

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

STATE	STATE PROJECT REFERENCE NO.
N.C.	R-2233BB

SUBSURFACE INVESTIGATION

SECTION B

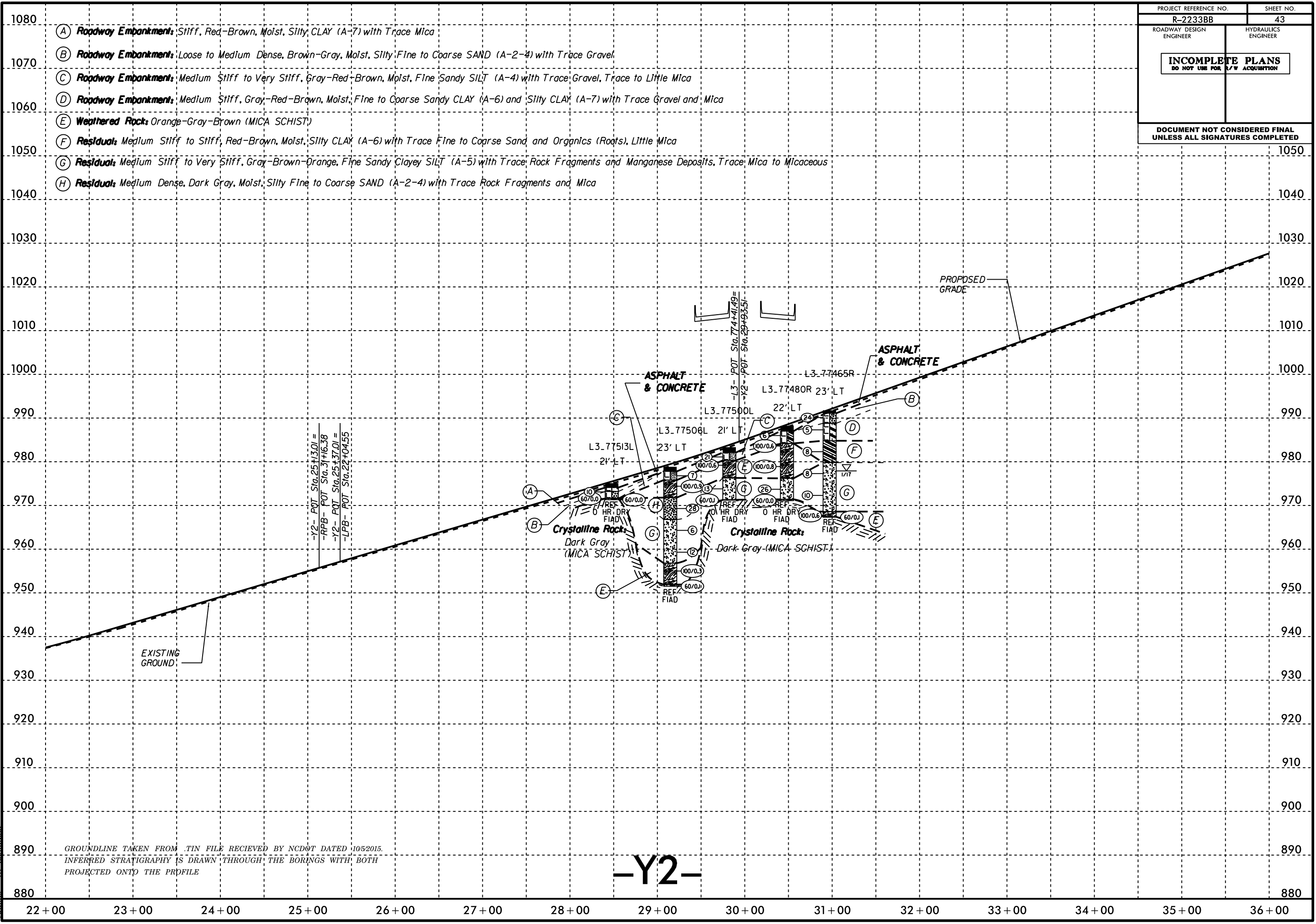
REFERENCE: R-2233BB

PROJECT: 34400

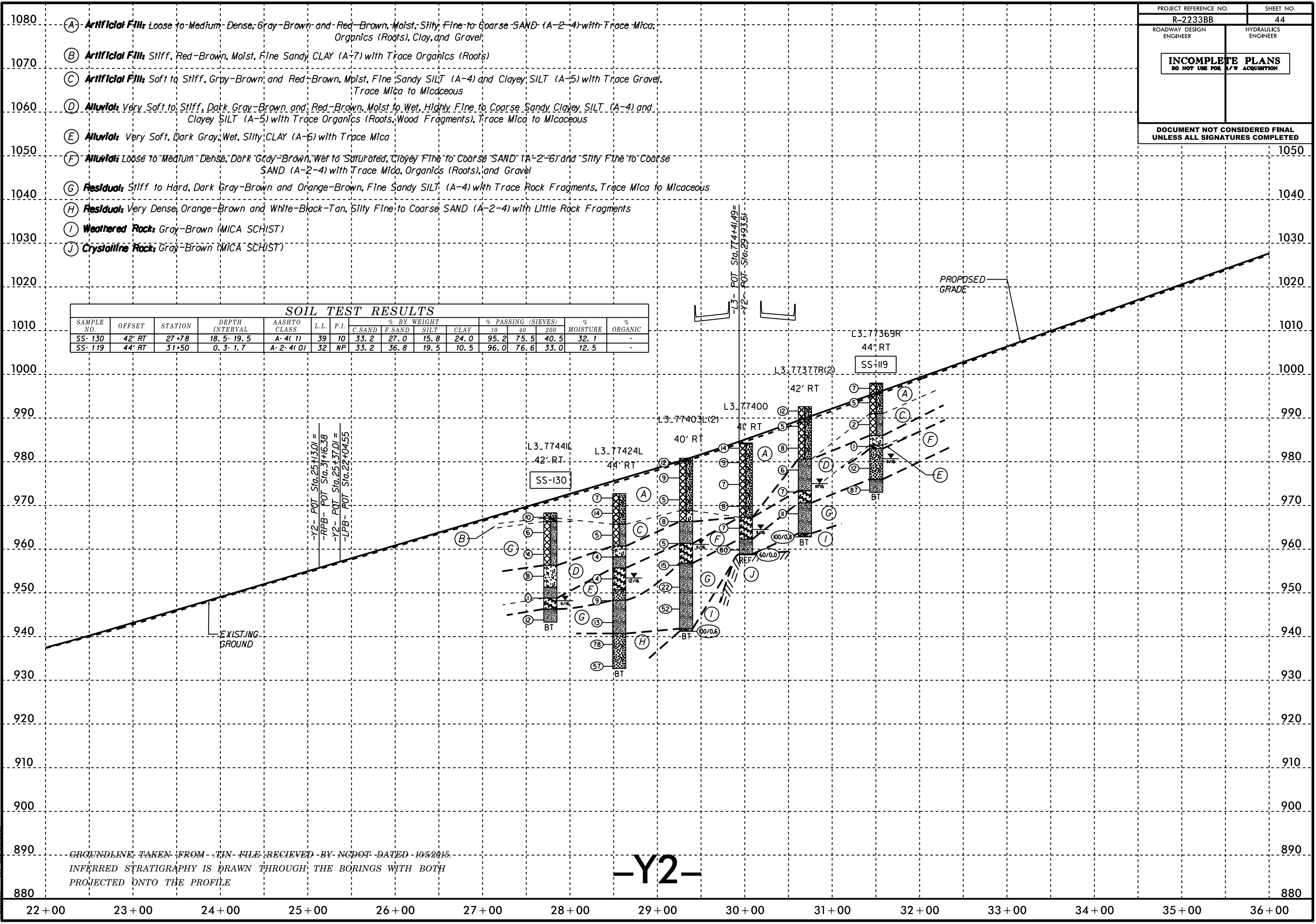
^{DS} WPA	4/6/2017
INITIALS	DATE

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 43
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - 61 6581058



GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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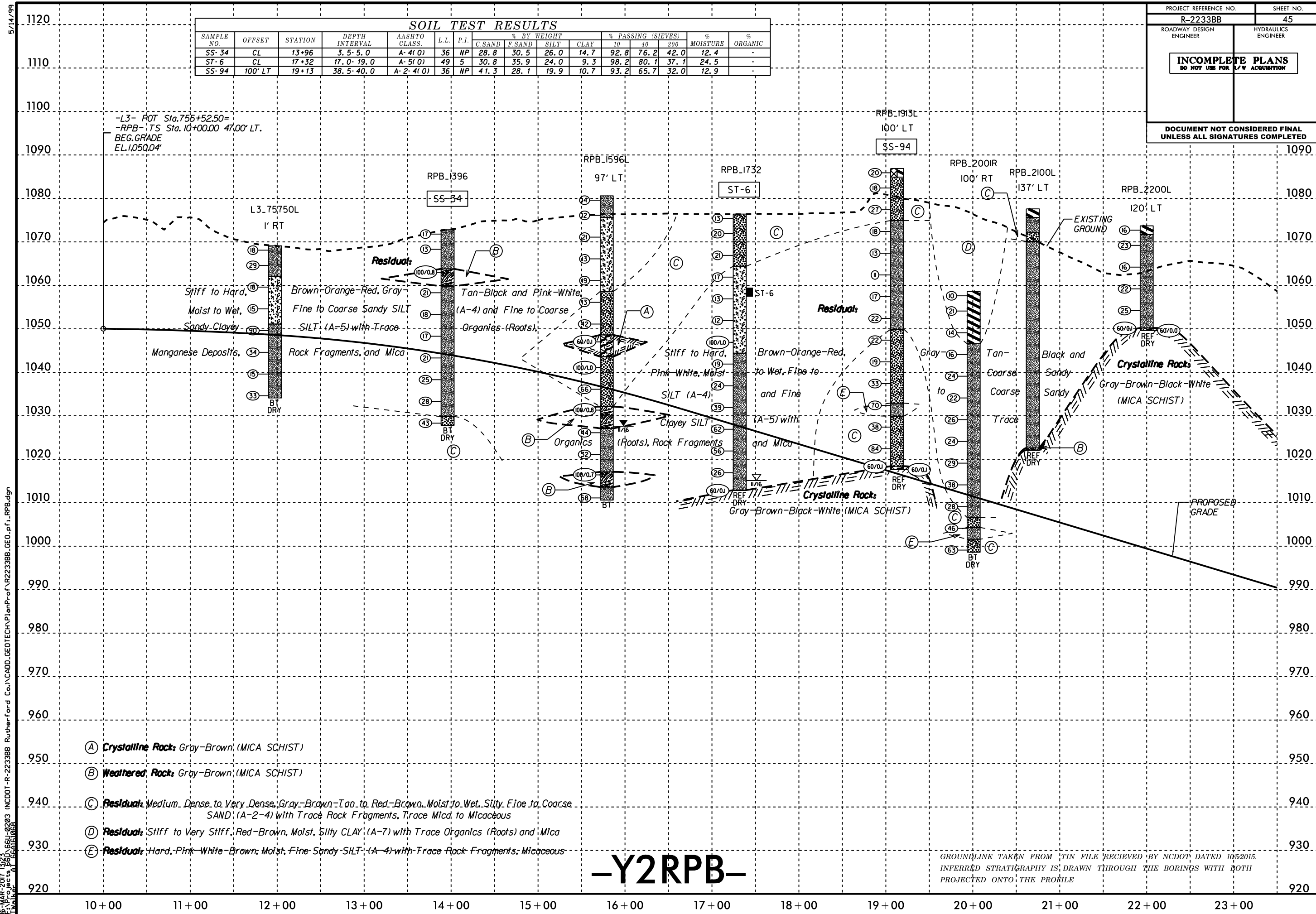
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-130	42' RT	27+78	18.5-19.5	A-4(1)	39	10	33.2	27.0	15.8	24.0	95.2	75.5	40.5	32.1	-
SS-119	44' RT	31+50	0.3-1.7	A-2-4(0)	32	NP	33.2	36.8	19.5	10.5	96.0	76.6	33.0	12.5	-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015
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 Walker - 66166U

SOIL TEST RESULTS															
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-34	CL	13+96	3.5-5.0	A-4(O)	36	NP	28.8	30.5	26.0	14.7	92.8	76.2	42.0	12.4	-
ST-6	CL	17+32	17.0-19.0	A-5(O)	49	5	30.8	35.9	24.0	9.3	98.2	80.1	37.1	24.5	-
SS-94	100' LT	19+13	38.5-40.0	A-2-4(O)	36	NP	41.3	28.1	19.9	10.7	93.2	65.7	32.0	12.9	-

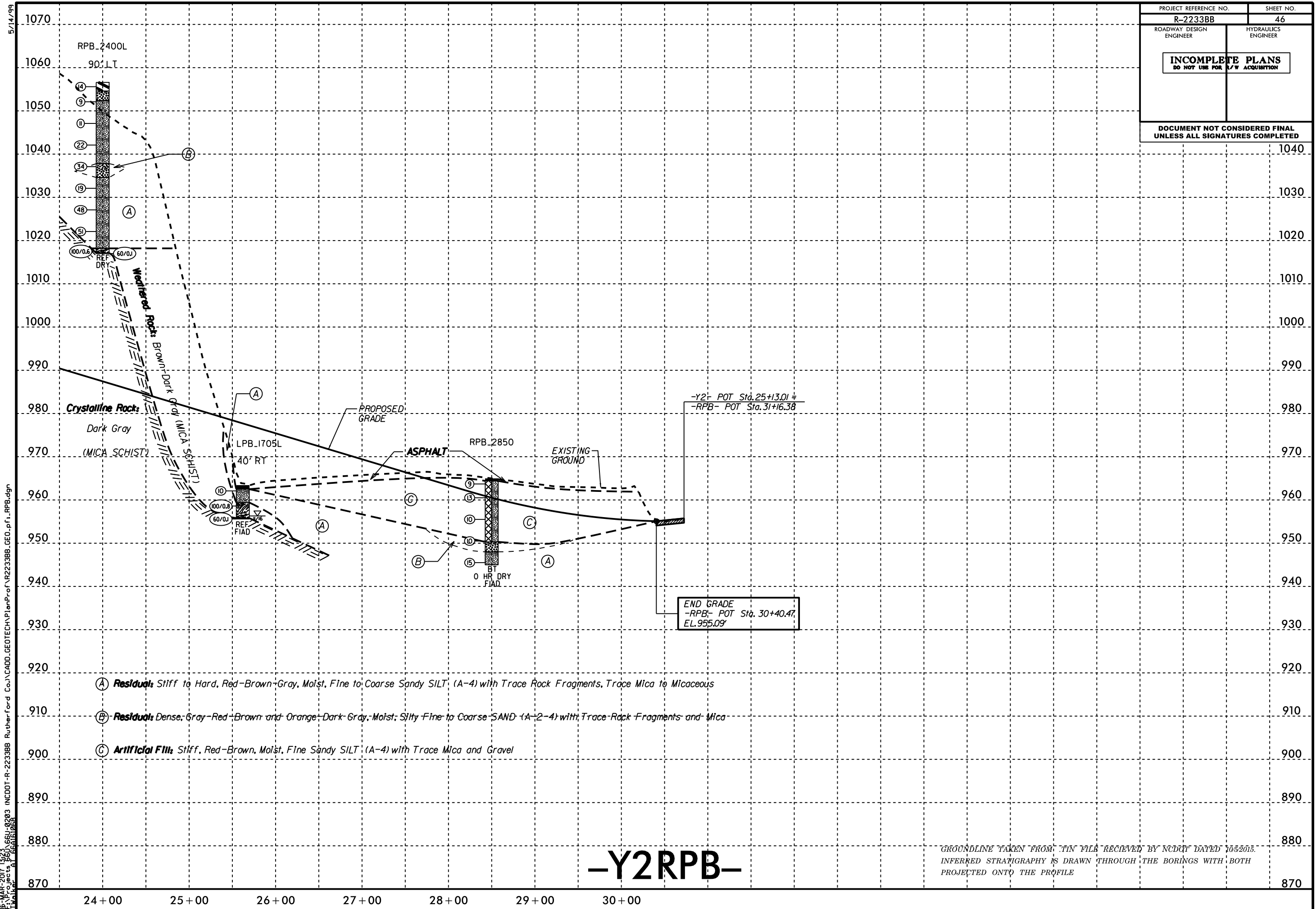


-Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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 Walker - 6/16/16

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 46
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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 Walker - 66166U-0203

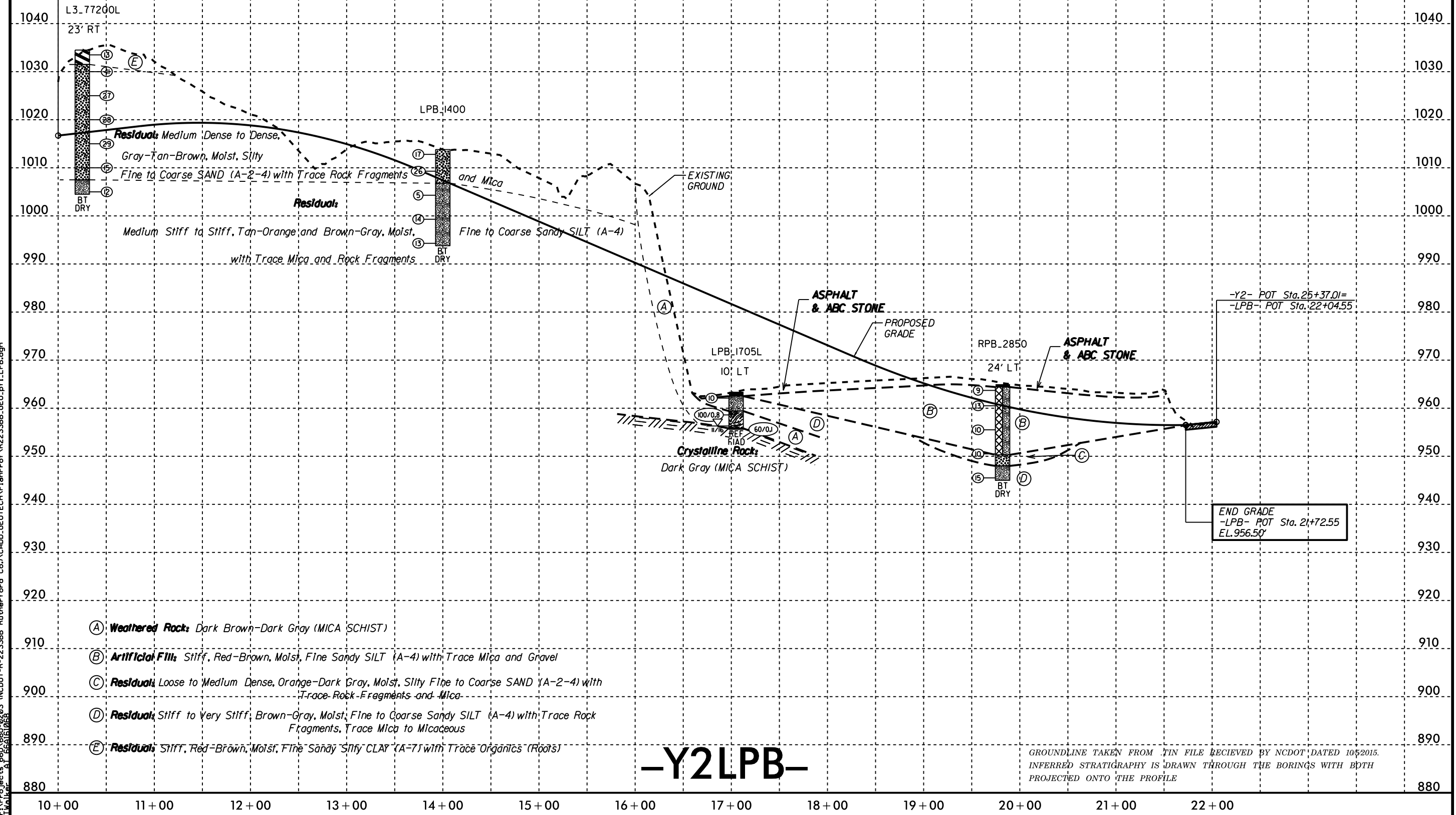
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PROJECT REFERENCE NO. R-2233BB	SHEET NO. 47
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS <small>DO NOT USE FOR R/W ACQUISITION</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

L3- POC Sta. 772+25.00=
-LPB- ICS Sta. 10+00.00 47'00' LT.
BEGIN GRADE
EL. 1016.71'

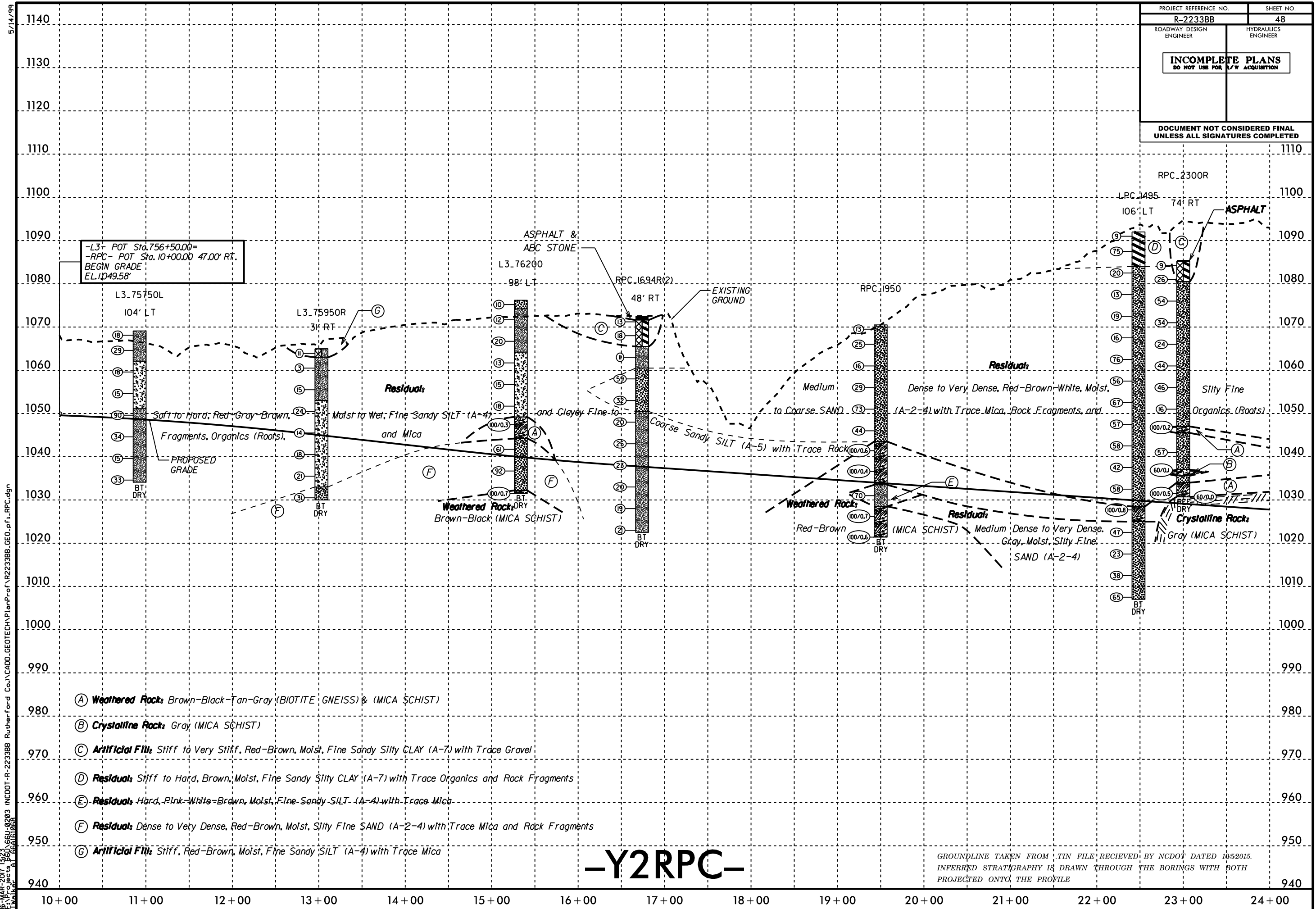


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Walker AT 660660

- (A) **Weathered Rock:** Dark Brown-Dark Gray (MICA SCHIST)
- (B) **Artificial Fill:** Stiff, Red-Brown, Moist, Fine Sandy SILT (A-4) with Trace Mica and Gravel
- (C) **Residual:** Loose to Medium Dense, Orange-Dark Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Rock Fragments and Mica
- (D) **Residual:** Stiff to Very Stiff, Brown-Gray, Moist, Fine to Coarse Sandy SILT (A-4) with Trace Rock Fragments, Trace Mica to Micaceous
- (E) **Residual:** Stiff, Red-Brown, Moist, Fine Sandy Silty CLAY (A-7) with Trace Organics (Roots)

-Y2LPB-

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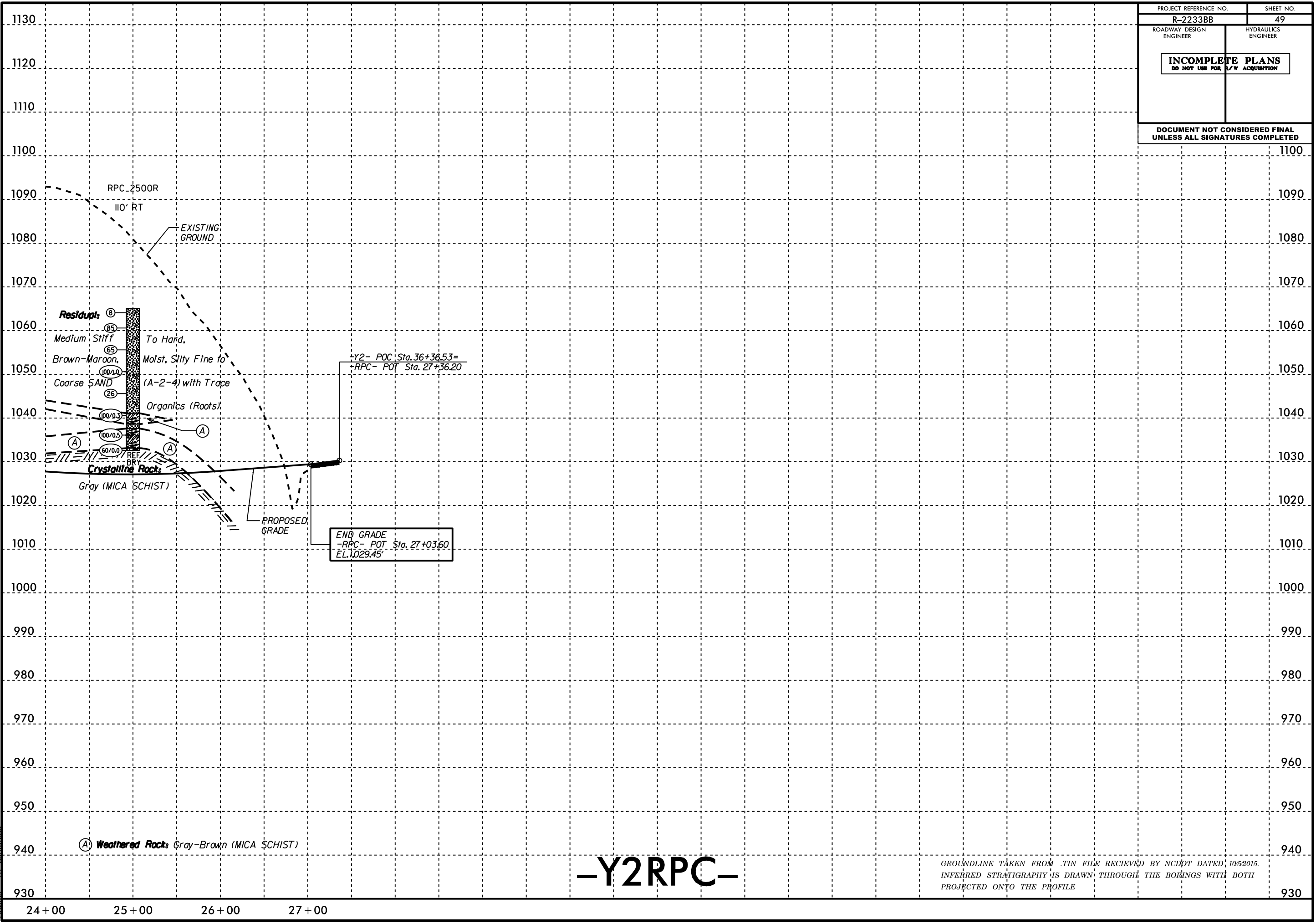
-Y2RPC-

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 Walker - B1 6/18/15

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	49
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - AT 6581068



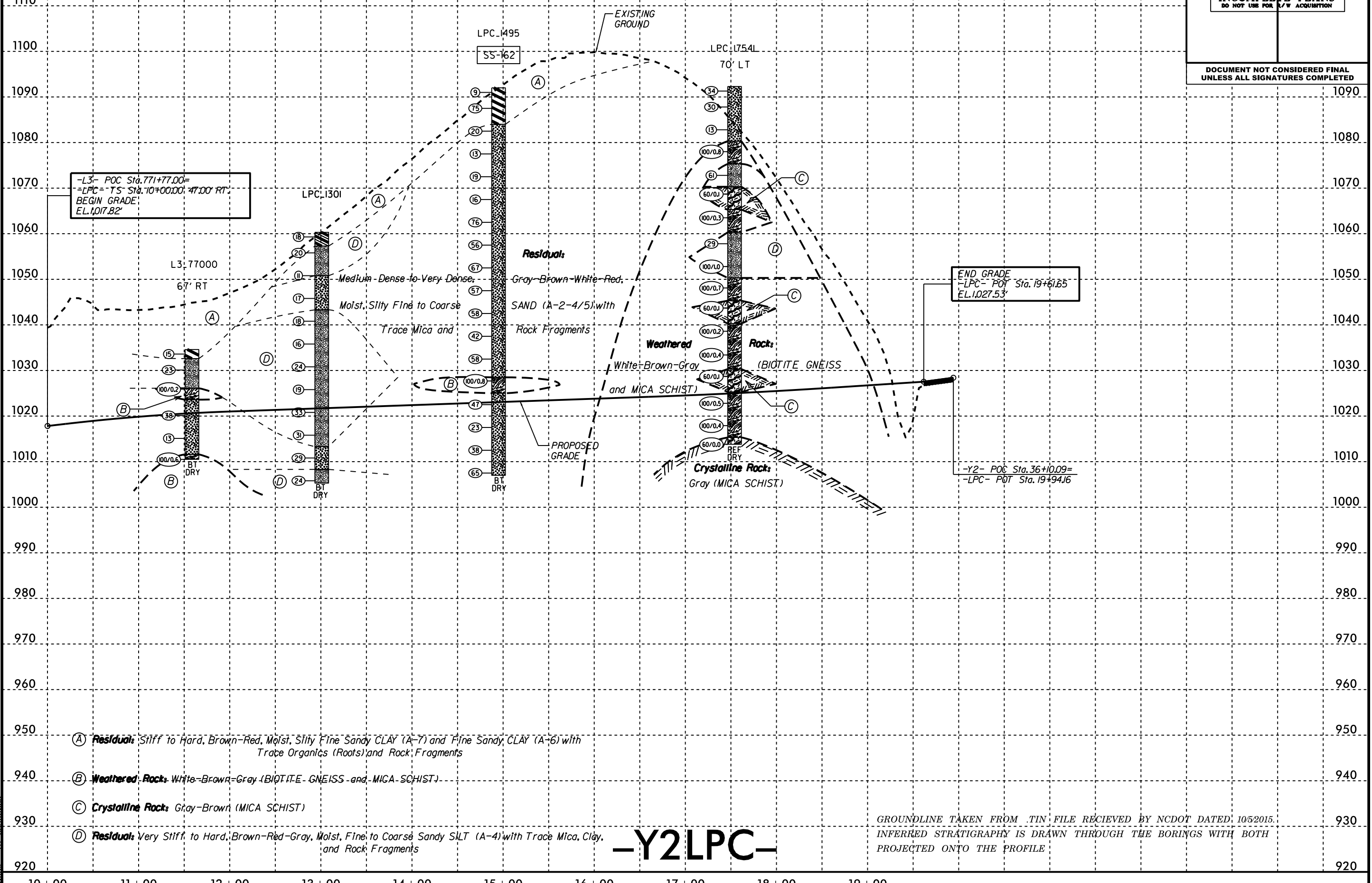
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 Walker - AT 661066

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 50
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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-162	CL	14+95	13.5-15.0	A-2-5(0)	42	NP	33.5	36.0	20.7	9.8	94.0	73.9	32.9	15.9	-



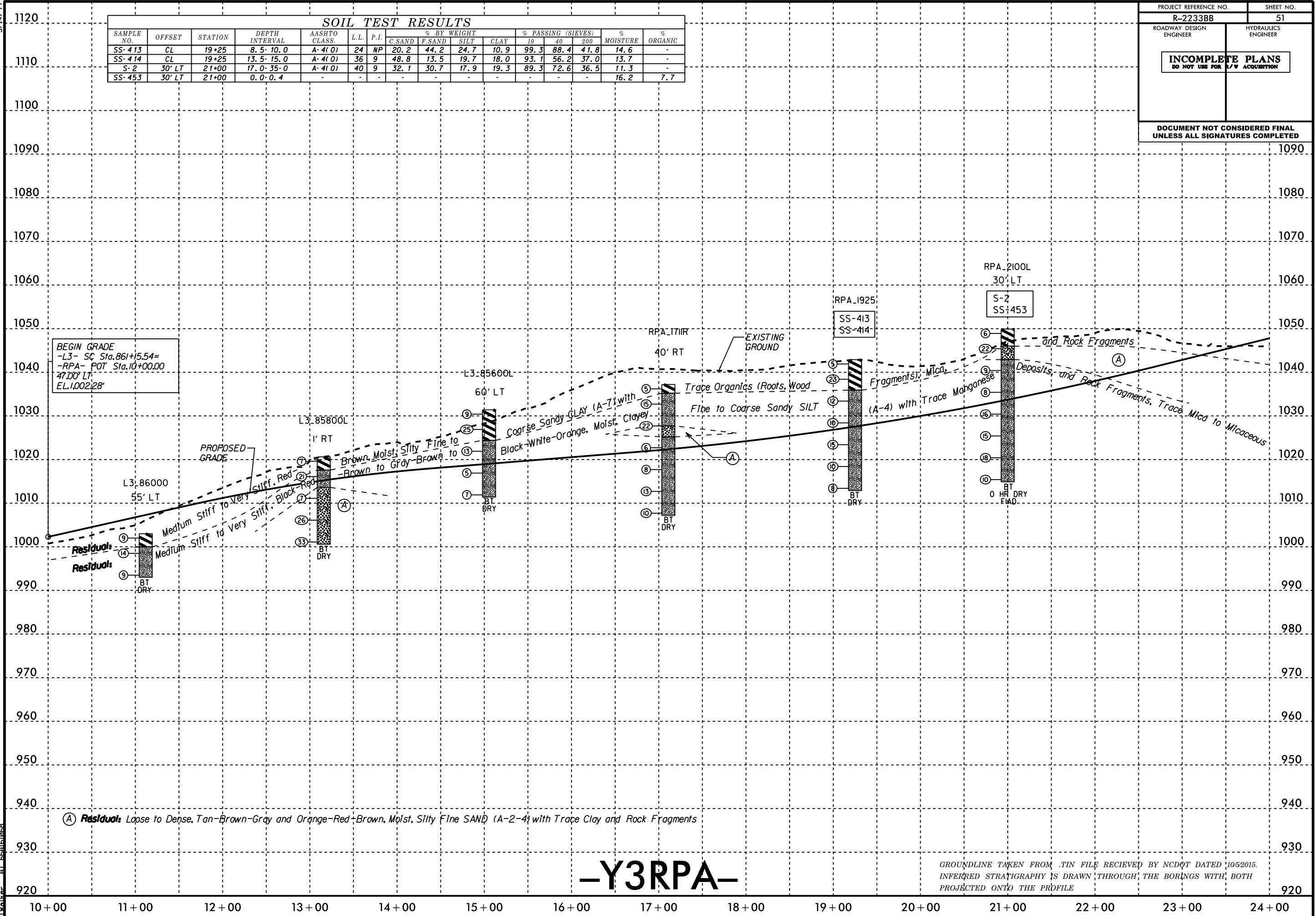
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PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	51
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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-413	CL	19+25	8.5-10.0	A-4(0)	24	NP	20.2	44.2	24.7	10.9	99.3	88.4	41.8	14.6	-
SS-414	CL	19+25	13.5-15.0	A-4(0)	36	9	48.8	13.5	19.7	18.0	93.1	56.2	37.0	13.7	-
S-2	30' LT	21+00	17.0-35.0	A-4(0)	40	9	32.1	30.7	17.9	19.3	89.3	72.6	36.5	11.3	-
SS-453	30' LT	21+00	0.0-0.4	-	-	-	-	-	-	-	-	-	16.2	7.7	

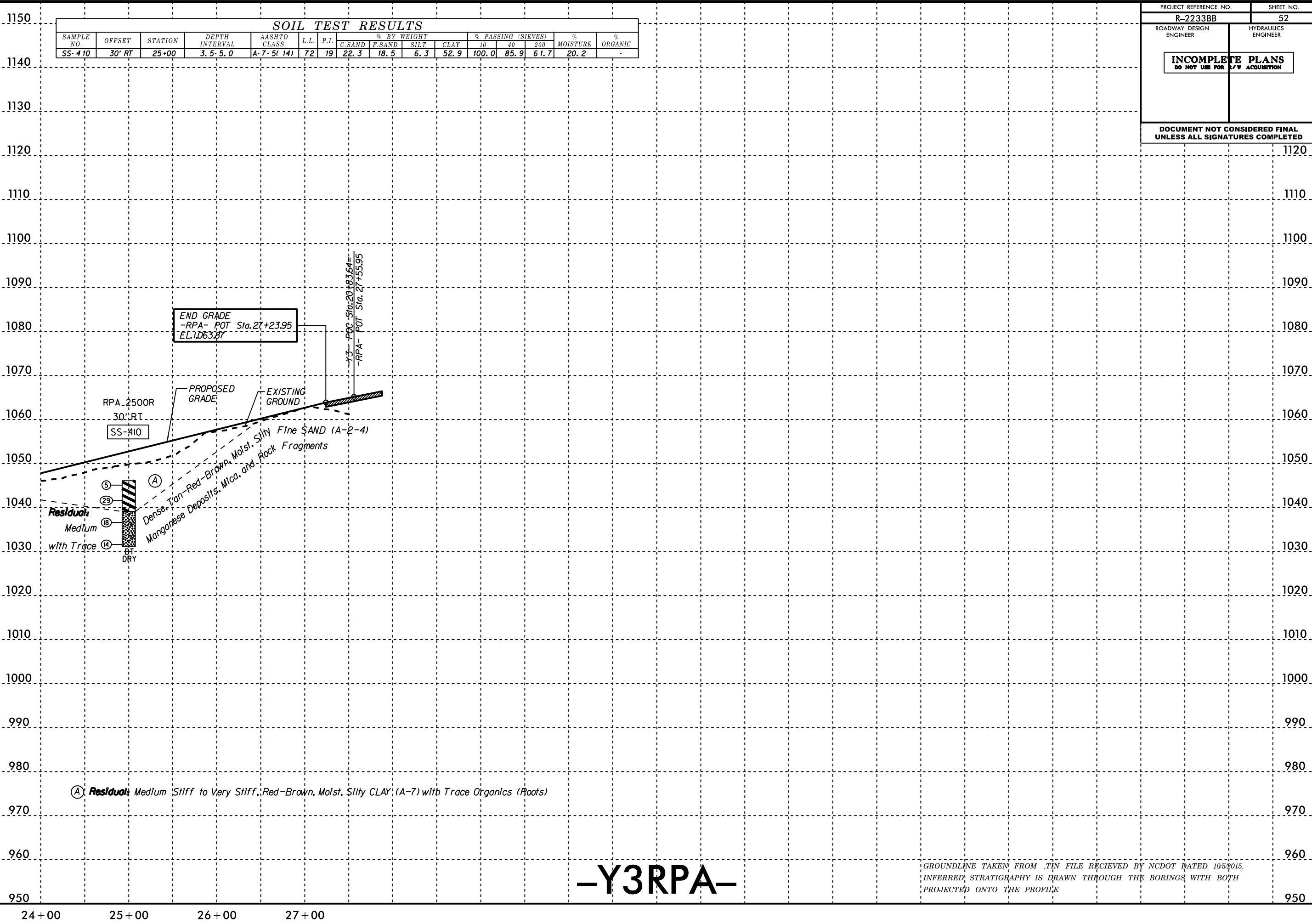
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

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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-410	30' RT	25+00	3.5-5.0	A-7-5(14)	72	19	22.3	18.5	6.3	52.9	100.0	85.9	61.7	20.2	-

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

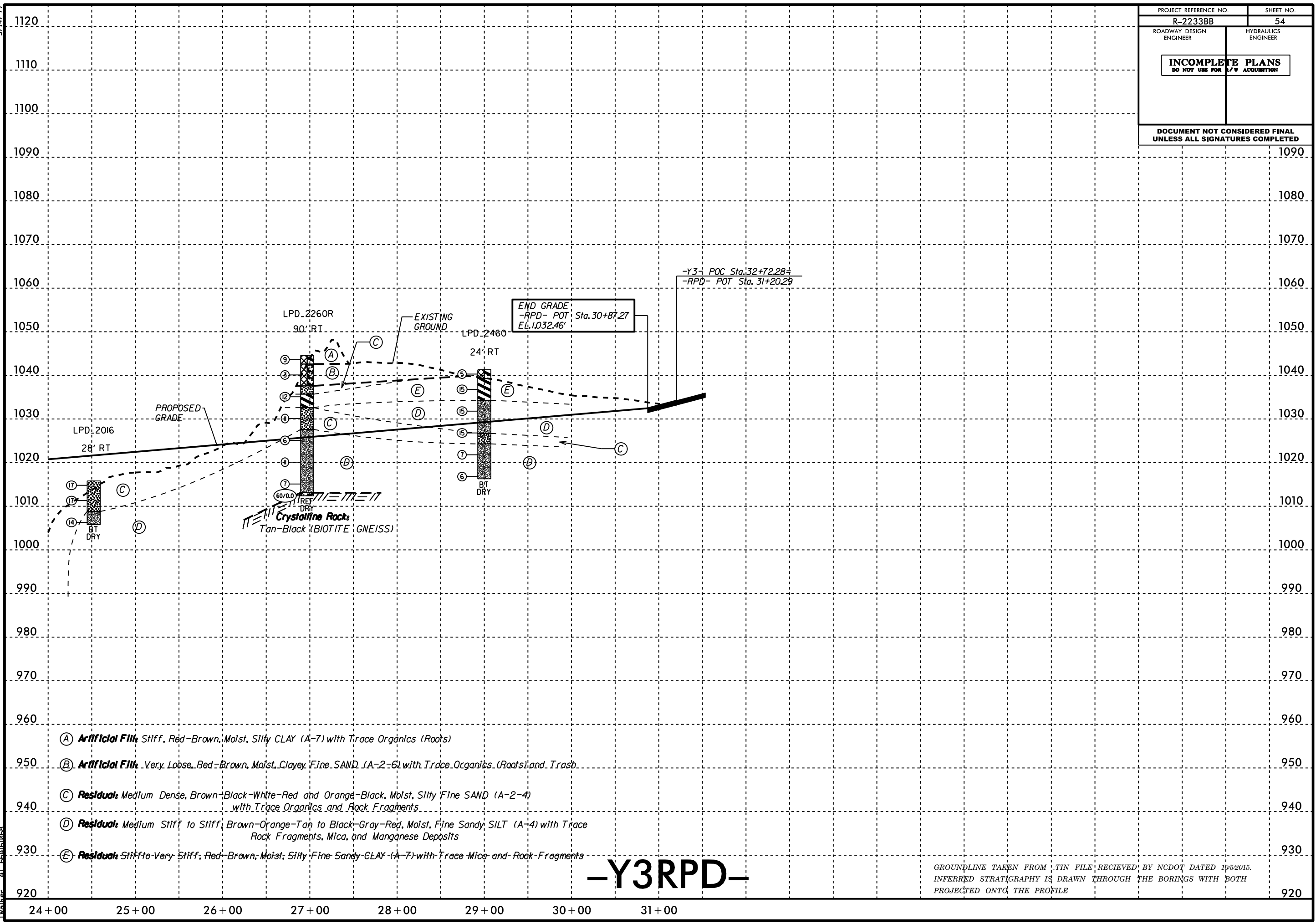
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-Y3RPA-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

