STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5987B	1	395

REFERENCE: I-5987B

PROJECT: 47533

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 *ROBESON*

PROJECT DESCRIPTION *I-95 IMPROVEMENTS FROM NORTH OF SR 1758 (McDUFFIE CROSSING RD.) TO NORTH OF SR 1723 (PARKTON TOBEMORY RD.)*

SITE DESCRIPTION

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CAUTION NOTICE

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

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

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

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

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F&R, Inc.	*Catlin*

INVESTIGATED BY *S&ME, INC.*

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DATE *DECEMBER 2021*

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NORTH CAROLINA PROFESSIONAL SEAL 032125 ENGINEER STACIE E. MITCHELL

DocuSigned by:
Stacie E. Mitchell 03/31/2022
BBC611B64E19458...
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

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

SOIL LEGEND AND AASHTO CLASSIFICATION

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

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

CONSISTENCY OR DENSENESS

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

TEXTURE OR GRAIN SIZE

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

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

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

SOIL MOISTURE - CORRELATION OF TERMS

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

PLASTICITY

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

COLOR

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

GRADATION

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

ANGULARITY OF GRAINS

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

MINERALOGICAL COMPOSITION

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

COMPRESSIBILITY

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

PERCENTAGE OF MATERIAL

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

GROUND WATER

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

MISCELLANEOUS SYMBOLS

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

RECOMMENDATION SYMBOLS

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

ABBREVIATIONS

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

SAMPLE ABBREVIATIONS

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

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [X] CME-45B
- [X] CME-55
- [X] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [X] MOBILE B-57
- [X] CPT/DMT

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [X] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [X] CASING [ ] W/ ADVANCER
- [X] TRICONE 2 15/16 " STEEL TEETH
- [ ] TRICONE _____ " TUNG.-CARB.
- [ ] CORE BIT
- [ ] _____

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: • SEE NOTE

ELEVATION: FEET

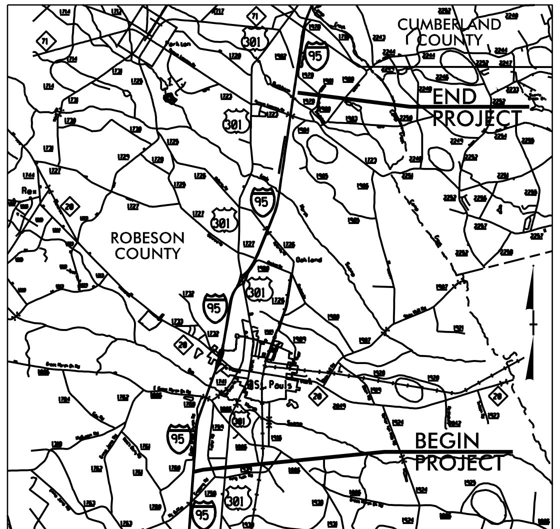
NOTES:

• Elevations derived from geopak and the .tin files
i5987_ls_tin1.tin dated 05/06/21
i5987_ls_tin2.tin dated 05/06/21

DATE: 8-15-14

09/08/99

See Sheet 1A For Index of Sheets



VICINITY MAP

25% PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

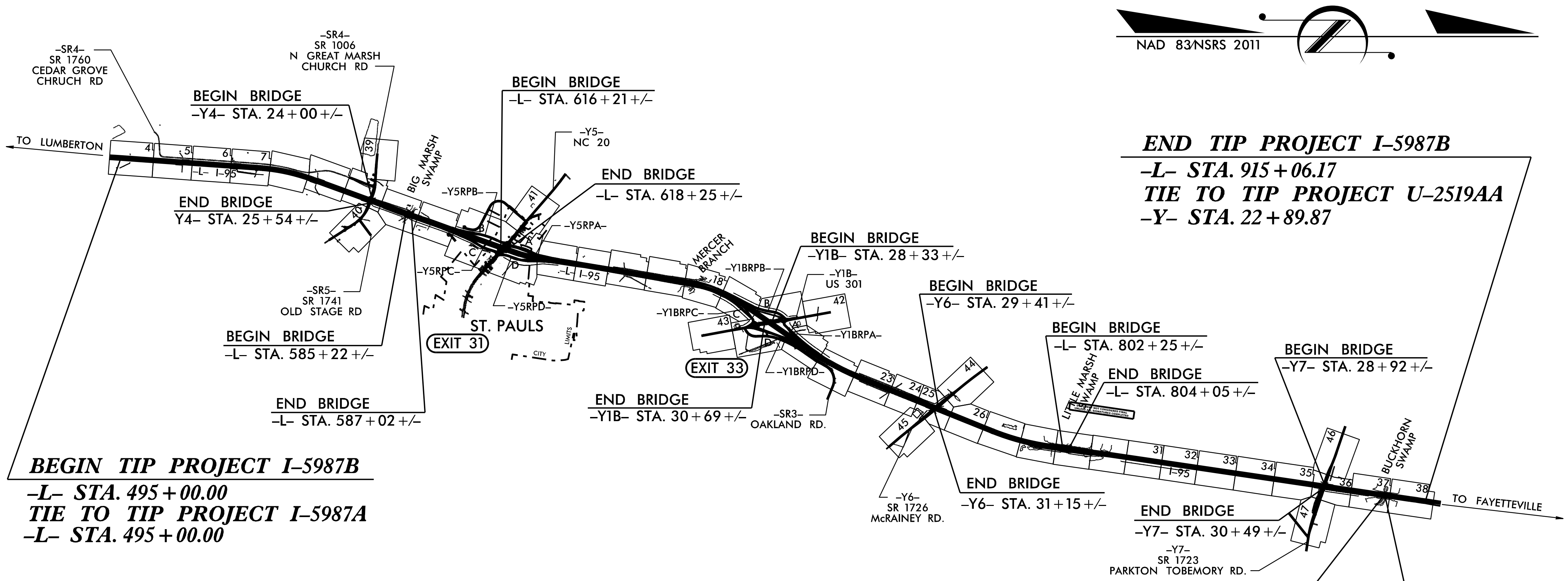
ROBESON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5987B	3	395

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
47533.1.3	NHP-0095(056)	PE

LOCATION: I-95 IMPROVEMENTS FROM NORTH OF SR 1758 (McDUFFIE CROSSING RD.) TO NORTH OF SR 1723 (PARKTON TOBEMORY RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES, SIGNING, CULVERTS, AND RETAINING WALLS



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF ST. PAULS.

CLEARING ON THIS PROJECT SHALL BE PERFROMED TO THE LIMITS ESTABLISHED BY METHOD __.

THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

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

TIP PROJECT: I-5987B

CONTRACT:

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2022 = 63,300
ADT 2042 = 92,600
K = 8 %
D = 55 %
T = 14 % *
V = 75 MPH
* TTST = 11 DUAL 3
FUNC CLASS = INTERSTATE STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-5987B = 7.844 MILES

LENGTH STRUCTURES TIP PROJECT I-5987B = 0.112 MILES

TOTAL LENGTH OF TIP PROJECT I-5987B = 7.956 MILES

Prepared In the Office of:

MOTT MACDONALD
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2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 28, 2021

LETTING DATE:
AUGUST 17, 2022

DAVID C. WALLER, PE
PROJECT ENGINEER

MICHAEL D. PEKAREK, PE
PROJECT DESIGN ENGINEER

CRAIG A. FREEMAN, JR., PE
NCDOT CONTACT - DIVISION 6

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

$$$$SYSTIME$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

December 15, 2021

STATE PROJECT: 47533.1.3 (I-5987B)
FEDERAL PROJECT: N/A
COUNTY: Robeson
DESCRIPTION: I-95 Improvements from North of SR 1758 (McDuffie Crossing Road) to North of SR 1723 (Parkton Tobemory Road)
SUBJECT: Geotechnical Report – Inventory

S&ME, Inc. has completed a reconnaissance and subsurface investigation for the above roadway project and presents the following inventory. Plans and cross-sections are included in this report.

Project Description

The project corridor is located in Robeson County near the Town of Saint Pauls, North Carolina. The majority of the project consists of widening I-95 (-L-) from a median divided 4-lane roadway to a median divided 8-lane roadway from approximate mile marker 29 to mile marker 38. Improvements to existing overpass bridges, interchanges, and secondary alignments are included in the work as well. The project begins approximately 2 miles south of the NC 20 interchange (exit 31) and continues northwards for approximately 8 miles. Intersections or grade crossings with other existing roads occur as follows from south to north: The first road is a grade crossing with W Great Marsh Church Rd. (-Y4-). W Great Marsh Church Rd. (-Y4-) flys over I-95 with an overpass bridge structure. The bridge on W. Great Marsh Church Rd (-Y4-) over I-95 is being replaced and offset to the north. There is a service road named Cedar Grove Church Rd (-SR4-) that ties into W Great Marsh Church Rd (-Y4-) at a T-junction intersection just west of the overpass along W. Great Marsh Church Rd (-Y4-). The next intersection is with NC 20 (-Y5-) and its existing interchange. This interchange will be modified to a new diverging diamond interchange. There are 5 on/off ramps associated with this newly proposed interchange (-Y5RPA-, -Y5RPB-, -Y5RPC- & -Y5RPD-). The dual structure bridge on I-95 over NC 20 (-Y5-) will be replaced to accommodate the new interchange. The next intersection to the north is also an existing interchange with US 301 (-Y1B-). This interchange is being modified with a newly proposed double roundabout interchange. The bridge on US 301 (-Y1B-) over I-95 will be replaced and offset to the south. There is one service road named Oakland Rd (-SR3-) that will be slightly realigned and tie into US 301 (-Y1B-) southeast of the bridge. The next grade crossing is with E. McRainey Rd. (-Y6-). E. McRainey Rd (-Y6-) flys over I-95 with an overpass bridge structure. This bridge is being replaced and offset to the north. The last grade crossing is with E. Parkton Tobermory Rd. (-Y7-). E. Parkton Tobermory Rd. (-Y7-) flys over I-95 with an overpass bridge structure. This bridge is also being replaced and offset to the south. To summarize, each grade crossing will have a bridge structure that is being replaced as well as MSE walls at the abutments. In total, there are 5 culverts, 5 grade crossing bridges, 2 stream crossing bridges and 10 retaining walls associated with this roadway. These structures were not investigated directly during this investigation but are noted in this project description for informational purposes.

The geotechnical field investigation was conducted during the period of January through October 2021. Three S&ME drill crews and one Breccia Construction drill crew were used to drill, sample, and log the borings in this report. The S&ME rigs used for the drilling include two ATV-mounted CME 550X, an ATV-mounted CME-750X and the Breccia Construction rig used for this investigation was a truck-mounted CME-45B drill machine. All machines were equipped with an automatic hammer. Standard Penetration Tests were performed at selected locations and additional borings were advanced using continuous flight augers or mud rotary/wash bore techniques. Representative soil samples were collected for visual classification in the field and selected samples were submitted for laboratory analysis by the S&ME soils lab. In addition, 110 muck probes were performed after drilling to help identify areas with high organic content.

The following alignments, totaling approximately 22 miles, were investigated. Subsurface cross-sections of these alignments are included in this report.

Line	Station		
-L-	495+00	to	915+06
-Y4-	13+00	to	38+00
-Y5-	10+00	to	28+50
-Y5RPA-	10+00	to	24+25
-Y5RPB-	10+00	to	27+64
-Y5RPC-	10+00	to	26+32
-Y5RPD-	10+00	to	25+84
-Y1B-	18+00	to	42+00
-Y1BRPA-	10+00	to	24+79
-Y1BRPB-	10+00	to	28+06
-Y1BRPC-	10+00	to	24+48
-Y1BRPD-	10+00	to	26+62
-Y1BRAB-	10+00	to	13+89
-Y6-	14+50	to	46+50
-Y7-	18+00	to	47+00
-SR3-	10+00	to	46+50
-SR4-	74+00	to	81+89
-SR5-	10+00	to	16+00

Areas of Special Geotechnical Interest

1) The following continuous intervals encountered soft, cohesive soils which have the potential to cause embankment stability and/or long-term settlement problems:

Line	Station		
-L-	576+00	to	592+00
-L-	608+00	to	630+00
-L-	673+00	to	681+00
-L-	792+00	to	817+00
-L-	898+00	to	906+00

-Y4-	19+00	to	34+00
-Y1B-	26+00	to	37+00
-Y1BRPA-	19+00	to	23+50
-Y6-	22+00	to	28+00
-Y7-	24+00	to	38+00
-SR3-	11+00	to	19+00

2) Highly Plastic Clays: Highly plastic clays (PI > 25) were encountered on the project at the following borehole locations:

Line	Stations	Offsets (ft)
-L-	495+00	95 RT
-L-	517+00	78 RT
-L-	522+00	24 LT
-L-	537+09	102 RT
-L-	577+03	73 RT
-L-	582+03	53 RT
-L-	585+26	21 RT
-L-	585+99	59 LT & 20 RT
-L-	586+45	84 RT
-L-	587+14	88 LT
-L-	618+81	103 RT
-L-	619+20	120 LT
-L-	619+83	96 RT
-L-	622+77	79 RT
-L-	623+28	119 LT
-L-	625+31	102 LT
-L-	626+43	103 LT
-L-	627+00	60 RT
-L-	632+07	16 LT
-L-	652+07	CL
-L-	654+50	78 LT
-L-	657+06	CL
-L-	659+50	83 LT & 80 RT
-L-	662+07	CL & 102 RT
-L-	667+07	CL
-L-	672+07	CL
-L-	676+69	28 RT
-L-	692+07	94 RT
-L-	697+07	86 RT
-L-	702+85	13 RT
-L-	708+99	138 LT
-L-	709+18	88 RT
-L-	712+07	102 LT
-L-	732+07	102 LT
-L-	737+07	30 RT
-L-	742+07	93 LT & 20 RT
-L-	744+50	20 LT
-L-	747+07	10 RT
-L-	757+07	95 RT
-L-	759+86	66 RT
-L-	761+16	CL
-L-	772+07	CL
-L-	777+08	CL & 80 RT
-L-	782+06	78 LT
-L-	782+07	4 LT
-L-	782+08	89 RT
-L-	792+08	13 LT
-L-	802+34	110 LT
-L-	804+09	50 LT
-L-	897+00	11 LT
-L-	907+09	75 RT
-Y1BRPA-	22+00	36 LT
-Y1BRPC-	20+00	15 LT
-Y4-	21+50	73 LT
-Y5RPD-	15+00	22 RT
-Y6-	40+89	20 LT
-SR3-	11+86	16 LT
-SR3-	17+56	12 LT
-SR3-	39+04	15 RT
-SR3-	45+02	21 LT

3) Organic Soils: Soils with varying degrees of organic matter were encountered at the following locations:

Line	Stations	Offsets (ft)
-L-	502+00	88 LT
-L-	575+50	90 RT
-L-	576+50	90 RT
-L-	577+03	73 RT
-L-	578+00	110 LT & 100 RT
-L-	579+00	105 LT & 70 RT
-L-	579+50	29 RT & 58 RT
-L-	580+00	110 LT & 70 RT
-L-	581+00	110 LT & 100 RT
-L-	581+97	53 RT
-L-	582+00	110 LT

-L-	582+03	53 RT
-L-	582+50	80 RT
-L-	583+00	110 LT & 110 RT
-L-	583+50	75 RT
-L-	584+00	115 LT & 100 RT
-L-	584+50	80 RT
-L-	585+00	115 LT & 100 RT
-L-	585+99	20 RT & 59 LT
-L-	586+35	58 LT
-L-	586+45	84 RT
-L-	587+05	84 RT
-L-	587+14	88 LT
-L-	587+50	70 RT
-L-	588+00	100 RT
-L-	624+27	101 LT
-L-	642+00	70 RT
-L-	647+00	CL
-L-	652+07	CL & 94 RT
-L-	657+07	110 RT
-L-	674+50	25 LT
-L-	675+00	CL & 110 RT
-L-	675+50	25 LT, 25 RT & 42 RT
-L-	676+00	61 LT, CL, 27 RT & 110 RT
-L-	676+50	20 LT
-L-	676+69	28 RT
-L-	676+85	109 RT
-L-	677+50	25 LT
-L-	678+00	CL
-L-	678+25	60 LT
-L-	678+50	25 LT & 10 RT
-L-	712+07	CL
-L-	717+07	80 LT
-L-	722+07	76 LT
-L-	732+07	102 LT, CL & 90 RT
-L-	733+00	110 RT
-L-	737+07	94 LT, 15 LT & 30 RT
-L-	742+07	93 LT, 25 LT & 20 RT
-L-	747+07	25 LT
-L-	792+09	77 RT
-L-	793+00	95 RT & 75 RT
-L-	794+00	70 RT
-L-	796+00	70 RT & 95 RT
-L-	797+00	70 LT
-L-	797+09	74 RT
-L-	798+00	105 LT, 85 LT,70 LT, 55 RT & 95 RT
-L-	799+00	73 LT & 63 RT
-L-	799+25	80 RT
-L-	800+00	105 LT & 90 RT
-L-	800+25	30 RT
-L-	800+30	70 LT
-L-	800+35	15 LT
-L-	800+50	85 LT & 55 RT
-L-	801+00	105 LT & 70 RT, 95 RT
-L-	802+34	110 LT
-L-	803+00	20 RT
-L-	803+50	20 RT
-L-	804+09	50 LT & 65 RT
-L-	804+50	75 RT
-L-	805+00	105 LT & 95 RT
-L-	806+00	105 LT & 95 RT
	806+75	35 RT
-L-	807+10	96 LT
-L-	808+00	105 LT, 91 LT, 38 RT & 95 RT
-L-	808+50	75 RT
-L-	809+00	105 LT
-L-	810+00	70 RT
-L-	867+00	55 LT
-L-	898+00	100 LT
-L-	899+00	100 LT & 90 RT
-L-	899+50	95 LT
-L-	900+00	100 LT & 100 RT
-L-	901+00	100 LT & 90 RT
-L-	901+50	95 LT, 78 LT & 80 RT
	902+05	68 LT
-L-	903+00	100 LT & 90 RT
	903+50	74 LT, 45 LT & 50 RT 75 RT
-L-	904+00	100 LT & 90 RT
-L-	905+00	100 LT & 90 RT
-L-	905+75	100 LT & 90 RT
-L-	906+00	100 LT & 90 RT
-Y4-	29+30	70 RT

-Y4-	31+30	26 LT
-Y4-	35+50	6 RT
-SR3-	20+01	52 RT
-SR3-	22+08	43 RT

4) Groundwater: Groundwater above or within 6 feet of grade was encountered in the following continuous intervals:

Line	Stations
-L-	495+00 to 529+50
-L-	559+50 to 564+50
-L-	568+25 to 575+00
-L-	593+25 to 599+50
-L-	634+50 to 673+25
-L-	680+50 to 701+25
-L-	705+00 to 713+25
-L-	720+75 to 745+75
-L-	748+25 to 754+50
-L-	769+50 to 784+50
-L-	790+75 to 792+50
-L-	814+50 to 824+50
-L-	864+50 to 874+50
-L-	882+25 to 889+50
-L-	894+50 to 899+75
-L-	900+75 to 902+50
-L-	903+25 to 915+00
-SR3-	24+50 to 28+50
-SR3-	38+00 to 41+00
-Y1BRPC-	10+00 to 14+50
-Y5-	18+50 to 22+25
-Y5RPA-	19+00 to 23+77.41

5) Ponds: Two ponds occur within proximity to right of way on this project. They are noted at the following locations:

Line	Stations	Offset (ft)
-L-	755+00-758+00	212 RT to 508 RT
-L-	841+00-845+00	330 LT to 860 LT

Physiography and Geology

The project corridor is located in southeastern North Carolina in the Coastal Plain Physiographic Province of North Carolina near the town of St. Pauls. A mixture of houses, businesses, fields, pastures, and wooded areas lie within the project corridor. The project corridor is predominately rural with few commercial businesses, single-family homes and farm fields. Topography along the project is flat to gently sloping. Elevations along the project range from 133± to 192± feet above sea level.

Geologically the project area is located within the Inner Coastal Plain and consists of soils that are Cretaceous in age underneath a thin veneer of Undivided Coastal Plain soils that are Quaternary to Tertiary in age. The Cretaceous aged soils belong to the Black Creek Formation and consist of sands, clayey sands and clays mostly.

Water Bodies & Culverts

There are 7 major creeks, streams and/or wetlands that run through the project corridor. Starting at the northernmost end of the project the water bodies encountered are as follows. Buckhorn Swamp resides near the northern end of the project and passes underneath I-95 from west to east through a box culvert at approximate -L- station 902+30. To the south is another body of water called Little Marsh Swamp that passes underneath I-95 from west to east at approximate -L- station 803+00. A new bridge is proposed here to replace the dual structure bridge that is currently in place. At approximate -L- station 708+50 a stream named Brisson Branch passes underneath I-95 from west to east. This stream also passes underneath the on and off ramp (-Y1BPA-, -Y1BRPD-) that are adjacent to I-95 in this area and a service road named Oakland Rd (-SR3-). This stream currently flows through a series of concrete pipes and a culvert is proposed to replace them. Approximately ¼ mile south of the US 301 interchange lies another body of water called Mercer Branch. This stream passes underneath I-95 from west to east at approximate -L- station 677+00 through a box culvert along a skew. A new box culvert is also proposed to replace the one currently here. Just south of the NC 20 interchange another body of water named Big Marsh Swamp passes underneath I-95 from west to east at approximate -L- station 586+00. There is another dual structure bridge that currently crosses Big Marsh Swamp and a new structure is proposed to replace this one. At the southernmost end of the project there is what appears to be a small manmade canal that passes underneath I-95 from west to east before feeding into a pond. This body of water passes underneath I-95 at -L- station 514+00 through a corrugated pipe. Lastly there is an unnamed stream that passes underneath W McRainey Rd at approximate -Y6- station 23+50. This stream flows SW to NE through a corrugated pipe and a culvert is proposed to replace it. All the newly proposed structures over water bodies were not investigated directly but are noted here for informational purposes.

There are two ponds in close proximity to the project. These ponds are noted above in the areas of special geotechnical interest. These ponds are outside construction limits but should be monitored in case siltation should occur.

Soil Properties

Soils encountered during this investigation are separated into 4 categories: Roadway Embankment, Artificial Fill, Coastal Plain, Undivided Coastal Plain and Alluvial soils.

Roadway Embankment soils were found beneath the pavement and on or near the shoulders of the road. These soils consist of gray, tan, brown, red, black, white and orange, loose to med. dense, silty sand (A-2-4), clayey sand (A-2-6) and sand (A-1-b or A-3) and soft to med. stiff, sandy silt (A-4), sandy clay (A-6), silty clay (A-7-5/A-7-6). Plasticity indices ranged from 13 to 29 in the cohesive soils. Some of these soils contain varying amounts of organic matter with tested values ranging from 3.0 to 5.9 percent.

Artificial Fill soils were found in some proposed widening areas. These soils consist of gray, tan, and brown, very loose to med. dense, silty sand (A-2-4), clayey sand (A-2-6) and sand (A-1-b or A-3) and very soft, sandy silt (A-4).

Undivided Coastal Plain soils are found at the surface to a depth of 5± feet approximately. These soils consist of gray, tan, brown, red and orange, soft to med. stiff, sandy silt (A-4), sandy clay (A-6) and silty clay (A-7-6) and loose to dense, clayey sand (A-2-6), silty sand (A-2-4) and sand (A-3 or A-1-b). Plasticity indices ranged from 11 to 66 in the cohesive soils. Some of these soils contain varying amounts of organic matter with tested values ranging from 2.8 to 18.3 percent.

Coastal Plain soils are found beneath the Undivided or at the surface in some locations. These soils consist of gray, tan, brown, red, orange and white, soft to med. stiff, sandy silt (A-4), sandy clay (A-6) and silty clay (A-7-6) and loose to dense, clayey sand (A-2-6), silty sand (A-2-4) and sand (A-3 or A-1-b). Plasticity indices ranged from 11 to 49 in the cohesive soils.

Alluvial soils are found in the floodplains from the nearby streams, creeks and wetlands in the area. These soils consist of gray, black, tan and brown, very soft to med. stiff, sandy clay (A-6), silty clay (A-7-6), sandy silt (A-4), and very loose to dense, silty sand (A-2-4), sand (A-3 and A-1-b) and clayey sand (A-2-6). Plasticity indices ranged from 11 to 34 in the cohesive soils. Some of these soils contain varying amounts of organic matter with tested values ranging from 0.9 to 72.7 percent.

Groundwater

Groundwater measurements were taken in January of 2021 during average to below average rainfall conditions. Ground water is typically between 2’ and 12’ below the ground surface. Groundwater is expected to have moderate impacts.

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	4

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

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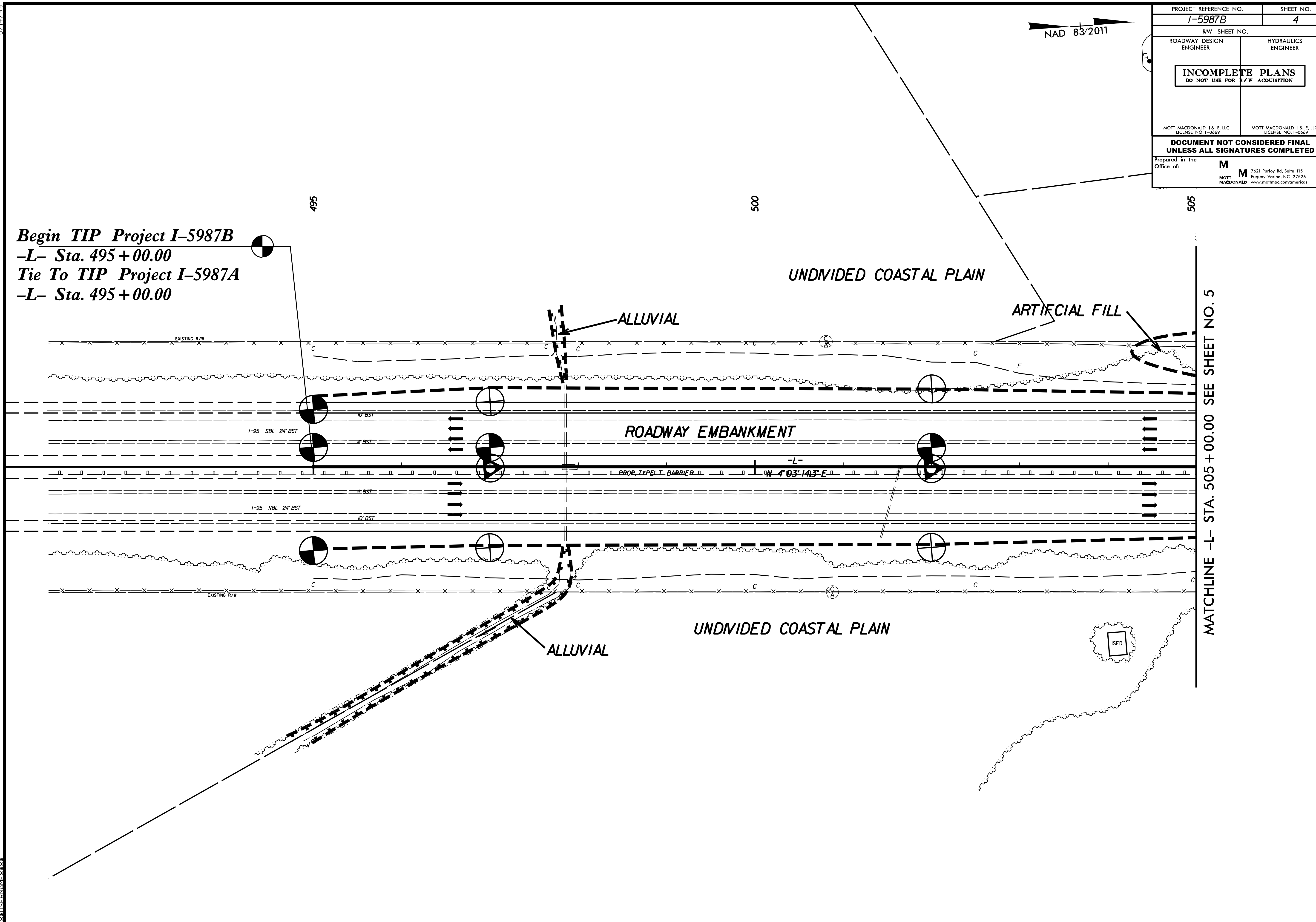

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	MOTT MACDONALD I & E, LLC LICENSE NO. F-0669

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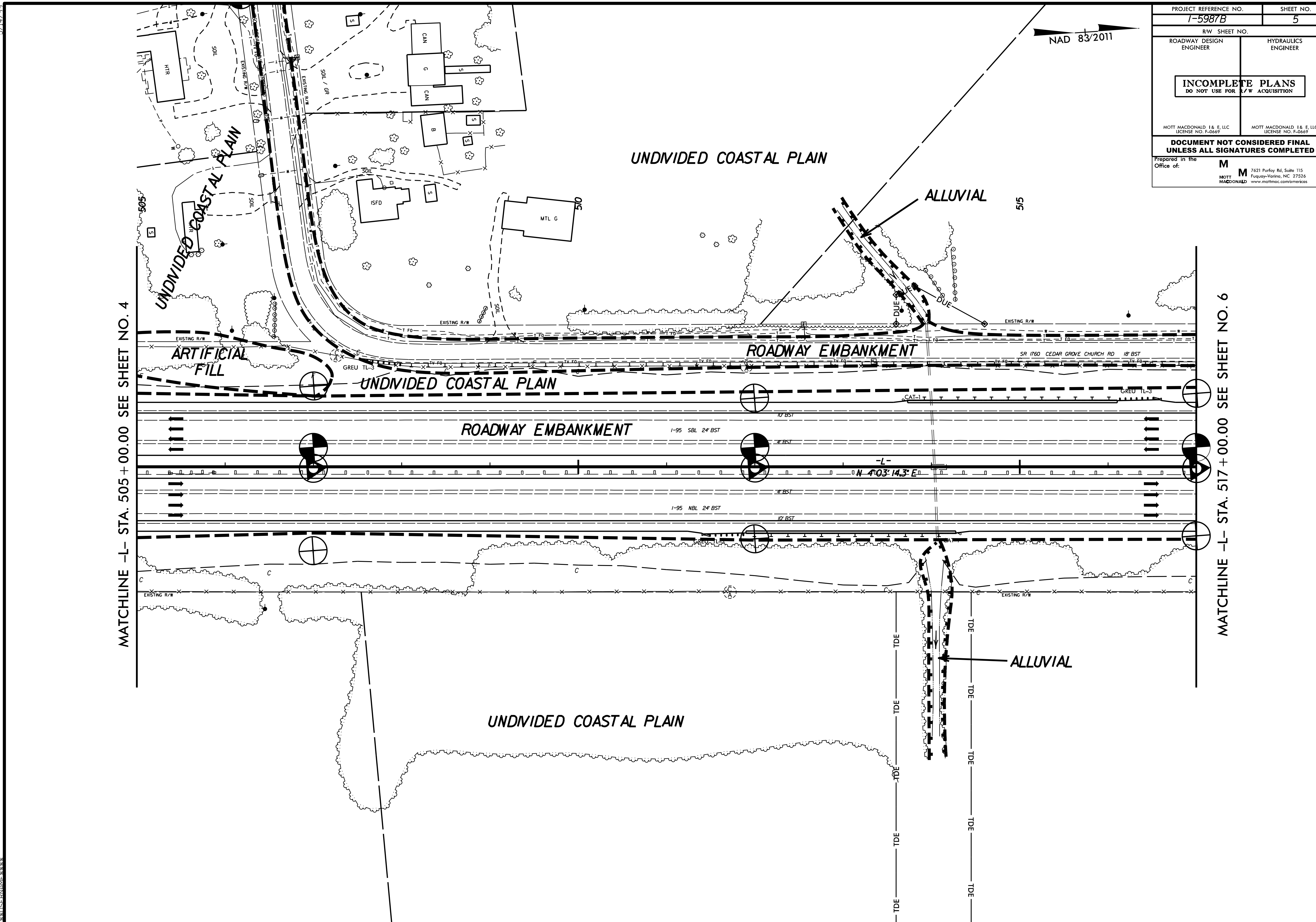

5/14/99
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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NAD 83/2011

520

525

UNDIVIDED COASTAL PLAIN

ROADWAY EMBANKMENT

SR 1760 CEDAR GROVE CHURCH RD 18' BST

UNDIVIDED COASTAL PLAIN

ROADWAY EMBANKMENT

I-95 SBL 24' BST

I-95 NBL 24' BST

10' BST

4' BST

10' BST

-L-

N 4°03'14.3"E

ARTIFICIAL FILL

EXISTING R/W

SOIL

MATCHLINE -L- STA. 517+00.00 SEE SHEET NO. 5

MATCHLINE -L- STA. 529+00.00 SEE SHEET NO. 7

UNDIVIDED COASTAL PLAIN

$$$$$$$SYSTIME$$$$$$
$$$$$$$USERNAME$$$$$$DGN$$$$$$$$$$$$$$$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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NAD 83/2011

530 535 540

UNDIVIDED COASTAL PLAIN

ALLUVIAL

PDE PDE

EXISTING R/W

ROADWAY EMBANKMENT

SR 1760 CEDAR GROVE CHURCH RD 18' BST

UNDIVIDED COASTAL PLAIN

GREU TL-3

CAT-1

I-95 SBL 24' BST

ROADWAY EMBANKMENT

-L-

N 403°14.3"E

I-95 NBL 24' BST

MATCHLINE -L- STA. 529+00.00 SEE SHEET NO. 6

MATCHLINE -L- STA. 541+00.00 SEE SHEET NO. 8

TS Sta. 537+01.64

-L- SC Sta. 539+01.64

UNDIVIDED COASTAL PLAIN

ALLUVIAL

ALLUVIAL

UNDIVIDED COASTAL PLAIN

$$$$$$$SYSTIME$$$$$
$$$$$$$USERNAME$$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	8
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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INCOMPLETE PLANS
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NAD 83/2011

545

550

UNDIVIDED COASTAL PLAIN

PDE — PDE

EXISTING R/W

ROADWAY EMBANKMENT

SR-1760 CEDAR GROVE CHURCH RD 18' BST

UNDIVIDED COASTAL PLAIN

10' BST

I-95 SBL 24' BST

-L-

I-95 NBL 24' BST

4' BST

10' BST

GABLE

ROADWAY EMBANKMENT

ARTIFICIAL FILL

EXISTING R/W

EXISTING R/W

UNDIVIDED COASTAL PLAIN

MATCHLINE -L- STA. 541+00.00 SEE SHEET NO. 7

MATCHLINE -L- STA. 553+00.00 SEE SHEET NO. 9

$$$$$$SYSTIME$$$$$$
$$$$$$FILENAME$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	9
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	MOTT MACDONALD I & E, LLC LICENSE NO. F-0669

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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7621 Purfoy Rd, Suite 115
Fuquay-Varina, NC 27526
www.mottmac.com/americas

NAD 83/2011

UNDIVIDED COASTAL PLAIN

~90.00' EY18
30.00' (EX.R/W)

SR 1760 CEDAR GROVE CHURCH RD 18' BST

1 FO

TV FO

ALLUVIAL

555

560

565

UNDIVIDED COASTAL PLAIN

ROADWAY EMBANKMENT

ALLUVIAL

F

C

CA1

GREU TL-3

10' BST

I-95 SBL 24' BST

-L-

N 20°03'13.0" E

4' BST

I-95 NBL 24' BST

ROADWAY EMBANKMENT

10' BST

GREU TL-3

CA1

F

UNDIVIDED COASTAL PLAIN

-L- CS Sta. 553+04.51

-L- ST Sta. 555+04.51

ARTIFICIAL FILL

ALLUVIAL

MATCHLINE -L- STA. 553+00.00 SEE SHEET NO. 8

MATCHLINE -L- STA. 565+00.00 SEE SHEET NO. 10

$$$$$$SYSTIME$$$$$$
$$$$$$FILENAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	MOTT MACDONALD I & E, LLC LICENSE NO. F-0669

INCOMPLETE PLANS
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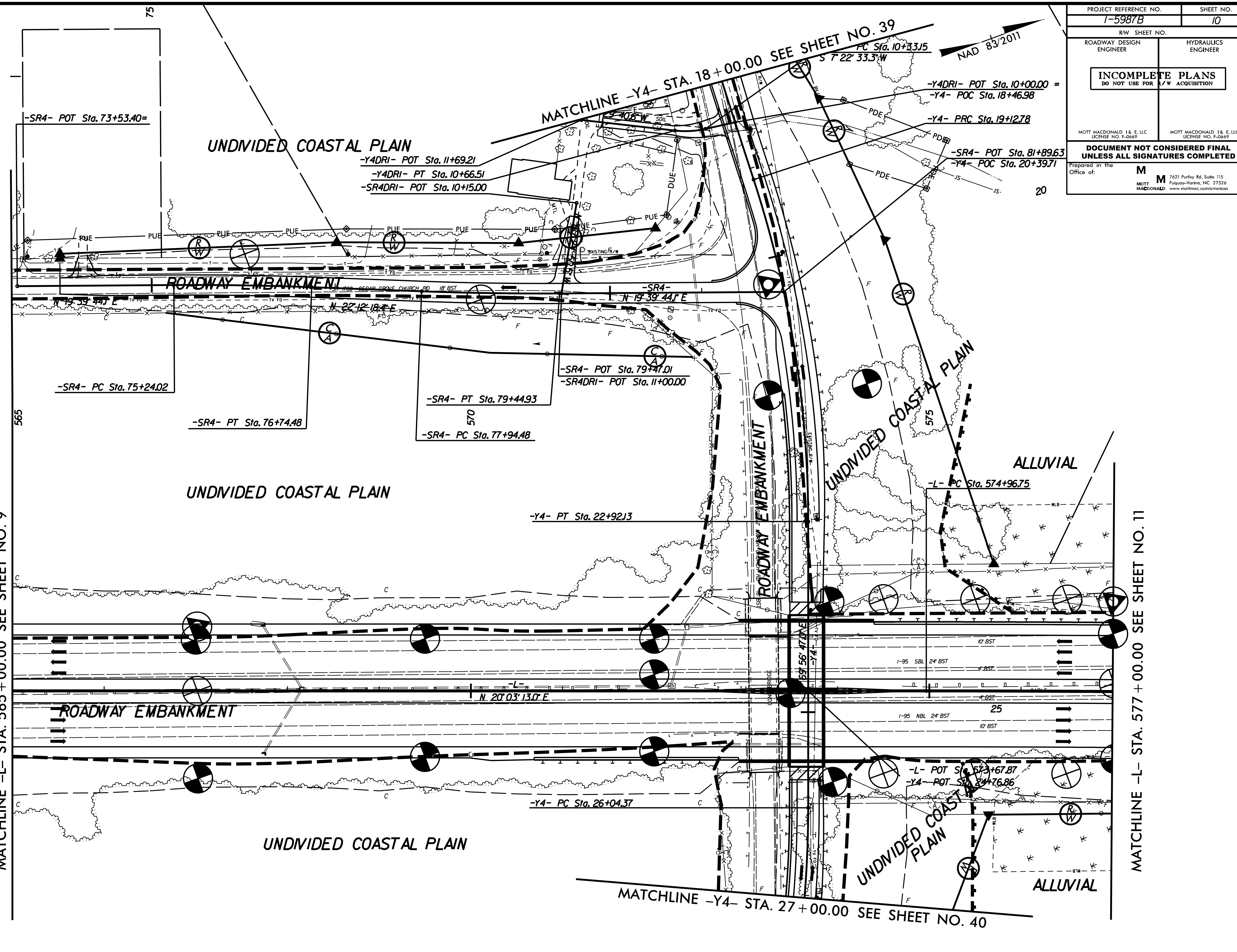

REVISIONS

5/14/99

$$$$SYSTIME$$$$ $$$$DGN$$$$ $$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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LICENSE NO. F-0669

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LICENSE NO. F-0669

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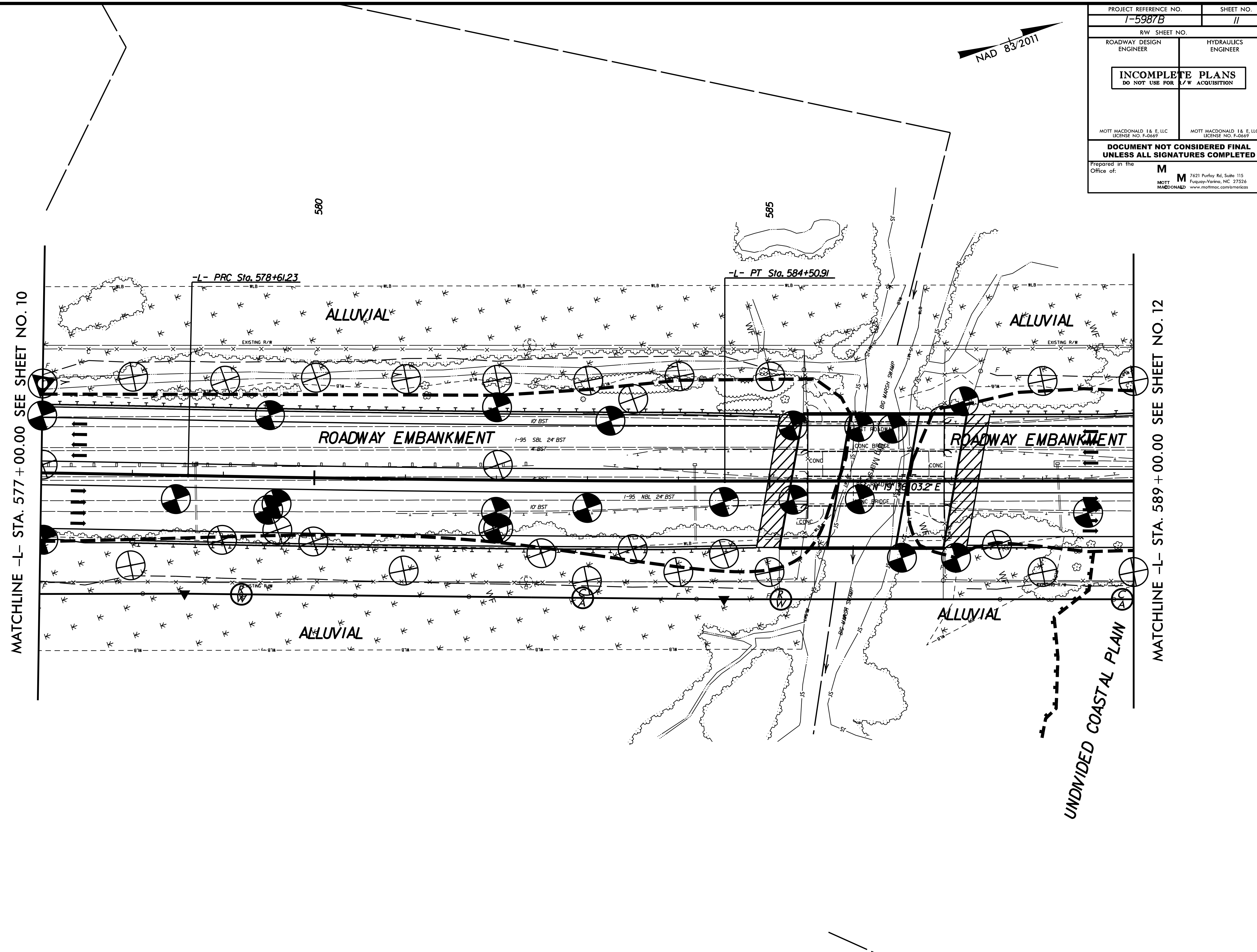

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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MOTT MACDONALD I& E, LLC LICENSE NO. F-0669

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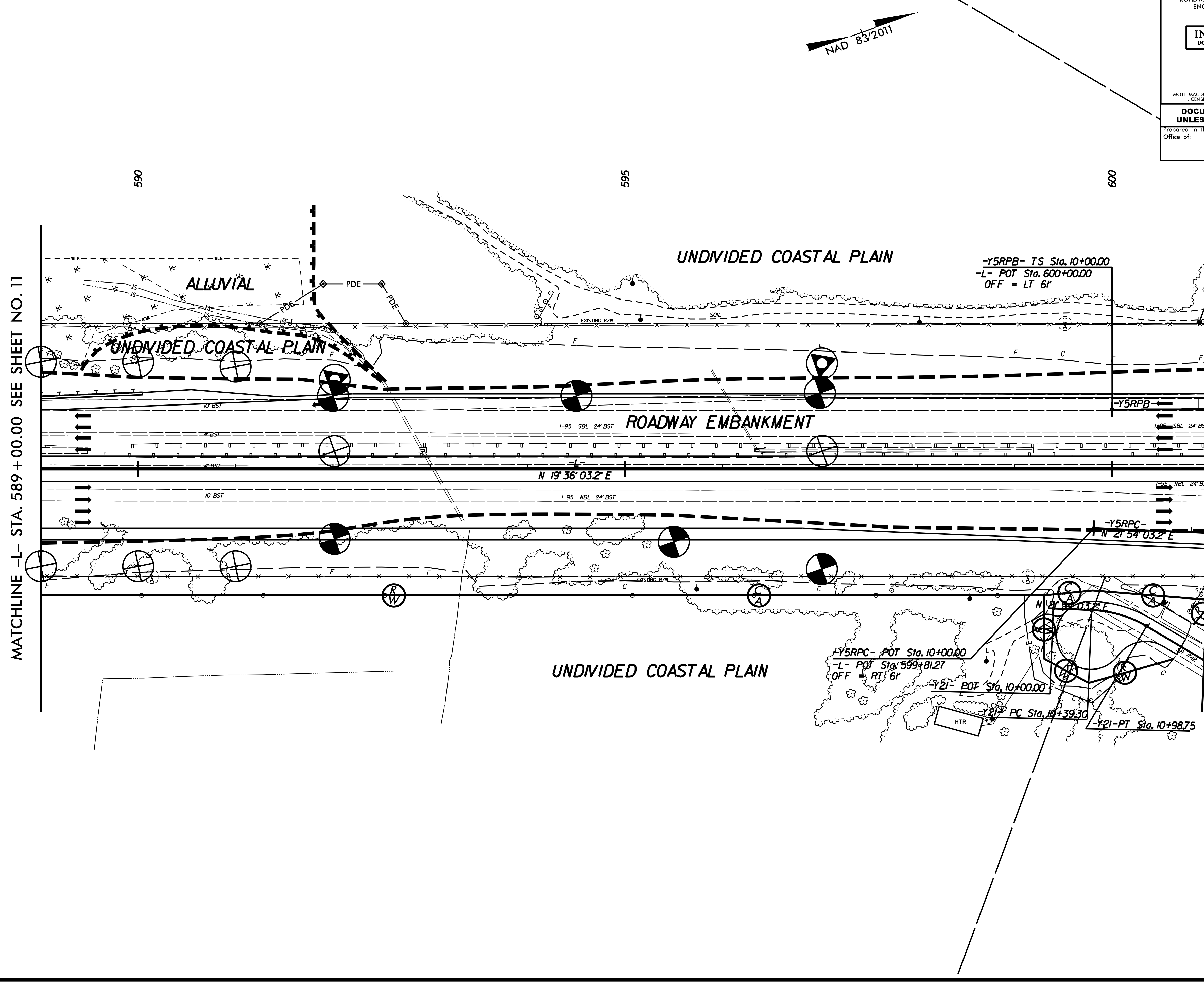

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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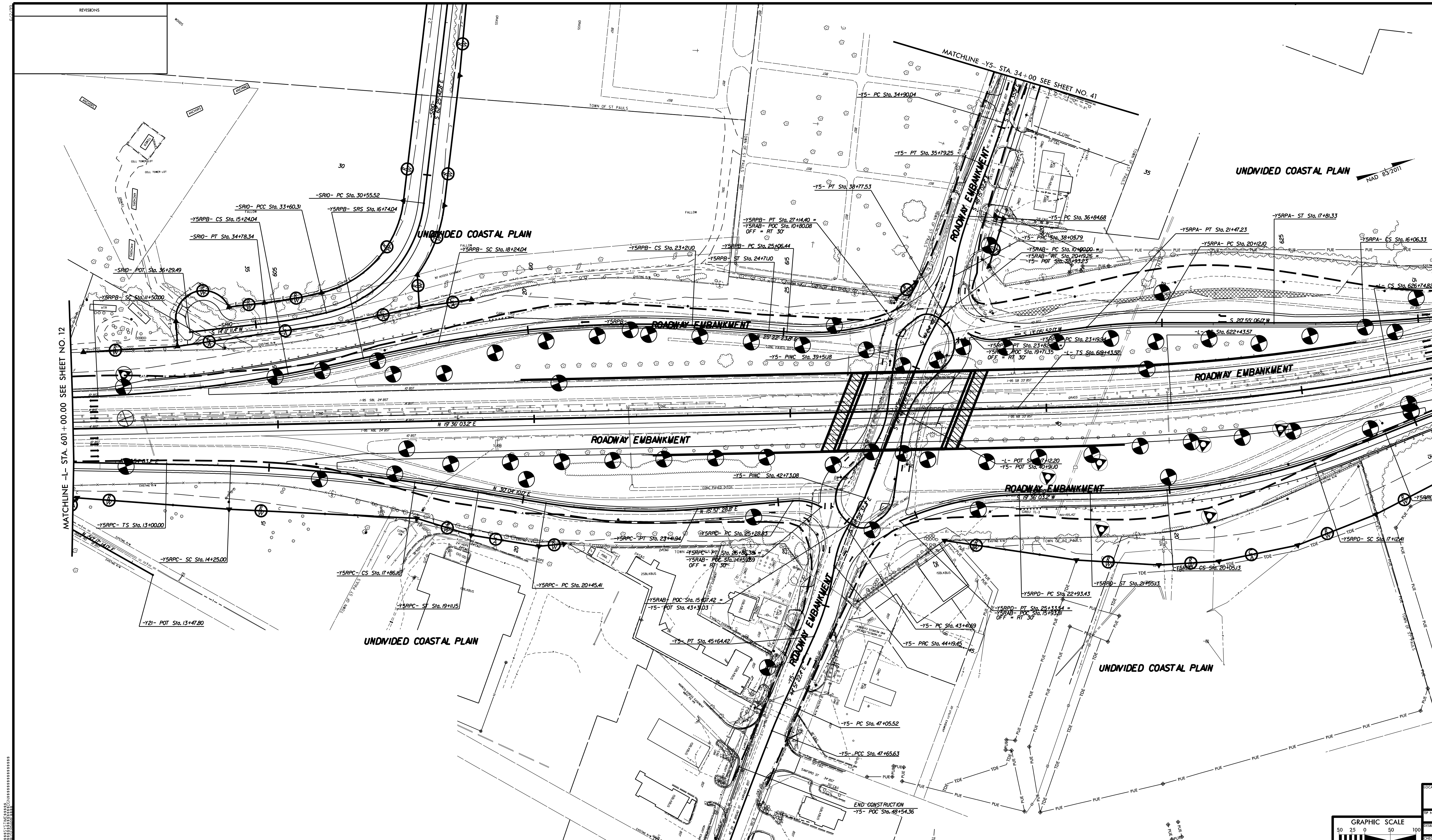

LOCATION:

TIP NO.: COUNTY:

DESIGNED BY:

CHECKED BY: DATE:

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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NAD 83/2011

630

635

640

-Y5RPA- POT Sta. 10+00.00
-L- POT Sta. 632+50.96
OFF = LT 61'

WOODS
-L- ST Sta. 629+74.82

-Y5RPA- TS Sta. 12+72.47

-Y5RPA- SC Sta. 14+47.47

UNDIVIDED COASTAL PLAIN

-L- PC Sta. 633+49.05

PUE

EXISTING R/W

S 12° 08' 37.0" W
-Y5RPA-

ROADWAY EMBANKMENT

-L-

N 8° 01' 36.9" E

I-95 NB 33' BST

-Y5RPD-

CAT

EXISTING R/W

-Y5RPD- SC Sta. 11+50.00

CULTIVATED FIELD

UNDIVIDED COASTAL PLAIN

WOODS

-Y5RPD- TS Sta. 10+00.00
-L- POT Sta. 632+01.18
OFF = RT 61'

MATCHLINE -L- STA. 628+00.00 SEE SHEET NO. 13

MATCHLINE -L- STA. 640+00.00 SEE SHEET NO. 15

$$$$$$$SYTIME$$$$$
$$$$$$$USERNAME$$$$$DGN$$$$$$$$$$$$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/2011

640

645

650

-L- PT Sta. 641+83.86 LB =
-L- PT Sta. 641+84.17 LA

UNDIVIDED COASTAL PLAIN

WOODS

EXISTING R/W

ALLUVIAL

WOODS

I-95 SB 33' BST

N 9° 42' 21.0"E
-L-

PROP. TYPE T BARRIER

I-95 NB 33' BST

ROADWAY EMBANKMENT

WOODS

EXISTING R/W

EXISTING R/W

UNDIVIDED COASTAL PLAIN

MATCHLINE -L- STA. 640+00.00 SEE SHEET NO. 14

MATCHLINE -L- STA. 650+00.00 SEE SHEET NO. 16

$$$$$$$SYSTIME$$$$$$$
$$$$$$$USERNAME$$$$$$$DGN$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	16
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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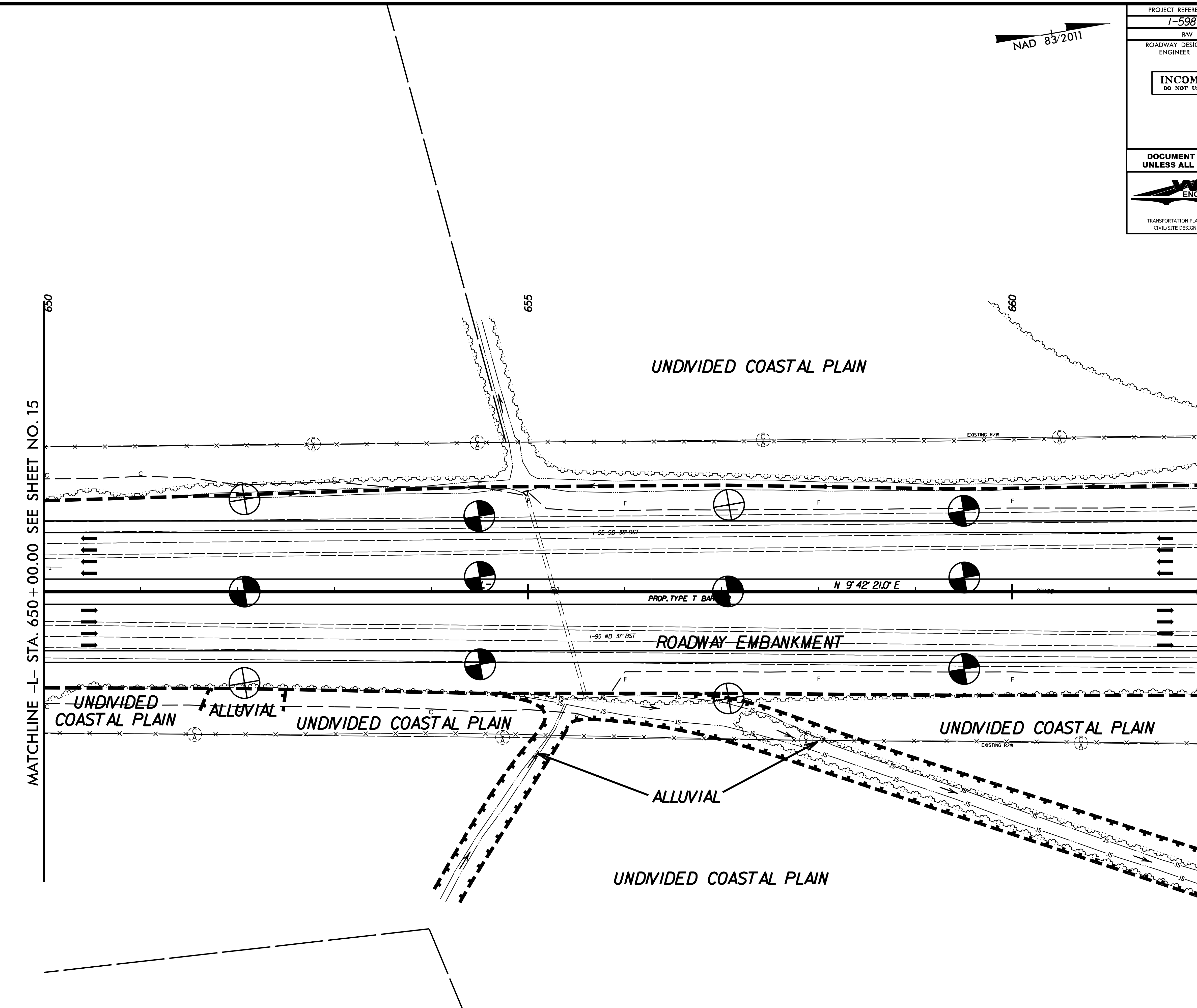
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION



PROJECT REFERENCE NO.	SHEET NO.
I-5987B	17

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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Fax: 919 851 8107
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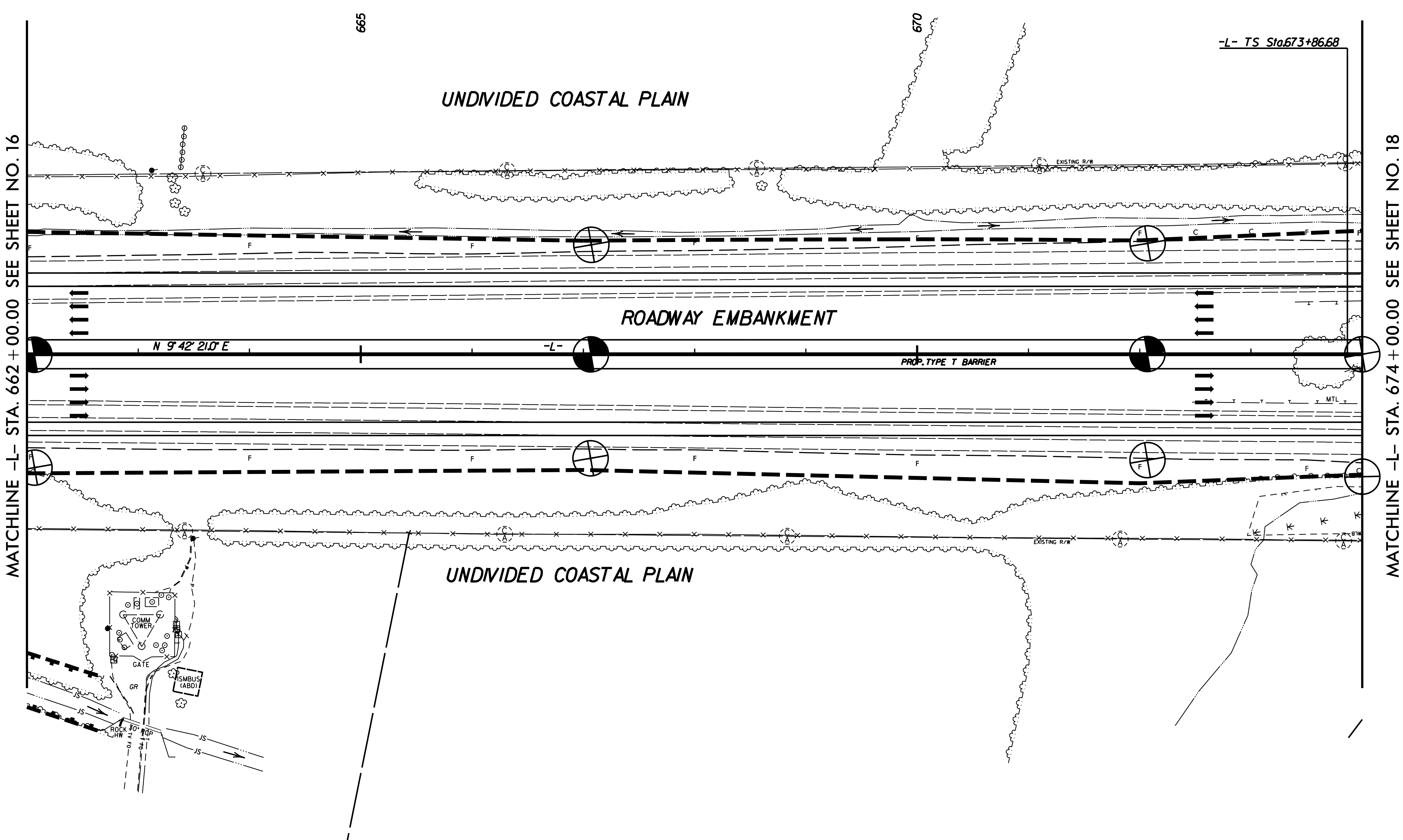
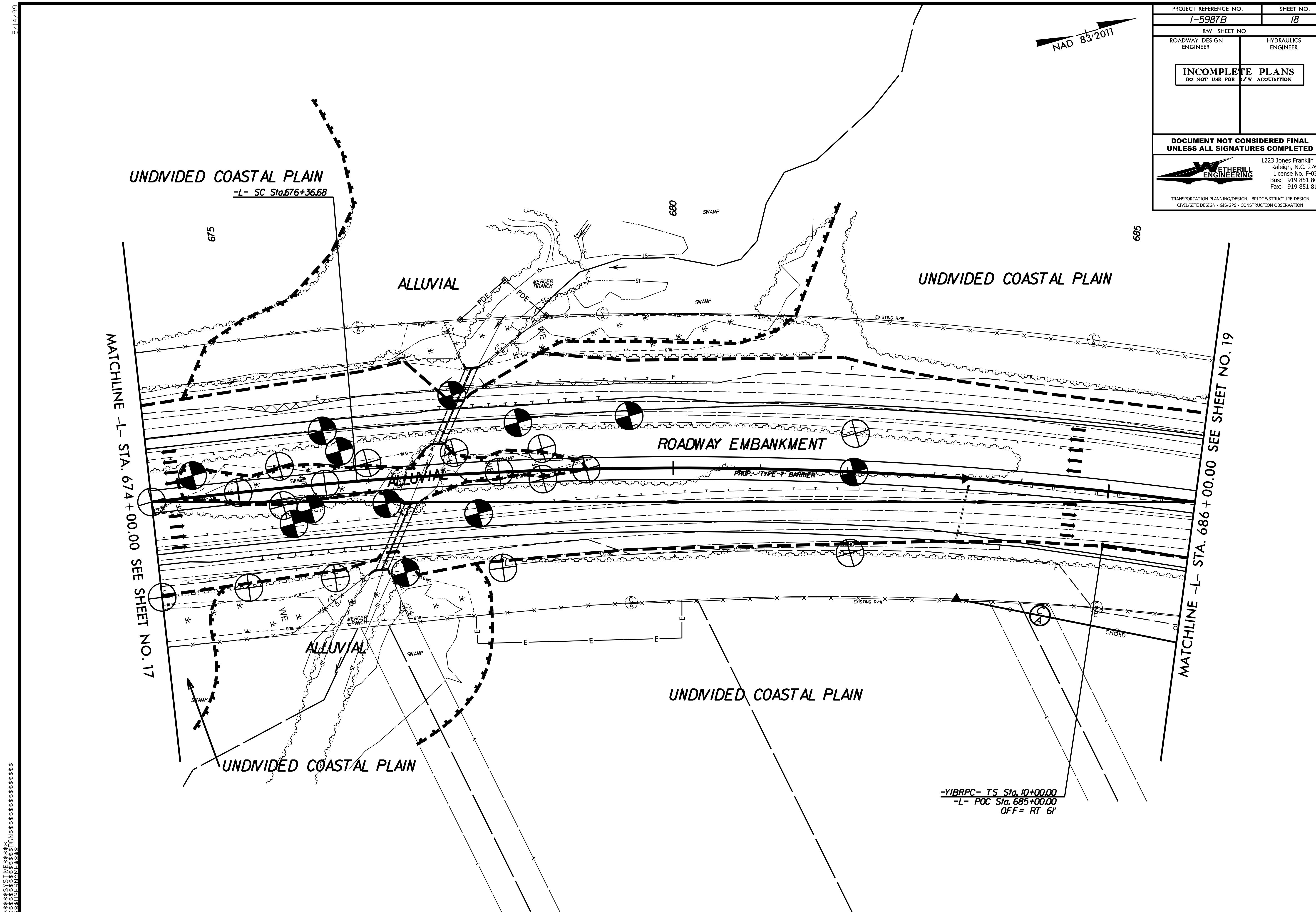
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION



5/14/99
$$$$$SYSTIME$$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$


PROJECT REFERENCE NO.
SHEET NO.
I-5987B
18
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
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UNLESS ALL SIGNATURES COMPLETED
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Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION
NAD 83/2011
UNDIVIDED COASTAL PLAIN
-L- SC Sta.676+36.68
675
680
685
SWAMP
MERCER BRANCH
ALLUVIAL
PDE
EXISTING R/W
ROADWAY EMBANKMENT
PROP. TYPE T BARRIER
CONC
CHORD
MATCHLINE -L- STA. 674+00.00 SEE SHEET NO. 17
MATCHLINE -L- STA. 686+00.00 SEE SHEET NO. 19
-YIBRPC- TS Sta. 10+00.00
-L- POC Sta. 685+00.00
OFF= RT 61'
5/14/99
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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Fax: 919 851 8107

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

NAD 83/2011

-YIBRPB- POT Sta10+00.00=
-L- POC Sta.689+00.00
OFF.=61' LT.

