

NOTE: SEE SHEET 1A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4006	1	6
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33374.1.1	BRZ-1446(2)	P.E.	
33374.2.1	BRZ-1446(2)	ROW & UTIL	
33374.3.1	BRZ-1446(2)	CONST	

CONTENTS

LINE	STATION	SHEET NUMBERS		
		PLAN	PROFILE	XSECT
-L-	10+00.00 to 26+63.33	4	5-6	

ROADWAY
SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 33374.1.1 (B-4006) F.A. PROJ. BRZ-1446(2)
COUNTY ALEXANDER
PROJECT DESCRIPTION BRIDGE NO. 08 OVER ROCKY CREEK
ON SR 1446

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) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

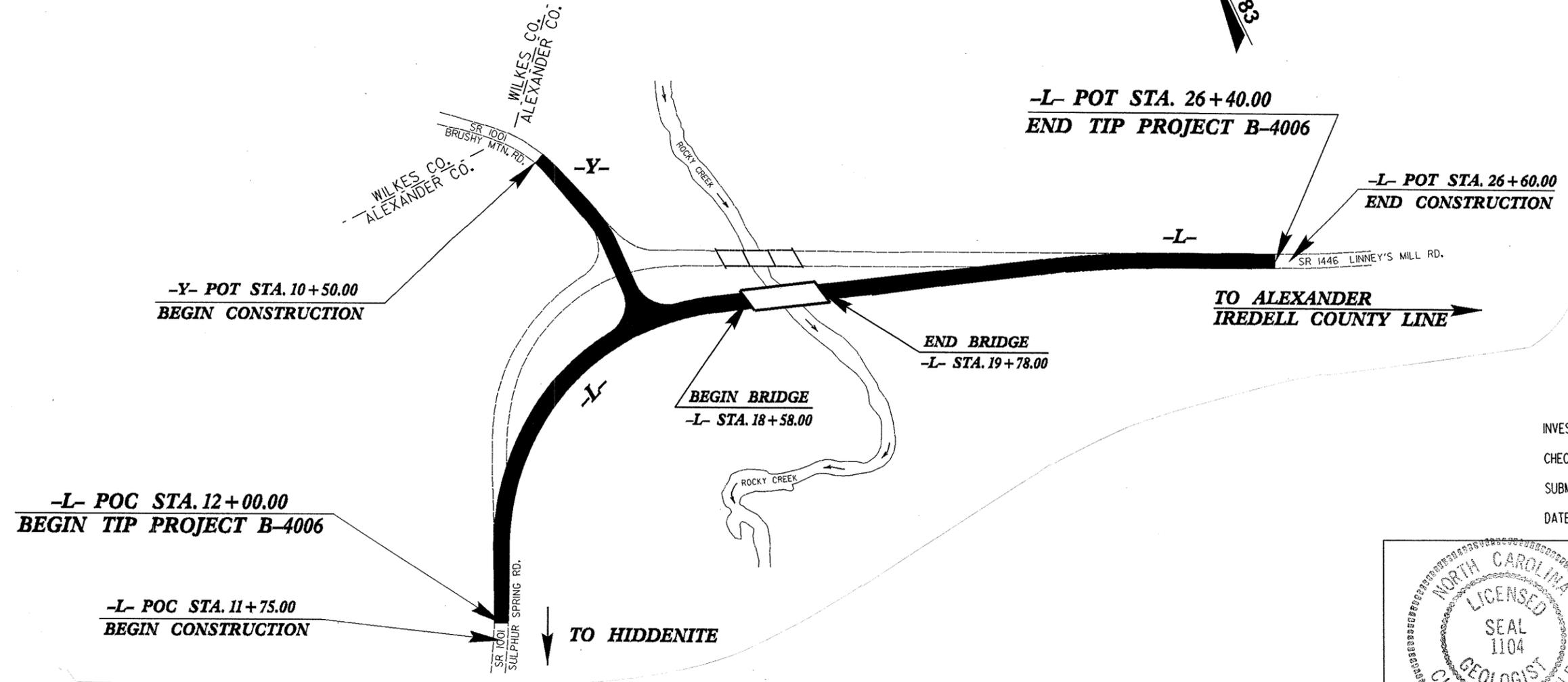
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE, THE LABORATORY SAMPLE DATA AND THE IN SITU (ON-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, OR 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 THIS 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.

