

REFERENCE: R-5725

PROJECT: 50474

SEE SHEET 3 FOR PLAN SHEET LAYOUT  
AT TIME OF INVESTIGATION

**STATE OF NORTH CAROLINA**  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5725	1	29

**CONTENTS**

<u>LINE</u>	<u>STATION</u>	<u>PLAN</u>
-LI-	11+50 - 21+17.15	4-5
-Y1-	10+00 - 13+62.65	5
-RABT1-	10+00 - 12+51.33	5
-DR3-	10+00 - 11+39.151	5
-L2-	10+00 - 39+50	5-7
-Y2A-	10+00 - 19+01.64	8
-Y2B-	10+00 - 18+00	6,8
-DRI-	10+00 - 11+71.94	8
-DR2-	10+00 - 11+70.0	8
-RABT2-	10+00 - 12+51.33	8

**CROSS SECTIONS**

<u>LINE</u>	<u>STATION</u>	<u>SHEET</u>
-LI-	13+00	9
-LI-	15+50	9
-LI-	18+00	9
-LI-	20+50	10
-L2-	11+00	11
-L2-	13+50	11
-L2-	17+00	11
-L2-	18+00	12
-L2-	18+50	13
-L2-	19+00	14
-L2-	21+00	14
-L2-	23+50	15
-L2-	26+00	15
-L2-	32+00	15
-L2-	34+50	16
-L2-	36+50	16
-L2-	39+00	16
-Y1-	12+00-12+50	17
-Y1-	13+00	18
-Y2A-	16+00-16+50	19
-Y2B-	11+50	20
-Y2B-	12+00-13+00	21
-Y2B-	13+50	22
-Y2B-	15+00	23
-Y2B-	16+00	23
-Y2B-	17+50	24
-DRI-	11+00	25
-DR2-	10+50	26
-DR3-	10+50-11+39	27

# ROADWAY SUBSURFACE INVESTIGATION

COUNTY GUILFORD

PROJECT DESCRIPTION NC 68 AT SR 2129 (FOGLEMAN ROAD)  
TO NC 150 INTERSECTION IN OAK RIDGE INTERSECTION,  
INTERSECTION IMPROVEMENTS

## INVENTORY

**CAUTION NOTICE**

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1919 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
  2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

E. FERREIRA, EI

CATLIN

EJ. EDMONDSON

A. CLISTER

INVESTIGATED BY E. FERREIRA, EI

DRAWN BY E. FERREIRA, EI

CHECKED BY D. BROWN, PE

SUBMITTED BY D. BROWN, PE

DATE MARCH 2021



DocuSigned by:

*Donald W. Brown Jr.* 4/13/2021

C06817F5F39A SIGNATURE DATE

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**





March 31, 2021

STATE PROJECT: 50474.1.1 (R-5725)  
 COUNTY: Guilford  
 DESCRIPTION: Intersection improvements at NC 68 at SR 2129 (Fogleman Road) to NC 150/Oak Ridge Road (S.R. 2137) in Oak Ridge.

SUBJECT: Roadway Subsurface Inventory

**Project Description**

The project consists of improvements to NC 68, located within the municipal boundaries of Oak Ridge in North Carolina. The total length of the project is approximately 0.53 miles, with 10 alignments as shown in the table below. The project corridor contains mainly commercial properties with some undeveloped land.

Alignment	Description	Beg/End Stations
-L1-	NC 68	11+50.00 to 21+17.15
-L2-	NC 68	10+00.00 to 39+50.00
-Y1-	Linville Road	10+50.00 to 13+62.65
-Y2A-	Oak Ridge Road	15+50.00 to 19+01.64
-Y2B-	Oak Ridge Road	10+00.00 to 18+00.00
-DR1-	Driveway	10+00.00 to 11+71.94
-DR2-	Driveway	10+00.00 to 11+70.00
-DR3-	Driveway	10+00.00 to 11+39.15
-RABT1-	Roundabout	10+00.00 to 12+51.33
-RABT2-	Roundabout	10+00.00 to 12+51.33

Plans call for the improvement of NC 68 (-L1- and -L2-), from approximately 68± feet south of its intersection with Fogleman Road to 1,070± feet north of its intersection with NC 150/Oak Ridge Road (Y2B). The improvements include widening the existing roadways, new concrete medians, two new roundabouts on the Y-lines, curb and gutter, and installation of sidewalks. The driveway leading to Oak Ridge Dentistry (DR3) will be realigned with a roundabout (-RABT1-) to connect to the new alignment. Linville Road (-Y1-) will be widened with an alignment shift and will also be connected to the roundabout (-RABT1-). Oak Ridge Road will be widened and will connect to a second roundabout (-RABT2-). The ramps on NC 68 heading south, west, and east will be removed, with new thru lanes and turn lane configurations.

A geotechnical field investigation was conducted for this project in February of 2021. Drilling was performed by Catlin of Williamsburg, NC using a track-mounted CME-55 drill rig. The drill rig was equipped with an automatic hammer with an efficiency of 94.7%. All drilling activities were supervised by Stewart personnel.

A total of 19 Standard Penetration Test (SPT) borings and 7 Hand Auger borings were performed for the project. Representative soil samples from select borings were collected in the field for laboratory analysis.

**Physiography & Geology**

The project site is located in Guilford County, North Carolina, which lies within the Piedmont Geologic Province of North Carolina. The site is part of the Charlotte Belt, adjacent to the Carolina Slate Belt region, which is generally characterized by low grade metamorphosed volcanic rock. Review of the

*Geologic Map of Region G, North Carolina (P. Albert Carpenter, 1982)* shows that the site is underlain by Porphyritic granite (Pzpggr) north of the intersection of SR 150 and US 68, and the site is underlain by Mica gneiss and schist (mgs) south of the intersection.

**Soil Properties**

Soils encountered at the site include artificial fill, roadway embankment, alluvial, and residual soils.

Artificial fill was encountered on -L2- and -DR3- consisting of medium stiff (A-7-5) to and stiff silt (A-4), with a Plasticity Index (PI) of 26 to 32 and was moist.

Roadway embankment was encountered in borings along -L1-, -L2-, -Y2A-, -Y2B-, -Y1-, -DR1-, -DR2-, and -DR3-. The material was very loose to dense Silty SAND (A-2-4) and Clayey SAND (A-2-6 and A-2-7) and medium stiff to very stiff Sandy Lean CLAY (A-6) and Silty Plastic CLAY (A-7-5 and A-7-6). The samples were moist to wet. Laboratory test samples had PIs of 12 and 50.

Alluvial soil associated with a nearby creek was encountered along -L2- with material classified as very loose to medium stiff Silty SAND (A-2-4) and Clayey SAND (A-2-6) and soft Silty CLAY (A-7-5) and Sandy Lean CLAY (A-6). The samples were wet to saturated.

Native residual soils were encountered in all borings except for borings DR1\_1130 HA, L2\_1690 HA, L2\_1800 HA, L2\_1900 HA, and Y2B\_1612 HA. The soils types primarily consist of loose to very dense, Clayey SAND (A-2-6) and Silty SAND (A-2-4), and medium stiff to very stiff Sandy SILT (A-4), Silty CLAY (A-7-5 and A-7-6), and Clayey SILT (A-5). The samples were moist to wet. Laboratory testing on clay samples had PIs ranging from 25 to 26.

**Rock Properties**

Weathered rock nor bedrock was encountered in any of the 19 borings.

**Groundwater**

Of the 19 borings, groundwater was not encountered during the drilling process. Thirteen borings were left open for a 24+ hour stabilization period, and six borings were left open until the end of day, after which groundwater was measured in one boring at a depth of 5.6 feet below the current ground surface (el. 903.5± feet). Two hand auger borings had groundwater measured at depths of 2 and 4 feet below the current ground surface (el. 881.9± feet and 936.5± feet).

**Areas of Special Geotechnical Interest**

Alluvial Soils

Alluvial soil was encountered along the two alignments as shown below.

Alignment	Station	Offset (ft)
-L2-	17+00± to 19+00±	80-90± RT

Groundwater

Groundwater was encountered within 6 feet of finished grade in the following locations:

Alignment	Station
-L2-	39+00±
-Y2B-	14+80±

Artificial Fill

Artificial fill was encountered at the following locations:

Alignment	Station	Offset (ft)
-L2-	10+00± to 13+00±	20-30± RT
-DR2-	10+60±	CL

Items of Interest

USTs, ASTs and gas pumps, or indicators thereof, were noted on the plans near the right-of-way at the following location(s):

Type	Alignment	Station	Offset (ft)
Gas Valve	-L1-	39+10± to 39+42±	230± RT to 235± RT
Gas Valve	-L2-	20+80±	40± LT
UST	-L2-	24+88	80± RT
Gas Valve	-Y2A-	16+42±	27± LT

Ponds and Wetland Locations

Type	Alignment	Station	Offset (ft)
Stream	-L2-	17+00±	80± RT

Soil with High Plasticity Indices

Based on laboratory testing, soil at the following locations was determined to be highly plastic (PI=26 to 35).

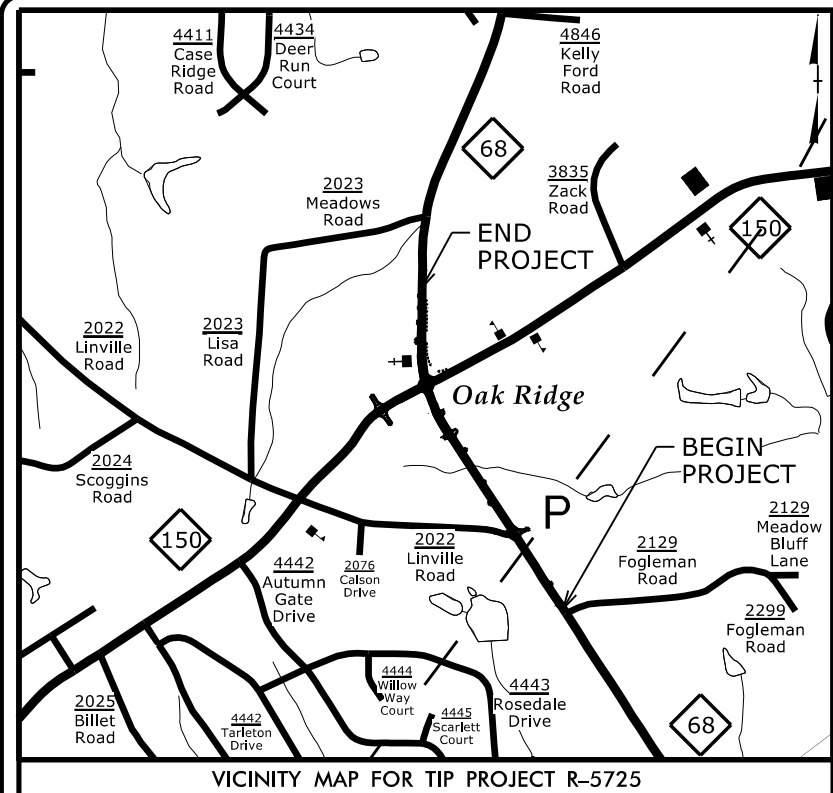
Alignment	Station	Offset (ft)
-L2-	11+00± to 15+00±	35± RT
-L2-	33+50± to 35+50±	29± LT
-L2-	38+00± to 39+50±	18± RT
-Y1-	12+00± to 13+00±	19± RT
-Y2B-	16+50± to 18+00±	46± LT
-DR3-	10+50± to 11+39±	CL

Based on laboratory testing, soil at the following locations was determined to be highly plastic (PI=35 or greater).

