

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-5797	1	74

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PERSONNEL

<u>T. BEARD</u>	<u>W. PESL</u>
<u>A. STURCHIO</u>	<u>M. DURWAY</u>
	<u>D. TIGNOR</u>
	<u>S. DAVIS</u>
	<u>M. RENZA</u>
	<u>W. SHENBERGER</u>

INVESTIGATED BY F&R, Inc.
DRAWN BY T.T. WALKER
CHECKED BY C. WANG, P.E.
SUBMITTED BY P. ALTON, P.E.
DATE NOVEMBER 2019

**ROADWAY
SUBSURFACE INVESTIGATION**

COUNTY COLUMBUS
PROJECT DESCRIPTION US 74 AT SR 1506 (OLD
BOARDMAN ROAD/MACEDONIA CHURCH ROAD)

INVENTORY

CONTENTS

LINE	STATION	PLAN
-L-	14+88.04-68.00.00	4-6
-YIA-	11+00.00-26+15.86	5,7
-YIB-	26+15.86-34+33.50	5
-YIC-	34+33.50-46+86.00	5,8
-RPA-	10+00.00-28+28.84	5-6
-RPB-	10+00.00-24+70.05	5
-RPC-	10+00.00-26+22.25	5
-RPD-	10+00.00-25+13.83	5-6
-DRI-	10+00.00-12+12.12	5
-RAB-	10+00.00+15+15.22	5
-RCD-	10+00.00-15+15.22	5

LINE	STATION	CROSS SECTION
-L-	15+50-20+50	9-11
-L-	22+00	12
-L-	25+00	13
-L-	28+00	14
-L-	31+00	15
-L-	43+50-45+50	16
-L-	46+50	17
-L-	48+00-49+00	18
-L-	51+50-52+00	19
-L-	55+00	20
-L-	58+00-68+00	21-26
-YIA-	17+00	27
-YIA-	19+50-21+50	28-29
-YIA-	23+00	30
-YIB-	27+00-29+50	31-33
-YIB-	30+50	34
-YIB-	32+00	35
-YIC-	37+00	36
-YIC-	40+00	37
-YIC-	43+00	38
-RPA-	10+49.81-28+00.52	39-48
-RPB-	17+19.07-18+71.90	49-52
-RPB-	19+23.05-19+74.32	53-54
-RPB-	20+25.72	55
-RPB-	23+00	56
-RPC-	17+84.24	57
-RPC-	21+11.46	58
-RPC-	24+00	59
-RPD-	10+10.34-24+21.62	60-67
-DRI-	10+50-11+75	68-70
-RAB-	12+50-14+50	71-73
-RCD-	10+00.00	74

REFERENCE: R-5797

PROJECT: 44997

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. Includes sub-sections like SOIL LEGEND AND AASHTO CLASSIFICATION, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, and COLOR.

See Sheet 1A For Index of Sheets
 See Sheet 1B For Symbols Sheet
 See Sheet 1C For Survey Control Sheet

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

COLUMBUS COUNTY

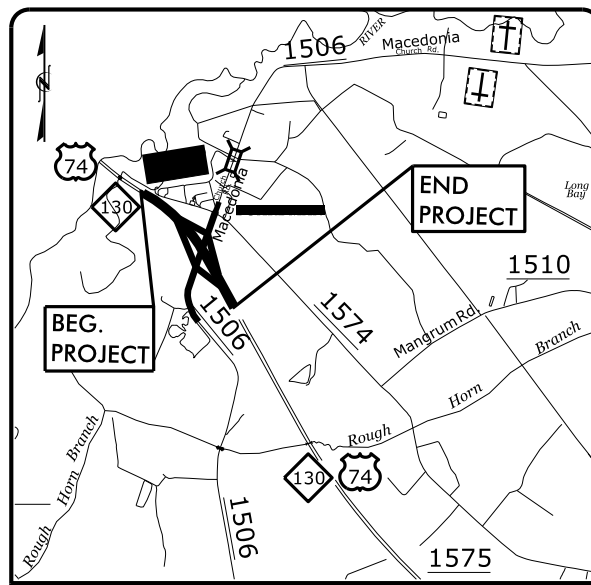
LOCATION: US 74 AT SR 1506 (OLD BOARDMAN RD/
 MACEDONIA CHURCH RD.)

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES

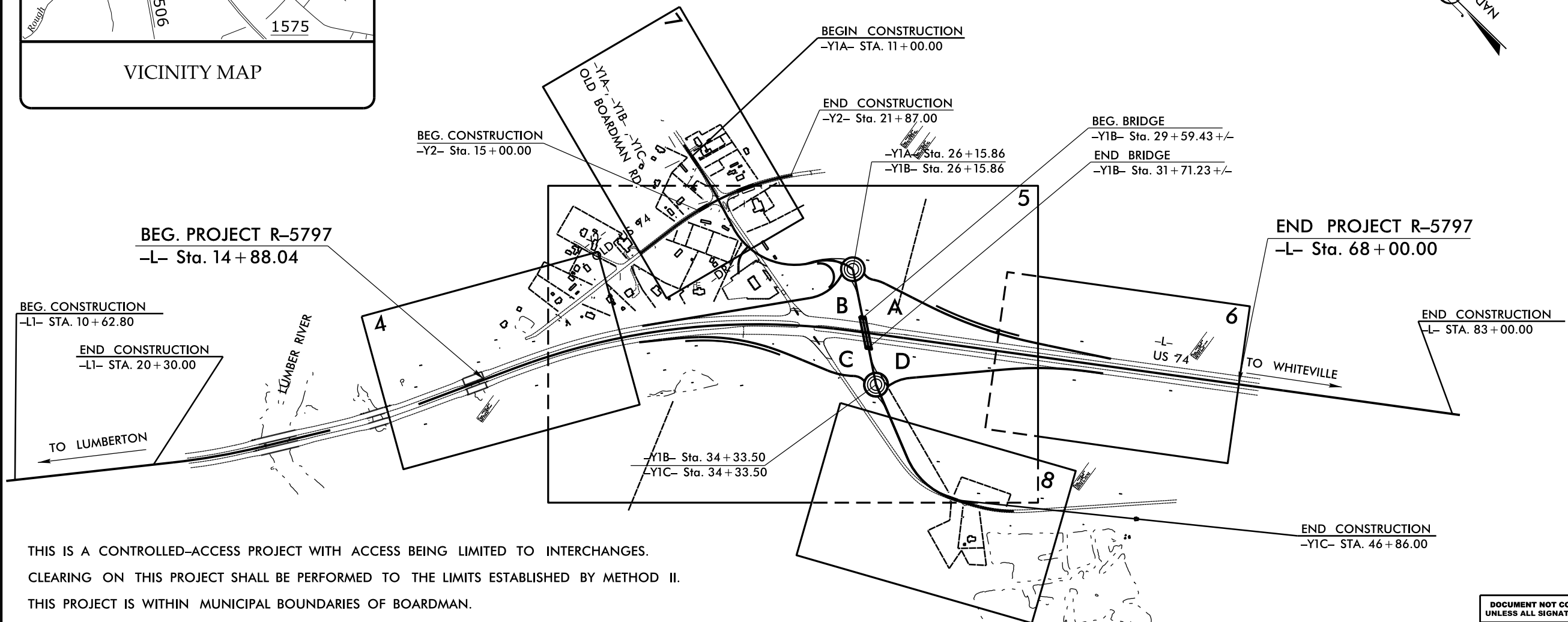
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5797	3	74
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44997.1.1		PE	
44997.2.1	NHPP-0074(215)	ROWUTIL.	

ROW PLANS
 OCTOBER 31, 2018

TIP PROJECT: R-5797



VICINITY MAP

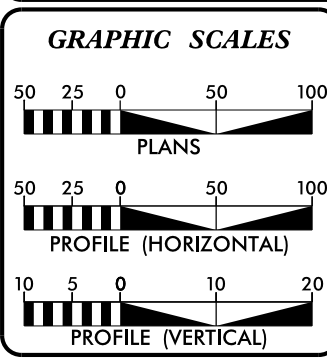


THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
 THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF BOARDMAN.

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CONTRACT:



DESIGN DATA

ADT 2020 =	13,700
ADT 2040 =	20,110
K =	9 %
D =	55 %
T =	19 % *
V =	70 MPH
* TTST =	15% DUAL = 4%
FUNC. CLASS =	FUTURE INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5797	=	1.066 MILES
TOTAL LENGTH TIP PROJECT R-5797	=	1.066 MILES

Prepared in the Office of:
ETHERILL ENGINEERING
 1223 Jones Franklin Rd. Raleigh, N.C. 27606
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2018 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
 OCTOBER 31, 2018
LETTING DATE:
 OCTOBER 20, 2020

NCDOT CONTACT:

Prepared for:
**DIVISION OF HIGHWAYS
 DIVISION 6**
 549 Transportation Drive
 Fayetteville, NC, 28301

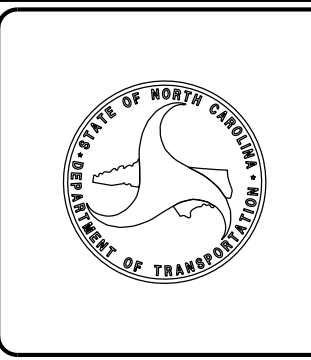
GREG PURVIS, PE
 PROJECT ENGINEER

ROBERT O'DELL, JR.
 PROJECT DESIGN ENGINEER

JOHN GAUTHIER
 DIVISION PROJECT MANAGER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER





November 13, 2019

State Project No.: 44997.1.1
 TIP No.: R-5797
 F.A. Number: N/A
 County: Columbus
 Description: US 74 at SR 1506 (Old Boardman Road / Macedonia Church Road)

SUBJECT: Geotechnical Report – Inventory

Project Description

This project primarily consists of a grade separation at the intersection of US 74 with SR 1506 (Old Boardman Road) in Boardman, Columbus County, North Carolina. Currently, the interchange is an at-grade intersection. This conversion will result in the widening of US 74 from about 0.5 mile west of the intersection to about 0.5 mile east of the intersection – a distance of about 1 mile (-L- station 14+88.14 to 68+00). The grade separation will necessitate the construction of a two-span bridge over US 74 approximately 400 feet east of the existing intersection. Roundabouts are proposed just off the ends of the bridge. Two retaining walls are also proposed: one is located on the north side of the existing gas station at the intersection of Y1A and DR1 and is about 250 feet in length; the second is located on the south side of the gas station along Ramp B from about 17+00 to 20+00 and is about 300 feet in length.

The majority of the proposed road widening extends across several wetland areas that are delineated on the provided plans. The largest wetland area east of the existing interchange is a swamp known as McColskey Bay. Other portions of the project site traverse mixed-use areas consisting of farmland, residences, churches, and small businesses.

The geotechnical field investigation was performed from August 2018 to November 2019. During this time period, a total of 54 Standard Penetration Test (SPT) borings were advanced with ATV- and track-mounted CME-55 drill rigs with automatic hammers. In addition, 4 push probes, 12 sounding rods, and 10 hand auger borings with sounding rods were completed due to restrictive drill rig access. Representative soil samples were collected from the split spoon or hand auger cuttings for visual classification in the field and for analysis by F&R's testing laboratory.

The following alignments were investigated:

<u>Alignment</u>	<u>Station (±)</u>
-L-	14+88.04 to 68+00
-Y1A-	11+00 to 26+15.86

-Y1B-	26+15.86 to 34+33.50
-Y1C-	34+33.50 to 46+86
-RPA-	10+00 to 28+28.84
-RPB-	10+00 to 24+70.05
-RPC-	10+00 to 26+22.25
-RPD-	10+00 to 25+13.83
-DR1-	10+00 to 12+12.12
-RAB-	10+00 to 15+15.22
-RCD-	10+00 to 15+15.22

Areas of Special Geotechnical Interest

1) Groundwater: The following areas exhibited groundwater within six feet of the proposed subgrade:

<u>Alignment</u>	<u>Station (±)</u>
-L-	21+75 to 25+25, right
-L-	47+75 to 48+25
-L-	51+25 to 58+25
-L-	60+75 to 64+25, left
-Y1C-	42+75 to 43+25
-RPA-	10+75 to 17+25
-RPC-	17+75 to 18+25

The following areas exhibited groundwater above or within three feet of existing ground surface, which have the potential to cause subgrade problems during construction:

<u>Alignment</u>	<u>Station (±)</u>
-L-	14+88.04 to 25+75
-L-	40+75 to 68+00, left
-L-	43+25 to 68+00, right
-Y1A-	20+75 to 21+25, right
-Y1A-	22+75 to 23+25
-Y1B-	26+75 to 29+25
-Y1B-	34+00 to 34+34
-Y1C-	34+34 to 43+25
-RPA-	10+00 to 16+50, right
-RPA-	16+50 to 28+28.84
-RPD-	10+00 to 14+50, left
-RPD-	14+50 to 25+13.83
-RAB-	12+75 to 14+05
-RCD-	10+00 to 15+15.22

2) Soft, Loose and/or Wet Soils: The following areas contain relatively soft or loose (SPT N<6 bpf) and/or wet, near-surface soils that have the potential to cause subgrade problems during construction:

<u>Alignment</u>	<u>Station (±)</u>
-L-	14+88.04 to 18+75
-L-	18+75 to 20+75, right
-L-	24+75 to 25+75
-L-	27+75 to 28+25
-L-	30+75 to 31+25
-L-	40+75 to 68+00, left
-L-	43+25 to 68+00, right
-Y1A-	16+75 to 26+15.86
-Y1B-	26+75 to 29+25
-Y1B-	34+00 to 34+33.5
-Y1C-	34+33.5 to 43+25
-RPA-	10+00 to 16+50, right
-RPA-	16+50 to 28+28.84
-RPB-	16+75 to 19+75, left
-RPB-	22+75 to 24+70.05
-RPC-	17+50 to 18+25, left
-RPD-	10+00 to 14+50, left
-RPD-	14+50 to 25+13.83
-DR1-	10+25 to 10+75, right
-RAB-	12+75 to 14+05
-RCD-	10+00 to 15+15.22

3) Cohesive Soils: The following areas contain deeper deposits of relatively soft cohesive soils (AASHTO A-5, A-6 & A-7 soils) that have the potential to cause embankment instability or long-term settlement problems:

<u>Alignment</u>	<u>Station (±)</u>
-L-	54+75 to 58+25, left
-RPB-	17+75 to 18+25, left

4) Artificial Fill: The following location contains artificial fill. These soils have the potential to be highly variable, which could cause subgrade problems during construction if undetected pockets of organics, debris, or soft/loose/wet soils are present.

<u>Alignment</u>	<u>Station (±)</u>
-RPC-	20+75 to 23+00

5) Highly Organic Soils: The following areas contain highly organic soils (>10%), standing water, and soft loose soils. These areas have the potential to cause subgrade problems during construction, embankment instability, and/or long-term settlement problems:

<u>Alignment</u>	<u>Station (±)</u>
-L-	15+75 to 20+75, right
-L-	58+75 to 60+25, left
-L-	51+25 to 67+25, right
-Y1B-	26+75 to 29+25
-RPA-	16+75 to 28+28.84
-RPD-	10+00 to 24+10
-RAB-	12+75 to 14+05

Physiography and Geology

The existing road in the area of this project generally runs in a west-to-east direction, and primarily through undeveloped farmland areas. The existing ground surface along the centerline of -L- generally slopes gently downward from an elevation (EL) of ±85 feet at the beginning of the project to EL ±83 feet near station -L- 21+50 and then upward to EL ±89 feet near station 48+50. The ground surface then generally slopes downward to EL ±87 feet at the end of the project.

Drainage across the site is generally poor, though surface water across the project is generally drained by the Lumber River.

The project site is geologically located in Coastal Plain physiographic province of North Carolina. The Coastal Plain Province is a broad flat plain with widely spaced low rolling hills where the near surface soils have their origin from the deposition of sediments several million years ago during the period that the ocean receded from this area to its present location along the Atlantic Coast. According to the Geologic Map of North Carolina (1985), the site is within an area mapped as Tertiary period deposits and is comprised of sediments that are identified as being located within the Duplin Formation, Undivided. The Duplin Formation is described as shelly, medium to coarse grained sand, sandy marl and limestone, bluish gray.

Soils Properties

The subsurface conditions discussed below and those shown on the attached drawings, represent an estimate of the subsurface conditions based on interpretation of the boring data using normally-accepted geotechnical engineering judgments. The transitions between different soil strata are usually less distinct than those shown on the sections. Sometimes the relatively small sample obtained in the field is insufficient to definitively describe the origin of the subsurface material. Although individual soil test borings are representative of the subsurface conditions at the boring locations on the dates shown, they are not necessarily indicative of subsurface conditions at other locations or at other times.

Soils within the area of this project have been divided into four categories: roadway embankment fill, artificial fill, alluvial, and coastal plain soils.

Roadway Embankment: Roadway embankment (RE) soils were encountered at the surface of 18 borings. The RE extended to depths ranging from 0 to 7 feet, with most about 2 feet or less. The fill was typically described as moist to wet, loose to medium dense silty SAND (A-2-4). Most of the samples contained trace organic matter.

Artificial Fill: Artificial fill (AF) was encountered at the surface of boring RPC_2019 and extended to a depth of 2 feet. The AF was associated with a rough-graded working area adjacent to a farm. The artificial fill was typically described as moist, medium dense silty SAND (A-2-4).

Alluvial Soils: Alluvial soils were encountered at the surface of 11 borings and 4 push probes. The alluvial soils extended to a depth of about 2 to 3 feet and were typically described as wet to saturated, MUCK. In addition to these borings, alluvial soils were observed and mapped in wetland areas as noted earlier in this report as "Highly Organic Soils". Hand auger borings were attempted along these alignments, but samples were unable to be obtained due to standing water and very loose sandy soils.

Coastal Plain Soils: A majority of the soils encountered on this project were coastal plain soils. Most of the soils were typically described as moist to saturated, very loose to medium dense silty SAND (A-2-4) and were encountered in the upper 30 to 35 feet. Isolated zones of sandy and clayey SILT (A-4 & A-5), and sandy and silty CLAY (A-6 & A-7) were encountered between 7 to 10 feet and below 25 feet. A majority of the samples contained trace amounts of organics. Some of the surficial loose/soft soils were located in the agricultural fields and most likely disturbed due to farming activities.

Groundwater Properties

Generally, groundwater measurements were attempted in a majority of the borings along the project immediately upon their completion and after a stabilization period of approximately 24 hours. Six borings were backfilled immediately upon their completion. Immediately upon completion, groundwater was encountered in 26 borings at depths ranging from 1 to 9 feet, and elevations ranging from about 76.9 to 84.5 feet. Stabilized groundwater was encountered in 45 borings at depths ranging from ground surface to 9.8 feet, and elevations ranging from 76.8 to 86.4 feet. Groundwater was either not measured or not encountered in the remaining borings. The recovered soil samples were generally described as moist above the groundwater level and wet or saturated below the groundwater level. It should be noted that the groundwater levels fluctuate depending upon seasonal factors such as precipitation and temperature. As such, soil moisture and groundwater conditions at other times may vary or be different from those described in this report.

We appreciate the opportunity to work with you on this project. Please contact us if you have any questions regarding this report or if we may be of further service.

Sincerely,
FROEHLING & ROBERTSON, INC.

Derick Racey
 Geotechnical Project Manager

W. Patrick Alton, P.E.
 Transportation Services Manager

Appendix A

Undisturbed Samples

One undisturbed Shelby tube was attempted at RPB_1950L but was unable to be retrieved.

