173

1957
Year

Job. No. 014544

Changes

County RICHLAND

Project Identification RIC-1-12.03
RIC-C-12

FEP-32 4/C-62

File No. 5A-028

CONSULTANT PROJECT

Begin Sta. 10+00 End Sta. 409+00

Name of Consultant

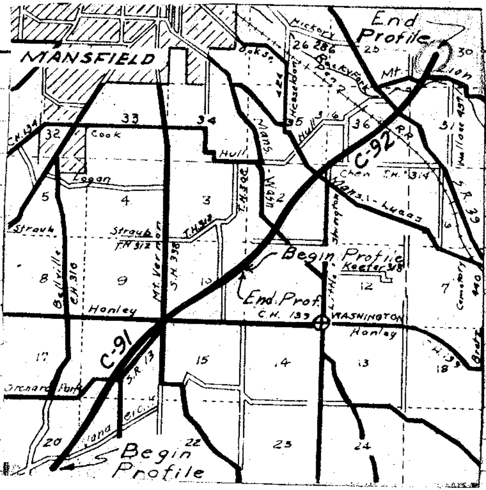
Name of Drilling Contractor

Contents of File

Date of Report 9-17-57 No. of Tracings 8

Date Received Filed with Year

Remarks


MANSFIELD
End Profile
C-92
C-91
Begin Profile
End Prof.
Begin Profile
WASHINGTON
Honley
Cook
Logan
Straub
Hull
Orchard Park
Hickory
Mt. Vernon
S.H. 330
C.H. 310
Bellville
C.H. 133
Keefer 318
33
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014544

SUMMARY OF TESTS ON SOIL PROFILE SAMPLES

1
2

County, Rt. No. & Section Ric-1-1003

Lab. No. So.	Field No.	Station	Depth in Feet	Mechanical Analysis					Physical Charact.			Density		SHTL Class	Remarks
				Agg %	C Sand %	F Sand %	Silt %	Clay %	LL	PI	Water Cont. %	Opt.	Max. Dry Wt.		
92841	1	406+0 119Rt	0'-3'	10	5	19	43	23	25	7	11			A-4a	
92842	2	" "	3-14	20	6	16	37	21	22	8	11			A-4a	
92843	3	" "	14-17	44	13	15	19	9	18	3	7			A-2-4	GRAVEL
92844	4	" "	17-20	36	8	25	18	13	19	5	10			A-2-4	"
92845	5	" "	20-25	14	9	47	17	23	N-P		16			A-3a	
92846	6	406+93 127Rt	0'-9'	10	7	18	41	24	24	7	11			A-4a	
92847	7	" "	9'-20	10	8	18	40	24	21	6	10			A-4a	
92848	8	" "	20-26	10	7	17	43	23	22	7	12			A-4a	
92849	9	" "	26-33	37	10	15	26	12	20	6	10			A-4a	
92850	10	" "	33-36	17	8	17	38	20	21	7	9			A-4a	
92851	11	408+70 127Rt	0'-10'	23	5	15	33	24	27	9	9			A-4a	
92852	12	" "	10-16	10	6	15	45	24	22	7	10			A-4a	
92853	13	" "	17-24	19	8	17	38	18	19	5	10			A-4a	

SUMMARY OF TESTS ON SOIL PROFILE SAMPLES

County, Rt. No. & Section RIC-1-1203

Lab. No. So.	Field No.	Station	Depth in Feet	Mechanical Analysis					Physical Charact.			Density		SHTL Class	Remarks
				Agg %	C Sand %	F Sand %	Silt %	Clay %	LL	PI	Water Cont. %	Opt.	Max. Dry Wt.		
92856	14	407+50 141LT	0-14	13	8	16	42	21	21	6	10			A-4a	
92857	15	" "	14-16	21	9	13	36	16	20	7	10			A-4a	
92856	16	" "	16-19	8	9	27	45	11	N-P		9			A-4a	
92857	17	406+00 143LT	0'-7'	23	7	16	38	16	22	5	10			A-4a	
92858	18	" "	7'-33	9	8	15	43	22	23	10	11			A-4a	
92859	19	" "	33-35	51	15	15	13	6	40	18	10			A-2-6	GRAVEL
92860	20	" "	35-41	29	10	17	31	13	18	4	11			A-4a	
92861	21	407+56 128LT	0'-9'	14	7	19	39	21	22	5	11			A-4a	
92862	22	" "	9-12	9	4	17	61	9	20	2	15			A-4a	
92863	23	" "	12-16	12	7	18	42	21	18	4	11			A-4a	
92864	24	408+82 95LT	0'-9'	13	5	17	40	25	25	9	11			A-4a	
92865	25	" "	9'-20'	10	9	18	38	25	20	7	11			A-4a	
92866	26	" "	20-25	10	7	20	41	22	20	5	12			A-4a	

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
TESTING LABORATORY

SUMMARY OF SOIL TEST DATA

CO., RT. NO., SEC. RICHLAND
RIC-1-12.03

SHEET NO. 1 OF 2 SHEET

SAMPLE NUMBER	LABORATORY NUMBER SO-	PHYSICAL CHARACTERISTICS							WATER CONTENT	DEPTH	DESCRIPTION	OHIO CLASS
		% AGGREGATE RET. # 10	% COARSE SAND 2.0MM - 0.42MM	% FINE SAND 0.42MM - 0.07MM	% SILT 0.07MM - 0.005MM	% CLAY <0.005MM	LIQUID LIMIT	PLASTICITY INDEX				
	STA 404+50	141' LT		SURF. EL.		1257.6						
14	92854	13	8	16	42	21	21	6	10	0.0-14.0	GRAY SANDY SILT	A-4a
15	92855	21	9	18	36	16	20	7	10	14.0-16.0	BROWN SANDY SILT	A-4a
16	92856	8	9	27	45	11	NP	NP	9	16.0-19.0	BROWN SANDY SILT	A-4a
			REFUSAL AT 19.0'									
	STA 405+00	119' RT		SURF. EL.		1249						
1	92841	10	5	19	43	23	25	7	11	0.0-3.0	BROWN SANDY SILT	A-4a
2	92842	20	6	16	37	21	22	8	11	3.0-14.0	GRAY SANDY SILT	A-4a
3	92843	44	13	15	19	9	18	3	7	14.0-17.0	GRAVEL & STONE FRTS	
											W/BR.SAND & SILT	A-2-4
4	92844	36	8	25	18	13	19	5	10	17.0-20.0	GRAVEL & STONE FRTS	
											W/BR. SAND & SILT	A-2-4
5	92845	14	4	47	12	23	NP	NP	16	20.0-21.5	COARSE & FINE LIGHT	
											BROWNISH GR. SAND	A-3a
	STA 406+00	142' LT		SURF. EL.		1,257.3						
17	92857	23	7	16	38	16	22	5	10	0.0-7.0	BR. SANDY SILT	A-4a
18	92858	9	8	18	43	22	23	10	11	7.0-33.0	GRAY SANDY SILT	A-4a
19	92859	51	15	15	13	6	40	18	10	33.0-35.0	GRAVEL & STONE FRTS	
											W/SAND SILT & CLAY	A-2-6
20	92860	29	10	17	31	13	18	4	11	35.0-41.0	GRAY SANDY SILT	A-4a
			HOLE CAVED AT 32.0'									
			WATER SEEPAGE AT 33.0'									

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
TESTING LABORATORY

SUMMARY OF SOIL TEST DATA

CO., RT. NO., SEC. RICHLAND
RIC-1-12.03

SHEET NO. 2 OF 2 SHEET

SAMPLE NUMBER	LABORATORY NUMBER SO-	PHYSICAL CHARACTERISTICS							WATER CONTENT	DEPTH	DESCRIPTION	OHIO CLASS
		% AGGREGATE RET. # 10	% COARSE SAND 2.0MM - 0.42MM	% FINE SAND 0.42MM - 0.074MM	% SILT 0.074MM - 0.005MM	% CLAY <0.005MM	LIQUID LIMIT	PLASTICITY INDEX				
	STA 406+93	127' RT		SURF. EL.		1248		.1				
6	92846	10	7	18	41	24	24	7	11	0.0-9.0	BR. SANDY SILT	A-4a
7	92847	10	8	18	40	24	21	6	10	9.0-20.0	GRAY SANDY SILT	A-4a
8	92848	10	7	17	43	23	22	7	12	20.0-26.0	GRAY SANDY SILT	A-4a
9	92849	37	10	15	26	12	20	6	10	26.0-33.0	GRAY SANDY SILT	A-4a
10	92850	17	8	17	38	20	21	7	9	33.0-36.0	GRAY SANDY SILT	A-4a
	STA 407+56	128' LT		SURF. EL.		1250		.8				
21	92861	14	7	19	39	21	22	5	11	0.0-9.0	BROWN SANDY SILT	A-4a
22	92862	9	4	17	61	9	20	2	15	9.0-12.0	GRAY SILT	A-4b
23	92863	12	7	18	42	21	18	4	11	12.0-26.0	GRAY SANDY SILT	A-4a
			WATER SEEPAGE AT 22.0'									
	STA 408+70	127' RT		SURF. EL.		1235		.6				
11	92851	23	5	15	33	24	27	9	9	0.0-10.0	BROWN SANDY SILT	A-4a
12	92852	10	6	15	45	24	22	7	10	10.0-16.0	GRAY SANDY SILT	A-4a
13	92853	19	8	17	38	18	19	5	10	16.0-24.0	GRAY SANDY SILT	A-4a
			WATER SEEPAGE AT 8.0'									
	STA 408+82	95' LT		SURF. EL.		1246		.1				
24	92864	13	5	17	40	25	25	9	11	0.0-9.0	BROWN SANDY SILT	A-4a
25	92865	10	9	18	38	25	20	2	11	9.0-20.0	GRAY SANDY SILT	A-4a
26	92866	10	7	20	41	22	20	5	12	20.0-25.0	GRAY SANDY SILT	A-4a

Form L.96-B.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

INTER-OFFICE COMMUNICATION

County of ..... Div. .....

S. H. ..... Sec. .....

Date September 17, 1957

To Neil E. Mason, Engineer, Testing Laboratory ..... Attention: .....

From R. J. Lehman, Chief Engineer, Interstate Projects By Robert B. Burket .....

Subject .....

Herewith please find one copy of Soil Profile covering contract sections C-91 and C-92 of SR 1 in Richland County.

R. J. Lehman

Robert B. Burket

By Robert B. Burket, Engineer
Location and Design

RJL/RBB/KY/el
cc: FILE:
File (Reading)

May 7, 1958

R. E. Shultz, Engineer of Location & Design — H. L. Marshall

R. R. Litehiser, Engineer of Tests — Per: W. L. Mason

Report of Special Borings RIC-1-12.03 C-92 — File: 13-3-1 Richland

In accordance with your request by phone of April 28, and confirming our conversation of May 2, transmitted herein are the results of a investigation to explore a cut section between station 404+00 and 409+00 on the above project.

It is our understanding that borings made by the Mobile Drilling and Engineering Co., for the soil profile, indicated sandstone bedrock at a higher elevation than that encountered by the construction contractor in preparing borings for explosive charges to excavate the sandstone. The approximate degree of this difference is indicated in the following table:

	TOP OF ROCK ELEVATION	
STATION	MOBILE DRILLING	CONSTRUCTION CONTRACTOR
404+50	1254'	1238'
405+00	1255'	1221'
406+00	1253'	1214'

Since it was intended that slopes be ½:1 in the rock with a 20 foot bench at rock surface and 2:1 slope in the overburden, the depth of soil cover being greater than anticipated would necessitate a greater width of cut transverse to centerline, and in this case a wider right of way than had been purchased.

In order to more accurately establish the rock surface location a staff geologist, and a drilling crew were dispatched from this office to the site. Their assignment was to probe for rock surface using a truck mounted earth auger, and to examine rock exposures in the excavation. The following table discloses the results of this investigation.

TOP OF ROCK ELEVATION

STATION	LEFT	RIGHT
404+00	1258 (Exposure 144' Lt.)	1275 (Exposure)
404+50	1238 (Boring 141' Lt.)	1270 (Exposure)
405+00	1222 (Interpolated)	1260 (Exposure)
405+50	1210 (Interpolated) Just below grade	1248 (Exposure)
406+00	1205 (Estimated) Below grade	1227 (Boring 119 Rt.)
406+50	- Below grade	1215 (Interpolated)
406+93	- Below grade	Boring 127' Rt indicates no rock above grade (Interpolated Sl. of Rock 1208').

Briefly, the findings disclose that glacial drift is plastered against a rock face and that the plane of the rock face is at a slope of about 1/3:1 with the horizontal, crosses the centerline on a skew of about 30° Right Forward, and that no rock will be in the slope beyond station 406+50.

The soil overburden was found to be composed of sandy silts and clays generally containing gravel and stone fragments.

R. R. Litchiser
Engineer of Tests

Per _____
N. L. Mason
Assistant Engineer

NLM:DJR:bjl

cc: H. H. Craig Attn: Shepard
N. J. Lehman
N. L. Mason (2)

RIC- 1-12.03

1. 406+00 119 Rt.
Sur. El. = 1249.0

Refusal 21.5'

2. 406+00 142 Lt.
Sur. El. 12573 (delete comment

WAS
NOT TRANSMITTED

Data Not available
at time of letter report

404+50 Lt. pl 1214 bench
1238 neck

405+00 Lt pl 1256
1221 neck

406+00 Lt. 1251 bench
1214 neck

Ric-1-12.03 (Strahl)

Sta. 406+00 — 119' Rt. El. 1249.0

Sample No	Depth	Visual Classification
1	0.0-3.0	Brown Sandy Silt w/Gravel & Stone Fragments
2	3.0-14.0	Gray Sandy Silt w/Gravel
3	14.0-17.0	Brown Sandy Silt w/Gravel & Stone Fragments
4	17.0-20.0	" " " w/Gravel & " "
5	20.0-21.5	Light Brownish Gray Sandy Clay w/Stone Fragments
		Refusal at 21.5 — Bedrock (Sandstone)
Sta 406+93 — 127' Rt. El. 1248.1		
6	0.0-9.0	Brown Sandy Silt Clay w/Gravel & Stone Fragments
7	9.0-20.0	Gray Sandy Silt w/Gravel
8	20.0-26.0	" " " " "
9	26.0-33.0	Gray Sandy Clayey Silt w/Gravel & Stone Fragments
10	33.0-36.0	" " " " w/Gravel " " "
		Moisture at 18.0'
		NOTE: Two holes at Sta. 407+00 128' Rt. Hit Boulders @: for 1st hole — 7' for 2nd hole — 6'
Sta 408+70 — 127' Rt El. 1235.6		
11	0.0-10.0	Brown Sandy Silt Clay w/Gravel & Stone Fragments
12	10.0-16.0	Gray " Silt w/Gravel & Stone Fragments
13	16.0-24.0	D.H.O.
		Water Seepage at 8.0'
Sta 404+50 — 141' Lt. El. 1257.6		
14	0.0-14.0	Gray Sandy Silt Clay w/Gravel & Stone Fragments
15	14.0-16.0	Brown Sandy Silt w/ " " " "
16	16.0-19.0	Brown Silty Sand w/Stone Fragments
		Refusal at 19.0' — (Sandstone or Weathered Sandstone)
		Tried 3 holes 1st Hit boulder at 8.0' 2nd " " " 12.0'

Ric-1-12.03 (con't) (strahl)

Sta. 406+00 - 142' Lt. El. 1257.3

Sample No	Depth	Visual Classification
17	0.0 - 7.0	Brown Sandy Silt w/ Gravel & Stone Fragments
18	7.0 - 33.0	Gray " " w/ " " " "
19	33.0 - 35.0	Gray Silty Sand w/ " " " "
20	35.0 - 41.0	Gray Sandy Silt w/ " " " "
		Hole Caved at 32'.0 - Water Seepage at 33'.0

Sta. 407+56 - 128' Lt. El. 1250.8

21	0.0 - 9.0'	Brown Sandy Silt w/ Gravel & Stone Fragments
22	9.0 - 12.0'	Gray Silt w/ Stone Fragments
23	12.0 - 26.0'	Gray Sandy Silt w/ Gravel & Stone fragments
		Water Seepage at 22.0'

Sta. 408+82 - 95' Lt. El. 1246.1

24	0.0 - 9.0	Brown Sandy Silt Clay w/ Gravel & Stone Fragments
25	9.0 - 20.0	Gray " " " w/ " " " "
26	20.0 - 25.0	Gray Sandy Silt w/ Gravel & Stone Fragments

Sta		Rock Lt		Rock Rt	
404+00	Exp.	144 Lt	- 1258	Exp.	1 [illegible] Rt - 1275
404+50	Bor	140 Lt	- 1238	Exp	Rt - 1270
405+00	Interpolated		1222	Exp	1260
405+50	Interpolated		1210 " cost bel grade	Exp	Rt 1248
406+00	Below grade	cst	1205	Bor	119 Rt 1227
406+50	do			Inter	1215 ± No rock
406+93				Bor	127 Rt. above grade Inter 1208 ±

No rock in cut beyond 406+50

1276 1268 1255
1254 1255 1251
22 13 4

1245 1280
1238 1238
37 41

RIC-1-12.03   03281(2)

404+50 Lt. plan indic. Top of rock 1254. bench 20'
Slope 1/2:1 to bench top 10' 2:1 contractors boring " " 1238.

405+00 Lt. plan " Top of rock 1255. bench 20'
contrac. boring 1221

406+00 Lt. plan 1251 right
1/2:1 to 2:1 @ 1253 left. 1214 contrac

Steep slope to 409+70 went to straight 2:1

130-140 @ 150'

404-409

404+00 404

405+50

407+00

Fred Rudd @ Ashland
for arrangements for elevations

14544

FIELD BORING LOG

County, Route No., Section RIC – 1 – 12.03

Station 404 +50 Offset 141 Lt Elev. 1257.6

Date 4/30/58 Water Elev.

Crew Enoch, Pugh & Rose Equipment R19

Drafting

Depth Feet	Field Number	Description
0-	#14	GRAY SILT CLAY WITH STONE & GRAVEL
5		
10		
15	#15	BROWN SANDY CLAY SILT WITH STONE & GRAVEL
	#16	GRAY SANDY CLAY SILT WITH STONE & GRAVEL
20		REFUSAL @ 19.0 HIT SANDSTONE OR WEATHERED SANDSTONE
25		3 HOLES HIT BOULDERS 1ST HOLE @ 8.0 2ND HOLE @ 12.0
30		

Use reverse side of this sheet for additional notes.

FIELD BORING LOG

County „Route No., Section RIC — 1 — 12.103

Station 406+00 Offset 119' Rt ℄ Elev. 1249.0

Date 4/30/58 Water Elev.

Crew Stucki, Pugh & Rose Equipment Rig

Drafting

Depth Feet	Field Number	Description
0	1	Brown Sandy Clay Silt with Stone & Gravel
5	2	Gray Clay Silt with Stone & Gravel
10		
15	#3	Brown Sandy Clay Silt with Stone & Gravel
20	#4	Moist Brown Clay Silt with Stone & Gravel & Boulders
	#5	Moist Brown & Round up Sand Stone
21.5		Hit what I Believe to be Sandstone Bed Rock
25		
30		

Use reverse side of this sheet for additional notes.

FIELD BORING LOG

County, Route No., Section RIC — 1 — 12.03

Station 406+00 Offset 142' Lt Elev. 1257.3

Date 4/30/58 Water Elev.

Crew Straht, Pugh & Rose Equipment Rig

Drafting

Depth Feet	Field Number	Description
0-	#17	BROWN CLAY SILT WITH STONE & GRAVEL
5		
10	18	GRAY SILT CLAY WITH STONE & GRAVEL
15		
20		
25		
30		SEE OTHER SIDE

Use reverse side of this sheet for additional notes.

330

33

#19 Wet Gray Sand & Gravel

35

#20 Gray Sandy Clay Silt
With Stone & Gravel

41

Hole Caved at 32'0

Note! Water Seepage
at 33'0

FIELD BORING LOG

County, Route No., Section Ric - 1 - 12.03

Station 406+93 Offset 127' Rt ℄ Elev. 1248.1

Date 4/30/58 Water Elev.

Crew Stahl, Peggy & Rose Equipment Rig

Drafting		

Depth Feet	Field Number	Description
0-		
	#6	Brown & Gray sandy Clay silt with stone & Gravel
5		
10	#7	Gray silt clay with Stone & Gravel
15		
20		
	# 8	Moist Gray silt clay With stone & Gravel
25		
	#9	Wet Sandy Clay silt With stone & Gravel
30		See other Side

Use reverse side of this sheet for additional notes.