Alignment	Station	Offset (ft)
-Y2B-	11+50± to 13+50±	46± RT

09/08/19

**TIP PROJECT: R-5725**



VICINITY MAP FOR TIP PROJECT R-5725  
See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GUILFORD COUNTY**

**LOCATION: INTERSECTION IMPROVEMENTS ALONG NC 68  
AND NC 150 IN OAK RIDGE.**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE AND SIGNALS**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5725	3	29
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50474.1.1	N/A	P.E.	
		ROW	
		UTILITIES	
		CONSTRUCTION	

**25% REVIEW PLANS  
FOR REVIEW ONLY**

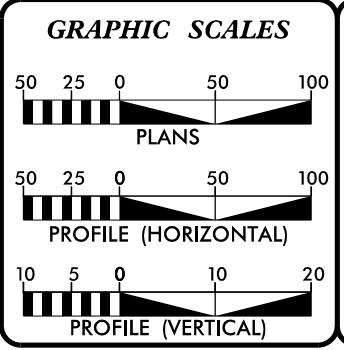


CLEARING ON THIS PROJECT SHALL BE TO LIMITS ESTABLISHED USING METHOD \_\_\_\_.  
THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF THE TOWN OF OAK RIDGE.

★ SIGNAL MODIFICATION

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**DESIGN DATA**

ADT 2023 =	21,287
ADT 2043 =	30,832
K =	9 %
D =	65%
T =	4 % *
V =	40 MPH
* TTST = 2% DUAL 2%	
FUNC CLASS =	
PRINCIPAL ARTERIAL	
REGIONAL TIER	

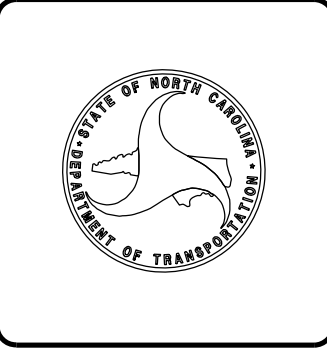
**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-5725	=	0.530 mi.
LENGTH STRUCTURES TIP PROJECT R-5725	=	0.000 mi.
TOTAL LENGTH TIP PROJECT R-5725	=	0.530 mi.

Prepared in the Offices of:  
**STEWART**  
2018 STANDARD SPECIFICATIONS  
RIGHT OF WAY DATE:  
SEPTEMBER 18, 2020  
LETTING DATE:  
SEPTEMBER 21, 2021



VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606  
**ANDY YOUNG, PE**  
PROJECT ENGINEER  
**MICHAEL BURNS, PE**  
PROJECT DESIGN ENGINEER  
**BRIAN KETNER, PE**  
NCDOT CONTACT

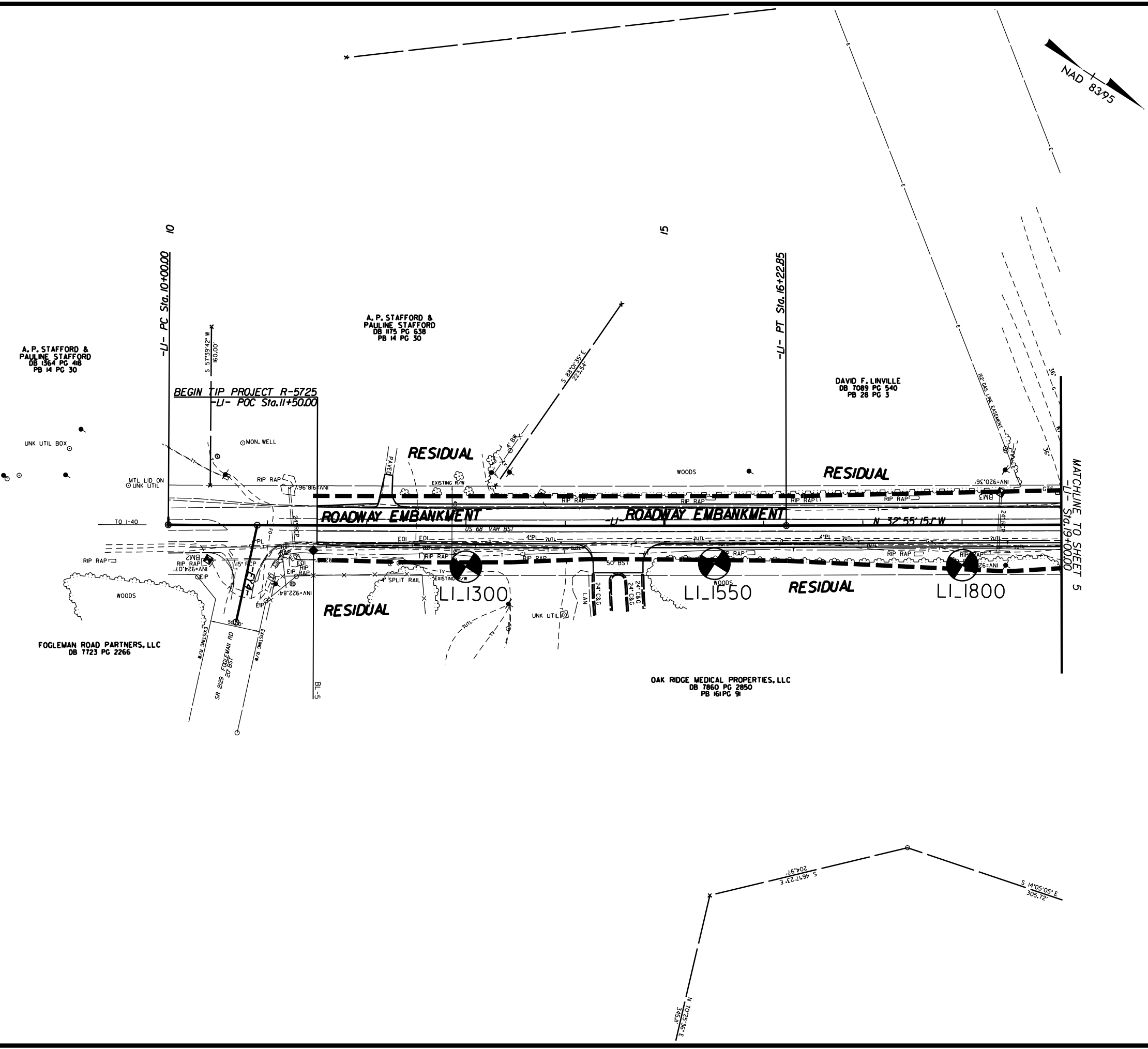
**HYDRAULICS ENGINEER**  
SIGNATURE: \_\_\_\_\_ P.E.  
**ROADWAY DESIGN ENGINEER**  
SIGNATURE: \_\_\_\_\_ P.E.





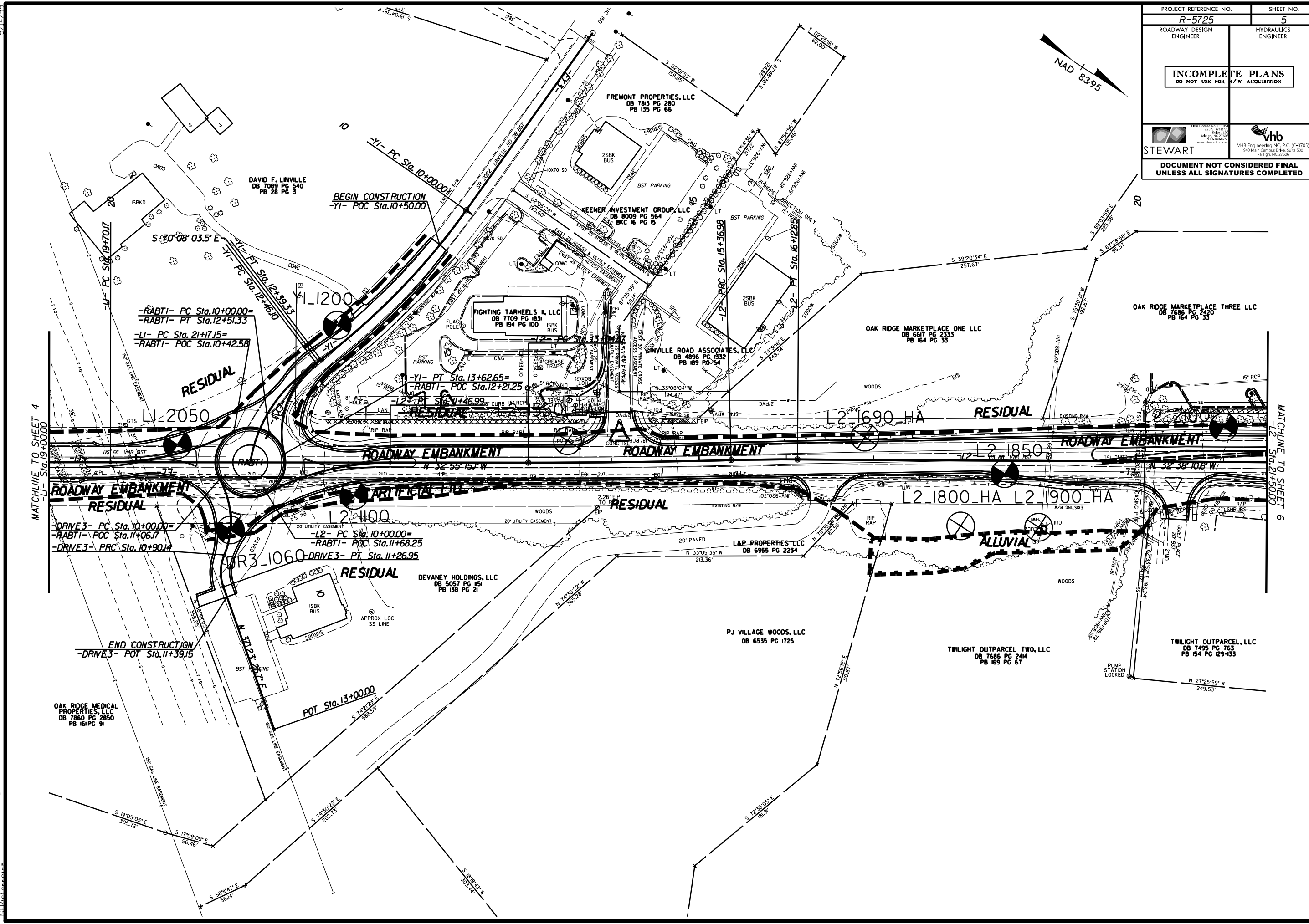
\$\$\$ SYSTEM \$\$\$  
\$\$\$ DONOR \$\$\$  
\$\$\$ USERNAME \$\$\$