Bulk Samples

The following bulk samples were obtained and transported to our laboratory for testing to determine the engineering properties of the soil:

Sample No.	Boring No.	Line	Station	Offset	Depth (ft)	Test(s) Performed
CBR-1	L_6350L	-L-	63+50	60' Lt.	0.0 – 2.0	Standard Proctor, CBR
CBR-2	RPA_1698	-RPA-	16+98	35' Lt.	0.0 – 2.0	Standard Proctor, CBR
CBR-3	RPC_1792	-RPC-	17+92	10' Lt.	0.0 – 2.0	Standard Proctor, CBR
CBR-4	L_2200R	-L-	22+00	65' Rt.	0.0 – 2.0	Standard Proctor, CBR

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 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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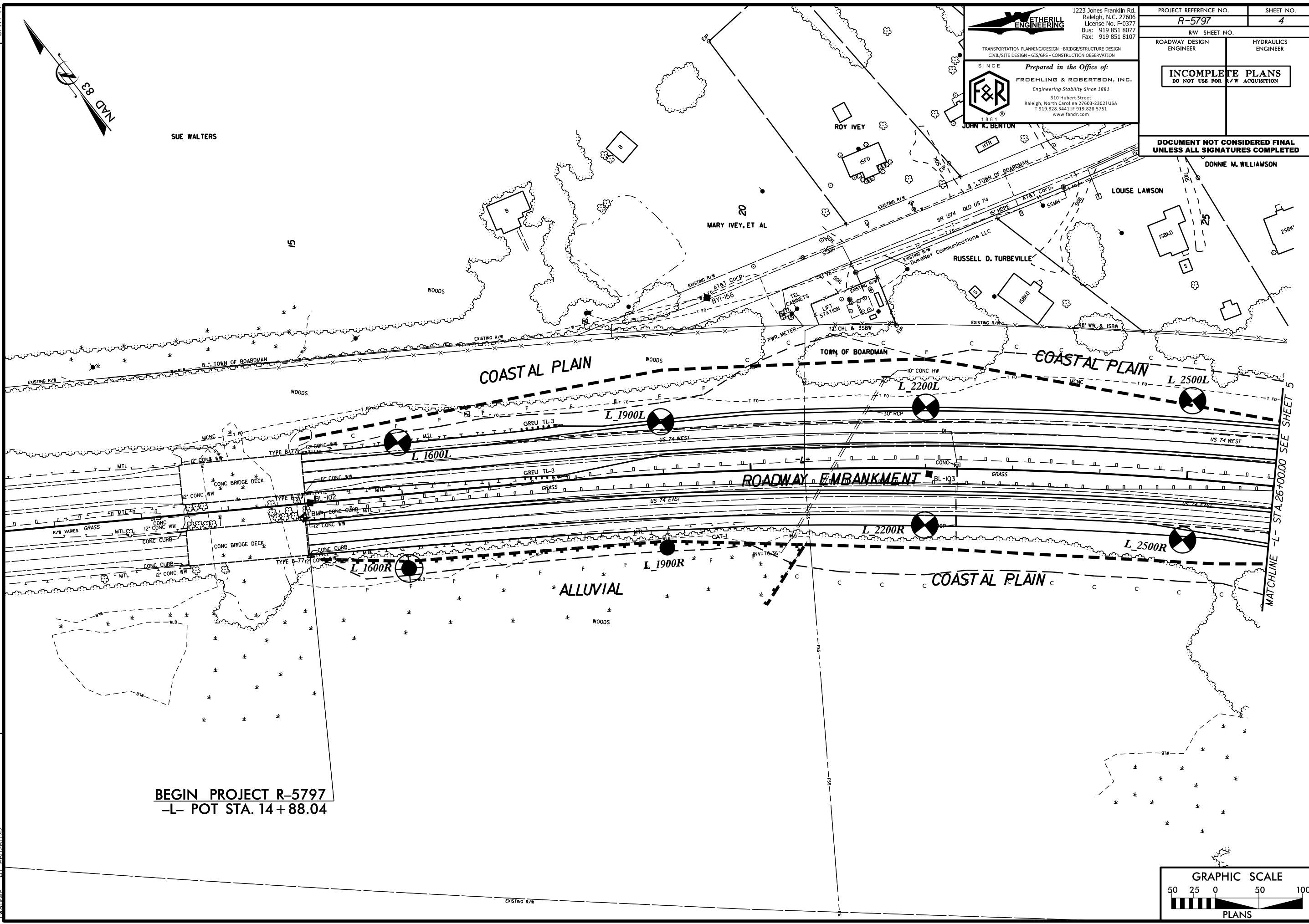
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R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

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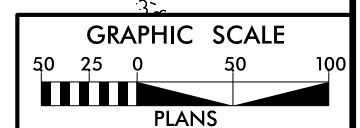
DONNIE M. WILLIAMSON

REVISIONS

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BEGIN PROJECT R-5797
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MATCHLINE -L- STA. 26+00.00 SEE SHEET 5

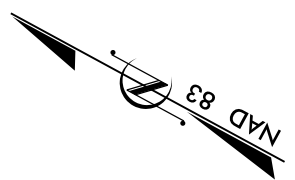
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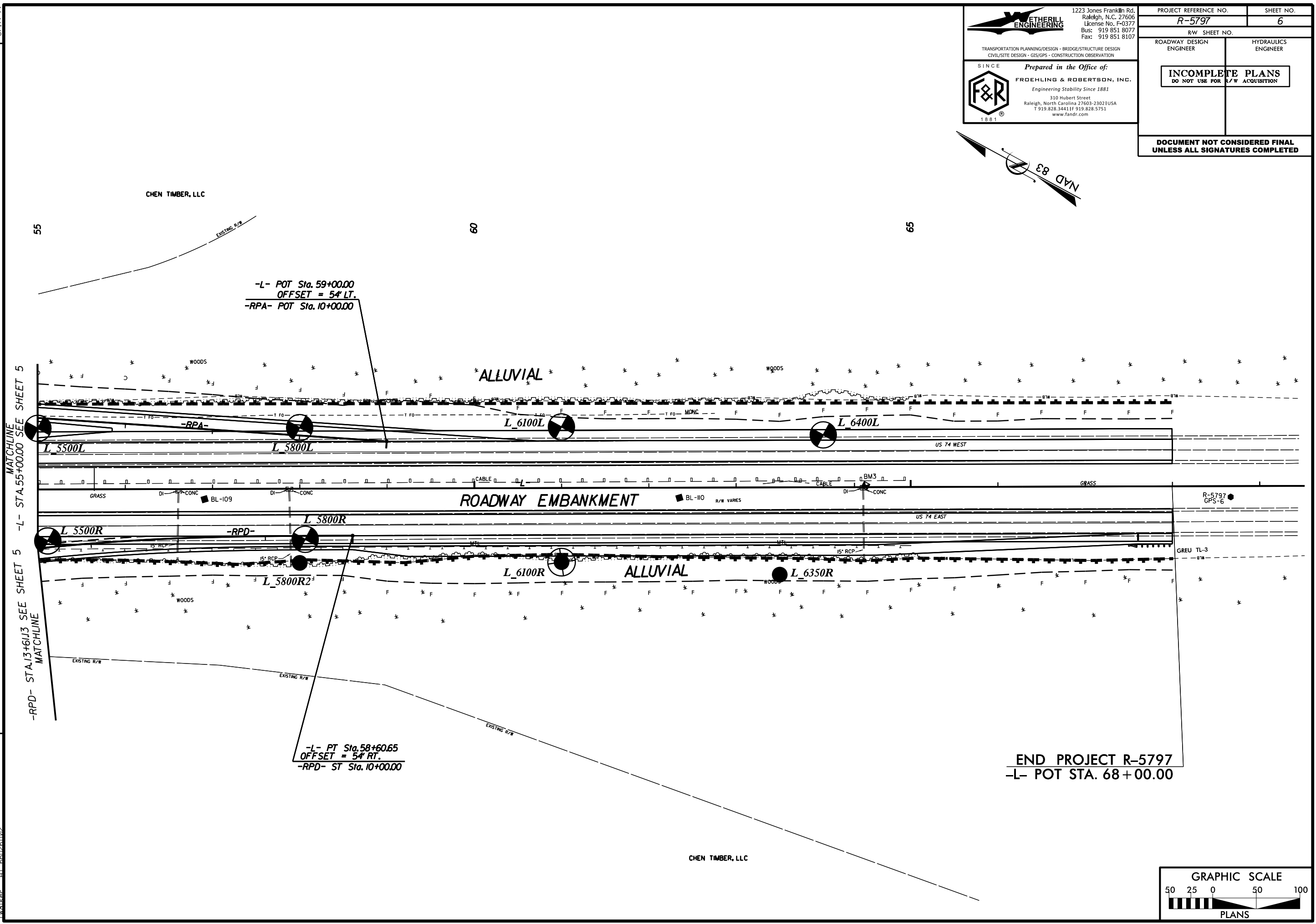
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PROJECT REFERENCE NO. R-5797	SHEET NO. 6
R/W SHEET NO.	HYDRAULICS ENGINEER
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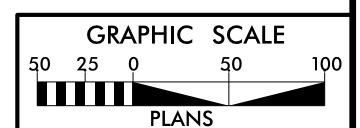
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-L- POT Sta. 59+00.00
 OFFSET = 5' LT.
 -RPA- POT Sta. 10+00.00

-L- PT Sta. 58+60.65
 OFFSET = 5' RT.
 -RPD- ST Sta. 10+00.00

END PROJECT R-5797
 -L- POT STA. 68+00.00



8/17/99

REVISIONS

05-NOV-2019 16:48 E:\Projects\661\661-0246 (WEI-R-5797) Columbia Co Task 2\1\1\661-0246 (WEI-R-5797) GEO-ROWY\CADD\GEO\TECH\Plan\Proj\R-5797_Rdy_PSH_07.dgn

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 Raleigh, North Carolina 27603-2302 USA
 T 919.828.3441 F 919.828.5751
 www.fandr.com

PROJECT REFERENCE NO. R-5797	SHEET NO. 7
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BEGIN CONSTRUCTION
-Y1A- POT STA. 11+00.00

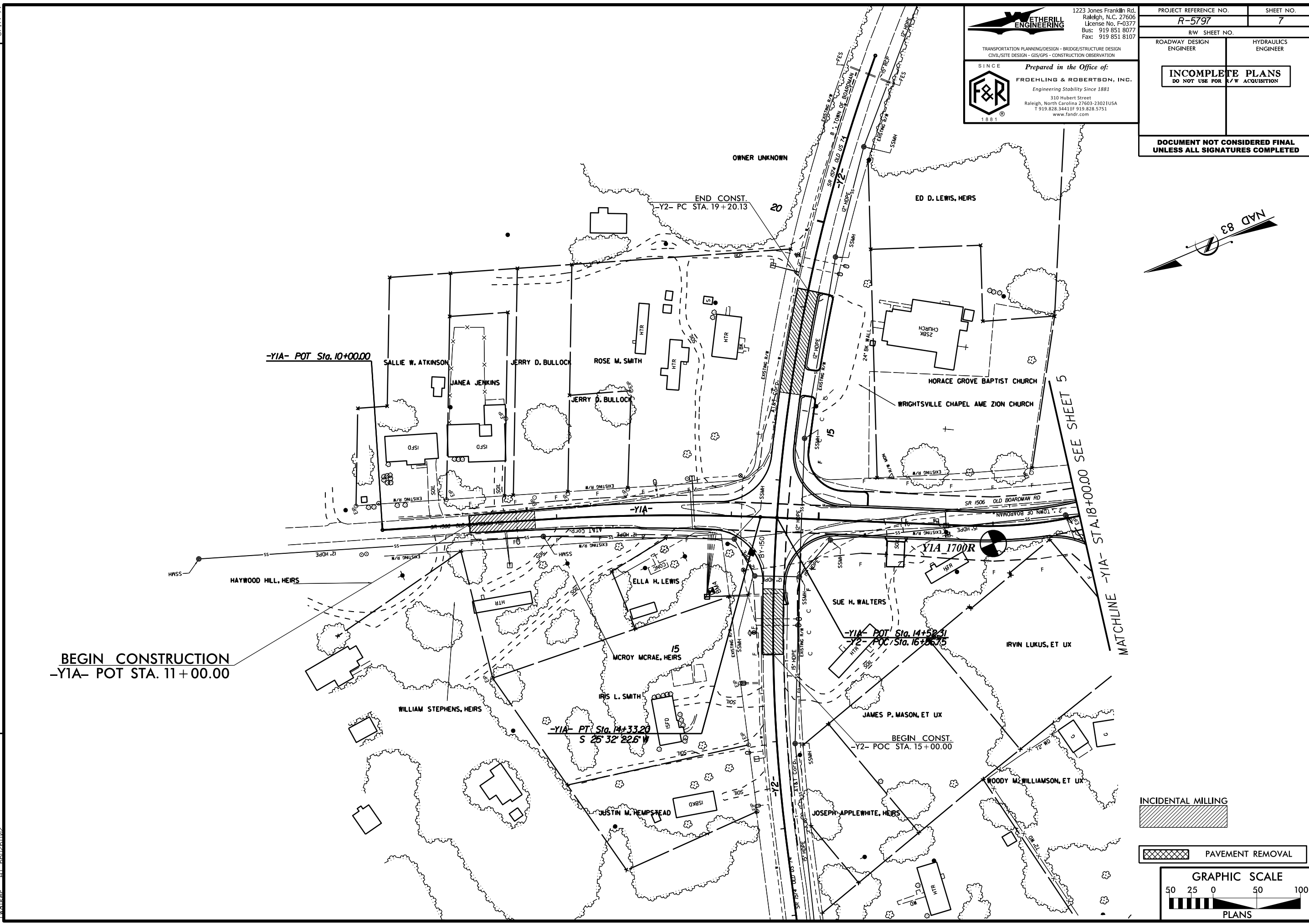
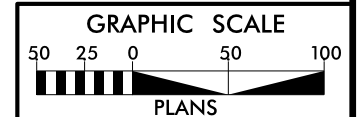
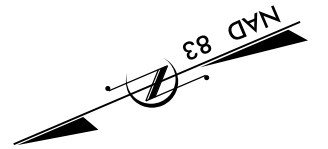
-Y1A- POT Sta. 10+00.00

END CONST.
-Y2- PC STA. 19+20.13

-Y1A- POT Sta. 14+50.31
-Y2- POC Sta. 16+06.15

BEGIN CONST.
-Y2- POC STA. 15+00.00

-Y1A- PT Sta. 14+33.20
S 25° 32' 22.6" W



8/17/99

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

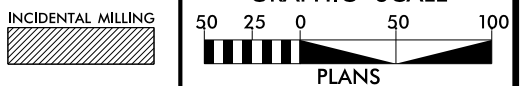
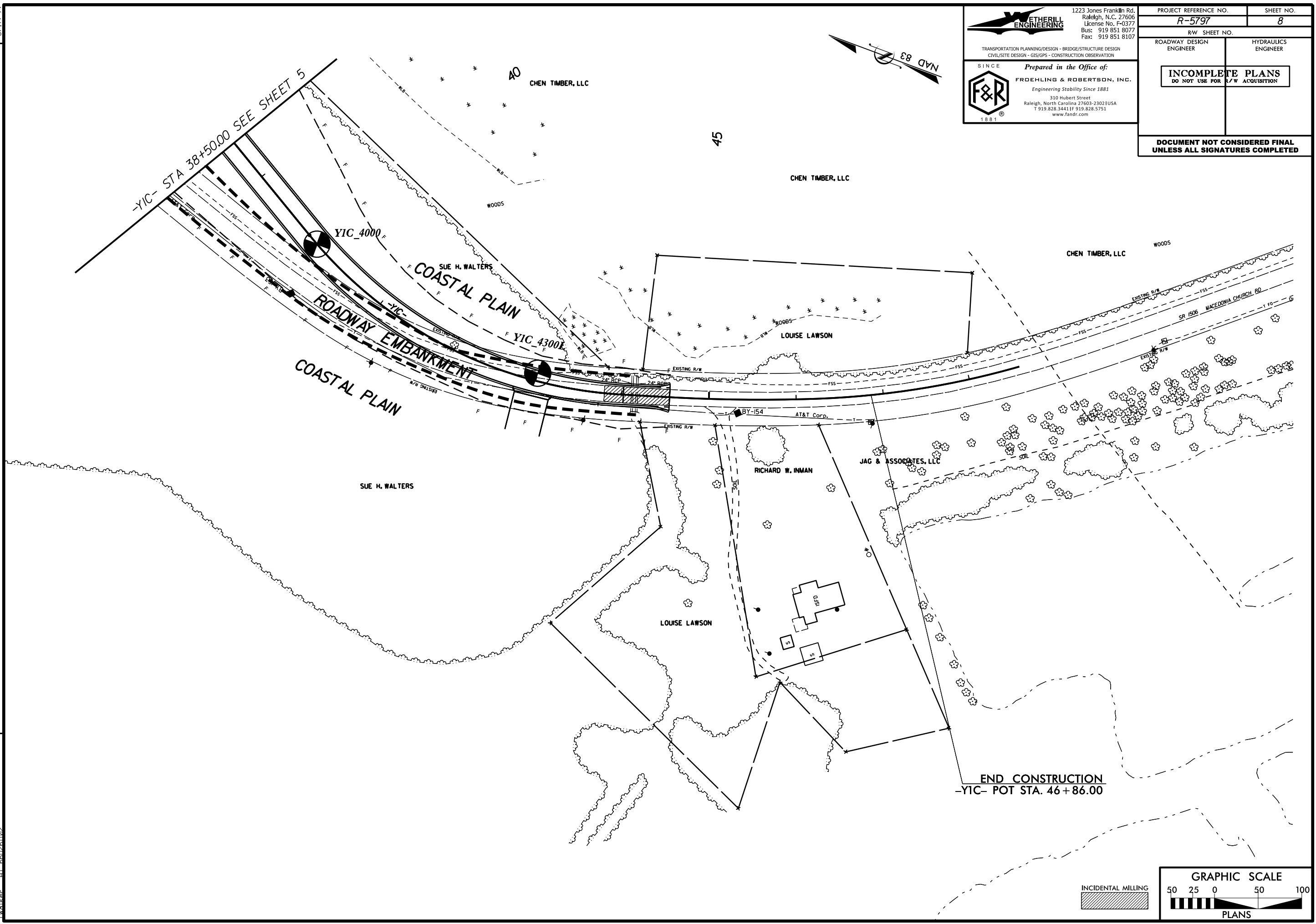
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

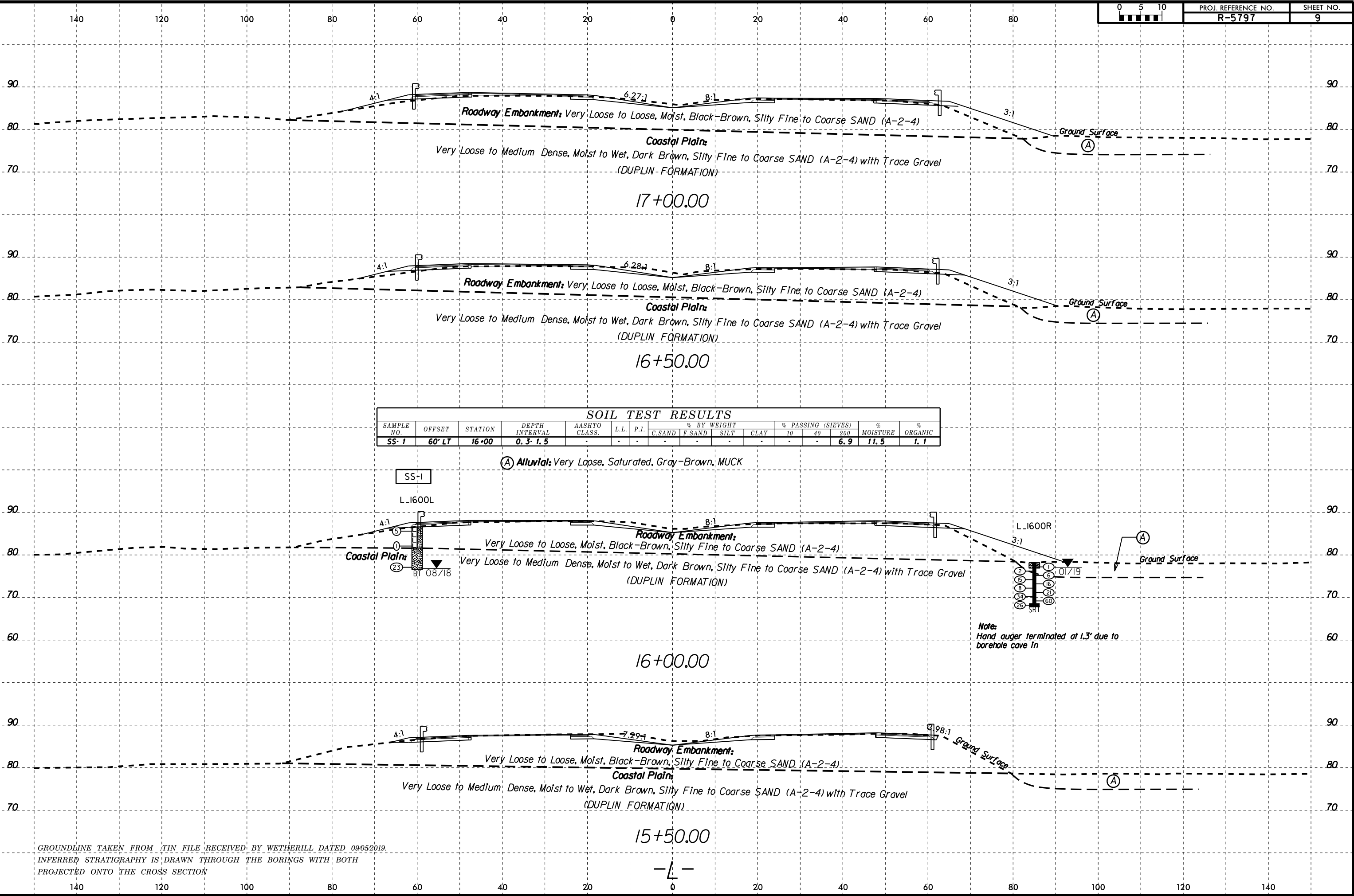
SINCE **Prepared in the Office of:**
F&R FROEHLING & ROBERTSON, INC.
 Engineering Stability Since 1881
 310 Hubert Street
 Raleigh, North Carolina 27603-2302 USA
 T 919.828.3441 F 919.828.5751
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PROJECT REFERENCE NO. R-5797	SHEET NO. 8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS

