



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

June 17, 2019

MEMORANDUM TO: Clark Morrison PhD, P.E.  
State Pavement Design Engineer

Teresa Bruton, PE  
Design Build Manager

FROM: J. L. Pilipchuk, PE, LG  
State Geotechnical Engineer

DocuSigned by:  
*John Pilipchuk*  
52C44B94B8BE444...

STATE PROJECT: 34178.1.3 (I-3306A) Design-Build

COUNTY: Orange

DESCRIPTION: Widening of I-40 from I-85 to the Durham County Line

SUBJECT: Pavement Design Inventory

The NCDOT Geotechnical Engineering Unit has completed the evaluation of the pavement and subgrade investigation and presents the following information.

The proposed work consists of widening a four-lane section of I-40 with a grass median into a six-lane divided highway with a paved median that has concrete barrier.

The NCDOT Geotechnical Engineering Unit contracted Terracon Consulting to perform the pavement and subgrade investigation on the -L- and several -Y- alignments for I-3306A. The fieldwork was performed from late January to early February of 2019. Terracon utilized a CME-45B drill rig to cut 4-inch pavement cores and auger approximately 6 feet below subgrade. Dynamic Cone Penetrometer Tests were conducted on subbase materials below the pavement and into the underlying soils to evaluate in-situ soil strengths. Representative soil and moisture samples were collected for visual field classification and laboratory analysis. Bulk samples were taken at select locations to be tested for CBR. Laboratory testing was performed by Terracon Consulting.

JLP/JBB/PTN

ATTACHMENT 1: Pavement and Subgrade Inventory 329

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL ENGINEERING UNIT  
1589 MAIL SERVICE CENTER  
RALEIGH NC 27699-1589

Telephone: 919-707-6850  
Fax: 919-250-4237  
Customer Service: 1-877-368-4968

Website: [www.ncdot.gov](http://www.ncdot.gov)

Location:  
CENTURY CENTER COMPLEX  
ENTRANCE B-2  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC

REFERENCE: I-3306A

PROJECT: 34178

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

**PAVEMENT AND SUBGRADE**  
**INVESTIGATION**

COUNTY ORANGE  
 PROJECT DESCRIPTION I-40 FROM I-85 TO  
DURHAM COUNTY LINE  
**INVENTORY**

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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	1	329

**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:
- 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.
  - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

McNALLY, T. G.

TURNAGE, J. R.

COGAR, T. E.

ROUSH, J. K.

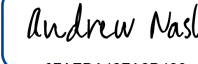
INVESTIGATED BY ALEXANDER, M. J.

DRAWN BY FIELDS, W. D.

CHECKED BY NASH, A. A.

SUBMITTED BY ALEXANDER, M. J.

DATE JUNE 2019

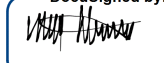
DocuSigned by:  
  
 Andrew Nash  
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Prepared in the Office of:

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 NC REGISTERED ENGINEERING FIRM: F-0869  
 NC REGISTERED GEOLOGIC FIRM: C-367



DocuSigned by:  
  
 DATE 6/17/2019

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**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

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 (ASTM D 1586).

SOIL LEGEND AND AASHTO CLASSIFICATION
Table with columns for Soil Class., Group Class., Symbol, % Passing, and Soil Description. Includes legends for Granular Materials, Silty-Clay Materials, and Organic Materials.

CONSISTENCY OR DENSENESS
Table showing Primary Soil Type, Compactness or Consistency, Range of Standard Penetration Resistance, and Range of Unconfined Compressive Strength.

TEXTURE OR GRAIN SIZE
Table showing U.S. Std. Sieve Size (mm and in.) and corresponding percentages for various soil fractions like Boulder, Cobble, Gravel, Sand, Silt, and Clay.

SOIL MOISTURE - CORRELATION OF TERMS
Table correlating Soil Moisture Scale (Atterberg Limits), Field Moisture Description, and Guide for Field Moisture Description (Liquid Limit, Plastic Limit, Optimum Moisture Shrinkage Limit).

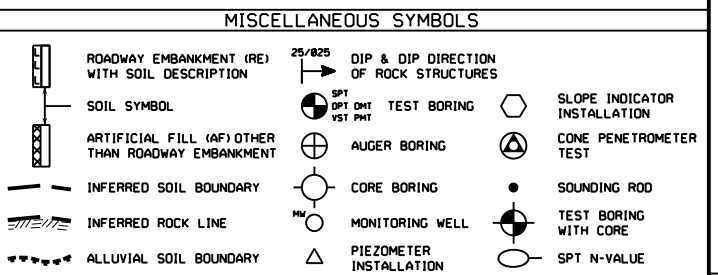
PLASTICITY
Table showing Plasticity Index (PI) ranges and corresponding Dry Strength (Very Low, Slight, Medium, High).

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.

ANGULARITY OF GRAINS, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL
Detailed text and tables defining grain angularity, mineral names (quartz, feldspar, mica, talc, kaolin, etc.), compressibility levels, and percentages of organic material, silty-clay soils, and other material.

GROUND WATER
Water level in bore hole immediately after drilling.
Static water level after 24 hours.
Perched water, saturated zone, or water bearing strata.
Sprung or seep.



RECOMMENDATION SYMBOLS
Table of symbols for Undercut, Shallow Undercut, Unclassified Excavation - Unsuitable Waste, Unclassified Excavation - Acceptable Degradable Rock, and Unclassified Excavation - Acceptable, But Not to be Used in the Top 3 Feet of Embankment or Backfill.

ABBREVIATIONS
List of abbreviations for test types (AR, BT, CPT, etc.), soil types (CSE, DMT, etc.), and sample types (VST, WE, etc.).

EQUIPMENT USED ON SUBJECT PROJECT
List of equipment including Drill Units (CME-45C, CME-55, etc.), Advancing Tools (Clay Bits, Augers, etc.), Hammer Type (Automatic, Manual), Core Size (B, H, N), and Hand Tools (Post Hole Digger, Auger, etc.).

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.

WEATHERED ROCK (WR), CRYSTALLINE ROCK (CR), NON-CRYSTALLINE ROCK (NCR), COASTAL PLAIN SEDIMENTARY ROCK (CP)
Diagrams and text defining rock types and their characteristics based on grain size and sedimentation.

WEATHERING
FRESH: Rock fresh, crystals bright, few joints may show slight staining.
VERY SLIGHT (IV SL): Rock generally fresh, joints stained, some joints may show thin clay coatings.
SLIGHT (SL): Rock generally fresh, joints stained and discoloration extends into rock up to 1 inch.
MODERATE (MOD): Significant portions of rock show discoloration and weathering effects.
MODERATELY SEVERE (MOD. SEV.): All rock except quartz discolored or stained.
SEVERE (SEV.): All rock except quartz discolored or stained.
VERY SEVERE (IV SEV.): All rock except quartz discolored or stained.
COMPLETE: Rock reduced to soil, rock fabric not discernible.

ROCK HARDNESS
Table defining rock hardness levels from Very Hard to Very Soft based on scratchability and SPT blow counts.

FRACTURE SPACING, BEDDING
Tables defining fracture spacing (Very Wide to Very Close) and bedding thickness (Very Thickly Bedded to Thinly Laminated).

INDURATION
FRIBLE: 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.

Notes section containing test location symbols (cored, auger probe) and elevation information (ELEVATION: FEET).

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	3	329

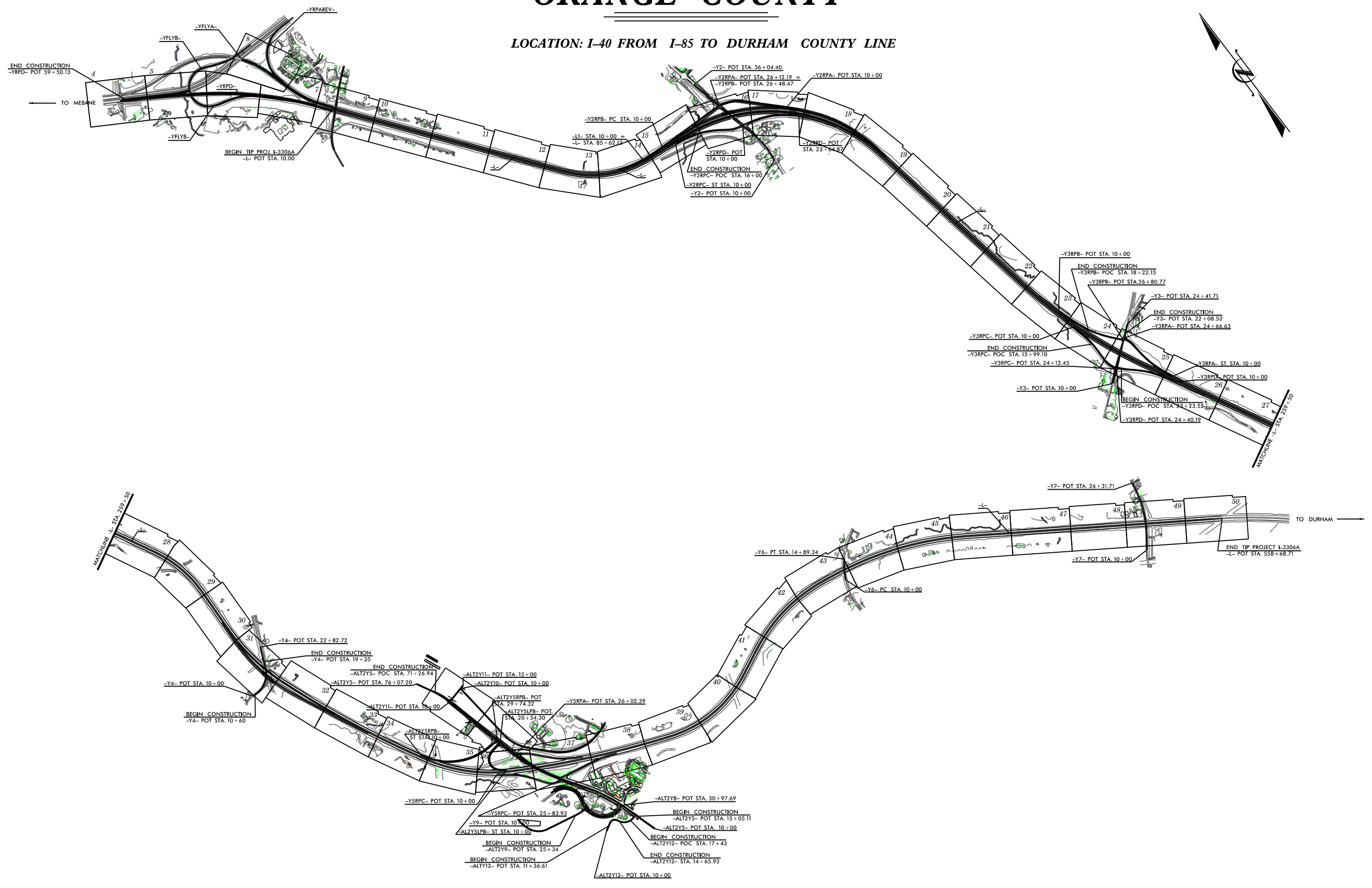
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

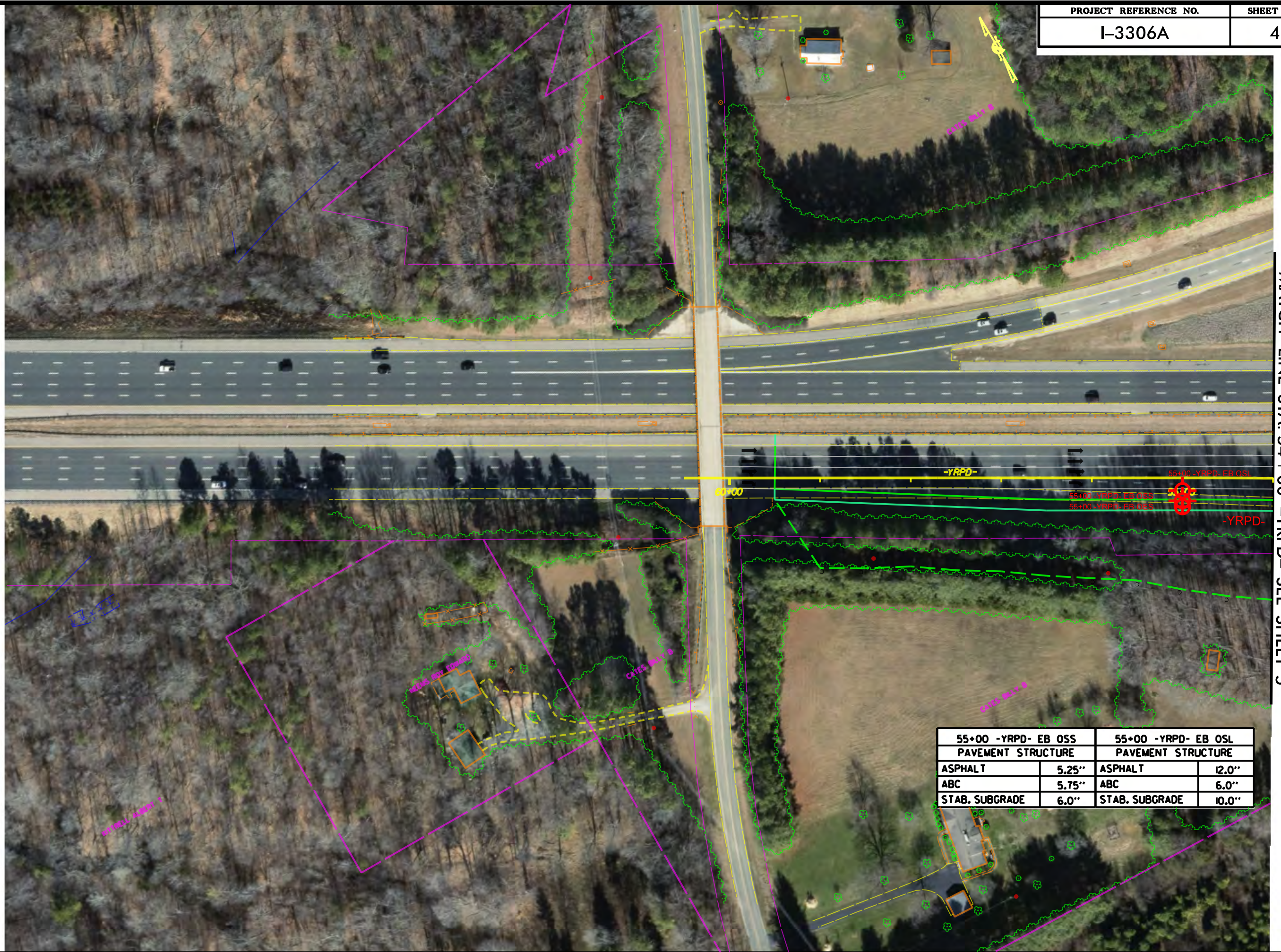
**ORANGE COUNTY**

LOCATION: I-40 FROM I-85 TO DURHAM COUNTY LINE

REFERENCE: I-3306A

PROJECT: 34178.1.3





MATCH LINE STA. 54+00 -YRPD- SEE SHEET 5

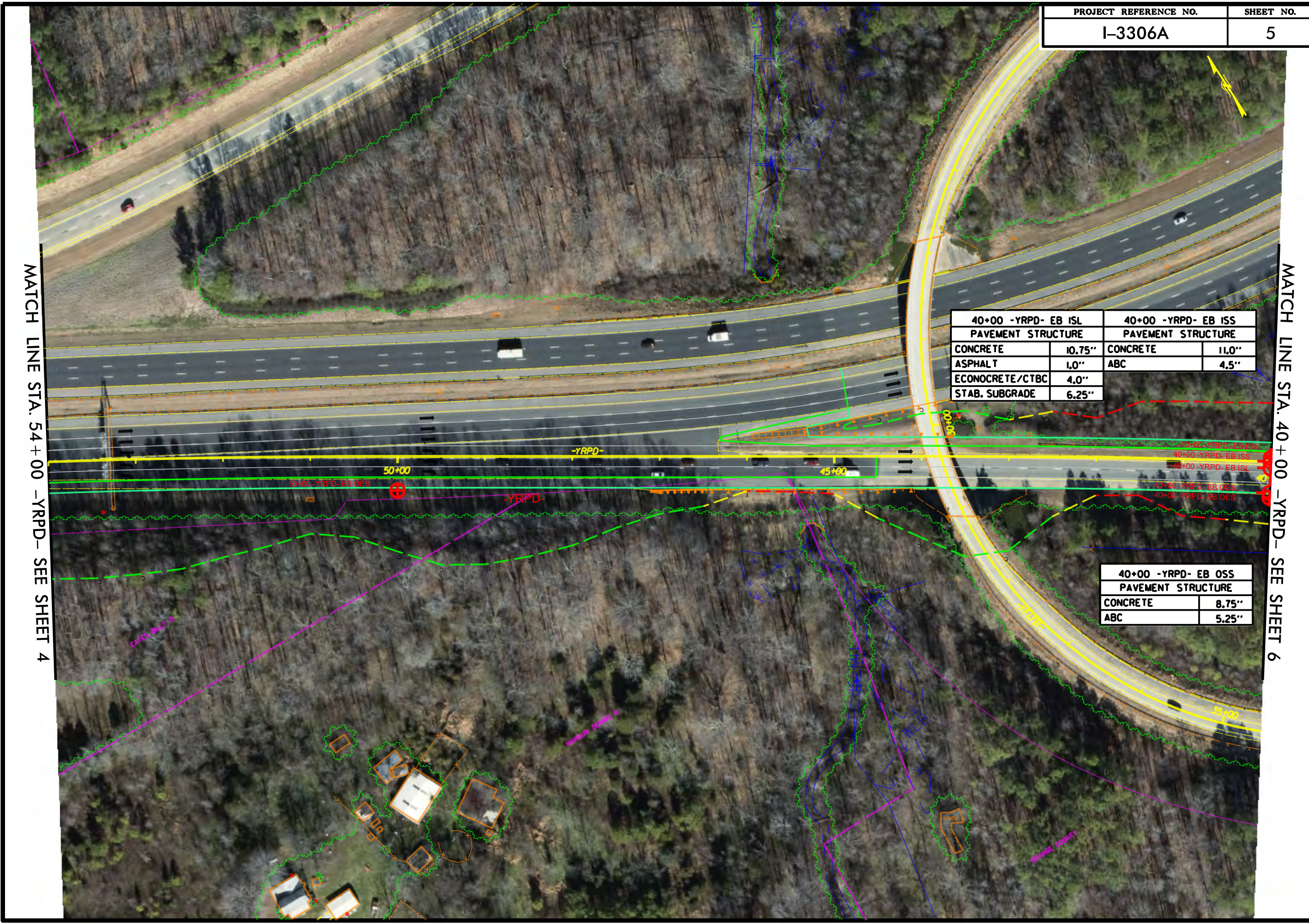
55+00 -YRPD- EB OSS PAVEMENT STRUCTURE		55+00 -YRPD- EB OSL PAVEMENT STRUCTURE	
ASPHALT	5.25"	ASPHALT	12.0"
ABC	5.75"	ABC	6.0"
STAB. SUBGRADE	6.0"	STAB. SUBGRADE	10.0"

MATCH LINE STA. 54+00 -YRPD- SEE SHEET 4

MATCH LINE STA. 40+00 -YRPD- SEE SHEET 6

40+00 -YRPD- EB ISL PAVEMENT STRUCTURE		40+00 -YRPD- EB ISS PAVEMENT STRUCTURE	
CONCRETE	10.75"	CONCRETE	11.0"
ASPHALT	1.0"	ABC	4.5"
ECONCRETE/CTBC	4.0"		
STAB. SUBGRADE	6.25"		

40+00 -YRPD- EB OSS PAVEMENT STRUCTURE	
CONCRETE	8.75"
ABC	5.25"



CATERS BUILT BY

MARSHALL TOWN

ORANGE COUNTY



MATCH LINE STA. 40+00 -YRPD- SEE SHEET 5

MATCH LINE STA. 27+50 -YRPD- SEE SHEET 7



DEPARTMENT OF TRANSPORTATION

JS MIT

JS MIT

JS MIT

-YRPD-

-YRPD-

40+00 -YRPD- EB EM  
40+00 -YRPD- EB ISS  
40+00 -YRPD- EB ISI  
40+00 -YRPD- EB OSS  
40+00 -YRPD- EB OES

30+00 -YRPD- EB EM  
30+00 -YRPD- EB OES

-YFLYB-

-YFLYB-

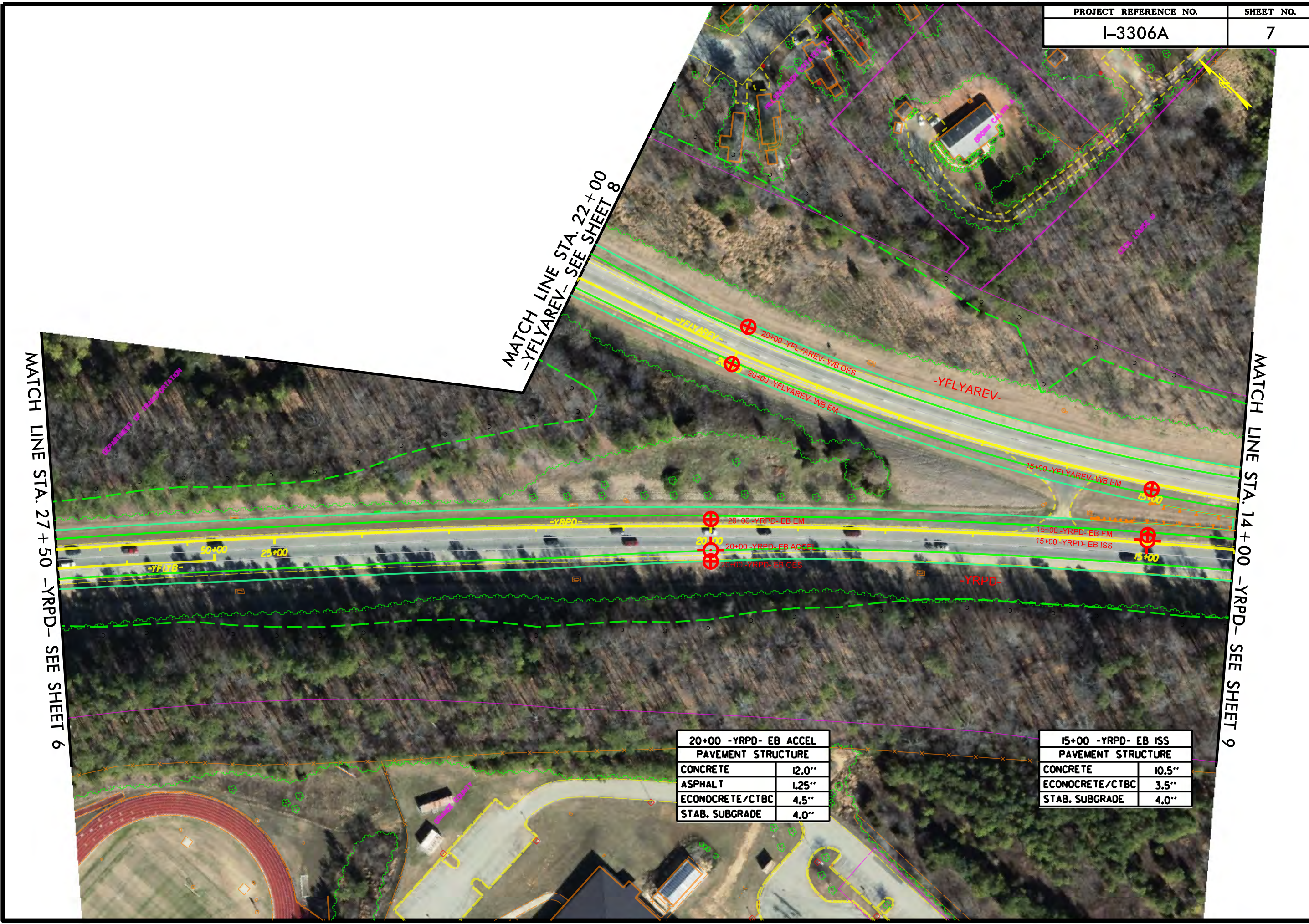
40+00

40+00 -YFLYB- EB OES

MATCH LINE STA. 27+50 -YRPD- SEE SHEET 6

MATCH LINE STA. 22+00 -YFLYAREV- SEE SHEET 8

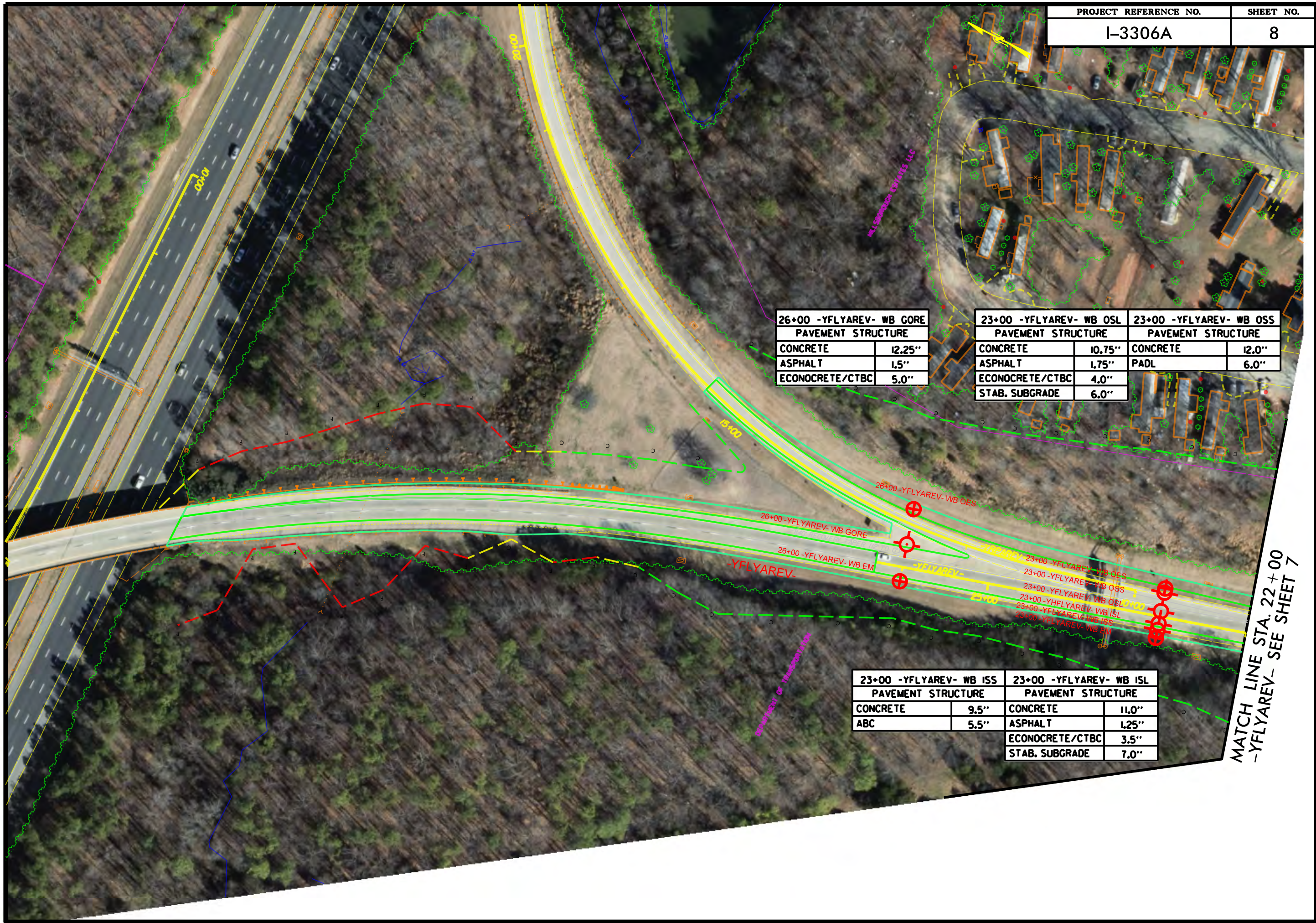
MATCH LINE STA. 14+00 -YRPD- SEE SHEET 9



20+00 -YRPD- EB ACCEL PAVEMENT STRUCTURE	
CONCRETE	12.0"
ASPHALT	4.25"
ECONOCRETE/CTBC	4.5"
STAB. SUBGRADE	4.0"

15+00 -YRPD- EB ISS PAVEMENT STRUCTURE	
CONCRETE	10.5"
ECONOCRETE/CTBC	3.5"
STAB. SUBGRADE	4.0"





26+00 -YFLYAREV- WB GORE	
PAVEMENT STRUCTURE	
CONCRETE	12.25"
ASPHALT	1.5"
ECONCRETE/CTBC	5.0"

23+00 -YFLYAREV- WB OSL		23+00 -YFLYAREV- WB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.75"	CONCRETE	12.0"
ASPHALT	1.75"	PADL	6.0"
ECONCRETE/CTBC	4.0"		
STAB. SUBGRADE	6.0"		

23+00 -YFLYAREV- WB ISS		23+00 -YFLYAREV- WB ISL	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.5"	CONCRETE	11.0"
ABC	5.5"	ASPHALT	1.25"
		ECONCRETE/CTBC	3.5"
		STAB. SUBGRADE	7.0"

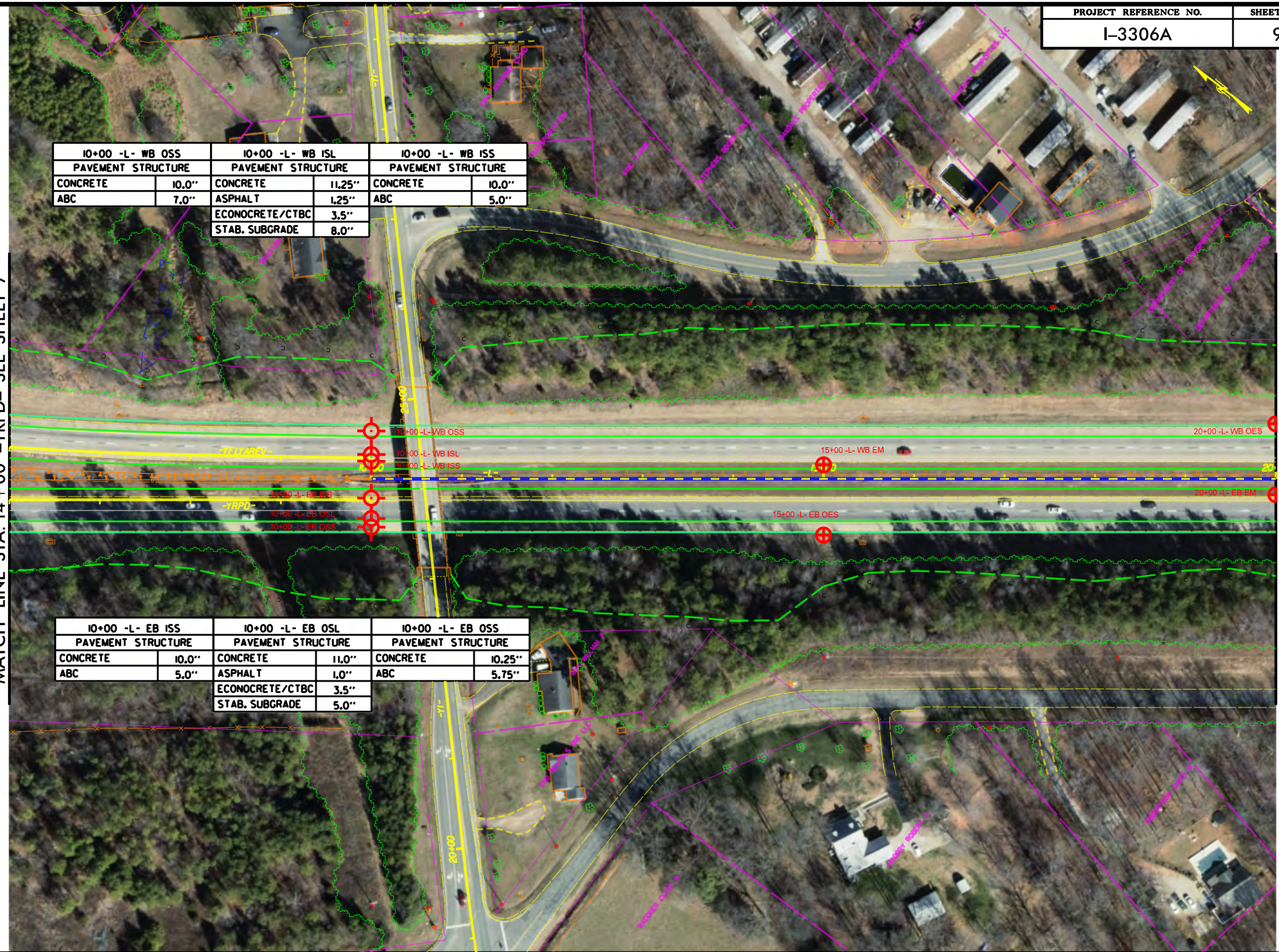
MATCH LINE STA. 22+00  
-YFLYAREV- SEE SHEET 7

10+00 -L- WB OSS		10+00 -L- WB ISL		10+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	11.25"	CONCRETE	10.0"
ABC	7.0"	ASPHALT	1.25"	ABC	5.0"
		ECONOCRETE/CTBC	3.5"		
		STAB. SUBGRADE	8.0"		

10+00 -L- EB ISS		10+00 -L- EB OSL		10+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	11.0"	CONCRETE	10.25"
ABC	5.0"	ASPHALT	1.0"	ABC	5.75"
		ECONOCRETE/CTBC	3.5"		
		STAB. SUBGRADE	5.0"		

MATCH LINE STA. 14+00 -YRPD- SEE SHEET 7

MATCH LINE STA. 20+00 -L- SEE SHEET 10



MATCH LINE STA. 20+00 -L- SEE SHEET 9

MATCH LINE STA. 34+00 -L- SEE SHEET 11



35+00 -L- WB OSS		35+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.0"	CONCRETE	8.5"
ABC	6.0"	PADL	6.0"

MATCH LINE STA. 34 + 00 -L- SEE SHEET 10

35+00 -L- EB ISS		35+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	9.5"
PADL	6.0"	ABC	4.5"

MATCH LINE STA. 48 + 00 -L- SEE SHEET 12



55+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.0"
ABC	7.0"

60+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.5"
ABC	5.5"

60+00 -L- WB OSL	
PAVEMENT STRUCTURE	
CONCRETE	10.5"
ASPHALT	1.0"
ECONOCRETE/CTBC	4.75"
STAB. SUBGRADE	6.75"

60+00 -L- WB ISS	
PAVEMENT STRUCTURE	
CONCRETE	10.5"
ECONOCRETE/CTBC	4.5"

MATCH LINE STA. 48+00 -L- SEE SHEET 11

MATCH LINE STA. 61+50 -L- SEE SHEET 13



60+00 -L- EB ISS	
PAVEMENT STRUCTURE	
CONCRETE	10.5"
ABC	4.0"

60+00 -L- EB ISL	
PAVEMENT STRUCTURE	
CONCRETE	11.0"
ASPHALT	0.5"
ECONOCRETE/CTBC	4.0"
STAB. SUBGRADE	5.5"

60+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.75"
ABC	4.25"

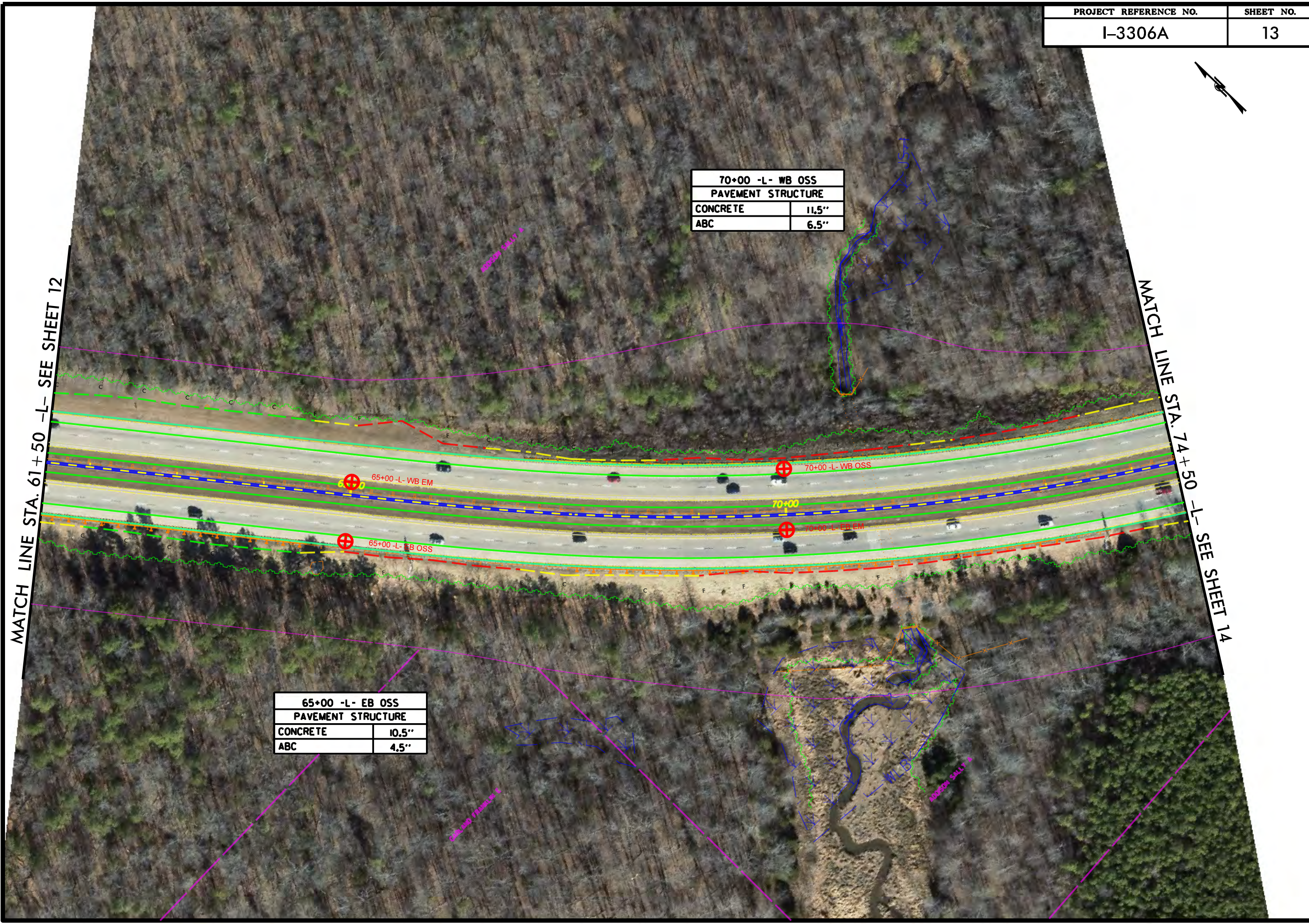


70+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	11.5"
ABC	6.5"

65+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.5"
ABC	4.5"

MATCH LINE STA. 61+50 -L- SEE SHEET 12

MATCH LINE STA. 74+50 -L- SEE SHEET 14

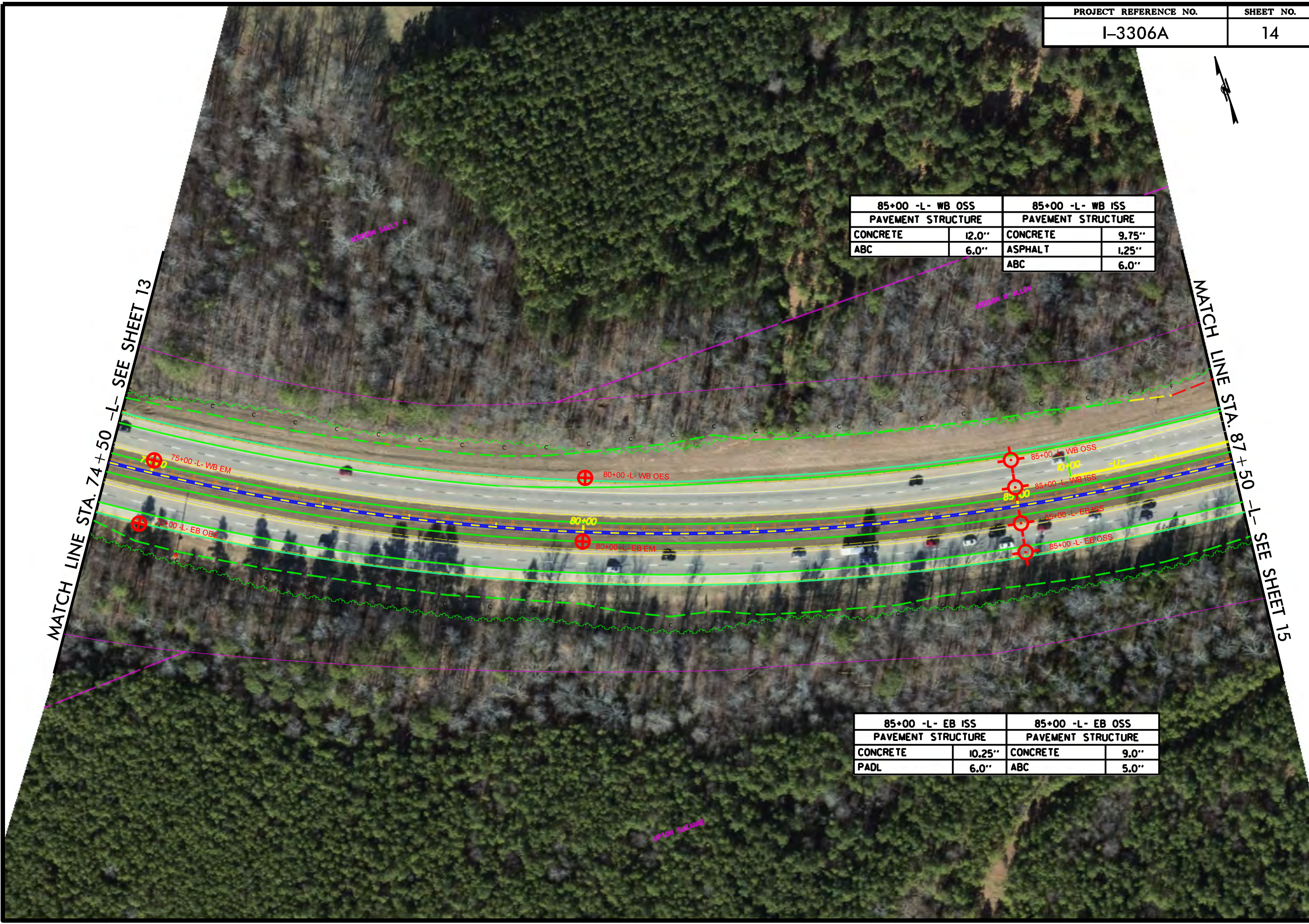




85+00 -L- WB OSS		85+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	12.0"	CONCRETE	9.75"
ABC	6.0"	ASPHALT	1.25"
		ABC	6.0"

MATCH LINE STA. 74+50 -L- SEE SHEET 13

MATCH LINE STA. 87+50 -L- SEE SHEET 15



85+00 -L- EB ISS		85+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.25"	CONCRETE	9.0"
PADL	6.0"	ABC	5.0"

ADJACENT SALLY A

ADJACENT B ALLEN

ADJACENT SUZANNE

MATCH LINE STA. 87 + 50 -L- SEE SHEET 14

MATCH LINE STA. 100 + 50 -L- SEE SHEET 16





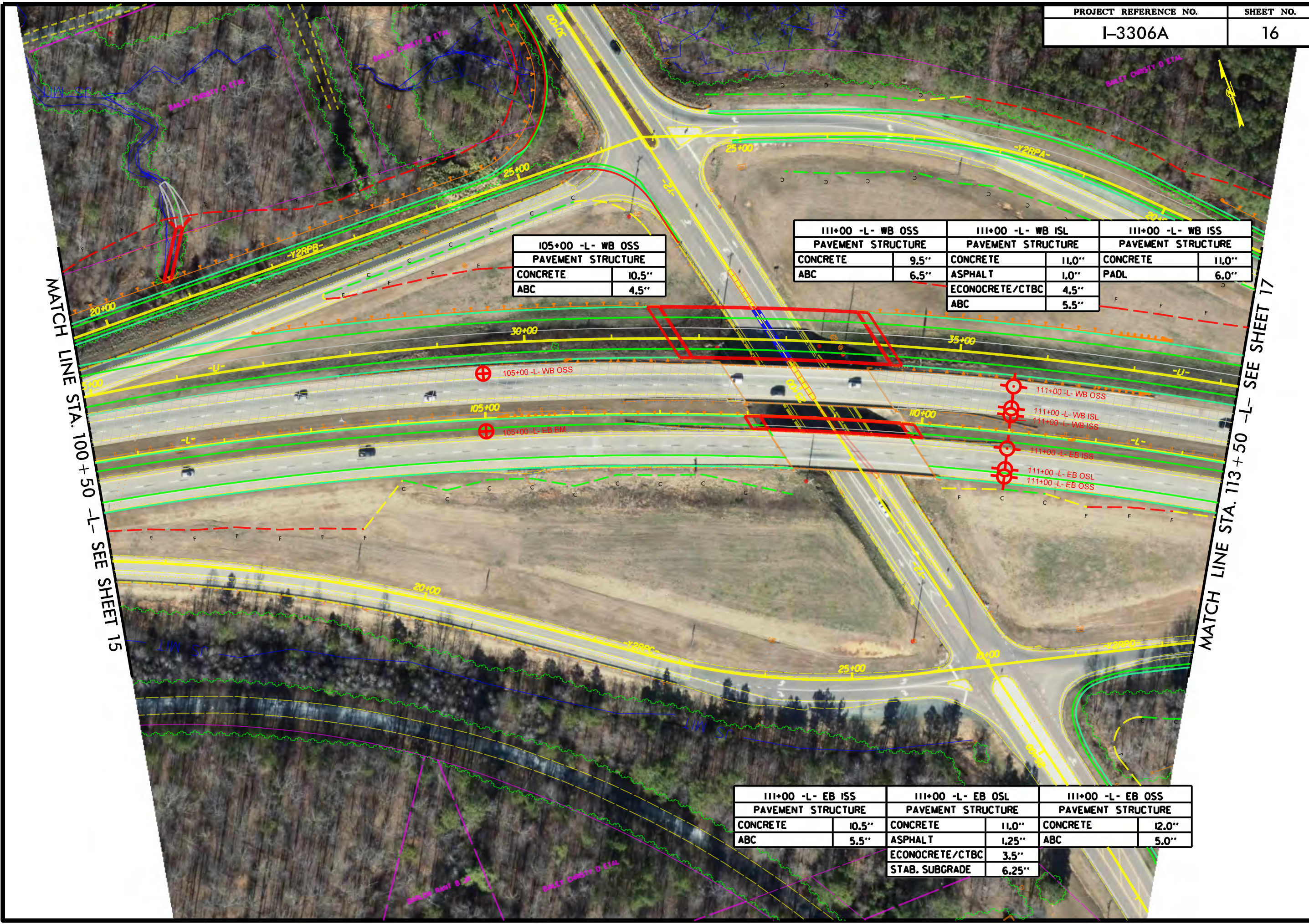
MATCH LINE STA. 100+50 -L- SEE SHEET 15

MATCH LINE STA. 113+50 -L- SEE SHEET 17

105+00 -L- WB OSS PAVEMENT STRUCTURE	
CONCRETE	10.5"
ABC	4.5"

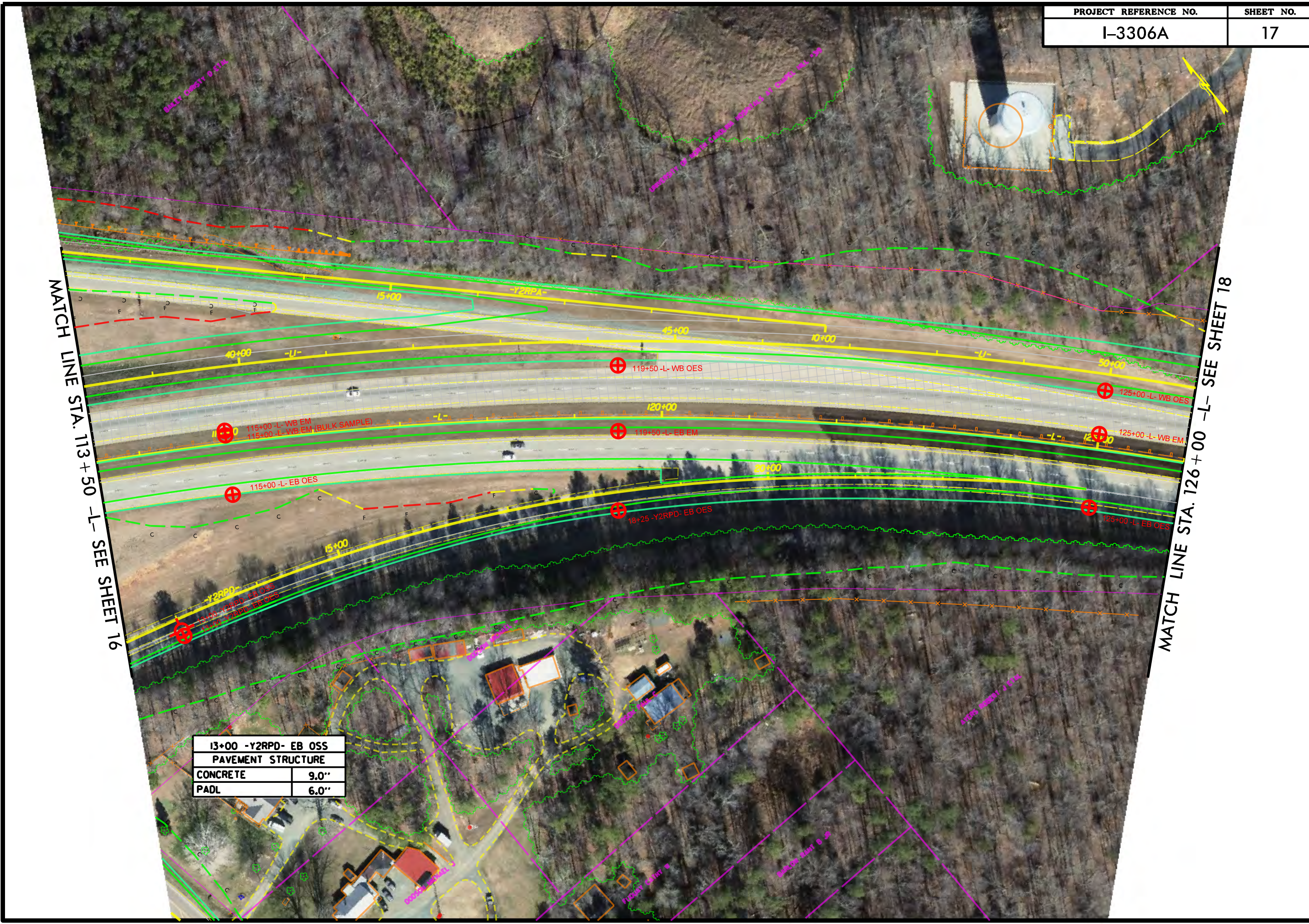
111+00 -L- WB OSS PAVEMENT STRUCTURE		111+00 -L- WB ISL PAVEMENT STRUCTURE		111+00 -L- WB ISS PAVEMENT STRUCTURE	
CONCRETE	9.5"	CONCRETE	11.0"	CONCRETE	11.0"
ABC	6.5"	ASPHALT	1.0"	PADL	6.0"
		ECONOCRETE/CTBC	4.5"		
		ABC	5.5"		

111+00 -L- EB ISS PAVEMENT STRUCTURE		111+00 -L- EB OSL PAVEMENT STRUCTURE		111+00 -L- EB OSS PAVEMENT STRUCTURE	
CONCRETE	10.5"	CONCRETE	11.0"	CONCRETE	12.0"
ABC	5.5"	ASPHALT	1.25"	ABC	5.0"
		ECONOCRETE/CTBC	3.5"		
		STAB. SUBGRADE	6.25"		



MATCH LINE STA. 113+50 -L- SEE SHEET 16

MATCH LINE STA. 126+00 -L- SEE SHEET 18

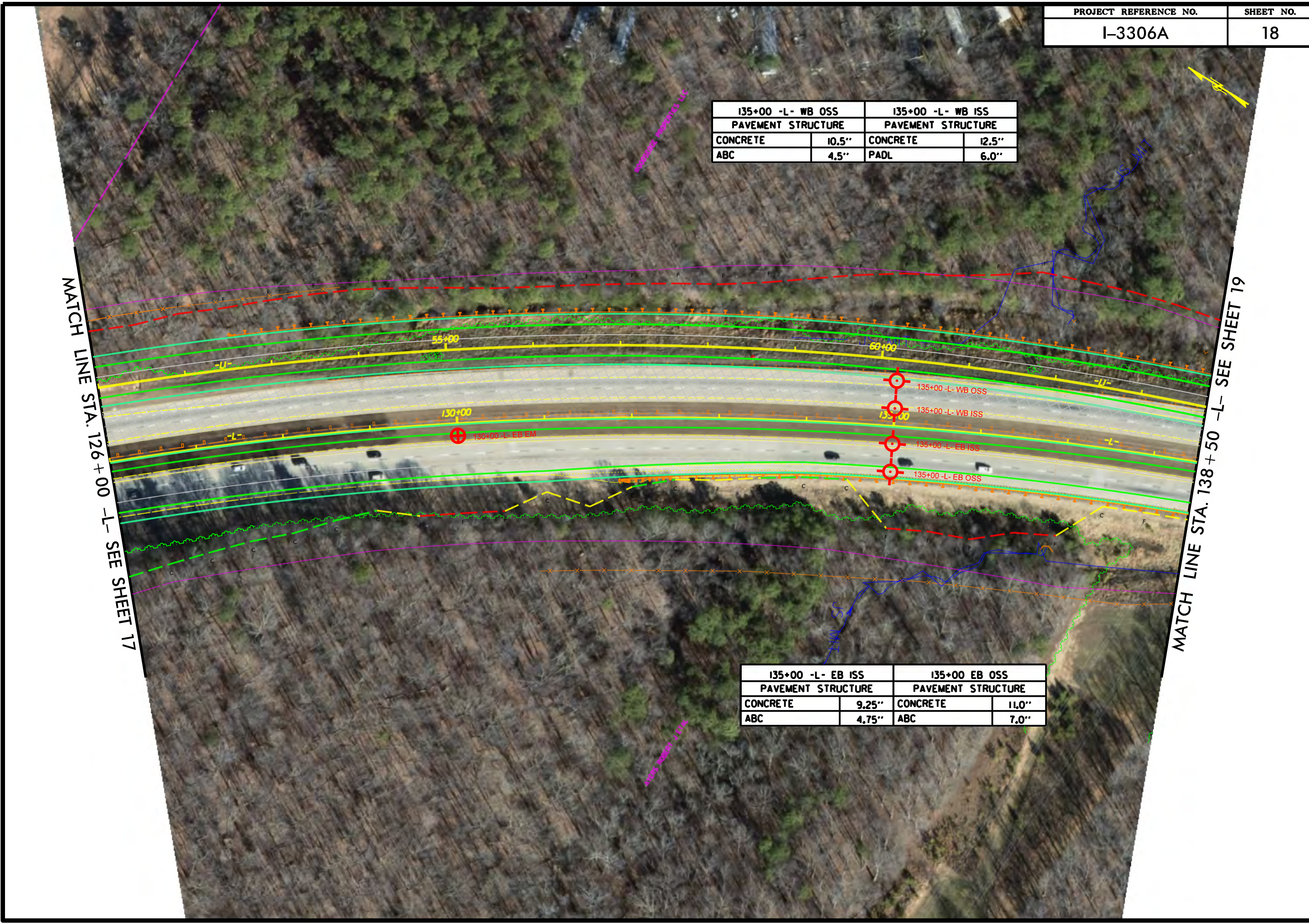


13+00 -Y2RPD- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.0"
PADL	6.0"

135+00 -L- WB OSS		135+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.5"	CONCRETE	12.5"
ABC	4.5"	PADL	6.0"

MATCH LINE STA. 126+00 -L- SEE SHEET 17

MATCH LINE STA. 138+50 -L- SEE SHEET 19



135+00 -L- EB ISS		135+00 EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	11.0"
ABC	4.75"	ABC	7.0"

WATER PROPERTIES L.P.

WATER PROPERTIES L.P.

- 135+00 -L- WB OSS
- 135+00 -L- WB ISS
- 135+00 -L- EB ISS
- 135+00 -L- EB OSS

130+00 -L- EB EM

MATCH LINE STA. 138 + 50 -L- SEE SHEET 18

MATCH LINE STA. 152 + 00 -L- SEE SHEET 20

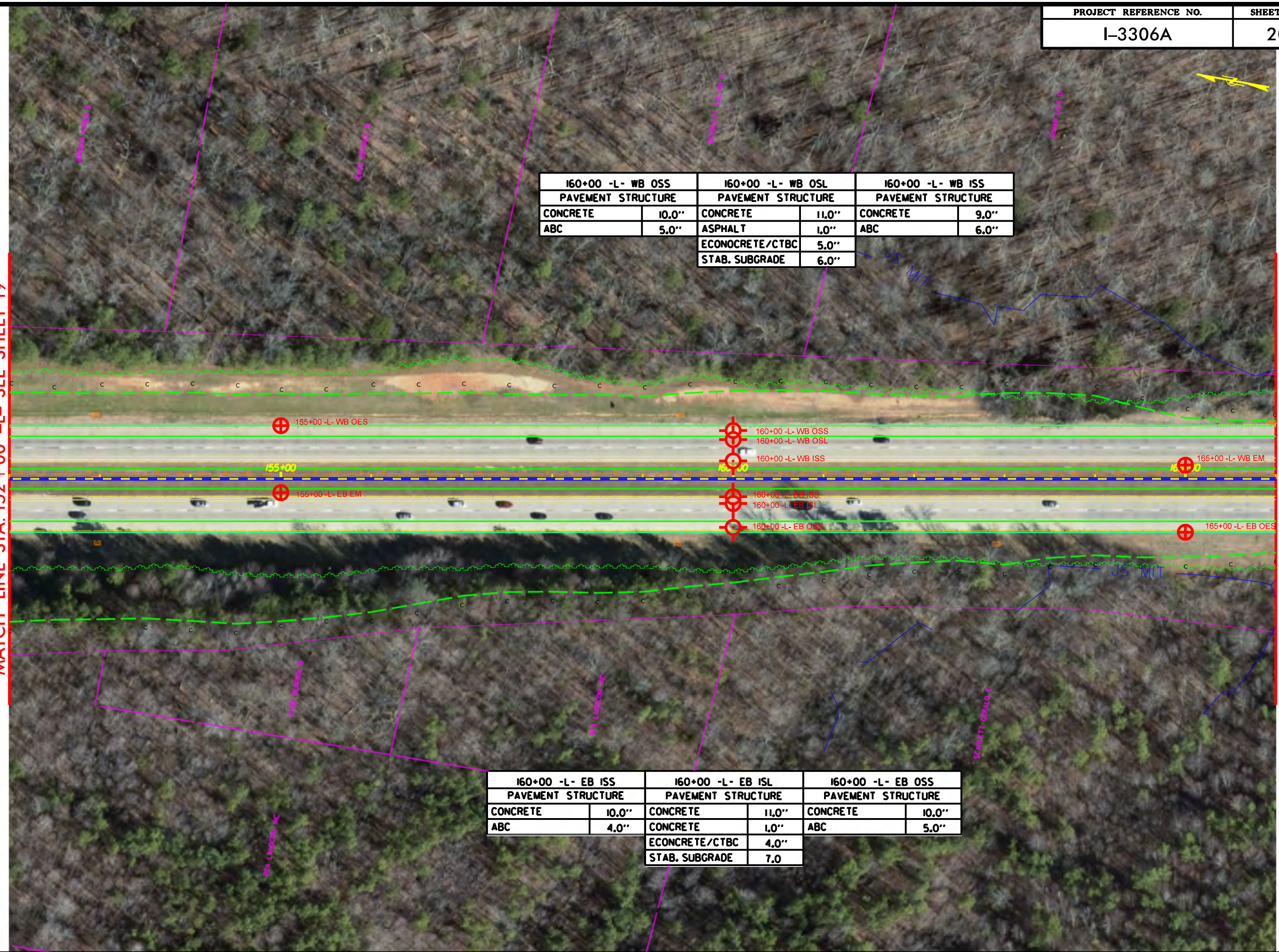


MATCH LINE STA. 152+00 -L- SEE SHEET 19

MATCH LINE STA. 166+00 -L- SEE SHEET 21

160+00 -L- WB OSS		160+00 -L- WB OSL		160+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	11.0"	CONCRETE	9.0"
ABC	5.0"	ASPHALT	1.0"	ABC	6.0"
		ECONCRETE/CTBC	5.0"		
		STAB. SUBGRADE	6.0"		

160+00 -L- EB ISS		160+00 -L- EB ISL		160+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	11.0"	CONCRETE	10.0"
ABC	4.0"	CONCRETE	1.0"	ABC	5.0"
		ECONCRETE/CTBC	4.0"		
		STAB. SUBGRADE	7.0"		

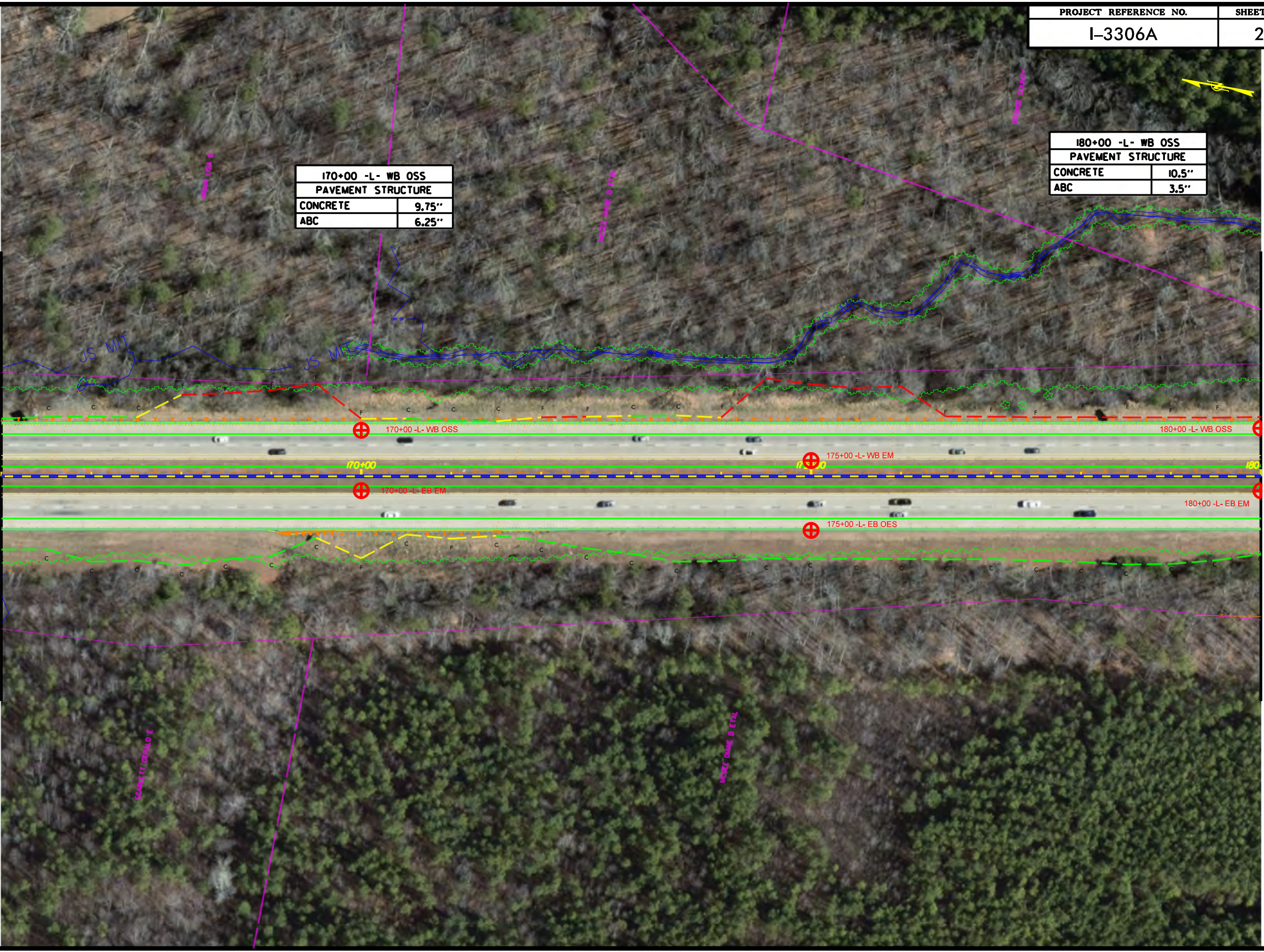


170+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.75"
ABC	6.25"

180+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.5"
ABC	3.5"

MATCH LINE STA. 166+00 -L- SEE SHEET 20

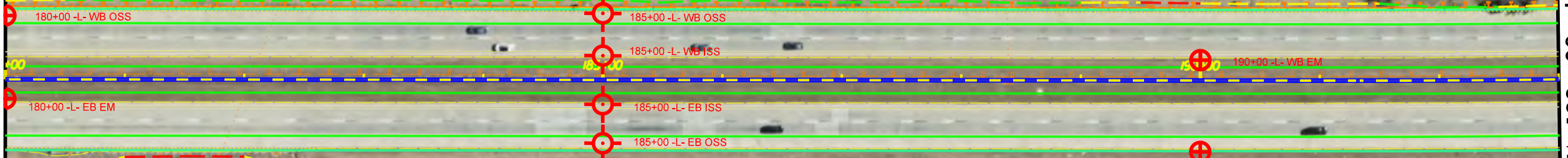
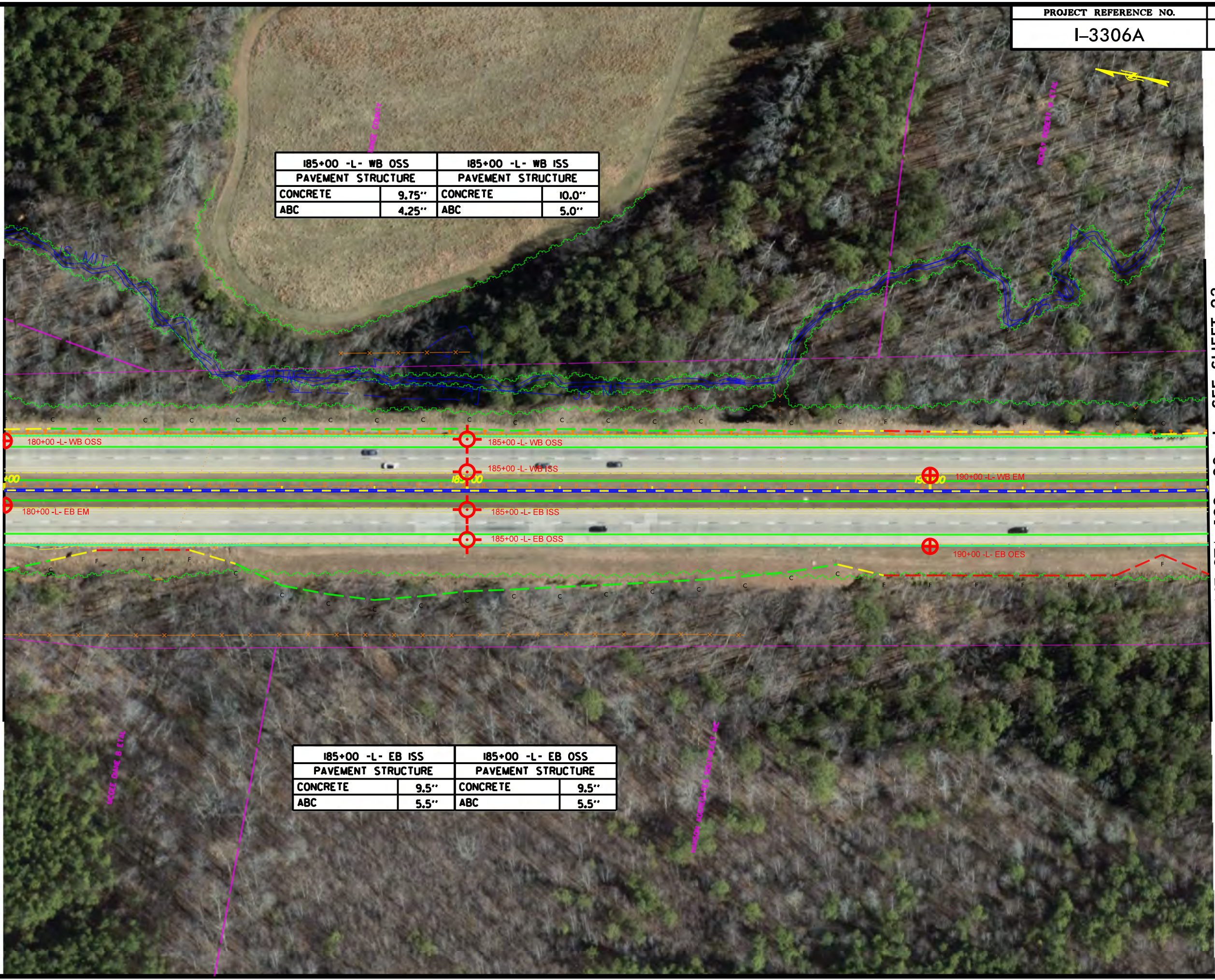
MATCH LINE STA. 180+00 -L- SEE SHEET 22



185+00 -L- WB OSS		185+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.75"	CONCRETE	10.0"
ABC	4.25"	ABC	5.0"

MATCH LINE STA. 180+00 -L- SEE SHEET 21

MATCH LINE STA. 193+00 -L- SEE SHEET 23



185+00 -L- EB ISS		185+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.5"	CONCRETE	9.5"
ABC	5.5"	ABC	5.5"

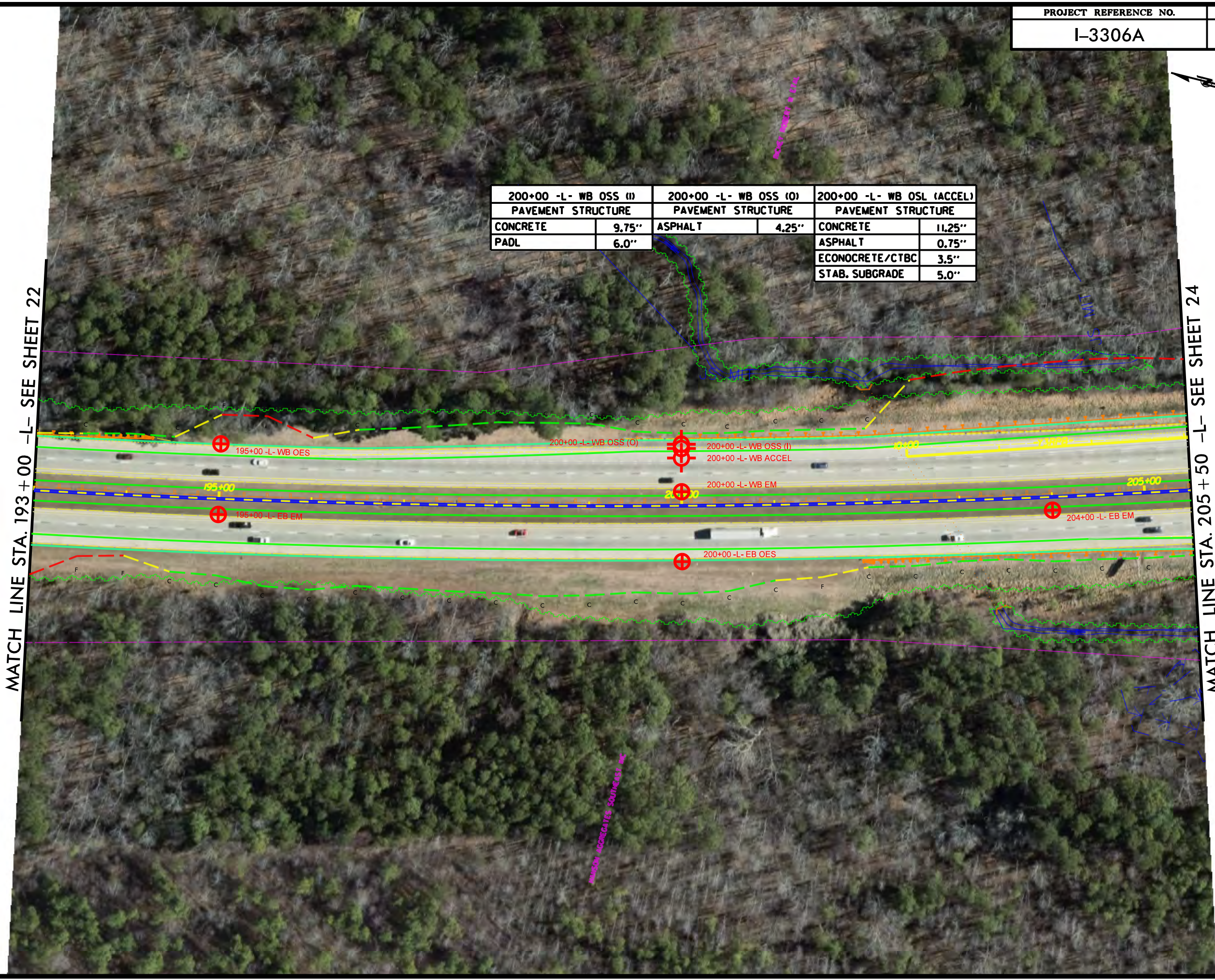
180' DUNE B E 1/4

180' DUNE B E 1/4

200+00 -L- WB OSS (I)		200+00 -L- WB OSS (O)		200+00 -L- WB OSL (ACCEL)	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.75"	ASPHALT	4.25"	CONCRETE	11.25"
PADL	6.0"			ASPHALT	0.75"
				ECONOCRETE/CTBC	3.5"
				STAB. SUBGRADE	5.0"

MATCH LINE STA. 193+00 -L- SEE SHEET 22

MATCH LINE STA. 205+50 -L- SEE SHEET 24



195+00 -L- WB OES

200+00 -L- WB OSS (O)

200+00 -L- WB OSS (I)

200+00 -L- WB ACCEL

195+00 -L- EB EM

200+00 -L- WB EM

204+00 -L- EB EM

200+00 -L- EB OES

MASON AGGREGATE'S SOUTHEAST W/

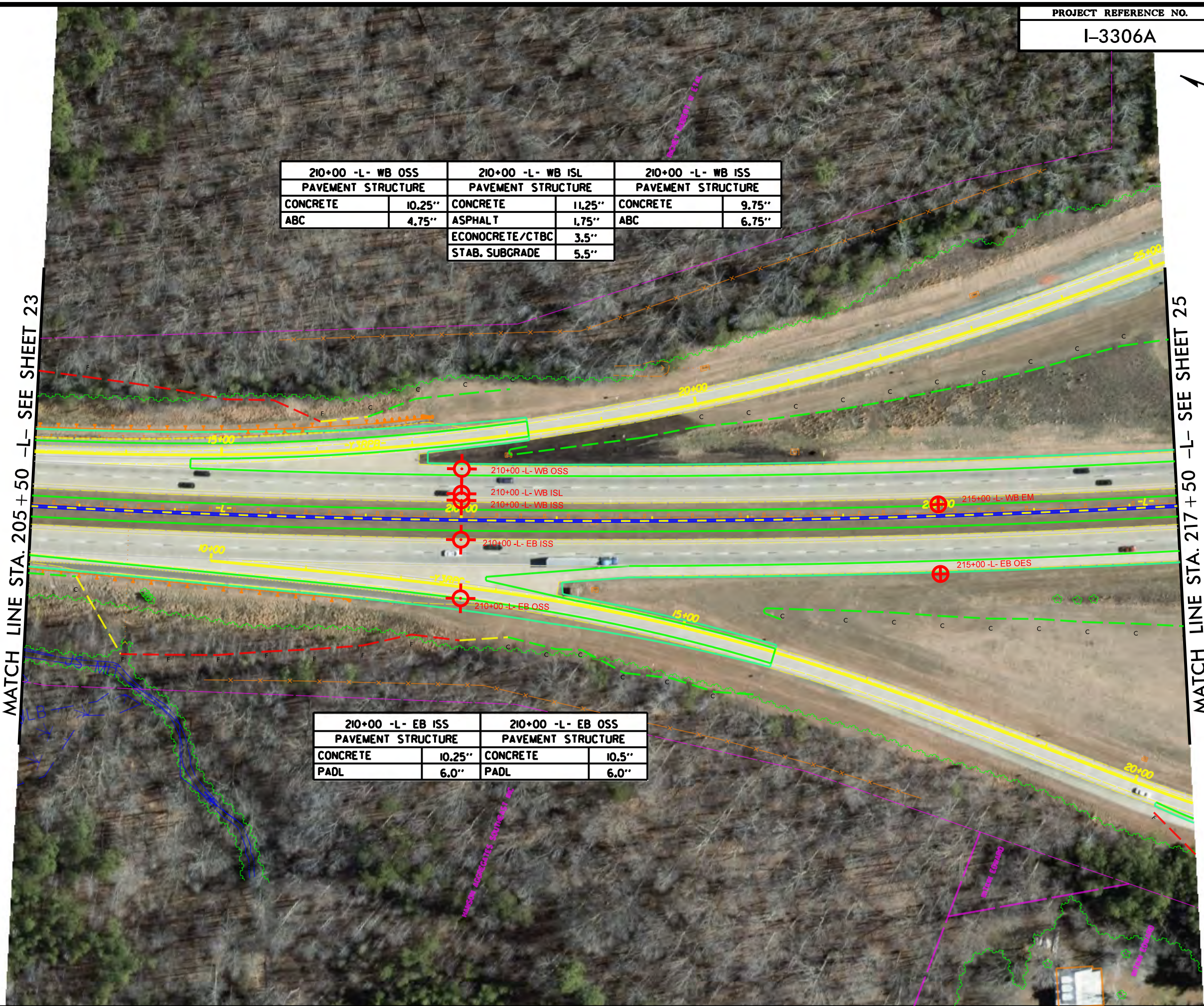


210+00 -L- WB OSS		210+00 -L- WB ISL		210+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.25"	CONCRETE	11.25"	CONCRETE	9.75"
ABC	4.75"	ASPHALT	1.75"	ABC	6.75"
		ECONOCRETE/CTBC	3.5"		
		STAB. SUBGRADE	5.5"		

210+00 -L- EB ISS		210+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.25"	CONCRETE	10.5"
PADL	6.0"	PADL	6.0"

MATCH LINE STA. 205+50 -L- SEE SHEET 23

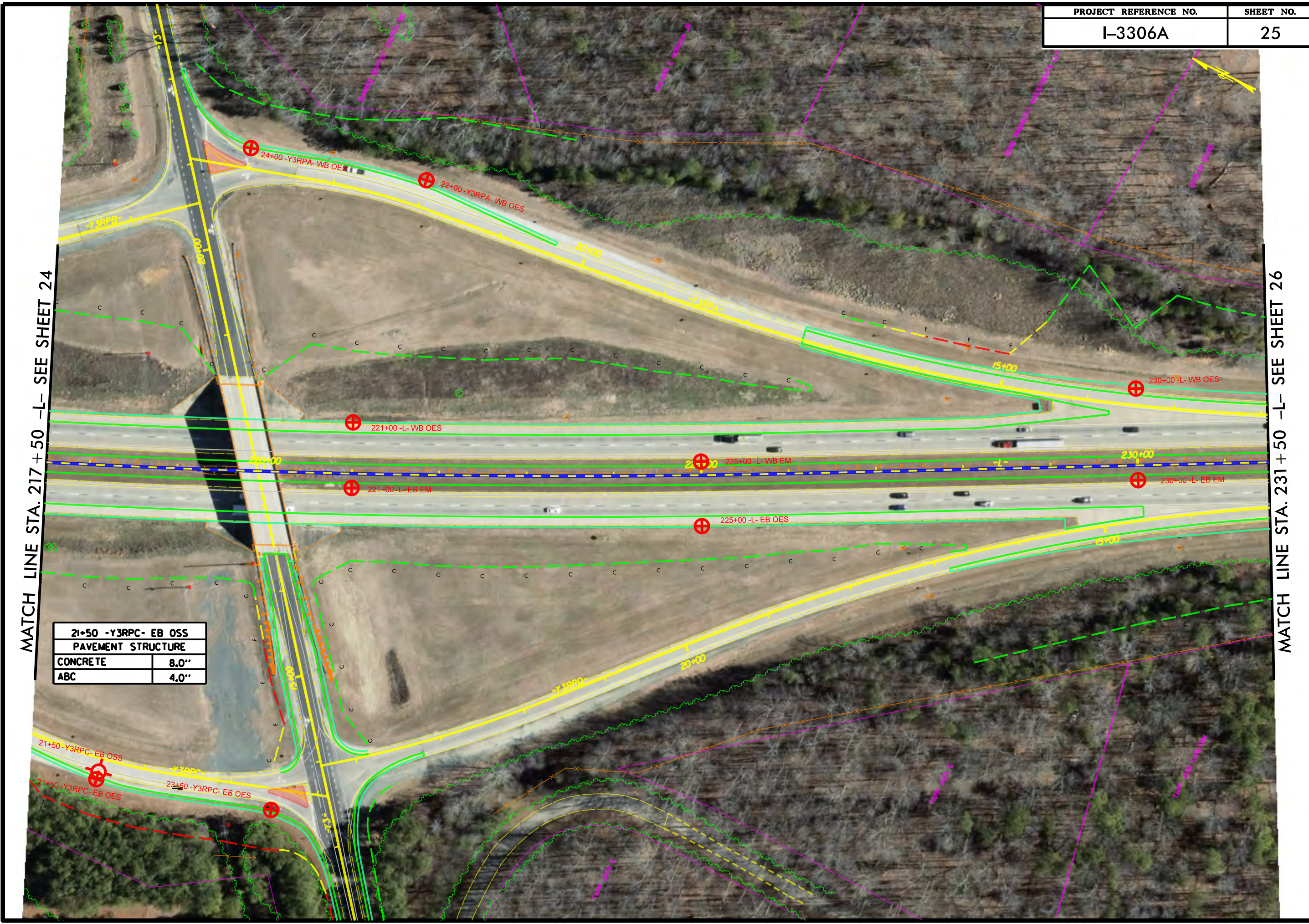
MATCH LINE STA. 217+50 -L- SEE SHEET 25



MATCH LINE STA. 217 + 50 -L- SEE SHEET 24

MATCH LINE STA. 231 + 50 -L- SEE SHEET 26

21+50 -Y3RPC- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	8.0"
ABC	4.0"



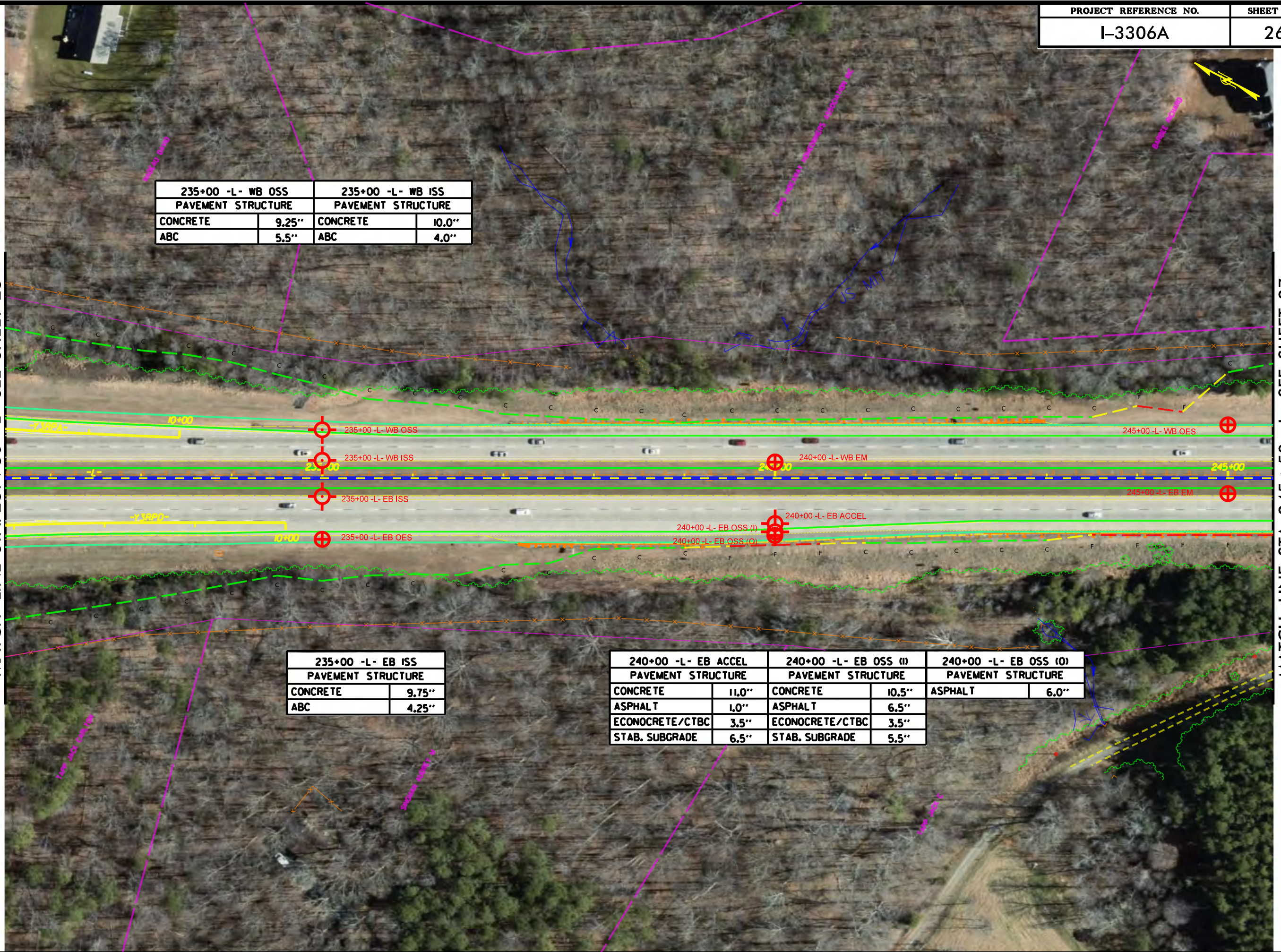
235+00 -L- WB OSS		235+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	10.0"
ABC	5.5"	ABC	4.0"

235+00 -L- EB ISS	
PAVEMENT STRUCTURE	
CONCRETE	9.75"
ABC	4.25"

240+00 -L- EB ACCEL		240+00 -L- EB OSS (II)		240+00 -L- EB OSS (OI)	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	11.0"	CONCRETE	10.5"	ASPHALT	6.0"
ASPHALT	1.0"	ASPHALT	6.5"		
ECONCRETE/CTBC	3.5"	ECONCRETE/CTBC	3.5"		
STAB. SUBGRADE	6.5"	STAB. SUBGRADE	5.5"		

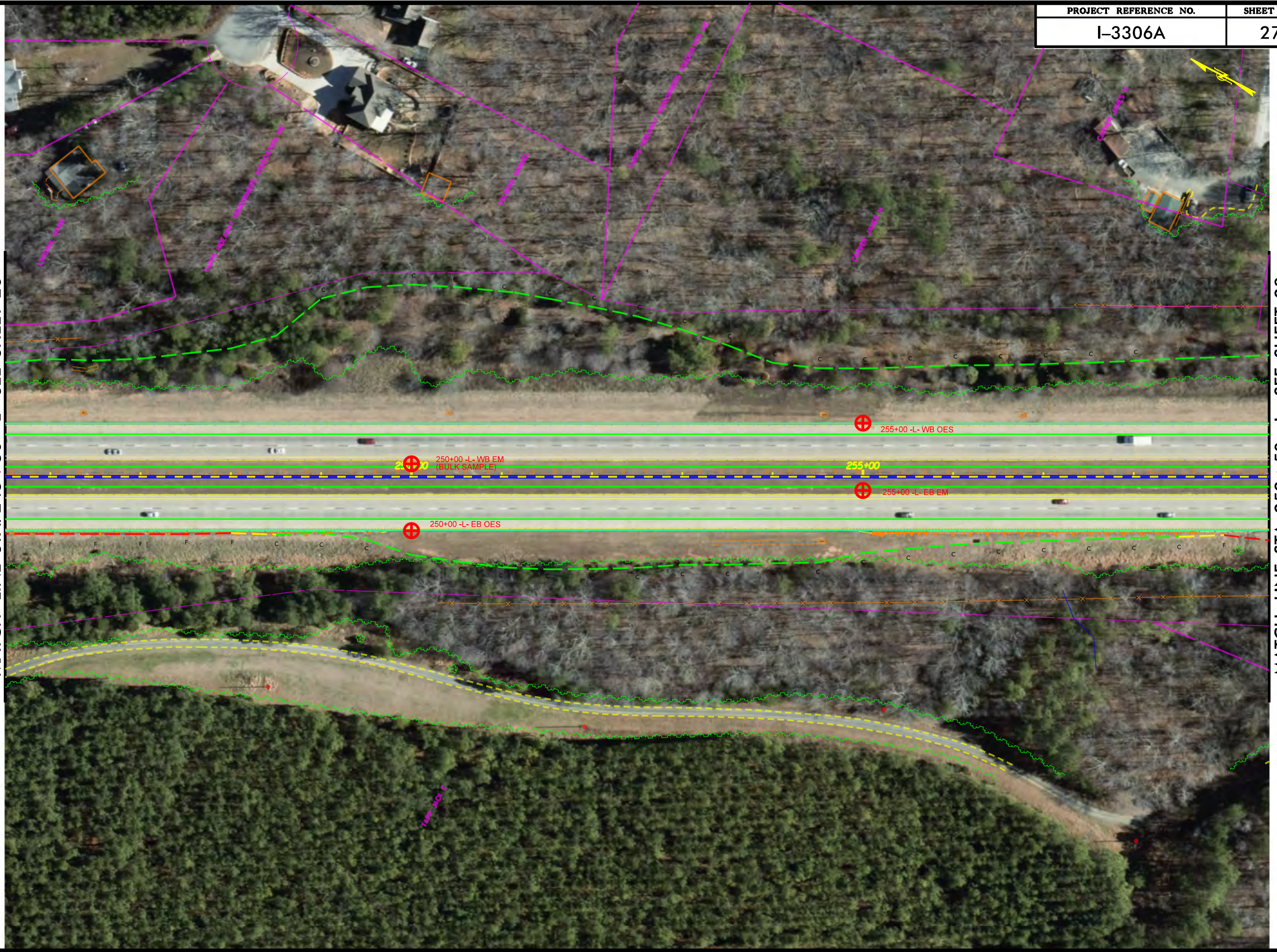
MATCH LINE STA. 231+50 -L- SEE SHEET 25

MATCH LINE STA. 245+50 -L- SEE SHEET 27



MATCH LINE STA. 245+50 -L- SEE SHEET 26

MATCH LINE STA. 259+50 -L- SEE SHEET 28



MATCH LINE STA. 259+50 -L- SEE SHEET 27

MATCH LINE STA. 273+00 -L- SEE SHEET 29

260+00 -L- WB OSS		260+00 -L- WB OSL		260+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	10.75"	CONCRETE	9.0"
ABC	4.0"	ASPHALT	1.25"	ABC	5.5"
		ECONCRETE/CTBC	4.0"		
		STAB. SUBGRADE	7.0"		

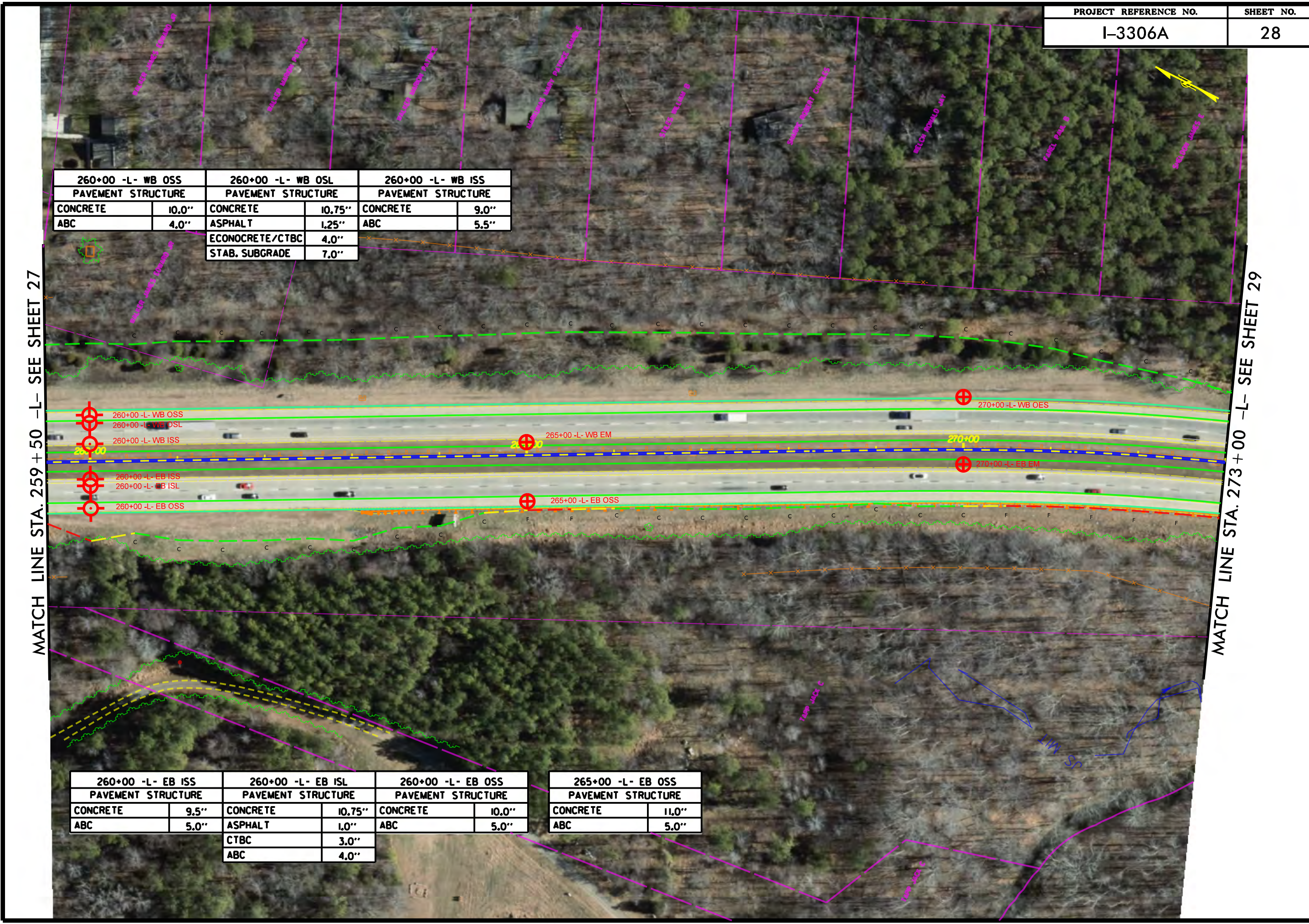
- 260+00 -L- WB OSS
- 260+00 -L- WB OSL
- 260+00 -L- WB ISS
- 260+00 -L- EB ISS
- 260+00 -L- EB ISL
- 260+00 -L- EB OSS

- 265+00 -L- WB EM
- 265+00 -L- EB OSS

- 270+00 -L- WB OES
- 270+00 -L- EB EM

260+00 -L- EB ISS		260+00 -L- EB ISL		260+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.5"	CONCRETE	10.75"	CONCRETE	10.0"
ABC	5.0"	ASPHALT	1.0"	ABC	5.0"
		CTBC	3.0"		
		ABC	4.0"		

265+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	11.0"
ABC	5.0"



280+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.25"
ABC	4.0"

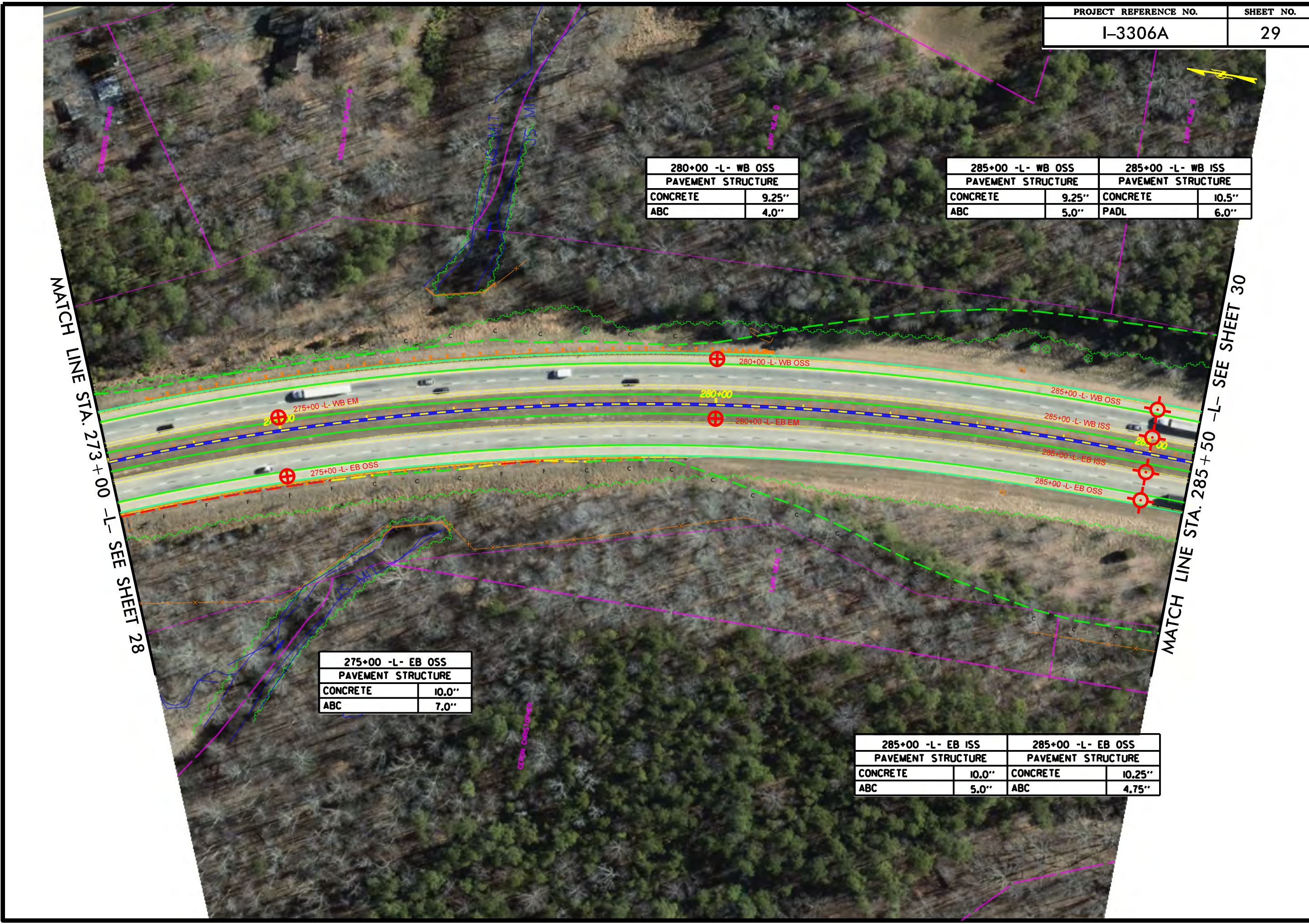
285+00 -L- WB OSS		285+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	10.5"
ABC	5.0"	PADL	6.0"

275+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.0"
ABC	7.0"

285+00 -L- EB ISS		285+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	10.25"
ABC	5.0"	ABC	4.75"

MATCH LINE STA. 273+00 -L- SEE SHEET 28

MATCH LINE STA. 285+50 -L- SEE SHEET 30





MATCH LINE STA. 285+50 -L- SEE SHEET 29

MATCH LINE STA. 298+50 -L- SEE SHEET 31



GEORGE CRUMPTON

1/20/2010

1/20/2010

1/20/2010

MATCH LINE STA. 298+50 -L- SEE SHEET 30

MATCH LINE STA. 312+00 -L- SEE SHEET 32

305+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.0"
ABC	5.0"

311+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.0"
ABC	5.0"

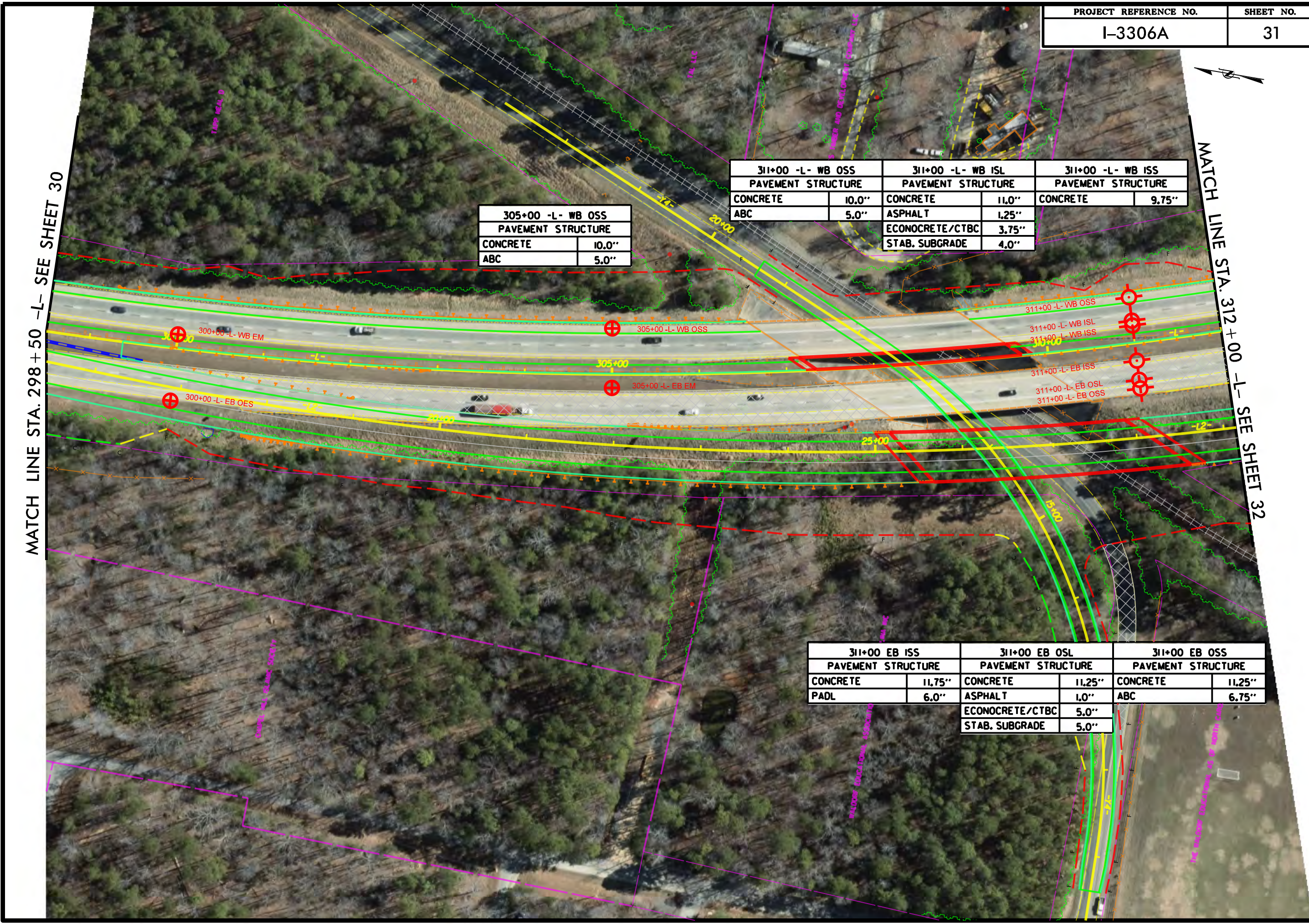
311+00 -L- WB ISL	
PAVEMENT STRUCTURE	
CONCRETE	11.0"
ASPHALT	1.25"
ECONCRETE/CTBC	3.75"
STAB. SUBGRADE	4.0"

311+00 -L- WB ISS	
PAVEMENT STRUCTURE	
CONCRETE	9.75"

311+00 EB ISS	
PAVEMENT STRUCTURE	
CONCRETE	11.75"
PADL	6.0"

311+00 EB OSL	
PAVEMENT STRUCTURE	
CONCRETE	11.25"
ASPHALT	1.0"
ECONCRETE/CTBC	5.0"
STAB. SUBGRADE	5.0"

311+00 EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	11.25"
ABC	6.75"

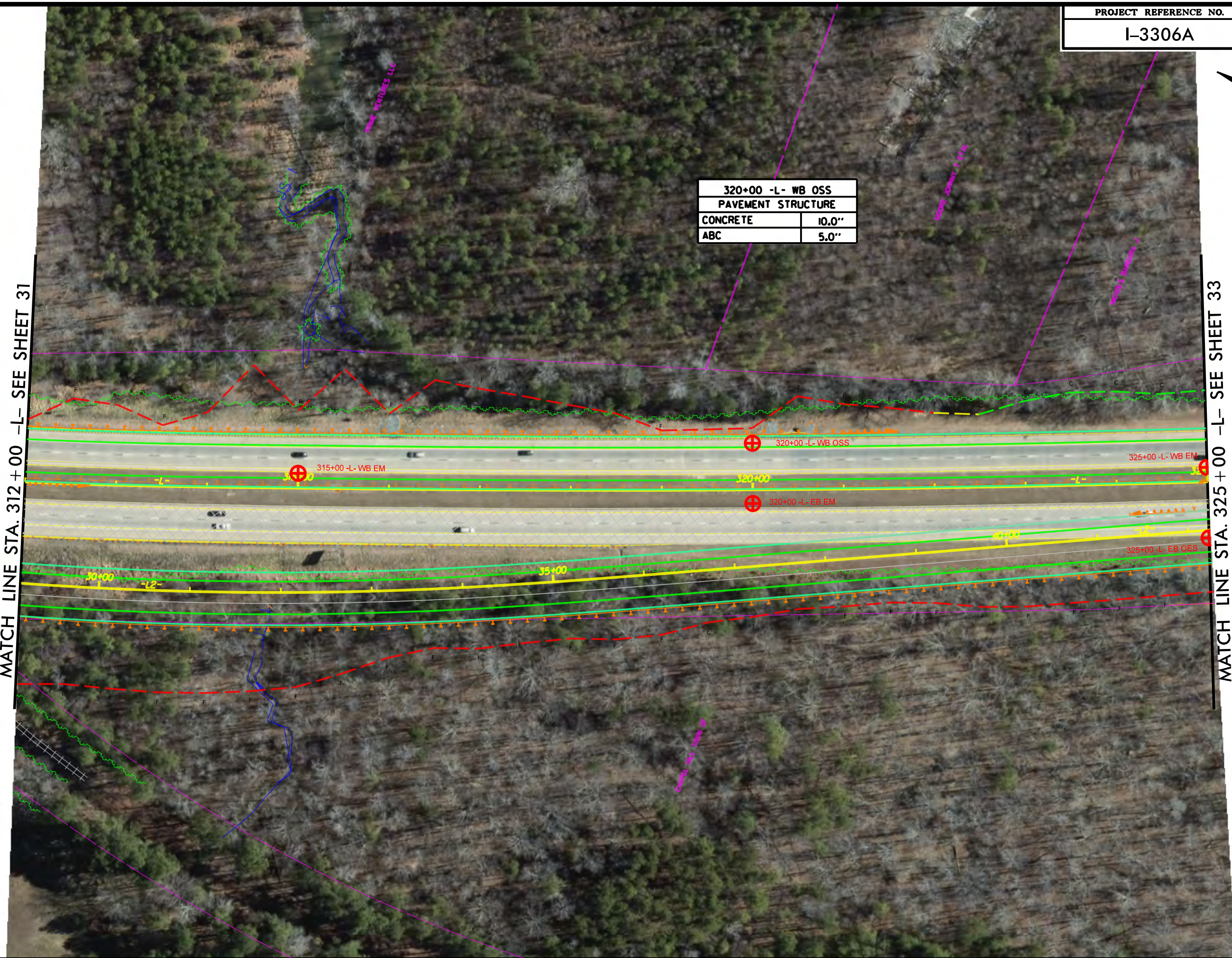




320+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.0"
ABC	5.0"

MATCH LINE STA. 312 + 00 -L- SEE SHEET 31

MATCH LINE STA. 325 + 00 -L- SEE SHEET 33



PROJ. VENTURES LLC

32000 - CONCRETE 10.0"

32000 - CONCRETE 5.0"

CONCRETE 10.0"

30+00 -L-

35+00

320+00 -L- WB OSS

325+00 -L- WB EM

315+00 -L- WB EM

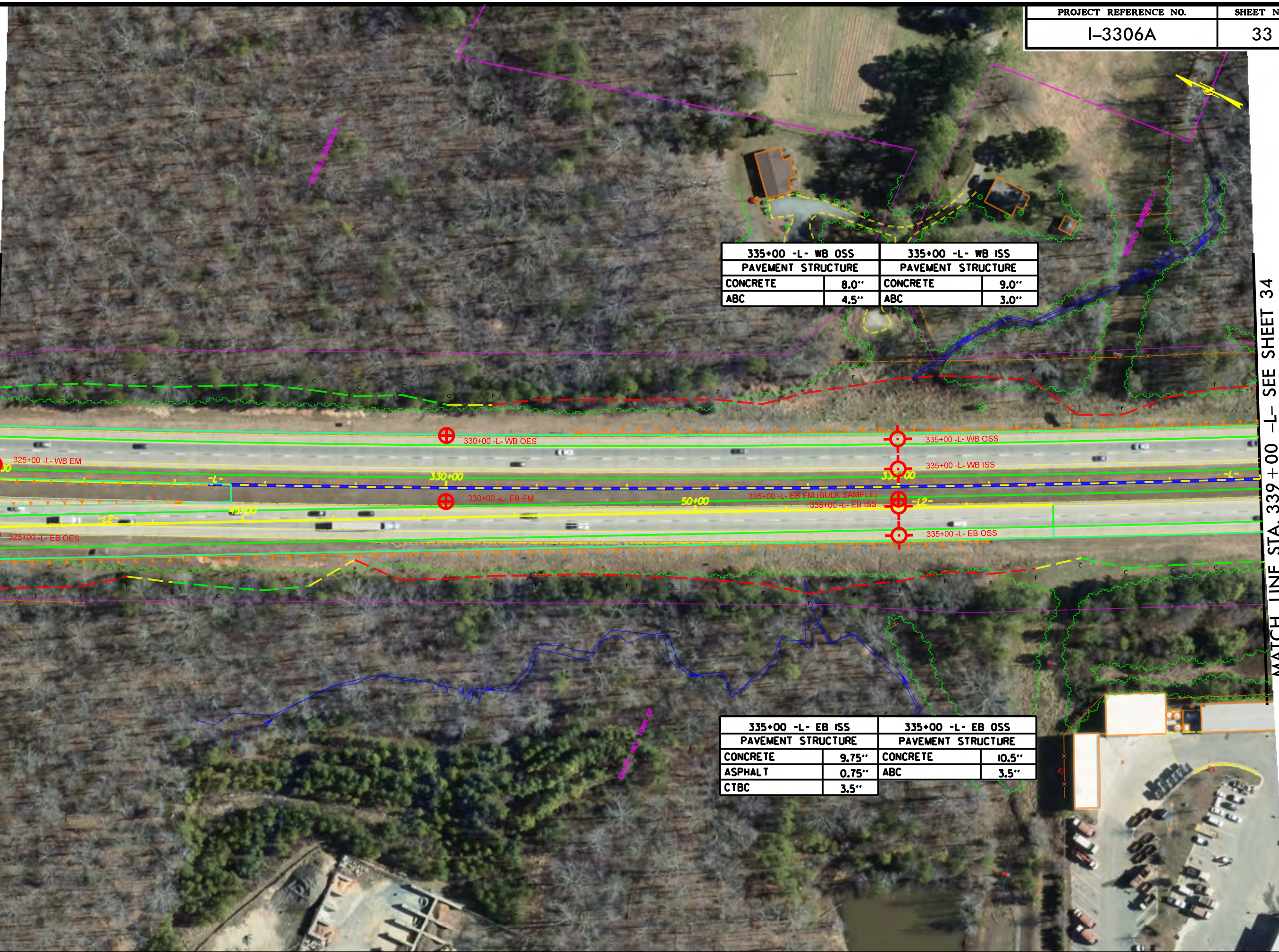
320+00 -L- EB EM

325+00 -L- EB OES

320+00

MATCH LINE STA. 325+00 -L- SEE SHEET 32

MATCH LINE STA. 339+00 -L- SEE SHEET 34



335+00 -L- WB OSS		335+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	8.0"	CONCRETE	9.0"
ABC	4.5"	ABC	3.0"

335+00 -L- EB ISS		335+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.75"	CONCRETE	10.5"
ASPHALT	0.75"	ABC	3.5"
CTBC	3.5"		

325+00 -L- WB EM  
 325+00 -L- EB OES

330+00 -L- WB OES  
 330+00 -L- EB EM

335+00 -L- WB OSS  
 335+00 -L- WB ISS  
 335+00 -L- EB ISS  
 335+00 -L- EB OSS

335+00 -L- EB EM (BULK SAMPLE)  
 335+00 -L- EB ISS

JS MIN

CRACKS REPAIR 100% OF

CRACKS REPAIR 100% OF

CRACKS REPAIR 100% OF

MATCH LINE STA. 339+00 -L- SEE SHEET 33

MATCH LINE STA. 352+00 -L- SEE SHEET 35



<b>350+00 -L- EB OSS</b>	
<b>PAVEMENT STRUCTURE</b>	
CONCRETE	10.25"
ABC	6.75"

CHANGELINE 10MM DP

CHANGELINE 10MM DP

MATCH LINE SEE SHEET 53

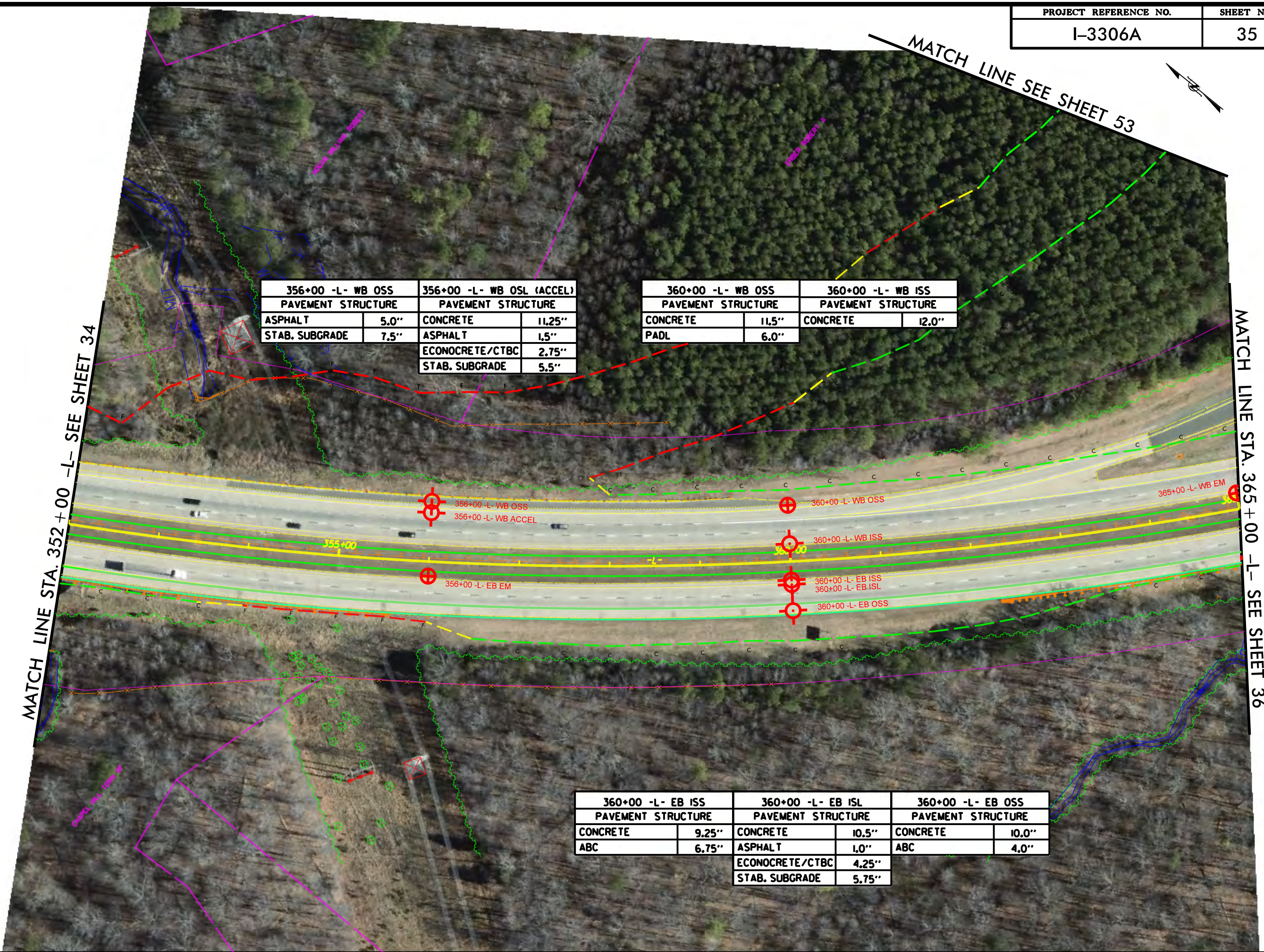
MATCH LINE STA. 352+00 -L- SEE SHEET 34

MATCH LINE STA. 365+00 -L- SEE SHEET 36

356+00 -L- WB OSS		356+00 -L- WB OSL (ACCEL)	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
ASPHALT	5.0"	CONCRETE	11.25"
STAB. SUBGRADE	7.5"	ASPHALT	1.5"
		ECONOCRETE/CTBC	2.75"
		STAB. SUBGRADE	5.5"

360+00 -L- WB OSS		360+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	11.5"	CONCRETE	12.0"
PADL	6.0"		

360+00 -L- EB ISS		360+00 -L- EB ISL		360+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	10.5"	CONCRETE	10.0"
ABC	6.75"	ASPHALT	1.0"	ABC	4.0"
		ECONOCRETE/CTBC	4.25"		
		STAB. SUBGRADE	5.75"		

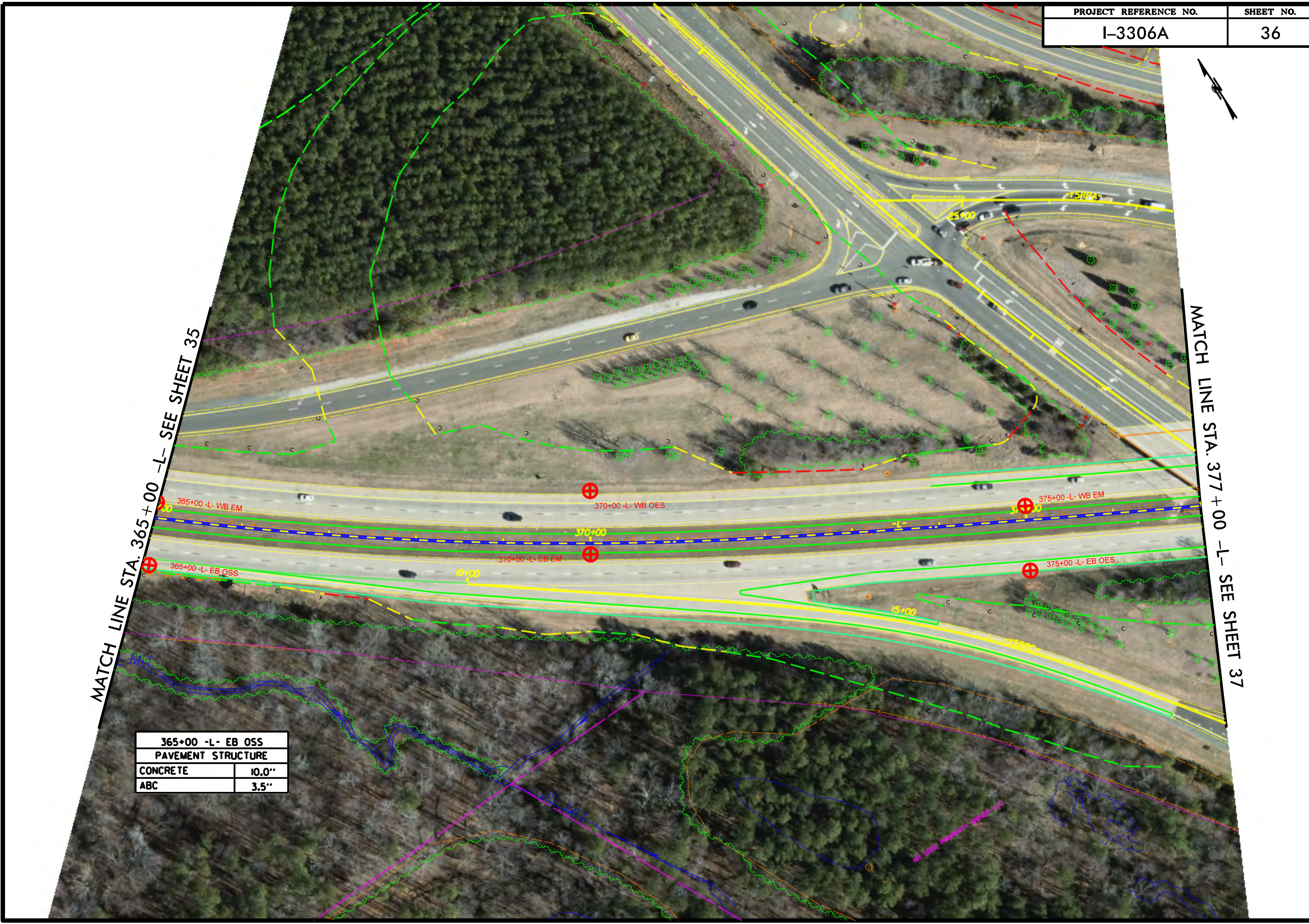




MATCH LINE STA. 365+00 -L- SEE SHEET 35

MATCH LINE STA. 377+00 -L- SEE SHEET 37

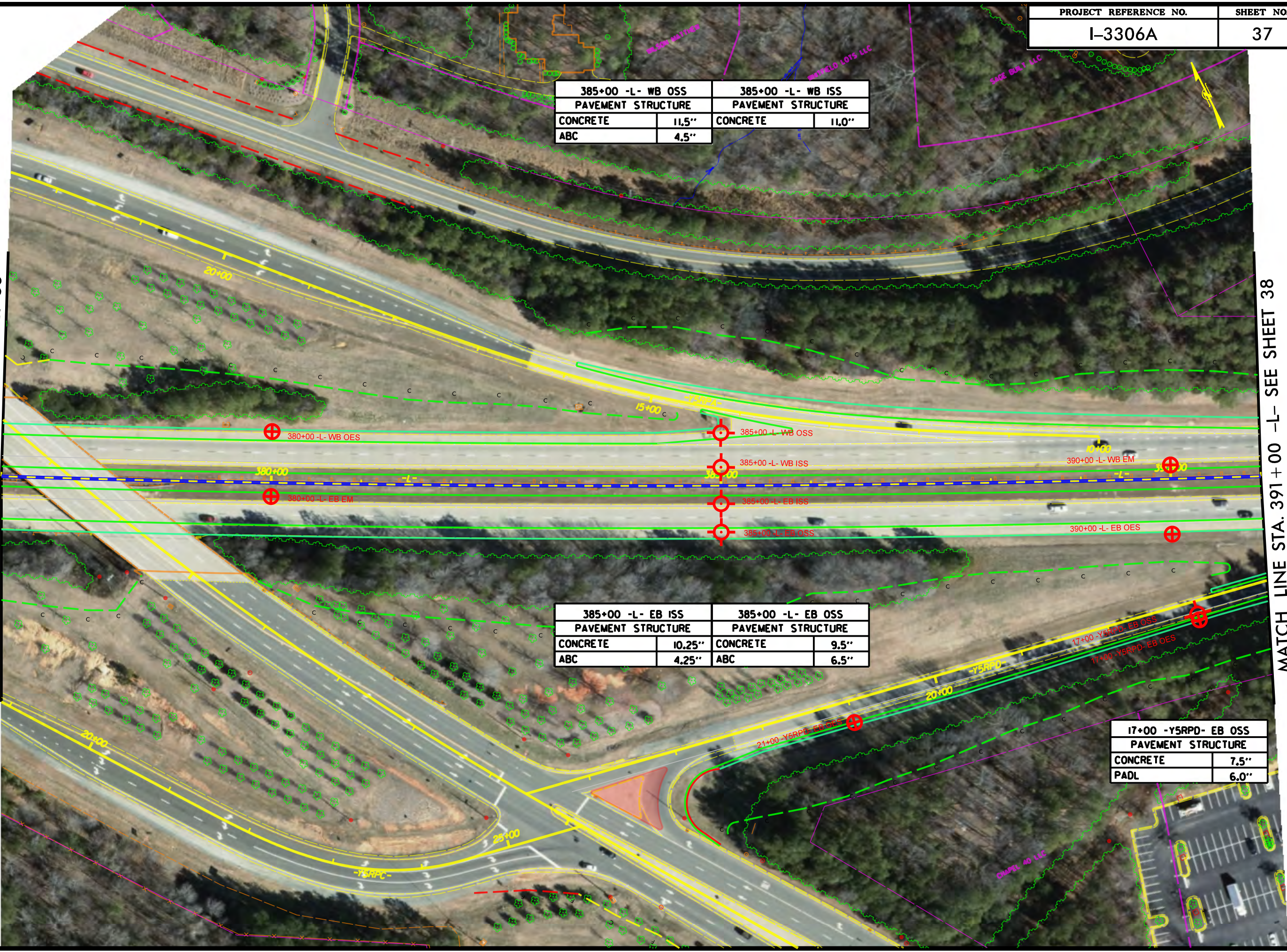
365+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	10.0"
ABC	3.5"



385+00 -L- WB OSS		385+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	11.5"	CONCRETE	11.0"
ABC	4.5"		

MATCH LINE STA. 377+00 -L- SEE SHEET 36

MATCH LINE STA. 391+00 -L- SEE SHEET 38



385+00 -L- EB ISS		385+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.25"	CONCRETE	9.5"
ABC	4.25"	ABC	6.5"

17+00 -Y5RPD- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	7.5"
PADL	6.0"

MATCH LINE STA. 391+00 -L- SEE SHEET 37

MATCH LINE STA. 404+00 -L- SEE SHEET 39



JOHNSON CHARLES W JR

JOHNSON CHARLES W JR

GARDNER MARGARET J

FISHER HEATON D

MAULDES MARY P

CHAPEL HILL NORTH STATION LLC

CHAPEL HILL MUTUAL LIFE INSURANCE COMPANY

SWEET LINDA B

395+00 -L- WB OES

395+00 -L- EB EM

400+00 -L- WB EM

400+00 -L- EB OES

395+00

400+00

15+00

10+00



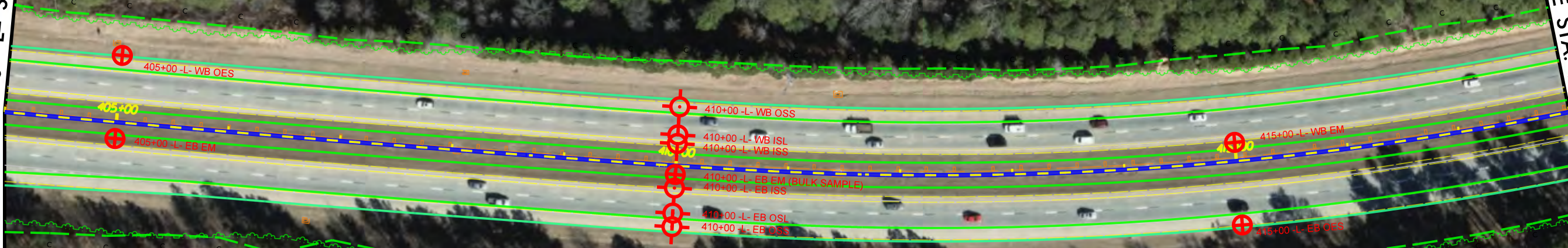


PROP OWNERS ASSOC OF STONERIDGE AND SLOPEFIELD INC

410+00 -L- WB OSS		410+00 -L- WB ISL		410+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.0"	CONCRETE	11.0"	CONCRETE	8.0"
ABC	6.0"	ASPHALT	1.0"	ABC	3.0"
		ECONCRETE/CTBC	3.5"		
		ABC	3.0"		
		STAB. SUBGRADE	8.0"		

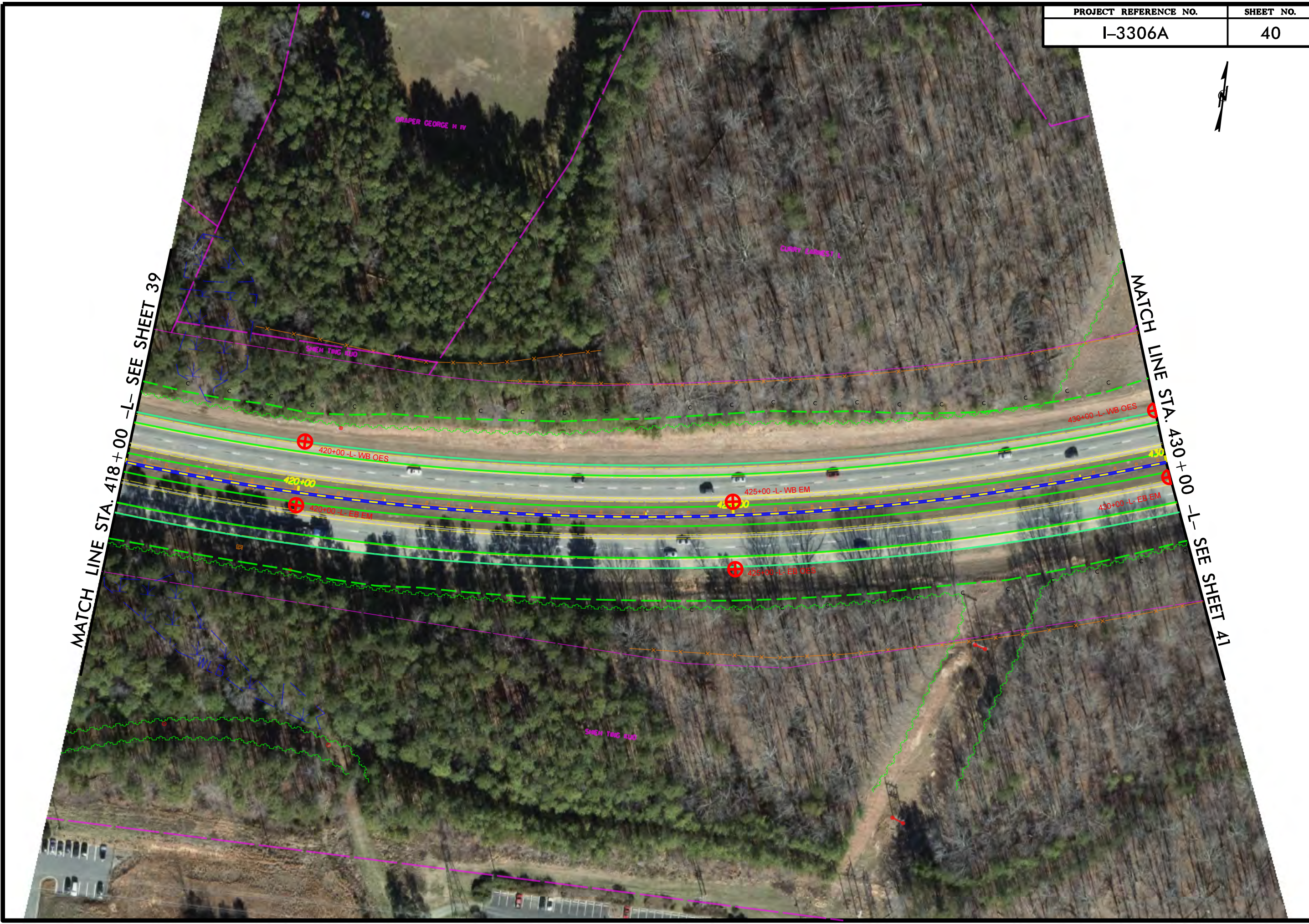
MATCH LINE STA. 404+00 -L- SEE SHEET 38

MATCH LINE STA. 418+00 -L- SEE SHEET 40



410+00 -L- EB ISS		410+00 -L- EB OSL		410+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.5"	CONCRETE	11.0"	CONCRETE	10.5"
PADL	10.5"	ASPHALT	1.0"	ABC	6.0"
		ECONCRETE/CTBC	4.5"		
		STAB. SUBGRADE	5.5"		





MATCH LINE STA. 418+00 -L- SEE SHEET 39

MATCH LINE STA. 430+00 -L- SEE SHEET 41

DRAPER GEORGE H IV

CURRY EARNEST L

SHEH TUNG #100

420+00 -L- WB OES

420+00

420+00 -L- EB EM

425+00 -L- WB EM

425+00

425+00 -L- EB OES

430+00 -L- WB OES

430

430+00 -L- EB EM

SHEH TUNG #100

WB

435+00 -L- WB OSS		435+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	8.0"	CONCRETE	10.0"
ABC	4.0"	ASPHALT	1.0"
		CTBC	4.0"
		STAB. SUBGRADE	4.0"

435+00 -L- EB ISS		435+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.75"	CONCRETE	9.5"
PADL	6.0"	ECONCRETE/CTBC	4.5"

MATCH LINE STA. 430+00 -L- SEE SHEET 40

MATCH LINE STA. 443+50 -L- SEE SHEET 42

430+00 -L- WB OES

435+00 -L- WB OSS

440+00 -L- WB EM

430+00 -L- EB EM

435+00 -L- EB ISS

440+00 -L- EB OES

430+00

435+00

440+00

430+00

435+00

440+00

430+00

435+00

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435+00

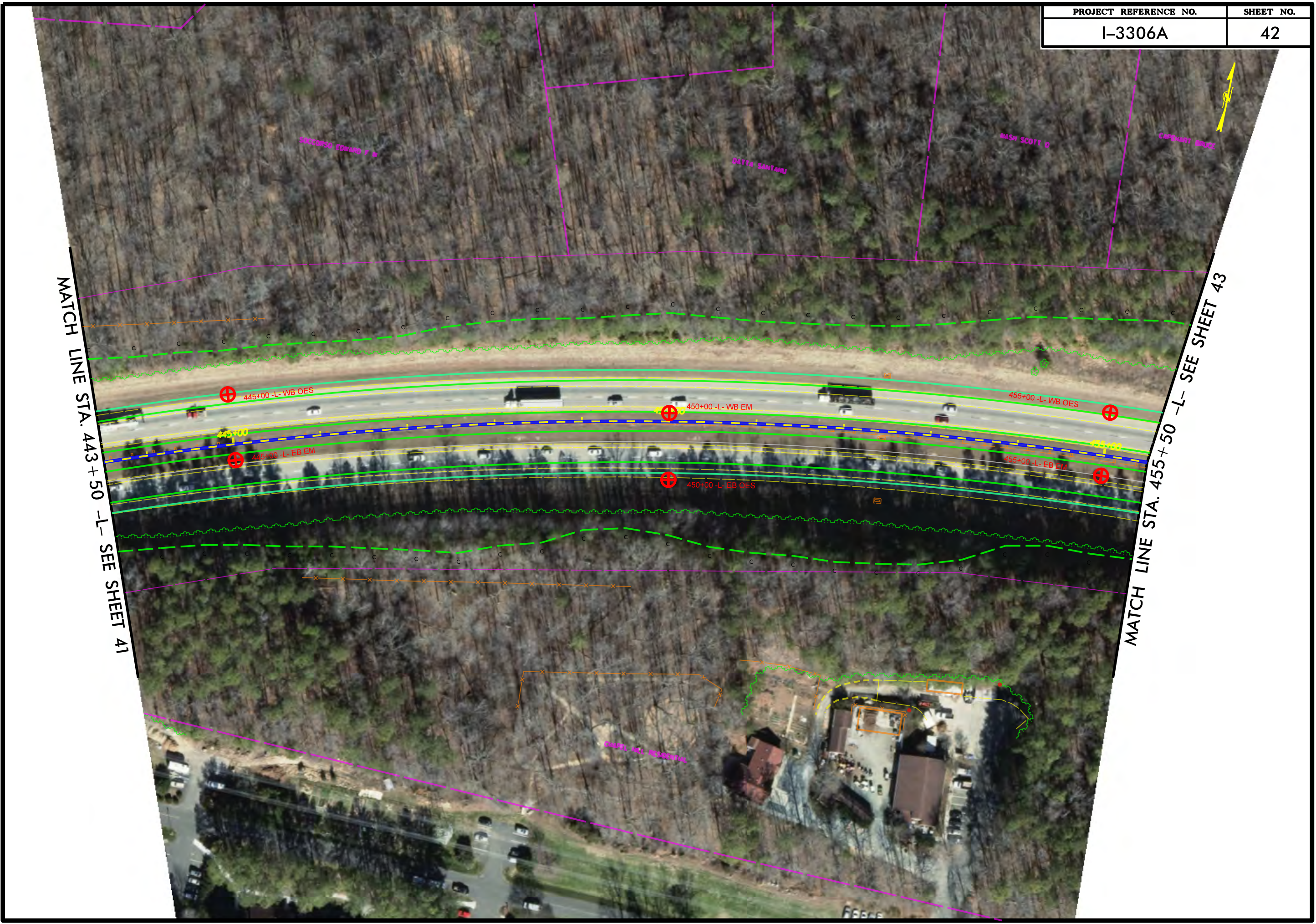
440+00

430+00

435+00

440+00

PROJECT REFERENCE NO.	SHEET NO.
I-3306A	42



MATCH LINE STA. 443 + 50 -L- SEE SHEET 41

MATCH LINE STA. 455 + 50 -L- SEE SHEET 43

SUSCORSO EDWARD F JR

DATTI SANTAMU

WASH SCOTT D

CAPEWART BRUCE

445+00 -L- WB OES

450+00 -L- WB EM

455+00 -L- WB OES

445+00 -L- EB EM

450+00 -L- EB OES

455+00 -L- EB EM

445+00

455+00

SHAWT L.M. RESIDENTIAL

460+00 -L- WB OSS		460+00 -L- WB OSL		460+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	11.0"	CONCRETE	10.0"
ABC	4.0"	ASPHALT	1.5"	PADL	3.0"
		ECONOCRETE/CTBC	3.0"		
		STAB. SUBGRADE	5.5"		

460+00 -L- EB ISS		460+00 -L- EB ISL		460+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	10.75"	CONCRETE	9.75"
ASPHALT	1.0"	ASPHALT	1.0"	ABC	4.75"
ECONOCRETE/CTBC	3.75"	ECONOCRETE/CTBC	4.0"		
STAB. SUBGRADE	5.0"	STAB. SUBGRADE	5.0"		

MATCH LINE STA. 455 + 50 -L- SEE SHEET 42

MATCH LINE STA. 469 + 50 -L- SEE SHEET 44

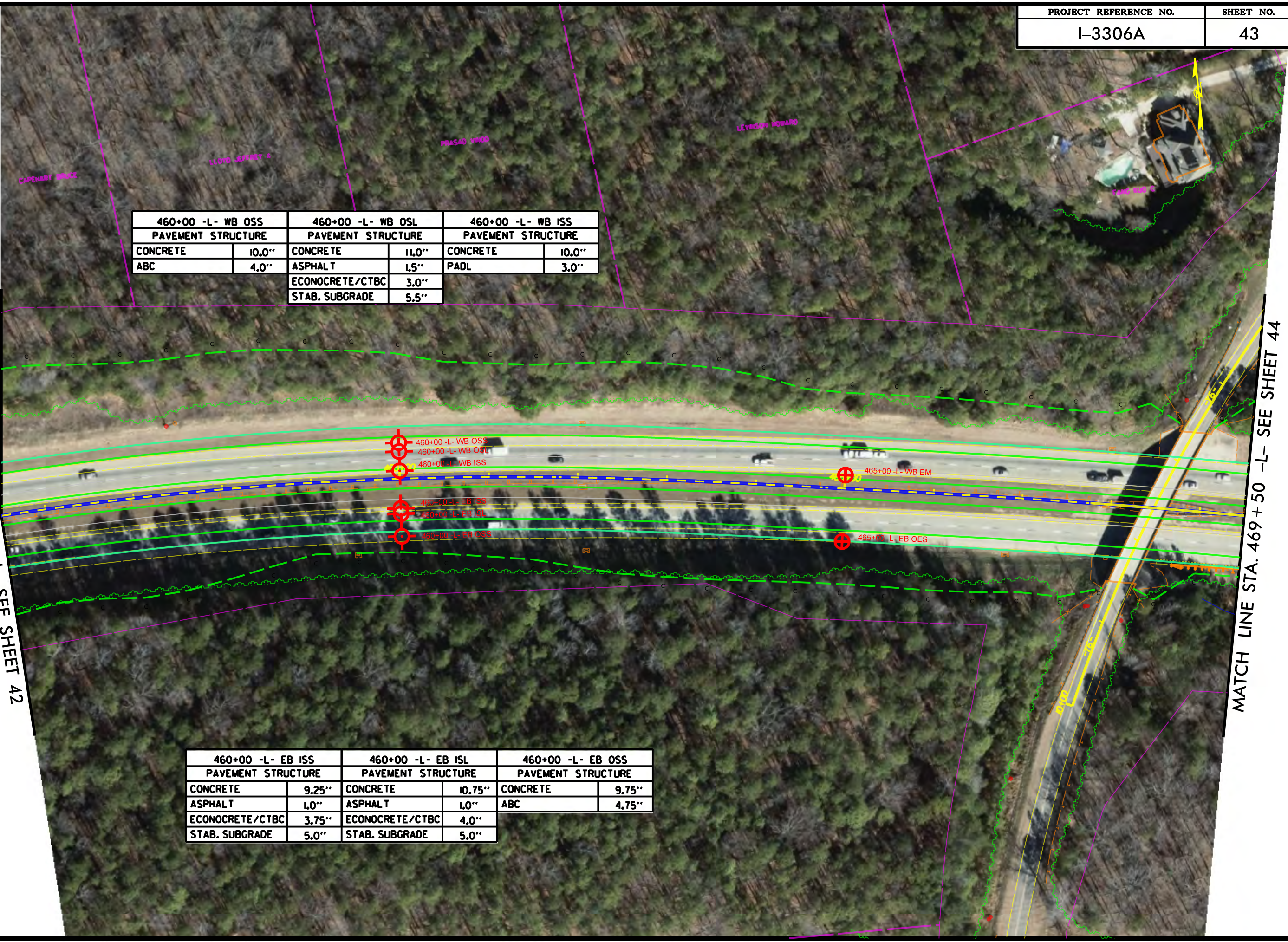
CAPEHART BRIDGE

LLOYD JEFFREY R

PRASAD VIKROD

LEVINSON HOWARD

PAGE 43 OF 43



MATCH LINE STA. 469 + 50 -L- SEE SHEET 43

MATCH LINE STA. 482 + 00 -L- SEE SHEET 45



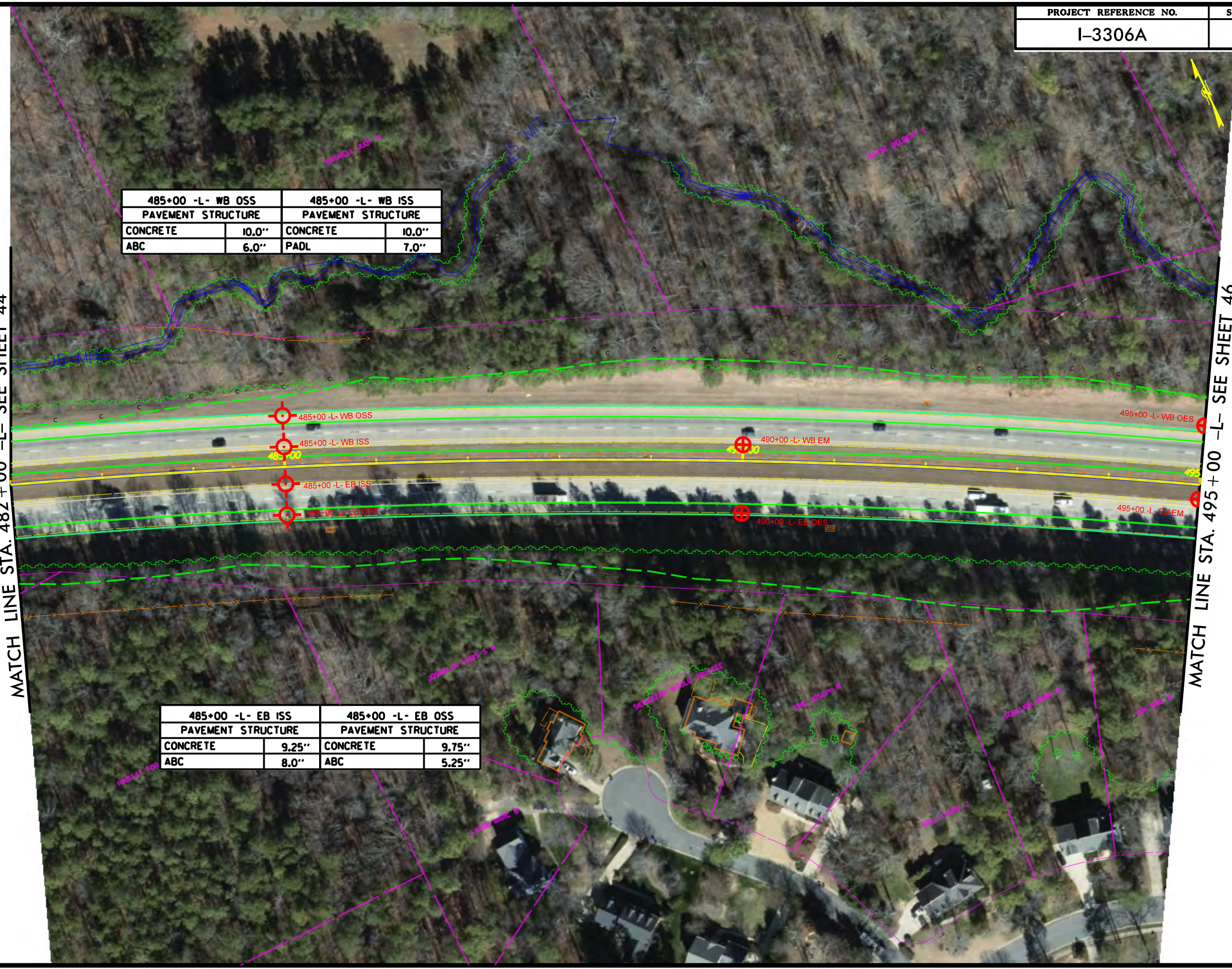
HABITAT FOR HUMANS ORANGE COUNTY NC NC

485+00 -L- WB OSS		485+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.0"	CONCRETE	10.0"
ABC	6.0"	PADL	7.0"

485+00 -L- EB ISS		485+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.25"	CONCRETE	9.75"
ABC	8.0"	ABC	5.25"

MATCH LINE STA. 482+00 -L- SEE SHEET 44

MATCH LINE STA. 495+00 -L- SEE SHEET 46



MATCH LINE STA. 495+00 -L- SEE SHEET 45

MATCH LINE STA. 509+00 -L- SEE SHEET 47



495+00 -L- WB OES

495+00 -L- EB EM

500+00 -L- WB EM

500+00 -L- EB OES

505+00 -L- WB OES

505+00 -L- EB EM

MATTHEWS WARENY

ATLAS DAVID

CUMBY MICHAEL F. PROTECTOR

FREEMAN, ANTHONY J.

KATLE DAVID M.

BALCON STORRETT W.

CARLSON DAVID

YELDM DARRYL CRAIG

EVANS EDWARD WALTER

COLLINS BRADLEY W.

SMITH EDWARD J. JR.

DUFFELDER ERIC J.

