STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5715	1	

REFERENCE: I-5715

PROJECT: 50128.1.FS1

SEE SHEET 3 FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

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

ROADWAY SUBSURFACE INVESTIGATION

COUNTY MECKLENBURG

PROJECT DESCRIPTION I-77 AND NC 73 INTERCHANGE, UPGRADE EXISTING INTERCHANGE TO SPLIT DIAMOND CONFIGURATION

INVENTORY

CONTENTS

LINE	STATION	PLAN
-L3NB-	840+78 - 974+90	4 - 13
-L3SB-	951+20 - 970+40	4 - 13
-Y1-	10+18.26 - 30+16.71	10
-Y1RPD-	10+00 - 22+09.87	10
-Y2-	19+81.29 - 40+77.43	14
-Y2LPB-	14+00 - 19+18.58	11
-Y2RPA-	10+00 - 32+70.76	11 - 12
-Y2RPA-DTR	17+10.59 - 28+58.64	11
-Y2RPB-	10+00 - 30+53.74	11 - 12
-Y2RPB-DTR	12+97.64 - 24+82.81	11
-Y2RPD-	10+00 - 55+99.80	9 - 11
-Y3-	10+00 - 17+81.76	11
-Y4-	10+00 - 15+00	11
-Y5-	10+00 - 11+95	11
-Y9-	10+00 - 11+20	11

CROSS SECTIONS

LINE	STATION	SHEETS
-L3NB-	842+00, 844+00, 846+00	15
-L3NB-	848+00, 850+00, 852+00	16
-L3NB-	854+00, 856+00, 858+00	17
-L3NB-	860+00, 862+00, 880+00	18
-L3NB-	897+00 - 899+00	19 - 20
-L3NB-	901+50, 902+50 - 905+50, 907+50	21 - 23
-L3NB-	908+50 - 912+50, 913+50	24 - 27
-L3NB-	915+00, 917+00	28
-L3NB-	919+00, 920+00 - 931+50	29 - 38
-L3NB-	933+45.59, 947+00	39
-L3NB-	949+00, 953+00	40
-L3NB-	955+00, 957+50, 963+00	41
-L3NB-	965+00, 967+00, 968+00	42
-L3NB-	970+00, 972+00	43
-L3NB-	974+00	44
-L3SB-	951+50, 954+00, 955+50	45
-L3SB-	957+00, 960+00	46
-L3SB-	961+00, 962+00	47
-L3SB-	963+50 - 964+00	48
-L3SB-	965+00, 966+50 - 967+00, 969+00	49 - 50
-Y1-	12+00, 14+00`	51
-Y1-	16+00	52
-Y1-	17+50	53
-Y1-	24+00	54
-Y1-	26+50	55
-Y1-	28+50, 30+00	56
-Y1RPD-	10+50 - 18+00	57 - 62
-Y1RPD-	20+00	63
-Y2-	17+50, 21+50, 25+50	64
-Y2-	26+00 - 29+00	65 - 67
-Y2-	31+00 - 31+50	68 - 69
-Y2-	33+50	70
-Y2RPA-	10+00, 12+00, 14+00	71
-Y2RPA-	16+00, 18+00	72
-Y2RPA-	19+00, 20+50	73
-Y2RPA-	22+00 - 25+75	74 - 79
-Y2RPA-	25+75, 28+50 - 32+00	80 - 82
-Y2RPA-DTR	11+50, 13+50	83
-Y2RPA-DTR	15+50, 17+00	84
-Y2RPA-DTR	18+00, 19+50 - 21+50	85 - 88
-Y2RPA-DTR	23+50, 24+50	89
-Y2RPA-DTR	25+50, 29+50	90
-Y2LPB-	15+00, 17+00, 18+30	91
-Y2RPB-	10+00 - 12+00	92 - 93
-Y2RPB-	13+00, 14+00 - 16+00, 19+00	94 - 96
-Y2RPB-	20+00 - 20+65	97
-Y2RPB-	25+50, 28+00	98
-Y2RPB-DTR	11+00 - 11+50, 14+50	99
-Y2RPB-DTR	16+50, 17+50	100
-Y2RPB-DTR	19+00, 20+00	101
-Y2RPB-DTR	22+00, 24+00, 25+50	102
-Y2RPD-	10+00 - 16+00, 17+00	103 - 108
-Y2RPD-	19+00, 20+50 - 28+50	109 - 116
-Y2RPD-	30+50	117
-Y2RPD-	31+50 - 41+50	118 - 125
-Y2RPD-	43+00, 45+00 - 53+50, 55+00	126 - 133

CROSS SECTIONS (continued)

LINE	STATION	SHEETS
-Y3-	10+15, 10+50 - 11+00	134 - 135
-Y4-	13+00	136
-Y5-	10+75, 11+50	137
-Y9-	10+50	138

APPENDICES

APPENDIX	TITLE	SHEETS
A	SOIL LABORATORY RESULTS	139 - 151

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 PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS 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

DRISCOLL, C.

KIKER, Z.

GRAINGER, P.

GRAHL, D.

TOOTHMAN, R.

INVESTIGATED BY GRAINGER, P.

DRAWN BY FIELDS, W. D.

CHECKED BY RIGGS, A.F., JR.

SUBMITTED BY WELLS, T. R.

DATE OCTOBER 2023

Prepared in the Office of:

Terracon

7327-G W. FRIENDLY AVE.
GREENSBORO, NORTH CAROLINA 27410
NC REGISTERED ENGINEERING FIRM: F-0869
NC REGISTERED GEOLOGIC FIRM: C-367

NORTH CAROLINA PROFESSIONAL SEAL 037998 ENGINEER THOMAS R. WELLS

DocuSigned by:
Thomas R. Wells 10/26/2023
F38C777458854EA...
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
I-5715	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:
- [ ] CME-45C
- [ ] CME-55
- [ ] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [X] CME-55 (TRI10055)
- [X] DIEDRICH D50 (HPC0279)

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [ ] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [ ] CASING [ ] W/ ADVANCER
- [ ] TRICONE _____" STEEL TEETH
- [ ] TRICONE _____" TUNG.-CARB.
- [ ] CORE BIT
- [X] 3/4" HOLLOW STEM AUGERS

HAMMER TYPE:
- [X] AUTOMATIC
- [ ] MANUAL

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

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [X] 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: TOP OF BORING ELEVATIONS ESTIMATED USING PROJECT PROIVIDED TIN FILE: I5715_Merge_Tin_2018-11-01.tin, DATED: 05/05/2023
ELEVATION: N/A FEET

NOTES:

FIAD - FILLED IMMEDIATELY AFTER DRILLING

DATE: 8-15-14

TIP PROJECT: I-5715

CONTRACT:

$FILE$

$DATE$

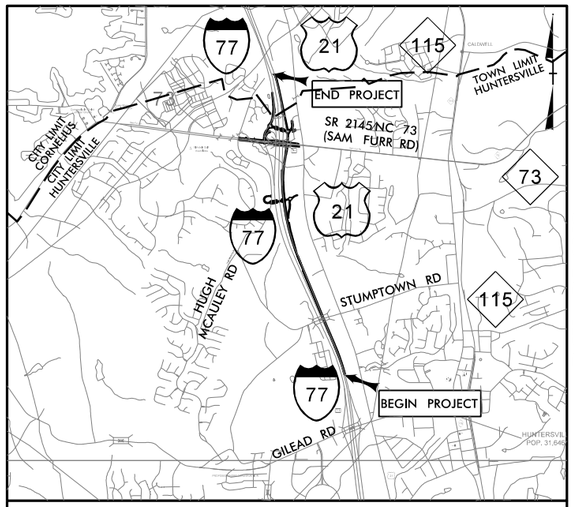
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5715	3	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
50128.1.FS1	NHPP-077-1(220)29	PE	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

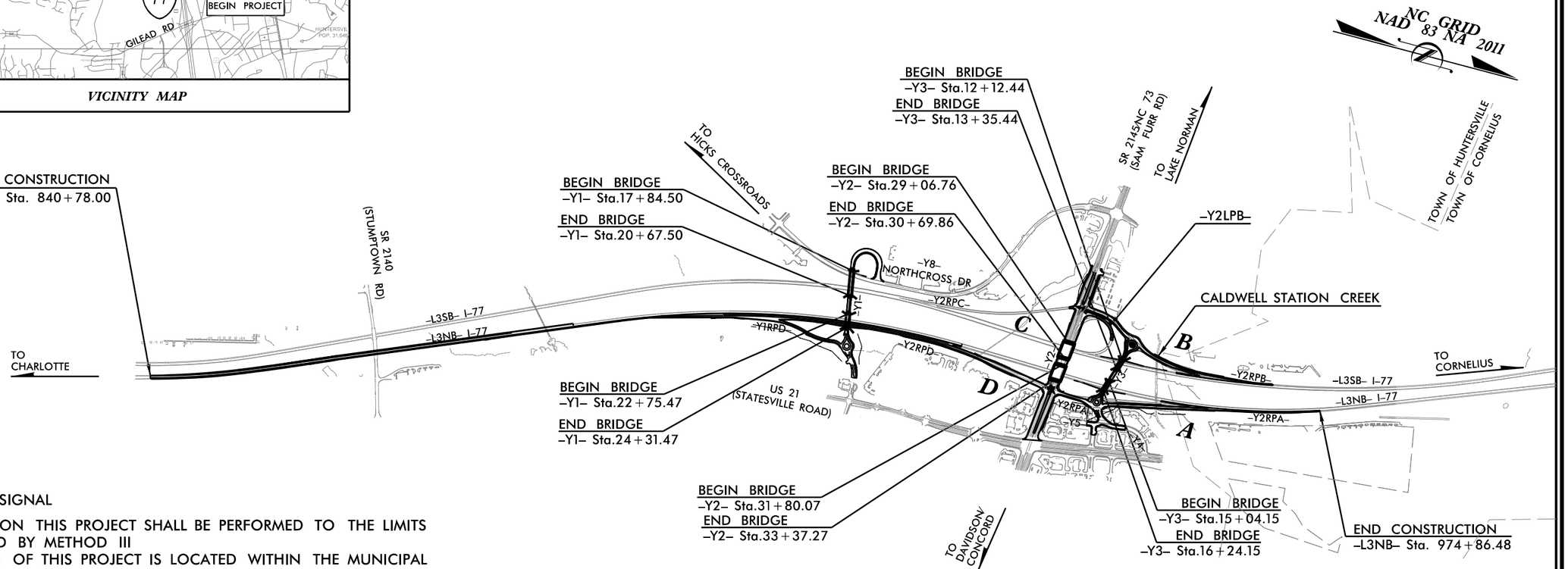
RW PLANS



VICINITY MAP

LOCATION: *I-77 FROM SOUTH OF SR 2140 (STUMPTOWN RD) TO NORTH OF NC 73 (SAM FURR RD) & SR 2145/NC 73 (SAM FURR RD) BETWEEN NORTHCROSS DR & US 21 (STATESVILLE RD)*

TYPE OF WORK: *GRADING, DRAINAGE, PAVING, SIGNING, ITS, SIGNALS, GUARDRAIL, PAVEMENT MARKING, NOISE WALL & STRUCTURES*



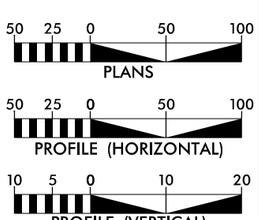
★ TRAFFIC SIGNAL

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

A PORTION OF THIS PROJECT IS LOCATED WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWNS OF HUNTERSVILLE AND CORNELIUS

THIS IS A PARTIALLY CONTROLLED ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS

GRAPHIC SCALES



DESIGN DATA

ADT 2020 = 95,600

ADT 2040 = 110,800

DHV = 8 %

D = 55 %

T = 10 % *

V = 70 MPH

* (TTST 7% + DUAL 3%)

FUNC. CLASS = INTERSTATE "STATE WIDE TIER"

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5715	=	*2.539 MILES*
LENGTH STRUCTURES TIP PROJECT I-5715	=	*0.000 MILES*
TOTAL LENGTH OF TIP PROJECT I-5715	=	*2.539 MILES*

** NOTE: PROJECT LENGTH BASED ON I-77 NORTHBOUND LANES*

PLANS PREPARED FOR THE NCDOT BY:

Kimley»Horn

NC LICENSE #F-0102
200 SOUTH TRYON STREET, SUITE 200
CHARLOTTE, NORTH CAROLINA 28202
PHONE: (704) 333-5131

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: APRIL 18, 2023

LETTING DATE: SEPTEMBER 16, 2025

LAURA SUTTON, P.E.
PROJECT ENGINEER

BRYAN KEY, P.E.
PROJECT DESIGN ENGINEER

TONY SPACEK, P.E.
PEF PROJECT ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

P.E.

STATE HIGHWAY DESIGN ENGINEER

Date: October 20, 2023

WBS Number: 50128.1.FS1
TIP Number: I-5715
County: Mecklenburg
Description: I-77 and the NC 73 Interchange

Subject: Roadway Geotechnical Report - Inventory

Project Description

The project is located at the existing I-77 and NC 73 interchange in Mecklenburg County, North Carolina. We understand that the project will consist of the construction of a split diamond interchange and will include the widening of NC 73 with the widening of the two (2) existing bridges on NC 73 over I-77. Two (2) new roadways with grade crossings over I-77 will be constructed. The northern crossing will include two (2) new bridges over I-77 and connect with the I-77 ramps with roundabouts on both sides. On the east end, the roundabout will also connect to Caldwell Creek Drive. The southern crossing will include two (2) bridges over I-77 and connect Northcross Drive and US 21 (Statesville Road), using a loop on the west side and a roundabout on the east side. This work will involve several roadway realignments of other SR roads and four (4) ramps & one (1) loop for the split diamond, deceleration & acceleration lanes in both directions on I-77, a culvert extension. The project corridor is in an urban commercial setting and much of the surrounding land is developed.

The geotechnical subsurface investigation was performed in June of 2023. Borings performed by Kleinfelder, Inc. from July of 2019 were incorporated into this report. The site was investigated with a total of ninety-five (95) standard penetration test (SPT) borings and sixteen (16) hand auger borings. The hand auger borings were performed at locations that could not be easily accessed by the drill rig or where underground utility conflicts existed. Standard penetration test (SPT) borings were advanced using a CME 55 or Diedrich D50 rotary drill rigs equipped with recently calibrated automatic hammers. SPT borings were advanced utilizing hollow stem auger techniques to depths of 1.5 to 85 feet beneath the surface.

Representative soil samples were collected in the field for visual classification and selected samples were submitted for laboratory analysis by Terracon's soil testing laboratory. Two Shelby tube samples were tested near the proposed bridge on NC 73 for consolidation testing and the rock plated slope on Y2RPD for CU triaxial testing. Laboratory testing was performed in a NCDOT materials and testing certified laboratory.

The following alignments were investigated by soil testing and visual reconnaissance:

Alignment	Stations (±)
-L3NB-	840+78 to 974+90
-L3SB-	951+20 to 970+40
-Y1-	10+18 to 30+17
-Y1RPD-	10+00 to 22+10
-Y2-	19+81 to 40+77
-Y2RPA-	10+00 to 32+71
-Y2RPB-	10+00 to 30+54
-Y2RPD-	10+00 to 56+00
-Y2LPB-	14+00 to 19+19
-Y3-	10+30 to 17+82
-Y4-	10+00 to 15+00
-Y5-	10+00 to 11+95
-Y9-	10+00 to 11+20
-Y2RPA-DTR-	10+00 to 30+26
-Y2RPB-DTR-	10+00 to 26+80

Physiography and Geology

The site is located within the Piedmont Physiographic Province and is part of the Charlotte terrane just north of Charlotte, North Carolina. The Charlotte terrane is mostly metamorphosed igneous rocks. It spans the central portion of the Piedmont. Topography in the area is rolling.

Geologically, the site is located within the Metamorphosed Quartz Diorite Formation. As mapped on the North Carolina Geologic Map 1985, the underlying rock formations at this site consist of intrusive rock of the Paleozoic Era (300 to 500 million years old). Based on the recovered rock samples, previous mapping and our knowledge of the local geology, the parent rock is interpreted to be predominately quartz diorite with interlayered gneiss. These rocks typically weather in an irregular pattern with deep residual soils overlying saprolite to bedrock. The typical residual profile consists of finer grain clays and silts near the ground surface which gradually transition to coarser and denser material with depth and contain varying amounts of mica.

Soil Properties

Soils encountered during this investigation are separated into four categories based on their origin. The soils encountered consist of roadway embankment fill, artificial fill, alluvial soils, and residual soil and rock materials.

Roadway embankment soils were encountered along the existing roadway along I-77 and NC 73. The roadway embankment soils appear to be reworked near-by residual soils. The roadway embankment soils extend to a depth of at least 23.9 feet beneath the ground surface. The roadway embankment soils consist of slightly plastic to highly plastic, medium to very stiff, moist to wet, silty clay (A-7-6, A-7-5), non-plastic to slightly plastic, medium stiff to very stiff, moist, sandy to clayey silt (A-4, A-5), and loose to medium dense, moist, silty sand and gravel (A-2-4, A-1-b) were also encountered within the roadway embankments. The plasticity index of the silty soil tested was 8 with 57 percent passing the #200 sieve and a natural moisture content of 29.1 percent. The plasticity indices of the clayey soils range from 17 to 43 with 40 to 76 percent passing the #200 sieve and natural moisture contents of 8.3 to 43.0 percent based on laboratory testing.

Artificial fill soils encountered consists of slightly to highly plastic, stiff, moist, sandy and silty clay (A-6, A-7-6), slightly plastic, medium stiff to stiff, sandy silt, moist (A-4), and non-plastic to moderately plastic, loose,

moist, silty and clayey sand (A-2-4, A-2-6). The artificial fill was generally associated with commercial developments to the northeast of the I-77 and NC-73 interchange. The plasticity index of the clayey soil tested was 26 with 61 percent passing the #200 sieve and a natural moisture content of 18.2 percent.

Alluvial soils are present adjacent to Caldwell Station Creek to the north of the I-77 and NC-73 interchange. These soils consist primarily of slightly to highly plastic, soft, moist to wet, sandy and silty clay (A-6, A-7-6), non-plastic, soft to stiff, moist, sandy silt (A-4), and very loose, moist to wet, silty and clayey sand (A-2-4, A-2-6). The plasticity index of the clayey soil tested was 27 with 67 percent passing the #200 sieve and a natural moisture content of 40.6 percent.

Residual soils are present at the surface and beneath the roadway embankment soils, asphalt pavement sections, and alluvial soils. The residual soils have weathered irregularly ranging in depths from 8.4 to 77.5 feet. The residual soils can be generalized as slightly to highly plastic, soft to very stiff, moist, sandy to silty clay (A-6, A-7-6, A-7-5), non-plastic to slightly plastic, very soft to hard, moist to wet, sandy to clayey silts (A-4, A-5), and loose to very dense, non-plastic to moderately plastic, moist to saturated, silty to clayey coarse to fine sands (A-2-4, A-2-6). The plasticity index of the clayey sand soil tested was 20 with 35 percent passing the #200 sieve and a natural moisture content of 13.5 percent. The plasticity index of the silty soil tested was 9 with 56 percent passing the #200 sieve and a natural moisture content of 30.9 percent. The plasticity indices of the clayey soils range from 13 to 57 with 37 to 89 percent passing the #200 sieve and natural moisture contents of 10.1 to 43.1 percent based on laboratory testing. The highly plastic residual soils are indicated on the attached cross section graphics.

Rock Properties

Weathered rock was encountered during the roadway investigation. It originates from the underlying crystalline rock (gneiss and metamorphosed quartz diorite). Weathered rock is present at depths of 21.3 feet to 77.5 feet beneath the ground surface, on alignments -Y1-, -Y2-, -Y2RPA-, and -Y2RPD- at elevations of approximately 667.4 to 722.4 feet.

Crystalline rock was encountered during the roadway investigation and consists of gneiss and metamorphosed quartz diorite. Crystalline rock is present at depths of 8.4 feet to 58.5 feet beneath the ground surface, on alignments -Y1-, -Y2-, -Y2RPA-, and -Y2RPD- at elevations of approximately 669.3 to 751.3 feet.

Groundwater

In general, the corridor drains to Caldwell Station Creek. In the project area, groundwater was encountered at depths of 2.0 feet to 37.6 feet below the existing ground surface, approximate elevations 698.3 to 765.8 feet. The depth of groundwater, beneath the ground surface, will fluctuate with seasonal precipitation and may occur at higher levels at other times of the year above less permeable clayey soils.

Areas of Special Geotechnical Interest

1) Highly Plastic Soils – Highly plastic soils with plasticity indices (PI) of 26 or greater occur throughout the project and may impact grading at the following locations:

Alignment	Stations (±)
-L3NB-	896+75 to 898+25
-L3NB-	902+75 to 904+25
-L3NB-	909+75 to 911+75
-L3NB-	920+75 to 924+75
-L3NB-	926+25 to 930+75
-L3NB-	969+75 to 970+25
-L3SB-	964+50 to 966+00
-Y1RPD-	11+25 to 18+50
-Y2-	17+50 to 21+00
-Y2-	26+25 to 28+75
-Y2RPA-	17+00 to 21+00
-Y2RPA-	28+75 to 31+75
-Y2RPA-DTR-	14+00 to 18+50
-Y2RPB-	10+00 to 11+25
-Y2RPB-	14+25 to 15+75
-Y2RPD-	10+00 to 16+25
-Y2RPD-	21+25 to 23+75
-Y2RPD-	27+75 to 28+25
-Y2RPD-	31+75 to 36+25
-Y2RPD-	37+75 to 40+75
-Y2RPD-	45+75 to 53+75

A discussion of these plastic soils is located above in the section titled “Soil Properties”.

2) Alluvial Soils- Soft wet near surface soils which have the potential to cause embankment stability/settlement problems occur through the following sections:

Alignment	Station (±)
-L3NB-	955+50 to 956+30
-L3SB-	955+40 to 956+50
-Y2RPA-	20+10 to 22+25
-Y2RPB-	16+80 to 22+40
-Y2RPA-DTR-	15+25 to 19+75
-Y2RPB-DTR-	16+25 to 17+25

A discussion of these soft wet alluvial near surface soils is located above in the section titled “Soil Properties”.

3) Groundwater- High water tables, seasonal high ground water, as well as, potential perched groundwater were encountered at the following locations:

Alignment	Station (±)
-L3NB-	907+00 to 910+00
-L3NB-	948+00 to 952+00
-L3SB-	955+00 to 964+00
-Y1RPD-	10+00 to 11+50
-Y2RPA-	13+00 to 15+00
-Y2RPA-	17+00 to 22+00
-Y2RPA-DTR-	11+00 to 19+75
-Y2RPB-	12+50 to19+50
-Y2RPD-DTR-	14+00 to 17+00
-Y2RPD-	12+50 to 15+00
-Y2RPD-	19+50 to 21+50

UNDISTURBED SAMPLES

The following “Shelby” tube sample were taken to provide data for consolidation and shear strength testing.

Sample No.	Alignment	Station	Offset	Depth (ft.)	Test
ST-1	-Y2RPD-	47+07	4’ RT	10-12	CU Triaxial
ST-3	-Y2-	33+55	84’ RT	5-7	Consolidation

Sincerely,
Terracon Consultants, Inc.

DocuSigned by:
Abner F. Riggs, Jr.
C2F6ACA84D274B1...
Abner F. Riggs Jr. P.E.
Senior Geotechnical Engineer

DocuSigned by:
Thomas R. Wells
F38C777458854EA...
Thomas R. Wells, P.E.
Senior Geotechnical Engineer

PROJECT REFERENCE NO.	SHEET NO.
I-5715	4

0 100 200
FEET

835

STONE HOLLOW HOMEOWNERS ASSOC
SHAWN MICHAEL SHROYER
NESTOR CABARCAS -ORTEGA
ALISON A HIBBETT
JOHN W MARTIN III
PHILIP PAUL REIA
WILLIAM TAYLOR
MICKIL BRI
MARCUS ALLEN GRAHAM
SECRETARY OF HOUSING & URBAN DEV
KRISTIM DUNN
STONE HOLLOW HOMEOWNERS ASSOC
JASON M HARMON

EXISTING R/W

840 845

-L3SB-

RESIDUAL

ROADWAY EMBANKMENT

MATCH LINE 847+00 SEE SHEET 5

TOP=743.26'

EXIST 16' PS (ASPHALT)

I-77 NBL 79' BST

4' BUFFER

OVERHEAD

CABLE

CONC

FES

EXIST 12' PS

L3NB_84200
842+00 -L3NB-
40' RT

L3NB_84400
844+00 -L3NB-
40' RT

L3NB_84600
846+00 -L3NB-
40' RT

BEGIN TIP PROJECT I-5715
BEGIN CONSTRUCTION
-L3NB- POC Sta. 840+78.00
MILL TO TIE-IN AT
TIP PROJECT I-5405

WOODS

RESIDUAL

DINESH AMBALA PATEL

DINESH AMBALA PATEL

MYRTLE HOKE POWELL

PROJECT REFERENCE NO.	SHEET NO.
I-5715	5

0 100 200
FEET

ROBERT BAJEK
PRESTON ANDREW MCDANIEL
AIMEE D KAPPS
JIAN WENG
ANCHOR RENTALS LLC
LILIETH A HERBERT
CHRISTOPHER C. DOWNING
CATHERINE W EDWARDS
ROBER R KULP JR
STONE HOLLOW HOMEOWNERS ASSOC
JACK HURLEY
NING SUN
CHAVONYA GAIL JETER
BENJAMIN HUFFMAN
ERIC J HANSE
LYLE KEITH RIPPETOE
CRUZ MARCELLO ZARAGOZA
SOMLET SISOUK
STONE HOLLOW HOMEOWNERS ASSOC
DAVID SIMPSON KNOX
EXISTING R/W

MATCH LINE 847+00 SEE SHEET 4

MATCH LINE 859+00 SEE SHEET 6

-L3SB-
-L3NB-
EXIST 10" PS (ASPHALT)
RESIDUAL
ROADWAY EMBANKMENT
RESIDUAL
EXISTING R/W
TOP=746.74'
BL-316
BL-317
BL-126
I-77 NBL
36" CMP
36" RCP
18" RCP
OTCB
CONC
CABLE
12" PS
WOODS

L3NB_84800
847+96 -L3NB-
58' RT

L3NB_85000
850+00 -L3NB-
76' RT

L3NB_86200
851+88 -L3NB-
80' RT

L3NB_85400
854+00 -L3NB-
75' RT

L3NB_85600
855+96 -L3NB-
40' RT

L3NB_85800
858+00 -L3NB-
45' RT

ROBERT MONROE BROWN

WILLIAM ORR BROWN JR

ROBERT MONROE BROWN

PROJECT REFERENCE NO.	SHEET NO.
I–5715	6

0 100 200
FEET

DAVID SIMPSON KNOX

JUDY KARON KNOX

DAVID SIMPSON KNOX

100.00'

EXISTING R/W

EXISTING R/W

MATCH LINE 859+00 SEE SHEET 5

MATCH LINE 871+00 SEE SHEET 7

-L3SB-

-L-

-L3NB-

860

865

870

RESIDUAL

RESIDUAL

ROADWAY EMBANKMENT

EXIST 4" PS (ASPHALT)

EXIST 4" PS (ASPHALT)

RETAIN EXIST SHOULDER

12' PS

10' PS

10' PS

10' PS

CAT-I

MTL

L3NB_86000
860+00 -L3NB-
40' RT

L3NB_86200
862+00 -L3NB-
43' RT

WOODS

WOODS

FES

CONC

42" CMP

BL 3@

CONC BRIDGE

OVERHEAD SIGN SUPPORT

CONC SLOPE PROTECTION

SR 2140 STUMPTOWN ROAD 315 BST

MTL S POLES (2)

EXISTING R/W

EXISTING R/W

WILLIAM ORR BROWN JR

ROBERT MONROE BROWN

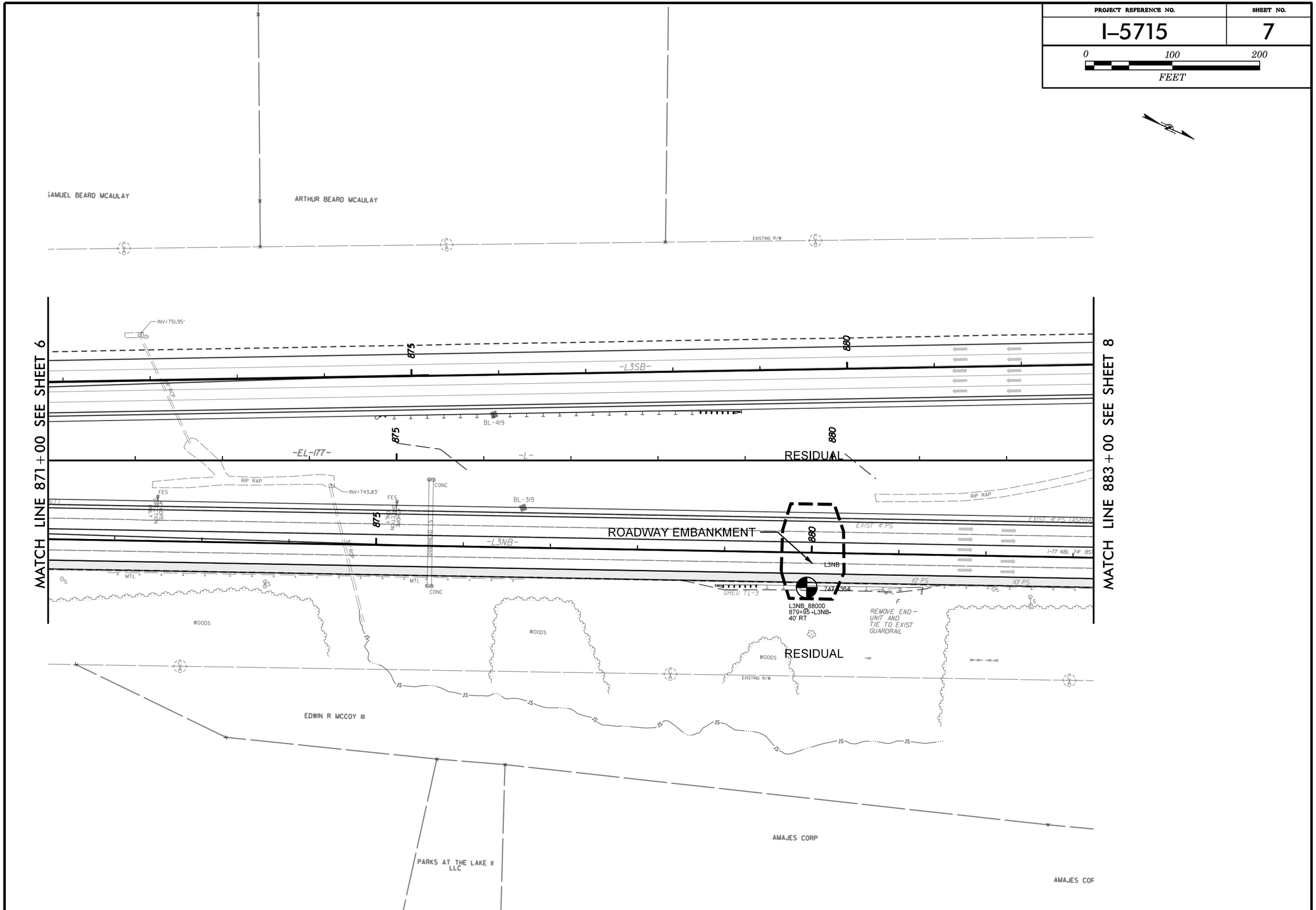
PARKS AT THE LAKE II LLC

PARKS AT THE LAKE II LLC

100.00'

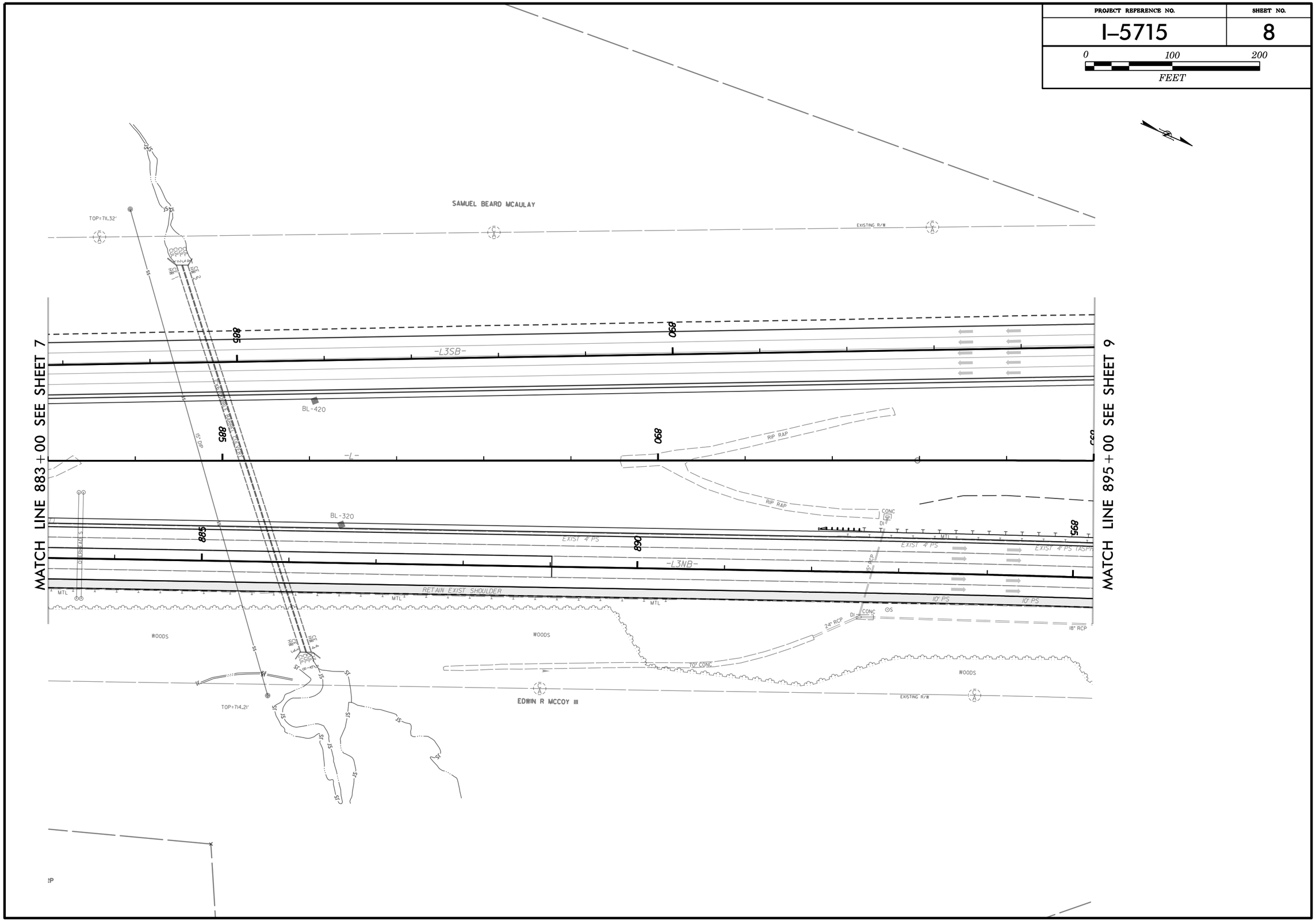
PROJECT REFERENCE NO.	SHEET NO.
I-5715	7

0 100 200
FEET



PROJECT REFERENCE NO.	SHEET NO.
I-5715	8

0 100 200
FEET



PROJECT REFERENCE NO.	SHEET NO.
I-5715	9

0 100 200
FEET

BOARD OF EDUCATION THE CHARLOTTE-MECKLENBURG

SAMUEL LEE CURETON JR

MELVIN GRAHAM JR

JOURNEY CHURCH OF LAKE NORMAN

EXISTING R/W

MATCH LINE 895+00 SEE SHEET 8

MATCH LINE 907+00 SEE SHEET 10

-L3SB-

-L-

-L3NB-

-Y2RPD-

RESIDUAL

ROADWAY EMBANKMENT

BL-422

BL-321

BL-322

I-77 NBL 74' BST

I-77 NBL 74' BST

EXIST 4' PS

12' PS

TA-MASH, TL-3

MTL

CONC BARRIER

RIP RAP

CONC DI

DI CONC

NCDOT SENSOR

L3NB_89750 ℄MTR
897+50 -L3NB-
115' RT

Y2RPD_1069
10+69 -Y2RPD-
87' RT

Y2RPD_1300
13+00 -Y2RPD-
76' RT

Y2RPD_1500
15+00 -Y2RPD-
55' RT

Y2RPD_1700
17+00 -Y2RPD-
30' RT

WOODS

EDWIN R MCCOY III

SAM J VASTIS

HAMPTONS PROFESSIONAL CENTER PROPERTY OWNERS ASSOCIATION INC

STATESVILLE ROAD OFFICE

-Y2RPD- POT Sta.10+00 =
-L3NB- POC Sta.898+43.34 (24' RT)

PROJECT REFERENCE NO.	SHEET NO.
I–5715	10

0 200 400
FEET

MATCH LINE 907+00 SEE SHEET 11

MATCH LINE 933+00 SEE SHEET 12

ROADWAY EMBANKMENT

RESIDUAL

Y1_1590
15+90 -Y1-
CL

Y1_1394
13+94 -Y1-
2' LT

Y1_1212
12+12 -Y1-
42' RT

S1A_EB1-A
17+75 -Y1-
29' LT

L3NB_90900
909+00 -L3NB-
70' RT

L3NB_91500
915+00 -L3NB-
41' RT

L3NB_91700
917+00 -L3NB-
43' RT

Y1RPD_1450
14+50 -Y1RPD-
70' LT

Y1RPD_1200
12+00 -Y1RPD-
60' RT

Y1RPD_1400
13+99 -Y1RPD-
45' RT

Y1RPD_1600
16+00 -Y1RPD-
CL

Y1RPD_1609
16+09 -Y1RPD-
1' RT

Y1RPD_1800
18+09 -Y1RPD-
60' LT

Y1RPD_1900
19+00 -Y2RPD-
40' RT

Y1RPD_2000
20+00 -Y1RPD-
10' RT

Y1_2650
26+50 -Y1-
CL

Y1_2850
28+51 -Y1-
CL

Y1_3000
30+00 -Y1-
40' RT

Y2RPD_3050
30+80 -Y2RPD-
60' RT

Y2RPD_3300
33+00 -Y2RPD-
49' RT

Y2RPD_3600
35+00 -Y2RPD-
45' RT

Y2RPD_3700
37+00 -Y2RPD-
40' RT

Y2RPD_3889
38+89 -Y2RPD-
33' RT

Y2RPD_4300
43+00 -Y2RPD-
63' RT

SHERRY W GEORGE
CAAC REAL ESTATE PARTNERS #LLC
CAAC REAL ESTATE PARTNERS #LLC
ROSE NC LLC
ABB HOLDINGS LLC
MOORESVILLE LODGING
MOORESVILLE LODGING LLC
SAMUEL L CURETON
GLORIA C OLSON

PROJECT REFERENCE NO.	SHEET NO.
I–5715	11

0 200 400
FEET

MATCH LINE 24+00 –Y2– SEE SHEET 14

MATCH LINE 933+00 SEE SHEET 10

MATCH LINE 959+00 SEE SHEET 12

RESIDUAL

ROADWAY EMBANKMENT

ALLUVIAL

ARTIFICIAL FILL

Y2_2750
27+50 -Y2-
70' RT

Y2RPB_2000
20+00 -Y2RPB-
70' RT

Y2RPB_DTR_2000
20+00 -Y2RPB-DTR
20' RT

Y2RPB_DTR_1900
19+00 -Y2RPB-DTR
25' RT

Y2RPB_2000
20+00 -Y2RPB-
70' LT

Y2RPB_1640
16+40 -Y2RPB-
80' LT

S2A_EB1-A
28+84 -Y2-
62' LT

S2A_EB2-B
31+11 -Y2-
86' RT

S2B_EB1-A
31+49 -Y2-
74' LT

S2B_EB2-B
33+55 -Y2-
84' RT

L3SB_95150
951+50 L3SB-
90' LT

L3SB_95400
954+00 L3SB-
40' LT

L3NB_94000
948+95 -L3NB-
110' RT

L3NB_94700
947+00 L3NB-
115' RT

L3NB_95800
957+00 L3NB-
35' RT

Y2RPD_4900
48+98 -Y2RPD-
TT RT

Y2RPD_4500
45+00 -Y2RPD-
67' RT

Y2RPD_4730
47+07 -Y2RPD-
7' RT

Y2RPD_5100
51+00 -Y2RPD-
65' RT

Y2RPD_5300
53+00 -Y2RPD-
60' RT

Y2RPD_5300
53+00 -Y2RPD-
75' RT

Y2RPD_4800
48+00 -Y2RPD-
80' RT

Y2RPA_3200
32+00 -Y2RPA-
30' RT

Y2RPA_2571
25+71 -Y2RPA-
25' RT

Y2RPA_2800
28+00 -Y2RPA-
62' RT

Y2RPA_2200
22+00 -Y2RPA-
80' RT

Y2RPA_2000
20+00 -Y2RPA-
45' LT

Y2RPA_2455
24+55 -Y2RPA-
19' LT

Y2RPA_2538
25+38 -Y2RPA-
39' LT

Y5_1800
18+00 -Y5-
39' RT

RW1

RW2

RW3

RW5

RW6

ROAD CLOSED AHEAD

ROAD CLOSED

TYPE III BARRICADE

I-77 NORTHBOUND

I-77 SOUTHBOUND

BEGIN CONSTRUCTION -Y2RPB- Sta. 14+00

END CONSTRUCTION -Y2RPB- Sta. 17+65.58

BEGIN CONSTRUCTION -L3SB- Sta. 95+00

END CONSTRUCTION -L3SB- Sta. 95+75

END CONSTRUCTION -L3NB- Sta. 95+75

END CONSTRUCTION -L3NB- Sta. 96+00

END CONSTRUCTION -Y2RPA- Sta. 20+55.42

END CONSTRUCTION -Y2RPA- Sta. 20+55.42

END CONSTRUCTION -Y2RPA- Sta. 20+55.42

PROJECT REFERENCE NO.	SHEET NO.
I-5715	12

0 100 200
FEET

THE LANDINGS APARTMENTS LLC

FLAGSHIP NORTHCROSS HUNTE

CITY OF CHARLOTTE

-Y2RPB- POT Sta.10+00 =
-L3SB- POC Sta.966+17.47 (24' LT)