-YIBRPB- SC Sta17+35.18

-YIBRPB- TS Sta15+60.18

060

15

695

UNDIVIDED COASTAL PLAIN

CHORD

EXISTING R/W

N 27° 22' 57.0" E

I-95 SB 42' BST

ROADWAY EMBANKMENT

PROP. TYPE T BARRIER

I-95 NB 38' BST

N 34° 36' 02.8" E

COASTAL PLAIN

-L- CS Sta.693+44.52

ST Sta.695+94.52

ROADWAY EMBANKMENT

UTILITY AND SIGN EASEMENT

N 42° 16' 20.0" E

UNDIVIDED COASTAL PLAIN

-YIBRPC- SC Sta12+00.00

-YIBRPC- CS Sta16+82.05

-YIBRPC- ST Sta18+82.05

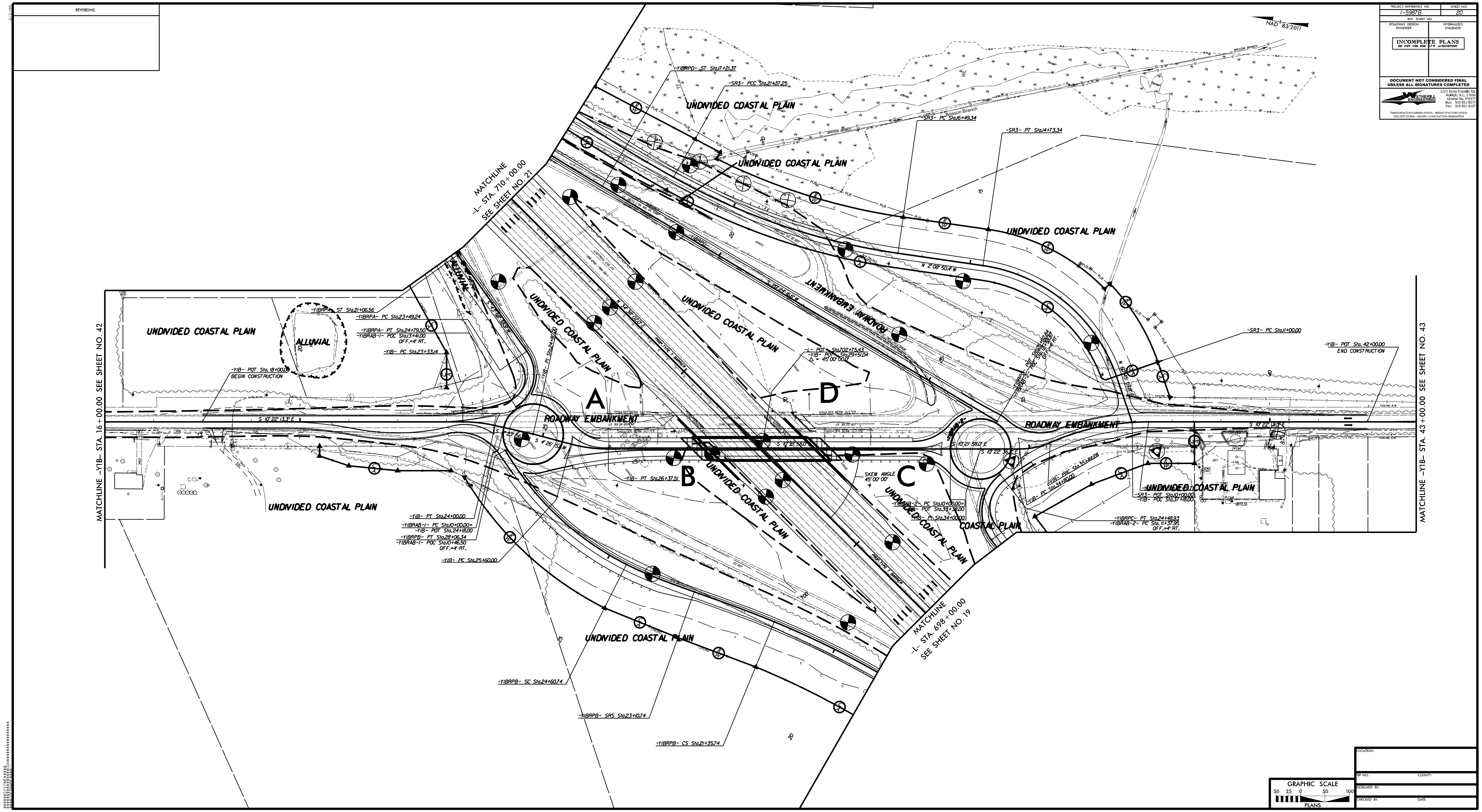
-YIBRPC- PC Sta22+98.24

20

MATCHLINE -L- STA. 686+00.00 SEE SHEET NO. 18

MATCHLINE -L- STA. 698+00.00 SEE SHEET NO. 20

$$$$$$$SYSTIME$$$$$$
$$$$$$$FILENAME$$$$$$DGN$$$$$$$$$$$$$$$$$$$$


REVISIONS
PROJECT REFERENCE NO.
I-5987B
SHEET NO.
20
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
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UNLESS ALL SIGNATURES COMPLETED
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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION
NAD 83/2011
UNDIVIDED COASTAL PLAIN
ALLUVIAL
ROADWAY EMBANKMENT
A
B
C
D
MATCHLINE -L- STA. 710+00.00 SEE SHEET NO. 21
MATCHLINE -L- STA. 698+00.00 SEE SHEET NO. 19
MATCHLINE -Y1B- STA. 16+00.00 SEE SHEET NO. 42
MATCHLINE -Y1B- STA. 43+00.00 SEE SHEET NO. 43
-Y1B- POT Sta. 18+00.00 BEGIN CONSTRUCTION
-Y1B- POT Sta. 42+00.00 END CONSTRUCTION
SKEW ANGLE 45°00'00"
-SR3- PT Sta.14+73.34
-SR3- PC Sta.11+00.00
-Y1B- PT Sta.24+00.00
-Y1B- PC Sta.25+60.00
-Y1B- PT Sta.26+37.51
-Y1BRPB- SC Sta.24+60.74
-Y1BRPB- SPS Sta.23+10.74
-Y1BRPB- CS Sta.21+35.74
GRAPHIC SCALE
50 25 0 50 100
PLANS
LOCATION:
TIP NO.:
COUNTY:
DESIGNED BY:
CHECKED BY:
DATE:

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	21
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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License No. F-0377
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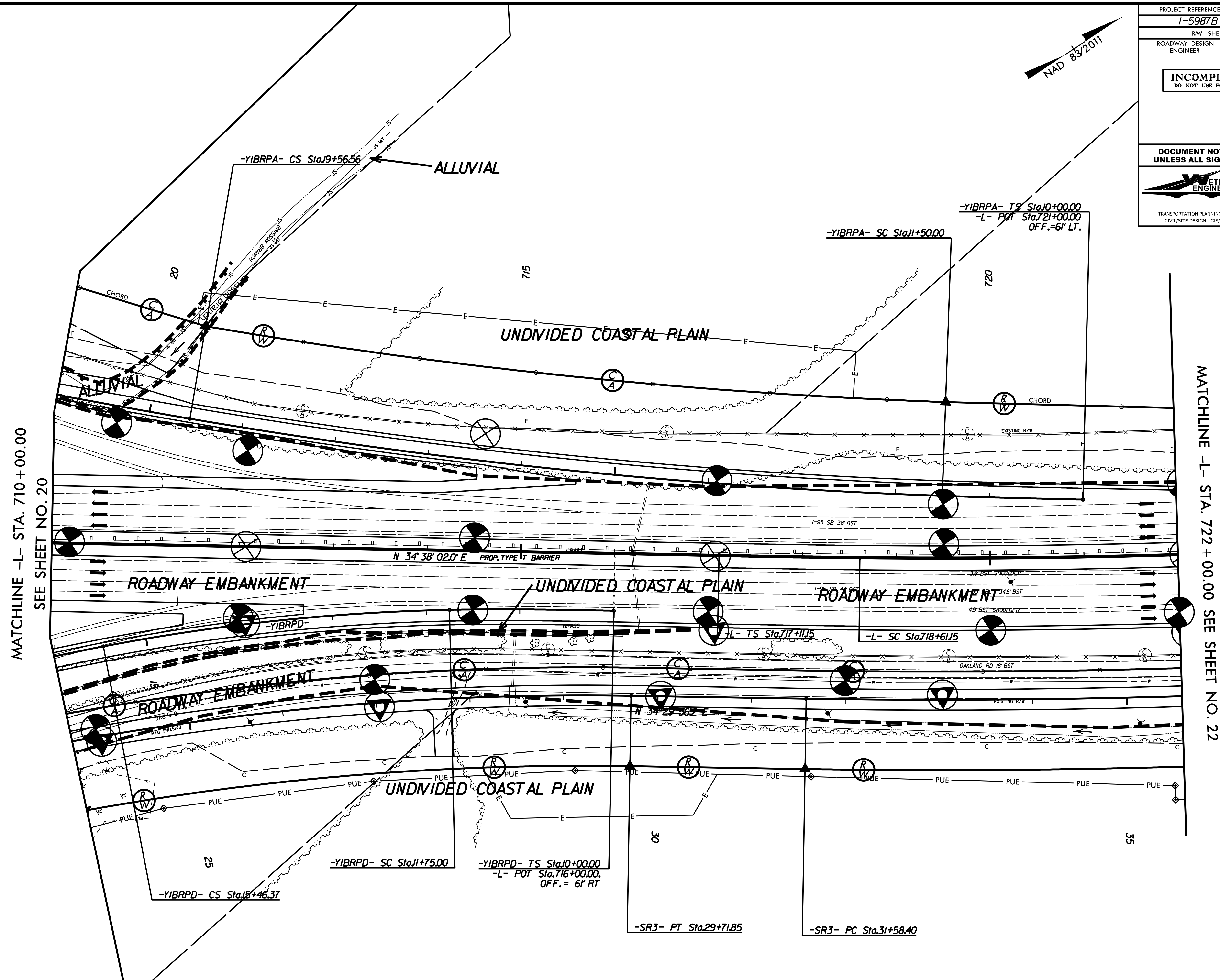
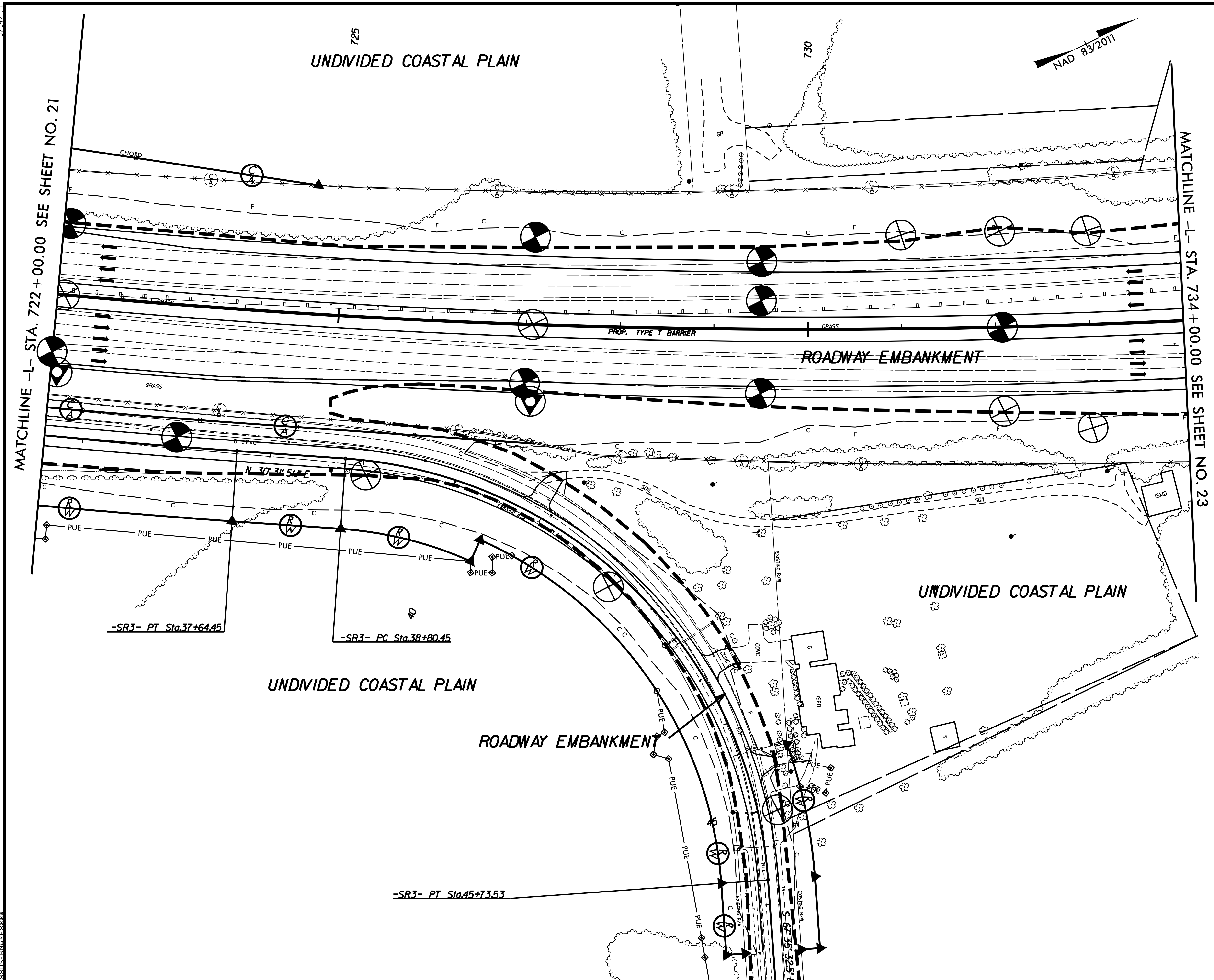
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION



5/14/99



PROJECT REFERENCE NO.	SHEET NO.
I-5987B	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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License No. F-0377
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Fax: 919 851 8107

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

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

NAD 83/2011

735 740 745

-L- CS Sta.736+09.98

-L- ST Sta.737+59.98

UNDIVIDED COASTAL PLAIN

EXISTING R/W

ROADWAY EMBANKMENT

I-95 SB 39' BST

N 21° 59' 00.1" E

PROP. TYPE T BARRIER

GRASS

14' BST

UNDIVIDED COASTAL PLAIN

ROADWAY EMBANKMENT

I-95 NB 38' BST

13.8' BST SHOULDER

I-95 NBL 23.5' BST

10.6' BST SHOULDER

UNDIVIDED COASTAL PLAIN

REMOVAL

MATCHLINE -L- STA. 734+00.00 SEE SHEET NO. 22

MATCHLINE -L- STA. 746+00.00 SEE SHEET NO. 24

$$$$$$SYSTIME$$$$$$
$$$$$$FILENAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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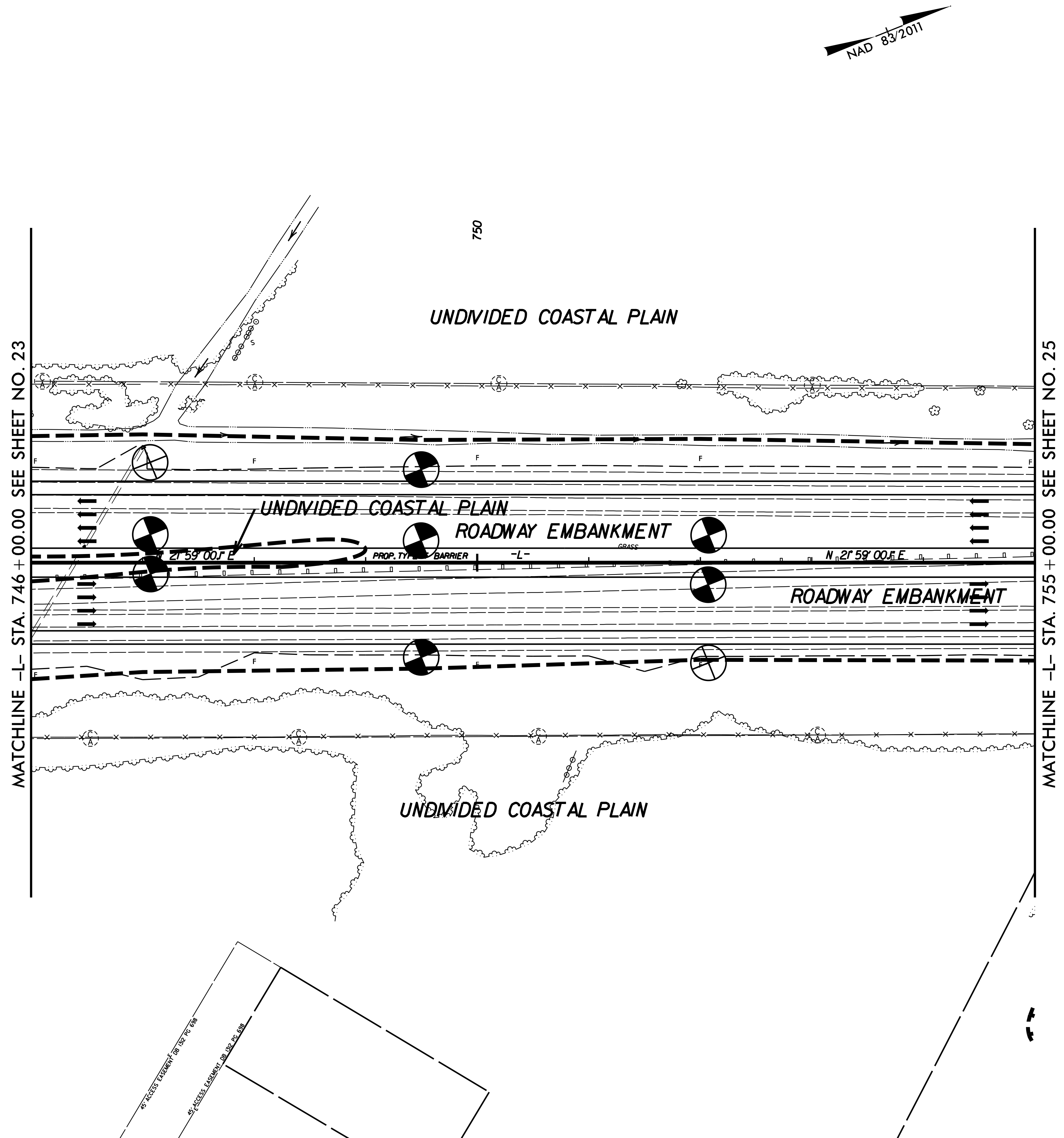
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION



PROJECT REFERENCE NO.	SHEET NO.
I-5987B	25

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	

INCOMPLETE PLANS
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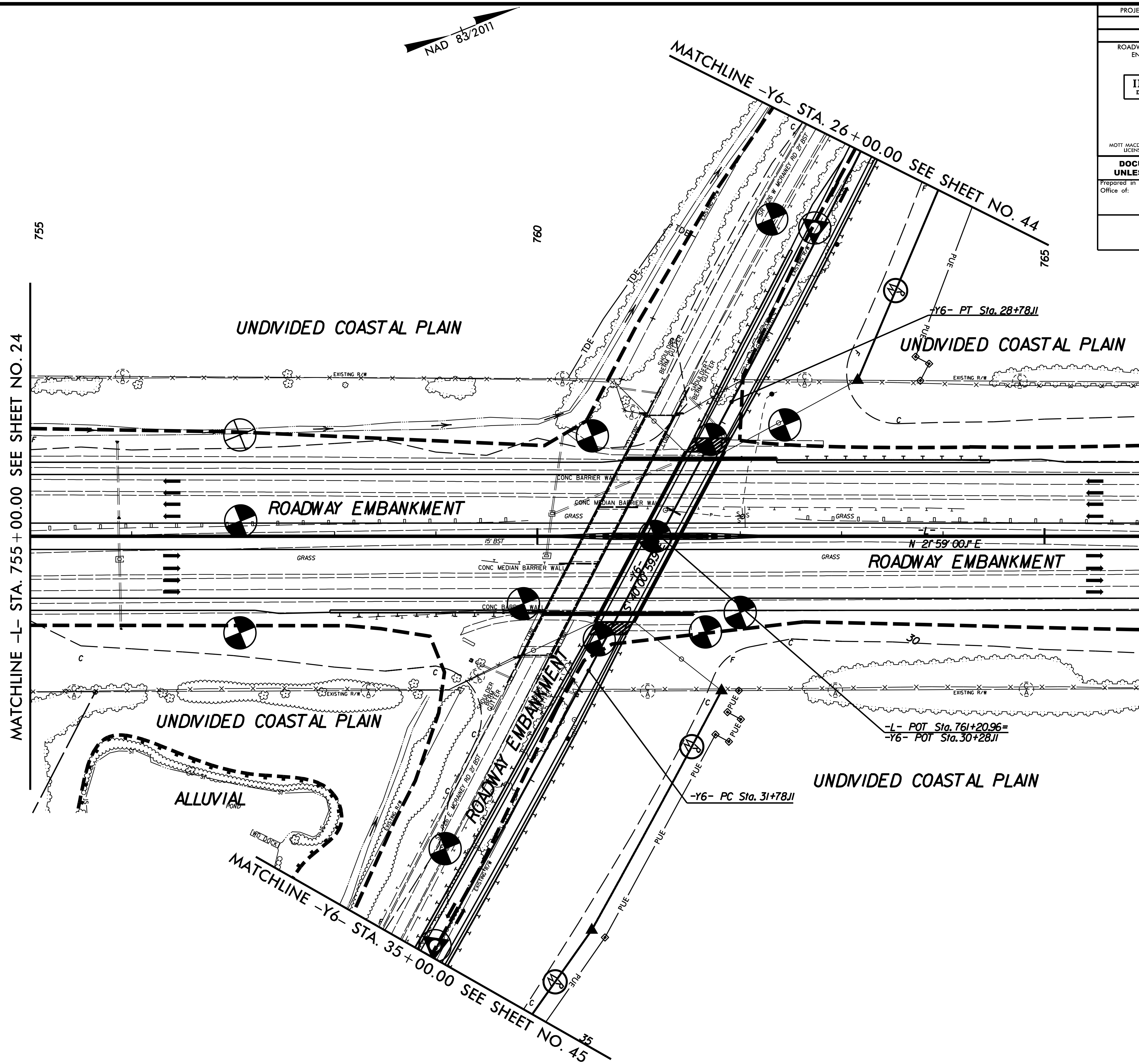

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	26

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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LICENSE NO. F-0669

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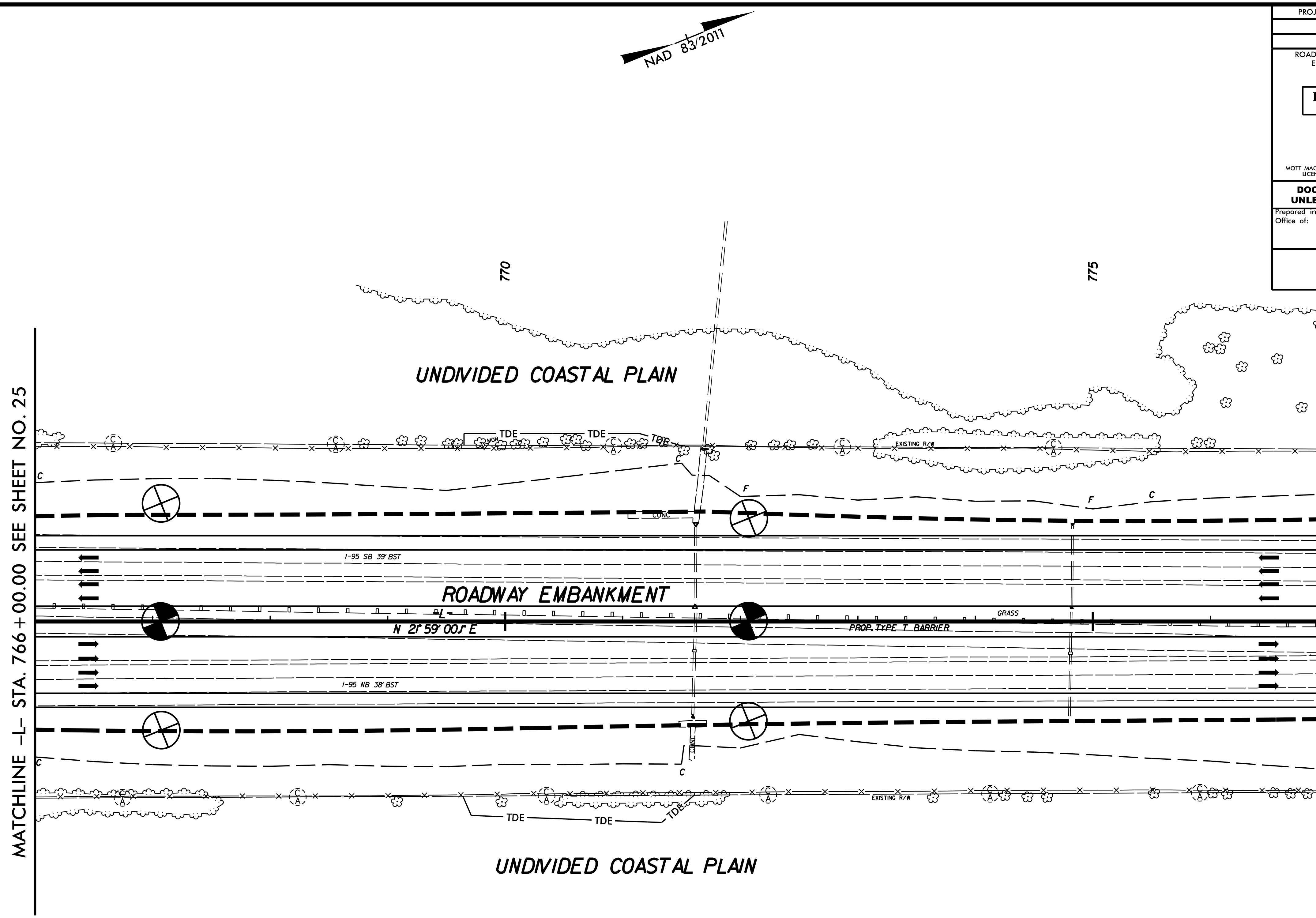
Bus: 919 851 8077
Fax: 919 851 8107



5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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

780

785

ALLUVIAL

SWAMP

-L- TS Sta. 778+75.74

-L- SC Sta. 780+25.74

UNDIVIDED COASTAL PLAIN

EXISTING R/W

CONC

ROADWAY EMBANKMENT

-L-
N 21° 59' 00.1" E

GRASS

CONC. TYPE T BARRIER

7" BST

UNDIVIDED COASTAL PLAIN

CONC

CONC

EXISTING R/W

TDE

TDE

TDE

TDE

MATCHLINE -L- STA. 777+00.00 SEE SHEET NO. 26

MATCHLINE -L- STA. 789+00.00 SEE SHEET NO. 28

UNDIVIDED COASTAL PLAIN

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$USERNAME$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	28

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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LICENSE NO. F-0669

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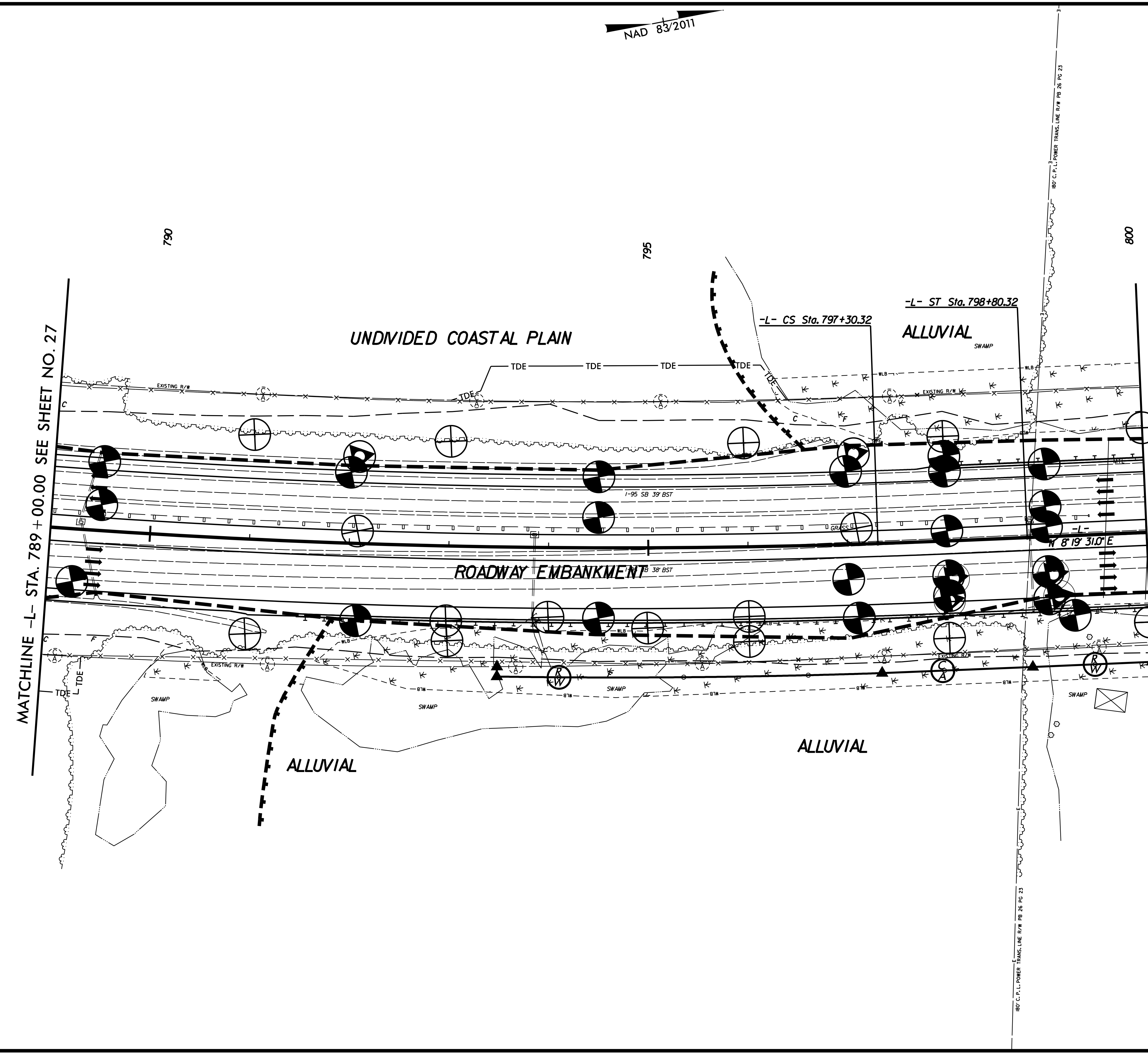
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107



5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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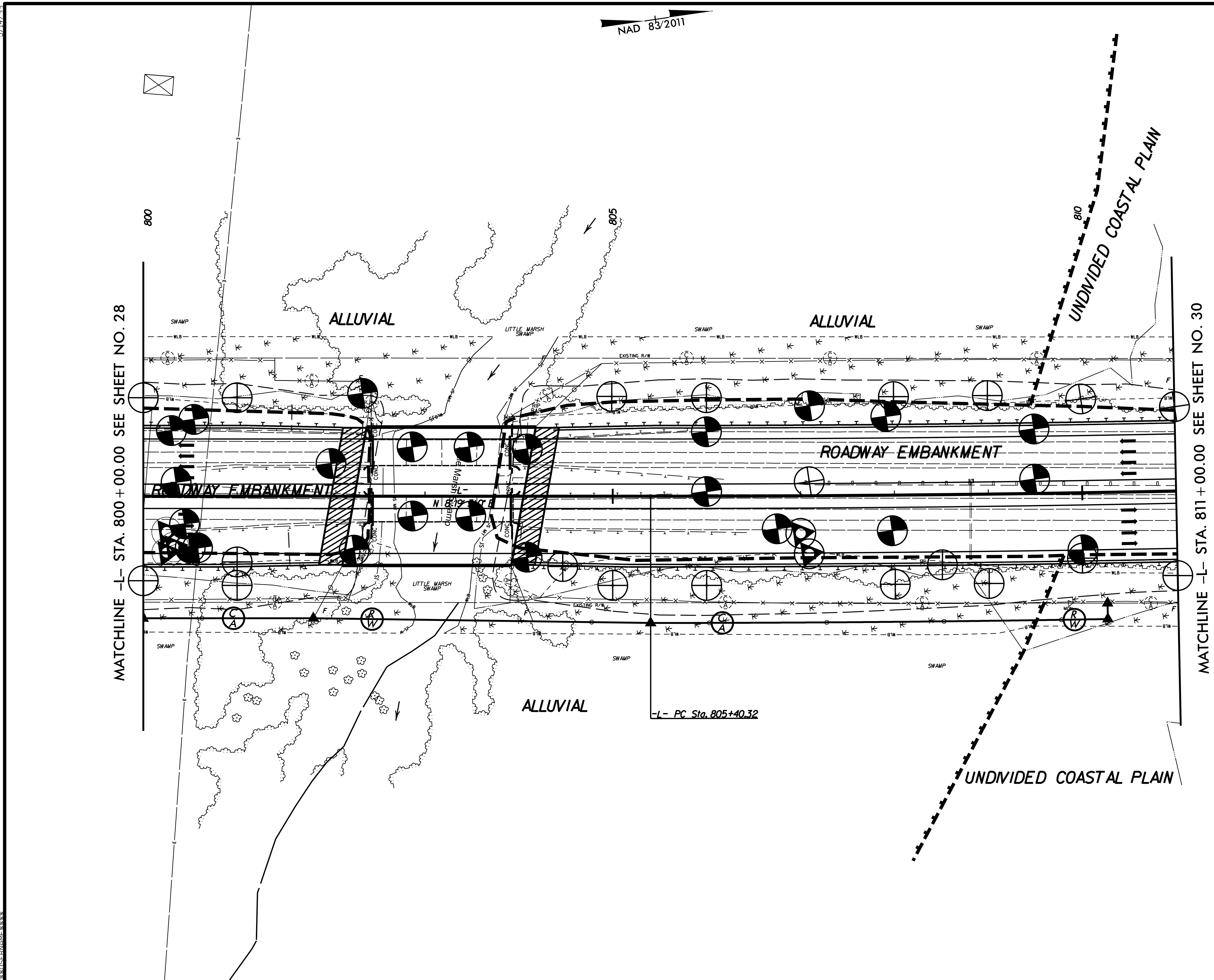
Prepared in the Office of:
MOTT MACDONALD
PO Box 700
Fuquay-Varina, NC 27526
www.mottmac.com/americas

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



$$$$$SYSTIME$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	30

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
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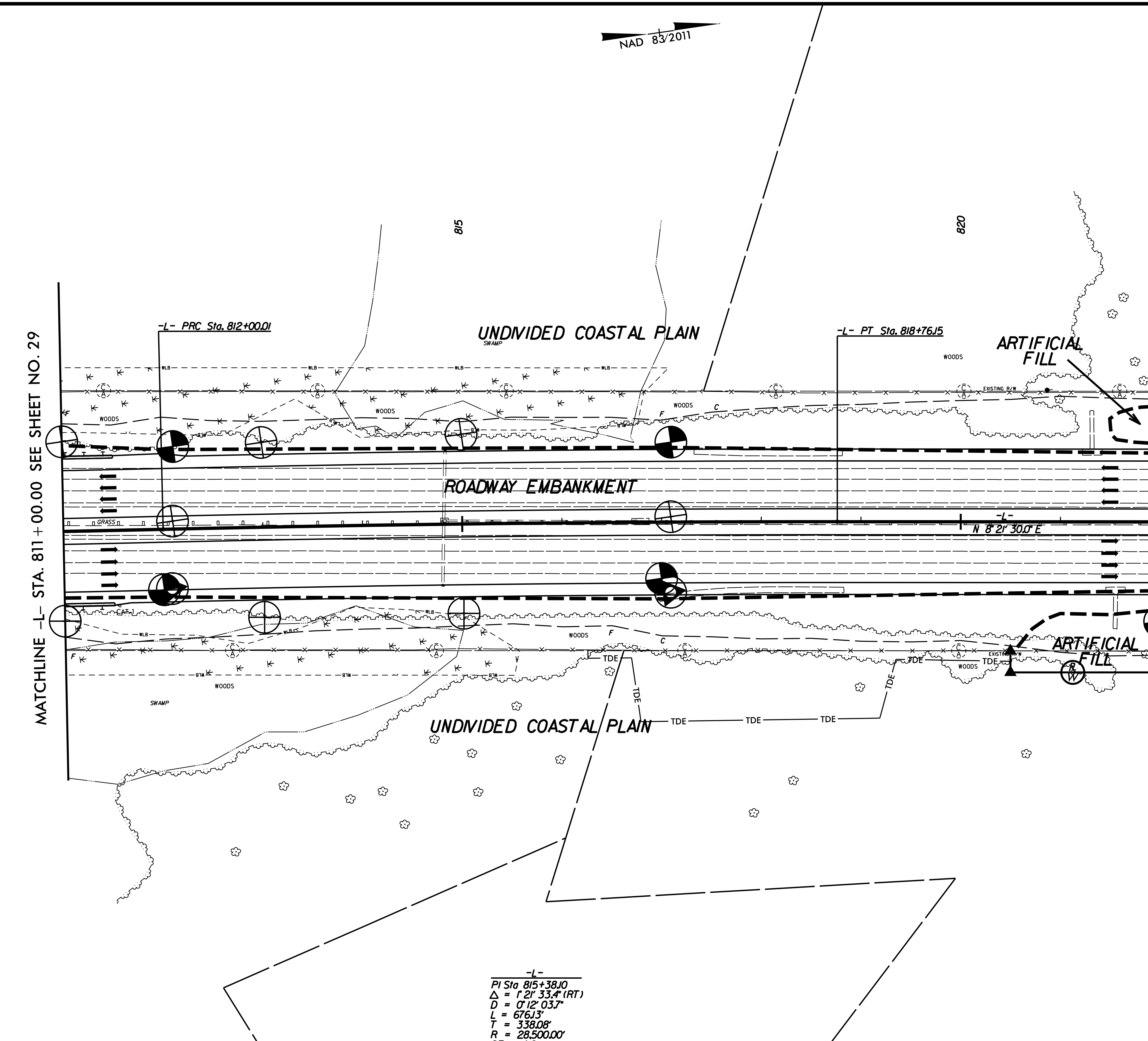
Fax: 919 851 8107



5/14/99

$$$$$SYSTIME$$$$$
$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	31

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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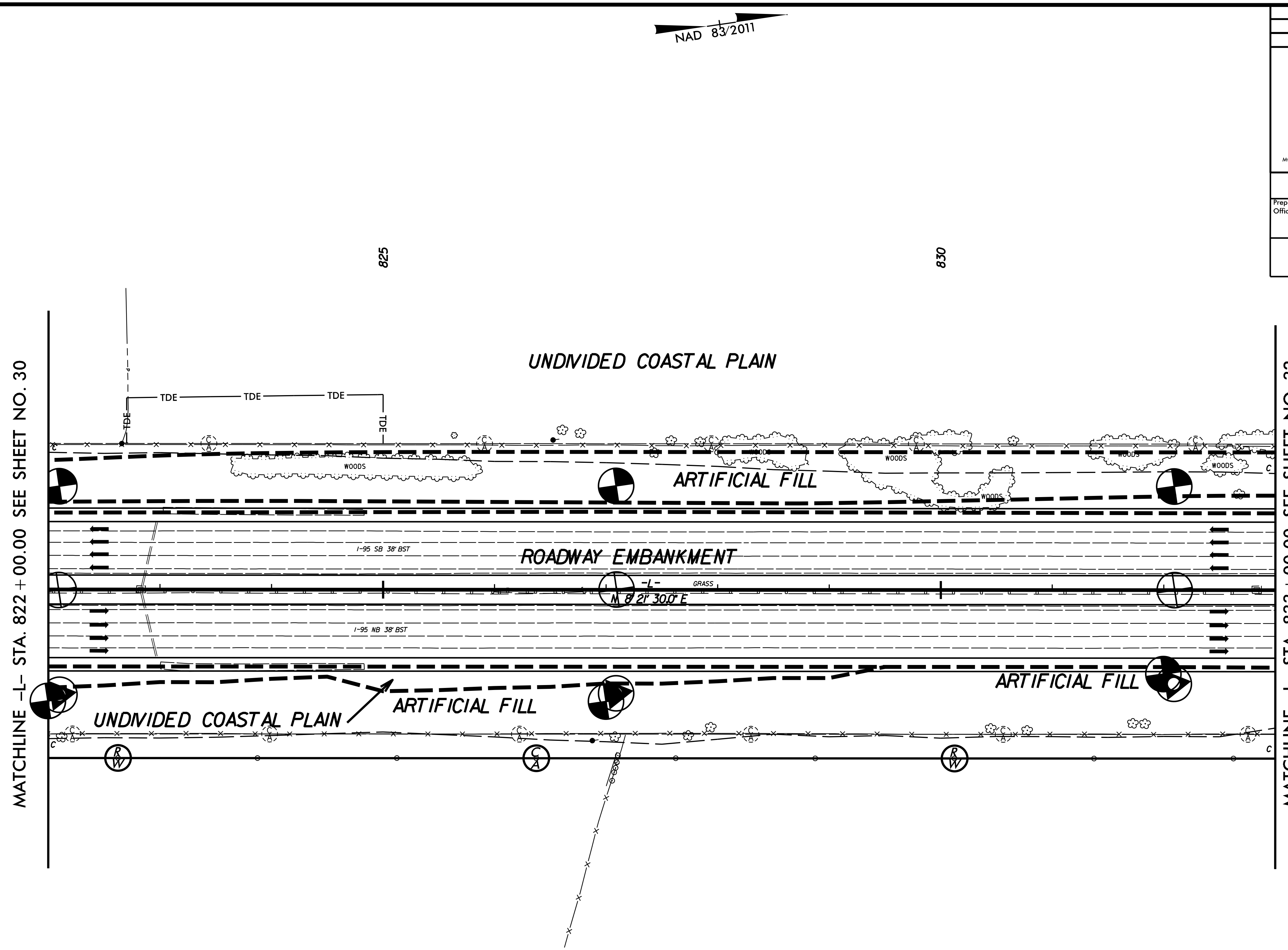
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107



5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	32
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. P-0377
Bus: 919 851 8077
Fax: 919 851 8107

835

840

UNDIVIDED COASTAL PLAIN

MATCHLINE -L- STA. 833+00.00 SEE SHEET NO. 31

MATCHLINE -L- STA. 844+00.00 SEE SHEET NO. 33

EXISTING R/W

ARTIFICIAL FILL

ROADWAY EMBANKMENT

-L-

N 8°21'30.0" E

GRASS

DI

EXISTING R/W

TDE

TDE

TDE

TDE

TDE

UNDIVIDED COASTAL PLAIN

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	33

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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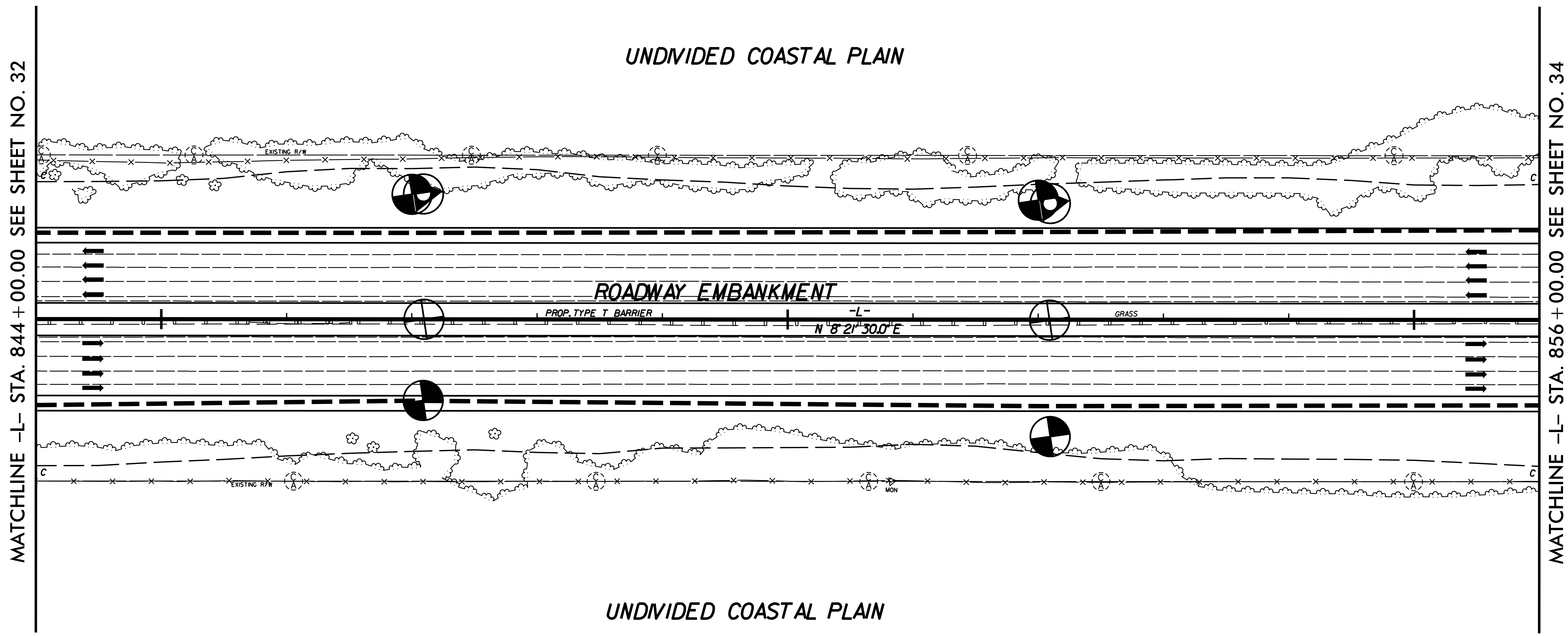
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

NAD 83/2011

845 850 855



5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	34

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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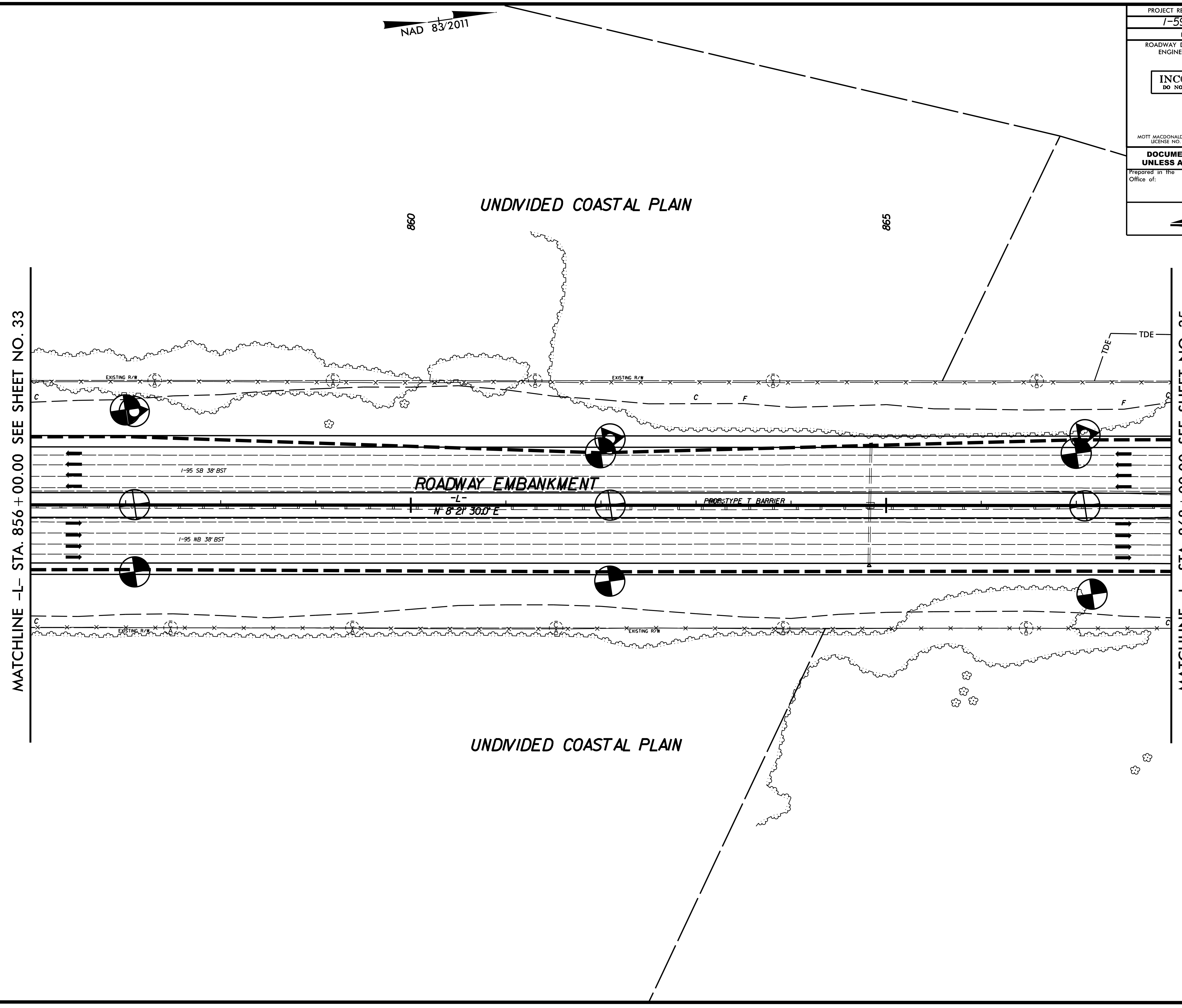
Bus: 919 851 8077
Fax: 919 851 8107



5/14/99

NAD 83/2011

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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Raleigh, N.C. 27606
License No. P-0377
Bus: 919 851 8077
Fax: 919 851 8107

870

875

UNDIVIDED COASTAL PLAIN

TDE

TDE

EXISTING R/W

ROADWAY EMBANKMENT

-L-

N 8° 21' 30.0" E

VAR BST

GRASS

PROP. TYPE T BARRIER

GRASS

EXISTING R/W

TDE

MATCHLINE -L- STA. 868+00.00 SEE SHEET NO. 34

MATCHLINE -L- STA. 880+00.00 SEE SHEET NO. 36

UNDIVIDED COASTAL PLAIN

$$$$$$SYSTIME$$$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	36

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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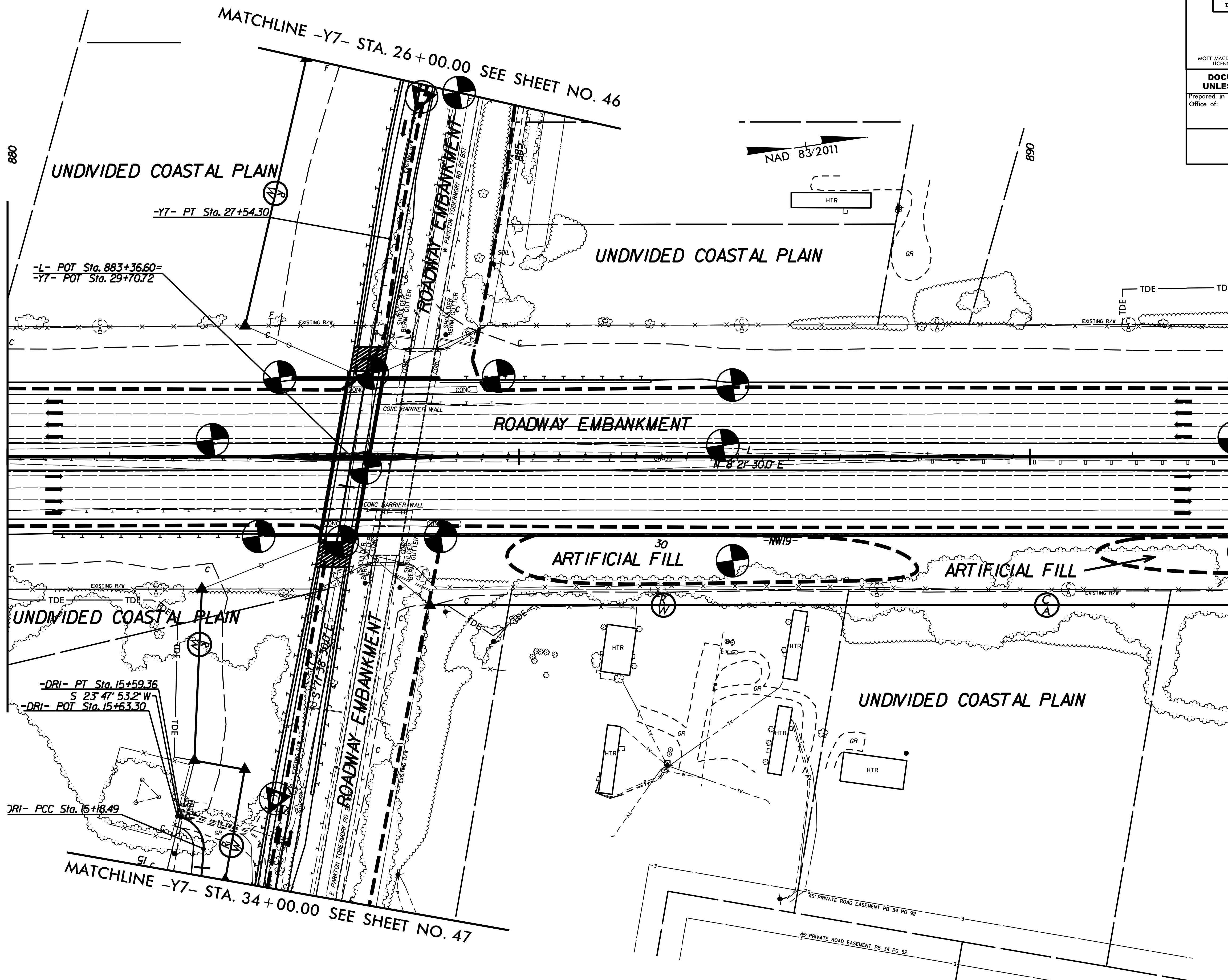

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$DGN$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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LICENSE NO. F-0669

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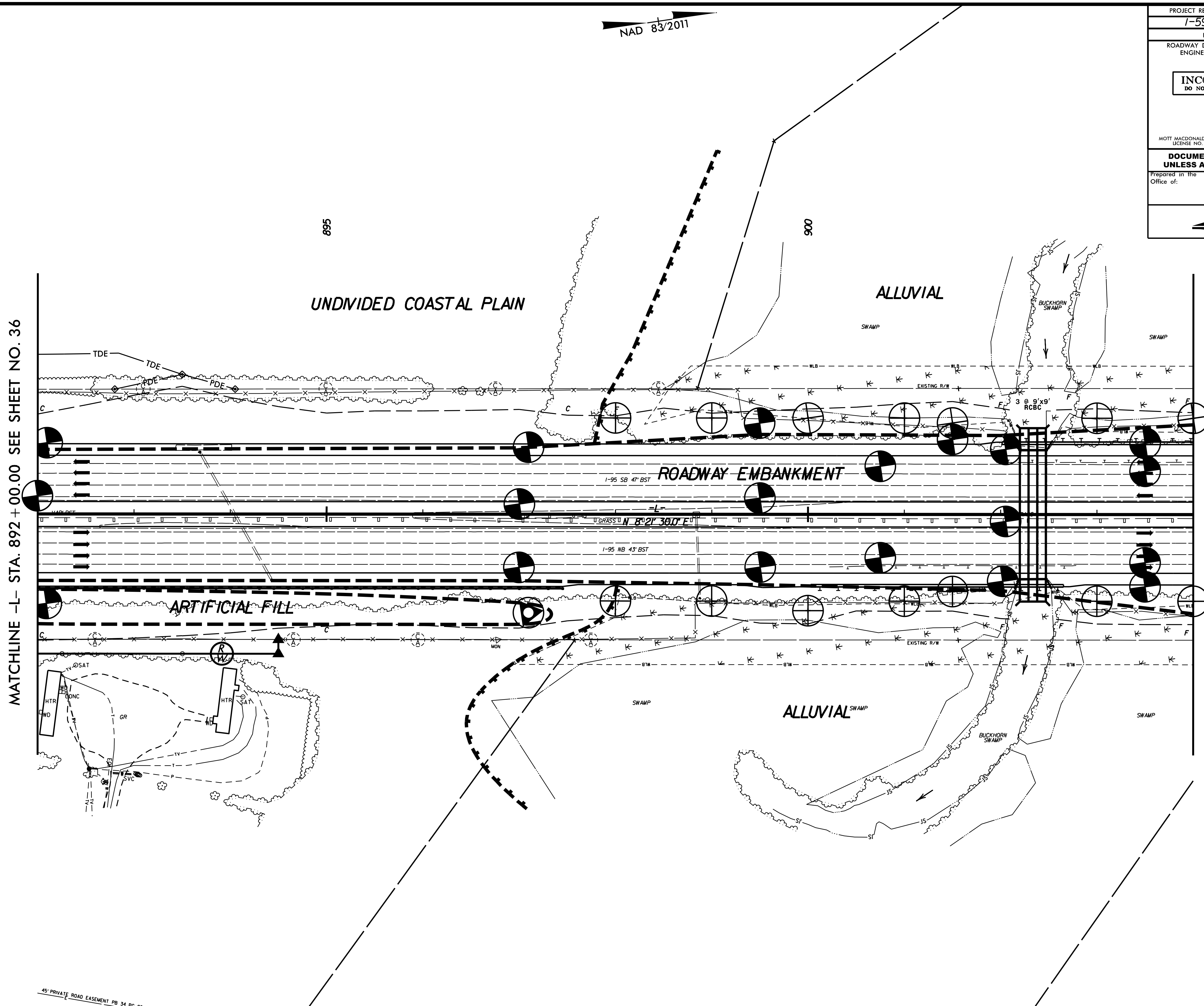
Fax: 919 851 8107



5/14/99

$$$$SYSTIME$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	38
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
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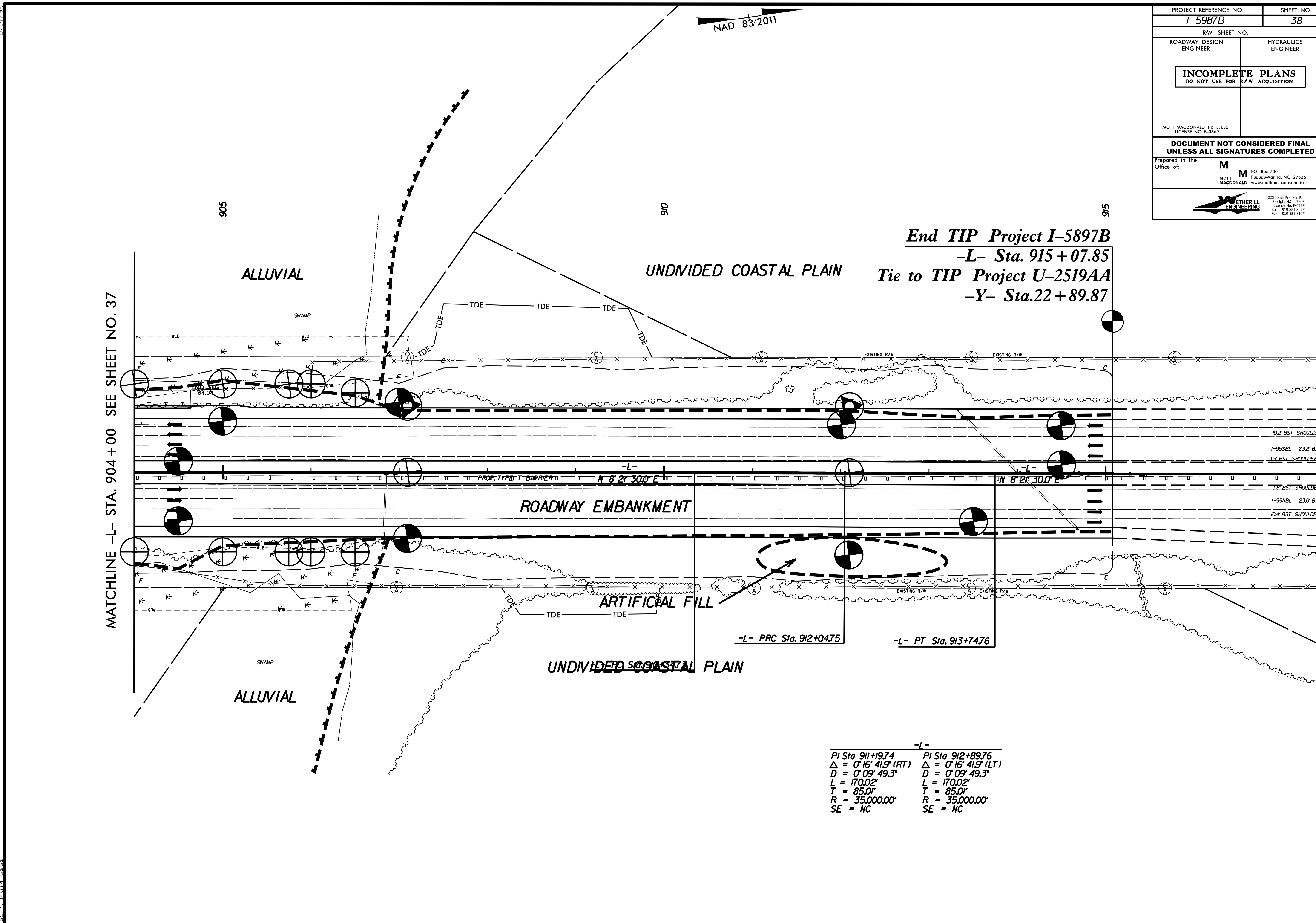

-L-

PI Sta 911+19.74	PI Sta 912+89.76
Δ = 0° 16' 41.9" (RT)	Δ = 0° 16' 41.9" (LT)
D = 0° 09' 49.3"	D = 0° 09' 49.3"
L = 170.02'	L = 170.02'
T = 85.01'	T = 85.01'
R = 35,000.00'	R = 35,000.00'
SE = NC	SE = NC

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	39
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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LICENSE NO. F-0669

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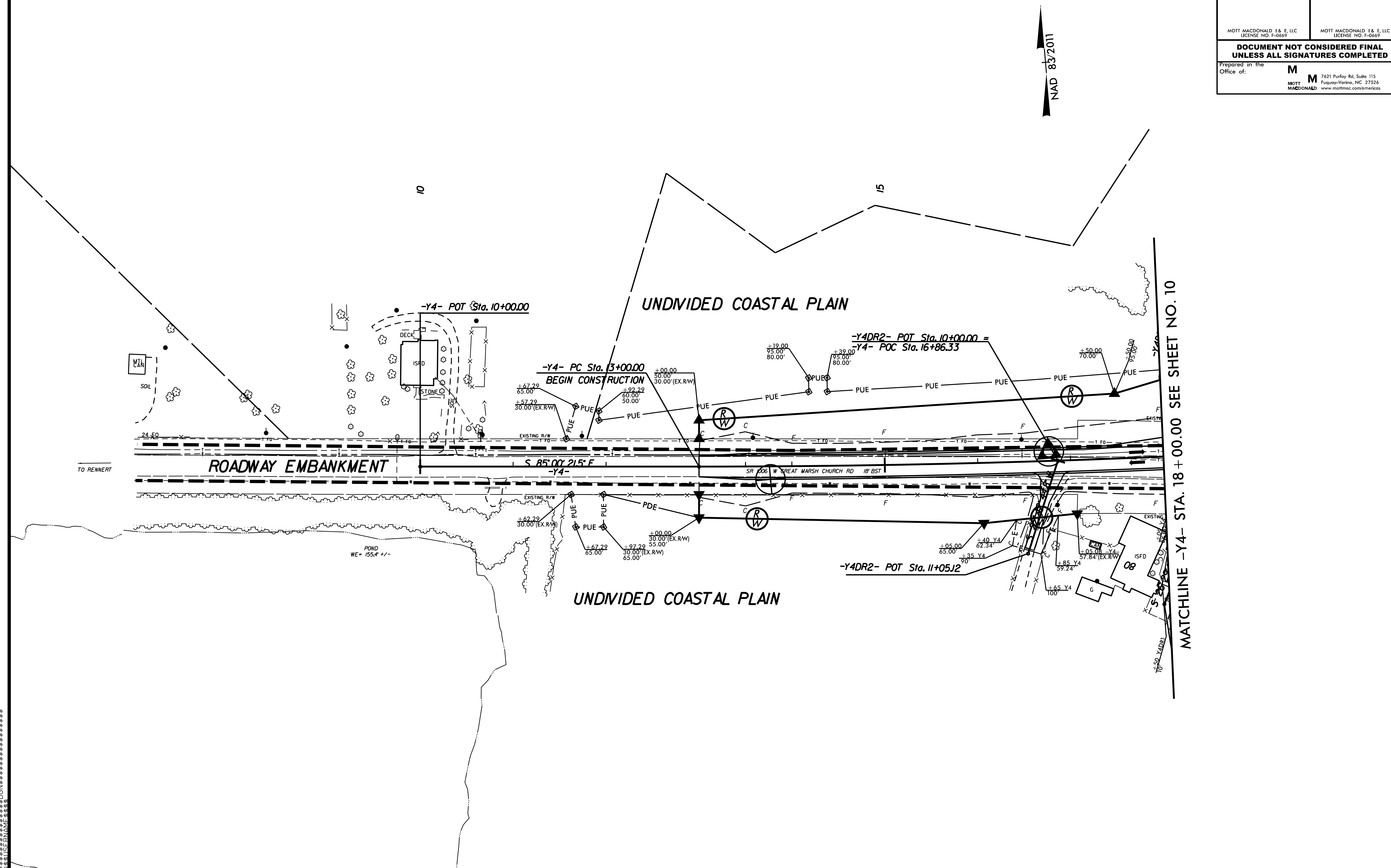
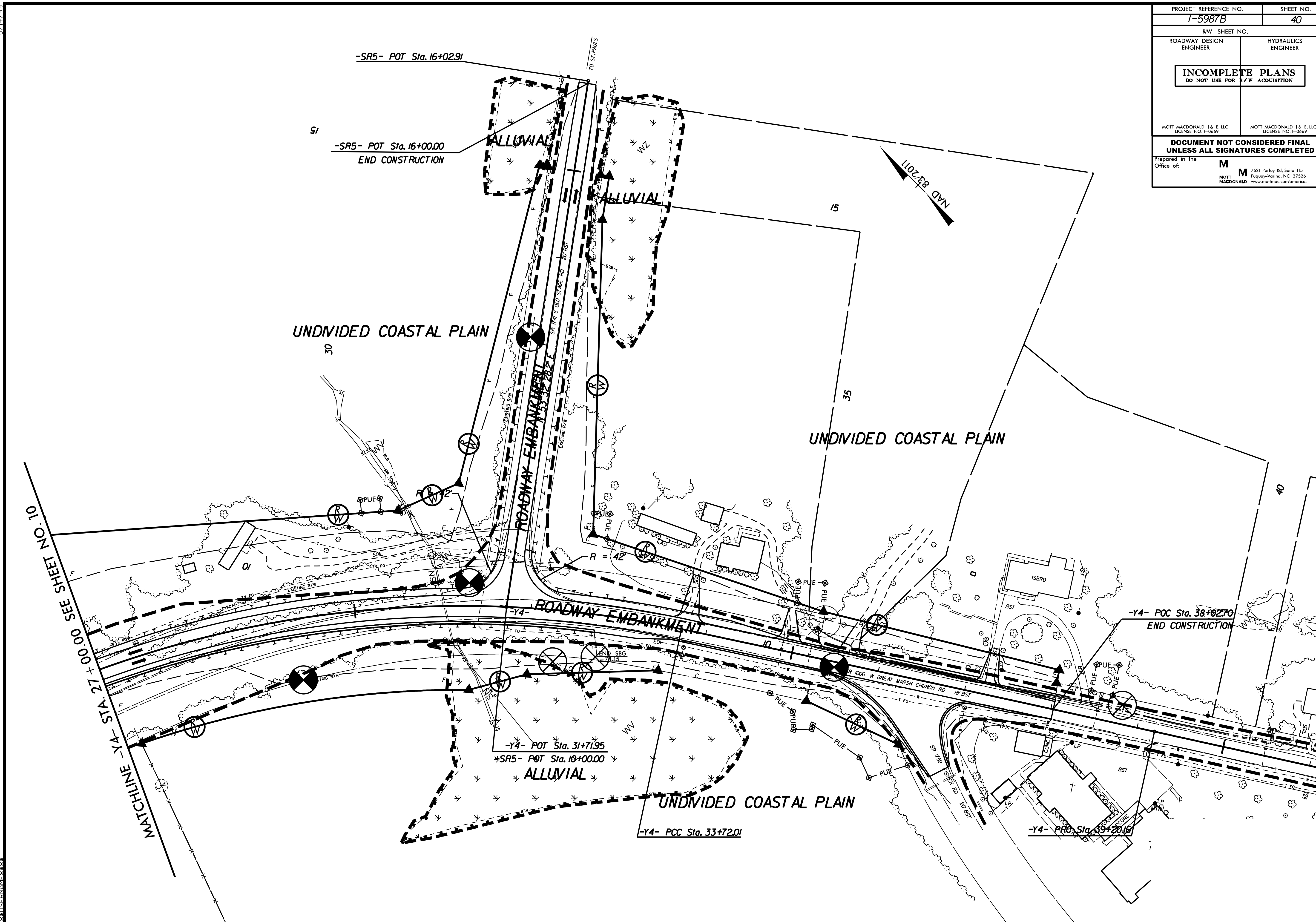
7621 Purfoy Rd, Suite 115
Fuquay-Varina, NC 27526
www.mottmac.com/americas



$$$$SYSTIME$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



PROJECT REFERENCE NO.	SHEET NO.
I-5987B	40
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	MOTT MACDONALD I & E, LLC LICENSE NO. F-0669

INCOMPLETE PLANS
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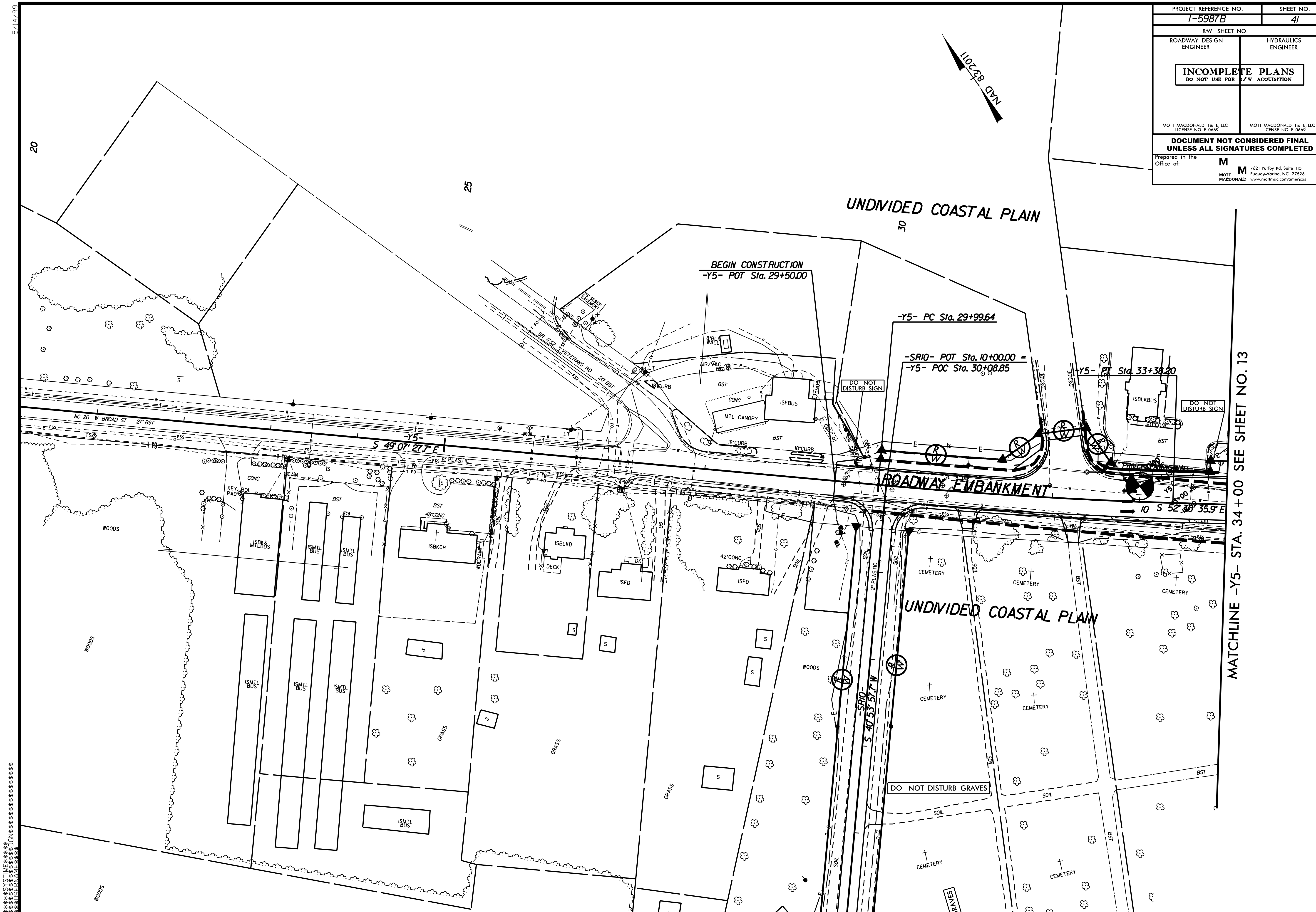
5/14/99

$$$$$SYSTIME$$$$$
$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	42
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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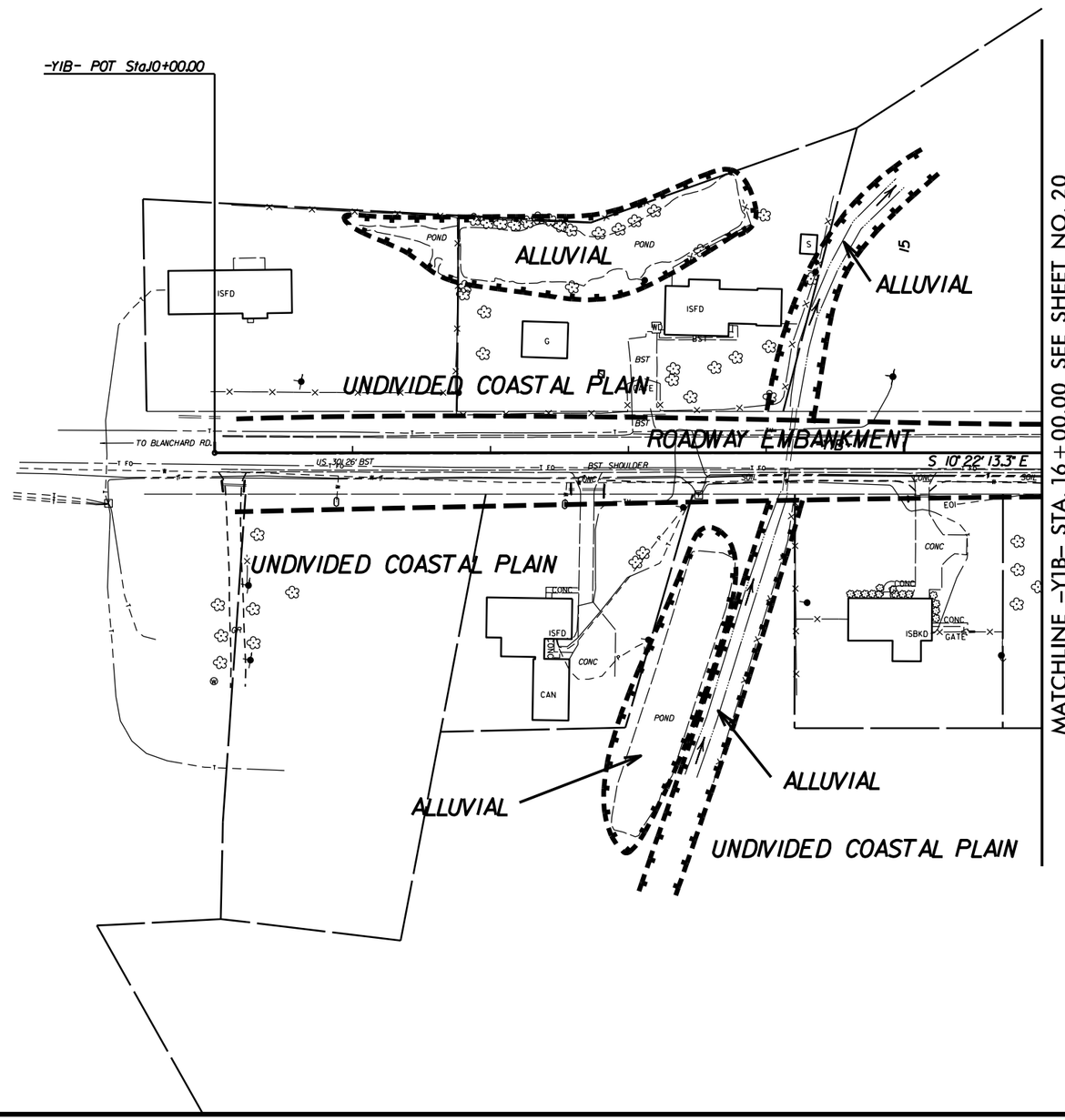
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

NAD 83/2011



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$$$$$$USERNAME$$$$$$DGN$$$$$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	43

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
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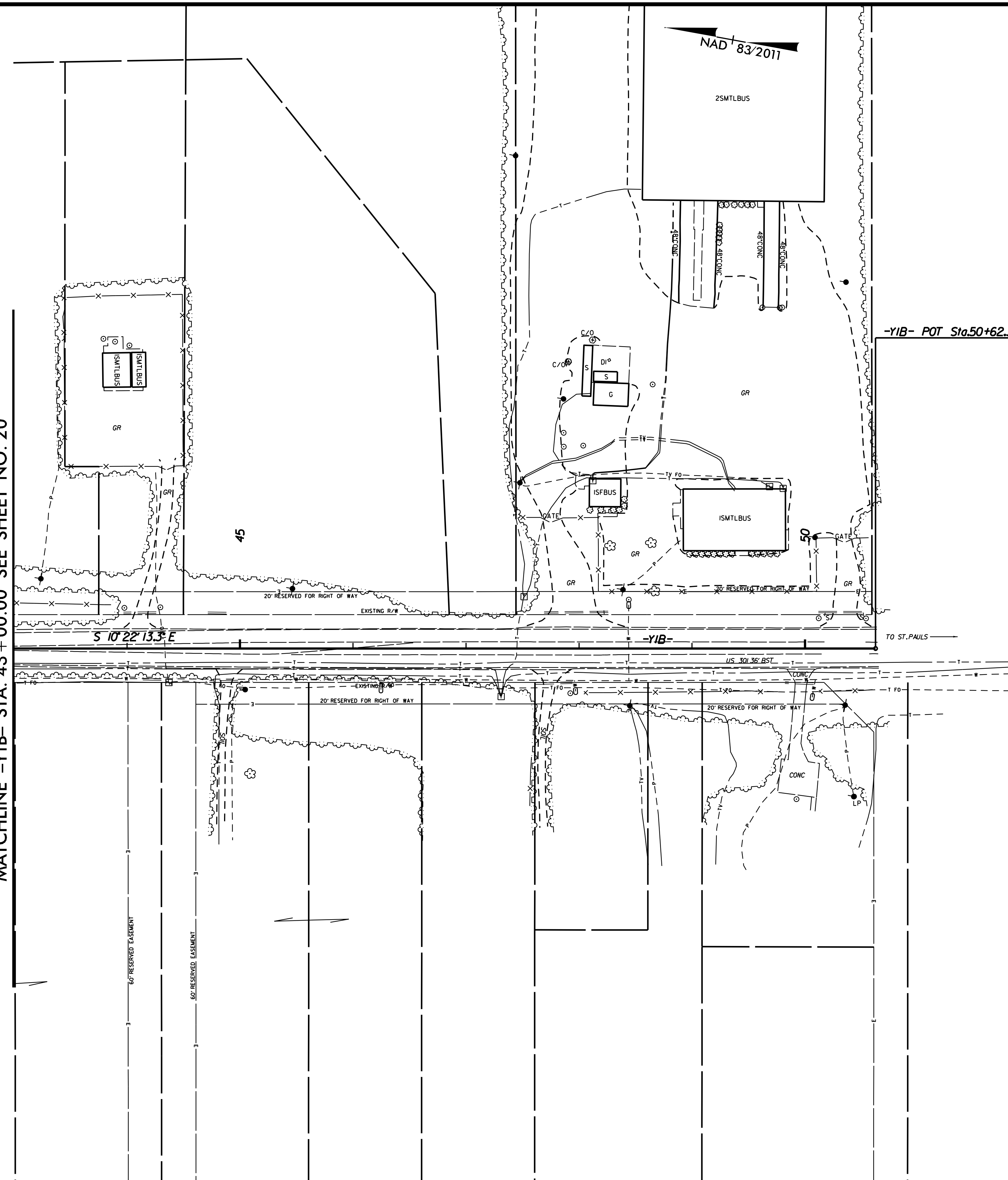
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

5/14/99



$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	44
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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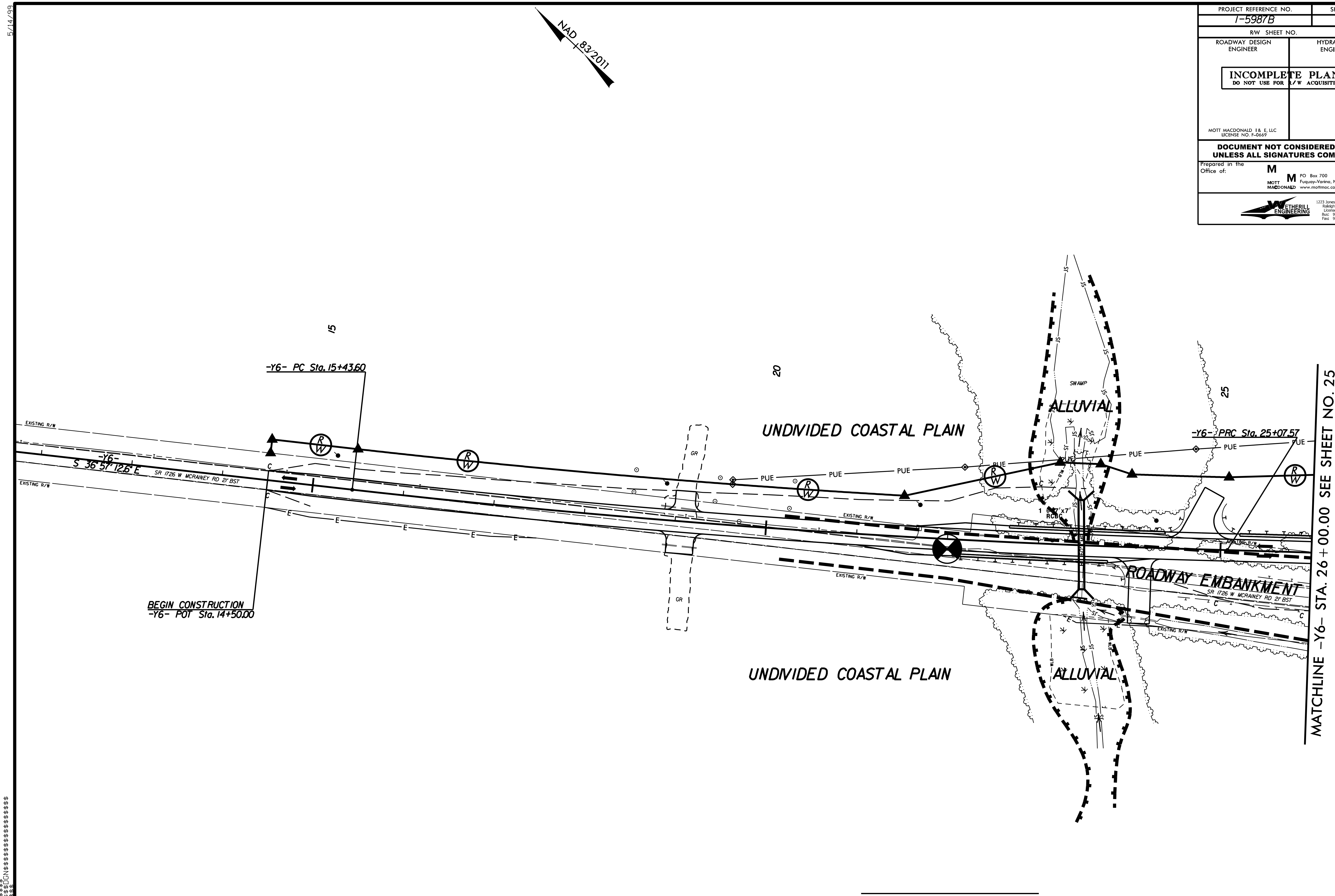
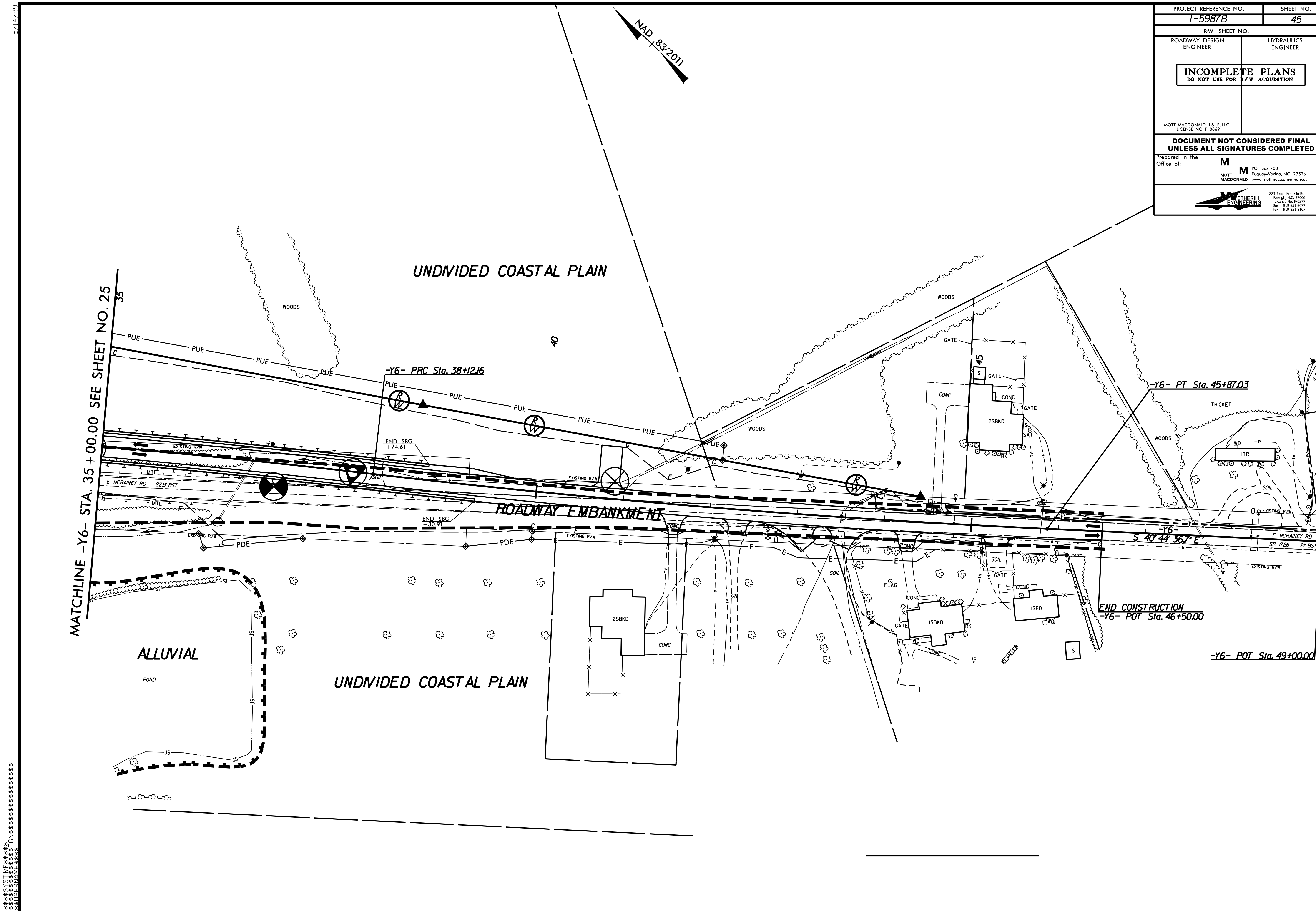
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107




