This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document –

The documents contained herein were originally issued and sealed by the individuals whose names and license numbers appear on each page, on the dates appearing with their signature on that page.
This file or an individual page shall not be considered a certified document.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3825B	1	217

REFERENCE: R-3825B

PROJECT: 34552

SEE SHEET 3 FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

CONTENTS

CROSS SECTIONS

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

ROADWAY SUBSURFACE INVESTIGATION

COUNTY JOHNSTON

PROJECT DESCRIPTION NC 42 FROM EAST OF SR 1902 (GLEN LAUREL ROAD) TO SR 1003 (BUFFALO ROAD)

INVENTORY

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

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

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

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

PERSONNEL

GEOSYNTEC

GEOLOGIC EXPLORATION

CAROLINA DRILLING

INVESTIGATED BY NJOROGE WAINAINA

DRAWN BY CHUCK TURLINGTON

CHECKED BY NJOROGE WAINAINA

SUBMITTED BY NJOROGE WAINAINA

DATE FEBRUARY 2017

NORTH CAROLINA PROFESSIONAL SEAL 014587 ENGINEER NJOROGE WA WAINAINA

DocuSigned by:
Njoroge Wa Wainaina 3/1/2017
AEC0C6E0A2F14F2... SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2				A-4	A-5	A-6	A-7	A-1, A-2 A-3	A-4, A-5 A-6, A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5, A-7-6			
SYMBOL														
% PASSING #10 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX	51 MN 10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
MATERIAL PASSING #40 LL PI	— 6 MX		— NP	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	NO MX			
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS		CLAYEY SOILS				
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH ($TONS/FT^2$)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	< 4 4 TO 10 10 TO 30 30 TO 50 > 50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30	< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE	MM	305	75	2.0	0.25	0.05	0.005
	IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT		
PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL — PLASTIC LIMIT		
OM — OPTIMUM MOISTURE SL — SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL	
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE	1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE	10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME	20 - 35%
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW — PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 — DIP & DIP DIRECTION OF ROCK STRUCTURES
- SPT, DPT, DMT, VST, PMT — TEST BORING
- AUGER BORING
- CORE BORING
- MW — MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING WITH CORE
- SPT N-VALUE

RECOMMENDATION SYMBOLS

- UNDERCUT
- SHALLOW UNDERCUT
- UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
- UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK
- UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS

S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [X] CME-45C
- [ ] CME-55
- [ ] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [X] DIEDRICH D-50
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [X] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [ ] CASING [ ] W/ ADVANCER
- [ ] TRICONE _____" STEEL TEETH
- [ ] TRICONE _____" TUNG.-CARB.
- [ ] CORE BIT
- [ ] _____

HAMMER TYPE:
- [X] AUTOMATIC [ ] MANUAL

CORE SIZE:
- [ ] -B _____ [ ] -H _____
- [ ] -N _____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [ ] HAND AUGER
- [ ] SOUNDING ROD
- [ ] VANE SHEAR TEST
- [ ] _____

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.
ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD	CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
HARD	CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
MODERATELY HARD	CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
VERY SOFT	CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FOOT
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK:

ELEVATION: FEET

NOTES:

FIAD = FILLED IN AFTER DRILLING
SPT REF = STANDARD PENETRATION TEST REFUSAL

TIN FILE NAME "r3825b_ls_tnl.tin" WITH FILE DATE 4-5-2016, WAS USED TO GENERATE BORING ELEVATIONS.

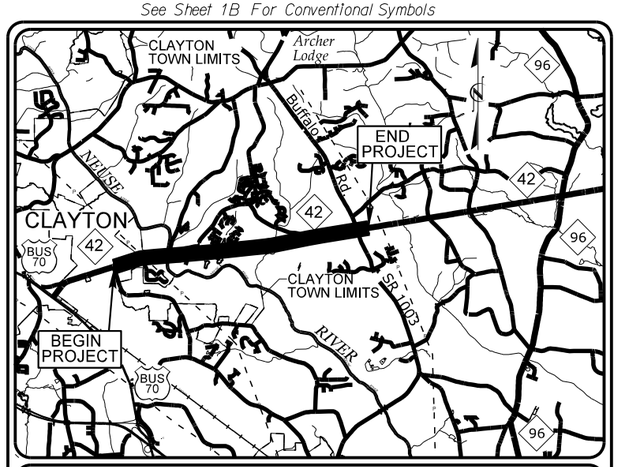
DATE: 8-15-14

9/09/99

TIP PROJECT: R–3825B

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

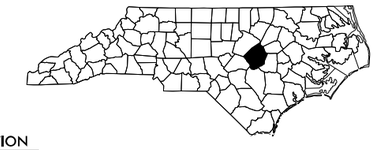
JOHNSTON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R–3825B	3	217
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34552.1.FR3	STP–0042(58)	P.E.	

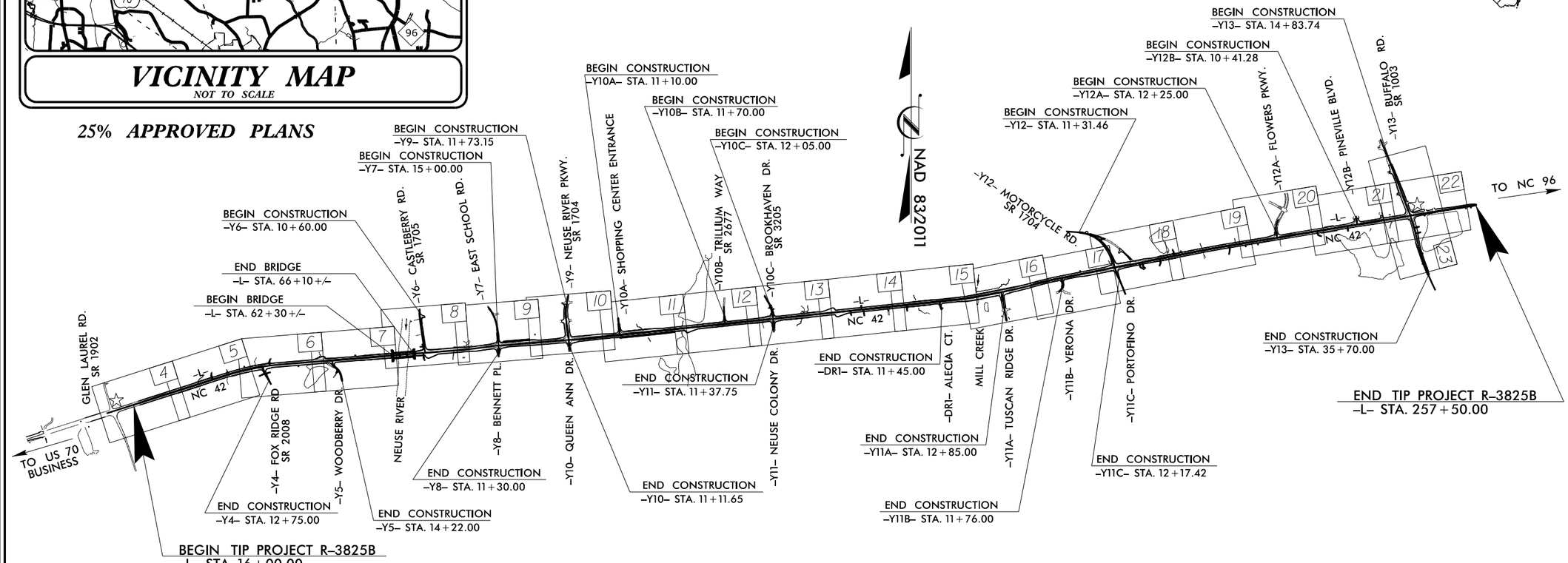
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: NC 42 FROM SR 1902 (GLEN LAUREL RD) TO SR 1003 (BUFFALO RD)

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



25% APPROVED PLANS



CLEARING ON THIS PROJECT WILL BE PERFORMED TO THE LIMITS ESTABLISHED BY NCDOT METHOD __.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2015 = 19,000
ADT 2040 = 37,400
K = 9%
D = 65%
T = 6% *
V = 60 MPH
* (TTST % + DUAL %)
FUNC. CLASS = RURAL MINOR ARTERIAL
REGIONAL TIER
DESIGN EXCEPTION (GRADE)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R–3825B = 4.521 MILES
LENGTH BRIDGE TIP PROJECT R–3825B = 0.072 MILES
TOTAL LENGTH OF TIP PROJECT R–3825B = 4.593 MILES

URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
NC LICENSE # C-2243

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 17, 2016

LETTING DATE:
JUNE 19, 2018

ED EDENS, P.E.
PROJECT ENGINEER

KEVIN VAN METRE, P.E.
PROJECT DESIGN ENGINEER

GARY R. LOVERING, P.E.
PROJECT ENGINEER
NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

2/27/2017
K:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_rdy_tsh.dgn

Geosyntec consultants

Geosyntec Consultants of NC, PC
2501 Blue Ridge Road, Suite 430
Raleigh, North Carolina 27607
PH 919.870.0576
www.geosyntec.com

February 22, 2017

WBS NUMBER	34552.1.FR3
TIP NUMBER	R-3825B
F. A. Proj.#:	STP-0042(58)
COUNTY:	Johnston
DESCRIPTION:	NC 42 from East of SR 1902 (Glen Laurel Rd.) to SR 1003 (Buffalo Road)
SUBJECT:	Geotechnical Report – Inventory

Geosyntec Consultants has completed a subsurface investigation for this project and present the following inventory.

Project Description

The project area lies east of the town of Clayton along the existing NC 42 beginning just east of Glen Laurel Road (Station 15+00) and extends eastward 4.6 miles to just east of Buffalo Road (Station 257+50). The proposed project consist of widening of the existing NC 42 from two lanes to four with median and turn lanes with multiple embankments of up to 30 feet and cut sections as deep as 30 feet. The widening will be accomplished by addition of two new travel lanes on the southern side of the existing NC 42 on majority of the roadway segments and addition of two new travel lanes on each side of the existing NC 42 in some roadway segments. Additionally, some widening and realignment is proposed for some of the intersecting -Y- lines.

The geotechnical investigation was conducted in March and April of 2016. Borings were advanced with ATV mounted Dietrich D50 and CME 45C drill machines. Both drill machines were equipped with automatic hammers. Standard Penetration tests were performed in all borings. Representative soil samples were collected for visual classification in the field and for laboratory analysis by Falcon Engineering.

The following alignments, totaling 5.5 miles were investigated. Subsurface cross sections of these alignments are included in this report.

Line	Station
-L-	15+00 to 257+50
-Y4-	10+00 to 12+75
-Y5-	10+00 to 14+22
-Y6-	10+60 to 17+91
-Y7-	15+00 to 17+35
-Y9-	11+73 to 18+12
-Y10A	11+10 to 13+13
-Y10C-	12+05 to 14+53
-Y11A-	10+00 to 12+85
-Y11B-	10+00 to 11+76
-Y12-	11+31 to 20+99
-Y13-	14+84 to 35+70

Physiography and Geology

The portion of the project corridor west of the Neuse River is within the Piedmont Physiographic Province and the portion east of the Neuse River is within the boundary of the Piedmont Province and the Coastal Plain Physiographic Province. Surficial soils within the Piedmont Province consist of residual sandy silts derived from weathering of the underlying metamorphic rocks of the Raleigh Belt. Within the Coastal Plain Province, the surficial soils consist of Terrace deposits and Upland sediments consisting of gravel, sands, clayey sands, sandy silts and sandy clays. The Coastal Plain surficial soils are underlain by the residual soils of the Piedmont Province.

The topography west of the Neuse River is generally sloping down towards the river. The elevation at the beginning of the project is approximately 310± feet and decreases to approximately 140± feet on the west bank of the Neuse River. The topography east of the Neuse River is generally rolling and ranges in elevation from a high of approximately 310± feet to approximately 150± feet. Surface waters generally flows towards the Neuse River and surface drainage is generally good.

Soil Properties

Soils encountered in this project have been divided into five categories, 1) roadway embankment 2) alluvial soils, 3) Coastal Plain soils, 4) residual soils, 5) artificial fill.

engineers | scientists | innovators

Roadway embankment soils are present along existing NC 42. They typically consist of red, brown, soft to medium stiff, moist, sandy and clayey silts (A-4 and A-5) and loose to medium dense, moist, silty sands (A-2-4 and A-2-5).

Alluvial soils are encountered throughout the project along the flood plains of the Neuse river, creeks and adjacent to wetlands. Alluvial soils are either present on the surface or under roadway embankment soils. These soils consist of tan, gray, red and brown loose to medium dense, moist, gravelly sands (A-1-a and A-1-b), and red, brown, soft to stiff, moist, sandy silts, sandy clays and silty clays (A-4, A-6 and A-7-6). These soils range in thickness from 2± to 6± feet.

Coastal Plain soils were encountered east of the Neuse River either on the surface, or under the roadway embankment or alluvial soils. Coastal plain deposits range in thickness from 2± to 10± feet. They consist of brown, red and gray, very loose to medium dense, moist, silty and clayey sands (A-2-4 and A-2-6) and soft to stiff, moist, sandy silts, sandy clays and silty clays (A-4, A-6 and A-7-6).

Residual soils were encountered throughout the project. Residual soils primarily consist of red, yellow and brown, medium stiff to very stiff, moist, sandy and clayey silts (A-4 and A-5) with trace weathered rock fragments.

Artificial fills are encountered in several areas along the -L- alignment and along -Y11B- and -Y13-. The artificial fill located on the right side, starting from Station 46+00 to 49+00 consist of red, brown, very loose to medium dense, moist, clayey sand (A-2-7) mixed with chunks of asphalt, concrete pavement materials, and concrete. The other areas of the artificial fill consist of soil materials including red and brown, loose to medium dense, moist, silty sand (A2-4) to clayey sand (A-2-6) and stiff to very stiff, moist, clayey and sandy silt (A-4) and (A-5).

Rock Properties

Weathered rock was encountered in deeper borings and some shallow borings in lower elevations. Weathered rock is derived from the weathering of the underlying schist. Crystalline rock was encountered at the following stations:

Line	Stations
-L-	58+75 to 59+25
-L-	61+75 to 62+75
-L-	106+25 to 107+25
-L-	135+25 to 135+75
-L-	155+75 to 156+75
-L-	165+25 to 165+75
-L-	166+25 to 157+25

Ground Water

Ground water data was collected during March and April of 2016, during a time of normal precipitation. Ground water occurs in low lying areas and adjacent to bodies of water at depths ranging from 0 to 15 feet from the existing ground surface elevation. Seasonal fluctuations of the ground water table should be anticipated.

Seeps: One area where water was seeping at the interface between the embankment and natural ground was noted at the following stations:

Line	Station (±)	Offsets
-L-	60+80 to 62+00	RT

Water Wells: Water wells were noted within or in close proximity to the construction limits at the following locations:

Line	Stations	Offsets
-L-	44+60	39’ RT
-L-	162+60	70’ RT
-L-	163+35	65’ RT
-L-	184+75	39’ LT
-L-	236+10	60’ RT

Ponds: Three ponds were noted within the construction limit at the following location:

Line	Stations	Offsets
-L-	116+50 to 118+50	LT
-L-	200+50 to 202+50	LT
-L-	248+50 to 249+50	RT

engineers | scientists | innovators

Areas of Special Geotechnical Interest

1) High Ground Water: Ground water was encountered within 6 feet of final grade at the following locations:

Line	Station	Offsets
-L-	41+75 to 43+25	RT
-L-	75+25 to 76+75	LT
-L-	79+75 to 82+25	LT and RT
-L-	110+25 to 113+25	LT and RT
-L-	234+25 to 236+25	LT and RT
-L-	243+75to 248+75	LT and RT
-L-	251+00 to 253+25	LT and RT
-L-	255+50 to 257+75	LT and RT
-Y7-	14+75 to 16+50	LT and RT

2) Artificial Fill: Areas of artificial fill were encountered at the following locations:

Line	Station	Offsets
-L-	46+00 to 51+50	RT
-L-	95+00 to 100+00	LT
-L-	107+00 to 109+00	RT
-L-	112+17 to 114+00	RT
-L-	117+00 to 119+00	LT
-L-	154+45 to 155+45	LT
-L-	167+70 to 170+80	RT
-L-	172+50 to 182+00	RT
-L-	183+00 to 186+00	RT
-L-	199+60 to 200+50	LT
-L-	201+00 to 202+00	LT
-L-	207+25 to 208+25	LT
-L-	213+25 to 213+75	LT
-L-	215+50 to 217+00	LT
-L-	248+75 to 250+00	LT
-Y6-	13+25 to 16+25	LT
-Y11B-	10+70 to 12+20	RT
-Y13-	21+00 to 22+50	RT

3) Soft Soils: The following areas were found to contain soft clay soils

Line	Station	Offsets
-L-	25+50 to 29+00	LT and RT
-L-	66+50 to 67+50	LT and RT
-L-	75+25 to 77+00	LT
-L-	85+50 to 88+00	LT and RT
-L-	136+50 to 137+00	RT
-L-	165+50 to 166+50	LT and RT
-L-	230+00 to 233+50	LT and RT

4) High Plastic Clays: Clay soils with high plasticity (PI > 15) were encountered either within three feet of final grade or above final grade in cut areas at the following locations:

Line	Station	Offsets
-L-	77+00 to 79+50	RT and LT
-L-	82+00 to 83+50	LT and RT
-L	92+50 to 94+50	LT and RT
-L-	177+50 to 181+00	LT and RT
-L-	207+00 to 208+50	RT
-L-	214+75 to 215+75	RT
-L-	217+80 to 218+50	LT and RT
-L-	220+50 to 222+00	LT
-L-	224+00 to 226+00	LT and RT
-L	243+00 to 246+50	LT and RT
-L-	251+50 to 253+00	LT and RT
-Y6-	14+00 to 15+25	LT
-Y7-	14+50 to 16+50	LT and RT

Culverts

Culvert at -L- 107+30

Natural ground elevations range from 160± feet at the bottom of the stream to 170± feet along the adjacent floodplain. Borings completed in the vicinity show approximately 5± feet of very loose alluvial clayey sand (A-2-6) underlain by weathered rock. Ground water was measured at an elevation of 157± feet during this investigation.

engineers | scientists | innovators

Culvert at -L- 114+10

Natural ground elevations range from 147± feet at the bottom of the stream to 170± feet along the adjacent floodplain. Borings completed in the vicinity show approximately 10± feet of very loose alluvial clayey sand (A-2-6) underlain by 10± feet of very loose Coastal Plain clayey sand (A-2-6) and very soft to soft sandy clay (A-6) and weathered rock. Ground water was measured at an elevation of 153± feet during this investigation.

Culvert at -L- 135+50

Natural ground elevations range from 165± feet at the bottom of the stream to 177± feet along the adjacent floodplain. The boring on the downstream side show approximately 5± feet of very loose to loose alluvial clayey sand (A-2-6) underlain by weathered rock. The boring on the upstream side show approximately 18± feet of very stiff to hard residual sandy silt (A-4) and dense to very dense gravelly sand (A-1-a) and silty sand (A-2-4) underlain by weathered rock. Ground water was measured at an elevation of 165± feet during this investigation.

Culvert at -L- 156+30

Natural ground elevations range from 160± feet at the bottom of the stream to 180± feet along the adjacent floodplain. The borings completed in the vicinity show approximately 6± feet of soft to stiff alluvial clayey sand (A-2-6) underlain by 15± feet of stiff to hard residual sandy silt (A-4) and weathered rock. Ground water was measured at an elevation of 157± feet during this investigation.

Culvert at -L- 167+10

Natural ground elevations range from 150± feet at the bottom of the stream to 155± feet along the adjacent floodplain. The borings completed in the vicinity show approximately 5± feet of soft to medium stiff alluvial clayey sand (A-2-6) underlain by 10± feet of hard residual sandy silt (A-4) and weathered rock. Ground water was measured at an elevation of 154± feet during this investigation.

Stream Relocation

Stream Relocation at -L- 73+20 to 76+50

A jurisdictional stream that drains into a 24” RCP at Station 73+20 will require relocation to an alignment outside of the proposed embankment slope stakes. The borings in the vicinity of the proposed alignment show approximately 10± feet of medium stiff to very stiff, alluvial, sandy clays (A-6) underlain by medium stiff to hard, residual, sandy silt (A-4). Shallow ground water less than 4± feet was encountered at the boring closest to the proposed alignment.

Stream Relocation at -L- 135+50 to 137+00

A jurisdictional stream that drains into the culvert at Station 135+50 will require relocation to an alignment outside of the proposed embankment slope stakes. The borings in the vicinity of the proposed alignment show approximately 3± feet of very loose to loose, alluvial, clayey sands (A-2-6) underlain by very stiff, residual, sandy silt (A-4). Shallow ground water less than 4± feet was encountered at the boring closest to the proposed alignment.

Stream Relocation at -L- 167+00 to 171+00

A jurisdictional stream that drains into the culvert at Station 167+10 will require relocation to an alignment outside of the proposed embankment slope stakes. The borings in the vicinity of the proposed alignment show approximately 7± feet of soft to medium stiff, alluvial, sandy silts (A-4) underlain by medium stiff, residual, sandy silt (A-4).

Prepared by

Njoroge Wainaina
Senior Consultant

engineers | scientists | innovators

APPENDIX A

Undisturbed and Bulk Samples

Undisturbed Samples: Undisturbed thin wall Shelby tube samples were collected at the following locations and submitted for testing.

Sample No.	Station	Depth (ft)	Test
ST-1	49+50, 35’ RT	9.0-11.0	Consolidation, Triaxial CU
ST-2	28+00, 44’ LT	7.0-9.0	Consolidation, Triaxial CU

Bulk samples were collected at the following locations and submitted for testing.

Sample No.	Station	Depth (ft)	Test
BS-1	53+50, 55’ RT and 55+00, 55RT	5.0 to 32.0	CBR
BS-2	51+50, 65’ LT	8.0 to 10.0	CBR

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	4

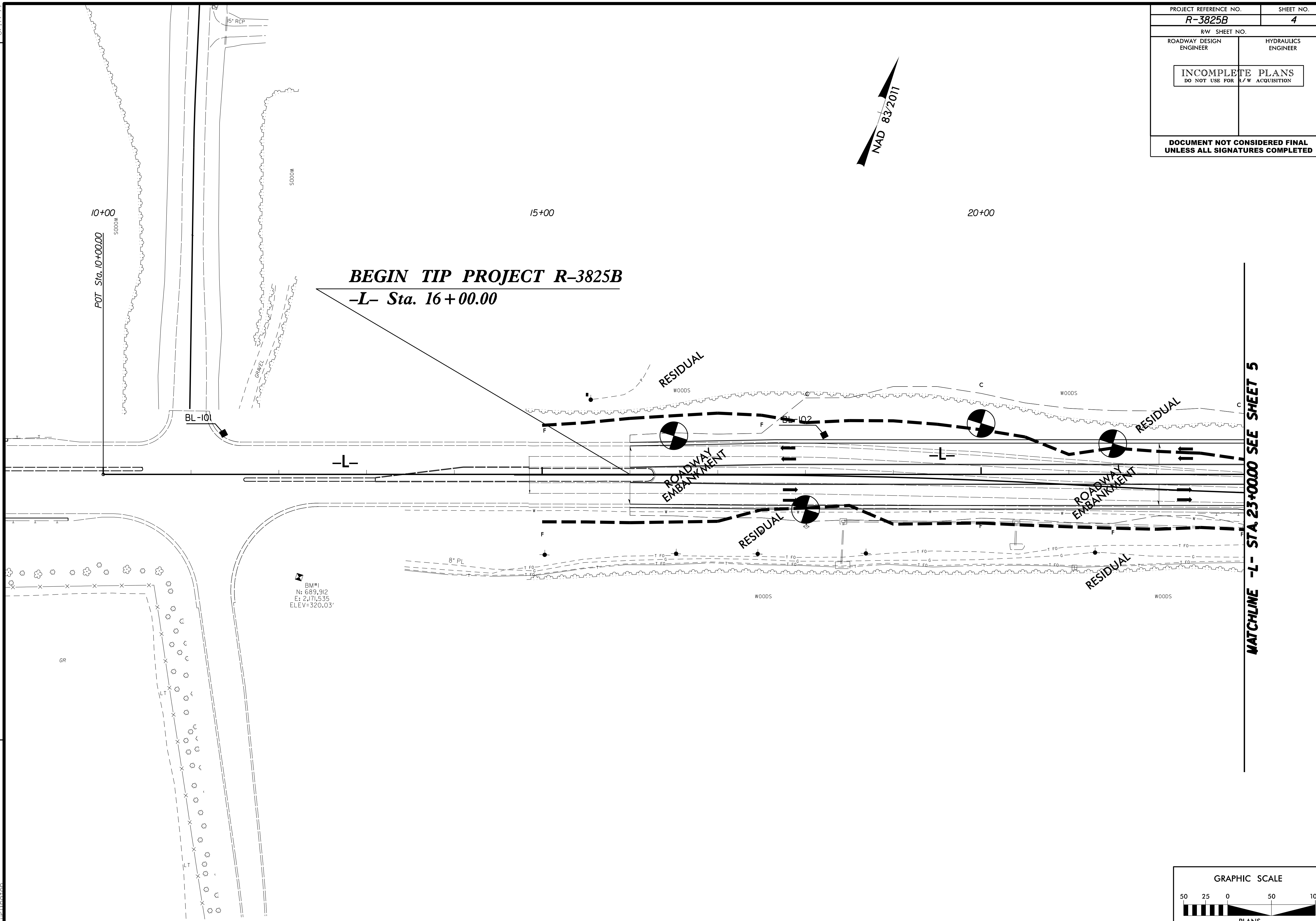
R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



REVISIONS

8/17/99

2/23/2017
M:\N\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_004.dgn

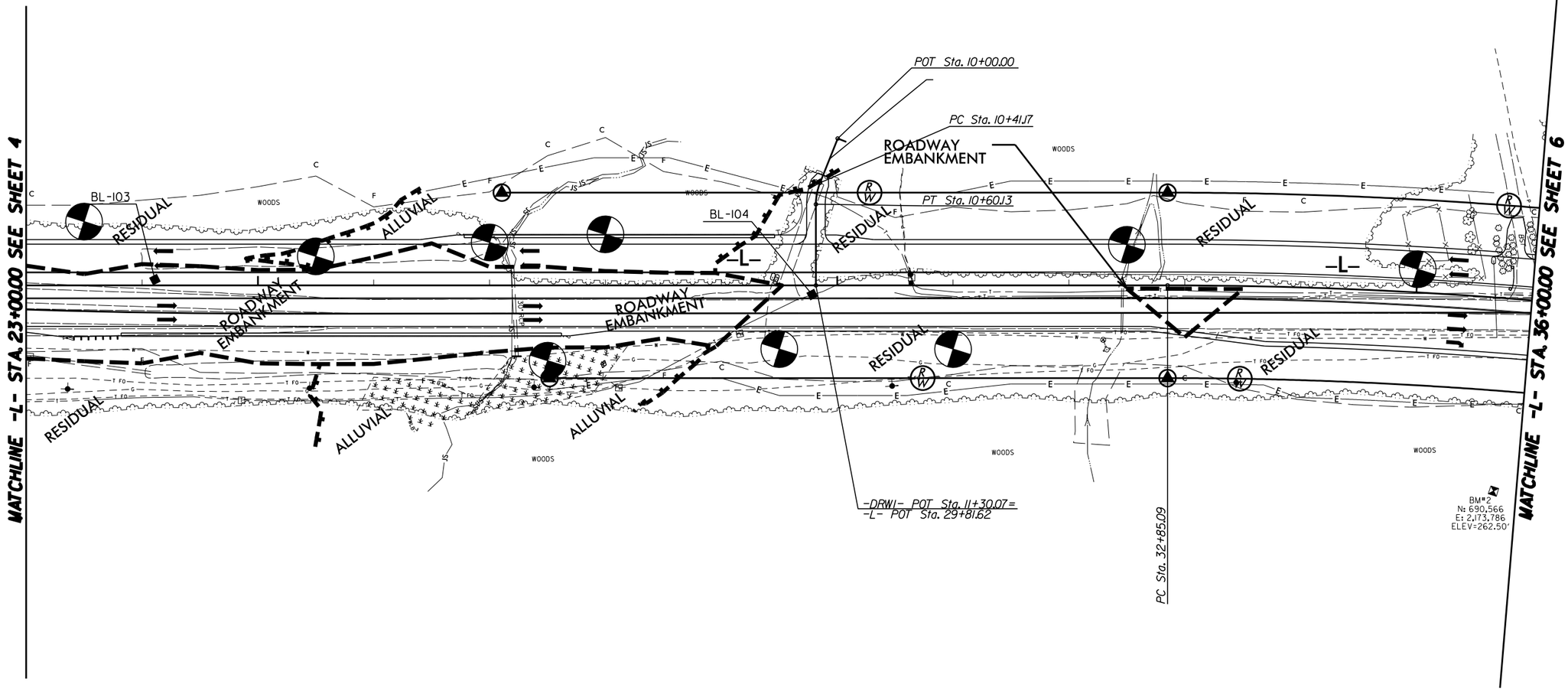
PROJECT REFERENCE NO.	SHEET NO.
R-3825B	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/2011

25+00 30+00 35+00



GRAPHIC SCALE
50 25 0 50 100
PLANS

REVISIONS 8/17/99

2/23/2017
C:\projects\DOT\R-3825B\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_005.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	6
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

NAD 83/2011

40+00

45+00

MATCHLINE -L- STA. 36+00.00 SEE SHEET 5

MATCHLINE -L- STA. 49+00.00 SEE SHEET 7

-L- POC Sta. 38+97.23 =
-Y4- POC Sta. 10+00.00

PC Sta. 10+33.29

POT Sta. 10+00.00

PT Sta. 10+65.26

-DRW2- POT Sta. 11+30.00 =
-L- POC Sta. 40+33.15

BL-105

BL-106

RESIDUAL

ROADWAY EMBANKMENT

ARTIFICIAL FILL

WOODS

PT Sta. 10+51.17

POT Sta. 10+99.46

PT Sta. 41+57.38

PI Sta. 10+52.88

PC Sta. 11+13.35

POT Sta. 10+00.00

-DRW16- POT Sta. 10+00.00 =
-Y4- POC Sta. 11+46.81

PT Sta. 11+71.01

-DRW15- POT Sta. 11+20.00 =
-Y4- POC Sta. 11+30.02

BY1-136

END CONSTRUCTION
-Y4- POT Sta. 12+75.00

POT Sta. 13+59.32

WELL
STA 44+60
39'RT

POND
WE = 196.6

GRAPHIC SCALE
50 25 0 50 100
PLANS

REVISIONS 8/17/99

2/23/2017
K:\STIP\R-3825B\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_006.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	7

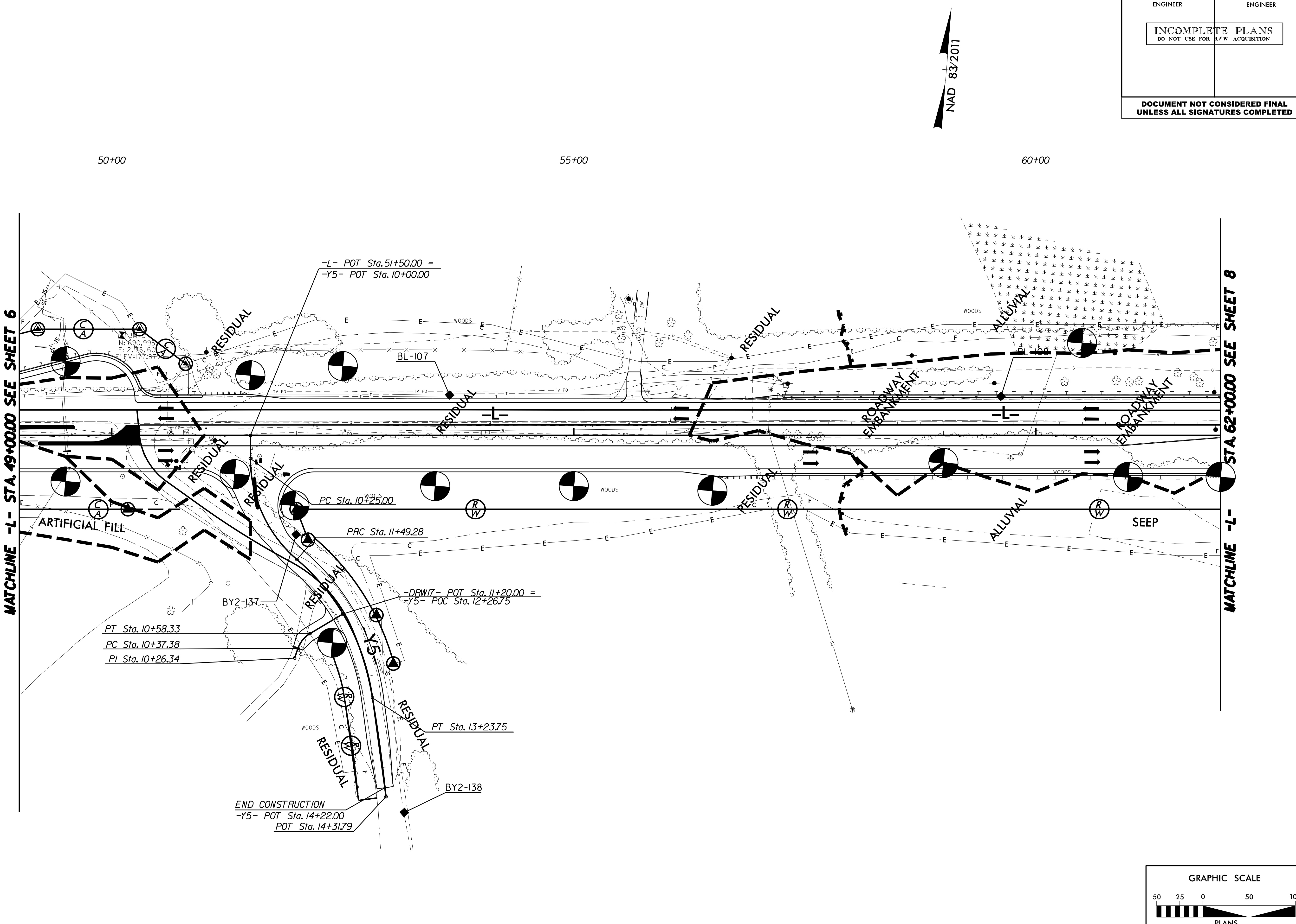
R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NAD 83/2011
50+00
55+00
60+00
MATCHLINE -L- STA. 49+00.00 SEE SHEET 6
MATCHLINE -L- STA. 62+00.00 SEE SHEET 8
-L- POT Sta. 51+50.00 =
-Y5- POT Sta. 10+00.00
BL-107
RESIDUAL
ROADWAY EMBANKMENT
ALLUVIAL
WOODS
ARTIFICIAL FILL
SEEP
PC Sta. 10+25.00
PRC Sta. 11+49.28
BY2-137
-DRW17- POT Sta. 11+20.00 =
-Y5- POC Sta. 12+26.75
PT Sta. 10+58.33
PC Sta. 10+37.38
PI Sta. 10+26.34
Y5
PT Sta. 13+23.75
BY2-138
END CONSTRUCTION
-Y5- POT Sta. 14+22.00
POT Sta. 14+31.79
GRAPHIC SCALE
50 25 0 50 100
PLANS

REVISIONS

8/17/99

2/23/2017
R3825b_inv_007.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	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

NAD 83/2011

PC Sta. 10+00.00
BEGIN CONSTRUCTION
-Y6- POC Sta. 10+60.00
℄PC Sta. 10+86.31
BY3-139
10
ROADWAY EMBANKMENT
COASTAL PLAIN
WOODS
-Y6-
ARTIFICIAL FILL
PT Sta. 13+34.37
ALLUVIAL
BY3-140
65+00
70+00
75+00
-DRW18- POT Sta. 10+75.00 =
-Y6- POT Sta. 16+71.62
POT Sta. 10+00.00
BEGIN APPROACH SLAB
-L- POT Sta.68+11.45 =
-Y6- POT Sta. 17+91.45
PC Sta. 74+07.16
BM#4
N: 691,147
E: 2,176,708
ELEV=140.97'
BL-109
BL-110
NEUSE RIVER
CORE EXCAVATION (6 TOT AL)
-DRW3- POT Sta. 10+00.00 =
-L- POT Sta. 67+78.51
PC Sta. 10+86.15
PT Sta. 11+09.46
ISBK BUS
WJ7
EIP
POOL
-L-
MATCHLINE -L- STA. 62+00.00 SEE SHEET 7
MATCHLINE -L- STA. 75+00.00 SEE SHEET 9

GRAPHIC SCALE
50 25 0 50 100
PLANS

R:\23\ROADWAY\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_008.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	9
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

8/17/99

NAD 83/2011

PC Sta. 10+00.00

BY4-141

BEGIN CONSTRUCTION
-Y7- POT Sta. 15+00.00

80+00

85+00

75+00

PT Sta. 14+78.36

15

PRC Sta. 77+97.10

-L- POC Sta.81+27.18 =
-Y8- POT Sta. 10+00.00

-L- POC Sta.81+26.07 =
-Y7- POT Sta. 17+35.33

BL-111

BL-112

ROADWAY EMBANKMENT

ROADWAY EMBANKMENT

ALLUVIAL

COASTAL PLAIN

WOODS

BM#5
N: 691,086
E: 2,178,502
ELEV=180.56'

PT Sta. 81+89.71

END CONSTRUCTION
-Y8- POT Sta. 11+42.90

PC Sta. 11+48.23

PT Sta. 12+06.29

MATCHLINE -L- STA. 75+00.00 SEE SHEET 8

MATCHLINE -L- STA. 88+00.00 SEE SHEET 10

GRAPHIC SCALE
50 25 0 50 100
PLANS

R-3825B_GEO_RDWY_modified.dgn
\CADD_GEOTECH\Plan Prof\R-3825B_inv_009.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	10

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

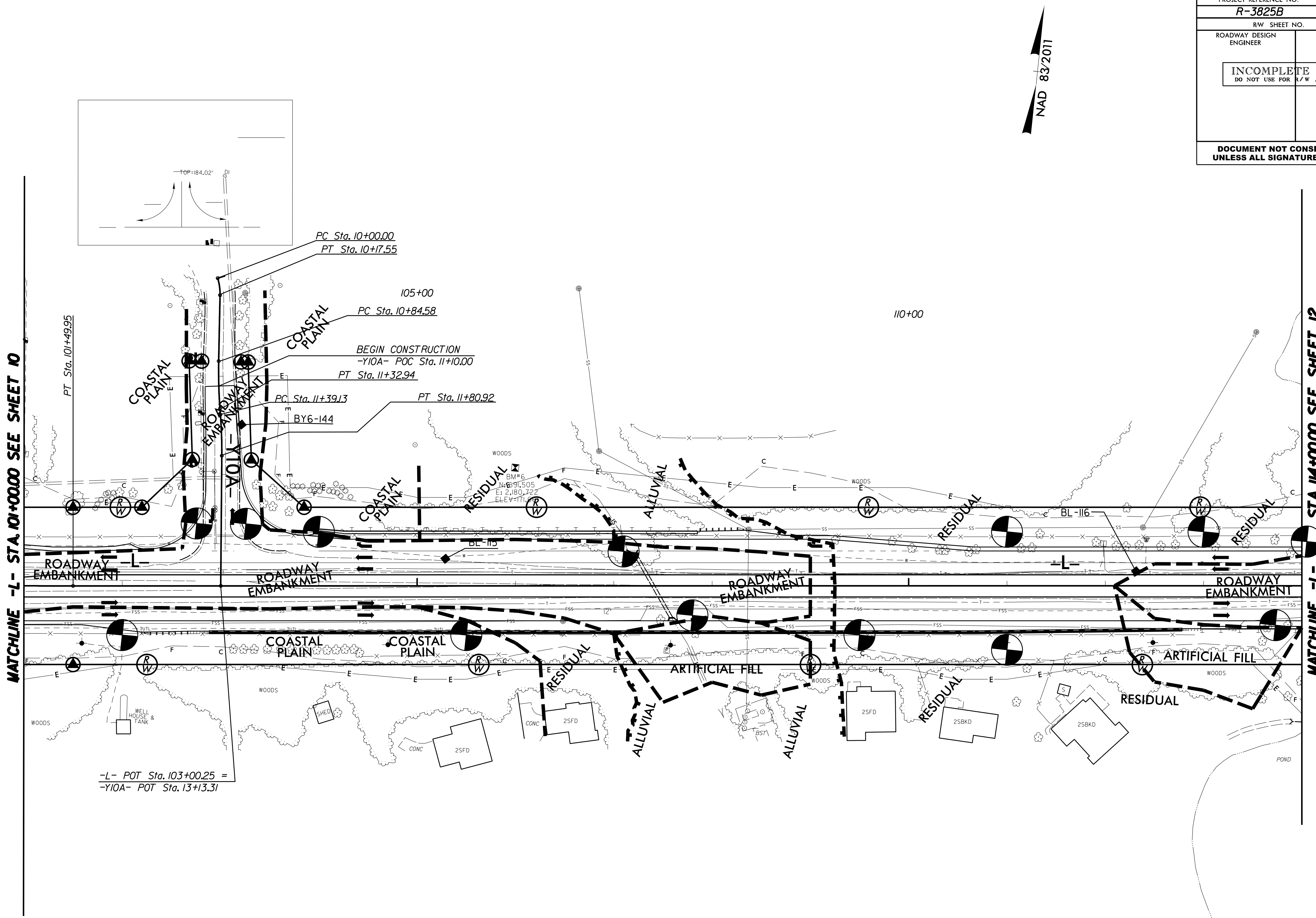
8/17/99

2/23/2017
M:\N\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_010.dgn
CTurlington

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	11
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



NAD 83/2011
MATCHLINE -L- STA. 101+00.00 SEE SHEET 10
MATCHLINE -L- STA. 114+00.00 SEE SHEET 12
PC Sta. 10+00.00
PT Sta. 10+17.55
105+00
110+00
PC Sta. 10+84.58
BEGIN CONSTRUCTION
-Y10A- POC Sta. 11+10.00
PT Sta. 11+32.94
PC Sta. 11+39.13
PT Sta. 11+80.92
BY6-144
PT Sta. 101+49.95
-Y10A-
-L-
BL-115
BL-116
BM#6
N: 631,505
E: 2,180,322
ELEV=171.18
COASTAL PLAIN
ROADWAY EMBANKMENT
RESIDUAL
ALLUVIAL
ARTIFICIAL FILL
WOODS
WELL HOUSE & TANK
SHED
CONC
2SFD
2SBKD
BST
POND
TOP=184.02'
-L- POT Sta. 103+00.25 =
-Y10A- POT Sta. 13+13.31

GRAPHIC SCALE

50 25 0 50 100

PLANS

REVISIONS

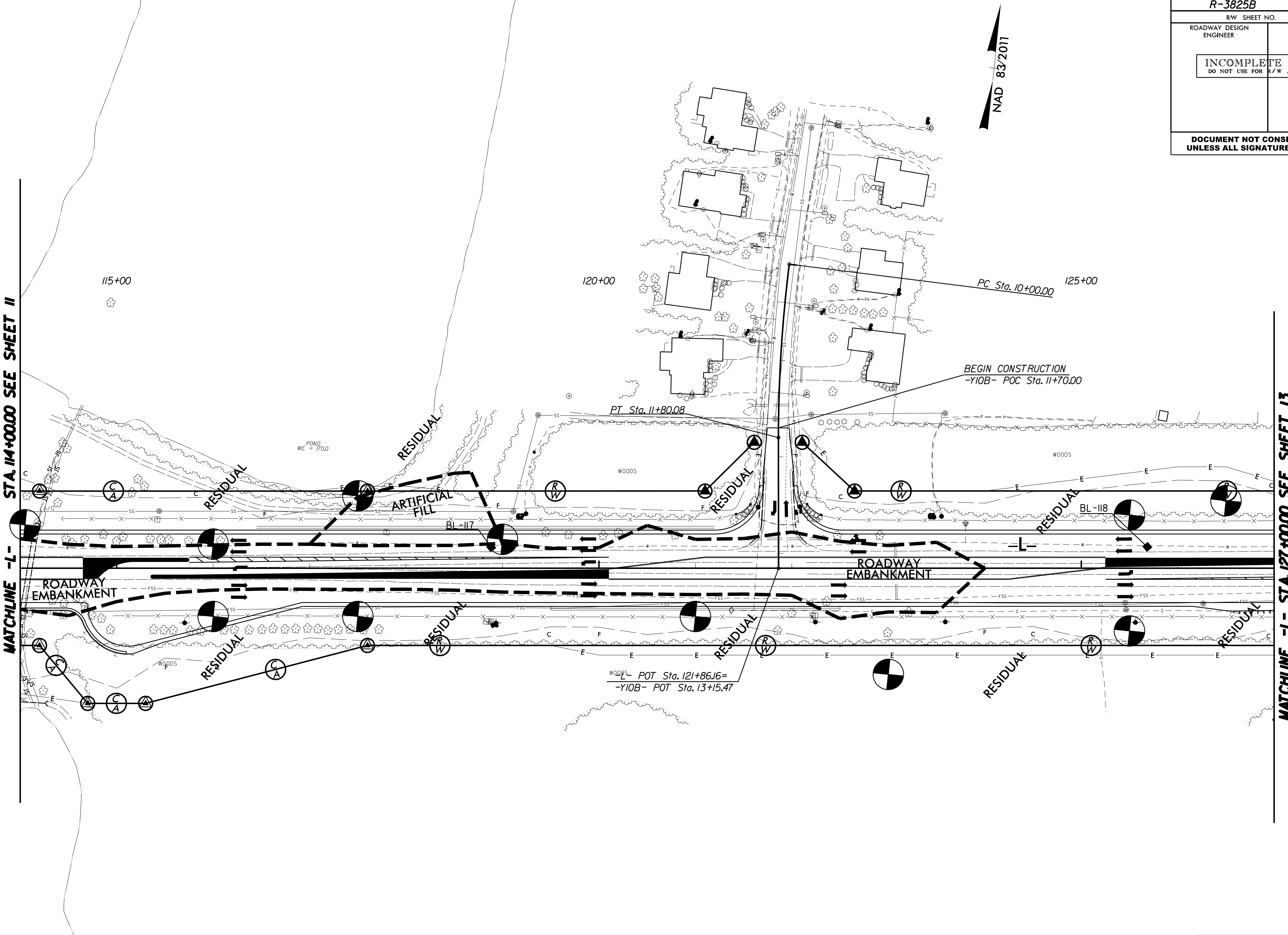
8/17/99

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_011.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	12
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



GRAPHIC SCALE

50 25 0 50 100

PLANS

REVISIONS

8/17/99

2/23/2017
M:\N\NCDOT\R-3825B\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_012.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	13
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

NAD 83/2011

-Y10C- BROOKHAVEN DR
PI Sta 12+68.33
Δ = 25° 15' 36.6" (RT)
D = 10° 54' 48.5"
L = 231.46'
T = 117.64'
R = 525.00'

POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y10C- POC Sta. 12+05.00

-Y10C-

PC Sta. 11+50.69

-DRW19- POT Sta. 10+45.00 =
-Y10C- POC Sta. 12+40.27

BY7-145

POT Sta. 10+00.00

POT Sta. 10+50.00

-DRW20- POT Sta. 10+00.00 =
-Y10C- POC Sta. 12+84.99

135+00

140+00

MATCHLINE -L- STA. 127+00.00 SEE SHEET 12

MATCHLINE -L- STA. 140+00.00 SEE SHEET 14

RESIDUAL

ALLUVIAL

PT Sta. 13+82.15

WOODS

BY7-146

BL-119

ROADWAY EMBANKMENT

SF

WH

BM#7
N:691,484
E:2,082,854
ELEV=96.61'

-L- POT Sta. 130+47.01=
-Y10C- POT Sta. 14+53.07 =
-Y11- POT Sta. 10+00.00

END CONSTRUCTION
-Y11- POT Sta. 11+37.75

BY7-147

POT Sta. 12+40.48

GRAPHIC SCALE
50 25 0 50 100
PLANS

REVISIONS

8/17/99

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_013.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	14
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

NAD 83/2011

REVISIONS

8/17/99

140+00

145+00

150+00

MATCHLINE -L- STA. 140+00.00 SEE SHEET 13

MATCHLINE -L- STA. 153+00.00 SEE SHEET 15

ROADWAY EMBANKMENT

-DRW4- POT Sta. 10+00.00 =
-L- POT Sta. 144+37.22

-DRW5- POT Sta. 11+20.00 =
-L- POT Sta. 146+33.96

PI Sta. 10+41.55

BL-120

BL-121

-L-

RESIDUAL

WOODS

SOIL & BROKEN RST

PC Sta. 10+61.96

PT Sta. 10+76.69

POT Sta. 10+91.15

-DRW6- POT Sta. 10+00.00 =
-L- POT Sta. 146+68.24

PI Sta. 10+83.52

POT Sta. 11+21.95

BM#8
N: 691,667
E: 2,185,039
ELEV=214.96'

GRAPHIC SCALE
50 25 0 50 100
PLANS

2/23/2017
R-3825B\PLOT\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_014.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	15
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

NAD 83/2011

REVISIONS 8/17/99

155+00 160+00 165+00

-DRW7- POT Sta. 10+00.00 =
-L- POT Sta. 154+39.44

-L- POT Sta. 160+31.76=
-DRI- POT Sta. 10+00.00

PC Sta. 163+30.63

ARTIFICIAL FILL

RESIDUAL

ALLUVIAL

RESIDUAL

WOODS

WOODS

ALLUVIAL

MATCHLINE -L- STA. 153+00.00 SEE SHEET 14

MATCHLINE -L- STA. 166+00.00 SEE SHEET 16

BL-12

R-3825B-3

12" PVC

-L-

-L-

RESIDUAL

ROADWAY EMBANKMENT

ROADWAY EMBANKMENT

16' DIP

PC Sta. 10+20.54

RESIDUAL

ALLUVIAL

RESIDUAL

RESIDUAL

WELL
STA 163+35
65' RT

WELL
STA 162+60
70' RT

PI Sta. 10+83.60
POT Sta. 11+18.21

END CONSTRUCTION
-DRI- POC Sta. 11+45.00
PT Sta. 11+56.05

GRAPHIC SCALE
50 25 0 50 100
PLANS

8/23/2017
R:\R-3825B\PLANS\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_015.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	16
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

NAD 83/2011

REVISIONS

8/17/99

170+00

175+00

-L- POT Sta. 171+51.31=
-Y11A- POT Sta. 10+00.00

PT Sta. 167+54.19

PC Sta. 172+47.75

PRC Sta. 177+28.61

MATCHLINE -L- STA. 166+00.00 SEE SHEET 15

MATCHLINE -L- STA. 178+00.00 SEE SHEET 17

ROADWAY EMBANKMENT

ARTIFICIAL FILL

ALLUVIAL

RESIDUAL

WOODS

BL-123

R-3825B-4

BY8-148

BM=9
N: 691,919
E: 2,186,774
ELEV=175.60

WILL CREEK

POND
WE = 170.0

-Y11A-

END CONSTRUCTION
-Y11A- POT Sta. 12+85.00

PC Sta. 14+41.74

PT Sta. 15+32.82

15

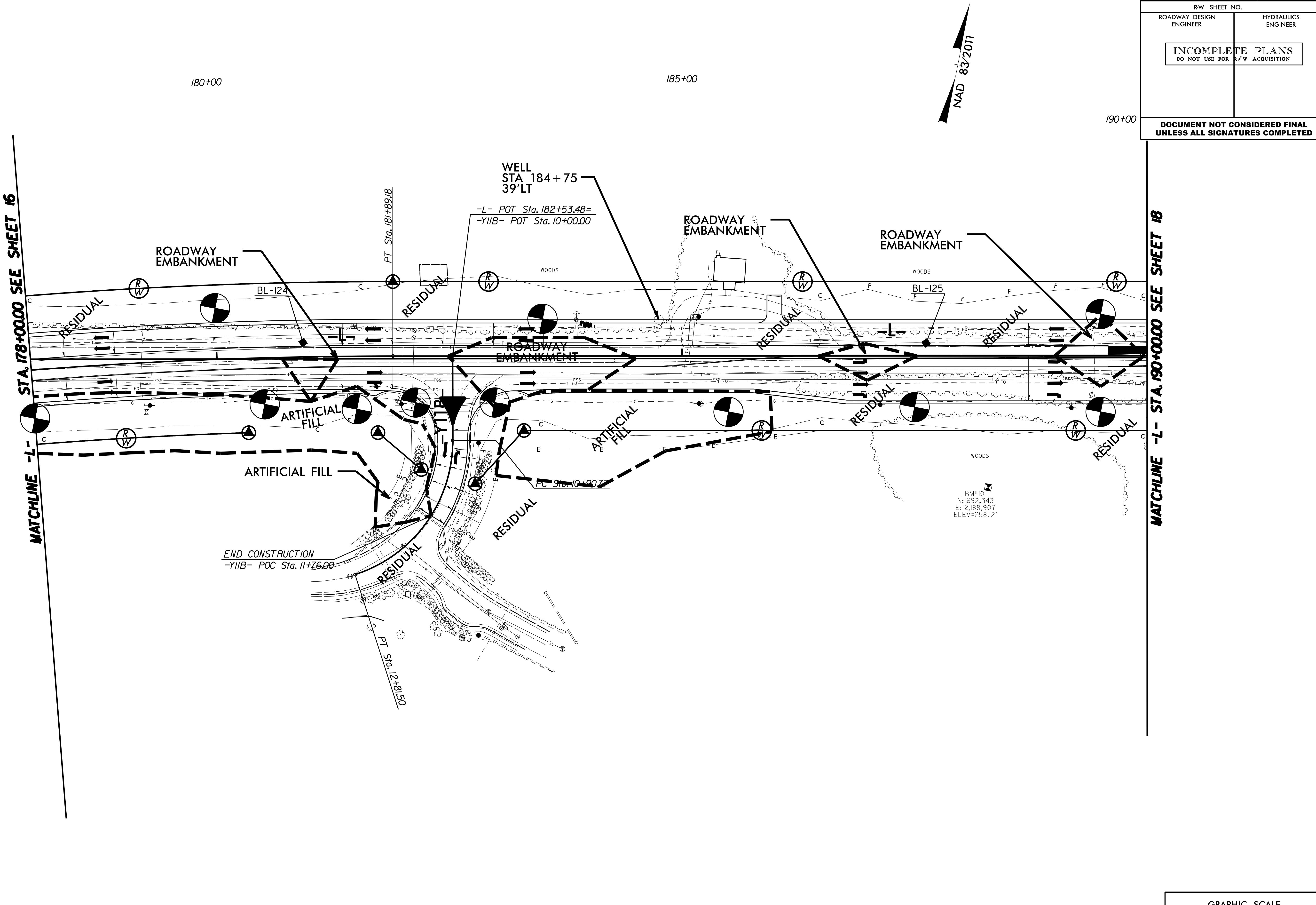
GRAPHIC SCALE
50 25 0 50 100
PLANS

2/23/2007
C:\projects\DOT\R-3825B\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_016.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	17
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



180+00
185+00
190+00
NAD 83/2011
WELL
STA 184+75
39'LT
-L- POT Sta. 182+53.48=
-YIIB- POT Sta. 10+00.00
PT Sta. 181+89.18
ROADWAY EMBANKMENT
BL-124
BL-125
RESIDUAL
ARTIFICIAL FILL
WOODS
MATCHLINE -L- STA. 178+00.00 SEE SHEET 16
MATCHLINE -L- STA. 190+00.00 SEE SHEET 18
END CONSTRUCTION
-YIIB- POC Sta. 11+76.00
PC Sta. 10+90.77
PT Sta. 12+81.50
BM#10
N: 692,343
E: 2,188,907
ELEV=258.12'
GRAPHIC SCALE
50 25 0 50 100
PLANS

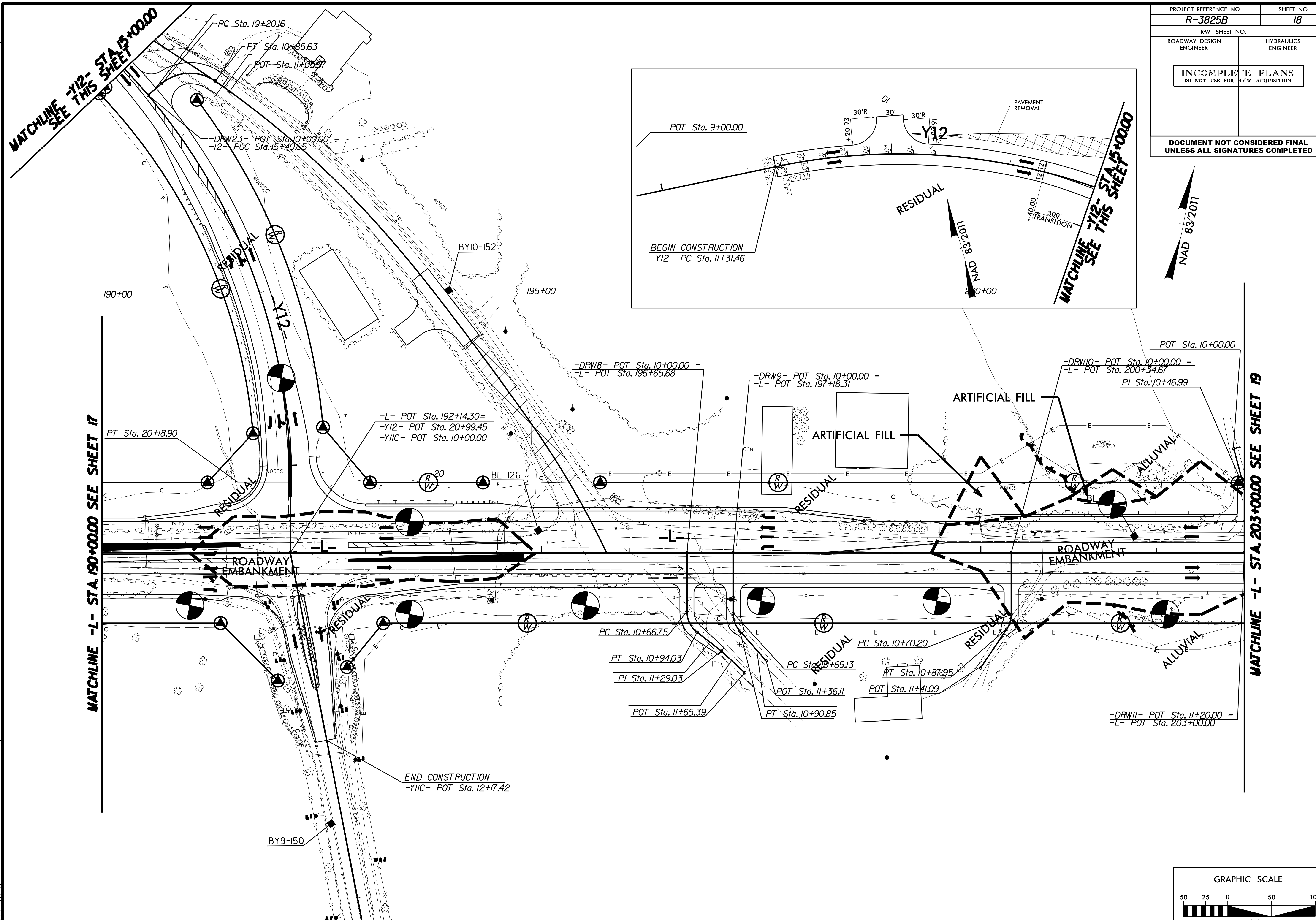
REVISIONS

2/23/2017
M:\N_NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_017.dgn
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	18
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



MATCHLINE -Y12- STA.15+00.00 SEE THIS SHEET
PC Sta. 10+20.16
PT Sta. 10+85.63
POT Sta. 11+05.97
-DRW23- POT Sta.10+00.00 =
-Y12- POC Sta.15+40.05
RESIDUAL
-Y12
BY10-152
190+00
195+00
POT Sta. 9+00.00
PAVEMENT REMOVAL
30'R
30'
30'R
+20.93
-Y12
RESIDUAL
300' TRANSITION
BEGIN CONSTRUCTION
-Y12- PC Sta. 11+31.46
NAD 83/2011
200+00
MATCHLINE -Y12- STA.15+00.00 SEE THIS SHEET
NAD 83/2011
POT Sta. 10+00.00
-DRW8- POT Sta. 10+00.00 =
-L- POT Sta. 196+65.68
-DRW9- POT Sta. 10+00.00 =
-L- POT Sta. 197+18.31
-DRW10- POT Sta. 10+00.00 =
-L- POT Sta. 200+34.67
PI Sta. 10+46.99
ARTIFICIAL FILL
ARTIFICIAL FILL
PT Sta. 20+18.90
-L- POT Sta. 192+14.30=
-Y12- POT Sta. 20+99.45
-Y11C- POT Sta. 10+00.00
BL-126
POND WE=257.0
ALLUVIAL
RESIDUAL
WOODS
CONC
ROADWAY EMBANKMENT
-L-
-L-
ROADWAY EMBANKMENT
MATCHLINE -L- STA. 190+00.00 SEE SHEET 17
MATCHLINE -L- STA. 203+00.00 SEE SHEET 19
RESIDUAL
PC Sta. 10+66.75
PT Sta. 10+94.03
PI Sta. 11+29.03
POT Sta. 11+65.39
PC Sta. 10+70.20
PC Sta. 10+69.13
POT Sta. 11+36.11
PT Sta. 10+90.85
PT Sta. 10+87.95
POT Sta. 11+41.09
RESIDUAL
RESIDUAL
ALLUVIAL
-DRW11- POT Sta. 11+20.00 =
-L- POT Sta. 203+00.00
END CONSTRUCTION
-Y11C- POT Sta. 12+17.42
BY9-150

GRAPHIC SCALE

50 25 0 50 100

PLANS

REVISIONS

8/17/99

2/23/2017
M:\N_NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_018.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	19
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

NAD 83/2011

REVISIONS

8/17/99

205+00

210+00

215+00

MATCHLINE -L- STA. 203+00.00 SEE SHEET 18

MATCHLINE -L- STA. 216+00.00 SEE SHEET 20

ALLUVIAL

ROADWAY EMBANKMENT

RESIDUAL

ARTIFICIAL FILL

ROADWAY EMBANKMENT

BL-12B

RESIDUAL

ARTIFICIAL FILL

ROADWAY EMBANKMENT

COASTAL PLAIN

ARTIFICIAL FILL

COASTAL PLAIN

RESIDUAL

ALLUVIAL

RESIDUAL

-DRW12- POT Sta. 10+00.00 =
-L- POC Sta. 212+94.21

POT Sta. 11+63.35

PI Sta. 10+74.48

PC Sta. 206+66.42

PT Sta. 213+54.74

BM#11
N: 692,755
E: 2,191,016
ELEV=316.27'

WOODS

GRAPHIC SCALE
50 25 0 50 100
PLANS

2/23/2017
R-3825B_PLOT\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_inv_019.dgn

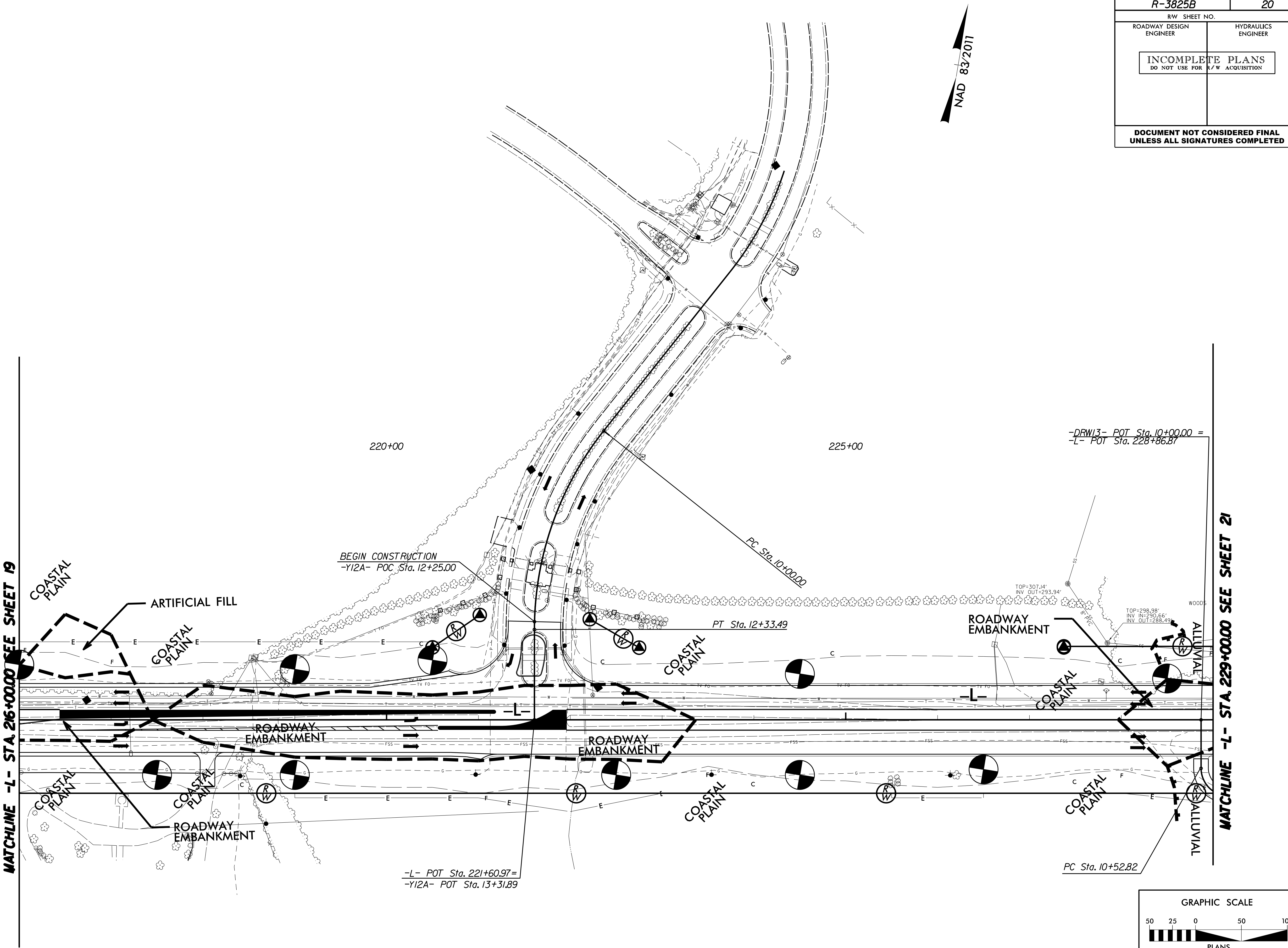
PROJECT REFERENCE NO.	SHEET NO.
R-3825B	20