END CONSTRUCTION
-L3SB- Sta. 970+40

RESIDUAL

ROADWAY EMBANKMENT

NW-5
09+99 -Y2RPB-
28' RT

NW-4
15+26 -Y2RPB-
52' RT

NW-3
14+00 -Y2RPB-
45' RT

NW-2
12+79 -Y2RPB-
40' RT

NW-1
12+22 -Y2RPB-
10' RT

Y2RPB_1100
10+99 -Y2RPB-
52' RT

L3SB_96700
967+02 -L3SB-
71' LT

L3SB_96900
969+04 -L3SB-
105' LT

MATCH LINE 959+00 SEE SHEET 11

MATCH LINE 971+00 SEE SHEET 13

Y2RPA_1788
17+86 -Y2RPA-
53' LT

Y2RPA_1614
16+14 -Y2RPA-
62' LT

Y2RPA_1400
14+00 -Y2RPA-
20' LT

Y2RPA_1200
11+95 -Y2RPA-
20' LT

Y2RPA_1000
966+91 -L3NB-
43' RT

L3NB_96800
968+00 -L3NB-
80' RT

L3NB_97000
970+04 -L3NB-
45' RT

-Y2RPA- POT Sta.10+00 =
-L3NB- POC Sta.966+86.48 (24' RT)

HD DEVELOPMENT OF MARYLAND INC

CRESCENT ELECTRIC EASEMENT

PROJECT REFERENCE NO.	SHEET NO.
I-5715	13

0 100 200
FEET

PROGRESS RESIDENTIAL BORROWER 7 LLC

MICHELLE L PENDERGRASS

RSVILLE LLC

EXISTING R/W

14' BST

CURB

PARGET

WOODS

48" CM

12" MO

EXISTING R/W

MATCH LINE 971+00 SEE SHEET 12

RESIDUAL

END TIP PROJECT I-5715
END CONSTRUCTION
-L3NB- POT Sta. 974+90.00
MILL TO TIE-IN

ROADWAY EMBANKMENT

ON/OFF SWITCH

18" RCP

CONC

BL-329

L3NB_97200
971+85 -L3NB-
45' RT

L3NB_97400
973+95 -L3NB-
40' RT

END TIP PROJECT I-5715
END CONSTRUCTION
-L3NB- POT Sta. 974+90.00
MILL TO TIE-IN

INTERNATIONAL CHURCH OF THE FOURSQUARE GOSPEL

22' BST

24" RCP

48" MW

980

975

PROJECT REFERENCE NO.	SHEET NO.
I-5715	14

0 100 200
FEET

ROADWAY EMBANKMENT

MATCH LINE 23+50 SEE SHEET 11

BEGIN TIP PROJECT I-5715
-Y2- POT Sta.19+81.29=
TIE TO TIP PROJECT U-5765
-L2- POT Sta.477+93.62

ARTIFICIAL FILL

-Y8- NORTHCROSS DR

-17- NORTHCROSS DR

SR 2145 NC 73 (SAM FURR RD)

JS MIT

IVT NORTHCROSS CENTER HUNTERSVILLE, LLC & INVEN TRUST PROPERTIES CORP

COLE BE PORTFOLIO I LLC

SREE-LAKE NORMAN LLC

BRANCH BANKING & TRUST CO

NORTH POINTE REALTY CORP & SENTINEL REAL ESTATE CORP

NORTHCROSS MASTER ASSOCIATION INC

TULL ASSOCIATES L P

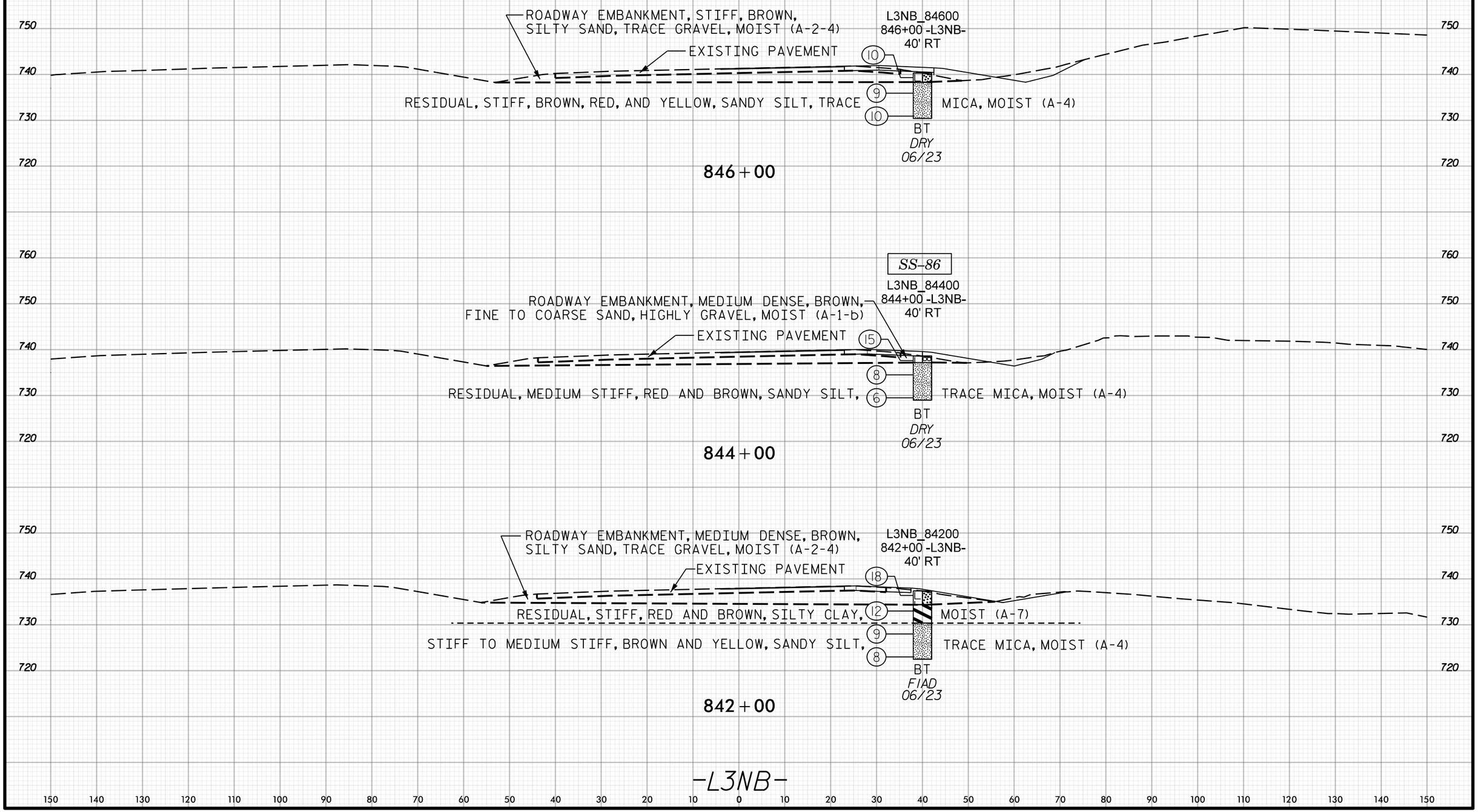
INVESTCORE PROP CO 16 LLC

Piedmont Natural Gas Company Inc., D.

TOP=706.79'
TOP=699.64'
TOP=701.76'
TOP=707.95'
TOP=710.04'
TOP=716.05'
TOP=723.51'
TOP=705.70'
TOP=709.32'
TOP=722.32'

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	15

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



-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	16

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

760 750 740 730

SS-96
L3NB_85200
851+88 -L3NB-
80' RT

RESIDUAL, STIFF, RED AND BROWN, SILTY CLAY, MOIST (A-7-5)

EXISTING PAVEMENT

12 12 9 8

STIFF TO MEDIUM STIFF, RED, BROWN, AND YELLOW, CLAYEY SILT TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)

BT
DRY
06/23

852+00

760 750 740 730

L3NB_85000
850+00 -L3NB-
76' RT

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST (A-7)

EXISTING PAVEMENT

STIFF, BROWN, RED, AND YELLOW, SANDY SILT TO CLAYEY SILT, TRACE MICA, MOIST (A-4, A-5)

BT
FIAD
06/23

850+00

750 740 730 720

L3NB_84800
847+96 -L3NB-
58' RT

EXISTING PAVEMENT

6 7 9 11

RESIDUAL, MEDIUM STIFF TO STIFF, BROWN, RED, AND YELLOW, SANDY SILT, TRACE MICA, MOIST (A-4)

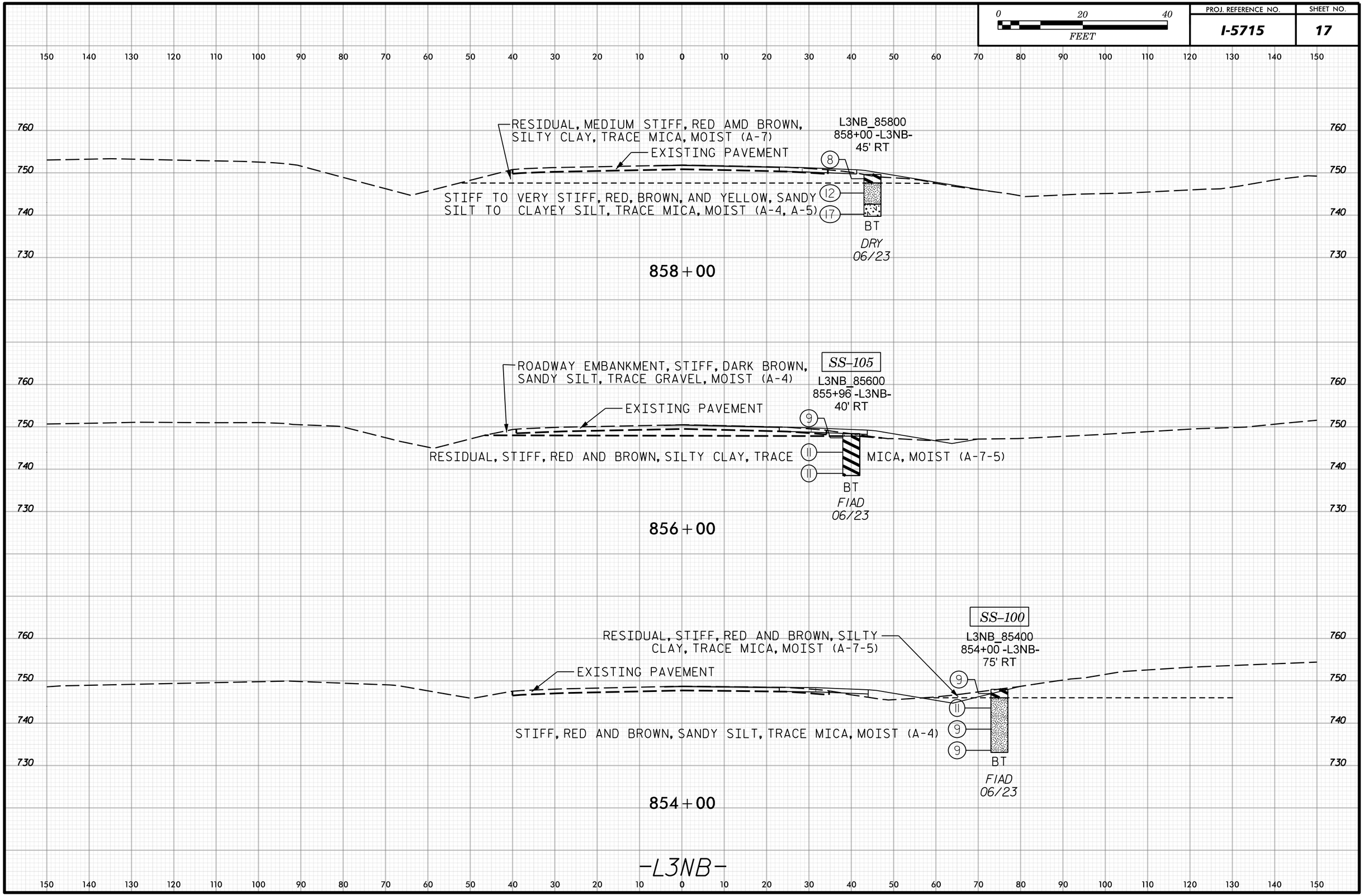
BT
FIAD
06/23

848+00

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	17



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	18

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

760 750 740 730

L3NB_88000
879+95 -L3NB-
40' RT

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, GRAVEL, SOME SAND, MOIST (A-1-b)

EXISTING PAVEMENT

16

RESIDUAL, STIFF, BROWN, RED, AND YELLOW, SILTY CLAY, TRACE MICA, 14 MOIST (A-7)

STIFF, BROWN, AND YELLOW, SANDY SILT, TRACE MICA AND ROCK FRAGMENTS, 10 MOIST (A-4)

BT

DRY
06/23

880+00

770 760 750 740

S-220

L3NB_86200
862+00 -L3NB-
43' RT

ROADWAY EMBANKMENT, BROWN AND RED, CLAYEY SILT, MOIST (A-5)

EXISTING PAVEMENT

RESIDUAL, RED, BROWN, AND YELLOW, SANDY SILT TO CLAYEY SILT, TRACE MICA, MOIST (A-4, A-5)

BT

FIAD
06/23

862+00

760 750 740 730

L3NB_86000
860+00 -L3NB-
40' RT

ROADWAY EMBANKMENT, MEDIUM DENSE, DARK BROWN, SILTY SAND, MOIST (A-2-4)

EXISTING PAVEMENT

10

11

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, RED, AND YELLOW, SANDY SILT TO CLAYEY SILT, TRACE MICA, MOIST (A-4, A-5) 4

06/23

SOFT, BROWN, SILTY CLAY, HIGHLY PLASTIC, 3 MOIST (A-7)

MEDIUM STIFF, BLUISH GRAY AND BROWN, SANDY SILT, 6 MOIST (A-4)

BT

860+00

-L3NB-

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

PROJ. REFERENCE NO.	SHEET NO.
I-5715	19

0 20 40
FEET

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

780 770 760 750

RESIDUAL, LOOSE, TAN-ORANGE, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

EXISTING PAVEMENT

VERY STIFF TO STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, LITTLE MICA, MOIST (A-4)

898+00

780 770 760 750 740 730

L3NB_89750
897+50 -L3NB-
115' RT

RESIDUAL, LOOSE, TAN-ORANGE, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

EXISTING PAVEMENT

VERY STIFF TO STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, LITTLE MICA, MOIST (A-4)

9 17 16 10 12 9 26

BT

FIAD
07/19

897+50

780 770 760 750

RESIDUAL, LOOSE, TAN-ORANGE, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

EXISTING PAVEMENT

VERY STIFF TO STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, LITTLE MICA, MOIST (A-4)

897+00

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	20

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

790 780 770 760 750 740

SS-7 KLF
Y2RPD_1069
899+06 -L3NB-
116' RT

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

SEE –Y2RPD– CROSS SECTIONS

EXISTING PAVEMENT

STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, MOIST (A-4)

13 18 12 10 12 8

BT

FIAD
07/19

899+00

RESIDUAL, LOOSE, TAN-ORANGE, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

SEE –Y2RPD– CROSS SECTIONS

EXISTING PAVEMENT

VERY STIFF TO STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, LITTLE MICA, MOIST (A-4)

898+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	21

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

770 760 750 740

EXISTING PAVEMENT

SEE -Y2RPD- CROSS SECTIONS

RESIDUAL, LOOSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF TO STIFF, RED-TAN, FINE SANDY SILT, MOIST (A-4)

903+00

790 780 770 760

EXISTING PAVEMENT

SEE -Y2RPD- CROSS SECTIONS

RESIDUAL, LOOSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF TO STIFF, RED-TAN, FINE SANDY SILT, MOIST (A-4)

902+50

790 780 770 760 750 740

SS-8 KLF

Y2RPD_1300
901+40 -L3NB-
119' RT

5 18 12 10 7 10

BT

FIAD
07/19

EXISTING PAVEMENT

SEE -Y2RPD- CROSS SECTIONS

RESIDUAL, LOOSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

MEDIUM STIFF TO STIFF, RED-TAN, FINE SANDY SILT, MOIST (A-4)

901+50

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	22

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

770 760 750

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

RESIDUAL, VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF TO MEDIUM STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

904+50

770 760 750

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

RESIDUAL, VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF TO MEDIUM STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

904+00

780 770 760 750 740

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

STIFF TO MEDIUM STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

SS–9 KLF

Y2RPD_1500
903+43 -L3NB-
106' RT

11
23
13
10
6

BT

FIAD 07/19

903+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	23

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

780 770 760 750 740 730

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

SS-10 KLF

Y2RPD_1900
907+47 -L3-NB-
95' RT

8
7
12
12

BT

FIAD
07/19

RESIDUAL, LOOSE, DARK BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

MEDIUM STIFF TO STIFF, ORANGE, TAN, AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

907+50

770 760 750 740

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

Y2RPD_1700
905+46 -L3NB-
84' RT

9
7
60/0.1

AR

FIAD
07/19

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

MEDIUM STIFF, BROWN-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

CRYSTALLINE ROCK (GRAY WHITE GNEISS)

905+50

770 760 750 740

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

MEDIUM STIFF, BROWN-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

905+00

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	24

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

800
790
780
770
760

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

909+50

L3NB_90900
909+00 -L3NB-
40' RT

790
780
770
760
750

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

13
10
11
7
BT
06/23

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

909+00

780
770
760

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

908+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	25

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

790 780 770 760

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

911+00

790 780 770 760 750

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SS–1 KLF
Y1RPD_1200
910+57 -L3NB-
138' RT

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

9
22
17
16
9
BT

FIAD
07/19

910+50

780 770 760

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, VERY STIFF, ORANGE-TAN, SILTY CLAY, HIGHLY PLASTIC, MOIST (A-7-5)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

910+00

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

790
780
770
760
750
740

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

STIFF TO MEDIUM STIFF, RED, WHITE, PINK, AND TAN, FINE SANDY SILT, MOIST (A-4)

912+00

790
780
770
760
750
740

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

911+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

790 780 770 760 750

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, FINE TO COARSE, SANDY GRAVEL, MOIST (A-1-b)

EXISTING PAVEMENT

Y1RPD_1450
913+26 -L3NB-
37' RT

SEE -Y2RPD- CROSS SECTIONS

23

RESIDUAL, MEDIUM STIFF TO STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

8
10
8

BT

DRY
06/23

913+50

800 790 780 770 760 750 740

SS-2 KLF

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

Y1RPD_1400
912+53 -L3NB-
140' RT

VERY STIFF, TAN-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

EXISTING PAVEMENT

SEE -Y2RPD- CROSS SECTIONS

10
24
14
11
10
12
6

STIFF TO MEDIUM STIFF, RED, WHITE, PINK, AND TAN, FINE SANDY SILT, MOIST (A-4)

BT

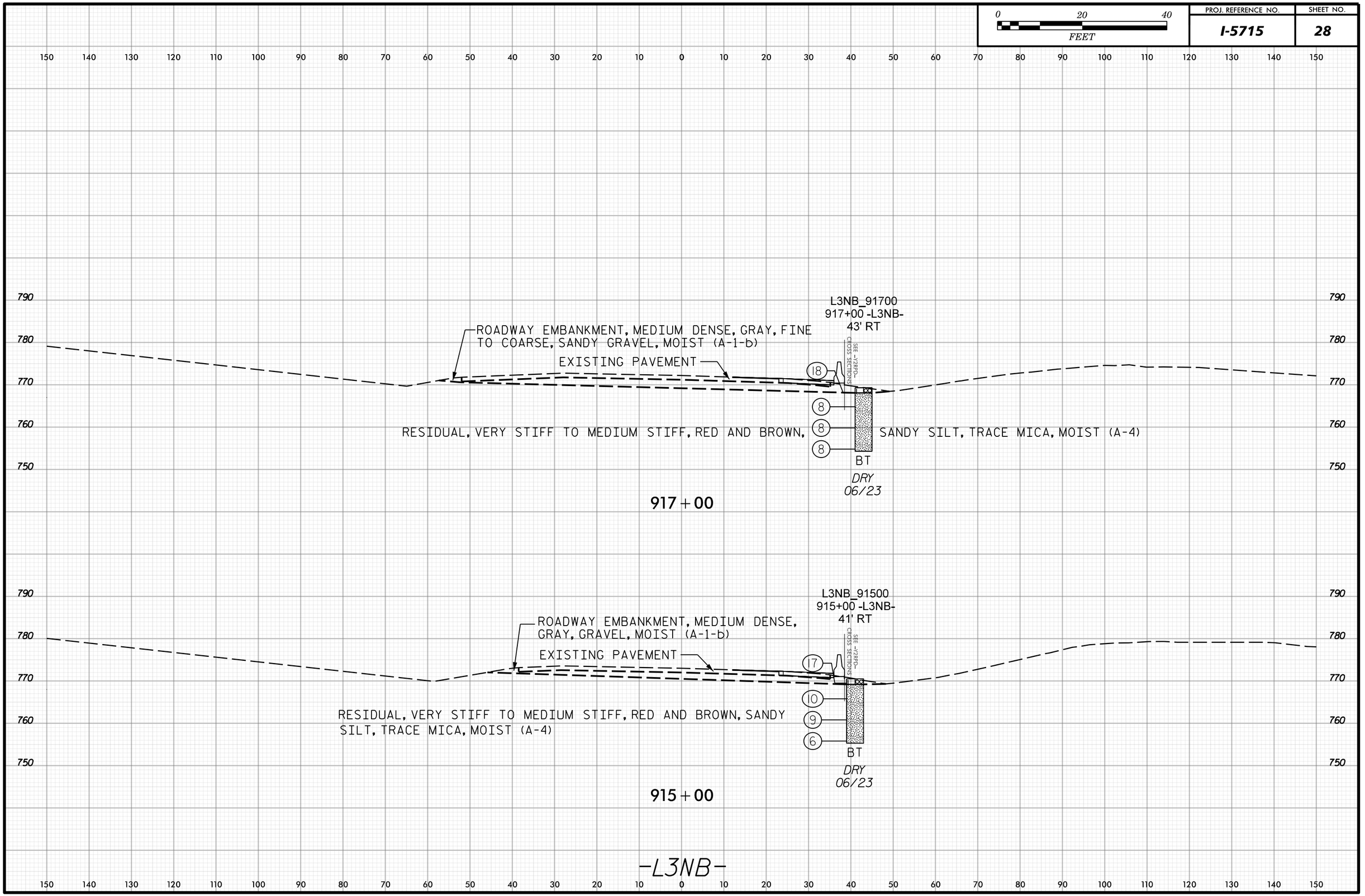
FIAD
07/19

912+50

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	28



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	29

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

790
780
770
760
750
740

SS-291
Y2RPD_3050
919+03 -L3NB-
115' RT

SEE -Y2RPD-
CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, MEDIUM STIFF, BROWN, RED, AND YELLOW, SILTY CLAY, TRACE MICA, MOIST

(A-7-6)

MEDIUM STIFF TO STIFF, RED, YELLOW, BROWN, CLAYEY SILT, TRACE MICA, MOIST (A-5)

5
15
10
10
8

BT

DRY
06/23

919+00

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	30

RESIDUAL, STIFF, TAN-RED, SILTY CLAY, MOIST (A-7)

EXISTING PAVEMENT

SEE –Y2RPD–
CROSS SECTIONS

S1B_EB2-B
920+05 -L3NB-
80' RT

10
17
12
14
9
10
7
14
9
23
17
24
34
53
75
95
100/0.9
100/0.7

07/19

BT

MEDIUM STIFF TO HARD, TAN, RED, AND WHITE, COARSE TO FINE SANDY SILT, MOIST (A-4)

VERY DENSE, TAN-WHITE, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

WEATHERED ROCK (TAN WHITE GNEISS)

920+00

–L3NB–

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780
770
760
750
740

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

921+00

790
780
770
760
750
740

RESIDUAL, STIFF, TAN-RED, SILTY CLAY, MOIST (A-7)

SEE –Y2RPD– CROSS SECTIONS

EXISTING PAVEMENT

MEDIUM STIFF TO HARD, TAN, RED, AND WHITE, COARSE TO FINE SANDY SILT, MOIST (A-4)

920+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780 770 760 750

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

922+50

780 770 760 750

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

922+00

780 770 760 750 740

Y2RPD_3300
921+55 -L3NB-
104' RT

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7)

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

11 13 9 8

BT

FIAD
07/19

921+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

770
760
750

SEE –Y2RPD– CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

924+00

780
770
760
750
740

SEE –Y2RPD– CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

SS–11 KLF
Y2RPD_3500
923+56 -L3NB-
99' RT

10
11
12
10

BT

FIAD
07/19

923+50

770
760
750

SEE –Y2RPD– CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

923+00

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780 770 760 750 740

SS–12 KLF
SS–13 KLF

Y2RPD_3700
925+57 -L3NB-
95' RT

SEE –Y2RPD–
CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF TO VERY STIFF, BROWN-RED, SILTY CLAY, MOIST (A-7-6, A-7-5)

STIFF, YELLOW-RED, COARSE TO FINE SANDY SILT, MOIST (A-4)

10
18
12
13

BT

FIAD
07/19

925+50

770 760 750 740 730

SEE –Y2RPD–
CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF TO VERY STIFF, BROWN-RED, SILTY CLAY, MOIST (A-7)

STIFF, YELLOW-RED, COARSE TO FINE SANDY SILT, MOIST (A-4)

925+00

770 760 750

SEE –Y2RPD–
CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

924+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

760

750

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, RED-BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED AND TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

927+00

770

760

750

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, RED-BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED AND TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

926+50

780

770

760

750

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, BROWN,-RED, SILTY CLAY, MOIST (A-7)

STIFF, YELLOW,-RED, COARSE TO FINE SANDY SILT, MOIST (A-4)

926+00

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

760 750 740

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, RED-BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED AND TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

928+50

770 760 750 740

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, RED-BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED AND TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

928+00

770 760 750 740 730

EXISTING PAVEMENT

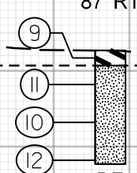
SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF, RED-BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

STIFF, RED AND TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

SS–14 KLF

Y2RPD_3889
927+47 -L3NB-
87' RT



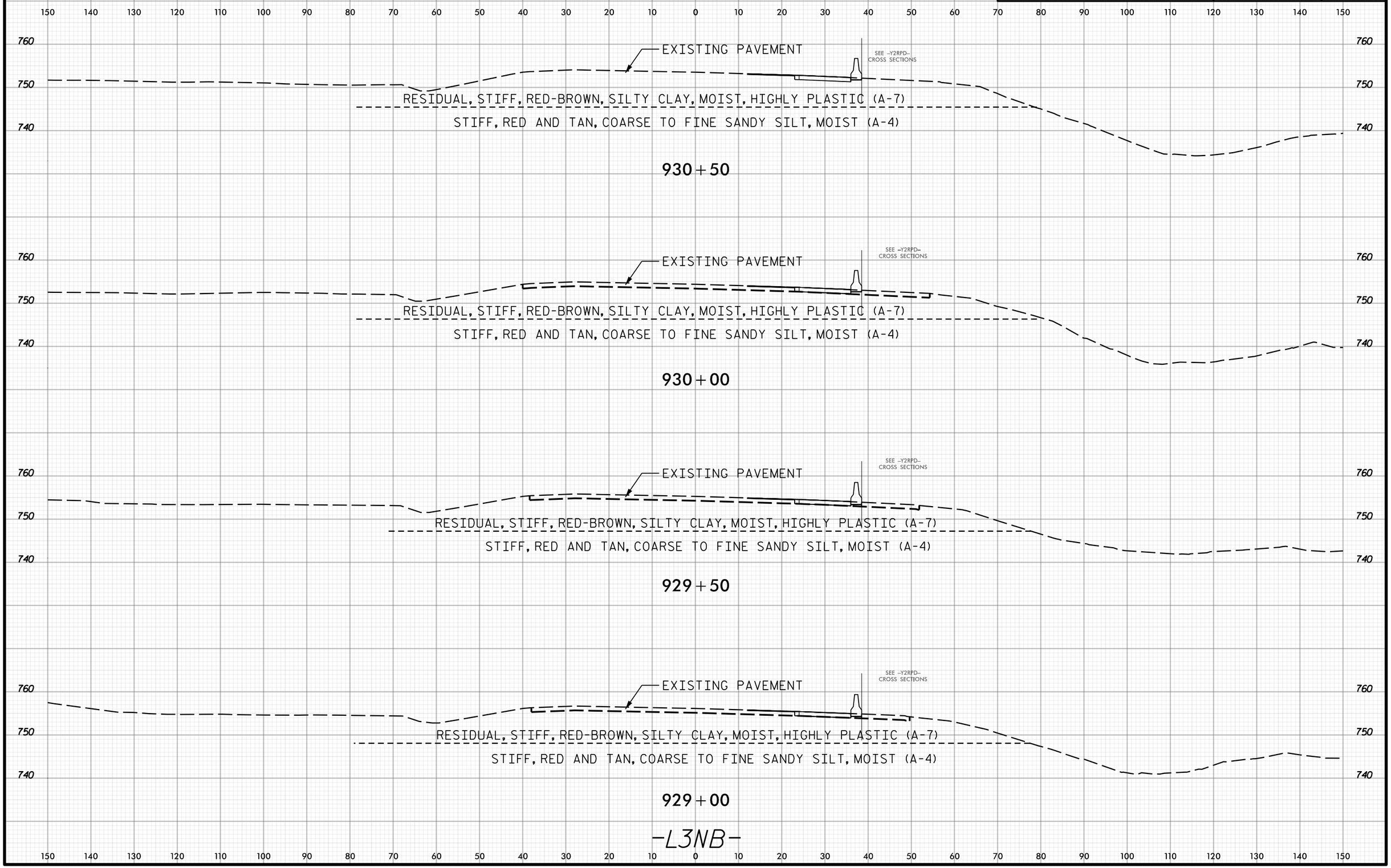
FIAD 07/19

927+50

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	37



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

760 750 740 730 720 710

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

ROADWAY EMBANKMENT, MEDIUM STIFF, RED-BROWN, CLAYEY SILT, TRACE GRAVEL, MOIST (A-5)

RESIDUAL, HARD, YELLOW, RED, AND BROWN, SANDY SILT, MOIST (A-4)

Y2RPD_4300
931+58 -L3NB-
122' RT

LT

BT

DRY

06/23

931+50

760 750 740 730 720 710

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

ROADWAY EMBANKMENT, MEDIUM STIFF, RED-BROWN, CLAYEY SILT, TRACE ROCK FRAGMENTS, MOIST (A-5)

RESIDUAL, HARD, YELLOW, RED, AND BROWN, SANDY SILT, MOIST (A-4)

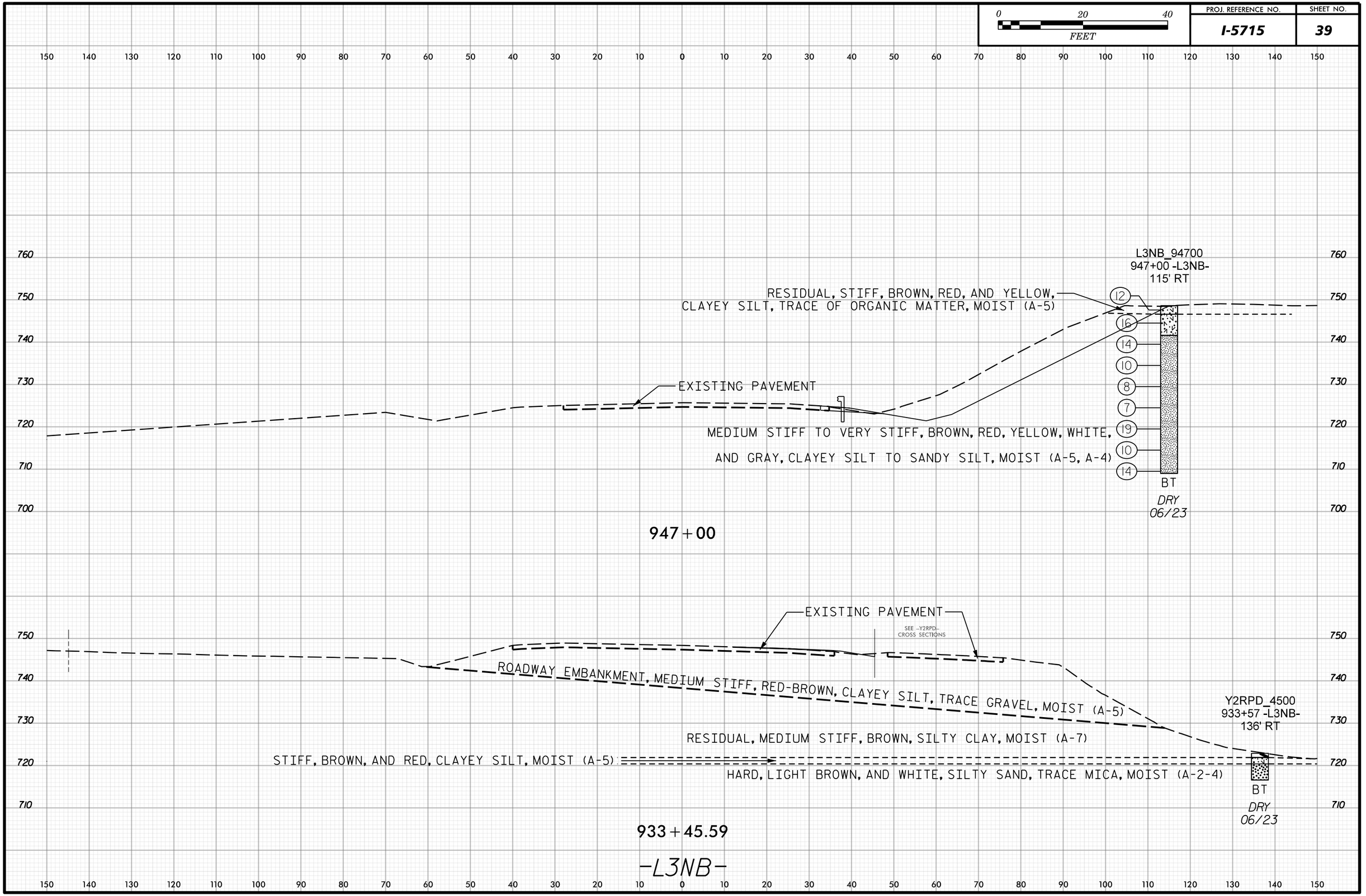
931+00

760 750 740 730 720 710 700

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	39



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

740 730 720 710 700

SS-257
Y2RPA_2400
952+89 -L3NB-
55' RT

EXISTING PAVEMENT

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

4
7
6
6
10

06/23

BT

RESIDUAL, MEDIUM STIFF TO STIFF, BROWN, WHITE, AND YELLOW, SANDY SILT TO CLAYEY SILT, TRACE MICA, MOIST TO WET (A-5, A-4)

953+00

750 740 730 720 710

L3NB_94900
948+95 -L3NB-
110' RT

RESIDUAL, MEDIUM STIFF, BROWN AND YELLOW,
CLAYEY SILT, TRACE OF ORGANIC MATTER, MOIST (A-5)

5
12
8
7
6
9
12

EXISTING PAVEMENT

06/23

BT

MEDIUM STIFF TO STIFF, BROWN, YELLOW, AND WHITE,
SANDY SILT, TRACE MICA, MOIST (A-4)

949+00

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	41

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

750
740
730
720

ROADWAY EMBANKMENT, BROWN, SILTY CLAY, TRACE ORGANIC MATTER, MOIST (A-7-5)

EXISTING PAVEMENT

SEE -Y2RPA- CROSS SECTIONS

S-202
Y2RPA_1400
962+94 -L3NB-
54' RT

RED, YELLOW, LIGHT BROWN, BROWN, AND GRAY, SANDY SILT AND CLAYEY SILT, TRACE MICA, MOIST (A-4, A-5)

06/23
BT

963+00

740
730
720
710
700

SS-267
L3NB_95800
957+67 -L3NB-
35' RT

SEE -Y2RPA- CROSS SECTIONS

EXISTING PAVEMENT, ASPHALT AND ABC

ROADWAY EMBANKMENT, MEDIUM DENSE, BLACK AND GRAY, SANDY GRAVEL, MOIST (A-1-b)

STIFF TO MEDIUM STIFF, RED, BROWN, GRAY, AND WHITE, SILTY CLAY, TRACE MICA (A-7-6)

STIFF, RED AND BROWN, CLAYEY SILT, TRACE MICA (A-5)

BT

FIAD
06/23

957+50

740
730
720
710
700

SS-262
Y2RPA_2200
954+91 -L3NB-
58' RT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM STIFF TO STIFF, RED AND GRAY, SILTY CLAY, MOIST (A-7-5)

06/23
BT

955+00

-L3NB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

750
740
730
720

EXISTING PAVEMENT

L3NB_96800
968+00 -L3NB-
80' RT

ROADWAY EMBANKMENT, VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST (A-7)

RESIDUAL, STIFF TO VERY STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

STIFF, ORANGE-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED-ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

15
22
13
9

BT

FIAD
07/19

968+00

760
750
740
730
720

SS–162

Y2RPA_1000
966+91 -L3NB-
43' RT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, VERY STIFF, RED AND BROWN, SILTY CLAY, SOME GRAVEL, MOIST (A-7-6)

VERY STIFF, BROWN AND YELLOW, SANDY SILT, TRACE MICA, MOIST (A-4)

RESIDUAL, STIFF TO VERY STIFF, RED AND YELLOW, SILTY CLAY, MOIST (A-7)

17
20
15
26

BT

DRY
06/23

967+00

750
740
730
720

ROADWAY EMBANKMENT, VERY STIFF, RED AND BROWN, SILTY CLAY, LITTLE GRAVEL, MOIST (A-7)

Y2RPA_1200
964+93 -L3NB-
46' RT

SEE –Y2RPA– CROSS SECTIONS

STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

RESIDUAL, VERY STIFF TO STIFF, RED, SILTY CLAY, MOIST (A-7)

16
10
18
11

BT

DRY
06/23

965+00

–L3NB–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

770
760
750
740
730

L3NB_97200
971+85 -L3NB-
45' RT

ROADWAY EMBANKMENT, STIFF, RED, SILTY CLAY, MOIST (A-7)

EXISTING PAVEMENT

MEDIUM DENSE, GRAY, GRAVEL, LITTLE SAND, MOIST (A-1-b)

15
9
7
8

RESIDUAL, MEDIUM STIFF TO STIFF, RED AND YELLOW, SANDY SILT, TRACE MICA, MOIST (A-4)

BT
DRY
06/23

972+00

770
760
750
740
730

SS-167
L3NB_97000
970+00 -L3NB-
45' RT

ROADWAY EMBANKMENT, VERY STIFF, RED, SILTY CLAY, MOIST (A-7)

EXISTING PAVEMENT

MEDIUM DENSE, SANDY GRAVEL, MOIST (A-1-b)

25
18
12
6

RESIDUAL, VERY STIFF, RED, YELLOW, AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7-5)

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN AND YELLOW, SANDY SILT, TRACE MICA, MOIST (A-4)