PROJECT REFERENCE NO.
I-5987B
SHEET NO.
45
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
MOTT MACDONALD I& E, LLC
LICENSE NO. F-0669
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PO Box 700
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www.mottmac.com/americas
WETHERILL ENGINEERING
NAD 83/2011
MATCHLINE -Y6- STA. 35+00.00 SEE SHEET NO. 25
UNDIVIDED COASTAL PLAIN
WOODS
-Y6- PRC Sta. 38+12.16
END SBG +74.61
END SBG +30.91
E MCRAINEY RD 22.9' BST
ROADWAY EMBANKMENT
EXISTING R/W
PUE
PDE
2SBKD
ALLUVIAL
POND
UNDIVIDED COASTAL PLAIN
THICKET
HTR
-Y6- PT Sta. 45+87.03
-Y6-
S 40° 44' 36.7" E
E MCRAINEY RD
SR 1726 21' BST
1SBKD
1SFD
END CONSTRUCTION
-Y6- POT Sta. 46+50.00
-Y6- POT Sta. 49+00.00

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	46
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0277
Bus: 919 851 8077
Fax: 919 851 8107

NAD 83/2011

UNDIVIDED COASTAL PLAIN

50' PRIVATE ROAD EASEMENT DB 780 PG 461

50' PRIVATE ROAD EASEMENT DB 780 PG 461

45' PRIVATE ACCESS EASEMENT

10' PRIVATE ACCESS EASEMENT

15

20

25

ISFD

G

CONC

WD

CAN

GATE

GR

SOIL

HTR

EXISTING R/W

ROADWAY EMBANKMENT

TO PARKTON

W PARKTON TOBERMORY RD SR 1137

-Y7- S 71° 33' 13" E

-Y7- PC Sta. 19+12.98

-Y7- PC Sta. 23+79.04

-Y7- PT Sta. 22+83.04

BEGIN CONSTRUCTION
-Y7- POT Sta. 18+00.00

MATCHLINE -Y7- STA. 26+00.00 SEE SHEET NO. 36

UNDIVIDED COASTAL PLAIN

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$FILENAME$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987B	47
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
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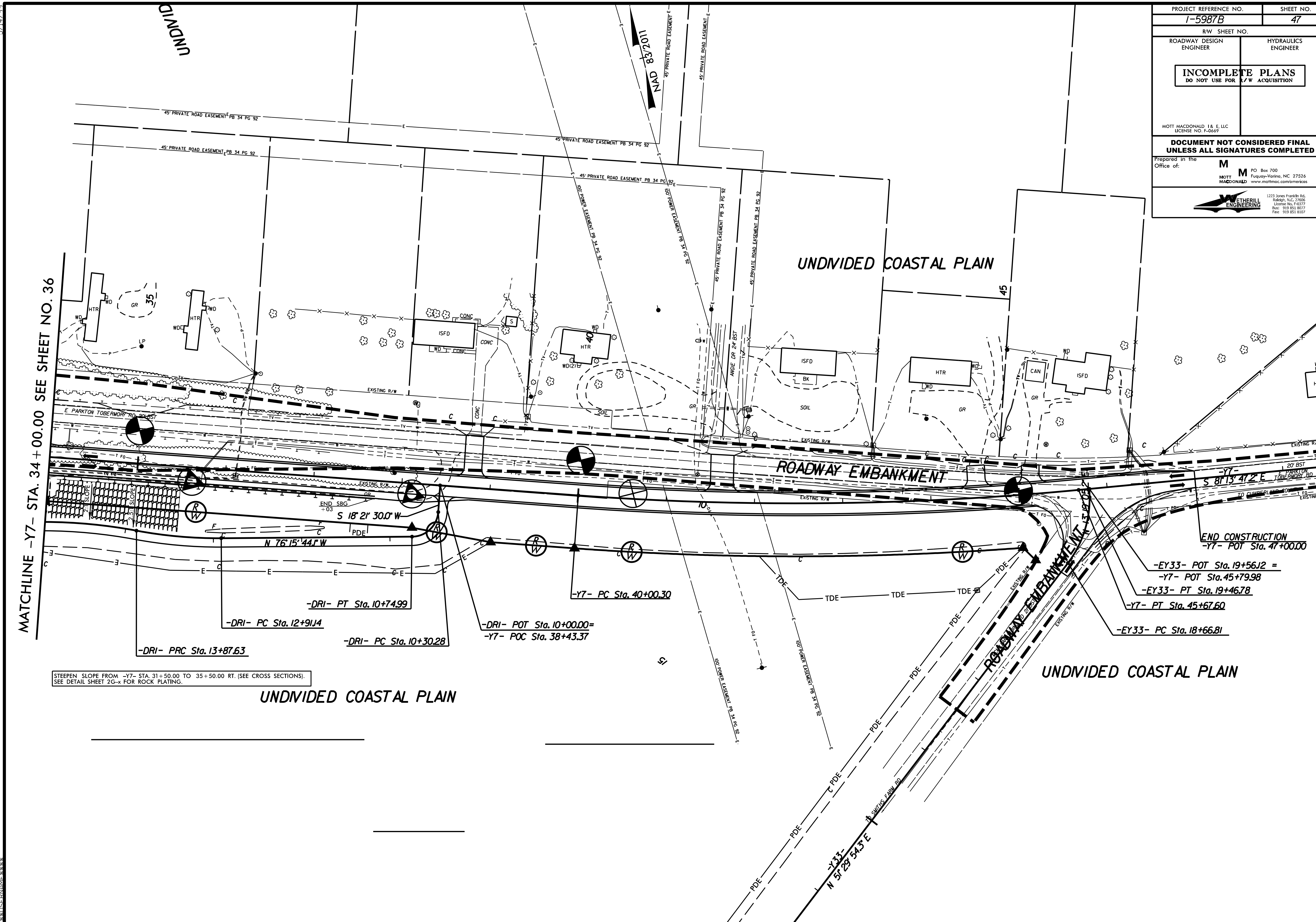
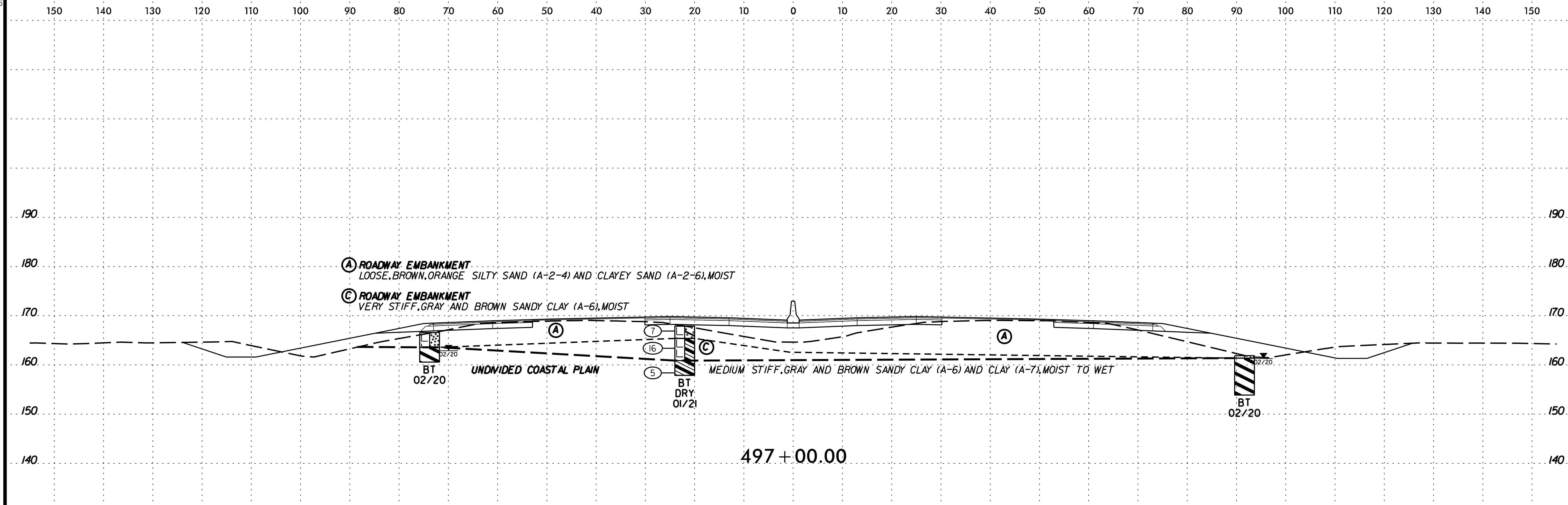


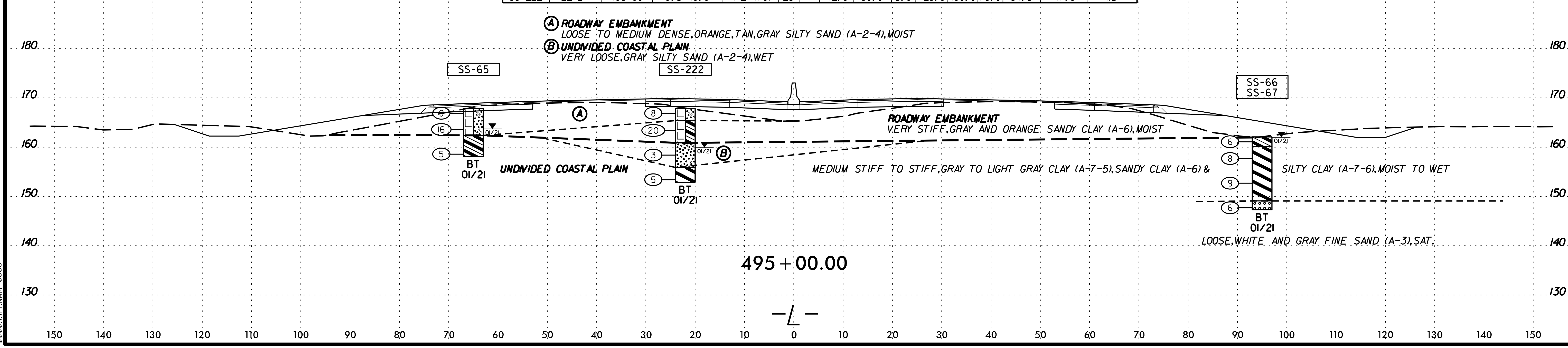
STEEPEN SLOPE FROM -Y7- STA. 31+50.00 TO 35+50.00 RT. (SEE CROSS SECTIONS).
SEE DETAIL SHEET 2G-x FOR ROCK PLATING.

$$$$$$SYSTIME$$$$$ $$$$$$$$USERNAME$$$$$$ $$$$$$DGN$$$$$$$$$$$$$$



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-65	65' LT	495+00	0.0-1.5	A-2-4(0)	NP	NP	63.0	25.0	2.0	10.0	96.0	58.0	13.2	10.9	ND
SS-66	95' RT	495+00	0.0-1.5	A-6(2)	30	13	35.0	25.0	14.0	26.0	99.0	78.0	43.0	17.2	ND
SS-67	95' RT	495+00	3.4-4.9	A-7-6(8)	45	28	30.0	30.0	6.0	34.0	100.0	82.0	44.8	16.8	ND
SS-222	22' LT	495+00	8.5-10.0	A-2-4(0)	23	7	42.0	30.0	5.0	23.0	100.0	76.0	31.5	17.8	ND

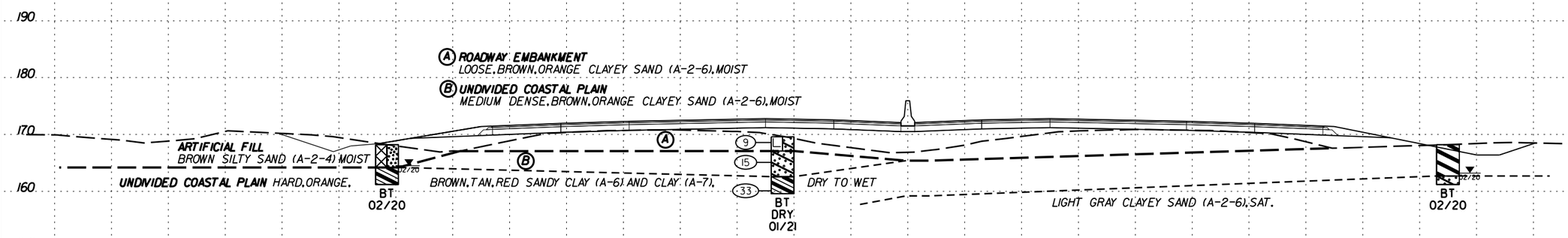


6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

190
180
170
160
150
140

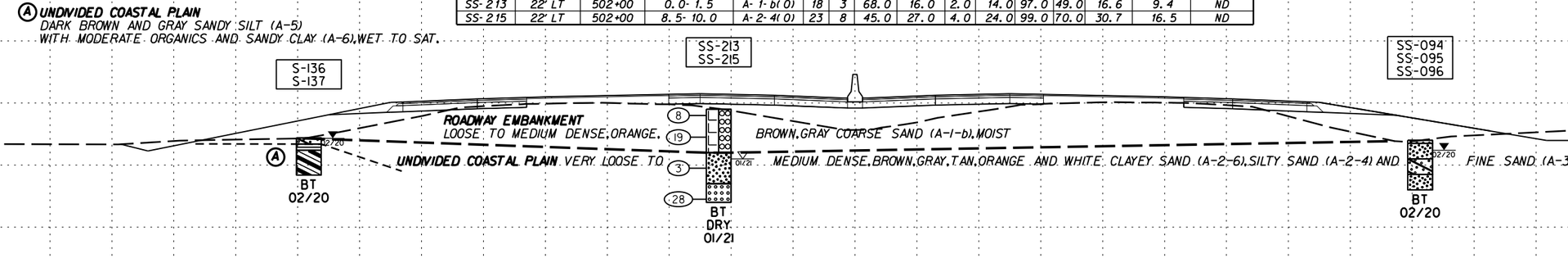


507+00.00

210
200
190
180
170
160
150
140

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
S-094	91' RT	502+00	1.0-2.0	A-2-4(0)	NP	NP	52.8	28.1	8.2	10.9	98.8	65.0	22.0	-	ND
S-095	91' RT	502+00	3.5-4.5	A-2-6(1)	30	16	51.6	23.3	7.4	17.8	98.1	66.0	28.0	-	ND
S-096	91' RT	502+00	6.0-7.0	A-2-4(0)	NP	NP	73.6	15.0	6.6	4.8	96.1	49.0	12.0	-	ND
S-136	88' LT	502+00	1.0-2.0	A-5(0)	45	9	40.8	26.0	17.3	15.9	99.7	71.0	37.0	50.0	12.4
S-137	88' LT	502+00	2.0-3.0	A-6(2)	26	13	32.0	28.4	13.1	26.5	99.7	79.0	43.0	18.0	ND
SS-213	22' LT	502+00	0.0-1.5	A-1-b(0)	18	3	68.0	16.0	2.0	14.0	97.0	49.0	16.6	9.4	ND
SS-215	22' LT	502+00	8.5-10.0	A-2-4(0)	23	8	45.0	27.0	4.0	24.0	99.0	70.0	30.7	16.5	ND



502+00.00

$$$$$$$$SYSTIME$$$$$
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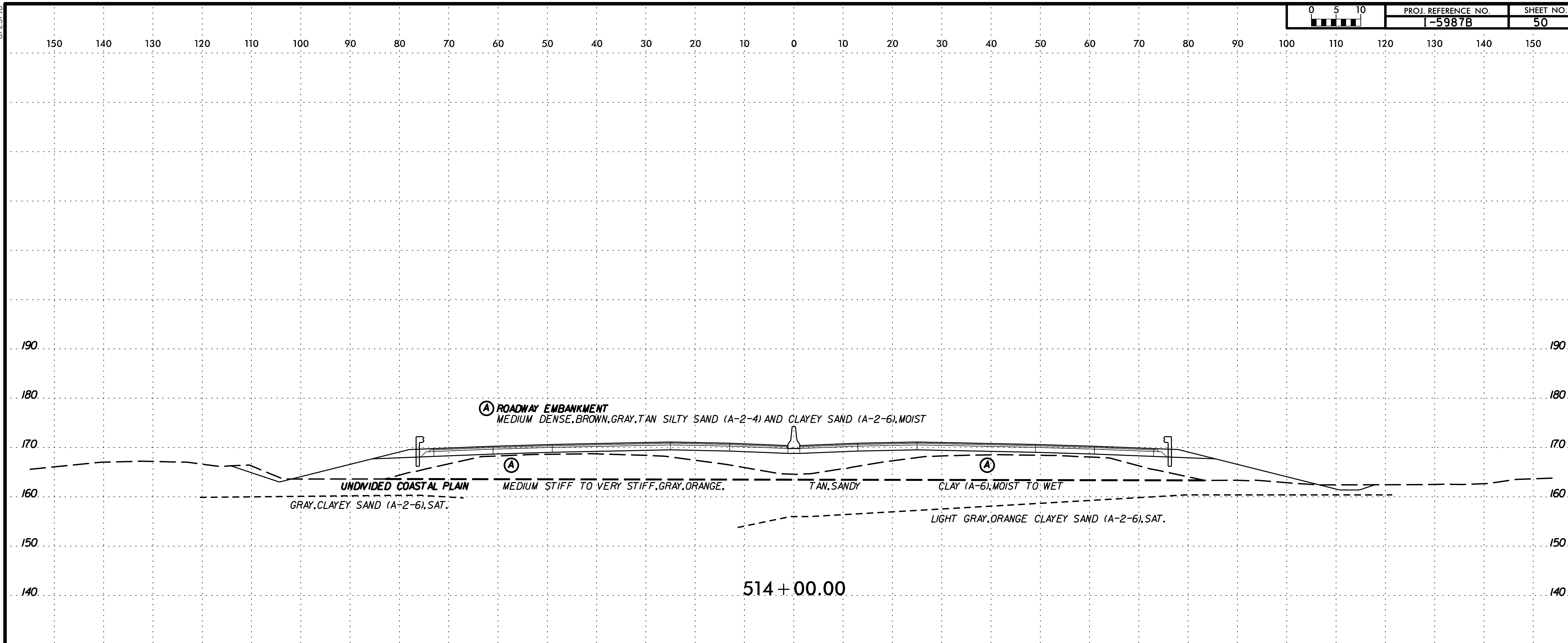
$$$$$USERNAME$$$$

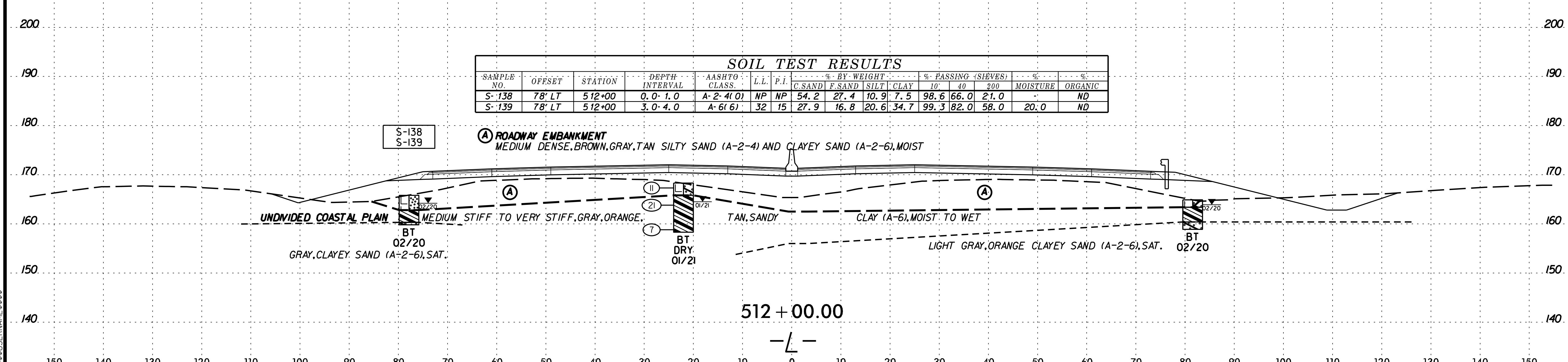
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	50



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-138	78' LT	512+00	0.0-1.0	A-2-4(0)	NP	NP	54.2	27.4	10.9	7.5	98.6	66.0	21.0	-	ND
S-139	78' LT	512+00	3.0-4.0	A-6(6)	32	15	27.9	16.8	20.6	34.7	99.3	82.0	58.0	20.0	ND



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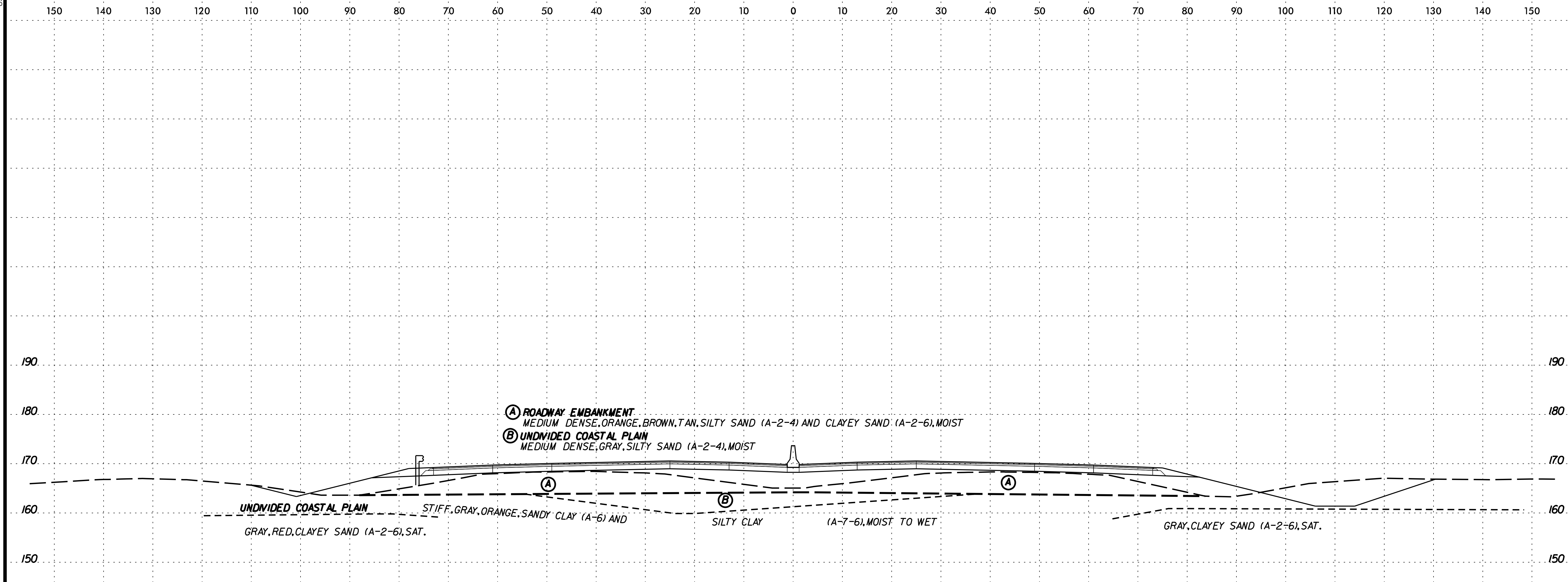
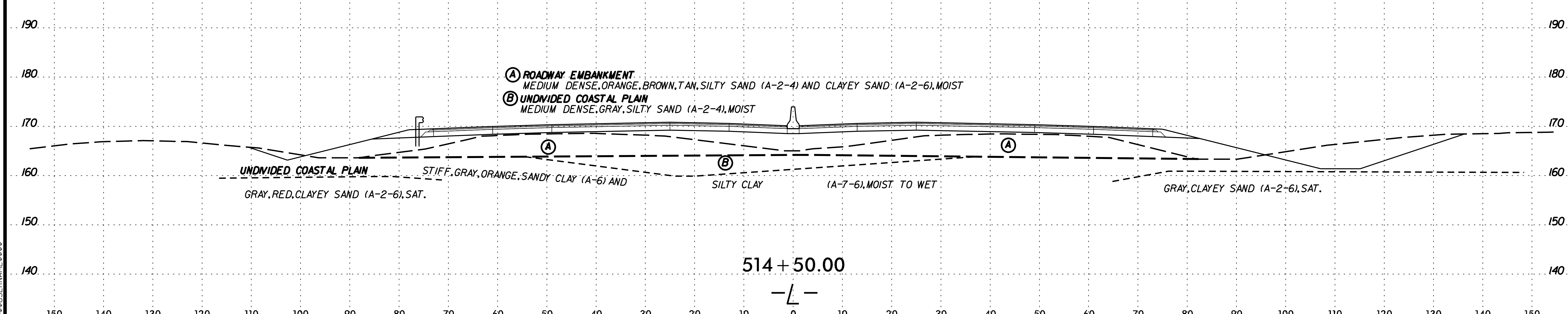
$$$$USERNAME$$$$



515 + 00.00



514 + 50.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	52

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

190
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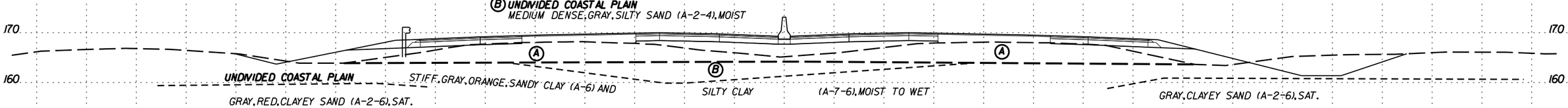
Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, ORANGE, BROWN, TAN, SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE, GRAY, SILTY SAND (A-2-4), MOIST



UNDIVIDED COASTAL PLAIN *STIFF, GRAY, ORANGE, SANDY CLAY (A-6) AND GRAY, RED, CLAYEY SAND (A-2-6), SAT.*

SILTY CLAY (A-7-6), MOIST TO WET

GRAY, CLAYEY SAND (A-2-6), SAT.

516 + 00.00

190
180
170
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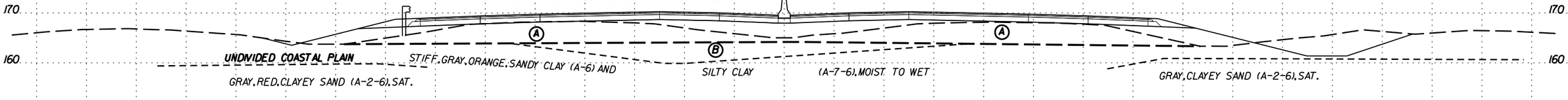
140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, ORANGE, BROWN, TAN, SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE, GRAY, SILTY SAND (A-2-4), MOIST



UNDIVIDED COASTAL PLAIN *STIFF, GRAY, ORANGE, SANDY CLAY (A-6) AND GRAY, RED, CLAYEY SAND (A-2-6), SAT.*

SILTY CLAY (A-7-6), MOIST TO WET

GRAY, CLAYEY SAND (A-2-6), SAT.

515 + 50.00

$-L-$

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

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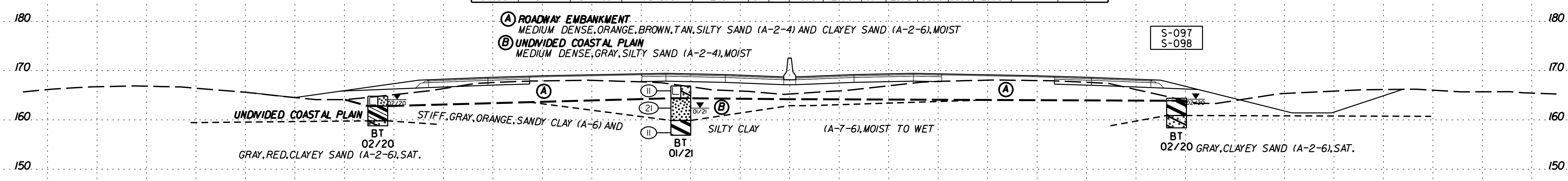
$$$$USERNAME$$$$

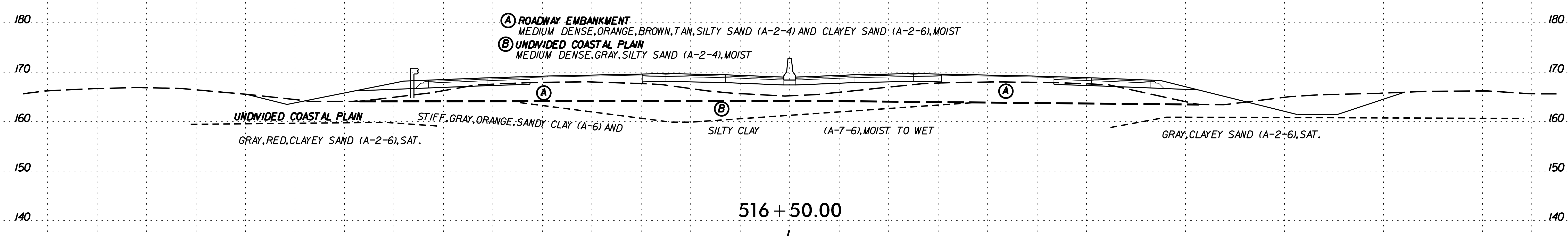
6/23/16

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	53

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-097	78' RT	517+00	1.5-3.0	A-7-6(21)	47	29	16.3	9.9	55.0	18.8	99.7	90.0	75.0	-	ND
S-098	78' RT	517+00	4.5-5.5	A-2-6(1)	34	17	48.9	23.8	3.7	23.5	98.8	68.0	29.0	-	ND





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$$$$$SYSTIME$$$$$
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$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	54

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

190
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170
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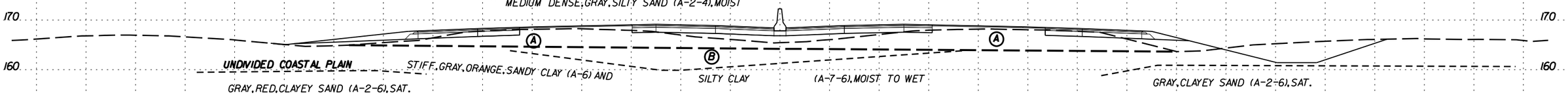
150
140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, ORANGE, BROWN, TAN, SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE, GRAY, SILTY SAND (A-2-4), MOIST

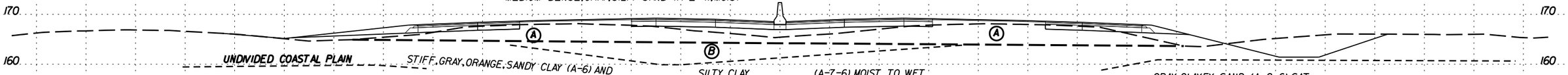


518 + 00.00

190
180
170
160
150
140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, ORANGE, BROWN, TAN, SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE, GRAY, SILTY SAND (A-2-4), MOIST



517 + 50.00

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
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6/23/16

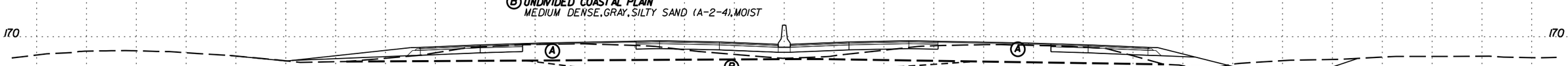
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	55

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

190 180 170 160 150 140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, ORANGE, BROWN, TAN, SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE, GRAY, SILTY SAND (A-2-4), MOIST

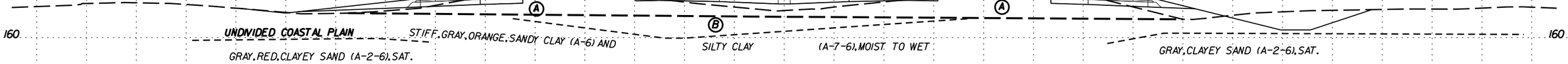


519 + 00.00

190 180 170 160 150 140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, ORANGE, BROWN, TAN, SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE, GRAY, SILTY SAND (A-2-4), MOIST



518 + 50.00

$$$$$$$$SYSTIME$$$$$
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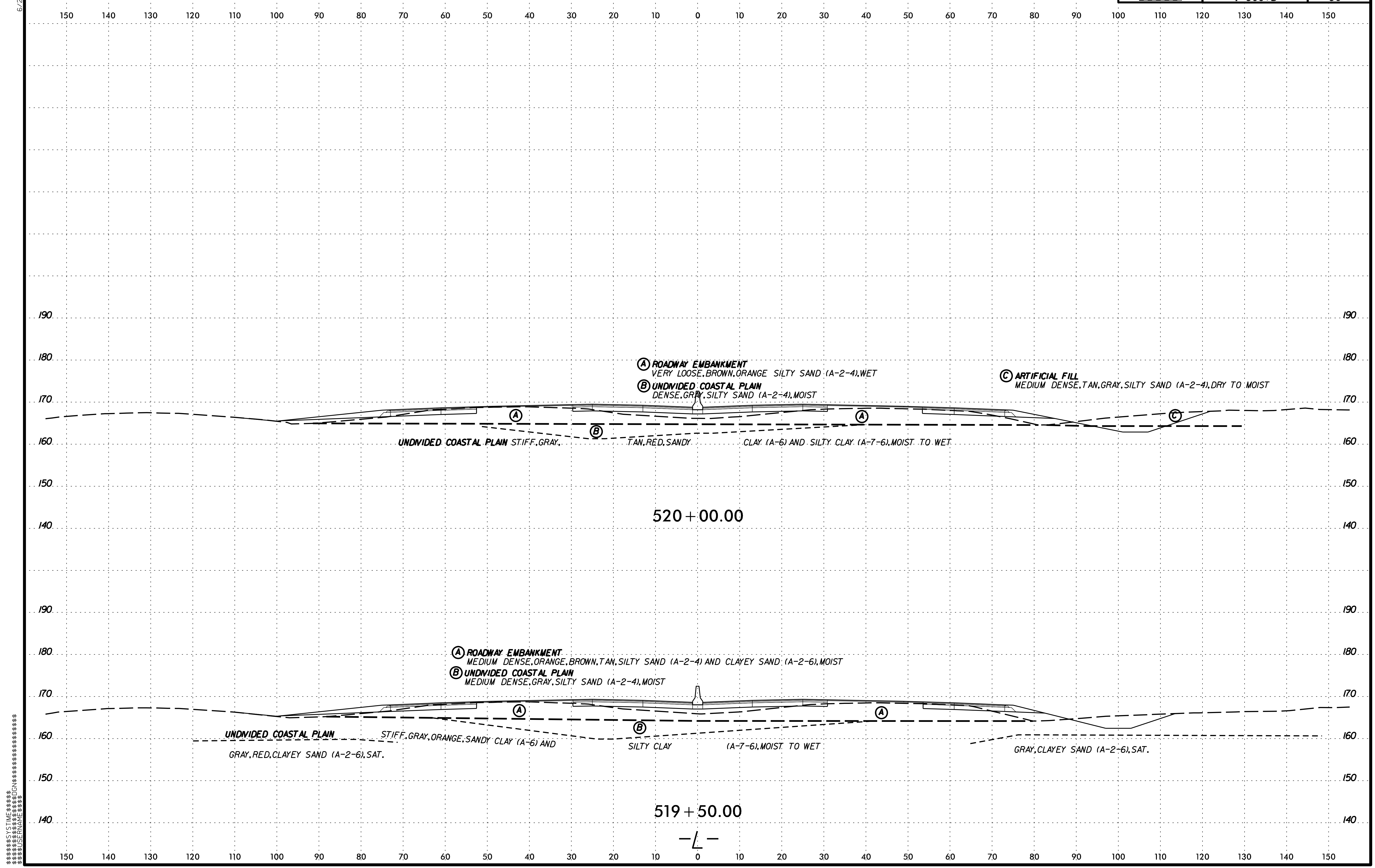
$$$$$USERNAME$$$$

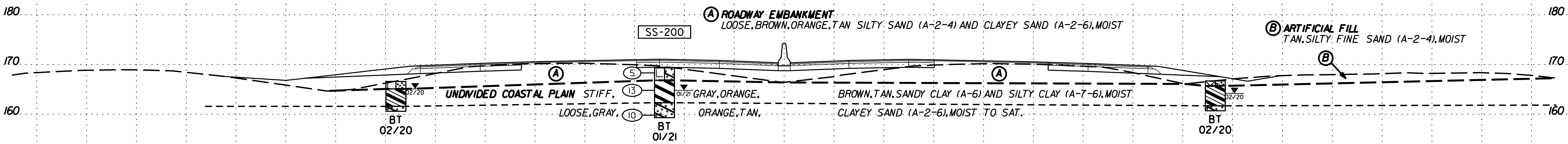
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	56



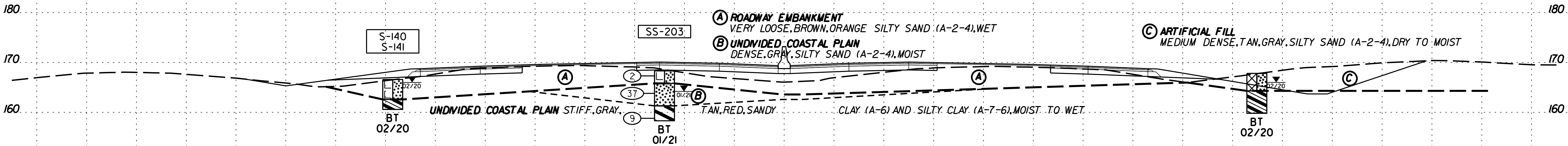
6/23/16

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-200	24' LT	527+00	3.5-5.0	A-7-6(3)	41	16	34.0	28.0	7.0	31.0	100.0	81.0	42.6	18.5	ND



527+00.00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
S-140	79' LT	522+00	0.0-1.0	A-2-4(0)	NP	NP	56.8	26.0	7.5	9.7	96.9	63.0	20.0	-	ND
S-141	79' LT	522+00	4.0-5.0	A-6(1)	23	11	35.1	31.0	11.9	22.0	99.5	76.0	39.0	13.0	ND
SS-203	24' LT	522+00	8.5-10.0	A-7-6(16)	60	32	31.0	14.0	6.0	49.0	100.0	79.0	57.0	24.6	ND



522+00.00

-L-

$$$$SYSTIME$$$$
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$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

200 190 180 170 160 150 140

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-099	102' RT	537+09	4.3-5.8	A-7-6(15)	41	24	40.4	22.9	7.4	29.3	99.6	75.0	40.0	20.0	ND
SS-100	102' RT	537+09	9.3-10.8	A-7-6(30)	55	37	4.5	26.0	22.7	46.8	100.0	97.0	80.0	-	ND
SS-193	24' LT	537+00	0.0-1.5	A-1-b(0)	NP	NP	64.0	19.0	5.0	12.0	92.0	48.0	17.1	10.2	ND

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, LIGHT BROWN WITH RED AND GRAY MOTTLING, COARSE SAND WITH LITTLE CLAY (A-1-b)
CLAYEY SAND (A-2-6), MOIST TO WET

SS-193

Ⓑ **UNDIVIDED COASTAL PLAIN**
DARK GRAY TO GRAY, CLAYEY, F. SAND

SS-099
SS-100
537+09

BT 02/20

UNDIVIDED COASTAL PLAIN

BT DRY 01/21

GRAY BROWN AND ORANGE SANDY CLAY (A-6) AND CLAY (A-7), MOIST

BT 12/19

537+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
S-142	78' LT	532+00	0.0-1.0	A-2-6(0)	25	11	42.8	26.8	9.6	20.9	98.9	75.0	34.0	-	ND
S-143	78' LT	532+00	2.0-3.0	A-2-6(0)	32	13	46.3	25.7	1.8	26.2	99.7	74.0	31.0	15.0	ND
S-144	78' LT	532+00	4.0-5.0	A-6(2)	29	13	36.4	24.8	20.7	18.1	99.9	78.0	42.0	-	ND

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE, BROWN, ORANGE, TAN CLAYEY SAND (A-2-6), COARSE SAND (A-1-b) AND SILTY SAND (A-2-4), MOIST TO WET

Ⓑ **UNDIVIDED COASTAL PLAIN**
ORANGE, TAN, GRAY, CLAYEY SAND (A-2-6) AND SILTY SAND (A-2-4), MOIST TO WET

S-142
S-143
S-144

BT 02/20

UNDIVIDED COASTAL PLAIN STIFF.

BT 01/20

ORANGE, GRAY,

BROWN, SANDY CLAY (A-6) AND CLAY (A-7), MOIST TO WET

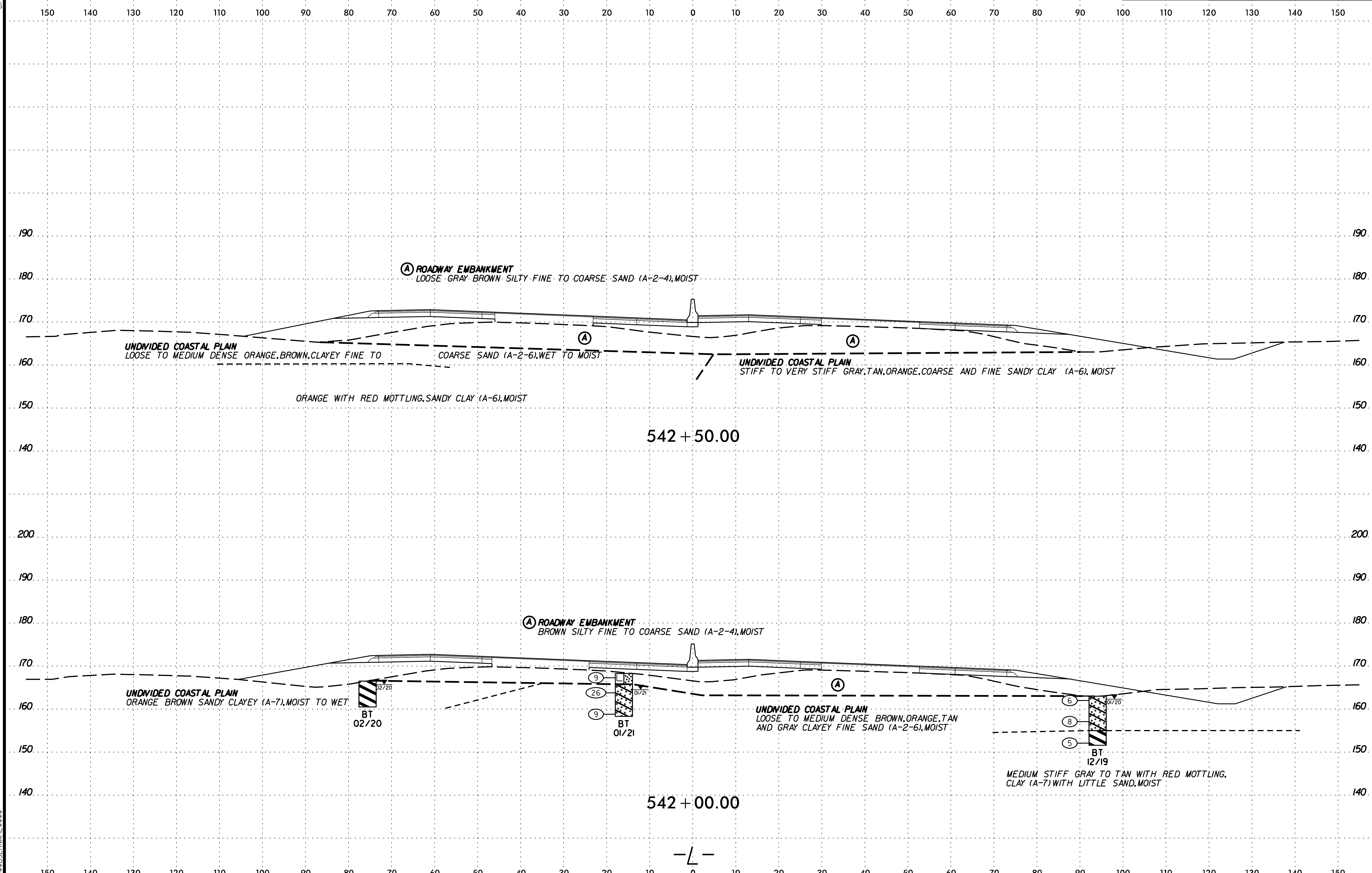
BT 02/20

532+00.00

$$$$USERNAME$$$$ $$$$SYSTIME$$$$ $$$$DGN$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	59



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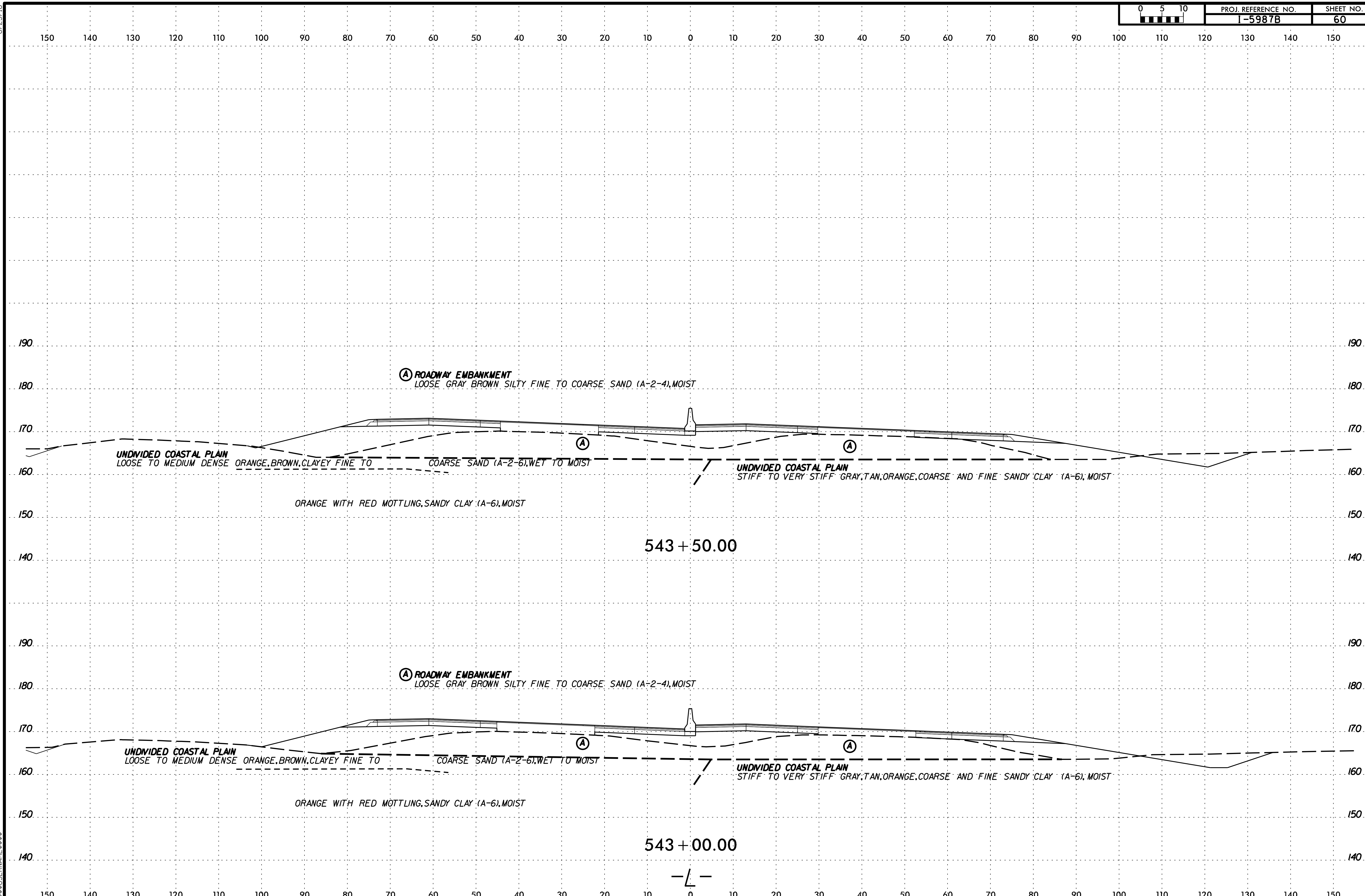
PROJ. REFERENCE NO.
I-5987B
SHEET NO.
60
Ⓐ ROADWAY EMBANKMENT
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4),MOIST
UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE,BROWN,CLAYEY FINE TO COARSE SAND (A-2-6),WET TO MOIST
ORANGE WITH RED MOTTLING,SANDY CLAY (A-6),MOIST
UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY,TAN,ORANGE,COARSE AND FINE SANDY CLAY (A-6), MOIST
543+50.00
Ⓐ ROADWAY EMBANKMENT
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4),MOIST
UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE,BROWN,CLAYEY FINE TO COARSE SAND (A-2-6),WET TO MOIST
ORANGE WITH RED MOTTLING,SANDY CLAY (A-6),MOIST
UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY,TAN,ORANGE,COARSE AND FINE SANDY CLAY (A-6), MOIST
543+00.00
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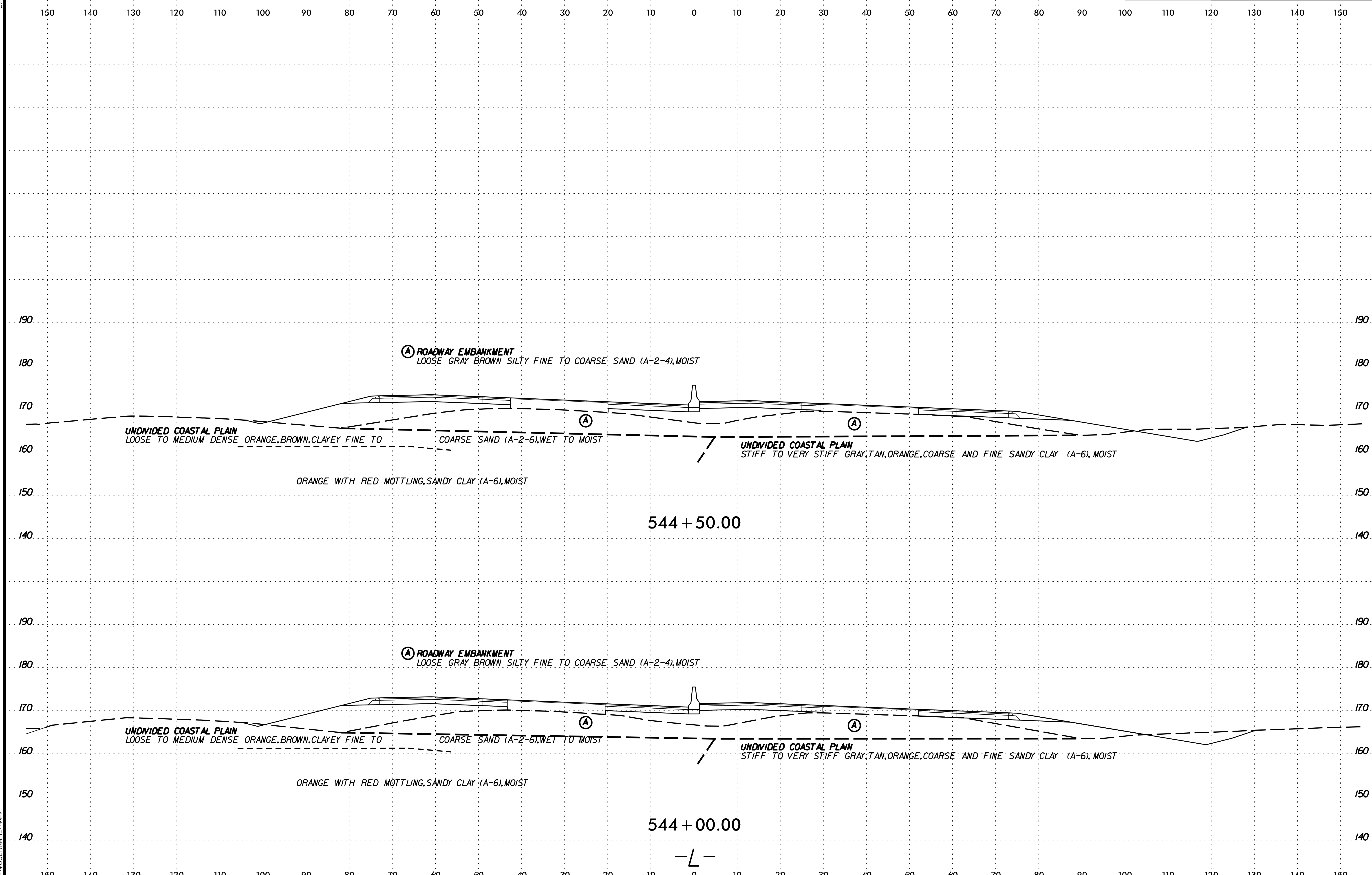
6/23/16

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	61



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$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	62

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

190
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170
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150
140

Ⓐ **ROADWAY EMBANKMENT**
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

545+50.00

190
180
170
160
150
140

Ⓐ **ROADWAY EMBANKMENT**
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

545+00.00

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

$$$$$$$SYSTIME$$$$$$
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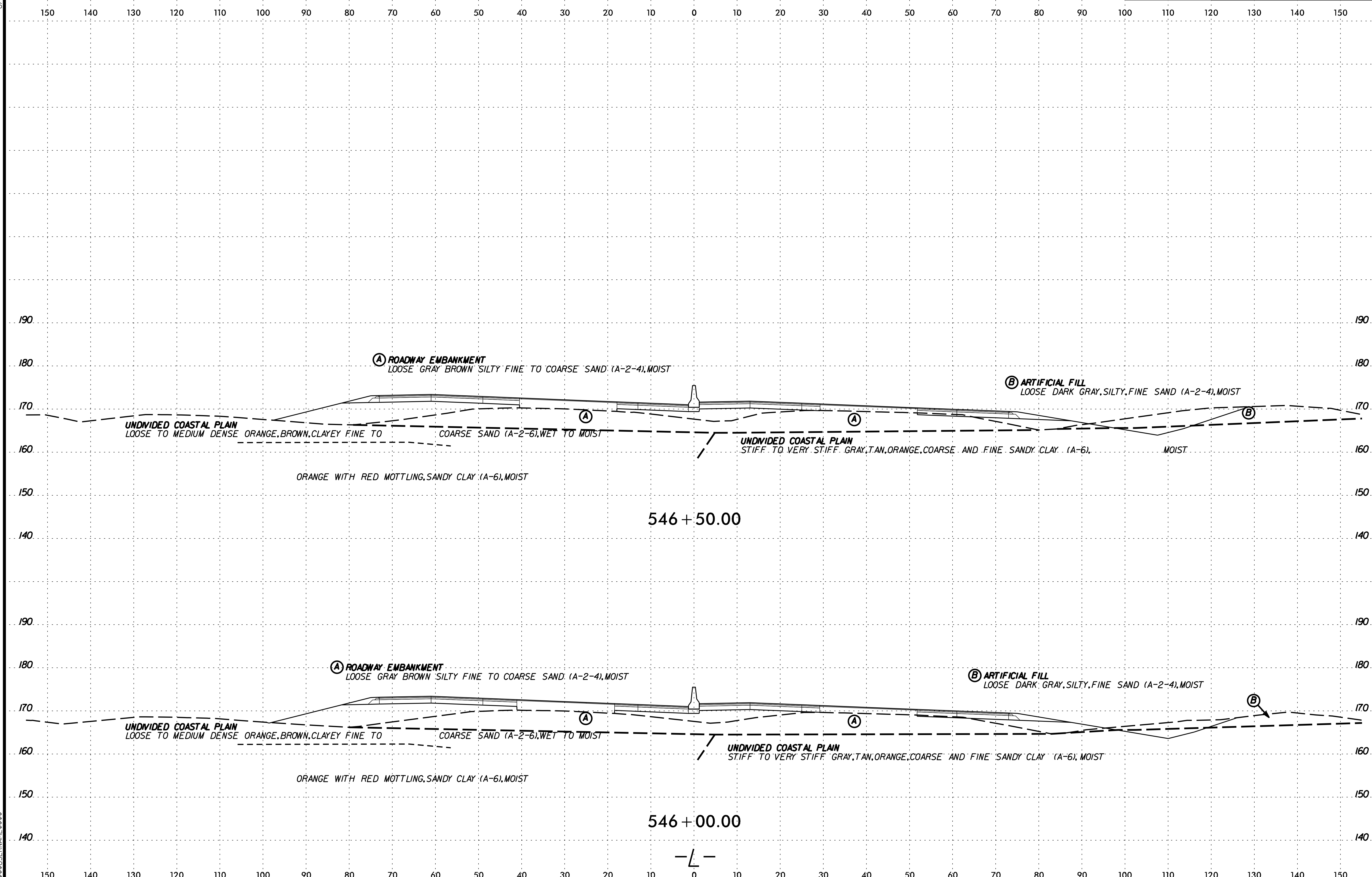
$$$$$USERNAME$$$$

PROJ. REFERENCE NO. I-5987B

SHEET NO. 63



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	64

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

190 180 170 160 150

(A) ROADWAY EMBANKMENT
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

(B) ARTIFICIAL FILL
LOOSE DARK GRAY, SILTY, FINE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

547+50.00

210 200 190 180 170 160 150 140

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-101	100' RT	547+00	4.9-6.4	A-6(3)	36	20	41.6	21.5	9.3	27.6	99.7	74.0	39.0	-	ND
SS-189	6' LT	547+00	8.5-10.0	A-2-6(2)	40	20	47.0	21.0	5.0	27.0	99.0	68.0	33.5	15.4	ND

(A) ROADWAY EMBANKMENT
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

(B) ARTIFICIAL FILL
LOOSE DARK GRAY, SILTY, FINE SAND (A-2-4), MOIST

SS-189 SS-101

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

02/20 BT 02/20

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

8 9 13 01/21 BT 01/21

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

5 9 18 01/20 BT 12/19

547+00.00

—L—

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

$$$$$$$$SYSTIME$$$$$$
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$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

190
180
170
160
150
140

Ⓐ **ROADWAY EMBANKMENT**
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

Ⓑ **ARTIFICIAL FILL**
LOOSE DARK GRAY, SILTY, FINE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

548+50.00

Ⓐ **ROADWAY EMBANKMENT**
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

Ⓑ **ARTIFICIAL FILL**
LOOSE DARK GRAY, SILTY, FINE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

548+00.00

$$$$$$$SYSTIME$$$$$$$
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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	66

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

190 180 170 160 150 140

Ⓐ **ROADWAY EMBANKMENT**
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

549+50.00

Ⓐ **ROADWAY EMBANKMENT**
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, BROWN, CLAYEY FINE TO COARSE SAND (A-2-6), WET TO MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF GRAY, TAN, ORANGE, COARSE AND FINE SANDY CLAY (A-6), MOIST

ORANGE WITH RED MOTTLING, SANDY CLAY (A-6), MOIST

549+00.00

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

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	67

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
S-175	10' RT	552+00	2.0-6.0	A-2-4(0)	NP	NP	60.3	26.2	1.3	12.2	99.5	63.0	15.0	-	ND

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN TO LIGHT BROWN SILTY SAND (A-2-4) AND FINE SAND (A-3), WITH LITTLE CLAY, MOIST TO WET

S-175

BT 01/21 (9, 23, 9)

BT 03/20 (03/20)

BT 12/19 (6, 6, 26; 01/20)

MEDIUM STIFF TAN TO LIGHT GRAY SANDY CLAY (A-6), MOIST

UNDIVIDED COASTAL PLAIN *LOOSE TO MEDIUM DENSE TAN, GRAY CLAYEY FINE SAND (A-2-6), FINE SAND (A-3) AND SILTY SAND (A-2-4), MOIST TO WET*

552+00.00

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN TO LIGHT BROWN SILTY SAND (A-2-4) AND FINE SAND (A-3), WITH LITTLE CLAY, MOIST TO WET

UNDIVIDED COASTAL PLAIN *LOOSE TO MEDIUM DENSE TAN, GRAY CLAYEY FINE SAND (A-2-6), FINE SAND (A-3) AND SILTY SAND (A-2-4), MOIST TO WET*

MEDIUM STIFF TAN TO LIGHT GRAY SANDY CLAY (A-6), MOIST

550+00.00

$$$$$$$$SYSTIME$$$$$$$$
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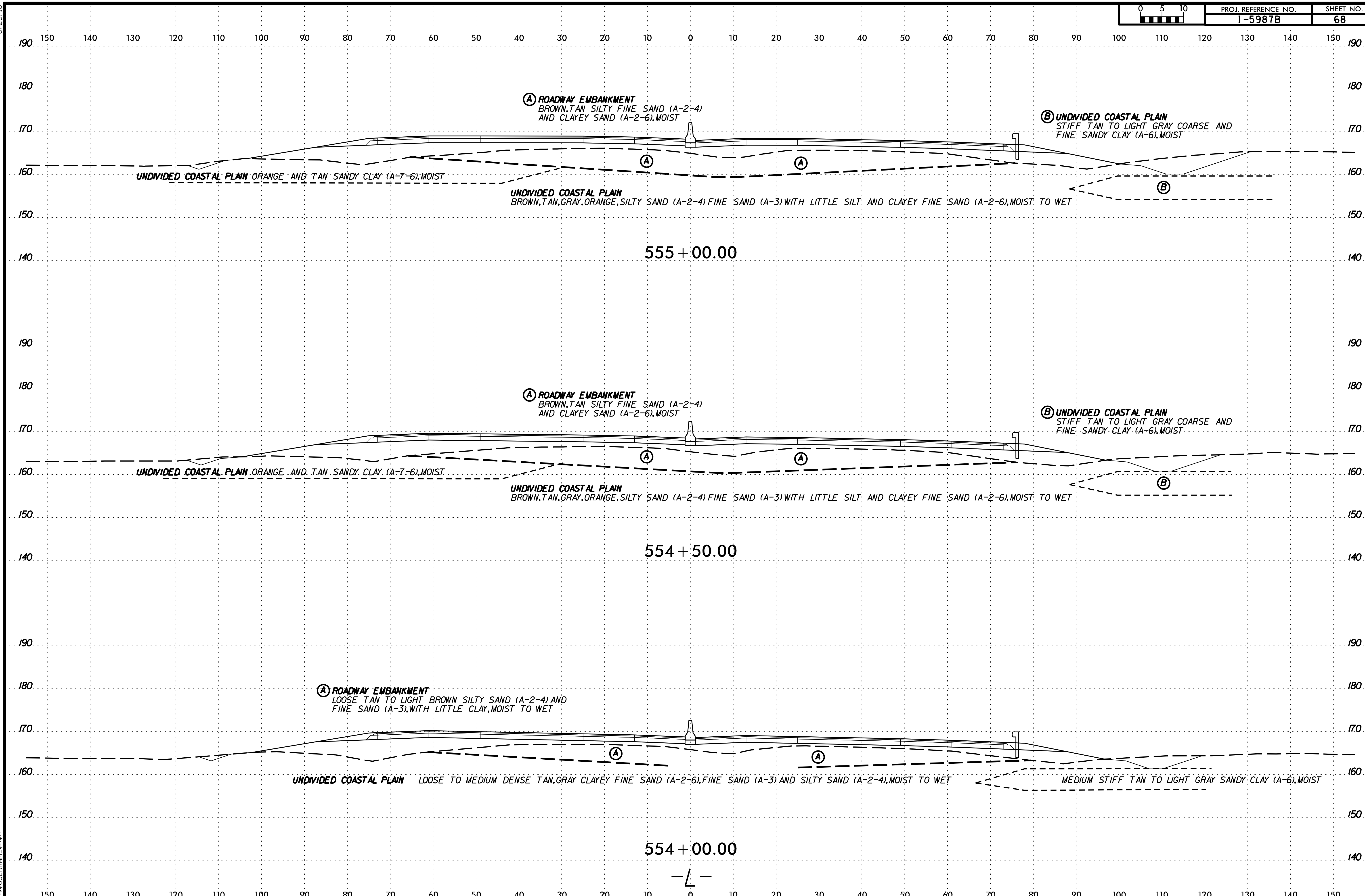
$$$$$$USERNAME$$$$

6/23/16



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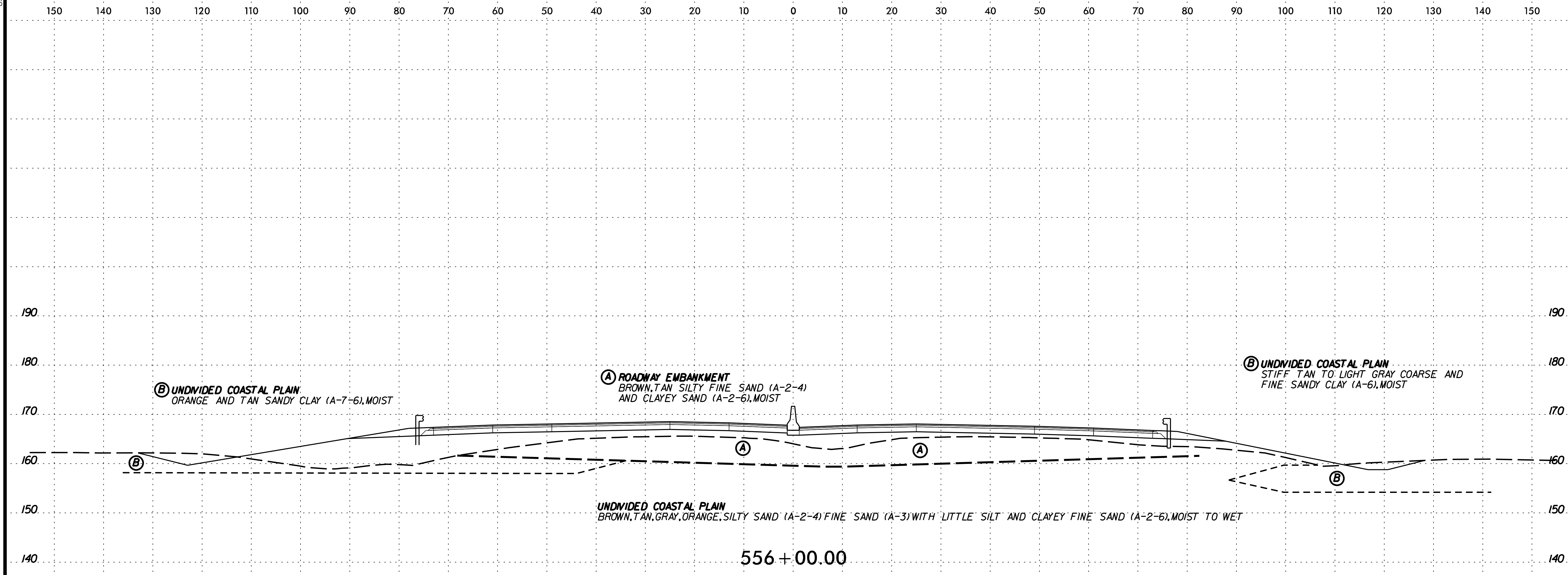
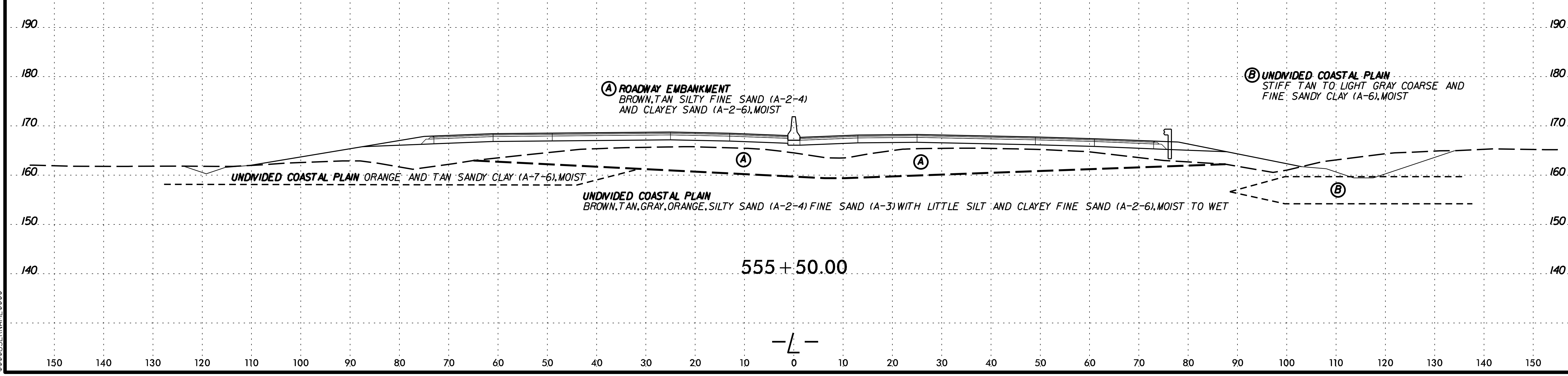
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	69



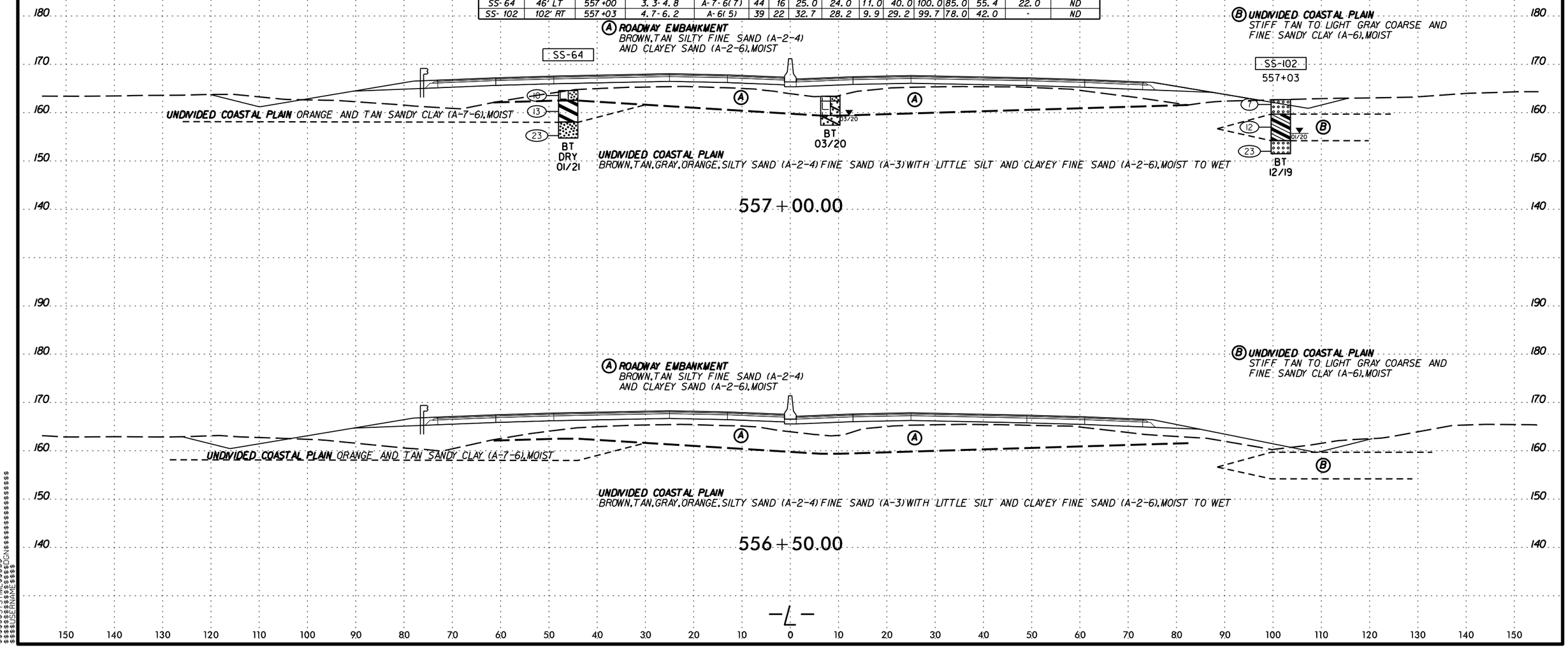


6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	70

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-64	46' LT	557+00	3.3-4.8	A-7-6(17)	44	16	25.0	24.0	11.0	40.0	100.0	85.0	55.4	22.0	ND
SS-102	102' RT	557+03	4.7-6.2	A-6(5)	39	22	32.7	28.2	9.9	29.2	99.7	78.0	42.0	-	ND



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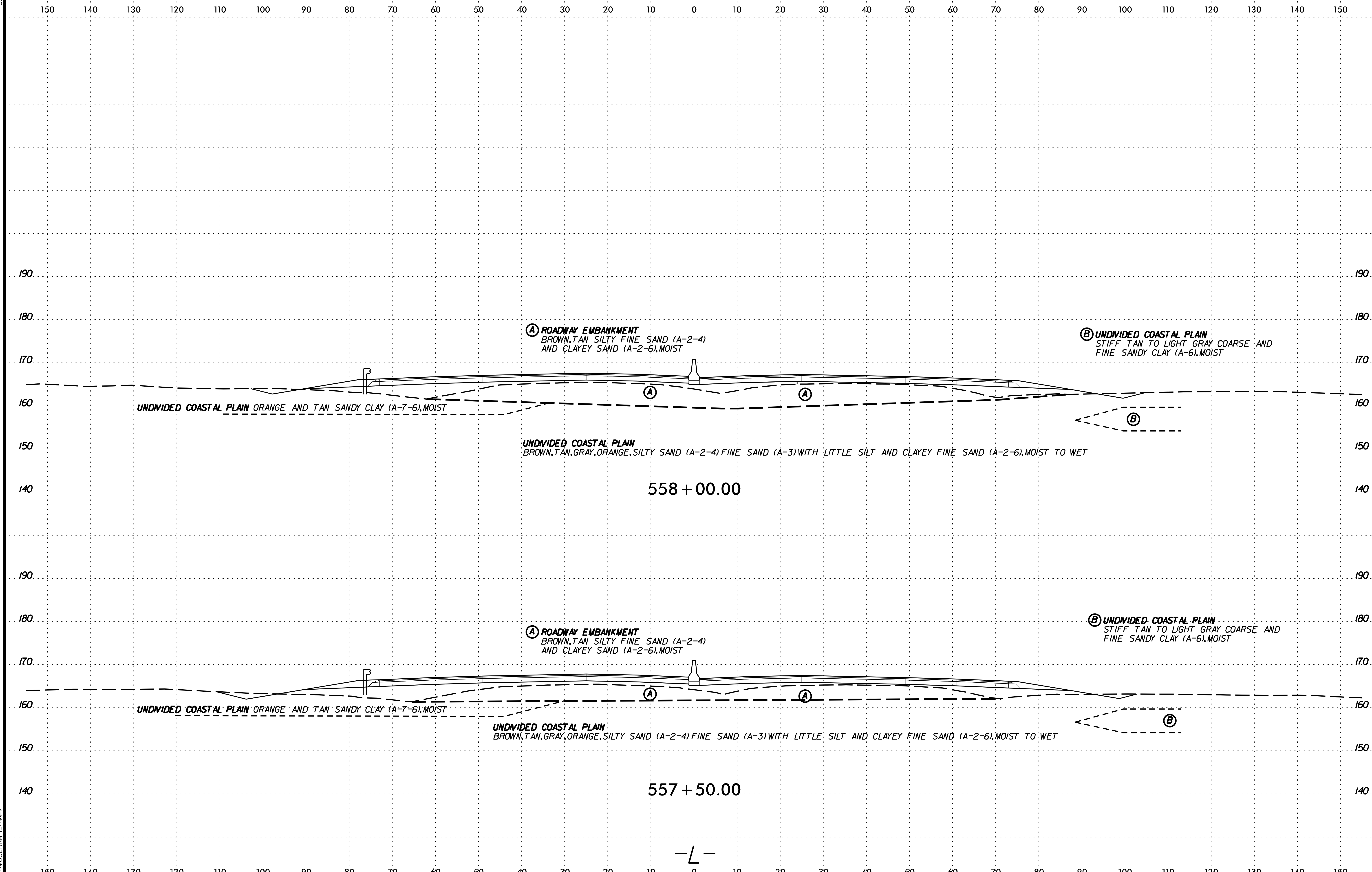
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	71