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



NAD 83/2011
220+00
225+00
MATCHLINE -L- STA. 216+00.00 SEE SHEET 19
MATCHLINE -L- STA. 229+00.00 SEE SHEET 21
COASTAL PLAIN
ARTIFICIAL FILL
BEGIN CONSTRUCTION
-Y12A- POC Sta. 12+25.00
PT Sta. 12+33.49
PC Sta. 10+00.00
-DRW13- POT Sta. 10+00.00 =
-L- POT Sta. 228+86.87
TOP=307.14'
INV OUT=293.94'
TOP=298.98'
INV IN=290.66'
INV OUT=288.49'
WOODS
ROADWAY EMBANKMENT
ALLUVIAL
-L-
-L- POT Sta. 221+60.97 =
-Y12A- POT Sta. 13+31.89
PC Sta. 10+52.82
GRAPHIC SCALE
50 25 0 50 100
PLANS

REVISIONS

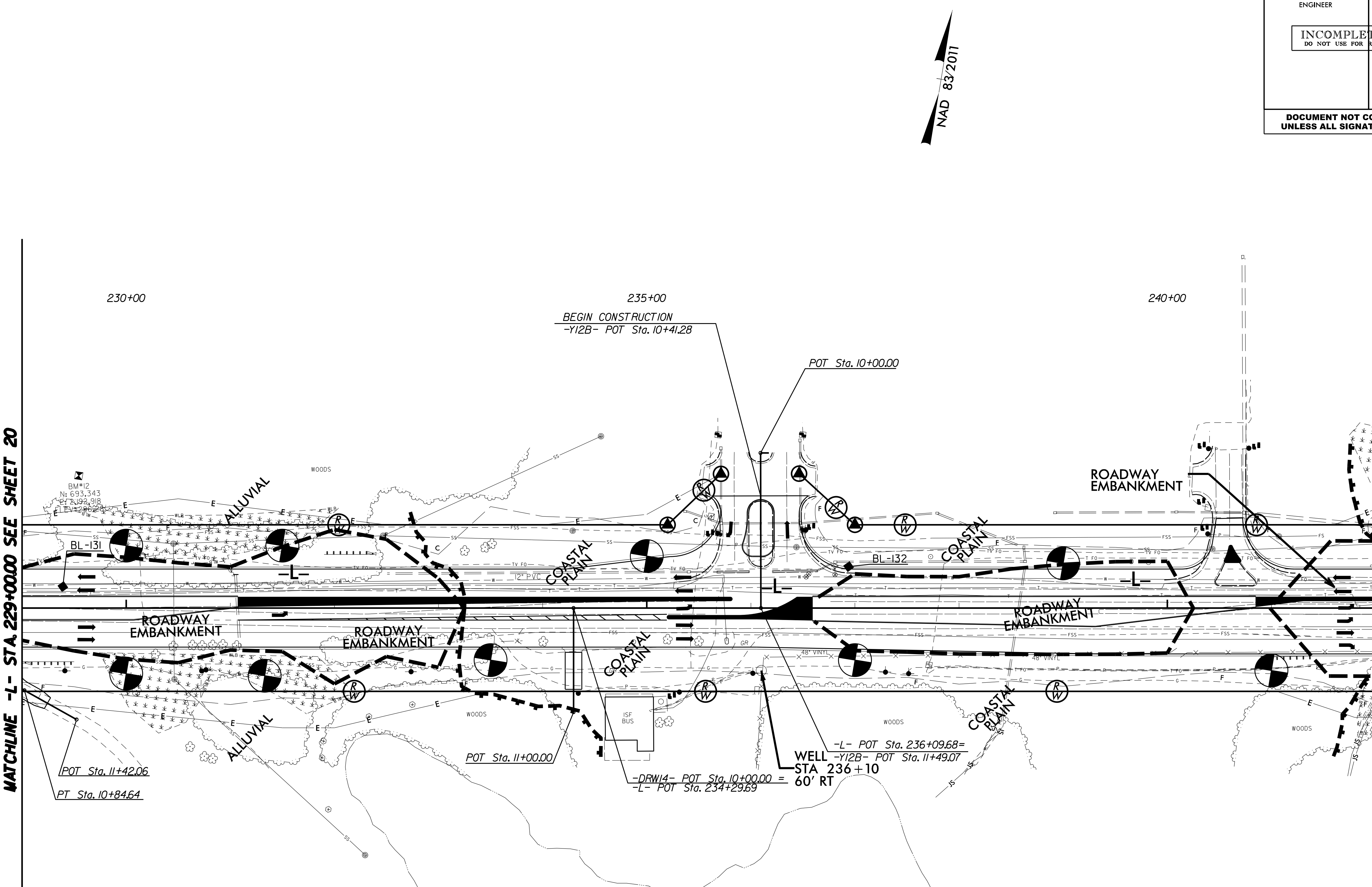
8/17/99

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_020.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	21
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



NAD 83/2011
230+00
235+00
240+00
BEGIN CONSTRUCTION
-Y12B- POT Sta. 10+41.28
POT Sta. 10+00.00
BM#12
N: 693,343
WOODS
ALLUVIAL
BL-131
BL-132
-L-
COASTAL PLAIN
ROADWAY EMBANKMENT
12" PVC
48" VINYL
ISF BUS
POT Sta. 11+00.00
POT Sta. 11+42.06
PT Sta. 10+84.64
-DRW14- POT Sta. 10+00.00 =
-L- POT Sta. 234+29.69
-L- POT Sta. 236+09.68=
-Y12B- POT Sta. 11+49.07
WELL
STA 236+10
60' RT
MATCHLINE -L- STA. 229+00.00 SEE SHEET 20
MATCHLINE -L- STA. 242+00.00 SEE SHEET 22
GRAPHIC SCALE
50 25 0 50 100
PLANS

REVISIONS

8/17/99

2/23/2017
R:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\PlanProf\R3825b_inv_021.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	22
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

8/17/99

MATCHLINE -Y13- STA. 19+00.00 SEE SHEET 23

MATCHLINE -L- STA. 242+00.00 SEE SHEET 21

MATCHLINE -L- STA. 255+00.00 SEE THIS SHEET

MATCHLINE -Y13- STA. 28+00.00 SEE SHEET 23

NAD 83/2011

-Y13-

-L-

ROADWAY EMBANKMENT

ARTIFICIAL FILL

ALLUVIAL

COASTAL PLAIN

CAN

POND
WE=286.0

PCC Sta. 23+13.33

BL-134

-L- POT Sta. 245+70.36=
-Y13- POC Sta. 24+61.09

POT Sta. 11+02.51
PI Sta. 10+46.97

-DRW21- POT Sta. 10+00.00 =
-Y13- POC Sta. 26+89.48

-DRW22- POT Sta. 10+00.00 =
-Y13- POC Sta. 27+92.31

POT Sta. 11+00.00

250+00

255

END CONSTRUCTION
-L- POT Sta. 257+50.00

POT Sta. 257+70.28

END TIP PROJECT R-3825B
-L- Sta. 257+50.00

GRAPHIC SCALE
50 25 0 50 100
PLANS

2/23/2017
K:\DOT\R-3825B\R-3825B_GEO_RDWY_modified\CADD_GEOTECH\PlanProf\R3825b_rnv_022.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	23
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

8/17/99

NAD 83/2011

15

30

35

BEGIN CONSTRUCTION
-Y13- POC Sta. 14+83.74

END CONSTRUCTION
-Y13- POC Sta. 35+70.00

MATCHLINE -Y13- STA. 19+00.00 SEE SHEET 22

MATCHLINE -Y13- STA. 28+00.00 SEE SHEET 22

PT Sta. 33+86.36

PC Sta. 35+05.20

POND
WE=286.0

R-3825B-5

BY12-155

BY12-156

-Y13-

ROADWAY EMBANKMENT

COASTAL PLAIN

BLDG FOUNDATION (UNDER CONSTRUCTION)

SR1003 BUFFALO RD

POC Sta. 13+65.85

PRC Sta. 28+62.58

GRAPHIC SCALE

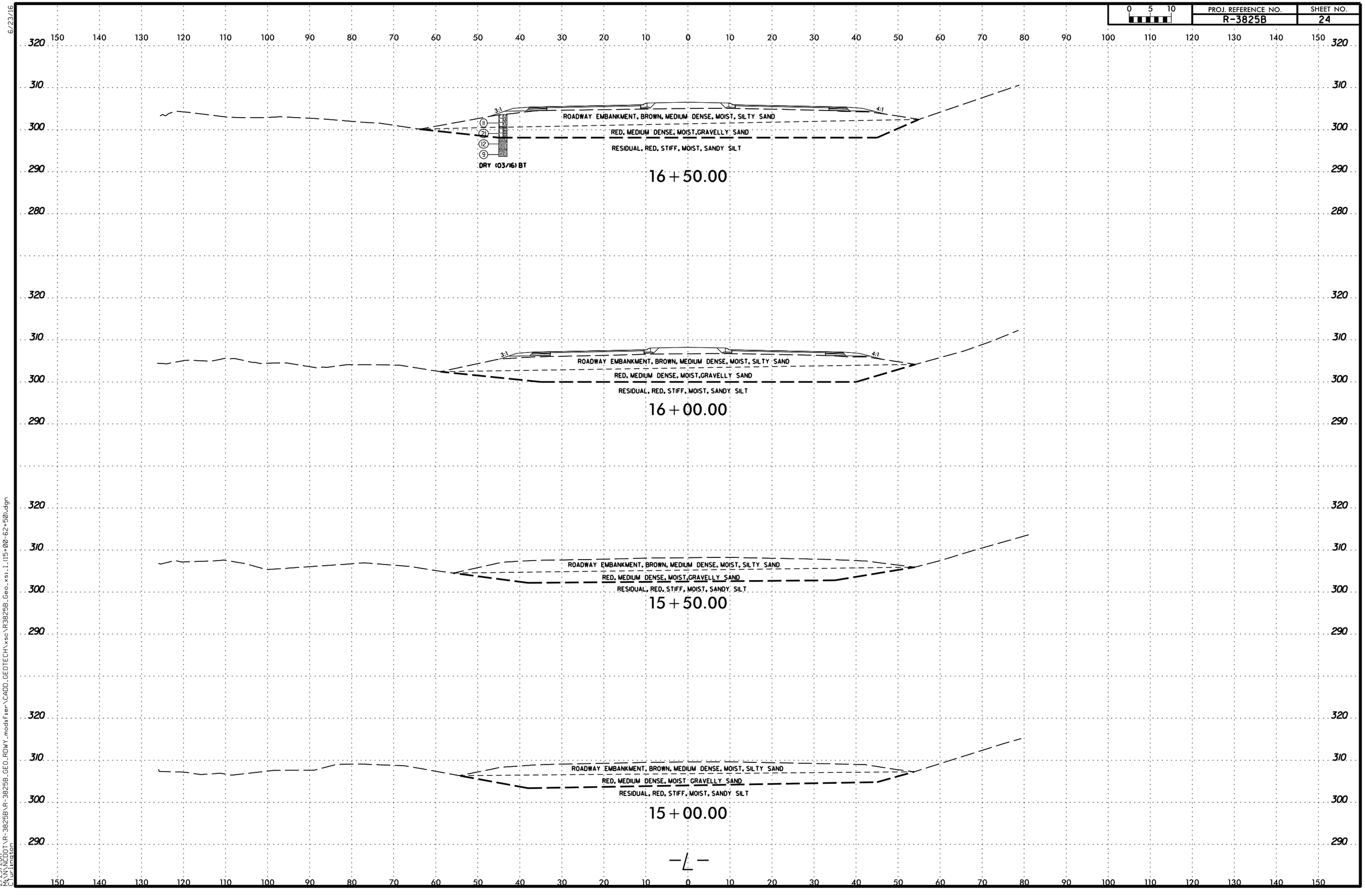
50 25 0 50 100

PLANS

R-3825B_GEO_RDWY_modified.dgn
C:\CADD_GEOTECH\PlanProf\R3825b_inv_023.dgn
8/23/2017

6/23/16

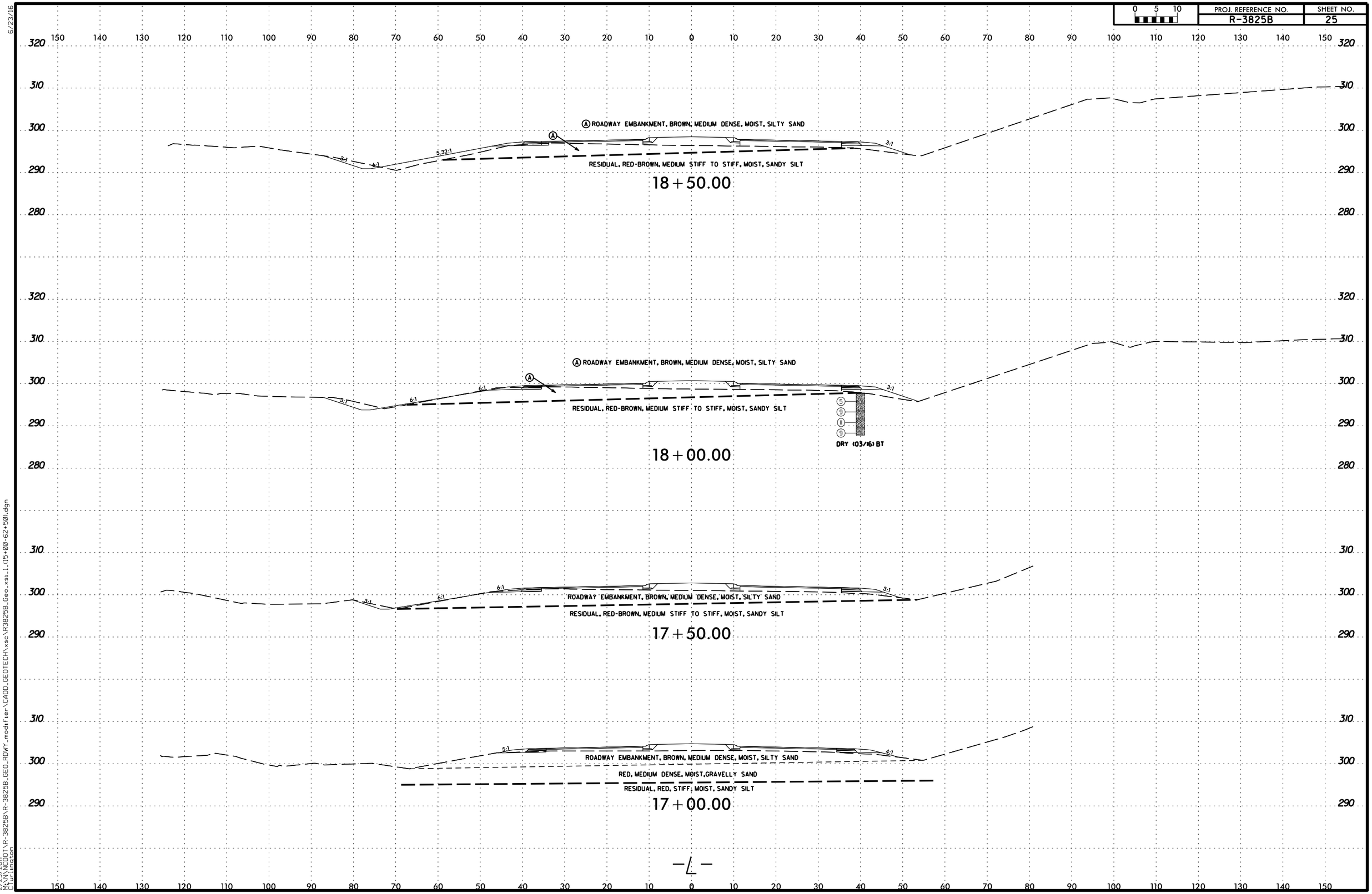
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	24



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	25



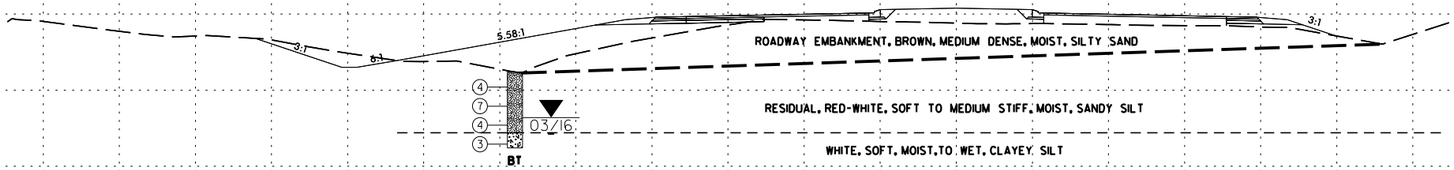
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

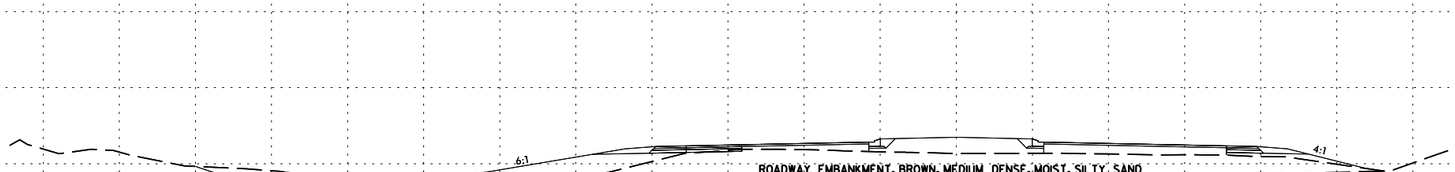
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	26

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

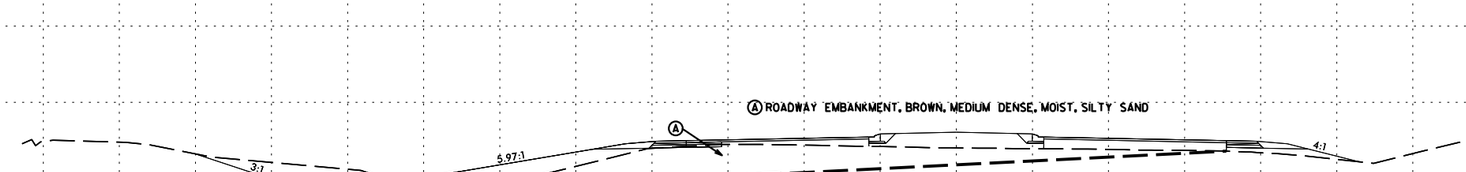
310
300
290
280
270
260



20+00.00



19+50.00



19+00.00

-L-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	27

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300 290 280 270 260

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 6:1

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

12 20 10 7 03/16 BT

21+50.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 6:1 5:1

RESIDUAL, RED-WHITE, SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

WHITE, SOFT, MOIST, TO WET, CLAYEY SILT

21+00.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 6:1 4:1

RESIDUAL, RED-WHITE, SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

WHITE, SOFT, MOIST, TO WET, CLAYEY SILT

20+50.00

—℄—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	28

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

280
270
260
250

3:1 6:1 (15) (9) (5) (9) (5)

DRY (03/16) BT

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

23+50.00

280
270
260

3:1 6:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

23+00.00

290
280
270
260

3:1 6:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

22+50.00

290
280
270
260

3:1 6:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

22+00.00

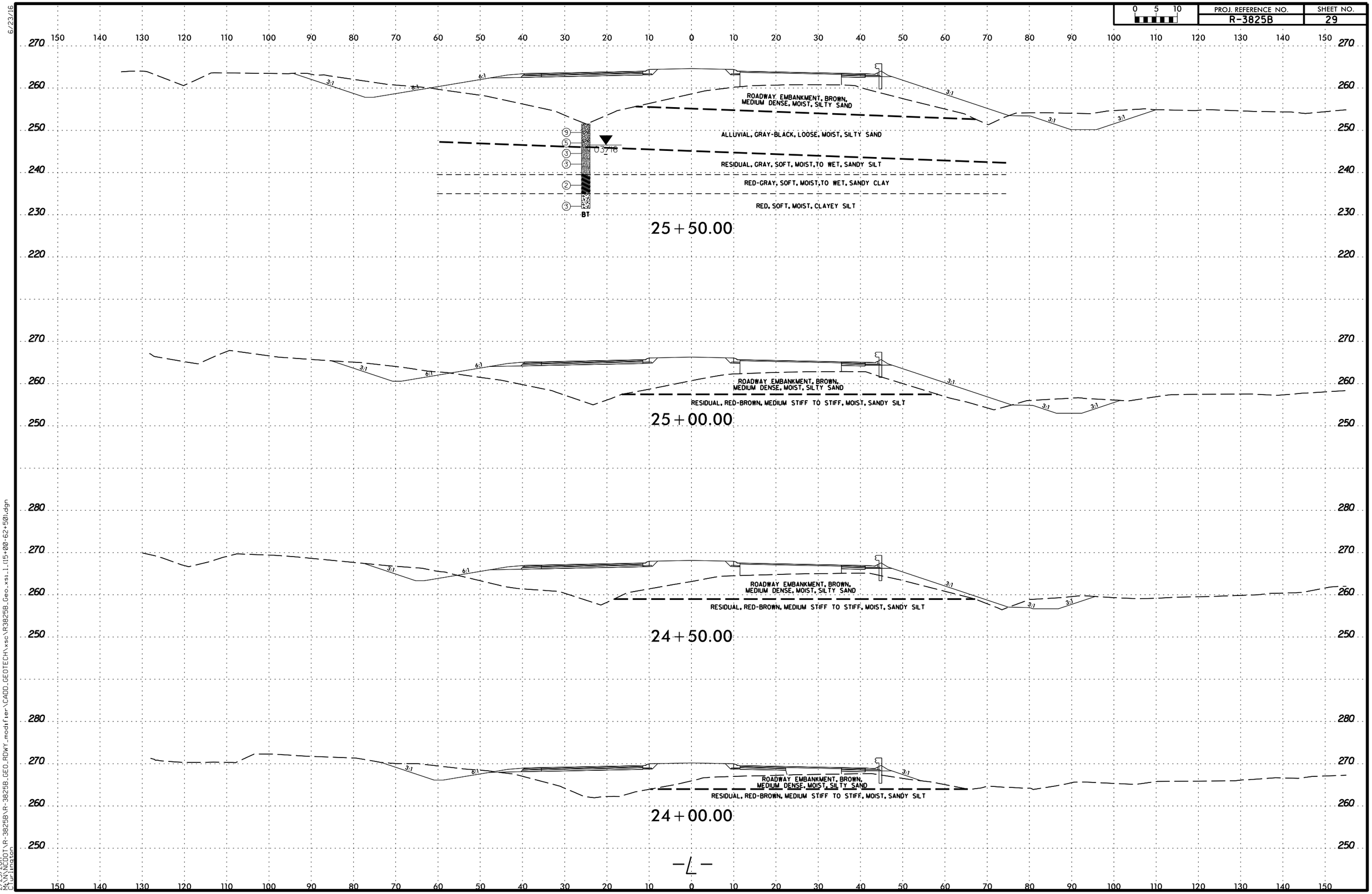
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

-L-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	29



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	30

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

270
260
250
240
230
220

4.45:1

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

3:1

3:1

3:1

ALLUVIAL, GRAY-BLACK, LOOSE, MOIST, SILTY SAND

RESIDUAL, GRAY, SOFT, MOIST,TO WET, SANDY SILT

RED-GRAY, SOFT, MOIST,TO WET, SANDY CLAY

RED, SOFT, MOIST, CLAYEY SILT

26+50.00

6:1

ROADWAY EMBANKMENT,BROWN,
MEDIUM DENSE,MOIST,SILTY SAND

3:1

3:1

3:1

ALLUVIAL, GRAY-BLACK, LOOSE, MOIST, SILTY SAND

RESIDUAL, GRAY, SOFT, MOIST,TO WET, SANDY SILT

RED-GRAY, SOFT, MOIST,TO WET, SANDY CLAY

RED, SOFT, MOIST, CLAYEY SILT

26+00.00

270
260
250
240
230
220

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	31

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

270
260
250
240
230

3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, GRAY-BROWN, VERY STIFF, MOIST, SANDY CLAY

RESIDUAL, BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

03/16

2 0 7 4

BT

27+50.00

270
260
250
240
230
220
210

3:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN-BLACK, SOFT, SANDY CLAY

RESIDUAL, RED-WHITE, MEDIUM STIFF, MOIST, SANDY SILT

BROWN-WHITE, VERY STIFF, MOIST, CLAYEY SILT

BROWN-GRAY, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

03/16

3 2 8 18 4 12 14

BT

27+00.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

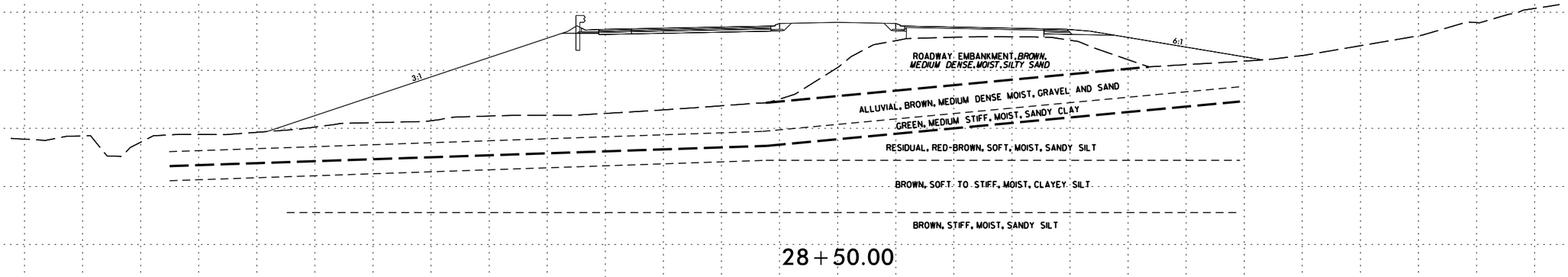
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_1(15+00-62+50).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	32

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

270 260 250 240 230 220 210

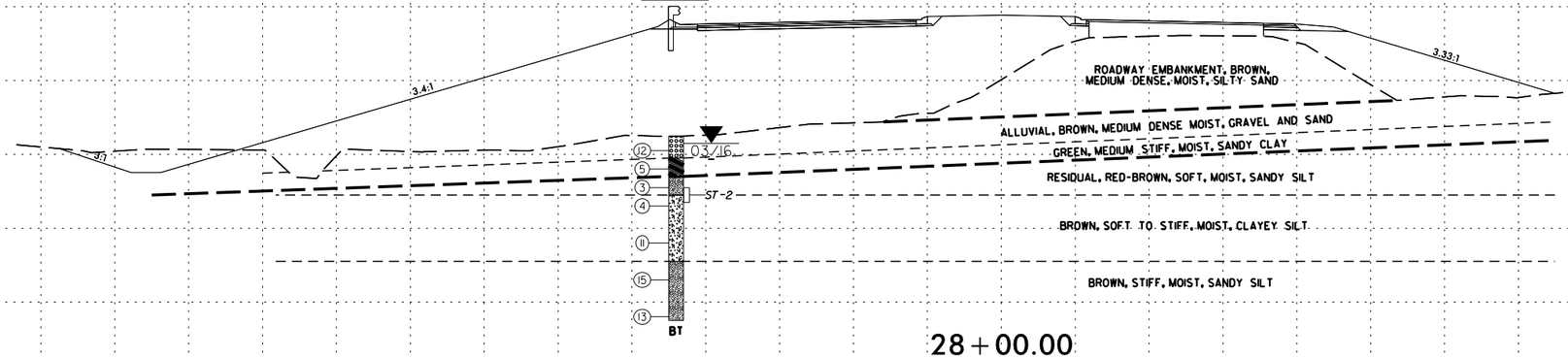


28+50.00

SS-1
SS-2
ST-2
SS-3
SS-4

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-1	44' LT	28+00	3.5-5.0	A-6(8)	38	17	16	28	34	22	82	72	53	23	-
SS-2	44' LT	28+00	6.0-7.5	A-4(2)	40	NP	6	33	51	10	100	97	74	41.9	-
ST-2	44' LT	28+00	7.0-9.0	-	-	-	-	-	-	-	-	-	-	-	-
SS-3	44' LT	28+00	8.5-10.0	A-5(24)	42	8	6	26	47	21	99	95	77	38.8	-
SS-4	44' LT	28+00	13.5-15.0	A-5(26)	42	8	4	27	54	15	100	98	81	38.7	-



28+00.00

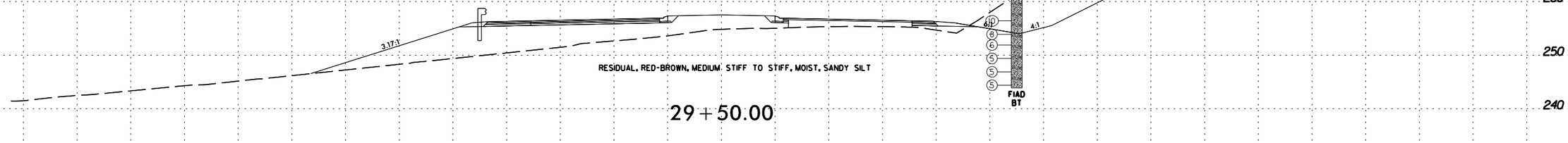
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

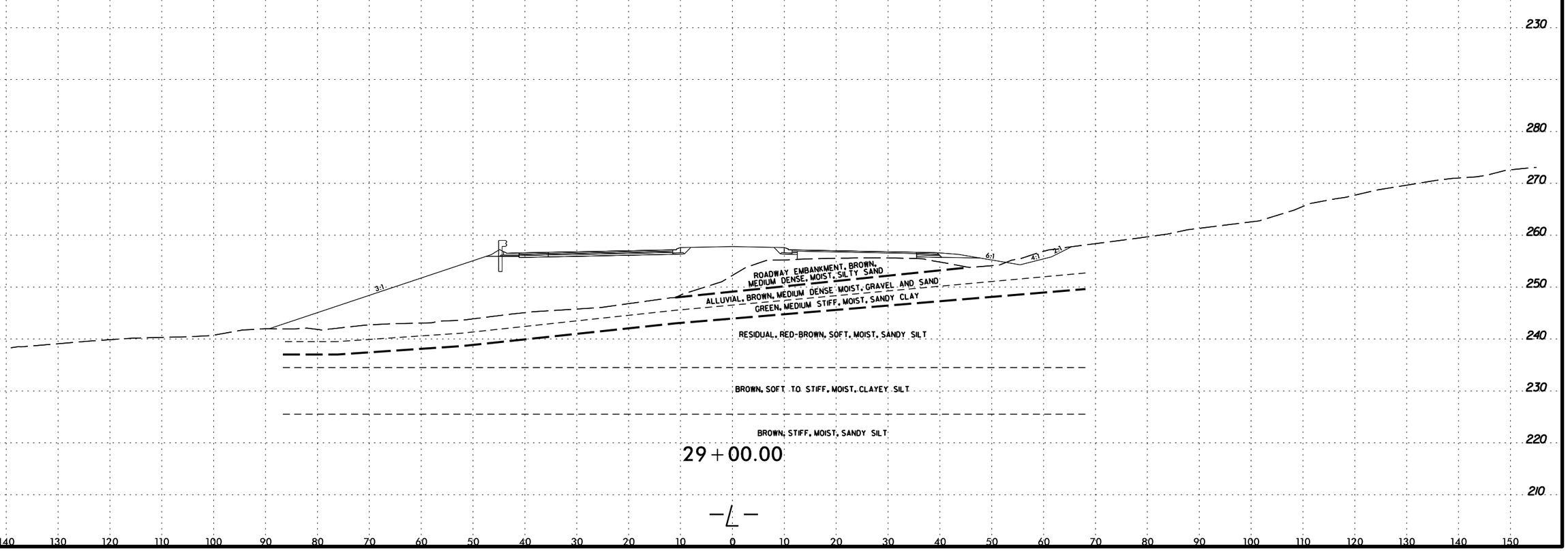
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	33

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

280 270 260 250 240 230 220 210



29+50.00



29+00.00

—℄—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

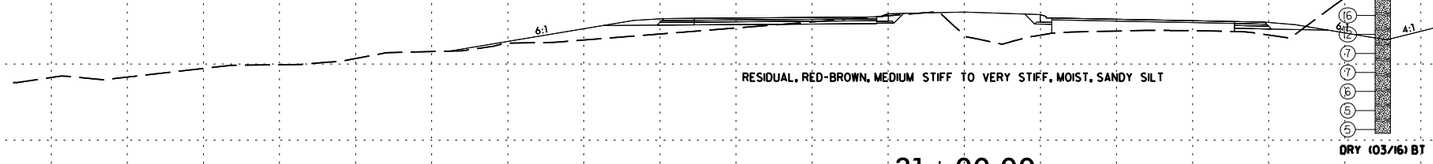
6/23/16

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	34

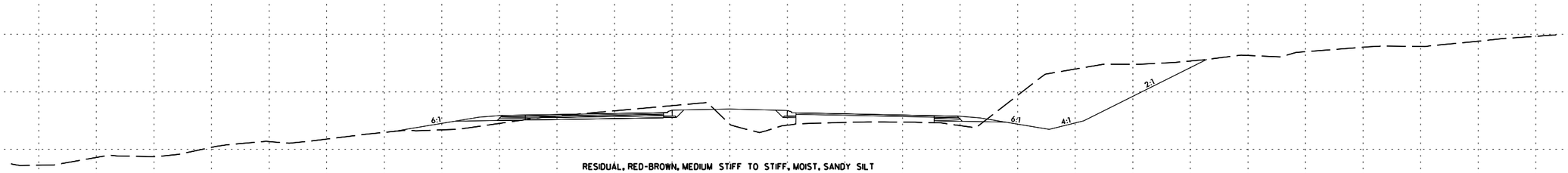
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

280 270 260 250 240 230



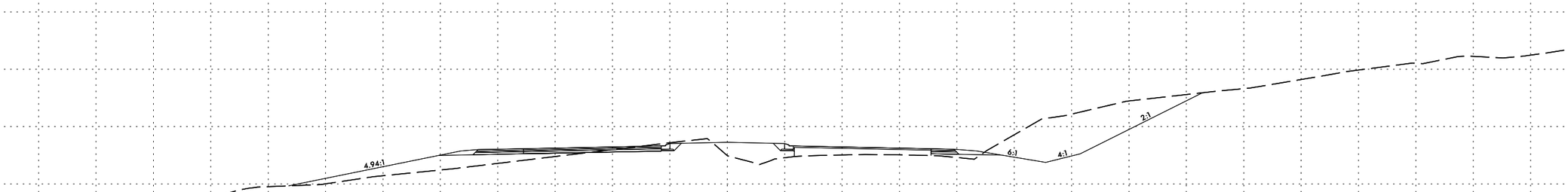
31+00.00

270 260 250 240



30+50.00

280 270 260 250 240



30+00.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD\GEOTECH\xsc\R3825B_Geo_xs1_1(15+00-62+50).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	35

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

270 260 250 240

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 4:1 2:1

RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT

33+00.00

270 260 250 240 230

3:1 6:1 4:1

13 15 9 4

DRY (03/16) BT

RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT

32+50.00

260 250 240

3:1 6:1 3:1

RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT

32+00.00

270 260 250 240

3 3:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF MOIST, SANDY SILT

31+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(15+00-62+50).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	36

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

280
270
260
250
240

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT

34+50.00

280
270
260
250
240

6:1 6:1 6:1 4:1 2:1

RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT

34+00.00

270
260
250
240

3:1 6:1 4:1 2:1

RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT

33+50.00

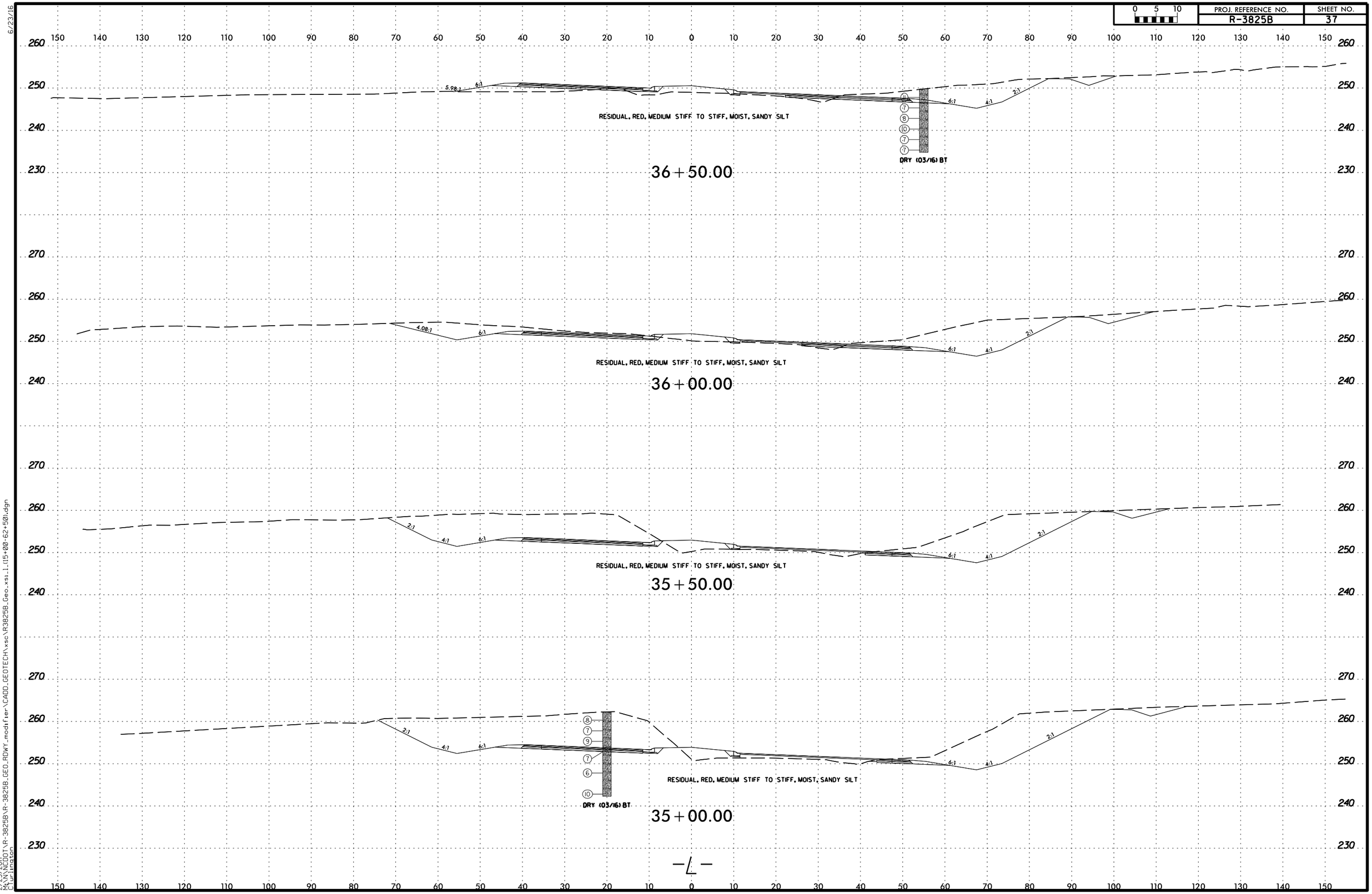
—℄—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	37



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	38

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

260
250
240
230
220

3:1

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

6:1

4.11:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

38+00.00

260
250
240
230
220
210

3:1

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

6:1

4.13:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

12
6
3
9
6
8

03/16

BT

37+50.00

260
250
240
230

3:1

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

6:1

4.23:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

37+00.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

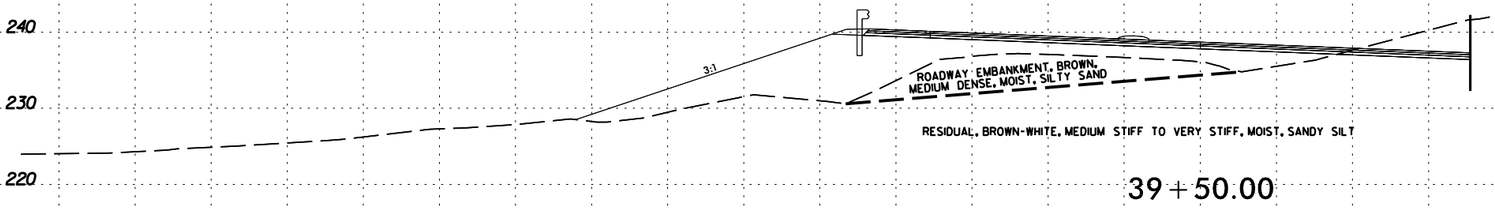
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	39

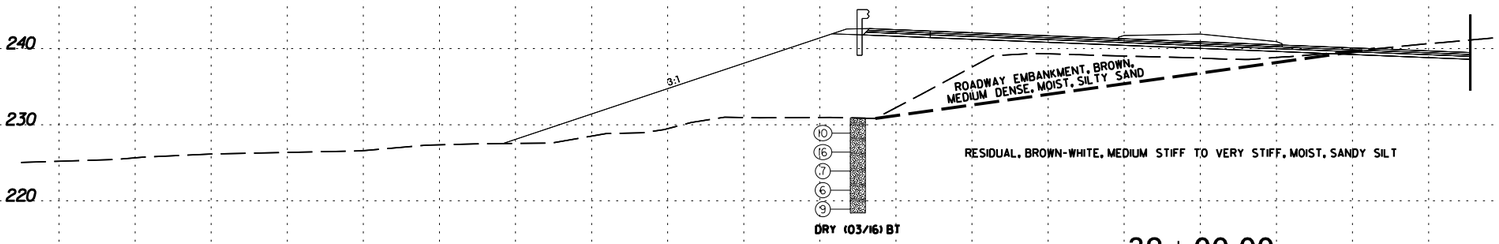
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

260 250 240 230 220



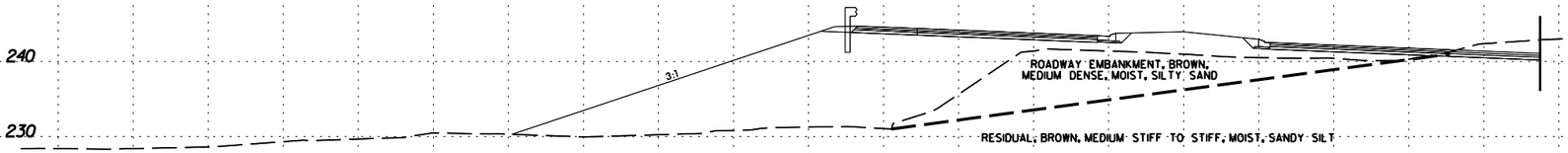
39+50.00

250 240 230 220 210



39+00.00

250 240 230 220



38+50.00

—L—

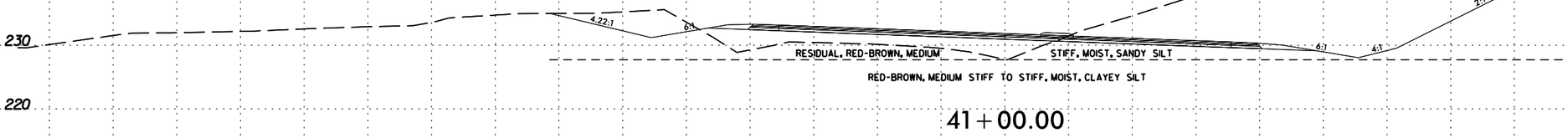
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

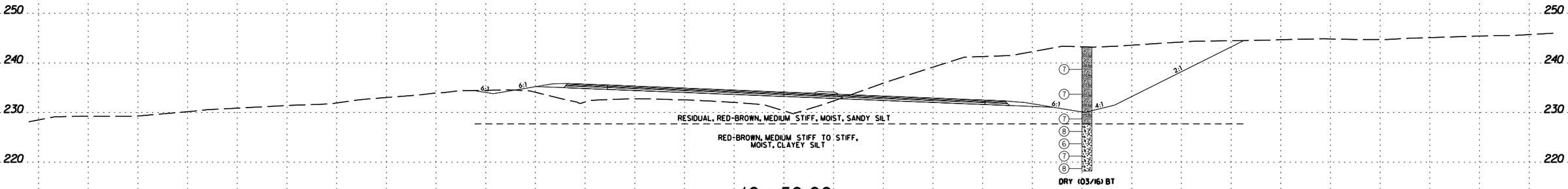
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	40

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

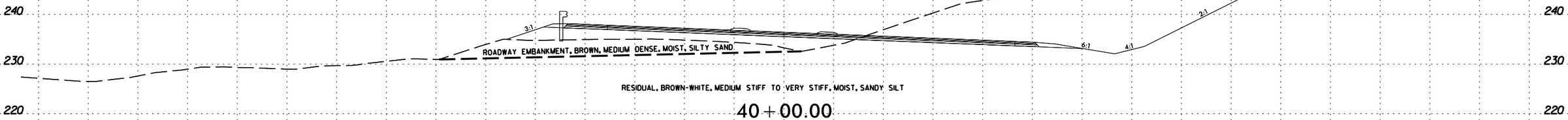
250 240 230 220 210



41+00.00



40+50.00



40+00.00

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	41

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

43+00.00

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

42+50.00

DRY (03/16) BT

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

BT

03/16

42+00.00

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, CLAYEY SILT

41+50.00

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	42

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

230 220 210 200

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

44+50.00

230 220 210 200

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

44+00.00

240 230 220 210 200 190

2:1 4:1 6:1 6:1 4:1 2:1

⑥ ⑧ ⑤ ⑧ ⑦ ⑥

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

DRY (03/16) BT

43+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	43

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

Ⓑ ARTIFICIAL FILL, BROWN, VERY LOOSE TO DENSE, MOIST, CLAYEY SAND AND MOIST, SILTY CLAY WITH SOME ASPHALT

2:1 4:1 6:1 5.02:1

RESIDUAL, RED-YELLOW, STIFF TO HARD, MOIST, SANDY SILT

46+50.00

220 210 200 190

2:1 4:1 6:1 6:1

15 16 33 23 10

RESIDUAL , RED-YELLOW, STIFF TO HARD, MOIST, SANDY SILT

DRY (03/16) BT

ARTIFICIAL FILL, MOIST, CLAYEY WITH SOME RED-YELLOW, SANDY ASPHALT

36 3 6 8

03/16

BT

BROWN, VERY LOOSE TO DENSE, SAND AND MOIST, SILTY CLAY, CLAY WITH TRACE OF GRAVEL

46+00.00

180 220 210 200

2:1 4:1 6:1 6:1 5.98:1

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

45+50.00

230 220 210 200

2:1 4:1 6:1 6:1 6:1

RESIDUAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

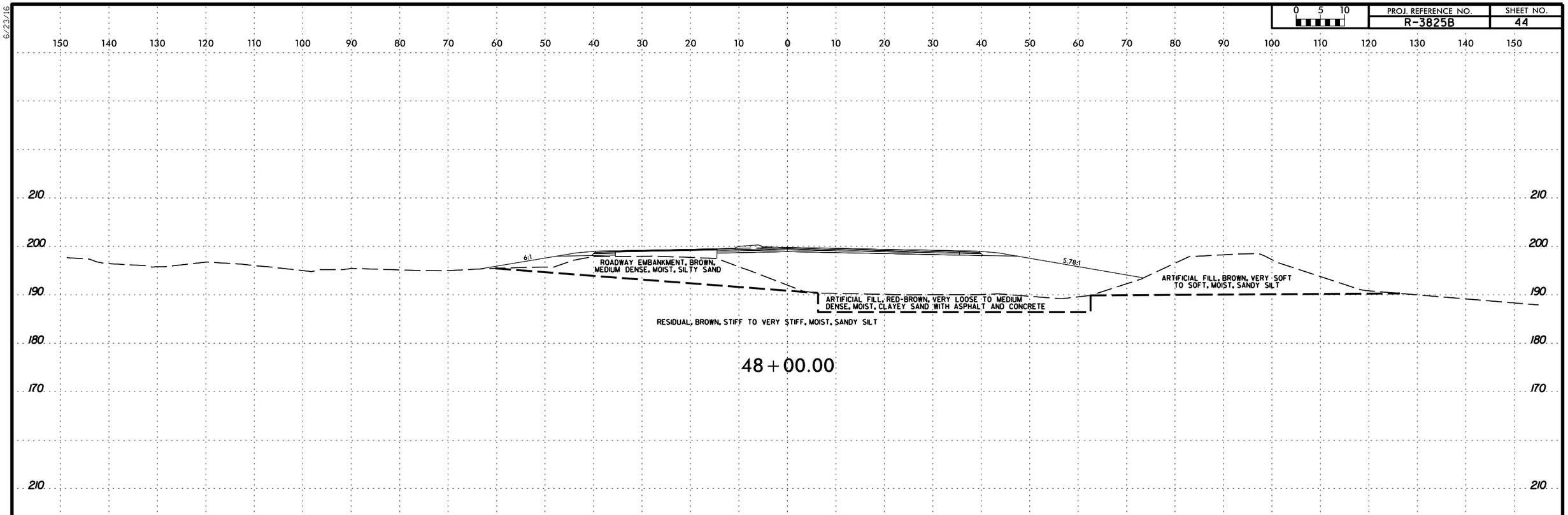
45+00.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

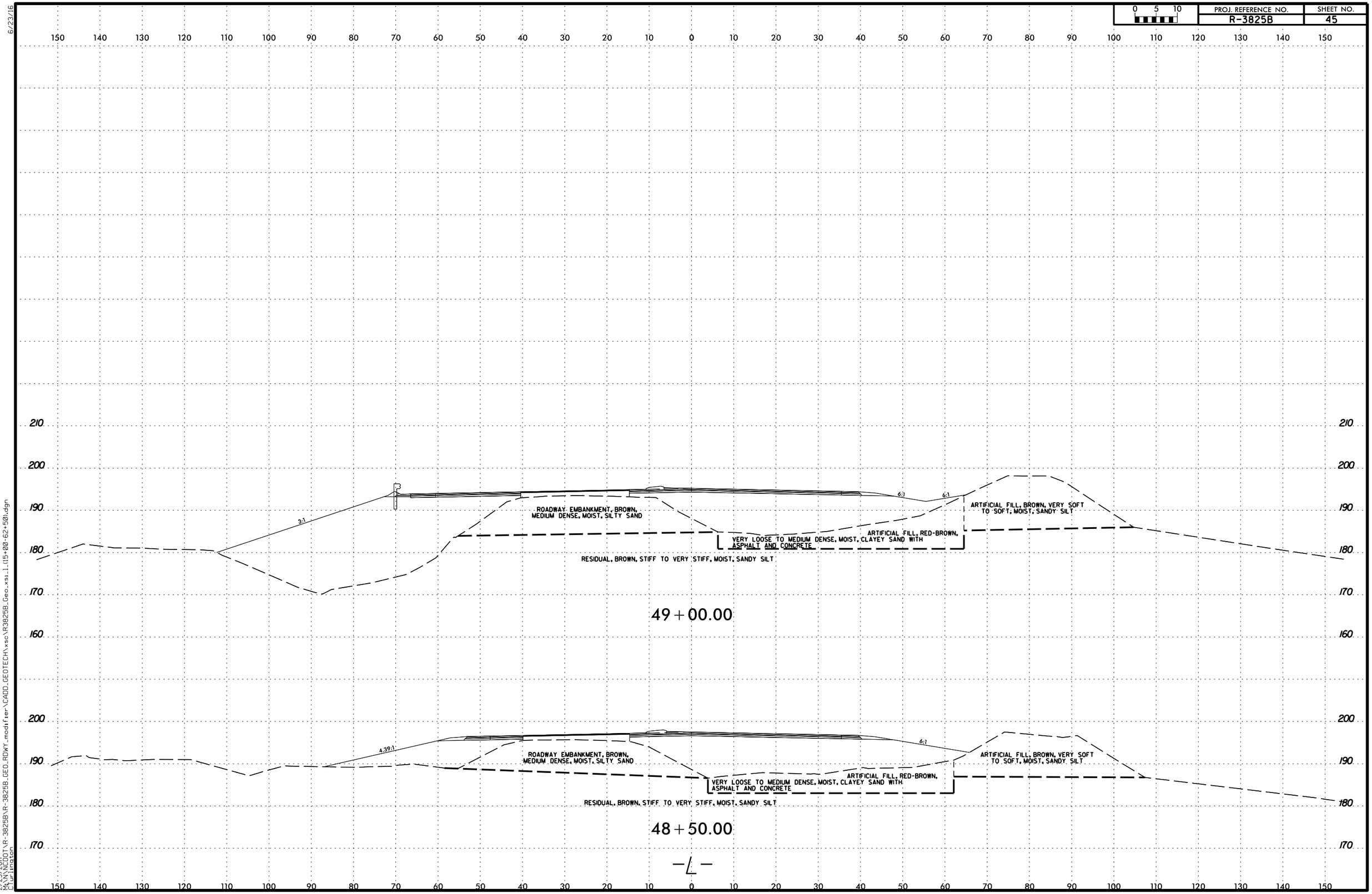
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(15+00-62+50).dgn
Curlington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	44



6/23/16

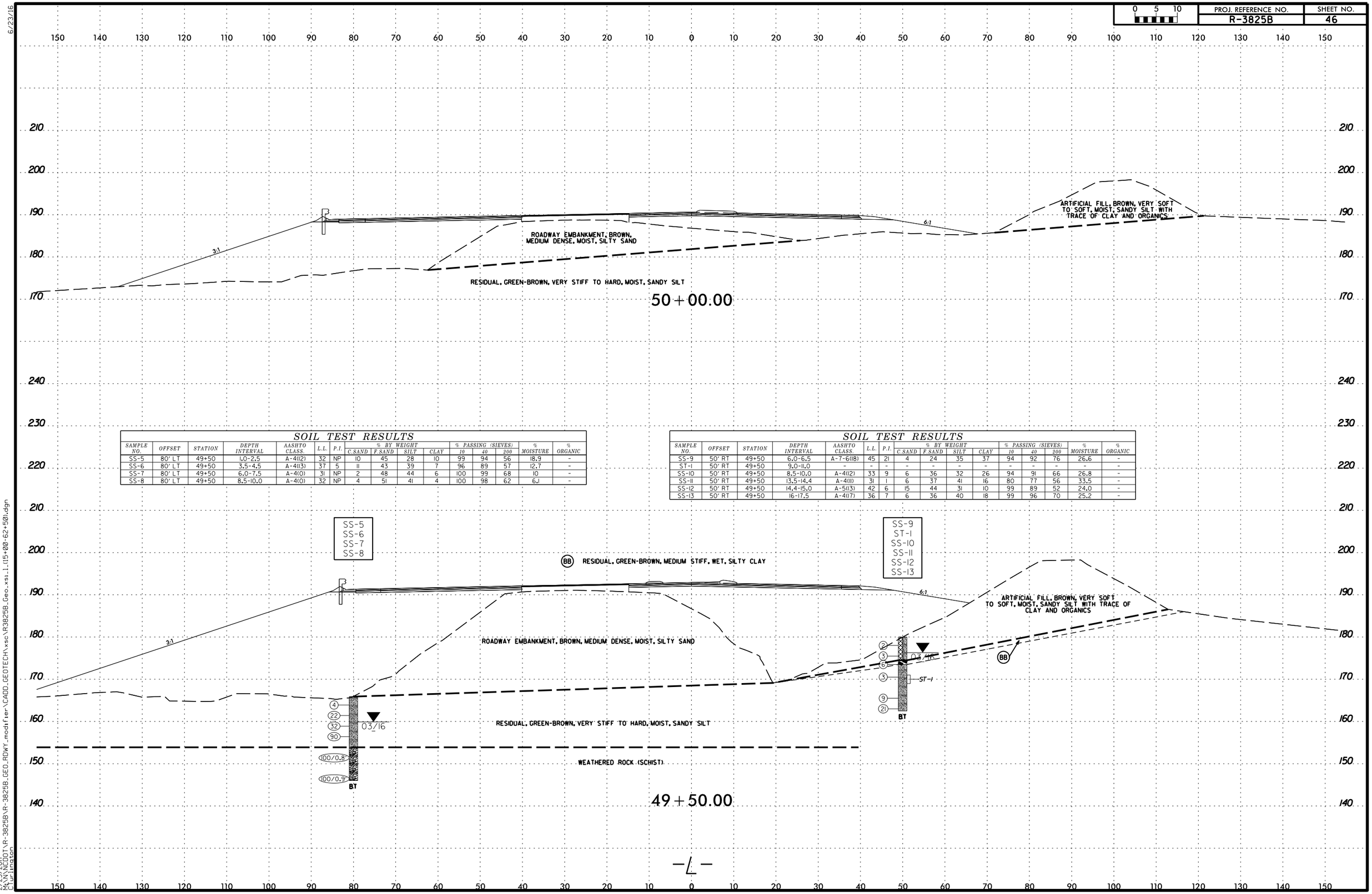
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	45



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	46



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-5	80' LT	49+50	1.0-2.5	A-4(12)	32	NP	10	45	28	10	99	94	56	18.9	-
SS-6	80' LT	49+50	3.5-4.5	A-4(13)	37	5	11	43	39	7	96	89	57	12.7	-
SS-7	80' LT	49+50	6.0-7.5	A-4(0)	31	NP	2	48	44	6	100	99	68	10	-
SS-8	80' LT	49+50	8.5-10.0	A-4(0)	32	NP	4	51	41	4	100	98	62	6.1	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-9	50' RT	49+50	6.0-6.5	A-7-6(18)	45	21	4	24	35	37	94	92	76	26.6	-
ST-1	50' RT	49+50	9.0-11.0	-	-	-	-	-	-	-	-	-	-	-	-
SS-10	50' RT	49+50	8.5-10.0	A-4(12)	33	9	6	36	32	26	94	91	66	26.8	-
SS-11	50' RT	49+50	13.5-14.4	A-4(11)	31	1	6	37	41	16	80	77	56	33.5	-
SS-12	50' RT	49+50	14.4-15.0	A-5(13)	42	6	15	44	31	10	99	89	52	24.0	-
SS-13	50' RT	49+50	16-17.5	A-4(17)	36	7	6	36	40	18	99	96	70	25.2	-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(15+00-62+50).dgn
Curlington

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190 180 170 160

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
BS-2	65' LT	51+50	-	A-7-5	52	19	-	-	-	-	-	-	72	16.0	-

BS-2

Ⓒ ARTIFICIAL FILL, BROWN, VERY SOFT TO SOFT, MOIST, SANDY SILT WITH TRACE OF CLAY AND ORGANICS

2:1 4:1 6:1

(10) (13) (13) (16) (18) (24)

DRY (03/16) BT

RESIDUAL, BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

51+33

(13) (7) (12) (12) (16) (21) (14)

DRY (03/16) BT

51+50.00

Ⓒ ARTIFICIAL FILL, BROWN, VERY SOFT TO SOFT, MOIST, SANDY SILT WITH TRACE OF CLAY AND ORGANICS

2:1 4:1 6:1

RESIDUAL, BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

51+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

Ⓒ ARTIFICIAL FILL, BROWN, VERY SOFT TO SOFT, MOIST, SANDY SILT WITH TRACE OF CLAY AND ORGANICS

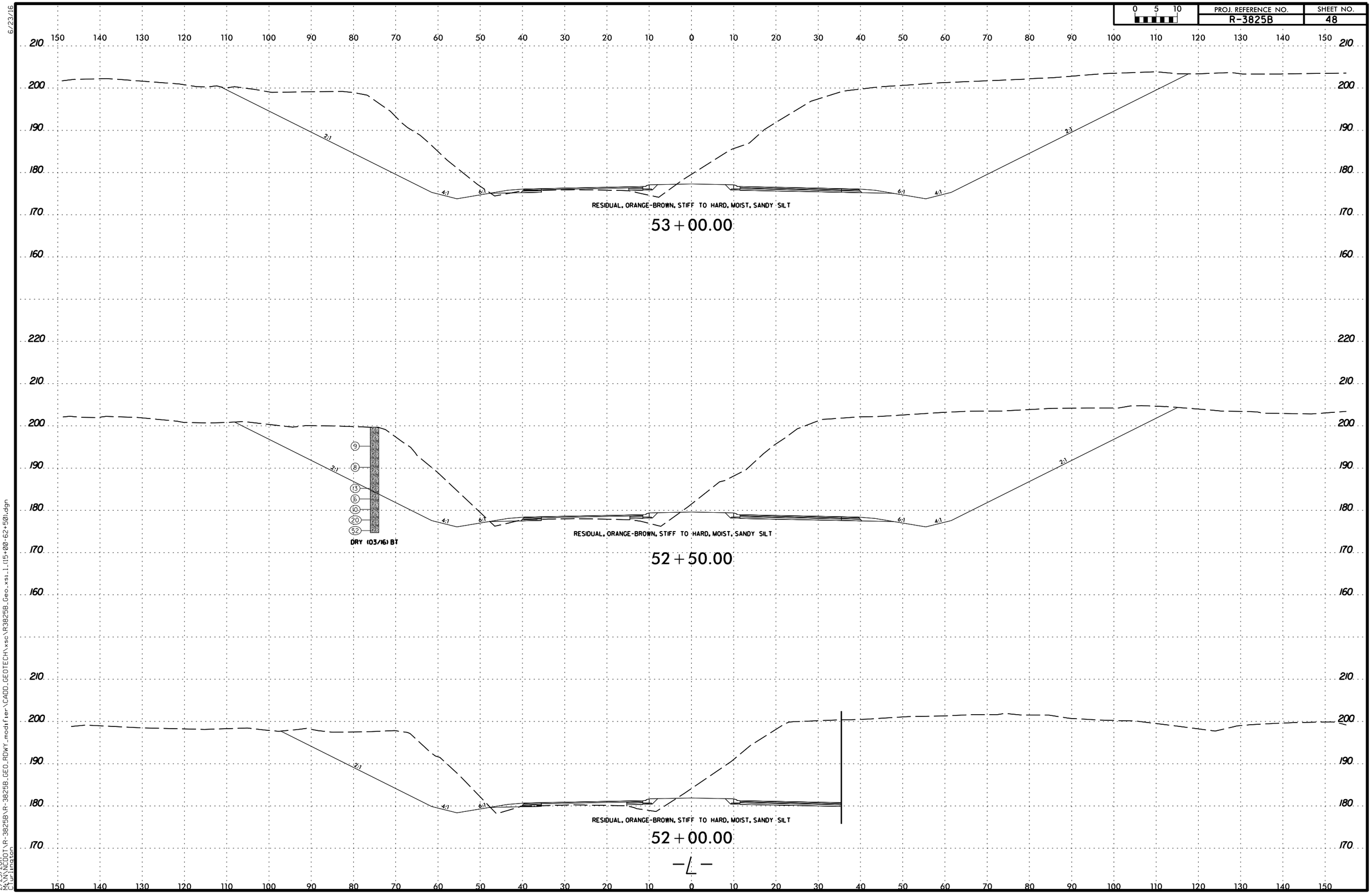
3:1 6:1 6:1

RESIDUAL, GREEN-BROWN, VERY STIFF TO HARD, MOIST, SANDY SILT

50+50.00

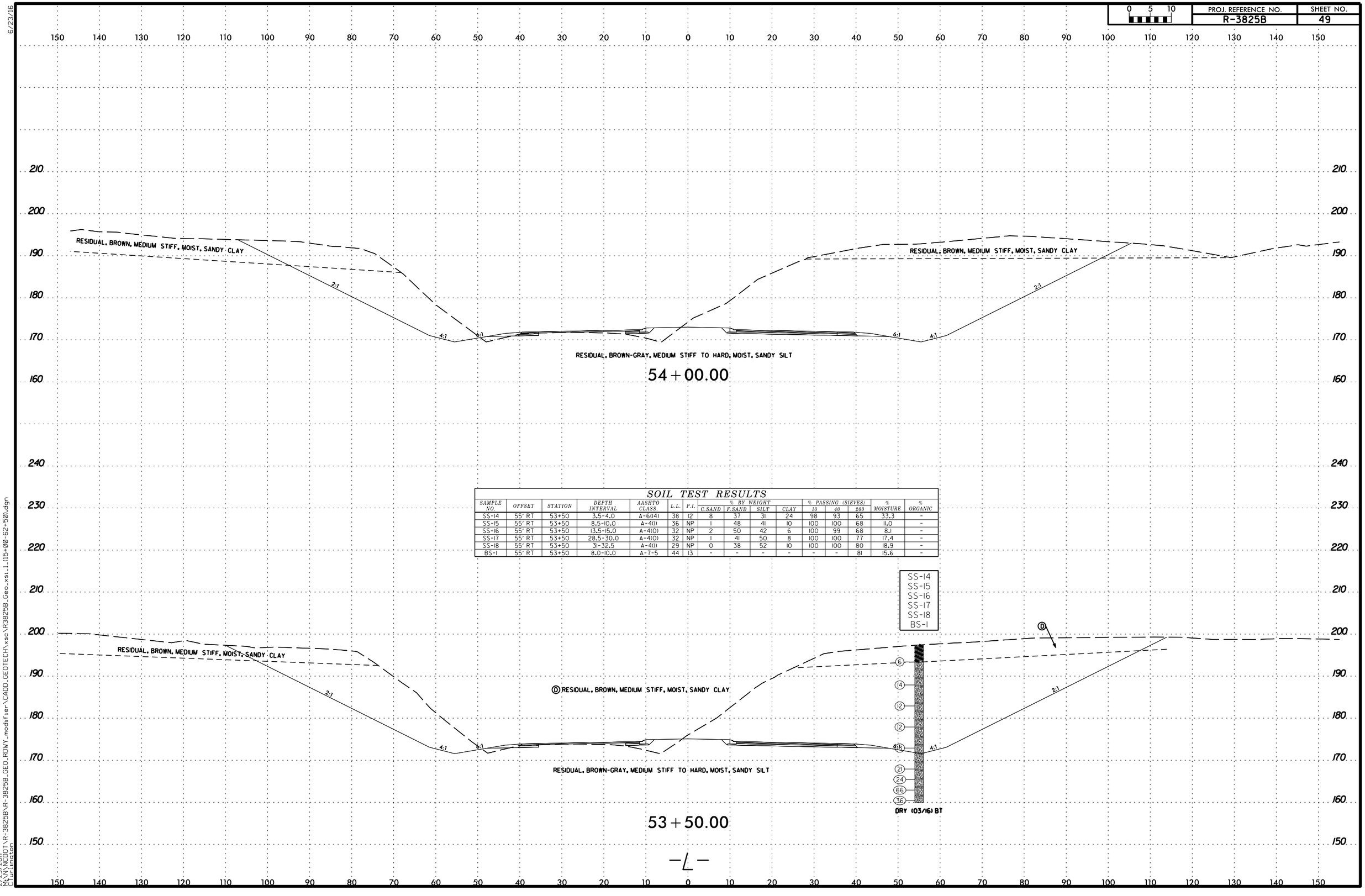
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	48