05-NOV-2019 16:48 F:\Projects\66V\66V-0246 (WEI-R-5797) Columbia Co Task 2\VR-5797.GEO.RDWAY\CADD.GEOTECH\PlanProf\R-5797_Rdy_PSH_08.dgn Walker AT 66261102





SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-1	60' LT	16+00	0.3-1.5	-	-	-	-	-	-	-	-	-	6.9	11.5	1.1

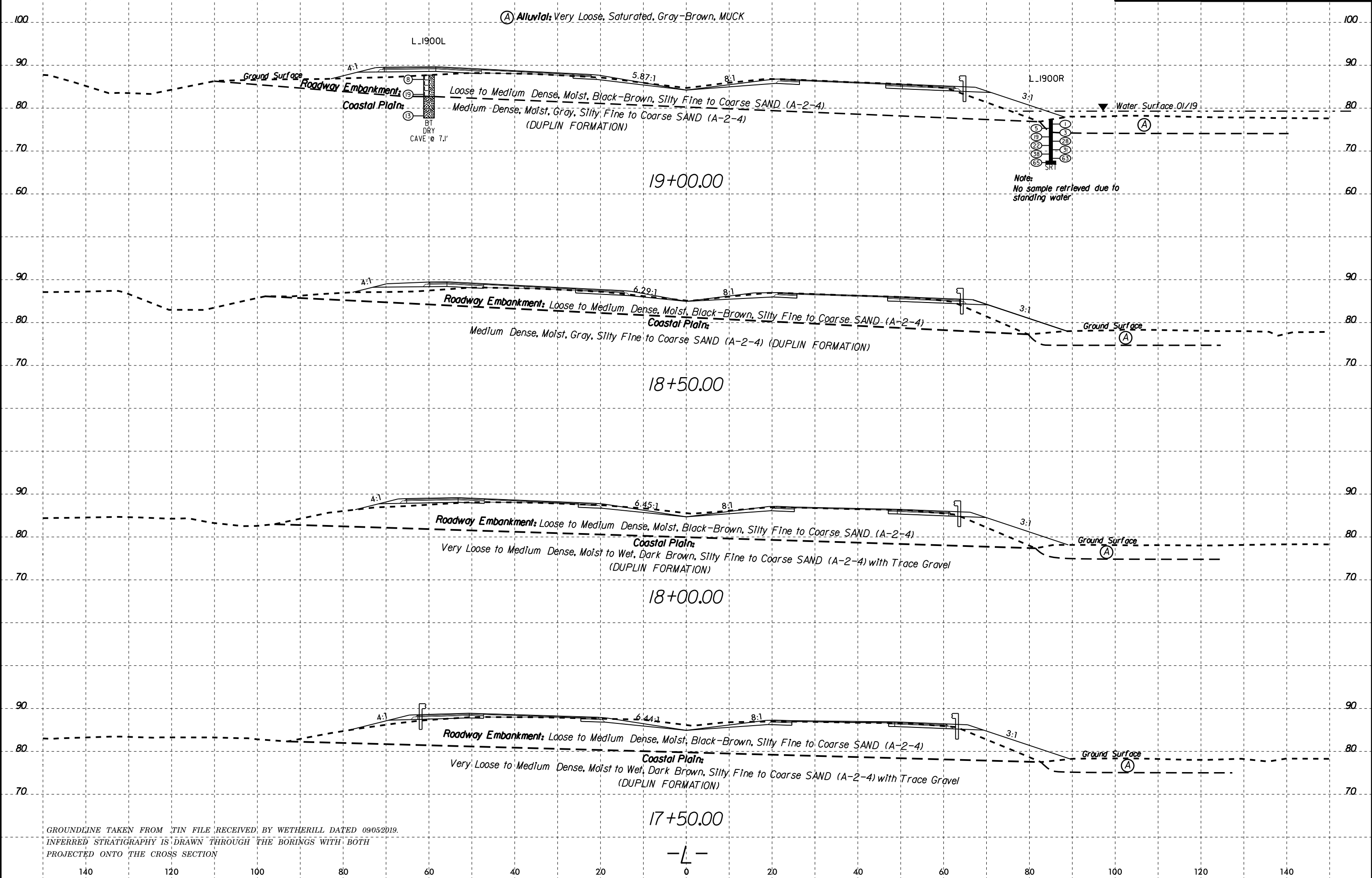
(A) Alluvial: Very Loose, Saturated, Gray-Brown, MUCK

Note: Hand auger terminated at 1.3' due to borehole cave in

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 15:59
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 Walker-A 660261102

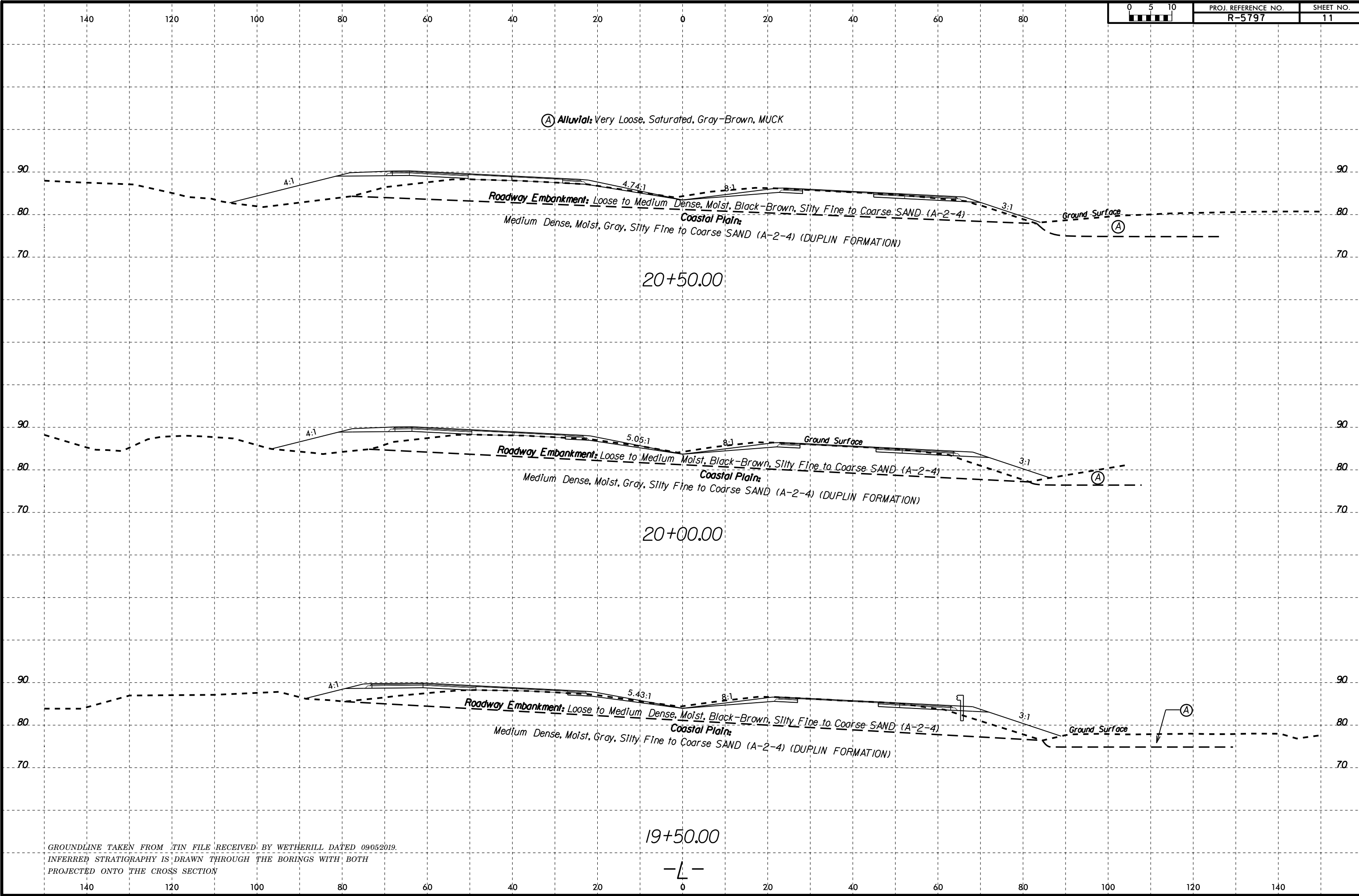
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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

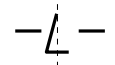
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6/23/16



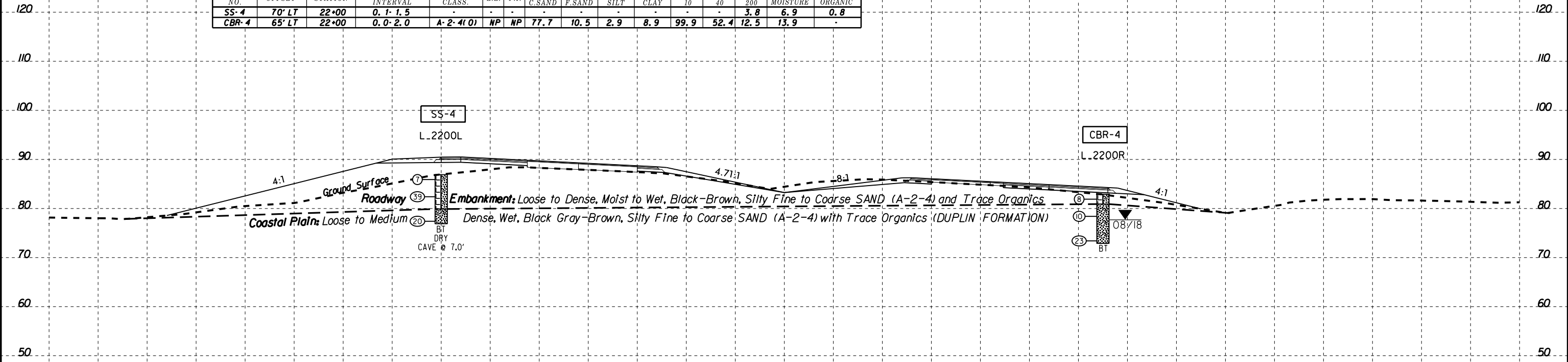
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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

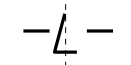


140 120 100 80 60 40 20 0 20 40 60 80

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-4	70' LT	22+00	0.1-1.5	-	-	-	-	-	-	-	-	3.8	6.9	0.8	
CBR-4	65' LT	22+00	0.0-2.0	A-2-4(0)	NP	NP	77.7	10.5	2.9	8.9	99.9	52.4	12.5	13.9	-



22+00.00



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
13

140

120

100

80

60

40

20

0

20

40

60

80

90

80

70

60

50

90

80

70

60

50

Ground Surface

L_2500L

4:1

③

⑧

⑬

BT

08/18

6.47:1

8:1

L_2500R

4:1

⑩

⑪

⑬

BT

08/18

Roadway Embankment: Loose to Medium Dense, Moist, Black, Silty Fine to Coarse SAND (A-2-4)

Coastal Plain:

Very Loose to Medium Dense, Moist to Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4)
(DUPLIN FORMATION)

25+00.00



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 15:59
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Walker-A 66026102

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
14

140

120

100

80

60

40

20

0

20

40

60

80

100

100

L_2800L

L_2800R

Ground Surface

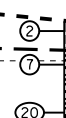
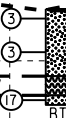
Roadway Embankment: Very Loose, Moist, Gray-Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Organics
Coastal Plains

Wood

Very Loose to Medium Dense, Moist to Saturated, Gray-Tan-Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Organics
(DUPLIN FORMATION)

7.92:1

8:1



08/18

08/18

28+00.00



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

05-NOV-2019 15:59
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Walker-A 66026102

140

120

100

80

60

40

20

0

20

40

60

80

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-806	90' RT	31+00	0.0-1.5	A-2-4	-	-	-	-	-	-	-	7.9	19.4	1.2	

110

110

100

100

90

90

80

80

70

70

60

60

50

50

Ⓐ Coastal Plain: Soft to Medium Stiff, Wet, Black, Silty Fine Sandy Clayey SILT (A-5) (DUPLIN FORMATION)

L_3100L

SS-806

Ground Surface

Roadway Embankment: Very Loose, Moist, Gray-Brown

8:1

6.22:1

Silty Fine to Coarse SAND (A-2-4) with Trace Organics

Coastal Plain: Very Loose to Medium Dense, Black-Tan and White-Gray, Silty Fine to Coarse SAND (A-2-4) and Fine to Coarse SAND (A-3) with Trace Organics (DUPLIN FORMATION)

08/18

01/19

BT

BT

31+00.00

-L-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

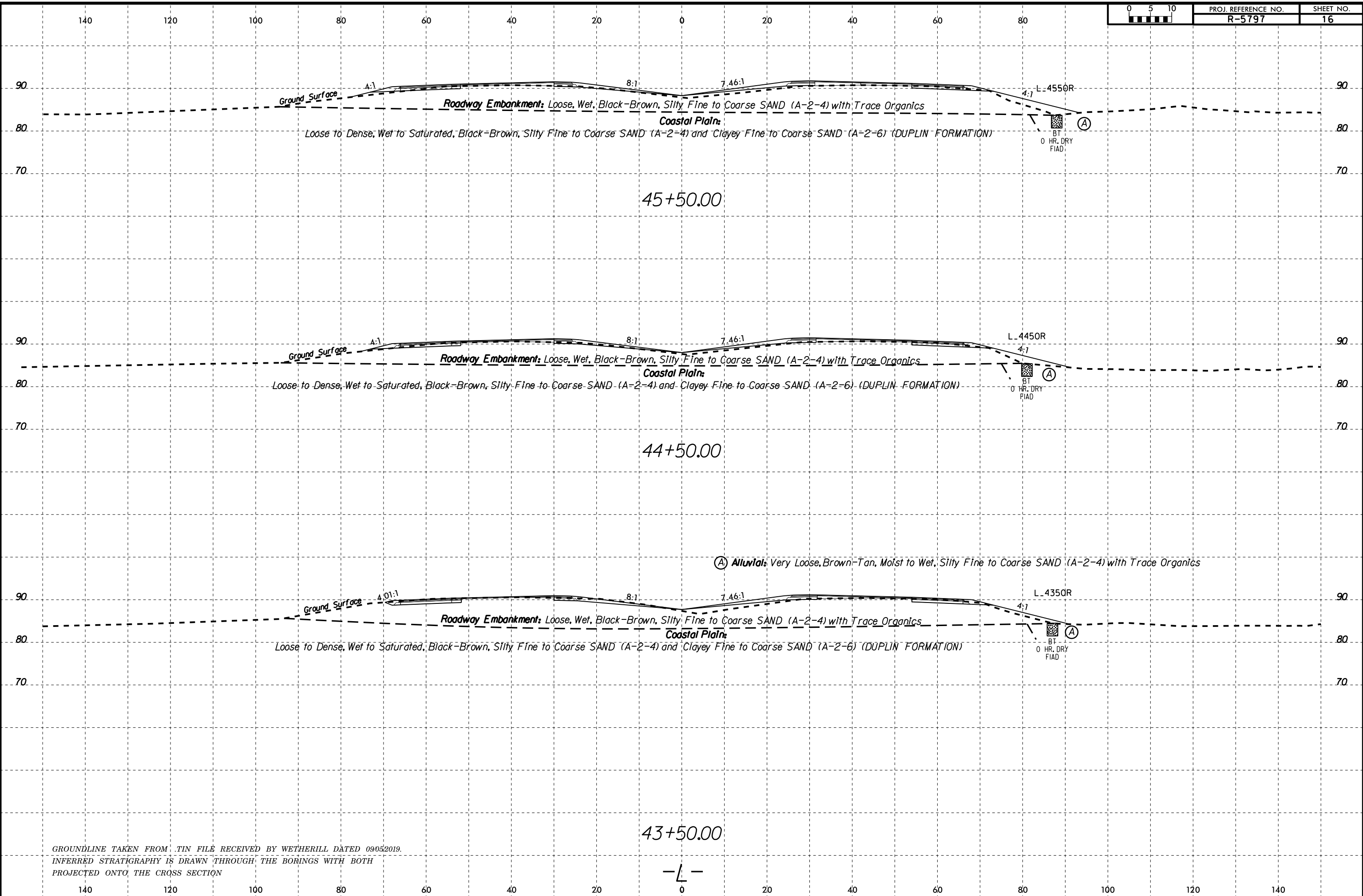
80

100

120

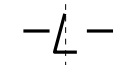
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6/23/16
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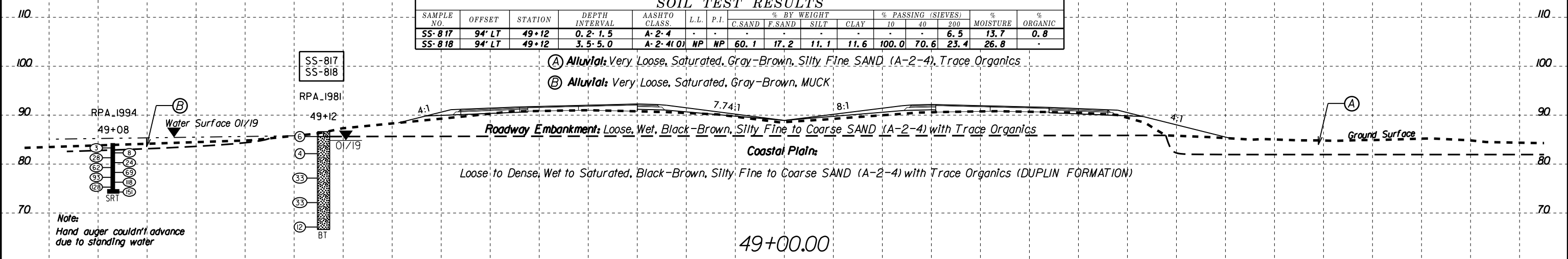
GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

43+50.00

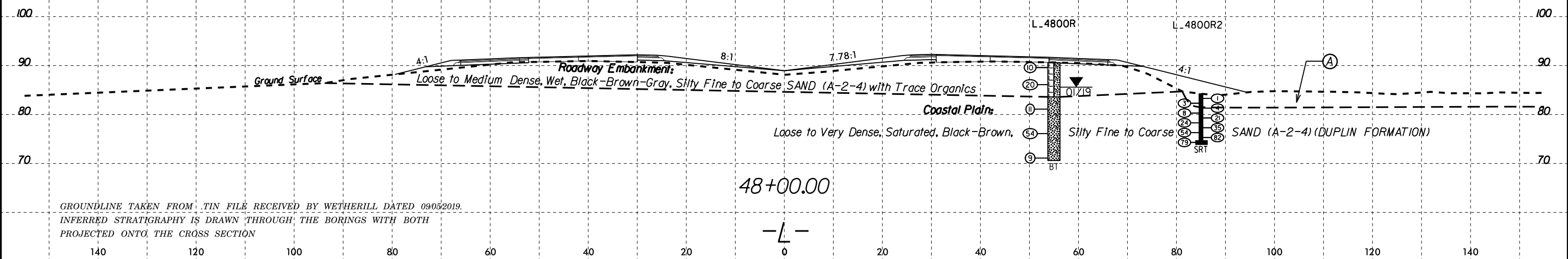


SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40		
SS-817	94' LT	49+12	0.2-1.5	A-2-4	-	-	-	-	-	-	-	6.5	13.7	0.8
SS-818	94' LT	49+12	3.5-5.0	A-2-4(0)	NP	NP	60.1	17.2	11.1	11.6	100.0	70.6	23.4	26.8