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DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



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940
930
920

END GRADE
-RPD- POT
EL. 1032.46
Sta. 30+87.27

-Y3- POC Sta. 32+72.28+
-RPD- POT Sta. 31+20.29

LPD-2260R
90' RT

EXISTING GROUND

LPD-2460
24' RT

LPD-2016
28' RT

PROPOSED GRADE

Crystalline Rocks
Tan-Black (BIOTITE GNEISS)

- (A) **Artificial Fill:** Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots)
- (B) **Artificial Fill:** Very Loose, Red-Brown, Moist, Clayey, Fine SAND (A-2-6) with Trace Organics (Roots) and Trash
- (C) **Residuals:** Medium Dense, Brown-Black-White-Red and Orange-Black, Moist, Silty Fine SAND (A-2-4) with Trace Organics and Rock Fragments
- (D) **Residuals:** Medium Stiff to Stiff, Brown-Orange-Tan to Black-Gray-Red, Moist, Fine Sandy, SILT (A-4) with Trace Rock Fragments, Mica, and Manganese Deposits
- (E) **Residuals:** Stiff to Very Stiff, Red-Brown, Moist, Silty Fine Sandy-CLAY (A-7) with Trace Mica and Rock Fragments

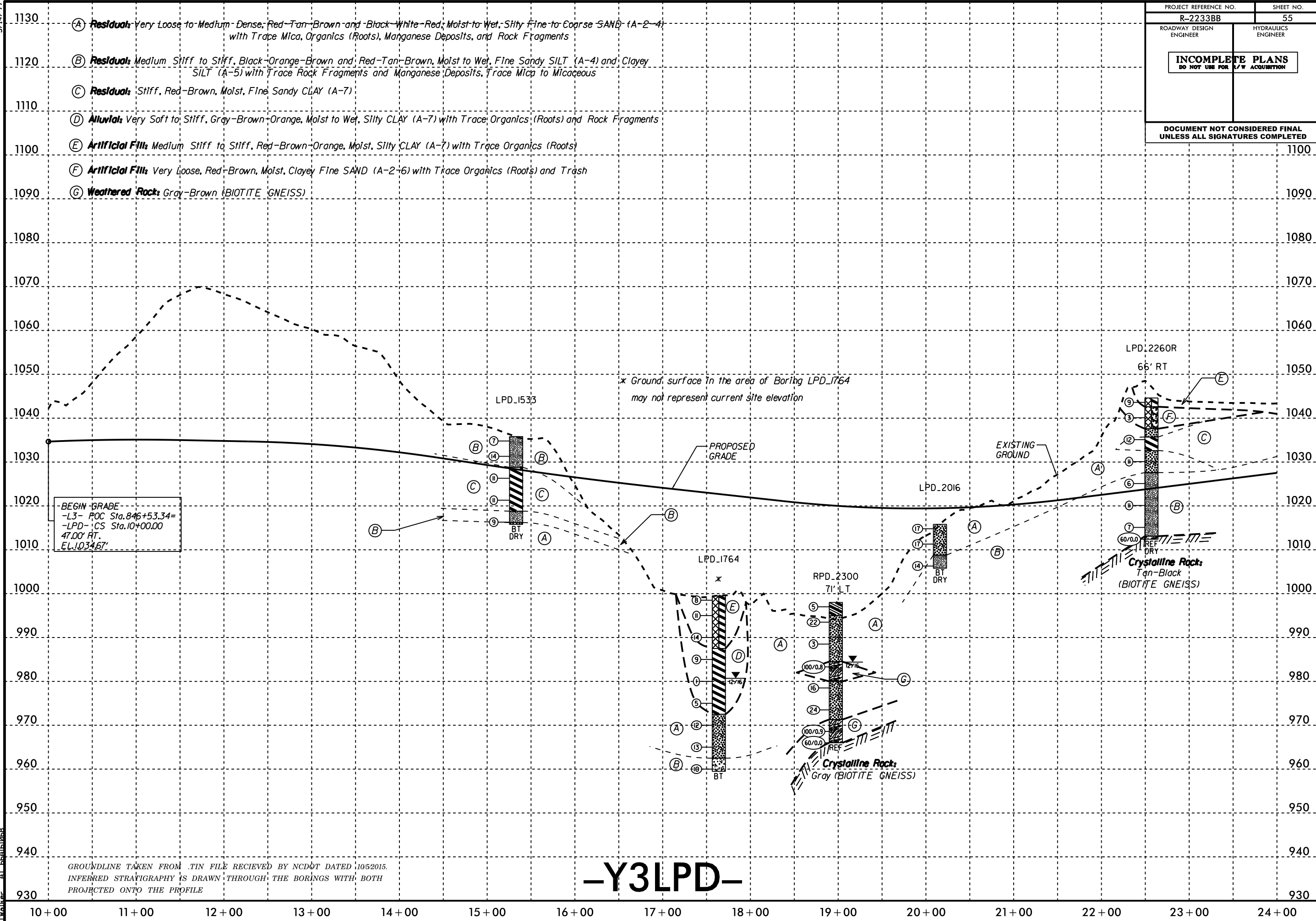
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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00

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PROJECT REFERENCE NO. R-2233BB	SHEET NO. 55
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



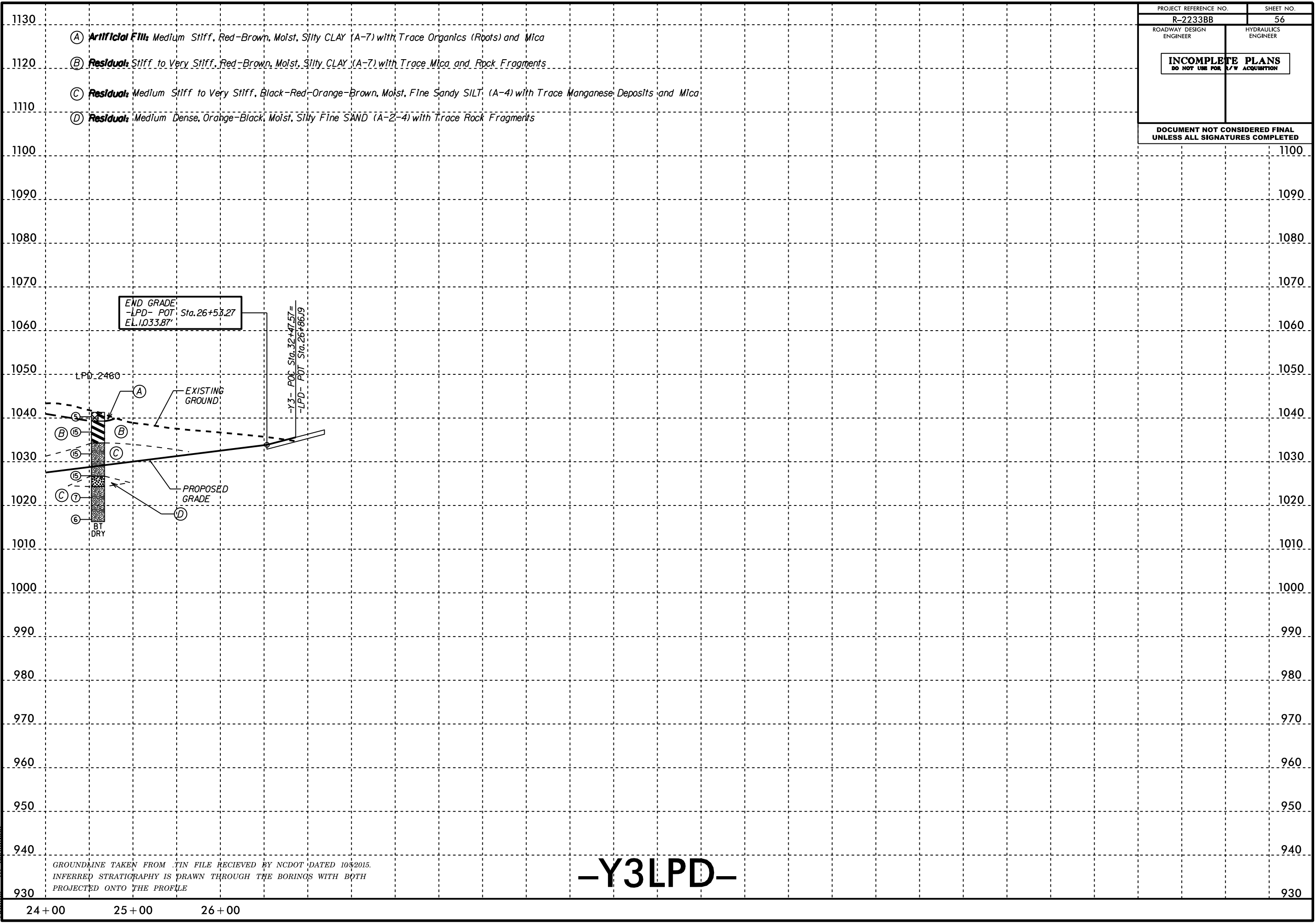
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 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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-Y3LPD-

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PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - BT 66166U



- (A) **Artificial Fill:** Medium Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots) and Mica
- (B) **Residuals:** Stiff to Very Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica and Rock Fragments
- (C) **Residuals:** Medium Stiff to Very Stiff, Black-Red-Orange-Brown, Moist, Fine Sandy SILT (A-4) with Trace Manganese Deposits and Mica
- (D) **Residuals:** Medium Dense, Orange-Black, Moist, Silty Fine SAND (A-2-4) with Trace Rock Fragments

END GRADE
 -LPD- POT Sta. 26+53.27
 EL. 1033.87'

-Y3- POC Sta. 26+47.57 =
 -LPD- POT Sta. 26+86.19

LPD-2460

BT DRY

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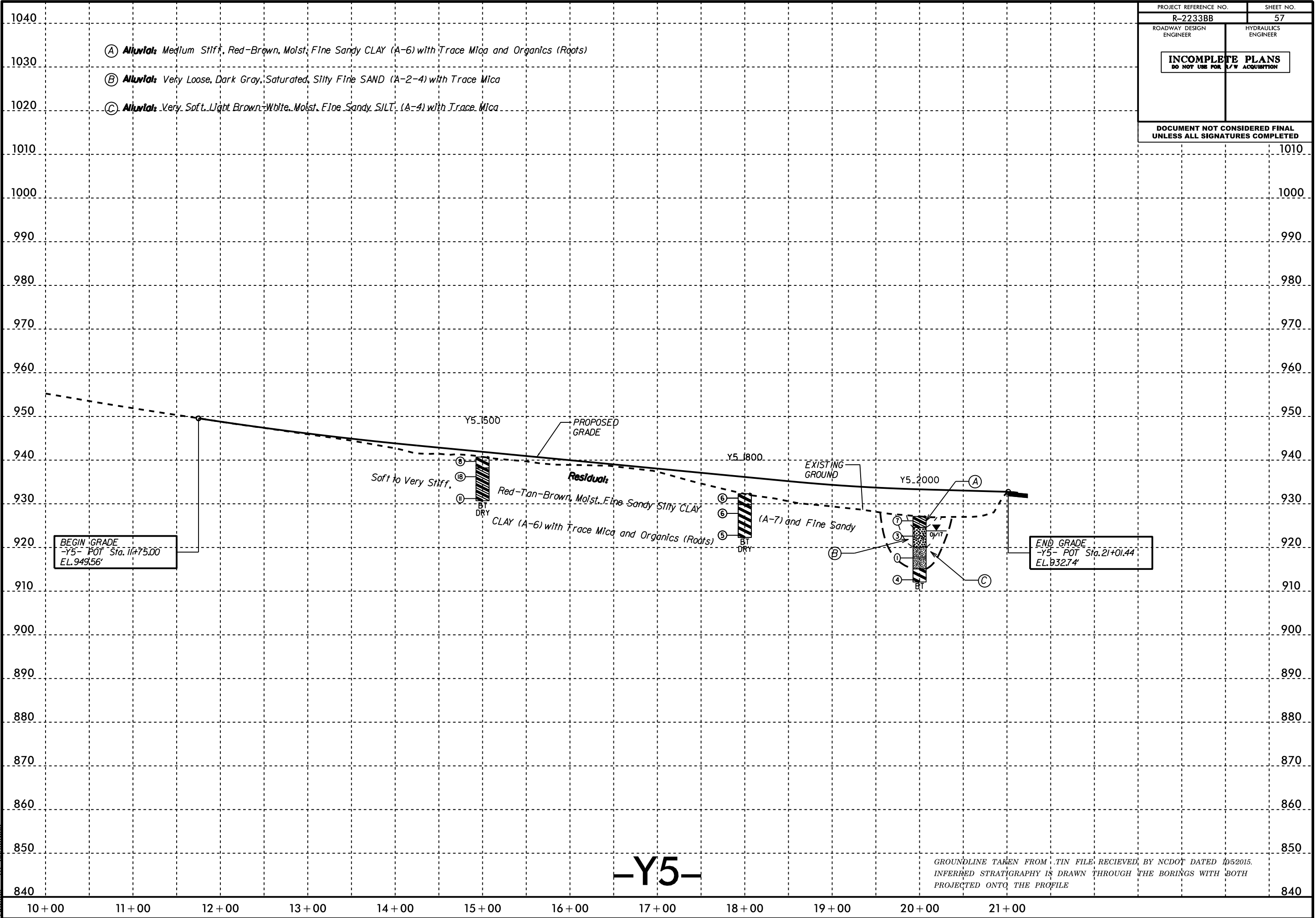
-Y3LPD-

24 + 00 25 + 00 26 + 00

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 Walker - 661666

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



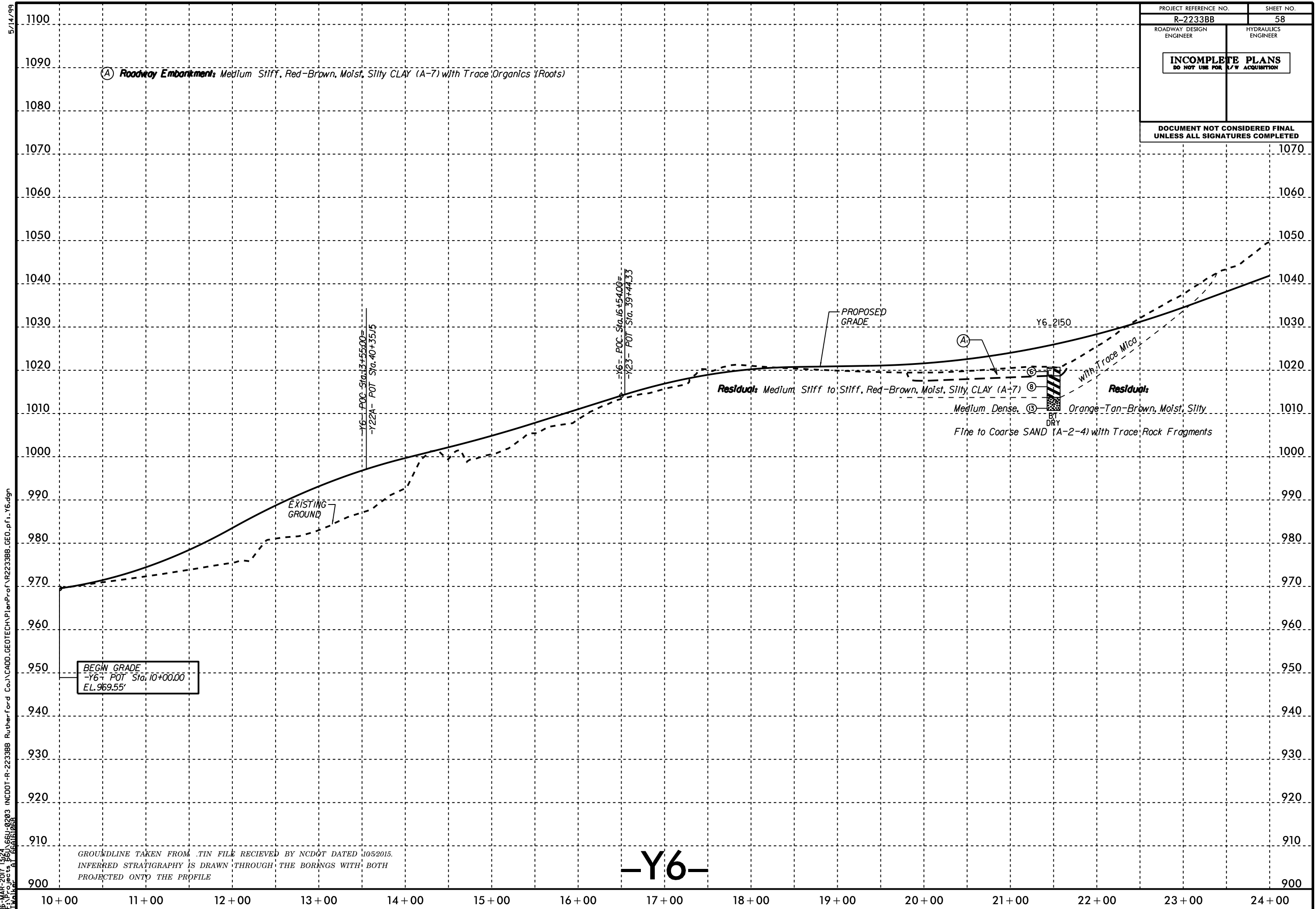
BEGIN GRADE
 -Y5- POT Sta. 11+75.00
 EL. 949.56'

END GRADE
 -Y5- POT Sta. 21+01.44
 EL. 932.74'

-Y5-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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PROJECT REFERENCE NO. R-2233BB	SHEET NO. 58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



(A) **Roadway Embankment:** Medium Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots)

PROPOSED GRADE

EXISTING GROUND

Residuals: Medium Stiff to Stiff, Red-Brown, Moist, Silty CLAY (A-7)

Medium Dense, Orange-Tan-Brown, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Rock Fragments

Residuals:

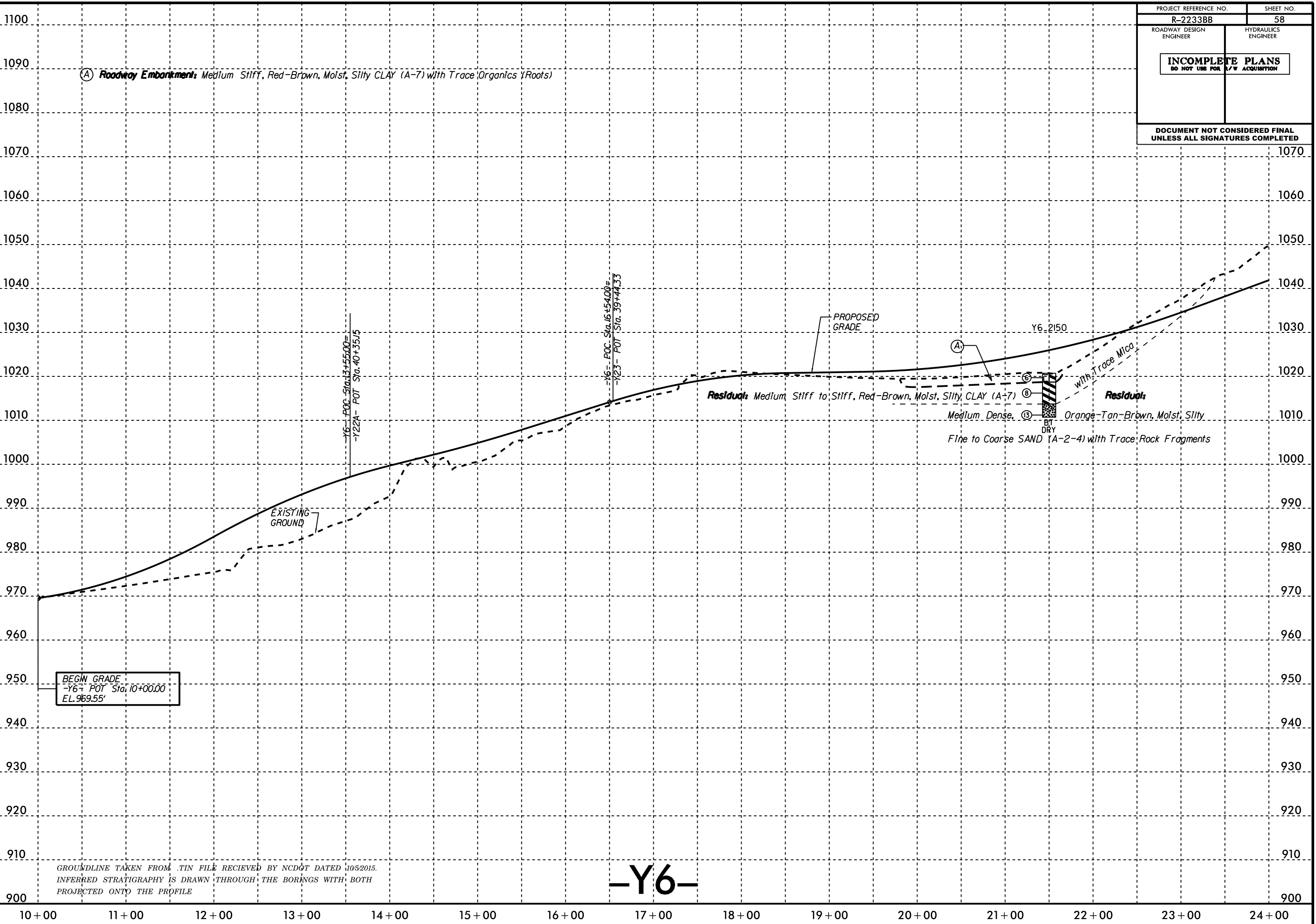
With Trace Mica

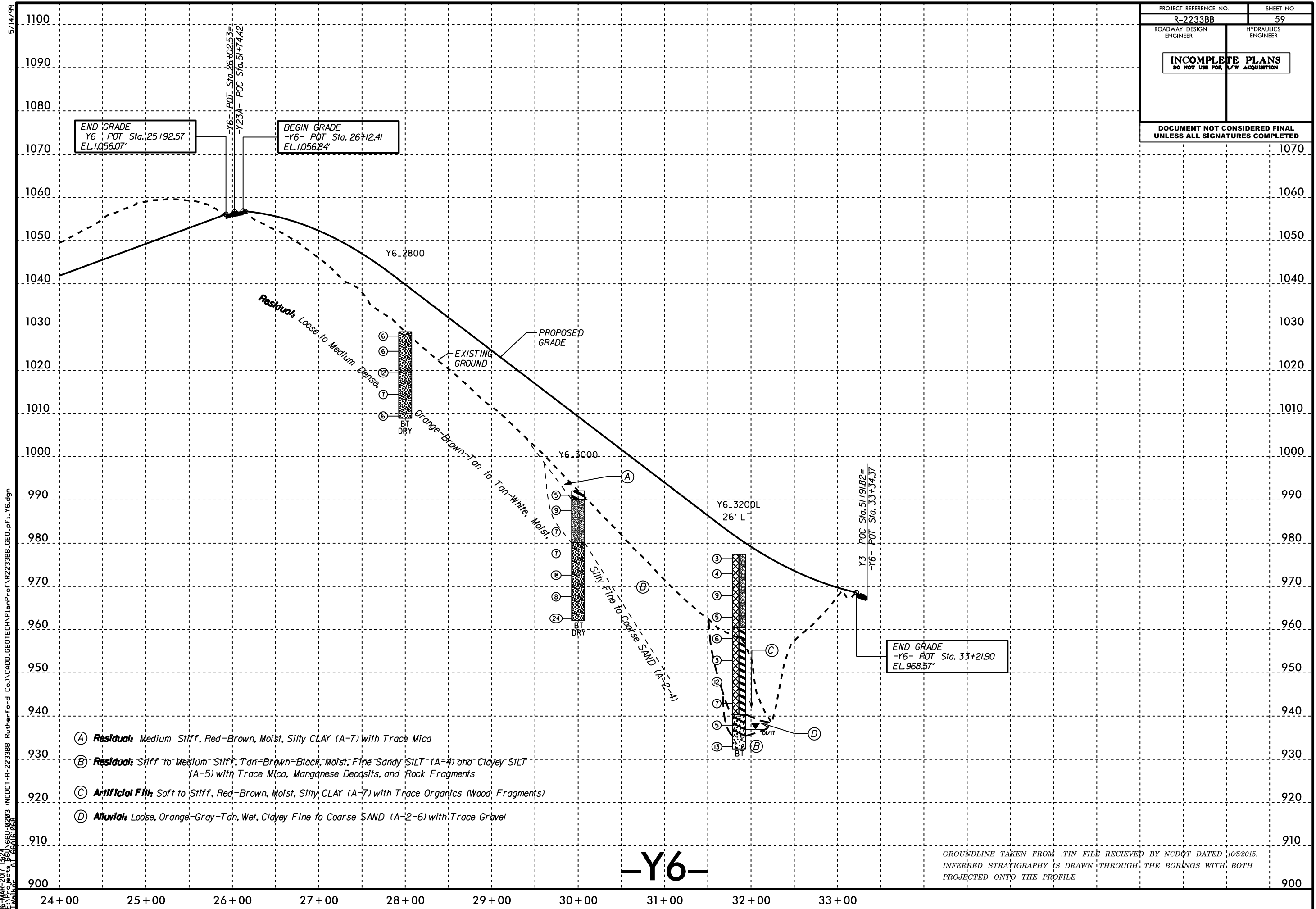
BEGIN GRADE
-Y6- POT Sta. 10+00.00
EL. 969.55'

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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 Walker - AT 66166U





END GRADE
-Y6- POT Sta. 25+92.57
EL. 1056.07'

BEGIN GRADE
-Y6- POT Sta. 26+12.41
EL. 1056.84'

END GRADE
-Y6- POT Sta. 33+21.90
EL. 968.57'

- (A) **Residuals:** Medium Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica
- (B) **Residuals:** Stiff to Medium Stiff, Tan-Brown-Black, Moist, Fine Sandy SILT (A-4) and Clayey SILT (A-5) with Trace Mica, Manganese Deposits, and Rock Fragments
- (C) **Artificial Fills:** Soft to Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Wood Fragments)
- (D) **Alluvials:** Loose, Orange-Gray-Tan, Wet, Clayey Fine to Coarse SAND (A-2-6) with Trace Gravel

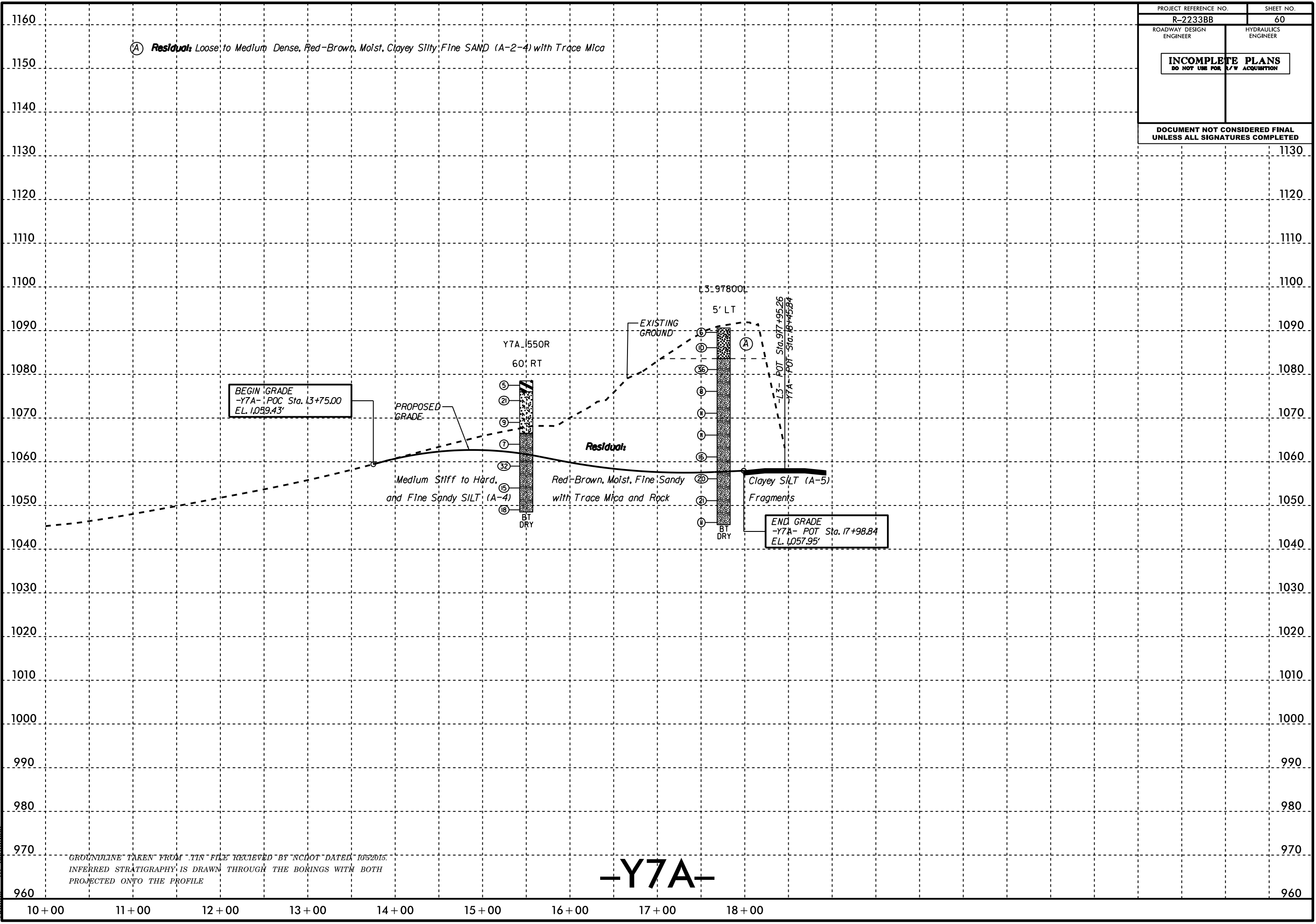
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
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 Walker - AT 66166U

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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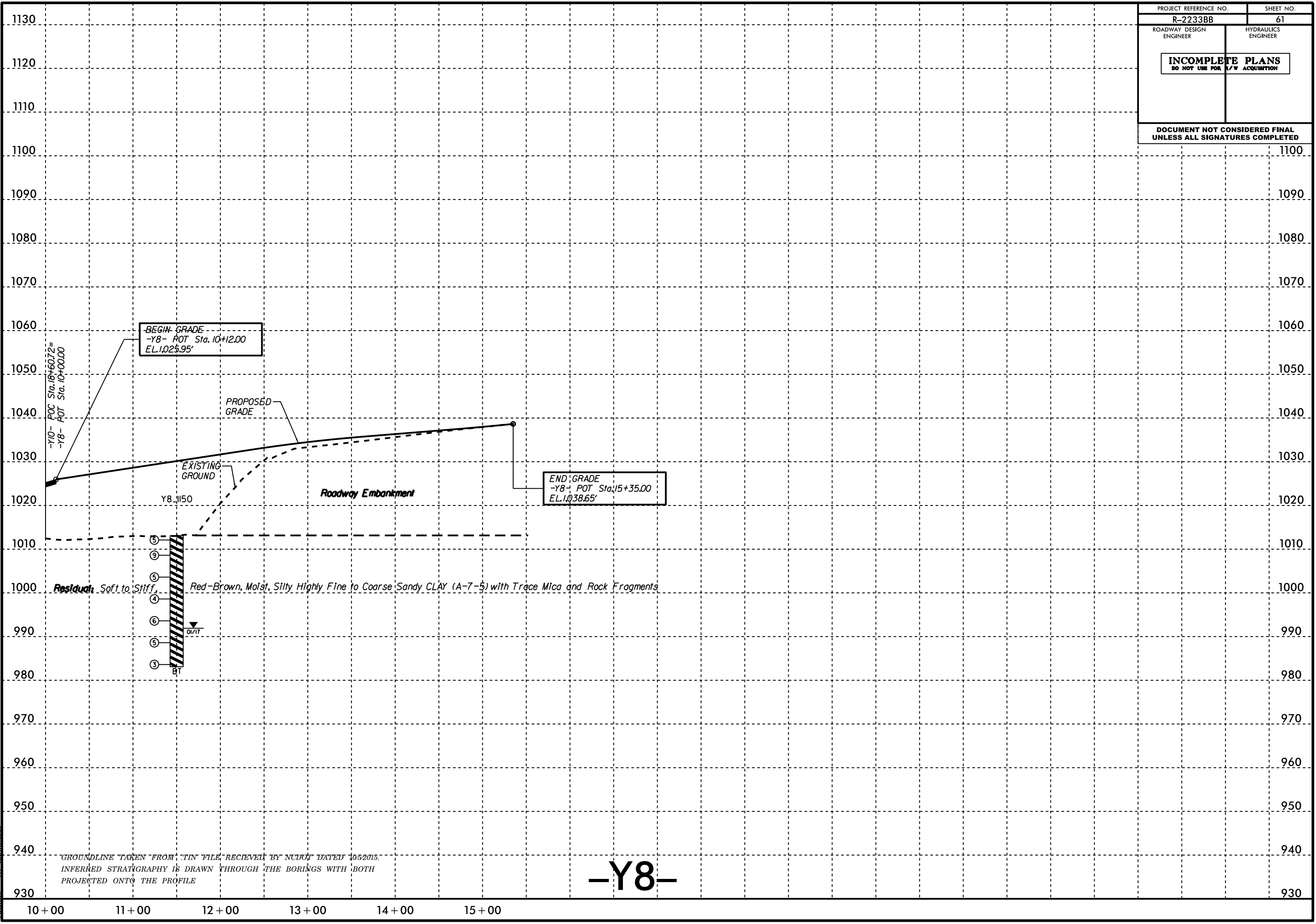


GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
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-Y7A-

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 61
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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 Walker - 61



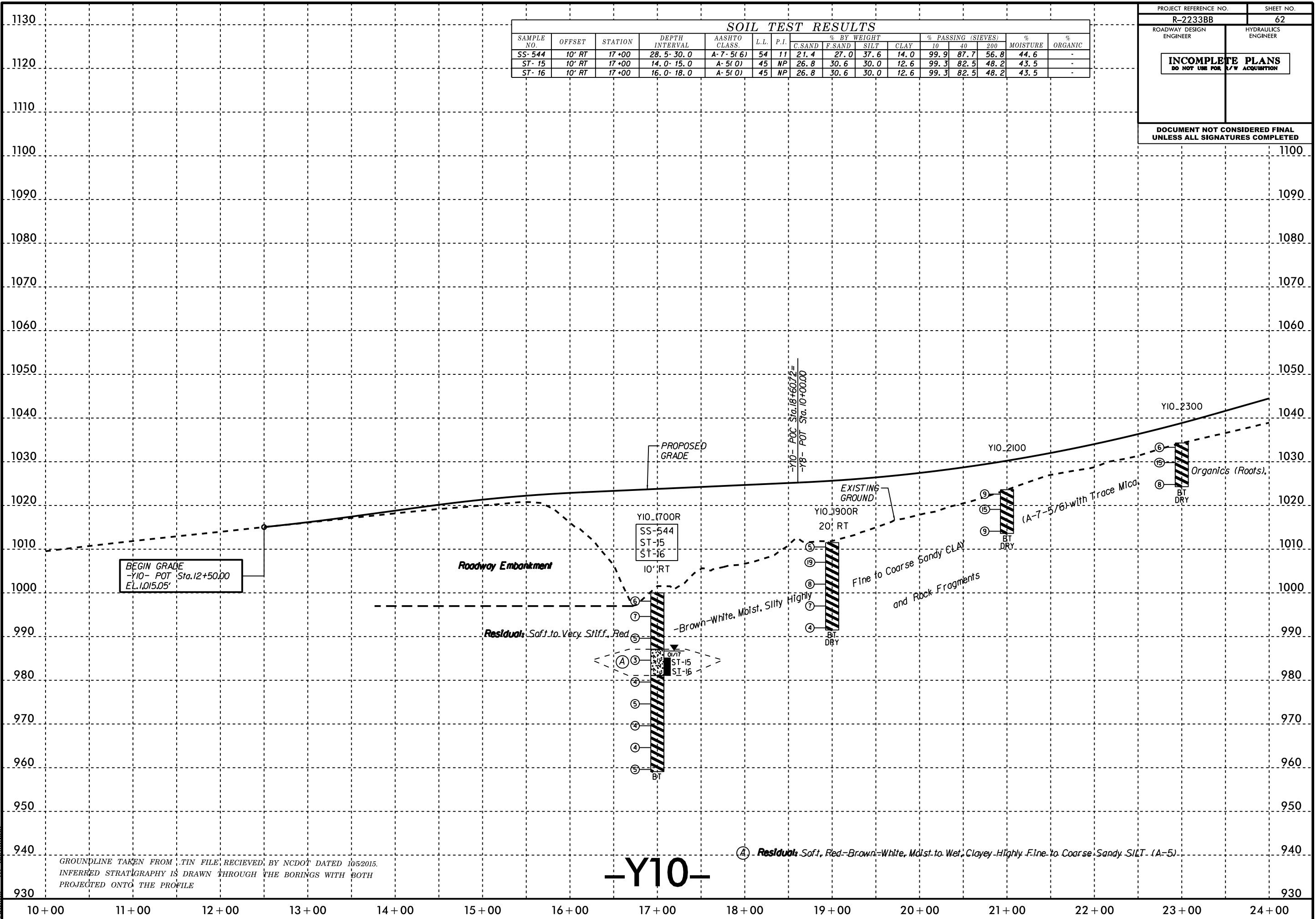
-Y8-

5/14/99

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 62
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

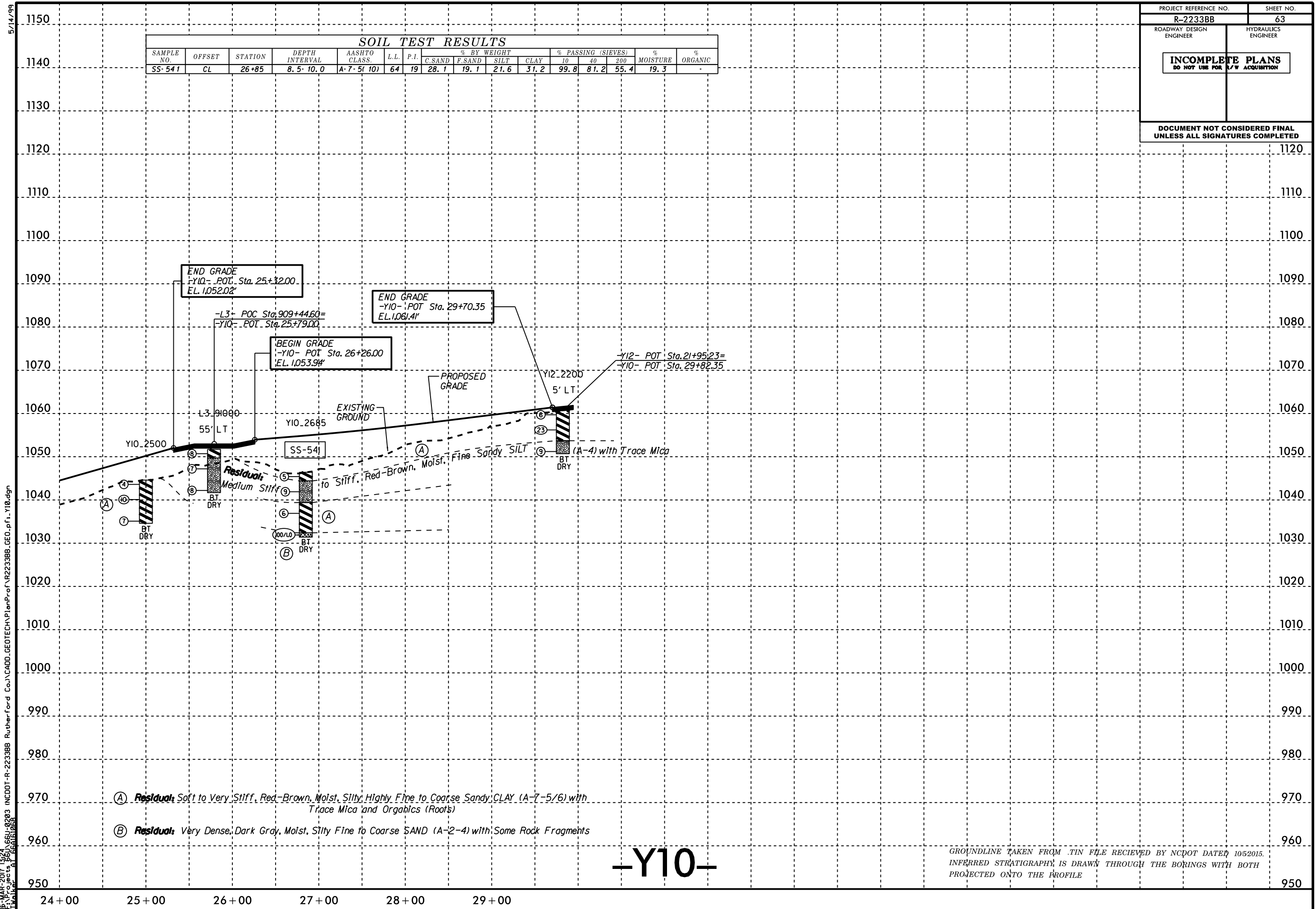
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-544	10' RT	17+00	28.5-30.0	A-7-5(6)	54	11	21.4	27.0	37.6	14.0	99.9	87.7	56.8	44.6	-
ST-15	10' RT	17+00	14.0-15.0	A-5(0)	45	NP	26.8	30.6	30.0	12.6	99.3	82.5	48.2	43.5	-
ST-16	10' RT	17+00	16.0-18.0	A-5(0)	45	NP	26.8	30.6	30.0	12.6	99.3	82.5	48.2	43.5	-

16-MAR-2017 13:24
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 Walker - AT 66166U



-Y10-

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-541	CL	26+85	8.5-10.0	A-7-5(10)	64	19	28.1	19.1	21.6	31.2	99.8	81.2	55.4	19.3	-