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	49



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-14	55' RT	53+50	3.5-4.0	A-6(14)	38	12	8	37	31	24	98	93	65	33.3	-
SS-15	55' RT	53+50	8.5-10.0	A-4(1)	36	NP	1	48	41	10	100	100	68	11.0	-
SS-16	55' RT	53+50	13.5-15.0	A-4(0)	32	NP	2	50	42	6	100	99	68	8.1	-
SS-17	55' RT	53+50	28.5-30.0	A-4(0)	32	NP	1	41	50	8	100	100	77	17.4	-
SS-18	55' RT	53+50	31-32.5	A-4(1)	29	NP	0	38	52	10	100	100	80	18.9	-
BS-1	55' RT	53+50	8.0-10.0	A-7-5	44	13	-	-	-	-	-	-	81	15.6	-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	50

RESIDUAL, BROWN-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

55+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
BS-1	55' RT	55+00	-	A-7-5	44	13	-	-	-	-	-	-	81	15.6	-

BS-1

6
10
13
16
12
15
11
18

DRY (03/16) BT

RESIDUAL, BROWN-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

55+00.00

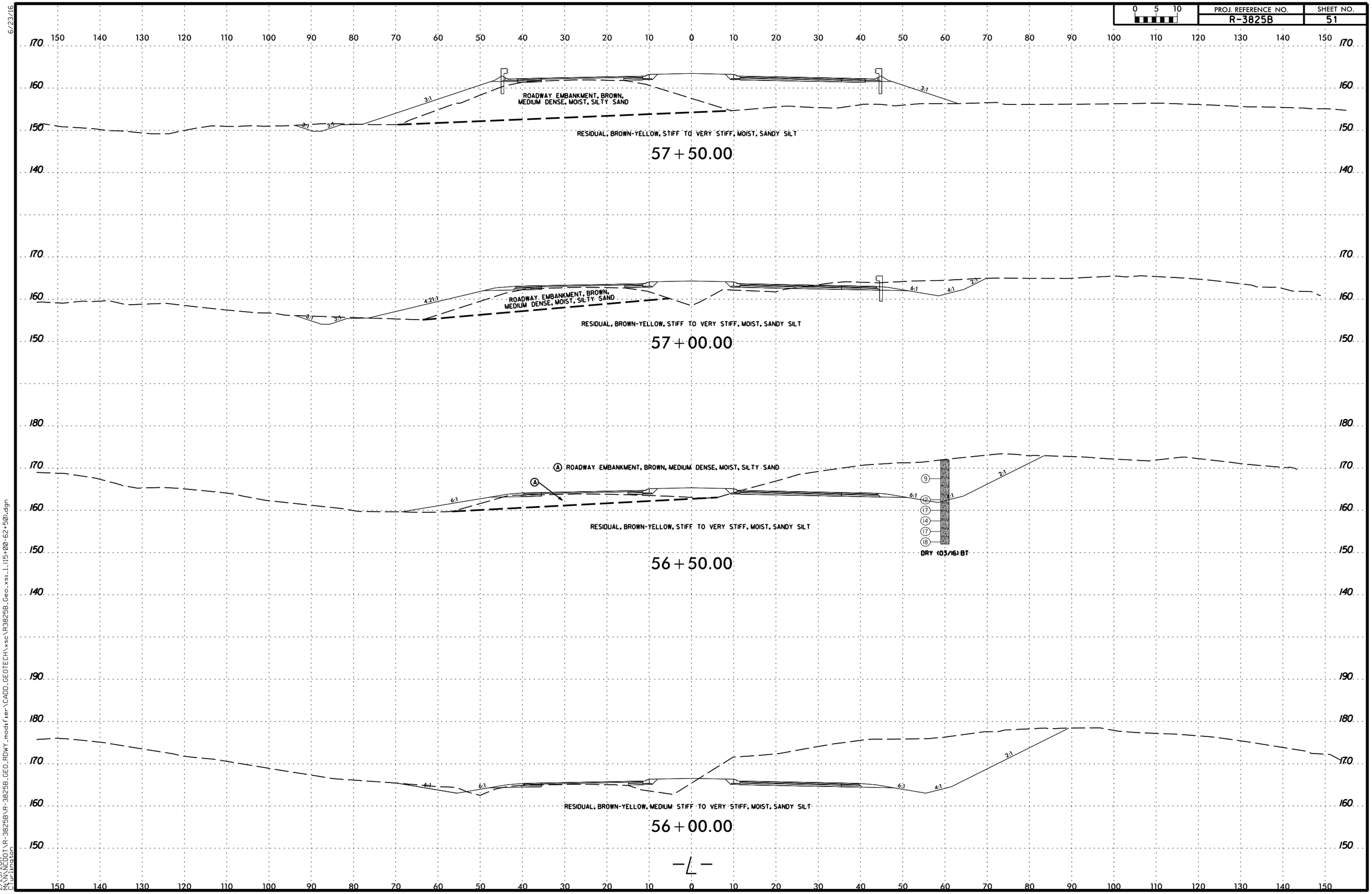
RESIDUAL, BROWN-GRAY, MEDIUM STIFF TO HARD, MOIST, SANDY SILT

54+50.00

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(15+00-62+50).dgn
Clurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	51



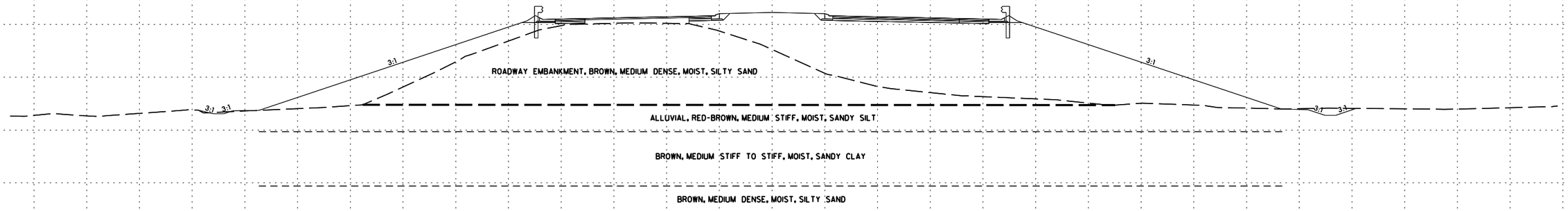
2/23/2017
M:\NNCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

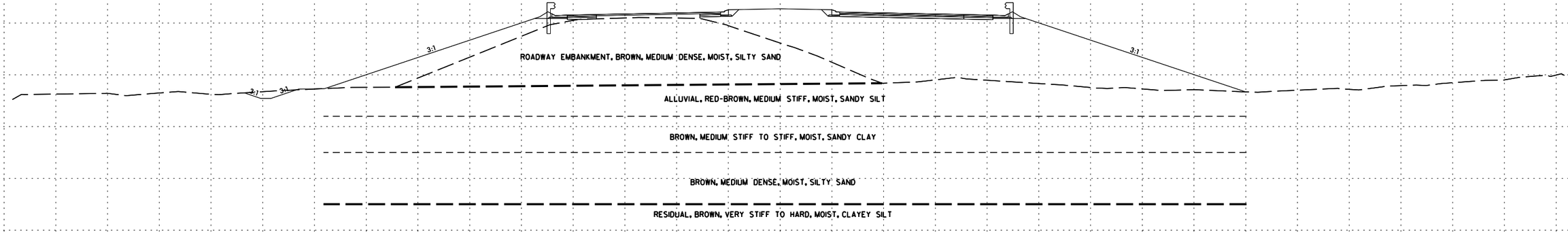
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	52

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

170
160
150
140
130
120
110



58+50.00



58+00.00

—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	53

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

170 160 150 140 130 120 110 100

3:1 3:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

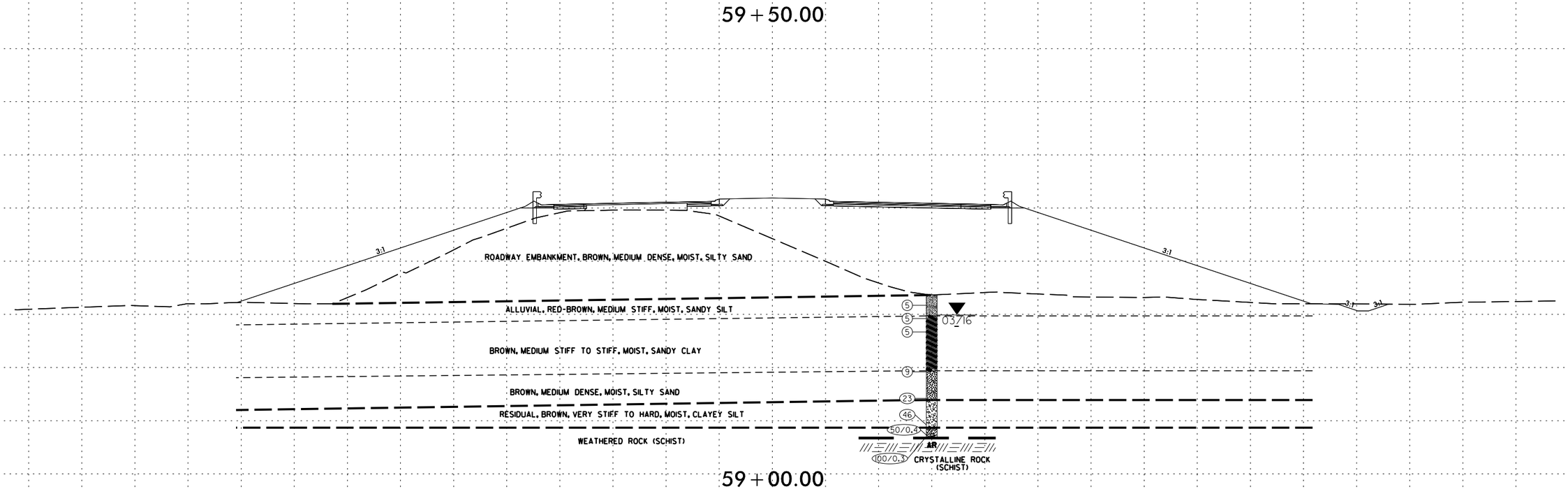
ALLUVIAL, RED-BROWN, MEDIUM STIFF, MOIST, SANDY SILT

BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, BROWN, VERY STIFF TO HARD, MOIST, CLAYEY SILT

59 + 50.00



59 + 00.00

$-\mathit{L}-$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

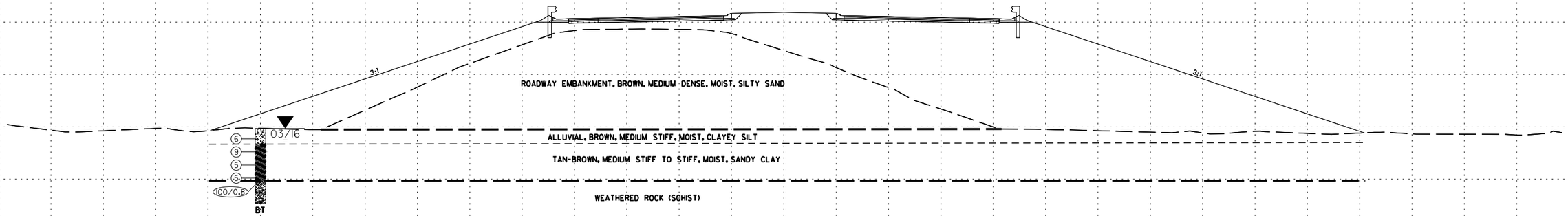
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(15+00-62+50).dgn
Clarington

6/23/16

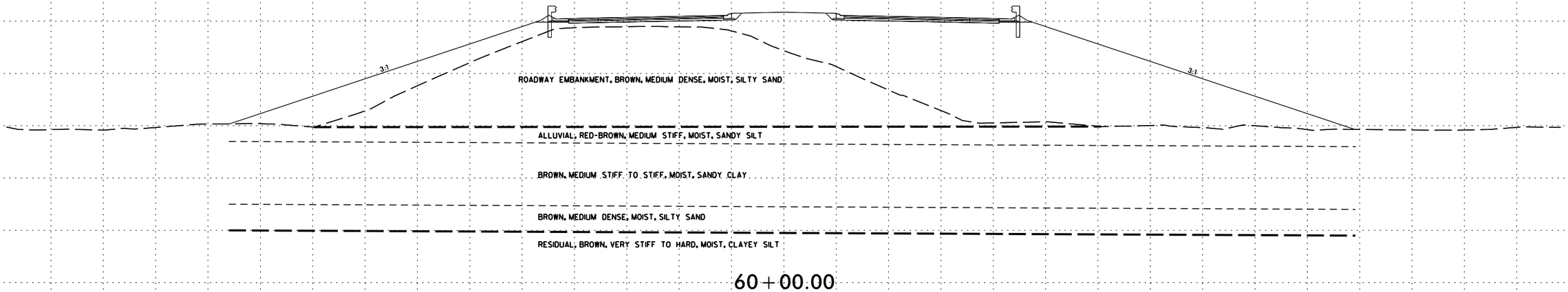
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	54

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

170 160 150 140 130 120



60+50.00



60+00.00

—L—

170 160 150 140 130 120 110

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(15+00-62+50).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	55

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

180 170 160 150 140 130 120 110

Ⓔ RESIDUAL, BROWN, HARD, MOIST, CLAYEY SILT

3:1

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, MEDIUM STIFF, MOIST, SANDY SILT

GRAY-BROWN, MEDIUM STIFF TO HARD, MOIST, SANDY CLAY

Ⓔ

WEATHERED ROCK (SCHIST)

61+50.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, MEDIUM STIFF, MOIST, SANDY SILT

GRAY-BROWN, MEDIUM STIFF TO HARD, MOIST, SANDY CLAY

RESIDUAL, BROWN, HARD, MOIST, CLAYEY SILT

WEATHERED ROCK (SCHIST)

03/16

(5) (10) (8) (6) (54) (100/0.9) (100/0.9) (100/0.9)

BT

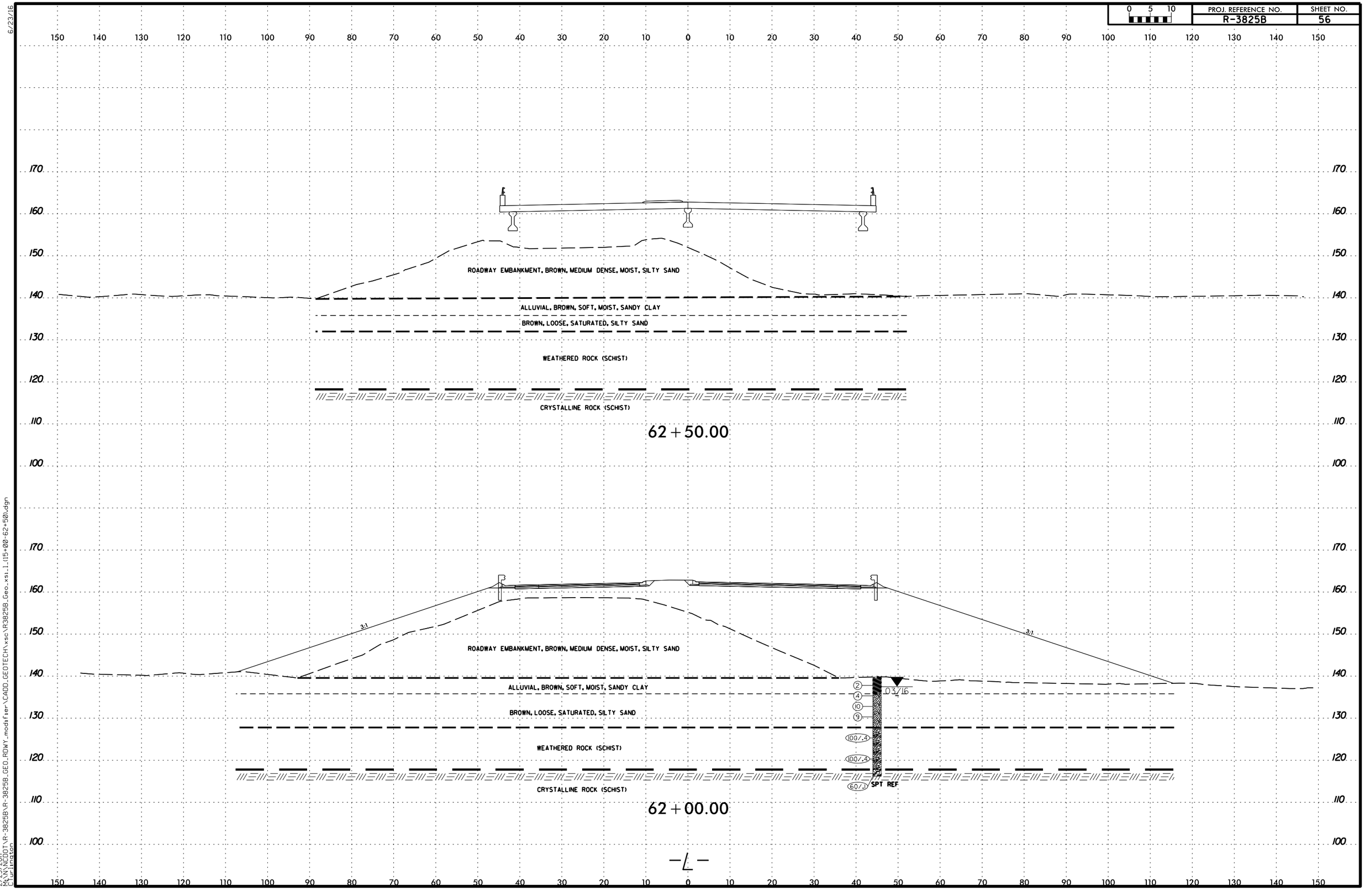
61+00.00

—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(15+00-62+50).dgn
CTurlington

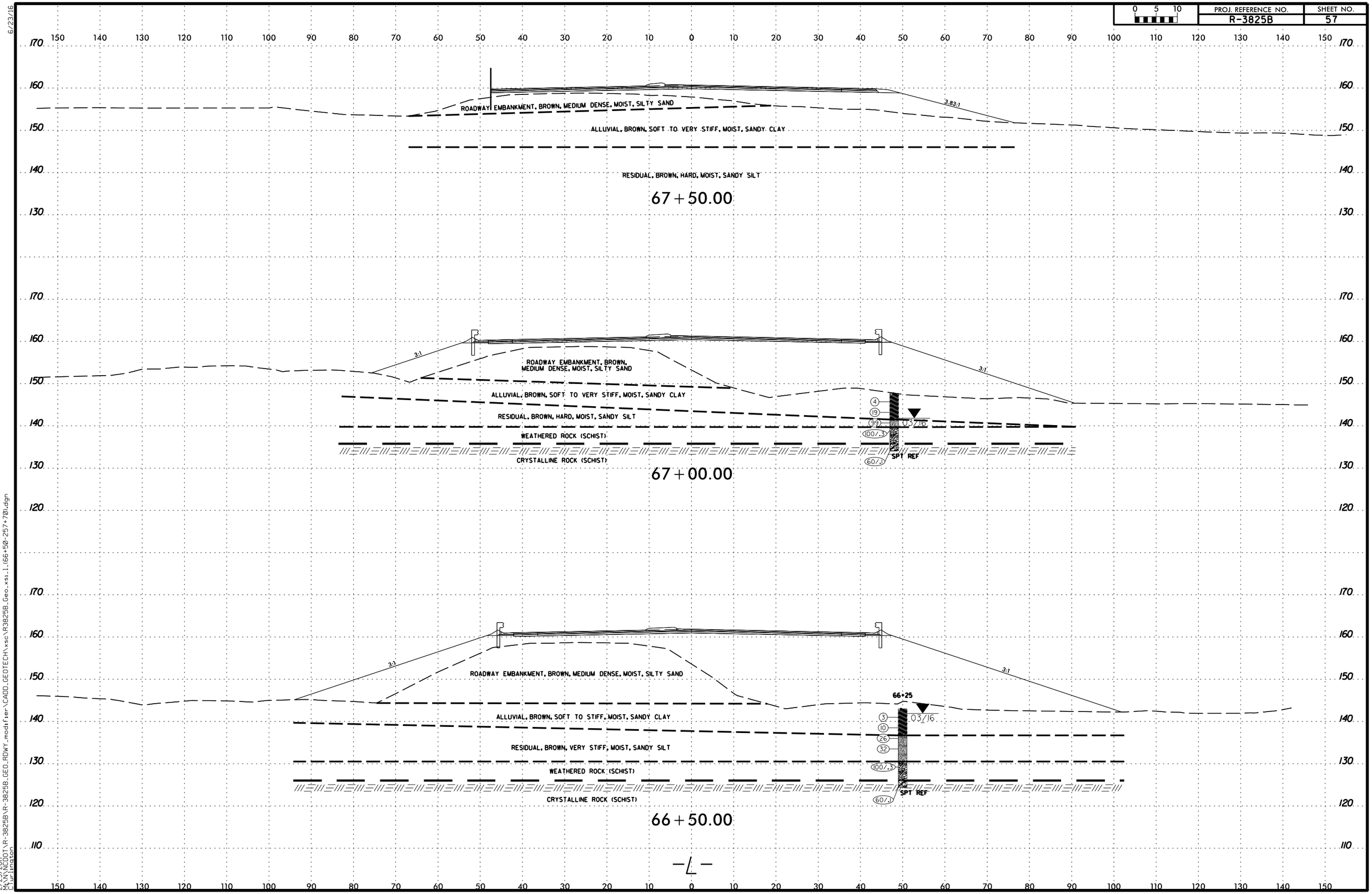
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	56



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(15+00-62+50).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	57



6/23/16

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_1(66+50-257+70).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	58

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

170 160 150

4.0:1 6:1 6:1 6:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, YELLOW-RED, STIFF TO VERY STIFF, MOIST, CLAYEY SILT

69+50.00

170 160 150

6:1 6:1 6:1 6:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

12 25 12 14

DRY (03/16) BT

ALLUVIAL, YELLOW-RED, STIFF TO VERY STIFF, MOIST, CLAYEY SILT

69+00.00

140 170 160 150

6:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, YELLOW-RED, STIFF TO VERY STIFF, MOIST, CLAYEY SILT

68+50.00

170 160 150

6:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, YELLOW-RED, STIFF TO VERY STIFF, MOIST, CLAYEY SILT

68+00.00

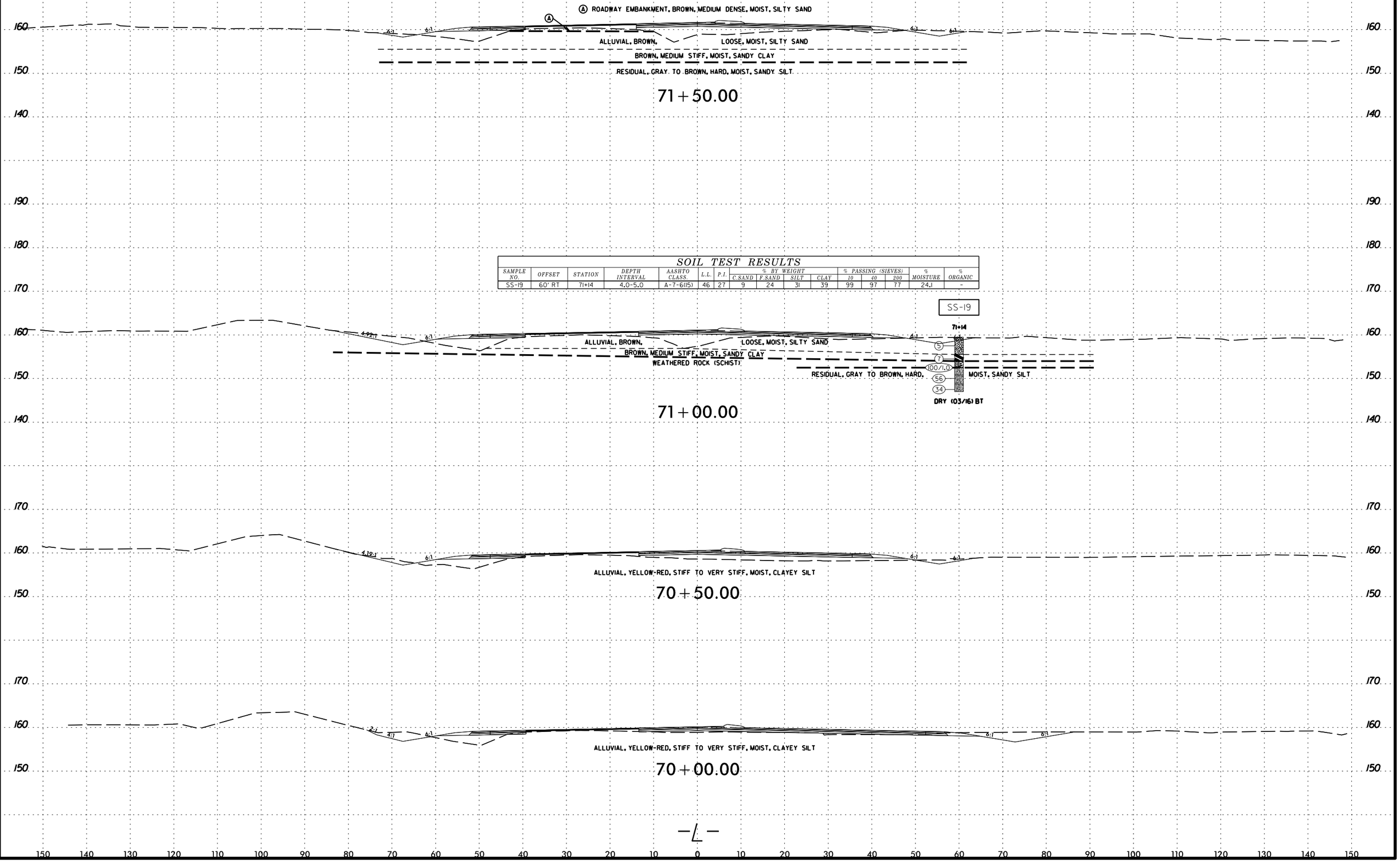
—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	59



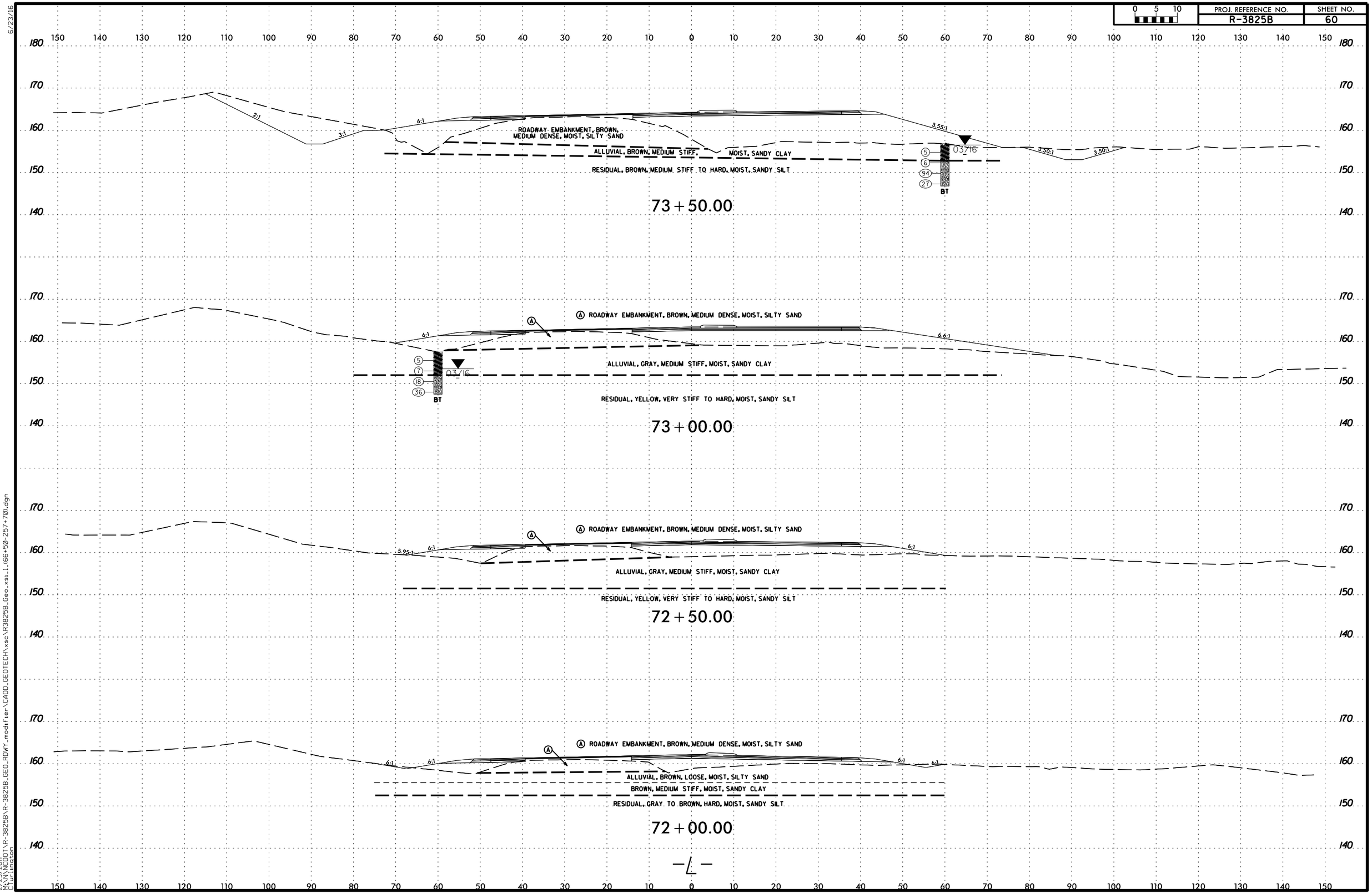
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-19	60' RT	71+14	4.0-5.0	A-7-6(15)	46	27	9	24	31	39	99	97	77	24.1	-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	60



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	61

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

180 170 160 150 140

2:1 6:1 6:1

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

4.53:1 3.50:1 3.50:1

COASTAL PLAIN, GRAY-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY CLAY

GRAY, MEDIUM DENSE, MOIST, SILTY SAND

75+00.00

180 170 160 150 140

2:1 3:1 6:1

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

3.75:1 3.50:1 3.50:1

COASTAL PLAIN, GRAY-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY CLAY

GRAY, MEDIUM DENSE, MOIST, SILTY SAND

74+50.00

180 170 160 150 140

2:1 3:1 6:1

(5) (20) (28) (18) 03/16

BT

ROADWAY EMBANKMENT, BROWN,
MEDIUM DENSE, MOIST, SILTY SAND

3.51:1 3.50:1 3.50:1

COASTAL PLAIN, GRAY-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY CLAY

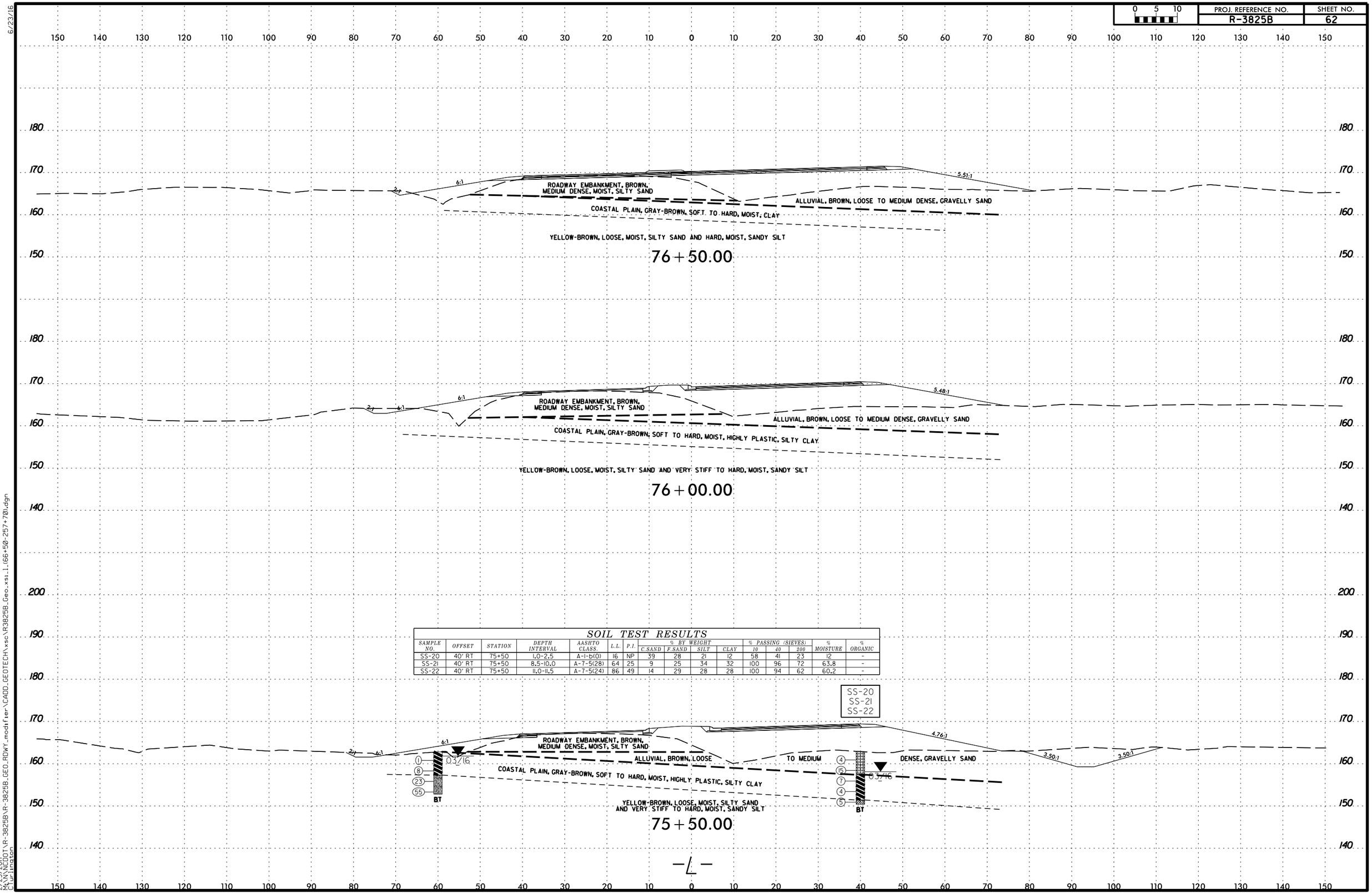
GRAY, MEDIUM DENSE, MOIST, SILTY SAND

74+00.00

—℄—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-20	40' RT	75+50	1.0-2.5	A-1-b(0)	16	NP	39	28	21	12	58	41	23	12	-
SS-21	40' RT	75+50	8.5-10.0	A-7-5(28)	64	25	9	25	34	32	100	96	72	63.8	-
SS-22	40' RT	75+50	11.0-11.5	A-7-5(24)	86	49	14	29	28	28	100	94	62	60.2	-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	63

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

180
170
160
150

2:1 6:1 6:1 6:1

ROADWAY EMBANKMENT; BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, STIFF TO VERY STIFF, MOIST, SANDY CLAY

RESIDUAL, BROWN-GRAY, MEDIUM STIFF, MOIST, SANDY SILT

78+00.00

180
170
160
150

2:1 6:1 6:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, STIFF TO VERY STIFF, MOIST, SANDY CLAY

RESIDUAL, BROWN-GRAY, MEDIUM STIFF, MOIST, SANDY SILT

(10) (19) (11) (15)

DRY (03/16) BT

77+50.00

180
170
160
150

2:1 6:1 6:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, GRAY BROWN, SOFT TO HARD, MOIST, CLAY

RESIDUAL, BROWN-GRAY, MEDIUM STIFF, MOIST, SANDY SILT

77+00.00

180
170
160
150
140

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	64

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210 200 190 180 170 160 150

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-23	60' RT	79+50	1.5-2.0	A-7-6(11)	59	40	22	19	18	41	94	80	60	17.2	-
SS-24	60' RT	79+50	3.5-4.3	A-4(10)	29	10	11	25	26	38	100	94	71	28.0	-

SS-23
SS-24

Ⓕ COASTAL PLAIN, BROWN, VERY LOOSE, MOIST, SILTY SAND

Ⓒ COASTAL PLAIN, BROWN, SOFT, MOIST, HIGHLY PLASTIC, SILTY CLAY

RESIDUAL, BROWN, VERY STIFF, MOIST, SANDY SILT

4:1 6:1 6:1 6:1

3 16 15 18 25

DRY (03/16) BT

79+50.00

Ⓕ COASTAL PLAIN, BROWN, VERY LOOSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, SOFT, MOIST, CLAY

RESIDUAL, BROWN, VERY STIFF, MOIST, SANDY SILT

2:1 6:1 6:1 6:1

79+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, STIFF TO VERY STIFF, MOIST, SANDY CLAY

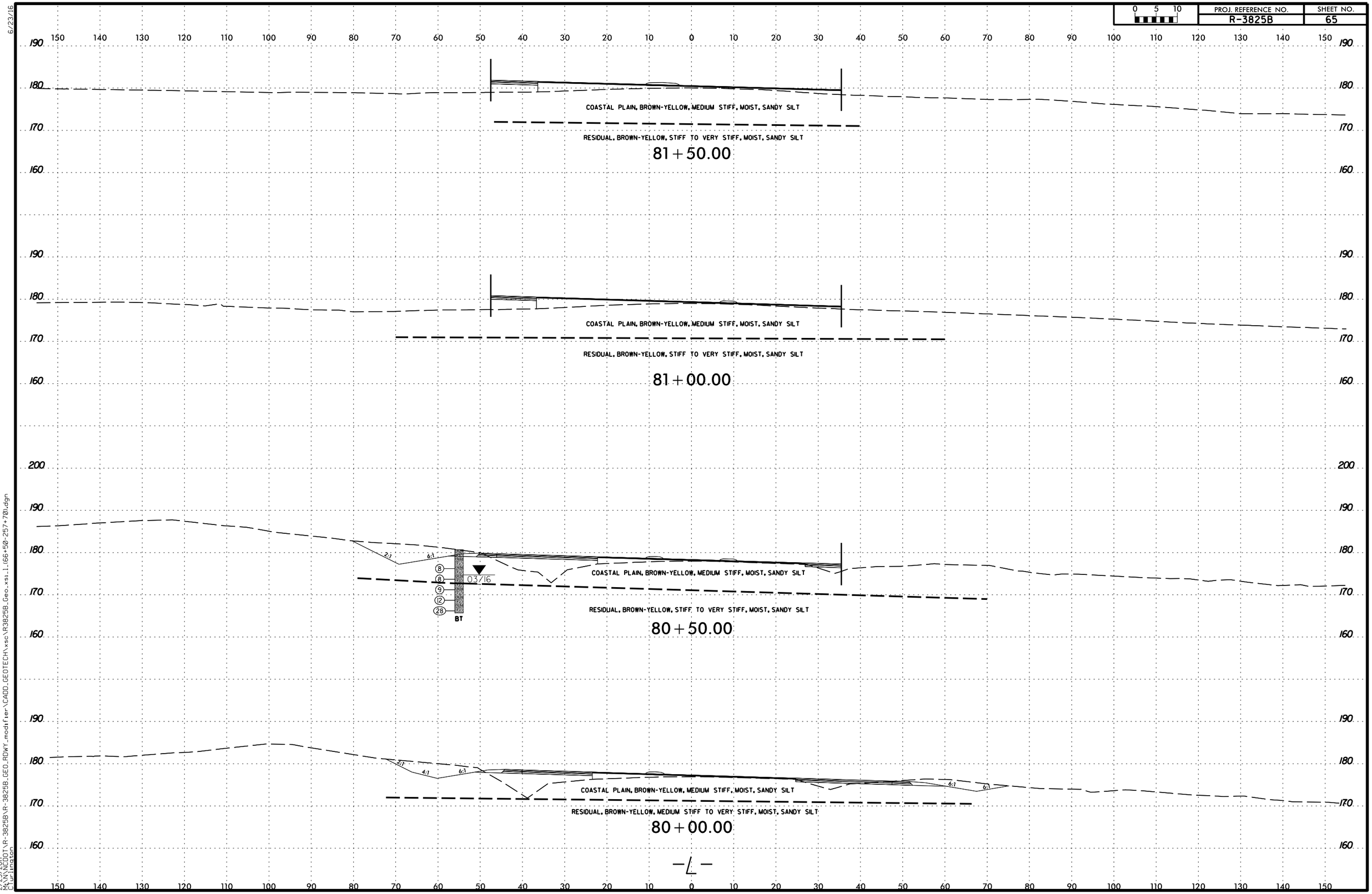
RESIDUAL, BROWN-GRAY, MEDIUM STIFF, MOIST, SANDY SILT

2:1 6:1 6:1 5.07:1

78+50.00

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	65



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	66

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

200
190
180
170
160

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 4:1 6:1 3:1 3:1

COASTAL PLAIN, BROWN-GRAY, SOFT TO STIFF, MOIST, SANDY CLAY

RESIDUAL, BROWN, STIFF TO HARD, MOIST, SANDY SILT

83+00.00

2:1 4:1 6:1 3:1 3:1

COASTAL PLAIN, BROWN-GRAY, SOFT TO STIFF, MOIST, SANDY CLAY

RESIDUAL, BROWN, STIFF TO HARD, MOIST, SANDY SILT

3
4
15
36

DRY (03/16) BT

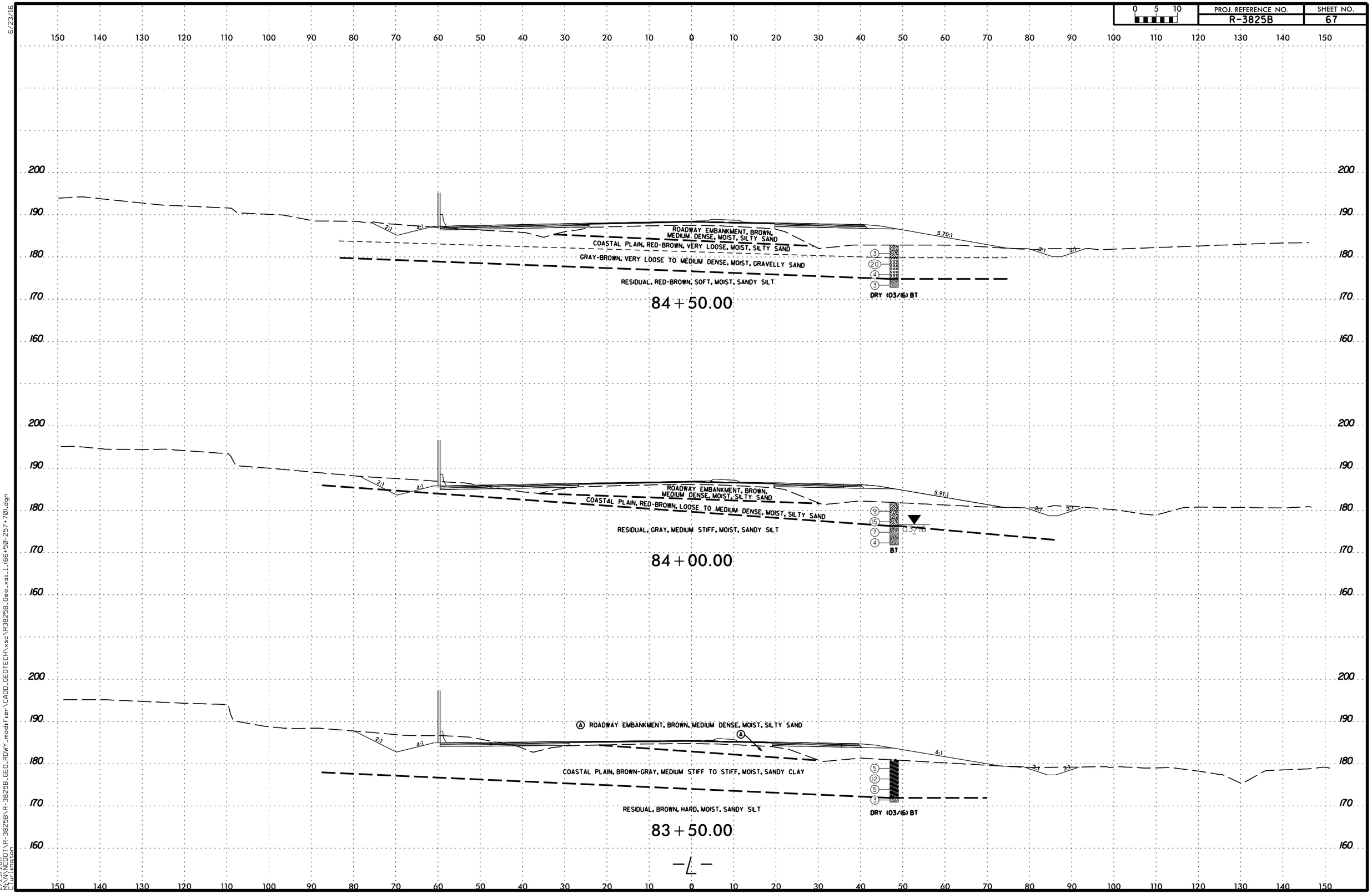
82+50.00

2:1 6:1

COASTAL PLAIN, BROWN-GRAY, SOFT TO STIFF, MOIST, SANDY CLAY

RESIDUAL, BROWN, STIFF TO HARD, MOIST, SANDY SILT

82+00.00



6/23/16

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Burlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	68

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

200
190
180
170

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1

3:1

3:1

COASTAL PLAIN, RED-GRAY, SOFT TO MEDIUM SOFT, MOIST, SANDY CLAY

RESIDUAL, RED-GRAY, LOOSE TO MEDIUM DENSE, MOIST, CLAYEY SAND

(2) (7) (11) (19)

DRY (03/16) BT

86+00.00

200
190
180
170

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1

3:1

3:1

COASTAL PLAIN, RED-GRAY, SOFT TO MEDIUM SOFT, MOIST, SANDY CLAY

RESIDUAL, RED-GRAY, LOOSE TO MEDIUM DENSE, MOIST, CLAYEY SAND

85+50.00

200
190
180
170
160

2

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

5.52:1

3:1

3:1

COASTAL PLAIN, RED-BROWN, VERY LOOSE, MOIST, SILTY SAND

GRAY-BROWN, VERY LOOSE TO MEDIUM DENSE, MOIST, GRAVELLY SAND

RESIDUAL, RED-BROWN, SOFT, MOIST, SANDY SILT

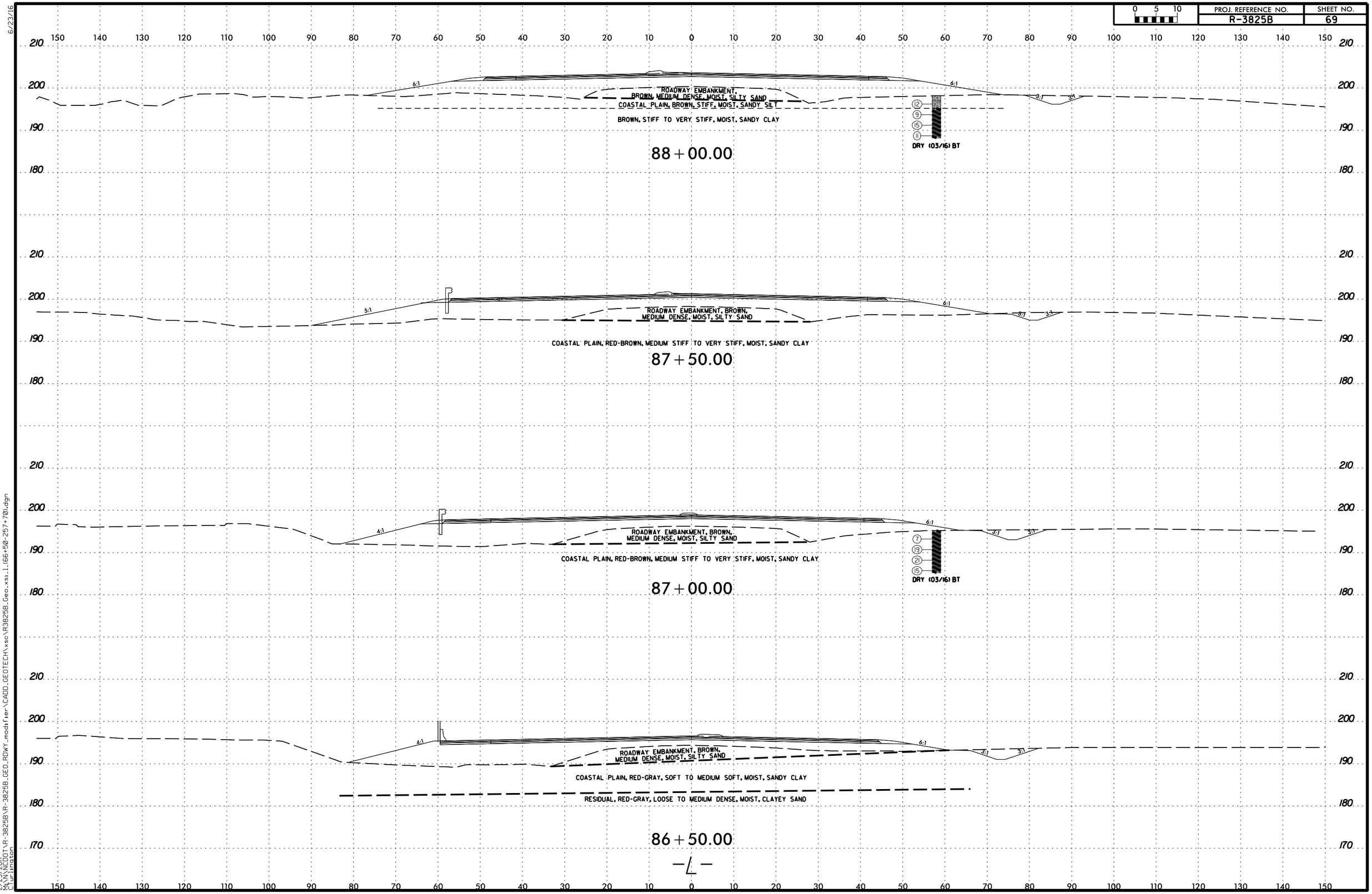
85+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	69



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	70

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220
210
200
190

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 6:1 5.43:1 3:1 3:1

Ⓐ

COASTAL PLAIN, BROWN, STIFF, MOIST, SANDY SILT

BROWN, STIFF TO VERY STIFF, MOIST, SANDY CLAY

89 + 50.00

220
210
200
190

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 6:1 5.45:1 3:1 3:1

Ⓐ

COASTAL PLAIN, BROWN, STIFF, MOIST, SANDY SILT

BROWN, STIFF TO VERY STIFF, MOIST, SANDY CLAY

89 + 00.00

220
210
200
190
180

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 6:1 3:1 3:1

Ⓐ

COASTAL PLAIN, BROWN, STIFF, MOIST, SANDY SILT

BROWN, STIFF TO VERY STIFF, MOIST, SANDY CLAY

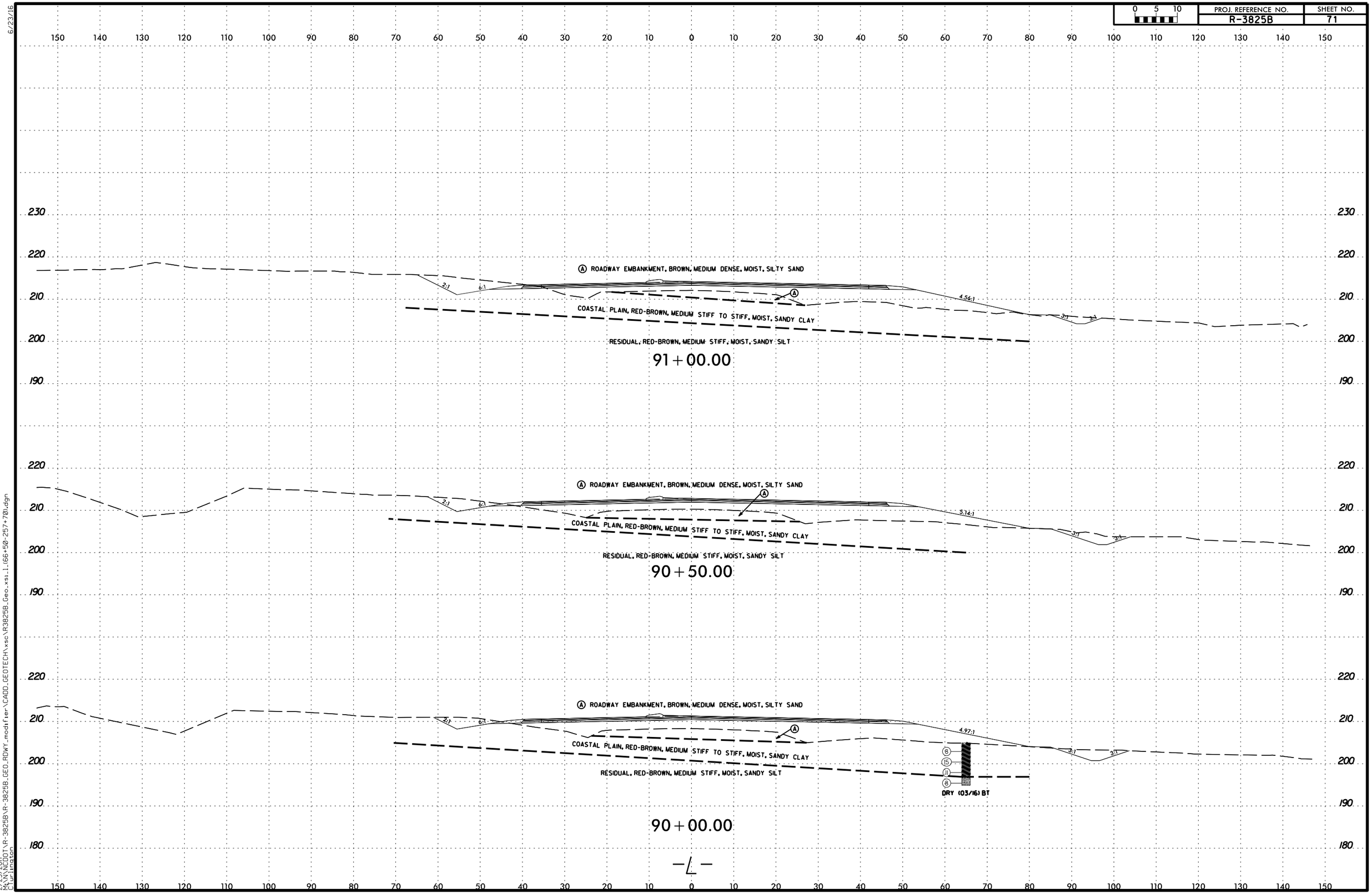
88 + 50.00

— L —

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

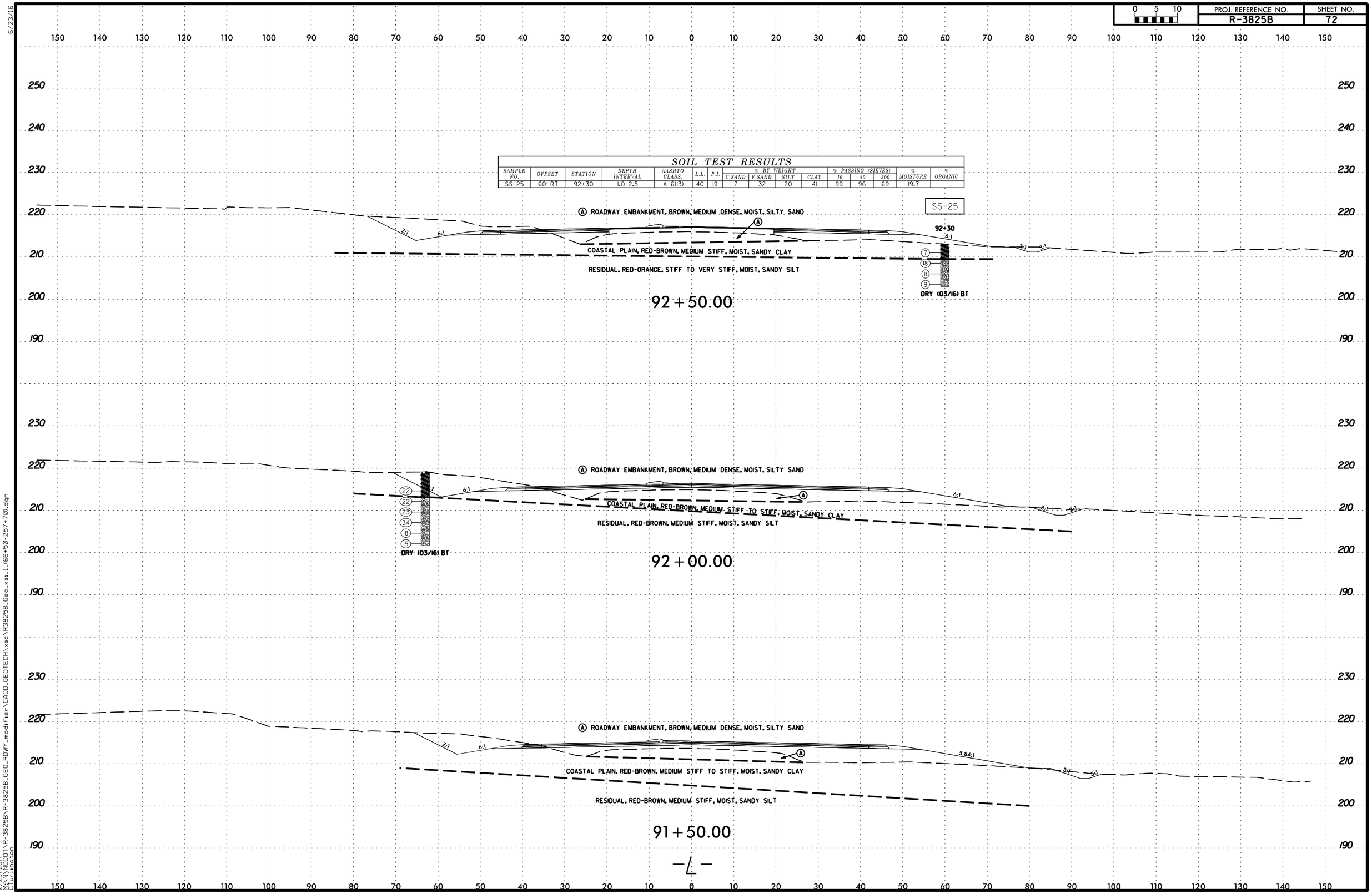
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	71



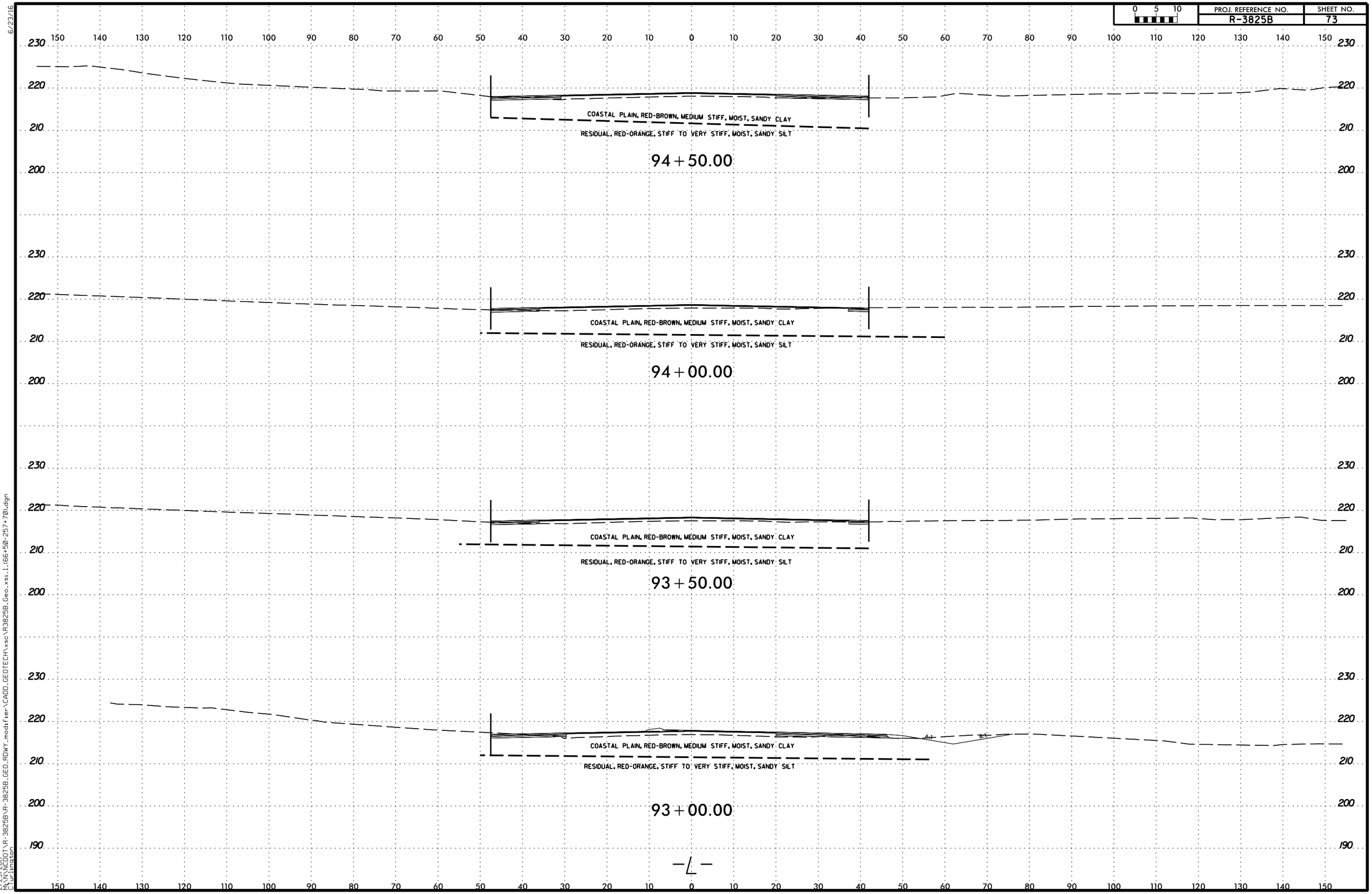
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-25	60' RT	92+30	1.0-2.5	A-6(13)	40	19	7	32	20	41	99	96	69	19.7	-



6/23/16

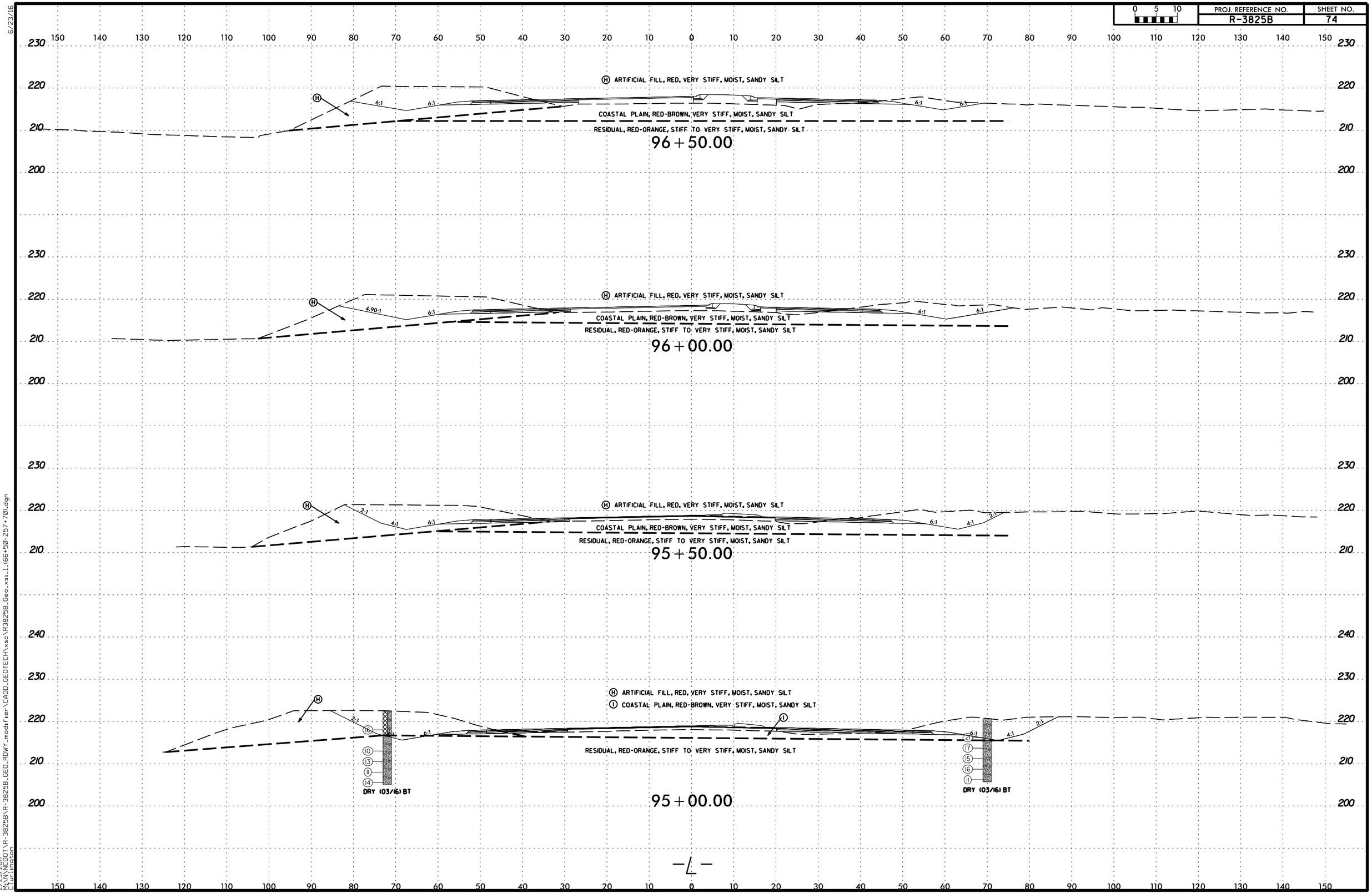
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	73