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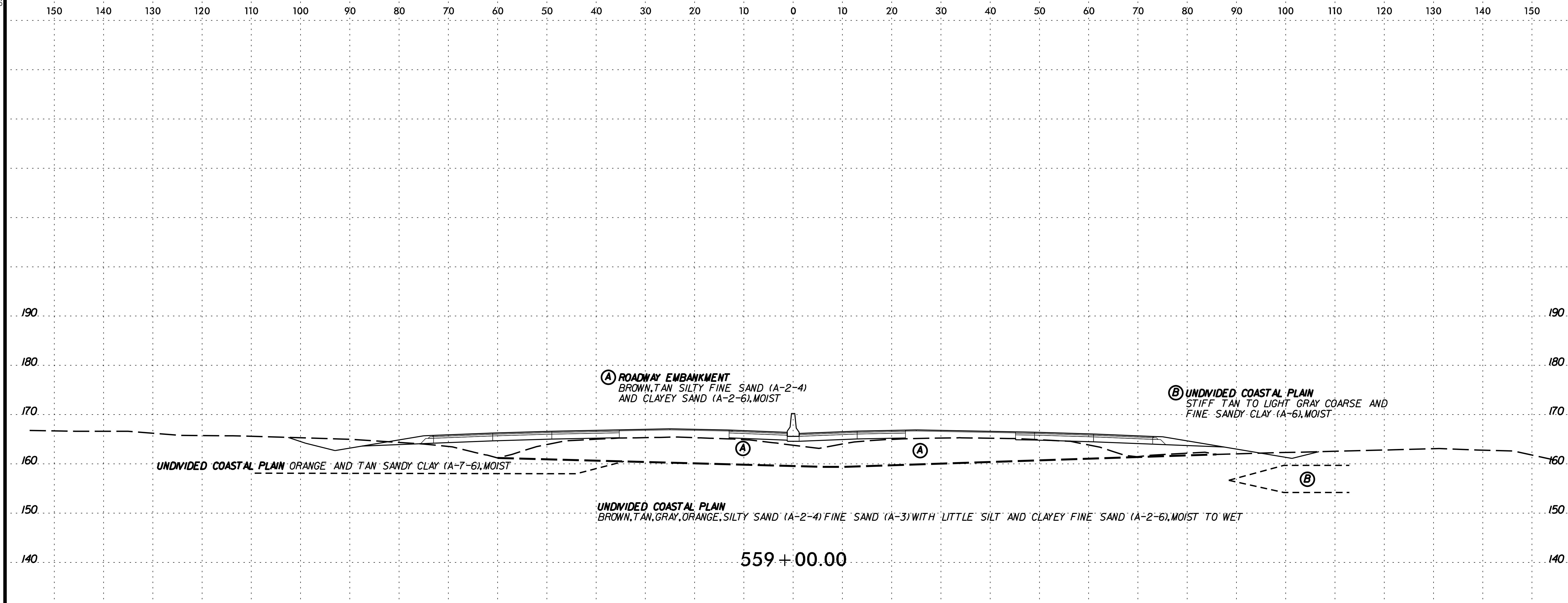
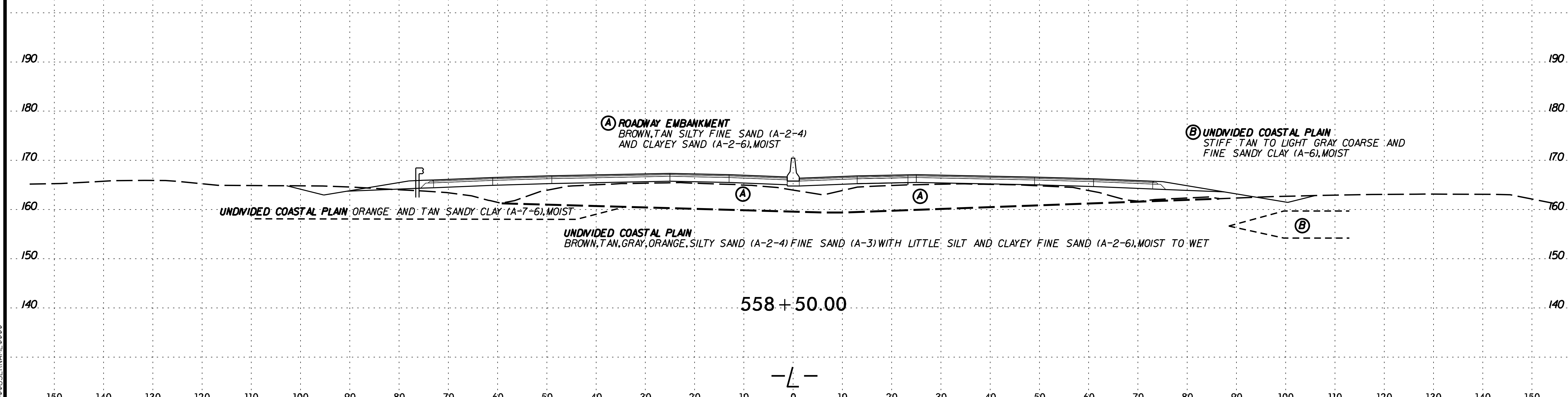
6/23/16

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	72





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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

190 180 170 160 150 140

Ⓐ **ROADWAY EMBANKMENT**
ORANGE, BROWN, TAN SILTY FINE AND COARSE SAND (A-2-4), MOIST

Ⓑ **ARTIFICIAL FILL**
LOOSE BROWN SILTY SAND (A-2-4), MOIST

UNDIVIDED COASTAL PLAIN LOOSE TO DENSE ORANGE, TAN, GRAY, RED SILTY SAND (A-2-4), CLAYEY SAND (A-2-6) AND FINE SAND (A-3) WITH LITTLE SILT, MOIST

560+00.00

Ⓐ **ROADWAY EMBANKMENT**
BROWN, TAN SILTY FINE SAND (A-2-4) AND CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
STIFF TAN TO LIGHT GRAY COARSE AND FINE SANDY CLAY (A-6), MOIST

UNDIVIDED COASTAL PLAIN ORANGE AND TAN SANDY CLAY (A-7-6), MOIST

UNDIVIDED COASTAL PLAIN
BROWN, TAN, GRAY, ORANGE, SILTY SAND (A-2-4) FINE SAND (A-3) WITH LITTLE SILT AND CLAYEY FINE SAND (A-2-6), MOIST TO WET

559+50.00

$$$$$$$$SYSTIME$$$$$$
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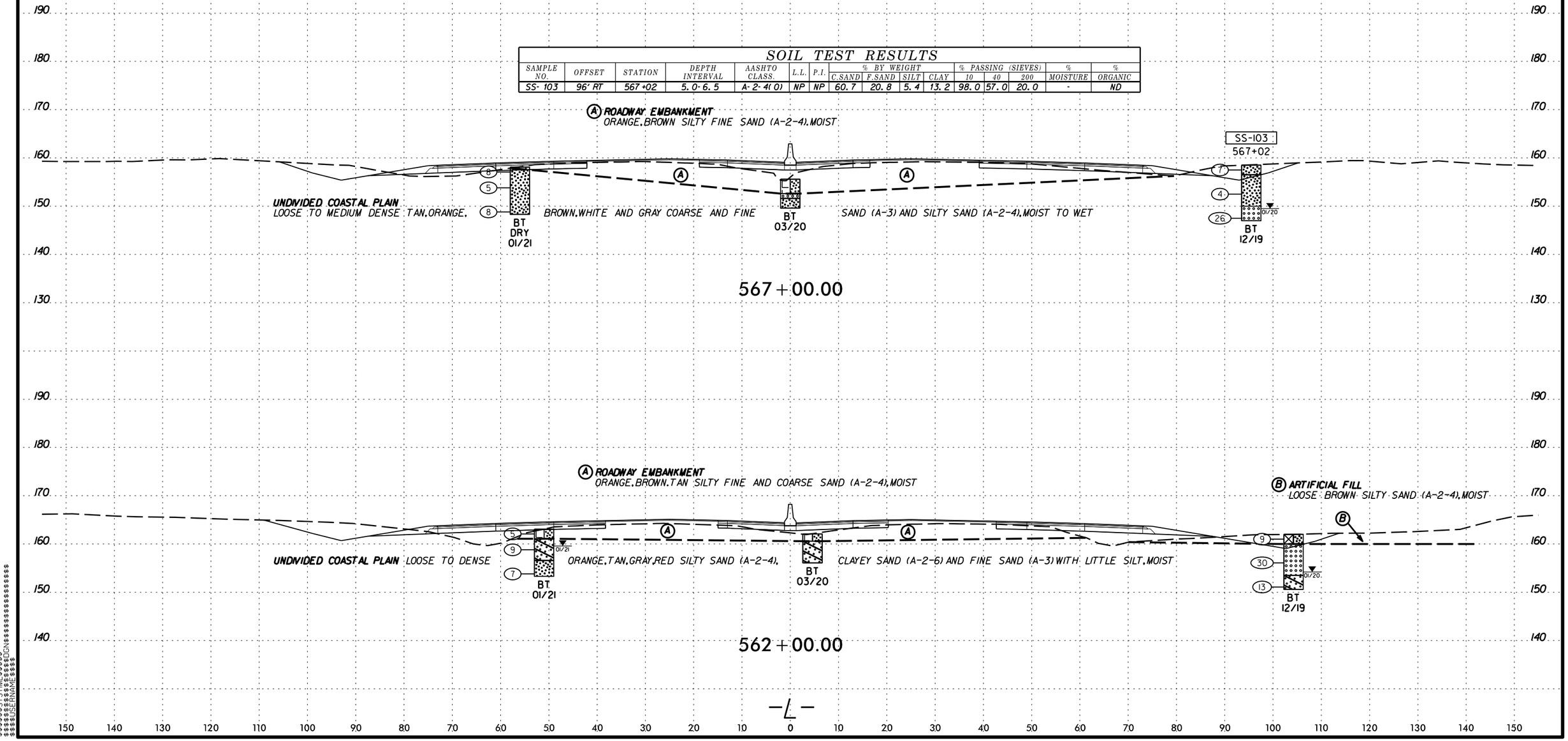
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	74

SOIL TEST RESULTS

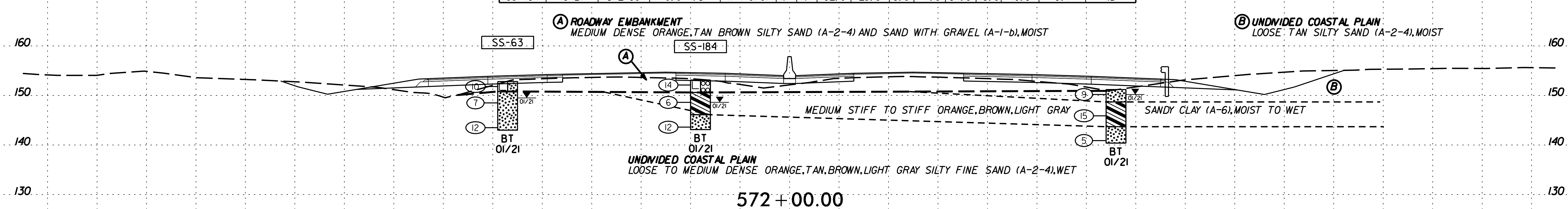
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-103	96' RT	567+02	5.0-6.5	A-2-4(0)	NP	NP	60.7	20.8	5.4	13.2	98.0	57.0	20.0	-	ND

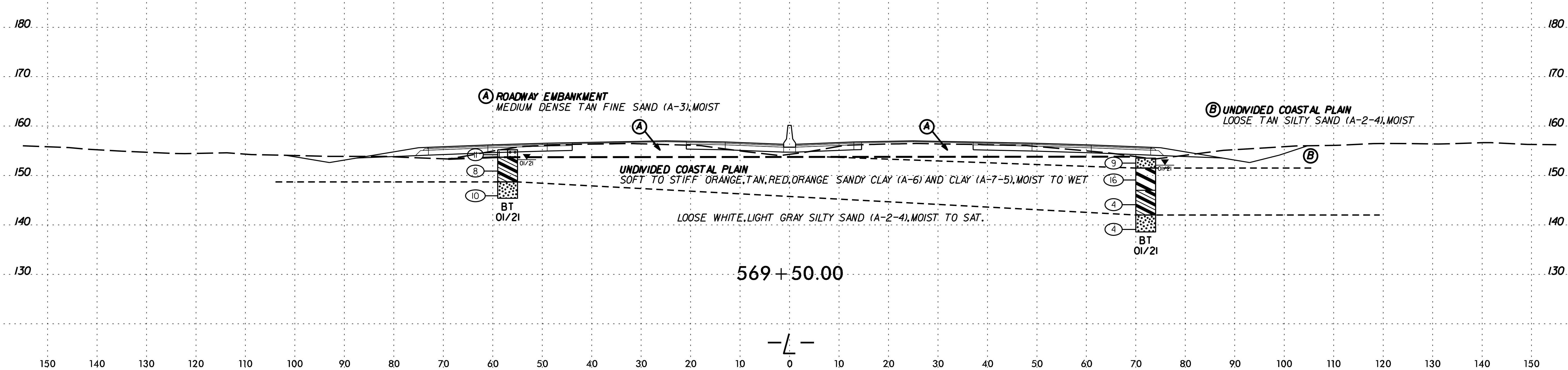


0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	75

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-63	57' LT	572+00	0.0-1.5	A-2-4(0)	19	3	59.0	22.0	3.0	16.0	96.0	56.0	21.0	12.2	ND
SS-184	18' LT	572+00	0.0-1.5	A-1-b(0)	NP	NP	62.0	28.0	6.0	4.0	81.0	48.0	10.9	9.7	ND





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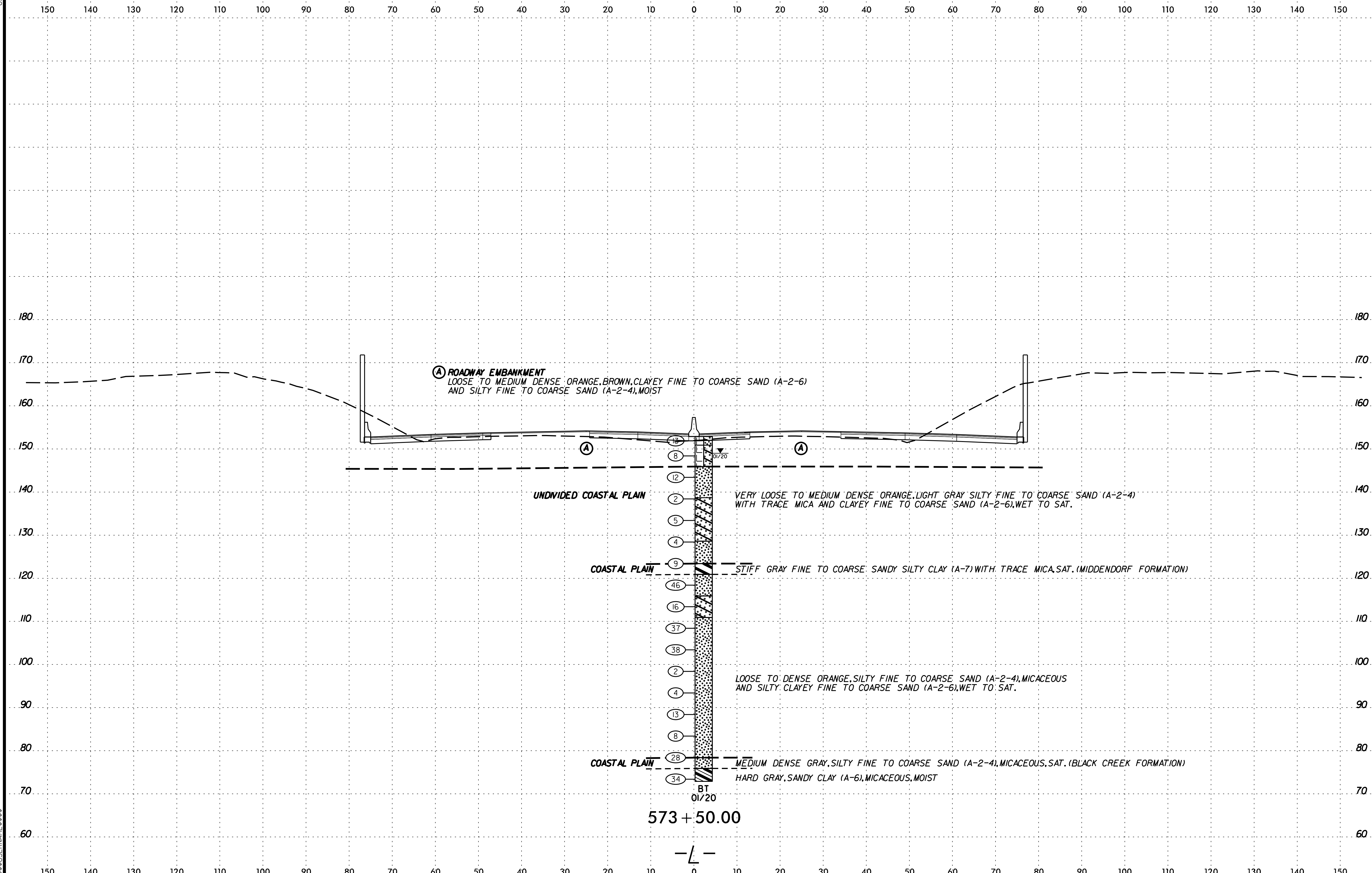
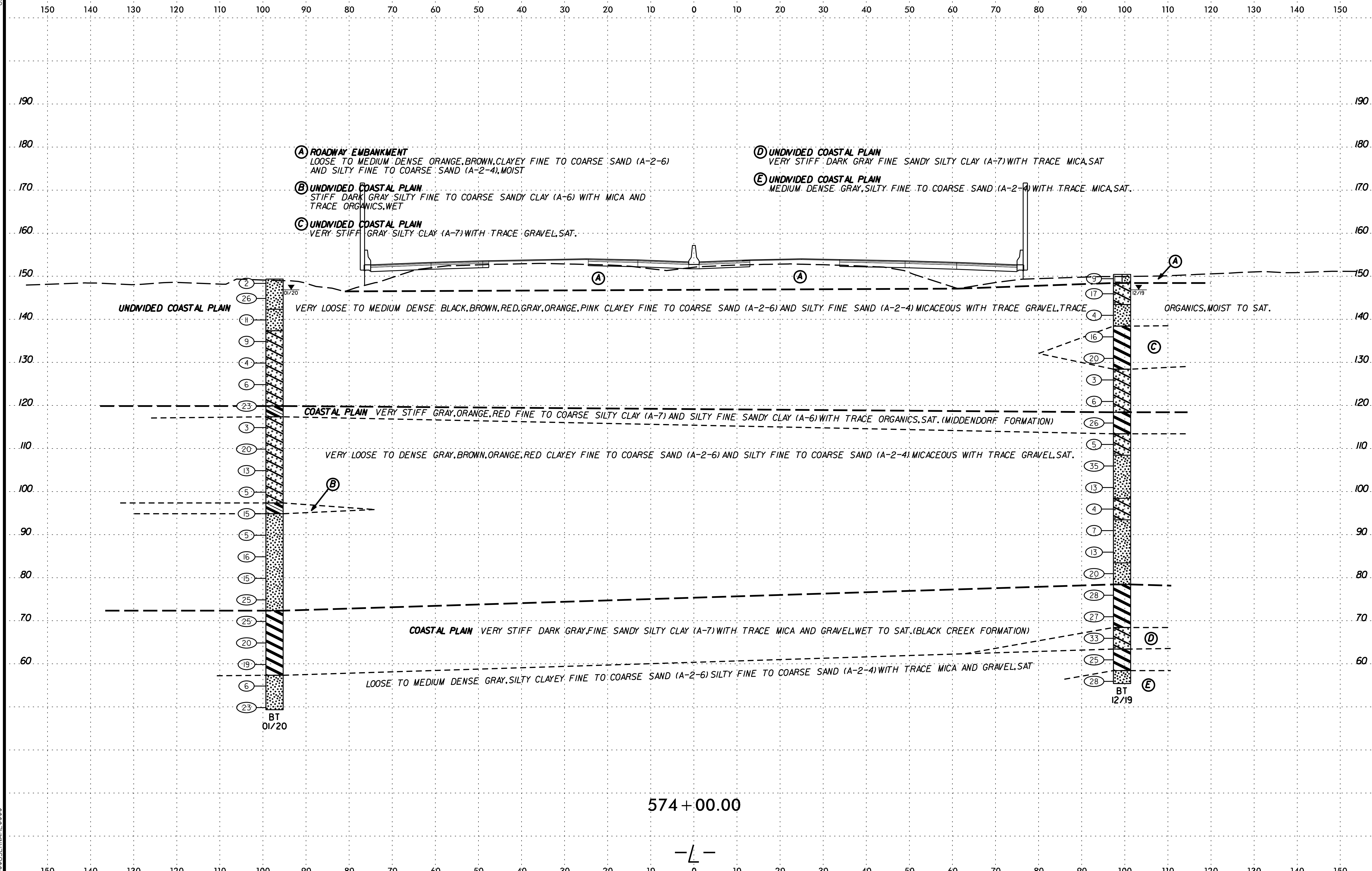
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	76





0 5 10
(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE ORANGE,BROWN,CLAYEY FINE TO COARSE SAND (A-2-6) AND SILTY FINE TO COARSE SAND (A-2-4),MOIST
(B) UNDIVIDED COASTAL PLAIN
STIFF DARK GRAY SILTY FINE TO COARSE SANDY CLAY (A-6) WITH MICA AND TRACE ORGANICS,WET
(C) UNDIVIDED COASTAL PLAIN
VERY STIFF GRAY SILTY CLAY (A-7) WITH TRACE GRAVEL,SAT.
(D) UNDIVIDED COASTAL PLAIN
VERY STIFF DARK GRAY FINE SANDY SILTY CLAY (A-7) WITH TRACE MICA,SAT
(E) UNDIVIDED COASTAL PLAIN
MEDIUM DENSE GRAY,SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE MICA,SAT.
UNDIVIDED COASTAL PLAIN VERY LOOSE TO MEDIUM DENSE BLACK,BROWN,RED,GRAY,ORANGE,PINK CLAYEY FINE TO COARSE SAND (A-2-6) AND SILTY FINE SAND (A-2-4) MICACEOUS WITH TRACE GRAVEL,TRACE ORGANICS,MOIST TO SAT.
COASTAL PLAIN VERY STIFF GRAY,ORANGE,RED FINE TO COARSE SILTY CLAY (A-7) AND SILTY FINE SANDY CLAY (A-6) WITH TRACE ORGANICS,SAT.(MIDDENDORF FORMATION)
VERY LOOSE TO DENSE GRAY,BROWN,ORANGE,RED CLAYEY FINE TO COARSE SAND (A-2-6) AND SILTY FINE TO COARSE SAND (A-2-4) MICACEOUS WITH TRACE GRAVEL,SAT.
COASTAL PLAIN VERY STIFF DARK GRAY,FINE SANDY SILTY CLAY (A-7) WITH TRACE MICA AND GRAVEL,WET TO SAT.(BLACK CREEK FORMATION)
LOOSE TO MEDIUM DENSE GRAY,SILTY CLAYEY FINE TO COARSE SAND (A-2-6) SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE MICA AND GRAVEL,SAT
01/20
12/19
BT 01/20
BT 12/19
574+00.00
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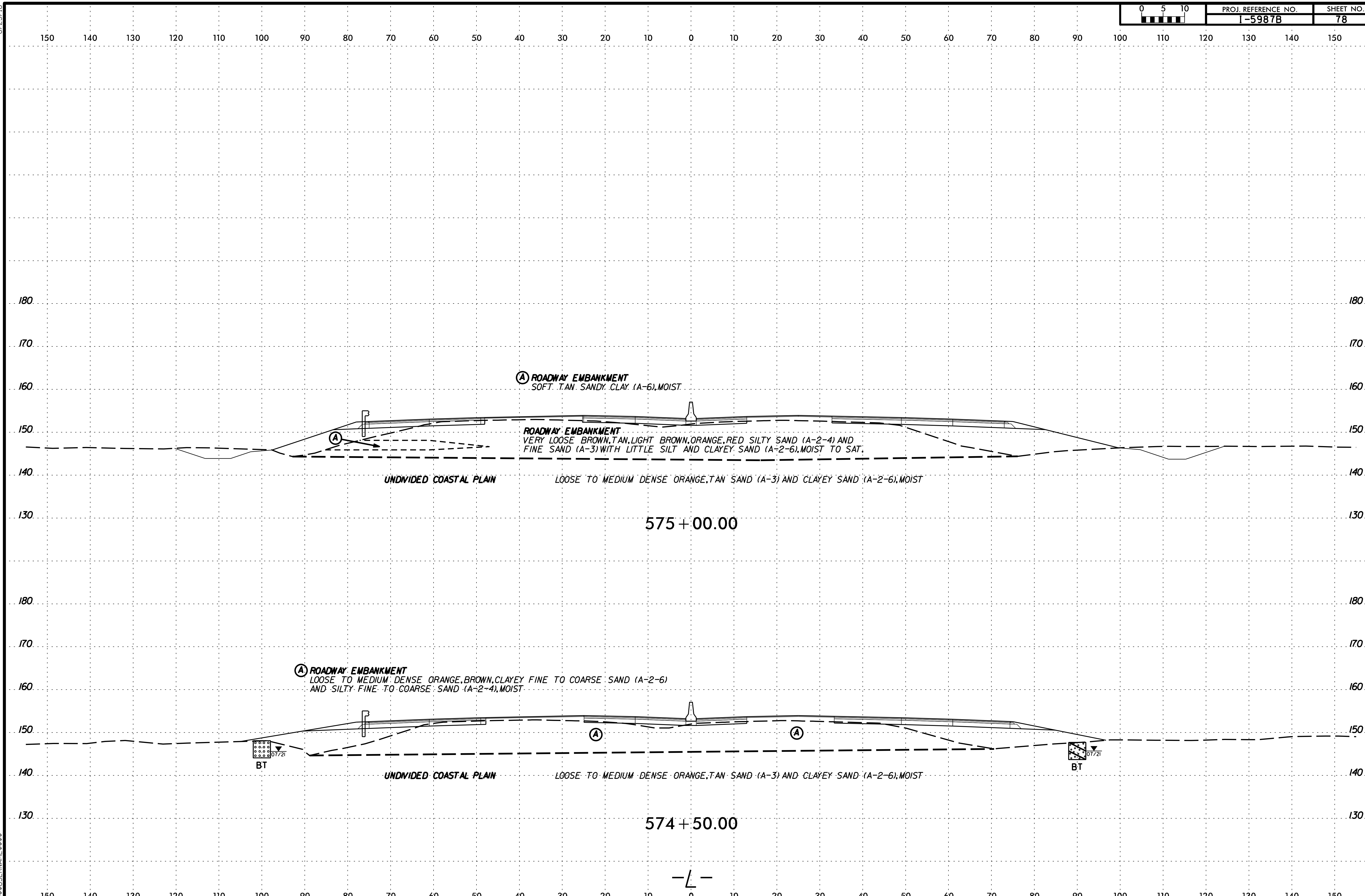
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150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
180
170
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150
140
130
(A) ROADWAY EMBANKMENT
SOFT TAN SANDY CLAY (A-6),MOIST
ROADWAY EMBANKMENT
VERY LOOSE BROWN,TAN,LIGHT BROWN,ORANGE,RED SILTY SAND (A-2-4) AND
FINE SAND (A-3) WITH LITTLE SILT AND CLAYEY SAND (A-2-6),MOIST TO SAT.
(A)
UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE,TAN SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST
575+00.00
(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE ORANGE,BROWN,CLAYEY FINE TO COARSE SAND (A-2-6)
AND SILTY FINE TO COARSE SAND (A-2-4),MOIST
(A)
(A)
BT
07/21
BT
07/21
UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE,TAN SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST
574+50.00
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$$$$$SYSTIME$$$$
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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

180 170 160 150 140 130

Ⓐ **ROADWAY EMBANKMENT**
SOFT TAN SANDY CLAY (A-6), MOIST

ROADWAY EMBANKMENT
VERY LOOSE BROWN, TAN, LIGHT BROWN, ORANGE, RED SILTY SAND (A-2-4) AND FINE SAND (A-3) WITH LITTLE SILT AND CLAYEY SAND (A-2-6), MOIST TO SAT.

ALLUVIAL
LOOSE TAN SAND (A-3), MOIST

Ⓑ **ALLUVIAL**
VERY SOFT DARK BROWN SANDY SILT (A-4) WITH TRACE ORGANICS, MOIST TO WET

LOOSE TAN SAND (A-3), MOIST

576+00.00

Ⓓ **ALLUVIAL**
SOFT BROWN SANDY CLAY WITH TRACE ORGANICS, SAT.

Ⓐ **ROADWAY EMBANKMENT**
SOFT TAN SANDY CLAY (A-6), MOIST

ROADWAY EMBANKMENT
VERY LOOSE BROWN, TAN, LIGHT BROWN, ORANGE, RED SILTY SAND (A-2-4) AND FINE SAND (A-3) WITH LITTLE SILT AND CLAYEY SAND (A-2-6), MOIST TO SAT.

Ⓒ **ALLUVIAL**
VERY SOFT ORANGE, BROWN, GRAY SANDY SILT (A-4) AND SANDY CLAY (A-6) WITH TRACE ORGANICS, MOIST

BT 07/21

UNDIVIDED COASTAL PLAIN
LOOSE TAN SAND (A-3), MOIST

LOOSE TO MEDIUM DENSE GRAY SAND (A-3), SAT.

BT 07/21

575+50.00

$$$$$$$$SYSTIME$$$$$
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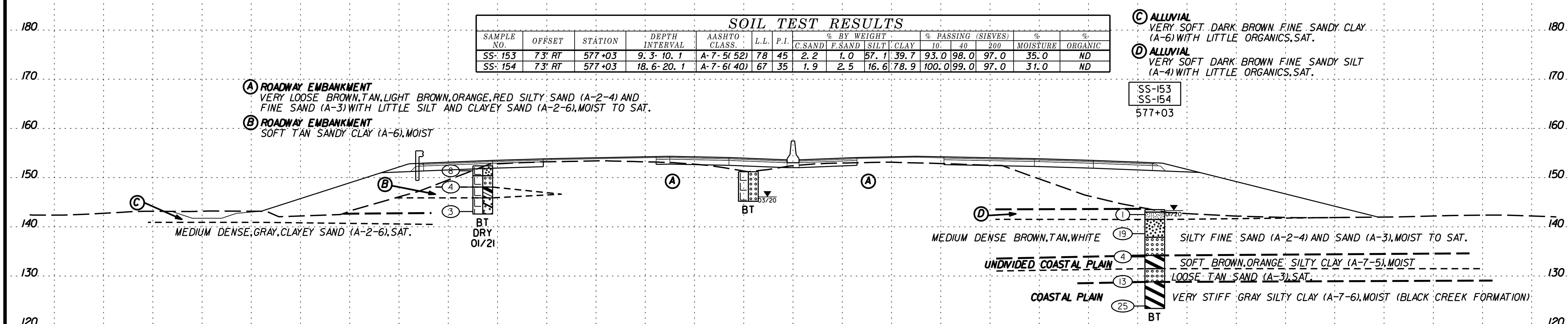
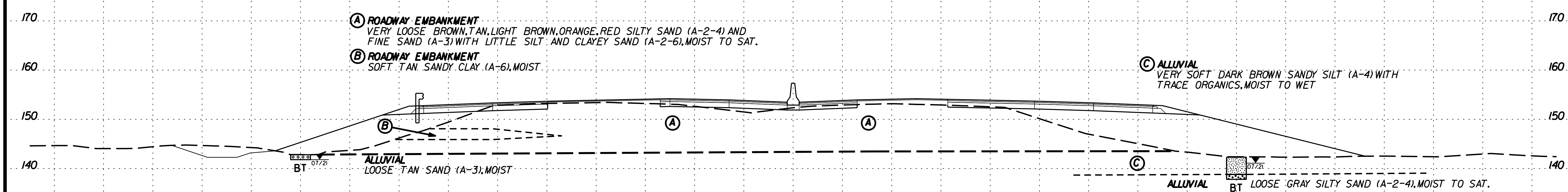
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-153	73' RT	577+03	9.3-10.1	A-7-5(52)	78	45	2.2	1.0	57.1	39.7	93.0	98.0	97.0	35.0	ND
SS-154	73' RT	577+03	18.6-20.1	A-7-6(40)	67	35	1.9	2.5	16.6	78.9	100.0	99.0	97.0	31.0	ND



577+00.00



576+50.00

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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

180 170 160 150 140 130

Ⓐ **ALLUVIAL**
VERY SOFT DARK BROWN FINE SANDY CLAY (A-6) WITH TRACE ORGANICS, SAT.

Ⓑ **ALLUVIAL**
SOFT BROWN MUCK, SAT.

ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE, GRAY, ORANGE, FINE SAND (A-3) AND CLAYEY SAND (A-2-6), MOIST

05/74

MEDIUM DENSE, GRAY, CLAYEY SAND (A-2-6), SAT.

BT

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05/21

MEDIUM DENSE, TAN, FINE SAND (A-3), SAT.

BT

578+00.00

190 180 170 160 150 140 130

Ⓐ **ROADWAY EMBANKMENT**
VERY LOOSE BROWN, TAN, LIGHT BROWN, ORANGE, RED SILTY SAND (A-2-4) AND FINE SAND (A-3) WITH LITTLE SILT AND CLAYEY SAND (A-2-6), MOIST TO SAT.

Ⓑ **ROADWAY EMBANKMENT**
SOFT TAN SANDY CLAY (A-6), MOIST

Ⓒ **ALLUVIAL**
VERY SOFT DARK BROWN FINE SANDY CLAY (A-6) WITH LITTLE ORGANICS, SAT.

Ⓓ **ALLUVIAL**
VERY SOFT DARK BROWN FINE SANDY SILT (A-4) WITH LITTLE ORGANICS, SAT.

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MEDIUM DENSE, GRAY, CLAYEY SAND (A-2-6), SAT.

MEDIUM DENSE BROWN, TAN, WHITE SILTY FINE SAND (A-2-4), AND SAND (A-3), MOIST TO SAT.

577+50.00

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

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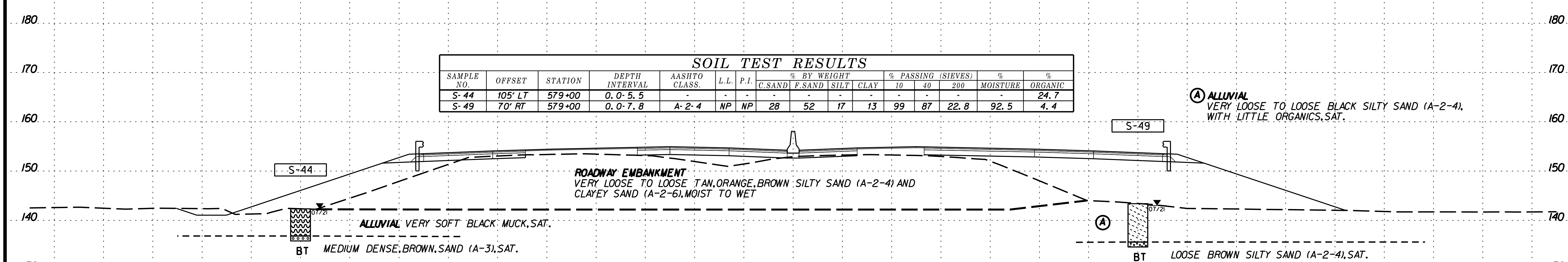
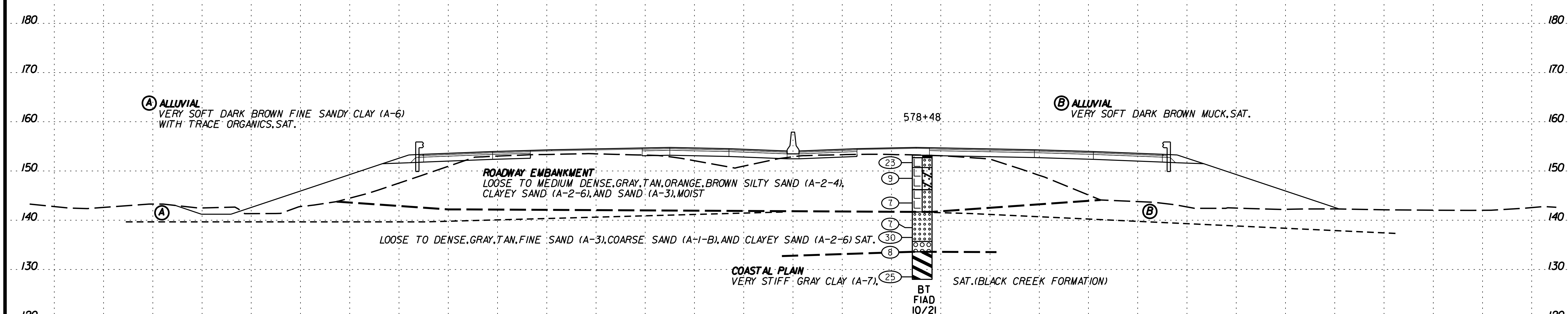
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
S-44	105' LT	579+00	0.0-5.5	-	-	-	-	-	-	-	-	-	-	-	24.7
S-49	70' RT	579+00	0.0-7.8	A-2-4	NP	NP	28	52	17	13	99	87	22.8	92.5	4.4



579+00.00



578+50.00

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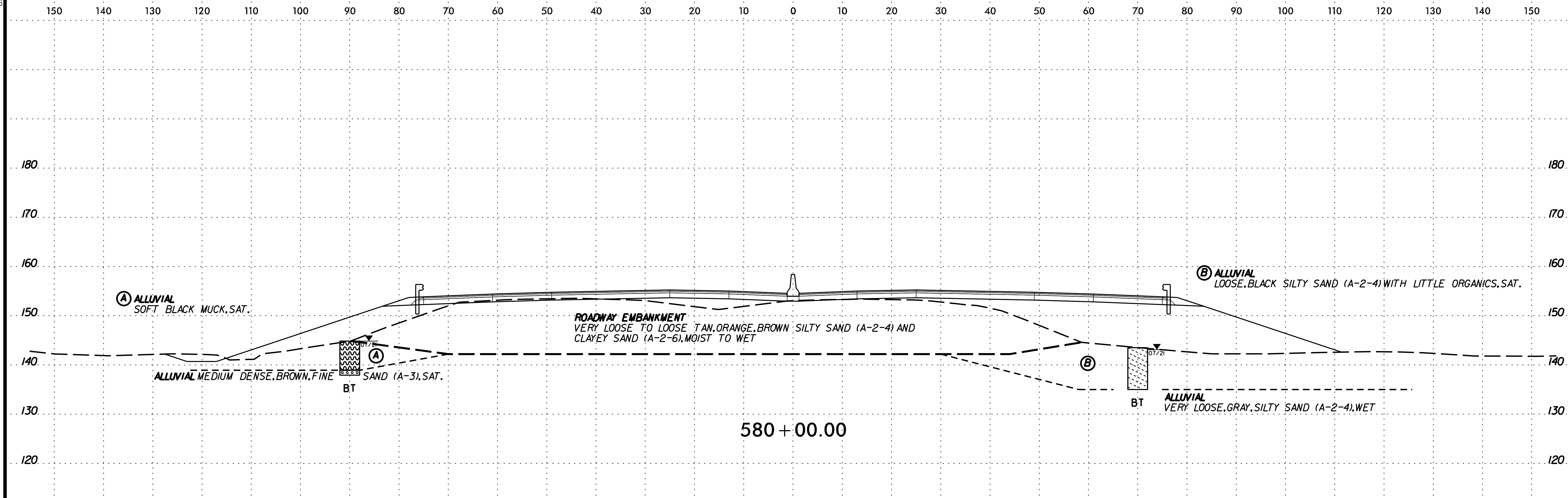
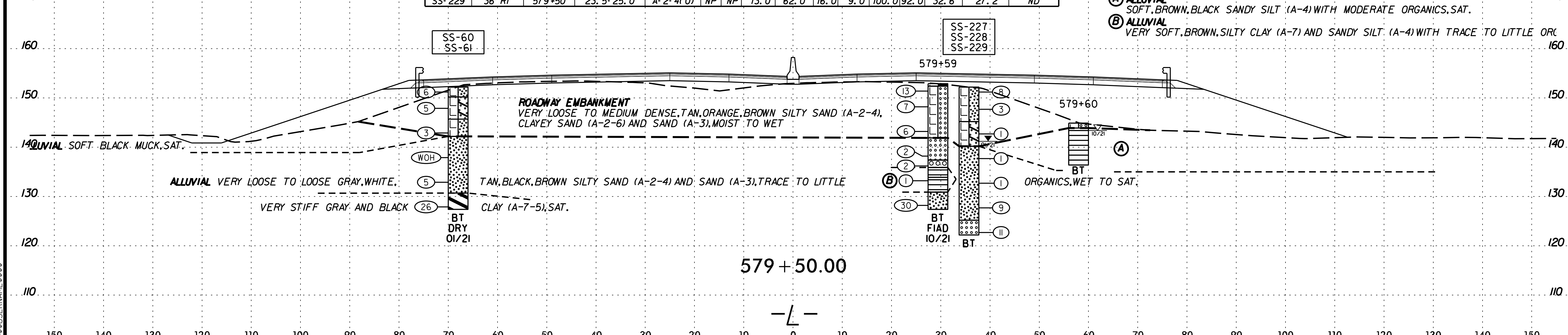
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	83



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-60	68' LT	579+50	13.3-14.8	A-2-4(0)	NP	NP	62.0	23.0	4.0	11.0	97.0	55.0	16.0	18.9	ND
SS-61	68' LT	579+50	18.3-19.8	A-2-4(0)	NP	NP	30.0	40.0	14.0	16.0	99.0	83.0	33.7	54.3	ND
SS-227	36' RT	579+50	13.5-15.0	-	-	-	-	-	-	-	-	-	-	-	0.9
SS-228	36' RT	579+50	18.5-20.0	A-2-4(0)	NP	NP	9.0	68.0	13.0	10.0	100.0	95.0	32.9	46.9	ND
SS-229	36' RT	579+50	23.5-25.0	A-2-4(0)	NP	NP	13.0	62.0	16.0	9.0	100.0	92.0	32.6	27.2	ND



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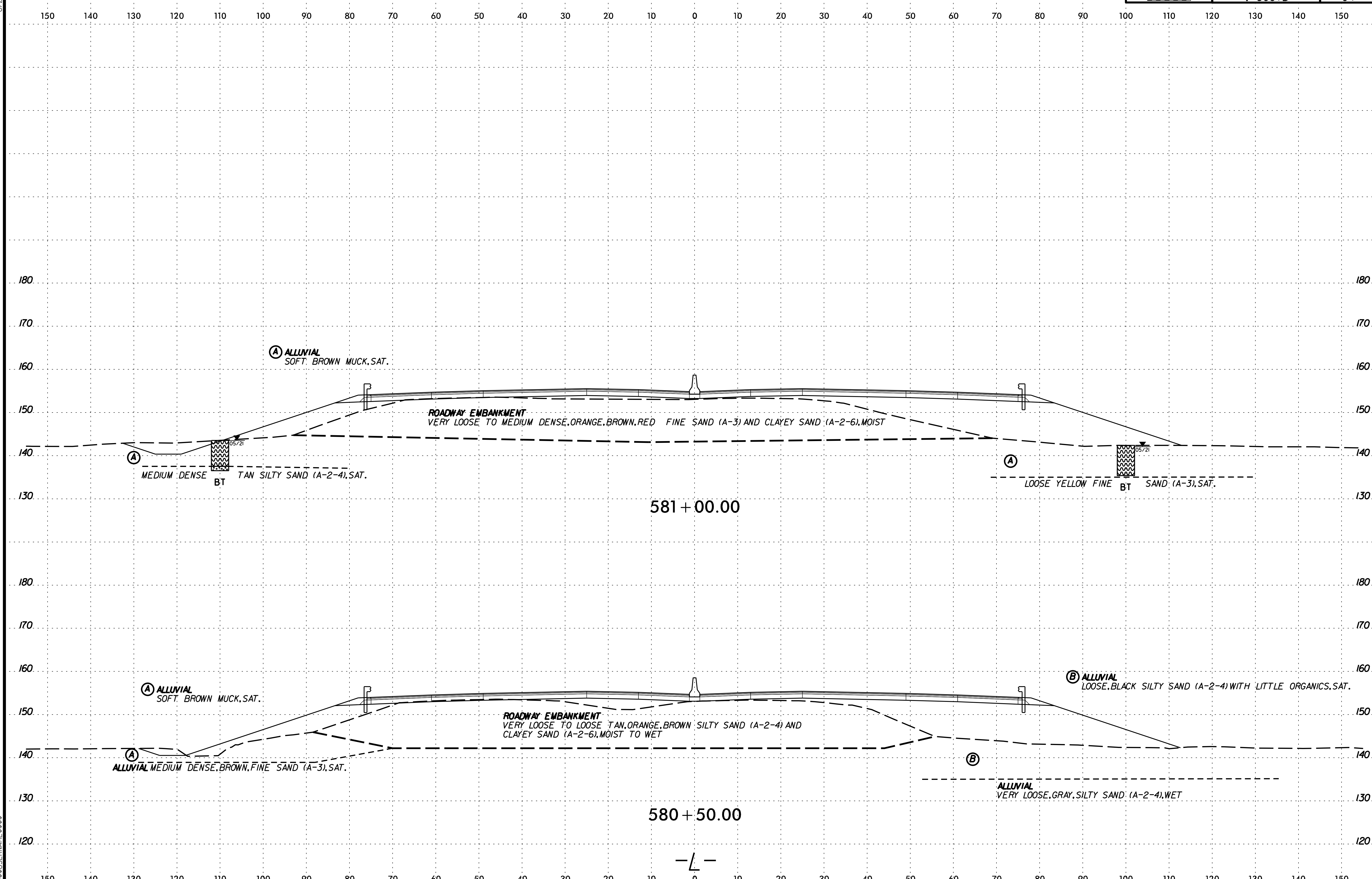
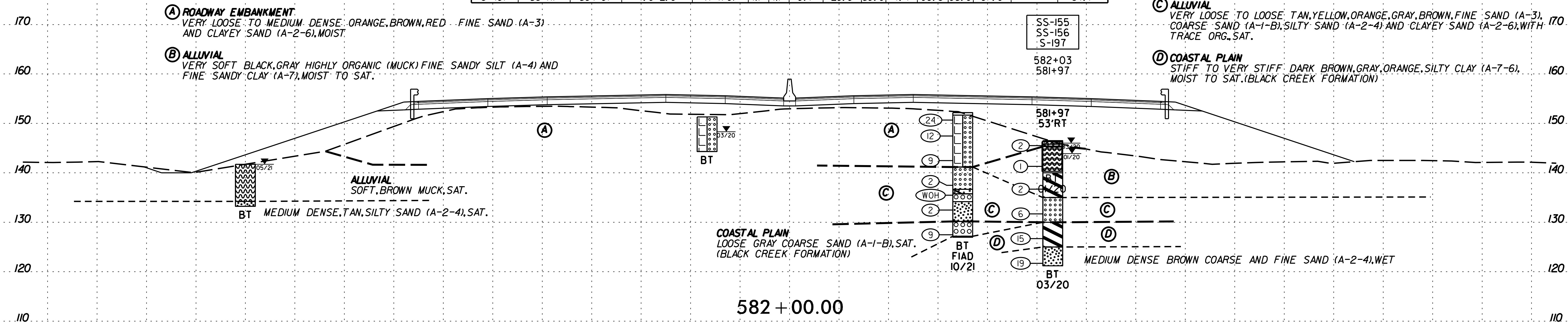
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	84



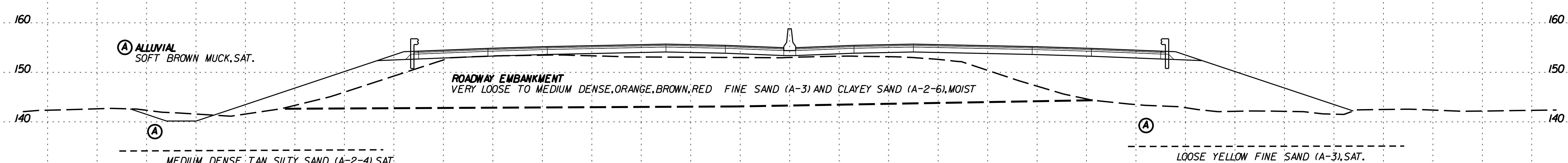
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	85

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-155	53' RT	582+03	18.8-20.3	A-7-6(27)	54	28	8.5	5.3	33.5	52.7	96.9	94.0	88.0	23.0	ND
SS-156	53' RT	582+03	23.8-25.3	A-2-4(0)	NP	NP	19.3	65.7	5.2	9.8	100.0	92.0	18.0	-	ND
S-197	53' RT	581+97	1.0-2.0	A-4(0)	NP	NP	9.7	26.9	59.0	4.4	98.3	95.0	67.0	-	34.7



582+00.00



581+50.00

-L-

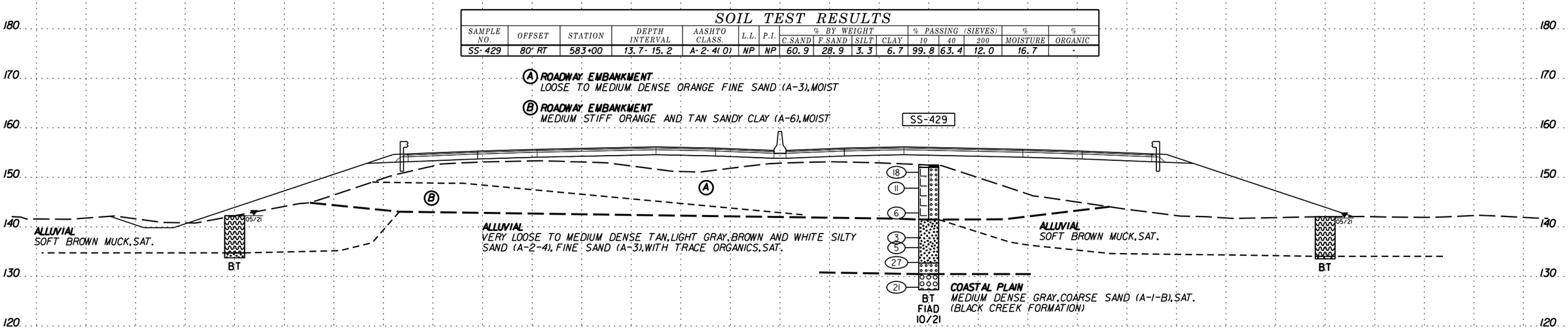
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	86

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

190 180 170 160 150 140 130 120 110

SOIL TEST RESULTS

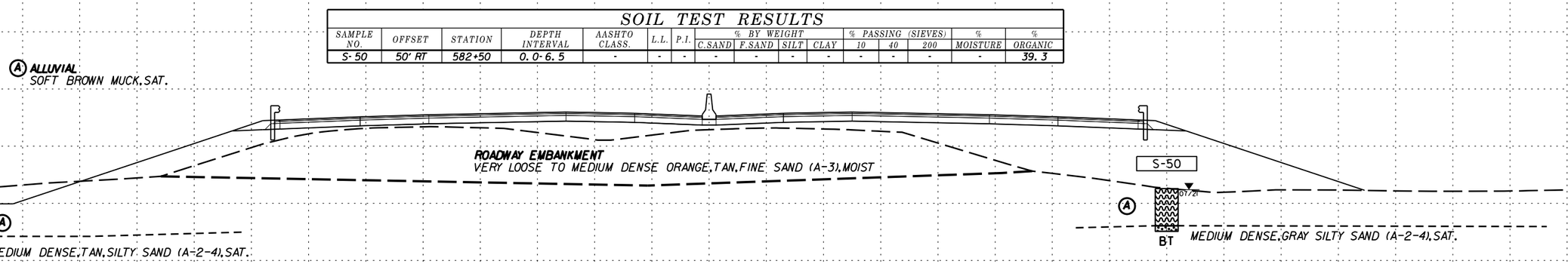
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-429	80' RT	583+00	13.7-15.2	A-2-4(0)	NP	NP	60.9	28.9	3.3	6.7	99.8	63.4	12.0	16.7	-



583+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-50	50' RT	582+50	0.0-6.5	-	-	-	-	-	-	-	-	-	-	-	39.3



582+50.00

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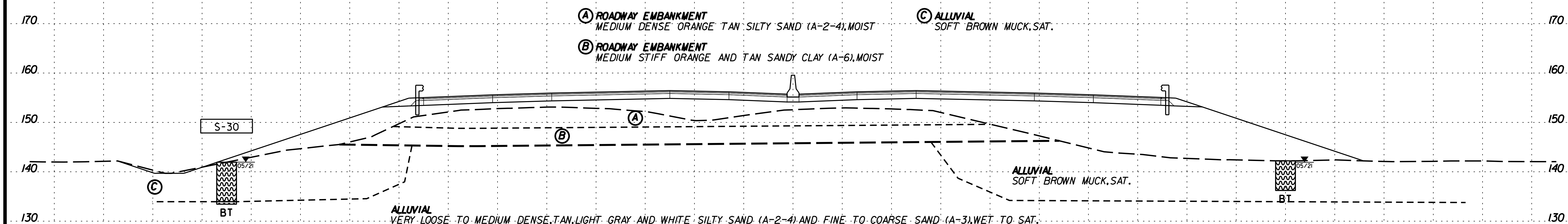
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	87

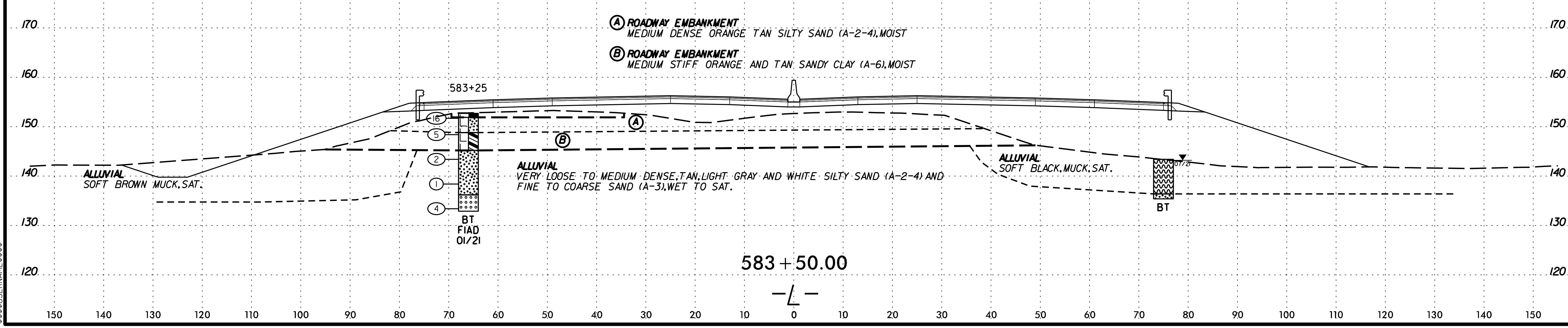
0 5 10

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-30	115' LT	584+00	0.0-8.0	A-7-5(26)	126	11	11	15	52	18	97	89	75	296	39.9



584+00.00



583+50.00

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6/23/16

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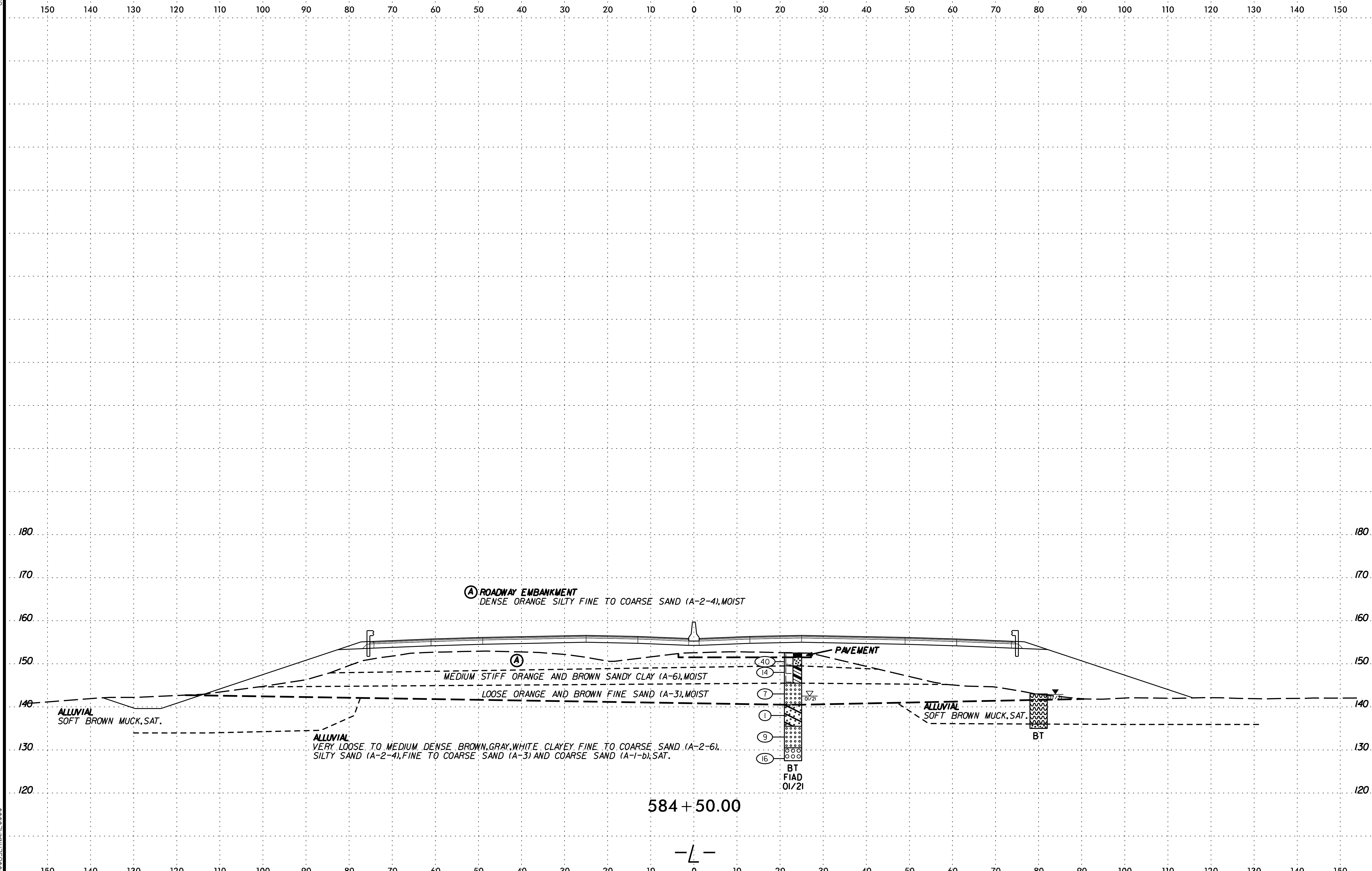
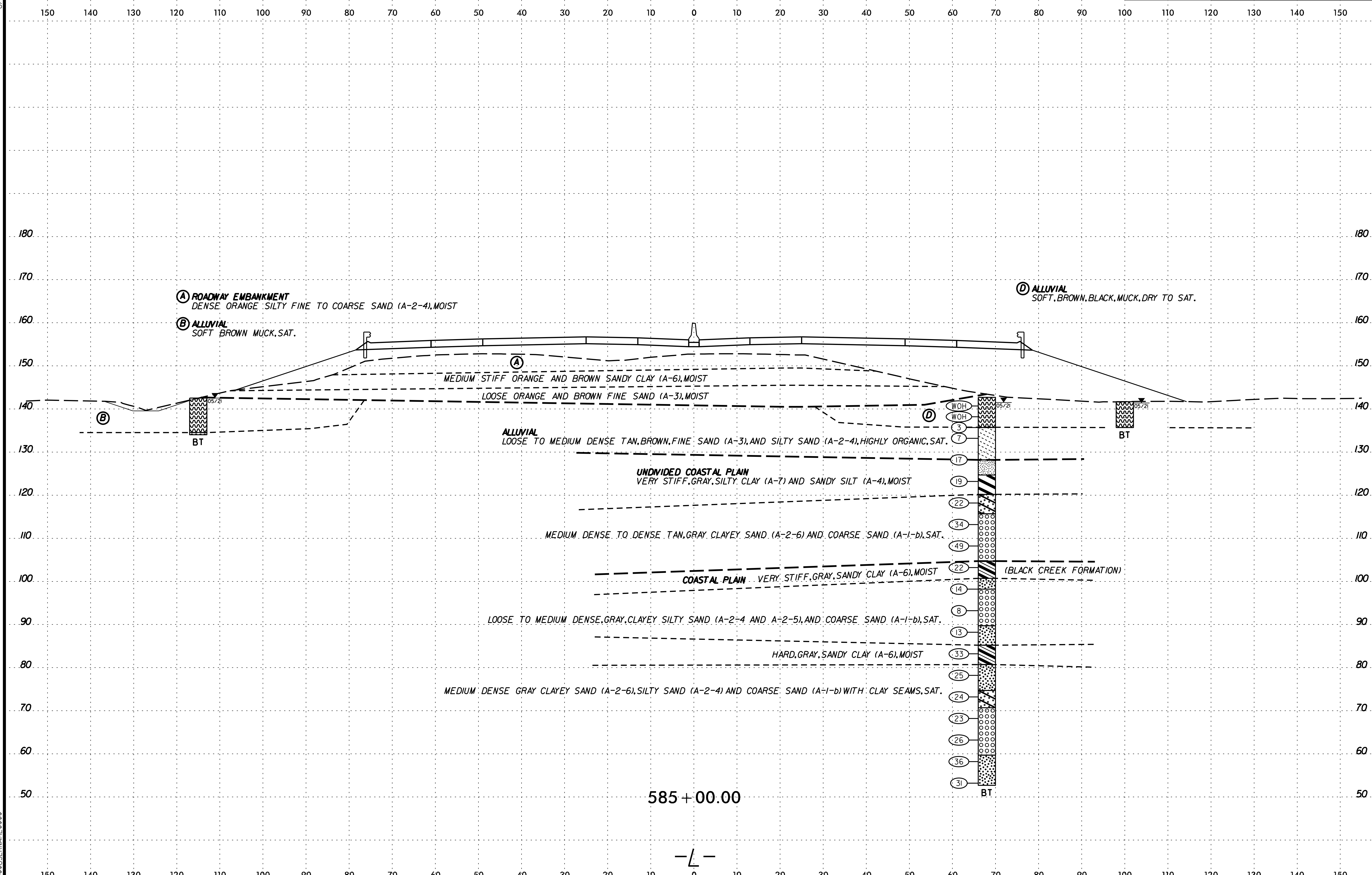

0 5 10
Ⓐ ROADWAY EMBANKMENT
DENSE ORANGE SILTY FINE TO COARSE SAND (A-2-4),MOIST
PAVEMENT
MEDIUM STIFF ORANGE AND BROWN SANDY CLAY (A-6),MOIST
LOOSE ORANGE AND BROWN FINE SAND (A-3),MOIST
ALLUVIAL
SOFT BROWN MUCK,SAT.
ALLUVIAL
VERY LOOSE TO MEDIUM DENSE BROWN,GRAY,WHITE CLAYEY FINE TO COARSE SAND (A-2-6),
SILTY SAND (A-2-4),FINE TO COARSE SAND (A-3) AND COARSE SAND (A-1-b),SAT.
ALLUVIAL
SOFT BROWN MUCK,SAT.
40
14
7
1
9
16
BT
FIAD
01/21
BT
180
170
160
150
140
130
120

584+50.00

-L-

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	89



6/23/16

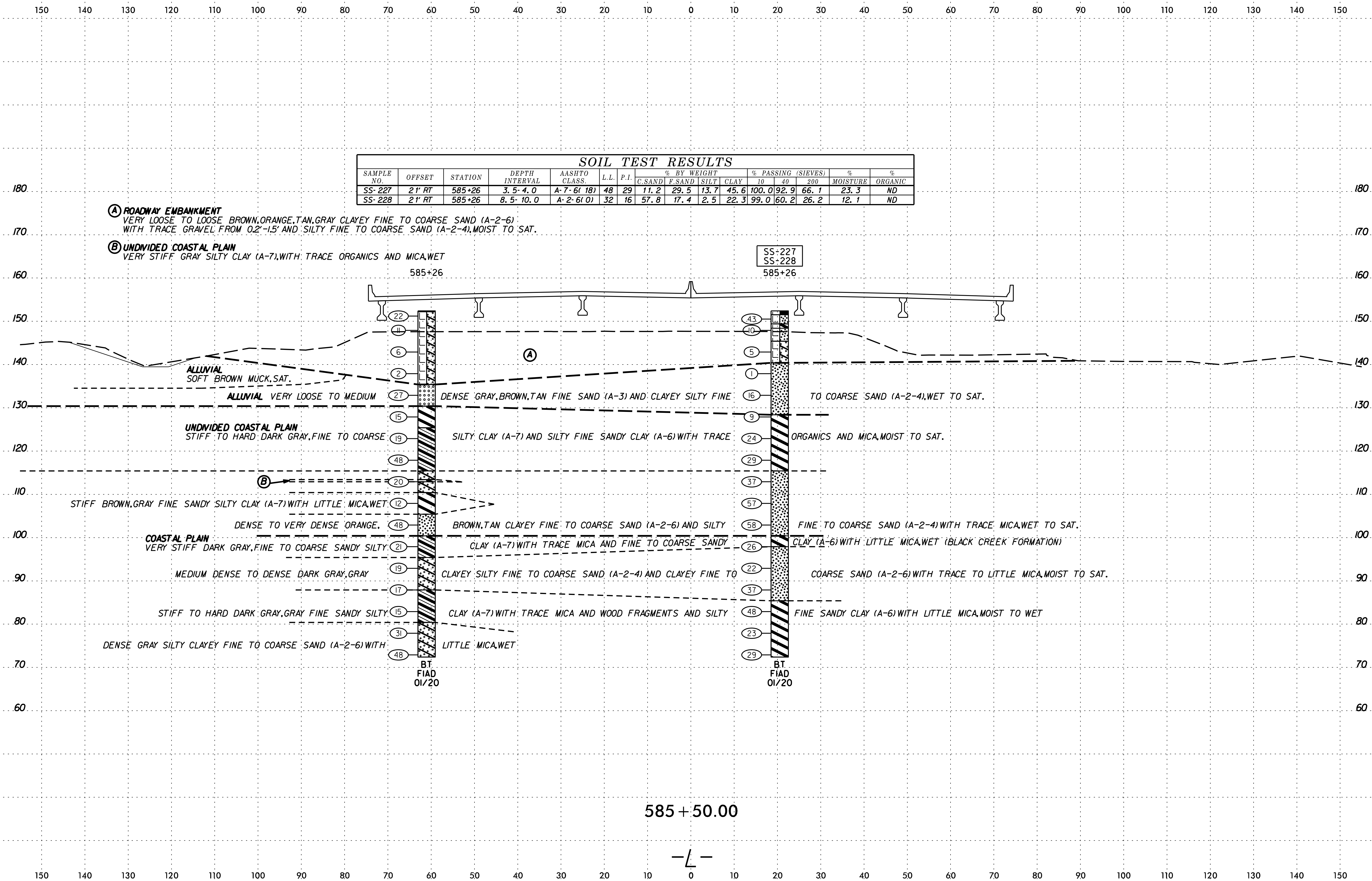
$$$$$$SYSTIME$$$$$ $$$$$$$$DGN$$$$$$$$$$$$$$$$$ $$$USERNAME$$$$

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-227	21' RT	585+26	3.5-4.0	A-7-6(18)	48	29	11.2	29.5	13.7	45.6	100.0	92.9	66.1	23.3	ND
SS-228	21' RT	585+26	8.5-10.0	A-2-6(0)	32	16	57.8	17.4	2.5	22.3	99.0	60.2	26.2	12.1	ND

Ⓐ **ROADWAY EMBANKMENT**
VERY LOOSE TO LOOSE BROWN,ORANGE,TAN,GRAY CLAYEY FINE TO COARSE SAND (A-2-6) WITH TRACE GRAVEL FROM 0.2'-1.5' AND SILTY FINE TO COARSE SAND (A-2-4),MOIST TO SAT.

Ⓑ **UNDIVIDED COASTAL PLAIN**
VERY STIFF GRAY SILTY CLAY (A-7),WITH TRACE ORGANICS AND MICA,WET



585+50.00

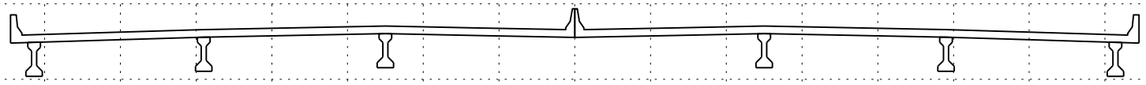
-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	91

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-220	20' RT	585+99	3.5-5.0	A-4(2)	25	9	3.6	50.6	19.5	26.3	100.0	99.0	55.8	24.5	ND
SS-222	20' RT	585+99	9.7-10.0	A-7-6(24)	51	29	12.5	11.1	17.7	58.7	99.0	91.5	78.8	25.5	ND
SS-214	59' LT	585+99	8.5-10.0	A-7-6(25)	52	29	2.1	22.3	15.9	59.7	100.0	99.2	82.5	26.1	ND



SS-214
585+99

SS-220
SS-222
585+99

(A) **ALLUVIAL**
VERY SOFT DARK BROWN MUCK,SAT.

WOR
MEDIUM DENSE TAN,GRAY,ORANGE,BROWN — II
II — SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY.

WOH
WOH — VERY SOFT GRAY,CLAYEY FINE SANDY SILT (A-4),WET
II — ORGANICS AND GRAVEL,WET

UNDIVIDED COASTAL PLAIN STIFF TO HARD GRAY
21
30 — FINE TO COARSE SANDY SILTY CLAY (A-7-6) WITH TRACE MICA.
50
15 — HIGHLY PLASTIC,MOIST
42
34
MEDIUM DENSE TO VERY DENSE ORANGE,BROWN,
90
33 — TAN,GRAY CLAYEY SILTY FINE TO COARSE SAND (A-2-4) WITH
29
18 — TRACE MICA AND TRACE CLAY,MOIST TO SAT.

COASTAL PLAIN VERY STIFF DARK GRAY.
19 — SILTY CLAY (A-7) WITH TRACE FINE TO COARSE SAND AND MICA
24 — (BLACK CREEK FORMATION),MOIST TO SAT.

9
SOFT DARK GRAY SILTY CLAY (A-7) WITH TRACE FINE SAND,SAT.
3
VERY LOOSE TO DENSE BROWN,TAN,DARK GRAY,
GRAY ORANGE CLAYEY SILTY FINE TO COARSE SAND (A-2-4)
33
35 — WITH TRACE CLAY AND TRACE MICA,SAT.
STIFF DARK GRAY FINE SANDY SILTY CLAY (A-7) WITH TRACE MICA,WET
13
21
16
22
39
36
25
23
VERY STIFF
26 — DARK GRAY FINE SANDY SILTY CLAY (A-7) WITH TRACE MICA,
26 — WET TO SAT.
22
22

MEDIUM DENSE
BT FIAD 01/20
GRAY CLAYEY SILTY FINE SAND (A-2-4) WITH
BT FIAD 01/20
TRACE MICA,SAT.

586+00.00

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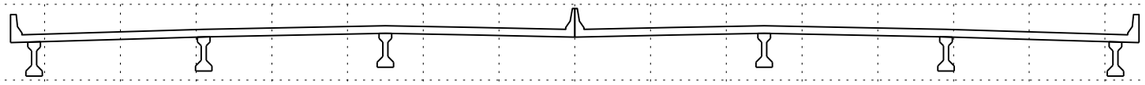
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	92

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-82	84' RT	586+45	14.5-15.0	A-7-6(30)	57	31	5.6	11.1	13.4	69.9	100.0	97.6	85.9	27.0	ND
SS-72	84' RT	586+45	3.5-5.0	A-4(0)	ND	ND	16.9	21.5	48.6	13.0	99.9	88.5	66.1	27.4	29.6
SS-203	58' LT	586+35	8.5-10.0	A-7-6(21)	43	23	5.8	11.1	26.2	56.9	100.0	97.0	87.3	21.0	ND



SS-203
586+35

SS-82
SS-72
586+45

(A) **ALLUVIAL** VERY SOFT MUCK, SAT.

(A) **ALLUVIAL** VERY LOOSE TO LOOSE BLACK, BROWN, GRAY, SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY, ORGANICS, AND WOOD FRAGMENTS, WET TO SAT.

UNDIVIDED COASTAL PLAIN STIFF TO HARD GRAY, LIGHT GRAY, DARK GRAY FINE SILTY CLAY (A-7-6) WITH TRACE WOOD FRAGMENTS FROM 8.5'-10.0' AND TRACE FINE TO COARSE SAND, HIGHLY PLASTIC, MOIST (BLACK CREEK FORMATION)

LOOSE TO DENSE ORANGE, BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY, MOIST TO SAT.

COASTAL PLAIN MEDIUM STIFF TO VERY STIFF DARK GRAY, SANDY SILTY CLAY (A-7) WITH TRACE MICA, SAT. (BLACK CREEK FORMATION)

LOOSE TO DENSE GRAY TO ORANGE, BROWN, TAN, SILTY FINE TO COARSE SAND (A-2-4) CLAYEY FINE SAND (A-2-6) WITH TRACE MICA AND WOOD FRAGMENTS, SAT.

VERY STIFF DARK GRAY FINE SANDY CLAYEY SILT (A-5) WITH TRACE MICA, MOIST

VERY STIFF TO HARD DARK GRAY FINE SANDY SILTY CLAY (A-7) WITH TRACE MICA AND COARSE SAND, MOIST TO WET

MEDIUM DENSE TO DENSE GRAY, SILTY AND CLAYEY FINE SAND (A-2-4) WITH TRACE MICA AND CLAY, SAT.

BT
FIAD
01/20

BT
12/19

586+50.00

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6/23/16

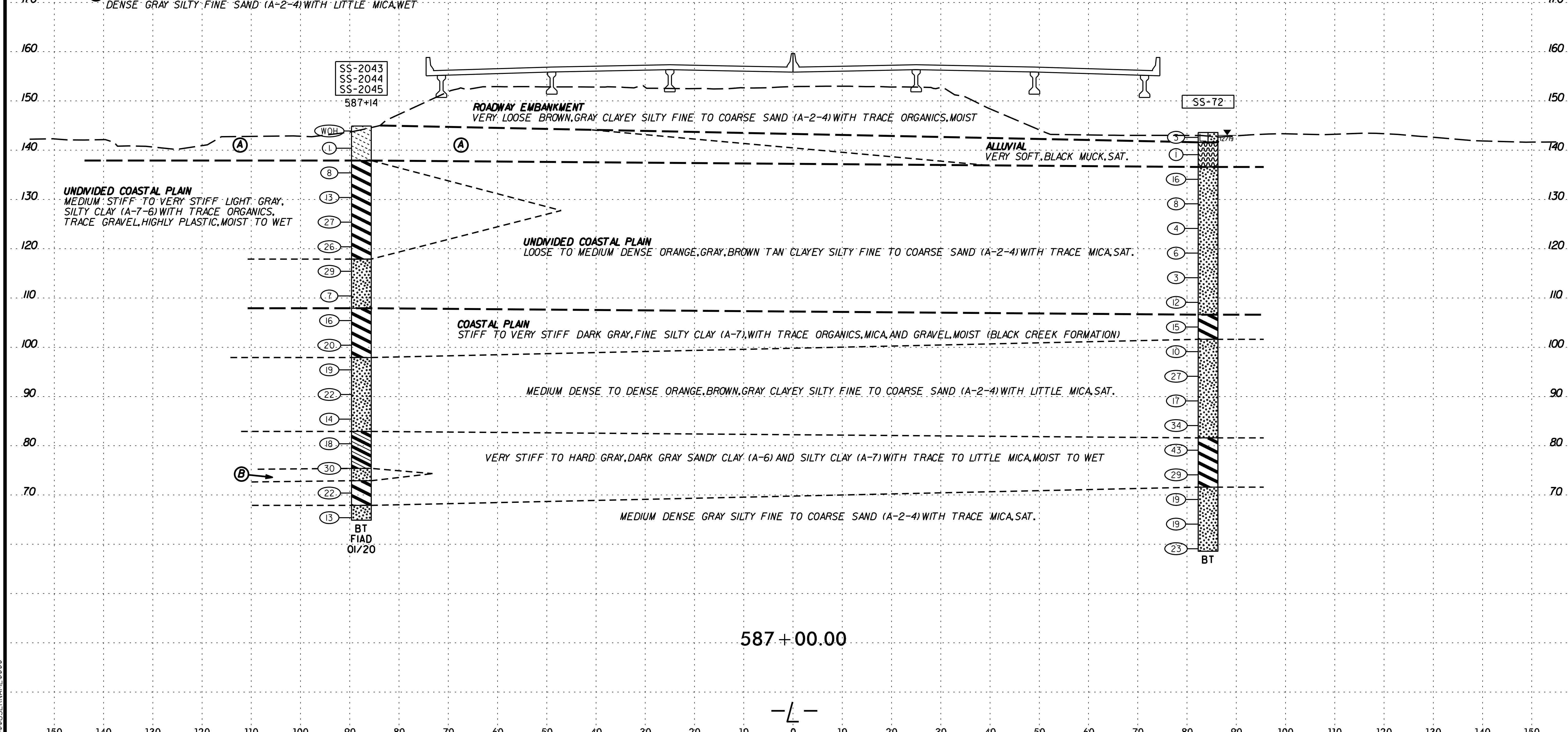
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	93

(A) ALLUVIAL
VERY LOOSE BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH LITTLE TO MODERATE ORGANICS, SAT.