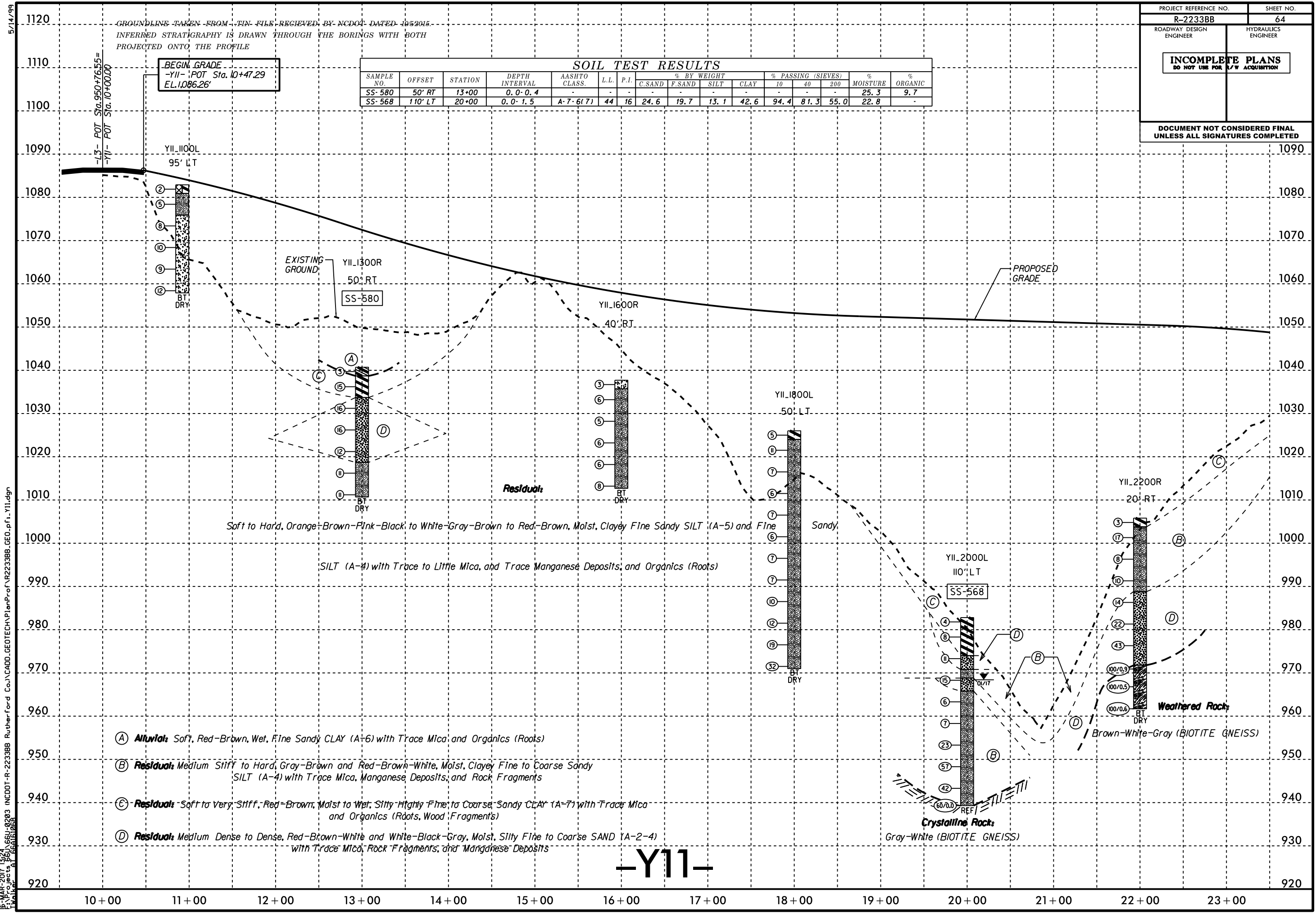
- (A) **Residual:** Soft to Very Stiff, Red-Brown, Moist, Silty, Highly Fine to Coarse Sandy CLAY (A-7-5/6) with Trace Mica and Organics (Roots)
- (B) **Residual:** Very Dense, Dark Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Some Rock Fragments

-Y10-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

16-MAR-2017 13:24 I:\Projects\661666U-0203 INCDOT-R-2233BB Rutherford Co.\CADD\GEO\TechPlan\Proj\R2233BB_GEO_p1_Y10.dgn

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-580	50' RT	13+00	0.0-0.4	-	-	-	-	-	-	-	-	-	-	25.3	9.7
SS-568	110' LT	20+00	0.0-1.5	A-7-6(7)	44	16	24.6	19.7	13.1	42.6	94.4	81.3	55.0	22.8	-



- (A) **Alluvial:** Soft, Red-Brown, Wet, Fine Sandy CLAY (A-6) with Trace Mica and Organics (Roots)
- (B) **Residual:** Medium Stiff to Hard, Gray-Brown and Red-Brown-White, Moist, Clayey Fine to Coarse Sandy SILT (A-4) with Trace Mica, Manganese Deposits, and Rock Fragments
- (C) **Residual:** Soft to Very Stiff, Red-Brown, Moist to Wet, Silty Highly Fine to Coarse Sandy CLAY (A-7) with Trace Mica and Organics (Roots, Wood Fragments)
- (D) **Residual:** Medium Dense to Dense, Red-Brown-White and White-Black-Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica, Rock Fragments, and Manganese Deposits

-Y11-

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 Walker - AT 65181058

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

BEGIN GRADE
 -Y11- POT Sta. 10+47.29
 EL. 1086.26'

-L3- POT Sta. 950+76.55 =
 -Y11- POT Sta. 10+00.00

Y11.1100L
 95' LT

EXISTING GROUND
 Y11.1300R
 50' RT
 SS-580

Y11.1600R
 40' RT

Y11.1800L
 50' LT

Y11.2000L
 110' LT
 SS-568

Y11.2200R
 20' RT

PROPOSED GRADE

Residuals

Soft to Hard, Orange-Brown-Pink-Black to White-Gray-Brown to Red-Brown, Moist, Clayey Fine Sandy SILT (A-5) and Fine
 SILT (A-4) with Trace to Little Mica, and Trace Manganese Deposits, and Organics (Roots)

Sandy

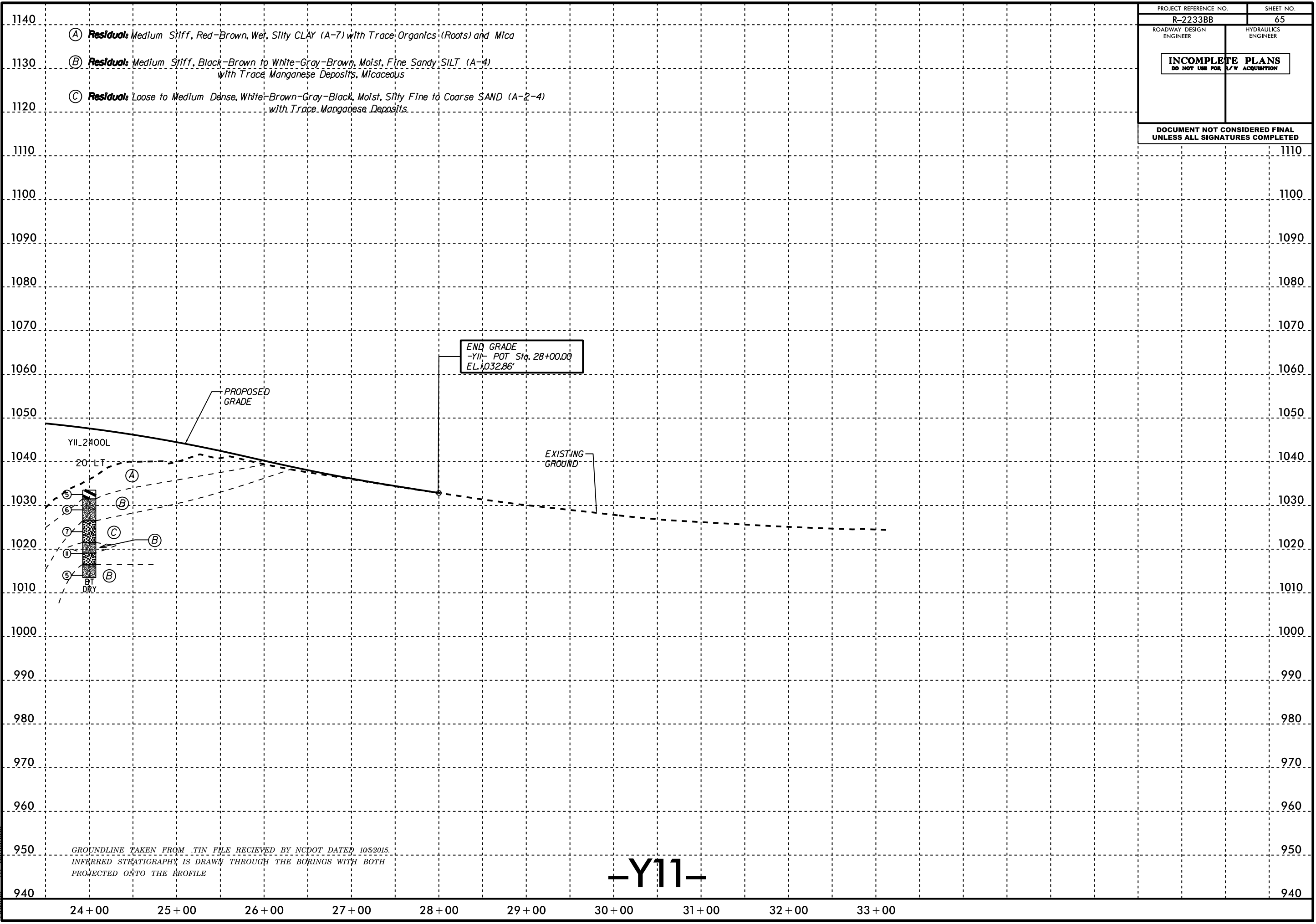
Weathered Rock

Brown-White-Gray (BIOTITE GNEISS)

Crystalline Rock
 Gray-White (BIOTITE GNEISS)

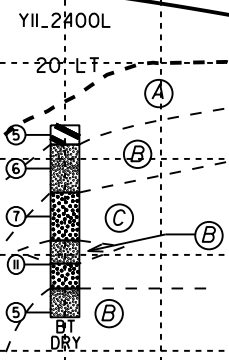
PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

5/14/99
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 Walker - BT



- (A) **Residual:** Medium Stiff, Red-Brown, Wet, Silty CLAY (A-7) with Trace Organics (Roots) and Mica
- (B) **Residual:** Medium Stiff, Black-Brown to White-Gray-Brown, Moist, Fine Sandy SILT (A-4) with Trace Manganese Deposits, Micaceous
- (C) **Residual:** Loose to Medium Dense, White-Brown-Gray-Black, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Manganese Deposits.

END GRADE
 -Y11- POT Stg. 28+00.00
 EL. 1032.86'



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

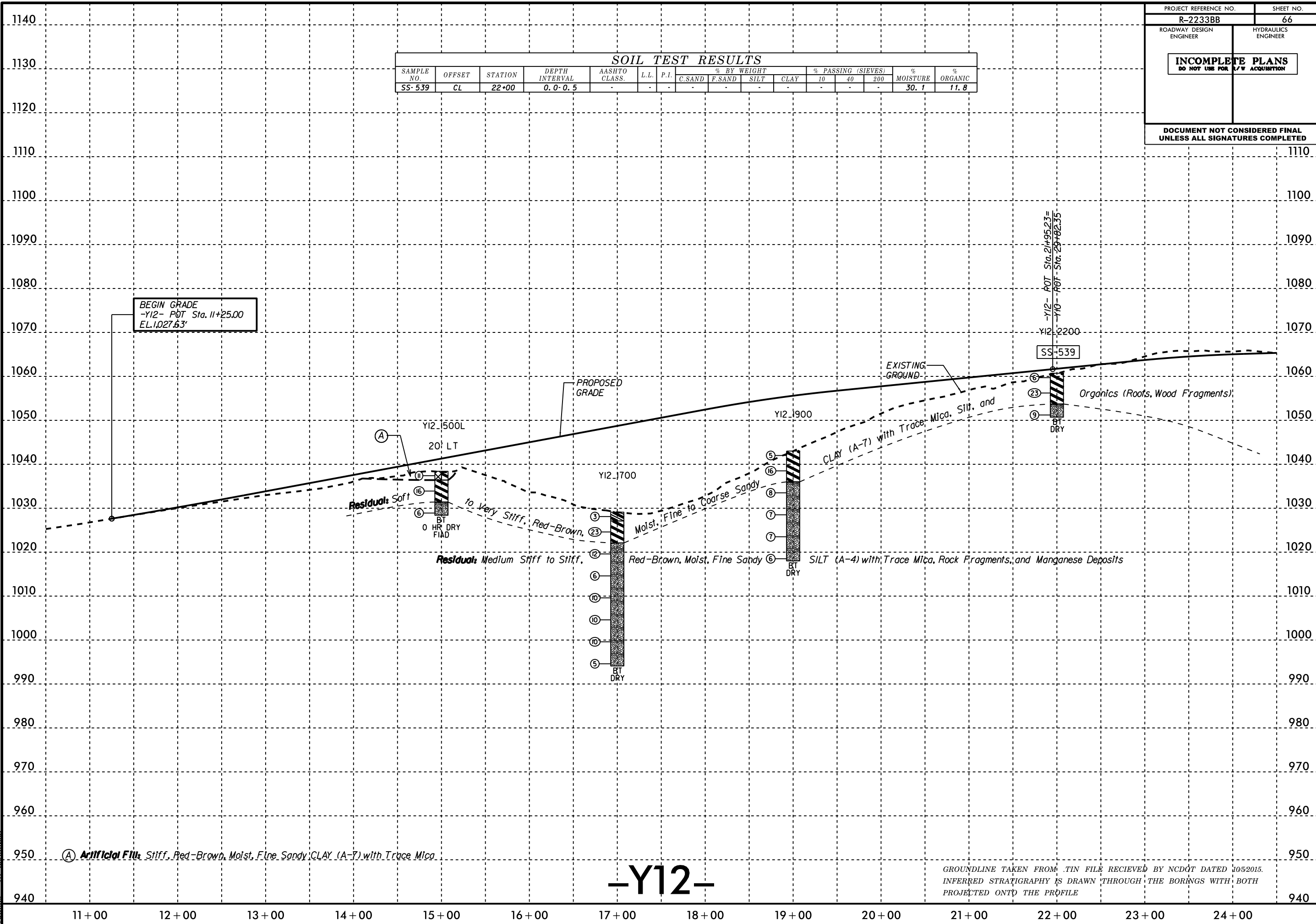
-Y11-

5/14/99

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 66
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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-539	CL	22+00	0.0-0.5	-	-	-	-	-	-	-	-	-	-	30.1	11.8

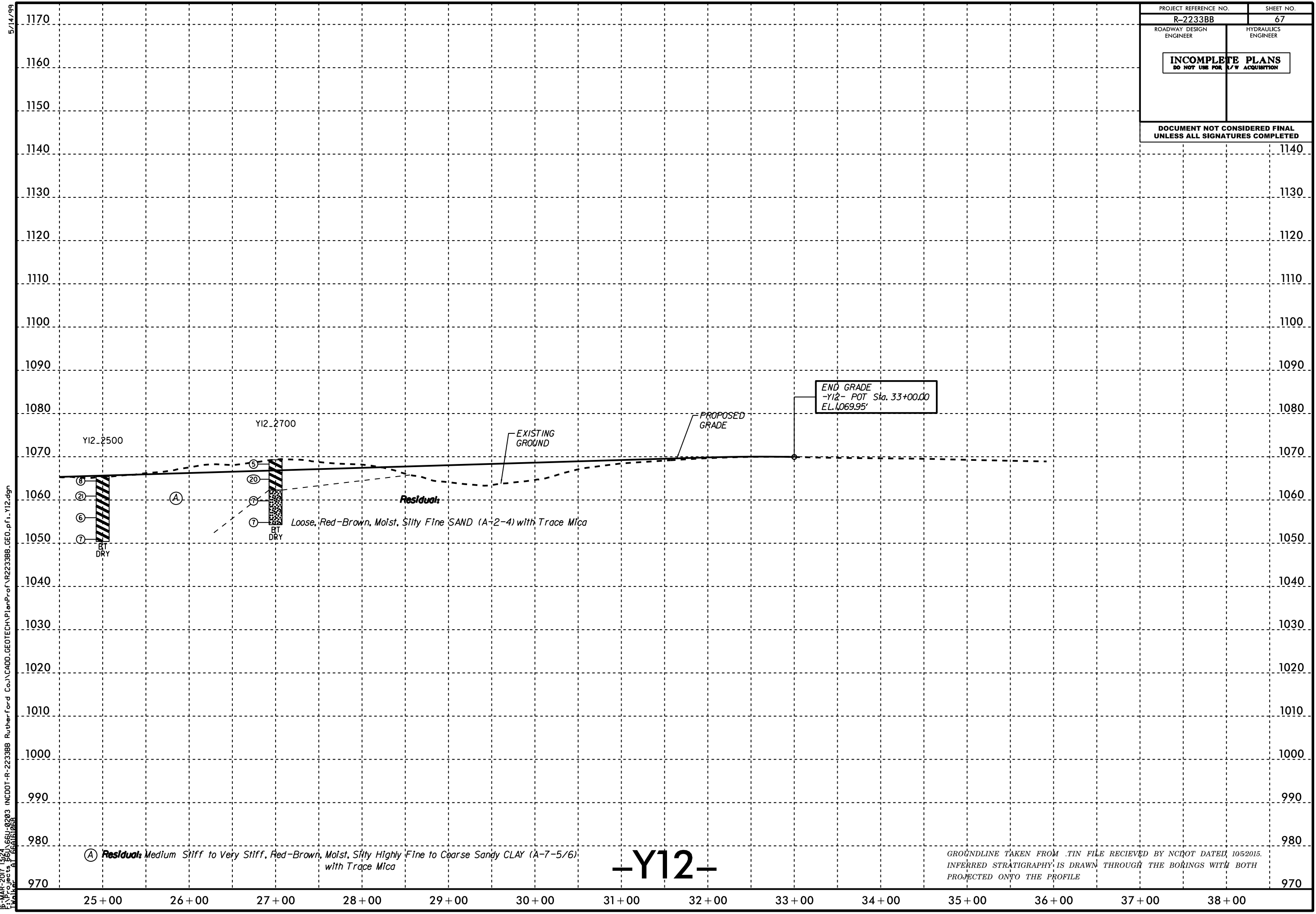
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 Walker - B1 6/18/08



-Y12-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



(A) **Residuals** Medium Stiff to Very Stiff, Red-Brown, Moist, Silty Highly Fine to Coarse Sandy CLAY (A-7-5/6) with Trace Mica

Loose, Red-Brown, Moist, Silty Fine SAND (A-2-4) with Trace Mica

END GRADE
-Y12- POT Sta. 33+00.00
E.L. 1069.95'

-Y12-

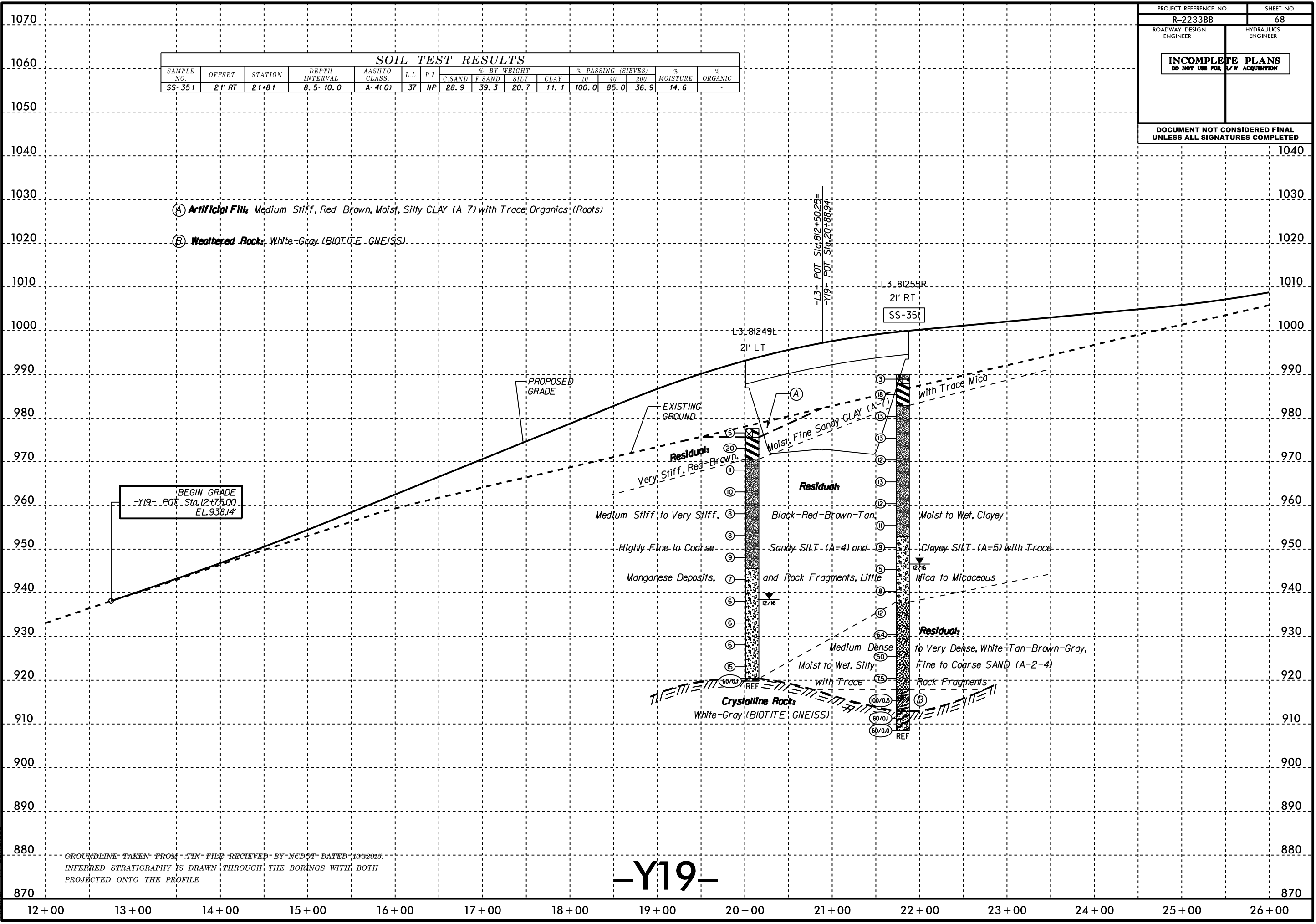
GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

5/14/99
 16-MAR-2017 13:24
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 Walker - BT

5/14/99
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 Walker - 6/15/16

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 68
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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-351	2' RT	21+81	8.5-10.0	A-4(0)	37	NP	28.9	39.3	20.7	11.1	100.0	85.0	36.9	14.6	-



- (A) **Artificial Fill:** Medium Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots)
- (B) **Weathered Rock:** White-Gray (BIOTITE GNEISS)

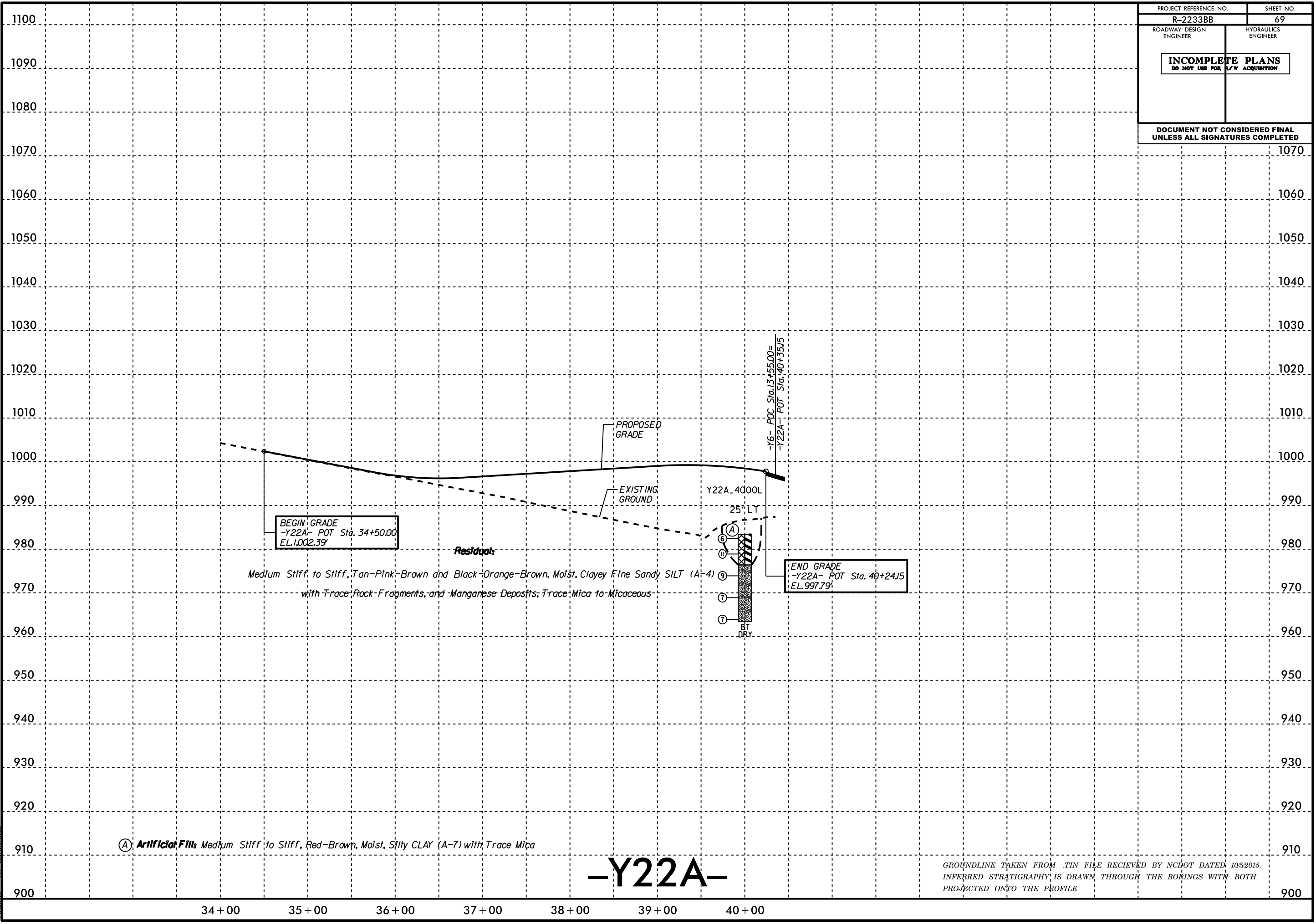
BEGIN GRADE
 -Y19- POT Sta. 12+75.00
 EL. 938.14

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/3/2013.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y19-

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	69
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

5/14/99
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 Walker - 66166U0203



BEGIN GRADE
 -Y22A- POT Sta. 34+50.00
 EL. 1002.39'

END GRADE
 -Y22A- POT Sta. 40+24.15
 EL. 997.79'

(A) Artificial Fill: Medium Stiff to Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica

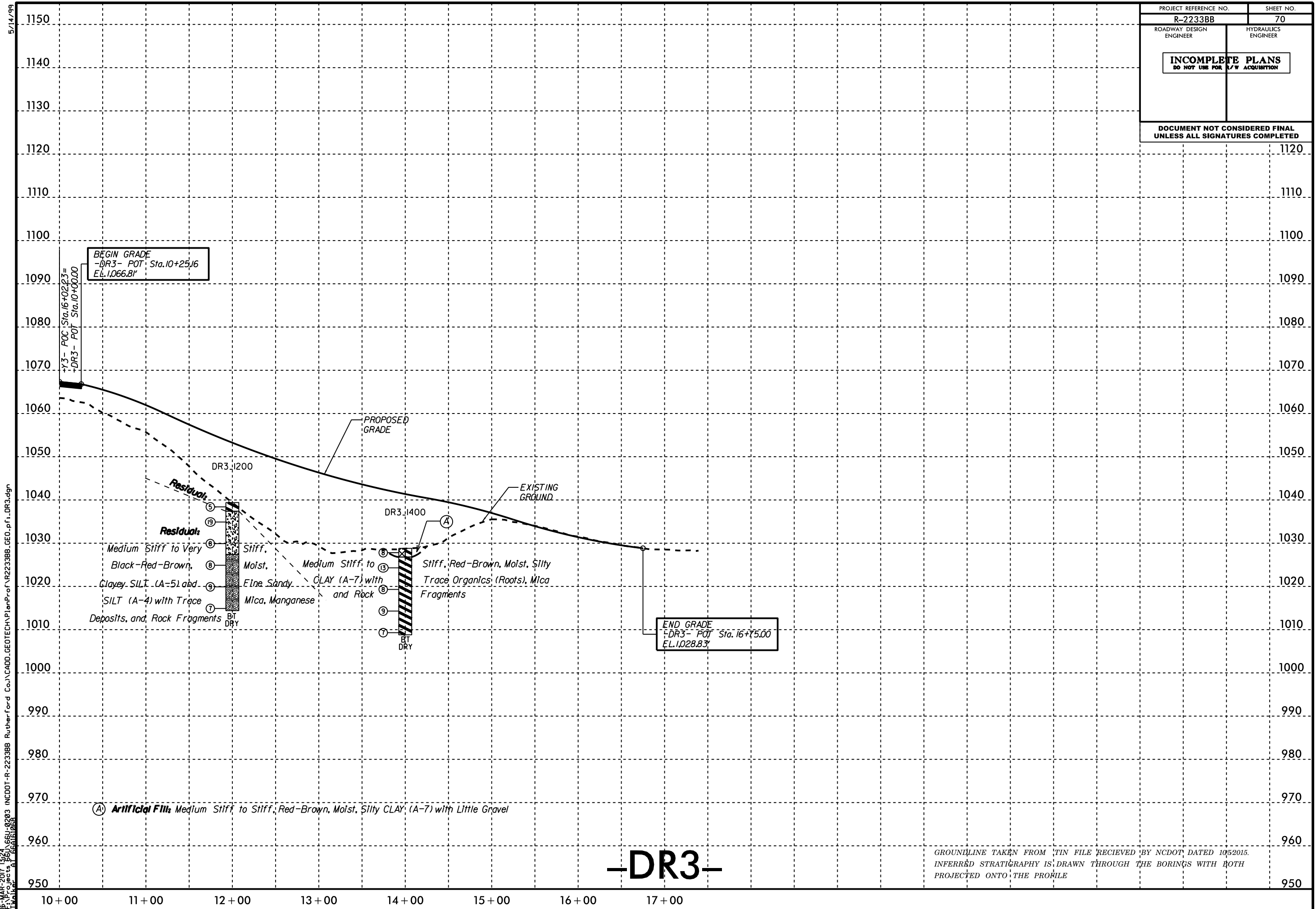
-Y22A-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

34+00 35+00 36+00 37+00 38+00 39+00 40+00

1070
1060
1050
1040
1030
1020
1010
1000
990
980
970
960
950
940
930
920
910
900

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



5/14/99
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 Walker - AT 661066

-DR3-

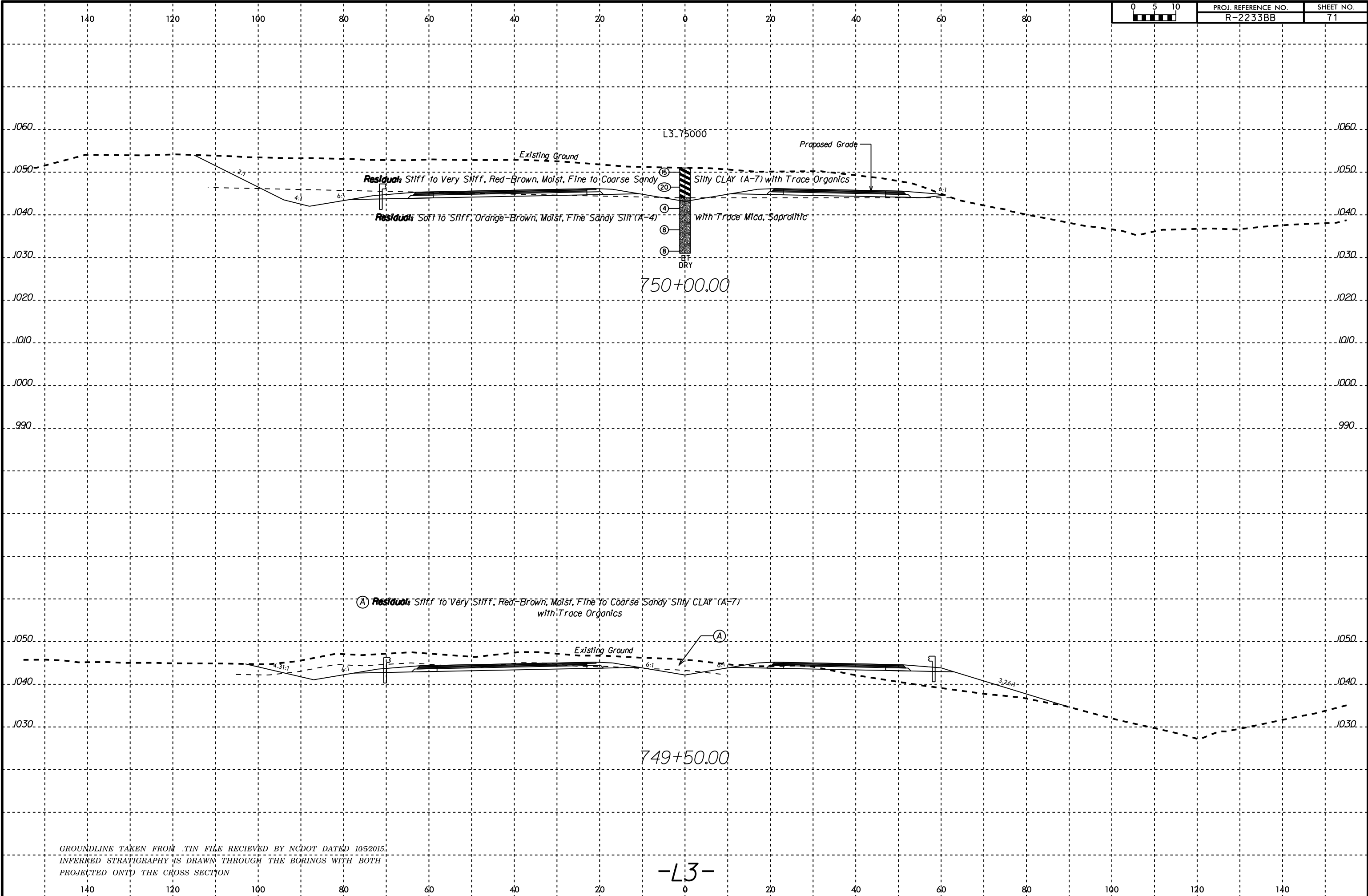
GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT, DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
71



15-MAR-2017 13:21
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A Walker

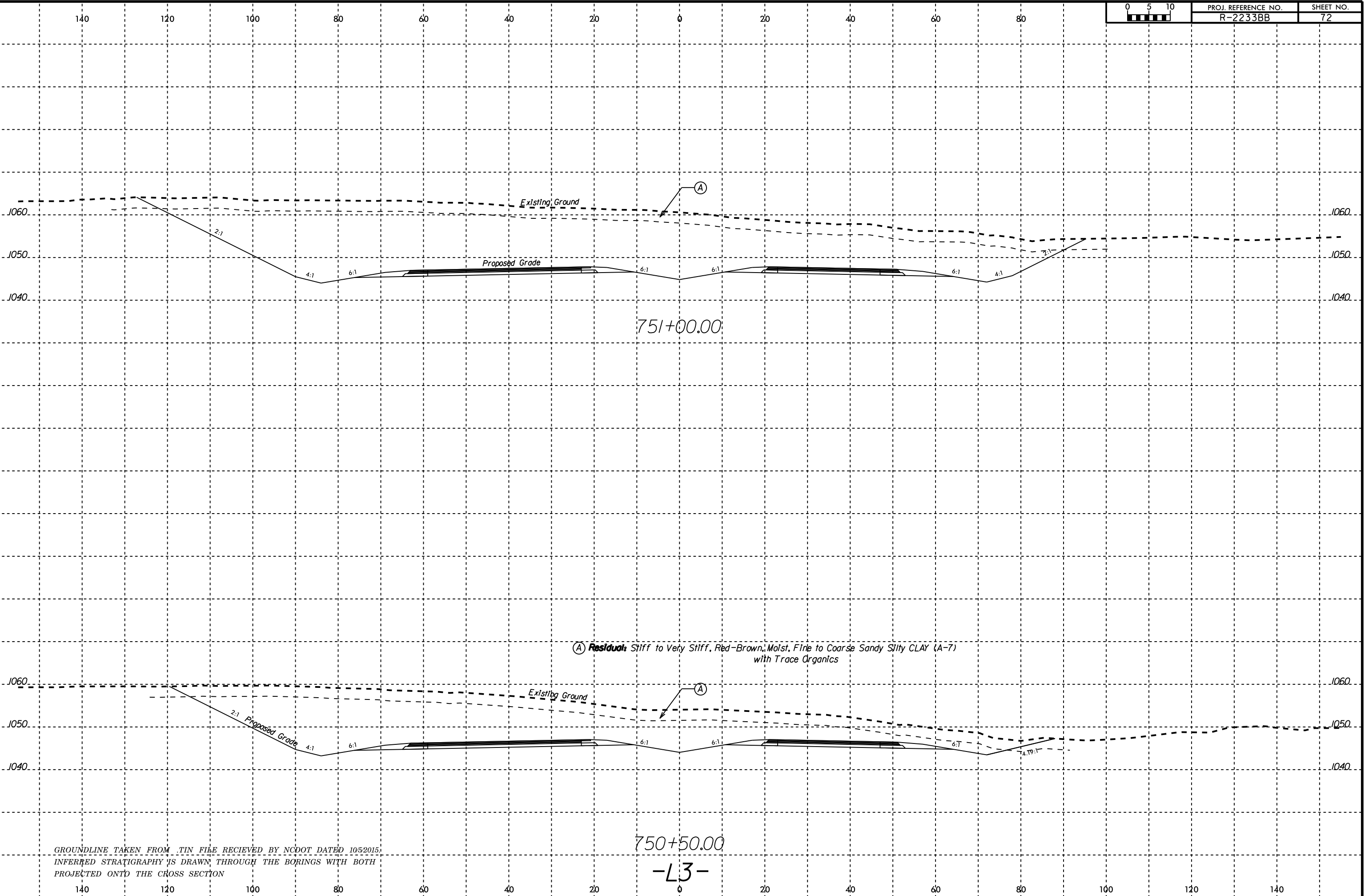
-L3-

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
72



Existing Ground

Proposed Grade

751+00.00

(A) Residuals: Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy Silty CLAY (A-7) with Trace Organics

Existing Ground

Proposed Grade

750+50.00

-L3-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

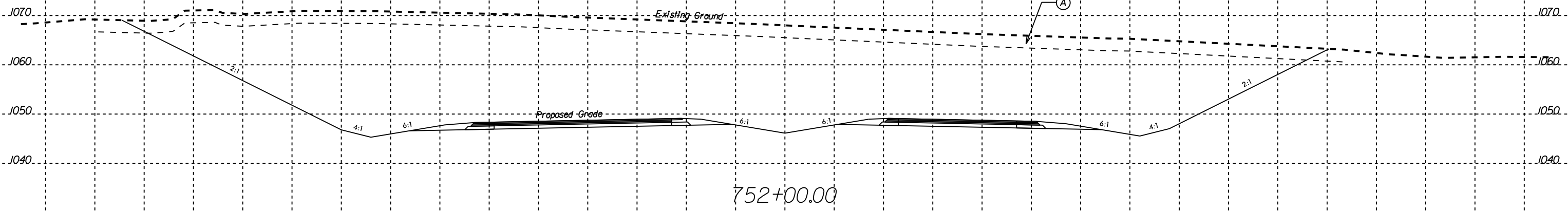
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Rutherford Co.\CA000.GEOTECH\asc\VR2233BB_RDY_xsi.L3.dgn
Walker

6/23/16

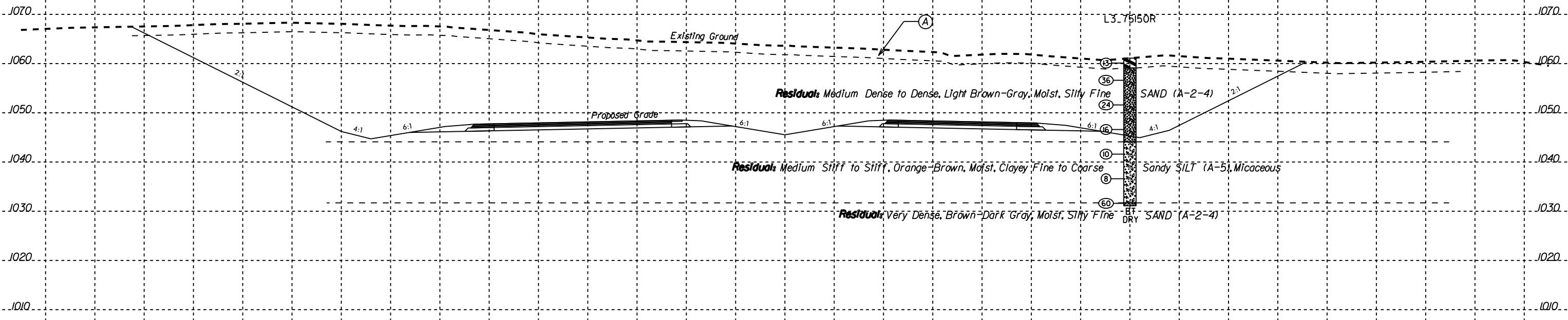


PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
73



752+00.00



751+50.00

-L3-

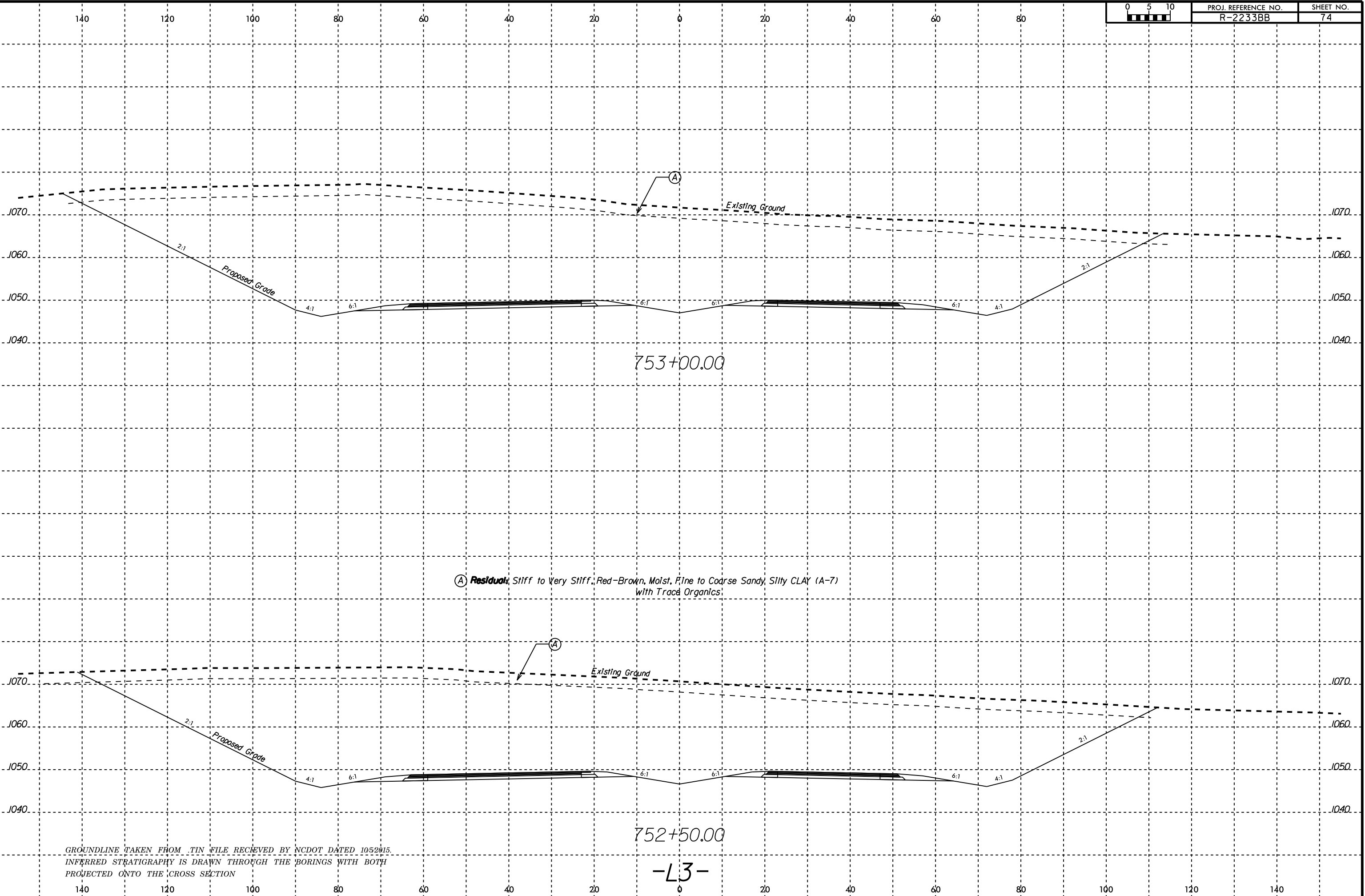
GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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Walker

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	74



753+00.00

(A) Residual, Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy, Silty CLAY (A-7) with Trace Organics