WALD MEING

JS MIT

MATCH LINE STA. 509+00 -L- SEE SHEET 46

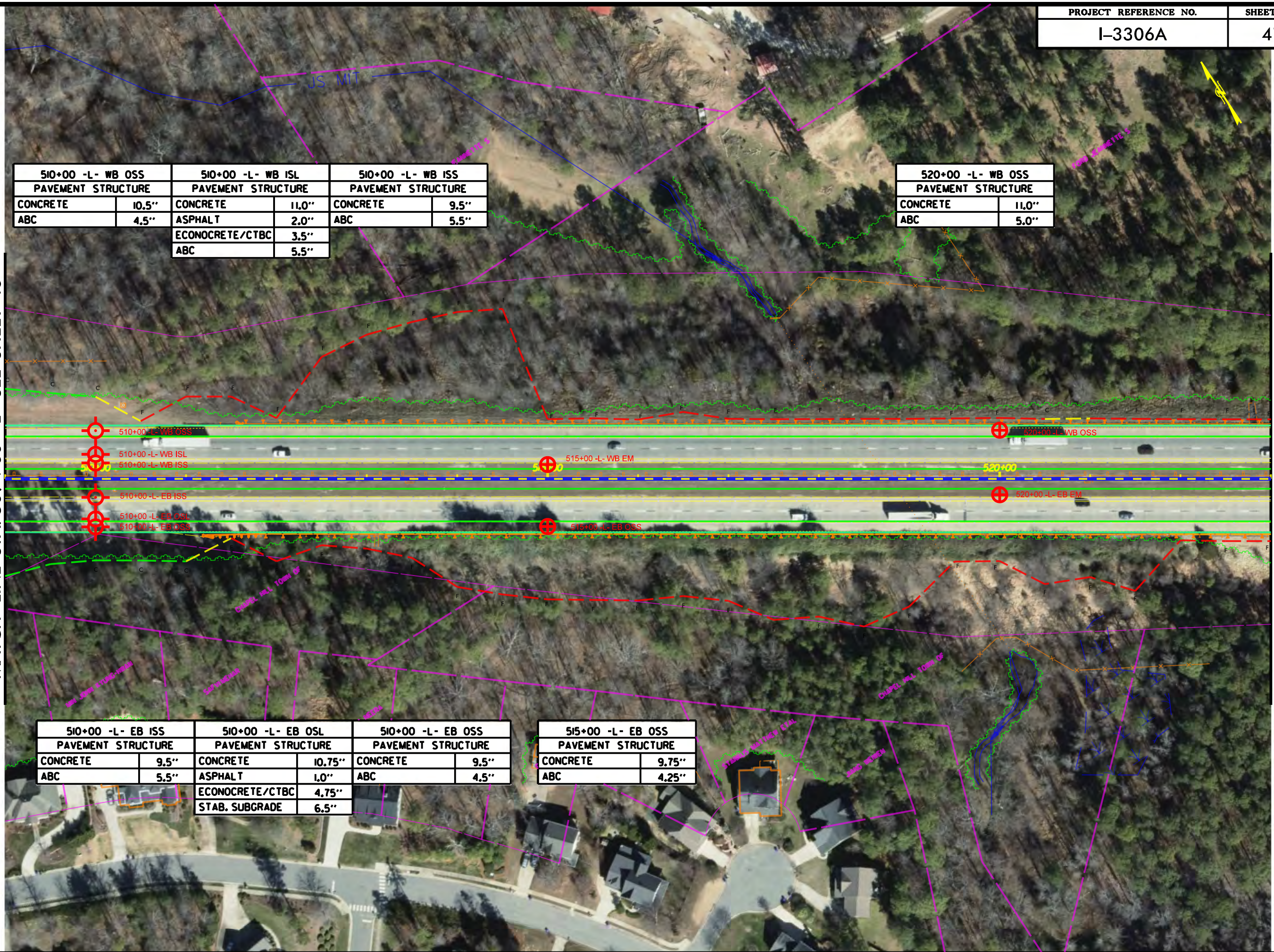
MATCH LINE STA. 523+00 -L- SEE SHEET 48

510+00 -L- WB OSS		510+00 -L- WB ISL		510+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	10.5"	CONCRETE	11.0"	CONCRETE	9.5"
ABC	4.5"	ASPHALT	2.0"	ABC	5.5"
		ECONCRETE/CTBC	3.5"		
		ABC	5.5"		

520+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	11.0"
ABC	5.0"

510+00 -L- EB ISS		510+00 -L- EB OSL		510+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.5"	CONCRETE	10.75"	CONCRETE	9.5"
ABC	5.5"	ASPHALT	1.0"	ABC	4.5"
		ECONCRETE/CTBC	4.75"		
		STAB. SUBGRADE	6.5"		

515+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.75"
ABC	4.25"





MATCH LINE STA. 523 + 00 -L- SEE SHEET 47

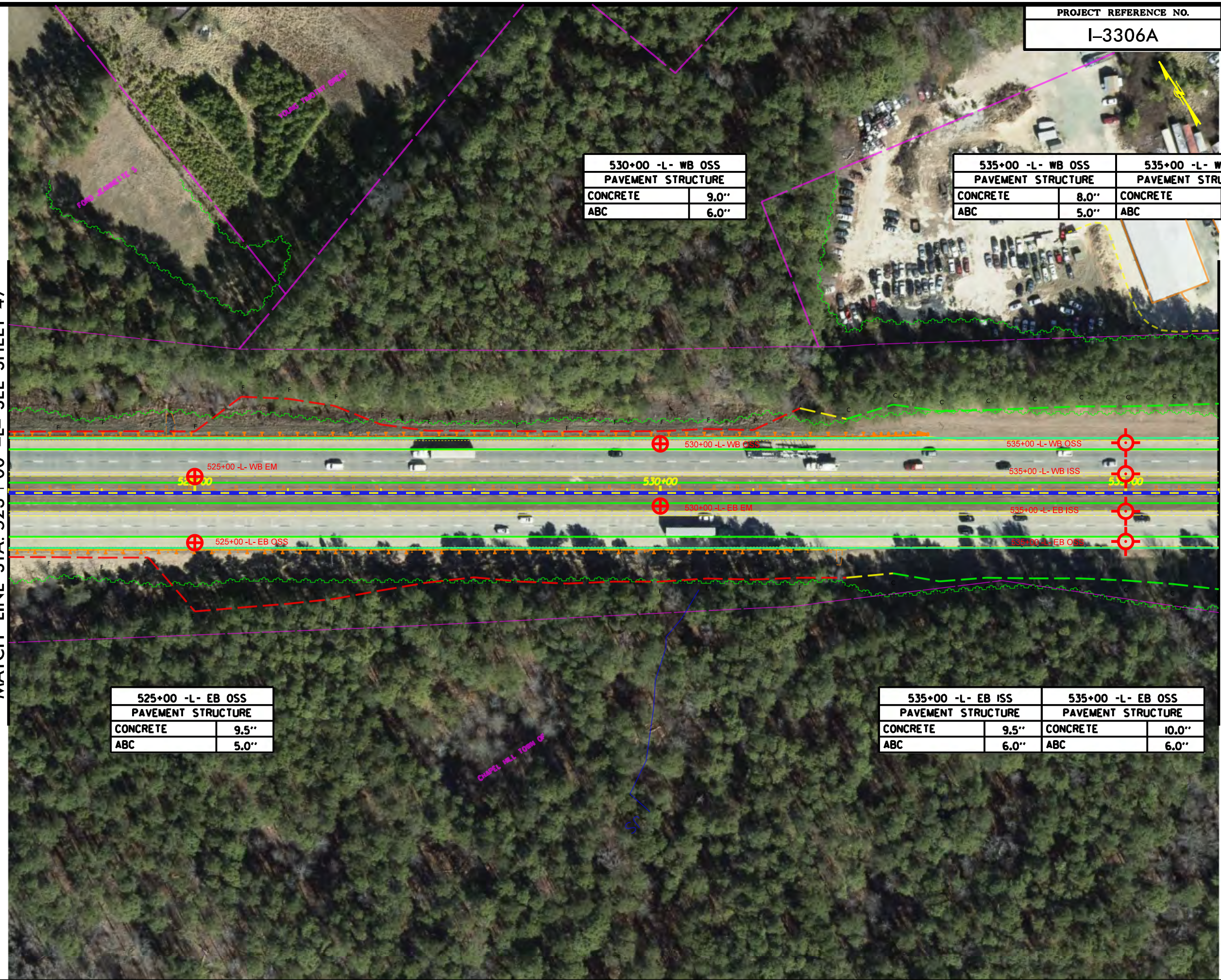
MATCH LINE STA. 536 + 00 -L- SEE SHEET 49

530+00 -L- WB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.0"
ABC	6.0"

535+00 -L- WB OSS		535+00 -L- WB ISS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	8.0"	CONCRETE	9.0"
ABC	5.0"	ABC	4.0"

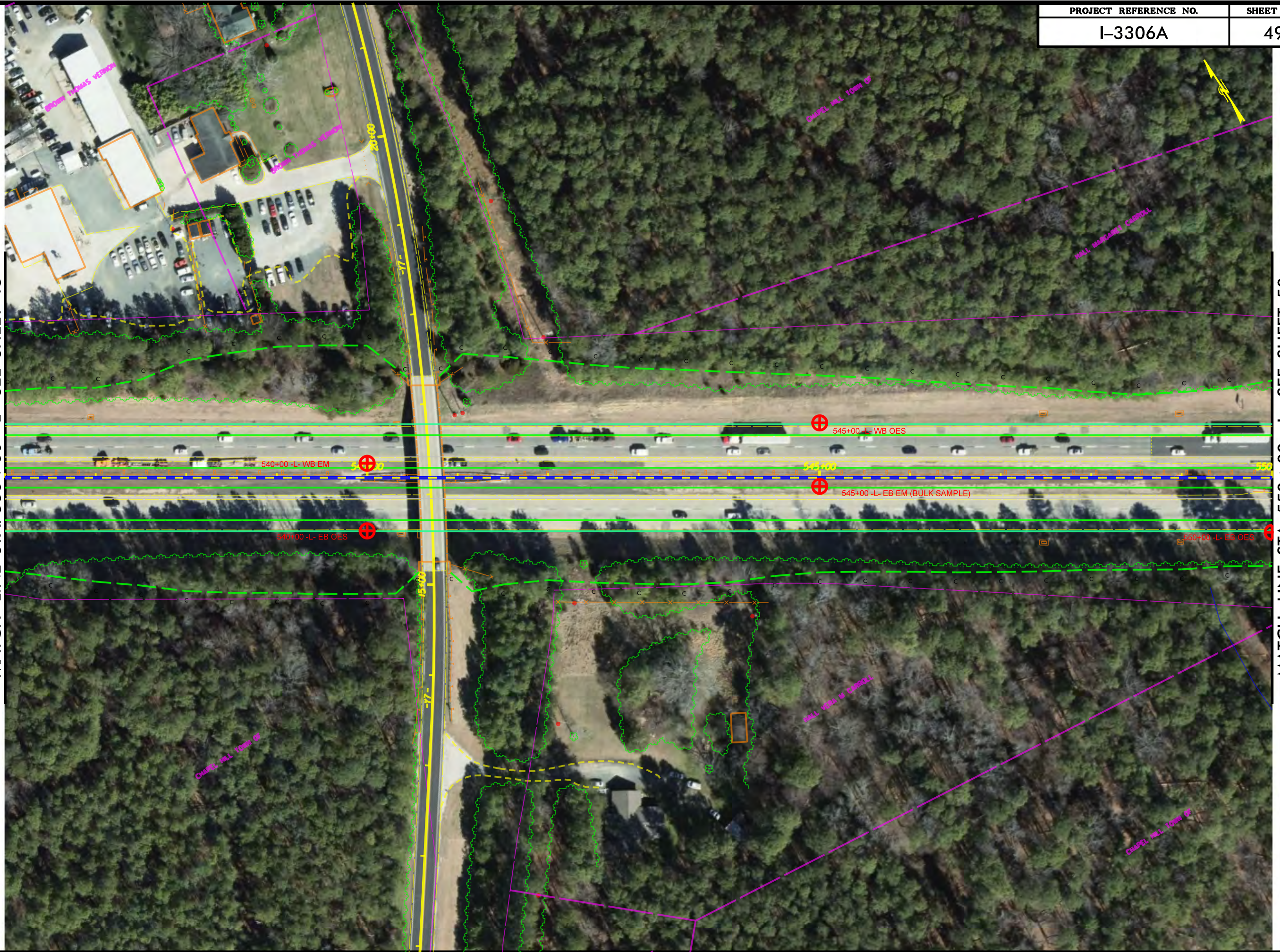
525+00 -L- EB OSS	
PAVEMENT STRUCTURE	
CONCRETE	9.5"
ABC	5.0"

535+00 -L- EB ISS		535+00 -L- EB OSS	
PAVEMENT STRUCTURE		PAVEMENT STRUCTURE	
CONCRETE	9.5"	CONCRETE	10.0"
ABC	6.0"	ABC	6.0"



MATCH LINE STA. 536+00 -L- SEE SHEET 48

MATCH LINE STA. 550+00 -L- SEE SHEET 50



MATCH LINE STA. 550+00 -L- SEE SHEET 49



**PROJECT: 34178**

**REFERENCE: I-3306A**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	51	329

## ***APPENDIX A***

***PAVEMENT INVESTIGATION DATA SHEETS -YRPD-  
DYNAMIC CONE PENETROMETER DATA -YRPD-  
PAVEMENT CORE PHOTOGRAPHS -YRPD-***

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-85 NB TO I-40 EB RAMP

<b>Date:</b>	1/30/2019, 1/31/2019, 2/14/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting		
15+00 -YRPD- EB ISS	CUT 6	EB OSL 12.0	EB OSS 10.0	3.0 FY	C	CONCRETE CTBC STABILIZED SUB. (18.0)	10.5		3.5		4.0	1.2' - 3.5' RESIDUAL: BROWN-TAN, SILTY CLAY	S-110	A-7-6	W	6	DIAMOND GRINDING EB OSS/OES DROP OFF	838,532	1,963,546		
		EB ISL 12.0	EB ISS 4.0										3.5' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	REF S-109	A-6	M					
15+00 -YRPD- EB EM				9.0 FY									0' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	S-109	A-6	M		6		838,535	1,963,551
20+00 -YRPD- EB OES	CUT 15	EB ACCEL 8.0	EB OSS 6.0	7.5 FW	S (LT)	CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (21.75)						0' - 3.2' RESIDUAL: BROWN WITH RED, SILTY CLAY	REF S-97	A-7-6	M	AR 3.3	DIAMOND GRINDING MODERATE SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINT INTERSECTIONS IN EB ACCEL AND EB OSL	838,885	1,963,191		
		EB OSL 12.0	EB ISS 4.0										1.8' - 4.6' RESIDUAL: BROWN WITH RED, SILTY CLAY	S-97	A-7-6	M		AR 4.6		838,893	1,963,201
20+00 -YRPD- EB ACCEL		EB ISL 12.0		4.0 FW									0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-108	A-7-6	M		6		838,917	1,963,227
20+00 -YRPD- EB EM				8.0 FY																	
30+00 -YRPD- EB OES	CUT 10	EB ACCEL 16.0	EB OSS 4.0	7.0 FW	C							0' - 3.5' RESIDUAL: BROWN, SILTY CLAY	REF S-108	A-7-6	M	6	DIAMOND GRINDING LOW SEVERITY SPALLING ON LONGITUDINAL JOINT BETWEEN EB OSS AND EB ACCEL	839,580	1,962,480		
		EB OSL 12.0	GORE 5.0										3.5' - 6.0' RESIDUAL: GRAY-BROWN, C-F SANDY CLAY	S-200	A-6	W					
30+00 -YRPD- EB EM		EB ISL 12.0	EB ISS 4.0	7.0 FY									0' - 6.0' RESIDUAL: TAN-BROWN, SILTY CLAY	S-107	A-7-6	M		6		839,624	1,962,519

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal    NM = Not Measured  
 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-85 NB TO I-40 EB RAMP

<b>Date:</b>	1/30/2019, 1/31/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting
40+00 -YRPD- EB OES	FILL 15	EB OSL 12.0	EB OSS 10.0	14.0 FW	C						0' - 6.0' ROADWAY EMBANKMENT: BROWN, TAN, C-F SANDY CLAY	S-96	A-6	M	6	DIAMOND GRINDING  LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN EB OSL AND EB ISL  LOW SEVERITY AGGREGATE POP-OUTS IN EB OSL AND EB ISL	840,208	1,961,709	
		EB ISL 12.0	EB ISS 4.0																
40+00 -YRPD- EB OSS				9.0 FW		CONCRETE ABC (14.0)	8.75			5.25	1.2' - 6.0' ROADWAY EMBANKMENT: BROWN, TAN, C-F SANDY CLAY	REF S-96	A-6	M	6			840,212	1,961,712
40+00 -YRPD- EB ISL				4.0 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	10.75	1.0	4.0	6.25	1.8' - 6.0' ROADWAY EMBANKMENT: BROWN, TAN, C-F SANDY CLAY	REF S-96	A-6	M	6			840,235	1,961,728
40+00 -YRPD- EB ISS				3.5 FY		CONCRETE ABC (15.5)	11.0			4.5	1.2' - 6.0' ROADWAY EMBANKMENT: BROWN, TAN, C-F SANDY CLAY	REF S-96	A-6	M	6			840,242	1,961,733
40+00 -YRPD- EB EM				7.5 FY							0' - 6.0' ROADWAY EMBANKMENT: BROWN, TAN, C-F SANDY CLAY	REF S-96	A-6	M	6			840,245	1,961,735
50+00 -YRPD- EB OES	CUT 12	EB OSL 12.0	EB OSS 10.0	13.5 FW	C						0' - 6.0' RESIDUAL: RED-BROWN, SILTY CLAY	S-95	A-7-5	SAT.	6		ASPHALT PAVEMENT  LOW SEVERITY TRANSVERSE CRACKING IN I-40 EB OSS  MODERATE SEVERITY LONGITUDINAL CRACKING IN I-40 EB OSS AND I-40 EB OSL	840,759	1,960,876
		EB ISL 12.0	I-85 NB ISS NM																
		GORE NM																	
		I-85 NB OSL NM																	
		I-85 NB CL NM																	
		I-85 NB ISL NM																	

Notes:

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

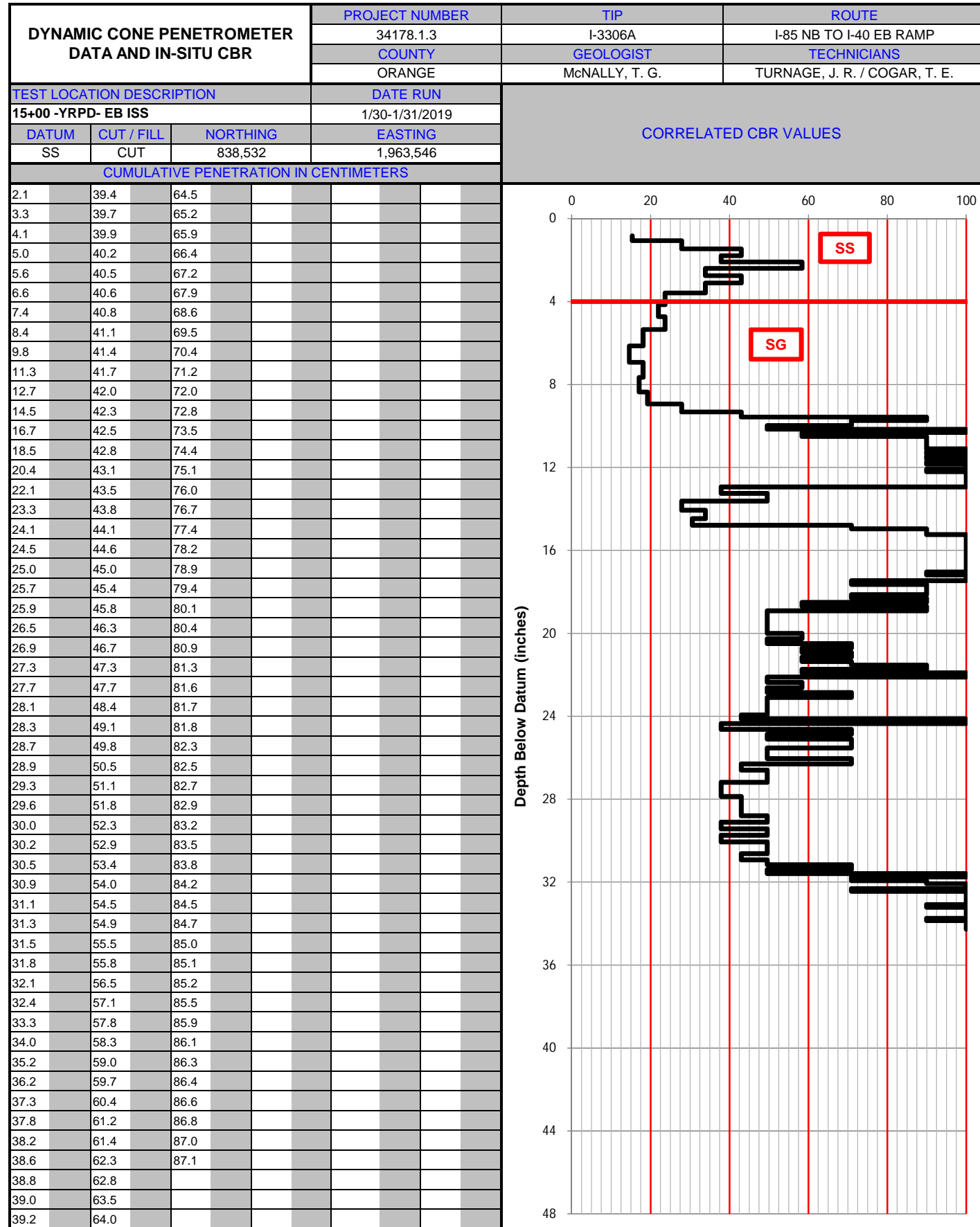
<b>County:</b>	ORANGE
<b>Route:</b>	I-85 NB TO I-40 EB RAMP

<b>Date:</b>	1/30/2019, 1/31/2019
<b>Notes By:</b>	TIM MCNALLY

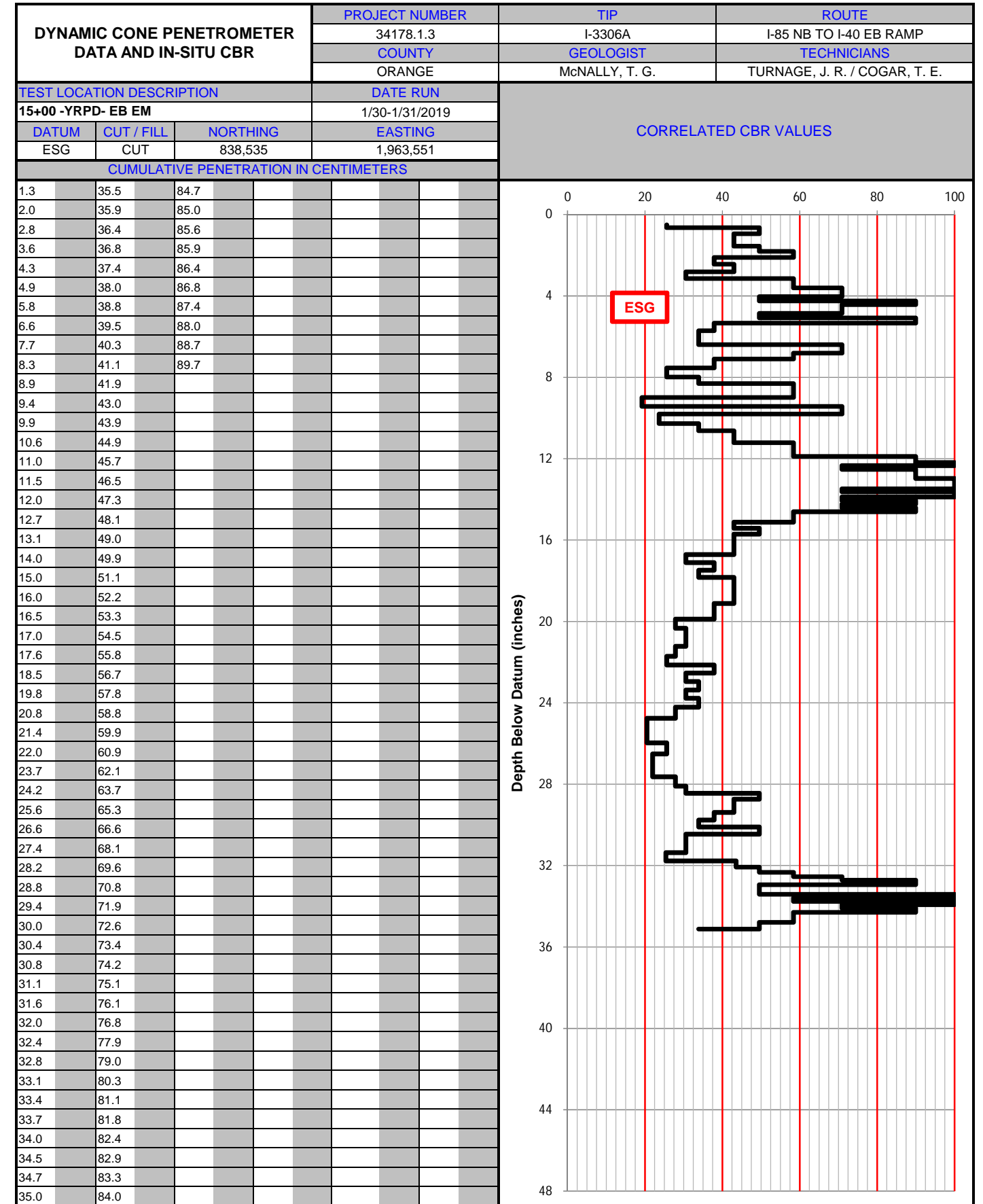
Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description		Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting
55+00 -YRPD- EB OES	CUT 12	EB OSL 12.0	I-40 EB OSS 10.0	14.0 FW	C						0' - 1.9' RESIDUAL: BROWN, C-F SANDY CLAY	S-93	A-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN EB OSS	841,028	1,960,457	
		EB ISL 7.0	I-85 EB ISS NM										1.9' - 6.0' RESIDUAL: TAN-BROWN, SILTY CLAY	S-94	A-7-6	M		MODERATE SEVERITY LONGITUDINAL CRACKING IN I-40 EB OSS AND I-40 EB OSL	
55+00 -YRPD- EB OSS		I-85 NB OSL NM	I-85 NB CL NM	7.5 FW		ASPHALT ABC STABILIZED SUB. (17.0)		5.25		5.75	6.0	1.4' - 2.0' RESIDUAL: BROWN, C-F SANDY CLAY	REF S-93	A-6	M	6	I-40 EB OSS / OES DROP OFF	841,034	1,960,460
	I-85 NB CL NM												2.0' - 6.0' RESIDUAL: TAN-BROWN, SILTY CLAY	REF S-94	A-7-6	M			
55+00 -YRPD- EB OSL		I-85 NB ISL NM		3.5 FW		ASPHALT ABC STABILIZED SUB. (28.0)		12.0		6.0	10.0	2.3' - 3.6' RESIDUAL: BROWN, C-F SANDY CLAY	REF S-93	A-6	M	6		841,043	1,960,466

Notes:  
 NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal    NM = Not Measured  
 WB = Westbound    MP = Mile Post    (O) = Outside





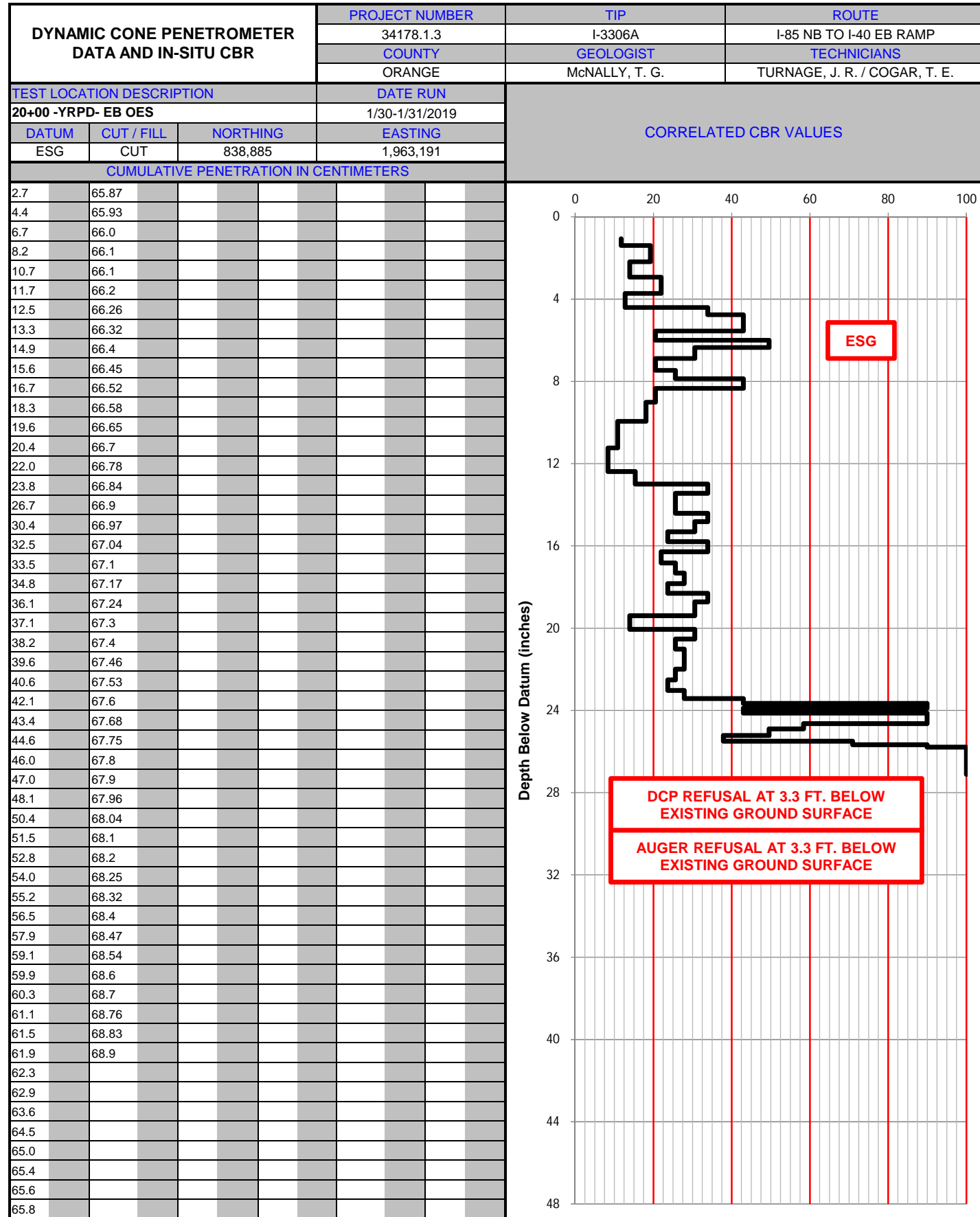
Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



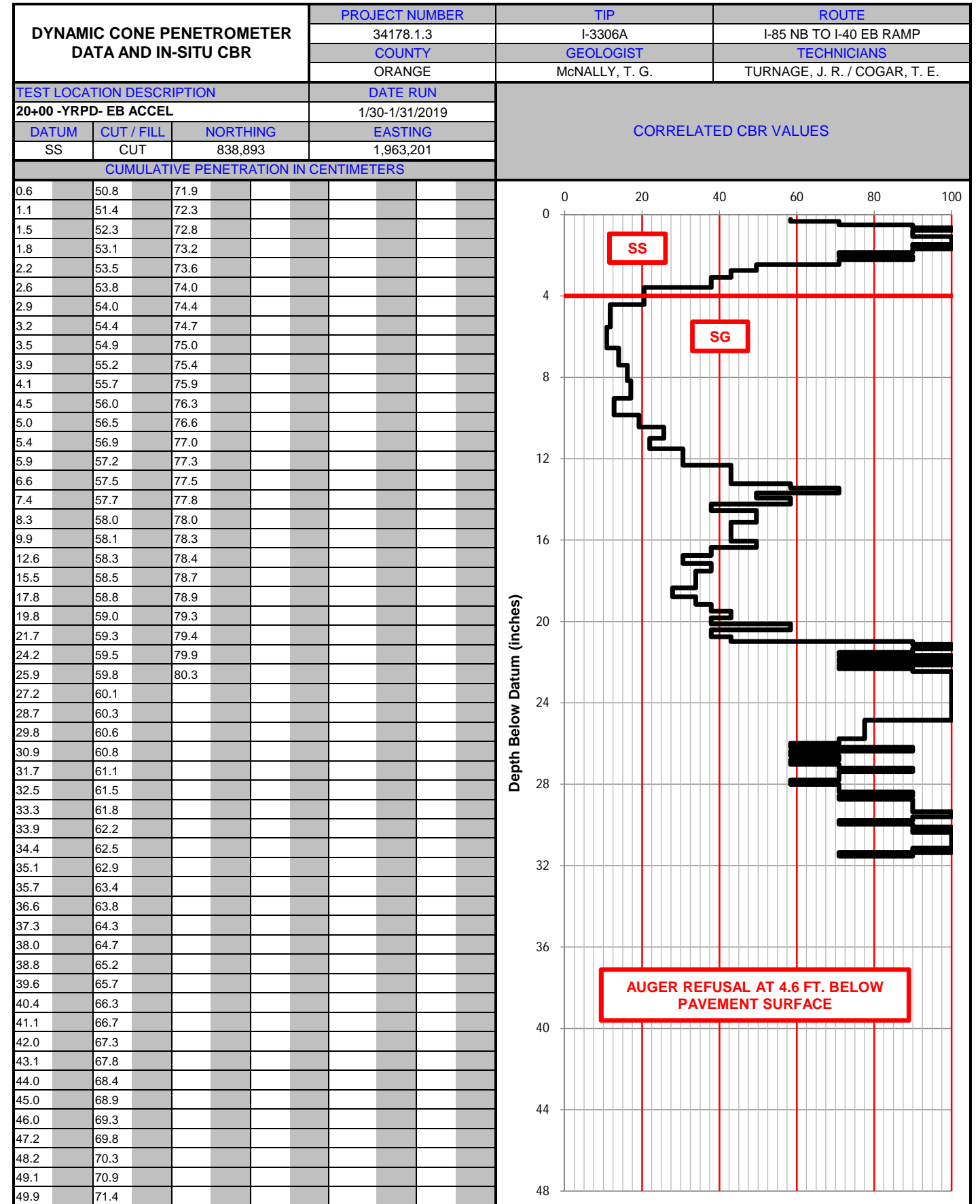
Notes:  
 SG = Subgrade  
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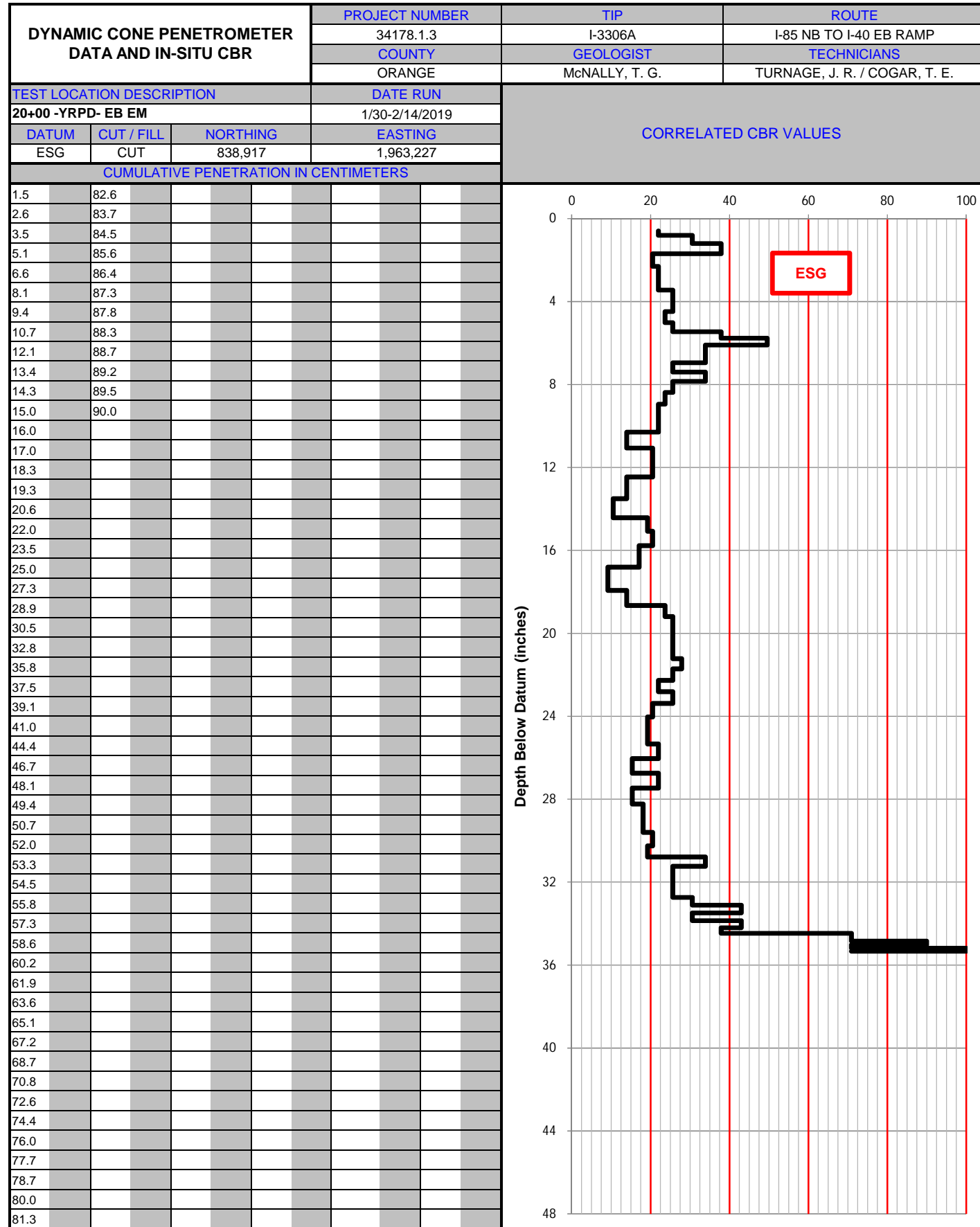


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

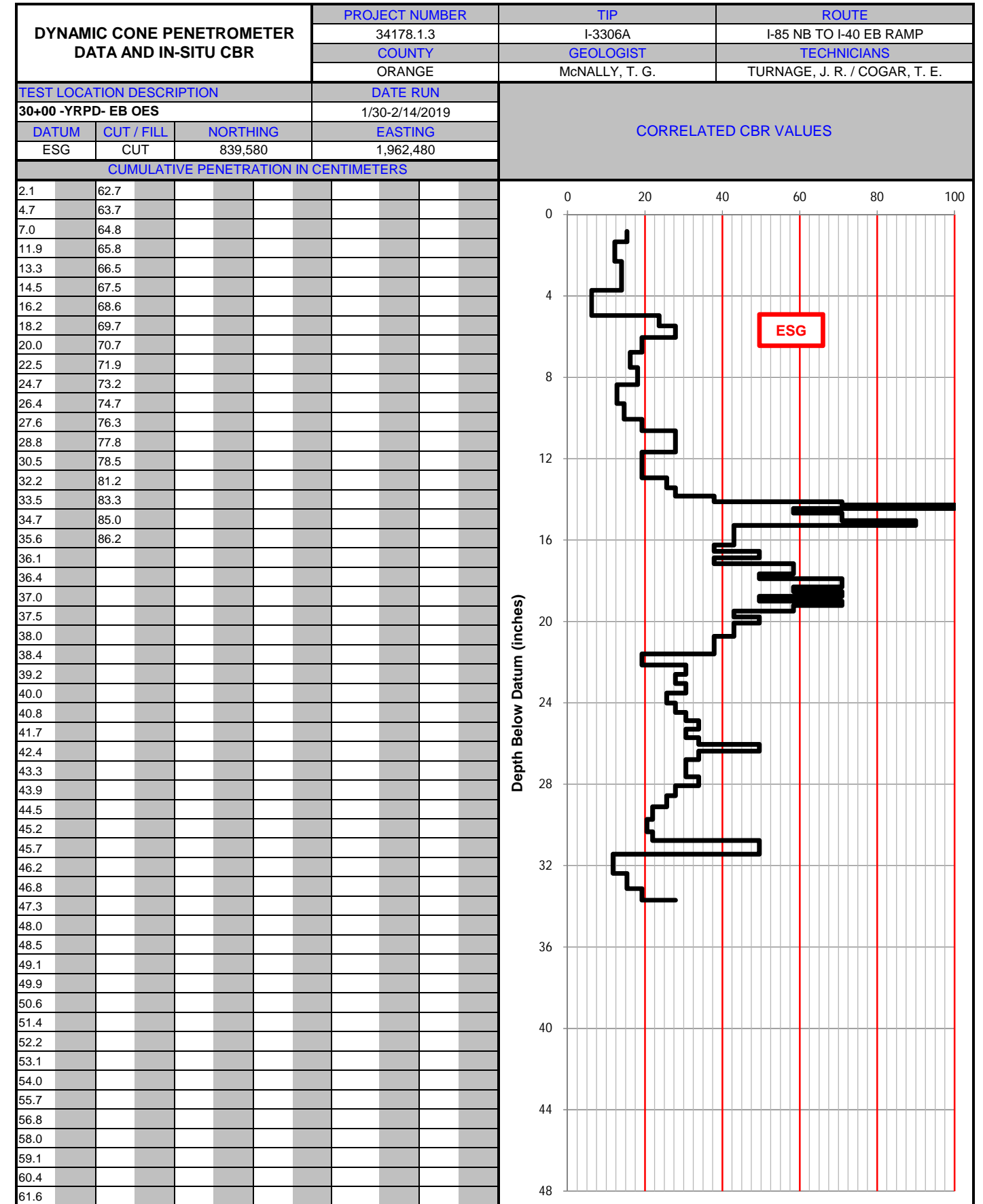


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



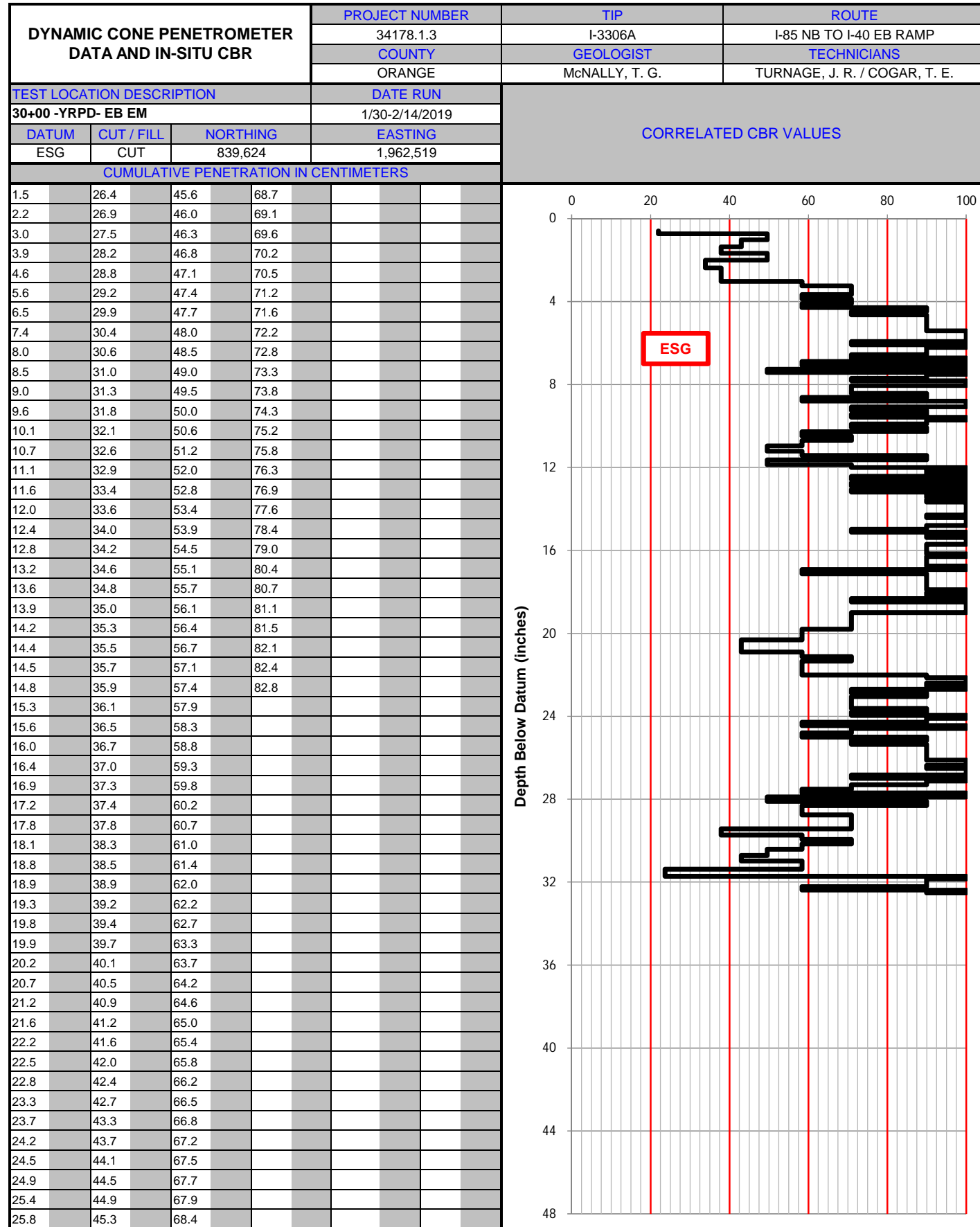


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

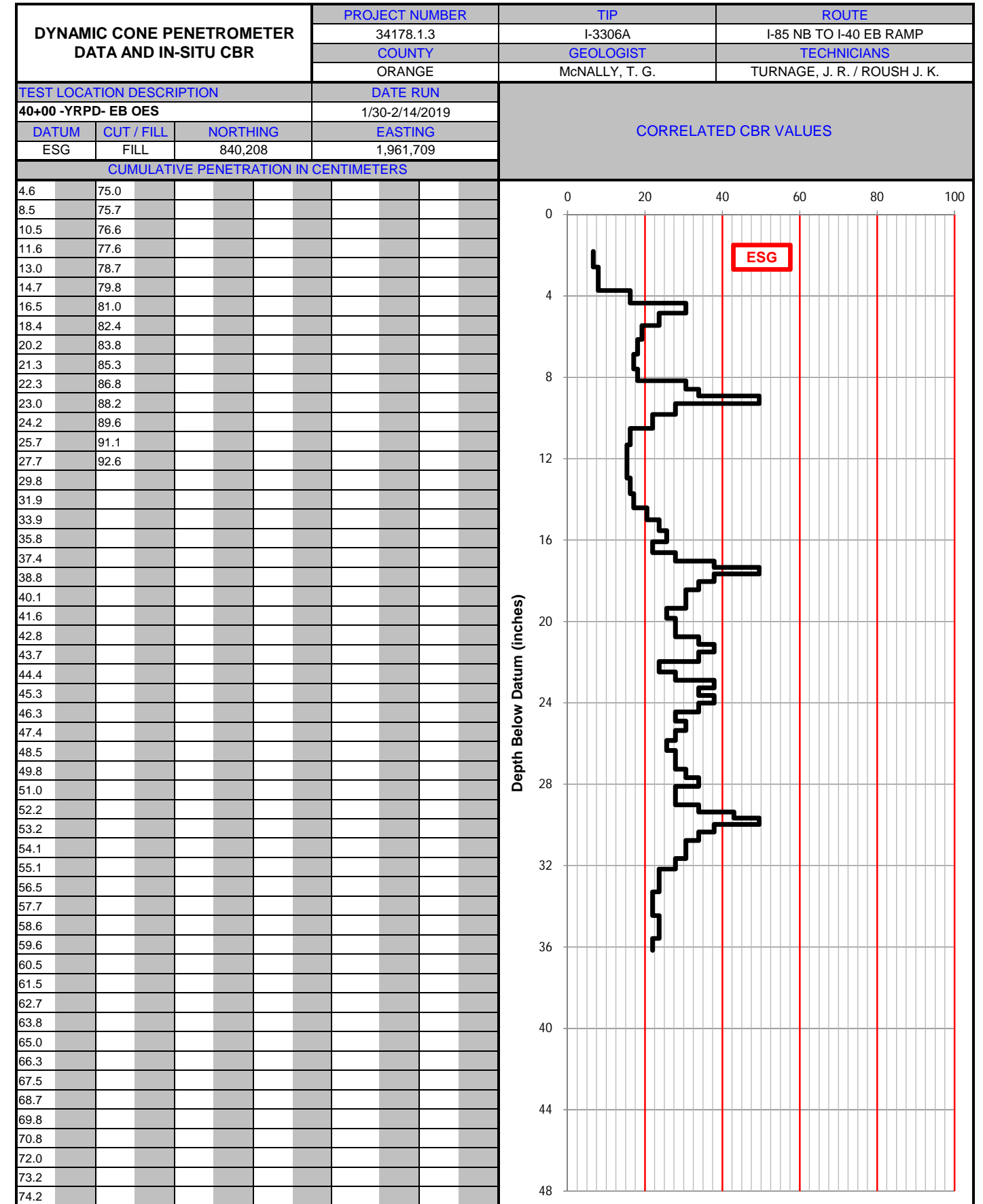


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





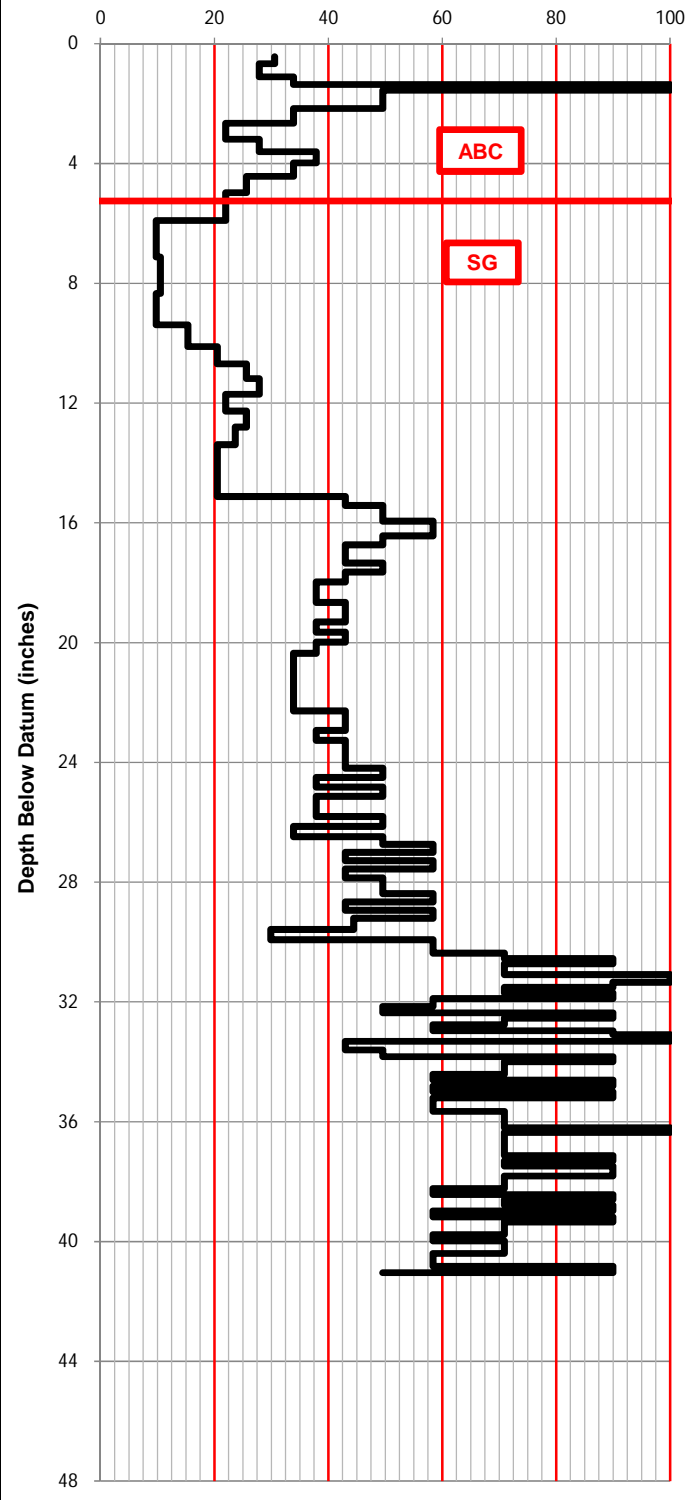
Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



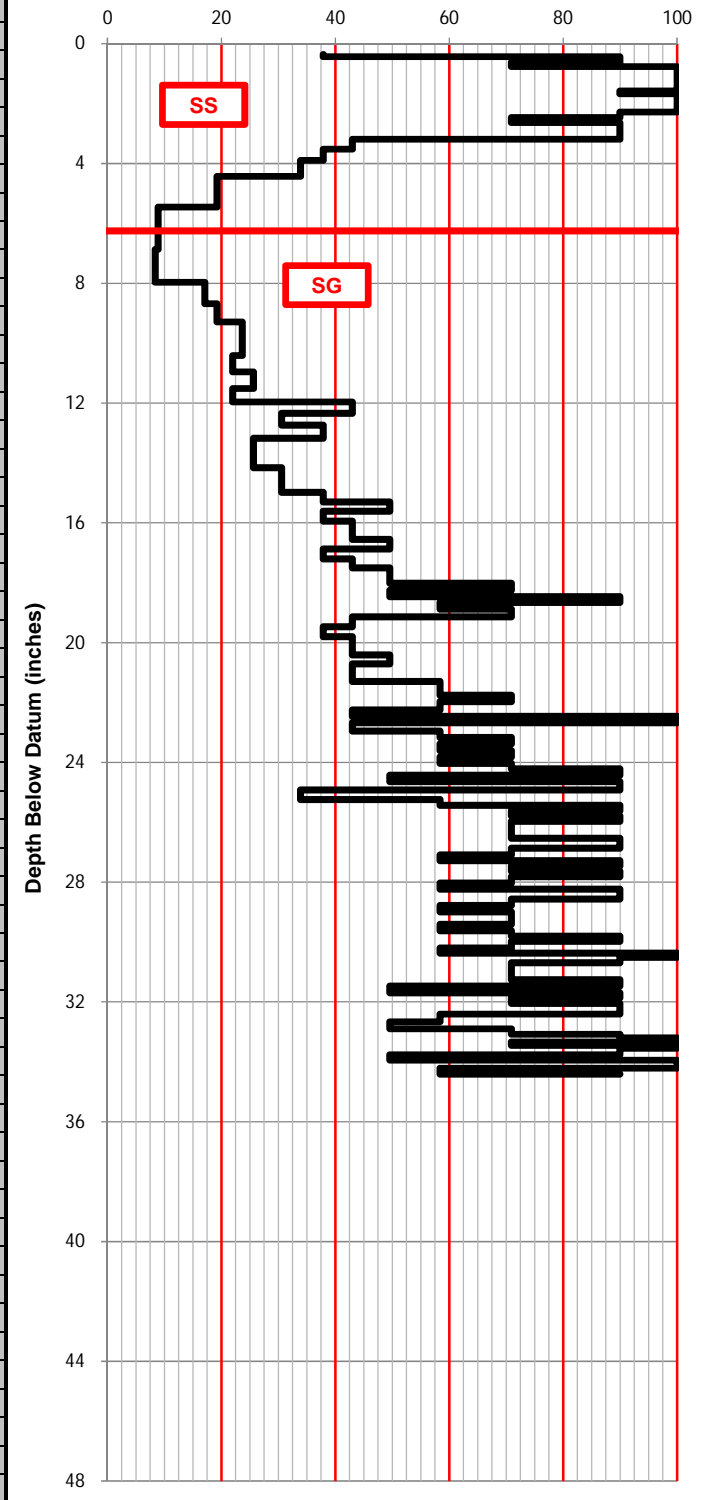
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-85 NB TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
40+00 -YRPD- EB OSS				1/30-1/31/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	840,212	1,961,712			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.1	61.1	92.6				
2.3	61.8	93.1				
3.3	62.7	93.6				
3.6	63.4	94.1				
4.3	64.3	94.5				
5.0	65.2	95.0				
6.0	65.9	95.4				
7.5	66.9	95.8				
8.7	67.6	96.3				
9.6	68.2	96.8				
10.6	69.0	97.4				
11.9	69.6	97.8				
13.4	70.4	98.3				
16.6	71.1	98.7				
19.6	71.8	99.3				
22.8	74.4	99.7				
24.9	73.2	100.2				
26.5	73.8	100.1				
27.8	74.6	101.3				
29.0	75.7	101.8				
30.5	76.3	102.3				
31.8	76.9	102.9				
33.2	77.4	103.5				
34.8	77.8	103.9				
36.4	78.3	104.6				
38.0	78.8					
38.8	79.1					
39.5	79.4					
40.2	79.8					
40.8	80.3					
41.4	80.7					
42.1	81.3					
42.9	82.0					
43.7	82.4					
44.4	82.9					
45.2	83.5					
46.1	83.9					
47.0	84.2					
47.8	85.0					
48.6	85.7					
49.5	86.1					
50.3	86.6					
51.2	87.1					
52.2	87.7					
53.2	88.1					
54.2	88.7					
55.2	89.1					
56.2	89.7					
57.0	90.3					
57.8	90.8					
58.7	91.3					
59.5	91.8					
60.3	92.1					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

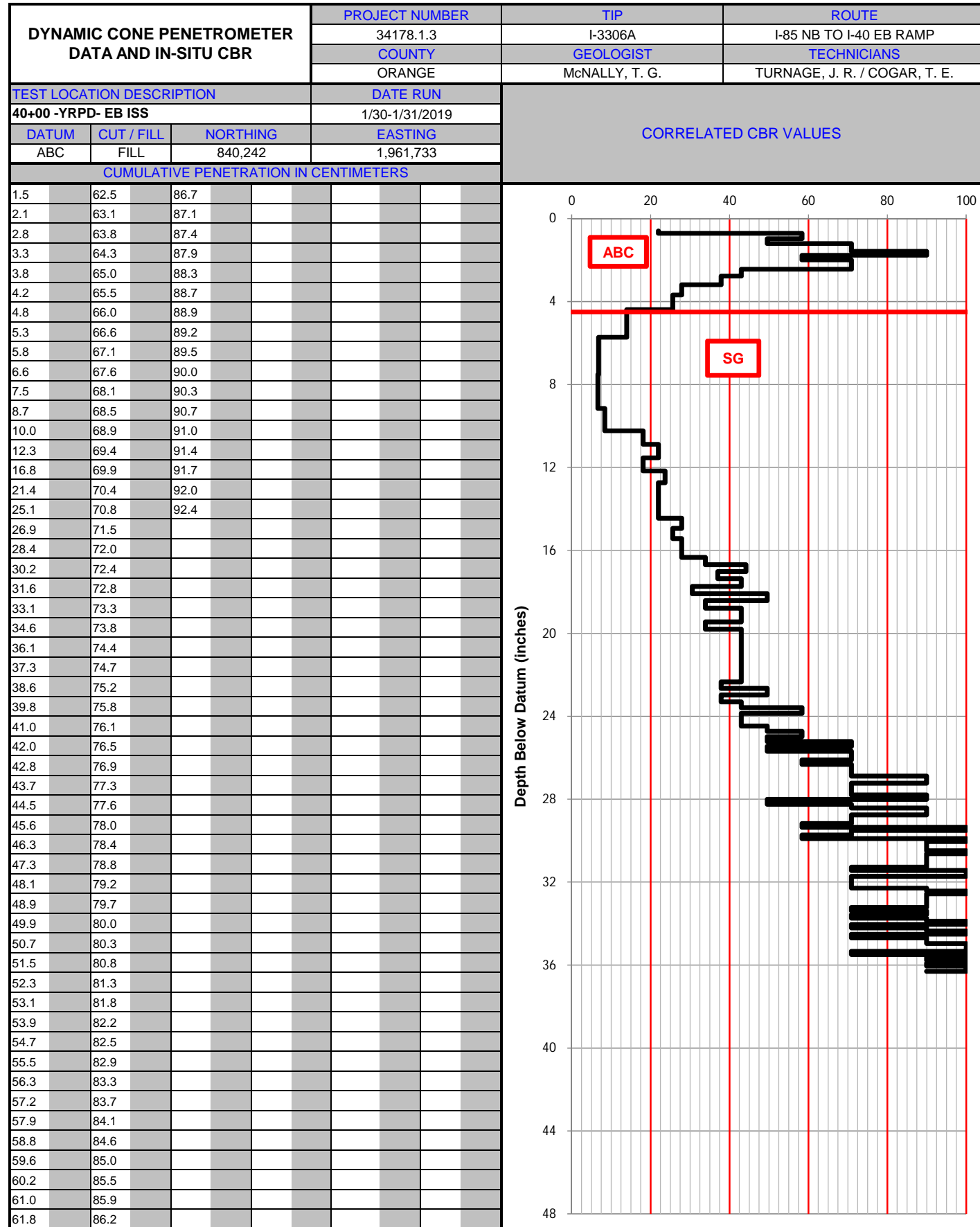


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-85 NB TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
40+00 -YRPD- EB ISL				1/30-1/31/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SS	FILL	840,235	1,961,728			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.9	45.5	75.5				
1.3	46.0	75.9				
1.8	46.7	76.4				
2.1	47.1	77.0				
2.3	47.7	77.3				
2.4	48.2	77.7				
2.7	49.0	78.2				
2.9	49.9	78.7				
3.2	50.7	79.2				
3.4	51.5	79.6				
3.5	52.2	80.3				
3.8	53.0	80.7				
4.2	53.8	81.2				
4.3	54.4	81.6				
4.5	55.0	82.0				
4.8	55.5	82.6				
5.1	56.1	83.3				
5.3	56.9	83.8				
5.6	57.2	84.2				
6.0	58.0	84.4				
6.5	58.6	84.9				
6.9	59.1	85.0				
7.3	59.7	85.4				
7.7	60.2	86.1				
8.5	60.8	86.3				
9.4	61.3	86.6				
10.4	61.7	87.2				
12.1	62.4	87.6				
15.6	62.8					
19.3	63.8					
21.2	64.4					
22.9	64.8					
24.3	65.3					
25.7	65.7					
27.2	66.2					
28.5	66.7					
30.0	67.2					
30.8	67.6					
31.9	68.0					
32.8	68.5					
34.1	69.1					
35.4	69.5					
36.5	70.0					
37.6	70.4					
38.5	70.9					
39.2	71.5					
40.1	71.9					
40.9	72.3					
41.7	72.8					
42.4	73.4					
43.3	73.9					
44.1	74.4					
44.8	75.0					

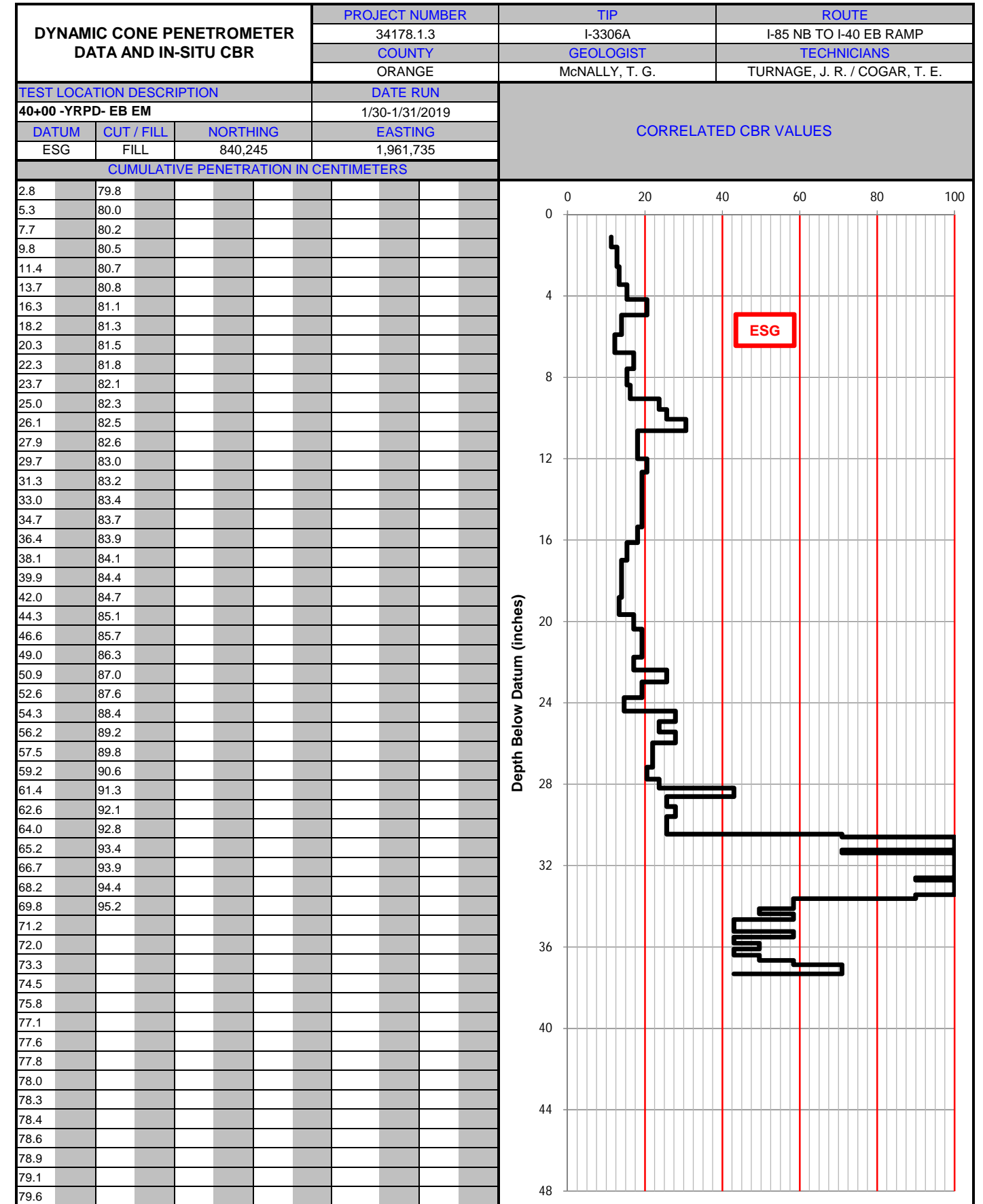


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



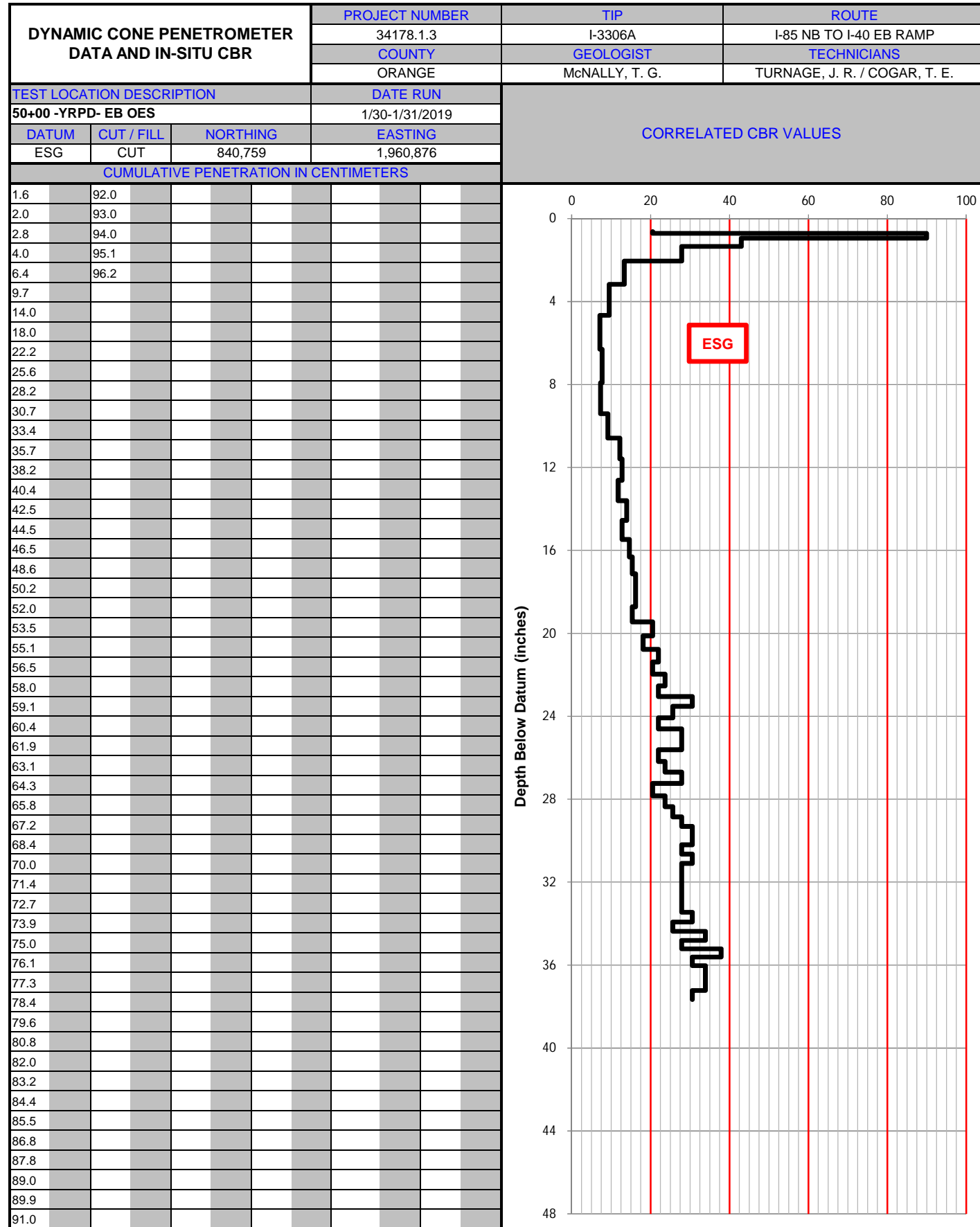


Notes:  
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 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

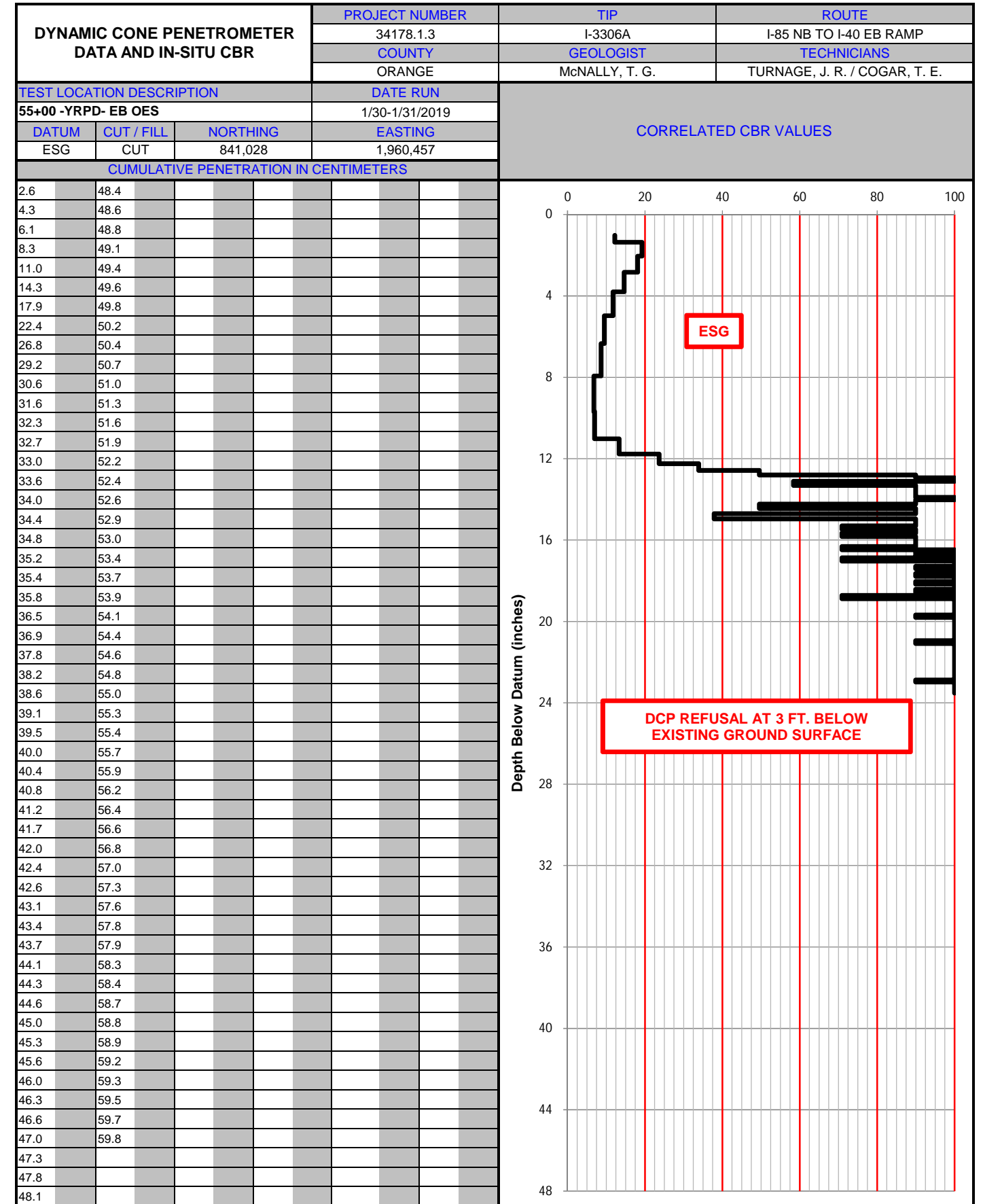


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



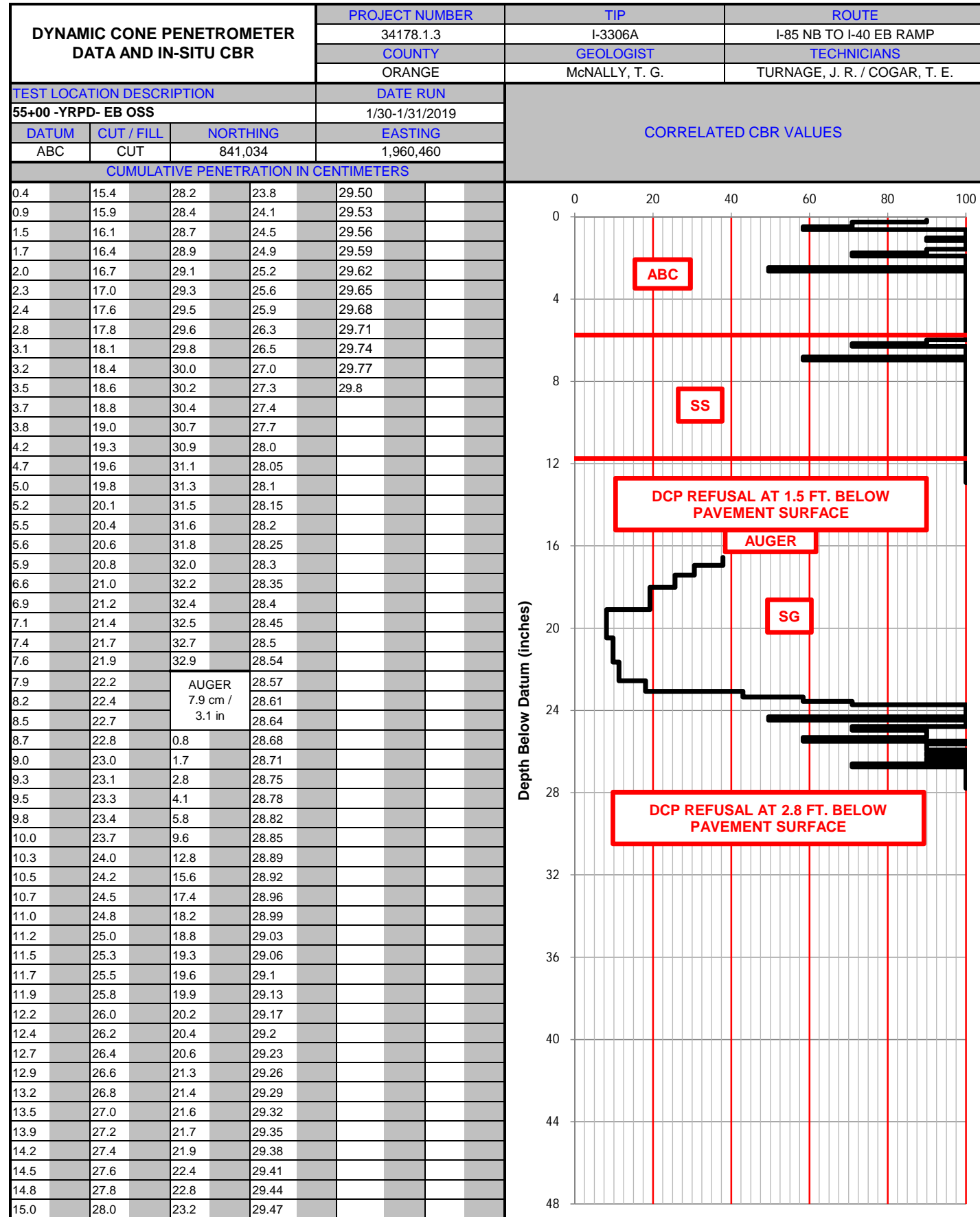


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

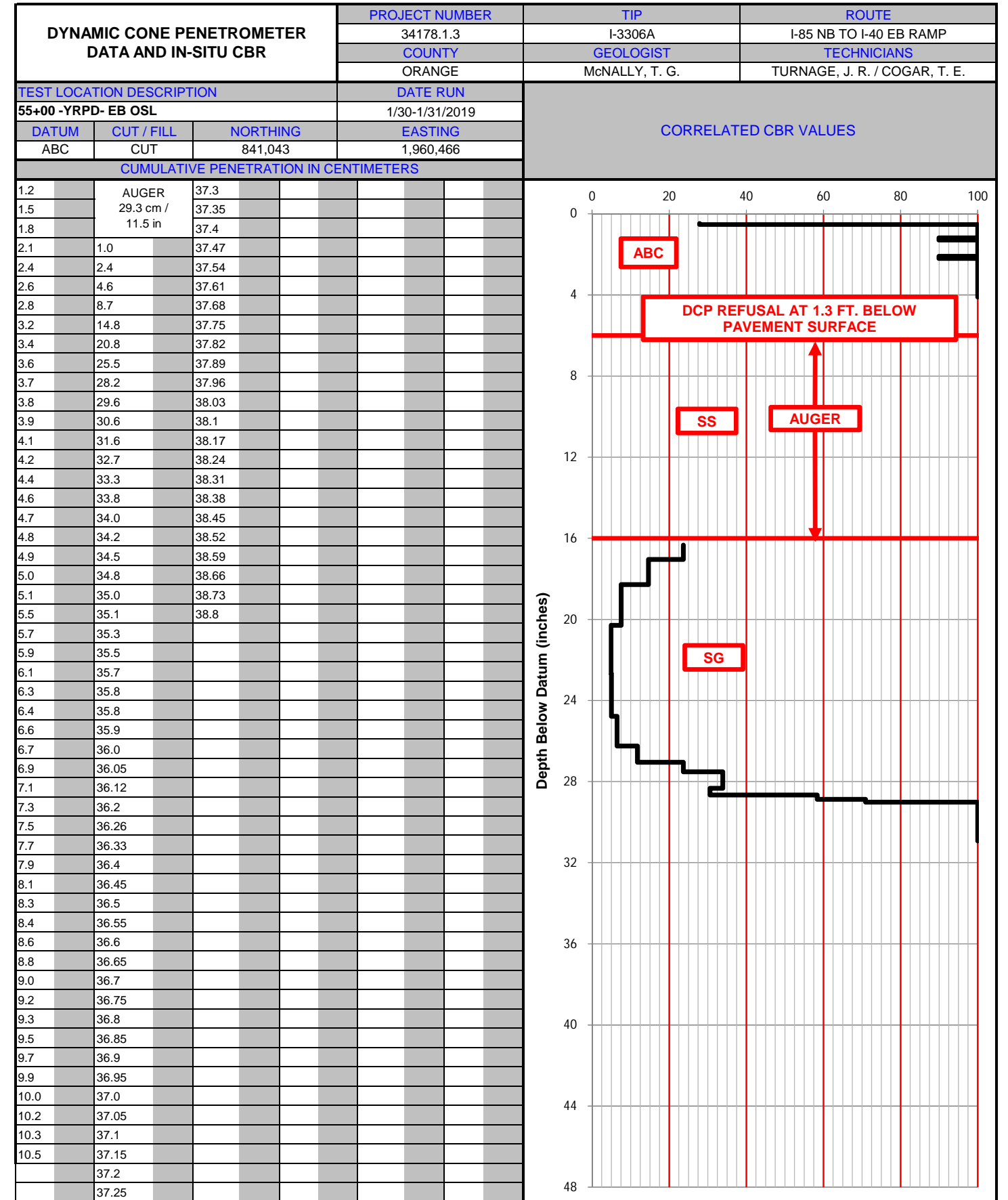


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



# PAVEMENT CORE PHOTOGRAPHS

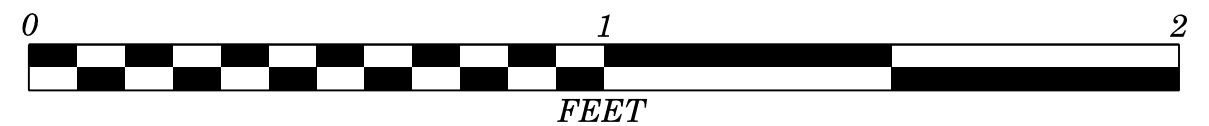
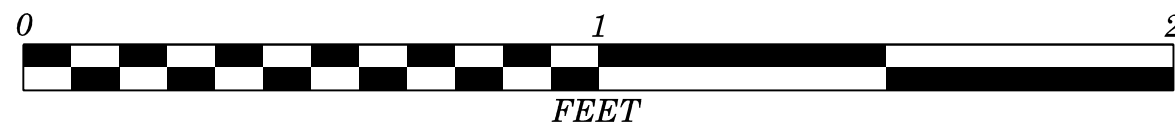
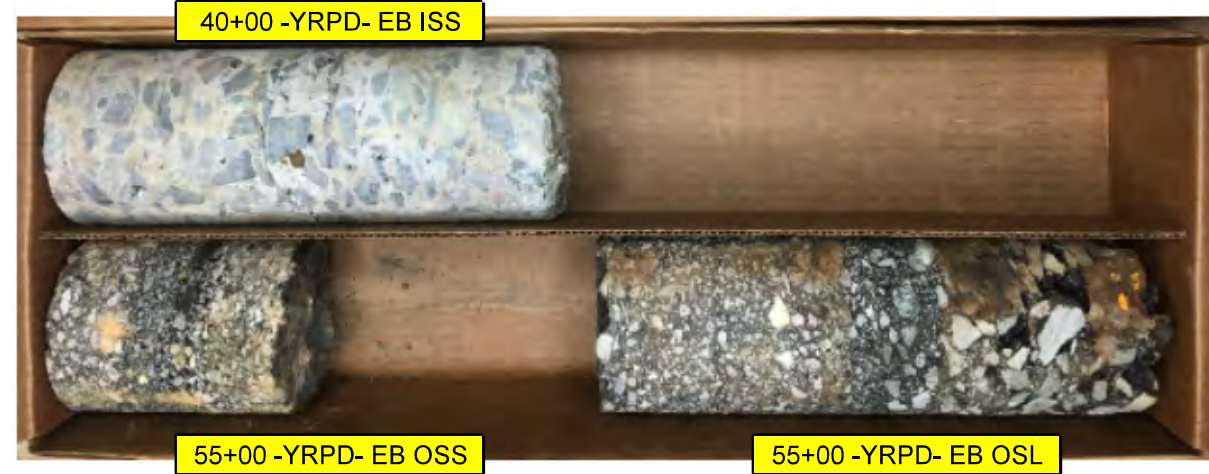
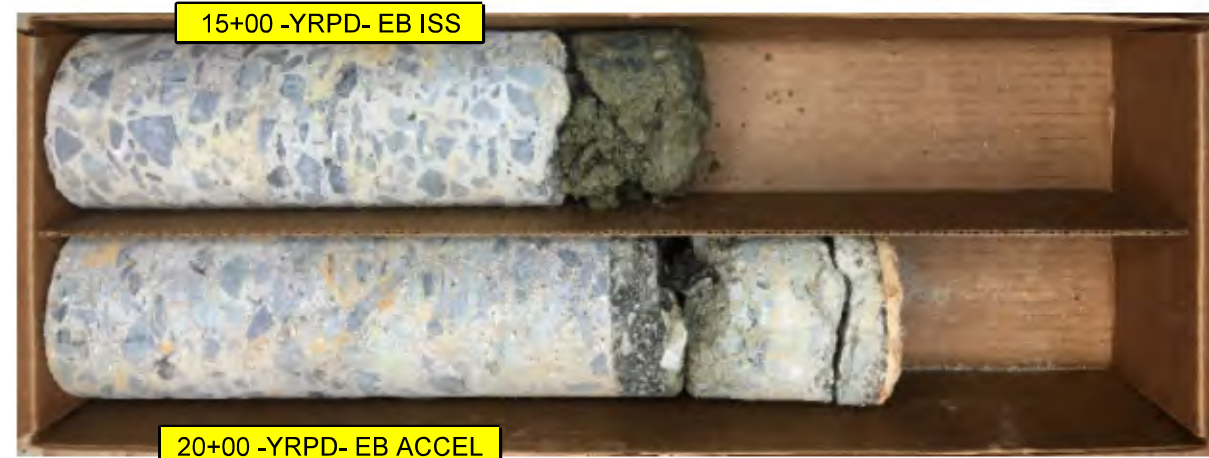
I-85 NB TO I-40 EB RAMP

PROJECT REFERENCE NO.

I-3306A

SHEET NO.

63





**PROJECT: 34178**

**REFERENCE: I-3306A**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	64	329

## ***APPENDIX B***

***PAVEMENT INVESTIGATION DATA SHEETS -YFLYB-  
DYNAMIC CONE PENETROMETER DATA -YFLYB-***

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

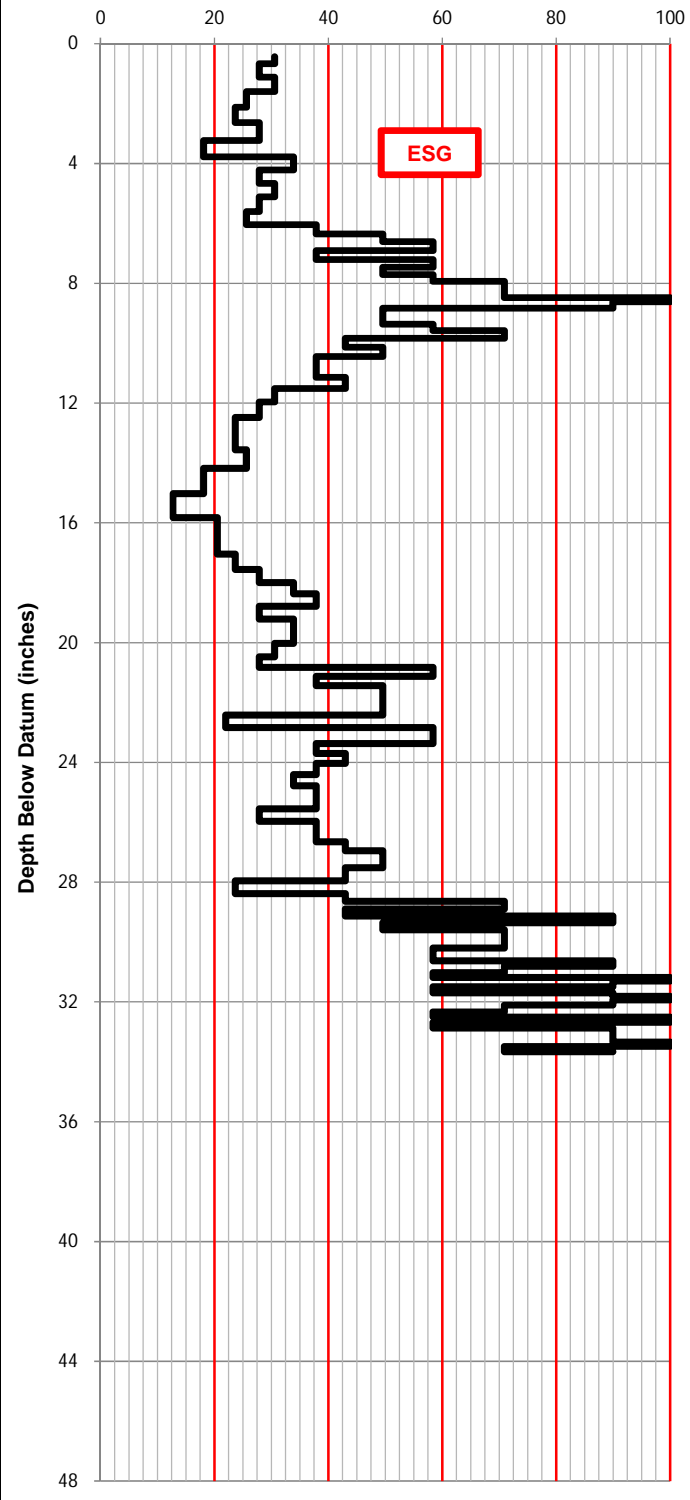
<b>Date:</b>	2/14/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econocrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting		
40+00 -YFLYB- EB OES	AT GRADE	EB ACCEL 16.0	EB OSS 4.0	6.5 FW	C									0' - 6.0' RESIDUAL: BROWN-TAN, SILTY CLAY	S-198	A-7-6	M	6	DIAMOND GRINDING MODERATE SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN EB ISS, EB ACCEL, AND EB OSS	839,807	1,961,969
			EB ISS 3.5																		
43+00 -YFLYB- EB OES	CUT 5	EB ACCEL 16.0	EB OSS 4.0	6.0 FW	S (RT)									0' - 6.0' RESIDUAL: BROWN-TAN-GRAY, SILTY CLAY	S-199	A-7-6	W	6	DIAMOND GRINDING LOW SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN EB ISS, EB ACCEL, AND EB OSS	839,713	1,962,251
			EB ISS 3.5																		

**Notes:**  
 NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



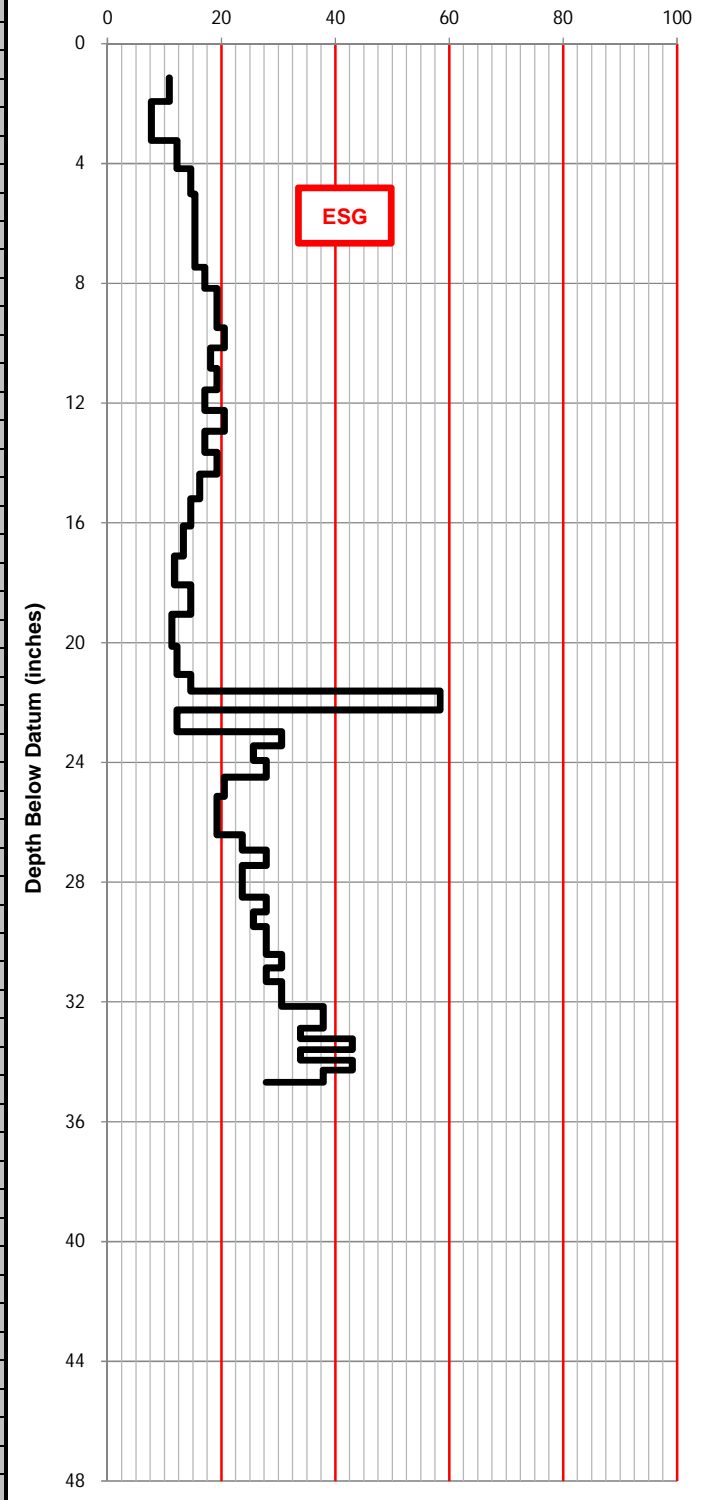
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-85 SB TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
40+00 -YFLYB- EB OES				DATE RUN	CORRELATED CBR VALUES	
				2/14/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	GRADE	839,807	1,961,969			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.1	54.8					
2.3	55.5					
3.4	56.2					
4.7	57.7					
6.1	58.3					
7.3	58.9					
9.1	59.8					
10.1	60.6					
11.3	61.5					
12.4	62.5					
13.6	63.4					
14.9	64.3					
15.8	65.5					
16.5	66.4					
17.1	67.3					
18.0	68.1					
18.6	68.8					
19.3	69.5					
19.9	70.3					
20.4	71.7					
20.9	72.5					
21.4	73.0					
21.7	73.8					
22.1	74.2					
22.8	74.9					
23.5	75.4					
24.1	75.9					
24.6	76.4					
25.4	77.0					
26.1	77.6					
27.0	78.0					
27.9	78.5					
28.7	79.1					
29.8	79.3					
31.0	79.7					
32.4	80.3					
33.8	80.7					
35.1	80.9					
36.9	81.3					
39.4	81.8					
41.0	82.4					
42.6	82.7					
44.0	83.3					
45.2	83.7					
46.2	84.1					
47.1	84.5					
48.3	84.8					
49.3	85.3					
50.3	85.7					
51.4						
52.6						
53.2						
54.1						



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-85 SB TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
43+00 -YFLYB- EB OES				DATE RUN	CORRELATED CBR VALUES	
				2/14/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	839,713	1,962,251			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.9						
6.9						
9.5						
11.7						
13.8						
15.9						
18.0						
19.9						
21.6						
23.3						
24.9						
26.7						
28.4						
30.3						
31.9						
33.8						
35.5						
37.5						
39.7						
42.1						
44.8						
47.0						
49.8						
52.4						
54.6						
55.2						
57.8						
58.9						
60.2						
61.4						
63.0						
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67.8						
69.0						
70.4						
71.8						
73.0						
74.3						
75.5						
76.7						
77.8						
79.0						
80.1						
81.2						
82.1						
83.0						
84.0						
84.8						
85.8						
86.6						
87.5						
88.7						



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	67	329

**REFERENCE: I-3306A**

**PROJECT: 34178**

## **APPENDIX C**

**PAVEMENT INVESTIGATION DATA SHEETS -YFLYAREV-  
DYNAMIC CONE PENETROMETER DATA -YFLYAREV-  
PAVEMENT CORE PHOTOGRAPHS -YFLYAREV-**

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 WB TO I-85 RAMP

<b>Date:</b>	1/28-29/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting		
15+00 -YFLYAREV- WB EM	CUT 20	WB ISL 12.0	WB ISS 4.0	7.5 FY	S (RT)								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	S-85	A-6	D	6	DIAMOND GRINDING	838,567	1,963,592	
		WB OSL 12.0	WB OSS 8.0																		
20+00 -YFLYAREV- WB EM	CUT 30	WB ISL 12.0	WB ISS 4.0	9.0 FY	S (RT)								0' - 2.4' RESIDUAL: BROWN, SILTY CLAY	REF S-83	A-7-6	M	6	DIAMOND GRINDING	839,019	1,963,375	
		WB OSL 12.0	WB OSS 8.0										2.4' - 6.0' RESIDUAL: BROWN WITH RED AND TAN, SILTY CLAY	S-86	A-7-6	W		WB OSS / OES DROP OFF			
20+00 -YFLYAREV- WB OES		WB DECEL 2.5		12.5 FW									0' - 2.1' RESIDUAL: BROWN, SILTY CLAY	REF S-83	A-7-6	M	AR 2.1		839,034	1,963,419	

**Notes:**  
 NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 WB TO I-85 RAMP

<b>Date:</b>	1/28-29/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting
23+00 -YFLYAREV- WB EM	CUT 10	WB ISL 12.0	WB ISS 4.0	13.0 FY	S (RT)							0' - 1.8' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-87	A-6	D	AR 1.8	DIAMOND GRINDING	839,304	1,963,278
		WB OSL 12.0	WB OSS 4.0																
23+00 -YFLYAREV- WB ISS		WB DECEL 12.0		3.5 FY		CONCRETE ABC (15.0)	9.5			5.5		1.25' - 2.1' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-87	A-6	D	AR 2.1		839,307	1,963,287
23+00 -YFLYAREV- WB ISL				4.0 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.75)	11.0	1.25	3.5		7.0	1.25' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	S-87	A-6	D	6		839,309	1,963,294
23+00 -YFLYAREV- WB OSL				5.0 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.5)	10.75	1.75	4.0		6.0	1.9' - 2.8' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-87	A-6	M	AR 2.8		839,313	1,963,308
23+00 -YFLYAREV- WB OSS				3.5 FW		CONCRETE PADL 6.0" (18.0)	12.0					DRAIN ENCOUNTERED BELOW PADL AT 3.5' FW SEE 23+00 -YFLYAREV- WB OES FOR SUBGRADE DESCRIPTION AND DCP						839,319	1,963,329
23+00 -YFLYAREV- WB OES				8.0 FW								0' - 3.3' RESIDUAL: BROWN, SILTY CLAY	S-90	A-7-6	M	AR 3.3		839,320	1,963,334

**Notes:**

NB = Northbound  
SB = Southbound  
EB = Eastbound  
WB = Westbound

OSL = Outside Lane  
CL = Center Lane  
ISL = Inside Lane  
MP = Mile Post

COL = Collector Lane  
ACCEL = Acceleration Lane  
DECEL = Deceleration Lane

LTL = Left Turn Lane  
CTL = Center Turn Lane  
RTL = Right Turn Lane

RT = Right  
LT = Left  
(I) = Inside  
(O) = Outside

RT LN = Right Lane  
LT LN = Left Lane

OSS = Outside Shoulder  
ISS = Inside Shoulder  
PS = Paved Shoulder

OES = Outside Earth Shoulder  
EM = Earth Median

FW = From White Line  
FY = From Yellow Line  
AR = Auger Refusal  
NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 WB TO I-85 RAMP

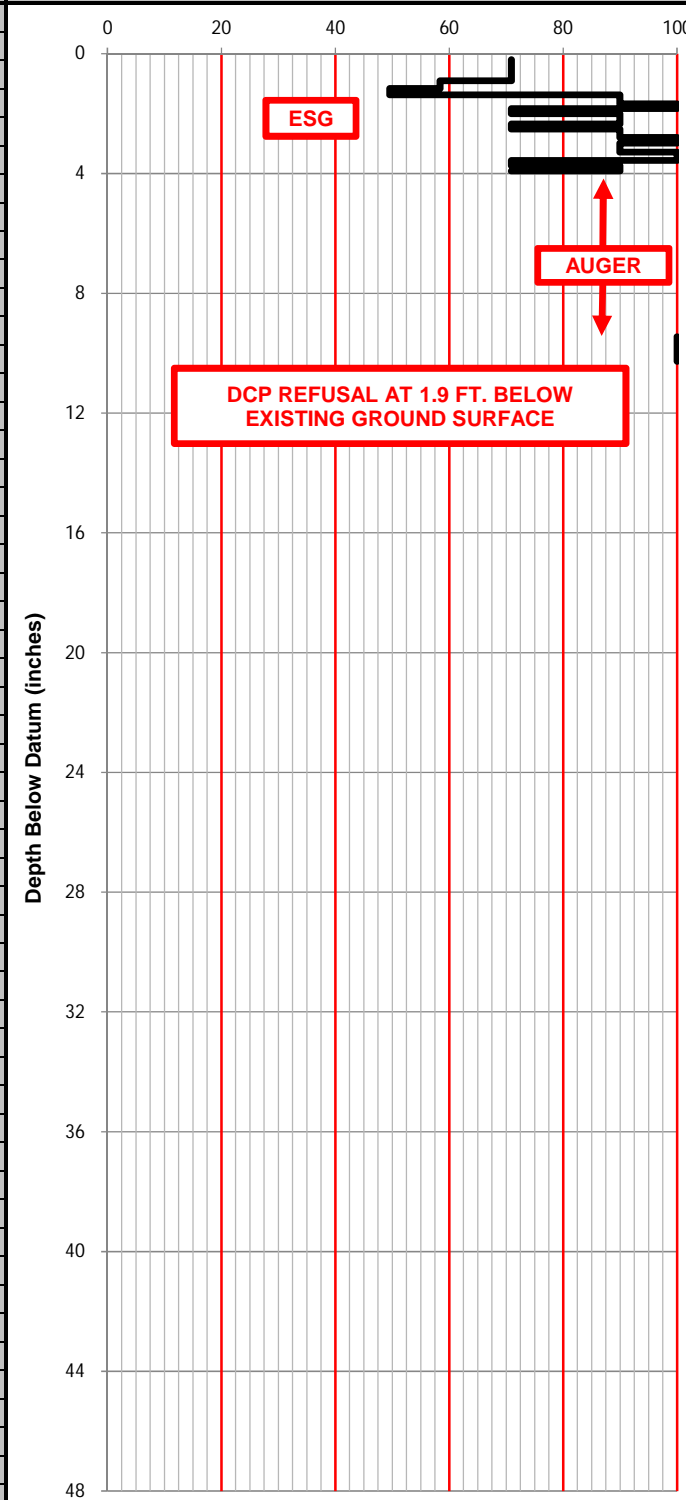
<b>Date:</b>	1/28-1/29/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description		Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting
26+00 -YFLYAREV- WB EM	CUT 8	WB ISL 12.0	WB ISS 4.0	4.0 FY	S (RT)							0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-87	A-6	D	6	DIAMOND GRINDING LOW SEVERITY SPALLING IN WB OSS AND WB GORE	839,595	1,963,203
		WB OSL 12.0	GORE 30.0																
26+00 -YFLYAREV- WB GORE		WB DECEL 12.0	WB OSS 4.0	15.0 FW (INSIDE)		CONCRETE ASPHALT ECONC / CTBC (18.75)	12.25	1.5	5.0			1.5' - 2.25' RESIDUAL: BROWN, SILTY CLAY	REF S-90	A-7-6	M	6		839,607	1,963,244
												2.25' - 6.0' RESIDUAL: BROWN, C-F SANDY CLAY	REF S-91	A-6	D				
26+00 -YFLYAREV- WB OES				7.5 FW								0' - 6.0' RESIDUAL: BROWN, C-F SANDY CLAY	S-91	A-6	D	6		839,618	1,963,283

**Notes:**  
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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



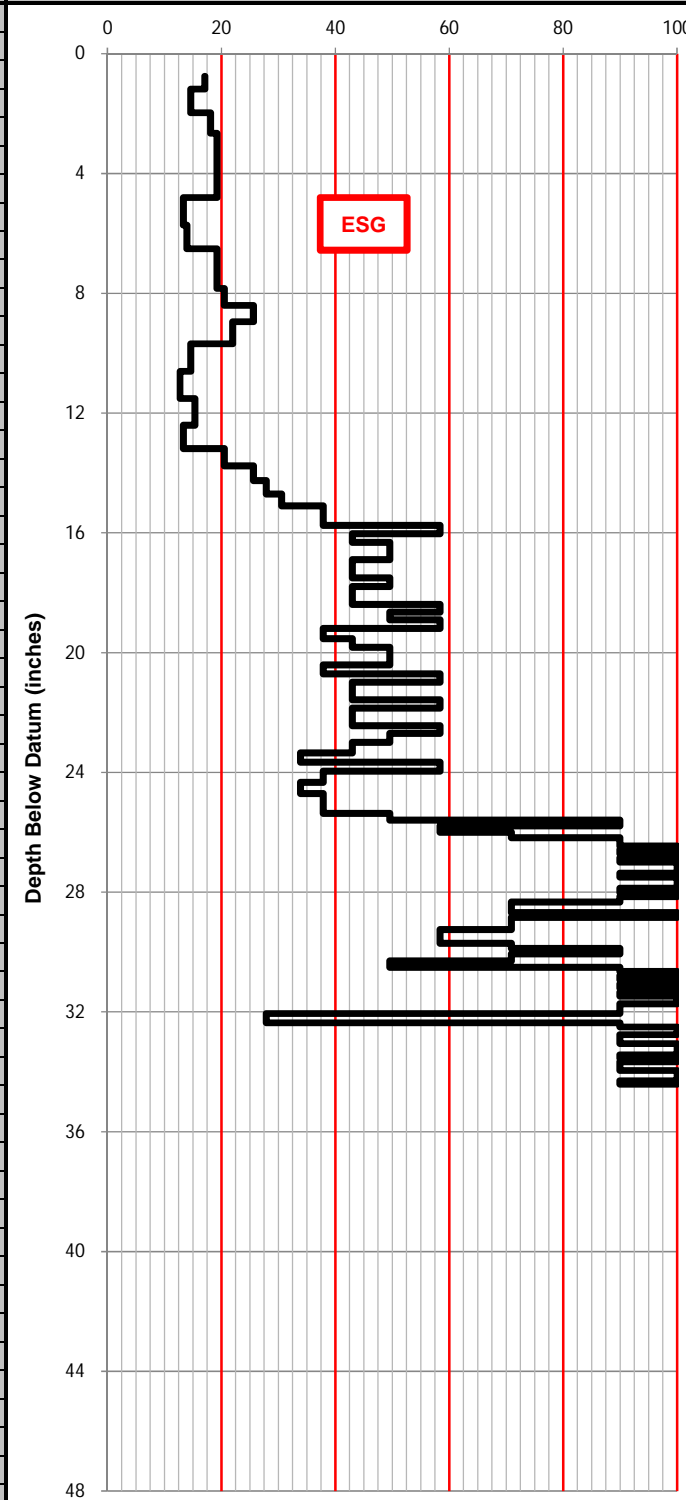
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				34178.1.3	I-3306A	I-40 WB TO I-85 RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
15+00 -YFLYAREV- WB EM				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	838,567	1,963,592			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.5	1.6					
1.0	1.6					
1.5	1.6					
2.0	1.7					
2.6	1.7					
3.3	1.8					
3.7	1.8					
4.1	1.8					
4.4	1.9					
4.9	1.9					
5.3	1.9					
5.7	2.0					
6.2	2.0					
6.6	2.0					
7.0	2.0					
7.2	2.1					
7.4	2.1					
7.8	2.1					
8.2	2.2					
8.5	2.2					
8.8	2.2					
9.3	2.3					
9.7	2.3					
10.2	2.3					
AUGER	2.3					
13.5 cm /	2.4					
5.3 in	2.4					
0.2						
0.4						
0.6						
0.7						
0.7						
0.8						
0.8						
0.9						
0.9						
1.0						
1.0						
1.1						
1.1						
1.1						
1.2						
1.2						
1.2						
1.3						
1.3						
1.3						
1.3						
1.4						
1.4						
1.4						
1.5						
1.5						



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



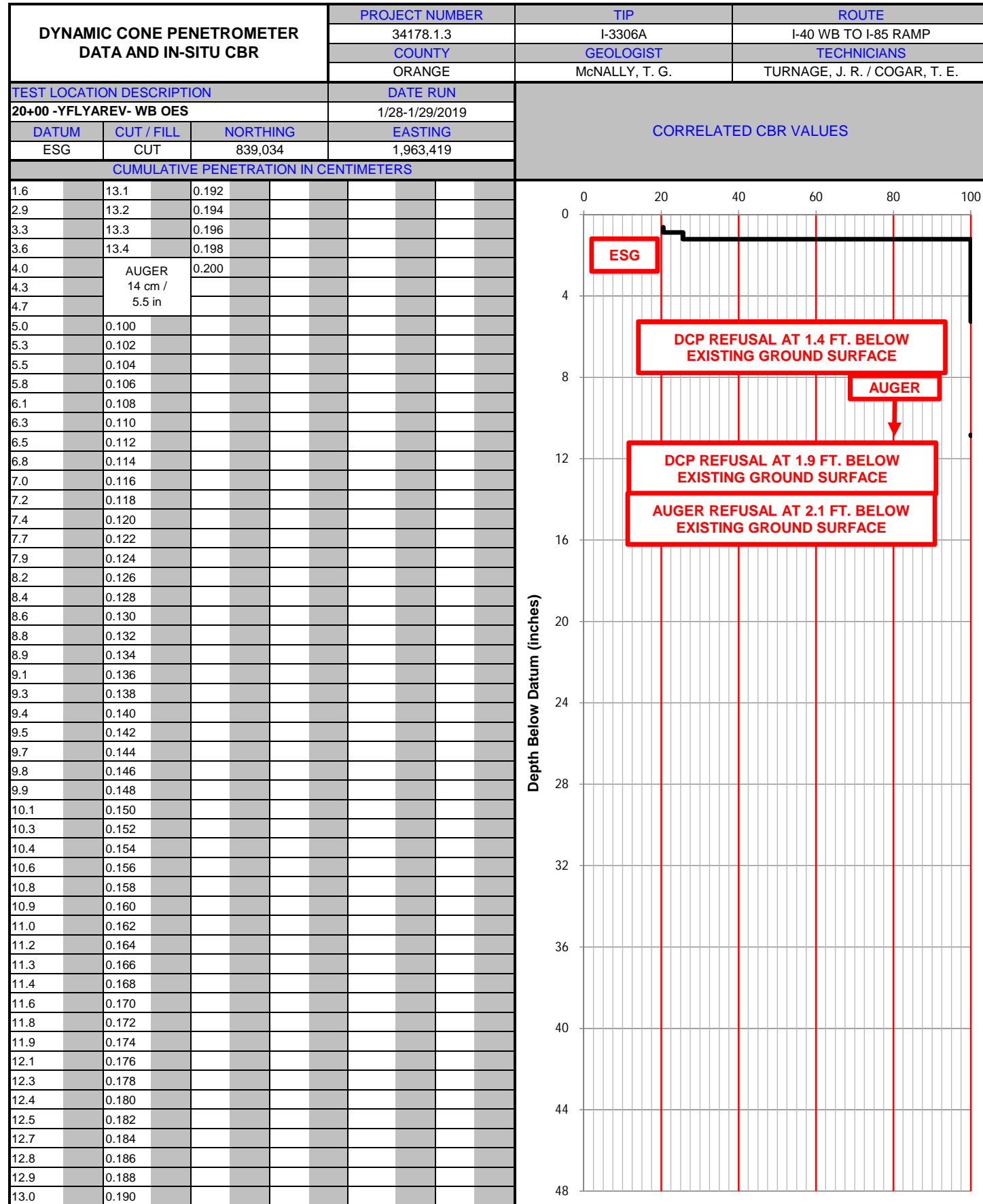
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO I-85 RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
20+00 -YFLYAREV- WB EM				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	839,019	1,963,375			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.9	63.2	85.3				
4.1	64.1	85.7				
5.9	64.8	86.1				
7.6	65.2	86.4				
9.3	65.8	86.6				
11.0	66.3	86.7				
13.4	66.7	86.9				
15.7	67.1	87.3				
17.4	67.3	87.5				
19.1	67.7					
20.7	68.0					
22.0	68.4					
23.5	68.7					
25.7	69.0					
28.2	69.3					
30.3	69.7					
32.7	70.0					
34.3	70.3					
35.6	70.6					
36.8	71.0					
37.9	71.3					
38.8	71.7					
39.7	72.2					
40.3	72.7					
41.1	73.0					
41.8	73.5					
42.5	74.0					
43.3	74.6					
44.1	75.2					
44.8	75.7					
45.6	76.1					
46.4	76.6					
47.0	77.3					
47.7	77.7					
48.3	78.0					
49.2	78.4					
50.0	78.7					
50.7	79.1					
51.4	79.4					
52.3	79.8					
52.9	80.1					
53.7	80.4					
54.5	80.8					
55.1	82.0					
55.9	82.4					
56.7	82.7					
57.3	83.0					
58.0	83.4					
58.8	83.8					
59.8	84.1					
60.4	84.4					
61.3	84.7					
62.3	85.1					



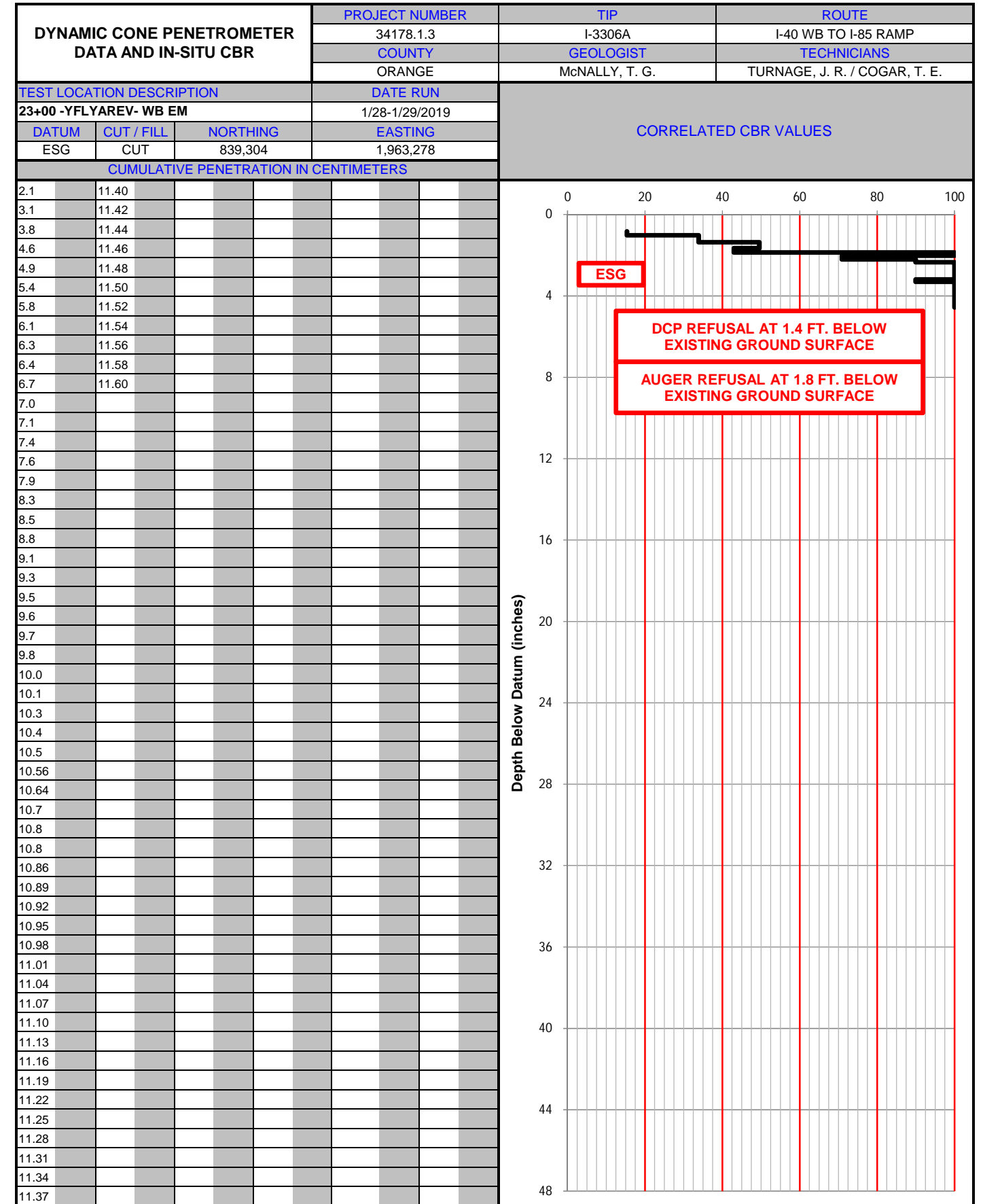
Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)







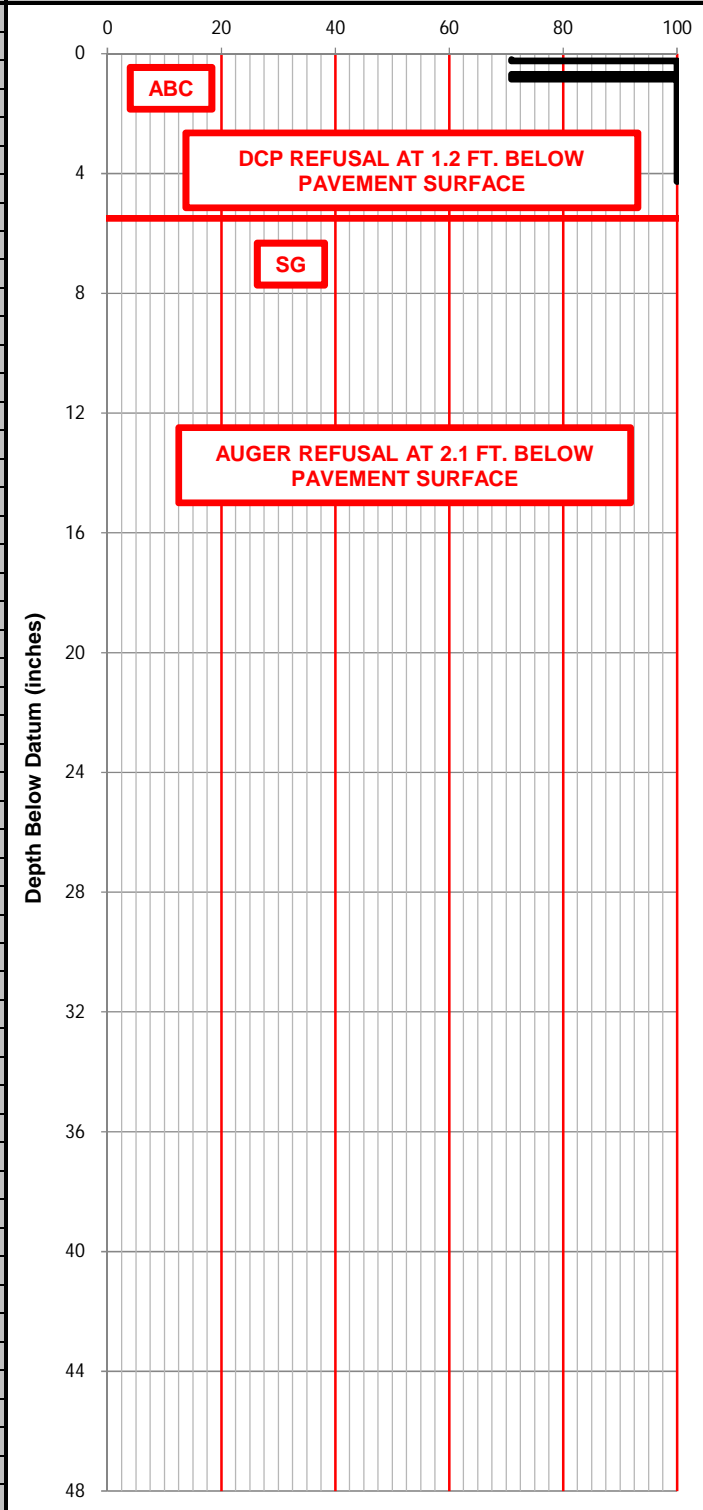
Notes:  
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 CTBC = Cement-Treated Base Course  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



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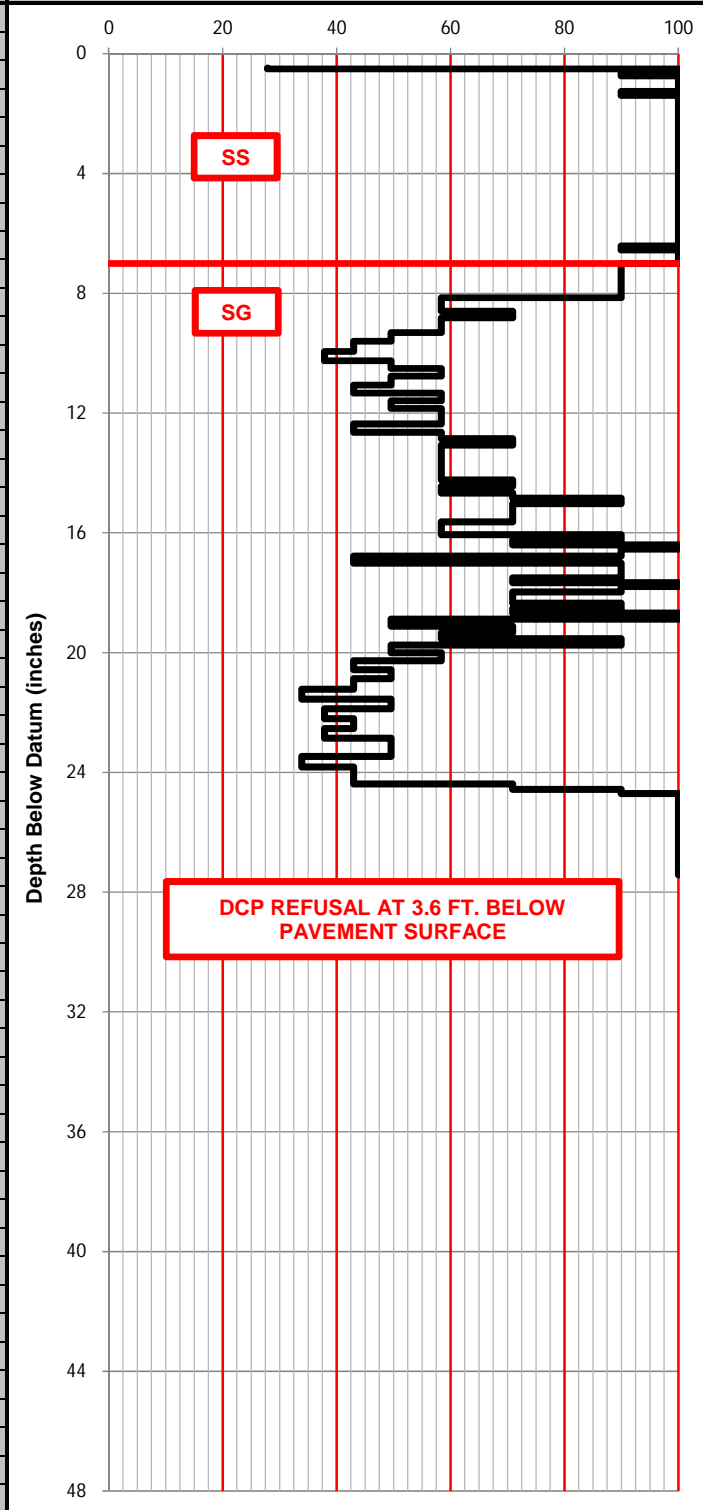
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO I-85 RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
23+00 -YFLYAREV- WB ISS				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	839,307	1,963,287			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.5	8.6					
0.7	8.7					
0.9	8.8					
1.1	9.0					
1.3	9.1					
1.5	9.2					
2.0	9.3					
2.3	9.4					
2.4	9.5					
2.6	9.6					
2.8	9.7					
3.0	9.8					
3.2	9.9					
3.4	10.1					
3.6	10.2					
3.7	10.3					
3.8	10.4					
4.0	10.5					
4.2	10.7					
4.3	10.8					
4.5	10.9					
4.6						
4.8						
4.9						
5.0						
5.1						
5.3						
5.4						
5.5						
5.6						
5.7						
5.8						
5.9						
6.0						
6.1						
6.2						
6.3						
6.4						
6.5						
6.6						
6.7						
6.8						
6.9						
7.0						
7.2						
7.3						
7.5						
7.6						
7.8						
8.0						
8.1						
8.3						
8.4						



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

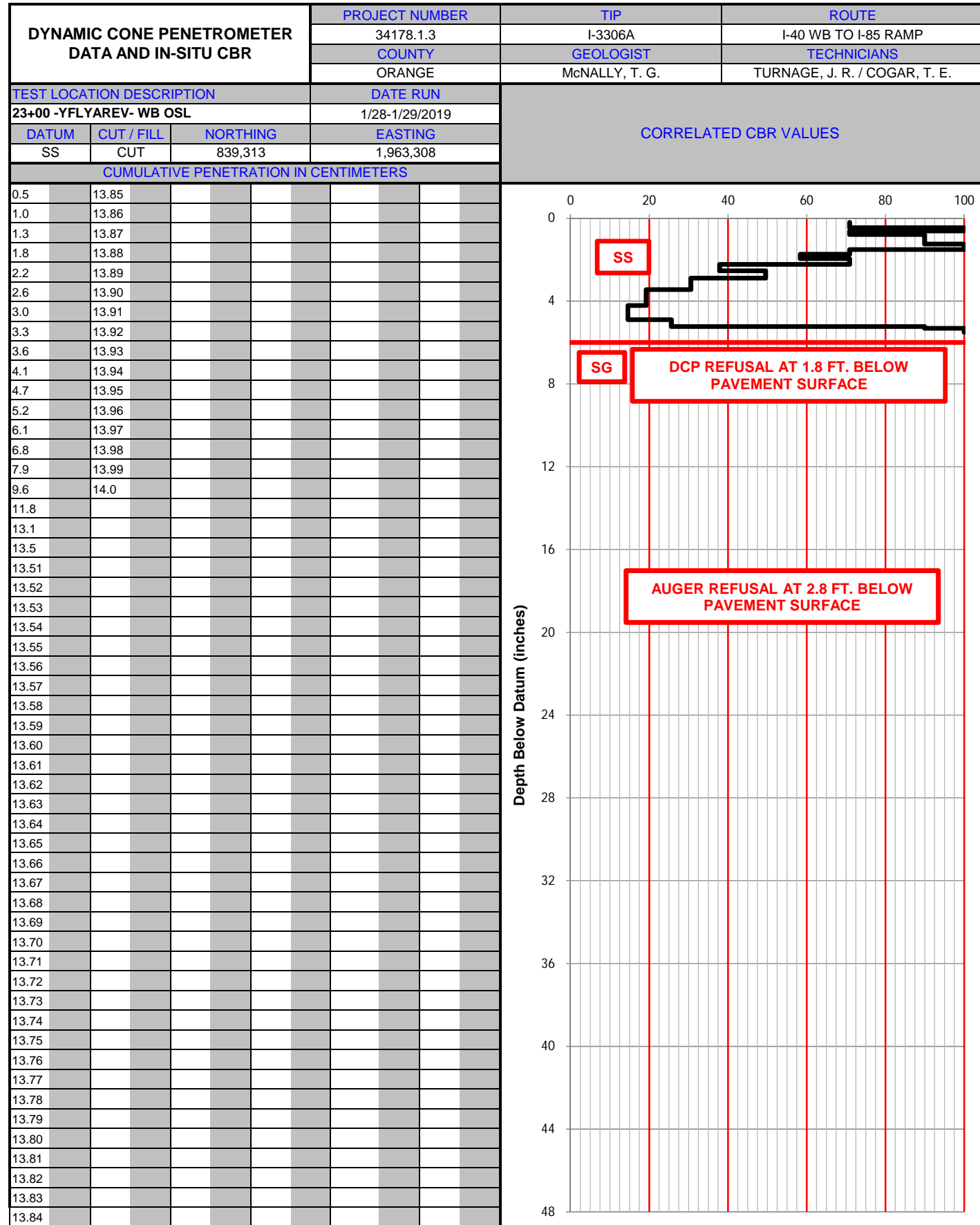


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO I-85 RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
23+00 -YFLYAREV- WB ISL				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SS	CUT	839,309	1,963,294			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	12.4	37.9	65.3			
1.4	12.6	38.4	65.6			
1.8	12.9	38.9	65.8			
2.0	13.1	39.4	66.0			
2.2	13.4	40.0	66.1			
2.5	13.6	40.6	66.3			
2.8	13.9	41.0	66.4			
3.0	14.1	41.5	66.6			
3.4	14.4	41.8	66.7			
3.7	14.7	42.2	66.8			
3.9	15.1	43.0	67.0			
4.2	15.4	43.4	67.1			
4.4	15.8	43.8	67.3			
4.7	16.1	44.2	67.4			
5.0	16.5	44.7	67.5			
5.3	16.8	45.0	67.6			
5.5	17.0	45.4	67.7			
5.6	17.3	45.9	67.8			
5.8	17.6	46.4	67.9			
6.1	18.0	46.8	68.0			
6.3	18.4	47.3	68.06			
6.6	18.8	47.6	68.14			
6.9	19.2	48.3	68.2			
7.0	19.6	48.8	68.3			
7.2	20.0	49.4	68.4			
7.4	20.4	49.8	68.46			
7.5	21.0	50.5	68.54			
7.8	21.6	51.1	68.6			
7.9	22.1	51.9	68.7			
8.2	22.7	52.6	68.8			
8.5	23.3	53.4	68.9			
8.6	24.0	54.4	69.0			
8.8	24.8	55.1	69.1			
9.0	25.7	56.0	69.2			
9.1	26.4	56.8	69.3			
9.2	27.0	57.7	69.4			
9.3	27.7	58.4	69.5			
9.5	28.5	59.1	69.6			
9.6	29.1	60.1	69.7			
9.8	29.8	60.9				
9.9	30.4	61.7				
10.1	31.0	62.2				
10.3	31.8	62.6				
10.5	32.4	62.9				
10.6	32.9	63.2				
10.8	33.5	63.5				
11.0	34.1	63.8				
11.2	34.7	64.1				
11.4	35.3	64.3				
11.5	35.9	64.5				
11.7	36.4	64.7				
11.9	37.0	64.9				
12.1	37.5	65.1				

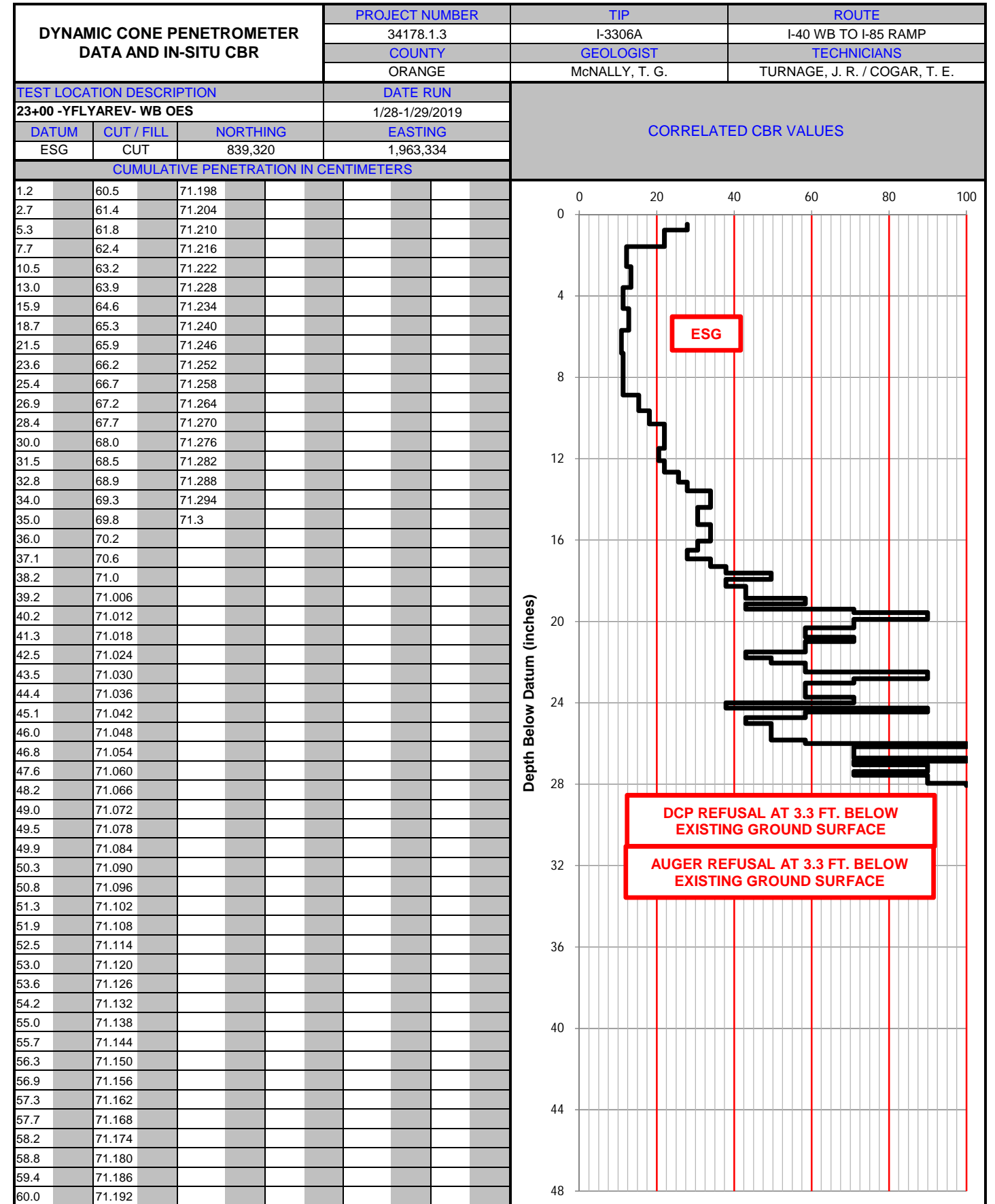


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





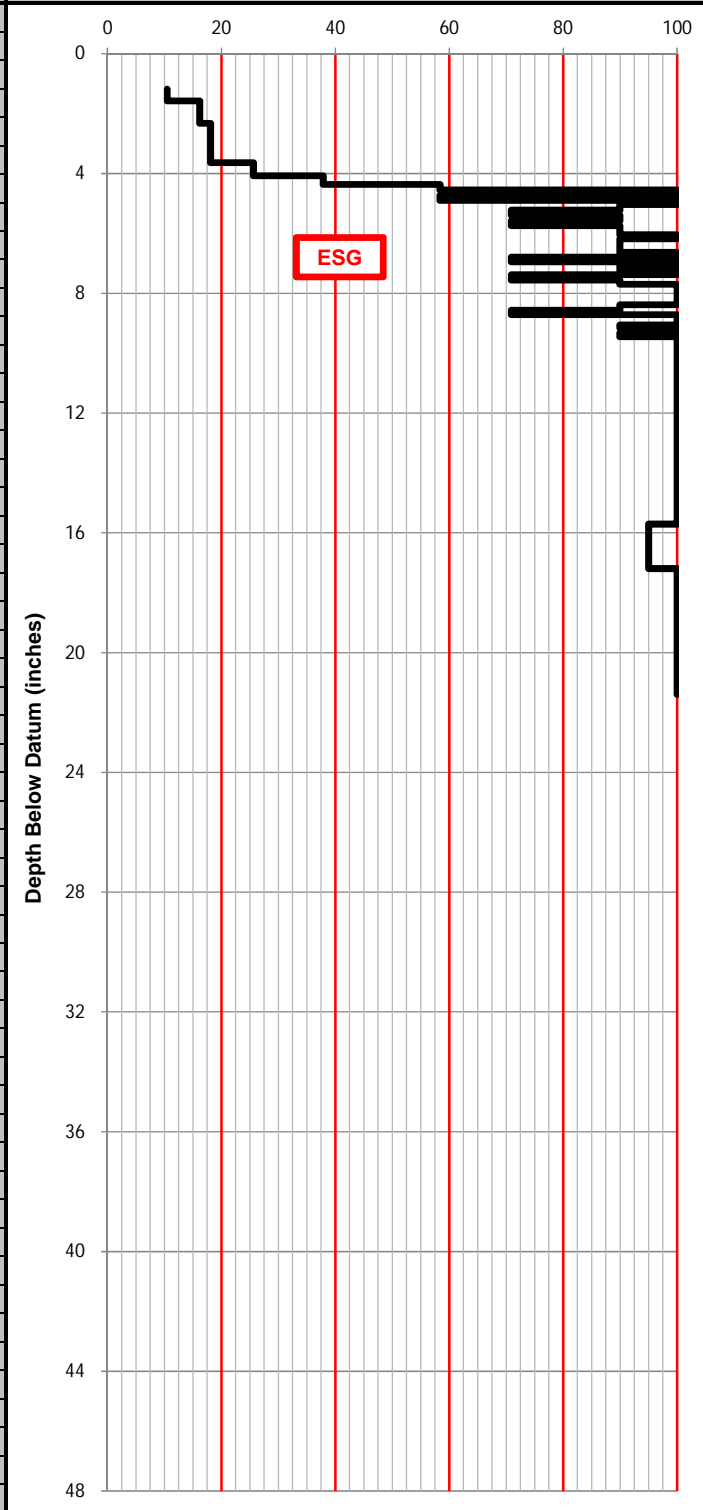
Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



Notes:  
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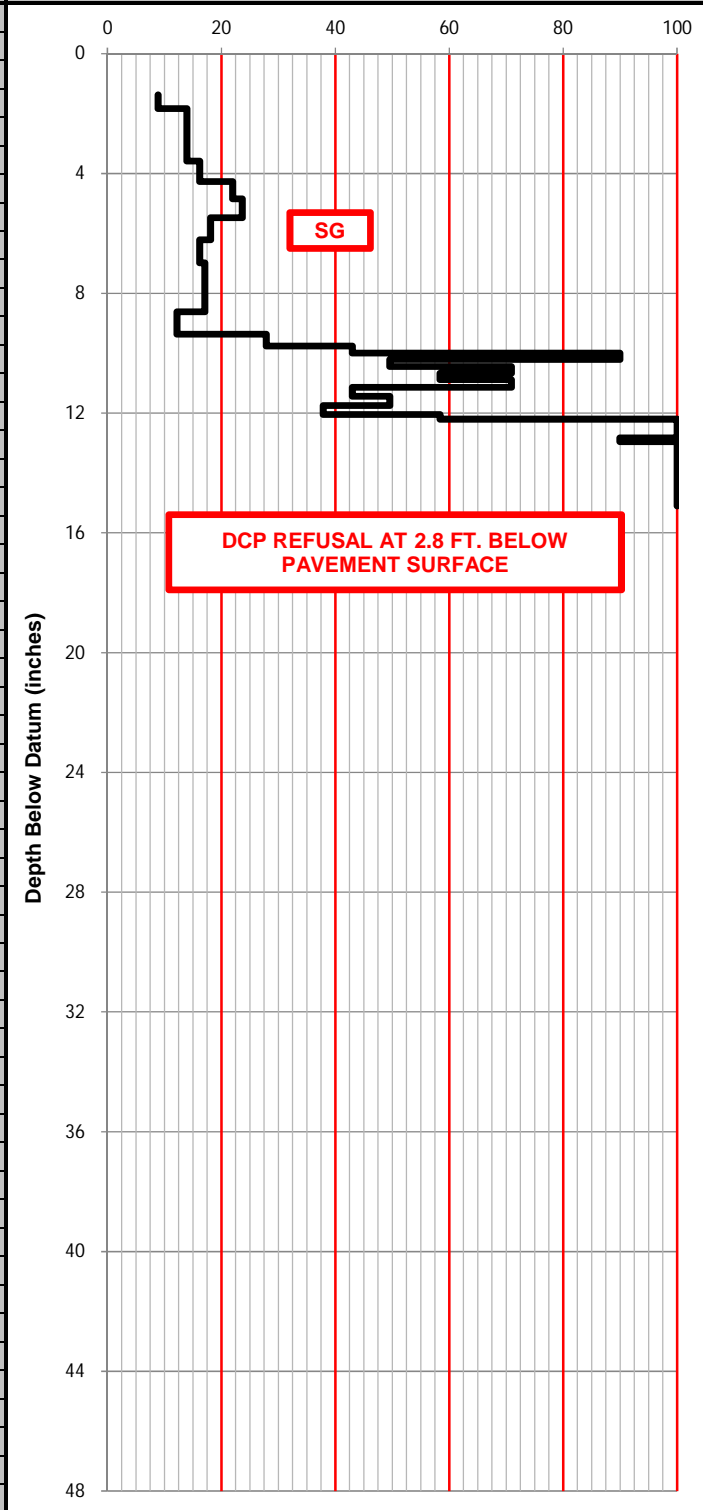
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO I-85 RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
26+00 -YFLYAREV- WB EM				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	839,595	1,963,203			
CUMULATIVE PENETRATION IN CENTIMETERS						
3.0	26.4	41.6				
5.0	26.5	42.0				
6.8	26.7	42.4				
8.6	26.9	42.7				
9.9	27.2	43.1				
10.8	27.5	43.5				
11.4	27.8	43.8				
11.7	28.1	44.2				
12.3	28.4	44.5				
12.6	28.7	44.9				
13.0	29.0	45.2				
13.5	29.2	45.5				
13.9	29.5	45.8				
14.4	29.8	46.0				
14.8	30.0	46.3				
15.2	30.2	46.6				
15.5	30.5	46.9				
15.9	30.7	47.3				
16.3	30.9	47.6				
16.7	31.2	48.0				
17.0	31.5	48.3				
17.5	31.9	48.6				
17.8	32.2	48.9				
18.2	32.5	49.2				
18.5	32.8	49.5				
19.0	33.2	49.8				
19.4	33.5	50.1				
19.7	33.9	50.5				
19.8	34.2	50.8				
20.1	34.5	51.2				
20.3	34.8	51.5				
20.6	35.1	51.8				
20.8	35.4	52.1				
21.1	35.7	52.4				
21.5	35.9	52.7				
22.0	36.2	53.0				
22.3	36.4	53.3				
22.4	36.7	53.6				
22.5	36.9	53.9				
22.8	37.2	54.2				
23.2	37.5	54.5				
23.3	37.9					
23.5	38.2					
23.9	38.5					
24.1	38.7					
24.4	39.0					
24.6	39.2					
24.9	39.5					
25.2	39.7					
25.4	40.1					
25.7	40.5					
26.0	40.8					
26.2	41.2					



Notes:  
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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



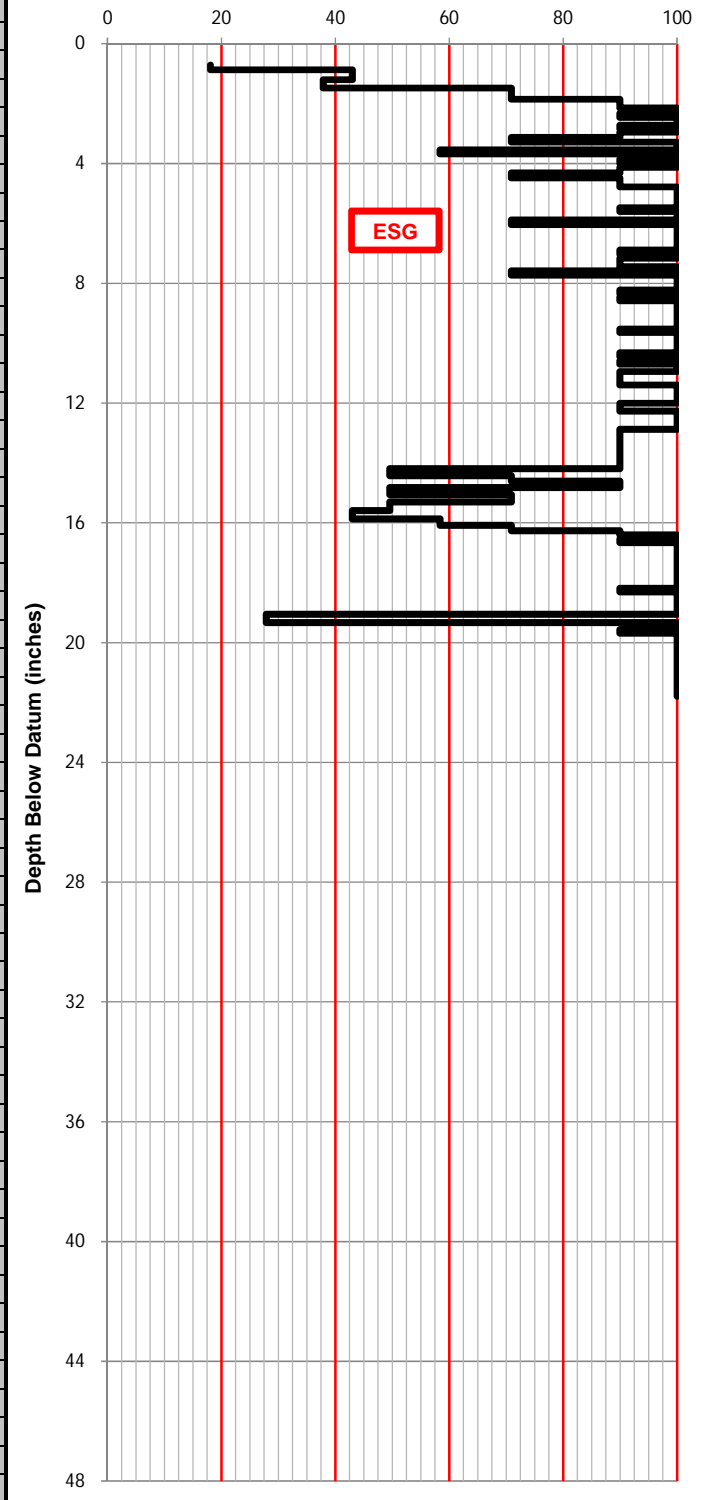
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO I-85 RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
26+00 -YFLYAREV- WB GORE				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SG	CUT	839,607	1,963,244			
CUMULATIVE PENETRATION IN CENTIMETERS						
3.5	37.0					
5.8	37.0					
8.1	37.1					
10.1	37.2					
11.6	37.3					
13.0	37.4					
14.8	37.5					
16.8	37.6					
18.7	37.7					
20.6	37.8					
23.2	37.9					
24.4	38.0					
25.2	38.1					
25.6	38.2					
26.3	38.3					
26.8	38.4					
27.4						
27.9						
28.7						
29.4						
30.3						
30.9						
31.1						
31.4						
31.6						
31.9						
32.1						
32.4						
32.8						
33.0						
33.1						
33.3						
33.4						
33.6						
33.8						
34.0						
34.1						
34.3						
34.5						
34.7						
34.9						
35.1						
35.3						
35.5						
35.7						
35.9						
36.1						
36.3						
36.5						
36.6						
36.7						
36.8						
36.9						



Notes:  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER		TIP		ROUTE	
				34178.1.3		I-3306A		I-40 WB TO I-85 RAMP	
				COUNTY		GEOLOGIST		TECHNICIANS	
				ORANGE		McNALLY, T. G.		TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		CORRELATED CBR VALUES			
26+00 -YFLYAREV- WB OES				1/28-1/29/2019					
DATUM	CUT / FILL	NORTHING	EASTING						
ESG	CUT	839,618	1,963,283						
CUMULATIVE PENETRATION IN CENTIMETERS									
1.8	20.1	36.4	52.2						
2.6	20.4	36.9	52.4						
3.5	20.7	37.3	52.6						
4.0	21.1	38.0	52.9						
4.5	21.3	38.5	53.2						
4.9	21.7	39.2	53.4						
5.3	21.9	40.0	53.5						
5.6	22.1	40.6	53.8						
5.7	22.4	41.1	53.9						
6.1	22.7	41.5	54.2						
6.4	22.9	41.8	54.4						
6.7	23.2	42.2	54.7						
7.1	23.5	42.4	54.8						
7.3	23.5	42.5	55.1						
7.7	23.8	42.8	55.2						
8.2	24.0	43.1	55.5						
8.5	24.4	43.3							
8.7	24.6	43.5							
9.3	24.8	43.7							
9.4	25.0	43.8							
9.6	25.3	44.1							
10.0	25.6	44.2							
10.3	25.8	44.5							
10.7	26.0	44.8							
11.2	26.4	45.0							
11.6	26.7	45.3							
12.0	27.1	45.5							
12.3	27.3	45.6							
12.6	27.6	45.7							
12.9	28.0	46.0							
13.1	28.4	46.4							
13.4	28.8	46.6							
13.7	29.1	46.8							
14.1	29.4	47.1							
14.4	29.7	47.2							
14.7	30.0	47.3							
15.2	30.3	47.5							
15.5	30.7	47.8							
15.7	31.1	49.0							
16.0	31.2	49.2							
16.3	31.5	49.5							
16.6	31.8	49.9							
16.9	32.1	50.1							
17.1	32.4	50.3							
17.3	32.5	50.4							
17.7	32.9	50.6							
18.0	33.3	50.8							
18.4	33.7	50.9							
18.8	34.1	51.1							
19.0	34.5	51.2							
19.5	34.9	51.5							
19.8	35.3	51.8							
20.0	35.7	51.9							



**Notes:**  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



# PAVEMENT CORE PHOTOGRAPHS

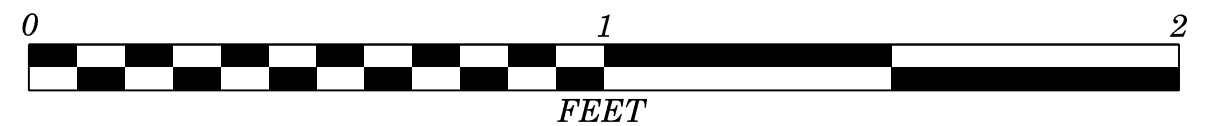
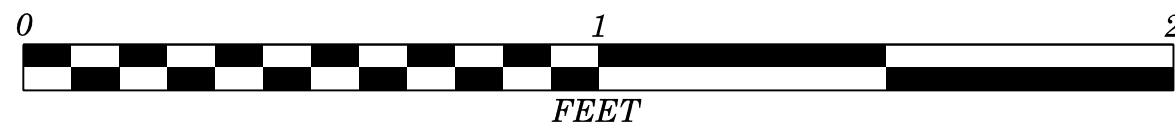
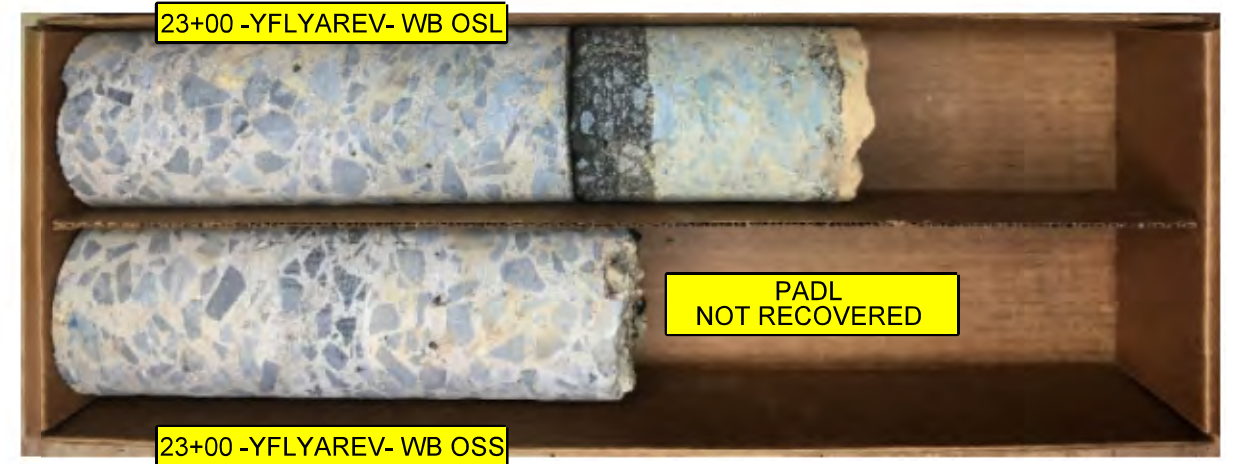
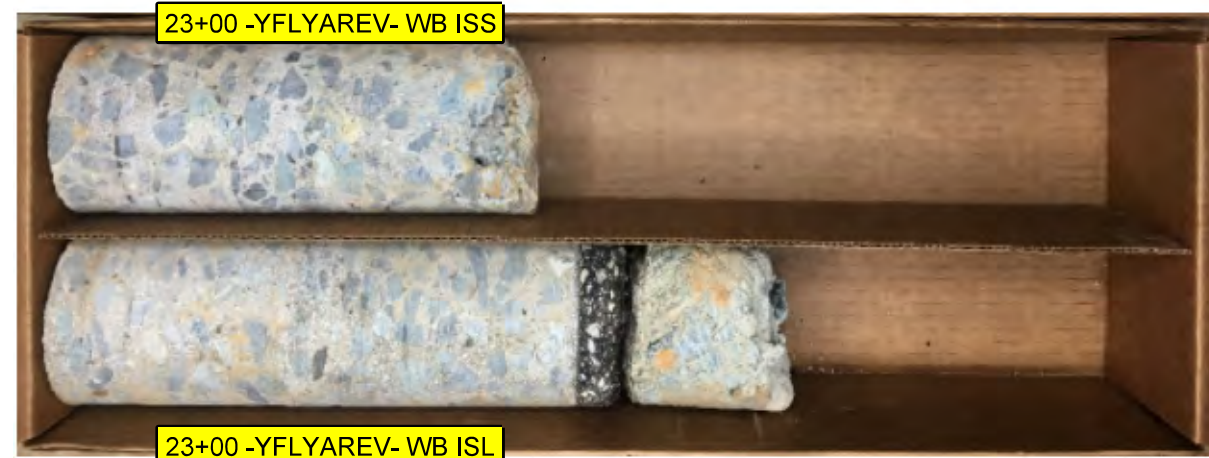
I-40 WB TO I-85 RAMP

PROJECT REFERENCE NO.

I-3306A

SHEET NO.