- (A) Alluvial: Very Loose, Saturated, Gray-Brown, Silty Fine SAND (A-2-4), Trace Organics
- (B) Alluvial: Very Loose, Saturated, Gray-Brown, MUCK

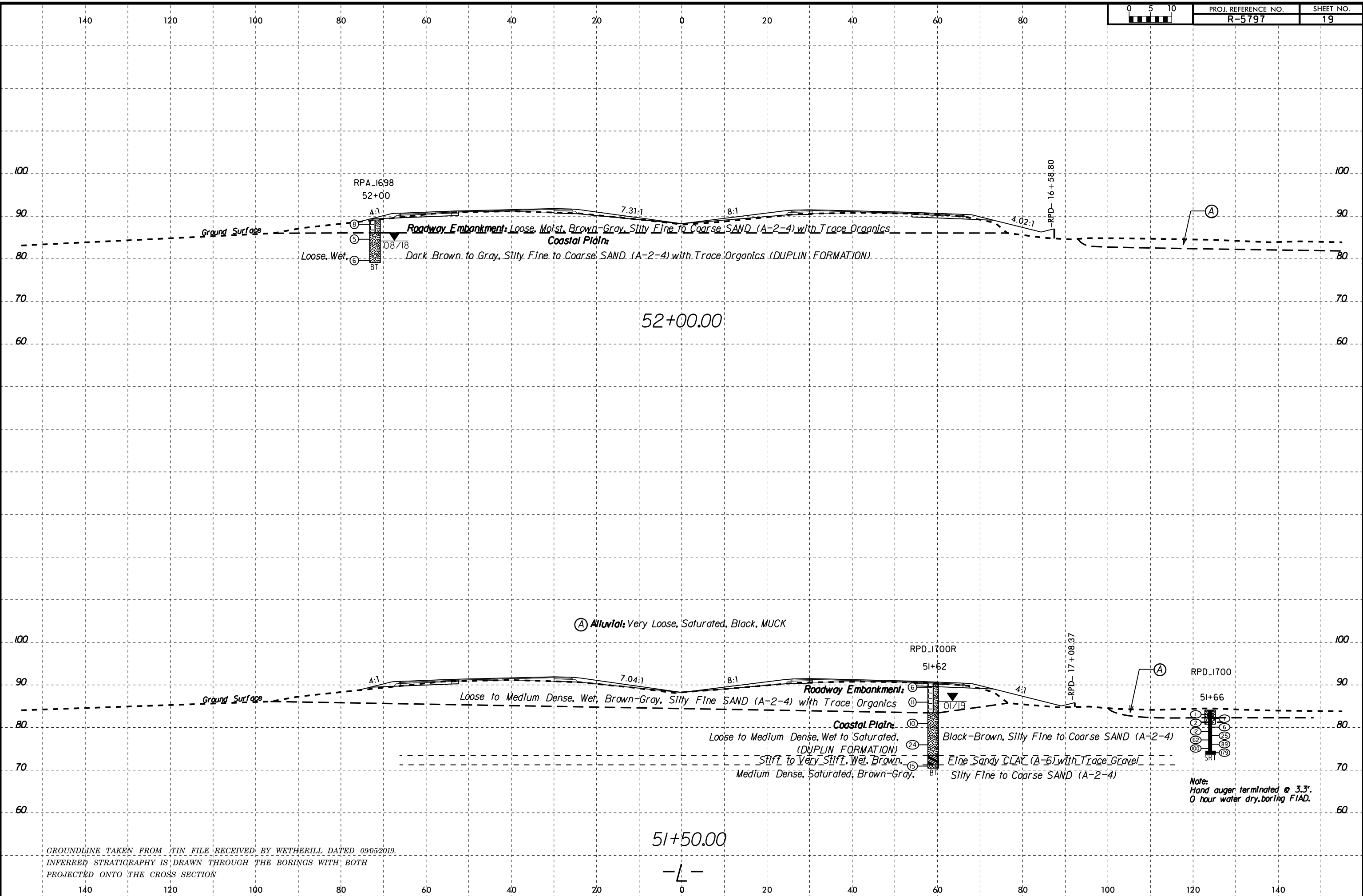


Note:
Hand auger couldn't advance due to standing water



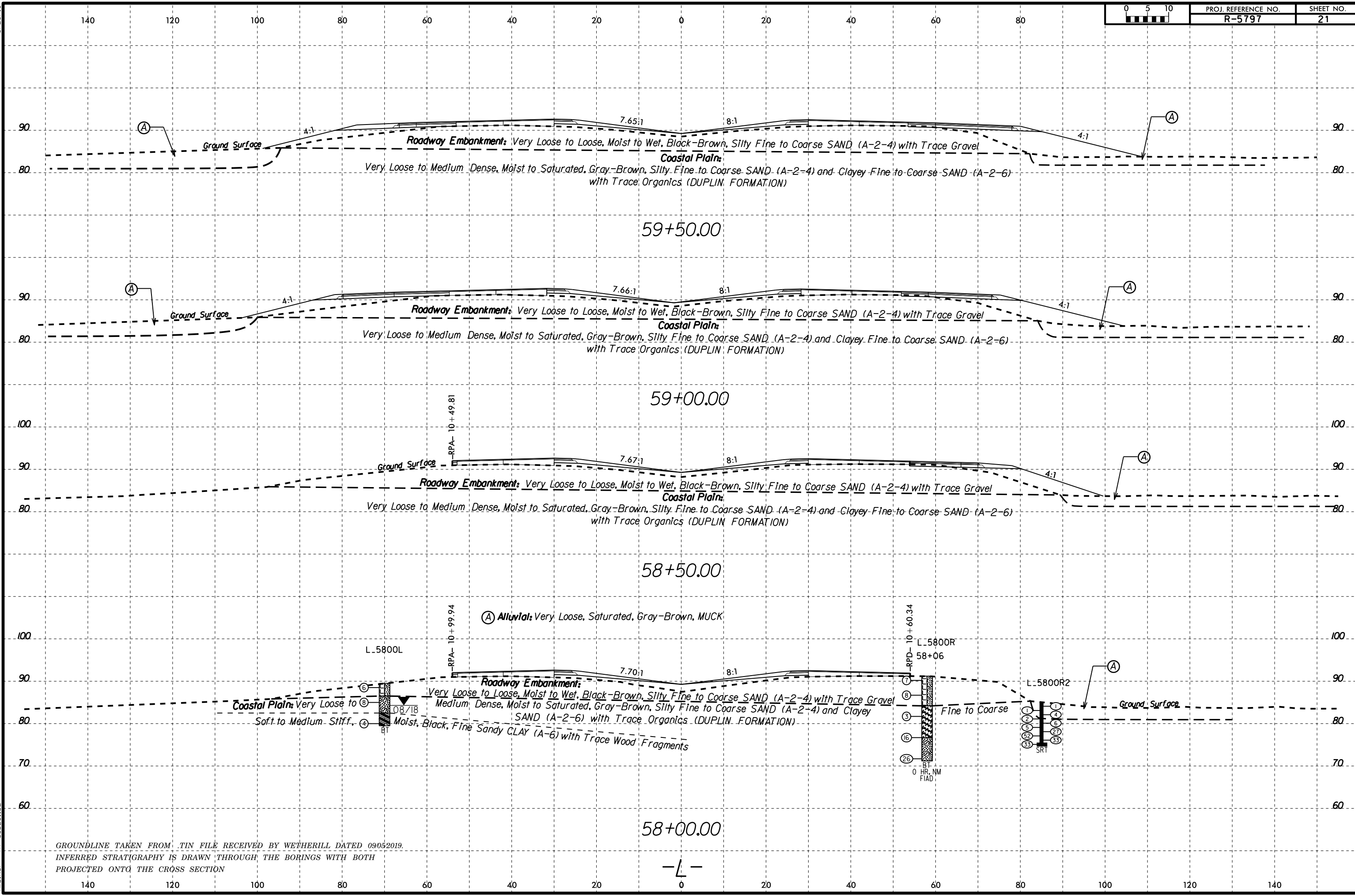
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

6/23/16
07-NOV-2019 16:05
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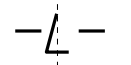
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

Note:
Hand auger terminated @ 3.3'.
0 hour water dry, boring FIAD.

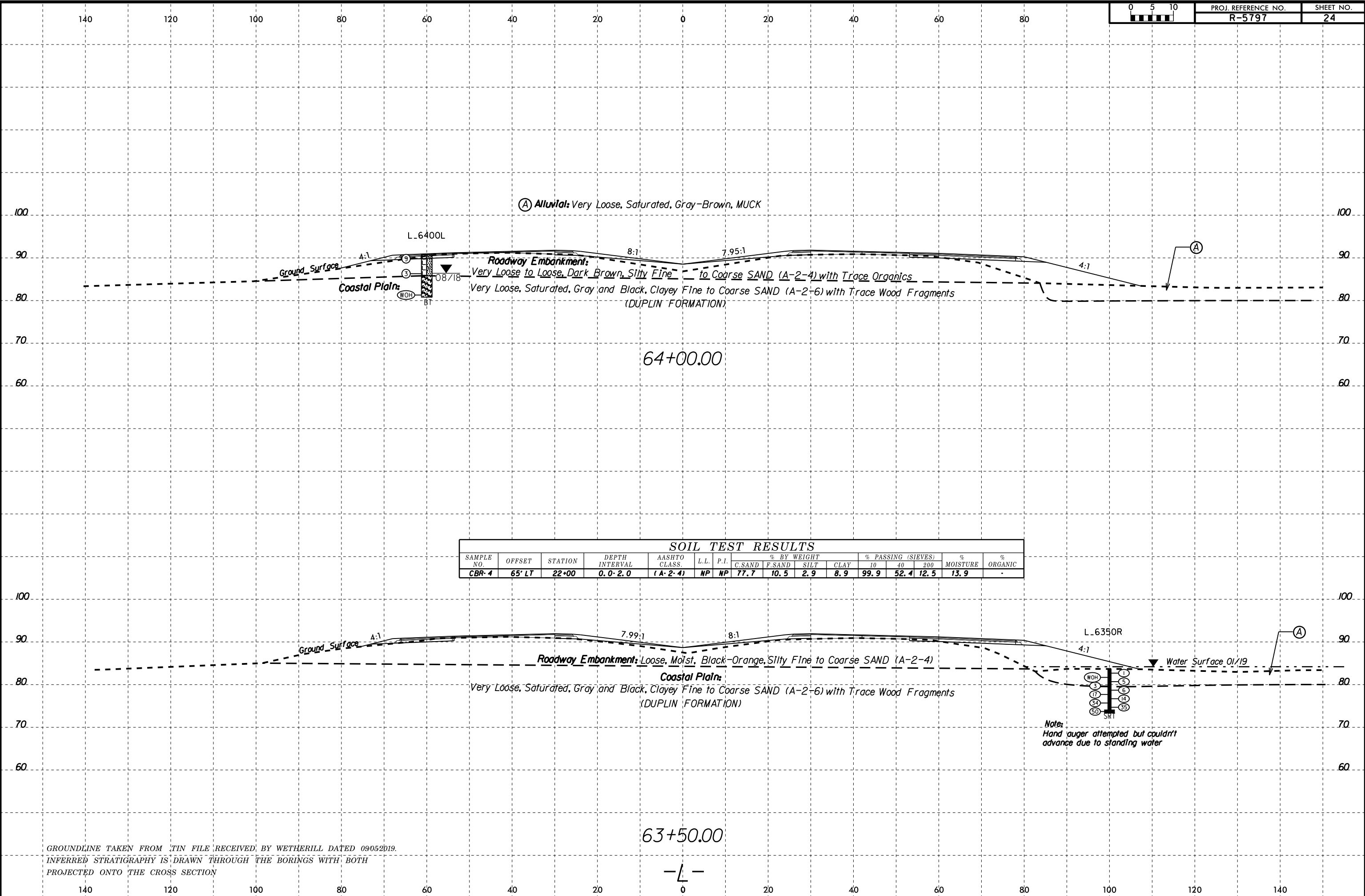


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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION



6/23/16

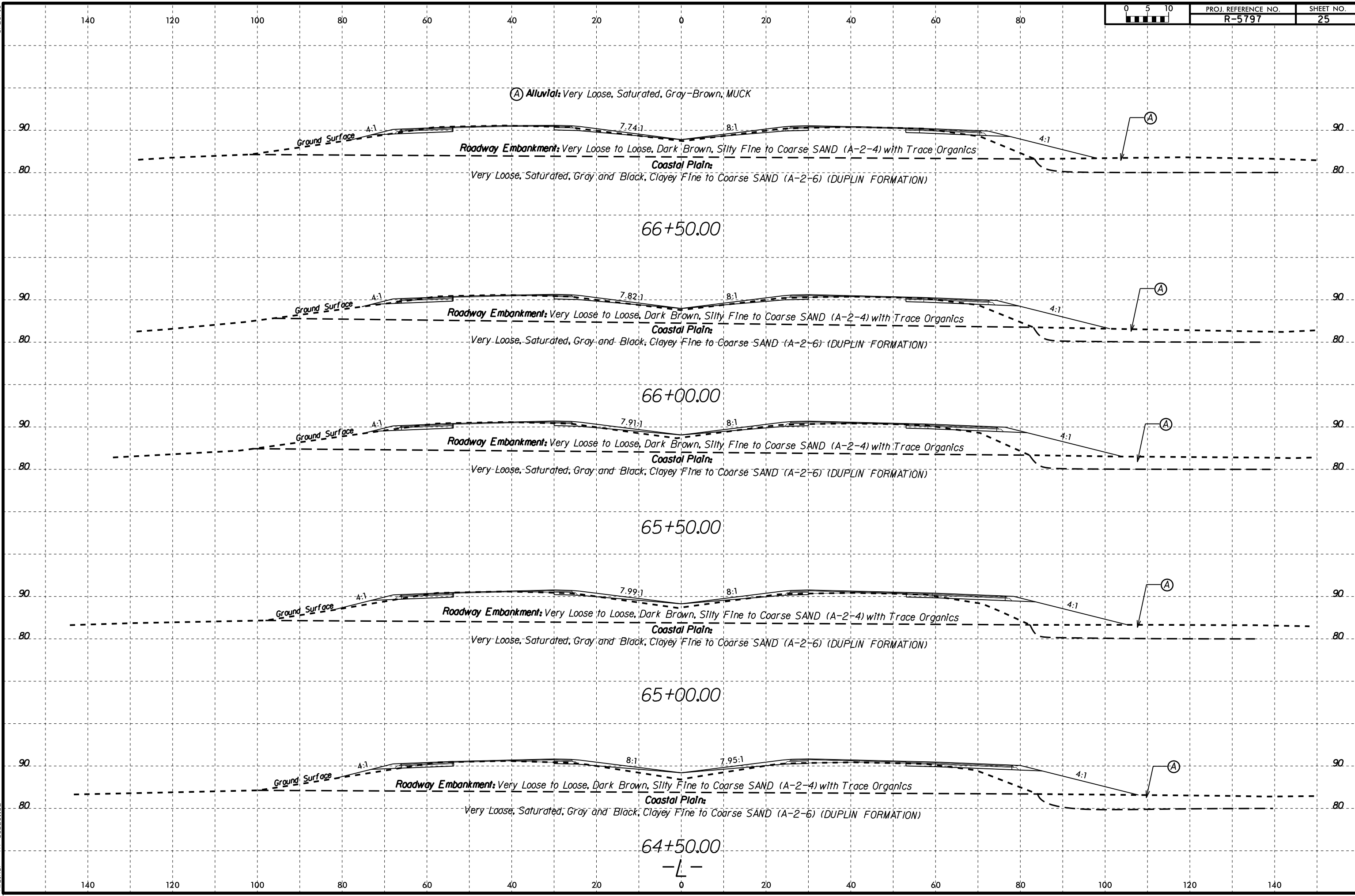


SOIL TEST RESULTS

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		
CBR-4	65' LT	22+00	0.0-2.0	(A-2-4)	NP	NP	77.7	10.5	2.9	8.9	99.9	52.4	12.5	13.9	-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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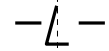
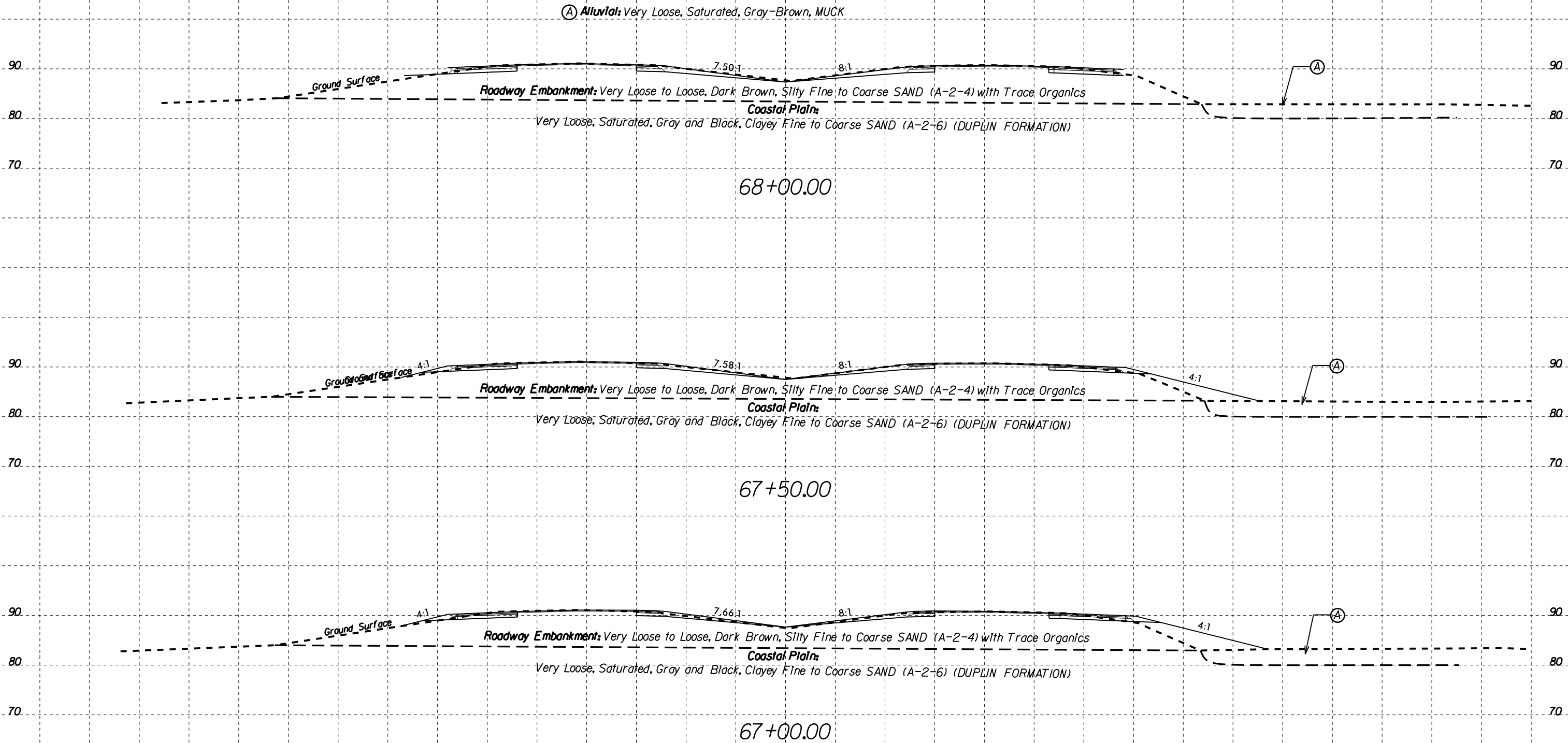
6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
26