752+50.00

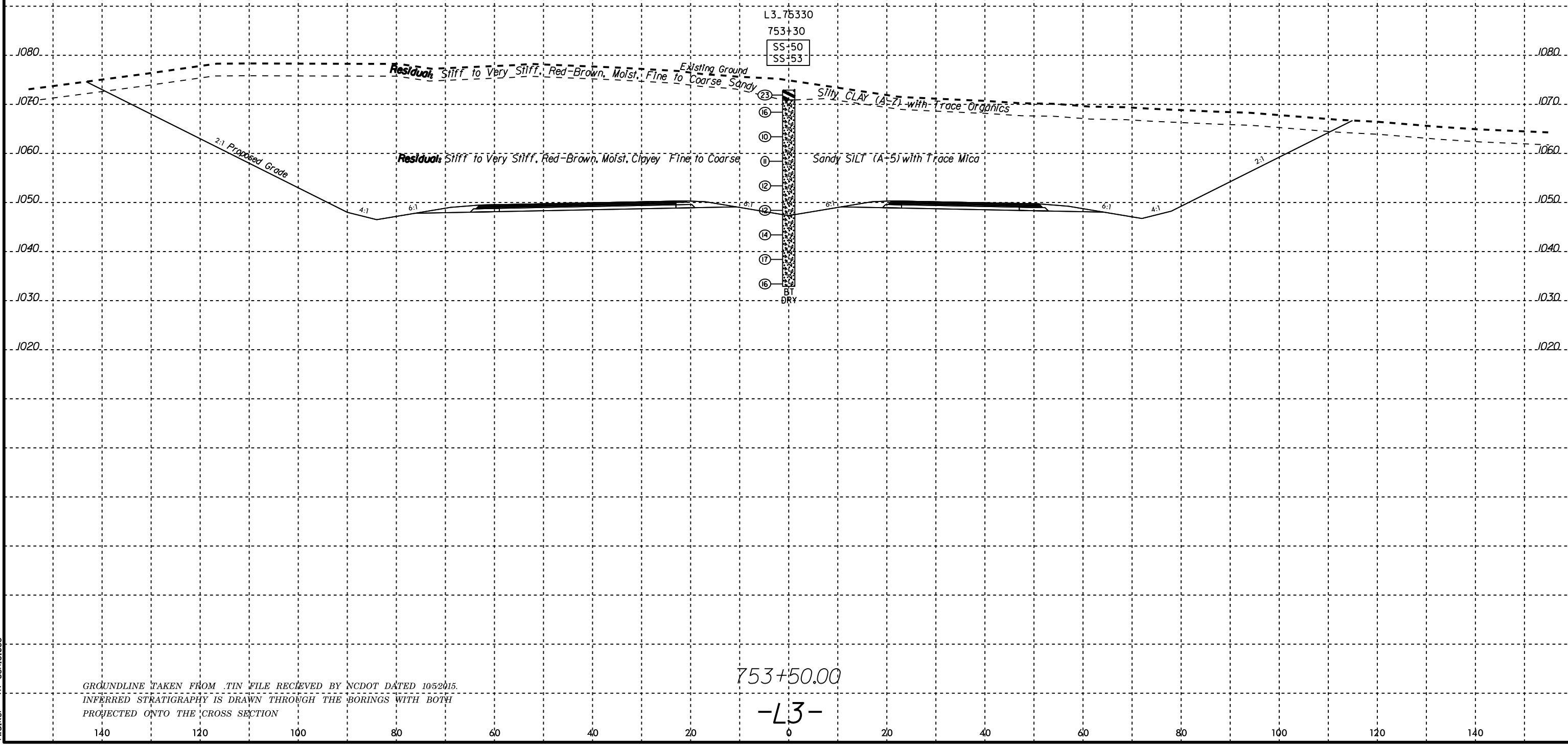
-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:21
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A: Walker

SOIL TEST RESULTS

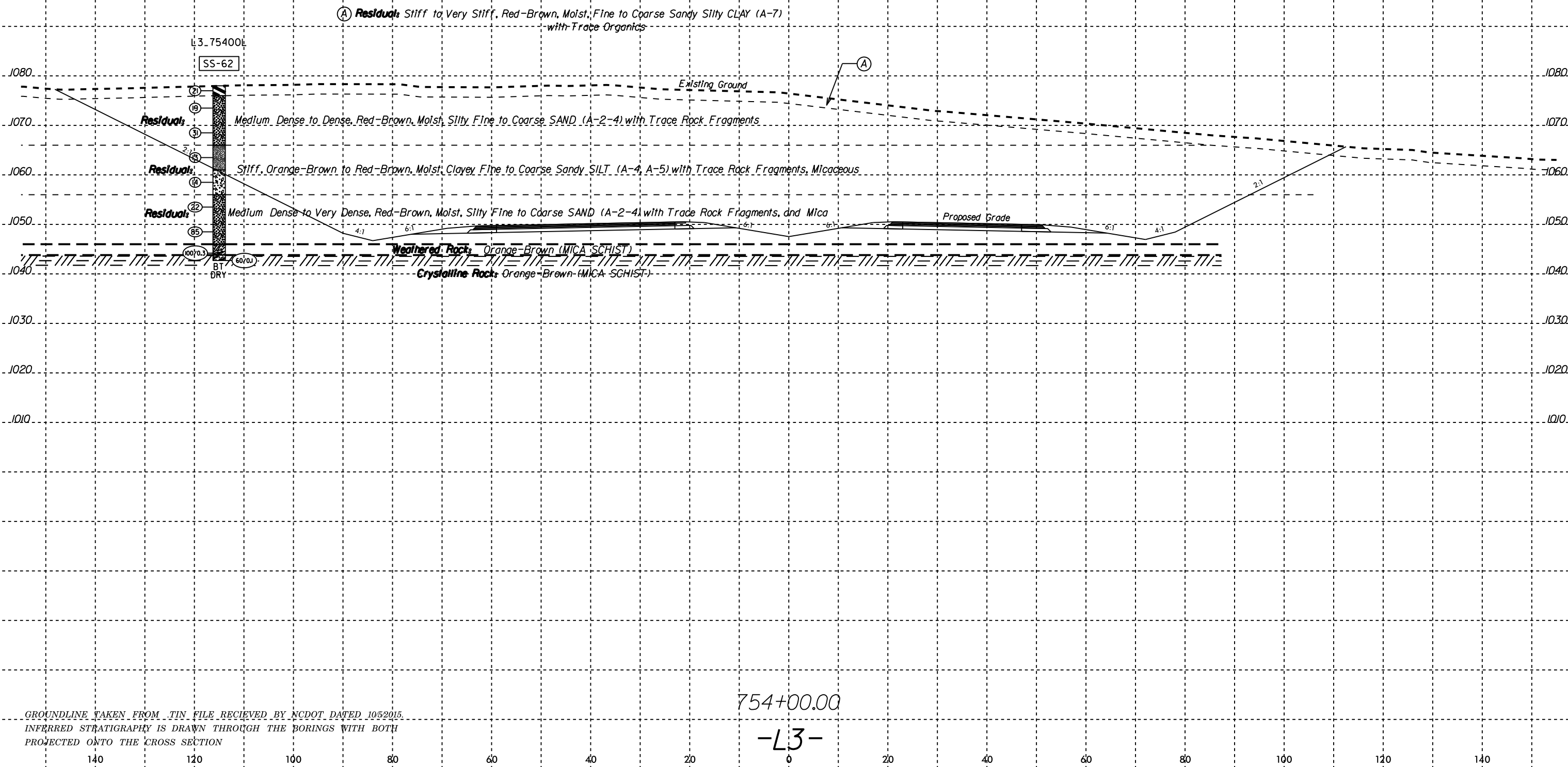
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-50	CL	753+30	0.0- 1.5	A-7-5(31)	70	29	6.6	10.4	16.9	66.1	99.9	96.2	84.5	24.8	-
SS-53	CL	753+30	23.5- 25.0	A-5(4)	51	10	23.6	30.1	30.9	15.4	99.8	85.6	50.8	24.6	-



15-MAR-2017 13:31 E:\Projects\6616\66161058\INCDOT-R-223388 Rutherford Co.\CAO.D. GEOTECH\asc\VR223388_RDY_xsi.L3.dgn

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

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	115' LT	754+00	13.5- 15.0	A-4(0)	35	NP	26.2	29.0	33.2	11.6	98.2	81.7	48.7	18.6	-



15-MAR-2017 13:21 E:\Projects\661666\661666-0203_NCDOT-R-2233BB_Rutherford Co.\CA000_GEO1TECH\asc\VR2233BB_RDY_xsl\13.dgn

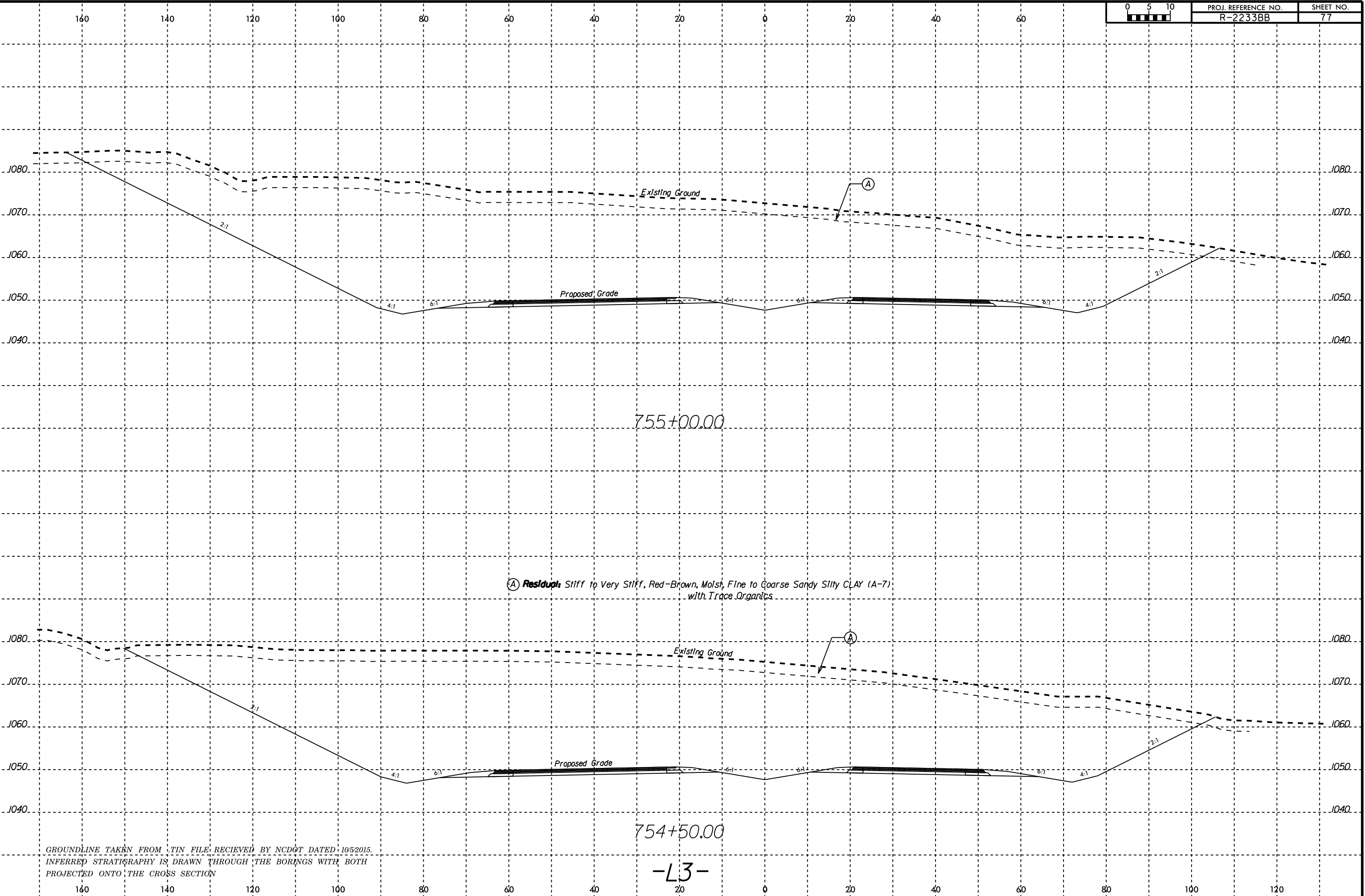
GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
77



(A) Residual: Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy Silty CLAY (A-7) with Trace Organics

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

-L3-

15-MAR-2017 13:21
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Walker

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
78

140

120

100

80

60

40

20

0

20

40

60

80

1080

1070

1060

1050

1040

1030

1020

1010

1080

1070

1060

1050

1040

1030

1020

1010

(A) Residual: Dense, Dark Brown, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Rock Fragments, Mica and Clay

L3_75550L

(16)

(26)

(67)

(45)

(51)

(52)

(53)

(39)

BT

DRY

755+50.00

-L3-

Residual: Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse

Sandy Silty CLAY (A-7) with Trace Organics

Residual: Hard, Red-Brown to

Orange-Dark Brown, Moist, Fine Sandy SILT (A-4) with Trace Rock Fragments, Trace Mica to Micaceous

Proposed Grade

Existing Ground

2:1

4:1

6:1

8:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

6:1

2:1

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
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

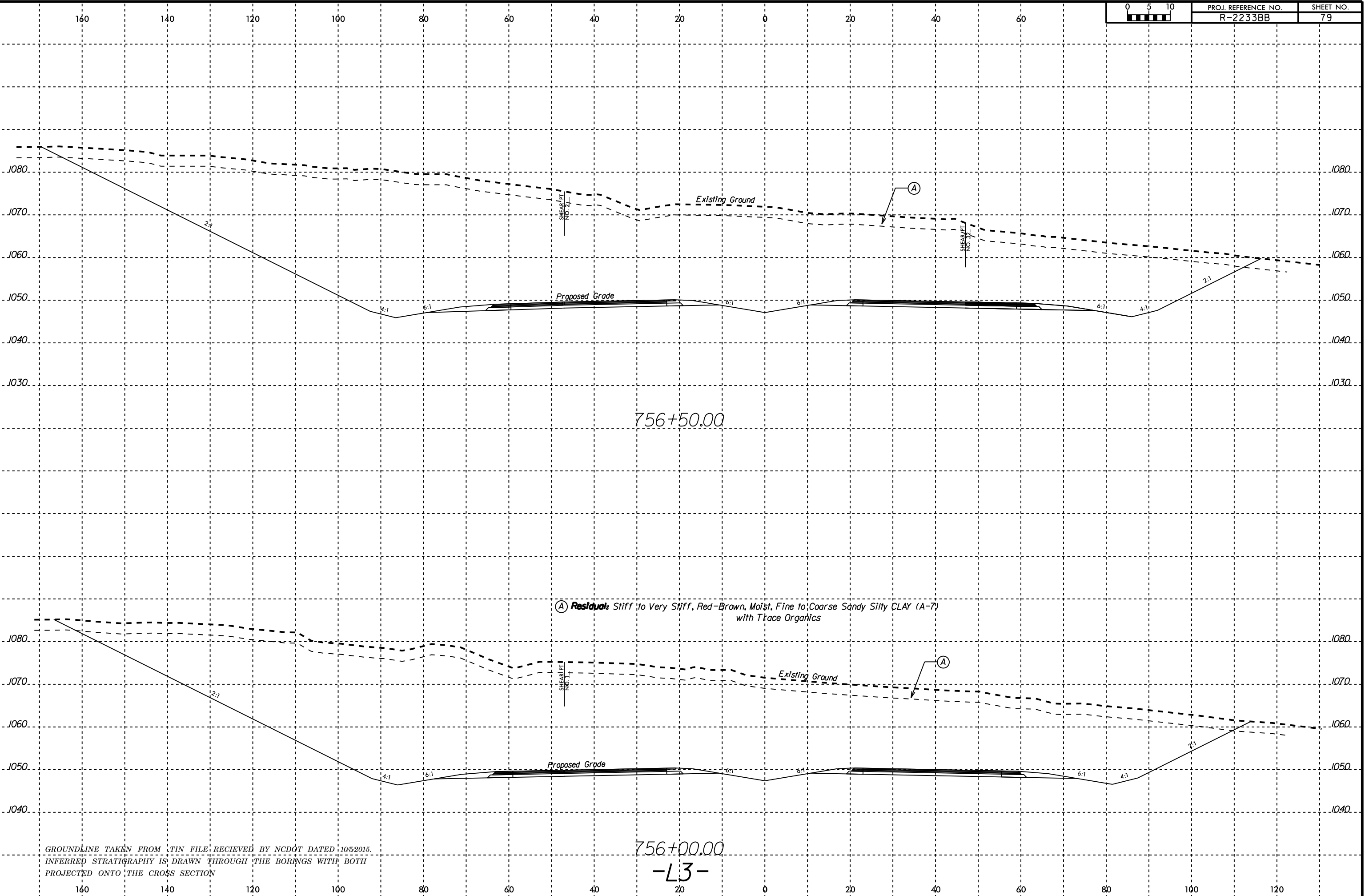
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6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	79

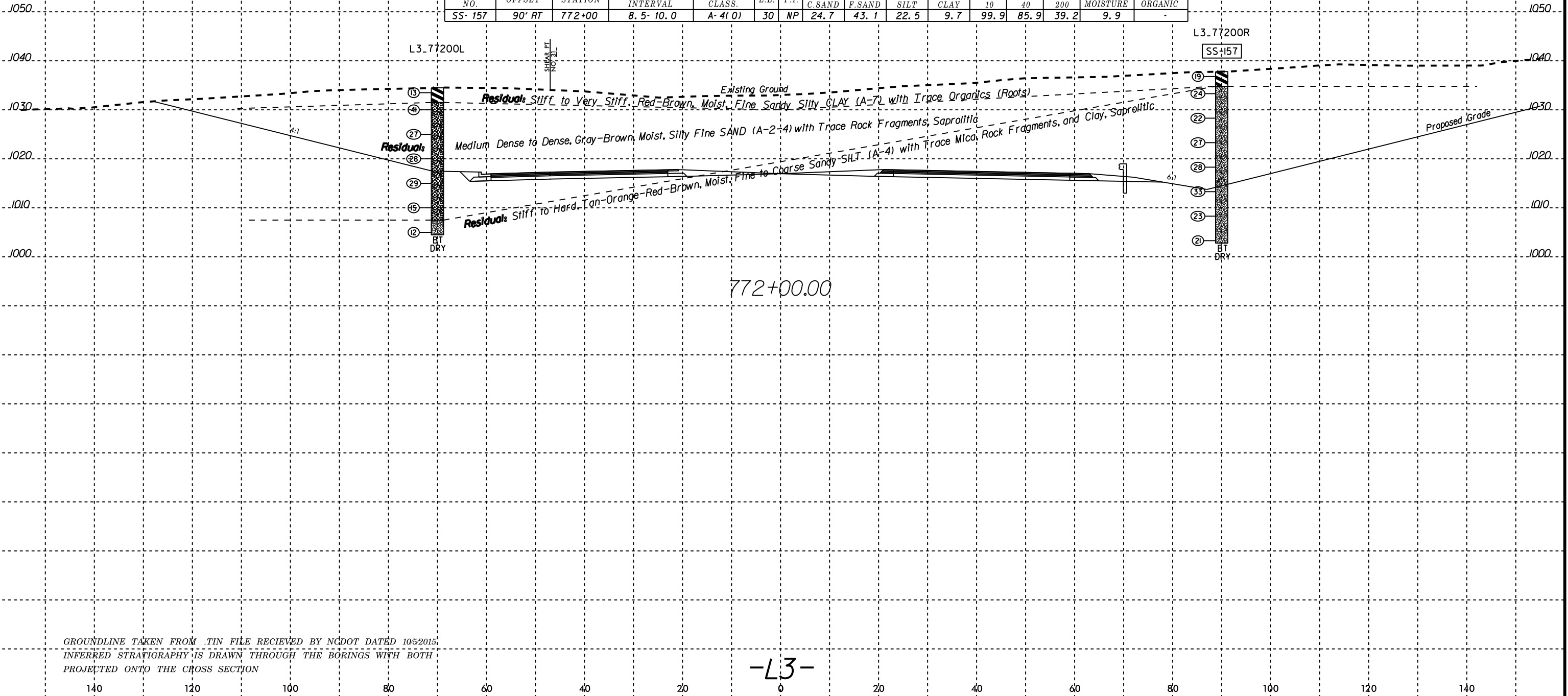


GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

-L3-

I:\MAR-2017\171\Projects\661661\661661-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_RDY_xsi.L3.dgn
 6/23/16
 Walker

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-157	90' RT	772+00	8.5-10.0	A-4(0)	30	NP	24.7	43.1	22.5	9.7	99.9	85.9	39.2	9.9	-



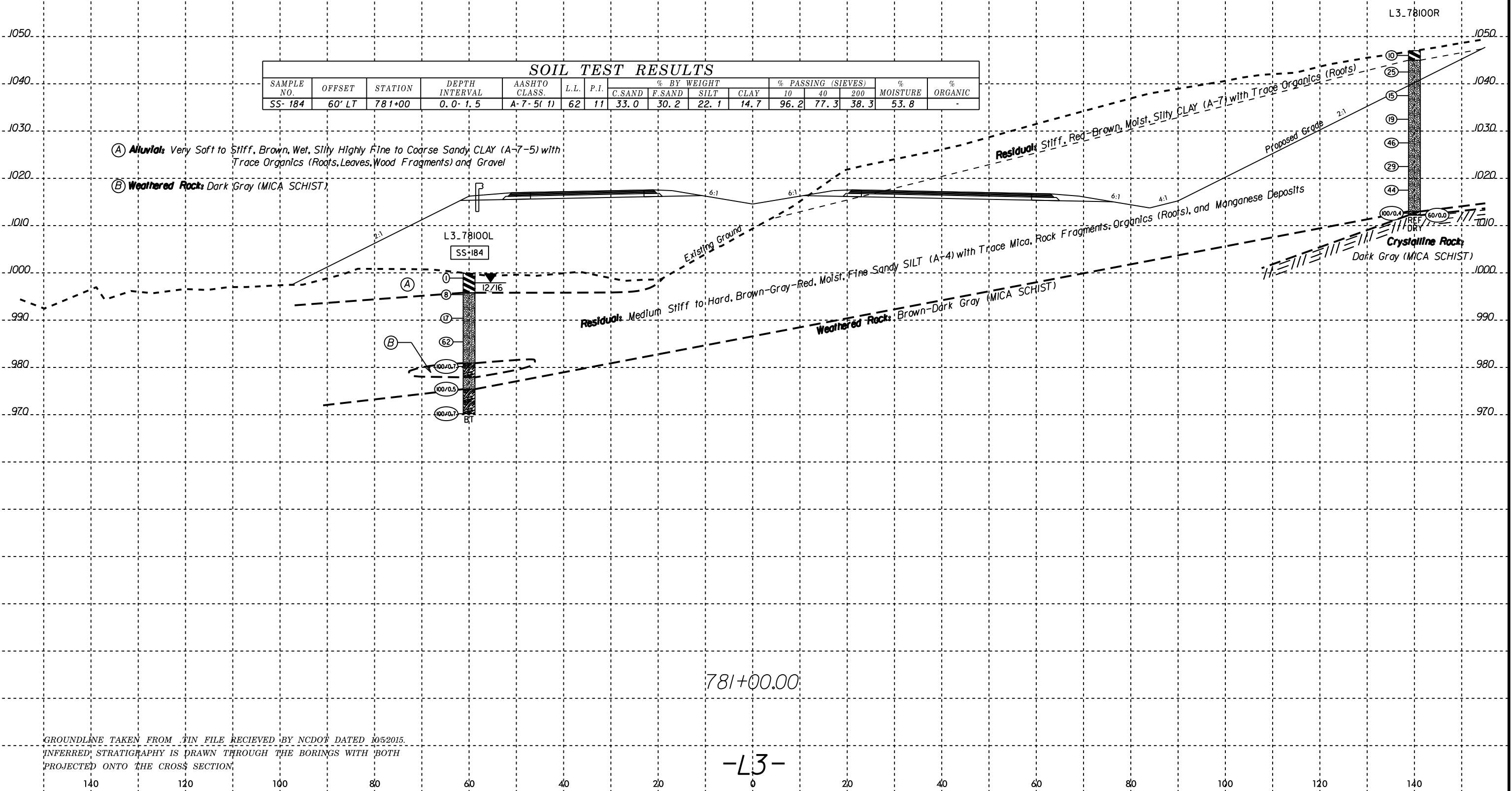
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GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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-184	60' LT	781+00	0.0-1.5	A-7-5(1)	62	11	33.0	30.2	22.1	14.7	96.2	77.3	38.3	53.8	-

(A) **Alluvials:** Very Soft to Stiff, Brown, Wet, Silty High Fine to Coarse Sandy CLAY (A-7-5) with Trace Organics (Roots, Leaves, Wood Fragments) and Gravel

(B) **Weathered Rocks:** Dark Gray (MICA SCHIST)



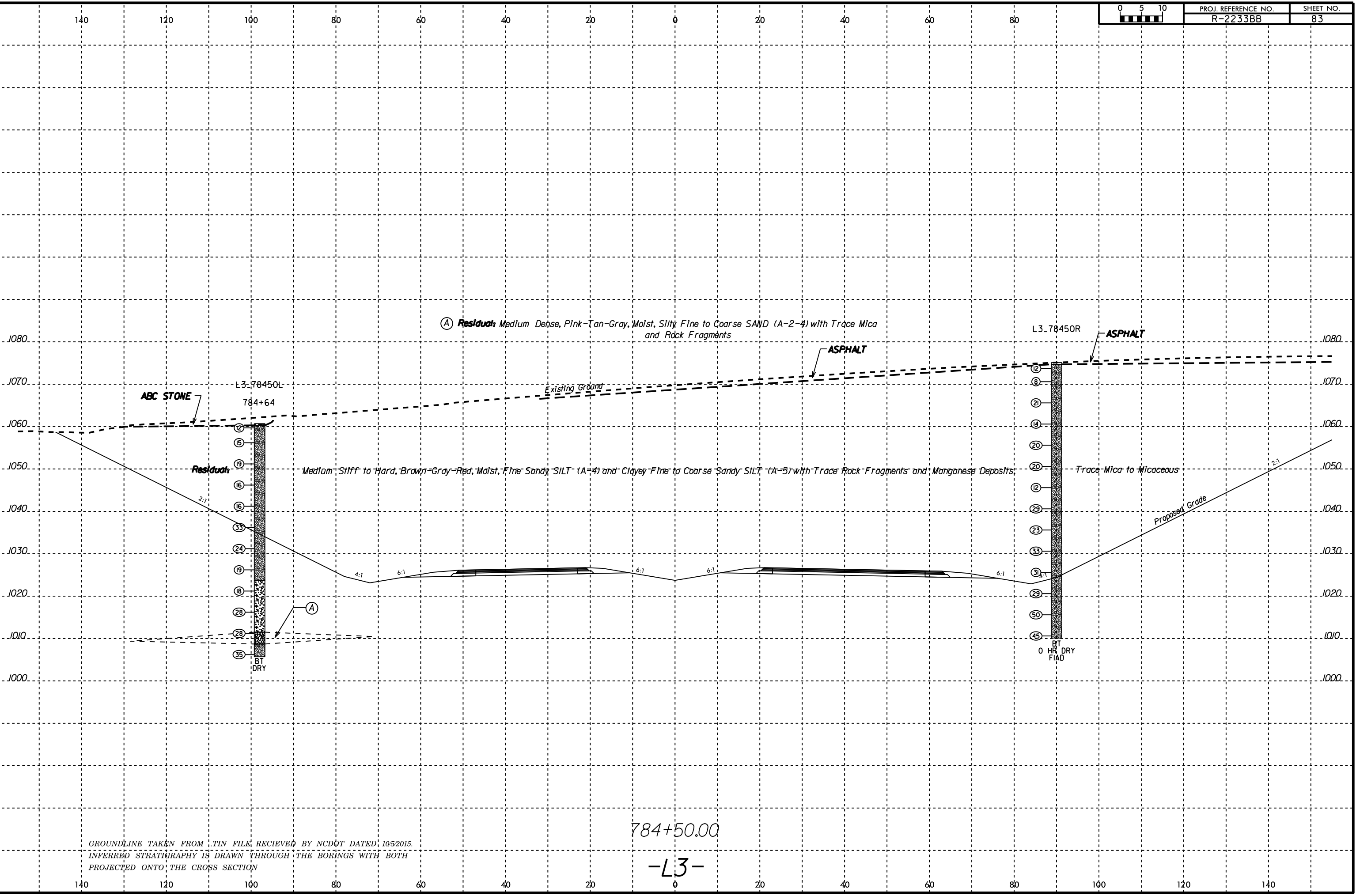
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 T.Walker

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION.

781+00.00

-L3-

6/23/16
15-MAR-2017 13:32
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Walker

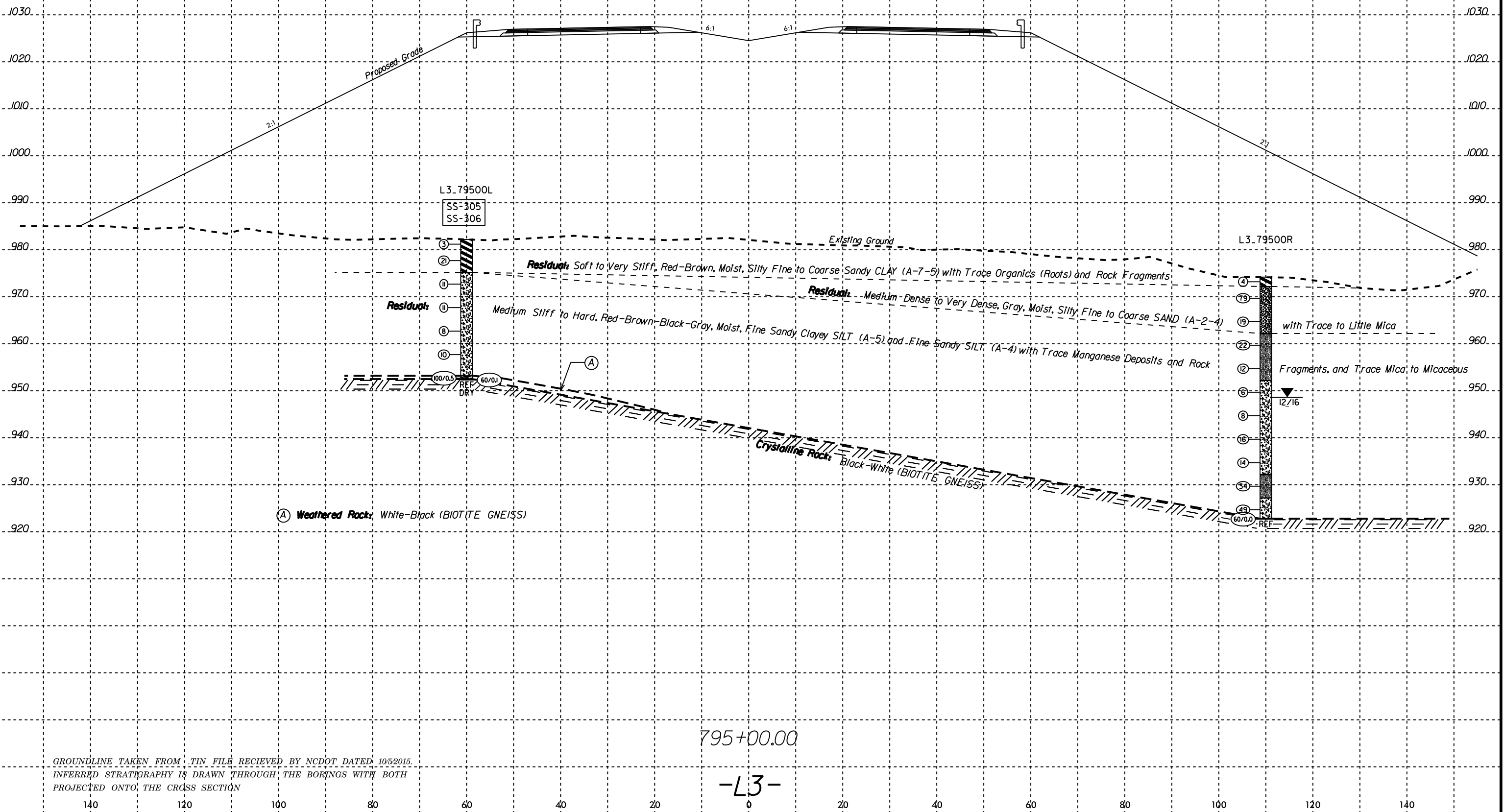


GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

784+50.00

-L3-

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-305	70' LT	791+00	0.0-0.4	-	-	-	-	-	-	-	-	-	-	22.3	9.5
SS-306	60' LT	795+00	0.4-1.5	A-7-5(8)	48	18	26.0	19.9	11.5	42.6	97.0	80.4	54.3	21.1	-



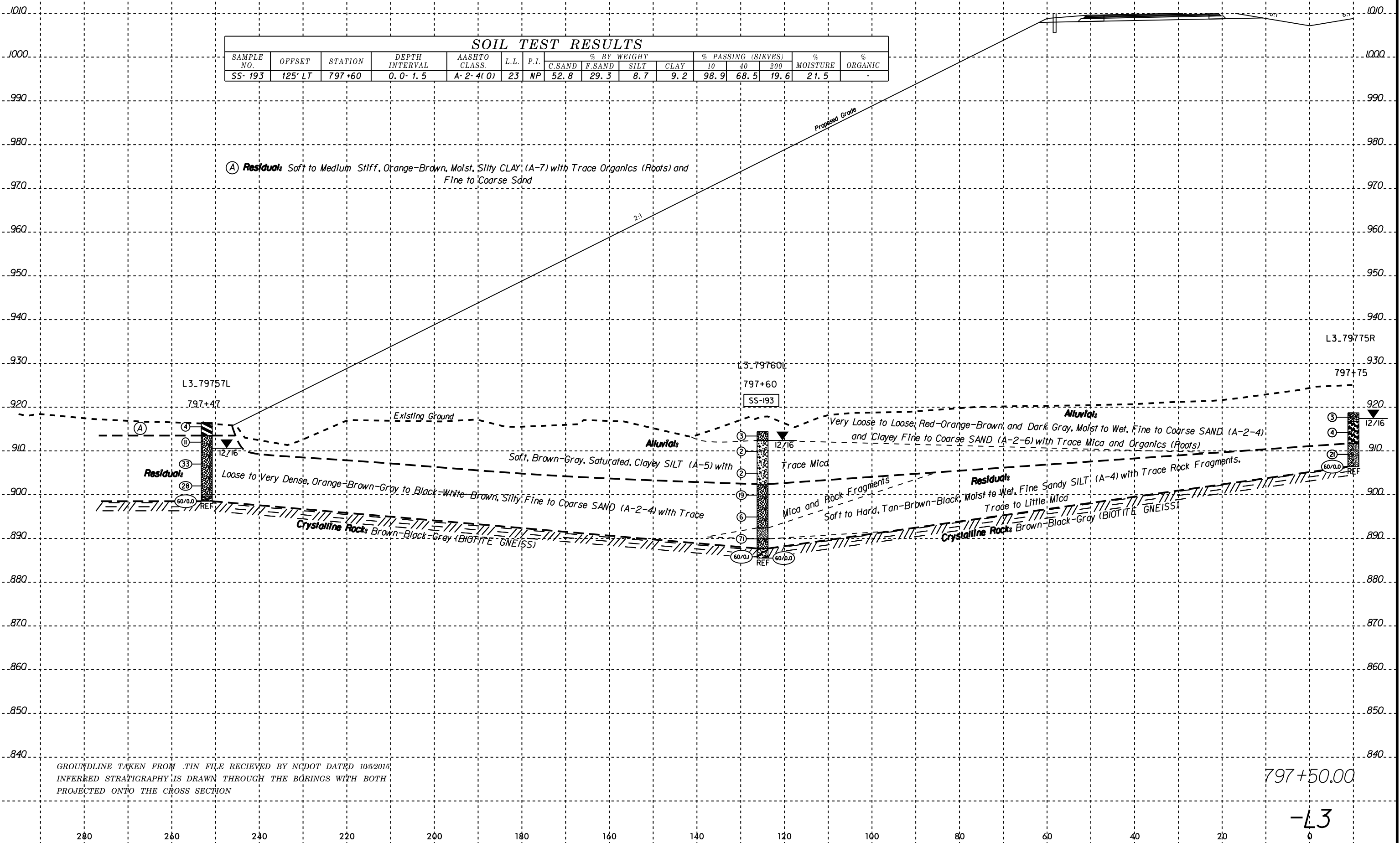
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795+00.00

-L3-

6/23/16
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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-193	125' LT	797+60	0.0-1.5	A-2-4(0)	23	NP	52.8	29.3	8.7	9.2	98.9	68.5	19.6	21.5	-



(A) **Residuals:** Soft to Medium Stiff, Orange-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots) and Fine to Coarse Sand

Residuals: Loose to Very Dense, Orange-Brown-Gray to Black-White-Brown, Silty, Fine to Coarse SAND (A-2-4) with Trace

Alluvials: Soft, Brown-Gray, Saturated, Clayey SILT (A-5) with Trace Mica and Rock Fragments

Alluvials: Very Loose to Loose, Red-Orange-Brown, and Dark Gray, Moist to Wet, Fine to Coarse SAND (A-2-4) and Clayey Fine to Coarse SAND (A-2-6) with Trace Mica and Organics (Roots)

Residuals: Soft to Hard, Tan-Brown-Black, Moist to Wet, Fine Sandy SILT (A-4) with Trace Rock Fragments. Trace to Little, Mica

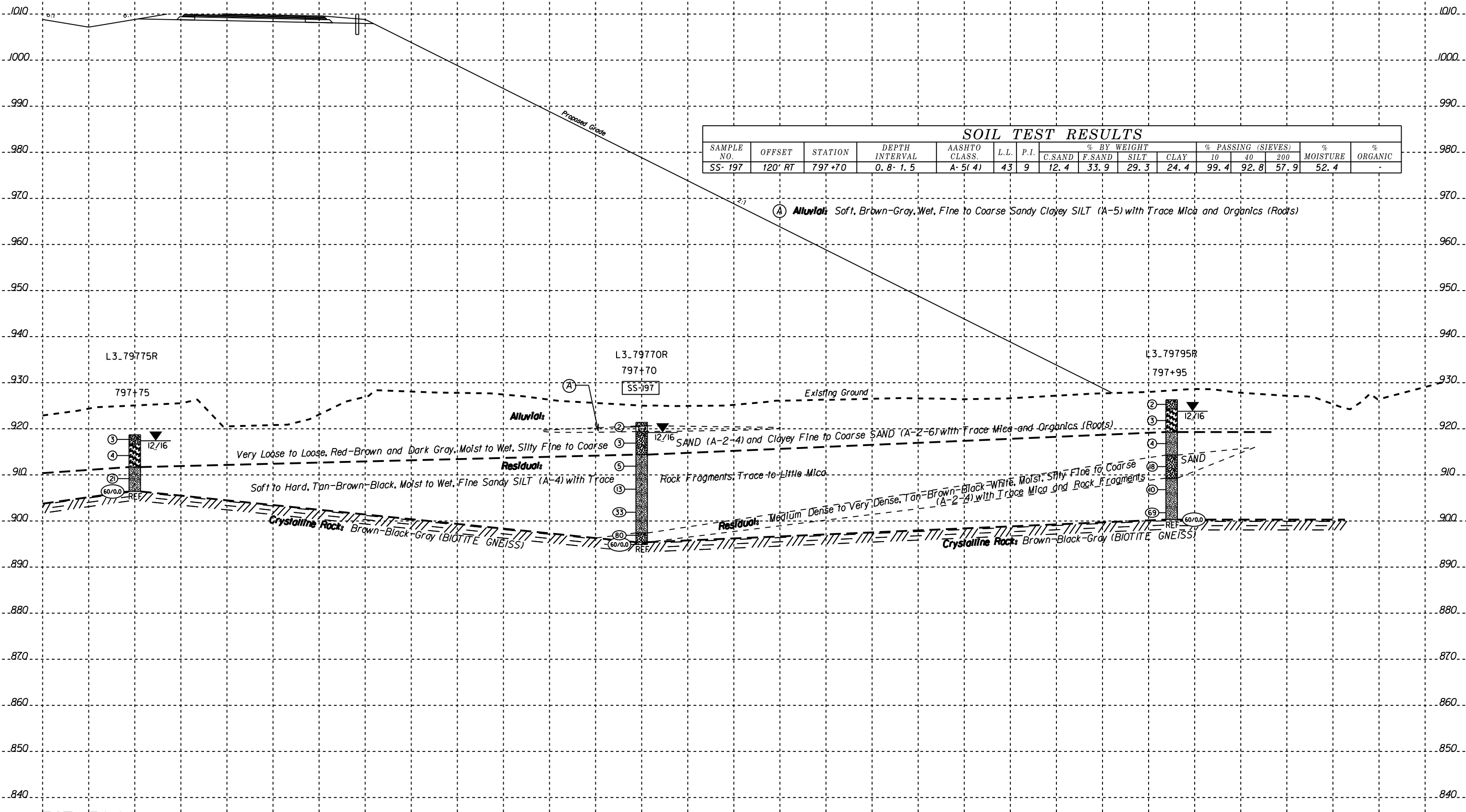
Crystalline Rocks: Brown-Black-Gray (BIOTITE GNEISS)

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

797+50.00

-L3

6/23/16



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-197	120' RT	797+70	0.8-1.5	A-5(4)	43	9	12.4	33.9	29.3	24.4	99.4	92.8	57.9	52.4	-

(A) **Alluvial:** Soft, Brown-Gray, Wet, Fine to Coarse Sandy Clayey SILT (A-5) with Trace Mica and Organics (Roots)

Very Loose to Loose, Red-Brown and Dark Gray, Moist to Wet, Silty Fine to Coarse SAND (A-2-4) and Clayey Fine to Coarse SAND (A-2-6) with Trace Mica and Organics (Roots)

Soft to Hard, Tan-Brown-Black, Moist to Wet, Fine Sandy SILT (A-4) with Trace

Medium Dense to Very Dense, Tan-Brown-Black-White, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica and Rock Fragments

Crystalline Rock: Brown-Black-Gray (BIOTITE GNEISS)

Crystalline Rock: Brown-Black-Gray (BIOTITE GNEISS)

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 6/23/16
 Walker

797+50.00

-L3-

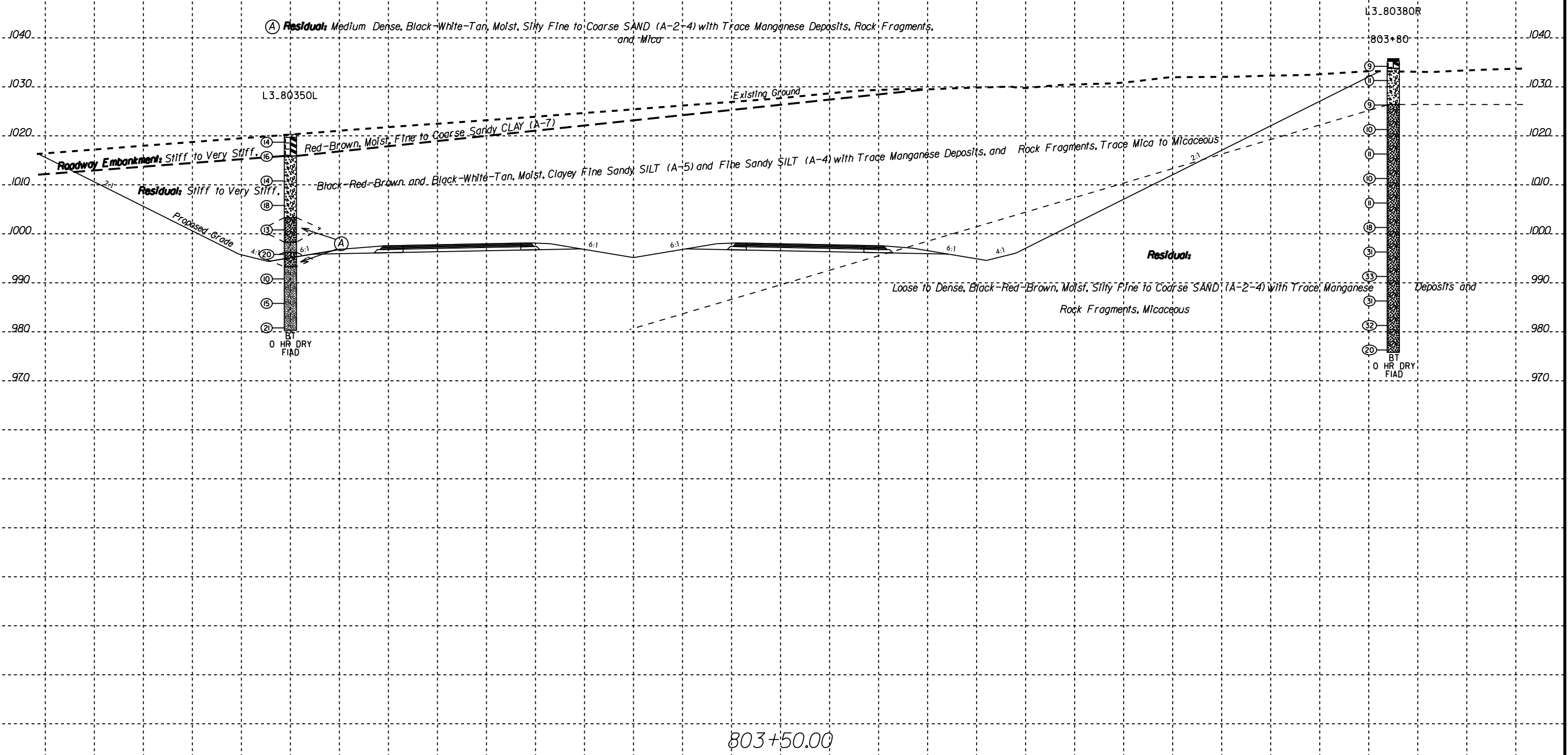
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 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16