77



**PROJECT: 34178**

**REFERENCE: I-3306A**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	78	329

## ***APPENDIX D***

***PAVEMENT INVESTIGATION DATA SHEETS -L- WB  
DYNAMIC CONE PENETROMETER DATA -L- WB  
PAVEMENT CORE PHOTOGRAPHS -L- WB***

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/28/2019 - 01/29/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates																		
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting															
10+00 -L- WB OSS	CUT 10	WB OSL 12.0	WB OSS 10.0	6.0 FW	C	CONCRETE ABC (17.0)	10.0			7.0		1.5' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	REF S-84	A-6	W	6	DIAMOND GRINDING WB OSS / OES DROP OFF WB ISS / EM DROP OFF	838,180	1,963,909															
		WB ISL 12.0	WB ISS 4.0																															
10+00 -L- WB ISL																			4.0 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (24.0)	11.25	1.25	3.5		8.0	2.0' - 3.75' RESIDUAL: BROWN, SILTY CLAY	S-83	A-7-6	M	6		838,164	1,963,888
																											3.75' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	REF S-84	A-6	W				
10+00 -L- WB ISS																			3.5 FY		CONCRETE ABC (15.0)	10.0			5.0		1.25' - 2.4' RESIDUAL: BROWN, SILTY CLAY	REF S-83	A-7-6	M	AR 3.7		838,160	1,963,882
												2.4' - 3.4' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	S-84	A-6	W																			
15+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	8.0 FY	C							0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY CLAY	S-82	A-6	D	6	DIAMOND GRINDING	837,761	1,964,184															
		WB ISL 12.0	WB ISS 4.0																															
20+00 -L- WB OES	CUT 8	WB OSL 12.0	WB OSS 10.0	14.0 FW	C							0' - 6.0' RESIDUAL: DARK BROWN-GRAY WITH TAN, SILTY CLAY	S-89	A-7-6	M	6	DIAMOND GRINDING WB OSS / OES DROP OFF LOW SEVERITY SPALLING ON LONGITUDINAL AND TRANSVERSE JOINTS WB OSL / OSS	837,392	1,964,524															
		WB ISL 12.0	WB ISS 4.0																															
25+00 -L- WB EM	CUT 6	WB OSL 12.0	WB OSS 10.0	7.0 FY	C							0' - 3.8' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	REF S-89	A-7-6	M	6	DIAMOND GRINDING WB OSS / OES DROP OFF	836,968	1,964,794															
		WB ISL 12.0	WB ISS 4.0																								3.8' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	S-81	A-6	M				
30+00 -L- WB OES	CUT 10	WB OSL 12.0	WB OSS 10.0	14.0 FW	C							0' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, SILTY CLAY	S-88	A-7-5	W	6	DIAMOND GRINDING WB OSS / OES DROP OFF	836,599	1,965,134															
		WB ISL 12.0	WB ISS 4.0																															

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured





**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/28/2019 - 01/29/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness					Subgrade				GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
35+00 -L- WB OSS	CUT 10	WB OSL 12.0	WB OSS 10.0	6.5 FW	C	CONCRETE ABC (15.0)	9.0			6.0		1.25' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	S-80	A-7-6	M TO W	6	DIAMOND GRINDING WB OSS / OES DROP OFF	836,198	1,965,432
		WB ISL 12.0	WB ISS 4.0									WATER OBSERVED AT 3 FT IN OPEN BOREHOLE							
35+00 -L- WB ISS				CORE 3.5 FY		CONCRETE PADL 6.0" (14.5)	8.5					1.2' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	REF S-80	A-7-6	M	6		CORE 836,177	1,965,406
				DCP 7.0 FY								DRAIN ENCOUNTERED AT 3.5' FY BELOW PADL DCP AND AUGER PERFORMED 7.0' FY						AUGER / DCP 836,175	1,965,403
40+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	7.5 FY	C							0' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	S-70	A-7-6	W	6	DIAMOND GRINDING	835,778	1,965,707
		WB ISL 12.0	WB ISS 4.0																
45+00 -L- WB OES	CUT 12	WB OSL 12.0	WB OSS 10.0	13.0 FW	C							0' - 1.75' RESIDUAL: BROWN-RED, SILTY CLAY	REF S-70	A-7-6	W	6	DIAMOND GRINDING WB OSS / OES DROP OFF	835,409	1,966,047
		WB ISL 12.0	WB ISS 4.0									1.75' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, SILTY CLAY	S-79	A-7-5	M	6			
50+00 -L- WB EM	CUT 8	WB OSL 12.0	WB OSS 10.0	10.0 FY	C							0' - 6.0' RESIDUAL: RED-BROWN, SILTY CLAY	S-1	A-7-6	M	6	DIAMOND GRINDING	834,984	1,966,314
		WB ISL 12.0	WB ISS 4.0									BULK SAMPLE COLLECTED FROM 1.0' TO 3.5'							
55+00 -L- WB OSS	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0	8.0 FW	C	CONCRETE ABC (17.0)	10.0			7.0		1.4' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	REF S-78	A-7-5	M	6	DIAMOND GRINDING	834,613	1,966,652
		WB ISL 12.0	(CONC.) 10.0																
			WB ISS 4.0			CORE NOT SAVED													

**Notes:**

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 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/26/2019 - 01/28/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness					Subgrade				GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
60+00 -L- WB OSS	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10	8.5 FW	C	CONCRETE ABC (15.0)	9.5			5.5			1.25' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-78	A-7-5	M	6	DIAMOND GRINDING	834,216	1,966,957
		WB ISL 12.0																		
60+00 -L- WB OSL			WB ISS 4.0	4.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (23.0)	10.5	1.0	4.75		6.75		1.9' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	S-78	A-7-5	M	6		834,208	1,966,947
60+00 -L- WB ISS				3.0 FY		CONCRETE CTBC (15.0)	10.5		4.5				1.25' - 6.0' ROADWAY EMBANKMENT: RED, SILTY CLAY	S-69	A-7-6	W	6		834,195	1,966,929
65+00 -L- WB EM	FILL 3	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10	8.0 FY	S (LT)								0' - 3.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	S-68	A-7-6	M	6	DIAMOND GRINDING	833,795	1,967,230
		WB ISL 12.0											3.0' - 6.0' RESIDUAL: RED-BROWN WITH TAN, SILTY CLAY	REF S-67	A-7-6	W				
			WB ISS 4.0																	
70+00 -L- WB OSS	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10	5.0 FW	S (LT)	CONCRETE ABC (18.0)	11.5			6.5			1.5' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	REF S-68	A-7-6	M	6	DIAMOND GRINDING	833,448	1,967,583
		WB ISL 12.0																		
			WB ISS 4.0																	
						CORE NOT SAVED														
75+00 -L- WB EM	FILL 10	WB OSL 12.0	WB OSS 10.0	9.0 FY	S (LT)								0' - 6.0' RESIDUAL: RED-BROWN WITH TAN, SILTY CLAY	REF S-67	A-7-6	W	6	DIAMOND GRINDING	833,115	1,967,948
		WB ISL 12.0	WB ISS 4.0																	

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 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/26/2019 - 01/28/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness					Subgrade				GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture Probe Depth (feet)	Pavement Notes	Northing	Easting
80+00 -L- WB OES	GRADE	WB OSL 12.0	WB OSS 10.0	15.0 FW	S (LT)						0' - 4.5' RESIDUAL: RED-BROWN WITH TAN, SILTY CLAY	REF S-67	A-7-6	W	6	DIAMOND GRINDING	832,936	1,968,408
		WB ISL 12.0	WB ISS 4.0								4.5' - 6.0' RESIDUAL: RED-BROWN WITH DARK GRAY, SILTY CLAY	S-77	A-7-6	M				
85+00 -L- WB OSS	GRADE	WB OSL 12.0	WB OSS 10.0	6.0 FW	S (LT)	CONCRETE ABC (18.0)	12.0		6.0		1.5' - 6.0' RESIDUAL: BROWN-GRAY WITH TAN, C-F SANDY CLAY	S-76	A-6	M	6	DIAMOND GRINDING	832,797	1,968,876
		WB ISL 12.0	WB ISS 4.0															
85+00 -L- WB ISS				2.0 FY		CONCRETE ASPHALT ABC (17.0)	9.75	1.25	6.0		1.3' - 6.0' RESIDUAL: BROWN-GRAY, C-F SANDY CLAY	REF S-76	A-6	M	6		832,765	1,968,870
90+00 -L- WB EM	FILL 8	WB ACCEL 12.0	WB OSS 4.0	8.5 FY	S (LT)						0' - 6.0' ROADWAY EMBANKMENT: RED-BROWN WITH TAN, SILTY CLAY	S-67	A-7-6	W	6	DIAMOND GRINDING	832,704	1,969,365
		WB OSL 12.0	WB ISS 4.0															
		WB ISL 12.0																
95+00 -L- WB OES	FILL 12	WB ACCEL 12.0	WB OSS 4.0	7.5 FW	C						0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	REF S-66	A-7-6	W	6	DIAMOND GRINDING	832,711	1,969,867
		WB OSL 12.0	WB ISS 4.0															
		WB ISL 12.0																
100+00 -L- WB EM	FILL 20	WB ACCEL 12.0	WB OSS (ASPH.) 8.0	9.5 FY	S (RT)						0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	S-66	A-7-6	W	6	DIAMOND GRINDING	832,600	1,970,360
		GORE 25.0	(CONC.) 4.0															
		WB OSL 12.0	WB ISS 4.0															
		WB ISL 12.0																
105+00 -L- WB OSS	FILL 20	WB OSL 12.0	WB OSS 10.0	5.0 FW	S (RT)	CONCRETE ABC (15.0)	10.5		4.5		1.25' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, SILTY CLAY	S-75	A-7-6	M	6	DIAMOND GRINDING	832,516	1,970,858
		WB ISL 12.0	WB ISS 4.0			CORE NOT SAVED												

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/25/2019, 01/26/2019, 01/27/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness							Subgrade				GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting			
111+00 -L- WB OSS	FILL 15	WB OSL 12.0	WB OSS 10.0	6.0 FW	S (RT)	CONCRETE ABC (16.0)	9.5			6.5		1.25' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	S-74	A-7-6	M	6	DIAMOND GRINDING  SPALLING ON TRANSVERSE JOINTS IN WB OSL AND WB ISL  0.5" VOID BENEATH SLAB IN WB OSS	832,290	1,971,422			
		WB ISL 12.0	WB ISS 4.0																			
111+00 -L- WB ISL						4.5 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	11.0	1.0	4.5		5.5	1.75' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-65	A-7-6		M	6		832,267	1,971,411
111+00 -L- WB ISS						CORE 3.0 FY		CONCRETE PADL 6.0" (17.0)	11.0					1.0' - 3.5' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	S-65	A-7-6		M	6	CORE 832,260	1,971,407	
						DCP 8.0 FY								3.5' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH GRAY, C-F SANDY CLAY	REF S-64	A-6		M		DCP / AUGER 832,255	1,971,405	
												DRAIN ENCOUNTERED AT 3.0' FY BELOW PADL DCP AND AUGER PERFORMED 8.0' FY										
115+00 -L- WB EM	FILL 10	WB OSL 12.0	WB OSS 10.0	9.0 FY	S (RT)							0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH GRAY AND TAN, C-F SANDY CLAY	S-64	A-6	W	6	DIAMOND GRINDING	832,057	1,971,754			
		WB ISL 12.0	WB ISS 4.0																			
115+00 -L- WB EM (BULK SAMPLE)						14.0 FY								1.0' - 4.0' ROADWAY EMBANKMENT: RED-BROWN WITH TAN, SILTY CLAY	S-2	A-7-6		M	4	832,053	1,971,751	
												BULK SAMPLE ONLY, NO DCP										
119+50 -L- WB OES	GRADE	WB OSL 12.0	WB OSS 10.0	13.5 FW	S (RT)							0' - 2.1' ROADWAY EMBANKMENT: BROWN-RED WITH GRAY, C-F SANDY CLAY	REF S-64	A-6	M	AR 2.1	DIAMOND GRINDING	831,828	1,972,149			
		WB ISL 12.0	WB ISS 4.0																			

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/25/2019, 01/27/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness						Subgrade				GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing
125+00 -L- WB OES	CUT 15	WB DECEL 12.0	WB OSS 10.0	11.5 FW	S (RT)						0' - 6.0' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	REF S-61	A-7-6	M	6	DIAMOND GRINDING  LOW SEVERITY SPALLING ON LONGITUDINAL JOINT ON CL AND ON TRANSVERSE JOINTS IN WB OSL WHEEL PATHS	831,450	1,972,560
		WB CL 12.0	WB ISS 4.0															
125+00 -L- WB EM		WB ISL 12.0		5.5 FY							1.25' - 1.8' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	REF S-61	A-7-6	M	6		831,416	1,972,523
											1.8' - 6.0' RESIDUAL: BROWN-GRAY, C-F SANDY CLAY	S-63	A-6	D				
135+00 -L- WB OSS	FILL 20	WB OSL 12.0	WB OSS 10.0	5.5 FW	S (RT)	CONCRETE ABC (15.0)	10.5			4.5	1.25' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	REF S-62	A-6	W	6	DIAMOND GRINDING  WB OSS / OES DROP OFF	830,611	1,973,128
		WB ISL 12.0	WB ISS 4.0															
135+00 -L- WB ISS				CORE 3.5 FY		CONCRETE PADL 6.0" (18.5)	12.5				1.0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	S-62	A-6	W	6	CORE	830,598	1,973,103
				DCP 8.5 FY							DRAIN ENCOUNTERED AT 3.5' FY BELOW PADL DCP AND AUGER PERFORMED 8.5' FY					DCP / AUGER	830,594	1,973,095
140+00 -L- WB EM	FILL 15	WB OSL 12.0	WB OSS 10.0	9.5 FY	S (RT)						0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH GRAY, SILTY CLAY	S-61	A-7-6	M	6	DIAMOND GRINDING  WB OSS / OES DROP OFF	830,134	1,973,296
		WB ISL 12.0	WB ISS 4.0															
145+00 -L- WB OES	CUT 2	WB OSL 12.0	WB OSS 10.0	14.0 FW	C						0' - 6.0' RESIDUAL: LIGHT BROWN-TAN WITH GRAY, SILTY CLAY	S-73	A-7-6	M	6	DIAMOND GRINDING  WB OSS / OES DROP OFF  LOW SEVERITY SPALLING ALONG WB OSS / OSL LONGITUDINAL JOINT	829,662	1,973,481
		WB ISL 12.0	WB ISS 4.0															
150+00 -L- WB EM	CUT 6	WB OSL 12.0	WB OSS 10.0	8.0 FY	C						0' - 6.0' RESIDUAL: BROWN-GRAY, SILTY C-F SAND	S-60	A-2-4	D	6	DIAMOND GRINDING	829,161	1,973,529
		WB ISL 12.0	WB ISS 4.0															
155+00 -L- WB OES	CUT 6	WB OSL 12.0	WB OSS 10.0	12.0 FW	C						0' - 6.0' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	REF S-61	A-7-6	M	AR 4.6	DIAMOND GRINDING  WB OSS / OES DROP OFF  LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN OSL WHEEL PATH	828,676	1,973,660
		WB ISL 12.0	WB ISS 4.0															

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/25/2019, 01/27/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting			
160+00 -L- WB OSS	CUT 3	WB OSL 12.0	WB OSS 10.0	7.0 FW	C	CONCRETE ABC (15.0)	10.0			5.0		1.4' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-59	A-7-5	W	6	DIAMOND GRINDING WB OSS / OES DROP OFF	828,183	1,973,742			
		WB ISL 12.0	WB ISS 4.0																			
160+00 -L- WB OSL							3.0 FW	CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (23.0)	11.0	1.0	5.0		6.0	1.4' - 1.9' RESIDUAL (STABILIZED SUBGRADE): BROWN SILTY CLAY	S-72	A-7-5		W	6		828,181	1,973,730
														1.9' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-59	A-7-5		W				
160+00 -L- WB ISS				3.5 FY	CONCRETE ABC (15.0)	9.0				6.0	1.25' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-59	A-7-5	W	6		828,177	1,973,709				
165+00 -L- WB EM	FILL 6	WB OSL 12.0	WB OSS 10.0	8.0 FY	C							0' - 6.0' RESIDUAL: BROWN-RED-GRAY, C-F SANDY CLAY	S-58	A-6	M	6	DIAMOND GRINDING	827,684	1,973,792			
		WB ISL 12.0	WB ISS 4.0																			
170+00 -L- WB OSS	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0	4.5 FW	C	CONCRETE ABC (16.0)	9.75			6.25		1.25' - 3.5' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-57	A-6	W	6	DIAMOND GRINDING LOW SEVERITY TRANSVERSE CRACKING IN ASPHALT WB OSS	827,198	1,973,915			
		WB ISL 12.0	(CONC.) 10.0											3.5' - 6.0' ROADWAY EMBANKMENT: BROWN-GRAY, SILTY CLAY	S-71	A-7-6		M				
			WB ISS 4.0											CORE NOT SAVED								
175+00 -L- WB EM	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0	5.5 FY	C							0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	S-57	A-6	W	6	DIAMOND GRINDING	826,700	1,973,970			
		WB ISL 12.0	(CONC.) 10.0																			
			WB ISS 4.0																			

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/23/2019, 01/25/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness						Subgrade				GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in (inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
180+00 -L- WB OSS	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0	6.0 FW	C	CONCRETE ABC (14.0)	10.5			3.5		1.1' - 3.8' ROADWAY EMBANKMENT: BROWN-RED-GRAY, C-F SANDY CLAY	REF S-58	A-6	M	AR 4.1	DIAMOND GRINDING  LOW SEVERITY TRANSVERSE CRACKING IN ASPHALT WB OSS	826,214	1,974,093
		WB ISL 12.0	(CONC.) 10.0																
			WB ISS 4.0			CORE NOT SAVED													
185+00 -L- WB OSS	CUT 12	WB OSL 12.0	WB OSS (ASPH.) 2.0	8.5 FW	C	CONCRETE ABC (14.0)	9.75			4.25		1.1' - 6.0' RESIDUAL: BROWN-RED WITH TAN, SILTY CLAY	REF S-53	A-7-6	M	6	DIAMOND GRINDING  MODERATE SEVERITY SPALLING ON TRANSVERSE JOINTS IN WHEEL PATH OF WB OSL	825,722	1,974,182
		WB ISL 12.0	(CONC.) 10.0																
185+00 -L- WB ISS			WB ISS 4.0	3.0 FY		CONCRETE ABC (15.0)	10.0			5.0		1.25' - 6.0' RESIDUAL: RED-BROWN WITH GRAY, SILTY CLAY	REF S-55	A-7-6	M	6		825,716	1,974,148
190+00 -L- WB EM	FILL 6	WB OSL 12.0	WB OSS (ASPH.) 2.0	6.5 FY	C							0' - 2.6' ROADWAY EMBANKMENT: RED-BROWN WITH GRAY, SILTY CLAY	S-55	A-7-6	M	AR 2.6	DIAMOND GRINDING	825,223	1,974,232
		WB ISL 12.0	(CONC.) 10.0																
			WB ISS 4.0																
195+00 -L- WB OES	FILL 5	WB OSL 12.0	WB OSS 10.0	12.0 FW	C							0' - 6.0' ROADWAY EMBANKMENT: RED-BROWN WITH GRAY, CLAYEY C-F SAND	REF S-56	A-2-6	M	6	DIAMOND GRINDING	824,741	1,974,367
		WB ISL 12.0	WB ISS 4.0																
200+00 -L- WB OSS (O)	FILL 12	WB ACCEL 12.0	WB OSS (ASPH.) 8.0	7.5 FW	C	ASPHALT (4.25)		4.25				0.4' - 6.0' ROADWAY EMBANKMENT: RED-BROWN WITH GRAY, CLAYEY C-F SAND	S-56	A-2-6	M	6	DIAMOND GRINDING  LOW SEVERITY LONGITUDINAL CRACKING IN ASPHALT WB OSS	824,259	1,974,487
200+00 -L- WB OSS (I)		WB OSL 12.0	(CONC.) 4.0	3.0 FW		CONCRETE PADL 6.0" (15.75)	9.75					DRAIN ENCOUNTERED AT 3.0' FW BELOW PADL DCP AND AUGER PERFORMED 7.5' FW						824,258	1,974,483
200+00 -L- WB ACCEL		WB ISL 12.0	WB ISS 4.0	4.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (20.5)	11.25	0.75	3.5	5.0		1.8' - 6.0' ROADWAY EMBANKMENT: RED-BROWN WITH GRAY, CLAYEY C-F SAND	REF S-56	A-2-6	M	6		824,255	1,974,473
200+00 -L- WB EM				7.0 FY								0' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN WITH GRAY, C-F SANDY CLAY	S-54	A-6	D	6		824,246	1,974,438

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NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
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 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/23/2019, 01/25/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
210+00 -L- WB OSS	FILL 5	WB OSL 12.0	WB OSS 10.0	6.0 FW	S LT	CONCRETE ABC (15.0)	10.25			4.75			1.2' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH TAN AND GRAY, SILTY CLAY	REF S-53	A-7-6	M	6	DIAMOND GRINDING	823,304	1,974,765
		WB ISL 12.0	WB ISS 4.0																	
210+00 -L- WB ISL				4.5 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	11.25	1.75	3.5		5.5		1.9' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH TAN, SILTY CLAY	S-53	A-7-6	M	6		823,295	1,974,740
210+00 -L- WB ISS				2.5 FY		CONCRETE ABC (16.5)	9.75			6.75			1.4' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH TAN, SILTY CLAY	REF S-53	A-7-6	M	6		823,293	1,974,734
215+00 -L- WB EM	CUT 8	WB OSL 12.0	WB OSS 10.0	9.5 FY	C								0' - 2.8' RESIDUAL: LIGHT BROWN-TAN, SILTY CLAY	REF S-52	A-7-6	M	AR 2.8	DIAMOND GRINDING	822,823	1,974,903
		WB ISL 12.0	WB ISS 4.0																	
221+00 -L- WB OES	CUT 8	WB OSL 12.0	WB OSS 10.0	11.5 FW	C								0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, SILTY CLAY	REF S-52	A-7-6	M	6	DIAMOND GRINDING	822,292	1,975,183
		WB ISL 12.0	WB ISS 4.0																	
225+00 -L- WB EM	CUT 25	WB OSL 12.0	WB OSS 10.0	7.5 FY	C								0' - 3.1' RESIDUAL: LIGHT BROWN-TAN, SILTY CLAY	S-52	A-7-6	M	AR 3.1	DIAMOND GRINDING	821,915	1,975,318
		WB ISL 12.0	WB ISS 4.0																	
230+00 - L - WB OES	CUT 6	WB DECEL 14.0	WB OSS 4.0	6.5 FW	C								0' - 6.0' RESIDUAL: BROWN-TAN, SILTY CLAY	S-192	A-7-6	M	6	DIAMOND GRINDING	821,505	1,975,613
		WB OSL 12.0	GORE 20.0																	
		WB ISL 12.0	WB ISS 4.0																	

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured





**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/23/2019, 1/24/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
235+00 -L- WB OSS	CUT 8	WB DECEL 3.0	WB OSS 8.0	4.5 FW	C	CONCRETE ABC (14.75)	9.25			5.5			1.2' - 6.0' RESIDUAL: LIGHT BROWN-TAN, SILTY CLAY	REF S-52	A-7-6	D	6	DIAMOND GRINDING	821,046	1,975,814
		WB OSL 12.0	WB ISS 4.0																	
235+00 -L- WB ISS		WB ISL 12.0		3.5 FY		CONCRETE ABC (14.0)	10.0			4.0			1.2' - 6.0' RESIDUAL: BROWN-RED-TAN WITH GRAY, SILTY CLAY	REF S-51	A-7-6	M	6		821,030	1,975,784
240+00 -L- WB EM	FILL 25	WB OSL 12.0	WB OSS 10.0	5.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED-TAN WITH GRAY, SILTY CLAY	S-51	A-7-6	M	6	DIAMOND GRINDING	820,586	1,976,013
		WB ISL 12.0	WB ISS 4.0																	
245+00 -L- WB OES	CUT 12	WB OSL 12.0	WB OSS 10.0	11.5 FW	C								0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-50	A-7-6	D	6	DIAMOND GRINDING	820,162	1,976,281
		WB ISL 12.0	WB ISS 4.0																	
250+00 -L- WB EM	CUT 15	WB OSL 12.0	WB OSS 10.0	8.5 FY	C								0' - 2.8' RESIDUAL: RED-BROWN, C-F SANDY CLAY	REF S-3	A-6	M	AR 2.8	DIAMOND GRINDING	819,698	1,976,473
250+00-L- WB EM (BULK SAMPLE)		WB ISL 12.0	WB ISS 4.0			10 FY										1.0' - 3.5' RESIDUAL: RED-BROWN, C-F SANDY CLAY BULK SAMPLE ONLY, NO DCP	S-3	A-6	M	
255+00 -L- WB OES	CUT 15	WB OSL 12.0	WB OSS 10.0	12.5 FW	C								0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-50	A-7-6	M	6	DIAMOND GRINDING	819,275	1,976,744
		WB ISL 12.0	WB ISS 4.0																	

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/22/2019, 1/24/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting			
260+00 -L- WB OSS	CUT 18	WB OSL 12.0	WB OSS 10.0	6.5 FW	C	CONCRETE ABC (14.0)	10.0			4.0			1.2' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-50	A-7-6	M	6	DIAMOND GRINDING	818,829	1,976,970		
		WB ISL 12.0	WB ISS 4.0																			
260+00 -L- WB OSL						2.5 FW	CONCRETE ASPHALT ECONC STABILIZED SUB. (23.0)	10.75	1.25	4.0		7.0		1.9' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-50	A-7-6	M		6		818,825	1,976,962
							CORE ON TRANSVERSE JOINT CONCRETE ABC (14.5)	9.0				5.5		1.25' - 2.4' RESIDUAL: BROWN, SILTY CLAY	S-50	A-7-6	M		AR 2.4		818,814	1,976,940
265+00 -L- WB EM	CUT 12	WB OSL 12.0	WB OSS 10.0	8.0 FY	C								0' - 5.5' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	S-49	A-7-6	W	AR 5.5	DIAMOND GRINDING	818,368	1,977,167		
			WB ISL 12.0			WB ISS 4.0																
270+00 -L- WB OES	CUT 20	WB OSL 12.0	WB OSS 10.0	13.5 FW	S (RT)								0' - 6.0' RESIDUAL: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-48	A-6	W	6	DIAMOND GRINDING	817,945	1,977,438		
			WB ISL 12.0			WB ISS 4.0									WATER OBSERVED AT 3.9 FT IN OPEN BOREHOLE							
275+00 -L- WB EM	FILL 20	WB OSL 12.0	WB OSS 10.0	6.5 FY	S (RT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	S-48	A-6	W	6	DIAMOND GRINDING SPALLING ON TRANSVERSE JOINT IN WB ISL WHEEL PATH	817,459	1,977,586		
			WB ISL 12.0			WB ISS 4.0																
280+00 -L- WB OSS	FILL 15	WB OSL 12.0	WB OSS 10.0	7.0 FW	S (RT)	CONCRETE ABC (13.25)	9.25			4.0			1.25' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-48	A-6	W	6	DIAMOND GRINDING	816,973	1,977,728		
			WB ISL 12.0			WB ISS 4.0			CORE NOT SAVED													

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 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/20/2019, 1/22/2019, 1/24/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
285+00 -L- WB OSS	CUT 25	WB OSL 12.0	WB OSS 10.0	5.5 FW	S (RT)	CONCRETE ABC (14.25)	9.25			5.0			1.25' - 6.0' RESIDUAL: LIGHT BROWN-RED WITH TAN, C-F SANDY SILT	REF S-47	A-4	M TO D	6	DIAMOND GRINDING	816,465	1,977,746
		WB ISL 12.0	WB ISS 4.0																	
285+00 -L- WB ISS				CORE 3.5 FY		CONCRETE PADL 6.0" (16.5)	10.5						1.0' - 6.0' RESIDUAL: LIGHT BROWN-RED WITH TAN, C-F SANDY SILT	S-47	A-4	D	6	CORE	816,466	1,977,714
				DCP 7.5 FY									DRAIN ENCOUNTERED AT 3.5' FY BELOW PADL DCP AND AUGER PERFORMED 7.5' FY					DCP / AUGER	816,467	1,977,711
290+00 -L- WB EM	CUT 18	WB OSL 12.0	WB OSS 10.0	6.0 FY	C								0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY SILT	S-46	A-4	D	6	DIAMOND GRINDING	815,967	1,977,690
		WB ISL 12.0	WB ISS 4.0															SOME SMALL CUT AND REPAIRED AREAS ON LONGITUDINAL JOINT BETWEEN WB OSL AND WB ISL		
295+00 -L- WB OES	CUT 2	WB OSL 12.0	WB OSS 10.0	13.0 FW	S (LT)								0' - 3.0' RESIDUAL: LIGHT BROWN-GRAY, CLAYEY C-F SAND	S-38	A-2-6	D	AR 3	DIAMOND GRINDING	815,466	1,977,711
		WB ISL 12.0	WB ISS 4.0															WB OSS / OES DROP OFF		
300+00 -L- WB EM	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0	6.0 FY	S (LT)								0' - 6.0' ROADWAY EMBANKMENT: LIGHT BROWN WITH GRAY, SILTY CLAY	S-45	A-7-6	M	6	DIAMOND GRINDING	814,969	1,977,669
		WB ISL 12.0	(CONC.) 10.0																	
			WB ISS 4.0																	
305+00 -L- WB OSS	FILL 25	WB OSL 12.0	WB OSS (ASPH.) 2.0	6.5 FW	S (LT)	CONCRETE ABC (15.0)	10.0			5.0			1.25' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-37	A-6	M	6	DIAMOND GRINDING	814,480	1,977,760
		WB ISL 12.0	(CONC.) 10.0																	
			WB ISS 4.0			CORE NOT SAVED														

**Notes:**  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/20/2019, 1/21/2019, 1/22/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness						Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting	
311+00 -L- WB OSS	FILL 22	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10.0	6.0 FW	S (LT)	CONCRETE ABC (15.0)	10.0			5.0			1.25' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-37	A-6	M	6	DIAMOND GRINDING	813,903	1,977,865
		WB ISL 12.0																SOME SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN ALL WB LANES AND SHOULDERS		
311+00 -L- WB ISL			WB ISS 4.0	2.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (20.0)	11.0	1.25	3.75		4.0		1.25' - 1.75' ROADWAY EMBANKMENT: BROWN-ORANGE, C-F SANDY SILT	S-44	A-4	M	6	SOME CUT AND REPAIRED AREAS ON JOINTS IN WB OSL	813,895	1,977,869
													1.75' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-37	A-6	M				
311+00 -L- WB ISS				3.5 FY		CONCRETE (9.75)	9.75						.75' - 3.3' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-37	A-6	M	AR 3.3		813,894	1,977,864
315+00 -L- WB EM	FILL 30	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10.0	6.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-37	A-6	M	6	DIAMOND GRINDING	813,515	1,977,990
		WB ISL 12.0																		
			WB ISS 4.0																	
320+00 -L- WB OSS	FILL 10	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10.0	5.5 FW	C	CONCRETE ABC (15.0)	10.0			5.0			1.25' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	S-37	A-6	M	6	DIAMOND GRINDING	813,060	1,978,198
		WB ISL 12.0																SPALLING ON TRANSVERSE JOINTS IN WB OSL AND WB OSS		
			WB ISS 4.0			CORE NOT SAVED														
325+00 -L- WB EM	GRADE	WB OSL 12.0	WB OSS 10.0	6.0 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-37	A-6	M	6	DIAMOND GRINDING	812,583	1,978,351
		WB ISL 12.0	WB ISS 4.0																	
330+00 -L- WB OES	FILL 5	WB OSL 12.0	WB OSS 10.0	11.0 FW	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, C-F SANDY CLAY	REF S-36	A-6	M	6	DIAMOND GRINDING	812,140	1,978,584
		WB ISL 12.0	WB ISS 4.0																	

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/20/2019, 1/21/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
335+00 -L- WB OSS	FILL 20	WB OSL 12.0	WB OSS (ASPH.) 2.0 (CONC.) 10.0	6.0 FW	C	CONCRETE ABC (12.5)	8.0			4.5			1.0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, C-F SANDY CLAY	S-36	A-6	M	6	DIAMOND GRINDING	811,684	1,978,785
335+00 -L- WB ISS		WB ISL 12.0	WB ISS 4.0	3.5 FY		CONCRETE ABC (12.0)	9.0			3.0			1.0' - 3.8' ROADWAY EMBANKMENT: BROWN, C-F SANDY CLAY	S-43	A-6	M	AR 3.8		811,670	1,978,755
340+00 -L- WB EM	FILL 8	WB OSL 12.0	WB OSS 10.0	8.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN, C-F SANDY CLAY	REF S-35	A-6	M	6	DIAMOND GRINDING	811,217	1,978,966
345+00 -L- WB OES	FILL 4	WB OSL 12.0	WB OSS 10.0	14.0 FW	C								0' - 3.5' ROADWAY EMBANKMENT: BROWN, C-F SANDY CLAY	S-35	A-6	M	6	DIAMOND GRINDING	810,792	1,979,233
		WB ISL 12.0	WB ISS 4.0										3.5' - 6.0' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	REF S-34	A-7-6	W		WB OSS / OES DROP OFF		
350+00 -L- WB EM	FILL 12	WB OSL 12.0	WB OSS 10.0	7.0 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN, C-F SANDY CLAY	S-42	A-6	W	6	DIAMOND GRINDING	810,330	1,979,427
		WB ISL 12.0	WB ISS 4.0															SPALLING ON TRANSVERSE JOINTS IN WB ISS		

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/20/2019, 1/21/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness					Subgrade				GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
356+00 -L- WB OSS	FILL 25	WB ACCEL 12.0	WB OSS (ASPH.) 8.0 (CONC.) 4.0	7.0 FW	S (LT)	ASPHALT STABILIZED SUB. (12.5)		5.0			7.5	1.0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH GRAY, SILTY CLAY	REF S-34	A-7-6	W	6	DIAMOND GRINDING  LOW SEVERITY TRANSVERSE CRACKING IN ASPHALT WB OSS	809,852	1,979,783
356+00 -L- WB ACCEL		WB OSL 12.0																	
356+00 -L- WB ACCEL		WB ISL 12.0	WB ISS 4.0	5.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (21.0)	11.25	1.5	2.75		5.5	1.75' - 6.0' ROADWAY EMBANKMENT: BROWN-RED WITH GRAY, SILTY CLAY	S-34	A-7-6	W	6		809,845	1,979,773
360+00 -L- WB OSS	FILL 6	WB ACCEL 12.0	WB OSS (ASPH.) 3.0 (CONC.) 4.0	CORE 3.0 FW	S (LT)	CONCRETE PADL 6.0" (17.5)	11.5					1.0' - 6.0' ROADWAY EMBANKMENT: MEDIUM BROWN-ORANGE WITH GRAY, SILTY CLAY	REF S-34	A-7-6	M	6	DIAMOND GRINDING  LOW SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN ALL WB LANES AND SHOULDERS	CORE 809,545	1,980,028
		WB OSL 12.0		DCP 13.0 FW		CORE NOT SAVED						DRAIN ENCOUNTERED 3.0' FW BELOW PADL DCP AND AUGER PERFORMED 13' FW					DCP / AUGER 809,551	1,980,037	
360+00 -L- WB ISS		WB ISL 12.0	WB ISS 4.0	3.5 FY		CONCRETE (12.0)	12.0					1.0' - 6.0' ROADWAY EMBANKMENT: MEDIUM BROWN-ORANGE WITH GRAY, SILTY CLAY	REF S-34	A-7-6	M	6		809,516	1,979,996
365+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (LT)							0' - 3.0' RESIDUAL: MEDIUM BROWN-ORANGE WITH GRAY, SILTY CLAY	REF S-33	A-7-6	M	6	DIAMOND GRINDING	809,168	1,980,351
		WB ISL 12.0	WB ISS 4.0									3.0' - 6.0' RESIDUAL: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	REF S-41	A-6	M				
370+00 -L- WB OES	CUT 10	WB OSL 12.0	WB OSS 10.0	13.5 FW	S (LT)							0' - 6.0' RESIDUAL: MEDIUM BROWN-ORANGE WITH GRAY, SILTY CLAY	S-33	A-7-6	M	6	DIAMOND GRINDING	808,905	1,980,772
		WB ISL 12.0	WB ISS 4.0																
375+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	6.5 FY	C							0' - 4.2' RESIDUAL: BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	S-41	A-6	M	AR 4.2	DIAMOND GRINDING	808,616	1,981,179
		WB ISL 12.0	WB ISS 4.0																
380+00 -L- WB OES	GRADE	WB OSL 12.0	WB OSS 10.0	13.0 FW	C							0' - 5.0' ROADWAY EMBANKMENT: MEDIUM BROWN-ORANGE WITH GRAY, SILTY CLAY	S-32	A-7-6	W	6	DIAMOND GRINDING	808,415	1,981,637
		WB ISL 12.0	WB ISS 4.0									5.0' - 6.0' ROADWAY EMBANKMENT: LIGHT BROWN AND YELLOW, C SAND (UNDERDRAIN)							

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/20/2019, 1/21/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
385+00 -L- WB OSS	CUT 10	WB OSL 12.0	WB OSS 16.0	12.0 FW	C	CONCRETE ABC (16.0)	11.5			4.5			1.3' - 6.0' RESIDUAL: BROWN, C-F SANDY CLAY	S-31	A-6	W	6	DIAMOND GRINDING	808,189	1,982,082
		WB ISL 12.0	WB ISS 4.0																	
385+00 -L- WB ISS				3.0 FY		CONCRETE (11.0)	11.0						0.9' - 6.0' RESIDUAL: BROWN, C-F SANDY CLAY	REF S-31	A-6	W	6		808,155	1,982,065
390+00 -L- WB EM	CUT 8	WB DECEL 4.0	WB OSS 4.0	7.5 FY	C								0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY CLAY	S-40	A-6	M	6	DIAMOND GRINDING  LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN WB ISL AND WB ISS	807,932	1,982,512
		WB OSL 12.0	WB ISS 4.0																	
395+00 -L- WB OES	GRADE	WB OSL 12.0	WB OSS 10.0	13.0 FW	C								0' - 2.4' ROADWAY EMBANKMENT: BROWN WITH GRAY, C-F SANDY CLAY	REF S-30	A-6	M	AR 2.4	DIAMOND GRINDING	807,762	1,982,983
		WB ISL 12.0	WB ISS 4.0																	
400+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	6.5 FY	C								0' - 6.0' RESIDUAL: LIGHT BROWN-ORANGE WITH GRAY, C-F SANDY CLAY	S-39	A-6	M	6	DIAMOND GRINDING	807,526	1,983,425
		WB ISL 12.0	WB ISS 4.0																	
405+00 -L- WB OES	CUT 6	WB OSL 12.0	WB OSS 10.0	13.0 FW	C								0' - 2.7' RESIDUAL: BROWN WITH GRAY, C-F SANDY CLAY	S-30	A-6	M	AR 2.7	DIAMOND GRINDING	807,378	1,983,904
		WB ISL 12.0	WB ISS 4.0																	

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 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/23/2019, 01/25/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
410+00 -L- WB OSS	CUT 5	WB OSL 12.0	WB OSS 10.0	6.0 FW	S (LT)	CONCRETE ABC (15.0)	9.0			6.0			1.25' - 3.4' RESIDUAL: LIGHT BROWN-ORANGE WITH GRAY, SILTY CLAY	REF S-29	A-7-6	M	AR 3.4	DIAMOND GRINDING	807,193	1,984,367
		WB ISL 12.0	WB ISS 4.0																	
410+00 -L- WB ISL				4.0 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (23.5)	11.0	1.0	3.5		8.0		1.5' - 3.5' RESIDUAL: LIGHT BROWN-ORANGE WITH GRAY, SILTY CLAY	REF S-29	A-7-6	M	AR 3.5		807,170	1,984,358
410+00 -L- WB ISS				3.0 FY		CONCRETE ABC (11.0)	8.0			3.0			0.7' - 4.6' RESIDUAL: LIGHT BROWN-ORANGE WITH GRAY, SILTY CLAY	S-29	A-7-6	M	AR 4.6		807,162	1,984,356
415+00 -L- WB EM	CUT 5	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (LT)								0' - 6.0' RESIDUAL: LIGHT BROWN-ORANGE, C-F SANDY CLAY	REF S-17	A-6	M	6	DIAMOND GRINDING	807,023	1,984,832
		WB ISL 12.0	WB ISS 4.0																	
420+00 -L- WB OES	CUT 3	WB OSL 12.0	WB OSS 10.0	12.0 FW	S (LT)								0' - 4.0' RESIDUAL: LIGHT BROWN, C-F SANDY CLAY	REF S-28	A-6	M	6	DIAMOND GRINDING	807,012	1,985,326
		WB ISL 12.0	WB ISS 4.0															LOW SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN WB OSL AND WB OSS		
425+00 -L- WB EM	CUT 15	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (LT)								0' - 6.0' RESIDUAL: LIGHT BROWN, C-F SANDY CLAY	S-28	A-6	M	6	DIAMOND GRINDING	807,003	1,985,821
		WB ISL 12.0	WB ISS 4.0																	
430+00 -L- WB OES	CUT 8	WB OSL 12.0	WB OSS 10.0	15.0 FW	S (LT)								0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY SILT	S-19	A-4	D	6	DIAMOND GRINDING	807,165	1,986,289
		WB ISL 12.0	WB ISS 4.0															LOW SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN WB OSL AND WB OSS		

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/16/2019, 1/17/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
435+00 -L- WB OSS	CUT 10	WB OSL 12.0	WB OSS 10.0	6.5 FW	S (RT)	CONCRETE ABC (12.0)	8.0			4.0			1.0' - 6.0' RESIDUAL: LIGHT BROWN-RED WITH TAN, C-F SANDY CLAY	S-18	A-6	W	6	DIAMOND GRINDING WB OSS / OES DROP OFF	807,351	1,986,745
		WB ISL 12.0	WB ISS 4.0																	LOW SEVERITY SPALLING ON LONGITUDINAL JOINT BETWEEN WB OSL AND WB ISL
435+00 -L- WB ISS				1.0 FY		CONCRETE ASPHALT CTBC STABILIZED SUB. (19.0)	10.0	1.0	4.0		4.0		1.5' - 6.0' RESIDUAL: LIGHT BROWN-RED WITH TAN, C-F SANDY CLAY	REF S-18	A-6	W	6	PATCH AND REPLACE CONCRETE AT LONGITUDINAL JOINT BETWEEN WB OSL AND WB ISL	807,323	1,986,759
440+00 -L- WB EM	CUT 20	WB OSL 12.0	WB OSS 10.0	8.0 FY	S (RT)								0' - 6.0' RESIDUAL: LIGHT BROWN-ORANGE WITH TAN, C-F SANDY CLAY	REF S-17	A-6	M	6	DIAMOND GRINDING	807,532	1,987,213
		WB ISL 12.0	WB ISS 4.0																	
445+00 -L- WB OES	CUT 15	WB OSL 12.0	WB OSS 10.0	13.0 FW	S (RT)								0' - 6.0' RESIDUAL: LIGHT BROWN-ORANGE WITH TAN, C-F SANDY CLAY	S-17	A-6	M	6	DIAMOND GRINDING	807,758	1,987,665
		WB ISL 12.0	WB ISS 4.0																	
450+00 -L- WB EM	CUT 12	WB OSL 12.0	WB OSS 10.0	7.5 FY	S (RT)								0' - 3.3' RESIDUAL: LIGHT BROWN-ORANGE WITH TAN, C-F SANDY CLAY	REF S-17	A-6	M	AR 3.3	DIAMOND GRINDING LOW SEVERITY SPALLING ON LONGITUDINAL JOINT BETWEEN WB ISL AND WB ISS	807,838	1,988,165
		WB ISL 12.0	WB ISS 4.0																	
455+00 -L- WB OES	CUT 25	WB OSL 12.0	WB OSS 10.0	12.0 FW	S (RT)								0' - 6.0' RESIDUAL: RED-BROWN, C-F SANDY CLAY	S-16	A-6	M	6	DIAMOND GRINDING	807,939	1,988,660
		WB ISL 12.0	WB ISS 4.0																	

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/16/2019, 1/17/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure Thickness					Subgrade				GPS Coordinates									
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting			
460+00 -L- WB OSS	CUT 20	WB OSL 12.0	WB OSS 10.0	5.5 FW	S (RT)	CONCRETE ABC (14.0)	10.0			4.0		1.1' - 6.0' RESIDUAL: RED-BROWN, C-F SANDY CLAY	S-15	A-6	W	6	DIAMOND GRINDING  MODERATE SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN WB ISL AND WB ISS	807,926	1,989,166			
		WB ISL 12.0	WB ISS 4.0																			
460+00 -L- WB OSL						4.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (21.0)	11.0	1.5	3.0		5.5	1.9' - 4.2' RESIDUAL: RED-BROWN, C-F SANDY CLAY	REF S-15	A-6		W	AR 4.2		807,916	1,989,165
460+00 -L- WB ISS						CORE 2.5 FY		CONCRETE PADL 3.0" (13.0)	10.0					1.1' - 3.3' RESIDUAL: RED-BROWN, C-F SANDY CLAY	REF S-15	A-6		W	AR 3.3	CORE 807,894	1,989,163	
				DCP 3.5 FY								DRAIN ENCOUNTERED BELOW PADL AT 2.5' FY DCP AND AUGER PERFORMED 3.5' FY					DCP / AUGER 807,890	1,989,163				
465+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (RT)							0' - 1.9' RESIDUAL: MEDIUM BROWN-RED, SILTY CLAY	REF S-14	A-7-6	W	6	DIAMOND GRINDING  SPALLING ON LONGITUDINAL JOINT BETWEEN WB ISL AND WB ISS	807,835	1,989,661			
		WB ISL 12.0	WB ISS 4.0										1.9' - 6.0' RESIDUAL: LIGHT BROWN-GRAY, SANDY SILT	S-27	A-4	D						
470+00 -L- WB OES	CUT 6	WB OSL 12.0	WB OSS 10.0	15.0 FW	S (RT)							0' - 6.0' RESIDUAL: MEDIUM BROWN-RED, SILTY CLAY	S-14	A-7-6	W	6	DIAMOND GRINDING	807,793	1,990,163			
		WB ISL 12.0	WB ISS 4.0																			
475+00 -L- WB EM	CUT 3	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (RT)							0' - 6.0' RESIDUAL: MEDIUM BROWN WITH MAROON AND GRAY, C-F SANDY CLAY	S-26	A-6	M	6	DIAMOND GRINDING	807,629	1,990,640			
		WB ISL 12.0	WB ISS 4.0										DCP REFUSAL, AUGERED THROUGH MULTIPLE HARD LAYERS									
480+00 -L- WB OES	FILL 10	WB OSL 12.0	WB OSS 10.0	17.0 FW	S (RT)							0' - 6.0' ROADWAY EMBANKMENT: MEDIUM BROWN-GRAY WITH RED, C-F SANDY CLAY	S-13	A-6	M	6	DIAMOND GRINDING	807,523	1,991,134			
		WB ISL 12.0	WB ISS 4.0																			

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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/16/2019, 1/17/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
485+00 -L- WB OSS	FILL 7	WB OSL 12.0	WB OSS 10.0	7.5 FW	S (RT)	CONCRETE ABC (16.0)	10.0			6.0			1.3' - 6.0' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	S-12	A-6	M	6	DIAMOND GRINDING  MODERATE SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN ALL WB LANES AND SHOULDERS	807,332	1,991,600
		WB ISL 12.0	WB ISS 4.0																	
485+00 -L- WB ISS				3.0 FY		CONCRETE PADL 7.0" (17.0)	10.0						1.4' - 3.0' SHOULDER DRAIN WASHED STONE  3.0' - 6.0' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	REF S-12	A-6	M	6		807,301	1,991,587
490+00 -L- WB EM	CUT 10	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (RT)								0' - 5.1' RESIDUAL: LIGHT BROWN-GRAY, SANDY CLAY	S-25	A-6	D	AR 5.1	DIAMOND GRINDING  MODERATE SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN WB ISL AND WB ISS	807,085	1,992,040
		WB ISL 12.0	WB ISS 4.0																	
495+00 -L- WB OES	CUT 6	WB OSL 12.0	WB OSS 10.0	17.0 FW	S (RT)								0' - 6.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	REF S-24	A-6	M	6	DIAMOND GRINDING  WB OSS / OES DROP OFF	806,885	1,992,503
		WB ISL 12.0	WB ISS 4.0																	
500+00 -L- WB EM	CUT 6	WB OSL 12.0	WB OSS 10.0	7.0 FY	S (RT)								0' - 3.9' TRIASSIC RESIDUAL: MAROON-BROWN, C-F SANDY CLAY	S-24	A-6	M	AR 3.9	DIAMOND GRINDING  OCCASIONAL AGGREGATE POP-OUTS  LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN WB OSS	806,575	1,992,901
		WB ISL 12.0	WB ISS 4.0																	
505+00 -L- WB OES	FILL 8	WB OSL 12.0	WB OSS 10.0	14.5 FW	C								0' - 3.0' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	REF S-11	A-6	W	AR 3	DIAMOND GRINDING  WB OSS / OES DROP OFF	806,338	1,993,344
		WB ISL 12.0	WB ISS 4.0																	

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 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/16/2019, 1/17/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting			
510+00 -L- WB OSS	CUT 4	WB OSL 12.0	WB OSS 10.0	6.5 FW	C	CONCRETE ABC (15.0)	10.5			4.5			1.25' - 6.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	REF S-24	A-6	M	6	DIAMOND GRINDING  CUT AND REPAIR AREAS ALONG LONGITUDINAL JOINT BETWEEN WB OSL AND WB ISL  WB OSS / OES DROP OFF	806,056	1,993,757		
		WB ISL 12.0	WB ISS 4.0																			
510+00 -L- WB ISL						4.5 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	11.0	2.0	3.5		5.5	1.75' - 6.0' TRIASSIC RESIDUAL: MAROON AND GRAY, C-F SANDY CLAY	REF S-24	A-6	M		6	LOW SEVERITY SPALLING ON TRANSVERSE AND LONGITUDINAL JOINTS IN WB ISL	806,034	1,993,742
510+00 -L- WB ISS						5.0 FY		CONCRETE ABC (15.0)	9.5				5.5	1.25' - 6.0' TRIASSIC RESIDUAL: MAROON-ORANGE WITH GRAY, SILTY CLAY	S-23	A-7-6	W		6		806,026	1,993,737
515+00 -L- WB EM	FILL 15	WB OSL 12.0	WB OSS 10.0	7.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: MAROON-ORANGE WITH GRAY, C-F SANDY CLAY	S-22	A-6	M	6	DIAMOND GRINDING	805,749	1,994,153		
		WB ISL 12.0	WB ISS 4.0																			
520+00 -L- WB OSS	FILL 15	WB OSL 12.0	WB OSS 10.0	6.5 FW	C	CONCRETE ABC (16.0")	11.0				5.0		1.3' - 6.0' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	S-11	A-6	W	6	DIAMOND GRINDING	805,505	1,994,591		
		WB ISL 12.0	WB ISS 4.0																			
525+00 -L- WB EM	FILL 15	WB OSL 12.0	WB OSS 10.0	5.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: MAROON WITH ORANGE, C-F SANDY CLAY	S-21	A-6	M	6	DIAMOND GRINDING  OCCASIONAL AGGREGATE POP-OUTS	805,200	1,994,989		
		WB ISL 12.0	WB ISS 4.0																			
530+00 -L- WB OSS	FILL 15	WB OSL 12.0	WB OSS 10.0	6.0 FW	C	CONCRETE ABC (15.0")	9.0				6.0		1.25' - 6.0' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	S-10	A-6	M	6	DIAMOND GRINDING  FLEXIBLE JOINT SEALANT DETERIORATION	804,954	1,995,425		
		WB ISL 12.0	WB ISS 4.0																			

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

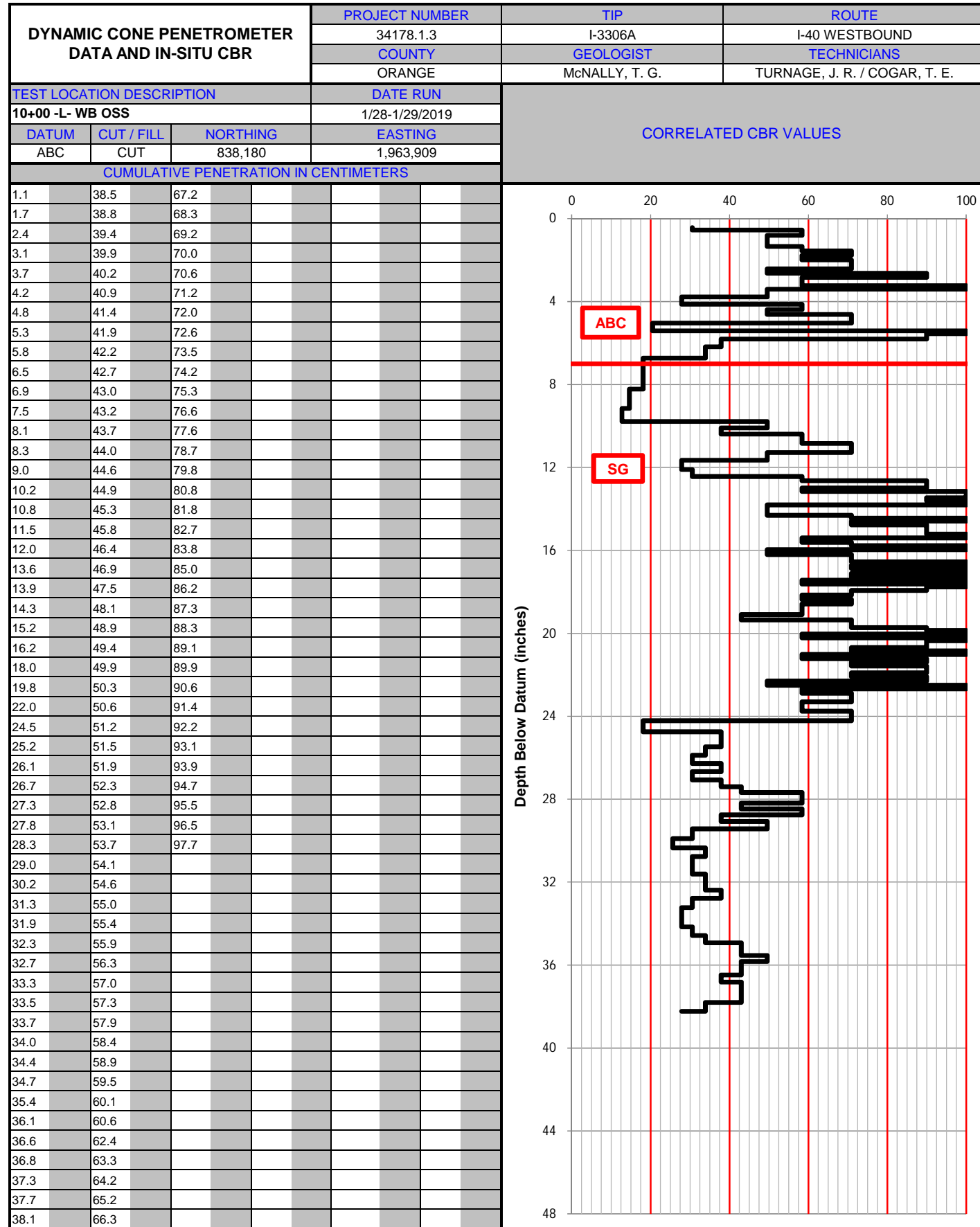
<b>Date:</b>	1/16/2019, 1/17/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure Thickness					Subgrade				Pavement Notes	GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting				
535+00 -L- WB OSS	CUT 8	WB OSL 12.0	WB OSS 10.0	7.5 FW	C	CONCRETE ABC (13.0)	8.0			5.0			1.1' - 6.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	S-9	A-6	M	6	DIAMOND GRINDING OCCASIONAL AGGREGATE POP-OUTS	804,679	1,995,843			
		WB ISL 12.0	WB ISS 4.0																				
535+00 -L- WB ISS				3.0 FY		CONCRETE ABC (13.0)	9.0			4.0			1.1' - 6.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	REF S-9	A-6	M	6		804,651	1,995,825			
540+00 -L- WB EM	CUT 15	WB OSL 12.0	WB OSS 10.0	8.0 FY	C								0' - 6.0' TRIASSIC: LIGHT MAROON-GRAY, C-F SANDY CLAY	S-20	A-6	D	6	DIAMOND GRINDING FLEXIBLE JOINT SEALANT DETERIORATION	804,372	1,996,240			
		WB ISL 12.0	WB ISS 4.0																				
545+00 -L- WB OES	CUT 10	WB OSL 12.0	WB OSS 10.0	14.0 FW	C								0' - 5.5' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	S-8	A-6	M	6	DIAMOND GRINDING	804,134	1,996,682			
		WB ISL 12.0	WB ISS 4.0												5.5' - 6.0' ROADWAY EMBANKMENT: YELLOW, C SAND (UNDERDRAIN)		A-1-b		M				
555+00 -L- WB OES	CUT 12	WB OSL 12.0	WB OSS 10.0	16.5 FW	C								0' - 4.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	S-7	A-6	D	AR 4	DIAMOND GRINDING REFLECTION CRACKING ACROSS WB OSL, WB CL, WB ISL	803,585	1,997,518			
		WB CL 12.0	WB ISS 4.0																				
		WB ISL 4.0																					

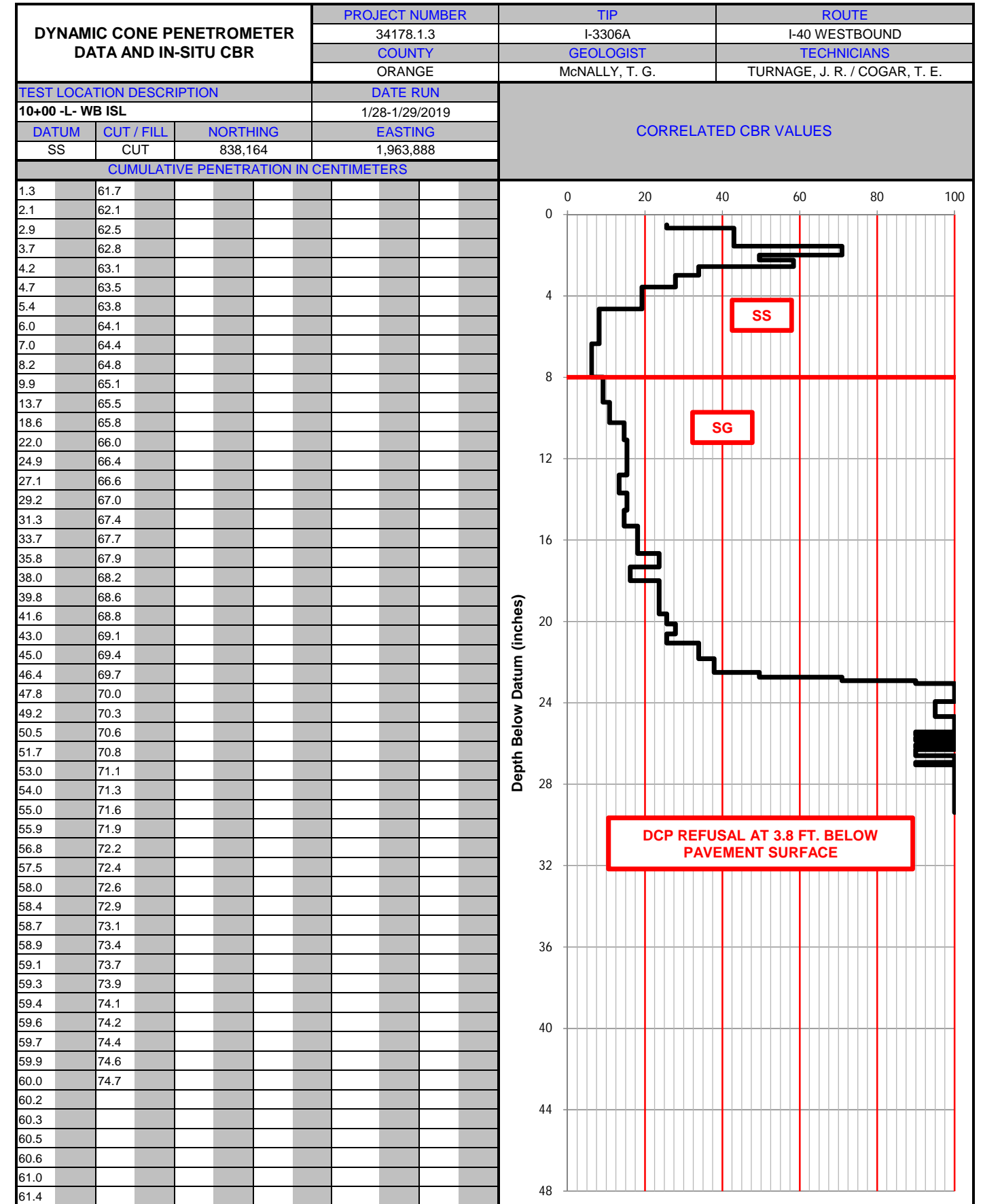
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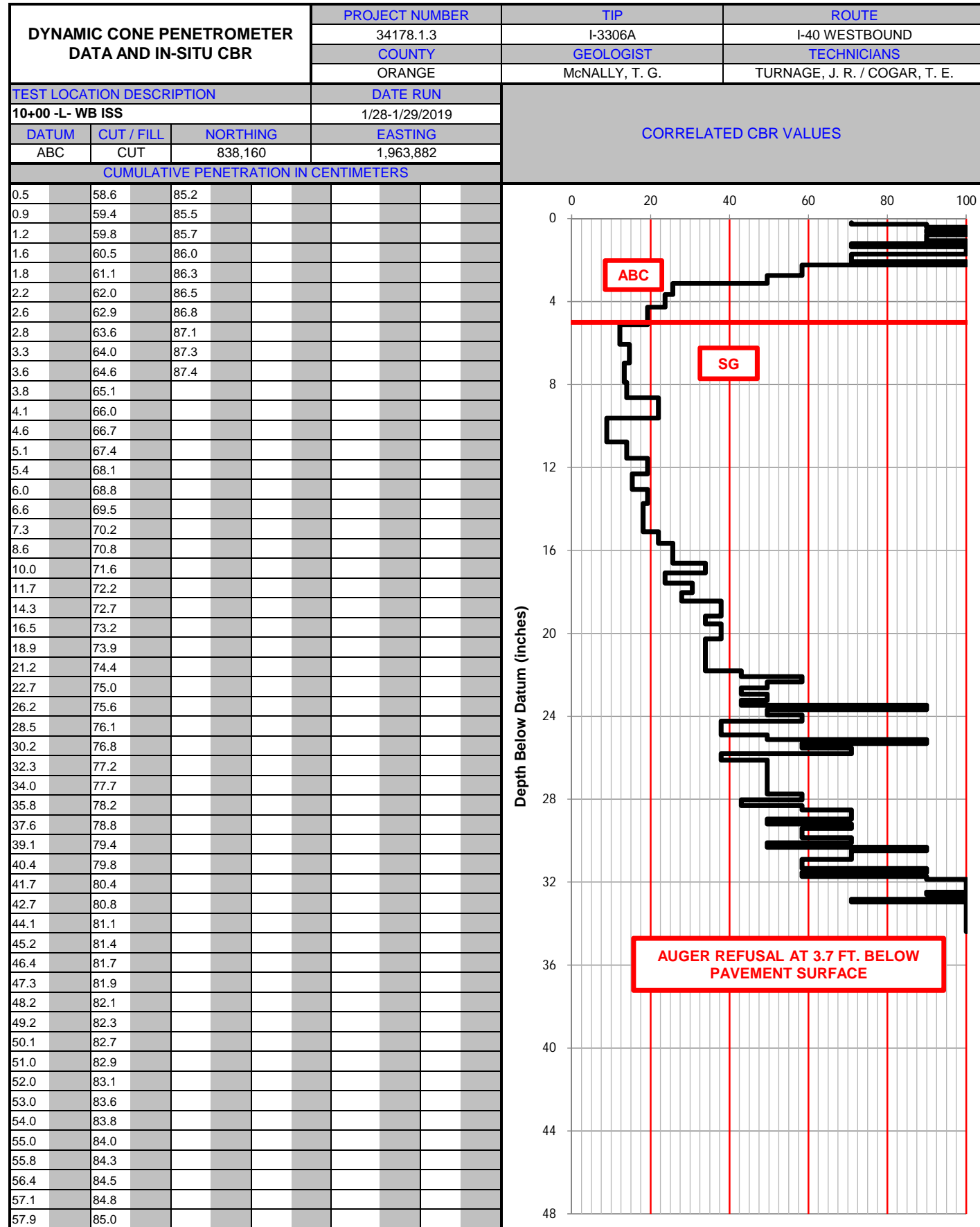


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

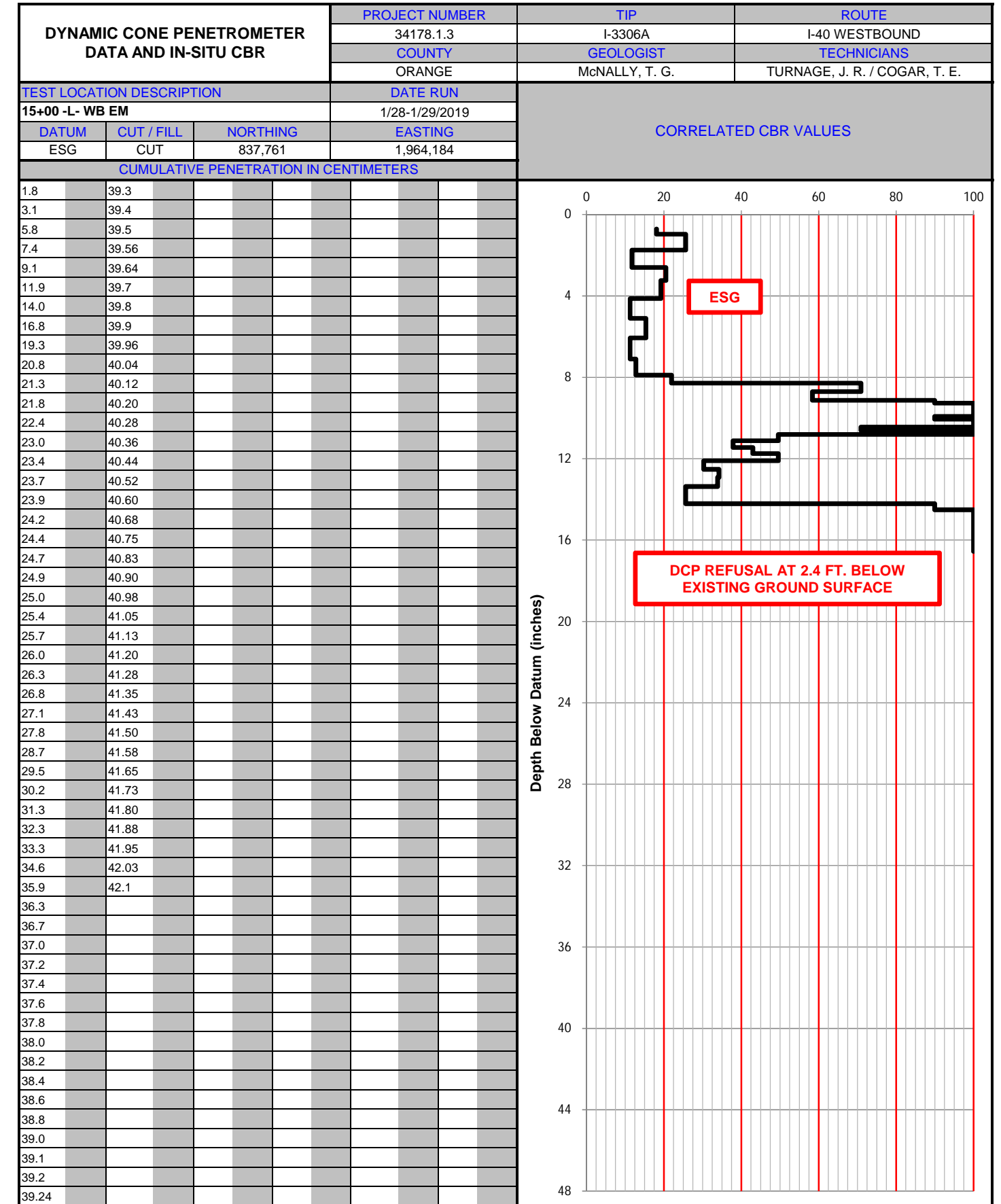


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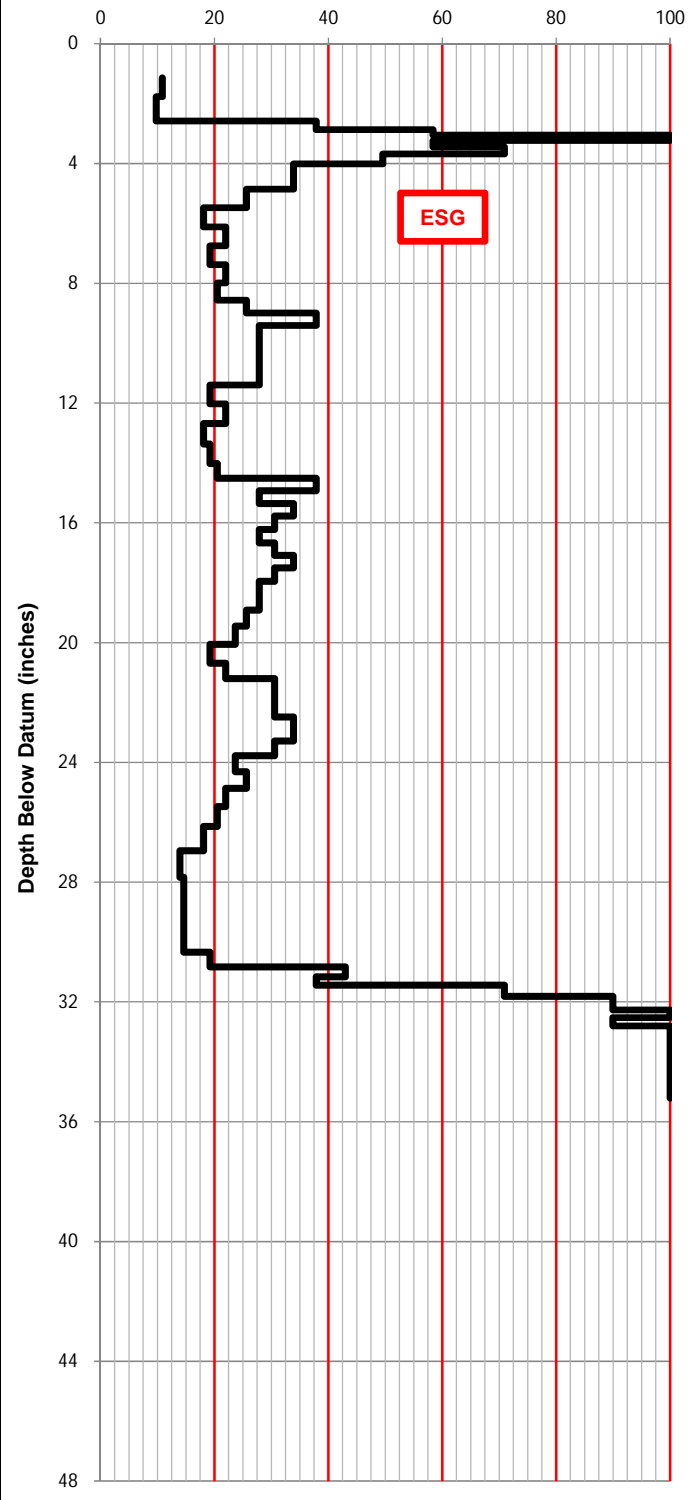
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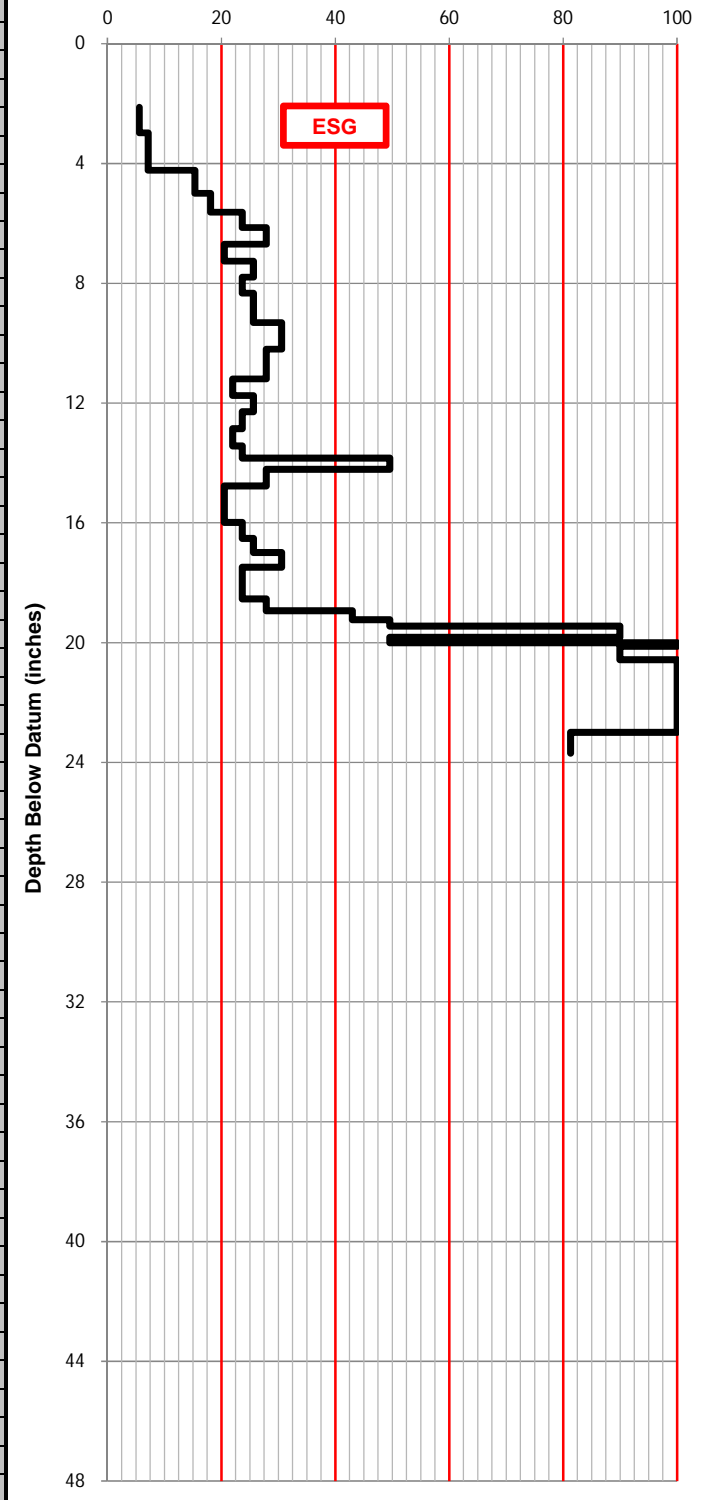
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
20+00 -L- WB OES				DATE RUN		
				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	837,392	1,964,524			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.9	71.8					
6.1	74.0					
7.0	76.2					
7.6	77.9					
7.9	78.7					
8.5	79.6					
9.0	80.1					
9.7	80.6					
10.7	81.0					
11.7	81.4					
13.0	81.8					
14.8	82.1					
16.3	82.4					
18.0	82.8					
19.5	83.2					
21.1	83.4					
22.4	83.6					
23.3	83.8					
24.5	84.1					
25.7	84.4					
26.9	84.6					
28.1	84.9					
29.8	85.2					
31.3	85.3					
33.1	85.4					
34.8	85.6					
36.4	85.7					
37.3	85.8					
38.5	85.9					
39.5	86.0					
40.6	86.2					
41.8	86.3					
42.9	86.4					
43.9	86.7					
45.0	86.9					
46.2	87.2					
47.4	87.4					
48.7	87.7					
50.1	88.0					
51.8	88.3					
53.3	88.6					
54.4	88.7					
55.5	89.0					
56.6	89.3					
57.6	89.6					
58.6						
59.7						
61.1						
62.4						
63.9						
65.5						
67.3						
69.6						



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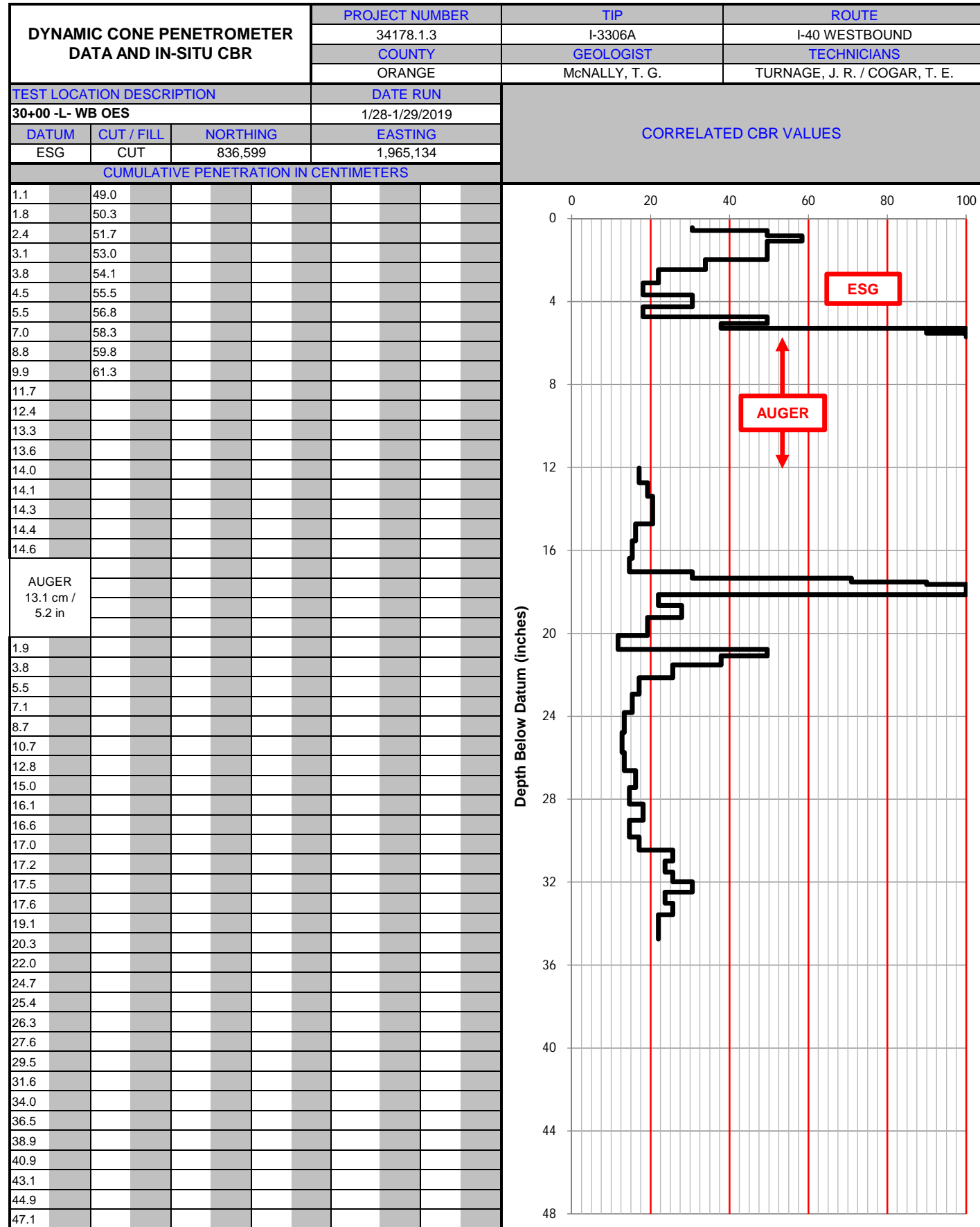
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
25+00 -L- WB EM				DATE RUN		
				1/28-1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	836,968	1,964,794			
CUMULATIVE PENETRATION IN CENTIMETERS						
5.4	55.7					
9.7	56.0					
11.8	56.2					
13.6	56.5					
15.0	56.8					
16.2	57.2					
17.8	57.5					
19.1	57.9					
20.5	58.2					
21.8	58.6					
23.1	59.1					
24.2	59.5					
25.3	60.0					
26.5	60.4					
27.7						
29.2						
30.5						
31.9						
33.4						
34.8						
35.5						
36.7						
38.3						
39.9						
41.3						
42.6						
43.7						
45.1						
46.5						
47.7						
48.5						
49.2						
49.6						
50.0						
50.7						
50.9						
51.3						
51.7						
52.1						
52.4						
52.6						
52.7						
53.0						
53.3						
53.5						
53.7						
53.9						
54.2						
54.4						
54.7						
54.9						
55.2						
55.5						



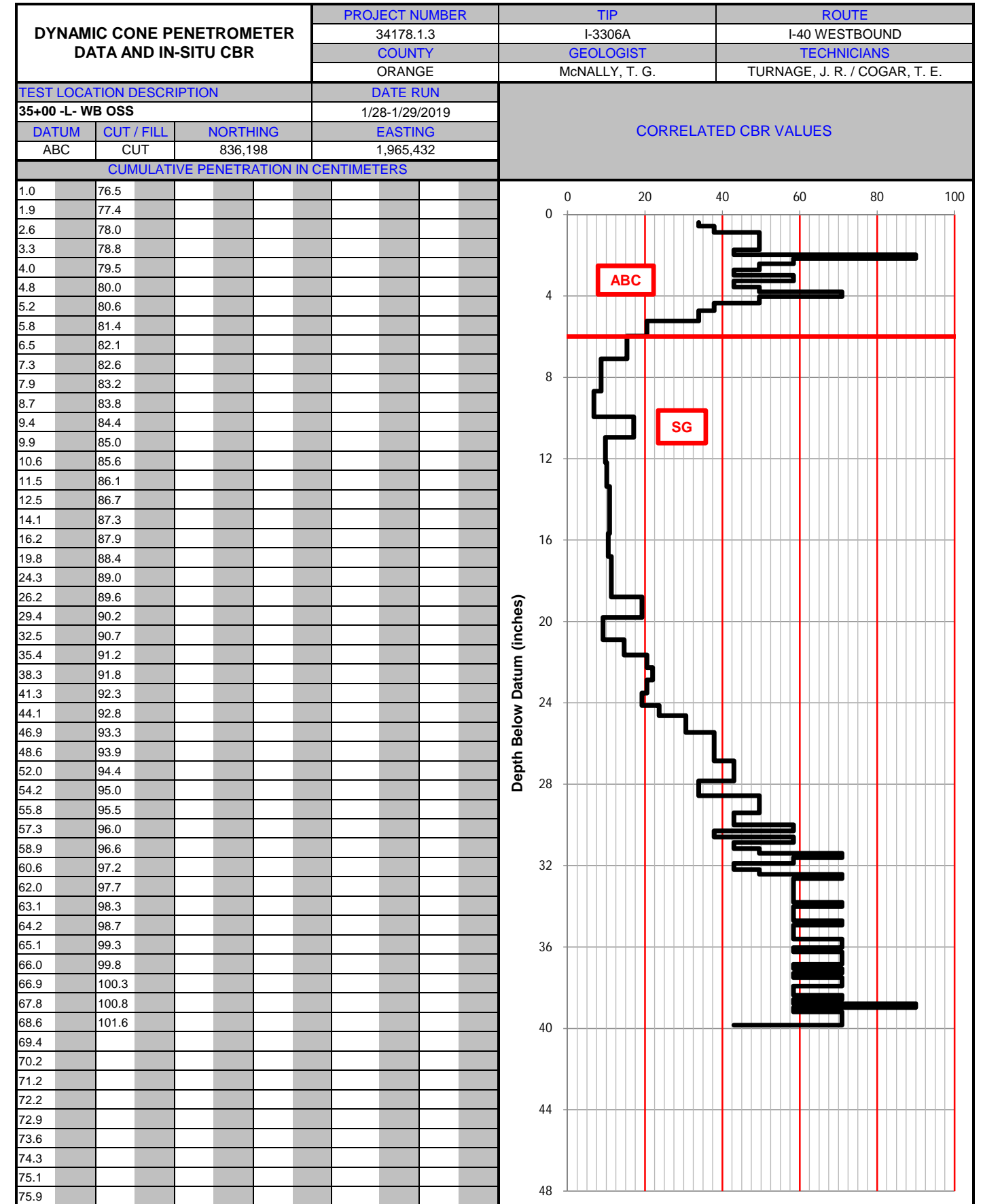
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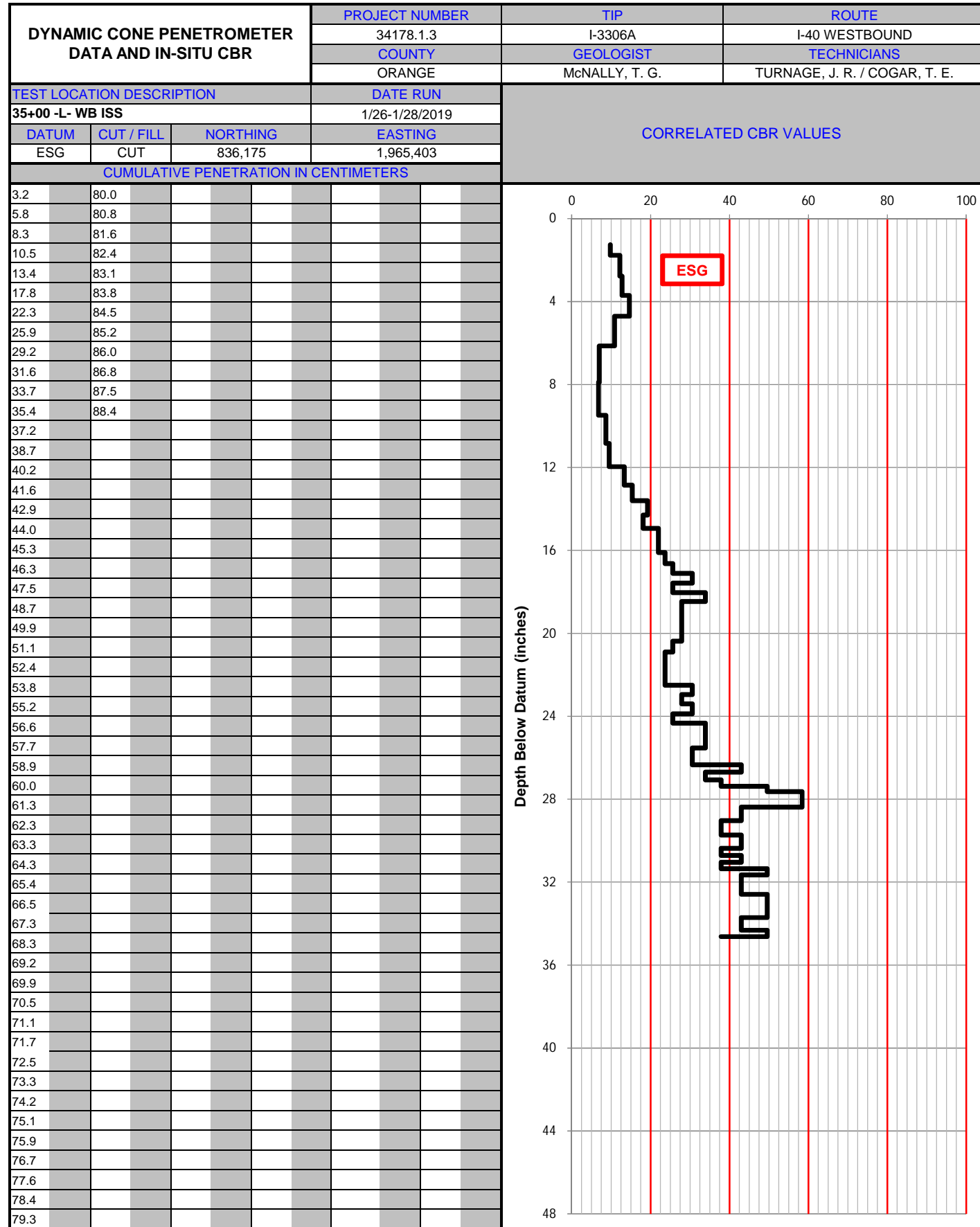


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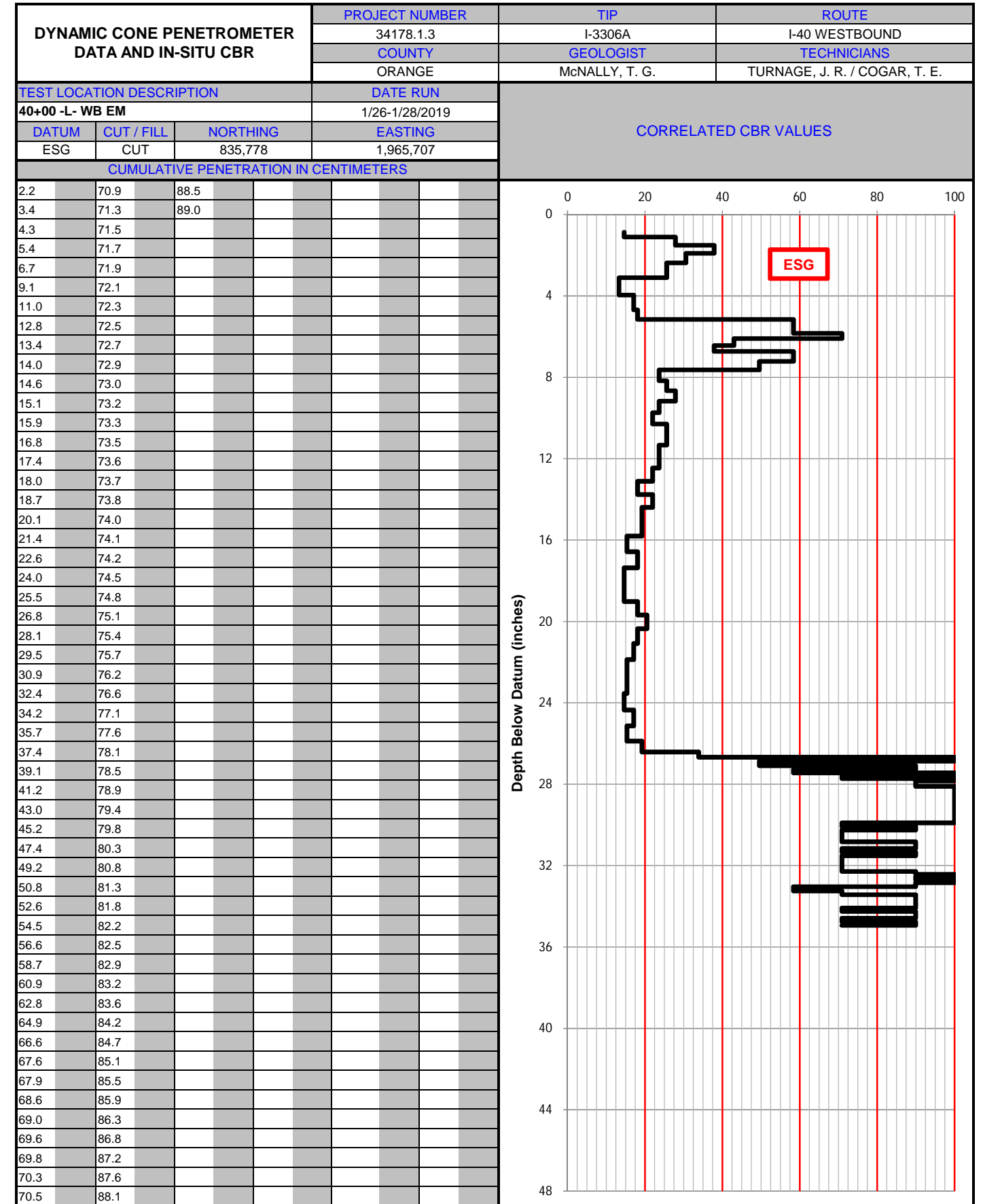


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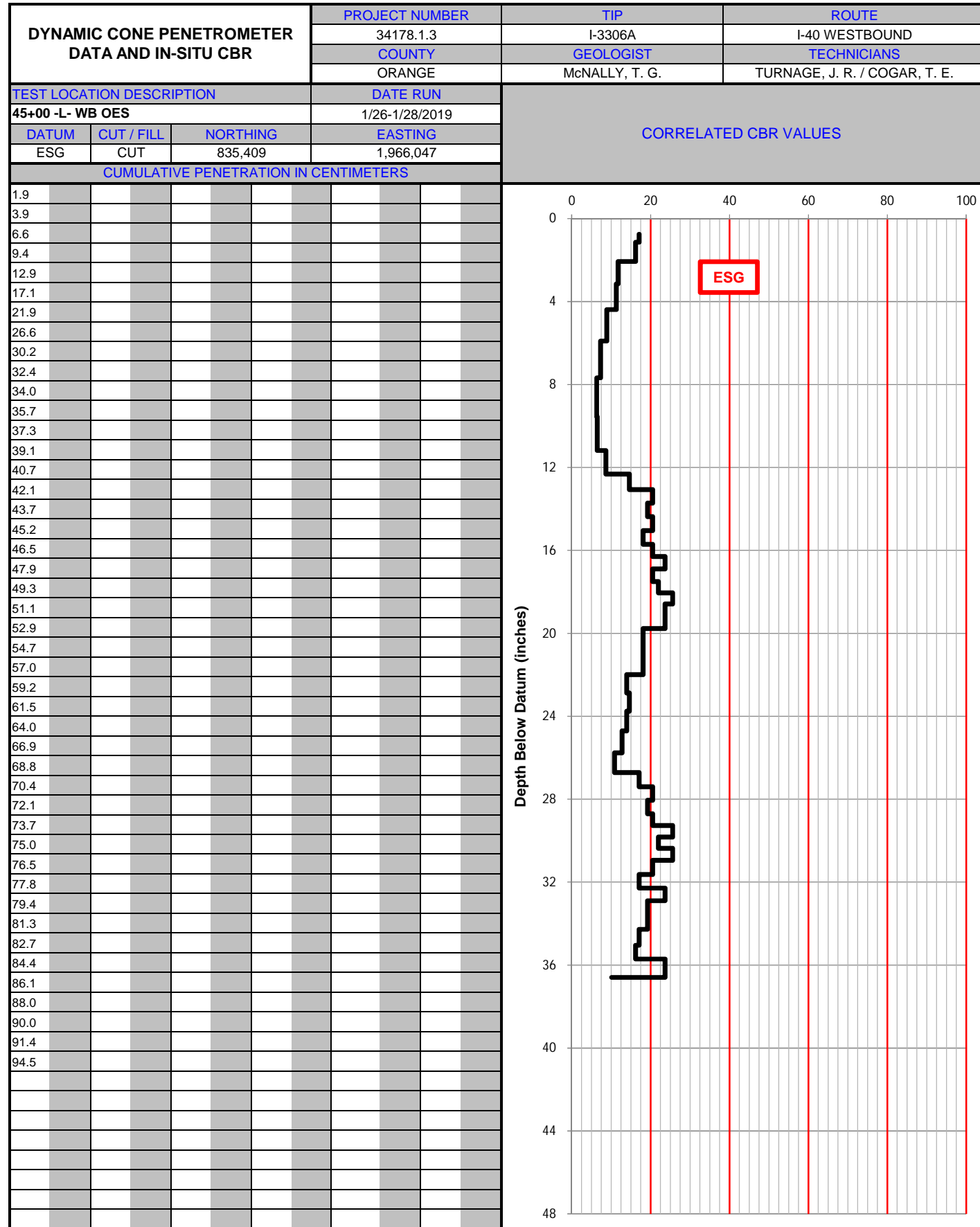


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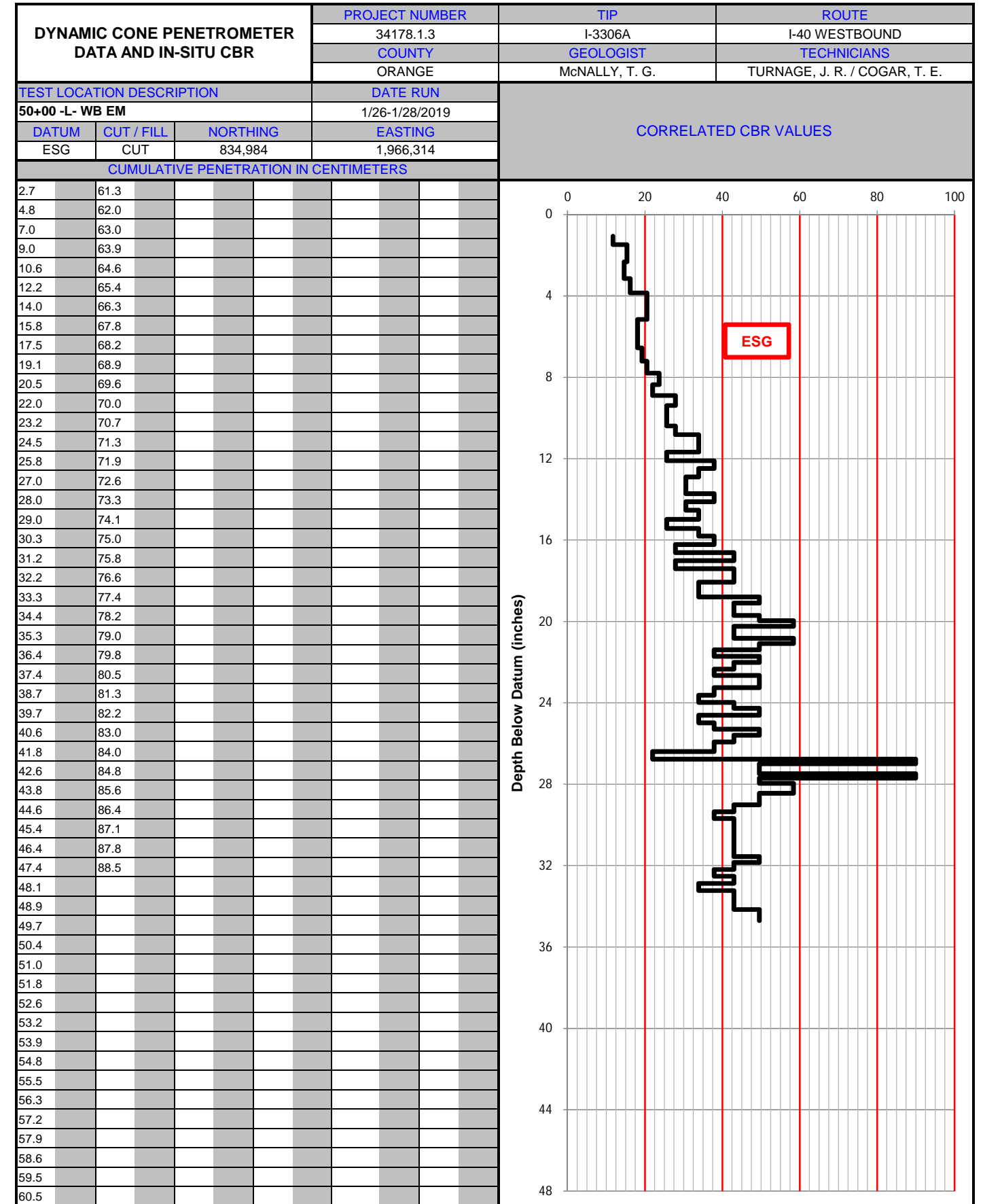


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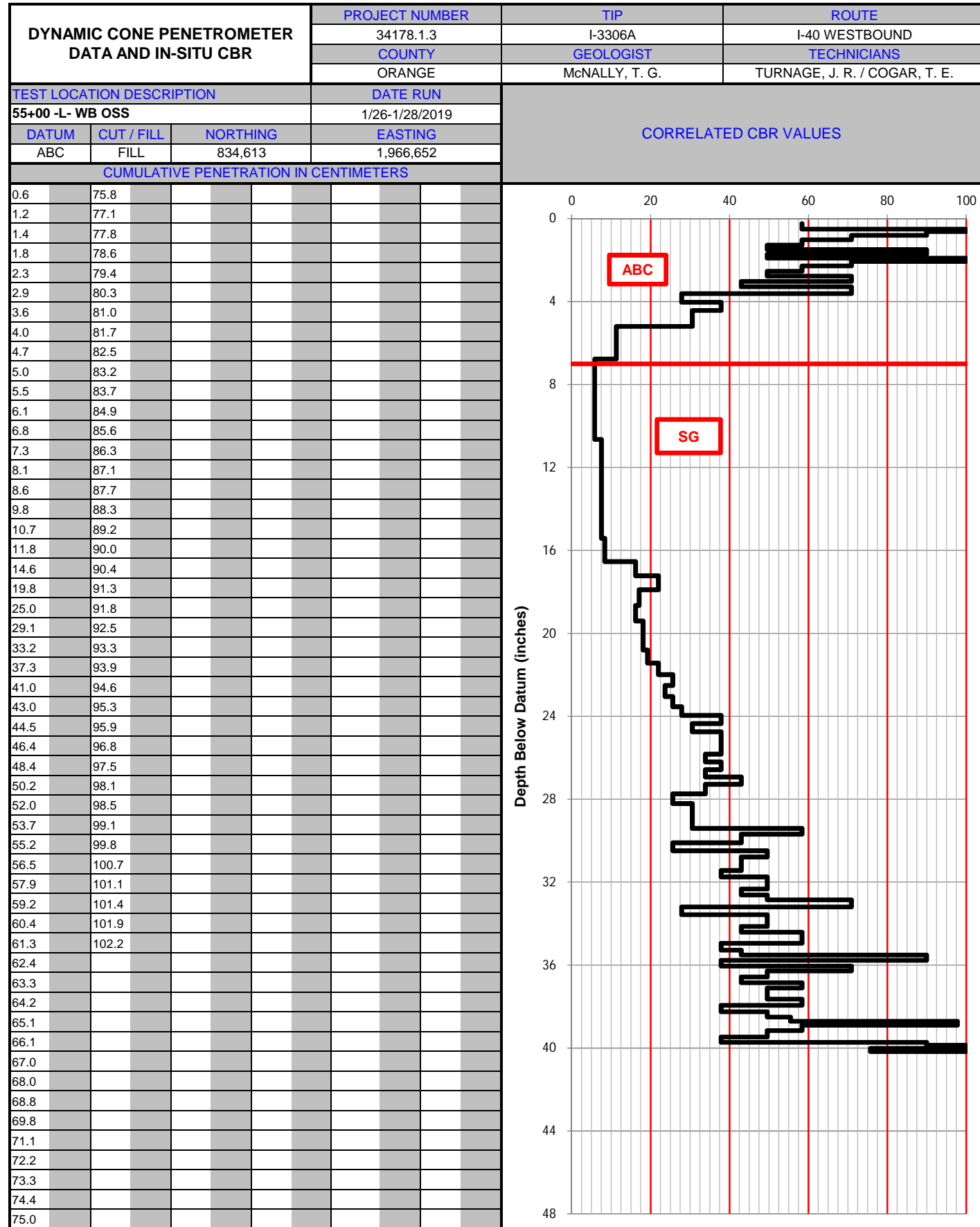


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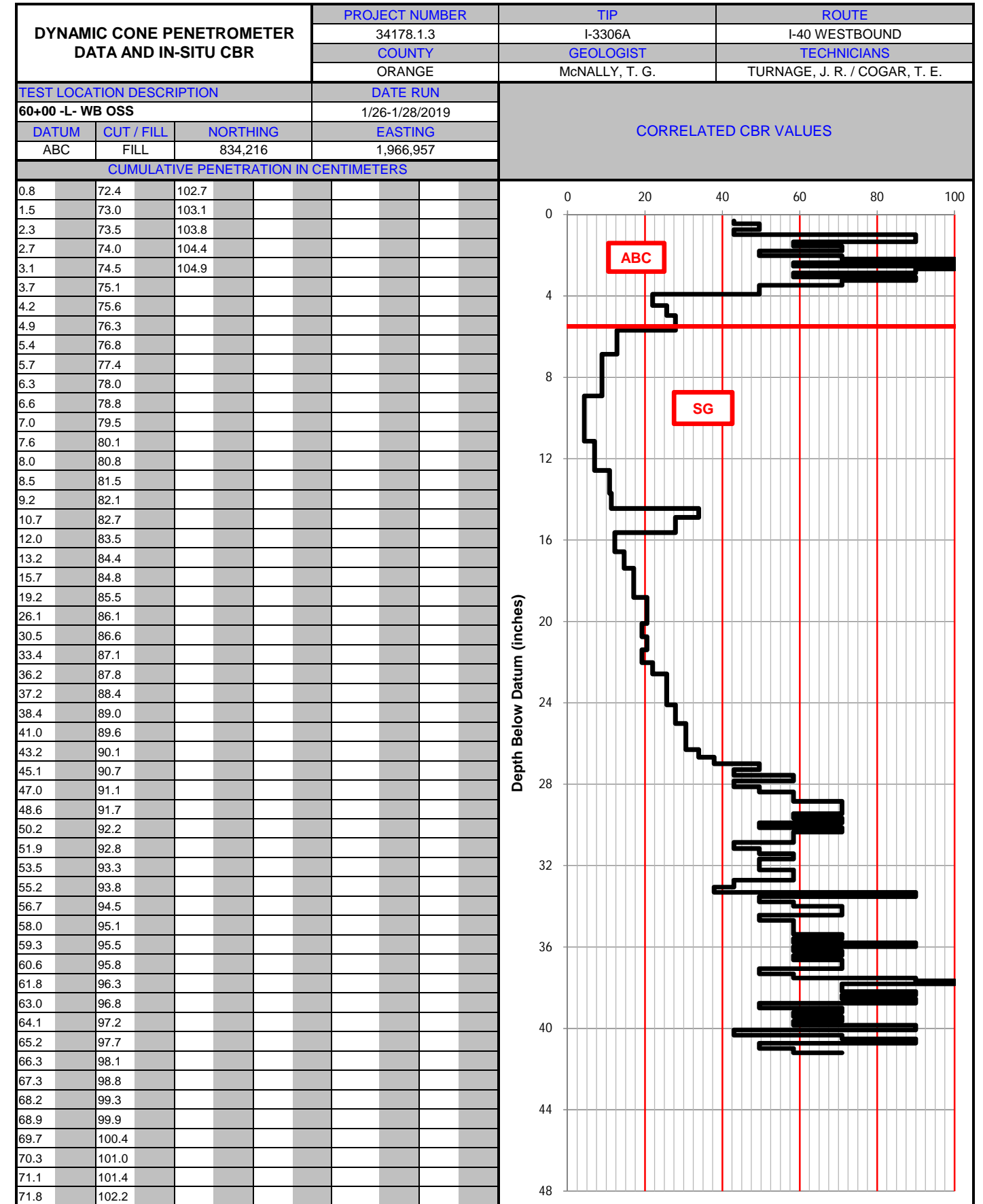


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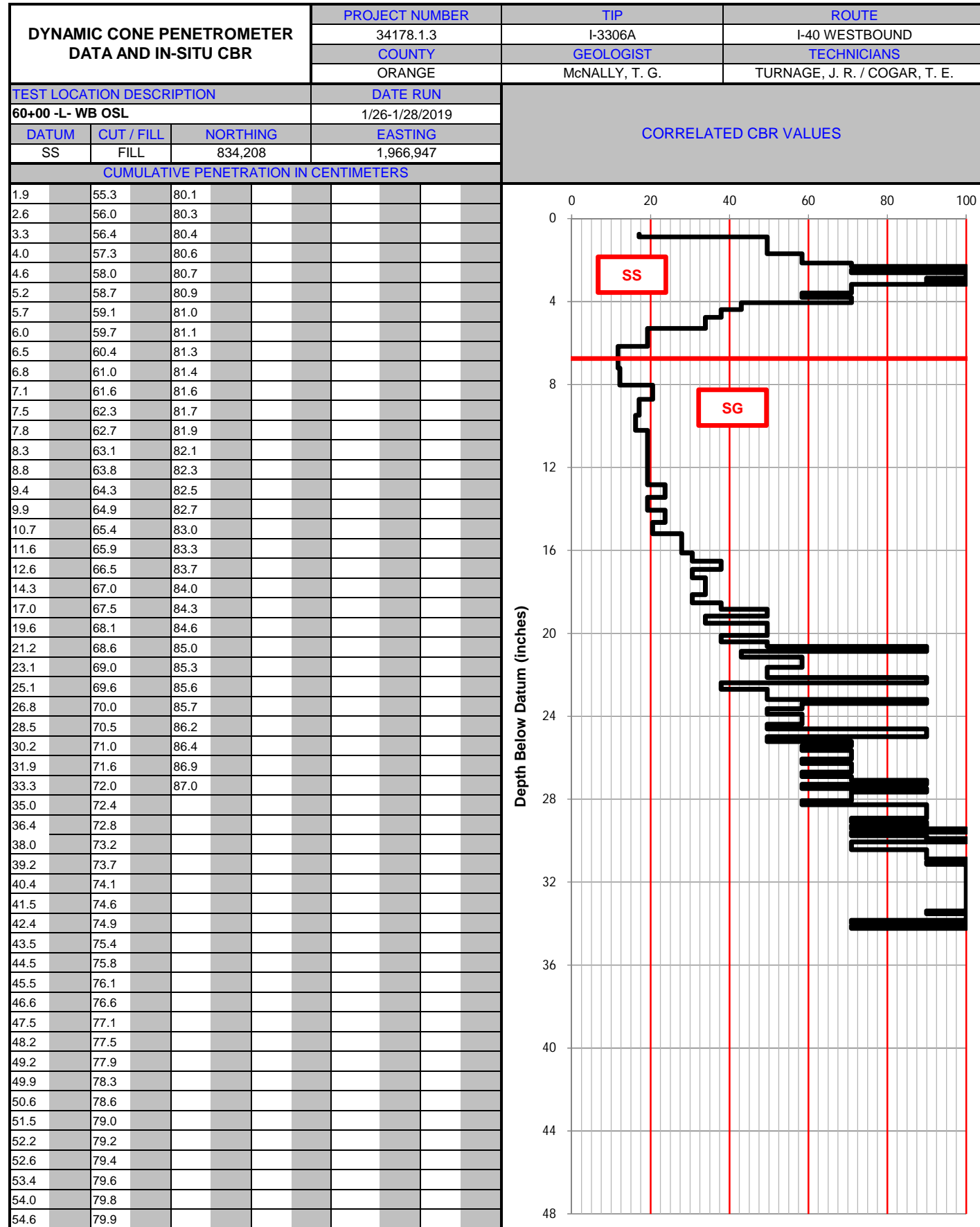


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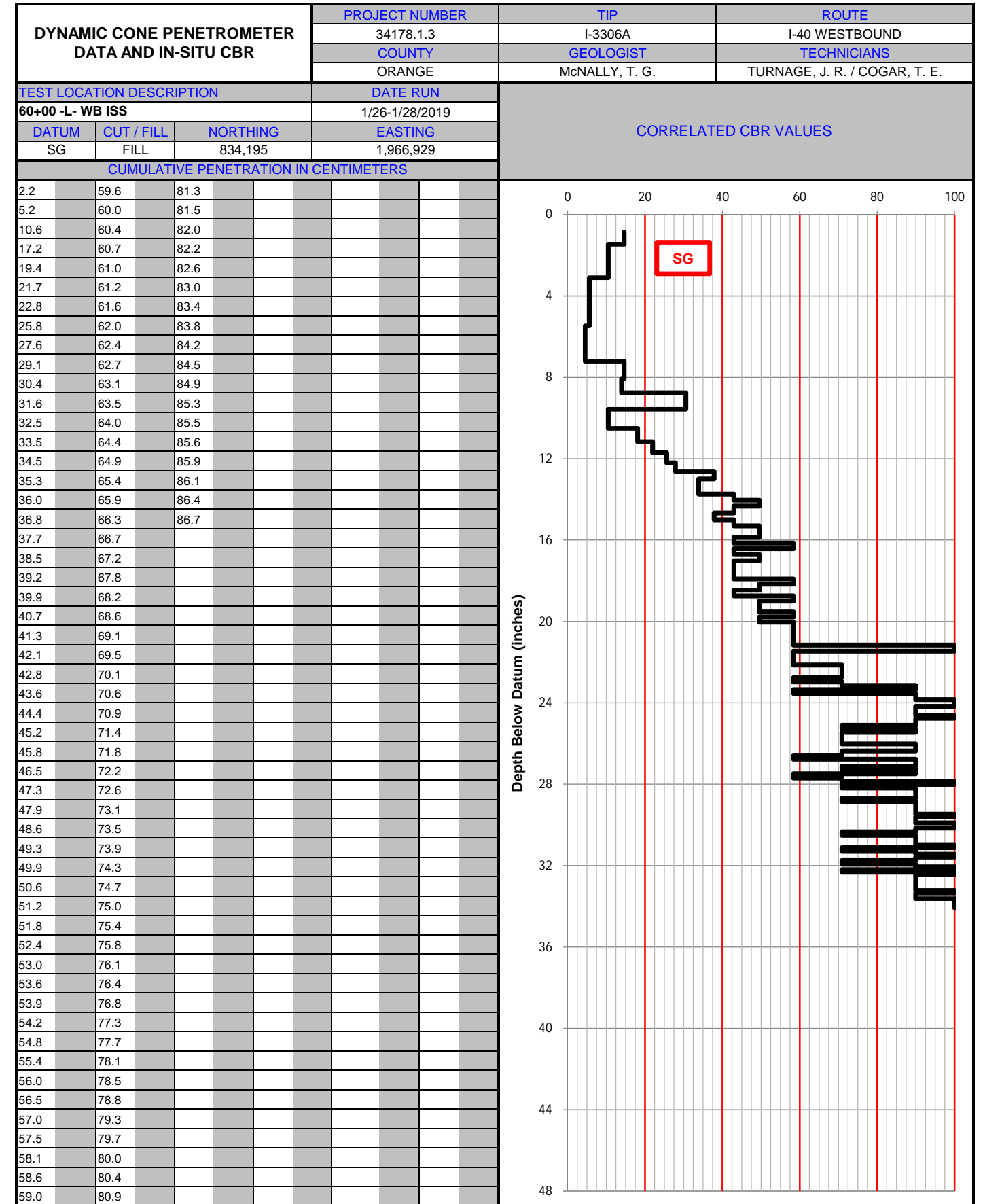


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 CTBC = Cement-Treated Base Course  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





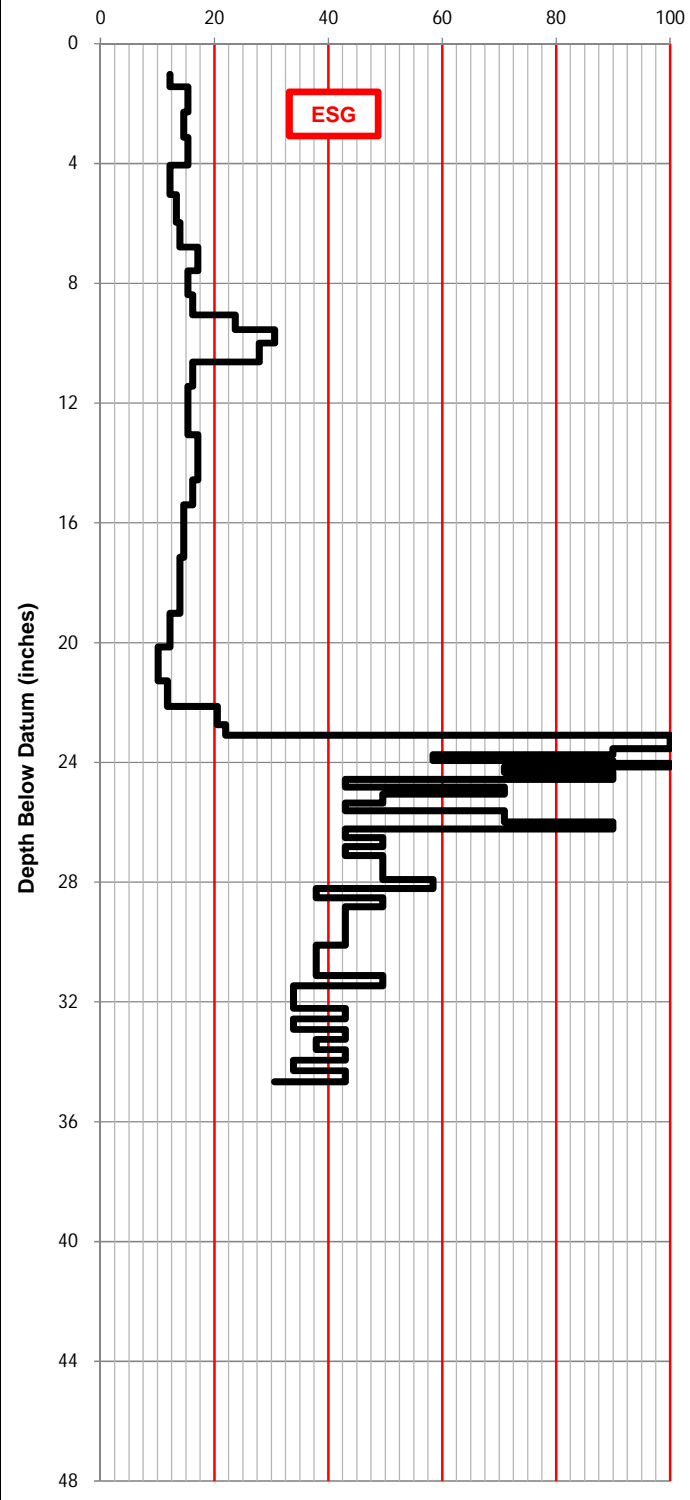
Notes:  
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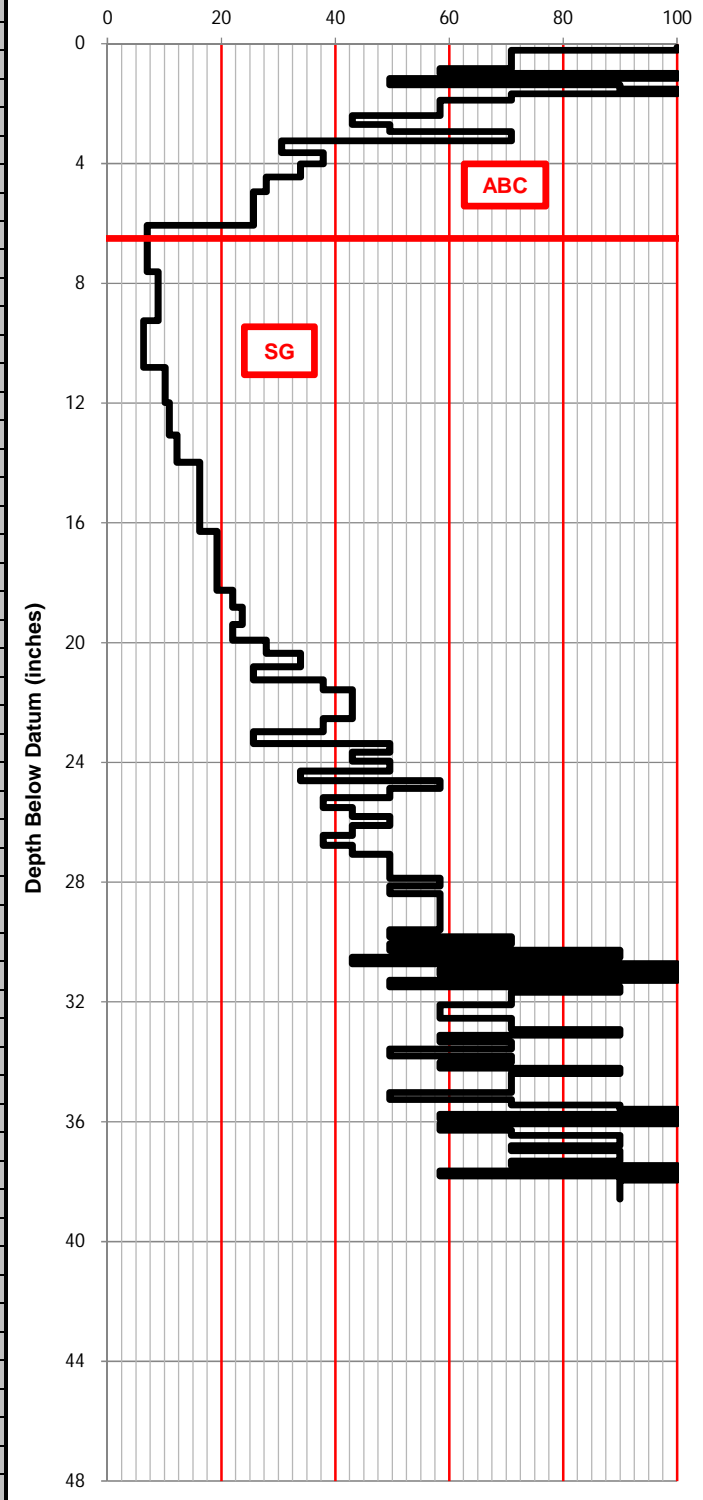
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
65+00 -L- WB EM				1/26-1/28/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	FILL	833,795	1,967,230			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.6	72.8					
4.7	73.6					
6.9	74.4					
9.0	75.2					
11.6	76.0					
14.0	76.9					
16.3	77.8					
18.2	78.7					
20.3	79.4					
22.3	80.4					
23.7	81.4					
24.8	82.2					
26.0	83.2					
28.0	84.0					
30.1	84.9					
32.2	85.7					
34.1	86.7					
36.0	87.5					
38.0	88.6					
40.2						
42.4						
44.7						
47.0						
49.6						
52.7						
55.4						
57.0						
58.5						
58.8						
59.1						
59.3						
59.6						
60.0						
60.6						
61.0						
61.1						
61.6						
62.0						
62.8						
63.3						
64.0						
64.8						
65.3						
65.8						
66.2						
67.0						
67.7						
68.5						
69.2						
69.9						
70.6						
71.2						
72.1						



Notes:  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

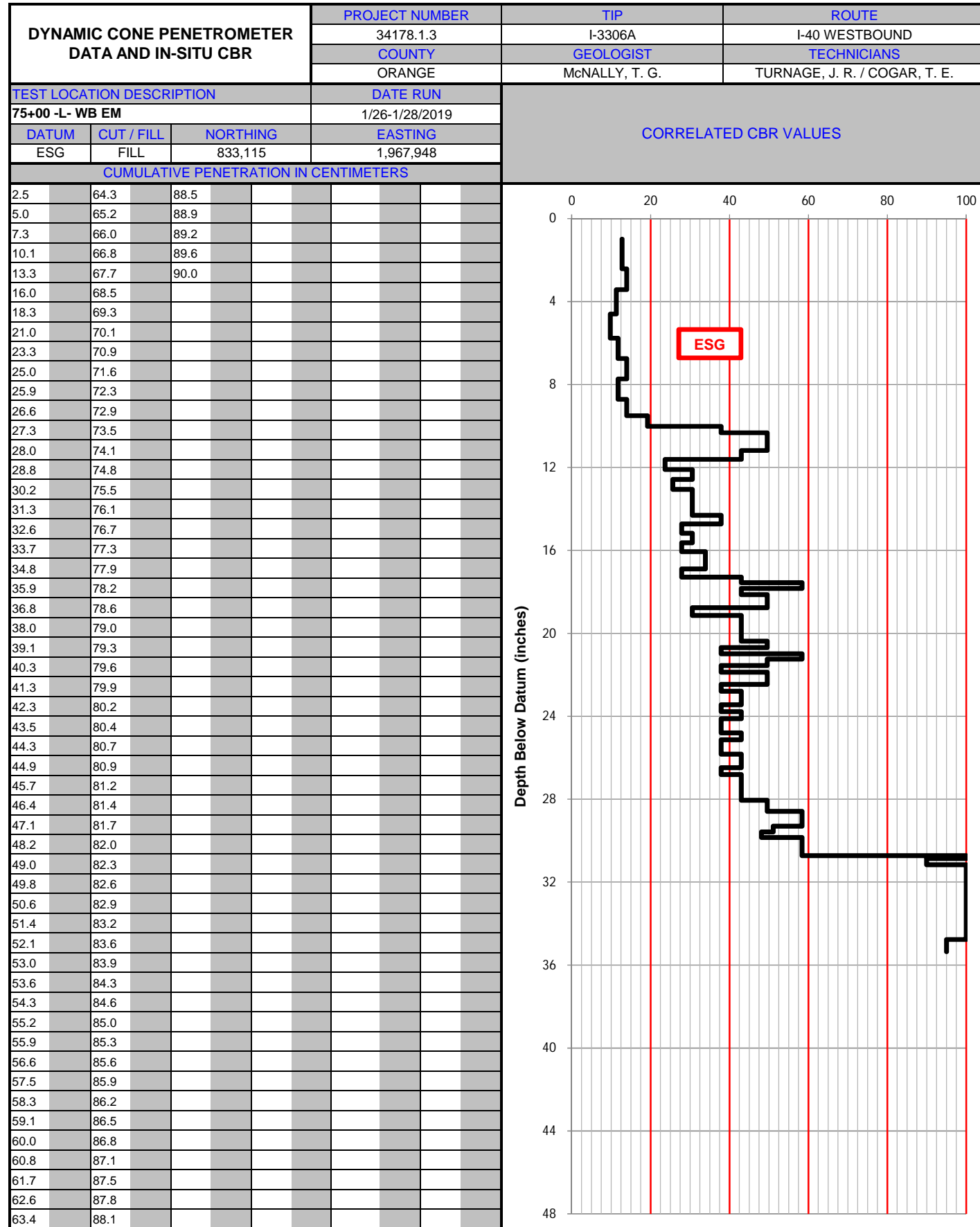


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
70+00 -L- WB OSS				1/26-1/28/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	FILL	833,448	1,967,583			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.3	66.7	95.3				
0.8	67.6	95.9				
1.3	68.4	96.2				
1.8	69.1	96.6				
2.4	69.8	97.0				
2.6	70.5	97.4				
3.3	71.1	97.8				
3.7	71.8	98.2				
4.0	72.4					
4.5	73.0					
5.1	73.6					
5.7	74.2					
6.5	74.8					
7.2	75.5					
7.7	76.0					
8.8	76.7					
9.7	77.1					
10.7	77.9					
11.9	78.2					
13.2	78.8					
17.6	79.1					
21.1	79.8					
25.9	80.2					
29.0	80.7					
31.9	81.2					
34.5	81.8					
36.5	82.4					
38.5	82.9					
40.5	83.4					
42.2	83.8					
43.9	84.4					
45.6	84.9					
47.1	85.6					
48.5	86.1					
50.0	86.7					
51.2	87.1					
52.2	87.6					
53.5	88.1					
54.4	88.6					
55.2	89.3					
56.0	89.8					
56.8	90.2					
57.7	90.5					
59.0	91.1					
59.7	91.3					
60.5	91.9					
61.2	92.4					
62.2	92.8					
62.8	93.2					
63.5	93.7					
64.4	94.1					
65.2	94.5					
65.9	95.0					

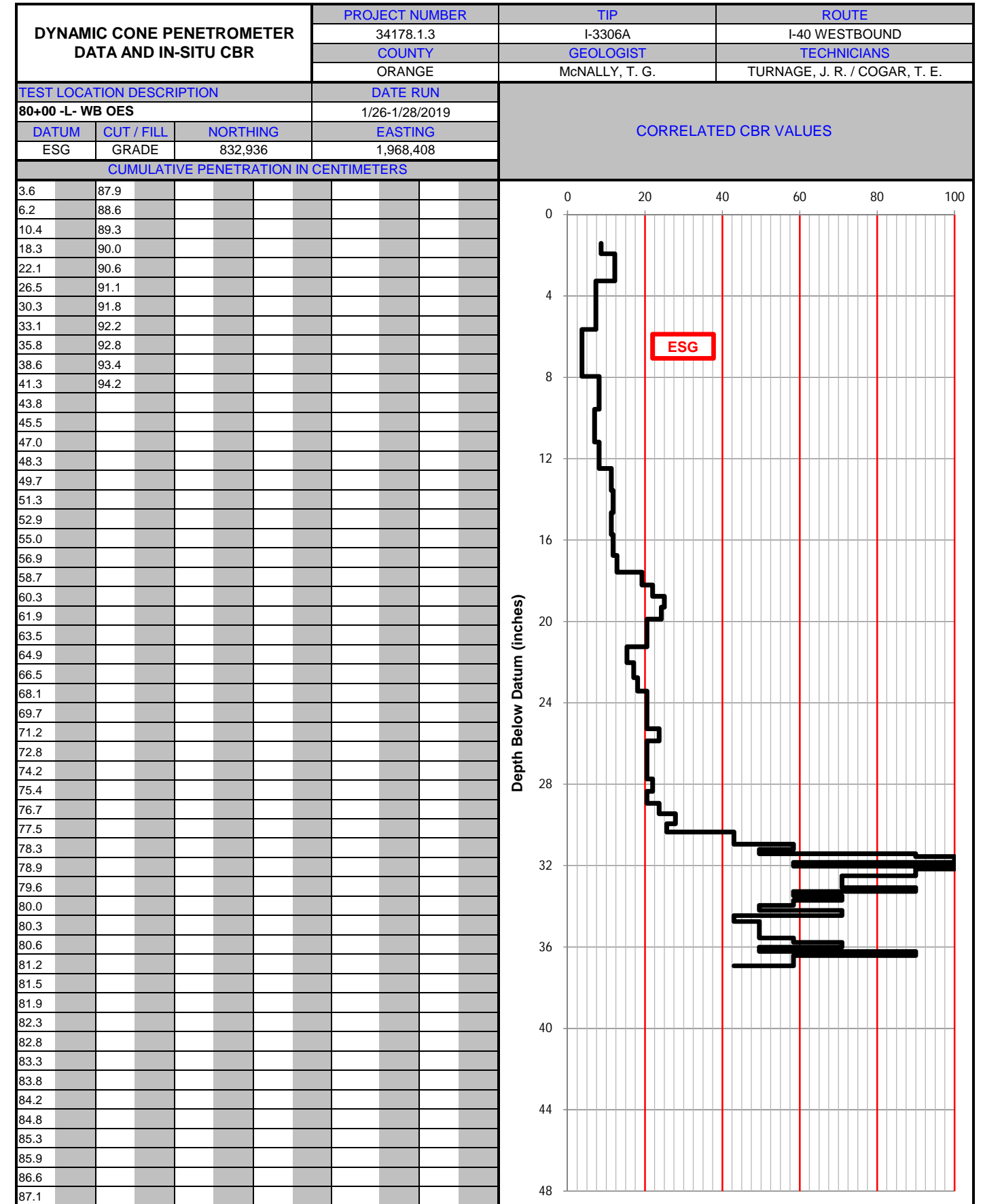


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



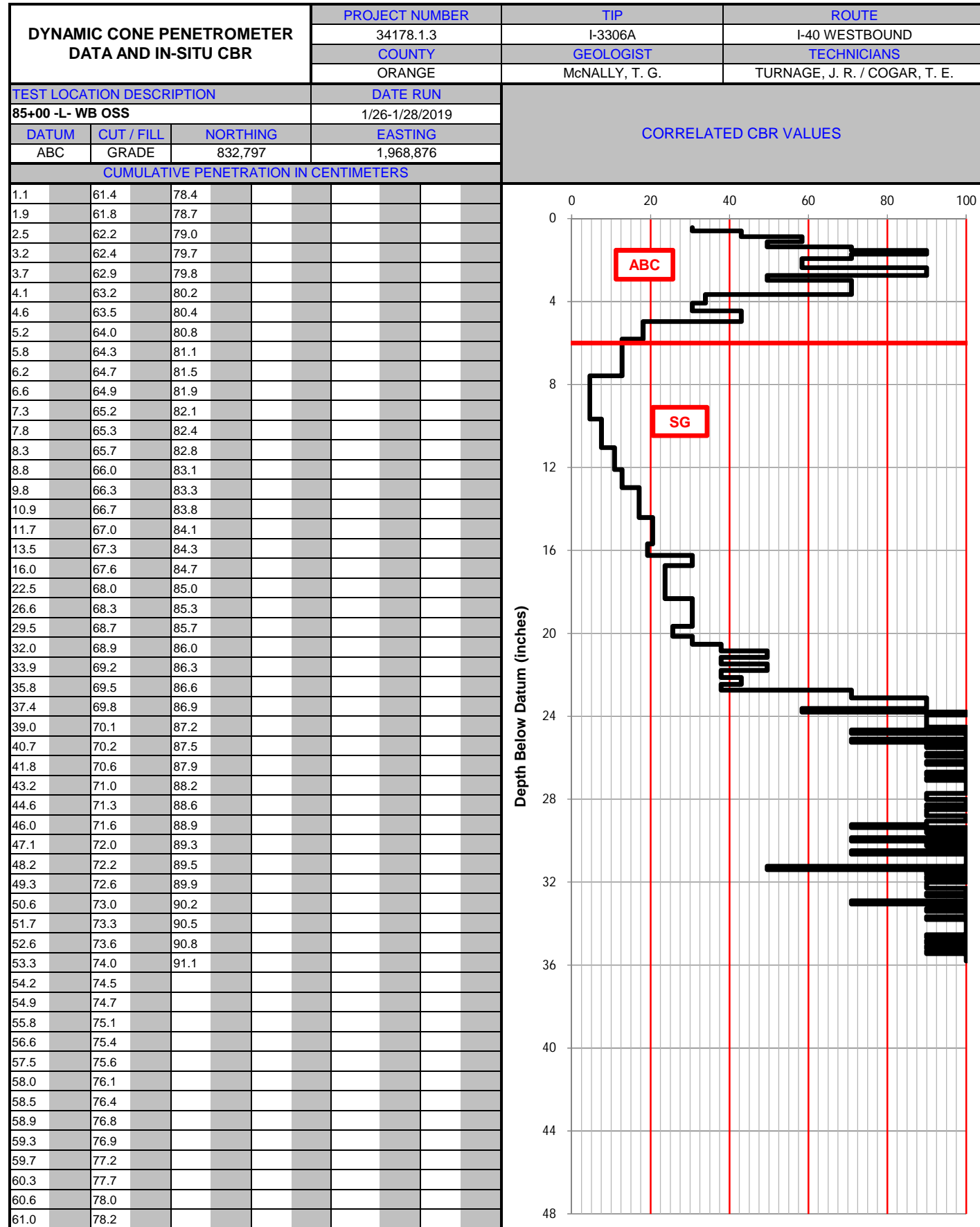


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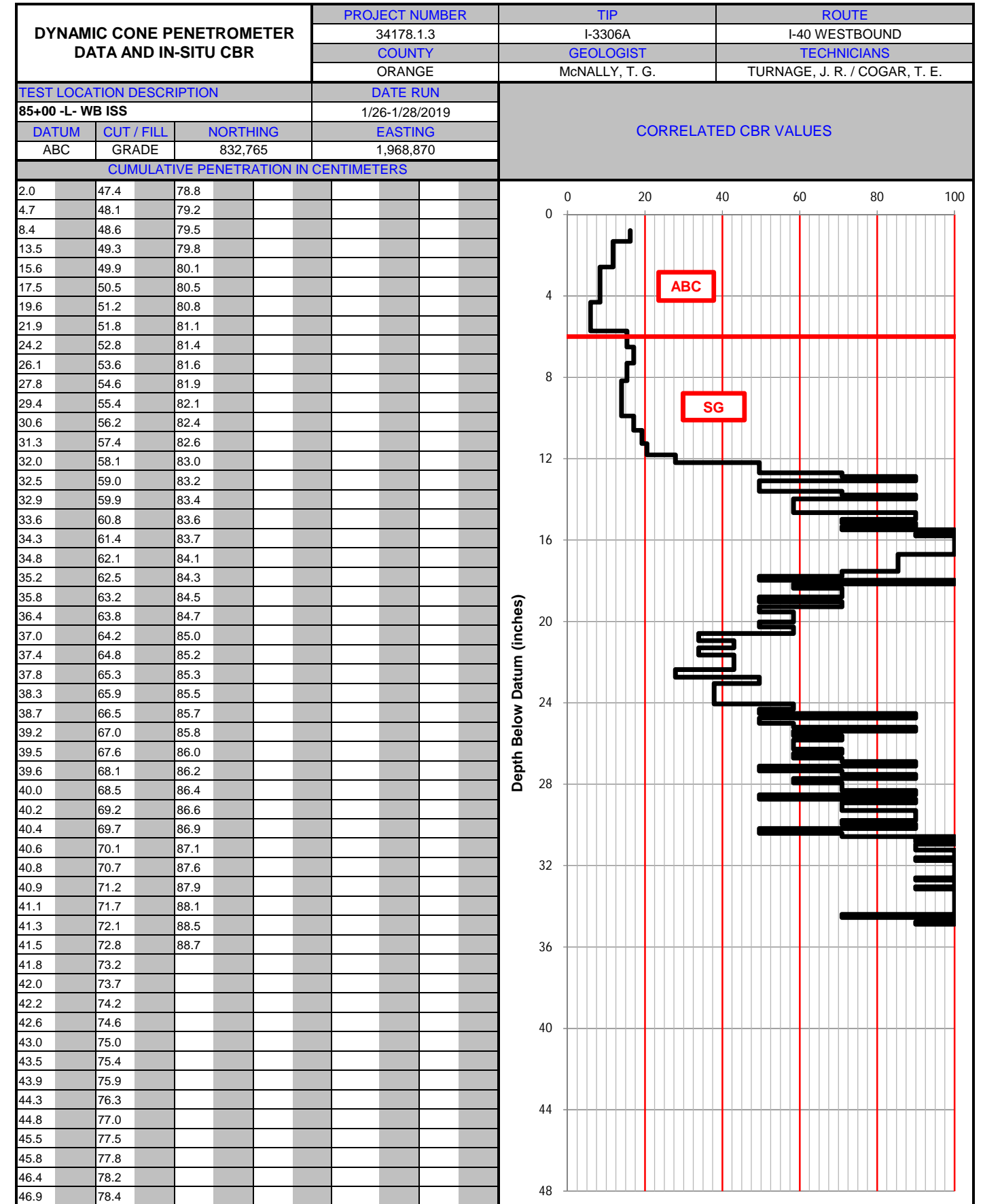


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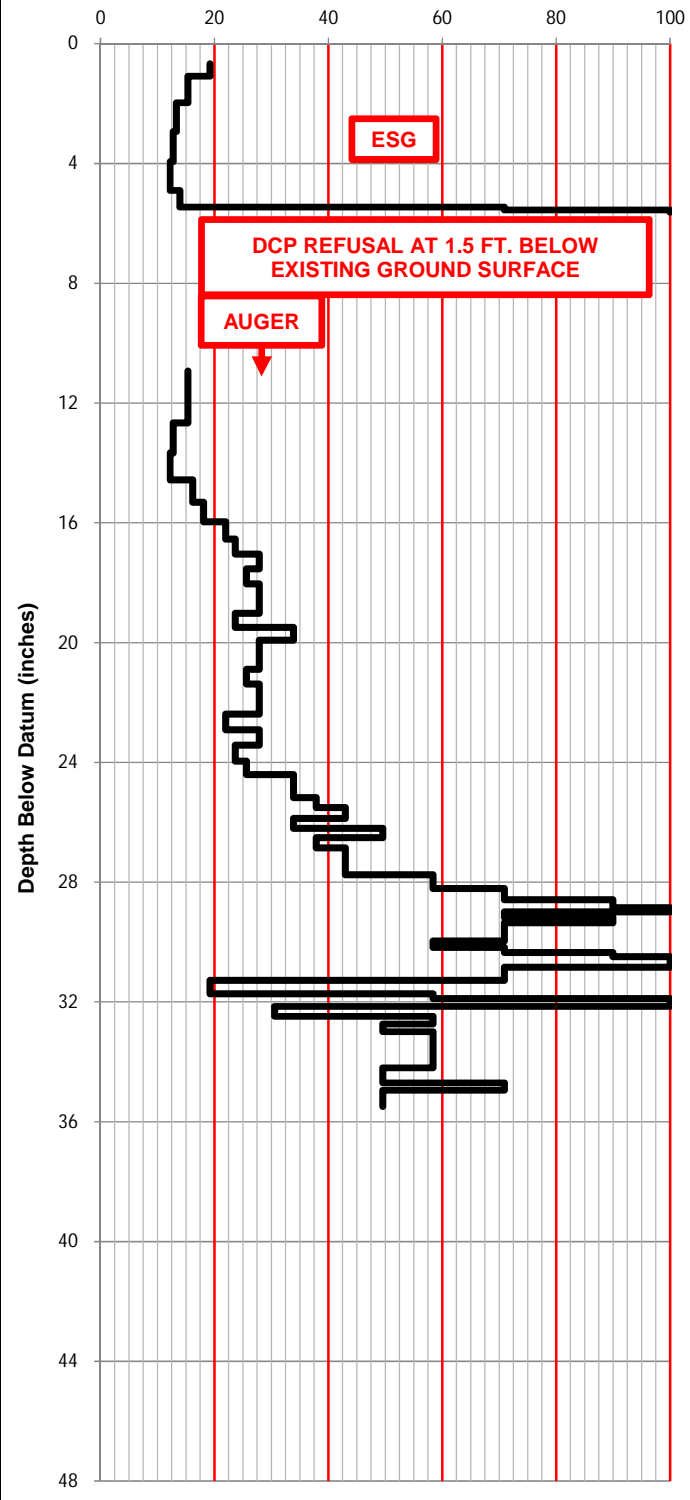


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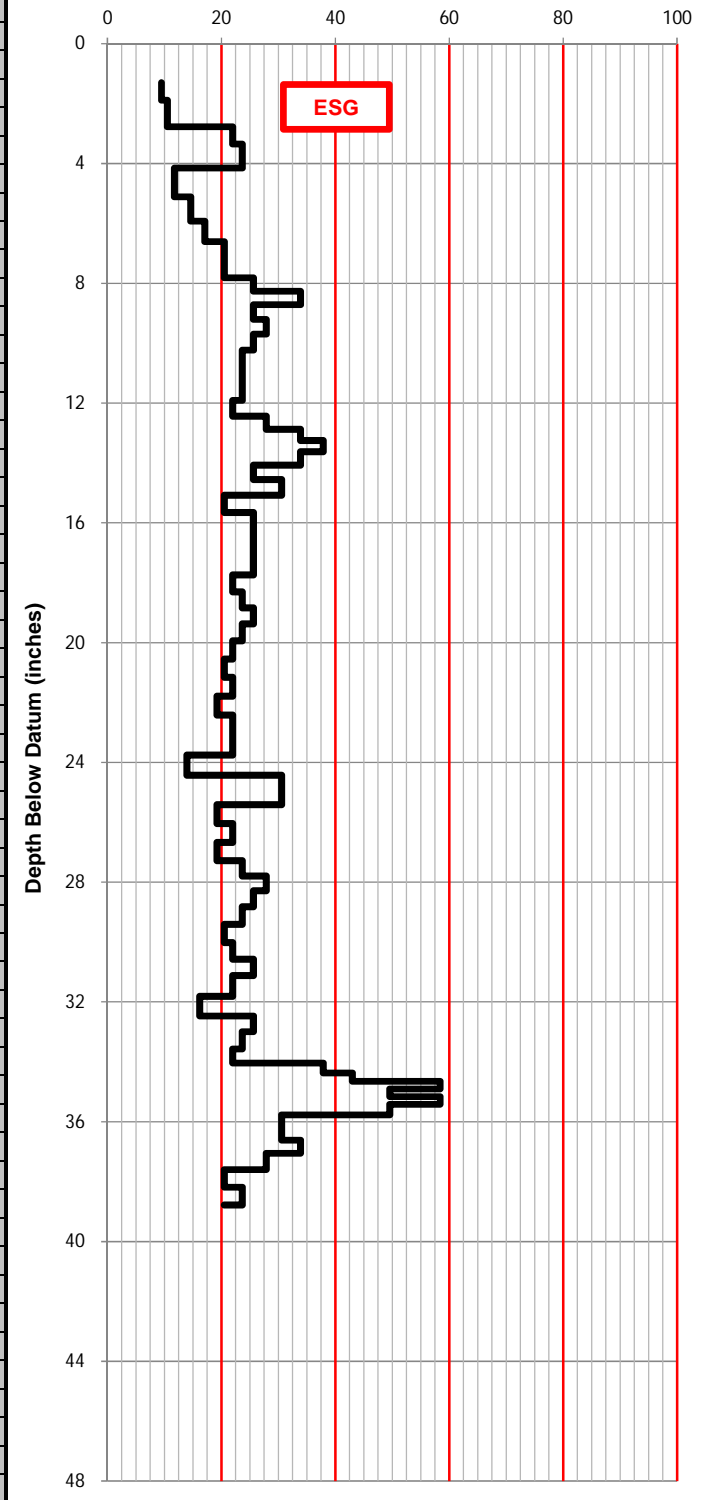
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
90+00 -L- WB EM				1/26-1/28/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	832,704	1,969,365			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.7	14.29	52.4				
3.8	14.29	52.9				
6.2	14.3	53.3				
8.7		53.6				
11.3	AUGER	53.9				
13.6	9.7 cm / 3.8 in	54.0				
14.1		54.1				
14.10	2.7	54.6				
14.11	4.8	56.3				
14.11	6.9	56.9				
14.12	9.4	57.1				
14.12	12.0	58.2				
14.12	14.0	58.8				
14.13	15.8	59.5				
14.13	17.3	60.1				
14.14	18.7	60.7				
14.14	19.9	61.3				
14.14	21.2	61.9				
14.15	22.4	62.5				
14.15	23.6	63.2				
14.16	25.0	63.9				
14.16	26.0	64.4				
14.16	27.2	65.1				
14.17	28.4	65.8				
14.17	29.7	66.5				
14.18	30.9					
14.18	32.1					
14.18	33.6					
14.19	34.8					
14.19	36.2					
14.20	37.5					
14.20	38.5					
14.20	39.5					
14.21	40.4					
14.21	41.2					
14.22	42.2					
14.22	42.9					
14.22	43.8					
14.23	44.6					
14.23	45.4					
14.24	46.2					
14.24	46.8					
14.24	47.4					
14.25	47.9					
14.25	48.4					
14.26	48.8					
14.26	49.2					
14.26	49.4					
14.27	49.9					
14.27	50.3					
14.28	50.8					
14.28	51.3					
14.28	51.8					



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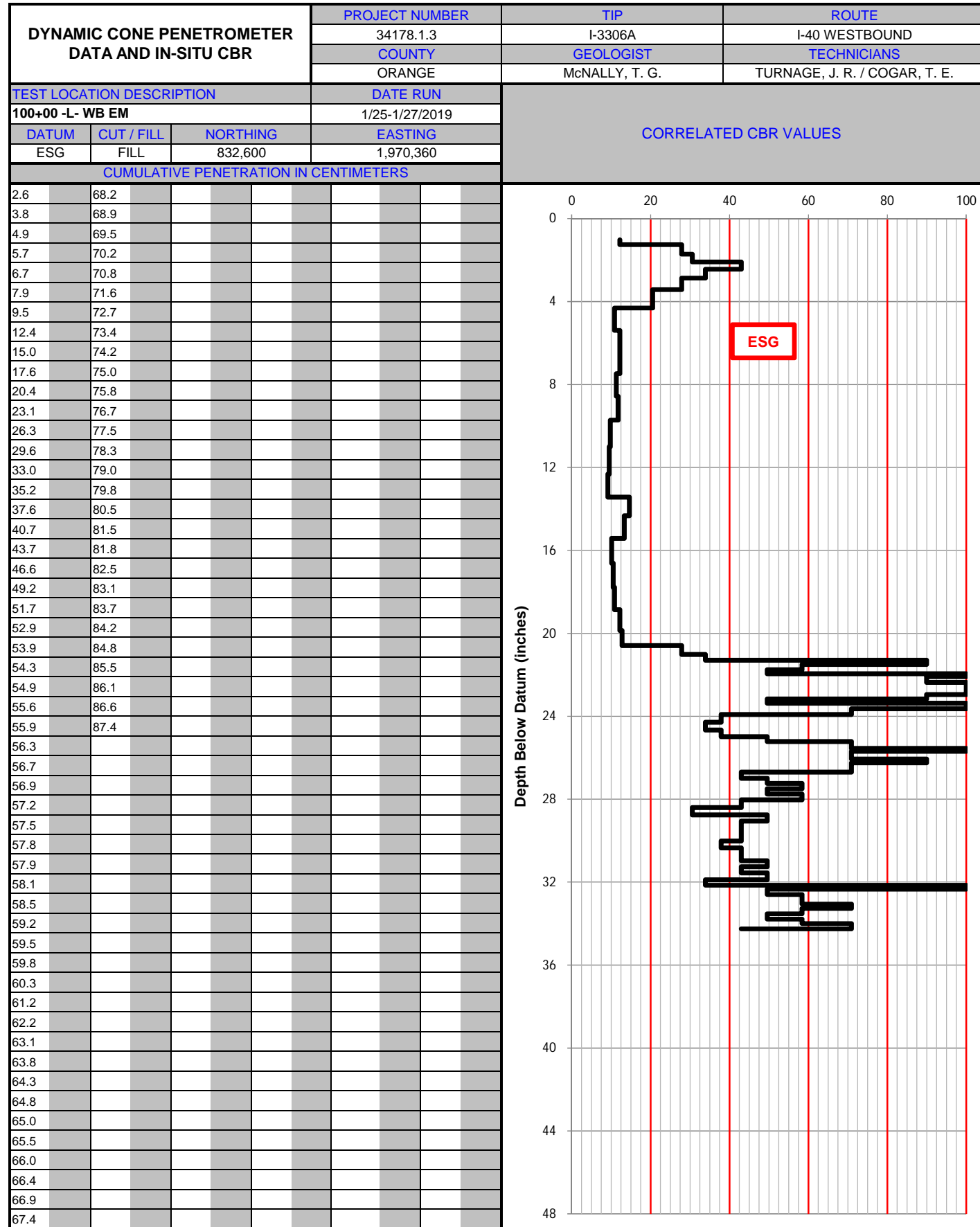


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
95+00 -L- WB OES				1/26-1/28/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	832,711	1,969,867			
CUMULATIVE PENETRATION IN CENTIMETERS						
3.3	81.8					
6.3	83.1					
7.8	84.5					
9.2	86.0					
11.9	86.9					
14.1	87.7					
16.0	88.3					
17.6	89.0					
19.2	89.6					
20.5	90.3					
21.5	91.4					
22.8	92.5					
24.0	93.5					
25.3	94.7					
26.7	96.3					
28.1	97.7					
29.5	99.3					
31.0						
32.2						
33.2						
34.1						
35.1						
36.4						
37.5						
39.1						
40.4						
41.7						
43.0						
44.3						
45.8						
47.2						
48.5						
49.9						
51.4						
53.0						
54.5						
56.2						
57.7						
59.2						
61.5						
62.6						
63.7						
65.4						
66.9						
68.6						
70.0						
71.2						
72.5						
73.9						
75.5						
77.0						
78.3						
79.8						

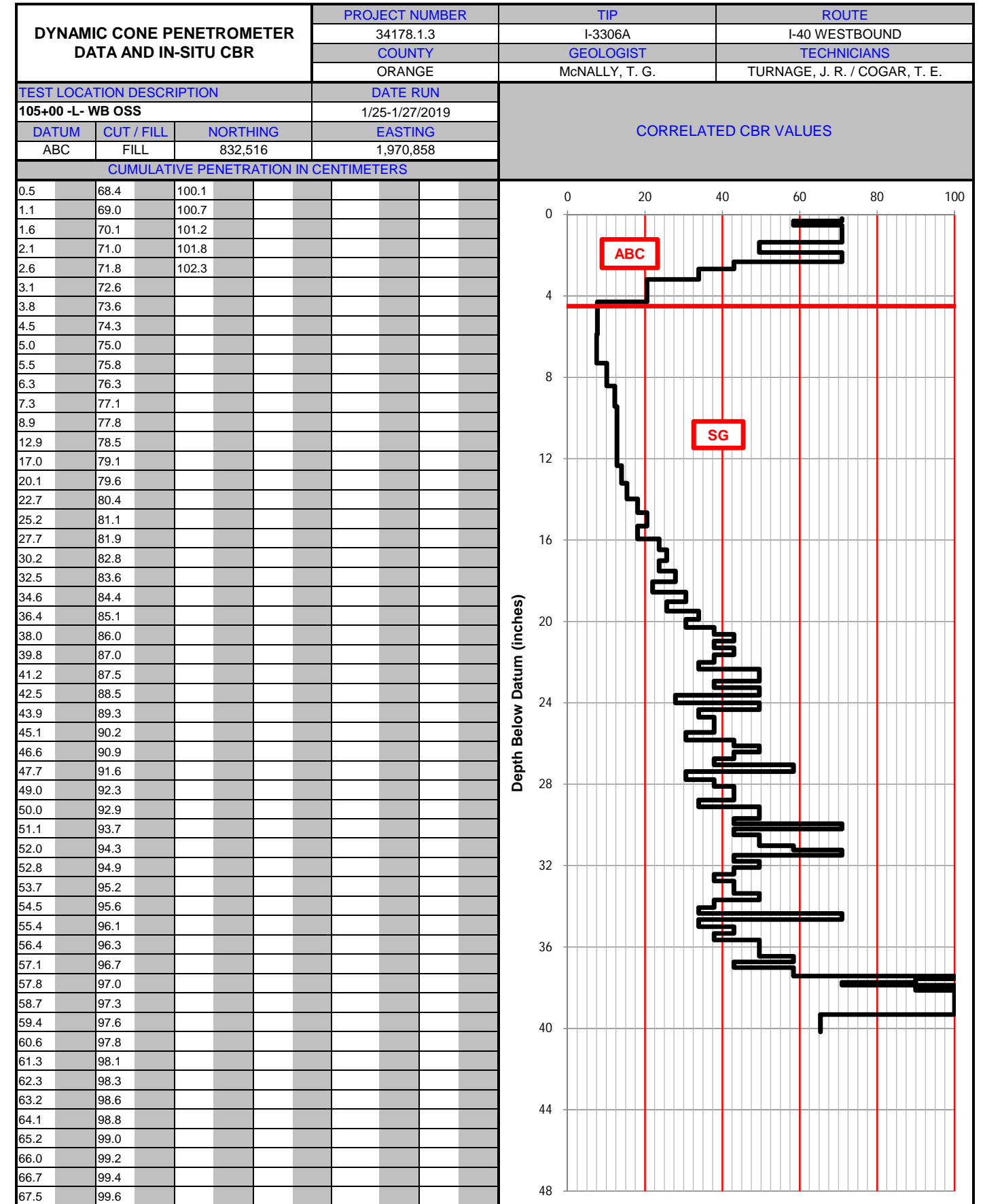


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 ABC = Aggregate Base Course  
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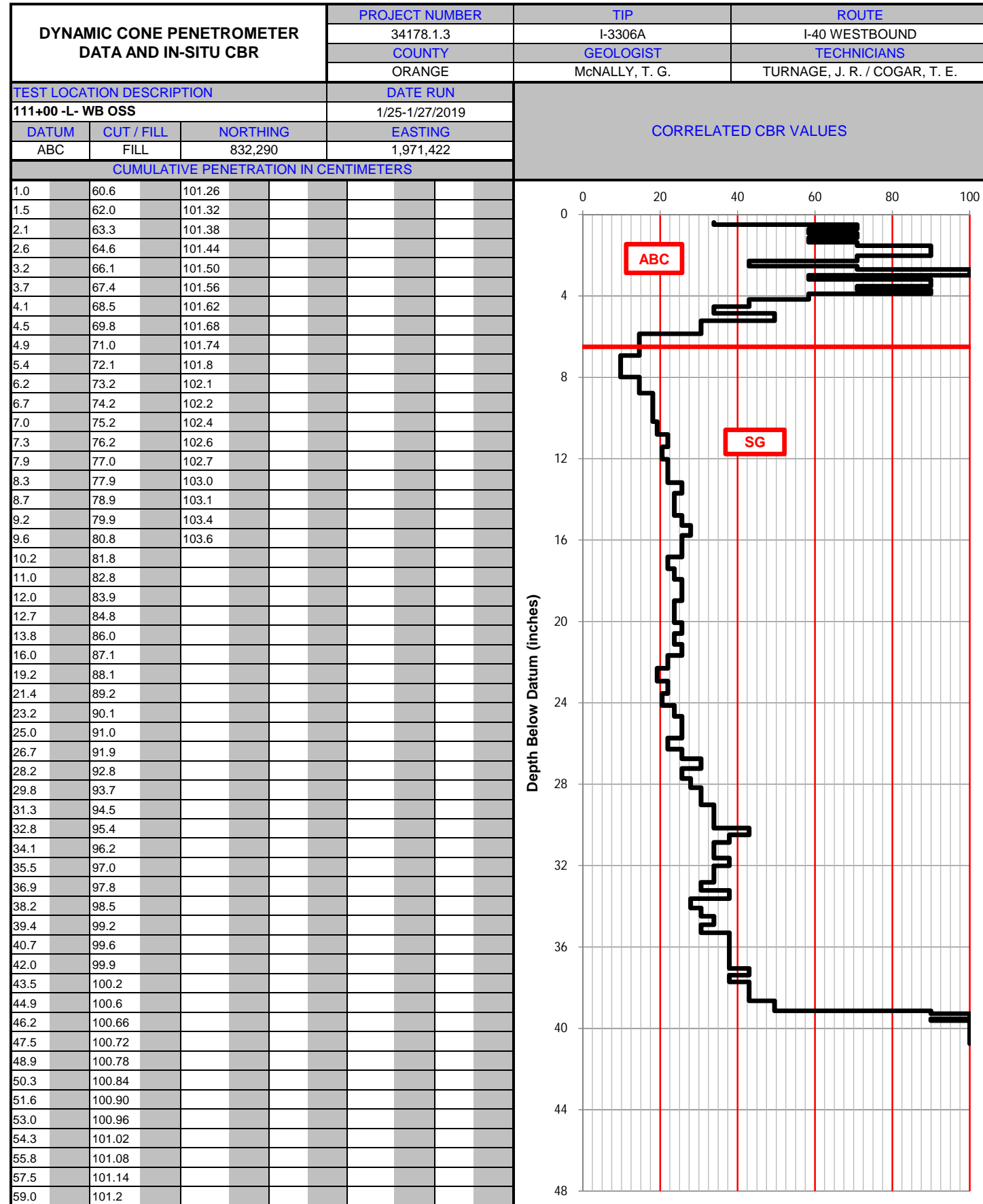


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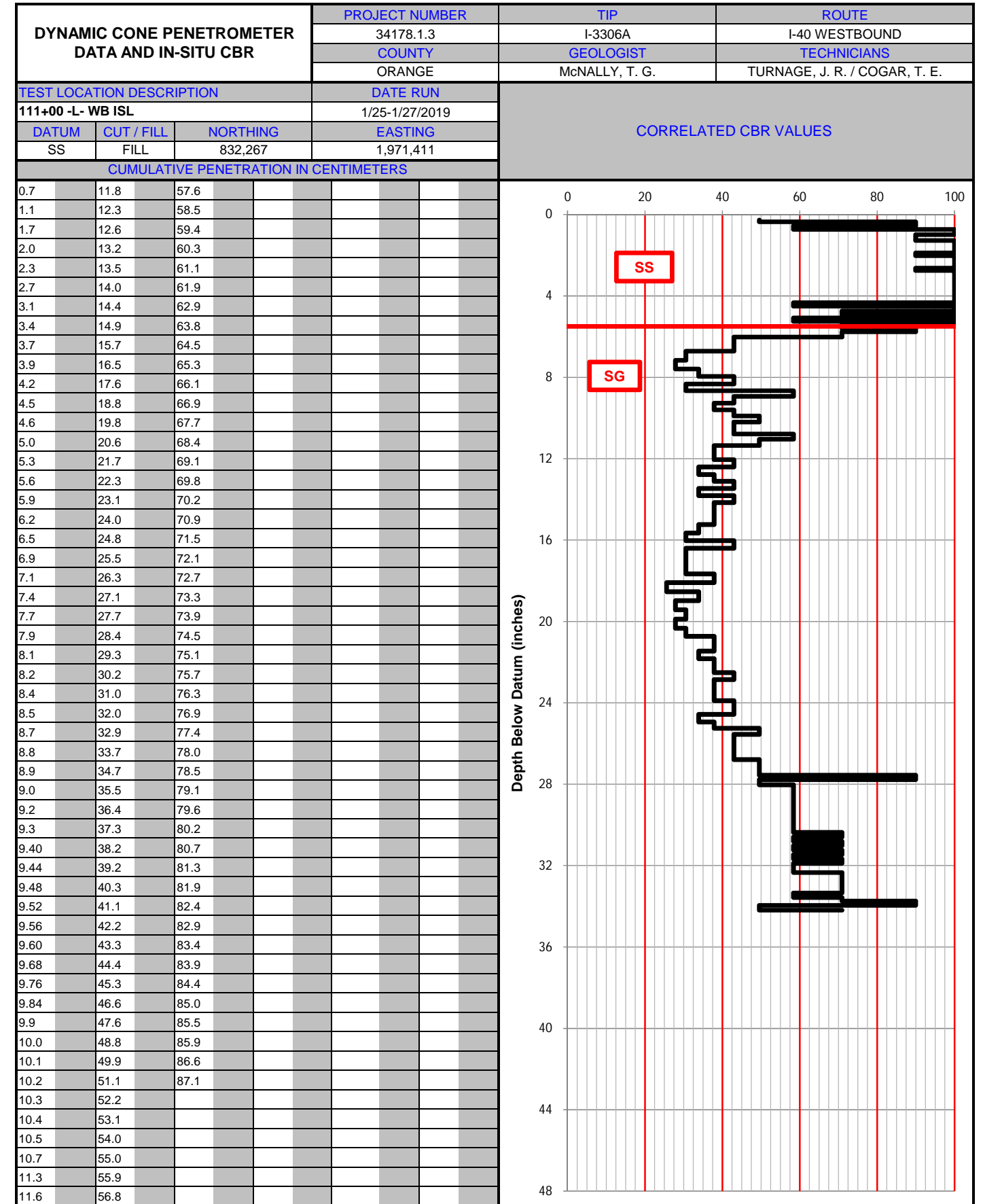


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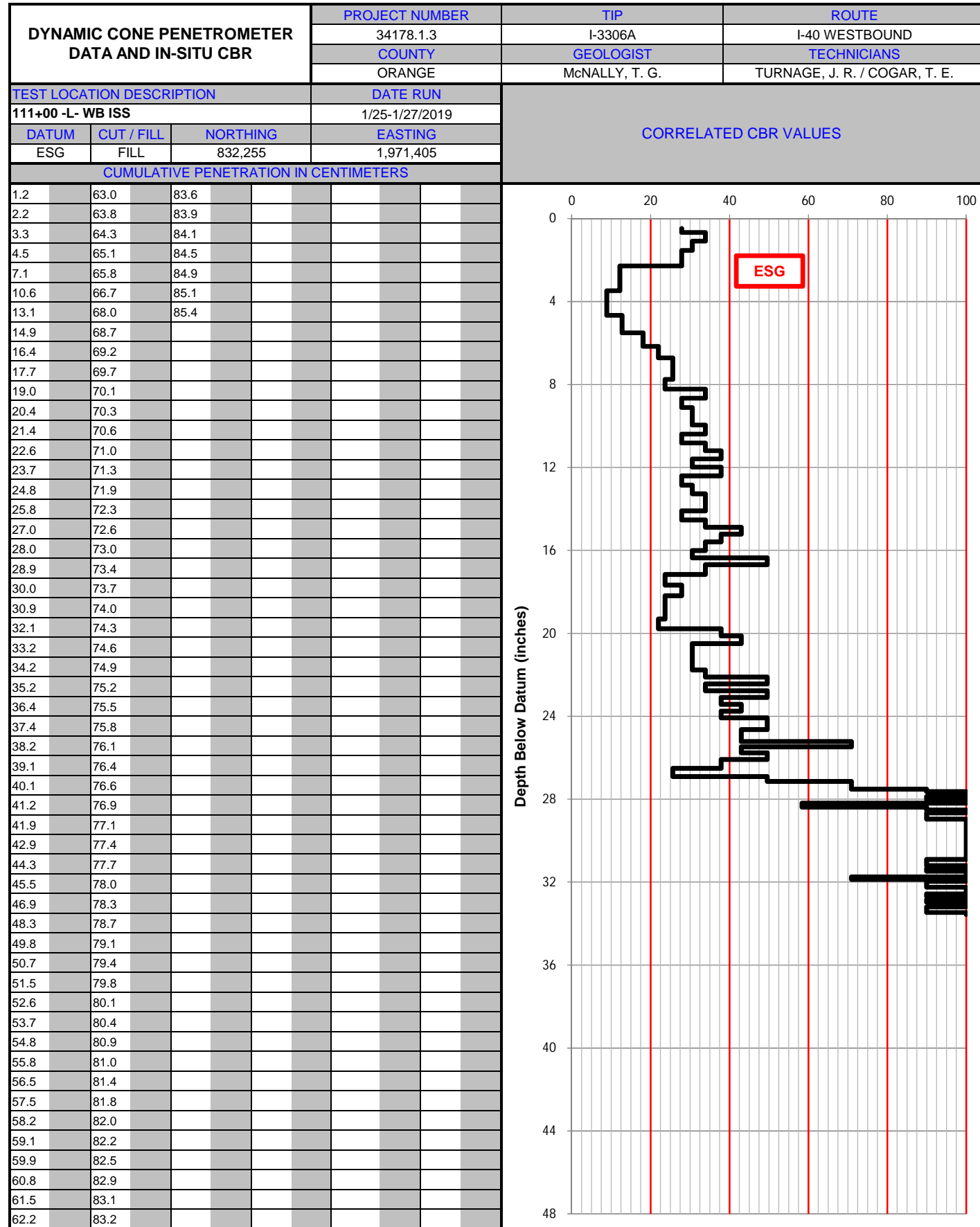


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

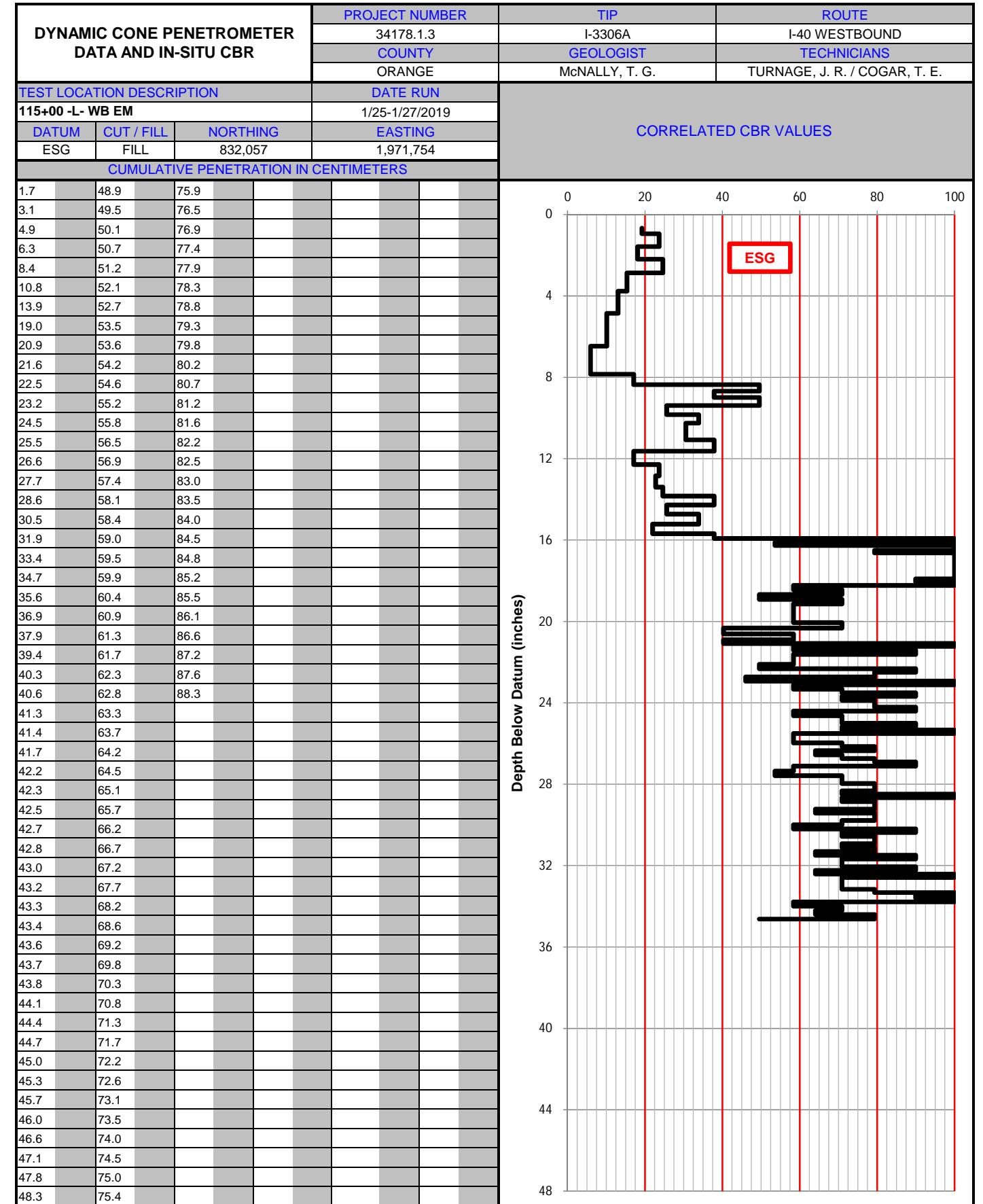


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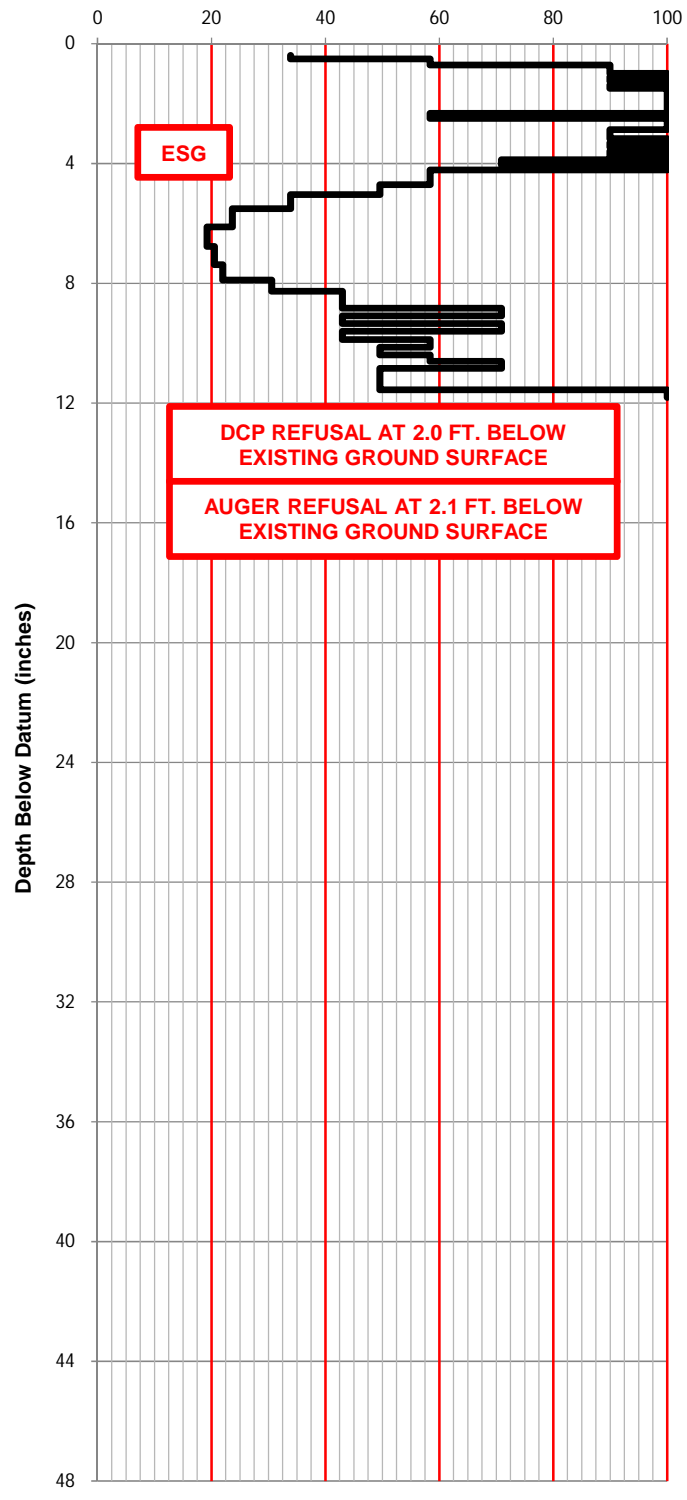
Notes:  
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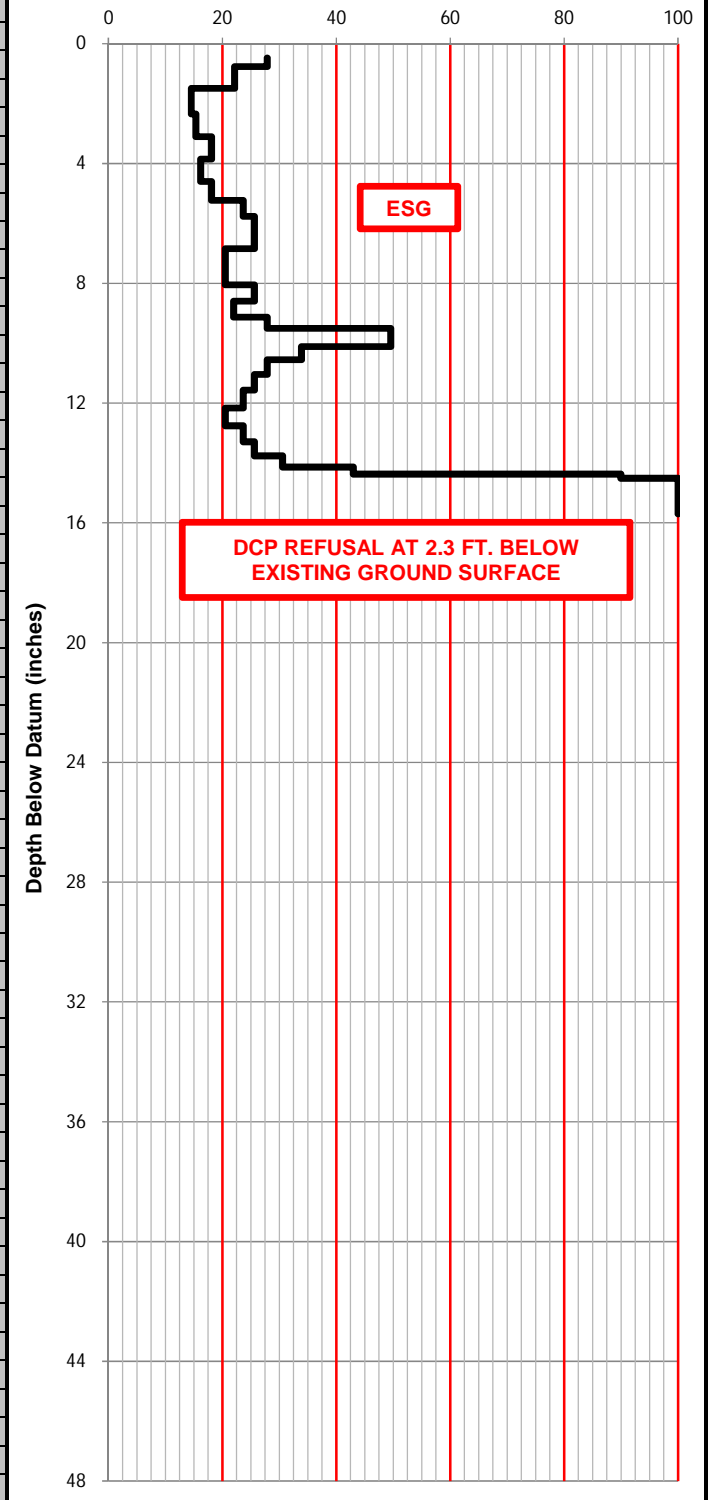
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
119+50 -L- WB OES				1/25-1/27/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	GRADE	831,828	1,972,149			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.0	29.61					
1.6	29.62					
2.0	29.62					
2.4	29.63					
2.6	29.64					
3.0	29.65					
3.3	29.66					
3.7	29.66					
3.9	29.67					
4.1	29.68					
4.3	29.69					
4.6	29.70					
4.9	29.70					
5.2	29.71					
5.4	29.72					
5.6	29.73					
6.2	29.74					
6.5	29.74					
6.8	29.75					
7.1	29.76					
7.5	29.77					
7.9	29.78					
8.2	29.78					
8.6	29.79					
8.9	29.80					
9.3	29.81					
9.6	29.82					
10.1	29.82					
10.4	29.83					
11.0	29.84					
11.6	29.85					
12.3	29.86					
13.3	29.86					
14.7	29.87					
16.4	29.88					
18.0	29.89					
19.5	29.90					
20.6	29.90					
21.4	29.91					
22.2	29.92					
22.7	29.93					
23.5	29.94					
24.0	29.94					
24.8	29.95					
25.4	29.96					
26.1	29.97					
26.7	29.98					
27.2	29.98					
27.9	29.99					
28.6	30.00					
29.3						
29.4						
29.6						



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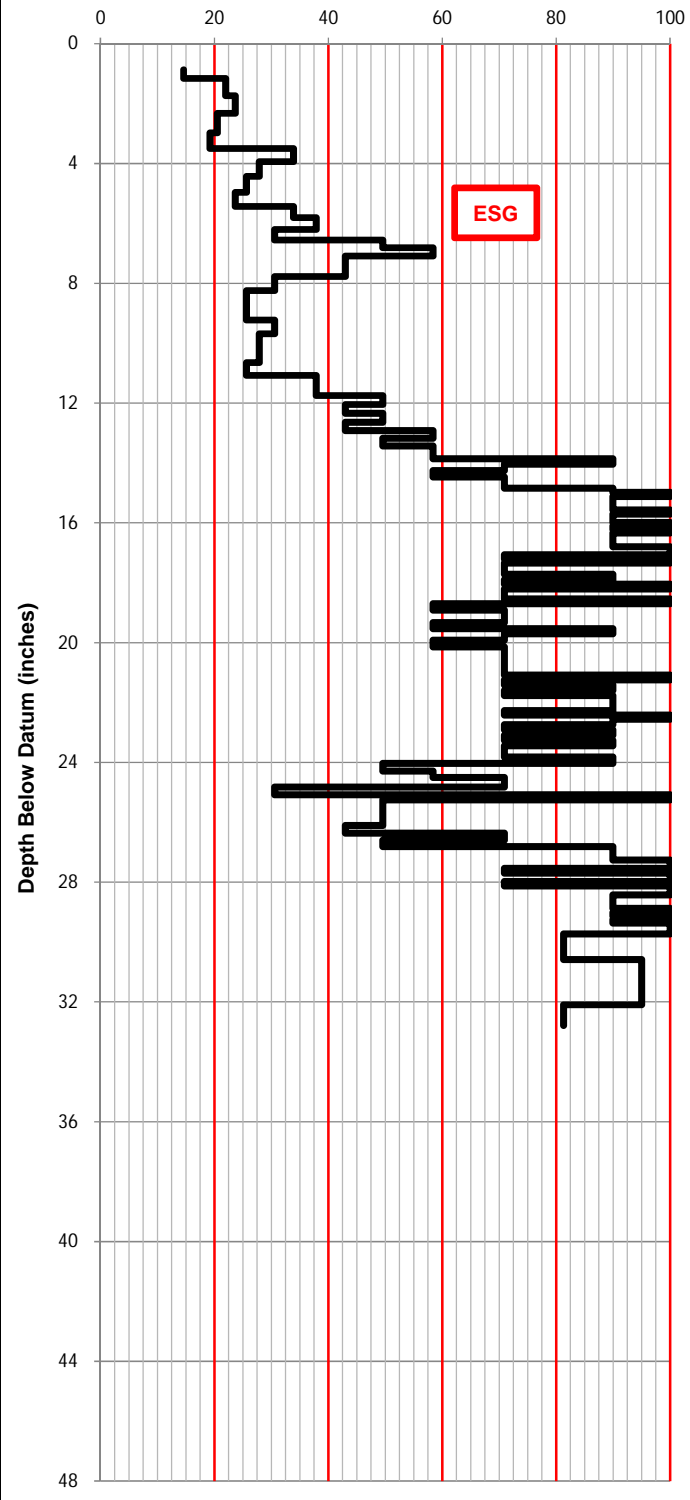
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
125+00 -L- WB OES				1/25-1/27/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	831,450	1,972,560			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	39.06					
2.7	39.10					
4.9	39.13					
7.0	39.16					
8.8	39.20					
10.8	39.23					
12.6	39.26					
14.0	39.29					
15.3	39.32					
16.6	39.36					
18.2	39.39					
19.8	39.42					
21.1	39.45					
22.6	39.48					
23.8	39.52					
24.5	39.55					
25.2	39.58					
26.2	39.61					
27.4	39.64					
28.7	39.68					
30.1	39.71					
31.7	39.74					
33.1	39.77					
34.4	39.80					
35.5	39.84					
36.3	39.87					
36.7	39.90					
37.0						
37.2						
37.3						
37.5						
37.7						
37.8						
38.0						
38.1						
38.30						
38.34						
38.37						
38.42						
38.46						
38.50						
38.54						
38.58						
38.62						
38.66						
38.74						
38.78						
38.82						
38.86						
38.90						
38.94						
38.98						
39.02						