INVENTORY

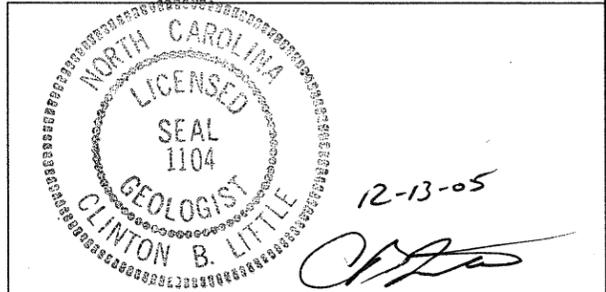


CONTRACT: C201584 ID: B-4006



PERSONNEL
J.K. STICKNEY
C.E. SMITH
H.K. WISE

INVESTIGATED BY C.B. LITTLE
CHECKED BY C.B. LITTLE
SUBMITTED BY C.B. LITTLE
DATE DECEMBER 2005



DRAWN BY: J.K. McClure

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - 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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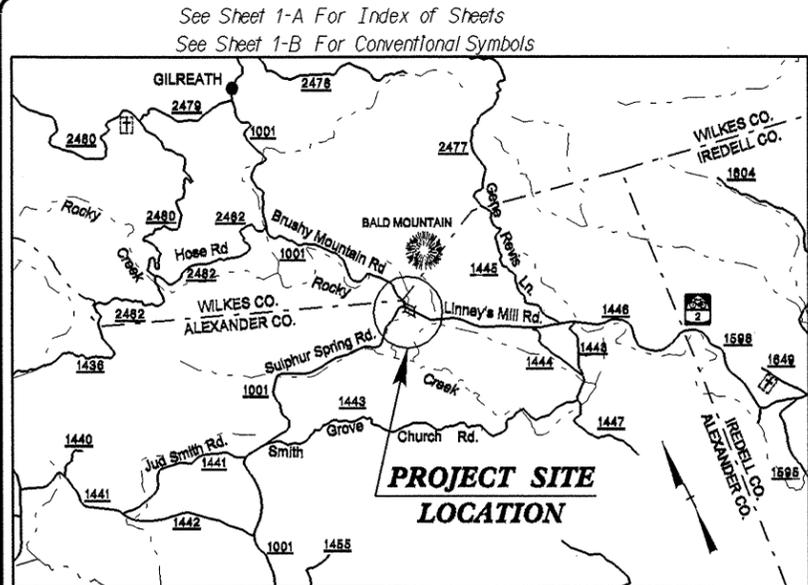
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALEXANDER COUNTY