33

GRAY SANDY CLAY. SILT
#10 WITH STONE & GRAVEL

36

MOISTURE at 18.0'

Note 2 holes at
407+00 128' RT
hit Boulders
1st. hole at 7.0'
2nd hole at 6.0'

5

FIELD BORING LOG

County, Route No., Section: Ric - 1 - 12.03

Station: 407+56 Offset: 128' LT Elev.: 1250.8

Date: 5/1/58 Water Elev.:

Crew: Schwall, Pugh & Rose Equipment: Rig

Drafting

Depth Feet	Field Number	Description
0-		
	21	BROWN CLAY SILT with STONE & GRAVEL
5		
10		GRAY SANDY SILT with STONE
	22	
15	23	GRAY CLAY SILT with STONE & GRAVEL
20		
25		
	↑	Water seepage at 22.10
30		

Use reverse side of this sheet for additional notes.

FIELD BORING LOG

County, Route No., Section RIC — I — 12.03

Station 408 + 90 Offset 127' RLC Elev. 1235.6'

Date 4/30/58 Water Elev.

Crew Strahl, Pugh & Rose Equipment Rig

Drafting

Depth Feet	Field Number	Description
0-	#11	BROWN SANDY CLAY SILT WITH STONE & GRAVEL
5		
10	12	GRAY SILTY CLAY WITH STONE & GRAVEL
15		
20	13	GRAY SANDY CLAY SILT WITH STONE & GRAVEL
25	N	Water Seepage at 8.1'
30		

Use reverse side of this sheet for additional notes.

FIELD BORING LOG

County, Route No., Section RIC - I - 12.103

Station 408+82 Offset 95' LT Elev. 1246.1

Date 6/1/58 Water Elev.

Crew Straub, Pugh & Rose Equipment R19

Drafting

Depth Feet	Field Number	Description
0-		
	24	Brown silt clay with stone & Roots
5		
10	25	Gray silt clay with stone & Roots
15		
20		
	26	Moist Gray Clay Silt with Stone & Roots
25		
		↑
30		

Use reverse side of this sheet for additional notes.

stake elev.

Right

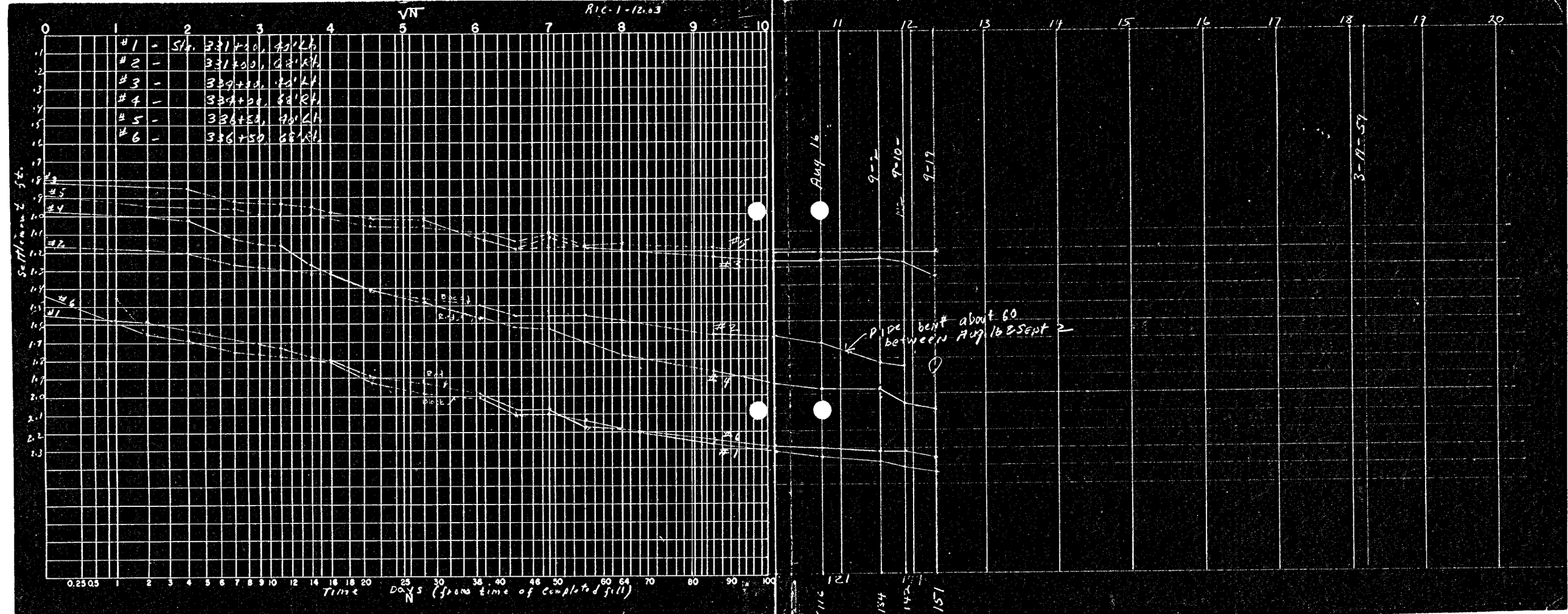
405+50 - (approx 125' RT) — top of exp. bedrock = 1247.3

Hole	elev.	depth
406+00 - 119' RT -	1249.0	- 21.5' (bedrock?)
406+98 - 127' RT -	1242.1	- 36.0'
408+70 - 127' -	1235.6	24.0'

Left

1258.2 - stake elev. top of exp. bedrock

404+00 - 144' -		1257.9
404+50 - 141' -	1257.6	19.0' - bedrock?
406+00 - 142' -	1257.3	41.0
407+56 - 128' LT -	1250.8	26.0'
408+82 - 95' LT -	1246.1	25.0'


R.I.C.-1-12.03
#1 - Sta. 331+10, 40' Lt.
#2 - 331+00, 68' Rt.
#3 - 339+10, 40' Lt.
#4 - 339+00, 68' Rt.
#5 - 336+50, 40' Lt.
#6 - 336+50, 68' Rt.
Settlement in ft.
Time Days (from time of completed fill)
Aug 16
9-2
9-10
9-19
3-19-59
Pipe bent about 60 between Aug 16 & Sept 2
Fill
Block
R.R.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO, AND; IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

RIC-1-8.54

SR-1 C-91+92

LEGEND FOR PROJECT—AVERAGE RESULTS OF TESTS

SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL WITH SAND		A-1-b	35.2	22.2	27.1	10.3	4.5	NP	NP	—	3
FINE SAND		A-3	0	20.5	75.0	4.5	0	NP	NP	—	1
COARSE AND FINE SAND	—	A-3a	38.7	13.75	15.85	20.95	10.7	24.35	3.4	—	3
GRAVEL OR STONE FRAGMENTS WITH SAND AND SILT		A-2-4	5.5	15.5	58.5	20.5	0	NP	NP	—	1
SANDY SILT	A-4	A-4a	21.8	10.7	18.3	30.3	18.0	24.8	6.4	19.1	9
SILT	A-4	A-4b	8.55	5.97	16.5	41.2	22.7	25.3	6.58	23.6	21
SILT AND CLAY	A-6	A-6a	12.4	7.81	11.24	41.2	26.2	32.5	12.1	24.8	13
SILTY CLAY	A-6	A-6b	9.9	4.75	10.25	44.1	27.3	28.2	11.0	18.8	3
ELASTIC CLAY		A-7-5	0.8	2.76	4.83	48.9	44.8	48.2	24.5	30.1	9
CLAY		A-7-6						55.4	27.1		

MARL, FIBROUS PEAT, AND SEDIMENTARY PEAT (VISUAL CLASSIFICATION)

OVERBURDEN (VISUAL CLASSIFICATION)

LIMESTONE (VISUAL CLASSIFICATION)

SANDSTONE (VISUAL CLASSIFICATION)

SHALE (VISUAL CLASSIFICATION)

ORGANIC CLAY — ORGANIC SILT (VISUAL CLASSIFICATION)

SOD & TOP SOIL

BERM MATERIAL

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY

AUGER BORING—PLAN VIEW

CORE BORING—PLAN VIEW

W-WATER

H.A.-HAND AUGER

(1) WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT

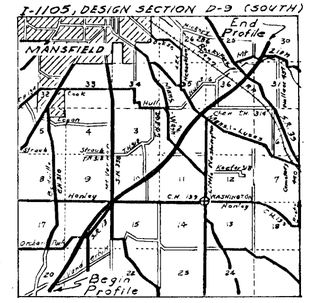
COMPOSITE SAMPLE

STANDARD PROCTOR TESTS

STATION NO.	OPTIMUM MOIST.-%	OPTIMUM Den.-Lb./Cu.Ft.
52-64	11	119
213-240	12	121
269	15	112
292-300	12	122
395-401	10	118

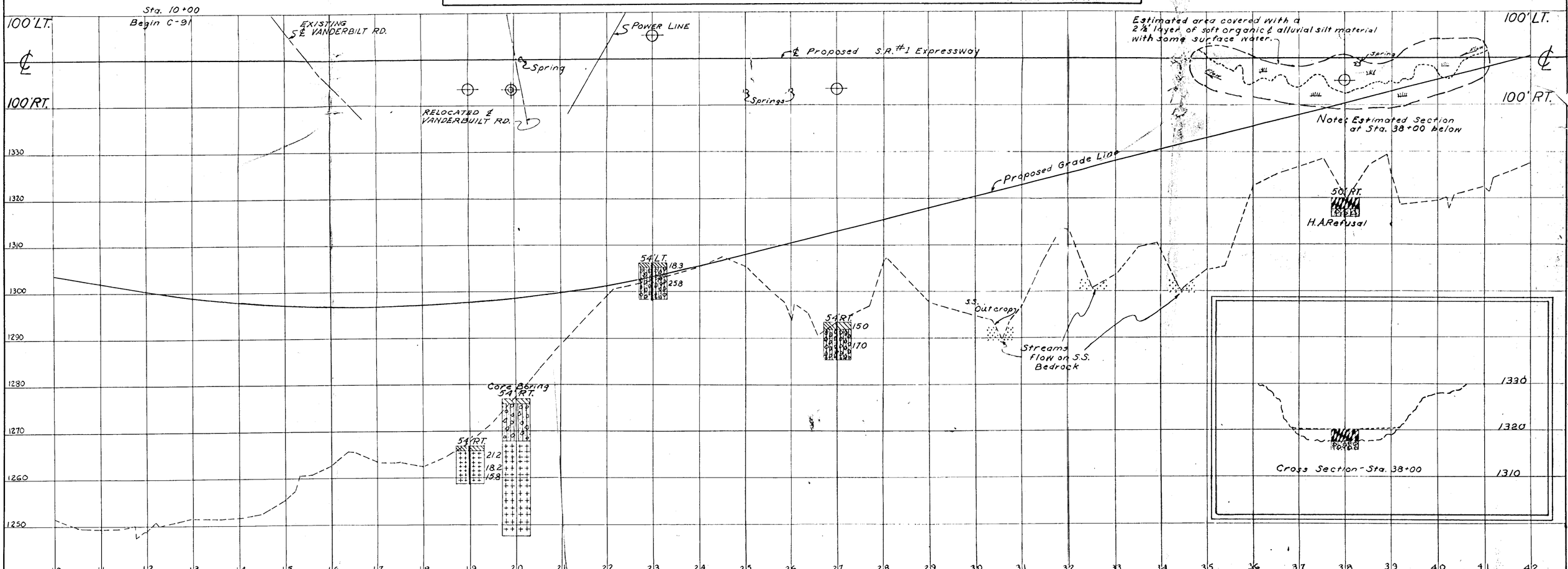
Note: Figures adjacent to borings designate water content in Per cent.

I-1105, DESIGN SECTION D-9 (SOUTH)



LOCATION MAP

Recon., Drilling, Drafting - Mobile Drilling & Engineering, Inc. July-Aug. 1957



LEGEND FOR PROJECT—AVERAGE RESULTS OF TESTS

SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL WITH SAND		A-1-b	35.2	22.2	27.1	10.3	4.5	NP	NP	—	3
FINE SAND		A-3	0	20.5	75.0	4.5	0	NP	NP	—	1
COARSE AND FINE SAND	—	A-3a	38.7	13.75	15.85	20.95	10.7	24.35	3.4	—	3
GRAVEL OR STONE FRAGMENTS WITH SAND AND SILT		A-2-4	5.5	15.5	58.5	20.5	0	NP	NP	—	1
SANDY SILT	A-4	A-4a	21.8	10.7	18.3	30.3	18.0	24.8	6.4	19.1	9
SILT	A-4	A-4b	8.55	5.97	16.5	41.2	22.7	25.3	6.58	23.6	21
SILT AND CLAY	A-6	A-6a	12.4	7.81	11.24	41.2	26.2	32.5	12.1	24.8	13
SILTY CLAY	A-6	A-6b	9.9	4.75	10.25	44.1	27.3	28.2	11.0	18.8	3
ELASTIC CLAY		A-7-5	0.8	2.76	4.83	48.9	44.8	48.2	24.5	30.1	9
CLAY		A-7-6						55.4	27.1		

M F S MARL, FIBROUS PEAT, AND SEDIMENTARY PEAT (VISUAL CLASSIFICATION)

OVERBURDEN (VISUAL CLASSIFICATION)

LIMESTONE (VISUAL CLASSIFICATION)

SANDSTONE (VISUAL CLASSIFICATION)

SHALE (VISUAL CLASSIFICATION)

ORGANIC CLAY — ORGANIC SILT (VISUAL CLASSIFICATION)

SOD & TOP SOIL

BERM MATERIAL

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY

AUGER BORING—PLAN VIEW

CORE BORING—PLAN VIEW

W-WATER

H.A.-HAND AUGER

● WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT

COMPOSITE SAMPLE

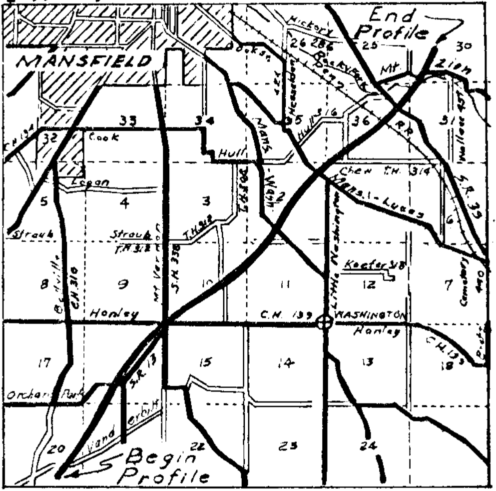
STANDARD PROCTOR TESTS

STATION NO.	OPTIMUM MOIST.-%	OPTIMUM Den.-Lb./Cu.Ft.
52-64	11	119
213-240	12	121
269	15	112
292-300	12	122
395-401	10	118

Note: Figures adjacent to borings designate water content in Per cent.

Est

I-1105, DESIGN SECTION D-9 (SOUTH)



LOCATION MAP

Recon., Drilling, Drafting -
Mobile Drilling & Engineering, Inc.
July - Aug. 1957

ORGANIC CLAY | ORGANIC SILT | (VISUAL CLASSIFICATION) | H.A.-HAND AUGER | Note: Figures adjacent to borings designate water content in Percent.

Sta. 10+00
Begin C-91

EXISTING ℄ VANDERBILT RD.

RELOCATED ℄ VANDERBILT RD.

Spring

℄ POWER LINE

Springs

℄ Proposed S.R. #1 Expressway

100'LT.

℄

100'RT.

1330
1320
1310
1300
1290
1280
1270
1260
1250

Proposed Grade Line

54' LT. 183 258

54' RT. 150 170

S.S. Outcrop

Streams flow on S.S. Bedrock

Core Boring 54' RT.

54' RT. 212 182 158

50' RT.
H.A. Refusal

Estimated area covered with a 2½' layer of soft organic & alluvial silt material with some surface water.

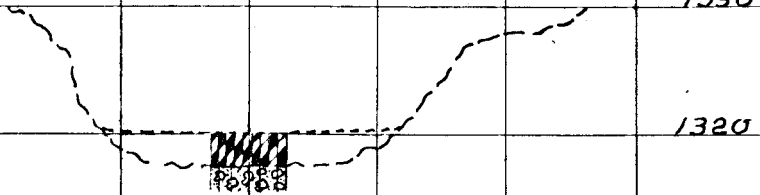
Spring

Note: Estimated Section at Sta. 38+00 below

Cross Section - Sta. 38+00

1330
1320
1310

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42



Cross Section - Sta. 38+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2

100 LT.

℄

100 RT.

Spring

Springs causing soft organic material

Proposed ℄ S.R. No. 1

Core Boring 90' LT.

Core Boring 90' RT

22.2 W

10.4

12.8

12.3

13.6

10.1

10.7

10.7

Core Boring 90' LT.

20.8

15.5 W

11.4

11.1

12.8

12.6

12.2

13.5

11.7

11.3

10.3

Core Boring 90' RT.

54' RT.

16.5

15.6

54' LT.

15.9

15.8

54' RT.

16.5

1450
1440
1430
1420
1410
1400
1390
1380
1370
1360
1350
1340
1330
1320

42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74

2	OHIO			

100 LT.

℄

Spring

100 RT.

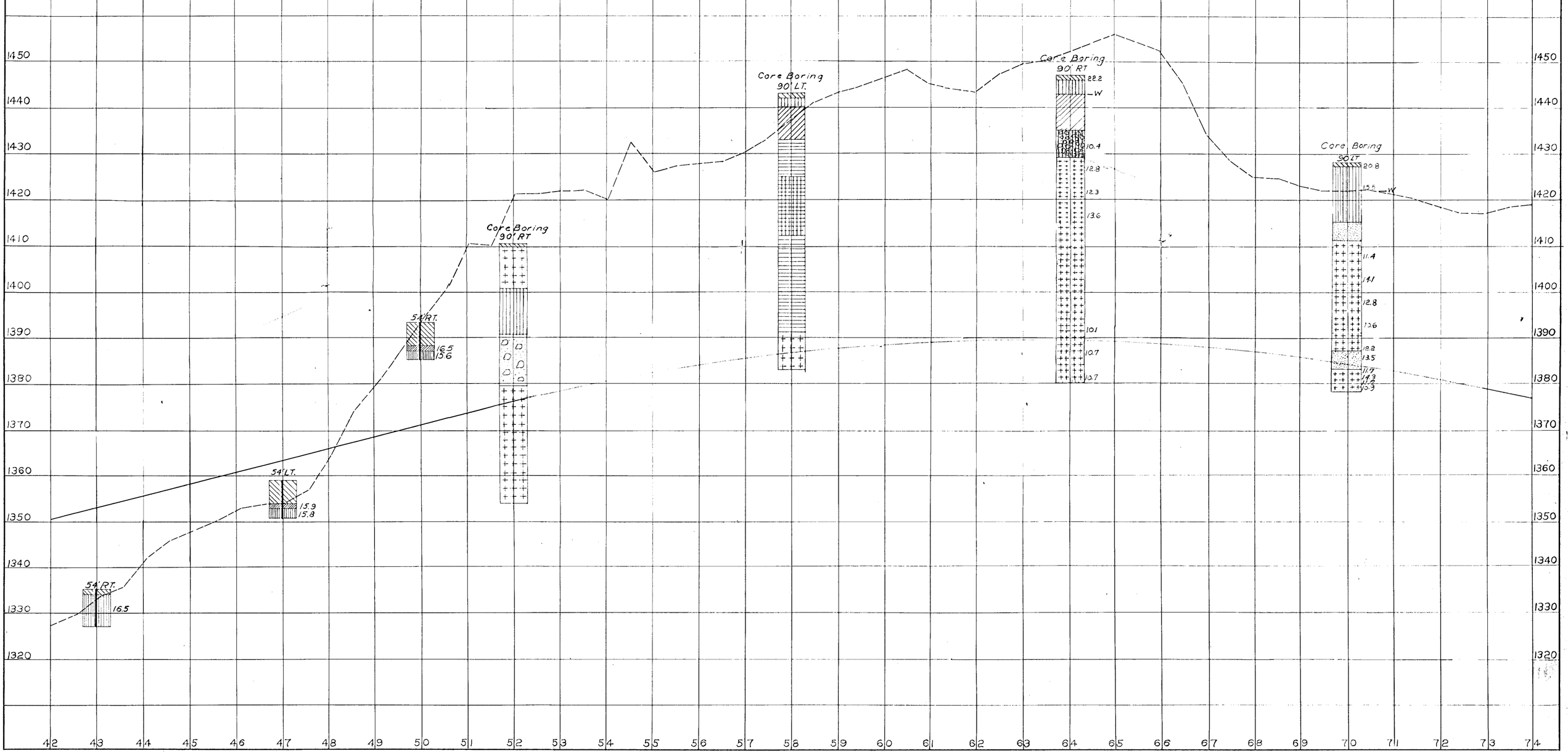
Springs causing soft organic material

Proposed ℄ S.R. No. 1

100 LT.

℄

100 RT.


1450
1440
1430
1420
1410
1400
1390
1380
1370
1360
1350
1340
1330
1320
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74
54' RT.
16.5
54' LT.
15.9
15.8
54' RT.
16.5
15.6
Core Boring
90' RT
Core Boring
90' LT.
Core Boring
90' RT
22.2
W
10.4
12.8
12.3
13.6
10.1
10.7
10.7
Core Boring
90 LT
20.8
15.5
W
11.4
11.1
12.8
13.6
12.2
13.5
7.7
11.3
11.2
5.3

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3

100'LT.