Notes:  
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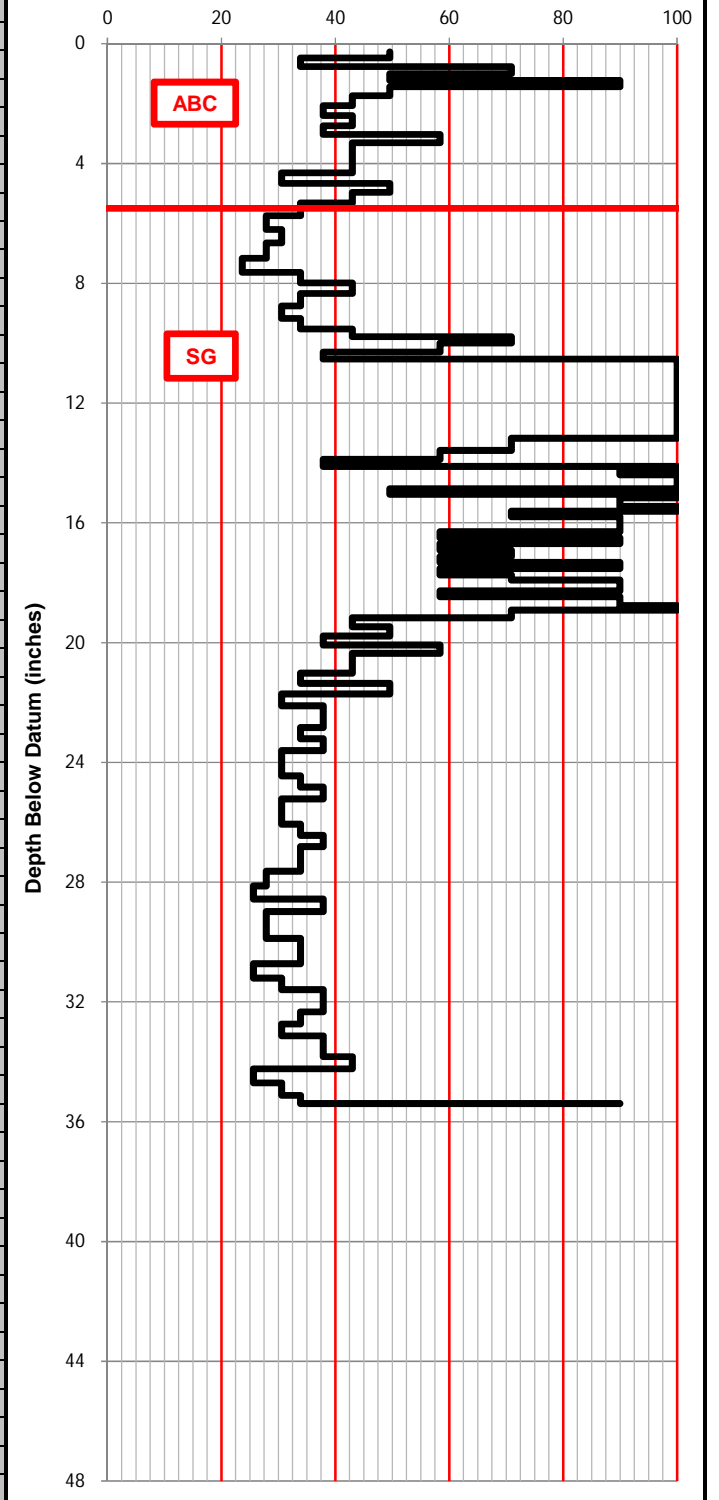
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
125+00 -L- WB EM				1/25-1/27/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	831,416	1,972,523			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.2	43.1	69.1				
3.7	43.6	69.4				
5.1	43.8	69.7				
6.7	44.3	70.2				
8.4	44.8	70.5				
9.4	45.2	70.8				
10.6	45.7	71.3				
11.9	46.0	71.6				
13.3	46.5	71.7				
14.3	47.0	72.0				
15.2	47.2	72.4				
16.3	47.8	72.8				
17.0	48.3	73.2				
17.6	48.8	73.5				
18.4	49.4	73.9				
19.2	49.8	74.1				
20.3	50.3	74.5				
21.6	50.9	74.7				
22.9	51.4	75.0				
24.0	51.9	75.3				
25.2	52.4	75.7				
26.4	52.9	76.2				
27.7	53.4	76.6				
28.6	53.7	77.1				
29.5	54.2	77.5				
30.2	54.6	77.9				
31.0	55.1	78.3				
31.7	55.5	78.6				
32.5	55.9	79.0				
33.1	56.3	79.4				
33.8	56.8	79.8				
34.4	57.1	80.2				
35.0	57.5	80.5				
35.4	58.0	80.9				
35.9	58.4	81.3				
36.5	58.9	81.7				
37.0	59.3	82.2				
37.5	59.8	82.6				
37.9	60.3	83.1				
38.2	60.7	83.5				
38.6	61.4					
39.0	62.0					
39.4	62.5					
39.7	63.6					
40.1	63.8					
40.5	64.5					
40.7	65.2					
41.1	65.9					
41.3	66.7					
41.7	67.2					
42.1	67.9					
42.5	68.3					
42.8	68.7					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



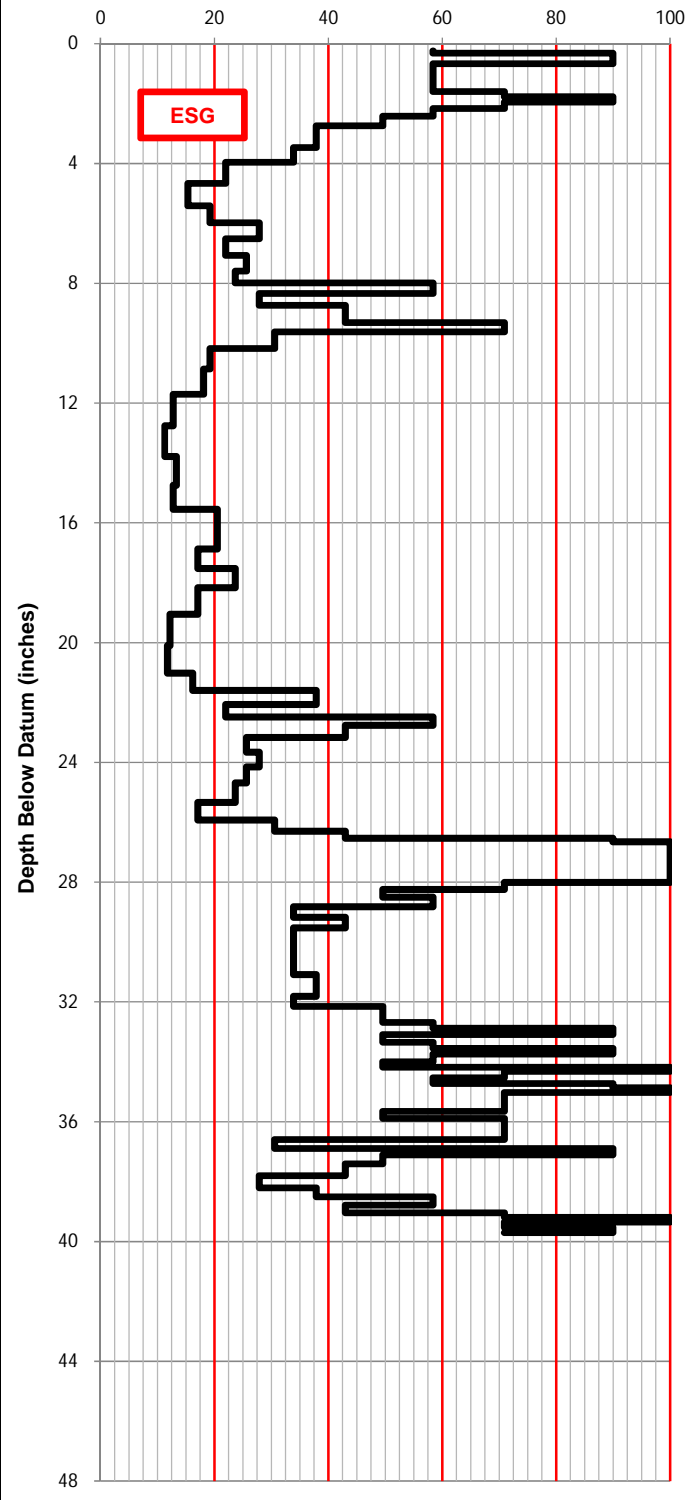
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
135+00 -L- WB OSS				1/25-1/27/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	830,611	1,973,128			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.7	30.2	52.1				
1.7	30.4	52.9				
2.2	30.7	53.9				
2.9	30.9	54.6				
3.3	31.1	55.7				
4.0	31.3	56.6				
4.8	31.6	57.5				
5.7	31.8	58.5				
6.5	32.1	59.4				
7.4	32.3	60.5				
8.0	32.5	61.6				
8.8	32.7	62.6				
9.6	32.8	63.5				
10.4	33.0	64.6				
11.5	33.2	65.7				
12.2	33.7	66.7				
13.0	34.2	67.6				
14.0	34.8	68.6				
15.2	35.7	69.6				
16.3	36.0	70.8				
17.5	36.4	72.1				
18.9	36.7	73.0				
19.9	36.9	74.2				
20.7	37.2	75.4				
21.7	37.4	76.4				
22.8	38.1	77.4				
23.8	38.3	78.7				
24.6	38.7	79.8				
25.1	39.1	80.7				
25.7	39.4	81.6				
26.6	39.9	82.6				
26.9	40.3	83.7				
27.2	40.7	84.6				
27.4	41.1	85.5				
27.6	41.7	86.3				
27.7	42.1	87.6				
28.0	42.7	88.7				
28.2	43.2	89.7				
28.3	43.8	90.1				
28.4	44.2					
28.5	44.8					
28.6	45.3					
28.7	45.7					
28.8	46.1					
29.0	46.7					
29.1	47.1					
29.3	47.5					
29.4	47.8					
29.5	48.3					
29.6	49.1					
29.8	49.8					
29.9	50.7					
30.0	51.3					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



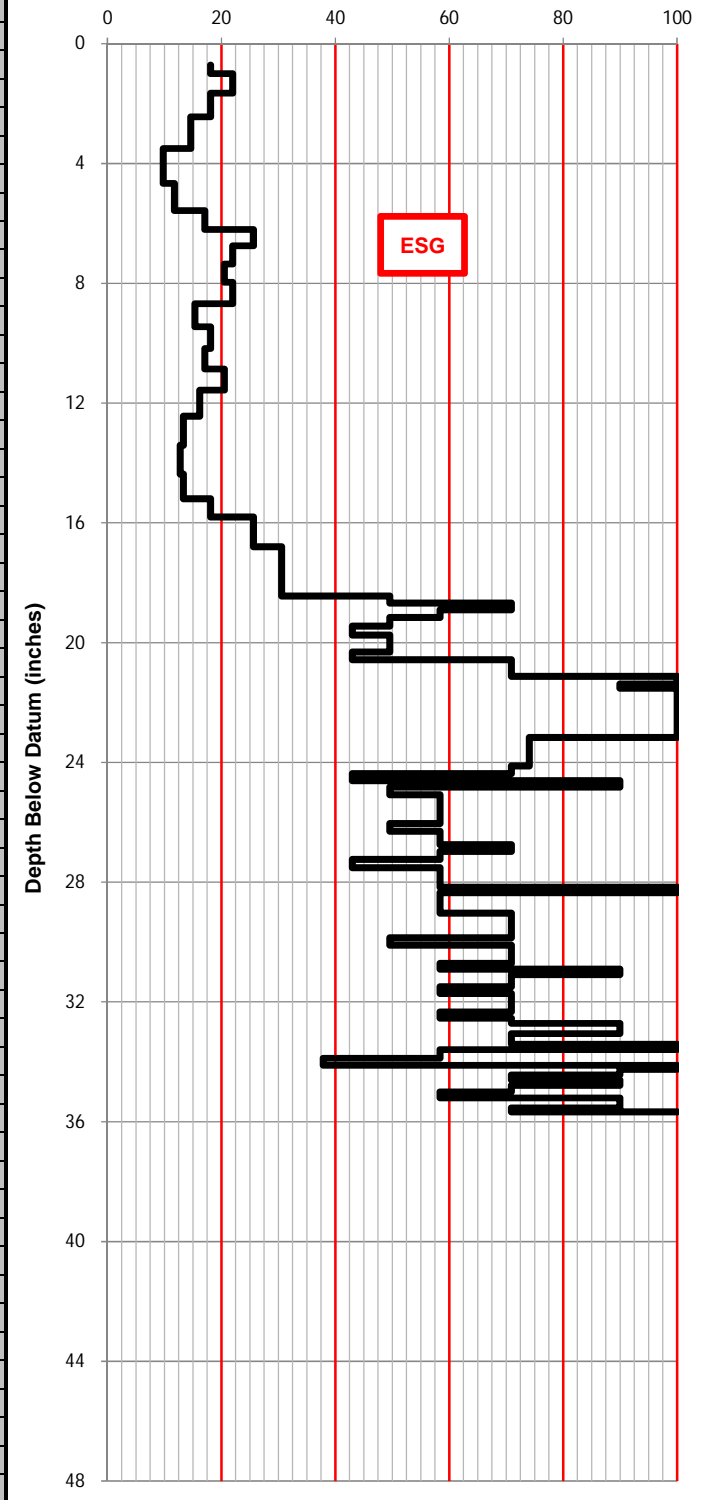
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
135+00 -L- WB ISS				1/25-1/27/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	830,594	1,973,095			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.6	67.6	98.1				
1.0	67.8	98.9				
1.4	68.1	99.4				
2.0	68.3	99.7				
2.6	68.5	100.2				
3.2	68.7	100.6				
3.8	68.8	101.1				
4.3	69.0					
4.7	69.2					
5.2	69.5					
5.8	69.9					
6.5	70.2					
7.4	70.6					
8.3	70.9					
9.3	71.4					
10.8	72.1					
12.9	72.7					
14.6	73.7					
15.8	74.5					
17.3	75.5					
18.6	76.5					
20.0	77.5					
20.6	78.5					
21.8	79.4					
22.6	80.3					
23.4	81.3					
23.9	82.0					
25.0	82.7					
26.7	83.3					
28.5	83.7					
31.0	84.4					
33.8	85.0					
36.2	85.4					
38.7	86.0					
40.3	86.7					
41.9	86.9					
43.8	87.4					
45.2	88.0					
47.1	88.4					
49.7	88.7					
52.4	89.2					
54.4	89.7					
55.3	90.2					
56.8	90.9					
57.4	91.4					
58.2	91.9					
59.5	92.4					
60.7	93.5					
62.0	93.9					
63.4	94.6					
65.3	95.4					
66.4	96.6					
67.2	97.5					



Notes:  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

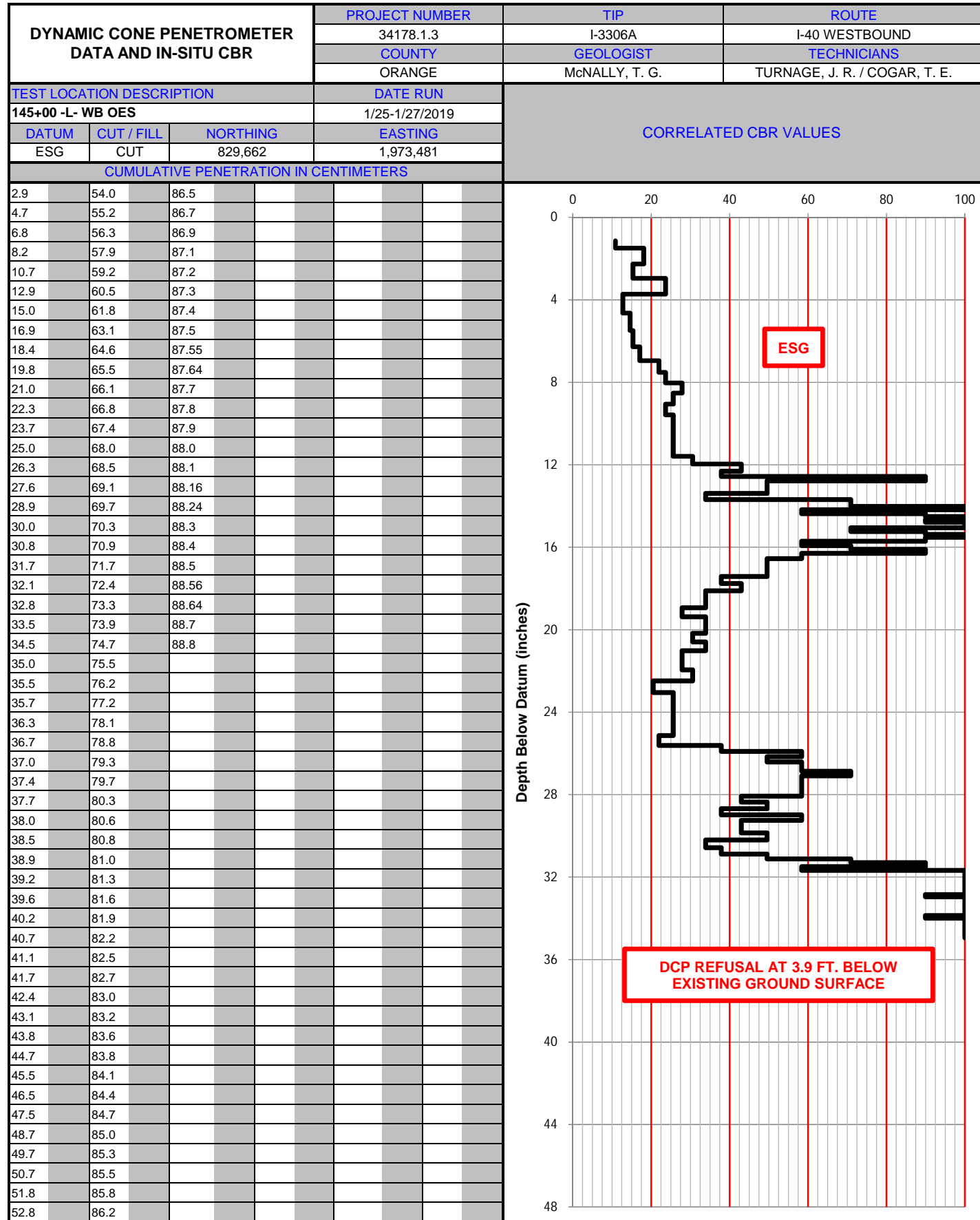


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
140+00 -L- WB EM				1/25-1/27/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	830,134	1,973,296			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.8	57.8	85.6				
3.3	58.0	86.5				
5.1	58.3	86.8				
7.3	58.6	87.2				
10.5	59.1	87.7				
13.2	59.6	88.1				
15.1	60.0	88.6				
16.4	60.5	89.2				
17.9	61.0	89.6				
19.5	61.5	90.0				
21.0	62.3	90.5				
23.1	62.7	90.7				
24.9	63.4					
26.8	64.0					
28.4	64.6					
30.4	65.2					
32.8	65.8					
35.3	66.5					
37.7	67.1					
39.5	67.7					
40.8	68.2					
42.1	68.8					
43.2	69.6					
44.3	70.2					
45.4	70.8					
46.5	71.4					
47.2	71.7					
47.7	72.3					
48.3	72.9					
49.0	73.5					
49.8	74.0					
50.5	74.5					
51.2	75.0					
52.0	75.5					
52.5	76.2					
53.0	76.7					
53.5	77.2					
53.8	77.7					
54.1	78.3					
54.5	78.7					
54.8	79.2					
55.1	79.7					
55.2	80.3					
55.5	80.8					
55.6	81.3					
55.9	81.8					
56.0	82.4					
56.2	82.9					
56.5	83.3					
56.7	83.7					
57.0	84.2					
57.2	84.7					
57.5	85.0					

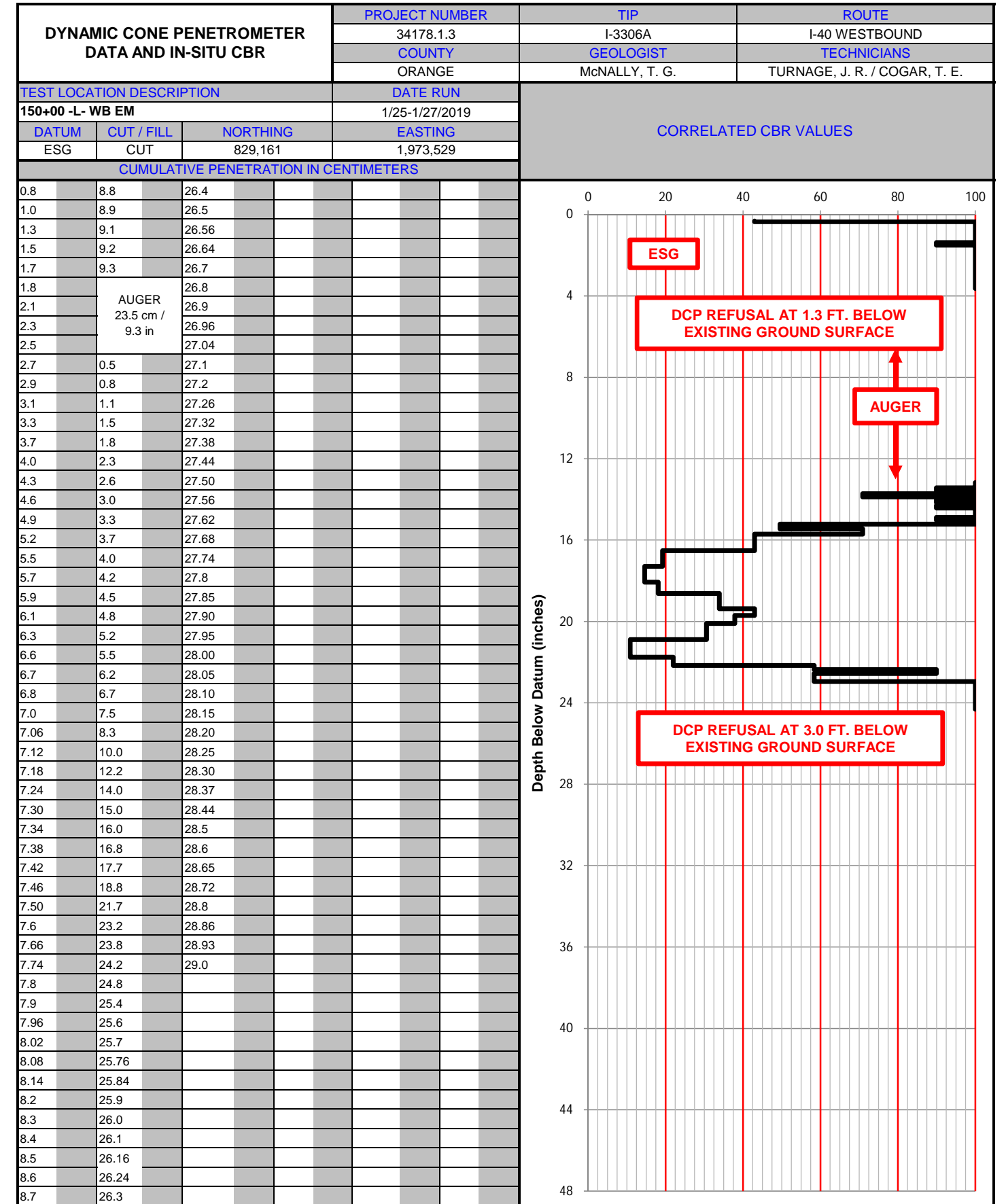


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





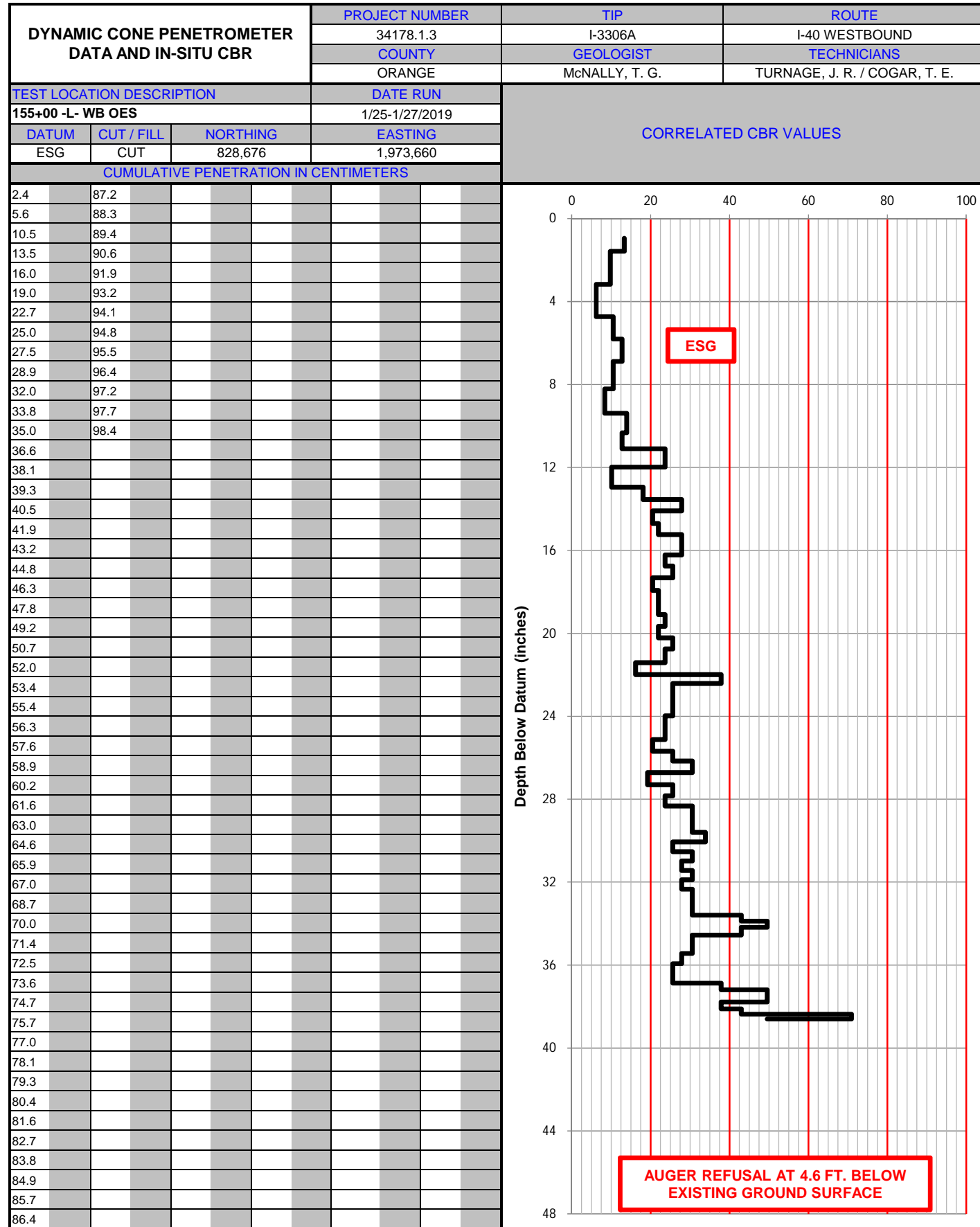
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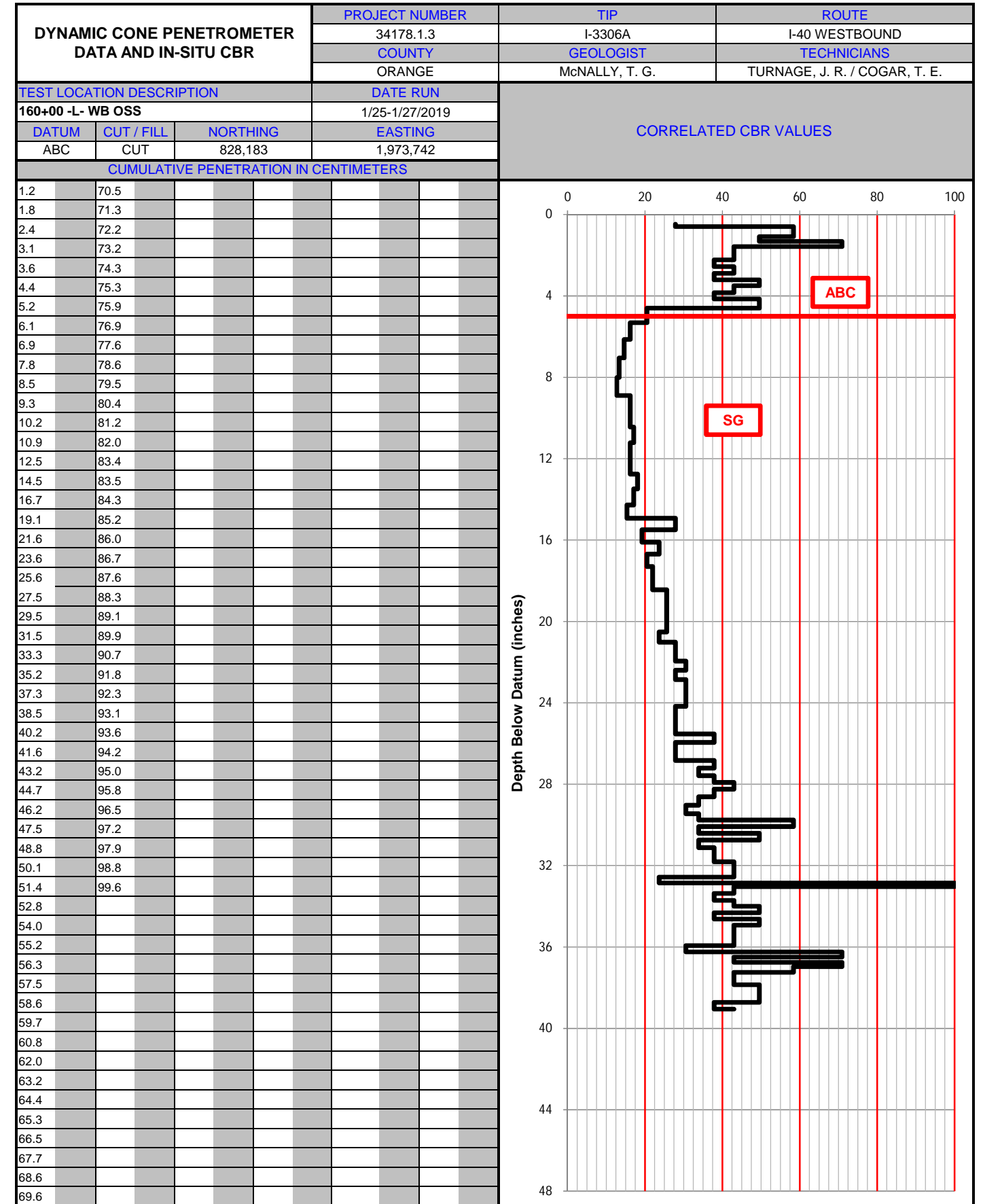
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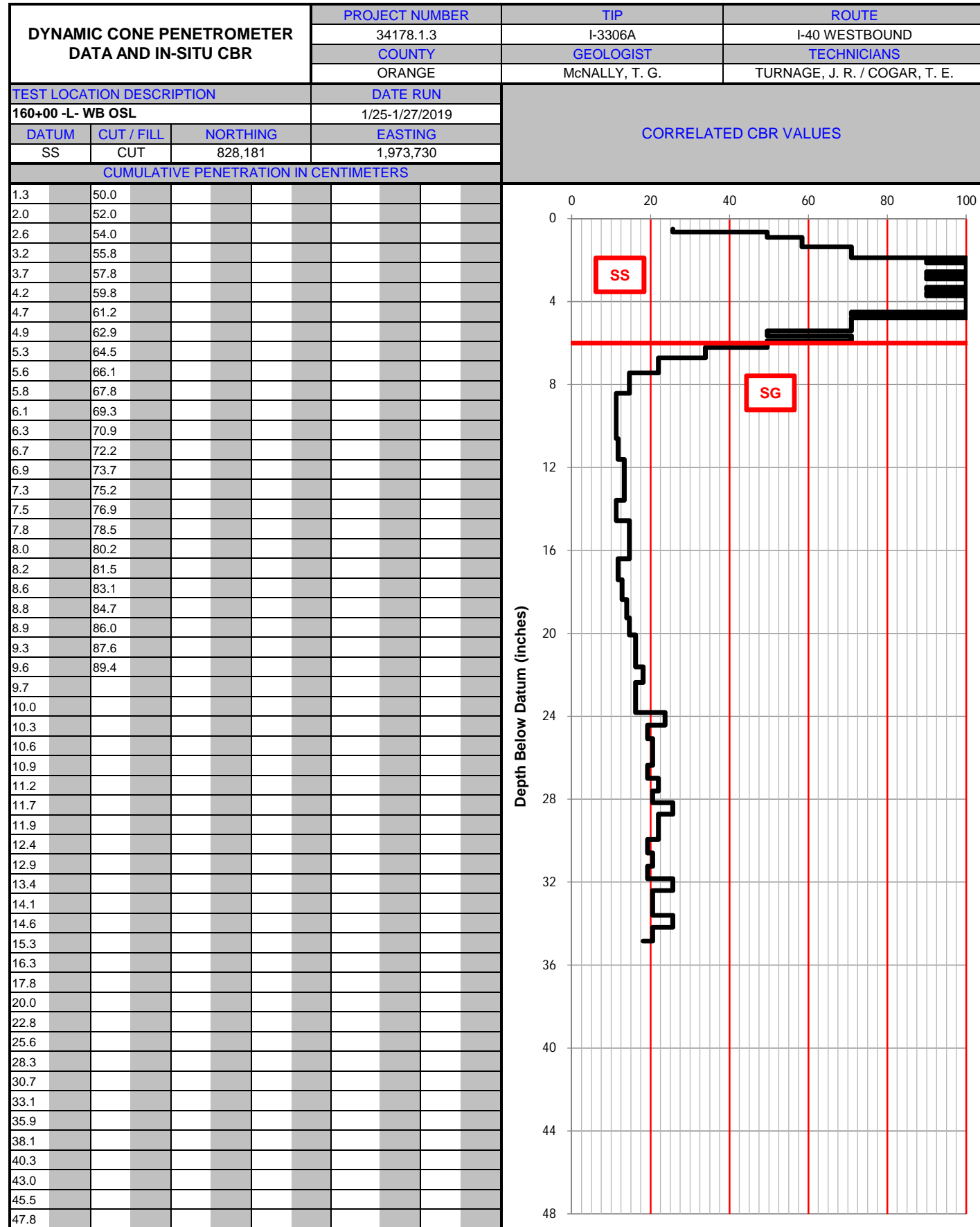


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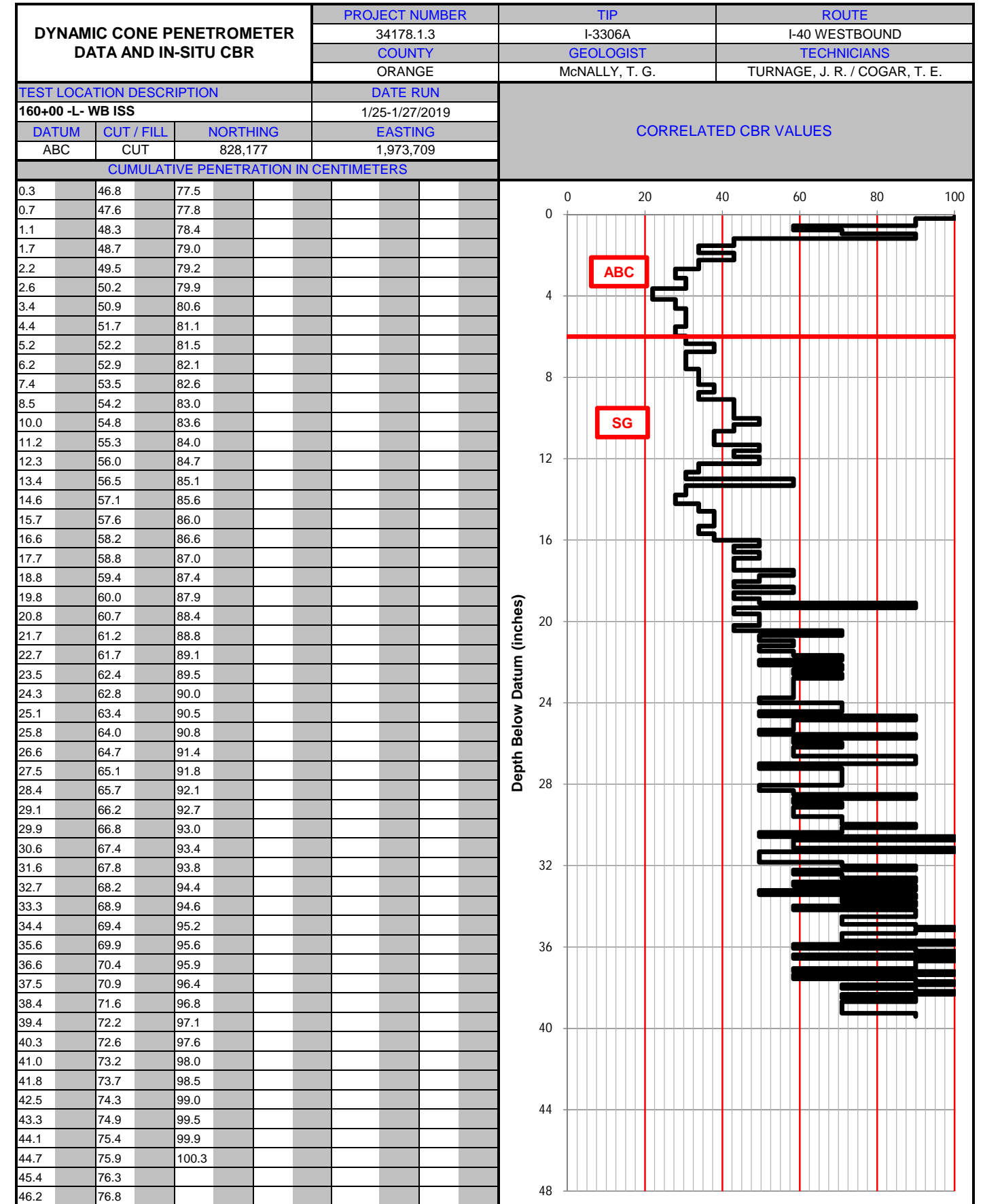


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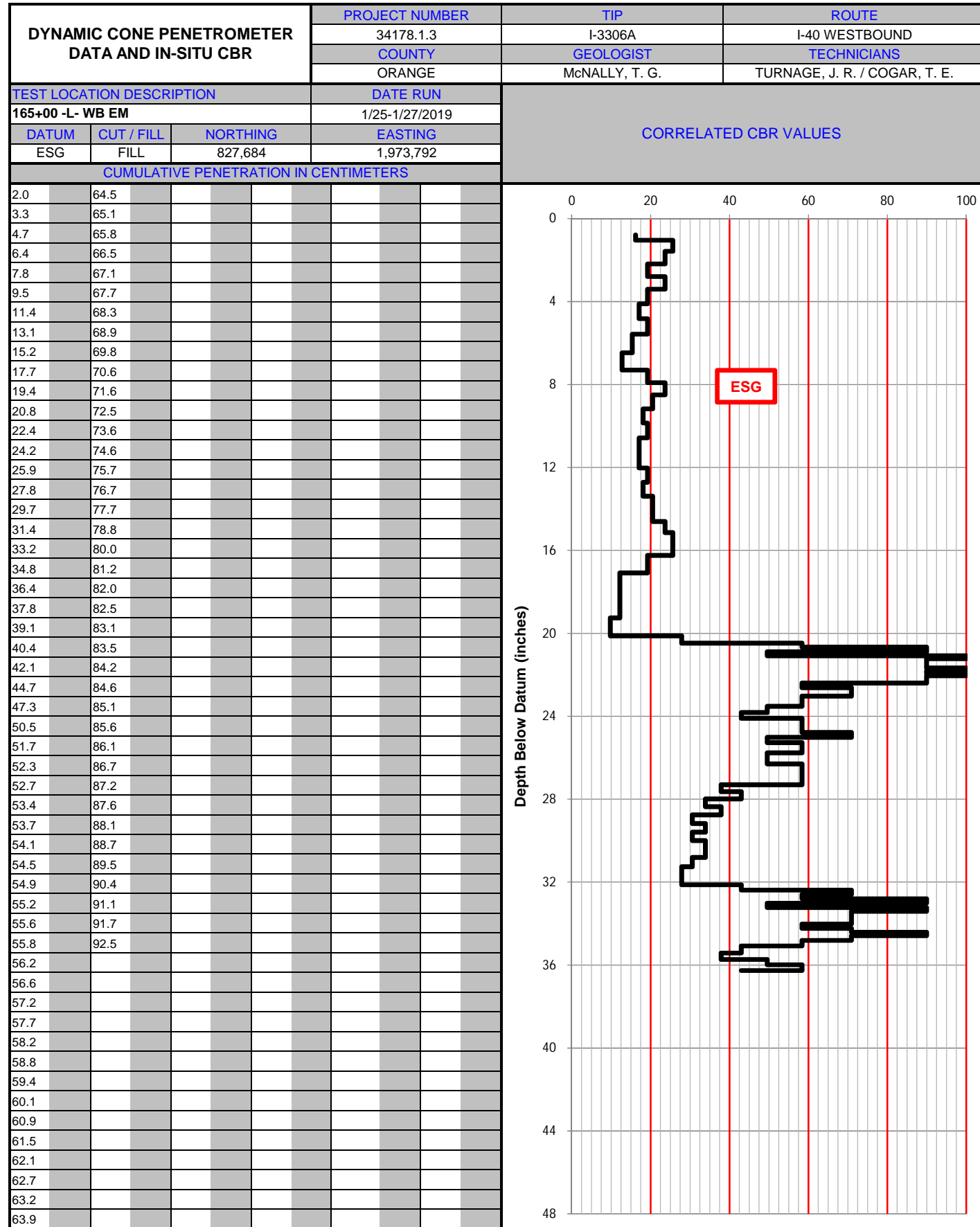


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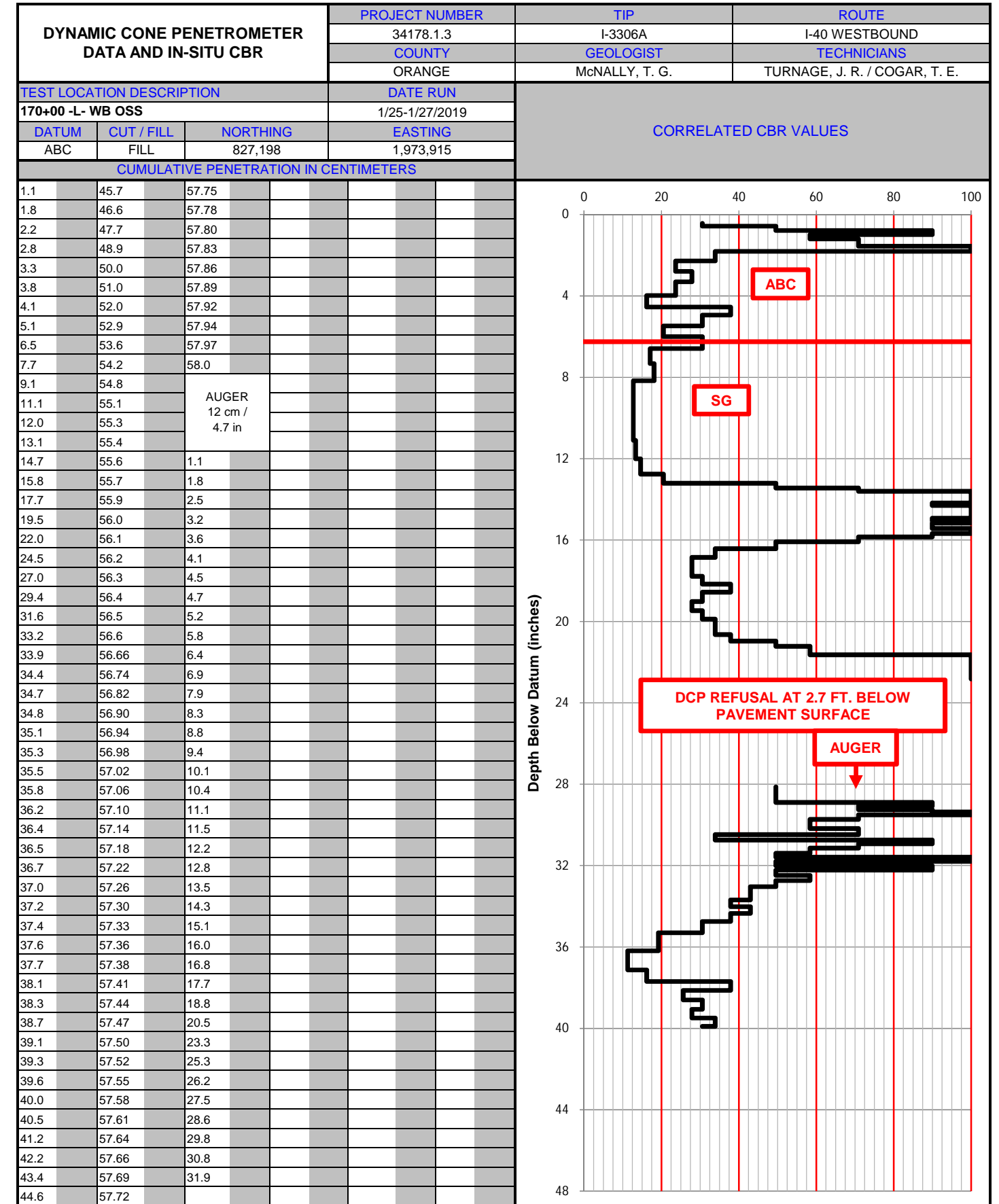


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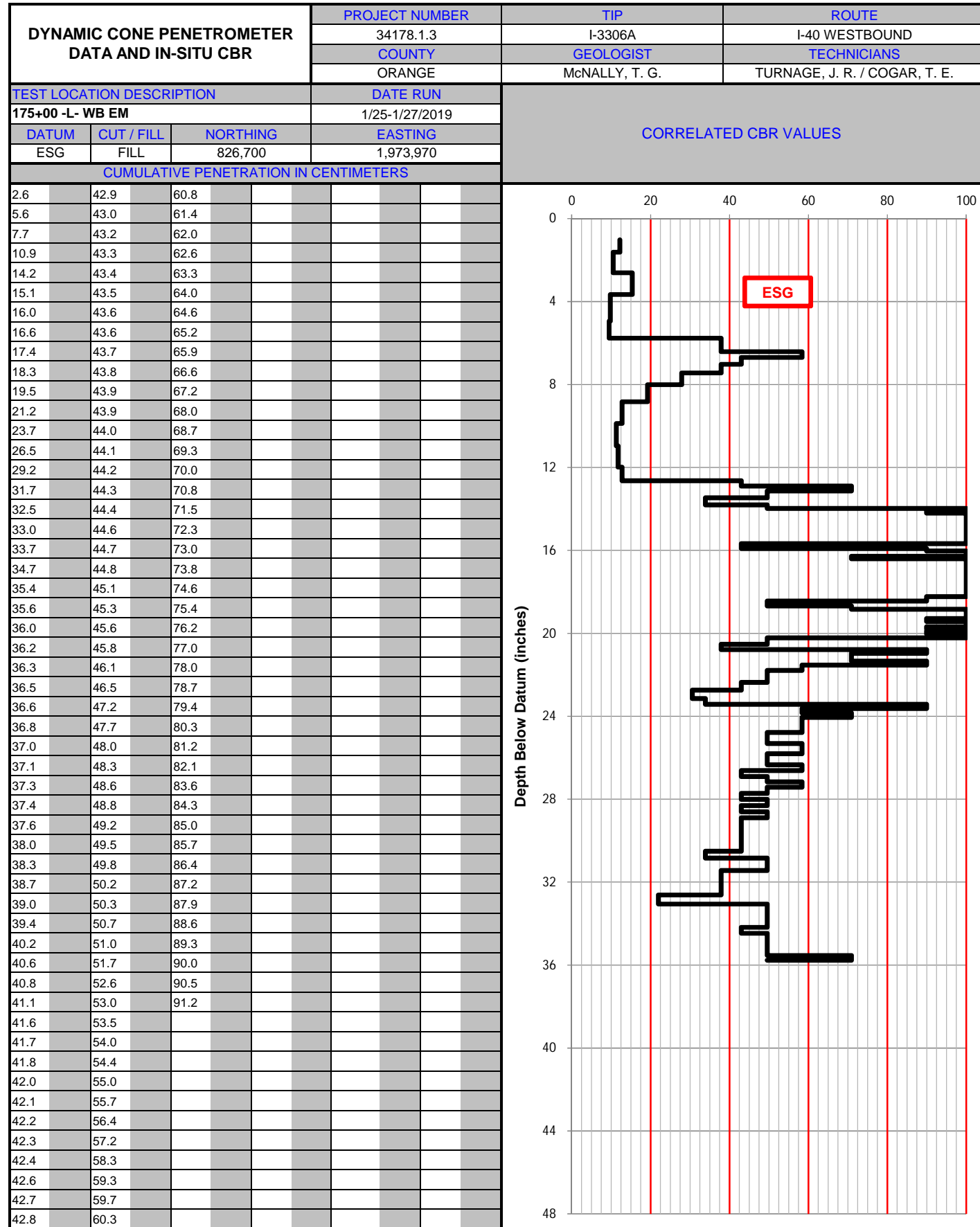


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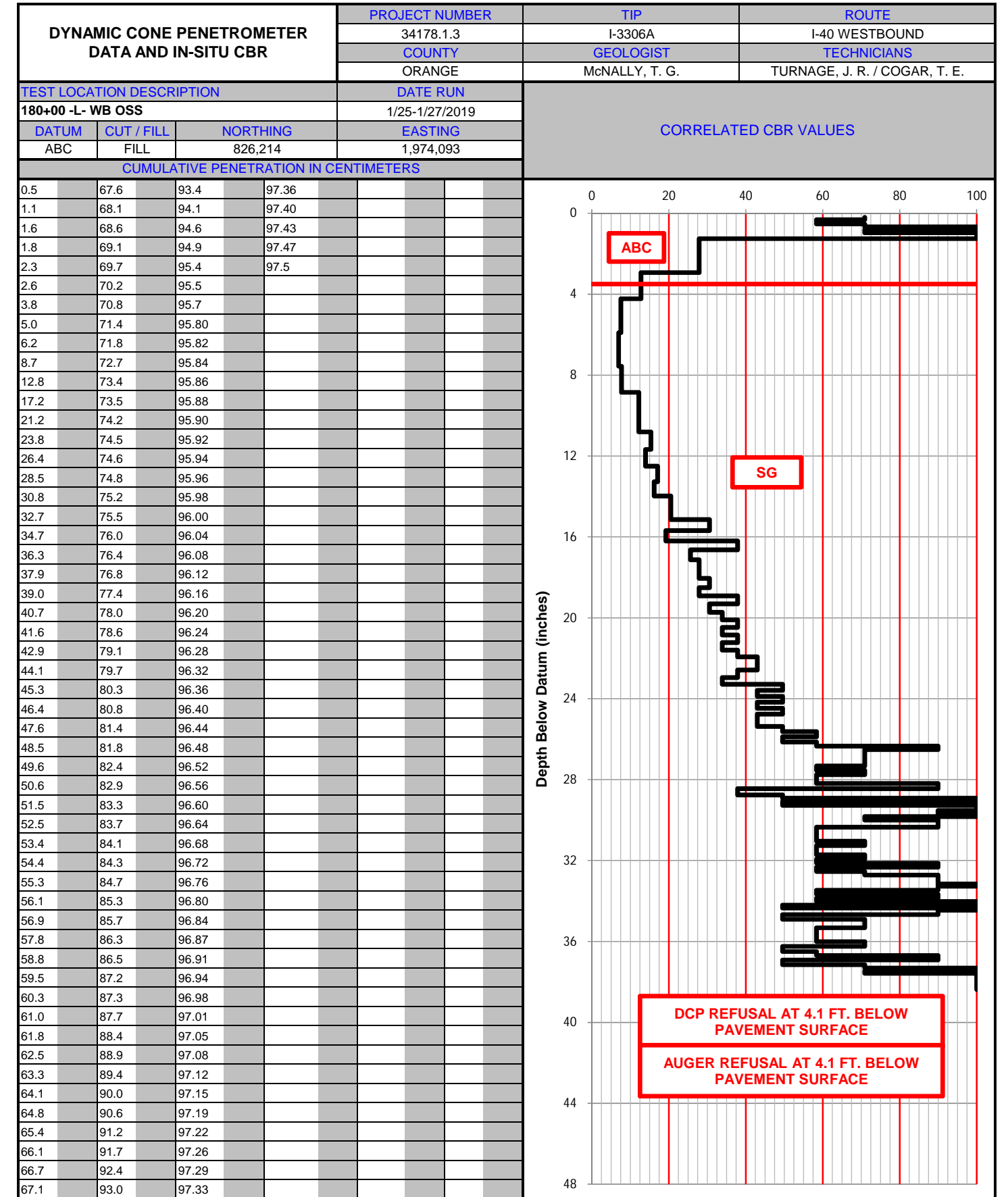


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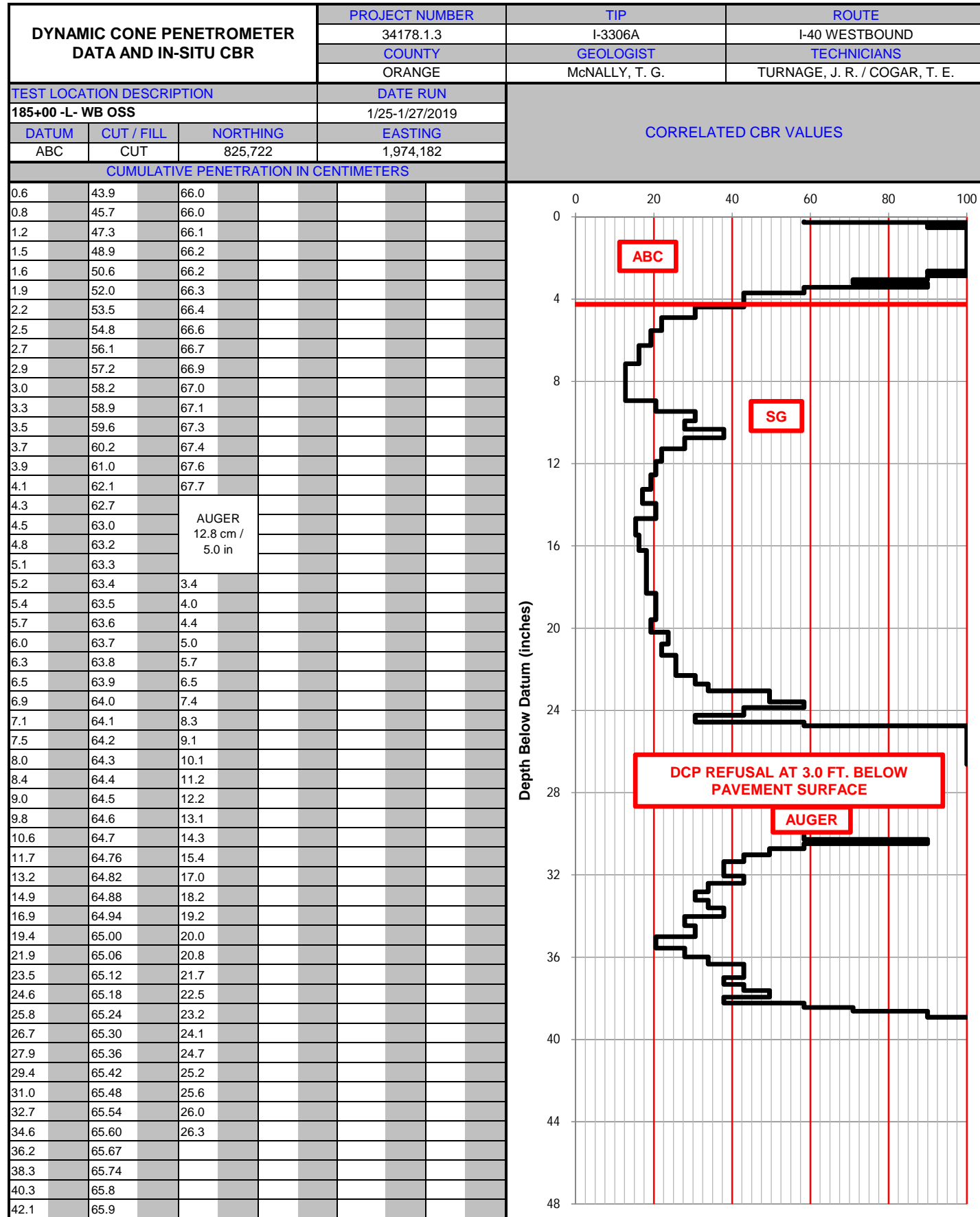


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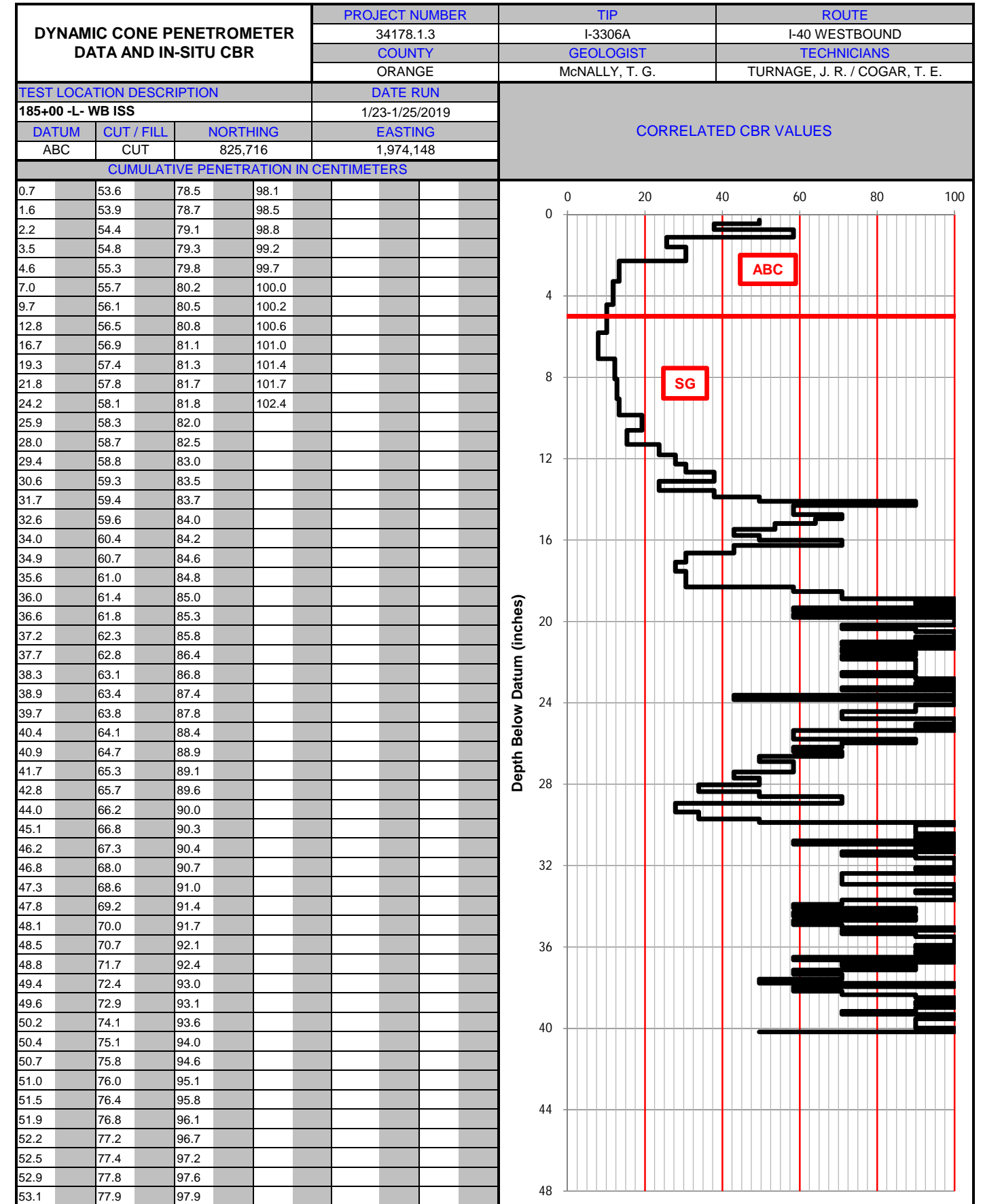


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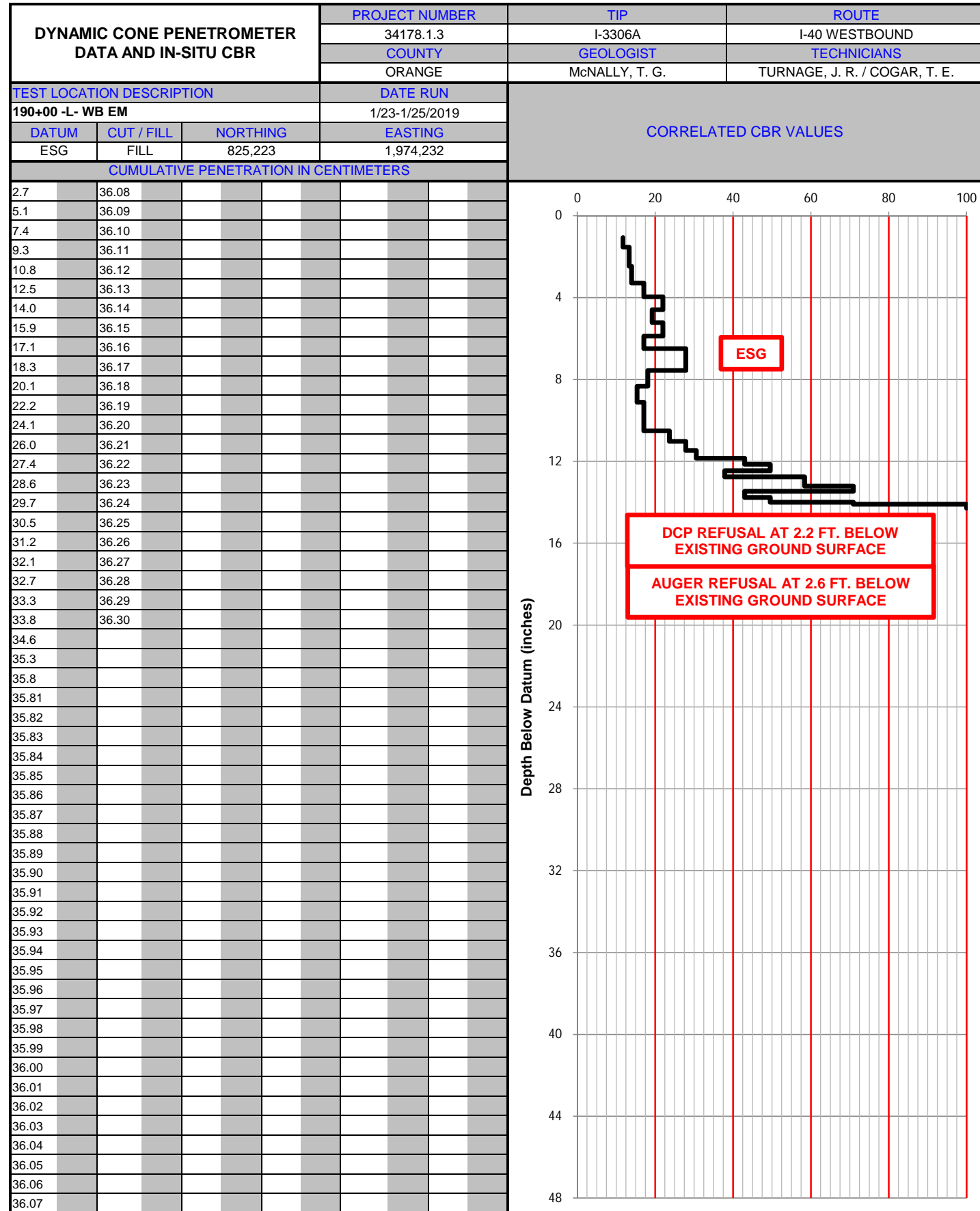


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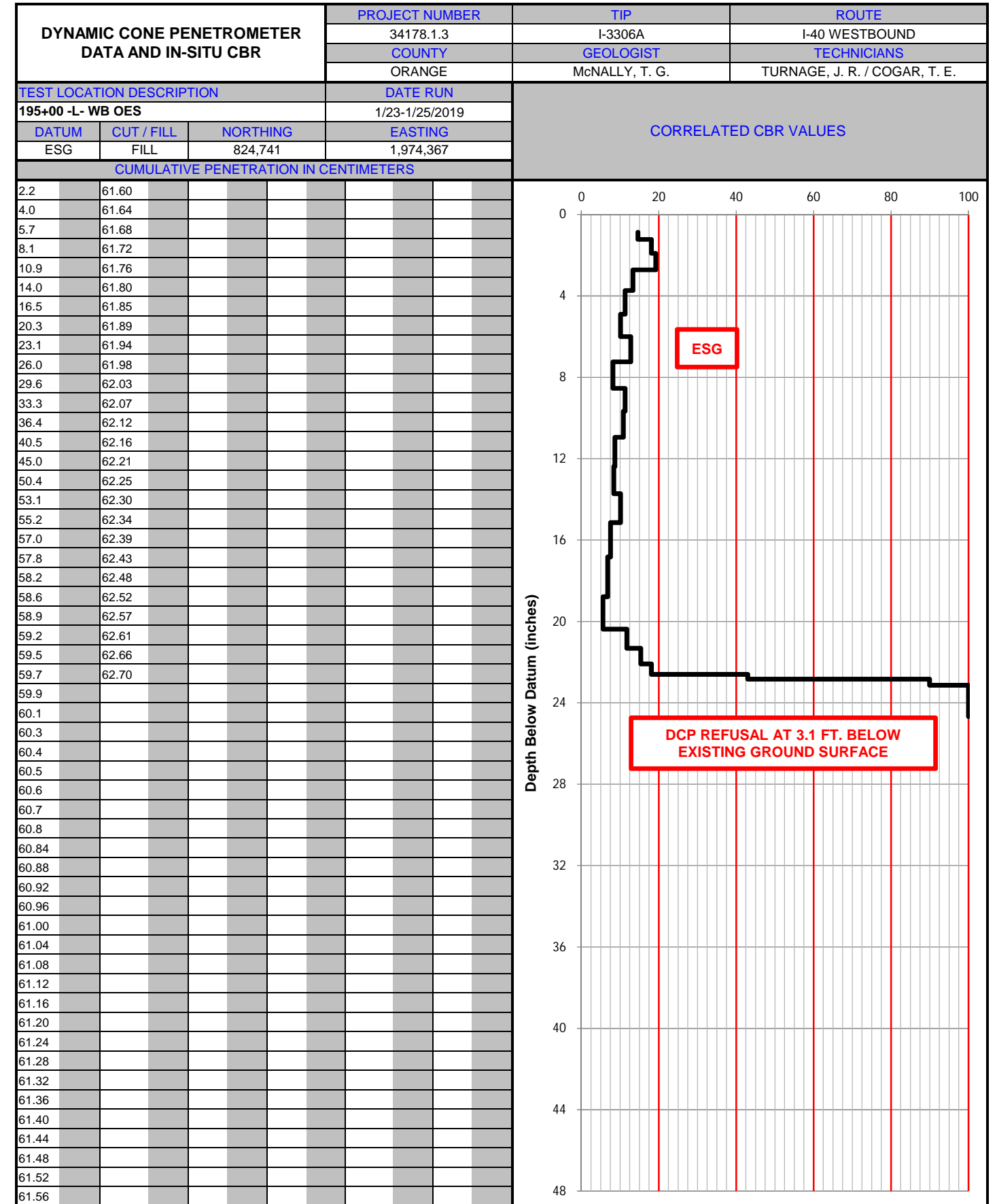


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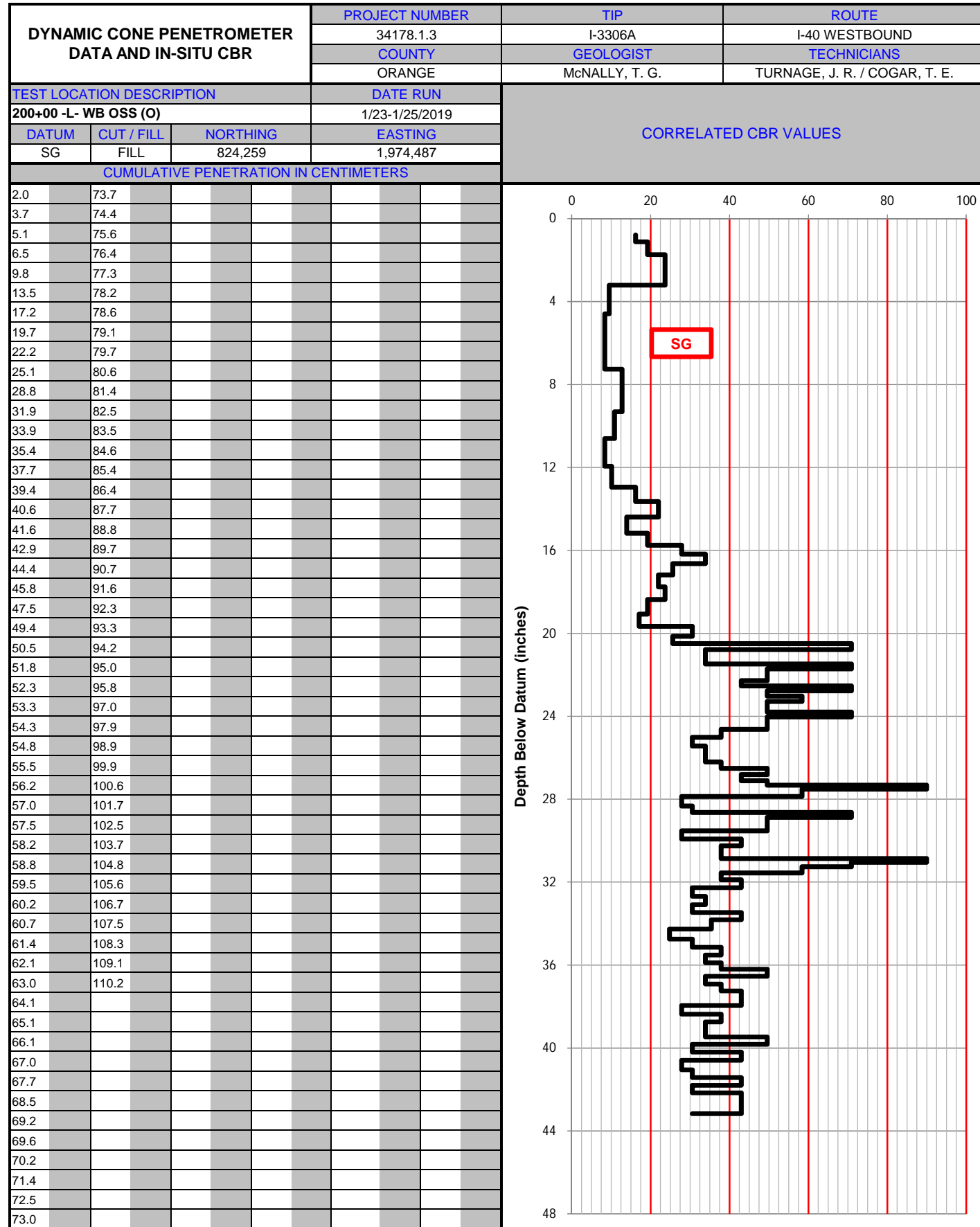


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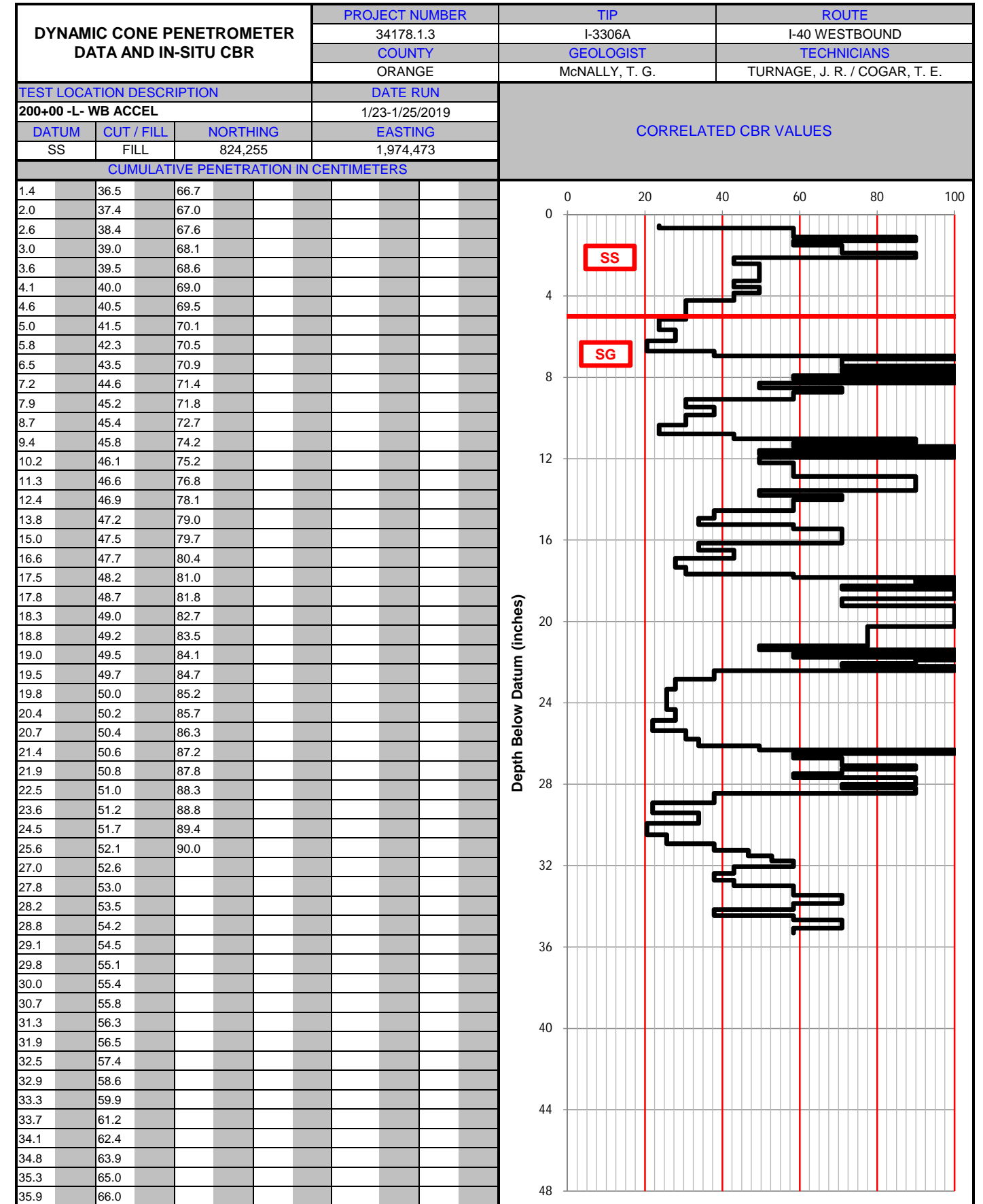


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 ABC = Aggregate Base Course  
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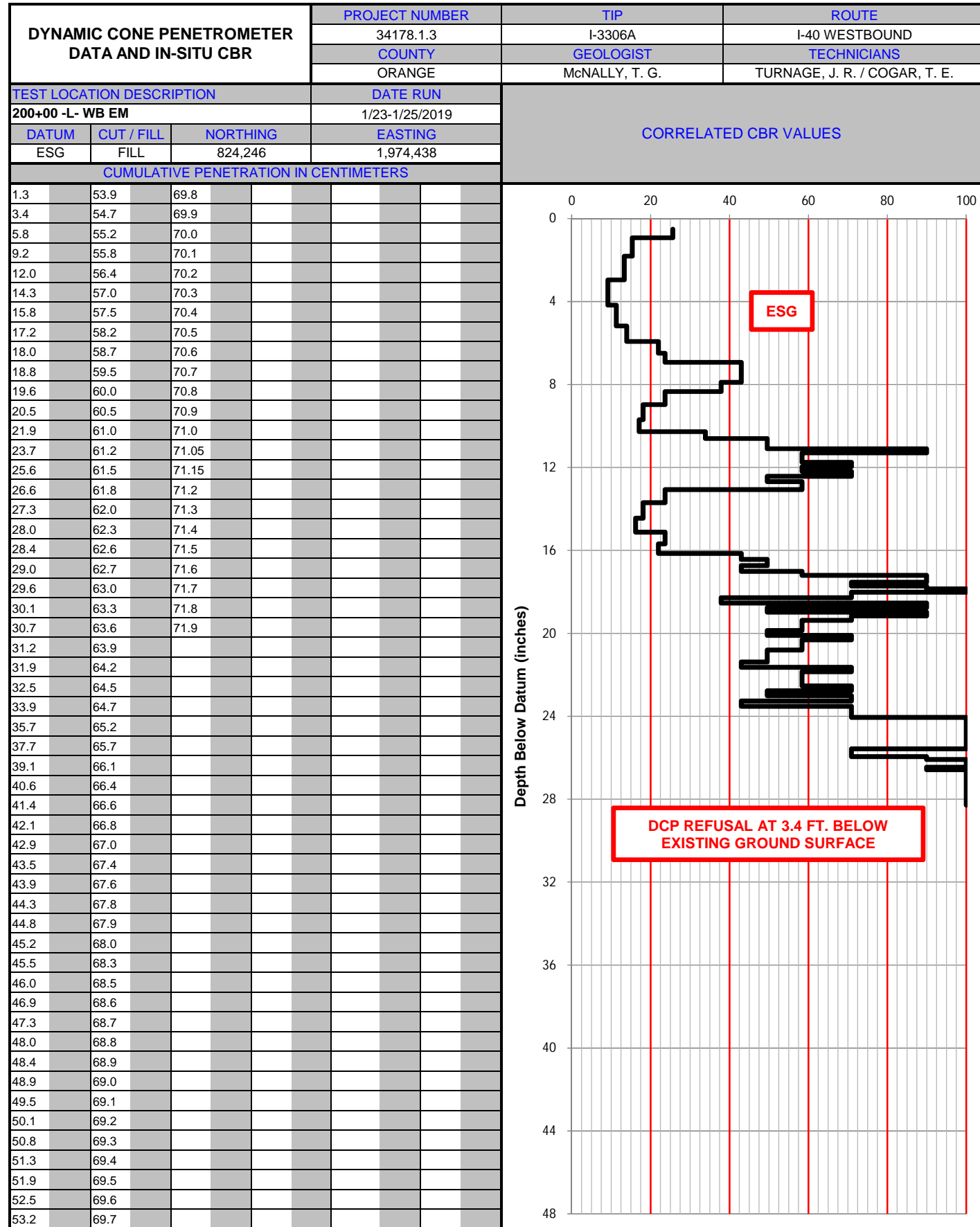


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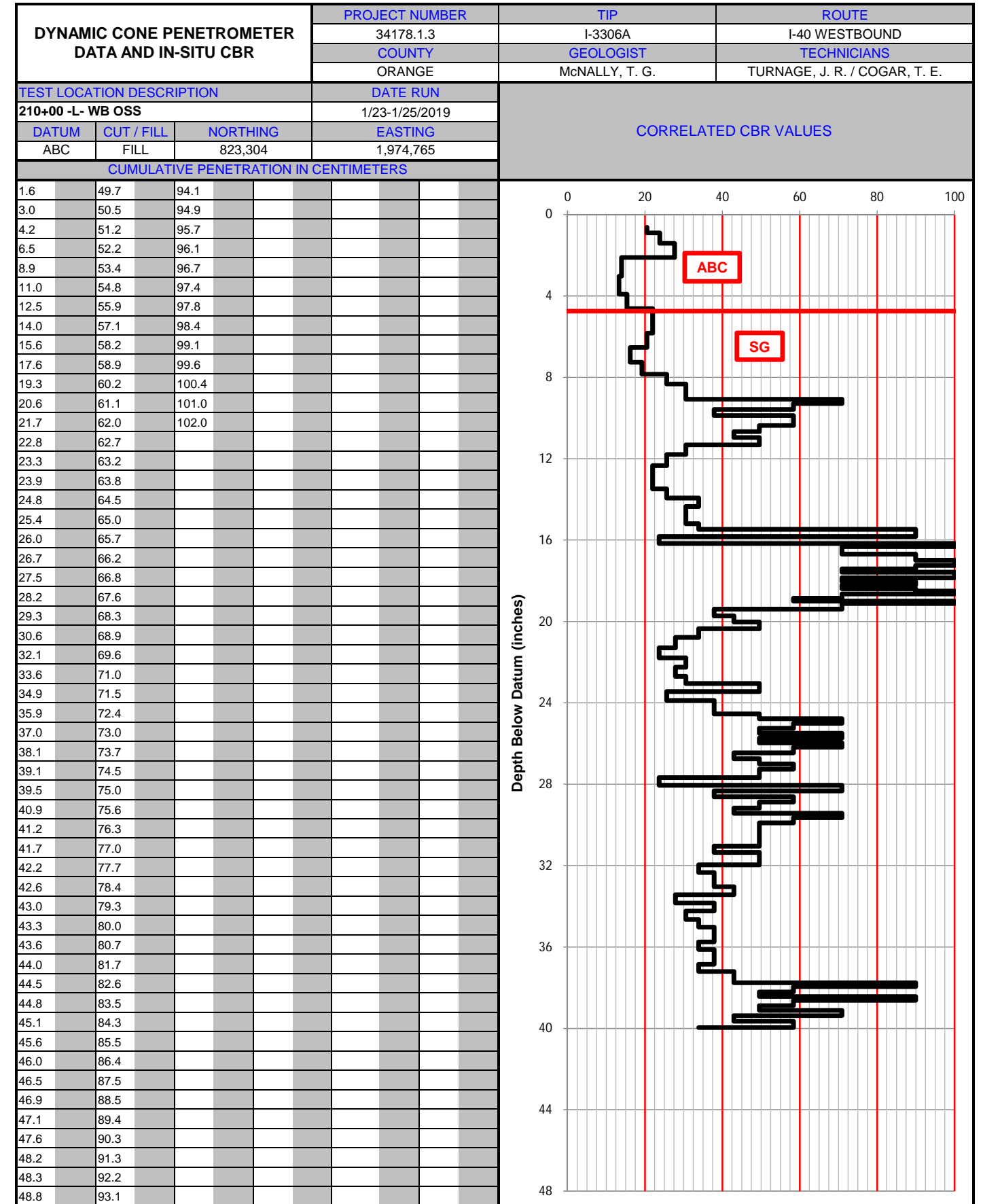


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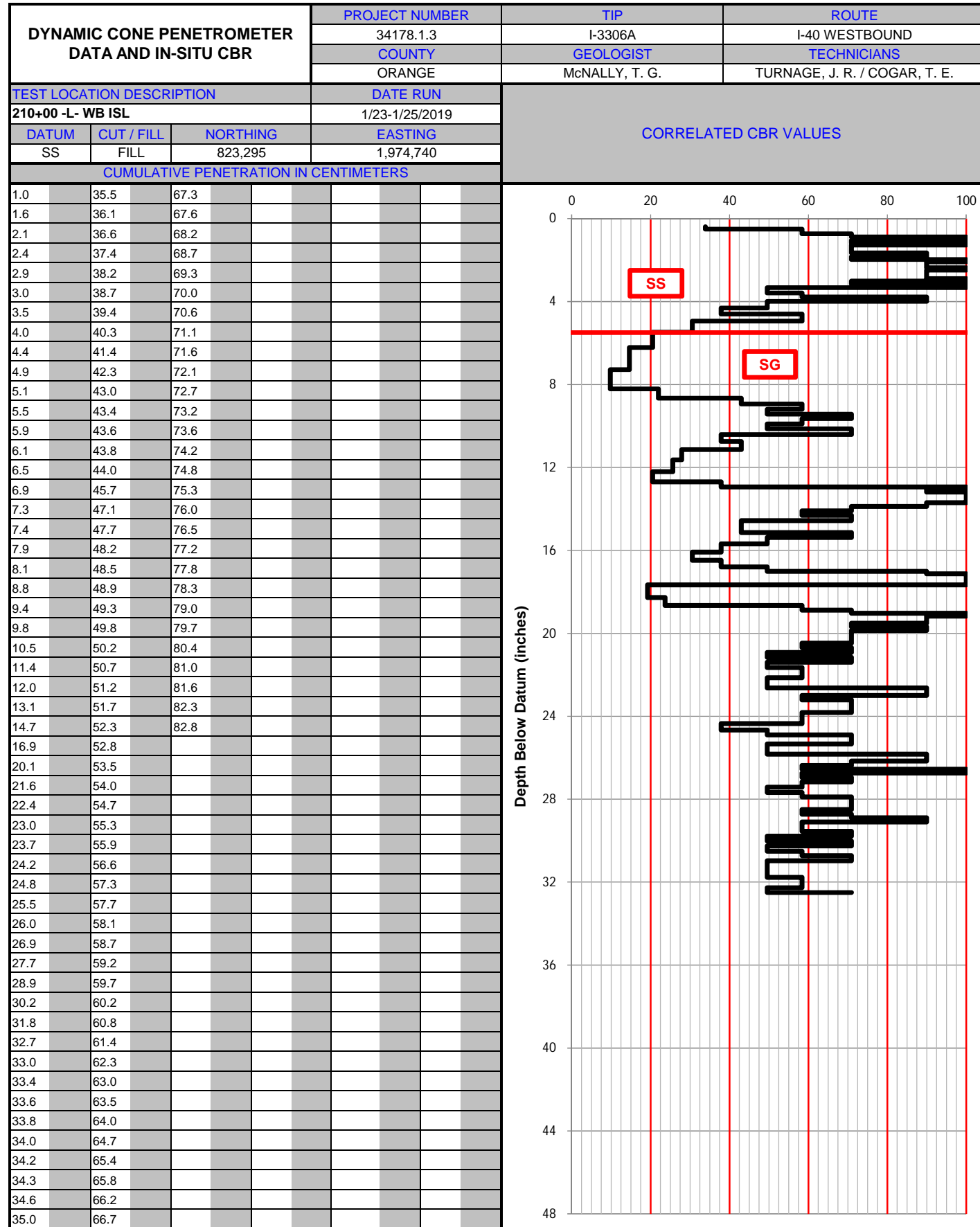
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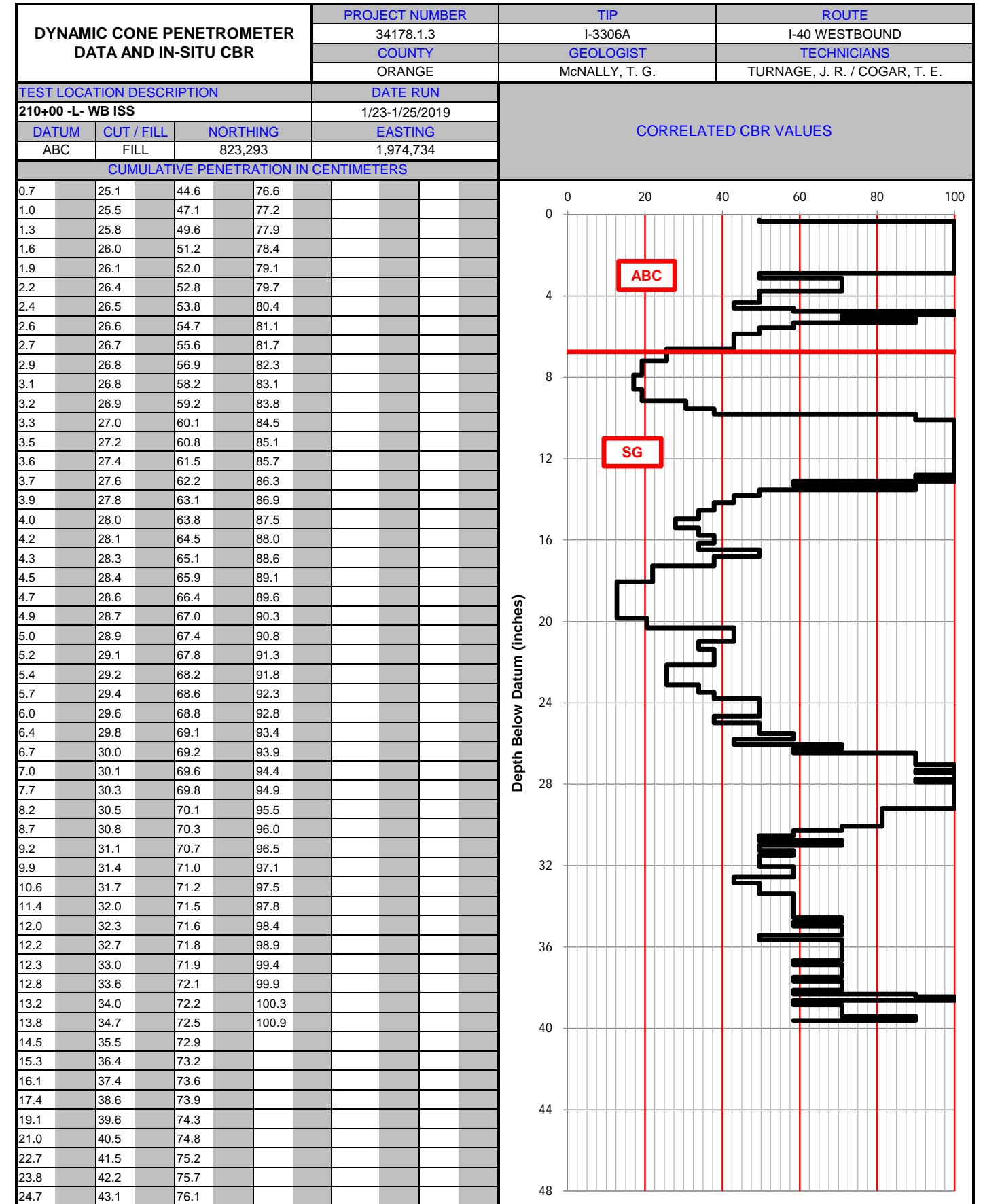
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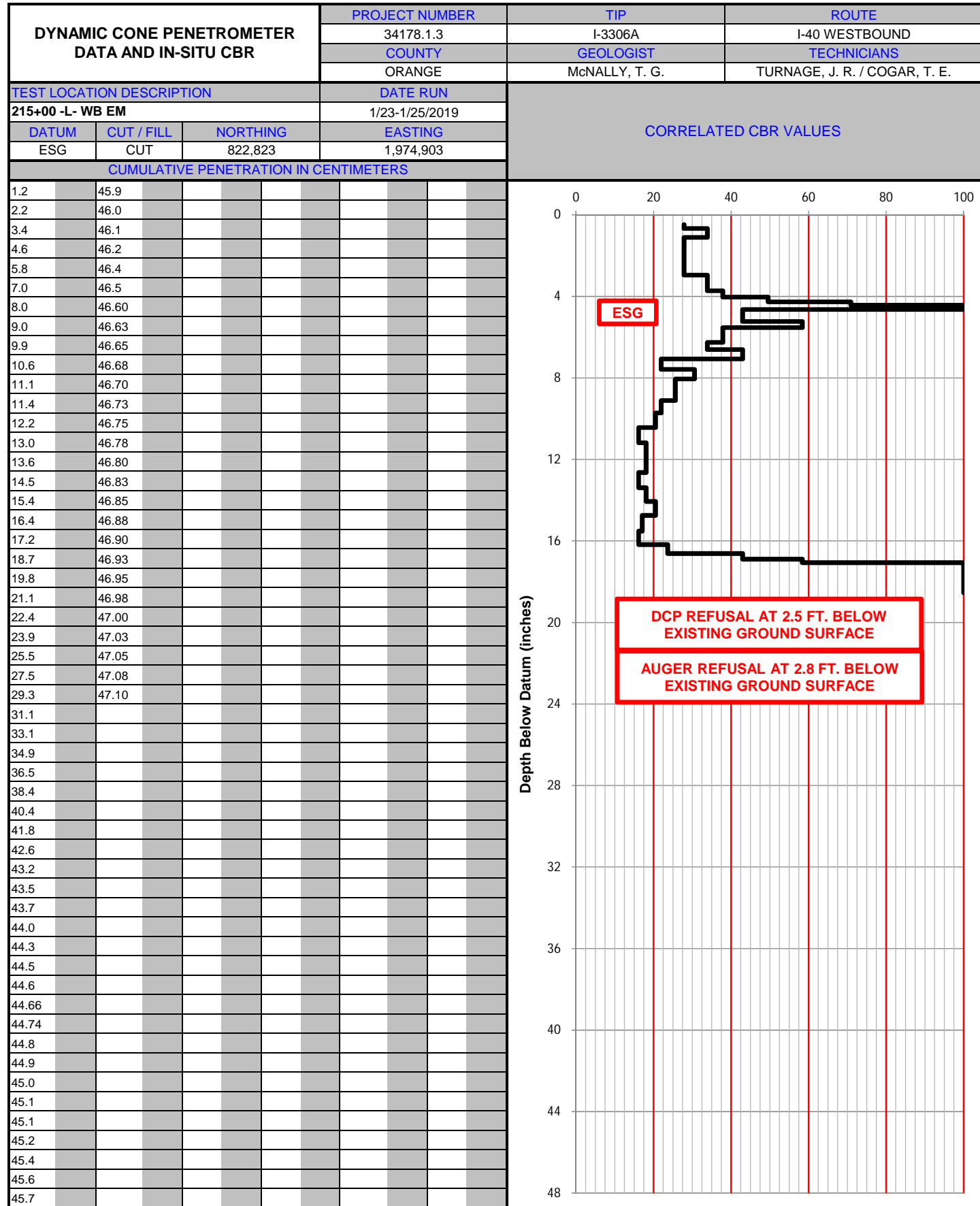


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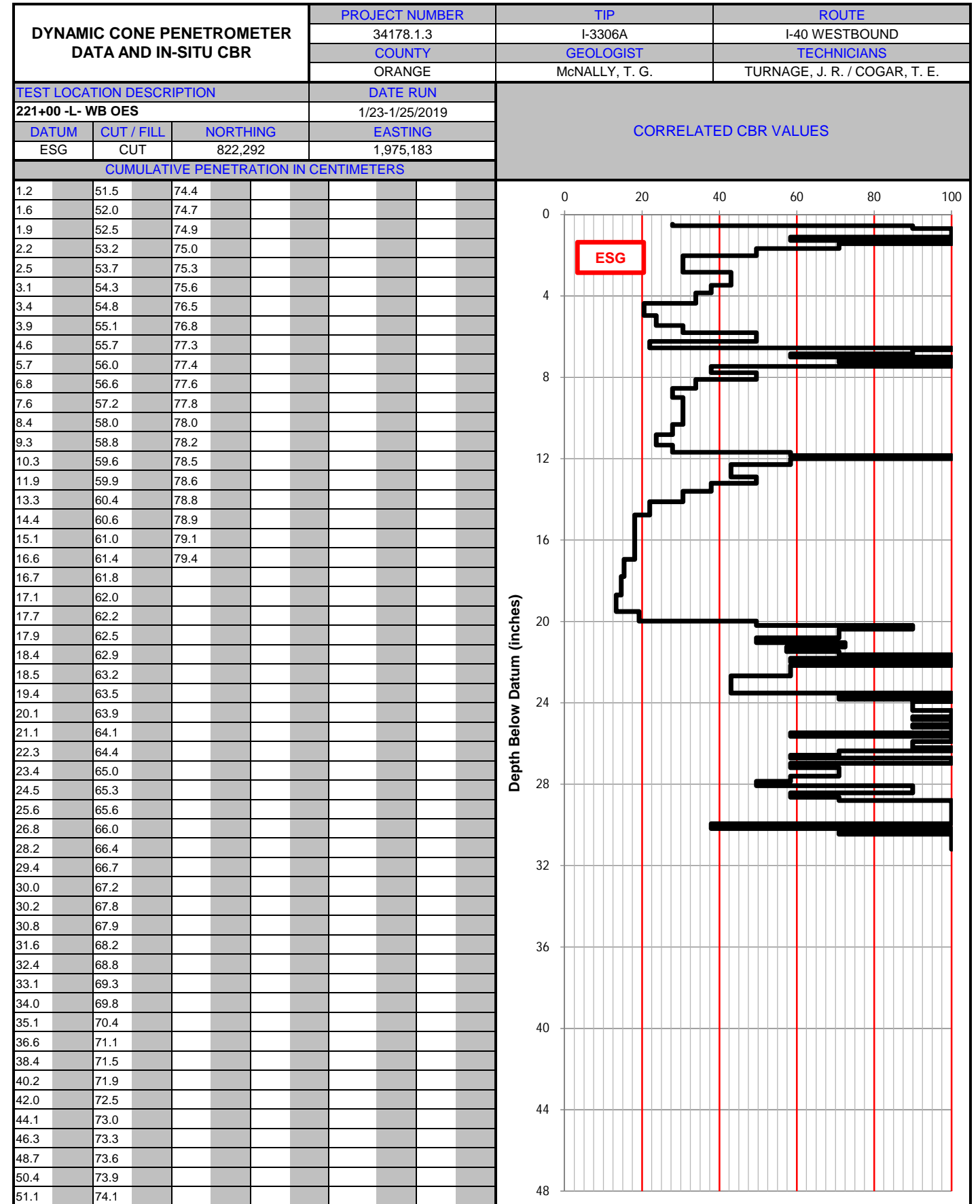


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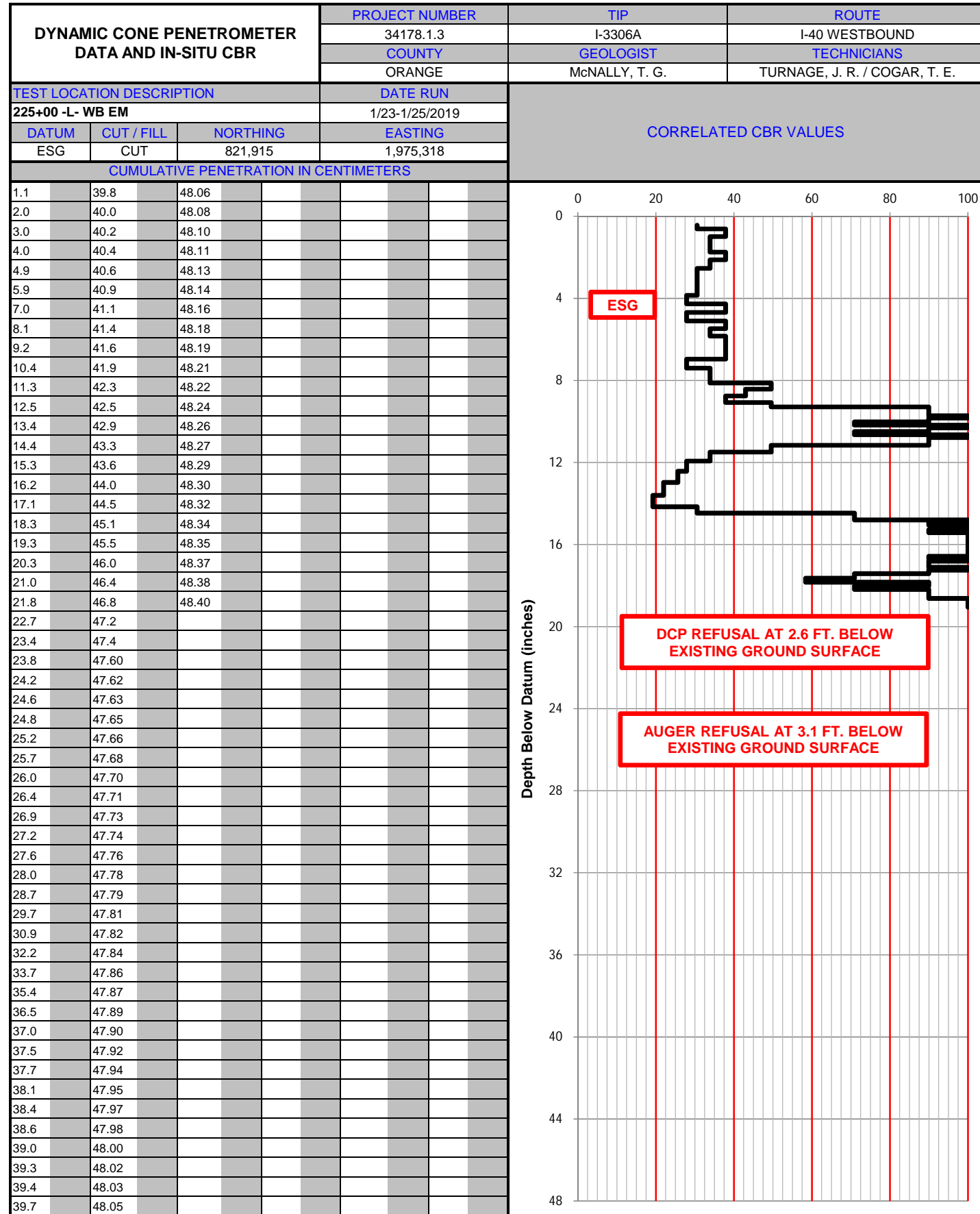


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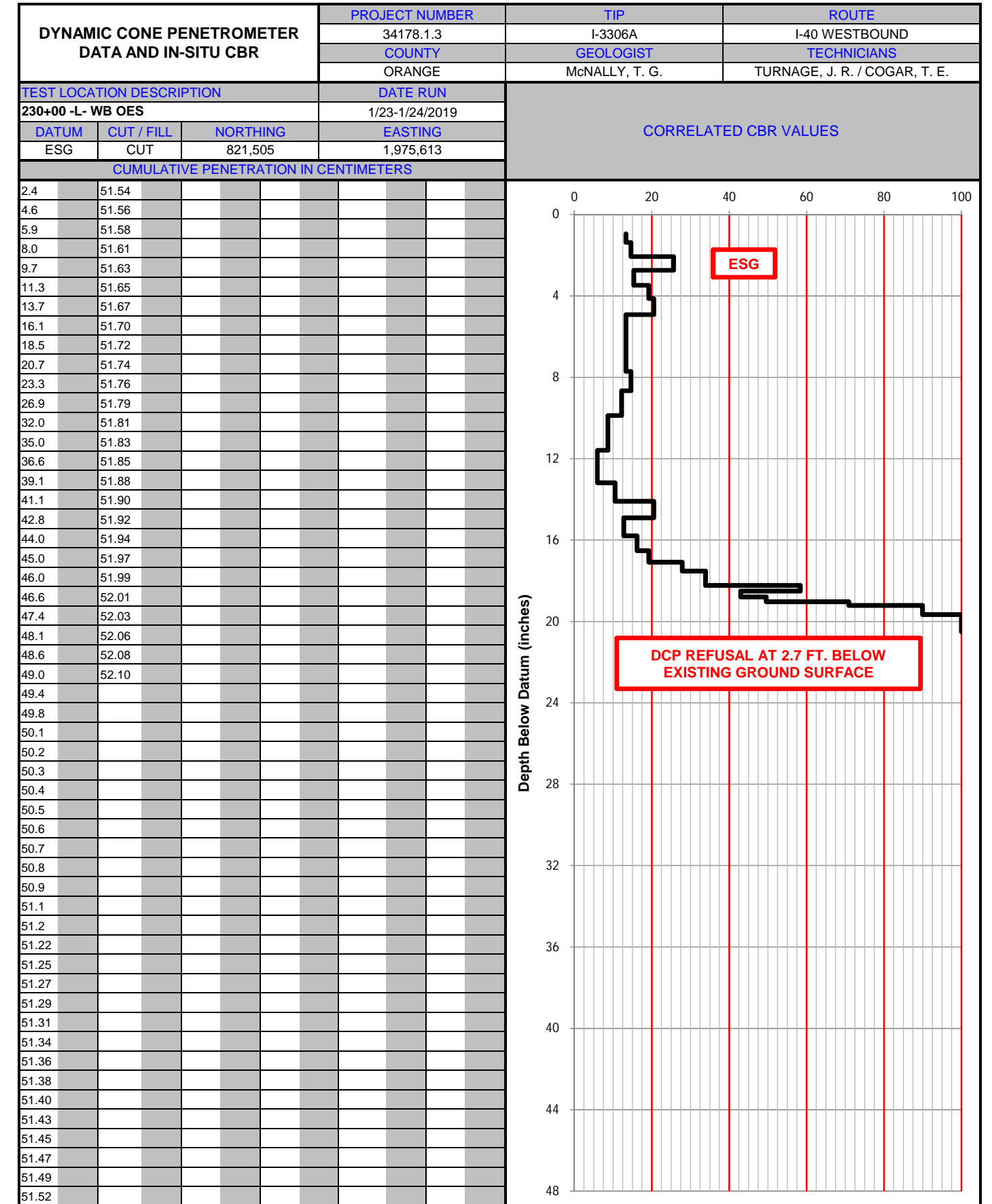


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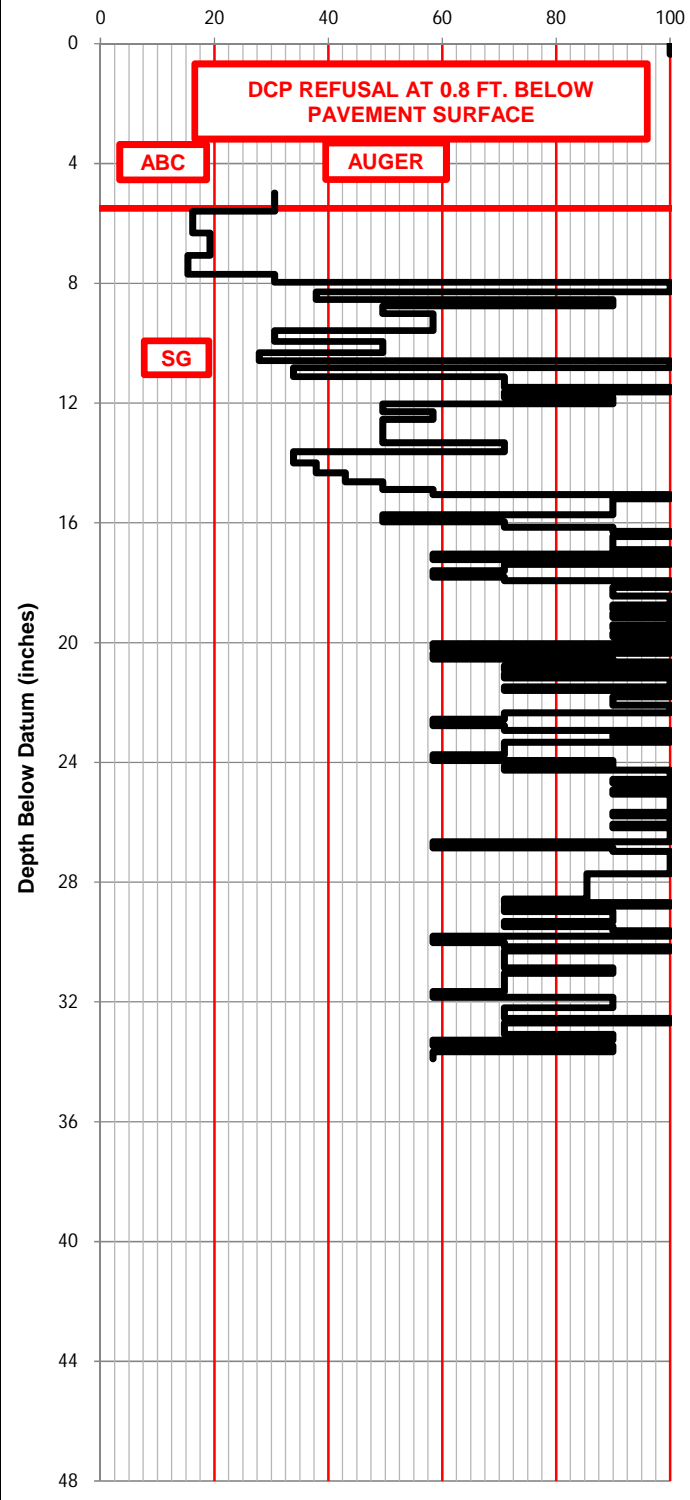
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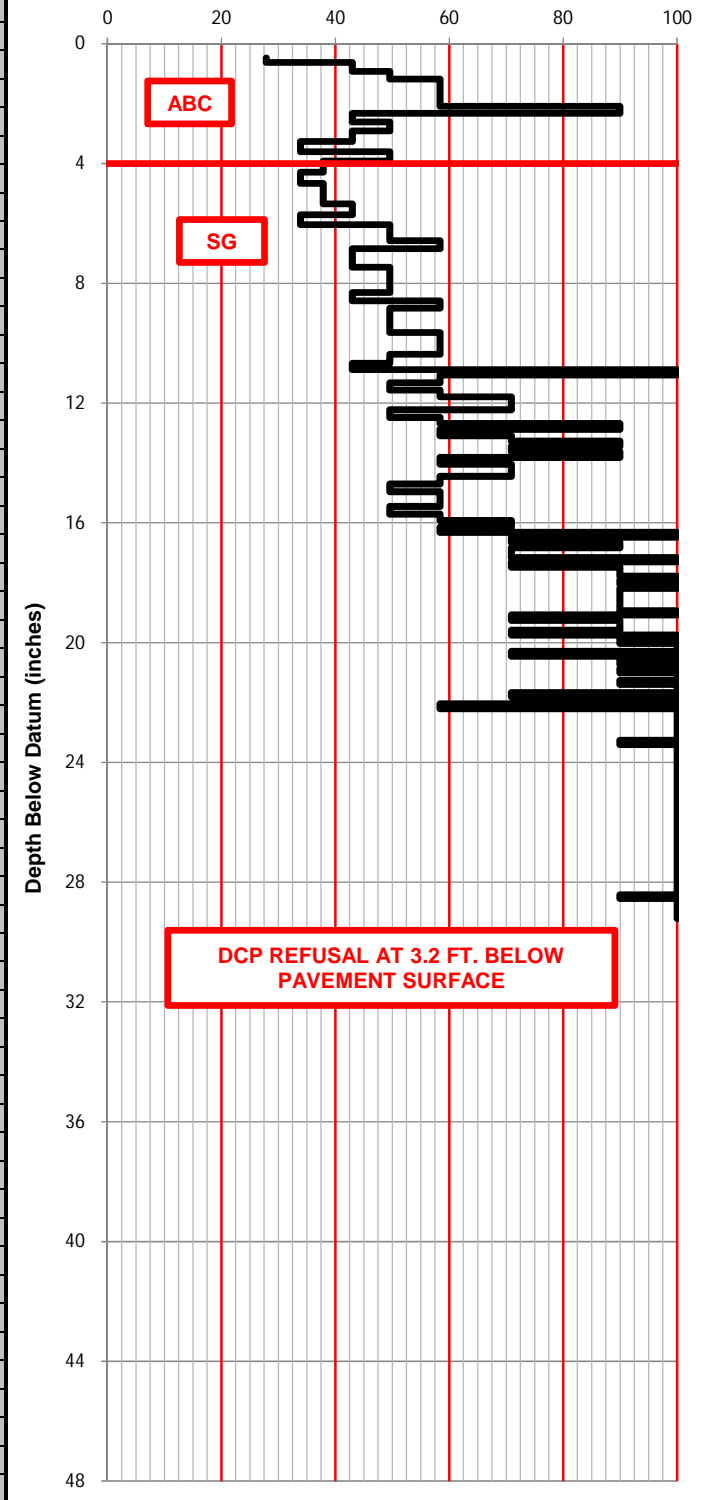
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
235+00 -L- WB OSS				1/23-1/24/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	821,046	1,975,814			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.02	1.3	35.1	52.7	72.5		
0.04	2.4	35.5	53.0	73.0		
0.06	4.4	35.9	53.3	73.4		
0.08	6.1	36.2	53.6	74.0		
0.10	8.2	36.3	53.9	74.4		
0.12	9.3	36.6	54.2	75.0		
0.14	9.6	37.0	54.6	75.6		
0.16	9.8	37.3	54.8			
0.18	10.7	37.7	55.0			
0.20	11.1	38.0	55.1			
0.22	11.8	38.3	55.2			
0.24	12.4	38.7	55.6			
0.26	13.0	38.8	55.8			
0.28	14.1	39.0	56.0			
0.30	14.8	39.4	56.3			
0.32	16.0	39.6	56.6			
0.34	16.2	39.8	57.2			
0.36	17.2	40.4	57.6			
0.38	17.7	40.6	57.8			
0.40	18.2	41.2	58.1			
0.42	18.5	41.6	58.4			
0.44	19.0	41.7	58.8			
0.46	19.4	42.2	59.1			
0.48	20.1	42.4	59.4			
0.50	20.7	42.9	59.8			
0.52	21.4	43.1	60.2			
0.53	22.1	43.2	60.7			
0.55	22.8	43.5	61.1			
0.56	23.3	44.0	61.5			
0.58	24.3	44.1	62.0			
0.60	25.2	44.4	62.1			
0.61	26.0	44.8	62.6			
0.63	26.7	45.2	63.0			
0.64	27.3	45.4	63.4			
0.66	27.6	45.7	63.9			
0.68	28.0	46.2	64.3			
0.69	28.4	46.8	64.6			
0.71	28.8	47.3	65.2			
0.72	29.5	47.6	65.7			
0.74	30.0	48.0	65.9			
0.76	30.4	48.1	66.4			
0.77	30.7	48.2	66.9			
0.79	30.8	48.7	67.4			
0.80	31.2	49.2	67.8			
0.82	31.6	49.8	68.3			
0.84	32.0	50.2	68.8			
0.85	32.2	50.7	69.3			
0.87	32.8	50.9	69.9			
0.88	33.1	51.2	70.3			
0.90	33.6	51.4	70.7			
AUGER	34.2	51.8	71.2			
9.9 cm /	34.7	52.0	71.7			
3.9 in	34.8	52.3	72.0			



Notes:  
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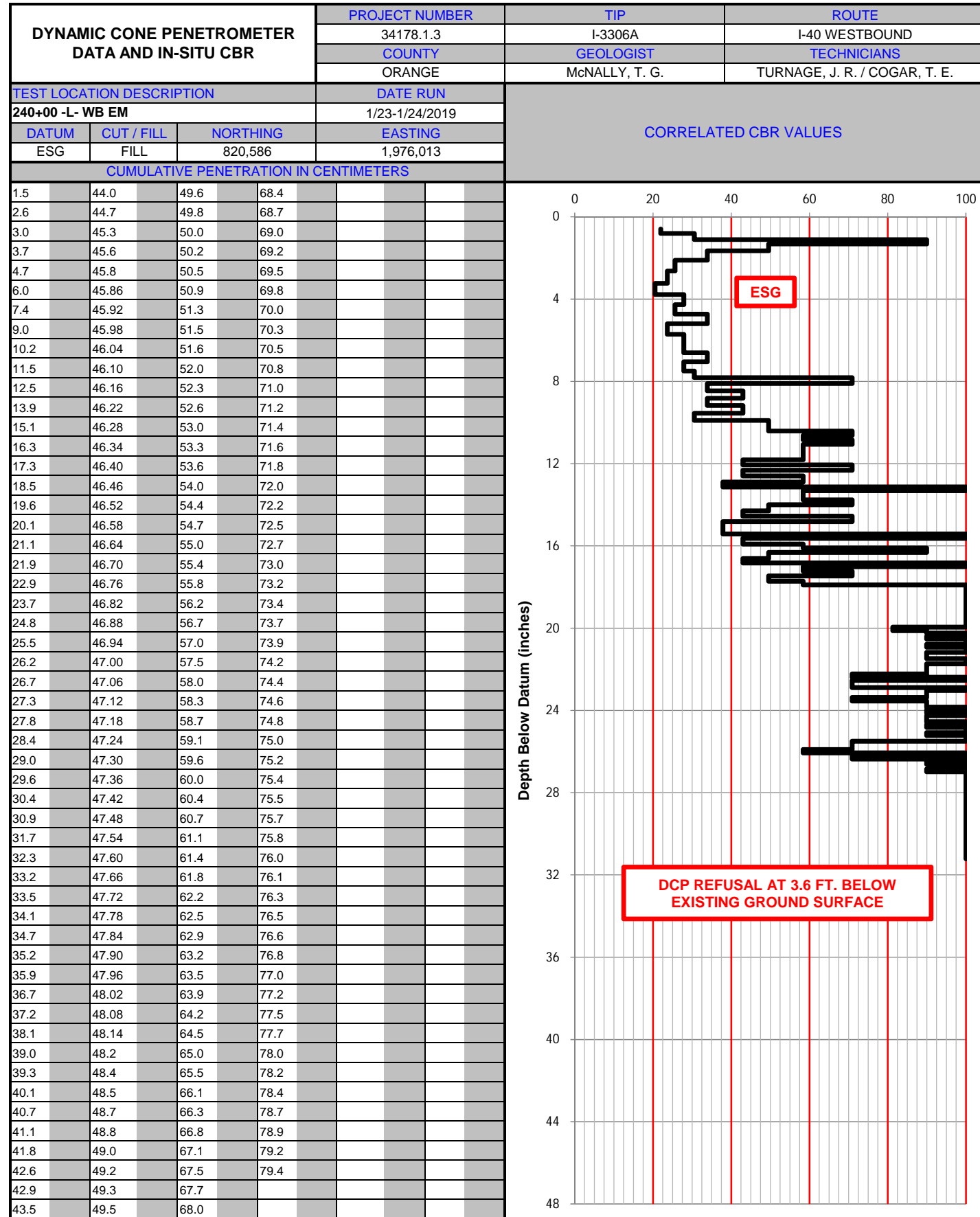


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
235+00 -L- WB ISS				1/23-1/24/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	821,030	1,975,784			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	36.4	57.6	69.7			
2.0	37.0	57.8	69.9			
2.7	37.7	58.1	70.1			
3.3	38.3	58.4	70.3			
3.9	38.9	58.7	70.5			
4.5	39.6	58.9	70.7			
5.1	40.2	59.3	70.9			
5.5	40.7	59.6	71.0			
6.3	41.3	59.8	71.2			
7.0	41.6	60.1	71.3			
7.8	42.1	60.4	71.5			
8.8	42.5	60.7	71.6			
9.5	43.0	61.0	71.8			
10.4	43.5	61.3	72.0			
11.4	43.7	61.6	72.4			
12.3	44.2	61.9	72.6			
13.2	44.6	62.1	72.8			
14.0	45.0	62.4	72.9			
15.0	45.3	62.7	73.1			
15.7	45.7	63.0	73.2			
16.4	46.0	63.2	73.4			
17.0	46.4	63.4	73.6			
17.8	46.8	63.6	73.8			
18.6	47.2	63.8	73.9			
19.3	47.6	64.0	74.1			
20.0	48.0	64.3	74.3			
20.7	48.2	64.4				
21.5	48.7	64.7				
22.1	49.1	64.9				
22.8	49.5	65.1				
23.5	50.0	65.3				
24.2	50.3	65.5				
24.8	50.7	65.7				
25.4	51.0	65.9				
26.0	51.3	66.1				
26.7	51.8	66.3				
27.5	52.1	66.5				
27.8	52.5	66.7				
28.4	52.8	66.9				
29.1	53.2	67.1				
29.7	53.5	67.3				
30.2	53.8	67.5				
30.7	54.2	67.7				
31.4	54.5	67.9				
32.0	54.8	68.1				
32.4	55.3	68.3				
33.0	55.5	68.5				
33.5	55.7	68.6				
33.9	56.3	68.8				
34.4	56.5	69.0				
34.8	56.8	69.2				
35.4	57.0	69.4				
35.9	57.3	69.5				

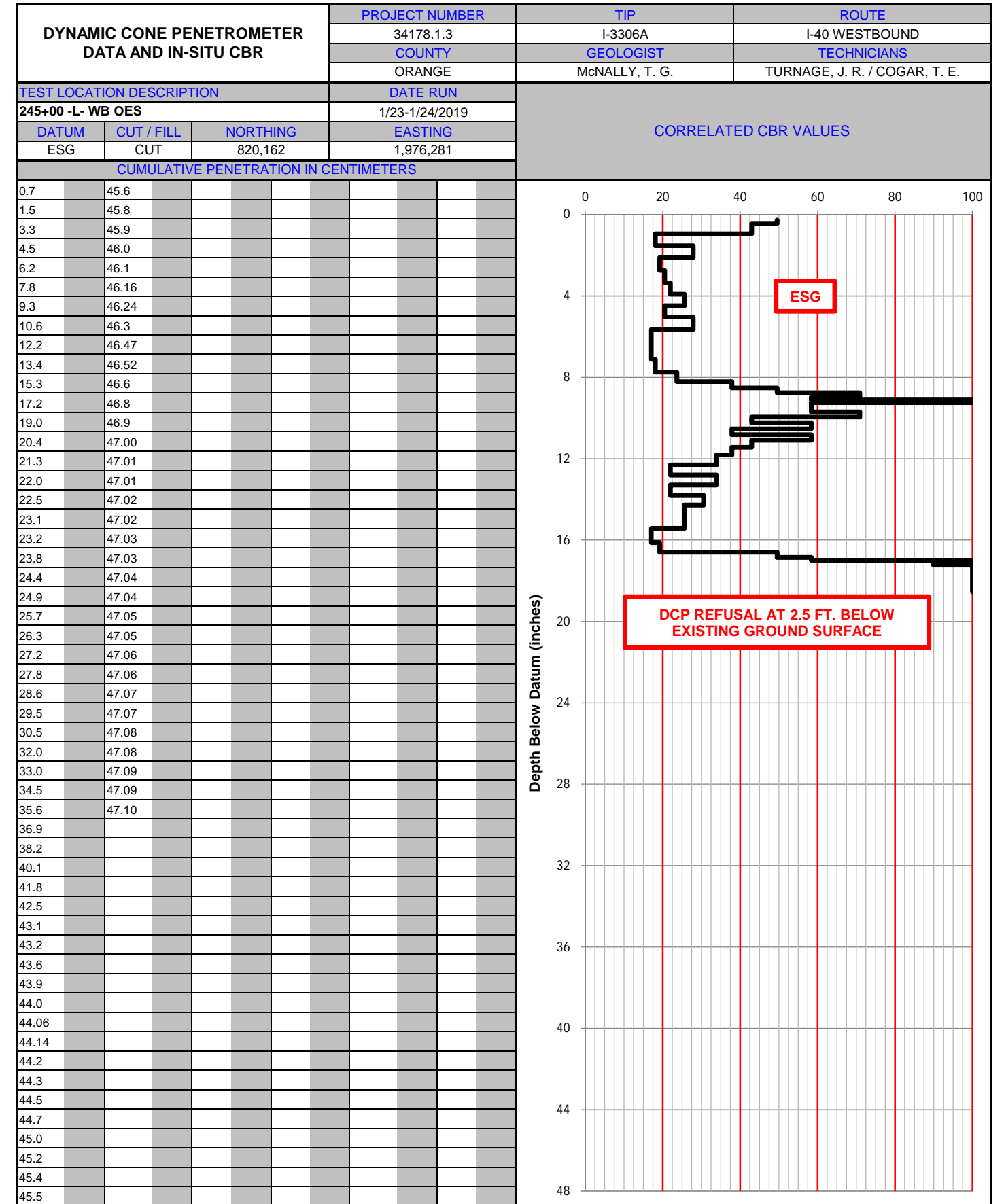


Notes:  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



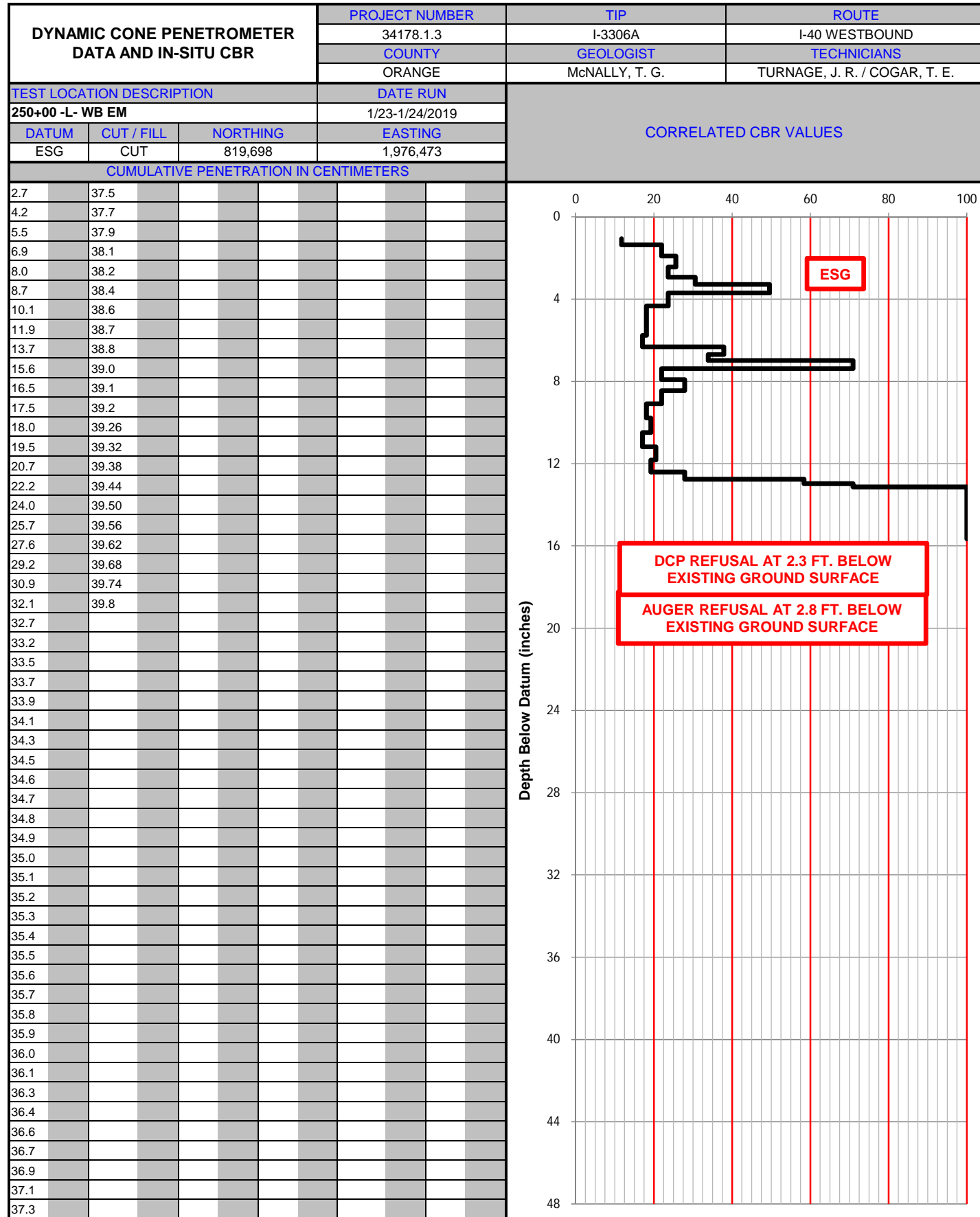


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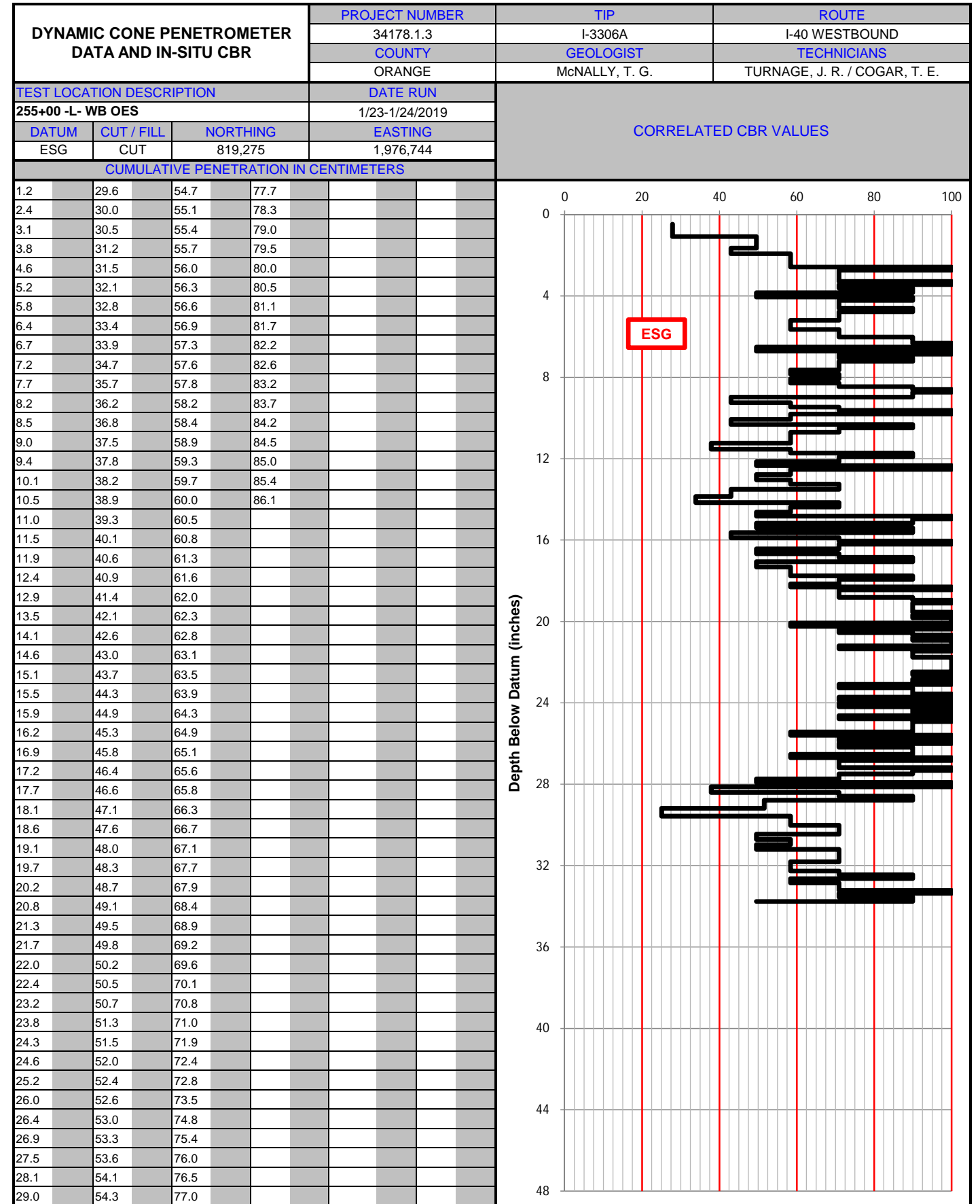


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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



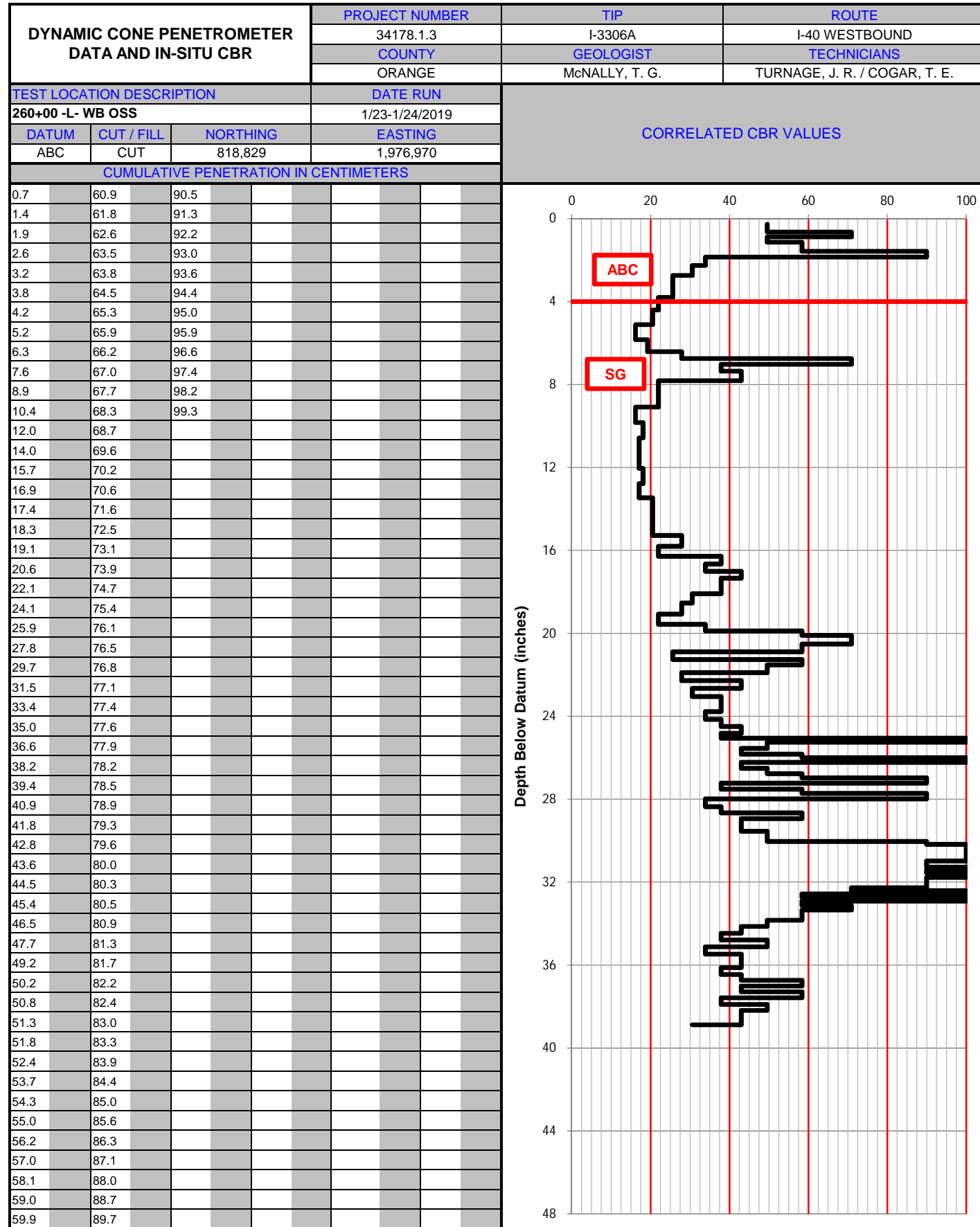


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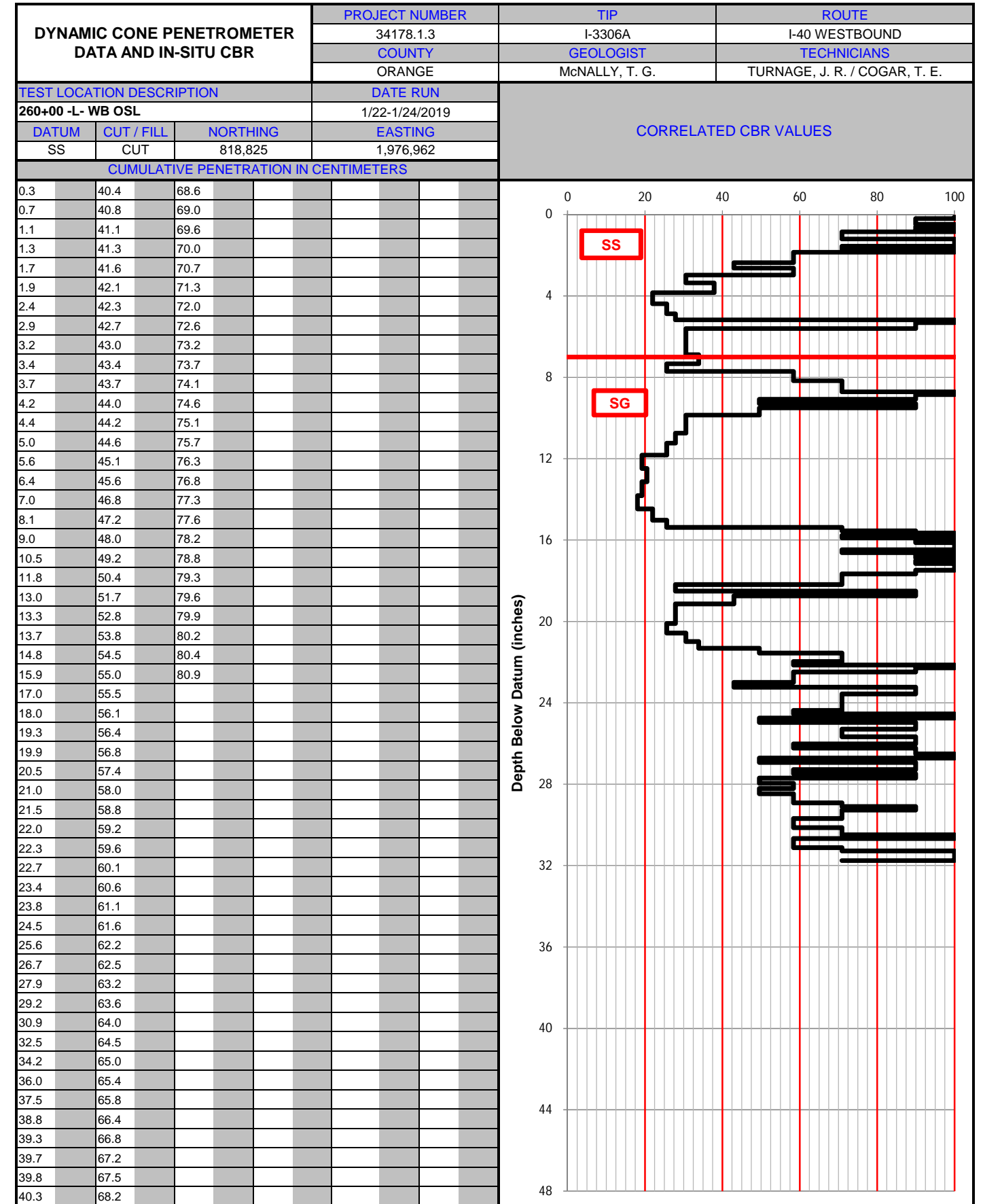


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 ABC = Aggregate Base Course  
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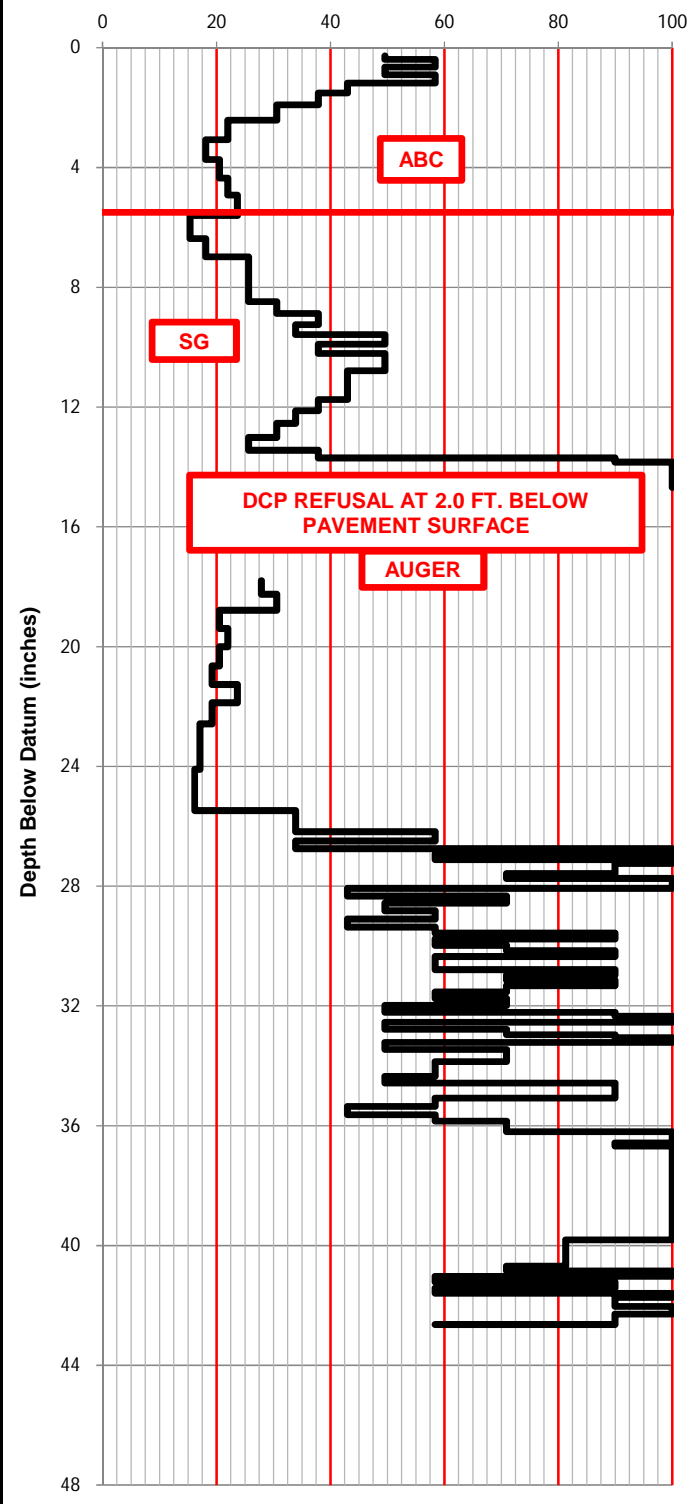
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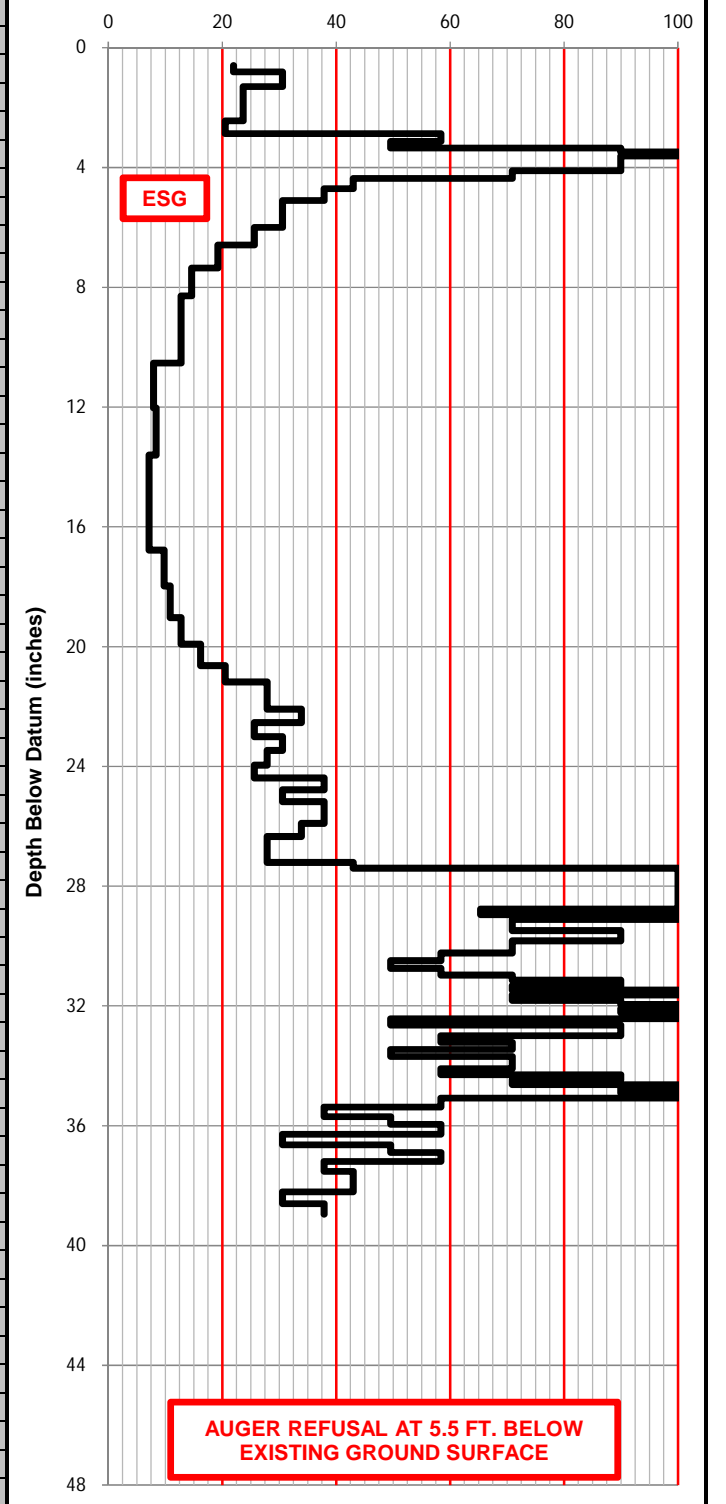
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
260+00 -L- WB ISS				1/22-1/24/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	818,814	1,976,940			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.7	37.03	26.7	51.1			
1.3	37.04	27.2	51.3			
2.0	37.05	27.5	51.5			
2.6	37.06	27.8	51.7			
3.4	37.07	28.6	51.9			
4.3	37.08	29.1	52.1			
5.4	37.09	29.8	52.4			
6.9	37.10	30.4	52.6			
8.7	37.11	31.2	52.9			
10.3	37.12	31.8	53.1			
11.8	37.13	32.2	53.3			
13.2	37.14	32.8	53.6			
15.3	37.15	33.3	53.8			
17.1	37.16	33.7	54.1			
18.4	37.17	34.3	54.3			
19.7	37.18	34.9	54.6			
21.0	37.19	35.3	55.0			
22.1	37.20	35.8	55.3			
23.0	37.21	36.2	55.7			
24.0	37.22	36.7	56.0			
24.7	37.23	37.3	56.4			
25.6	37.24	37.8	56.7			
26.3	37.25	38.5	57.1			
27.0	37.26	38.9	57.4			
27.8	37.27	39.2	57.8			
28.6	37.28	39.9	58.2			
29.4	37.29	40.4	58.7			
30.3	37.30	40.8	59.1			
31.3		40.9	59.6			
32.4	AUGER	41.6	60.0			
33.7	5.8 cm /	42.1	60.5			
34.6	2.3 in	42.6	60.8			
35.0	1.5	43.2	61.4			
35.3	2.7	43.8	61.8			
35.4	3.8	44.5	62.4			
35.7	5.4	44.9	62.7			
35.8	6.9	45.3	63.1			
35.9	8.5	45.7	63.5			
35.9	10.2	46.3	63.8			
36.0	11.6	47.1	64.1			
36.1	13.3	47.7	64.5			
36.2	15.2	48.2	64.9			
36.3	17.1	48.7	65.5			
36.4	19.1	49.0				
36.5	21.1	49.2				
36.6	22.1	49.4				
36.7	23.1	49.6				
36.76	23.7	50.0				
36.84	24.7	50.1				
36.92	25.0	50.3				
37.00	25.6	50.4				
37.01	25.9	50.7				
37.02	26.3	50.9				



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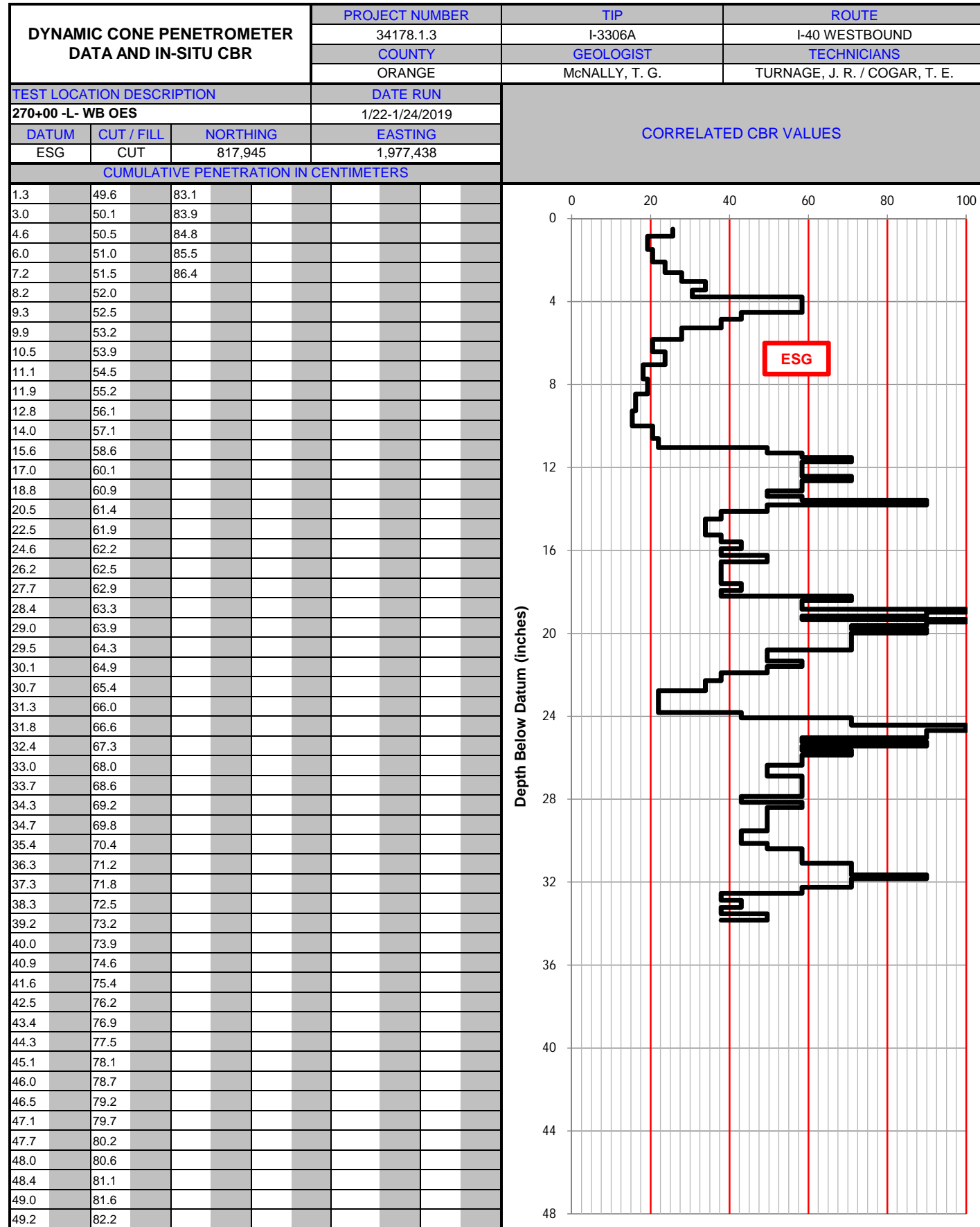
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
265+00 -L- WB EM				1/22-1/24/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	818,368	1,977,167			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.5	70.26	92.7				
2.6	70.34	93.4				
4.0	70.4	94.0				
5.4	70.5	94.9				
7.0	70.7	95.7				
7.6	70.9	96.5				
8.3	71.1	97.6				
8.7	71.3	98.5				
9.0	71.5	99.4				
9.4	71.7					
9.8	71.9					
10.2	72.1					
10.7	72.3					
11.5	72.5					
12.4	72.8					
13.5	73.3					
14.6	73.7					
15.9	74.2					
17.6	74.7					
19.8	75.1					
22.3	75.5					
24.8	76.0					
28.7	76.5					
32.4	77.1					
36.7	77.8					
41.0	78.4					
44.2	78.9					
47.1	79.3					
49.6	79.8					
51.6	80.1					
53.2	80.6					
54.4	81.0					
55.6	81.3					
56.6	81.7					
57.9	82.0					
59.0	82.7					
60.2	83.1					
61.5	83.5					
62.4	84.1					
63.5	84.6					
64.4	85.3					
65.3	85.8					
66.3	86.3					
67.5	86.9					
68.7	87.3					
69.5	87.8					
69.7	88.1					
69.8	88.5					
69.86	88.8					
69.94	89.4					
70.0	90.3					
70.1	91.0					
70.2	91.6					



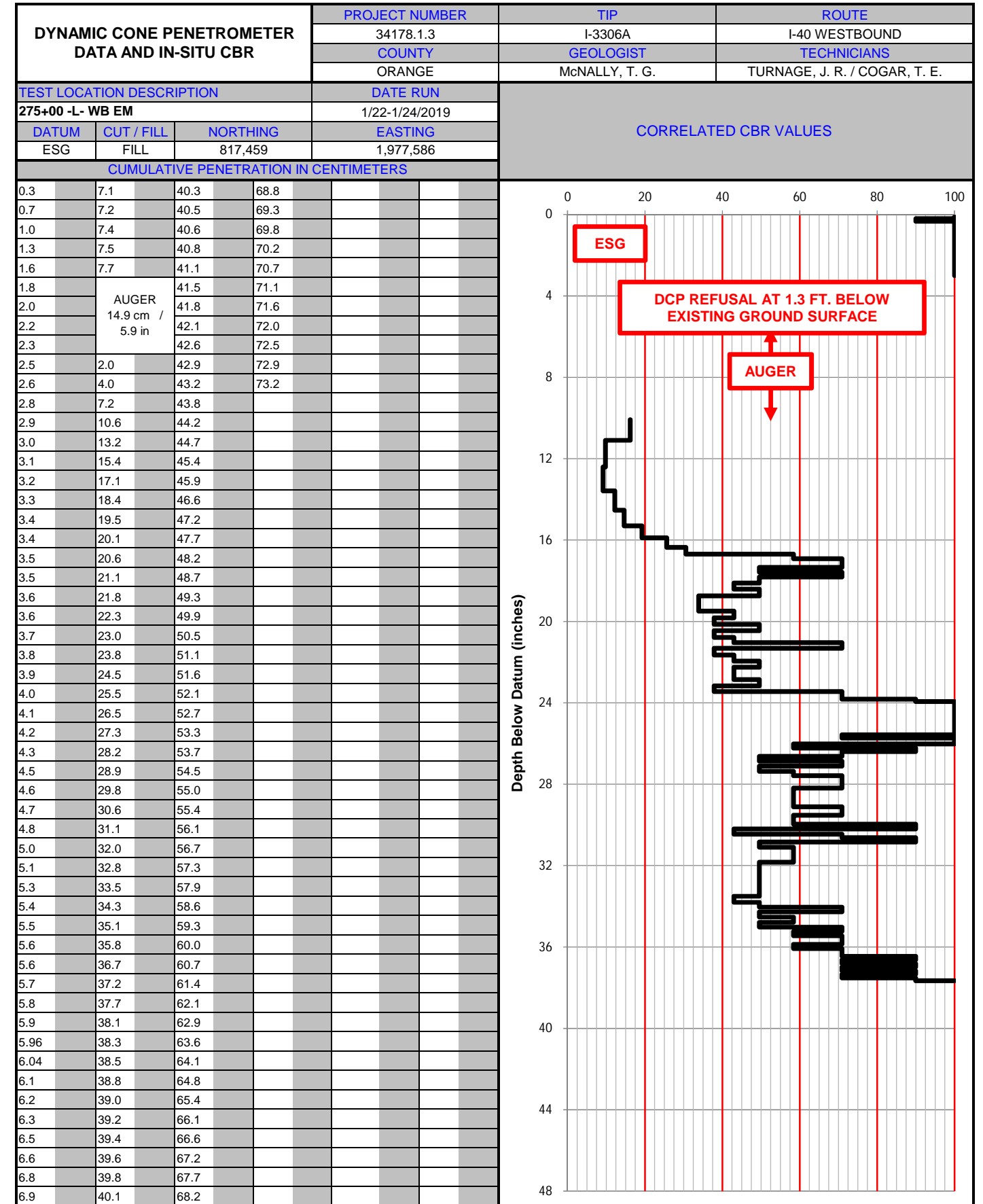
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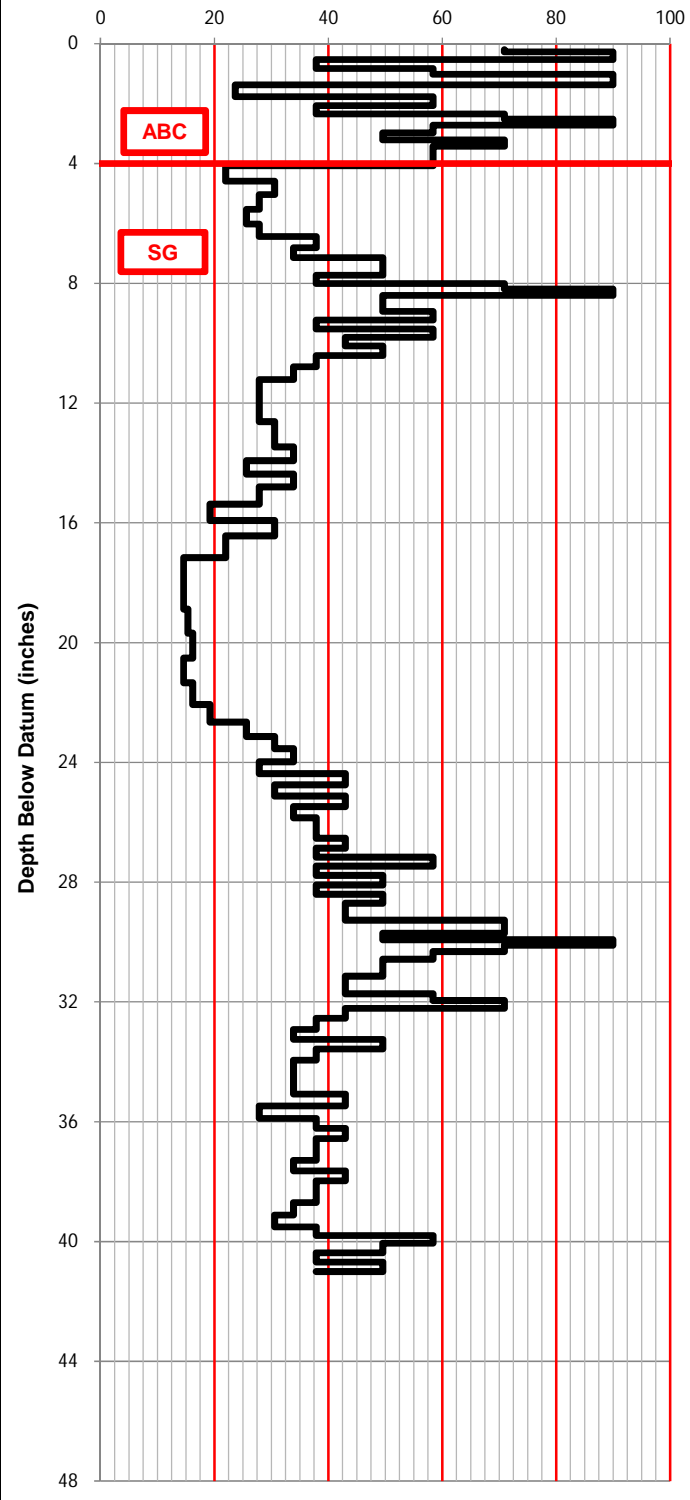
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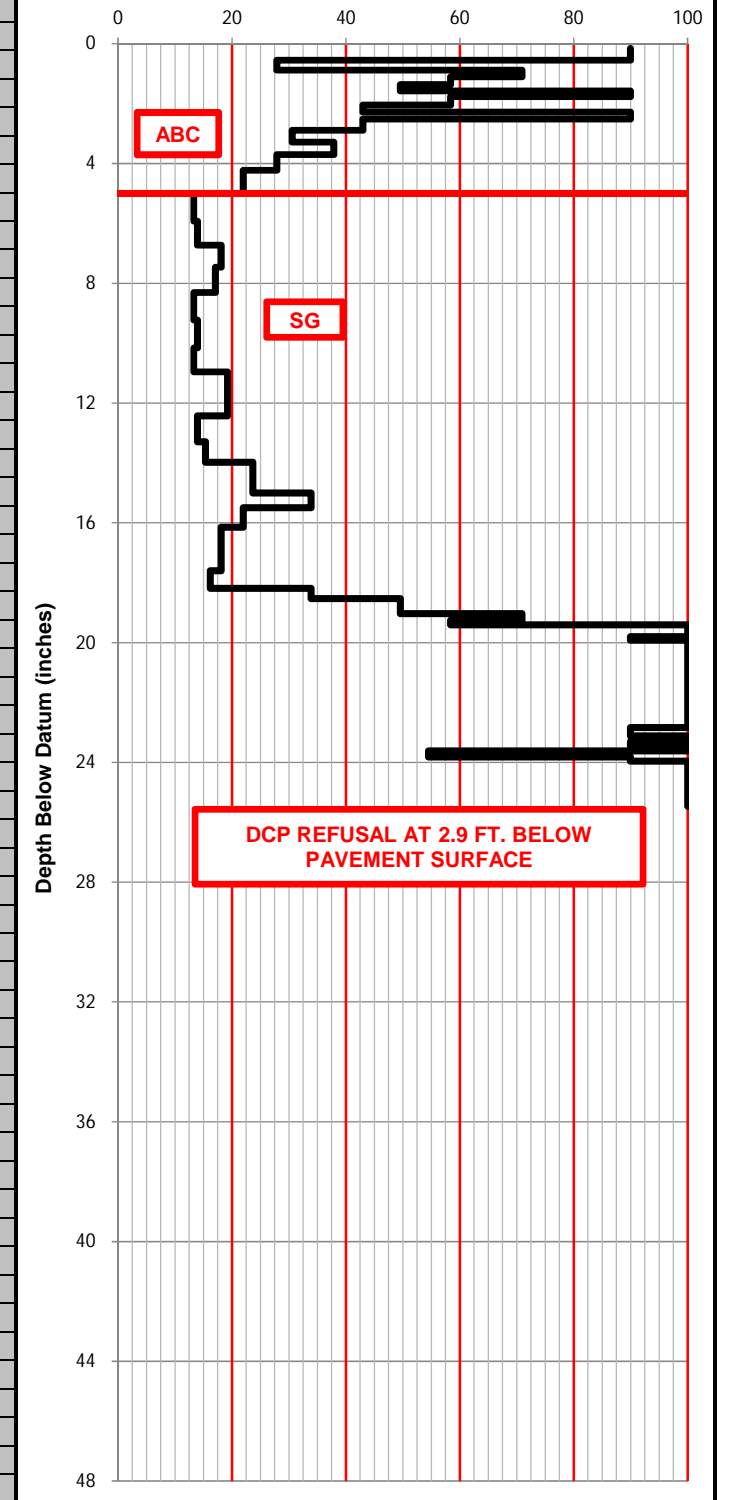
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
				1/22-1/24/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	FILL	816,973	1,977,728			
CUMULATIVE PENETRATION IN CENTIMETERS				CORRELATED CBR VALUES		
0.5	55.2	100.8				
0.9	56.9	101.4				
1.8	58.2	102.1		CORRELATED CBR VALUES		
2.4	59.3	103.0				
2.8	60.3	103.7		CORRELATED CBR VALUES		
4.2	61.5	104.6				
4.8	62.3			CORRELATED CBR VALUES		
5.7	63.4					
6.2	64.2			CORRELATED CBR VALUES		
6.6	65.2					
7.2	66.1			CORRELATED CBR VALUES		
7.9	67.0					
8.4	67.8			CORRELATED CBR VALUES		
9.0	68.7					
9.6	69.3			CORRELATED CBR VALUES		
11.1	70.2					
12.2	70.9			CORRELATED CBR VALUES		
13.4	71.8					
14.7	72.5			CORRELATED CBR VALUES		
15.9	73.3					
16.8	74.1			CORRELATED CBR VALUES		
17.8	74.6					
18.5	75.1			CORRELATED CBR VALUES		
19.2	75.8					
20.1	76.2			CORRELATED CBR VALUES		
20.6	76.7					
21.0	77.3			CORRELATED CBR VALUES		
21.7	78.0					
22.4	78.7			CORRELATED CBR VALUES		
23.0	79.5					
23.9	80.3			CORRELATED CBR VALUES		
24.5	80.9					
25.3	81.4			CORRELATED CBR VALUES		
26.0	82.2					
26.9	83.1			CORRELATED CBR VALUES		
27.9	84.1					
29.1	84.8			CORRELATED CBR VALUES		
30.3	85.7					
31.5	86.7			CORRELATED CBR VALUES		
32.6	87.7					
33.7	88.7			CORRELATED CBR VALUES		
34.7	89.5					
36.0	90.7			CORRELATED CBR VALUES		
37.0	91.6					
38.2	92.4			CORRELATED CBR VALUES		
39.9	93.3					
41.0	94.2			CORRELATED CBR VALUES		
42.5	95.2					
44.7	96.0			CORRELATED CBR VALUES		
46.9	96.9					
49.0	97.8			CORRELATED CBR VALUES		
51.0	98.8					
53.2	99.9			CORRELATED CBR VALUES		