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Walker-A 66026102

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
27

140

120

100

80

60

40

20

0

20

40

60

80

110

100

90

80

70

110

100

90

80

70

YIA_1700R

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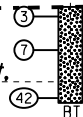
3:1

4:1

Ground Surface

Coastal Plains

Very Loose to Dense, Moist to Wet,



08.78

Black and Tan, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

17+00.00

-Y/A-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

05-NOV-2019 16:07
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Walker-A 660261102

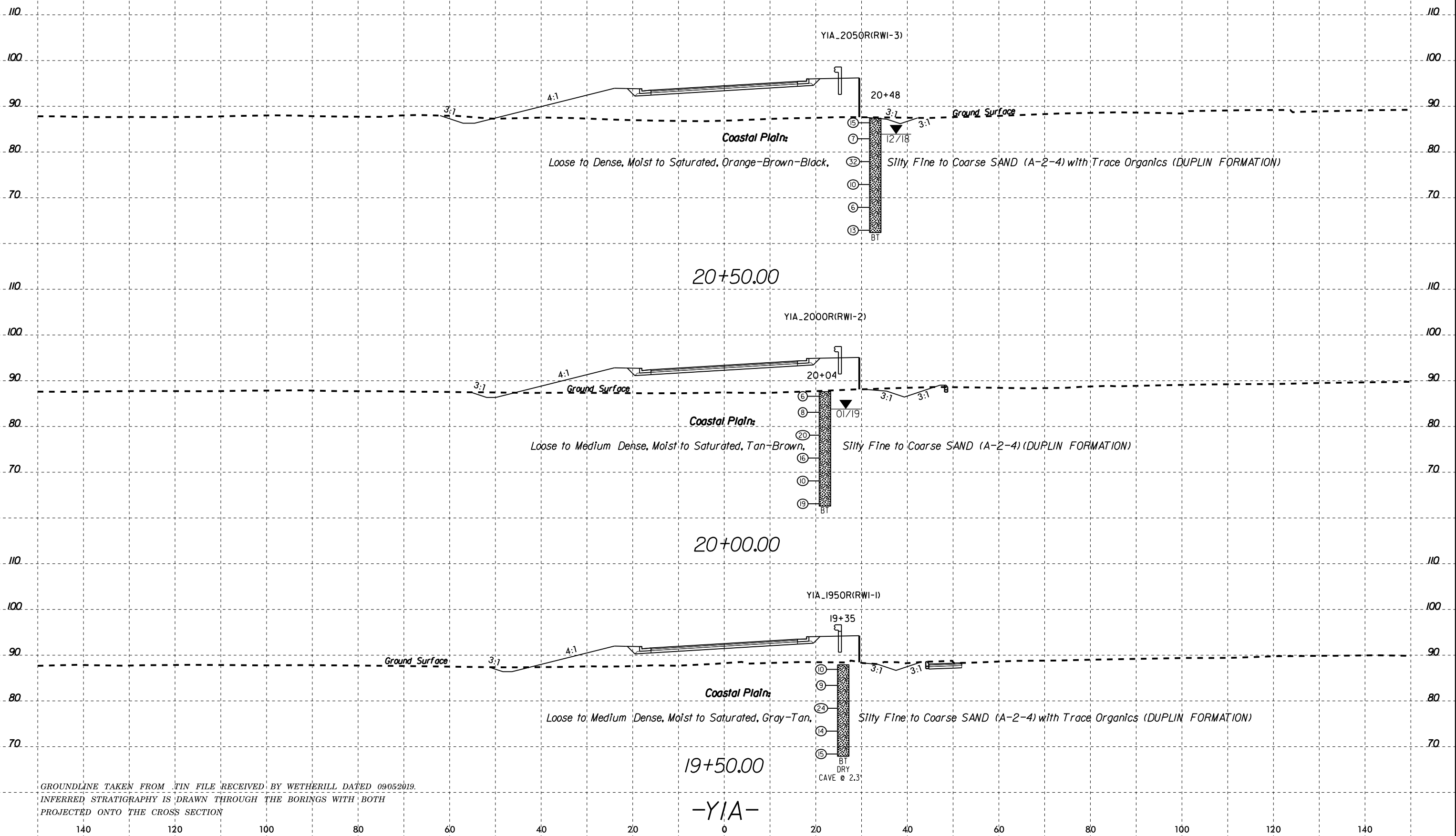
6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
28

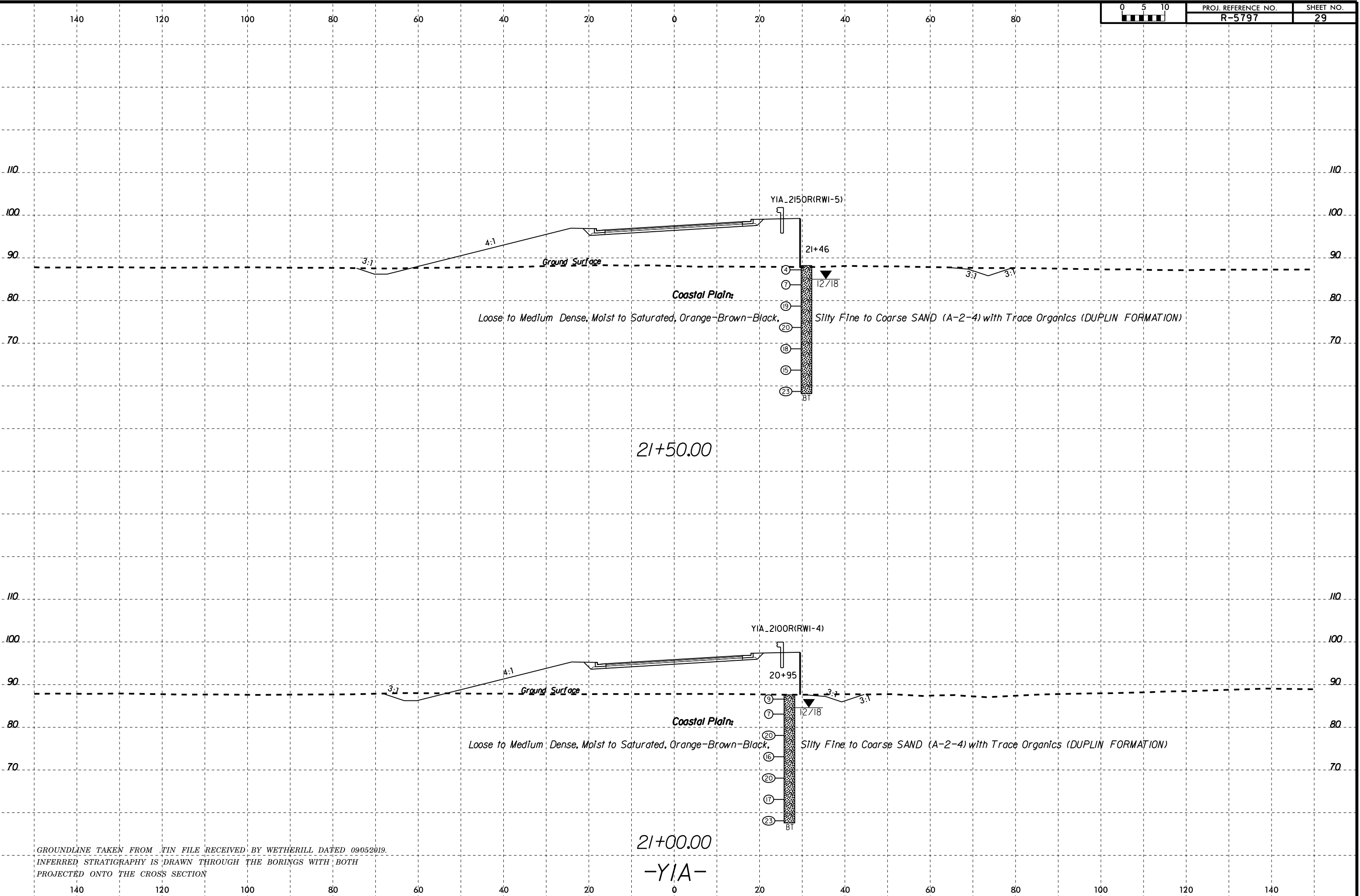
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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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07-NOV-2019 11:45:56
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05-NOV-2019 16:07 P:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO.RDWY\CADD.GEOTECH\ssc\1R-5797-geo.xst_1\IA.dgn Walker-A 660261102

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

21+50.00
-YIA-

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
30

140

120

100

80

60

40

20

0

20

40

60

80

110

100

90

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60

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40

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100

90

80

70

60

50

40

3:1

4:1

3:1

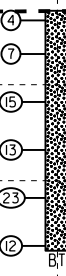
YIA_2300

Ground Surface

Coastal Plains

Loose to Medium Dense, Wet to Saturated, Gray-Tan and

Brown-Black, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)



12.718

23+00.00

-YIA-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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Walker-A 660261102

140

120

100

80

60

40

20

0

20

40

60

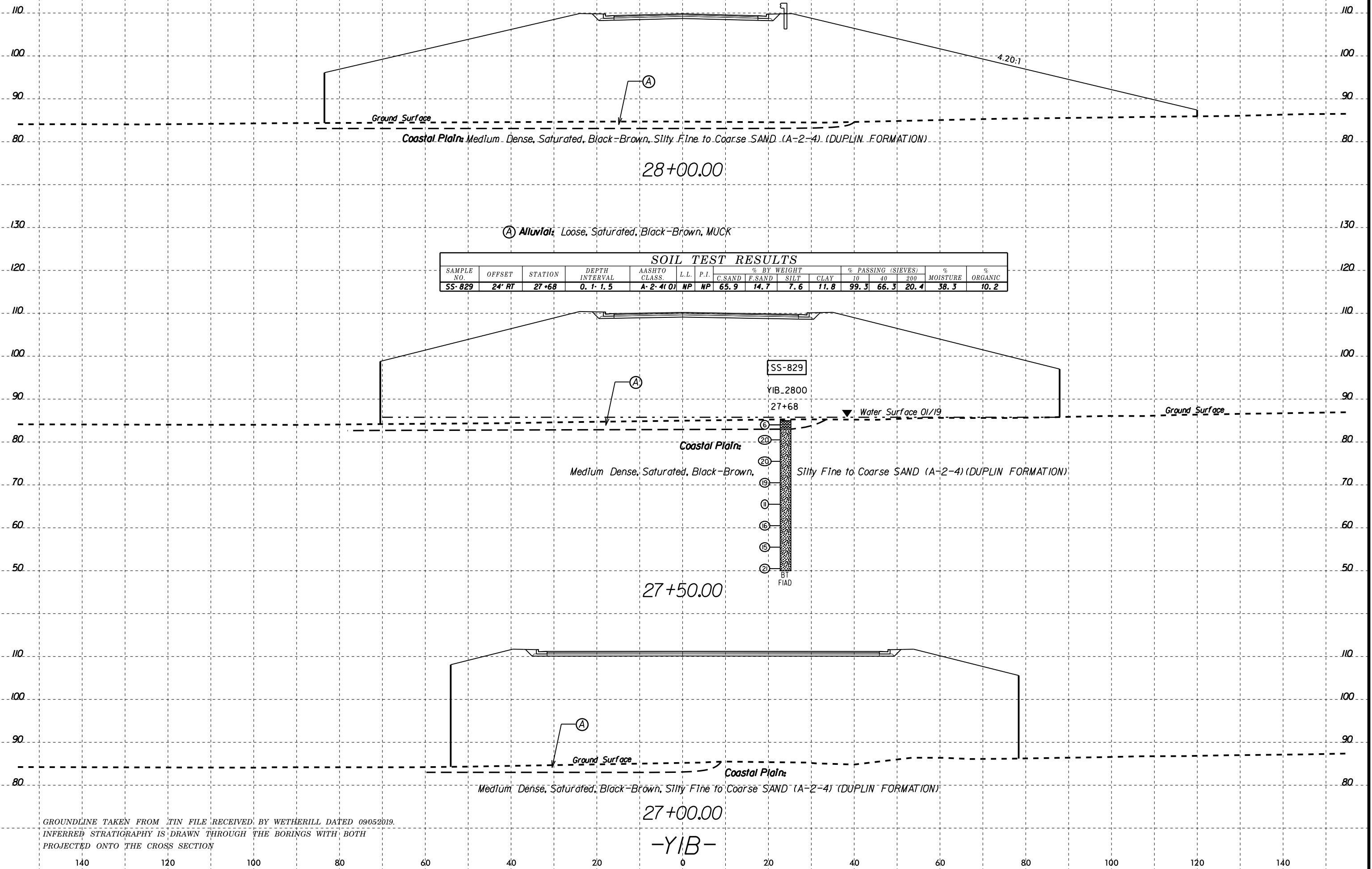
80

100

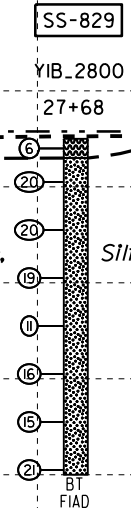
120

140

6/23/16
 05-NOV-2019 16:08
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 TWalker-A 660261102



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-829	24' RT	27+68	0.1-1.5	A-2-4(0)	NP	NP	65.9	14.7	7.6	11.8	99.3	66.3	20.4	38.3	10.2



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

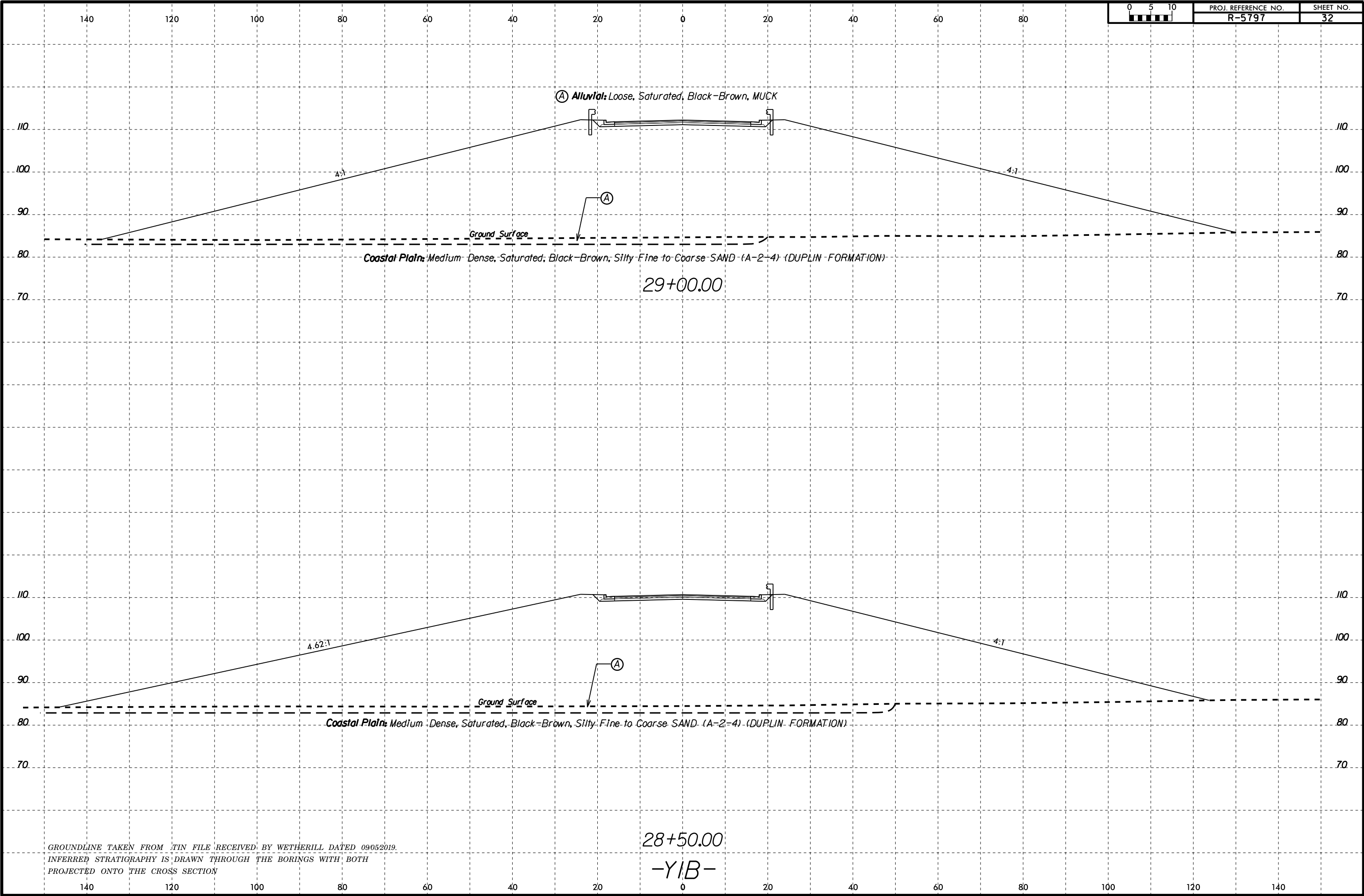
-YIB-

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
32



(A) Alluvial: Loose, Saturated, Black-Brown, MUCK

Coastal Plain: Medium Dense, Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

29+00.00

4.62:1

(A)

Coastal Plain: Medium Dense, Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

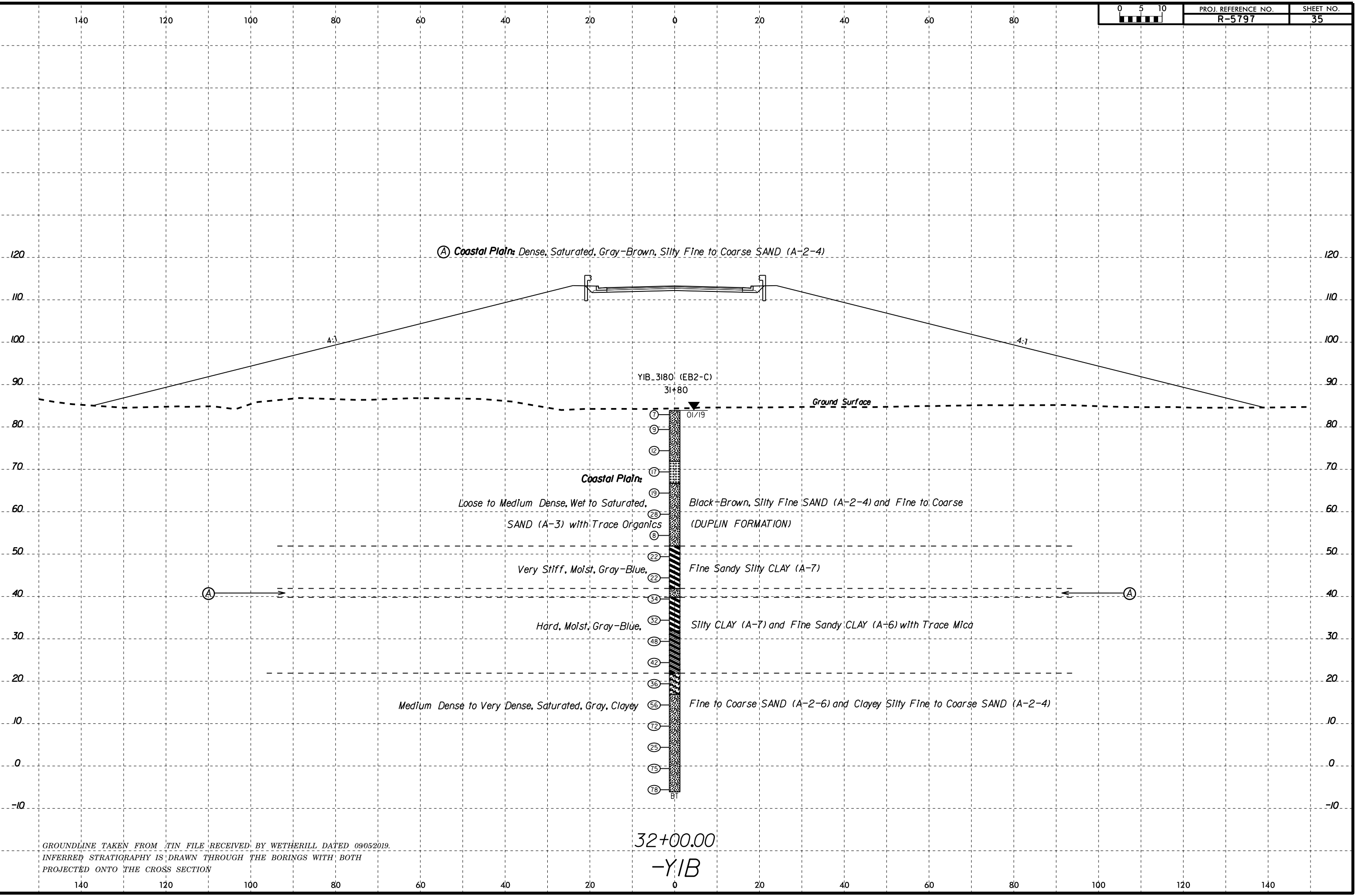
28+50.00

-YIB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:08
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Walker-A 66026102