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3/30/2021  
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PROJECT REFERENCE NO. <b>R-5725</b>	SHEET NO. <b>4</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
 STEWART	 vhb VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



PROJECT REFERENCE NO. <b>R-5725</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
 <b>STEWART</b> <small>1100 Atlantic Blvd., Suite 200 Raleigh, NC 27601 www.stewartinc.com</small>	 <b>vhb</b> <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	





MATCHLINE TO SHEET 4  
L1- Sta. 19+00.00

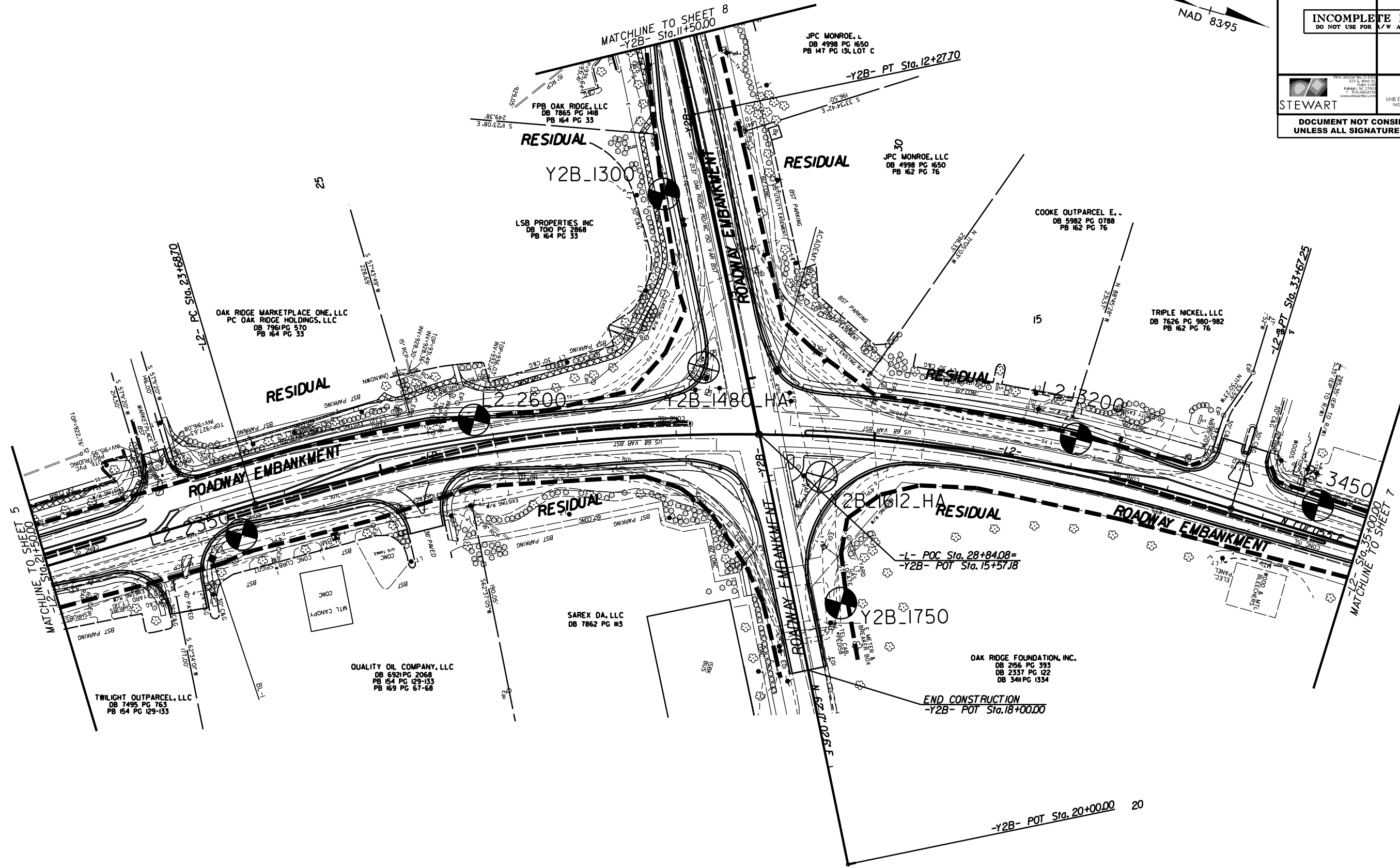
MATCHLINE TO SHEET 6  
L2- Sta. 21+50.00

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3/30/2021  
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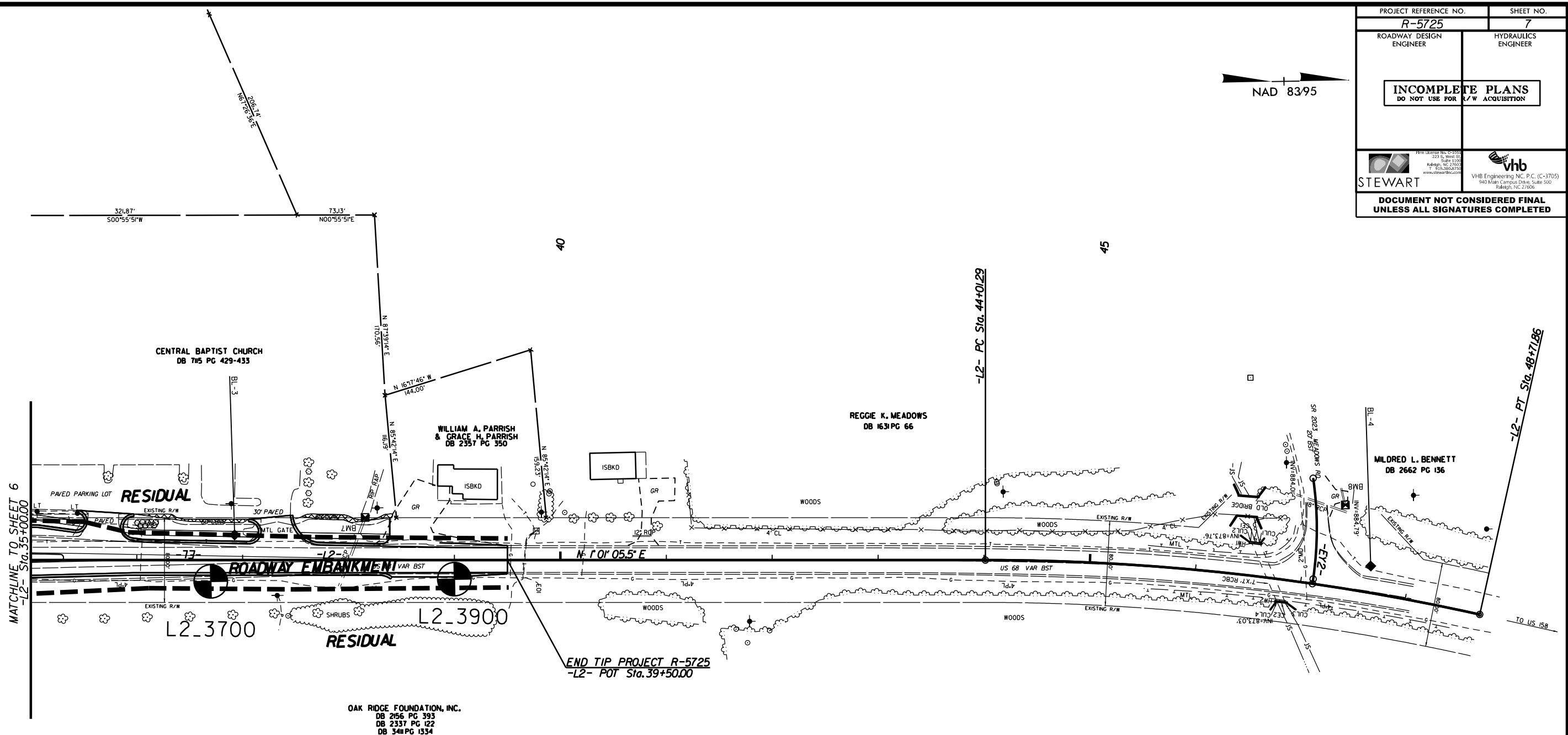
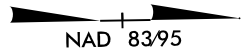
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ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/C ACQUISITION			
 <b>STEWART</b>		 <b>vhb</b> VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED			







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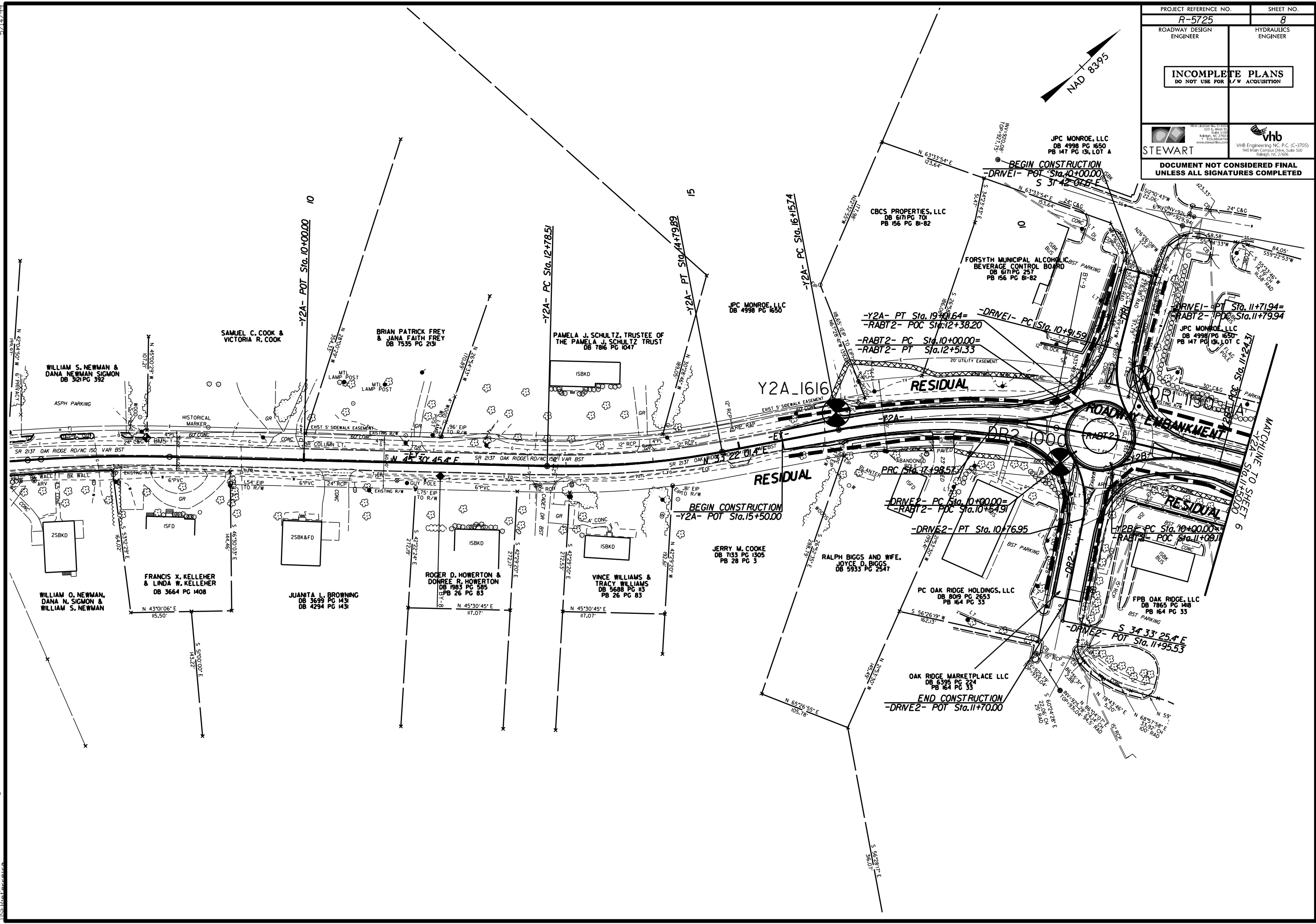
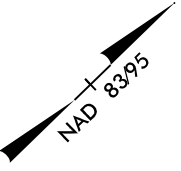
PROJECT REFERENCE NO. <b>R-5725</b>	SHEET NO. <b>7</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
 <b>STEWART</b> <small>1100 Moore Ave., Suite 1100 223 S. West St. Raleigh, NC 27601 P: 919-884-7200 www.stewartinc.com</small>	 <b>vhb</b> <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