BT
DRY
06/23

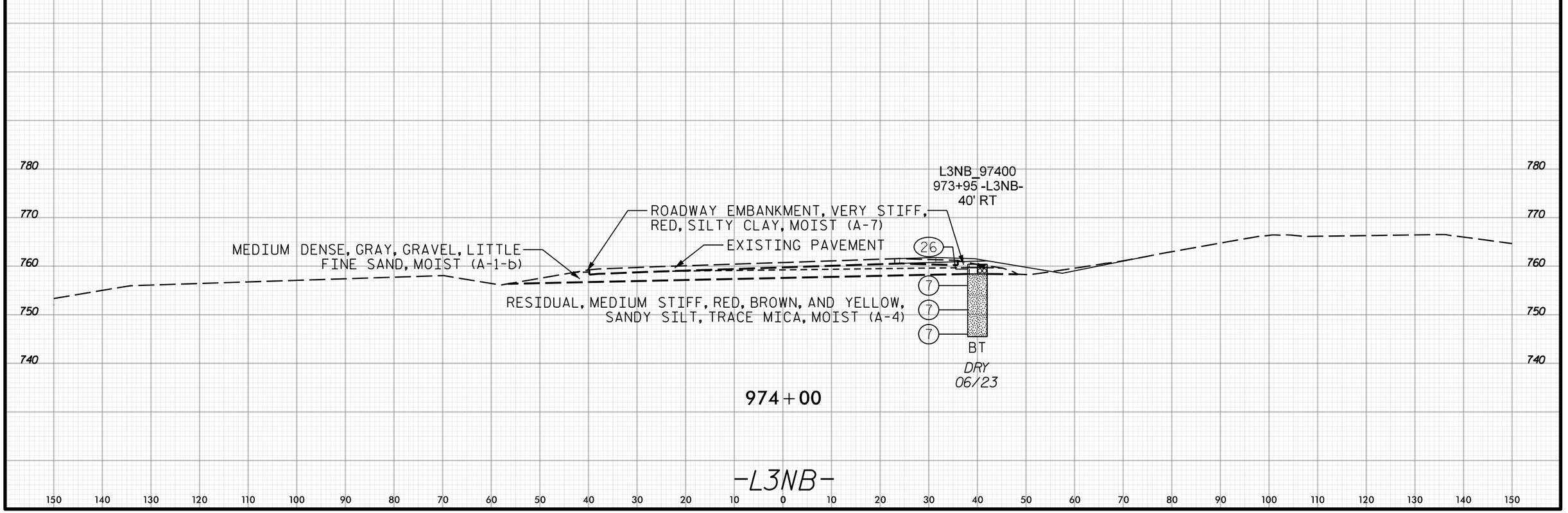
970+00

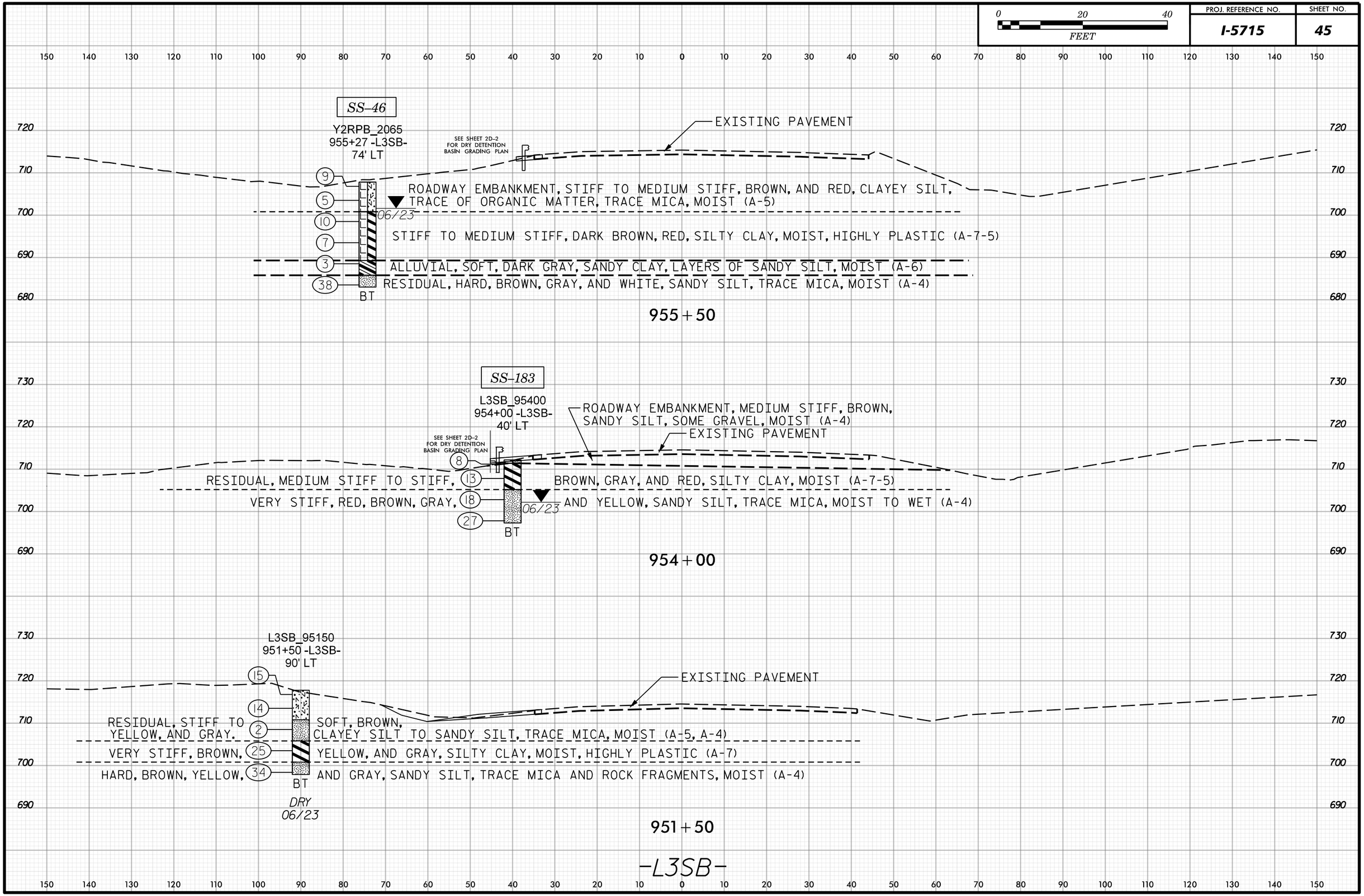
-L3NB-

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 20 40
FEET

PROJ. REFERENCE NO.	SHEET NO.
I-5715	44





0 20 40
FEET
PROJ. REFERENCE NO.
I-5715
SHEET NO.
45
SS-46
Y2RPB_2065
955+27 -L3SB-
74' LT
SEE SHEET 2D-2 FOR DRY DETENTION BASIN GRADING PLAN
EXISTING PAVEMENT
ROADWAY EMBANKMENT, STIFF TO MEDIUM STIFF, BROWN, AND RED, CLAYEY SILT, TRACE OF ORGANIC MATTER, TRACE MICA, MOIST (A-5)
06/23
STIFF TO MEDIUM STIFF, DARK BROWN, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)
ALLUVIAL, SOFT, DARK GRAY, SANDY CLAY, LAYERS OF SANDY SILT, MOIST (A-6)
RESIDUAL, HARD, BROWN, GRAY, AND WHITE, SANDY SILT, TRACE MICA, MOIST (A-4)
BT
955+50
SS-183
L3SB_95400
954+00 -L3SB-
40' LT
ROADWAY EMBANKMENT, MEDIUM STIFF, BROWN, SANDY SILT, SOME GRAVEL, MOIST (A-4)
EXISTING PAVEMENT
SEE SHEET 2D-2 FOR DRY DETENTION BASIN GRADING PLAN
RESIDUAL, MEDIUM STIFF TO STIFF, BROWN, GRAY, AND RED, SILTY CLAY, MOIST (A-7-5)
VERY STIFF, RED, BROWN, GRAY, AND YELLOW, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)
06/23
BT
954+00
L3SB_95150
951+50 -L3SB-
90' LT
EXISTING PAVEMENT
RESIDUAL, STIFF TO YELLOW, AND GRAY.
SOFT, BROWN, CLAYEY SILT TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)
VERY STIFF, BROWN, YELLOW, AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)
HARD, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA AND ROCK FRAGMENTS, MOIST (A-4)
BT
DRY
06/23
951+50
-L3SB-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	46

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

730
720
710
700

NW-5
960+20 -L3SB-
88' LT

SEE –Y2RPB– CROSS SECTIONS

EXISTING PAVEMENT

9
6
3
6
LL
06/23
BT

ROADWAY EMBANKMENT, STIFF, BROWN, CLAYEY SILT, TRACE OF ORGANIC MATTER, MOIST (A-5)

RESIDUAL, MEDIUM STIFF TO SOFT, BROWN, YELLOW, AND WHITE, SANDY SILT, TRACE MICA, MOIST (A-4)

960+00

740
730
720
710
700
690

Y2RPB_1900
956+98 -L3SB-
39' LT

SEE SHEET 2D–2 FOR DRY DETENTION BASIN GRADING PLAN

ROADWAY EMBANKMENT, LOOSE, BROWN, SILTY SAND, SOME GRAVEL, MOIST (A-2-4)

EXISTING PAVEMENT

8
8
7
13
LL
06/23
BT
DRY
06/23

MEDIUM STIFF, RED, BROWN AND YELLOW, SANDY SILT, MOIST (A-4)

RESIDUAL, MEDIUM STIFF TO STIFF, BROWN AND YELLOW, SILTY CLAY, TRACE MICA, MOIST (A-7)

957+00

-L3SB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	47

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

740 730 720 710 700 690

NW-3
962+19 -L3SB-
90' LT

6
7 06/23
10
3
8
BT

FIAD
06/23

ROADWAY EMBANKMENT, STIFF, BROWN, CLAYEY SILT, TRACE ORGANIC MATTER, MOIST (A-5)

SEE -Y2RPB- CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, MEDIUM STIFF, BROWN, RED, AND YELLOW, SANDY SILT, MOIST (A-4)

STIFF, RED, YELLOW, AND GRAY, SANDY CLAY, WET (A-6)

SOFT TO MEDIUM STIFF, RED, YELLOW, BROWN, GRAY, AND WHITE, SANDY SILT, TRACE MICA, WET, (A-4)

962+00

SS-36

NW-4
960+95 -L3SB-
106' LT

8
20
3
4 06/23
4
BT

RESIDUAL, MEDIUM STIFF, BROWN, SANDY SILT, MOIST (A-4)

SEE -Y2RPB- CROSS SECTIONS

EXISTING PAVEMENT

ROADWAY EMBANKMENT, STIFF, BROWN, CLAYEY SILT, MOIST (A-5)

VERY STIFF, RED, YELLOW, AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC, (A-7-6)

SOFT TO MEDIUM STIFF, RED, YELLOW, BROWN, WHITE, AND GRAY, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

961+00

-L3SB-

740 730 720 710 700 690

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	48

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

740 730 720 710 700

NW-1
963+96 -L3SB-
47' LT

ROADWAY EMBANKMENT, RED AND BROWN,
CLAYEY SILT, TRACE GRAVEL, MOIST (A-5)

SEE -Y2RPB- CROSS SECTIONS

EXISTING PAVEMENT

8
10
5
4
3
4

06/23

RESIDUAL, STIFF TO SOFT, RED, BROWN, YELLOW, LIGHT BROWN, GRAY, AND WHITE,
CLAYEY SILT TO SANDY SILT, TRACE MICA, MOIST TO WET (A-5, A-4)

BT

964+00

SS-24

NW-2
963+40 -L3SB-
80' LT

SEE -Y2RPB- CROSS SECTIONS

ROADWAY EMBANKMENT, GRAVEL, MOIST (A-1-b)

EXISTING PAVEMENT

7
4
12
4
4
13

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

06/23

MEDIUM STIFF TO STIFF, RED, BROWN, YELLOW, GRAY, AND WHITE,
CLAYEY SILT TO SANDY SILT, TRACE MICA, MOIST TO WET (A-5, A-4)

BT

963+50

-L3SB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	49

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

750
740
730
720

EXISTING PAVEMENT

RESIDUAL, MEDIUM STIFF TO VERY STIFF, BROWN AND RED, SANDY SILT TO CLAYEY SILT, TRACE MICA, MOIST (A-4, A-5)

LOOSE, BROWN, SILTY SAND, TRACE MICA, MOIST TO WET (A-2-4)

966+50

760
750
740
730
720
710

SS-12
SS-14

Y2RPB_1100
965+22 -L3SB-
82' LT

SEE -Y2RPB- CROSS SECTIONS

EXISTING PAVEMENT

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

10
24
21
7
4
6

MEDIUM STIFF, RED, YELLOW, AND GRAY, CLAYEY SAND, MOIST (A-2-6)

06/23

MEDIUM STIFF, BROWN, RED, YELLOW, TAN, LIGHT BROWN, WHITE, AND BLACK, SANDY SILT WITH TRACE MICA, MOIST TO WET (A-4)

BT

965+00

-L3SB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	50

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

760 750 740 730 720

L3SB_96900
969+04 -L3SB-
105' LT

(13) (13) (6) (5) (4) (6)

BT

DRY
06/23

RESIDUAL, STIFF, RED AND TAN,
CLAYEY SILT, TRACE MICA AND TRACE OF ORGANIC MATTER, MOIST (A-5)

EXISTING PAVEMENT

STIFF TO MEDIUM STIFF, RED AND TAN, CLAYEY SILT, TO SANDY SILT,
TRACE MICA, MOIST TO WET (A-5, A-4)

969+00

770 760 750 740 730 720 710

L3SB_96700
967+02 -L3SB-
71' LT

(7) (16) (7) (4) (4)

BT

DRY
06/23

EXISTING PAVEMENT

RESIDUAL, MEDIUM STIFF TO VERY STIFF, BROWN AND RED,
SANDY SILT TO CLAYEY SILT, TRACE MICA, MOIST (A-4, A-5)

LOOSE, BROWN, SILTY SAND, TRACE MICA, MOIST TO WET (A-2-4)

967+00

-L3SB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	51

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

780 770 760 750 740 730 720 710 700

Y1_1394
13+94 -Y1-
2' LT

9
9
10
11
11
12
12
36
100/0.8
100/0.9

RESIDUAL, STIFF, YELLOWISH BROWN TO LIGHT BROWNISH GRAY, SANDY CLAY, MOIST (A-6)

07/19

MEDIUM DENSE TO DENSE, BROWN, LIGHT BROWN, WHITE, AND GRAY, SILTY SAND, MOIST TO WET (A-2-4)

WEATHERED ROCK (WHITE AND GRAY METAMORPHOSED QUARTZ DIORITE)

BT

14+00
2 OF 2

14 + 00

Y1_1212
12+12 -Y1-
42' RT

10
13
9
5
5
12

RESIDUAL, STIFF, YELLOWISH RED, SANDY SILT, MOIST (A-4)

MEDIUM DENSE TO LOOSE, YELLOWISH RED TO YELLOWISH BROWN, SILTY SAND, MOIST (A-2-4)

MEDIUM STIFF, YELLOWISH BROWN TO LIGHT BROWN AND WHITE, SANDY SILT, MOIST (A-4)

MEDIUM DENSE, LIGHT BROWN AND WHITE, SILTY SAND, MOIST (A-2-4)

BT

FIAD
07/19

12 + 00

-Y1-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	52

790 780 770 760 750 740 730 720 710

Y1_1590
15+90 -Y1-
CL

11	RESIDUAL, MEDIUM DENSE, RED AND BROWN, CLAYEY SAND, MOIST (A-2-6)
11	STIFF, YELLOW AND GRAY, SANDY CLAY, MOIST (A-6)
5	MEDIUM STIFF, LIGHT GREENISH GRAY AND LIGHT BROWN, SANDY SILT, MOIST (A-4)
8	07/19
10	LOOSE TO MEDIUM DENSE, BROWN, GRAY, AND WHITE, SILTY SAND, MOIST TO WET (A-2-4)
27	
28	
100/0.8	
100/0.5	WEATHERED ROCK (BROWNISH GRAY AND WHITE METAMORPHOSED QUARTZ DIORITE)
100/0.3	

BT

16+00

16+00
2 OF 2

-Y1-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	53

ROADWAY EMBANKMENT, MEDIUM DENSE, REDDISH, BROWN, SILTY SAND, TRACE GRAVEL AND ASPHALT FRAGMENTS, MOIST (A-2-4)

S1A_EB1-A
17+75 -Y1-
29' LT

13
18
12
7
7
6
5
4
17
25
28
100/0.9
60/0.0

RESIDUAL, VERY STIFF TO STIFF, RED AND YELLOW, SANDY SILT, MOIST (A-4)

07/19

LOOSE TO MEDIUM DENSE, YELLOW, RED, BROWN, WHITE, AND GRAY, SILTY SAND, MOIST TO WET (A-2-4)

WEATHERED ROCK (BROWN AND WHITE METAMORPHOSED QUARTZ DIORITE)

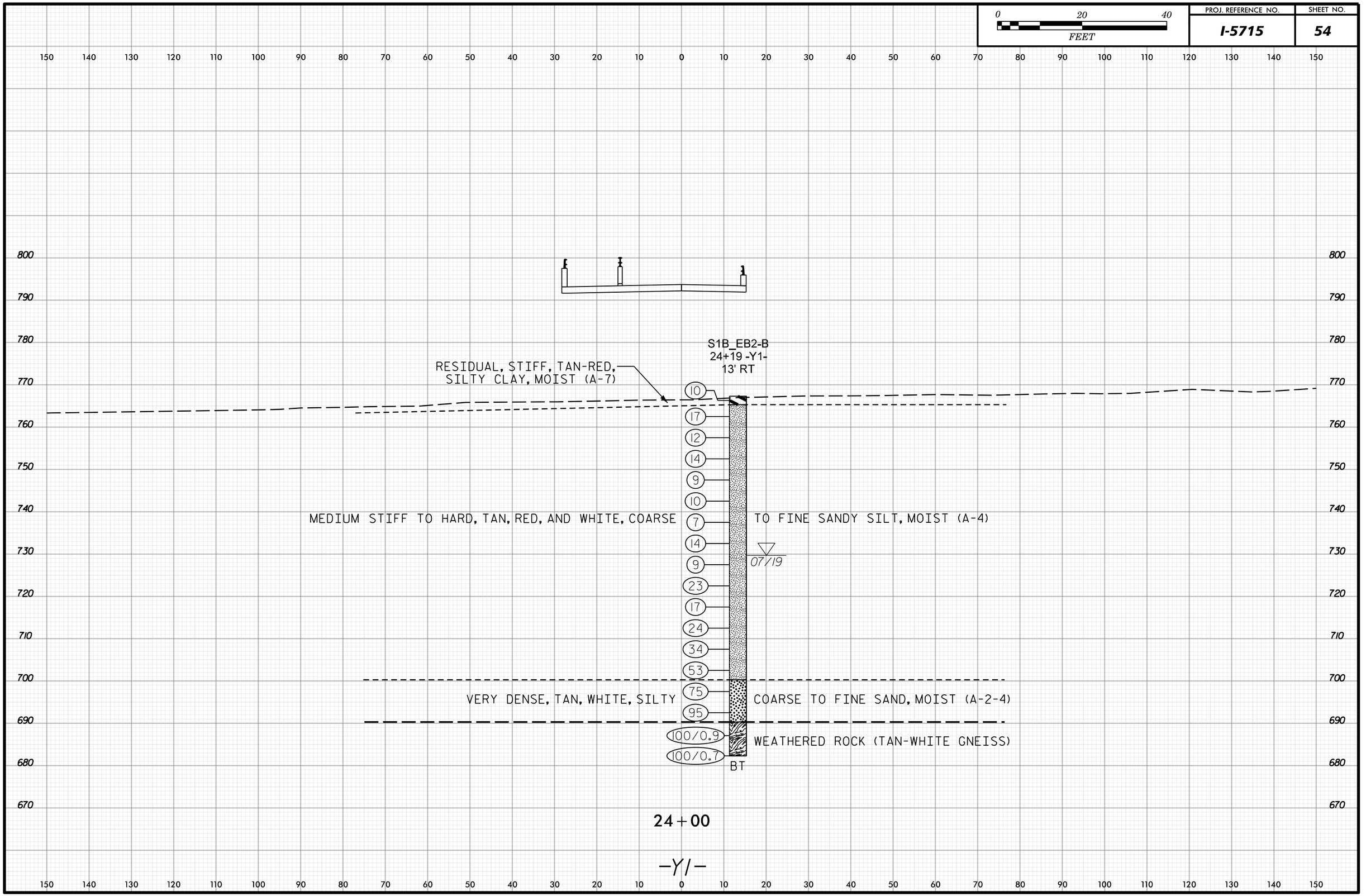
AR

CRYSTALLINE ROCK (METAMORPHOSED QUARTZ DIORITE)

17+50

-Y1-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	54



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

810 800 790 780 770 760 750 740 730 720 710 700 690

NOTE:
DUE TO THE SKEW OF THE ROUNDABOUT CROSS SECTIONS, NO SLOPES OR ELEVATIONS WILL BE DISPLAYED. SEE SHEET 2C-1 FOR Y1 ROUNDABOUT DETAIL.

Y1_2650
26+50 -Y1-
CL

9
9
3
8
13
20
31
48
59
100/0.8

07/19

CLAYEY FINE TO COARSE SAND, MOIST, (A-2-4, A-2-6)

RESIDUAL, LOOSE, BROWN TO GRAY, SILTY COARSE TO FINE SAND, TO

SOFT TO HARD, TAN-WHITE, COARSE TO FINE SANDY SILT, MOIST TO WET (A-4)

DENSE TO VERY DENSE, WHITE-GRAY, SILTY COARSE TO FINE SAND, MOIST TO SATURATED (A-2-4)

WEATHERED ROCK (GRAY-WHITE GNEISS)

BT

FIAD
07/19

26+50

-Y1-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	56

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

780 770 760 750

SS-287
Y1_3000
30+00 -Y1-
40' RT

3
17
7
9

RESIDUAL, SOFT TO VERY STIFF, RED AND BROWN, SANDY CLAY, MOIST (A-6)

MEDIUM STIFF TO STIFF, RED, BROWN, YELLOW, AND WHITE, CLAYEY SILT TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)

BT
DRY
06/23

30+00

780 770 760 750 740 730 720

RESIDUAL, LOOSE, RED, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

Y1_2850
28+51 -Y1-
CL

6
14
6
6
7
10

MEDIUM STIFF TO STIFF, ORANGE-TAN TO TAN-WHITE, COARSE TO FINE SANDY SILT TO CLAYEY SILT, MOIST (A-4, A-5)

07/19

BT

28+50

-Y1-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	57

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

780 770 760

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

11+50

810 800 790 780 770 760

EXISTING PAVEMENT

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

11+00

790 780 770 760 750

L3NB_90900
10+39 -Y1RPD-
29' LT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

SEE –Y2RPD– CROSS SECTIONS

13 10 11 7

06/23

BT

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

10+50

–YIRPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780 770 760

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, HIGHLY PLASTIC, MOIST (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

13+00

780 770 760

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

12+50

790 780 770 760 750

SS–1 KLF

Y1RPD_1200
12+00 -Y1RPD-
60' RT

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE –Y2RPD– CROSS SECTIONS

9
VERY STIFF, ORANGE-TAN, SILTY 22 CLAY, MOIST, HIGHLY PLASTIC (A-7-5)
17
VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO 16 FINE SANDY SILT, MOIST (A-4)
9

BT

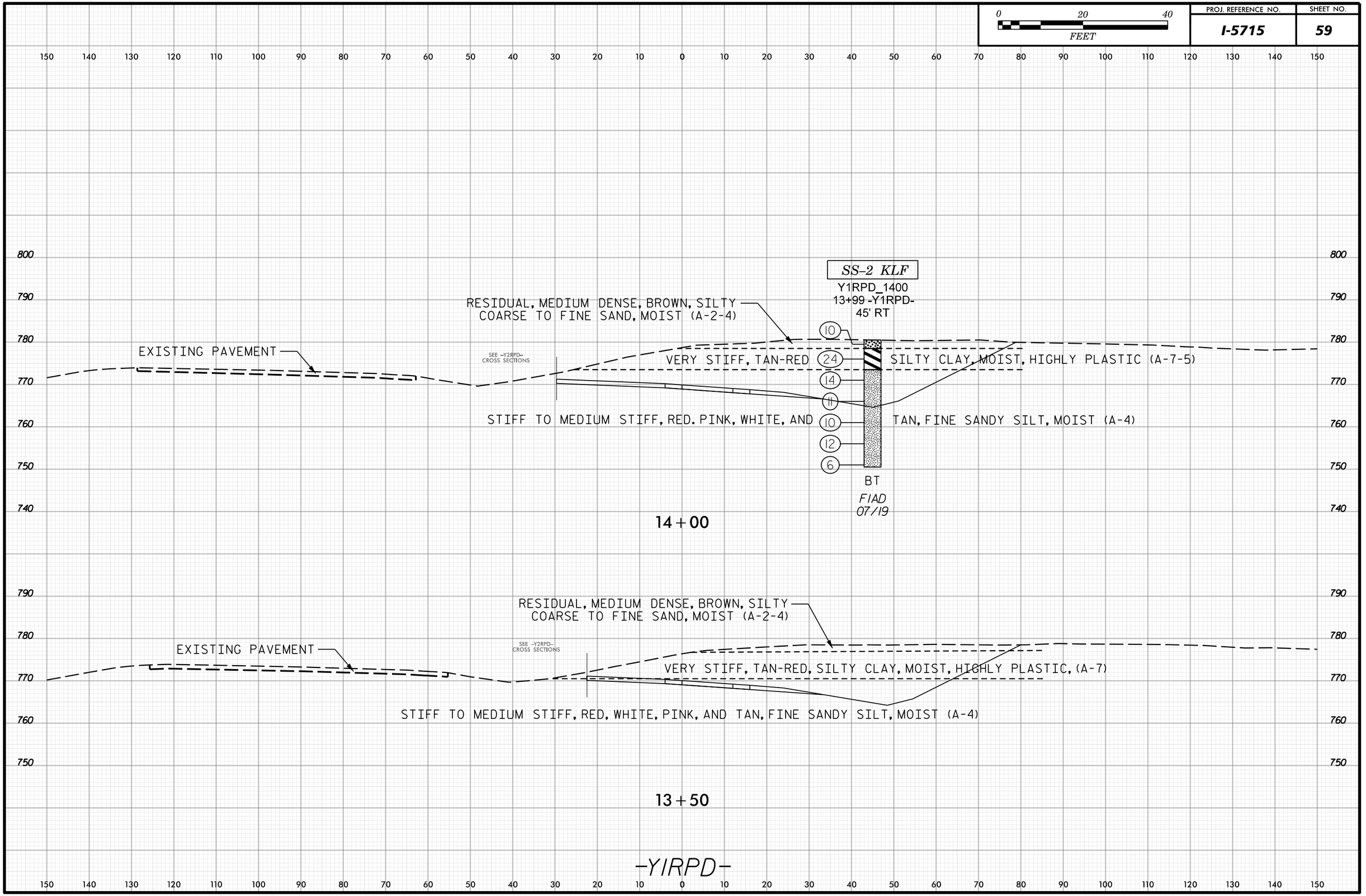
FIAD 07/19

12+00

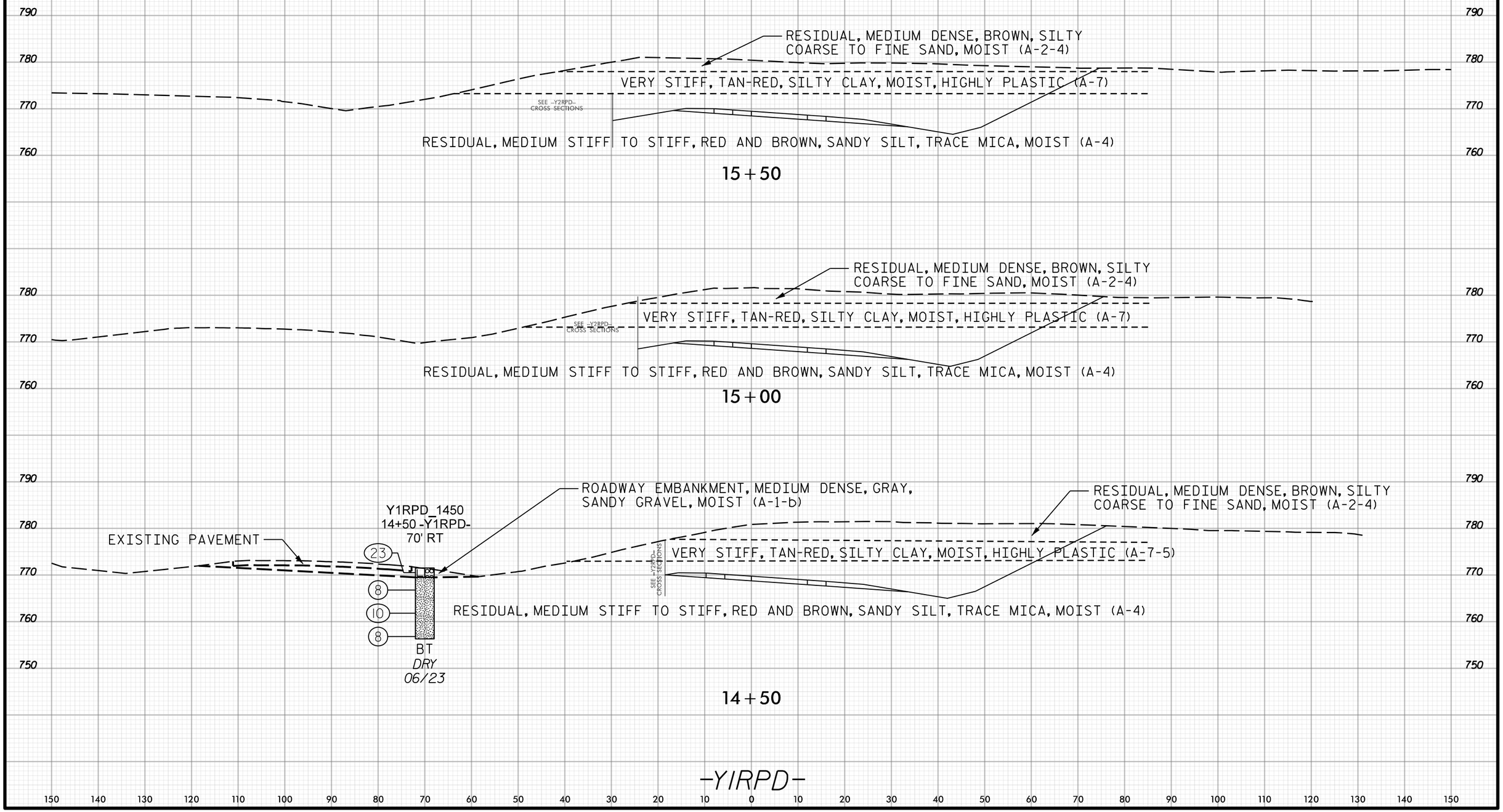
–YIRPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	59



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	60



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	61

2 OF 2

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

780 770 760

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF TO MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

STIFF TO MEDIUM STIFF, BROWN, RED, YELLOW, AND TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

17+00

19+50

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE –Y2RPD– CROSS SECTIONS

VERY STIFF TO MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

STIFF TO MEDIUM STIFF, BROWN, RED, YELLOW, AND TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

16+50

790 780 770 760 750 740

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

L3NB_91500
16+03 -Y1RPD-
114' LT

17
10
9
6

BT

DRY
06/23

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SS-3 KLF

Y1RPD_1609
16+09 -Y1RPD-
1' RT

COARSE TO FINE SANDY SILT, TRACE MICA, MOIST (A-4)

SEE –Y2RPD– CROSS SECTIONS

RESIDUAL, VERY STIFF TO MEDIUM STIFF, RED AND BROWN,

STIFF TO MEDIUM STIFF, BROWN, RED, YELLOW, AND TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

13
13
6

BT

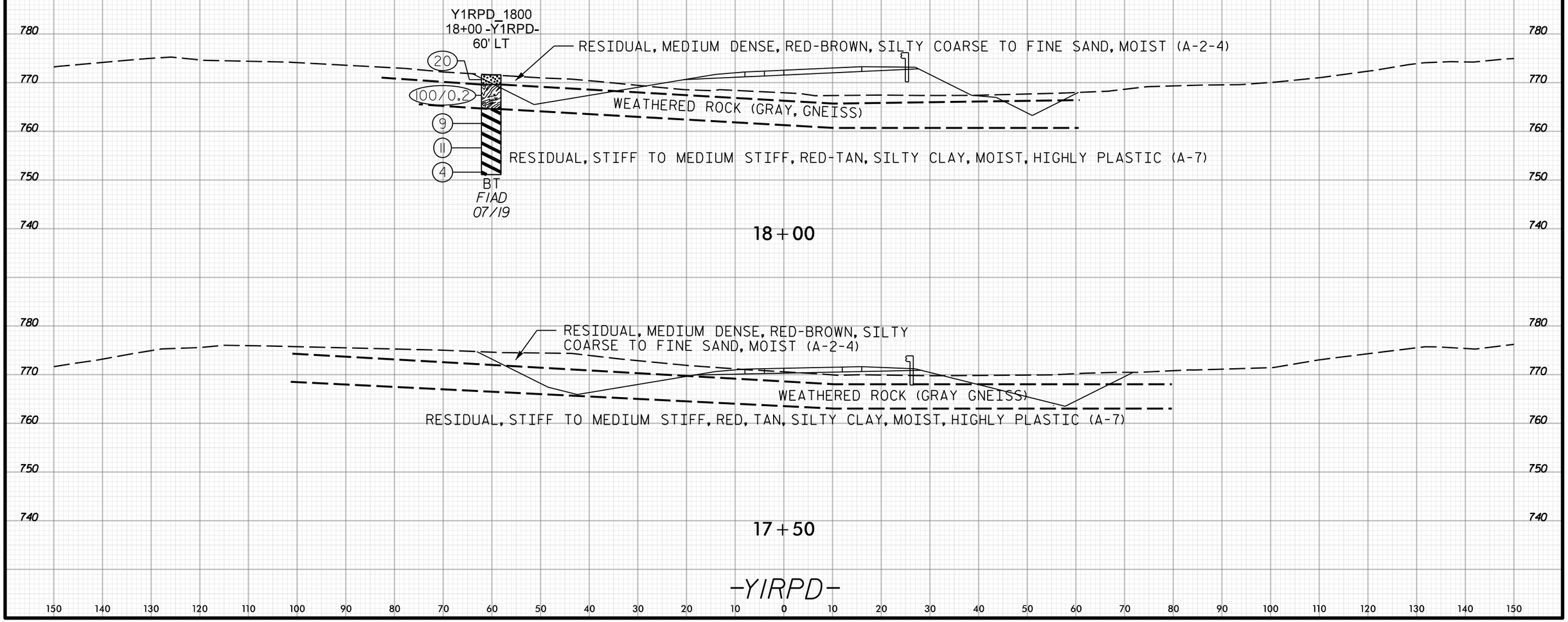
FIAD
07/19

16+00

–YIRPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	62



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

790
780
770
760
750
740
730
720
710

Y1RPD_2000
20+00 -Y1RPD-
10' RT

RESIDUAL, MEDIUM DENSE, BROWN AND GRAY, SILTY
MEDIUM STIFF, TAN, SILTY CLAY,
STIFF TO VERY STIFF, WHITE-TAN, COARSE
DENSE TO VERY DENSE, TAN-WHITE, SILTY

10
19
7
9
11
19
44
47
91

COARSE TO FINE SAND TO CLAYEY FINE TO COARSE SAND, MOIST (A-2-4, A-2-6)
MOIST, HIGHLY PLASTIC (A-7)
07/19
TO FINE SANDY SILT, MOIST (A-4)
FINE TO COARSE SAND, MOIST (A-2-4)

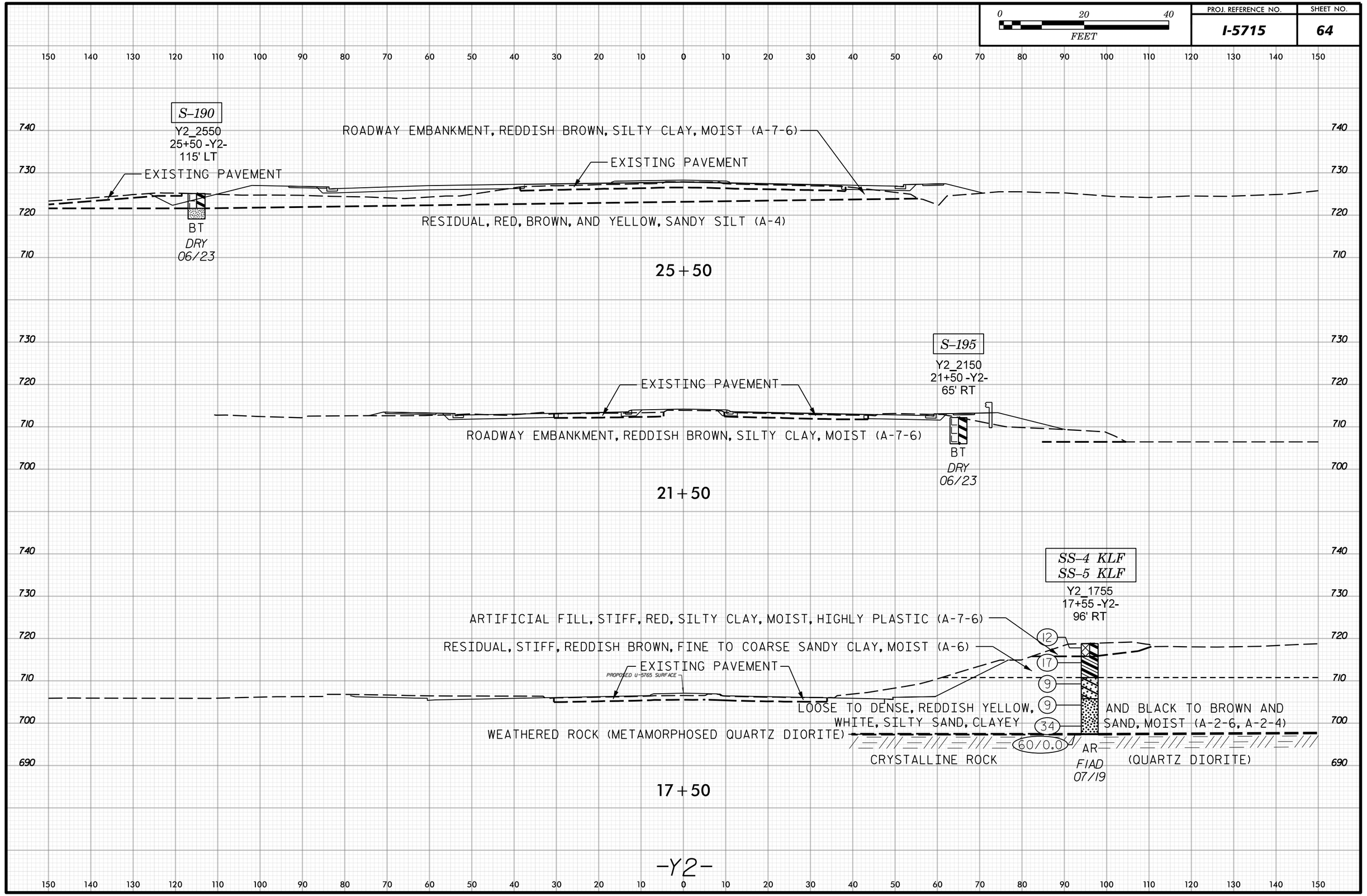
BT

20+00

-YIRPD-

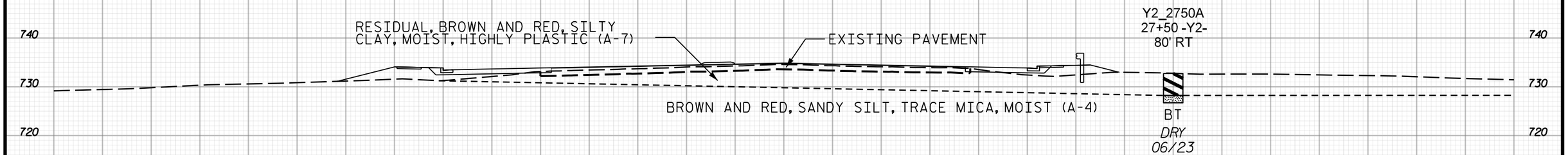
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	64

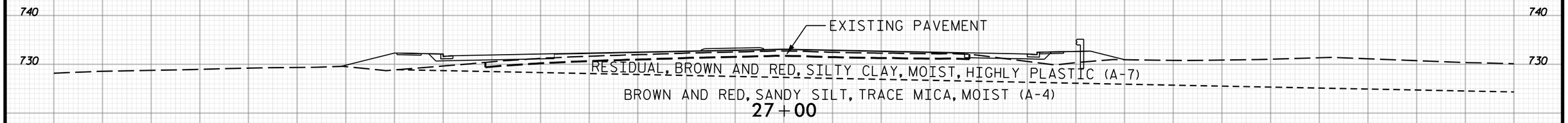


0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	65

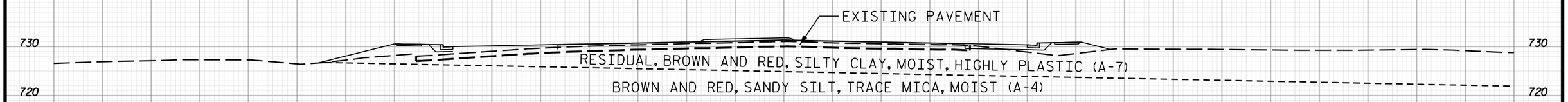
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