6/23/16
05-NOV-2019 16:08
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Walker



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

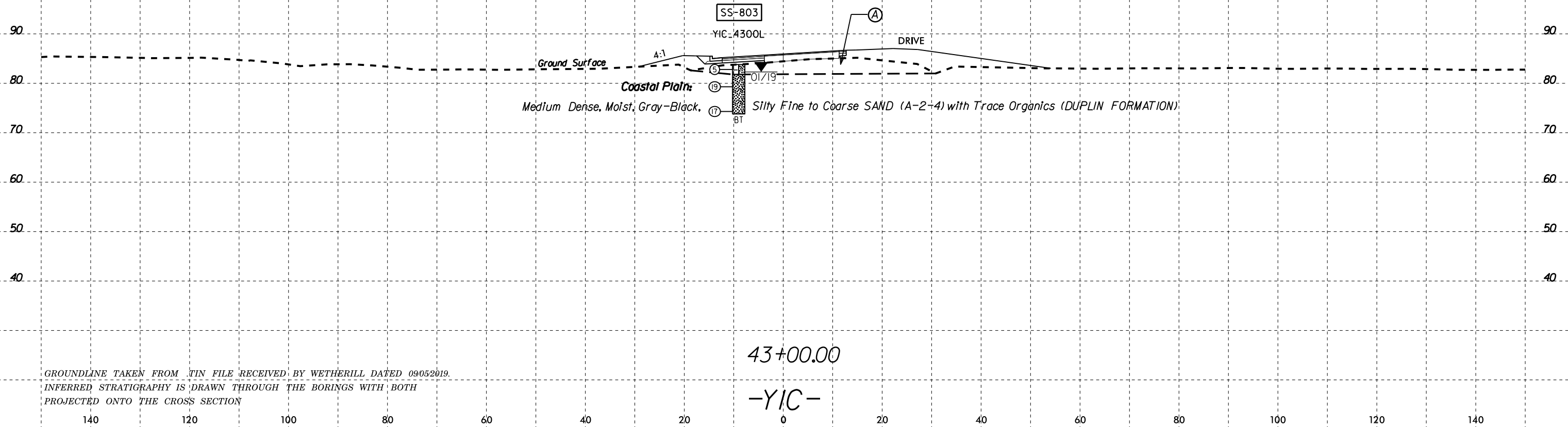
40

60

80

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-803	9' LT	43+00	0.2-1.5	A-2-4	-	-	-	-	-	-	-	-	13.1	18.6	2.7

Ⓐ Roadway Embankment: Loose, Moist, Black-Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Organics



140

120

100

80

60

40

20

0

20

40

60

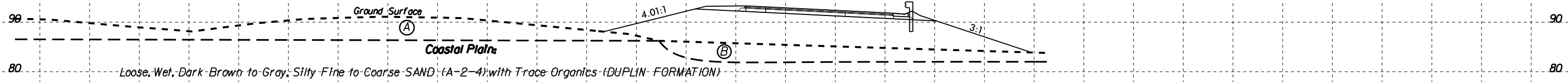
80

100

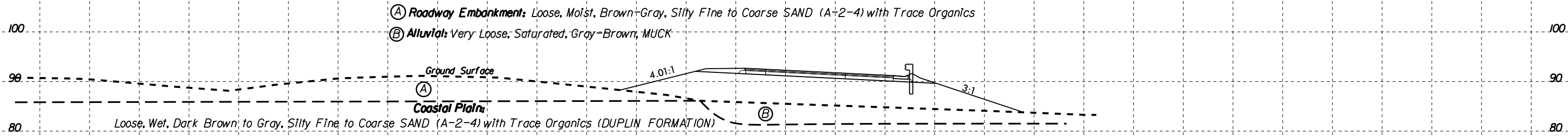
120

140

6/23/16



17+98.61



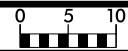
17+49.07

-RPA-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09052019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:09
 P:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797 GEO.RDWY\CADD.GEOTECH\sec\1R-5797_geo.xsi.RPA.dgn
 Walker-A 66026102

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
44

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

(A) Alluvial: Very Loose, Saturated, Gray-Brown, MUCK

4:1

Ground Surface

(A)

3:1

Coastal Plains

Loose to Dense, Wet to Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4)
with Trace Organics (DUPLIN FORMATION)

21+87.58

100

90

80

4:1

Ground Surface

(A)

3:1

Coastal Plains

Loose to Dense, Wet to Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4)
with Trace Organics (DUPLIN FORMATION)

21+39.89

100

90

80

4:1

Ground Surface

(A)

3:1

Coastal Plains

Loose to Dense, Wet to Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4)
with Trace Organics (DUPLIN FORMATION)

20+91.89

90

80

70

4:1

Ground Surface

(A)

3:1

Coastal Plains

Loose to Dense, Wet to Saturated, Black-Brown, Silty Fine to Coarse SAND (A-2-4)
with Trace Organics (DUPLIN FORMATION)

20+43.60

-RPA-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:09
F:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-Geo\RDWY\CADD\GEO\TECH\sec\1R-5797-geo.xsi.RPA.dgn
Walker-A 660261102

140

120

100

80

60

40

20

0

20

40

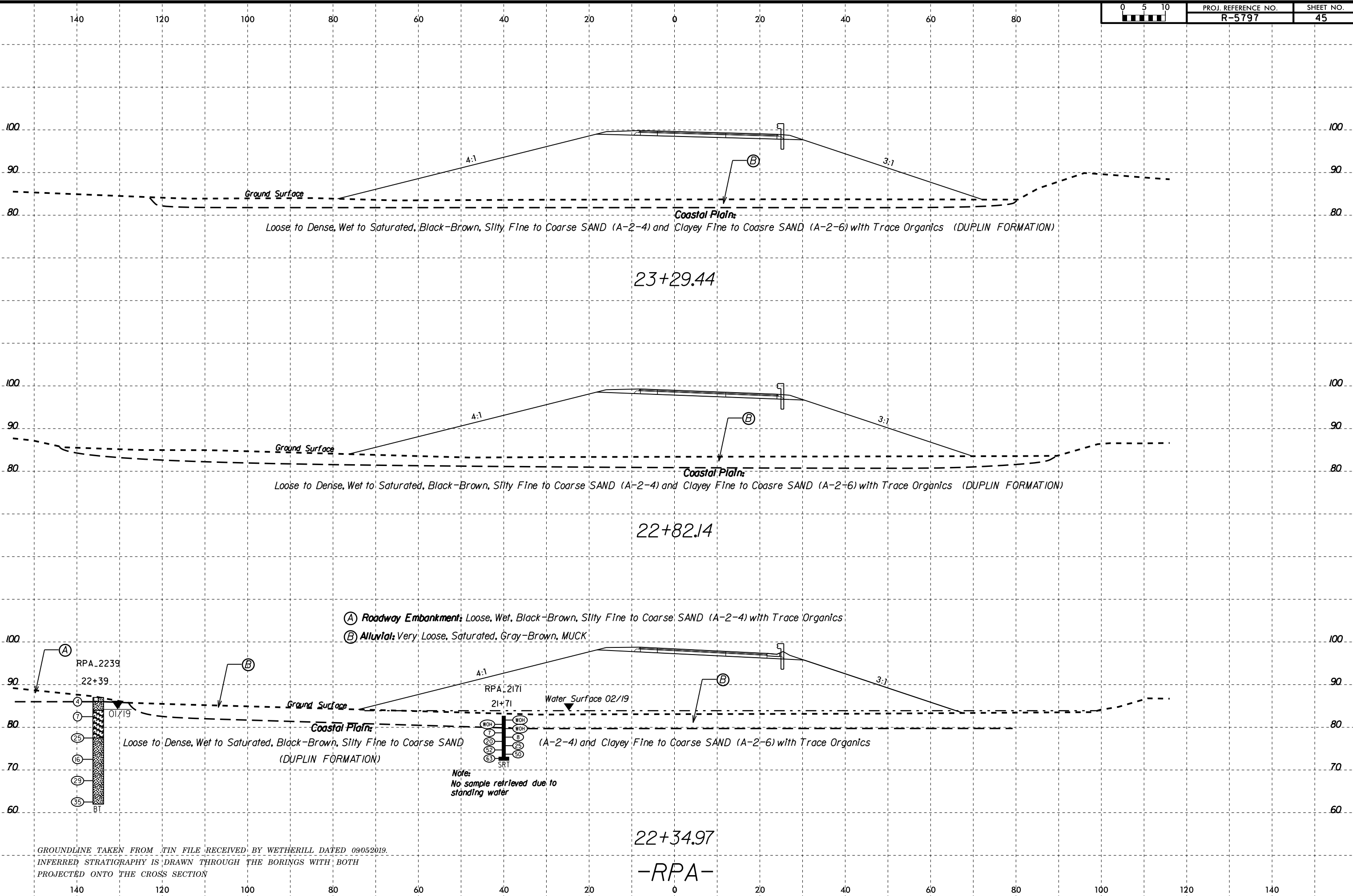
60

80

100

120

140



- (A) Roadway Embankment: Loose, Wet, Black-Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Organics
- (B) Alluvial: Very Loose, Saturated, Gray-Brown, MUCK

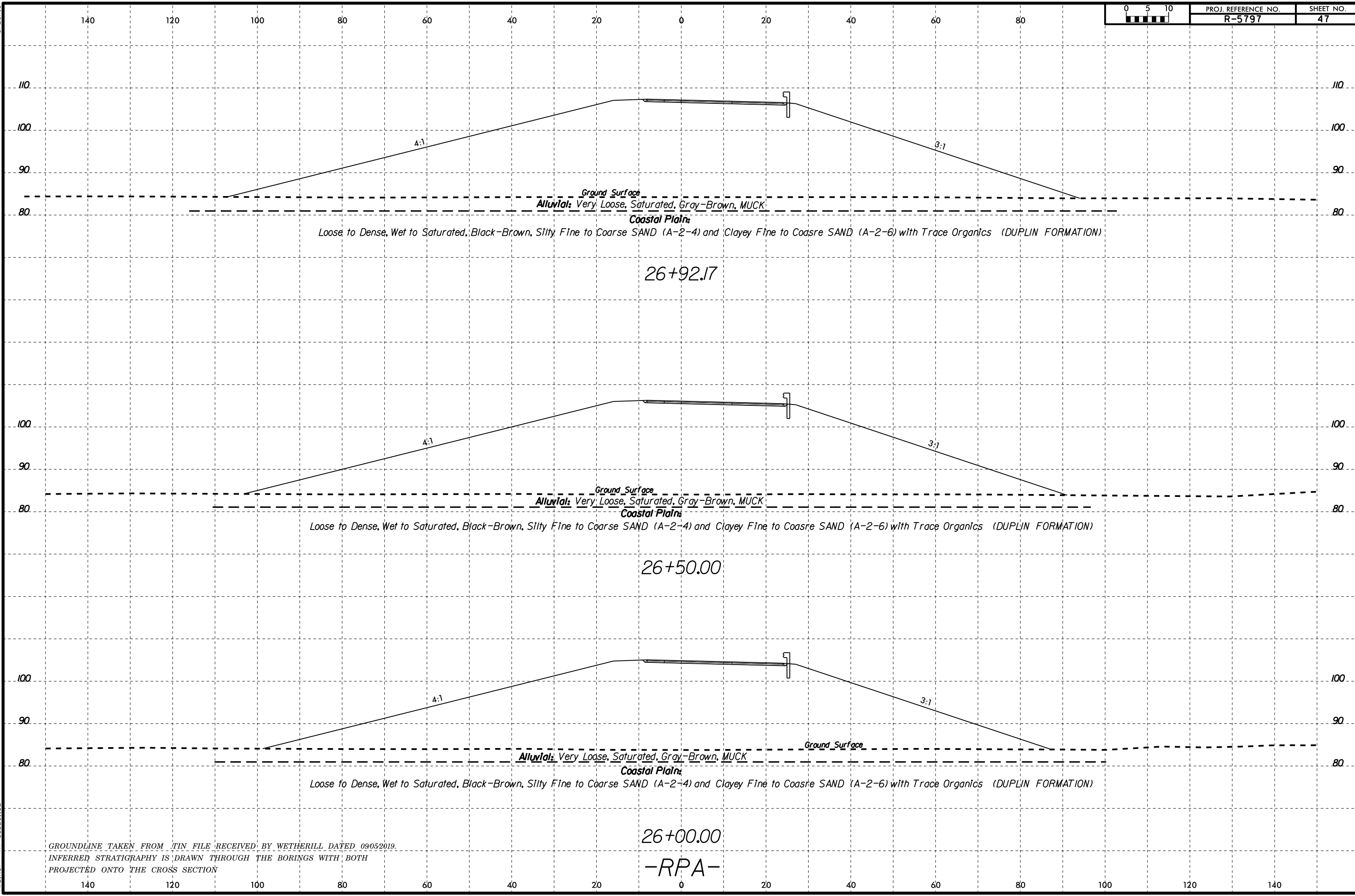
Note:
No sample retrieved due to
standing water

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

22+34.97
-RPA-

05-NOV-2019 16:09 F:\Projects\66166\66166-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO.RDWY\CADD.GEOTECH\sec\1R-5797-geo.xst_RPA.dgn

6/23/16



05-NOV-2019 16:09
E:\Projects\66V\66V-0246 (WEI-R-5797) Columbia Co Task 2\1R-5797-GEO\RDWY\CADD\GEO\TECH\sec\1R-5797_geo_xsi_RPA.dgn
Walker-A 660261102

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

26+00.00
-RPA-

6/23/16

140

120

100

80

60

40

20

0

20

40

60

80



PROJ. REFERENCE NO.
R-5797

SHEET NO.
48

(A) Alluvial: Very Loose, Saturated, Gray-Brown, MUCK

4.1:1

-YIB- 27+00

RPA-2825

28+25

Water Surface 02/19

3:1

Ground Surface

Coastal Plain
Medium Dense, Moist to Saturated, Black-Dark Brown,
(DUPLIN FORMATION)

Silty Fine to Coarse SAND (A-2-4) and Clayey Fine SAND (A-2-6)

Very Stiff, Moist, Gray-Blue, Fine Sandy CLAY (A-6)

28+00.52

3.67:1

-YIB- 27+50

3:1

Ground Surface

Coastal Plain
Medium Dense, Moist to Saturated, Black-Dark Brown, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

27+71.78

4:1

-YIB- 28+00

3:1

Ground Surface

Coastal Plain
Medium Dense, Moist to Saturated, Black-Dark Brown, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

27+53.57

-RPA-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:09
F:\Projects\66166\66166-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO\RDWY\CADD\GEO\TECH\5797-geo.xst.RPA.dgn
Walker-A 660261102

140

120

100

80

60

40

20

0

20

40

60

80

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-12	32' LT	17+00	3.5-5.0	-	-	-	-	-	-	-	-	2.7	20.1	1.5	

(A) Roadway Embankment: Loose, Moist, Brown, Silty Fine SAND (A-2-4)

RPB_1700L(RW2-1)

17+00

4:1

Ground Surface

Coastal Plains

Very Loose to Medium Dense

Moist to Wet, Black and Tan, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

3

3

27

BT

FIAD

08/18

17+19.07

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
50

140

120

100

80

60

40

20

0

20

40

60

80

110

100

90

80

70

60

50

40

110

100

90

80

70

60

50

40

RPB_1750L (RW2-2)

17+48

④

⑤

⑫

BT

08/18

Ⓐ **Roadway Embankment:** Loose, Moist, Brown, Silty Fine SAND (A-2-4)

Coastal Plain:

Moist to Wet, Black and Tan, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

Loose to Medium Dense

4:1

Ground Surface

Ⓐ

17+69.92

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

05-NOV-2019 16:09
F:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\17-5797-GEO\RDWY\CADD\GEO\TECH\sec\17-5797-geo.xst\RPB.dgn
Walker-A 66026102

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
51

140

120

100

80

60

40

20

0

20

40

60

80

90

80

70

60

50

40

30

20

10

90

80

70

60

50

40

30

20

10

(A) **Roadway Embankment:** Loose, Moist, Brown, Silty Fine SAND (A-2-4)

RPB_1800L (RW2-3)

18+00

4:1

Ground Surface

Coastal Plain:

Loose, Moist to Wet, Black

(DUPLIN FORMATION)

Very Soft to Hard, Moist to Wet,

Dense, Wet, Gray, Silty

(4)

(6)

(0)

(3)

BT
FIAD

and Tan, Silty Fine to Coarse SAND (A-2-4)

Black, Fine Sandy Clayey SILT (A-5)

Fine to Coarse SAND (A-2-4)

18+20.86

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:09
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Walker-A 66026102

140

120

100

80

60

40

20

0

20

40

60

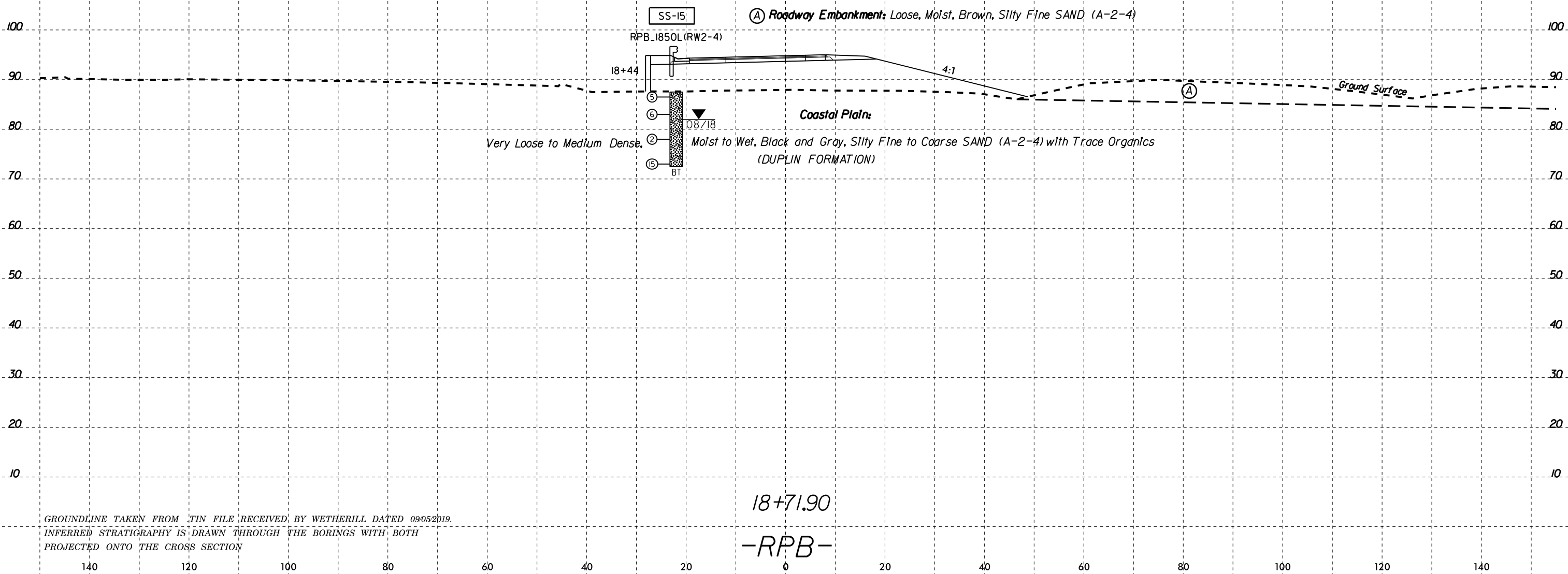
80

100

120

140

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	22' LT	18+44	8.5-10.0	A-2-4	NP	NP	67.2	19.1	4.2	9.5	99.9	67.2	14.5	63.2	-