(B) UNDIVIDED COASTAL PLAIN
DENSE GRAY SILTY FINE SAND (A-2-4) WITH LITTLE MICA, WET

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-2043	88' LT	587+14	0.0-1.5	A-2-4(0)	ND	ND	49.3	28.5	4.6	17.6	98.9	68.6	23.8	20.3	3.1
SS-2044	88' LT	587+14	3.5-5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.6
SS-2045	88' LT	587+14	8.5-10.0	A-7-6(42)	6	38	0.6	7.2	19.8	72.4	100.0	99.7	94.9	29.5	ND
SS-72	84' RT	587+05	3.5-5.0	A-4(0)	ND	ND	16.9	21.5	48.6	13.0	99.9	88.5	66.1	271.4	29.6



587+00.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	94

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

180 170 160 150 140 130 120 110 100 90 80 70 60

ROADWAY EMBANKMENT
VERY LOOSE BROWN,GRAY CLAYEY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

ALLUVIAL
VERY LOOSE BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH LITTLE TO MODERATE ORGANICS,SAT.

ALLUVIAL SOFT,BROWN MUCK,SAT.

GT/2I
BT

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF LIGHT GRAY,SILTY CLAY (A-7-6) WITH TRACE ORGANICS,HIGHLY PLASTIC,MOIST TO WET

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE,GRAY,BROWN TAN CLAYEY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE MICA,SAT.

COASTAL PLAIN
STIFF TO VERY STIFF DARK GRAY,FINE SILTY CLAY (A-7),WITH TRACE ORGANICS,MICA,AND GRAVEL,MOIST (BLACK CREEK FORMATION)

MEDIUM DENSE TO DENSE ORANGE,BROWN,GRAY CLAYEY SILTY FINE TO COARSE SAND (A-2-4) WITH LITTLE MICA,SAT.

VERY STIFF TO HARD GRAY,DARK GRAY SANDY CLAY (A-6) AND SILTY CLAY (A-7) WITH TRACE TO LITTLE MICA,MOIST TO WET

MEDIUM DENSE GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE MICA,SAT.

587+50.00

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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	95

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

170 160 150 140 130 120 110

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

(B) ALLUVIAL
VERY LOOSE TO MEDIUM DENSE BROWN, TAN, GRAY, FINE SAND (A-3), SILTY FINE TO COARSE SAND (A-2-4) AND COARSE SAND (A-1-B), MOIST TO SAT.

(C) ALLUVIAL
SOFT BROWN SANDY CLAY (A-6) WITH TRACE ORGANICS, MOIST

ROADWAY EMBANKMENT
MEDIUM DENSE, ORANGE, TAN, GRAY CLAYEY SAND (A-2-6), AND FINE SAND (A-3), MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF LIGHT GRAY, SILTY CLAY (A-7-6) WITH TRACE ORGANICS, TRACE GRAVEL, HIGHLY PLASTIC, MOIST TO WET

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, GRAY, WHITE.

12 10 18 27 8 9 5 7

BT
FIAD
10/21

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF TAN, RED, GRAY SILTY CLAY (A-7-6) TRACE ORG., SAT.

TAN CLAYEY SILTY FINE TO COARSE SAND (A-2-4), SAT.

ALLUVIAL
SOFT BROWN MUCK, SAT.

588+50.00

180 170 160 150 140 130 120 110

(A) ALLUVIAL
VERY LOOSE TO MEDIUM DENSE, BROWN, TAN, GRAY, SILTY FINE TO COARSE SAND (A-2-4), COARSE SAND (A-1-B) AND FINE SAND (A-3), MOIST TO SAT.

(B) ALLUVIAL
SOFT BROWN SANDY CLAY (A-6) WITH TRACE ORGANICS, MOIST

ROADWAY EMBANKMENT
VERY LOOSE BROWN, GRAY CLAYEY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS, MOIST

BT

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF LIGHT GRAY, SILTY CLAY (A-7-6) WITH TRACE ORGANICS, HIGHLY PLASTIC, MOIST TO WET

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE ORANGE, GRAY, WHITE, TAN CLAYEY SILTY FINE TO COARSE SAND (A-2-4), SAT.

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF TAN, RED, GRAY SILTY CLAY (A-7-6) TRACE ORG., SAT.

BT
09/21

ALLUVIAL
SOFT BROWN MUCK, SAT.

588+00.00

-L-

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

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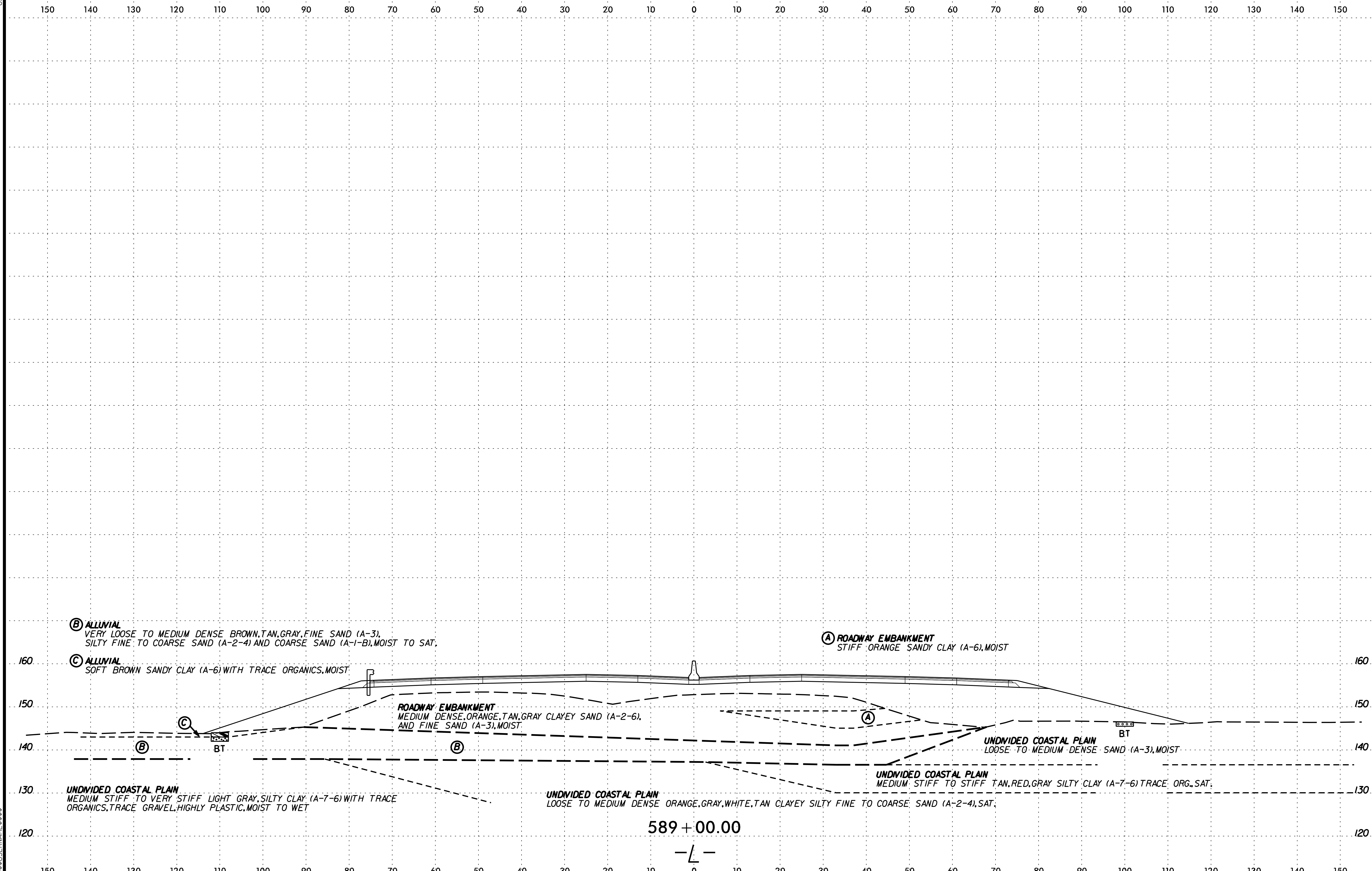
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	96



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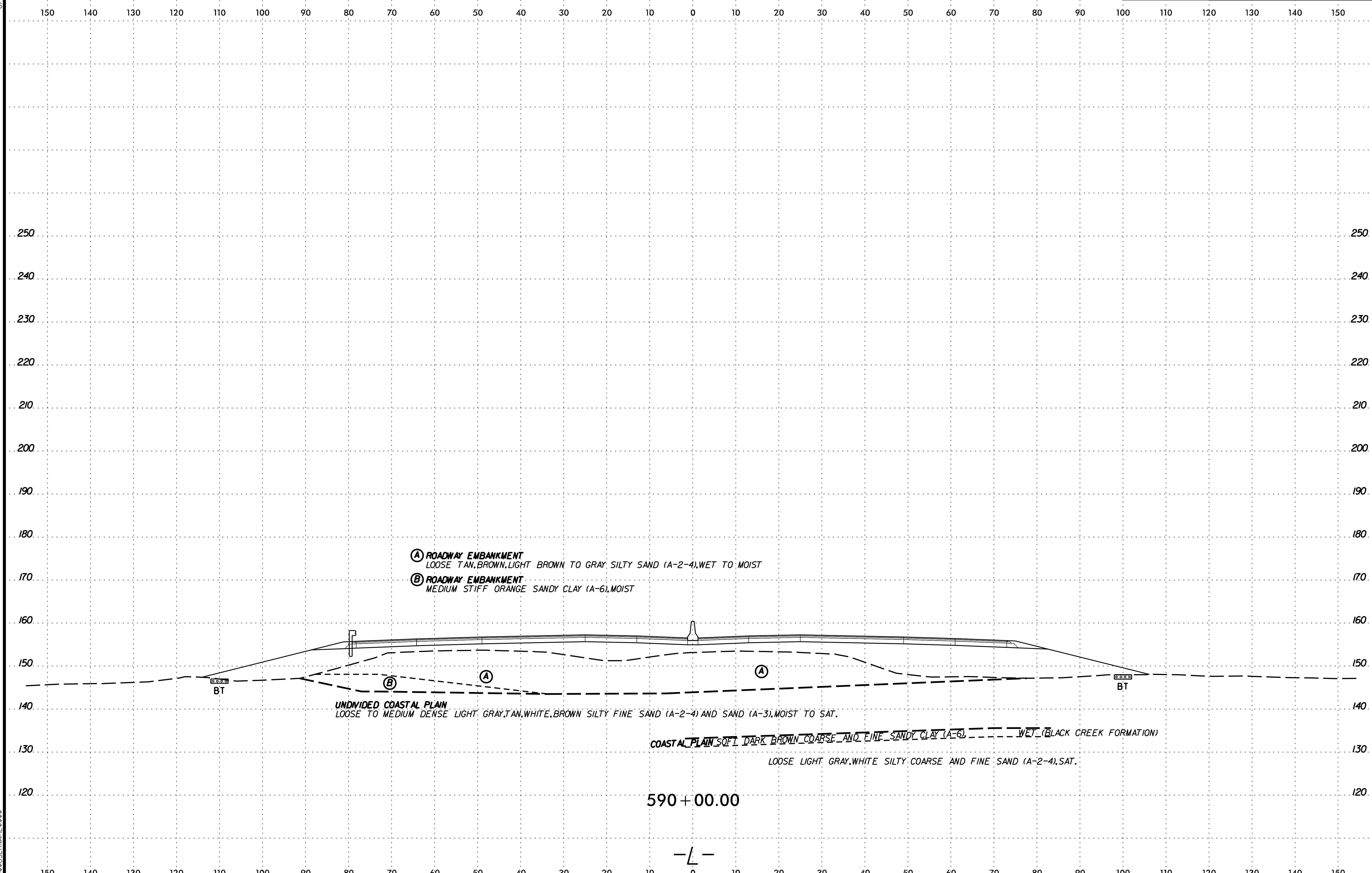
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	97



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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	98

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-157	72' RT	592+02	0.0-1.5	A-2-4(0)	NP	NP	22.2	61.0	12.5	4.2	99.8	93.0	23.0	-	ND
SS-158	72' RT	592+02	4.7-6.2	A-3(0)	NP	NP	79.0	18.3	2.5	0.2	99.4	62.0	3.0	-	ND
SS-159	72' RT	592+02	10.5-11.2	A-6(2)	35	17	37.0	28.7	9.6	24.7	93.7	75.0	37.0	23.0	ND
SS-160	72' RT	592+02	14.7-16.2	A-2-4(0)	NP	NP	56.2	30.7	3.6	9.5	93.1	78.0	14.0	-	ND

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,BROWN,LIGHT BROWN TO GRAY SILTY SAND (A-2-4),WET TO MOIST

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM STIFF ORANGE SANDY CLAY (A-6),MOIST

SS-157
SS-158
SS-159
SS-160
592+02

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY AND WHITE SILTY FINE SAND (A-2-4),WET

BT DRY 01/21

BT 03/20

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,LIGHT GRAY,WHITE SILTY FINE SAND (A-2-4) AND SAND (A-3),MOIST TO SAT.

COASTAL PLAIN SOFT DARK BROWN COARSE AND FINE SANDY CLAY (A-6), WET (BLACK CREEK FORMATION)

LOOSE LIGHT GRAY,WHITE SILTY COARSE AND FINE SAND (A-2-4),SAT.

BT 01/20 01/20

592+00.00

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,BROWN,LIGHT BROWN TO GRAY SILTY SAND (A-2-4),WET TO MOIST

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM STIFF ORANGE SANDY CLAY (A-6),MOIST

BT

ALLUVIAL
LOOSE TO MEDIUM DENSE LIGHT GRAY,TAN,WHITE,BROWN SILTY FINE SAND (A-2-4) AND SAND (A-3),MOIST TO SAT.

COASTAL PLAIN SOFT DARK BROWN COARSE AND FINE SANDY CLAY (A-6), WET (BLACK CREEK FORMATION)

LOOSE LIGHT GRAY,WHITE SILTY COARSE AND FINE SAND (A-2-4),SAT.

591+00.00

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	99

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

180 170 160 150 140 130 120

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

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN, BROWN, ORANGE AND WHITE SILTY SAND (A-2-4) AND FINE TO COARSE SAND (A-3), MOIST TO SAT.

8
15
24
16
01/21
BT
01/21

595+50.00

180 170 160 150 140 130 120

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

Ⓑ **ROADWAY EMBANKMENT**
ORANGE SANDY CLAY (A-6), MOIST

6
4
24
01/21
BT
01/21

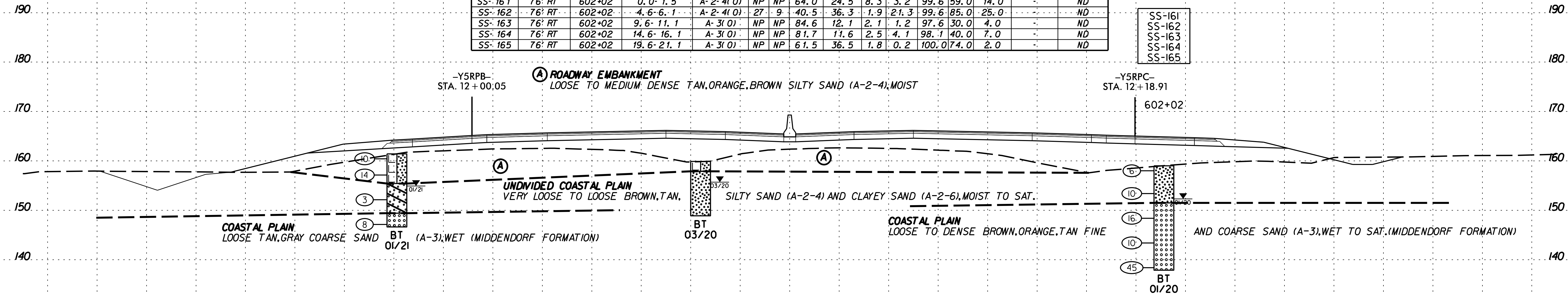
UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE LIGHT GRAY AND WHITE SILTY FINE SAND (A-2-4), MOIST

594+50.00

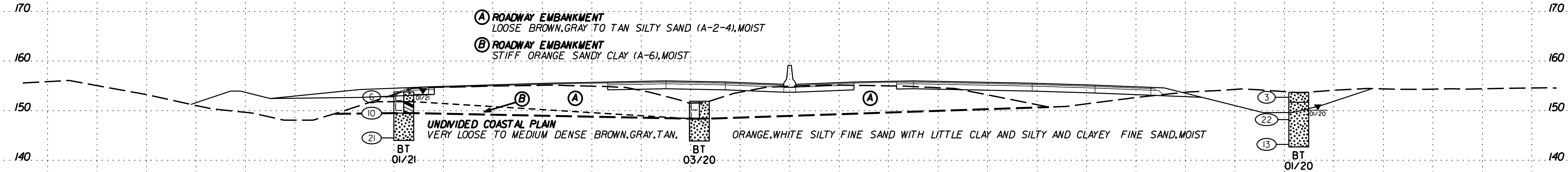
$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

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

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-161	76' RT	602+02	0.0-1.5	A-2-4(0)	NP	NP	64.0	24.5	8.3	3.2	99.6	59.0	14.0	-	ND
SS-162	76' RT	602+02	4.6-6.1	A-2-4(0)	27	9	40.5	36.3	1.9	21.3	99.6	85.0	25.0	-	ND
SS-163	76' RT	602+02	9.6-11.1	A-3(0)	NP	NP	84.6	12.1	2.1	1.2	97.6	30.0	4.0	-	ND
SS-164	76' RT	602+02	14.6-16.1	A-3(0)	NP	NP	81.7	11.6	2.5	4.1	98.1	40.0	7.0	-	ND
SS-165	76' RT	602+02	19.6-21.1	A-3(0)	NP	NP	61.5	36.5	1.8	0.2	100.0	74.0	2.0	-	ND



602+00.00



597+00.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	101

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

(B) UNDIVIDED COASTAL PLAIN
LOOSE TO DENSE ORANGE, RED, BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4), FINE SAND (A-3) AND CLAYEY SAND (A-2-6) WITH TRACE CLAY AND GRAVEL, MOIST TO SAT.

STIFF ORANGE, BROWN SILTY FINE TO COARSE SANDY CLAY (A-6), SAT.

MATCH LINE 150' LEFT

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-69	108' RT	605+79	8.4-9.9	A-2-6(1)	36	16	46.0	22.0	7.0	25.0	99.0	69.0	35.4	16.0	ND

(A) ROADWAY EMBANKMENT
LOOSE BROWN-GRAY, SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND CLAY, MOIST

–Y5RPB–
STA. 16+03.30

–Y5RPC–
STA. 16+19.87

MATCH LINE 150' RIGHT

UNDIVIDED COASTAL PLAIN
LOOSE TO DENSE ORANGE, RED, BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4), FINE SAND (A-3) AND CLAYEY SAND (A-2-6) WITH TRACE CLAY AND GRAVEL, MOIST TO SAT.

SS-69

10 39 13 34 27 21 — 02/20 — BT 02/20

3 2 12 — 01/21 — BT 01/21

UNDIVIDED COASTAL PLAIN
LOOSE TO DENSE ORANGE, RED, BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4), FINE SAND (A-3) AND CLAYEY SAND (A-2-6) WITH TRACE CLAY AND GRAVEL, MOIST TO SAT.

STIFF ORANGE, BROWN SILTY FINE TO COARSE SANDY CLAY (A-6), SAT.

COASTAL PLAIN
MEDIUM DENSE ORANGE, BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4), SAT. (MIDDENDORF FORMATION)

606+00.00

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TO DENSE RED, BROWN, TAN, ORANGE, GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY AND CLAYEY FINE TO COARSE SAND (A-2-6), MOIST TO SAT.

MATCH LINE 150' LEFT

–Y5RPB–
STA. 15+01.76

(A) ROADWAY EMBANKMENT
MEDIUM DENSE BROWN-GRAY, SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL, CLAY, AND ORGANICS, MOIST

–Y5RPC–
STA. 15+19.36

MATCH LINE 150' RIGHT

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TO DENSE RED, BROWN, TAN, ORANGE, GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY AND CLAYEY FINE TO COARSE SAND (A-2-6), MOIST TO SAT.

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TO DENSE RED, BROWN, TAN, ORANGE, GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY AND CLAYEY FINE TO COARSE SAND (A-2-6), MOIST TO SAT.

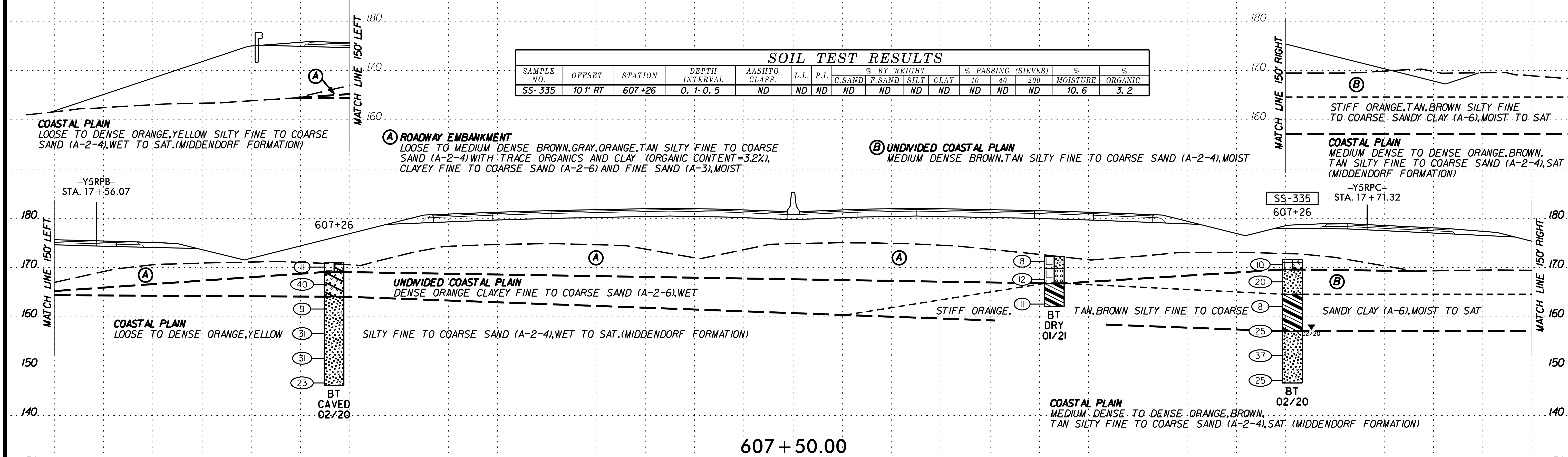
44 31 18 30 19 23 — BT CAVED 02/20

605+00.00

–L–

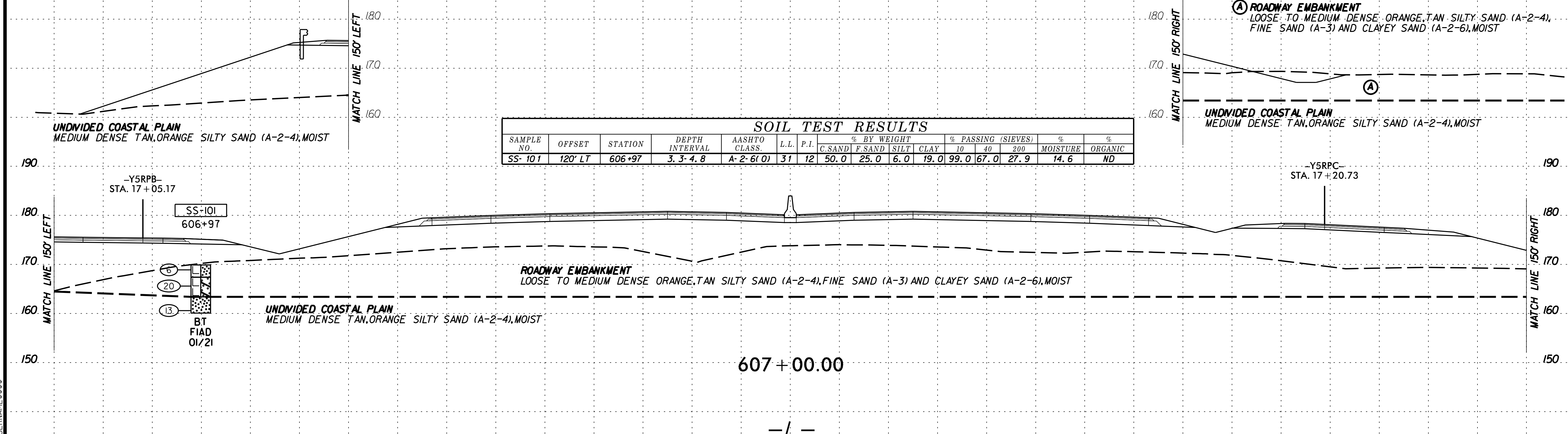
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$


MATCH LINE 150' LEFT
MATCH LINE 150' RIGHT
COASTAL PLAIN
LOOSE TO DENSE ORANGE,YELLOW SILTY FINE TO COARSE SAND (A-2-4),WET TO SAT.(MIDDENDORF FORMATION)
(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE BROWN,GRAY,ORANGE,TAN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND CLAY (ORGANIC CONTENT=3.2%), CLAYEY FINE TO COARSE SAND (A-2-6) AND FINE SAND (A-3),MOIST
(B) UNDIVIDED COASTAL PLAIN
MEDIUM DENSE BROWN,TAN SILTY FINE TO COARSE SAND (A-2-4),MOIST
STIFF ORANGE,TAN,BROWN SILTY FINE TO COARSE SANDY CLAY (A-6),MOIST TO SAT
COASTAL PLAIN
MEDIUM DENSE TO DENSE ORANGE,BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4),SAT (MIDDENDORF FORMATION)
-Y5RPB-
STA. 17+56.07
-Y5RPC-
STA. 17+71.32
SS-335
607+26
UNDIVIDED COASTAL PLAIN
DENSE ORANGE CLAYEY FINE TO COARSE SAND (A-2-6),WET
COASTAL PLAIN
LOOSE TO DENSE ORANGE,YELLOW SILTY FINE TO COARSE SAND (A-2-4),WET TO SAT.(MIDDENDORF FORMATION)
STIFF ORANGE, TAN,BROWN SILTY FINE TO COARSE SANDY CLAY (A-6),MOIST TO SAT
BT
CAVED
02/20
BT
DRY
01/21
BT
02/20
COASTAL PLAIN
MEDIUM DENSE TO DENSE ORANGE,BROWN, TAN SILTY FINE TO COARSE SAND (A-2-4),SAT (MIDDENDORF FORMATION)

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-335	10 1' RT	607+26	0.1-0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.6	3.2

607+50.00

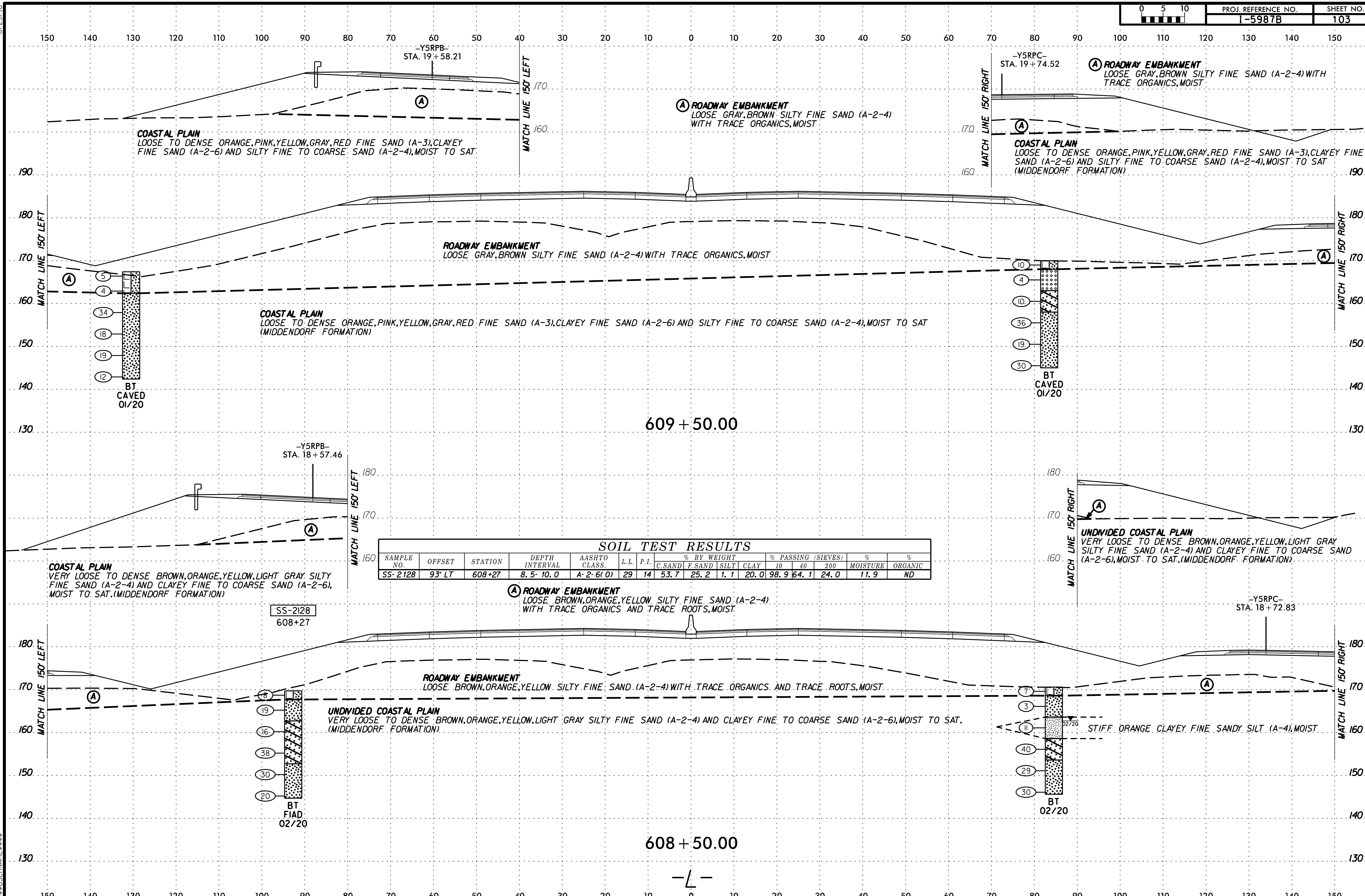

MATCH LINE 150' LEFT
MATCH LINE 150' RIGHT
UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN,ORANGE SILTY SAND (A-2-4),MOIST
(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE ORANGE,TAN SILTY SAND (A-2-4), FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST
-Y5RPB-
STA. 17+05.17
SS-101
606+97
-Y5RPC-
STA. 17+20.73
ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE ORANGE,TAN SILTY SAND (A-2-4),FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST
UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN,ORANGE SILTY SAND (A-2-4),MOIST
BT
FIAD
01/21

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-101	120' LT	606+97	3.3-4.8	A-2-6(0)	31	12	50.0	25.0	6.0	19.0	99.0	67.0	27.9	14.6	ND

607+00.00

-L-

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	103



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-2128	93' LT	608+27	8.5-10.0	A-2-6(0)	29	14	53.7	25.2	1.1	20.0	98.9	64.1	24.0	11.9	ND

$$$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	104

610+50.00

–Y5RPB–
STA. 20+58.51

SS-2036

MATCH LINE 140' LEFT

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TO MEDIUM DENSE TAN,GRAY,ORANGE,RED SILTY FINE TO COARSE SAND (A-2-4),CLAYEY SAND (A-2-7) AND FINE SAND (A-3) WITH TRACE ORGANICS,MOIST TO WET

UNDIVIDED COASTAL PLAIN
LOOSE ORANGE,SILTY FINE SAND (A-2-4),MOIST

VERY STIFF RED,YELLOW,GRAY SILTY FINE TO COARSE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
MEDIUM DENSE ORANGE,YELLOW FINE SAND (A-3) AND SILTY FINE SAND (A-2-4),SAT. (MIDDENDORF FORMATION)

9, 5, 18, 22, 19, 12

BT
01/20

–Y5RPC–
STA. 20+76.14

MATCH LINE 150' RIGHT

Ⓐ **UNDIVIDED COASTAL PLAIN**
LOOSE YELLOW FINE SAND (A-3),MOIST TO SAT.

COASTAL PLAIN
MEDIUM DENSE ORANGE,BROWN,SILTY FINE SAND (A-2-4),WET TO SAT.(MIDDENDORF FORMATION)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-58	69' LT	610+50	3.3-4.8	A-2-7(0)	43	22	65.0	12.0	4.0	19.0	97.0	49.0	23.2	13.9	ND
SS-2036	151' LT	610+27	8.5-10.0	A-6(5)	35	18	28.0	27.9	11.2	32.9	99.9	83.1	49.2	16.3	ND

SS-58

22, 16, 15, 8

BT
01/21

MATCH LINE 140' LEFT

ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE TAN,GRAY,ORANGE.

UNDIVIDED COASTAL PLAIN
LOOSE ORANGE,SILTY FINE SAND (A-2-4),MOIST

PAVEMENT

RED SILTY FINE TO COARSE SAND (A-2-4),CLAYEY SAND (A-2-7) AND FINE SAND (A-3) WITH TRACE ORGANICS,MOIST TO WET

UNDIVIDED COASTAL PLAIN LOOSE YELLOW FINE SAND (A-3),MOIST TO SAT.

COASTAL PLAIN
MEDIUM DENSE ORANGE,BROWN,SILTY FINE SAND (A-2-4),WET TO SAT.(MIDDENDORF FORMATION)

10, 5, 14, 28, 20, 22

BT
CAVED
01/20

MATCH LINE 150' RIGHT

610+00.00

–Y5RPB–
STA. 20+08.40

MATCH LINE 150' LEFT

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

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN,ORANGE FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST

–Y5RPC–
STA. 20+25.36

Ⓐ **ROADWAY EMBANKMENT**
LOOSE ORANGE SILTY SAND (A-2-4),MOIST

MATCH LINE 150' RIGHT

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN,ORANGE FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-70	40' LT	20+00	0.0-1.5	A-2-4(0)	NP	NP	54.0	30.0	4.0	12.0	100.0	68.0	18.6	7.1	ND

SS-70

MATCH LINE 150' LEFT

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

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN,ORANGE FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST

10, 4, 13

BT
DRY
01/21

MATCH LINE 150' RIGHT

610+00.00

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	105

–Y5RPB–
STA. 22+08.64

SS-100
611+91

13
9
14

BT
FIAD
01/21

MATCH LINE 150' LEFT

COASTAL PLAIN
LOOSE TO MEDIUM DENSE,TAN,ORANGE SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6),MOIST (MIDDENDORF FORMATION)

(A) ROADWAY EMBANKMENT
VERY LOOSE TO MEDIUM DENSE TAN,BROWN,YELLOW SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

–Y5RPC–
STA. 22+26.91

MATCH LINE 150' RIGHT

COASTAL PLAIN
LOOSE TO MEDIUM DENSE,TAN,ORANGE SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6),MOIST (MIDDENDORF FORMATION)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-100	170' LT	611+91	3.3-4.8	A-2-4(0)	NP	NP	61.0	30.0	4.0	5.0	99.0	60.0	13.2	10.4	ND

ROADWAY EMBANKMENT
VERY LOOSE TO MEDIUM DENSE TAN,BROWN,YELLOW SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

COASTAL PLAIN
LOOSE TO MEDIUM DENSE,TAN,ORANGE SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6),MOIST (MIDDENDORF FORMATION)

612+00.00

–Y5RPB–
STA. 21+58.56

611+27

5
11
42
22
13
17

01/20

BT
01/20

MATCH LINE 150' LEFT

COASTAL PLAIN
LOOSE TO DENSE BROWN,GRAY,ORANGE,SILTY FINE TO COARSE SAND (A-2-4) AND CLAYEY FINE SAND (A-2-6),WET TO SAT. (MIDDENDORF FORMATION)

(A) ROADWAY EMBANKMENT
LOOSE TO VERY LOOSE BROWN,YELLOW SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

–Y5RPC–
STA. 21+76.84

MATCH LINE 150' RIGHT

COASTAL PLAIN
LOOSE TO DENSE BROWN,GRAY,ORANGE,SILTY FINE TO COARSE SAND (A-2-4) AND CLAYEY FINE SAND (A-2-6),WET TO SAT. (MIDDENDORF FORMATION)

ROADWAY EMBANKMENT
LOOSE TO VERY LOOSE BROWN,YELLOW SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

COASTAL PLAIN
LOOSE TO DENSE BROWN,GRAY,ORANGE,SILTY FINE TO COARSE SAND (A-2-4) AND CLAYEY FINE SAND (A-2-6),WET TO SAT. (MIDDENDORF FORMATION)

6
3
10
30
21
7

BT
CAVED
01/20

611+50.00

–L–

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

–Y5RPB–
STA. 22+58.58

Ⓐ

COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,ORANGE,GRAY,PINK,
YELLOW,GRAY,WHITE,SILTY FINE TO COARSE SAND (A-2-4)
AND FINE SAND (A-3) WITH TRACE ORGANICS,MOIST TO SAT.
(MIDDENDORF FORMATION)

6
10
25
7
13
3
18

01/20

BT
01/20

MATCH LINE 150' LEFT

170
160

–Y5RPC–
STA. 22+76.92

MATCH LINE 150' RIGHT

170
160

Ⓐ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF ORANGE,BROWN FINE SANDY SILT (A-4),MOIST

COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,ORANGE,GRAY,PINK,YELLOW,GRAY,WHITE,SILTY FINE TO
COARSE SAND (A-2-4) AND FINE SAND (A-3) WITH TRACE ORGANICS,MOIST TO SAT.

Ⓐ **ROADWAY EMBANKMENT**
LOOSE BROWN SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

200
190
180
170
160
150
140

MATCH LINE 150' LEFT

ROADWAY EMBANKMENT
LOOSE BROWN SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,ORANGE,GRAY,PINK,YELLOW,GRAY,WHITE,SILTY FINE TO COARSE SAND (A-2-4) AND FINE SAND (A-3) WITH TRACE ORGANICS,MOIST TO SAT.
(MIDDENDORF FORMATION)

6
4
7
17
20
18

02/20

BT
01/20

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE,BROWN FINE SANDY SILT (A-4),MOIST

MATCH LINE 150' RIGHT

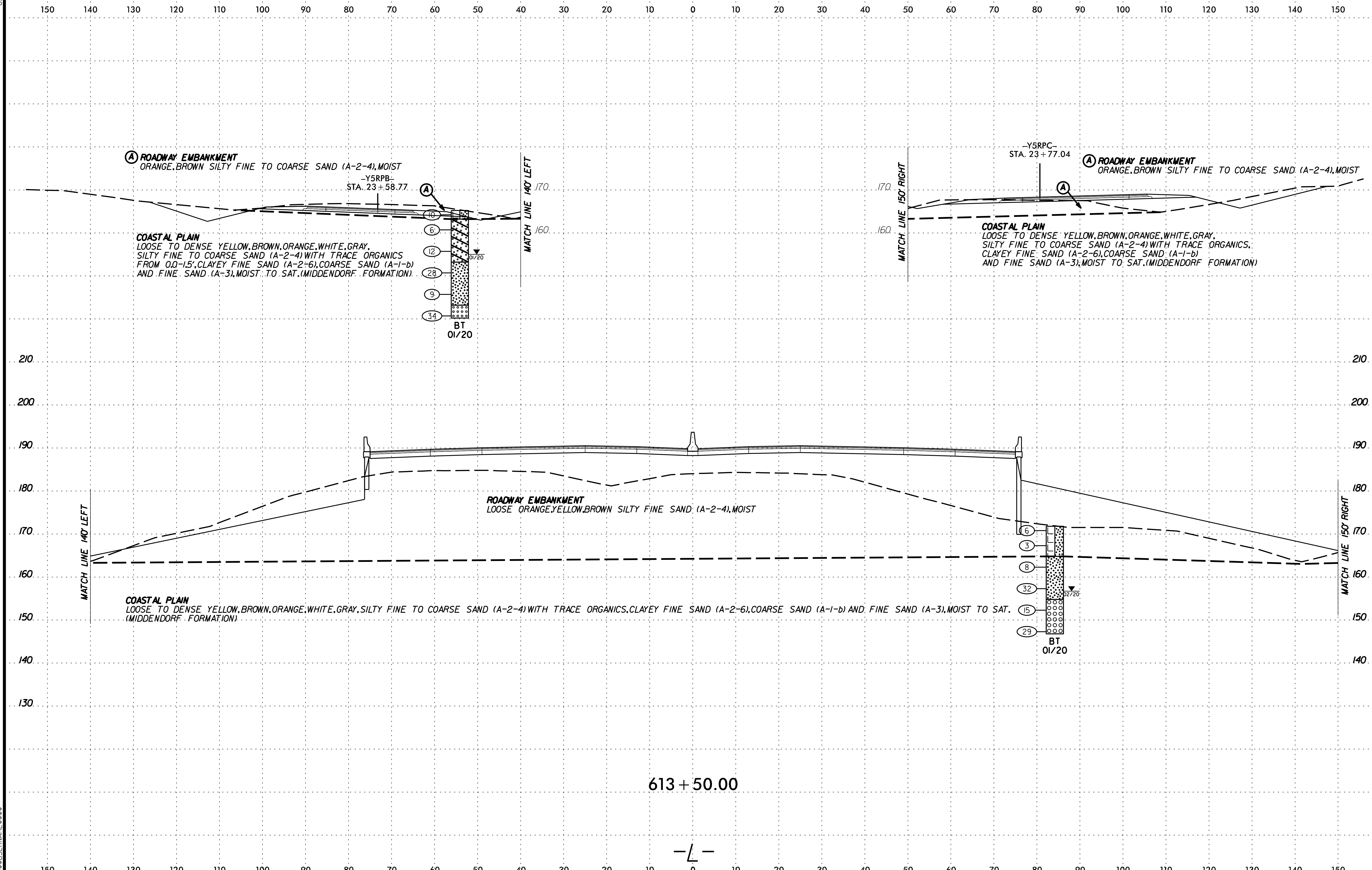
612+50.00

–L–

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	107



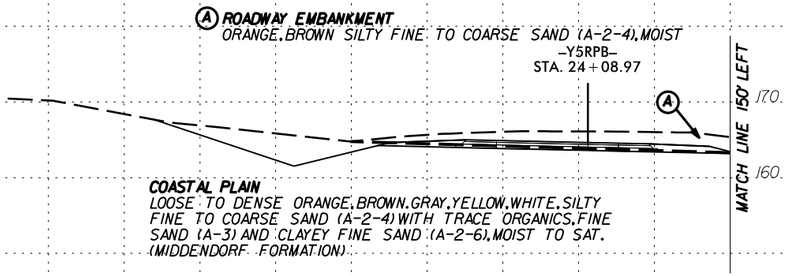
6/23/16

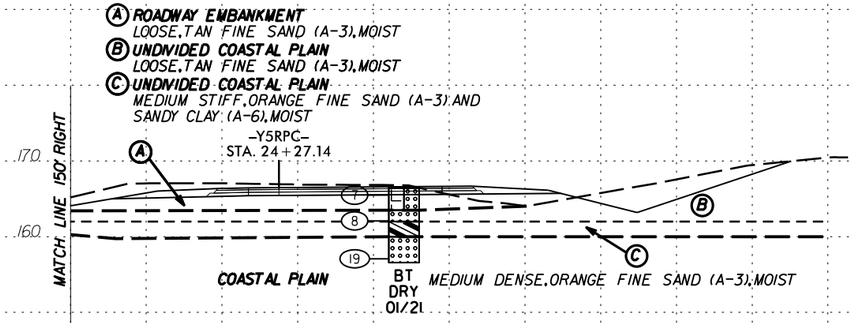
$$$$$SYSTIME$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

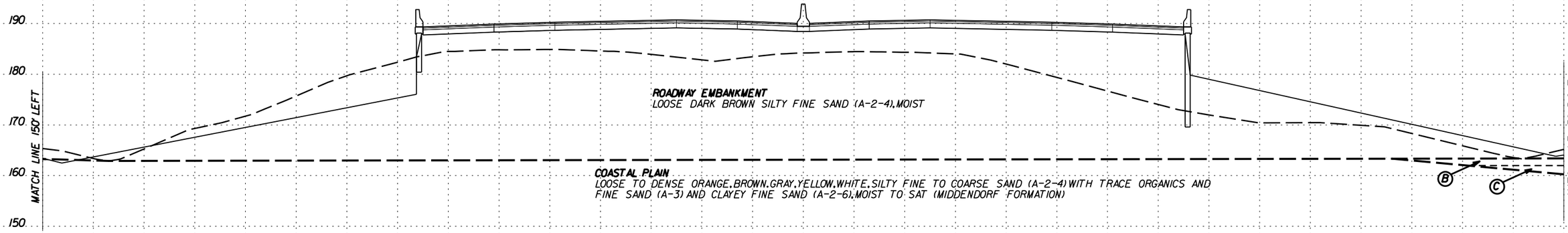
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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







614+00.00

–L–

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

Ⓐ **ROADWAY EMBANKMENT**
ORANGE, BROWN SILTY FINE TO COARSE SAND (A-2-4), MOIST
–Y5RPB–
STA. 24+59.22

COASTAL PLAIN
LOOSE TO DENSE ORANGE, BROWN, GRAY, YELLOW, WHITE, SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS, FINE SAND (A-3) AND CLAYEY FINE SAND (A-2-6), MOIST TO SAT. (MIDDENDORF FORMATION)

MATCH LINE 150' LEFT

170
160

–Y5RPC–
STA. 24+77.24

MATCH LINE 150' RIGHT

170
160

190
180
170
160
150
140
130

MATCH LINE 150' LEFT

614+27

10
11
35 01/20
21
6
24

BT
01/20

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

COASTAL PLAIN
LOOSE TO DENSE ORANGE, BROWN, GRAY, YELLOW, WHITE, SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND FINE SAND (A-3) AND CLAYEY FINE SAND (A-2-6), MOIST TO SAT. (MIDDENDORF FORMATION)

8
3
8
25
21
26

BT
CAVED
01/20

MATCH LINE 140' LEFT

190
180
170
160
150
140
130

614+50.00

–L–

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

210 200 190 180 170 160 150 140 130

(A) ROADWAY EMBANKMENT
LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL,MOIST

-Y5RPB-
STA. 25+59.54

MATCH LINE 150' LEFT

170.

160.

COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,GRAY SILTY FINE TO COARSE SAND (A-2-4),MOIST TO SAT.
(MIDDENDORF FORMATION)

(A) ROADWAY EMBANKMENT
LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL,MOIST

615+27

MATCH LINE 150' LEFT

10
9
39
14
14
25

01/20

BT
01/20

ROADWAY EMBANKMENT
LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL,MOIST

COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,GRAY SILTY FINE TO COARSE SAND (A-2-4),MOIST TO SAT.(MIDDENDORF FORMATION)

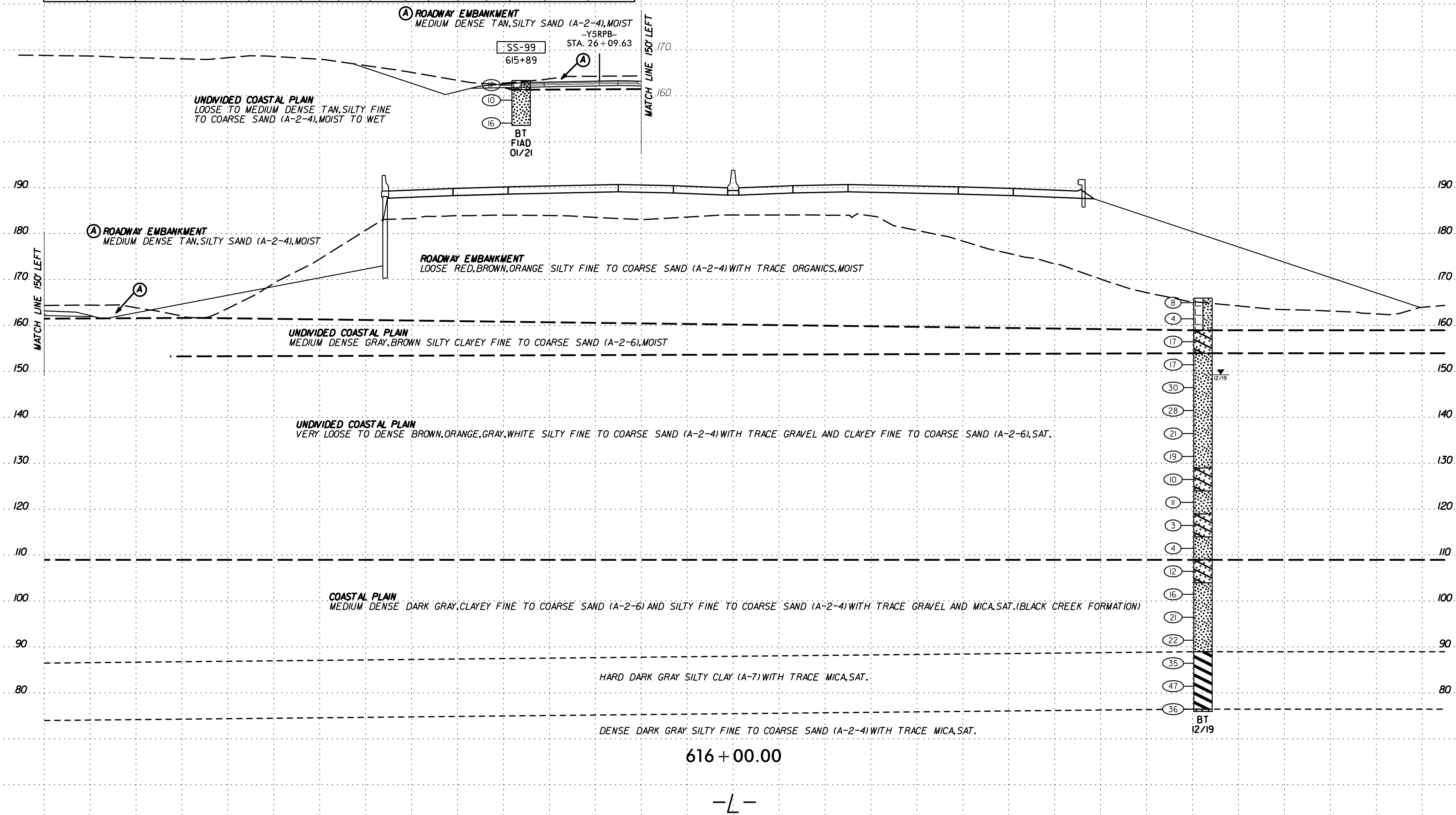
615+50.00

-L-

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-99	176' LT	615+89	0.0-1.5	A-2-4(0)	NP	NP	52.0	37.0	4.0	7.0	98.0	67.0	13.0	6.2	ND



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

(A) ROADWAY EMBANKMENT
LOOSE DARK GRAY,BROWN,ORANGE,RED,SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND GRAVEL AND CLAYEY FINE TO COARSE SAND (A-2-6), MOIST

-Y5RPB-
STA. 26+60.22

MATCH LINE 150' LEFT

170

160

COASTAL PLAIN
VERY LOOSE TO DENSE BROWN,ORANGE,WHITE,GRAY SILTY FINE TO COARSE SAND (A-2-4) CLAYEY FINE TO COARSE SAND (A-2-6), MOIST TO SAT. (MIDDENDORF FORMATION)

190 180 170 160 150 140 130 120 110 100 90 80 70

MATCH LINE 150' LEFT

ROADWAY EMBANKMENT
LOOSE DARK GRAY,BROWN,ORANGE,RED,SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND GRAVEL AND CLAYEY FINE TO COARSE SAND (A-2-6), MOIST

7 4 11 11 32 28 12 12 WOH 35 28 10 17 23 25 22 25

12/19

BT
12/19

UNDIVIDED COASTAL PLAIN VERY LOOSE TO LOOSE BROWN,CLAYEY FINE TO COARSE SAND (A-2-6), MOIST

24 4 8 11 27 29 5 11 26 22 5 11 23 21 16 19 25 35

COASTAL PLAIN
MEDIUM STIFF TO STIFF RED,BROWN,GRAY FINE TO COARSE SANDY SILTY CLAY (A-7), SAT. (MIDDENDORF FORMATION)

COASTAL PLAIN
VERY LOOSE TO DENSE BROWN,ORANGE,WHITE,GRAY SILTY FINE TO COARSE SAND (A-2-4) CLAYEY FINE TO COARSE SAND (A-2-6), MOIST TO SAT. (MIDDENDORF FORMATION)

COASTAL PLAIN
MEDIUM DENSE DARK GRAY SILTY FINE TO COARSE SAND (A-2-4), SAT. (BLACK CREEK FORMATION)

VERY STIFF DARK GRAY SILTY CLAY (A-7) WITH TRACE MICA, SAT.

MEDIUM DENSE DARK GRAY SILTY FINE TO COARSE SAND (A-2-4) AND CLAYEY FINE TO COARSE SAND (A-2-6) WITH TRACE MICA, SAT.

VERY STIFF TO HARD DARK GRAY SANDY SILTY CLAY (A-7) WITH LITTLE MICA, SAT.

MEDIUM DENSE DARK GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH LITTLE MICA, SAT.

BT
FIAD
12/19

616+50.00

-L-

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

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	113

MATCH LINE 150' LEFT

-Y5RPB-
STA. 27+11.84

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,ORANGE FINE TO COARSE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE GRAY,ORANGE,BROWN,WHITE SILTY FINE TO COARSE SAND (A-2-4),CLAYEY FINE TO COARSE SAND (A-2-6),SAT.(MIDDENDORF FORMATION)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-1801	89' LT	617+22	3.5-5.0	A-6(2)	35	17	41.3	27.7	3.8	33.0	99.2	72.2	35.5	14.7	ND
SS-1036	83' RT	617+19	3.5-5.0	A-6(3)	35	17	35.1	27.1	6.0	26.9	99.2	77.5	41.7	16.6	ND

(A) ROADWAY EMBANKMENT
LOOSE TO DENSE GRAY,BROWN,ORANGE SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

(B) COASTAL PLAIN
MEDIUM STIFF GRAY FINE TO COARSE SANDY CLAY (A-7),SAT.(BLACK CREEK FORMATION)

SS-1801
617+22

SS-1036
617+19

UNDIVIDED COASTAL PLAIN SOFT TO MEDIUM STIFF BROWN,ORANGE FINE TO COARSE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE GRAY,ORANGE,BROWN,WHITE SILTY FINE TO COARSE SAND (A-2-4),CLAYEY FINE TO COARSE SAND (A-2-6),SAT.(MIDDENDORF FORMATION)

GRAY,BROWN FINE SANDY CLAY (A-7),SAT.

SOFT RED,GRAY,BROWN SILTY FINE SANDY CLAY (A-6),SAT.

COASTAL PLAIN
LOOSE TO MEDIUM DENSE DARK GRAY,SILTY FINE TO COARSE SAND (A-2-4),SAT.(BLACK CREEK FORMATION)

VERY STIFF GRAY,DARK GRAY FINE TO COARSE SANDY CLAY (A-7),SAT.

MEDIUM DENSE GRAY SILTY FINE TO COARSE SAND (A-2-4),SAT.

VERY STIFF TO HARD DARK GRAY,FINE TO COARSE SILTY CLAY (A-7) WITH TRACE WOOD FRAGMENTS,SAT.

MEDIUM DENSE GRAY SILTY FINE SAND (A-2-4) WITH TRACE GRAVEL,SAT.

VERY STIFF GRAY SILTY SILTY CLAY (A-7),SAT.

BT
FIAD
12/19

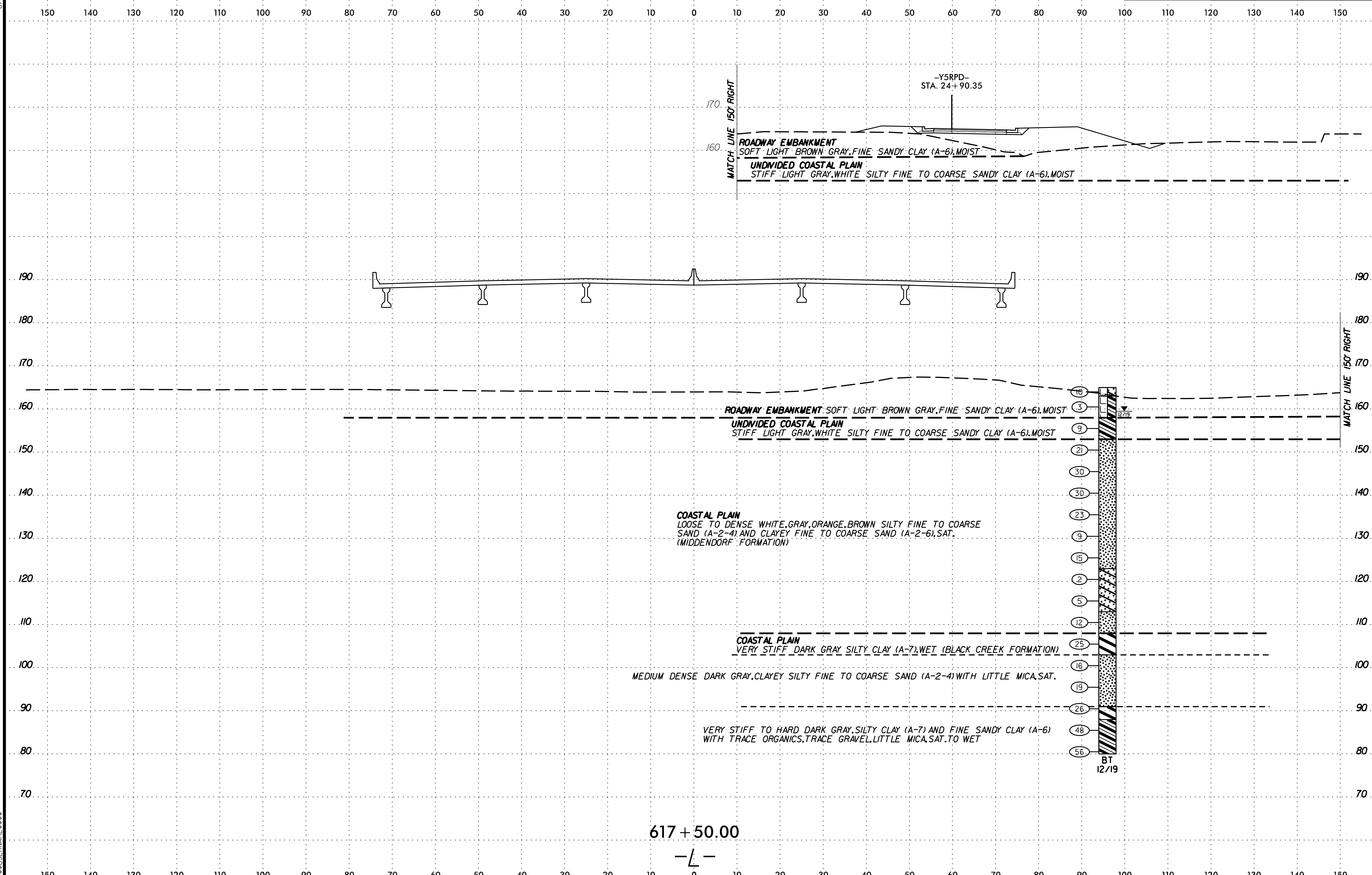
BT
12/19

617+00.00

-L-

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	114



617+50.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	115

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

(A) ROADWAY EMBANKMENT
MEDIUM DENSE ORANGE,BROWN,GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND CLAY,WET

MATCH LINE 150' RIGHT

170

160

-Y5RPD-
STA. 24+38.31

UNDIVIDED COASTAL PLAIN
LOOSE GRAY-BROWN,CLAYEY FINE TO COARSE SAND (A-2-6) WITH TRACE ORGANICS,WET

COASTAL PLAIN
MEDIUM DENSE TO DENSE TAN,GRAY,SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY,SAT.(MIDDENDORF FORMATION)

200 190 180 170 160 150 140 130 120 110 100 90 80

ROADWAY EMBANKMENT
MEDIUM DENSE ORANGE,BROWN,GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND CLAY,WET

11 4 14 21 32 19 19 22 14 54 13 8 19 38 25 24 54

BT 01/20

UNDIVIDED COASTAL PLAIN
LOOSE GRAY-BROWN,CLAYEY FINE TO COARSE SAND (A-2-6) WITH TRACE ORGANICS,WET

COASTAL PLAIN
MEDIUM DENSE TO DENSE TAN,GRAY,SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY,SAT.(MIDDENDORF FORMATION)

VERY STIFF GRAY,FINE SANDY SILTY CLAY (A-7) WITH TRACE COARSE SAND,MOIST

MEDIUM DENSE TO VERY DENSE GRAY,TAN,WHITE CLAYEY FINE TO COARSE SAND (A-2-6) AND SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY AND MICA,SAT.

COASTAL PLAIN
MEDIUM DENSE GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE MICA,SAT.(BLACK CREEK FORMATION)

HARD DARK GRAY FINE TO COARSE SANDY SILTY CLAY (A-7) WITH TRACE MICA AND WOOD FRAGMENTS,WET

MEDIUM DENSE GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE MICA,CLAY,AND GRAVEL,SAT.

HARD DARK GRAY TO LIGHT GRAY,FINE SILTY CLAY (A-7) WITH TRACE MICA,MOIST

618+00.00

MATCH LINE 150' RIGHT

$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

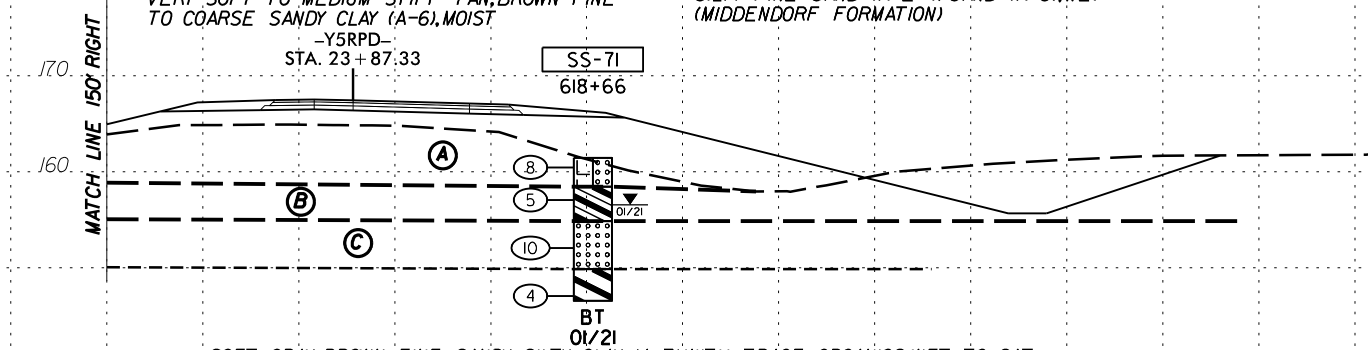
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	116

6/23/16

Ⓐ **ROADWAY EMBANKMENT**
LOOSE ORANGE,TAN,BROWN SILTY CLAYEY FINE TO COARSE SAND (A-2-6) FINE SAND (A-3),MOIST

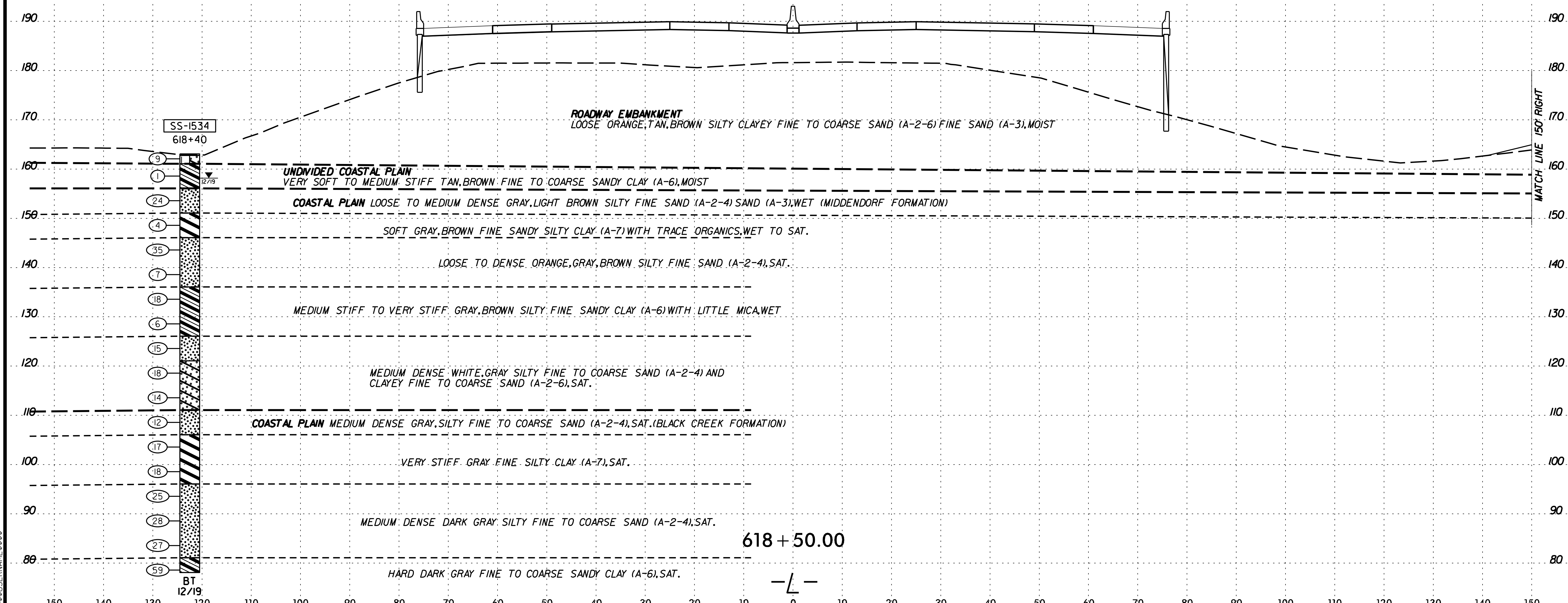
Ⓑ **UNDIVIDED COASTAL PLAIN**
VERY SOFT TO MEDIUM STIFF TAN,BROWN FINE TO COARSE SANDY CLAY (A-6),MOIST

Ⓒ **COASTAL PLAIN**
LOOSE TO MEDIUM DENSE GRAY,LIGHT BROWN SILTY FINE SAND (A-2-4) SAND (A-3),WET (MIDDENDORF FORMATION)

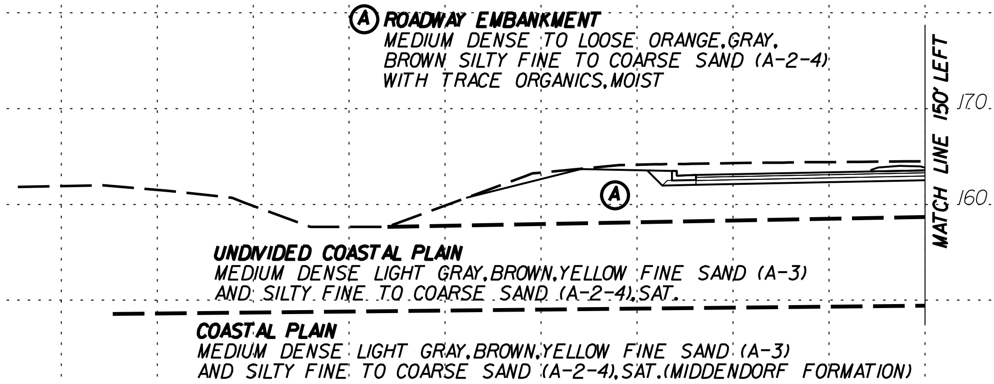


SOIL TEST RESULTS

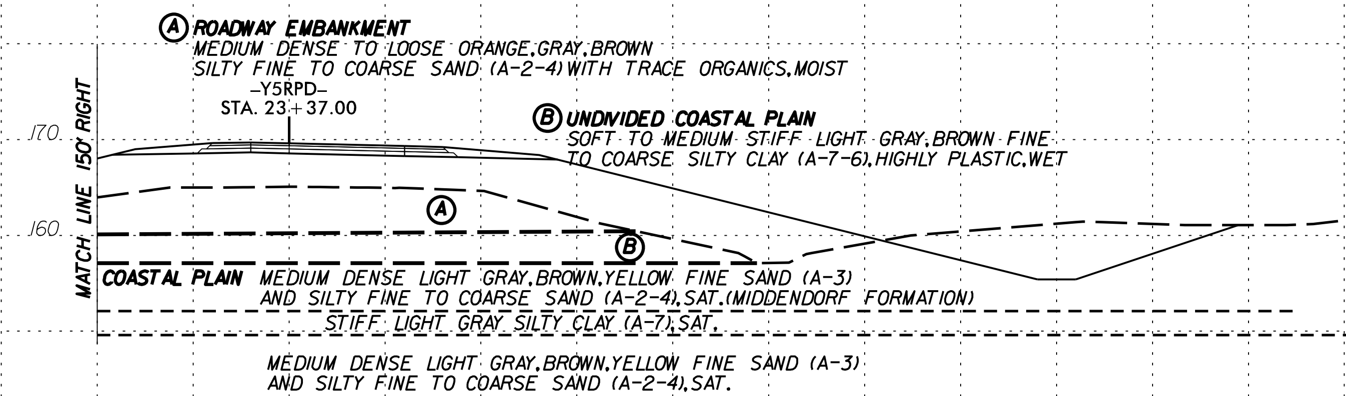
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-1534	123' LT	618+40	3.5-5.0	A-6(4)	30	17	33.0	26.9	6.7	6.7	99.2	82.2	43.8	16.5	ND
SS-71	201' RT	618+66	3.4-4.9	A-6(6)	39	18	31.0	20.0	7.0	42.0	99.0	79.0	50.9	21.1	ND



\$\$\$\$\$SYSTIME\$\$\$\$
\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$
\$\$\$USERNAME\$\$\$\$



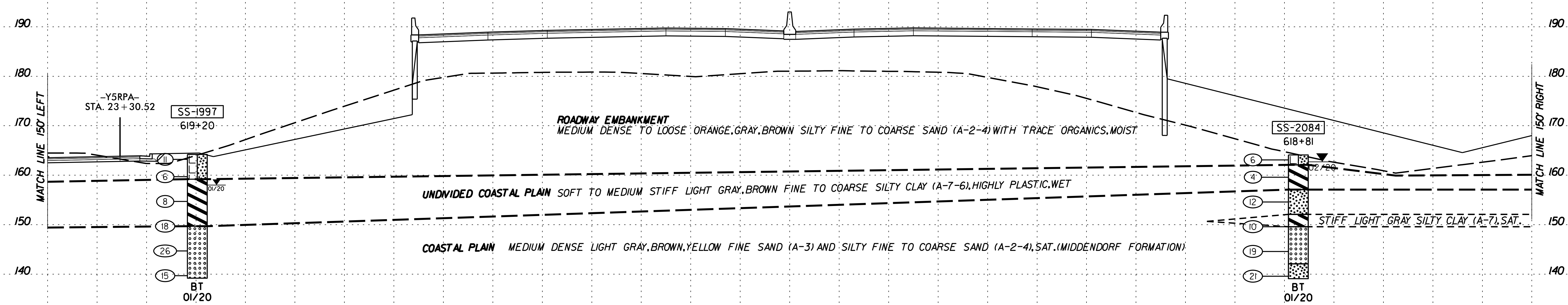
(A) ROADWAY EMBANKMENT
MEDIUM DENSE TO LOOSE ORANGE,GRAY, BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST
UNDIVIDED COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.
COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.(MIDDENDORF FORMATION)
MATCH LINE 150' LEFT
170
160



(A) ROADWAY EMBANKMENT
MEDIUM DENSE TO LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST
-Y5RPD-
STA. 23+37.00
(B) UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF LIGHT GRAY,BROWN FINE TO COARSE SILTY CLAY (A-7-6),HIGHLY PLASTIC,WET
COASTAL PLAIN MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.(MIDDENDORF FORMATION)
STIFF LIGHT GRAY SILTY CLAY (A-7),SAT.
MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.
MATCH LINE 150' RIGHT
170
160

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-2084	103' RT	618+81	3.5-5.0	A-7-6(17)	56	35	30.6	13.9	8.8	46.7	99.1	79.2	57.1	24.3	ND
SS-1997	120' LT	619+20	8.2-10.0	A-7-6(30)	56	35	10.7	12.2	23.2	53.9	99.2	93.5	82.1	28.7	ND



MATCH LINE 150' LEFT
-Y5RPA-
STA. 23+30.52
SS-1997
619+20
ROADWAY EMBANKMENT
MEDIUM DENSE TO LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST
SS-2084
618+81
UNDIVIDED COASTAL PLAIN SOFT TO MEDIUM STIFF LIGHT GRAY,BROWN FINE TO COARSE SILTY CLAY (A-7-6),HIGHLY PLASTIC,WET
STIFF LIGHT GRAY SILTY CLAY (A-7),SAT.
COASTAL PLAIN MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.(MIDDENDORF FORMATION)
BT
01/20
BT
01/20
MATCH LINE 150' RIGHT

619+00.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	118

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

(A) ROADWAY EMBANKMENT
MEDIUM DENSE TO LOOSE ORANGE,GRAY, BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

MATCH LINE 150' LEFT

170.

160.

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.

COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.(MIDDENDORF FORMATION)

(A) ROADWAY EMBANKMENT
MEDIUM DENSE TO LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

–Y5RPD–
STA. 22+86.96

(B) UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF LIGHT GRAY,BROWN FINE TO COARSE SILTY CLAY (A-7-6),HIGHLY PLASTIC,WET

MATCH LINE 150' RIGHT

170.

160.

COASTAL PLAIN MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.(MIDDENDORF FORMATION)
STIFF LIGHT GRAY SILTY CLAY (A-7),SAT.

MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.

190 180 170 160 150 140

MATCH LINE 150' LEFT

–Y5RPA–
STA. 22+80.24

ROADWAY EMBANKMENT
MEDIUM DENSE TO LOOSE ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS,MOIST

UNDIVIDED COASTAL PLAIN SOFT TO MEDIUM STIFF LIGHT GRAY,BROWN FINE TO COARSE SILTY CLAY (A-7-6),HIGHLY PLASTIC,WET

COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY,BROWN,YELLOW FINE SAND (A-3) AND SILTY FINE TO COARSE SAND (A-2-4),SAT.
(MIDDENDORF FORMATION)

STIFF LIGHT GRAY SILTY CLAY (A-7),SAT.