LOCATION: REPLACE BRIDGE No. 8 ON SR 1446
OVER ROCKY CREEK

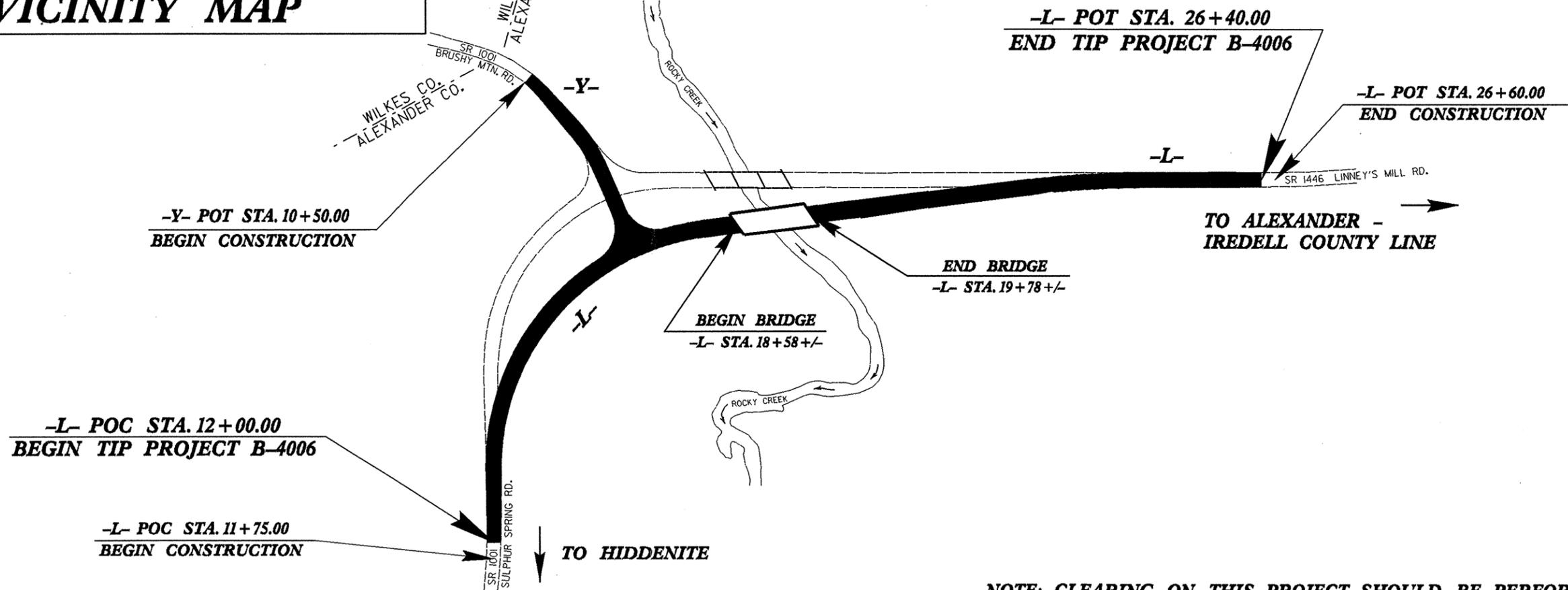
TYPE OF WORK: GRADING, DRAINAGE, PAVING,
STRUCTURE, AND RESURFACING

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



VICINITY MAP

TIP PROJECT: B-4006

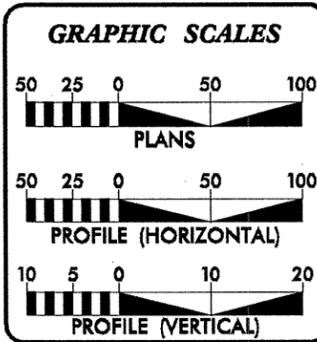


THIS PROJECT IS NOT WITHIN
ANY MUNICIPAL BOUNDARIES.

** DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

NOTE: CLEARING ON THIS PROJECT SHOULD BE PERFORMED
TO THE LIMITS ESTABLISHED BY METHOD III.

CONTRACT:



DESIGN DATA

ADT 2002 =	400
ADT 2025 =	800
DHV =	10 %
D =	60 %
T =	3 % *
**V =	30 MPH
* TTST 1%	DUAL 2%
FUNC CLASS =	LOCAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4006 =	0.250 MI
LENGTH STRUCTURE TIP PROJECT B-4006 = +/-	0.023 MI
TOTAL LENGTH TIP PROJECT B-4006 =	0.273 MI

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2002 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	ROGER D. THOMAS, PE PROJECT ENGINEER
NOT AUTHORIZED	
LETTING DATE:	BRIAN P. ROBINSON PROJECT DESIGN ENGINEER
FEBRUARY 20, 2007	

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

SIGNATURE: _____ P.E.

STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR

DATE

12-DEC-2005 12:05 c:\projects\4006\4006-geo_r.dwg\cadd\geotech\planprof\b4006-geo_tshla_rdy(ort).dgn

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION	GRADATION	ROCK DESCRIPTION	TERMS AND DEFINITIONS																																																																																												
SOIL IS CONSIDERED TO BE THE 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 STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE: <i>VERY STIFF, GRAY, SATY CLAY, MOST WITH INTERBEDDED FINE SAND LAYERS, HEAVY PLASTIC, A-7-6</i>	WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED) GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES 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 .	HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. 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 YIELD 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.	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, 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 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 (IN 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. 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	<input type="checkbox"/> TRICONE _____ * TUNG-CARB.	<input type="checkbox"/> HAND AUGER																																																																																													
	<input type="checkbox"/> CORE BIT	<input type="checkbox"/> SOUNDING ROD																																																																																													
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FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE 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.																																																																																														
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NONPLASTIC</th> <th>PLASTICITY INDEX (PI)</th> <th>DRY STRENGTH</th> </tr> <tr> <td>LOW PLASTICITY</td> <td>0-5</td> <td>VERY LOW</td> </tr> <tr> <td>MED. PLASTICITY</td> <td>6-15</td> <td>SLIGHT</td> </tr> <tr> <td>HIGH PLASTICITY</td> <td>16-25</td> <td>MEDIUM</td> </tr> <tr> <td></td> <td>26 OR MORE</td> <td>HIGH</td> </tr> </table>	NONPLASTIC	PLASTICITY INDEX (PI)	DRY STRENGTH	LOW PLASTICITY	0-5	VERY LOW	MED. PLASTICITY	6-15	SLIGHT	HIGH PLASTICITY	16-25	MEDIUM		26 OR MORE	HIGH																																																																																
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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.																																																																																															
			NOTES:																																																																																												
			BENCH MARK: BL GPS 4006-2 11+89.24 PINC -L- STA. 16+91.33 (16.50 LT.) ELEVATION: 1194.66 FT.																																																																																												