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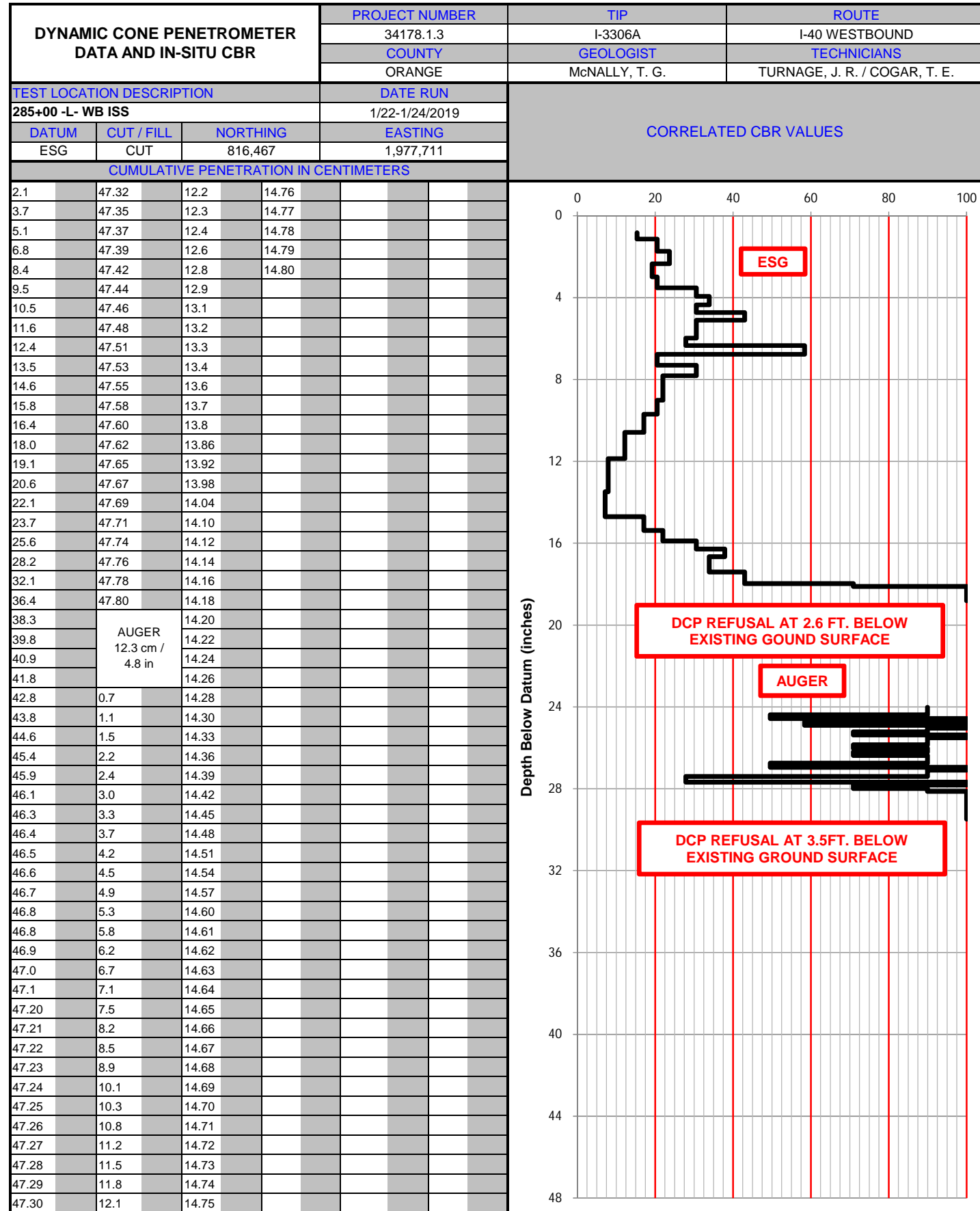


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
				1/22-1/24/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	816,465	1,977,746			
CUMULATIVE PENETRATION IN CENTIMETERS				CORRELATED CBR VALUES		
0.4	52.8	63.83				
0.8	53.0	63.85				
2.0	53.2	63.88		CORRELATED CBR VALUES		
2.5	53.4	63.90				
3.1	53.5	63.93		CORRELATED CBR VALUES		
3.8	53.7	63.95				
4.2	53.8	63.98		CORRELATED CBR VALUES		
4.8	54.0	64.00				
5.6	54.2	64.03		CORRELATED CBR VALUES		
6.0	54.4	64.05				
6.8	54.6	64.08		CORRELATED CBR VALUES		
7.9	54.8	64.10				
8.8	55.0	64.13		CORRELATED CBR VALUES		
10.0	55.2	64.15				
11.5	55.5	64.18		CORRELATED CBR VALUES		
13.9	55.7	64.20				
16.2	56.0	64.22		CORRELATED CBR VALUES		
18.0	56.2	64.24				
19.9	56.5	64.26		CORRELATED CBR VALUES		
22.3	56.8	64.28				
24.6	57.2	64.30		CORRELATED CBR VALUES		
27.0	57.5	64.32				
28.7	57.8	64.34		CORRELATED CBR VALUES		
30.4	58.2	64.36				
32.7	58.6	64.38		CORRELATED CBR VALUES		
34.8	58.8	64.40				
36.2	59.0	64.42		CORRELATED CBR VALUES		
37.6	59.4	64.44				
38.6	59.7	64.46		CORRELATED CBR VALUES		
40.1	60.3	64.48				
41.9	60.7	64.50		CORRELATED CBR VALUES		
43.7	61.0	64.52				
45.7	61.2	64.54		CORRELATED CBR VALUES		
46.7	61.5	64.56				
47.4	61.8	64.58		CORRELATED CBR VALUES		
48.1	62.0	64.60				
48.6	62.3	64.62		CORRELATED CBR VALUES		
49.2	62.5	64.64				
49.4	62.8	64.66		CORRELATED CBR VALUES		
49.7	62.9	64.68				
49.8	62.96	64.70		CORRELATED CBR VALUES		
50.1	63.04					
50.5	63.1			CORRELATED CBR VALUES		
50.7	63.2					
50.9	63.3			CORRELATED CBR VALUES		
51.1	63.4					
51.3	63.5			CORRELATED CBR VALUES		
51.5	63.6					
51.8	63.70			CORRELATED CBR VALUES		
52.0	63.73					
52.2	63.75			CORRELATED CBR VALUES		
52.4	63.78					
52.6	63.80			CORRELATED CBR VALUES		

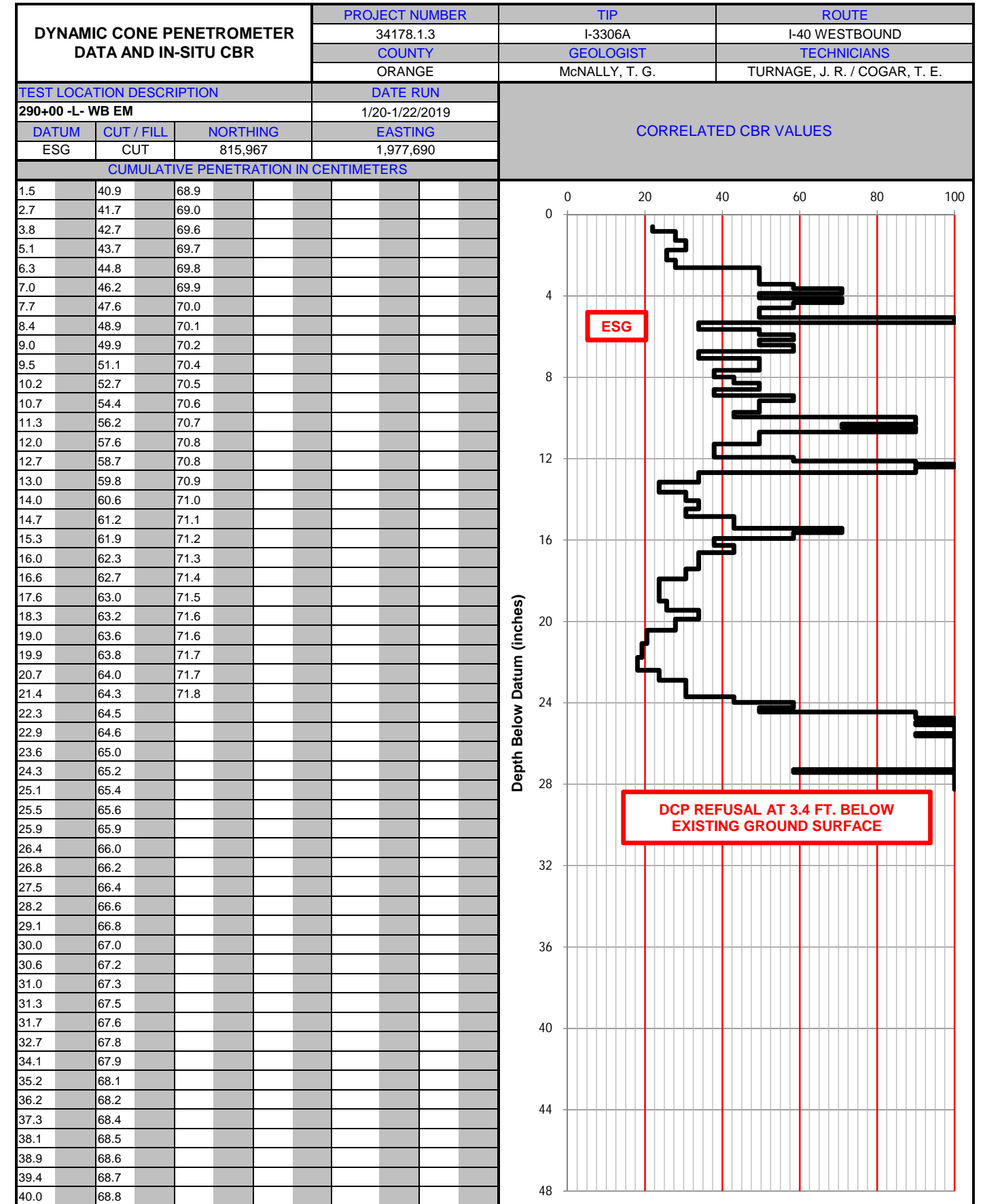


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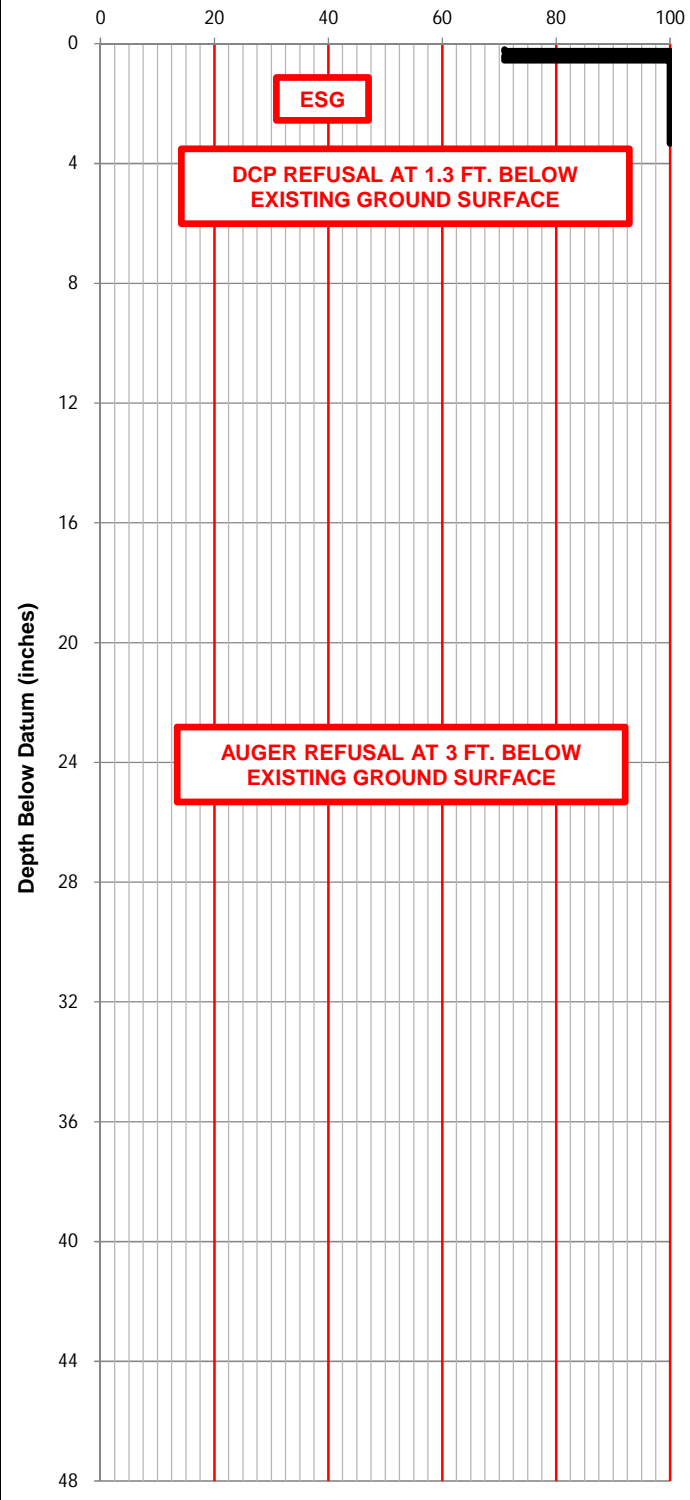
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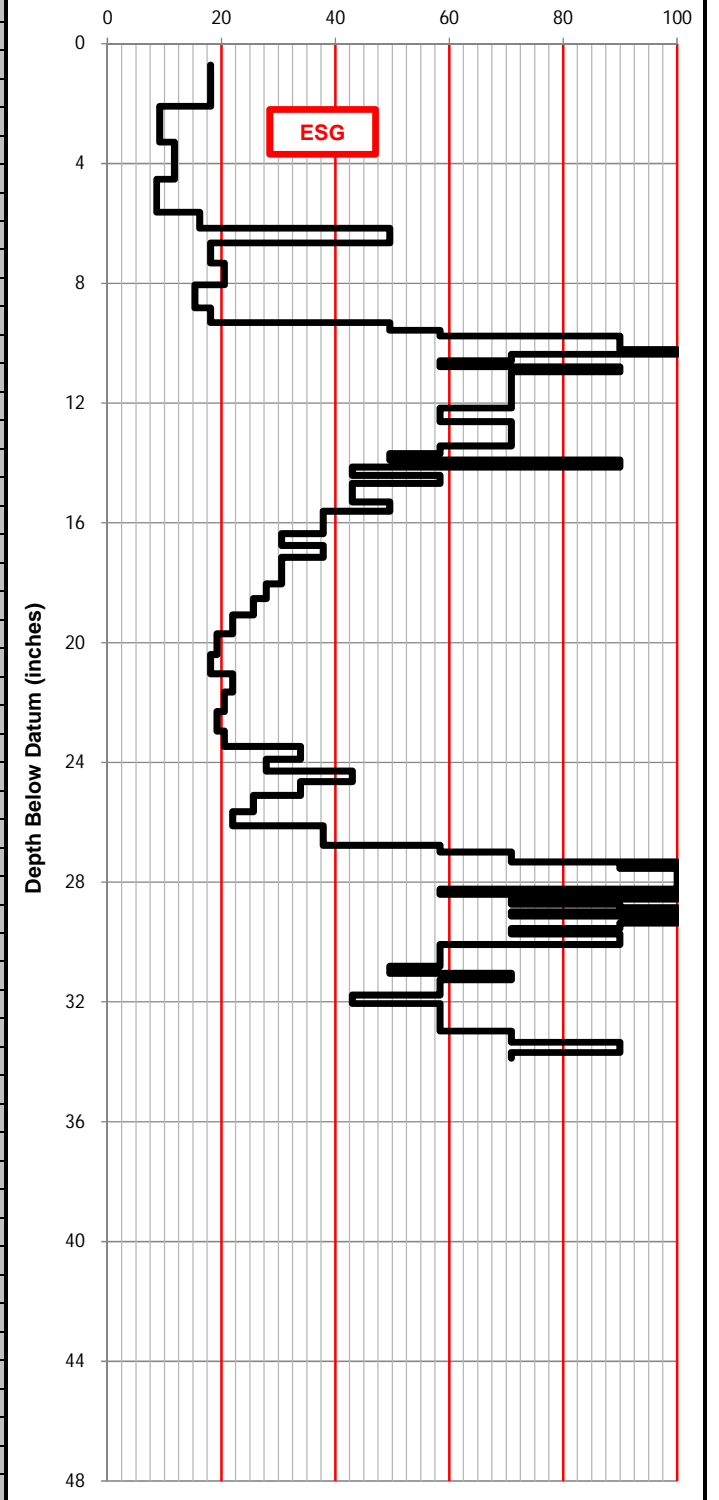
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
295+00 -L- WB OES				1/20-1/22/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	815,466	1,977,711	CUMULATIVE PENETRATION IN CENTIMETERS		
0.5						
0.8						
1.3						
1.5						
1.8						
1.9						
2.2						
2.4						
2.6						
2.9						
3.0						
3.2						
3.4						
3.5						
3.8						
3.9						
4.0						
4.1						
4.3						
4.4						
4.5						
4.6						
4.7						
4.9						
5.0						
5.2						
5.3						
5.4						
5.7						
5.9						
6.0						
6.2						
6.3						
6.4						
6.6						
6.7						
6.8						
6.9						
7.1						
7.2						
7.4						
7.5						
7.6						
7.7						
7.8						
7.9						
8.0						
8.1						
8.2						
8.3						
8.4						
8.5						



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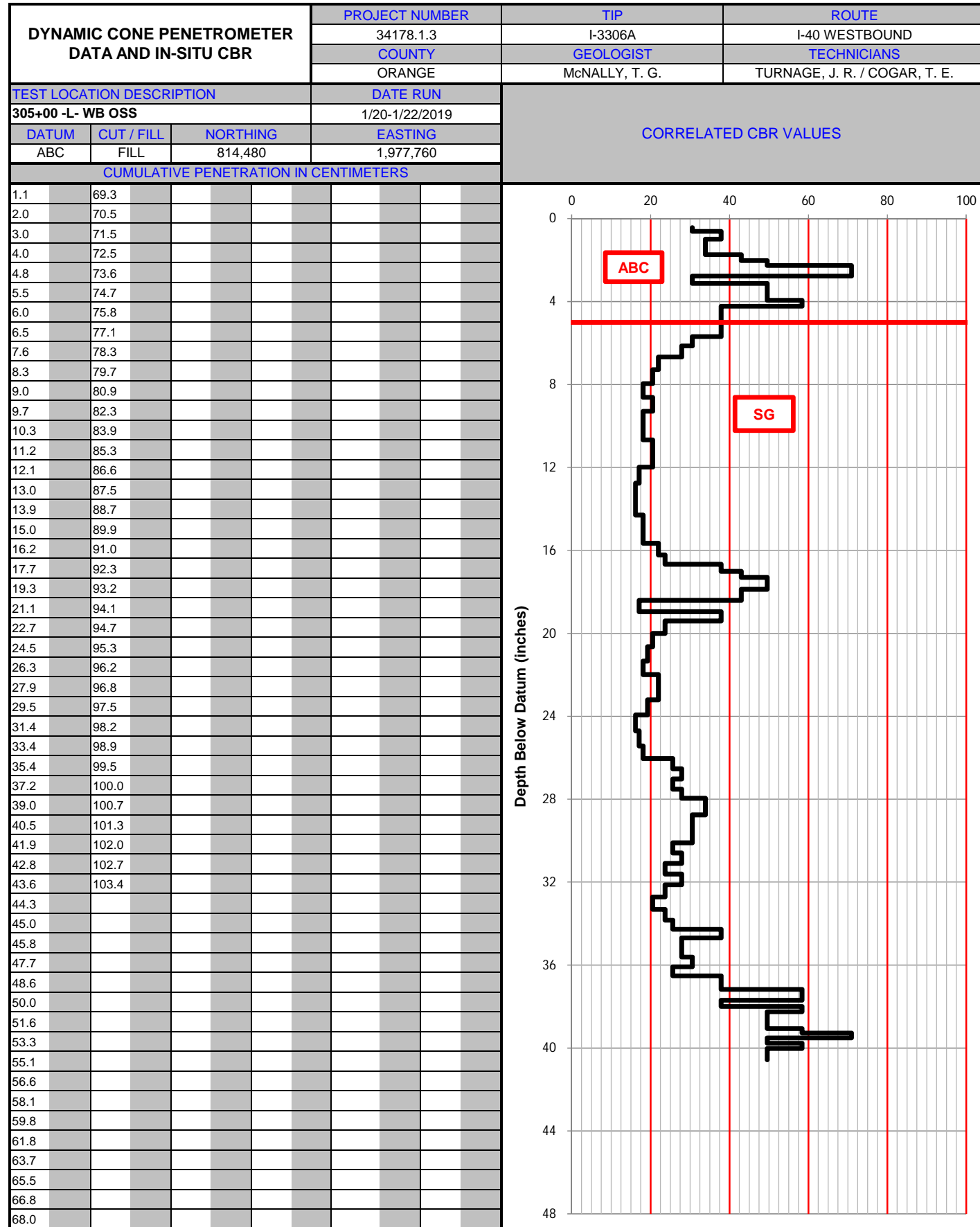


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
300+00 -L- WB EM				1/20-1/22/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	814,969	1,977,669	CUMULATIVE PENETRATION IN CENTIMETERS		
1.8	57.5					
3.6	59.1					
7.0	60.1					
9.7	61.3					
13.3	62.1					
15.3	63.1					
16.0	64.4					
17.8	65.9					
19.4	66.8					
21.5	67.7					
23.3	68.3					
24.0	68.8					
24.6	69.3					
25.0	69.5					
25.4	69.9					
25.8	70.0					
26.1	70.3					
26.6	70.6					
27.2	70.9					
27.6	71.2					
28.1	71.4					
28.6	72.0					
29.1	72.3					
29.6	72.8					
30.1	73.2					
30.6	73.4					
31.2	73.9					
31.8	74.1					
32.3	74.4					
32.8	74.8					
33.3	75.3					
33.8	75.7					
34.4	76.1					
35.1	76.7					
35.5	77.3					
36.3	77.9					
36.9	78.6					
37.7	79.1					
38.5	79.7					
39.2	80.3					
40.1	81.1					
41.0	81.7					
42.1	82.3					
43.0	82.9					
44.1	83.5					
45.2	84.0					
46.4	84.5					
47.7	84.9					
49.2	85.3					
50.9	85.8					
52.7	86.3					
54.2						
55.8						

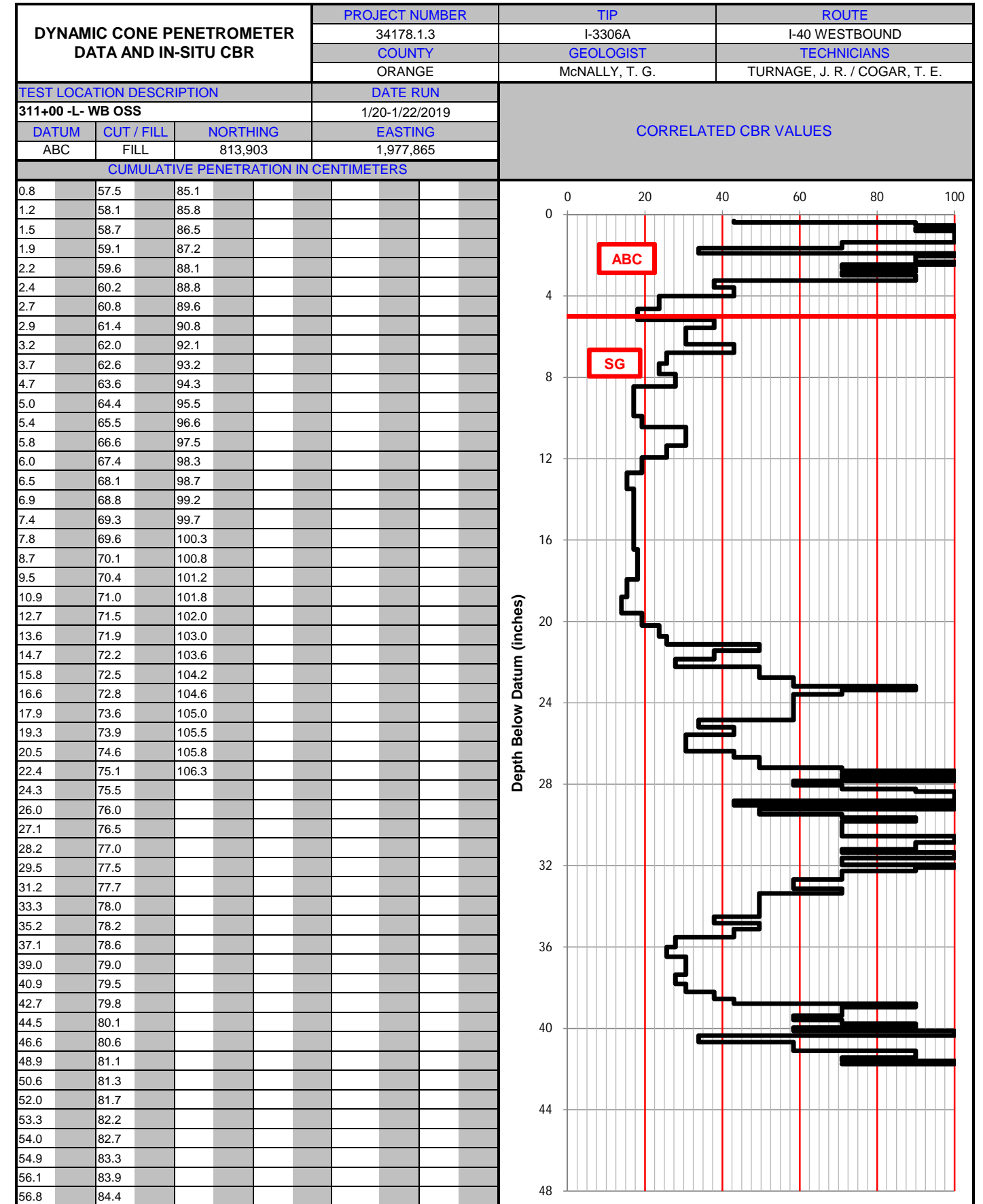


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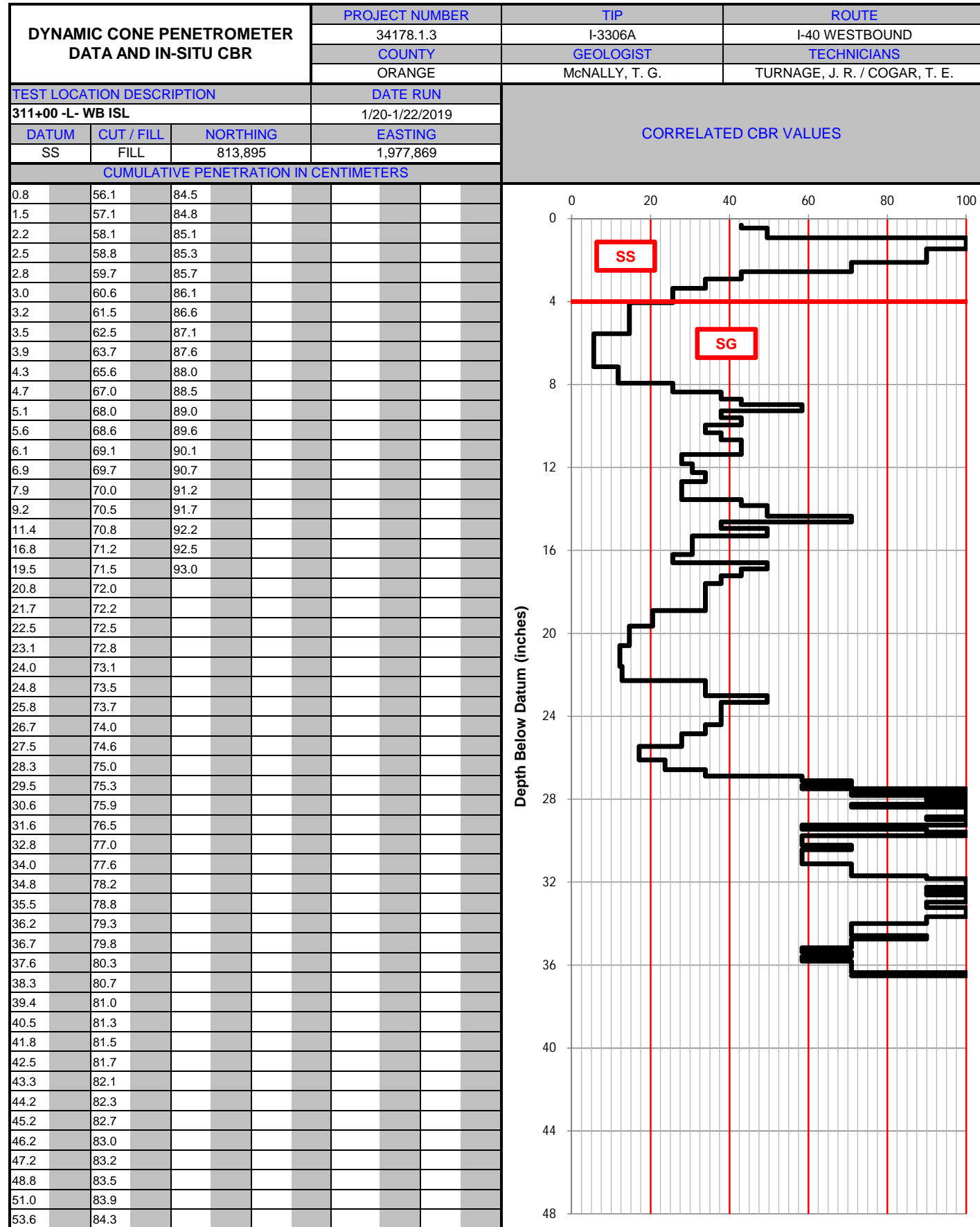


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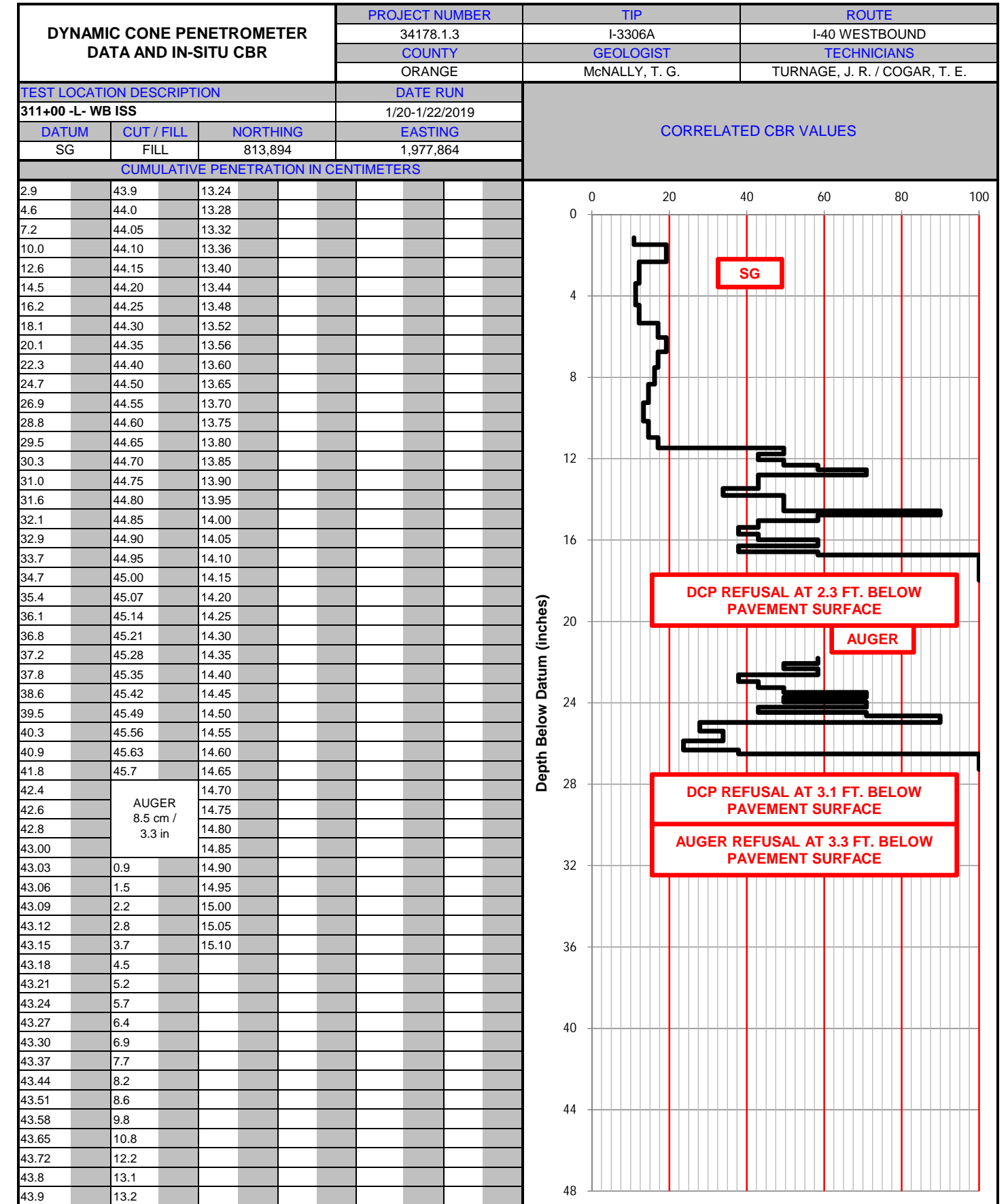


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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



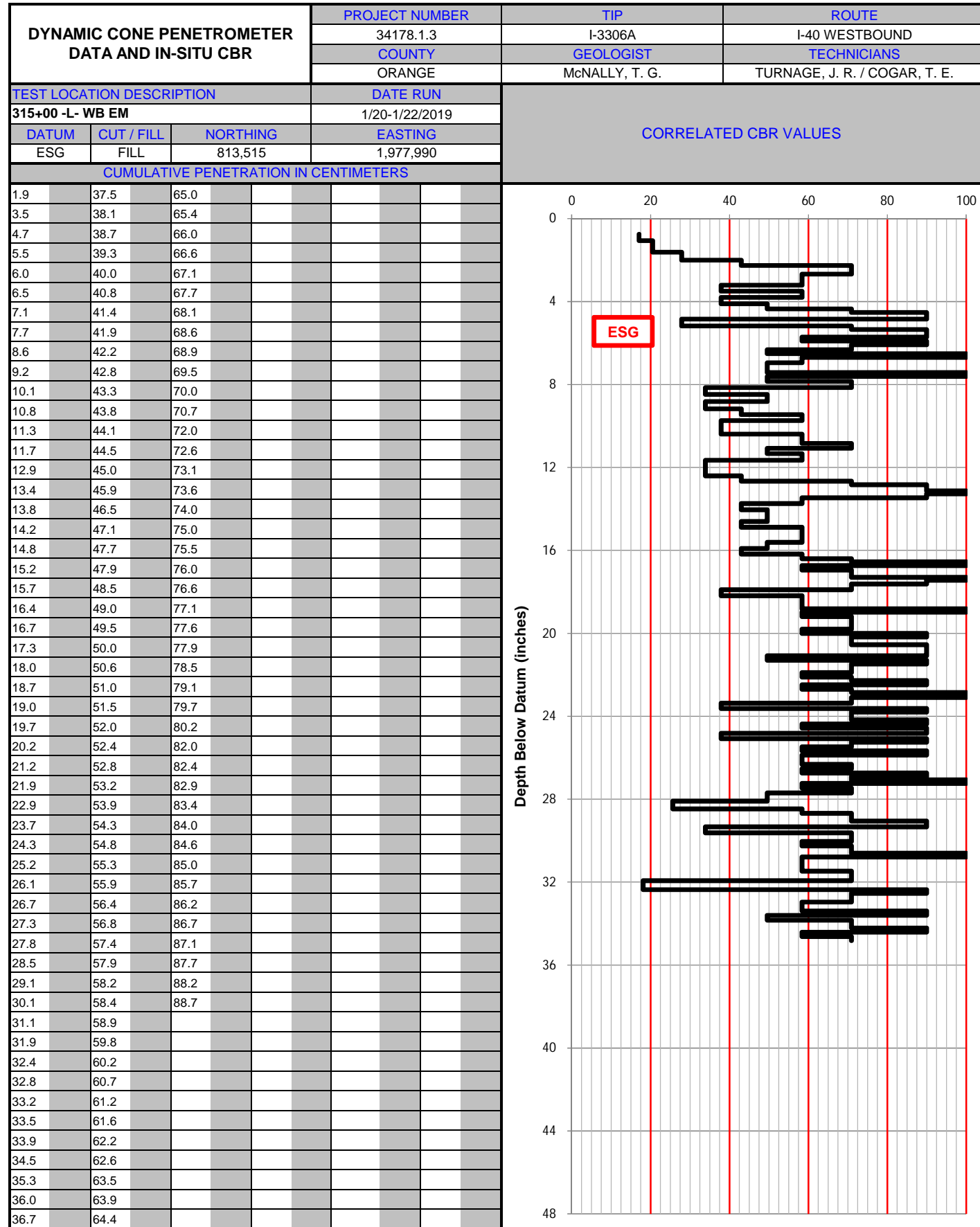


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

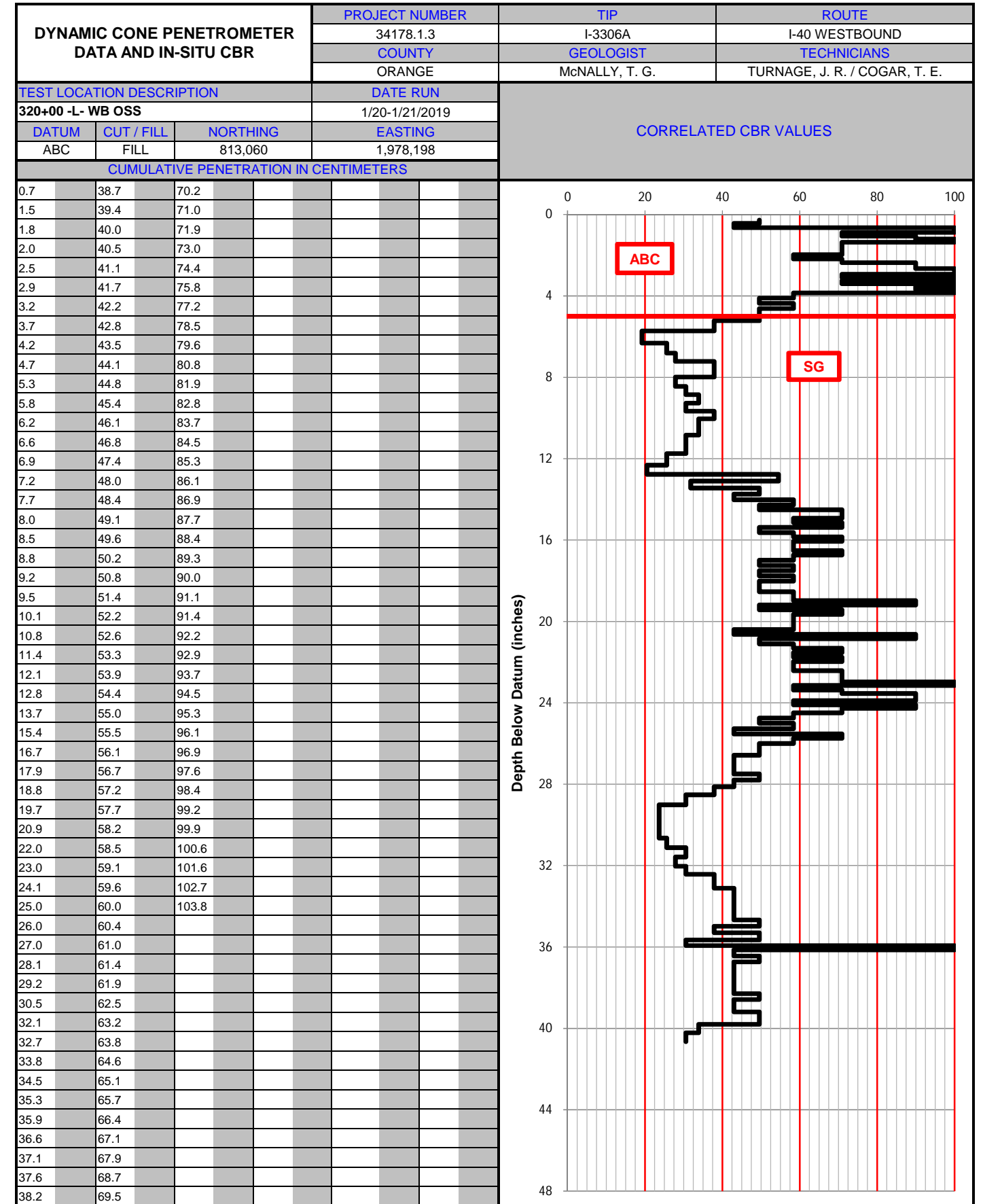


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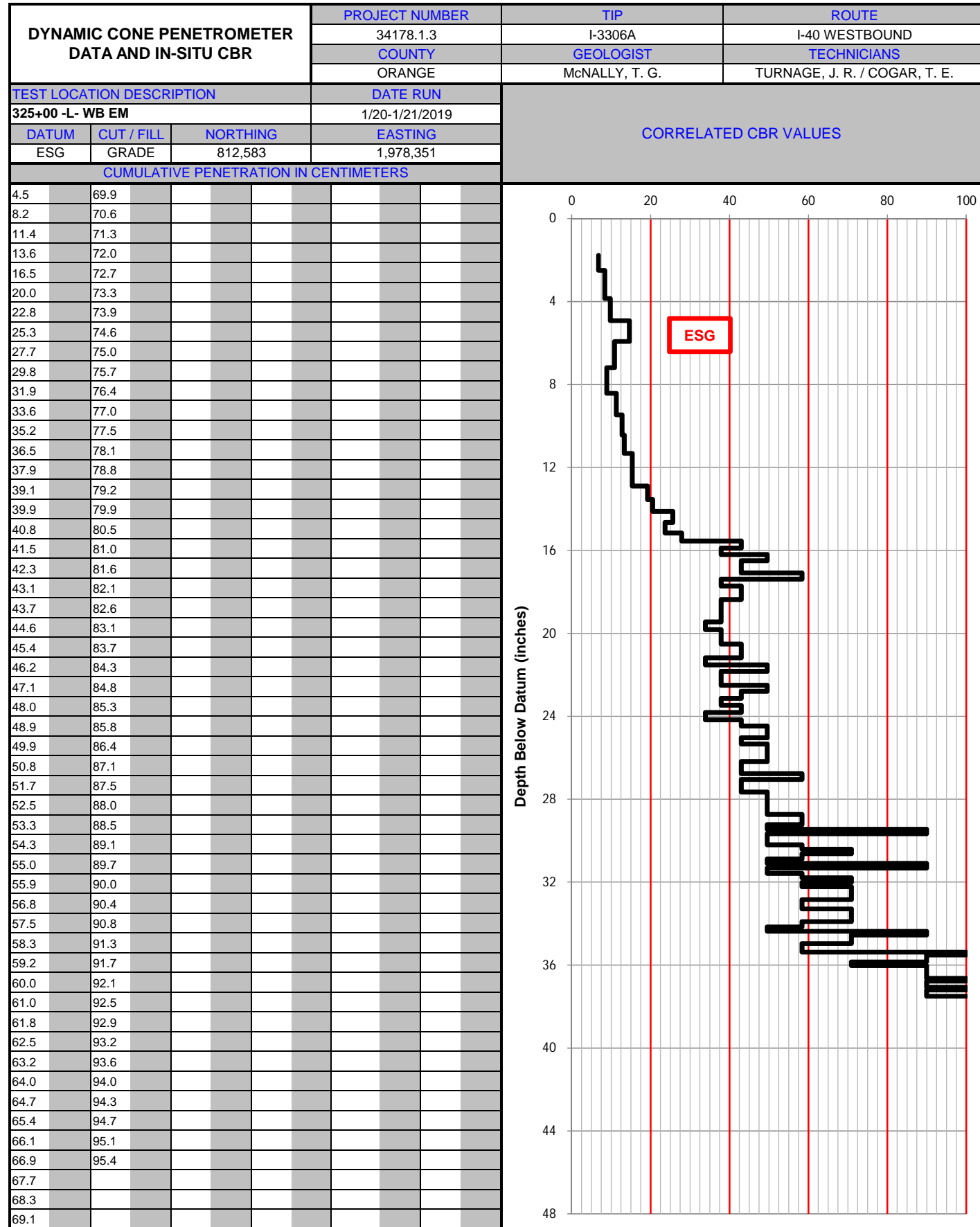


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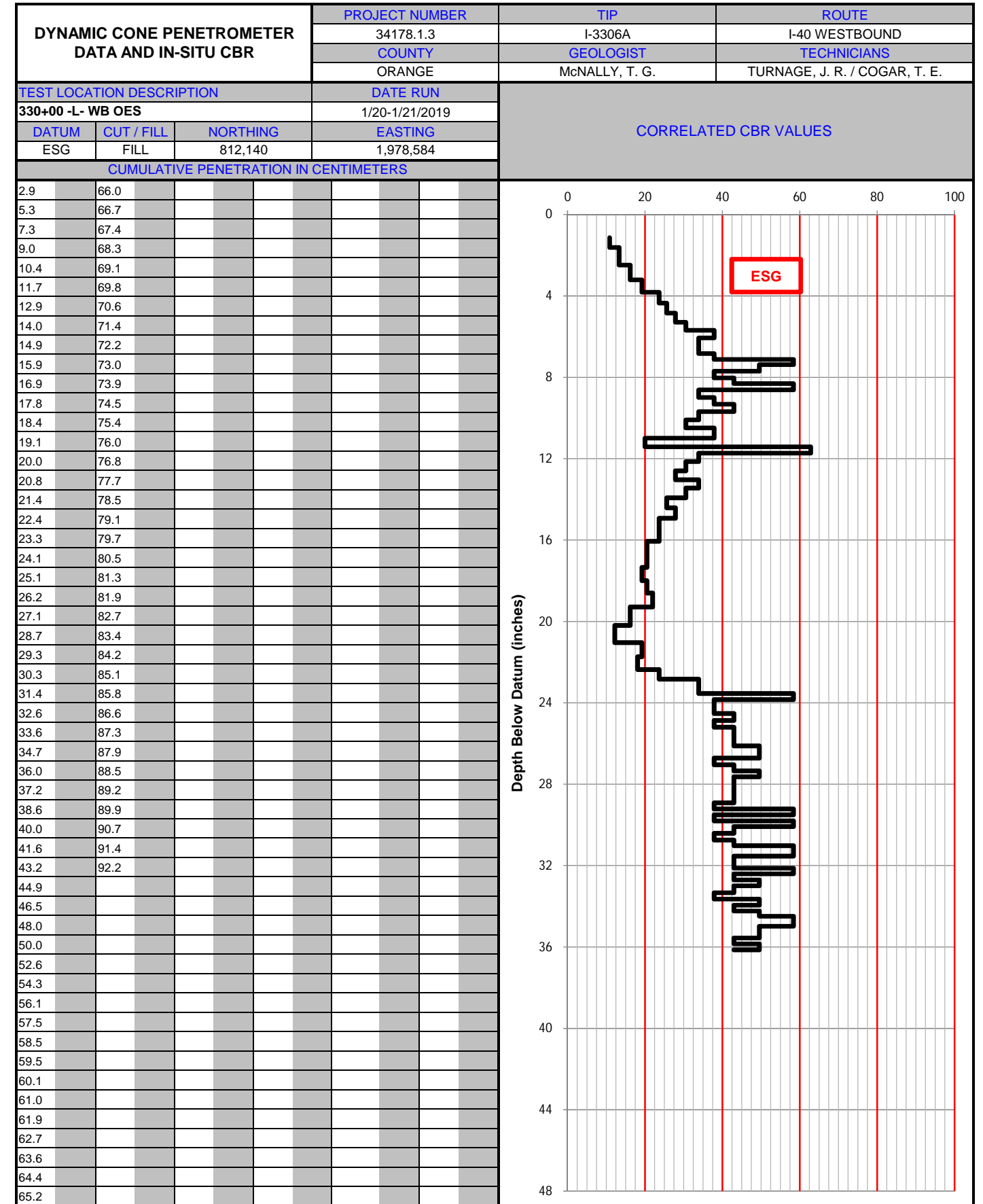


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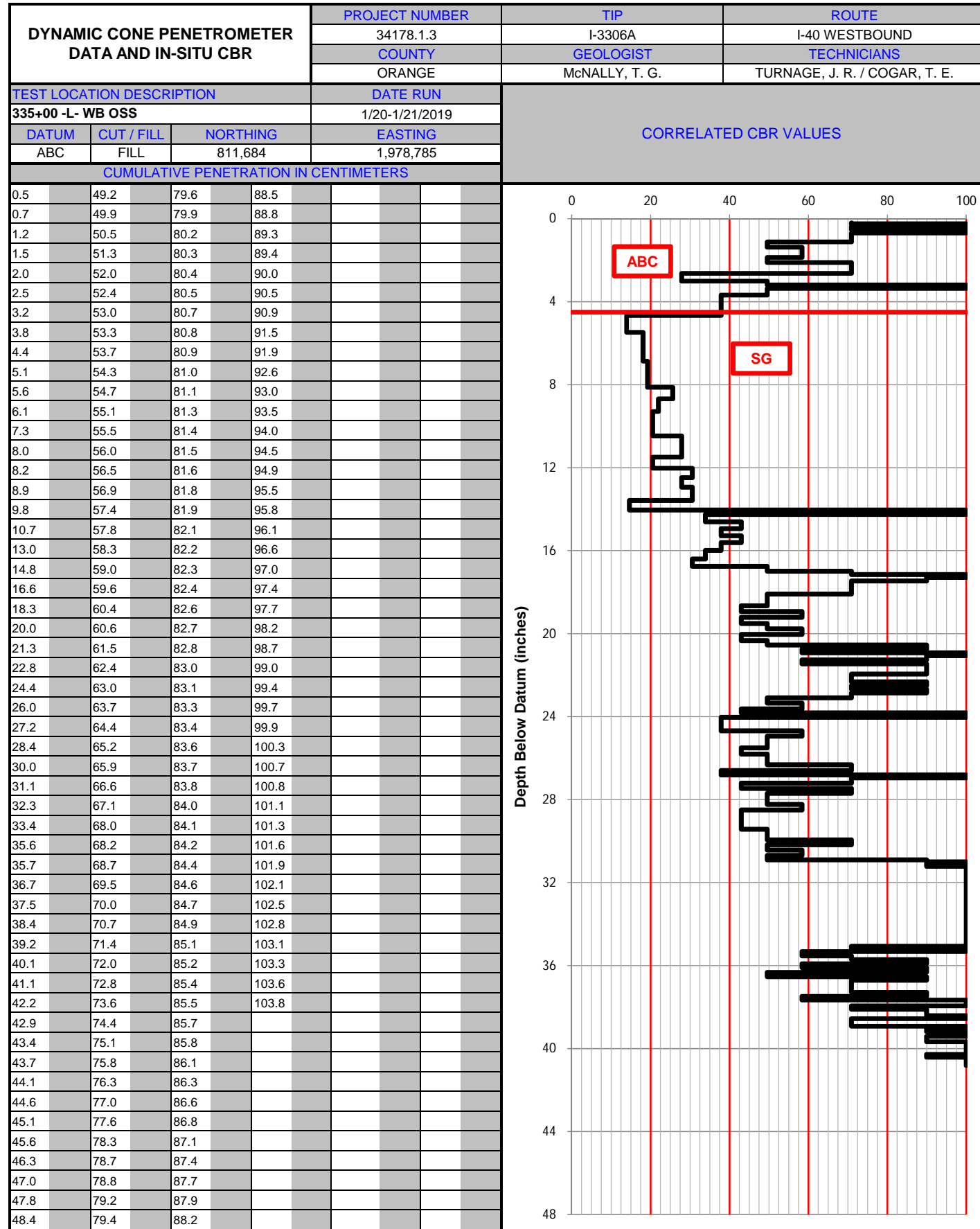
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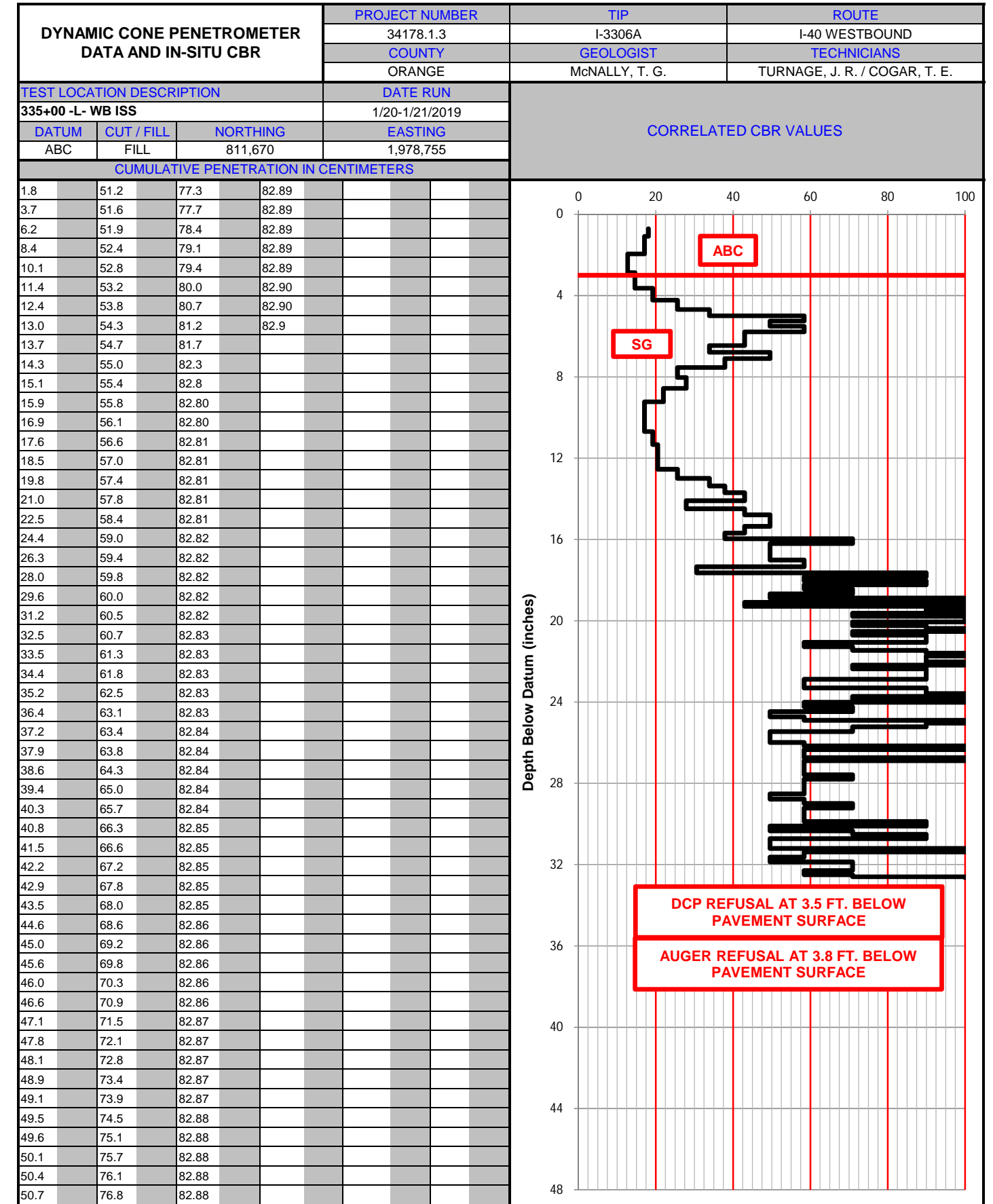
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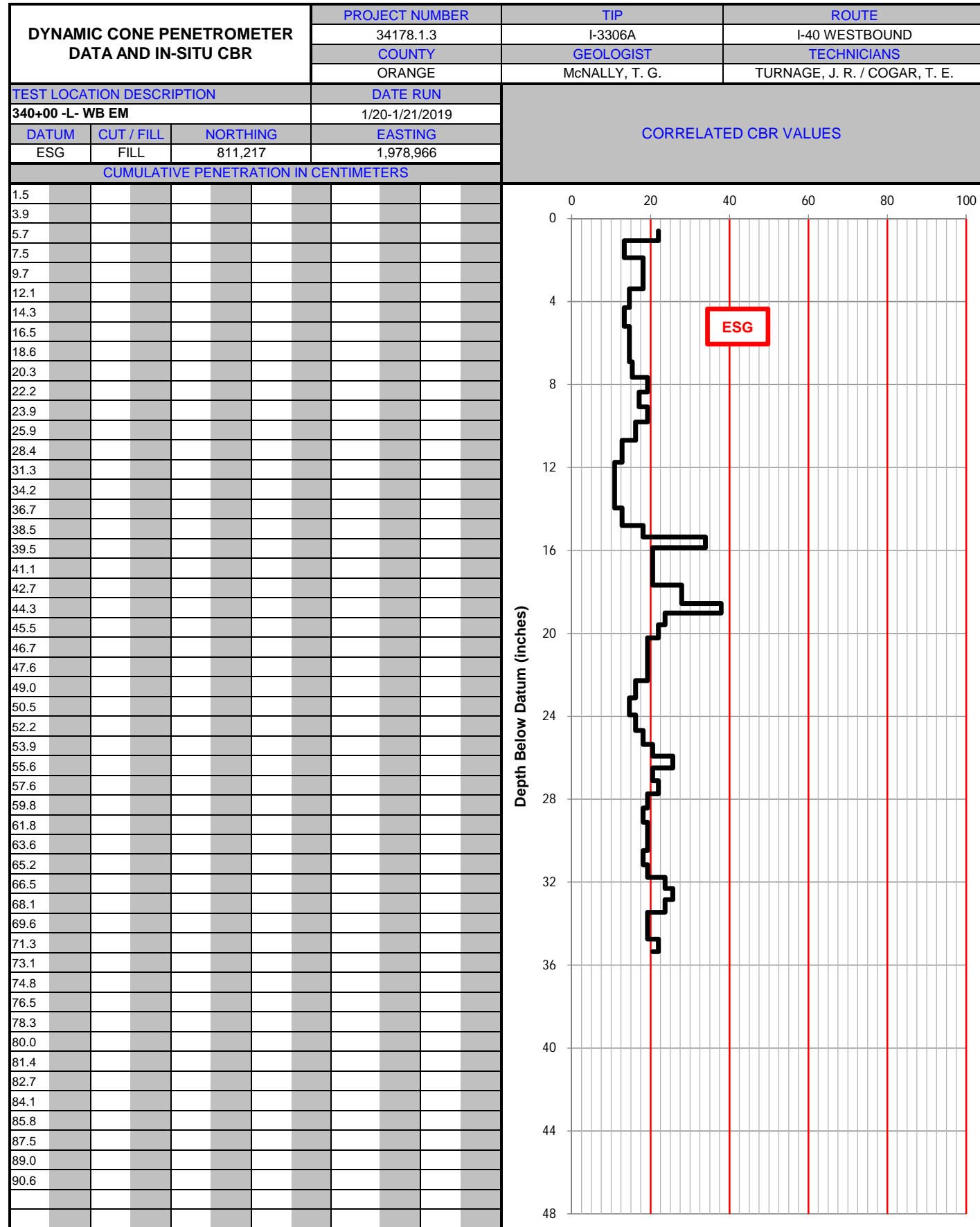


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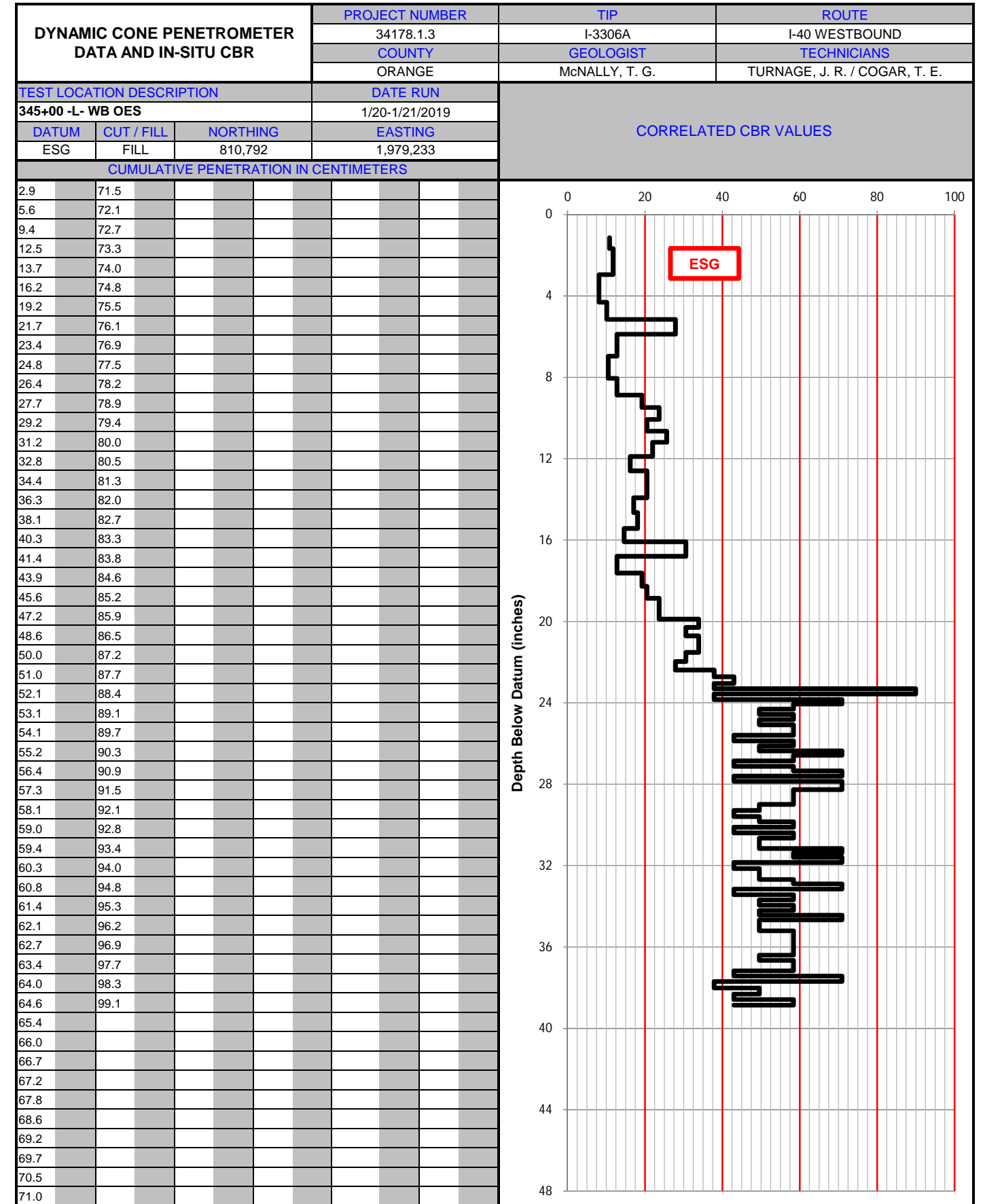


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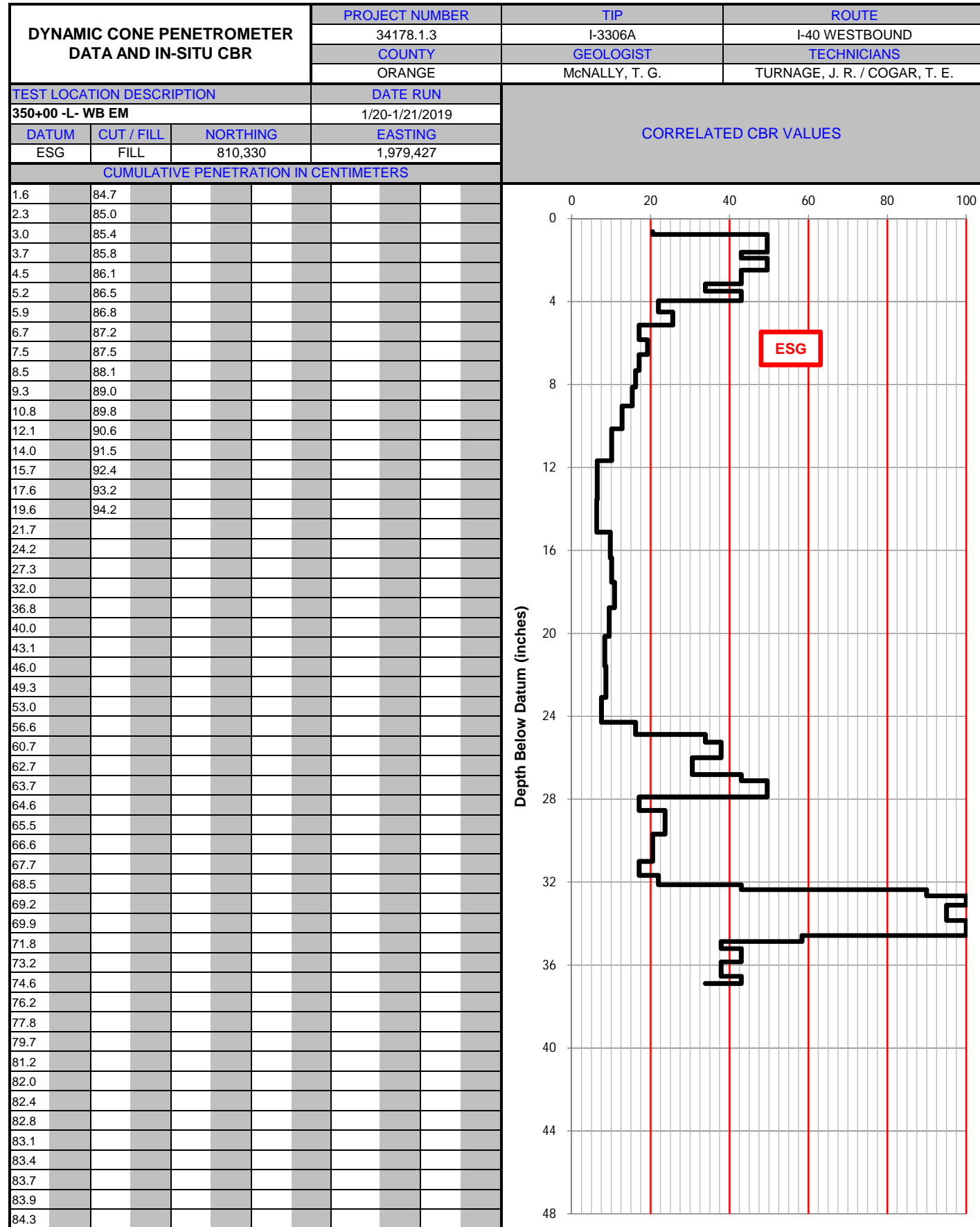


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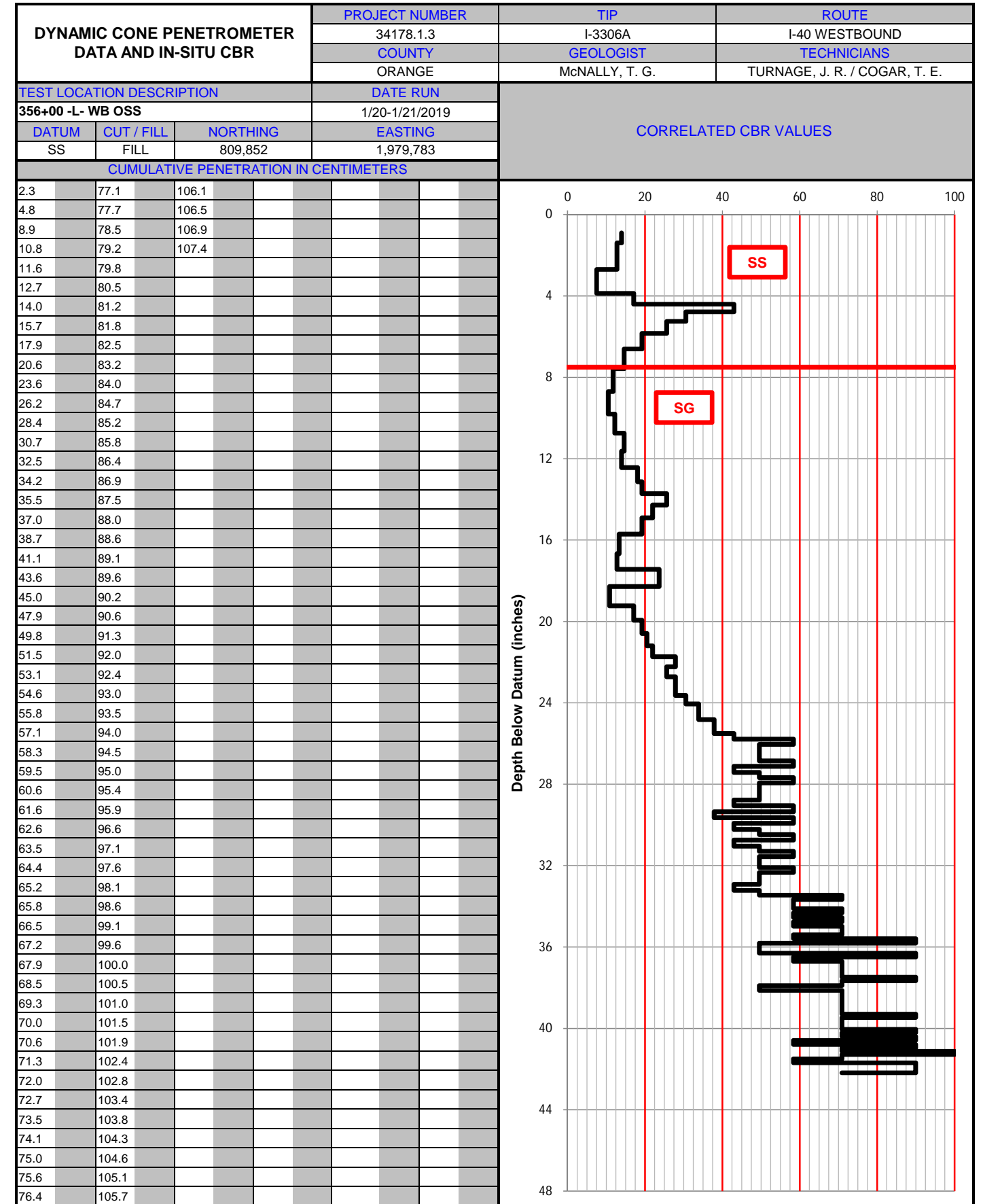


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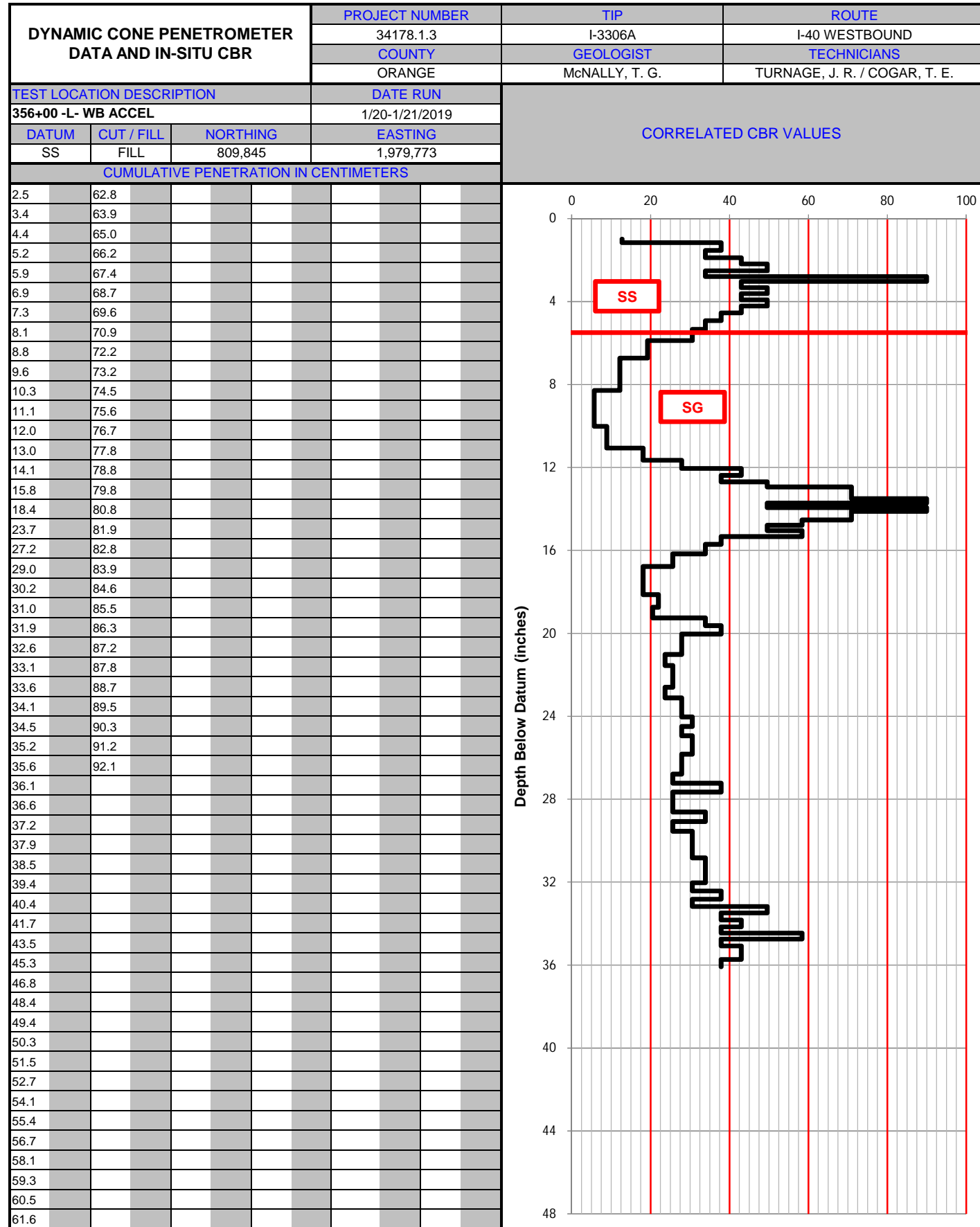


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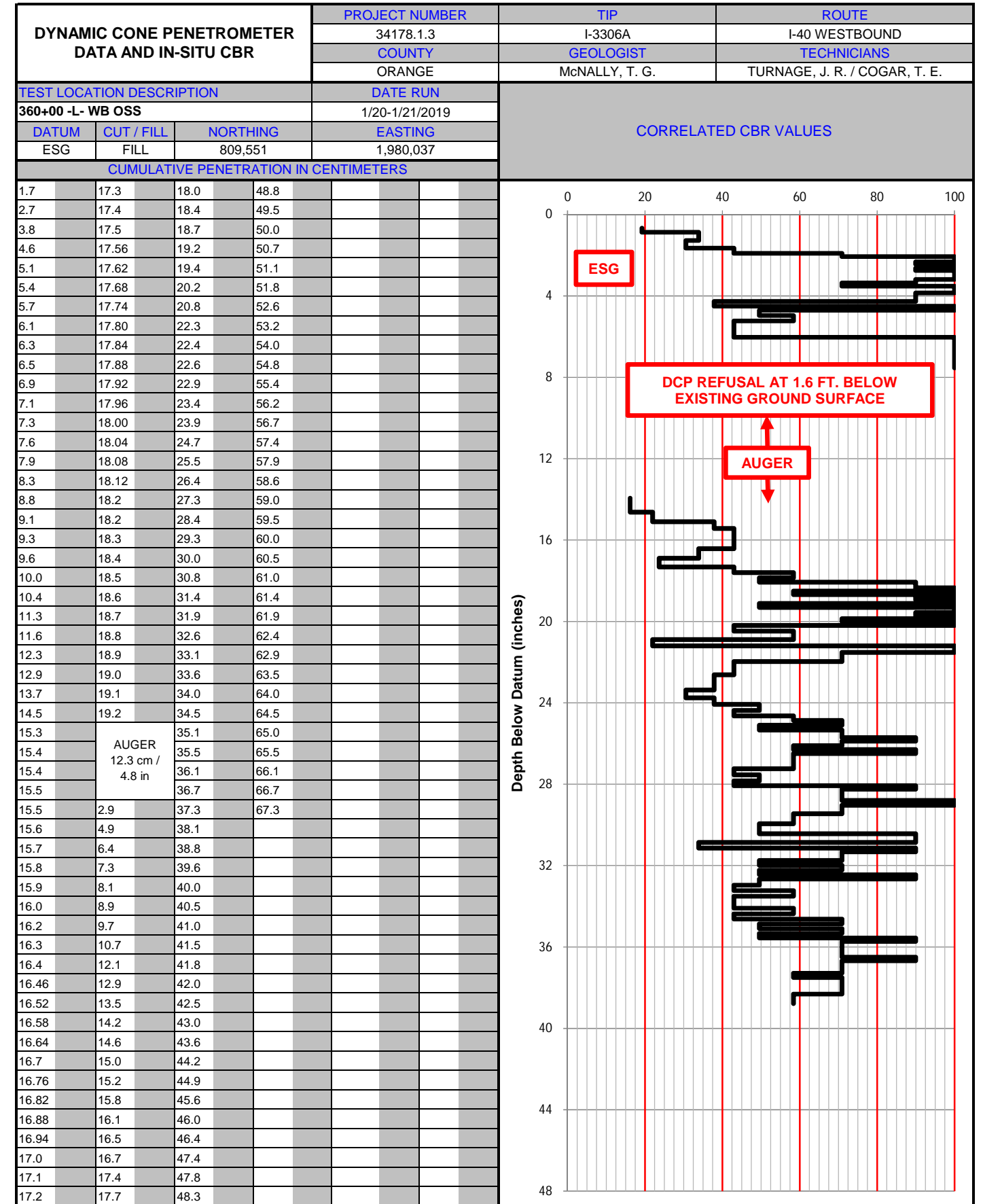


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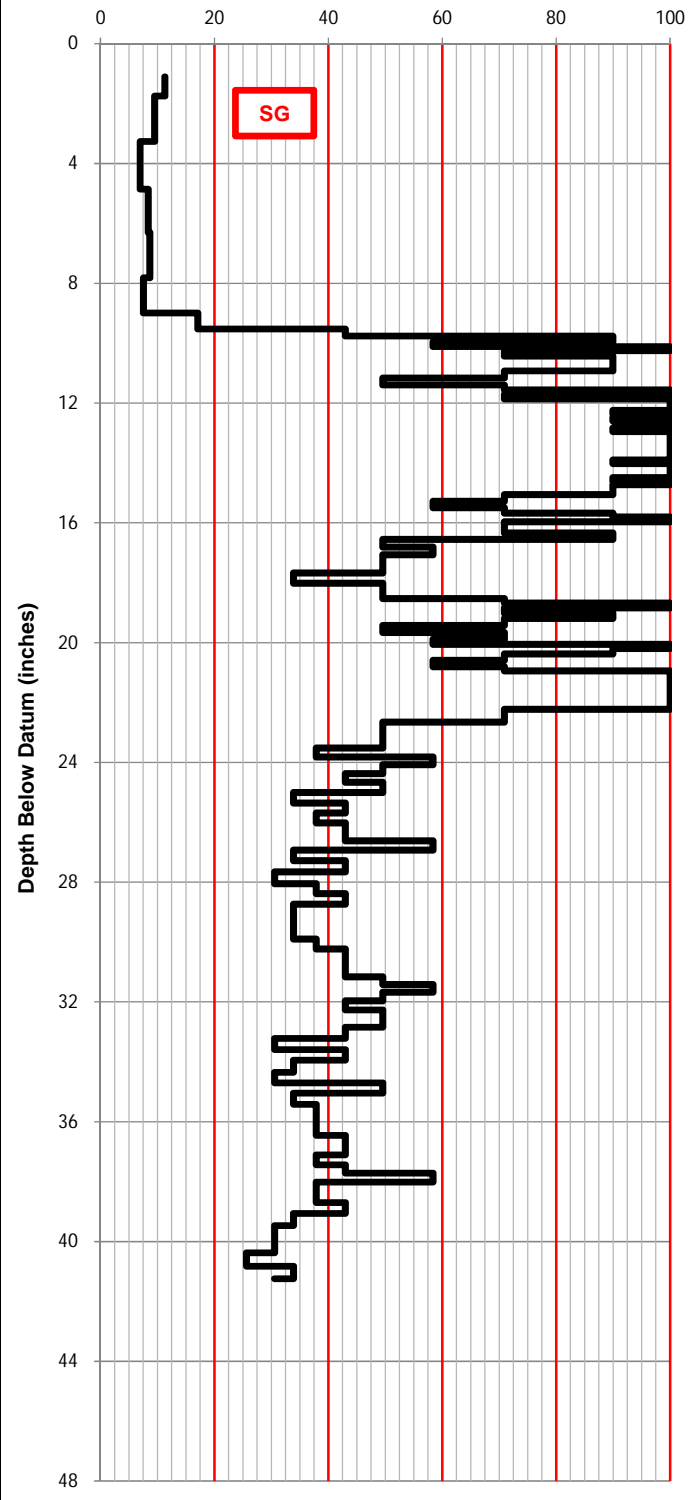
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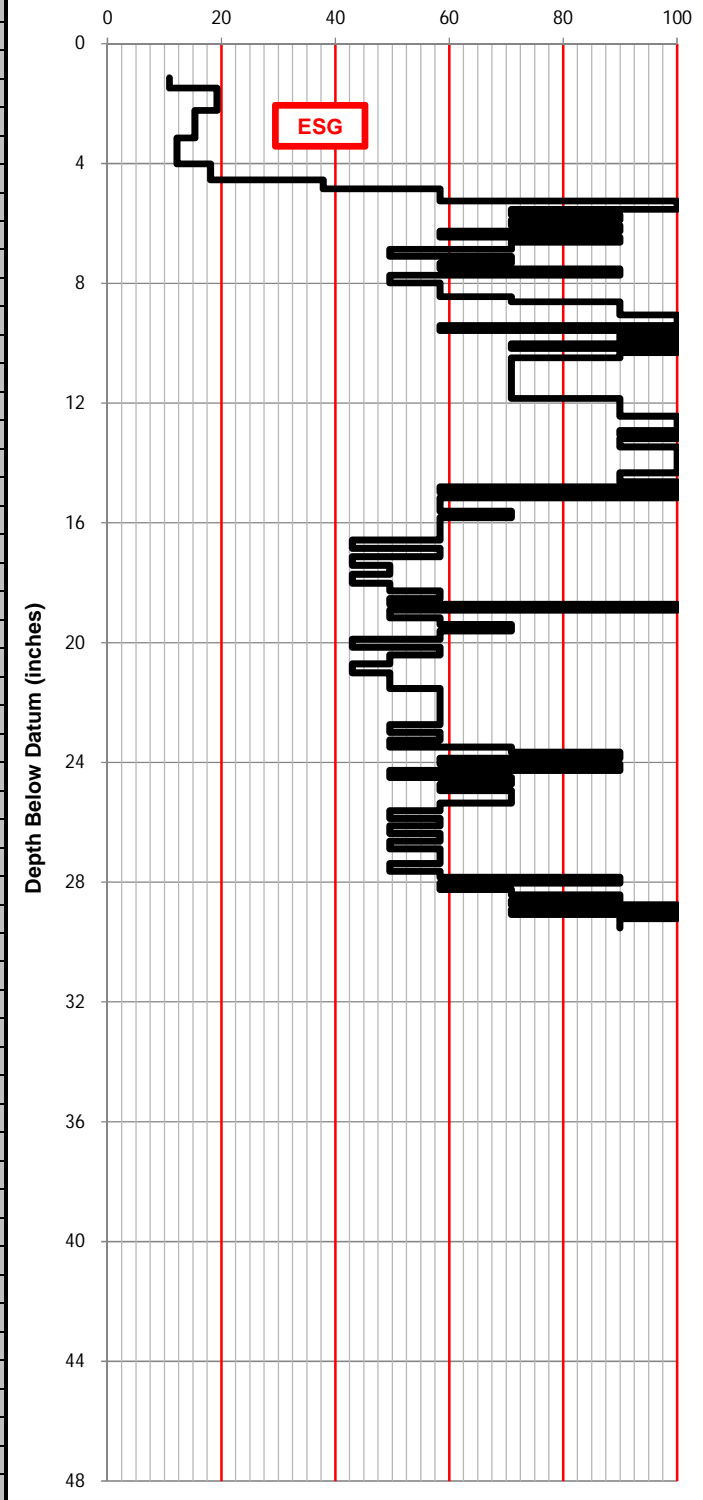
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
360+00 -L- WB ISS				1/20-1/21/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SG	FILL	809,516	1,979,996			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.8	40.3	67.9				
6.1	40.8	68.9				
10.5	41.3	69.7				
14.2	41.7	70.8				
17.8	42.4	71.7				
21.9	43.0	72.5				
23.8	43.7	73.5				
24.6	44.4	74.5				
25.0	45.4	75.5				
25.6	46.1	76.4				
25.8	46.8	77.2				
26.3	47.3	78.0				
26.7	47.6	78.8				
27.1	48.1	79.5				
27.5	48.5	80.1				
28.0	49.0	80.8				
28.7	49.7	81.6				
29.2	50.2	82.3				
29.5	50.8	83.0				
30.0	51.1	83.8				
30.3	51.5	84.9				
30.6	52.0	85.7				
30.9	52.6	86.7				
31.3	53.1	87.8				
31.5	53.3	88.5				
31.9	53.5	89.5				
32.1	53.8	90.4				
32.4	54.1	91.3				
32.8	54.3	92.2				
33.0	54.5	93.0				
33.2	54.7	93.8				
33.4	54.9	94.7				
33.6	55.1	95.5				
33.8	55.3	96.1				
34.1	55.4	97.0				
34.4	55.7	97.9				
34.6	56.0	98.7				
34.8	56.2	99.7				
35.0	56.7	100.8				
35.1	57.2	101.9				
35.5	57.9	103.2				
35.7	58.6	104.2				
36.0	59.3	105.3				
36.3	60.2					
36.6	60.8					
37.0	61.5					
37.2	62.3					
37.6	63.0					
38.0	64.0					
38.5	64.8					
39.1	65.7					
39.6	66.5					
40.0	67.3					



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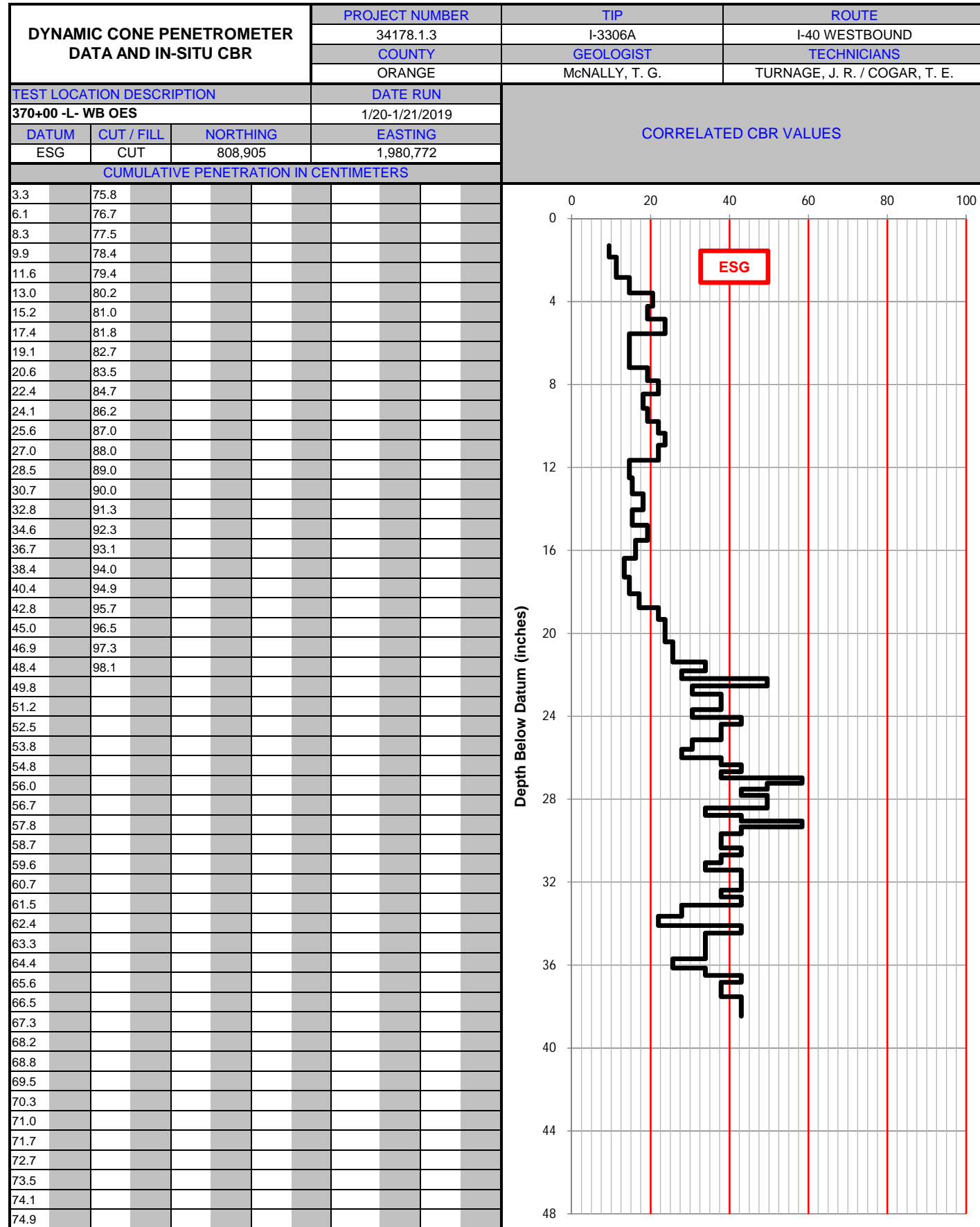


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
365+00 -L- WB EM				1/20-1/21/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	809,168	1,980,351			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.9	33.0	60.9				
4.6	33.3	61.3				
6.7	33.7	62.0				
9.3	34.1	62.5				
11.1	34.3	63.1				
12.0	34.5	63.6				
12.6	34.7	64.1				
13.2	34.9	64.7				
13.5	35.1	65.4				
13.8	35.4	66.0				
14.3	35.7	66.7				
14.7	35.9	67.3				
15.2	36.2	68.0				
15.6	36.6	68.6				
16.2	37.0	69.2				
16.6	37.3	69.9				
17.1	37.9	70.5				
17.8	38.2	70.9				
18.3	38.8	71.5				
18.9	39.4	72.0				
19.3	39.9	72.4				
20.0	40.5	72.9				
20.6	41.1	73.2				
21.2	41.7	73.7				
21.7	42.5	74.0				
22.1	43.1	74.4				
22.5	43.9	74.8				
22.9	44.6	75.2				
23.1	45.4					
23.4	46.1					
23.6	46.7					
24.2	47.4					
24.5	47.7					
24.9	48.4					
25.2	49.0					
25.7	49.5					
26.0	50.1					
26.4	50.9					
26.9	51.5					
27.4	52.2					
27.9	53.0					
28.4	53.7					
28.9	54.4					
29.4	55.0					
29.9	55.6					
30.3	56.2					
30.7	56.8					
31.1	57.4					
31.5	58.1					
31.7	58.7					
32.0	59.4					
32.3	59.9					
32.6	60.3					

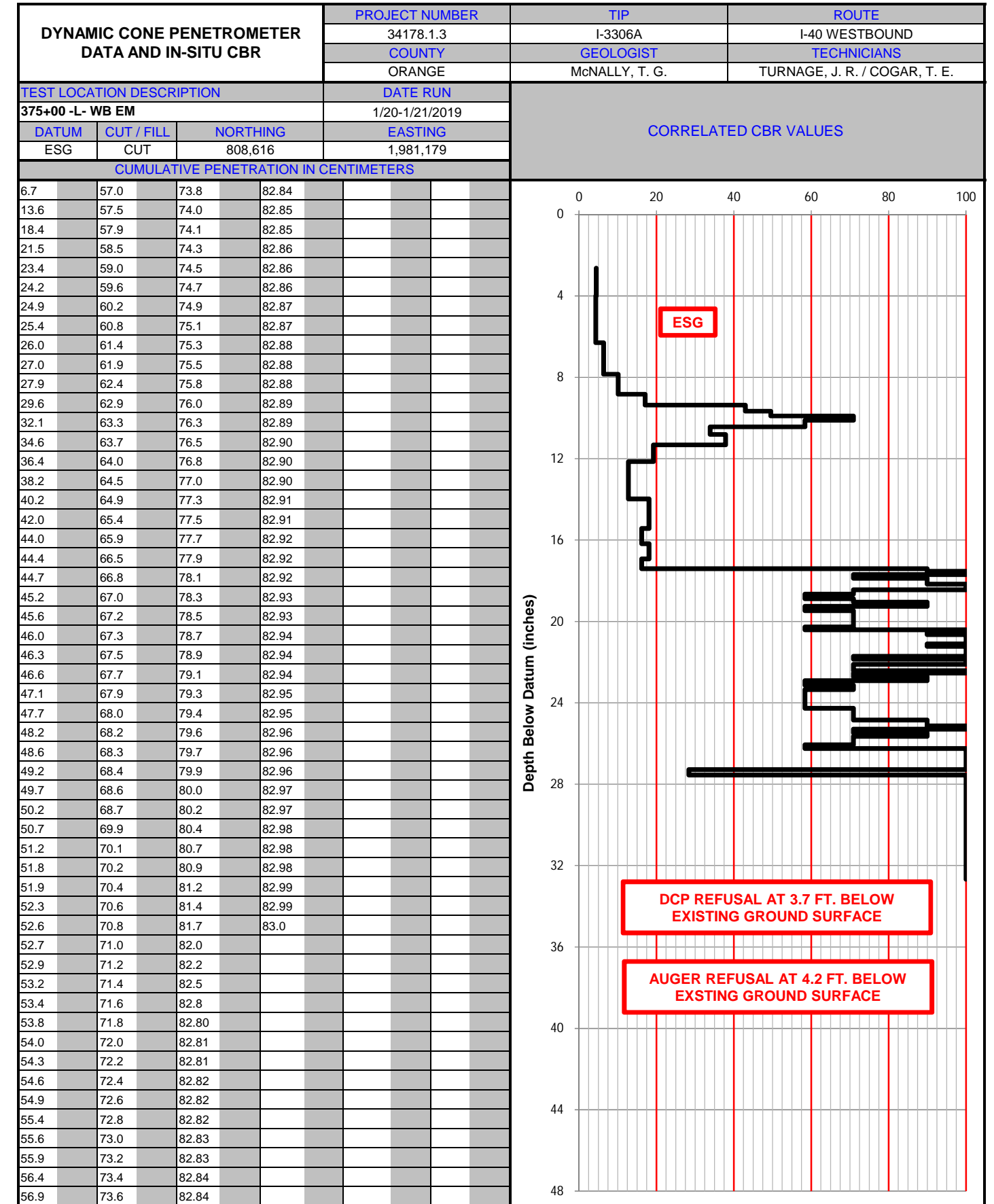


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



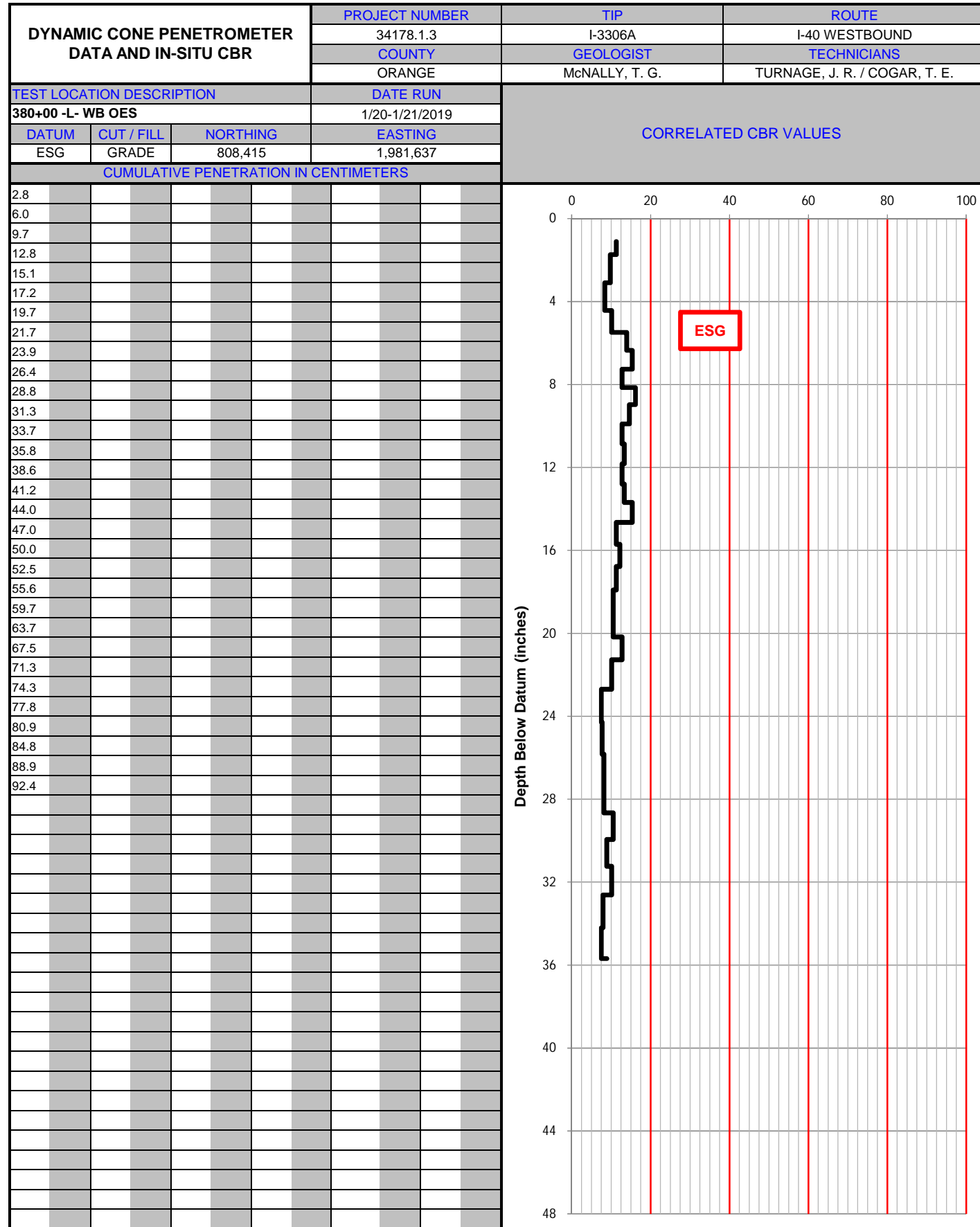


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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

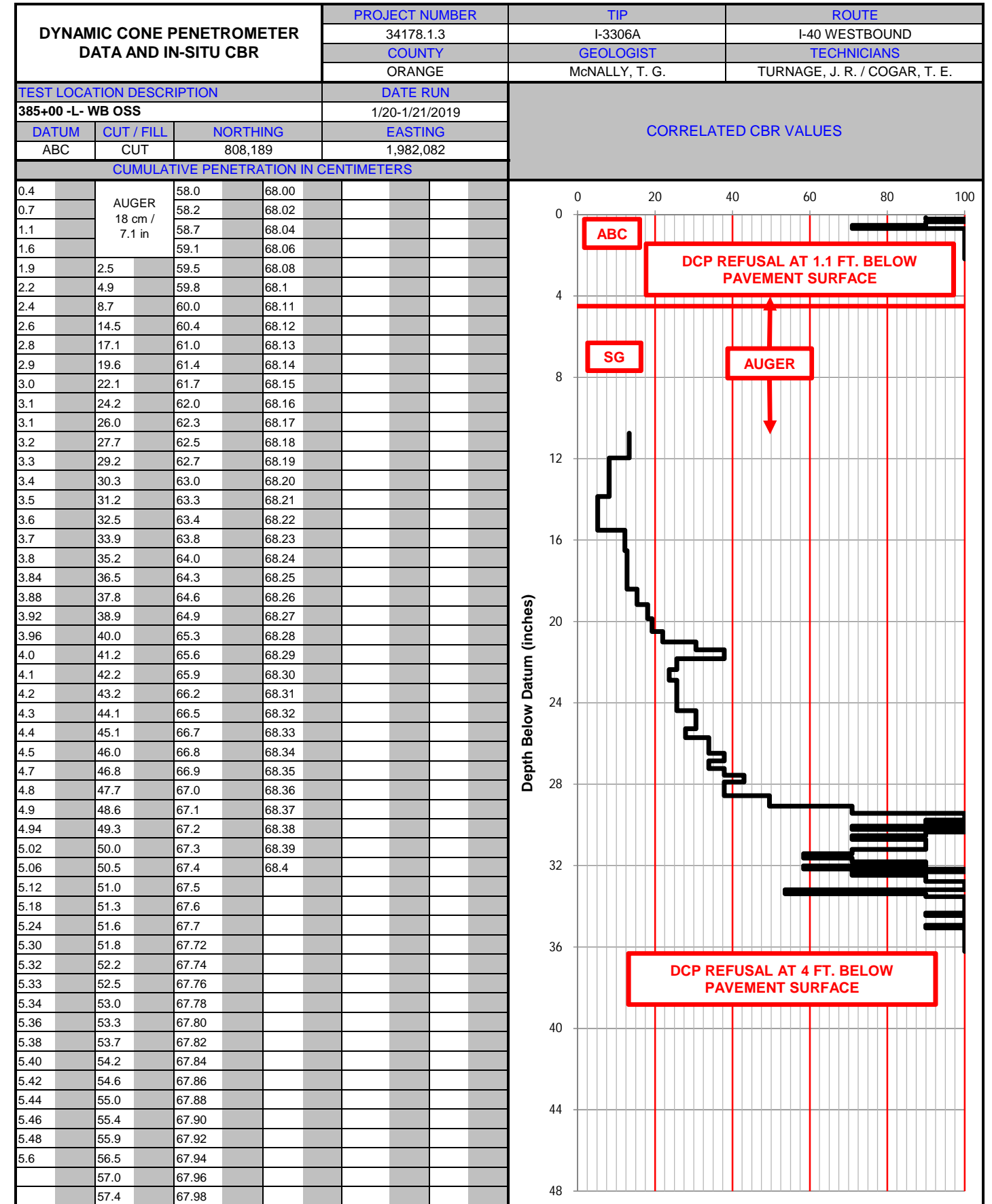


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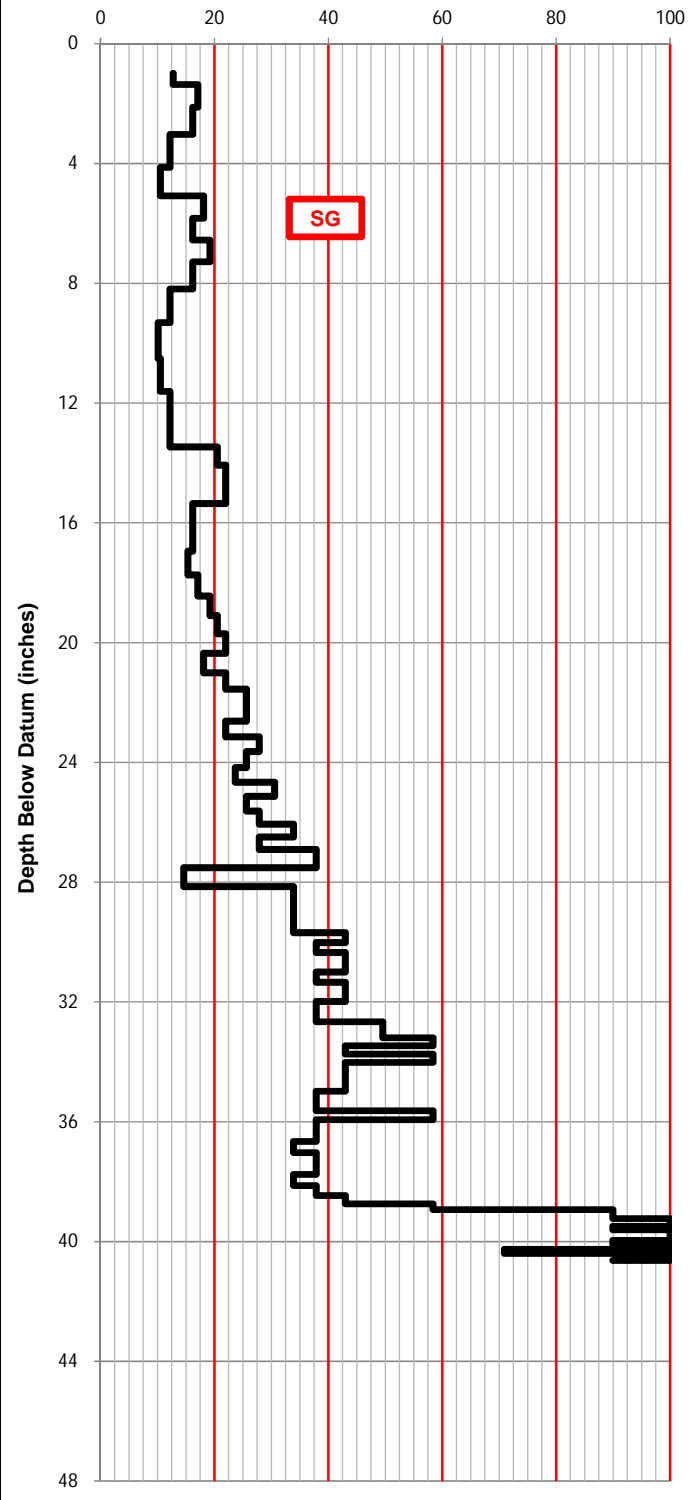
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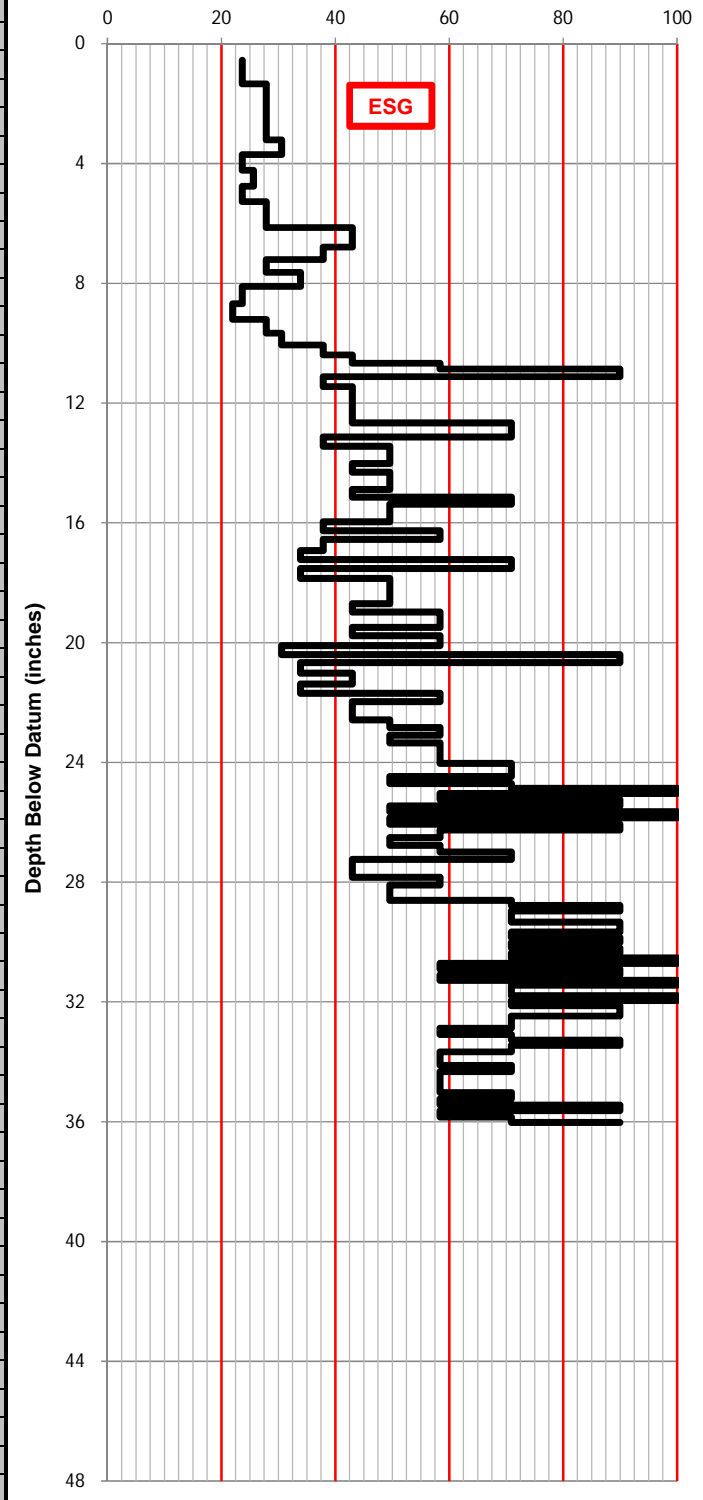
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
385+00 -L- WB ISS				1/20-1/21/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SG	CUT	808,155	1,982,065			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.5	84.0					
4.4	84.6					
6.4	85.4					
9.0	86.0					
12.0	86.8					
13.8	87.6					
15.8	88.4					
17.5	89.3					
19.5	90.2					
22.1	90.8					
25.2	91.7					
28.2	92.6					
30.8	93.6					
33.4	94.5					
35.0	95.4					
36.5	96.4					
38.0	97.3					
40.0	98.1					
42.0	98.7					
44.1	99.1					
46.0	99.5					
47.7	99.8					
49.3	100.1					
50.8	100.5					
52.6	100.7					
54.1	101.0					
55.4	101.3					
56.7	101.7					
58.2	102.0					
59.4	102.5					
60.7	102.7					
62.1	103.0					
63.2	103.4					
64.5						
65.7						
66.7						
67.9						
68.8						
71.0						
72.0						
73.0						
74.0						
75.0						
75.8						
76.7						
77.5						
78.3						
79.2						
80.0						
80.8						
81.7						
82.6						
83.3						



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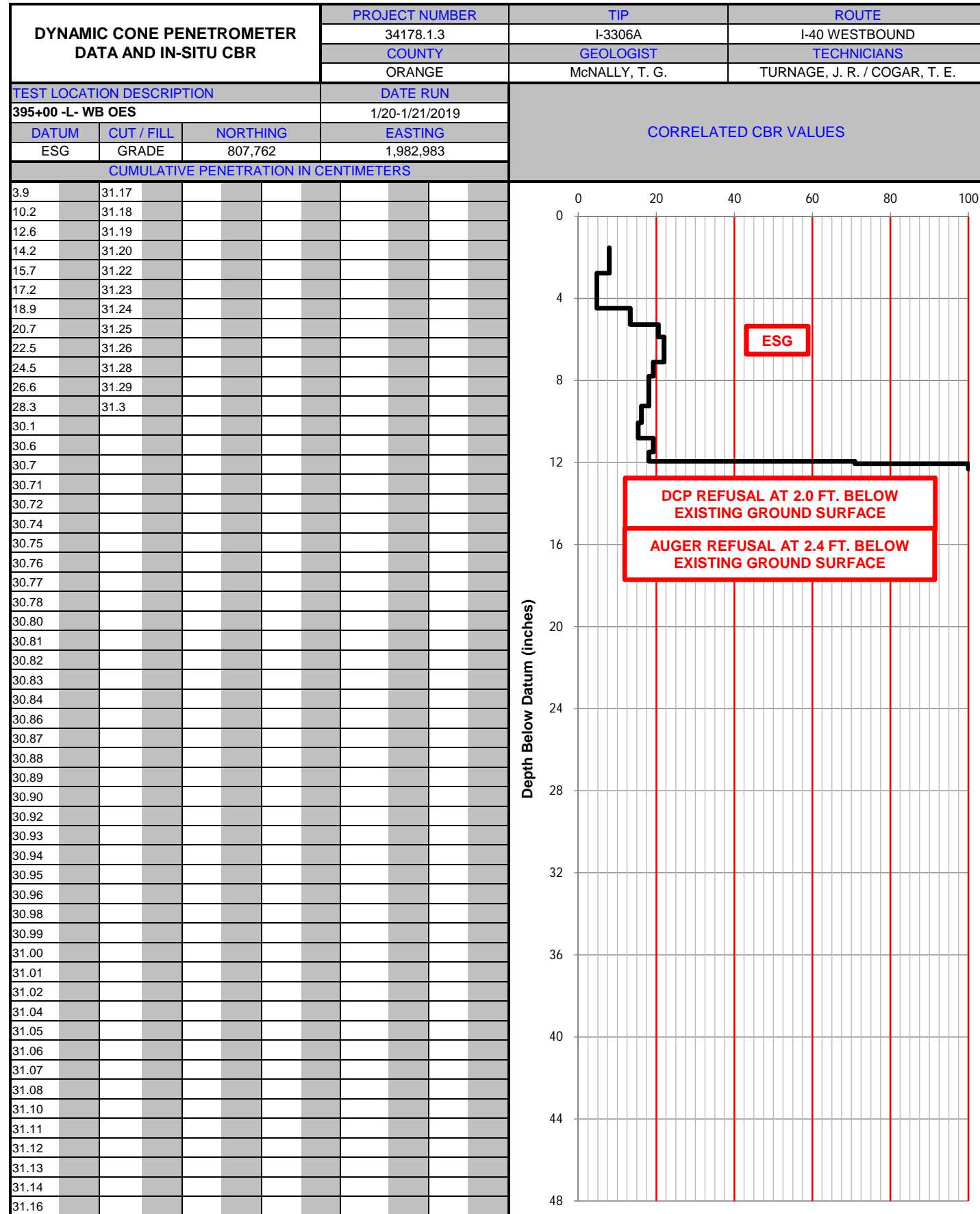
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
390+00 -L- WB EM				1/20-1/21/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	807,932	1,982,512			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.4	49.1	80.1				
2.8	49.9	80.6				
4.0	50.5	80.9				
5.2	51.6	81.4				
6.4	52.0	81.8				
7.6	53.0	82.2				
8.7	53.8	82.7				
10.1	54.8	83.2				
11.4	55.4	83.8				
12.8	56.2	84.3				
14.0	57.0	84.7				
15.2	57.7	85.2				
16.0	58.3	85.8				
16.8	59.0	86.4				
17.7	59.6	86.9				
18.9	60.2	87.5				
19.9	60.8	88.1				
21.3	61.3	88.7				
22.8	61.8	89.2				
24.0	62.5	89.8				
25.1	63.0	90.2				
26.0	63.3	90.8				
26.8	63.9	91.3				
27.4	64.3	91.7				
27.8	65.0					
28.7	65.3					
29.5	66.0					
30.3	66.4					
31.1	67.0					
31.9	67.7					
32.4	68.3					
32.9	68.8					
33.8	69.6					
34.5	70.4					
35.2	71.0					
36.0	71.7					
36.7	72.4					
37.4	72.9					
38.2	73.3					
38.7	73.8					
39.4	74.3					
40.1	74.7					
41.0	75.1					
41.6	75.6					
42.5	76.0					
43.5	76.5					
44.0	76.9					
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46.4	78.3					
47.1	78.7					
47.9	79.3					
48.5	79.6					



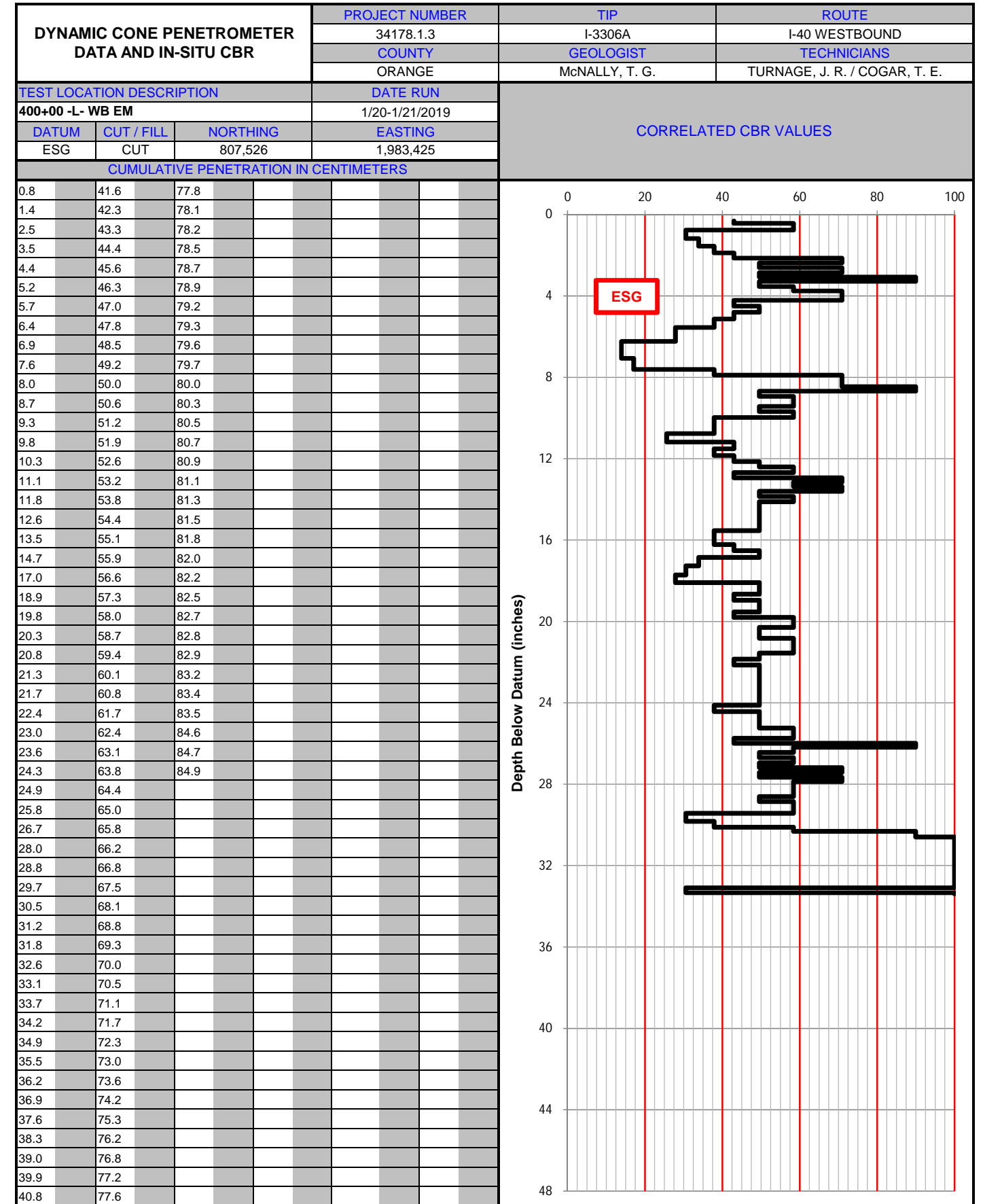
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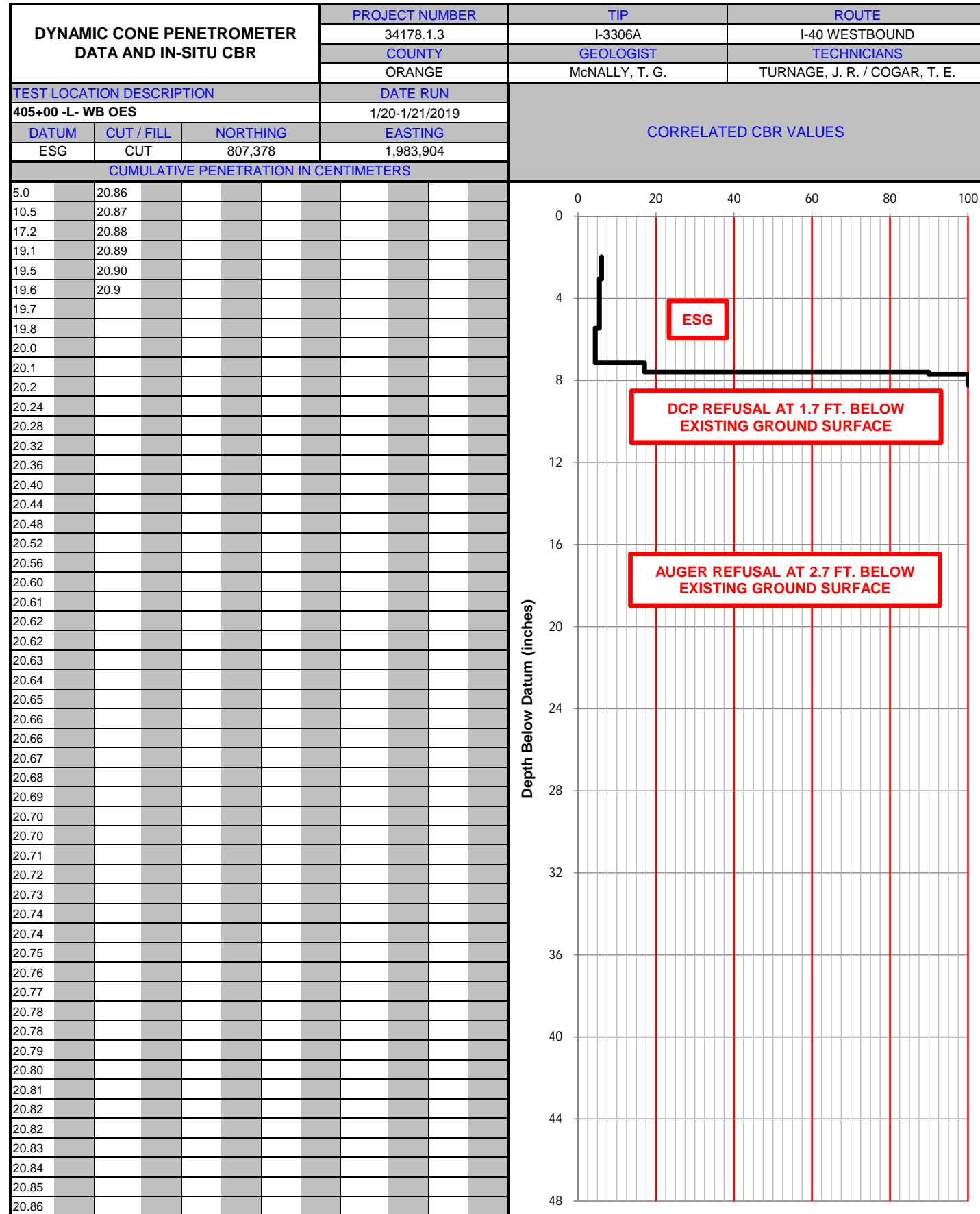


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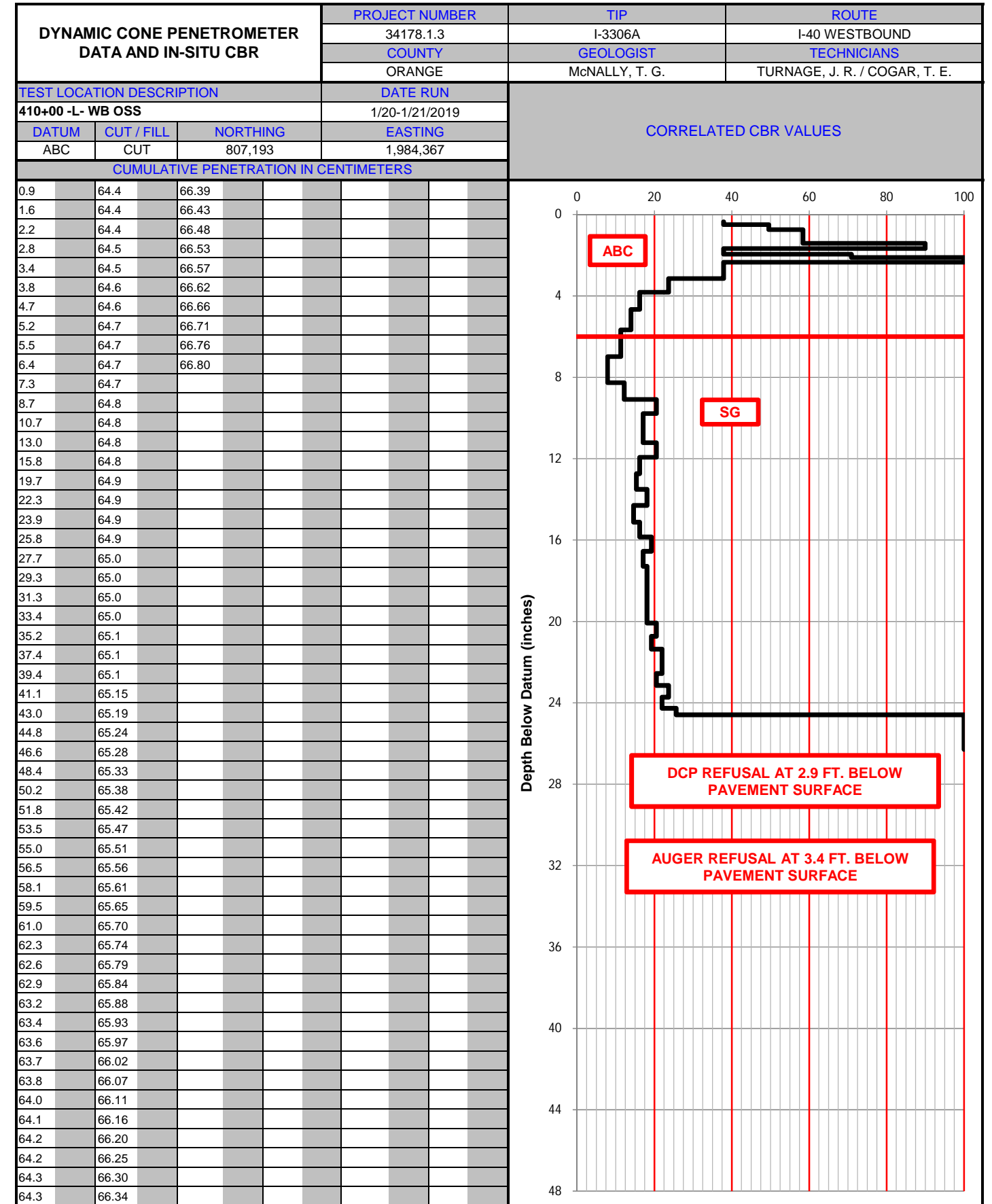


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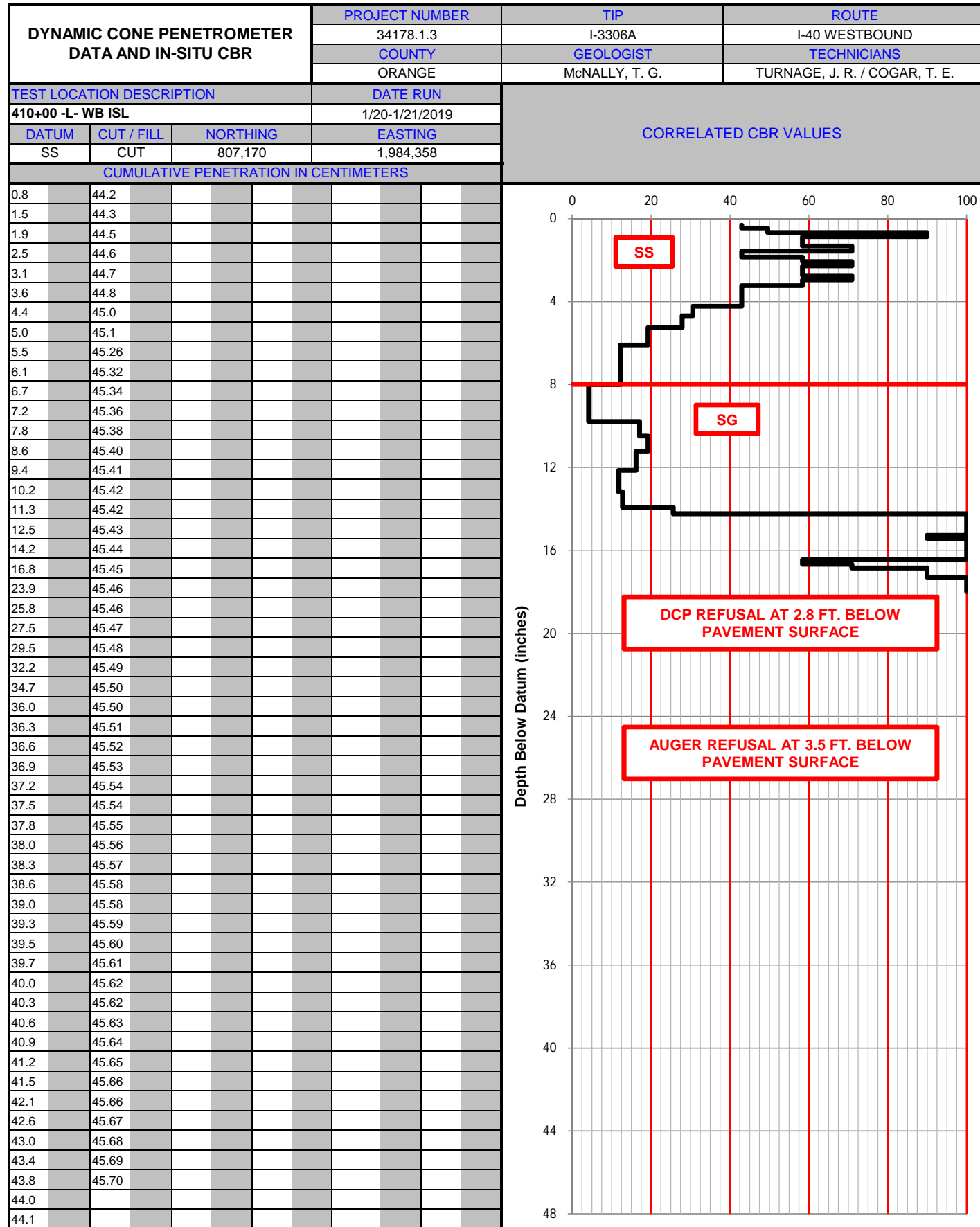


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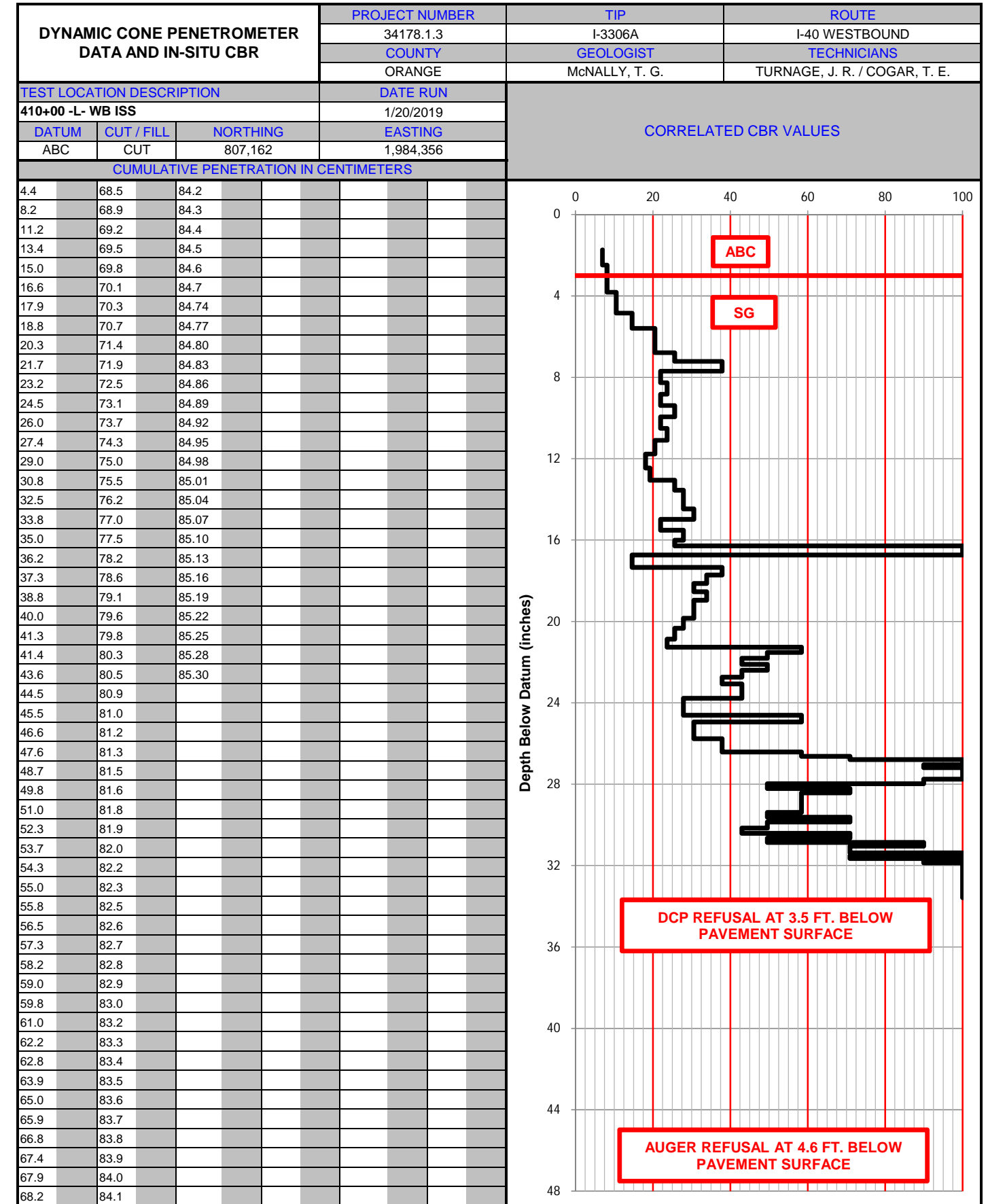


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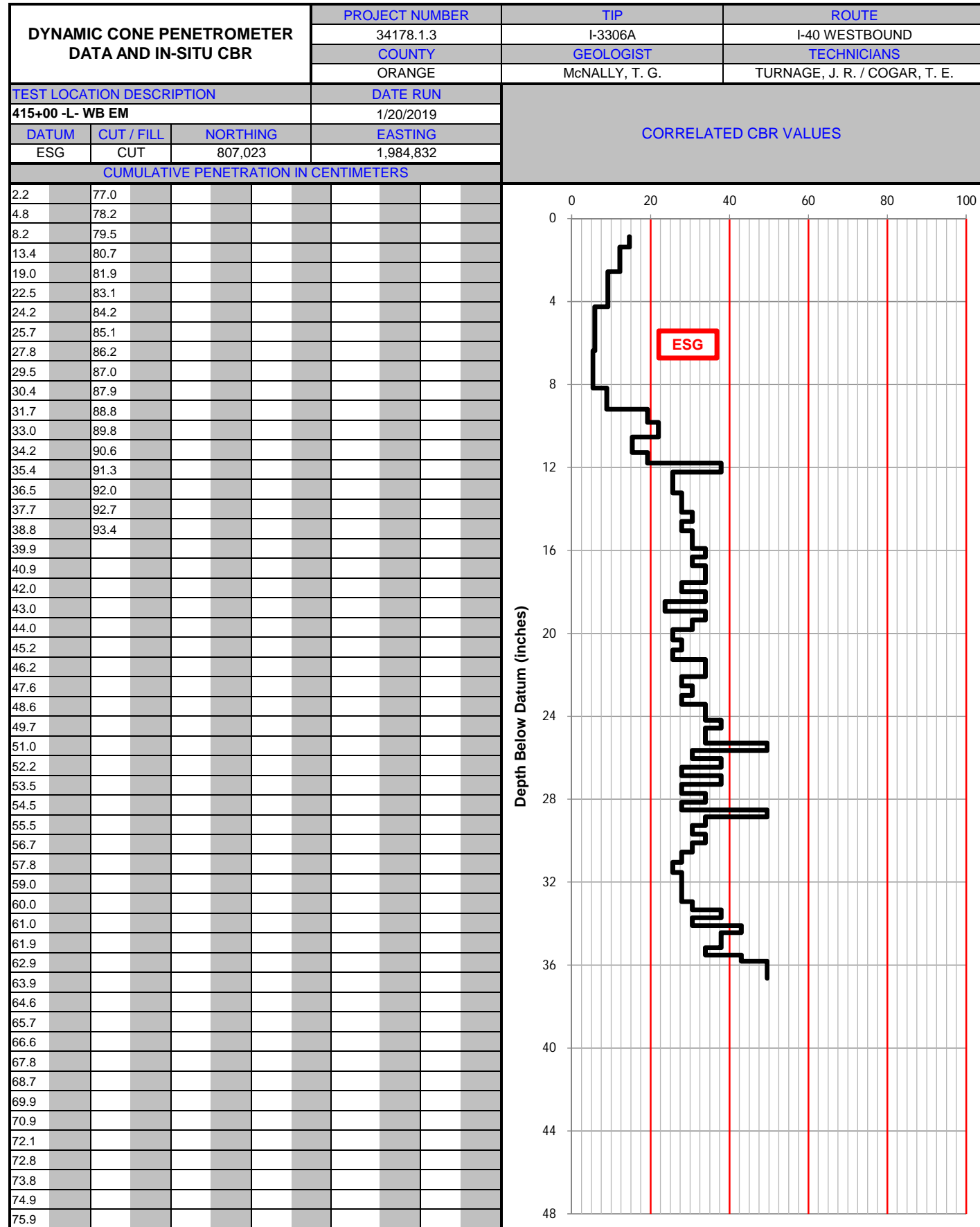


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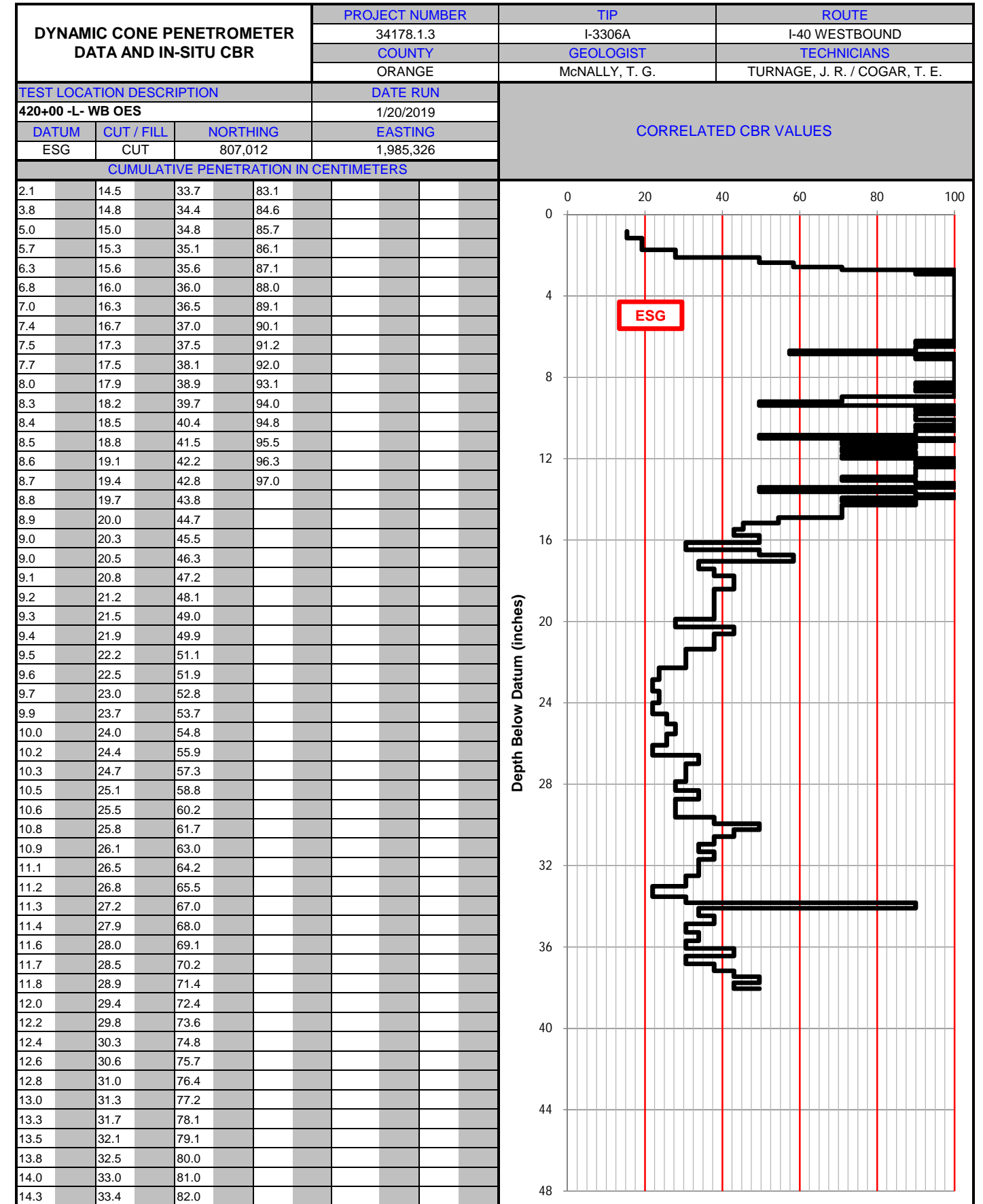


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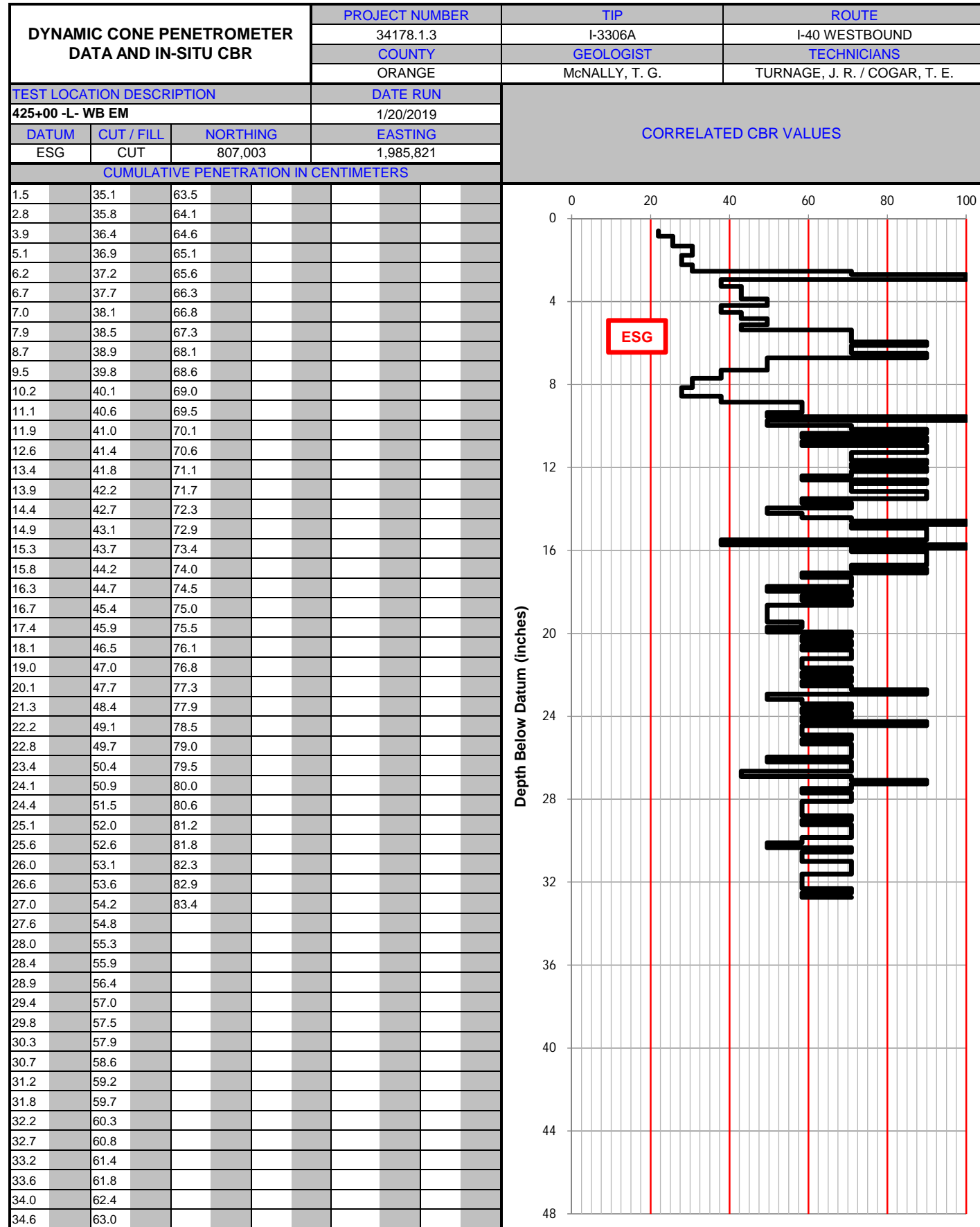


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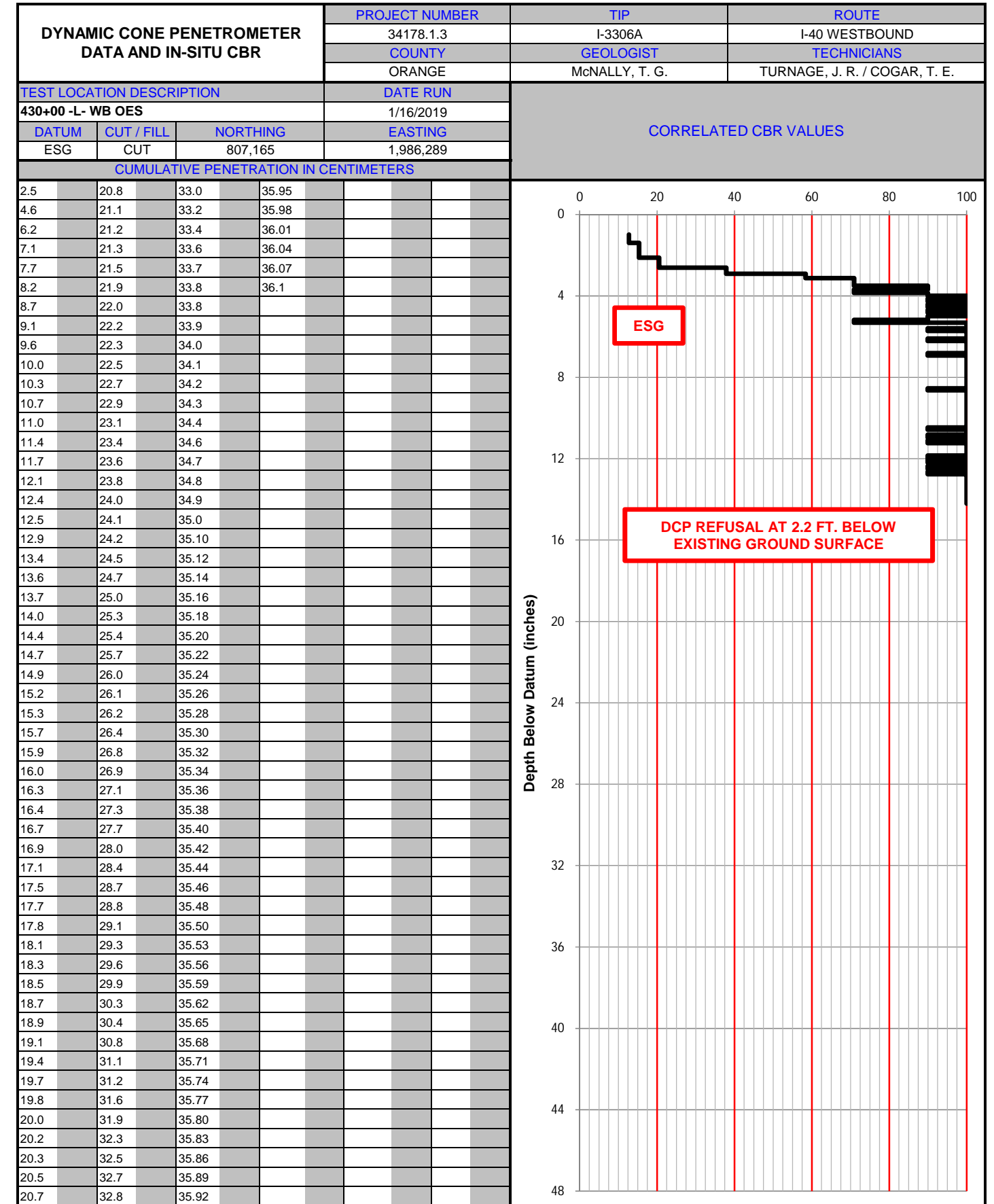


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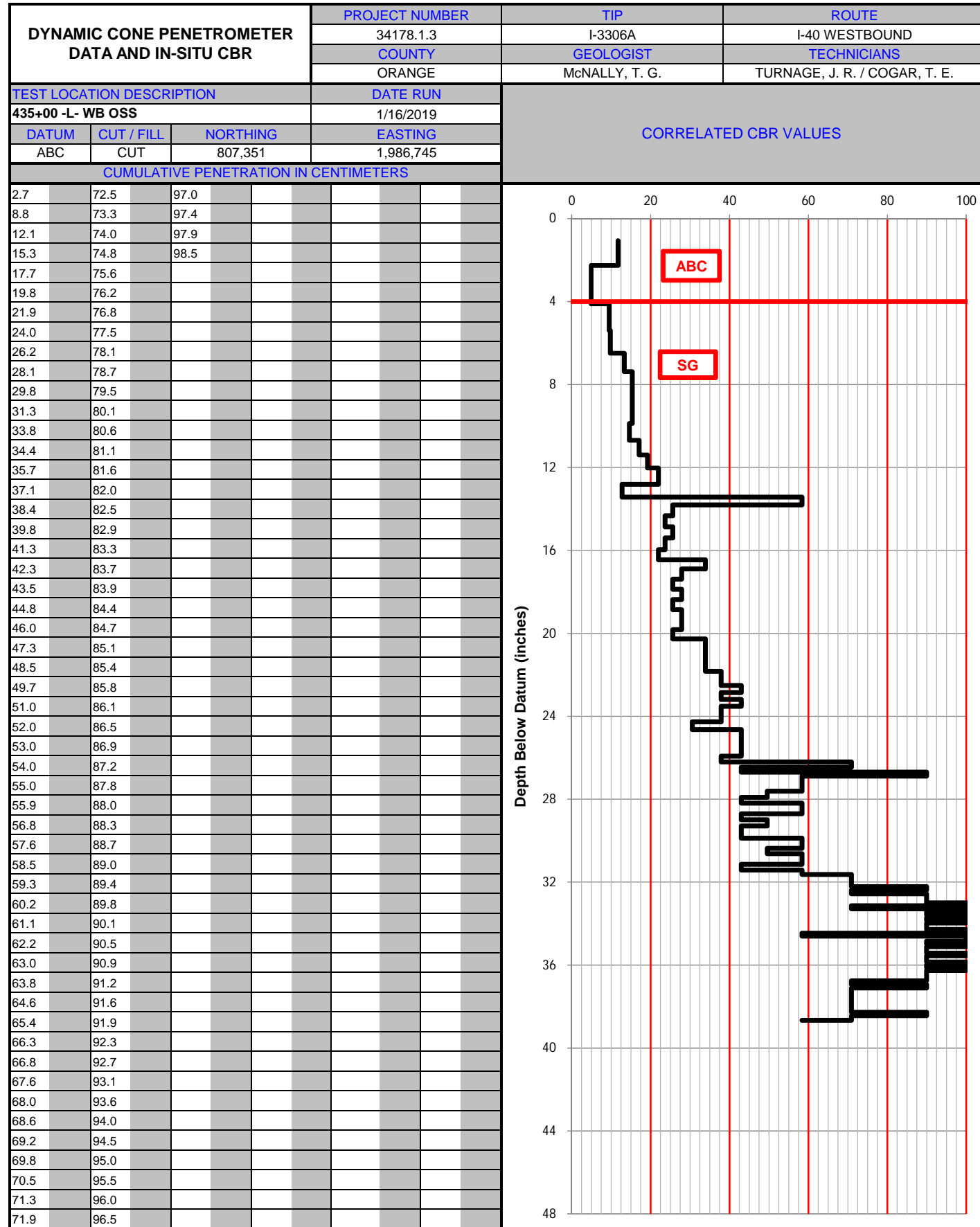


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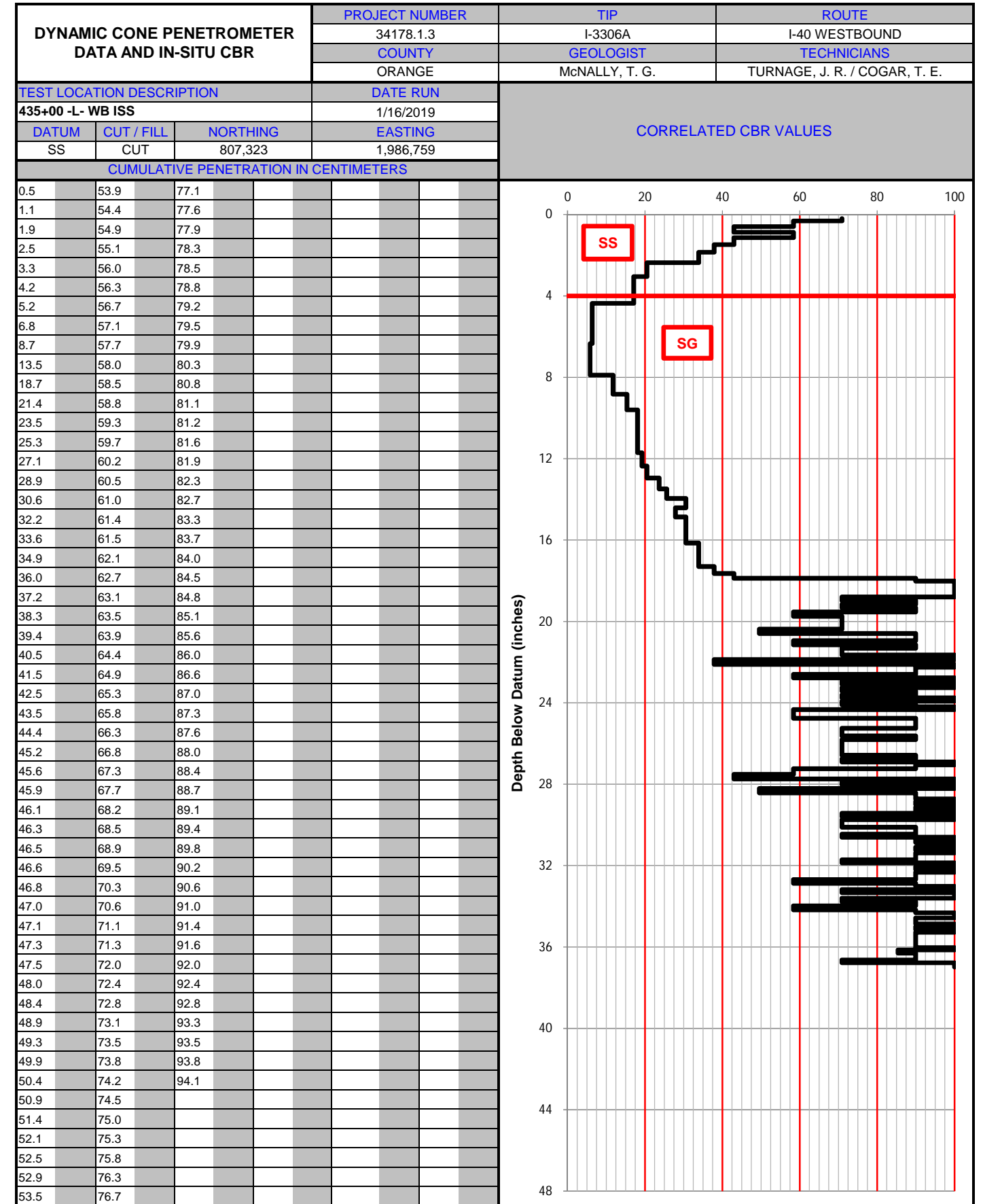