-L2-

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PROJECT REFERENCE NO. <b>R-5725</b>	SHEET NO. <b>8</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR P/W ACQUISITION	
 STEWART <small>1100 S. West St. Raleigh, NC 27601 P: 919.884.8888 www.stewartinc.com</small>	 <b>vhb</b> <small>VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606</small>
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

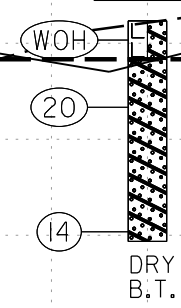


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-23	40 FT RT	18+00	0-1.5	A-2-7(0)	40	22	10.2	30.4	14.1	59.4	39.8	74	43.4	21.6	---

LI\_1800  
18+00  
40 RT

SS-23



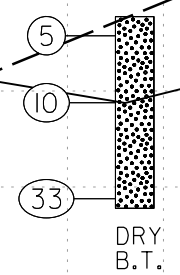
**GROUND SURFACE**

**ROADWAY EMBANKMENT**  
VERY LOOSE, RED, MOIST, CLAYEY SAND (A-2-7)

**RESIDUAL**  
MEDIUM DENSE, RED AND TAN, MOIST, CLAYEY SAND (A-2-6)

18 + 00.00

LI\_1550  
15+50  
38.5 RT



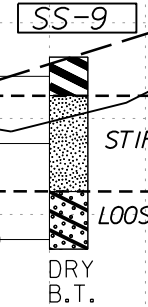
**GROUND SURFACE**

**RESIDUAL**  
LOOSE TO DENSE, WHITE AND RED, MOIST, SILTY SAND (A-2-4)

15 + 50.00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-9	41 FT RT	13+00	0-1.5	A-7-6(12)	53	25	25.8	29.8	8.8	46.9	98	81	57	28.7	---

LI\_1300  
13+00  
41 RT



**GROUND SURFACE**

**RESIDUAL**  
SOFT, RED, MOIST, MICACEOUS, MODERATELY PLASTIC, SILTY CLAY (A-7)

STIFF, RED, MOIST, MICACEOUS, SANDY SILT (A-4)

LOOSE, RED, MOIST, MICACEOUS, CLAYEY SAND (A-2-6)

13 + 00.00

-L1-

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-1	10 FT LT	20+50	0.2-1.5	A-7-5(3)	43	12	27.67	30.39	18.31	23.6	97.85	79.16	46.38	30.3	---

LI\_2050  
20+50  
10 LT  
SS-1

(A) ROADWAY EMBANKMENT MEDIUM STIFF, RED, MOIST, SLIGHTLY PLASTIC, SILTY CLAY (A-7-5)

(8) LOOSE, RED, MOIST, CLAYEY SAND (A-2-6)

RESIDUAL  
(6) VERY LOOSE TO LOOSE, GRAY AND WHITE, MOIST, MICACEOUS SILTY SAND (A-2-4)

(3) DRY B.T.

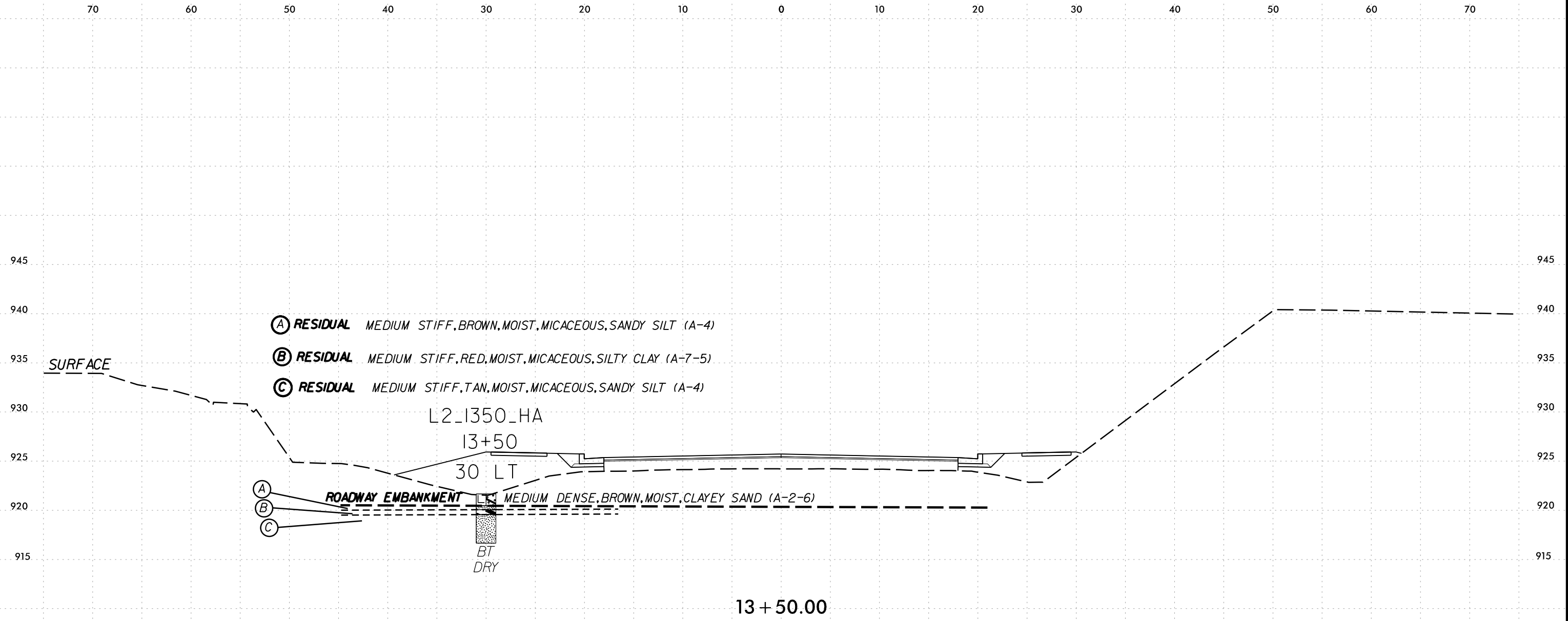
GROUND SURFACE

20 + 50.00

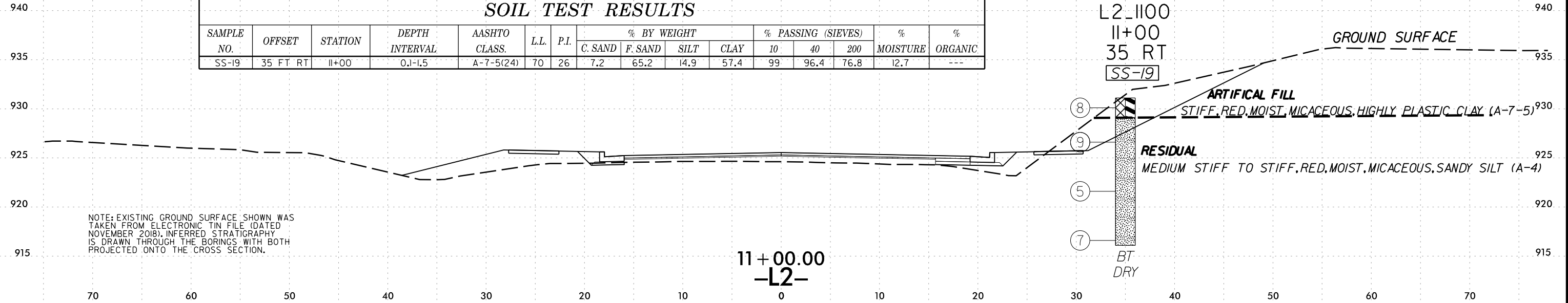
-L1-

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-19	35 FT RT	11+00	0.1-1.5	A-7-5(24)	70	26	7.2	65.2	14.9	57.4	99	96.4	76.8	12.7	---