05-NOV-2019 16:09
 F:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\18-5797-GEO\RDWY\CADD\GEO\TECH\sec\18-5797-geo_xsi_RPB.dgn
 T:\walker

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
53

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

70

60

50

40

30

20

10

100

90

80

70

60

50

40

30

20

10

RPB-1900L(RW2-5)

18+97

3

3

WOH

15

BT

08/18

Coastal Plain:

Very Loose to Medium Dense,

Moist to Wet, Black, Tan, and Gray, Fine to Coarse SAND (A-2-4)

(DUPLIN FORMATION)

(A) Roadway Embankment: Loose, Moist, Brown, Silty Fine SAND (A-2-4)

4:1

Ground Surface

(A)

19+23.05

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

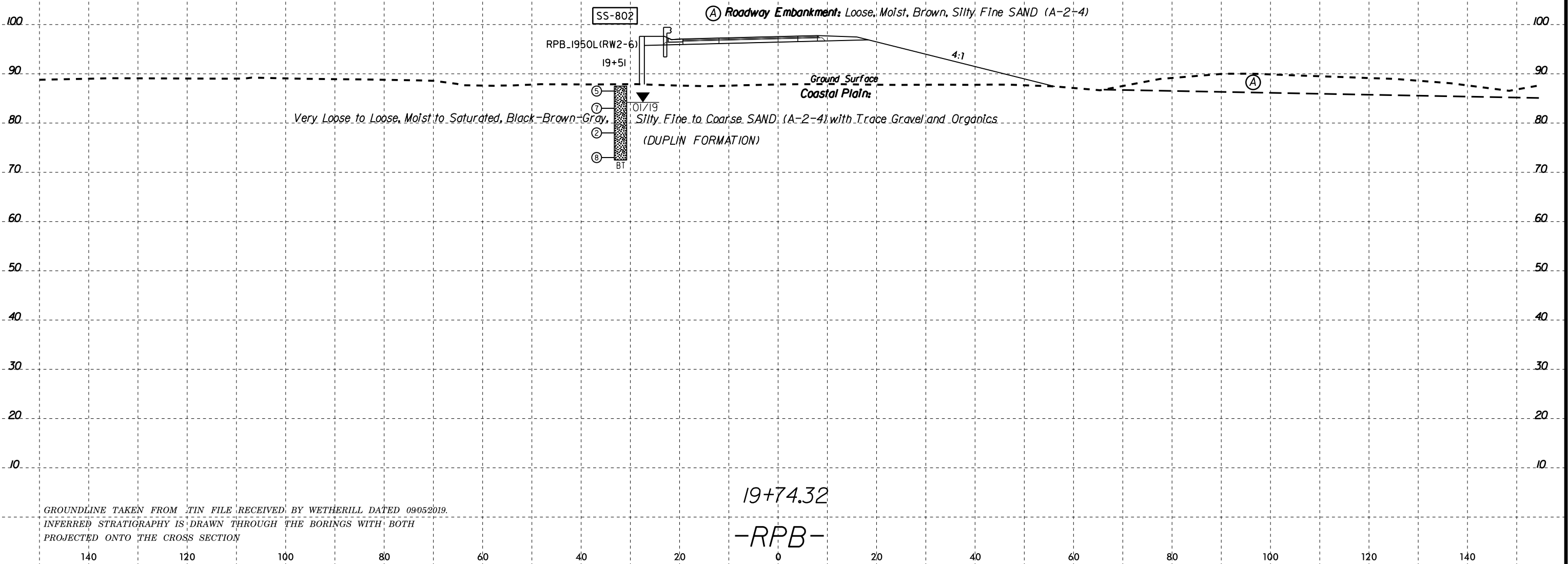
100

120

140

05-NOV-2019 16:09
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Walker-A 66026102

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-802	32' LT	19+51	8.5-10.0	A-2-4(0)	NP	NP	47.0	20.0	17.8	15.2	99.3	75.5	34.9	123.5	-



Very Loose to Loose, Moist to Saturated, Black-Brown-Gray,

(A) Roadway Embankment: Loose, Moist, Brown, Silty Fine SAND (A-2+4)

RPB-1950L(RW2-6)

19+51

- 5
- 7
- 2
- 8
- BT

Silty Fine to Coarse SAND (A-2-4) with Trace Gravel and Organics (DUPLIN FORMATION)

Ground Surface
Coastal Plains

4:1

19+74.32

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
55

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

70

60

50

40

30

20

10

100

90

80

70

60

50

40

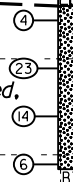
30

20

10

RPB_2000L(RW2-7)
20+01

Roadway Embankment



Loose, Moist, Brown, Silty Fine SAND (A-2-4)

Coastal Plain

Loose to Medium Dense, Wet to Saturated,

Tan-Brown and Black, Silty Fine to Coarse SAND (A-2-4)
(DUPLIN FORMATION)

Ground Surface

4:1

20+25.72

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:10:16 I:\0\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO\RDWY\CADD\GEO\TECH\sec\1R-5797-geo.xst.RPB.dgn
P:\Projects\66V-0246\660261102\Walker-A

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
56

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

70

60

50

40

30

20

100

90

80

70

60

50

40

30

20

4:1

4:1

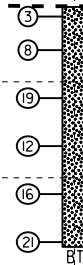
RPB_2300

Ground Surface

Coastal Plain

Very Loose to Medium Dense, Moist to Saturated,
(DUPLIN FORMATION)

08/18
Black, Tan, and Gray, Silty Fine to Coarse SAND (A-2-4)



23+00.00

-RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:10:16 I:\01\666\0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO\RDWY\CADD\GEO\TECH\ssc\1R-5797-geo.xsi_RPB.dgn
P:\Projects\666\0246\A\660261102

140

120

100

80

60

40

20

0

20

40

60

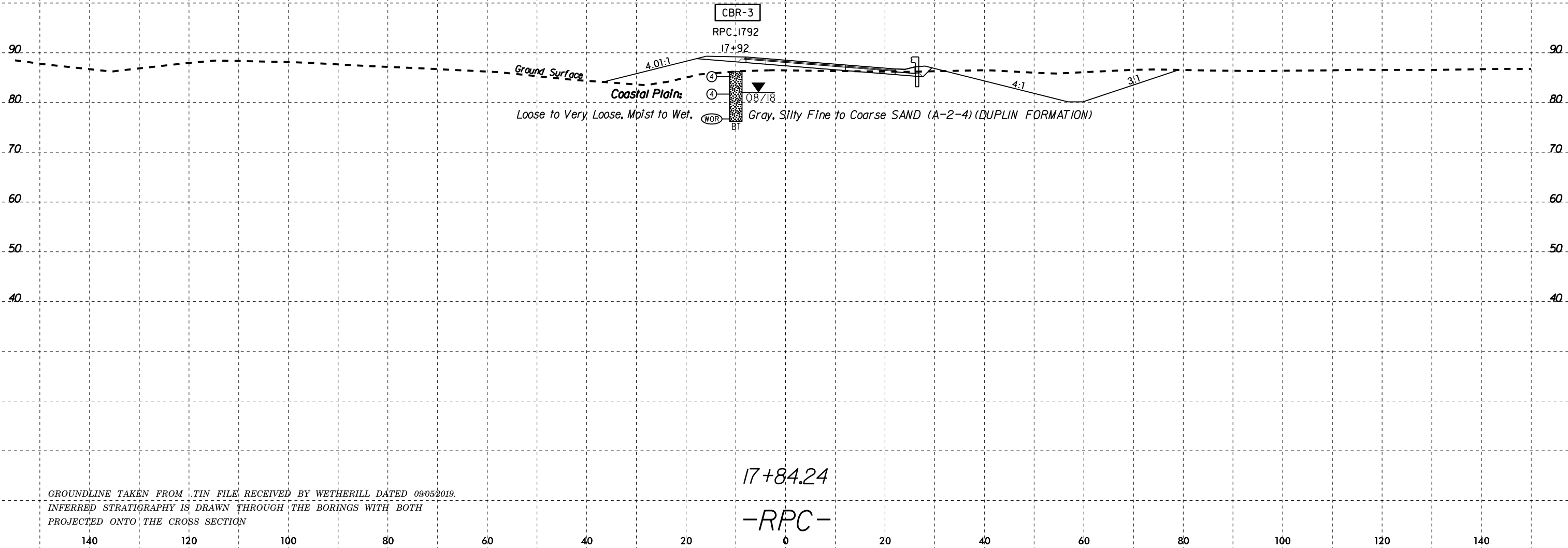
80

100

120

140

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		
CBR-3	10' LT	17+92	0.0-2.0	A-2-4(0)	NP	NP	73.7	14.2	3.0	9.1	100.0	62.0	12.8	11.0	-



17+84.24

-RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
58

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

70

60

100

90

80

70

60

Ⓐ Artificial Fill: Medium Dense, Moist, Brown, Clayey Fine to Coarse SAND (A-2-6) with Trace Gravel

4:1

Ground Surface

RPC 2091

20+91

(25)

(7)

(14)

B1

Coastal Plain: Loose to Medium Dense, Moist to Wet, Dark Brown to Dark Gray, Silty Fine to Coarse SAND (A-2-4) (DUPLIN FORMATION)

4:1

3:1

21+11.46

-RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

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P:\Projects\66V-0246 (WEI-R-5797) Walker-A\660261102

140

120

100

80

60

40

20

0

20

40

60

80

110

100

90

80

70

60

50

40

110

100

90

80

70

60

50

40

4:1

4:1

RPC_2383
23+83

Ground Surface

Coastal Plains

Loose to Medium Dense, Moist to Saturated, White-Gray-Brown,
(DUBLIN FORMATION)

Silty Fine SAND (A-2-4) and Fine to Coarse SAND (A-3) with Trace Organics

- 6
- 12
- 24
- 18
- 21
- 14
- BT

01/19

24+00.00

-RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

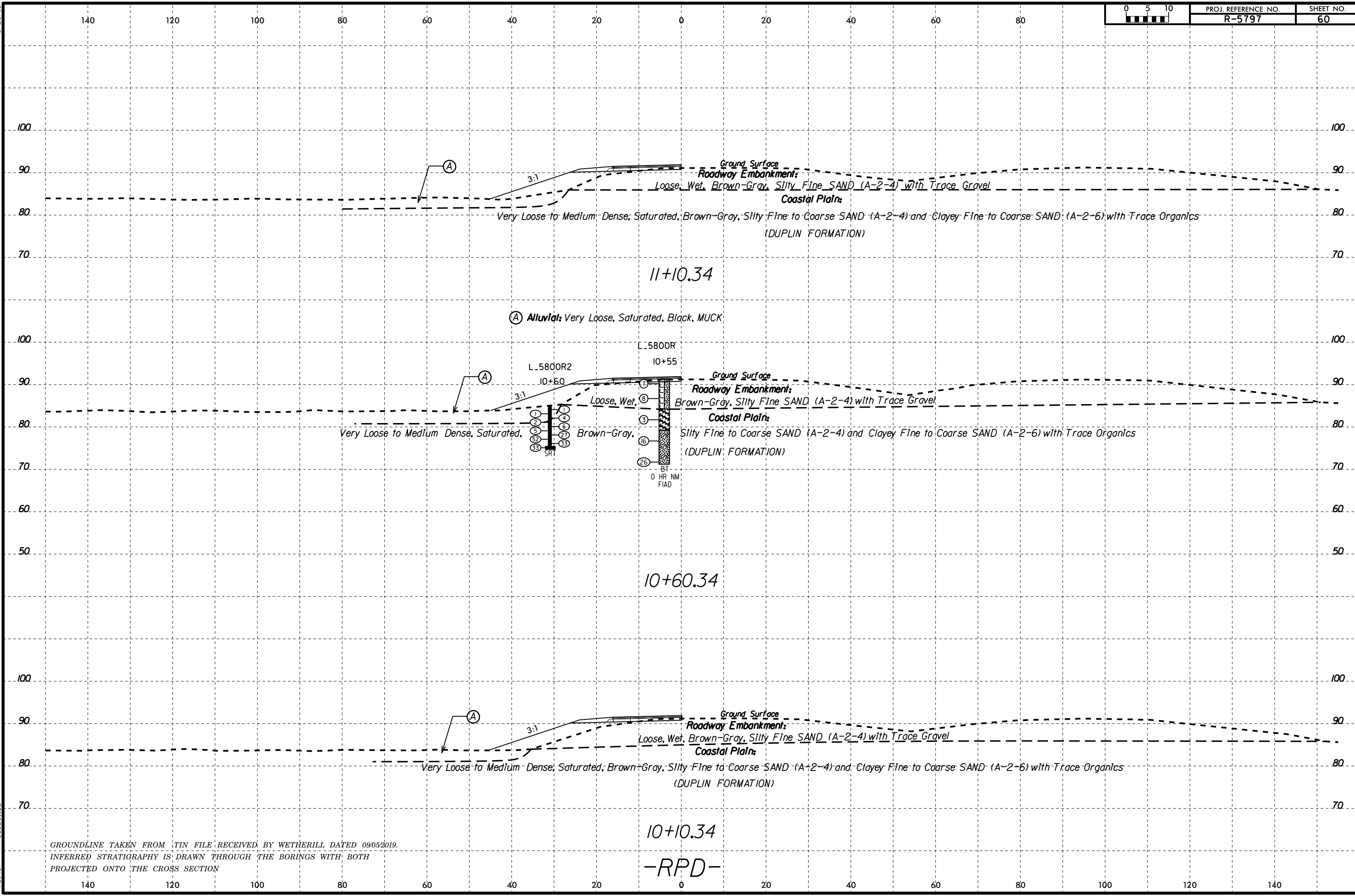
80

100

120

140

6/23/16

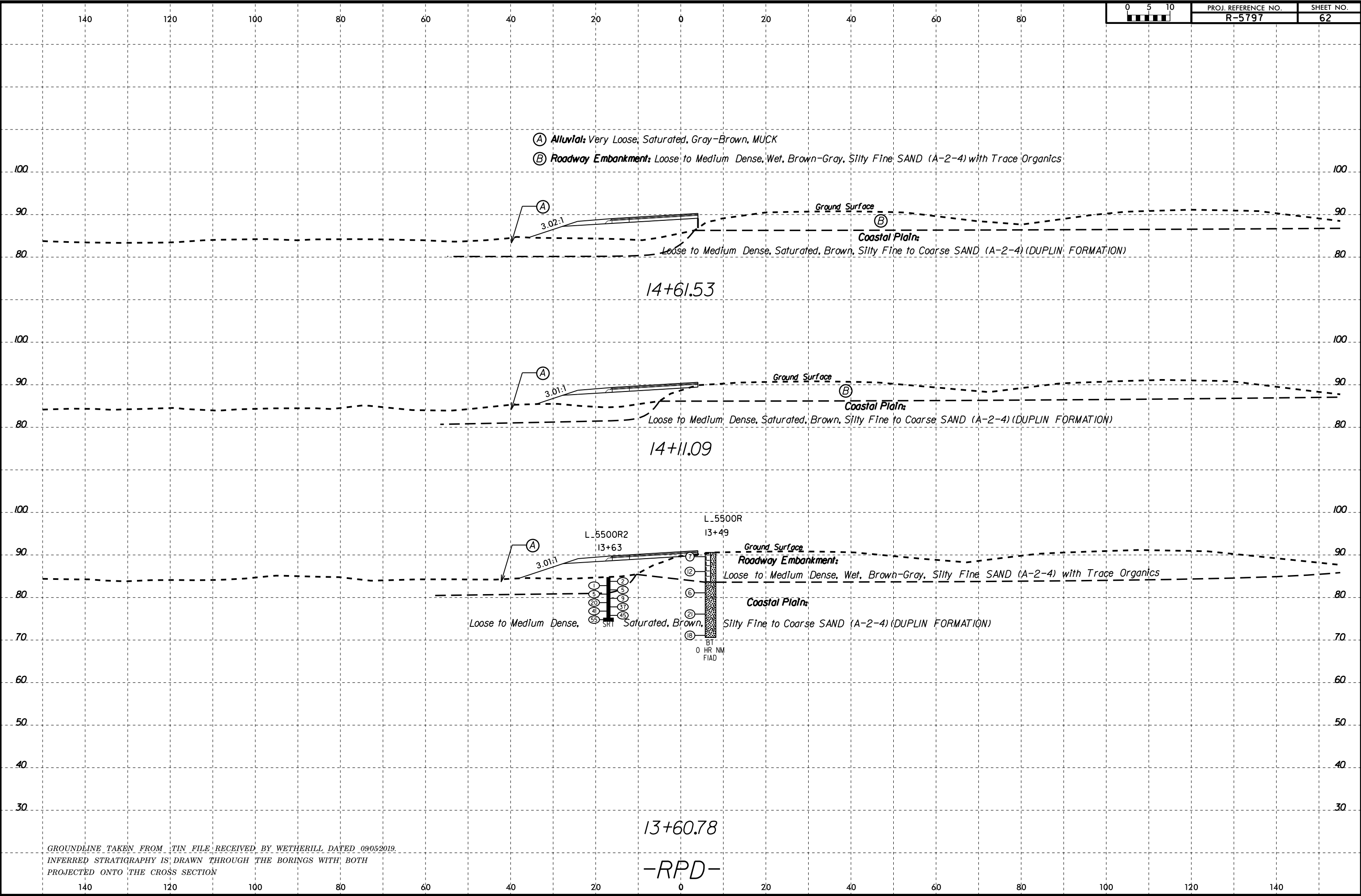


GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

-RPD-

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6/23/16
 06-NOV-2019 14:32
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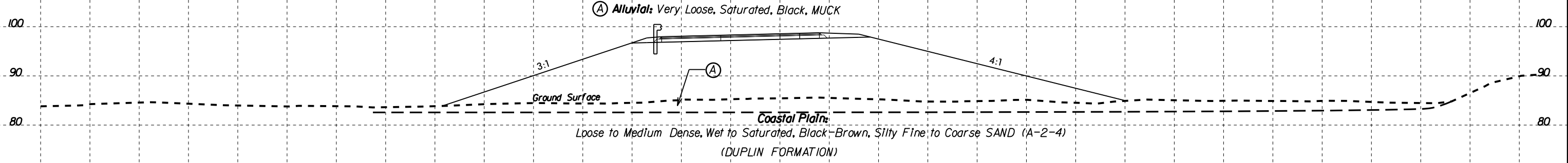


-RPD-

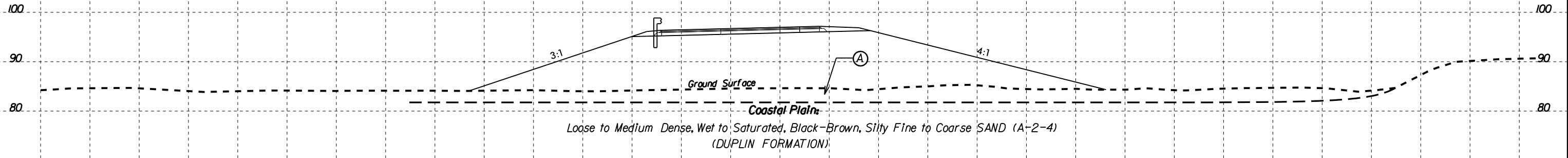
6/23/16



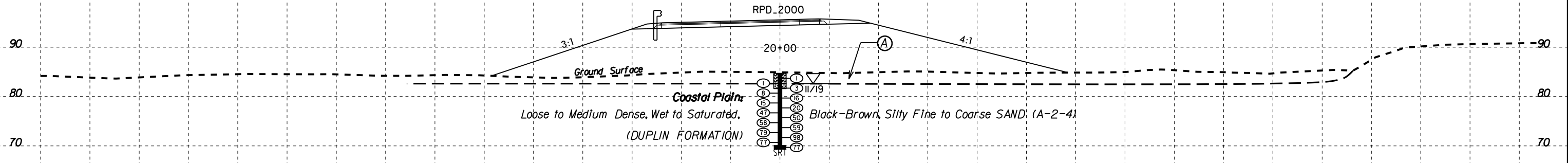
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21+06.58

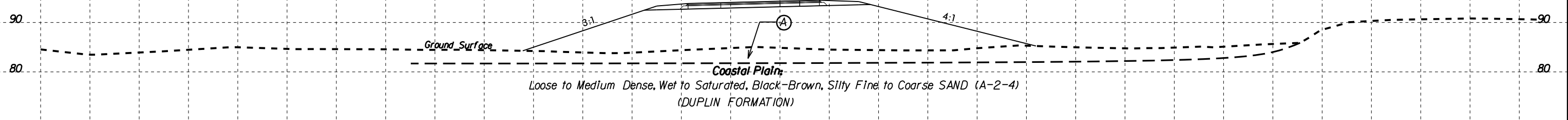


20+56.78



20+06.98

Note: Hand auger terminated @ 3.0' FIAD.