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PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	88

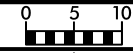


803+50.00

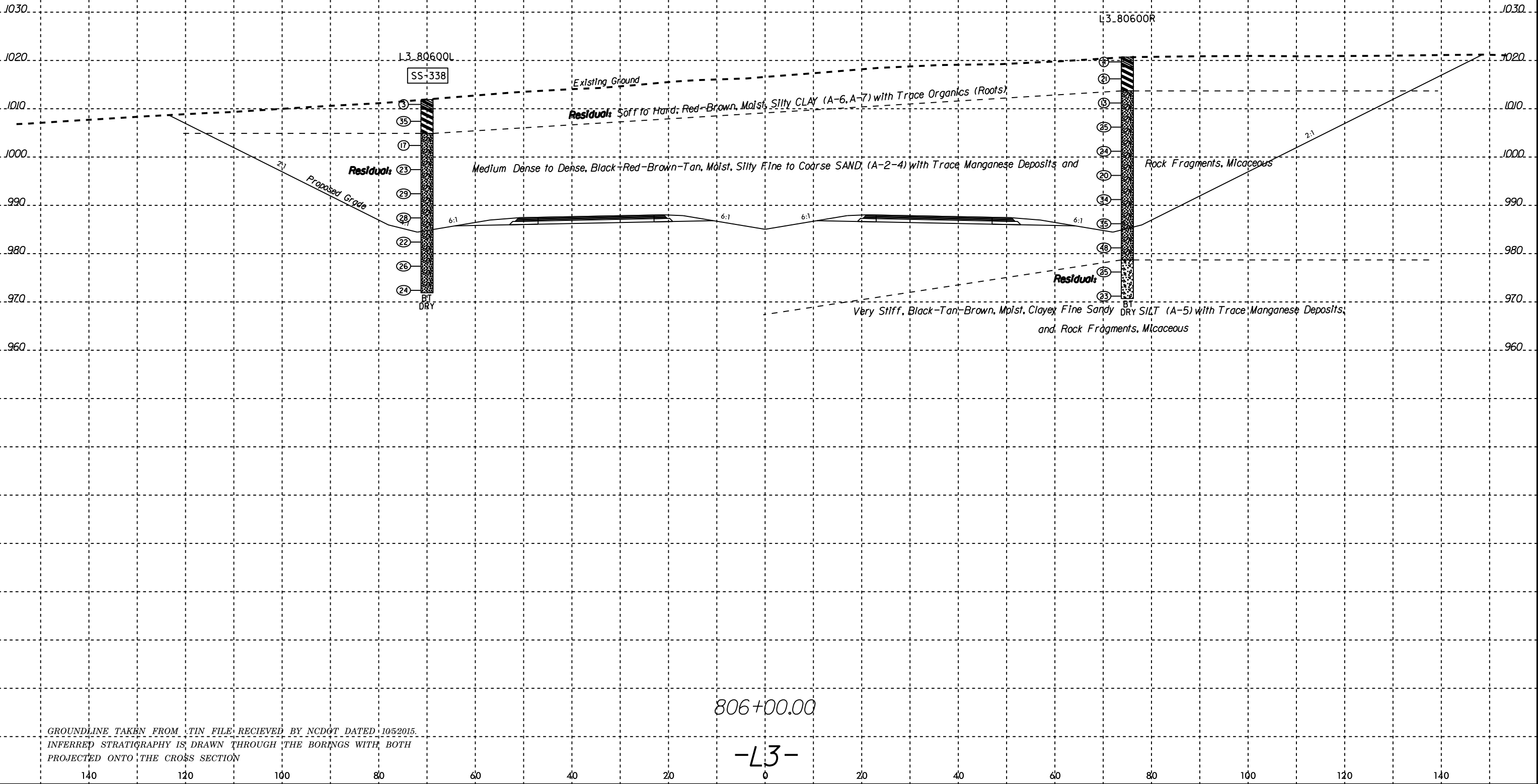
-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

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 Walker



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-338	70' LT	806+00	8.5-10.0	A-2-4(0)	28	NP	19.6	57.2	17.1	6.1	100.0	92.4	30.1	11.1	-



140

120

100

80

60

40

20

0

20

40

60

80

L3-84274L

842+74

(A) Residuals Soft to Very Stiff, Brown to Red-Brown, Moist, Fine Sandy, Silty CLAY (A-6) and Fine Sandy CLAY (A-7) with Trace Organics (Roots and Wood Fragments) and Rock Fragments

1060

1060

1050

1050

1040

1040

1030

1030

1020

1020

1010

1010

1000

1000

990

990

980

980

Residuals Medium Stiff to Stiff, Black-Red-Brown, Moist, Highly Fine to Coarse Sandy SILT (A-4) with Trace Manganese Deposits and Rock Fragments

Residuals Medium Dense, White-Gray-Tan, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Rock Fragments

Weathered Rocks White-Dark Gray (MICA SCHIST)
Crystalline Rocks White-Dark Gray (MICA SCHIST)

Proposed Grade

Existing Ground

842+50.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
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

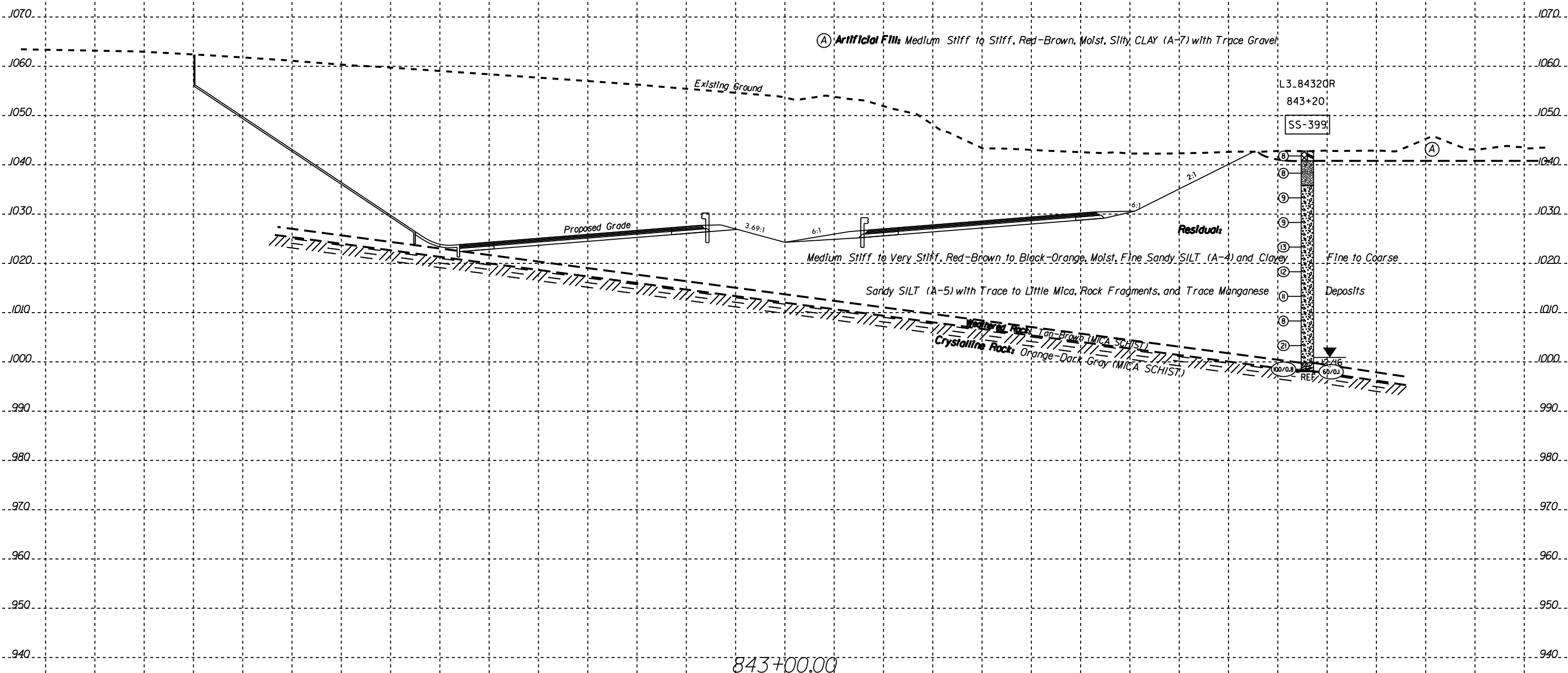
80

100

120

140

SOIL TEST RESULTS															
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-399	106' RT	843+20	8.5- 10.0	A-5(10)	55	10	13.8	14.9	55.3	16.0	99.1	89.5	73.7	28.1	-



15-MAR-2017 13:32 E:\Projects\661661\661661-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_RDY_xsi.L3.dgn

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

-L3-

6/23/16

140

120

100

80

60

40

20

0

20

40

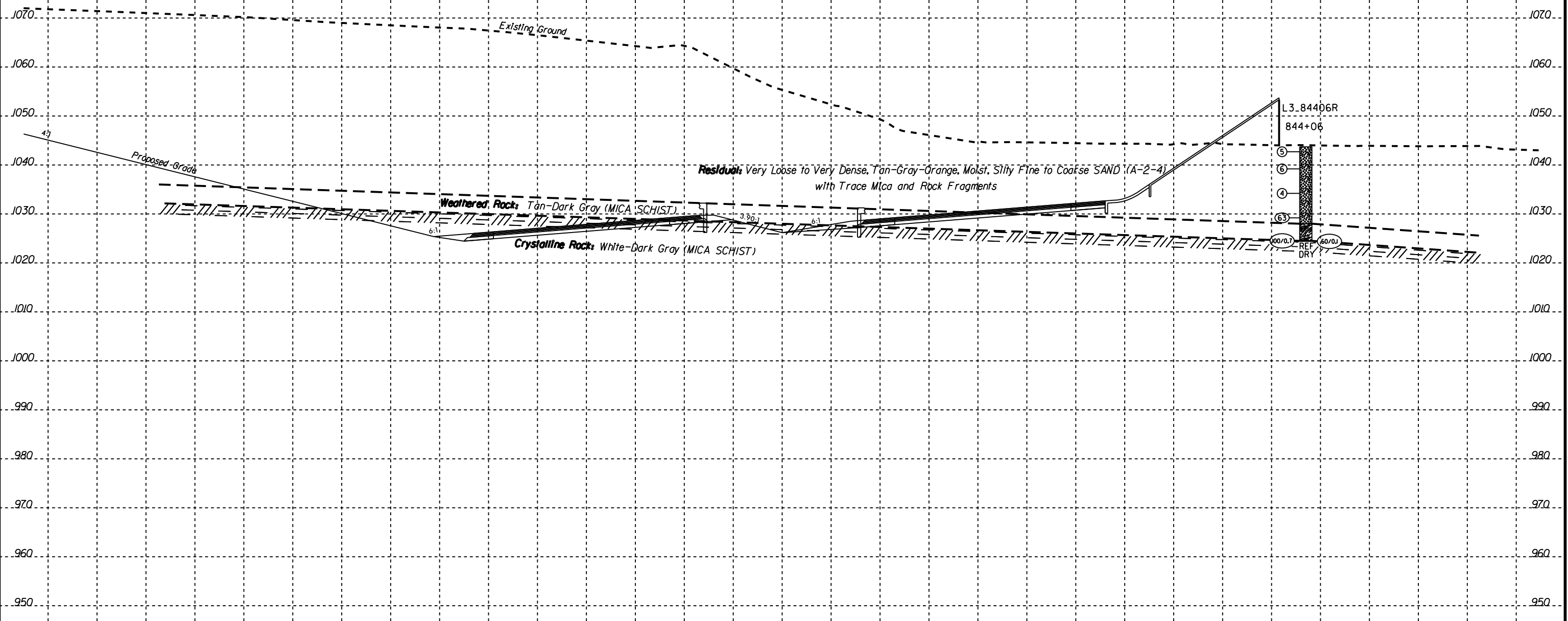
60

80



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	93

PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	93



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

844+00.00
 -L3-

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 User: Walker

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16

140

120

100

80

60

40

20

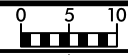
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20

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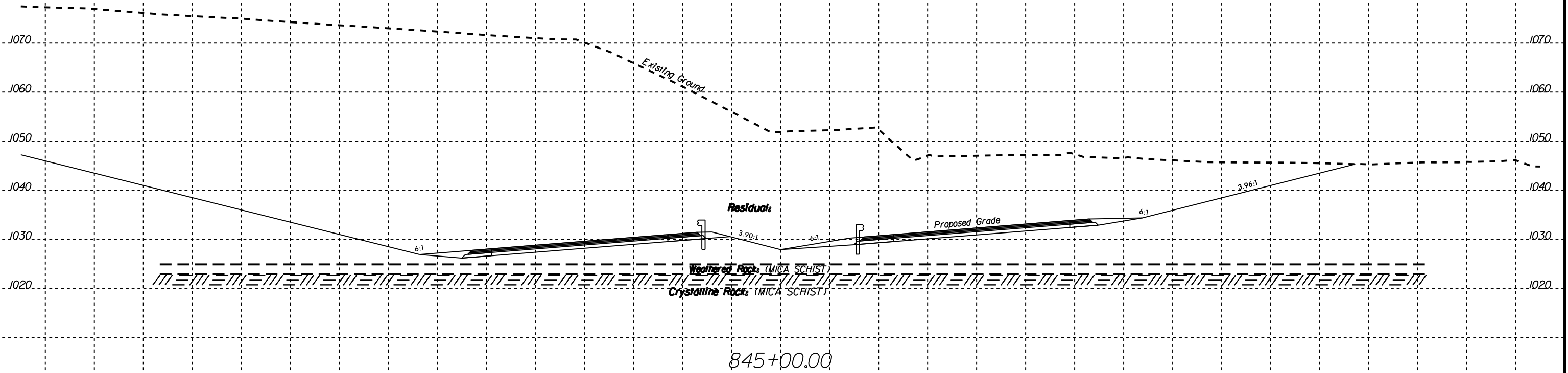
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80

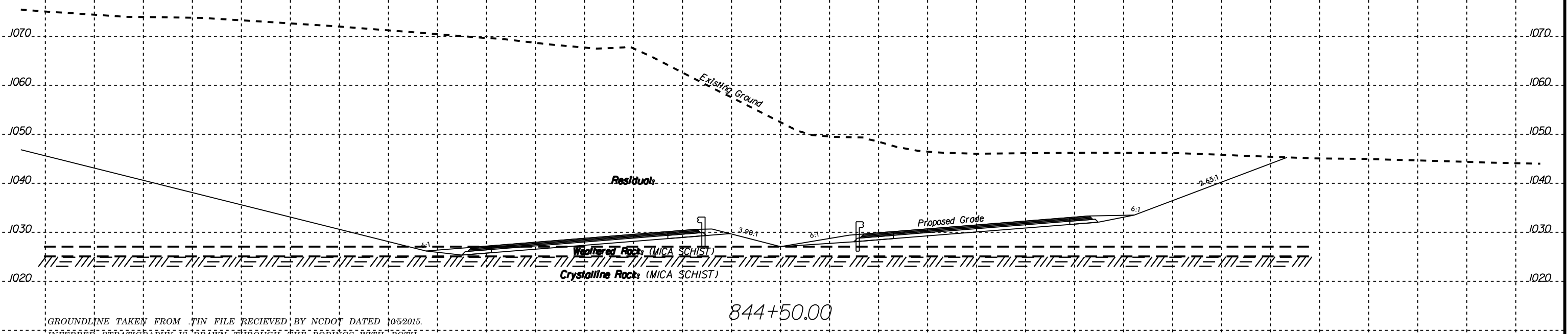


PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	94

PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	94



845+00.00



844+50.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

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 T\Walker
 Rutherford Co.\CA00.GEOTECH\asc\R2233BB_RDY_xsl.L3.dgn

140

120

100

80

60

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0

20

40

60

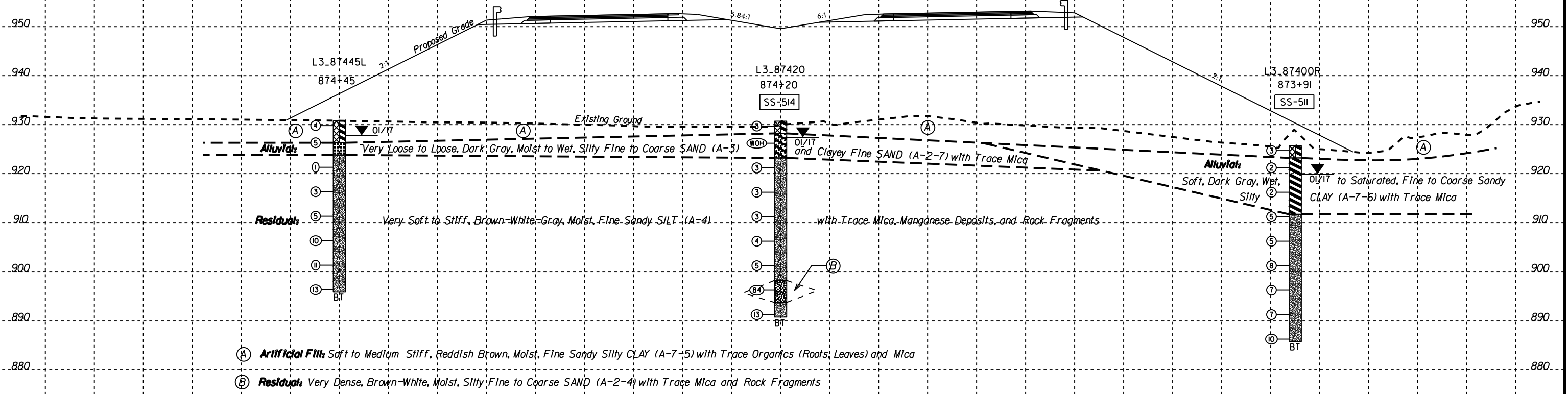
80

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-511	105' RT	873+91	3.5-5.0	A-7-6(3)	41	14	42.0	14.6	18.3	25.1	98.3	70.0	44.2	39.9	-
SS-514	CL	874+20	0.0-1.5	A-7-5(11)	47	15	3.3	31.3	29.0	36.4	100.0	99.2	69.3	35.0	-



- (A) **Artificial Fill:** Soft to Medium Stiff, Reddish Brown, Moist, Fine Sandy Silty CLAY (A-7-5) with Trace Organics (Roots, Leaves) and Mica
- (B) **Residuals:** Very Dense, Brown-White, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica and Rock Fragments

874+00.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:32
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6/23/16

140

120

100

80

60

40

20

0

20

40

60

80

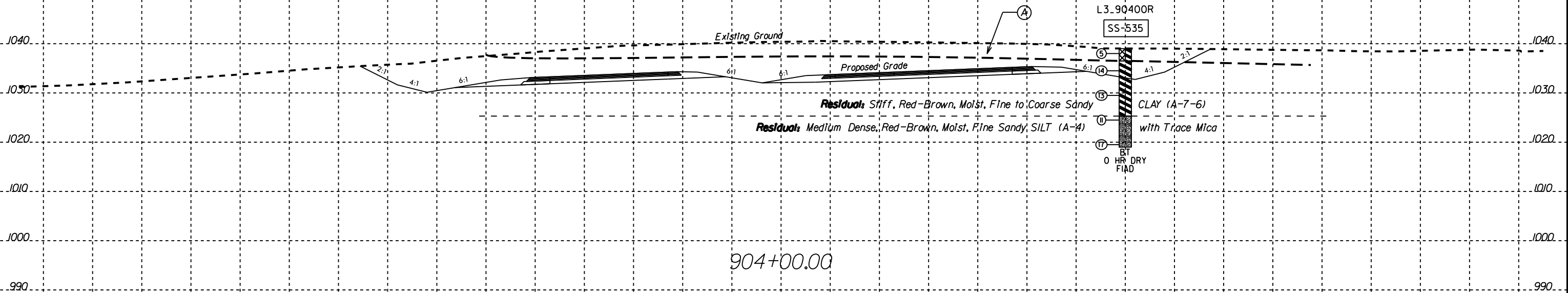


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R-2233BB

SHEET NO.
96

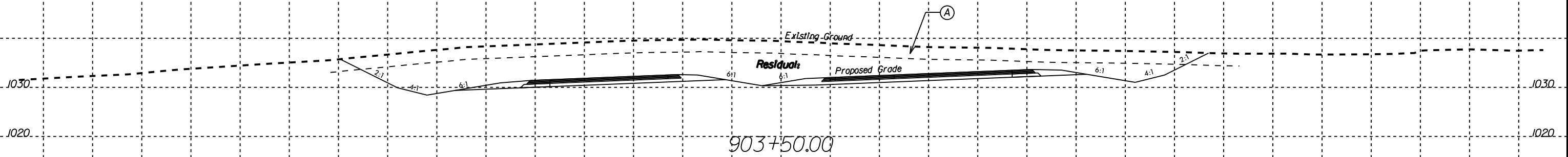
SOIL TEST RESULTS

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-535	70' RT	904+00	3.5-5.0	A-7-6(21)	59	30	15.9	15.4	9.4	59.3	99.3	91.3	69.9	23.9	-



904+00.00

(A) Artificial Fill: Medium Stiff, Moist, Fine Sandy CLAY (A-7) with Trace Mica and Organics (Roots)



903+50.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

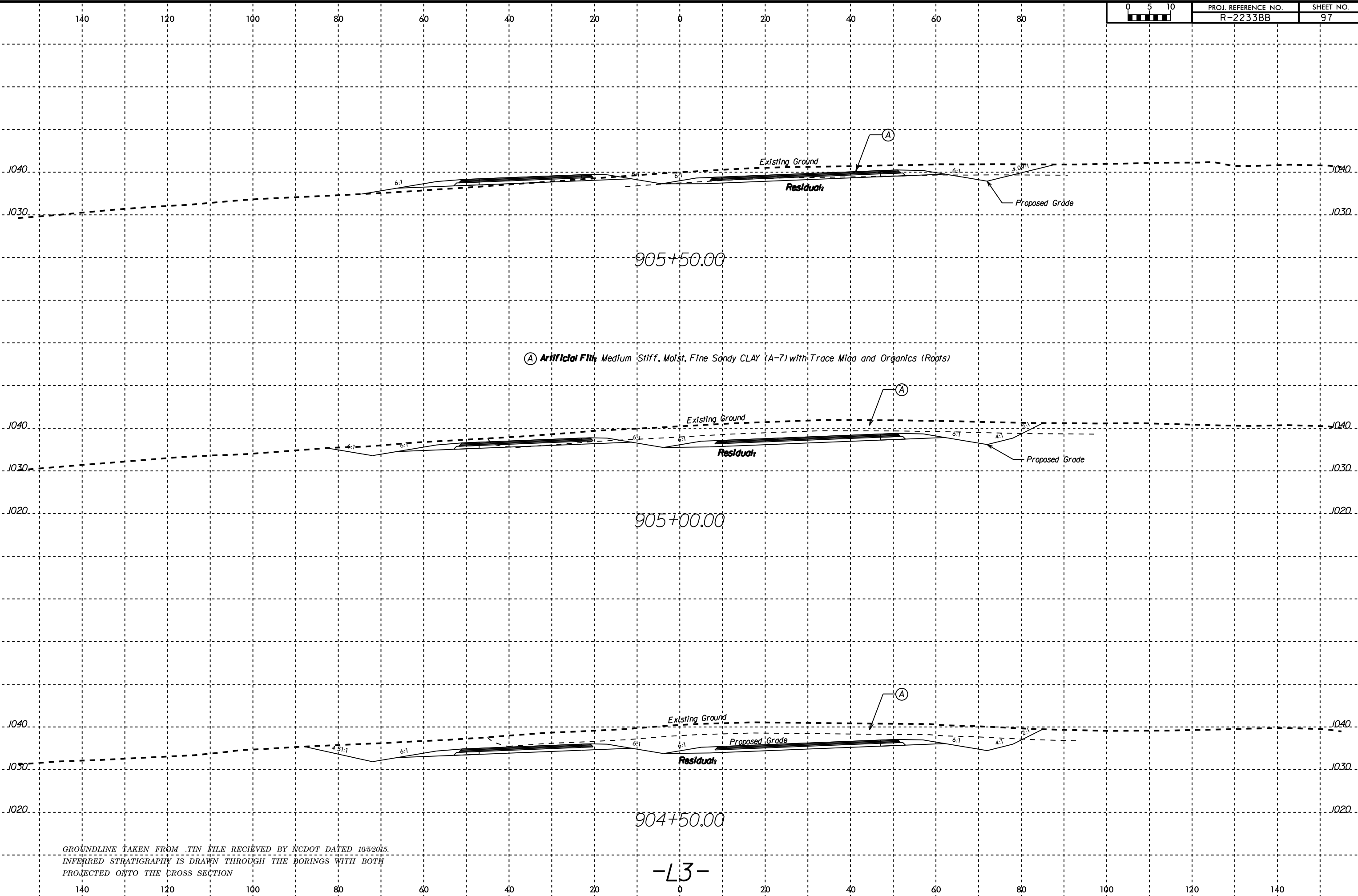
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6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
97



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A: Walker

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

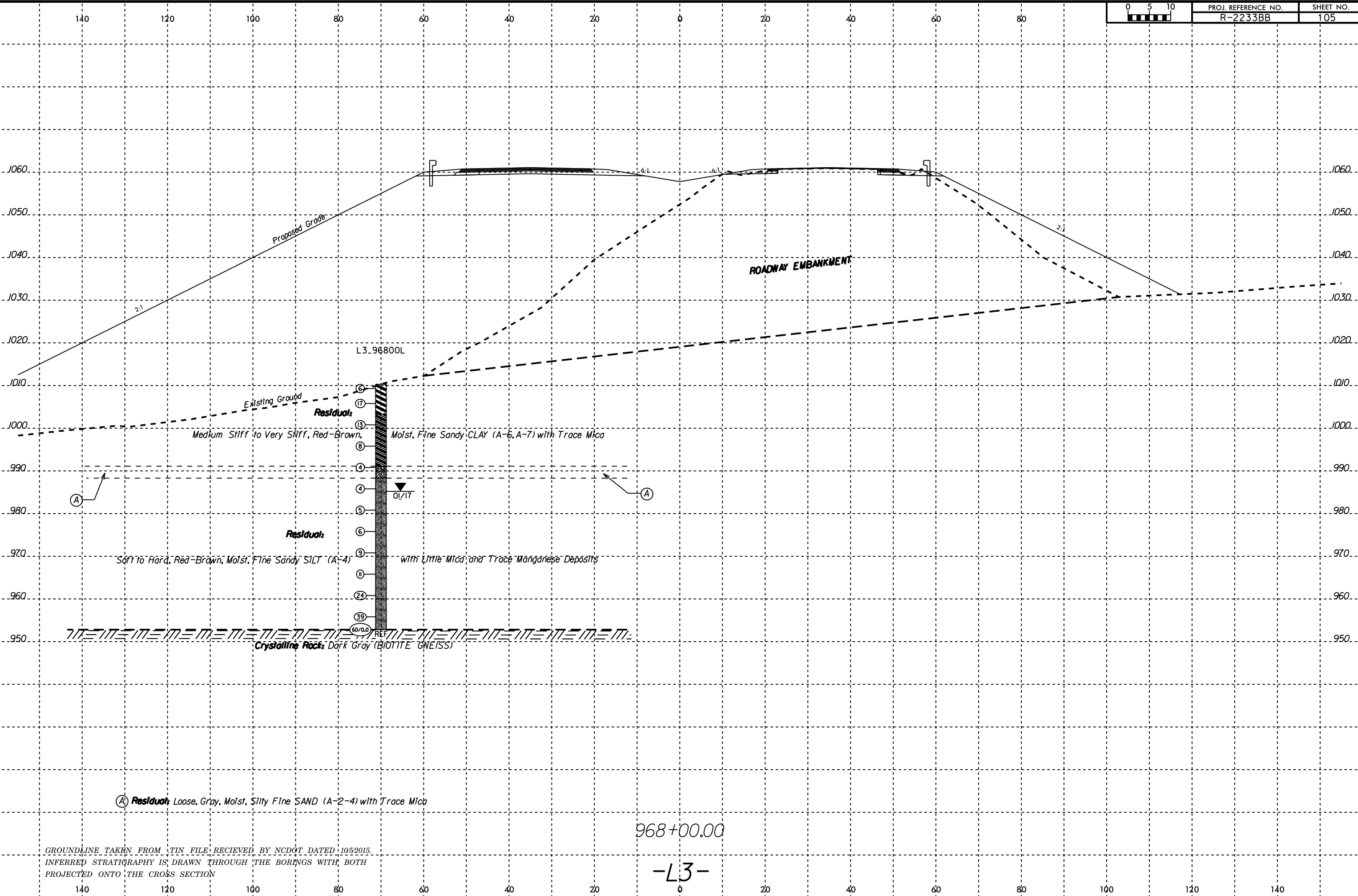
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6/23/16



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SHEET NO.
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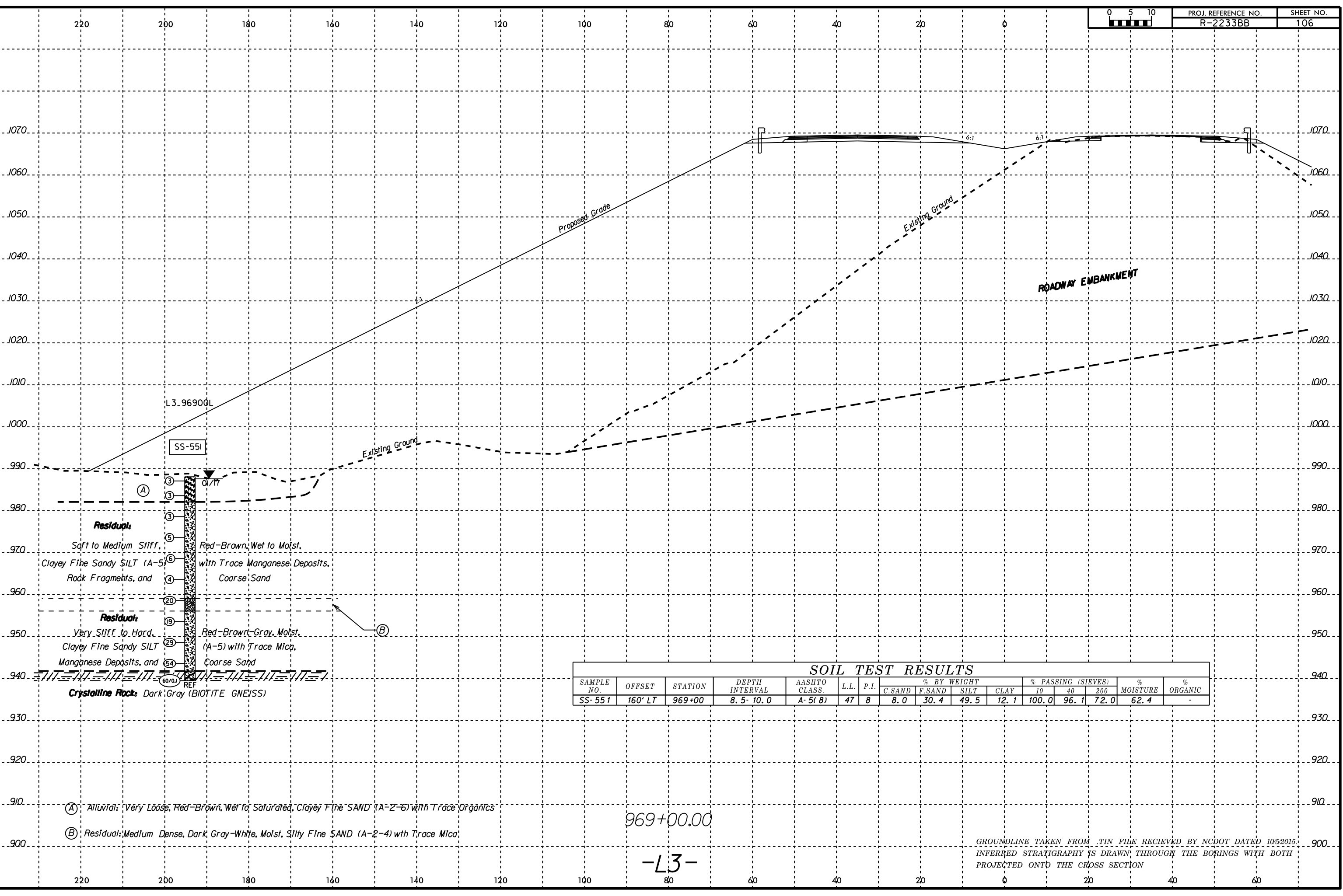


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Walker

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

968+00.00

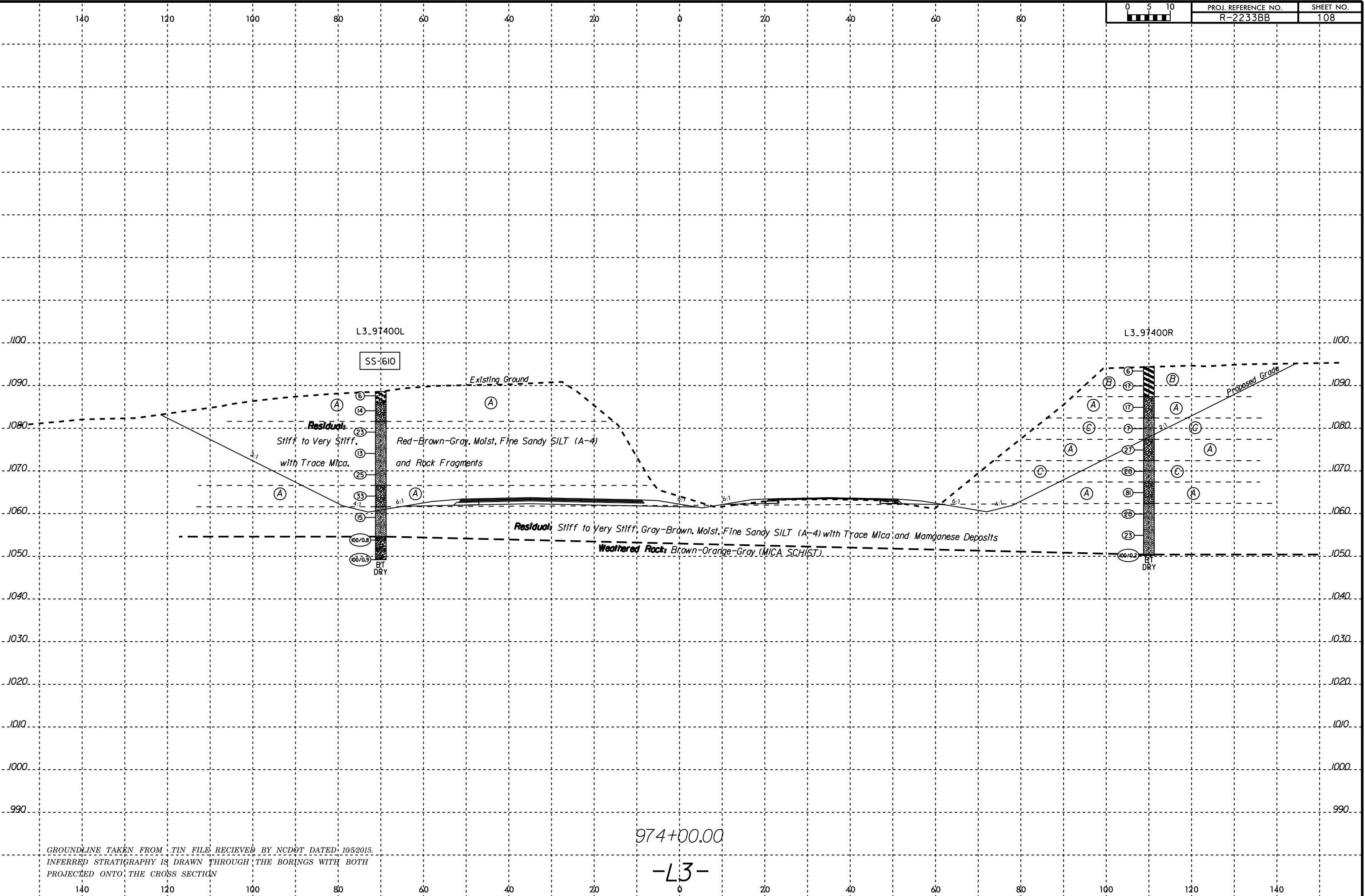
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SOIL TEST RESULTS

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-551	160' LT	969+00	8.5-10.0	A-5(8)	47	8	8.0	30.4	49.5	12.1	100.0	96.1	72.0	62.4	-

6/23/16

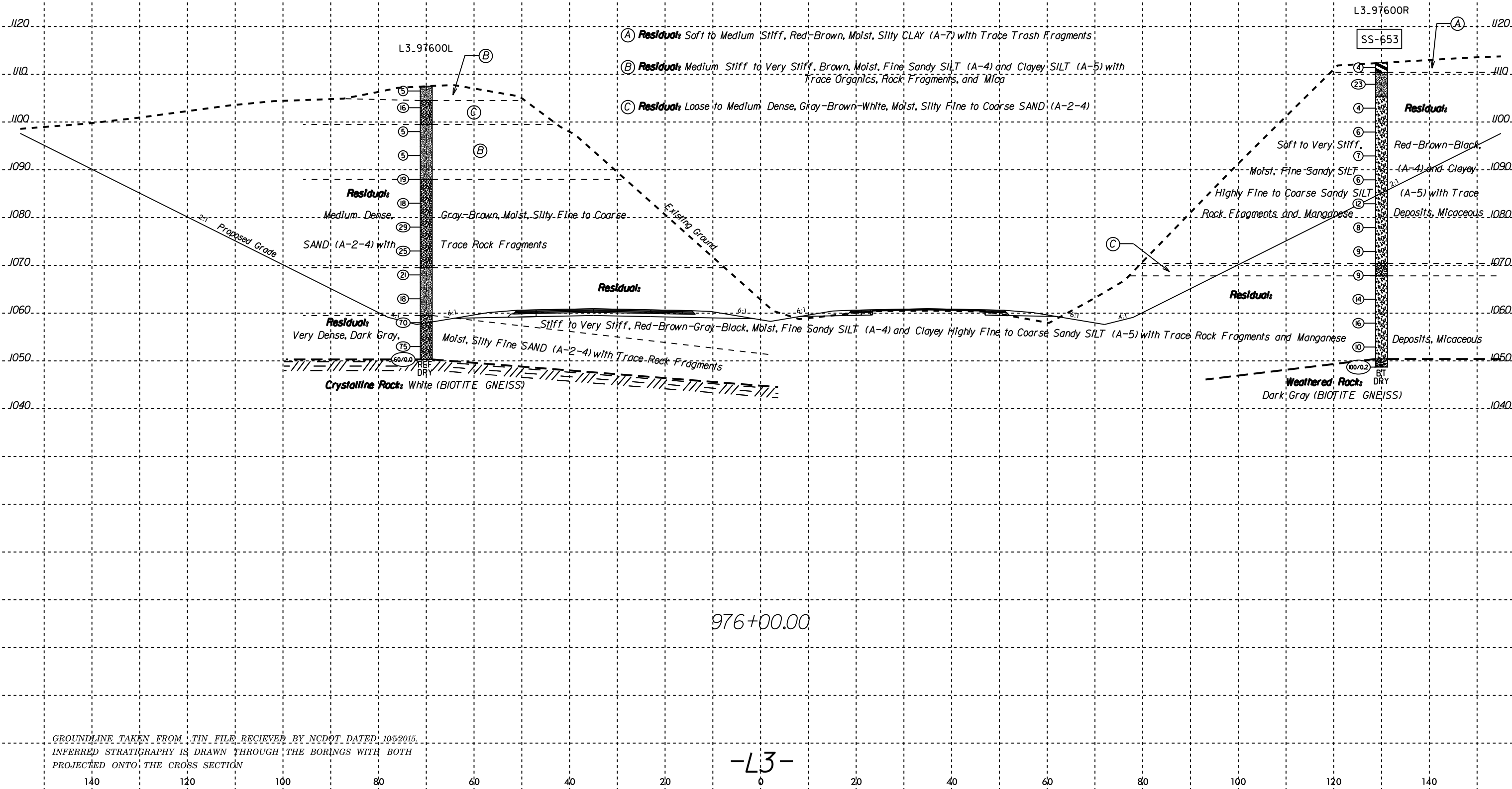


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Walker

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

-L3-

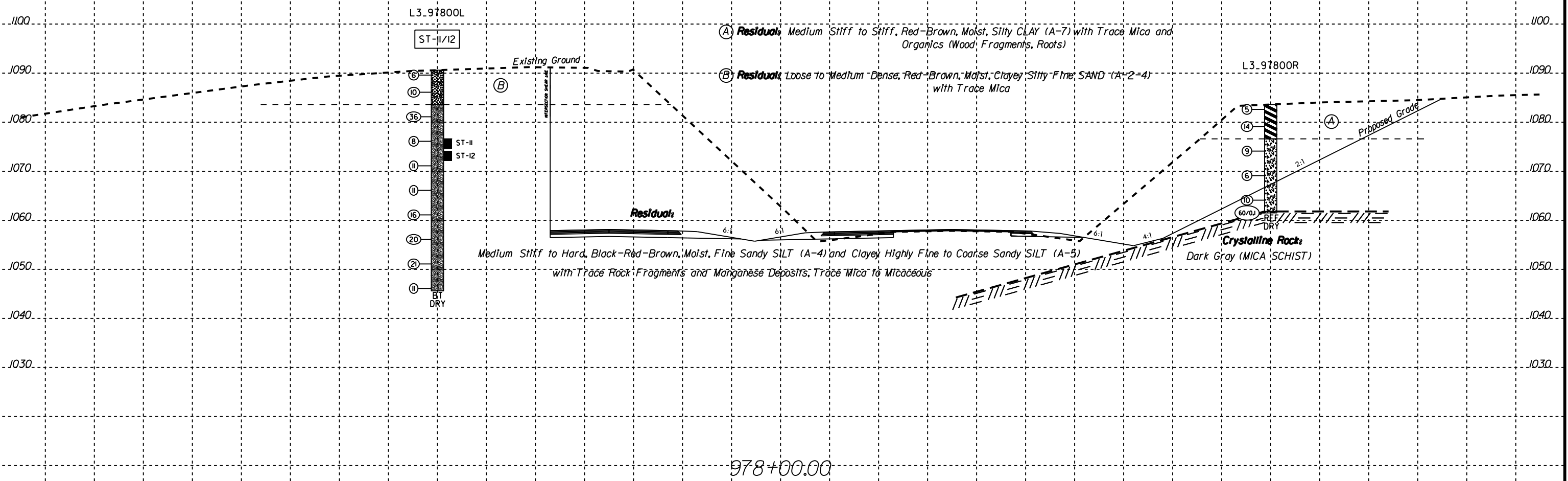
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-653	130' RT	976+00	13.5-15.0	A-5(1)	44	5	24.4	32.3	24.5	18.8	99.6	86.7	48.7	20.8	-