℄

100'RT.

℄ ORCHARD RD.

Organic Deposit, Possible Spring

Proposed ℄ S.R. No. 1

100'LT.

℄

100'RT.

1420
1410
1400
1390
1380
1370
1360
1350
1340
1330
1320
1310

Core Boring 5' RT.

Core Boring 90' RT.
20.8
12.4
11.5
13.1
12.7
13.3

℄
25.6
24.9
W
W.O. 21.0
17.2

54' LT.
21.8
18.8
12.5

54' RT.
20.6

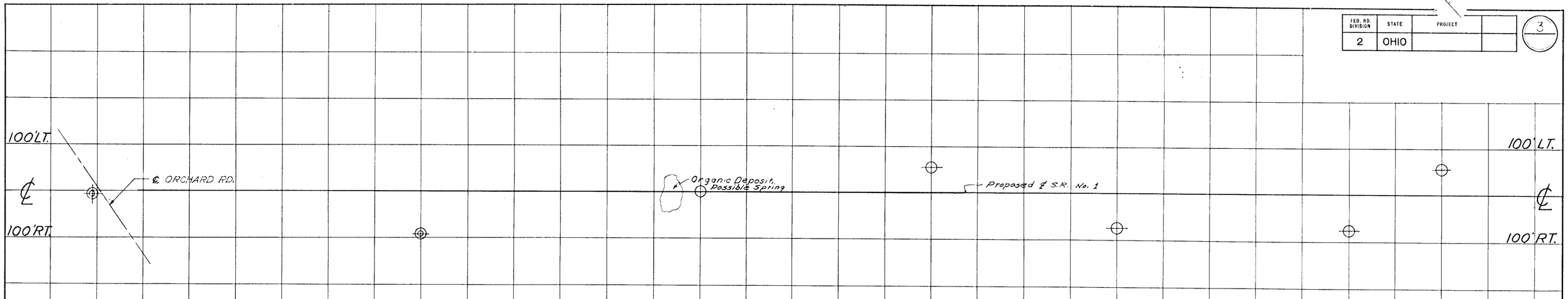
54' RT.
W

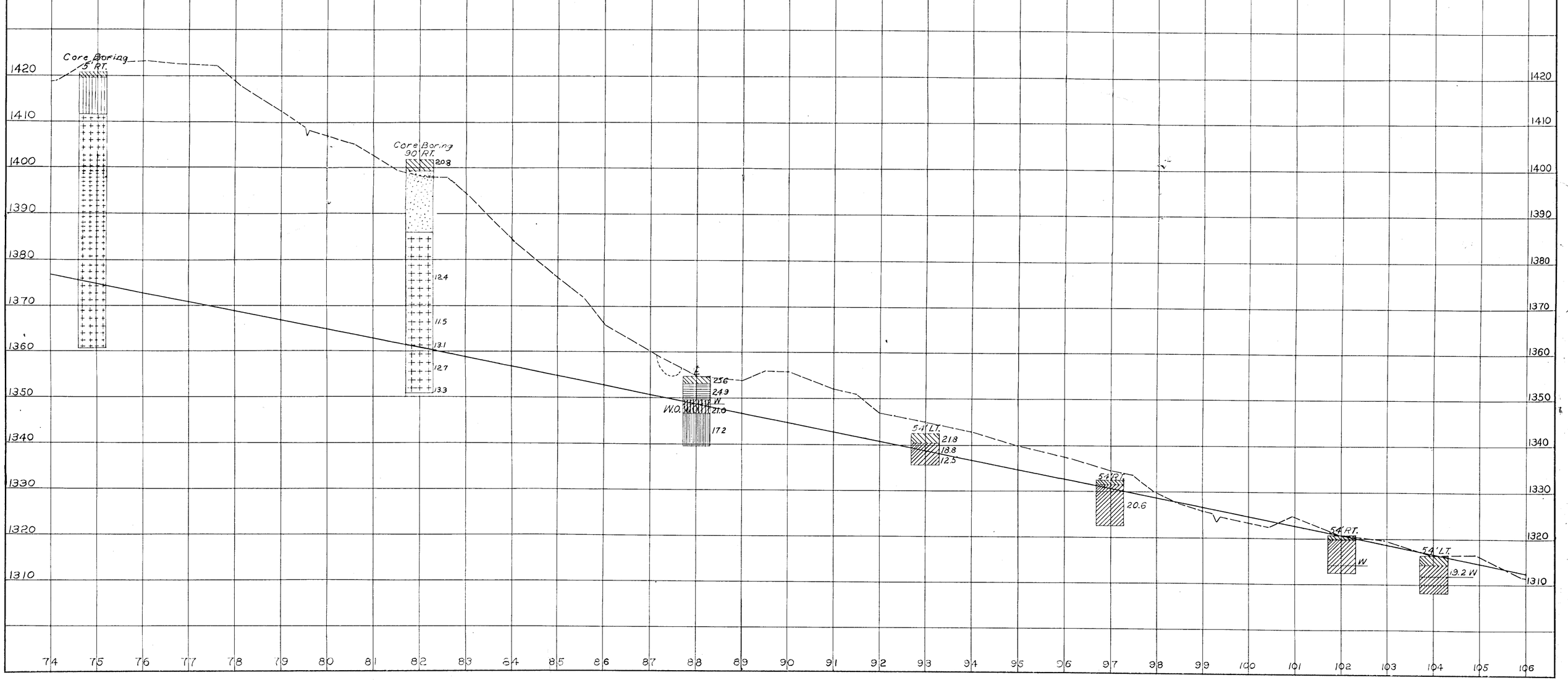
54' LT.
19.2 W

74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3




Core Boring
5' RT.
Core Boring
90' RT.
208
124
115
131
127
133
256
249
W
W.O. 210
172
5.4' LT.
218
188
125
20.6
5.4' RT.
W
5.4' LT.
19.2 W
1420
1410
1400
1390
1380
1370
1360
1350
1340
1330
1320
1310
74
75
76
77
78
79
80
81
82
83
84
85
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94
95
96
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100
101
102
103
104
105
106

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100' LT. ℄ 100' RT.

Or Spring

Ditch

Proposed ℄ S.R. No. 1

Existing ℄ S.R. 13

100' LT. ℄ Handley Rd. 100' RT.

1320 1310 1300 1290 1280 1270 1260

1280 1270 1260 1250 1240 1230

1270 1260 1250 1240 1230 1220 1210

1250 1240 1230 1220 1210 1220

54' LT.

75' LT. H.A. Refusal

℄ H.A. Refusal

54' RT. N 17.8 H.A. Refusal

Core Boring 120' RT.

H.A. Refusal

H.A. Refusal

54' RT.

Note: Borings for Left of ℄.

Core Boring 54' LT.

54' LT. 22.6 N 25.2

54' LT. 23.2 22.2 N 33.6

Core Boring 54' LT.

Core Boring 54' LT. 27.6 27.8 37.6 64.5 71 53

Core Boring 54' LT.

Core Boring 110' LT.

Note: Borings for Right of ℄.

54' RT. N 3.12

Core Boring 90' RT. 30 26 36 30

Core Boring 90' RT. 38 36 40 41 38 30 47 38 114* 40 38 14

Core Boring 54' RT. 42* 64*

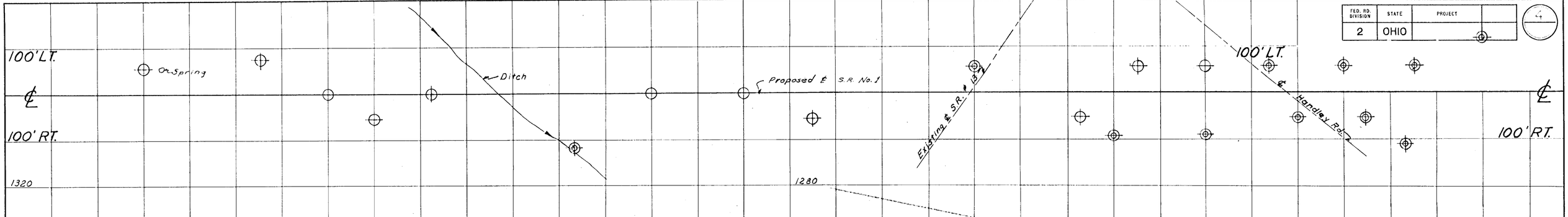
Core Boring 54' RT. 27.0 N 21.4 42* 60.8 139

Core Boring 110' RT.

Note: The organic soils of this area have average test results as follows:
Liquid Limits - 55%
Plastic Index - 24%
Pen. Resist. - 2 Blows/Ft.

* This value obtained from Shelby Tube sample and believed to be accurate. Other values shown may be low (obtained from jar samples).

106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

1320
1310
1300
1290
1280
1270
1260
1280
1270
1260
1250
1240
1230
1220
1210

54' LT.

75' LT.
H.A. Refusal

℄
H.A. Refusal

54' RT.
W
17.8

℄
H.A. Refusal

Core Boring
120' RT.

℄
H.A. Refusal

H.A. Refusal

54' RT.

106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123

Note: Borings for Left of ℄.

Core Boring 54' L.T.

54' LT. 22.6 W 25.2

54' LT. 29.2 26.2 —W 33.6

Core Boring 54' LT.

Core Boring 54' LT. 27.6 27.8 37.6 64.5 71 53

Core Boring 54' LT.

Core Boring 110' LT.

54' RT.

Note: Borings for Right of ℄.

54' RT. W 31.2

Core Boring 90' RT. 30 26 36 30

Core Boring 90' RT. 38 36 40 41 38 30 47 38 114* 40 38 14

Core Boring 54' RT.

Core Boring 54' RT. 27.0 W 21.4 42* 60.8 19.9 64*

Core Boring 110' RT.

Note: The organic soils of this area have average test results as follows:
Liquid Limits - 55%
Plastic Index - 24%
Pen. Resist. - 2 Blows/Ft.

* This value obtained from Shelby Tube sample and believed to be accurate. Other values shown may be low (obtained from jar samples).

1280 1270 1260 1250 1240 1230 1220 1210

122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5

100'LT.

℄

100'RT.

Proposed S.R. No. 1

Stream

100'LT.

℄

100'RT.

1340
1330
1320
1310
1300
1290
1280
1270
1260
1250
1240
1230

Core Boring 90' LT.
23.0

Core Boring 90' LT.
17.6
15.0
13.9
16.1

Core Boring 90' RT.
22.0
18.9
12W
13.9

Stream Flows on S.S. ledge
H.A. Refusal

W

Sandstone

Sandstone

Sandstone

H.A. REFUSAL

54' LT.
W
15.0
H.A. REFUSAL 20.7

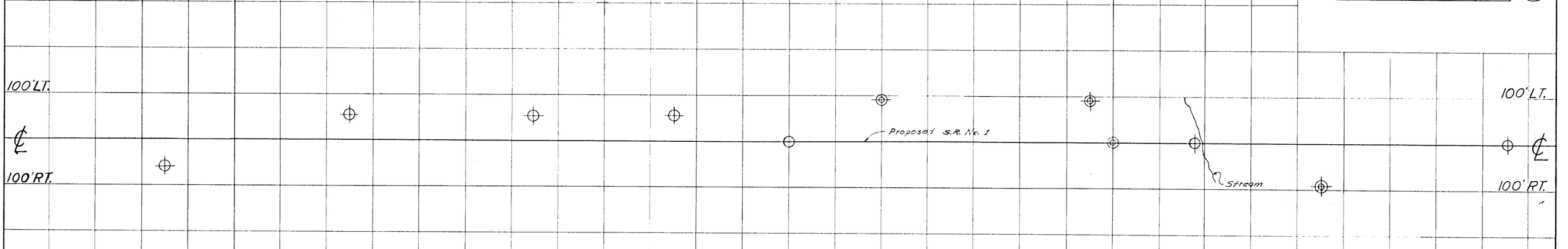
54' LT.
18.2
REFUSAL 18.2

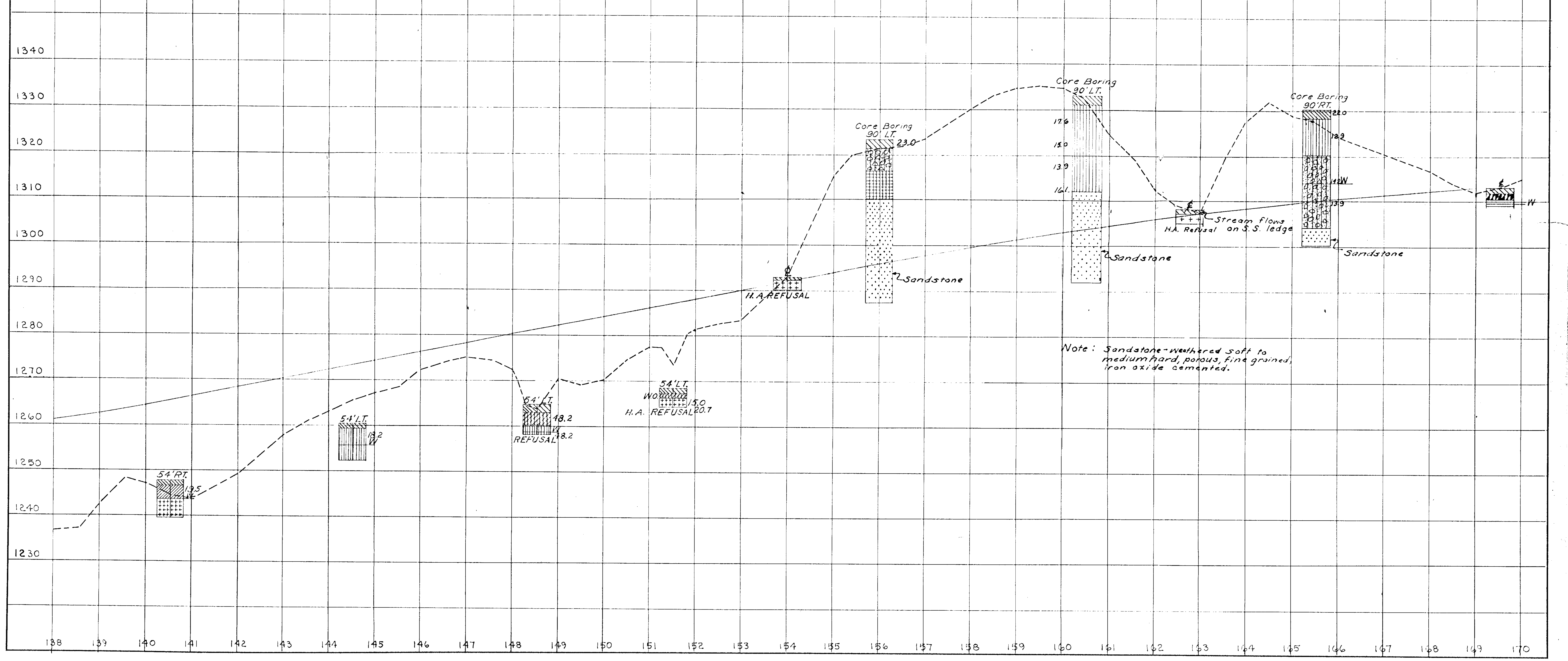
54' LT.
13.2
W

54' RT.
13.5
W

Note: Sandstone - weathered soft to medium hard, porous, fine grained, iron oxide cemented.

138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170


100'LT.
℄
100'RT.
Proposed S.R. No. 1
Stream
100'LT.
℄
100'RT.



1340
1330
1320
1310
1300
1290
1280
1270
1260
1250
1240
1230
Core Boring 90' LT.
23.0
Sandstone
Core Boring 90' LT.
17.6
15.0
13.9
16.1
Sandstone
Core Boring 90' RT.
22.0
13.9
14.0 W
13.9
Sandstone
H.A. REFUSAL
H.A. Refusal
Stream flows on S.S. ledge
W
54' RT.
13.5
54' LT.
13.2 W
54' LT.
48.2
REFUSAL
18.2
54' LT.
W
15.0
H.A. REFUSAL
20.7
Note: Sandstone-weathered soft to medium hard, porous, fine grained, iron oxide cemented.
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100'LT.

℄ WOODVILLE RD.

℄

100'RT.

℄ Proposed ℄ S.R. No. 1

100'LT.

℄

100'RT.

Core Boring 90'LT.
15.1
12.5
19.6
16.4
W
11.3
10.8
10.4
8.4 5

Core Boring 3'LT.

Core Boring 90'LT.
15.5
13.8
18.0
12.9
14.5
9.7 5

54'RT.
26.4
W
9.7 5
15.5
14.7

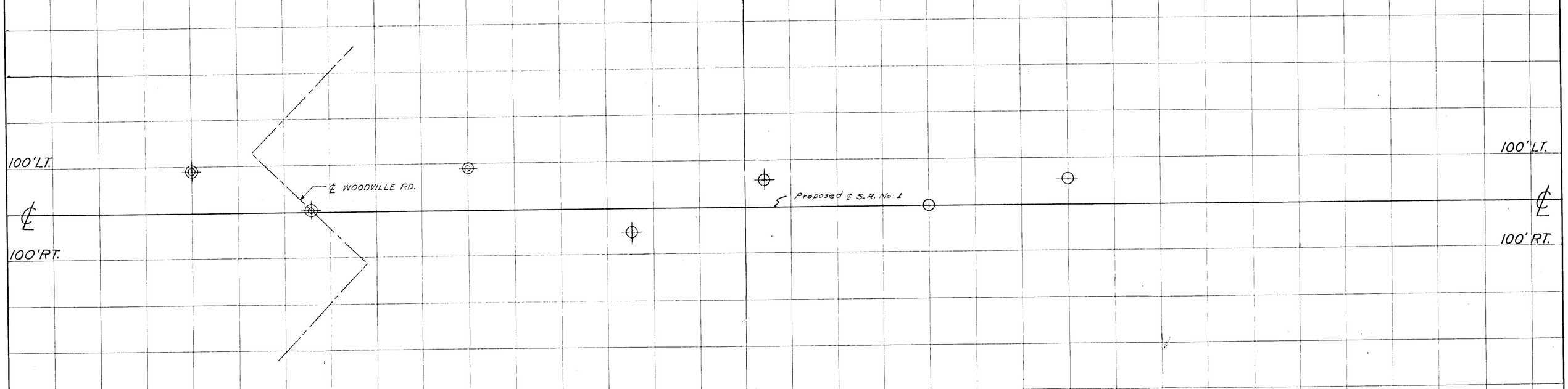
54'LT.
25.3
19.7
14.0

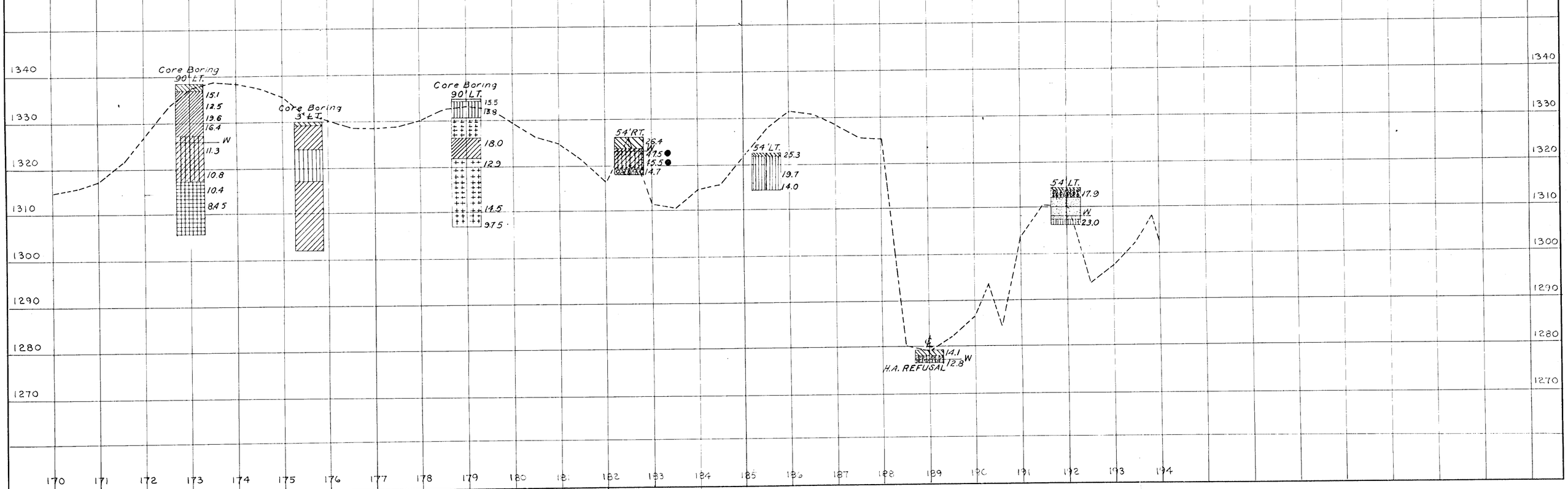
54'LT.
17.9
W
23.0

℄
14.1
12.8 W
H.A. REFUSAL

1340
1330
1320
1310
1300
1290
1280
1270

170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194


100'L.T.
℄ WOODVILLE RD.
℄
100'R.T.
℄ Proposed ℄ S.R. No. 1
100'L.T.
℄
100'R.T.