19+57.18

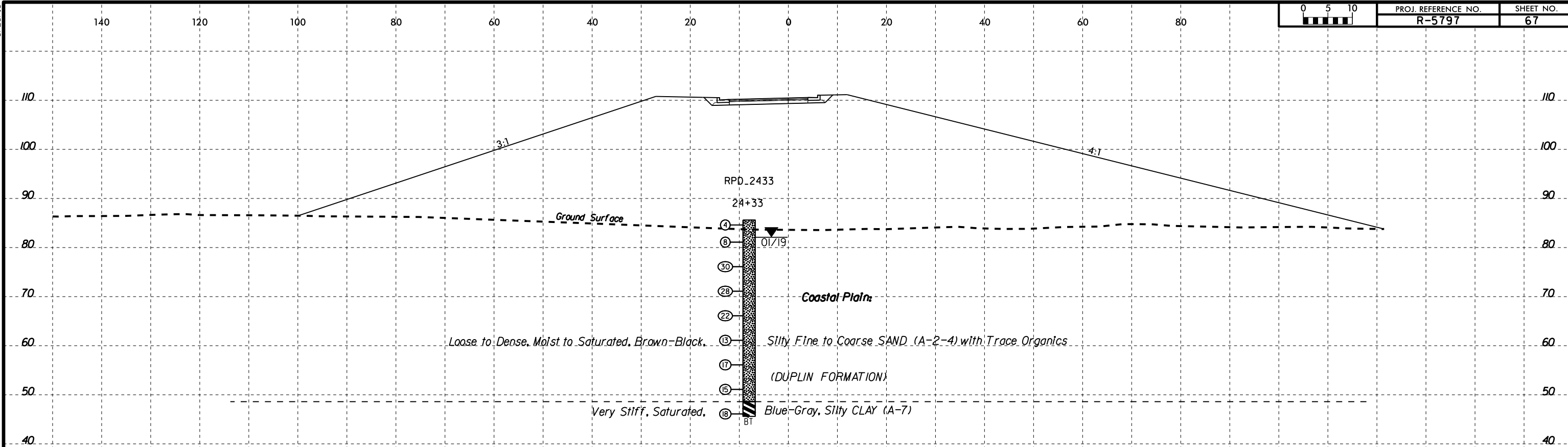
-RPD-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

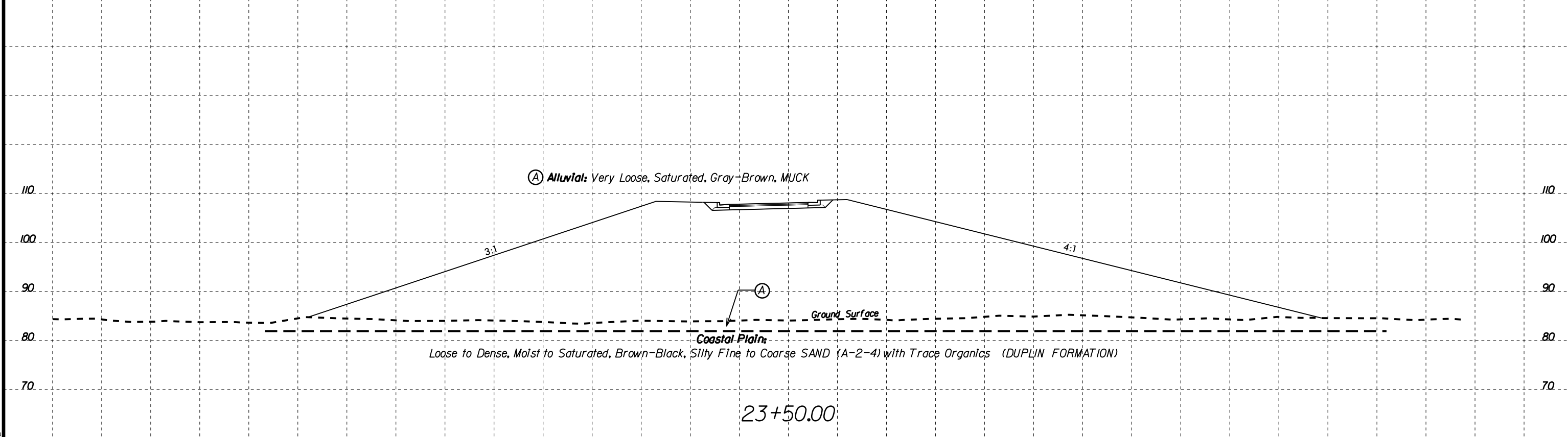
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6/23/16



24+21.62



23+50.00

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

-RPD-

05-NOV-2019 16:11
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 Walker-A 660261102

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
68

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

70

60

50

100

90

80

70

60

50

4:1

DRI_I050R
10+49

Ground Surface

Coastal Plains

Loose, Moist to Wet, Dark, Brown and Gray.

Silty Fine to Coarse SAND (A-2-4) (DUBLIN FORMATION)

BT 08/18

10+50.00

-DRI-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:11 P:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO\RDWY\CADD\GEO\TECH\sec\1R-5797-geo.xsi_DRI.dgn
Walker-A 660261102

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
69

140

120

100

80

60

40

20

0

20

40

60

80

100

90

80

70

60

50

100

90

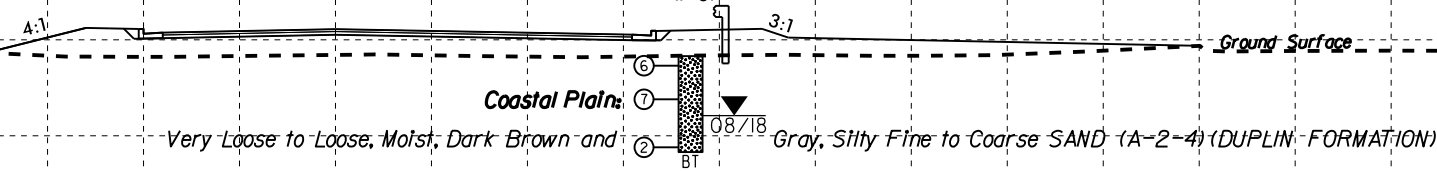
80

70

60

50

05-NOV-2019 16:11 P:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797-GEO\RDWY\CADD\GEO\TECH\sec\1R-5797-geo_xsi_DRI.dgn Walker-A 660261102



11+00.00

-DRI-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-5797

SHEET NO.
70

140

120

100

80

60

40

20

0

20

40

60

80

90

80

70

60

50

90

80

70

60

50

4:1

DRI.1175R

11+57

3:1

Ground Surface

Coastal Plains

Loose to Medium Dense, Moist to Saturated, Black-Tan-Gray,
(DUPLIN FORMATION)

01/19

Silty Fine to Coarse SAND (A-2-4) with Trace Organics from 0.0'-1.5'

- ⑤
- ⑥
- ④
- ⑭
- ①

BT

11+75.00

-DRI-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:11
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Walker-A 660261102

140

120

100

80

60

40

20

0

20

40

60

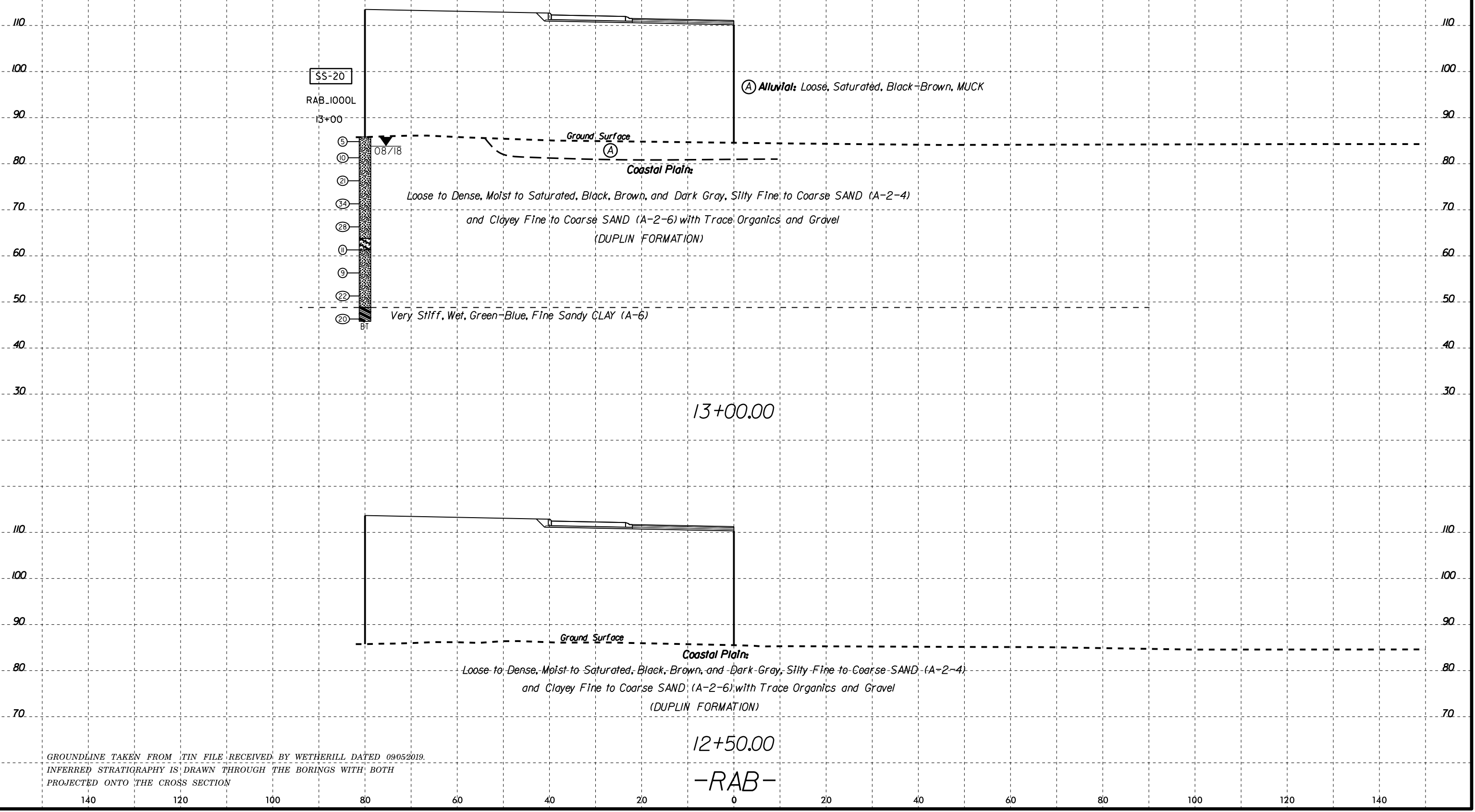
80

100

120

140

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	200		
SS-20	80' LT	13+00	0.0-1.0	-	-	-	-	-	-	-	-	-	8.1	1.8

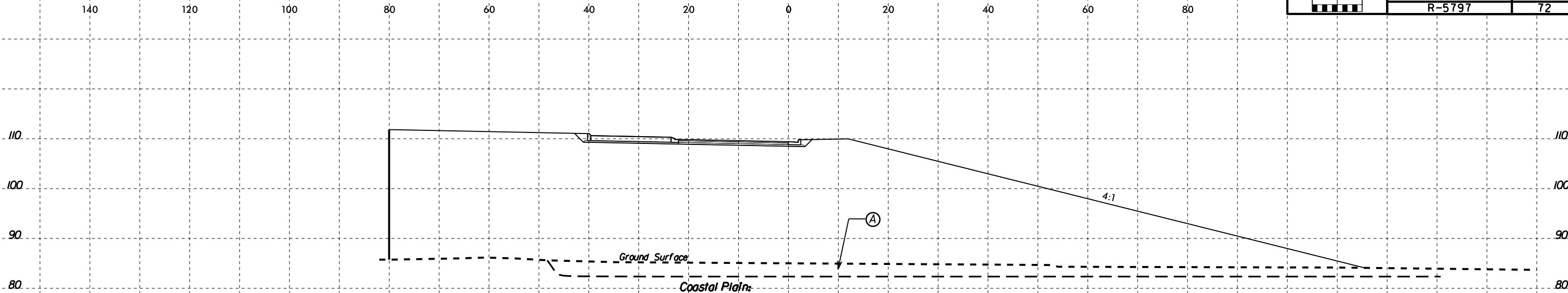


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 Walker-A 660261102

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

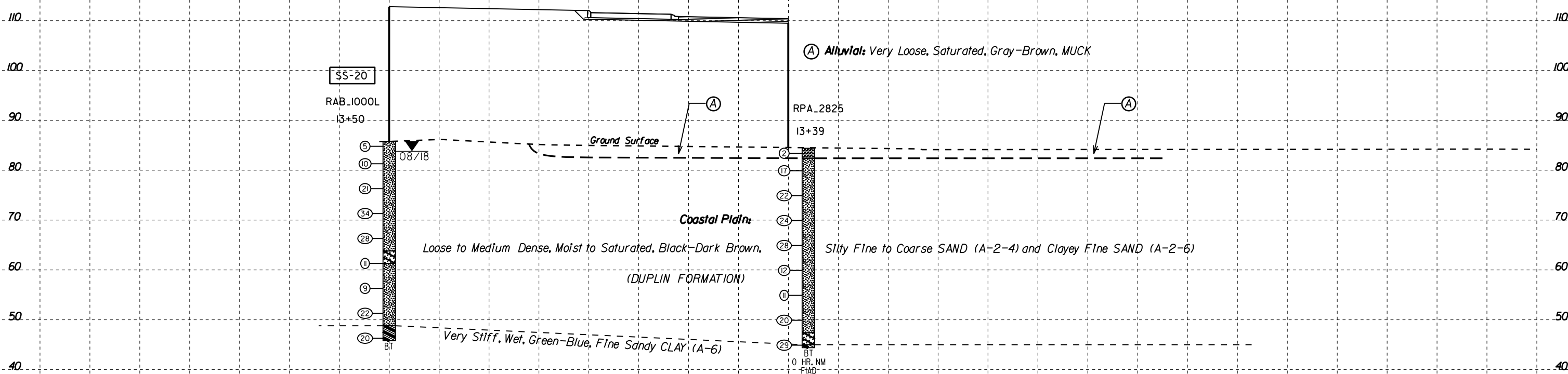
-RAB-

6/23/16



14+00.00

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-20	80' LT	13+50	0.0-1.0	-	-	-	-	-	-	-	-	-	-	8.1	1.8



13+50.00

-RAB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

05-NOV-2019 16:11
 E:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797.GEO\RDWY\CADD\GEO\TECH\ssc\1R-5797_geo_xsi_RAB.dgn
 Walker-A 660261102

6/23/16

140

120

100

80

60

40

20

0

20

40

60

80



PROJ. REFERENCE NO.
R-5797

SHEET NO.
73

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-825	98' RT	14+52	0.1- 1.5	A-2-4	-	-	-	-	-	-	-	-	6.4	21.7	2.2
SS-827	98' RT	14+52	23.5- 25.0	A-4 (2)	29	6	9.1	36.1	29.9	24.9	99.9	95.7	67.6	31.9	-

120

110

100

90

80

70

60

120

110

100

90

80

70

60

SS-825
SS-827

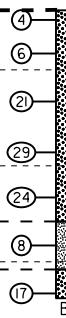
RAB 1452R
14+52

Ground Surface

Coastal Plain

Loose to Medium Dense, Wet to Saturated,
with Trace Organics

Medium Stiff to Stiff, Saturated, Fine Sandy,
Medium Dense, Saturated, Brown-Gray



01/19

Black-Brown-Gray, Silty Fine SAND (A-2-4)
(DUPLIN FORMATION)

SILT (A-4) with Trace Organics

Silty Fine to Coarse SAND (A-2-4)

14+50.00

-RAB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY WETHERILL DATED 09/05/2019.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

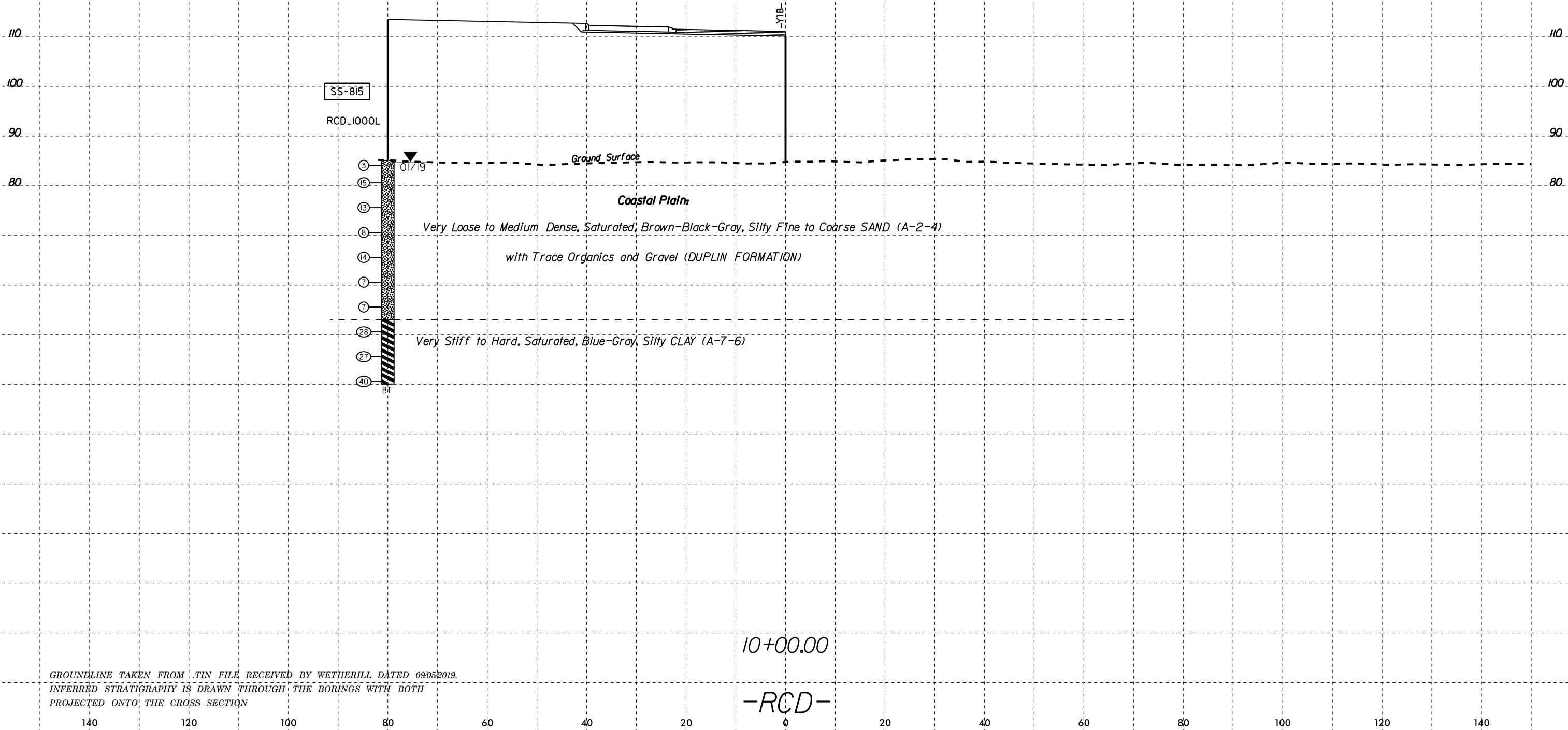
100

120

140

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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-815	80' LT	10+00	33.5-35.0	A-7-6 (16)	41	23	12.7	18.3	45.5	23.5	99.6	92.4	75.5	21.4	-



05-NOV-2019 16:11:16 \\F:\Projects\66V\66V-0246 (WEI-R-5797) Columbus Co Task 2\1R-5797.GEO\RDWY\CADD.GEOTECH\ssc\1R-5797_geo_xsi.RCD.dgn Walker-A 660261102

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY WETHERILL DATED 09052019.
INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

10+00.00

-RCD-