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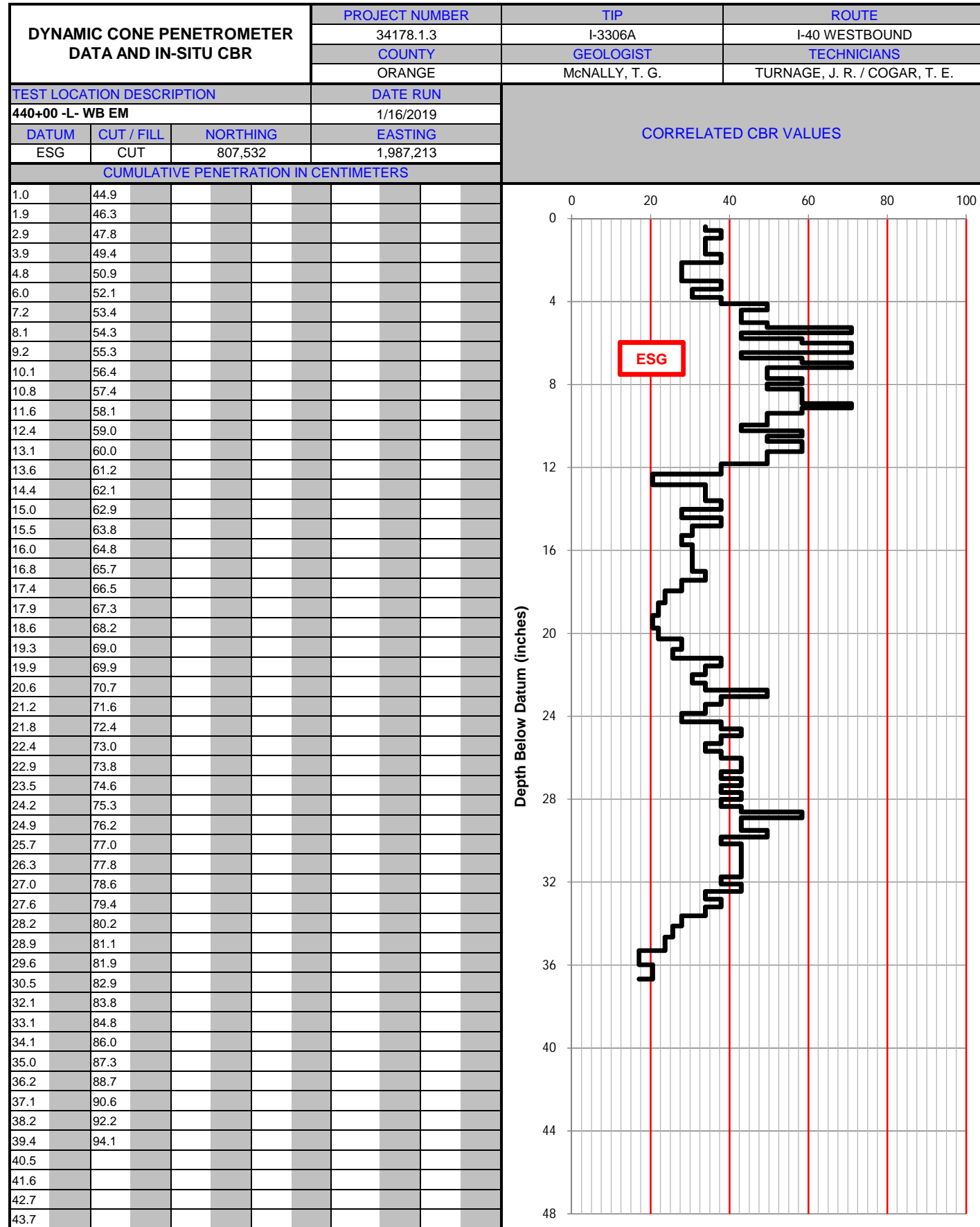


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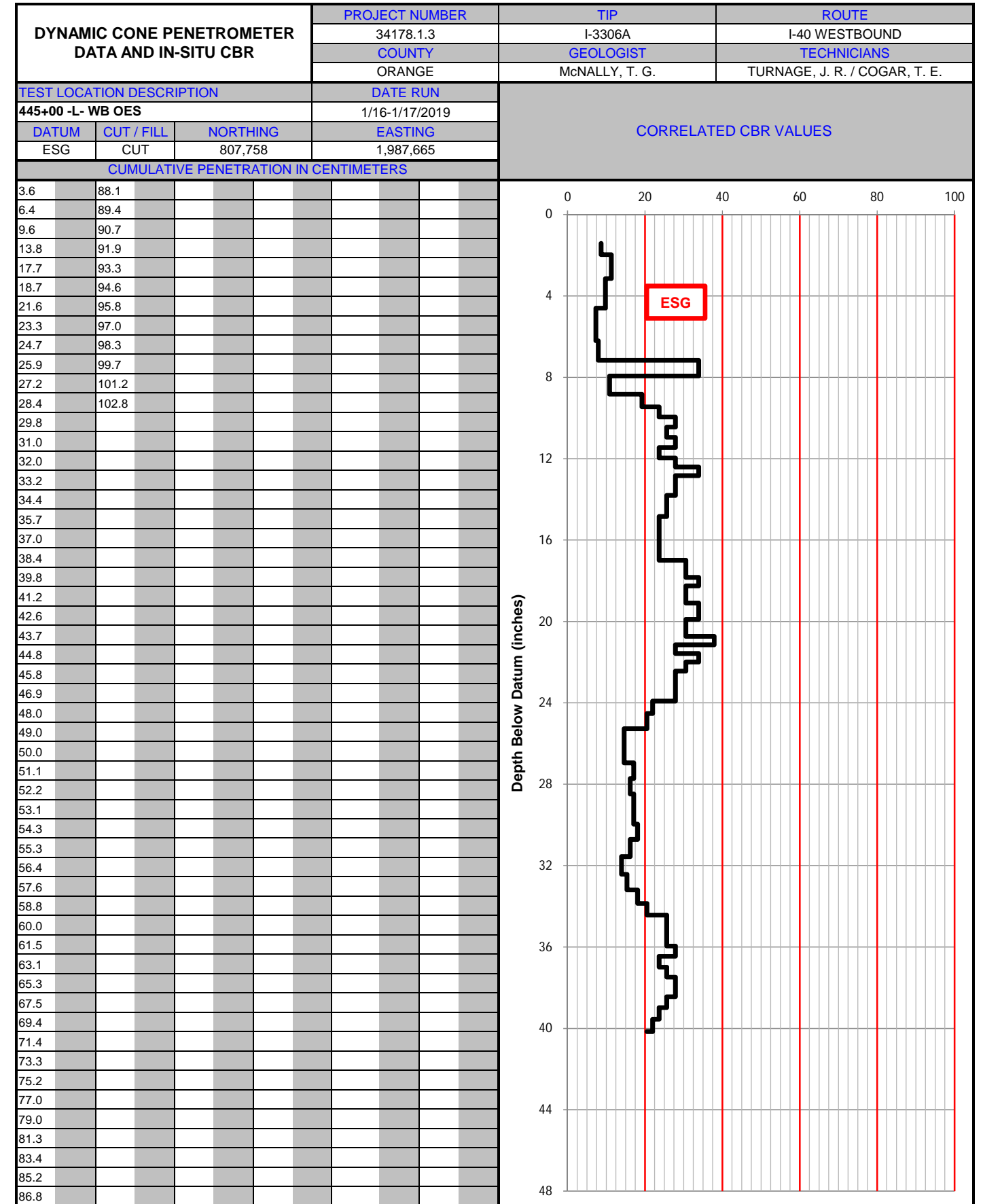


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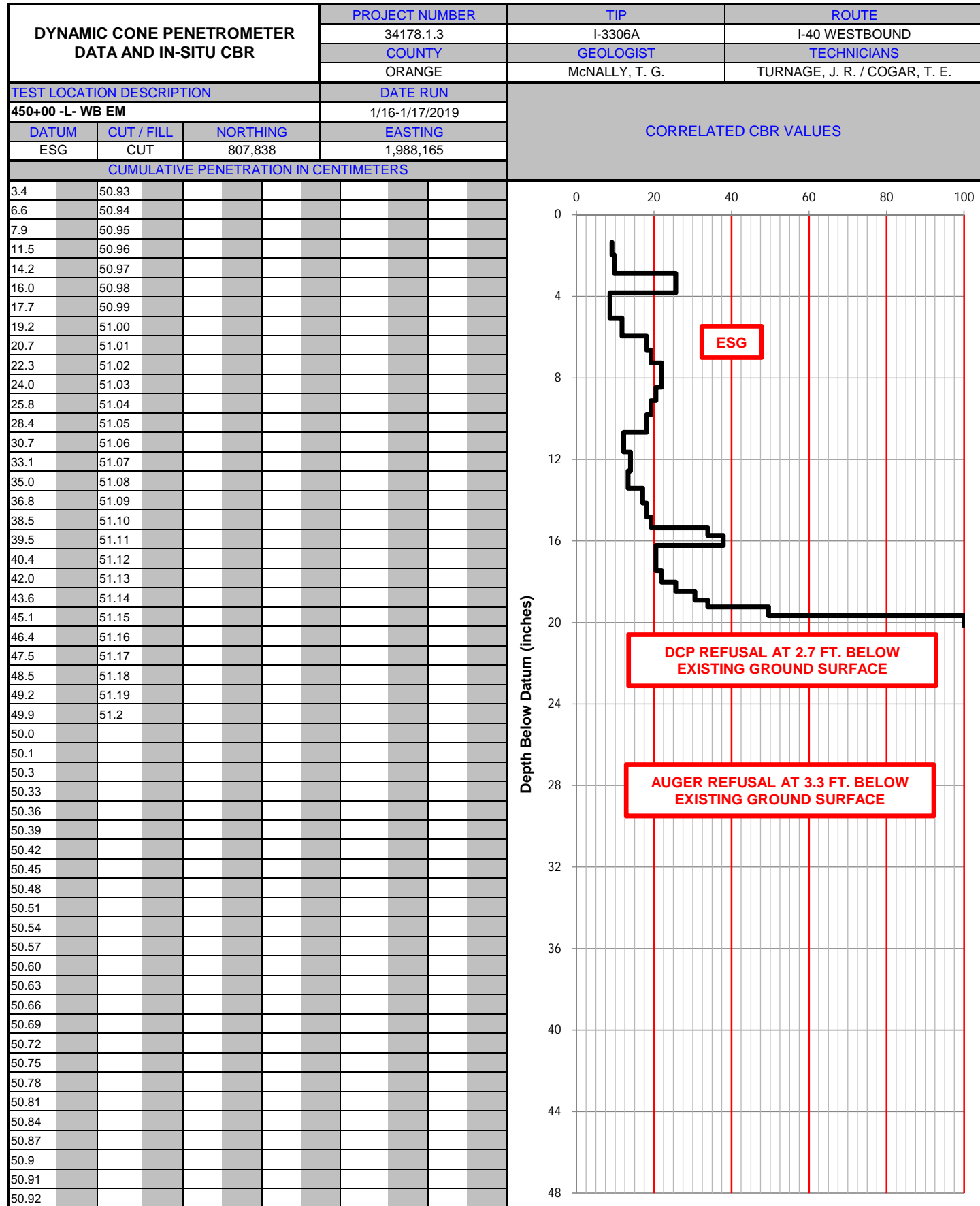


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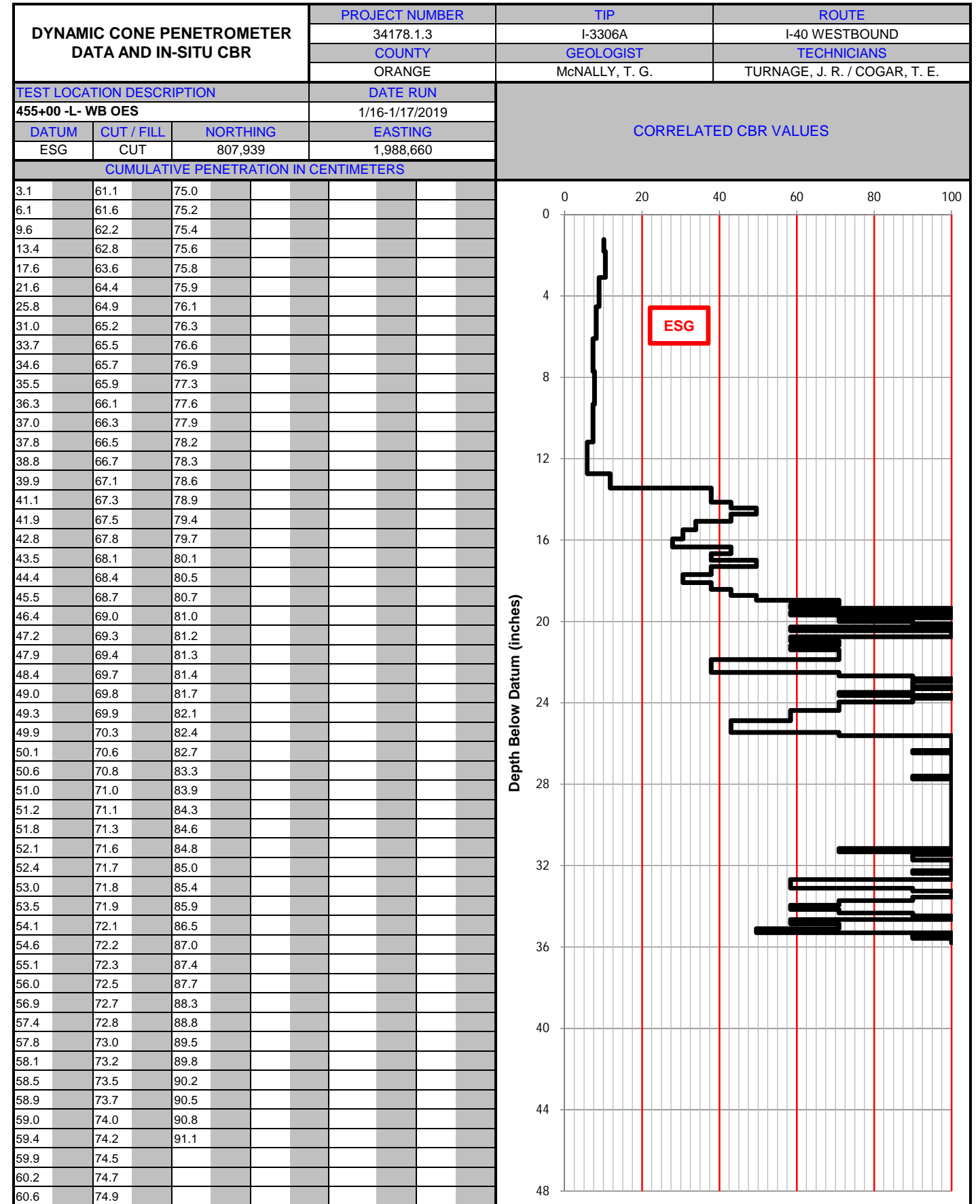


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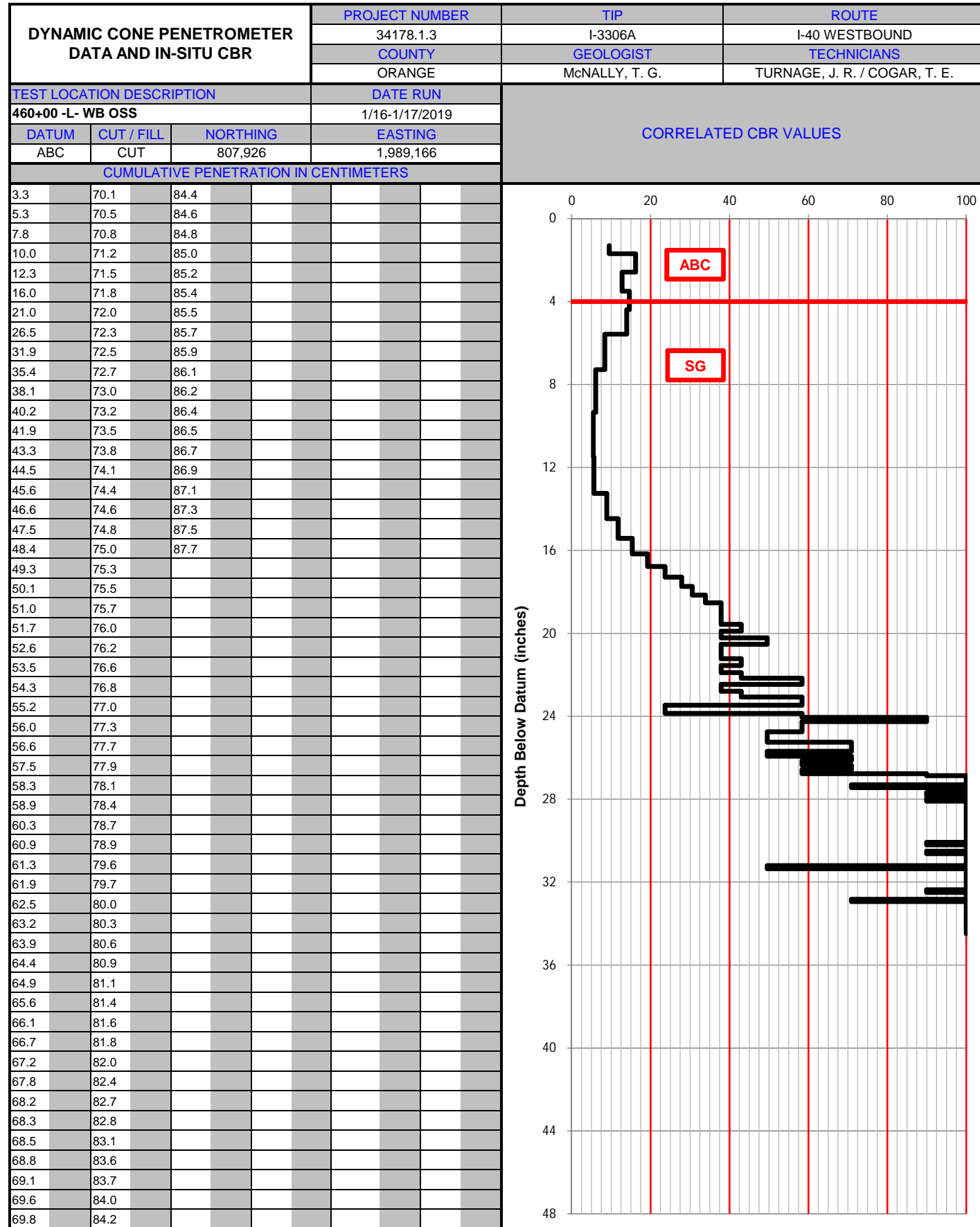
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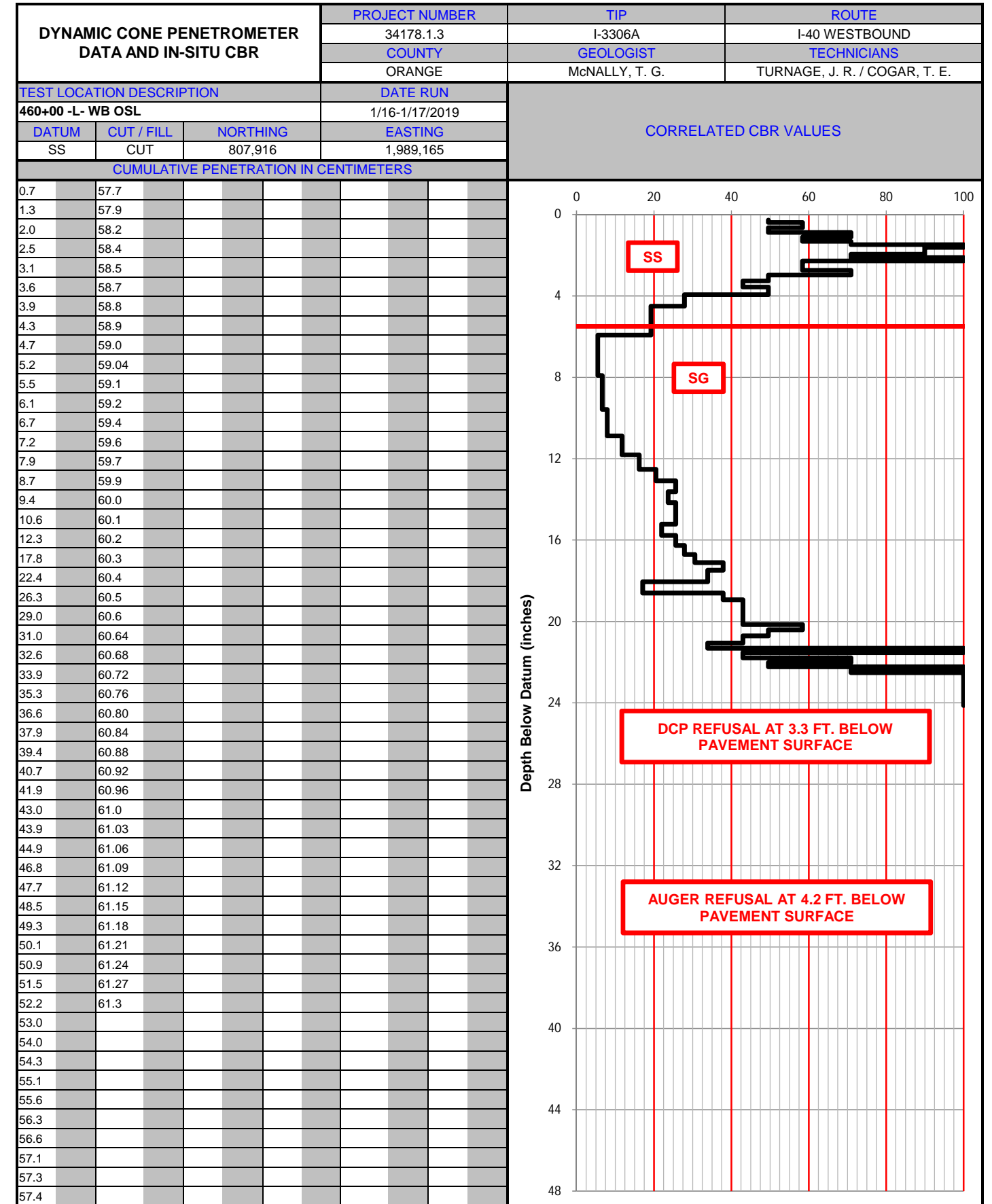
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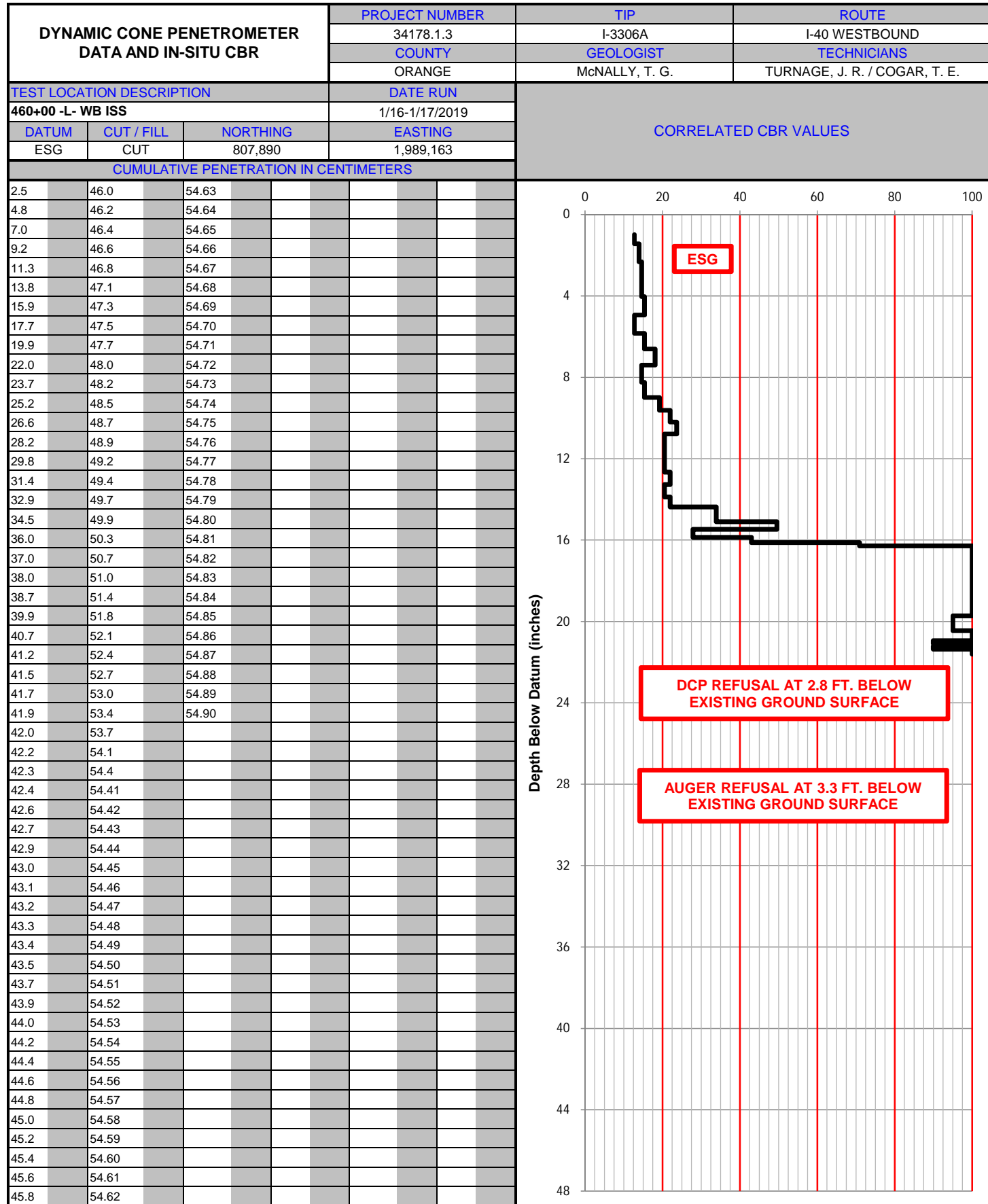


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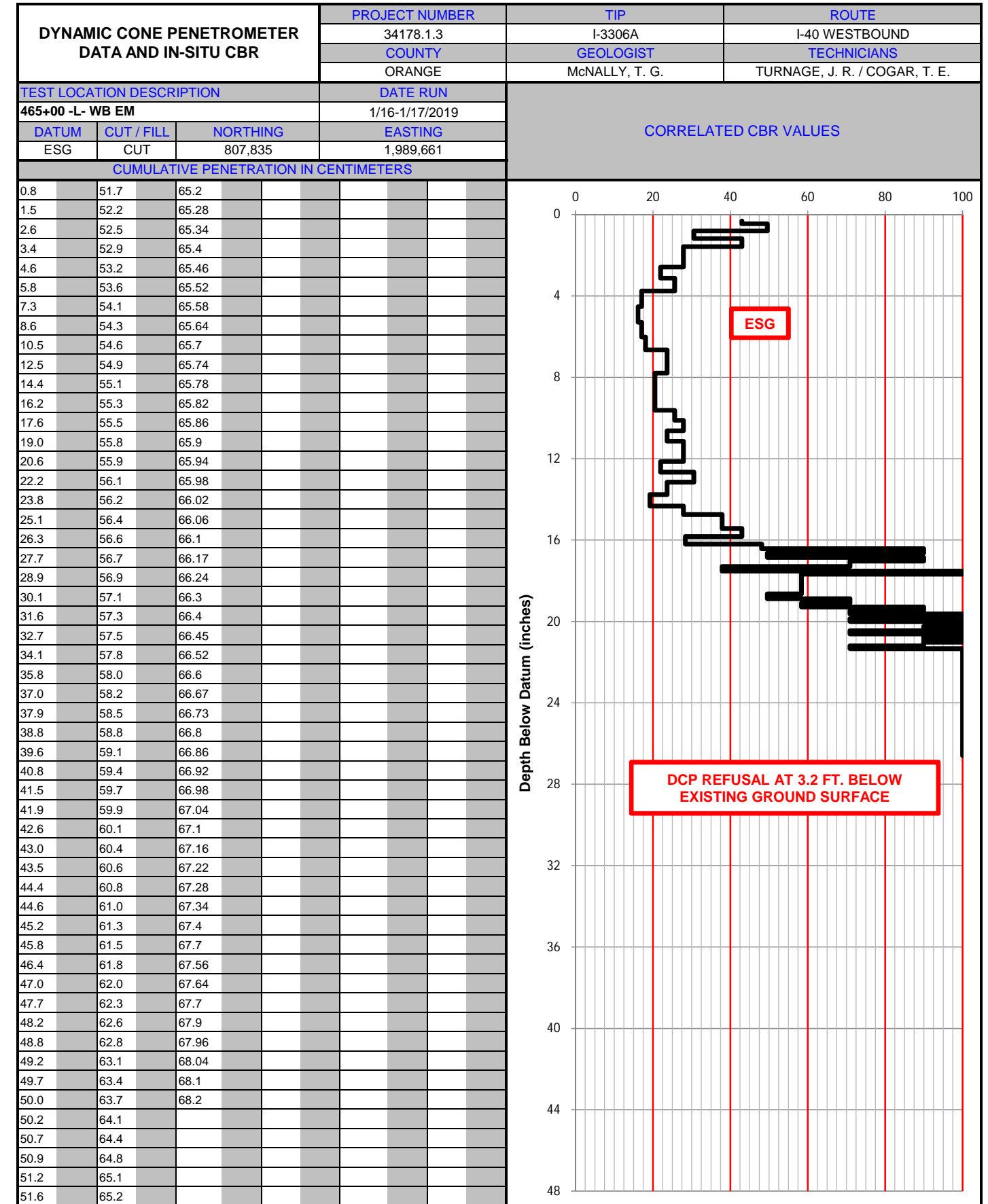


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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



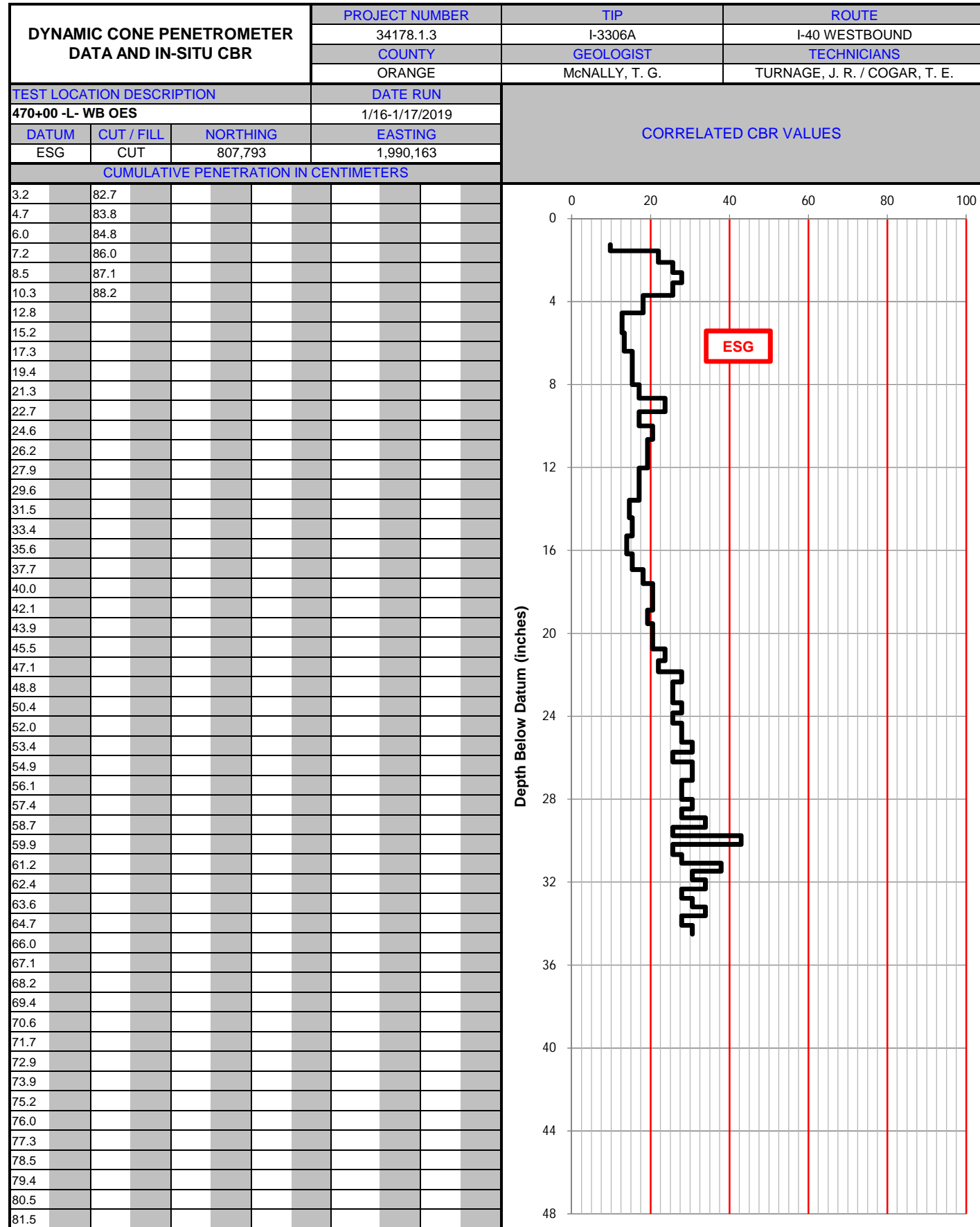


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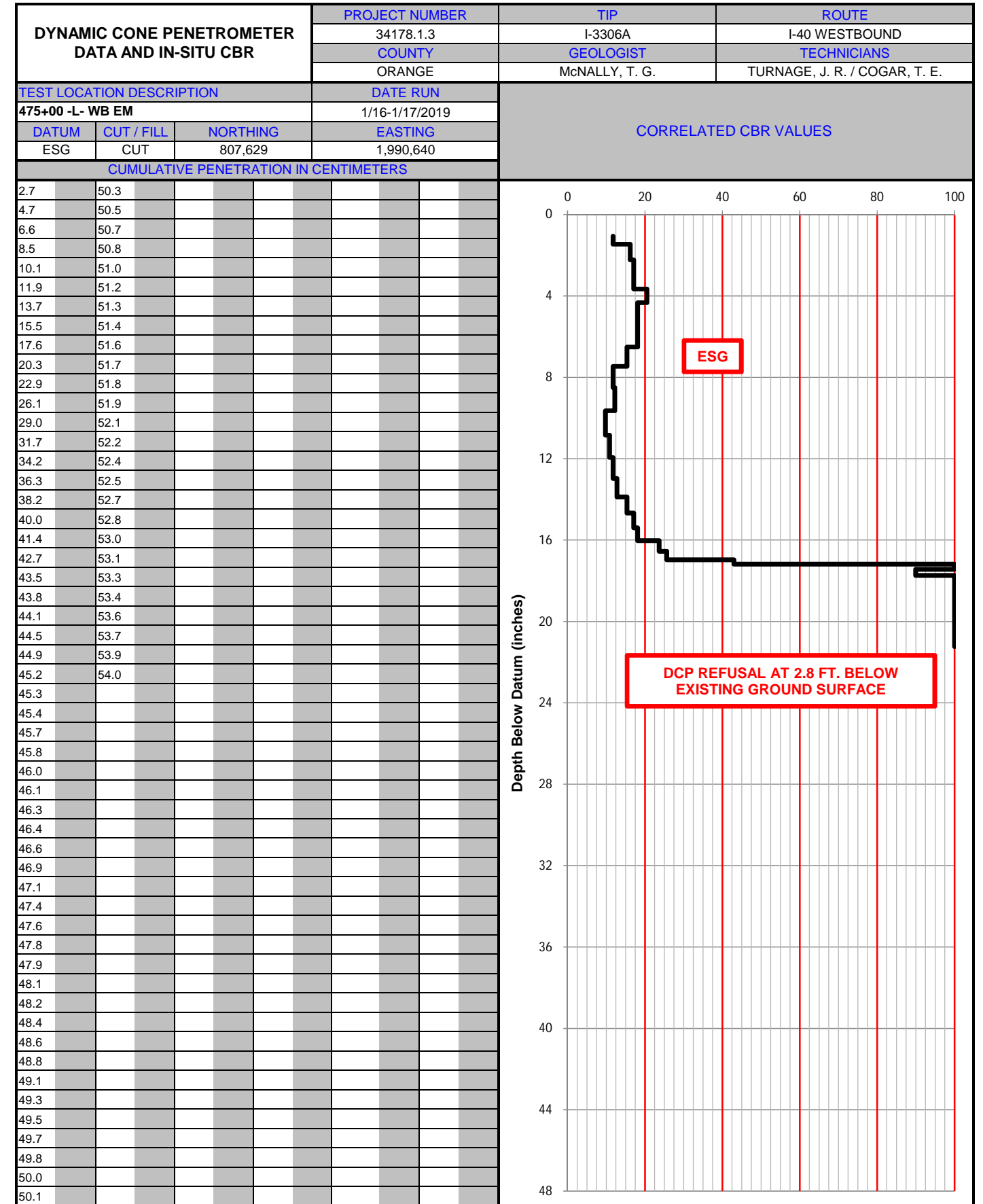


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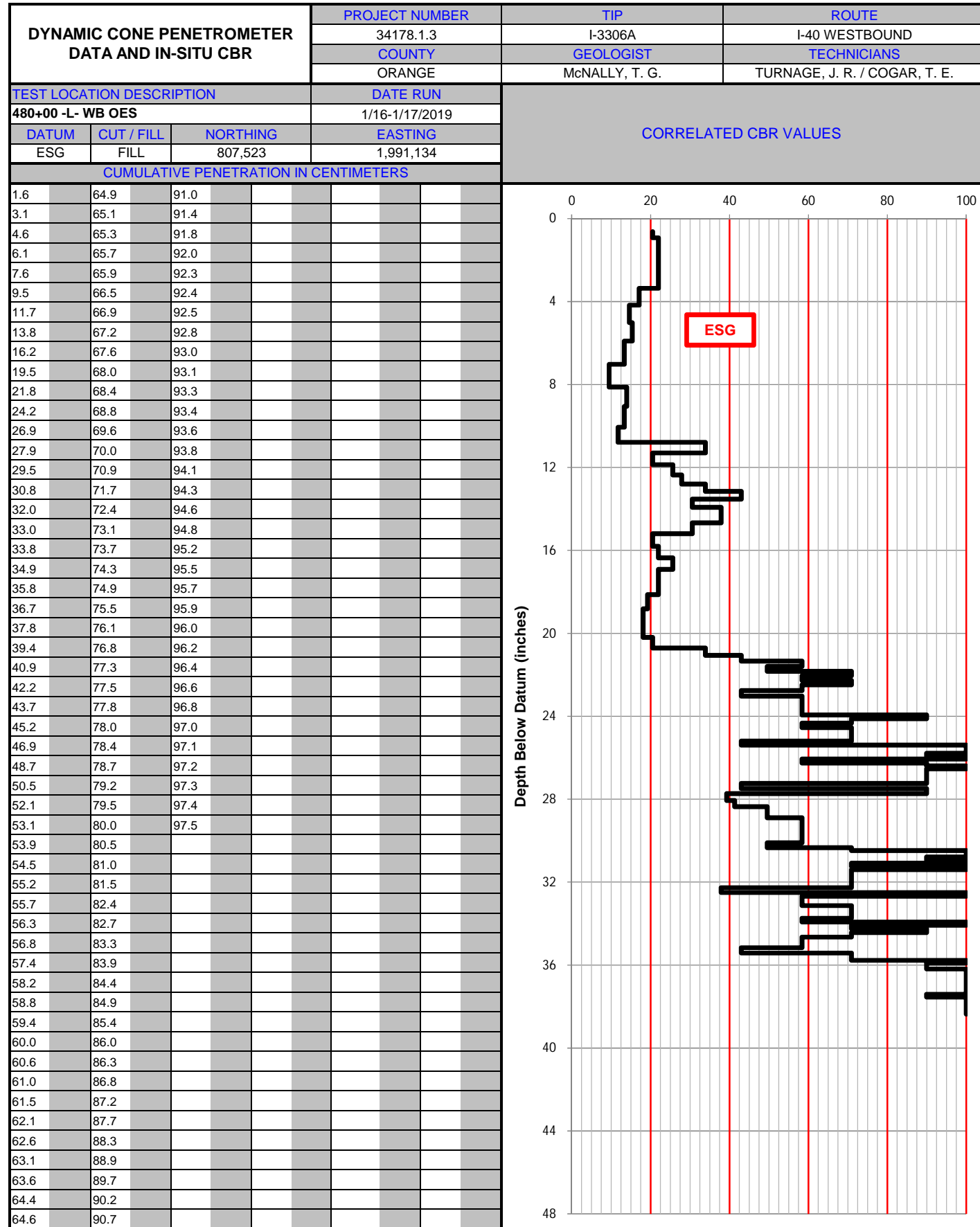


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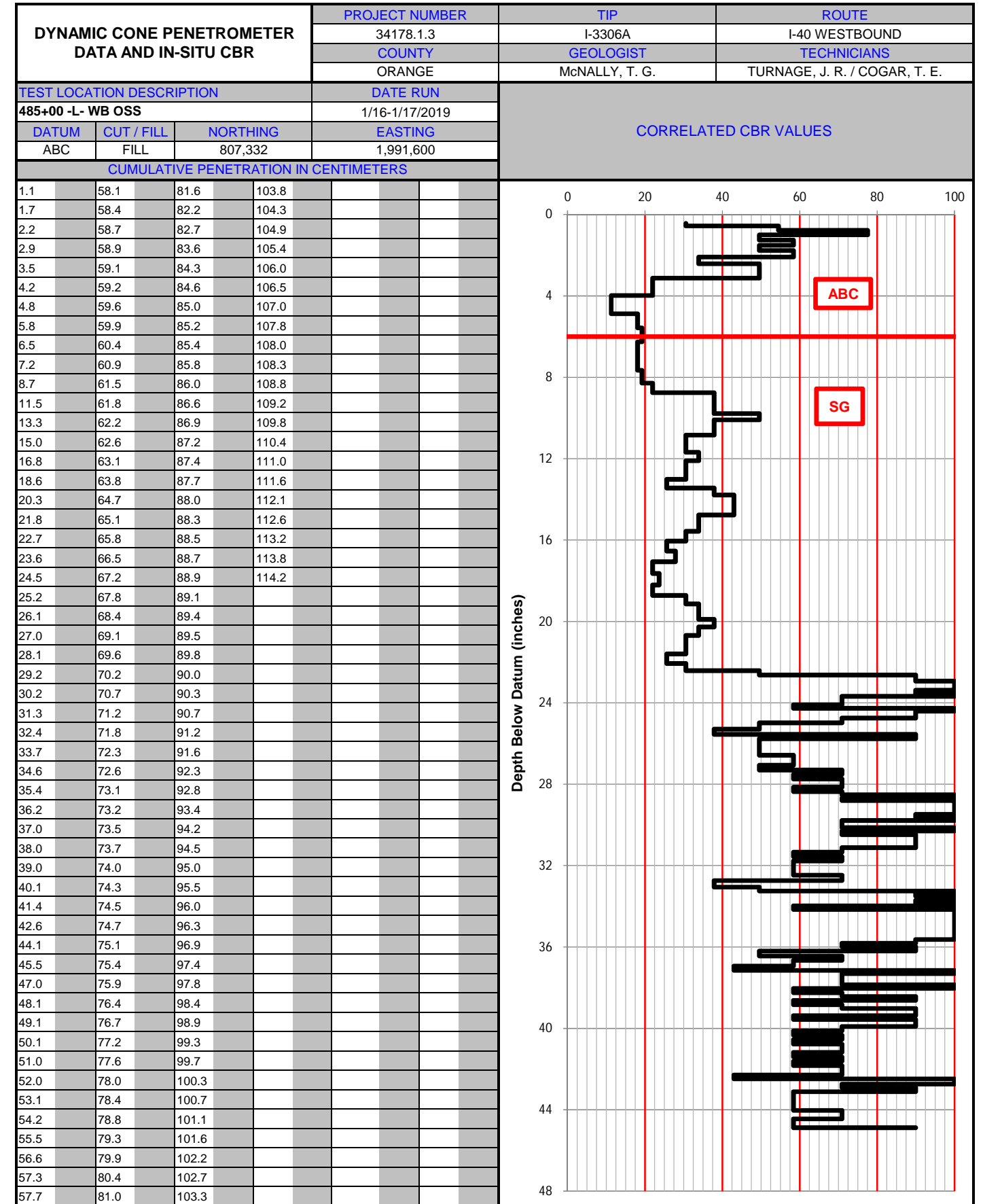


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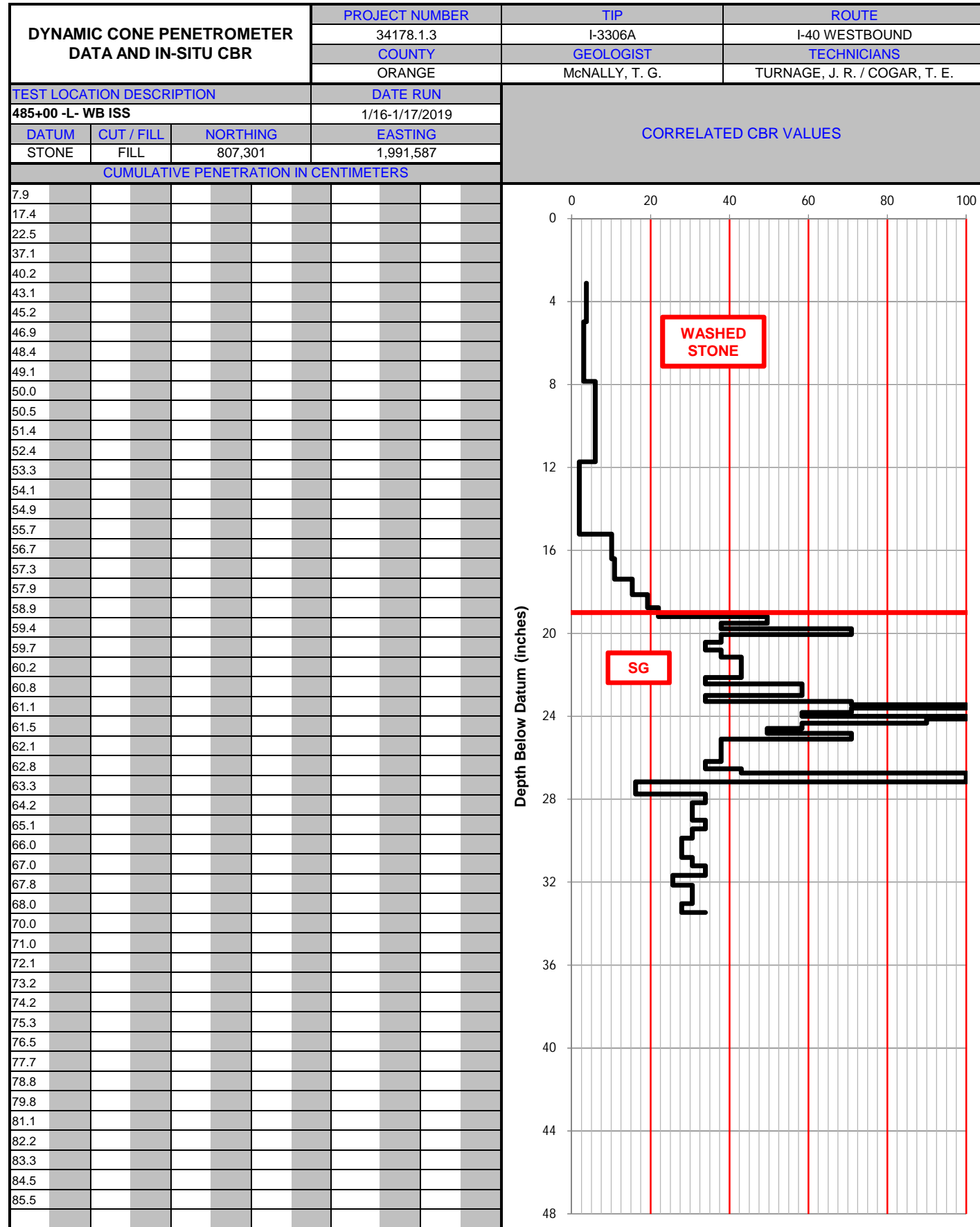


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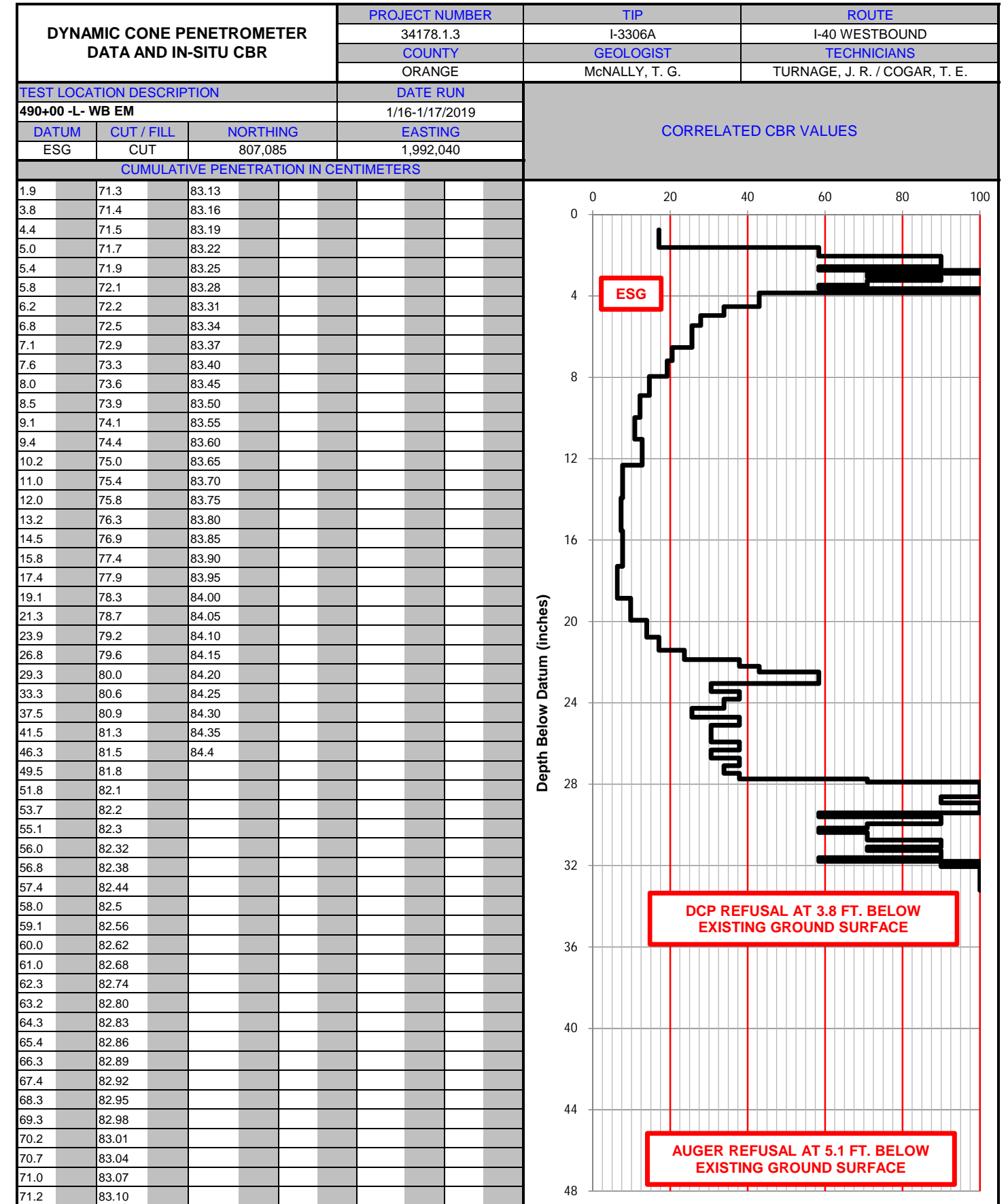


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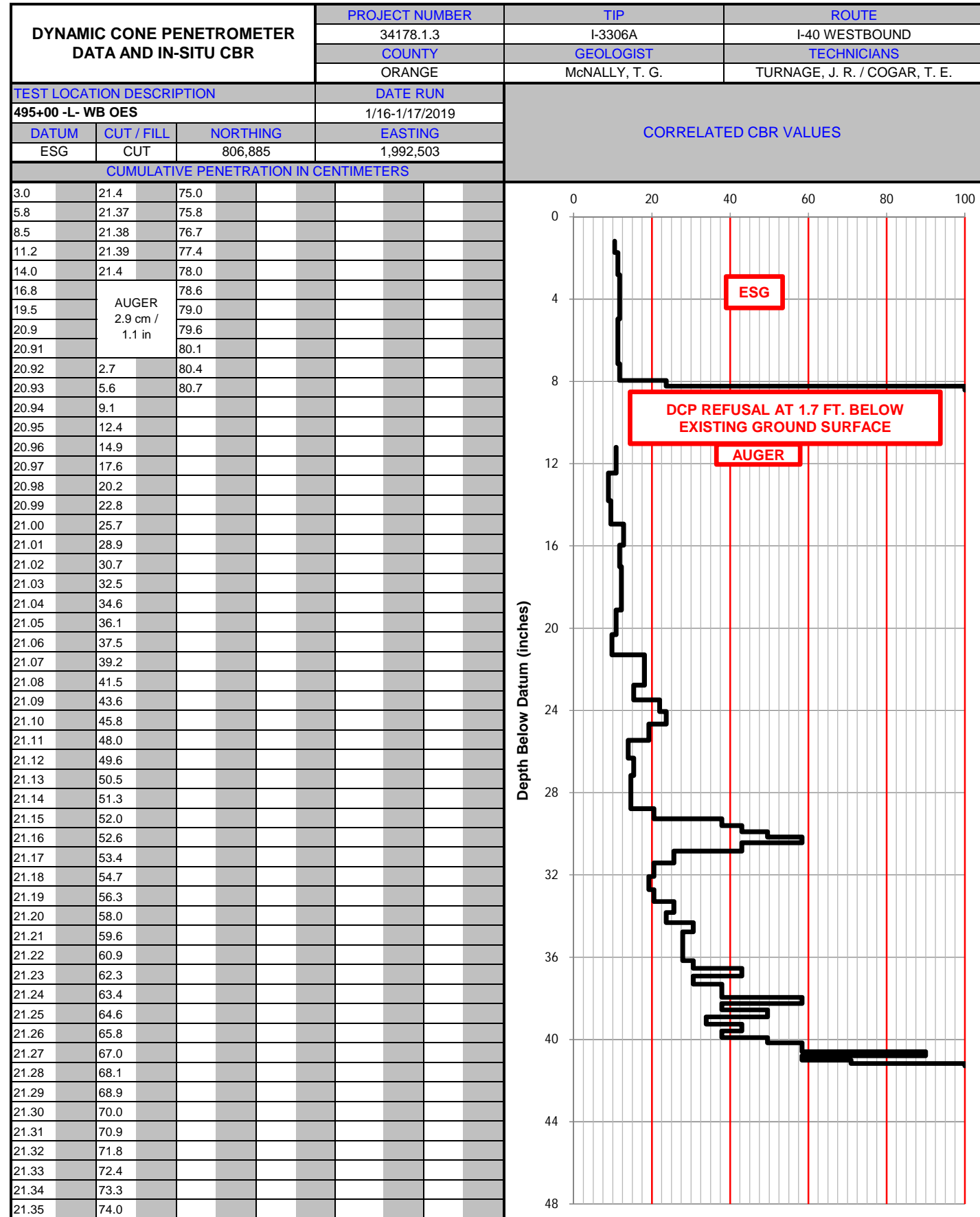


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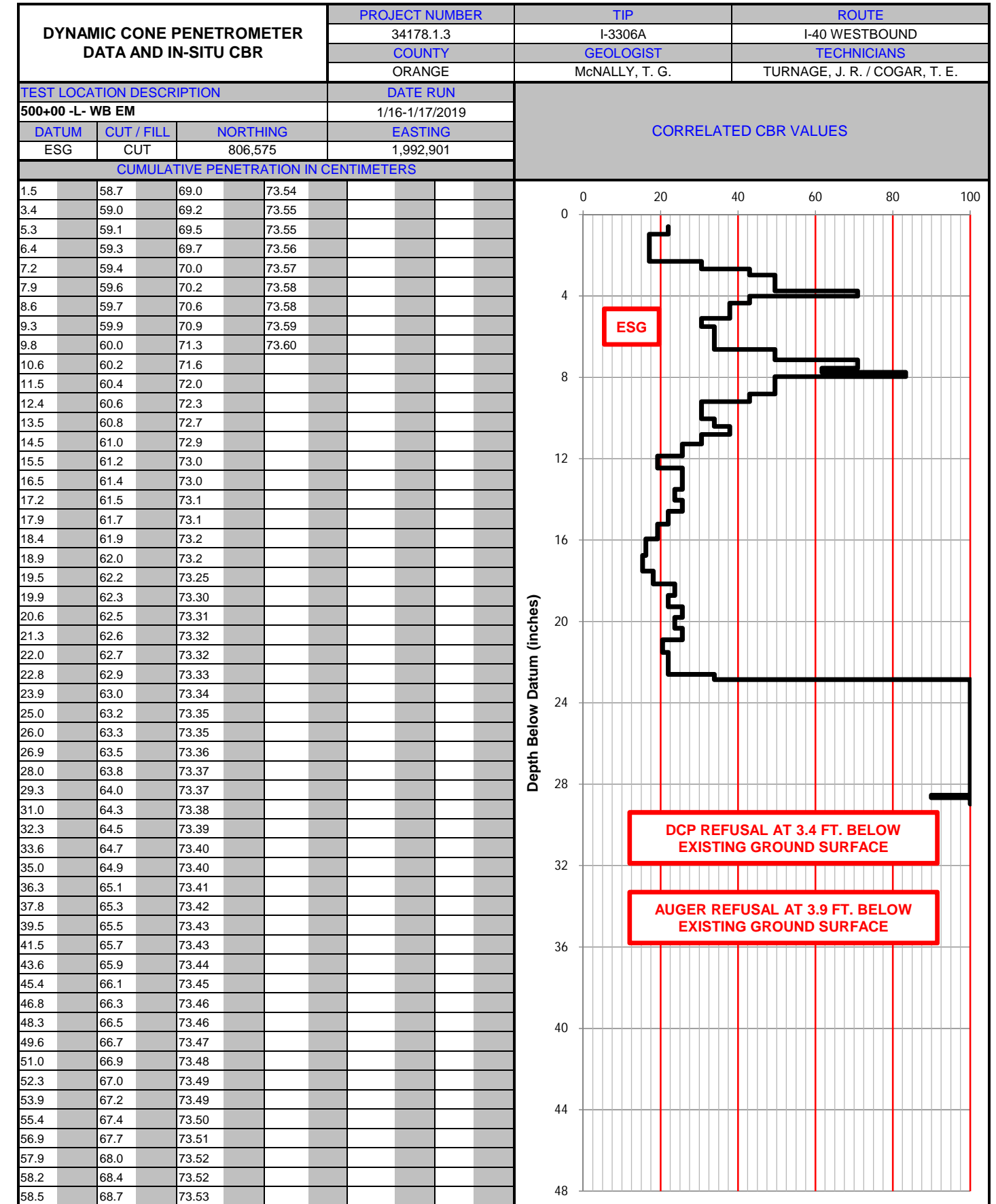


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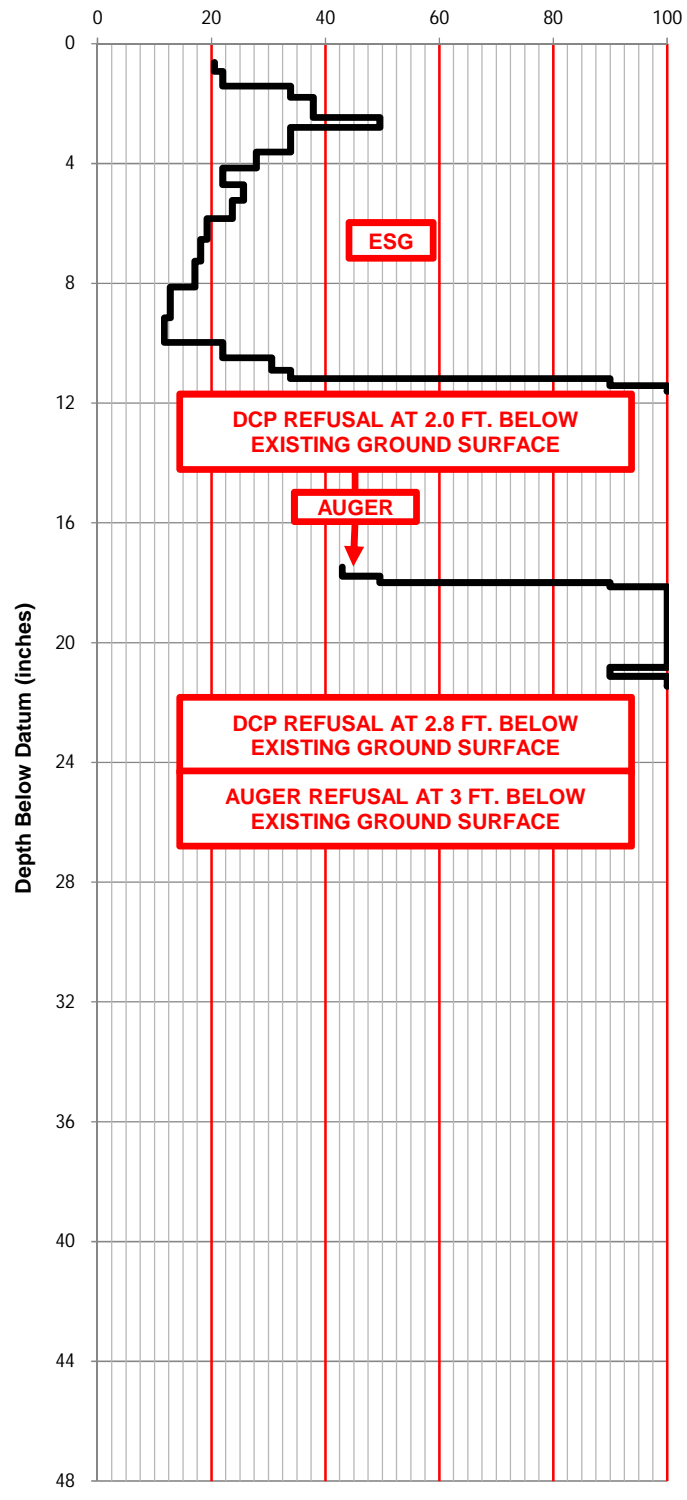
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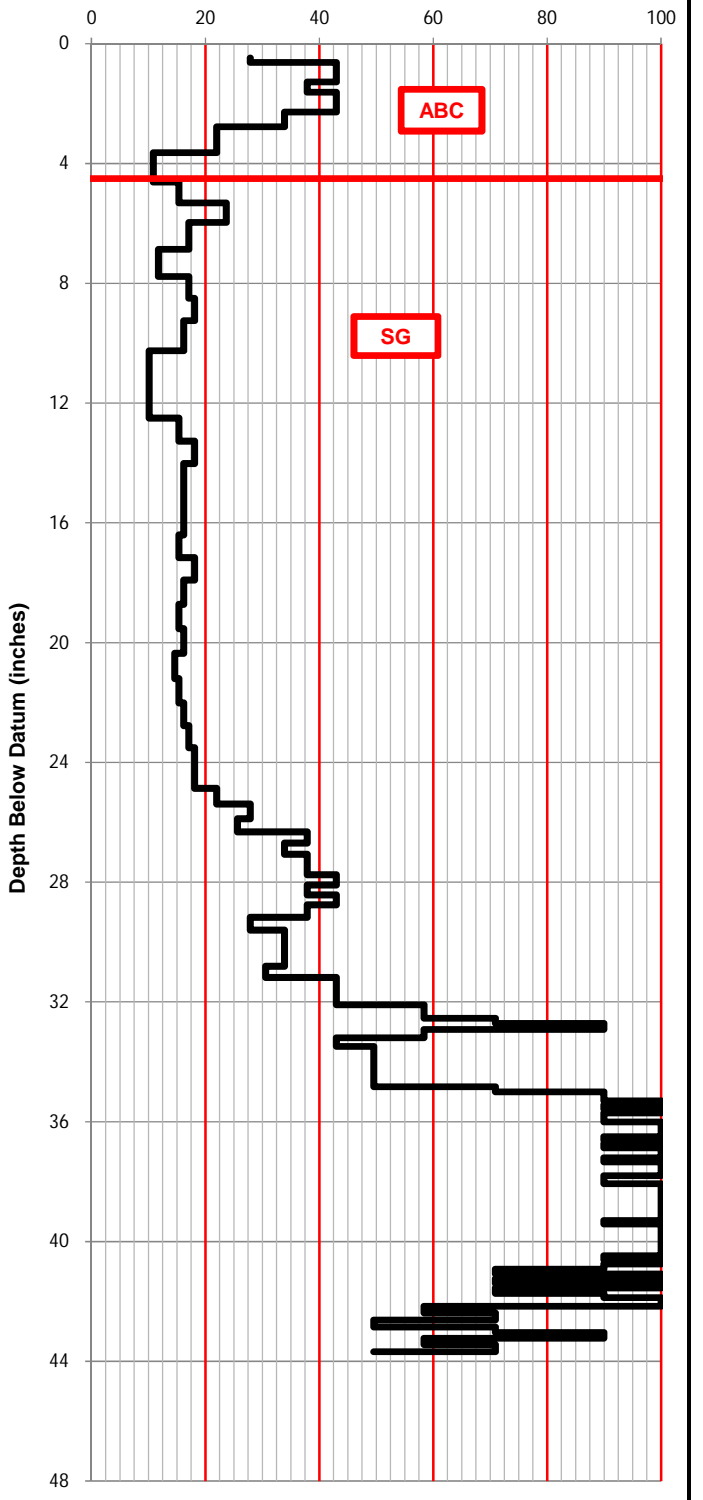
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE				McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		
505+00 -L- WB OES				1/16-1/17/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	FILL	806,338	1,993,344			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.6	29.32	6.9	11.24			
3.1	29.33	7.1	11.25			
4.1	29.34	7.3	11.25			
5.0	29.35	7.4	11.26			
5.9	29.36	7.6	11.26			
6.6	29.37	7.8	11.26			
7.6	29.38	7.9	11.27			
8.6	29.39	8.1	11.27			
9.8	29.40	8.4	11.28			
11.3	29.41	8.7	11.28			
12.6	29.42	8.9	11.28			
14.0	29.43	9.2	11.29			
15.7	29.44	9.5	11.29			
17.5	29.45	9.9	11.30			
19.4	29.46	10.3	11.30			
21.9	29.47	10.6				
24.6	29.48	10.8				
26.1	29.49	11.1				
27.2	29.5	11.10				
28.2		11.11				
28.6	AUGER	11.11				
29.0	13.7 cm /	11.12				
29.01	5.4 in	11.12				
29.02	0.8	11.12				
29.03	1.6	11.13				
29.04	2.3	11.13				
29.05	2.7	11.14				
29.06	3.0	11.14				
29.07	3.3	11.14				
29.08	3.6	11.15				
29.09	3.7	11.15				
29.10	3.8	11.16				
29.11	4.0	11.16				
29.12	4.1	11.16				
29.13	4.2	11.17				
29.14	4.4	11.17				
29.15	4.5	11.18				
29.16	4.6	11.18				
29.17	4.7	11.18				
29.18	4.9	11.19				
29.19	5.0	11.19				
29.20	5.1	11.20				
29.21	5.3	11.20				
29.22	5.4	11.20				
29.23	5.6	11.21				
29.24	5.7	11.21				
29.25	5.8	11.22				
29.26	6.0	11.22				
29.27	6.1	11.22				
29.28	6.3	11.23				
29.29	6.4	11.23				
29.30	6.6	11.24				
29.3	6.7	11.24				



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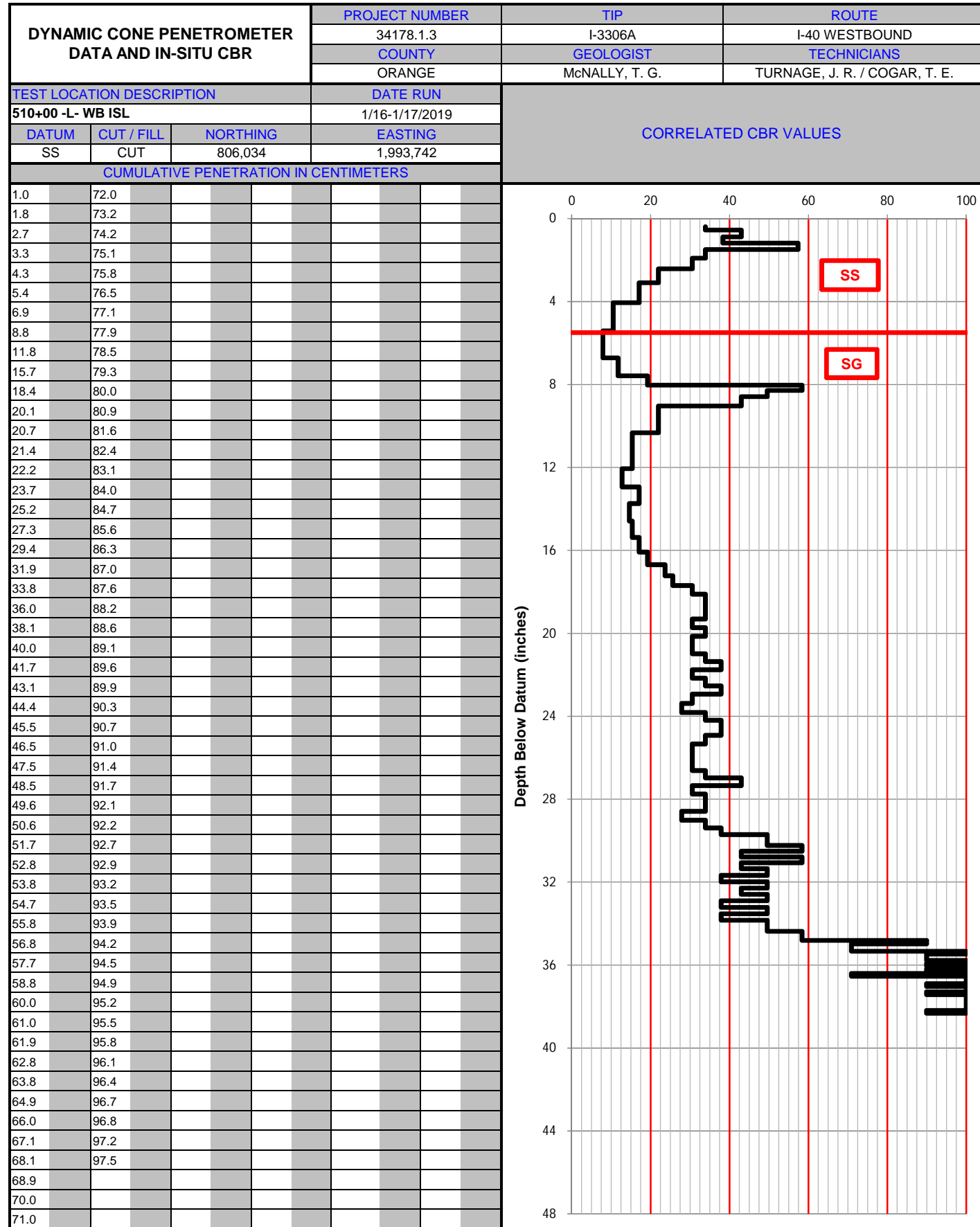


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE				McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		
510+00 -L- WB OSS				1/16-1/17/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	806,056	1,993,757			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	81.8	101.4				
2.0	82.4	101.7				
2.8	82.9	102.0				
3.7	83.3	102.3				
4.5	83.9	102.6				
5.3	84.7	103.0				
6.3	85.4	103.3				
7.8	86.1	103.7				
10.7	86.8	104.2				
12.8	87.5	104.5				
14.2	88.2	105.0				
16.1	88.7	105.3				
18.8	89.1	105.8				
20.7	89.5	106.2				
22.5	89.8	106.5				
24.5	90.2	106.8				
27.6	90.5	107.4				
30.7	90.9	107.9				
32.8	91.3	108.6				
34.6	91.6	109.1				
36.6	91.9	109.5				
38.6	92.2	110.1				
40.6	92.5	110.6				
42.7	92.9	111.3				
44.5	93.1					
46.5	93.5					
48.6	93.8					
50.6	94.0					
52.8	94.3					
54.9	94.7					
56.9	95.0					
58.8	95.3					
60.6	95.6					
62.4	95.8					
63.9	96.2					
65.1	96.6					
66.4	96.8					
67.3	97.1					
68.3	97.4					
69.2	97.7					
70.1	98.0					
70.9	98.2					
71.8	98.4					
72.6	98.6					
73.5	98.9					
74.7	99.2					
75.7	99.4					
76.7	99.6					
77.7	100.0					
78.8	100.2					
79.6	100.5					
80.4	100.8					
81.2	101.1					

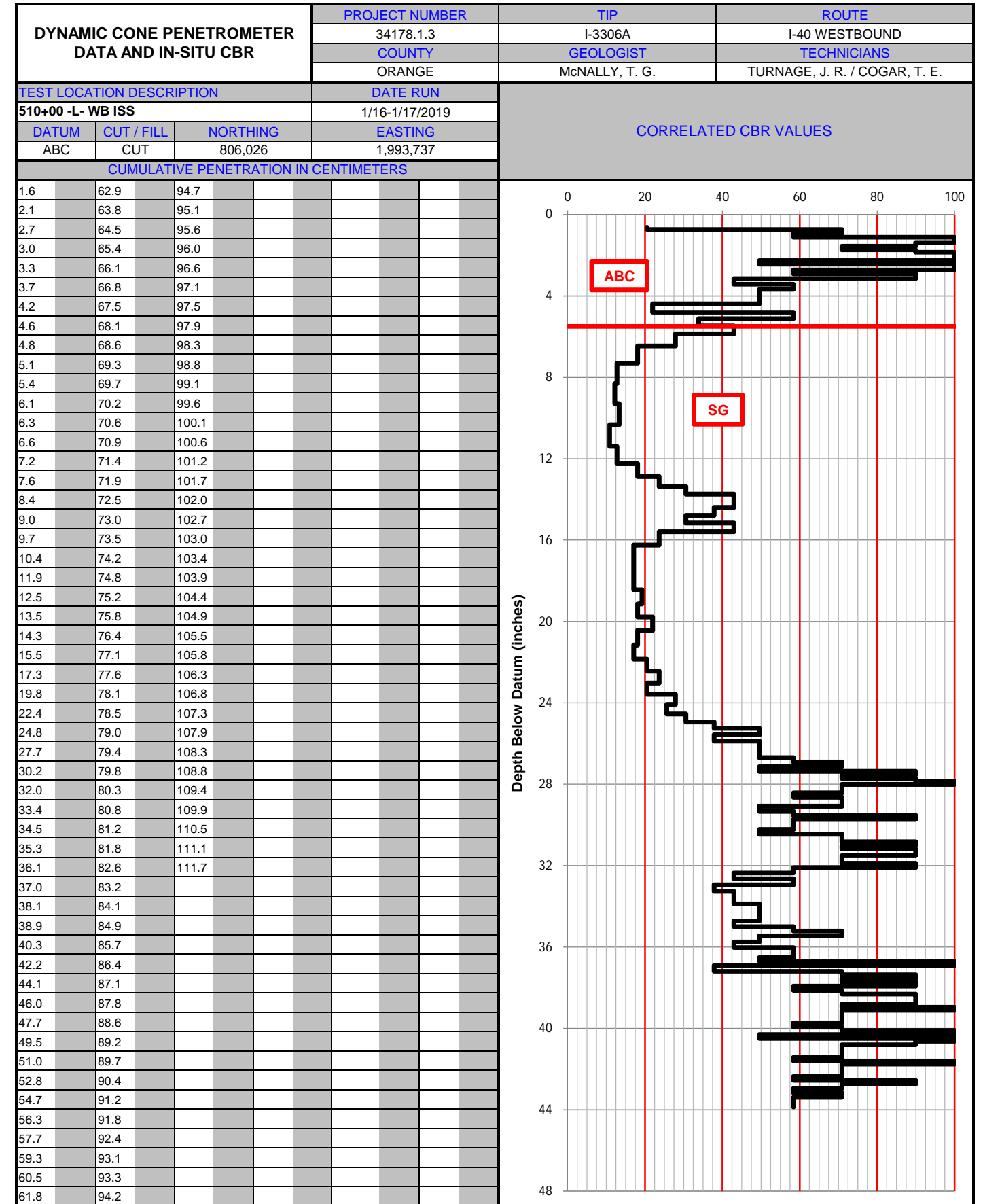


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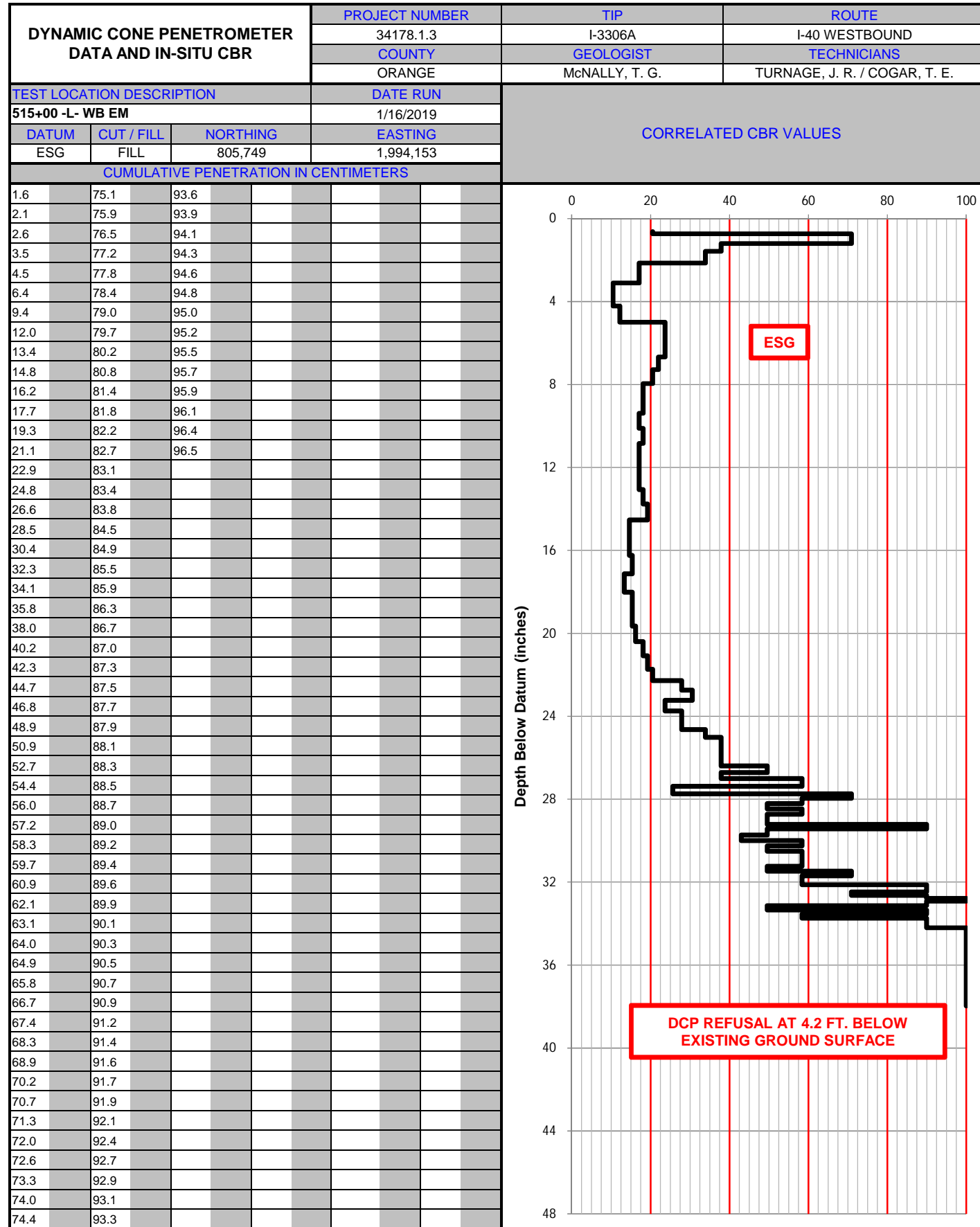
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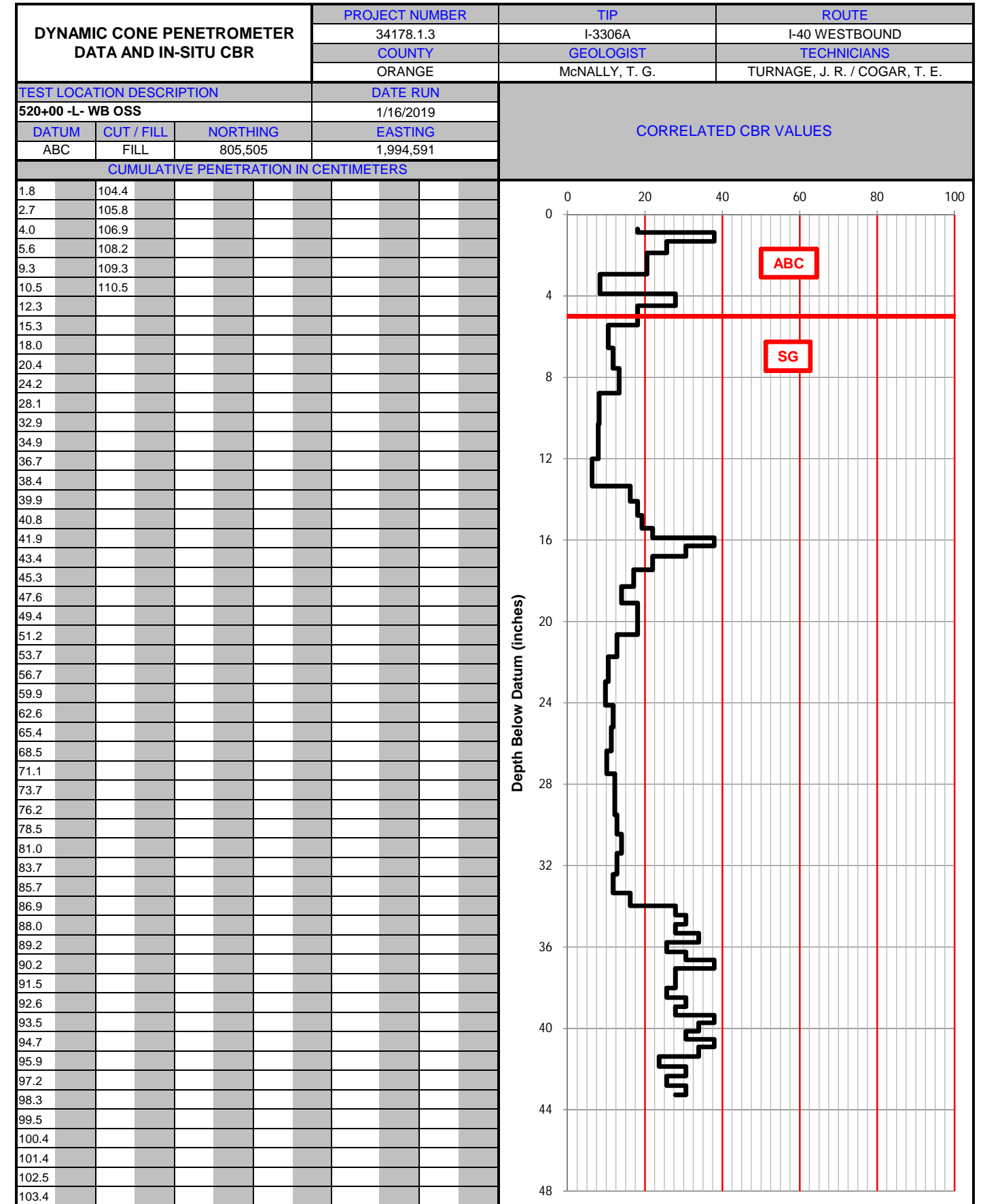
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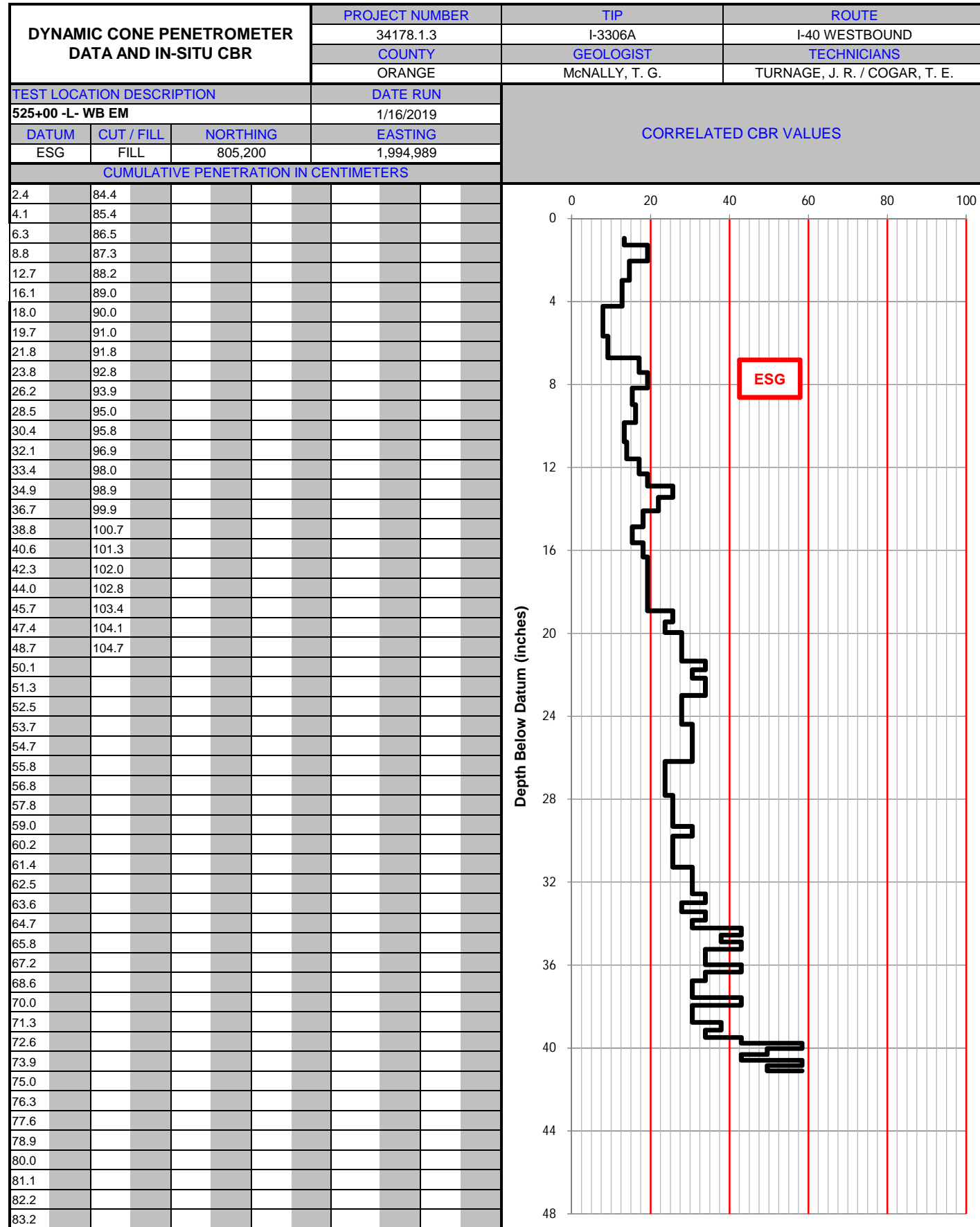


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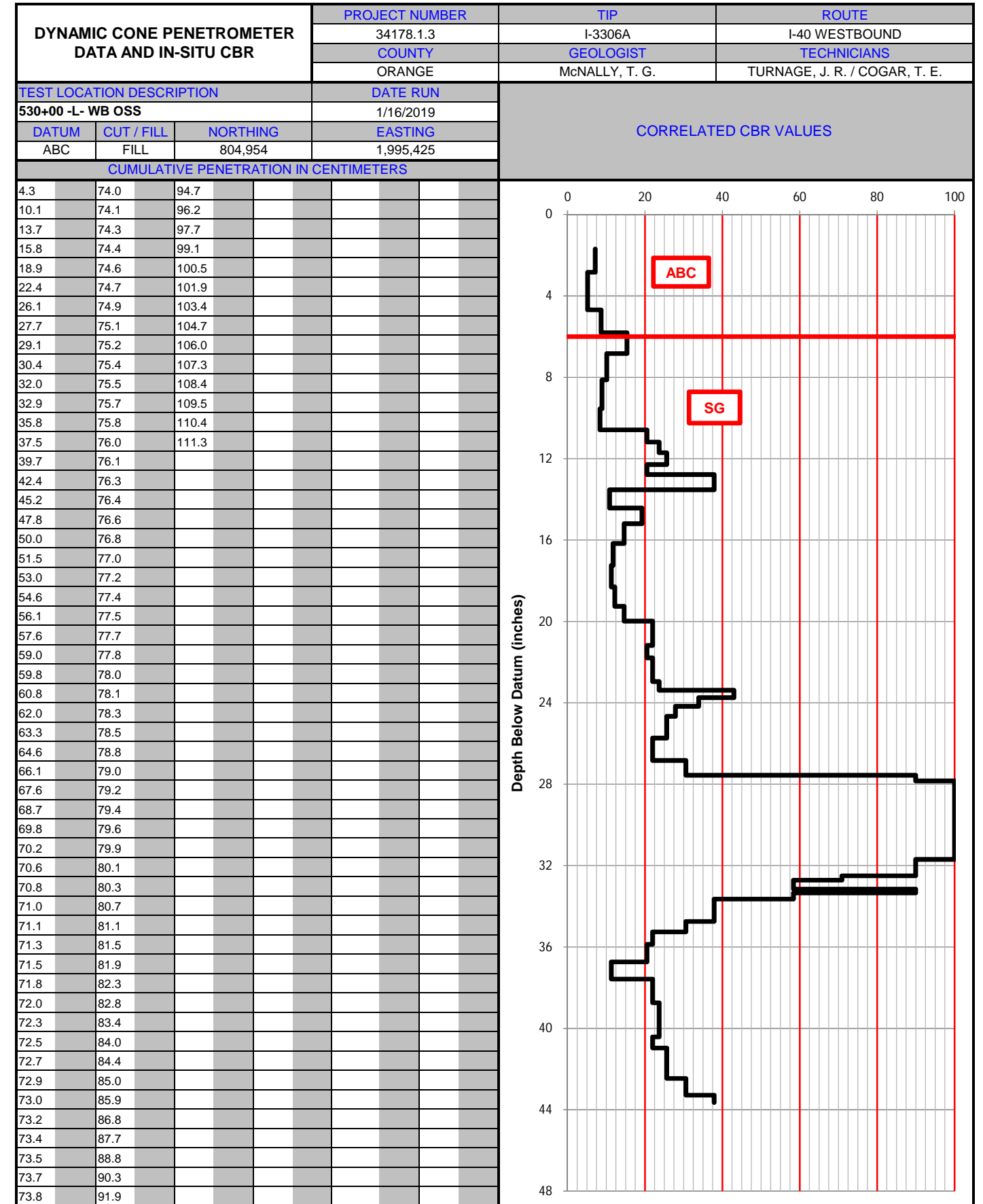


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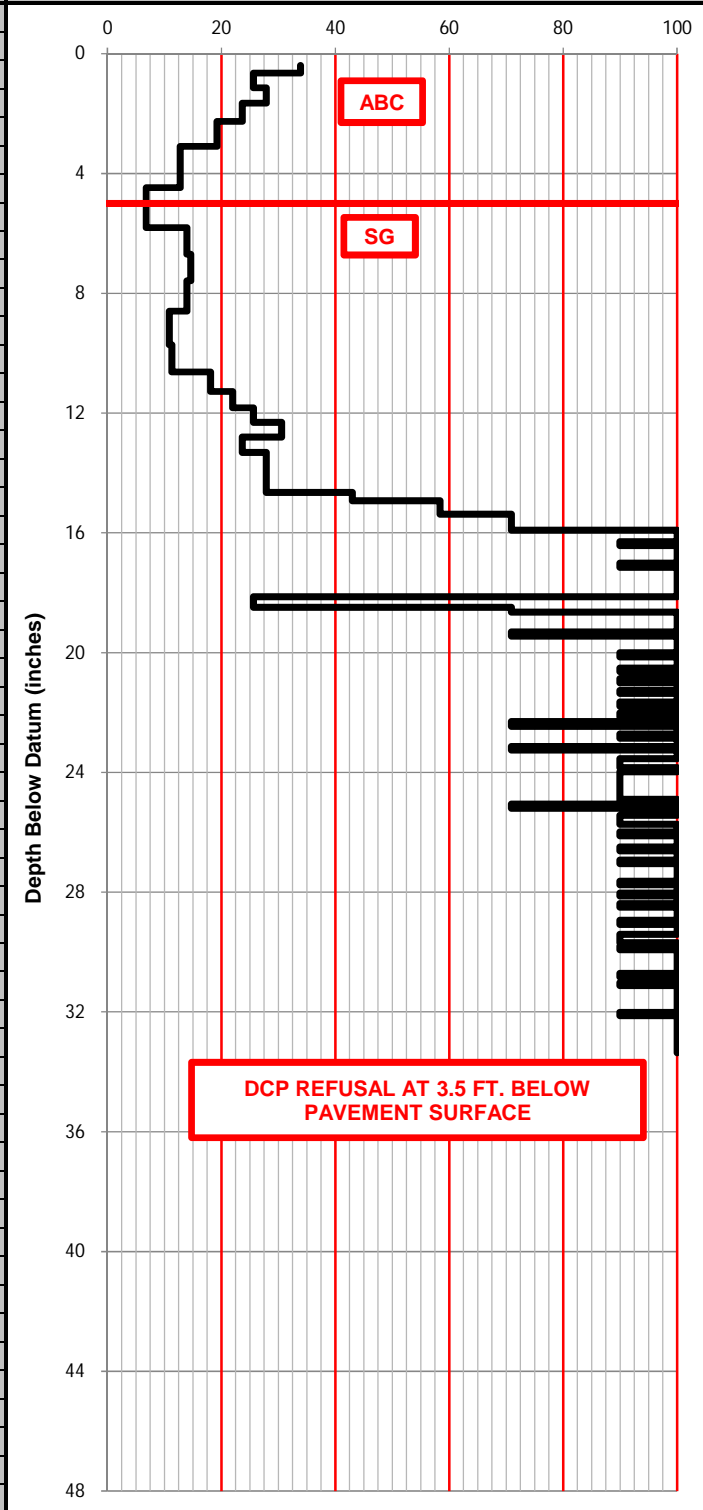
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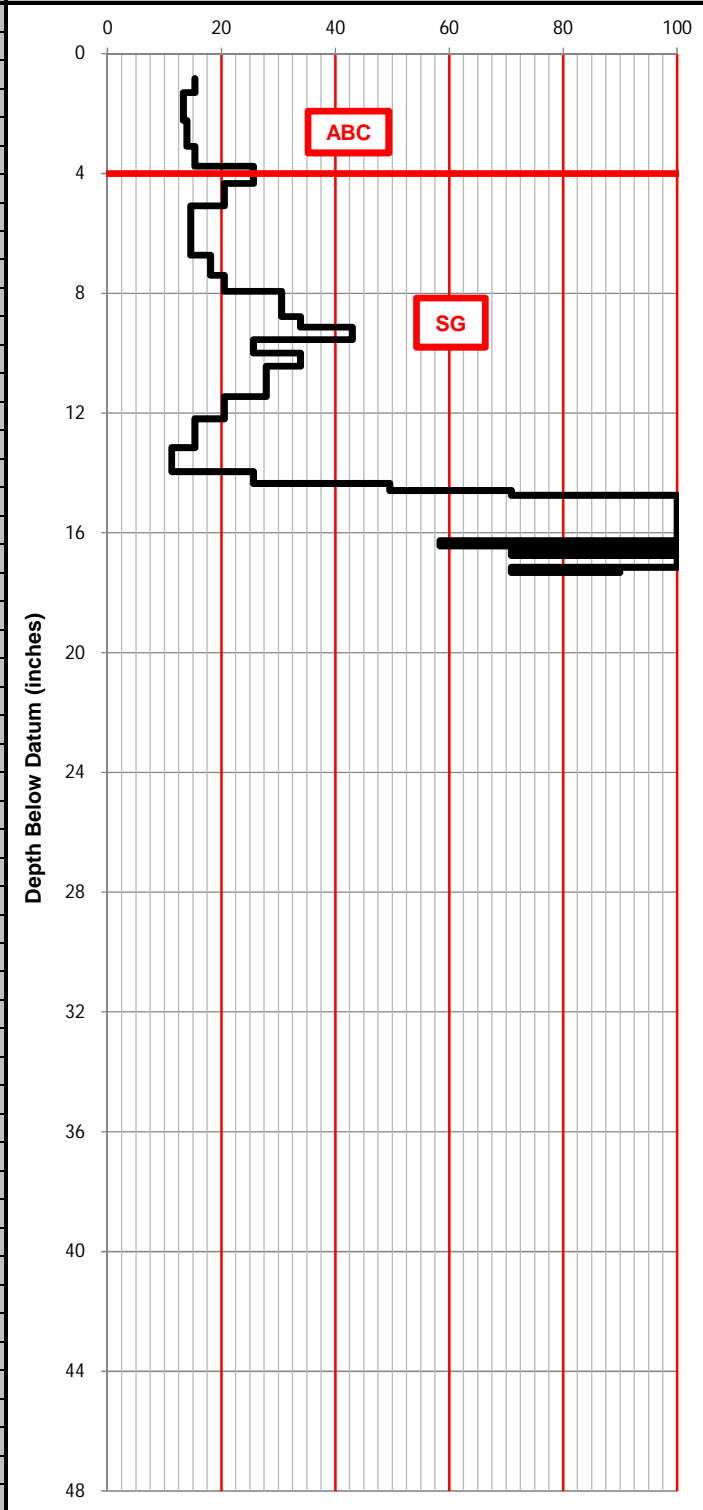
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
535+00 -L- WB OSS				DATE RUN	CORRELATED CBR VALUES	
				1/16/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	804,679	1,995,843			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.0	48.6	65.5	79.3			
2.3	48.8	65.8	79.5			
3.5	49.3	66.2	79.7			
4.9	49.5	66.5	79.9			
6.6	49.8	66.8	80.2			
9.1	50.1	67.1	80.3			
13.6	50.4	67.5	80.4			
15.9	50.6	67.7	80.7			
18.1	51.0	68.0	81.0			
20.4	51.3	68.2	81.1			
23.3	51.6	68.6	81.5			
26.1	51.9	68.8	81.7			
27.9	52.3	69.0	82.0			
29.4	52.5	69.2	82.2			
30.7	52.8	69.5	82.5			
31.8	53.2	69.8	82.7			
33.2	53.5	70.0	83.0			
34.4	53.8	70.4	83.3			
35.6	54.2	70.6	83.4			
36.8	54.3	70.8	83.5			
37.6	54.5	70.9	83.7			
38.2	54.8	71.0	84.0			
38.8	55.2	71.4	84.3			
39.3	55.5	71.5	84.6			
39.8	55.6	71.7	84.9			
40.3	55.7	71.9				
40.5	56.1	72.3				
40.7	56.4	72.5				
40.9	56.9	72.8				
41.2	57.2	73.1				
41.6	57.5	73.3				
41.8	57.9	73.7				
42.1	58.2	74.0				
42.4	58.5	74.2				
42.6	59.0	74.5				
42.9	59.1	74.9				
43.0	59.3	75.3				
43.4	59.6	75.5				
43.7	60.0	75.9				
43.8	60.4	76.1				
44.1	60.7	76.4				
44.3	61.1	76.6				
44.6	61.5	76.8				
44.7	61.9	77.0				
44.9	62.3	77.2				
45.2	62.7	77.5				
45.4	63.1	77.8				
46.7	63.4	78.2				
47.2	63.9	78.4				
47.5	64.1	78.6				
47.8	64.4	79.0				
48.1	64.8	79.1				
48.3	65.2	79.2				



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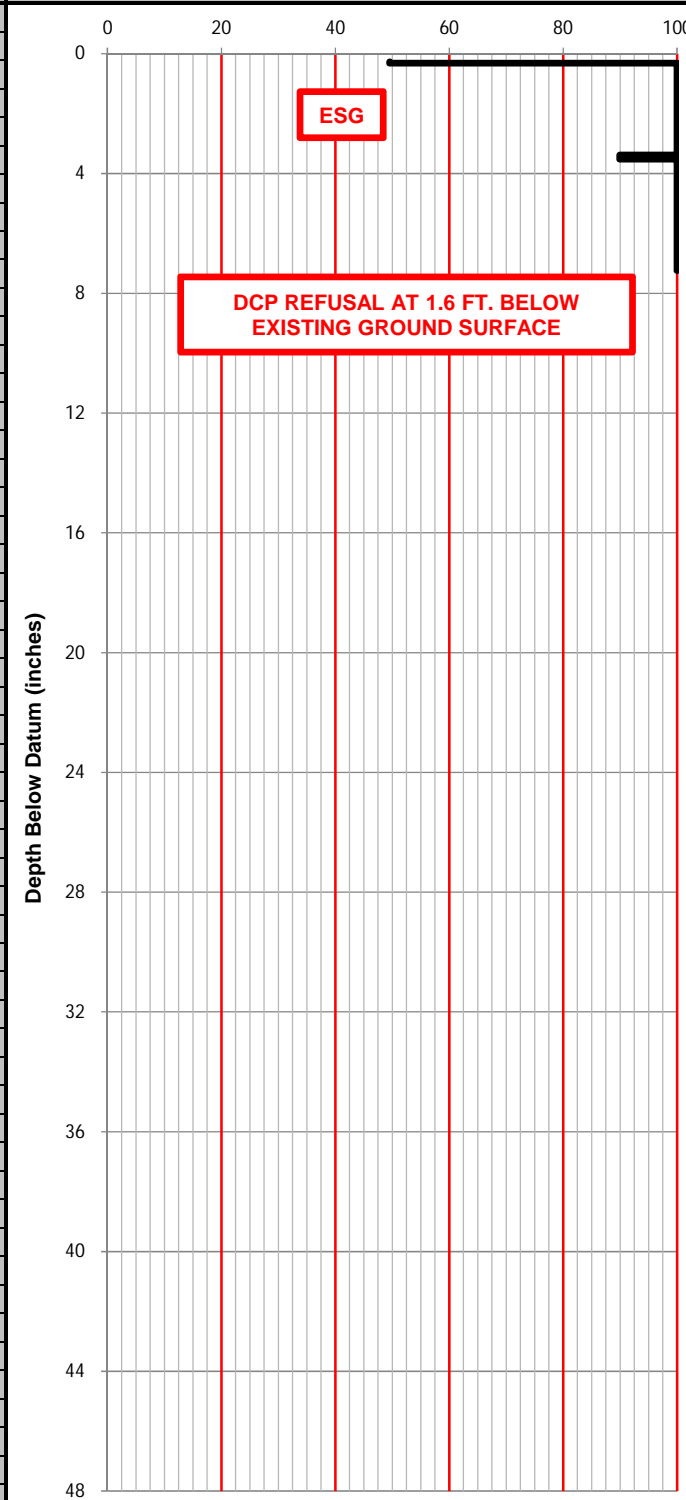
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
535+00 -L- WB ISS				DATE RUN	CORRELATED CBR VALUES	
				1/16/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	804,651	1,995,825			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.1						
4.5						
6.8						
8.9						
10.2						
11.8						
14.0						
16.2						
18.0						
19.6						
20.7						
21.8						
22.8						
23.6						
24.9						
25.9						
27.1						
28.3						
29.9						
32.0						
34.8						
36.1						
36.8						
37.3						
37.6						
37.9						
38.2						
38.5						
38.7						
38.9						
39.2						
39.5						
39.6						
39.7						
39.9						
40.1						
40.3						
40.4						
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40.7						
40.9						
41.0						
41.6						
41.9						
42.4						
42.7						
43.0						
43.3						
43.8						
44.2						



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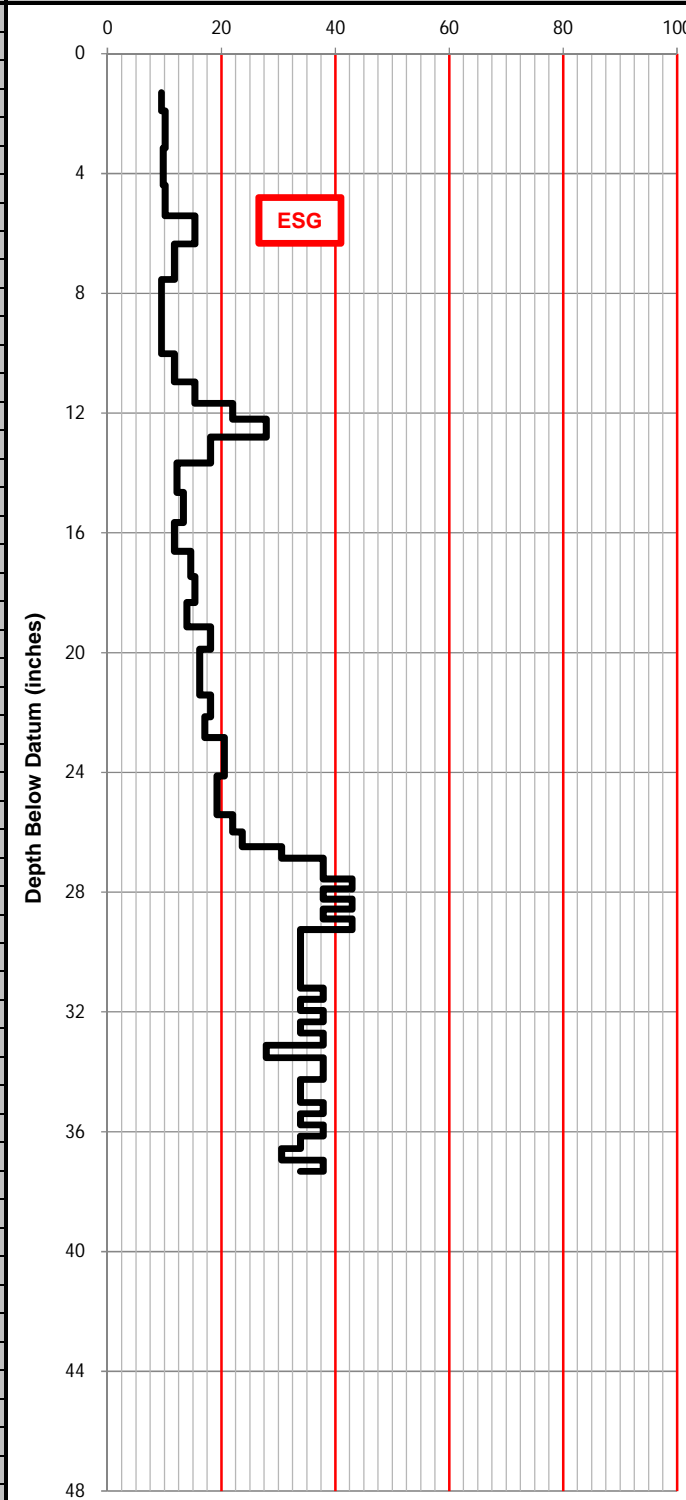
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
540+00 -L- WB EM				DATE RUN	CORRELATED CBR VALUES	
1/16/2019						
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	804,372	1,996,240			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.7	10.2	17.3				
0.9	10.4	17.4				
1.2	10.6	17.6				
1.4	10.7	17.8				
1.7	10.9	18.1				
1.8	11.2	18.3				
2.0	11.3	18.5				
2.2	11.6					
2.5	11.7					
2.7	11.8					
2.8	11.9					
2.9	12.0					
3.1	12.1					
3.3	12.2					
3.5	12.3					
3.6	12.4					
3.9	12.5					
4.0	12.7					
4.2	12.8					
4.3	12.9					
4.4	13.0					
4.6	13.1					
4.7	13.2					
4.8	13.3					
4.9	13.4					
5.1	13.6					
5.2	13.8					
5.4	13.9					
5.6	14.1					
5.8	14.3					
6.0	14.4					
6.2	14.5					
6.4	14.6					
6.6	14.7					
6.8	14.8					
6.9	15.0					
7.1	15.1					
7.2	15.3					
7.3	15.4					
7.4	15.6					
7.6	15.7					
7.8	15.8					
7.9	15.8					
8.2	15.9					
8.3	16.0					
8.4	16.2					
8.8	16.3					
9.1	16.5					
9.2	16.6					
9.4	16.8					
9.6	16.9					
9.8	17.0					
10.0	17.2					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



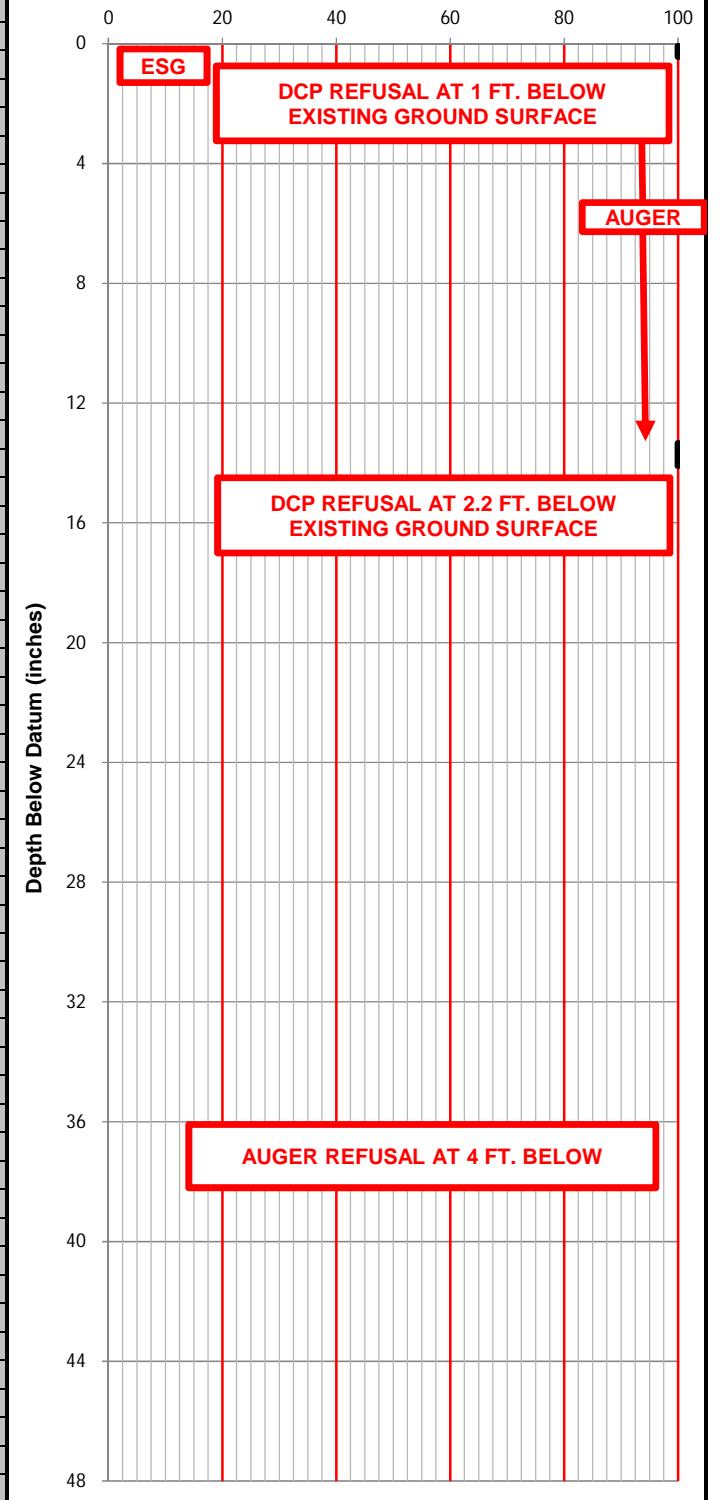
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WESTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
545+00 -L- WB OES				DATE RUN	CORRELATED CBR VALUES	
1/16/2019						
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	804,134	1,996,682			
CUMULATIVE PENETRATION IN CENTIMETERS						
3.3	89.4					
6.4	90.4					
9.6	91.3					
12.7	92.3					
14.8	93.4					
17.5	94.3					
20.8	95.3					
24.1						
26.8						
28.9						
30.4						
31.6						
33.4						
36.0						
38.4						
41.1						
43.3						
45.4						
47.7						
49.5						
51.5						
53.5						
55.3						
57.2						
58.8						
60.4						
62.1						
63.8						
65.3						
66.7						
67.8						
68.7						
69.6						
70.4						
71.3						
72.1						
73.0						
73.8						
74.8						
75.8						
76.8						
77.8						
78.8						
79.7						
80.7						
81.6						
82.6						
83.5						
84.7						
85.6						
86.5						
87.5						
88.5						



Notes:  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER		TIP	ROUTE
				34178.1.3		I-3306A	I-40 WESTBOUND
				COUNTY		GEOLOGIST	
				ORANGE		McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN			
555+00 -L- WB OES				1/16/2019			
DATUM	CUT / FILL	NORTHING	EASTING				
ESG	CUT	803,585	1,997,518				
CORRELATED CBR VALUES							
CUMULATIVE PENETRATION IN CENTIMETERS							
0.2		2.20					
0.260	AUGER 32.5 cm / 12.8 in						
0.320							
0.380							
0.440	0.2						
0.500	0.4						
0.515	0.6						
0.530	0.8						
0.545	1.0						
0.560	1.0						
0.575	1.1						
0.590	1.12						
0.605	1.16						
0.620	1.20						
0.635	1.24						
0.650	1.28						
0.665	1.32						
0.680	1.36						
0.695	1.40						
0.710	1.44						
0.725	1.48						
0.740	1.52						
0.755	1.56						
0.770	1.6						
0.785	1.62						
0.8	1.64						
0.812	1.66						
0.824	1.68						
0.836	1.70						
0.848	1.72						
0.860	1.74						
0.872	1.76						
0.884	1.78						
0.896	1.80						
0.908	1.82						
0.920	1.84						
0.932	1.86						
0.944	1.88						
0.956	1.90						
0.968	1.92						
0.980	1.94						
0.992	1.96						
1.004	1.98						
1.016	2.00						
1.028	2.02						
1.040	2.04						
1.052	2.06						
1.064	2.08						
1.076	2.10						
1.088	2.12						
1.100	2.14						
	2.16						
	2.2						



**Notes:**  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

# PAVEMENT CORE PHOTOGRAPHS

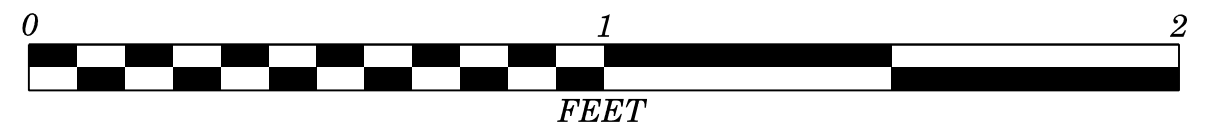
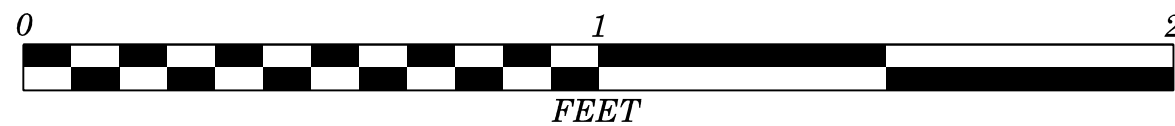
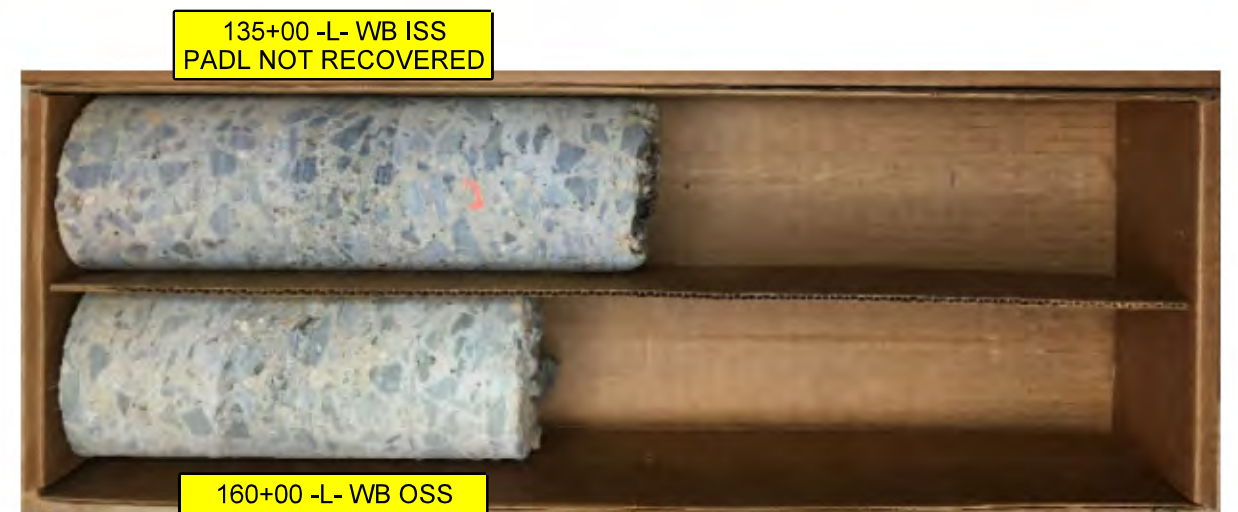
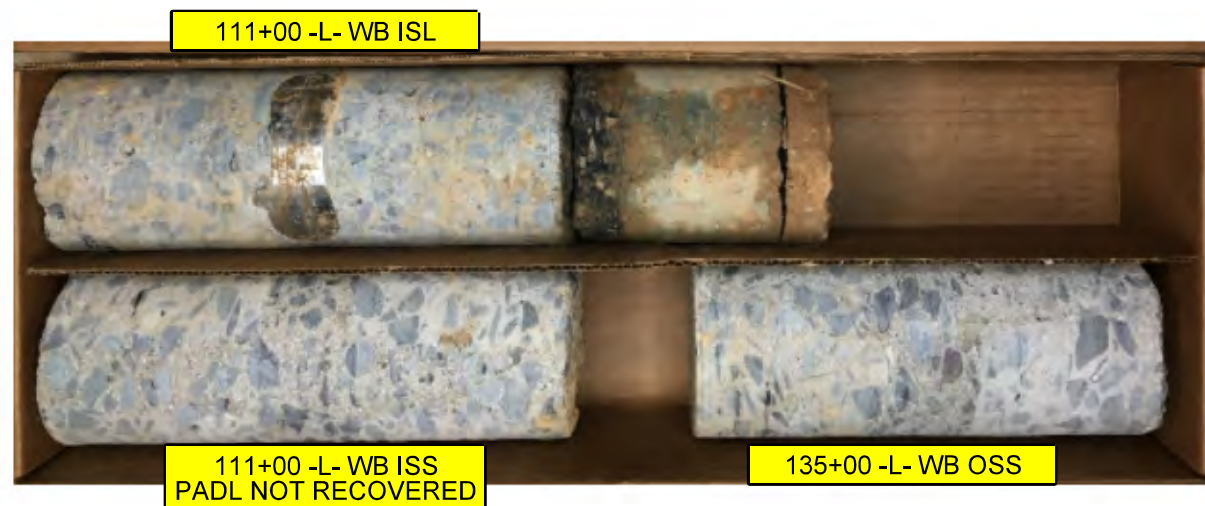
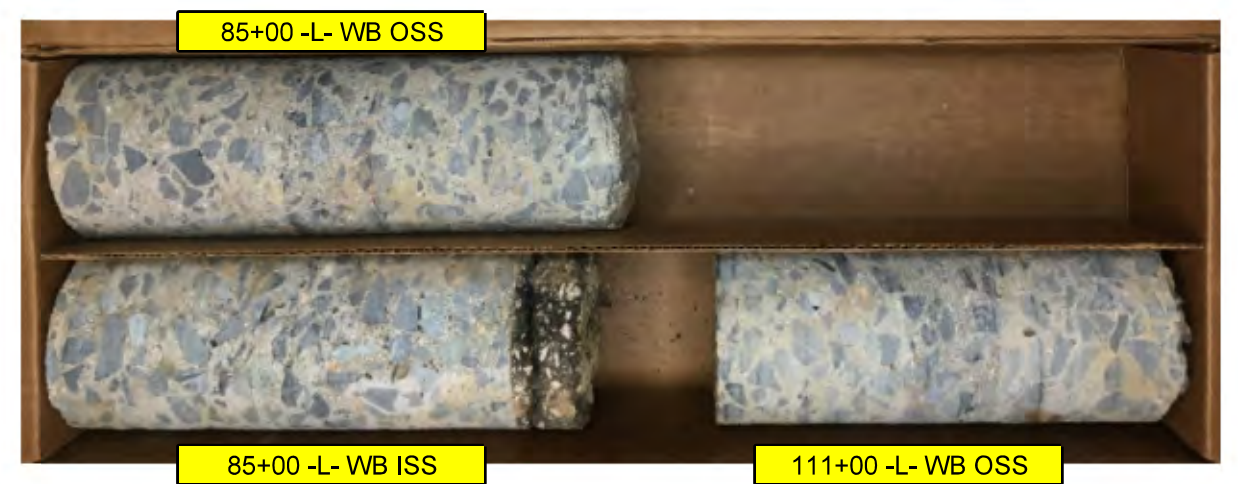
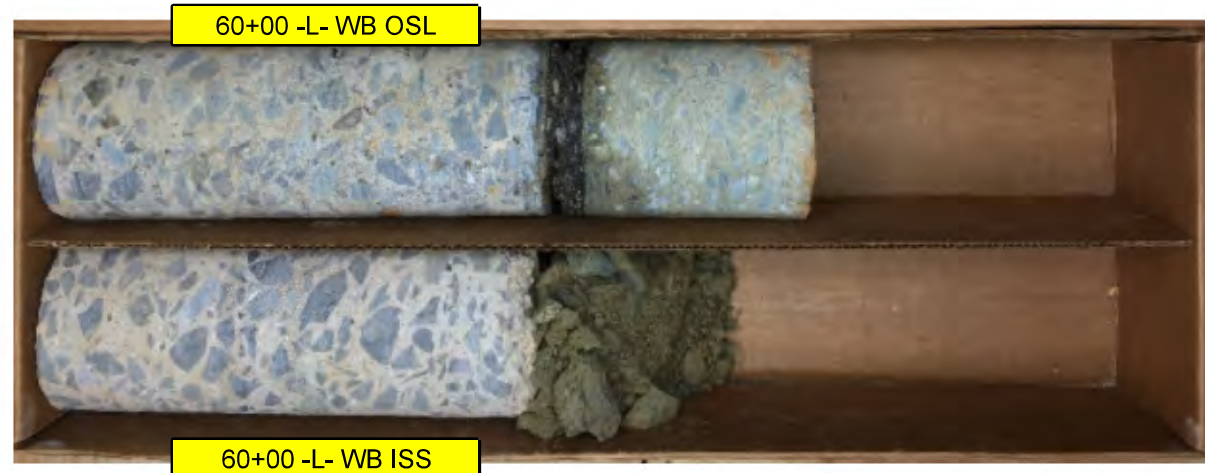
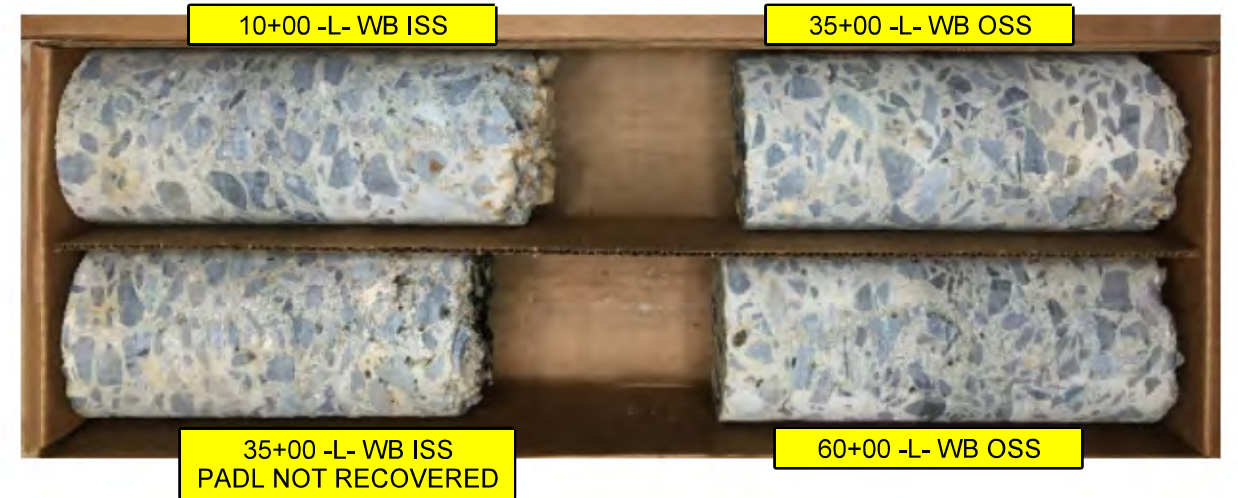
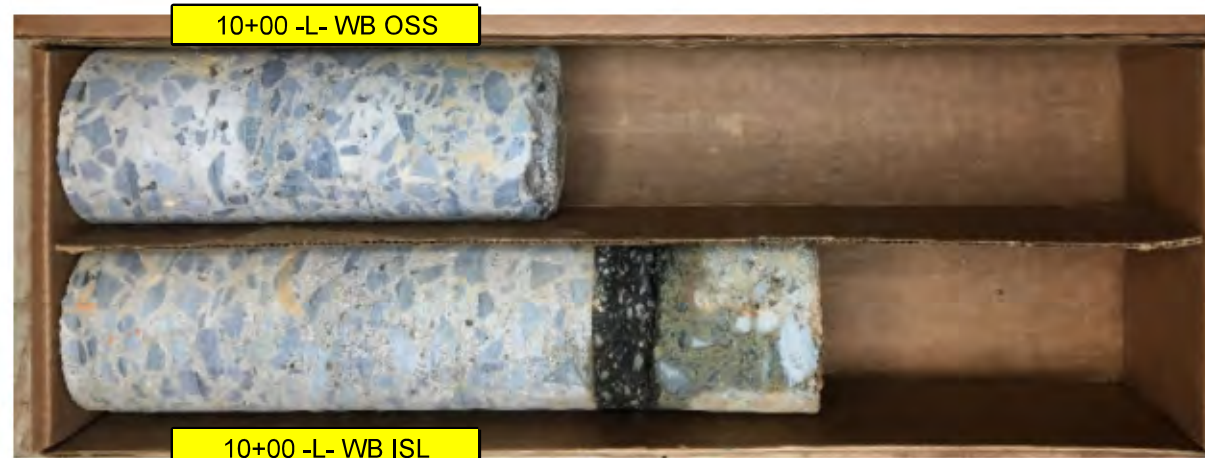
I-40 WESTBOUND

PROJECT REFERENCE NO.

SHEET NO.

I-3306A

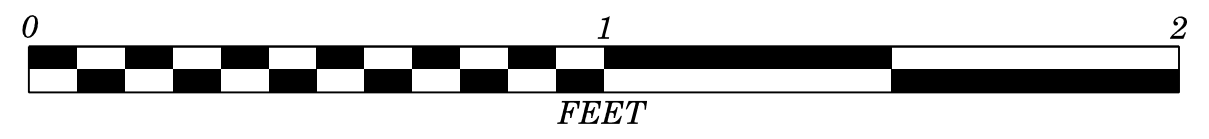
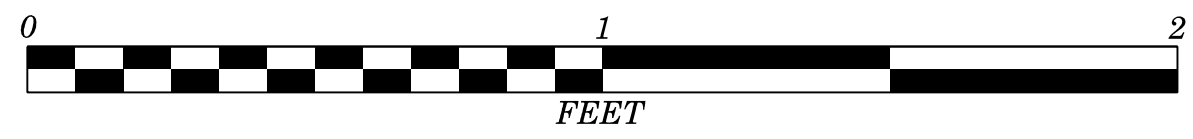
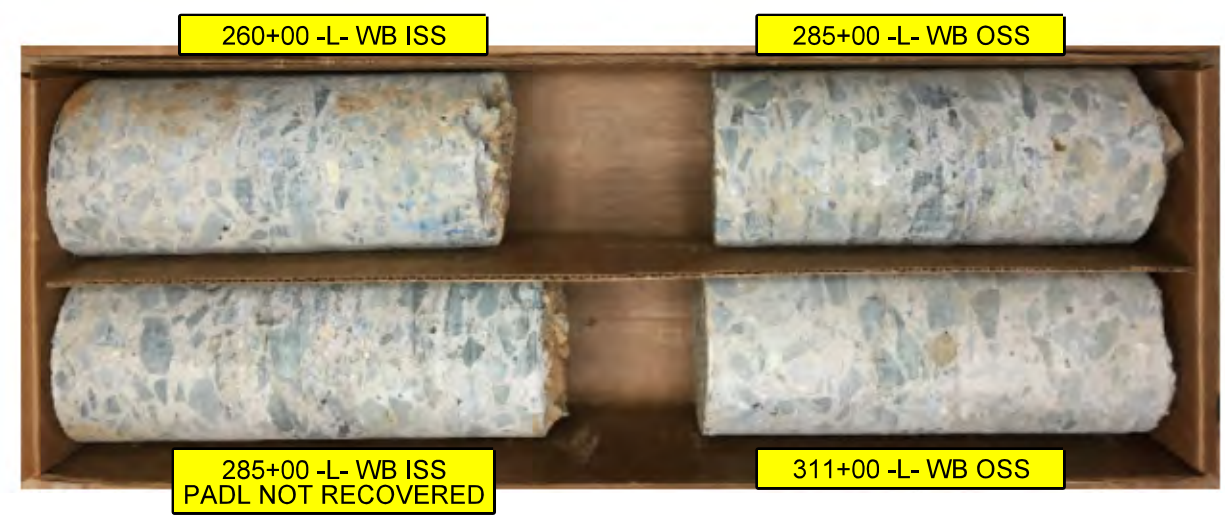
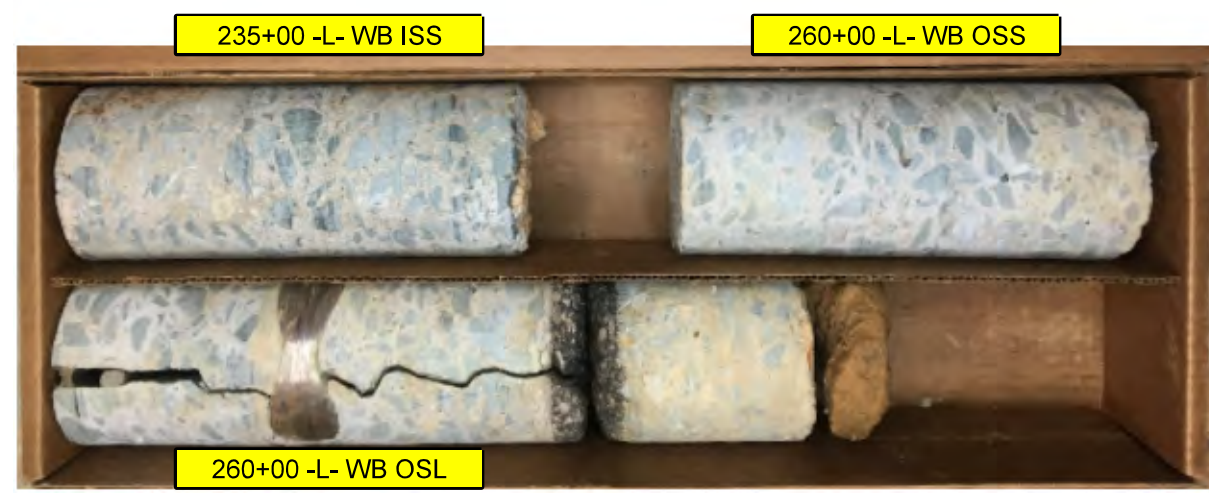
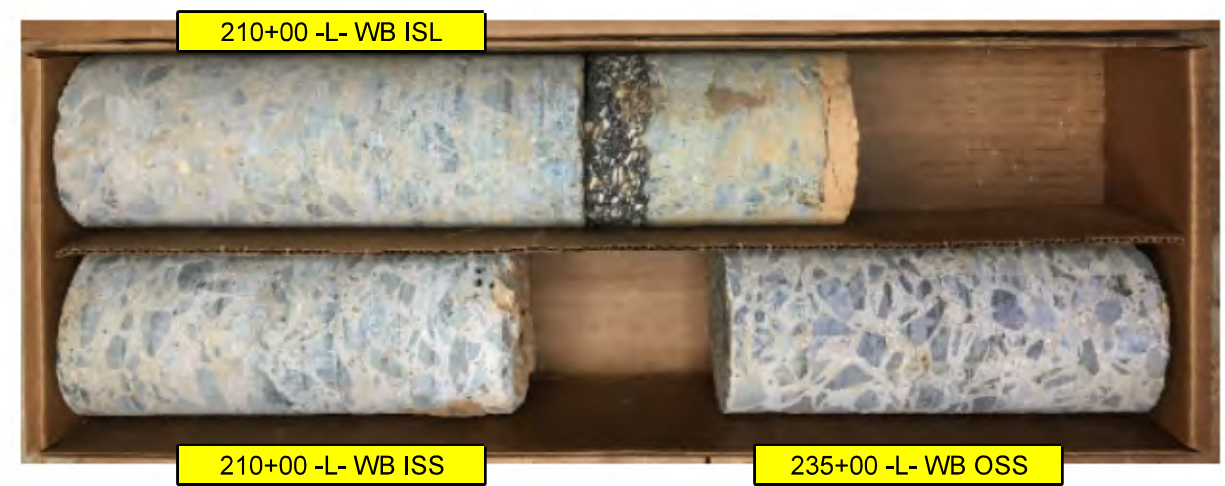
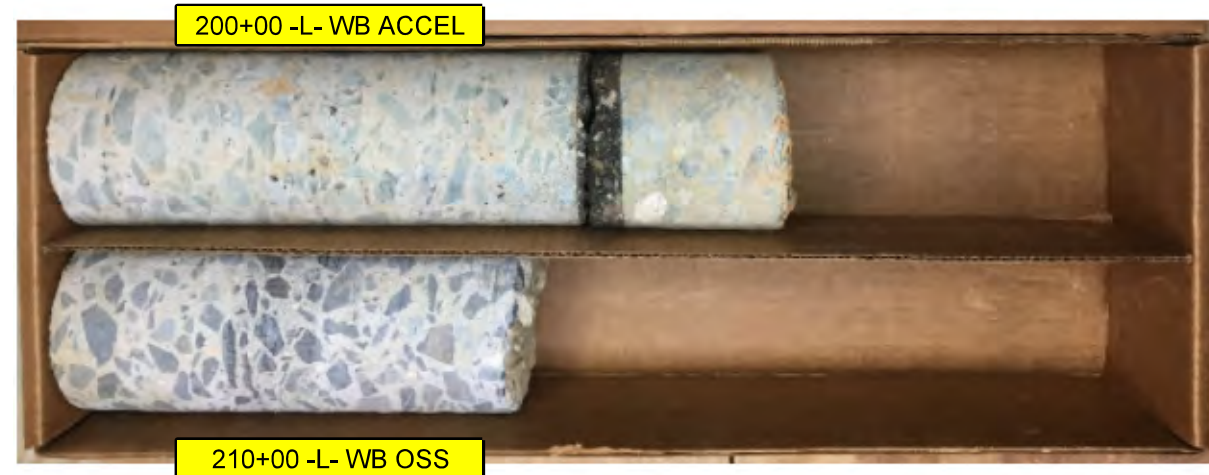
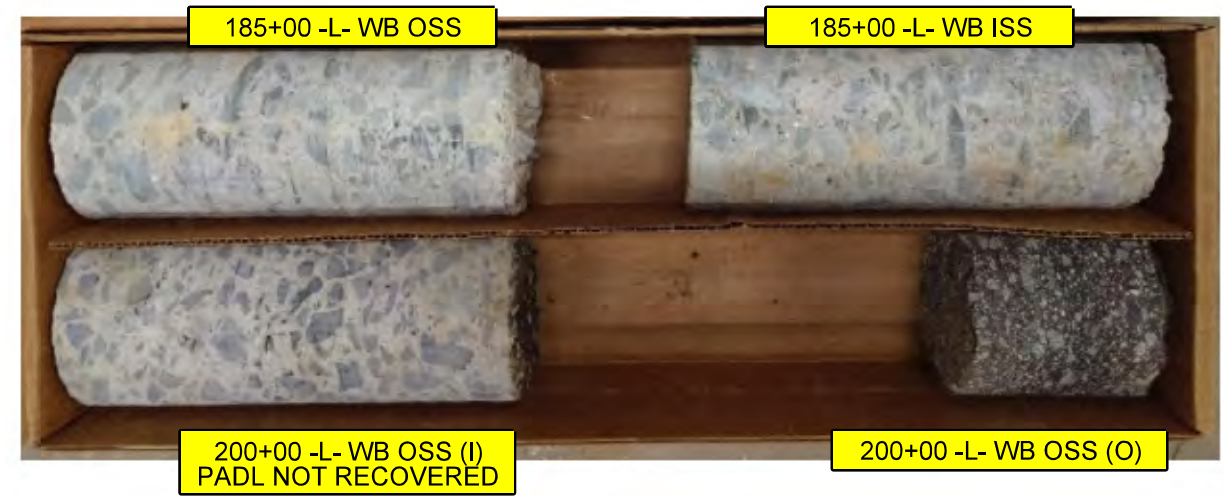
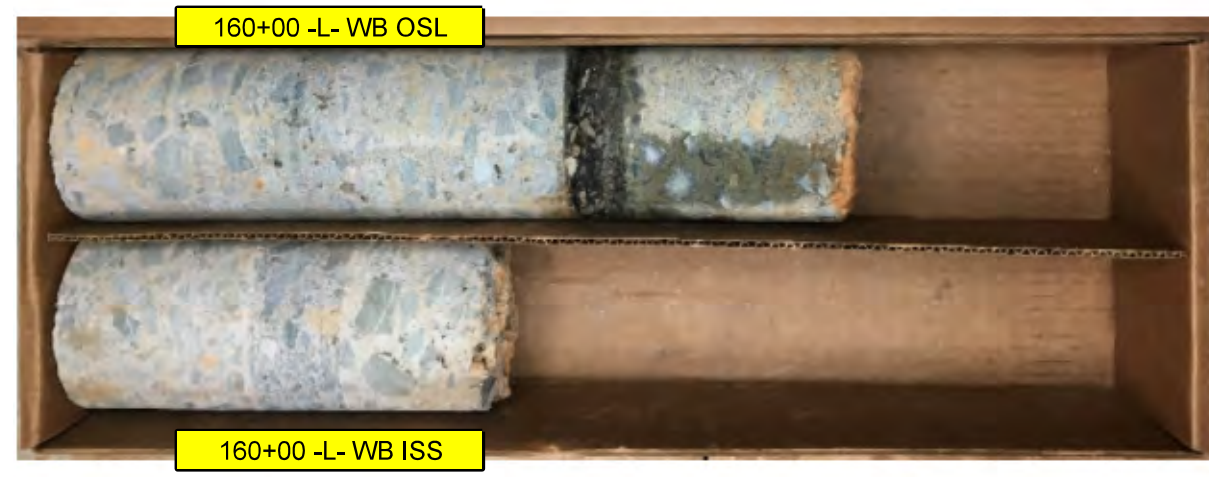
173



# PAVEMENT CORE PHOTOGRAPHS

I-40 WESTBOUND

PROJECT REFERENCE NO.	SHEET NO.
I-3306A	174



# PAVEMENT CORE PHOTOGRAPHS

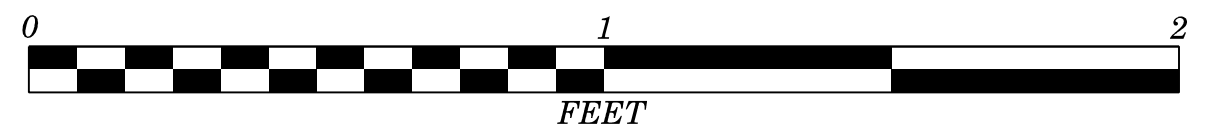
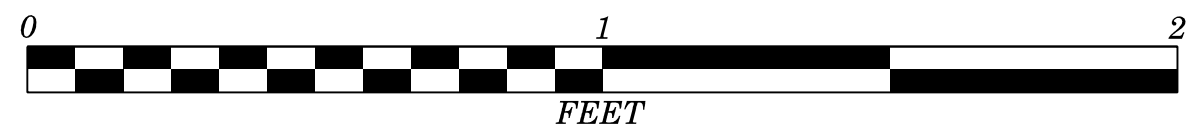
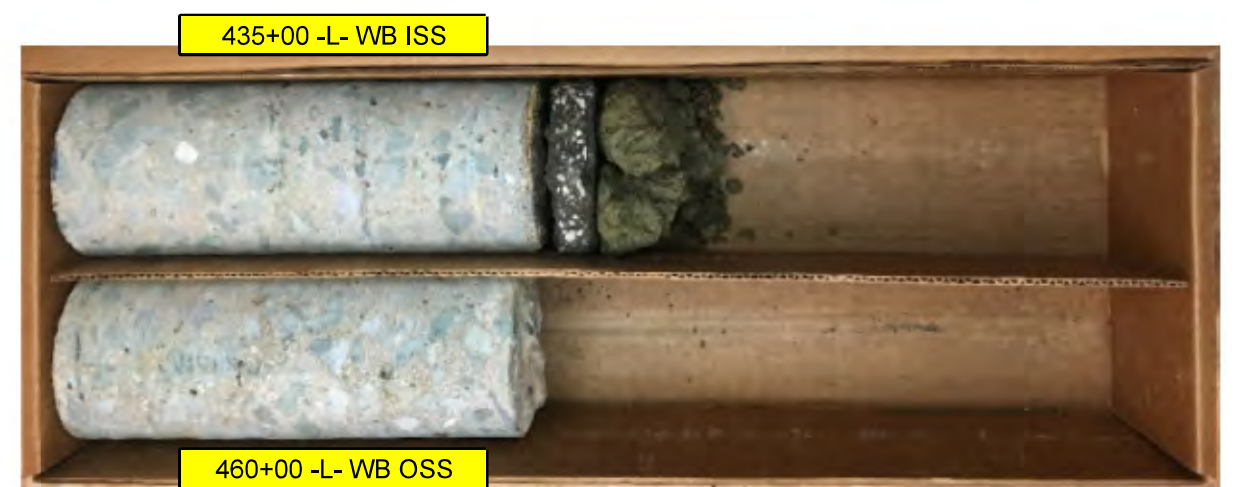
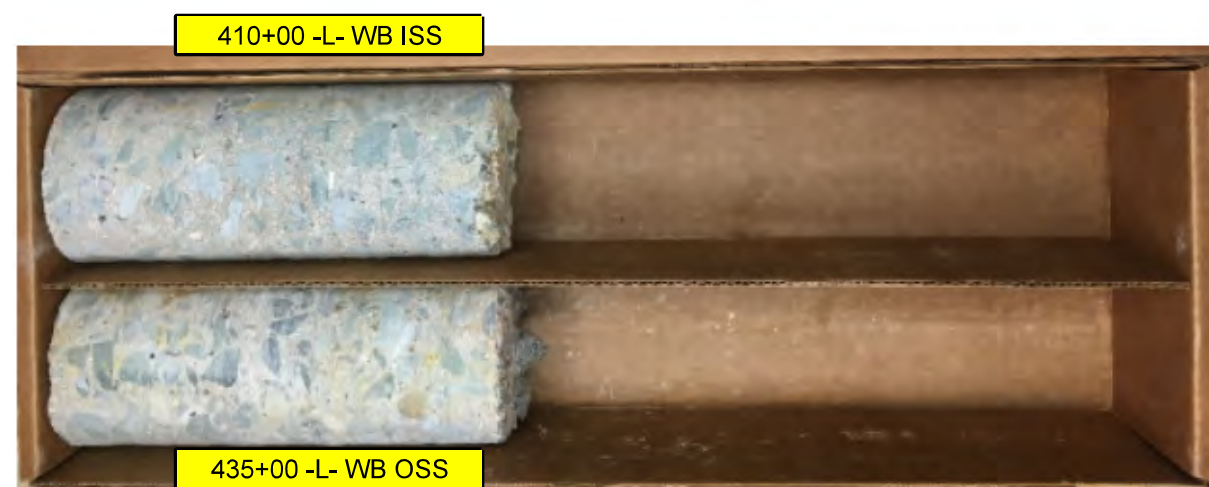
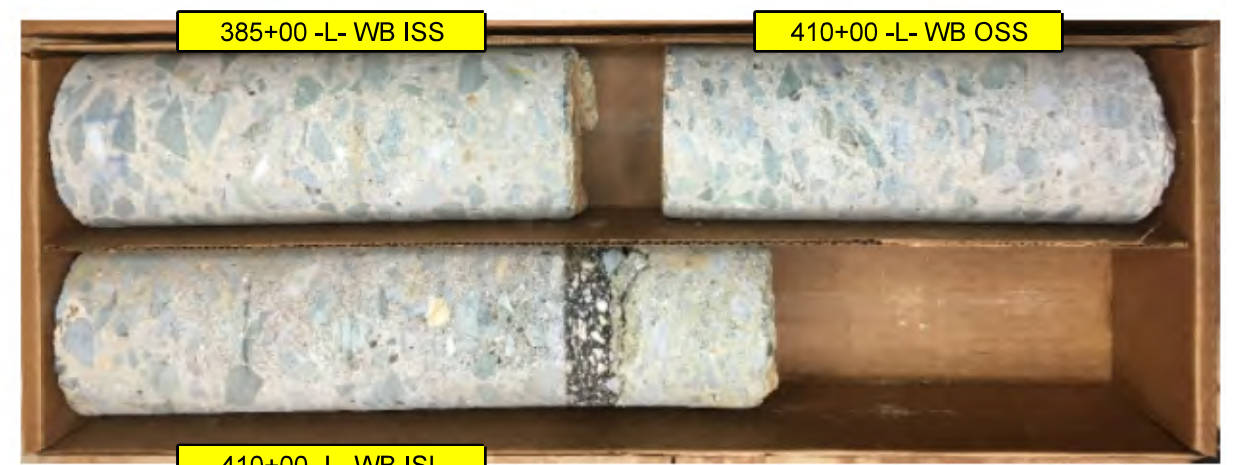
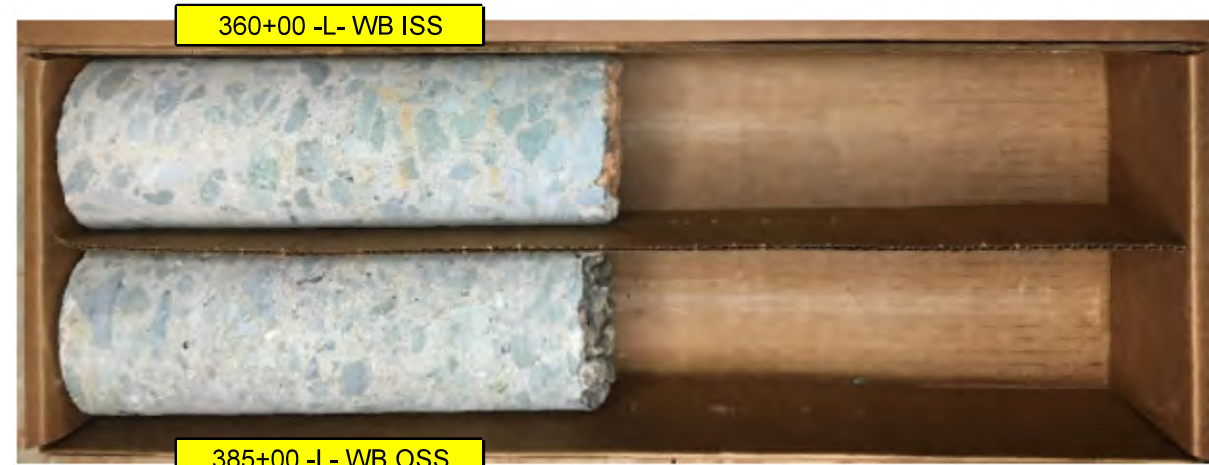
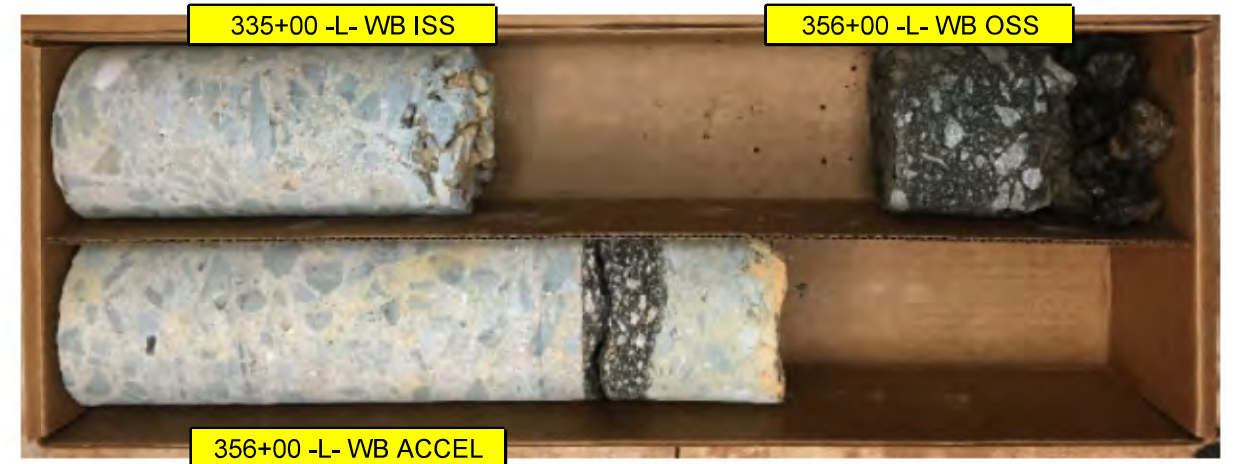
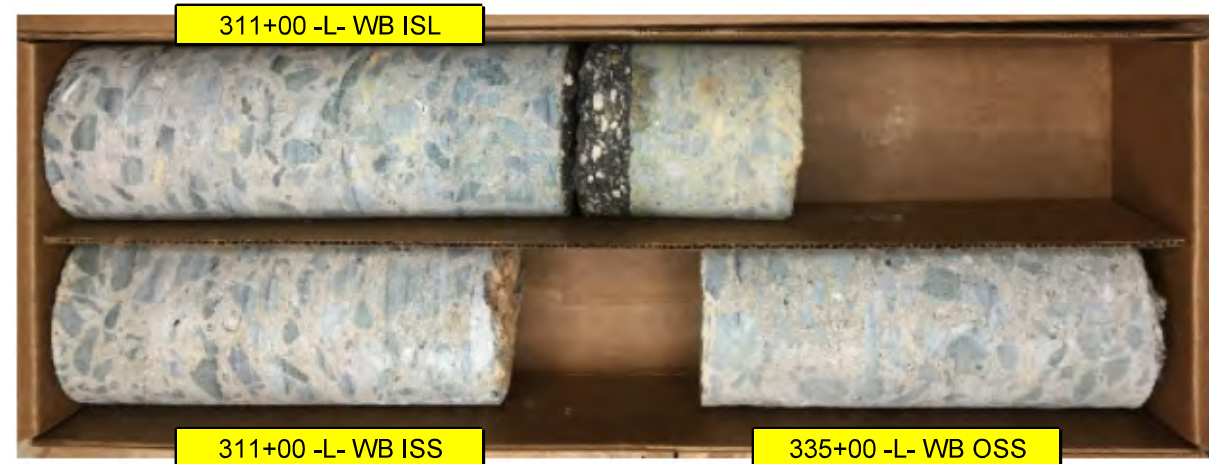
I-40 WESTBOUND

PROJECT REFERENCE NO.

I-3306A

SHEET NO.

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# PAVEMENT CORE PHOTOGRAPHS

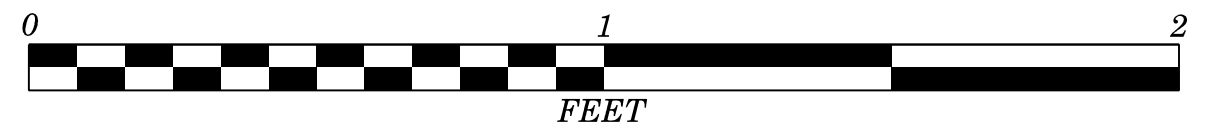
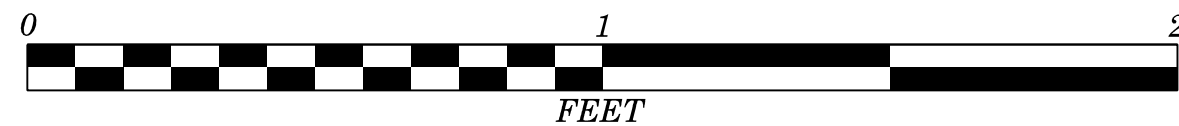
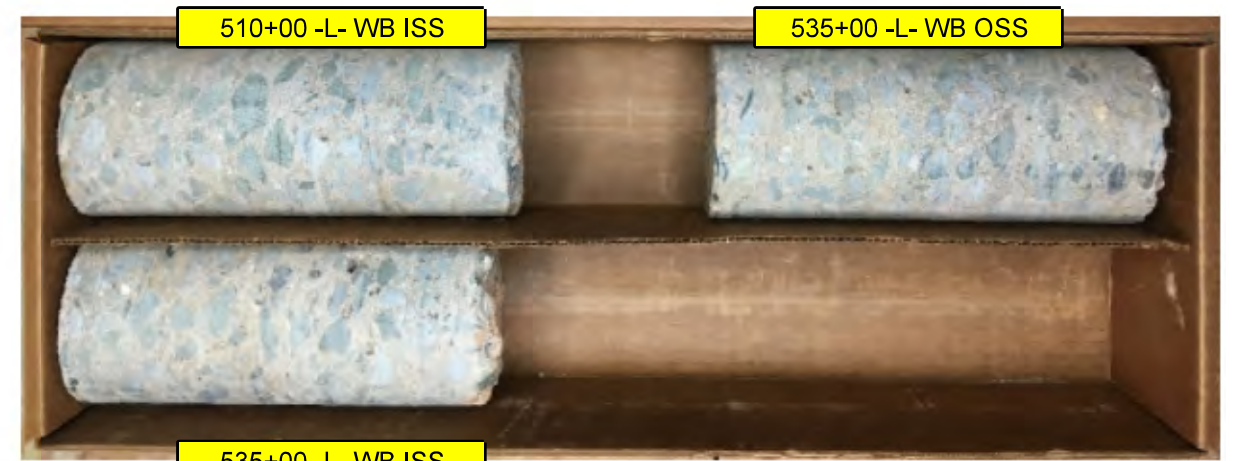
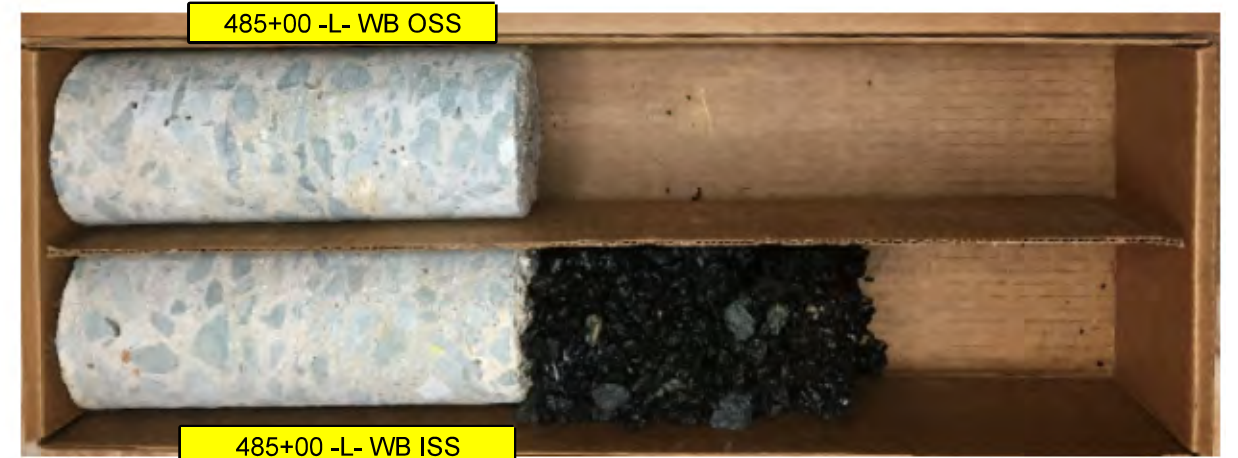
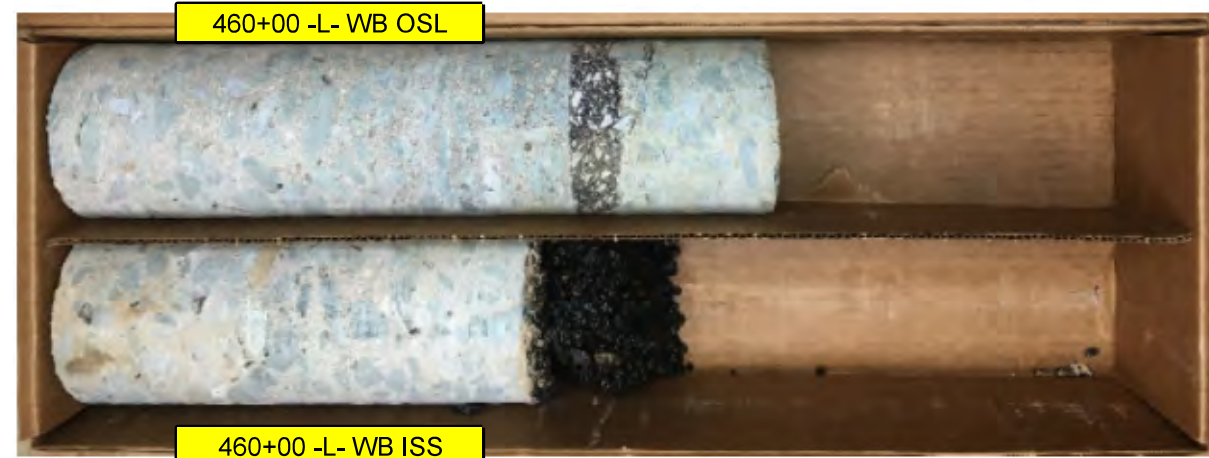
I-40 WESTBOUND

PROJECT REFERENCE NO.

SHEET NO.