27+50



27+00



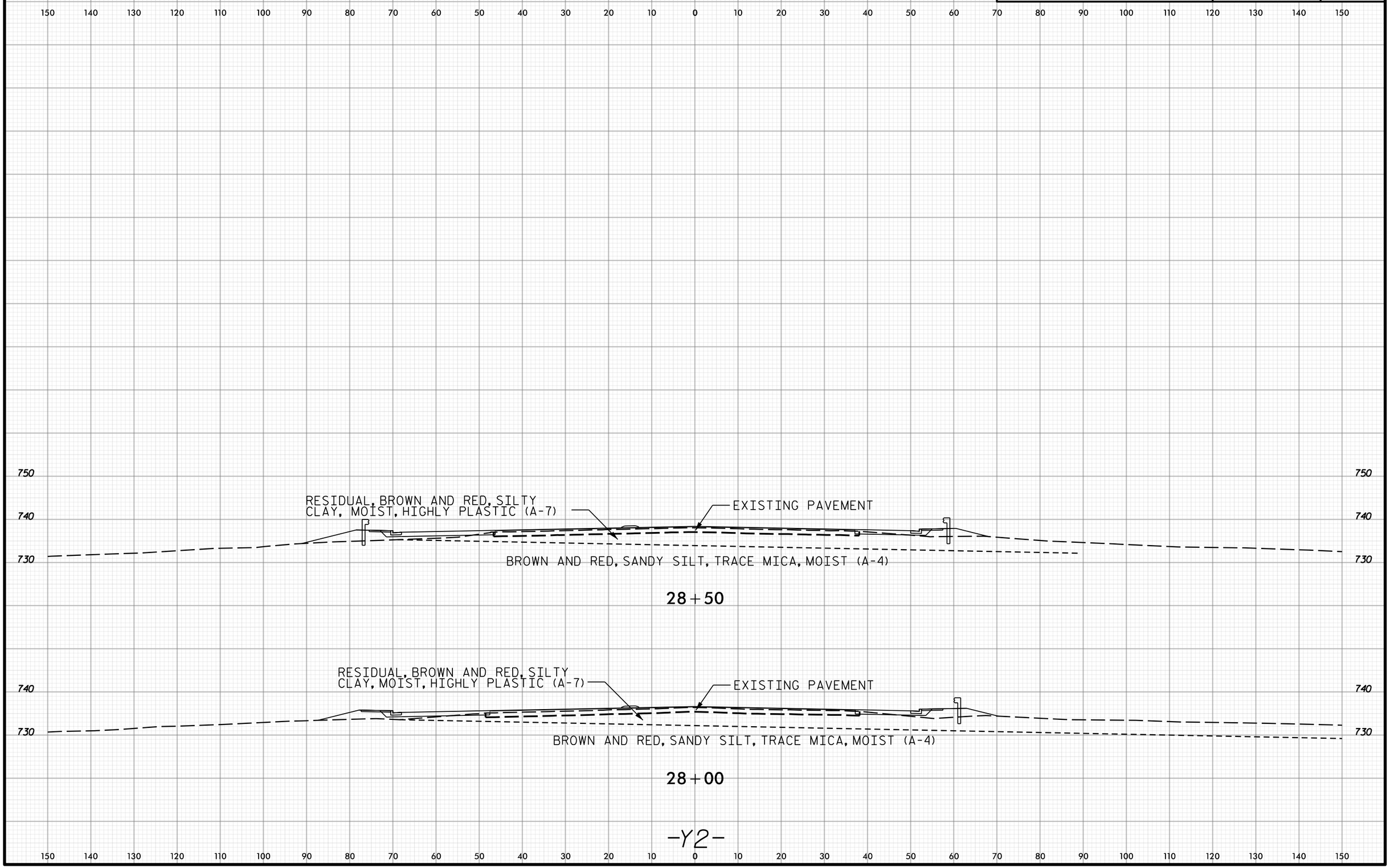
26+50

26+00

-Y2-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	66



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	67

S2A_EB1-A
28+84 -Y2-
62' LT

ROADWAY EMBANKMENT, LOOSE, RED, BROWN, SILTY SAND, MOIST (A-2-4)

EXISTING PAVEMENT

7
13
15
12
17
20
33
30
90
100/0.8
100/0.9
100/0.8
60/0.0

07/19

RESIDUAL, MEDIUM DENSE TO VERY DENSE, YELLOW, BROWN, LIGHT BROWN, AND WHITE, SILTY SAND, MOIST (A-2-4)

WEATHERED ROCK (WHITE, BROWN, AND GRAY METAMORPHOSED QUARTZ DIORITE)

AR
FIAD
07/19

CRYSTALLINE ROCK (METAMORPHOSED QUARTZ DIORITE)

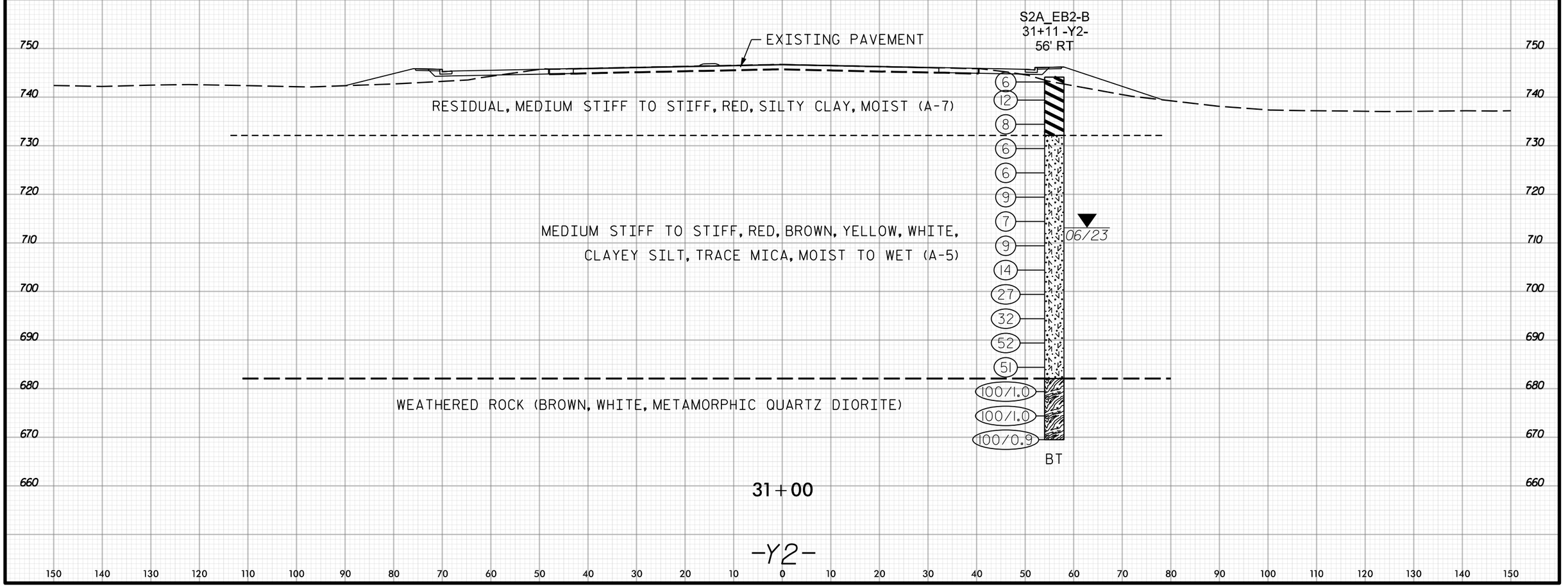
750 740 730 720 710 700 690 680 670 660 650

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

29+00

-Y2-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	68



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	69

S2B_EB1-A
31+49 -Y2-
74' LT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM DENSE, LIGHT BROWN AND BROWN, SILTY SAND, TRACE GRAVEL, MOIST (A-2-4)

11	
4	
10	RESIDUAL, LOOSE, BROWN, YELLOW, RED, BLACK, AND LIGHT BROWN, SILTY SAND, MOIST (A-2-4)
8	
7	
6	
5	07/19 MEDIUM STIFF, LIGHT BROWN, SANDY SILT, MOIST TO WET (A-4)
5	
12	
24	
32	
40	LOOSE TO VERY DENSE, LIGHT, BROWNISH GRAY, YELLOW, BROWN, WHITE, SILTY SAND, WET (A-2-4)
72	
68	
82	
45	
100/0.3	BT WEATHERED ROCK (DARK GRAY, BROWN WHITE METAMORPHOSED QUARTZ DIORITE)

FIAD
07/19

750 740 730 720 710 700 690 680 670 660

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

31+50

-Y2-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

760
750
740
730
720
710
700
690
680
670
660

EXISTING PAVEMENT

ST-3
S2B_EB2-B
33+55 -Y2-
84' RT

RESIDUAL, MEDIUM STIFF, BROWN, SILTY CLAY, MOIST (A-7)

MEDIUM STIFF TO VERY STIFF, BROWN, RED, YELLOW, AND WHITE, CLAYEY SILT, TRACE MICA, MOIST TO WET (A-5)

DENSE TO VERY DENSE, BROWN AND WHITE, SILTY FINE TO COARSE SAND, TRACE MICA (A-2-4)

WEATHERED ROCK (BROWN, WHITE, AND BLACK METAMORPHOSED QUARTZ DIORITE)

6
9
6
6
5
4
4
10
11
20
28
29
39
63
100/0.7
100/0.6
100/0.8

ST-3

06/23

BT

33+50

-Y2-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	71

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

750 740 730 720

S-202

Y2RPA_1400
13+95 -Y2RPA-
20' LT

ROADWAY EMBANKMENT, BROWN, SILTY CLAY,
TRACE OF ORGANIC MATTER, MOIST (A-7-5)

SEE –L3NB– CROSS SECTIONS

EXISTING PAVEMENT

06/23

LIGHT BROWN, GRAY, BROWN, RED, AND YELLOW, CLAYEY
SILT, SANDY SILT, TRACE MICA, MOIST (A-5, A-4)

BT

14+00

750 740 730 720

Y2RPA_1200
11+95 -Y2RPA-
20' LT

SEE –L3NB– CROSS SECTIONS

EXISTING PAVEMENT

ROADWAY EMBANKMENT, VERY STIFF,
RED, AND BROWN, SILTY CLAY,
LITTLE GRAVEL, MOIST (A-7)

16
10
18
11

STIFF, RED, AND BROWN, SANDY SILT WITH TRACE MICA, MOIST (A-4)

RESIDUAL, VERY STIFF TO STIFF, RED, SILTY CLAY, MOIST (A-7)

BT

DRY
06/23

12+00

760 750 740 730 720

SS-162

Y2RPA_1000
9+92 -Y2RPA-
19' LT

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

ROADWAY EMBANKMENT, VERY STIFF,
RED, AND BROWN, SILTY CLAY,
SOME GRAVEL, MOIST (A-7-6)

17
20
15
26

VERY STIFF, BROWN, AND YELLOW, SANDY
SILT, TRACE MICA, MOIST (A-4)

RESIDUAL, STIFF TO VERY STIFF, RED, YELLOW, SILTY CLAY, MOIST (A-7)

BT

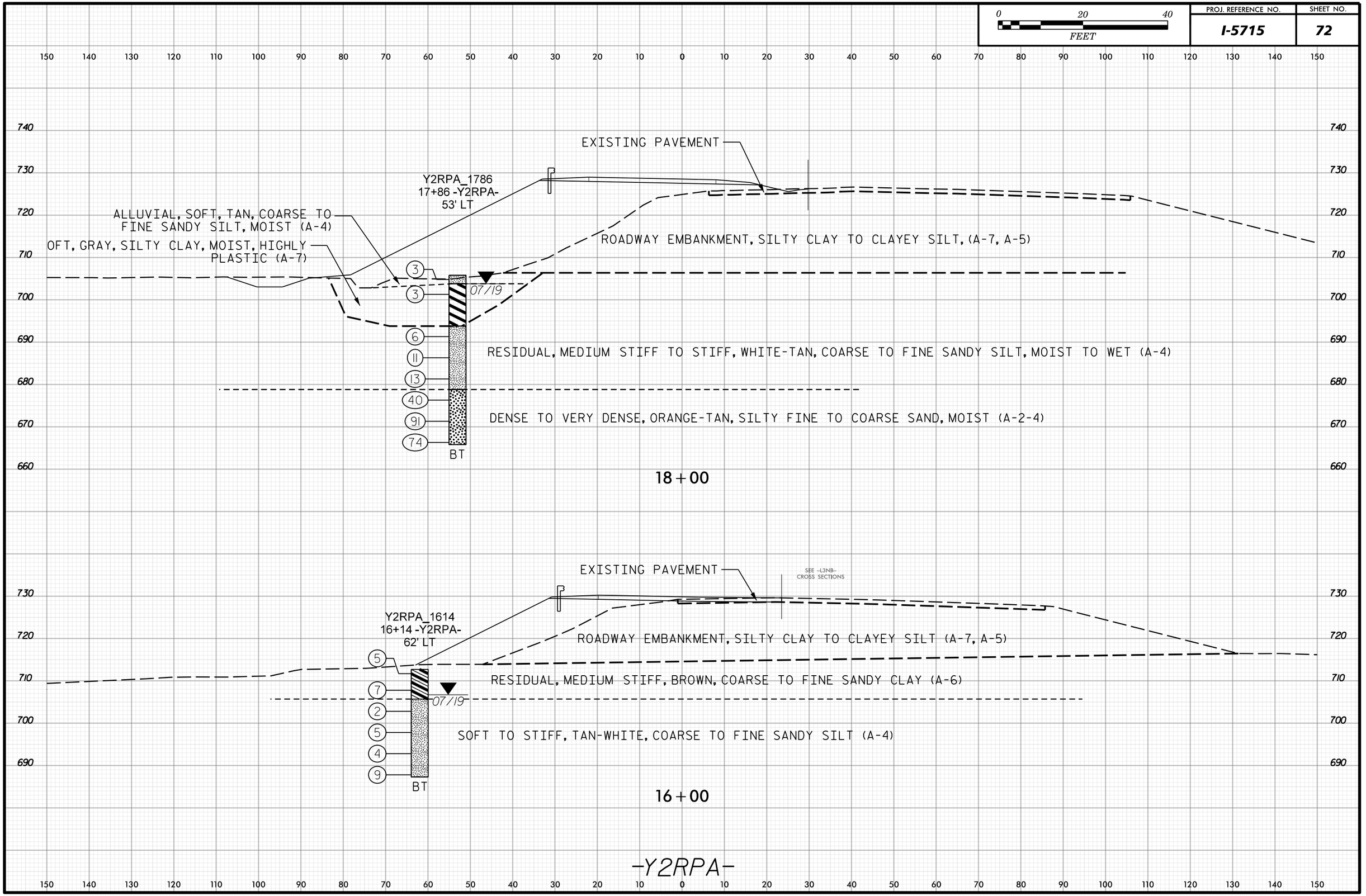
DRY
06/23

10+00

-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	72



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	73

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

740
730
720
710
700
690

ROADWAY EMBANKMENT, SANDY GRAVEL (A-1-b)

EXISTING PAVEMENT

S-305

Y2RPA_2075
20+50 -Y2RPA-
45' LT

ALLUVIAL, LOOSE, BROWN, SILTY FINE SAND, MOIST (A-2-4)

MEDIUM STIFF TO STIFF, RED, AND GRAY, SILTY CLAY, MOIST (A-7-5)

SOFT TO STIFF, BROWN, GRAY, SILTY CLAY, MOIST TO WET, HIGHLY PLASTIC, (A-7-5)

06/23

BT
FIAD
06/23

20+50

740
730
720
710
700

SS-267

L3NB_95800
19+21 -Y2RPA-
44' RT

PAVEMENT, ASPHALT AND ABC

ROADWAY EMBANKMENT, MEDIUM DENSE, BLACK, AND GRAY, SANDY GRAVEL, MOIST (A-1-b)

STIFF TO MEDIUM STIFF, RED, BROWN, GRAY, AND WHITE, SILTY CLAY, TRACE MICA (A-7-6)

STIFF, RED, AND BROWN, CLAYEY SILT, TRACE MICA (A-5)

RESIDUAL, MEDIUM STIFF TO STIFF, WHITE-TAN, COARSE TO FINE SANDY SILT, MOIST TO WET (A-4)

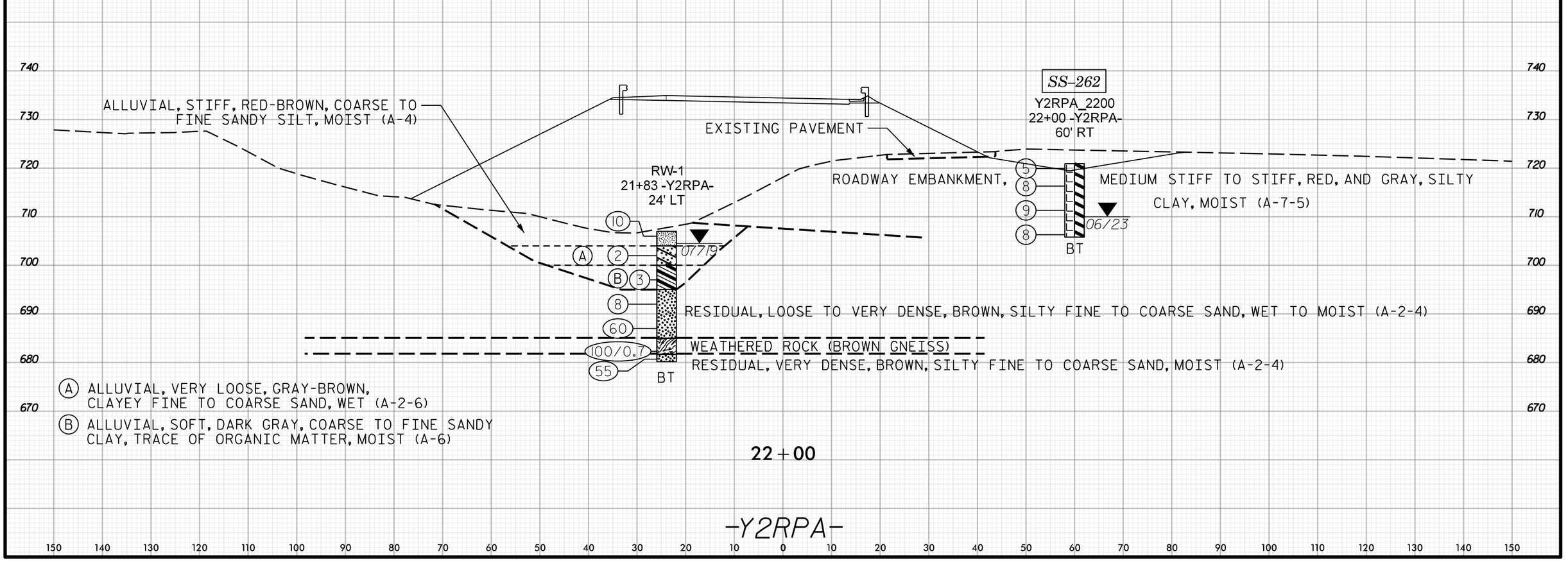
BT
FIAD
06/23

19+00

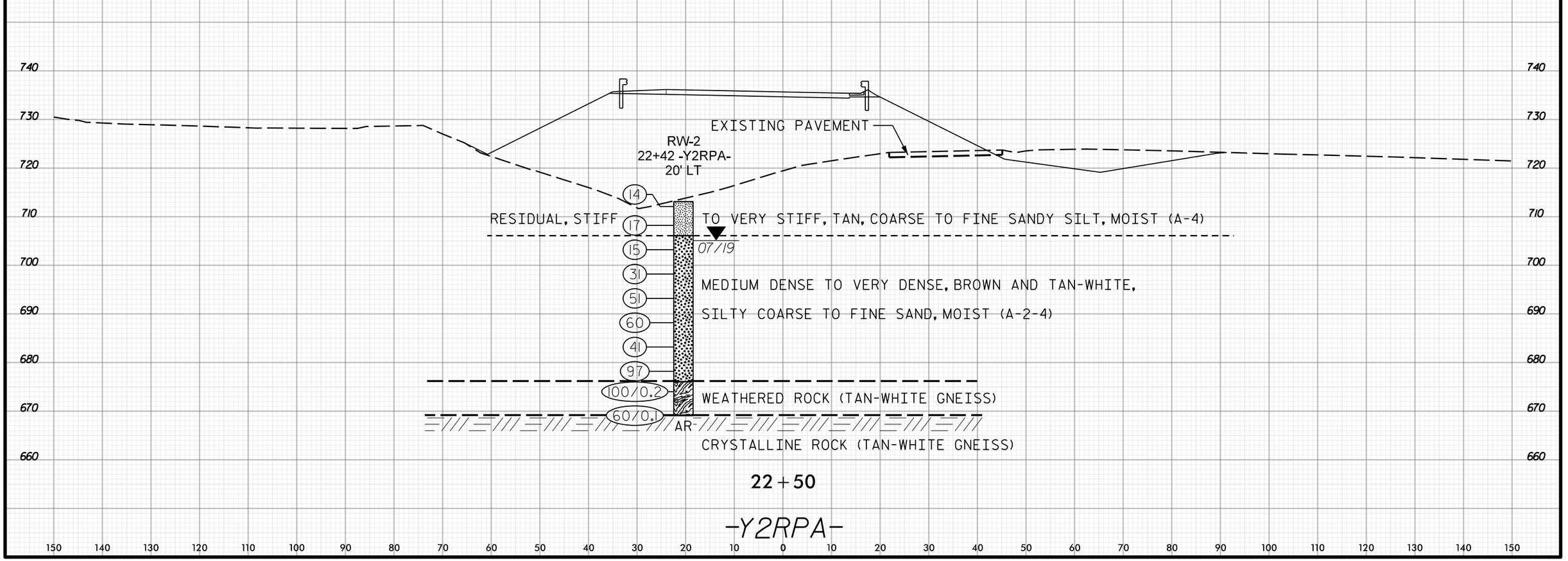
-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	74



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	75



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	76

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

750 740 730 720 710 700 690 680 670 660

RW-3
23+04 -Y2RPA-
21' LT

EXISTING PAVEMENT

RESIDUAL, STIFF, RED-BROWN, COARSE TO FINE SANDY CLAY, MOIST (A-6)

9
14

STIFF, TAN, BROWN, AND WHITE, COARSE TO FINE SANDY SILT, MOIST (A-4)

9
07/19
18
26

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

96
45
93
100/0.6

WEATHERED ROCK (TAN, WHITE GNEISS)

60/0.0

AR

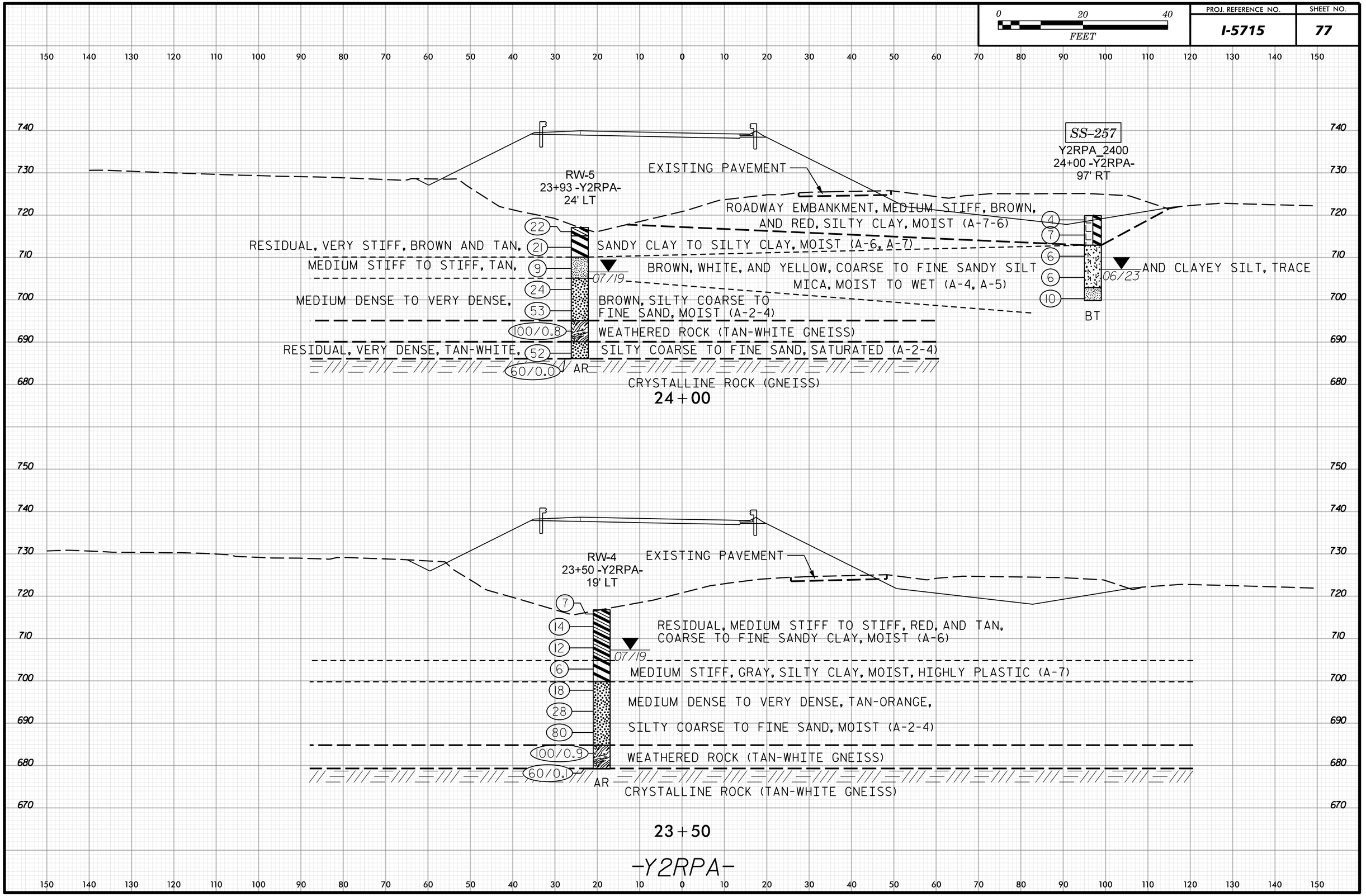
CRYSTALLINE ROCK (GNEISS)

23+00

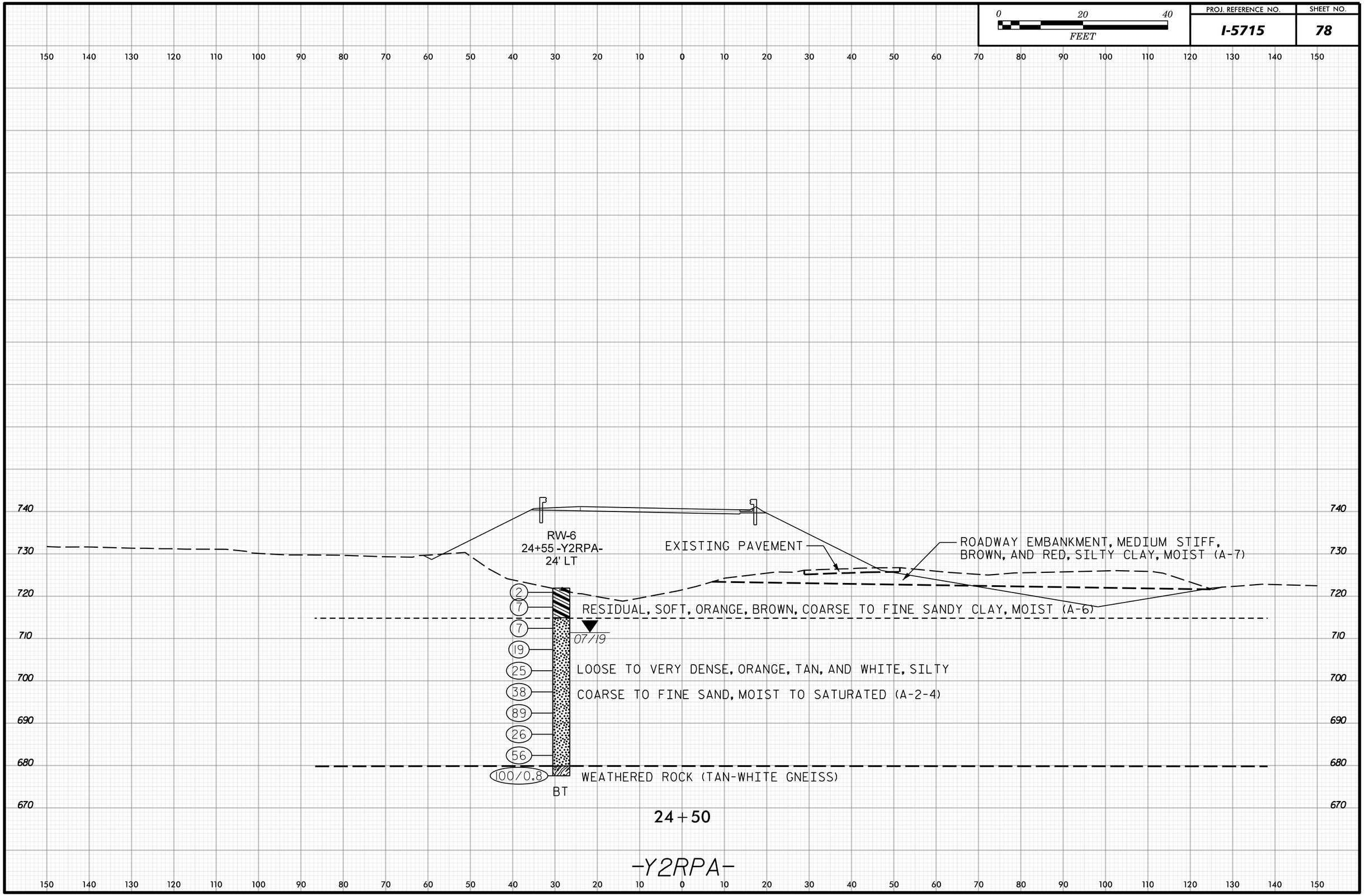
-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	77



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	78



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

750 740 730 720 710 700

RW-8
25+38 -Y2RPA-
33' LT

10
13
8
12
27
60/0.0

07/19

RESIDUAL, STIFF, TAN-ORANGE,
COARSE TO FINE SANDY CLAY, MOIST (A-6)

STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

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

AR

CRYSTALLINE ROCK (GNEISS)

25+50

750 740 730 720 710 700 690 680

RW-7
25+00 -Y2RPA-
30' LT

5
8
3
3
51
66
100/0.7
100/0.8
60/0.1

07/19

EXISTING PAVEMENT

RESIDUAL, SOFT TO STIFF, RED-BROWN TO TAN-GRAY,
COARSE TO FINE SANDY CLAY, TO SILTY CLAY, MOIST (A-6, A-7)

VERY DENSE, TAN-WHITE, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

WEATHERED ROCK (TAN-WHITE GNEISS)

AR

CRYSTALLINE ROCK (WHITE-TAN GNEISS)

25+00

-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	80

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

750
740
730

ARTIFICIAL FILL, STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF TO VERY STIFF, ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

29+00

760
750
740
730
720
710

Y2RPA_2800
28+00 -Y2RPA-
5' LT

ROADWAY EMBANKMENT, DARK BROWN, SILTY SAND AND RIP RAP, MOIST (A-2-4, A-1)

EXISTING PAVEMENT

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

STIFF, RED, YELLOW, AND GRAY, SILTY CLAY, MOIST (A-7)

MEDIUM STIFF, BROWN, YELLOW, SANDY SILT, TRACE MICA, MOIST (A-4)

11
7
4
8

06/23

BT

28+50

750
740
730
720
710
700

Y2RPA_2571
25+71 -Y2RPA-
5' RT

EXISTING PAVEMENT

10
12
5
29

RESIDUAL, MEDIUM STIFF TO VERY STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

07/19

MEDIUM DENSE, TAN-WHITE, 24 SILTY FINE TO COARSE SAND, MOIST (A-2-4)

60/0.0 AR

CRYSTALLINE ROCK (GNEISS)

25+75

-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	81

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

760
750
740

ARTIFICIAL FILL, STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

STIFF TO VERY STIFF, ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

30+50

760
750
740
730
720

ARTIFICIAL FILL, STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

SS-6 KLF
Y2RPA_3014
30+14 -Y2RPA-
47' LT

EXISTING PAVEMENT

11
15
14
21

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

STIFF TO VERY STIFF, ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

BT

FIAD 07/19

30+00

750
740
730

ARTIFICIAL FILL, STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF TO VERY STIFF, ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

29+50

-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	82

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

770
760
750
740

EXISTING PAVEMENT

Y2RPA_3200
32+00 -Y2RPA-
30' RT

ROADWAY EMBANKMENT, RED, AND BROWN, CLAYEY SILT TO SANDY SILT, MOIST (A-5, A-4)

BT

FIAD
06/23

32+00

780
770
760
750
740

ARTIFICIAL FILL, STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF TO VERY STIFF, ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

31+50

760
750
740

ARTIFICIAL FILL, STIFF, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF TO VERY STIFF, ORANGE, COARSE TO FINE SANDY SILT, MOIST (A-4)

31+00

-Y2RPA-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

740
730
720
710
700
690
680

EXISTING PAVEMENT

Y2RPA_1614
13+67 -Y2RPA-DTR
79' LT

ROADWAY EMBANKMENT, SILTY CLAY TO CLAYEY SILT (A-7, A-5)

5
7 RESIDUAL, MEDIUM STIFF, BROWN, COARSE TO FINE SANDY CLAY, MOIST (A-6)
07/19
2
5 SOFT TO STIFF, TAN-WHITE, COARSE TO FINE SANDY SILT, MOIST (A-4)
4
9
BT

13 + 50

750
740
730
720
710

S-202
Y2RPA_1400
11+52 -Y2RPA-DTR
29' LT

ROADWAY EMBANKMENT, BROWN, SILTY CLAY, TRACE OF ORGANIC MATTER, MOIST (A-7-5)

EXISTING PAVEMENT

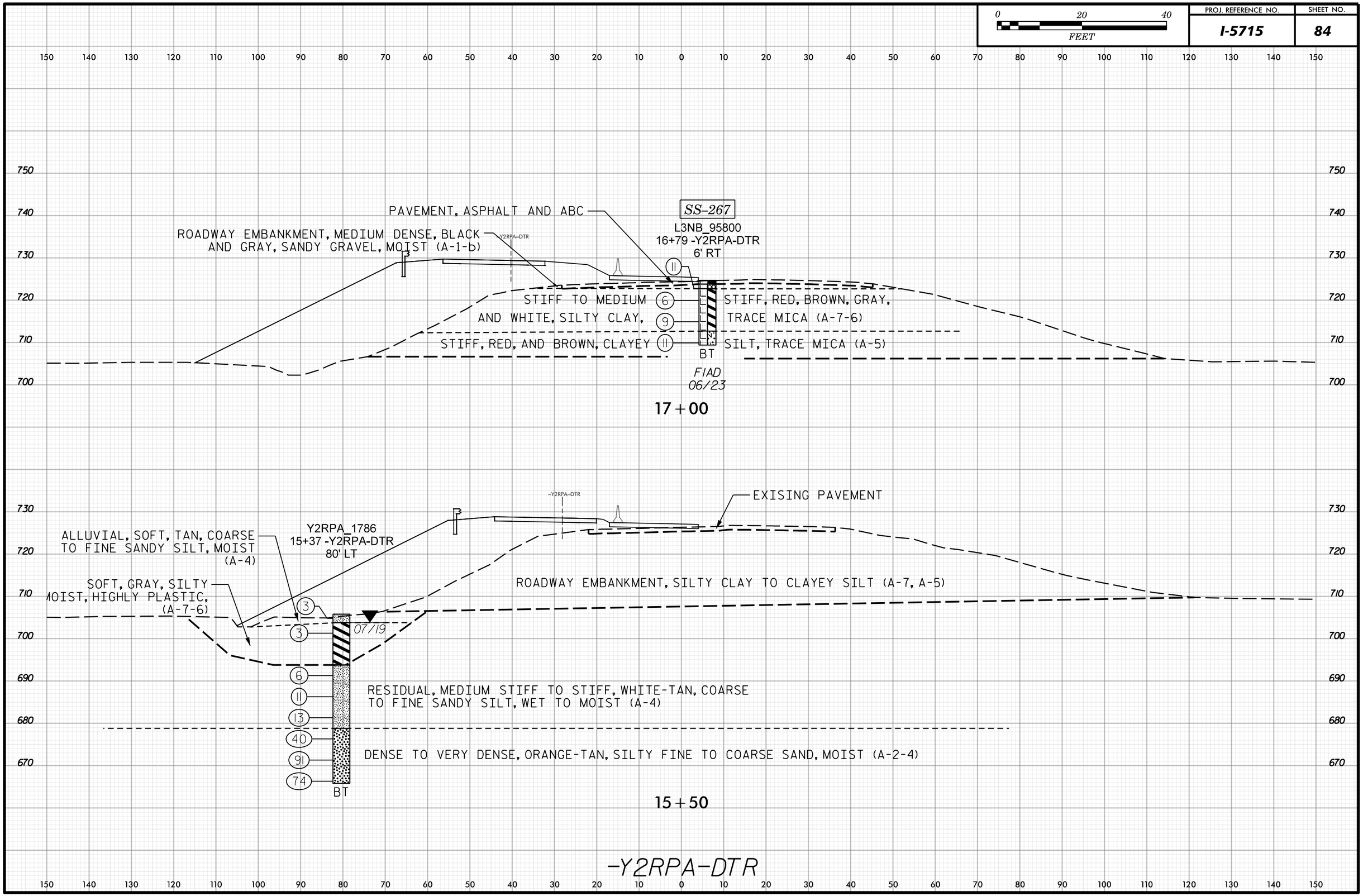
06/23
LIGHT BROWN, GRAY, BROWN, RED, AND YELLOW, CLAYEY SILT TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)
BT

11 + 50

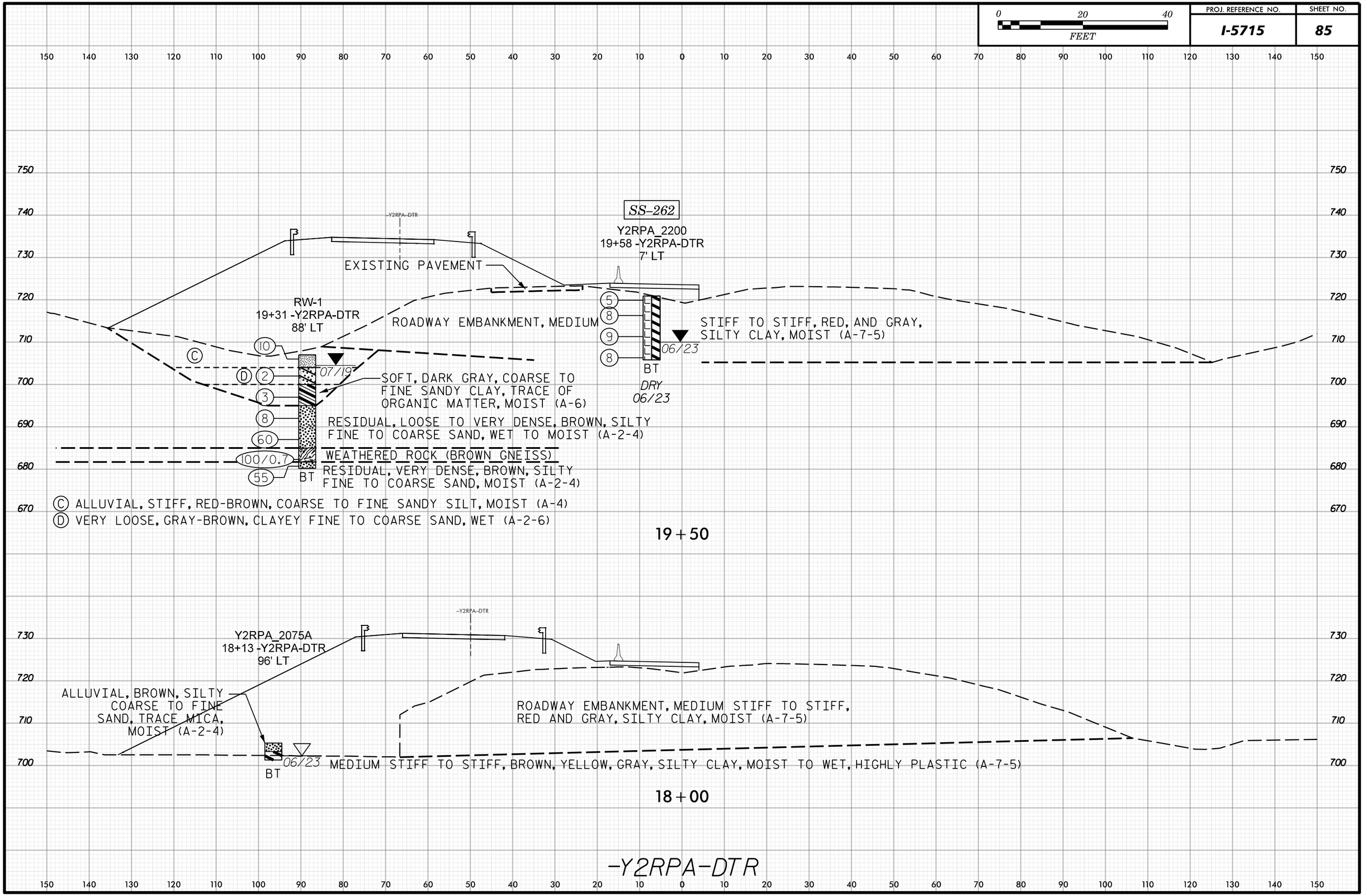
-Y2RPA-DTR

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

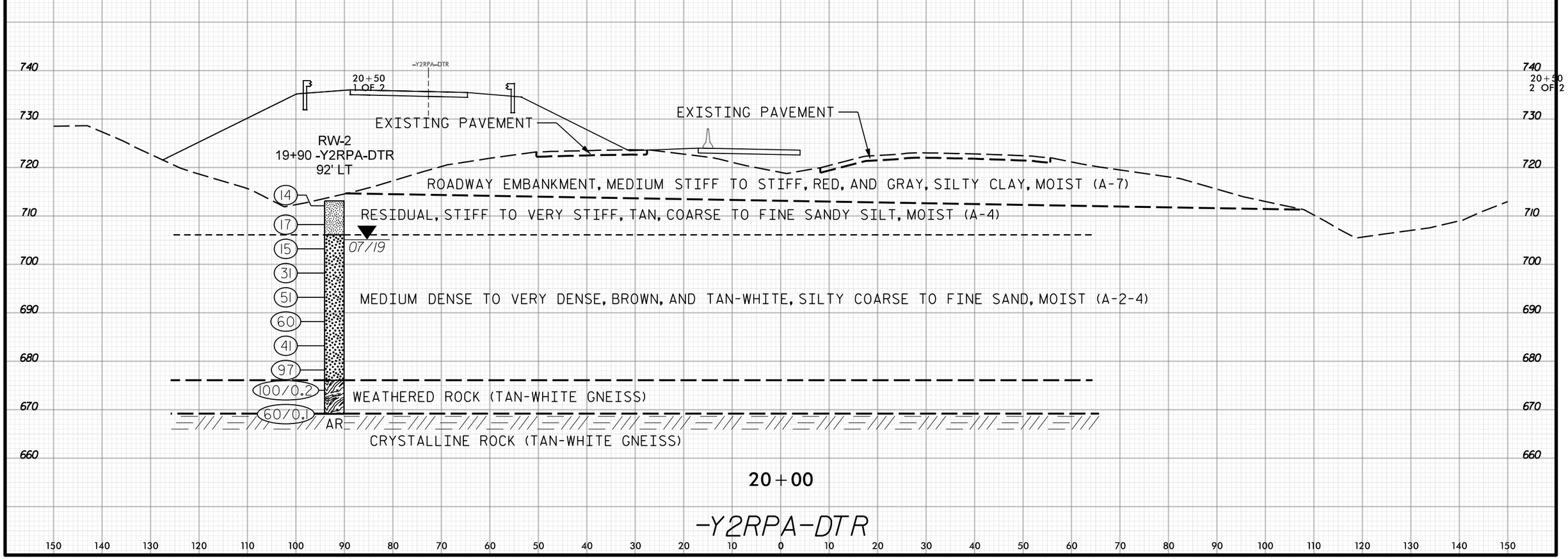
0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	84