Core Boring
90' LT.
15.1
12.5
13.6
16.4
W
11.3
10.8
10.4
8.45
Core Boring
3' LT.
Core Boring
90' LT.
15.5
13.8
18.0
12.9
14.5
9.75
54' RT.
26.4
W
4.75
15.5
14.7
54' LT.
25.3
19.7
14.0
54' LT.
17.9
W
23.0
℄
14.1
12.8 W
H.A. REFUSAL
1340
1330
1320
1310
1300
1290
1280
1270
170
171
172
173
174
175
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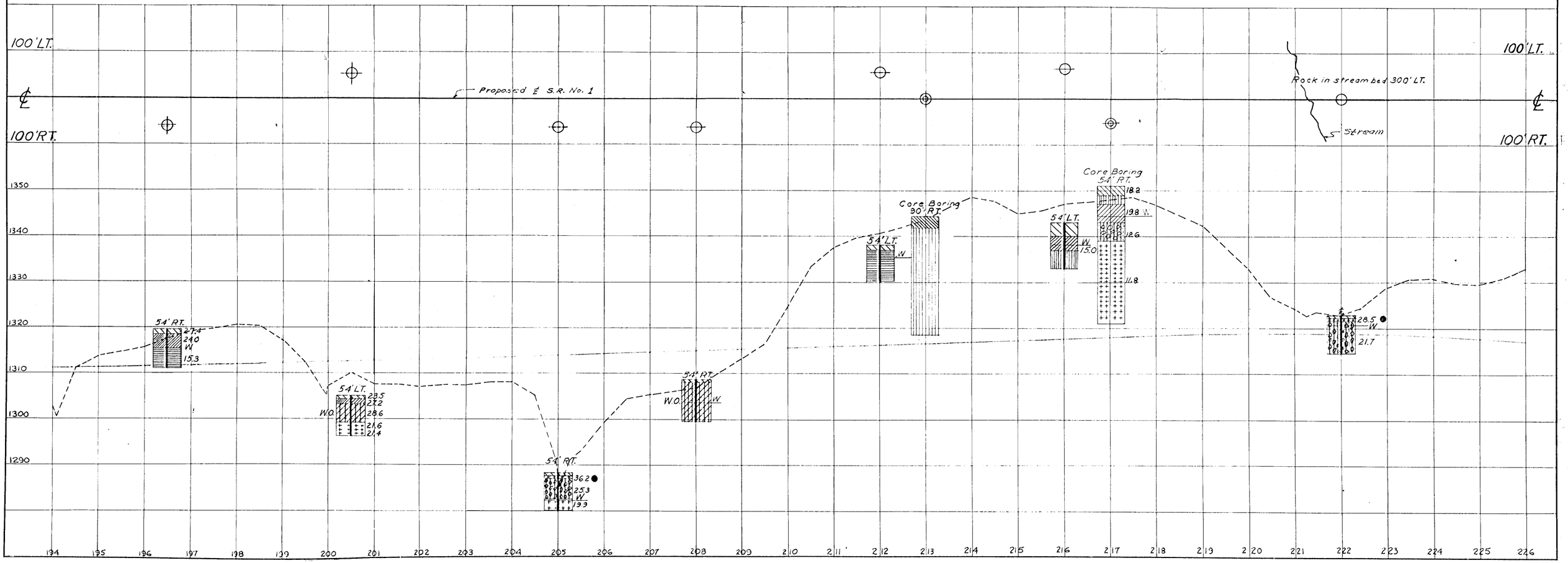
192
193
194


100'LT.
100'RT.
℄
Proposed ℄ S.R. No. 1
100'LT.
100'RT.
℄
Rock in stream bed 300'LT.
Stream
1350
1340
1330
1320
1310
1300
1290
54' RT.
27.4
24.0
W
15.3
54' LT.
23.5
22.2
28.6
W.O.
21.6
21.4
54' RT.
36.2
25.3
W
19.3
54' RT.
W.O.
W
54' LT.
W
Core Boring
90' RT.
54' LT.
W
15.0
Core Boring
54' RT.
18.2
19.8 W
12.6
11.8
28.5
W
21.7
134 135 136 137 138 139 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MANSFIELD-WASHINGTON ROAD

100'LT.

℄

100'RT.

℄ Proposed ℄ S.R. No. 1

Stream

100'LT.

℄

100'RT.

Core Boring
Sta. 226+75-3 RT.

Core Boring
90' RT.

Core Boring
60' RT.
24.5

W
16.7

54' RT
22.6
20.2
H.A. REFUSAL

54' LT.
20.0
13.6
H.A. REFUSAL

℄ MANS-WASH. RD.
226+63.96

Sandstone-
Weathered soft to medium hard, porous, fine grained, iron oxide cemented.

W

FS

Stream Flow on S.S. & rock outcroppings in stream banks

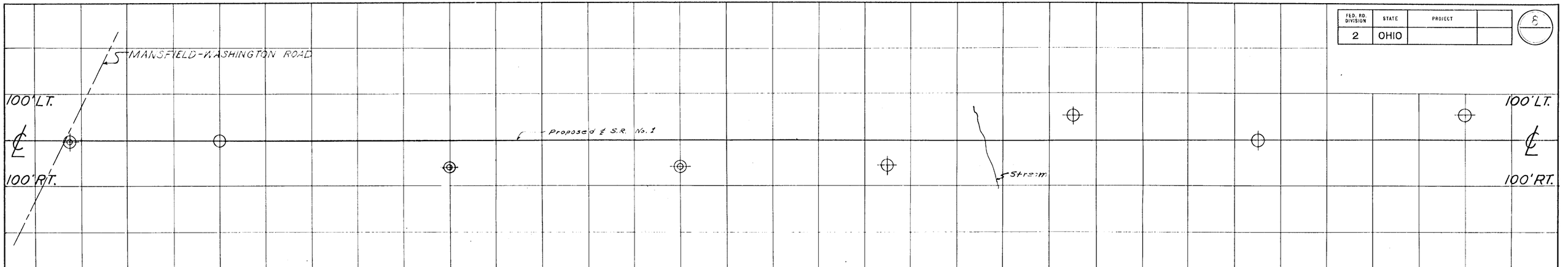
℄
27.2
19.4
13.2
H.A. REFUSAL

54' LT.
18.6
15.7
H.A. REFUSAL

H.A. REFUSAL

1340 1330 1320 1310 1300 1290 1280 1270 1260 1250 1240 1230 1220 1210

226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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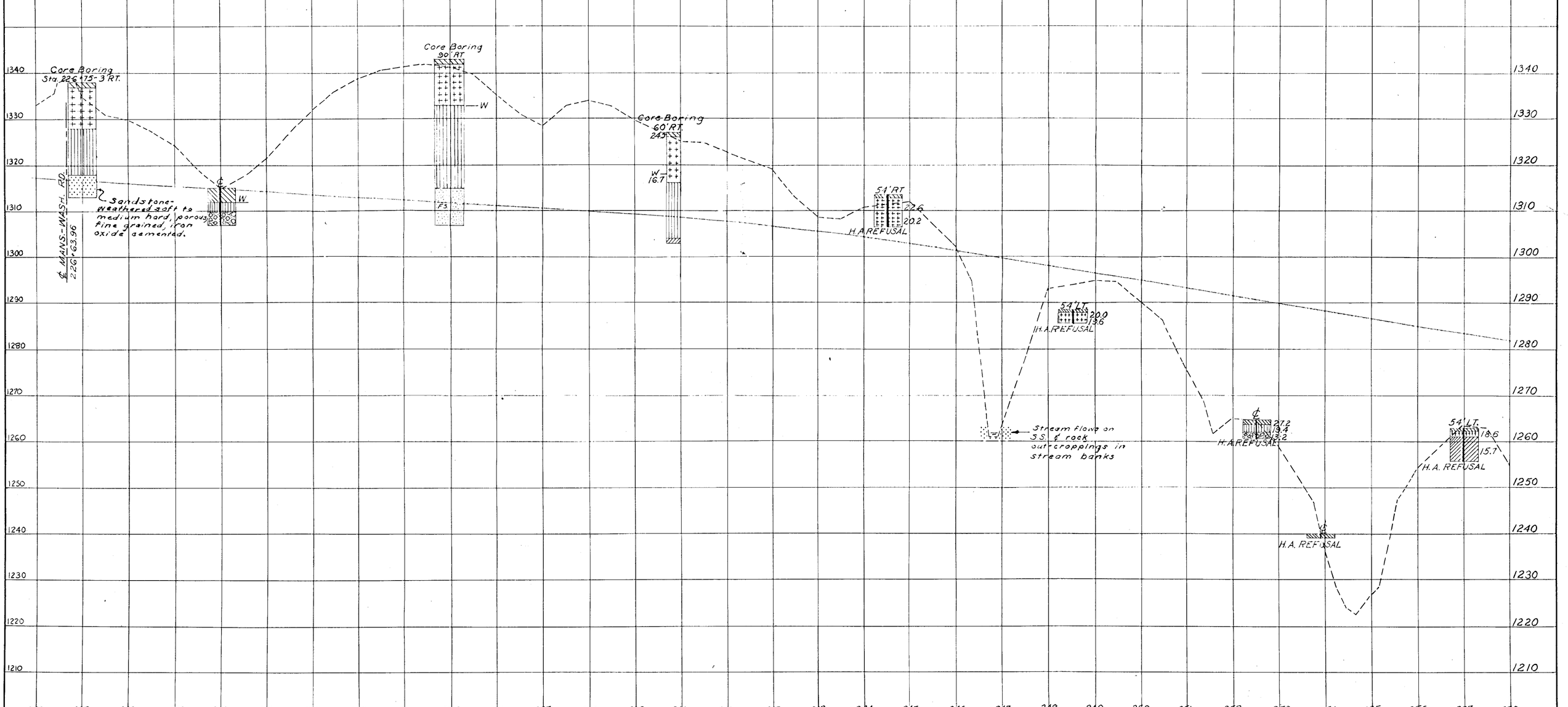
Core Boring
Sta. 226+75-3 RT.
℄ MANS-WASH RD.
226+63.96
Sandstone-
Weathered soft to
medium hard, porous
Fine grained, iron
oxide cemented.
W
Core Boring
90' RT.
W
F3
Core Boring
60' RT.
245
W
16.7
54' RT
22.6
20.2
H.A. REFUSAL
54' LT.
20.0
13.6
H.A. REFUSAL
Stream flows on
S.S. & rock
outcroppings in
stream banks
℄
27.2
3.4
3.2
H.A. REFUSAL
H.A. REFUSAL
54' LT.
18.6
15.7
H.A. REFUSAL
1340
1330
1320
1310
1300
1290
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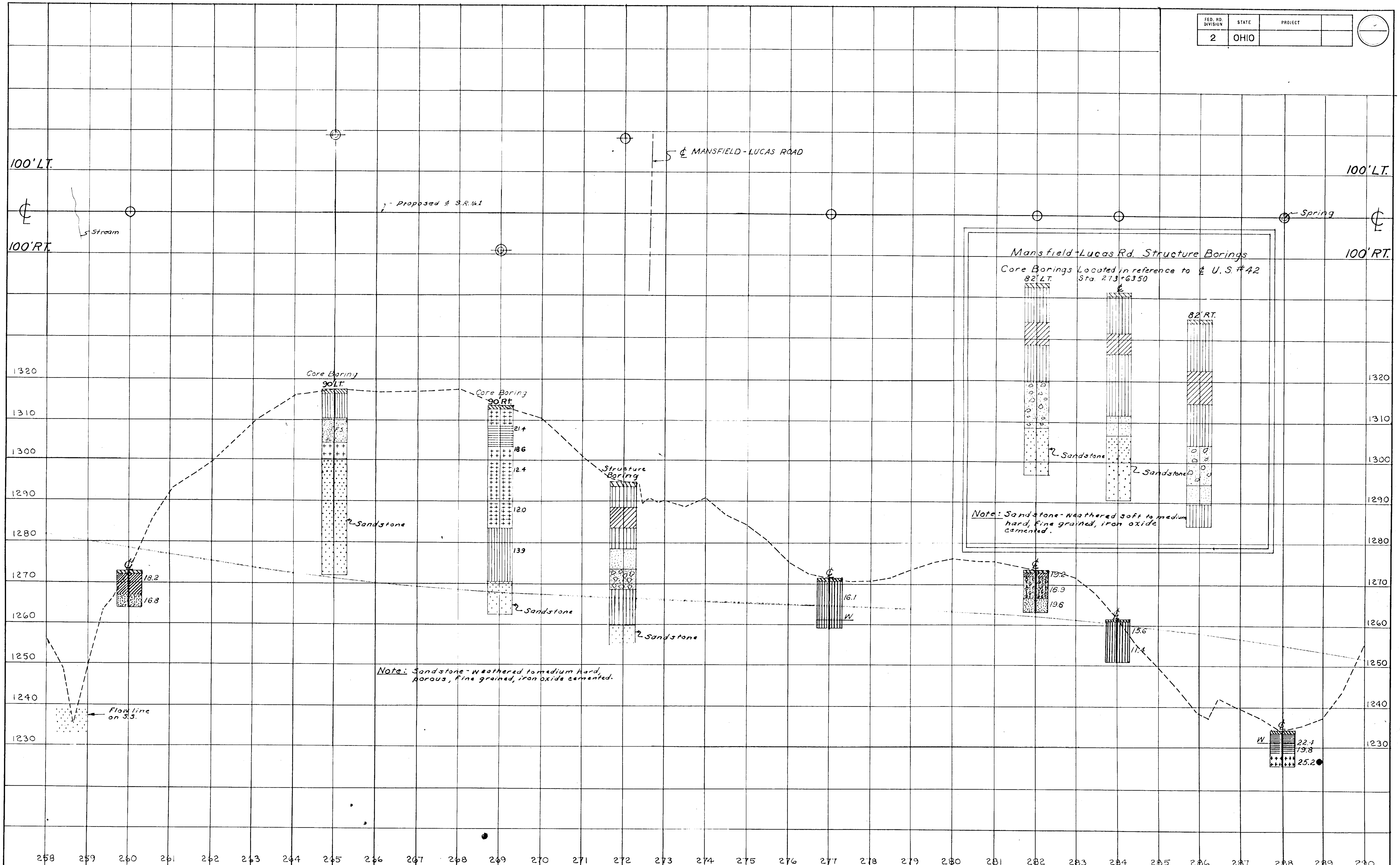
FED. RD. DIVISION
2
STATE
OHIO
PROJECT
¢ MANSFIELD - LUCAS ROAD
100' LT.
100' RT.
Proposed ¢ S.R. 141
Stream
Spring
Mansfield-Lucas Rd. Structure Borings
Core Borings Located in reference to ¢ U.S. #42
Sta. 273+63.50
82' LT.
82' RT.
Sandstone
Note: Sandstone - weathered soft to medium hard, fine grained, iron oxide cemented.
Core Boring 90' LT.
Core Boring 90' RT.
Structure Boring
Sandstone
Flow line on S.S.
Note: Sandstone - weathered to medium hard, porous, fine grained, iron oxide cemented.
18.2
16.8
21.4
18.6
12.4
12.0
13.9
16.1
W
19.2
16.9
19.6
15.6
11.4
22.4
19.8
25.2
1320
1310
1300
1290
1280
1270
1260
1250
1240
1230
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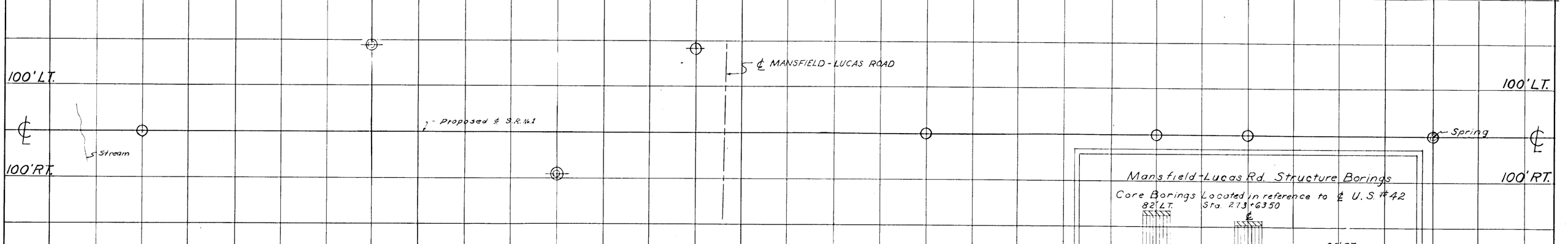
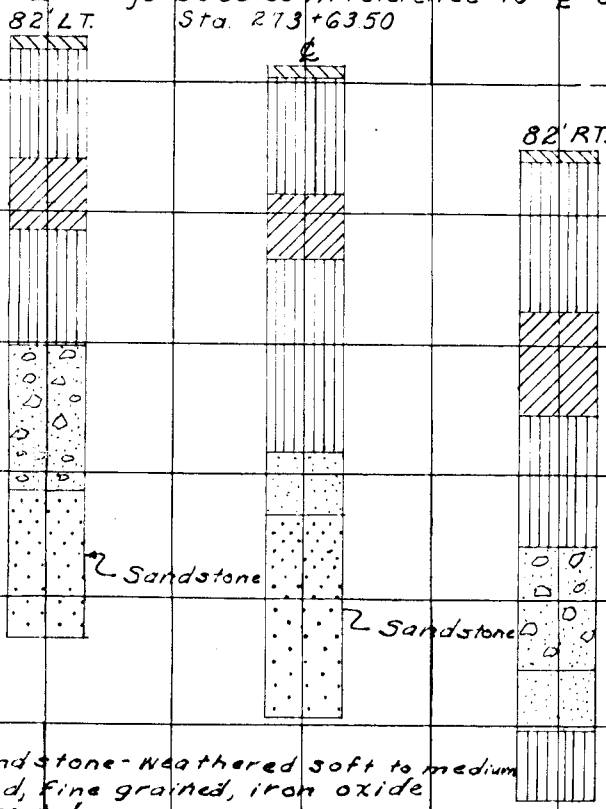

100'LT.
100'RT.
℄ MANSFIELD - LUCAS ROAD
℄ - Proposed ℄ S.R. No. 1
Stream
Spring
100'LT.
100'RT.
Mansfield-Lucas Rd. Structure Borings
Core Borings Located in reference to ℄ U.S. #42
82' LT. Sta. 273+63.50
℄

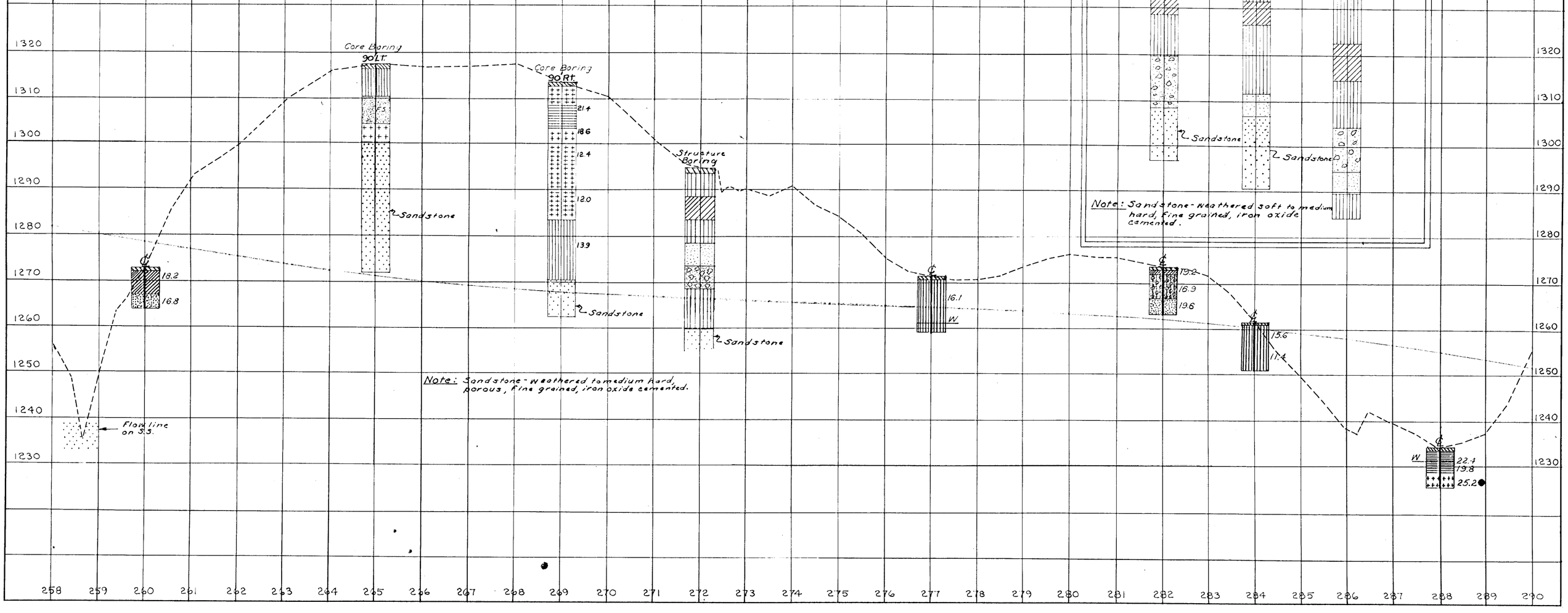
Mansfield-Lucas Rd. Structure Borings

Core Borings Located in reference to ℄ U.S. #42



Note: Sandstone - weathered soft to medium hard, fine grained, iron oxide cemented.