I-3306A

176



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	177	329

**REFERENCE: I-3306A**

**PROJECT: 34178**

## ***APPENDIX E***

***PAVEMENT INVESTIGATION DATA SHEETS -L- EB***  
***DYNAMIC CONE PENETROMETER DATA -L- EB***  
***PAVEMENT CORE PHOTOGRAPHS -L- EB***

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	01/31/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
10+00 -L- EB ISS	CUT 8	EB ISL 12.0	EB ISS 4.0	2.5 FY	C	CONCRETE ABC (15.0)	10.0			5.0			1.25' - 4.0' RESIDUAL: BROWN, SILTY CLAY	S-111	A-7-6	W	AR 4	DIAMOND GRINDING EB OSS / OES DROP OFF	838,135	1,963,850
		EB OSL 12.0	EB OSS 10.0															MODERATE SEVERITY SPALLING AT EB CL LONGITUDINAL JOINT		
10+00 -L- EB OSL				3.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (20.5)	11.0	1.0	3.5		5.0		1.6' - 2.6' RESIDUAL: BROWN WITH TAN AND GRAY, SILTY CLAY	S-99	A-7-6	W	6	OCCASIONAL AGGREGATE POP-OUT	838,121	1,963,832
													2.6' - 6.0' RESIDUAL: GRAY WITH BROWN, C-F SAND Y CLAY	REF S-98	A-6	M				
10+00 -L- EB OSS				6.0 FW		CONCRETE ABC (16.0)	10.25			5.75			1.3' - 6.0' RESIDUAL: GRAY WITH BROWN, C-F SANDY CLAY	S-98	A-6	M	6		838,115	1,963,825
15+00 -L- EB OES	CUT 10	EB ISL 12.0	EB ISS 4.0	14.5 FW	S RT								0' - 6.0' RESIDUAL: GRAY WITH BROWN, C-F SANDY CLAY	REF S-98	A-6	M	6	DIAMOND GRINDING	837,713	1,964,122
		EB OSL 12.0	EB OSS 10.0																	
20+00 -L- EB EM	CUT 8	EB ISL 12.0	EB ISS 4.0	6.0 FY	C								0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-112	A-7-6	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF OCCASIONAL AGGREGATE POP-OUT	837,344	1,964,462
		EB OSL 12.0	EB OSS 10.0															PATCH AND REPLACE CONCRETE AT EB CL		
25+00 -L- EB OES	CUT 8	EB ISL 12.0	EB ISS 4.0	12.5 FW	C								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	S-100	A-6	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF	836,922	1,964,734
		EB OSL 12.0	EB OSS 10.0																	
30+00 -L- EB EM	CUT 8	EB ISL 12.0	EB ISS 4.0	10.0 FY	C								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-100	A-6	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF	836,553	1,965,075
		EB OSL 12.0	EB OSS 10.0																	

**Notes:**  
 NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/31/2019, 2/1/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates						
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting			
35+00 -L- EB ISS	CUT 10	EB ISL 12.0	EB ISS 4.5	CORE 3.0 FY	C	CONCRETE PADL 6.0" (15.25)	9.25						1.0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-101	A-7-6	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF	CORE 836,153	1,965,374		
		EB OSL 12.0	EB OSS 10.0	DCP 8.5 FY									DRAIN ENCOUNTERED AT 3.0' FY BELOW PADL DCP AND AUGER PERFORMED 8.5' FY					MODERATE SEVERITY SPALLING ON EB OSS CONCRETE EDGE	DCP / AUGER 836,156	1,965,378		
35+00 -L- EB OSS				7.5 FW		CONCRETE ABC (14.0)	9.5				4.5		1.2' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	S-101	A-7-6	W	6			836,132	1,965,347	
40+00 -L- EB OES	CUT 10	EB ISL 12.0	EB ISS 4.0	13.0 FW	C								0' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	REF S-101	A-7-6	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF		835,732	1,965,647	
		EB OSL 12.0	EB OSS 10.0																			
45+00 -L- EB EM	CUT 10	EB ISL 12.0	EB ISS 4.0	9.0 FY	C								0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-113	A-7-6	M	6	DIAMOND GRINDING EB OSS / OES DROP OFF		832,363	1,965,987	
		EB OSL 12.0	EB OSS 10.0																			
50+00 -L- EB OES	FILL 10	EB ISL 12.0	EB ISS 4.0	14.5 FW	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	S-102	A-7-5	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF		834,938	1,966,254	
		EB OSL 12.0	EB OSS 10.0																LOW SEVERITY SPALLING AT LONGITUDINAL JOINT BETWEEN EB OSL AND OSS			
55+00 -L- EB EM	FILL 20	EB ISL 12.0	EB ISS 4.0	10.0 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-103	A-7-5	W	6	DIAMOND GRINDING		834,571	1,966,598	
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																			

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/31/2019, 2/1/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
60+00 -L- EB ISS	FILL 20	EB ISL 12.0	EB ISS 4.0	3.5 FY	C	CONCRETE ABC (14.5)	10.5			4.0		1.1' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-103	A-7-5	W	6	DIAMOND GRINDING	834,166	1,966,892	
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																	
60+00 -L- EB ISL				3.0 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (21.0)	11.0	0.5	4.0		5.5	1.7' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-103	A-7-5	W	6		834,170	1,966,896	
60+00 -L- EB OSS				6.0 FW		CONCRETE ABC (14.0)		9.75		4.25		1.1' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	S-103	A-7-5	W	6		834,150	1,966,871	
65+00 -L- EB OSS	FILL 20	EB ISL 12.0	EB ISS 4.0	5.5 FW	S (LT)	CONCRETE ABC (15.0)	10.5			4.5		1.25' - 4.5' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	S-104	A-7-6	M	6	DIAMOND GRINDING	833,754	1,967,176	
		EB OSL 12.0	EB OSS 10.0									4.5' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-103	A-7-5	W		MODERATE SEVERITY SPALLING AT LONGITUDINAL JOINT BETWEEN EB OSL AND EB OSS AND IN EB OSL WHEEL PATH			
						CORE NOT SAVED														
70+00 -L- EB EM	FILL 20	EB ISL 12.0	EB ISS 4.0	6.0 FY	S (LT)							0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, SILTY CLAY	S-114	A-7-6	M	6	DIAMOND GRINDING	833,398	1,967,534	
		EB OSL 12.0	EB OSS 10.0															EB OSS / OES DROP OFF		
75+00 -L- EB OES	FILL 10	EB ISL 12.0	EB ISS 4.0	13.0 FW	S (LT)							0' - 6.0' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	REF S-104	A-7-6	M	6	DIAMOND GRINDING	833,052	1,967,908	
		EB OSL 12.0	EB OSS 10.0															EB OSS / OES DROP OFF		
80+00 -L- EB EM	FILL 3	EB ISL 12.0	EB ISS 4.0	13.0 FY	S (LT)							0' - 3.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, SILTY CLAY	REF S-114	A-7-6	M	6	DIAMOND GRINDING	832,868	1,968,382	
		EB OSL 12.0	EB OSS 10.0									3.0' - 6.0' RESIDUAL: BROWN WITH GRAY, SILTY CLAY	S-115	A-7-6	W					

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	1/31/2019, 2/1/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting			
85+00 -L- EB ISS	CUT 3	EB ISL 12.0	EB ISS 4.0	CORE 3.5 FY	S (LT)	CONCRETE PADL 6.0" (16.25)	10.25							0.0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-116	A-7-6	M	6	DIAMOND GRINDING	CORE 832,724	1,968,863	
		EB OSL 12.0	EB OSS 10.0	DCP 8.0 FY																DCP / AUGER 832,729	1,968,864	
														DRAIN ENCOUNTERED AT 3.5' FY BELOW PADL DCP AND AUGER PERFORMED 8.0' FY								
85+00 -L- EB OSS				6.5 FW		CONCRETE ABC (14.0)	9.0				5.0			1.2' - 6.0' RESIDUAL: BROWN-TAN, SILTY CLAY	S-105	A-7-6	M	6			832,691	1,968,857
90+00 -L- EB OES	FILL 5	EB ISL 12.0	EB ISS 4.5	14.0 FW	C									0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	S-106	A-7-5	W	6	DIAMOND GRINDING		832,629	1,969,358
		EB OSL 12.0	EB OSS 10.0																			
95+00 -L- EB EM	FILL 8	EB ISL 12.0	EB ISS 4.0	6.0 FY	C									0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	S-117	A-7-6	M	6	DIAMOND GRINDING		832,628	1,969,860
		EB OSL 12.0	EB OSS (CONC.) 4																			
		EB DECEL 12.0	(ASPH.) 8.0																			
100+00 -L- EB OES	FILL 10	EB ISL 12.0	EB ISS 4.0	12.0 FW	S (RT)									0' - 6.0' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	REF S-118	A-7-6	M	6	DIAMOND GRINDING		832,527	1,970,347
		EB OSL 12.0	EB OSS 10.0																			
105+00 -L- EB EM	FILL 18	EB ISL 12.0	EB ISS 4.0	10.0 FY	S (RT)									0' - 6.0' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	S-118	A-7-6	M	6	DIAMOND GRINDING		832,453	1,970,838
		EB OSL 12.0	EB OSS (CONC.) 10.0																			
			(ASPH.) 5.0																			

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/1/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
111+00 -L- EB ISS	FILL 20	EB ISL 12.0	EB ISS 4.0	3.0 FY	S (RT)	CONCRETE ABC (16.0)	10.5			5.5			1.3' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	S-119	A-7-6	W	6	DIAMOND GRINDING	832,226	1,971,390
		EB OSL 12.0	EB OSS 10.0																	
111+00 -L- EB OSL				4.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	11.0	1.25	3.5		6.25		1.8' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-119	A-7-6	W	6		832,204	1,971,380
111+00 -L- EB OSS				4.0 FW		CONCRETE ABC (17.0)	12.0			5.0			1.2' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, SILTY CLAY	REF S-119	A-7-6	W	6		832,197	1,971,376
115+00 -L- EB OES	FILL 15	EB ISL 12.0	EB ISS 4.0	12.0 FW	S (RT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, TAN, SILTY CLAY	S-122	A-7-6	W	6	DIAMOND GRINDING	831,995	1,971,715
		EB OSL 12.0	EB OSS 10.0																	
119+50 -L- EB EM	CUT 10	EB ISL 12.0	EB ISS 4.0	8.0 FY	S (RT)								0' - 3.2' RESIDUAL: BROWN-TAN WITH RED, C-F SANDY CLAY	S-120	A-6	M	AR 3.2	DIAMOND GRINDING	831,770	1,972,101
		EB OSL 12.0	EB OSS 10.0																	
125+00 -L- EB OES	CUT 10	EB ISL 12.0	EB ISS 4.0	8.0 FW	S (RT)								0' - 6.0' RESIDUAL: BROWN-TAN WITH RED, C-F SANDY CLAY	REF S-120	A-6	M	6	DIAMOND GRINDING	831,358	1,972,460
		EB CL 12.0	EB OSS 10.0										WATER IN OPEN BOREHOLE AT DEPTH OF 0.7'							
		EB ACCEL 12.0																		
130+00 -L- EB EM	FILL 6	EB ISL 12.0	EB ISS 4.0	9.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN, SILTY CLAY	S-121	A-7-6	M	6	DIAMOND GRINDING	831,006	1,972,811
		EB OSL 12.0	EB OSS 10.0																	

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    NM = Not Measured  
 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/1/2019, 2/4/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting		
135+00 -L- EB ISS	FILL 12	EB ISL 12.0	EB ISS 4.0	3.5 FY	S (RT)	CONCRETE ABC (14.0)	9.25			4.75				1.2' - 4.8' ROADWAY EMBANKMENT: BROWN-TAN, SILTY CLAY	REF S-121	A-7-6	M	AR 4.8	DIAMOND GRINDING	830,578	1,973,064
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																		
135+00 -L- EB OSS				5.0 FW		CONCRETE ABC (18.0)	11.0			7.0				1.5' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN, SILTY CLAY	REF S-121	A-7-6	M	6		830,563	1,973,035
140+50 -L- EB OES	FILL 8	EB ISL 12.0	EB ISS 4.0	14.5 FW	S (RT)									0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH GRAY AND TAN, SILTY CLAY	S-123	A-7-6	M	6	DIAMOND GRINDING LOW SEVERITY TRANSVERSE CRACKING IN EB ASPHALT OSS	830,062	1,973,241
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																		
145+00 -L- EB EM	CUT 8	EB ISL 12.0	EB ISS 4.0	8.0 FY	C									0' - 2.5' RESIDUAL: BROWN WITH GRAY AND TAN, SILTY CLAY	REF S-123	A-7-6	M	6	DIAMOND GRINDING	829,646	1,973,407
		EB OSL 12.0	EB OSS 10.0											2.5' - 6.0' RESIDUAL: LIGHT GRAY-OFF WHITE WITH TAN, SILTY CLAY	S-135	A-7-6	W				
150+00 -L- EB OES	CUT 8	EB ISL 12.0	EB ISS 4.0	14.5 FW	C									0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-124	A-7-6	M	6	DIAMOND GRINDING	829,147	1,973,454
		EB OSL 12.0	EB OSS 10.0																		
155+00 -L- EB EM	CUT 8	EB ISL 12.0	EB ISS 4.0	8.0 FY	C									0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	REF S-124	A-7-6	M	6	DIAMOND GRINDING	828,663	1,973,587
		EB OSL 12.0	EB OSS 10.0																		

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/1/2019, 2/4/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting		
160+00 -L- EB ISS	CUT 8	EB ISL 12.0	EB ISS 4.0	3.5 FY	C	CONCRETE ABC (14.0)	10.0			4.0		1.2' - 6.0' RESIDUAL: GRAY, C-F SANDY SILT	S-136	A-4	M	6	DIAMOND GRINDING	828,170	1,973,670		
		EB OSL 12.0	EB OSS 10.0																		
160+00 -L- EB ISL						4.0 FY	CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (23.0)	11.0	1.0	4.0		7.0	1.8' - 6.0' RESIDUAL: GRAY, C-F SANDY SILT	REF S-136	A-4	M		6		828,169	1,973,662
160+00 -L- EB OSS						7.0 FW	CONCRETE ABC (15.0)	10.0				5.0	1.25' - 6.0' RESIDUAL: LIGHT GRAY-BROWN, C-F SANDY CLAY	S-125	A-6	M		6		828,164	1,973,636
165+00 -L- EB OES	GRADE	EB ISL 12.0	EB ISS 4.0	11.5 FW	C							0' - 6.0' RESIDUAL: BROWN-GRAY WITH RED AND TAN, SILTY CLAY	S-126	A-7-6	W	6	DIAMOND GRINDING	827,671	1,973,719		
			EB OSL 12.0	EB OSS 10.0																	
170+00 -L- EB EM	FILL 6	EB ISL 12.0	EB ISS 4.0	7.5 FY	C							0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, SILTY CLAY	S-137	A-7-6	M	6	DIAMOND GRINDING	827,186	1,973,849		
			EB OSL 12.0	EB OSS 10.0																	
175+00 -L- EB OES	CUT 3	EB ISL 12.0	EB ISS 4.0	13.0 FW	C							0' - 6.0' RESIDUAL: BROWN WITH GRAY AND TAN, C-F SANDY CLAY	S-127	A-6	M	6	DIAMOND GRINDING	826,686	1,973,893		
			EB OSL 12.0	EB OSS 10.0																	
180+00 -L- EB EM	FILL 4	EB ISL 12.0	EB ISS 4.0	7.0 FY	C							0' - 3.0' ROADWAY EMBANKMENT: BROWN-RED WITH TAN, SILTY CLAY	S-138	A-7-6	W	AR 3	DIAMOND GRINDING	826,202	1,974,024		
			EB OSL 12.0	EB OSS 10.0																	

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/2/2019, 2/4/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
185+00 -L- EB ISS	CUT 5	EB ISL 12.0	EB ISS 4.0	3.0 FY	C	CONCRETE ABC (15.0)	9.5			5.5			1.25' - 3.2' RESIDUAL: BROWN, C-F SANDY CLAY	S-139	A-6	M	AR 3.5	DIAMOND GRINDING HIGH SEVERITY TRANSVERSE CRACKING IN EB OSS	825,709	1,974,108
		EB OSL 12.0	EB OSS 10.0																	
185+00 -L- EB OSS				6.0 FW		CONCRETE ABC (15.0)	9.5			5.5			1.25' - 6.0' RESIDUAL: BROWN, C-F SANDY CLAY	REF S-139	A-6	M	6	HIGH SEVERITY SPALLING AT LONGITUDINAL AND TRANSVERSE JOINT INTERSECTIONS IN EB OSL AND EB OSS SEVERAL CONCRETE SLABS SAWCUT AND REPLACED IN EB ISL AND EB OSL	825,703	1,974,076
190+00 -L- EB OES	FILL 8	EB ISL 12.0	EB ISS 4.0	13.0 FW	S (LT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN WITH GRAY, C-F SANDY CLAY	S-128	A-6	W	6	DIAMOND GRINDING LOW SEVERITY LONGITUDINAL CRACKING IN EB OSS LOW SEVERITY SPALLING AT TRANSVERSE JOINTS IN EB OSS	825,210	1,974,157
		EB OSL 12.0	EB OSS 10.0																	
195+00 -L- EB EM	GRADE	EB ISL 12.0	EB ISS 4.0	6.0 FY	S (LT)								0' - 6.0' RESIDUAL: BROWN, C-F SILTY CLAY	S-140	A-7-6	M	6	DIAMOND GRINDING	824,725	1,974,292
		EB OSL 12.0	EB OSS 10.0																	
200+00 -L- EB OES	CUT 2	EB ISL 12.0	EB ISS 4.0	13.5 FW	S (LT)								0' - 6.0' RESIDUAL: BROWN-RED WITH GRAY, SILTY CLAY	S-129	A-7-6	M	6	DIAMOND GRINDING	824,227	1,974,364
		EB OSL 12.0	EB OSS 10.0																	
204+00 -L- EB EM	FILL 8	EB ISL 12.0	EB ISS 4.0	8.5 FY	S (LT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	S-141	A-7-6	W	6	DIAMOND GRINDING	823,853	1,974,516
		EB OSL 12.0	EB OSS 10.0																	
210+00 -L- EB ISS	FILL 12	EB ISL 12.0	EB ISS 4.0	CORE 3.0 FY	S (LT)	CONCRETE PADL 6" (16.25)	10.25						0.8' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-128	A-6	W	6	DIAMOND GRINDING MODERATE SEVERITY JOINT SPALLING AT LONGITUDINAL AND TRANSVERSE JOINT INTERSECTIONS EB OSL, GORE, EB DECEL, EB OSS	CORE 823,279	1,974,695
		EB OSL 12.0	EB OSS (CONC.) 4.0			DCP 8.5 FY														
210+00 -L- EB OSS		GORE 18.0	(ASPH.) 4.0	CORE 2.0 FW		CONCRETE PADL 6" (16.5)	10.5						0.8' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-128	A-6	W	6	MODERATELY SEVERITY SPALLING IN EB DECEL WHEEL PATH	CORE 823,258	1,974,637
		EB DECEL 12.0		DCP 10.0 FW									DRAIN ENCOUNTERED AT 2.0' FW BELOW PADL DCP AND AUGER PERFORMED 10.0' FW					LOW SEVERITY LONGITUDINAL AND TRANSVERSE CRACKING IN EB ASPHALT OSS	DCP / AUGER 823,256	1,974,629

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/2/2019, 2/5/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
215+00 -L- EB OES	CUT 10	EB ISL 12.0	EB ISS 4.0	13.5 FW	C								0' - 6.0' RESIDUAL: BROWN WITH TAN, SILTY CLAY	S-130	A-7-6	W	6	DIAMOND GRINDING	822,795	1,974,834
		EB OSL 12.0	EB OSS 10.0																	
221+00 -L- EB EM	CUT 10	EB ISL 12.0	EB ISS 4.0	7.0 FY	C								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-131	A-6	D	6	DIAMOND GRINDING	822,261	1,975,114
		EB OSL 12.0	EB OSS 10.0																	
225+00 -L- EB OES	CUT 12	EB ISL 12.0	EB ISS 4.0	12.0 FW	C								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	S-131	A-6	M	6	DIAMOND GRINDING	821,882	1,975,252
		EB OSL 12.0	EB OSS 10.0																	
230+00 -L- EB EM	CUT 6	EB ISL 12.0	EB ISS 4.0	6.5 FY	C								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-131	A-6	M	6	DIAMOND GRINDING	821,457	1,975,520
		GORE 15.0	EB OSS 3.0																	
		EB OSL 12.0																		
		EB ACCEL 14.0																		
235+00 -L- EB ISS	CUT 8	EB ISL 12.0	EB ISS 4.0	3.0 FY	C	CONCRETE ABC (14.0)	9.75				4.25		1.1' - 6.0' RESIDUAL: BROWN-TAN, GREY, SILTY CLAY	S-142	A-7-6	M	6	DIAMOND GRINDING	821,012	1,975,748
		EB OSL 12.0	EB OSS 4.0															LOW SEVERITY SPALLING ALONG LONGITUDINAL JOINT BETWEEN EB ACCEL AND EB OSS		
235+00 -L- EB OES		EB ACCEL 12.0		9.0 FW									0' - 6.0' RESIDUAL: BROWN-TAN, SILTY CLAY	S-147	A-7-6	M	6		820,990	1,975,706

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/2/2019, 2/5/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates			
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting
240+00 -L- EB ACCEL	FILL 10	EB ISL 12.0	EB ISS 4.0	6.5 FW	C	CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	11.0	1.0	3.5		6.5	1.9' - 6.0' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	S-148	A-7-6	M	6	DIAMOND GRINDING	820,551	1,975,945
		EB OSL 12.0	EB OSS (CONC.) 4.0														PATCH AND REPLACE CONCRETE AT LONGITUDINAL JOINT BETWEEN EB OSL AND EB ACCEL		
240+00 -L- EB OSS (I)		EB ACCEL 9.0	(ASPH.) 8.0	2.5 FW		CONCRETE ASPHALT PADL 5.5" CTBC STABILIZED SUB. (26.0)	10.5	1.0	3.5		5.5	1.7' - 6.0' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	REF S-148	A-7-6	M	6	LOW SEVERITY TRANSVERSE CRACKING IN ASPHALT OF EB OSS	820,549	1,975,942
240+00 -L- EB OSS (O)				6.5 FW		ASPHALT (6.0)		6.0				NO DCP OR AUGER PROBE SEE 240+00 -L- EB OSS (I) FOR SUBGRADE						820,551	1,975,945
						CORE NOT SAVED													
245+00 -L- EB EM	FILL 10	EB ISL 12.0	EB ISS 4.0	6.0 FY	C							0' - 6.0' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	S-143	A-7-6	M	6	DIAMOND GRINDING	820,127	1,976,214
		EB OSL 12.0	EB OSS (CONC.) 10.0																
			(ASPH.) 2.0																
250+00 -L- EB OES	FILL 4	EB ISL 12.0	EB ISS 4.0	13.0 FW	C							0' - 3.5' ROADWAY EMBANKMENT: BROWN, SILTY CLAY	S-149	A-7-6	M	AR 5.5	DIAMOND GRINDING	819,664	1,976,407
		EB OSL 12.0	EB OSS 10.0									3.5' - 5.5' RESIDUAL: BROWN-GRAY, C-F SANDY CLAY	S-150	A-6	D				
255+00 -L- EB EM	CUT 5	EB ISL 12.0	EB ISS 4.0	8.5 FY	C							0' - 6.0' RESIDUAL: BROWN- MAROON, C-F SANDY CLAY	S-144	A-6	M	6	DIAMOND GRINDING	819,241	1,976,678
		EB OSL 12.0	EB OSS (CONC.) 10.0																
			(ASPH.) 2.0																

Notes:

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/5/2019, 2/6/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in (inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
260+00 -L- EB ISS	FILL 6	EB ISL 12.0	EB ISS 4.0	3.5 FY	C	CONCRETE ABC (14.5)		9.5		5.0			0.8' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	S-145	A-6	M	6	DIAMOND GRINDING  LOW SEVERITY SPALLING AT TRANSVERSE JOINTS IN EB ISS	818,795	1,976,905
		EB OSL 12.0	EB OSS 10.0																	
260+00 -L- EB ISL				4.0 FY		CONCRETE ASPHALT ECONCRETE STABILIZED SUB. (18.75)	10.75	1.0	3.0		4.0		1.2' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-145	A-6	M	6		818,792	1,976,898
260+00 -L- EB OSS				6.5 FW		CONCRETE ABC (15.0)	10.0			5.0			1.25' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-145	A-6	M	6		818,780	1,976,875
265+00 -L- EB OSS	FILL 8	EB ISL 12.0	EB ISS 4.0	6.0 FW	C	CONCRETE ABC (16.0)	11.0			5.0			1.3' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	S-151	A-6	M	6	DIAMOND GRINDING	818,337	1,977,107
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																	
						CORE NOT SAVED														
270+00 -L- EB EM	FILL 8	EB ISL 12.0	EB ISS 4.0	7.0 FY	C								0' - 4.1' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-145	A-6	M	AR 4.1	DIAMOND GRINDING	817,910	1,977,369
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																	
275+00 -L- EB OSS	FILL 10	EB ISL 12.0	EB ISS 4.0	5.0 FW	S (RT)	CONCRETE ABC (17.0)	10.0			7.0			1.8' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN, C-F SANDY CLAY	S-152	A-6	M	6	DIAMOND GRINDING  SETTLEMENT BETWEEN EB CONCRETE OSS AND EB ASPHALT OSS	817,439	1,977,521
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																	
						CORE NOT SAVED														

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/5/2019, 2/6/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
280+00 -L- EB EM	FILL 6	EB ISL 12.0	EB ISS 4.0	8.5 FY	S (RT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-145	A-6	M	6	DIAMOND GRINDING	816,964	1,977,660
		EB OSL 12.0	EB OSS 10.0																	
285+00 -L- EB ISS	CUT 10	EB ISL 12.0	EB ISS 4.0	2.5 FY	S (RT)	CONCRETE ABC (15.0)	10.0			5.0			1.25' - 2.25' RESIDUAL: BROWN WITH TAN, C-F SANDY CLAY	REF S-145	A-6	M	6	DIAMOND GRINDING	816,468	1,977,674
		EB OSL 12.0	EB OSS 10.0										2.25' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY CLAY	REF S-153	A-6	D				
285+00 -L- EB OSS				7.0 FW		CONCRETE ABC (15.0)	10.25			4.75			1.25' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY CLAY	S-153	A-6	D	6		816,469	1,977,641
290+00 -L- EB OES	CUT 6	EB ISL 12.0	EB ISS 4.0	13.5 FW	C								0' - 3.5' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY CLAY	REF S-153	A-6	D	AR 3.5	DIAMOND GRINDING	815,970	1,977,613
		EB OSL 12.0	EB OSS 10.0																	
295+00 -L- EB EM	CUT 8	EB ISL 12.0	EB ISS 4.0	10.0 FY	S (LT)								0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY CLAY	REF S-153	A-6	D	6	DIAMOND GRINDING	815,469	1,977,638
		EB OSL 12.0	EB OSS 10.0																	
300+00 -L- EB OES	GRADE	EB ISL 12.0	EB ISS 4.0	12.0 FW	S (LT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	S-154	A-6	M	6	DIAMOND GRINDING	814,965	1,977,593
		EB OSL 12.0	EB OSS 10.0															MODERATE SEVERITY SPALLING ON TRANSVERSE JOINTS IN EB OSL WHEEL PATH		
305+00 -L- EB EM	FILL 16	EB ISL 12.0	EB ISS 5.0	8.5 FY	S (LT)								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-154	A-6	M	6	DIAMOND GRINDING	814,469	1,977,693
		EB OSL 12.0	EB OSS 10.0																	

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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/6/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting	
311+00 -L- EB ISS	FILL 30	EB ISL 12.0	EB ISS 5.0	CORE 2.5 FY	S (LT)	CONCRETE PADL 6.0" (17.75)	11.75						0' - 6.0' ROADWAY EMBANKMENT: BROWN, TAN, AND RED, FINE TO COARSE SANDY CLAY	S-164	A-6	W	6	DIAMOND GRINDING  PATCH AND REPLACE CONCRETE AT EB CL LONGITUDINAL JOINT	CORE 813,882	1,977,825
		EB OSL 12.0	EB OSS 10.0	DCP 7.5 FY									DRAIN ENCOUNTERED AT 2.5' FY BELOW PADL DCP AND AUGER PERFORMED 7.5' FY AT STA. 311+20 -L-					AUGER / DCP 813,860	1,977,837	
311+00 -L- EB OSL				4.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.25)	11.25	1.0	5.0		5.0		1.4' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	REF S-155	A-6	M	6		813,875	1,977,804
													DRAIN ENCOUNTERED AT 2.5' FY BELOW PADL DCP AND AUGER PERFORMED 7.5' FY AT STA. 311+20 -L-							
311+00 -L- EB OSS				5.5 FW		CONCRETE ABC (18.0)	11.25				6.75		1.5' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	S-155	A-6	M	6		813,872	1,977,794
320+00 -L- EB EM	FILL 6	EB ISL 12.0	EB ISS 4.0	9.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	REF S-155	A-6	M	6	DIAMOND GRINDING  EB OSS / OES DROP OFF	813,036	1,978,136
		EB OSL 12.0	EB OSS 10.0																	
325+00 -L- EB OES	FILL 7	EB ISL 12.0	EB ISS 4.0	14.0 FW	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN AND GRAY, C-F SANDY CLAY	REF S-155	A-6	M	6	DIAMOND GRINDING	812,554	1,978,279
		EB OSL 12.0	EB OSS 10.0																	
330+00 -L- EB EM	FILL 10	EB ISL 12.0	EB ISS 4.0	8.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN, C-F SANDY CLAY	REF S-156	A-6	M	6	DIAMOND GRINDING	812,111	1,978,517
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																	

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/6/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / (Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
335+00 -L- EB EM	FILL 10	EB ISL 12.0	EB ISS 4.0	15.0 FY	C							1.0' - 4.0' ROADWAY EMBANKMENT: BROWN-RED, TAN, C-F SANDY CLAY	S-4	A-6	M	4	DIAMOND GRINDING	811,658	1,978,729	
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0	2.0 FY		CONCRETE ASPHALT CTBC (14.0) ASPHALT THRU HALF OF CORE	9.75	0.75	3.5				1.1' - 2.8' ROADWAY EMBANKMENT: BROWN-RED, TAN, C-F SANDY CLAY	REF S-4	A-6	M	AR 2.8		811,652	1,978,718
335+00 -L- EB ISS				6.5 FW		CONCRETE ABC (14.0)	10.5			3.5			1.1' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN, C-F SANDY CLAY	S-156	A-6	M	6		811,639	1,978,688
340+00 -L- EB OES	FILL 8	EB ISL 12.0	EB ISS 4.0	14.5 FW	C							0' - 6.0' ROADWAY EMBANKMENT: BROWN-RED, TAN, GRAY, C-F SANDY CLAY	S-157	A-6	M	6	DIAMOND GRINDING	811,183	1,978,898	
		EB OSL 12.0	EB OSS 10.0																	
345+00 -L- EB EM	FILL 3	EB ISL 12.0	EB ISS 4.0	9.0 FY	C							0' - 3.5' ROADWAY EMBANKMENT: BROWN-RED, TAN, GRAY, C-F SANDY CLAY	REF S-157	A-6	M	6	DIAMOND GRINDING	810,757	1,979,166	
		EB OSL 12.0	EB OSS 10.0									3.5' - 6.0' RESIDUAL: BROWN-RED, SILTY CLAY	S-165	A-7-6	M					
350+00 -L- EB OSS	GRADE	EB ISL 12.0	EB ISS 4.0	5.5 FW	C	CONCRETE ABC (17.0)		10.25		6.75		1.6' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, C-F SANDY CLAY	S-158	A-6	M	6	DIAMOND GRINDING	810,298	1,979,368	
		EB OSL 12.0	EB OSS 10.0			CORE NOT SAVED												MODERATE SEVERITY SPALLING AT LONGITUDINAL AND TRANSVERSE JOINT INTERSECTIONS IN EB ISS AND EB ISL		
																		EB OSS / OES DROP OFF		
356+00 -L- EB EM	FILL 12	EB ISL 12.0	EB ISS 4.0	6.5 FY	S (LT)							0' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, C-F SANDY CLAY	REF S-158	A-6	M	6	DIAMOND GRINDING	809,804	1,979,716	
		EB OSL 12.0	EB OSS 10.0																	

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/6/2019, 2/7/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in (inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
360+00 -L- EB ISS	FILL 6	EB ISL 12.0	EB ISS 4.0	3.0 FY	S (LT)	CONCRETE ABC (16.0)	9.25			6.75			1.3' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	S-166	A-7-6	W	6	DIAMOND GRINDING LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN EB OSL WHEEL PATH LOW SEVERITY TRANSVERSE CRACKING IN EB ISS	809,489	1,979,966
		EB OSL 12.0	EB OSS 10.0																	
360+00 -L- EB ISL				2.0 FY		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (21.5)	10.5	1.0	4.25		5.75		1.7' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, SILTY CLAY	REF S-166	A-7-6	W	6	PATCH AND REPLACE CONCRETE AT EB CL	809,486	1,979,962
360+00 -L- EB OSS				7.5 FW		CONCRETE ABC (14.0)	10.0			4.0			1.1' - 3.5' ROADWAY EMBANKMENT: BROWN-RED WITH TAN, SILTY CLAY	S-159	A-7-6	M	6		809,466	1,979,941
													3.5' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, SILTY CLAY	S-160	A-7-6	W				
365+00 -L- EB OSS	FILL 12	EB ISL 12.0	EB ISS 4.0	7.5 FW	S (LT)	CONCRETE ABC (13.5)	10.0			3.5			1.1' - 6.0' ROADWAY EMBANKMENT: BROWN-TAN, F-C SANDY CLAY	S-161	A-6	M	6	DIAMOND GRINDING EB OSS / OES DROP OFF	809,113	1,980,304
		EB OSL 12.0	EB OSS 10.0			CORE NOT SAVED														
370+00 -L- EB EM	GRADE	EB ISL 12.0	EB OSS 5.0	10.0 FY	S (LT)								0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY SILT	S-167	A-4	M	6	DIAMOND GRINDING	808,844	1,980,733
		EB OSL 12.0	GORE 9.5																	
		EB DECEL 12.0	EB ISS 4.0																	
375+00 -L- EB OES	CUT 8	EB ISL 12.0	EB ISS 4.0	12.0 FW	C								0' - 6.0' RESIDUAL: BROWN, SILTY CLAY	S-162	A-7-6	M	6	DIAMOND GRINDING	808,551	1,981,142
		EB OSL 12.0	EB OSS 10.0																	

Notes:

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/6/2019, 2/7/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
380+00 -L- EB EM	CUT 6	EB ISL 12.0	EB ISS 4.0	8.0 FY	C								0' - 6.0' RESIDUAL: LIGHT BROWN-TAN WITH GRAY, C-F SANDY CLAY	S-168	A-6	M	6	DIAMOND GRINDING	808,351	1,981,603
		EB OSL 12.0	EB OSS 10.0																	
385+00 -L- EB ISS	CUT 4	EB ISL 12.0	EB ISS 4.0	3.5 FY	C	CONCRETE ABC (14.5)	10.25			4.25			1.2' - 6.0' RESIDUAL: BROWN-TAN, GRAY, F-C SANDY CLAY	S-169	A-6	W	6	DIAMOND GRINDING	808,118	1,982,047
		EB OSL 12.0	EB OSS 10.0															MODERATE SEVERITY SPALLING AT TRANSVERSE JOINT IN EB OSS		
385+00 -L- EB OSS				4.5 FW		CONCRETE ABC (16.0)	9.5			6.5			1.3' - 6.0' RESIDUAL: LIGHT BROWN-TAN WITH GRAY, C-F SANDY CLAY	REF S-168	A-6	M	6		808,090	1,982,032
390+00 -L- EB OES	CUT 6	EB ISL 12.0	EB ISS 4.0	14.5 FW	C								0' - 6.0' RESIDUAL: BROWN-TAN, GRAY, SILTY CLAY	S-163	A-7-6	W	6	DIAMOND GRINDING	807,862	1,982,479
		EB OSL 12.0	EB OSS 10.0																	
395+00 -L- EB EM	GRADE	EB ISL 12.0	EB ISS 4.0	8.5 FY	C								0' - 6.0' RESIDUAL: BROWN-TAN, GRAY, SILTY CLAY	REF S-163	A-7-6	W	6	DIAMOND GRINDING	807,696	1,982,954
		EB OSL 12.0	GORE 1.5															HIGH SEVERITY SPALLING AT TRANSVERSE JOINT BETWEEN EB OSL AND EB GORE		
		EB ACCEL 13.0	EB OSS 10.0																	
400+00 -L- EB OES	CUT 6	EB ISL 12.0	EB ISS 4.0	6.0 FW	C								0' - 6.0' RESIDUAL: BROWN-TAN, SILTY CLAY	REF S-170	A-7-6	M	6	DIAMOND GRINDING	807,451	1,983,393
		EB OSL 12.0	EB OSS 4.0																	
		EB ACCEL 12.0																		
405+00 -L- EB EM	CUT 4	EB ISL 12.0	EB ISS 4.0	9.0 FY	C								0' - 6.0' RESIDUAL: BROWN-TAN, SILTY CLAY	S-170	A-7-6	M	6	DIAMOND GRINDING	807,309	1,983,876
		EB OSL 12.0	EB OSS 10.0																	
		EB ACCEL 2.0																		

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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal    NM = Not Measured  
 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/7/2019, 2/8/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting			
410+00 -L- EB EM	CUT 4	EB ISL 12.0	EB ISS 4.0	11.0 FY	S (LT)									1.0' - 4.0' RESIDUAL: BROWN, RED, AND TAN, C-F SANDY CLAY	S-5	A-6	M	4	DIAMOND GRINDING	807,131	1,984,345	
		EB OSL 12.0	EB OSS 10.0											BULK SAMPLE ONLY, NO DCP								
410+00 -L- EB ISS				3.5 FY		CONCRETE PADL 10.5" GEOTEXTILE (21.0)	10.5							1.75' - 3.8' RESIDUAL: BROWN, C-F SANDY CLAY	S-171	A-6	W	AR 3.8			807,125	1,984,342
410+00 -L- EB OSL				4.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (22.0)	11.0	1.0	4.5	5.5				1.9' - 6.0' RESIDUAL: ORANGE-BROWN, C-F SANDY CLAY	S-183	A-6	W	6			807,104	1,984,334
410+00 -L- EB OSS				7.5 FW		CONCRETE ABC (16.5)	10.5			6.0				1.4' - 3.2' RESIDUAL: ORANGE-BROWN, C-F SANDY CLAY	REF S-183	A-6	W	AR 3.2			807,093	1,984,330
415+00 -L- EB OES	CUT 5	EB ISL 12.0	EB ISS 4.0	11.0 FW	S (LT)									0' - 6.0' RESIDUAL: BROWN-ORANGE, SILTY CLAY	REF S-172	A-7-6	M	6		DIAMOND GRINDING	806,950	1,984,818
		EB OSL 12.0	EB OSS 10.0																EB OSS / OES DROP OFF			
420+00 -L- EB EM	CUT 4	EB ISL 12.0	EB ISS 4.0	8.5 FY	S (LT)									0' - 6.0' RESIDUAL: BROWN-ORANGE, SILTY CLAY	S-172	A-7-6	M	6	DIAMOND GRINDING	806,938	1,985,325	
		EB OSL 12.0	EB OSS 10.0																			
425+00 -L- EB OES	CUT 6	EB ISL 12.0	EB ISS 4.0	14.5 FW	S (LT)									0' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, SILTY CLAY	REF S-173	A-7-6	W	6	DIAMOND GRINDING	806,926	1,985,833	
		EB OSL 12.0	EB OSS 10.0																			
430+00 -L- EB EM	CUT 3	EB ISL 12.0	EB ISS 4.0	7.0 FY	S (LT)									0' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, SILTY CLAY	S-173	A-7-6	W	6	DIAMOND GRINDING	807,091	1,986,314	
		EB OSL 12.0	EB OSS 10.0																			

Notes:

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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/8/2019
<b>Notes By:</b>	TIM McNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness					Subgrade				GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting	
435+00 -L- EB ISS	CUT 5	EB ISL 12.0	EB ISS 4.0	CORE 3.5 FY	S (LT)	CONCRETE PADL 6.0" (15.75)	9.75					1.0' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, SILTY CLAY	REF S-173	A-7-6	W	AR 4.3	DIAMOND GRINDING  CORE	807,284	1,986,777	
		EB OSL 12.0	EB OSS 10.0	DCP 9.5 FY								DRAIN ENCOUNTERED AT 3.5' FY BELOW PADL DCP AND AUGER PERFORMED 9.5' FY							DCP / AUGER	807,289
435+00 -L- EB OSS						7.0 FW		CONCRETE ABC (14.0)	9.5			4.5		1.2' - 6.0' RESIDUAL: BROWN-TAN WITH GRAY, SILTY CLAY	REF S-173	A-7-6	W	6		807,254
440+00 -L- EB OES	CUT 12	EB ISL 12.0	EB ISS 4.0	11.0 FW	S (RT)							0' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	S-184	A-6	W	6	DIAMOND GRINDING  PATCH AND REPLACE CONCRETE IN EB OSL WHEEL PATH	807,466	1,987,244	
		EB OSL 12.0	EB OSS 10.0																	
445+00 -L- EB EM	CUT 10	EB ISL 12.0	EB ISS 4.0	7.0 FY	S (RT)							0' - 6.0' RESIDUAL: LIGHT BROWN-TAN, C-F SANDY SILT	S-174	A-4	M	6	DIAMOND GRINDING	807,686	1,987,689	
		EB OSL 12.0	EB OSS 10.0																	
450+00 -L- EB OES	CUT 10	EB ISL 12.0	EB ISS 4.0	14.0 FW	S (RT)							0' - 6.0' RESIDUAL: BROWN, C-F SANDY CLAY	S-185	A-6	M	6	DIAMOND GRINDING	807,763	1,988,180	
		EB OSL 12.0	EB OSS 10.0																	
455+00 -L- EB EM	CUT 6	EB ISL 12.0	EB ISS 4.0	9.0 FY	S (RT)							0' - 2.6' TRIASSIC RESIDUAL: BROWN-MAROON, C-F SANDY CLAY	S-175	A-6	M	AR 2.6	DIAMOND GRINDING	807,866	1,988,664	
		EB OSL 12.0	EB OSS 10.0																	

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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/8/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates							
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in (inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting				
460+00 -L- EB ISS	CUT 10	EB ISL 12.0	EB ISS 4.0	1.5 FY	C	CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (19.0)	9.25	1.0	3.75		5.0	1.2' - 4.5' TRIASSIC RESIDUAL: MAROON, SILTY CLAY				S-176	A-7-6	W	AR 4.5	DIAMOND GRINDING  MODERATE SEVERITY SPALLING AT TRANSVERSE JOINTS IN EB OSS	807,852	1,989,160	
		EB OSL 12.0	EB OSS 10.0										1.3' - 4.3' TRIASSIC RESIDUAL: MAROON, SILTY CLAY				REF S-176	A-7-6	W		AR 4.3	807,846	1,989,160
460+00 -L- EB ISL						4.5 FY		CONCRETE ASPHALT ECONC/CTBC STABILIZED SUB. (20.75)	10.75	1.0	4.0		5.0	1.2' - 2.9' TRIASSIC RESIDUAL: MAROON, SILTY CLAY				REF S-176	A-7-6		W	AR 2.9	807,820
460+00 -L- EB OSS				6.5 FW		CONCRETE ABC (14.5)	9.75				4.75												
465+00 -L- EB OES	CUT 10	EB ISL 12.0	EB ISS 4.0	11.5 FW	C							0' - 4.0' TRIASSIC RESIDUAL: MAROON, SILTY CLAY				S-186	A-7-6	M	AR 4	DIAMOND GRINDING	807,761	1,989,649	
		EB OSL 12.0	EB OSS 10.0																				
470+00 -L- EB EM	FILL 6	EB ISL 12.0	EB ISS 4.0	8.5 FY	C							0' - 2.0' ROADWAY EMBANKMENT: MAROON C-F SANDY CLAY				S-178	A-6	M		DIAMOND GRINDING	807,718	1,990,147	
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0										2.0' - 6.0' ROADWAY EMBANKMENT: BROWN, C-F SANDY CLAY				S-177	A-6	M				
475+00 -L- EB OES	FILL 6	EB ISL 12.0	EB ISS 4.0	13.0 FW	C							0' - 3.7' ROADWAY EMBANKMENT: MAROON C-F SANDY CLAY				REF S-178	A-6	M	AR 3.7	DIAMOND GRINDING	807,556	1,990,620	
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																				

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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/8/2019, 2/9/2019, 2/13/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates					
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting		
480+00 -L- EB EM	FILL 6	EB ISL 12.0	EB ISS 4.0	7.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: BROWN, F-C SANDY CLAY	S-179	A-6	W	6	DIAMOND GRINDING	807,449	1,991,108	
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																		
485+00 -L- EB ISS	CUT 6	EB ISL 12.0	EB ISS 4.0	3.0 FY	S (RT)	CONCRETE ABC (17.25)	9.25			8.0			1.0' - 2.5' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	S-180	A-6	M	6	DIAMOND GRINDING	807,263	1,991,571	
		EB OSL 12.0	EB OSS 10.0										2.5' - 6.0' TRIASSIC RESIDUAL: LIGHT GRAY-BROWN, MAROON, C-F SANDY SILT	S-181	A-4	D		LOW SEVERITY SPALLING AT TRANSVERSE JOINTS IN EB OSS			
485+00 -L- EB OSS				7.5 FW		CONCRETE ABC (15.0)	9.75			5.25			1.25' - 3.2' TRIASSIC RESIDUAL: MAROON, C-F SANDY SILT	REF S-181	A-4	M	AR 3.2		807,232	1,991,558	
490+00 -L- EB OES	CUT 15	EB ISL 12.0	EB ISS 4.0	11.5 FW	S (RT)								0' - 6.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY SILT	REF S-181	A-4	M	6	DIAMOND GRINDING	807,018	1,992,006	
		EB OSL 12.0	EB OSS 10.0																		
495+00 -L- EB EM	CUT 15	EB ISL 12.0	EB ISS 4.0	7.0 FY	S (RT)								0' - 3.7' TRIASSIC RESIDUAL: MAROON-GRAY, C-F SANDY CLAY	S-182	A-6	M	AR 3.7	DIAMOND GRINDING	806,815	1,992,462	
		EB OSL 12.0	EB OSS 10.0																		
500+00 -L- EB OES	CUT 12	EB ISL 12.0	EB ISS 4.0	12 FW	C								0' - 4.1' TRIASSIC RESIDUAL: MAROON-GRAY, C-F SANDY CLAY	REF S-182	A-6	M	AR 4.1	DIAMOND GRINDING	806,513	1,992,860	
		EB OSL 12.0	EB OSS 10.0																		
505+00 -L- EB EM	CUT 10	EB ISL 12.0	EB ISS 4.0	8.5 FY	C								0' - 3.2' TRIASSIC RESIDUAL: MAROON-GRAY, C-F SANDY CLAY	REF S-182	A-6	M	AR 3.2	DIAMOND GRINDING	806,274	1,993,302	
		EB OSL 12.0	EB OSS 10.0																EB OSS / OES DROP OFF		

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 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
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**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/9/2019, 2/13/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates								
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting					
510+00 -L- EB ISS	CUT 4	EB ISL 12.0	EB ISS 4.0	3.0 FY	C	CONCRETE ABC (15.0)	9.5			5.5			1.25' - 3.5' TRIASSIC RESIDUAL: MAROON, SILTY CLAY	REF S-187	A-7-6	W	6	DIAMOND GRINDING EB OSS / OES DROP OFF	805,994	1,993,716				
		EB OSL 12.0	EB OSS 10.0												3.5' - 6.0' TRIASSIC RESIDUAL: BROWN-MAROON, C-F SANDY CLAY	REF S-188	A-6		M					
510+00 -L- EB OSL							2.5 FW		CONCRETE ASPHALT ECONC / CTBC STABILIZED SUB. (23.0)	10.75	1.0	4.75		6.5	1.9' - 2.8' TRIASSIC RESIDUAL: MAROON, SILTY CLAY	S-187	A-7-6		W	6		805,974	1,993,703	
															2.8' - 6.0' TRIASSIC RESIDUAL: BROWN-MAROON, C-F SANDY CLAY	REF S-188	A-6		M					
510+00 -L- EB OSS							6.5 FW		CONCRETE ABC (14.0)	9.5			4.5		1.25' - 2.9' TRIASSIC RESIDUAL: MAROON, SILTY CLAY	REF S-187	A-7-6		M	6		805,967	1,993,698	
												2.9' - 6.0' TRIASSIC RESIDUAL: BROWN-MAROON, C-F SANDY CLAY	S-188	A-6	M									
515+00 -L- EB OSS	FILL 15	EB ISL 12.0	EB ISS 4.0	6.0 FW	C	CONCRETE ABC (14.0)	9.75			4.25			1.25' - 6.0' ROADWAY EMBANKMENT: MAROON, SILTY CLAY	REF S-189	A-7-6	M	6	DIAMOND GRINDING PATCH AND REPLACE CONCRETE AT EB CL	805,692	1,994,115				
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																					
									CORE NOT SAVED															
520+00 -L- EB EM	FILL 12	EB ISL 12.0	EB ISS 4.0	6.0 FY	C								0' - 6.0' ROADWAY EMBANKMENT: MAROON, SILTY CLAY	REF S-189	A-7-6	M	6	DIAMOND GRINDING PATCH AND REPLACE WITH CONCRETE AND ASPHALT AT TRANSVERSE JOINTS IN EB ISL AND EB OSL	805,446	1,994,552				
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																					
525+00 -L- EB OSS	FILL 15	EB ISL 12.0	EB ISS 4.0	6.5 FW	C	CONCRETE ABC (14.5)	9.5			5.0			1.2' - 6.0' ROADWAY EMBANKMENT: MAROON, SILTY CLAY	S-189	A-7-6	M	6	DIAMOND GRINDING LOW SEVERITY LONGITUDINAL CRACKING IN EB ASPHALT OSS LOW SEVERITY SPALLING AT TRANSVERSE JOINTS IN EB OSS CONCRETE SETTLEMENT AT OSS CONCRETE AND OSS ASPHALT LONGITUDINAL JOINT SEVERE EMBANKMENT FAILURE, 3' WASHOUT	805,140	1,994,950				
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																					
									CORE NOT SAVED															

**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/9/2019, 2/13/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness					Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification		Soil Moisture	Probe Depth (feet)	Northing	Easting	
530+00 -L- EB EM	FILL 15	EB ISL 12.0	EB ISS 4.0	9.5 FY	C								0' - 6.0' ROADWAY EMBANKMENT: MAROON, C-F SANDY CLAY	REF S-189	A-7-6	M	6	DIAMOND GRINDING	804,898	1,995,389
		EB OSL 12.0	EB OSS (CONC.) 10.0 (ASPH.) 2.0																	
535+00 -L- EB ISS	CUT 3	EB ISL 12.0	EB ISS 4.0	3.5 FY	C	CONCRETE ABC (15.5)	9.5			6.0			1.3' - 4.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	S-196	A-6	M	6	DIAMOND GRINDING	804,618	1,995,803
		EB OSL 12.0	EB OSS 10.0										4.0' - 6.0' TRIASSIC RESIDUAL: MAROON-GRAY, C-F SANDY CLAY	S-195	A-6	D		EB OSS / OES DROP OFF		
535+00 -L- EB OSS				5.5 FW		CONCRETE ABC (16.0)	10.0			6.0			1.3' - 6.0' TRIASSIC RESIDUAL: MAROON WITH GRAY, C-F SANDY CLAY	S-190	A-6	M	6		804,591	1,995,785
540+00 -L- EB OES	CUT 18	EB ISL 12.0	EB ISS 4.0	12.5 FW	C								0' - 6.0' TRIASSIC RESIDUAL: MAROON WITH GRAY, C-F SANDY CLAY	REF S-190	A-6	M	6	DIAMOND GRINDING	804,310	1,996,199
		EB OSL 12.0	EB OSS 10.0																	
545+00 -L- EB EM	CUT 6	EB ISL 12.0	EB ISS 4.0	16 FY	C								1.0' - 3.5' TRIASSIC RESIDUAL: BROWN AND PURPLE, C-F SANDY CLAY	S-6	A-6	M	3.5	DIAMOND GRINDING	804,075	1,996,643
		EB OSL 12.0	EB OSS 10.0										BULK SAMPLE ONLY, NO DCP					EB OSS / OES DROP OFF		
545+00 -L- EB EM				13 FY									0' - 6.0' TRIASSIC RESIDUAL: BROWN, C-F SANDY CLAY	REF S-6	A-6	M	6		804,075	1,996,643
550+00 -L- EB OES	CUT 6	EB ISL 12.0	EB ISS 4.0	14.5 FW	C								0' - 6.0' TRIASSIC RESIDUAL: BROWN-MAROON, C-F SANDY CLAY	S-191	A-6	D	6	DIAMOND GRINDING	803,757	1,997,032
		EB OSL 12.0	EB OSS 10.0															EB OSS / OES DROP OFF		

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 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured





**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

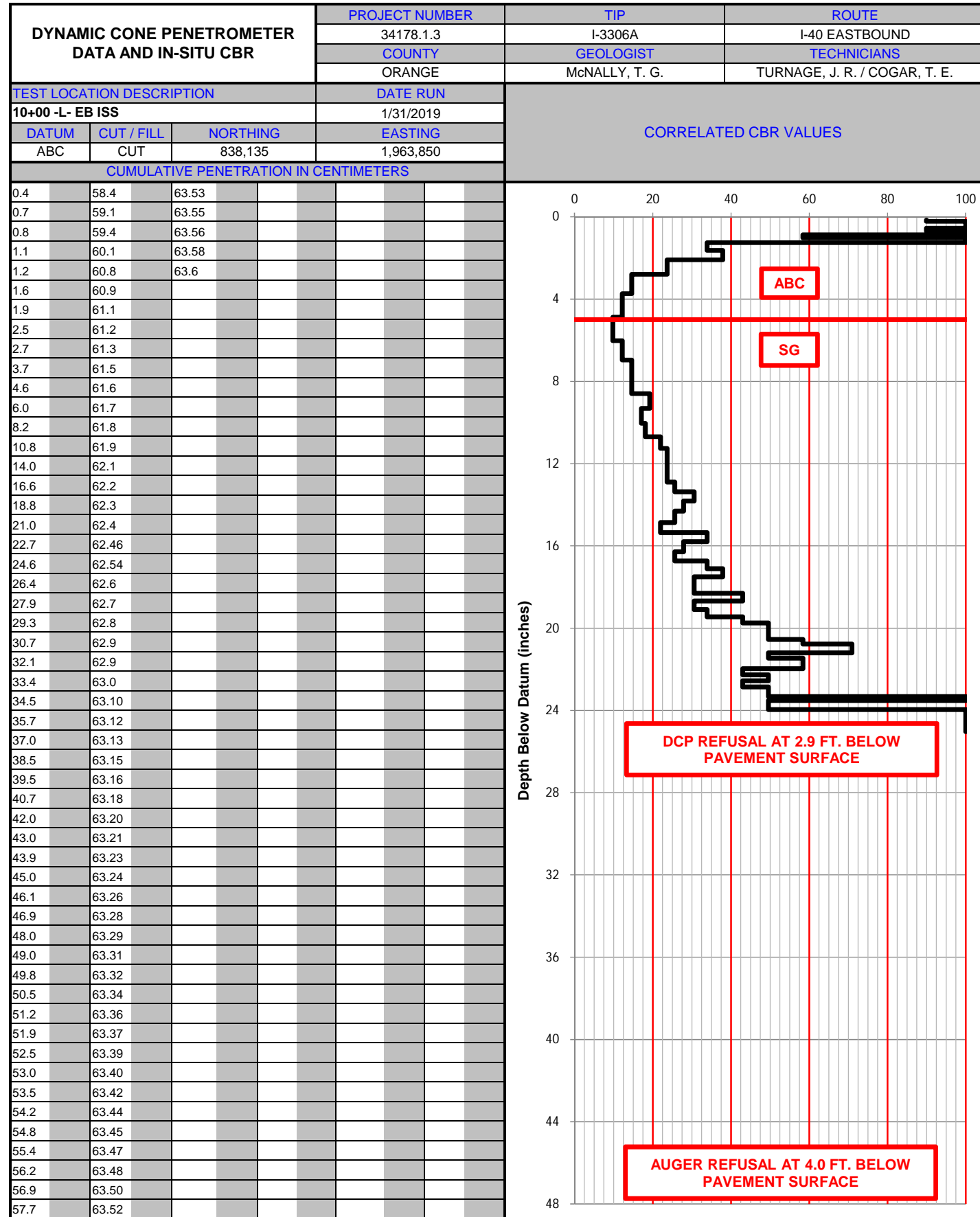
<b>County:</b>	ORANGE
<b>Route:</b>	I-40 FROM I-85 TO DURHAM COUNTY LINE

<b>Date:</b>	2/9/2019, 2/13/2019
<b>Notes By:</b>	TIM MCNALLY

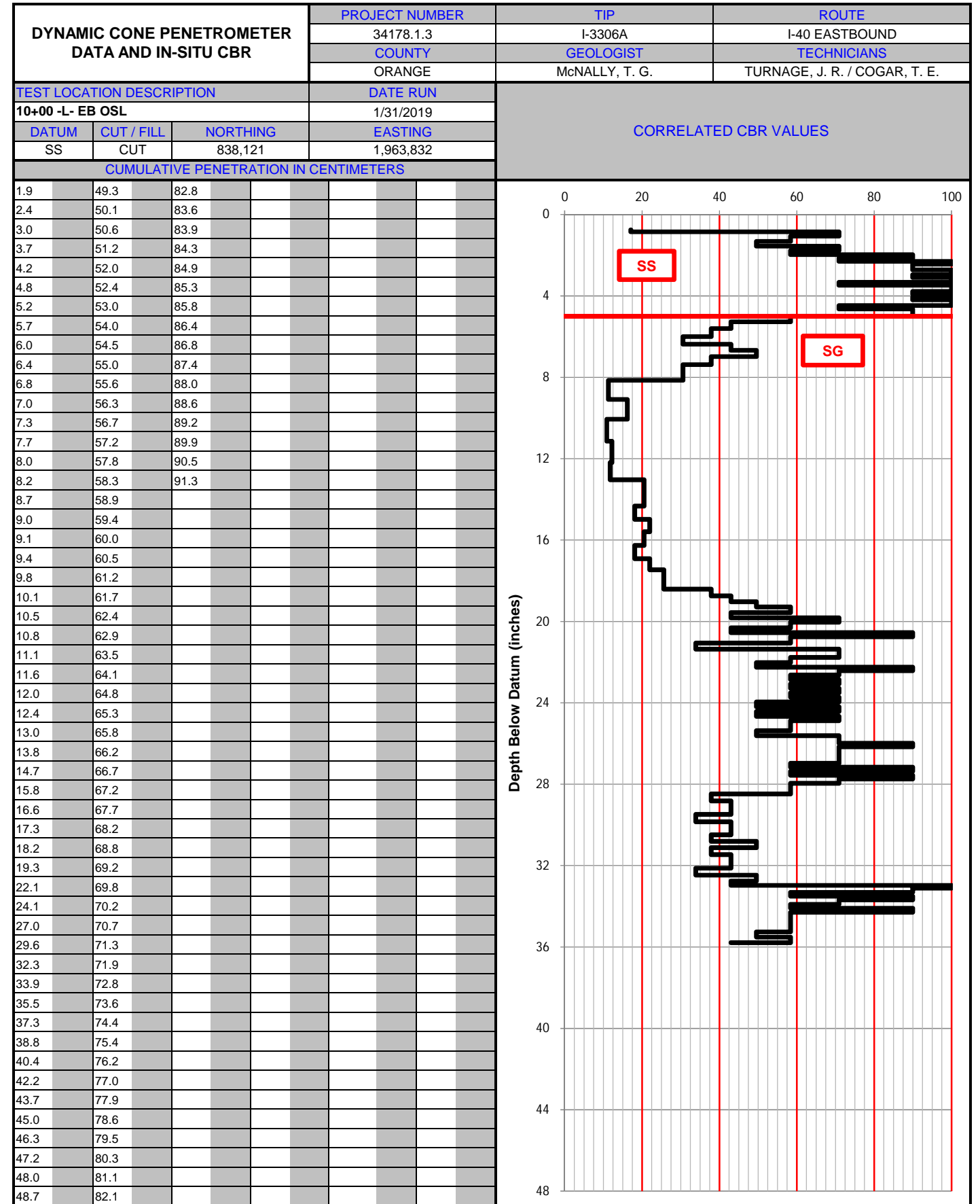
Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting
555+00 -L- EB EM	CUT 6	EB ISL 6.0	EB ISS 4.0	9.5 FY	C							0' - 6.0' TRIASSIC RESIDUAL: MAROON, C-F SANDY CLAY	S-197	A-6	M	6	DIAMOND GRINDING EB OSS / OES DROP OFF ASPHALT OVERLAY IN EB OSS WITH REFLECTION CRACKING	803,527	1,997,479
		EB CL 12.0	EB OSS 10.0																
		EB OSL 12.0																	

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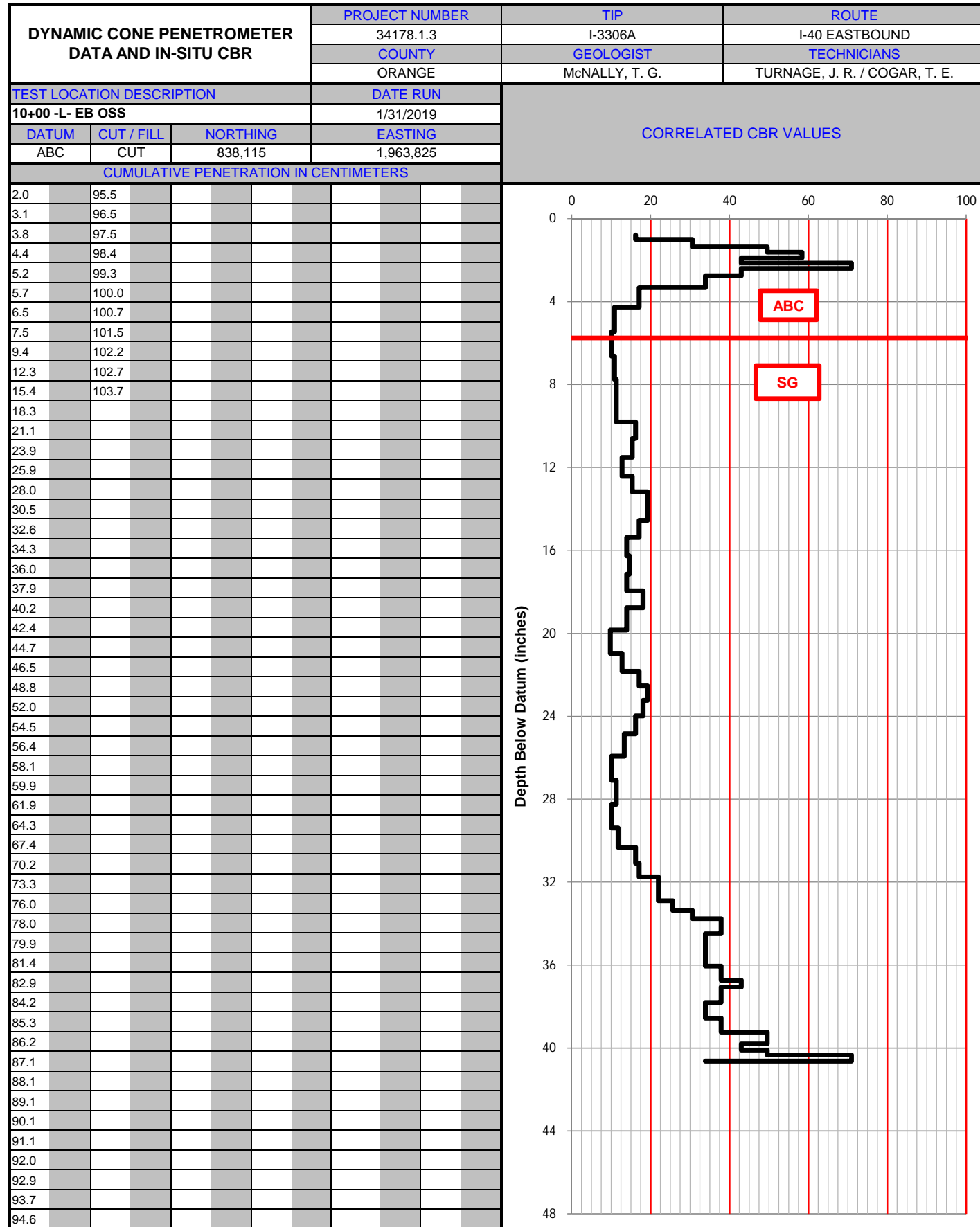


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

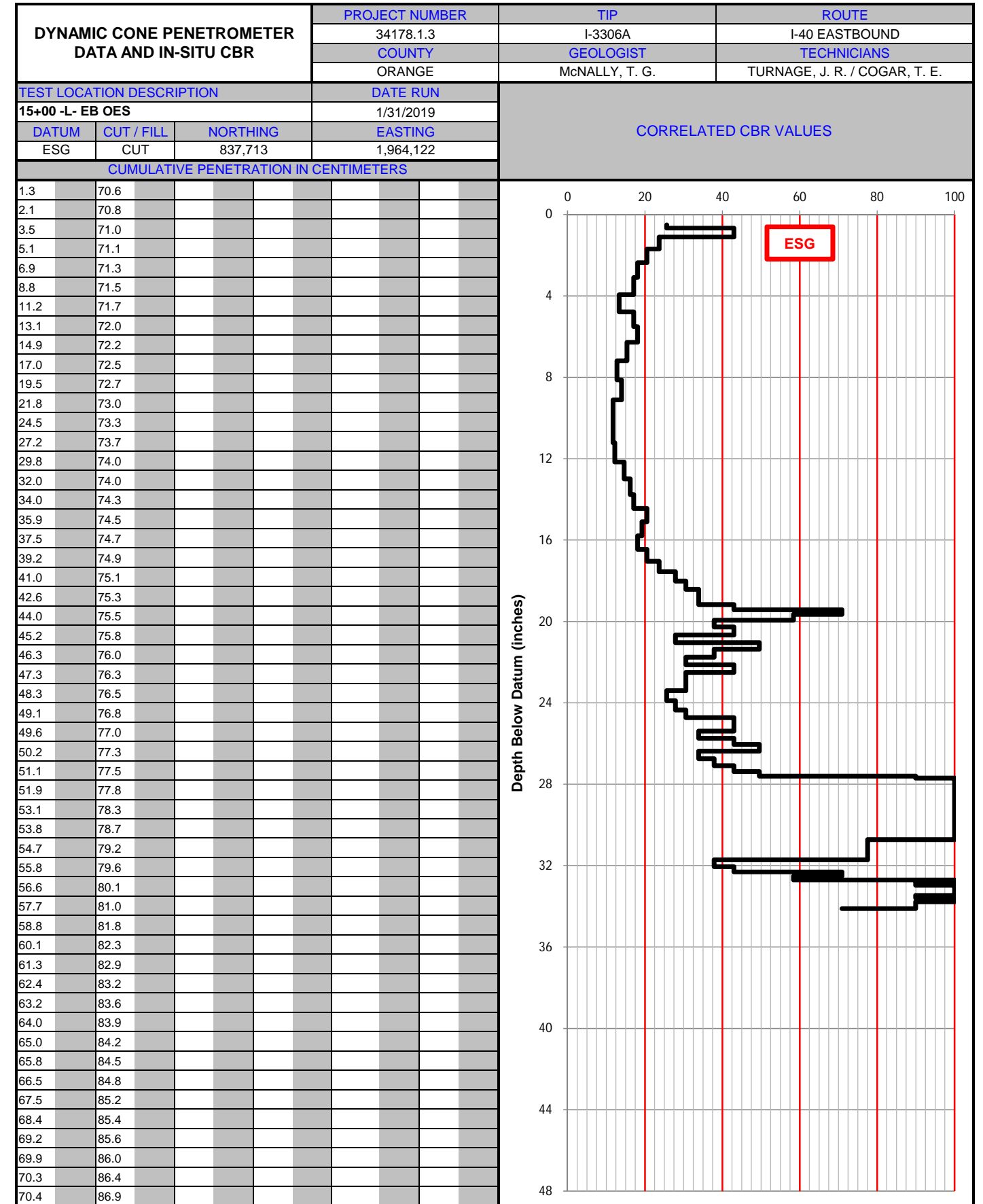


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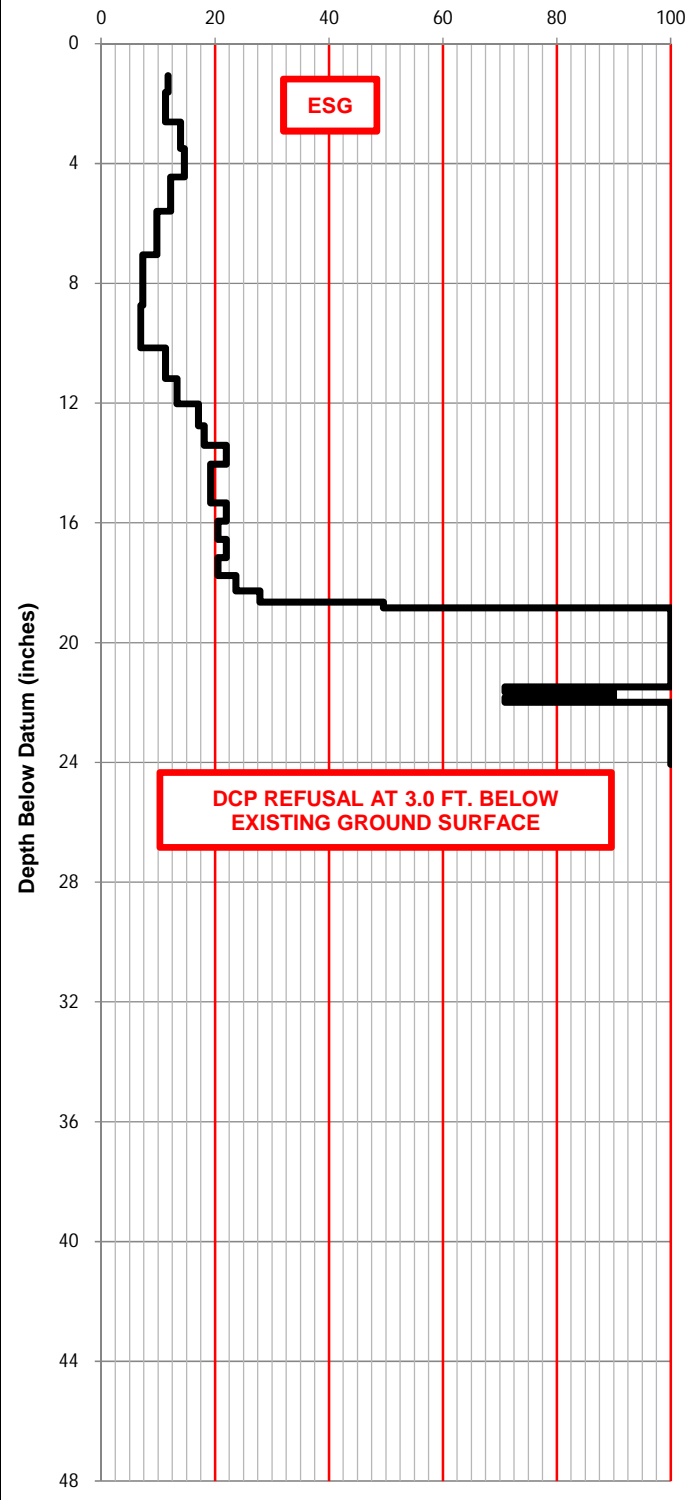
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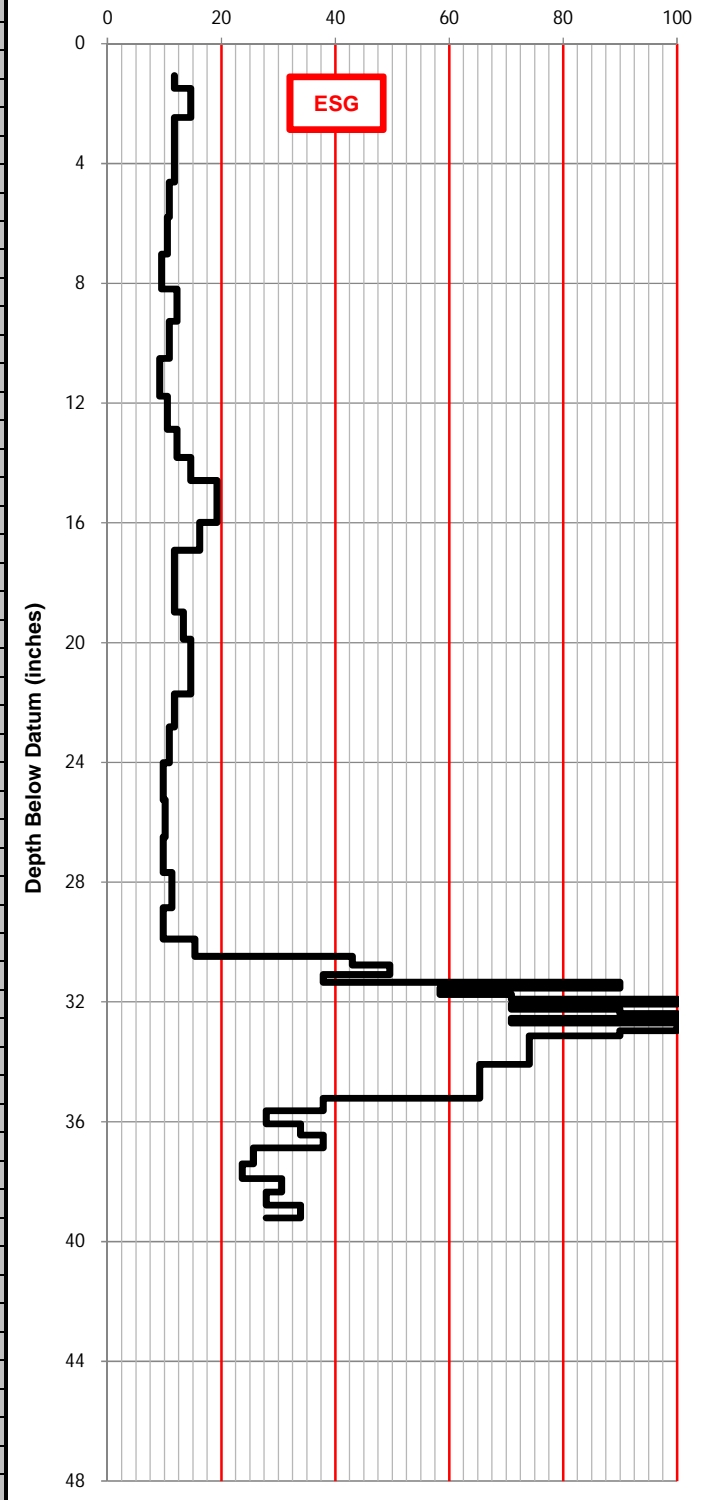
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
20+00 -L- EB EM				DATE RUN		
				1/31/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	837,344	1,964,462			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.7	51.7					
5.5	51.8					
7.8	52.0					
10.0	52.2					
12.6	52.5					
15.8	52.7					
20.0	52.9					
24.4	53.1					
27.2	53.3					
29.6	53.6					
31.5	53.8					
33.3	54.0					
34.8	54.3					
36.5	54.8					
38.2	55.2					
39.7	55.7					
41.3	56.0					
42.8	56.2					
44.4	56.3					
45.8	56.5					
47.0	56.6					
47.7	56.8					
48.0	56.9					
48.2	57.1					
48.4	57.2					
48.7	57.4					
48.9	57.5					
49.1	57.7					
49.2	57.8					
49.3	58.0					
49.5	58.1					
49.7	58.3					
49.9	58.4					
50.2	58.5					
50.3	58.7					
50.4	58.8					
50.46	59.0					
50.54	59.1					
50.6	59.3					
50.7	59.4					
50.8	59.6					
50.86	59.7					
50.94	60.0					
51.0	60.2					
51.1	60.3					
51.17	60.5					
51.24	60.6					
51.3	60.7					
51.4	60.8					
51.45	61.0					
51.52	61.1					
51.6	61.2					
51.7						



Notes:  
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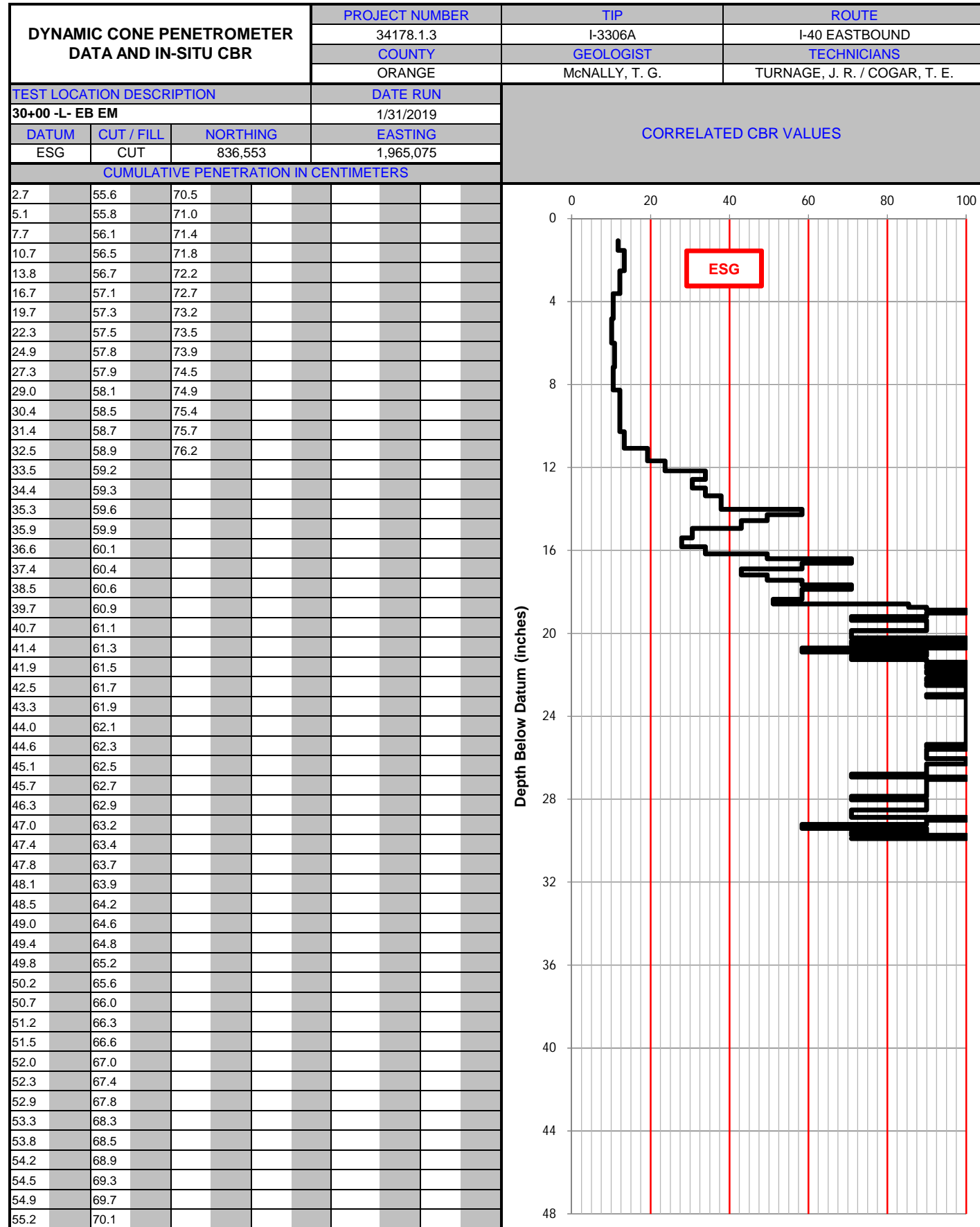


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
25+00 -L- EB OES				DATE RUN		
				1/31/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	836,922	1,964,734			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.7	89.9					
4.9	91.1					
7.6	92.1					
10.3	93.0					
13.2	94.3					
16.2	95.7					
19.5	96.8					
22.1	98.0					
25.0	99.0					
28.4	100.2					
31.4						
34.0						
36.2						
37.9						
39.6						
41.6						
44.3						
47.0						
49.4						
51.6						
53.8						
56.5						
59.4						
62.6						
65.7						
68.9						
71.7						
74.9						
77.0						
77.8						
78.5						
79.4						
79.8						
80.4						
80.9						
81.2						
81.7						
82.1						
82.4						
82.9						
83.2						
83.5						
83.9						
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86.8						
87.4						
87.9						
88.5						
89.0						

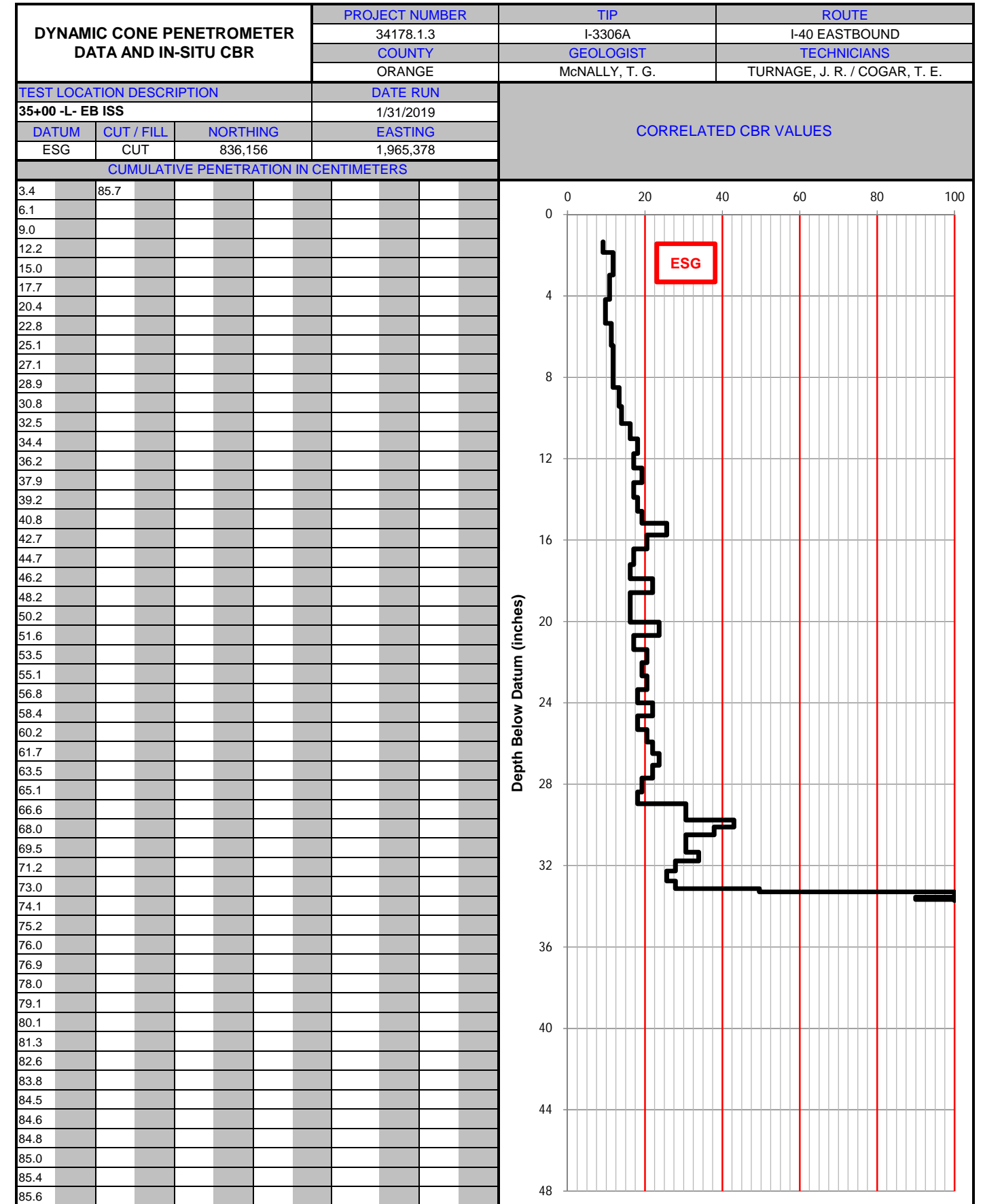


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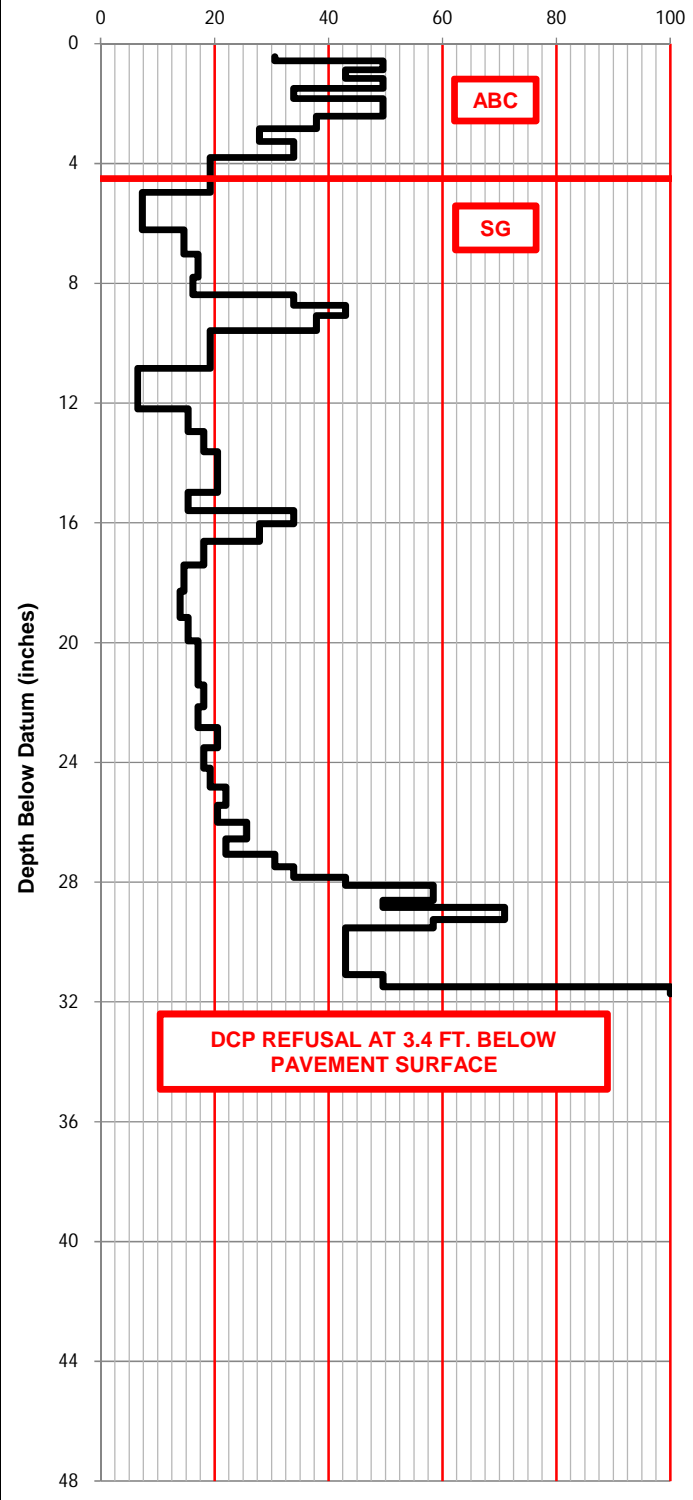
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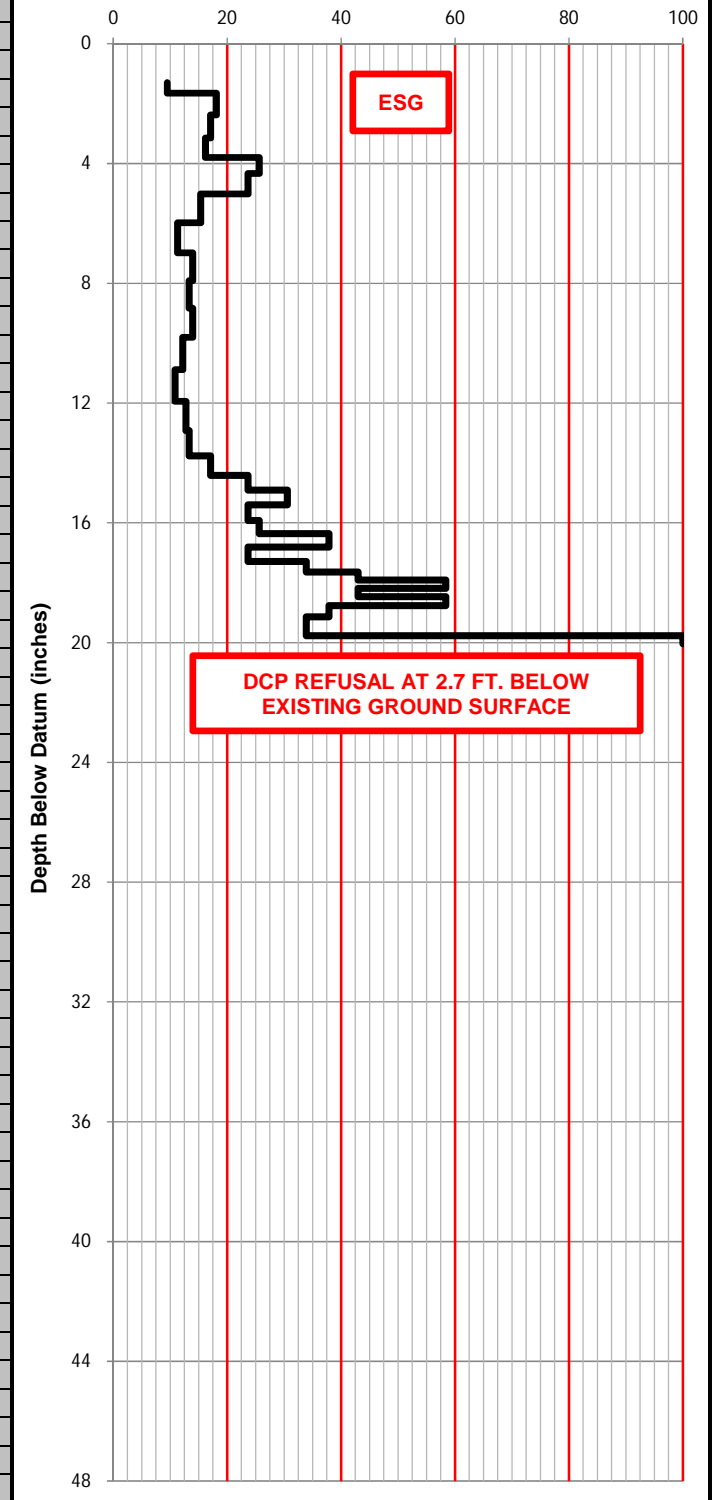
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
35+00 -L- EB OSS				1/31 - 2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	836,132	1,965,347			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.1	77.0	80.588				
1.8	77.8	80.6				
2.6	78.6					
3.3	79.3					
4.3	80.0					
5.0	80.012					
5.7	80.024					
6.6	80.036					
7.8	80.048					
8.8	80.060					
10.5	80.072					
14.7	80.084					
16.9	80.096					
18.8	80.108					
20.8	80.120					
21.8	80.132					
22.6	80.144					
23.5	80.156					
25.2	80.168					
29.9	80.180					
32.0	80.192					
33.8	80.204					
35.4	80.216					
37.0	80.228					
39.1	80.240					
40.1	80.252					
41.3	80.264					
43.1	80.276					
45.3	80.288					
47.6	80.300					
49.7	80.312					
51.6	80.324					
53.5	80.336					
55.3	80.348					
57.2	80.360					
58.8	80.372					
60.6	80.384					
62.3	80.396					
63.8	80.408					
65.4	80.420					
66.7	80.432					
68.2	80.444					
69.3	80.456					
70.3	80.468					
71.1	80.480					
71.7	80.492					
72.3	80.504					
73.0	80.516					
73.5	80.528					
74.0	80.540					
74.6	80.552					
75.4	80.564					
76.2	80.576					



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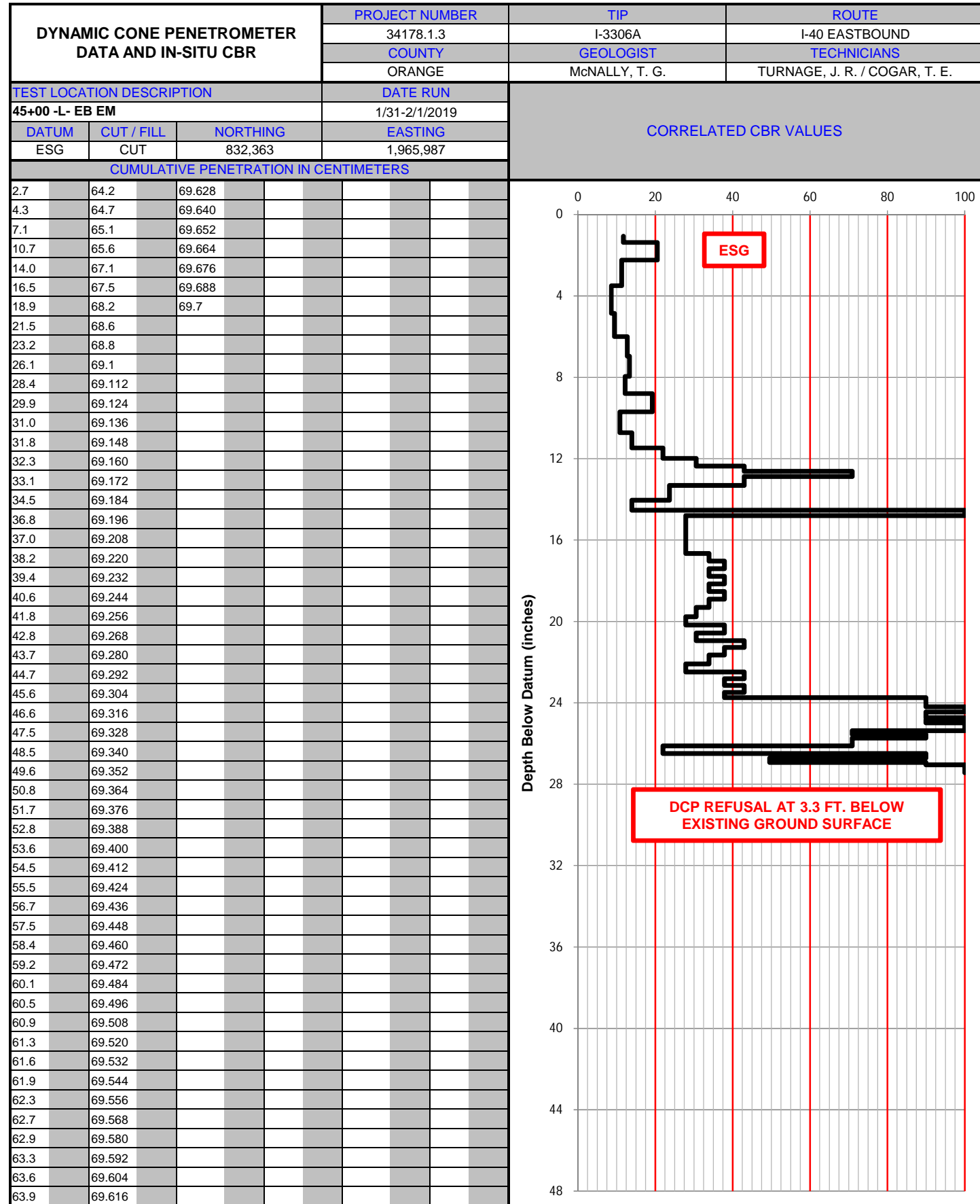


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
40+00 -L- EB OES				1/31-2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	835,732	1,965,647			
CUMULATIVE PENETRATION IN CENTIMETERS						
3.3	50.576					
5.1	50.588					
7.0	50.600					
9.0	50.612					
10.3	50.624					
11.7	50.636					
13.8	50.648					
16.6	50.660					
18.9	50.672					
21.3	50.684					
23.6	50.696					
26.2	50.708					
29.1	50.720					
31.6	50.732					
34.0	50.744					
35.9	50.756					
37.3	50.768					
38.4	50.780					
39.8	50.792					
41.1	50.804					
42.0	50.816					
43.4	50.828					
44.4	50.840					
45.2	50.852					
45.8	50.864					
46.6	50.876					
47.2	50.888					
48.1	50.9					
49.1						
50.1						
50.300						
50.312						
50.324						
50.336						
50.348						
50.360						
50.372						
50.384						
50.396						
50.408						
50.420						
50.432						
50.444						
50.456						
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50.504						
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50.528						
50.540						
50.552						
50.564						

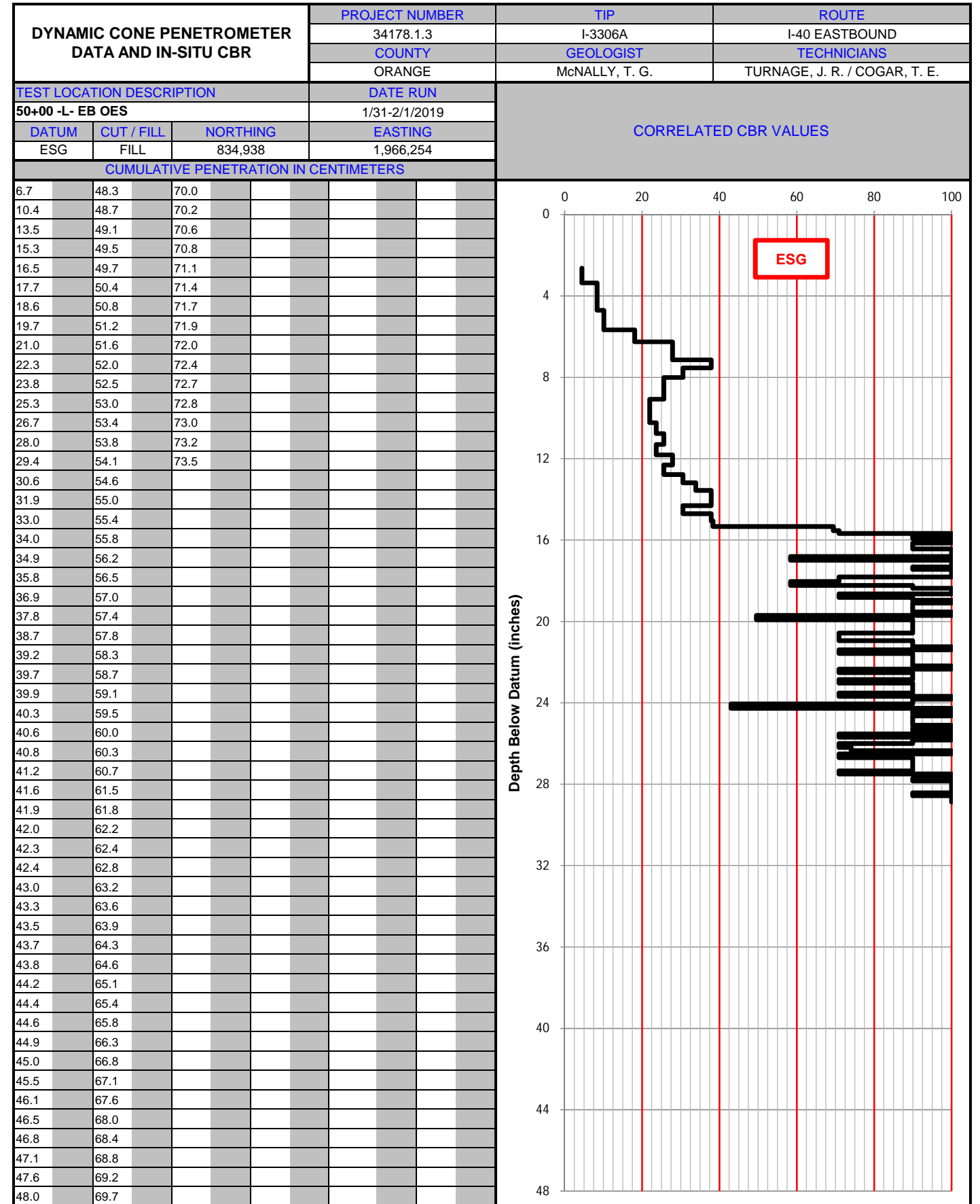


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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



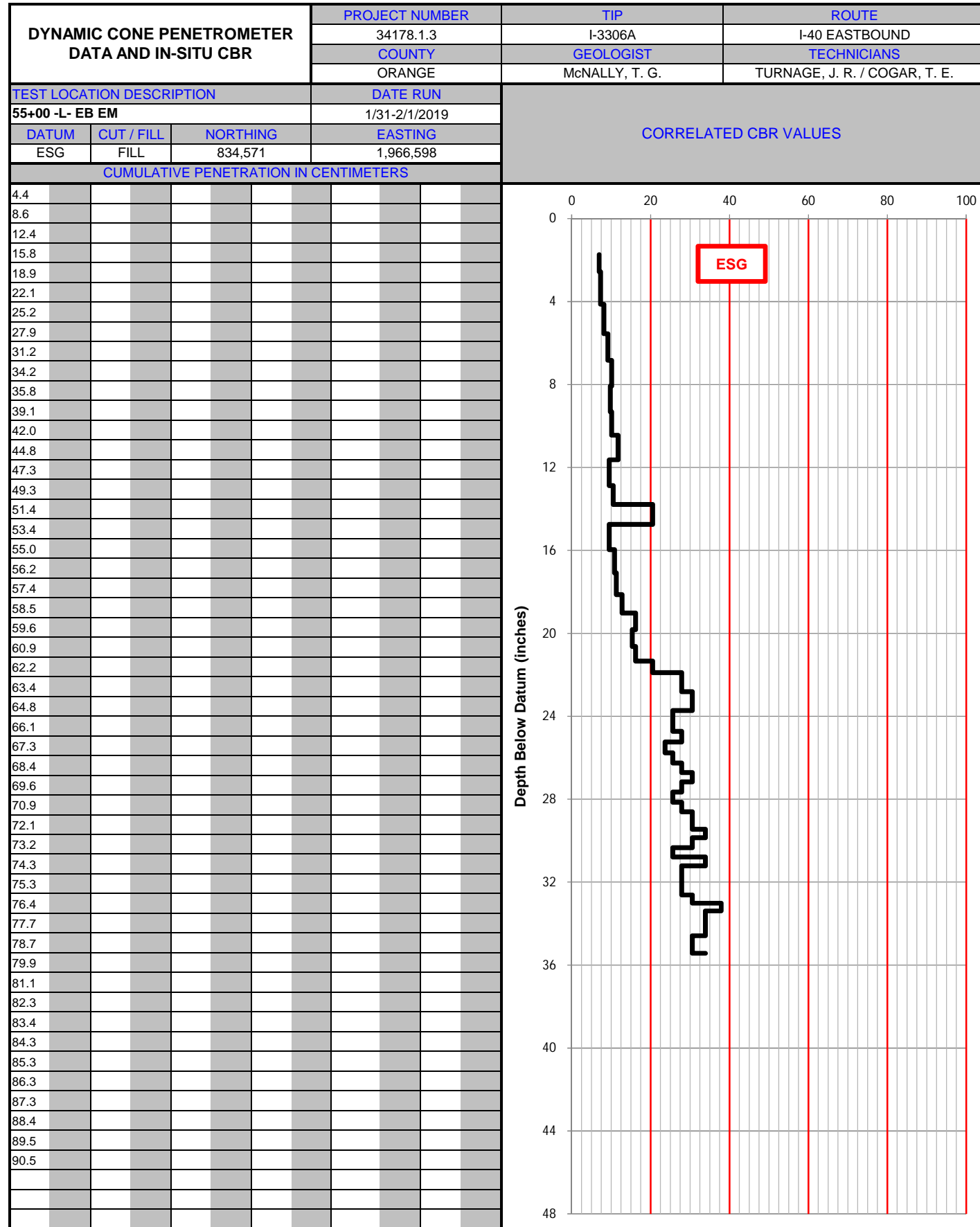


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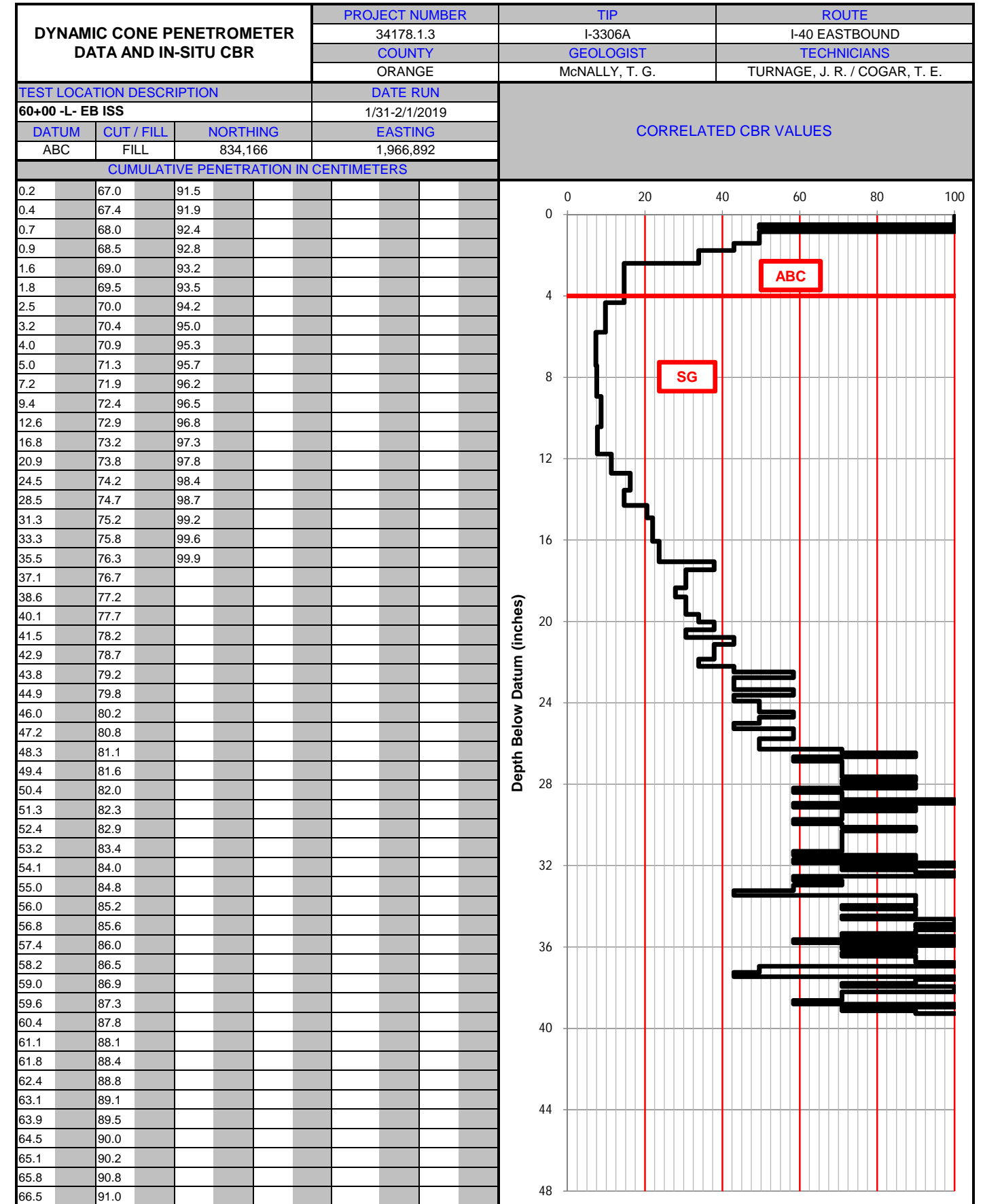


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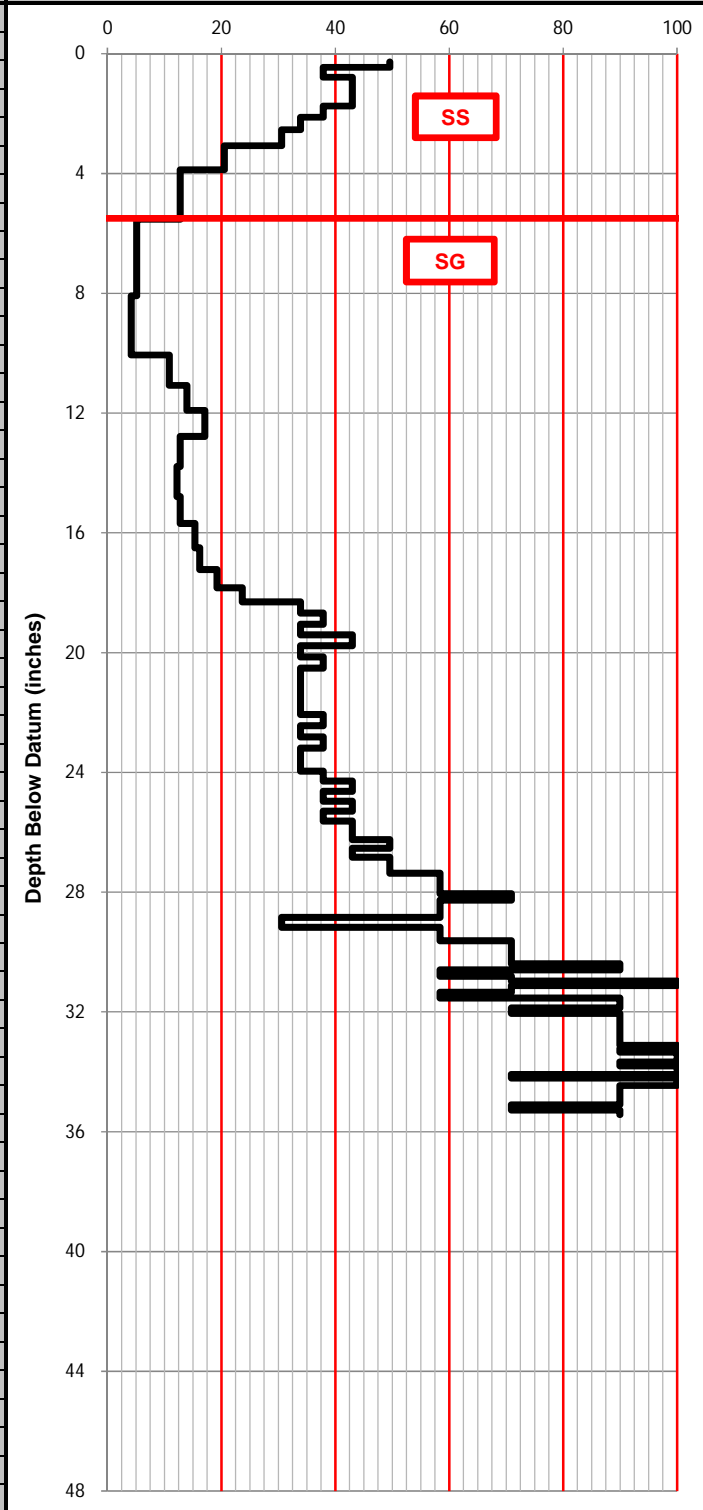


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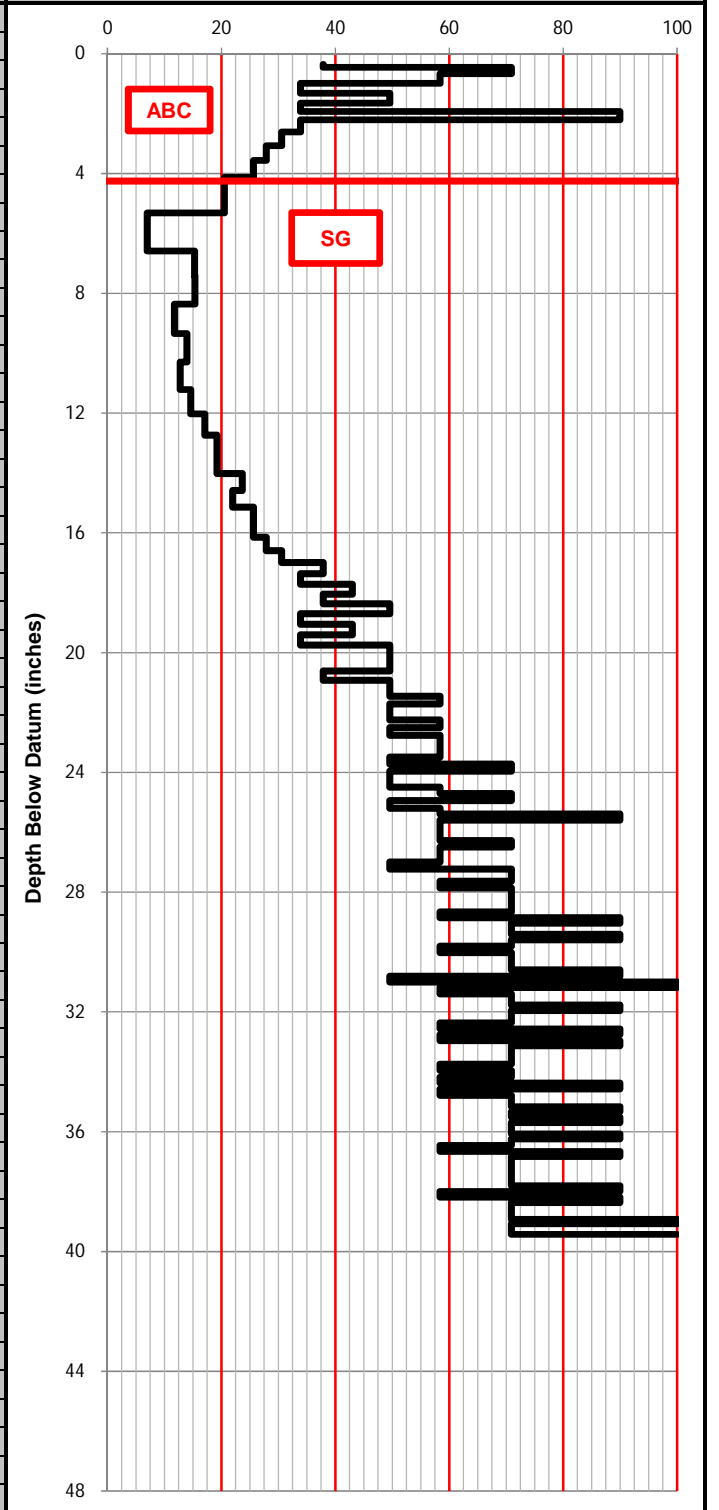
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
60+00 -L- EB ISL				1/31-2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SS	FILL	834,170	1,966,896			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.7	72.7					
1.6	73.8					
2.4	74.4					
3.2	75.0					
4.0	75.5					
4.9	76.0					
5.9	76.5					
7.0	77.0					
8.6	77.4					
11.1	78.0					
17.0	78.5					
24.1	78.8					
27.0	79.3					
29.3	79.9					
31.2	80.3					
33.7	80.7					
36.3	81.2					
38.8	81.6					
40.9	82.0					
42.9	82.4					
44.6	82.8					
46.0	83.2					
47.0	83.6					
47.9	84.0					
48.9	84.2					
49.7	84.6					
50.7	84.8					
51.6	85.0					
52.6	85.3					
53.6	85.7					
54.6	86.0					
55.6	86.3					
56.5	86.8					
57.5	87.0					
58.4	87.3					
59.4	87.7					
60.4	88.1					
61.3	88.5					
62.1	88.9					
63.0	89.4					
63.8	89.8					
64.7	90.2					
65.5						
66.3						
67.0						
67.8						
68.5						
69.2						
69.8						
70.4						
71.0						
71.5						
72.1						



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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

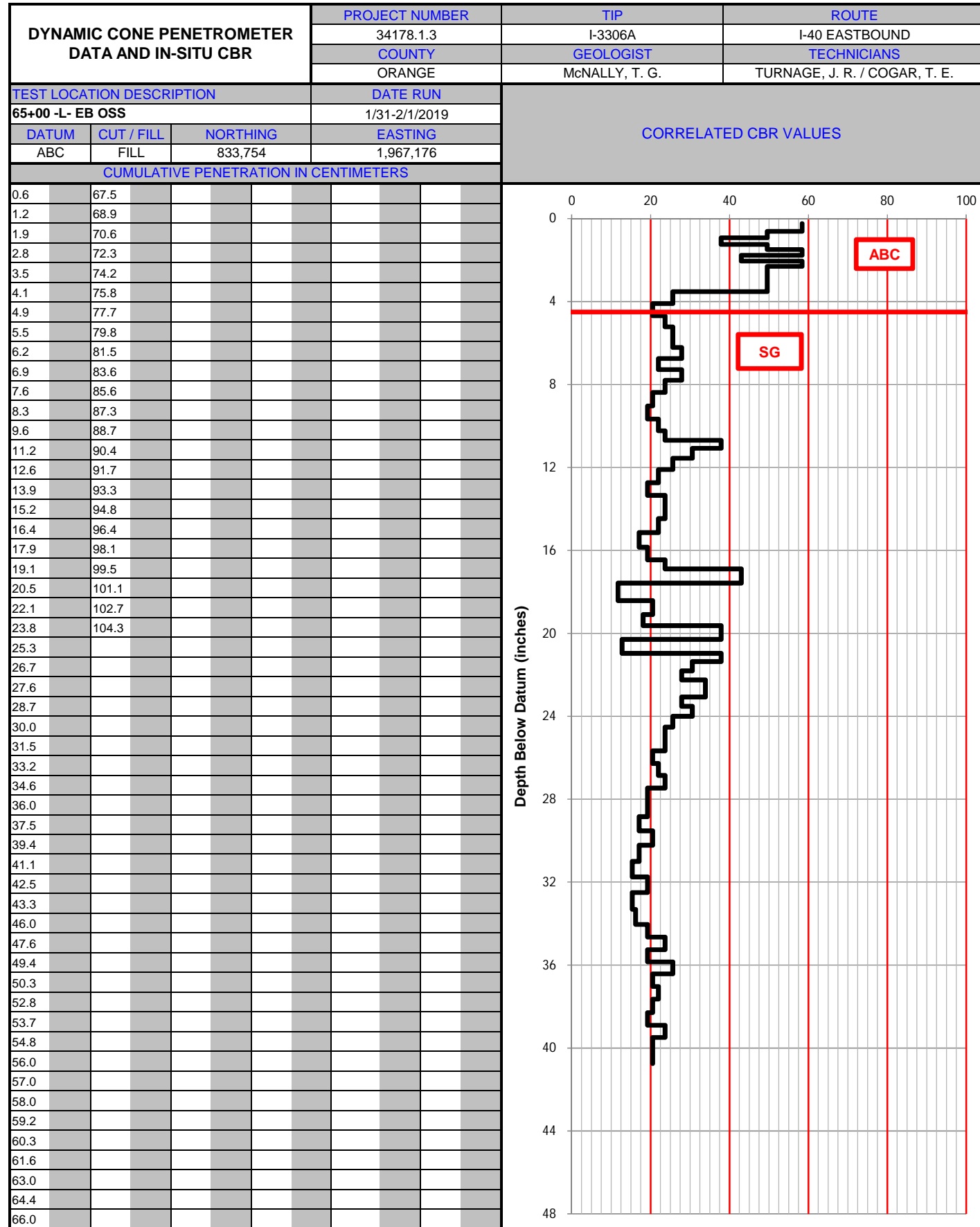


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
60+00 -L- EB OSS				1/31-2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	834,150	1,966,871			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.9	61.9	89.5				
1.4	62.5	90.0				
2.0	63.0	90.4				
3.0	63.7	90.9				
3.7	64.3	91.4				
4.7	64.7	91.8				
5.1	65.3	92.3				
6.1	65.9	92.9				
7.2	66.5	93.3				
8.4	67.0	93.8				
9.7	67.6	94.3				
11.3	68.2	94.8				
15.7	68.9	95.3				
17.8	69.4	95.8				
19.9	69.9	96.2				
22.6	70.5	96.8				
24.9	71.0	97.2				
27.4	71.5	97.7				
29.6	72.0	98.2				
31.5	72.5	98.7				
33.2	73.1	99.0				
34.9	73.5	99.5				
36.3	74.0	100.0				
37.8	74.5	100.3				
39.1	74.9					
40.4	75.4					
41.6	76.0					
42.7	76.5					
43.6	77.0					
44.6	77.5					
45.4	77.9					
46.3	78.6					
47.0	78.9					
48.0	79.5					
48.8	80.0					
49.8	80.5					
50.5	80.9					
51.2	81.4					
51.9	81.9					
52.8	82.5					
53.5	82.9					
54.2	83.5					
54.8	83.9					
55.5	84.4					
56.2	84.9					
56.8	85.4					
57.5	86.0					
58.1	86.5					
58.7	87.1					
59.3	87.5					
60.0	88.1					
60.5	88.6					
61.2	89.1					

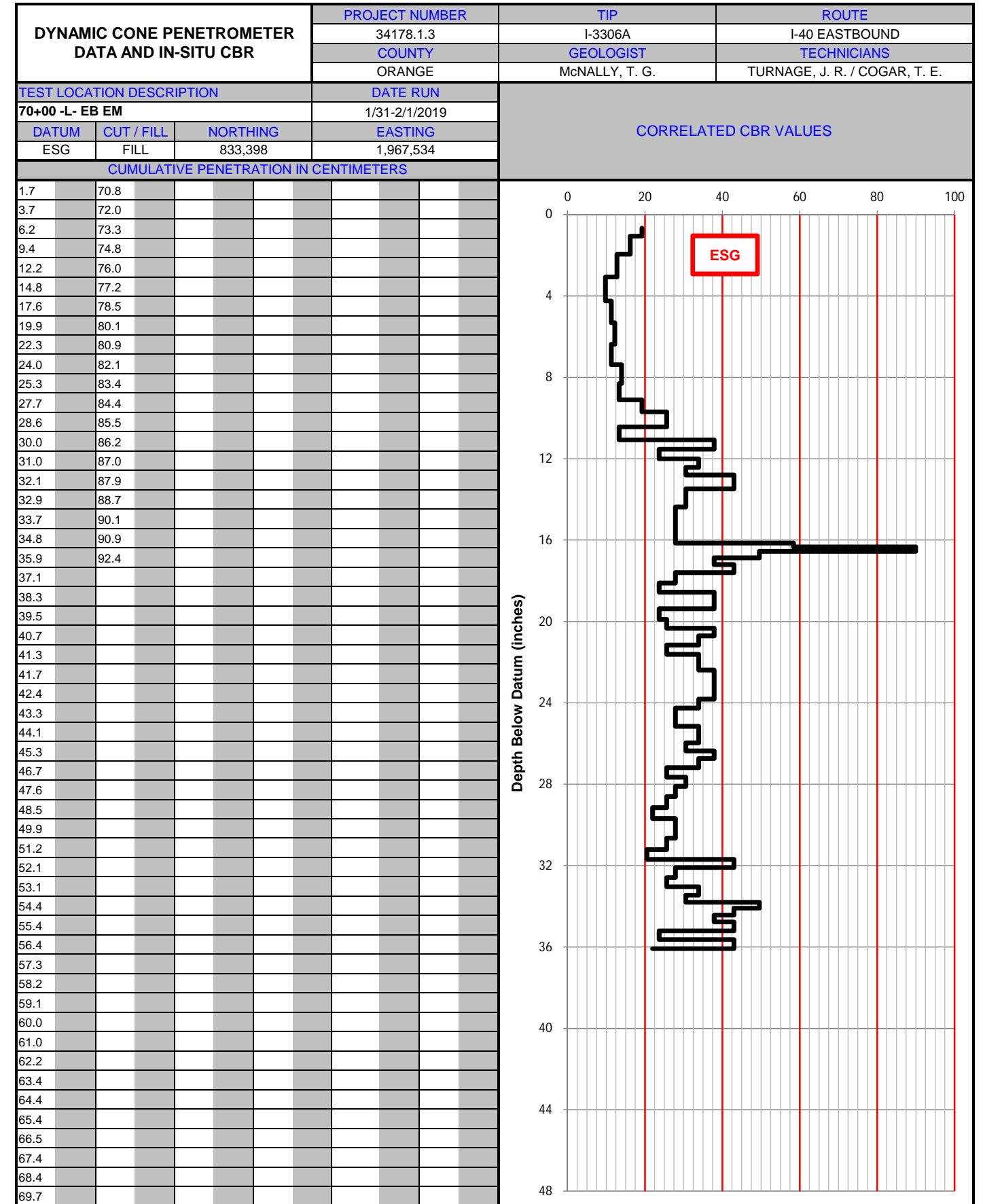


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



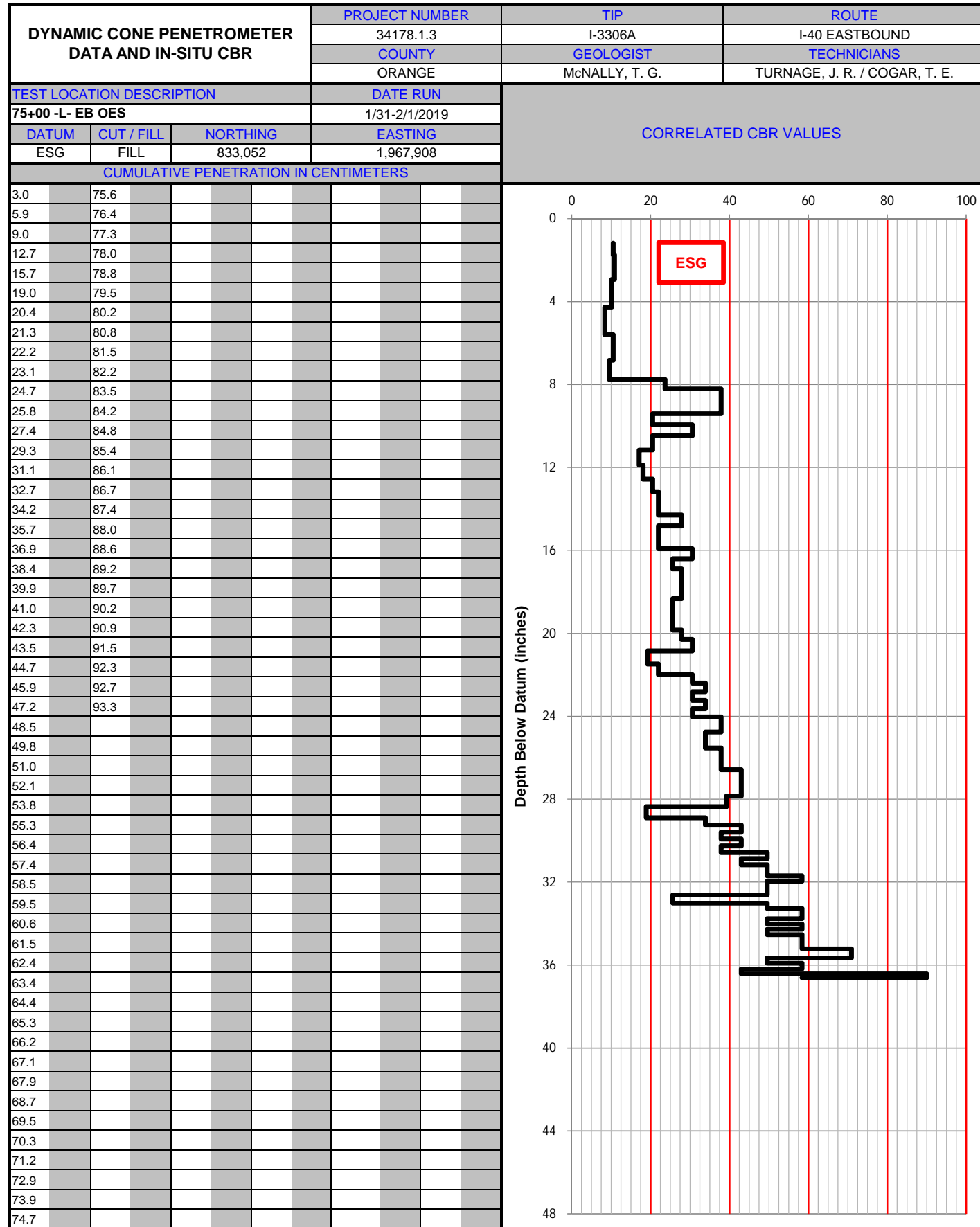


Notes:  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

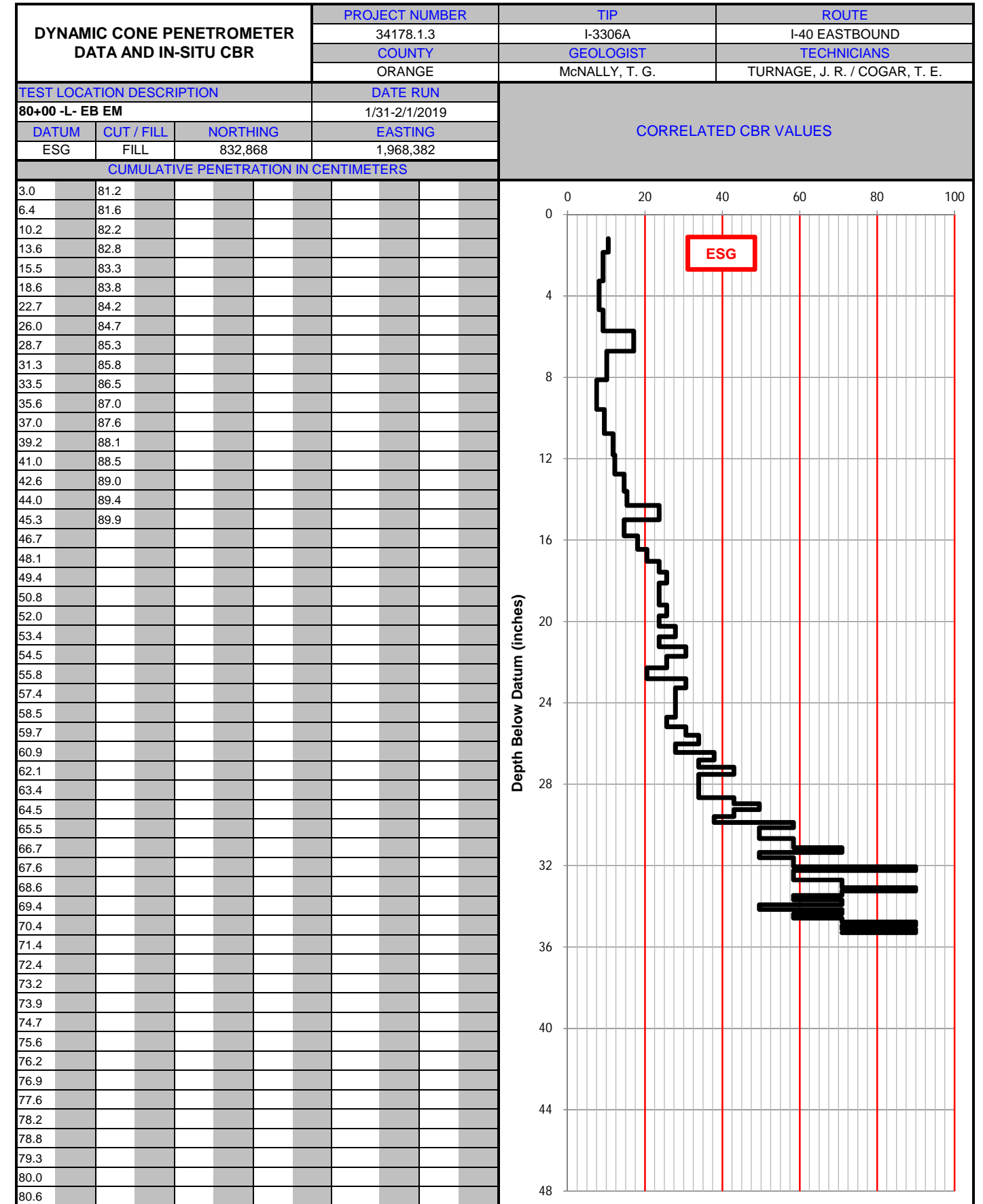


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





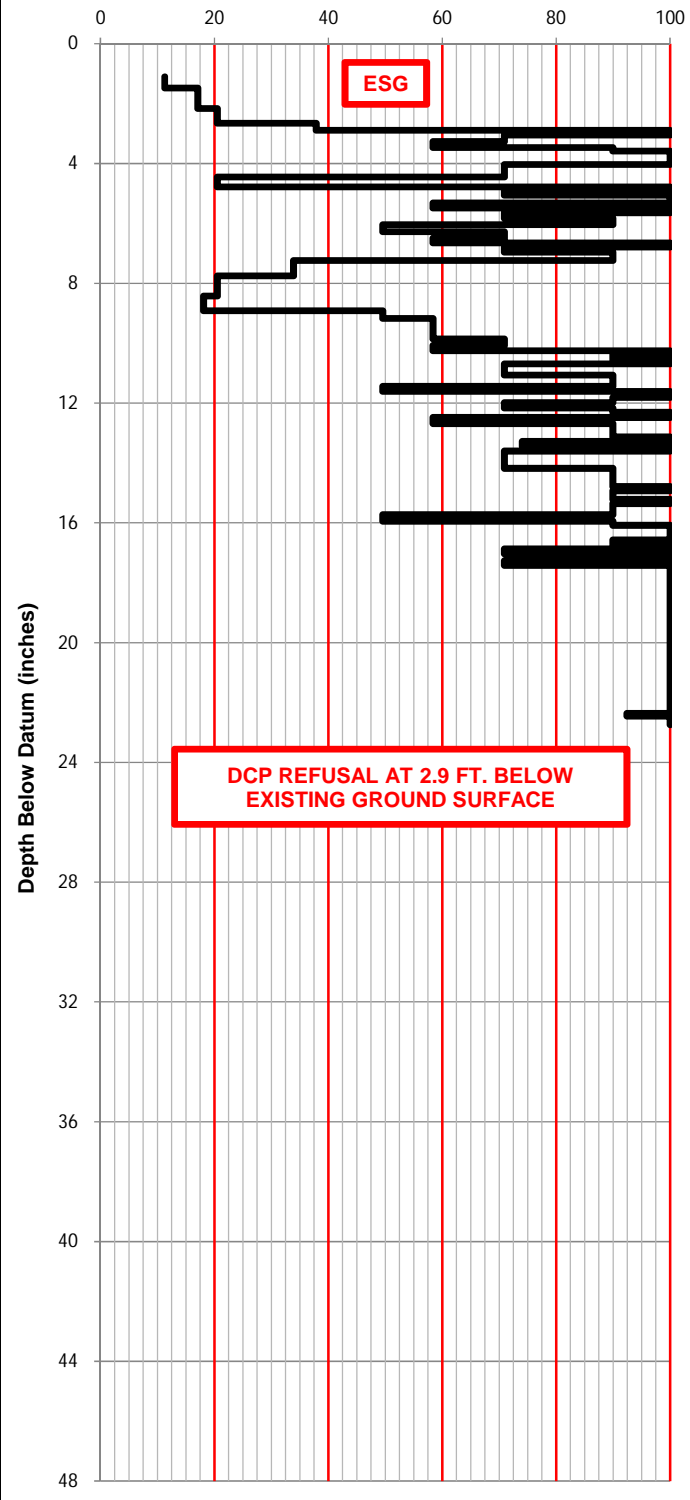
Notes:  
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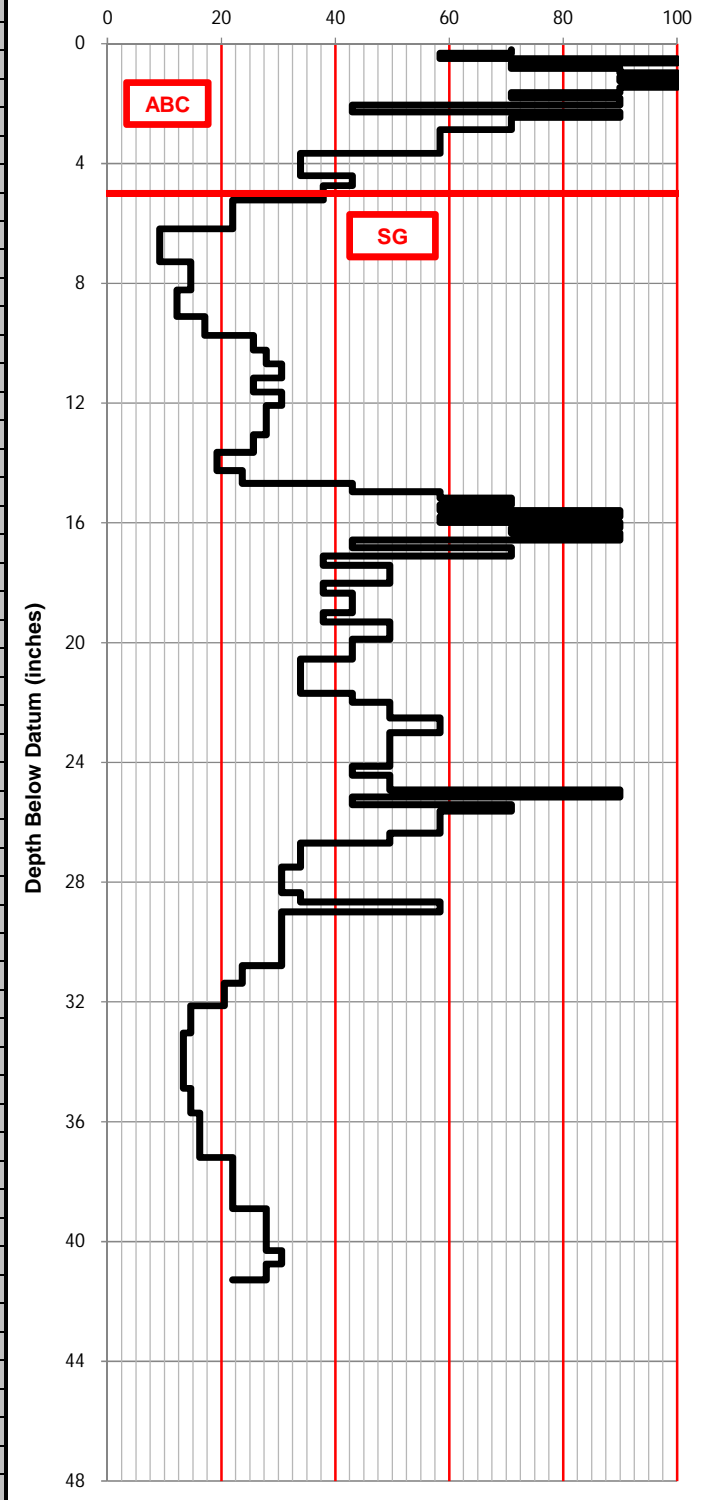
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
85+00 -L- EB ISS				DATE RUN		
				1/31-2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	832,729	1,968,864			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.8	32.8	50.6				
4.7	33.2	50.8				
6.3	33.5	51.1				
7.2	34.0	51.4				
7.5	34.3	51.7				
8.0	34.8	51.9				
8.6	35.3	52.2				
9.0	35.8	52.5				
9.2	36.2	52.8				
9.5	36.6	53.1				
9.8	37.0	53.4				
10.0	37.4	53.7				
10.5	37.7	54.0				
12.1	38.1	54.3				
12.2	38.5	54.6				
12.7	38.8	55.0				
13.0	39.2	55.3				
13.2	39.6	55.6				
13.8	40.3	55.7				
14.1	40.7	55.8				
14.6	41.0	55.9				
15.0	41.3	56.0				
15.7	41.6	56.1				
16.2	41.9	56.2				
16.8	42.3	56.3				
17.0	42.6	56.4				
17.5	43.1	56.5				
17.9	43.4	56.6				
18.9	43.6	57.0				
20.5	44.1	57.1				
22.3	44.4	57.2				
23.0	44.7	57.3				
23.6	45.0	57.4				
24.2	45.3	57.4				
24.8	45.5	57.5				
25.3	45.8	57.6				
25.9	46.1	57.7				
26.2	46.4	57.8				
26.6	46.6					
26.9	46.9					
27.4	47.2					
27.9	47.5					
28.3	47.7					
28.7	48.0					
29.4	48.2					
29.4	48.5					
29.8	48.8					
30.2	49.0					
30.7	49.3					
31.1	49.5					
31.4	49.8					
32.0	50.1					
32.4	50.3					



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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
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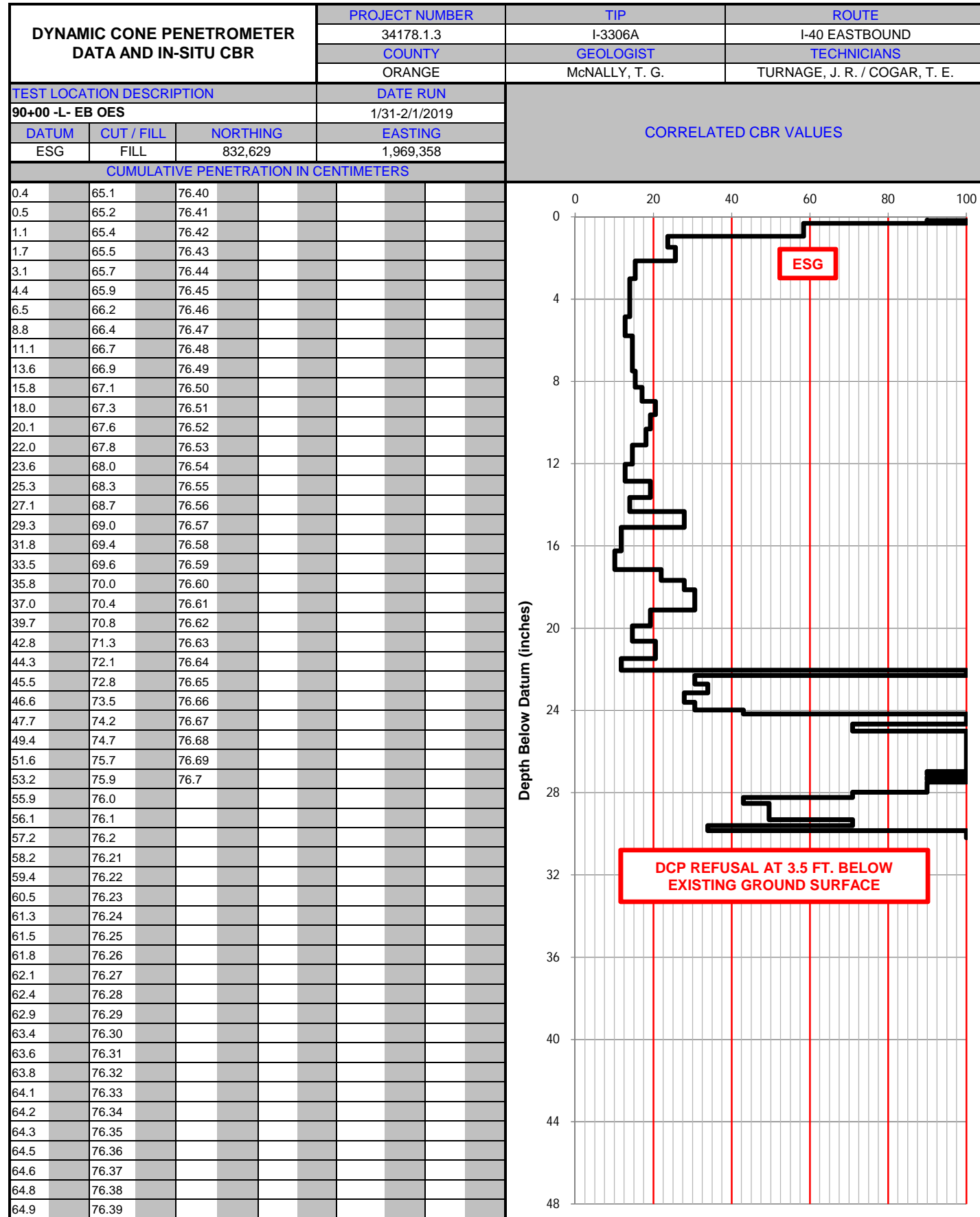


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
85+00 -L- EB OSS				DATE RUN		
				1/31-2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	832,691	1,968,857			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.5	47.0	102.9				
1.1	47.8	104.1				
1.4	48.7	105.6				
1.9	49.4					
2.3	50.1					
2.6	50.9					
3.0	51.7					
3.3	52.7					
3.5	53.7					
3.9	54.7					
4.4	55.5					
4.8	56.2					
5.6	56.9					
6.0	57.5					
6.5	58.1					
7.0	58.8					
7.6	59.5					
8.2	60.2					
8.8	60.9					
9.8	61.7					
10.8	62.4					
11.6	63.1					
12.5	63.5					
14.0	64.3					
17.4	64.8					
19.6	65.4					
22.2	66.0					
24.1	66.6					
25.4	67.3					
26.6	68.3					
27.7	69.3					
29.0	70.4					
30.1	71.5					
31.3	72.5					
32.5	73.1					
33.8	74.2					
35.5	75.3					
36.9	76.4					
37.7	77.5					
38.3	78.9					
38.8	80.5					
39.4	82.7					
39.8	85.1					
40.4	87.5					
40.8	89.7					
41.3	91.7					
41.7	93.7					
42.5	95.2					
43.0	96.7					
43.9	98.2					
44.6	99.4					
45.3	100.6					
46.2	101.8					

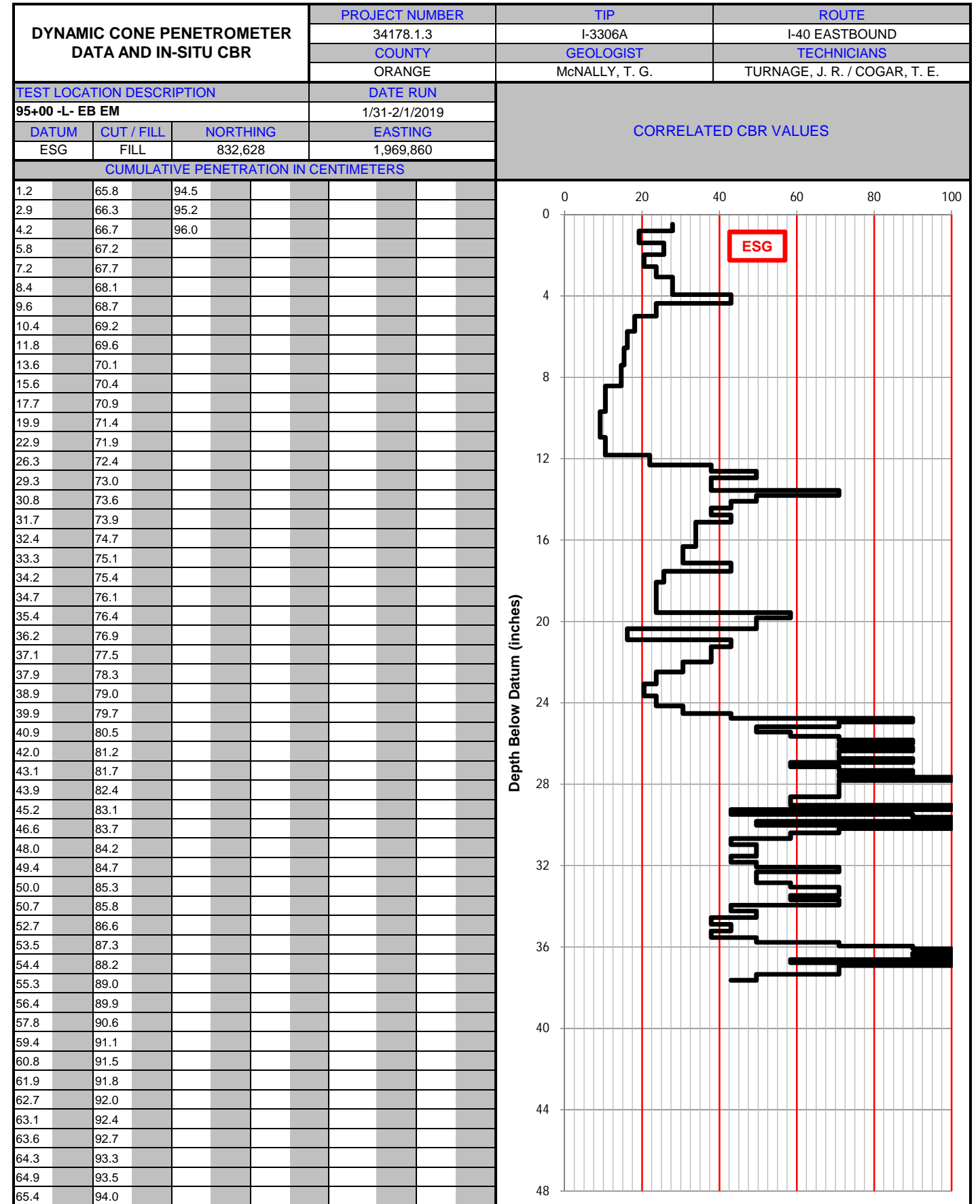


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



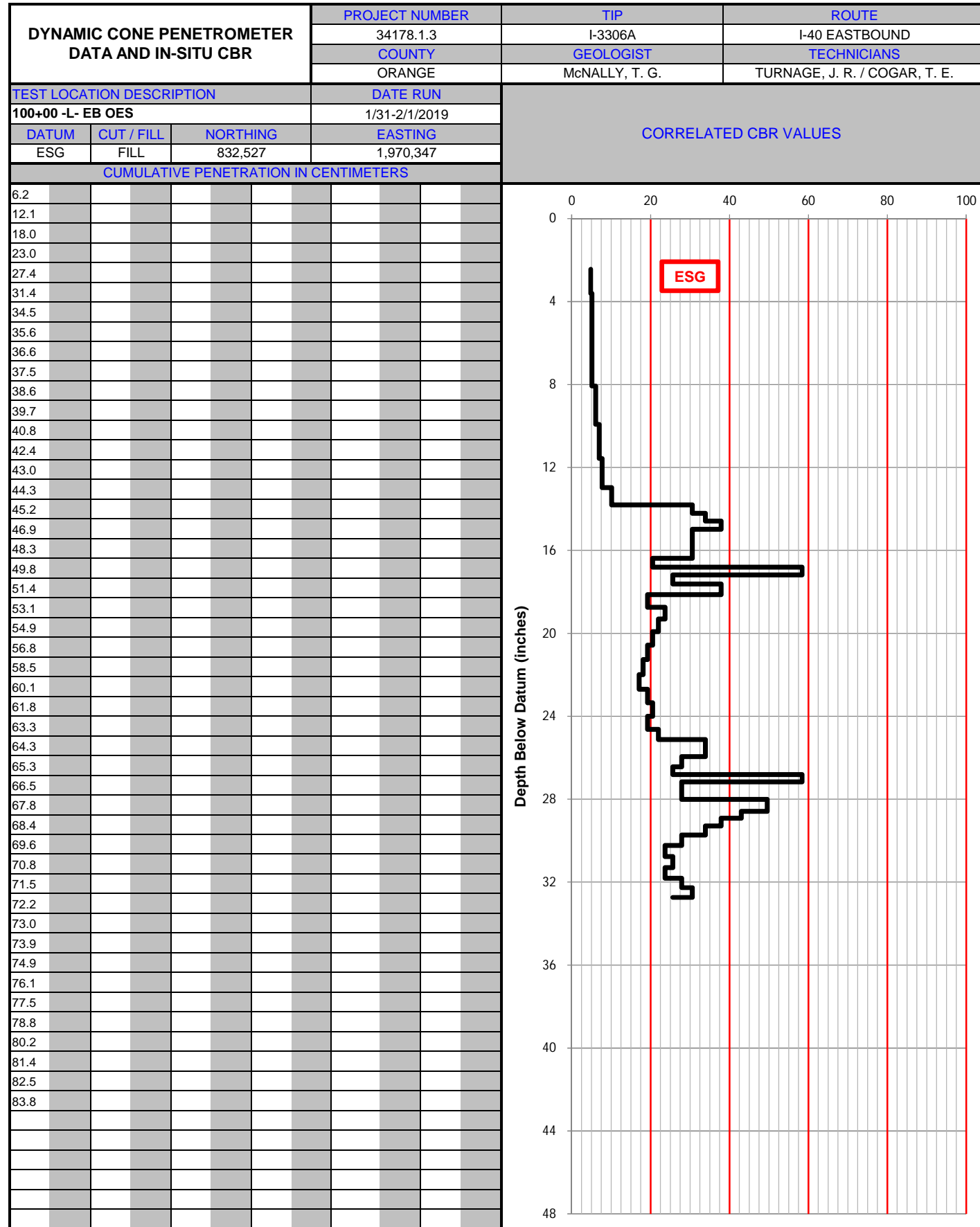


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 ABC = Aggregate Base Course  
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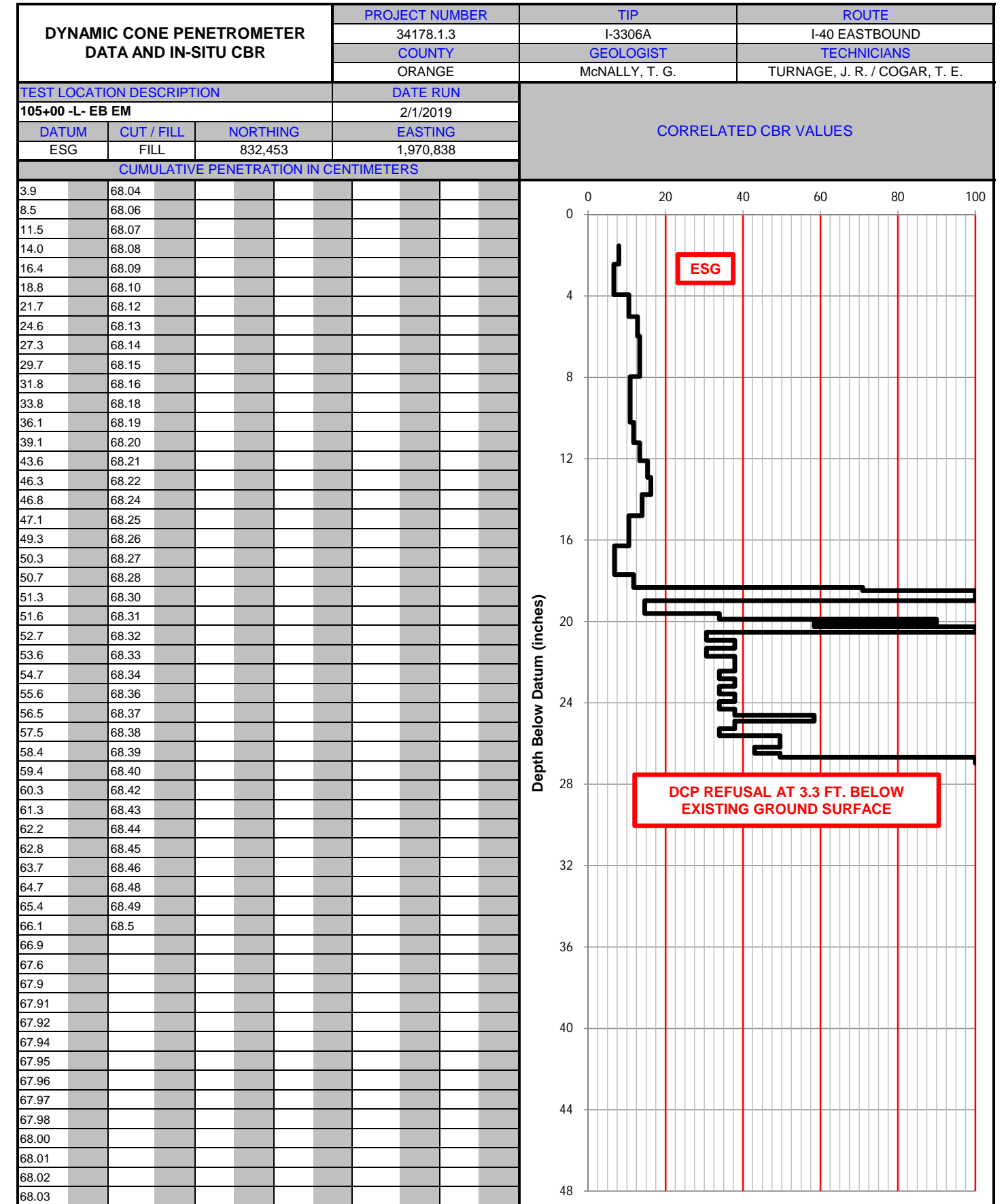


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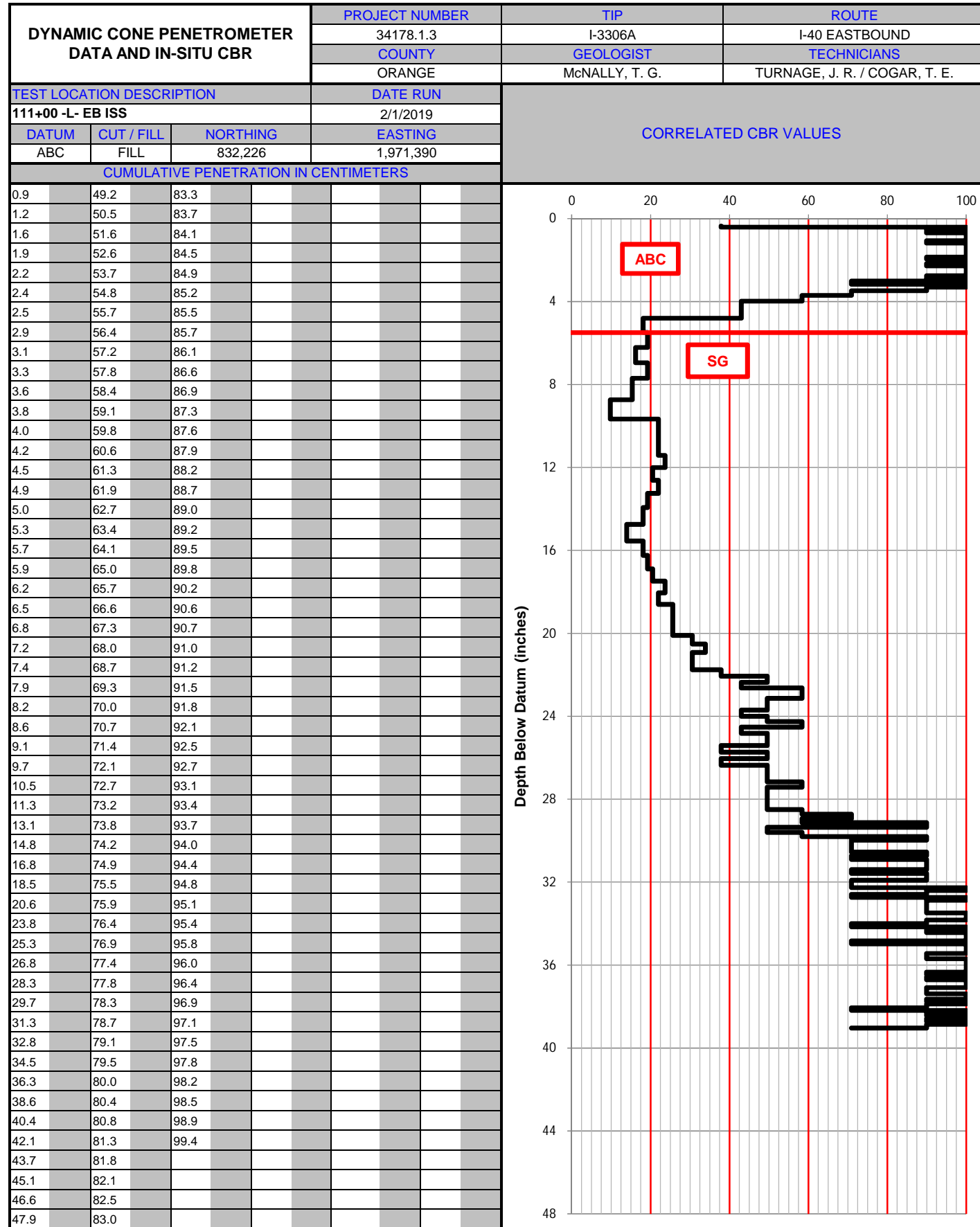


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 ABC = Aggregate Base Course  
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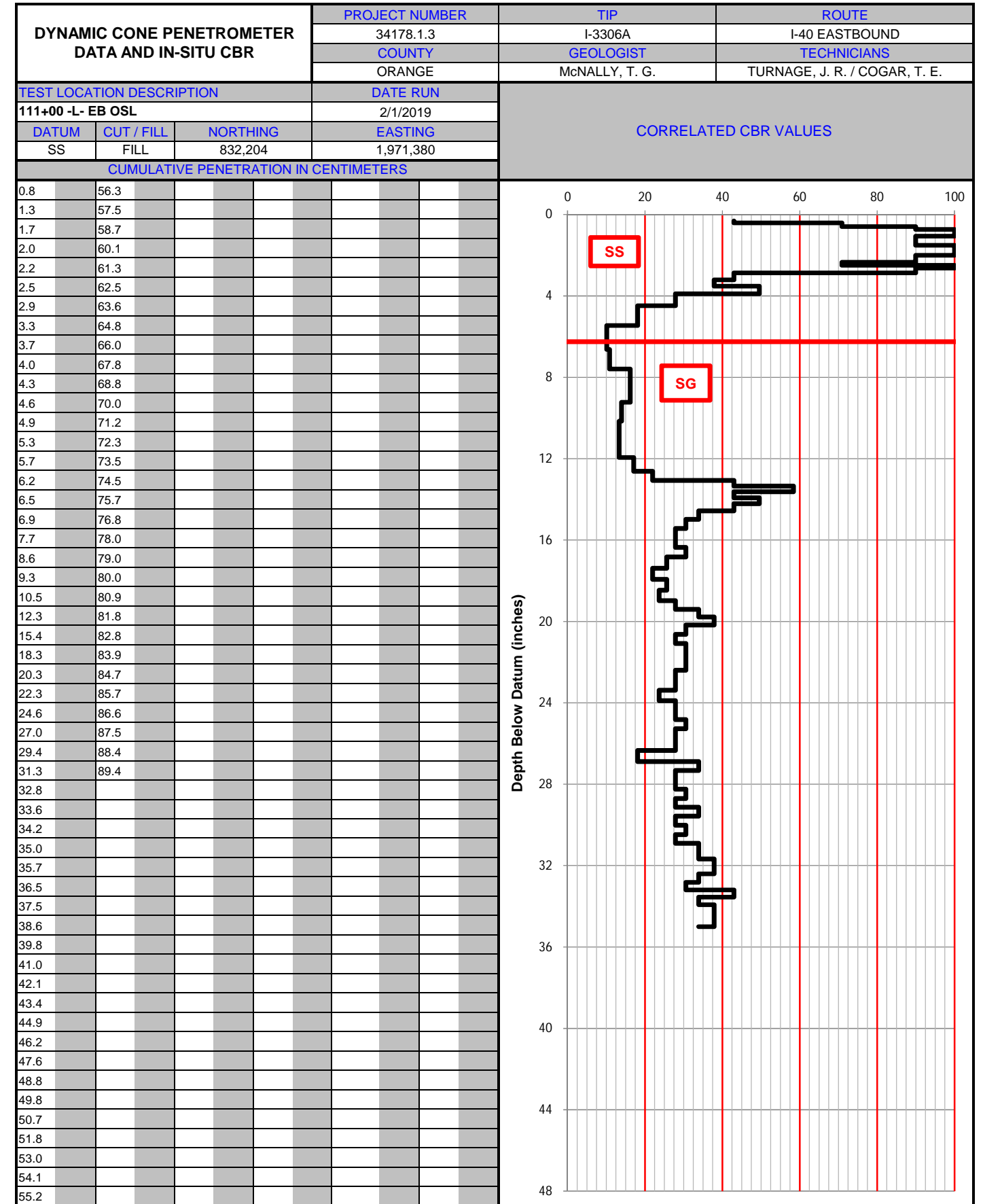