MATCH LINE 150' RIGHT

190 180 170 160 150 140

619+50.00

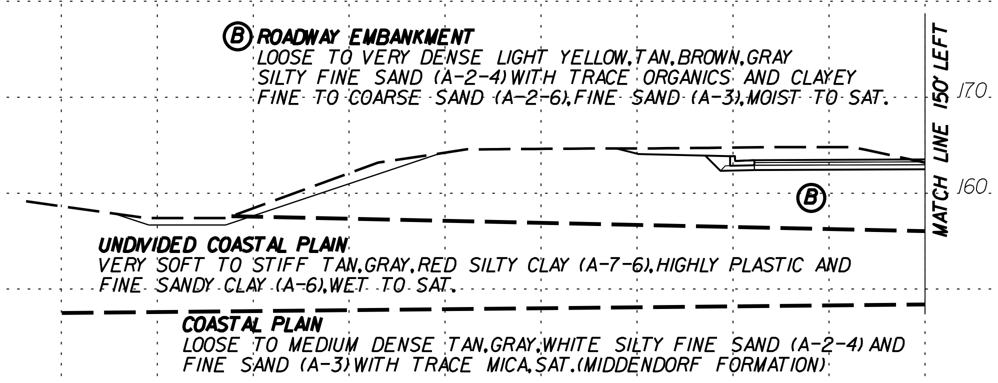
–L–

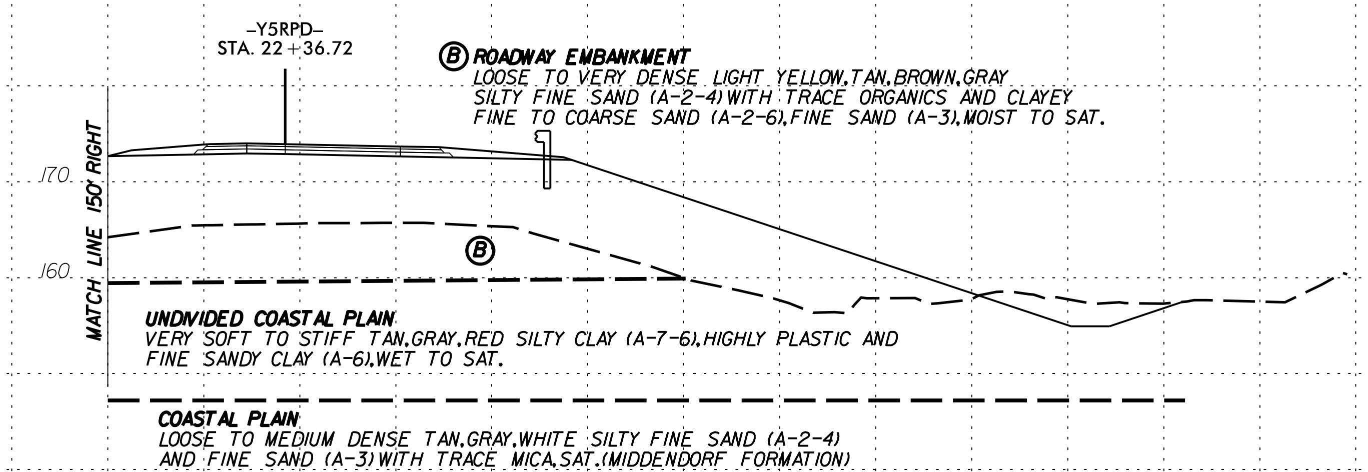
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

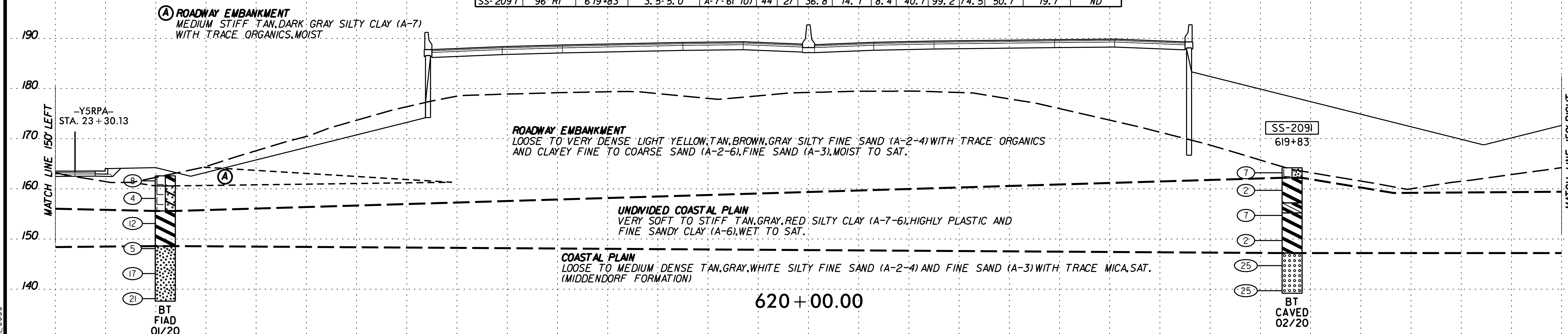
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	119





SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-2091	96' RT	619+83	3.5-5.0	A-7-6(10)	44	27	36.8	14.1	8.4	40.7	99.2	74.5	50.7	19.7	ND



620+00.00

-L-

$$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

Ⓑ **ROADWAY EMBANKMENT**
LOOSE TO VERY DENSE LIGHT YELLOW,TAN,BROWN,GRAY SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS AND CLAYEY FINE TO COARSE SAND (A-2-6),FINE SAND (A-3),MOIST TO SAT.

MATCH LINE 150' LEFT

170.

160.

Ⓑ

UNDIVIDED COASTAL PLAIN
VERY SOFT TO STIFF TAN,GRAY,RED SILTY CLAY (A-7-6),HIGHLY PLASTIC AND FINE SANDY CLAY (A-6),WET TO SAT.

COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN,GRAY,WHITE SILTY FINE SAND (A-2-4) AND FINE SAND (A-3) WITH TRACE MICA,SAT.(MIDDENDORF FORMATION)

Ⓑ **ROADWAY EMBANKMENT**
LOOSE TO VERY DENSE LIGHT YELLOW,TAN,BROWN,GRAY SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS AND CLAYEY FINE TO COARSE SAND (A-2-6),FINE SAND (A-3),MOIST TO SAT.

–Y5RPD–
STA. 21+86.09

170.

160.

MATCH LINE 150' RIGHT

Ⓑ

UNDIVIDED COASTAL PLAIN
VERY SOFT TO STIFF TAN,GRAY,RED SILTY CLAY (A-7-6),HIGHLY PLASTIC AND FINE SANDY CLAY (A-6),WET TO SAT.

COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN,GRAY,WHITE SILTY FINE SAND (A-2-4) AND FINE SAND (A-3) WITH TRACE MICA,SAT.(MIDDENDORF FORMATION)

210 200 190 180 170 160 150 140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM STIFF TAN,DARK GRAY SILTY CLAY (A-7) WITH TRACE ORGANICS,MOIST

–Y5RPA–
STA. 21+80.39

MATCH LINE 150' LEFT

Ⓐ

ROADWAY EMBANKMENT
LOOSE TO VERY DENSE LIGHT YELLOW,TAN,BROWN,GRAY SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS AND CLAYEY FINE TO COARSE SAND (A-2-6),FINE SAND (A-3),MOIST TO SAT.

UNDIVIDED COASTAL PLAIN
VERY SOFT TO STIFF TAN,GRAY,RED SILTY CLAY (A-7-6),HIGHLY PLASTIC AND FINE SANDY CLAY (A-6),WET TO SAT.

COASTAL PLAIN
LOOSE TO MEDIUM DENSE TAN,GRAY,WHITE SILTY FINE SAND (A-2-4) AND FINE SAND (A-3) WITH TRACE MICA,SAT.
(MIDDENDORF FORMATION)

MATCH LINE 150' RIGHT

620+50.00

–L–

210 200 190 180 170 160 150 140

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

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

(B) ROADWAY EMBANKMENT
MEDIUM STIFF DARK BROWN SILTY CLAY (A-7)
WITH TRACE ORGANICS, MOIST

–Y5RPA–
STA. 21+31.06

UNDIVIDED COASTAL PLAIN
VERY SOFT TO MEDIUM STIFF GRAY, ORANGE SILTY CLAY (A-7), WET TO SAT.

COASTAL PLAIN
MEDIUM DENSE WHITE SILTY FINE SAND (A-2-4), SAT.
(MIDDENDORF FORMATION)

MATCH LINE 150' LEFT

170.

160.

(A) ROADWAY EMBANKMENT
LOOSE TO VERY DENSE TAN AND GRAY CLAYEY
–Y5RPD– SAND (A-2-6), FINE SAND (A-3), MOIST
STA. 21+35.06

MATCH LINE 150' RIGHT

170.

160.

UNDIVIDED COASTAL PLAIN
VERY SOFT TO MEDIUM STIFF GRAY, ORANGE SILTY CLAY (A-7), WET TO SAT.

COASTAL PLAIN
MEDIUM DENSE WHITE SILTY FINE SAND (A-2-4), SAT.
(MIDDENDORF FORMATION)

210 200 190 180 170 160 150 140

MATCH LINE 150' LEFT

ROADWAY EMBANKMENT
LOOSE TO VERY DENSE TAN AND GRAY CLAYEY SAND (A-2-6), FINE SAND (A-3), MOIST

ROADWAY EMBANKMENT MEDIUM STIFF DARK BROWN SILTY CLAY (A-7) WITH TRACE ORGANICS, MOIST

UNDIVIDED COASTAL PLAIN
VERY SOFT TO MEDIUM STIFF GRAY, ORANGE SILTY CLAY (A-7), WET TO SAT.

COASTAL PLAIN
MEDIUM DENSE WHITE SILTY FINE SAND (A-2-4), SAT. (MIDDENDORF FORMATION)

7
8
7
WOH
12
15
02/20
BT
02/20

MATCH LINE 150' RIGHT

210 200 190 180 170 160 150 140

621+00.00

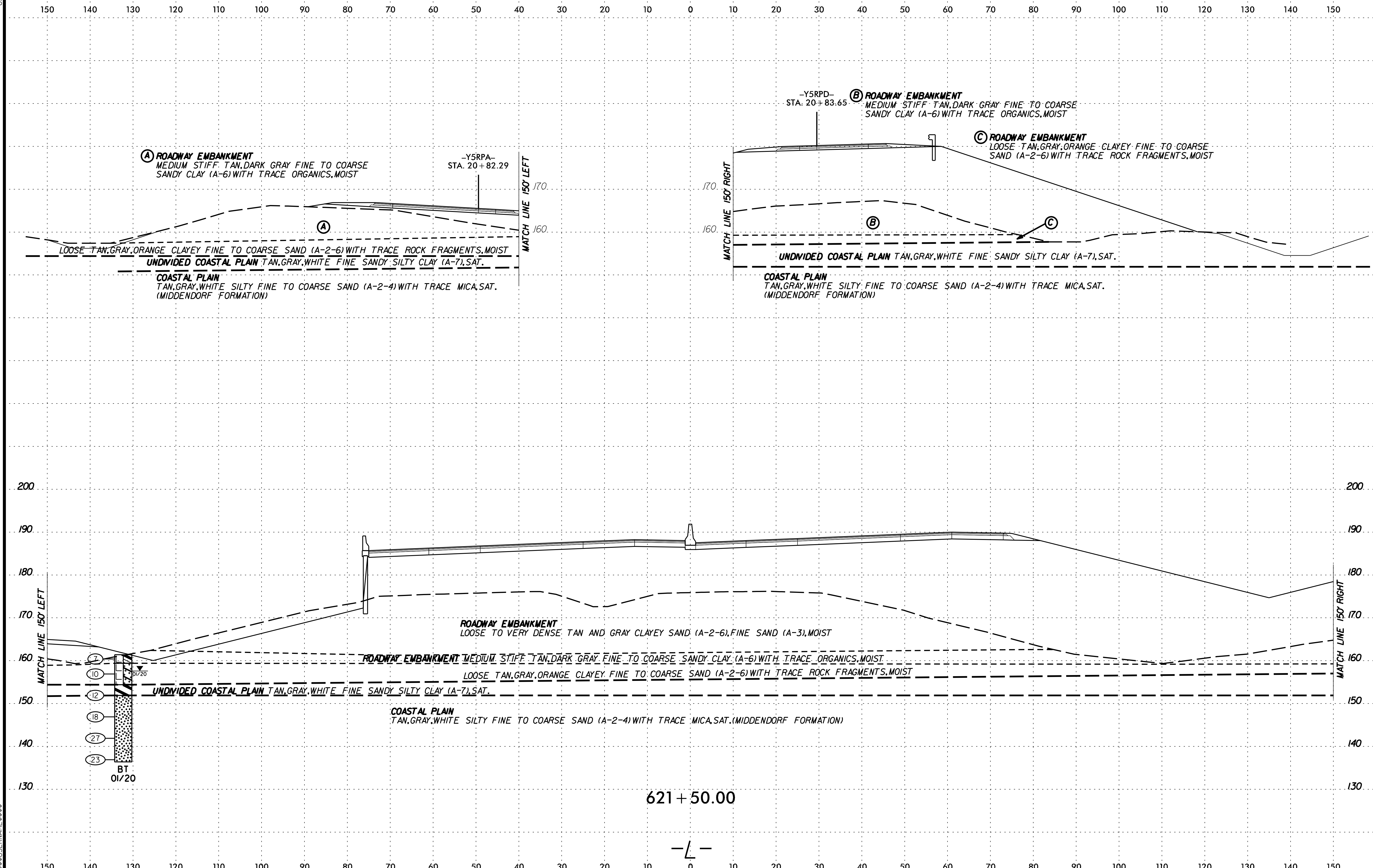
–L–

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

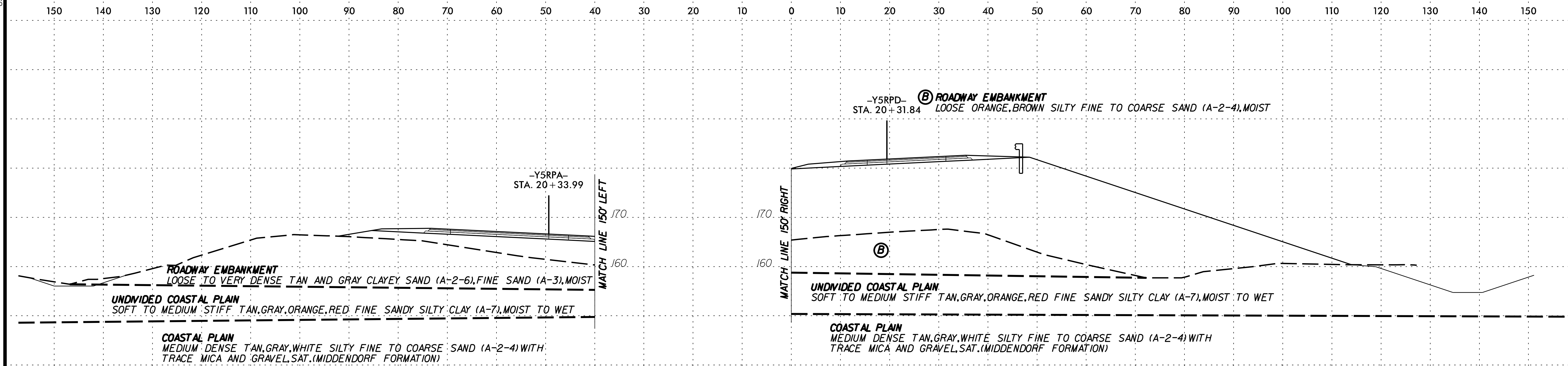
6/23/16

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	122



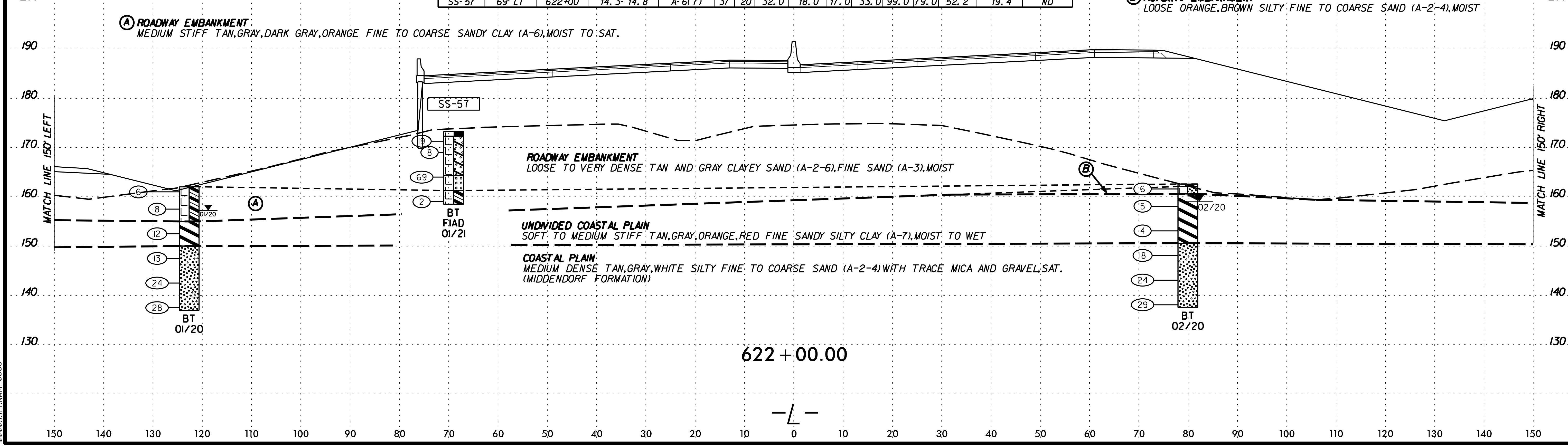
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	123

6/23/16

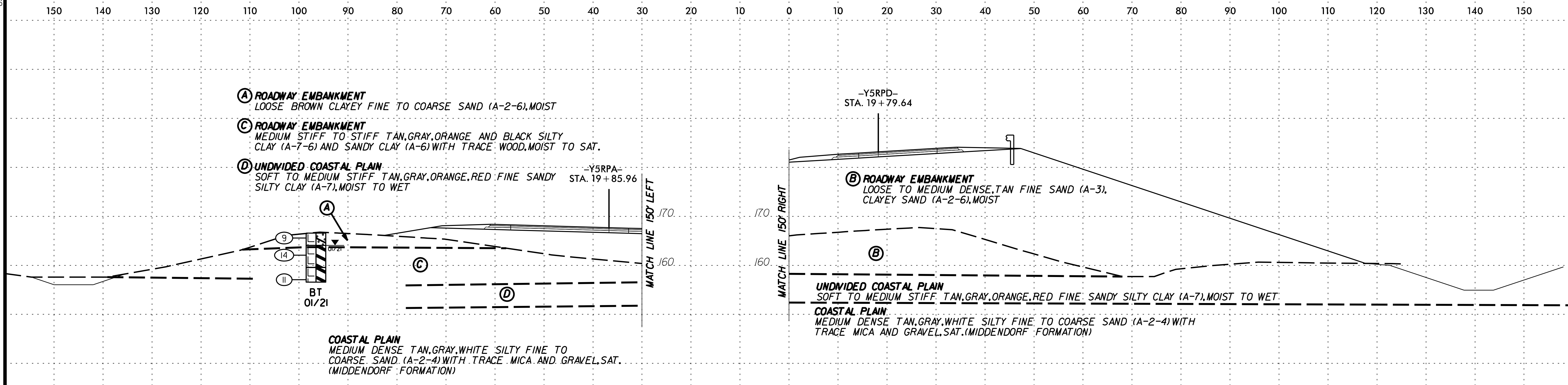


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-57	69' LT	622+00	14.3-14.8	A-6(7)	37	20	32.0	18.0	17.0	33.0	99.0	79.0	52.2	19.4	ND

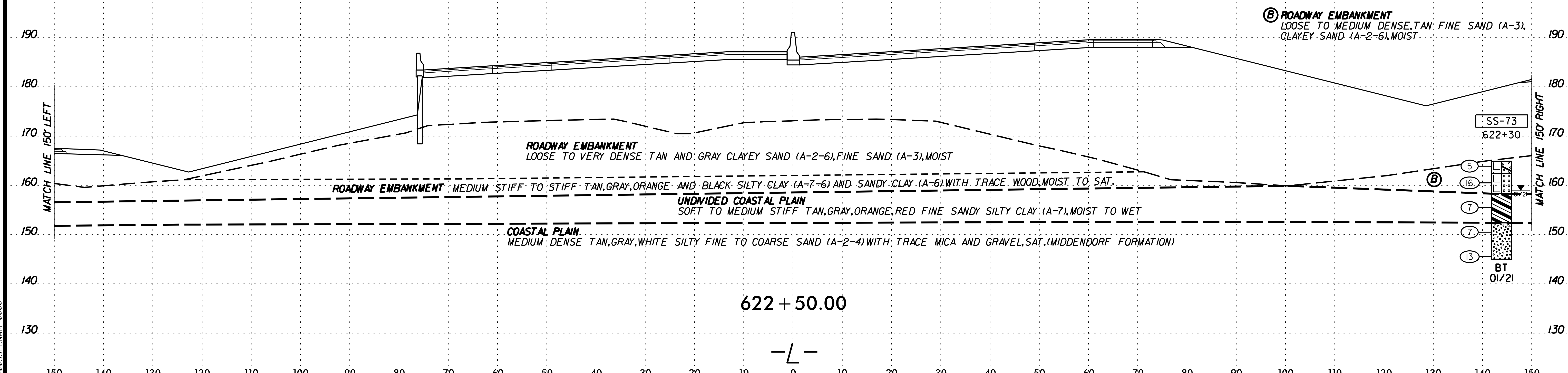


$$$$SYSTIME$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-73	144' RT	622+30	0.0-1.5	A-2-6(0)	28	13	49.0	21.0	5.0	25.0	99.0	67.0	31.8	12.4	ND



622+50.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	125

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

-Y5RPA-
STA. 19+37.97

MATCH LINE 150' LEFT

170.

160.

ROADWAY EMBANKMENT
MEDIUM STIFF DARK BROWN, FINE SANDY CLAY (A-6) WITH TRACE ORGANICS, MOIST

UNDIVIDED COASTAL PLAIN
SOFT TO VERY SOFT GRAY, BROWN SILTY CLAY (A-7-6), HIGHLY PLASTIC AND FINE TO COARSE SANDY CLAY (A-6), WET

COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY-WHITE, SILTY FINE SAND (A-2-4), SAT. (MIDDENDORF FORMATION)

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM STIFF DARK BROWN, FINE SANDY CLAY (A-6) WITH TRACE ORGANICS, MOIST

-Y5RPD-
STA. 19+27.26

MATCH LINE 150' RIGHT

170.

160.

Ⓐ

UNDIVIDED COASTAL PLAIN
SOFT TO VERY SOFT GRAY, BROWN SILTY CLAY (A-7-6), HIGHLY PLASTIC AND FINE TO COARSE SANDY CLAY (A-6), WET

COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY-WHITE, SILTY FINE SAND (A-2-4), SAT. (MIDDENDORF FORMATION)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-2102	79' RT	622+77	3.5-5.0	A-7-6(12)	50	31	37.0	12.8	7.4	42.8	99.7	75.5	51.8	20.3	ND

210 200 190 180 170 160 150 140 130

MATCH LINE 150' LEFT

MATCH LINE 150' RIGHT

ROADWAY EMBANKMENT
LOOSE TO VERY DENSE TAN AND GRAY CLAYEY SAND (A-2-6), FINE SAND (A-3), MOIST

ROADWAY EMBANKMENT *MEDIUM STIFF DARK BROWN, FINE SANDY CLAY (A-6) WITH TRACE ORGANICS, MOIST*

UNDIVIDED COASTAL PLAIN
SOFT TO VERY SOFT GRAY, BROWN SILTY CLAY (A-7-6), HIGHLY PLASTIC AND FINE TO COARSE SANDY CLAY (A-6), WET

COASTAL PLAIN
MEDIUM DENSE LIGHT GRAY-WHITE, SILTY FINE SAND (A-2-4), SAT. (MIDDENDORF FORMATION)

SS-2102
622+77

8
3
2
18
22
24

02/20

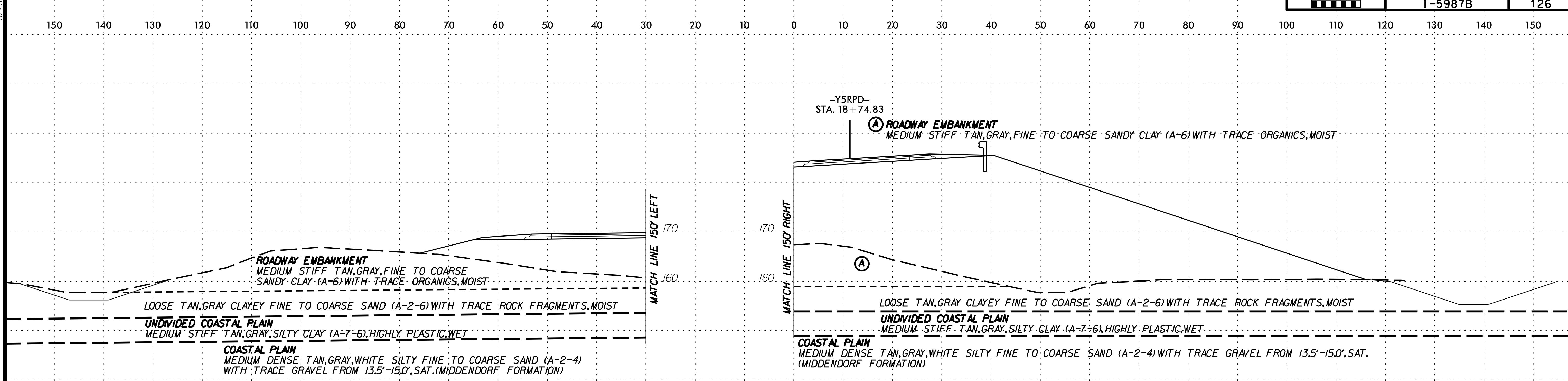
BT
02/20

623+00.00

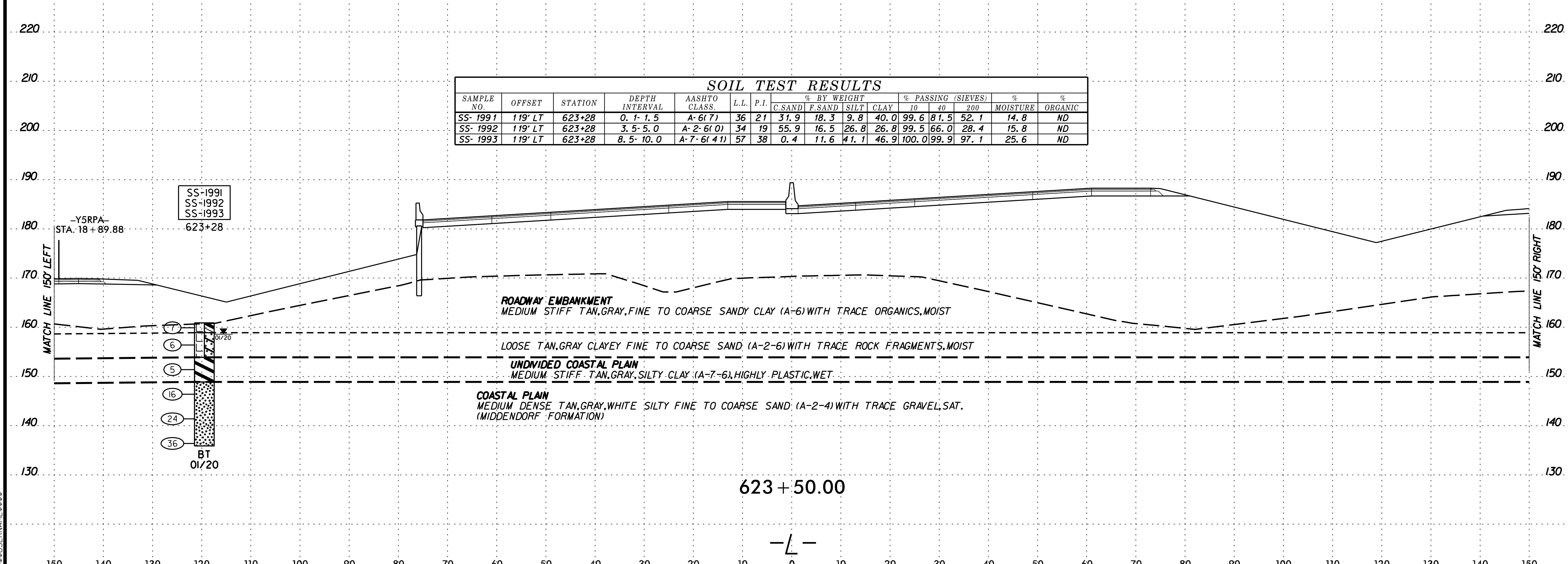
-L-

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS- 1991	119' LT	623+28	0. 1- 1. 5	A- 6(7)	36	21	31. 9	18. 3	9. 8	40. 0	99. 6	81. 5	52. 1	14. 8	ND
SS- 1992	119' LT	623+28	3. 5- 5. 0	A- 2- 6(0)	34	19	55. 9	16. 5	26. 8	26. 8	99. 5	66. 0	28. 4	15. 8	ND
SS- 1993	119' LT	623+28	8. 5- 10. 0	A- 7- 6(41)	57	38	0. 4	11. 6	41. 1	46. 9	100. 0	99. 9	97. 1	25. 6	ND

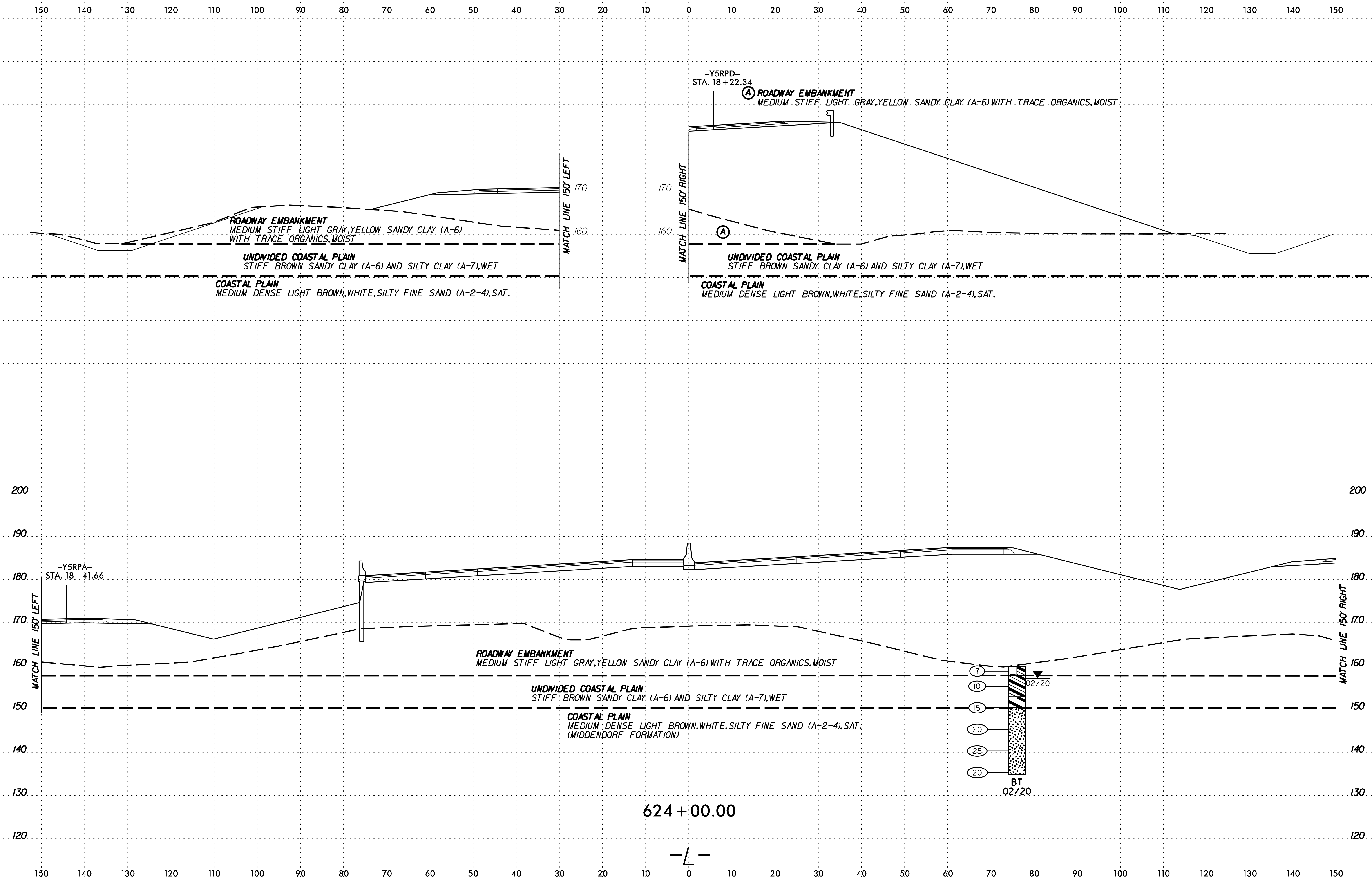


623+50.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	127

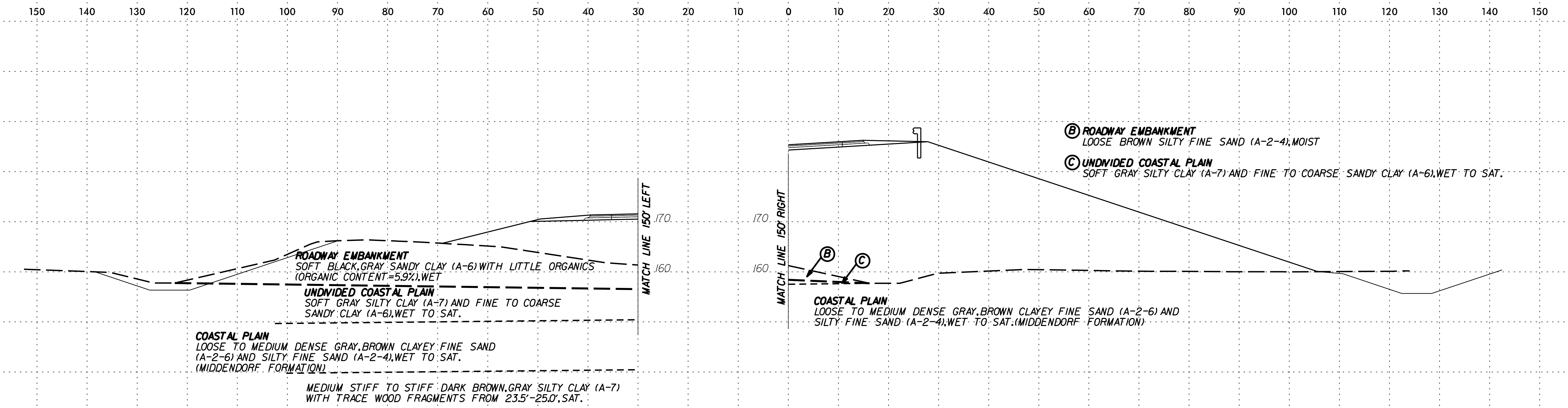


$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

6/23/16

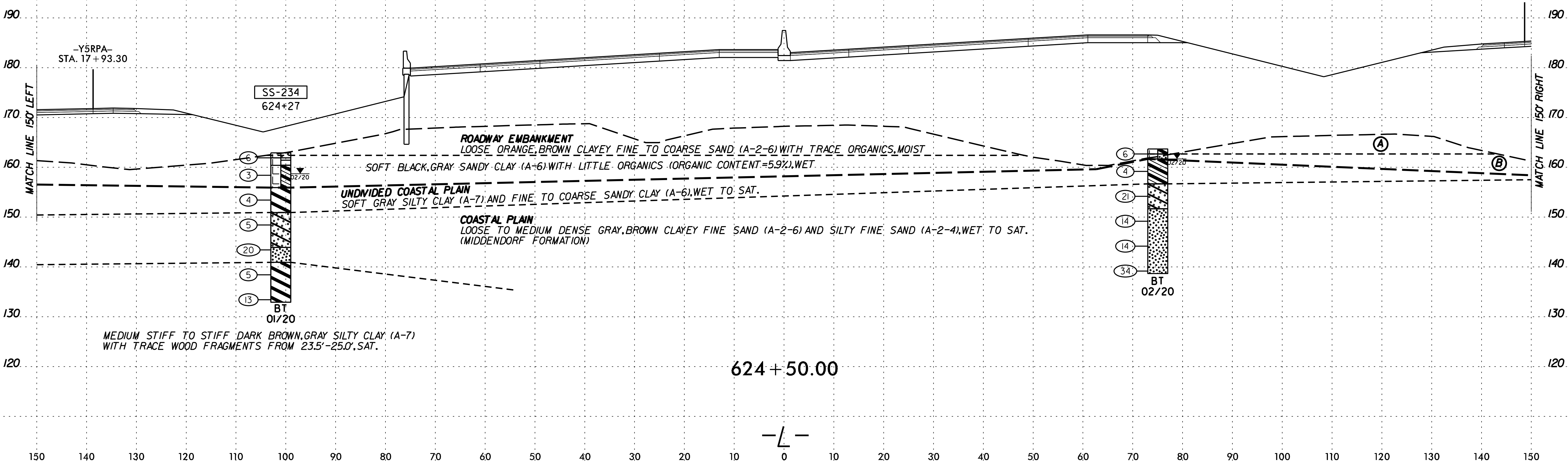
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	128

0 5 10



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-234	101' LT	624+27	1.0-1.5	A-6(3)	29	13	35.5	16.8	13.0	34.7	99.5	77.0	50.0	19.2	5.9



624+50.00

-L-

$$$$SYSTIME$$$$ $$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM STIFF BLACK,ORANGE,BROWN SILTY CLAY (A-7)
WITH TRACE ORGANICS,MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE,BROWN,GRAY SILTY CLAY (A-7-6),HIGHLY PLASTIC,MOIST TO WET

COASTAL PLAIN LOOSE GRAY SILTY CLAYEY FINE TO COARSE SAND (A-2-6),WET (MIDDENDORF FORMATION)

MEDIUM STIFF LIGHT GRAY FINE SANDY CLAY (A-6),WET

MEDIUM DENSE TAN,LIGHT GRAY SILTY FINE SAND (A-2-4)WITH TRACE CLAY,SAT.

MATCH LINE 150' LEFT

170.

160.

MATCH LINE 150' RIGHT

170.

160.

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE,BROWN,GRAY SILTY CLAY (A-7-6),HIGHLY PLASTIC,MOIST TO WET

COASTAL PLAIN LOOSE GRAY SILTY CLAYEY FINE TO COARSE SAND (A-2-6),WET (MIDDENDORF FORMATION)

MEDIUM STIFF LIGHT GRAY FINE SANDY CLAY (A-6),WET

MEDIUM DENSE TAN,LIGHT GRAY SILTY FINE SAND (A-2-4)WITH TRACE CLAY,SAT.

190 180 170 160 150 140 130 120

–Y5RPA–
STA. 17+44.78

–Y5RPD–
STA. 17+17.04

MATCH LINE 150' LEFT

MATCH LINE 150' RIGHT

ROADWAY EMBANKMENT
MEDIUM STIFF BLACK,ORANGE,BROWN SILTY CLAY (A-7)WITH TRACE ORGANICS,MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE,BROWN,GRAY SILTY CLAY (A-7-6),HIGHLY PLASTIC,MOIST TO WET

COASTAL PLAIN LOOSE GRAY SILTY CLAYEY FINE TO COARSE SAND (A-2-6),WET (MIDDENDORF FORMATION)

MEDIUM STIFF LIGHT GRAY FINE SANDY CLAY (A-6),WET

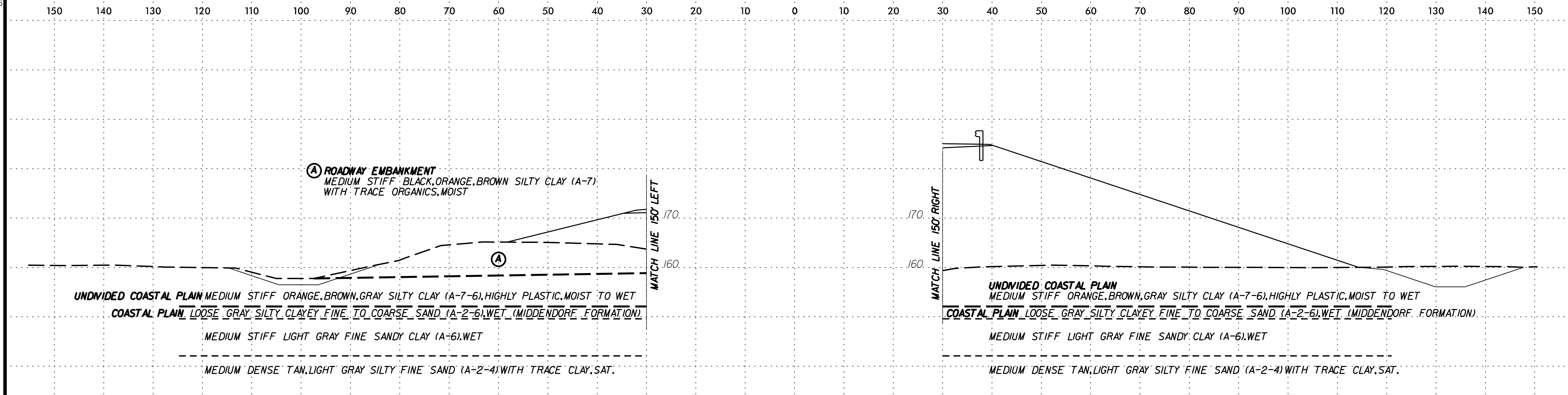
MEDIUM DENSE TAN,LIGHT GRAY SILTY FINE SAND (A-2-4)WITH TRACE CLAY,SAT.

625+00.00

–L–

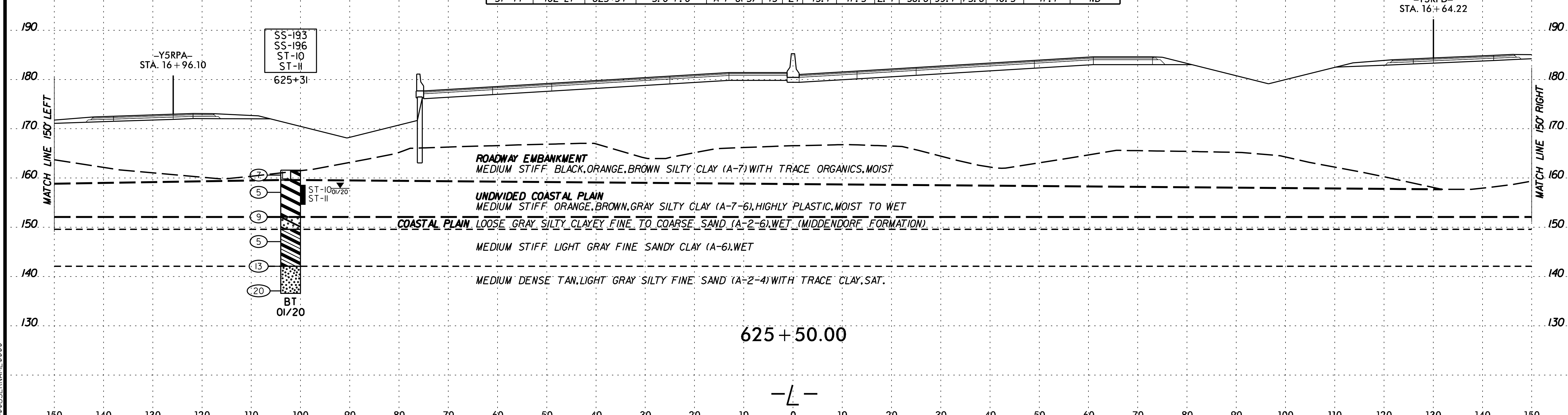
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$



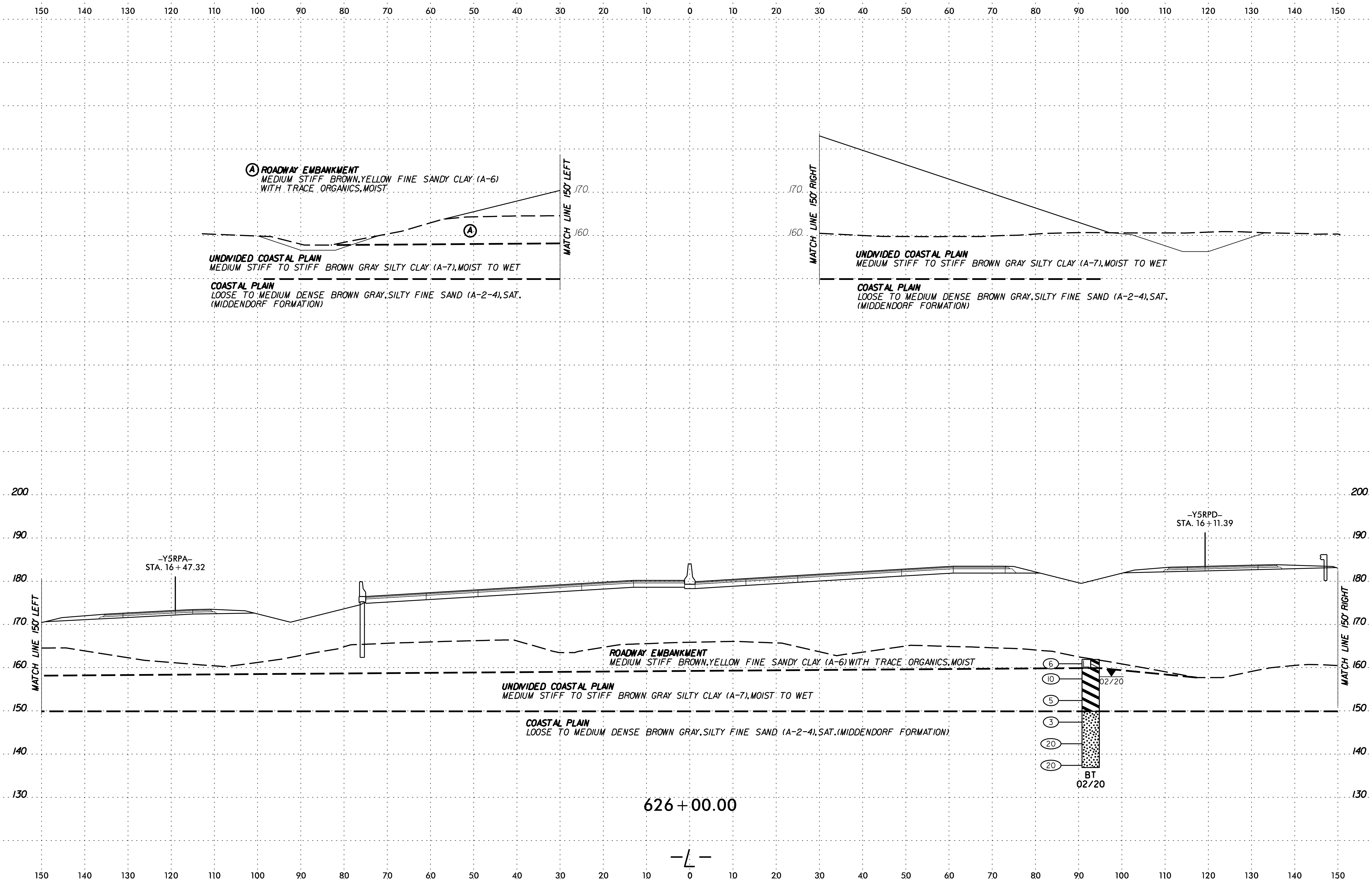
SOIL TEST RESULTS

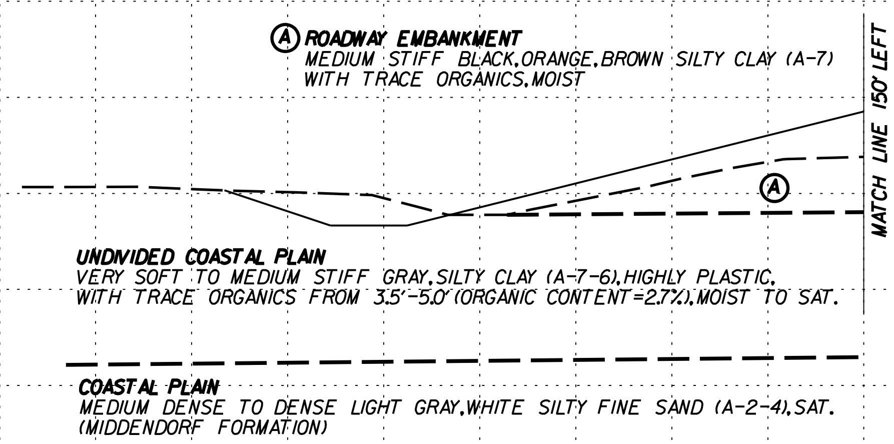
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS- 193	102' LT	625+31	3.5-5.0	A-7-6(16)	54	34	31.0	13.2	10.5	45.3	99.7	80.9	57.6	18.2	ND
SS- 196	102' LT	625+31	13.5-15.0	A-6(4)	26	11	2.3	45.4	18.0	34.3	100.0	99.2	60.0	17.1	ND
ST- 10	102' LT	625+31	3.0-5.0	A-7-6(17)	50	31	26.7	12.2	13.7	47.4	99.7	83.0	63.0	25.0	ND
ST- 11	102' LT	625+31	5.0-7.0	A-7-6(5)	43	24	43.7	17.5	2.1	36.8	99.7	75.8	40.5	17.7	ND

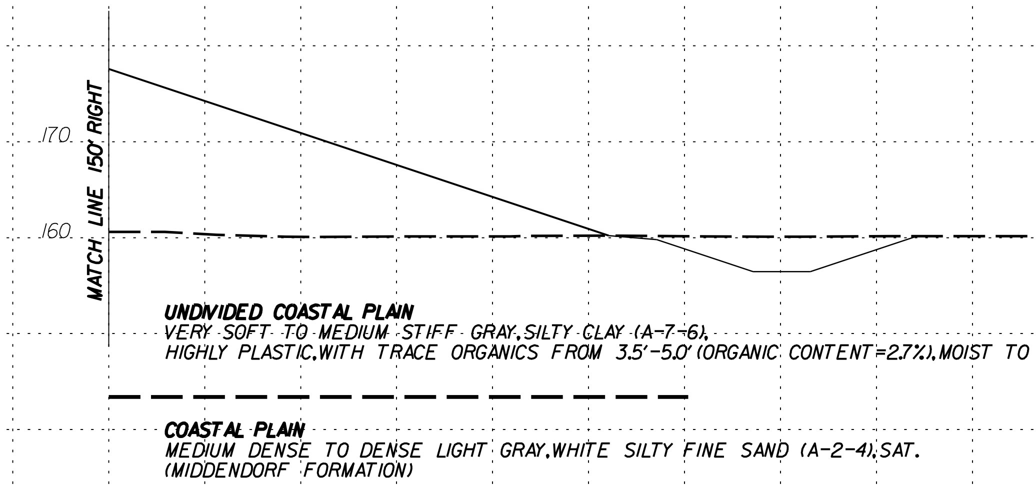


$$$$$SYSTIME$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	131

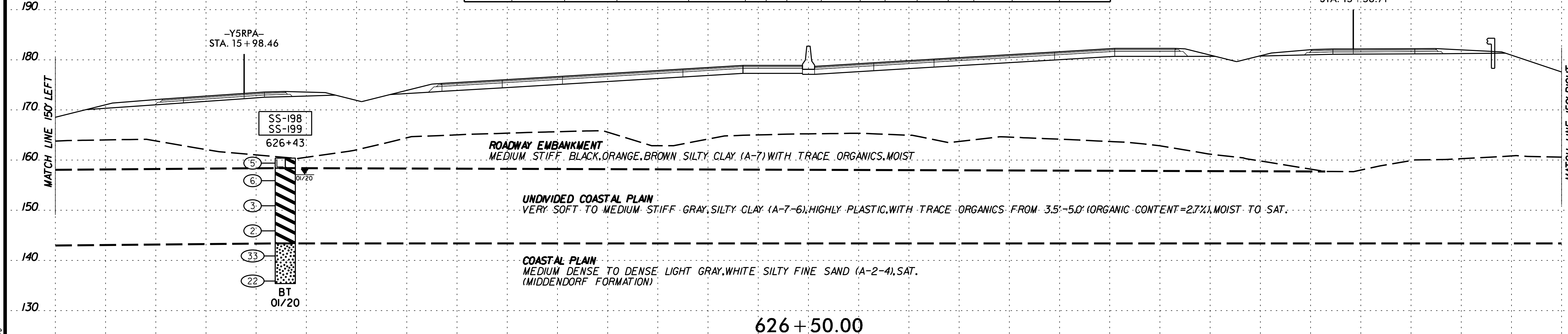






SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-198	103' LT	626+43	3.5-5.0	A-7-6(7)	44	28	36.0	21.6	5.5	36.9	99.8	79.4	44.3	19.7	2.8
SS-199	103' LT	626+43	8.5-10.0	A-7-6(24)	44	26	0.5	22.6	33.9	43.0	100.0	99.7	87.9	20.9	ND

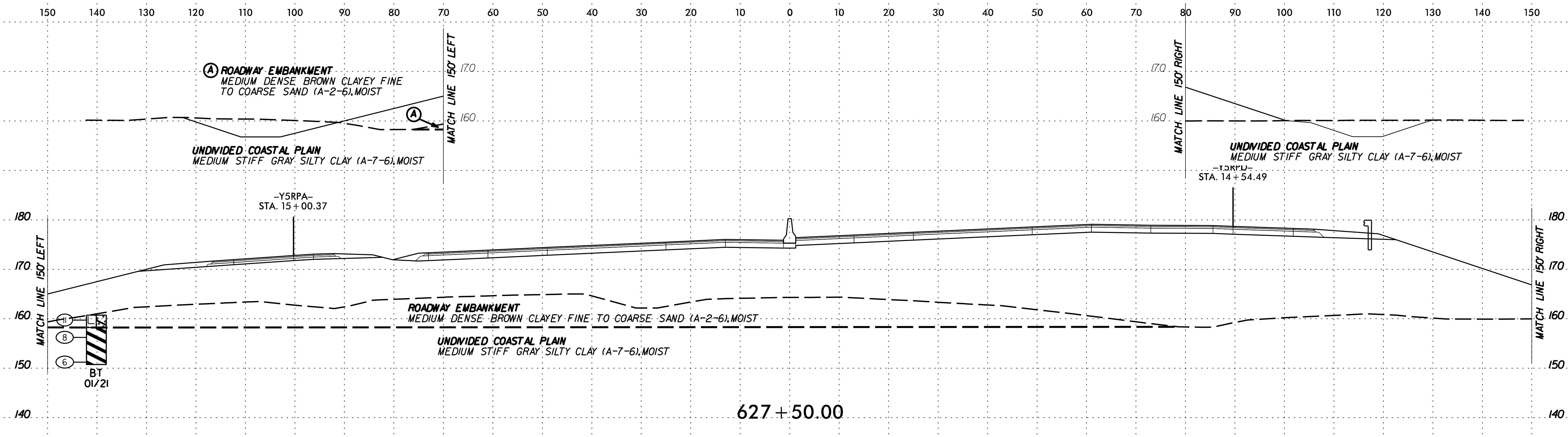


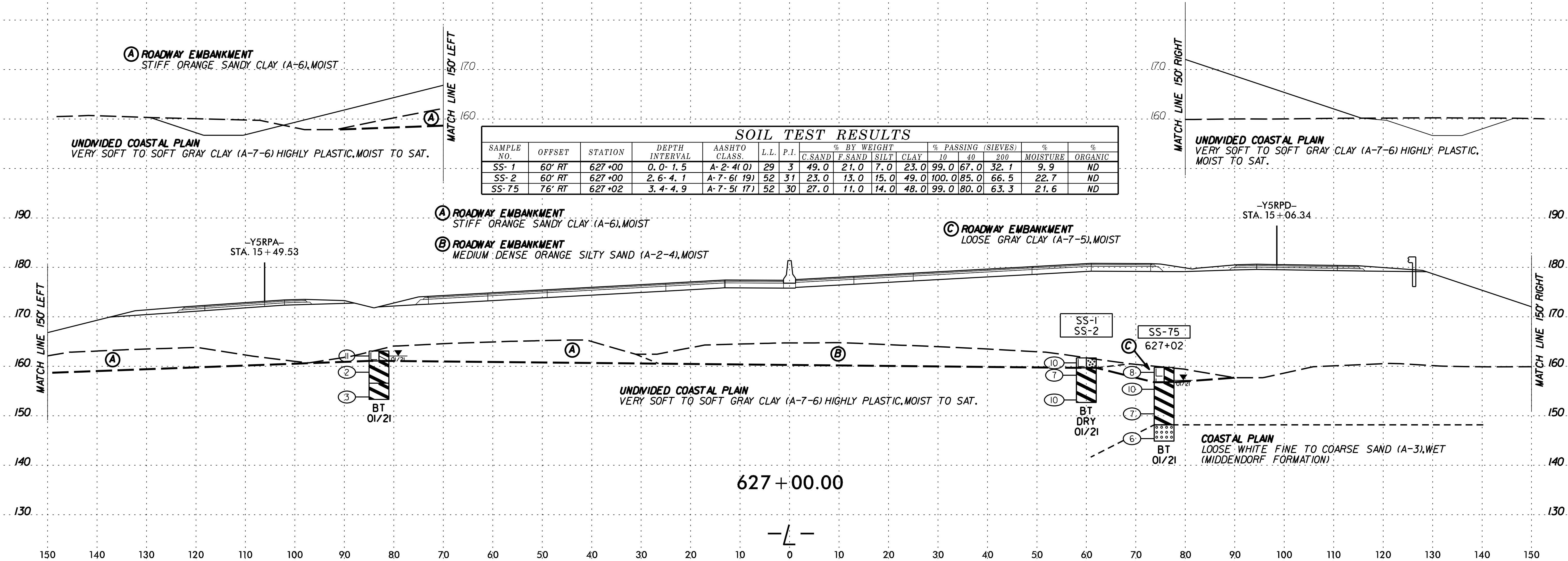
626+50.00

-L-

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	133

6/23/16





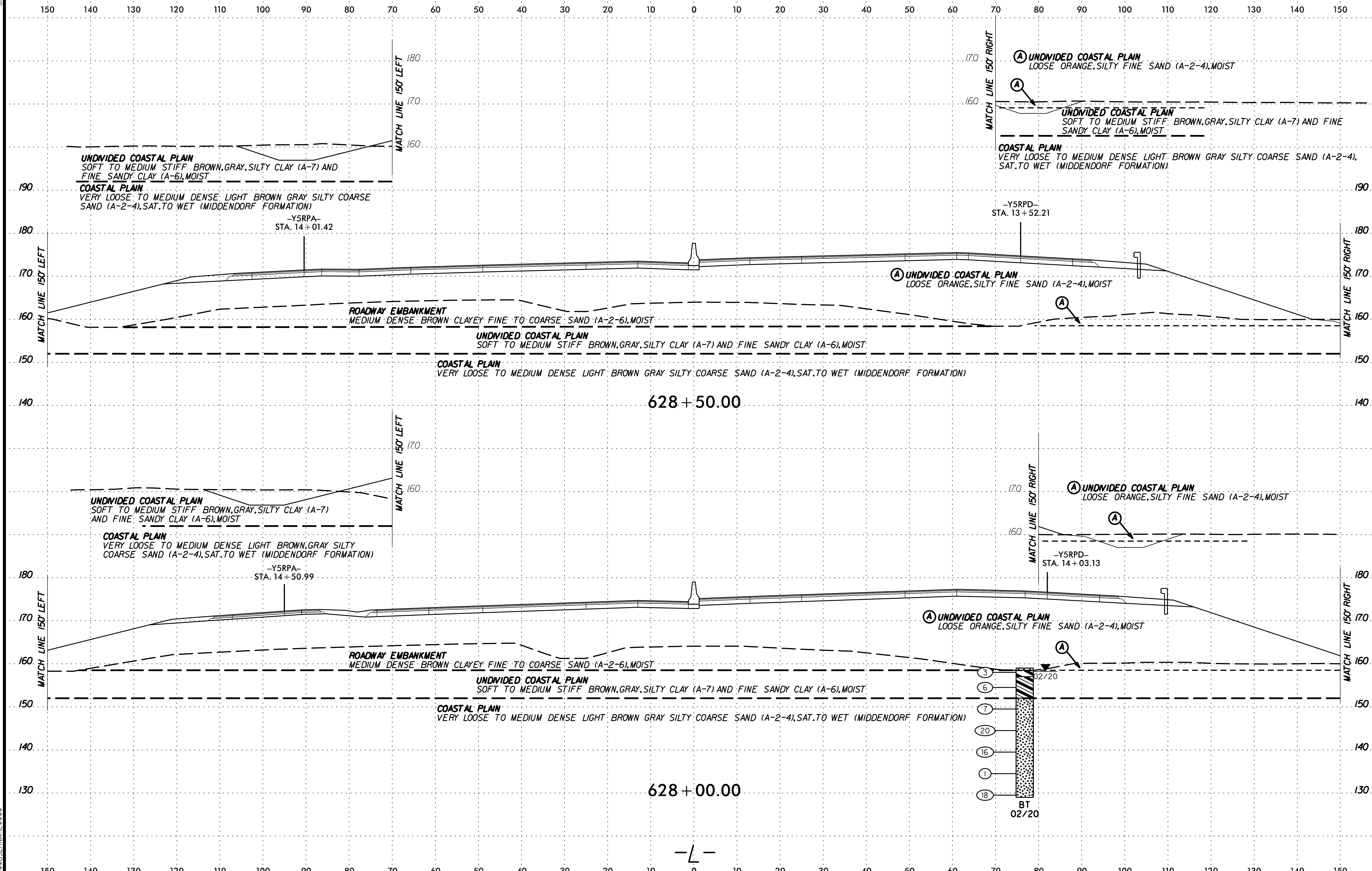
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS- 1	60' RT	627 +00	0. 0- 1. 5	A- 2- 4(0)	29	3	49. 0	21. 0	7. 0	23. 0	99. 0	67. 0	32. 1	9. 9	ND
SS- 2	60' RT	627 +00	2. 6- 4. 1	A- 7- 6(19)	52	31	23. 0	13. 0	15. 0	49. 0	100. 0	85. 0	66. 5	22. 7	ND
SS- 75	76' RT	627 +02	3. 4- 4. 9	A- 7- 5(17)	52	30	27. 0	11. 0	14. 0	48. 0	99. 0	80. 0	63. 3	21. 6	ND

$$$$$SYSTIME$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	134



$$$$$SYSTIME$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	135

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

MATCH LINE 150' LEFT

170
160
150

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,GRAY,SILTY CLAY (A-7) AND FINE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE LIGHT BROWN GRAY SILTY COARSE SAND (A-2-4),SAT.TO WET (MIDDENDORF FORMATION)

190
180
170
160
150
140

–Y5RPA–
STA. 13+01.72

–Y5RPD–
STA. 12+51.33

Ⓐ **UNDIVIDED COASTAL PLAIN**
LOOSE ORANGE,SILTY FINE SAND (A-2-4),MOIST

MATCH LINE 150' LEFT

ROADWAY EMBANKMENT
MEDIUM DENSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,GRAY,SILTY CLAY (A-7) AND FINE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE LIGHT BROWN GRAY SILTY COARSE SAND (A-2-4),SAT.TO WET (MIDDENDORF FORMATION)

629+50.00

MATCH LINE 150' LEFT

170
160
150

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,GRAY,SILTY CLAY (A-7) AND FINE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE LIGHT BROWN GRAY SILTY COARSE SAND (A-2-4),SAT.TO WET (MIDDENDORF FORMATION)

180
170
160
150
140

–Y5RPA–
STA. 13+51.66

–Y5RPD–
STA. 13+01.63

Ⓐ **UNDIVIDED COASTAL PLAIN**
LOOSE ORANGE,SILTY FINE SAND (A-2-4),MOIST

MATCH LINE 150' LEFT

ROADWAY EMBANKMENT
MEDIUM DENSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,GRAY,SILTY CLAY (A-7) AND FINE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE LIGHT BROWN GRAY SILTY COARSE SAND (A-2-4),SAT.TO WET (MIDDENDORF FORMATION)

629+00.00

–L–

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	136

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

170
160
150
140

MATCH LINE 150' LEFT

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF GRAY,ORANGE SANDY CLAY (A-6) AND SILTY CLAY (A-7-6),MOIST TO SAT.

ROADWAY EMBANKMENT
LOOSE TAN TO GRAY,BROWN TO ORANGE COARSE AND FINE SAND WITH LITTLE CLAY,MOIST TO WET

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF GRAY,ORANGE SANDY CLAY (A-6) AND SILTY CLAY (A-7-6),MOIST TO SAT.

630+50.00

MATCH LINE 150' LEFT

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,GRAY,SILTY CLAY (A-7) AND FINE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE LIGHT BROWN GRAY SILTY COARSE SAND (A-2-4),SAT.TO WET (MIDDENDORF FORMATION)

–Y5RPA–
STA. 12+51.61

–Y5RPD–
STA. 12+01.23

Ⓐ **UNDIVIDED COASTAL PLAIN**
LOOSE ORANGE,SILTY FINE SAND (A-2-4),MOIST

ROADWAY EMBANKMENT
MEDIUM DENSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF BROWN,GRAY,SILTY CLAY (A-7) AND FINE SANDY CLAY (A-6),MOIST

COASTAL PLAIN
VERY LOOSE TO MEDIUM DENSE LIGHT BROWN GRAY SILTY COARSE SAND (A-2-4),SAT.TO WET (MIDDENDORF FORMATION)

630+00.00

–L–

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	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

190
180
170
160
150
140

–Y5RPA–
STA. 11+01.22

–Y5RPD–
STA. 10+51.18

ROADWAY EMBANKMENT
LOOSE TAN TO GRAY, BROWN TO ORANGE COARSE AND FINE SAND WITH LITTLE CLAY, MOIST TO WET

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF GRAY, ORANGE SANDY CLAY (A-6) AND SILTY CLAY (A-7-6), MOIST TO SAT.

631+50.00

190
180
170
160
150
140

–Y5RPA–
STA. 11+51.35

–Y5RPD–
STA. 11+01.18

ROADWAY EMBANKMENT
LOOSE TAN TO GRAY, BROWN TO ORANGE COARSE AND FINE SAND WITH LITTLE CLAY, MOIST TO WET

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF GRAY, ORANGE SANDY CLAY (A-6) AND SILTY CLAY (A-7-6), MOIST TO SAT.

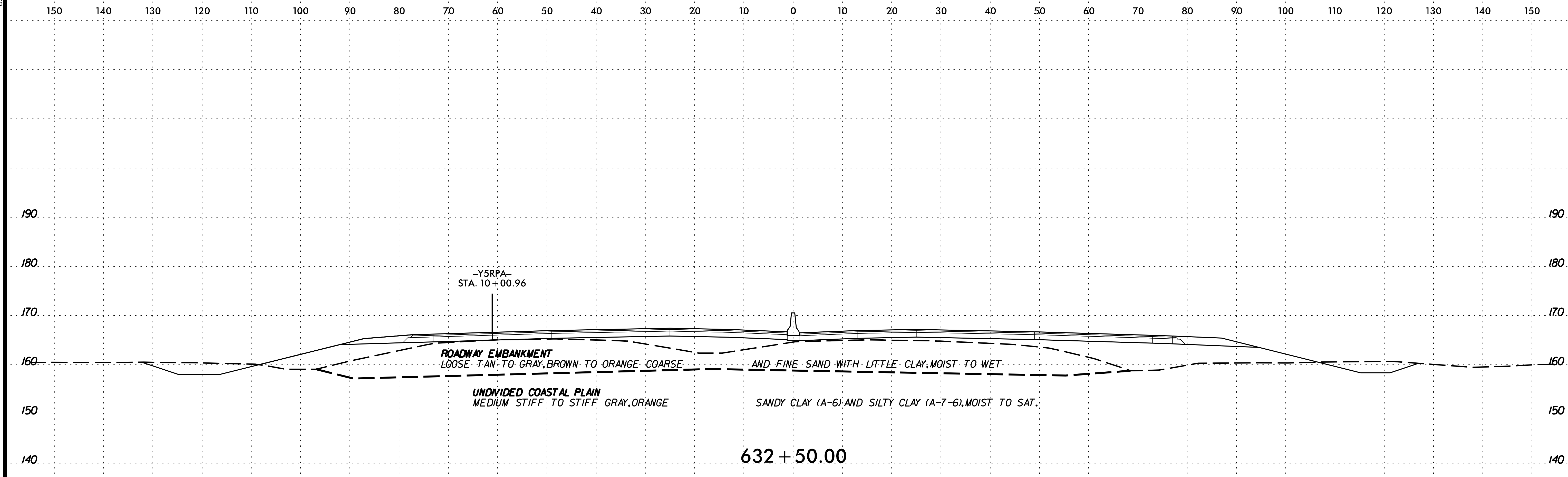
631+00.00

–L–

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

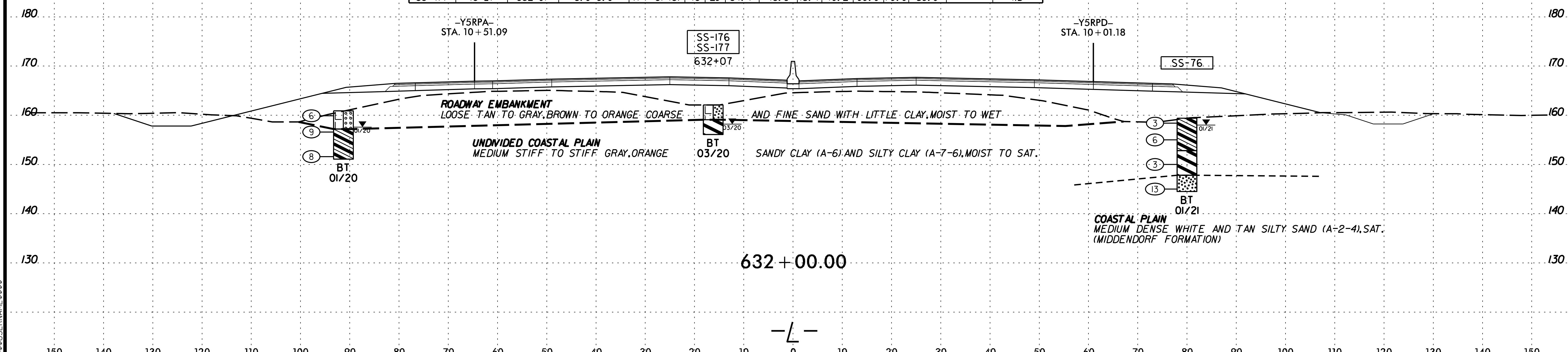
$$$$$$$$SYTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

6/23/16



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-76	80' RT	632+00	0.0-1.5	A-6(7)	35	18	30.0	16.0	18.0	36.0	100.0	81.0	57.1	18.7	ND
SS-176	16' LT	632+07	2.0-3.0	A-2-4(0)	15	0	59.3	22.9	5.8	12.0	99.8	61.0	20.0	16.0	ND
SS-177	16' LT	632+07	3.0-6.0	A-7-6(13)	46	29	31.1	13.6	15.1	40.2	99.0	79.0	58.0	-	ND

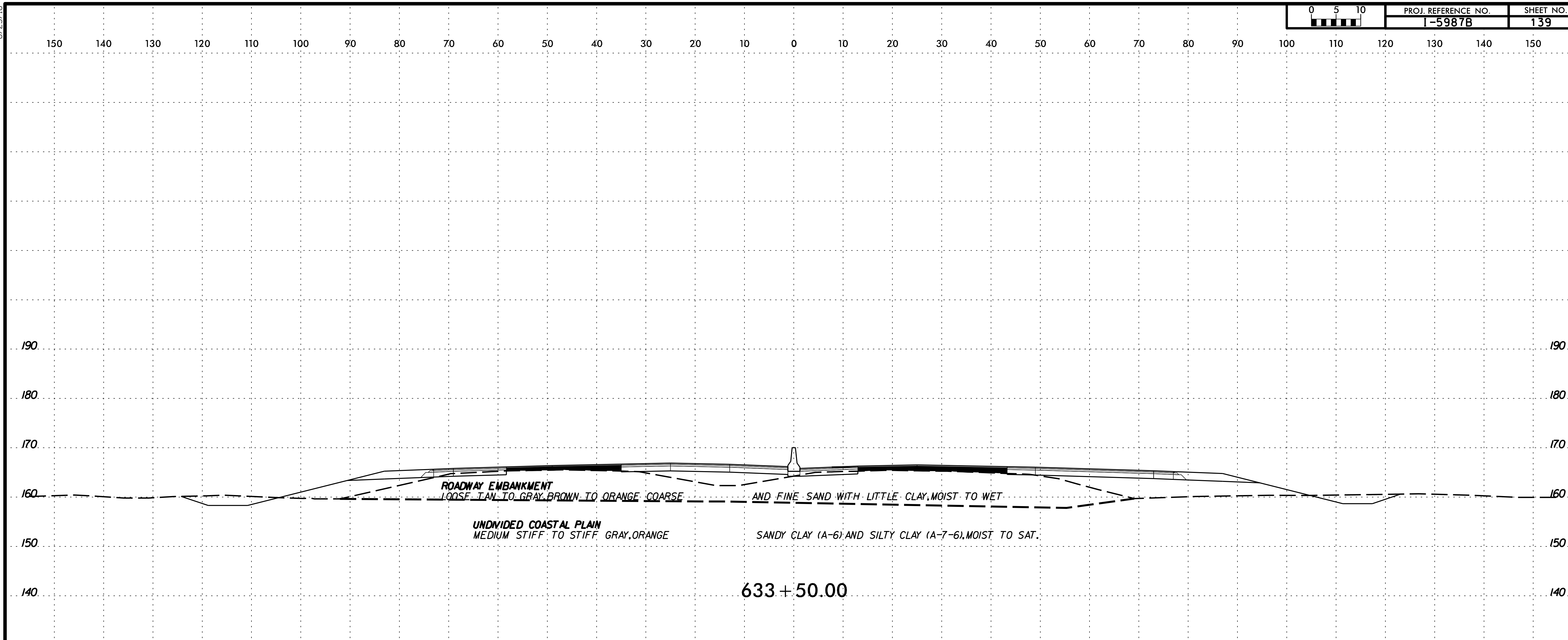


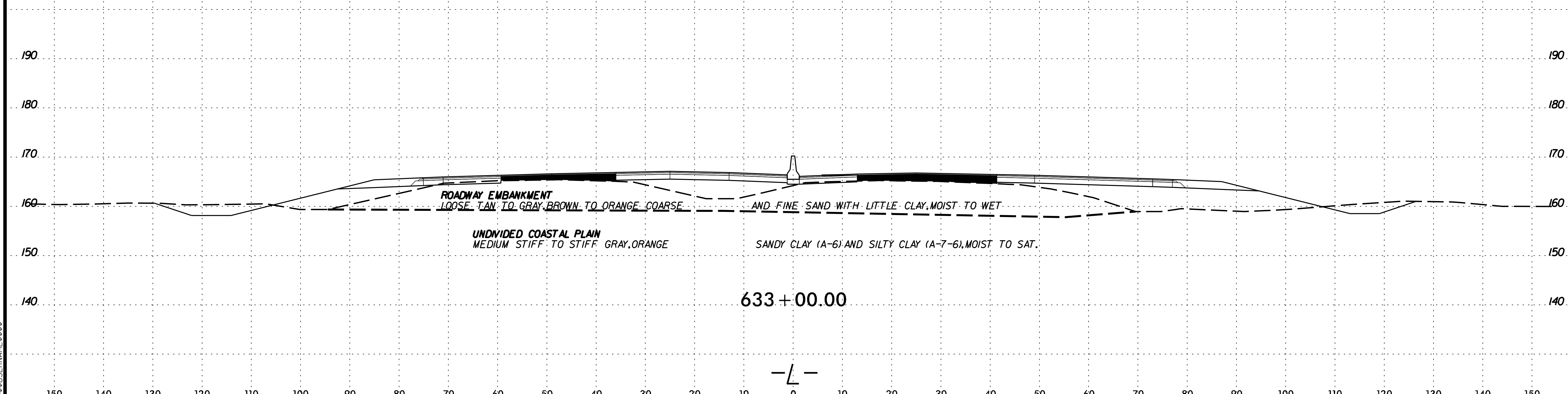
$$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

6/23/16

PROJ. REFERENCE NO. I-5987B

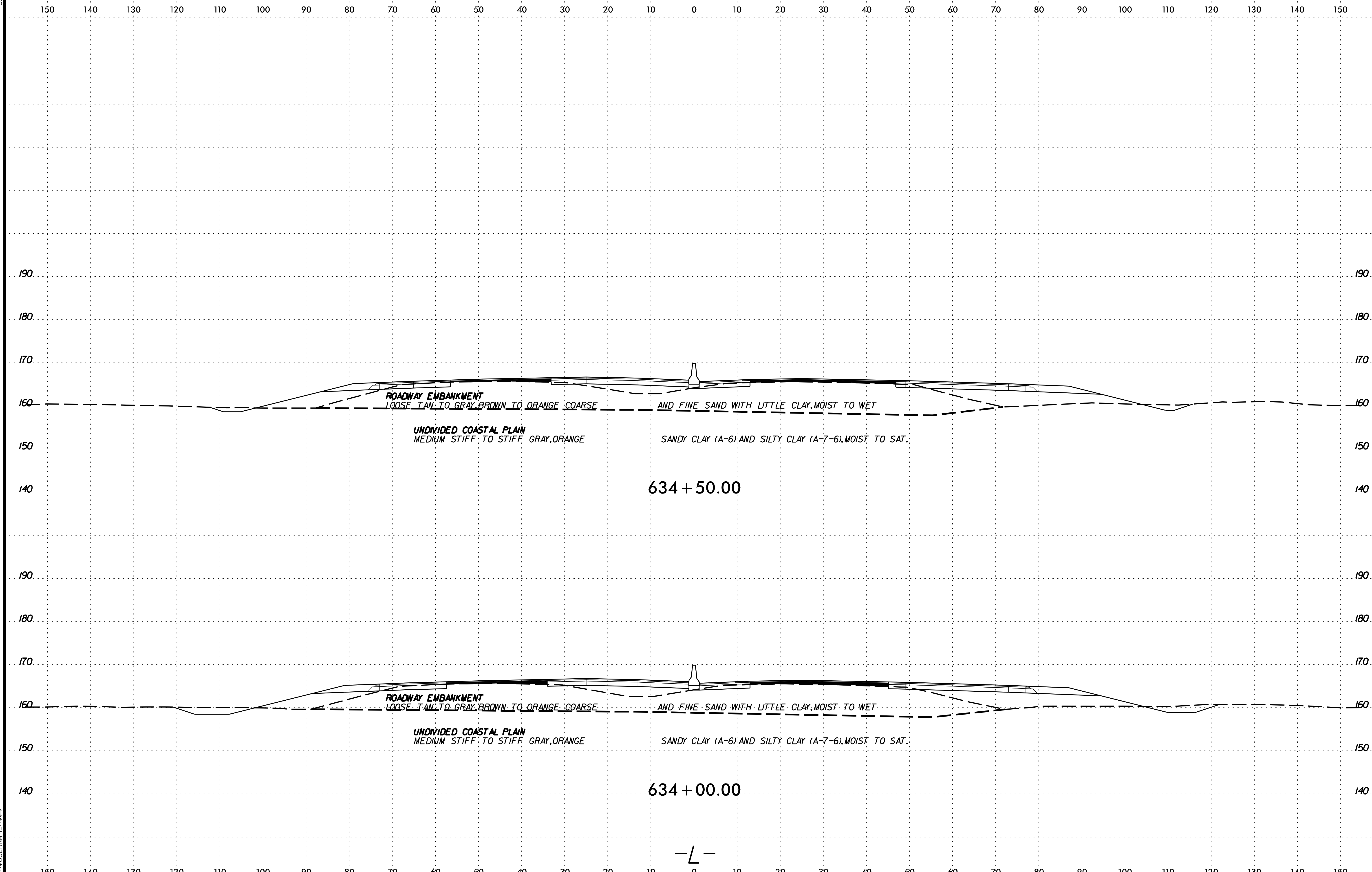
SHEET NO. 139





$$$$$SYSTIME$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

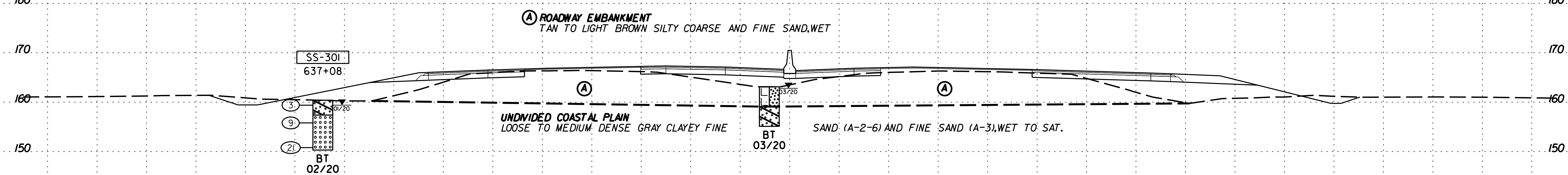
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	140



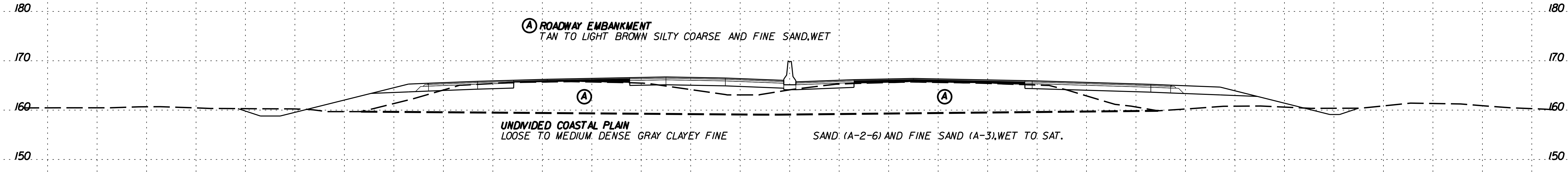
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	141

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-301	94' LT	637+08	8.6-10.1	A-3(0)	NP	NP	83.3	9.1	1.7	5.8	89.7	32.0	8.0	-	ND



637+00.00



635+00.00

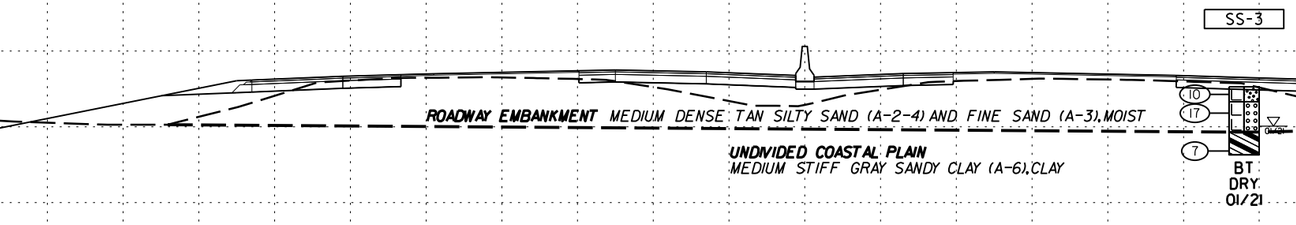
-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	142

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-3	58' RT	637+50	0.0-1.5	A-2-4(0)	NP	NP	52.0	29.0	3.0	16.0	98.0	67.0	20.2	9.7	ND



637+50.00

-L-

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	143

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

210
200
190
180
170
160
150
140

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-6	65' RT	644+50	3.2-4.7	A-2-4(0)	23	5	53.0	25.0	7.0	15.0	99.0	64.0	24.2	10.1	ND

(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE BROWN,ORANGE,TAN,BLACK SILTY FINE TO COARSE SAND (A-2-4) WITH GRAVEL,MOIST

(B) UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF GRAY,ORANGE SANDY CLAY (A-6),MOIST

SS-6

6 5 12 BT 01/21

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE

6 12 9 BT 01/21

LIGHT,GRAY,WHITE FINE TO COARSE SAND (A-3),SAT.