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 12, 2005

STATE PROJECT: 33374.1.1 (B-4006)
FEDERAL PROJECT: BRZ-1446(2)
COUNTY: Alexander
DESCRIPTION: Bridge No. 8 over Rocky Creek on SR 1446

SUBJECT: Geotechnical Report - Inventory

The project is in the northeastern corner of Alexander County on Linney's Mill Road/Sulphur Springs Road at the Wilkes County line. This area is in the Inner Piedmont Geologic Belt. The bedrock is probably CZbg, biotite gneiss. No outcrops were observed and no rock core samples were obtained. The area is in the foothills region. Project elevations range from about 1180 in the stream channel to about 1270 on the cut right of Station 25+50 -L-. The project runs from Station 12+00 to 26+40 -L (Linney's Mill Road/Sulphur Springs Road) and 10+50 to 13+41.04 -Y- (Brushy Mountain Road) for a total project length of 1751.04 feet.

The geotechnical field investigation was conducted in November 2005. It consisted of four Standard Penetration Test (SPT) borings performed for the structure investigation plus 2 SPT and one standard auger boring for the roadway portion. All of the borings are presented on the attached plans. The borings were performed with a CME-550 all-terrain drill.

Items of Special Geotechnical Interest

Alluvial soils: Alluvial deposits associated with Rocky Creek were encountered from Stations 14+50 to 20+50 -L-. These soils consist of medium stiff silty clay with basal sand/gravel from Sta. 14+50 to about Sta. 17+75, loose to medium dense sands in the vicinity of End Bent One (~Sta. 18+50), and soft sandy silt over loose sand at End Bent Two (~Sta. 20+00).

Residual soils and Rock

Hard crystalline rock was encountered as "auger refusal" on the structure borings. The rock line dips steeply from east to west across the stream. The boring conducted right of Station 25+76 for the proposed cut encountered 10.5 feet of stiff red to brown sandy clay, over material described as alternating layers of dense sandy soil and weathered rock. The boring was advanced 17 feet to the proposed grade elevation with standard 6" augers.

Groundwater

The upland boring at Station 25+76 did not encounter water. Groundwater was present across the floodplain near elevation 1180, approximately coincident with the stream elevation.

Respectfully submitted,

Clint Little
Regional Geologist

EARTHWORK SUMMARIES

Volumes in Cubic Yards

PROJECT B-4006

COUNTY ALEXANDER

DATE 01-24-2007

COMPILED BY RSG

SHEET

SHEETS

RD10S01C

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	EARTH EMB.	EMBANK. +15%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
-L-	12+00.00	18+72.00	94				94	3216		3216	3698	3604			
	(BRIDGE)														
-L-	19+63.00	26+40.00	2205				2205	3018		3018	3471	1266			
-Y-	10+50.00	13+30.04	137				137	303		303	348	211			
-DW1-	10+15.30	12+30.00	41				41	430		430	494	453			
-DW2-	10+15.00	11+25.00	42				42	8		8	9		33		33
	REMOVE EXT. ROAD BED		3802				3802						3802		3802
	TOTAL		6321				6321	6975		6975	8020	5534	3835		3835
	LOSS DUE TO CLEARING AND GRUBBING WASTE IN LIEU OF BORROW		-325				-325					325			0
	EST. 5% TO REPLACE TOPSOIL ON BORROW PIT											293			
	GRAND TOTAL		<u>5996</u>				<u>5996</u>	<u>6975</u>		<u>6975</u>	<u>8020</u>	<u>6152</u>	<u>3835</u>		
	SAY		6100									6200			
ESTIMATED DDE = 390 CY															
ESTIMATED UNDERCUT = 750 CY (PER GEOTECH)															

"EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT."