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	74



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	75

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

230
220
210
200

ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT
6:1 6:1 6:1 6:1
COASTAL PLAIN, RED-BROWN, MEDIUM DENSE, MOIST, SILTY SAND
RESIDUAL, RED-ORANGE, STIFF TO VERY STIFF, MOIST, SANDY SILT

98+00.00

ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT
6:1 6:1 6:1 6:1
COASTAL PLAIN, RED-ORANGE, STIFF TO VERY STIFF, MOIST, SANDY SILT
RESIDUAL, RED-ORANGE, STIFF TO VERY STIFF, MOIST, SANDY SILT

97+50.00

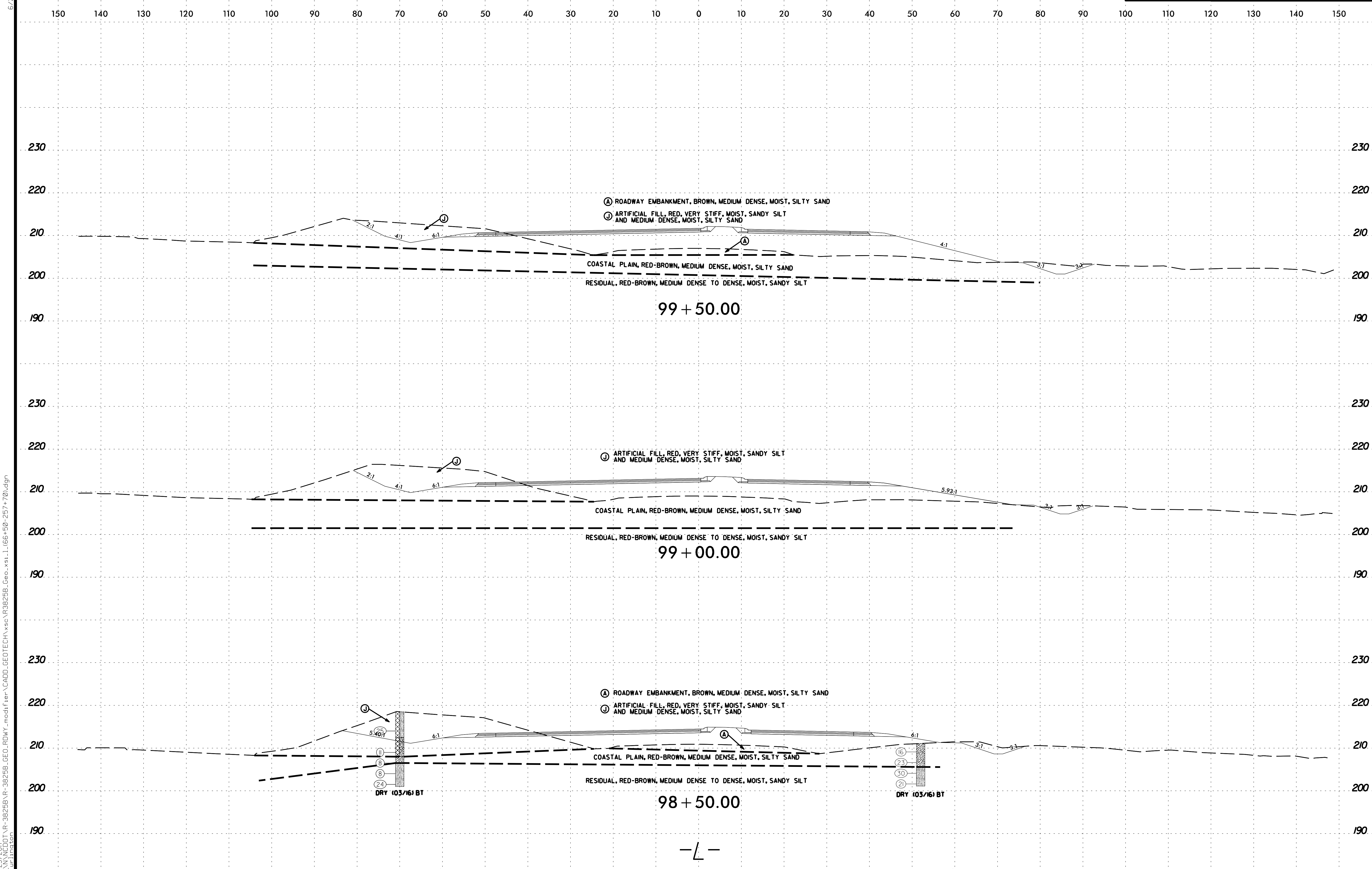
(H) ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT
(H) 6:1 (25) 6:1 6:1 6:1
(11) COASTAL PLAIN, RED-BROWN, VERY STIFF, MOIST, SANDY SILT
(8) (8) (24) RESIDUAL, RED-ORANGE, STIFF TO VERY STIFF, MOIST, SANDY SILT
DRY (03/16) BT

97+00.00

-L-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington


0 5 10
Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓙ ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT AND MEDIUM DENSE, MOIST, SILTY SAND
COASTAL PLAIN, RED-BROWN, MEDIUM DENSE, MOIST, SILTY SAND
RESIDUAL, RED-BROWN, MEDIUM DENSE TO DENSE, MOIST, SANDY SILT
99+50.00
Ⓙ ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT AND MEDIUM DENSE, MOIST, SILTY SAND
COASTAL PLAIN, RED-BROWN, MEDIUM DENSE, MOIST, SILTY SAND
RESIDUAL, RED-BROWN, MEDIUM DENSE TO DENSE, MOIST, SANDY SILT
99+00.00
Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓙ ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT AND MEDIUM DENSE, MOIST, SILTY SAND
COASTAL PLAIN, RED-BROWN, MEDIUM DENSE, MOIST, SILTY SAND
RESIDUAL, RED-BROWN, MEDIUM DENSE TO DENSE, MOIST, SANDY SILT
DRY (03/16) BT
DRY (03/16) BT
98+50.00
-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	77

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220
210
200
190
180

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 6:1 3:1 3:1 3:1

Ⓐ

COASTAL PLAIN, RED-YELLOW, LOOSE TO MEDIUM DENSE, MOIST, SILTY SAND

101+00.00

220
210
200
190
180

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 6:1 3:1 3:1 3:1

Ⓐ

23
15
15
9

COASTAL PLAIN, RED-YELLOW, LOOSE TO MEDIUM DENSE, MOIST, SILTY SAND

DRY (03/16) BT

100+50.00

230
220
210
200
190

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

Ⓙ ARTIFICIAL FILL, RED, VERY STIFF, MOIST, SANDY SILT AND MEDIUM DENSE, MOIST, SILTY SAND

Ⓙ 3:1 6:1 6:1 3:1 3:1 3:1

Ⓐ

COASTAL PLAIN, RED-BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, MEDIUM DENSE TO DENSE, MOIST, SANDY SILT

100+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1_(66+50-257+70).dgn
CTurlington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	78

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190 180 170

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓛ COASTAL PLAIN, BROWN-TAN, VERY LOOSE, MOIST, SAND

5.11:1

COASTAL PLAIN, BROWN, LOOSE, MOIST, CLAYEY SAND AND VERY LOOSE, MOIST, SAND

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

102 + 50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4.57:1 3:1 6:1 6:1

COASTAL PLAIN, BROWN-TAN, VERY LOOSE, MOIST, SAND

BROWN, LOOSE, MOIST, CLAYEY SAND

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

03/16

② ⑥ ⑥ ⑦ ⑧

BT

102 + 00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

5.35:1 3:1 6:1 3.80:1 3:1 3:1

COASTAL PLAIN, BROWN-YELLOW, LOOSE TO MEDIUM DENSE, MOIST, SILTY SAND

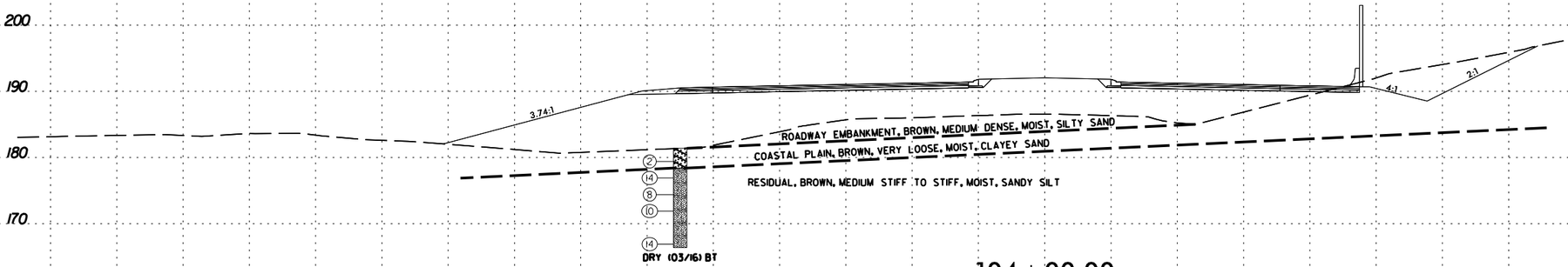
101 + 50.00

6/23/16

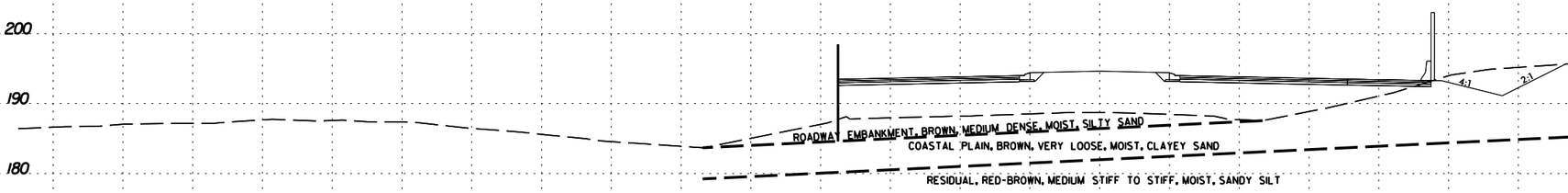
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	79

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

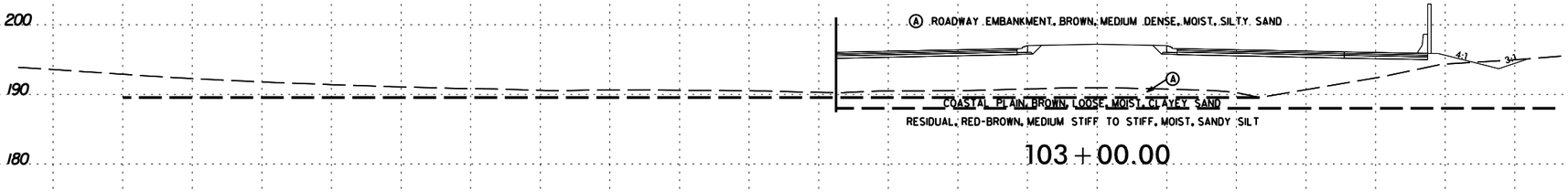
210
200
190
180
170
160



104+00.00



103+50.00

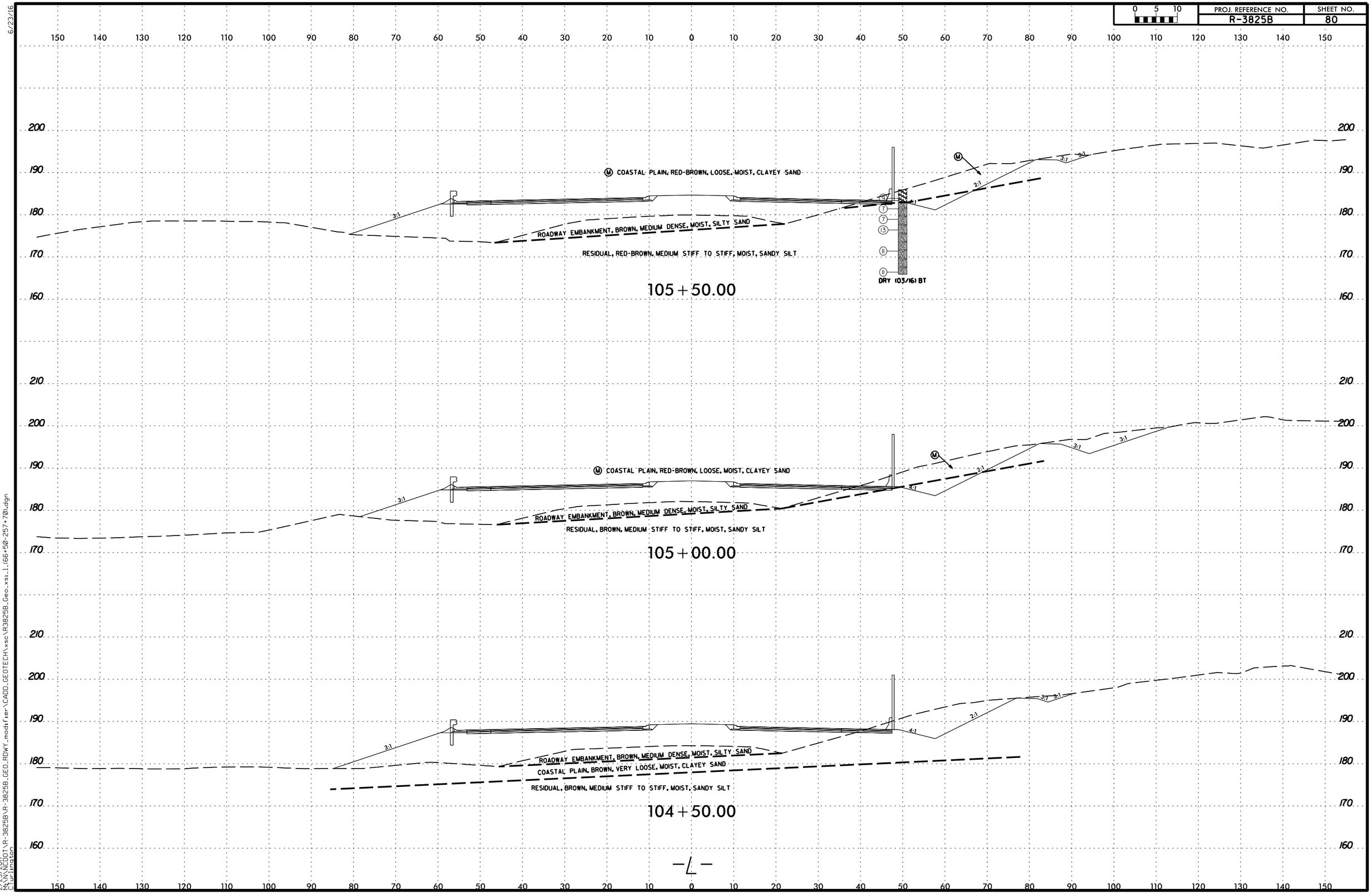


103+00.00

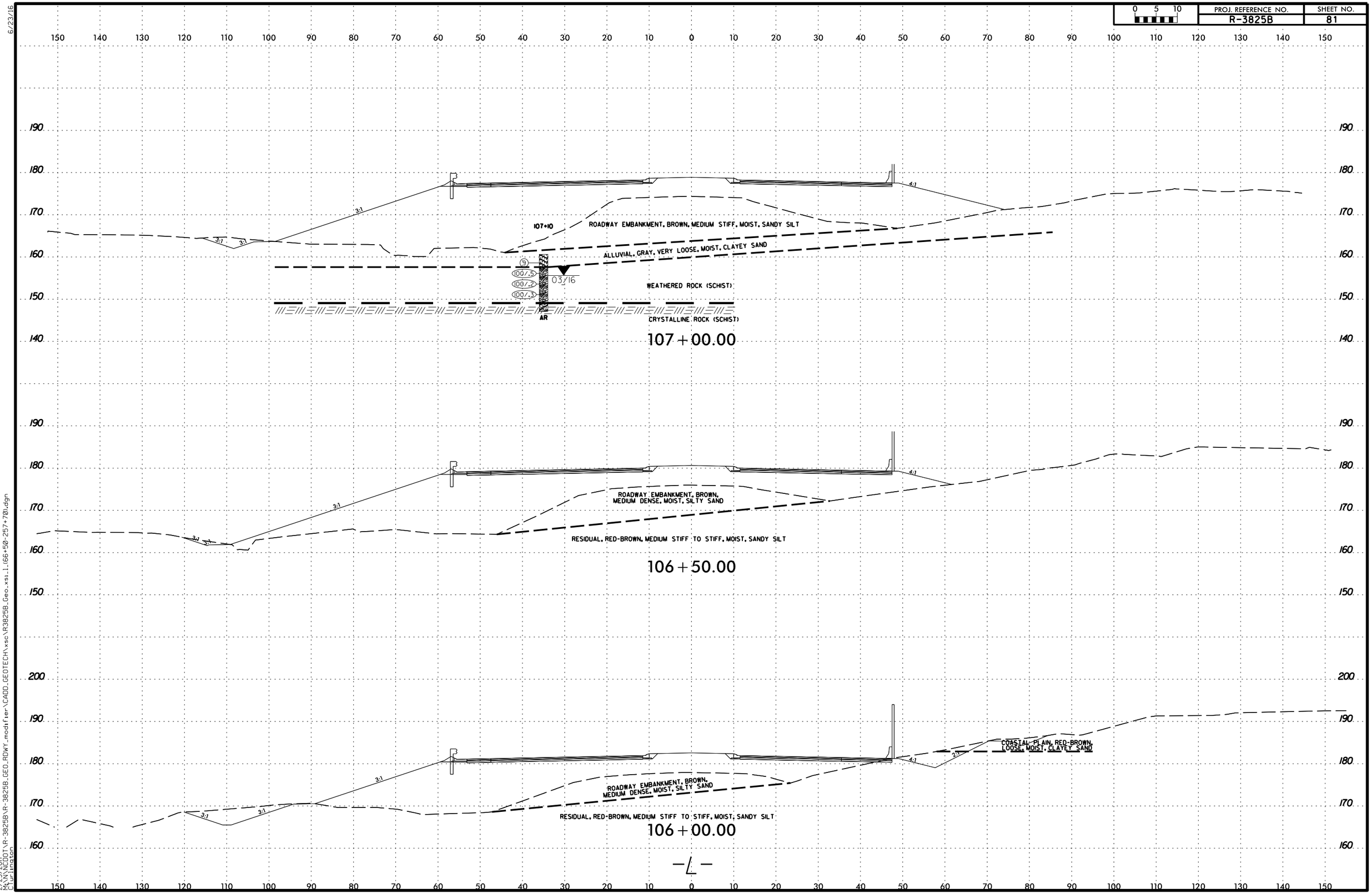
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	80



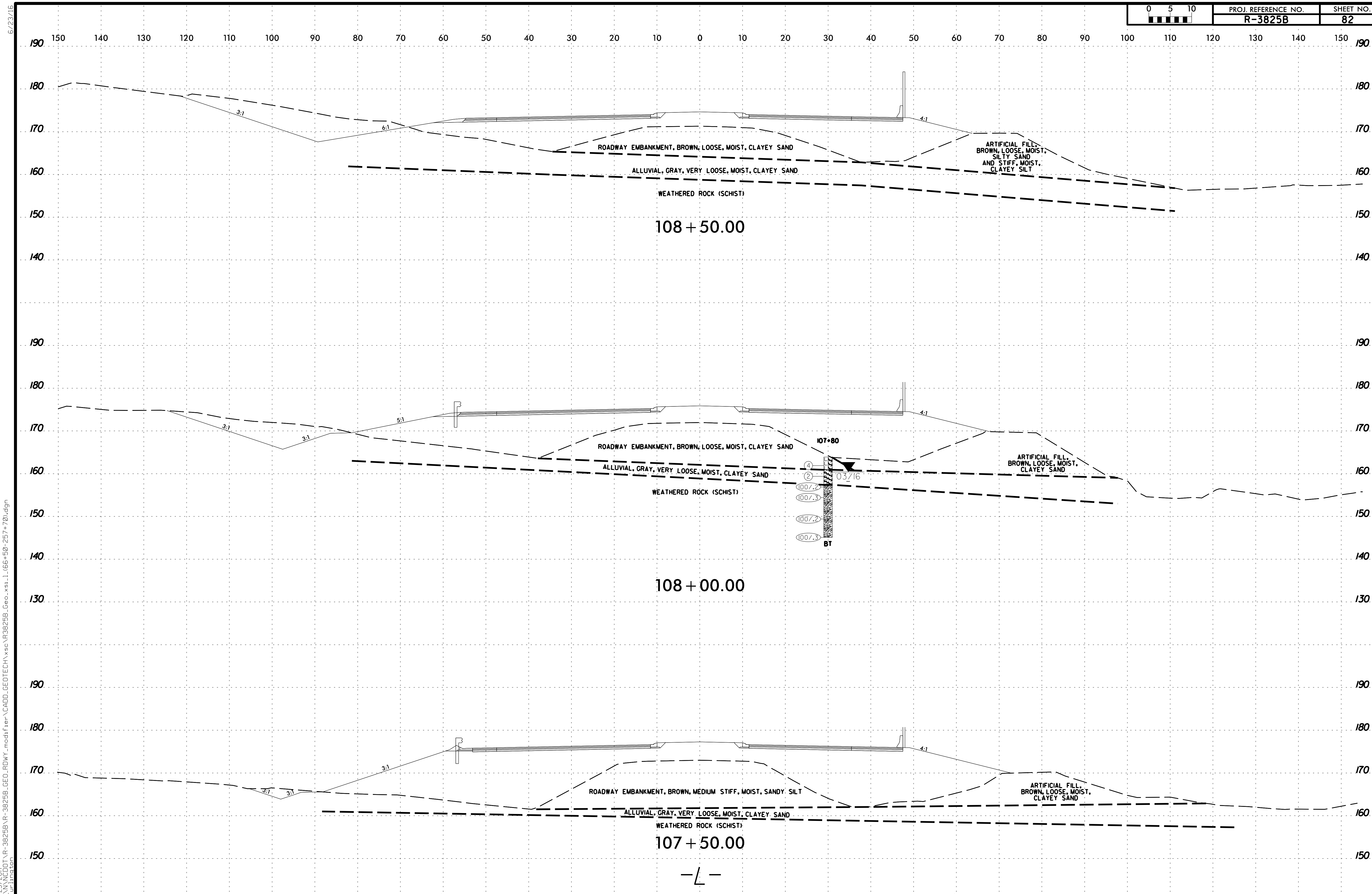
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1(66+50-257+70).dgn
Clarington



6/23/16

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Clarington

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	82



6/23/16
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1_(66+50-257+70).dgn
Clurlington

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	83

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

190 180 170 160

3:1 3:1 2:1 4:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

110+00.00

190 180 170 160

3:1 6:1 4:1 4:1

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

(13) (9) (8) (24)

DRY (03/16) BT

109+50.00

190 180 170 160 150

3:1 6:1 4:1

(W) ARTIFICIAL FILL, BROWN, LOOSE, MOIST, SILTY SAND AND STIFF, MOIST, CLAYEY SILT

ROADWAY EMBANKMENT, BROWN, LOOSE, MOIST, CLAYEY SAND

ALLUVIAL, GRAY, VERY LOOSE, MOIST, CLAYEY SAND

WEATHERED ROCK (SCHIST)

(W)

109+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	84

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

180 170 160 150

RESIDUAL, BROWN, MEDIUM STIFF TO HARD, MOIST, SANDY SILT

111 + 50.00

200 190 180 170 160 150

03716

BT

RESIDUAL, BROWN, MEDIUM STIFF TO HARD, MOIST, SANDY SILT

111 + 00.00

DRY (03/16) BT

RESIDUAL, BROWN, SOFT TO VERY STIFF, MOIST, SANDY SILT

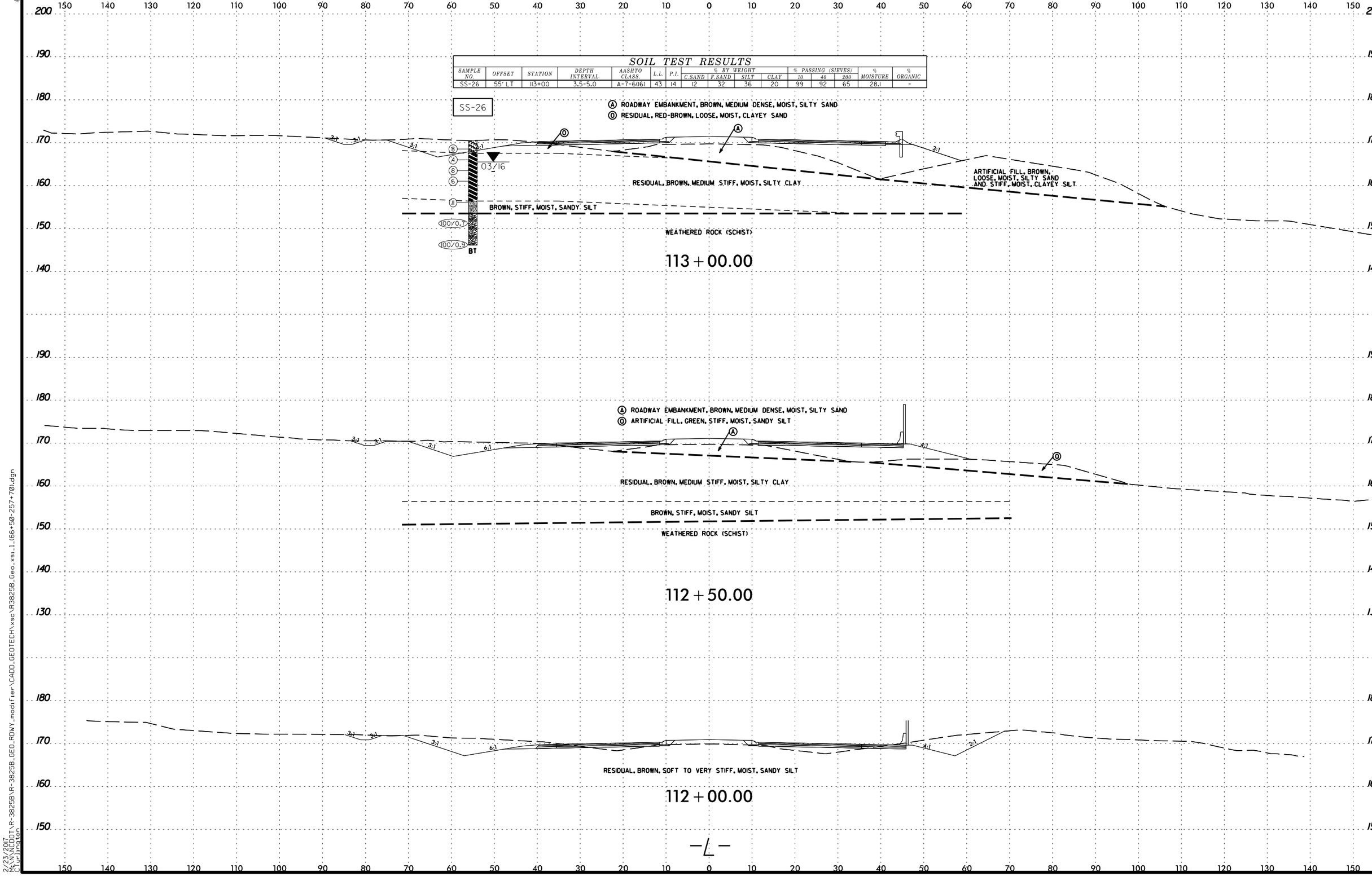
110 + 50.00

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	85

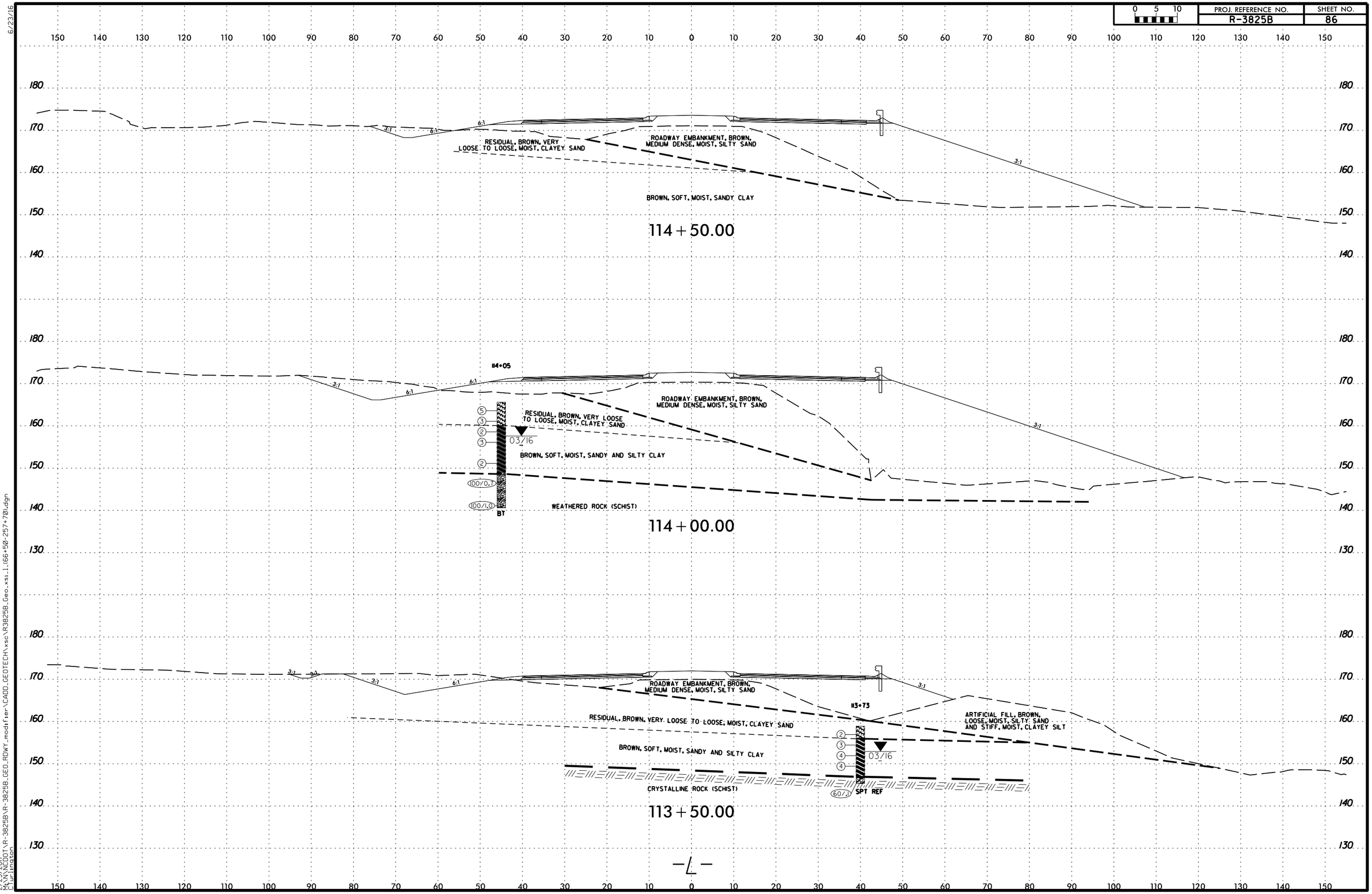
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-26	55' LT	113+00	3.5-5.0	A-7-6(16)	43	14	12	32	36	20	99	92	65	28.1	-



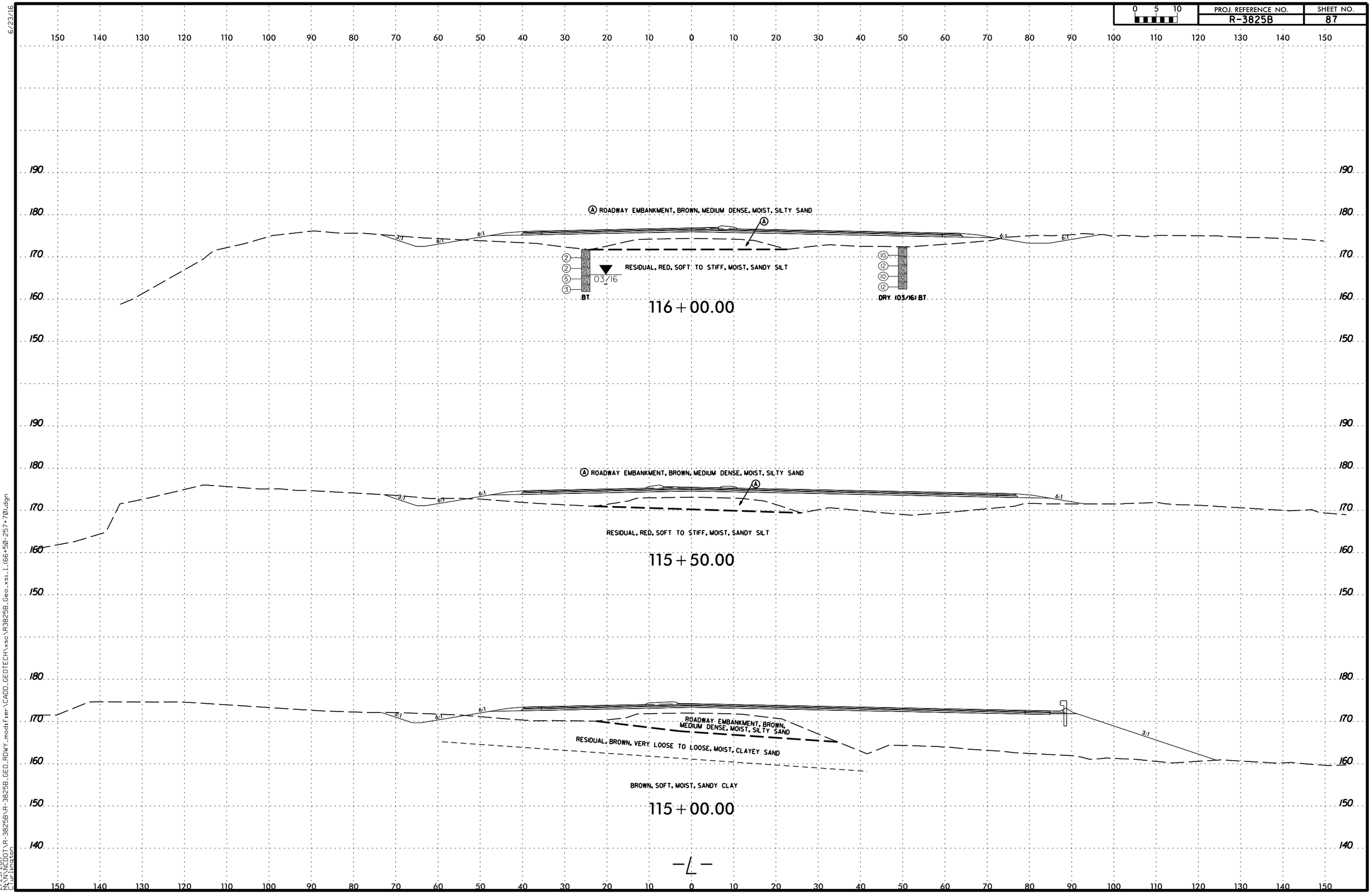
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Burlington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	86

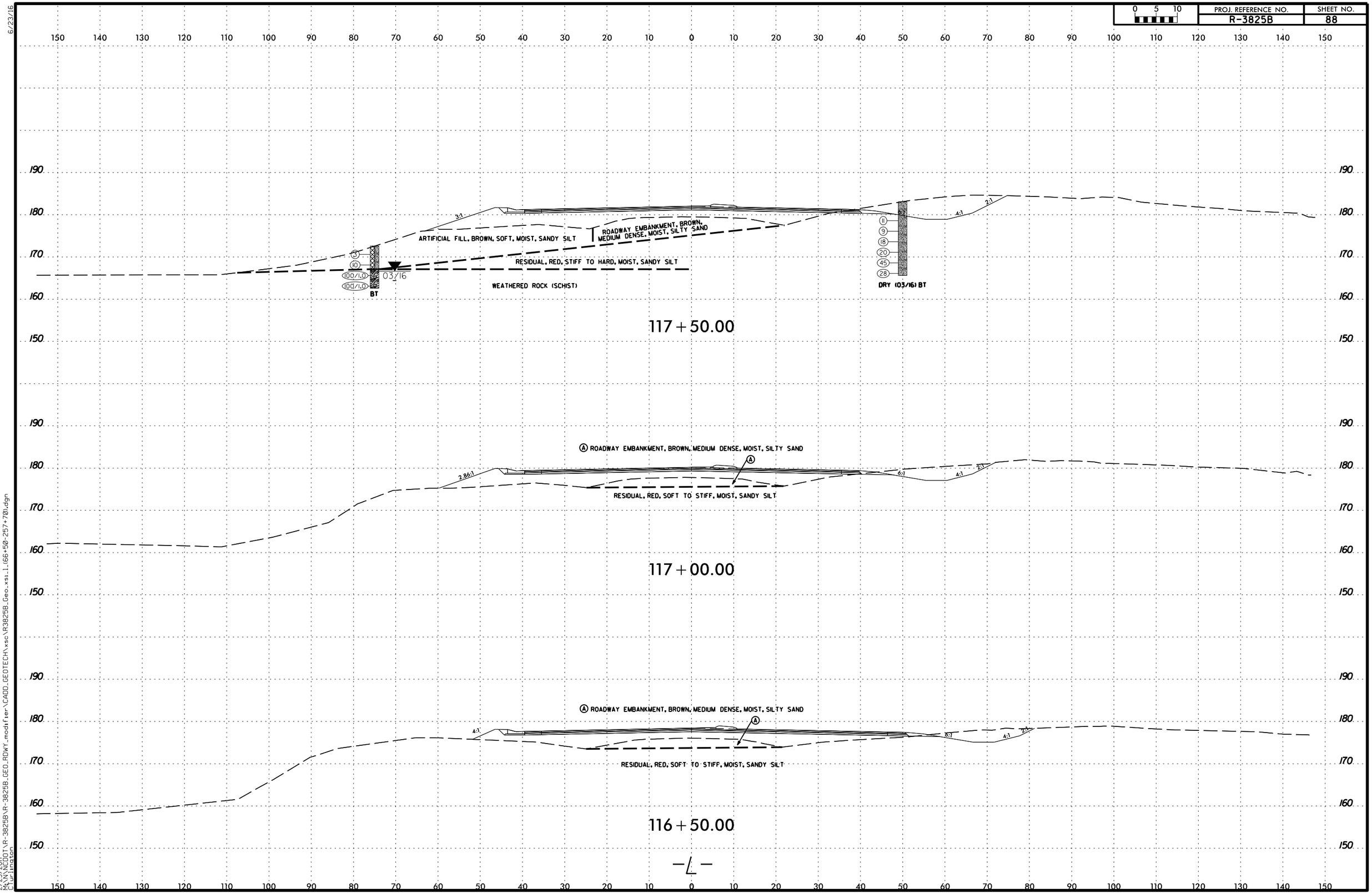


6/23/16

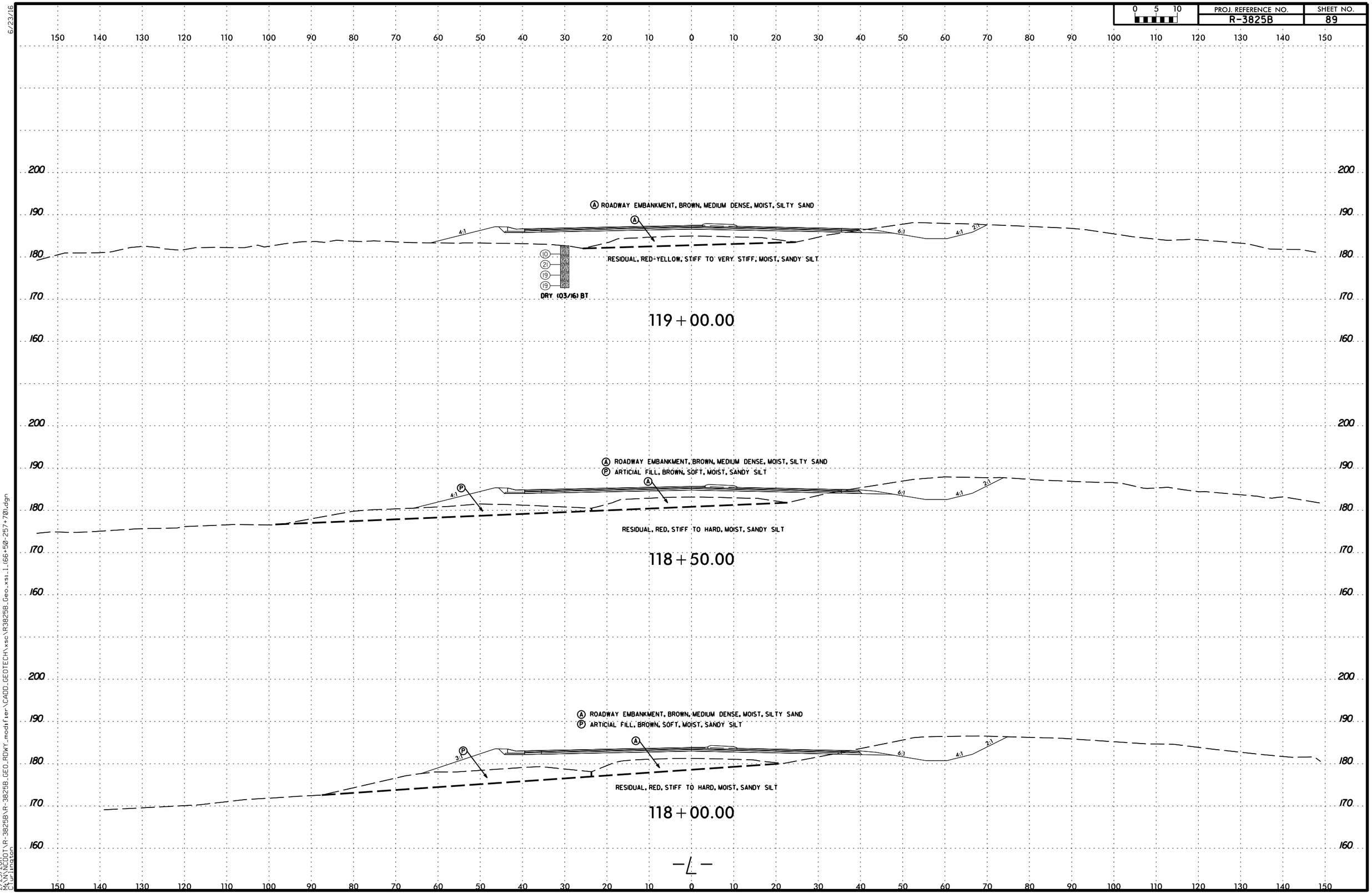
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	87



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

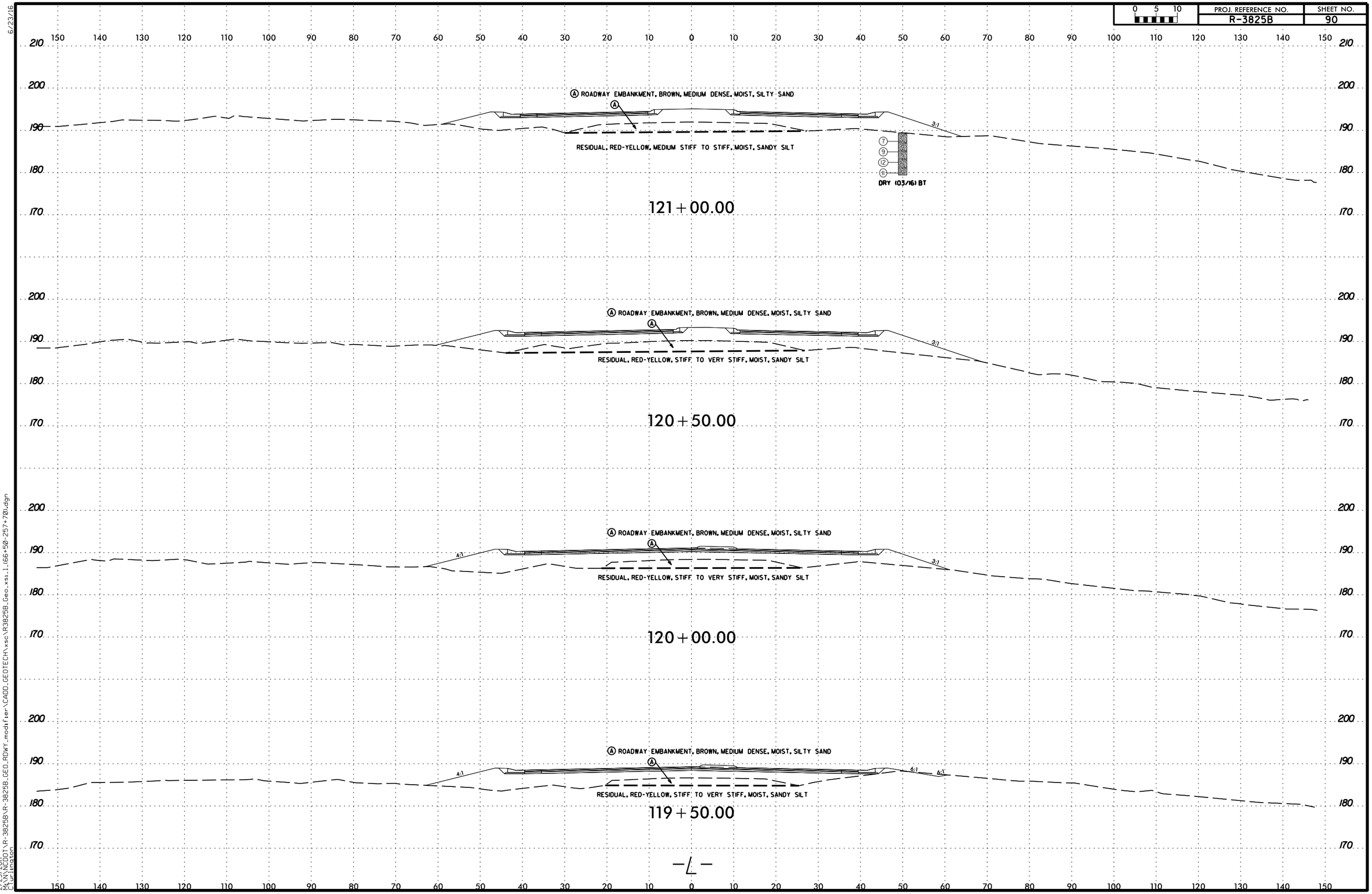

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
190
180
170
160
150
3:1
ARTIFICIAL FILL, BROWN, SOFT, MOIST, SANDY SILT
ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
RESIDUAL, RED, STIFF TO HARD, MOIST, SANDY SILT
WEATHERED ROCK (SCHIST)
(5)
(10)
(100/1.0)
(100/1.0)
03/16
BT
(11)
(9)
(18)
(20)
(45)
(28)
DRY (03/16) BT
6:1
4:1
2:1
117 + 50.00
Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
2.86:1
RESIDUAL, RED, SOFT TO STIFF, MOIST, SANDY SILT
117 + 00.00
116 + 50.00

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	89



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	90



—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	91

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210
200
190
180
170

2:1 2.68:1 4:1 6:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

122 + 50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

122 + 00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

121 + 50.00

— L —

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	92

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

124+50.00

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

124+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

123+50.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

DRY (03/16) BT

123+00.00

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Clurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	93

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190 180

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

126+00.00

220 210 200 190 180

2:1 4:1 6:1 6:1 4:1 2:1

9 16 15 6 8 8 19

RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

DRY (03/16) BT

WHITE, MEDIUM DENSE, MOIST, GRAVELLY SAND

19 9 7 8 9

DRY (03/16) BT

125+50.00

220 210 200 190

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

125+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	94

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210
200
190
180

6:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

127+50.00

220
210
200
190
180

2:1
4:1
6:1

RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

6:1

127+00.00

230
220
210
200
190
180

16
2:1
9
7
7
8
8
10

4:1
6:1

RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

6:1
4.34:1

DRY (03/16) BT

126+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	95

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210
200
190
180
170

3:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

129+00.00

210
200
190
180
170
160

3:1 3:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

7
8
7
9
18
12
15

03/16

BT

128+50.00

210
200
190
180
170

3:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

128+00.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
CJupLington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	96

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210
200
190
180

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

130+50.00

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

130+00.00

6:1 4:1

13
5
8
9
8

DRY (03/16) BT

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

129+50.00

6:1 6:1

-L-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	97

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190 180 170

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

132+00.00

220 210 200 190 180 170

2:1 4:1 6:1 6:1 4:1 2:1

8 8 10 9 9 8 7

DRY (03/16) BT

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

7 14 12 11 9

DRY (03/16) BT

131+50.00

220 210 200 190 180 170

RESIDUAL, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

131+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1_(66+50-257+70).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	98

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210 200 190 180 170

33 71 66 100/1.0 100/1.0 100/0.7

2:1 4:1 6:1 6:1 3:1

DRY (03/16) BT

RESIDUAL, TAN-YELLOW, HARD, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

133+50.00

220 210 200 190 180 170

2:1 4:1 6:1 6:1 6:1

RESIDUAL, TAN-YELLOW, HARD, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

133+00.00

220 210 200 190 180

2:1 4:1 6:1 6:1 4.12:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

132+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_(66+50-257+70).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	99

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

200 190 180 170 160 150

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, BROWN, SOFT TO HARD, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

135+00.00

200 190 180 170 160

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 4:1 6:1 3:1

RESIDUAL, BROWN, SOFT TO HARD, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

134+50.00

210 200 190 180 170 160

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 4:1 6:1 3:1

RESIDUAL, TAN-YELLOW, HARD, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

134+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1.1(66+50-257+70).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	100

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

200 190 180 170 160 150 140

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, GRAY, VERY LOOSE, MOIST, CLAYEY SAND

RESIDUAL, BROWN, SOFT TO HARD, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

136+00.00

135+55

16 38 77 32 16 100/0.9 100/0.3

03/16

DRY (03/16) BT

RESIDUAL, BROWN, SOFT TO HARD, MOIST, SANDY SILT

3 7 100/0.6 60/0.1

WEATHERED ROCK (SCHIST)

CRYSTALLINE ROCK (SCHIST)

DRY (03/16) SPT REF

ALLUVIAL, GRAY, VERY LOOSE, MOIST CLAYEY SAND

135+50.00

—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_1(66+50-257+70).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	101

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

200 190 180 170 160

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, YELLOW-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

3:1 3:1 3:1 6:1 6:1

137 + 50.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, GRAY, VERY LOOSE TO LOOSE, MOIST, CLAYEY SAND

RESIDUAL, BROWN, VERY STIFF, MOIST, SANDY SILT

3:1 3:1 3:1 3:1

10 51 62 27 35 03/16 BT

137 + 00.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, GRAY, VERY LOOSE TO LOOSE, MOIST, CLAYEY SAND

RESIDUAL, BROWN, VERY STIFF, MOIST, SANDY SILT

3:1 3:1 3:1 3:1

2 7 29 25 03/16 BT

136 + 50.00

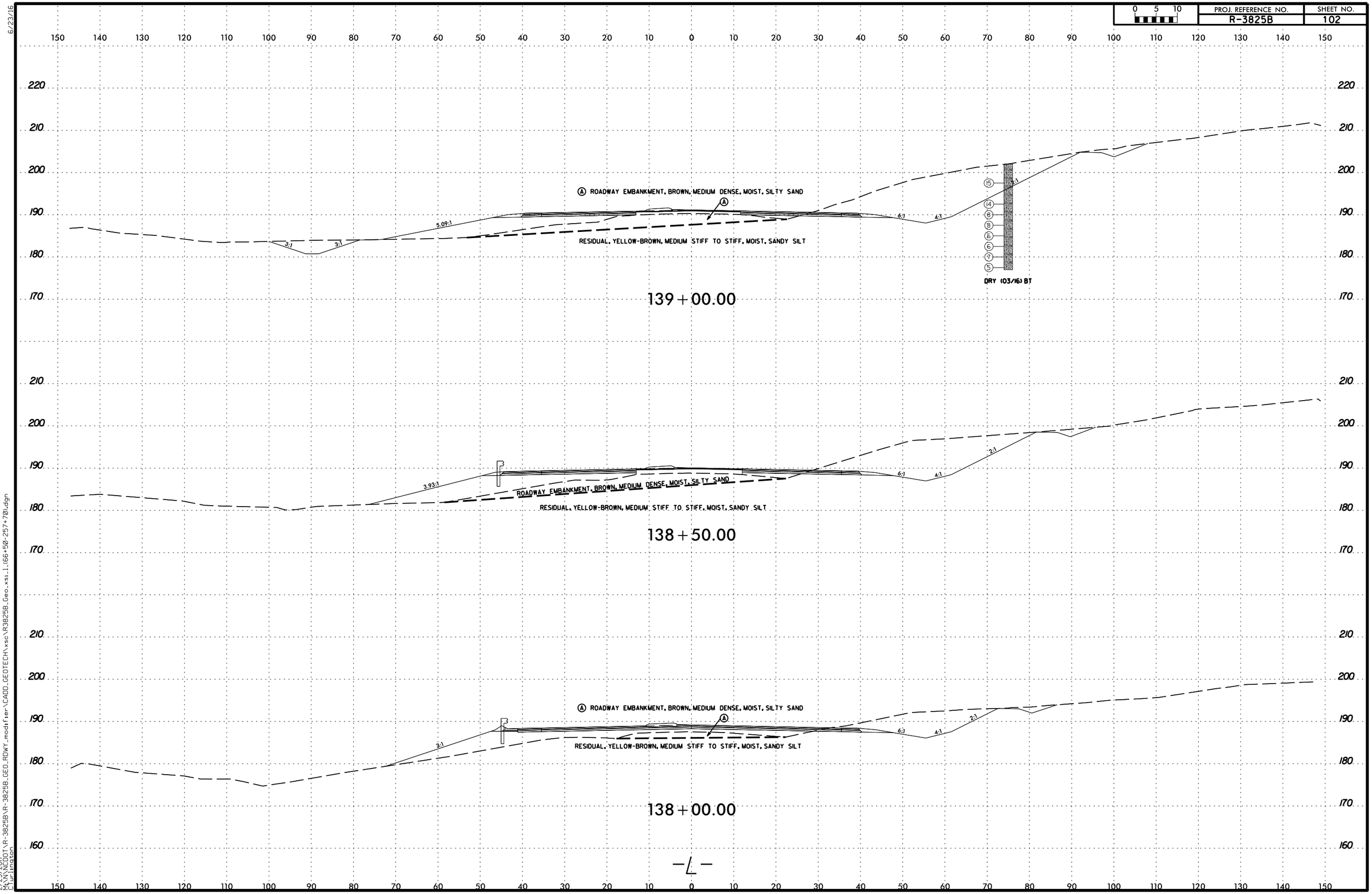
—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	102



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	103

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190 180 170

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, YELLOW-BROWN, SOFT TO STIFF, MOIST, SANDY SILT

6:1 3:1 2:1 4:1

(3) (5) (6) (13) DRY (03/16) BT

(13) (9) (10) (10) (10) (12) DRY (03/16) BT

140+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, YELLOW-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

140+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, YELLOW-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

139+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	104

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190

RESIDUAL, YELLOW-BROWN, SOFT TO STIFF, MOIST, SANDY SILT

142 + 00.00

RESIDUAL, YELLOW-BROWN, SOFT TO STIFF, MOIST, SANDY SILT

141 + 50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, YELLOW-BROWN, SOFT TO STIFF, MOIST, SANDY SILT

141 + 00.00

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	105

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

230
220
210
200
190

2:1 4:1 6:1 6:1 6:1 5:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

143 + 50.00

230
220
210
200
190

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

143 + 00.00

220
210
200
190
180

2:1 4:1 6:1 6:1 4:1 2:1

(11) (7) (8) (12) (11)

DRY (03/16) BT

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

142 + 50.00

— L —

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	106

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

230
220
210
200

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

145+00.00

230
220
210
200
190

4.42:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

144+50.00

6 (3)
14
10
10
7

DRY (03/16) BT

230
220
210
200

4.09:1 6:1 6:1 4.85:1

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

144+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	107

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

147+00.00

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

146+50.00

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

DRY (03/16) BT

DRY (03/16) BT

146+00.00

RESIDUAL, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

145+50.00

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	108

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

240
230
220
210

3:1 3:1 2:1 4:1 6:1 6:1 6:1

RESIDUAL, RED, STIFF, MOIST, SANDY SILT

148+50.00

240
230
220
210

3:1 3:1 2:1 4:1 6:1 6:1 4.73:1

(11) (12) (9) (12) (14)

DRY (03/16) BT

RESIDUAL, RED, STIFF, MOIST, SANDY SILT

148+00.00

240
230
220
210
200
190

3:1 3:1 2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

147+50.00

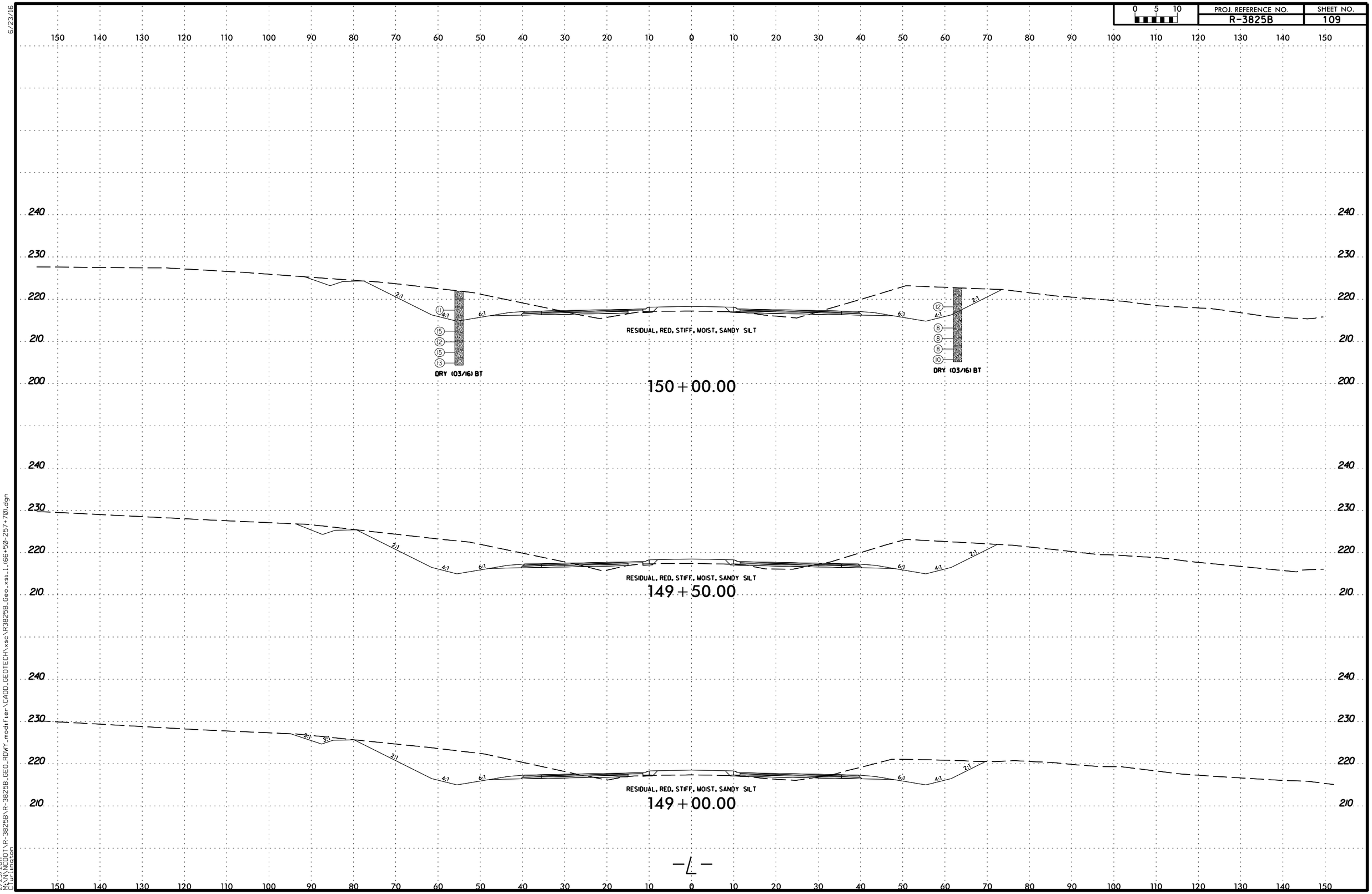
240
230
220
210
200

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

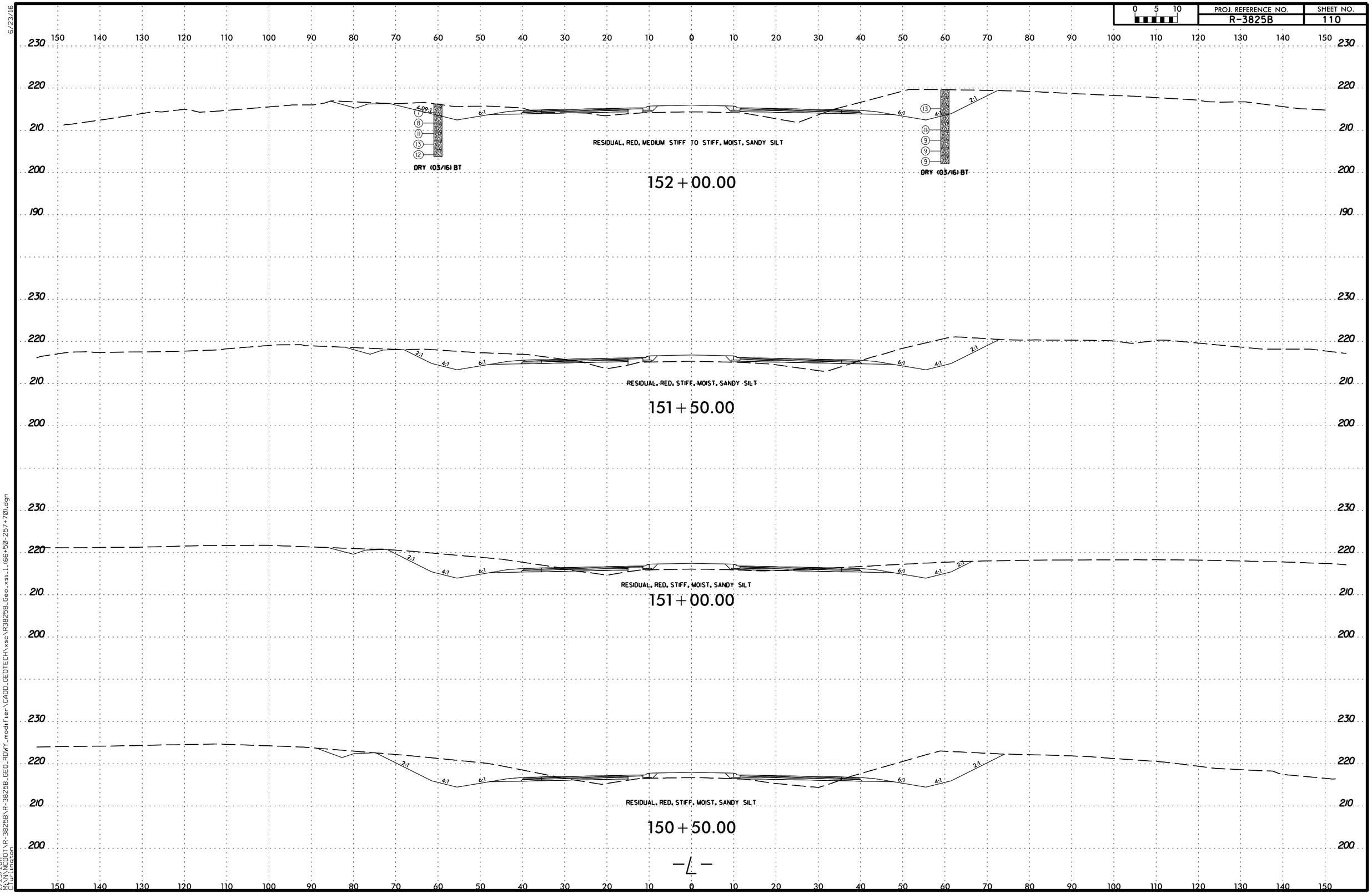
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	109



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	110



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	111

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

8:1 6:1 5:1 3:1

154+00.00

220 210 200 190

3:1 6:1 6:1 4:1

(12) (8) (9) (9) (9)

DRY (03/16) BT

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

153+50.00

220 210 200 190

4.81:1 6:1 6:1 4:1 2:1

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

153+00.00

220 210 200

4.42:1 6:1 6:1 4:1 2:1

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

152+50.00

220 210 200

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	112

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210
200
190
180
170

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

155 + 50.00

220
210
200
190
180

3:1 3:1

ARTIFICIAL FILL

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

155 + 00.00

220
210
200
190

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 3:1

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

154 + 50.00

— L —

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	113

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210 200 190 180 170 160 150 140 130 120

3:1

3:1

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

156+15

ALLUVIAL, BROWN, SOFT TO MEDIUM STIFF, SANDY SILT

3
6
11
15
19
27
100/0.7
100/0.6
BT

03/16

RESIDUAL, BROWN, VERY STIFF, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

CRYSTALLINE ROCK (SCHIST)