9 17 6 BT 01/21

644+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-5	70' RT	642+00	0.0-1.5	A-1-b(0)	NP	NP	60.0	27.0	2.0	11.0	82.0	49.0	12.9	8.1	ND
SS-178	0	642+00	3.0-7.0	A-2-4(0)	20	6	37.2	38.6	5.7	18.5	99.0	77.0	27.0	-	ND

(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE BROWN,TAN,ORANGE,BLACK FINE SAND (A-3),COARSE SAND WITH LITTLE GRAVEL (A-1-b) AND SILTY SAND (A-2-4) WITH TRACE ORGANIC MATTER IN LAST 0.5',MOIST TO WET

SS-178 SS-5

6 7 19 BT 01/20

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE

DARK GRAY,CLAYEY FINE AND COARSE SAND (A-2-6) AND FINE SAND

BT 03/20

(A-3) AND SILTY FINE SAND (A-2-4),WET TO SAT.

11 9 10 BT 01/21

642+00.00

-L-

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

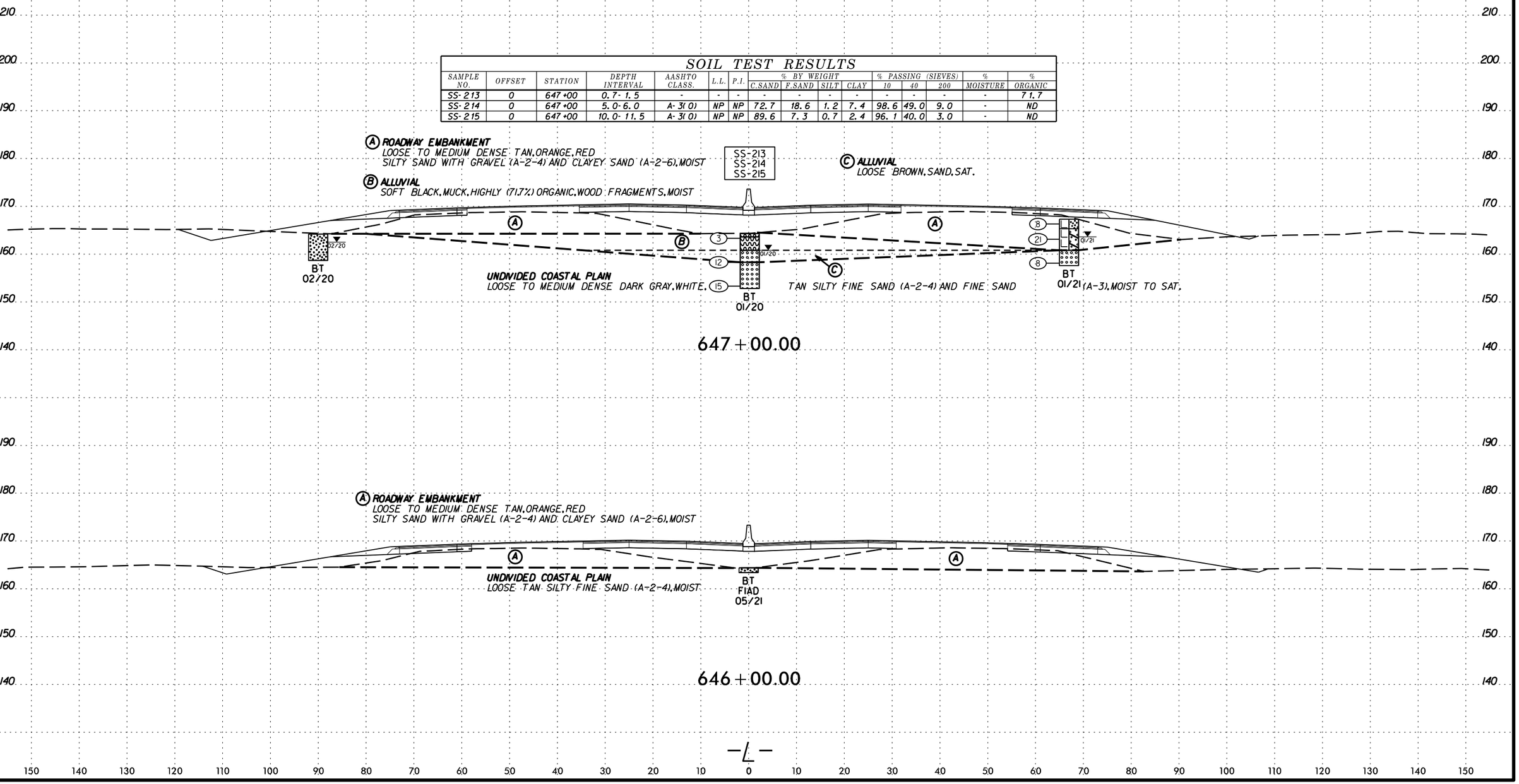
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	144

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-213	0	647+00	0.7-1.5	-	-	-	-	-	-	-	-	-	-	-	71.7
SS-214	0	647+00	5.0-6.0	A-3(0)	NP	NP	72.7	18.6	1.2	7.4	98.6	49.0	9.0	-	ND
SS-215	0	647+00	10.0-11.5	A-3(0)	NP	NP	89.6	7.3	0.7	2.4	96.1	40.0	3.0	-	ND



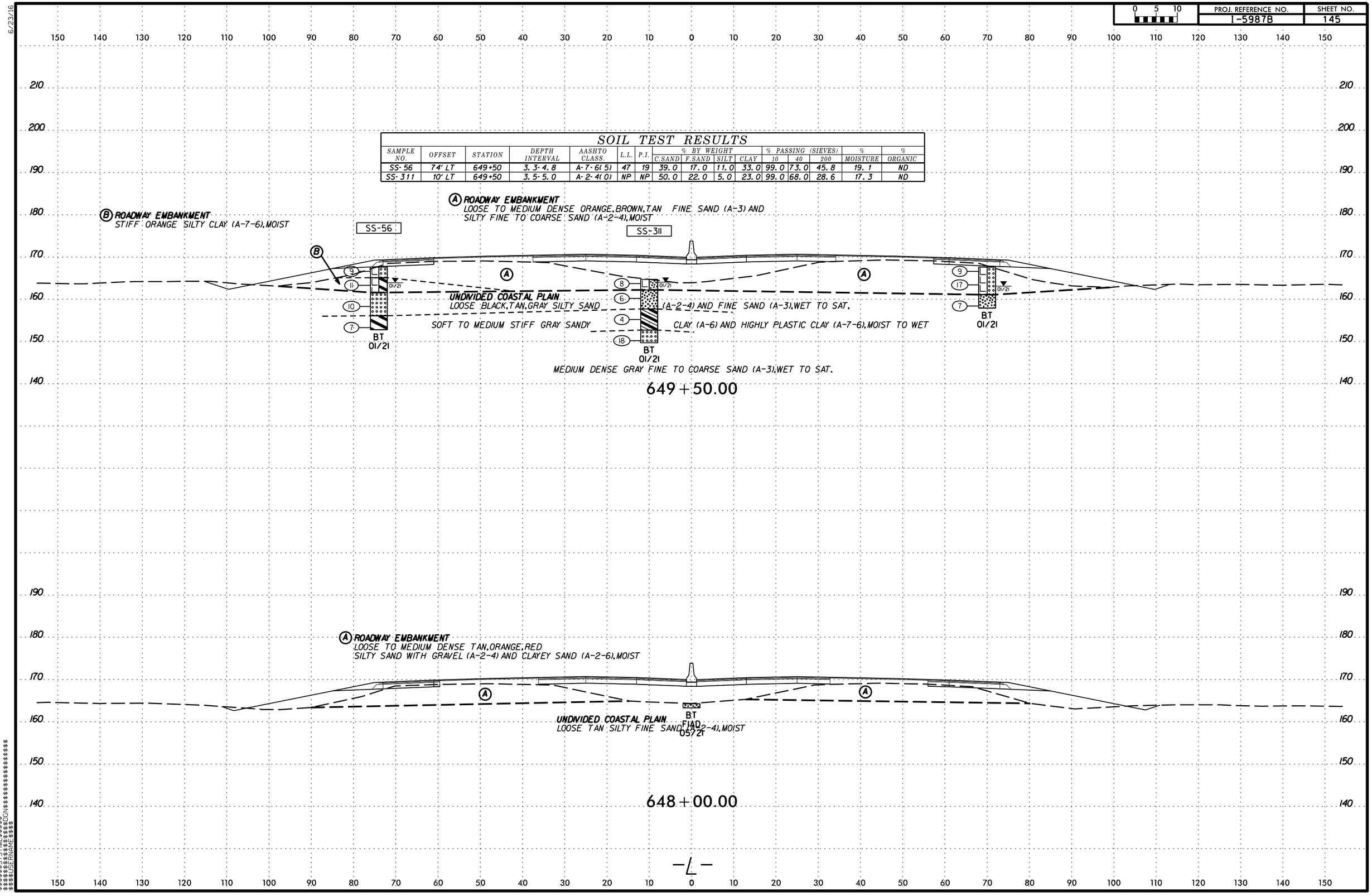
$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	145

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-56	74' LT	649+50	3.3-4.8	A-7-6(5)	47	19	39.0	17.0	11.0	33.0	99.0	73.0	45.8	19.1	ND
SS-311	10' LT	649+50	3.5-5.0	A-2-4(0)	NP	NP	50.0	22.0	5.0	23.0	99.0	68.0	28.6	17.3	ND



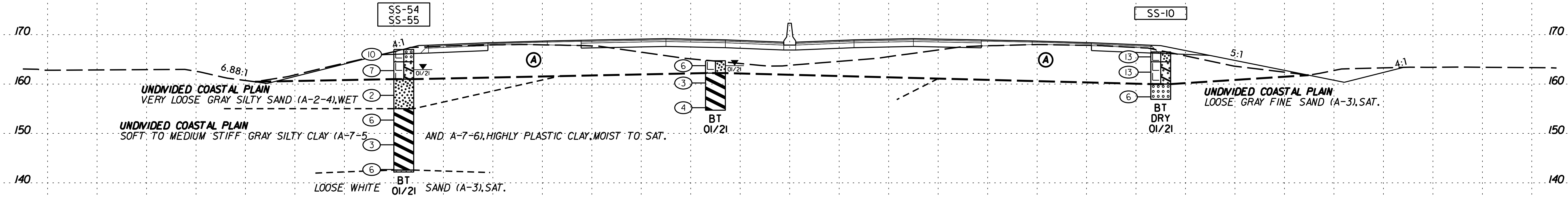
$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	146

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-10	75' RT	654+50	3.1-4.6	A-2-6(0)	31	12	46.0	26.0	3.0	25.0	100.0	70.0	31.4	12.0	ND
SS-54	78' LT	654+50	8.3-9.8	A-2-4(0)	26	9	47.0	28.0	4.0	21.0	99.0	72.0	30.5	33.3	ND
SS-55	78' LT	654+50	13.3-14.8	A-7-6(40)	70	41	7.0	10.0	15.0	68.0	100.0	95.0	86.8	36.7	ND

(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE TAN,ORANGE,BROWN FINE SAND (A-3),SILTY SAND WITH GRAVEL (A-2-4) AND CLAYEY SAND (A-2-6),MOIST TO WET



654+50.00

SOIL TEST RESULTS

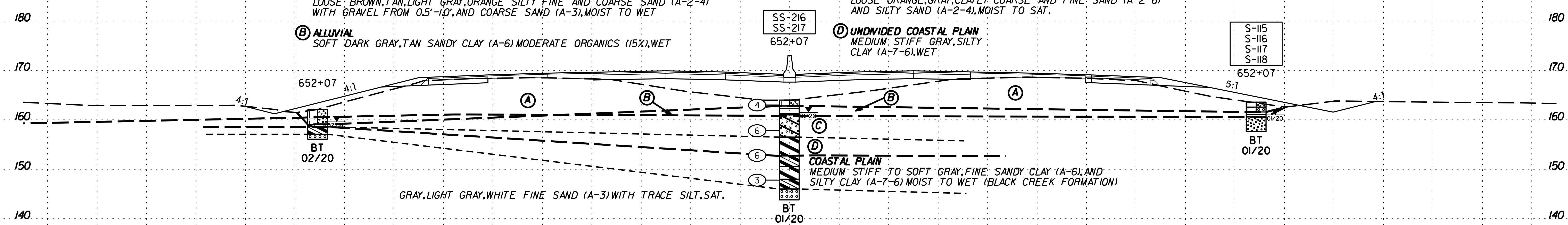
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-115	94' RT	652+07	0.0-1.0	A-2-4(0)	NP	NP	59.7	22.1	9.2	9.0	93.9	59.0	20.0	-	ND
S-116	94' RT	652+07	1.0-2.0	A-3(0)	NP	NP	82.9	12.8	0.3	4.0	94.3	34.0	5.0	-	ND
S-117	94' RT	652+07	2.0-3.0	A-6(1)	29	11	45.3	19.4	11.9	23.4	98.7	73.0	37.0	25.0	15
S-118	94' RT	652+07	5.0-6.0	A-2-4(0)	24	10	69.5	12.1	2.4	16.1	97.4	57.0	19.0	-	ND
SS-216	0	652+07	5.2-6.7	A-2-6(2)	38	23	50.0	18.1	7.4	24.5	99.0	67.0	33.0	21.0	ND
SS-217	0	652+07	10.2-11.3	A-7-6(37)	58	36	3.6	11.5	35.5	49.4	99.6	98.0	93.0	33.0	ND

(A) ROADWAY EMBANKMENT
LOOSE BROWN,TAN,LIGHT GRAY,ORANGE SILTY FINE AND COARSE SAND (A-2-4) WITH GRAVEL FROM 0.5'-1.0',AND COARSE SAND (A-3),MOIST TO WET

(B) ALLUVIAL
SOFT DARK GRAY,TAN SANDY CLAY (A-6) MODERATE ORGANICS (15%),WET

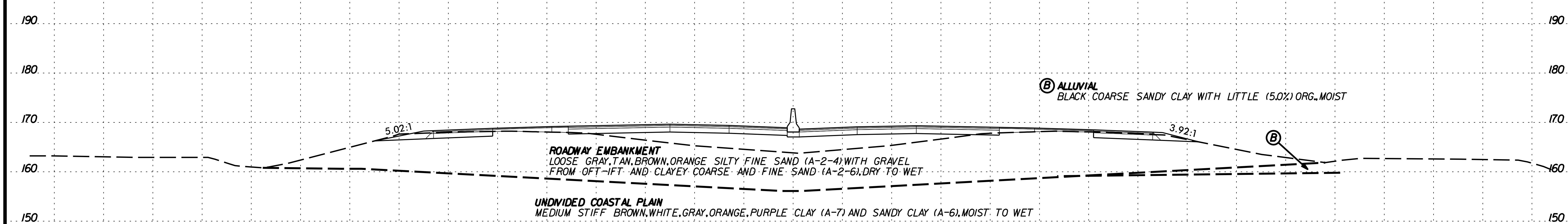
(C) UNDIVIDED COASTAL PLAIN
LOOSE ORANGE,GRAY,CLAYEY COARSE AND FINE SAND (A-2-6) AND SILTY SAND (A-2-4),MOIST TO SAT.

(D) UNDIVIDED COASTAL PLAIN
MEDIUM STIFF GRAY,SILTY CLAY (A-7-6),WET



652+00.00

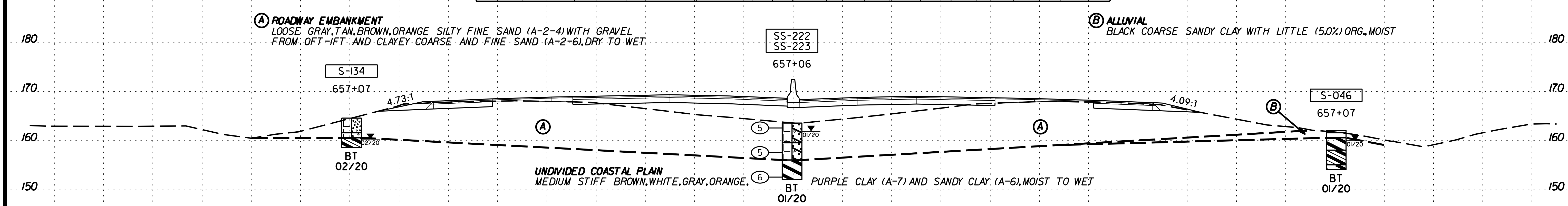
-L-



658+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-134	90' LT	657+07	4.0-6.0	A-6(1)	30	15	47.8	16.6	10.9	24.7	98.6	69.0	37.0	-	ND
SS-222	0	657+06	0.0-1.5	A-2-6(1)	28	14	48.4	19.1	10.3	22.2	94.7	69.0	35.0	17.0	ND
SS-223	0	657+06	10.0-11.5	A-7-6(30)	68	43	22.7	8.8	11.6	56.9	99.9	86.0	70.0	34.0	ND
S-046	110' RT	657+07	0.0-1.0	A-6(2)	31	13	39.1	21.2	16.5	23.2	99.4	76.0	42.0	22.0	5



657+00.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	148

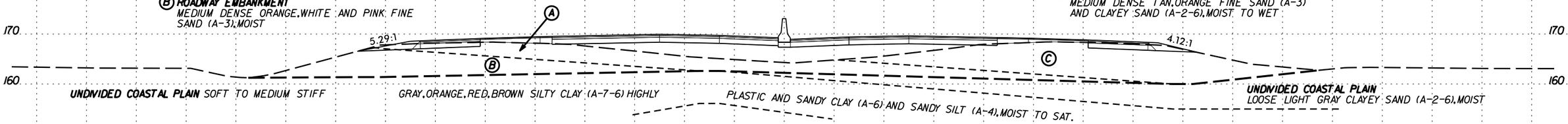
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

190
180
170
160
150
140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM STIFF ORANGE,BROWN SILTY CLAY (A-7-5),WET

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM DENSE ORANGE,WHITE AND PINK FINE SAND (A-3),MOIST

Ⓒ **ROADWAY EMBANKMENT**
MEDIUM DENSE TAN,ORANGE FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST TO WET



UNDIVIDED COASTAL PLAIN *SOFT TO MEDIUM STIFF GRAY,ORANGE,RED,BROWN SILTY CLAY (A-7-6) HIGHLY PLASTIC AND SANDY CLAY (A-6) AND SANDY SILT (A-4),MOIST TO SAT.*

MEDIUM DENSE GRAY CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

UNDIVIDED COASTAL PLAIN *LOOSE LIGHT GRAY CLAYEY SAND (A-2-6),MOIST*

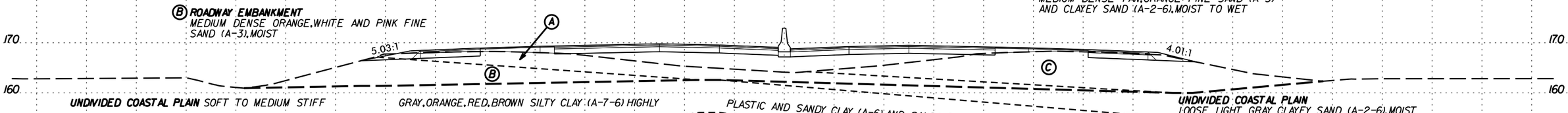
659+00.00

190
180
170
160
150
140

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM STIFF ORANGE,BROWN SILTY CLAY (A-7-5),WET

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM DENSE ORANGE,WHITE AND PINK FINE SAND (A-3),MOIST

Ⓒ **ROADWAY EMBANKMENT**
MEDIUM DENSE TAN,ORANGE FINE SAND (A-3) AND CLAYEY SAND (A-2-6),MOIST TO WET



UNDIVIDED COASTAL PLAIN *SOFT TO MEDIUM STIFF GRAY,ORANGE,RED,BROWN SILTY CLAY (A-7-6) HIGHLY PLASTIC AND SANDY CLAY (A-6) AND SANDY SILT (A-4),MOIST TO SAT.*

MEDIUM DENSE GRAY CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

UNDIVIDED COASTAL PLAIN *LOOSE LIGHT GRAY CLAYEY SAND (A-2-6),MOIST*

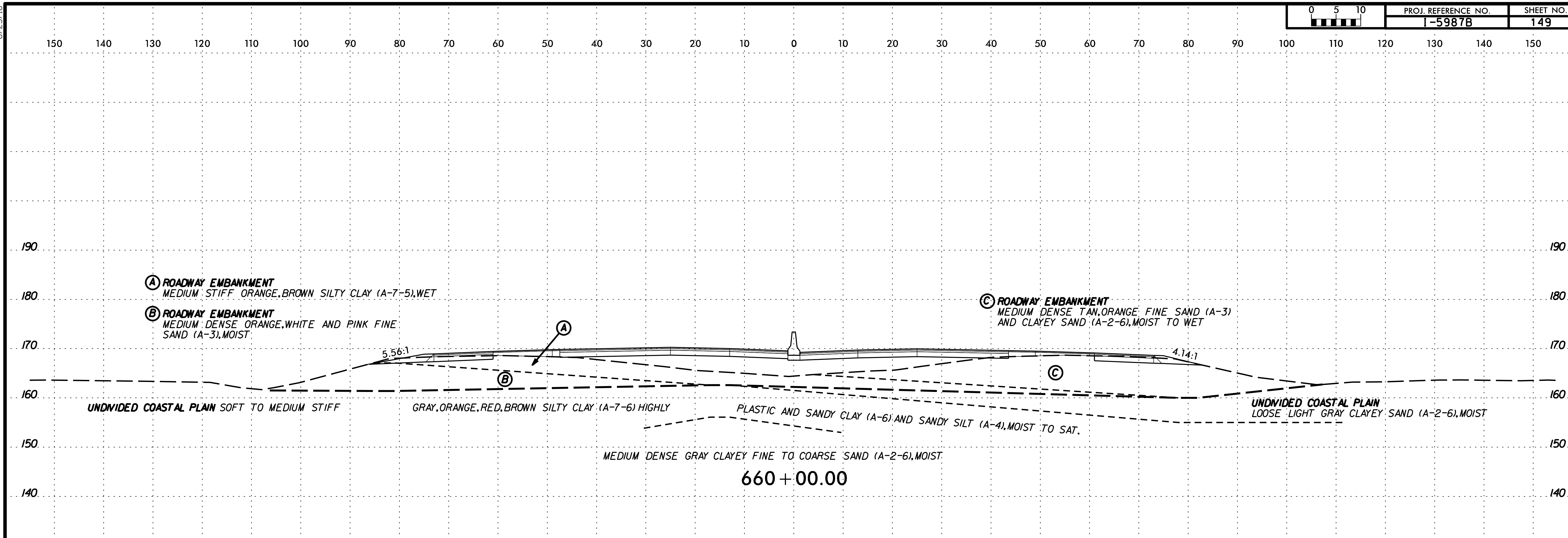
658+50.00

$$$$$$$SYTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

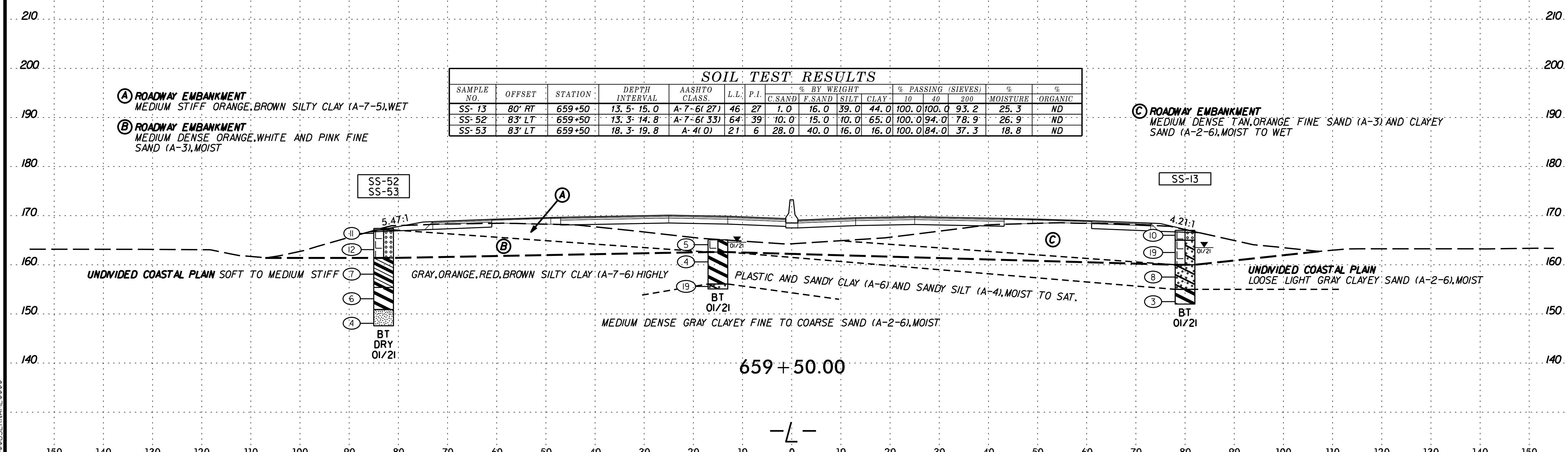
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

6/23/16

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	149



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-13	80' RT	659+50	13.5-15.0	A-7-6(27)	46	27	1.0	16.0	39.0	44.0	100.0	100.0	93.2	25.3	ND
SS-52	83' LT	659+50	13.3-14.8	A-7-6(33)	64	39	10.0	15.0	10.0	65.0	100.0	94.0	78.9	26.9	ND
SS-53	83' LT	659+50	18.3-19.8	A-4(0)	21	6	28.0	40.0	16.0	16.0	100.0	84.0	37.3	18.8	ND



$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	150

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

190 180 170 160 150 140

Ⓐ **UNDIVIDED COASTAL PLAIN**
GRAY CLAYEY SAND (A-2-6), MOIST

Ⓑ **UNDIVIDED COASTAL PLAIN**
BROWN SILTY CLAY (A-7), WET

5.58:1

ROADWAY EMBANKMENT
LOOSE BROWN, ORANGE SILTY COARSE AND FINE SAND (A-2-4) AND CLAYEY FINE SAND (A-2-6), MOIST

4.38:1

GRAY, ORANGE CLAYEY COARSE SAND (A-2-6), WET

UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF PURPLE, GRAY, BROWN, WHITE, RED, ORANGE SILTY CLAY (A-7-6), FINE SANDY CLAY (A-6) AND SANDY SILT (A-4), MOIST TO WET

661+00.00

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM STIFF ORANGE, BROWN SILTY CLAY (A-7-5), WET

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM DENSE ORANGE, WHITE AND PINK FINE SAND (A-3), MOIST

Ⓒ **ROADWAY EMBANKMENT**
MEDIUM DENSE TAN, ORANGE FINE SAND (A-3) AND CLAYEY SAND (A-2-6), MOIST TO WET

5.60:1

4.50:1

UNDIVIDED COASTAL PLAIN SOFT TO MEDIUM STIFF GRAY, ORANGE, RED, BROWN SILTY CLAY (A-7-6) HIGHLY PLASTIC AND SANDY CLAY (A-6) AND SANDY SILT (A-4), MOIST TO SAT.

UNDIVIDED COASTAL PLAIN
LOOSE LIGHT GRAY CLAYEY SAND (A-2-6), MOIST

MEDIUM DENSE GRAY CLAYEY FINE TO COARSE SAND (A-2-6), MOIST

660+50.00

$$$$$$$$SYSTIME$$$$$$$$
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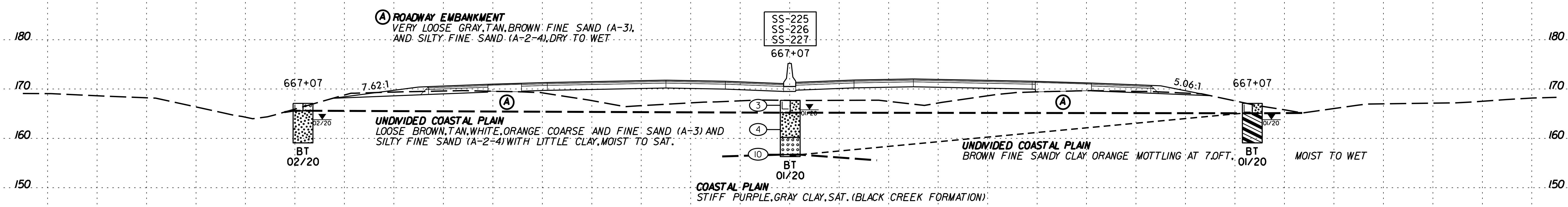
6/23/16

SOIL TEST RESULTS

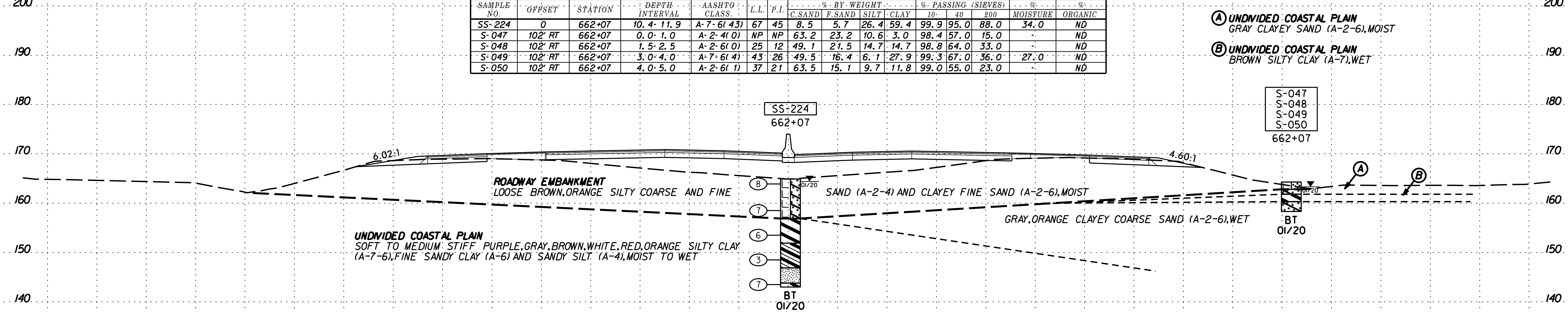
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-225	0	667+07	0.0-1.5	A-2-4(0)	20	8	52.4	19.8	11.2	16.7	98.7	63.0	30.0	-	ND
SS-226	0	667+07	9.9-11.0	A-3(0)	NP	NP	83.6	11.7	0.6	4.1	98.7	46.0	5.0	-	ND
SS-227	0	667+07	11.0-11.4	A-7-6(46)	72	45	2.3	11.2	17.3	69.2	99.9	99.0	90.0	37.0	ND



667+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-224	0	662+07	10.4-11.9	A-7-6(43)	67	45	8.5	5.7	26.4	59.4	99.9	95.0	88.0	34.0	ND
S-047	102' RT	662+07	0.0-1.0	A-2-4(0)	NP	NP	63.2	23.2	10.6	3.0	98.4	57.0	15.0	-	ND
S-048	102' RT	662+07	1.5-2.5	A-2-6(0)	25	12	49.1	21.5	14.7	14.7	98.8	64.0	33.0	-	ND
S-049	102' RT	662+07	3.0-4.0	A-7-6(4)	43	26	49.5	16.4	6.1	27.9	99.3	67.0	36.0	27.0	ND
S-050	102' RT	662+07	4.0-5.0	A-2-6(1)	37	21	63.5	15.1	9.7	11.8	99.0	55.0	23.0	-	ND



662+00.00

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$$$$SYSTIME$$$$
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$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	152

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

190 180 170 160 150

Ⓐ **ROADWAY EMBANKMENT**
LOOSE BLACK,GRAY SILTY SAND (A-2-4) WITH TRACE ORGANIC MATTER AND CLAYEY FINE TO COARSE SAND (A-2-6),WET TO MOIST

10.09:1

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF GRAY SANDY CLAY (A-6) AND SILTY CLAY (A-7-6),WET

BT 01/21

UNDIVIDED COASTAL PLAIN
LOOSE TO MEDIUM DENSE BROWN,GRAY SAND (A-3) AND SILTY SAND (A-2-4),MOIST

6:1 4.01:1

BT FIAD 05/21

674+00.00

210 200 190 180 170 160 150 140

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-228	0	672+07	5.5-6.5	A-7-6(19)	55	36	18.7	25.1	11.2	44.9	100.0	90.0	60.0	25.0	ND
S-051	95' RT	672+07	0.0-1.0	A-2-4(0)	NP	NP	61.6	23.3	5.2	9.9	98.6	58.0	17.0	-	ND
S-052	95' RT	672+07	4.0-5.0	A-4(0)	22	10	43.6	23.4	13.1	19.9	98.9	74.0	36.0	17.0	ND
S-053	95' RT	672+07	5.0-6.0	A-2-4(0)	NP	NP	54.8	23.6	13.4	8.2	98.4	64.0	24.0	-	ND

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,ORANGE,BROWN SILTY FINE SAND (A-2-4) WITH SOME CLAY AND GRAVEL AND CLAYEY FINE SAND (A-2-6) AND COARSE AND FINE SAND (A-3),MOIST

672+07

10.02:1

02/20

BT 02/20

SS-228
672+07

Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF BROWN,ORANGE SILT (A-4) AND SILTY CLAY (A-7-6), MOIST TO WET

S-051
S-052
S-053
672+07

7.94:1

01/20

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN,ORANGE,BROWN,LIGHT GRAY,WHITE SILTY FINE AND COARSE SAND (A-2-4),FINE SAND (A-3) AND CLAYEY FINE SAND (A-2-6),MOIST TO SAT.

8 7 25

BT 01/20

BT 01/20

672+00.00

-L-

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

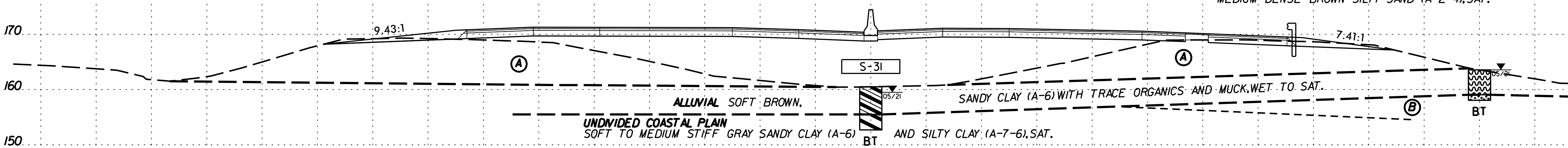
$$$$USERNAME$$$$ $$$$SYSTIME$$$$

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-31	0	675+00	0.0-5.0	A-6(3)	31	12	27.0	26.0	20.0	27.0	100.0	86.0	50.3	47.2	4.4

(A) **ROADWAY EMBANKMENT**
LOOSE BLACK,GRAY SILTY SAND (A-2-4)WITH TRACE ORGANIC MATTER AND CLAYEY FINE TO COARSE SAND (A-2-6),WET TO MOIST

(B) **UNDIVIDED COASTAL PLAIN**
MEDIUM DENSE BROWN SILTY SAND (A-2-4),SAT.



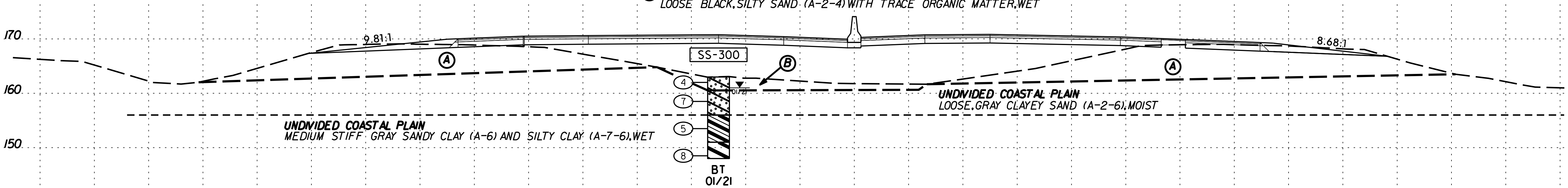
675+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-300	25' LT	674+50	0.0-1.5	A-2-4(0)	NP	NP	50.0	32.0	11.0	7.0	99.0	69.0	21.8	49.8	4.3

(A) **ROADWAY EMBANKMENT**
LOOSE GRAY SILTY SAND (A-2-4)WITH TRACE ORGANIC MATTER AND CLAYEY FINE TO COARSE SAND (A-2-6),WET TO MOIST

(B) **ALLUVIAL**
LOOSE BLACK,SILTY SAND (A-2-4)WITH TRACE ORGANIC MATTER,WET



674+50.00

-L-

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	154

SOIL TEST RESULTS

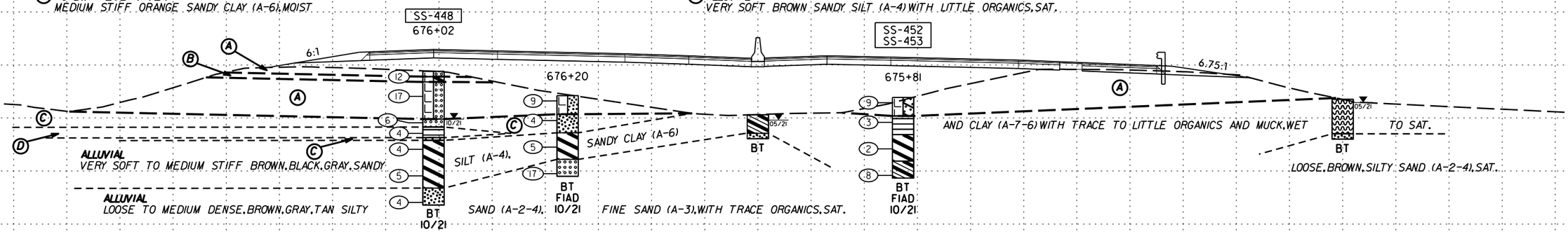
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-448	61' LT	676+02	13.7-15.2	A-7-6(10)	41	24	19.1	27.7	6.8	46.4	99.9	89.6	55.0	23.5	1.0
SS-452	27' RT	675+81	3.7-5.2	A-4(0)	32	10	36.0	30.6	14.1	19.4	99.7	80.5	36.8	37.0	6.2
SS-453	27' RT	675+81	8.7-10.2	A-7-6(44)	68	42	4.1	4.9	26.9	64.1	100.0	97.4	92.7	37.9	ND

(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE ORANGE,TAN FINE SAND (A-3),SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6),MOIST

(B) ROADWAY EMBANKMENT
MEDIUM STIFF ORANGE SANDY CLAY (A-6),MOIST

(C) ALLUVIAL
VERY LOOSE TO LOOSE TAN,BROWN SILTY SAND (A-2-4),FINE SAND (A-3),MOIST TO SAT.

(D) ALLUVIAL
VERY SOFT BROWN SANDY SILT (A-4) WITH LITTLE ORGANICS,SAT.



676+00.00

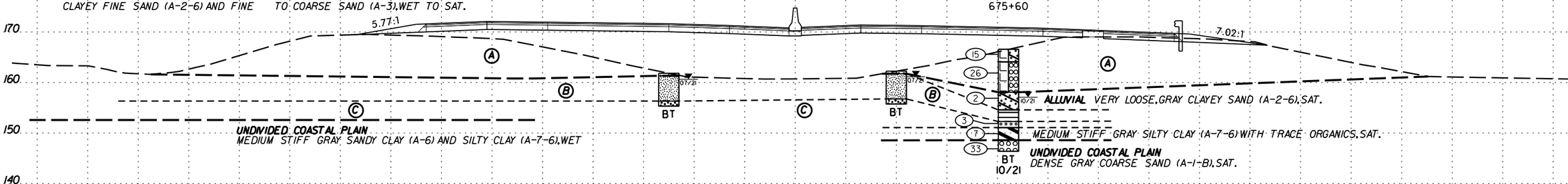
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-43	25' LT	675+50	0.5-5.5	A-4	34	5	32	29	27	12	99	83	41.7	43.3	1.8
SS-437	42' RT	675+60	13.7-14.3	A-6(4)	29	11	17.3	27.8	23.2	31.7	99.9	93.4	60.3	51.1	5.1

(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE,ORANGE,BLACK,GRAY,TAN SAND (A-3), SILTY SAND (A-2-4),COARSE SAND (A-1-B) AND CLAYEY FINE TO COARSE SAND (A-2-6),WITH TRACE ORGANIC MATTER,WET TO MOIST

(B) ALLUVIAL
VERY SOFT TO SOFT,BROWN,SANDY CLAY (A-6) AND SANDY SILT (A-4) WITH TRACE TO LITTLE ORGANICS,WET TO SAT.

(C) UNDIVIDED COASTAL PLAIN
VERY LOOSE TO LOOSE BLACK,GRAY,BROWN,TAN,SILTY SAND (A-2-4), CLAYEY FINE SAND (A-2-6) AND FINE TO COARSE SAND (A-3),WET TO SAT.



675+50.00

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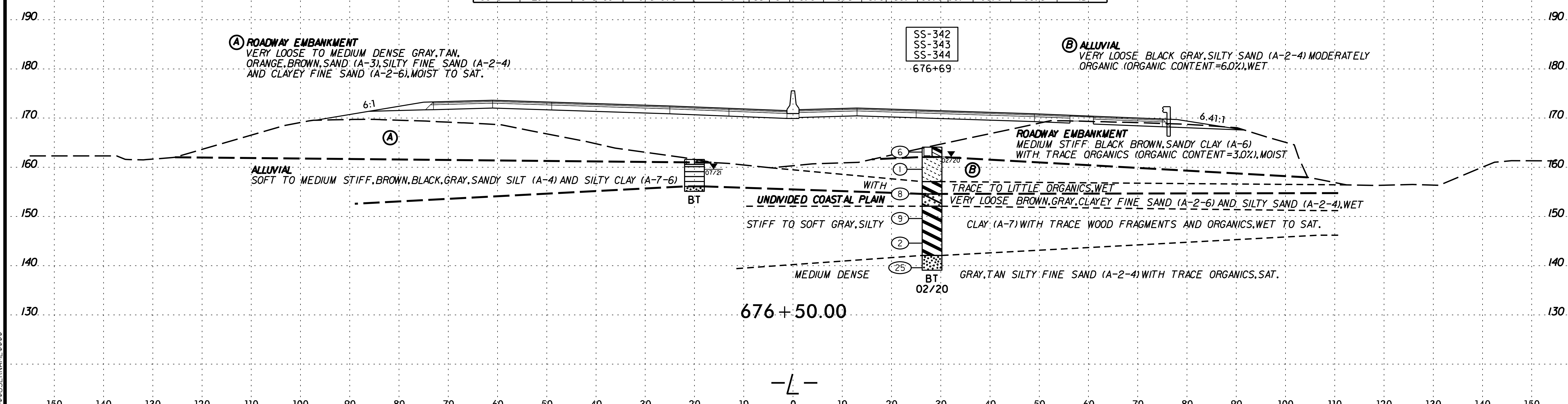
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	155

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-342	28' RT	676+69	0.2-1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.0	3.0
SS-343	28' RT	676+69	3.5-5.0	A-2-4(0)	NP	NP	45.0	26.7	13.3	15.0	99.7	76.7	30.3	39.5	6.0
SS-344	28' RT	676+69	8.5-9.5	A-7-6(31)	55	34	6.3	19.5	15.8	58.4	99.9	96.1	86.8	36.5	ND



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	156

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

220 210 200 190 180 170 160 150 140 130

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-2148	109' RT	676+85	3.5-5.0	A-4(0)	NP	NP	40.1	24.0	16.4	19.5	99.1	74.3	39.0	20.6	6.3
SS-2150	109' RT	676+85	13.5-15.0	A-6(6)	36	19	29.0	21.0	9.7	40.3	99.8	83.4	52.4	18.9	ND

(A) ROADWAY EMBANKMENT
LOOSE BROWN, BLACK, ORANGE CLAYEY SAND (A-2-6) WITH TRACE ORGANICS, MOIST

(B) ROADWAY EMBANKMENT
MEDIUM STIFF BLACK BROWN, SANDY CLAY (A-6) WITH TRACE ORGANICS (ORGANIC CONTENT = 3.0%), MOIST

(C) ALLUVIAL
SOFT BLACK SANDY SILT (A-4) WITH LITTLE ORGANICS (ORGANIC CONTENT = 6.3%), MOIST

5:1

ROADWAY EMBANKMENT
MEDIUM DENSE GRAY, ORANGE, BROWN, SILTY FINE TO COARSE SAND (A-2-4) AND CLAYEY SAND (A-2-6) WITH TRACE ORGANICS, MOIST TO SAT.

6.32:1

SS-2148
SS-2150
676+85

7
3
02/20
13
WOH
34
9

BT
02/20

UNDIVIDED COASTAL PLAIN MEDIUM DENSE GRAY, SILTY FINE TO COARSE SAND (A-2-4), MICACEOUS, WET

VERY SOFT GRAY, SANDY CLAY (A-6) WITH TRACE ORGANICS, WET

DENSE TO LOOSE BROWN, ORANGE, GRAY, SILTY FINE TO COARSE SAND (A-2-4), SAT.

677+00.00

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$$$$$$$$SYSTIME$$$$$$
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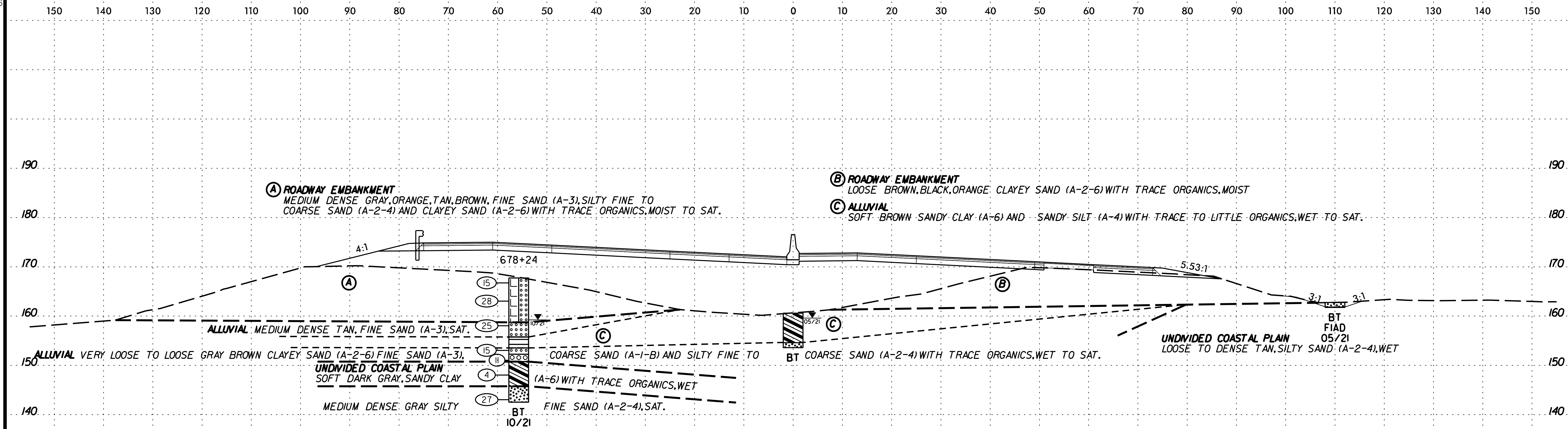
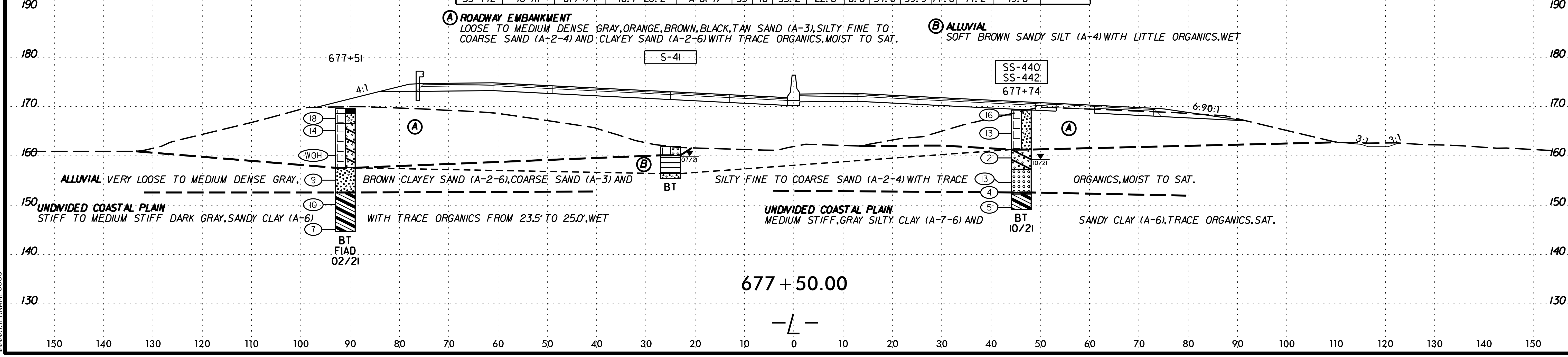
$$$$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	157



678 + 00.00

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-41	25' LT	677+50	1.8-5.5	-	-	-	-	-	-	-	-	-	-	-	8.9
SS-440	46' RT	677+74	8.7-10.2	A-2-6(0)	25	13	42.7	26.7	8.1	22.4	99.6	76.1	33.2	16.2	-
SS-442	46' RT	677+74	18.7-20.2	A-6(4)	33	18	35.2	22.8	8.0	34.0	99.9	77.6	44.2	19.6	-



677 + 50.00

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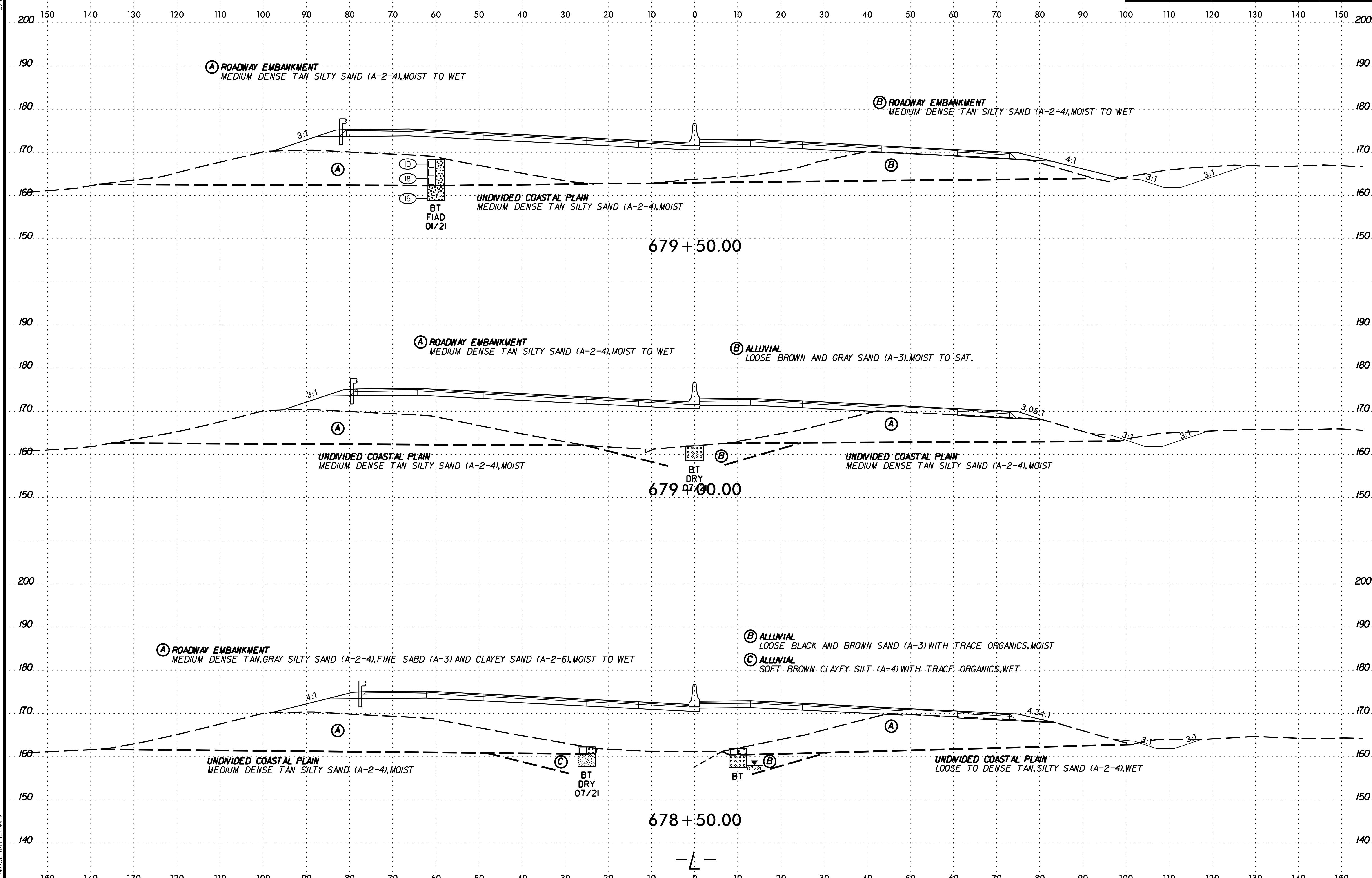
6/23/16

$$$$$SYSTIME$$$$$ $$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$ $$$USERNAME$$$$

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	158



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	159

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

190 180 170 160 150

Ⓐ **ROADWAY EMBANKMENT**
LOOSE BROWN,GRAY,TAN SILTY FINE SAND (A-2-4),MOIST

Ⓒ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF BROWN,GRAY,TAN COARSE AND FINE SANDY CLAY (A-6),MOIST TO WET

Ⓑ **UNDIVIDED COASTAL PLAIN**
BROWN SILTY FINE SAND (A-2-4)

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

MEDIUM DENSE GRAY,ORANGE TAN,BROWN CLAYEY COARSE AND FINE SAND (A-2-6) AND SILTY,F.SAND (A-2-4),WET TO SAT.

681+50.00

190 180 170 160 150

Ⓐ **ROADWAY EMBANKMENT**
LOOSE BROWN,GRAY,TAN SILTY FINE SAND (A-2-4),MOIST

Ⓒ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF BROWN,GRAY,TAN COARSE AND FINE SANDY CLAY (A-6),MOIST TO WET

Ⓑ **UNDIVIDED COASTAL PLAIN**
BROWN SILTY FINE SAND (A-2-4)

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

MEDIUM DENSE GRAY,ORANGE TAN,BROWN CLAYEY COARSE AND FINE SAND (A-2-6) AND SILTY,F.SAND (A-2-4),WET TO SAT.

681+00.00

200 190 180 170 160 150

Ⓐ **ROADWAY EMBANKMENT**
MEDIUM DENSE TAN SILTY SAND (A-2-4),MOIST TO WET

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM DENSE TAN SILTY SAND (A-2-4),MOIST TO WET

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

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN SILTY SAND (A-2-4),MOIST

680+50.00

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

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

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	160

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

190 180 170 160

(A) ROADWAY EMBANKMENT
LOOSE BROWN,GRAY,TAN SILTY FINE SAND (A-2-4),MOIST

(C) UNDIVIDED COASTAL PLAIN
MEDIUM STIFF BROWN,GRAY,TAN COARSE AND FINE SANDY CLAY (A-6),MOIST TO WET

(B) UNDIVIDED COASTAL PLAIN
BROWN SILTY FINE SAND (A-2-4)

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

MEDIUM DENSE GRAY,ORANGE TAN,BROWN CLAYEY COARSE AND FINE SAND (A-2-6) AND SILTY,F.SAND (A-2-4),WET TO SAT.

682+50.00

150 210 200 190 180 170 160 150

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-263	0	682+07	1.0-1.5	A-6(6)	38	23	36.2	20.6	10.7	32.5	99.0	76.0	46.0	17.0	ND
SS-264	0	682+07	5.0-6.5	A-2-7(4)	47	31	47.3	20.4	3.8	28.5	99.6	71.0	34.0	-	ND

(A) ROADWAY EMBANKMENT
LOOSE BROWN,GRAY,TAN SILTY FINE SAND (A-2-4),MOIST

(C) UNDIVIDED COASTAL PLAIN
MEDIUM STIFF BROWN,GRAY,TAN COARSE AND FINE SANDY CLAY (A-6),MOIST TO WET

(B) UNDIVIDED COASTAL PLAIN
BROWN SILTY FINE SAND (A-2-4)

SS-263
SS-264
682+07

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

BT 02/20 BT 01/20 BT 01/20

5 10 19

MEDIUM DENSE GRAY,ORANGE TAN,BROWN CLAYEY COARSE AND FINE SAND (A-2-6) AND SILTY,F.SAND (A-2-4),WET TO SAT.

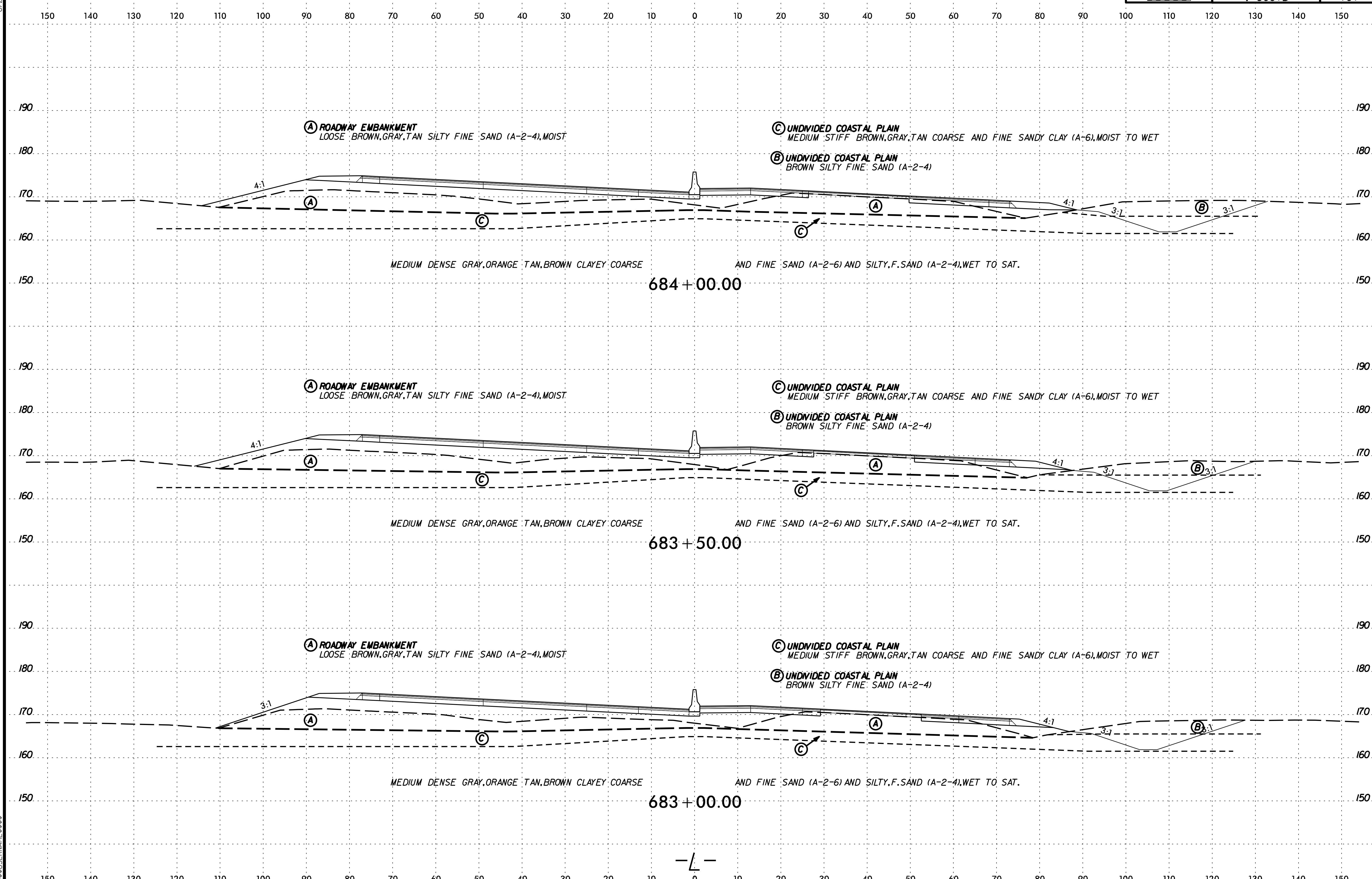
682+00.00

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

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

PROJ. REFERENCE NO. I-5987B | SHEET NO. 161



$$$$$SYSTIME$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	162

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

210 200 190 180 170 160 150

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
S-135	99' LT	687+07	2.5-5.0	A-2-6(1)	33	17	51.1	20.7	5.4	22.7	98.7	66.0	30.0	-	ND

Ⓐ ROADWAY EMBANKMENT
GRAY, TAN, BROWN, SILTY FINE SAND (A-2-4) WITH GRAVEL AND FINE SAND (A-3), MOIST

S-135
687+07

687+07

4:1

BT 02/20

BT 03/20

UNDIVIDED COASTAL PLAIN
GRAY, TAN, ORANGE CLAYEY COARSE AND FINE SAND (A-2-6), MOIST TO SAT.

687+00.00

BREAKLINE SEE -Y1BRPC- 11+97.25

Ⓐ ROADWAY EMBANKMENT
GRAY, TAN, BROWN, SILTY FINE SAND (A-2-4) WITH GRAVEL AND FINE SAND (A-3), MOIST

4:1

UNDIVIDED COASTAL PLAIN
GRAY, TAN, ORANGE CLAYEY COARSE AND FINE SAND (A-2-6), MOIST TO SAT.

4:1 3:1 3:1

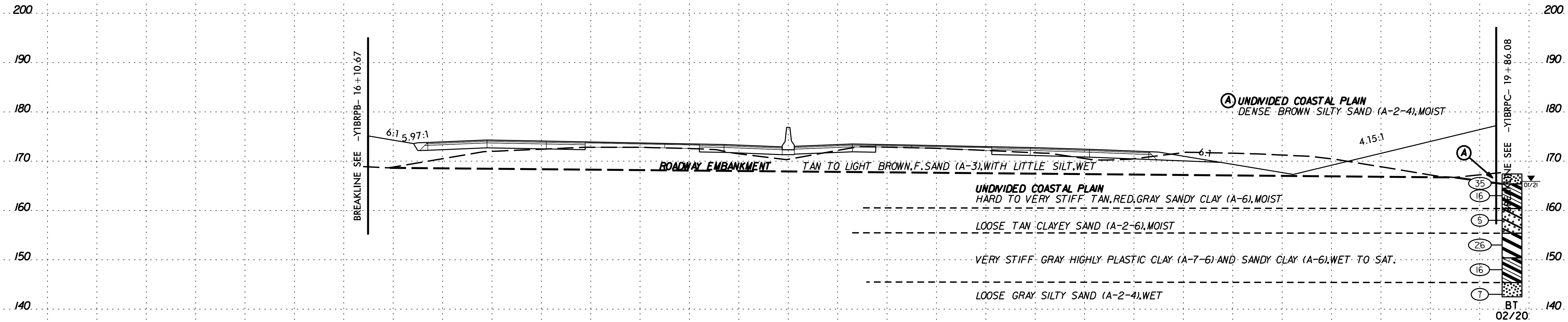
684+50.00

-L-

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

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

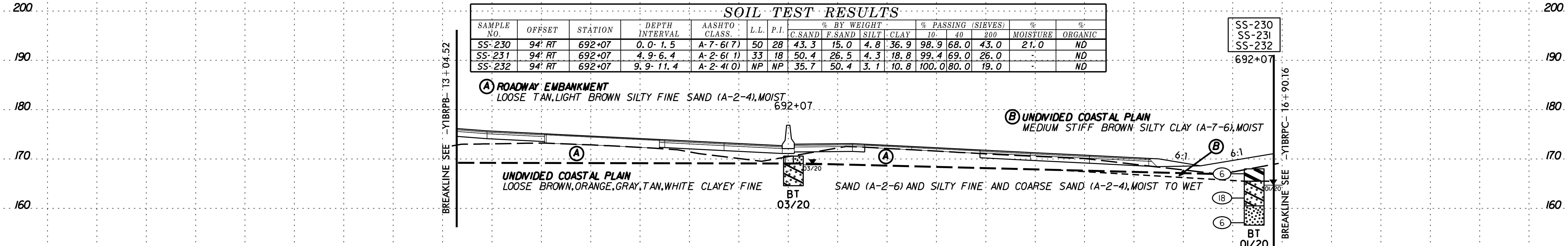
6/23/16



695+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-230	94' RT	692+07	0.0-1.5	A-7-6(7)	50	28	43.3	15.0	4.8	36.9	98.9	68.0	43.0	21.0	ND
SS-231	94' RT	692+07	4.9-6.4	A-2-6(1)	33	18	50.4	26.5	4.3	18.8	99.4	69.0	26.0	-	ND
SS-232	94' RT	692+07	9.9-11.4	A-2-4(0)	NP	NP	35.7	50.4	3.1	10.8	100.0	80.0	19.0	-	ND



692+00.00

-L-

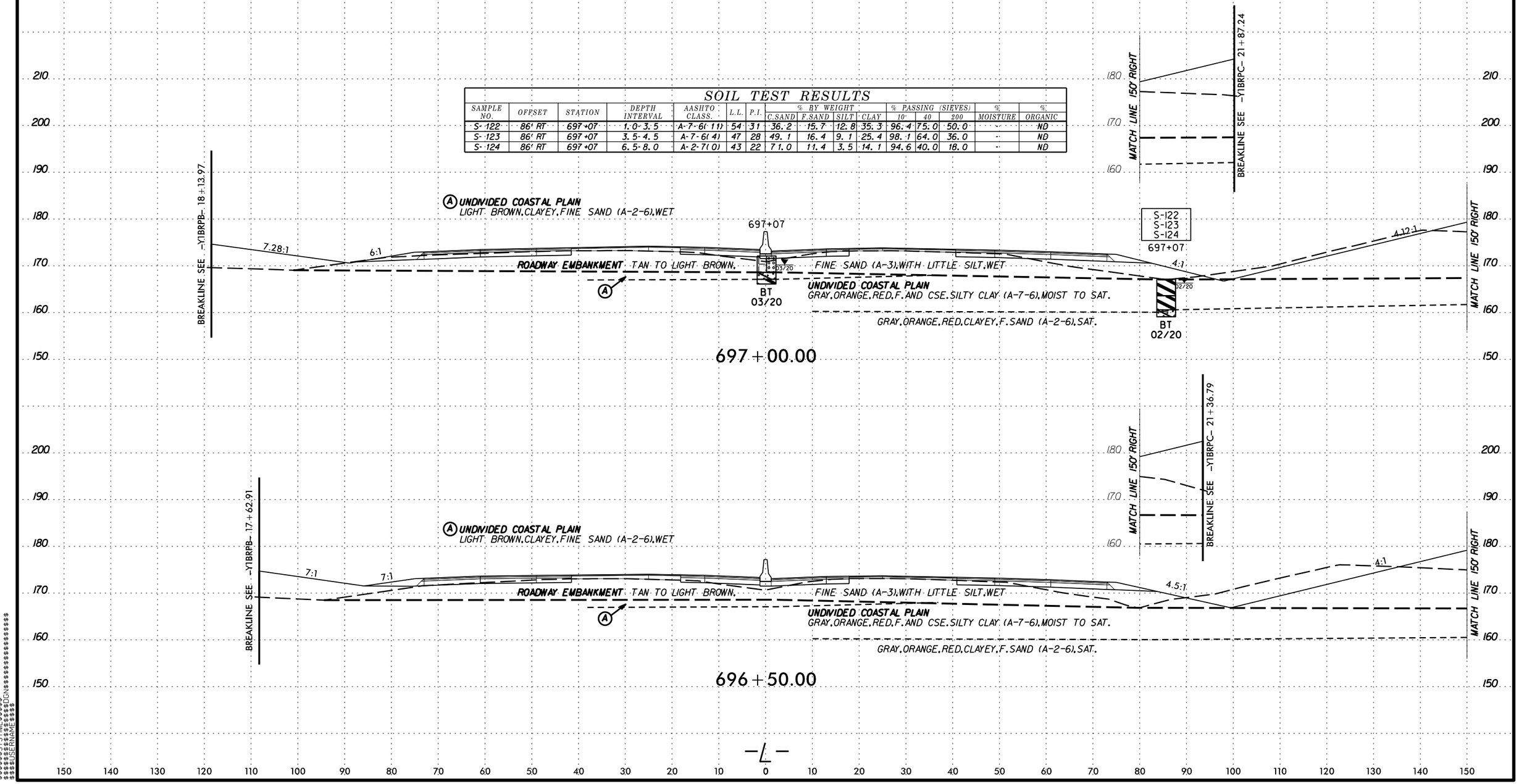
$$$$$SYSTIME$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	164

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-122	86' RT	697+07	1.0-3.5	A-7-6(11)	54	31	36.2	15.7	12.8	35.3	96.4	75.0	50.0	--	ND
S-123	86' RT	697+07	3.5-4.5	A-7-6(4)	47	28	49.1	16.4	9.1	25.4	98.1	64.0	36.0	--	ND
S-124	86' RT	697+07	6.5-8.0	A-2-7(0)	43	22	71.0	11.4	3.5	14.1	94.6	40.0	18.0	--	ND



$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	165

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

200 190 180 170 160

BREAKLINE SEE –Y1BRPB– 19+17.09

Ⓐ **ROADWAY EMBANKMENT**
VERY LOOSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM DENSE TO LOOSE ORANGE SILTY FINE SAND (A-2-4),MOIST

7.72:1 6:1 4:1 4:1

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE AND GRAY SANDY CLAY (A-6),MOIST

VERY LOOSE TO MEDIUM DENSE GRAY,ORANGE,WHITE CLAYEY FINE TO COARSE SAND (A-2-6)
AND FINE TO COARSE SAND (A-3),WET TO SAT.