℄


1320
1310
1300
1290
1280
1270
1260
1250
1240
1230
Core Boring
90' Lt.
Core Boring
90' Rt.
Structure Boring
Sandstone
Sandstone
Sandstone
Sandstone
Sandstone
Sandstone
21.4
18.6
12.4
12.0
13.9
18.2
16.8
16.1
W
19.2
16.9
19.6
15.6
11.4
W
22.1
19.8
25.2
Flow line on S.S.
Note: Sandstone - Weathered to medium hard, porous, fine grained, iron oxide cemented.
Note: Sandstone - Weathered soft to medium hard, fine grained, iron oxide cemented.
258
259
260
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10

100' LT.

℄ 100' RT.

℄ SITES ROAD

Proposed ℄ S.R. No. 1

100' LT.

℄ 100' RT.

Core Boring 90' RT.

No "W"

Core Boring 90' RT.

20.3
17.1
13.7
15.1
11.5
17.8

No "W"

Core Boring 90' RT.

33.1
23.0
12.9
13.3
12.3

54' LT.

25.7

54' RT.

17.9
18.9
W

54' LT.

W

1280 1270 1260 1250 1240 1230 1220 1210 1200 1190 1180 1170 1160 1150

290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10

100'LT.

℄

100'RT.

1280

Core Boring
90' RT.

Proposed ℄ S.R. No. 1

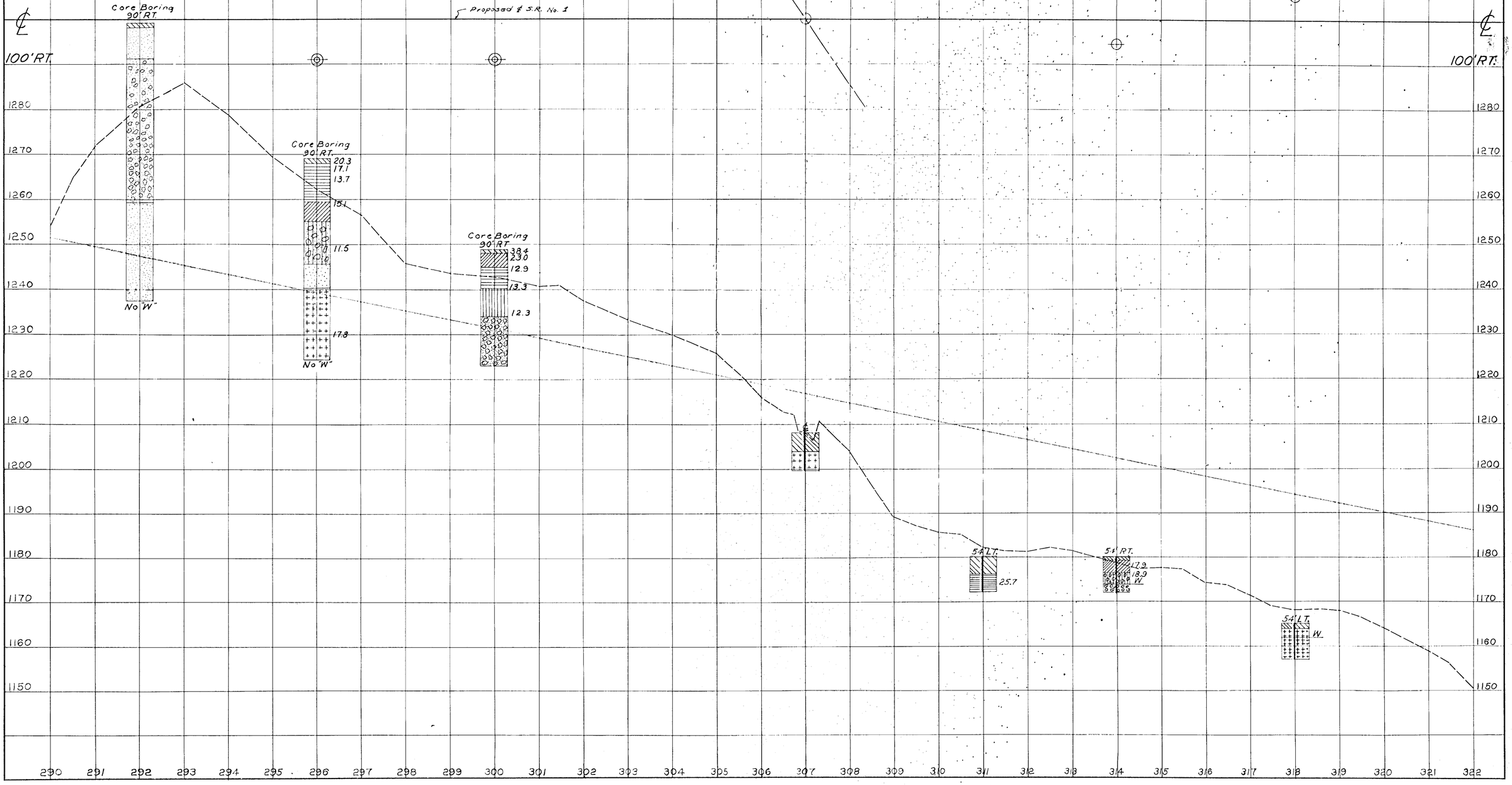
℄ SITES ROAD

100'LT.

℄

100'RT.

1280


℄
100'RT.
Core Boring
90'RT.
No "W"
Core Boring
90'RT.
20.3
17.1
13.7
15.1
11.5
17.8
No "W"
Core Boring
90'RT.
33.4
23.0
12.9
13.3
12.3
Proposed S.R. No. 1
54'LT.
25.7
54'RT.
17.9
18.9
W
54'LT.
W
1280
1270
1260
1250
1240
1230
1220
1210
1200
1190
1180
1170
1160
1150
290
291
292
293
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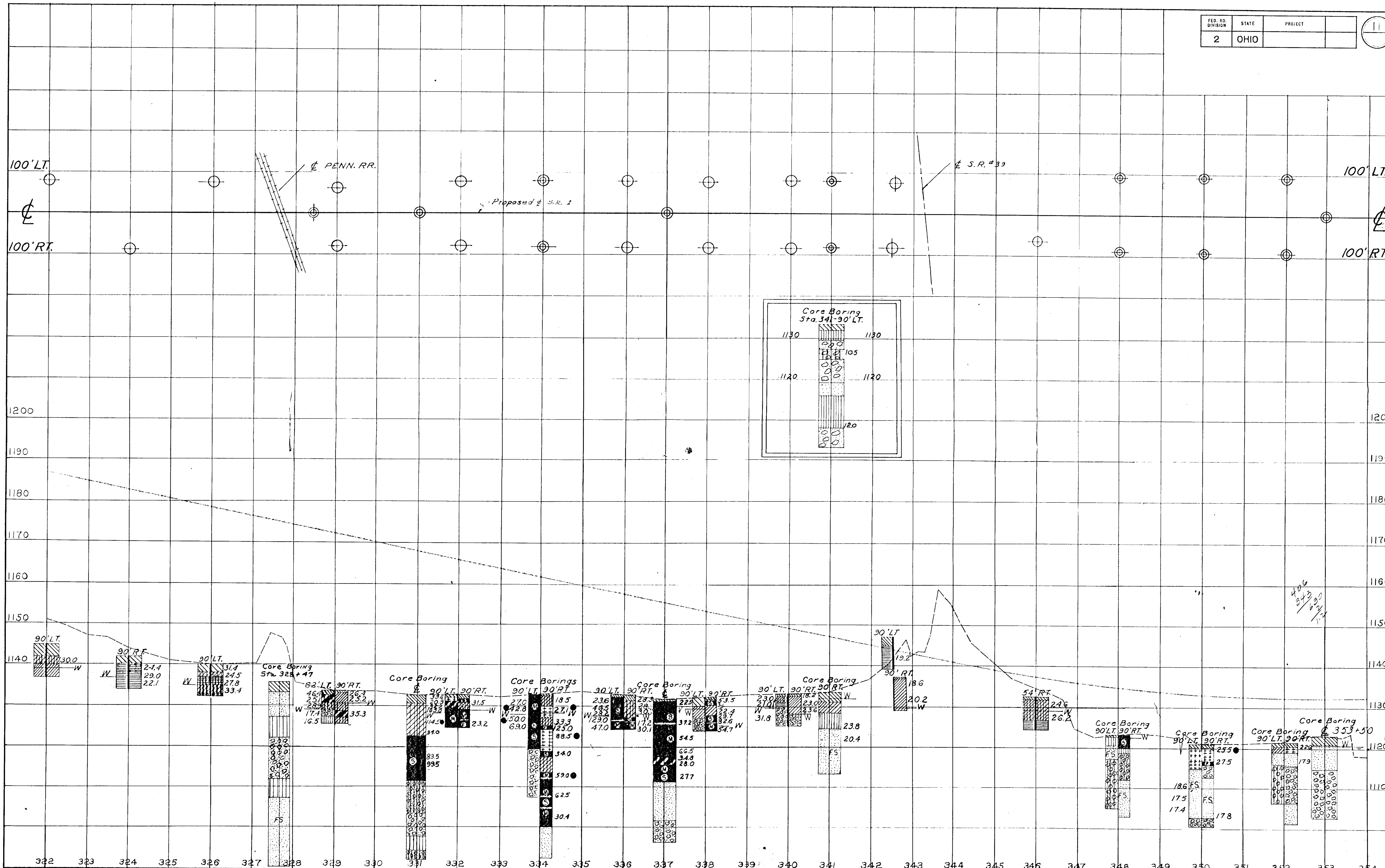

FED. RD. DIVISION 2
STATE OHIO
PROJECT
11
100' LT.
100' RT.
℄ PENN. RR.
Proposed ℄ S.R. 1
℄ S.R. #39
Core Boring Sta. 341-90' LT.
1130
1120
Core Boring Sta. 328+47
Core Boring ℄
Core Borings 90' LT. 90' RT.
Core Boring ℄
Core Boring 90' RT.
Core Boring 90' LT. 90' RT.
Core Boring ℄ 353+50
90' LT.
90' RT.
54' RT.
62' LT.
FS
W
1200
1190
1180
1170
1160
1150
1140
1130
1120
1110
322
323
324
325
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328
329
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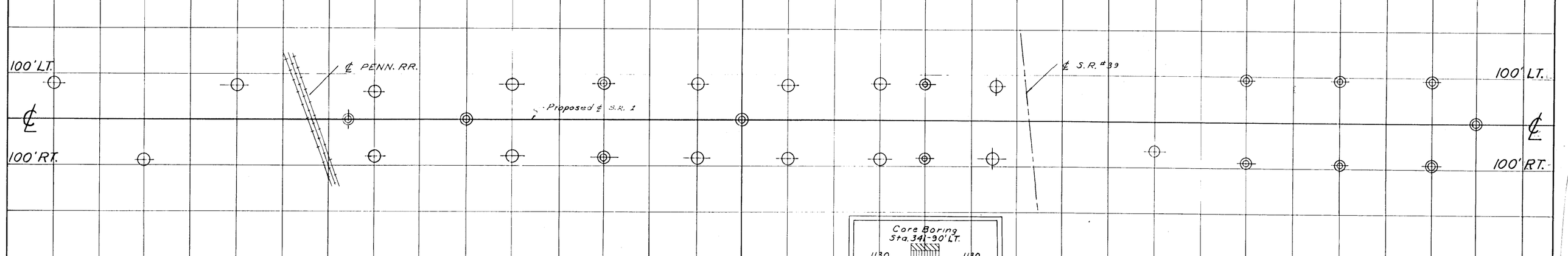
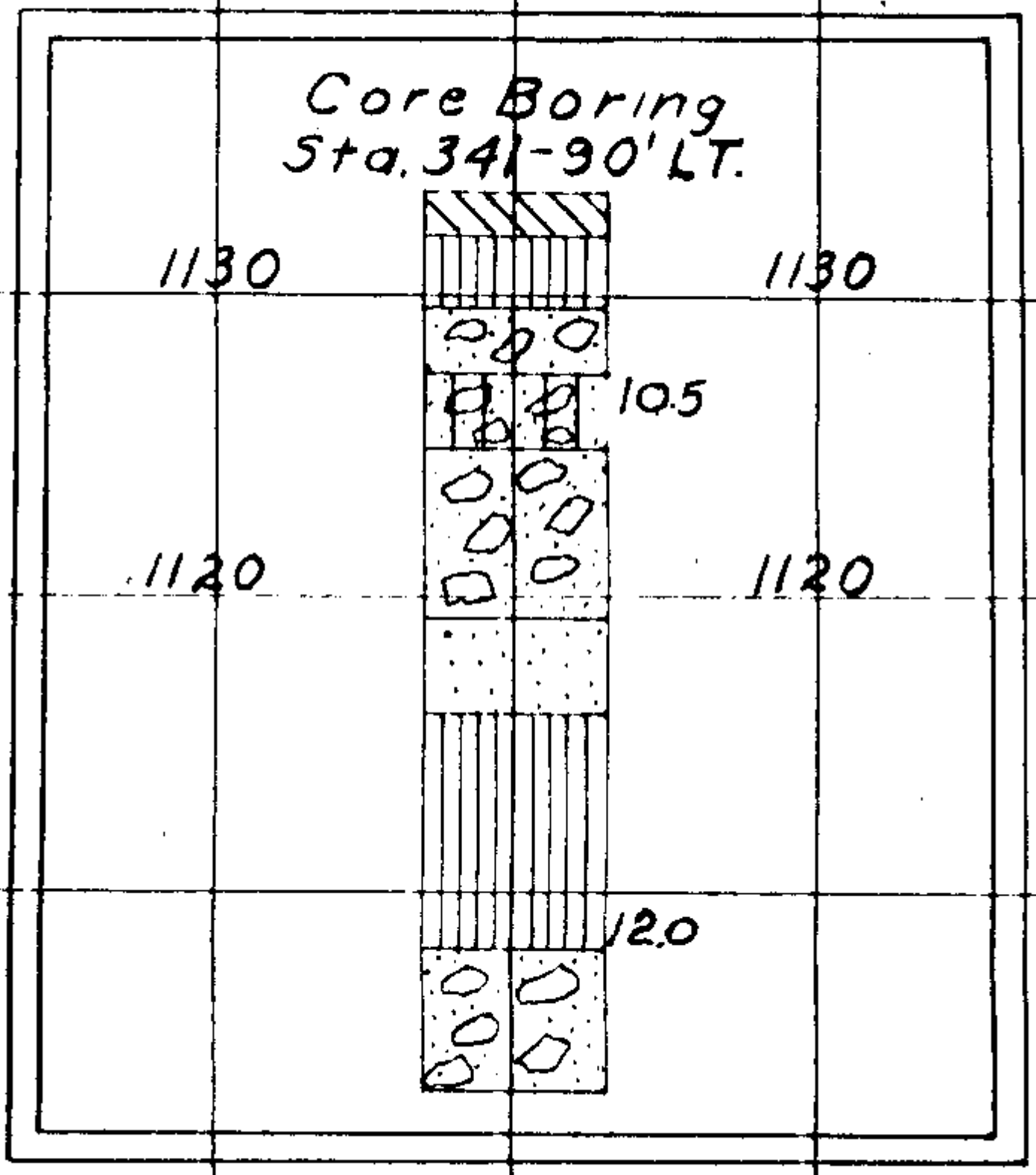

100' LT.
℄ PENN. RR.
Proposed ℄ S.R. 1
℄ S.R. #39
100' LT.
℄
100' RT.
100' RT.
Core Boring
Sta. 341-90' LT.
1130
1130


Core Boring
Sta. 341-90' LT.
1130
1130
10.5
1120
1120
12.0

1200
1190
1180
1170
1160
1150
1140
1130
1120
1110
90'LT.
90'RT.
Core Boring
Sta. 328+47
Core Borings
Core Boring
90'LT. 90'RT.
54'RT.
FS
Core Boring ℄ 353+50
322
323
324
325
326
327
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332
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

12

100' LT.

℄

100' RT.

Rocky Fork

Proposed ℄ S.R. No. 1

℄ Mt. Zion Rd.

Old stream bed
(Drain and consolidate or excavate undesirable material before placing fill).

100' LT.

℄

100' RT.

1190

1180

1170

1160

1150

1140

1130

1120

1110

54' LT. 54' RT. 13.9 24.7 W 23.0 20.8

54' LT. 54' RT. 12.7 15.5 18.5 W 23.6 W

Coring Boring 54' LT.

Core Boring 54' LT.

54' RT. 35.6

Core Boring 54' LT.

50' LT. 27.5 W 24.8

54' LT. 54' RT. 26.2 W 22.9 27.8 25.8

54' RT. 26.4 26.4 W 28.8

℄ Core Boring 23.7

54' LT. 17.6 W

30' RT. 32.3 FS 12.7 16.8 25.6

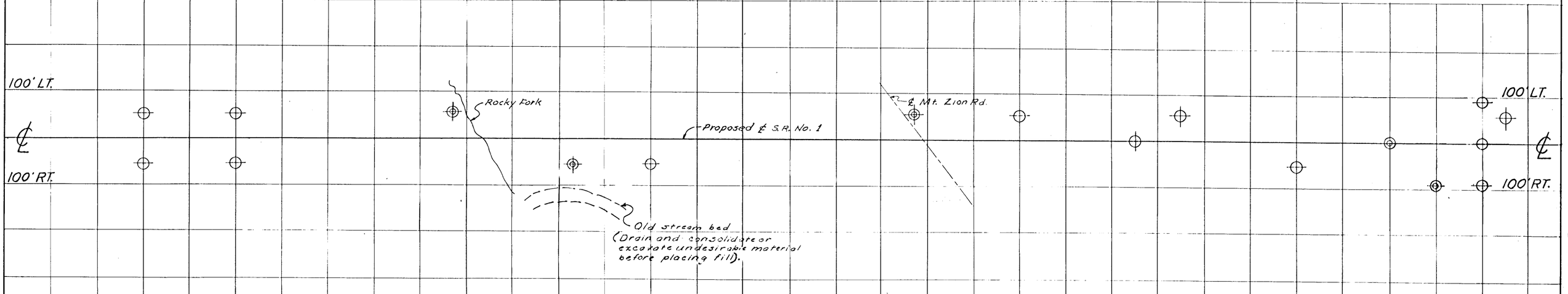
90' LT. ℄ 90' RT.