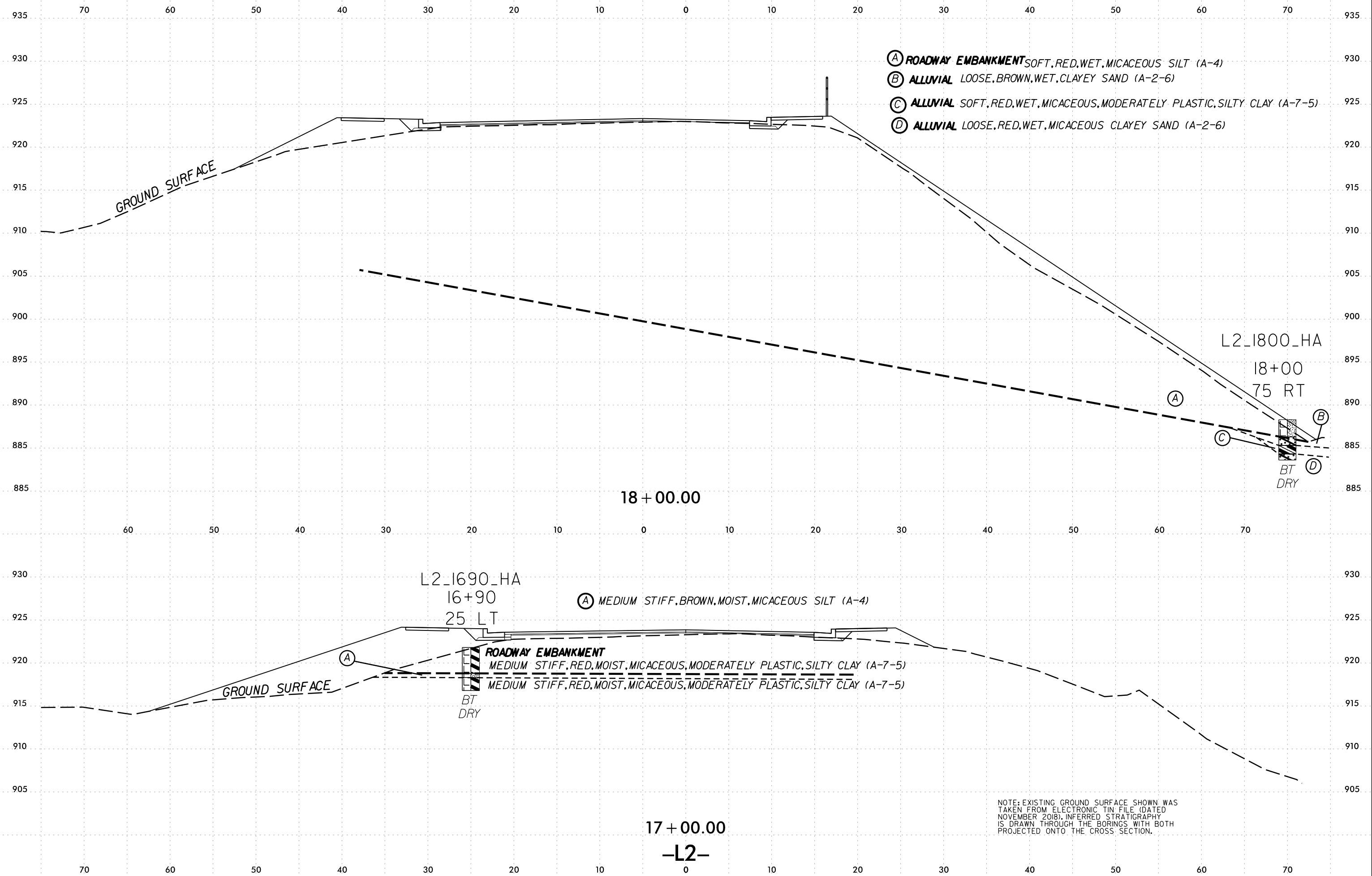


8/23/99



PROJ. REFERENCE NO.  
R-5725

SHEET NO.  
12



- (A) ROADWAY EMBANKMENT SOFT, RED, WET, MICACEOUS SILT (A-4)
- (B) ALLUVIAL LOOSE, BROWN, WET, CLAYEY SAND (A-2-6)
- (C) ALLUVIAL SOFT, RED, WET, MICACEOUS, MODERATELY PLASTIC, SILTY CLAY (A-7-5)
- (D) ALLUVIAL LOOSE, RED, WET, MICACEOUS CLAYEY SAND (A-2-6)

L2\_1800\_HA  
18+00  
75 RT

18 + 00.00

L2\_1690\_HA  
16+90  
25 LT

(A) MEDIUM STIFF, BROWN, MOIST, MICACEOUS SILT (A-4)

ROADWAY EMBANKMENT  
 MEDIUM STIFF, RED, MOIST, MICACEOUS, MODERATELY PLASTIC, SILTY CLAY (A-7-5)  
 BT  
 DRY  
 MEDIUM STIFF, RED, MOIST, MICACEOUS, MODERATELY PLASTIC, SILTY CLAY (A-7-5)

17 + 00.00

-L2-

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

4/7/2021  
I:\Projects\15725\_060\_xsi\_L2.dgn

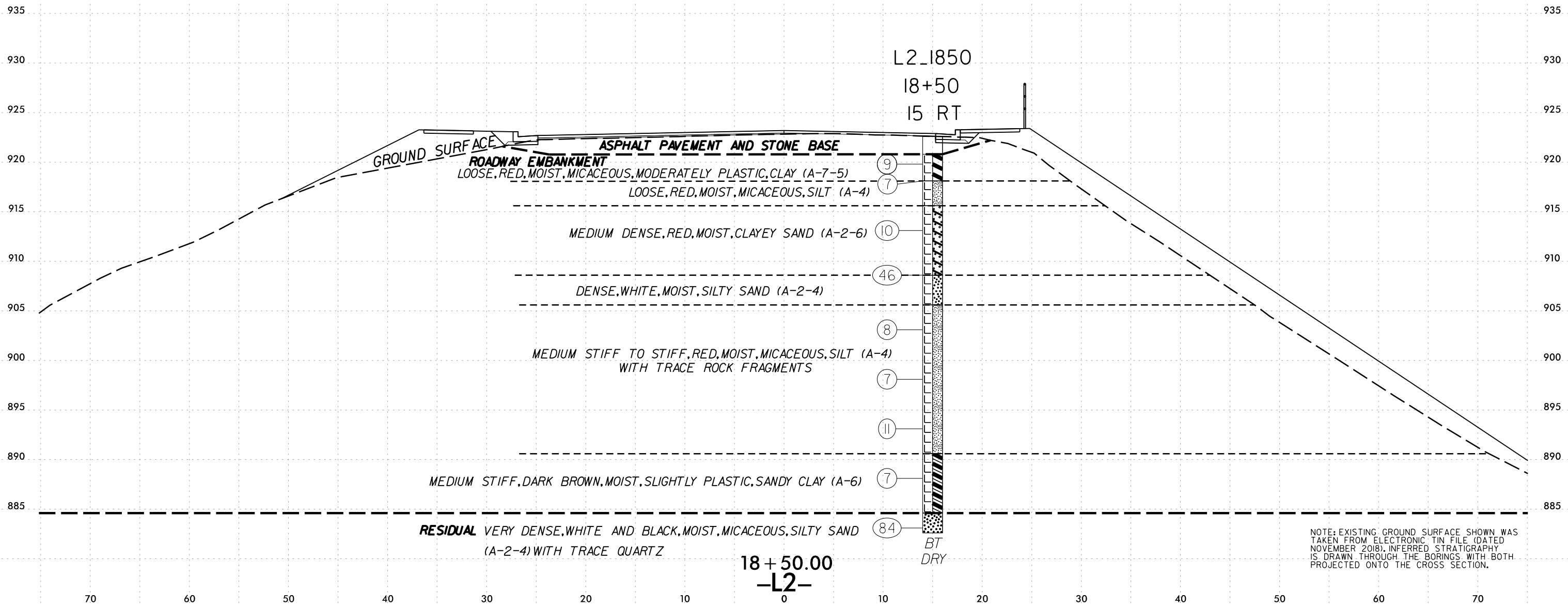
8/23/99



PROJ. REFERENCE NO.  
R-5725

SHEET NO.  
13

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



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70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

18 + 50.00  
-L2-

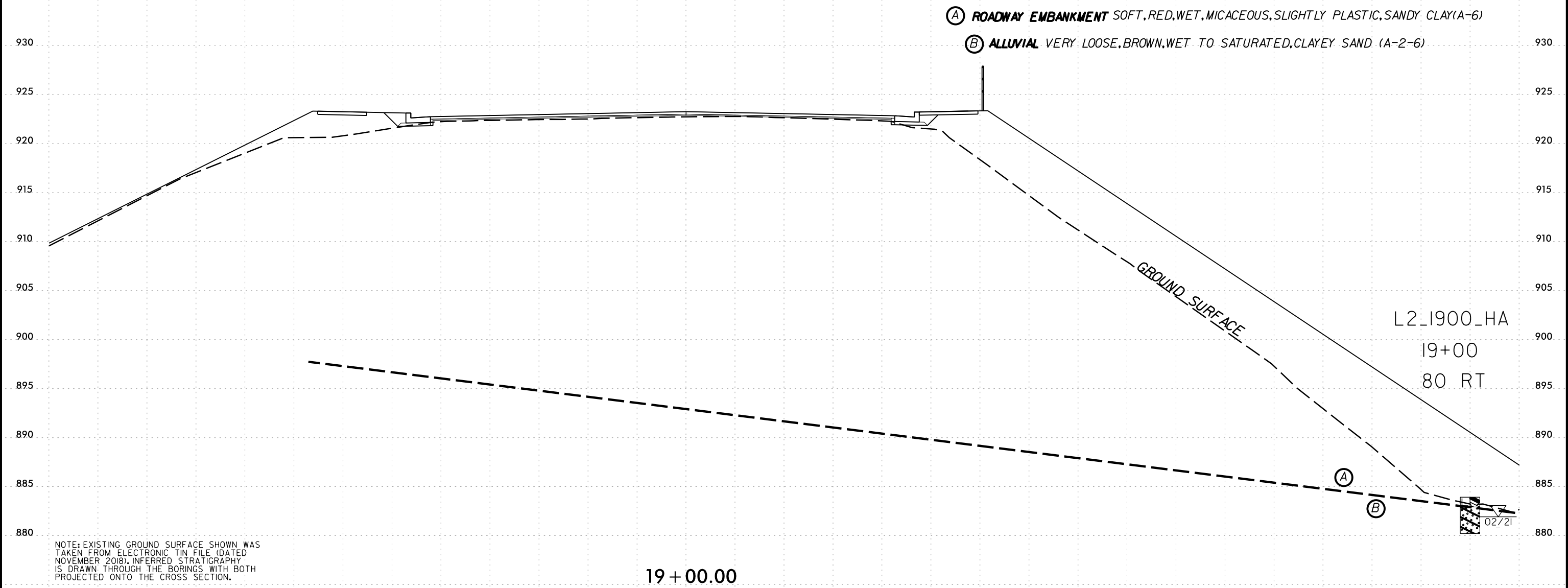
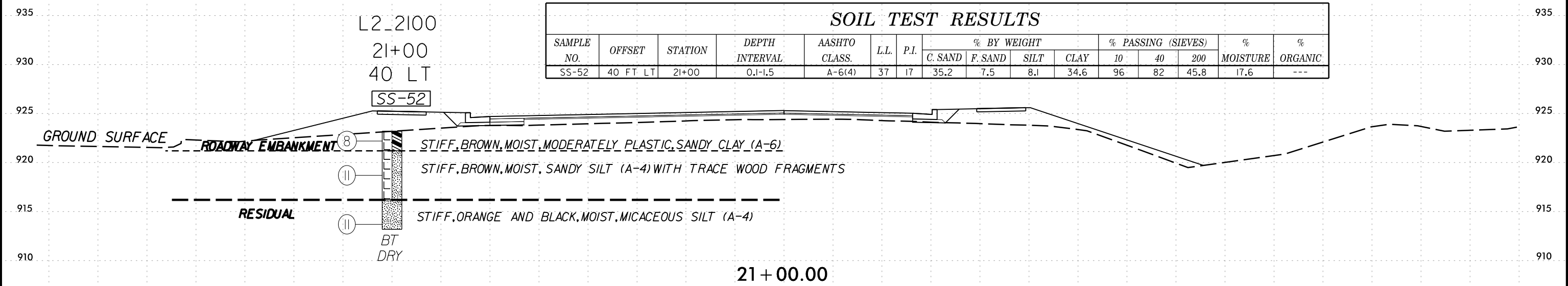
NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.