MATCH LINE 150' RIGHT

BREAKLINE SEE –Y1BRPC– 22+88.13

180 170 160

698+00.00

BREAKLINE SEE –Y1BRPB– 18+65.35

Ⓐ **UNDIVIDED COASTAL PLAIN**
LIGHT BROWN,CLAYEY,FINE SAND (A-2-6),WET

7.57:1 6:1 4:1 4:1

ROADWAY EMBANKMENT TAN TO LIGHT BROWN, FINE SAND (A-3),WITH LITTLE SILT,WET

UNDIVIDED COASTAL PLAIN
GRAY,ORANGE,RED,F.AND CSE.SILTY CLAY (A-7-6),MOIST TO SAT.

GRAY,ORANGE,RED,CLAYEY,F.SAND (A-2-6),SAT.

MATCH LINE 150' RIGHT

BREAKLINE SEE –Y1BRPC– 22+37.68

180 170 160

697+50.00

–L–

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

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	166

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

BREAKLINE SEE -Y1BRPB- 20+21.89

MATCH LINE 150' LEFT

180
170
160

200
190
180
170
160
150
140

(A) ROADWAY EMBANKMENT
VERY LOOSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

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

9:1
6:1
6:1
3:1
3:1

35
16
5
26
16
7

BT
FIAD
01/21

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE AND GRAY SANDY CLAY (A-6),MOIST

VERY LOOSE TO MEDIUM DENSE GRAY,ORANGE,WHITE CLAYEY FINE TO COARSE SAND (A-2-6)
AND FINE TO COARSE SAND (A-3),WET TO SAT.

699+00.00

BREAKLINE SEE -Y1BRPB- 19+69.26

MATCH LINE 150' LEFT

180
170
160

200
190
180
170
160
150

(A) ROADWAY EMBANKMENT
VERY LOOSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

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

7.86:1
6:1
6:1
3:1
3:1

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF ORANGE AND GRAY SANDY CLAY (A-6),MOIST

VERY LOOSE TO MEDIUM DENSE GRAY,ORANGE,WHITE CLAYEY FINE TO COARSE SAND (A-2-6)
AND FINE TO COARSE SAND (A-3),WET TO SAT.

698+50.00

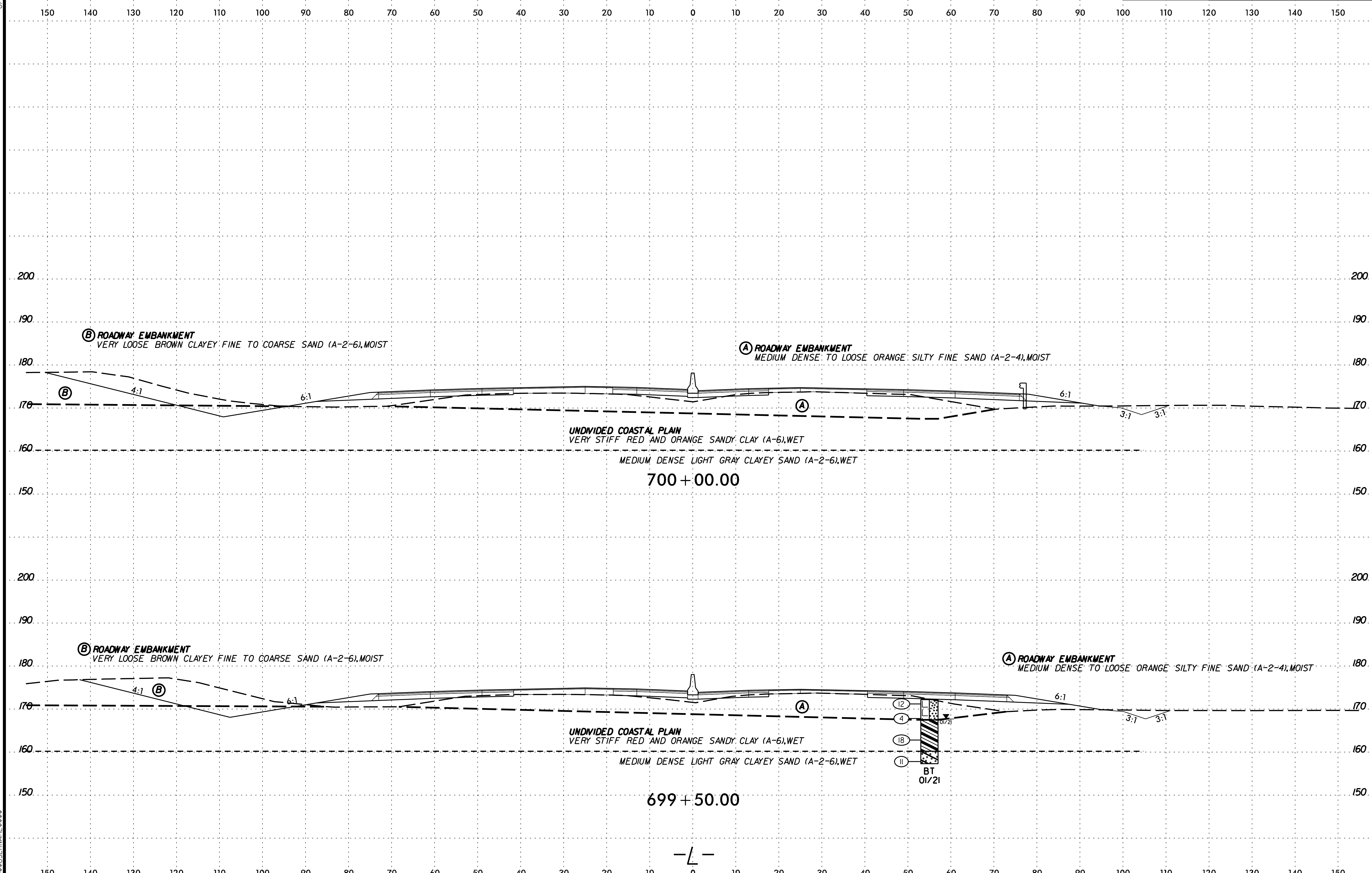
-L-

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

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
I-5987B	167

6/23/16



$$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	168

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

190 180 170 160

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TO MEDIUM DENSE BROWN,TAN SILTY FINE TO COARSE SAND (A-2-4) AND FINE SAND (A-3),MOIST

4:1 6:1

UNDIVIDED COASTAL PLAIN
SOFT TO STIFF ORANGE,GRAY,
BROWN CLAY (A-7-6) AND SANDY CLAY (A-6),MOIST TO WET

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN FINE TO COARSE SAND (A-3),WET

701+50.00

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TO MEDIUM DENSE BROWN,TAN SILTY FINE TO COARSE SAND (A-2-4) AND FINE SAND (A-3),MOIST

4:1 6:1

UNDIVIDED COASTAL PLAIN
SOFT TO STIFF ORANGE,GRAY,
BROWN CLAY (A-7-6) AND SANDY CLAY (A-6),MOIST TO WET

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN FINE TO COARSE SAND (A-3),WET

701+00.00

Ⓑ **ROADWAY EMBANKMENT**
VERY LOOSE BROWN CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

4:1 6:1

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

6:1 3:1 3:1

UNDIVIDED COASTAL PLAIN
VERY STIFF RED AND ORANGE SANDY CLAY (A-6),WET
MEDIUM DENSE LIGHT GRAY CLAYEY SAND (A-2-6),WET

700+50.00

—L—

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	169

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

200
190
180
170
160

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TO MEDIUM DENSE BROWN,TAN SILTY FINE TO COARSE SAND (A-2-4) AND FINE SAND (A-3),MOIST

6:1

6:1

Ⓐ

Ⓐ

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN FINE TO COARSE SAND (A-3),WET

UNDIVIDED COASTAL PLAIN
SOFT TO STIFF ORANGE,GRAY,

BROWN CLAY (A-7-6) AND SANDY CLAY (A-6),MOIST TO WET

702+50.00

200
190
180
170
160

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-51	63' LT	702+00	3.3-4.8	A-7-6(10)	46	21	28.0	18.0	9.0	45.0	100.0	82.0	57.1	26.8	ND

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TO MEDIUM DENSE BROWN,TAN SILTY FINE TO COARSE SAND (A-2-4) AND FINE SAND (A-3),MOIST

SS-51

6:1

4:1

Ⓐ

Ⓐ

8
4
9

BT
DRY
01/21

11
13
7

BT
FIAD
01/21

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TAN FINE TO COARSE SAND (A-3),WET

UNDIVIDED COASTAL PLAIN
SOFT TO STIFF ORANGE,GRAY,

BROWN CLAY (A-7-6) AND SANDY CLAY (A-6),MOIST TO WET

702+00.00

200
190
180
170
160
150

—L—

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

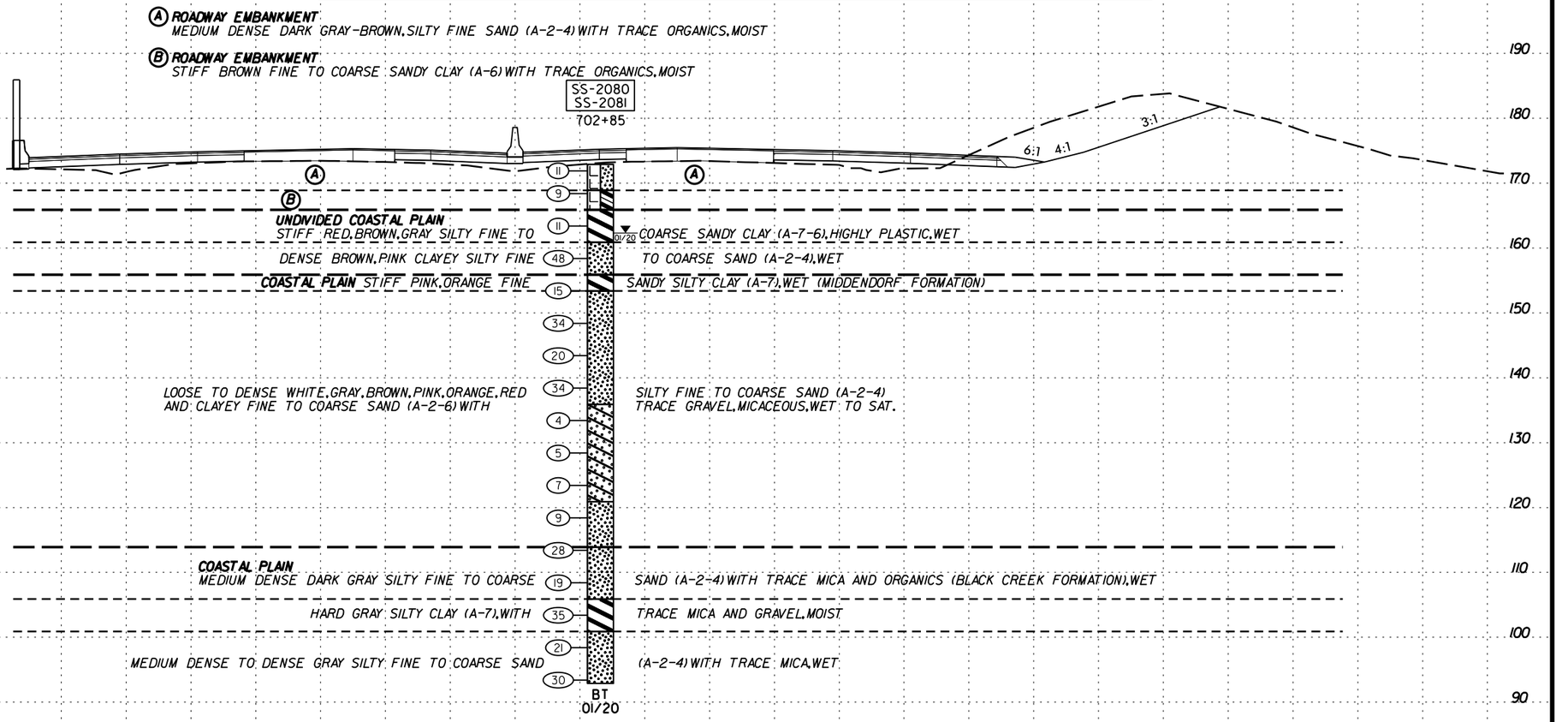
$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	170

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-2080	13' RT	702+85	4.0-5.0	A-6(4)	33	19	37.1	20.4	10.1	32.4	99.7	76.4	45.7	11.1	ND
SS-2081	13' RT	702+85	8.5-10.0	A-7-6(11)	65	45	44.0	17.9	3.9	34.2	99.7	72.2	40.2	20.3	ND



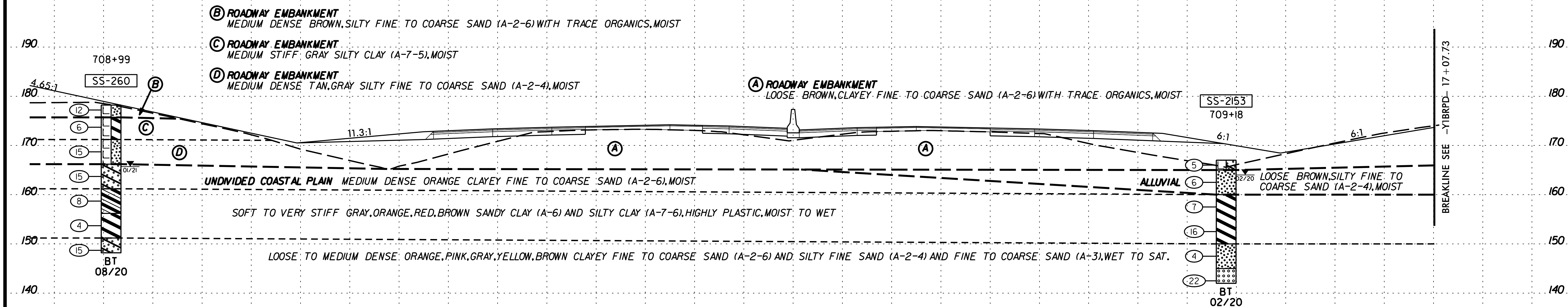
703+00.00

$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/23/16

SOIL TEST RESULTS

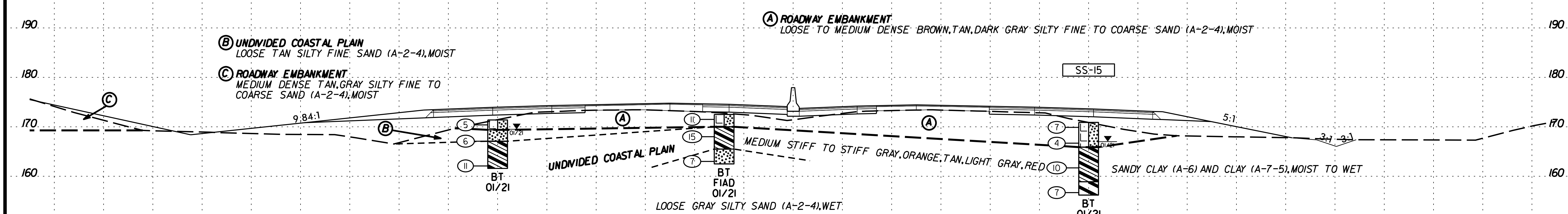
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-2153	88' RT	709+18	8.5-10.0	A-7-6(14)	52	31	25.8	22.0	11.1	41.1	100.0	85.7	55.9	21.2	ND
SS-260	138' LT	708+99	23.5-25.0	A-7-5(78)	99	66	1.0	2.0	20.0	77.0	100.0	99.0	98.4	43.6	ND



709+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-15	60' RT	707+00	3.2-4.7	A-2-4(0)	26	10	46.0	24.0	4.0	26.0	100.0	70.0	34.1	16.7	ND



707+00.00

-L-

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	172

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

200 190 180 170 160 150 140 130

BREAKLINE SEE -Y1BRPA- 20+52.29

710+67

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

13 11 2 7 2 3 36

02/20

BT
02/20

ROADWAY EMBANKMENT MEDIUM DENSE,BROWN,GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL AND ORGANICS,MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TO VERY LOOSE,ORANGE,BROWN,GRAY CLAYEY FINE TO COARSE SAND (A-2-6) WITH TRACE WOOD FRAGMENTS FROM 13.5'-15.0',SAT.

VERY SOFT,RED,TAN,GRAY SILTY CLAY (A-7) WITH TRACE FINE SAND,SAT.

VERY LOOSE,BROWN,TAN,GRAY CLAYEY FINE TO COARSE SAND (A-2-6),SAT.

SOFT TAN,GRAY FINE SANDY SILTY CLAY (A-7),SAT.

DENSE,TAN,WHITE CLAYEY SILTY FINE SAND (A-2-4),SAT.

BREAKLINE SEE -Y1BRPD- 15+53.48

710+50.00

BREAKLINE SEE -Y1BRPA- 21+02.96

4.25:1 7.3:1 6:1 6:1

Ⓐ **ROADWAY EMBANKMENT**
LOOSE BROWN,GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS AND CLAYEY FINE TO COARSE SAND (A-2-6),MOIST

710+18

8 10 22 7 8 17

12/19

BT
12/19

UNDIVIDED COASTAL PLAIN MEDIUM DENSE GRAY,BROWN CLAYEY FINE TO COARSE SAND (A-2-6) WITH TRACE GRAVEL,MOIST

MEDIUM STIFF GRAY-BROWN,FINE SANDY SILTY CLAY (A-7),MOIST

LOOSE ORANGE,GRAY,BROWN SILTY FINE SAND (A-2-4),SAT.

MEDIUM STIFF GRAY,PINK,RED FINE SANDY SILTY CLAY (A-7),SAT.

MEDIUM DENSE WHITE FINE TO COARSE SAND (A-3),WET

BREAKLINE SEE -Y1BRPD- 16+04.74

710+00.00

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

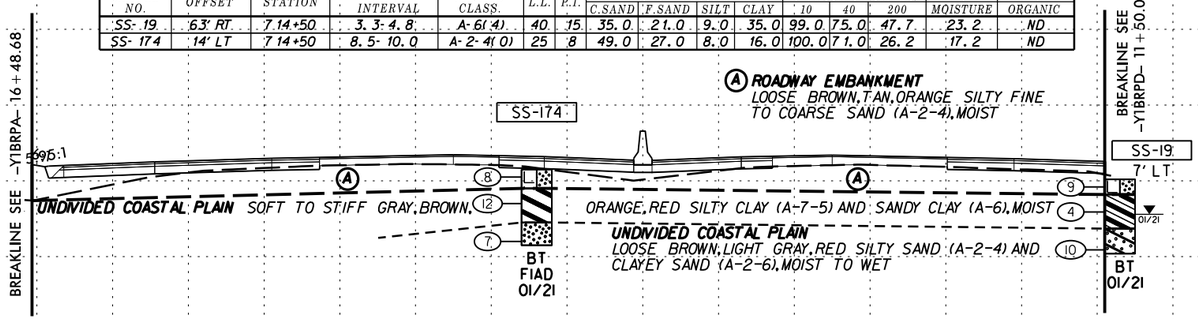
—L—

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	173

SOIL TEST RESULTS

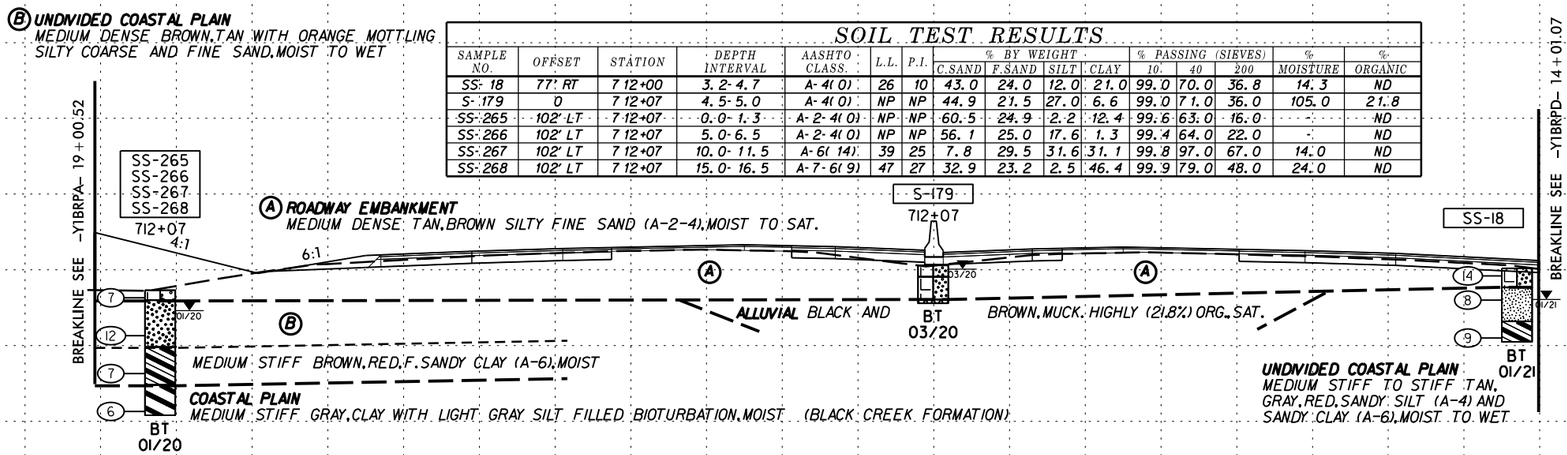
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-19	63' RT	714+50	3.3-4.8	A-6(4)	40	15	35.0	21.0	9.0	35.0	99.0	75.0	47.7	23.2	ND
SS-174	14' LT	714+50	8.5-10.0	A-2-4(0)	25	8	49.0	27.0	8.0	16.0	100.0	71.0	26.2	17.2	ND



714+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-18	77' RT	712+00	3.2-4.7	A-4(0)	26	10	43.0	24.0	12.0	21.0	99.0	70.0	36.8	14.3	ND
S-179	0	712+07	4.5-5.0	A-4(0)	NP	NP	44.9	21.5	27.0	6.6	99.0	71.0	36.0	105.0	21.8
SS-265	102' LT	712+07	0.0-1.3	A-2-4(0)	NP	NP	60.5	24.9	2.2	12.4	99.6	63.0	16.0	-	ND
SS-266	102' LT	712+07	5.0-6.5	A-2-4(0)	NP	NP	56.1	25.0	17.6	1.3	99.4	64.0	22.0	-	ND
SS-267	102' LT	712+07	10.0-11.5	A-6(14)	39	25	7.8	29.5	31.6	31.1	99.8	97.0	67.0	14.0	ND
SS-268	102' LT	712+07	15.0-16.5	A-7-6(9)	47	27	32.9	23.2	2.5	46.4	99.9	79.0	48.0	24.0	ND



712+00.00

-L-

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$$$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	174

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

200 190 180 170 160 150 140

BREAKLINE SEE -Y1BRPA- 12+48.26

(A) ROADWAY EMBANKMENT
LOOSE BROWN SILTY FINE TO COARSE SAND (A-2-4), WET

(B) ROADWAY EMBANKMENT
MEDIUM DENSE BROWN SILTY CLAY (A-7-5), MOIST

4:1

7
8
15

UNDIVIDED COASTAL PLAIN
STIFF GRAY SANDY CLAY (A-6), MOIST

BT
DRY
01/21

BREAKLINE SEE -SR3- 32+02.76

718+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-20	60' RT	717+00	0.0-1.5	A-2-4(0)	NP	NP	60.0	29.0	5.0	6.0	99.0	63.0	13.0	9.5	ND
S-180	1' RT	717+07	4.5-5.0	A-6(6)	39	24	40.2	16.7	9.6	33.6	98.8	72.0	45.0	21.0	ND
SS-269	80' LT	717+07	0.0-1.5	-	-	-	-	-	-	-	-	-	-	23.0	5.2

BREAKLINE SEE -Y1BRPA- 13+97.90

(A) ROADWAY EMBANKMENT
LOOSE TO MEDIUM DENSE TAN, BROWN SILTY SAND (A-2-4) AND SAND (A-3), MOIST TO SAT.

(B) UNDIVIDED COASTAL PLAIN
VERY SOFT BROWN, SILTY CLAY WITH LITTLE (5.2%) ORG. (A-7), MOIST

(C) UNDIVIDED COASTAL PLAIN
LOOSE GRAY, SILTY, CSE. AND F. SAND (A-2-4), MOIST

SS-269
717+07

S-180
717+07

SS-20

1
9
27
@20

BT
01/20

UNDIVIDED COASTAL PLAIN
STIFF GRAY WITH ORANGE MOTTLING, FINE SANDY CLAY (A-6), MOIST TO WET

MEDIUM DENSE TAN, F. SAND WITH TR. SILT (A-3), SAT.

BT
03/20

6
13
9

4:1
4:1

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE TO LOOSE GRAY, TAN AND BLACK SILTY SAND (A-2-4) AND CLAYEY SAND (A-2-6), WET

BT
DRY
01/21

BREAKLINE SEE -SR3- 30+51.63

717+00.00

-L-

220 210 200 190 180 170 160 150

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

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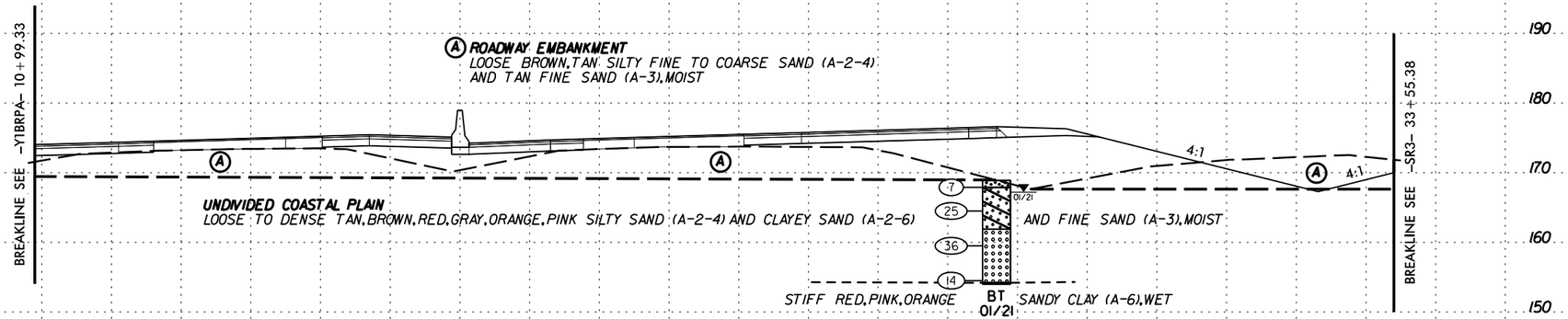
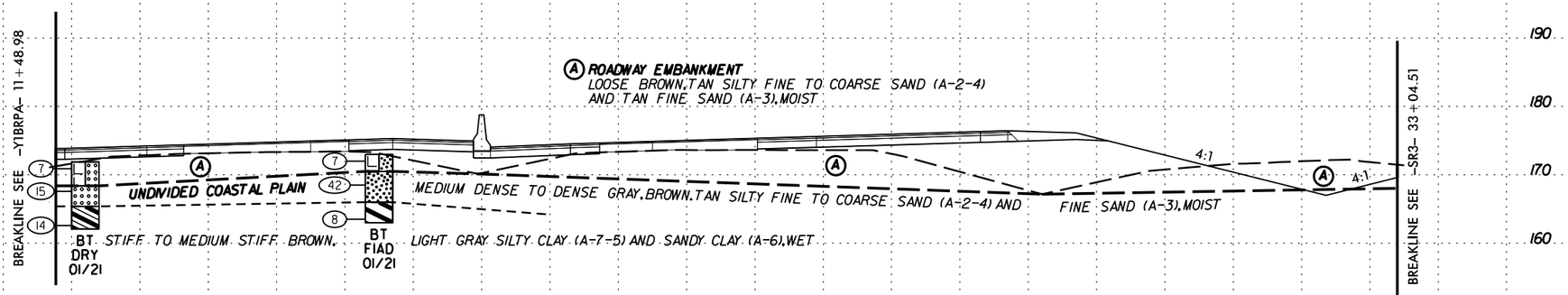
200 190 180 170 160 150 140



720+00.00



719+50.00

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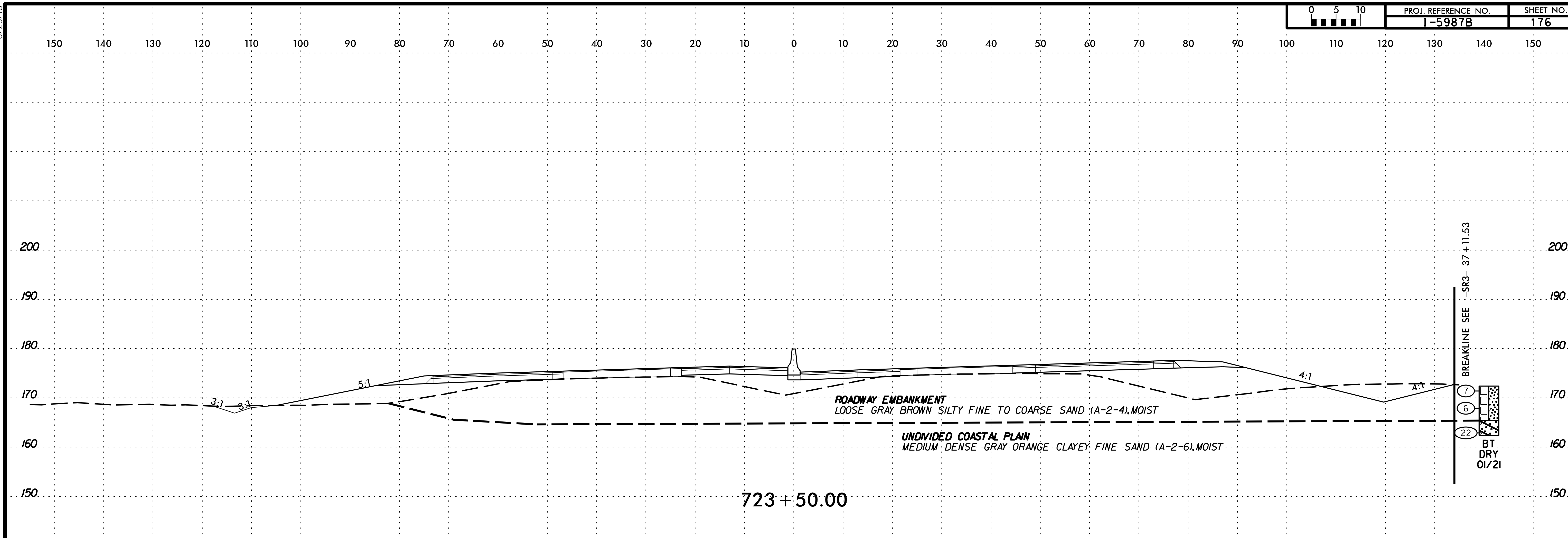


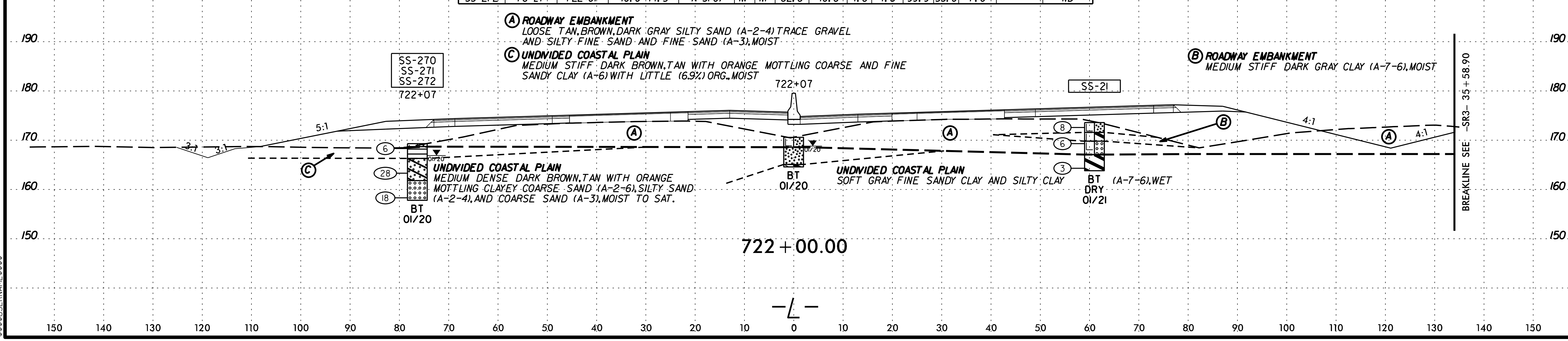
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-21	61' RT	722+00	8.3-9.8	A-7-6(9)	44	19	25.0	19.0	13.0	43.0	100.0	86.0	59.3	24.6	ND
SS-270	76' LT	722+07	0.6-1.5	A-6(4)	32	15	33.1	21.4	19.8	25.7	98.6	79.0	49.0	18.0	6.9
SS-271	76' LT	722+07	5.0-6.5	A-2-6(1)	30	16	51.9	19.8	3.3	25.0	100.0	70.0	29.0	-	ND
SS-272	76' LT	722+07	10.0-11.5	A-3(0)	NP	NP	82.8	10.8	1.6	4.8	99.9	53.0	7.0	-	ND

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,BROWN,DARK GRAY SILTY SAND (A-2-4)TRACE GRAVEL AND SILTY FINE SAND AND FINE SAND (A-3),MOIST

Ⓒ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF DARK BROWN,TAN WITH ORANGE MOTTLING COARSE AND FINE SANDY CLAY (A-6)WITH LITTLE (6.9%) ORG.,MOIST

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM STIFF DARK GRAY CLAY (A-7-6),MOIST



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$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	177

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

200
190
180
170
160
150

(A) ROADWAY EMBANKMENT
LOOSE TAN,BROWN FINE SAND WITH TRACE GRAVEL (A-3)
AND SILTY COARSE AND FINE SAND (A-2-4),MOIST

6:1

4.86:1

5.49:1

UNDIVIDED COASTAL PLAIN
BROWN SILTY COARSE AND FINE SAND (A-2-4),MOIST
GRAY AND ORANGE MOTTLED FINE SILTY CLAY (A-7-6),WET

BREAKLINE SEE –SR3– 39+15.11

725+50.00

5:1

4:1

5.673:1

ROADWAY EMBANKMENT
LOOSE GRAY BROWN SILTY FINE TO COARSE SAND (A-2-4),MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM DENSE GRAY ORANGE CLAYEY FINE SAND (A-2-6),MOIST

BREAKLINE SEE –SR3– 38+64.17

725+00.00

–L–

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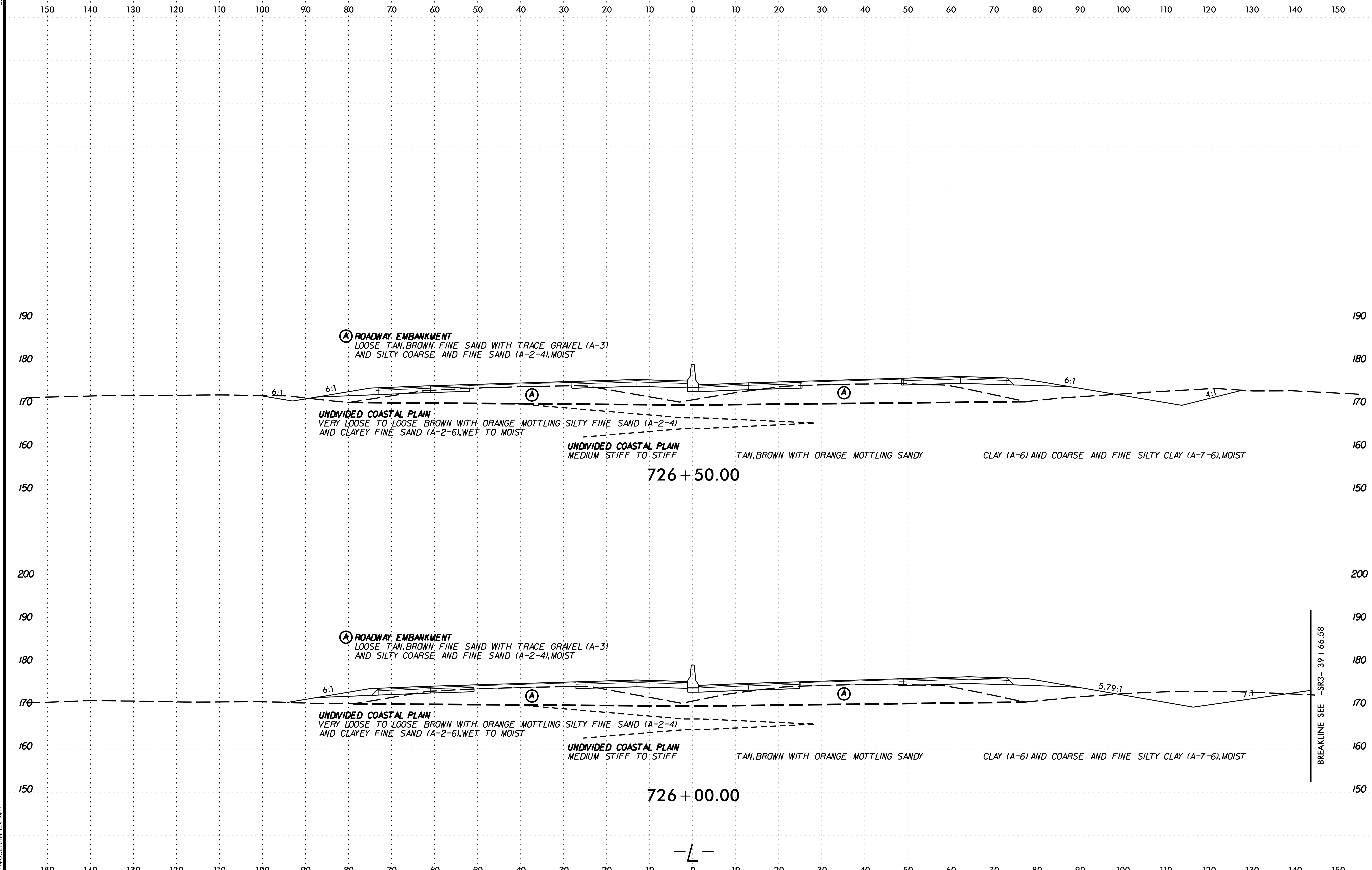
PROJ. REFERENCE NO.	SHEET NO.
I-5987B	178

6/23/16



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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	179

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

190 180 170 160 150

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,BROWN FINE SAND WITH TRACE GRAVEL (A-3)
AND SILTY COARSE AND FINE SAND (A-2-4),MOIST

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

UNDIVIDED COASTAL PLAIN
VERY LOOSE TO LOOSE BROWN WITH ORANGE MOTTLING SILTY FINE SAND (A-2-4)
AND CLAYEY FINE SAND (A-2-6),WET TO MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF TAN,BROWN WITH ORANGE MOTTLING SANDY CLAY (A-6) AND COARSE AND FINE SILTY CLAY (A-7-6),MOIST

727+50.00

220 210 200 190 180 170 160 150

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-22	63' RT	727+00	3.3-4.8	A-6(5)	32	16	28.0	24.0	8.0	40.0	100.0	85.0	50.6	21.6	ND
S-054	0	727+07	0.0-1.0	A-2-4(0)	NP	NP	50.3	29.7	20.0	0.0	99.4	73.0	23.0	-	ND
S-055	0	727+07	1.0-2.0	A-6(5)	31	17	31.4	22.9	25.5	20.2	100.0	85.0	48.0	14.0	ND
S-056	0	727+07	7.0-8.0	A-7-6(10)	45	24	28.9	18.6	14.3	38.2	99.6	81.0	56.0	21.0	ND

S-054
S-055
S-056
727+07

SS-22

727+07

Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,BROWN FINE SAND WITH TRACE GRAVEL (A-3)
AND SILTY COARSE AND FINE SAND (A-2-4),MOIST

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

3 8 9 01/20 BT 01/20

UNDIVIDED COASTAL PLAIN
VERY LOOSE TO LOOSE BROWN WITH ORANGE MOTTLING SILTY FINE SAND (A-2-4)
AND CLAYEY FINE SAND (A-2-6),WET TO MOIST

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO STIFF BT 01/20 TAN,BROWN WITH ORANGE MOTTLING SANDY CLAY (A-6) AND COARSE AND FINE SILTY CLAY (A-7-6),MOIST

7 5 10 BT DRY 01/21

727+00.00

$$$$$$$$SYSTIME$$$$$
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$$$$$$USERNAME$$$$

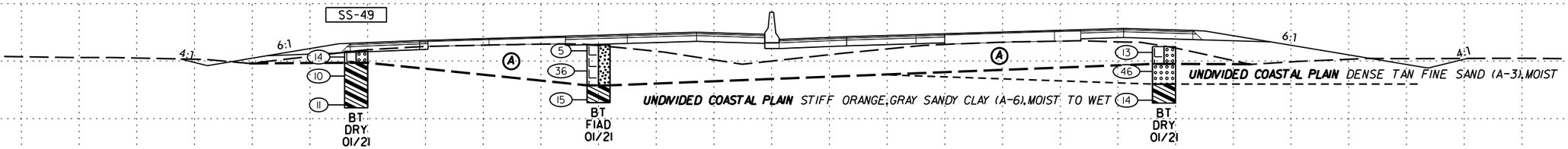
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

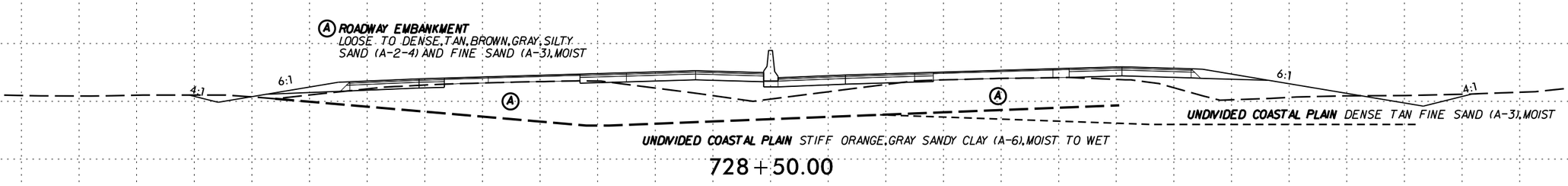
6/23/16

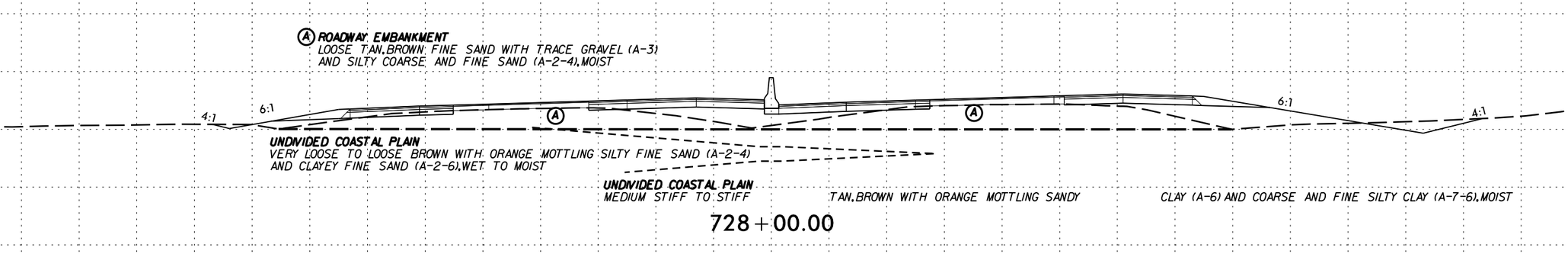
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	180

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-49	72' LT	726+50	0.0-1.5	A-2-4(0)	NP	NP	62.0	26.0	4.0	8.0	99.0	63.0	15.0	8.3	ND







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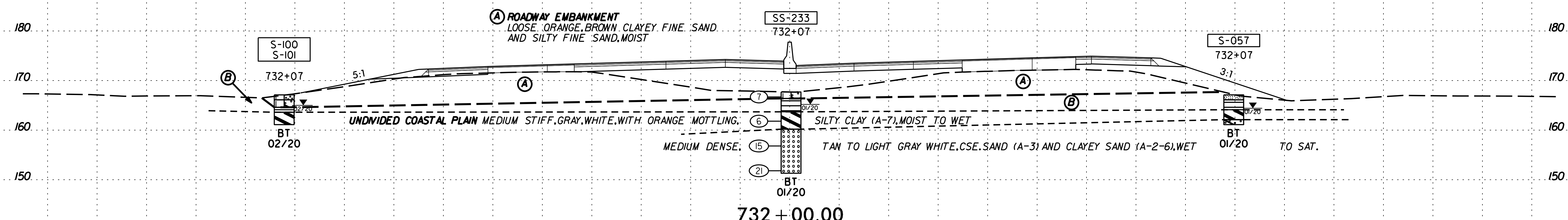
6/23/16

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-100	102' LT	732+07	2.5-3.5	A-4(1)	27	10	25.4	38.6	15.4	20.6	99.8	86.0	39.0	28.0	6.2
S-101	102' LT	732+07	5.5-6.0	A-7-6(23)	54	33	14.7	17.1	17.3	50.9	99.9	92.0	70.0	26.0	ND
SS-233	0	732+07	1.3-1.5	NEM	NEM	NEM	10.2	18.9	15.3	55.6	100.0	94.0	73.0	-	5.6
S-057	90' RT	732+07	1.0-2.0	A-7-5(3)	42	11	26.3	29.6	40.0	4.1	99.6	84.0	47.0	42.0	11.9

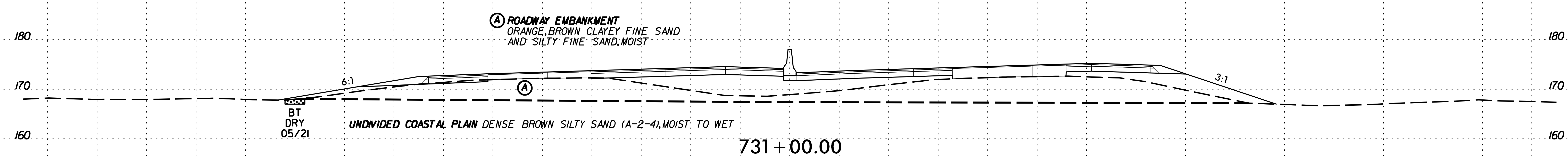
Ⓑ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF BLACK, DARK GRAY, BROWN, F. SANDY SILT (A-4), AND CLAY (A-7) AND LITTLE (6.2%, 5.6% AND 11.9%) ORG. MOIST TO WET

Ⓐ **ROADWAY EMBANKMENT**
LOOSE ORANGE, BROWN CLAYEY FINE SAND AND SILTY FINE SAND, MOIST



732+00.00

Ⓐ **ROADWAY EMBANKMENT**
ORANGE, BROWN CLAYEY FINE SAND AND SILTY FINE SAND, MOIST



731+00.00

-L-

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$$$USERNAME$$$$

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	182

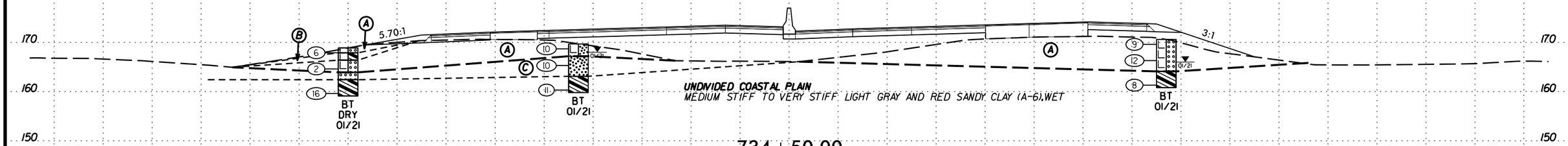
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

200
190
180
170
160
150

Ⓐ **ROADWAY EMBANKMENT**
VERY LOOSE TO MEDIUM DENSE, ORANGE, BROWN, TAN FINE SAND (A-3) AND SILTY SAND (A-2-4), MOIST

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM STIFF GRAY SANDY CLAY (A-6), MOIST

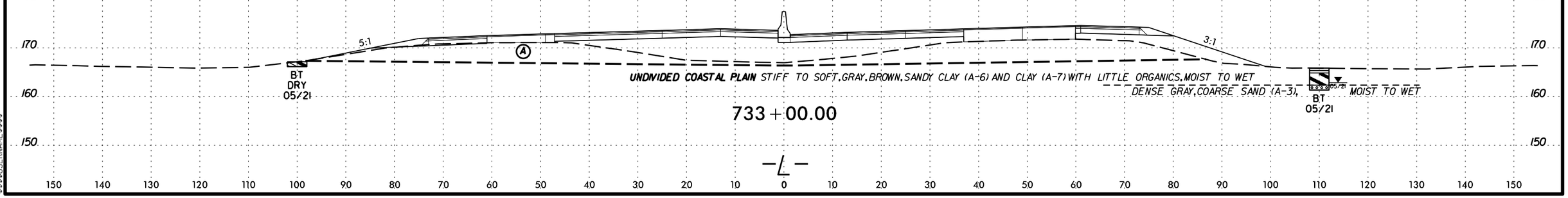
Ⓒ **UNDIVIDED COASTAL PLAIN**
LOOSE GRAY, TAN SILTY SAND (A-2-4) AND FINE SAND (A-3), MOIST



UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF LIGHT GRAY AND RED SANDY CLAY (A-6), WET

734+50.00

Ⓐ **ROADWAY EMBANKMENT**
ORANGE, BROWN CLAYEY FINE SAND
AND SILTY FINE SAND, MOIST



UNDIVIDED COASTAL PLAIN STIFF TO SOFT, GRAY, BROWN, SANDY CLAY (A-6) AND CLAY (A-7) WITH LITTLE ORGANICS, MOIST TO WET
DENSE GRAY, COARSE SAND (A-3), MOIST TO WET

733+00.00

$$$$$$$SYSTIME$$$$$
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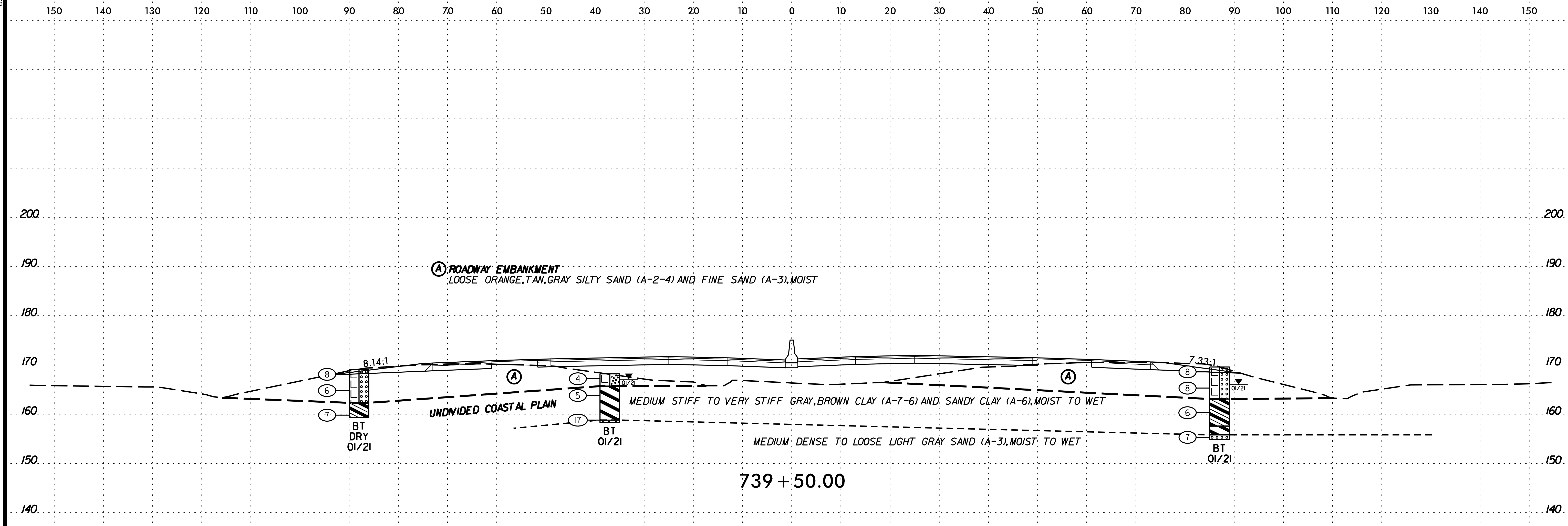
$$$$$USERNAME$$$$

150 140 130 120 110 100 90 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-5987B	183



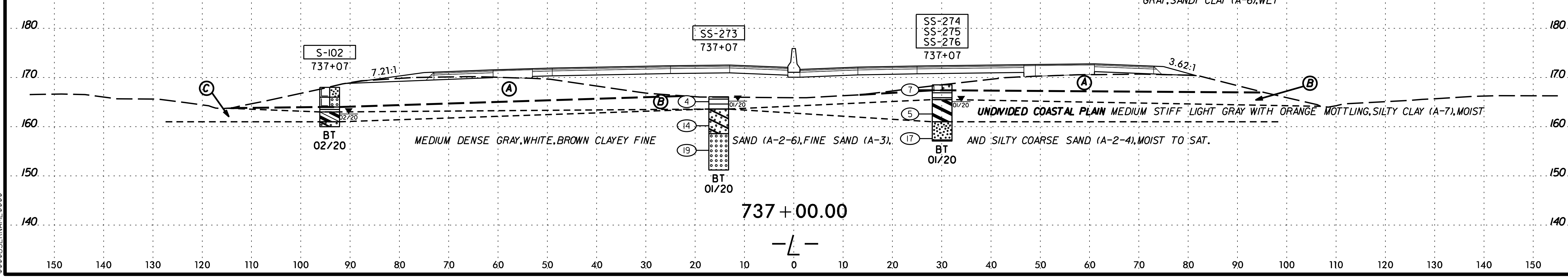
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-102	94' LT	737+07	4.0-5.0	A-7-6(12)	43	18	19.3	11.5	32.5	36.7	99.3	87.0	71.0	43.0	8.2
SS-273	15' LT	737+07	0.0-1.5	A-7-6(15)	45	21	16.5	10.9	29.2	43.3	98.1	90.0	74.0	41.0	12
SS-274	30' RT	737+07	1.1-1.5	NEM	NEM	NEM	11.9	10.0	26.7	51.5	98.8	92.0	80.0	27.0	9.3
SS-275	30' RT	737+07	4.9-6.4	A-7-6(35)	63	40	9.5	10.4	26.7	53.4	98.7	94.0	81.0	31.0	ND
SS-276	30' RT	737+07	9.9-11.2	A-2-4(0)	NP	NP	75.5	11.7	1.8	11.0	99.8	57.0	13.0	-	ND

SOIL TEST RESULTS

(A) ROADWAY EMBANKMENT
LOOSE,ORANGE,BROWN SILTY SAND (A-2-4) AND FINE SAND (A-3),MOIST

(B) UNDIVIDED COASTAL PLAIN
SOFT TO MEDIUM STIFF DARK GRAY,SILTY CLAY (A-7) WITH
LITTLE TO MODERATE (12.0%,9.3%,AND 8.2% ORGANICS,MOIST TO WET

(C) UNDIVIDED COASTAL PLAIN
GRAY,SANDY CLAY (A-6),WET



Ⓐ **ROADWAY EMBANKMENT**
LOOSE TAN,ORANGE CLAYEY SAND (A-2-6),SILTY SAND (A-2-4) AND FINE SAND (A-3),MOIST

Ⓑ **ROADWAY EMBANKMENT**
MEDIUM STIFF,GRAY,BROWN CLAY (A-7),MOIST

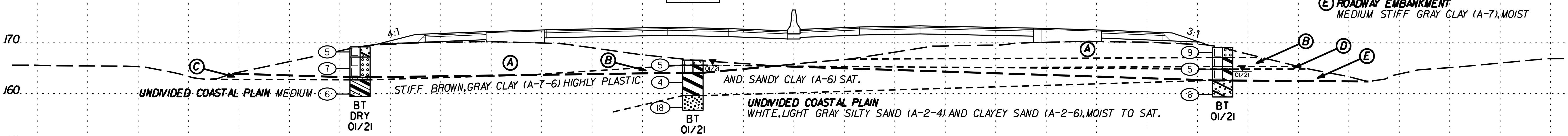
Ⓒ **UNDIVIDED COASTAL PLAIN**
LOOSE,TAN,LIGHT GRAY FINE SAND (A-3),MOIST

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-94	20' LT	744+50	0.0-1.0	A-2-4(0)	21	4	41.0	36.0	2.0	21.0	99.0	77.0	25.7	12.9	ND
SS-95	20' LT	744+50	3.4-4.9	A-7-6(12)	53	34	39.0	14.0	15.0	32.0	99.0	73.0	49.2	39.0	ND

Ⓓ **ROADWAY EMBANKMENT**
LOOSE GRAY SAND (A-3),MOIST

Ⓔ **ROADWAY EMBANKMENT**
MEDIUM STIFF GRAY CLAY (A-7),MOIST



744+50.00

Ⓐ **ROADWAY EMBANKMENT**
BROWN ORANGE SILTY FINE SAND WITH TRACE GRAVEL,MOIST

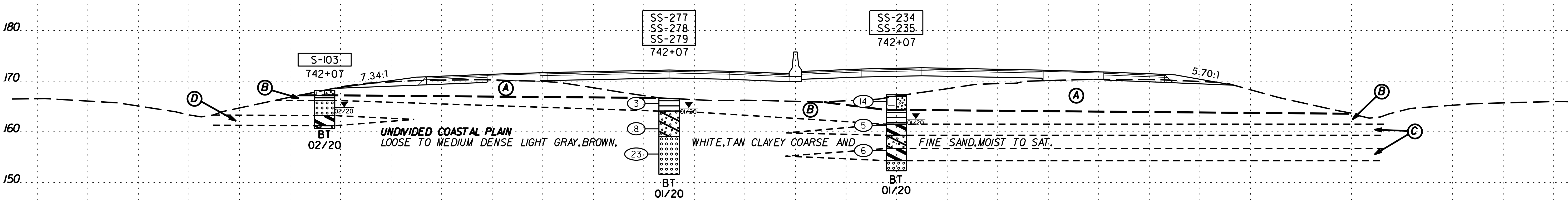
Ⓑ **UNDIVIDED COASTAL PLAIN**
SOFT DARK BROWN,DARK GRAY SILTY CLAY AND CLAY (A-7) WITH LITTLE (9.6% AND 6.9%) ORGANICS,MOIST TO WET

Ⓒ **UNDIVIDED COASTAL PLAIN**
MEDIUM STIFF LIGHT GRAY WITH ORANGE MOTTLING COARSE SILTY CLAY (A-7-6),MOIST

Ⓓ **UNDIVIDED COASTAL PLAIN**
GRAY SILTY CLAY (A-7),MOIST

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-103	93' LT	742+07	5.0-6.0	A-7-6(42)	68	45	10.9	5.4	28.4	55.3	99.7	93.0	85.0	28.0	ND
SS-277	25' LT	742+07	0.0-1.5	A-7-6(18)	50	24	17.2	10.5	27.5	44.8	93.0	89.0	75.0	37.0	9.6
SS-278	25' LT	742+07	5.0-6.5	A-2-6(1)	33	18	57.6	17.4	3.1	21.9	96.5	60.0	26.0	-	ND
SS-279	25' LT	742+07	10.0-11.5	A-3(0)	NP	NP	51.6	43.2	1.0	4.2	100.0	91.0	7.0	-	ND
SS-234	20' RT	742+07	5.0-5.8	A-7-6(22)	50	28	14.4	10.7	19.1	55.8	100.0	92.0	77.0	32.0	6.9
SS-235	20' RT	742+07	10.6-11.5	A-7-6(11)	50	31	37.8	15.5	4.1	42.6	99.7	74.0	49.0	31.0	ND



742+00.00

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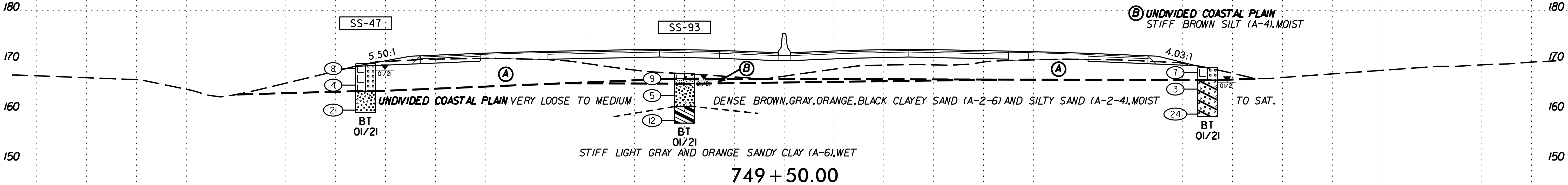
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-47	84' LT	749+50	3.3-4.8	A-2-4(0)	NP	NP	27.0	55.0	6.0	12.0	100.0	89.0	21.7	20.1	ND
SS-93	20' LT	749+50	3.4-4.9	A-2-4(0)	27	10	45.0	29.0	3.0	23.0	100.0	74.0	29.3	17.3	ND

(A) **ROADWAY EMBANKMENT**
LOOSE,TAN,ORANGE SILTY SAND (A-2-4) AND FINE SAND (A-3),MOIST

(B) **UNDIVIDED COASTAL PLAIN**
STIFF BROWN SILT (A-4),MOIST



749+50.00

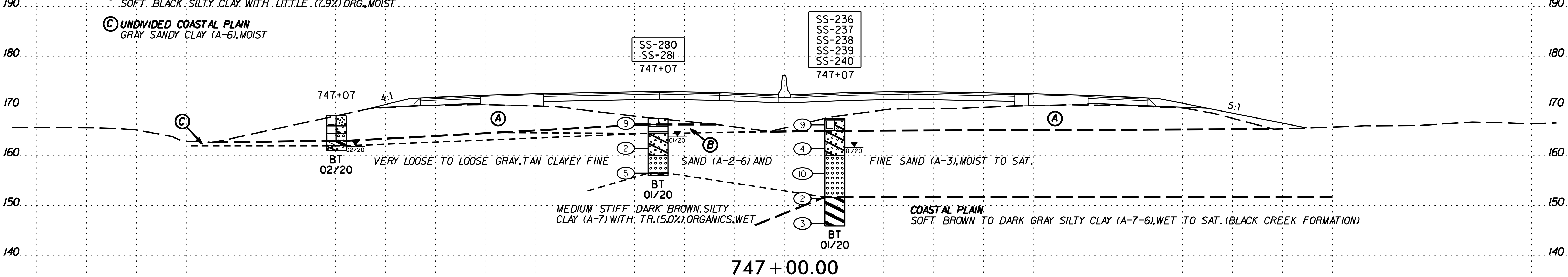
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-280	25' LT	747+07	1.2-1.5	-	-	-	-	-	-	-	-	-	-	23.0	7.9
SS-281	25' LT	747+07	11.0-11.5	A-6(10)	35	16	11.2	24.1	24.0	40.8	99.7	92.0	71.0	32.0	5
SS-236	10' RT	747+07	0.3-1.8	A-2-6(1)	27	14	47.5	24.2	5.9	22.4	99.3	70.0	31.0	-	ND
SS-237	10' RT	747+07	5.1-6.6	A-2-6(1)	28	14	19.0	54.0	2.5	24.4	99.5	88.0	33.0	-	ND
SS-238	10' RT	747+07	10.1-11.6	A-3(0)	NP	NP	81.8	17.3	0.5	0.4	100.0	69.0	1.0	-	ND
SS-239	10' RT	747+07	15.8-16.6	A-7-6(29)	55	33	11.4	7.6	55.5	25.6	99.5	92.0	83.0	61.0	ND
SS-240	10' RT	747+07	20.1-21.6	A-7-6(10)	42	22	25.9	20.2	11.2	42.7	99.4	81.0	57.0	30.0	ND

(A) **ROADWAY EMBANKMENT**
LOOSE ORANGE,BROWN,GRAY CLAYEY FINE SAND (A-2-6) AND SILTY FINE SAND (A-2-4) WITH TRACE GRAVEL AND FINE SAND (A-3),MOIST

(B) **UNDIVIDED COASTAL PLAIN**
SOFT BLACK SILTY CLAY WITH LITTLE (7.9%) ORG.,MOIST

(C) **UNDIVIDED COASTAL PLAIN**
GRAY SANDY CLAY (A-6),MOIST



747+00.00

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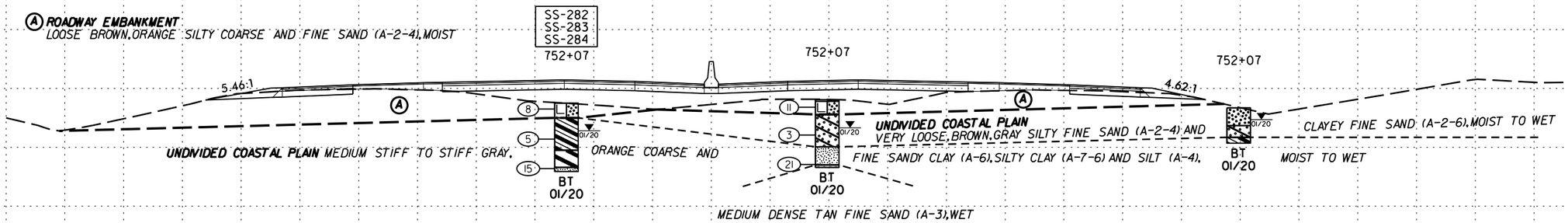
6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	186

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-282	25' LT	752+07	0.0- 1.5	A-2-4(0)	NP	NP	68.6	20.5	5.7	5.2	99.9	62.0	13.0	--	ND
SS-283	25' LT	752+07	5.1- 6.6	A-6(4)	35	20	37.3	24.4	7.3	31.0	98.2	75.0	41.0	20.0	ND
SS-284	25' LT	752+07	10.1- 10.9	A-7-6(21)	45	24	6.0	16.1	31.0	46.9	100.0	96.0	84.0	22.0	ND



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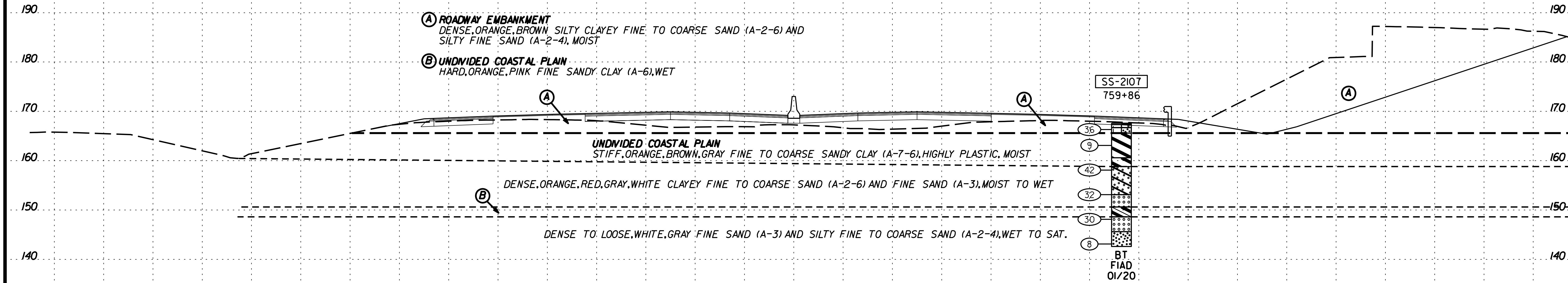
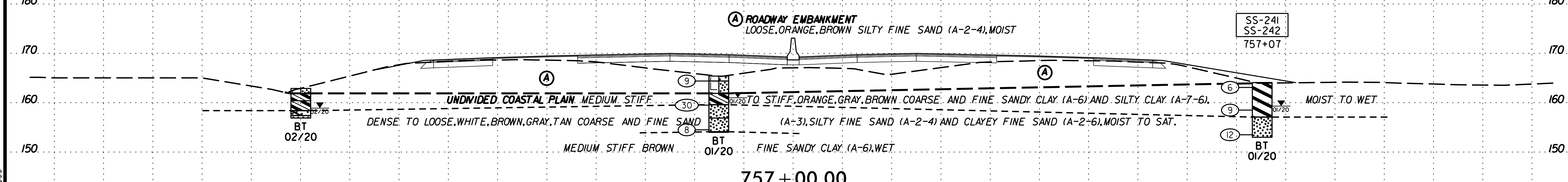
$$$$USERNAME$$$$

SOIL TEST RESULTS																
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-2107	66' RT	759+86	3.5-5.0	A-7-6(7)	45	31	34.1	27.4	2.9	35.6	99.7	79.9	41.3	16.7	ND



760+00.00

SOIL TEST RESULTS																
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-241	95' RT	757+07	0.0-1.5	A-7-6(7)	45	26	32.7	27.0	5.6	34.6	99.6	77.0	44.0	-	ND
SS-242	95' RT	757+07	9.6-11.1	A-2-4(0)	22	6	87.9	4.7	1.3	6.1	94.9	23.0	8.0	-	ND



757+00.00

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6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	188

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

190 180 170 160 150 140 130 120 110 100 90 80 70

(A) ROADWAY EMBANKMENT
LOOSE, BROWN, SILTY FINE SAND (A-2-4) WITH TRACE ORGANICS, MOIST

10 15 30 22 18 21
01/20

UNDIVIDED COASTAL PLAIN
STIFF TO HARD, ORANGE, BROWN, GRAY F. SANDY CLAY (A-6), MOIST

MEDIUM DENSE ORANGE, GRAY, RED, WHITE SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL, WET TO SAT.

BT 01/20

UNDIVIDED COASTAL PLAIN
LOOSE TO DENSE ORANGE, GRAY, RED, WHITE SILTY CLAYEY FINE SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE GRAVEL.

10 18 44 27 23
12/19

TO COARSE SAND (A-2-6) AND MOIST TO WET

7 9 10 10 7
MEDIUM STIFF TO STIFF LIGHT BROWN SILTY CLAY (A-7), WET TO SAT.

LOOSE, RED, ORANGE, WHITE CLAYEY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE ORGANICS, WET TO SAT.

COASTAL PLAIN
MEDIUM STIFF TO STIFF DARK GRAY SILTY CLAY (A-7) MICACEOUS, WET TO SAT. (BLACK CREEK FORMATION)

11 14 14 12 19 26 20 19
MEDIUM DENSE, DARK GRAY SILTY FINE SAND (A-2-4) AND CLAYEY FINE TO COARSE SAND (A-2-6) MICACEOUS, SAT.

VERY STIFF DARK GRAY FINE SANDY CLAY (A-6) MICACEOUS, WET TO SAT.

BT 01/19

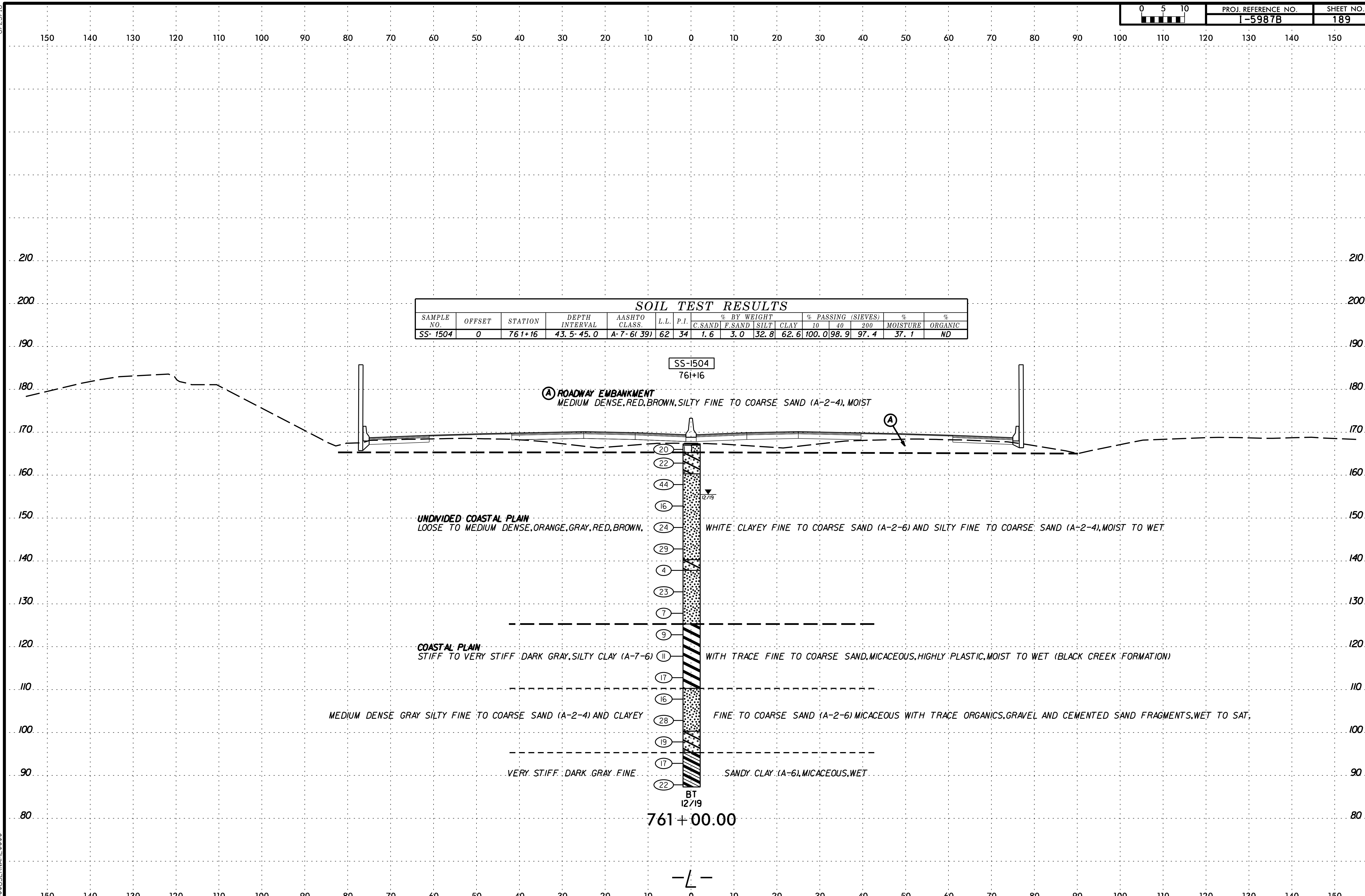
760+50.00

—L—

$$$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS- 1504	0	761+16	43.5-45.0	A-7-6(39)	62	34	1.6	3.0	32.8	62.6	100.0	98.9	97.4	37.1	ND



6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-5987B	190

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

200 190 180 170 160 150 140 130 120 110 100 90 80

(A) ROADWAY EMBANKMENT
ORANGE,GRAY,BROWN SILTY FINE TO COARSE SAND (A-2-4) AND
SILTY FINE TO COARSE SANDY CLAY (A-6) WITH TRACE ORGANICS,MOIST

(B) ROADWAY EMBANKMENT
STIFF,ORANGE,GRAY,BROWN FINE TO COARSE SANDY CLAY (A-6) WITH TRACE ORGANICS,MOIST

ROADWAY EMBANKMENT
MEDIUM DENSE,ORANGE,GRAY,BROWN
SILTY FINE TO COARSE SAND (A-2-4),MOIST

UNDIVIDED COASTAL PLAIN
STIFF TO VERY STIFF,GRAY,RED,ORANGE,FINE TO COARSE SANDY CLAY (A-6),MOIST

LOOSE TO DENSE,ORANGE,GRAY,WHITE SILTY FINE TO COARSE SAND (A-2-4),FINE SAND (A-3) AND CLAYEY FINE TO COARSE SAND (A-2-6),SAT.

COASTAL PLAIN
MEDIUM DENSE,GRAY,SILTY FINE TO COARSE SAND
VERY STIFF,GRAY SILTY CLAY FINE TO COARSE SANDY

VERY STIFF,GRAY,SILTY CLAY (A-7),MOIST (BLACK CREEK FORMATION)
(A-7) WITH TRACE MICA AND SILT (A-4),MOIST

MEDIUM DENSE,GRAY SILTY FINE TO COARSE SAND (A-2-4) WITH TRACE CLAY AND MICA,MOIST TO SAT.

VERY STIFF,GRAY,SILTY CLAY (A-7) WITH TRACE SAND,MOIST

BT
12/19

BT
DRY
01/20

761+50.00

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