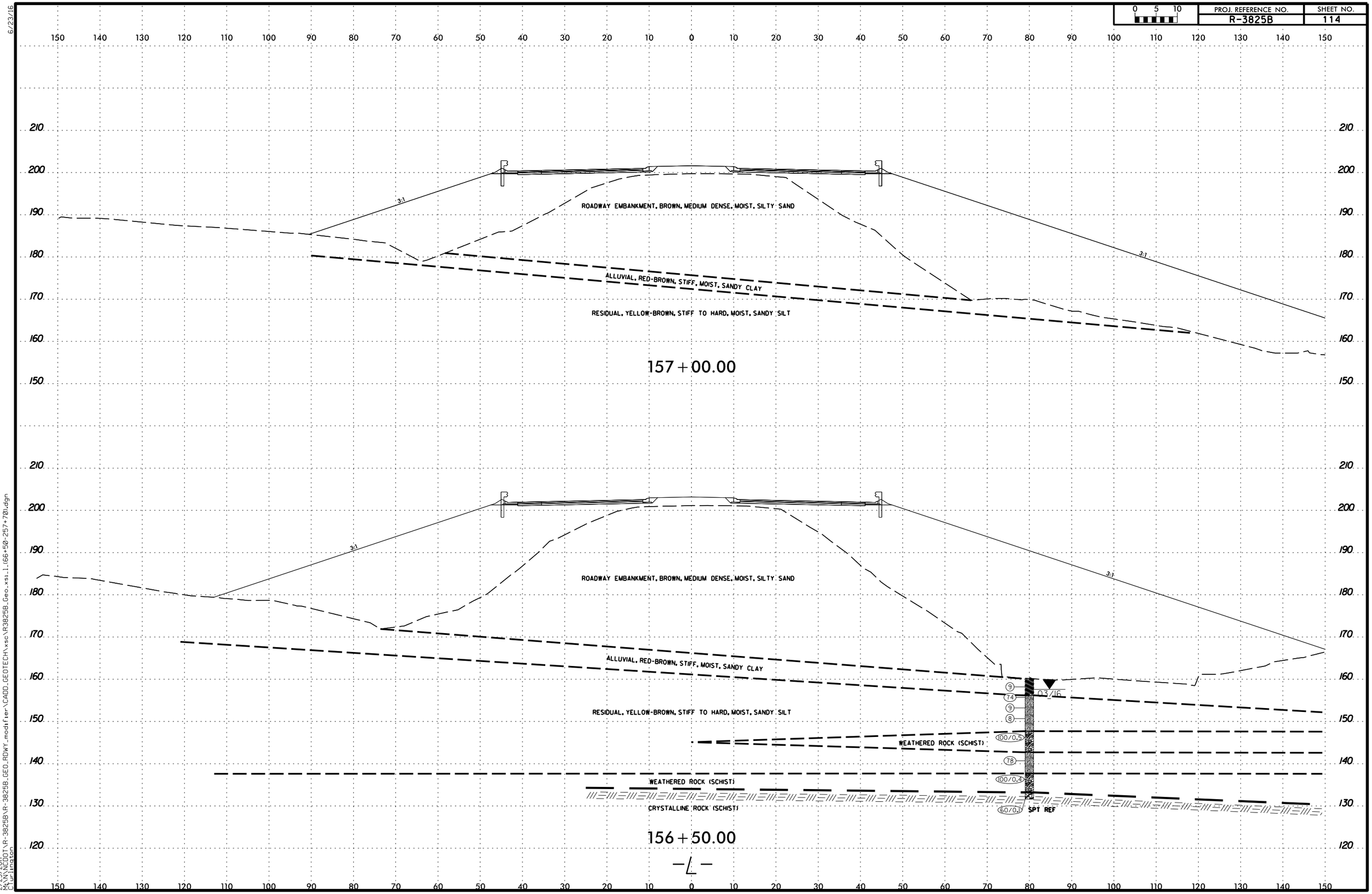
156+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

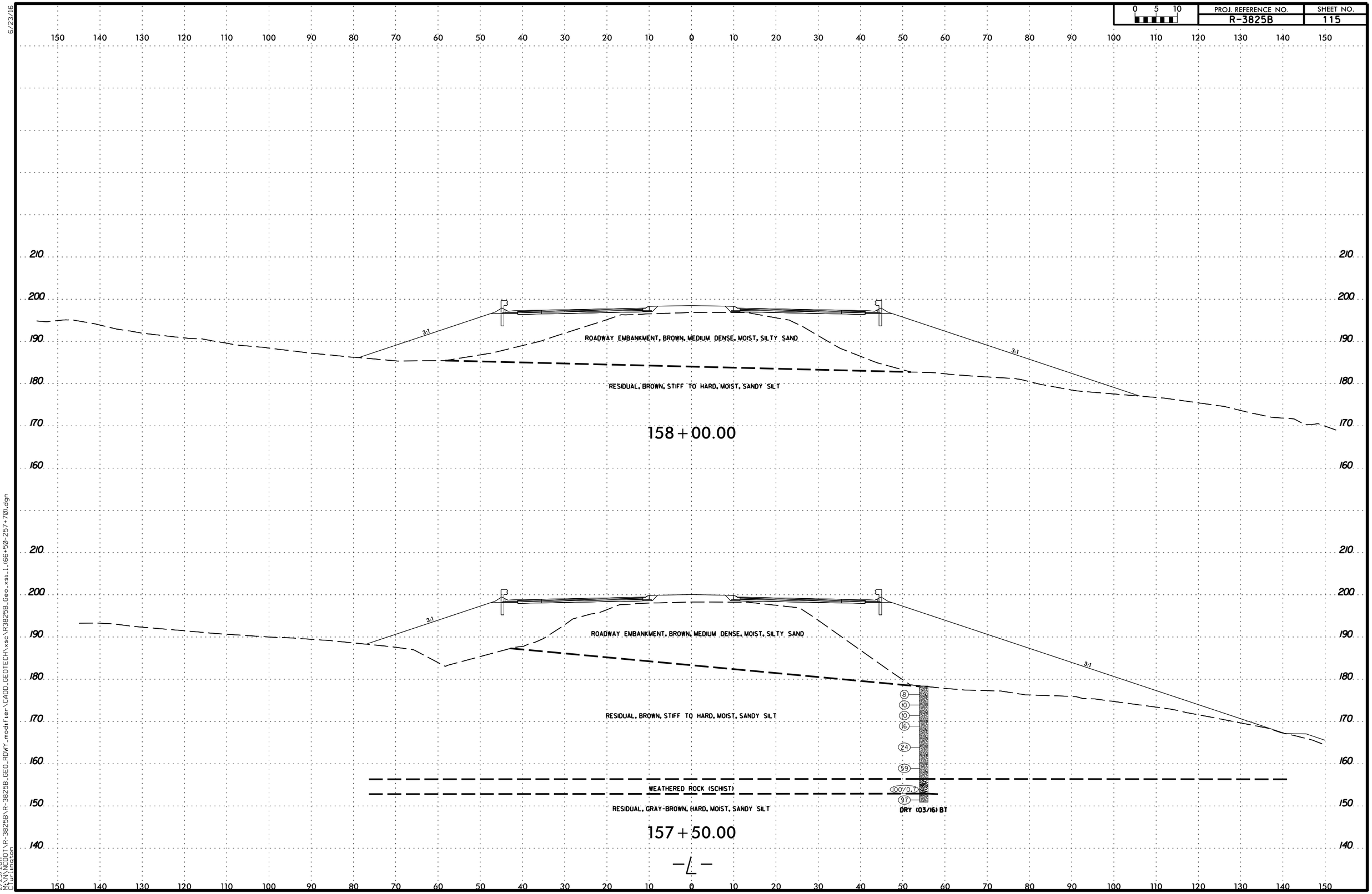
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	114



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	115



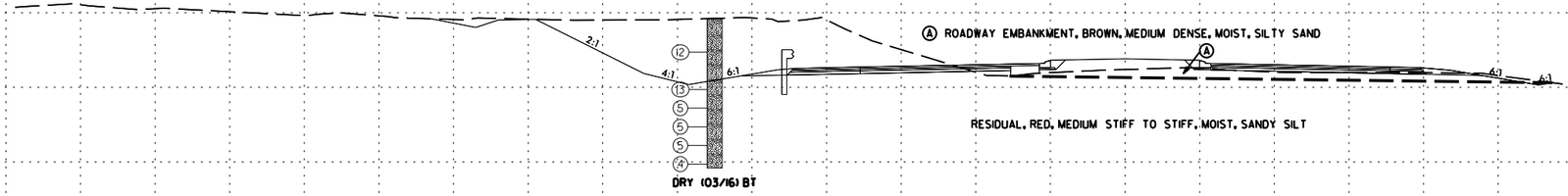
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

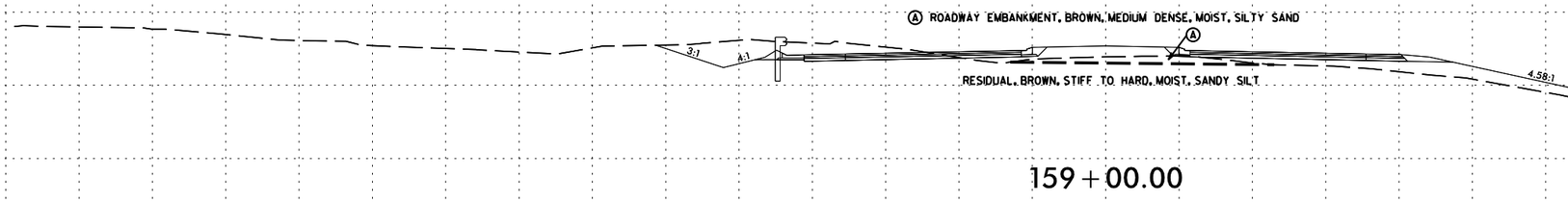
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	116

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

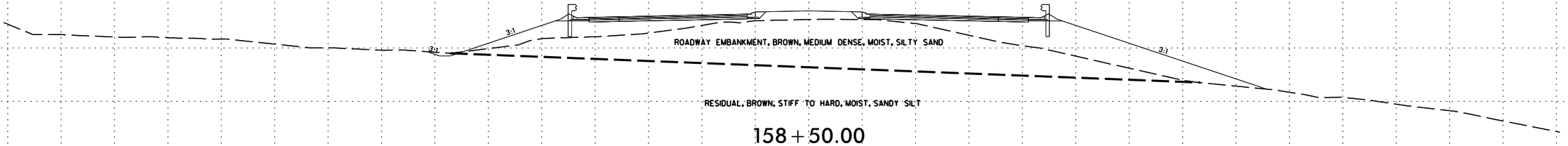
220 210 200 190 180 170



159+50.00



159+00.00



158+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	117

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210
200
190
180

2:1
4:1
6:1
6:1
4:1
2:1

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

161+00.00

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

160+50.00

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

160+00.00

-L-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

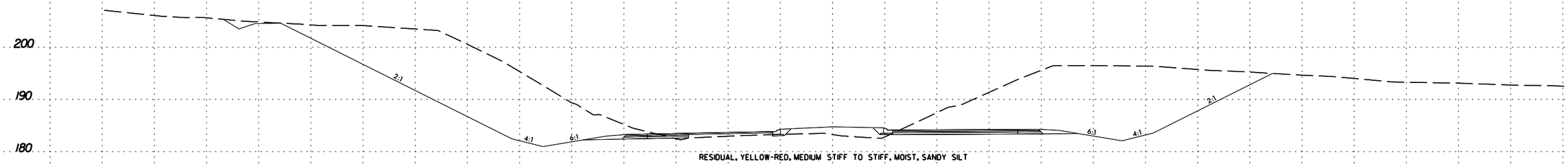
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	118

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

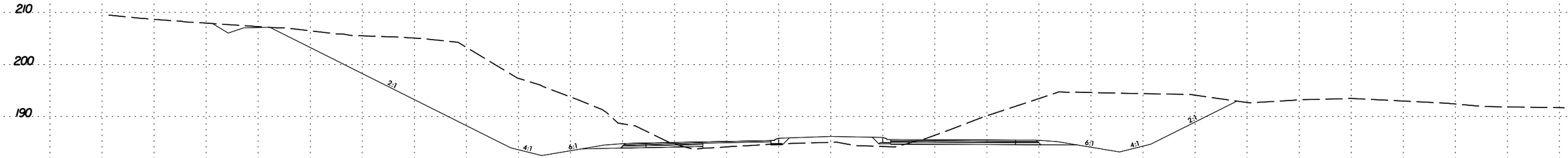
210 200 190 180 170



RESIDUAL, YELLOW-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

162 + 50.00

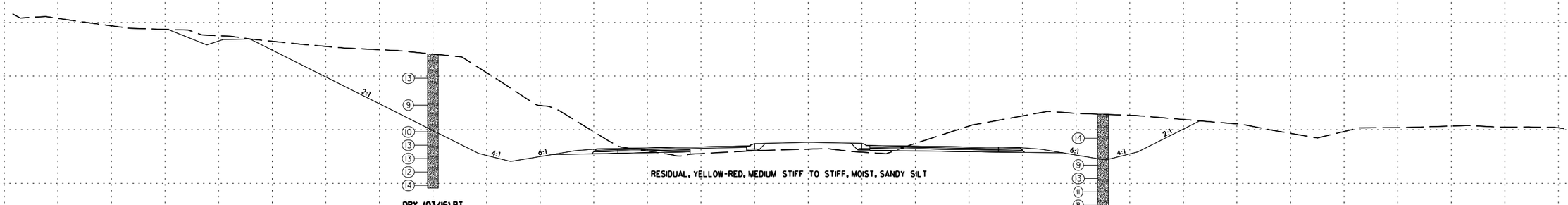
210 200 190 180 170



RESIDUAL, YELLOW-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

162 + 00.00

220 210 200 190 180 170 160



DRY (03/16) BT

RESIDUAL, YELLOW-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

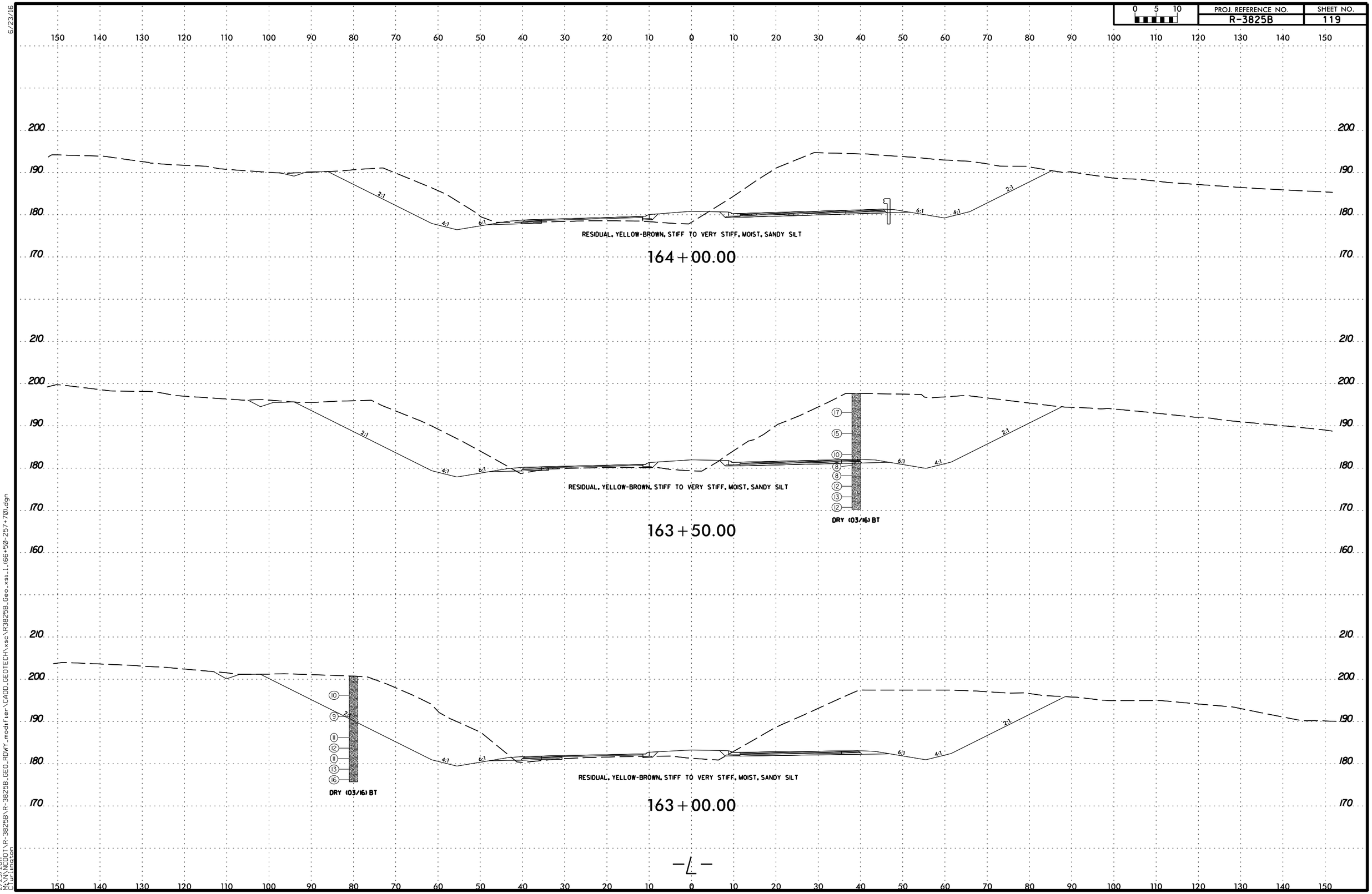
DRY (03/16) BT

161 + 50.00

$-\mathit{L}-$

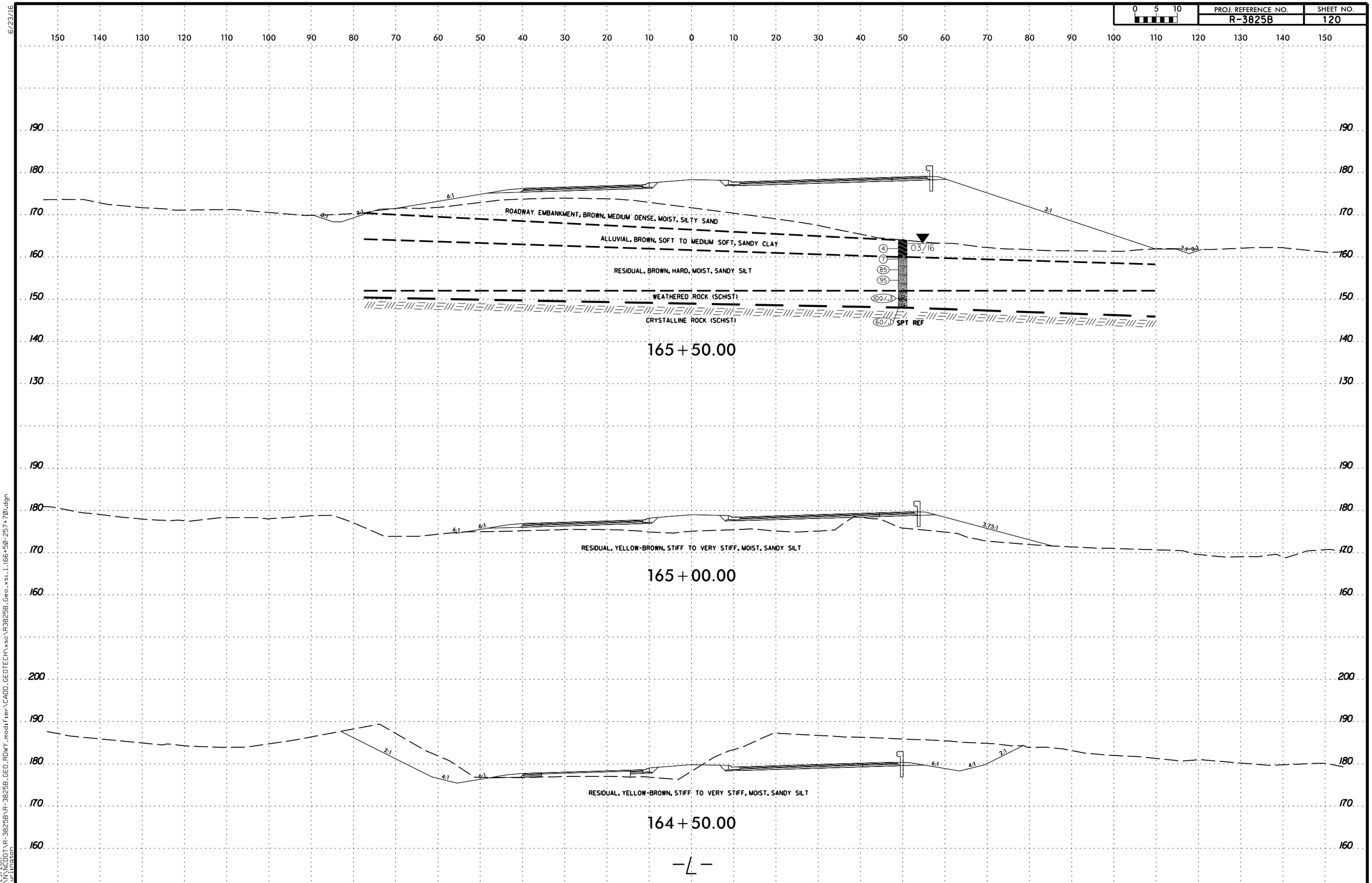
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1.1(66+50-257+70).dgn
CTurlington



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	120



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_(66+50-257+70).dgn
Clarington

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

190 180 170 160 150 140

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, RED-BROWN, SOFT, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

CRYSTALLINE ROCK (SCHIST)

3:1

3

3

(100/.1)

(60/0.1)

DRY (03/16)
SPT REF

166 + 50.00

190 180 170 160 150 140

3.5:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, SOFT TO MEDIUM SOFT, SANDY CLAY

RESIDUAL, BROWN, HARD, MOIST, SANDY SILT

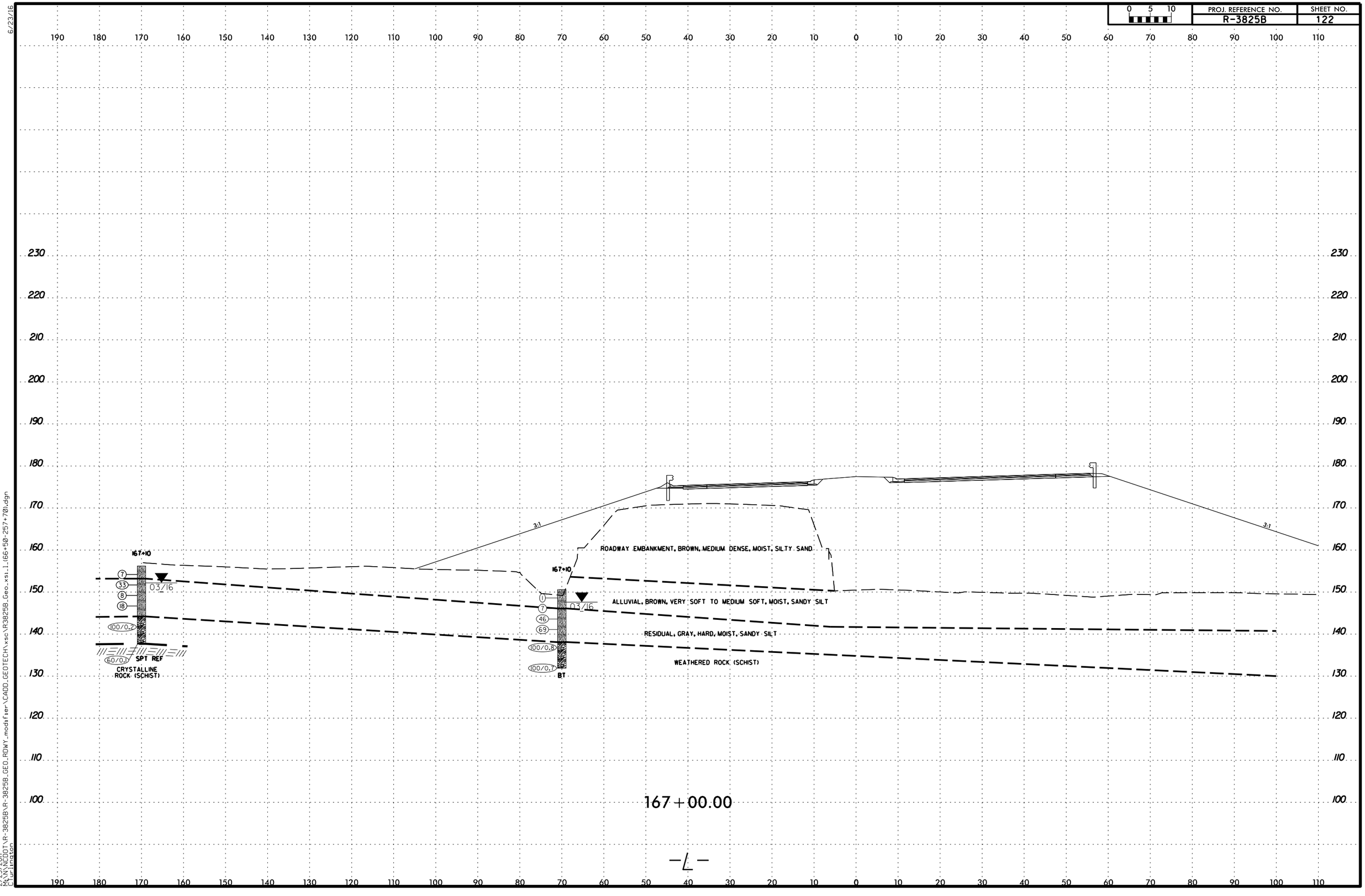
WEATHERED ROCK (SCHIST)

166 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	122



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	123

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

190
180
170
160
150
140

(W) ARTIFICIAL FILL, BROWN, LOOSE, MOIST, SILTY SAND AND STIFF, MOIST, CLAYEY SILT

3:1 3:1 3:1 4:1 4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, VERY SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

RESIDUAL, GRAY, HARD, MOIST, SANDY SILT

168+00.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, VERY SOFT TO MEDIUM SOFT, MOIST, SANDY SILT

RESIDUAL, GRAY, HARD, MOIST, SANDY SILT

167+50.00

—L—

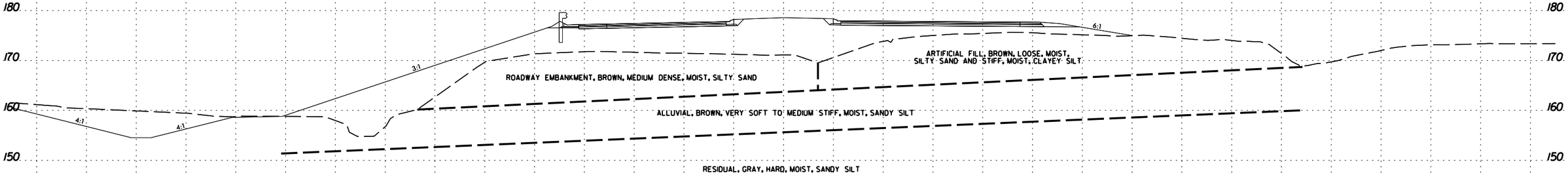
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Clurlington

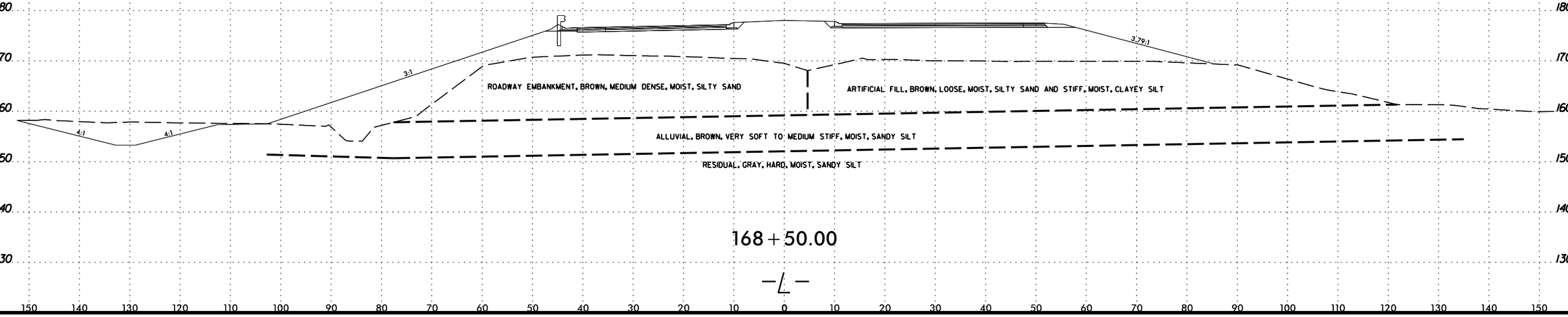
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	124

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

190 180 170 160 150 140

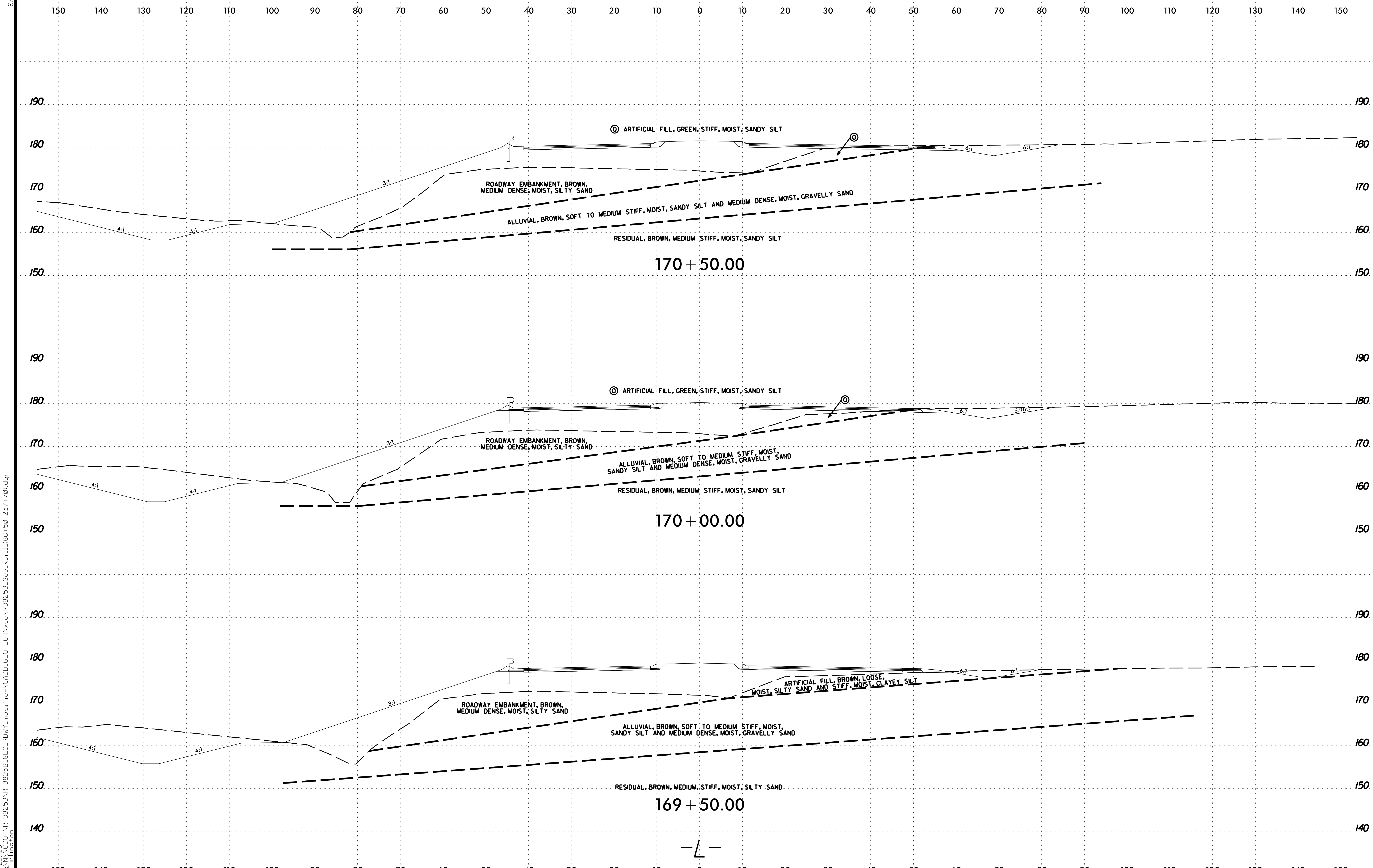


169 + 00.00



168 + 50.00

PROJ. REFERENCE NO. R-3825B | SHEET NO. 125

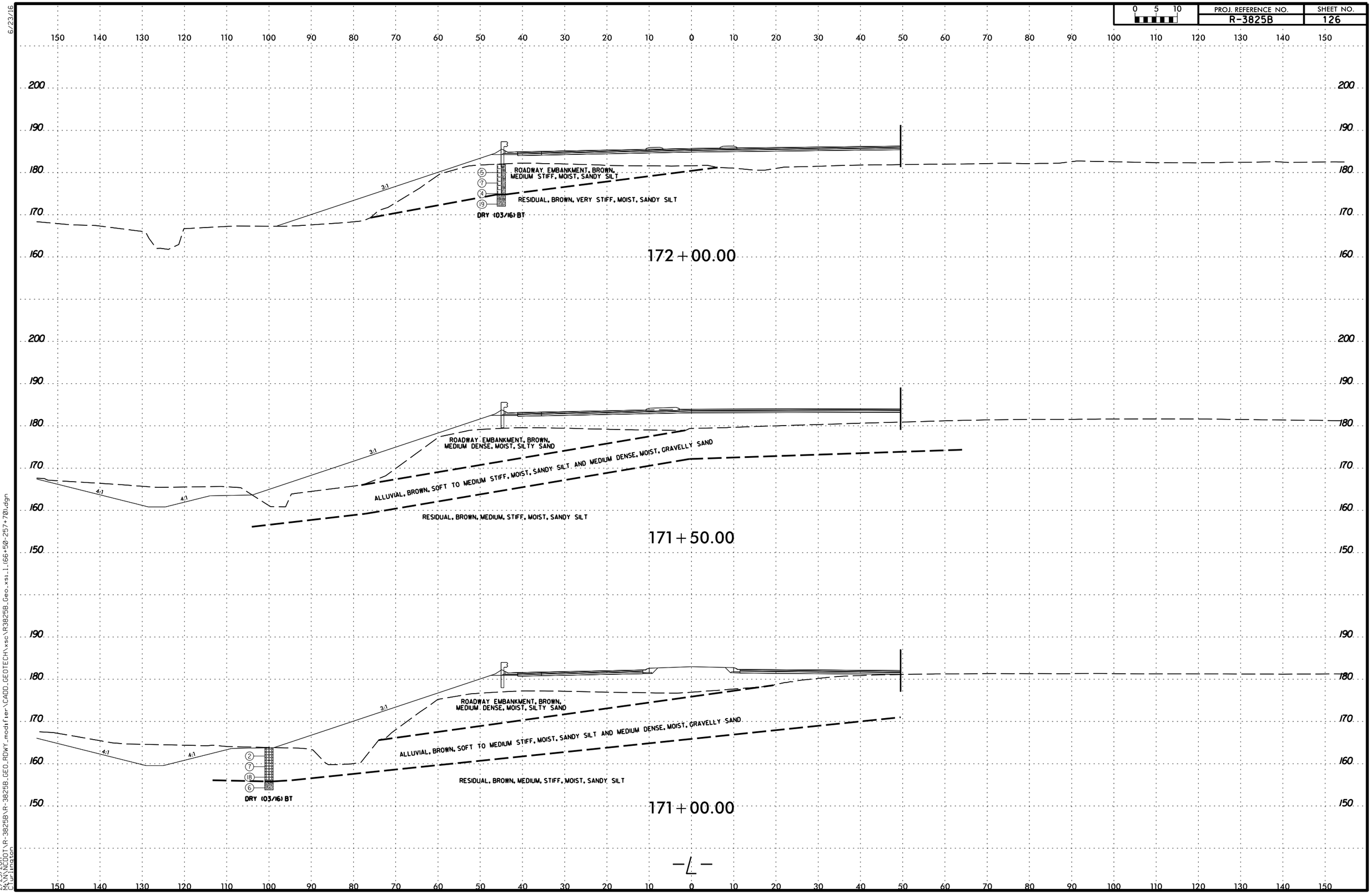


6/23/16

2/23/2017
M:\NNCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1_(66+50-257+70).dgn
Clurlington

6/23/16

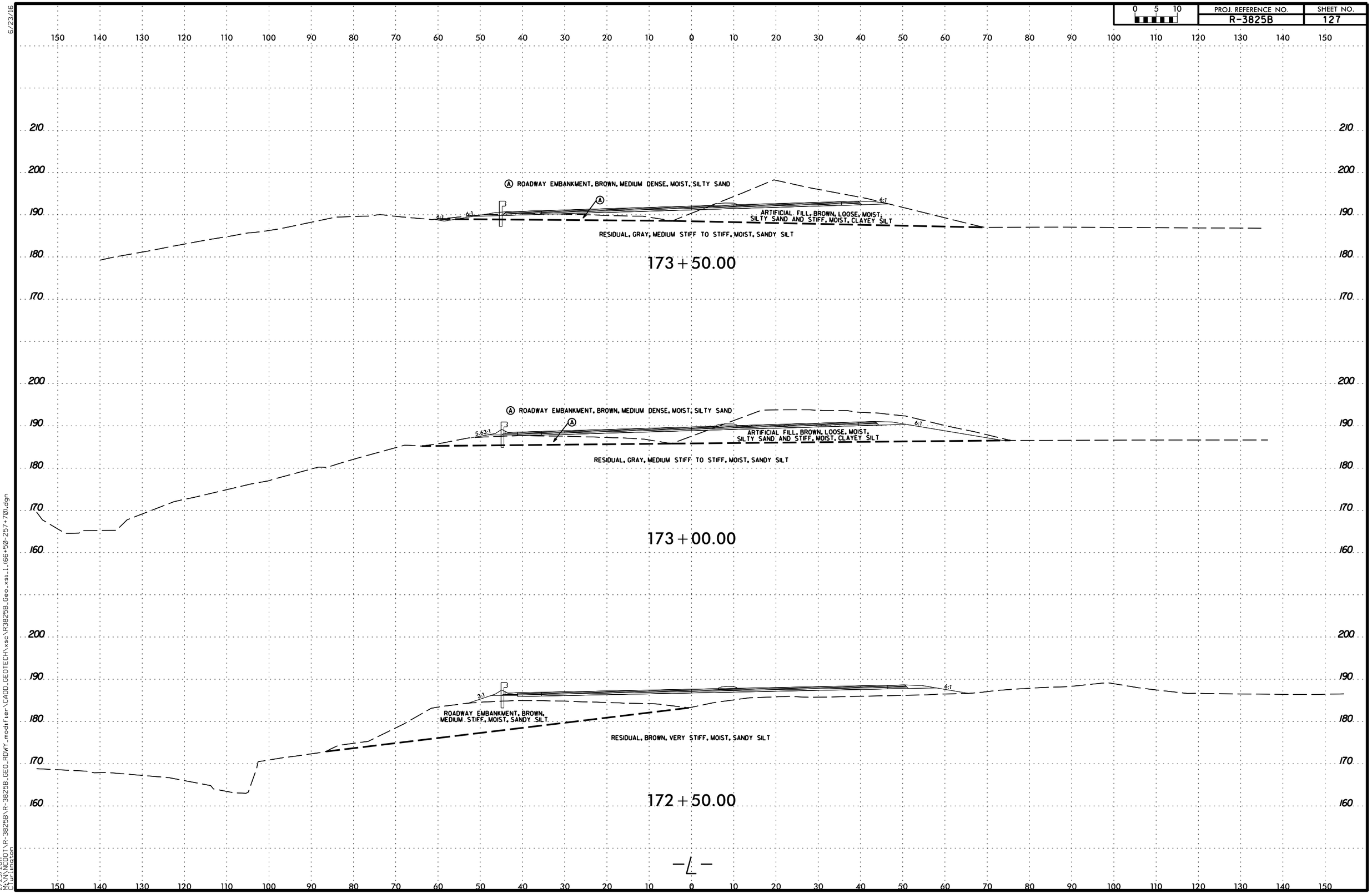
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	126



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1.1(66+50-257+70).dgn
Clarington

6/23/16

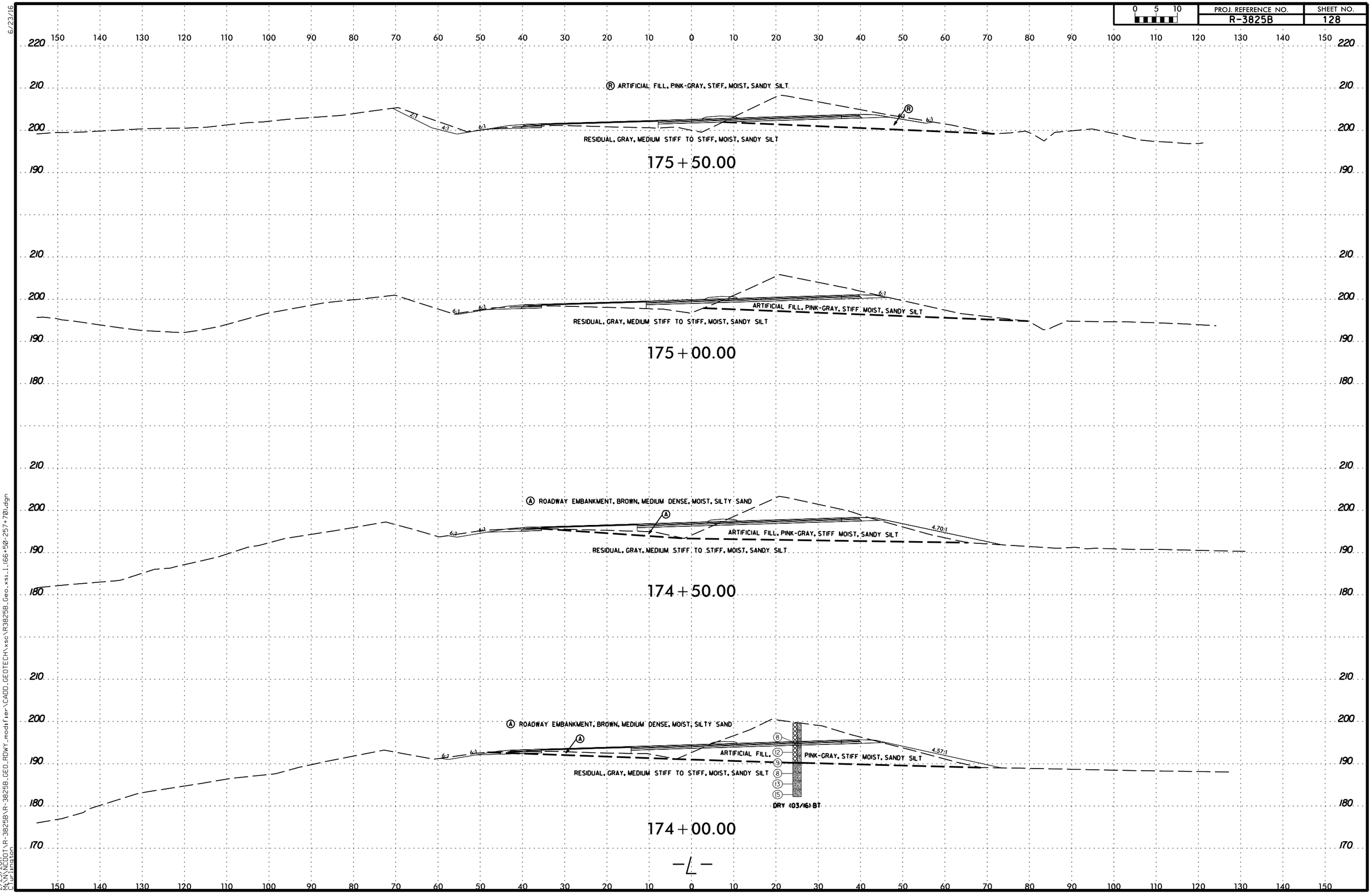
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	127



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_1(66+50-257+70).dgn
CTuplington

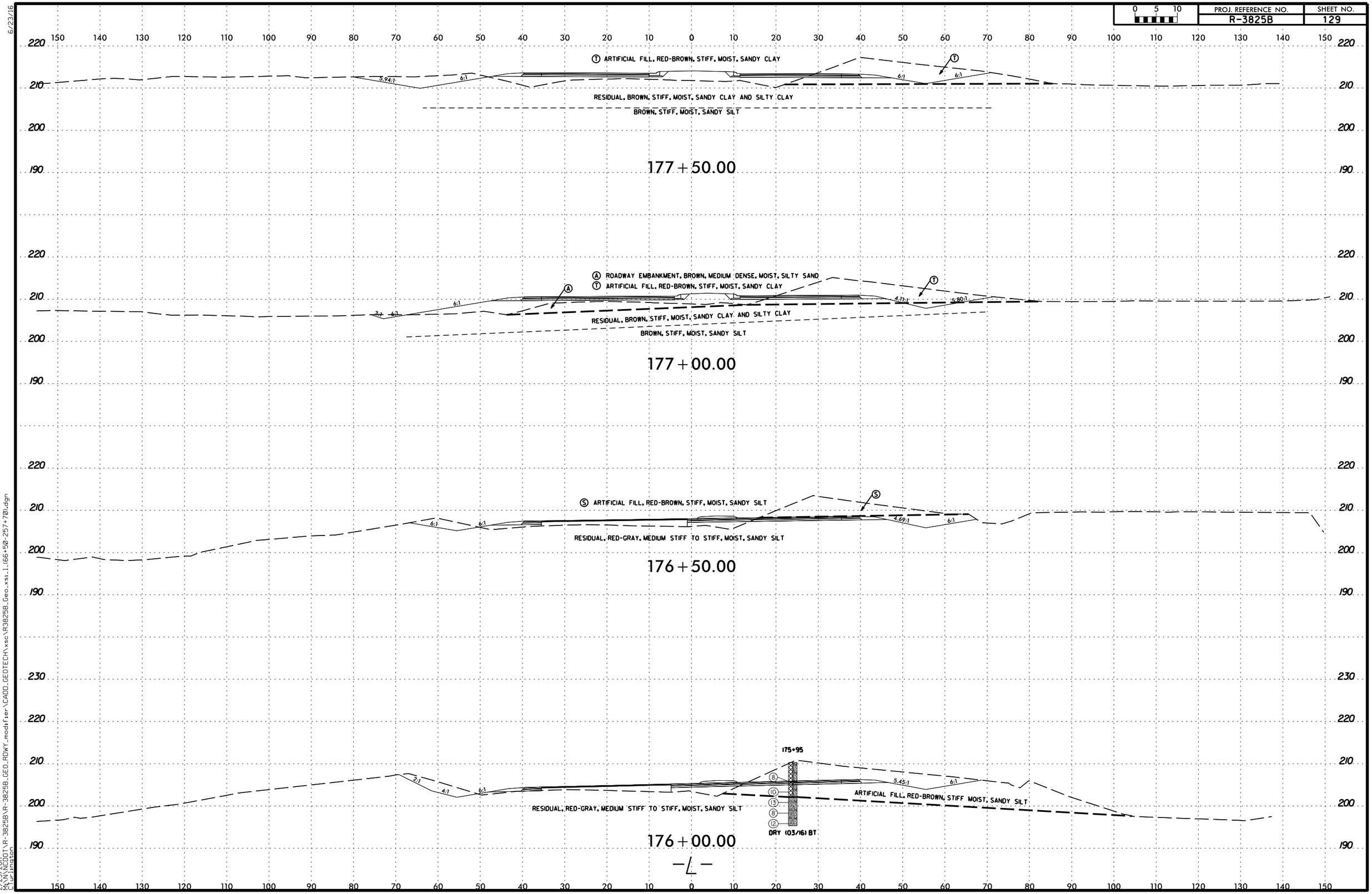
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	128



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	129



6/23/16

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	130

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

240 230 220 210 200

Ⓣ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY CLAY

6:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, STIFF, MOIST, SANDY CLAY AND SILTY CLAY

BROWN, STIFF, MOIST, SANDY SILT

179+00.00

230 220 210 200

Ⓣ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY CLAY

6:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, STIFF, MOIST, SANDY CLAY AND SILTY CLAY

BROWN, STIFF, MOIST, SANDY SILT

178+50.00

190 250 240 230 220 210 200 190

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-27	52' RT	178+00	6.0-7.5	A-6(14)	35	12	6	30	32	32	93	89	72	18.8	-
SS-28	52' RT	178+00	8.5-10.0	A-7-6(19)	46	21	6	24	30	40	97	93	78	24.9	-
SS-29	52' RT	178+00	11.0-12.5	A-7-6(18)	43	18	5	25	31	39	92	89	75	23.7	-

SS-27
SS-28
SS-29

Ⓣ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY CLAY

6:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, STIFF, MOIST, SANDY CLAY AND SILTY CLAY

BROWN, STIFF, MOIST, SANDY SILT

(9) (9) (8) (12) (10)

DRY (03/16) BT

178+00.00

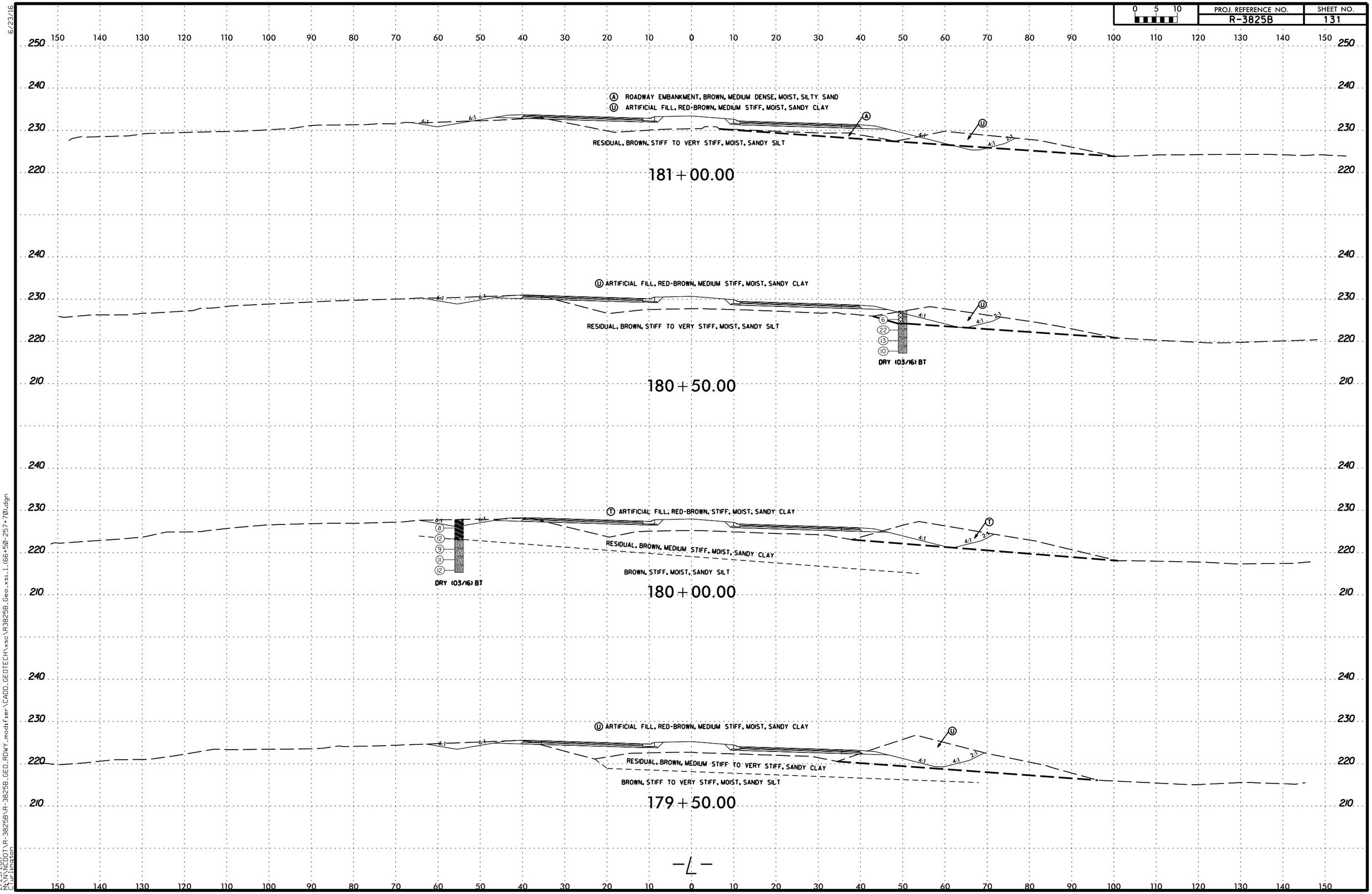
—℄—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1.1(66+50-257+70).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	131



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	132

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

250
240
230
220

6:1 6:1 6:1

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

182 + 50.00

250
240
230
220

6:1 6:1 6:1

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

182 + 00.00

250
240
230
220
210

Ⓢ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY SILT

6:1 6:1 6:1 6:1

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

9
13
21
15
14

DRY (03/16) BT

181 + 50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	133

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

270
260
250
240
230

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 6:1 6:1 4:1 2:1

ARTIFICIAL FILL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

RESIDUAL, RED, STIFF, MOIST, SANDY SILT

184+00.00

260
250
240
230
220

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 6:1 6:1 4:1 2:1

ARTIFICIAL FILL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

9 9 9 10

DRY (03/16) BT

RESIDUAL, RED, STIFF, MOIST, SANDY SILT

183+50.00

260
250
240
230

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓥ ARTIFICIAL FILL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

6:1 6:1 6:1

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

183+00.00

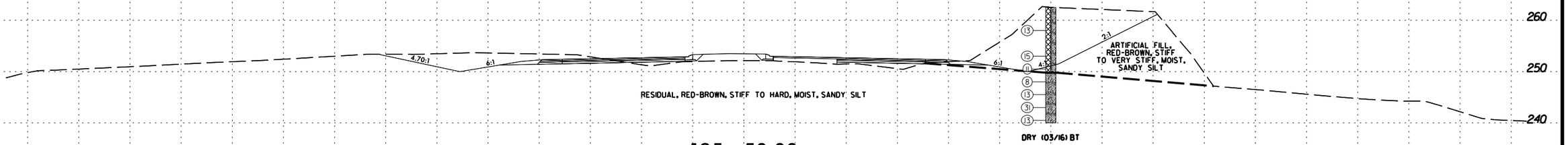
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

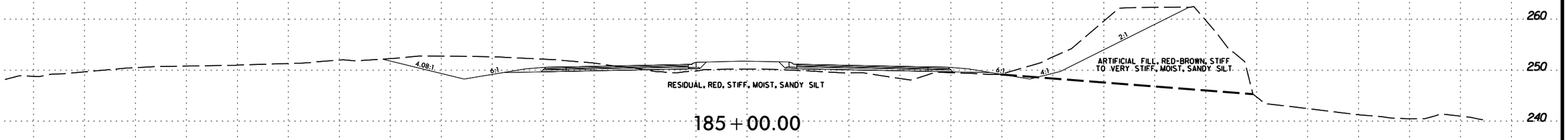
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	134

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

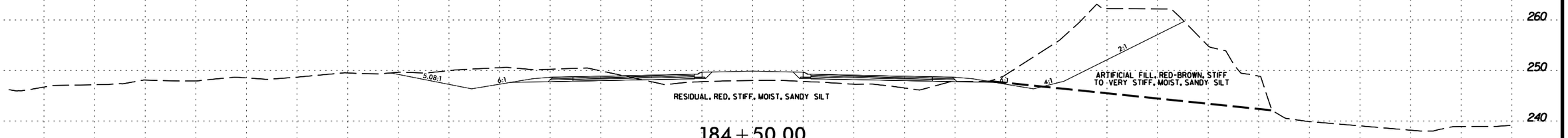
270 260 250 240 230



185+50.00



185+00.00



184+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	135

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

270 260 250 240

6:1 6:1 6:1 6:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

(7) (9) (11) (11) (12)

DRY (03/16) BT

187 + 50.00

270 260 250 240

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

Ⓐ

6:1 6:1 6:1 6:1

RESIDUAL, RED-BROWN, STIFF TO HARD, MOIST, SANDY SILT

187 + 00.00

260 250 240

6:1 6:1 6:1 6:1

RESIDUAL, RED-BROWN, STIFF TO HARD, MOIST, SANDY SILT

186 + 50.00

270 260 250 240

Ⓥ ARTIFICIAL FILL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

6:1 6:1 6:1 4:1 2:1

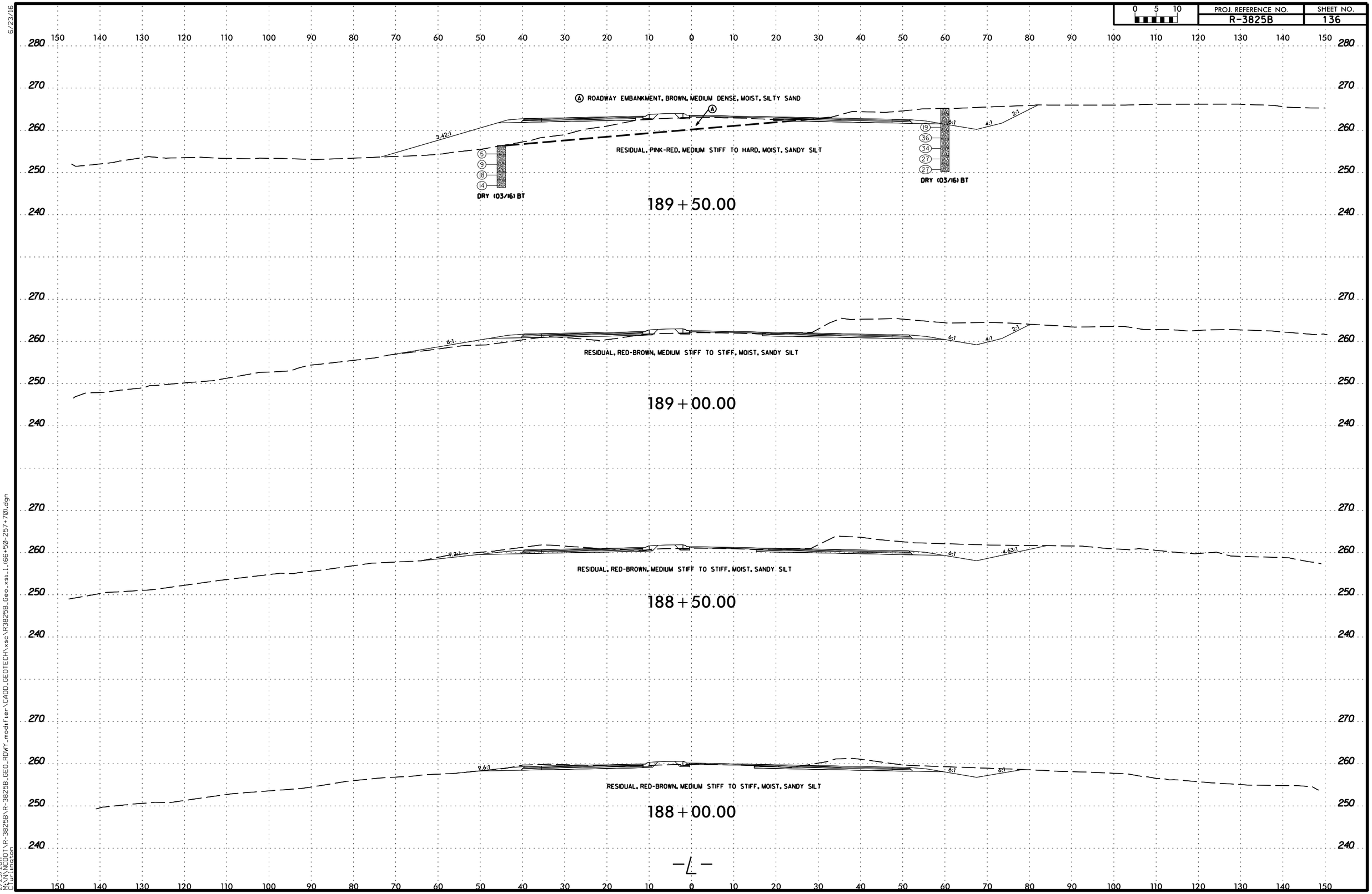
Ⓥ

RESIDUAL, RED-BROWN, STIFF TO HARD, MOIST, SANDY SILT

186 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

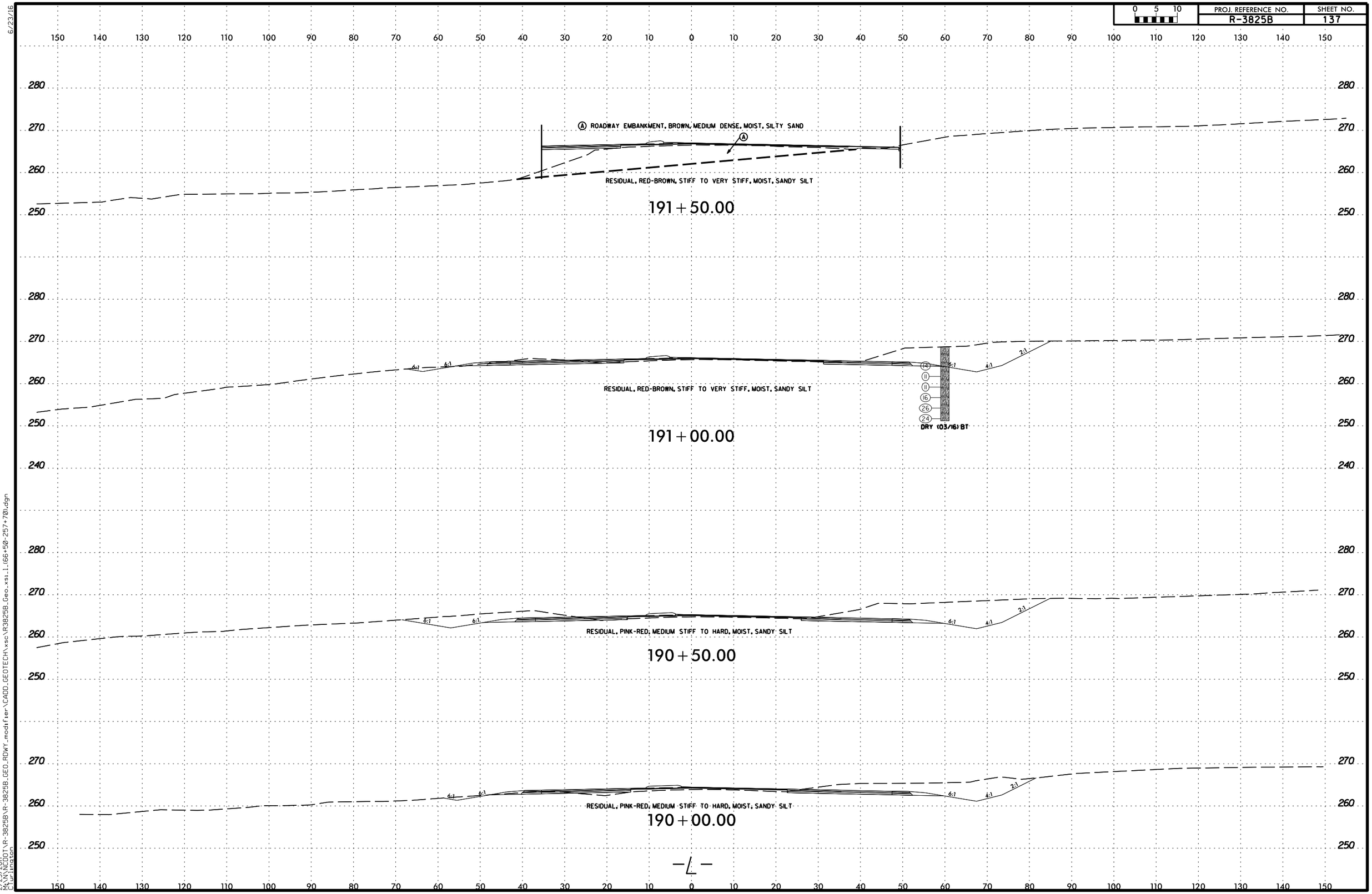
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_L(66+50-257+70).dgn
Clarington



6/23/16

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	137



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	138

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

280
270
260
250

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

193 + 00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

192 + 50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

192 + 00.00

-L-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	139

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

280 270 260

6:1 6:1 6:1 4.02:1 3:1 3:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

195+00.00

280 270 260

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 6:1 4.82:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

194+50.00

280 270 260 250

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 4:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

194+00.00

290 280 270 260 250 240

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

6:1 2:1

RESIDUAL, RED-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

(5) (8) (7) (10) DRY (03/16) BT

(43) (13) (14) (19) (21) DRY (03/16) BT

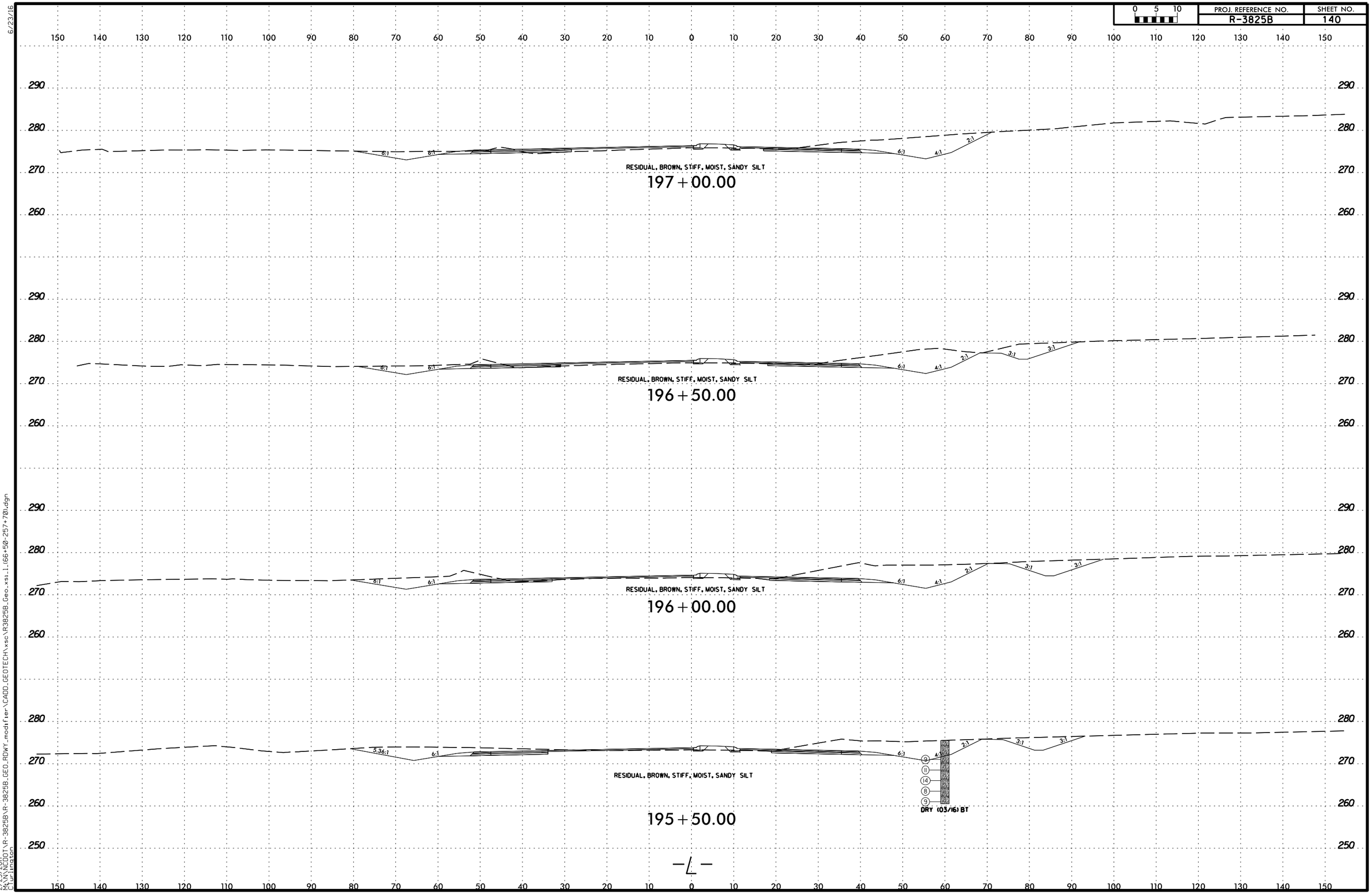
193+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD\GEOTECH\xsc\R3825B_Geo_xs1_1(66+50-257+70).dgn
CTurlington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	140