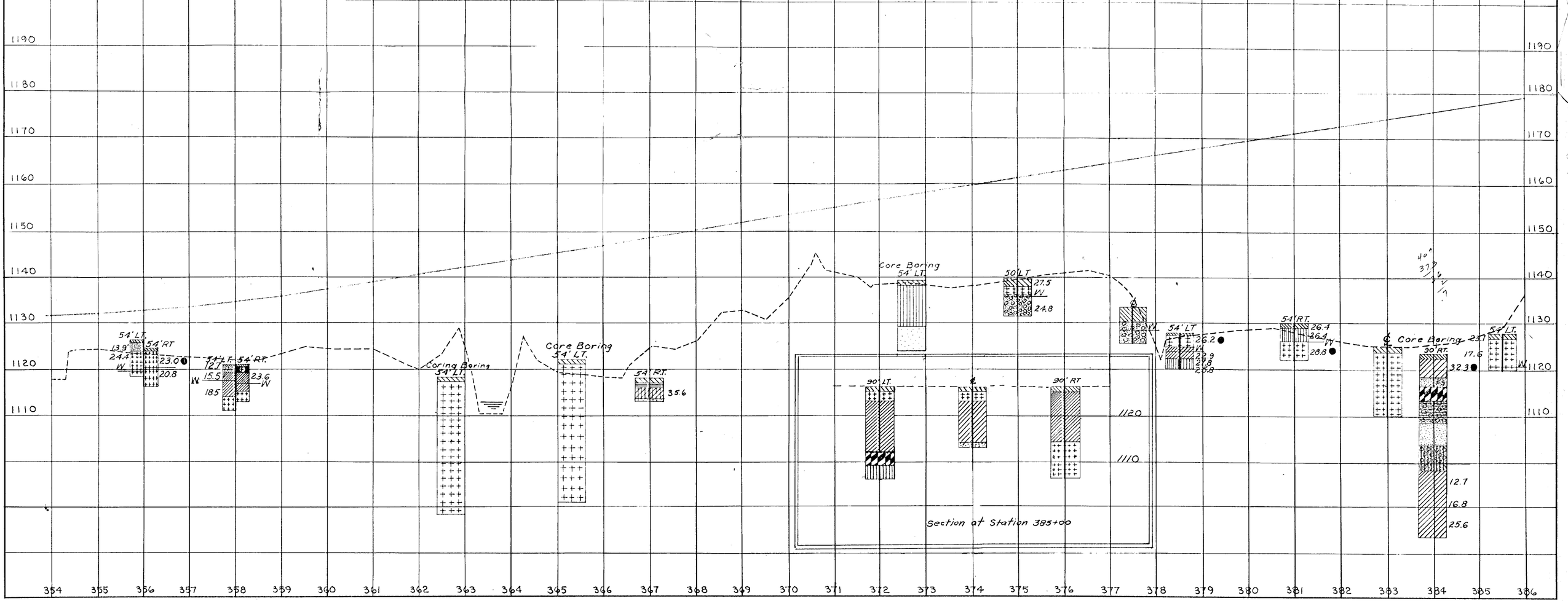
1120

1110

Section at Station 385+00

354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386


100' LT.
℄
100' RT.
Rocky Fork
Proposed ℄ S.R. No. 1
℄ Mt. Zion Rd.
Old stream bed
(Drain and consolidate or excavate undesirable material before placing fill).
100' LT.
℄
100' RT.


1190
1180
1170
1160
1150
1140
1130
1120
1110
54' LT.
54' RT
13.9
24.4
W
23.0
20.8
54' LT.
54' RT.
12.7
15.5
18.5
W
23.6
W
Coring Boring
54' LT.
Core Boring
54' LT.
54' RT.
35.6
Core Boring
54' LT.
50' LT.
27.5
W
24.8
54' LT.
26.2
W
28.9
27.8
25.8
54' RT.
26.4
36.4
W
28.8
Core Boring
30' RT.
54' LT.
17.6
32.3
W
FS
12.7
16.8
25.6
90' LT.
90' RT
1120
1110
Section at Station 385+00
354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13

100'LT.

℄

100'RT.

100'LT.

℄

100'RT.

Core Boring 100'RT.

12.7

Core Boring 100'LT.

9.7

13.0

Core Boring 100'RT.

16.1

8.8

Sandstone

Sandstone

Sandstone

No "W"

No "W"

No "W"

H.A. Refusal

Note: Sandstone - flat bedded, medium hard (soft near surface), porous, fine grained iron oxide cemented.

1300 1290 1280 1270 1260 1250 1240 1230 1220 1210 1200 1190 1180 1170 1160 1150 1140 1130

386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409

RICHLAND COUNTY
RIC-1-12.03

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105-(19)	

1/8

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO, AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

LEGEND FOR PROJECT—AVERAGE RESULTS OF TESTS

SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL WITH SAND		A-1-b	35.2	22.2	27.1	10.3	4.5	NP	NP	—	3
FINE SAND		A-3	0	20.5	75.0	4.5	0	NP	NP	—	1
COARSE AND FINE SAND	—	A-3a	38.7	13.75	15.85	20.95	10.7	24.35	3.4	—	3
GRAVEL OR STONE FRAGMENTS WITH SAND AND SILT		A-2-4	5.5	15.5	58.5	20.5	0	NP	NP	—	1
SANDY SILT	A-4	A-4a	11.6	7.7	21.6	35.6	23.4	24.2	5.9	25.0	33
SILT	A-4	A-4b	1.5	0.4	21.3	64.7	12.5	24.4	1.4	—	3
SILT AND CLAY	A-6	A-6a	11.3	8.3	16.8	36.0	24.5	32.4	11.9	31.7	14
SILTY CLAY	A-6	A-6b	0.8	3.6	10.9	51.6	33.1	32.4	18.8	22.4	1
ELASTIC CLAY		A-7-5	—	—	—	—	—	79.5	36.0	91.0	14
CLAY		A-7-6	0.4	1.4	5.6	48.3	44.7	49.0	24.6	55.5	25

MARL, FIBROUS PEAT, AND SEDIMENTARY PEAT (VISUAL CLASSIFICATION)
OVERBURDEN (VISUAL CLASSIFICATION)
LIMESTONE (VISUAL CLASSIFICATION)
SANDSTONE (VISUAL CLASSIFICATION)
SHALE (VISUAL CLASSIFICATION)

NOTE: TEST RESULTS OF ORGANIC SOILS ARE SHOWN ON PROFILE.

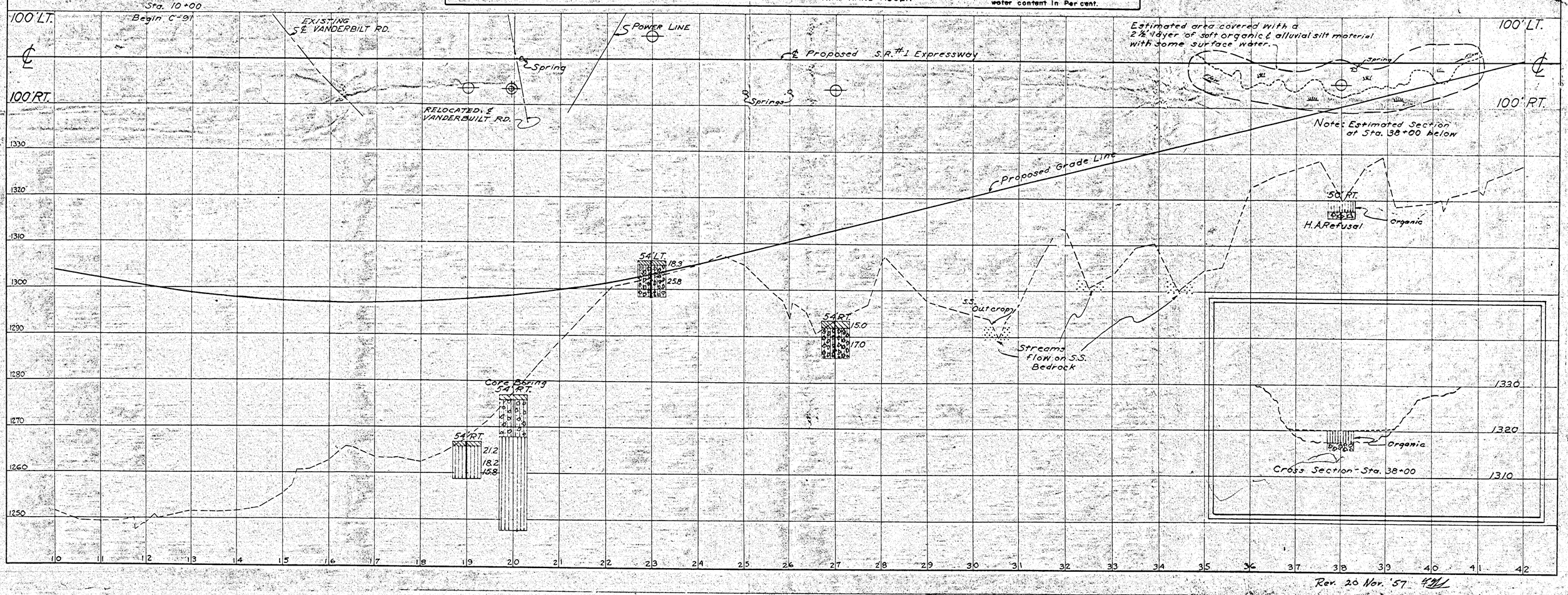
SOD & TOP SOIL
BERM MATERIAL
AUGER BORING PLOTTED TO VERTICAL SCALE ONLY
AUGER BORING-PLAN VIEW
CORE BORING-PLAN VIEW
W-WATER
H.A.-HAND AUGER

● WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT.

COMPOSITE SAMPLE
STANDARD PROCTOR TESTS

STATION NO.	OPTIMUM MOIST.-%	OPTIMUM Den.-Lb./Cu.Ft.
52-64	11	119
213-240	12	121
269	15	112
292-300	12	122
395-401	10	118

Note: Figures adjacent to borings designate water content in Per cent.



Rev. 20 Nov. '57

LEGEND FOR PROJECT—AVERAGE RESULTS OF TESTS

SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL WITH SAND		A-1-b	35.2	22.2	27.1	10.3	4.5	NP	NP	—	3
FINE SAND		A-3	0	20.5	75.0	4.5	0	NP	NP	—	1
COARSE AND FINE SAND	—	A-3a	38.7	13.75	15.85	20.95	10.7	24.35	3.4	—	3
GRAVEL OR STONE FRAGMENTS WITH SAND AND SILT		A-2-4	5.5	15.5	58.5	20.5	0	NP	NP	—	1
SANDY SILT	A-4	A-4a	11.6	7.7	21.6	35.6	23.4	24.2	5.9	25.0	33
SILT	A-4	A-4b	1.5	0.4	21.3	64.7	12.5	24.4	1.4	—	3
SILT AND CLAY	A-6	A-6a	11.3	8.3	16.8	36.0	24.5	32.4	11.9	31.7	14
SILTY CLAY	A-6	A-6b	0.8	3.6	10.9	51.6	33.1	32.4	18.8	22.4	1
ELASTIC CLAY		A-7-5	—	—	—	—	—	79.5	36.0	91.0	14
CLAY		A-7-6	0.4	1.4	5.6	48.3	44.7	49.0	24.6	55.5	25

M F S MARL, FIBROUS PEAT, AND SEDIMENTARY PEAT (VISUAL CLASSIFICATION)

OVERBURDEN (VISUAL CLASSIFICATION)

LIMESTONE (VISUAL CLASSIFICATION)

SANDSTONE (VISUAL CLASSIFICATION)

SHALE (VISUAL CLASSIFICATION)

NOTE: TEST RESULTS OF ORGANIC SOILS ARE SHOWN ON PROFILE.

SOD & TOP SOIL

BERM MATERIAL

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY

AUGER BORING—PLAN VIEW

CORE BORING—PLAN VIEW

W-WATER

H.A.-HAND AUGER

● WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT

COMPOSITE SAMPLE

STANDARD PROCTOR TESTS

STATION NO.	OPTIMUM MOIST.-%	OPTIMUM Den.-Lb./Cu.Ft.
52-64	11	119
213-240	12	121
269	15	112
292-300	12	122
395-401	10	118

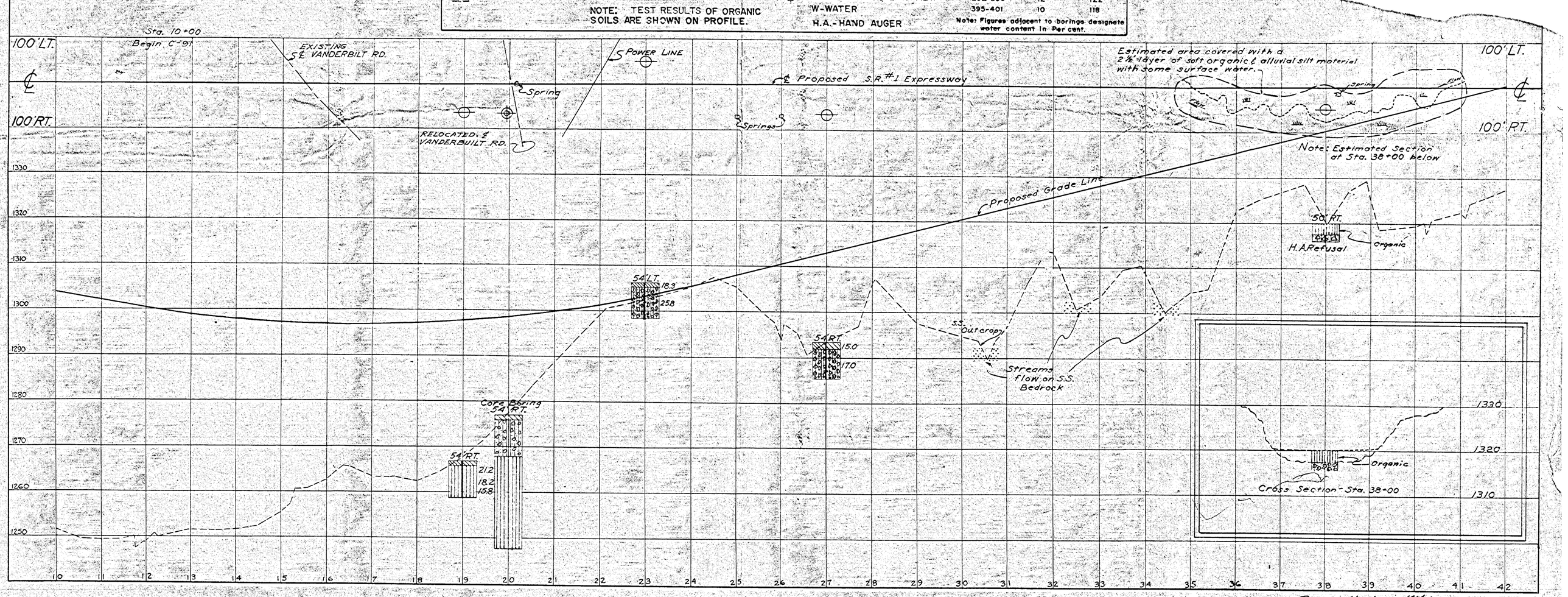
Note: Figures adjacent to borings designate water content in Per cent.

NOTE: TEST RESULTS OF ORGANIC SOILS ARE SHOWN ON PROFILE.

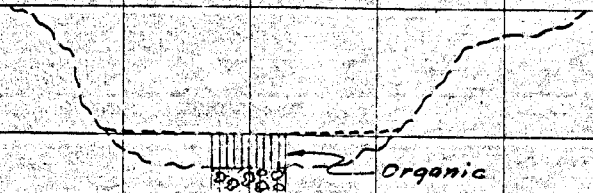
W-WATER
H.A.-HAND AUGER

395-401	10	118

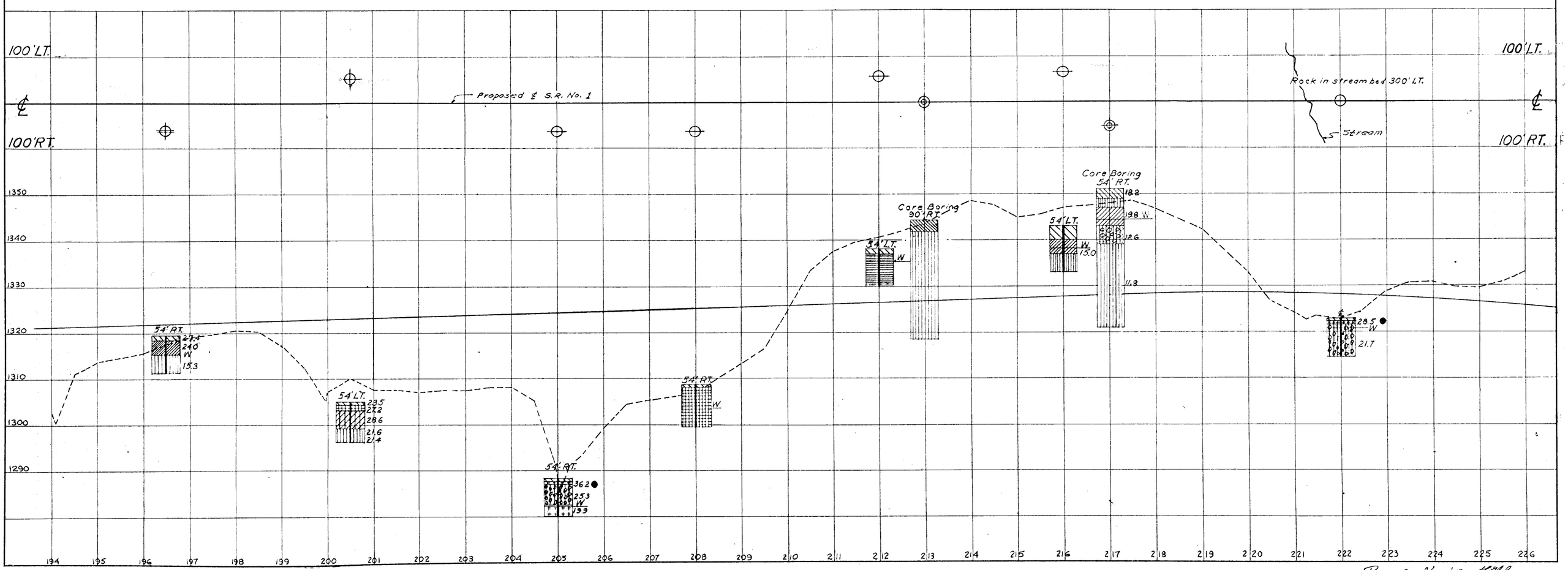
Note: Figures adjacent to borings designate water content in Per cent.



Rev. 20 Nov. '57 HW



Cross Section - Sta. 38+00



Rev. 20 Nov. '57 FMH

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105-(19)	

3/8

RICHLAND COUNTY
RIC-1-12.03

MANSFIELD-WASHINGTON ROAD

100' LT.

℄

100' RT.

Proposed ℄ S.R. No. 1

Stream

Core Boring
Sta. 226+75-3 RT.

Core Boring
90' RT

Core Boring
60' RT
24.5

54' RT
22.6
20.2
H.A. REFUSAL

54' LT
20.0
18.6
H.A. REFUSAL

℄ 27.2
24.4
22.2
H.A. REFUSAL

54' LT
18.6
15.7
H.A. REFUSAL

℄
H.A. REFUSAL

W

W
16.7

Fs

Sandstone-
Weathered soft to
medium hard, porous
fine grained, iron
oxide cemented.