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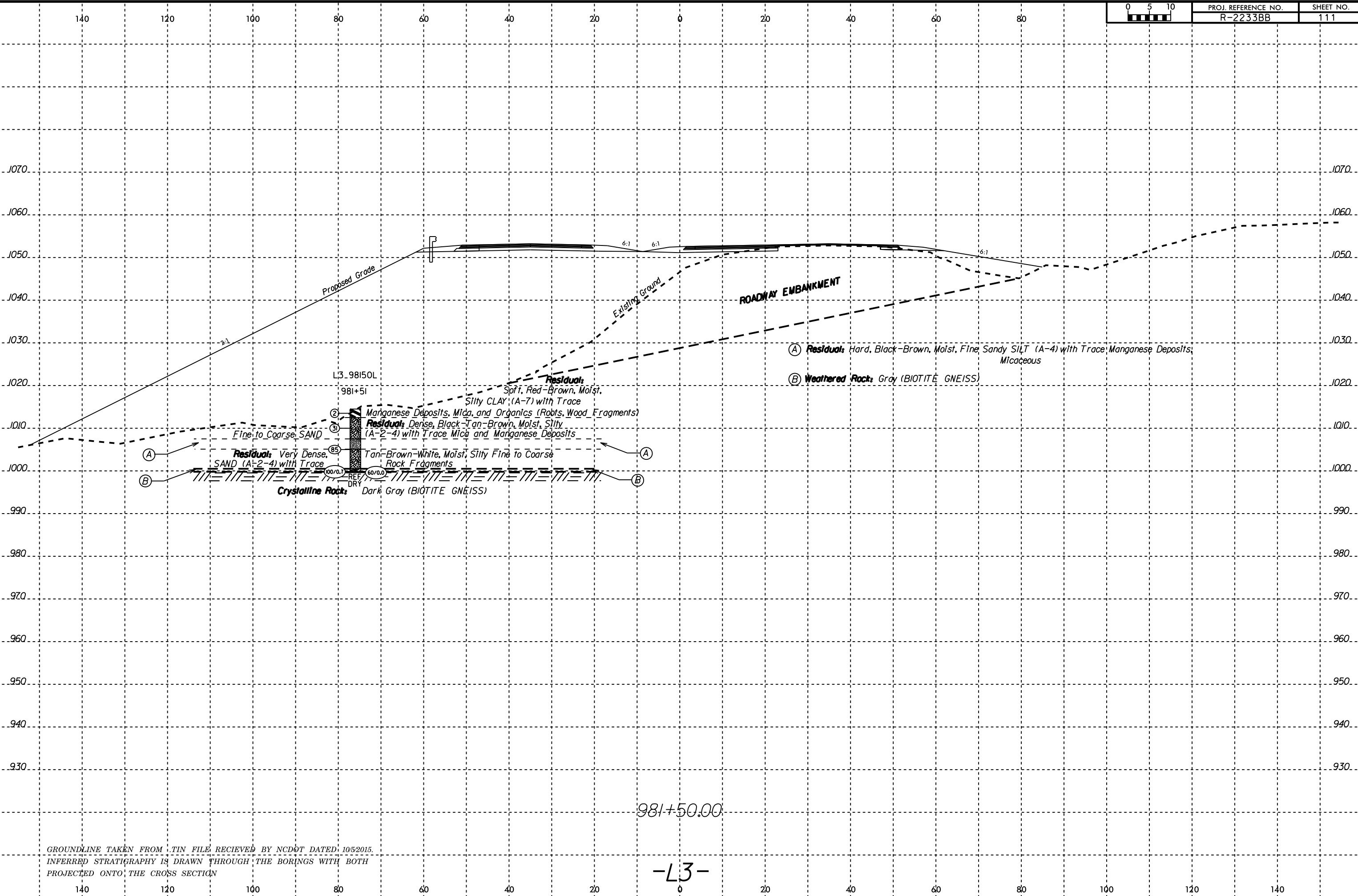
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
							ST-11	70' LT	978+00	14.0-16.0	A-7-5(11)	56	16		
ST-12	70' LT	978+00	18.5-20.5	A-7-5(11)	56	16	18.0	19.9	24.4	37.7	100.0	89.5	64.8	29.5	-



15-MAR-2017 13:33
E:\Projects\66166\66166-0203 NCDOT-R-2233BB Rutherford Co.\CA000_GEO1TECH\asc\VR2233BB_RDY_xsi.L3.dgn

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED: 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION



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Walker

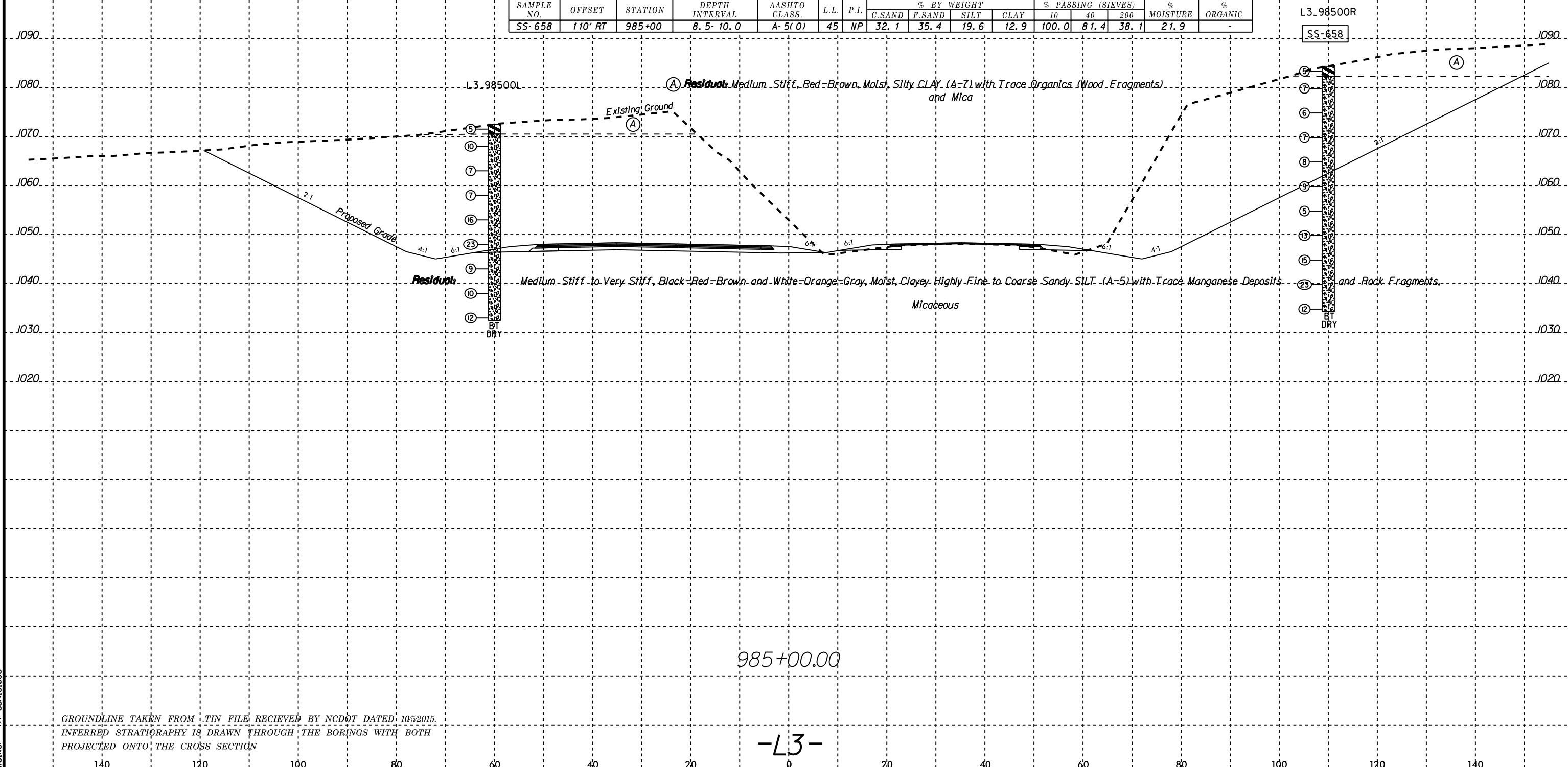
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

981+50.00

-L3-

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-658	110' RT	985+00	8.5-10.0	A-5(0)	45	NP	32.1	35.4	19.6	12.9	100.0	81.4	38.1	21.9	-



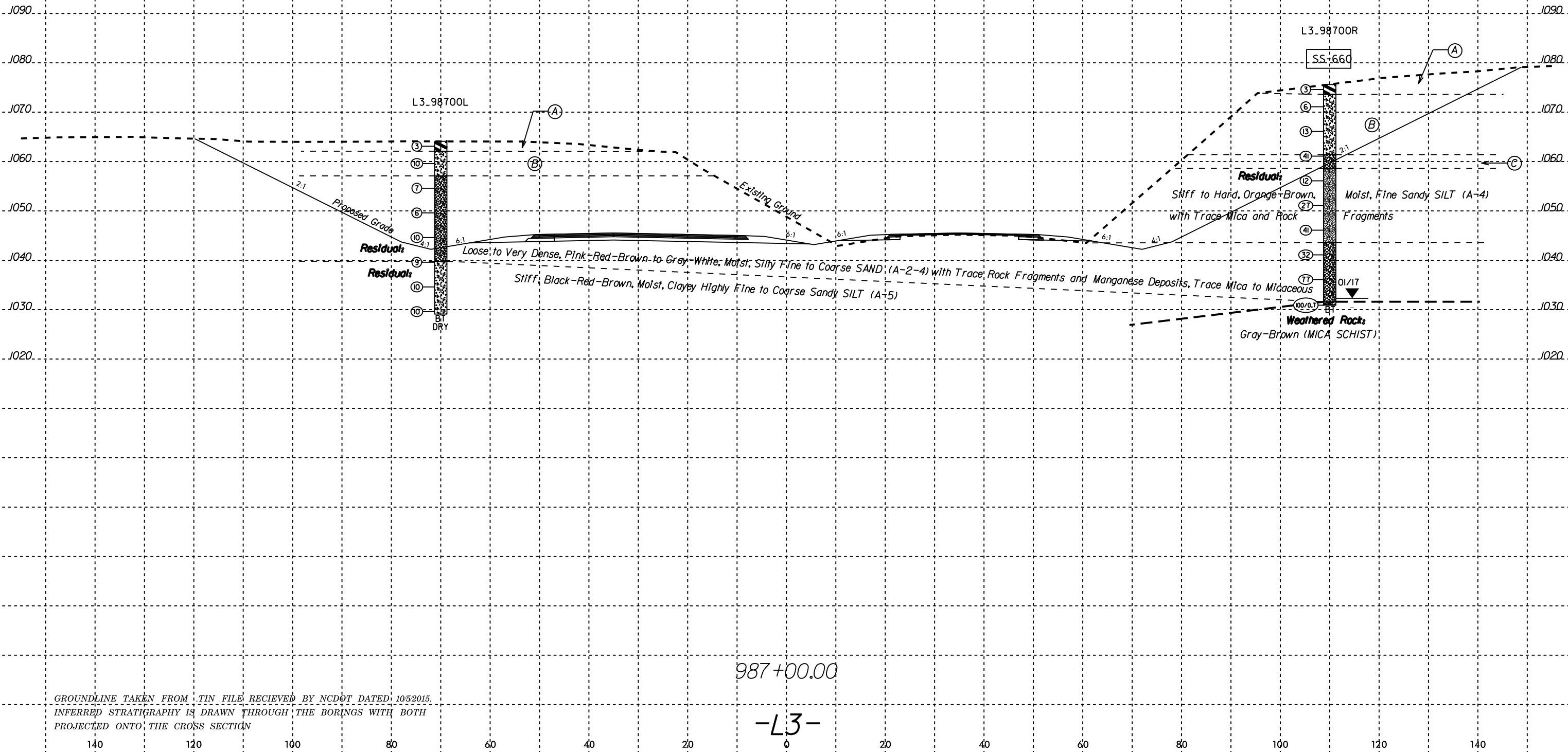
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GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

-L3-

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-660	110' RT	987+00	0.0-0.4	-	-	-	-	-	-	-	-	-	-	33.6	17.0

- (A) **Residual:** Soft, Red-Brown, Moist, Fine to Coarse Sandy SILTY CLAY (A-7) with Trace Organics (Roots), Mica, and Rock Fragments.
- (B) **Residual:** Medium Stiff to Stiff, Red-Brown-Gray, Moist, Clayey SILT (A-5) with Trace Organics (Roots), Mica, and Rock Fragments.
- (C) **Residual:** Dense, Dark Gray-White, Moist, Silty Fine to Coarse SAND (A-2-4) with Little Rock Fragments.

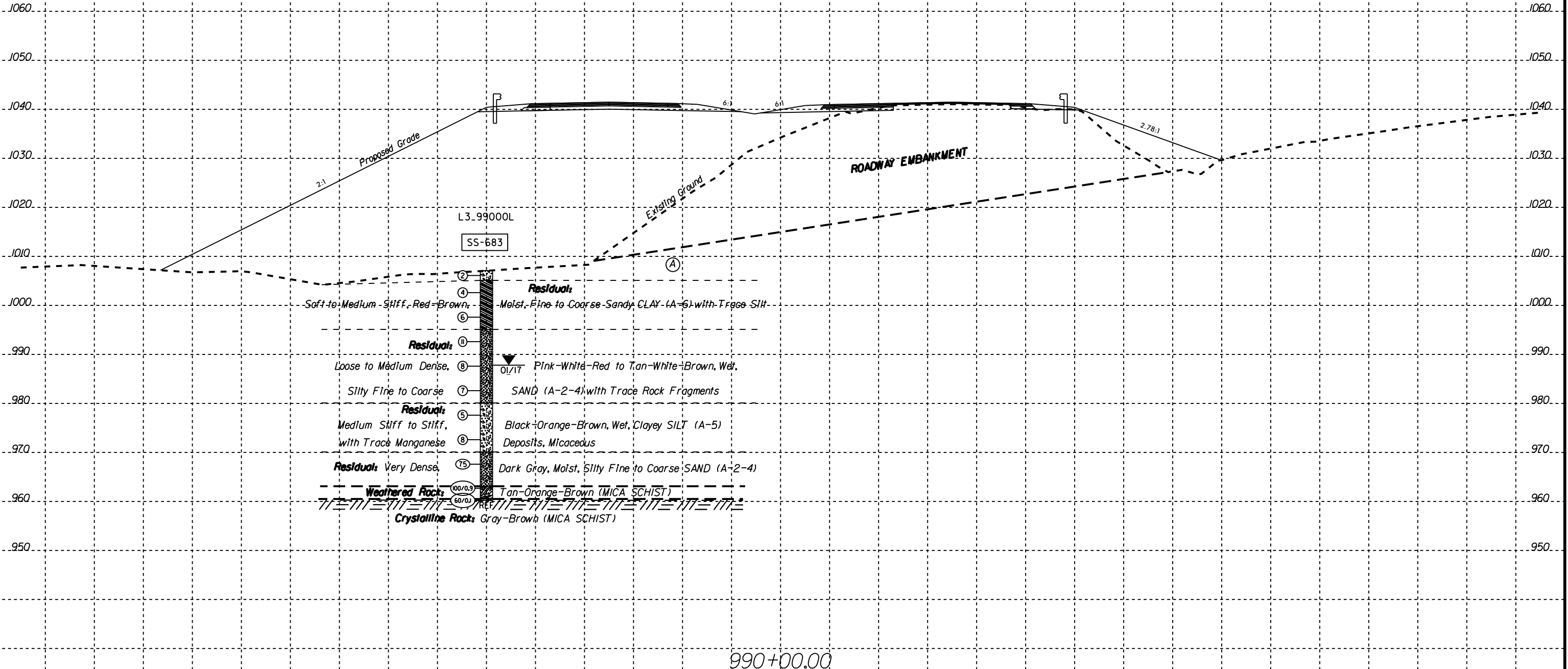


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GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED: 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

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-683	60' LT	990+00	3.5-5.0	A-6(4)	40	11	28.7	21.6	8.3	41.4	97.8	82.2	51.1	20.5	-

Ⓐ Residuals Soft, Red-Brown, Wet, Clayey SILT (A-5) with Trace Organics (Wood Fragments, Roots), Mica, and Fine to Coarse Sand



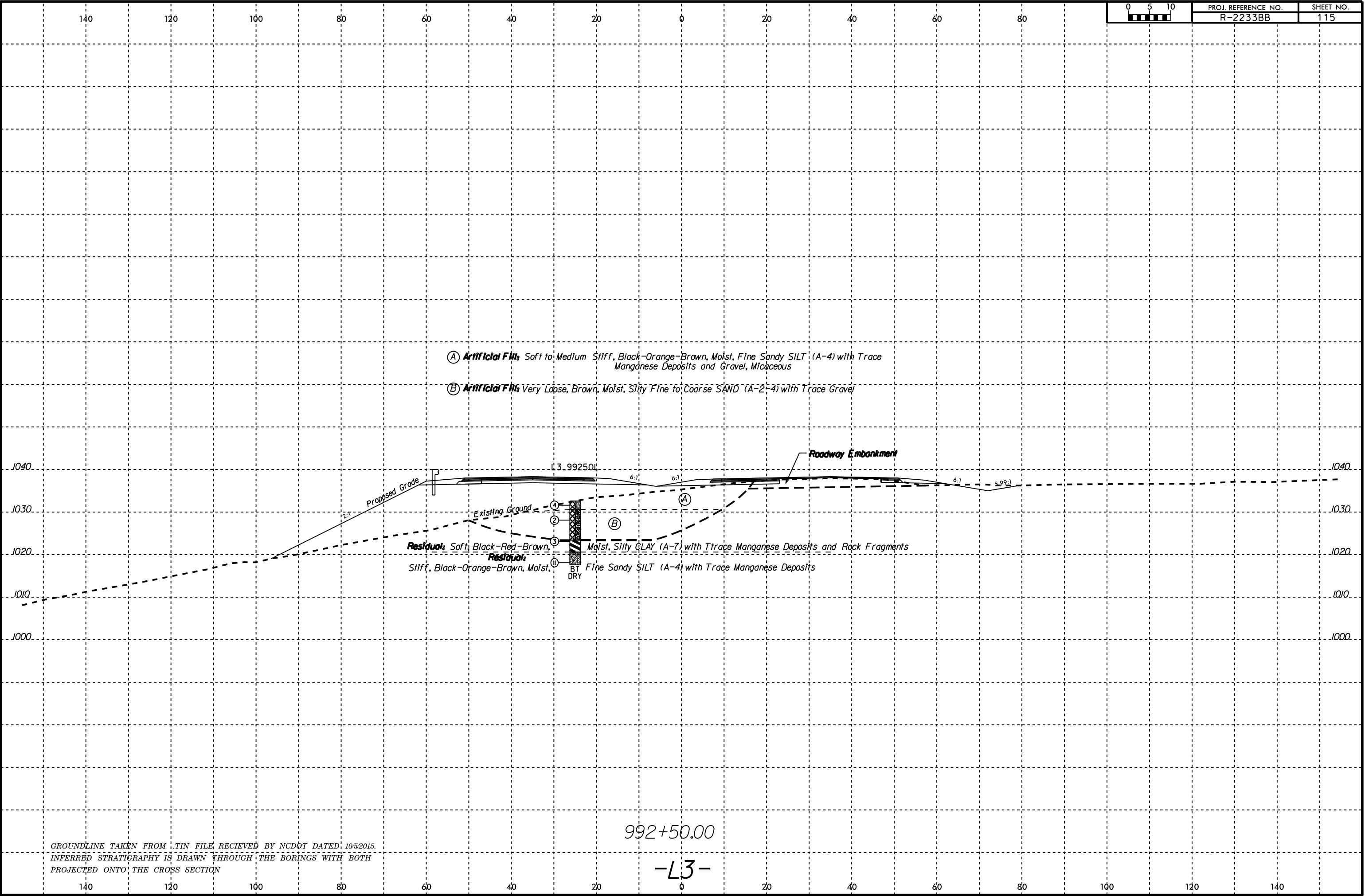
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 66161068

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED: 10/5/2015.
 INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

990+00.00

-L3-

15-MAR-2017 13:33
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Ruthers Ford Co.\CA00D.GEOTECH\asc\VR2233BB_RDY_xsi.L3.dgn



(A) Artificial Fill: Soft to Medium Stiff, Black-Orange-Brown, Moist, Fine Sandy SILT (A-4) with Trace Manganese Deposits and Gravel, Micaceous

(B) Artificial Fill: Very Loose, Brown, Moist, Slightly Fine to Coarse SAND (A-2-4) with Trace Gravel

Residual: Soft, Black-Red-Brown, Moist, Silty CLAY (A-7) with Trace Manganese Deposits and Rock Fragments

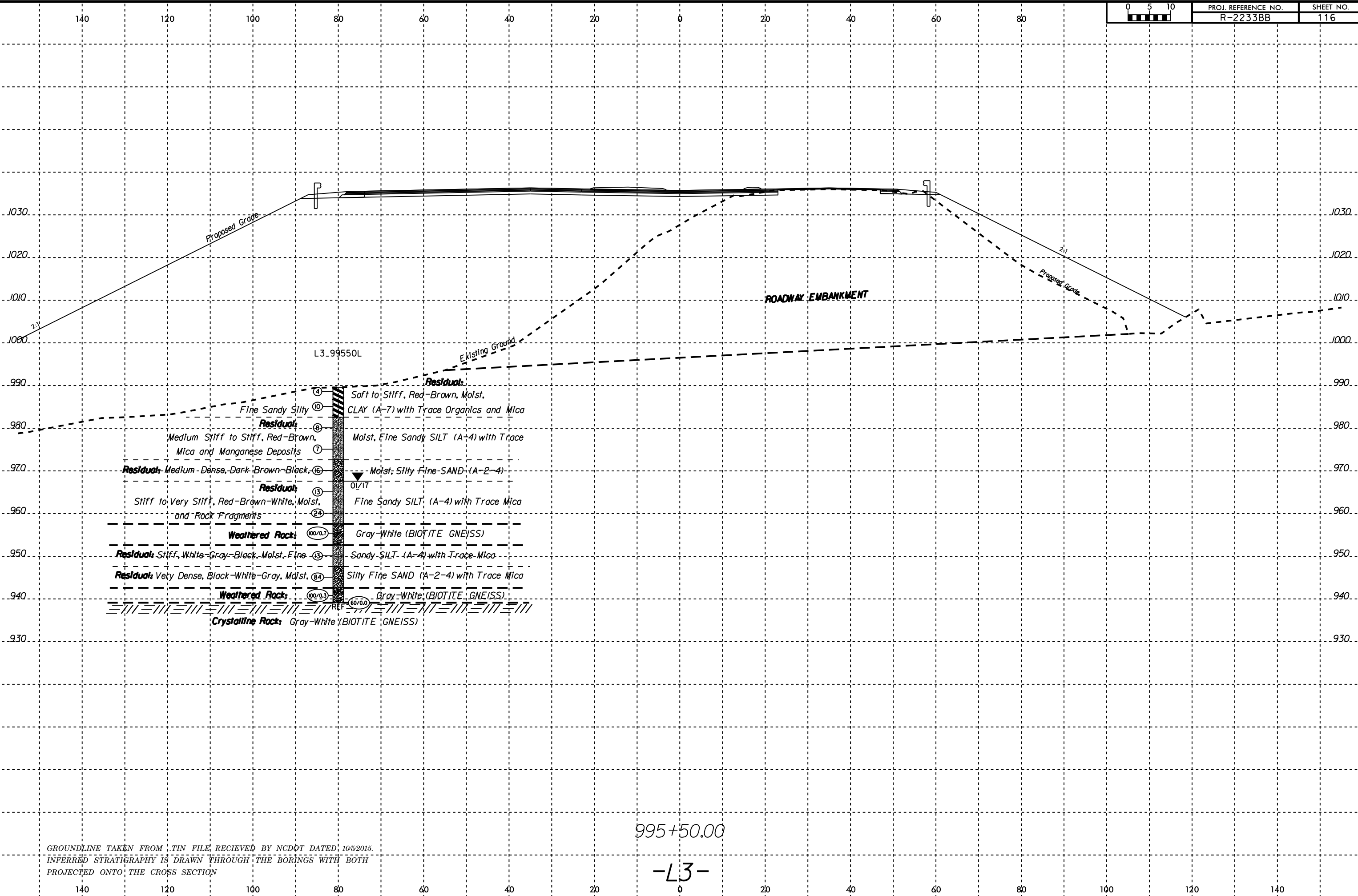
Residual: Stiff, Black-Orange-Brown, Moist, Fine Sandy SILT (A-4) with Trace Manganese Deposits

992+50.00

-L3-

GROUNDLINE TAKEN FROM .TIN FILE, RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16



15-MAR-2017 13:33 E:\Projects\66161068\66161068\66161068\RDY_xsi\L3.dgn

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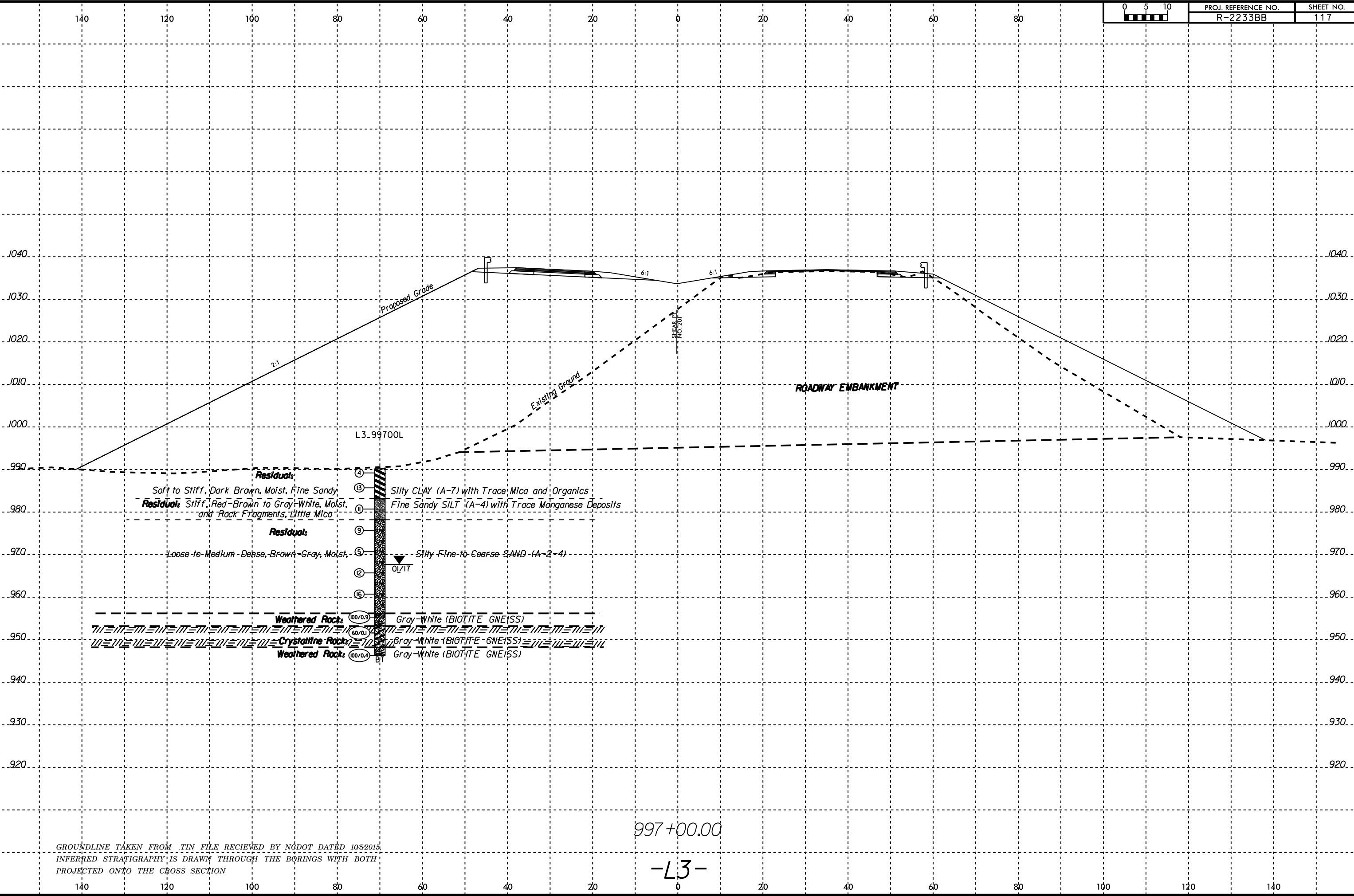
995+50.00

-L3-

6/23/16



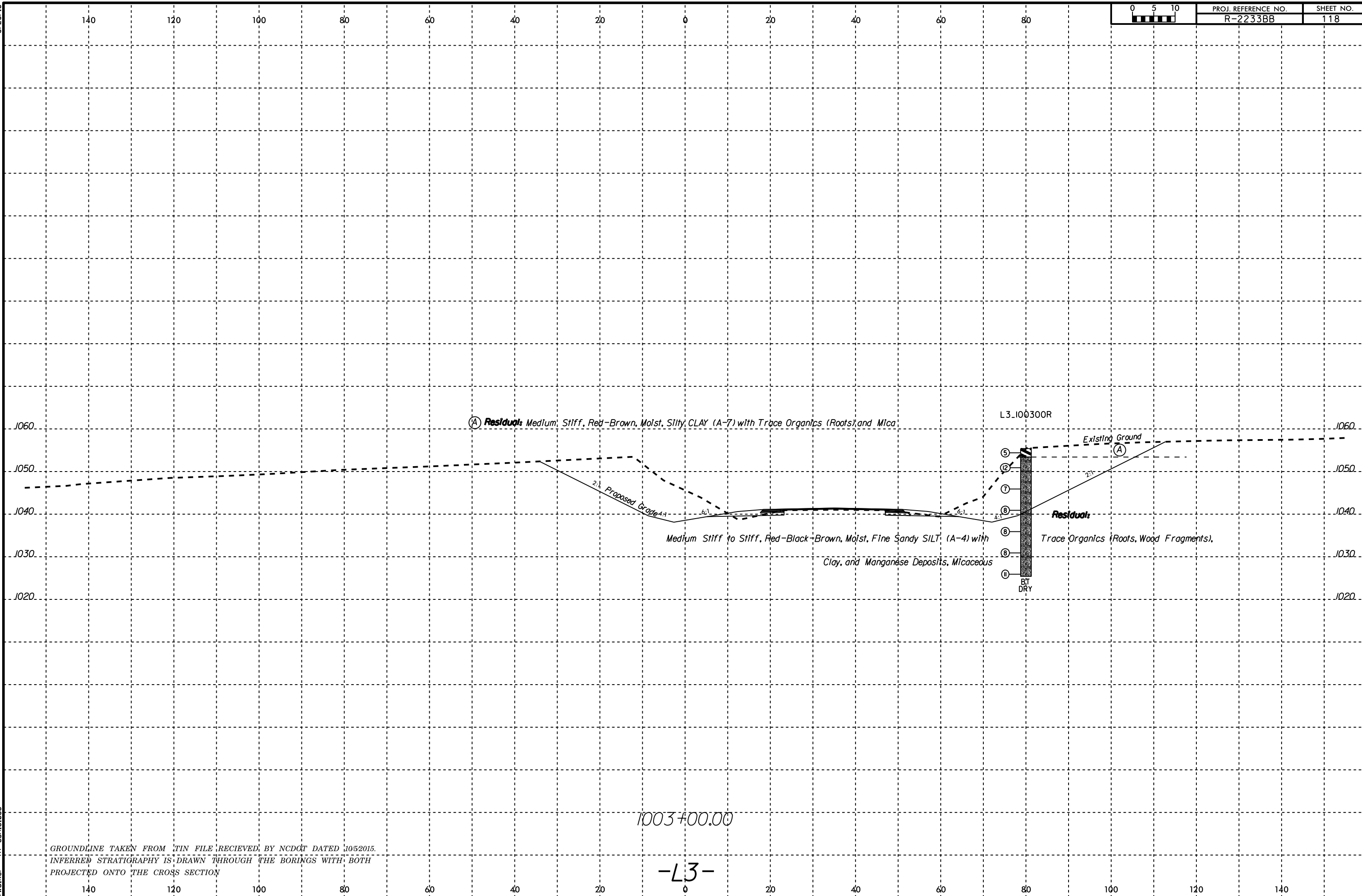
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GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

997+00.00

-L3-



(A) Residual Medium Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots) and Mica

L3.100300R

Existing Ground

2:1 Proposed Grade

Medium Stiff to Stiff, Red-Black-Brown, Moist, Fine Sandy SILT (A-4) with Clay, and Manganese Deposits, Micaceous

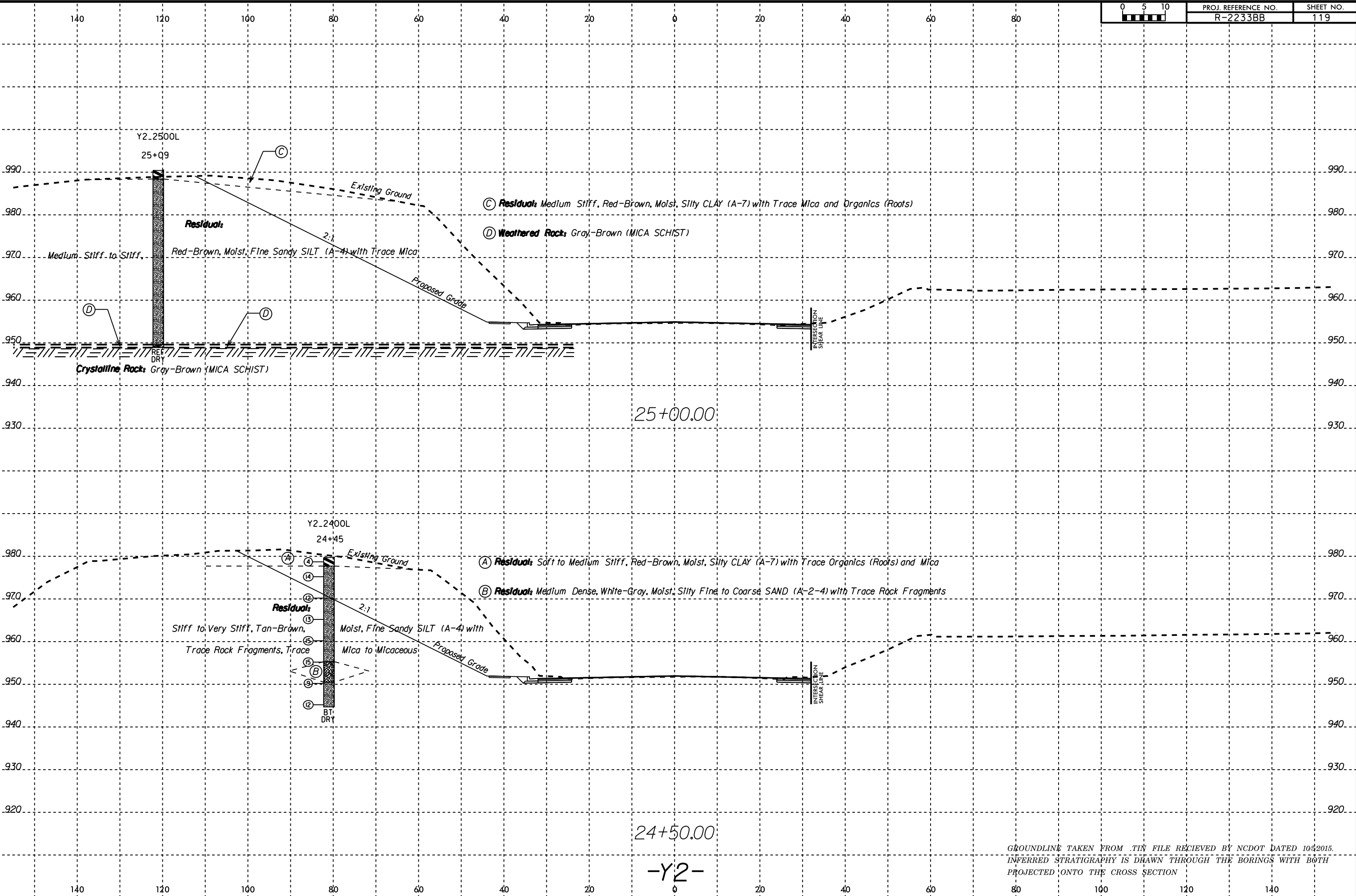
Residual Trace Organics (Roots, Wood Fragments)

- (S)
 - (Z)
 - (T)
 - (B)
 - (B)
 - (B)
 - (II)
- BT
DRY

1003+00.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION



15-MAR-2017 13:25
E:\Projects\661661\661661-0203 NCDOT-R-2233BB Rutherford Co.\CA00_GEO1TECH\asc\VR2233BB_geo_xsl_Y2.dgn
Walker

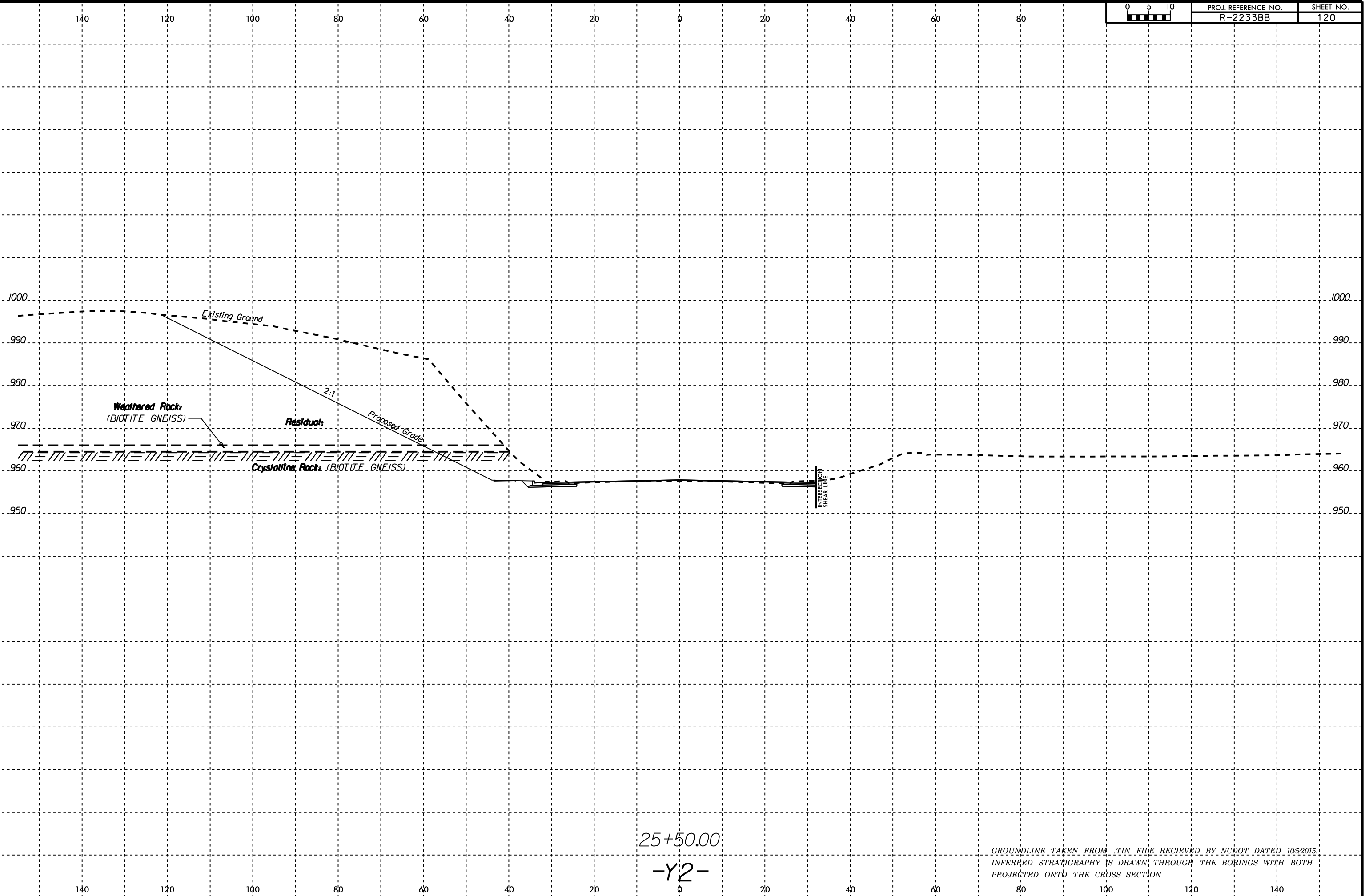
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	120

PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	120



25+50.00
-Y2-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:25
 E:\Projects\66166\66166-0203 INCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB-geo.xsl.Y2.dgn
 Walker

140

120

100

80

60

40

20

0

20

40

60

80

1010

1000

990

980

970

960

950

1010

1000

990

980

970

960

950

Y2-2600L

Existing Ground

Residuals

Stiff to Very Stiff

Crystalline Rocks: Gray-White (BIOTITE GNEISS)

REF

DRY

60/04

Red-Brown, Moist, Fine Sandy SILT (A-4)

with Trace Mica

2:1

(A) Residuals: Stiff to Very Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica, Organics (Roots), and Rock Fragments

(B) Residuals: Medium Dense, Brown-Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica

(C) Weathered Rocks: Gray-White (BIOTITE GNEISS)

Proposed Grade

INTERSECTION
SREAK LINE

26+00.00

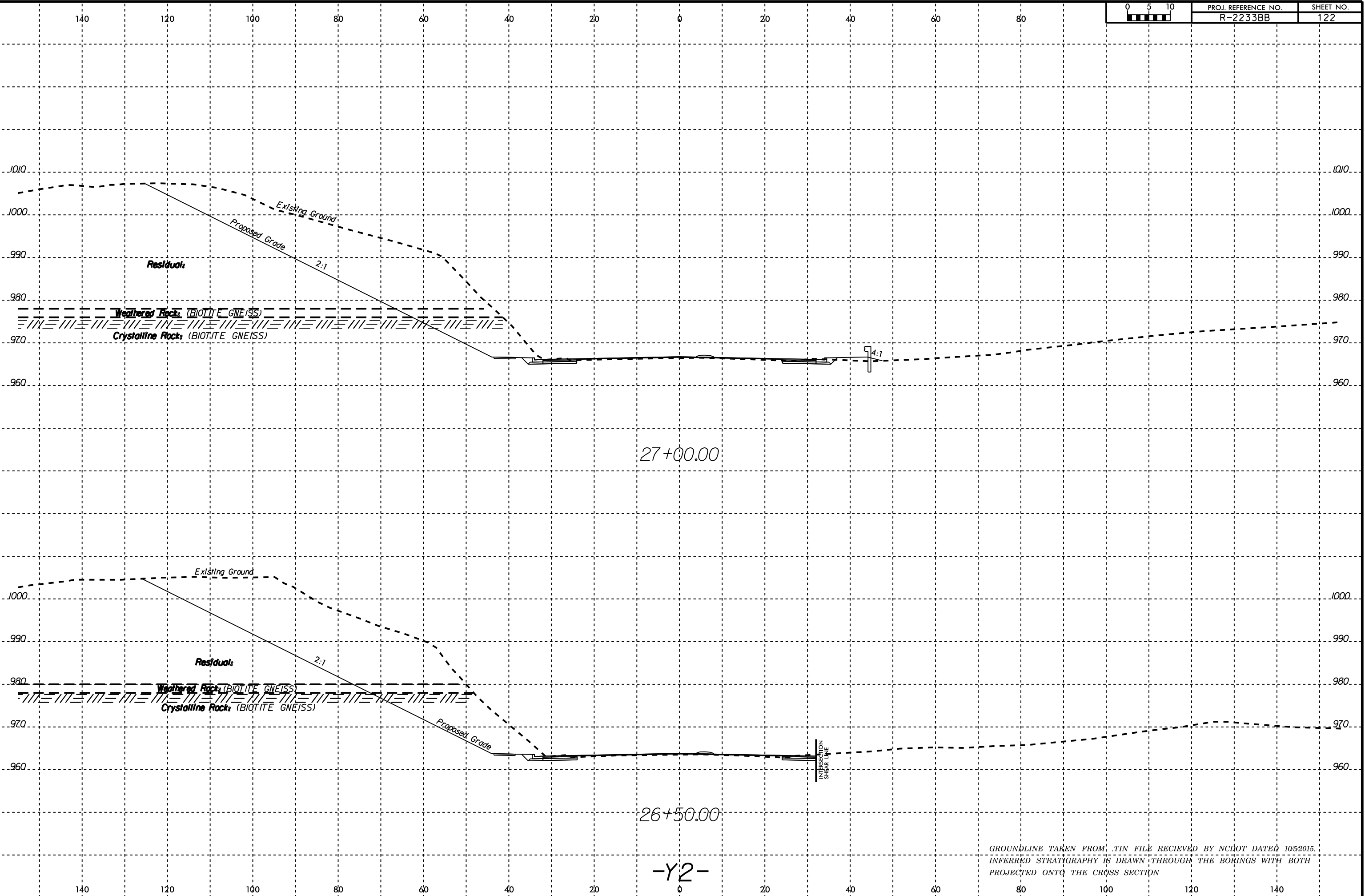
-Y2-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