6/23/16

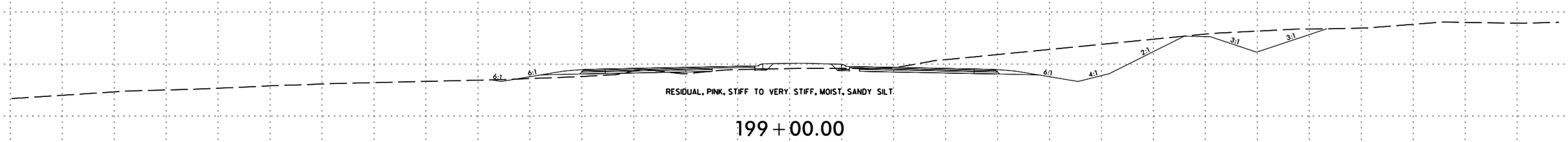
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	141

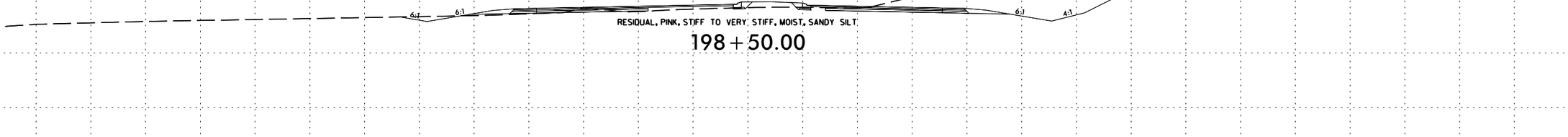
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

290 280 270 260



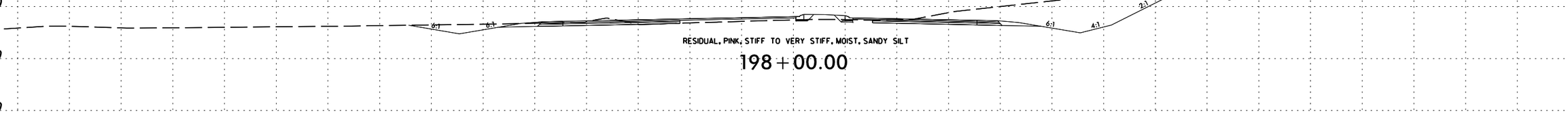
RESIDUAL, PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

199+00.00



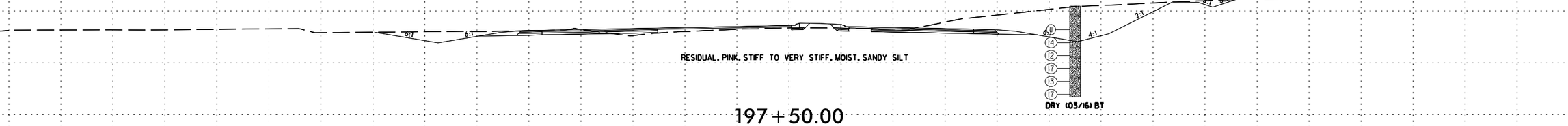
RESIDUAL, PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

198+50.00



RESIDUAL, PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

198+00.00



RESIDUAL, PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

DRY (03/16) BT

197+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	142

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

290 280 270 260 250

2:1 6:1 4.43:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, BROWN-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

200+50.00

300 290 280 270 260

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM STIFF, MOIST, SANDY SILT

Ⓦ ARTIFICIAL FILL, BROWN, LOOSE, MOIST, SILTY SAND AND STIFF, MOIST CLAYEY SILT

5.49:1 6:1 4:1 2:1 3:1 3:1

RESIDUAL, BROWN-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

200+00.00

290 280 270 260

6:1 4:1 2:1 3:1 3:1

6.0F (10) (12) (16) (15) (11)

RESIDUAL, BROWN-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

DRY (03/16) BT

199+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	143

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300 290 280 270 260 250 240 230 220

W ARTIFICIAL FILL, BROWN, LOOSE, MOIST, SILTY SAND AND STIFF, MOIST, CLAYEY SILT

2:1

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

W

(4) (15) (4) (7) (12) (14) (34)

03/16

BT

ALLUVIAL, BROWN, VERY SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

RESIDUAL, BROWN, SOFT TO HARD, MOIST, SANDY SILT

201+50.00

2:1

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

RESIDUAL, BROWN-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

ALLUVIAL, BROWN, VERY SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

201+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

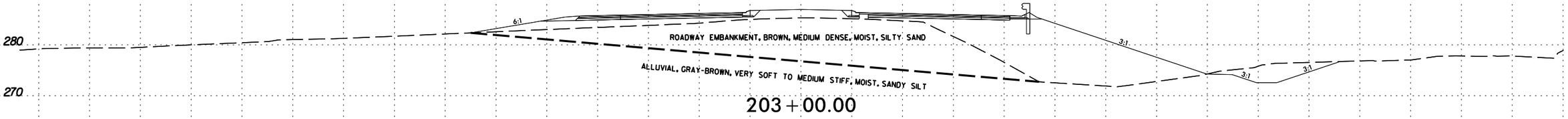
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

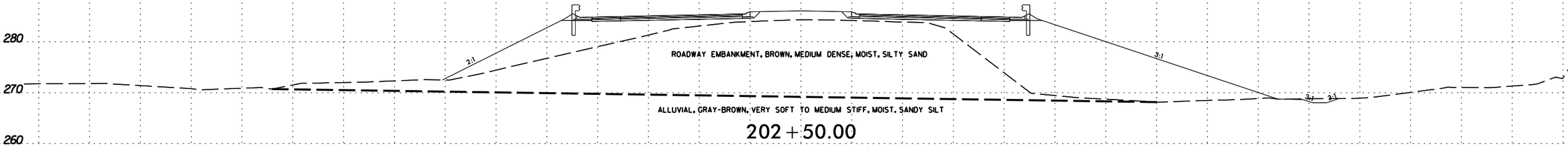
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	144

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

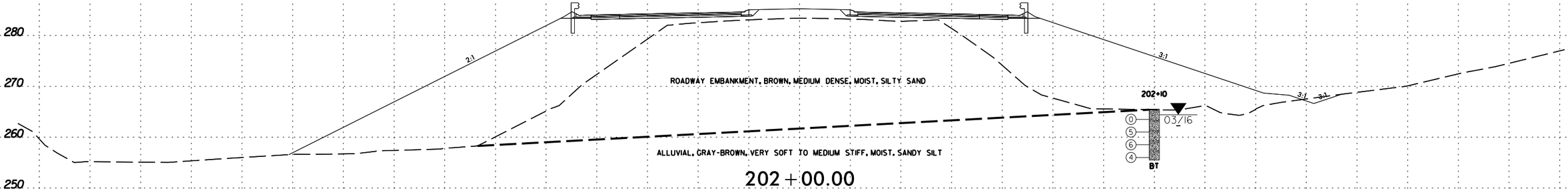
300 290 280 270 260



203+00.00



202+50.00



202+00.00

—L—

250

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

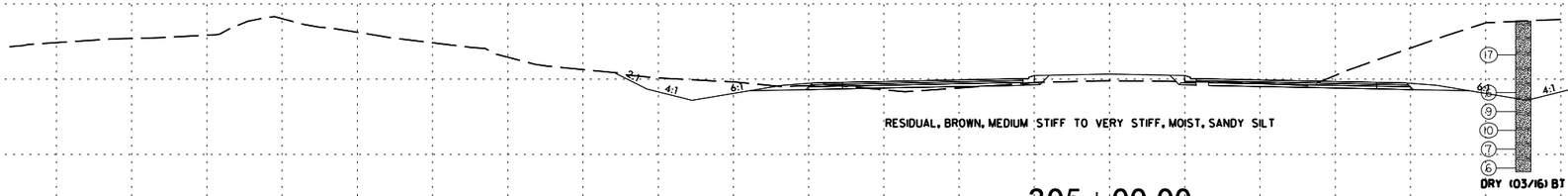
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	145

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

310 300 290 280 270

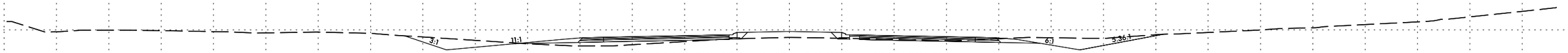


RESIDUAL, BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

DRY (03/16) BT

205+00.00

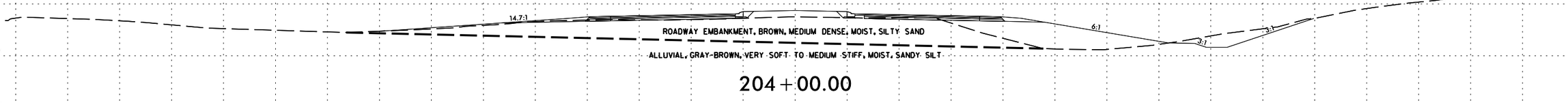
300 290 280



RESIDUAL, GRAY-BROWN, VERY SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

204+50.00

300 290 280 270

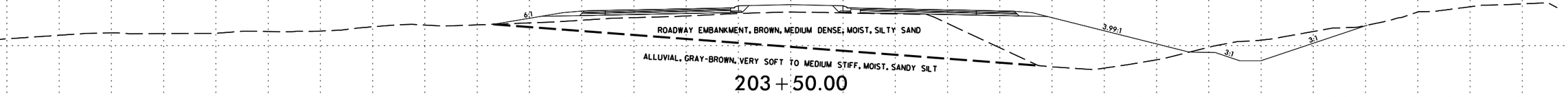


ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, GRAY-BROWN, VERY SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

204+00.00

300 290 280 270



ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, GRAY-BROWN, VERY SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

203+50.00

$-\mathit{L}-$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	146

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320
310
300
290
280

4.20:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

206+50.00

310
300
290
280

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

206+00.00

310
300
290
280

2:1 4:1 6:1 6:1 4:1 2:1

RESIDUAL, BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

205+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	147

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320 310 300 290 280

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

RESIDUAL, GRAY-BROWN, MEDIUM STIFF, MOIST, SILTY CLAY

RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

6:1 6:1 6:1 4:1 2:1

208+00.00

320 310 300 290 280

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

RESIDUAL, GRAY-BROWN, MEDIUM STIFF, MOIST, SILTY CLAY

RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

4:6:1 6:1 6:1 4:1 2:1

207+50.00

330 320 310 300 290 280 270

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-30	60' RT	207+00	13.5-15.0	A-7-6(19)	49	24	3	35	33	29	94	91	75	27.1	-

SS-30

(15) (15) (9) (13) (8)
DRY (03/16) BT

RESIDUAL, GRAY-BROWN, MEDIUM STIFF, MOIST, SILTY CLAY

RED-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

(18) (12) (6) (7) (7) (5) (5)
DRY (03/16) BT

RESIDUAL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

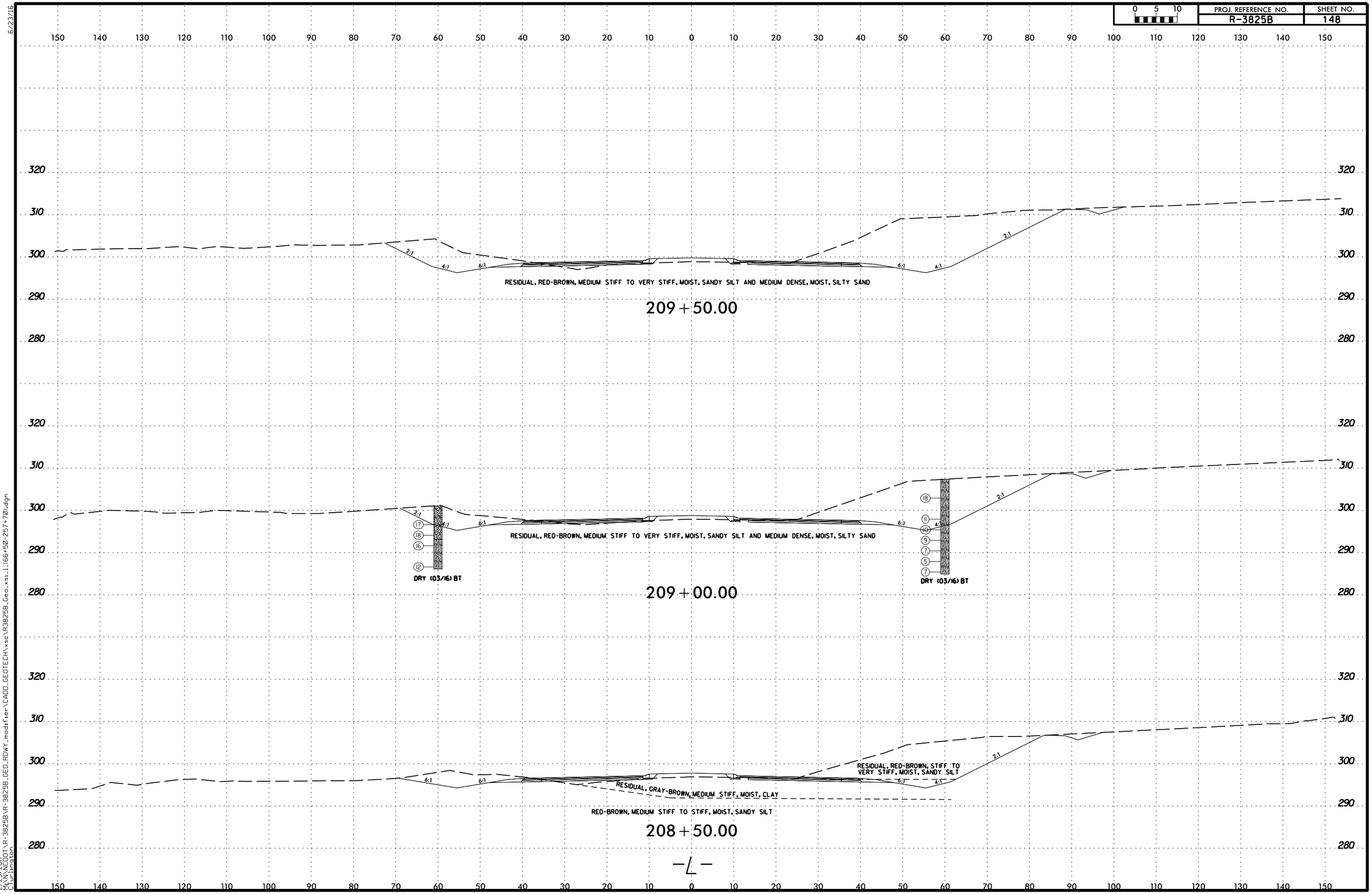
6:1 4:1 2:1

207+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

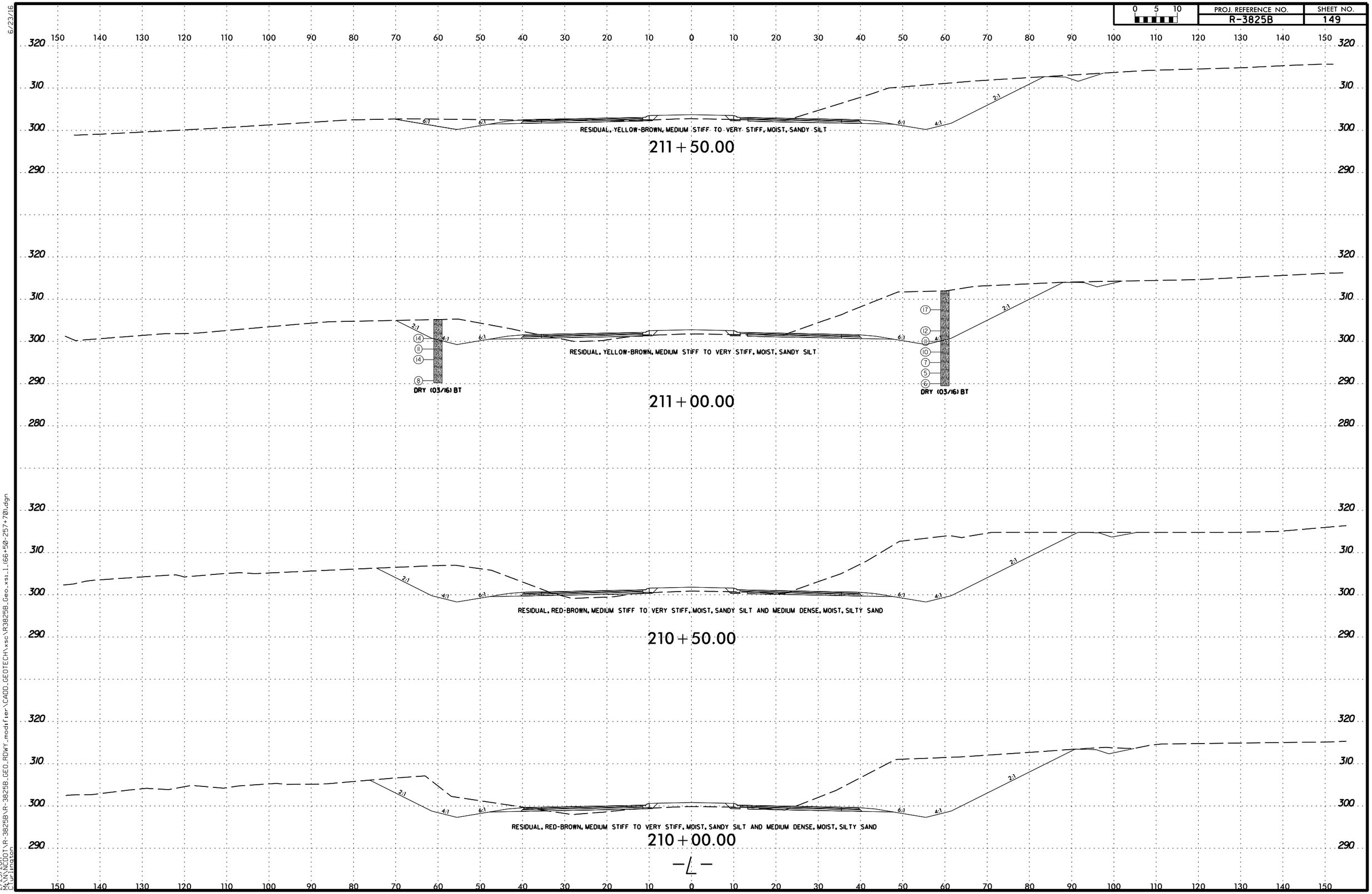
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	148



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	149



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	150

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320 310 300 290 340 330

6:1 6:1 6:1 4:1 2:1

RESIDUAL, RED-BROWN, STIFF, MOIST, CLAY

YELLOW-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

GRAY, LOOSE TO MEDIUM DENSE, MOIST, SAND

213+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-31	55' RT	212+50	6.0-7.5	A-7-6(10)	42	15	4	51	9	36	98	96	52	23.2	-

SS-31

RESIDUAL, CLAYEY SILT

RED-BROWN, STIFF, MOIST,

RESIDUAL, RED-BROWN, STIFF, MOIST, SILTY CLAY

YELLOW-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

GRAY, LOOSE TO MEDIUM DENSE, MOIST, SAND

(12) (4) (6) (9) (25) (9)

DRY (03/16) BT

212+50.00

RESIDUAL, YELLOW-BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

212+00.00

—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Burlington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	151

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320
310
300
290

3.98:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, SOFT, MOIST, CLAY

RESIDUAL, BROWN, MEDIUM STIFF, MOIST, SANDY SILT

6:1

3.73:1

214+50.00

320
310
300
290
280

3.14:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, SOFT, MOIST, CLAY

RESIDUAL, BROWN, MEDIUM STIFF, MOIST, SANDY SILT

4 7 8 5

DRY (03/16) BT

6:1 4:1 2:1

214+00.00

320
310
300
290

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

4.41:1

RESIDUAL, RED-BROWN, STIFF, MOIST, CLAY

YELLOW-BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

GRAY, LOOSE TO MEDIUM DENSE, MOIST, SAND

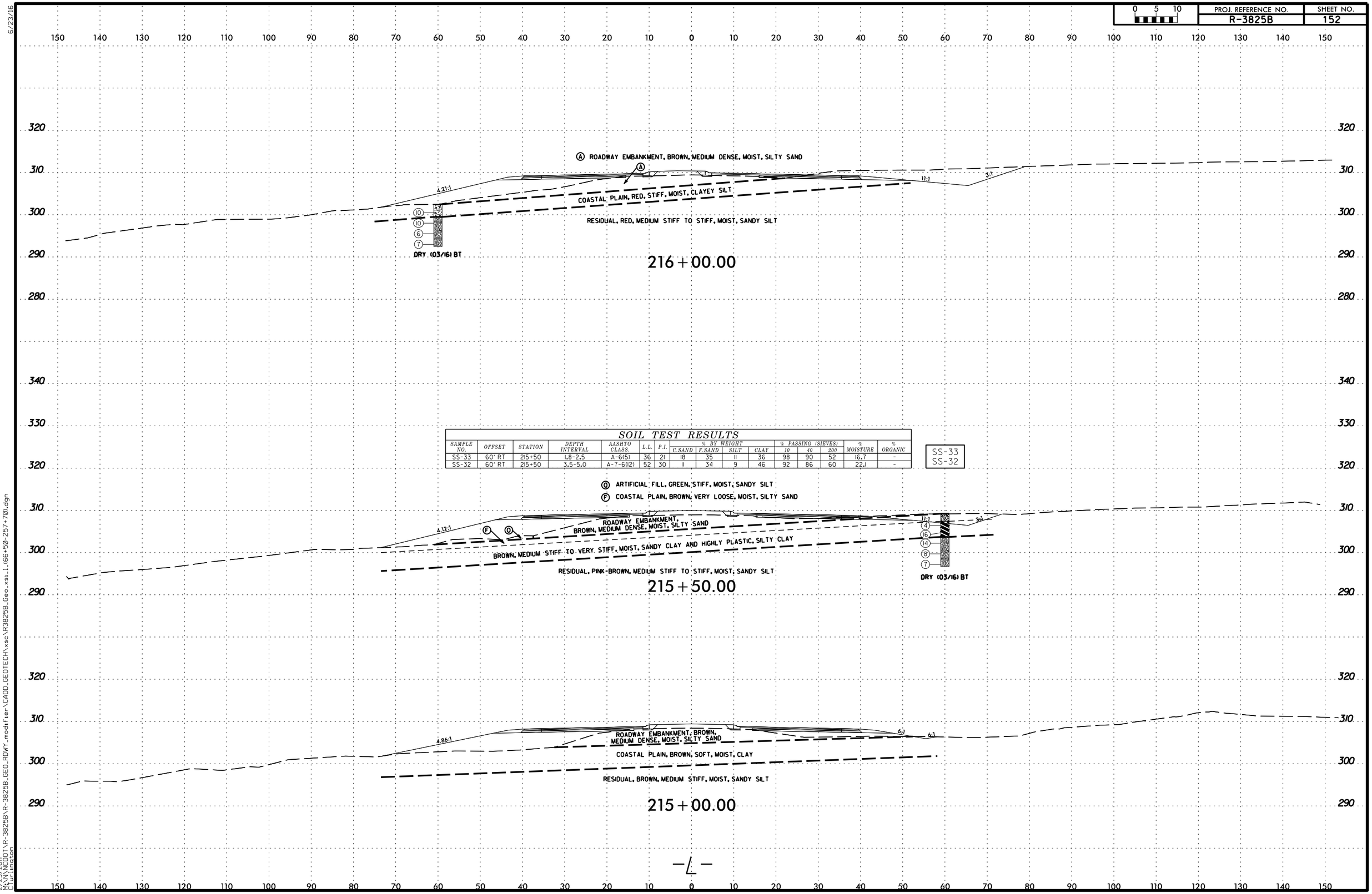
6:1 4:1 2:1

213+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	152



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-33	60' RT	215+50	1.8-2.5	A-6(5)	36	21	18	35	11	36	98	90	52	16.7	-
SS-32	60' RT	215+50	3.5-5.0	A-7-6(12)	52	30	11	34	9	46	92	86	60	22.1	-

SS-33
SS-32

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	153

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

340 330 320 310 300 290

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-34	60' RT	217+50	3.5-5.0	A-6(2)	30	14	29	35	11	24	100	85	40	15.8	-
SS-35	60' RT	217+50	6.0-7.5	A-2-7(1)	44	24	33	45	5	17	97	82	29	17.8	-

SS-34
SS-35

6:1 6:1 6:1 4:1 2:1

COASTAL PLAIN, BROWN, MEDIUM STIFF, MOIST, SILTY CLAY

BROWN, MEDIUM DENSE, MOIST, CLAYEY SAND

BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

7 15 22 10 8

DRY (03/16) BT

217+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓓ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

6:1 6:1 4:1 2:1

COASTAL PLAIN, RED, STIFF, MOIST, CLAYEY SILT

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

217+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓓ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

5.08:1 6:1 4:1 2:1

COASTAL PLAIN, RED, STIFF, MOIST, CLAYEY SILT

RESIDUAL, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

216+50.00

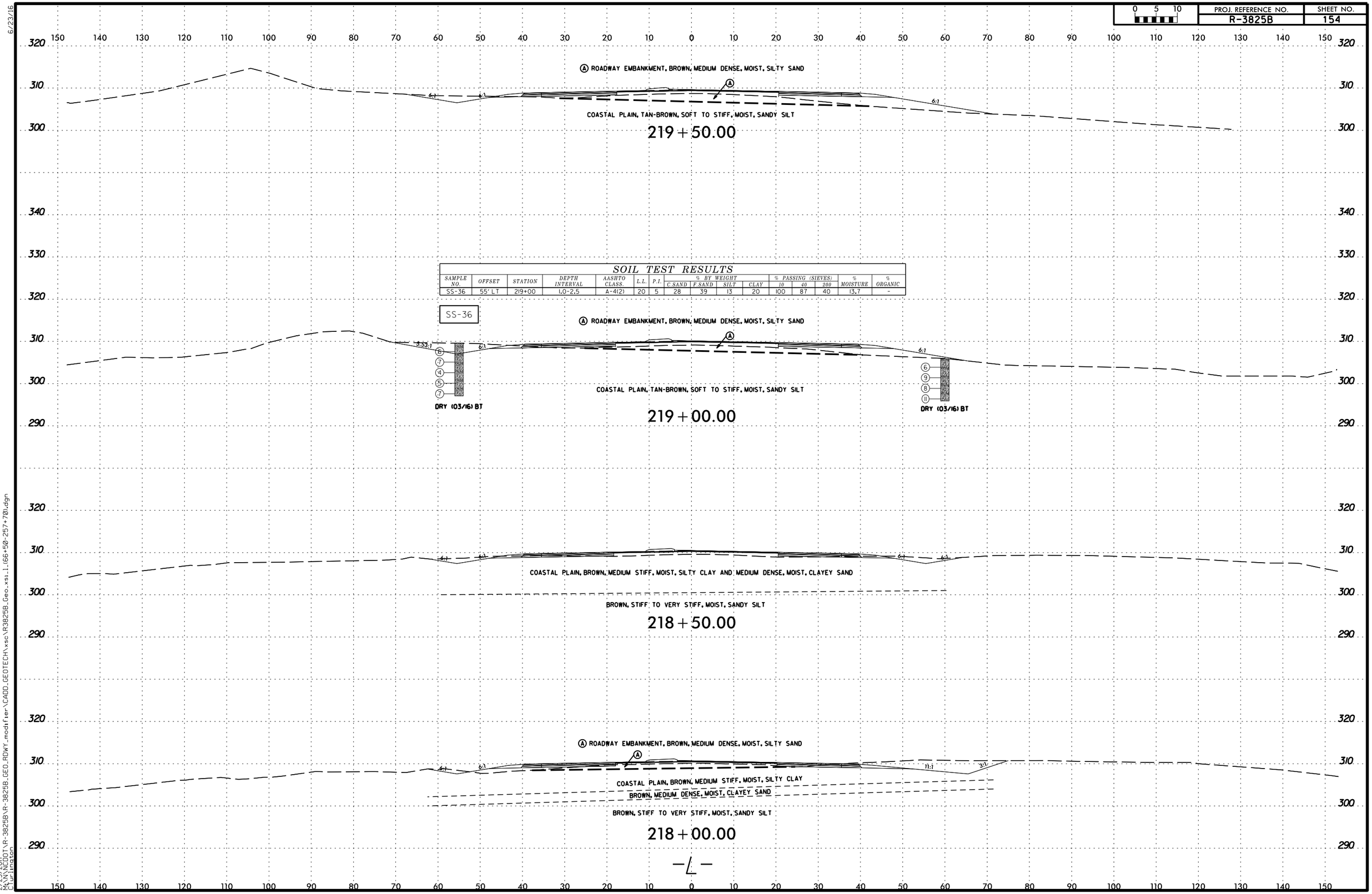
—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	154



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-36	55' LT	219+00	1.0-2.5	A-4(2)	20	5	28	39	13	20	100	87	40	13.7	-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	155

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320
310
300
290

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4.97:1

COASTAL PLAIN, RED, STIFF, MOIST, SANDY CLAY

RED-YELLOW, STIFF, MOIST, SANDY SILT

221+00.00

320
310
300
290
280

4.65:1 (N) (12) (13) (10) 6:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

5.29:1

COASTAL PLAIN, RED, STIFF, MOIST, SANDY CLAY

RED-YELLOW, STIFF, MOIST, SANDY SILT

DRY (03/16) BT

220+50.00

320
310
300
290

5.91:1 6:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

5.97:1

COASTAL PLAIN, TAN-BROWN, SOFT TO STIFF, MOIST, SANDY SILT

220+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	156

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-37	60' RT	222+50	1.0-2.0	A-2-4(0)	12	NP	36	43	14	7	100	83	26	7.7	-
SS-38	60' RT	222+50	2.0-2.5	A-2-4(0)	17	3	42	32	10	16	100	74	31	10.3	-
SS-39	60' RT	222+50	3.5-5.0	A-2-6(1)	28	11	32	38	9	21	99	82	35	16.0	-

SS-37
SS-38
SS-39

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, GRAY-BROWN, VERY LOOSE, MOIST, SILTY SAND

BROWN, LOOSE, MOIST, CLAYEY SAND

RED-GRAY, STIFF, MOIST, SANDY SILT AND STIFF, MOIST, SANDY CLAY

4:1 4:1 3:1

(3) (7) (14) (13)

DRY (03/16) BT

222+50.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, RED, STIFF, MOIST, SANDY CLAY

RED-YELLOW, STIFF, MOIST, SANDY SILT

3:1

222+00.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, RED, STIFF, MOIST, SANDY CLAY

RED-YELLOW, STIFF, MOIST, SANDY SILT

3:1

221+50.00

—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	157

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

330 320 310 300 290 280

4:1 4:1

COASTAL PLAIN, RED, DENSE, MOIST, SILTY SAND

BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

COASTAL PLAIN, BROWN, VERY STIFF, MOIST, HIGHLY PLASTIC, SILTY CLAY

224+00.00

330 320 310 300 290 280

4:1 4:1

COASTAL PLAIN, RED, DENSE, MOIST, SILTY SAND

BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

4:1

COASTAL PLAIN, BROWN, VERY STIFF, MOIST, HIGHLY PLASTIC, SILTY CLAY

223+50.00

320 310 300 290 280

4:1 4:1

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, GRAY-BROWN, VERY LOOSE, MOIST, SILTY SAND

BROWN, MEDIUM STIFF, MOIST, CLAYEY SAND

RED-GRAY, STIFF, MOIST, SANDY SILT AND STIFF, MOIST, SANDY CLAY

4:1

223+00.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	158

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320 310 300 290

Ⓧ COASTAL PLAIN, RED, DENSE, MOIST, SILTY SAND
Ⓨ COASTAL PLAIN, BROWN, VERY STIFF, MOIST, HIGHLY PLASTIC, SILTY CLAY

4:1 4:1

BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

225+50.00

330 320 310 300 290

Ⓧ COASTAL PLAIN, RED, DENSE, MOIST, SILTY SAND
Ⓨ COASTAL PLAIN, BROWN, VERY STIFF, MOIST, HIGHLY PLASTIC, SILTY CLAY

4:1 4:1

BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

225+00.00

340 330 320 310 300 290 280

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-40	60' RT	224+50	3.5-5.0	A-7-6(25)	61	32	9	17	25	49	99	95	78	28.4	-
SS-41	60' RT	224+50	6.0-6.5	A-7-5(34)	61	26	5	13	30	52	99	95	87	28.3	-

SS-40
SS-41

Ⓧ COASTAL PLAIN, RED, DENSE, MOIST, SILTY SAND
Ⓨ COASTAL PLAIN, BROWN, VERY STIFF, MOIST, HIGHLY PLASTIC, SILTY CLAY

4:1 4:1

(22) (17) (11) (5)

DRY (03/16) BT

BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

(23) (20) (21) (13) (6)

DRY (03/16) BT

224+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	159

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320
310
300
290
280

4:1 4:1

COASTAL PLAIN, BROWN-RED, MEDIUM DENSE TO DENSE, MOIST, SILTY SAND

GRAY-RED, STIFF, MOIST, SANDY CLAY AND SILT

227+00.00

320
310
300
290
280

4:1 4:1

COASTAL PLAIN, BROWN-RED, MEDIUM DENSE TO DENSE, MOIST, SILTY SAND

GRAY-RED, STIFF, MOIST, SANDY CLAY AND SILT

18
24
39
21
12
9

DRY (03/16) BT

226+50.00

320
310
300
290
280

4:1 4:1

Ⓧ COASTAL PLAIN, RED, DENSE, MOIST, SILTY SAND

Ⓨ COASTAL PLAIN, BROWN, VERY STIFF, MOIST, HIGHLY PLASTIC, SILTY CLAY

BROWN, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

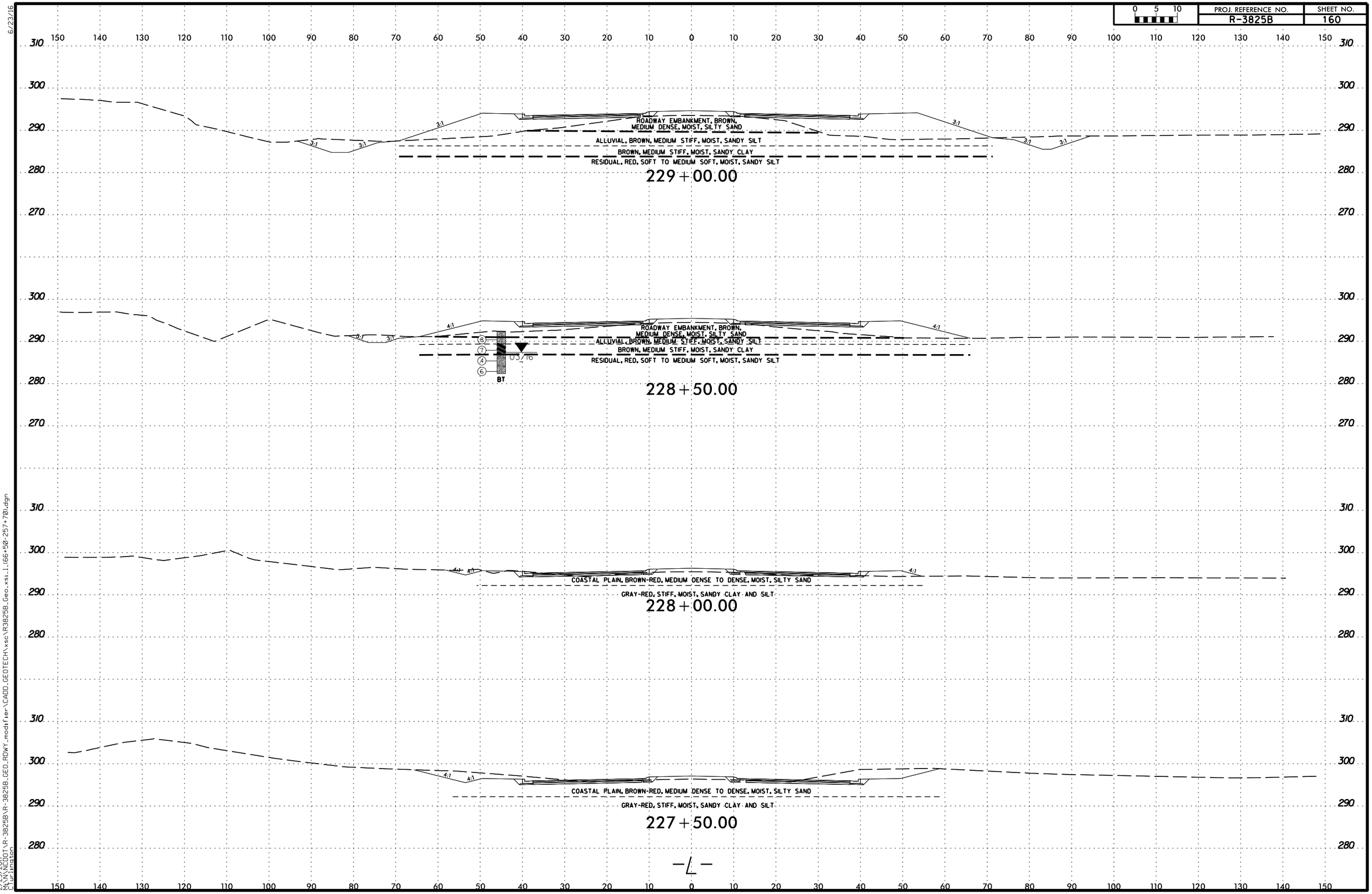
226+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	160



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	161

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300 290 280 270 260

2:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN-GRAY, VERY SOFT, MOIST SANDY CLAY

GRAY, MEDIUM STIFF, MOIST, CLAYEY SILT

RESIDUAL, BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

230+50.00

2:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN-GRAY, VERY SOFT, MOIST SANDY CLAY

GRAY, MEDIUM STIFF, MOIST, CLAYEY SILT

RESIDUAL, BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

03/16 (2, 9, 7, 3, 7) BT

03/16 (2, 4, 5, 2, 5) BT

230+00.00

3:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN-GRAY, VERY SOFT, SANDY CLAY

GRAY, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

RESIDUAL, BROWN, SOFT TO MEDIUM SOFT, MOIST, CLAYEY SILT

229+50.00

—L—

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_1_(66+50-257+70).dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	162

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

320 310 300 290 280 270 260 250 240

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-42	65' RT	231+33	1.0-1.5	A-4(0)	19	NP	19	48	23	10	95	86	42	37.0	-
SS-43	65' RT	231+33	1.5-2.3	A-4(2)	25	8	27	37	17	19	94	82	40	20.7	-
SS-44	65' RT	231+33	3.5-5.0	A-7-5(22)	47	14	10	26	40	24	99	95	72	34.1	-

SS-42
SS-43
SS-44

2:1 2:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN, VERY LOOSE, MOIST, SANDY SILT

GRAY-BROWN, VERY SOFT TO STIFF, MOIST, SILTY CLAY

RESIDUAL, GRAY-BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

03/16

3 15 4 4 5

BT

231+33

03/16

2 2 2 4 3 4 7 8

BT

231+50.00

2:1 3:1 3:1 3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

ALLUVIAL, BROWN-GRAY, VERY SOFT, MOIST, SANDY CLAY

GRAY, MEDIUM STIFF, MOIST, CLAYEY SILT

RESIDUAL, BROWN, SOFT TO MEDIUM SOFT, MOIST, CLAYEY SILT

231+00.00

—℄—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	163

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280
270

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
ALLUVIAL, BROWN, VERY LOOSE, MOIST, SANDY SILT
GRAY-BROWN, VERY SOFT TO STIFF, MOIST, SILTY CLAY
RESIDUAL, GRAY-BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

3:1

233+00.00

300
290
280
270
260

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
ALLUVIAL, BROWN, VERY LOOSE, MOIST, SANDY SILT
GRAY-BROWN, VERY SOFT TO STIFF, MOIST, SILTY CLAY
RESIDUAL, GRAY-BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

2:1

232+50.00

310
300
290
280
270
260

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
ALLUVIAL, BROWN, VERY LOOSE, MOIST, SANDY SILT
GRAY-BROWN, VERY SOFT TO STIFF, MOIST, SILTY CLAY
RESIDUAL, GRAY-BROWN, SOFT TO MEDIUM STIFF, MOIST, CLAYEY SILT

2:1

232+00.00

-L-

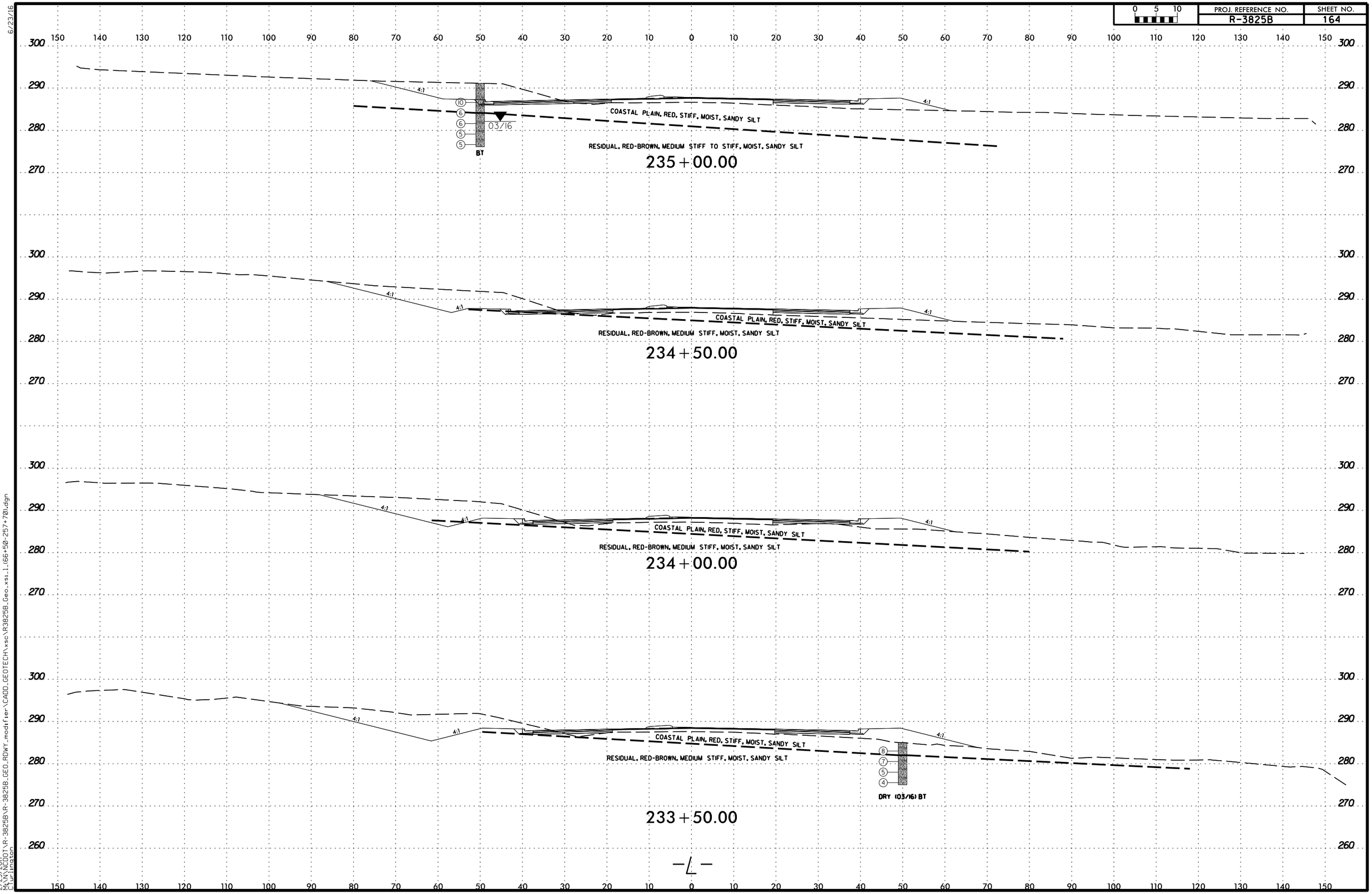
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD\GEOTECH\xsc\R3825B_Geo_xs1_1(66+50-257+70).dgn
CTurlington

6/23/16

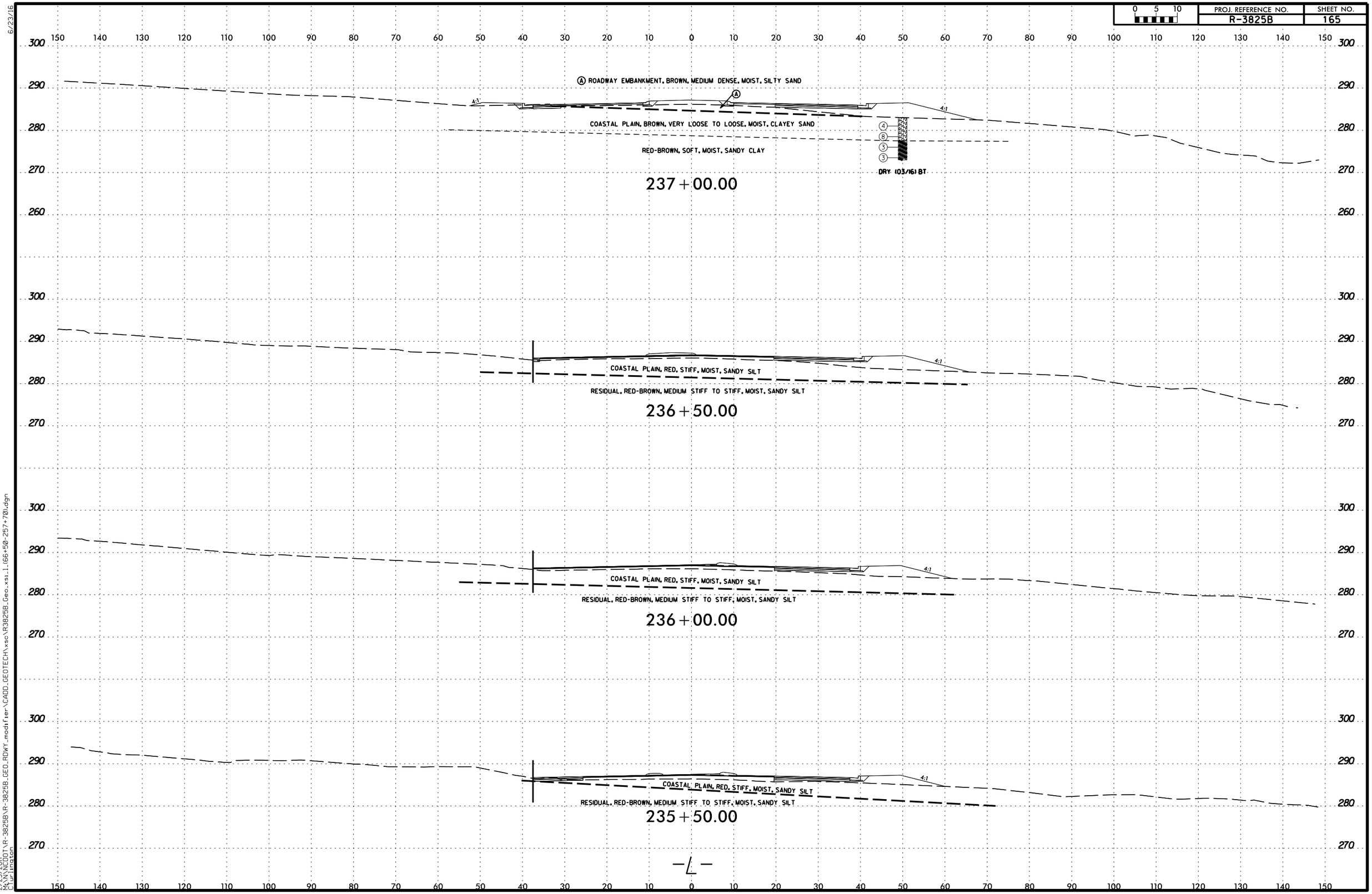
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	164



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl.1(66+50-257+70).dgn
Clarington

6/23/16

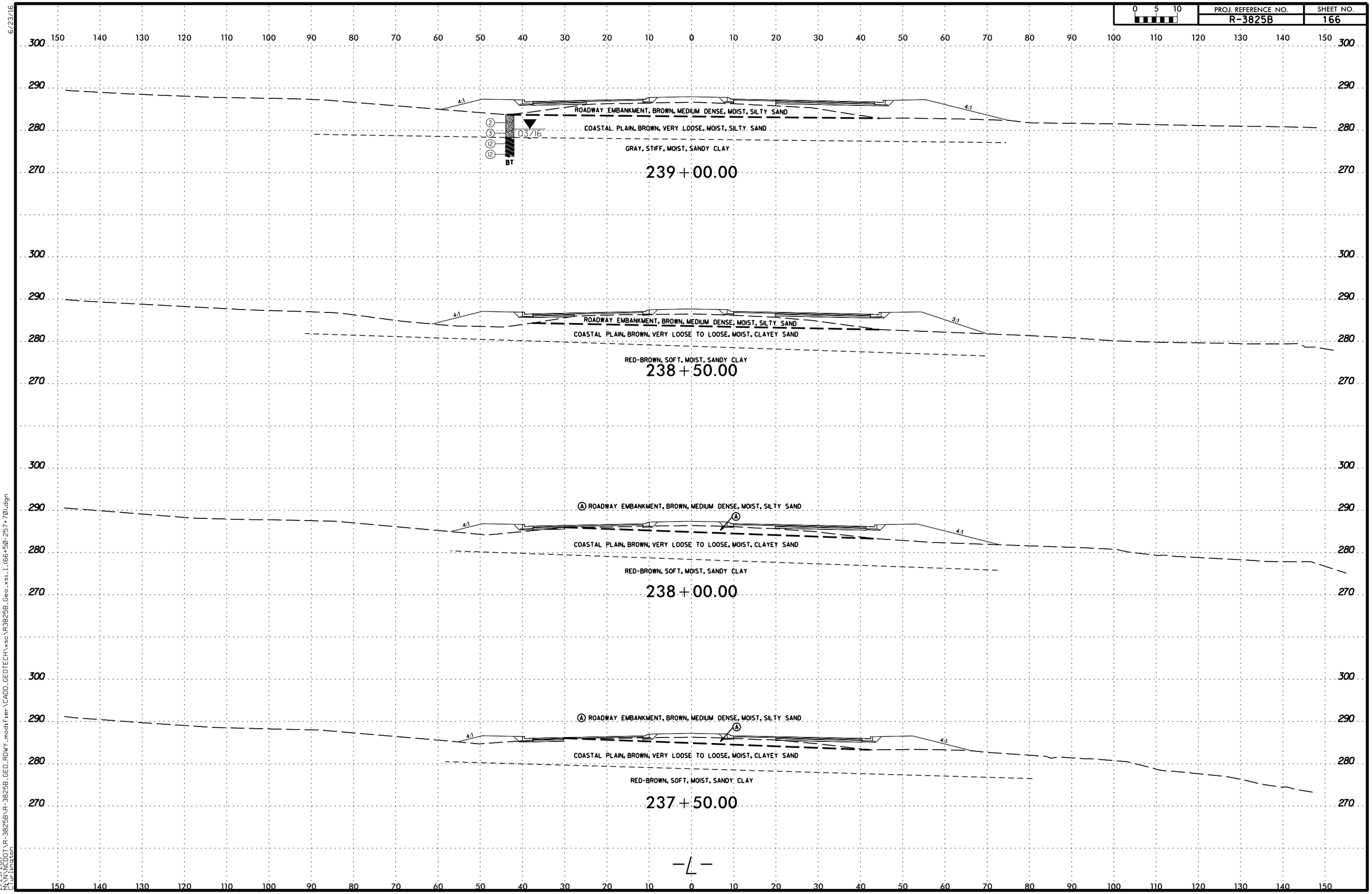
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	165



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	166



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	167

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300 290 280 270

4:1

COASTAL PLAIN, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

241+00.00

5 11 10 4

DRY (03/16) BT

COASTAL PLAIN, BROWN, VERY LOOSE, MOIST, SILTY SAND

GRAY, STIFF, MOIST, SANDY CLAY

240+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, VERY LOOSE, MOIST, SILTY SAND

GRAY, STIFF, MOIST, SANDY CLAY

240+00.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, VERY LOOSE, MOIST, SILTY SAND

GRAY, STIFF, MOIST, SANDY CLAY

239+50.00

-L-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	168

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280
270
260

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

ALLUVIAL, WHITE, SOFT, MOIST, SANDY CLAY

03/16

③
⑧
⑨
④

BT

COASTAL PLAIN, RED, SOFT TO STIFF, MOIST, SANDY SILT AND CLAY

242+50.00

242+15

03/16

①
②
④
⑧

BT

3:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

ALLUVIAL, WHITE, SOFT, MOIST, SANDY CLAY

BROWN, LOOSE, MOIST, GRAVELLY SAND

COASTAL PLAIN, RED, SOFT TO STIFF, MOIST, SANDY CLAY AND SILT

242+00.00

4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

COASTAL PLAIN, BROWN, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

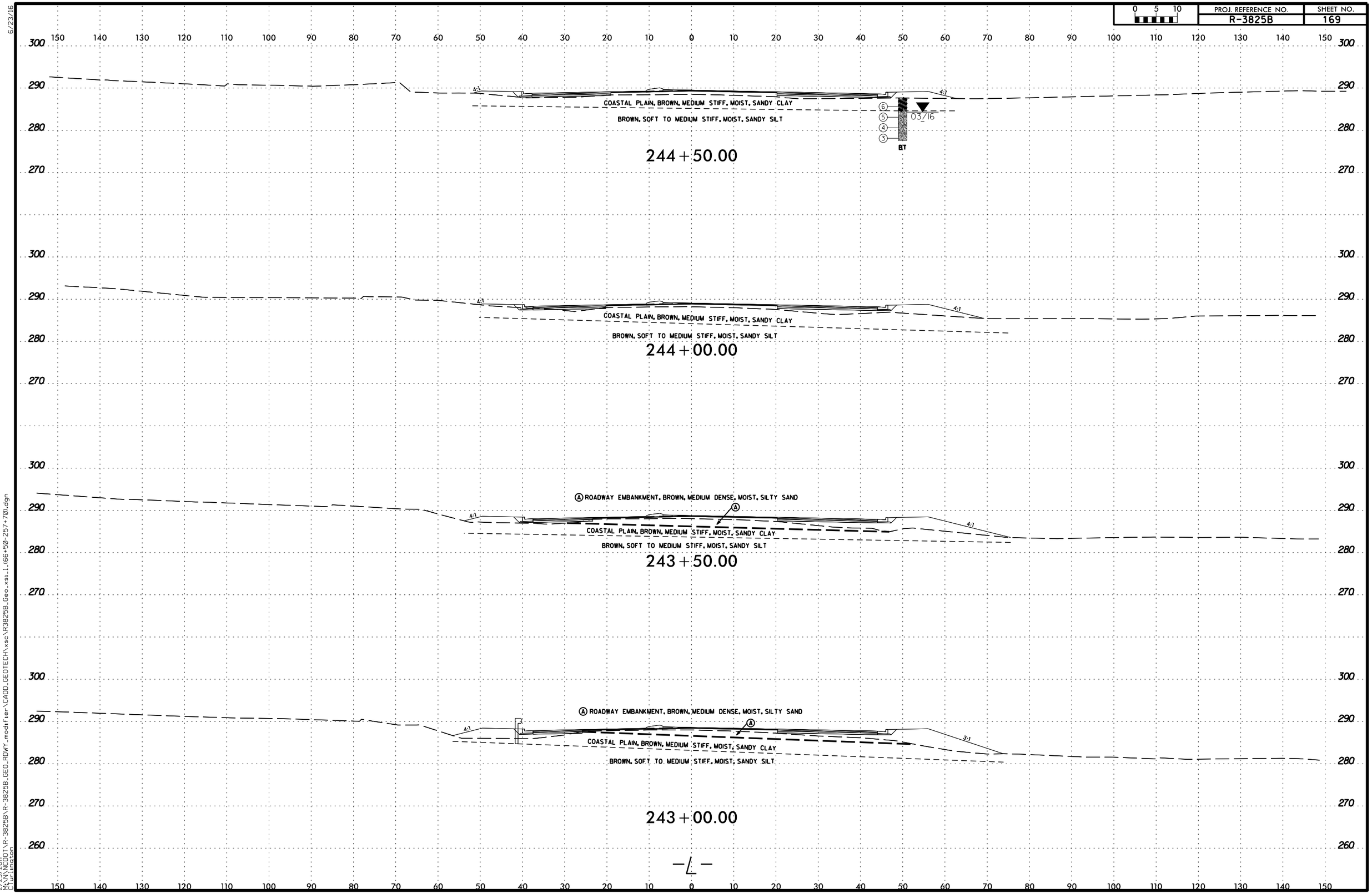
241+50.00

— L —

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

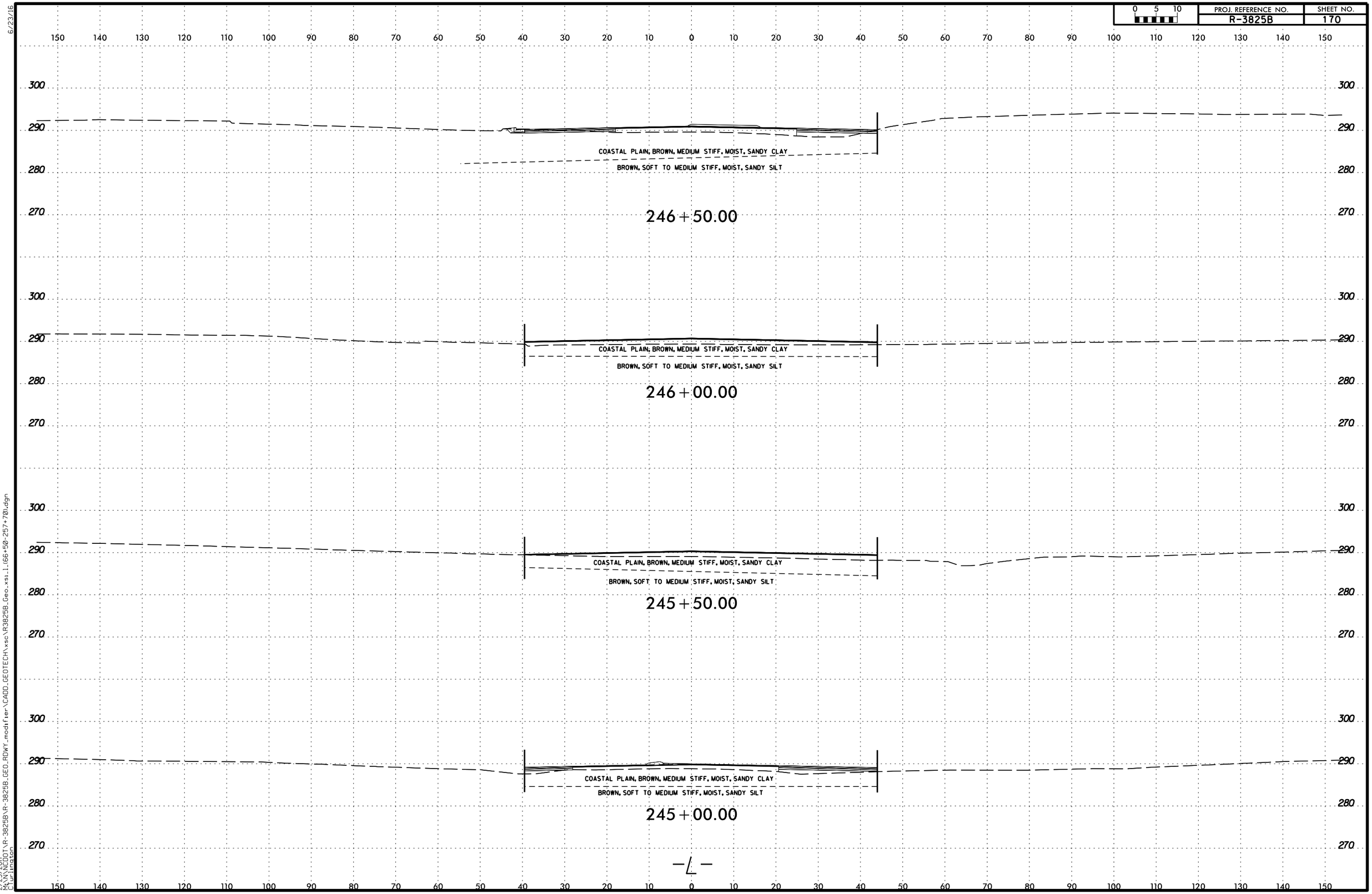
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	169



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	170

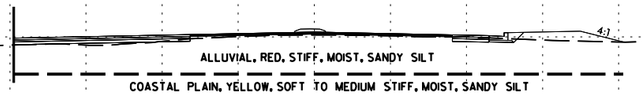


6/23/16

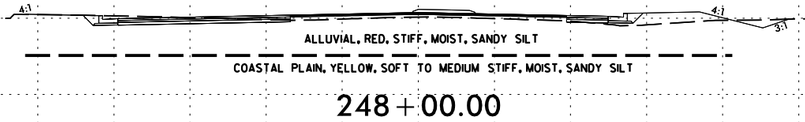
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	171

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

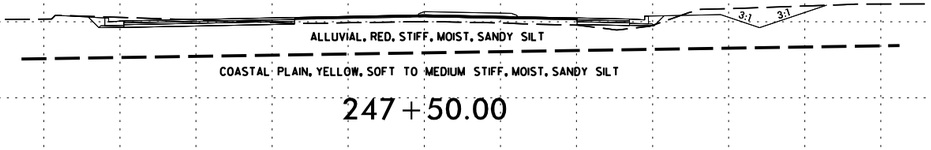
300 290 280 270



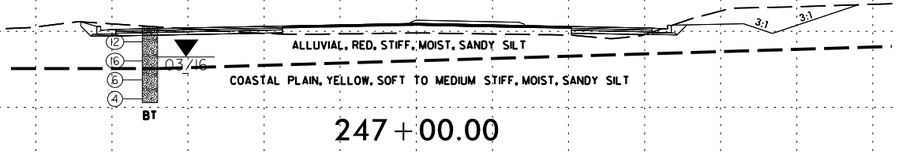
248+50.00



248+00.00



247+50.00



247+00.00

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

310
300
290
280
270

Ⓩ ROADWAY EMBANKMENT, BROWN, LOOSE, MOIST, SAND

3:1

COASTAL PLAIN, GRAY-BROWN, STIFF, MOIST, SANDY SILT

GRAY, VERY SOFT, MOIST, CLAYEY SAND

RESIDUAL, YELLOW-BROWN, HARD, MOIST, CLAYEY SILT

250+00.00

Ⓓ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

3:1

ROADWAY EMBANKMENT, BROWN, LOOSE, MOIST, SAND

COASTAL PLAIN, GRAY-BROWN, STIFF, MOIST, SANDY SILT

GRAY, VERY SOFT, MOIST, CLAYEY SAND

RESIDUAL, YELLOW-BROWN, HARD, MOIST, CLAYEY SILT

6 8 2 33

DRY (03/16) BT

249+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1

ALLUVIAL, RED, STIFF, MOIST, SANDY SILT

COASTAL PLAIN, YELLOW, SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

249+00.00

—L—

6/23/16

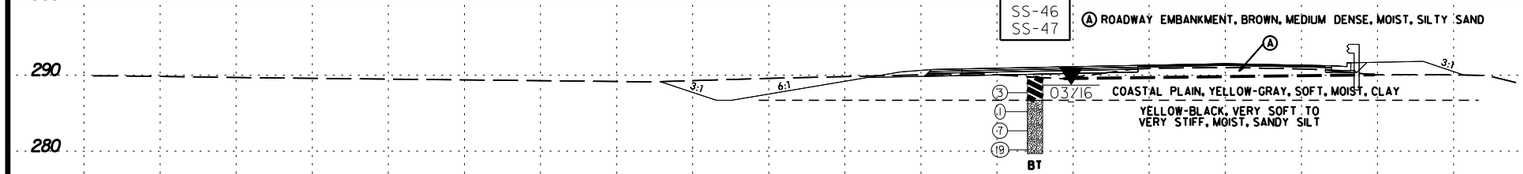
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	173