℄ MANS.-WASH. RD.
226+63.96

Stream flows on
S.S. & rock
outcroppings in
stream banks

1340 1330 1320 1310 1300 1290 1280 1270 1260 1250 1240 1230 1220 1210

226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258

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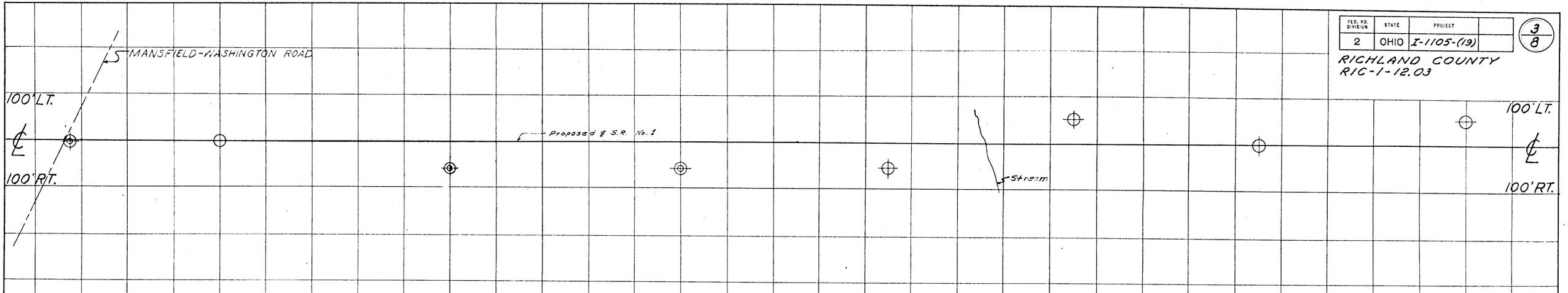

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105-(19)	

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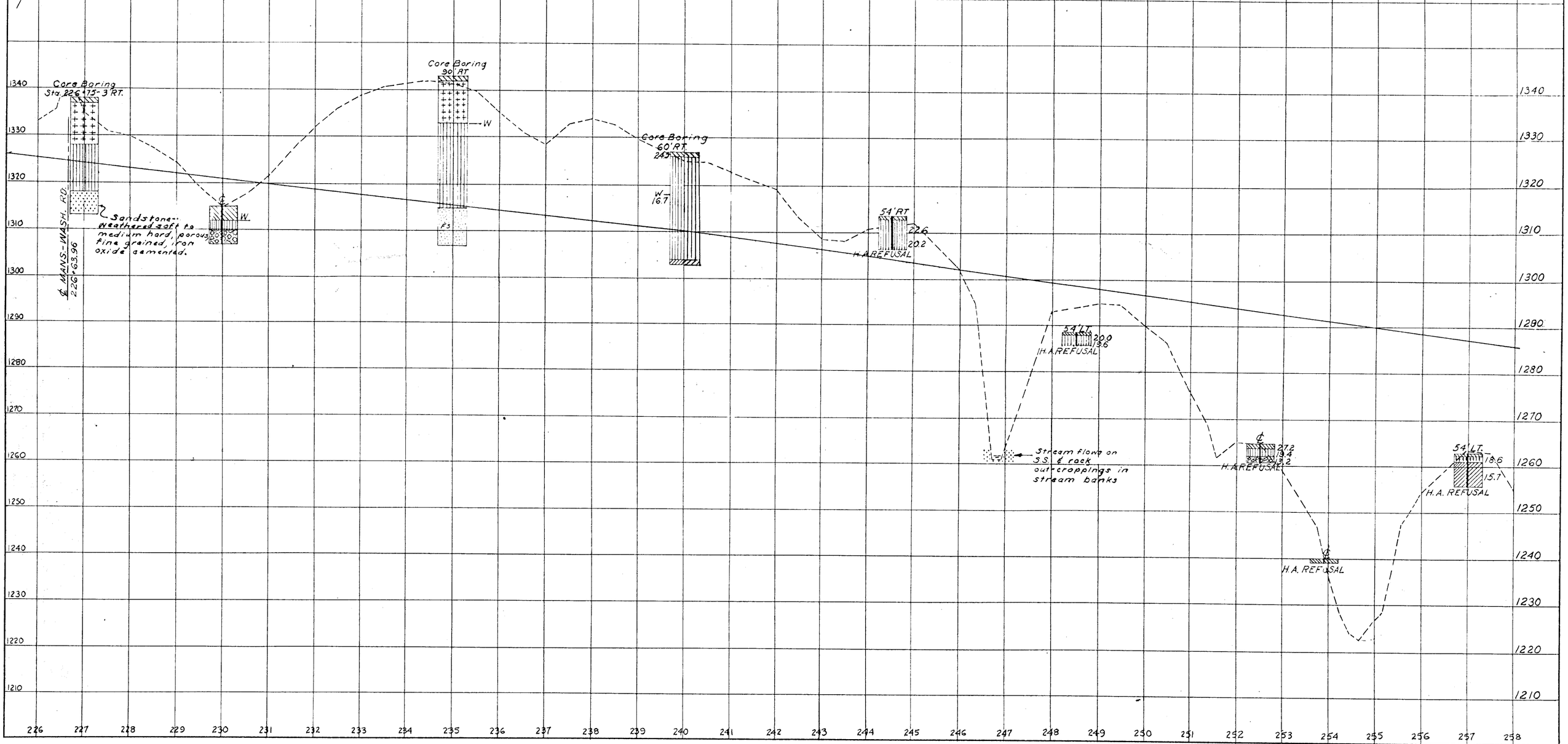
RICHLAND COUNTY
RIC-1-12.03



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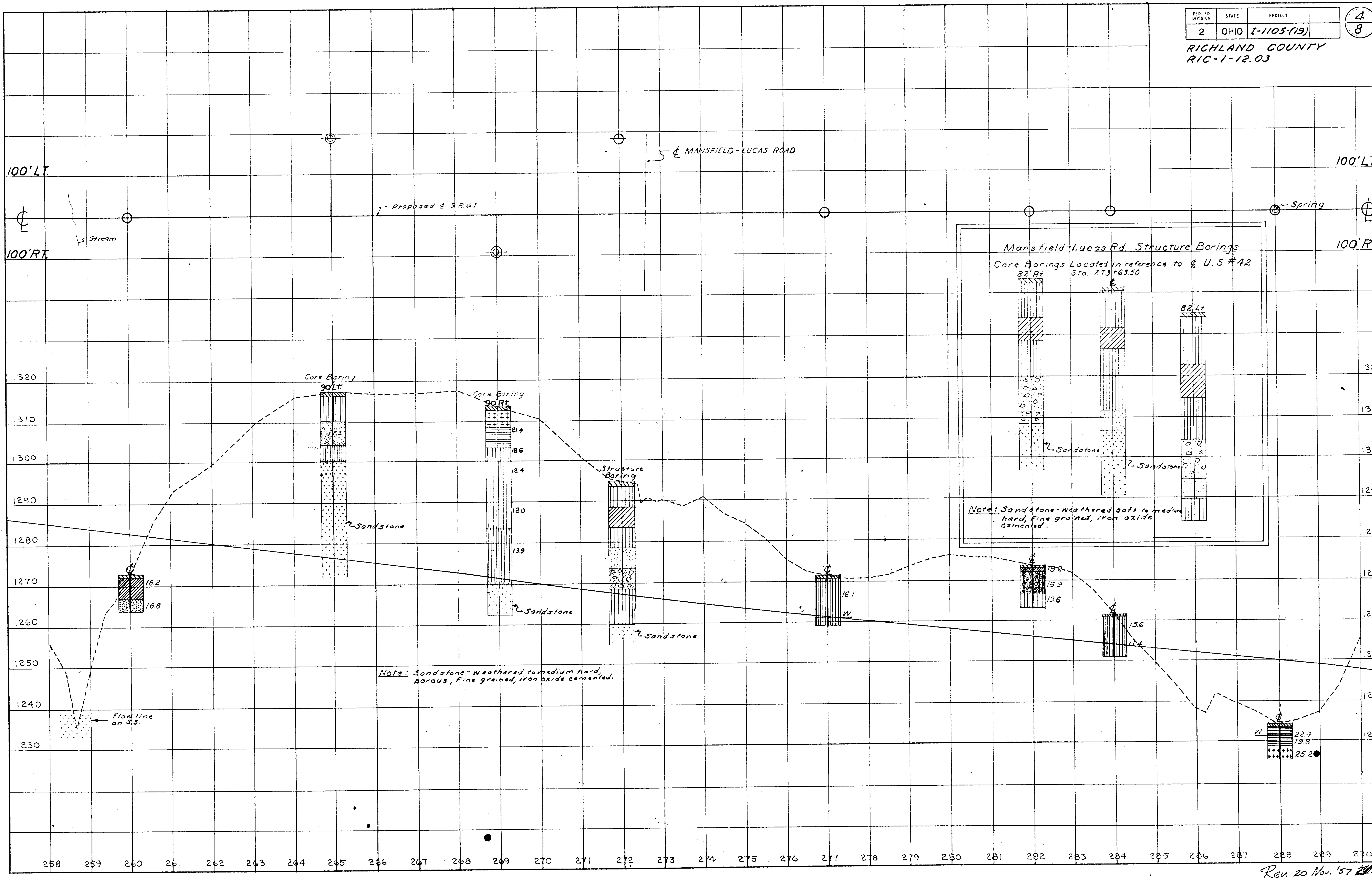

FED. RD. DIVISION
STATE
PROJECT
2
OHIO
I-1105-(19)
4
8
RICHLAND COUNTY
RIC-1-12.03
℄ MANSFIELD-LUCAS ROAD
100' LT.
100' RT.
℄
Proposed ℄ S.R. 161
Stream
Spring
Mansfield-Lucas Rd. Structure Borings
Core Borings Located in reference to ℄ U.S. #42
82' Rt.
Sta. 273+6350
82' Lt.
Sandstone
Note: Sandstone-weathered soft to medium hard, fine grained, iron oxide cemented.
Core Boring
90' LT.
90' Rt.
Structure Boring
Sandstone
18.2
16.8
21.4
18.6
12.4
12.0
13.9
16.1
W
19.2
16.9
19.6
15.6
17.4
22.4
19.8
25.2
Flow line on S.S.
Note: Sandstone-weathered to medium hard, porous, fine grained, iron oxide cemented.
1320
1310
1300
1290
1280
1270
1260
1250
1240
1230
258
259
260
261
262
263
264
265
266
267
268
269
270
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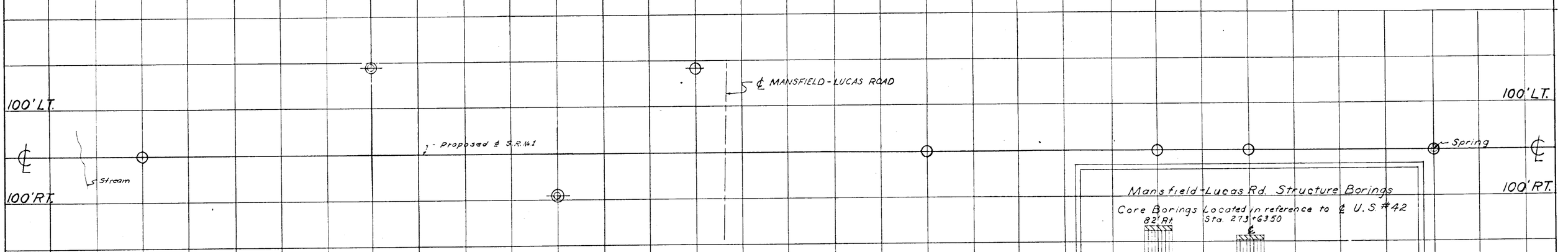
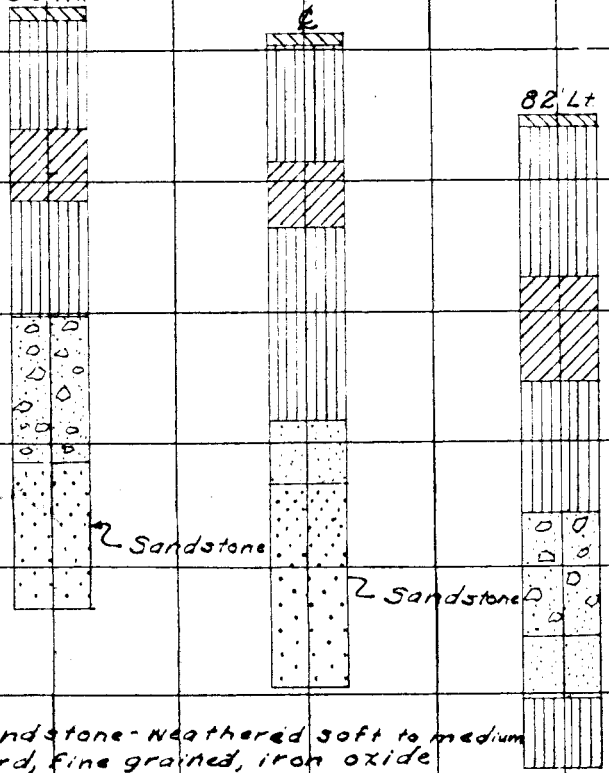
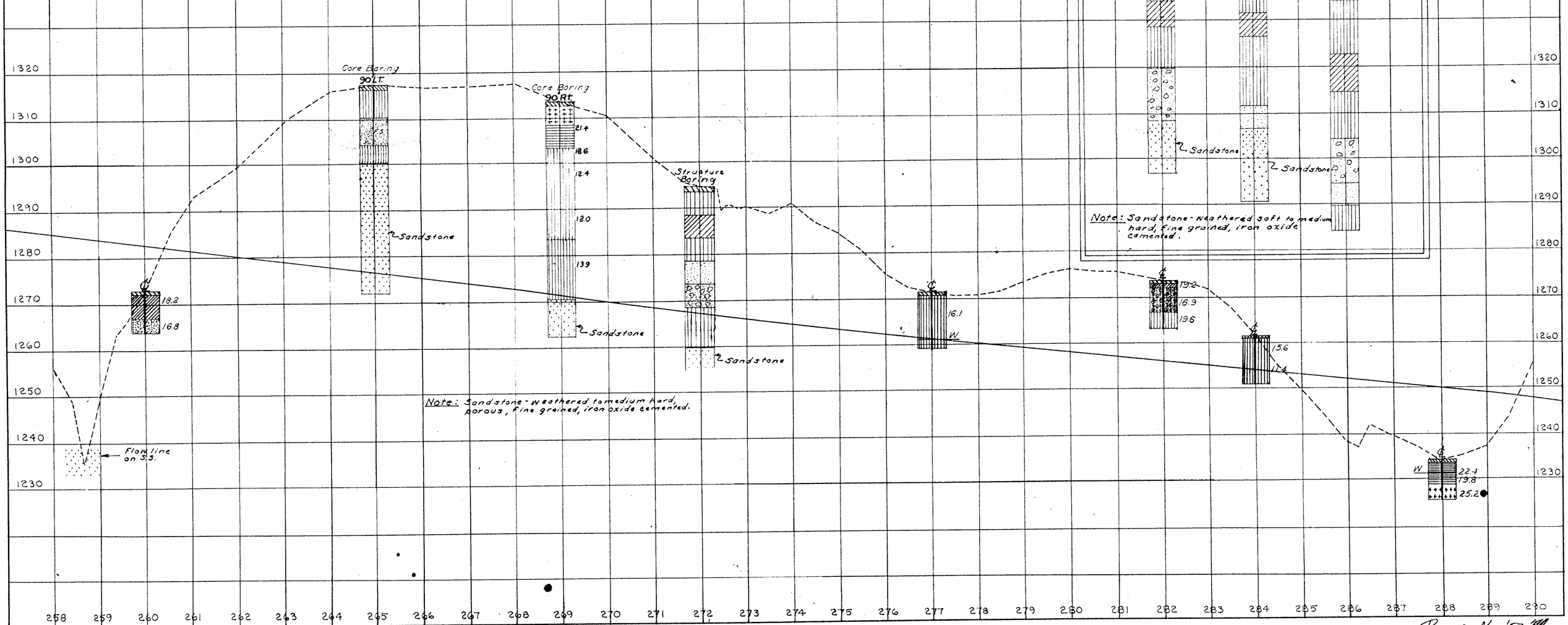

100'LT.
100'RT.
℄ MANSFIELD-LUCAS ROAD
Proposed ℄ S.R.#1
Stream
Spring
100'LT.
100'RT.
Mansfield-Lucas Rd. Structure Borings
Core Borings Located in reference to ℄ U.S. #42
82' Rt
Sta. 273+6350
℄

Mansfield-Lucas Rd. Structure Borings

Core Borings Located in reference to ℄ U.S. #42 Sta. 273+63.50



Note: Sandstone - Weathered soft to medium hard, fine grained, iron oxide cemented.


1320
1310
1300
1290
1280
1270
1260
1250
1240
1230
Core Boring 90 Lt.
Core Boring 90 Rt.
Structure Boring
Sandstone
Sandstone
Sandstone
Sandstone
Sandstone
Sandstone
18.2
16.8
21.4
18.6
12.4
12.0
13.9
16.1
W
19.2
16.9
19.6
15.6
17.4
W
22.1
19.8
25.2
Flow line on S.S.
Note: Sandstone - Weathered to medium hard, porous, fine grained, iron oxide cemented.
Note: Sandstone - Weathered soft to medium hard, fine grained, iron oxide cemented.
258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105-(19)	

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RICHLAND COUNTY
RIC-1-12.03

100'LT. ℄ 100'RT.

℄ SITES ROAD

Proposed ℄ S.R. No. 1

Core Boring 90'RT.
No W

Core Boring 90'RT.
20.3
17.1
13.7
15.1
11.5
17.8
No W

Core Boring 90'RT.
33.4
23.0
12.9
13.3
12.3

54'LT.
25.7

54'RT.
17.2
13.9
W

54'LT.
W

1280 1270 1260 1250 1240 1230 1220 1210 1200 1190 1180 1170 1160 1150

290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105-(19)	

5/8

RICHLAND COUNTY
RIC-1-12.03

100' LT.

℄ SITES ROAD

100' LT.

℄

Core Boring
90' RT.

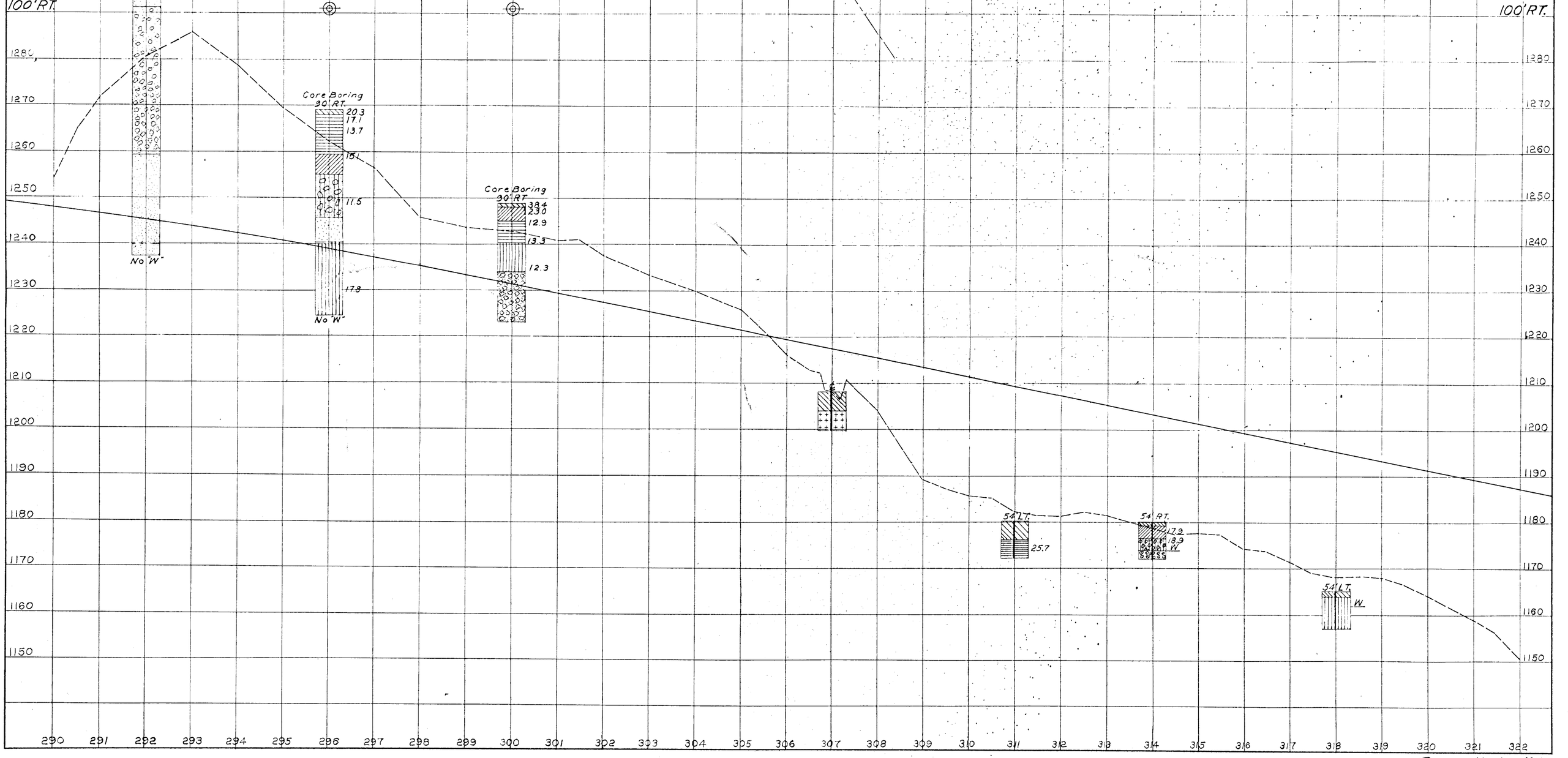
Proposed ℄ S.R. No. 1

100' RT.

100' RT.

1280

1280



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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-1105-(13)	

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RICHLAND COUNTY
RIC-1-12.03

100'LT. ℄ PENN. RR. Proposed ℄ S.R. 1 ℄ S.R. 433 100'LT.

℄

100'RT. 100'RT.

Core Boring Sta 341-30'LT.
1130 1130 105 1120 1120 120

1200 1200

1190 1190

1180 1180

1170 1170

1160 1160

1150 1150

1140 1140

90'LT. 90'RT. 30'LT. Core Boring Sta. 328+47 42'LT. 90'RT. Core Boring ℄ 90'LT. 30'RT. Core Borings 90'LT. 30'RT. 30'LT. 90'RT. Core Boring ℄ 90'LT. 90'RT. 90'LT. 90'RT. 30'RT. Core Boring 30'LT. 90'RT. 30'LT. 90'RT. 54'RT. Core Boring 90'LT. 30'RT. Core Boring 90'LT. 30'RT. Core Boring ℄ 353-50 90'LT. 90'RT.

Marly & Peaty · Peaty & Marly · Marly · Peaty · See Legend · FS

LEGEND:
LL - LIQUID LIMIT, %
PI - PLASTIC INDEX
W - MOISTURE CONTENT
N - STANDARD PENETRATION RESISTANCE, BLOWS/FOOT
q_u - Unconfined compressive strength, T.S.F.