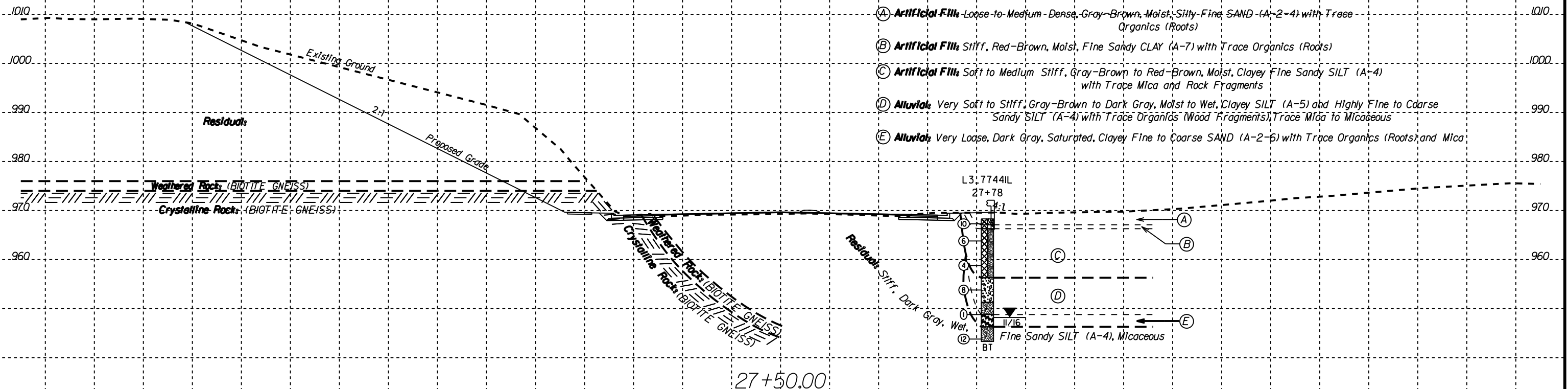
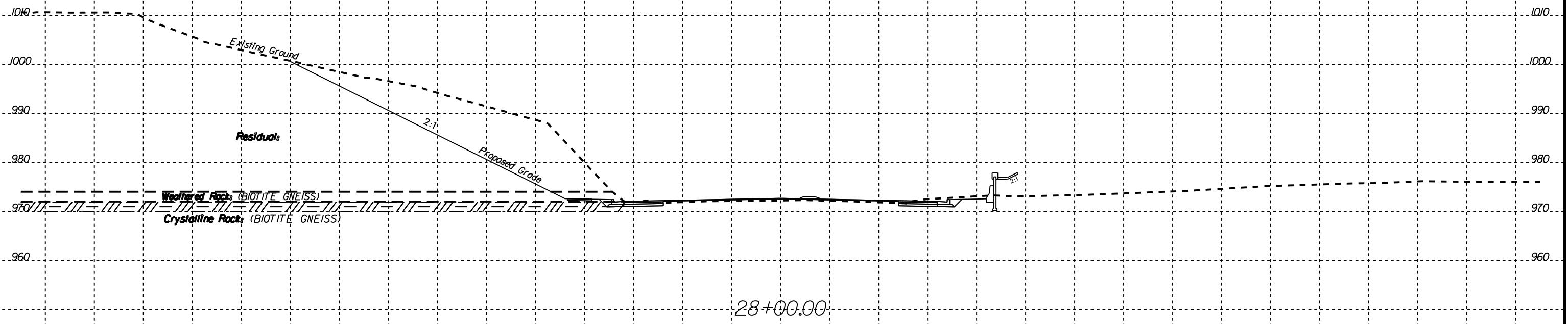
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R-2233BB	122



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 Walker

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

-Y2-



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:25
 E:\Projects\66166\66166-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\2233BB_geo_xsl_Y2.dgn
 Walker

140

120

100

80

60

40

20

0

20

40

60

80

1020

1010

1000

990

980

970

1020

1010

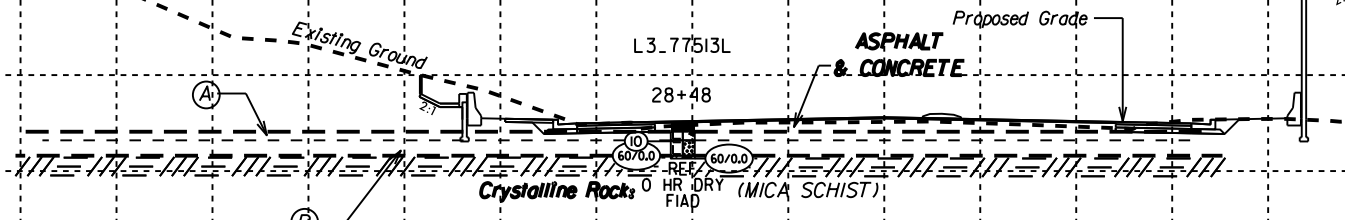
1000

990

980

970

- (A) Roadway Embankment: Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica
- (B) Roadway Embankment: Loose to Medium Dense, Brown-Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Gravel



28+50.00

-Y2-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
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.	SHEET NO.
R-2233BB	125

140

120

100

80

60

40

20

0

20

40

60

80

1080

1070

1060

1050

1040

1030

1080

1070

1060

1050

1040

1030

2:1

Proposed Grade

Existing Ground

Residual:

Weathered Rock: (MICA SCHIST)

Crystalline Rock: (MICA SCHIST)

4:1

6:1

6:1

6:1

SEAL PIT

15+44.00

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

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 Walker

140

120

100

80

60

40

20

0

20

40

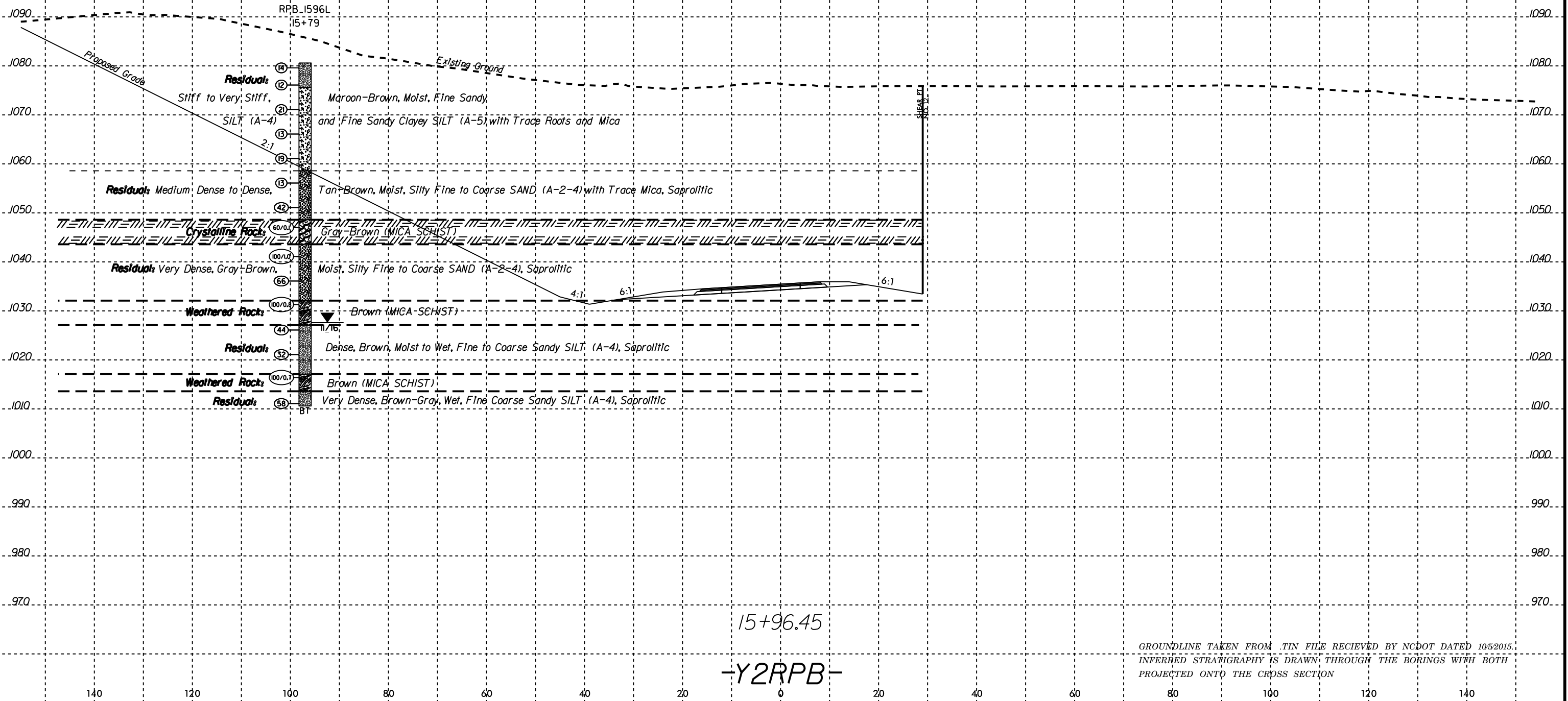
60

80

100

120

140



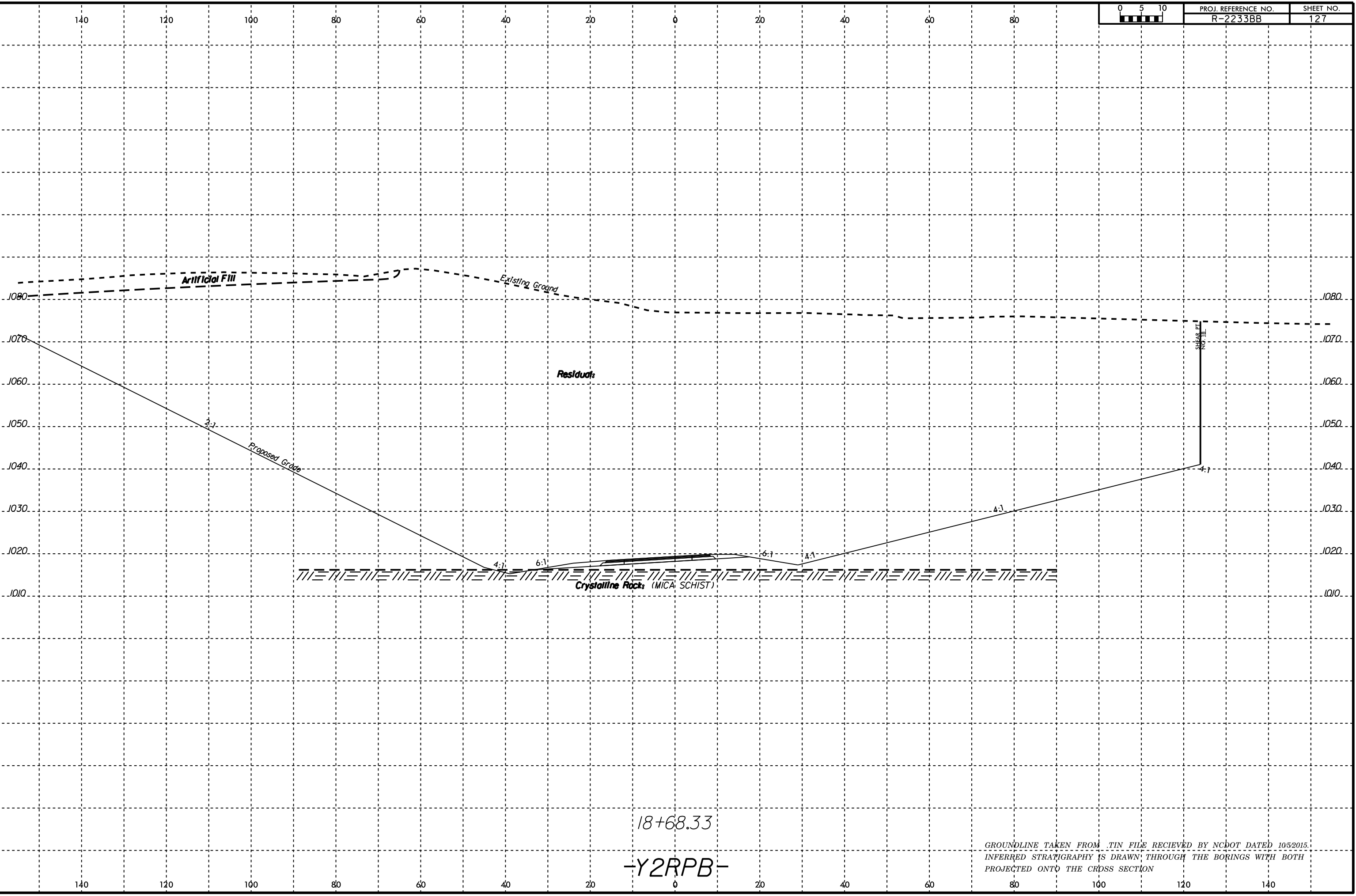
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Walker

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16
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Walker
A 66161068



PROJ. REFERENCE NO.	SHEET NO.
R-223388	127

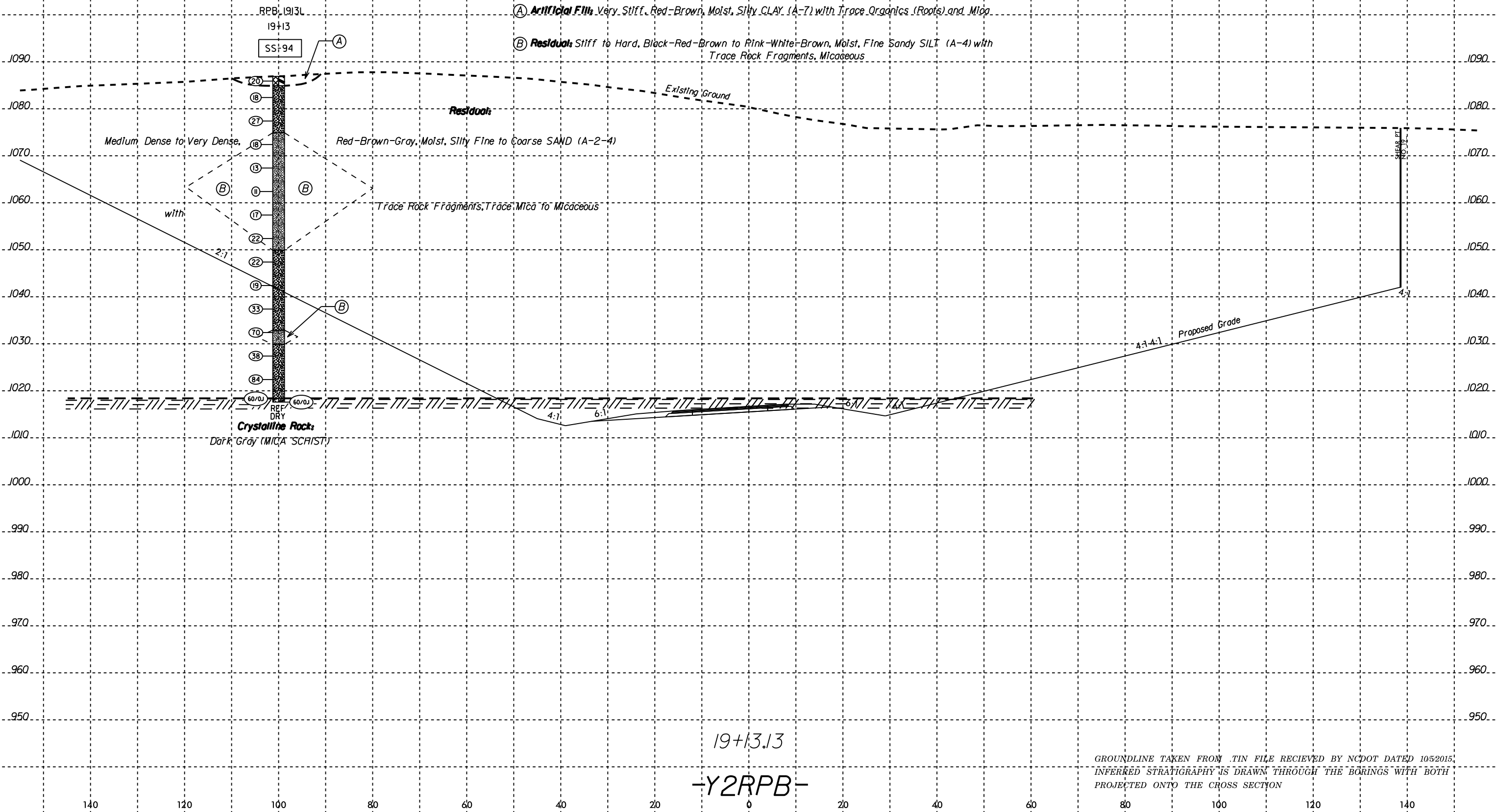


18+68.33

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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-94	100' LT	19+13	38.5-40.0	A-2-4(0)	36	NP	41.3	28.1	19.9	10.7	93.2	65.7	32.0	12.9	-



(A) Artificial Fill: Very Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Roots) and Mlop.

(B) Residuals: Stiff to Hard, Black-Red-Brown to Pink-White-Brown, Moist, Fine Sandy SILT (A-4) with Trace Rock Fragments, Micaceous.

Medium Dense to Very Dense, Red-Brown-Gray, Moist, Silty Fine to Coarse SAND (A-2-4)

Trace Rock Fragments, Trace Mica to Micaceous

Crystalline Rock: Dark Gray (MICA SCHIST)

19+13.13

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. 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-2233BB

SHEET NO.
129

140

120

100

80

60

40

20

0

20

40

60

80

1080

1070

1060

1050

1040

1030

1020

1010

1080

1070

1060

1050

1040

1030

1020

1010

Existing Ground

2:1

Proposed Grade

Residual

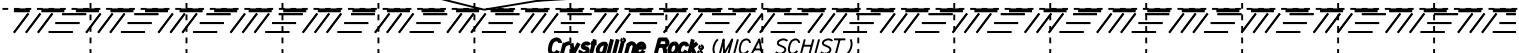
4:1

6:1

6:1

4:1

4:1



Crystalline Rocks (MICA SCHIST)

19+57.47
-Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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Walker
6/23/16

140

120

100

80

60

40

20

0

20

40

60

80

100

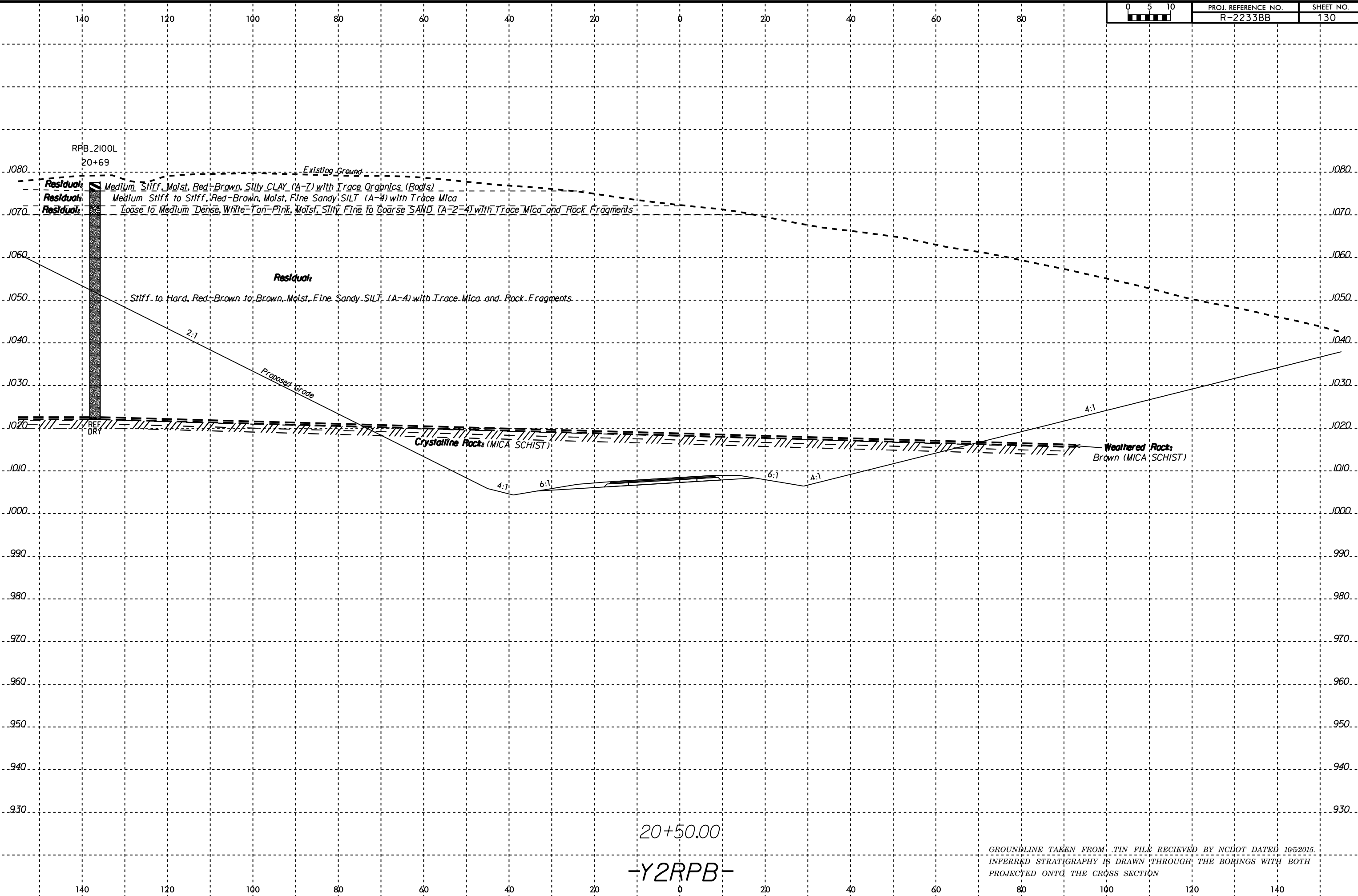
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140

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	130



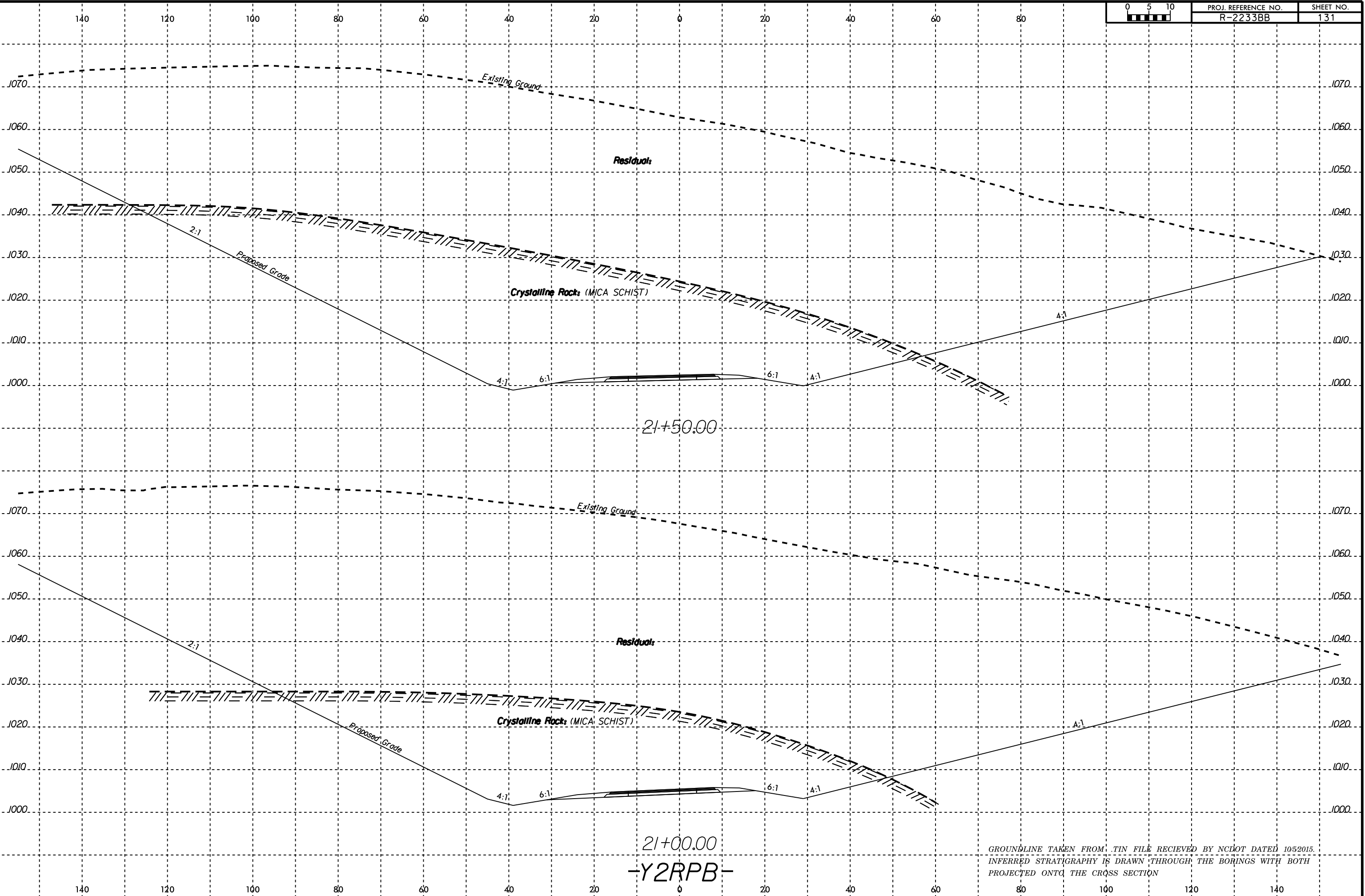
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 Walker

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

6/23/16



PROJ. REFERENCE NO. R-2233BB	SHEET NO. 131
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 Walker
 6/23/16

21+00.00
-Y2RPB-

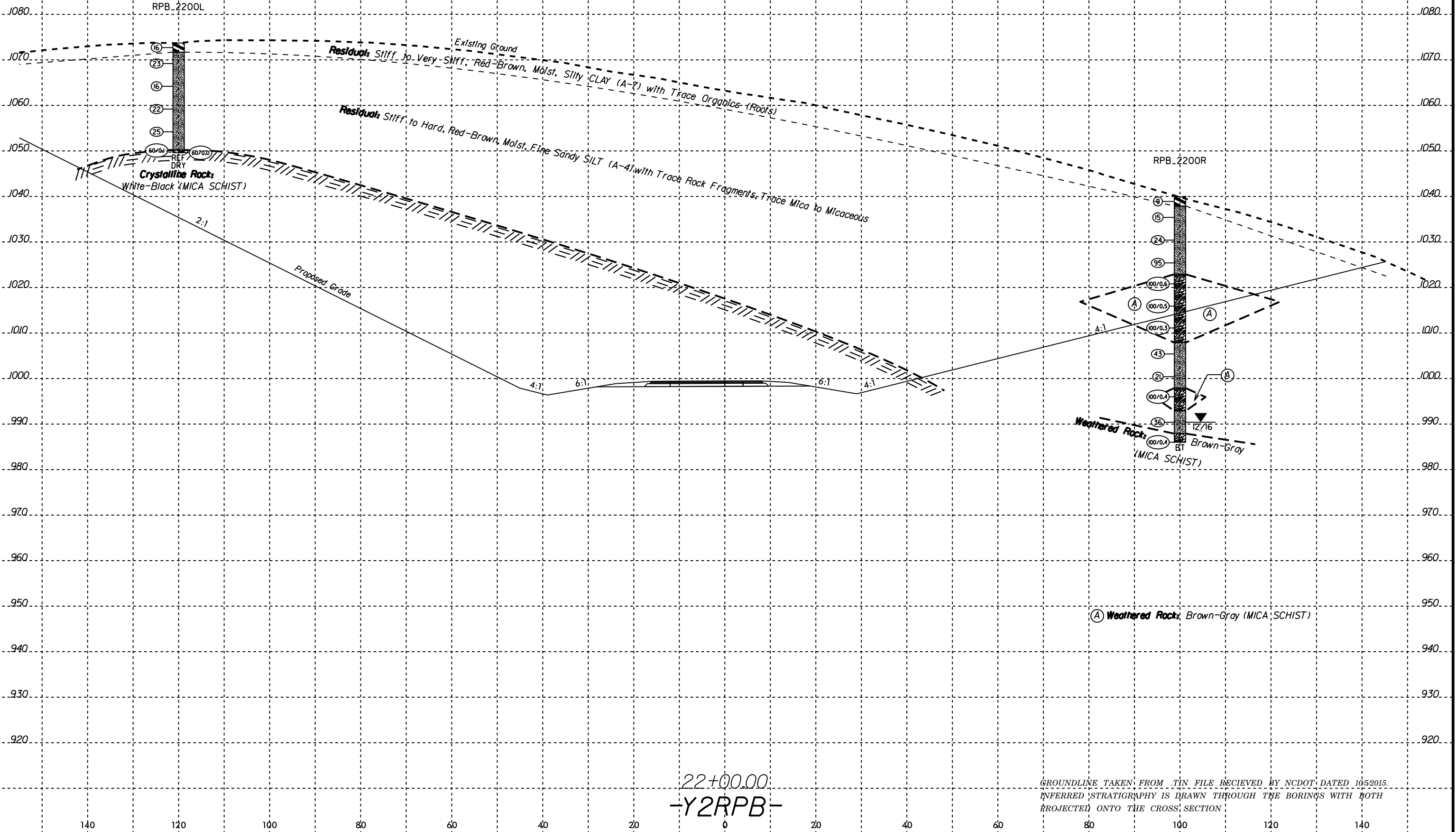
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 PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
132

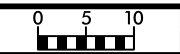


22+00.00
-Y2RPB-

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PROJECTED ONTO THE CROSS SECTION

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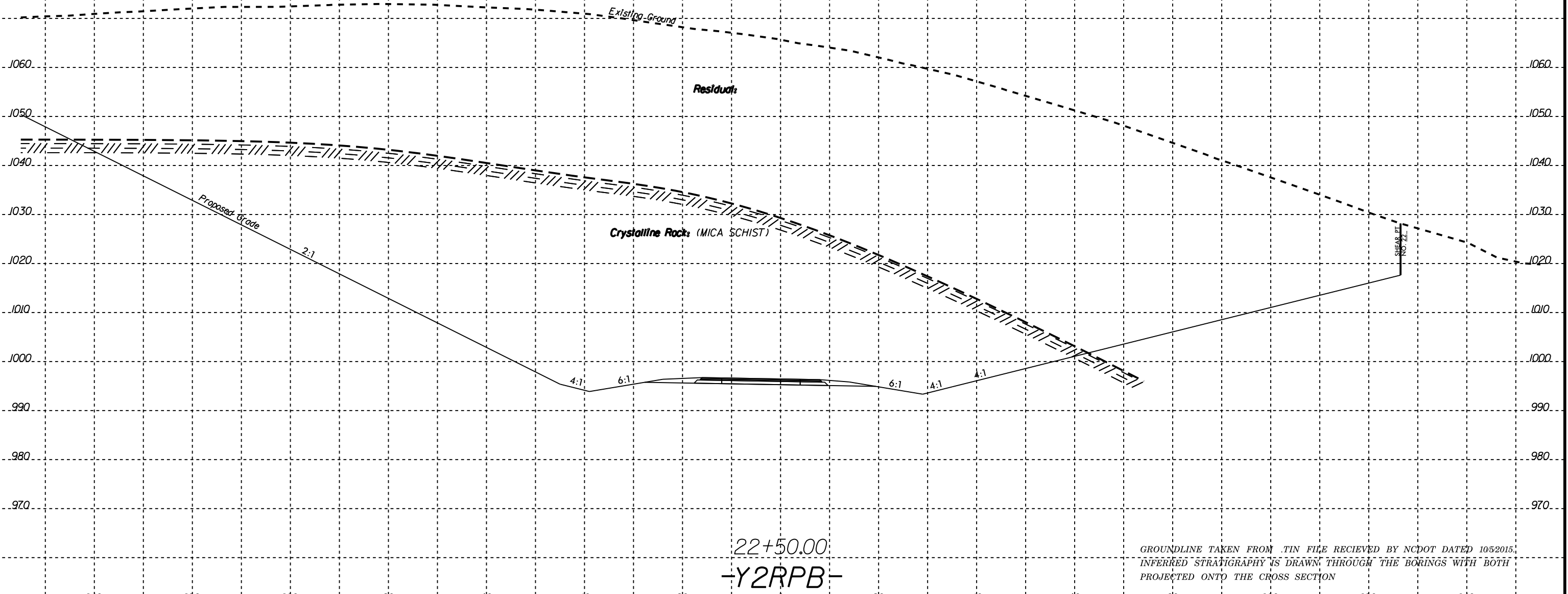
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Walker
A
66161088



PROJ. REFERENCE NO.	SHEET NO.
R-223388	133

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



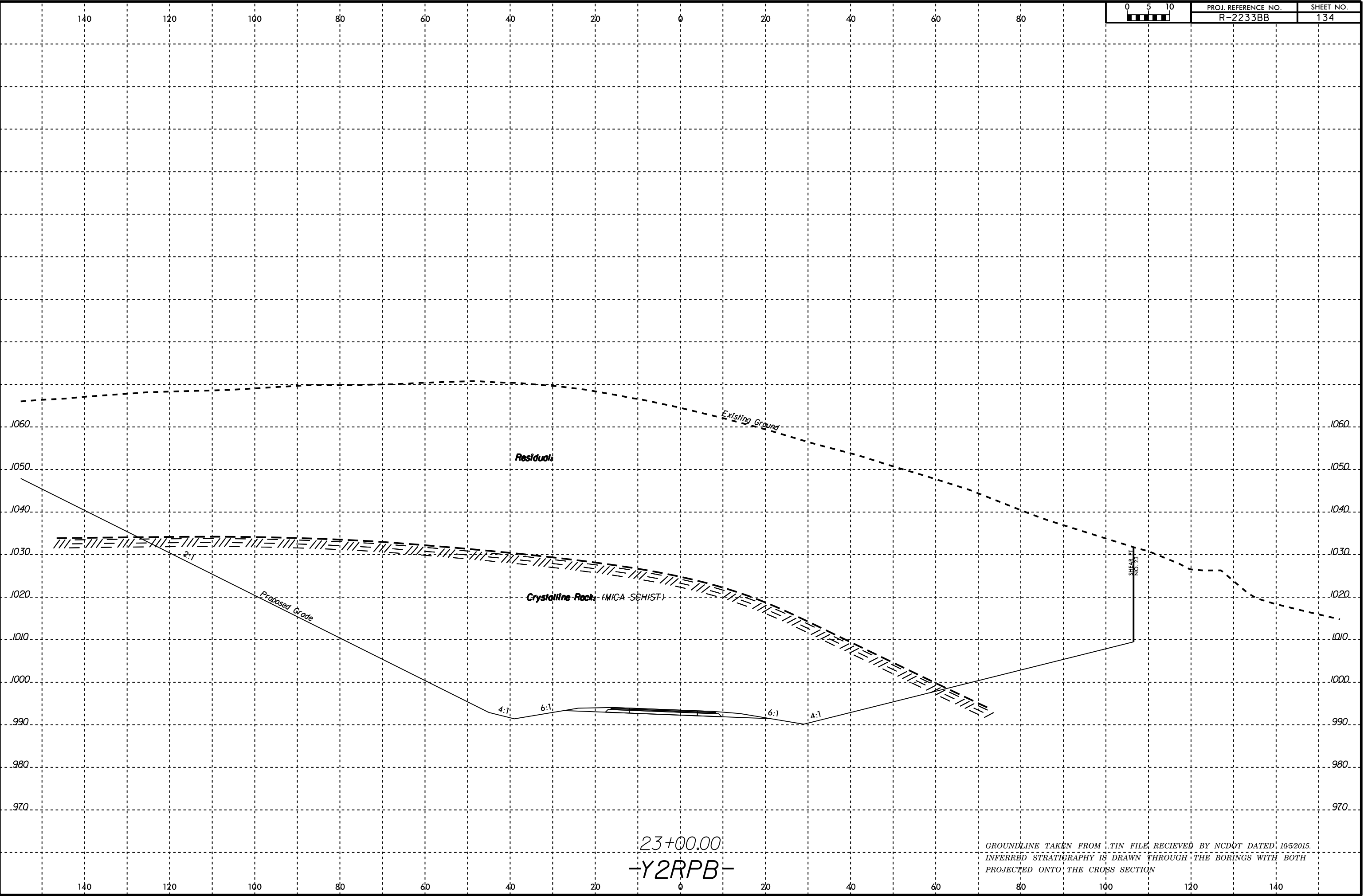
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PROJECTED ON THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	134

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 Walker
 6/23/16



23+00.00
 -Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE, RECIEVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
135

140

120

100

80

60

40

20

0

20

40

60

80

1060

1050

1040

1030

1020

1010

1000

990

980

970

1060

1050

1040

1030

1020

1010

1000

990

980

970

Existing Ground

Residuals

Crystalline Rock (MICA-SCHIST)

Proposed Grade

4:1

6:1

6:1

4:1

4.04:03:1

SHEET
NO. 21

4:1

23+50.00
-Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECIEVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:26
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Walker A 660661066

140

120

100

80

60

40

20

0

20

40

60

80

100

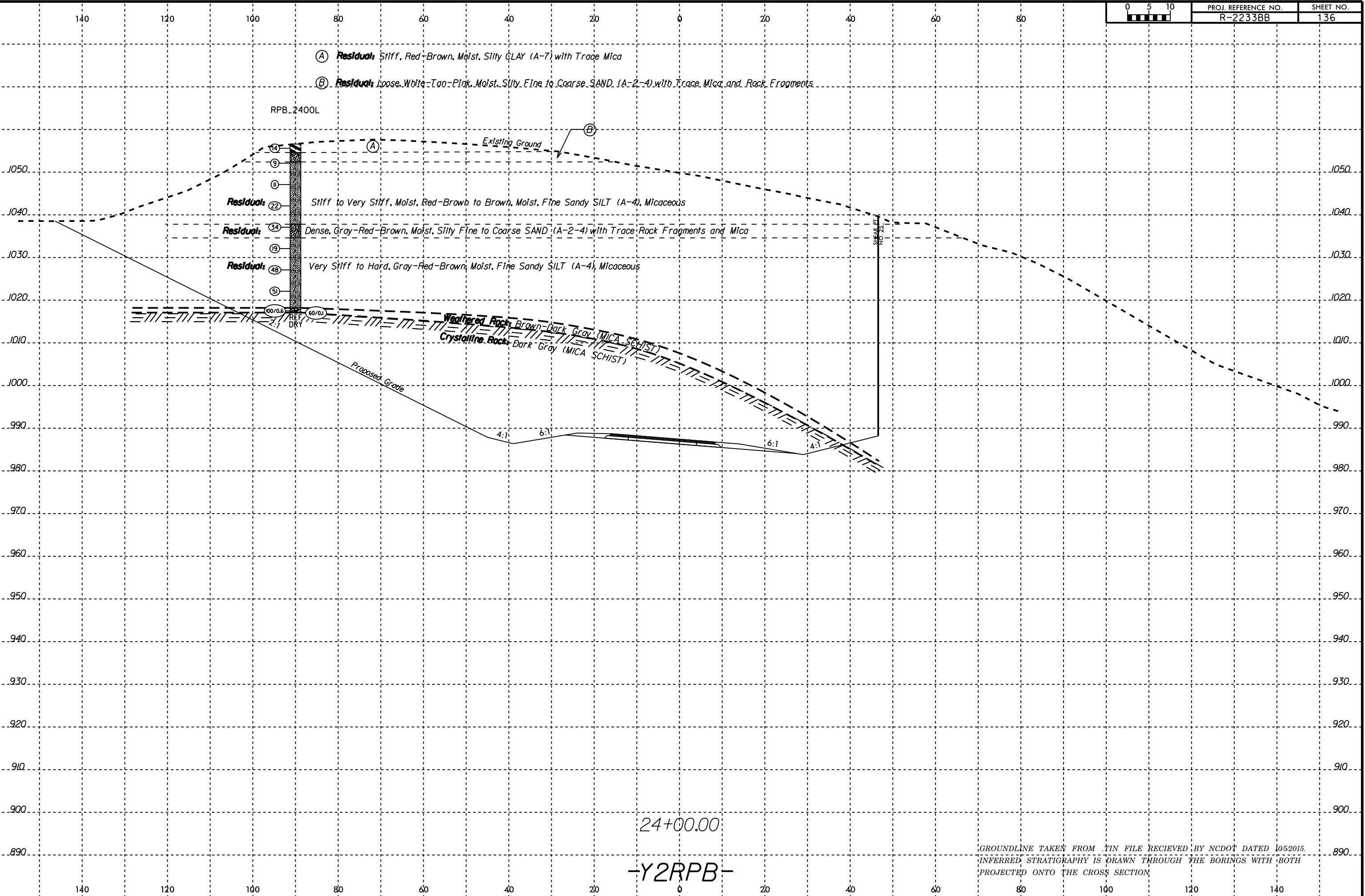
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140

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	136



I:\MAR-2017\1326
 E:\Projects\660661\0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_geo_xsl_RPB.dgn
 Walker
 6/23/16

24+00.00
-Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	137

140

120

100

80

60

40

20

0

20

40

60

80

1050

1040

1030

1020

1010

1000

990

980

970

1050

1040

1030

1020

1010

1000

990

980

970

Existing Ground

2:1

Proposed Grade

Residuals

SHEAR PL

80'-2 1/2"

4:1

6:1

Crystalline Rocks (MICA SCHIST)

24+50.00

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

I:\MAR-2017\1326
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 Walker
 6/23/16

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
138

140

120

100

80

60

40

20

0

20

40

60

80

1100

1090

1080

1070

1060

1050

1040

1030

1020

1100

1090

1080

1070

1060

1050

1040

1030

1020

Ⓐ **Residual:** Loose to Medium Dense, Tan-Brown, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Clay

RPC 1694R(1)

16+86

15

18

10

15

BT

0 HR DRY

FIAD

Ⓐ

Existing Ground

Artificial Fill: Stiff to Very Stiff, Red-Brown, Moist, Silty CLAY (A-7)

Residual: Stiff to very Stiff, Red-Brown, Moist, Fine Sandy SILT (A-4)

with Trace Organics (Roots)

with Trace Rock Fragments

Proposed Grade

4:1

16+94.45

-Y2RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:26
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Walker