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

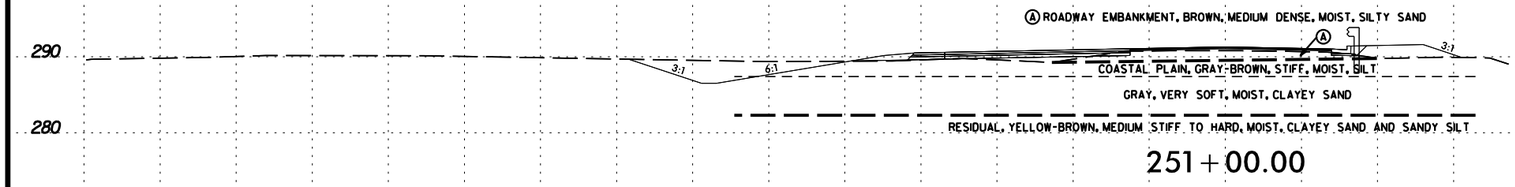
320 310 300 290 280 270 260

SOIL TEST RESULTS

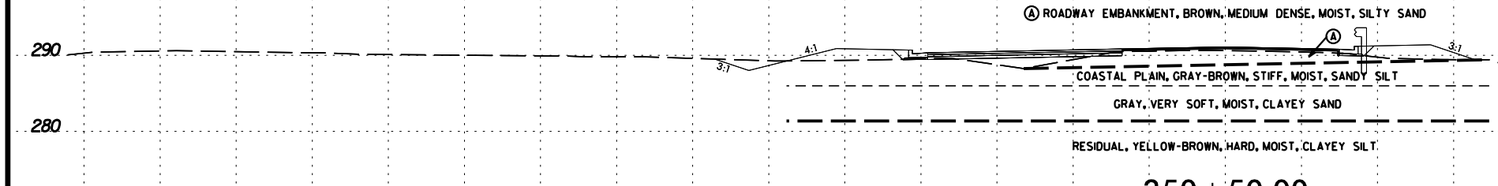
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-45	25' LT	251+50	1.0-2.5	A-7-6(12)	41	20	18	25	22	35	99	87	65	19.0	-
SS-46	25' LT	251+50	3.5-5.0	A-4(4)	25	5	31	34	21	14	98	78	42	18.4	-
SS-47	25' LT	251+50	8.5-10	A-4(1)	23	7	39	32	14	15	98	71	36	12.5	-



251+50.00



251+00.00



250+50.00

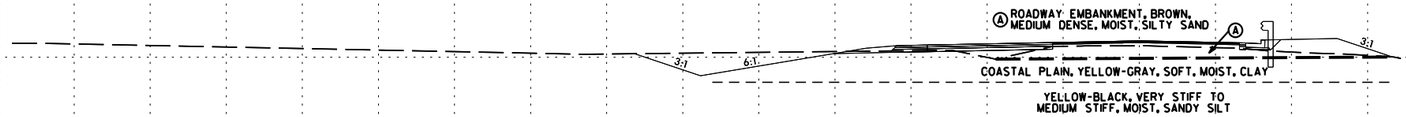
$-\mathit{L}-$

6/23/16

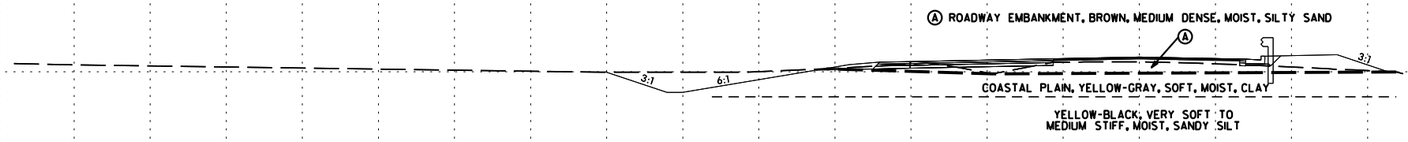
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	174

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

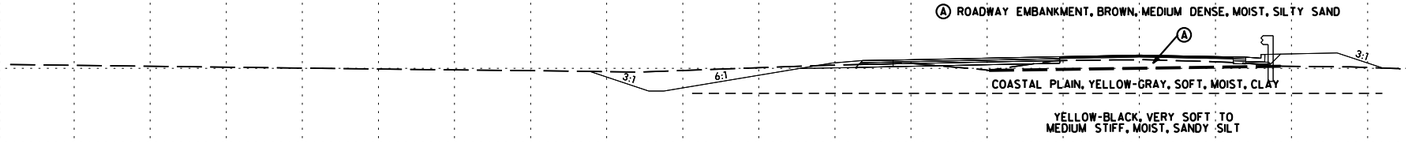
310
300
290
280
270



253+00.00



252+50.00



252+00.00

—℄—

310
300
290
280
270

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	175

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

310
300
290
280
270

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 4:1 3:1

COASTAL PLAIN, GRAY, MEDIUM STIFF, MOIST, SANDY SILT

GRAY, SOFT TO MEDIUM STIFF, MOIST, SANDY CLAY

254+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 4:1

COASTAL PLAIN, GRAY, MEDIUM STIFF, MOIST, SANDY SILT

GRAY, SOFT TO MEDIUM STIFF, MOIST, SANDY CLAY

254+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

3:1 6:1 3:1

COASTAL PLAIN, GRAY, MEDIUM STIFF, MOIST, SANDY SILT

GRAY, SOFT TO MEDIUM STIFF, MOIST, SANDY CLAY

(5) (7) (3) (5)

DRY (03/16) BT

253+50.00

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	176

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280
270

3:1 6:1 6:1 6:1

COASTAL PLAIN, ORANGE-RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

256+50.00

300
290
280
270

3:1 6:1 6:1 6:1

(10) (10) (10) (25) (19)

BT

03/16

COASTAL PLAIN, ORANGE-RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

256+00.00

300
290
280
270

3:1 6:1 6:1 3:1

COASTAL PLAIN, GRAY, MEDIUM STIFF, MOIST, SANDY SILT

GRAY, SOFT TO MEDIUM STIFF, MOIST, SANDY CLAY

255+50.00

300
290
280
270

3:1 6:1 6:1 3:1

COASTAL PLAIN, GRAY, MEDIUM STIFF, MOIST, SANDY SILT

GRAY, SOFT TO MEDIUM STIFF, MOIST, SANDY CLAY

255+00.00

300
290
280
270

—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NNCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	177

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280

COASTAL PLAIN, RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

257+70.00

310
300
290
280
270

6:1 6:1 6:1

12
13
12
8
7

03/16

BT

COASTAL PLAIN, RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

257+50.00

310
300
290
280

3:1 6:1 6:1 6:1

COASTAL PLAIN, ORANGE-RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

257+00.00

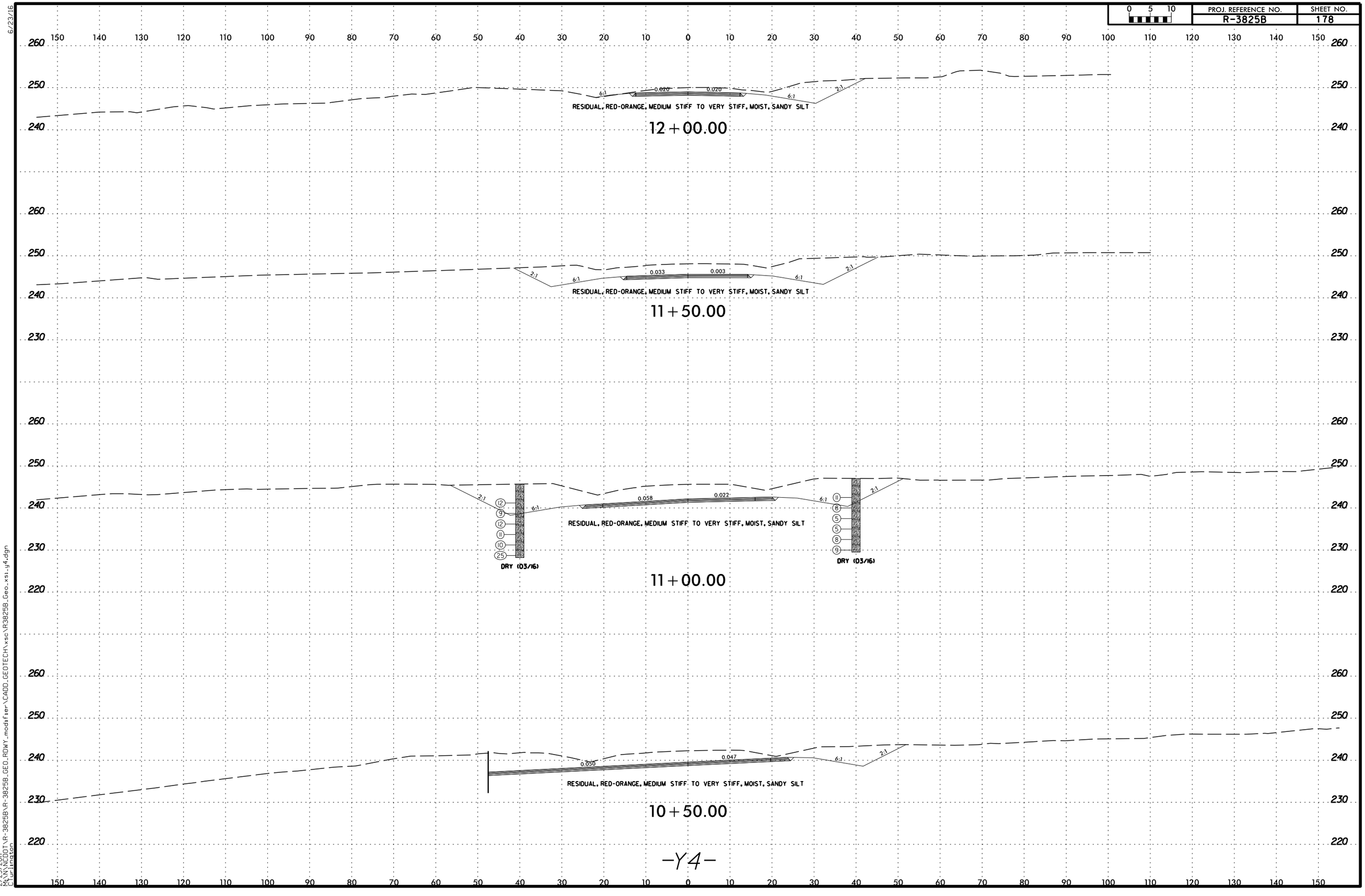
—L—

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_1(66+50-257+70).dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	178



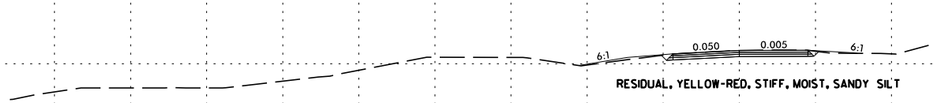
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y4.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	179

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

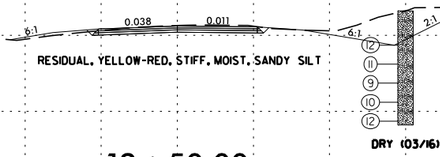
260
250
240



RESIDUAL, YELLOW-RED, STIFF, MOIST, SANDY SILT

12+75.00

260
250
240
230



RESIDUAL, YELLOW-RED, STIFF, MOIST, SANDY SILT

DRY (03/16)

12+50.00

-Y4-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_y4.dgn
Clarington

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	180

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

210 200 190 180

2:1 6:1 0.000 0.000 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

11+50.00

210 200 190 180 170 160

10+95

10 9 11 19 25 11 12

FIAD BT

2:1 6:1 0.029 0.029 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

11+00.00

210 200 190 180 170

0.048 0.040 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

10+50.00

-Y5-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	181

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190 180

6:1 0.025 0.025 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

13+50.00

6:1 0.054 0.054 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

13+00.00

2:1 6:1 0.059 0.059 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

21 14 24 28 17 9

DRY (03/16)

12+50.00

2:1 6:1 0.030 0.030 6:1 2:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

12+00.00

-Y5-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y5.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	182

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

230
220
210
200

4:1 0.019 0.008 6:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

14+22.00

220
210
200

6:1 0.005 0.005 6:1

RESIDUAL, YELLOW-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT

14+00.00

-Y5-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_y5.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	183

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

160
150
140
130

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

0.025 0.025 6:1

COASTAL PLAIN, BROWN, STIFF TO HARD, MOIST, SANDY SILT

11+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

0.042 0.030 6:1

COASTAL PLAIN, BROWN, STIFF TO HARD, MOIST SANDY SILT

11+00.00

6:1 0.055 0.020 4:1

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, STIFF TO HARD, MOIST SANDY SILT

10+60.00

ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

COASTAL PLAIN, BROWN, STIFF TO HARD, MOIST SANDY SILT

10+50.00

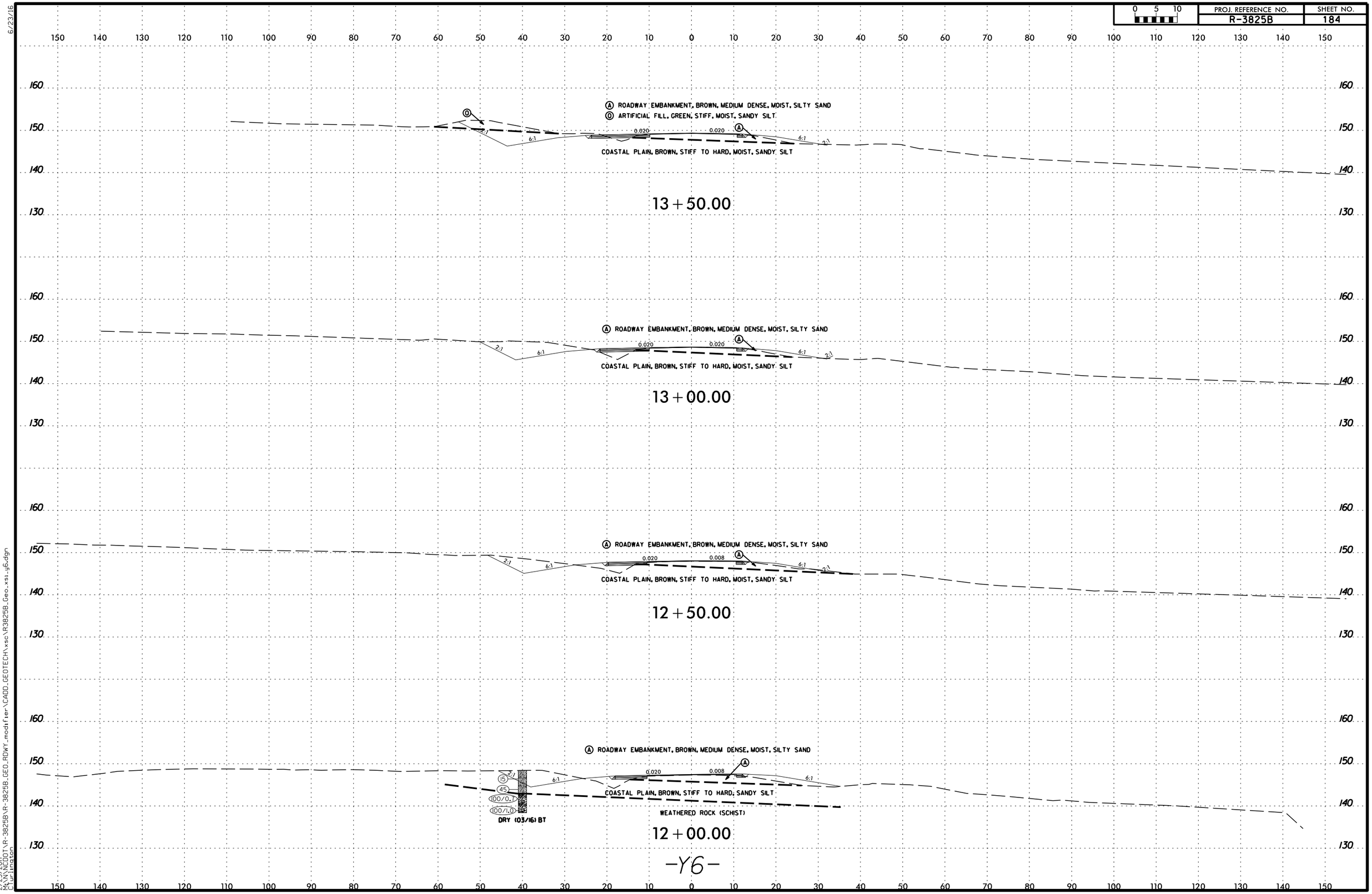
-Y6-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y6.dgn
Curlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	184



-Y6-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y6.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	185

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

170
160
150
140
130

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT
Ⓝ ALLUVIAL, TAN-BROWN, MEDIUM STIFF, MOIST, SANDY CLAY

0.020' 0.020' 6:1 6:1

COASTAL PLAIN, BROWN, HARD, MOIST, SANDY SILT AND HARD, MOIST, CLAY

15+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

0.020' 0.020' 6:1 6:1

ALLUVIAL, TAN-BROWN, MEDIUM STIFF, MOIST, SANDY CLAY

COASTAL PLAIN, BROWN, HARD, MOIST, SANDY SILT AND HARD, MOIST, CLAY

14+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

0.020' 0.020' 6:1 6:1

ALLUVIAL, TAN-BROWN, MEDIUM STIFF, MOIST, SANDY CLAY

COASTAL PLAIN, BROWN, HARD, MOIST, SANDY SILT AND HARD, MOIST, SILTY CLAY

(5) (26) (52) (38) BT

03/16

14+00.00

-Y6-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_y6.dgn
Clarington

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	186

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

170
160
150
140

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 6:1 0.020 Ⓐ 0.019 6:1 2:1

ALLUVIAL, ORANGE-RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

16+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

2:1 6:1 0.020 Ⓐ 0.020 6:1 2:1

(10) (18) (15) (100/0.1) (100/0.3) 03/16 BT

ALLUVIAL, ORANGE-RED, STIFF TO VERY STIFF, MOIST, SANDY SILT

WEATHERED ROCK (SCHIST)

16+00.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND
Ⓞ ARTIFICIAL FILL, GREEN, STIFF, MOIST, SANDY SILT

2:1 6:1 0.020 Ⓐ 0.020 6:1 2:1

ALLUVIAL, TAN-BROWN, MEDIUM STIFF, MOIST, SANDY CLAY

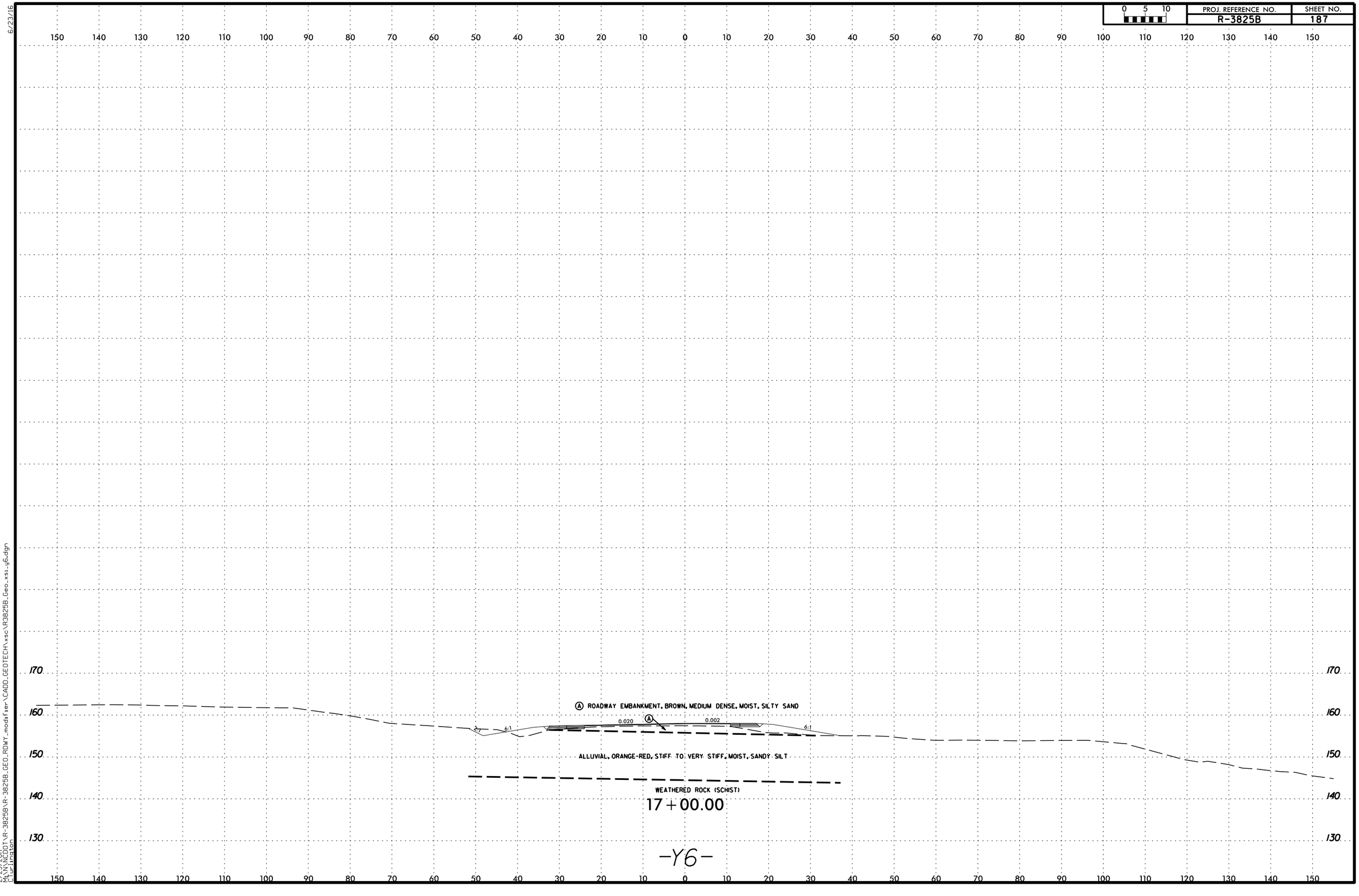
COASTAL PLAIN, BROWN, HARD, MOIST, SANDY SILT AND HARD, MOIST, CLAY

15+50.00

-Y6-

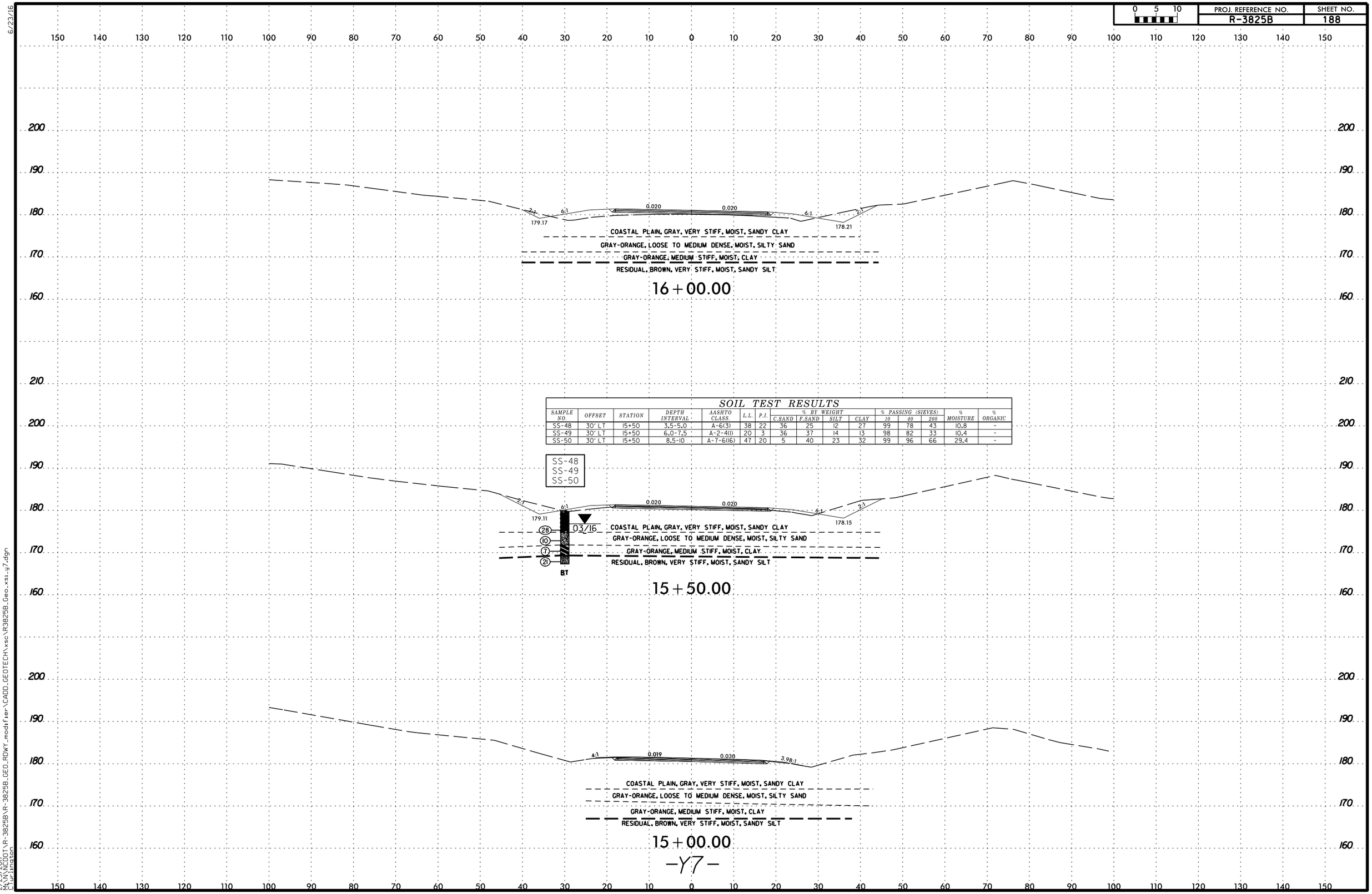
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	187



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y6.dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	188



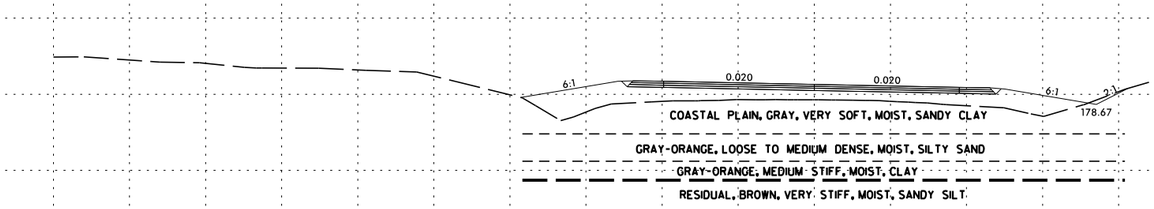
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-48	30' LT	15+50	3.5-5.0	A-6(3)	38	22	36	25	12	27	99	78	43	10.8	-
SS-49	30' LT	15+50	6.0-7.5	A-2-4(1)	20	3	36	37	14	13	98	82	33	10.4	-
SS-50	30' LT	15+50	8.5-10	A-7-6(16)	47	20	5	40	23	32	99	96	66	29.4	-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	189

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



16+50.00

-Y7-

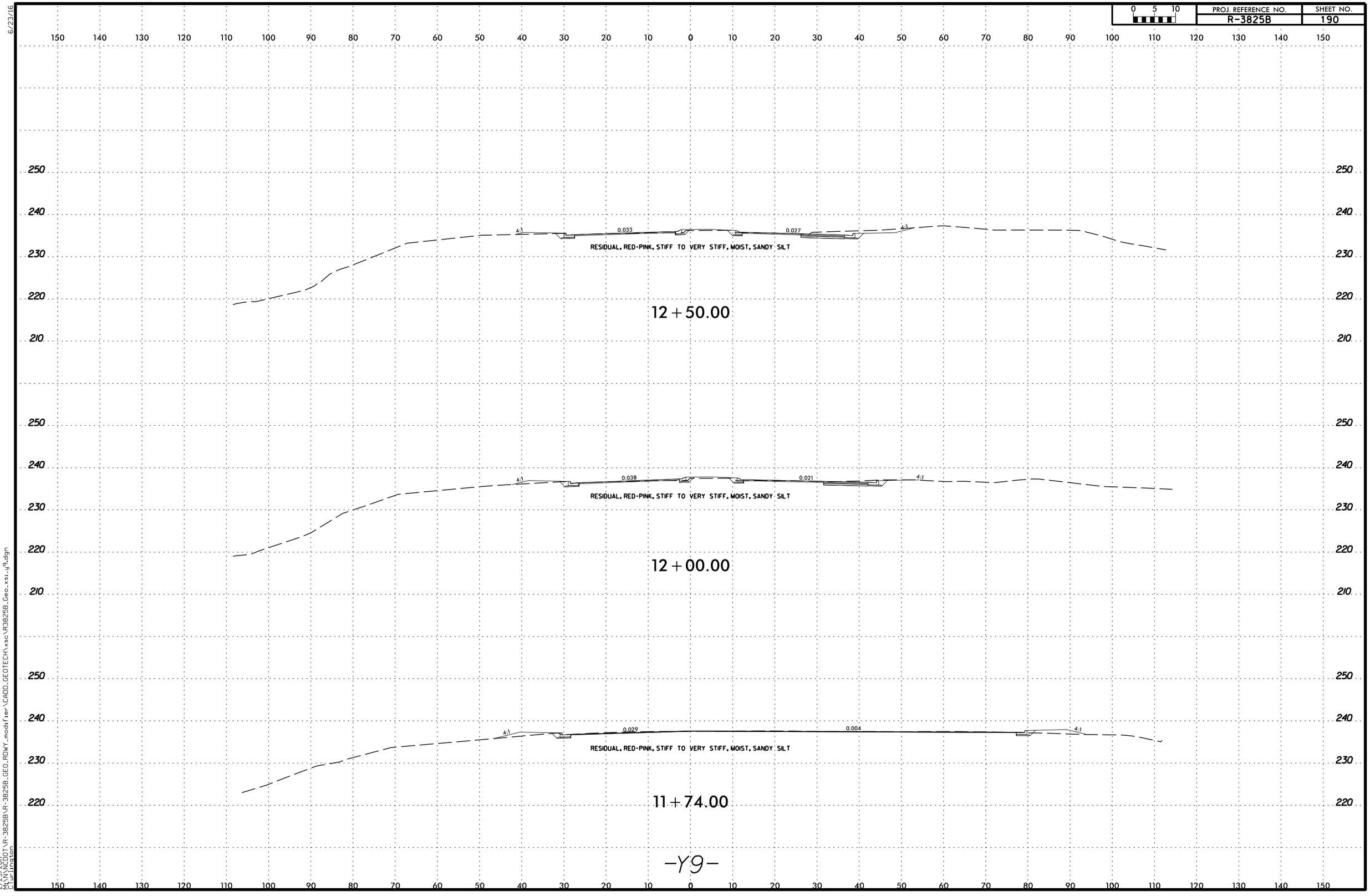
190 180 170 160

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_y7.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	190

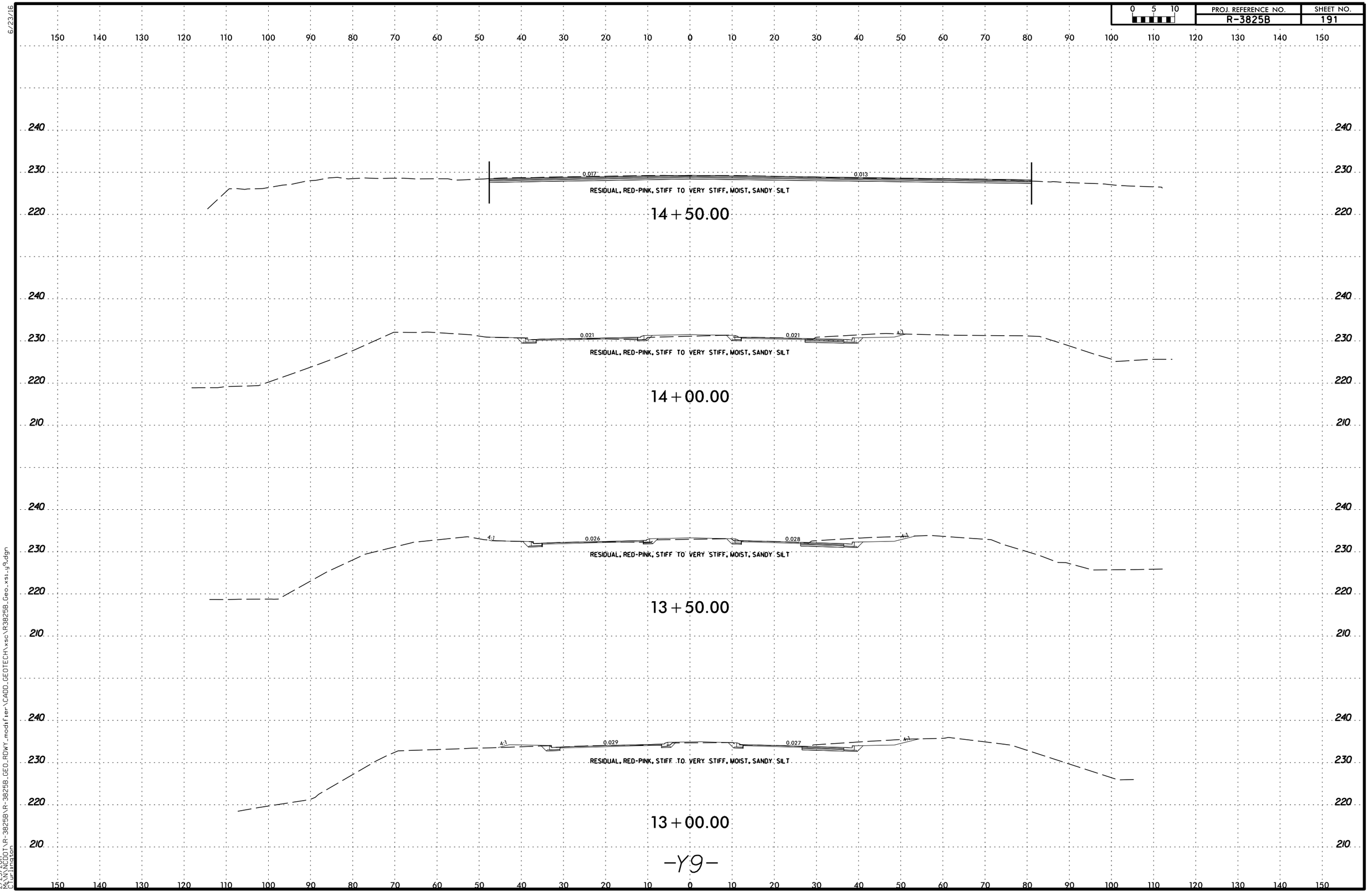


-Y9-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y9.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	191



-Y9-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y9.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	192

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

230
220
210

4:1 0.020 0.020 4:1

RESIDUAL, RED-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

16+50.00

240
230
220
210

4:1 0.020 0.020 4:1

RESIDUAL, RED-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

16+00.00

240
230
220
210

4:1 0.020 0.020 4:1

23
15
12
13

DRY (03/16) BT

RESIDUAL, RED-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

15+50.00

240
230
220
210

0.017 0.013 4:1

RESIDUAL, RED-PINK, STIFF TO VERY STIFF, MOIST, SANDY SILT

15+00.00

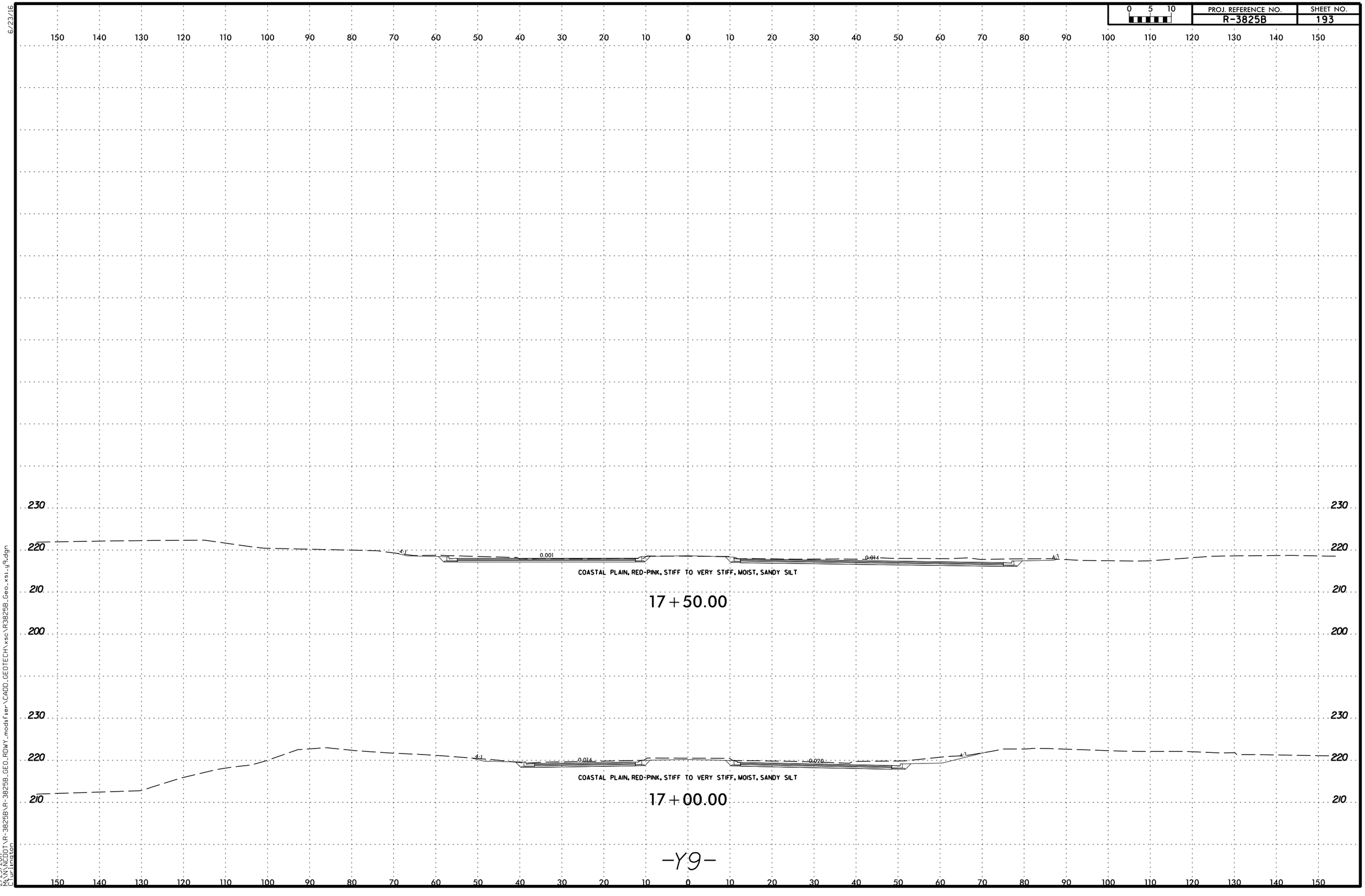
-Y9-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y9.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	193



-Y9-

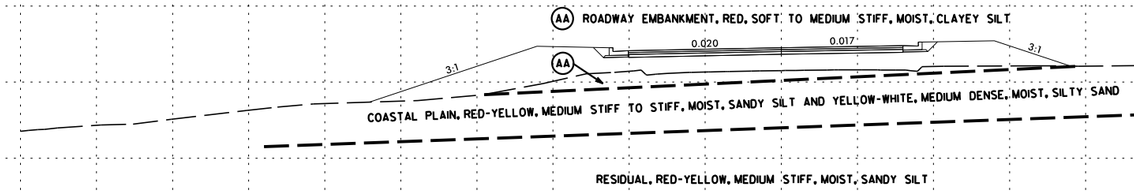
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y9.dgn
Clarington

6/23/16

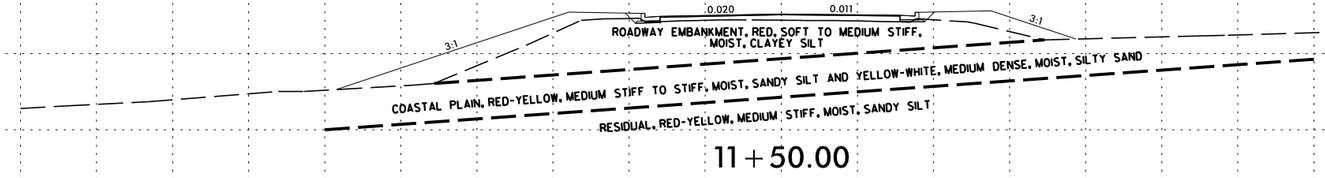
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	194

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

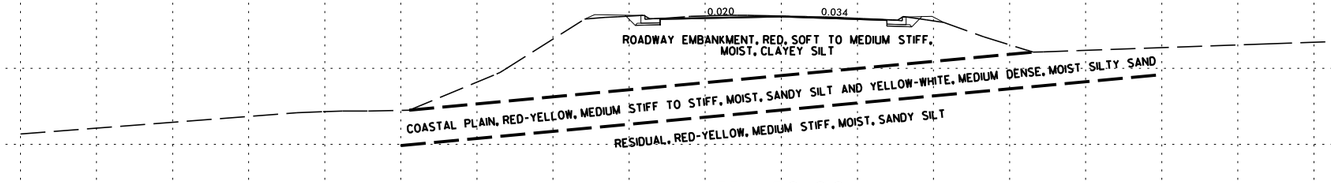
210
200
190
180
170



12+00.00



11+50.00



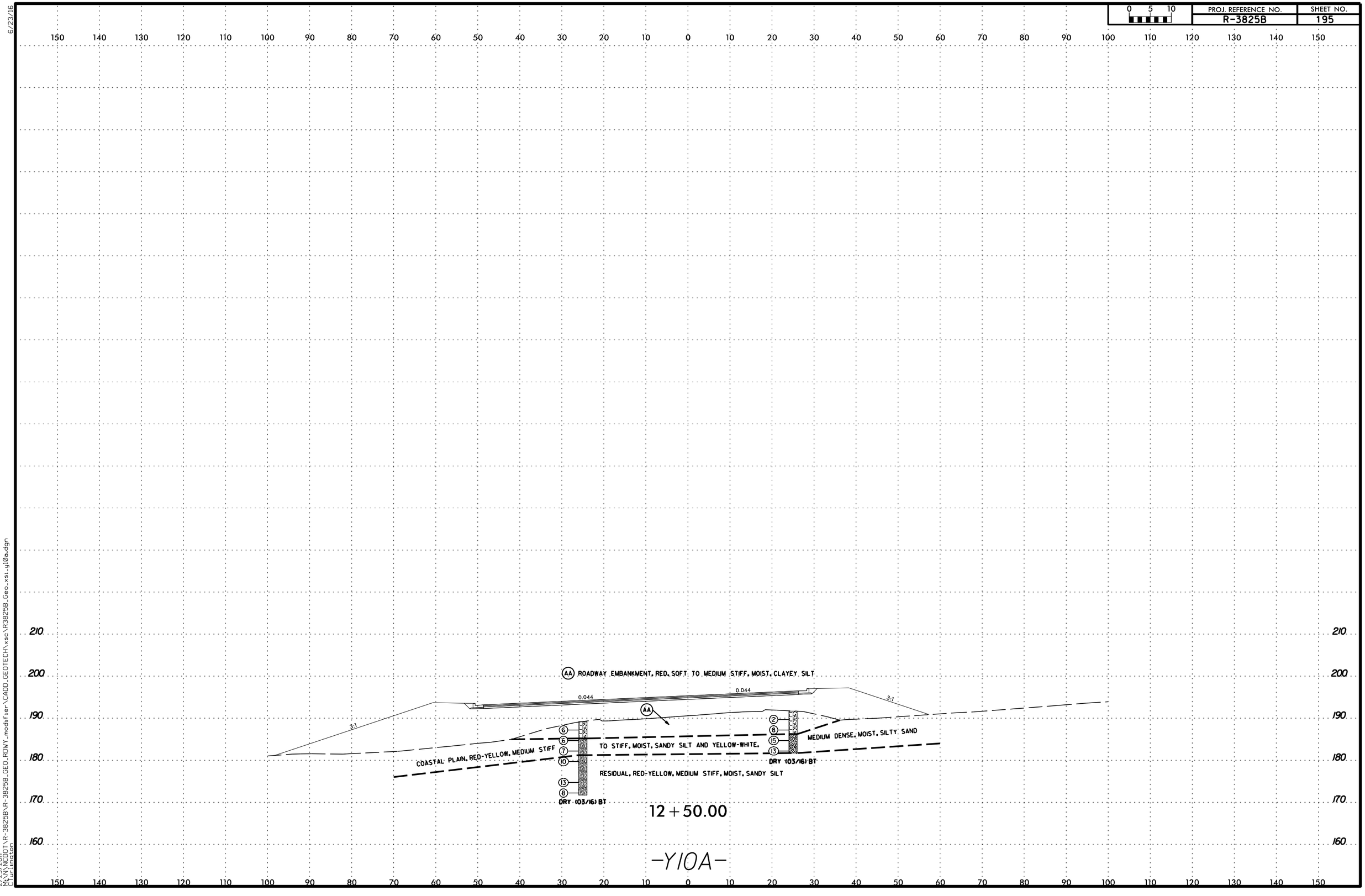
11+10.00

-YIOA-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_yl0a.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	195



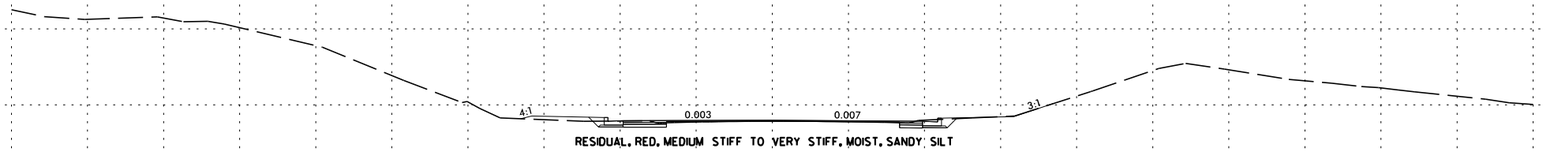
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_y10a.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	196

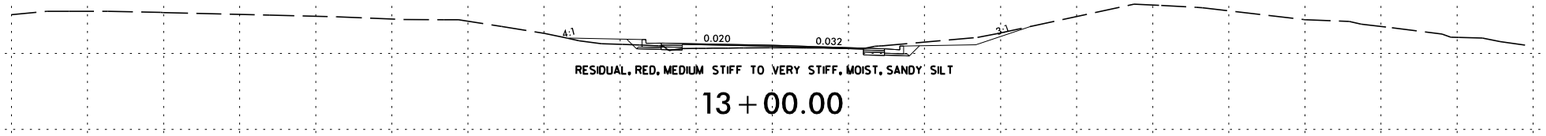
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

220 210 200 190



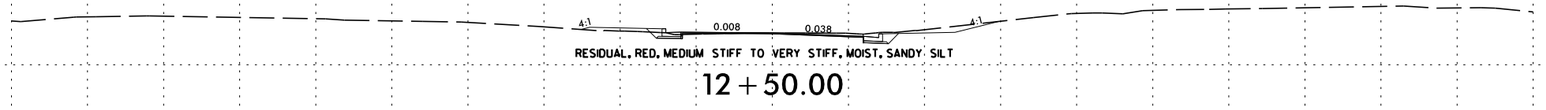
RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

13+50.00



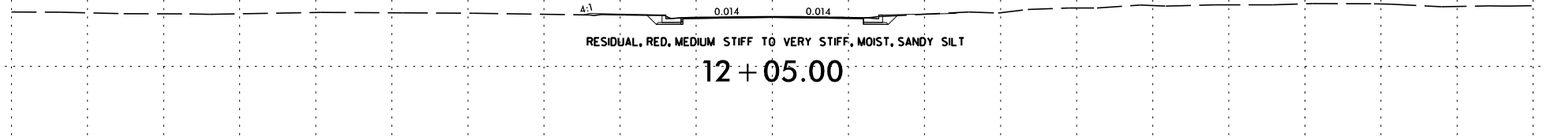
RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

13+00.00



RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

12+50.00



RESIDUAL, RED, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

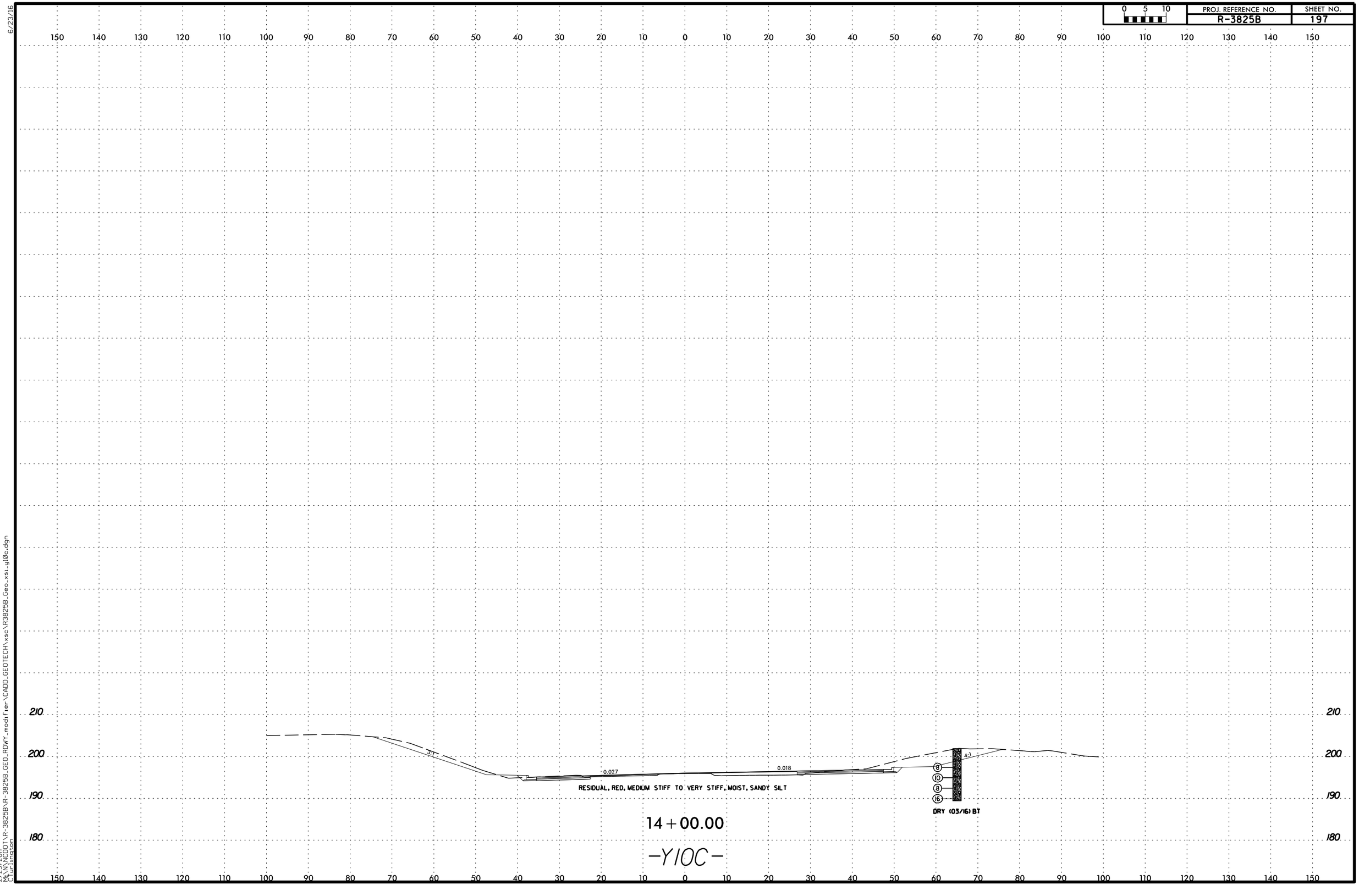
12+05.00

-YIOC-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_yl0c.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	197



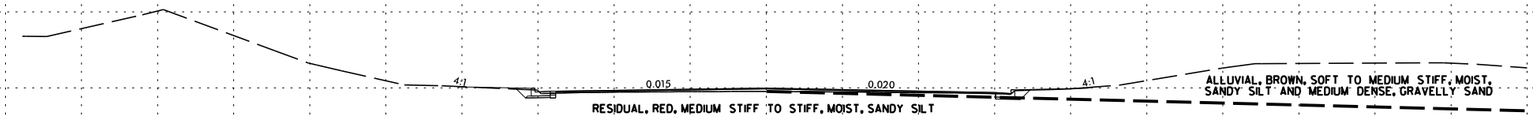
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_yl0c.dgn
Clarington

6/23/16

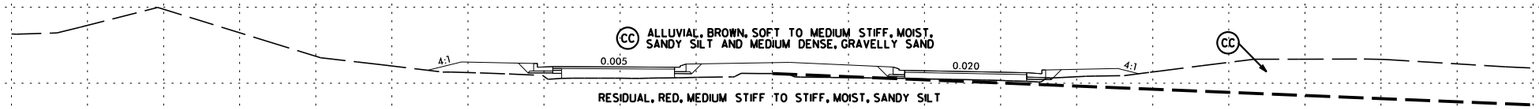
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	198

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

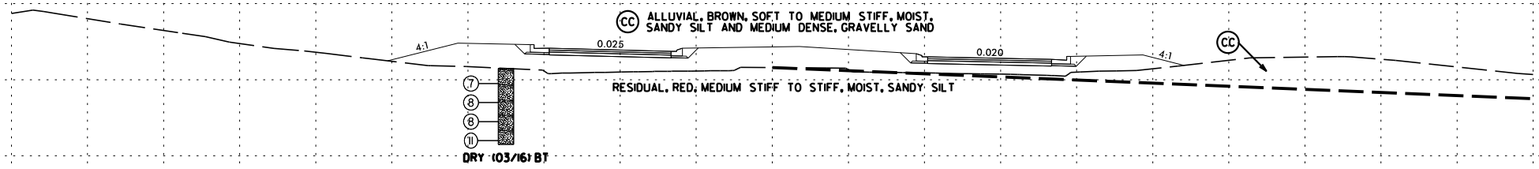
200 190 180 170



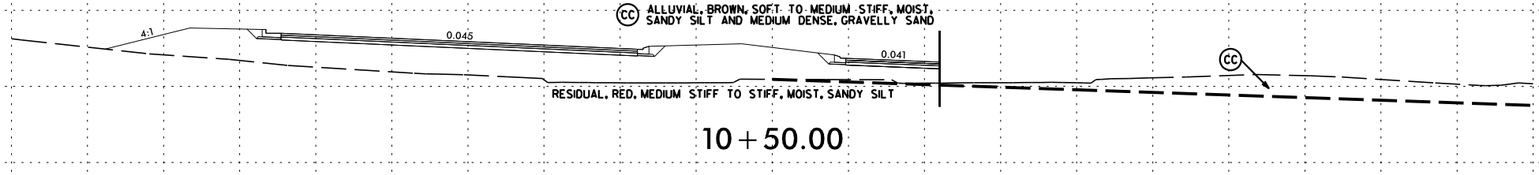
12+00.00



11+50.00



11+00.00



10+50.00

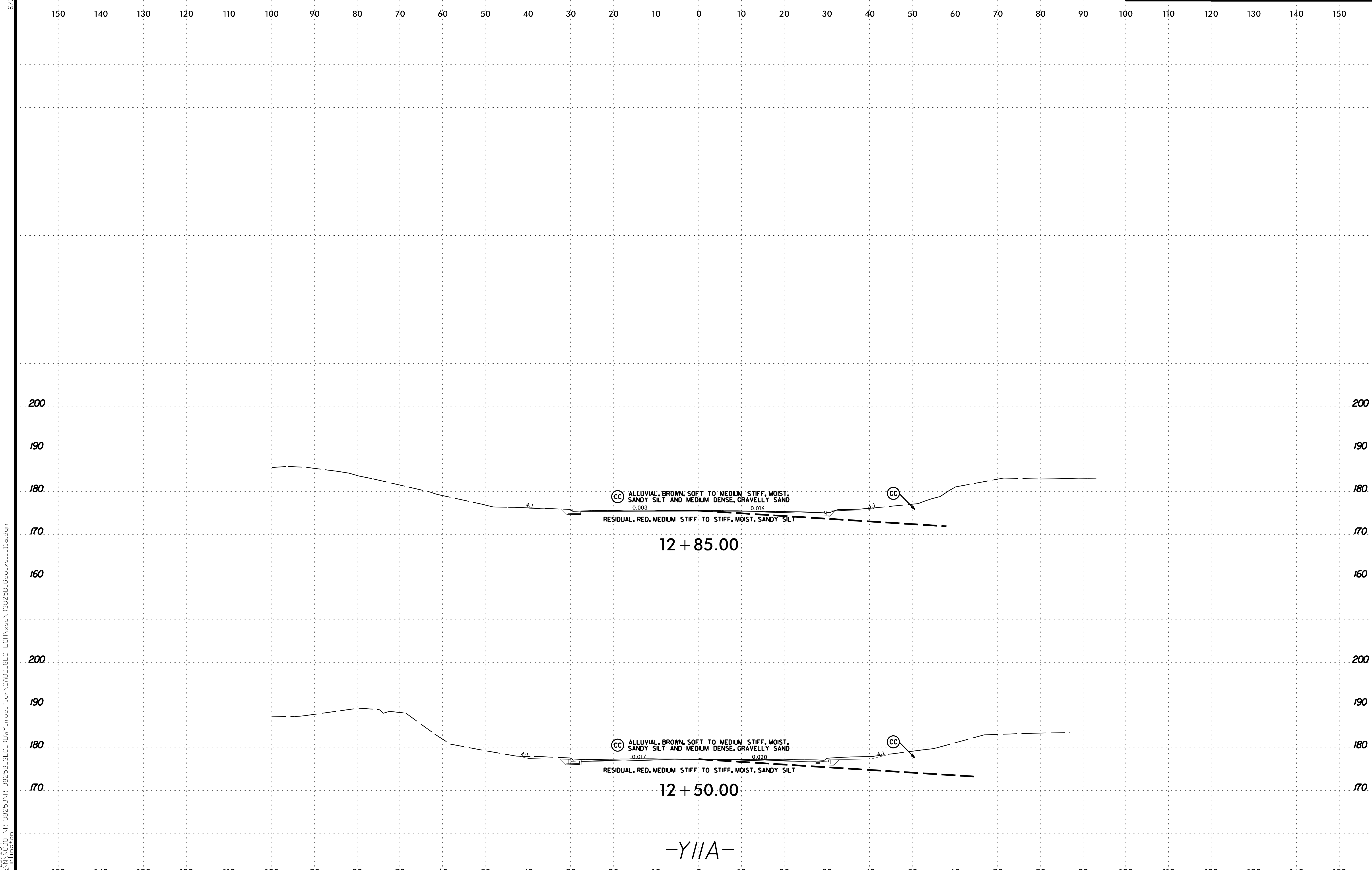
-Y1/A-

200 190 180 170 160

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_y11a.dgn
Clarington

PROJ. REFERENCE NO.	SHEET NO.
R-3825B	199



6/23/16

2/23/2017
M:\N\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_y11a.dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	200

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

240
230
220

Ⓢ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY SILT
0.017 0.022
4:1 4:1
RESIDUAL, RED-WHITE, SOFT TO STIFF, MOIST, SANDY SILT

11+76.00

240
230
220

Ⓢ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY SILT
0.005 0.035
4:1 4:1
RESIDUAL, RED-WHITE, SOFT TO STIFF, MOIST, SANDY SILT

11+50.00

260
250
240
230
220

Ⓢ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY SILT
Ⓥ ARTIFICIAL FILL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT
0.020 0.050
4:1 4:1
RESIDUAL, RED-WHITE, SOFT TO STIFF, MOIST, SANDY SILT

11+00.00

250
240
230
220

Ⓥ ARTIFICIAL FILL, RED-BROWN, STIFF TO VERY STIFF, MOIST, SANDY SILT
0.044 0.050
4:1 3:1
RESIDUAL, RED-WHITE, SOFT TO STIFF, MOIST, SANDY SILT
(5) (8) (13) (10)
DRY (03/16) BT
(3) (3) (3) (4)
DRY (03/16) BT

10+50.00

-Y11B-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_glib.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	201

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

240

230

220

Ⓢ ARTIFICIAL FILL, RED-BROWN, STIFF, MOIST, SANDY SILT

RESIDUAL, RED-WHITE, SOFT TO STIFF, MOIST, SANDY SILT

12+00.00

-Y11B-

240

230

220

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

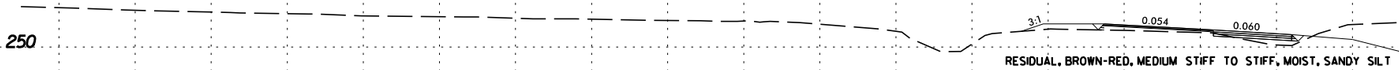
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_glib.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	202

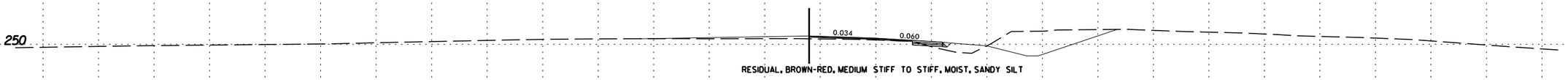
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

260
250
240



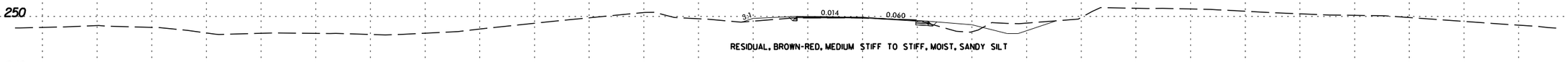
RESIDUAL, BROWN-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

13+00.00



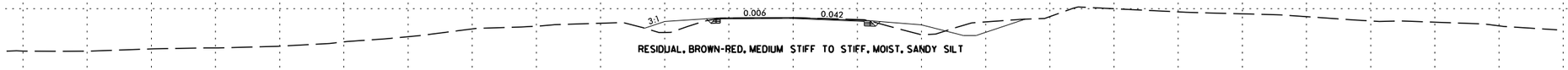
RESIDUAL, BROWN-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

12+50.00



RESIDUAL, BROWN-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

12+00.00



RESIDUAL, BROWN-RED, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

11+50.00

260
250
240
230

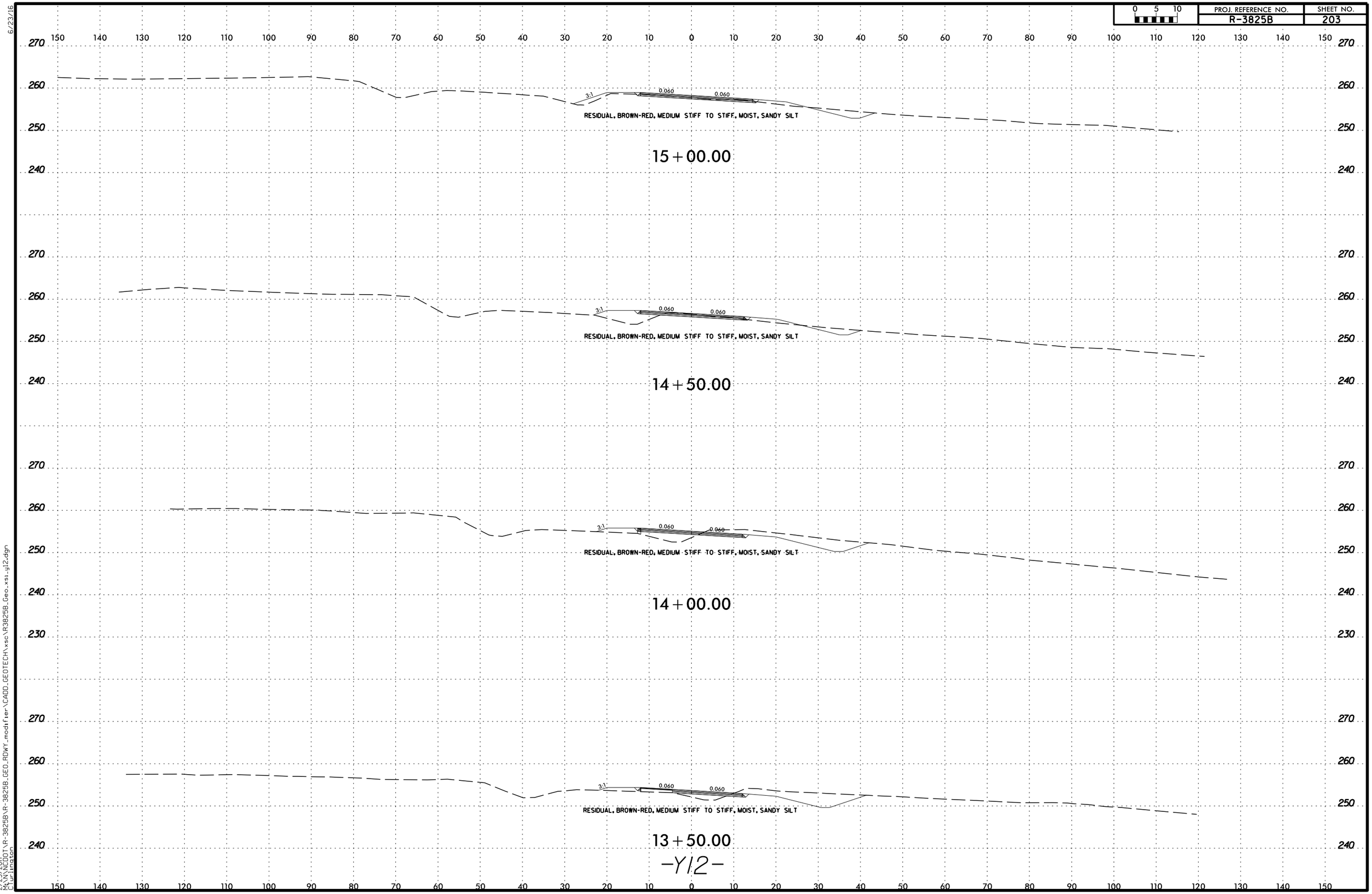
-Y12-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_yl2.dgn
CTurlington