8/23/99



SOIL TEST RESULTS																
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	CLAY	10	40	200			
SS-52	40 FT. LT	21+00	0.1-1.5	A-6(4)	37	17	35.2	7.5	8.1	34.6	96	82	45.8	17.6	---	



NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

-L2-

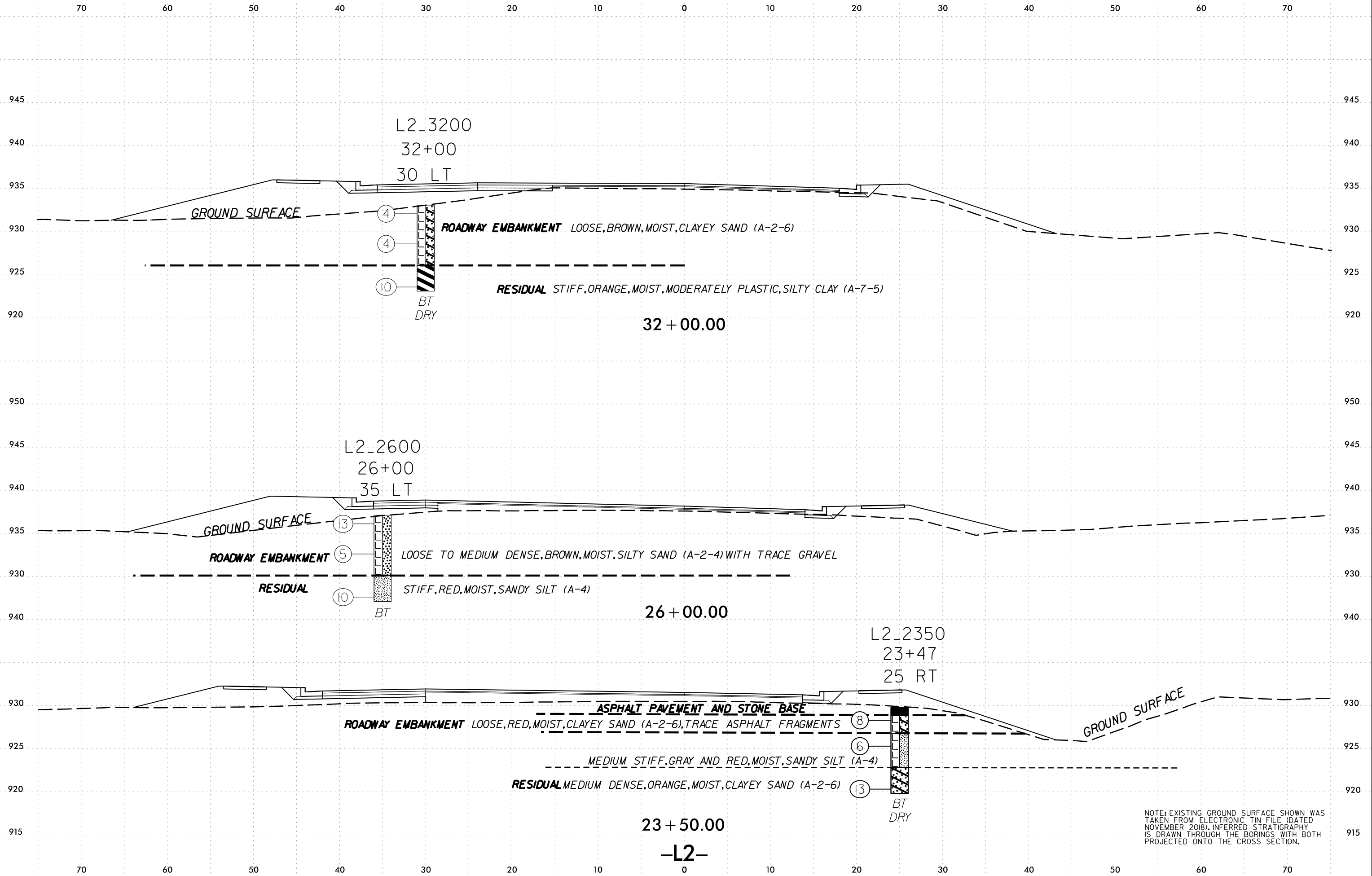
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8/23/99



PROJ. REFERENCE NO.  
R-5725

SHEET NO.  
15



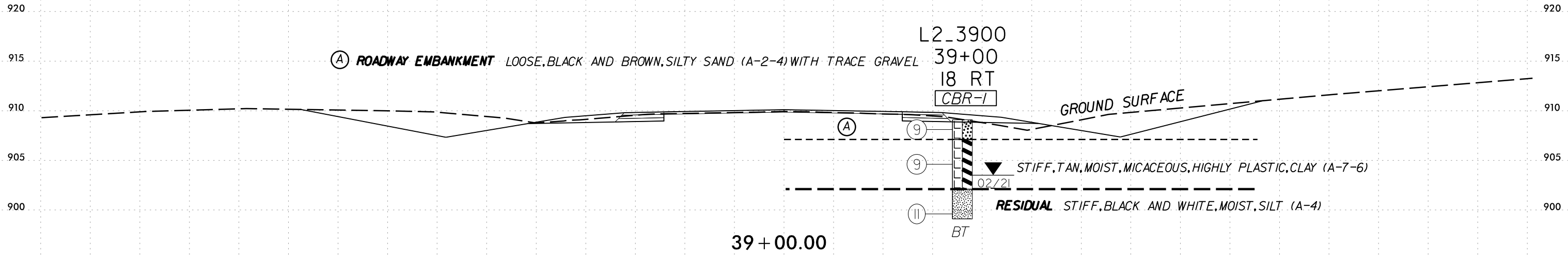
NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

4/7/2021  
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JTB

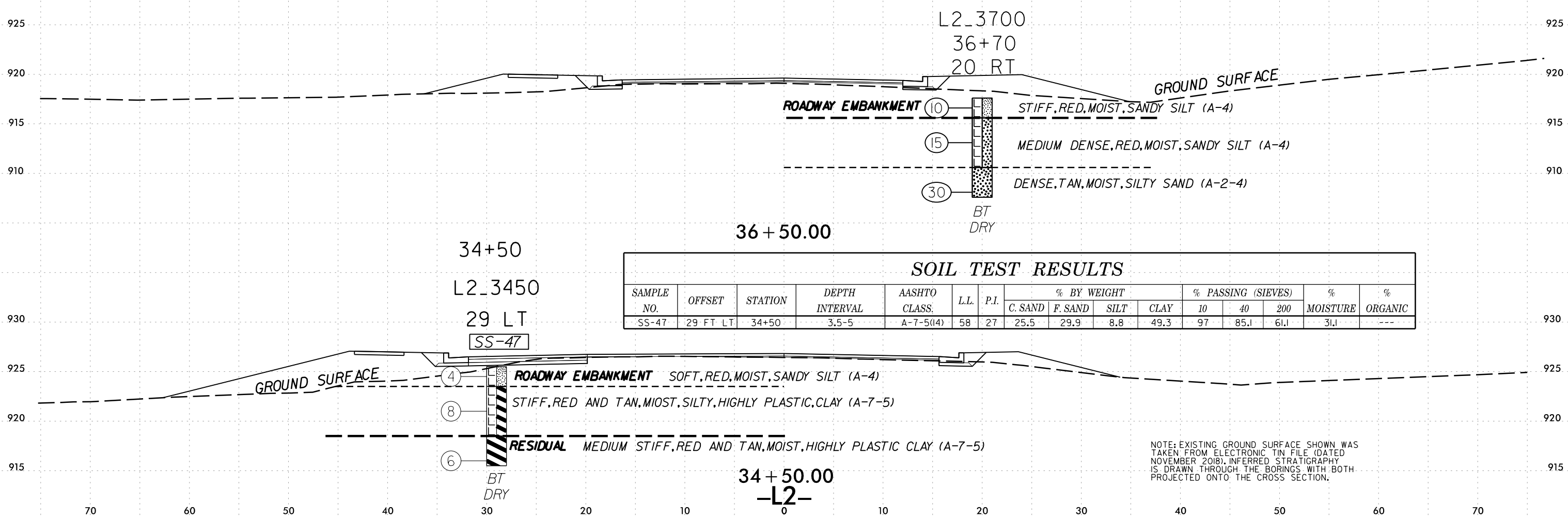
-L2-

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% CBR
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
CBR-1	18 FT RT	39+00	2-5	A-7-6(10)	51	26	30.7	20.8	21.07	27.41	100	81.15	51.53	25.9	2.8



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-47	29 FT LT	34+50	3.5-5	A-7-5(14)	58	27	25.5	29.9	8.8	49.3	97	85.1	61.1	31.1	---

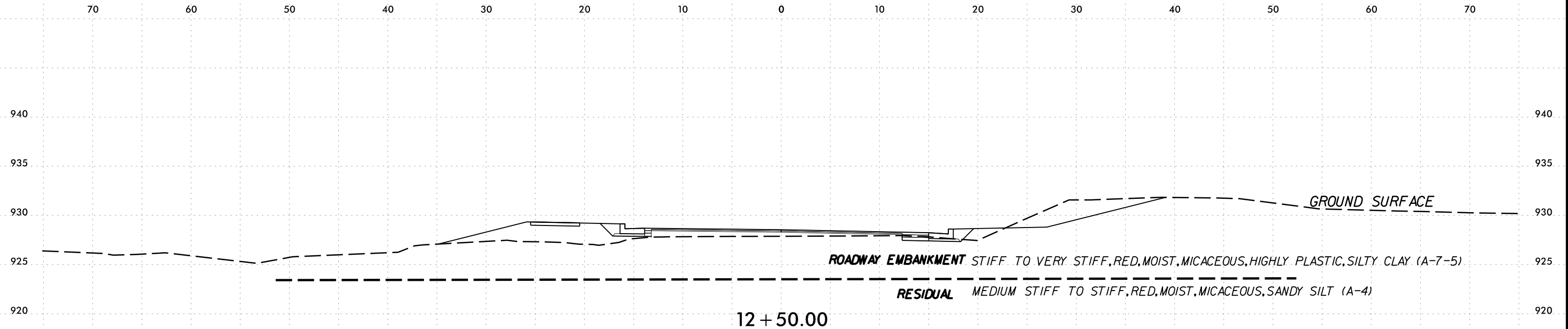


NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

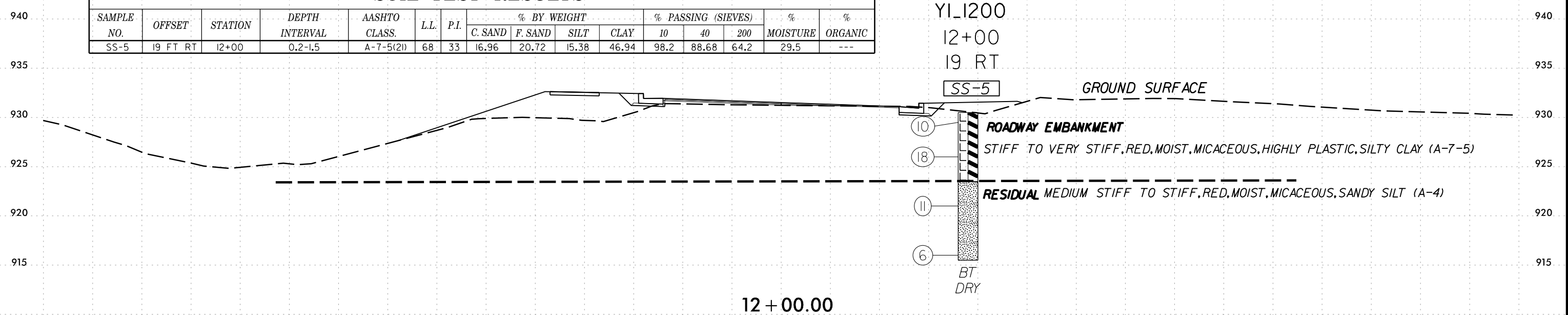
70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