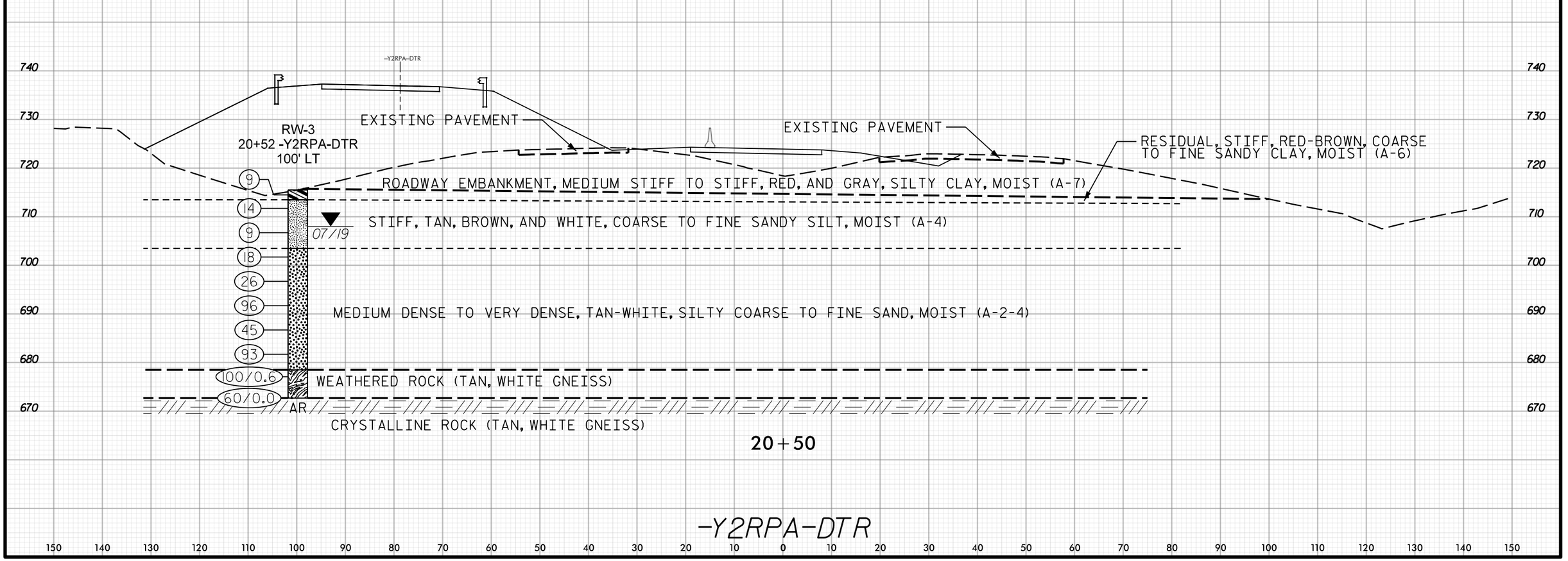
0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	85



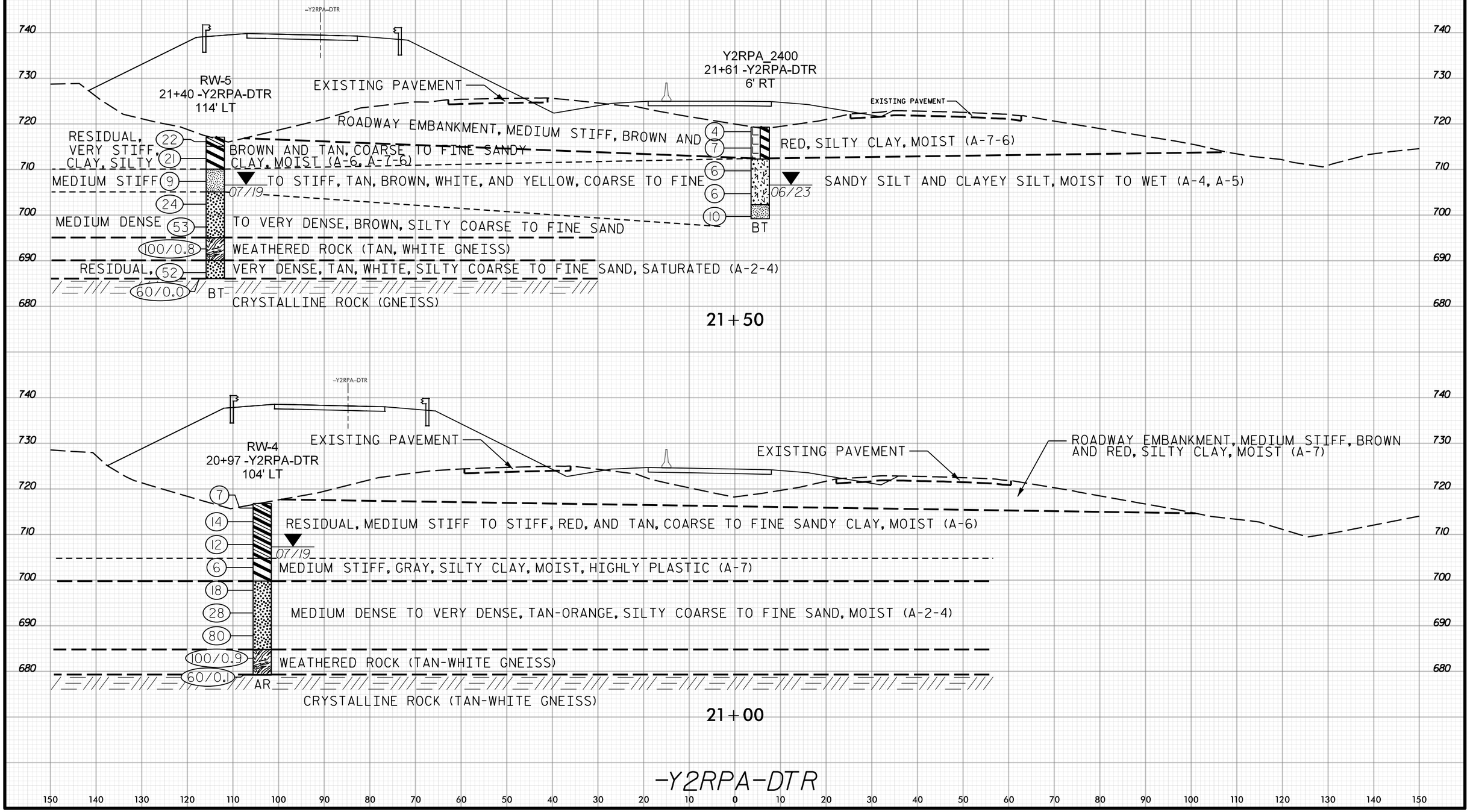
0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	86



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	87



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	88



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	89

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

ROUNDABOUT EOT

Y2RPA-DTR_2450
24+50 -Y2RPA-DTR
20' LT

ROADWAY EMBANKMENT, MEDIUM STIFF, BROWN, RED, SILTY CLAY, MOIST (A-7)

EXISTING PAVEMENT

750 740 730 720 710 700

RESIDUAL, STIFF, RED, BROWN, AND YELLOW, SILTY CLAY, MOIST (A-7)

7
9
5
6
8

MEDIUM STIFF, BROWN, YELLOW, GRAY, AND WHITE, SANDY SILT, TRACE MICA, MOIST (A-4)

BT

DRY
06/23

24+50

Y2RPA_2571
23+26 -Y2RPA-DTR
104' LT

EXISTING PAVEMENT

740 730 720 710 700

10
12
5
29
24
60/0.0

RESIDUAL, MEDIUM STIFF TO VERY STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

07/19

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

BT

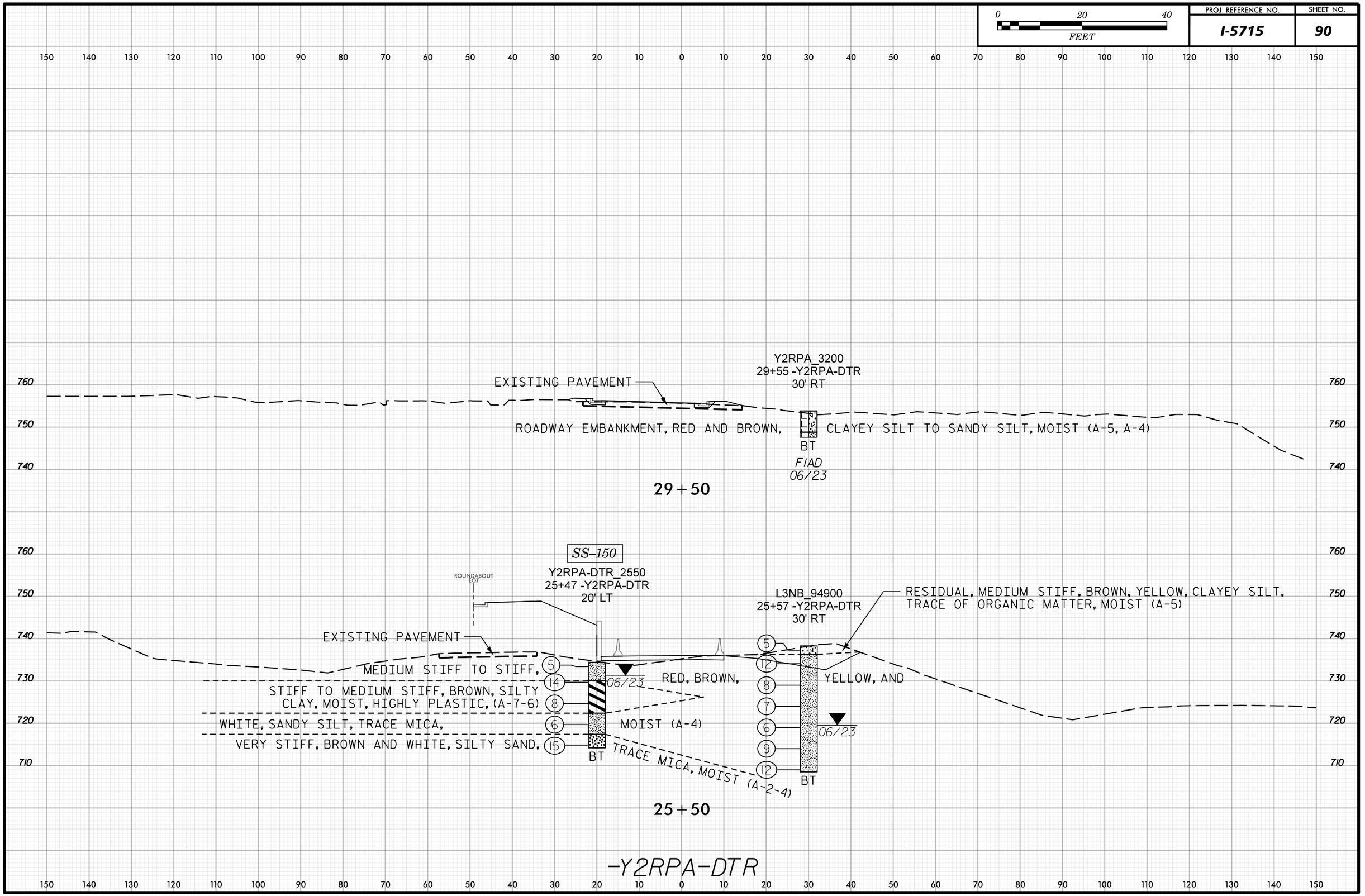
CRYSTALLINE ROCK (GNEISS)

23+50

-Y2RPA-DTR

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	90



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

740 730 720 710

S-190

Y2_2550
18+31 -Y2LPB-
45' LT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, REDDISH BROWN, SILTY CLAY, MOIST (A-7-6)

RESIDUAL, RED, BROWN, AND YELLOW, SANDY SILT, MOIST (A-4)

BT

DRY
06/23

18 + 30

740 730 720 710

Y2RPB_2801
16+97 -Y2LPB-
10' RT

EXISTING PAVEMENT

11

ROADWAY EMBANKMENT, STIFF, RED, SANDY CLAY, MOIST (A-6)

10

RESIDUAL, STIFF, YELLOW, RED, AND BROWN, SANDY SILT, MOIST (A-4)

9

LOOSE, YELLOW AND BROWN, SILTY SAND, MOIST (A-2-4)

BT

FIAD
07/19

17 + 00

700

740 730 720 710 700 690

ROADWAY EMBANKMENT, STIFF, RED, SANDY CLAY, MOIST (A-6)

Y2LPB_1512
15+12 -Y2LPB-
57' RT

SEE -Y2RPB- CROSS SECTIONS

EXISTING PAVEMENT

9
12
17
22

RESIDUAL, MEDIUM DENSE, YELLOW, BROWN, WHITE, AND GRAY, SILTY SAND, MOIST (A-2-4)

BT

FIAD
07/19

15 + 00

-Y2LPB-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	92

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

760 750 740 730 720 710

SS–12
SS–14

Y2RPB_1100
10+99 -Y2RPB-
52' RT

EXISTING PAVEMENT — SEE –L3SB– CROSS SECTIONS

10
24
21
7
4
6

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

MEDIUM STIFF, RED, YELLOW, AND GRAY, CLAYEY SAND, MOIST (A-2-6)

MEDIUM STIFF, BROWN, RED, YELLOW, TAN, LIGHT BROWN, WHITE, AND, BLACK, SANDY SILT WITH TRACE MICA, MOIST TO WET (A-4)

06/23

BT

11+00

740 730 720

EXISTING PAVEMENT — SEE –L3SB– CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF, RED, YELLOW, AND GRAY, CLAYEY SAND, MOIST (A-2-6)

MEDIUM STIFF, BROWN, RED, YELLOW, TAN, LIGHT BROWN, WHITE, AND, BLACK, SANDY SILT WITH TRACE MICA, MOIST TO WET (A-4)

10+50

750 740 730 720 710 700

EXISTING PAVEMENT — SEE –L3SB– CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, HIGHLY PLASTIC, MOIST (A-7)

MEDIUM STIFF, RED, YELLOW, AND GRAY, CLAYEY SAND, MOIST (A-2-6)

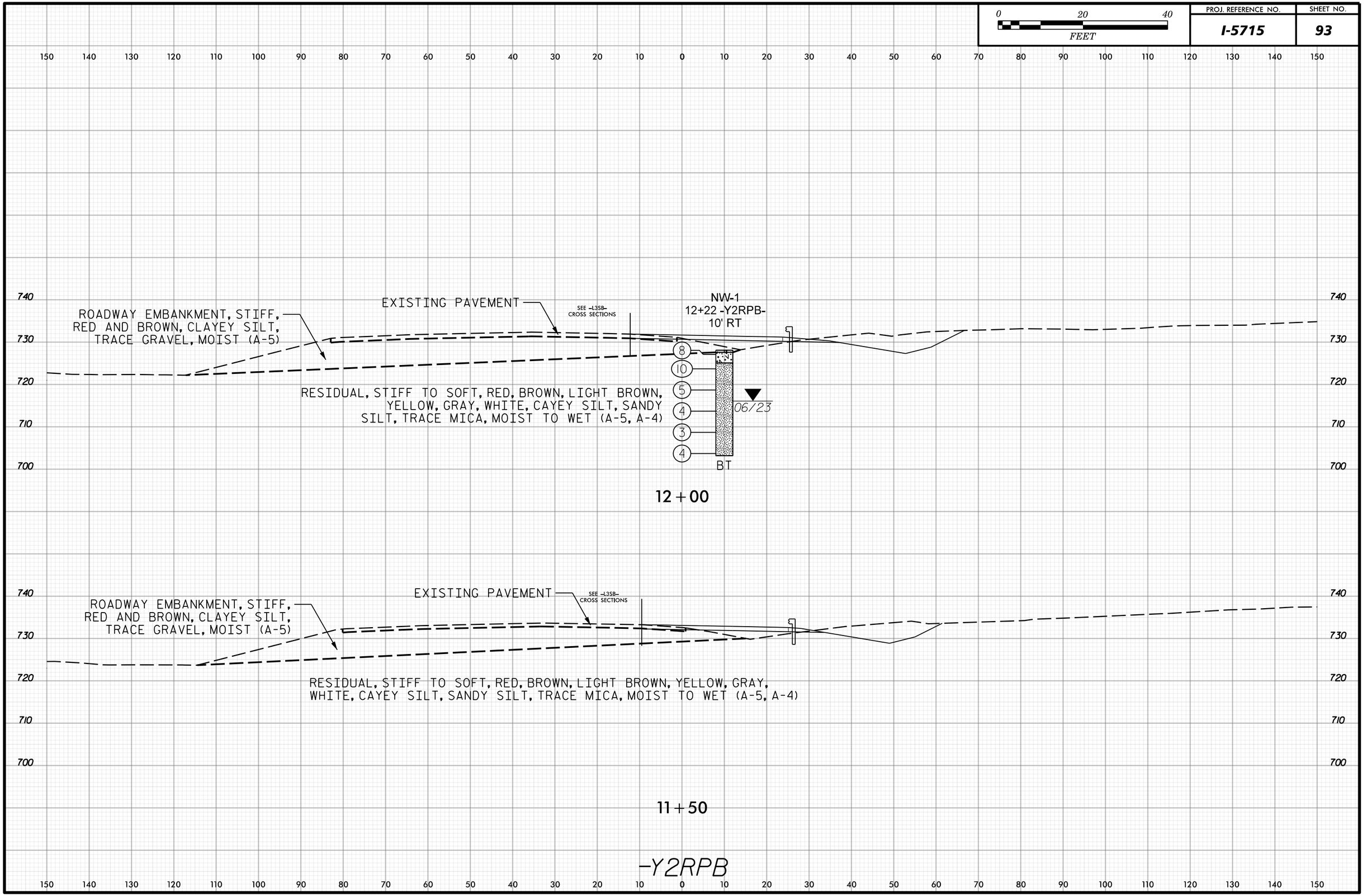
MEDIUM STIFF, BROWN, RED, YELLOW, TAN, LIGHT BROWN, WHITE, AND, BLACK, SANDY SILT WITH TRACE MICA, MOIST TO WET (A-4)

10+00

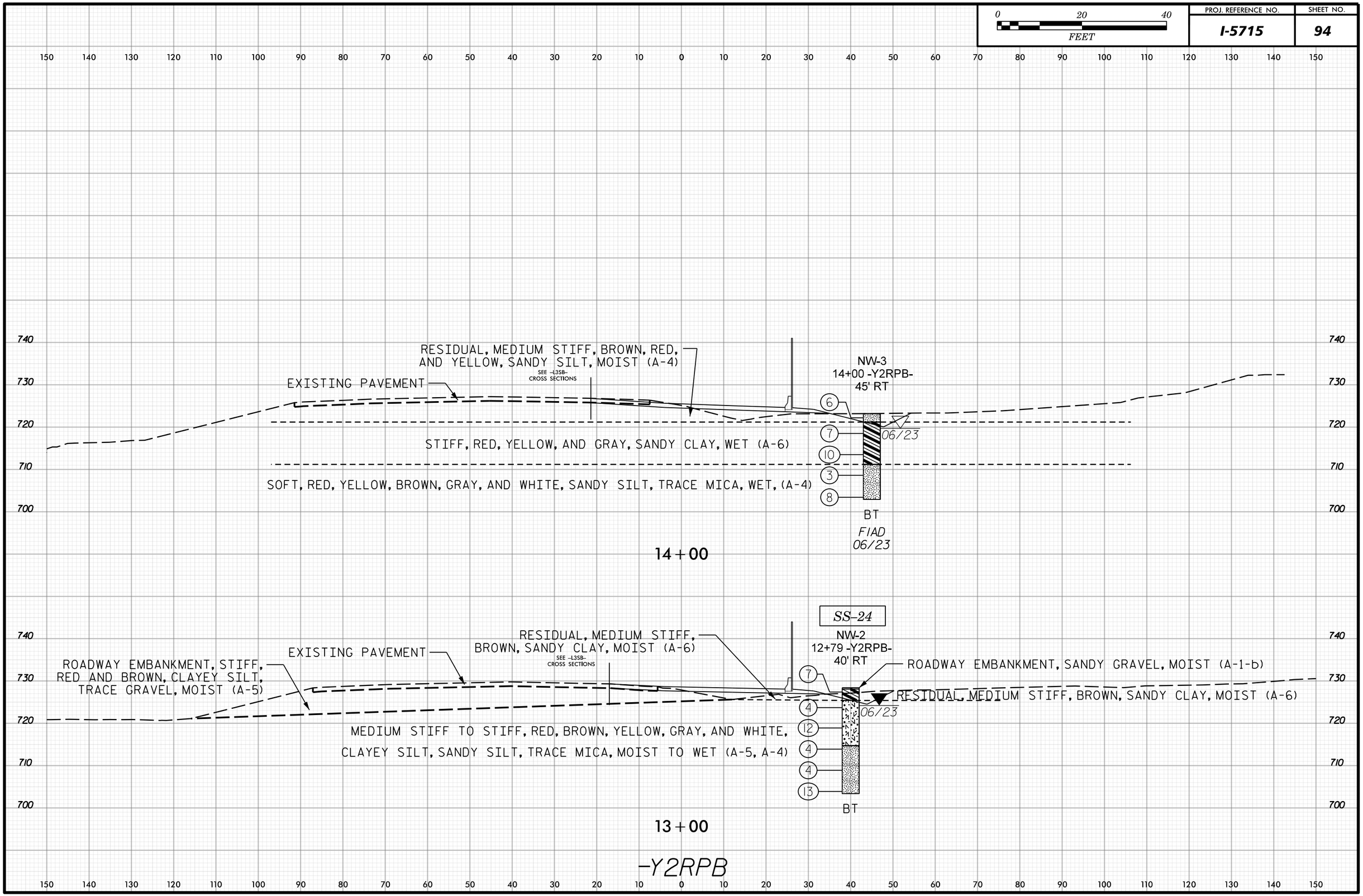
–Y2RPB

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

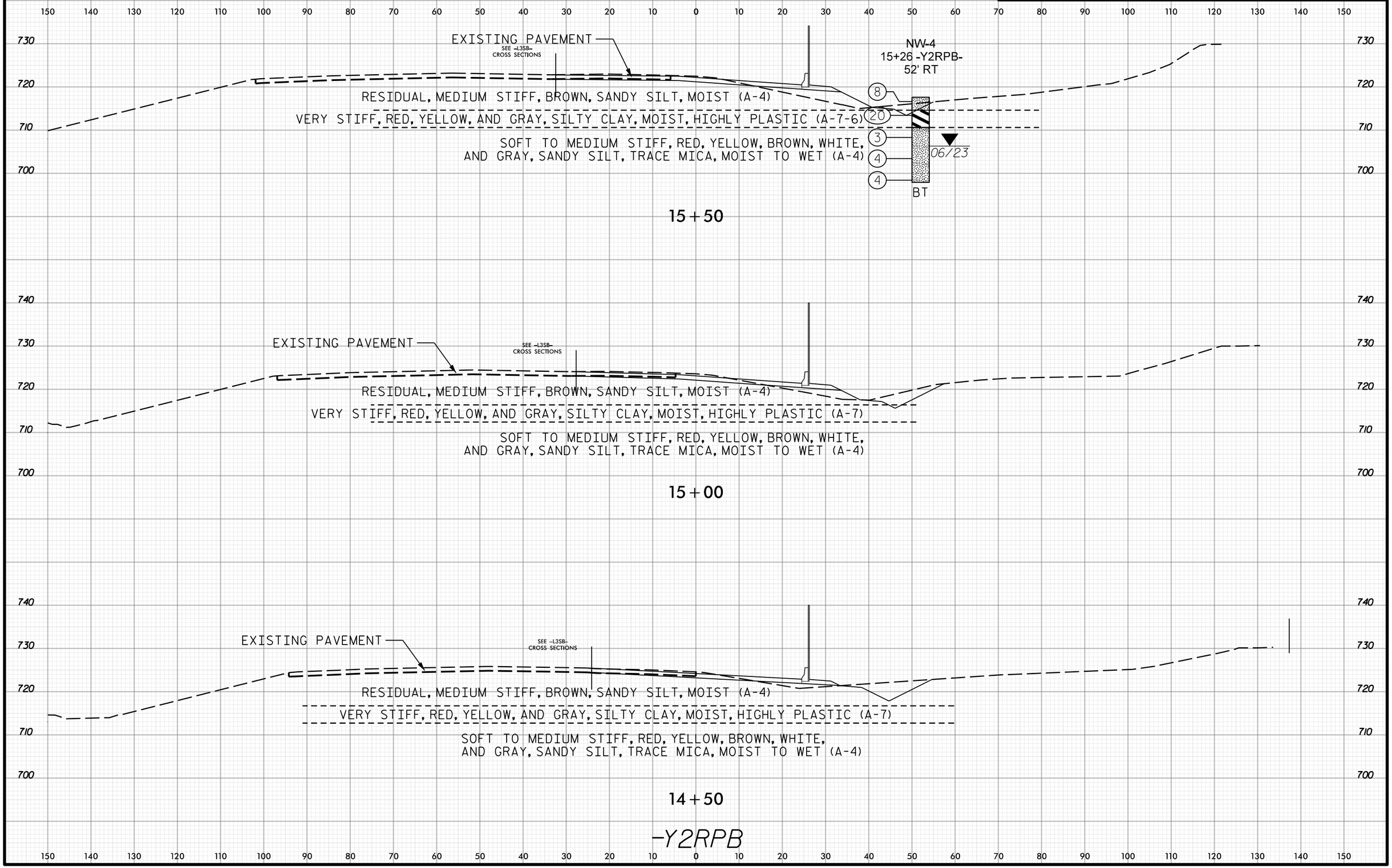
0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	93



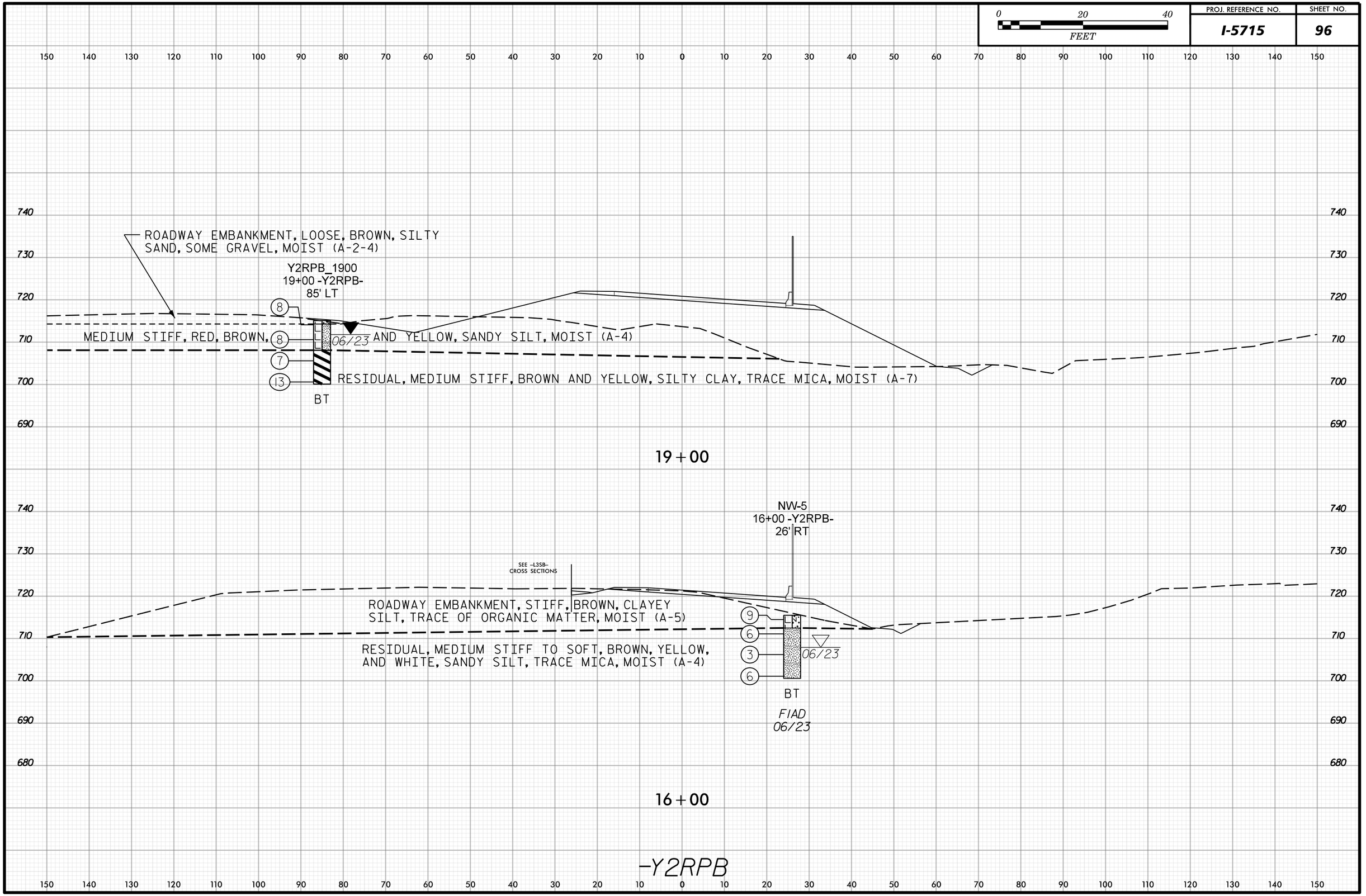
0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	94



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	95



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	96



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

730
720
710
700
690
680

SS-46

Y2RPB_2065
20+65 -Y2RPB-
102' LT

9
5
10
7
3
38

ROADWAY EMBANKMENT, STIFF TO MEDIUM STIFF, BROWN AND RED, CLAYEY SILT, TRACE OF ORGANIC MATTER, TRACE MICA, MOIST (A-5)

FIAD 06/23

STIFF TO MEDIUM STIFF, DARK BROWN, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

ALLUVIAL, SOFT, DARK GRAY, SANDY CLAY, LAYERS OF SANDY SILT, MOIST (A-6)

RESIDUAL, HARD, BROWN, GRAY, AND WHITE, SANDY SILT WITH TRACE MICA, MOIST (A-4)

BT

20+65

730
720
710
700
690

Y2RPB_2000
20+00 -Y2RPB-
95' RT

ROADWAY EMBANKMENT, LOOSE TO MEDIUM DENSE, BROWN, SILTY SAND, MOIST (A-2-4)

BT

FIAD 06/23

20+00

-Y2RPB

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

740
730
720
710
700

Y2RPB_2801
28+01 -Y2RPB-
37' LT

SEE -Y2LPB- CROSS SECTIONS

ROADWAY EMBANKMENT, STIFF, RED, SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

EXISTING PAVEMENT

11
10
9

RESIDUAL, STIFF, YELLOW, RED, AND BROWN, SANDY SILT, MOIST (A-4)

LOOSE, YELLOW, AND BROWN, SILTY SAND, MOIST (A-2-4)

BT

FIAD
07/19

28+00

730
720
710
700
690

Y2LPB_1512
25+71 -Y2RPB-
38' LT

ROADWAY EMBANKMENT, STIFF, RED, SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

9
12
17
22

RESIDUAL, MEDIUM DENSE, YELLOW, BROWN, WHITE, GRAY, SILTY SAND, MOIST (A-2-4)

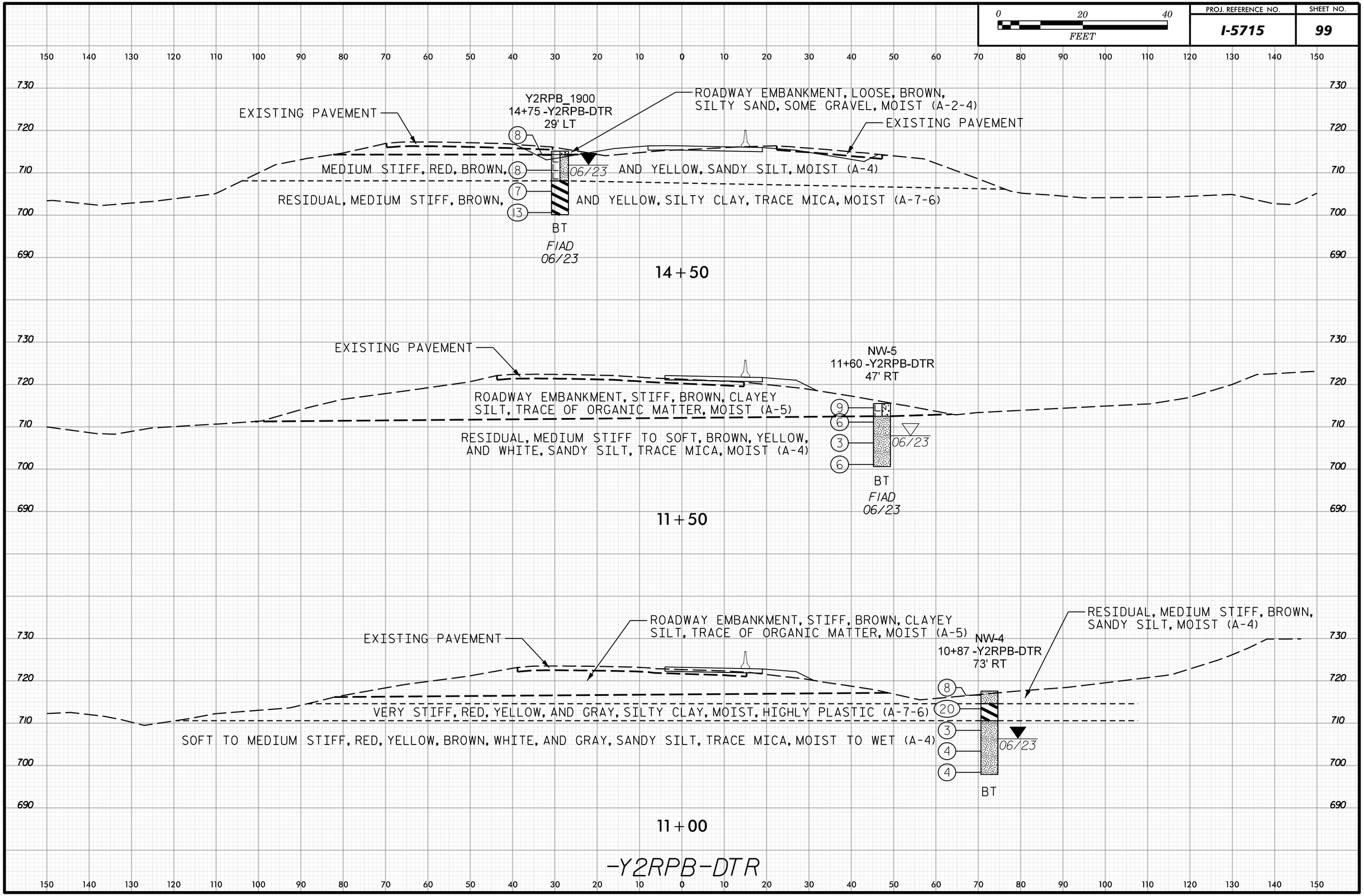
BT

FIAD
07/19

25+50

-Y2RPB

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 20 40
FEET
PROJ. REFERENCE NO.
I-5715
SHEET NO.
99
Y2RPB_1900
14+75 -Y2RPB-DTR
29' LT
EXISTING PAVEMENT
ROADWAY EMBANKMENT, LOOSE, BROWN, SILTY SAND, SOME GRAVEL, MOIST (A-2-4)
EXISTING PAVEMENT
MEDIUM STIFF, RED, BROWN, AND YELLOW, SANDY SILT, MOIST (A-4)
RESIDUAL, MEDIUM STIFF, BROWN, AND YELLOW, SILTY CLAY, TRACE MICA, MOIST (A-7-6)
06/23
BT
FIAD
06/23
14+50
EXISTING PAVEMENT
NW-5
11+60 -Y2RPB-DTR
47' RT
ROADWAY EMBANKMENT, STIFF, BROWN, CLAYEY SILT, TRACE OF ORGANIC MATTER, MOIST (A-5)
RESIDUAL, MEDIUM STIFF TO SOFT, BROWN, YELLOW, AND WHITE, SANDY SILT, TRACE MICA, MOIST (A-4)
06/23
BT
FIAD
06/23
11+50
EXISTING PAVEMENT
ROADWAY EMBANKMENT, STIFF, BROWN, CLAYEY SILT, TRACE OF ORGANIC MATTER, MOIST (A-5)
NW-4
10+87 -Y2RPB-DTR
73' RT
RESIDUAL, MEDIUM STIFF, BROWN, SANDY SILT, MOIST (A-4)
VERY STIFF, RED, YELLOW, AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)
SOFT TO MEDIUM STIFF, RED, YELLOW, BROWN, WHITE, AND GRAY, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)
06/23
BT
11+00
-Y2RPB-DTR

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

730 720 710 700 690

SS-183

L3SB_95400
17+60 -Y2RPB-
56' LT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM STIFF, BROWN, SANDY SILT, SOME GRAVEL, MOIST (A-4)

EXISTING PAVEMENT

8

RESIDUAL, MEDIUM STIFF TO STIFF, 13

BROWN, GRAY, AND RED, SILTY CLAY, MOIST (A-7-5)

VERY STIFF, RED, BROWN, GRAY, 18

AND YELLOW, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

06/23

27

BT

17 + 50

730 720 710 700 690 680

SS-46

Y2RPB_2065
16+47 -Y2RPB-DTR
4' LT

EXISTING PAVEMENT

EXISTING PAVEMENT

9

5

ROADWAY EMBANKMENT, STIFF TO MEDIUM STIFF, BROWN, AND RED, CLAYEY SILT, TRACE OF ORGANIC MATTER, TRACE MICA, MOIST (A-5)

06/23

10

STIFF TO MEDIUM STIFF, DARK BROWN, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

7

3

ALLUVIAL, SOFT, DARK GRAY, SANDY CLAY, LAYERS OF SANDY SILT, MOIST (A-6)

38

RESIDUAL, HARD, BROWN, GRAY, WHITE, SANDY SILT WITH TRACE MICA, MOIST (A-4)

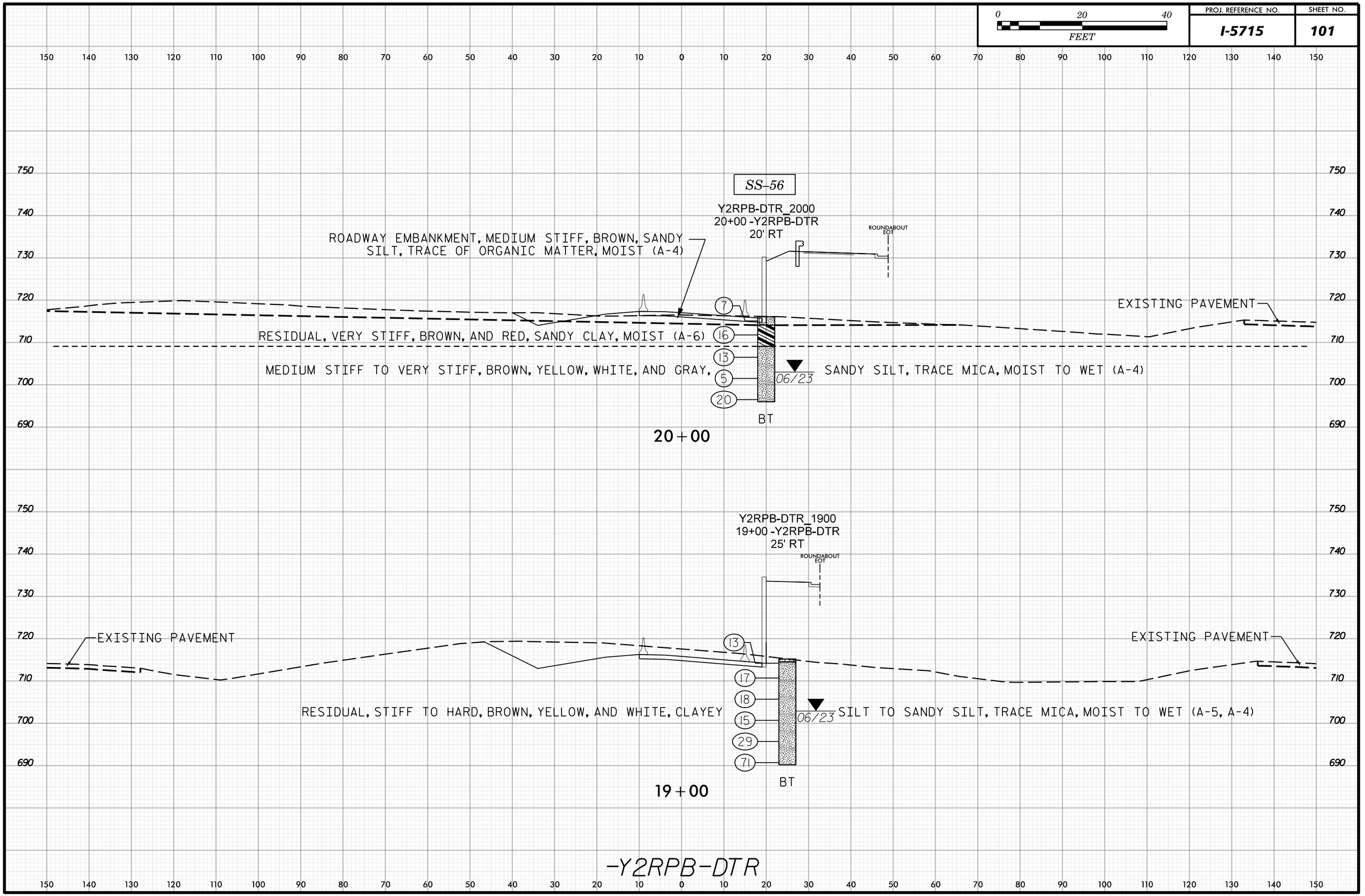
BT

16 + 50

-Y2RPB-DTR

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	101



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	102

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

740 730 720 710

S-190

Y2_2550
25+65 -Y2RPB-DTR
88' LT

ROADWAY EMBANKMENT, REDDISH, BROWN, SILTY CLAY, MOIST (A-7-6)