6/23/16

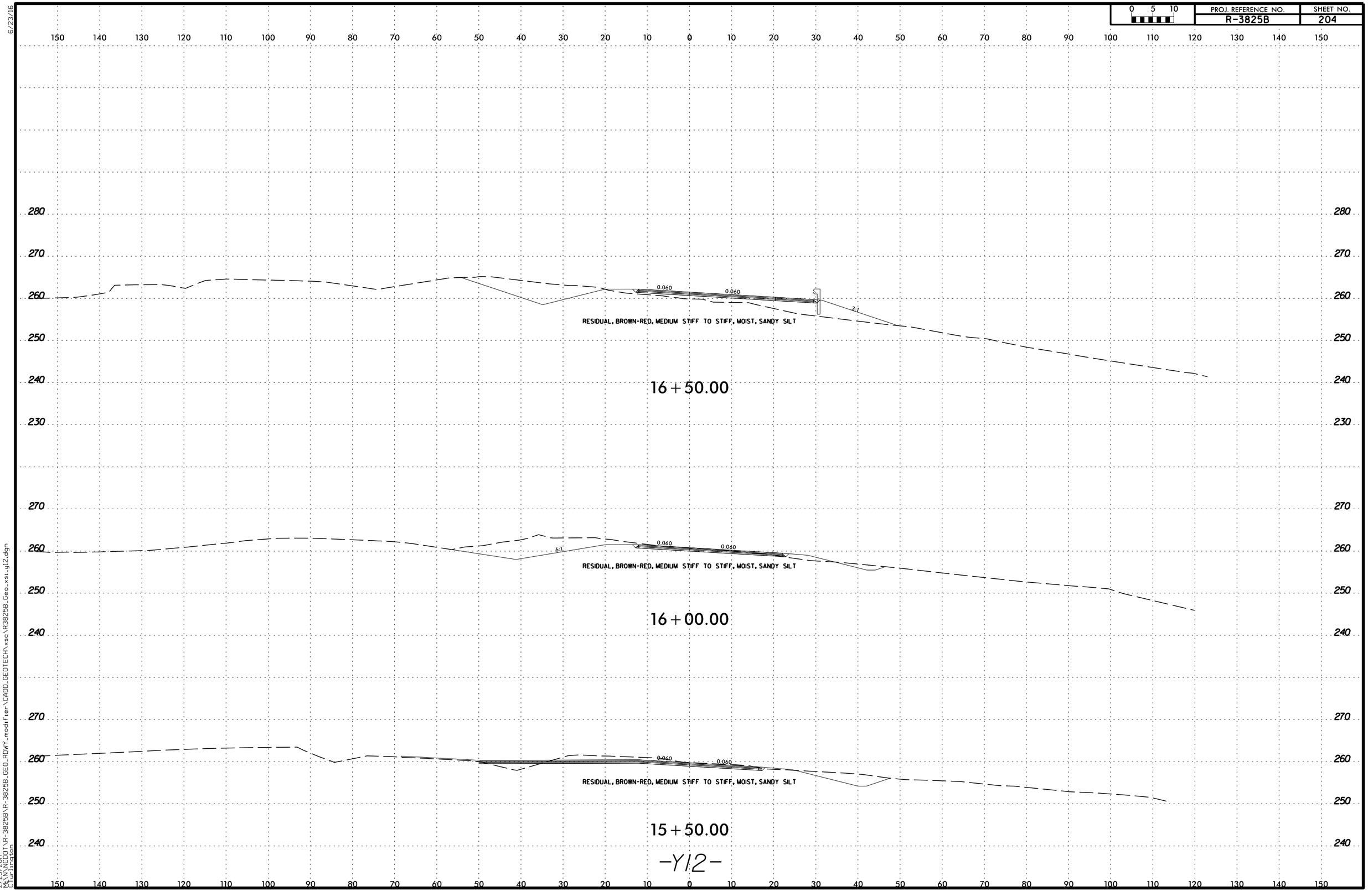
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	203



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_y12.dgn
Clarington

6/23/16

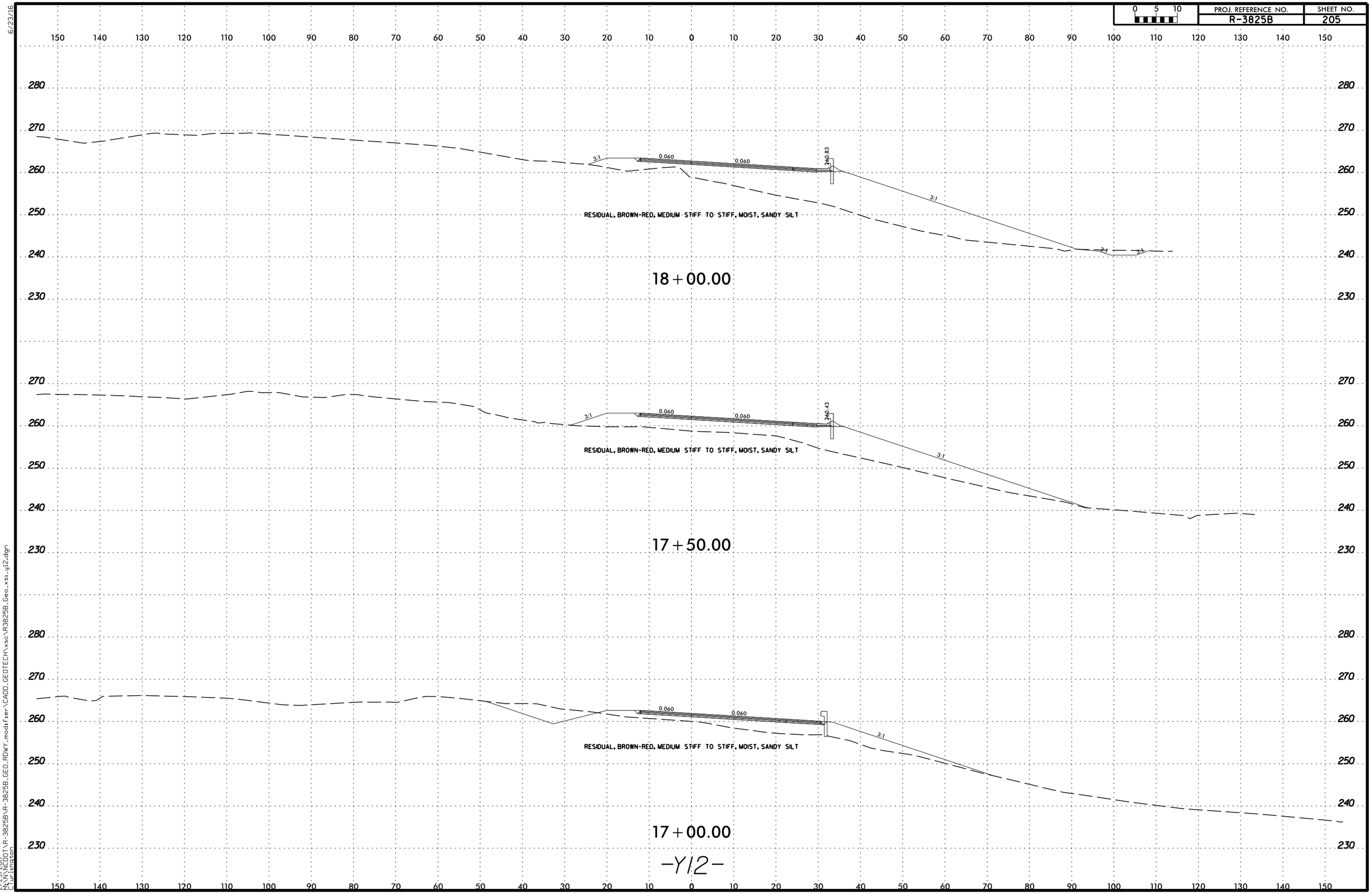
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	204



2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y12.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	205

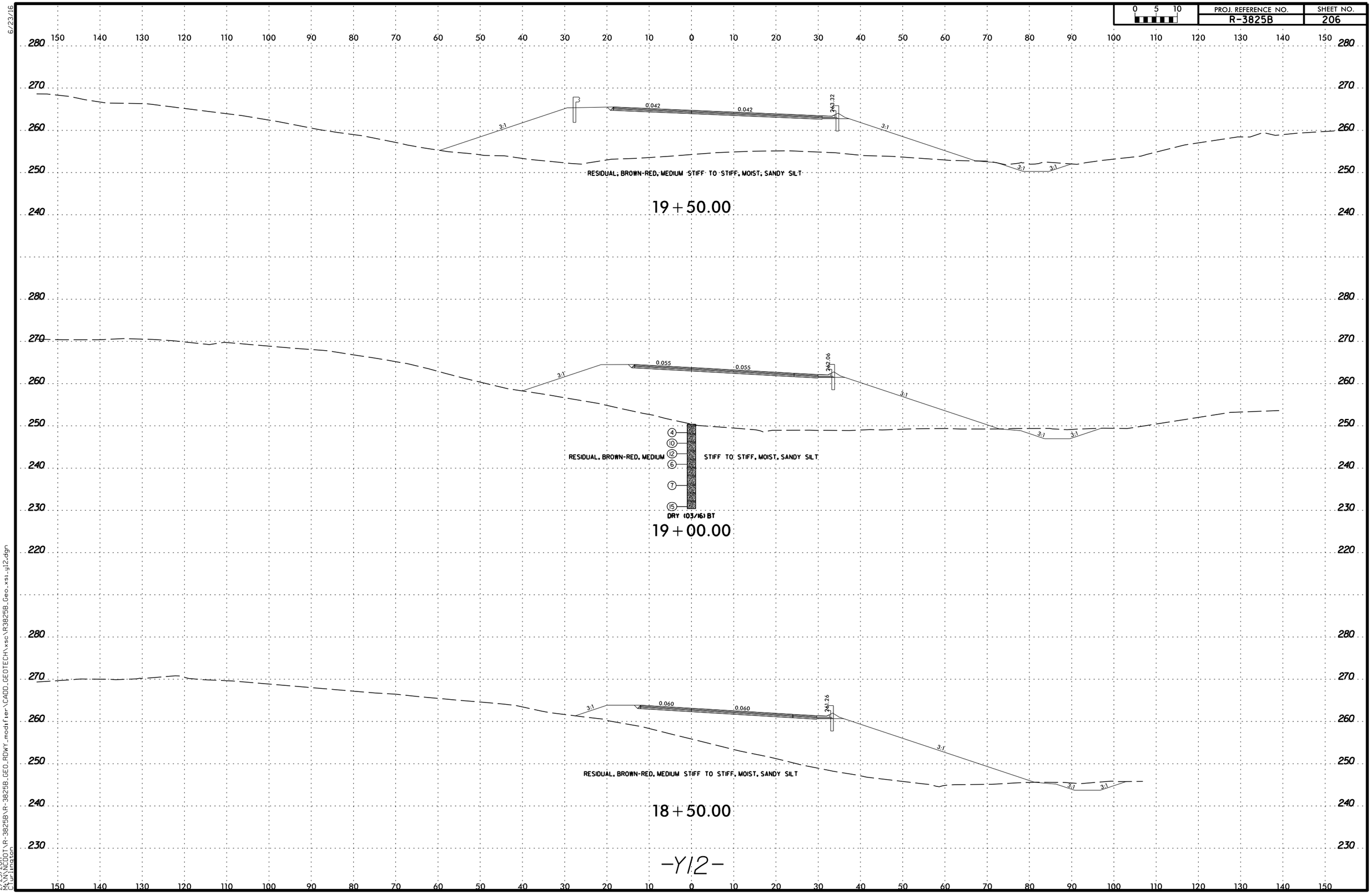


-Y12-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_gl2.dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	206

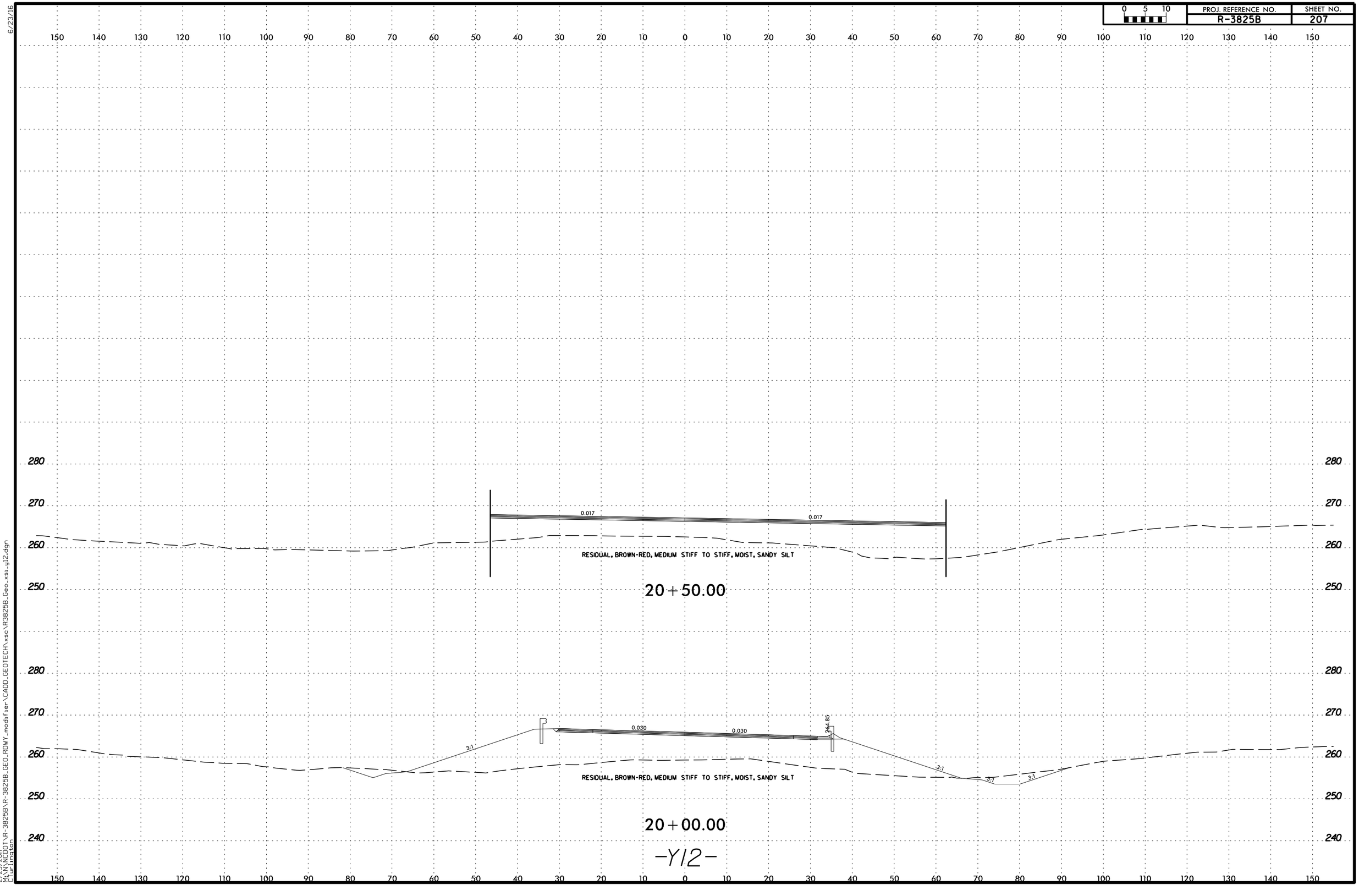


-Y12-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y12.dgn
Clarington

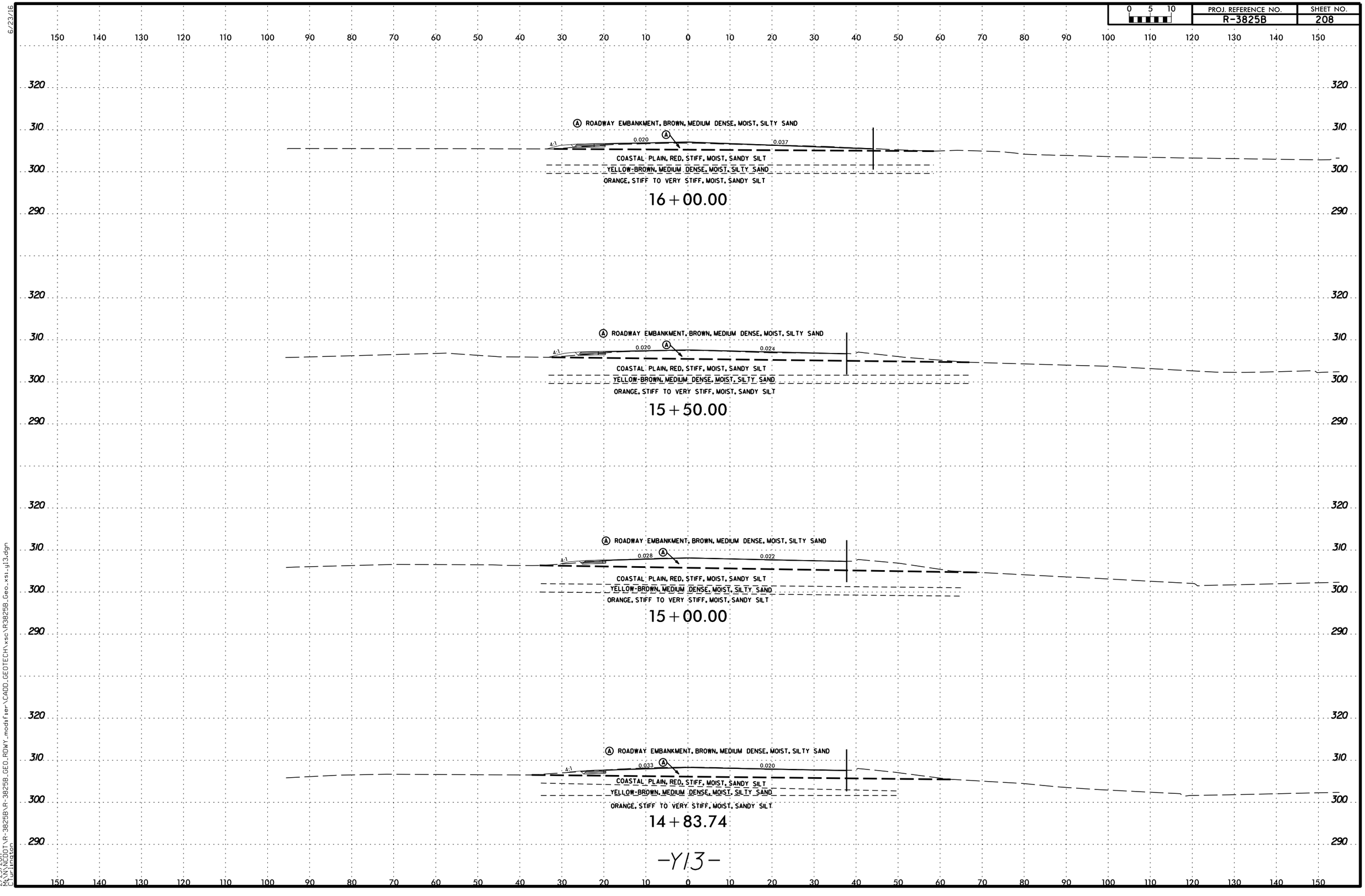
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	207



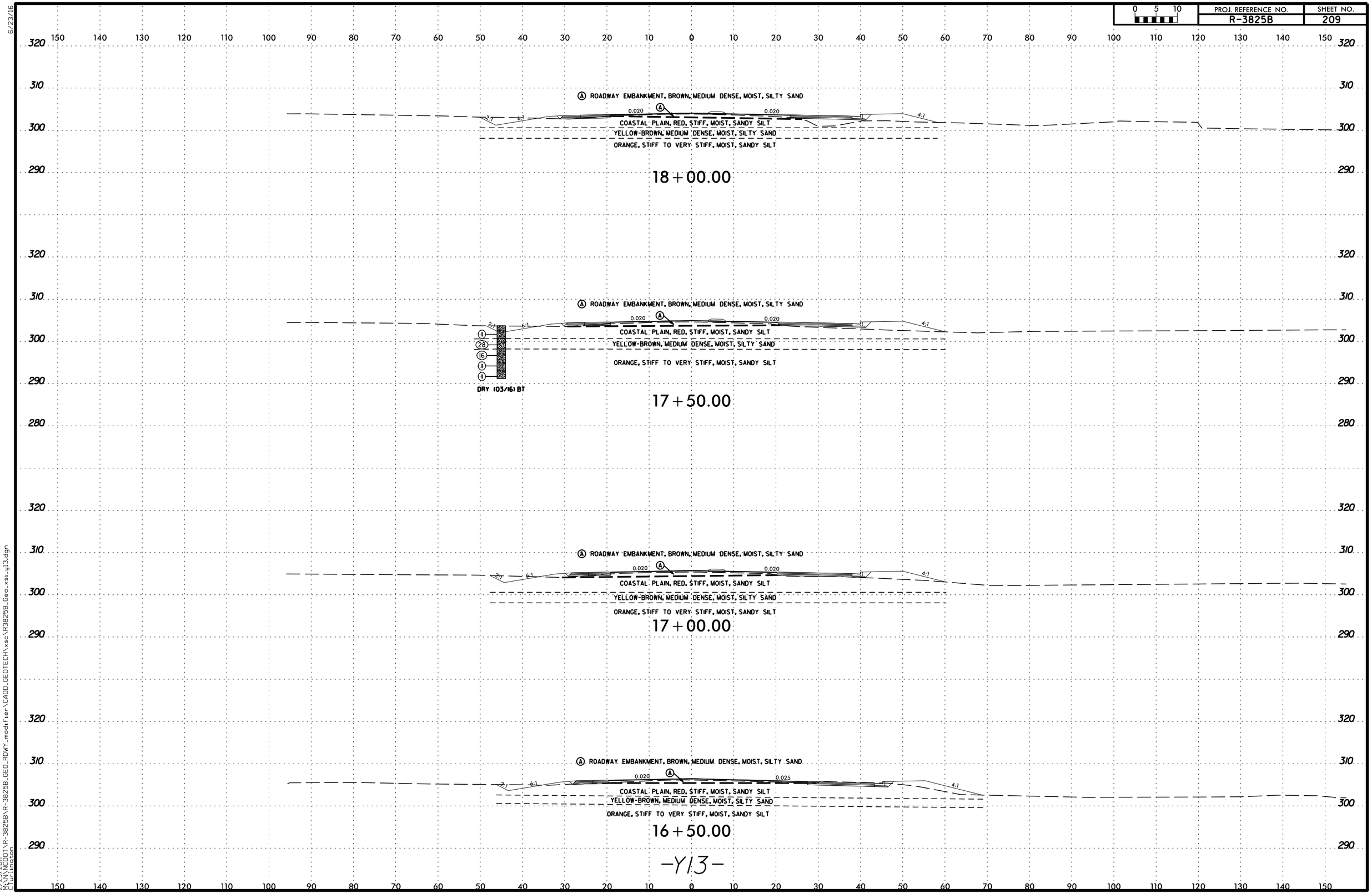
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_y12.dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	208



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	209



-Y13-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y13.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	210

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

310
300
290

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 6:1 0.020 0.020 4:1

COASTAL PLAIN, RED-ORANGE, STIFF, MOIST, SANDY SILT

20+00.00

310
300
290
280

2:1 6:1 0.020 0.020 4:1

COASTAL PLAIN, RED-ORANGE, STIFF, MOIST, SANDY SILT

12 14 10 9

DRY (03/16) BT

19+50.00

310
300
290

2:1 6:1 0.020 0.020 4:1

COASTAL PLAIN, RED-ORANGE, STIFF, MOIST, SANDY SILT

19+00.00

320
310
300
290

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

2:1 6:1 0.020 0.020 4:1

COASTAL PLAIN, RED, STIFF, MOIST, SANDY SILT
YELLOW-BROWN, MEDIUM DENSE, MOIST, SILTY SAND
RED-ORANGE, STIFF, MOIST, SANDY SILT

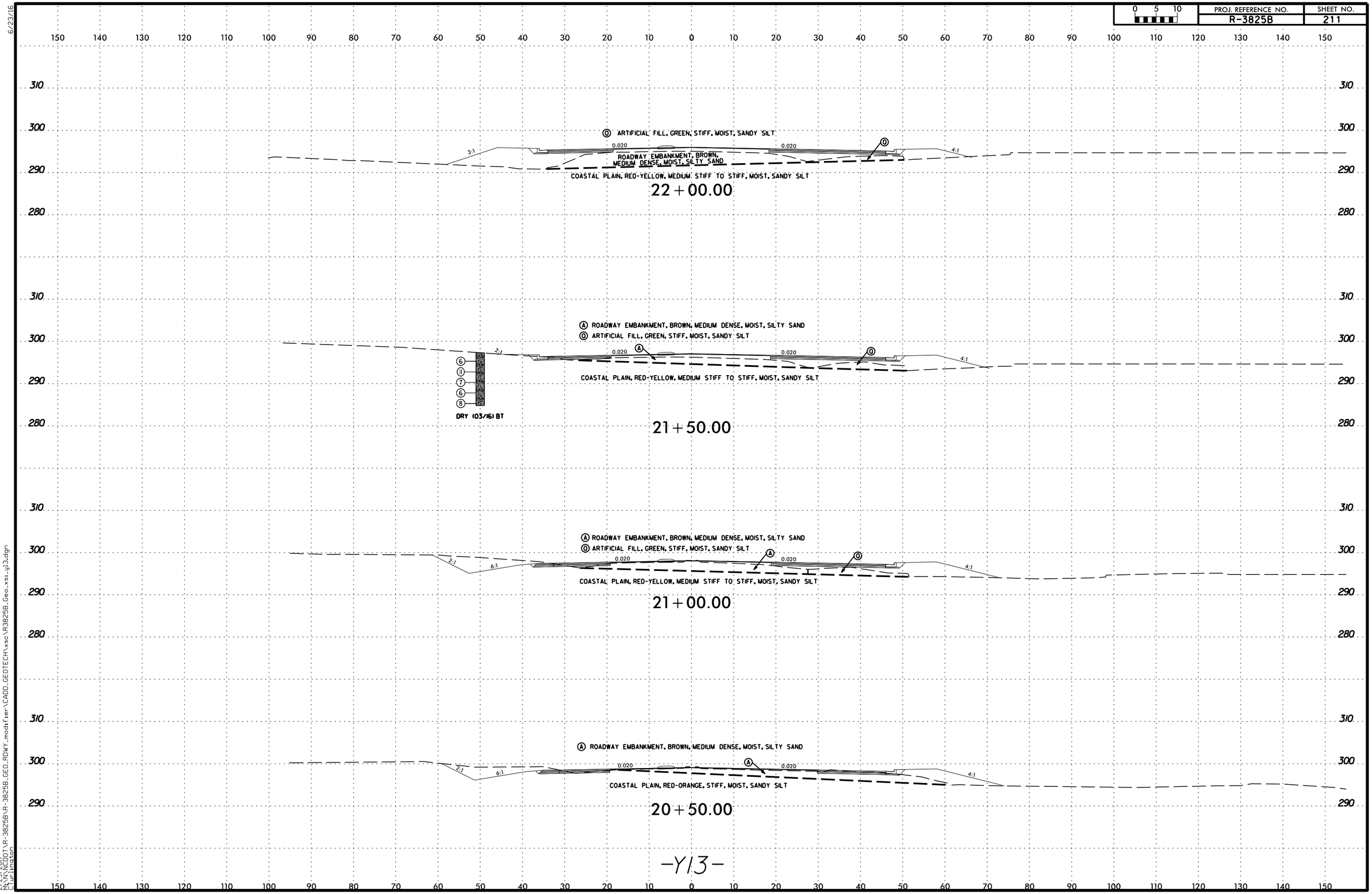
18+50.00

-Y13-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

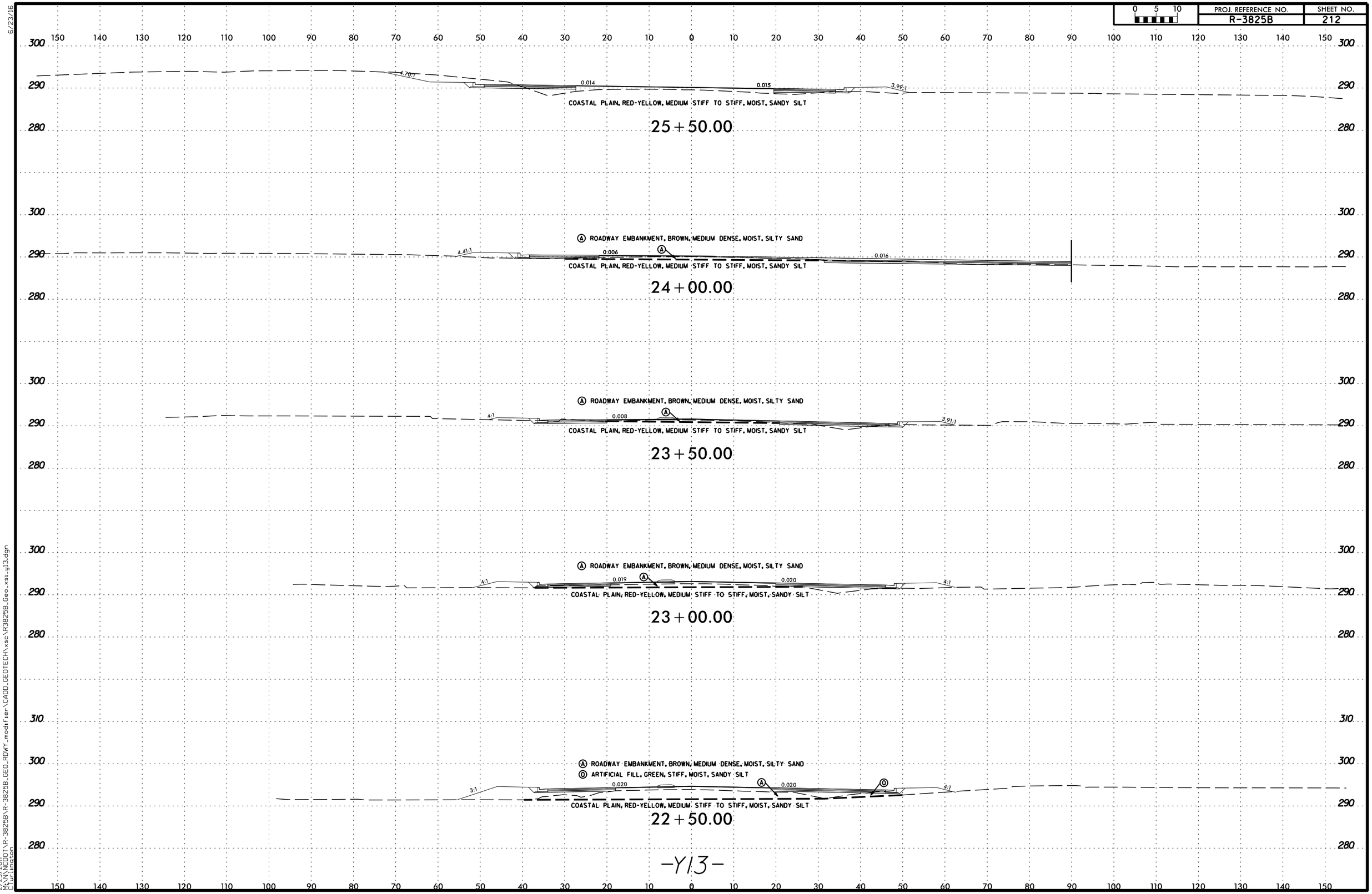
2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_yl3.dgn
Clarington

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	211



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	212



-Y13-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y13.dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	213

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

310
300
290
280

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 0.024 Ⓐ 0.024 4:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

27+50.00

300
290
280

4:1 0.030 0.030 4:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

27+00.00

300
290
280

4:1 0.030 0.030 4:1

COASTAL PLAIN, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

26+50.00

300
290
280

4:1 0.025 0.025 4:1

COASTAL PLAIN, RED-YELLOW, MEDIUM STIFF TO STIFF, MOIST, SANDY SILT

26+00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsl_yl3.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	214

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280
270

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 Ⓐ 0.019 0.019 4:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

29+50.00

300
290
280

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 Ⓐ 0.008 0.008 4:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

29+00.00

300
290
280

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 Ⓐ 0.003 0.003 ② 6:1 2:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

FIAD
BT

28+50.00

310
300
290
280

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 0.014 Ⓐ 0.014 4:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

28+00.00

-Y13-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_gl3.dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	215

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300 290 280 270

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 Ⓐ 0.030 0.030 4:1

COASTAL PLAIN, BROWN, SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

RED, MEDIUM STIFF, MOIST, SANDY CLAY

31+50.00

4:1 0.030 0.030 4:1

COASTAL PLAIN, BROWN, SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

RED, MEDIUM STIFF, MOIST, SANDY CLAY

31+00.00

4:1 0.030 0.030 4:1

⑦ ④ ⑧ ⑤

COASTAL PLAIN, BROWN, SOFT TO MEDIUM STIFF, MOIST, SANDY SILT

RED, MEDIUM STIFF, MOIST, SANDY CLAY

DRY (03/16) BT

30+50.00

4:1 0.030 0.030 4:1

COASTAL PLAIN, BROWN, SOFT, MOIST, SANDY SILT

30+00.00

-Y13-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_yl3.dgn
Clarington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	216

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280
270

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

0.030' Ⓐ 0.030' 4:1 4:1

COASTAL PLAIN, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

33+50.00

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

0.030' Ⓐ 0.030' 4:1 4:1

COASTAL PLAIN, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

33+00.00

0.030' 0.030' 4:1 4:1

⑦ ⑨ ⑰ ⑪

COASTAL PLAIN, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

DRY (03/16) BT

32+50.00

0.030' 0.030' 4:1 4:1

COASTAL PLAIN, RED-YELLOW, MEDIUM STIFF TO VERY STIFF, MOIST, SANDY SILT

32+00.00

-Y13-

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_RDWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xs1_gl3.dgn
CTurlington

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-3825B	217

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

300
290
280
270

Ⓐ ROADWAY EMBANKMENT, BROWN, MEDIUM DENSE, MOIST, SILTY SAND

4:1 0.020 0.020 6:1 2:1

COASTAL PLAIN, BROWN, VERY LOOSE TO LOOSE, MOIST, SILTY SAND

RED-YELLOW, VERY STIFF, MOIST, SANDY SILT

34+50.00

290
280
270

4:1 0.020 0.020 4:1

2
8
18
15

COASTAL PLAIN, BROWN, VERY LOOSE TO LOOSE, MOIST, SILTY SAND

RED-YELLOW, VERY STIFF, MOIST, SANDY SILT

DRY (03/16) BT

34+00.00

-Y13-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

2/23/2017
M:\NCDOT\R-3825B\R-3825B_GEO_ROWY_modifier\CADD_GEOTECH\xsc\R3825B_Geo_xsi_y13.dgn
Clarington

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3825B	1	9

REFERENCE: R-3825B

PROJECT: 34552

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

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY JOHNSTON

PROJECT DESCRIPTION NC 42 FROM EAST OF SR 1902 (GLEN LAUREL RD) TO SR 1003 (BUFFALOE RD)

SITE DESCRIPTION PROPOSED UTILITIES EASEMENT

CONTENTS

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

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

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

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

PERSONNEL

N. O. MOORE

A. N. KINTNER

D. G. PINTER

R. E. CLARKE

INVESTIGATED BY J. L. LOVE

DRAWN BY A. N. KINTNER

CHECKED BY C. A. KREIDER

SUBMITTED BY J. L. LOVE

DATE FEBRUARY 2018

NORTH CAROLINA LICENSED SEAL 2157 GEOLOGIST JAIME L. LOVE

DocuSigned by:
Jaime L. Love 2/15/2018
B93571039B8240E...
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2				A-4	A-5	A-6	A-7	A-1, A-2 A-3	A-4, A-5 A-6, A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5, A-7-6			
SYMBOL														
% PASSING #10 #40 #200	50 MX 30 MX 15 MX		50 MX 25 MX	51 MN 10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
MATERIAL PASSING #40 LL PI	6 MX		—	—	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
GROUP INDEX	0		0		0		4 MX		8 MX	12 MX	16 MX	NO MX			
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND					SILTY SOILS		CLAYEY SOILS				
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD								FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH ($TONS/FT^2$)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	< 4 4 TO 10 10 TO 30 30 TO 50 > 50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30	< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE	MM	305	75	2.0	0.25	0.05	0.005
	IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT		
PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL — PLASTIC LIMIT		
OM — OPTIMUM MOISTURE SL — SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL	
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE	1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE	10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME	20 - 35%
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW — PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 — DIP & DIP DIRECTION OF ROCK STRUCTURES
- SPT, DPT, DMT, VST, PMT — TEST BORING
- AUGER BORING
- CORE BORING
- MW — MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING WITH CORE
- SPT N-VALUE

RECOMMENDATION SYMBOLS

- UNDERCUT
- SHALLOW UNDERCUT
- UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
- UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK
- UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS

S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [ ] CME-45C
- [X] CME-55
- [ ] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [ ] _____
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [ ] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [X] CASING [X] W/ ADVANCER
- [ ] TRICONE _____" STEEL TEETH
- [ ] TRICONE _____" TUNG.-CARB.
- [X] CORE BIT
- [ ] _____

HAMMER TYPE:
- [X] AUTOMATIC [ ] MANUAL

CORE SIZE:
- [ ] -B _____ [ ] -H _____
- [X] -N XWL

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [ ] HAND AUGER
- [ ] SOUNDING ROD
- [ ] VANE SHEAR TEST
- [ ] _____

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.
ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD	CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
HARD	CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
MODERATELY HARD	CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
VERY SOFT	CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FOOT
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK: BORING ELEVATIONS TAKEN FROM r3825b_ls_tnl.tin
DATED 11/08/17.

ELEVATION: FEET

NOTES:

DATE: 8-15-14

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	2A

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SUPPLEMENTAL LEGEND, GEOLOGICAL STRENGTH INDEX (GSI) TABLES FROM AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

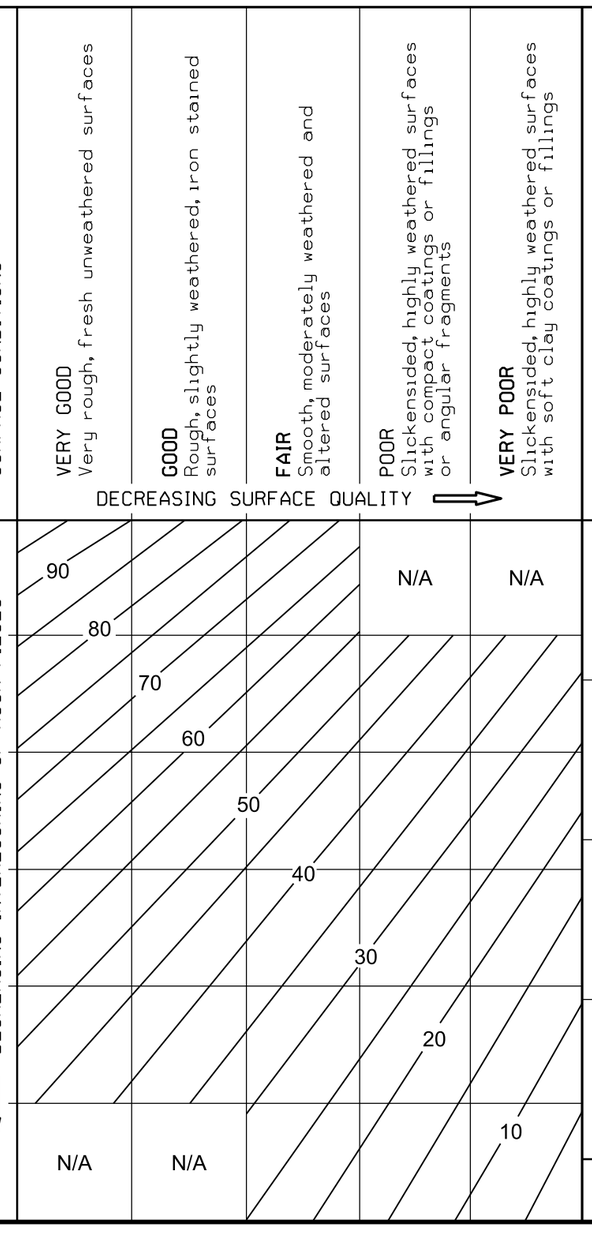
AASHTO LRFD Figure 10.4.6.4-1 — Determination of GSI for Jointed Rock Mass (Marinos and Hoek, 2000)

GEOLOGICAL STRENGTH INDEX (GSI) FOR JOINTED ROCKS (Hoek and Marinos, 2000)

From the lithology, structure and surface conditions of the discontinuities, estimate the average value of GSI. Do not try to be too precise. Quoting a range from 33 to 37 is more realistic than stating that GSI = 35. Note that the table does not apply to structurally controlled failures. Where weak planar structural planes are present in an unfavorable orientation with respect to the excavation face, these will dominate the rock mass behaviour. The shear strength of surfaces in rocks that are prone to deterioration as a result of changes in moisture content will be reduced if water is present. When working with rocks in the fair to very poor categories, a shift to the right may be made for wet conditions. Water pressure is dealt with by effective stress analysis.

STRUCTURE

- INTACT OR MASSIVE - intact rock specimens or massive in situ rock with few widely spaced discontinuities
- BLOCKY - well interlocked undisturbed rock mass consisting of cubical blocks formed by three intersecting discontinuity sets
- VERY BLOCKY - interlocked, partially disturbed mass with multi-faceted angular blocks formed by 4 or more joint sets
- BLOCKY/DISTURBED/SEAMY - folded with angular blocks formed by many intersecting discontinuity sets. Persistence of bedding planes or schistosity
- DISINTEGRATED - poorly interlocked, heavily broken rock mass with mixture of angular and rounded rock pieces
- LAMINATED/SHEARED - Lack of blockiness due to close spacing of weak schistosity or shear planes

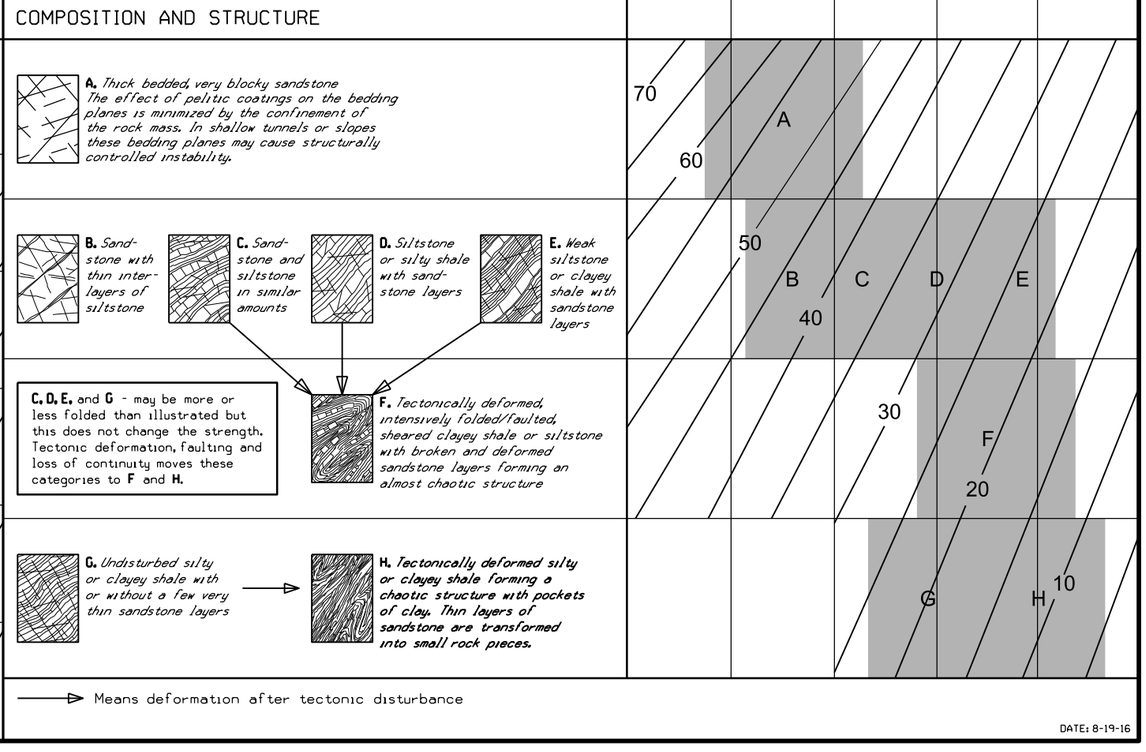


AASHTO LRFD Figure 10.4.6.4-2 — Determination of GSI for Tectonically Deformed Heterogeneous Rock Masses (Marinos and Hoek, 2000)

GSI FOR HETEROGENEOUS ROCK MASSES SUCH AS FLYSCH (Marinos. P and Hoek E., 2000)

From a description of the lithology, structure and surface conditions (particularly of the bedding planes), choose a box in the chart. Locate the position in the box that corresponds to the condition of the discontinuities and estimate the average value of GSI from the contours. Do not attempt to be too precise. Quoting a range from 33 to 37 is more realistic than giving GSI = 35. Note that the Hoek-Brown criterion does not apply to structurally controlled failures. Where unfavourably oriented continuous weak planar discontinuities are present, these will dominate the behaviour of the rock mass. The strength of some rock masses is reduced by the presence of groundwater and this can be allowed for by a slight shift to the right in the columns for fair, poor and very poor conditions. Water pressure does not change the value of GSI and it is dealt with by using effective stress analysis.

COMPOSITION AND STRUCTURE

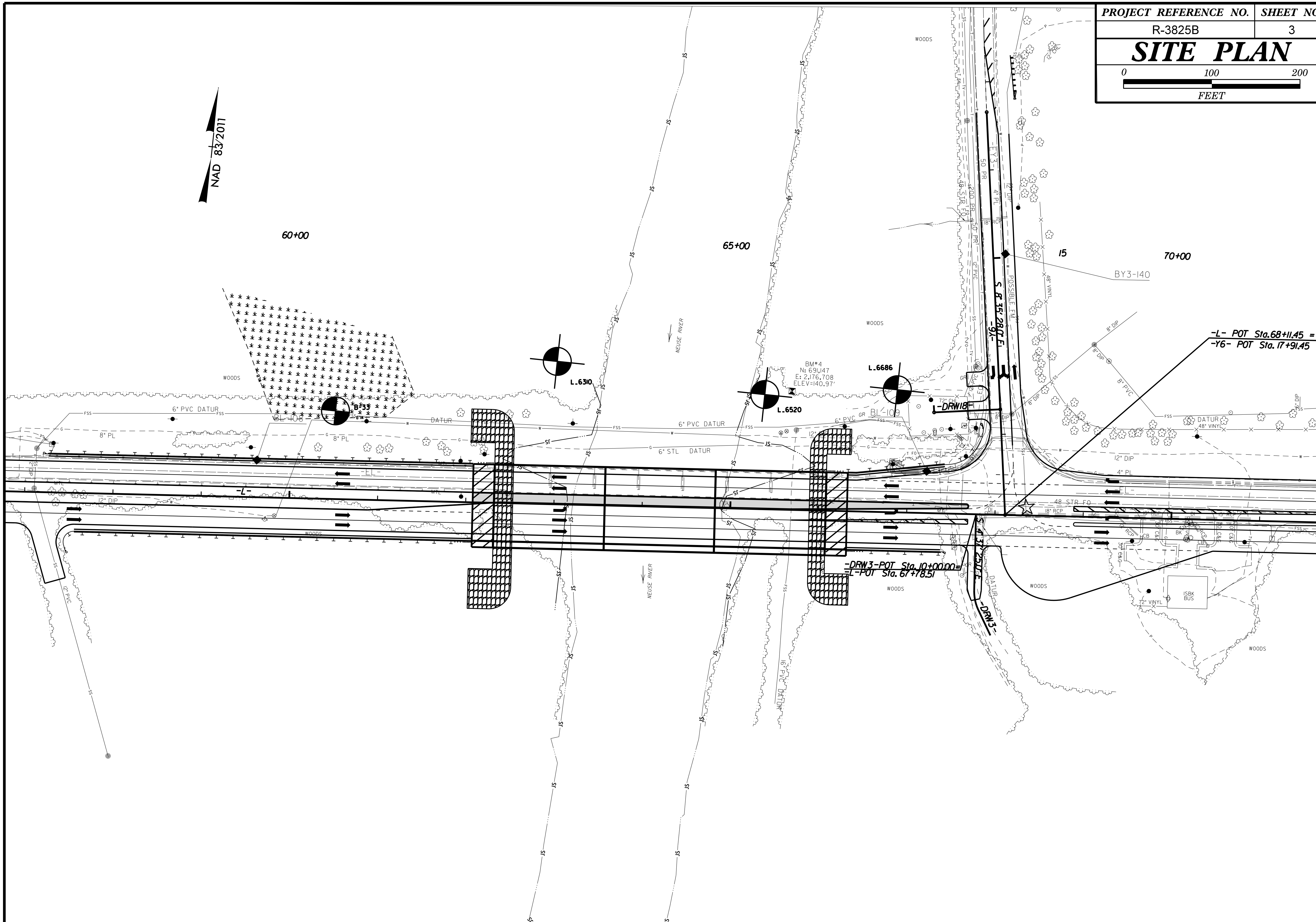


DATE: 8-19-16

PROJECT REFERENCE NO.	SHEET NO.
R-3825B	3

SITE PLAN

0 100 200
FEET



GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** MARCELO MEDEIROS	
SITE DESCRIPTION NC-42 From East of SR1902 to SR1003				**GROUND WTR (ft)**
BORING NO. B-33	**STATION** 60+50	**OFFSET** 100 ft LT	**ALIGNMENT** -L-	**0 HR.** 0.5
COLLAR ELEV. 139.7 ft	**TOTAL DEPTH** 14.3 ft	**NORTHING** 691,070	**EASTING** 2,176,196	**24 HR.** 0.0
DRILL RIG/HAMMER EFF./DATE BRI9910 BK-51 75% 06/03/2015		**DRILL METHOD** H.S. Augers		**HAMMER TYPE** Automatic
DRILLER Contract Driller	**START DATE** 03/07/16	**COMP. DATE** 03/07/16	**SURFACE WATER DEPTH** N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
140										139.7 GROUND SURFACE	0.0
	138.7	1.0	2	2	4	6		M		**ALLUVIAL** BROWN, CLAYEY SILT WITH TRACE MICA	
	136.2	3.5								136.7	3.0
135			2	4	5	9		M		TAN-BROWN, SANDY CLAY	
	133.7	6.0	2	2	3	5		M			
	131.2	8.5									
130	129.7	10.0	2	2	3	5		M		129.7	10.0
			6	100/0.3		100/0.8				**WEATHERED ROCK** (SCHIST)	
										125.4	14.3
										Boring Terminated at Elevation 125.4 ft IN WEATHERED ROCK (SCHIST)	
										BORING DRILLED DURING ROADWAY INVESTIGATION BY GEOSYNTEC.	

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** Kintner, A. N.	
SITE DESCRIPTION UTILITIES AT NEUSE RIVER BRIDGE ON NC 42				**GROUND WTR (ft)**
BORING NO. L_6310	**STATION** 63+00	**OFFSET** 162 ft LT	**ALIGNMENT** -L-	**0 HR.** 7.9
COLLAR ELEV. 139.8 ft	**TOTAL DEPTH** 30.5 ft	**NORTHING** 691,152	**EASTING** 2,176,440	**24 HR.** 12.0
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 86% 11/17/2017		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Automatic	
DRILLER Pinter, D. G.	**START DATE** 02/08/18	**COMP. DATE** 02/08/18	**SURFACE WATER DEPTH** N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
140										139.8 GROUND SURFACE	0.0
										138.3 TOPSOIL AND ROOT MAT	1.5
135	136.1	3.7	4	6	6	12		M		**ALLUVIAL** TAN-BROWN-ORANGE TO GRAY, SILTY SAND WITH TRACE MICA AND TRACE TO LITTLE ORGANICS AND WOOD FRAGMENTS	
130	131.1	8.7	4	5	5	10		M			
125	126.1	13.7	1	2	4	6		M		123.7	16.1
										WEATHERED ROCK (GNEISS)	
120	121.1	18.7	60/0.1			60/0.1				121.1	18.7
										121.0 **CRYSTALLINE ROCK** (GNEISS) DARK GREEN AND DARK GRAY, VERY SLIGHT WEATHERING TO FRESH, HARD TO VERY HARD, CLOSE TO MODERATELY CLOSE FRACTURE SPACING, GNEISS REC=100% RQD=75% GSI=75-80	18.8
115											
110										109.3	30.5
										Boring Terminated at Elevation 109.3 ft IN CRYSTALLINE ROCK (GNEISS)	

NCDOT BORE DOUBLE R3825_GEO_UTILITIES.GPJ NC_DOT.GDT 2/15/18

GEOTECHNICAL BORING REPORT
CORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** Kintner, A. N.	
SITE DESCRIPTION UTILITIES AT NEUSE RIVER BRIDGE ON NC 42				**GROUND WTR (ft)**
BORING NO. L_6310	**STATION** 63+00	**OFFSET** 162 ft LT	**ALIGNMENT** -L-	**0 HR.** 7.9
COLLAR ELEV. 139.8 ft	**TOTAL DEPTH** 30.5 ft	**NORTHING** 691,152	**EASTING** 2,176,440	**24 HR.** 12.0
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 86% 11/17/2017		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Automatic	
DRILLER Pinter, D. G.	**START DATE** 02/08/18	**COMP. DATE** 02/08/18	**SURFACE WATER DEPTH** N/A	
CORE SIZE NXWL	**TOTAL RUN** 11.7 ft			

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS ELEV. (ft)	DEPTH (ft)
121.02											Begin Coring @ 18.8 ft	
120	121.0	18.8	1.7	1:10/0.7 3:01/1.0	(1.7) 100%	(0.8) 47%		(11.7) 100%	(8.8) 75%		121.0 DARK GREEN AND DARK GRAY, VERY SLIGHT WEATHERING TO FRESH, HARD TO VERY HARD, CLOSE TO MODERATELY CLOSE FRACTURE SPACING, GNEISS GSI=75-80	18.8
	119.3	20.5	5.0	2:17/1.0 1:59/1.0 2:58/1.0 3:15/1.0 2:57/1.0	(5.0) 100%	(4.0) 80%						
115	114.3	25.5	5.0	2:45/1.0 3:13/1.0 3:41/1.0 3:52/1.0 2:47/1.0	(5.0) 100%	(4.0) 80%						
110	109.3	30.5									109.3 Boring Terminated at Elevation 109.3 ft IN CRYSTALLINE ROCK (GNEISS)	30.5

NCDOT CORE DOUBLE R3825_GEO_UTILITIES.GPJ NC_DOT.GDT 2/15/18

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** Kintner, A. N.	
SITE DESCRIPTION UTILITIES AT NEUSE RIVER BRIDGE ON NC 42				**GROUND WTR (ft)**
BORING NO. L_6520	**STATION** 65+36	**OFFSET** 130 ft LT	**ALIGNMENT** -L-	**0 HR.** 6.2
COLLAR ELEV. 136.6 ft	**TOTAL DEPTH** 30.4 ft	**NORTHING** 691,139	**EASTING** 2,176,678	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 86% 11/17/2017		**DRILL METHOD** NW Casing w/ Core	**HAMMER TYPE** Automatic	
DRILLER Pinter, D. G.	**START DATE** 01/26/18	**COMP. DATE** 01/26/18	**SURFACE WATER DEPTH** N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
										ELEV. (ft) DEPTH (ft)
140										
										136.6 GROUND SURFACE 0.0
135										**ALLUVIAL** GRAY, SANDY SILT WITH TRACE MICA AND WOOD FRAGMENTS
	133.1	3.5	2	1	1	2		M		
130										
	128.1	8.5	WOH	WOH	1	1.		M		126.4 10.2
125										**WEATHERED ROCK** (SCHIST)
	123.1	13.5	100/0.3			100/0.3				122.8 13.8
120										**WEATHERED ROCK** PALE GREEN-BROWN, SEVERE WEATHERING, CLOSE FRACTURE SPACING, SOFT TO MODERATELY HARD, AMPHIBOLITE
										117.9 18.7
115										REC=49%
										CRYSTALLINE ROCK DARK GREEN GRAY, VERY SLIGHT WEATHERING TO FRESH, MODERATELY CLOSE TO WIDE FRACTURE SPACING, MODERATELY HARD TO HARD, AMPHIBOLITE
110										REC=99% RQD=99% GSI=70-75
										106.2 30.4
										Boring Terminated at Elevation 106.2 ft IN CRYSTALLINE ROCK (AMPHIBOLITE)

NCDOT BORE DOUBLE R3825_GEO_UTILITIES.GPJ NC_DOT.GDT 2/15/18

GEOTECHNICAL BORING REPORT
CORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** Kintner, A. N.	
SITE DESCRIPTION UTILITIES AT NEUSE RIVER BRIDGE ON NC 42				**GROUND WTR (ft)**
BORING NO. L_6520	**STATION** 65+36	**OFFSET** 130 ft LT	**ALIGNMENT** -L-	**0 HR.** 6.2
COLLAR ELEV. 136.6 ft	**TOTAL DEPTH** 30.4 ft	**NORTHING** 691,139	**EASTING** 2,176,678	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 86% 11/17/2017		**DRILL METHOD** NW Casing w/ Core	**HAMMER TYPE** Automatic	
DRILLER Pinter, D. G.	**START DATE** 01/26/18	**COMP. DATE** 01/26/18	**SURFACE WATER DEPTH** N/A	
CORE SIZE NXWL	**TOTAL RUN** 16.6 ft			

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
122.83											Begin Coring @ 13.8 ft
	122.8	13.8	1.6	0:35/0.6 0:59/1.0	(0.4) 25%	(0.0) 0%		(2.4) 49%			122.8 **WEATHERED ROCK** 13.8
120	121.2	15.4	5.0	1:03/1.0 1:08/1.0 1:01/1.0 1:49/1.0 1:59/1.0	(3.7) 74%	(1.7) 34%					PALE GREEN-BROWN, SEVERE WEATHERING, CLOSE FRACTURE SPACING, SOFT TO MODERATELY HARD, AMPHIBOLITE
	116.2	20.4						(11.6) 99%	(11.6) 99%		117.9 18.7
115			5.0	1:59/1.0 2:11/1.0 2:06/1.0 2:08/1.0 2:11/1.0	(5.0) 100%	(5.0) 100%					**CRYSTALLINE ROCK** DARK GREEN GRAY, VERY SLIGHT WEATHERING TO FRESH, MODERATELY CLOSE TO WIDE FRACTURE SPACING, MODERATELY HARD TO HARD, AMPHIBOLITE
	111.2	25.4									GSI=70-75
110			5.0	1:56/1.0 2:14/1.0 2:10/1.0 2:11/1.0 1:51/1.0	(4.9) 98%	(4.9) 98%					
	106.2	30.4									106.2 30.4
											Boring Terminated at Elevation 106.2 ft IN CRYSTALLINE ROCK (AMPHIBOLITE)

NCDOT CORE DOUBLE R3825_GEO_UTILITIES.GPJ NC_DOT.GDT 2/15/18

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** Kintner, A. N.	
SITE DESCRIPTION UTILITIES AT NEUSE RIVER BRIDGE ON NC 42				**GROUND WTR (ft)**
BORING NO. L_6686	**STATION** 66+86	**OFFSET** 139 ft LT	**ALIGNMENT** -L-	**0 HR.** 11.8
COLLAR ELEV. 149.8 ft	**TOTAL DEPTH** 40.2 ft	**NORTHING** 691,161	**EASTING** 2,176,827	**24 HR.** 12.0
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 86% 11/17/2017		**DRILL METHOD** NW Casing w/ Core	**HAMMER TYPE** Automatic	
DRILLER Pinter, D. G.	**START DATE** 01/30/18	**COMP. DATE** 01/30/18	**SURFACE WATER DEPTH** N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
150										149.8 GROUND SURFACE	0.0
	146.3	3.5	6	11	15	26		M		**ALLUVIAL** LIGHT GRAY AND ORANGE, CLAYEY SAND, WITH TRACE WELL-ROUNDED GRAVEL	
145										143.8	6.0
	141.3	8.5	13	16	19	35		M		**RESIDUAL** DARK GREEN-GRAY, SAPROLITIC, SANDY SILT WITH TRACE MICA	
140											
	136.3	13.5	13	22	73	95		M			
135										132.3	17.5
	131.3	18.5	60/0.1			60/0.1				131.2 **CRYSTALLINE ROCK** (SCHIST)	18.6
130										**CRYSTALLINE ROCK** DARK GREEN-GRAY, MODERATE TO VERY SLIGHT WEATHERING, CLOSE FRACTURE SPACING, SOFT TO HARD, SCHIST WITH SOME SEVERELY WEATHERED ZONES	
125										24.0-25.1 SEVERELY WEATHERED ZONE	
120										REC=77% RQD=9% GSI=30-40	
115											
110	109.7	40.1	60/0.1			60/0.1				109.6	40.2
										Boring Terminated at Elevation 109.6 ft IN CRYSTALLINE ROCK (SCHIST)	

NCDOT BORE DOUBLE R3825_GEO_UTILITIES.GPJ NC_DOT.GDT 2/15/18

GEOTECHNICAL BORING REPORT
CORE LOG

WBS 34552.1.FR3	**TIP** R-3825B	**COUNTY** JOHNSTON	**GEOLOGIST** Kintner, A. N.	
SITE DESCRIPTION UTILITIES AT NEUSE RIVER BRIDGE ON NC 42				**GROUND WTR (ft)**
BORING NO. L_6686	**STATION** 66+86	**OFFSET** 139 ft LT	**ALIGNMENT** -L-	**0 HR.** 11.8
COLLAR ELEV. 149.8 ft	**TOTAL DEPTH** 40.2 ft	**NORTHING** 691,161	**EASTING** 2,176,827	**24 HR.** 12.0
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 86% 11/17/2017		**DRILL METHOD** NW Casing w/ Core	**HAMMER TYPE** Automatic	
DRILLER Pinter, D. G.	**START DATE** 01/30/18	**COMP. DATE** 01/30/18	**SURFACE WATER DEPTH** N/A	
CORE SIZE NXWL	**TOTAL RUN** 21.5 ft			

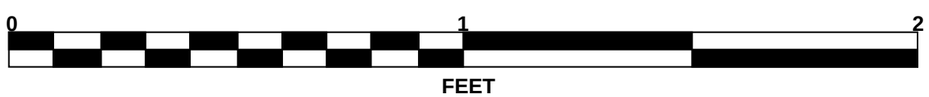
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS ELEV. (ft)	DEPTH (ft)
131.19											Begin Coring @ 18.6 ft	
130	131.2	18.6	1.5	0:39/0.5 1:27/1.0	(1.0) 67%	(0.0) 0%		(16.6) 77%	(2.0) 9%		131.2 **CRYSTALLINE ROCK**	18.6
	129.7	20.1	5.0	1:27/1.0 1:44/1.0 1:25/1.0 1:51/1.0 3:58/1.0	(3.9) 78%	(0.9) 18%					DARK GREEN-GRAY, MODERATE TO VERY SLIGHT WEATHERING, CLOSE FRACTURE SPACING, SOFT TO HARD, SCHIST WITH SOME SEVERELY WEATHERED ZONES	
125	124.7	25.1	5.0	1:29/1.0 1:58/1.0 2:13/1.0 1:42/1.0 1:51/1.0	(4.7) 94%	(0.0) 0%					24.0-25.1 SEVERELY WEATHERED ZONE	
120	119.7	30.1	5.0	1:29/1.0 1:41/1.0 2:03/1.0 2:15/1.0 2:17/1.0	(3.3) 66%	(0.7) 14%					GSI=30-40	
115	114.7	35.1	5.0	2:09/1.0 1:54/1.0 3:05/1.0 3:34/1.0 4:21/1.0	(3.7) 74%	(0.4) 8%						
110	109.7	40.1		*N=60/0.1*							109.6	40.2
											Boring Terminated at Elevation 109.6 ft IN CRYSTALLINE ROCK (SCHIST)	

NCDOT CORE DOUBLE R3825_GEO_UTILITIES.GPJ NC_DOT.GDT 2/15/18

CORE PHOTOGRAPHS

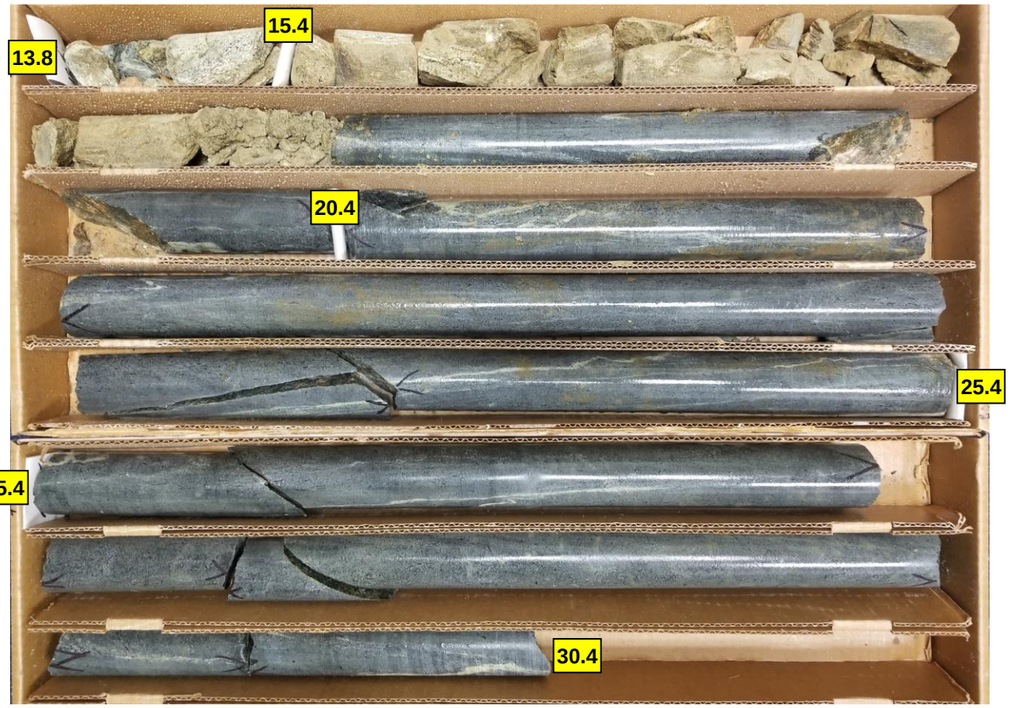
L_6310

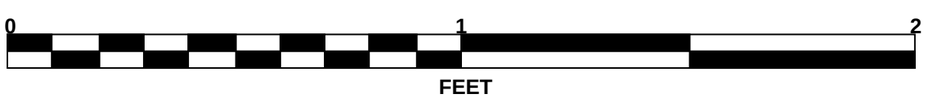
BOXES 1 & 2: 18.8 - 30.5 FEET



L_6520

BOXES 1 & 2: 13.8 - 30.4 FEET





CORE PHOTOGRAPHS

L_6686

BOXES 1 & 2: 18.6 - 40.1 FEET

0 1 2

FEET