322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354

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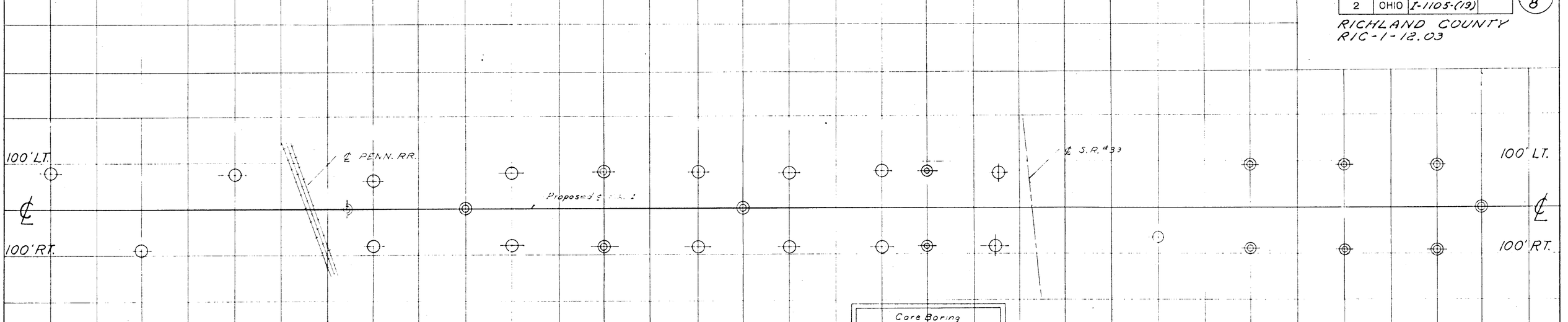
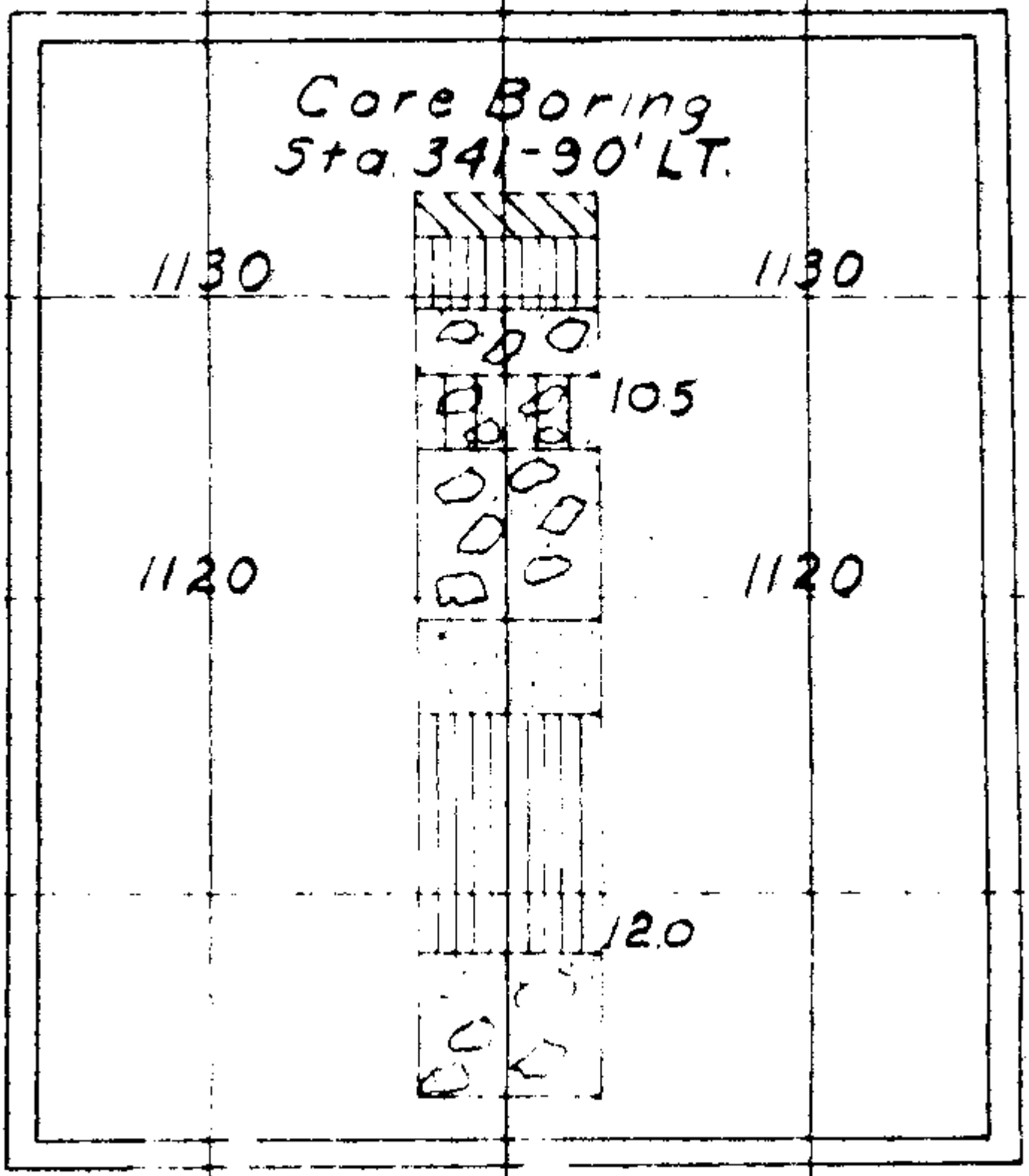
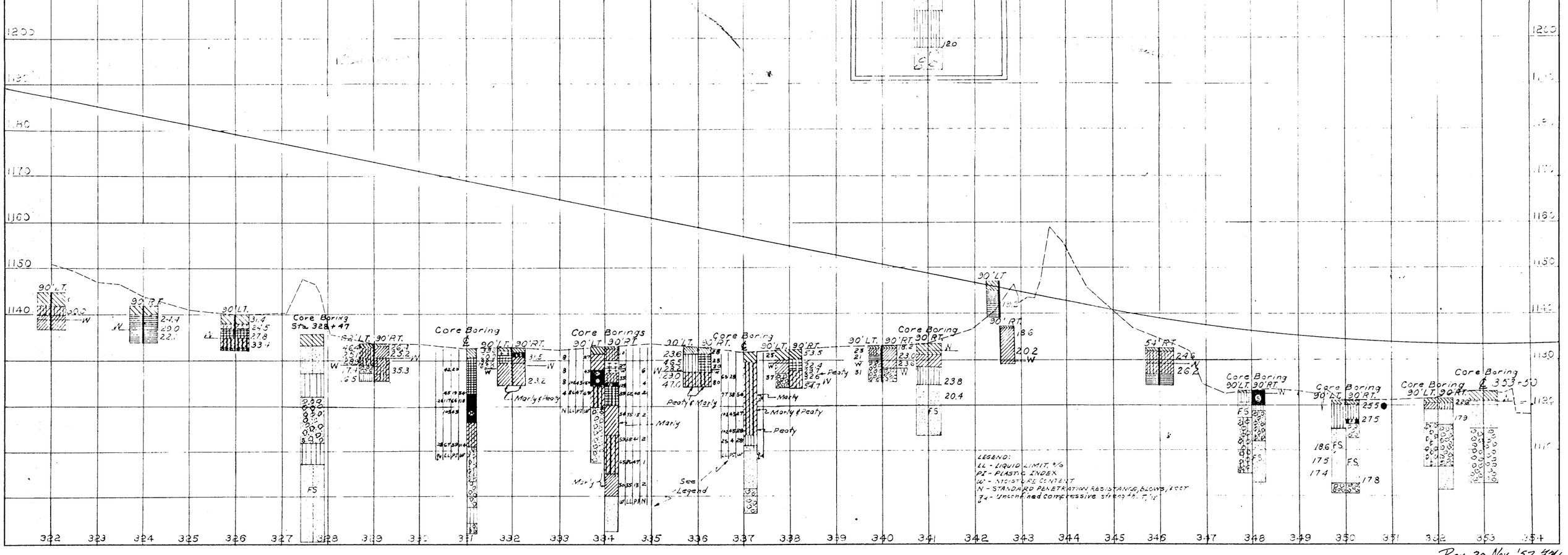
2	OHIO	I-1105-(13)	8

RICHLAND COUNTY
RIC-1-12.03




Core Boring
Sta. 341-90' LT.
1130
1130
105
1120
1120
12.0


1200
1190
1180
1170
1160
1150
1140
90' LT.
90' RT.
Core Boring
Sta. 328+47
Core Boring
Core Borings
Core Boring
Core Boring
Core Boring
Core Boring
Core Boring
Marly
Marly & Peaty
Peaty & Marly
Peaty
See Legend
FS
LEGEND:
LL - LIQUID LIMIT, %
PI - PLASTIC INDEX
W - MOISTURE CONTENT
N - STANDARD PENETRATION RESISTANCE, BLOWS/FOOT
qu - UNCONFINED COMPRESSIVE STRENGTH, T/SF
322
323
324
325
326
327
328
329
330
331
332
333
334
335
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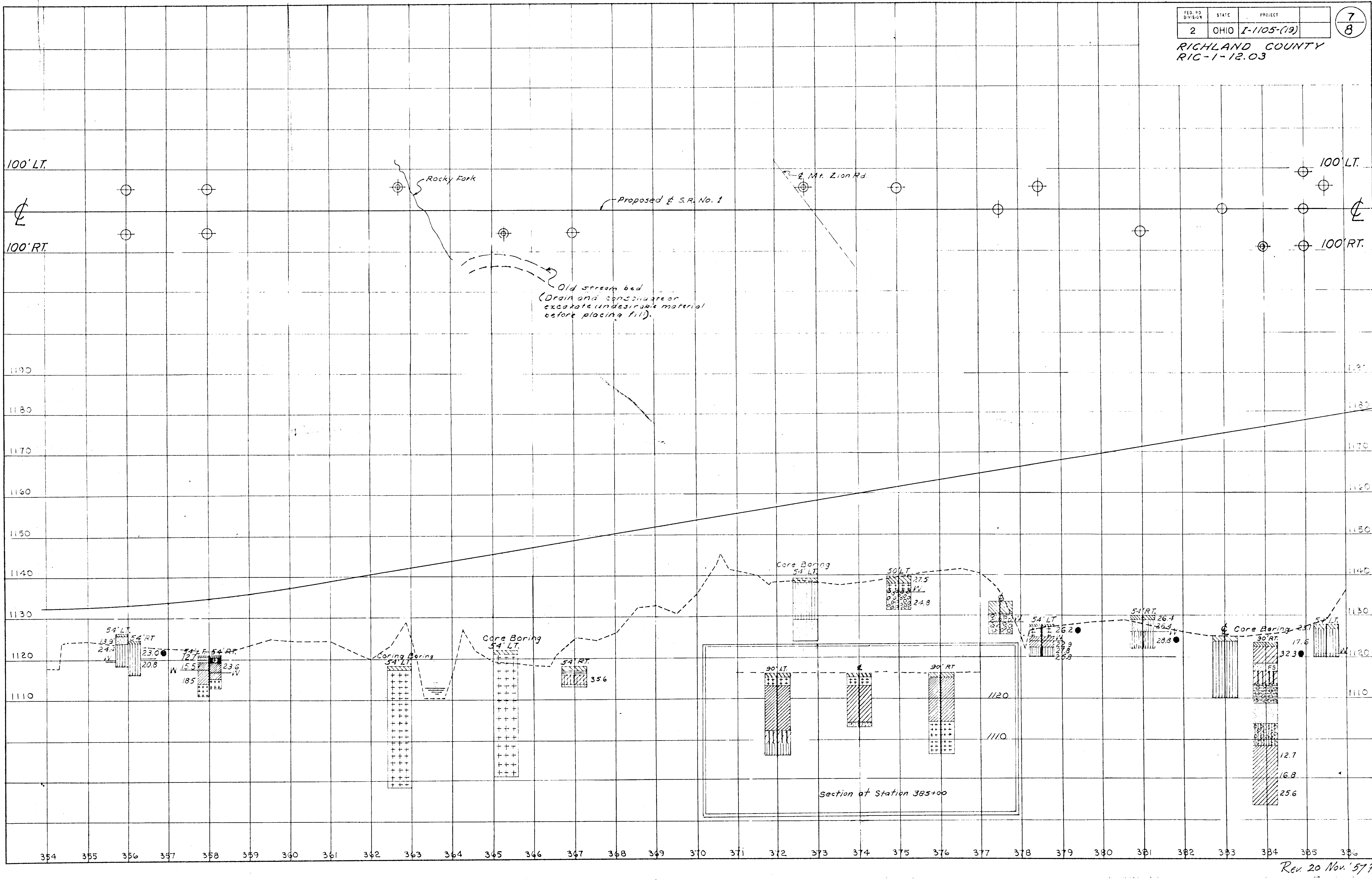
FED. RD. DIVISION
STATE
PROJECT
2
OHIO
I-1105-(19)
7
8
RICHLAND COUNTY
RIC-1-12.03
100' LT.
100' RT.
Rocky Fork
℄ Mt. Zion Rd.
Proposed ℄ S.R. No. 1
Old stream bed
(Drain and consolidate or excavate undesirable material before placing fill).
1190
1180
1170
1160
1150
1140
1130
1120
1110
Core Boring
54' LT.
54' RT.
50' LT.
90' LT.
90' RT.
Coring Boring
Section at Station 385+00
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
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RICHLAND COUNTY
RIC-1-12.03

100' LT.

℄

100' RT.

Rocky Fork

Proposed ℄ S.R. No. 1

℄ Mt. Zion Rd.

Old stream bed
(Drain and consolidate or excavate undesirable material before placing fill).

100' LT.

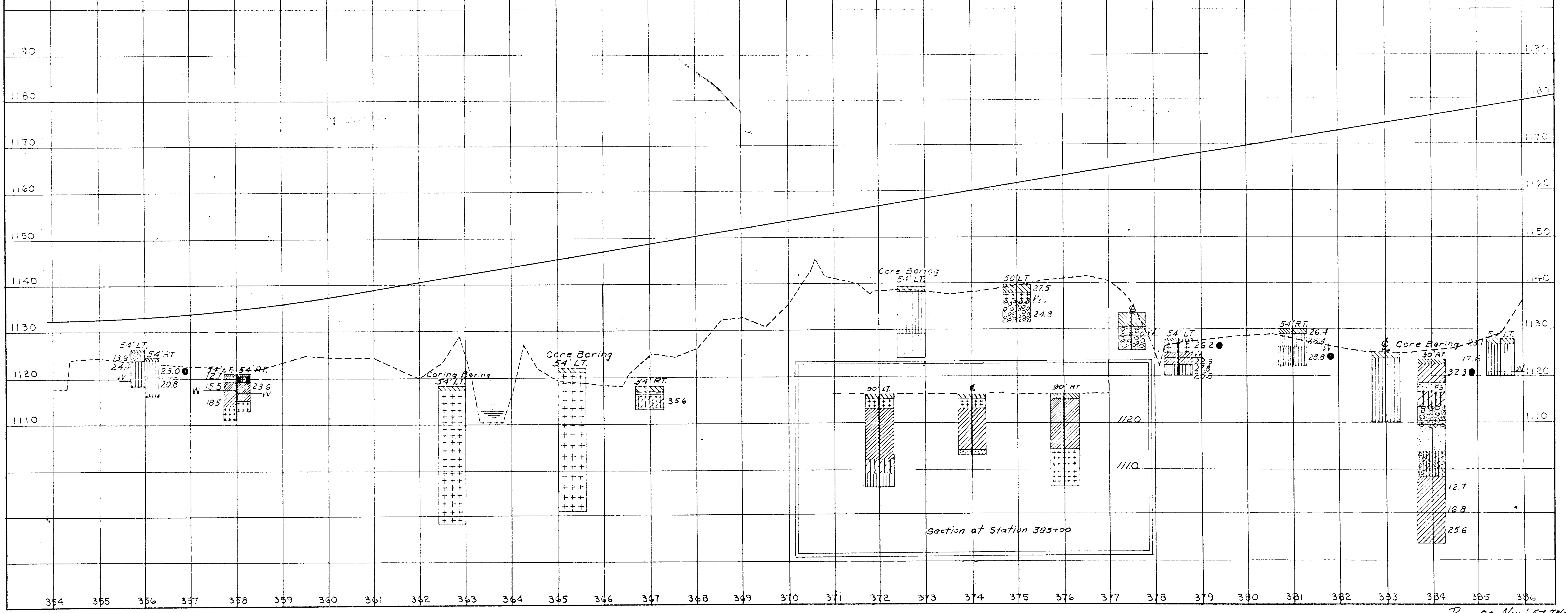
℄

100' RT.

1190

1180

before placing fill).



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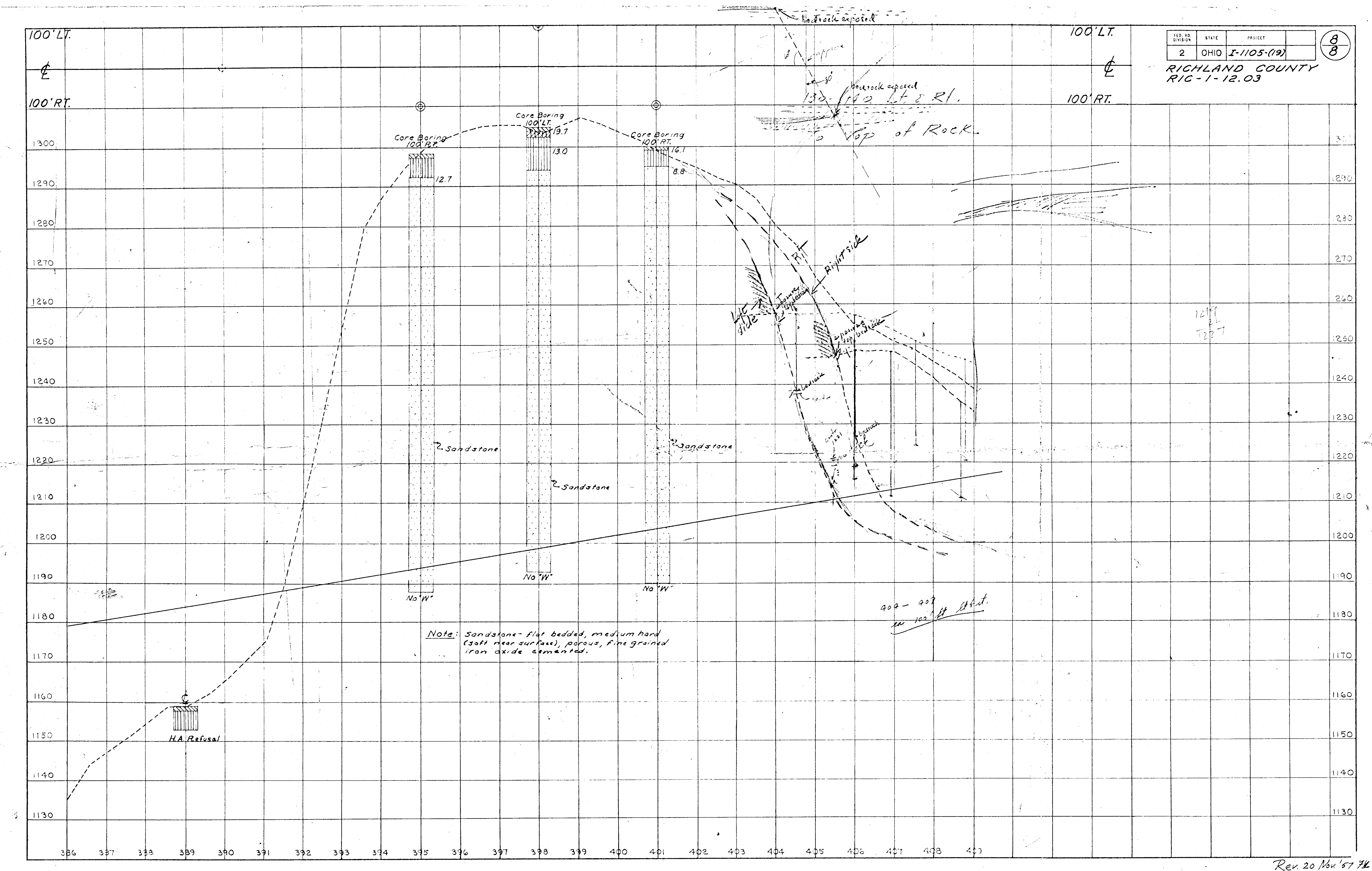
FED. RD. DIVISION
STATE
PROJECT
2
OHIO
I-1105-(19)
8
8
RICHLAND COUNTY
RIC-1-12.03
100' LT.
100' RT.
Core Boring 100' RT.
Core Boring 100' LT.
Core Boring 100' RT.
12.7
19.7
13.0
16.1
8.8
Sandstone
Sandstone
Sandstone
No "W"
No "W"
No "W"
H.A. Refusal
Note: Sandstone - flat bedded, medium hard (soft near surface), porous, fine grained iron oxide cemented.
Bedrock exposed
Top of Rock
Right side
Left side
1300
1290
1280
1270
1260
1250
1240
1230
1220
1210
1200
1190
1180
1170
1160
1150
1140
1130
386
387
388
389
390
391
392
393
394
395
396
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