EXISTING PAVEMENT

RESIDUAL, RED, BROWN, AND YELLOW, SANDY SILT (A-4)

BT
DRY
06/23

25+50

730 720 710

Y2RPB_2801
24+23 -Y2RPB-DTR
33' LT

EXISTING PAVEMENT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, STIFF, RED, SANDY CLAY, MOIST (A-6)

11
10
9

RESIDUAL, STIFF, YELLOW, RED AND BROWN, SANDY SILT, MOIST (A-4)

LOOSE, YELLOW, AND BROWN, SILTY SAND, MOIST (A-2-4)

BT
FIAD
07/19

24+00

730 720 710 700 690

Y2LPB_1512
22+09 -Y2RPB-DTR
21' RT

ROADWAY EMBANKMENT, STIFF, RED, SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

EXISTING PAVEMENT

9
12
17
22

RESIDUAL, MEDIUM DENSE, YELLOW, BROWN, WHITE, GRAY, SILTY SAND, MOIST (A-2-4)

BT
FIAD
06/23

22+00

-Y2RPB-DTR

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780 770 760

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

SEE –L3NB– CROSS SECTIONS

STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, MOIST (A-4)

11+00

790 780 770 760 750 740

SS–7 KLF

Y2RPD_1069
10+69 -Y2RPD-
87' RT

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

13 18 12 10 12 8

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

SEE –L3NB– CROSS SECTIONS

STIFF, RED, TAN, AND, WHITE, FINE SANDY SILT, MOIST (A-4)

BT

FIAD 07/19

10+50

770 760 750 740

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

SEE –L3NB– CROSS SECTIONS

STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, MOIST (A-4)

10+00

770 760 750 740

–Y2RPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780 770 760

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, MOIST (A-4)

SEE –L3NB– CROSS SECTIONS

12 + 50

780 770 760

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, MOIST (A-4)

SEE –L3NB– CROSS SECTIONS

12 + 00

780 770 760

RESIDUAL, MEDIUM DENSE, TAN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED, TAN, AND WHITE, FINE SANDY SILT, MOIST (A-4)

SEE –L3NB– CROSS SECTIONS

11 + 50

–Y2RPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780
770
760
750

RESIDUAL, LOOSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

SEE -L3NB- CROSS SECTIONS

MEDIUM STIFF TO STIFF, RED-TAN, FINE SANDY SILT, MOIST (A-4)

13+50

790
780
770
760
750
740

SS-8 KLF

Y2RPD_1300
13+00 -Y2RPD-
76' RT

RESIDUAL, LOOSE, BROWN, SILTY FINE TO COARSE SAND, MOIST (A-2-4)

5
18
12
10
7
10

VERY STIFF, RED-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

SEE -L3NB- CROSS SECTIONS

MEDIUM STIFF TO STIFF, RED-TAN, FINE SANDY SILT, MOIST (A-4)

BT

FIAD 07/19

13+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780
770
760
750
740
730

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE -L3NB- CROSS SECTIONS

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF TO STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

14+50

780
770
760
750
740
730

SEE -L3NB- CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF TO STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

14+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	107

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

780 770 760 750 740

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

SEE -L3NB- CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF TO STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

15+50

790 780 770 760 750 740

SS-9 KLF

Y2RPD_1500
15+00 -Y2RPD-
55' RT

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE -L3NB- CROSS SECTIONS

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

MEDIUM STIFF TO STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

11
23
13
10
6

BT

FIAD
07/19

15+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

780 770 760 750 740

Y2RPD_1700
17+00 -Y2RPD-
30' RT

SEE -L3NB- CROSS SECTIONS

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

9
7
60/0.1

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

MEDIUM STIFF, BROWN, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

BT
FIAD 07/19

CRYSTALLINE ROCK (GRAY-WHITE GNEISS)

17+00

780 770 760 750 740 730 720

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

SEE -L3NB- CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

MEDIUM STIFF TO STIFF, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

16+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	109

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

800 790 780 770 760 750 740

EXISTING PAVEMENT

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

21+00

L3NB_90900
20+52 -Y2RPD-
14' LT

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

13
10
11
7

06/23

RESIDUAL, STIFF TO MEDIUM STIFF, BROWN, YELLOW, AND GRAY, SANDY SILT, TRACE MICA, MOIST (A-4)

BT

20+50

ROADWAY EMBANKMENT, STIFF, RED, BROWN, YELLOW, AND GRAY, SILTY CLAY, TRACE SAND, MOIST (A-7)

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

SS-10 KLF

Y2RPD_1900
19+00 -Y2RPD-
40' RT

8
7
12
12

RESIDUAL, LOOSE, DARK BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

MEDIUM STIFF TO STIFF, ORANGE, TAN, AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-6)

BT

FIAD
07/19

19+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

790
780
770
760

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

SEE –Y1RPD– CROSS SECTIONS

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

22+50

790
780
770
760
750

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

SEE –Y1RPD– CROSS SECTIONS

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SS-1 KLF

Y1RPD_1200
22+09 -Y2RPD-
84' RT

9
22
17
16
9

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

BT
FIAD 07/19

22+00

780
770
760

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

SEE –Y1RPD– CROSS SECTIONS

RESIDUAL, VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

21+50

–Y2RPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

800

790

780

770

760

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

23+50

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

VERY STIFF, ORANGE-TAN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

VERY STIFF TO STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

23+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

800 790 780 770 760 750

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

EXISTING PAVEMENT

VERY STIFF, TAN-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

STIFF TO MEDIUM STIFF, RED, WHITE, PINK, AND TAN, FINE SANDY SILT, MOIST (A-4)

24+50

810 800 790 780 770 760 750 740

VERY STIFF, TAN-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

EXISTING PAVEMENT

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

STIFF TO MEDIUM STIFF, RED, WHITE, PINK, AND TAN, FINE SANDY SILT, MOIST (A-4)

SS-2 KLF

Y1RPD_1400
24+03 -Y1RPD-
85' RT

10 24 14 11 10 12 6

BT

FIAD
07/19

24+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

800
790
780
770
760
750

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

SEE -L3NB- CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE -Y1RPD- CROSS SECTIONS

VERY STIFF, TAN-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

RESIDUAL, MEDIUM STIFF TO STIFF, RED, BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

25+50

Y1RPD_1450
24+76 -Y2RPD-
18' LT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

SEE -L3NB- CROSS SECTIONS

SEE -Y1RPD- CROSS SECTIONS

RESIDUAL, MEDIUM DENSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

VERY STIFF, TAN-RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

23
8
10
8

RESIDUAL, MEDIUM STIFF TO STIFF, RED, AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

BT
DRY
06/23

25+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	114

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

790
780
770
760
750

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

EXISTING PAVEMENT

L3NB_91500
26+49 -Y2RPD-
14' LT

SEE -L3NB- CROSS SECTIONS

17
10
9
6

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SEE -Y2RPD- CROSS SECTIONS

RESIDUAL, VERY STIFF TO MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

BT
DRY
06/23

26+50

800
790
780
770
760
750
740
730

ROADWAY EMBANKMENT, MEDIUM DENSE, GRAY, SANDY GRAVEL, MOIST (A-1-b)

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, LOOSE, BROWN, SILTY COARSE TO FINE SAND, MOIST (A-2-4)

SS-3 KLF
Y1RPD_1609
26+14 -Y2RPD-
96' RT

SEE -Y1RPD- CROSS SECTIONS

VERY STIFF TO MEDIUM STIFF, RED AND BROWN, COARSE TO FINE SANDY SILT, TRACE MICA, MOIST (A-4)

13
13
6

STIFF TO MEDIUM STIFF, SILTY CLAY, MOIST, BROWN, RED, YELLOW, AND TAN, HIGHLY PLASTIC (A-7-5)

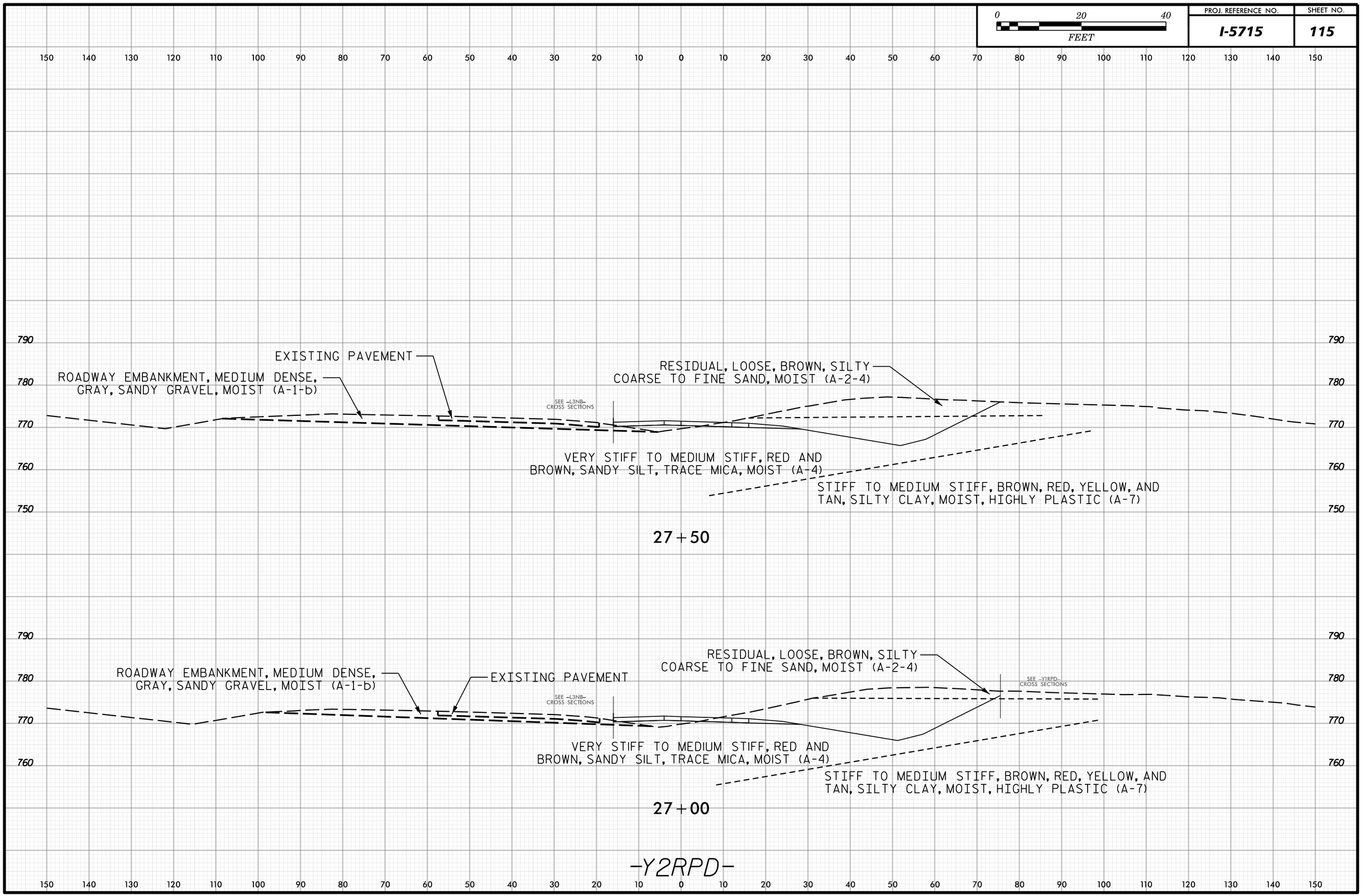
BT
FIAD
07/19

26+00

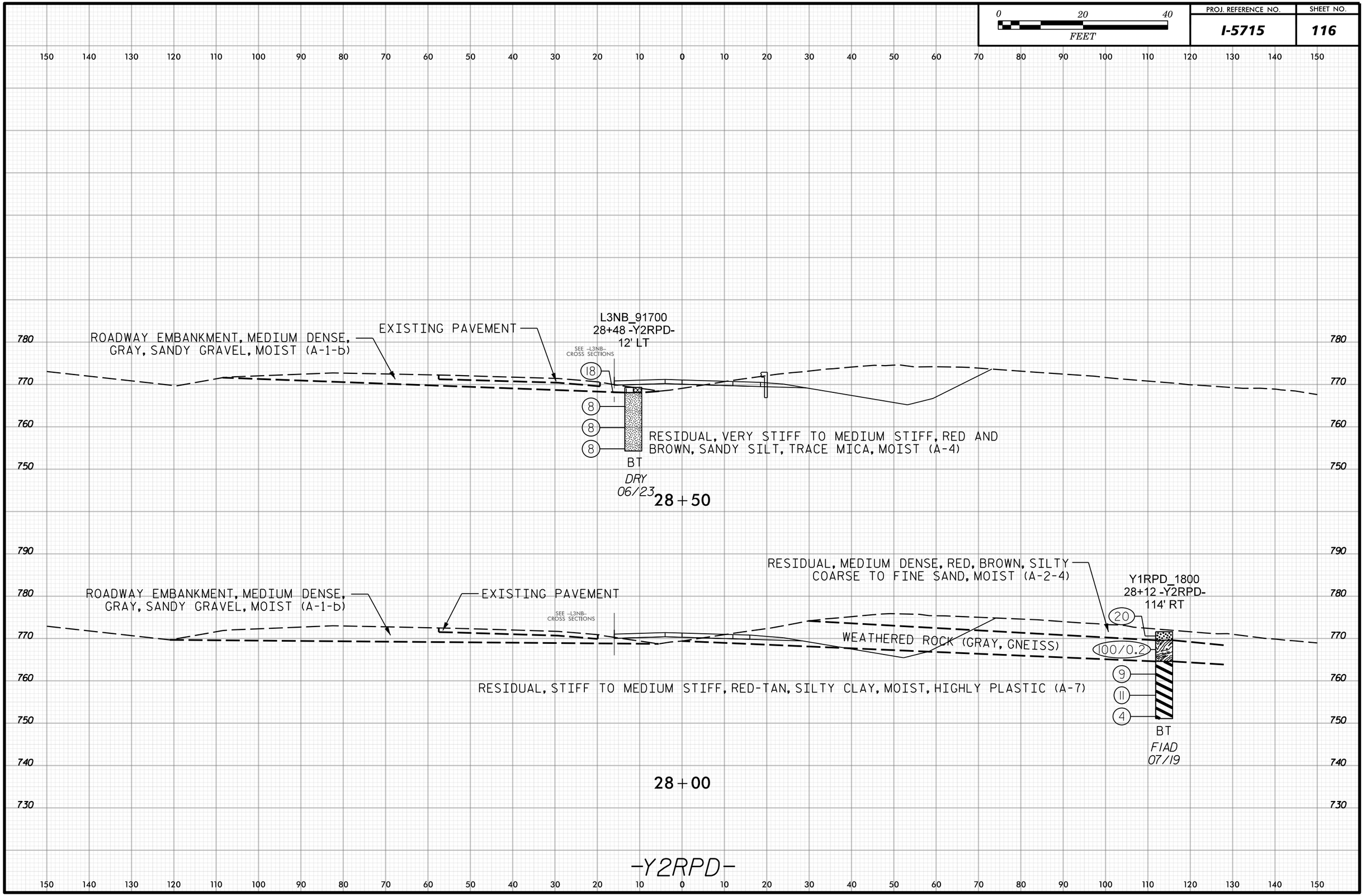
-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	115



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	116



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

790
780
770
760
750
740

SS-291

Y2RPD_3050
30+50 -Y2RPD-
60' RT

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

5
15
10
10
8

RESIDUAL, MEDIUM STIFF, BROWN, RED, AND YELLOW, SILTY CLAY, TRACE MICA, MOIST (A-7-6)

STIFF TO MEDIUM STIFF, RED, YELLOW, AND BROWN, CLAYEY SILT, TRACE MICA, MOIST (A-5)

BT
DRY
06/23

30+50

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	118

RESIDUAL, STIFF, TAN-RED, SILTY CLAY, MOIST (A-7)

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

S1B_EB2-B
31+51 -Y2RPD-
25' RT

10
17
12
14
9
10
7
14
9
23
17
24
34
53
75
95
100/0.9
100/0.7

07/19

MEDIUM STIFF TO HARD, TAN, RED, AND WHITE, COARSE TO FINE SANDY SILT, MOIST (A-4)

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

WEATHERED ROCK (TAN, WHITE GNEISS)

BT
DRY
07/19

31+50

-Y2RPD-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	119

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

780 770 760 750 740 730

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF, BROWN, SILIY CLAY, MOIST — HIGHLY PLASTIC (A-7)

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

32 + 50

780 770 760 750

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF, BROWN, SILIY CLAY, MOIST — HIGHLY PLASTIC (A-7)

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

32 + 00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	120

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

780
770
760

EXISTING PAVEMENT

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

SEE -L3NB- CROSS SECTIONS

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

34+00

780
770
760
750

EXISTING PAVEMENT

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

SEE -L3NB- CROSS SECTIONS

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

33+50

770
760
750
740

EXISTING PAVEMENT

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

SEE -L3NB- CROSS SECTIONS

Y2RPD_3300
33+00 -Y2RPD-
49' RT

11
13
9
8

BT

FIAD
07/19

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

33+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	121

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

780 770 760 750

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

35+50

SS–11 KLF

Y2RPD_3500
35+00 -Y2RPD-
45' RT

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

10 11 12 10

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

BT

FIAD 07/19

35+00

EXISTING PAVEMENT

RESIDUAL, STIFF, BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

SEE –L3NB– CROSS SECTIONS

STIFF, ORANGE-TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

34+50

–Y2RPD–

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	122

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

770
760
750
740
730
720

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, BROWN AND RED, SILTY CLAY, MOIST (A-7)

STIFF, YELLOW, RED, COARSE TO FINE SANDY SILT, MOIST (A-4)

36+50

780
770
760
750
740

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, ORANGE, CLAYEY SILT, MOIST (A-5)

36+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

770 760 750 740 730

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

38+00

780 770 760 750

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, BROWN AND RED, SILTY CLAY, MOIST (A-7)

STIFF, YELLOW, RED, COARSE TO FINE SANDY SILT, MOIST (A-4)

37+50

780 770 760 750 740

SS–12 KLF
SS–13 KLF

Y2RPD_3700
37+00 –Y2RPD–
40' RT

EXISTING PAVEMENT

SEE –L3NB– CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, BROWN AND RED, SILTY

10 CLAY, MOIST (A-7-5)

18

12 SILT, MOIST (A-4)

STIFF, YELLOW, RED, COARSE TO FINE SANDY

13

BT

FIAD
07/19

37+00

–Y2RPD–

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

760
750
740

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

STIFF, RED, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

39+50

770
760
750
740
730

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

STIFF, RED, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

SS-14 KLF

Y2RPD_3889
38+89 -Y2RPD-
33 RT

9
11
10
12

BT

FIAD
07/19

39+00

760
750

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

RESIDUAL, STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

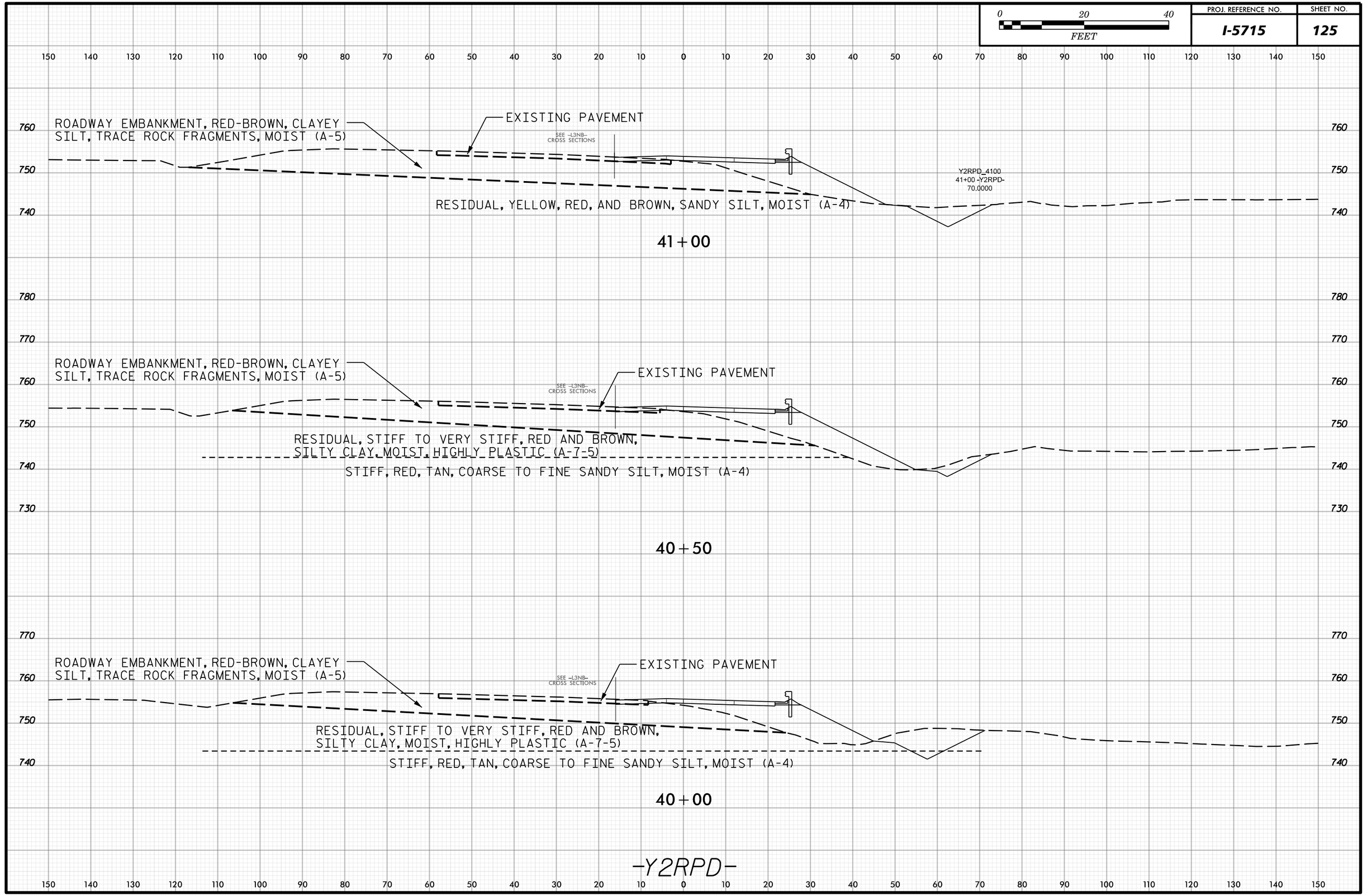
STIFF, RED, TAN, COARSE TO FINE SANDY SILT, MOIST (A-4)

38+50

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	125



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	126

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

750
740
730
720
710

EXISTING PAVEMENT

ROADWAY EMBANKMENT, RED-BROWN, CLAYEY SILT, TRACE ROCK FRAGMENTS, MOIST (A-5)

RESIDUAL, MEDIUM STIFF, BROWN, SILTY CLAY, MOIST (A-7)

STIFF, BROWN, AND RED, CLAYEY SILT, MOIST (A-5)

MEDIUM DENSE, LIGHT BROWN, AND WHITE, SILTY SAND, TRACE MICA, MOIST (A-2-4)

Y2RPD_4500
45+00 -Y2RPD-
67' RT

BT
DRY
06/23

45+00

760
750
740
730
720

EXISTING PAVEMENT

SEE -L3NB- CROSS SECTIONS

ROADWAY EMBANKMENT, RED-BROWN, CLAYEY SILT, TRACE ROCK FRAGMENTS, MOIST (A-5)

RESIDUAL, YELLOW, RED, AND BROWN, SANDY SILT, MOIST (A-4)

Y2RPD_4300
43+00 -Y2RPD-
63' RT

BT
DRY
06/23

43+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	127

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

780 770 760 750 740 730 720 710 700 690

EXISTING PAVEMENT

PROPOSED ROCK PLATING

ROADWAY EMBANKMENT, MEDIUM STIFF TO STIFF, RED, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

RESIDUAL, MEDIUM STIFF, BROWN, SILTY CLAY, MOIST (A-7)

46+00

750 740 730 720

EXISTING PAVEMENT

ROADWAY EMBANKMENT, RED-BROWN, CLAYEY SILT, TRACE ROCK FRAGMENTS, MOIST (A-5)

RESIDUAL, MEDIUM STIFF, BROWN, SILTY CLAY, MOIST (A-7)

STIFF, BROWN, AND RED, CLAYEY SILT, MOIST (A-5)

MEDIUM DENSE, LIGHT BROWN, AND WHITE, SILTY SAND, TRACE MICA, MOIST (A-2-4)

45+50

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	128

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

760 750 740 730 720 710 700

ST-1
Y2RPD_4710
47+07 -Y2RPD-
7.0000

EXISTING PAVEMENT
(ASPHALT, ABC)

ROADWAY EMBANKMENT, MEDIUM STIFF TO STIFF, RED, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

PROPOSED ROCK PLATING

ST-1

STIFF, RED AND BROWN, CLAYEY SILT, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7-5)

06/23

RESIDUAL, MEDIUM STIFF, GRAY, SANDY SILT, WITH TRACE MICA, MOIST (A-4)

MEDIUM STIFF, RED, GRAY, AND BROWN, SILTY CLAY, TRACE MICA, MOIST (A-7)

DENSE, GRAY, BLACK, AND WHITE, SILTY SAND WITH TRACE MICA, MOIST (A-2-4)

6 8 9 11 11 6 6 43

BT
FIAD
06/23

47+00

770 760 750 740 730 720 710

EXISTING PAVEMENT

PROPOSED ROCK PLATING

ROADWAY EMBANKMENT, MEDIUM STIFF TO STIFF, RED, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

RESIDUAL, MEDIUM STIFF, BROWN, SILTY CLAY, MOIST (A-7)

46+50

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	129

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

750 740 730 720

EXISTING PAVEMENT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

PROPOSED ROCK PLATING

RESIDUAL, MEDIUM STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7)

48+50

750 740 730 720

EXISTING PAVEMENT

PROPOSED ROCK PLATING

ROADWAY EMBANKMENT, MEDIUM STIFF TO STIFF, RED, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

RESIDUAL, MEDIUM STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7)

48+00

750 740 730 720 710

EXISTING PAVEMENT

PROPOSED ROCK PLATING

ROADWAY EMBANKMENT, MEDIUM STIFF TO STIFF, RED, SANDY SILT, TRACE MICA, MOIST TO WET (A-4)

STIFF, RED AND BROWN, CLAYEY SILT, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7)

RESIDUAL, MEDIUM STIFF, GRAY, SANDY SILT, WITH TRACE MICA, MOIST (A-4)

MEDIUM STIFF, RED, GRAY, AND BROWN, SILTY CLAY, TRACE MICA, MOIST (A-7)

DENSE, GRAY, BLACK, AND WHITE, SILTY SAND WITH TRACE MICA, MOIST (A-2-4)

47+50

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

750
740
730

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

PROPOSED ROCK PLATING

RESIDUAL, MEDIUM STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7)

50+00

750
740
730

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

PROPOSED ROCK PLATING

RESIDUAL, MEDIUM STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7)

49+50

770
760
750
740
730
720
710

Y2RPD_4900
48+95 -Y2RPD-
1' RT

PAVEMENT (ASPHALT, ABC)

ROADWAY EMBANKMENT, MEDIUM STIFF, RED AND BROWN, SANDY SILT, TRACE MICA, MOIST (A-4)

PROPOSED ROCK PLATING

RESIDUAL, MEDIUM STIFF TO VERY STIFF, RED AND BROWN, SILTY CLAY, TRACE MICA, MOIST, HIGHLY PLASTIC (A-7)

16 9 12 18 8 16

BT

FIAD
06/23

49+00

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	131

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

760
750
740
730

EXISTING PAVEMENT

RESIDUAL, MEDIUM STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

RESIDUAL, STIFF, RED, BROWN, YELLOW, AND WHITE, CLAYEY SILT, TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)

51+50

760
750
740
730
720

SS-296
Y2RPD_5100
51+00 Y2RPD-59' RT

EXISTING PAVEMENT

RESIDUAL, MEDIUM STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7-5)

PROPOSED ROCK RIPRAP

6
9
10
9

BT
DRY
06/23

RESIDUAL, STIFF, RED, BROWN, YELLOW, AND WHITE, CLAYEY SILT, TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)

51+00

750
740
730

EXISTING PAVEMENT

PROPOSED ROCK RIPRAP

RESIDUAL, MEDIUM STIFF, RED, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

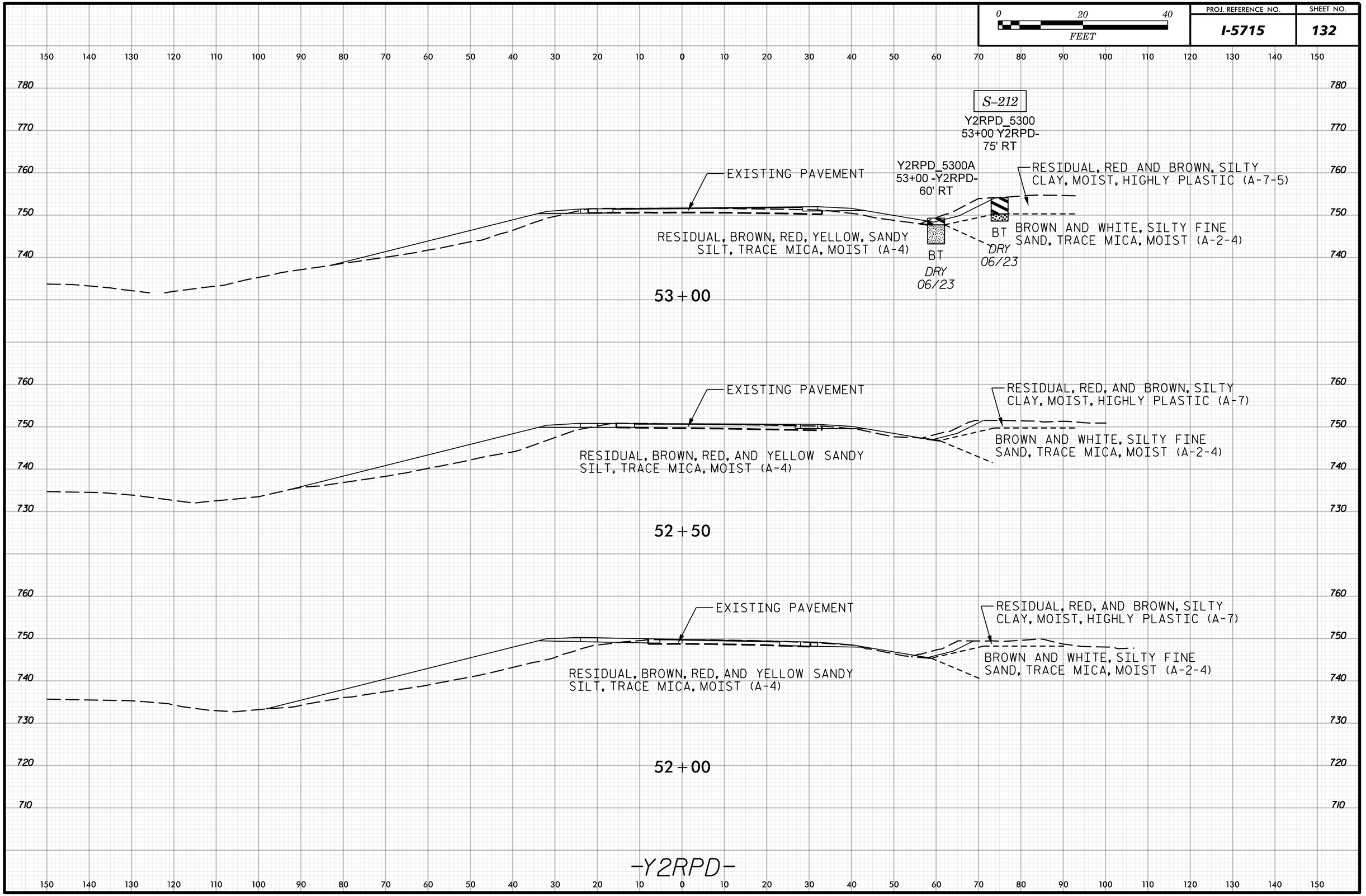
RESIDUAL, STIFF, RED, BROWN, YELLOW, AND WHITE, CLAYEY SILT, TO SANDY SILT, TRACE MICA, MOIST (A-5, A-4)

50+50

-Y2RPD-

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 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	132



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	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

770 760 750 740 730

EXISTING PAVEMENT

Y2RPD_5500
55+00 -Y2RPD-
60' RT

RESIDUAL, RED, AND BROWN, SANDY SILT, MOIST (A-4)

BT
CAVED DRY
@ 0.7'
06/23

55+00

EXISTING PAVEMENT

RESIDUAL, BROWN, RED, AND YELLOW,
SANDY SILT, TRACE MICA, MOIST (A-4)

RESIDUAL, RED AND BROWN, SILTY
CLAY, MOIST, HIGHLY PLASTIC (A-7)

BROWN AND WHITE, SILTY FINE
SAND, TRACE MICA, MOIST (A-2-4)

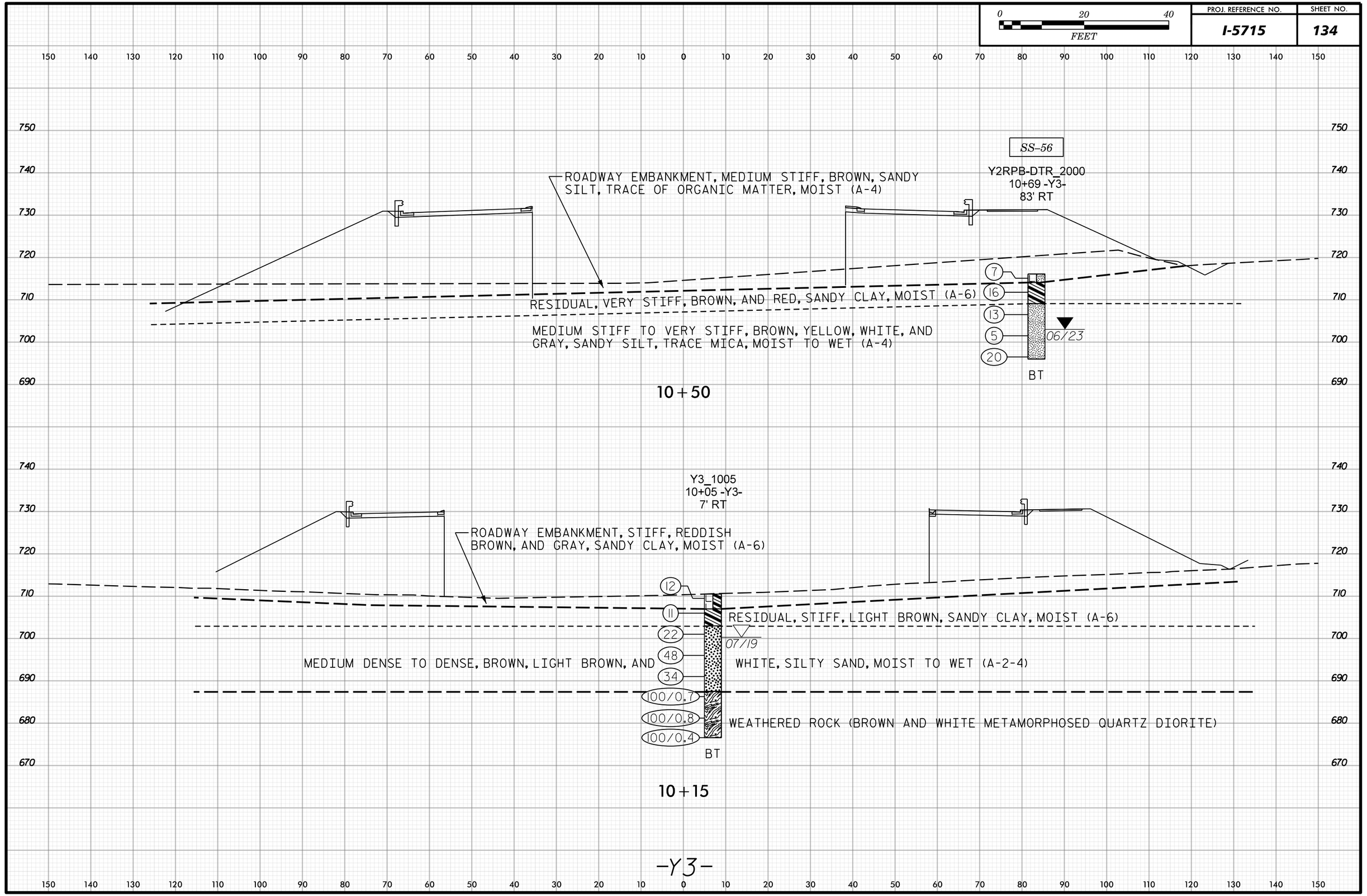
760 750 740 730 720

53+50

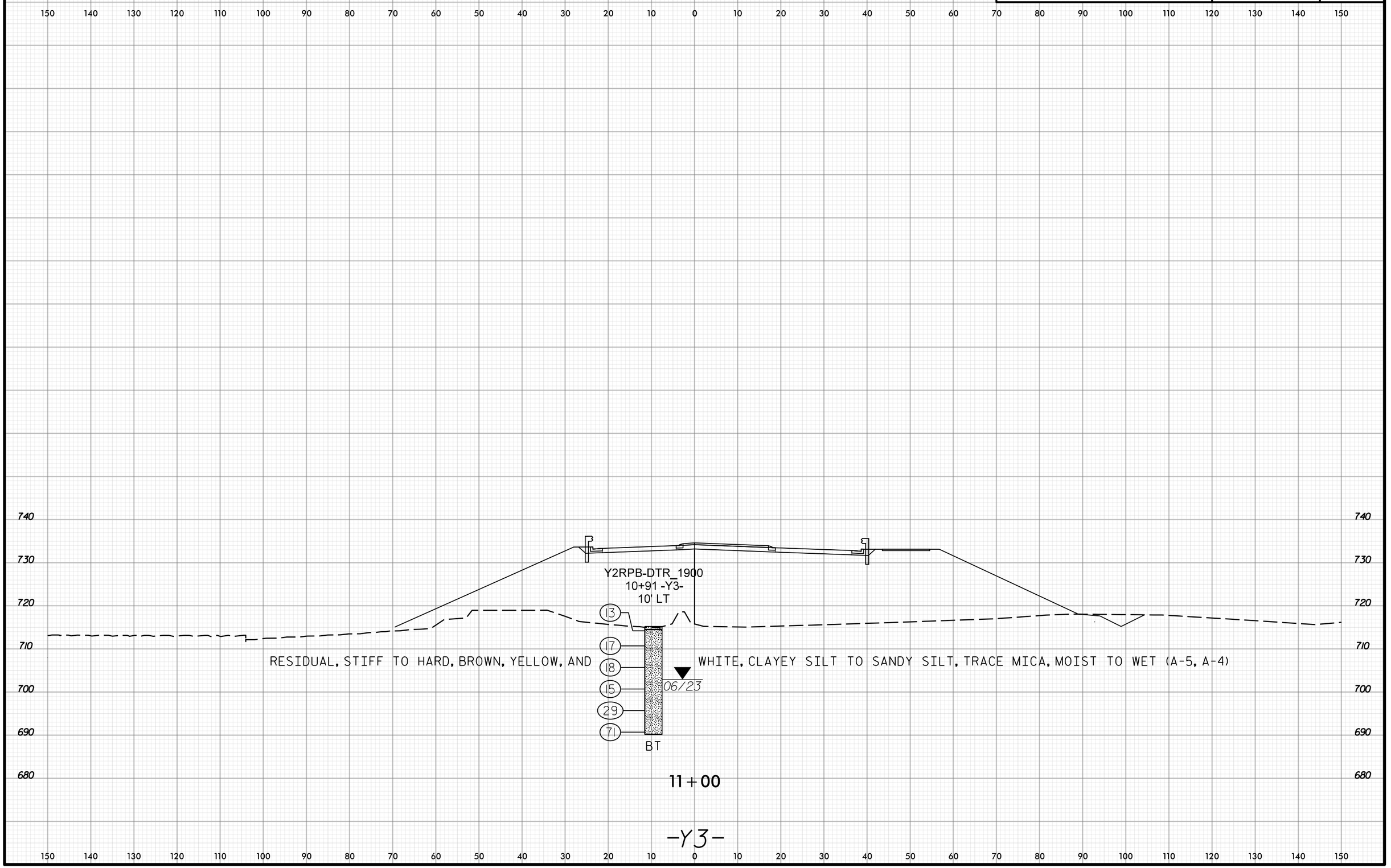
-Y2RPD-

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

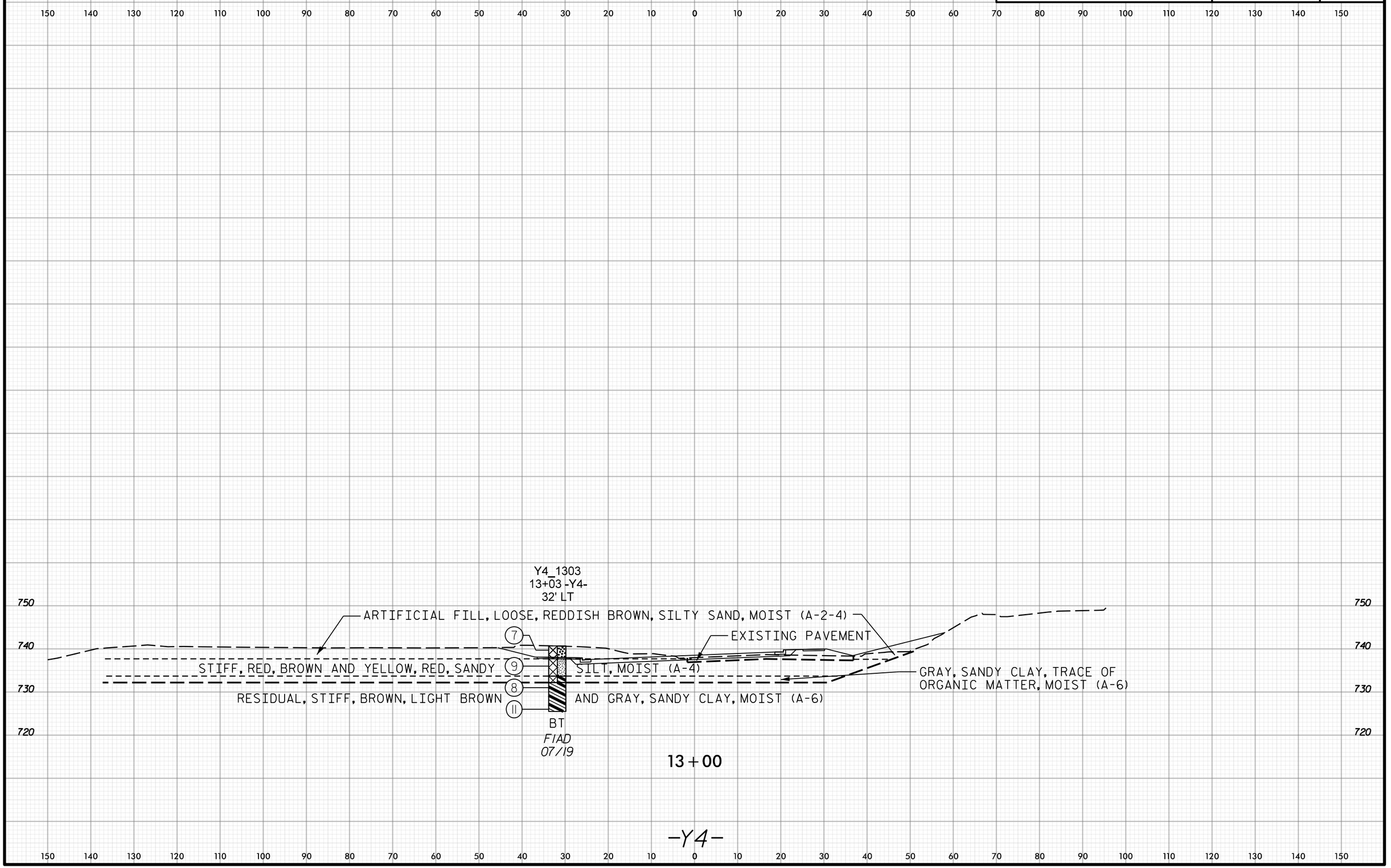
0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	134