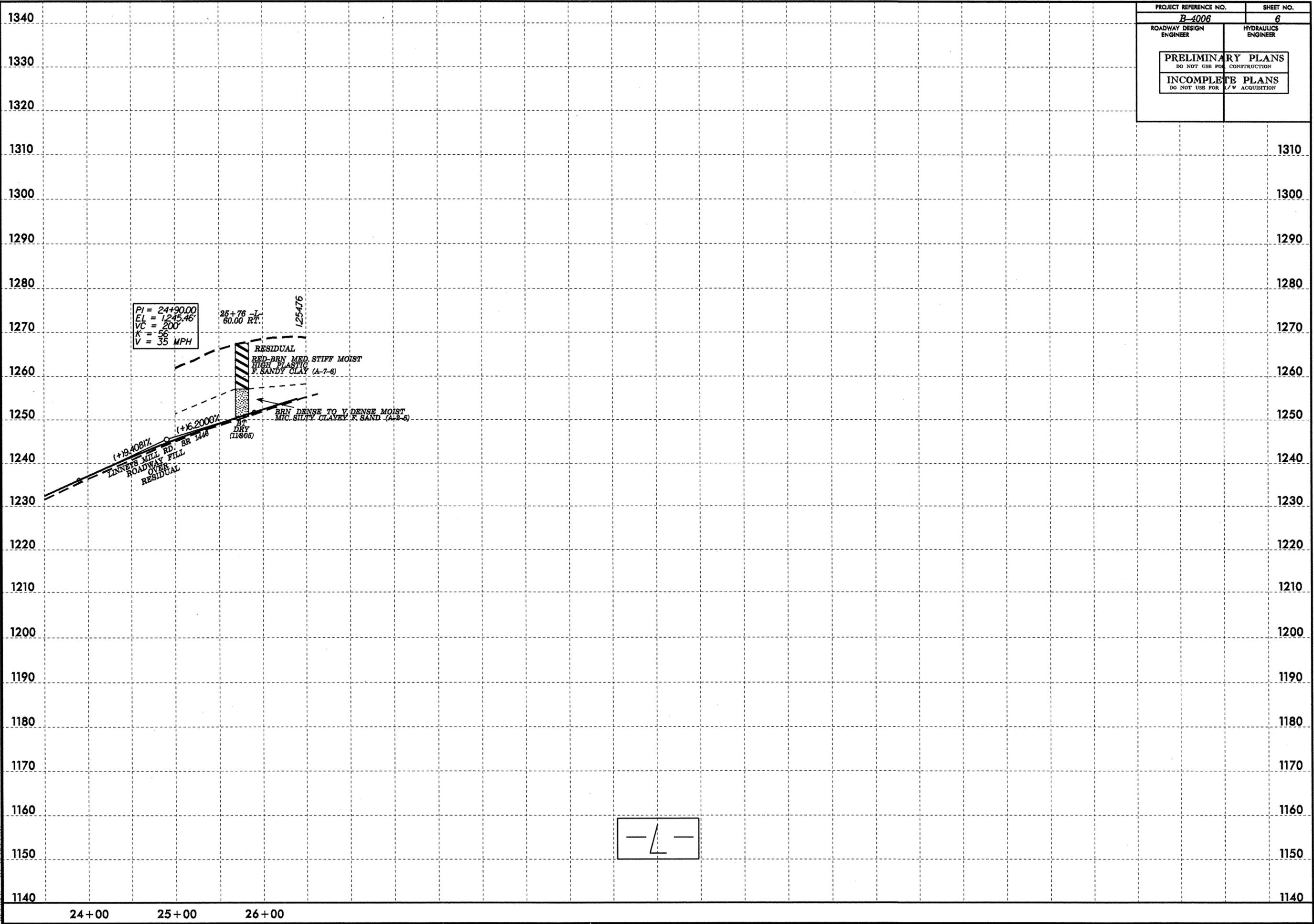
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PROJECT REFERENCE NO. B-4006	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

5/14/99

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24+00 25+00 26+00

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