34+50.00 -L2-

8/23/99



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-5	19 FT RT	12+00	0.2-1.5	A-7-5(2)	68	33	16.96	20.72	15.38	46.94	98.2	88.68	64.2	29.5	---



NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

8/23/99



PROJ. REFERENCE NO.  
*R-5725*

SHEET NO.  
*18*

70

60

50

40

30

20

10

0

10

20

30

40

50

60

70

935

935

930

930

925

925

920

920

*GROUND SURFACE*

*ROADWAY EMBANKMENT STIFF, RED, MOIST, MICACEOUS, HIGHLY PLASTIC, SILTY CLAY (A-7-5)*

*RESIDUAL MEDIUM STIFF TO STIFF, RED, MOIST, SANDY, MICACEOUS SILT (A-4)*

13 + 00.00

-Y1-

NOTE: EXISTING GROUND SURFACE SHOWN WAS  
TAKEN FROM ELECTRONIC TIN FILE (DATED  
NOVEMBER 2018). INFERRED STRATIGRAPHY  
IS DRAWN THROUGH THE BORINGS WITH BOTH  
PROJECTED ONTO THE CROSS SECTION.

70

60

50

40

30

20

10

0

10

20

30

40

50

60

70

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70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

### SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% CBR
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
CBR-2	20 FT LT	16+16	0-5	A-7-6(10)	52	25	30.04	18.39	14.42	37.15	95.95	76.3	51.83	24.7	7.4

16 + 50.00

Y2A\_1616

16+16

20 LT

CBR-2

(A) ROADWAY EMBANKMENT MEDIUM STIFF, BROWN, MOIST, SANDY MODERATELY PLASTIC CLAY (A-7-6)

GROUND SURFACE

6

(A)

8

RESIDUAL MEDIUM STIFF, BROWN, MOIST, SANDY SLIGHTLY PLASTIC CLAY (A-7-6)

7

MEDIUM STIFF, ORANGE AND WHITE, MOIST, SLIGHTLY PLASTIC CLAY (A-7-5)

BT  
DRY

16 + 00.00

-Y2A-

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

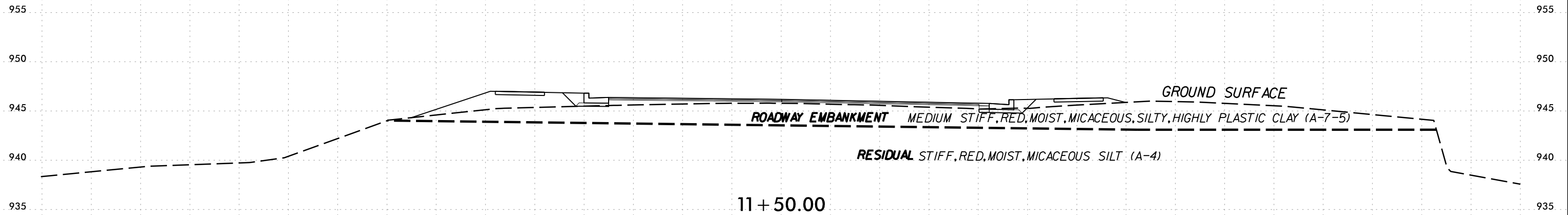
8/23/99



PROJ. REFERENCE NO.  
*R-5725*

SHEET NO.  
*20*

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



-Y2B-

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

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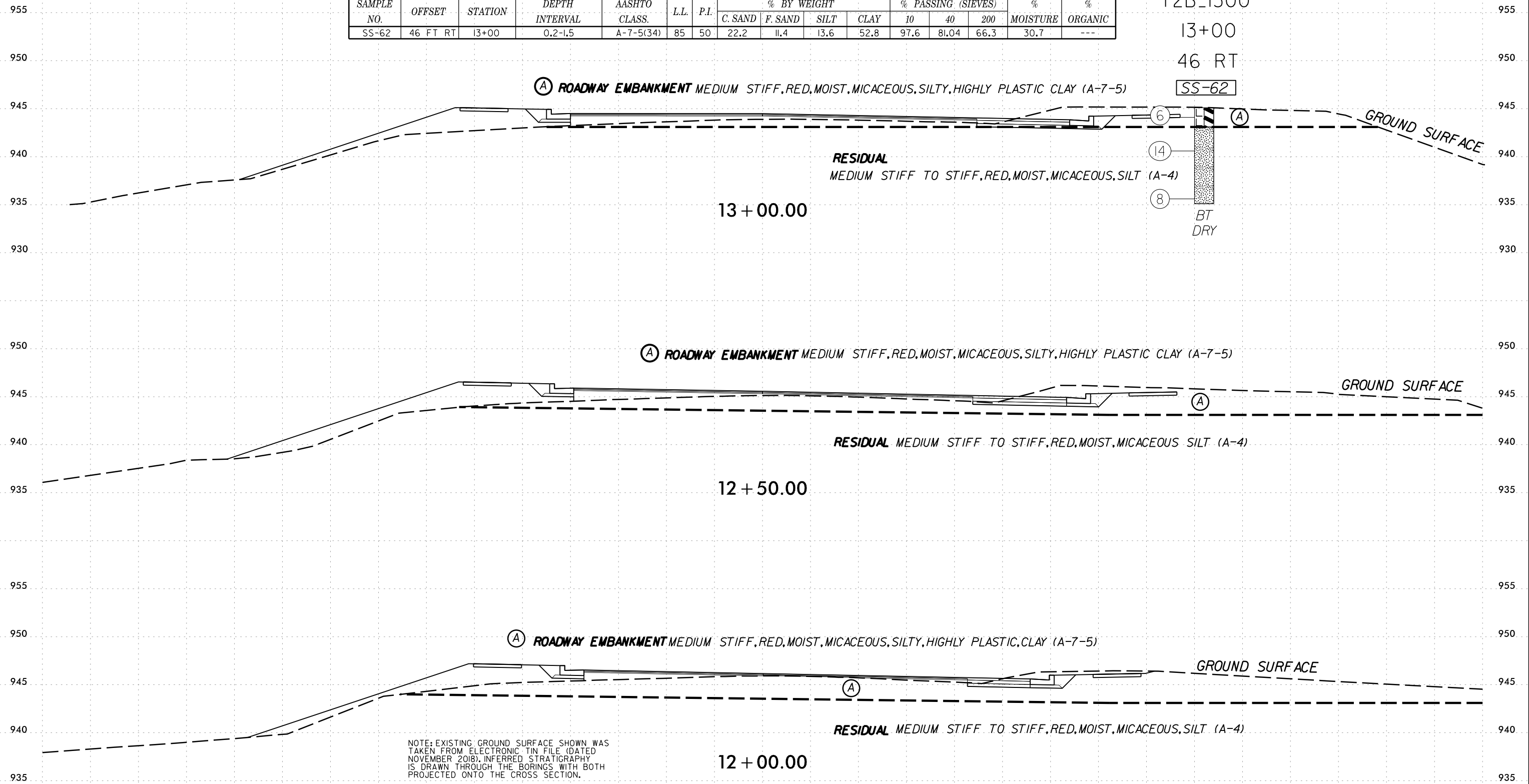
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70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-62	46 FT RT	13+00	0.2-1.5	A-7-5(34)	85	50	22.2	11.4	13.6	52.8	97.6	81.04	66.3	30.7	---

Y2B\_1300  
13+00  
46 RT  
SS-62



NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

-Y2B-

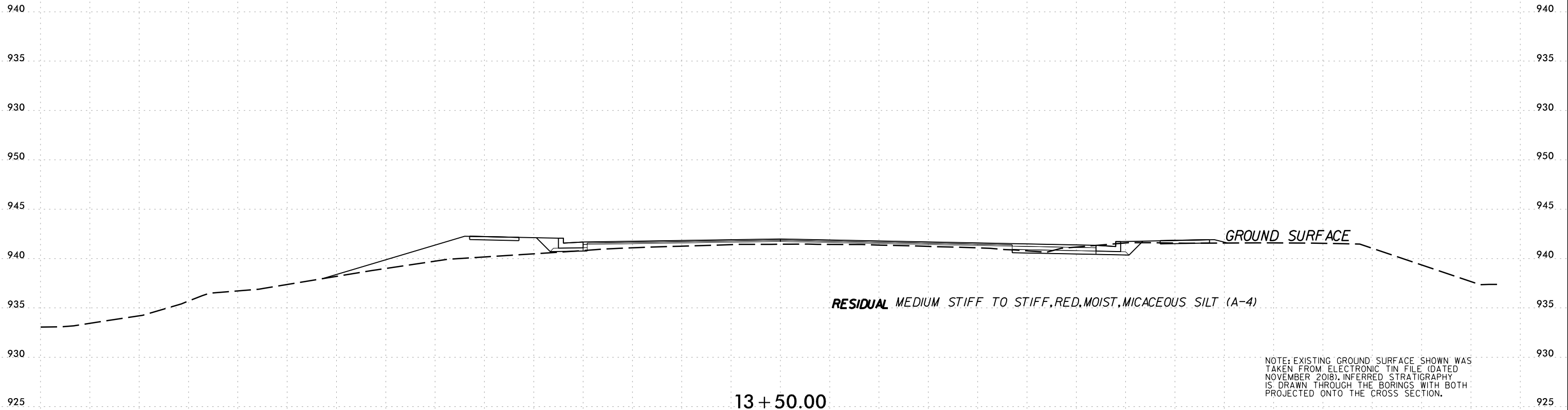
8/23/99



PROJ. REFERENCE NO.  
*R-5725*

SHEET NO.  
*22*

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE, DATED NOVEMBER 2018. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

13 + 50.00  
-Y2B-

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

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15725.dwg

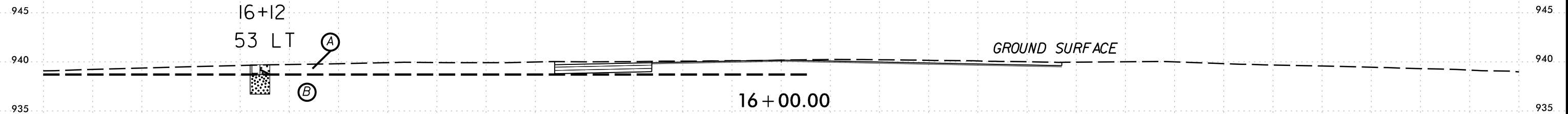
8/23/99



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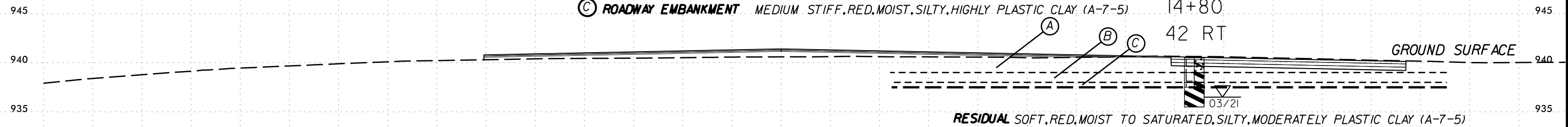
Y2B\_1612\_HA  
16+12  
53 LT

