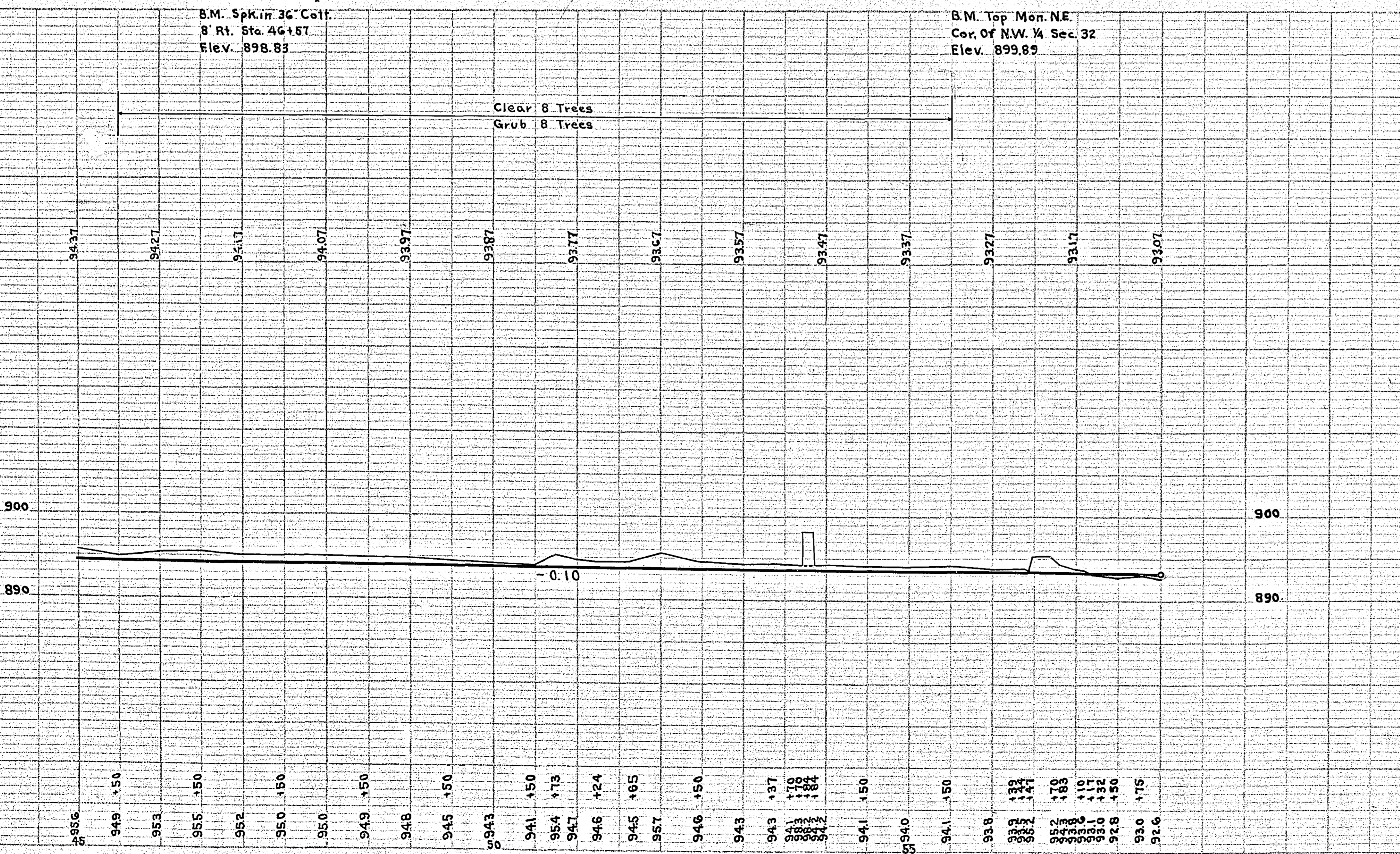
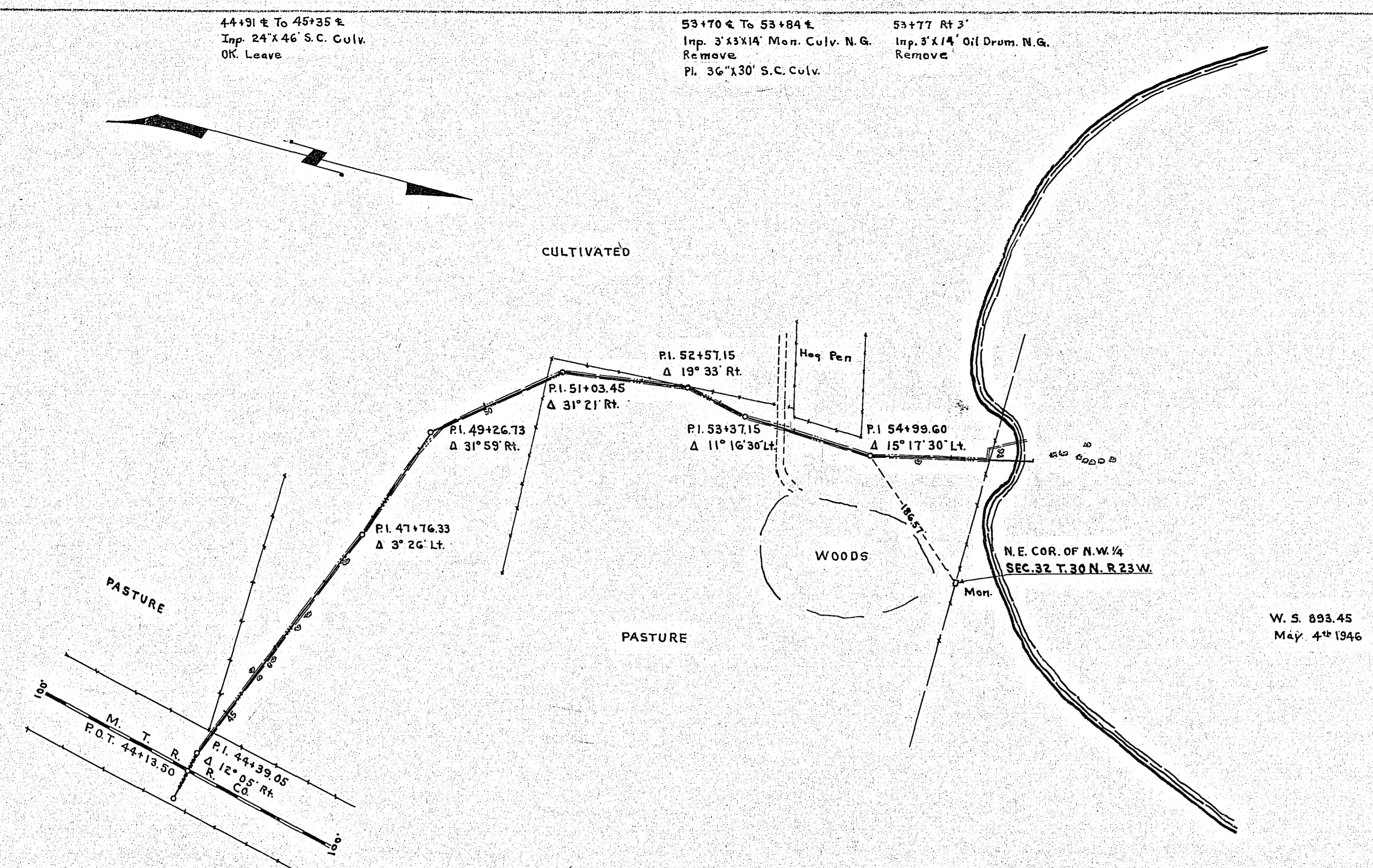
PLAN
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 STRUCTURE NOTATIONS CHECKED



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 STRUCTURE NOTATIONS CHECKED



5/17/15 6507



PLAN SURVEYED
PLOTTED
NOTE BOOK ALIGNMENT CHECKED
NO. 17

PROFILE SURVEYED
PLOTTED
NOTE BOOK CHECKED
NO. 17