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	135



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	136



0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	137

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

760 750 740 730 720 710

ARTIFICIAL FILL, MEDIUM STIFF, REDDISH YELLOW, SANDY CLAY, MOIST (A-6)

EXISTING PAVEMENT

Y5_1135
11+35 -Y8-
39' RT

6
10
7
5
4
4

RESIDUAL, MEDIUM DENSE, YELLOWISH RED AND BROWN, SILTY SAND, MOIST (A-2-4)

BT

FIAD
07/19

11+50

Y9_1055
10+75 -Y5-
64' LT

7
10
9
8

ARTIFICIAL FILL, MEDIUM STIFF TO STIFF, RED, BROWN, SANDY SILT, MOIST (A-4)

RESIDUAL, STIFF, BROWN, YELLOW, SANDY CLAY, TRACE OF ORGANIC MATTER, MOIST (A-6)

STIFF, BROWN AND GRAY, SILTY CLAY, MOIST, HIGHLY PLASTIC (A-7)

BT

FIAD
07/19

10+75

-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

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	138

S1A_EB1-A
21+59 -Y8-
58' LT

EXISTING PAVEMENT

ROADWAY EMBANKMENT, MEDIUM DENSE, REDDISH, BROWN, SILTY SAND, TRACE GRAVEL AND TRACE ASPHALT FRAGMENTS, TRACE OF ORGANIC MATTER, MOIST (A-2-4)

13
18
12
7
7
6
5
4
17
25
28
100/0.9
60/0.0

07/19

RESIDUAL, VERY STIFF TO STIFF, RED AND YELLOW, SANDY SILT, MOIST (A-4)

LOOSE TO MEDIUM DENSE, YELLOW, RED, BROWN, WHITE, AND GRAY, SILTY SAND, MOIST TO WET (A-2-4)

WEATHERED ROCK (BROWN AND WHITE METAMORPHOSED QUARTZ DIORITE)

AR

CRYSTALLINE ROCK (METAMORPHOSED QUARTZ DIORITE)

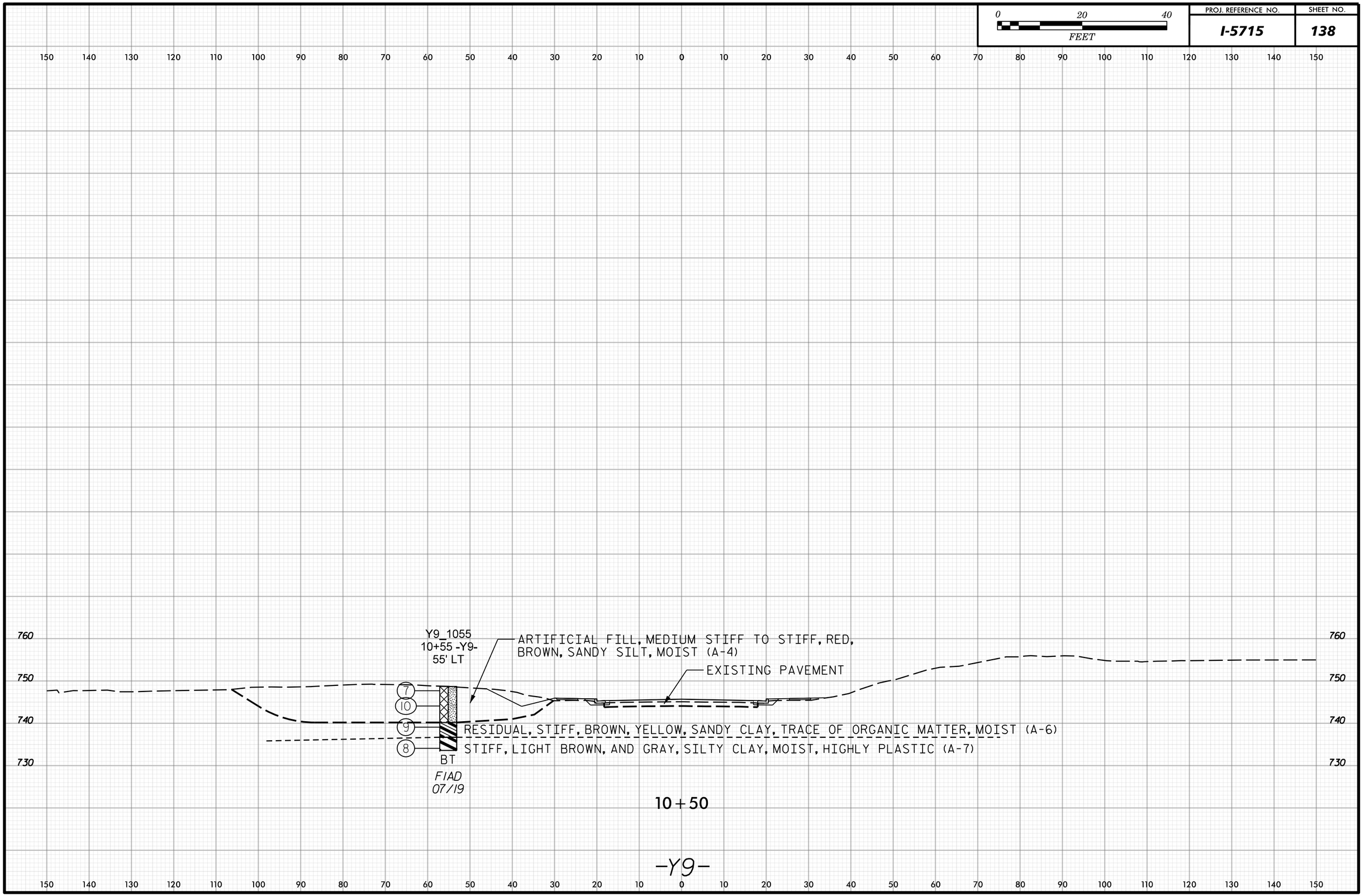
780 770 760 750 740 730 720 710 700

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

21+50

-Y8-

0 20 40 FEET	PROJ. REFERENCE NO.	SHEET NO.
	I-5715	138



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I–5715	139	

REFERENCE: I-5715

PROJECT: 50128.1.FS1

APPENDIX A

LABORATORY TESTING SUMMARY

LABORATORY SUMMARY SHEET FOR SOIL SAMPLES

PROJECT NO.: 50128.1.FS1 (I-5715)
COUNTY: MECKLENBURG
I-77 AND THE NC 73 INTERCHANGE. UPGRADE EXISTING INTERCHANGE TO SPLIT DIAMOND CONFIGURATION

										Atterberg Limits			Gradation Results							
Sample No.	Boring Number	Alignment	Station	Offset	Northing	Easting	Sample Depth (ft.)	Natural Moisture Content (%)	AASHTO Class.	L.L.	P.L.	P.I.	Retained #4 Sieve	Pass #10 Sieve	Pass #40 Sieve	Pass #200 Sieve	Coarse Sand (%)	Fine Sand (%)	Silt (%)	Clay (%)
SS-1 KLF	Y1RPD_1200	-Y1RPD-	12+00	60' RT	617,826	1,443,846	3.4 - 4.9	19.3	A-7-5	91	34	57	0.2	95.8	65.8	52.7	37.4	8.9	12.1	41.5
SS-2 KLF	Y1RPD_1400	-Y1RPD-	14+00	45' RT	618,015	1,443,808	3.5 - 5.0	28.4	A-7-5	89	40	49	0.0	99.0	83.1	70.8	20.6	10.0	17.3	52.0
SS-3 KLF	Y1RPD_1609	-Y1RPD-	16+09	1' RT	618,222	1,443,780	13.6 - 15.1	36.3	A-7-5	76	35	41	0.4	99.3	97.7	89.4	2.1	11.5	43.1	43.2
SS-4 KLF	Y2_1755	-Y2-	17+55	96' RT	621,249	1,442,017	0.0 - 1.5	18.2	A-7-6	51	25	26	0.1	99.7	83.1	61.2	26.9	13.8	13.0	46.3
SS-5 KLF	Y2_1755	-Y2-	17+55	96' RT	621,249	1,442,017	3.5 - 5.0	10.1	A-6	35	16	19	0.3	99.6	71.2	44.0	42.0	16.0	13.0	29.1
SS-6 KLF	Y2RPA_3014	-Y2RPA-	30+14	47' LT	621,422	1,443,795	4.0 - 5.5	26.8	A-7-6	63	28	35	0.0	99.9	96.4	68.6	9.2	27.4	11.5	51.8
SS-7 KLF	Y2RPD_1069	-Y2RPD-	10+69	87' RT	616,728	1,444,137	3.1 - 4.6	24.2	A-7-5	75	45	30	0.1	96.4	78.7	64.0	24.4	11.4	13.9	50.3
SS-8 KLF	Y2RPD_1300	-Y2RPD-	13+00	75' RT	616,948	1,444,065	3.6 - 5.1	26.7	A-7-5	86	51	35	0.0	96.8	77.4	63.8	26.3	9.6	15.7	48.5
SS-9 KLF	Y2RPD_1500	-Y2RPD-	15+00	55' RT	617,135	1,443,993	3.4 - 4.9	20.9	A-7-5	76	38	38	0.2	95.3	69.7	56.8	33.4	8.5	14.6	43.6
SS-10 KLF	Y2RPD_1900	-Y2RPD-	19+00	40' RT	617,517	1,443,875	3.1 - 4.6	24.8	A-7-6	73	28	45	0.1	97.3	69.7	55.9	34.6	9.3	11.9	44.1
SS-11 KLF	Y2RPD_3500	-Y2RPD-	35+00	45' RT	619,087	1,443,616	0.0 - 1.5	43.7	A-7-5	78	35	43	0.8	98.8	87.3	76.2	16.4	8.2	16.5	58.9
SS-12 KLF	Y2RPD_3700	-Y2RPD-	37+00	40' RT	619,285	1,443,597	0.0 - 1.5	17.6	A-7-6	48	24	24	0.2	99.2	75.9	56.9	32.4	11.7	16.7	39.3
SS-13 KLF	Y2RPD_3700	-Y2RPD-	37+00	40' RT	619,285	1,443,597	3.5 - 5.0	23.6	A-7-5	60	43	17	0.3	99.7	86.2	66.9	20.6	15.0	20.6	43.8
SS-14 KLF	Y2RPD_3889	-Y2RPD-	38+89	33' RT	619,473	1,443,580	0.0 - 1.5	18.0	A-7-5	70	30	40	0.6	99.4	80.6	63.4	26.8	11.1	17.1	45.1

LABORATORY TESTING SUMMARY

PROJECT NUMBER: 50128.1.FS1 **TIP:** I-5715 **COUNTY:** MECKLENBURG

DESCRIPTION: I-77 AND THE NC 73 INTERCHANGE. UPGRADE EXISTING INTERCHANGE TO SPLIT DIAMOND CONFIGURATION

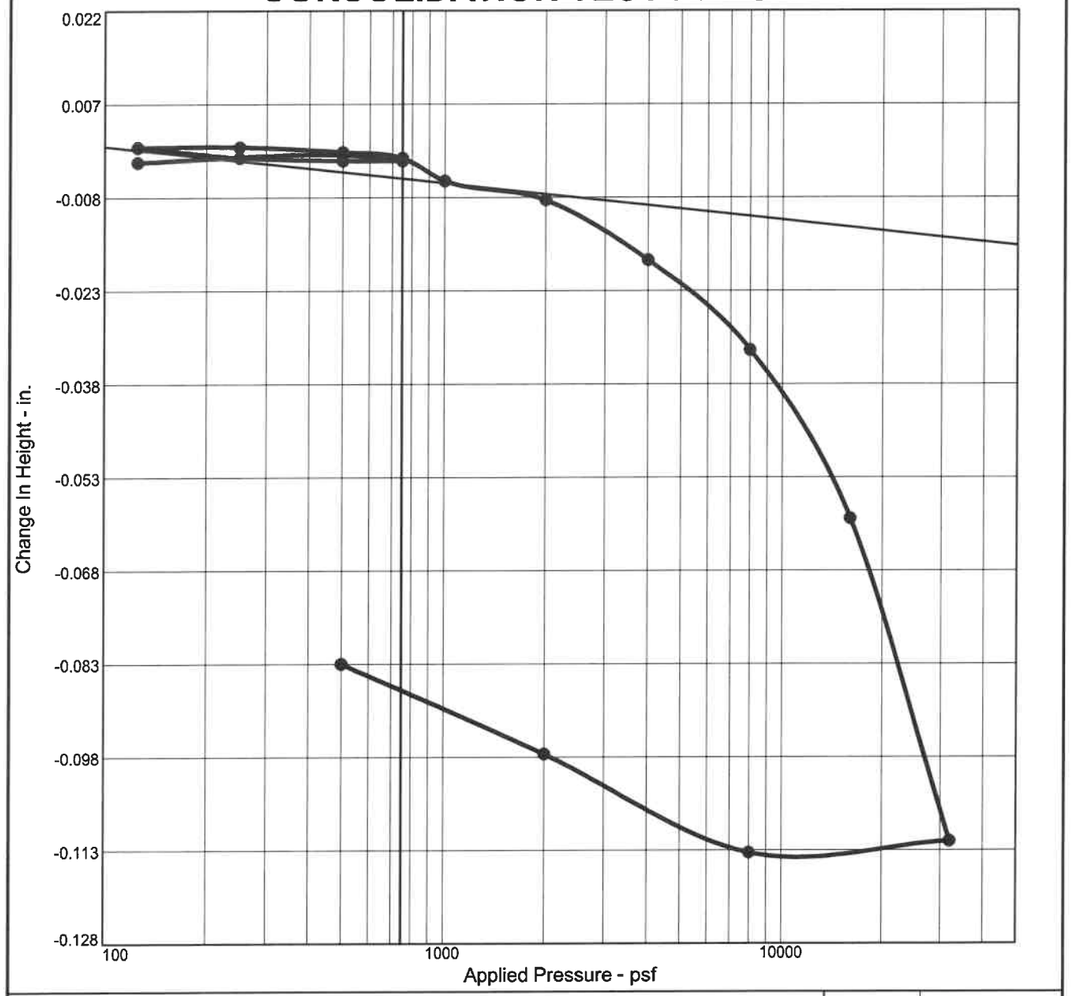
Sample No.	Sample Location							AASHTO Class. (Group Index)	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
	Boring No.	Alignment	Station	Offset (ft)	Northing (ft)	Easting (ft)	Depth Interval (feet)				Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
SS-86	L3NB_84400	-L3NB-	844+00	40' RT	611,598	1,446,130	0.0-1.5	A-1-b(0)	ND	NP	49.3	24.4	20.4	5.9	45.2	41.6	26.3	12.4	5.2	--
SS-96	L3NB_85200	-L3NB-	851+88	80' RT	612,358	1,445,899	0.0-1.5	A-7-5(17)	61	21	16.5	14.0	25.3	44.2	0.0	100.0	90.5	71.7	31.9	--
SS-100	L3NB_85400	-L3NB-	854+00	75' RT	612,552	1,445,814	0.0-1.5	A-7-5(17)	61	22	12.7	21.4	28.5	37.4	0.0	100.0	94.4	69.1	32.7	--
SS-105	L3NB_85600	-L3NB-	855+96	40' RT	612,720	1,445,706	3.4-4.9	A-7-5(8)	51	13	18.8	23.0	29.7	28.5	0.0	100.0	90.9	62.2	27.9	--
S-220	L3NB_86200	-L3NB-	862+00	43' RT	613,279	1,445,477	0.0-1.5	A-5(5)	51	8	22.0	20.1	23.5	34.4	6.4	92.8	80.1	56.8	29.1	--
SS-267	L3NB_95800	-L3NB-	957+67	35' RT	622,490	1,443,536	3.8-5.3	A-7-6(11)	50	21	25.7	20.1	26.5	27.7	0.0	99.8	82.2	58.0	25.7	--
SS-162	Y2RPA_1000	-Y2RPA-	9+92	20' LT	623,405	1,443,387	0.0-1.5	A-7-6(4)	46	23	31.3	19.6	18.0	31.1	16.1	76.1	59.2	39.9	8.3	--
SS-167	L3NB_97000	-L3NB-	970+00	45' RT	623,712	1,443,336	3.5-5.0	A-7-5(34)	82	46	22.1	9.9	20.9	47.1	0.0	99.9	81.8	70.1	28.2	--
SS-183	L3SB_95400	-L3SB-	954+00	40' LT	622,029	1,443,205	3.4-4.9	A-7-5(10)	46	20	23.3	21.8	23.8	31.1	0.0	99.2	84.5	58.8	23.0	--
SS-287	Y1_3000	-Y1-	30+00	40' RT	618,928	1,444,162	0.0-1.5	A-6(7)	39	19	36.9	12.9	16.9	33.3	0.0	98.8	71.4	51.2	15.2	--
S-195	Y2_2150	-Y2-	21+50	65' RT	621,239	1,442,414	0.0-6.2	A-7-6(7)	42	17	27.7	18.3	23.4	30.6	2.0	95.0	76.7	54.4	23.3	--
S-190	Y2_2550	-Y2-	25+50	115' LT	621,377	1,442,830	0.0-3.5	A-7-6(4)	37	18	37.0	19.2	19.0	24.8	0.6	97.6	73.4	45.6	17.4	--
S-187	Y2_2750A	-Y2-	27+50	80' RT	621,162	1,443,009	0.0-4.5	A-7-5(47)	81	50	12.1	6.2	17.6	64.1	0.0	100.0	90.7	83.0	39.3	--
ST-3	S2B_EB2-B	-Y2-	33+55	84' RT	621,096	1,443,610	5.0-7.0	A-5(6)	57	9	27.4	21.3	26.5	24.8	0.0	100.0	82.1	56.0	30.9	--
S-202	Y2RPA_1400	-Y2RPA-	13+95	20' LT	623,019	1,443,489	0.0-0.6	A-7-5(12)	58	23	22.2	17.6	31.6	28.6	2.7	91.3	76.9	58.0	43.0	--
S-305	Y2RPA_2075	-Y2RPA-	20+50	45' LT	622,383	1,443,650	2.0-6.7	A-7-5(16)	48	27	17.8	18.8	23.0	40.4	0.0	100.0	91.0	67.0	40.6	--
SS-262	Y2RPA_2200	-Y2RPA-	22+00	60' RT	622,215	1,443,578	0.0-1.5	A-7-5(14)	56	21	20.6	15.5	29.8	34.1	3.4	95.7	81.6	64.4	25.8	--
SS-257	Y2RPA_2400	-Y2RPA-	24+00	97' RT	622,011	1,443,584	0.0-1.5	A-7-6(13)	51	23	24.4	15.3	23.6	36.7	0.0	98.4	81.4	62.3	25.5	--
SS-12	Y2RPB_1100	-Y2RPB-	10+99	52' RT	623,135	1,443,058	0.0-1.5	A-7-6(15)	49	32	29.2	14.5	14.0	42.3	0.0	99.9	81.9	57.9	21.2	--
SS-14	Y2RPB_1100	-Y2RPB-	10+99	52' RT	623,135	1,443,058	8.5-10.0	A-2-6(2)	37	20	49.1	17.6	9.7	23.6	0.1	99.3	68.7	34.6	13.5	--
SS-46	Y2RPB_2065	-Y2RPB-	20+65	102' LT	622,153	1,443,164	8.3-9.8	A-7-5(17)	56	28	23.4	13.0	21.6	42.0	0.0	97.8	82.3	64.5	22.9	--
SS-291	Y2RPD_3050	-Y2RPD-	35+00	45' RT	619,087	1,443,616	0.0-1.5	A-7-6(10)	48	23	33.2	12.8	20.5	33.5	0.0	99.6	75.1	55.5	16.9	--
ST-1	Y2RPD_4710	-Y2RPD-	47+07	4' RT	620,287	1,443,584	10.0-12.0	A-7-5(46)	69	38	18.9	13.6	20.7	46.8	0.0	100.0	87.0	70.1	32.1	--
SS-296	Y2RPD_5100	-Y2RPD-	51+00	59' RT	620,666	1,443,702	0.0-1.5	A-7-5(19)	60	30	23.8	13.7	25.0	37.5	0.0	100.0	83.1	65.3	30.4	--
S-212	Y2RPD_5300	-Y2RPD-	53+00	75' RT	620,860	1,443,751	0.0-3.8	A-7-5(14)	68	43	8.1	18.8	18.8	54.3	0.0	98.8	94.4	75.8	28.7	--
SS-24	NW-2	-Y2RPB-	12+79	40' RT	622,957	1,443,084	0.3-1.5	A-6(5)	34	17	34.3	18.8	18.0	28.9	0.0	99.7	78.1	49.0	17.3	--
SS-36	NW-4	-Y2RPB-	15+26	52' RT	622,713	1,443,087	3.2-4.7	A-7-6(5)	44	29	47.2	17.2	6.6	29.0	0.0	99.7	69.2	36.9	12.8	--
SS-150	Y2RPA-DTR_2550	-Y2RPA-DTR-	25+47	20' LT	621,642	1,443,682	8.7-10.2	A-7-6(26)	65	33	16.2	12.8	27.0	44.0	0.0	100.0	88.8	74.4	31.8	--
SS-56	Y2RPB-DTR_2000	-Y2RPB-DTR-	20+00	20' RT	621,838	1,443,033	3.3-4.8	A-6(6)	38	19	34.1	18.4	18.8	28.7	0.0	97.5	76.0	49.1	14.4	--

ND - NOT DETERMINED
NP - NON-PLASTIC

DocuSigned by:
Myrna Grabski
Certified Lab Technician Signature

114-01-1203
NCDOT Certification Number

CONSOLIDATION TEST REPORT



MATERIAL DESCRIPTION	USCS	AASHTO
Light Reddish Brown Sandy SILT with mica	MH	A-5(6)

LL	PI	Sp. Gr.	Overburden (psf)	Dry Dens. (pcf)		Moisture		Saturation		Void Ratio		P_c (psf)	C_c
				Init.	Final	Init.	Final	Init.	Final	Init.	Final		
57	9	2.736		83.1	83.7	30.9 %	32.7	80.1 %	100.0	1.057	0.886	4134	0.01

Preparation Process: AASHTO T-216	D2435 Method	C_r	Swell Press. (psf)	Swell %
Condition of Test: Un-disturbed	T-216	0.02		

Project No. 75235097 **Client:** NCDOT
Project: I-77& NC 73 Interchange-I-5715
Location: S2B_EB2-B **Depth:** 5.0-7.0 ft **Sample Number:** ST-3
Terracon Consultants, Inc.
Charlotte, North Carolina

Remarks:
S2B-EB2-B @(5-7)'

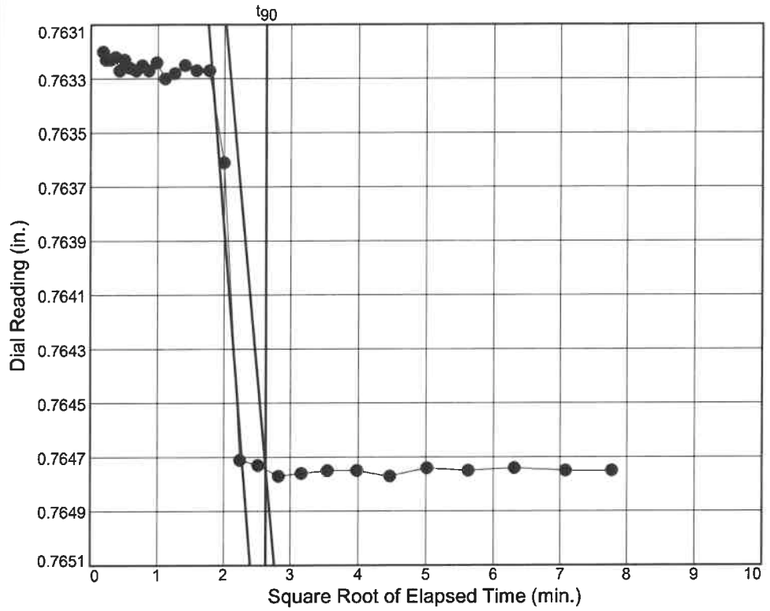
Checked By: M. Grabski
Title: lab Manager

Figure 1

Dial Reading vs. Time

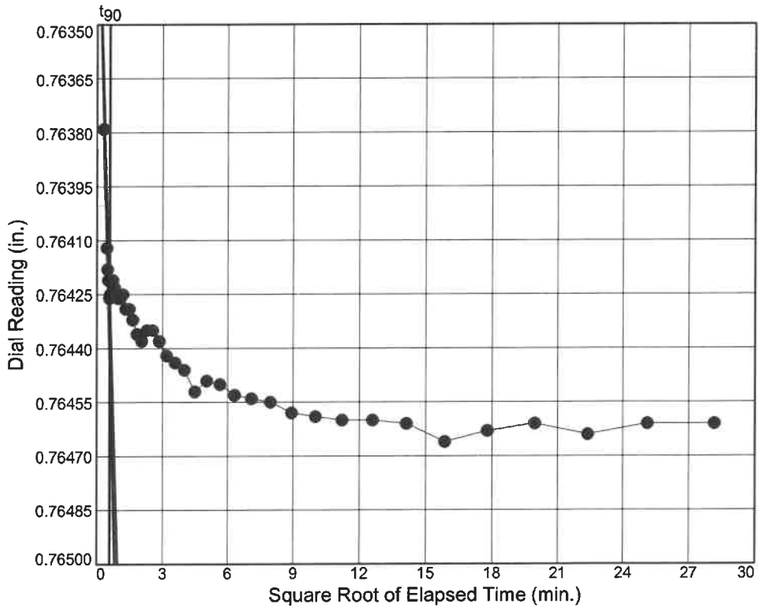
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 1
Load= 125 psf
D_0 = 0.7576
D_{90} = 0.7647
D_{100} = 0.7655
T_{90} = 6.91 min.

C_v @ T_{90}
0.031 $in.^2/min.$



Load No.= 2
Load= 500 psf
D_0 = 0.7630
D_{90} = 0.7643
D_{100} = 0.7644
T_{90} = 0.34 min.

C_v @ T_{90}
0.618 $in.^2/min.$

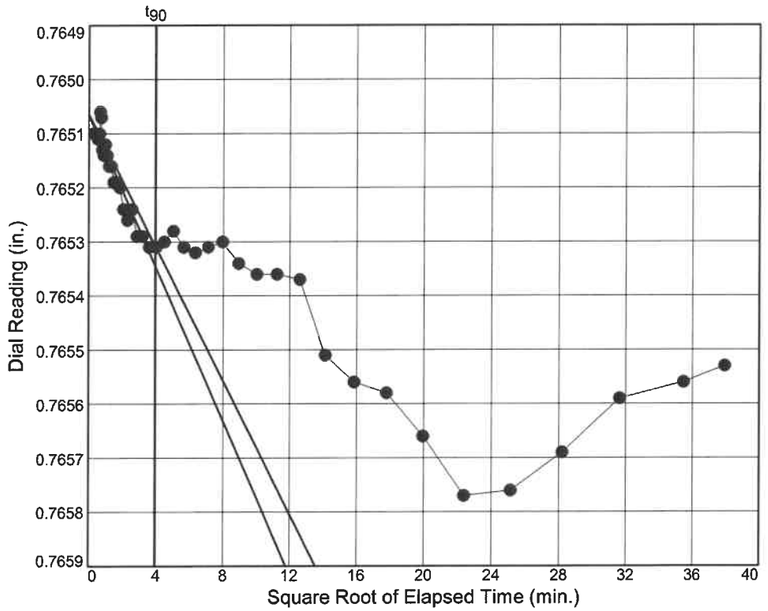
Terracon Consultants, Inc.

Figure 2

Dial Reading vs. Time

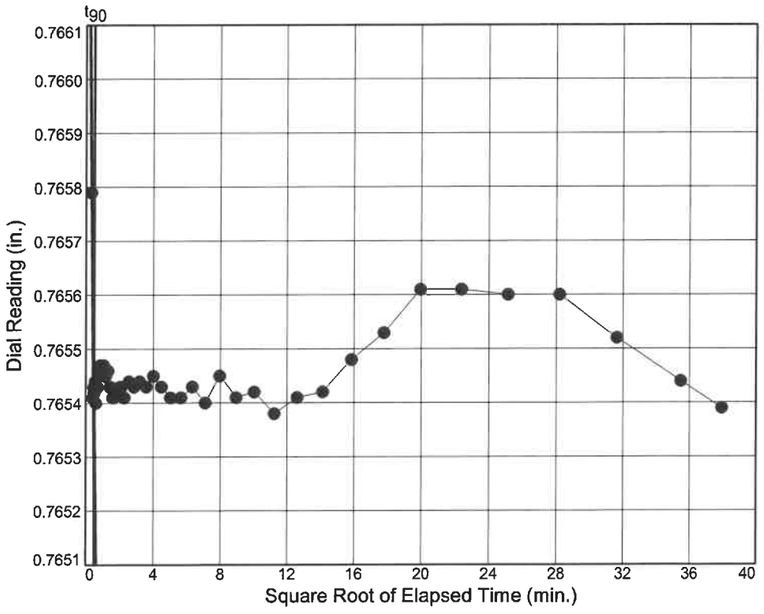
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 3
Load=750 psf
D_0 = 0.7651
D_{90} = 0.7653
D_{100} = 0.7653
T_{90} = 15.64 min.

C_v @ T_{90}
0.014 in.^{2}/min.



Load No.= 4
Load=500 psf
D_0 = 0.7667
D_{90} = 0.7654
D_{100} = 0.7653
T_{90} = 0.26 min.

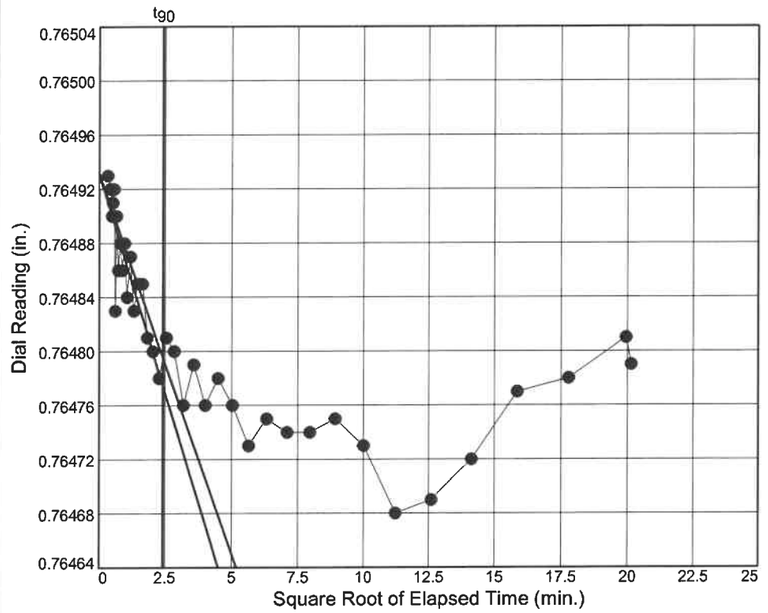
C_v @ T_{90}
0.813 in.^{2}/min.

Figure 3

Dial Reading vs. Time

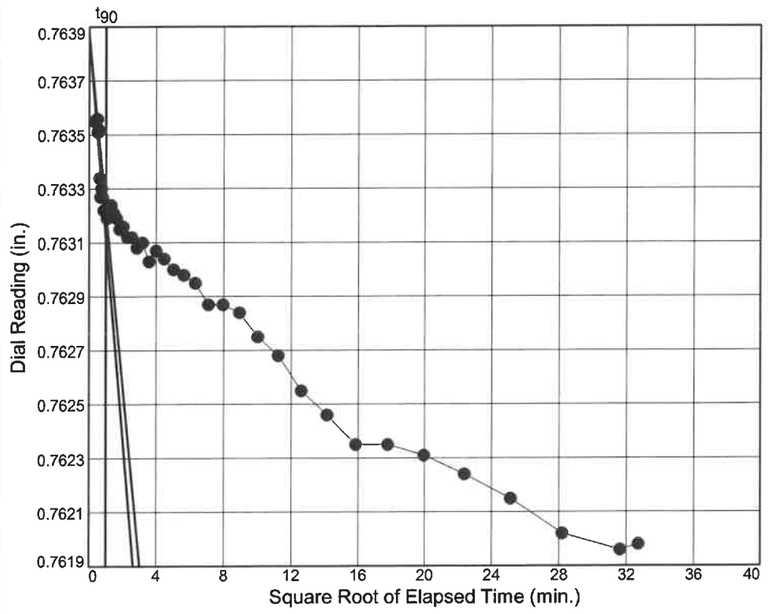
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 5
Load=250 psf
D_0 = 0.7649
D_{90} = 0.7648
D_{100} = 0.7648
T_{90} = 5.87 min.

C_v @ T_{90}
0.036 in.^{2}/min.



Load No.= 6
Load=125 psf
D_0 = 0.7639
D_{90} = 0.7632
D_{100} = 0.7631
T_{90} = 1.04 min.

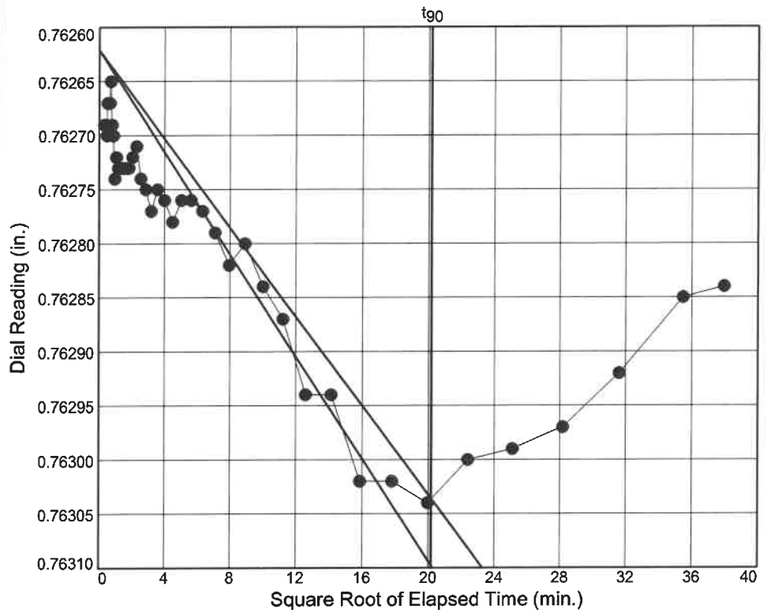
C_v @ T_{90}
0.204 in.^{2}/min.

Figure 4

Dial Reading vs. Time

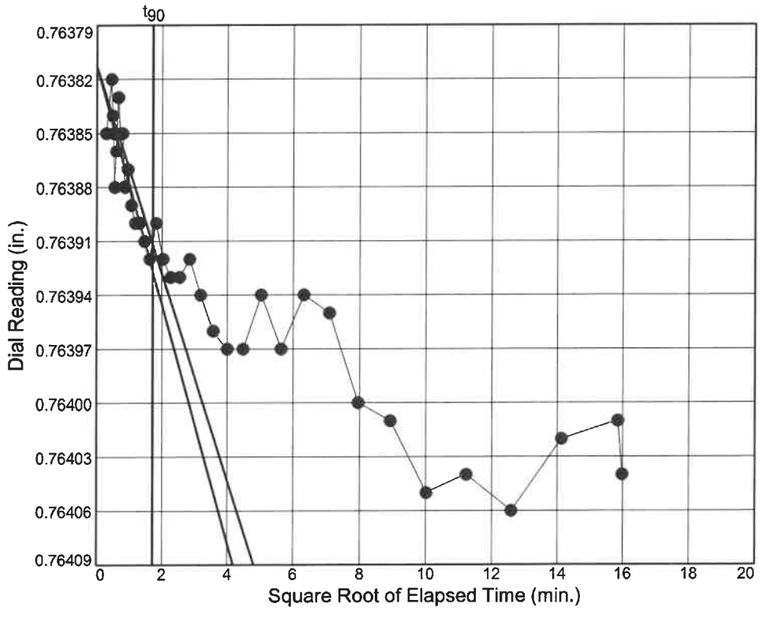
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 7
Load=250 psf
D_0 = 0.7626
D_{90} = 0.7630
D_{100} = 0.7631
T_{90} = 406.57 min.

C_v @ T_{90}
0.001 in.^{2}/min.



Load No.= 8
Load=500 psf
D_0 = 0.7638
D_{90} = 0.7639
D_{100} = 0.7639
T_{90} = 2.94 min.

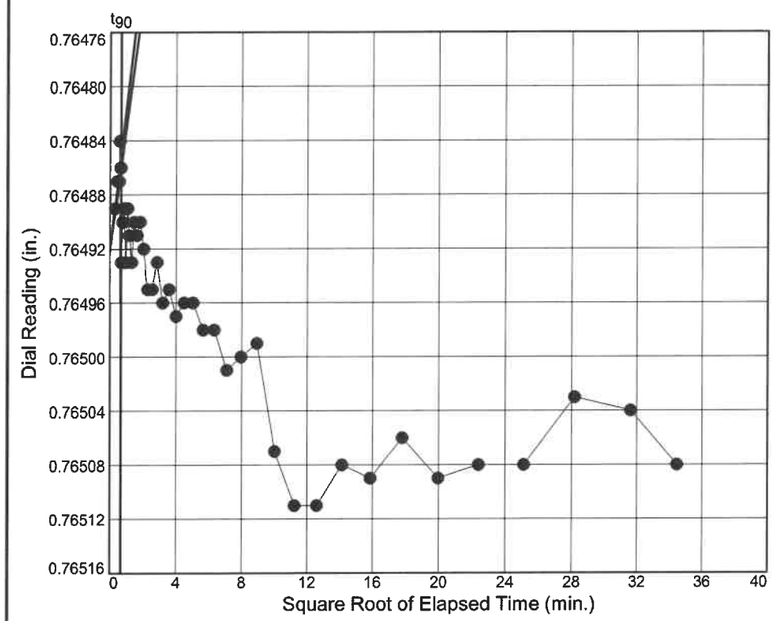
C_v @ T_{90}
0.072 in.^{2}/min.