- (A) ROADWAY EMBANKMENT STIFF, RED CLAYEY SAND (A-2-6)
- (B) RESIDUAL DENSE, TAN, SILTY SAND (A-2-4)



- (A) ROADWAY EMBANKMENT MEDIUM DENSE, BROWN, MOIST, CLAYEY SAND (A-2-6), WITH TRACE ASPHALT
- (B) ROADWAY EMBANKMENT MEDIUM STIFF, BROWN, MOIST, SANDY CLAY (A-6)
- (C) ROADWAY EMBANKMENT MEDIUM STIFF, RED, MOIST, SILTY, HIGHLY PLASTIC CLAY (A-7-5)

Y2B\_1480\_HA  
14+80  
42 RT



RESIDUAL SOFT, RED, MOIST TO SATURATED, SILTY, MODERATELY PLASTIC CLAY (A-7-5)

15 + 00.00  
-Y2B-

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

4/7/2021  
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70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

8/23/99



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-65	46 FT LT	17+40	0.2-1.5	A-7-6(7)	59	33	37.9	15.6	7.4	39.1	81.4	57.8	36.7	22.9	---

Y2B\_1750  
17+40  
46 LT

SS-65

6

22

34

BT  
DRY

ROADWAY EMBANKMENT MEDIUM STIFF, RED AND BROWN, HIGHLY PLASTIC, SILTY CLAY (A-7-6)

MEDIUM DENSE TO DENSE, TAN, PINK, AND WHITE, MOIST, SILTY COARSE SAND (A-2-4)

GROUND SURFACE

17 + 50.00

NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

-Y2B-

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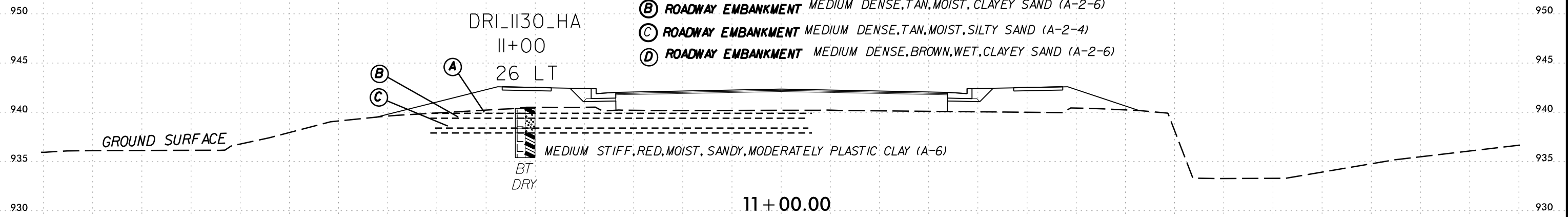
4/7/2021 11:58:11 AM Y2B.dgn

8/23/99



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

- Ⓐ ROADWAY EMBANKMENT MEDIUM STIFF, TAN, MOIST, MODERATELY PLASTIC, SANDY CLAY (A-6)
- Ⓑ ROADWAY EMBANKMENT MEDIUM DENSE, TAN, MOIST, CLAYEY SAND (A-2-6)
- Ⓒ ROADWAY EMBANKMENT MEDIUM DENSE, TAN, MOIST, SILTY SAND (A-2-4)
- Ⓓ ROADWAY EMBANKMENT MEDIUM DENSE, BROWN, WET, CLAYEY SAND (A-2-6)



NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

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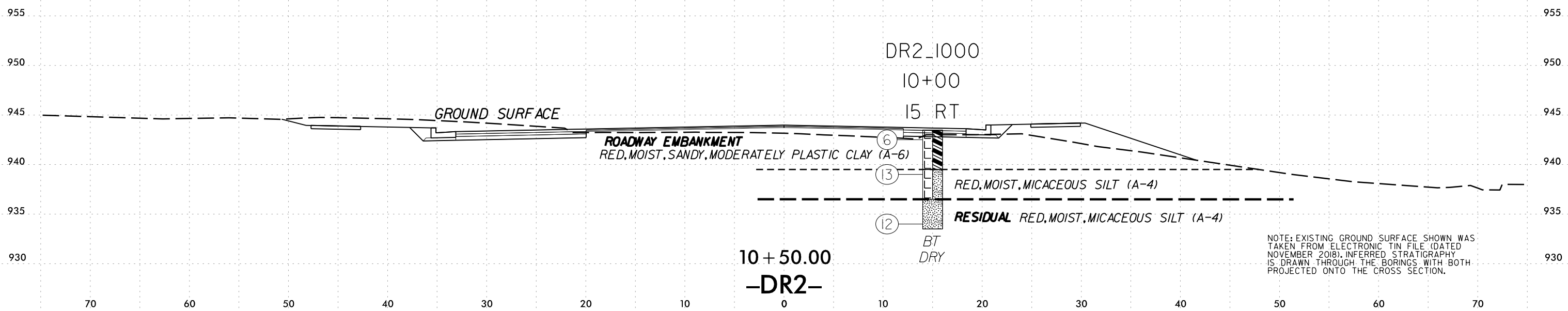
8/23/99



PROJ. REFERENCE NO.  
R-5725

SHEET NO.  
26

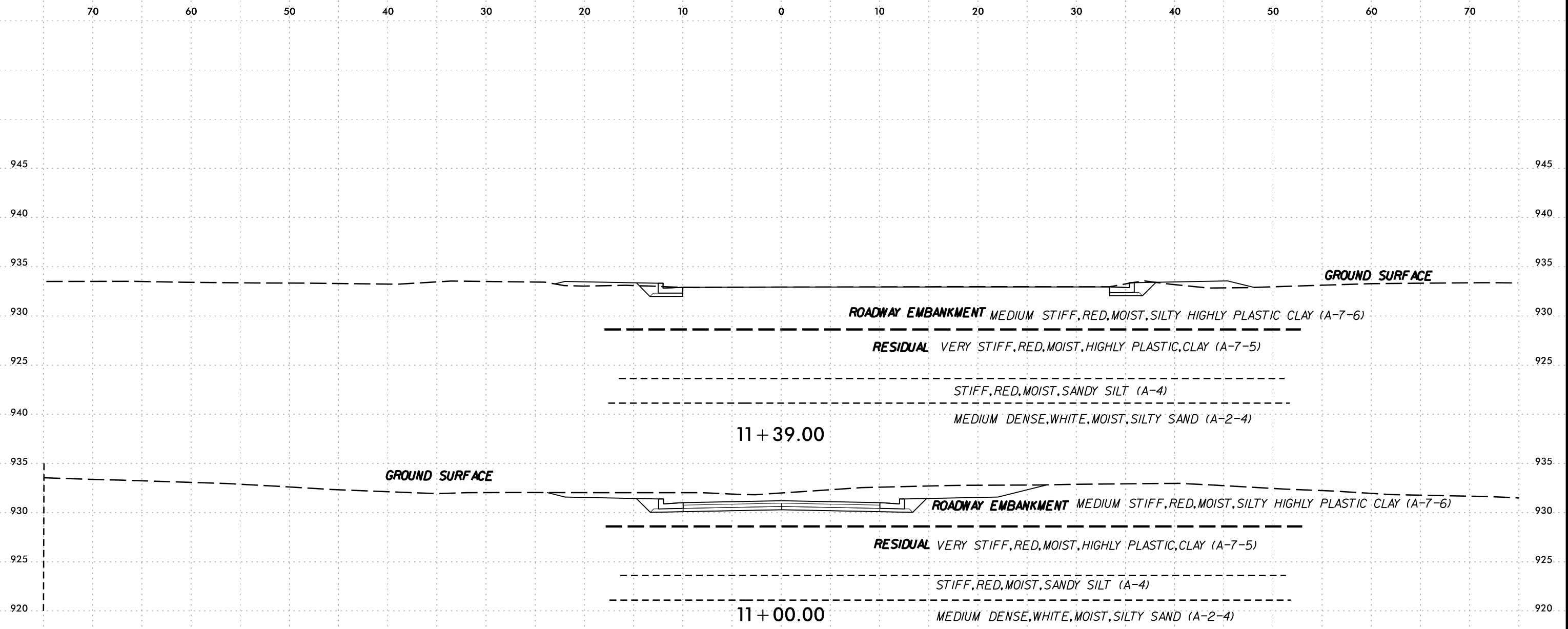
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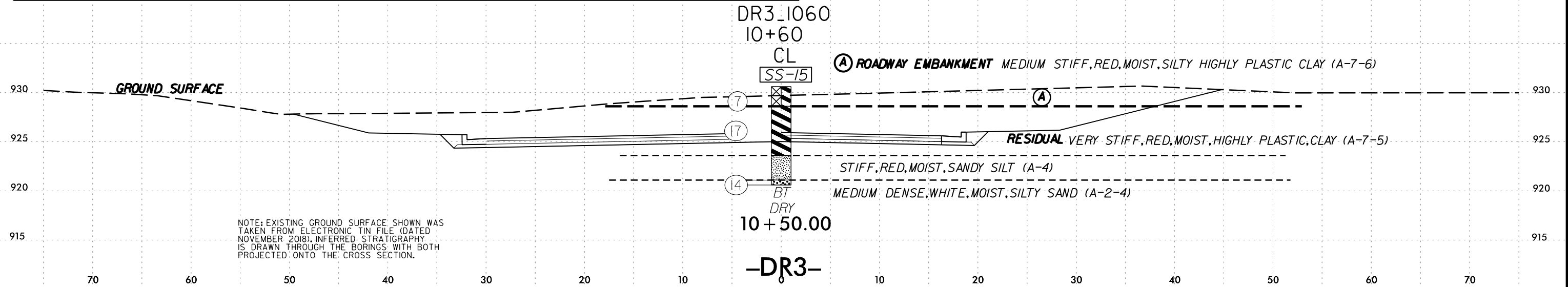
4/7/2021 10:57:25 AM R-5725.dwg DR2.dgn

10 + 50.00  
-DR2-

8/23/99



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-15	CL	10+60	0-1.5	A-7-6(18)	50	32	20.5	40.6	5.4	55.7	100	89	63	20.9	



NOTE: EXISTING GROUND SURFACE SHOWN WAS TAKEN FROM ELECTRONIC TIN FILE (DATED NOVEMBER 2018). INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION.

4/7/2021 11:58:18 AM R-5725\_GEO\_xsl\_DR3.dgn