140

120

100

80

60

40

20

0

20

40

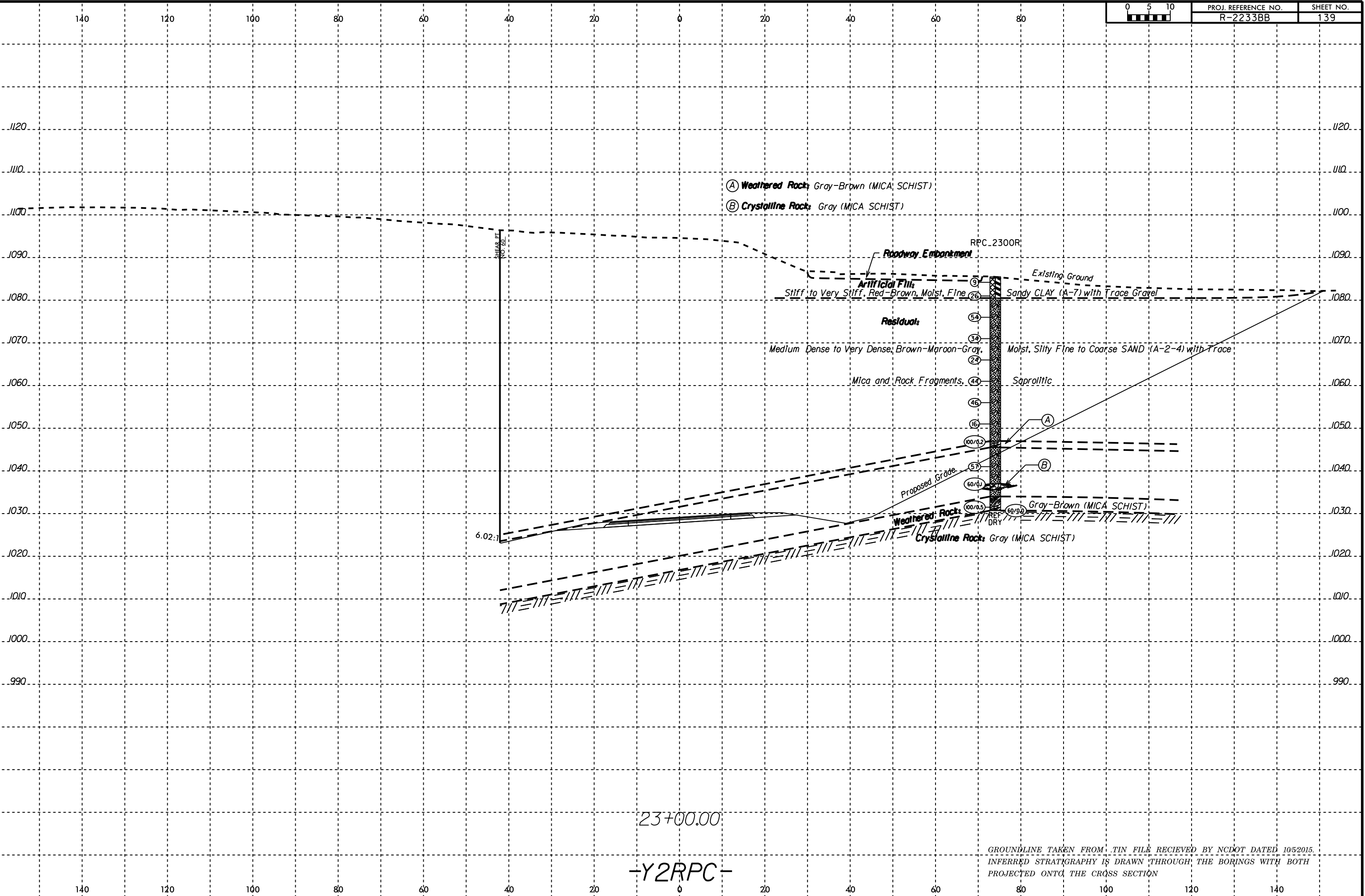
60

80

100

120

140



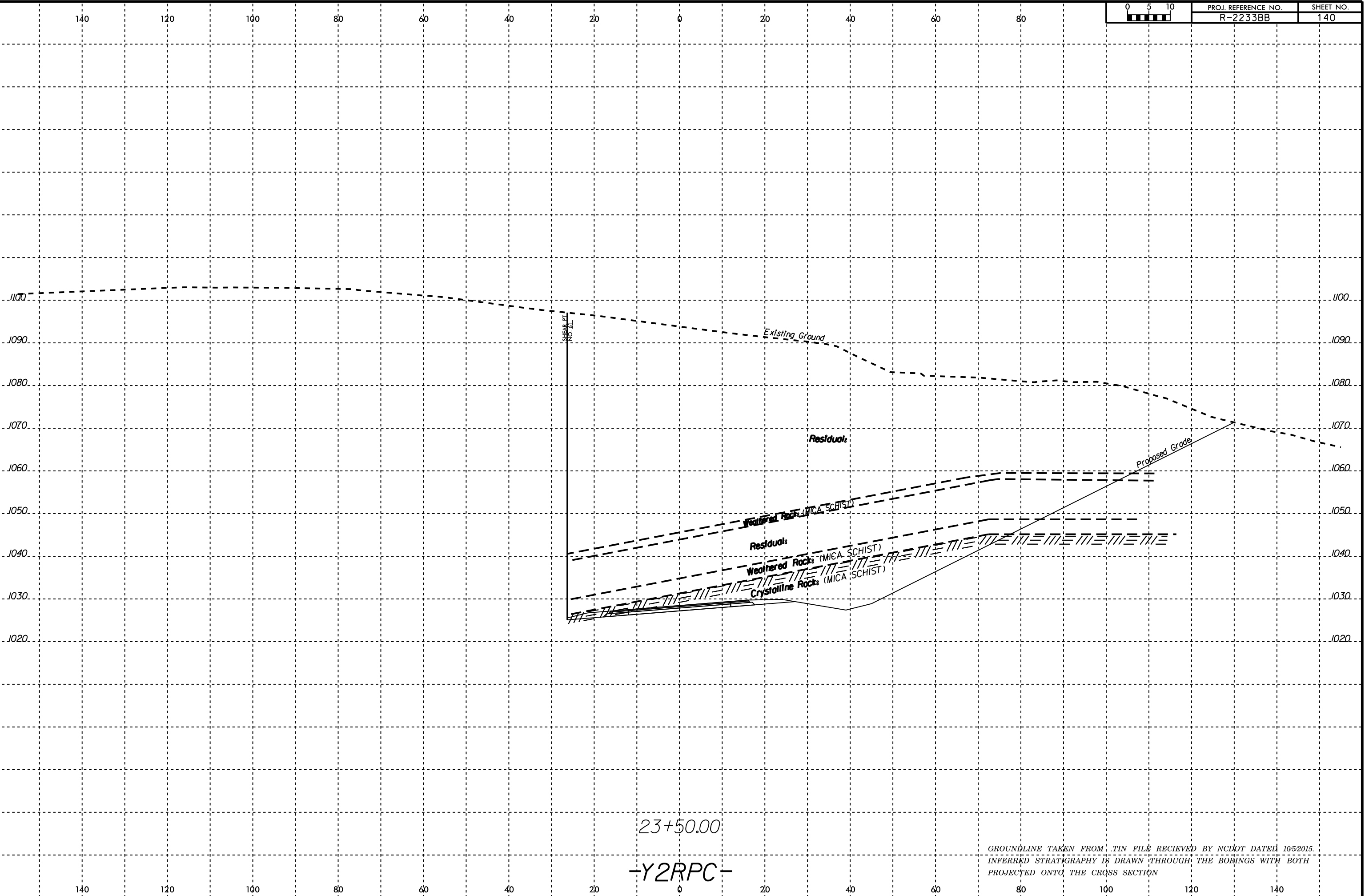
23+00.00

-Y2RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:26
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Walker

6/23/16

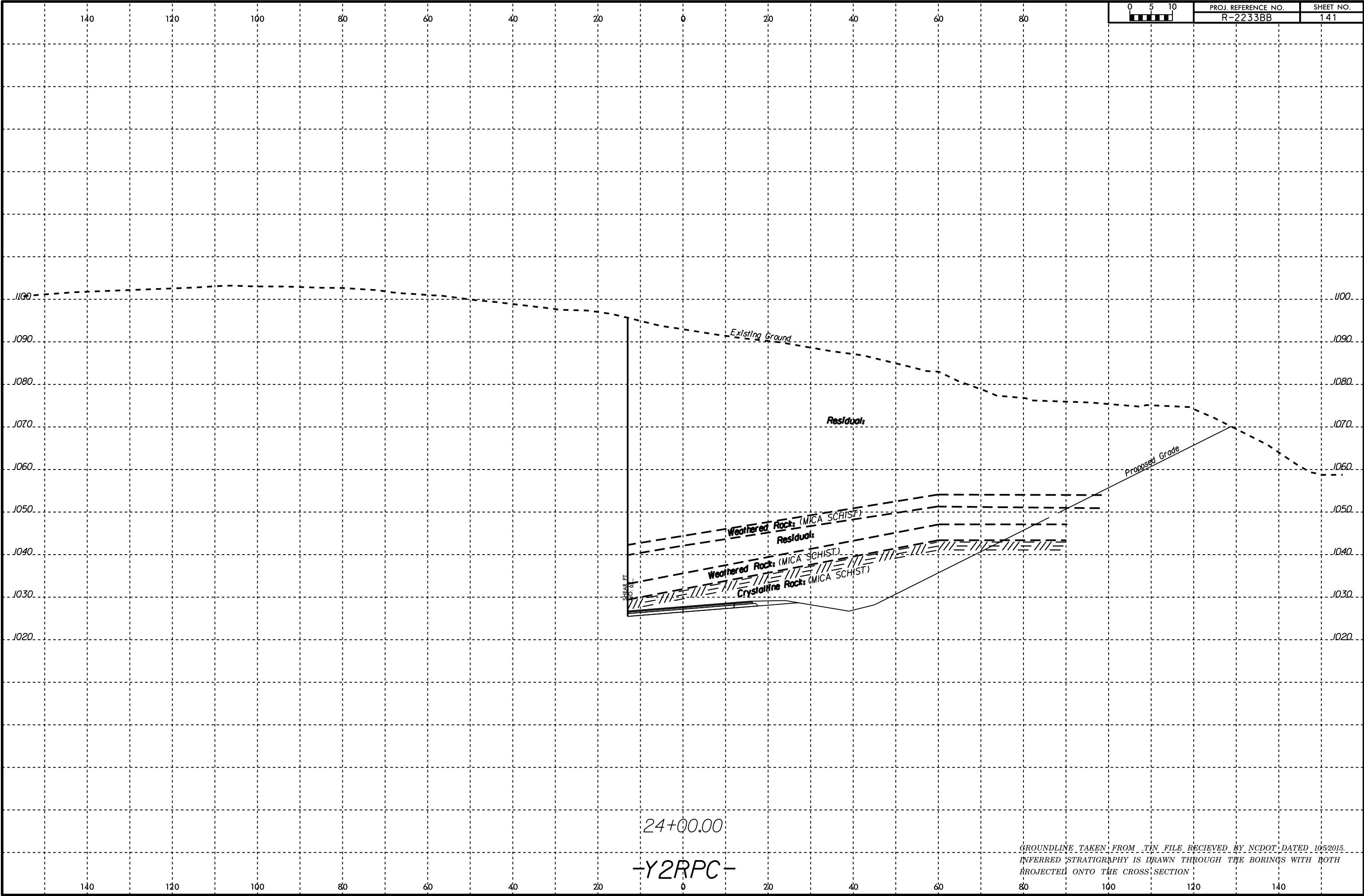


23+50.00

-Y2RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

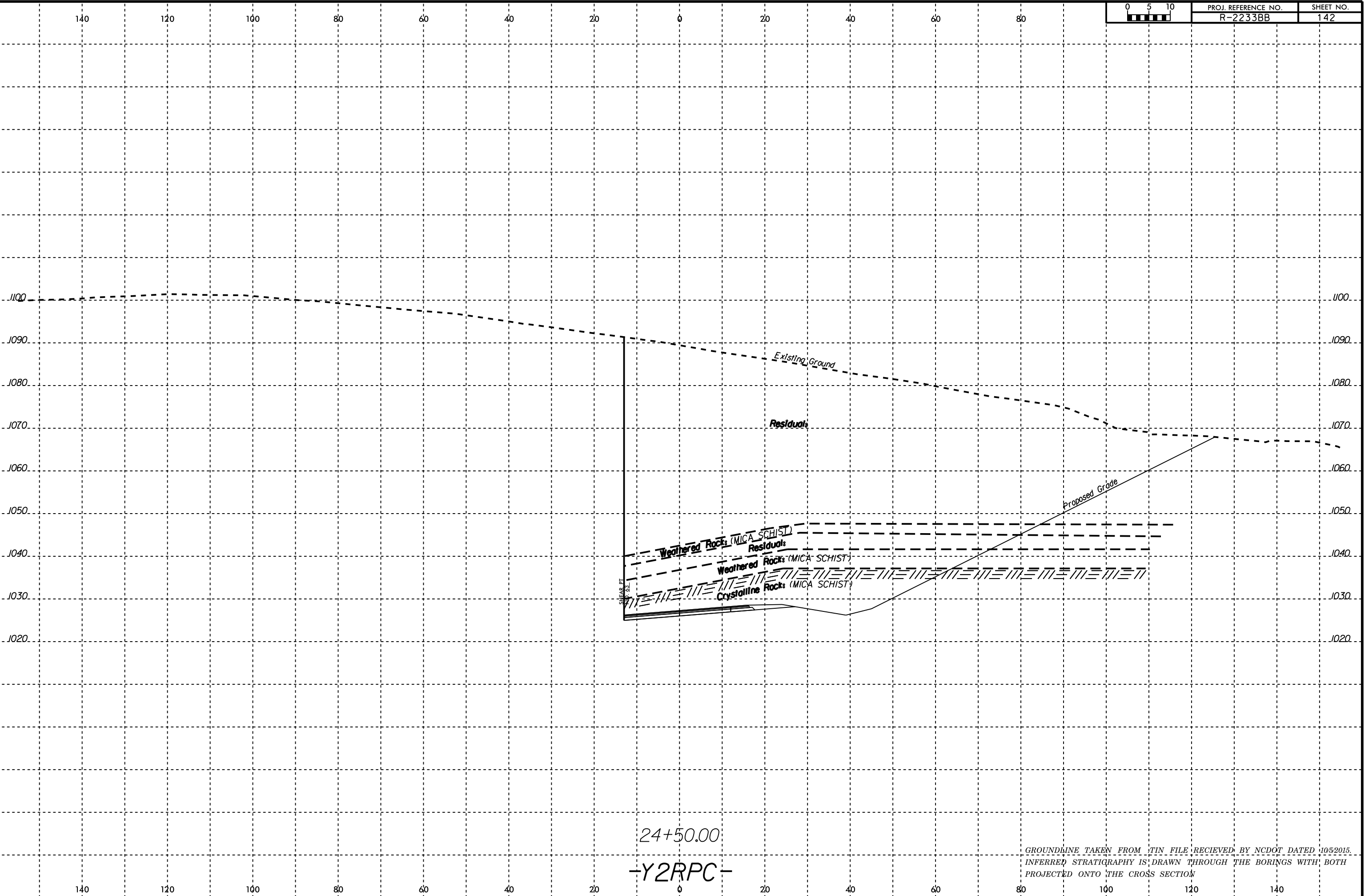
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 Walker A 66166



24+00.00
-Y2RPC-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



24+50.00
-Y2RPC-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

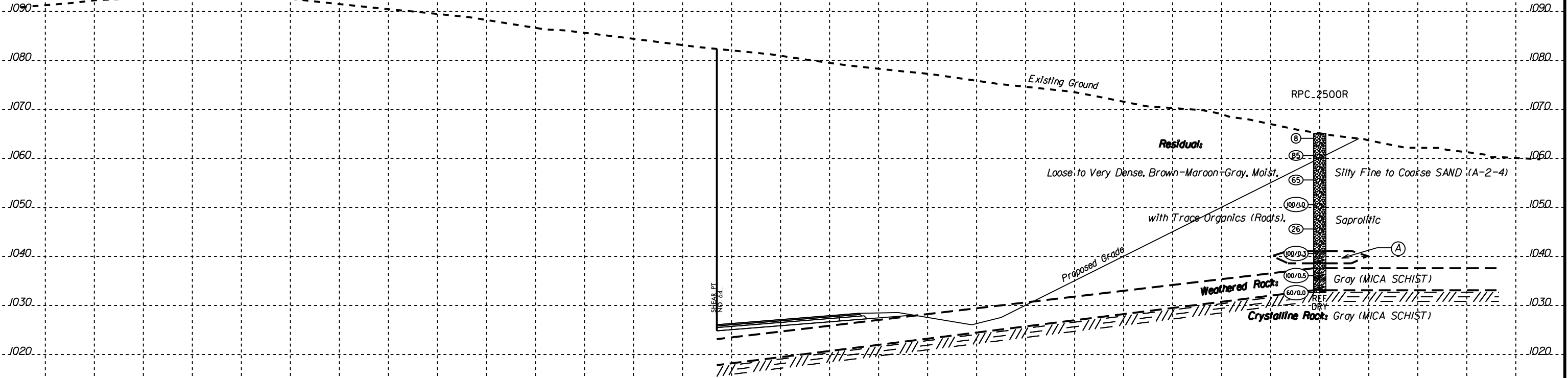
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Walker A 66161068

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	143

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



25+00.00

-Y2RPC-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:26
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 Walker, A. 6601661

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

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
144

140

120

100

80

60

40

20

0

20

40

60

80

1090

1080

1070

1060

1050

1040

1030

1020

1090

1080

1070

1060

1050

1040

1030

1020

SHEAR PLANE
NO. 64

Existing Ground

Residuals

Proposed Grade

Weathered Rocks (MICA SCHIST)

Crystalline Rocks (MICA SCHIST)

25+50.00

-Y2RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

IF: MAR-2017 13:26
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Walker A 66161068

140

120

100

80

60

40

20

0

20

40

60

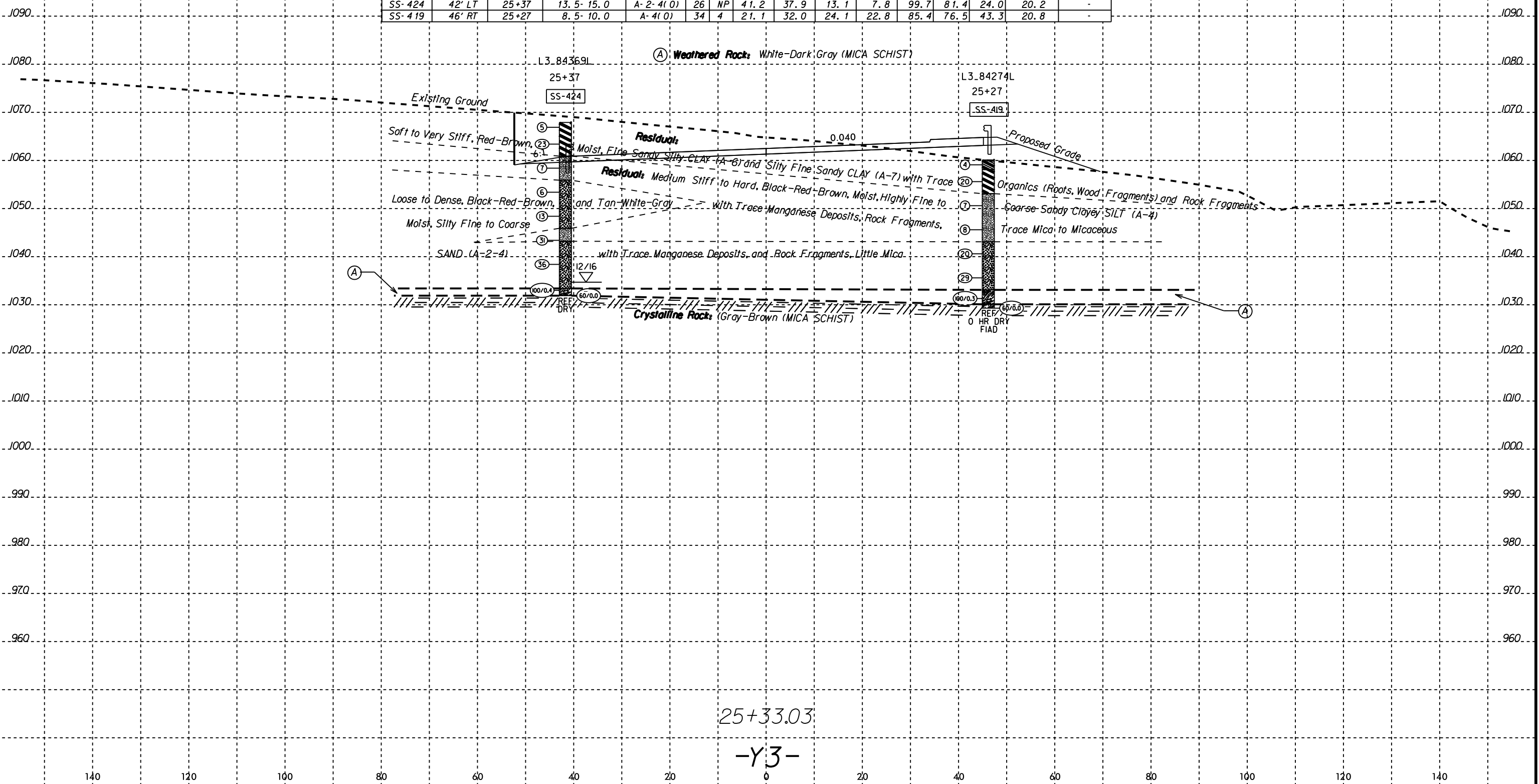
80

100

120

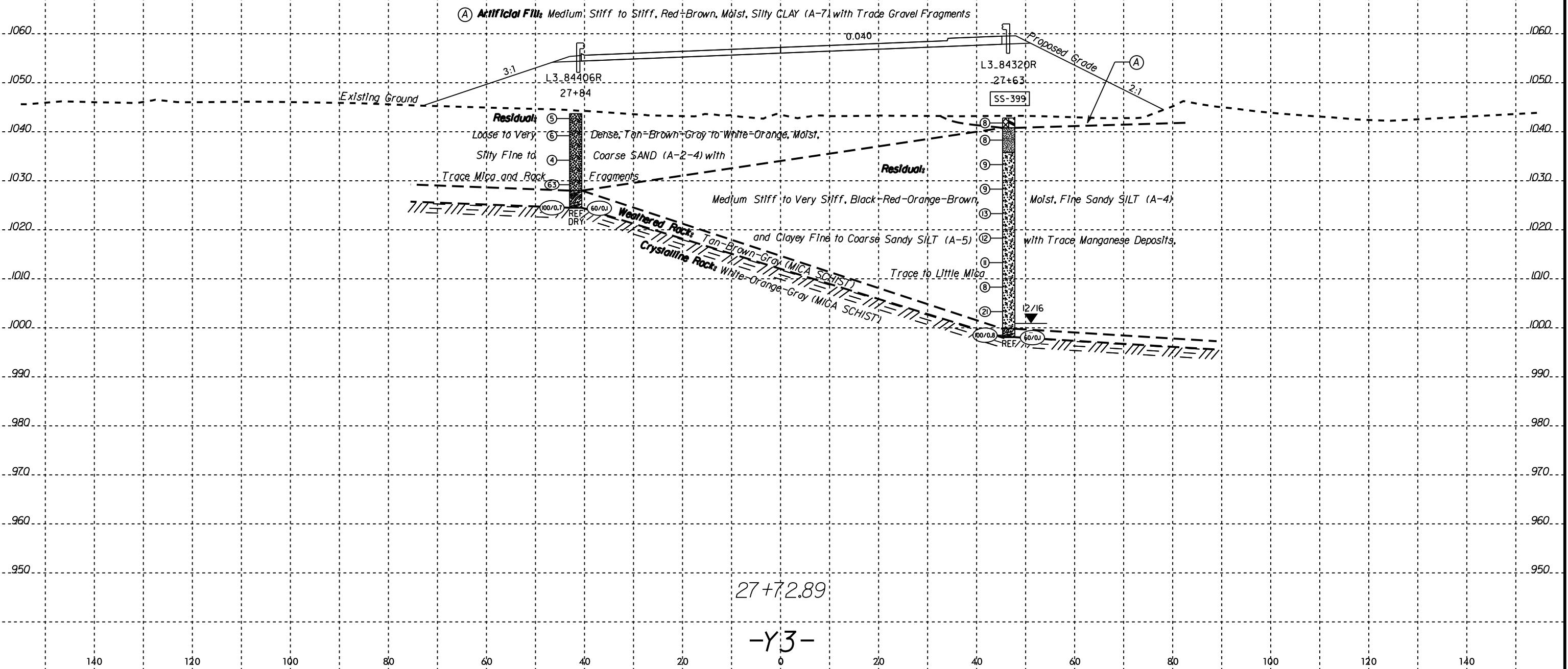
140

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-424	42' LT	25+37	13.5- 15.0	A-2-4(0)	26	NP	41.2	37.9	13.1	7.8	99.7	81.4	24.0	20.2	-
SS-419	46' RT	25+27	8.5- 10.0	A-4(0)	34	4	21.1	32.0	24.1	22.8	85.4	76.5	43.3	20.8	-



25+33.03
-Y3-

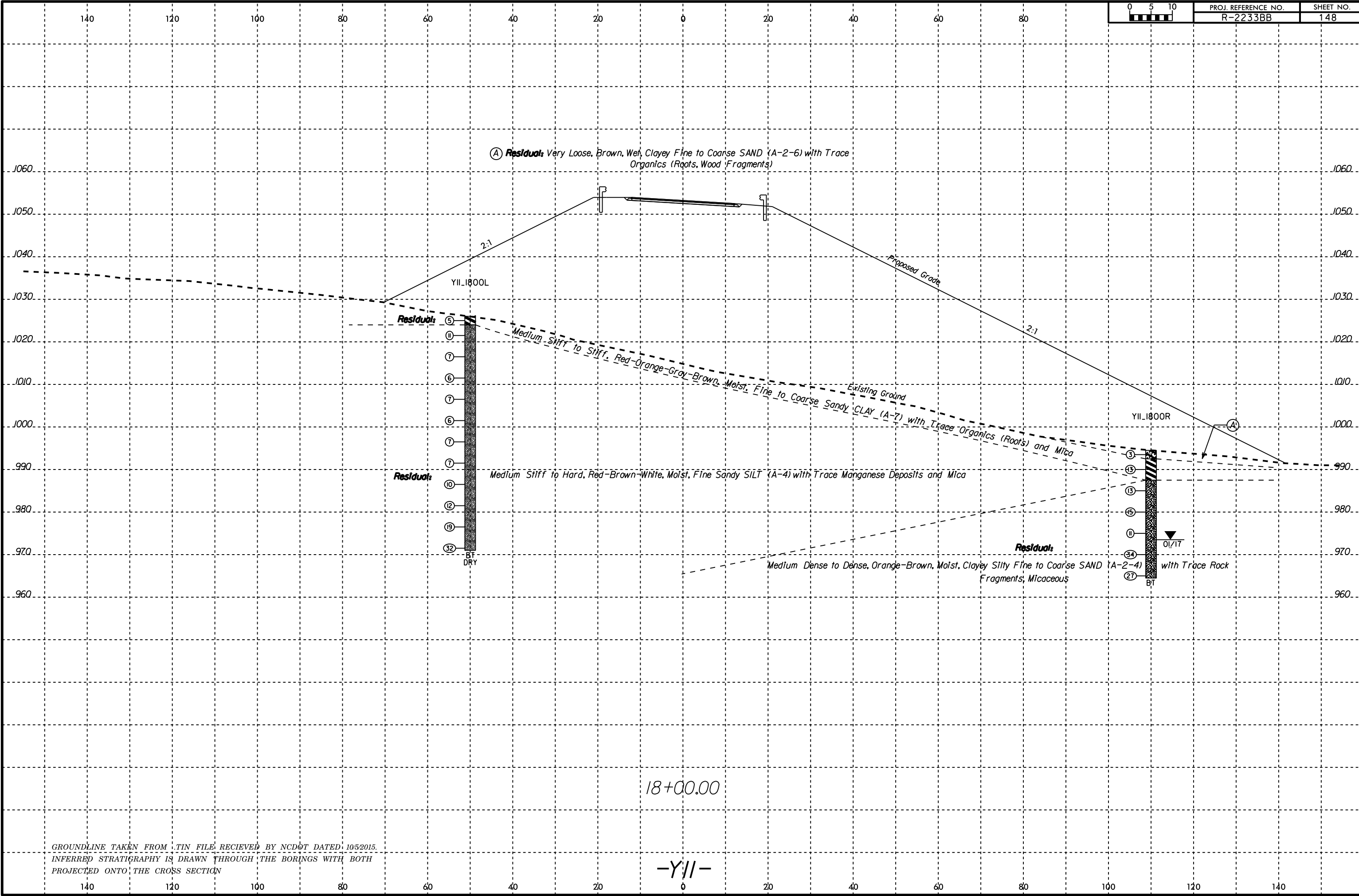
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-399	47' RT	27+63	8.5-10.0	A-5(10)	55	10	13.8	14.9	55.3	16.0	99.1	89.5	73.7	28.1	-



15-MAR-2017 13:26
 E:\Projects\661661\0203 INCD01-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB-geo-ssi-Y3.dgn
 Walker

27+72.89

-Y3-



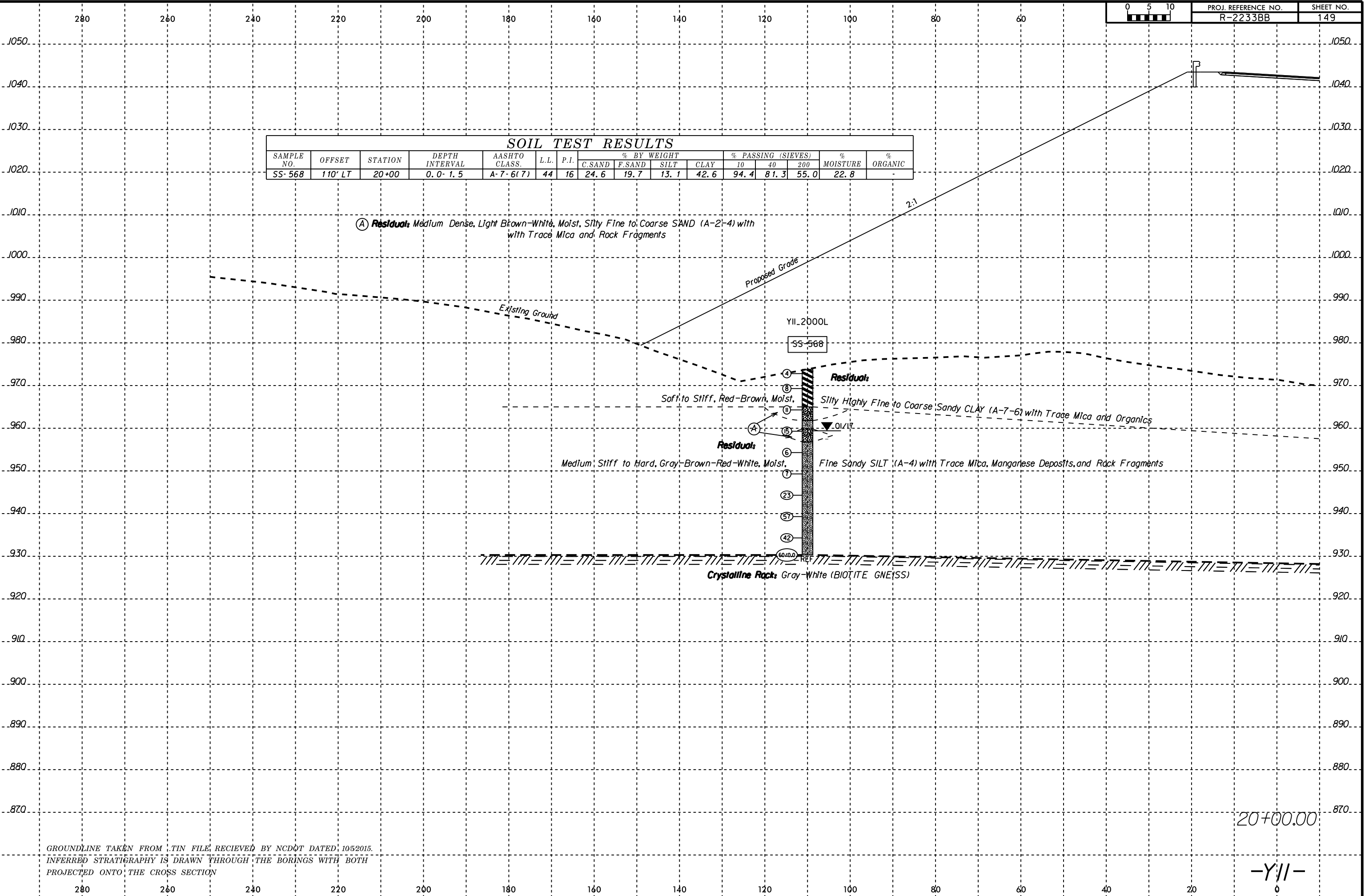
GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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		
SS-568	110' LT	20+00	0.0- 1.5	A-7-6(7)	44	16	24.6	19.7	13.1	42.6	94.4	81.3	55.0	22.8	-

(A) Residuals: Medium Dense, Light Brown-White, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica and Rock Fragments



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 Rutherford Co.\CA00.GEOTECH\asc\2233BB.geo_xsl.Y11.dgn

GROUNDLINE TAKEN FROM .TIN FILE, RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

20+00.00

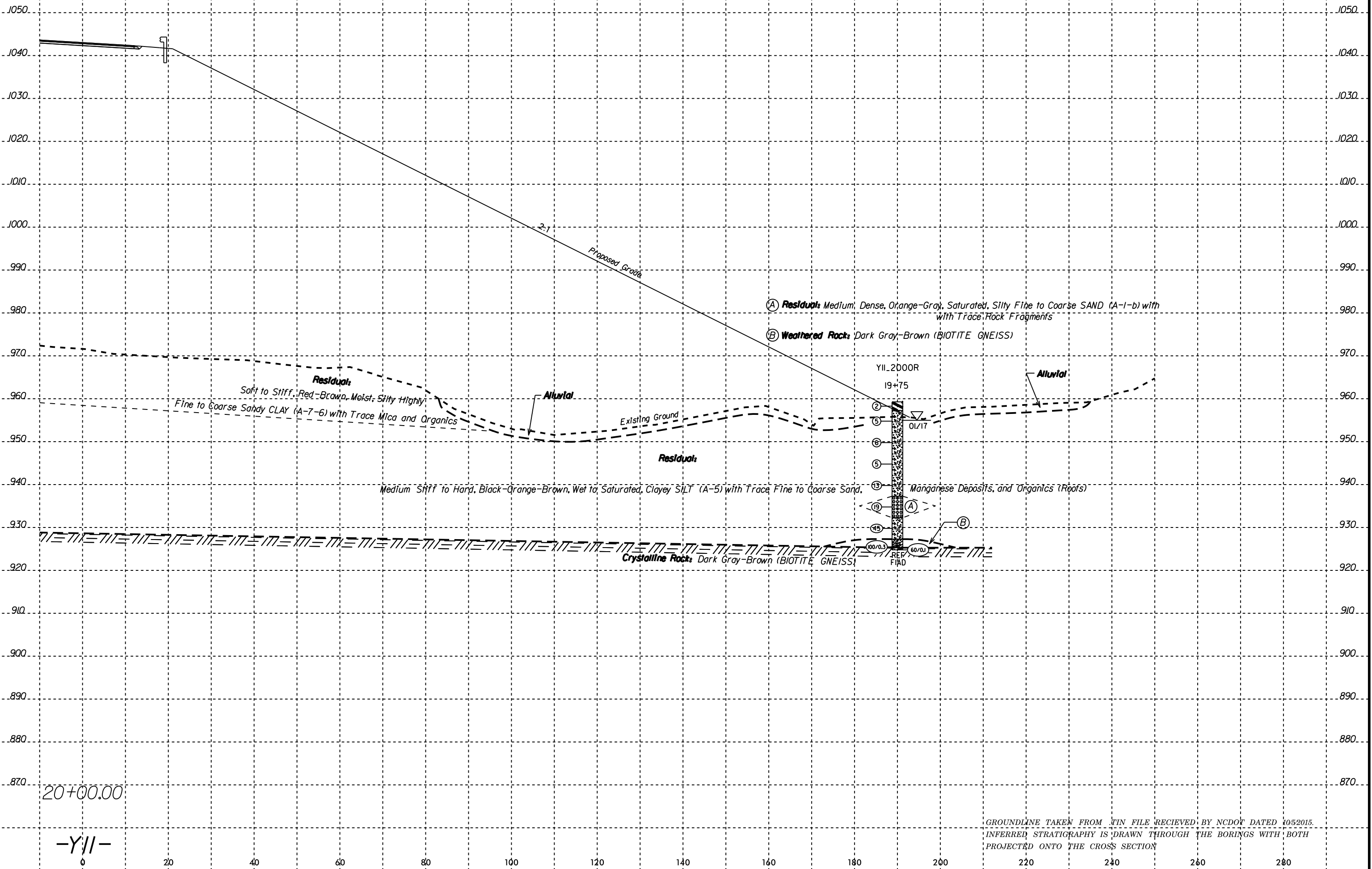
-Y11-

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
150



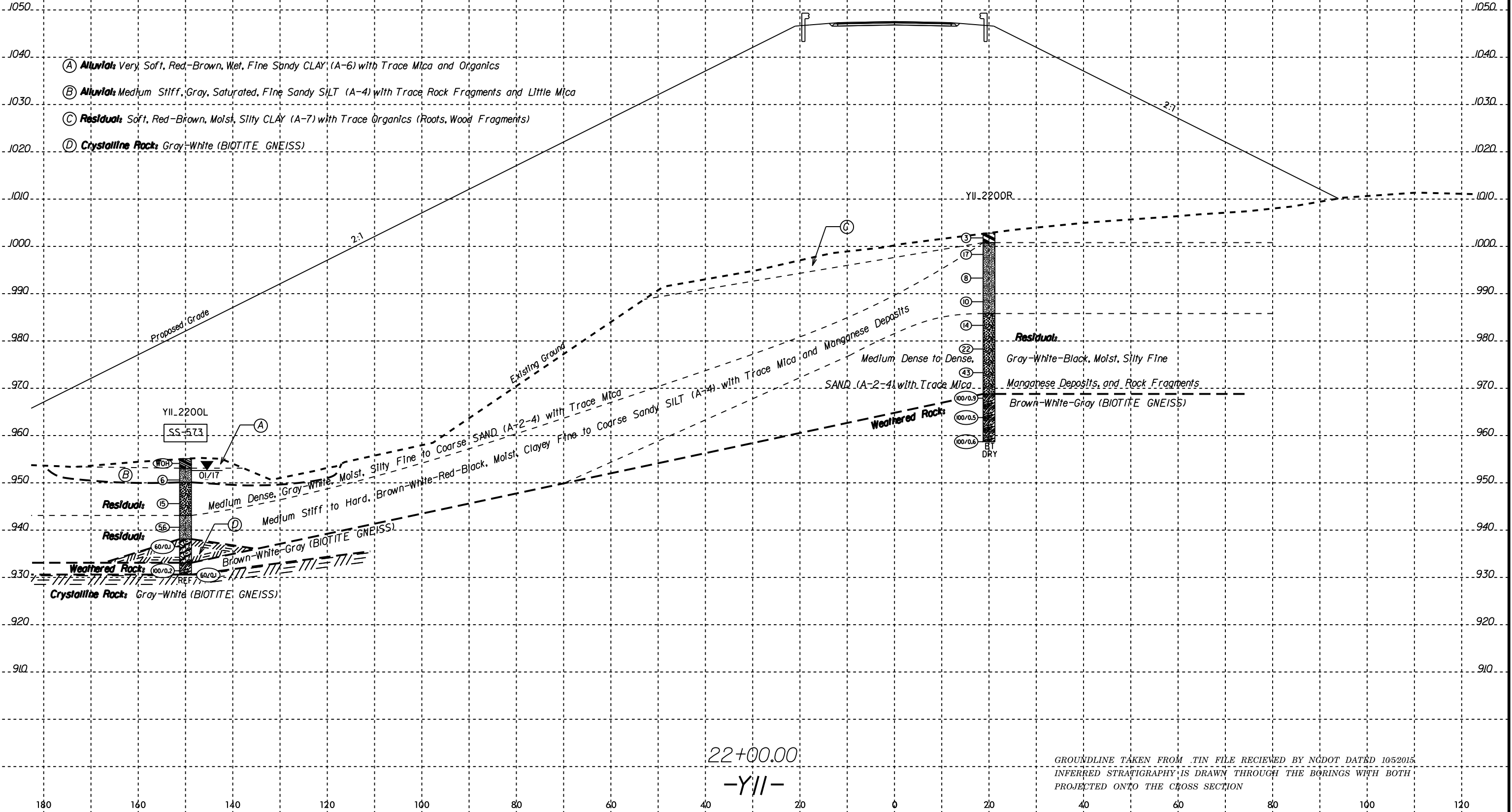
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A Walker

20+00.00

-Y11-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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-573	150' LT	22+00	0, 0-0.5	-	-	-	-	-	-	-	-	-	37.7	10.2	



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 E:\Projects\661661\0203 INCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\R2233BB-geo-ssi-YII.dgn
 Walker
 6/23/16

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

GEOTECHNICAL BORING REPORT BORE LOG

WBS 34400.1.S5		TIP R-2233BB		COUNTY RUTHERFORD		GEOLOGIST M. Arnold										
SITE DESCRIPTION US 221 South of Business (Charlotte Rd.) to SR 1366 (Roper Loop Rd.)							GROUND WTR (ft)									
BORING NO. L3_77377R(1)		STATION 773+77		OFFSET 67 ft RT		ALIGNMENT -L3-										
0 HR. Dry		4.3 ft		600,593		1,121,674										
COLLAR ELEV. 992.5 ft		TOTAL DEPTH 4.3 ft		NORTHING 600,593		EASTING 1,121,674										
DRILL RIG/HAMMER EFF./DATE F&R2175 CME-55 86% 02/16/2016		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER S. Davis		START DATE 11/20/16		COMP. DATE 11/20/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
995																
992.2	992.2	0.3	6	5	4									992.5	GROUND SURFACE	0.0
990	989.0	3.5												991.9	ASPHALT	0.6
	988.2	4.3	100/0.4											989.5	ARTIFICIAL FILL	3.0
		60/0.0												988.2	Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Mica and Clay	4.3
															(BOULDER)	
															Boring Terminated by Auger Refusal at Elevation 988.2 ft in Artificial Fill (BOULDER)	
															Note: 1) Boring offset to L3_77377R(2)	

WBS 34400.1.S5		TIP R-2233BB		COUNTY RUTHERFORD		GEOLOGIST M. Arnold										
SITE DESCRIPTION US 221 South of Business (Charlotte Rd.) to SR 1366 (Roper Loop Rd.)							GROUND WTR (ft)									
BORING NO. L3_77403L(1)		STATION 774+03		OFFSET 67 ft LT		ALIGNMENT -L3-										
0 HR. Dry		20.4 ft		600,598		1,121,537										
COLLAR ELEV. 980.9 ft		TOTAL DEPTH 20.4 ft		NORTHING 600,598		EASTING 1,121,537										
DRILL RIG/HAMMER EFF./DATE F&R2175 CME-55 86% 02/16/2016		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER S. Davis		START DATE 11/20/16		COMP. DATE 11/20/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
985																
	980.6	0.3	6	10	15									980.9	GROUND SURFACE	0.0
														980.3	ASPHALT	0.6
	977.4	3.5	4	7	6										ARTIFICIAL FILL	
															Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Mica, Gravel, and Clay	
	972.4	8.5	4	4	3											
	967.4	13.5	2	2	3									966.4	Red-Brown, Clayey SILT (A-5) with Trace Gravel, Micaceous	14.5
														964.3	Rubber, Plastic, and Metal Trash	16.6
	964.2	16.7	WOH	WOH	WOH											
	961.2	19.7	72	28/0.2										960.5	Boring Terminated by Auger Refusal at Elevation 960.5 ft in Rubber, Plastic, and Metal Trash (ARTIFICIAL FILL)	20.4
															Note: 1) Boring Terminated due to trash, offset to L3_774703L(2)	

NCDOT BORE DOUBLE R2233BB_GEO_BH.GPJ_NC_DOT.GDT 3/16/17