Figure 5

Dial Reading vs. Time

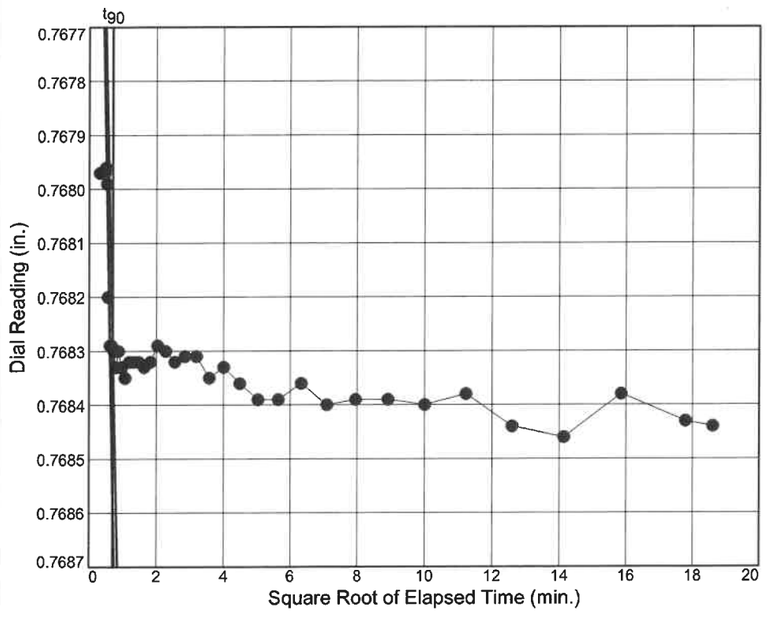
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 9
Load=750 psf
D_0 = 0.7649
D_{90} = 0.7649
D_{100} = 0.7649
T_{90} = 0.43 min.

C_v @ T_{90}
0.488 in.^{2}/min.



Load No.= 10
Load=1000 psf
D_0 = 0.7663
D_{90} = 0.7683
D_{100} = 0.7685
T_{90} = 0.50 min.

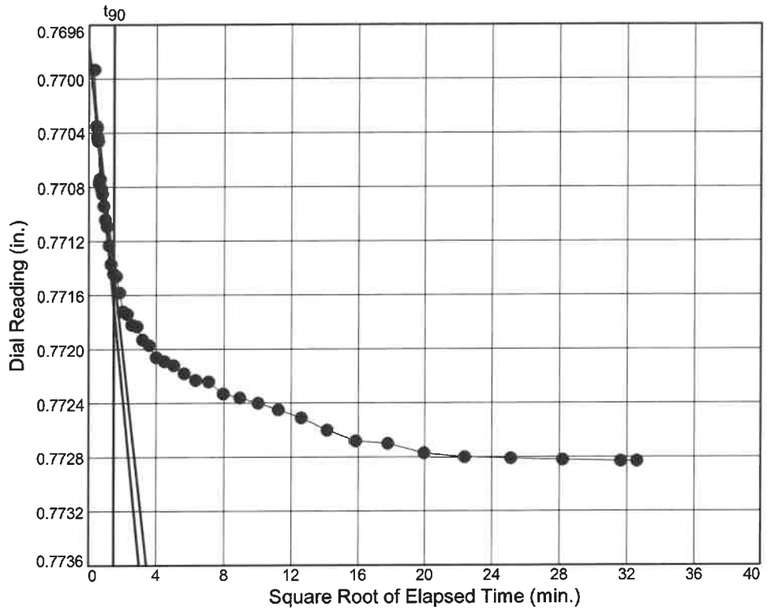
C_v @ T_{90}
0.422 in.^{2}/min.

Figure 6

Dial Reading vs. Time

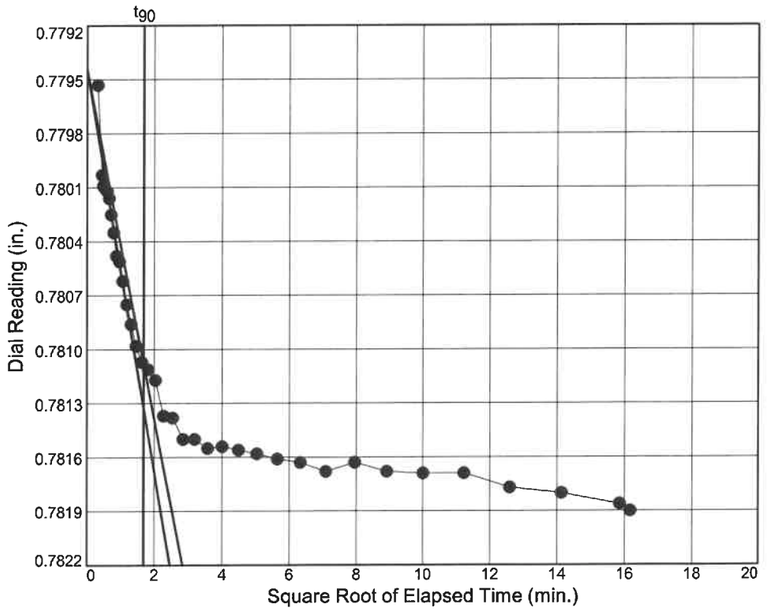
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 11
Load= 2000 psf
D_0 = 0.7698
D_{90} = 0.7714
D_{100} = 0.7716
T_{90} = 2.25 min.

C_v @ T_{90}
0.093 in.^{2}/min.



Load No.= 12
Load= 4000 psf
D_0 = 0.7794
D_{90} = 0.7811
D_{100} = 0.7813
T_{90} = 2.84 min.

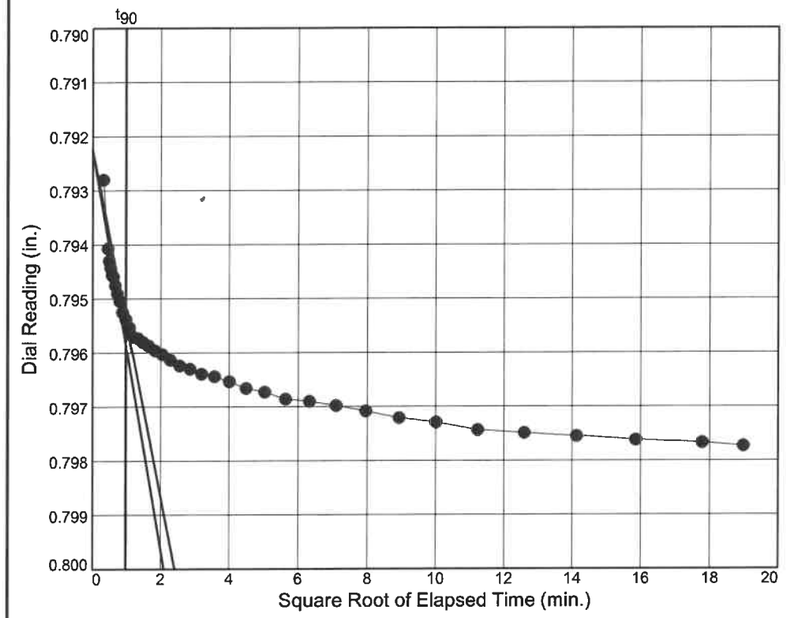
C_v @ T_{90}
0.072 in.^{2}/min.

Figure 7

Dial Reading vs. Time

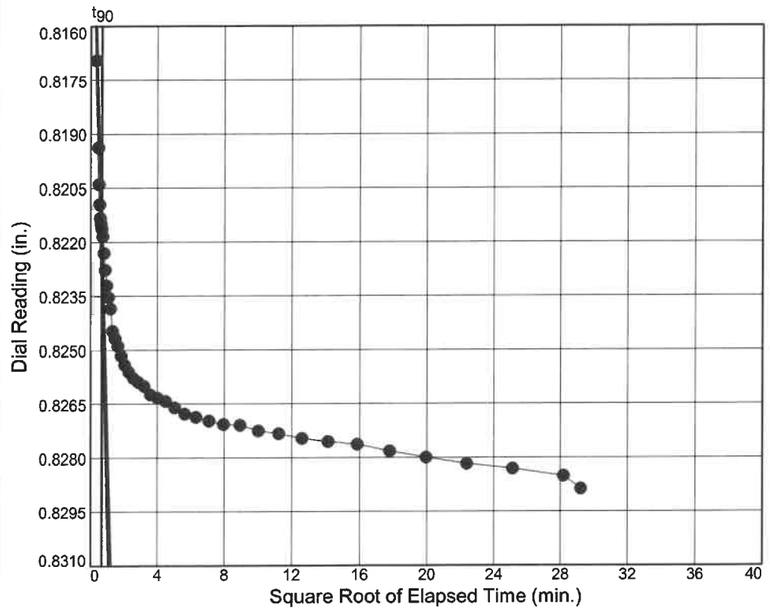
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 13
Load= 8000 psf
D_0 = 0.7923
D_{90} = 0.7954
D_{100} = 0.7957
T_{90} = 0.94 min.

C_v @ T_{90}
0.212 in.^{2}/min.



Load No.= 14
Load= 16000 psf
D_0 = 0.8104
D_{90} = 0.8216
D_{100} = 0.8228
T_{90} = 0.44 min.

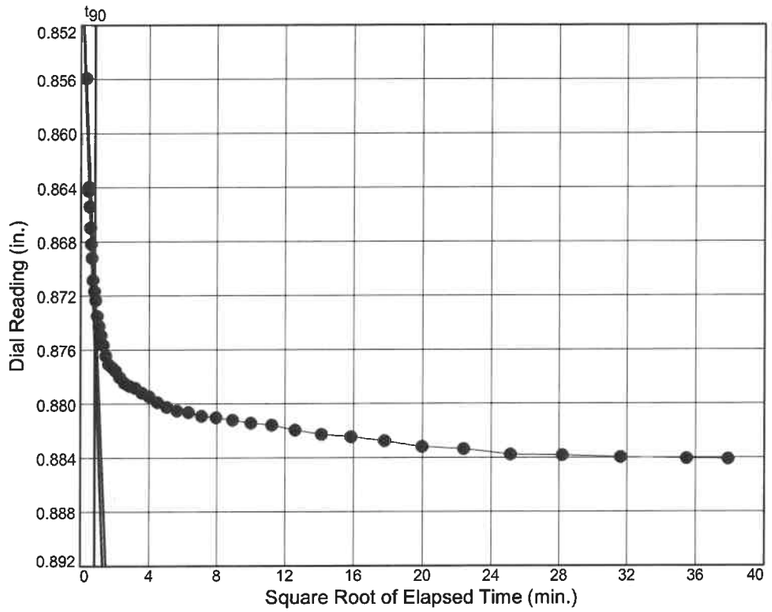
C_v @ T_{90}
0.433 in.^{2}/min.

Figure 8

Dial Reading vs. Time

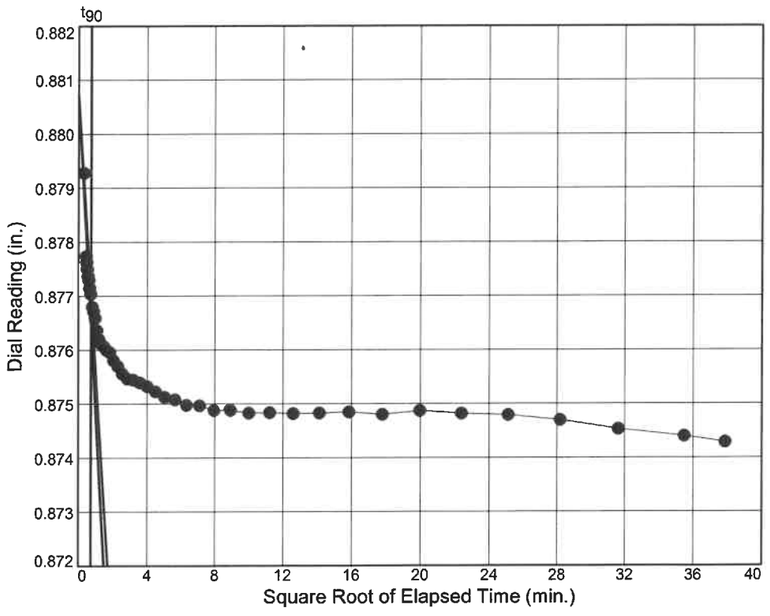
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 15
Load= 32000 psf
D_0 = 0.8468
D_{90} = 0.8719
D_{100} = 0.8747
T_{90} = 0.69 min.

C_v @ T_{90}
0.251 in.^{2}/min.



Load No.= 16
Load= 8000 psf
D_0 = 0.8807
D_{90} = 0.8770
D_{100} = 0.8766
T_{90} = 0.53 min.

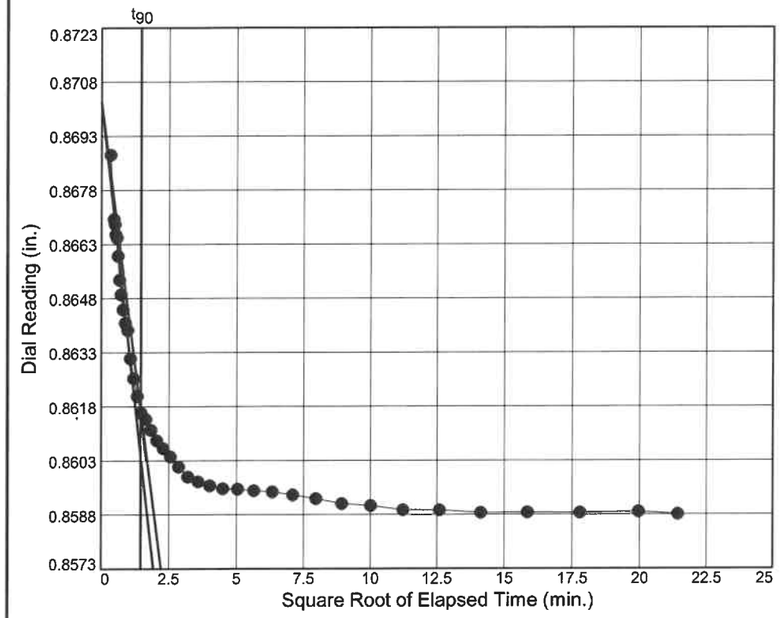
C_v @ T_{90}
0.315 in.^{2}/min.

Figure 9

Dial Reading vs. Time

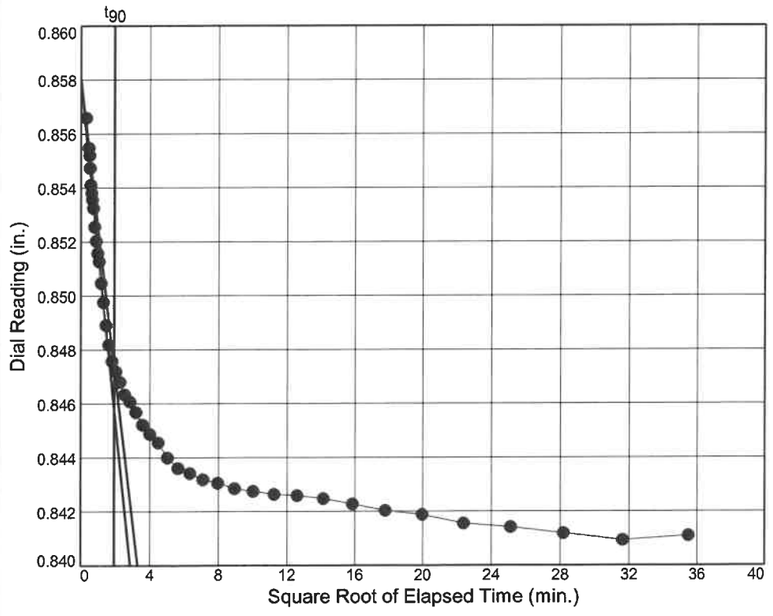
Project No.: 75235097
Project: I-77& NC 73 Interchange-I-5715

Location: S2B_EB2-B Depth: 5.0-7.0 ft Sample Number: ST-3



Load No.= 17
Load= 2000 psf
D_0 = 0.8703
D_{90} = 0.8617
D_{100} = 0.8607
T_{90} = 2.15 min.

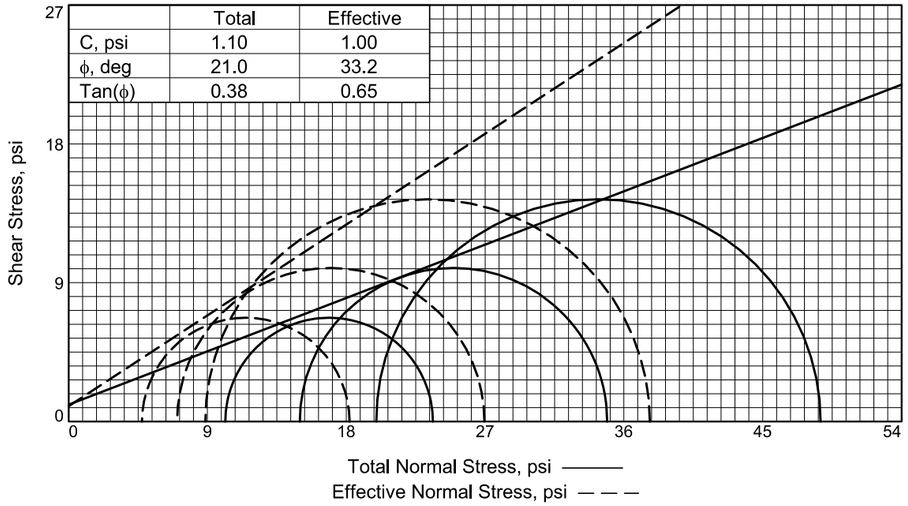
C_v @ T_{90}
0.080 in.^{2}/min.

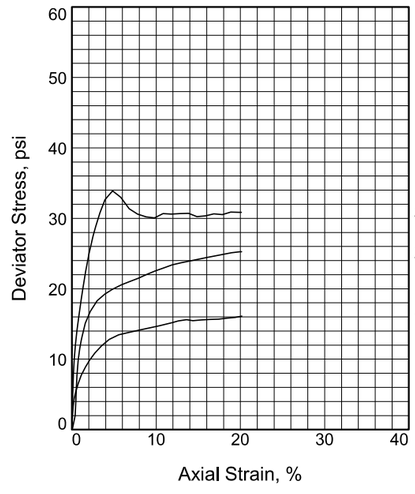


Load No.= 18
Load= 500 psf
D_0 = 0.8580
D_{90} = 0.8474
D_{100} = 0.8462
T_{90} = 3.80 min.

C_v @ T_{90}
0.046 in.^{2}/min.

Figure 10





Sample No.		1	2	3
Initial	Water Content, %	32.1	35.6	34.1
	Dry Density, pcf	85.5	85.6	88.9
	Saturation, %	86.8	96.7	100.0
	Void Ratio	1.0230	1.0212	0.9448
	Diameter, in.	2.865	2.866	2.866
	Height, in.	5.800	6.000	6.000
At Test	Water Content, %	35.8	36.1	33.6
	Dry Density, pcf	86.5	86.3	89.6
	Saturation, %	99.3	99.4	99.9
	Void Ratio	0.9992	1.0045	0.9306
	Diameter, in.	2.859	2.863	2.863
	Height, in.	5.756	5.963	5.967
Strain rate, %/min.		0.0010	0.0010	0.0010
Back Pressure, psi		60.0	60.0	60.0
Cell Pressure, psi		70.2	75.0	79.9
Fail. Stress, psi		13.4	19.9	28.8
Total Pore Pr., psi		65.4	68.0	71.1
Ult. Stress, psi				
Total Pore Pr., psi				
$\bar{\sigma}_1$ Failure, psi		18.2	26.9	37.7
$\bar{\sigma}_3$ Failure, psi		4.8	7.0	8.9

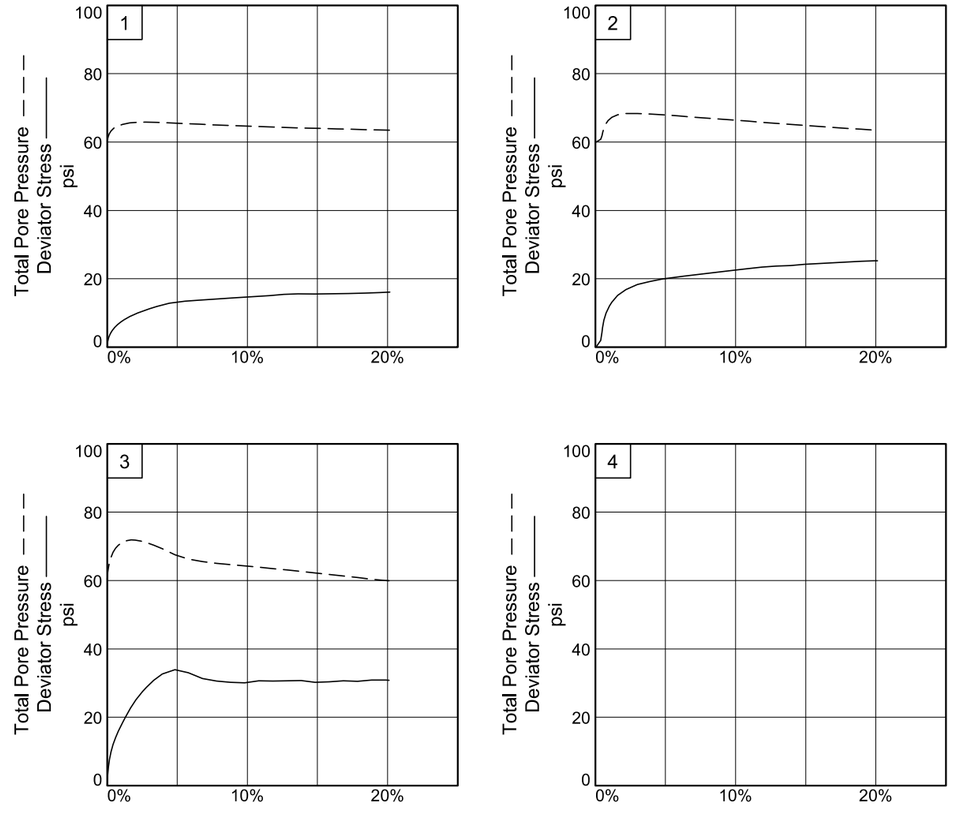
Type of Test:
CU with Pore Pressures
Sample Type: Un-Disturbed
Description: Red Sandy Silty CLAY- A-7-5(46)
Percent Passing #200= 70.1%
LL= 69 **PL=** 31 **PI=** 38
Specific Gravity= 2.77
Remarks: Y2RPD-4710 @(10.0-12.0)'

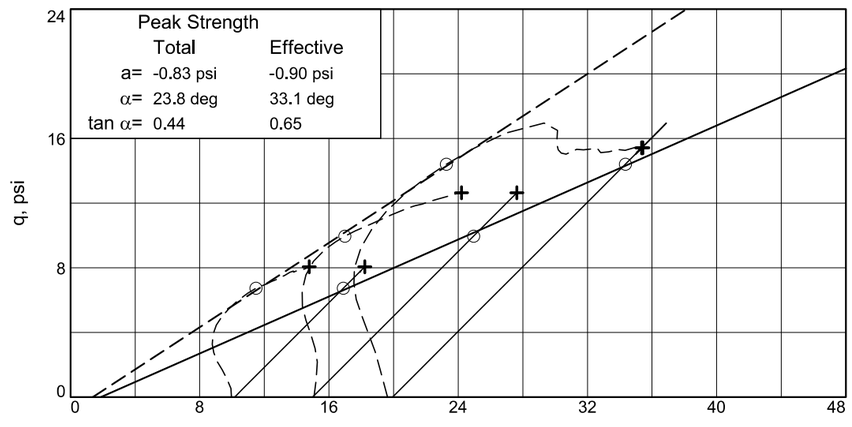
Figure 1

Client: NCDOT
Project: I-5715
Location: Y2RPD-4710
Sample Number: ST-1 **Depth:** 10.0-12.0'
Proj. No.: 75235097 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
Terracon Consultants, Inc.
Charlotte, North Carolina

Tested By: M. Grabski

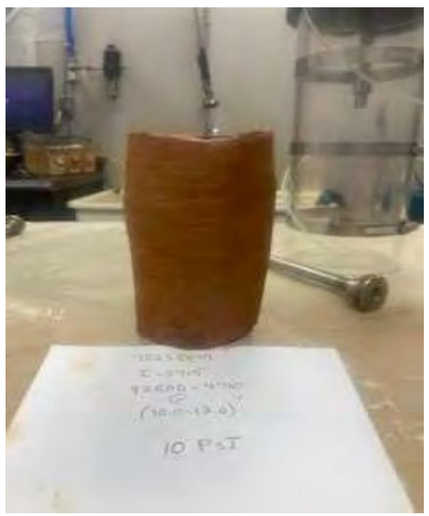


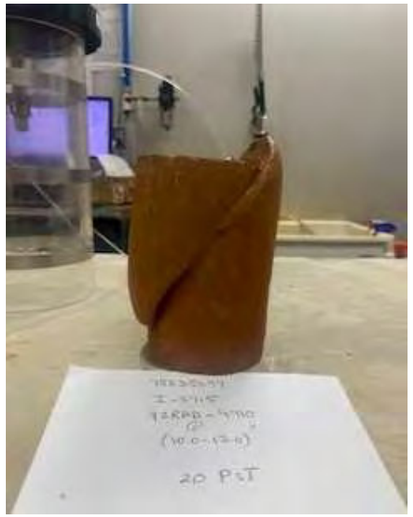


Client: NCDOT
Project: I-5715
Location: Y2RPD-4710 **Depth:** 10.0-12.0' **Sample Number:** ST-1
Project No.: 75235097 **Figure** _____

Terracon Consultants, Inc.

Tested By: M. Grabski





Y2RPD-4710 @910.0-12.0)'

Specimen Failure Illustration

TRIAXIAL COMPRESSION TEST

CU with Pore Pressures

7/7/2023
3:41 PM

Date:
Client: NCDOT
Project: I-5715
Project No.: 75235097
Location: Y2RPD-4710
Depth: 10.0-12.0' **Sample Number:** ST-1
Description: Red Sandy Silty CLAY- A-7-5(46)
Percent Passing #200= 70.1%
Remarks: Y2RPD-4710 @(10.0-12.0)'
Type of Sample: Un-Disturbed
Specific Gravity=2.77 **LL=**69 **PL=**31 **PI=**38
Test Method: ASTM D 4767 Method A

Parameters for Specimen No. 1

Specimen Parameter	Initial	Saturated	Consolidated	Final
Moisture content: Moist soil+tare, gms.	149.700			1136.860
Moisture content: Dry soil+tare, gms.	117.200			837.000
Moisture content: Tare, gms.	15.830			0.000
Moisture, %	32.1	36.4	35.8	35.8
Moist specimen weight, gms.	1107.97			
Diameter, in.	2.865	2.862	2.859	
Area, in.²	6.447	6.431	6.419	
Height, in.	5.800	5.793	5.756	
Net decrease in height, in.		0.007	0.037	
Net decrease in water volume, cc.			5.000	
Wet density, pcf	112.9	117.0	117.5	
Dry density, pcf	85.5	85.8	86.5	
Void ratio	1.0230	1.0157	0.9992	
Saturation, %	86.8	99.3	99.3	

Test Readings for Specimen No. 1

Consolidation cell pressure = 70.16 psi
Consolidation back pressure = 60.00 psi
Consolidation effective confining stress = 10.16 psi
Strain rate, %/min. = 0.0010
Fail. Stress = 13.45 psi **at reading no.** 13

Test Readings for Specimen No. 1

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress psi	Minor Eff. Stress psi	Major Eff. Stress psi	1:3 Ratio	Pore Press. psi	P psi	Q psi
0	-0.1593	3.524	0.0	0.0	0.00	9.96	9.96	1.00	60.20	9.96	0.00
1	-0.1579	10.281	6.8	0.0	1.05	9.41	10.46	1.11	60.75	9.94	0.53
2	-0.1550	17.966	14.4	0.1	2.25	8.56	10.81	1.26	61.60	9.69	1.12
3	-0.1506	24.851	21.3	0.2	3.32	7.74	11.06	1.43	62.42	9.40	1.66
4	-0.1433	31.667	28.1	0.3	4.37	6.90	11.27	1.63	63.26	9.08	2.19
5	-0.1317	38.946	35.4	0.5	5.49	6.12	11.61	1.90	64.04	8.87	2.75
6	-0.1172	45.732	42.2	0.7	6.53	5.51	12.04	2.18	64.65	8.77	3.26
7	-0.0954	53.696	50.2	1.1	7.73	4.96	12.69	2.56	65.20	8.82	3.86
8	-0.0664	61.572	58.0	1.6	8.90	4.58	13.47	2.94	65.58	9.03	4.45
9	-0.0374	68.538	65.0	2.1	9.91	4.40	14.31	3.25	65.76	9.36	4.96
10	-0.0026	75.365	71.8	2.7	10.89	4.34	15.23	3.51	65.82	9.78	5.44
11	0.0439	82.889	79.4	3.5	11.93	4.40	16.32	3.71	65.76	10.36	5.96
12	0.0961	89.678	86.2	4.4	12.83	4.54	17.37	3.82	65.62	10.96	6.41
13	0.1599	94.931	91.4	5.5	13.45	4.76	18.21	3.83	65.40	11.48	6.72
14	0.2179	97.880	94.4	6.6	13.74	4.95	18.69	3.77	65.21	11.82	6.87
15	0.2760	100.733	97.2	7.6	14.00	5.14	19.14	3.72	65.02	12.14	7.00
16	0.3340	103.869	100.3	8.6	14.29	5.31	19.60	3.69	64.85	12.46	7.15
17	0.3920	106.669	103.1	9.6	14.53	5.46	19.99	3.66	64.70	12.72	7.26
18	0.4500	109.897	106.4	10.6	14.82	5.61	20.42	3.64	64.55	13.02	7.41
19	0.5080	113.095	109.6	11.6	15.09	5.74	20.83	3.63	64.42	13.29	7.54
20	0.5661	116.768	113.2	12.6	15.42	5.87	21.29	3.63	64.29	13.58	7.71
21	0.6241	119.461	115.9	13.6	15.60	5.99	21.59	3.60	64.17	13.79	7.80
22	0.6676	119.540	116.0	14.4	15.48	6.07	21.55	3.55	64.09	13.81	7.74
23	0.7256	121.685	118.2	15.4	15.58	6.17	21.75	3.52	63.99	13.96	7.79
24	0.7836	123.515	120.0	16.4	15.63	6.31	21.94	3.48	63.85	14.12	7.81
25	0.8416	125.416	121.9	17.4	15.69	6.41	22.09	3.45	63.75	14.25	7.84
26	0.8996	127.939	124.4	18.4	15.82	6.52	22.34	3.43	63.64	14.43	7.91
27	0.9577	130.381	126.9	19.4	15.93	6.63	22.56	3.40	63.53	14.59	7.96
28	1.0010	133.102	129.6	20.2	16.12	6.72	22.84	3.40	63.44	14.78	8.06

Parameters for Specimen No. 2

Specimen Parameter	Initial	Saturated	Consolidated	Final
Moisture content: Moist soil+tare, gms.	129.240			1190.450
Moisture content: Dry soil+tare, gms.	99.440			875.000
Moisture content: Tare, gms.	15.810			0.000
Moisture, %	35.6	36.4	36.1	36.1
Moist specimen weight, gms.	1179.06			
Diameter, in.	2.866	2.863	2.863	
Area, in.²	6.451	6.436	6.438	
Height, in.	6.000	5.993	5.963	
Net decrease in height, in.		0.007	0.030	
Net decrease in water volume, cc.			3.000	
Wet density, pcf	116.0	117.1	117.4	
Dry density, pcf	85.6	85.9	86.3	
Void ratio	1.0212	1.0141	1.0045	
Saturation, %	96.7	99.4	99.4	

Test Readings for Specimen No. 2

Consolidation cell pressure = 74.99 psi
Consolidation back pressure = 60.00 psi
Consolidation effective confining stress = 14.99 psi
Strain rate, %/min. = 0.0010
Fail. Stress = 19.92 psi **at reading no.** 13

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress psi	Minor Eff. Stress psi	Major Eff. Stress psi	1:3 Ratio	Pore Press. psi	P psi	Q psi
0	1.1114	2.438	0.0	0.0	0.00	15.01	15.01	1.00	59.98	15.01	0.00
1	1.1144	2.999	0.6	0.1	0.09	15.03	15.12	1.01	59.96	15.07	0.04
2	1.1338	15.445	13.0	0.4	2.01	14.19	16.21	1.14	60.80	15.20	1.01
3	1.1398	30.467	28.0	0.5	4.33	13.11	17.45	1.33	61.88	15.28	2.17
4	1.1428	41.435	39.0	0.5	6.03	12.13	18.16	1.50	62.86	15.14	3.01
5	1.1473	52.224	49.8	0.6	7.69	11.04	18.73	1.70	63.95	14.89	3.84
6	1.1548	63.999	61.6	0.7	9.49	9.82	19.32	1.97	65.17	14.57	4.75
7	1.1653	75.370	72.9	0.9	11.23	8.75	19.97	2.28	66.24	14.36	5.61
8	1.1818	88.307	85.9	1.2	13.18	7.75	20.93	2.70	67.24	14.34	6.59
9	1.2058	101.315	98.9	1.6	15.12	7.02	22.14	3.15	67.97	14.58	7.56
10	1.2418	113.047	110.6	2.2	16.81	6.65	23.45	3.53	68.34	15.05	8.40
11	1.2898	123.814	121.4	3.0	18.29	6.62	24.91	3.76	68.37	15.77	9.14
12	1.3439	131.244	128.8	3.9	19.23	6.80	26.03	3.83	68.19	16.41	9.61
13	1.3979	137.147	134.7	4.8	19.92	7.03	26.95	3.83	67.96	16.99	9.96
14	1.4609	143.110	140.7	5.9	20.57	7.34	27.91	3.80	67.65	17.63	10.29
15	1.5210	147.753	145.3	6.9	21.02	7.66	28.68	3.74	67.33	18.17	10.51
16	1.5810	152.567	150.1	7.9	21.48	7.96	29.45	3.70	67.03	18.71	10.74
17	1.6410	157.992	155.6	8.9	22.02	8.27	30.29	3.66	66.72	19.28	11.01
18	1.7010	163.404	161.0	9.9	22.53	8.58	31.12	3.62	66.41	19.85	11.27
19	1.7610	168.410	166.0	10.9	22.97	8.89	31.86	3.58	66.10	20.38	11.49
20	1.8210	173.509	171.1	11.9	23.41	9.20	32.61	3.55	65.79	20.90	11.71
21	1.8810	177.472	175.0	12.9	23.68	9.51	33.19	3.49	65.48	21.35	11.84
22	1.9410	181.074	178.6	13.9	23.89	9.82	33.71	3.43	65.17	21.76	11.94
23	2.0011	185.525	183.1	14.9	24.20	10.11	34.31	3.39	64.88	22.21	12.10
24	2.0611	189.642	187.2	15.9	24.45	10.41	34.85	3.35	64.58	22.63	12.22
25	2.1211	193.442	191.0	16.9	24.65	10.69	35.33	3.31	64.30	23.01	12.32

Test Readings for Specimen No. 2

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress psi	Minor Eff. Stress psi	Major Eff. Stress psi	1:3 Ratio	Pore Press. psi	P psi	Q psi
26	2.1811	197.505	195.1	17.9	24.86	10.98	35.84	3.26	64.01	23.41	12.43
27	2.2411	202.047	199.6	18.9	25.13	11.25	36.38	3.23	63.74	23.81	12.57
28	2.3011	205.540	203.1	20.0	25.25	11.51	36.77	3.19	63.48	24.14	12.63
29	2.3116	206.122	203.7	20.1	25.27	11.57	36.84	3.18	63.42	24.20	12.64

Parameters for Specimen No. 3

Specimen Parameter	Initial	Saturated	Consolidated	Final
Moisture content: Moist soil+tare, gms.	120.720			1210.780
Moisture content: Dry soil+tare, gms.	94.050			906.600
Moisture content: Tare, gms.	15.830			0.000
Moisture, %	34.1	34.0	33.6	33.6
Moist specimen weight, gms.	1211.45			
Diameter, in.	2.866	2.865	2.863	
Area, in.²	6.451	6.447	6.440	
Height, in.	6.000	5.998	5.967	
Net decrease in height, in.		0.002	0.031	
Net decrease in water volume, cc.			4.000	
Wet density, pcf	119.2	119.3	119.6	
Dry density, pcf	88.9	89.0	89.6	
Void ratio	0.9448	0.9429	0.9306	
Saturation, %	100.0	99.9	99.9	

Test Readings for Specimen No. 3

Consolidation cell pressure = 79.94 psi
Consolidation back pressure = 60.00 psi
Consolidation effective confining stress = 19.94 psi
Strain rate, %/min. = 0.0010
Fail. Stress = 28.81 psi **at reading no.** 13

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress psi	Minor Eff. Stress psi	Major Eff. Stress psi	1:3 Ratio	Pore Press. psi	P psi	Q psi
0	-0.2071	3.189	0.0	0.0	0.00	19.63	19.63	1.00	60.31	19.63	0.00
1	-0.2041	24.825	21.6	0.1	3.36	17.49	20.85	1.19	62.45	19.17	1.68
2	-0.2011	39.453	36.3	0.1	5.63	16.05	21.67	1.35	63.89	18.86	2.81
3	-0.1966	53.466	50.3	0.2	7.79	14.55	22.34	1.54	65.39	18.45	3.90
4	-0.1905	67.046	63.9	0.3	9.89	13.11	23.00	1.75	66.83	18.06	4.94
5	-0.1815	81.294	78.1	0.4	12.08	11.65	23.73	2.04	68.29	17.69	6.04
6	-0.1710	94.270	91.1	0.6	14.06	10.51	24.57	2.34	69.43	17.54	7.03
7	-0.1590	106.881	103.7	0.8	15.97	9.59	25.57	2.66	70.35	17.58	7.99
8	-0.1410	123.664	120.5	1.1	18.50	8.73	27.23	3.12	71.21	17.98	9.25
9	-0.1230	139.220	136.0	1.4	20.83	8.26	29.08	3.52	71.68	18.67	10.41
10	-0.1050	153.673	150.5	1.7	22.97	8.06	31.03	3.85	71.88	19.55	11.48
11	-0.0870	166.745	163.6	2.0	24.89	8.10	32.98	4.07	71.84	20.54	12.44
12	-0.0630	181.411	178.2	2.4	27.01	8.40	35.41	4.22	71.54	21.90	13.50
13	-0.0390	194.108	190.9	2.8	28.81	8.86	37.68	4.25	71.08	23.27	14.41
14	-0.0089	208.244	205.1	3.3	30.79	9.58	40.37	4.21	70.36	24.97	15.39
15	0.0271	222.038	218.8	3.9	32.65	10.60	43.25	4.08	69.34	26.93	16.33
16	0.0811	232.550	229.4	4.8	33.90	12.38	46.27	3.74	67.56	29.32	16.95
17	0.1381	228.860	225.7	5.8	33.02	13.64	46.66	3.42	66.30	30.15	16.51

Test Readings for Specimen No. 3

No.	Def. Dial in.	Load Dial	Load lbs.	Strain %	Deviator Stress psi	Minor Eff. Stress psi	Major Eff. Stress psi	1:3 Ratio	Pore Press. psi	P psi	Q psi
18	0.1981	219.800	216.6	6.8	31.35	14.42	45.77	3.17	65.52	30.10	15.68
19	0.2581	216.889	213.7	7.8	30.60	14.90	45.50	3.05	65.04	30.20	15.30
20	0.3181	216.418	213.2	8.8	30.20	15.28	45.48	2.98	64.66	30.38	15.10
21	0.3782	217.955	214.8	9.8	30.08	15.64	45.72	2.92	64.30	30.68	15.04
22	0.4382	224.562	221.4	10.8	30.66	16.01	46.67	2.91	63.93	31.34	15.33
23	0.4982	226.708	223.5	11.8	30.61	16.45	47.06	2.86	63.49	31.75	15.30
24	0.5582	229.829	226.6	12.8	30.68	16.84	47.52	2.82	63.10	32.18	15.34
25	0.6182	232.717	229.5	13.8	30.71	17.27	47.98	2.78	62.67	32.62	15.36
26	0.6782	231.833	228.6	14.8	30.24	17.71	47.94	2.71	62.23	32.83	15.12
27	0.7383	235.339	232.2	15.8	30.34	18.13	48.47	2.67	61.81	33.30	15.17
28	0.7983	240.446	237.3	16.8	30.64	18.59	49.23	2.65	61.35	33.91	15.32
29	0.8583	242.479	239.3	17.9	30.53	19.08	49.60	2.60	60.86	34.34	15.26
30	0.9183	248.380	245.2	18.9	30.89	19.54	50.43	2.58	60.40	34.98	15.45
31	0.9783	251.236	248.0	19.9	30.87	19.93	50.80	2.55	60.01	35.37	15.43
32	0.9929	251.757	248.6	20.1	30.84	20.01	50.85	2.54	59.93	35.43	15.42