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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



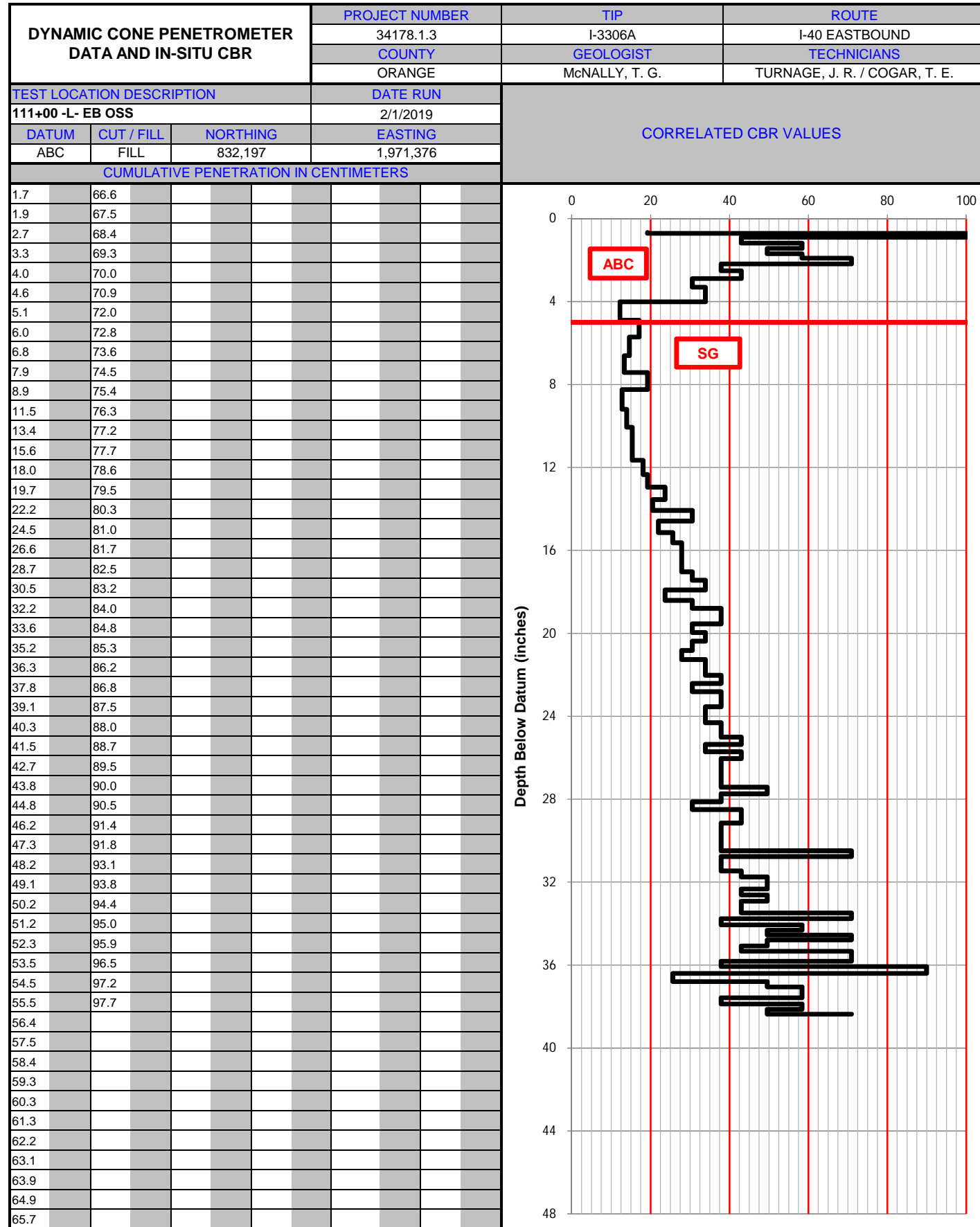


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 ABC = Aggregate Base Course  
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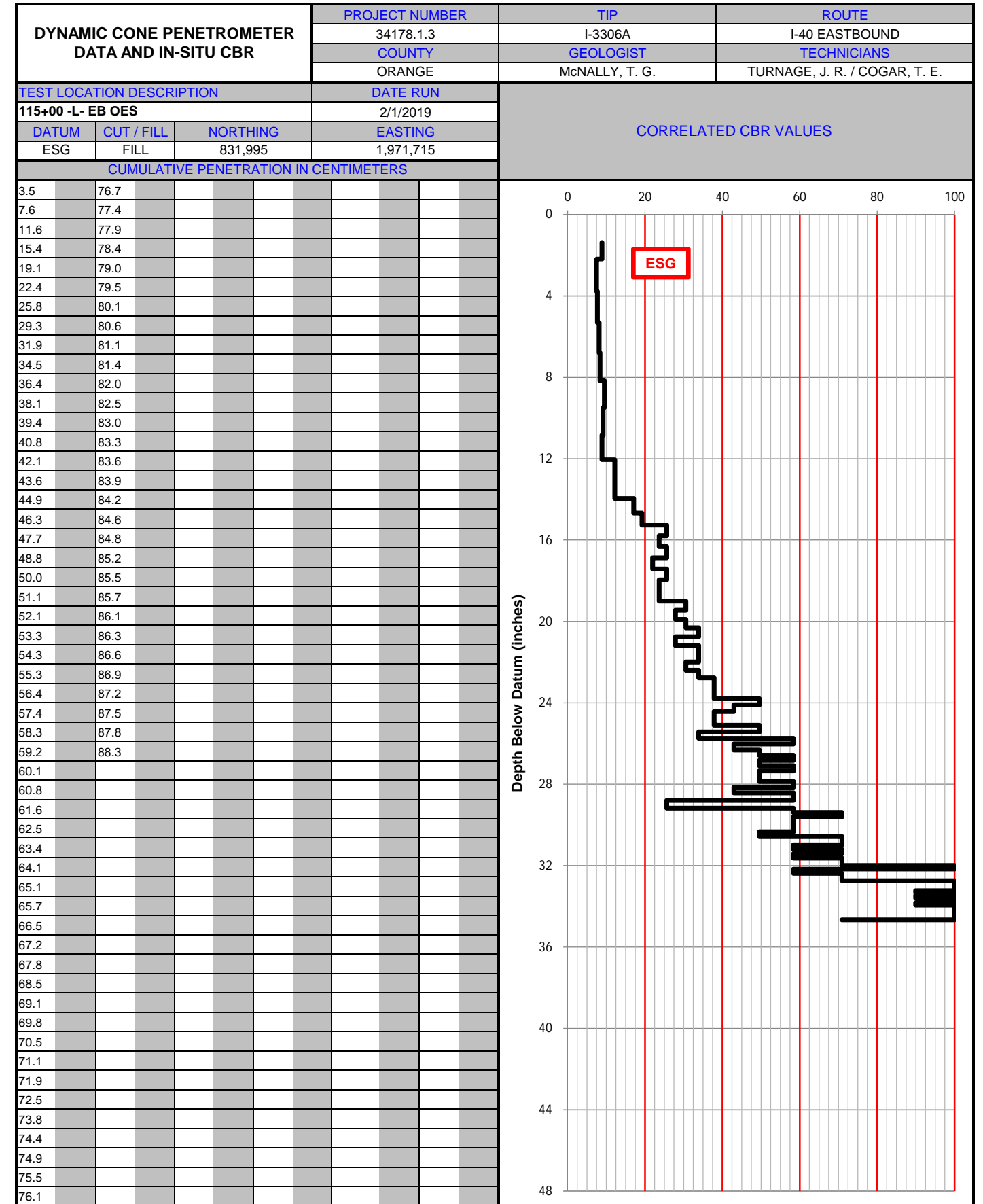


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





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 ABC = Aggregate Base Course  
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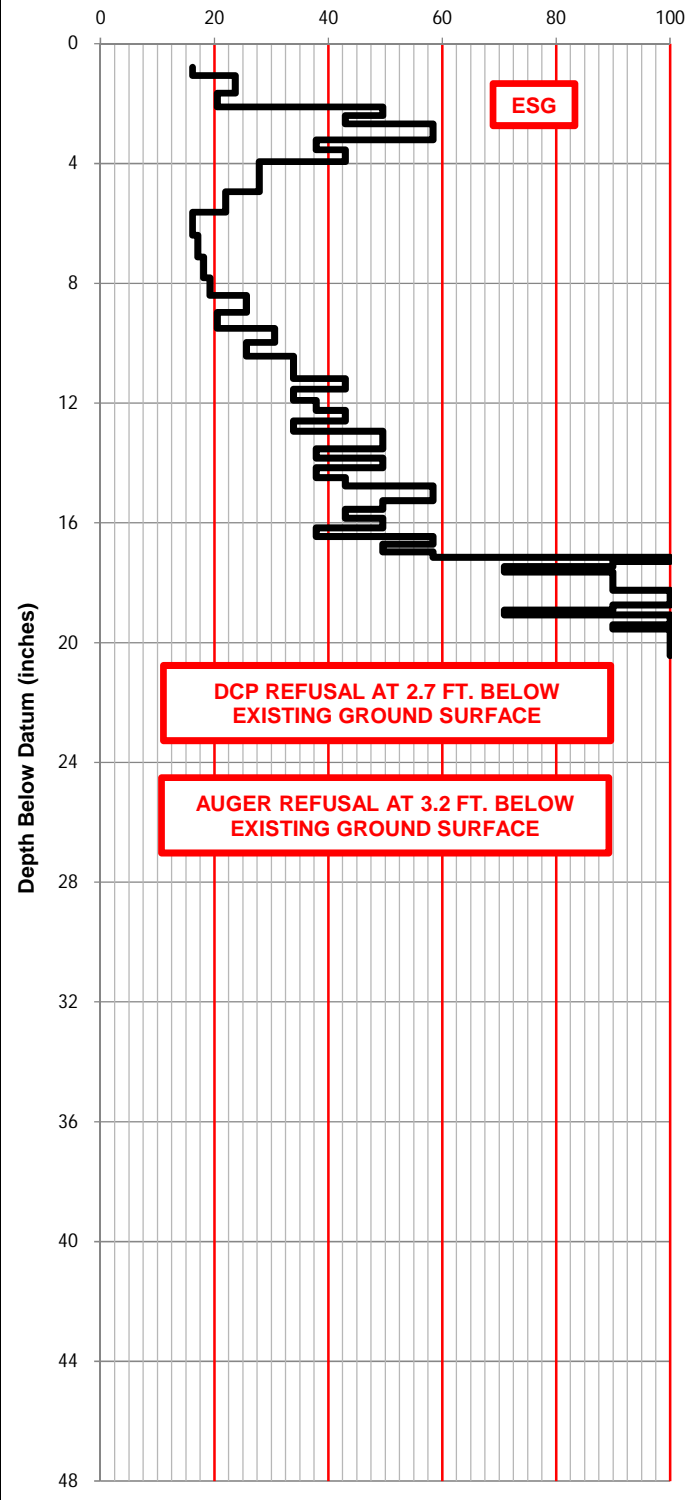


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





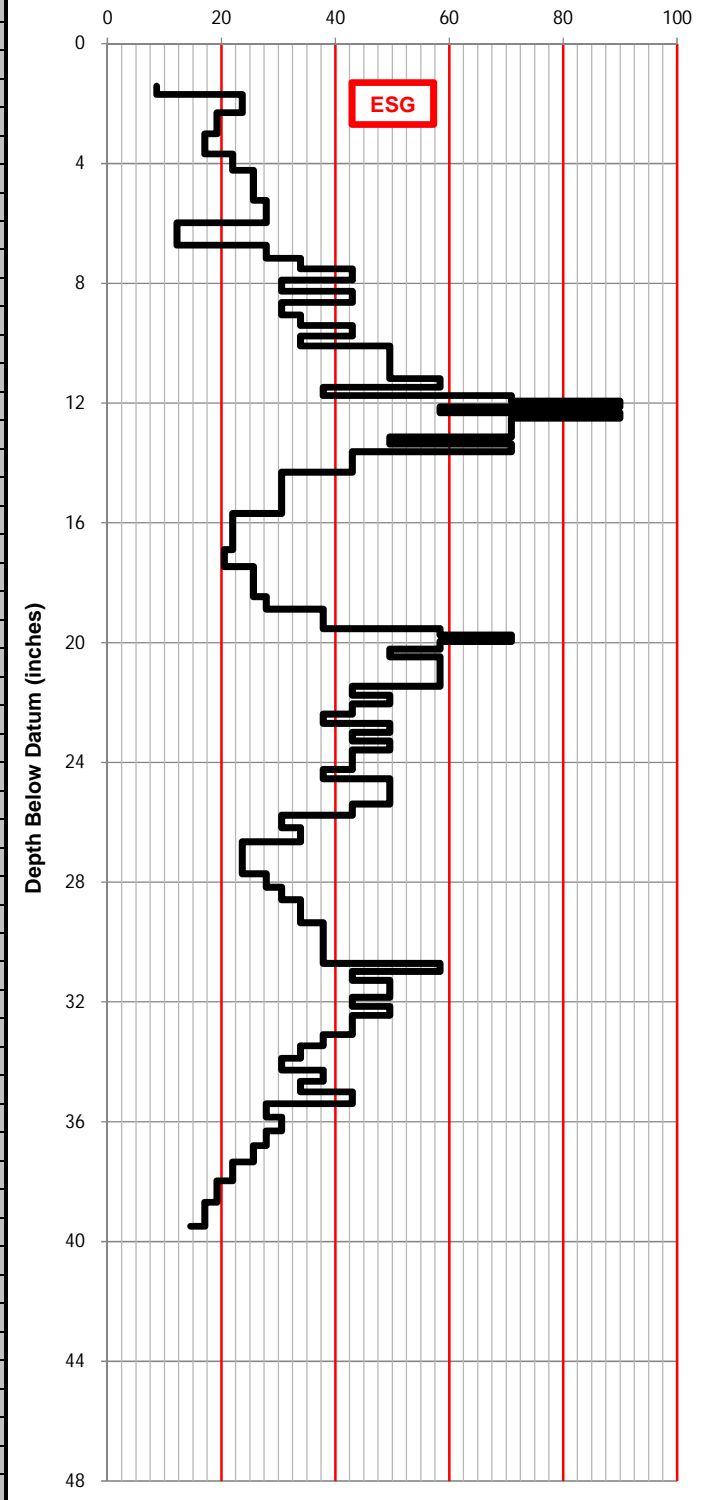
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
119+50 -L- EB EM				DATE RUN	CORRELATED CBR VALUES	
				2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	831,770	1,972,101			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.0	47.8	51.76				
3.4	48.3	51.77				
5.0	48.6	51.79				
5.7	48.9	51.81				
6.5	49.1	51.83				
7.1	49.5	51.85				
7.7	49.8	51.86				
8.6	50.0	51.88				
9.4	50.3	51.9				
10.6	50.5					
11.8	50.8					
13.3	51.00					
15.3	51.02					
17.2	51.04					
19.0	51.05					
20.7	51.07					
22.0	51.09					
23.6	51.11					
24.7	51.13					
26.0	51.14					
27.0	51.16					
28.0	51.18					
28.8	51.20					
29.8	51.22					
30.7	51.23					
31.5	51.25					
32.5	51.27					
33.2	51.29					
33.9	51.31					
34.8	51.32					
35.5	51.34					
36.4	51.36					
37.2	51.38					
37.8	51.40					
38.4	51.41					
39.1	51.43					
39.9	51.45					
40.6	51.47					
41.5	51.49					
42.1	51.50					
42.8	51.52					
43.4	51.54					
43.7	51.56					
44.1	51.58					
44.6	51.59					
45.0	51.61					
45.4	51.63					
45.8	51.65					
46.2	51.67					
46.5	51.68					
46.8	51.70					
47.1	51.72					
47.4	51.74					



Notes:  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



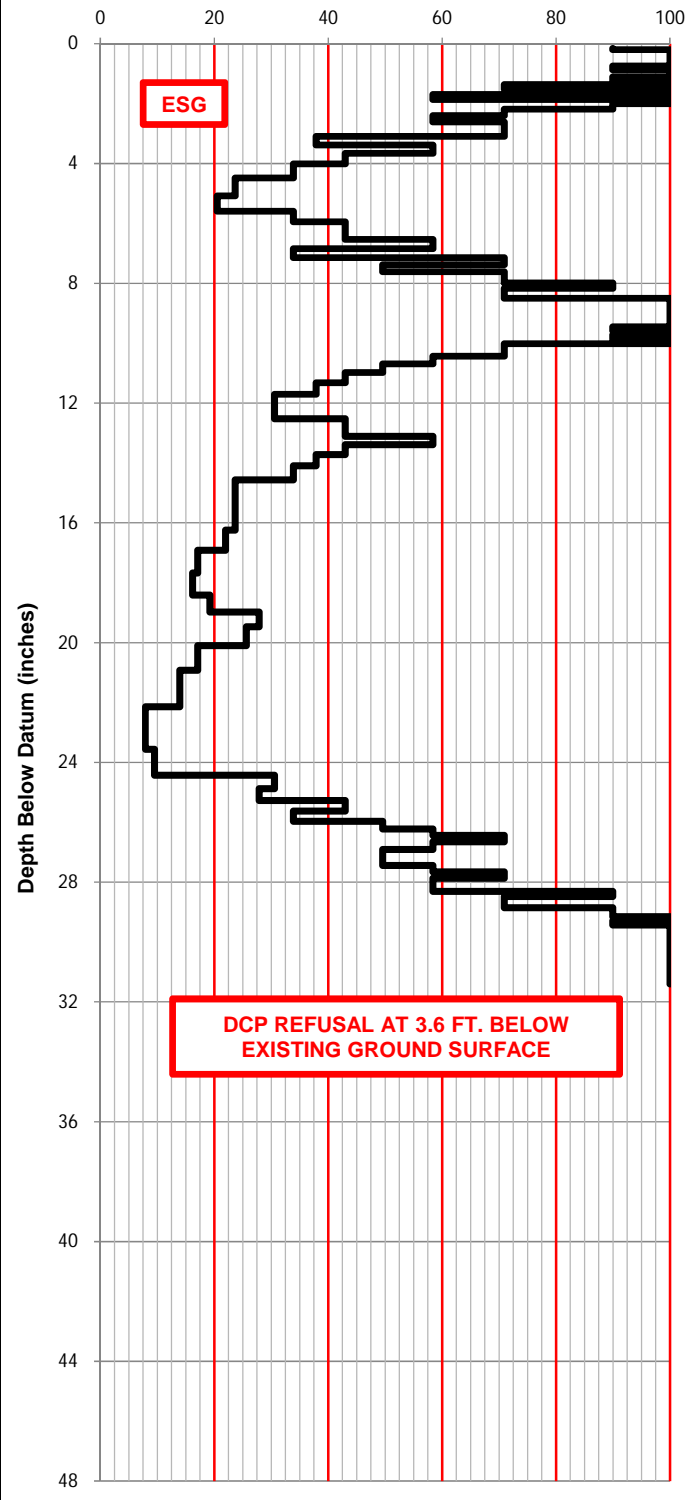
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
125+00 -L- EB OES				DATE RUN	CORRELATED CBR VALUES	
				2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	831,358	1,972,460			
CUMULATIVE PENETRATION IN CENTIMETERS						
3.6	54.1					
5.0	54.9					
6.7	55.6					
8.6	56.4					
10.1	57.3					
11.4	58.0					
12.7	58.8					
13.9	59.5					
16.5	60.3					
17.7	61.1					
18.7	62.0					
19.5	62.7					
20.6	63.4					
21.4	64.1					
22.5	64.9					
23.5	66.0					
24.3	67.0					
25.3	68.4					
26.0	69.8					
26.7	71.0					
27.4	72.1					
28.1	73.1					
28.7	74.1					
29.6	75.0					
30.1	75.9					
30.5	76.8					
31.1	77.7					
31.5	78.3					
32.0	79.1					
32.5	79.8					
33.0	80.5					
33.7	81.3					
34.2	82.0					
35.0	82.8					
35.8	83.6					
36.9	84.5					
38.0	85.5					
39.1	86.6					
40.6	87.5					
42.1	88.5					
43.7	89.3					
45.0	90.5					
46.3	91.6					
47.5	92.8					
48.4	94.1					
49.3	95.6					
49.9	97.3					
50.4	99.2					
51.0	101.4					
51.7						
52.3						
52.9						
53.5						



Notes:  
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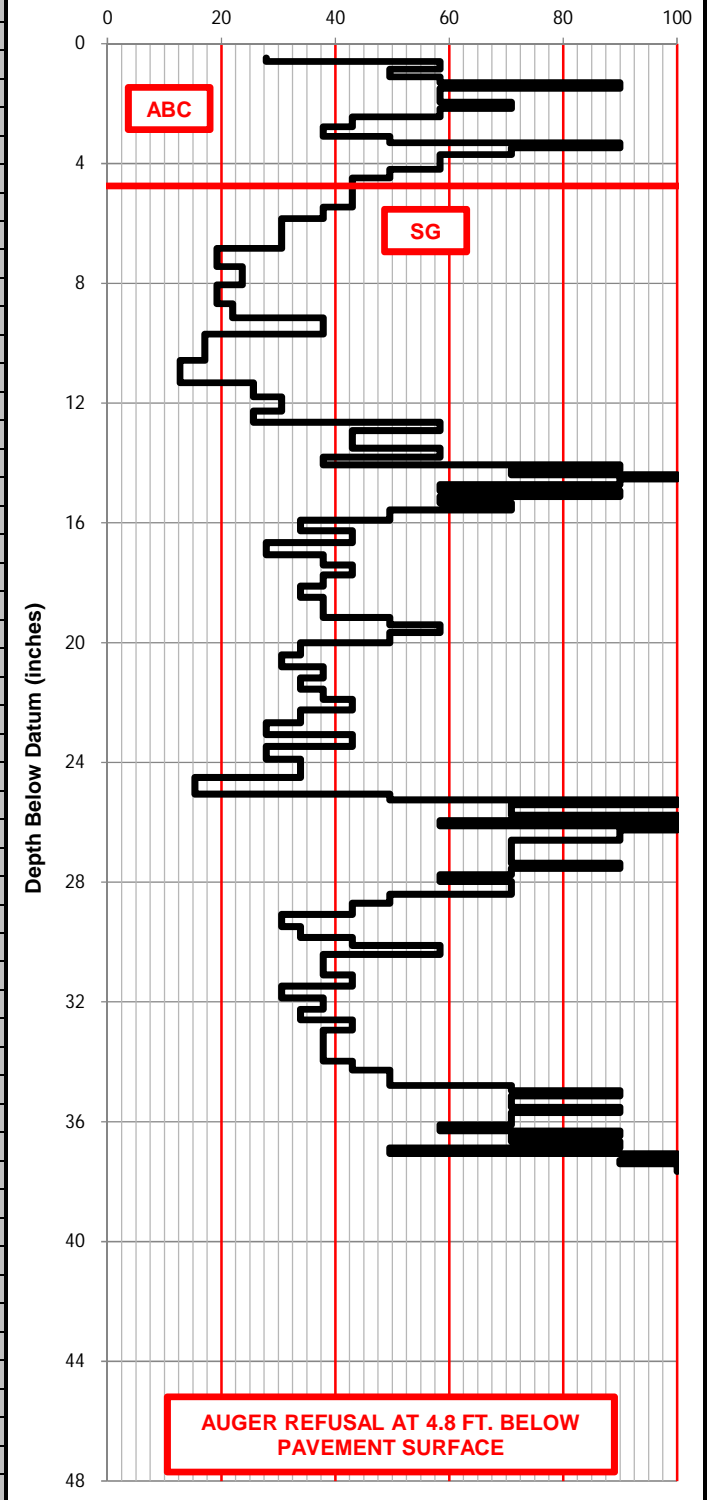
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
130+00 -L- EB EM				2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	831,006	1,972,811			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.4	25.2	75.8	79.8			
0.6	25.7	75.9				
0.7	26.2	76.1				
0.9	26.8	76.3				
1.0	27.5	76.4				
1.3	28.3	76.46				
1.5	29.2	76.54				
1.6	30.3	76.62				
1.7	31.4	76.70				
2.1	32.2	76.78				
2.3	33.0	76.86				
2.6	33.6	76.94				
3.0	34.4	77.02				
3.2	35.3	77.10				
3.7	36.3	77.16				
4.0	37.7	77.22				
4.6	39.1	77.28				
4.9	40.5	77.34				
5.3	42.0	77.40				
5.8	43.9	77.46				
6.4	45.9	77.52				
6.9	47.6	77.58				
7.4	48.8	77.64				
8.3	50.1	77.70				
8.9	52.0	77.77				
9.7	54.3	77.84				
10.7	58.2	77.91				
12.1	61.5	77.98				
13.7	62.6	78.05				
14.7	63.8	78.12				
15.5	64.6	78.19				
16.3	65.6	78.26				
16.9	66.3	78.33				
17.9	66.9	78.40				
18.4	67.4	78.47				
19.1	68.0	78.54				
19.6	68.7	78.61				
20.1	69.4	78.68				
20.5	70.0	78.75				
21.0	70.5	78.82				
21.5	71.1	78.89				
21.7	71.7	78.96				
22.0	72.1	79.03				
22.3	72.6	79.10				
22.6	73.1	79.17				
22.8	73.5	79.24				
23.1	73.9	79.31				
23.3	74.2	79.38				
23.6	74.6	79.45				
23.8	74.9	79.52				
24.2	75.2	79.59				
24.5	75.4	79.66				
24.9	75.6	79.73				



Notes:  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

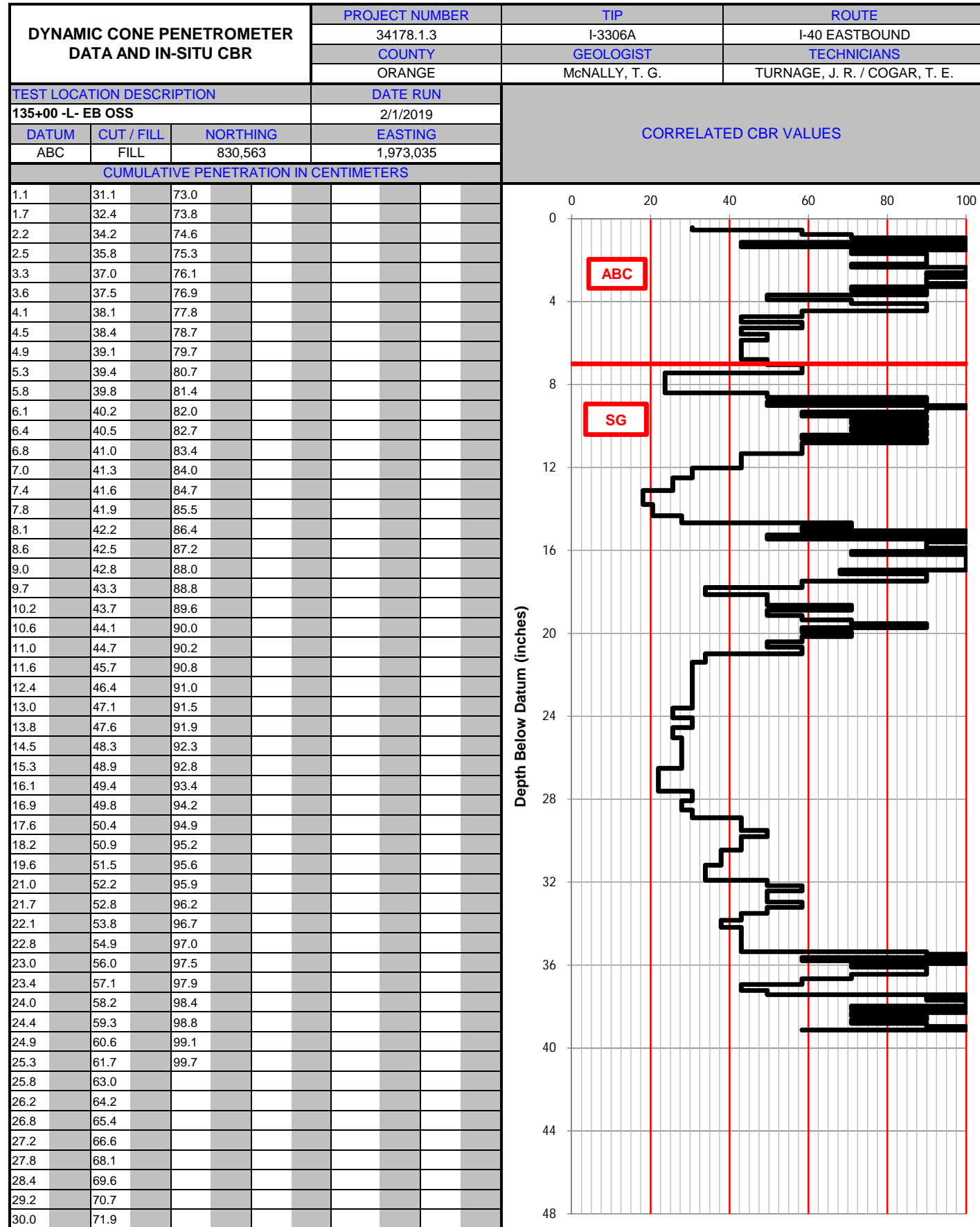


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
135+00 -L- EB ISS				2/1/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	830,578	1,973,064			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	46.5	87.4				
1.8	47.4	88.1				
2.5	48.3	88.6				
3.1	49.0	89.0				
3.5	49.6	89.5				
4.1	50.3	90.0				
4.7	51.3	90.4				
5.2	52.4	90.9				
5.8	53.3	91.4				
6.6	54.3	92.0				
7.5	55.2	92.4				
8.2	56.0	92.9				
8.6	57.0	93.3				
9.1	58.2	94.0				
9.7	59.0	94.3				
10.3	60.2	94.5				
11.0	61.2	94.9				
11.8	63.3	95.1				
12.6	64.0	95.2				
13.4	64.3	95.4				
14.3	64.8	95.5				
15.4	65.3	95.8				
16.5	65.6					
18.2	66.2					
19.6	66.5					
21.3	66.9					
22.8	67.3					
23.7	67.8					
25.6	68.3					
28.1	68.8					
29.4	69.3					
30.5	69.7					
31.8	70.2					
32.4	70.8					
33.2	71.3					
34.0	71.8					
34.6	72.5					
35.5	73.3					
35.9	74.4					
36.4	75.4					
36.7	76.2					
37.1	76.8					
37.7	77.7					
38.1	78.6					
38.7	79.4					
39.2	80.5					
39.9	81.4					
40.9	82.4					
41.7	83.2					
42.9	84.1					
43.8	85.0					
44.6	85.9					
45.5	86.7					

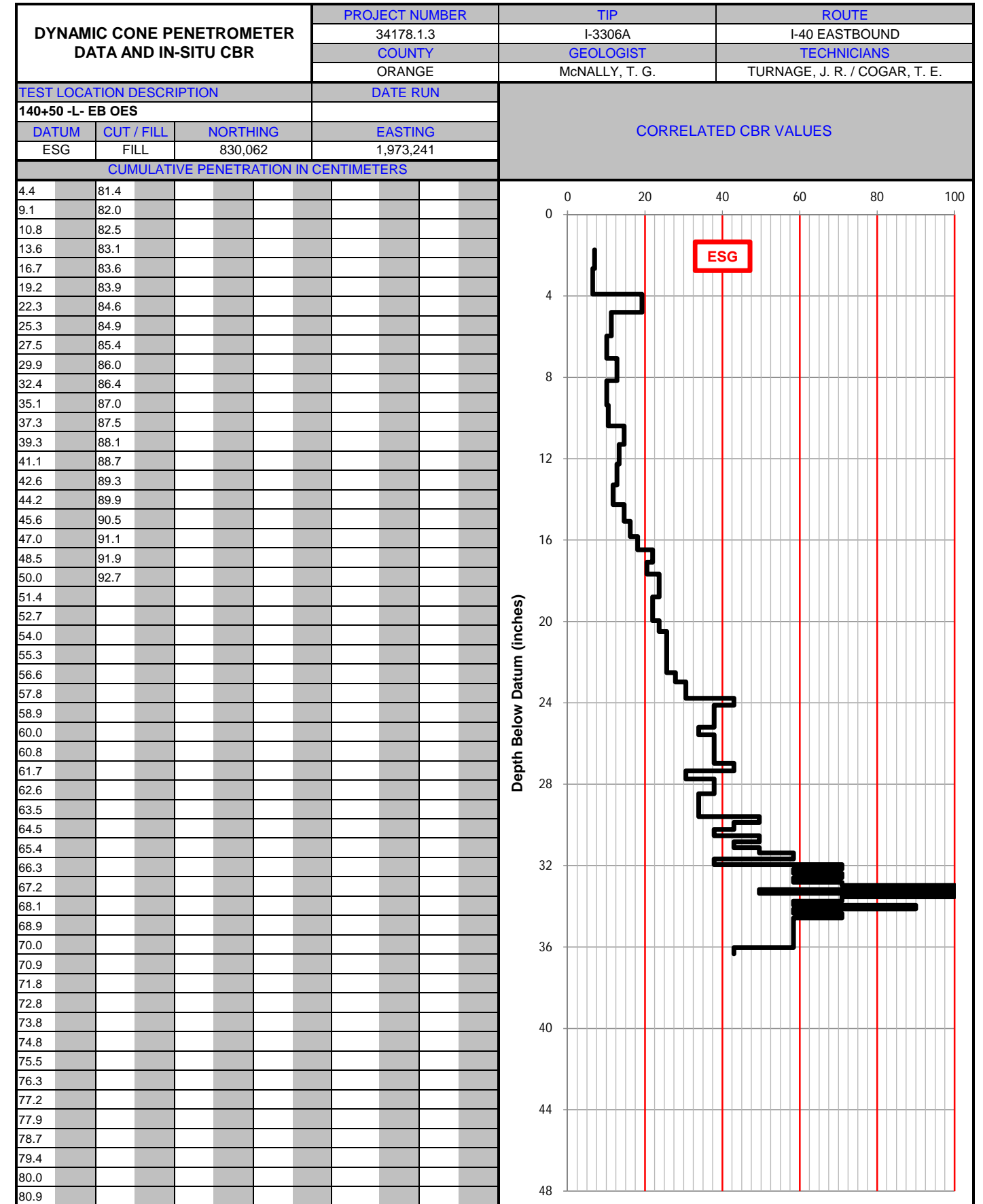


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



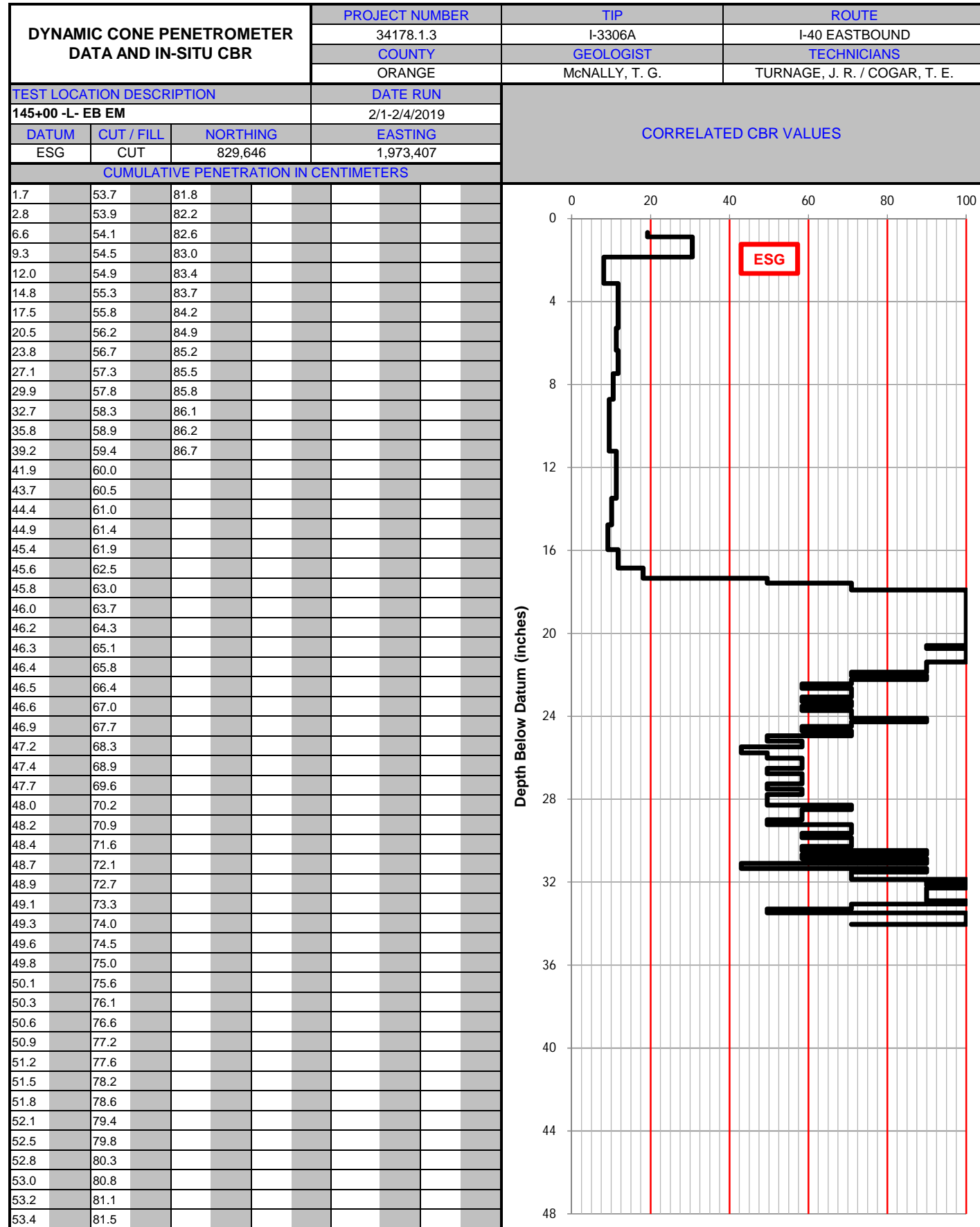


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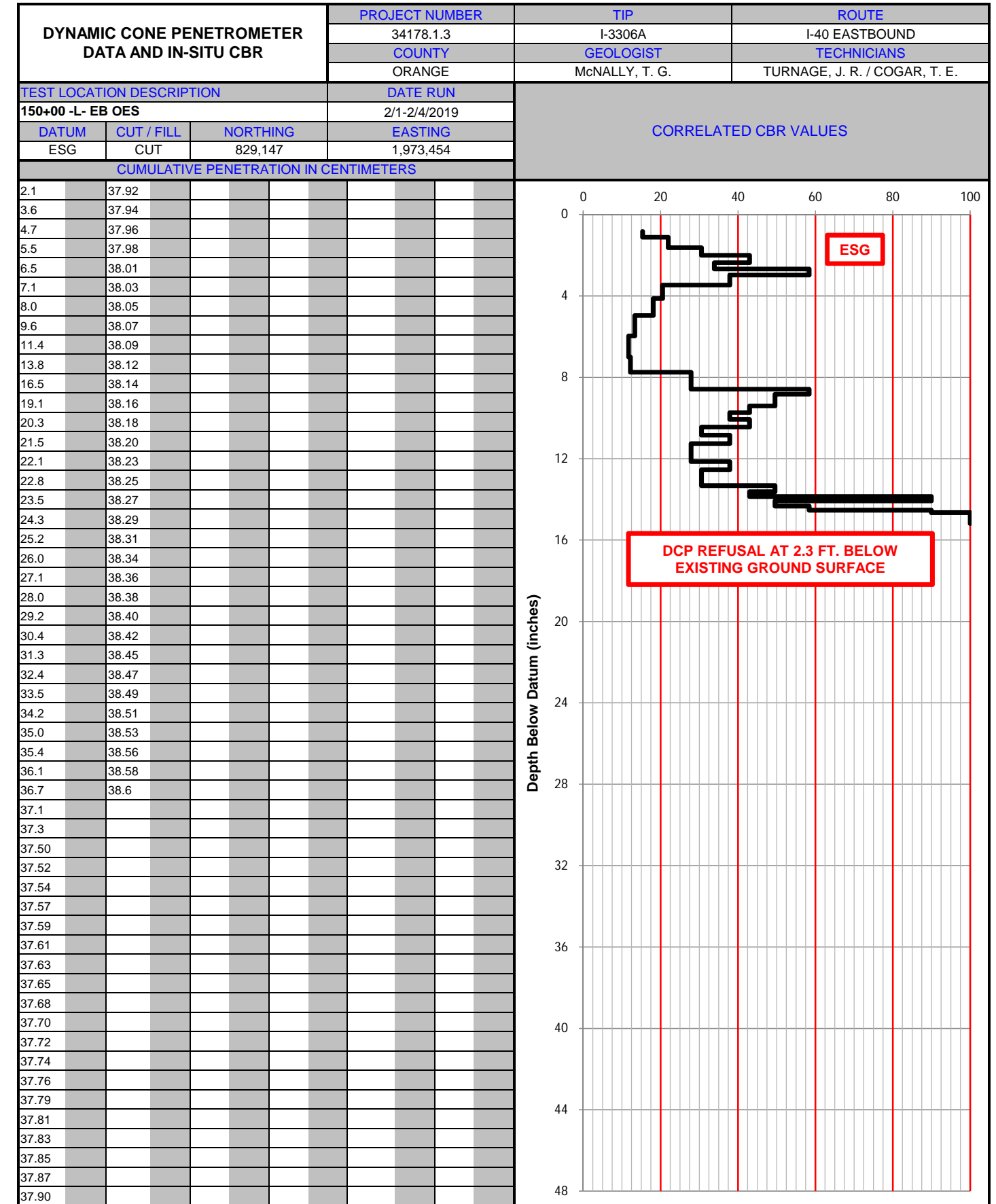


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DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
155+00 -L- EB EM				DATE RUN		
				2/1-2/4/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	828,663	1,973,587			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.8	86.9					
3.1	88.0					
4.5	88.9					
5.7	90.2					
6.9	91.3					
8.6	92.3					
10.0	93.2					
11.1	94.2					
12.3						
13.5						
14.8						
16.2						
17.1						
18.4						
19.5						
20.6						
21.7						
22.7						
23.9						
25.2						
26.7						
28.6						
30.7						
33.2						
36.8						
40.5						
44.1						
46.4						
48.9						
51.3						
53.5						
57.0						
60.4						
63.3						
66.3						
69.0						
71.0						
72.8						
74.3						
75.5						
76.3						
76.9						
78.2						
78.9						
79.6						
80.3						
81.0						
81.8						
82.6						
83.5						
84.2						
85.1						
86.0						

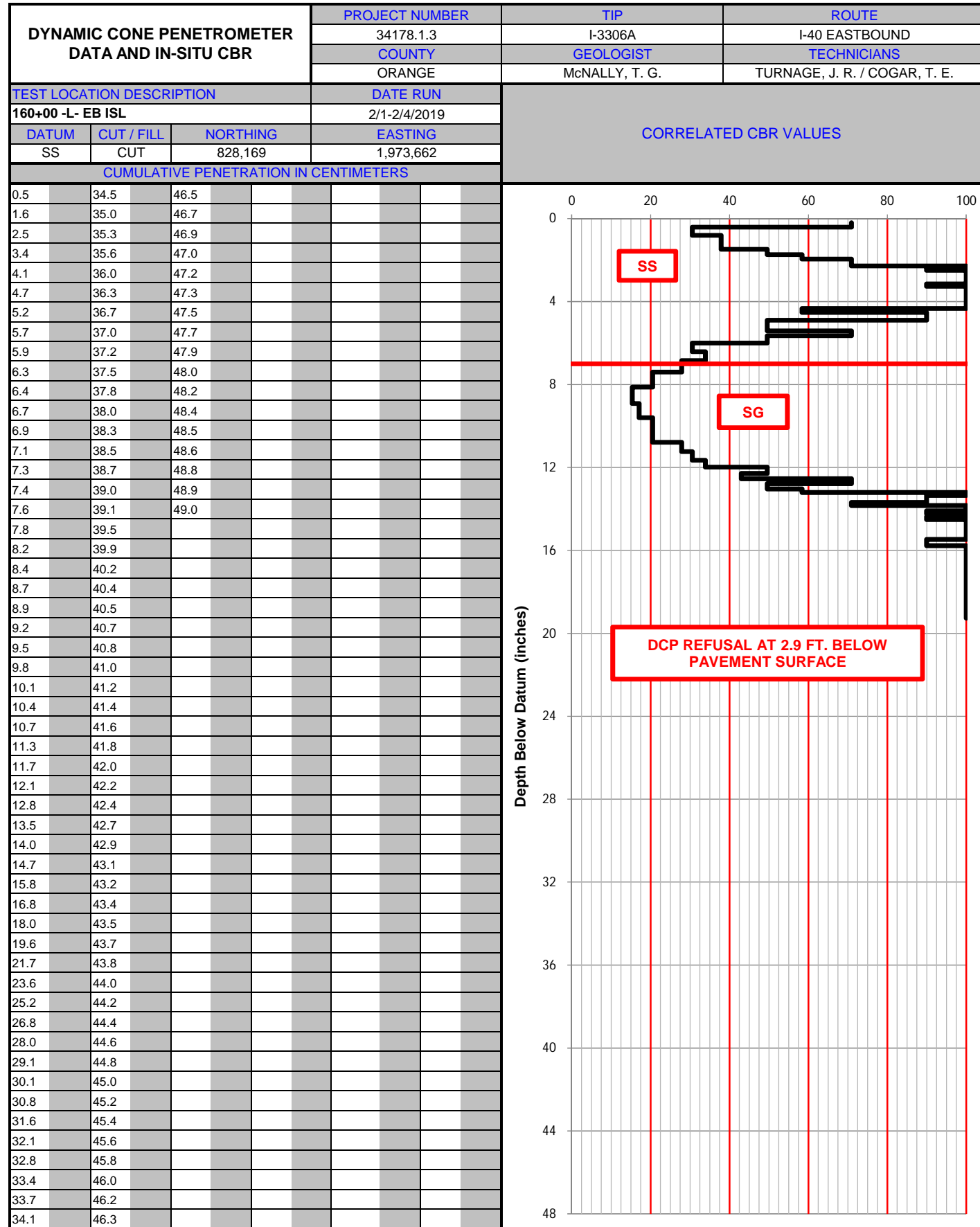
Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



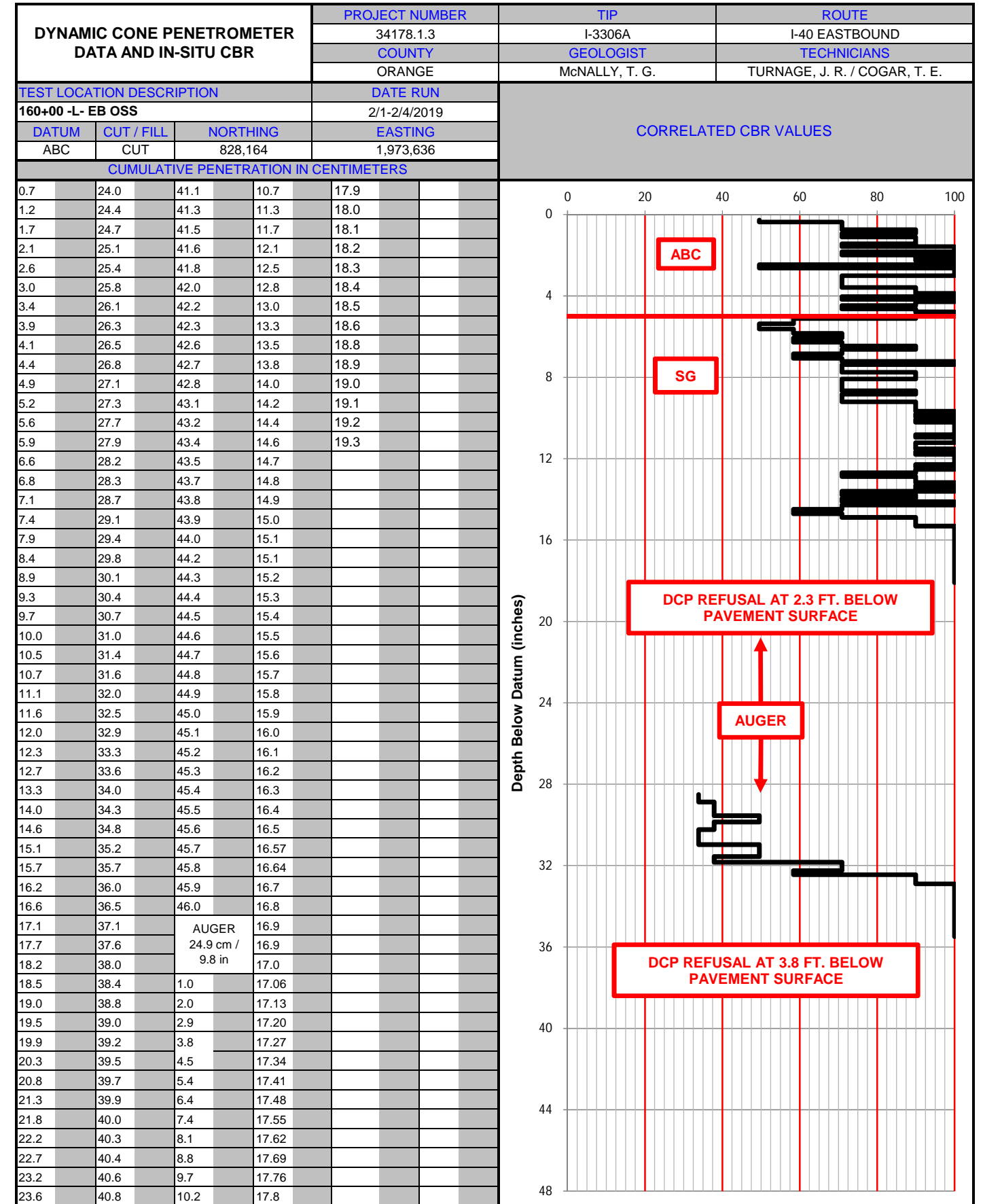
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
160+00 -L- EB ISS				DATE RUN		
				2/1-2/4/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	828,170	1,973,670			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.5	27.2					
5.1	27.3					
7.3	27.5					
11.1	27.6					
12.6	27.8					
13.3	27.9					
13.6	28.0					
14.1	28.1					
14.4	28.2					
14.7	28.3					
15.0	28.4					
15.2	28.5					
15.8	28.6					
16.5	28.7					
16.8	28.8					
17.0	28.8					
17.3	28.9					
17.4	29.0					
17.6	29.1					
18.1	29.2					
18.3	29.3					
18.5	29.4					
18.7	29.5					
19.0	29.6					
19.2	29.7					
19.3						
19.7						
20.0						
20.2						
20.6						
21.0						
21.3						
21.5						
21.8						
22.0						
22.5						
22.8						
23.0						
23.4						
23.7						
23.9						
24.2						
24.9						
25.2						
25.5						
25.7						
25.9						
26.2						
26.4						
26.5						
26.7						
26.8						
27.0						

Notes:  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



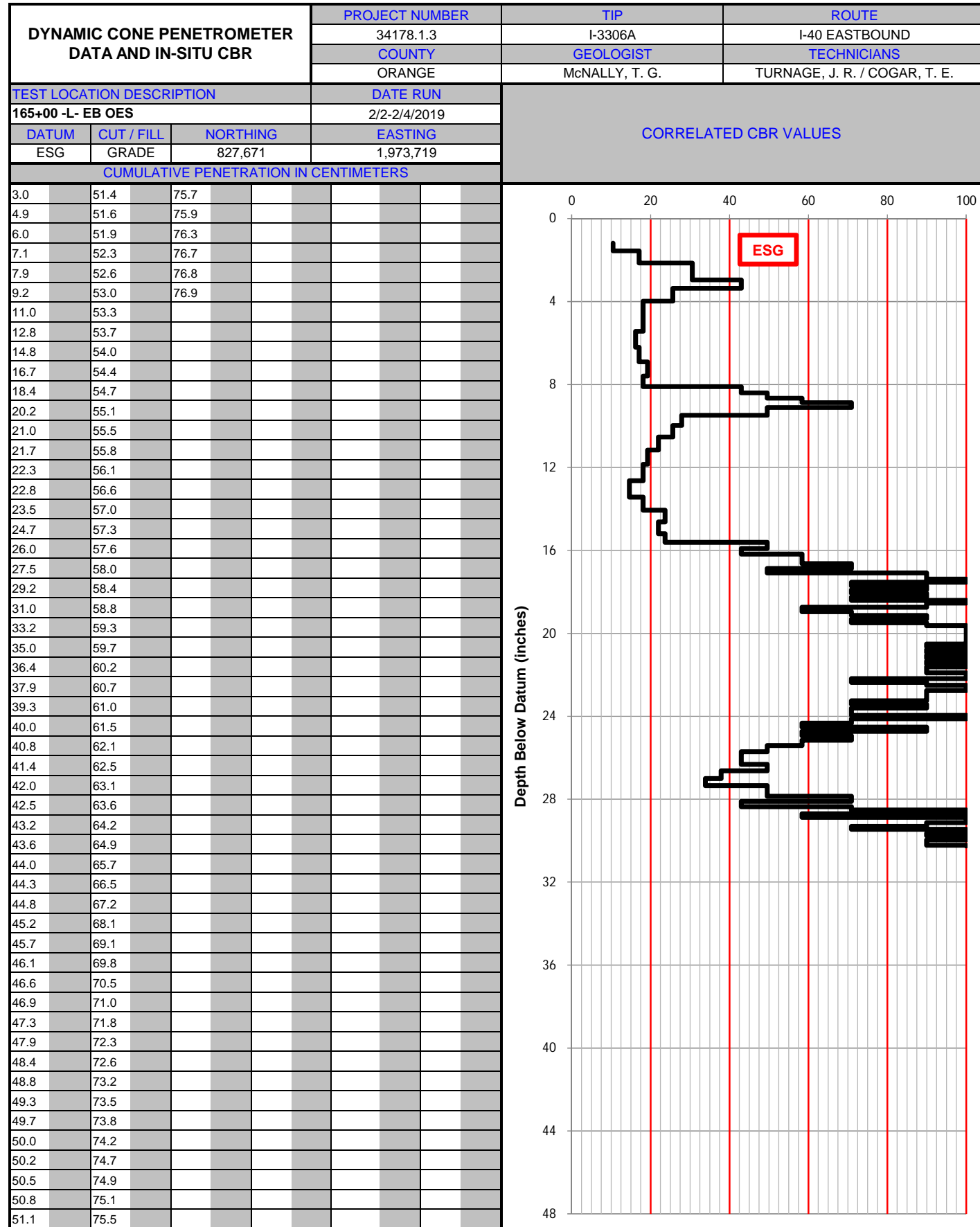


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

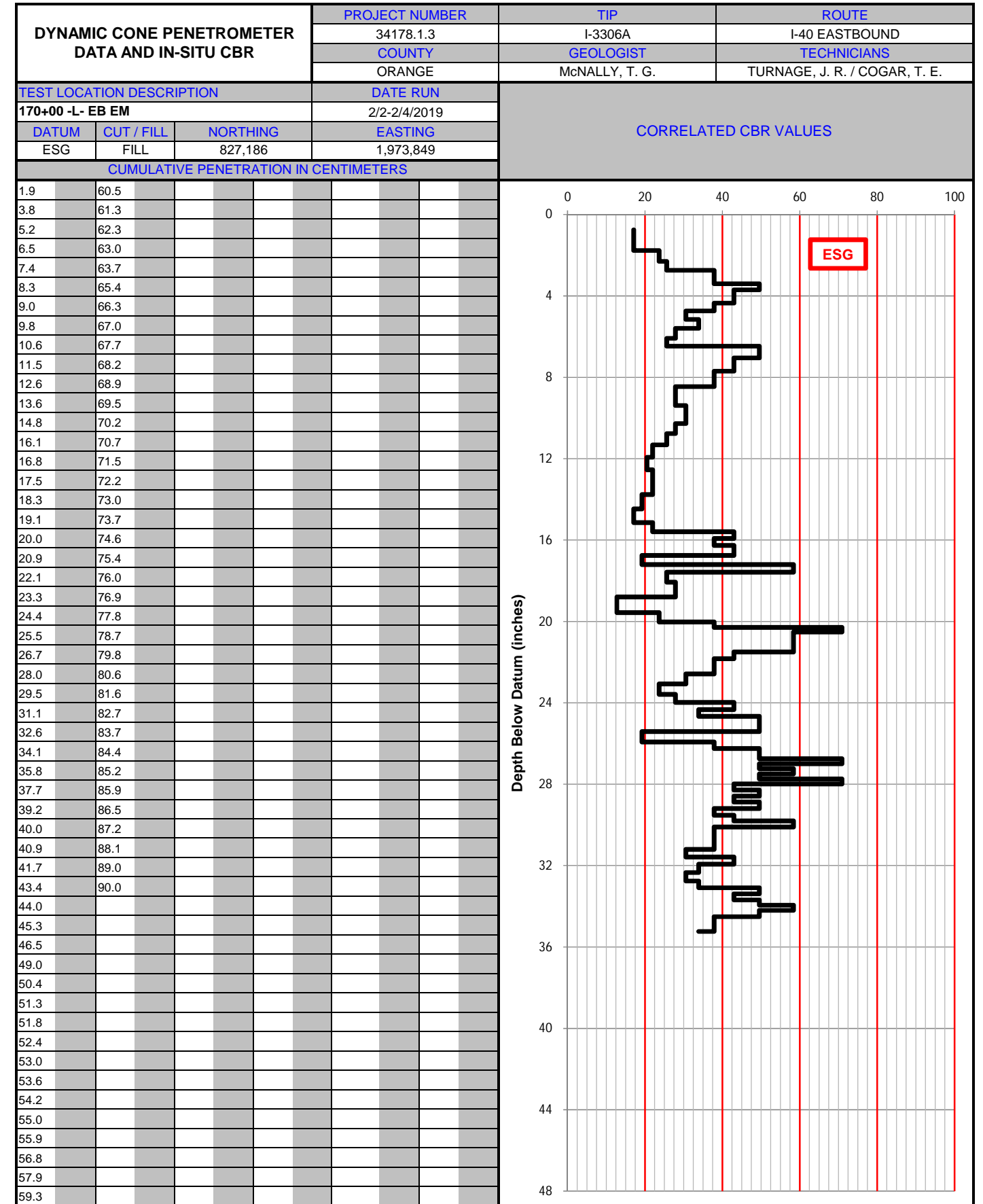


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 SG = Subgrade  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



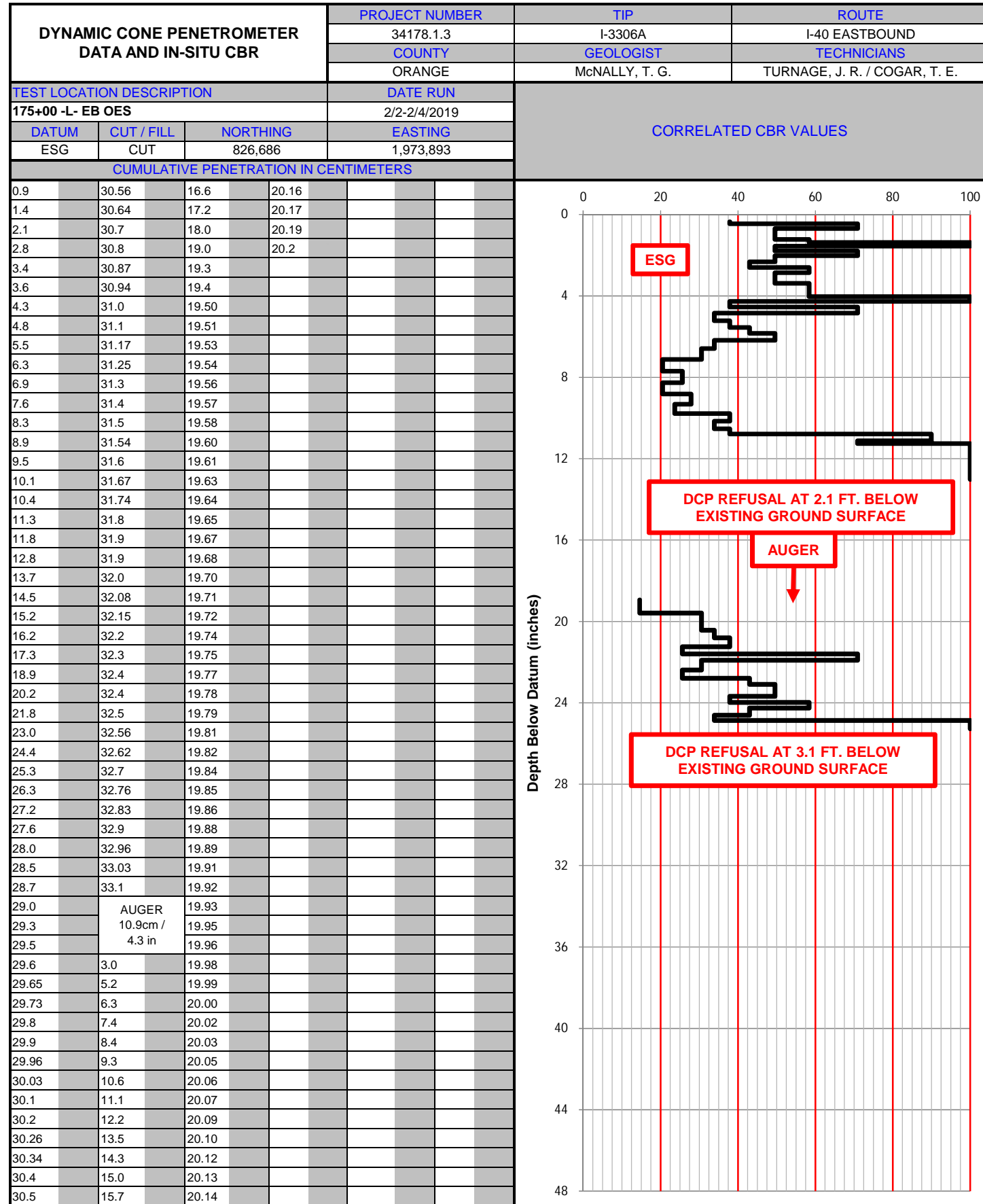


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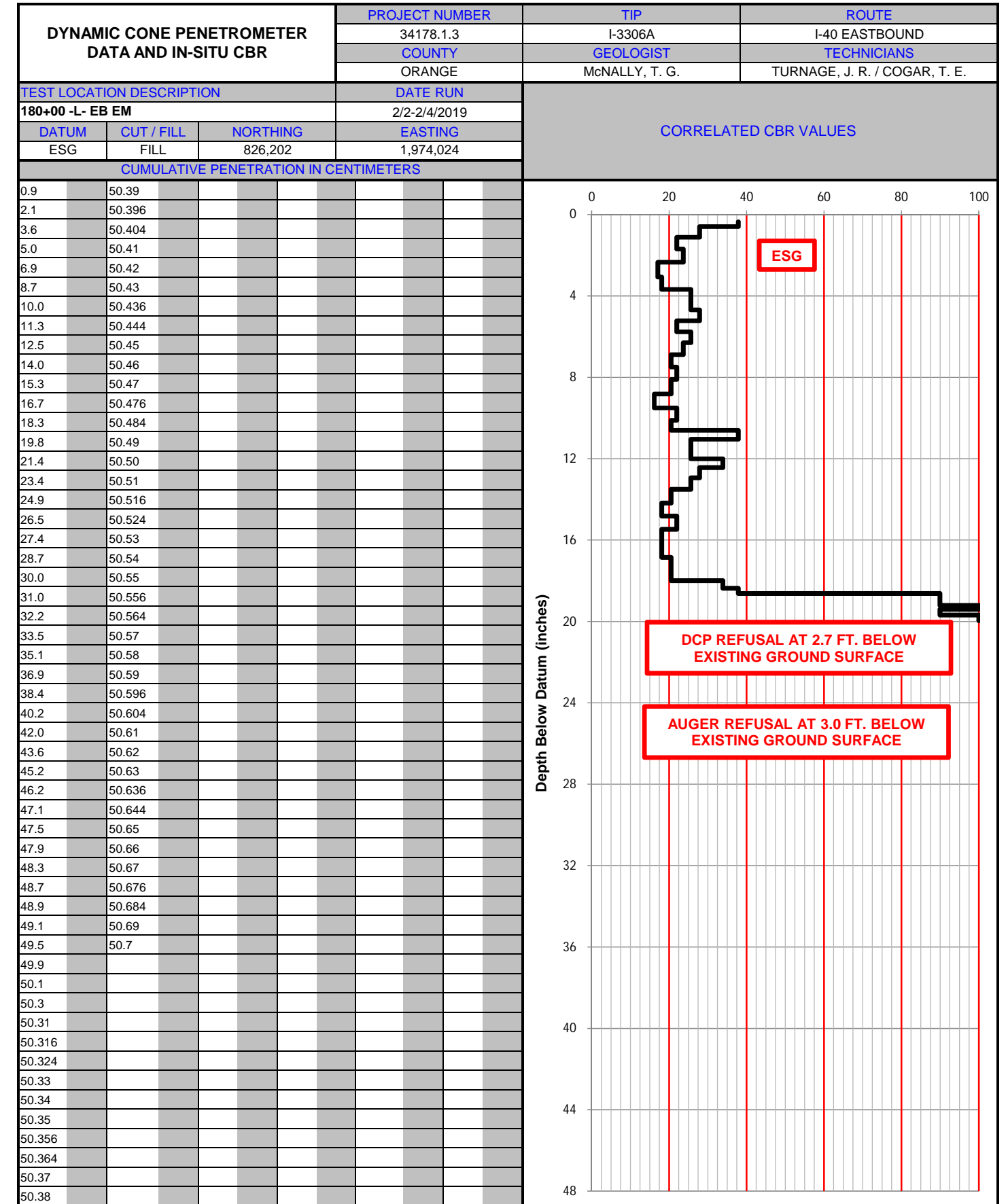


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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





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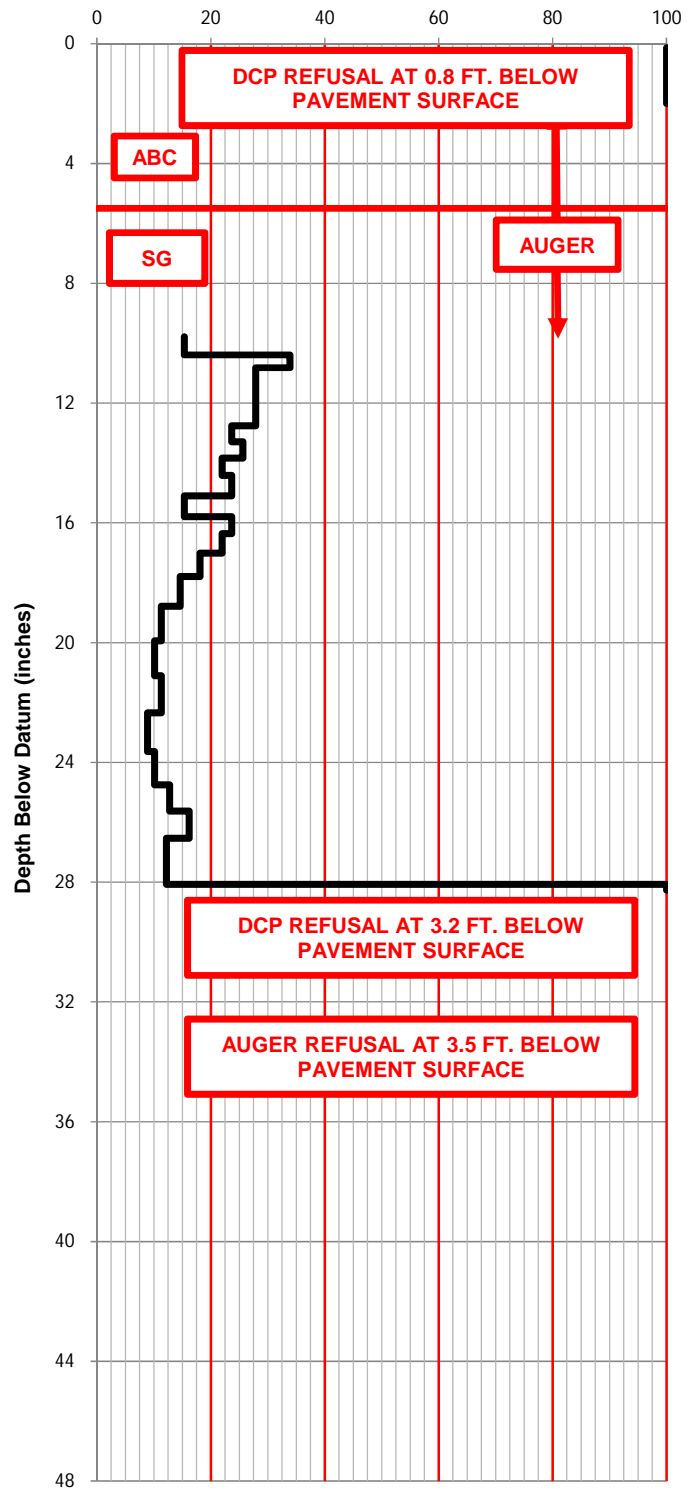


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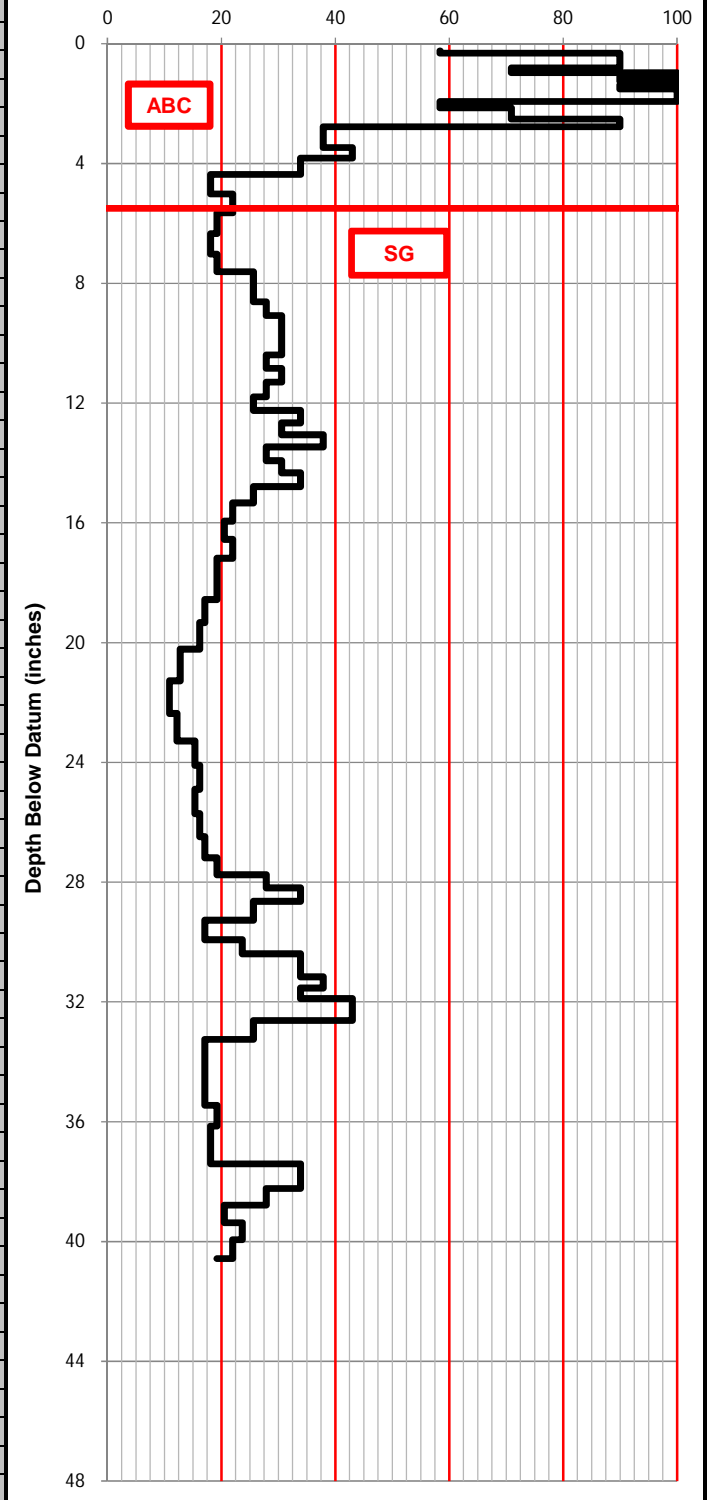
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE				McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		
185+00 -L- EB ISS				2/2-2/4/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	825,709	1,974,108			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.3	3.9	51.69				
0.7	6.0	51.7				
1.0	7.0	51.71				
1.4	8.2	51.72				
1.7	9.4	51.73				
1.8	10.6	51.74				
1.9	11.8	51.75				
2.0	13.2	51.76				
2.1	14.5	51.77				
2.2	16.0	51.78				
2.3	17.4	51.79				
2.4	19.5	51.8				
2.6	20.9	51.81				
2.7	22.4	51.82				
2.8	24.2	51.83				
2.9	26.4	51.84				
2.9	29.2	51.85				
3.0	32.3	51.86				
3.0	35.1	51.87				
3.1	38.6	51.88				
3.2	41.7	51.89				
3.26	44.2	51.9				
3.34	46.2					
3.4	48.8					
3.5	51.4					
3.6	51.41					
3.7	51.42					
3.8	51.43					
3.9	51.44					
4.0	51.45					
4.1	51.46					
4.16	51.47					
4.24	51.48					
4.3	51.49					
4.4	51.5					
4.44	51.51					
4.48	51.52					
4.52	51.53					
4.56	51.54					
4.60	51.55					
4.64	51.56					
4.68	51.57					
4.72	51.58					
4.76	51.59					
4.80	51.6					
4.86	51.61					
4.92	51.62					
4.98	51.63					
5.04	51.64					
5.1	51.65					
AUGER	51.66					
14.8 cm /	51.67					
5.8 in	51.68					



Notes:  
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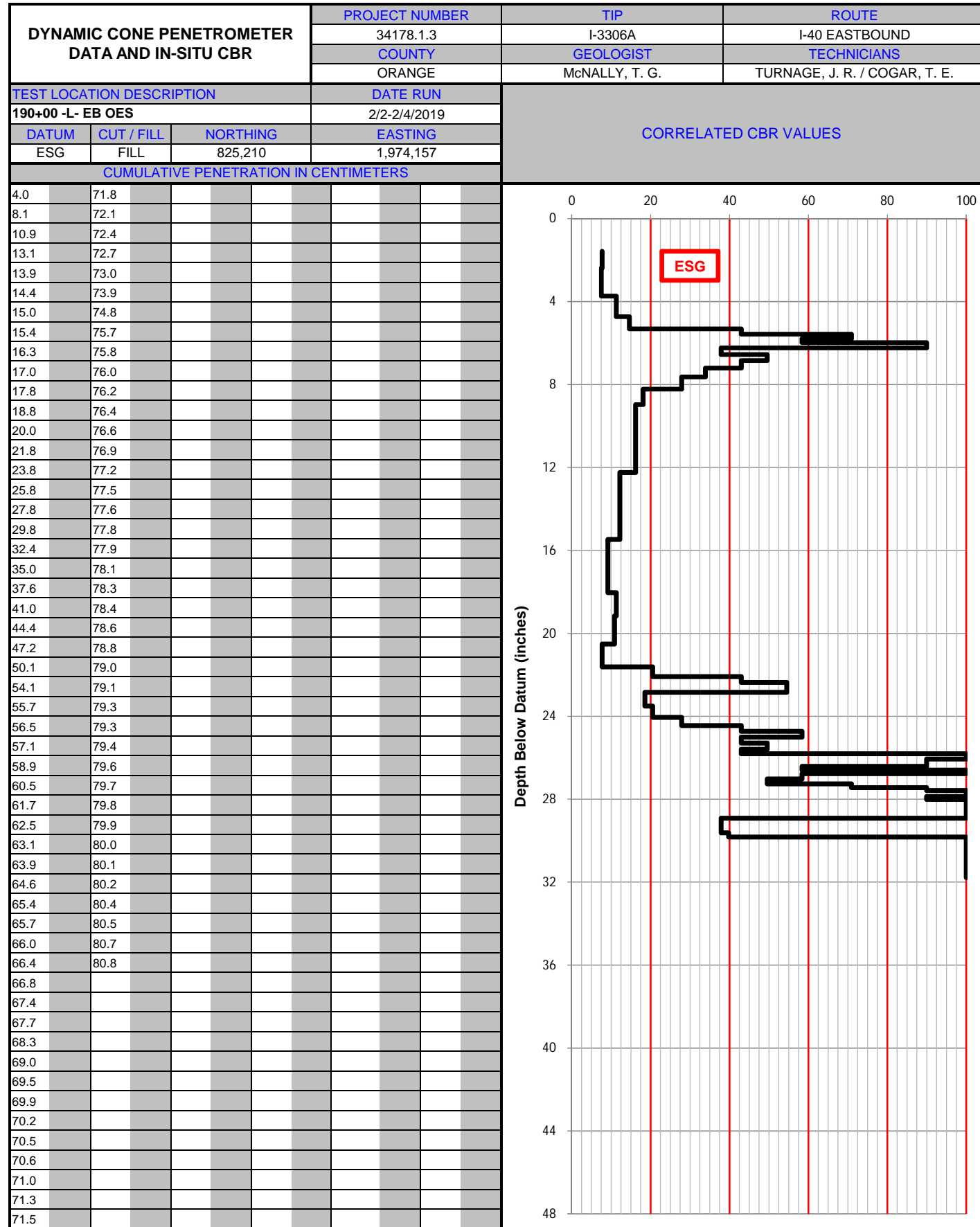


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE				McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		
185+00 -L- EB OSS				2/2-2/4/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	825,703	1,974,076			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.6	62.2					
1.0	64.3					
1.4	66.3					
1.8	68.2					
2.3	69.9					
2.6	71.1					
3.0	72.1					
3.3	73.4					
3.7	75.3					
4.0	76.7					
4.3	77.7					
4.6	78.7					
5.2	79.6					
5.7	80.6					
6.2	81.4					
6.6	82.2					
7.5	83.5					
8.4	85.4					
9.2	87.3					
10.2	89.2					
12.0	90.9					
13.5	92.7					
15.2	94.5					
17.0	95.5					
18.7	96.5					
20.0	97.7					
21.3	99.3					
22.5	100.7					
23.6	102.2					
24.7	103.9					
25.8						
27.0						
28.1						
29.3						
30.6						
31.6						
32.7						
33.6						
34.8						
35.9						
36.9						
38.2						
39.7						
41.3						
42.8						
44.5						
46.2						
48.1						
50.1						
52.6						
55.5						
58.1						
60.2						

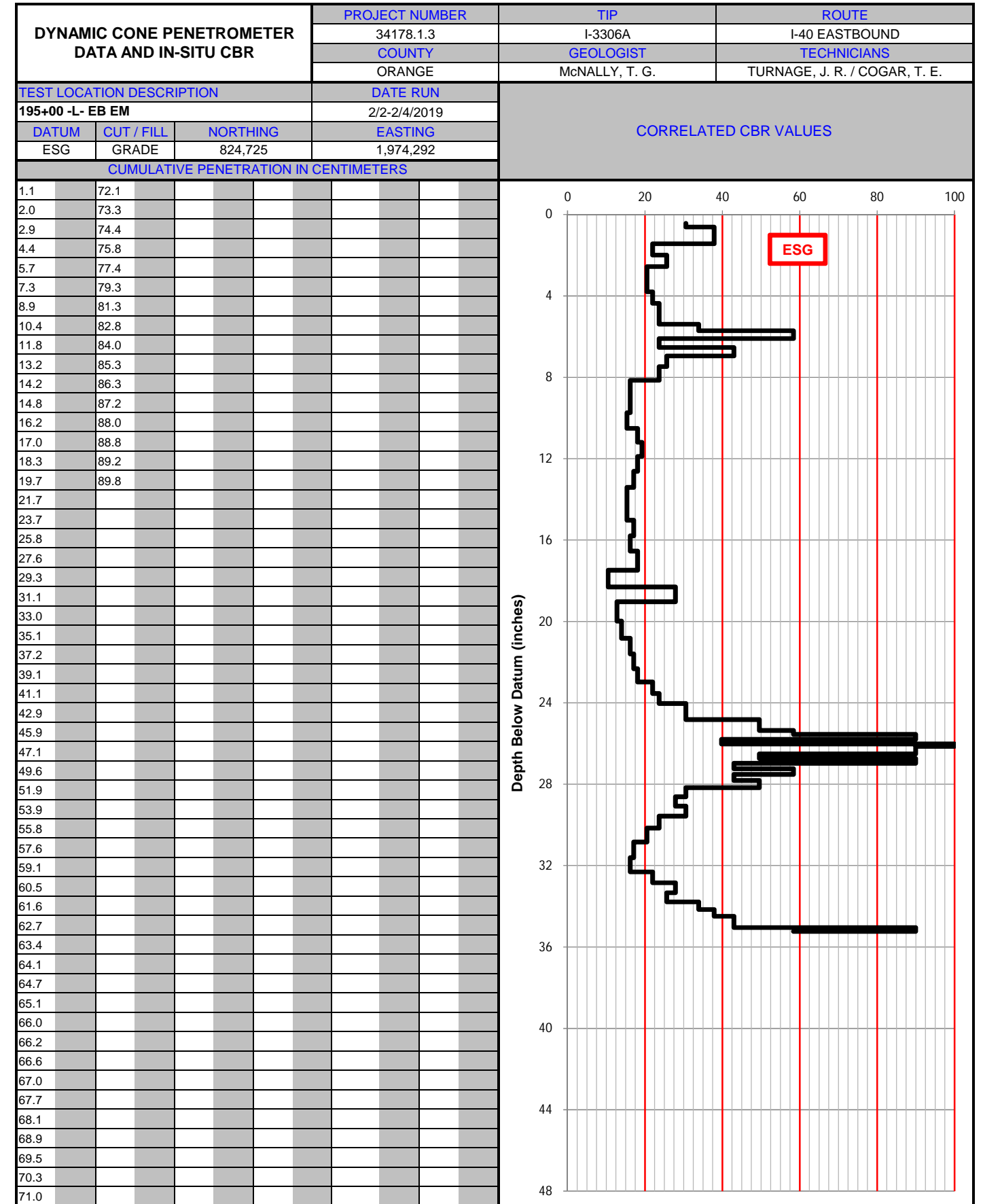


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
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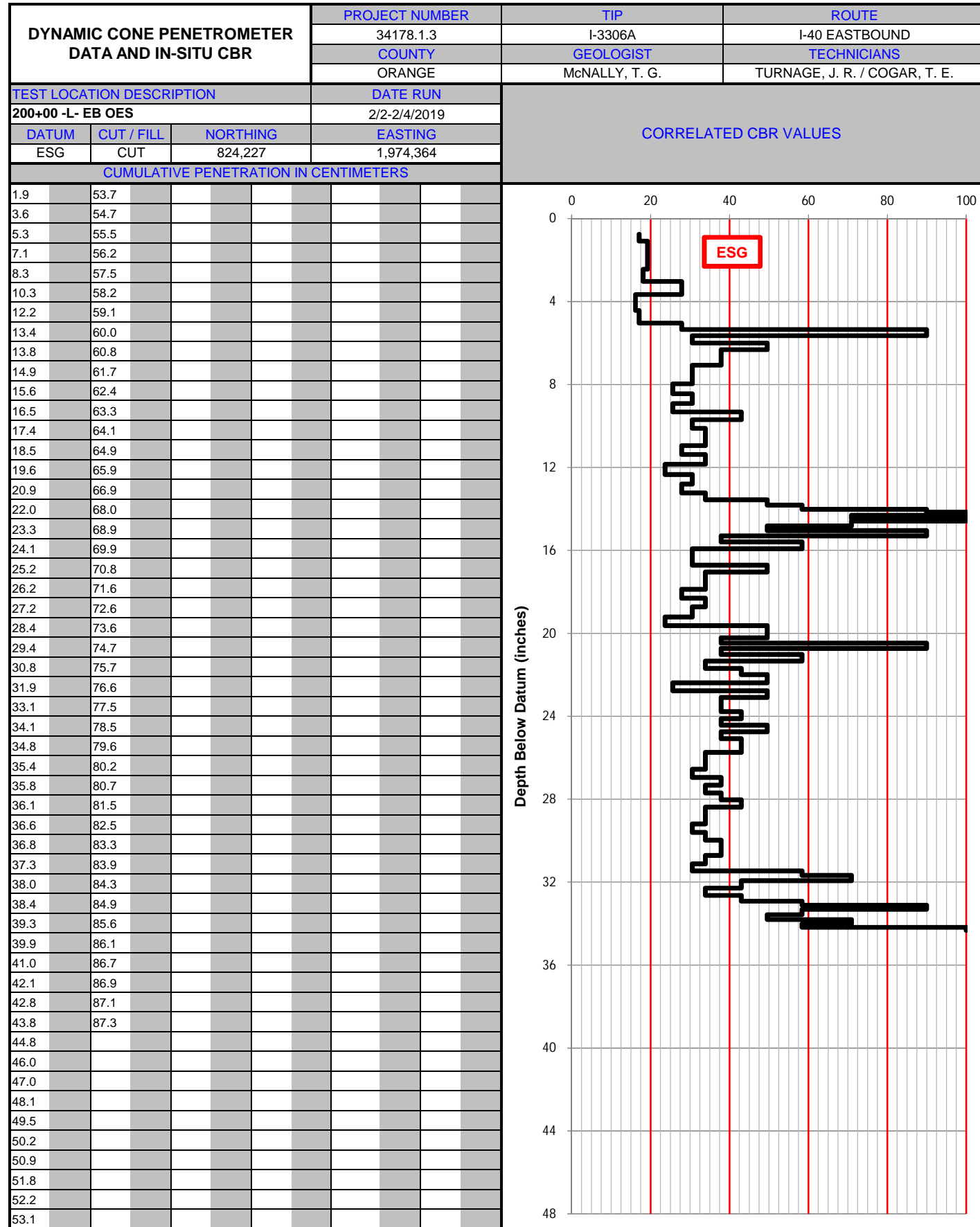


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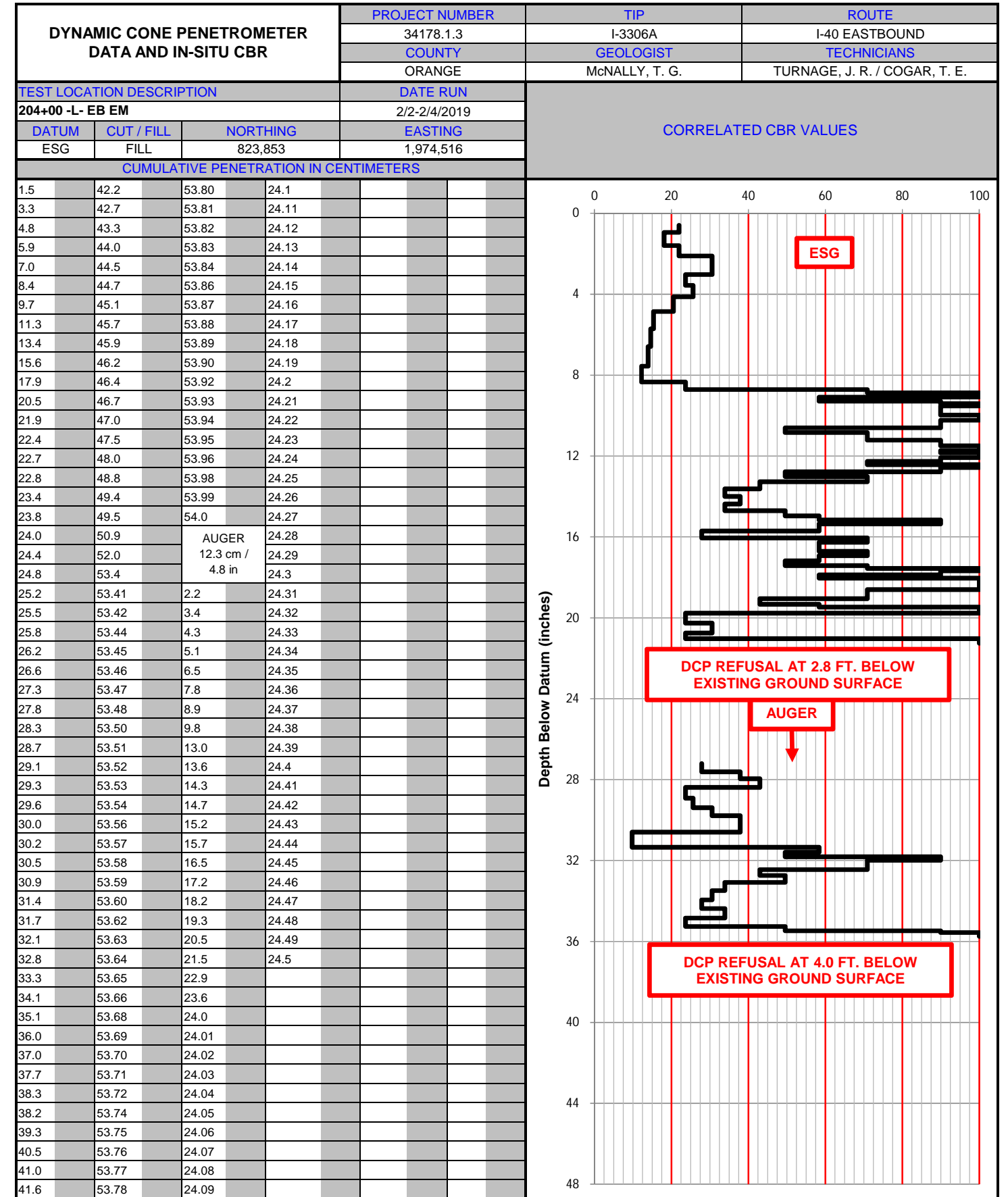


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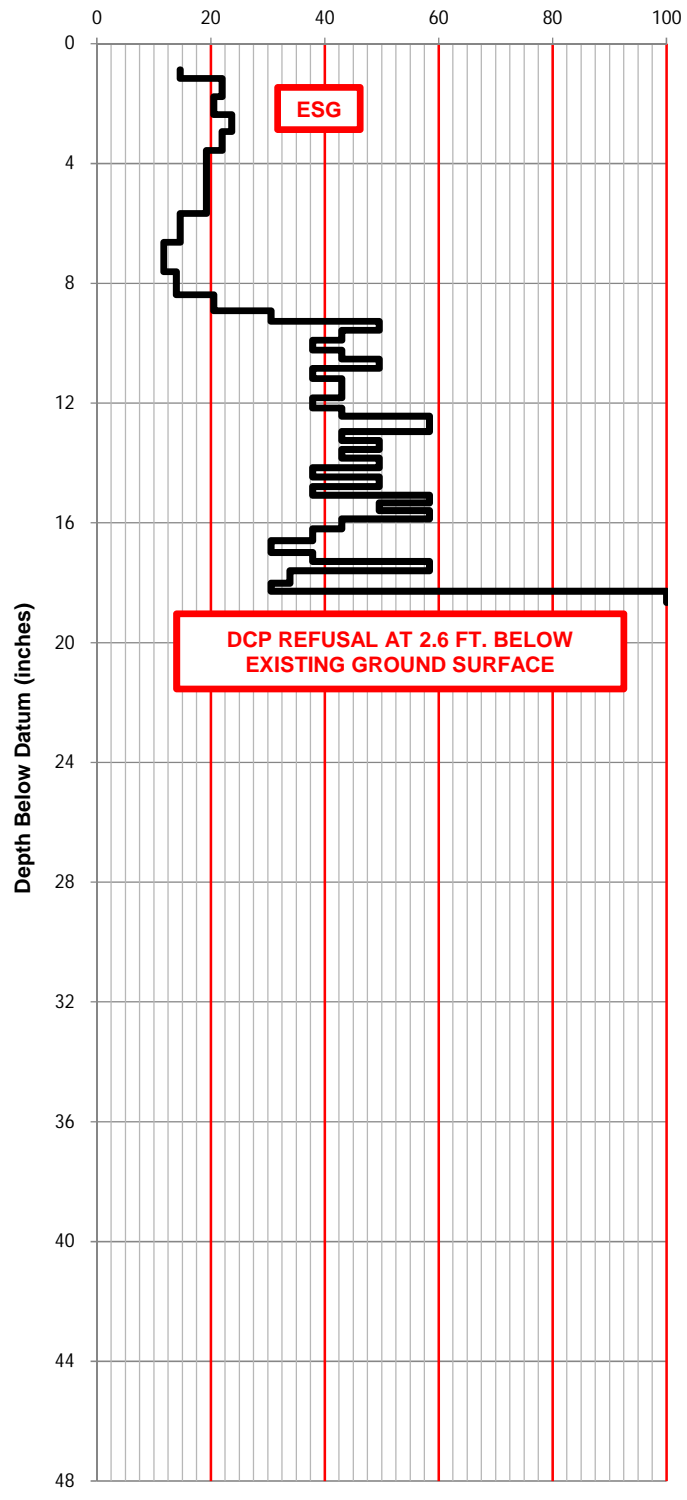
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 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



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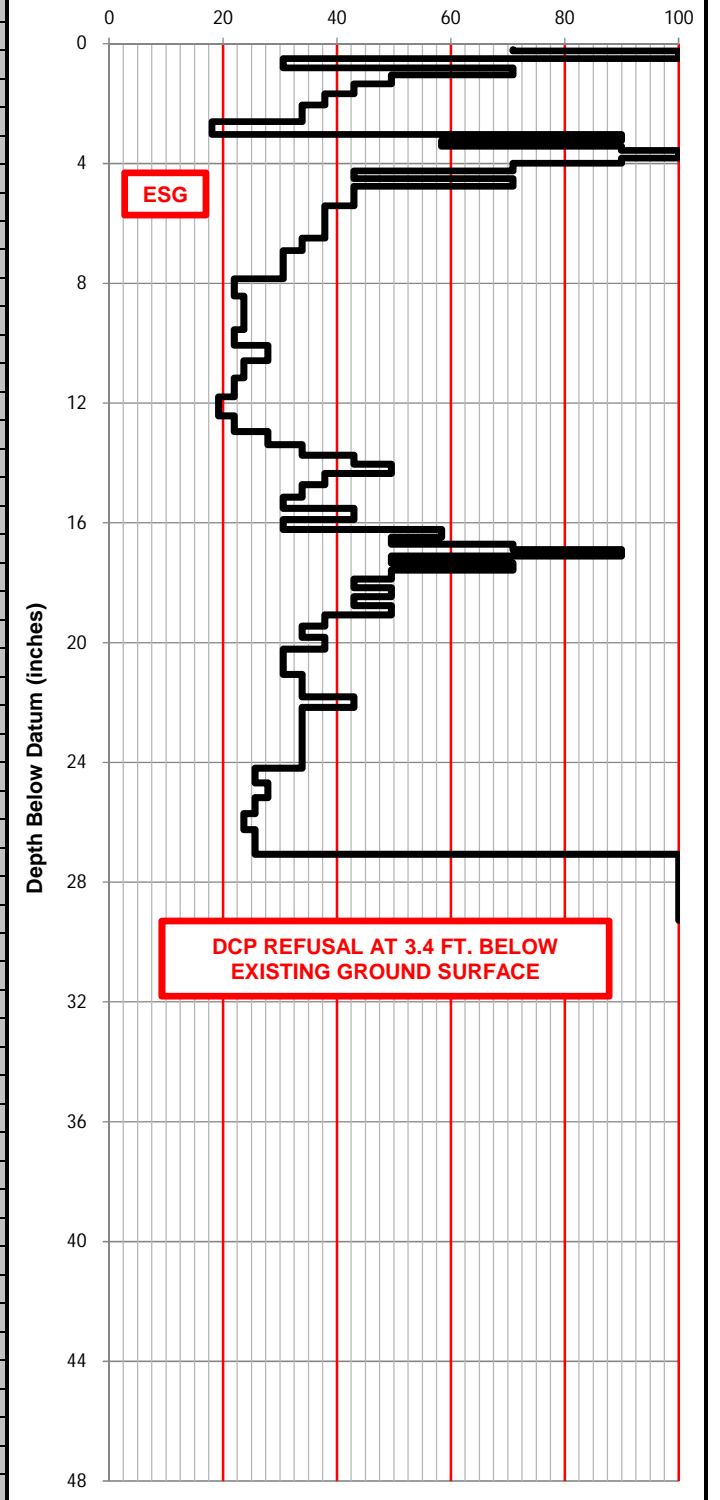
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
210+00 -L- EB ISS				2/2-2/14/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	823,281	1,974,700			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.2	46.92					
3.7	46.93					
5.3	46.94					
6.7	46.96					
8.2	46.97					
9.9	46.98					
11.6	46.99					
13.3	47.0					
15.5	47.02					
18.2	47.03					
20.5	47.04					
22.1	47.05					
23.2	47.06					
23.9	47.08					
24.7	47.09					
25.6	47.1					
26.4	47.11					
27.1	47.12					
28.0	47.14					
28.8	47.15					
29.6	47.16					
30.5	47.17					
31.3	47.18					
31.9	47.2					
32.5	47.21					
33.3	47.22					
34.0	47.23					
34.8	47.24					
35.5	47.26					
36.4	47.27					
37.1	47.28					
38.0	47.29					
38.6	47.3					
39.3	47.32					
39.9	47.33					
40.7	47.34					
41.6	47.35					
42.7	47.36					
43.6	47.38					
44.2	47.39					
45.2	47.4					
46.3						
46.6						
46.8						
46.81						
46.82						
46.84						
46.85						
46.86						
46.87						
46.88						
46.9						
46.91						



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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



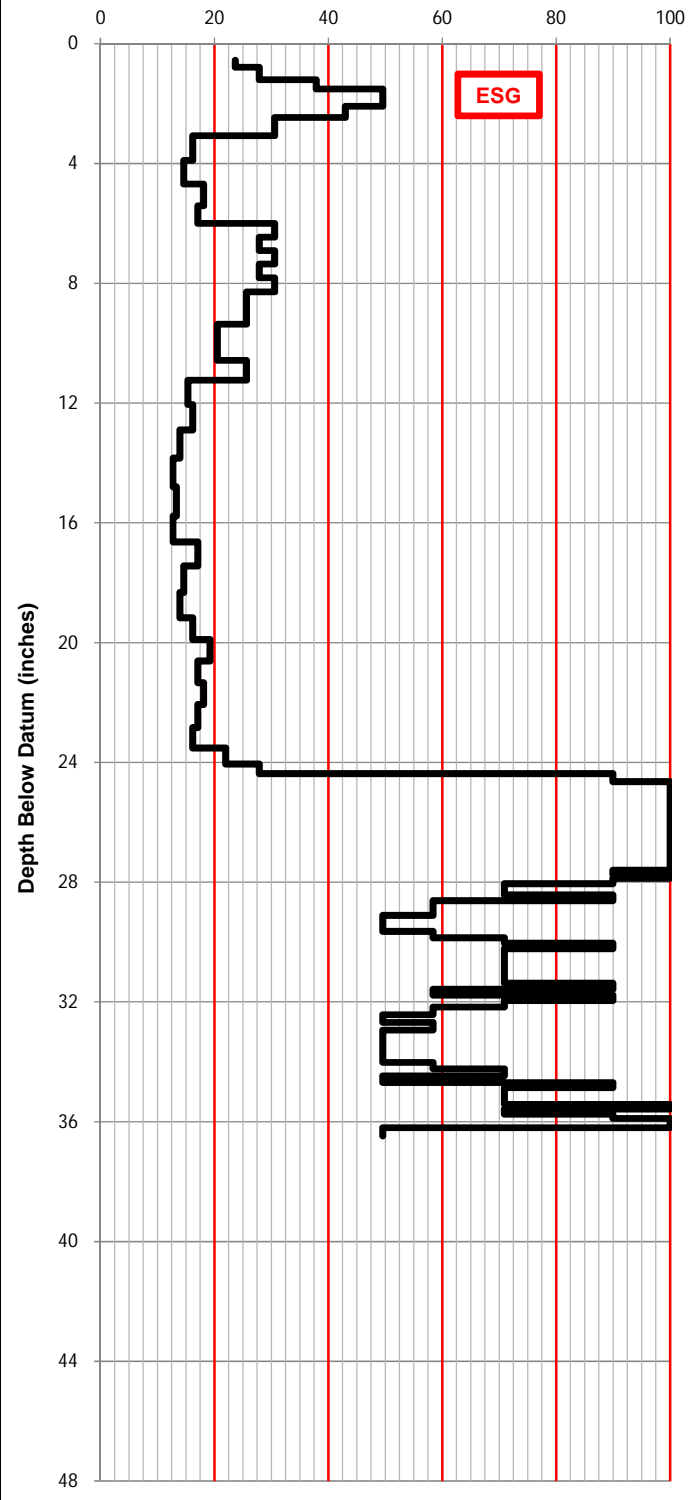
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
210+00 -L- EB OSS				2/2-2/14/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	823,256	1,974,629			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.5	47.3	72.6				
0.7	48.0	72.7				
1.8	48.9	72.8				
2.3	49.9	73.0				
3.0	50.8	73.1				
3.8	51.9	73.20				
4.7	53.0	73.24				
5.7	54.0	73.28				
7.5	55.0	73.32				
7.9	55.8	73.36				
8.5	56.8	73.4				
8.9	57.8	73.5				
9.2	58.8	73.6				
9.5	59.8	73.7				
9.9	60.8	73.8				
10.4	62.1	73.9				
11.2	63.3	74.0				
11.7	64.6	74.1				
12.5	66.0	74.2				
13.3	67.3	74.3				
14.2	68.6	74.4				
15.1	68.9					
16.0	69.2					
17.0	69.5					
18.1	69.54					
19.2	69.58					
20.7	69.62					
22.1	69.66					
23.5	69.70					
25.0	69.9					
26.2	70.0					
27.6	70.2					
29.1	70.3					
30.8	70.5					
32.3	70.6					
33.5	70.7					
34.5	70.8					
35.3	70.9					
36.0	71.0					
36.9	71.1					
37.9	71.2					
39.0	71.4					
39.8	71.5					
40.9	71.6					
41.5	71.7					
42.2	71.76					
43.7	71.84					
43.1	71.9					
43.8	72.0					
44.3	72.1					
45.0	72.2					
45.8	72.4					
46.5	72.5					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



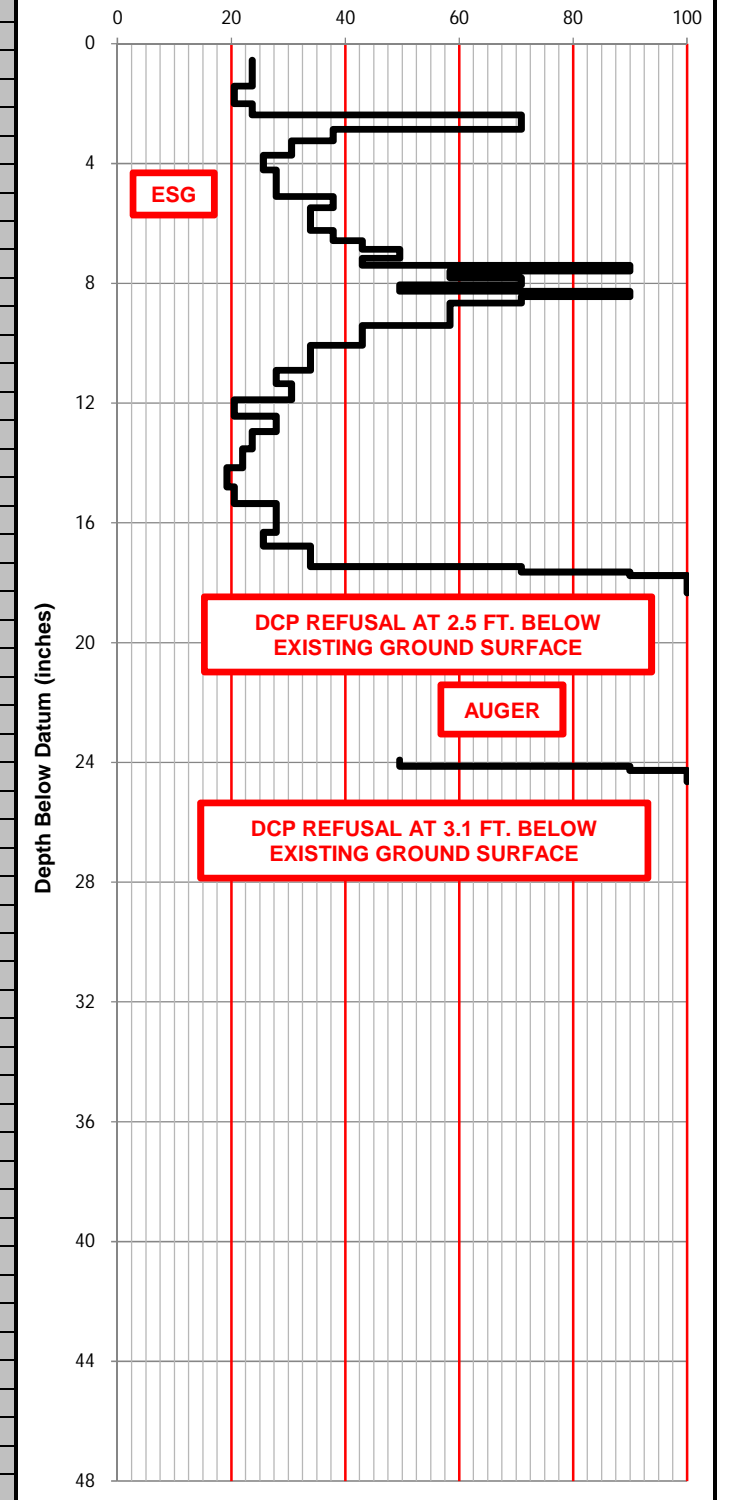
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
215+00 -L- EB OES				2/2-2/5/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	822,795	1,974,834			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.4	65.1	88.3				
2.6	65.2	88.8				
3.5	65.4	89.3				
4.2	65.6	89.8				
4.9	65.8	90.1				
5.7	66.0	90.6				
6.8	66.2	91.0				
8.8	66.4	91.3				
11.0	66.6	91.6				
12.8	66.9	92.3				
14.7	67.2	93.0				
15.8	67.4					
17.0	67.7					
18.1	68.0					
19.3	68.3					
20.4	68.6					
21.7	69.0					
23.0	69.3					
24.6	69.6					
26.2	69.9					
27.5	70.3					
29.6	70.6					
31.6	71.0					
33.9	71.5					
36.4	72.0					
38.8	72.4					
41.3	73.0					
43.2	73.6					
45.4	74.3					
47.7	75.0					
49.7	75.6					
51.4	76.1					
53.3	76.5					
55.1	77.0					
57.0	77.5					
59.0	78.0					
60.5	78.5					
61.7	79.0					
62.1	79.5					
62.5	79.9					
62.7	80.5					
62.9	80.9					
63.1	81.4					
63.3	82.0					
63.6	82.7					
63.8	83.3					
64.0	84.0					
64.1	84.7					
64.3	85.4					
64.4	86.1					
64.6	86.7					
64.7	87.2					
64.9	87.9					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

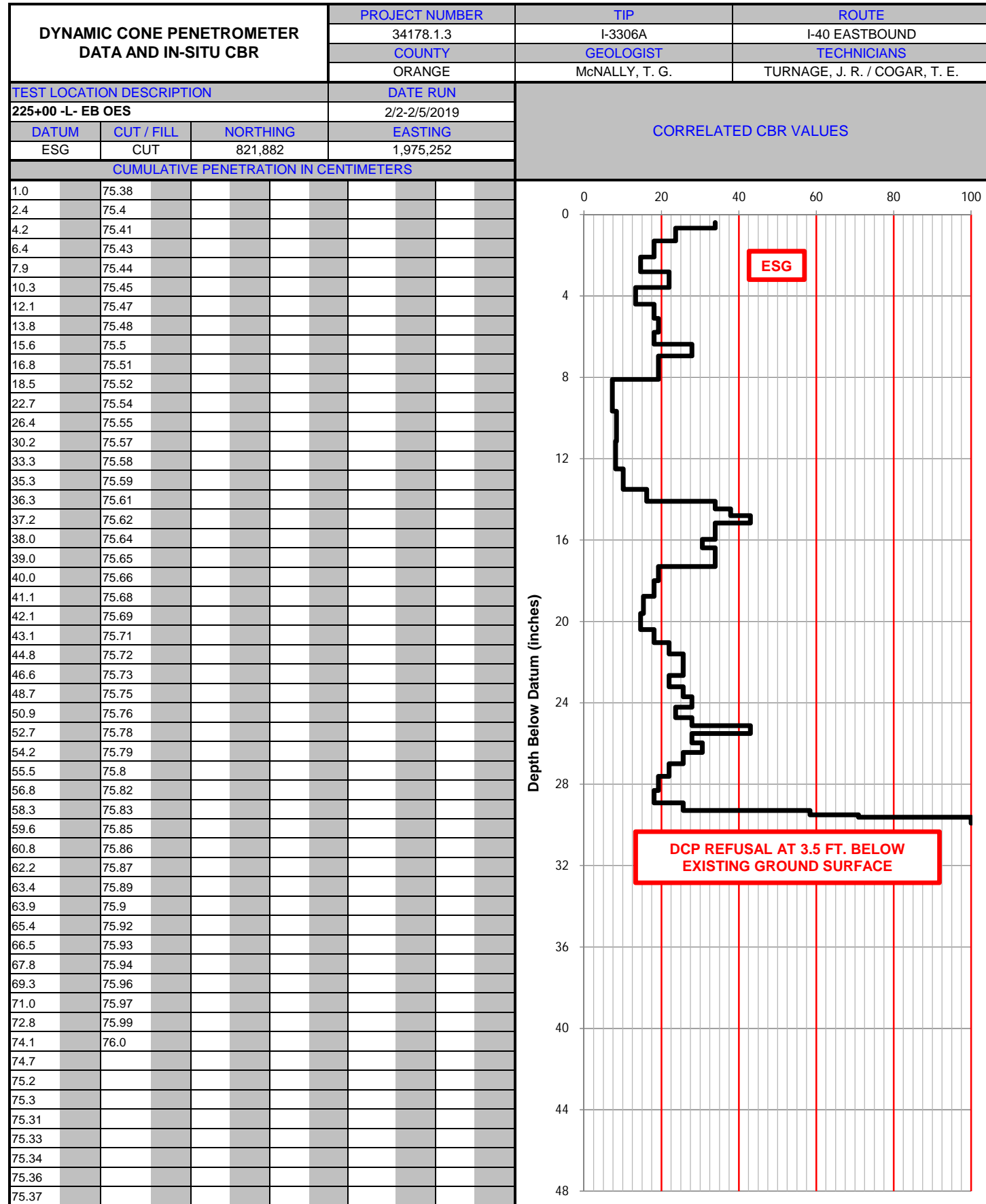


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
221+00 -L- EB EM				2/2-2/5/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	822,261	1,975,114			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.4	45.4	3.2				
2.8	45.42	3.3				
4.4	45.45	3.31				
5.8	45.48	3.316				
6.3	45.51	3.324				
6.8	45.54	3.332				
7.7	45.56	3.34				
8.8	45.59	3.348				
10.1	45.62	3.356				
11.3	45.65	3.364				
12.5	45.68	3.372				
13.4	45.7	3.38				
14.4	45.73	3.388				
15.4	45.76	3.396				
16.3	45.79	3.404				
17.1	45.82	3.412				
17.8	45.84	3.42				
18.6	45.87	3.428				
19.0	45.9	3.436				
19.6	45.93	3.444				
20.1	45.96	3.452				
20.8	45.98	3.46				
21.2	46.01	3.468				
21.7	46.04	3.476				
22.3	46.07	3.484				
22.9	46.1	3.492				
23.5	46.12	3.50				
24.3	46.15	3.508				
25.1	46.18	3.516				
26.1	46.21	3.524				
27.1	46.24	3.532				
28.3	46.26	3.54				
29.4	46.29	3.548				
31.0	46.32	3.556				
32.2	46.35	3.564				
33.6	46.38	3.572				
35.1	46.40	3.58				
36.8	46.4	3.588				
38.4	46.46	3.596				
39.6	46.49	3.604				
40.8	46.52	3.612				
42.1	46.54	3.62				
43.1	46.57	3.628				
44.1	46.6	3.636				
44.6		AUGER	3.644			
45.0		12.3 cm /	3.652			
45.2		4.8 in	3.66			
45.23	1.5		3.668			
45.26	2.2		3.676			
45.28	2.6		3.684			
45.31	2.9		3.692			
45.34	3.0		3.7			
45.37	3.1					

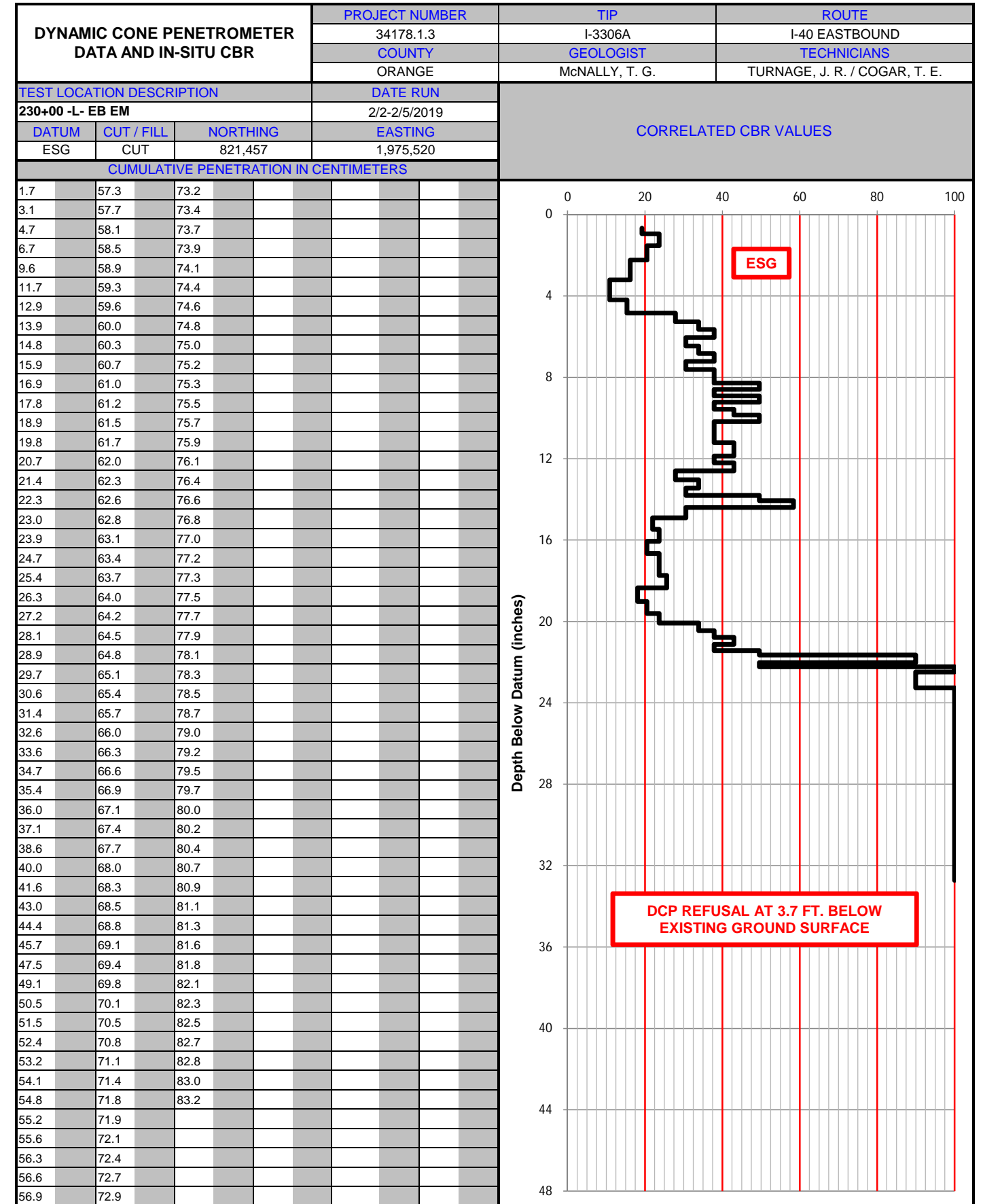


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



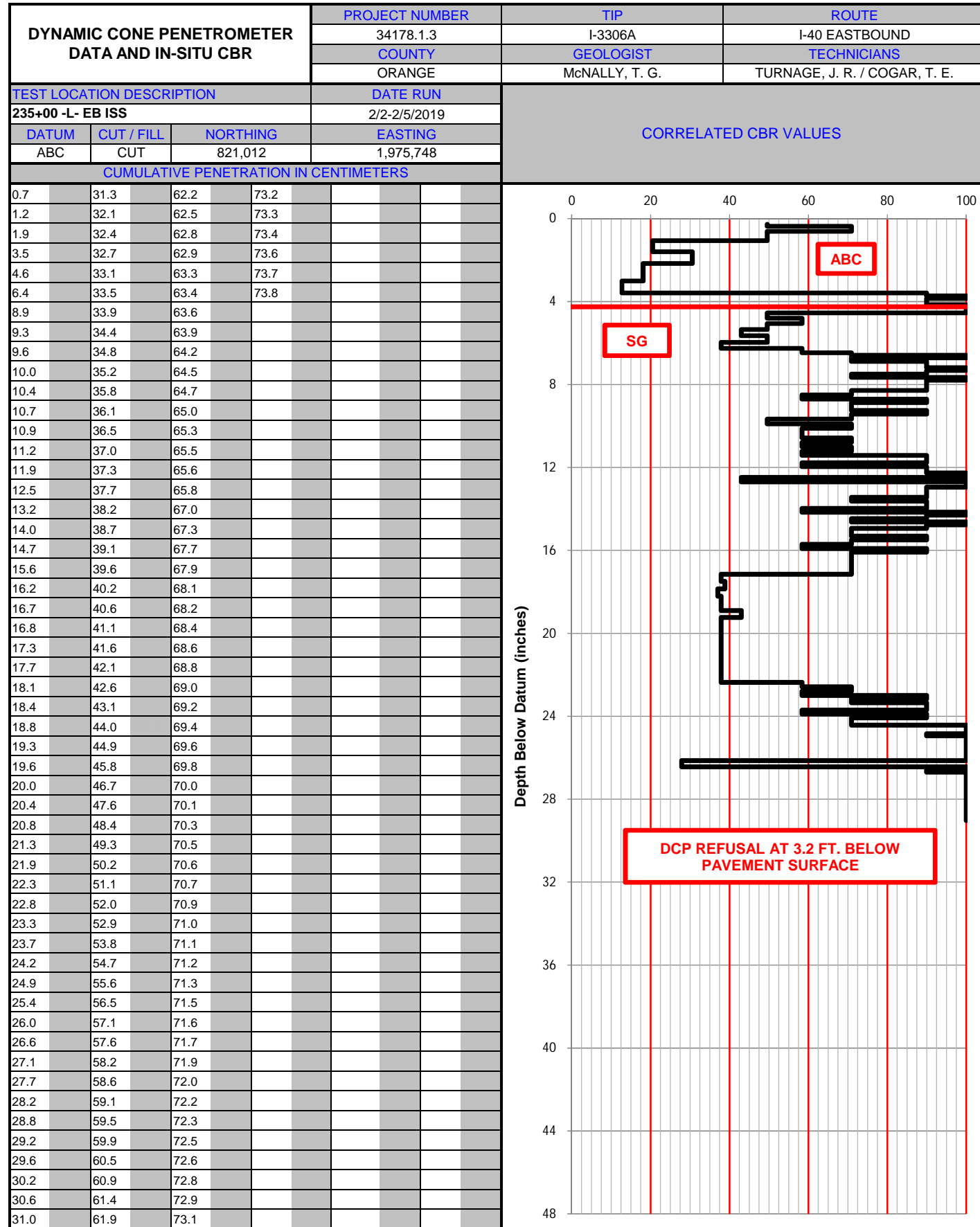


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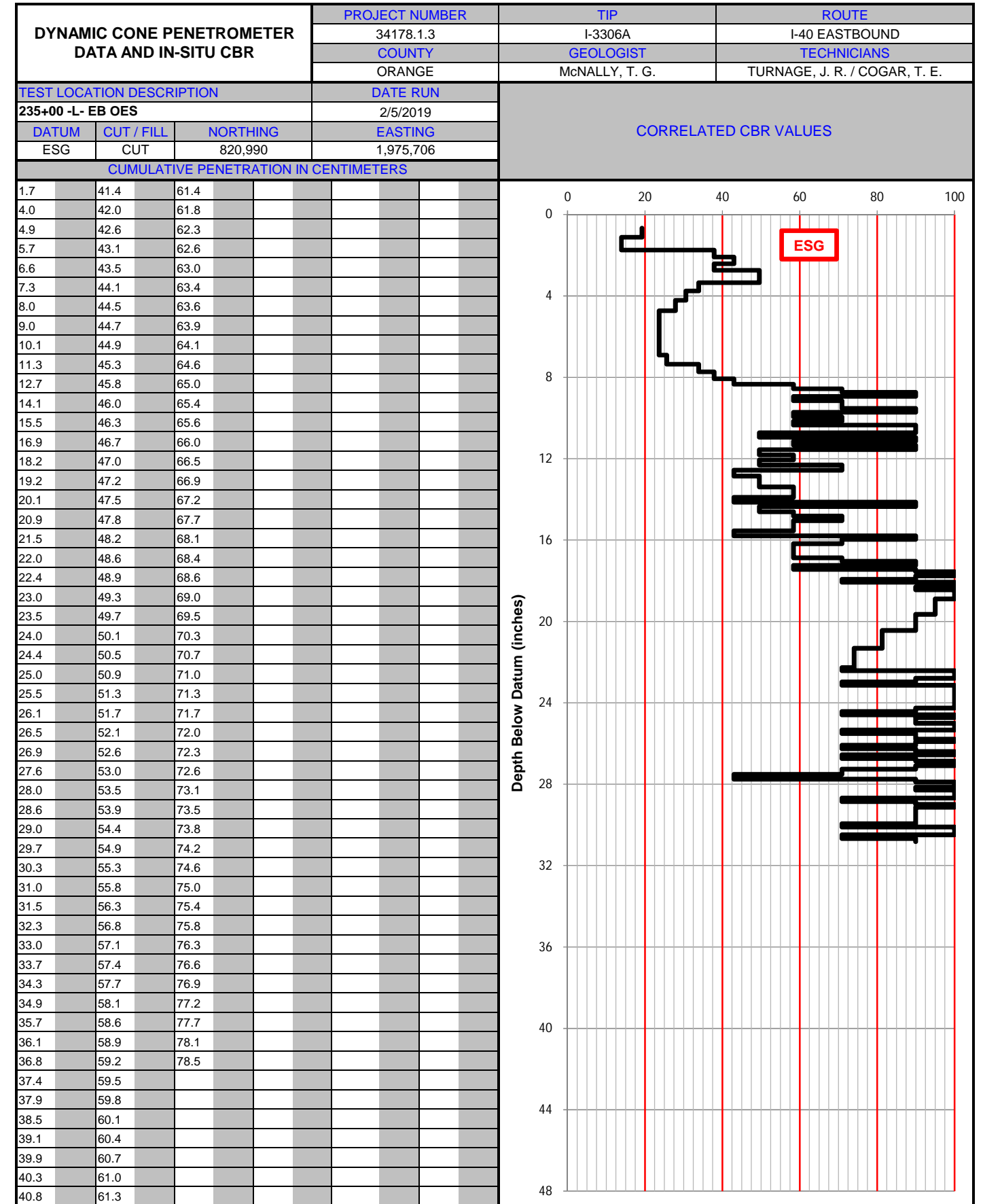


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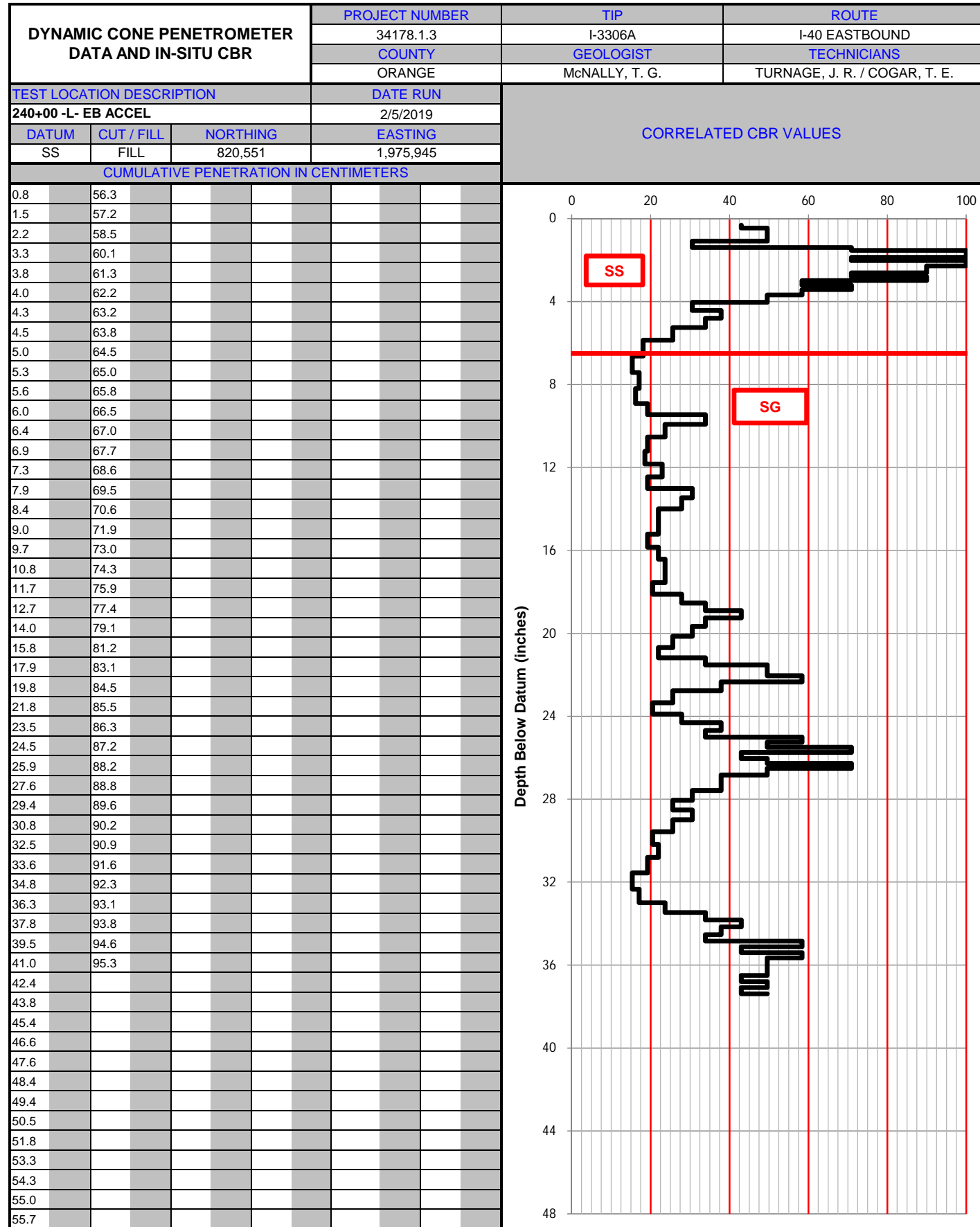


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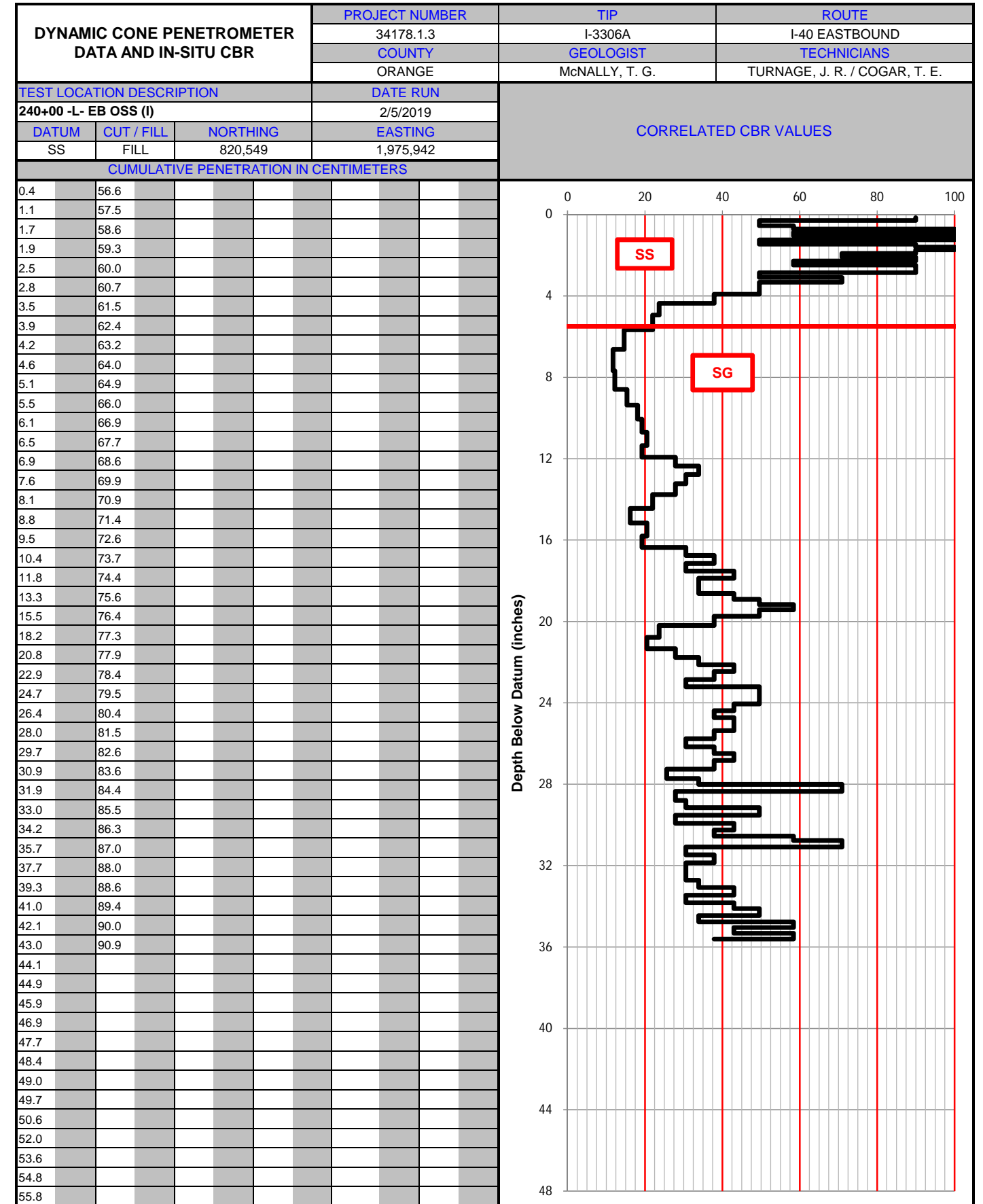


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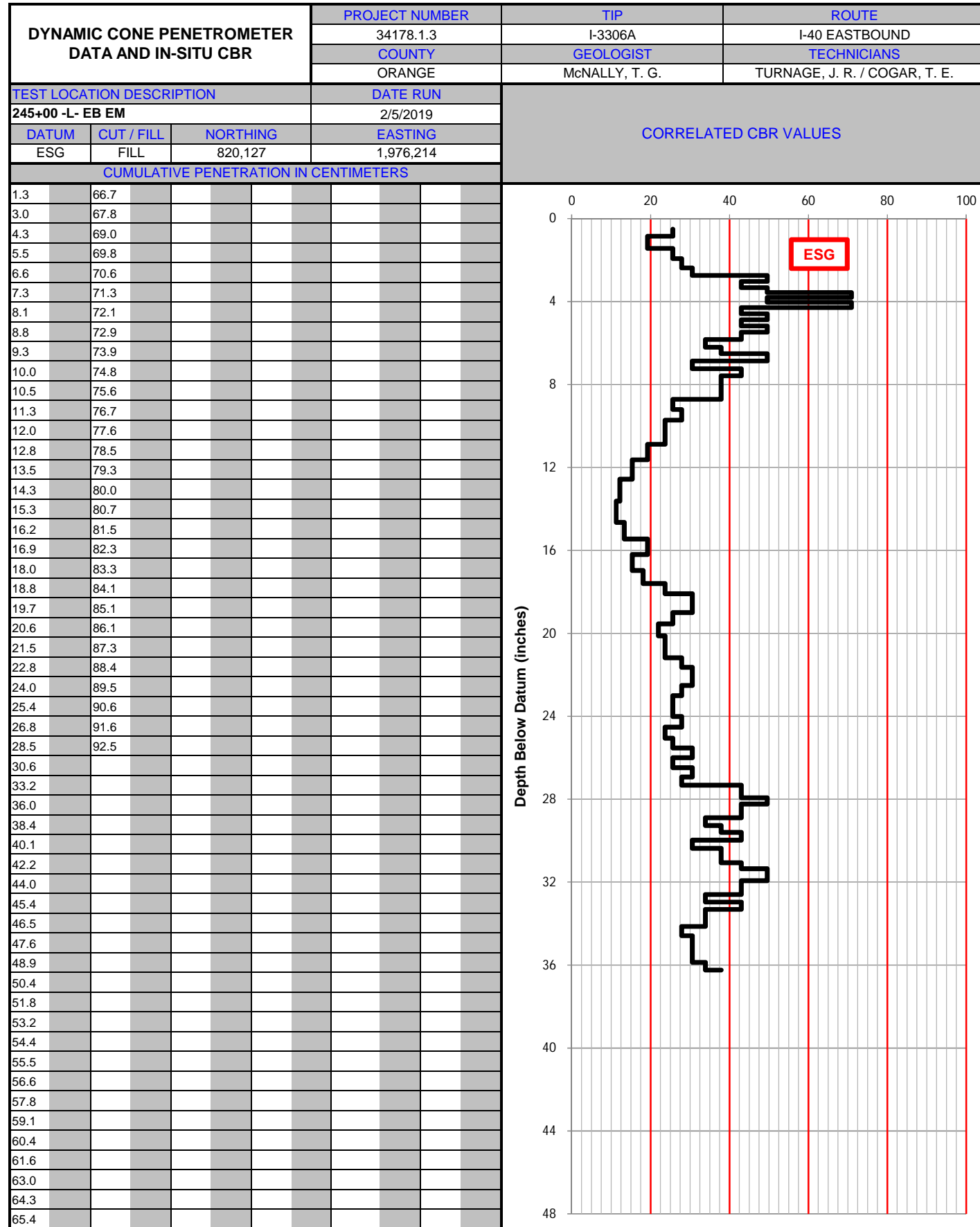
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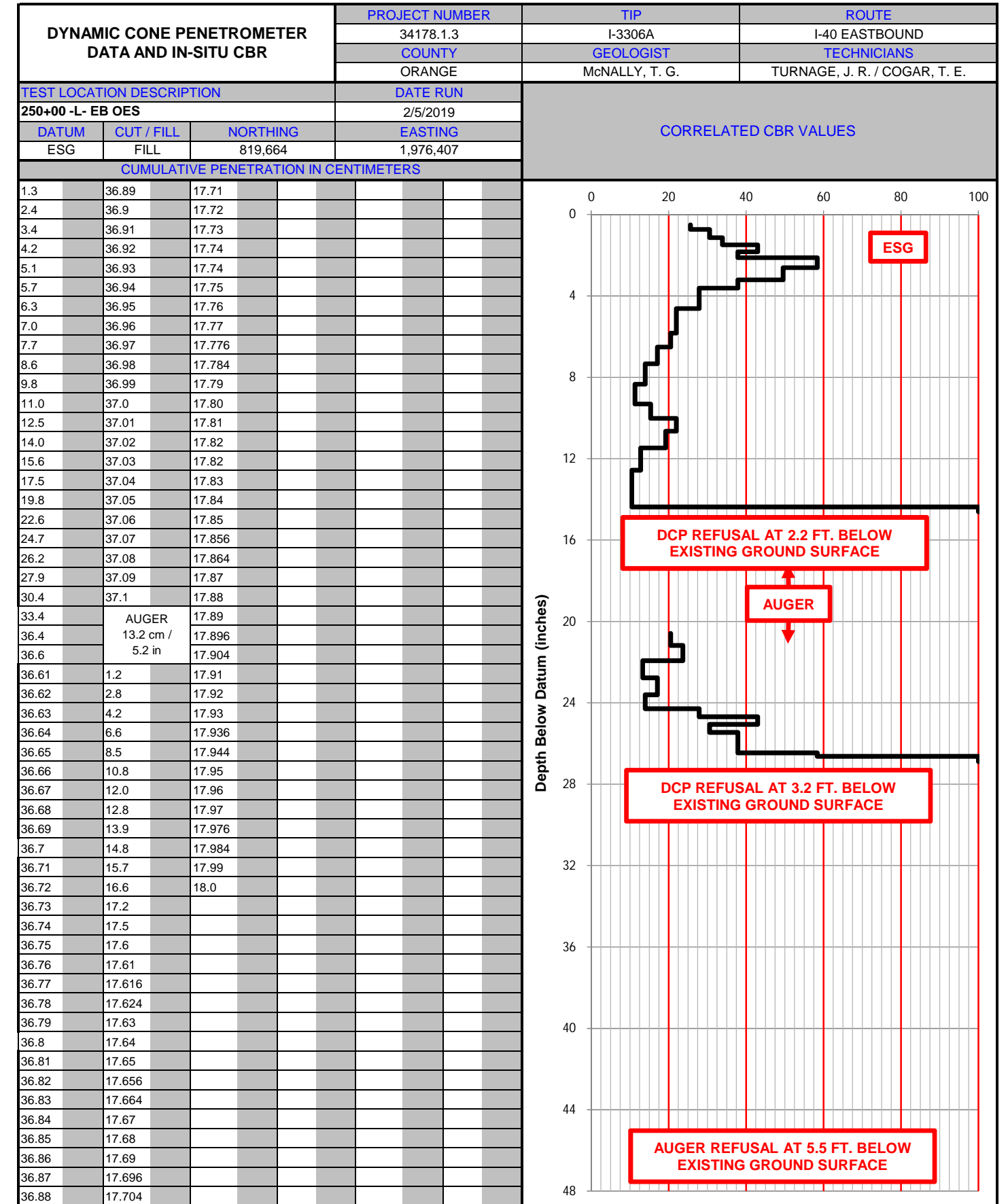
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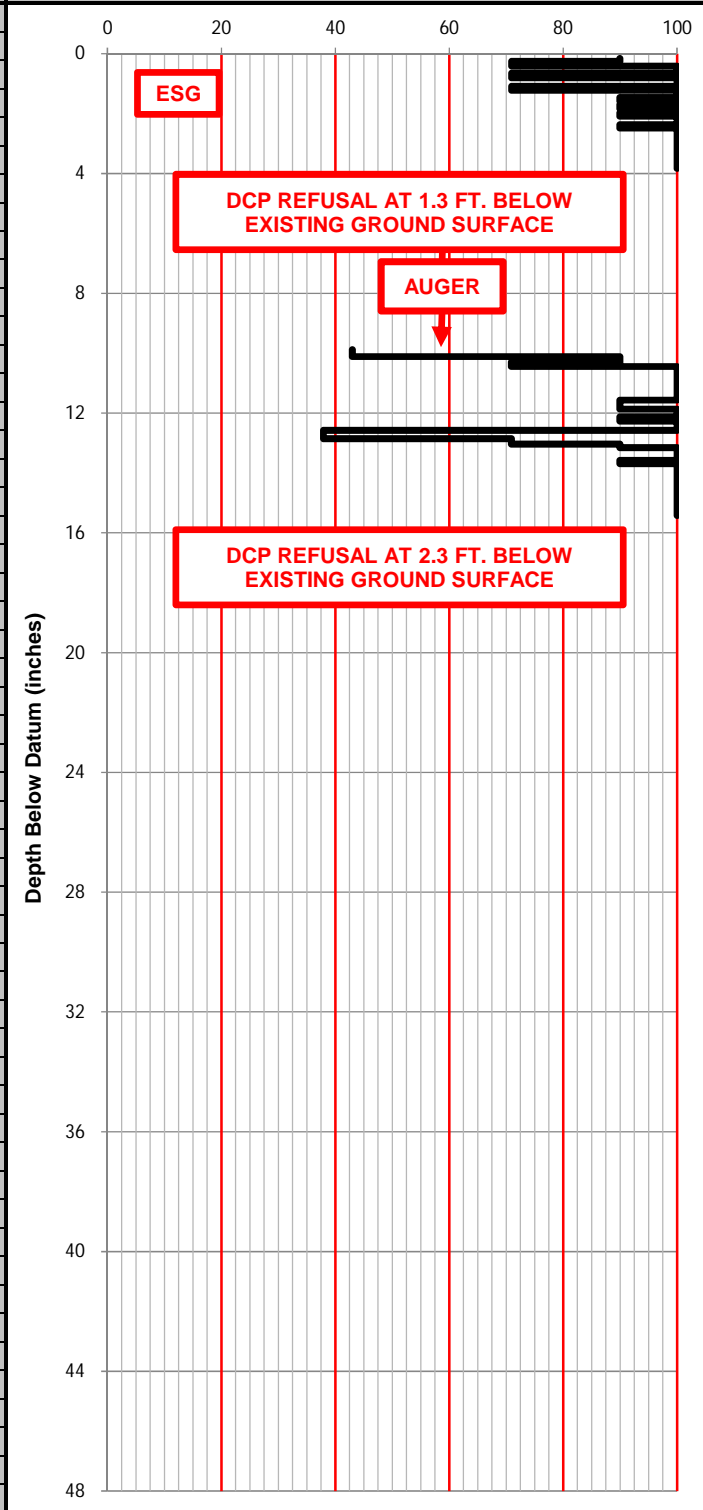
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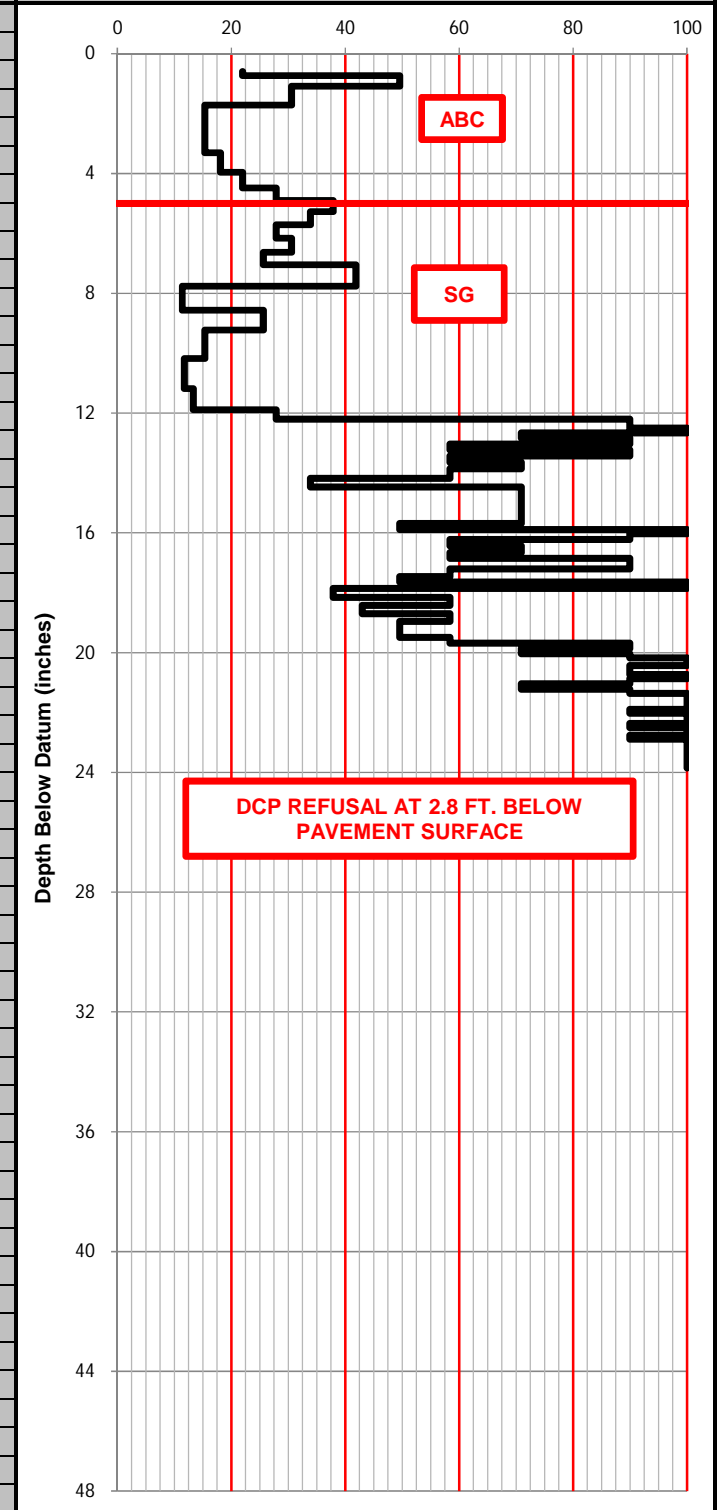
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
255+00 -L- EB EM				DATE RUN	CORRELATED CBR VALUES	
				2/5/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	819,241	1,976,678			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.4	3.3	13.06				
0.9	3.5	13.12				
1.2	3.8	13.18				
1.4	4.1	13.24				
1.9	4.2	13.3				
2.2	4.3	13.36				
2.5	4.4	13.42				
3.0	4.5	13.48				
3.2	4.8	13.54				
3.5	5.1	13.6				
3.9	5.3	13.66				
4.1	5.7	13.72				
4.5	6.1	13.75				
4.8	6.4	13.8				
5.2	6.6	13.9				
5.4	6.7	13.97				
5.7	7.1	14.04				
5.8	7.4	14.1				
6.2	7.6	14.2				
6.4	8.5	14.25				
6.7	9.0	14.32				
7.0	9.4	14.4				
7.3	9.6	14.46				
7.4	9.9	14.53				
7.5	10.2	14.6				
7.6	10.3	14.67				
7.7	10.4	14.74				
7.8	10.8	14.8				
8.0	10.9	14.9				
8.1	11.0	14.95				
8.2	11.1	15.02				
8.3	11.2	15.1				
8.4	11.3	15.16				
8.5	11.4	15.23				
8.6	11.5	15.3				
8.8	11.6					
8.9	11.7					
9.0	11.8					
9.2	11.9					
9.3	12.0					
9.4	12.1					
9.5	12.2					
9.7	12.25					
9.8	12.34					
AUGER	12.4					
14.1 cm / 5.6 in	12.5					
	12.6					
0.8	12.7					
1.6	12.76					
2.0	12.82					
2.5	12.9					
2.8	12.9					
3.0	13.0					



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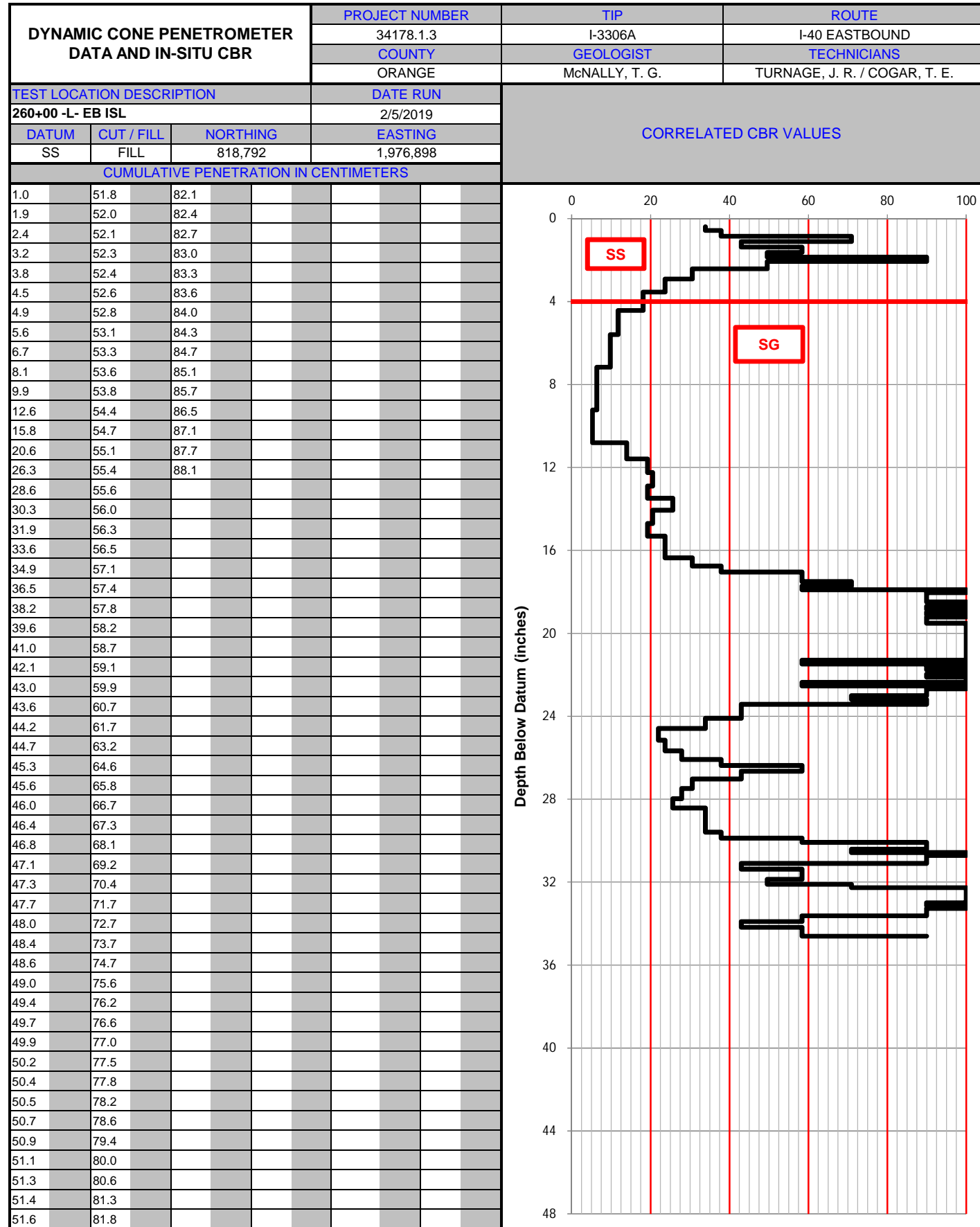


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
260+00 -L- EB ISS				DATE RUN	CORRELATED CBR VALUES	
				2/5/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	818,795	1,976,905			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.5	49.2	59.97				
2.2	49.8	60.00				
3.3	50.2	60.02				
5.4	50.7	60.04				
7.5	51.1	60.06				
9.3	51.4	60.09				
10.8	51.7	60.11				
12.0	52.1	60.13				
12.9	52.5	60.15				
13.9	52.8	60.18				
15.1	53.2	60.20				
16.2	53.7	60.22				
17.5	54.1	60.24				
18.3	54.4	60.27				
21.1	54.7	60.29				
22.4	55.0	60.31				
24.5	55.3	60.33				
27.2	55.4	60.36				
29.6	55.8	60.38				
30.8	56.1	60.40				
31.2	56.4	60.42				
31.6	56.6	60.45				
31.9	57.0	60.47				
32.4	57.3	60.49				
32.8	57.6	60.51				
33.4	58.0	60.54				
33.8	58.3	60.56				
34.4	58.4	60.58				
34.9	58.6	60.6				
35.5	58.9					
36.5	59.2					
37.0	59.25					
37.5	59.30					
38.0	59.35					
38.5	59.40					
39.0	59.45					
39.5	59.50					
40.2	59.55					
40.5	59.60					
40.9	59.65					
41.5	59.68					
42.0	59.70					
42.6	59.73					
43.0	59.75					
43.4	59.77					
44.0	59.79					
44.7	59.82					
44.9	59.84					
45.8	59.86					
46.4	59.88					
47.2	59.91					
47.8	59.93					
48.5	59.95					

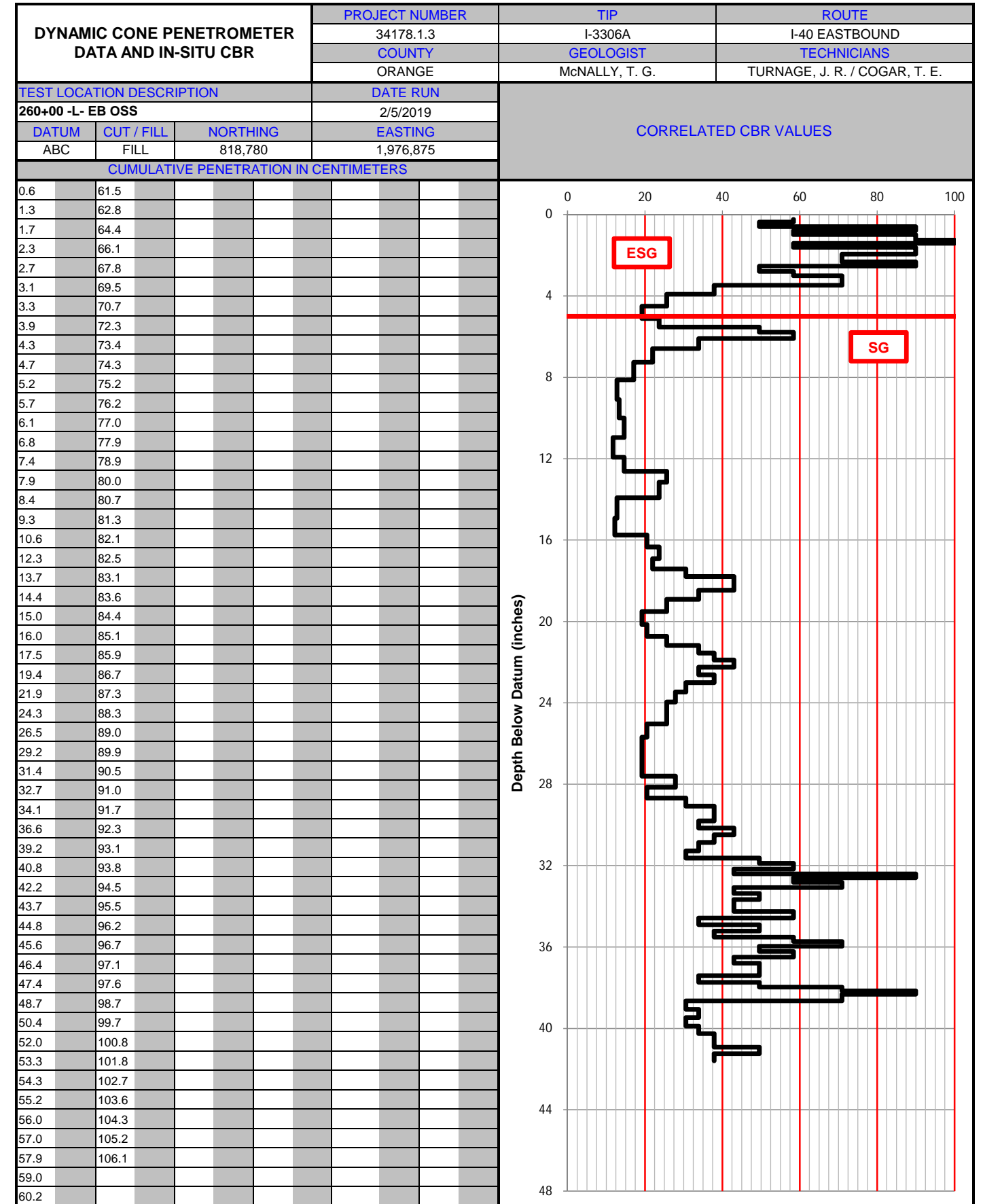


Notes:  
 SG = Subgrade  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



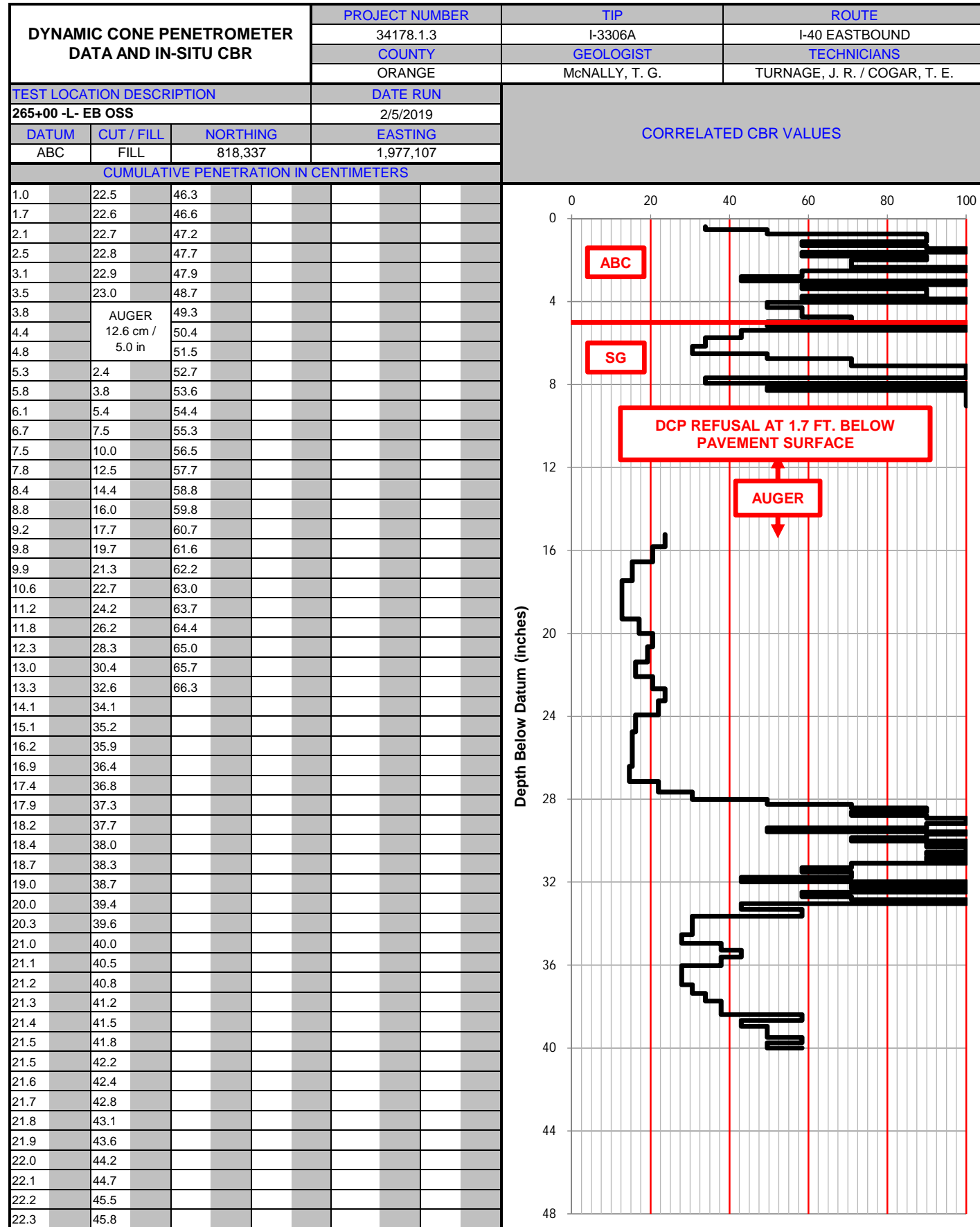


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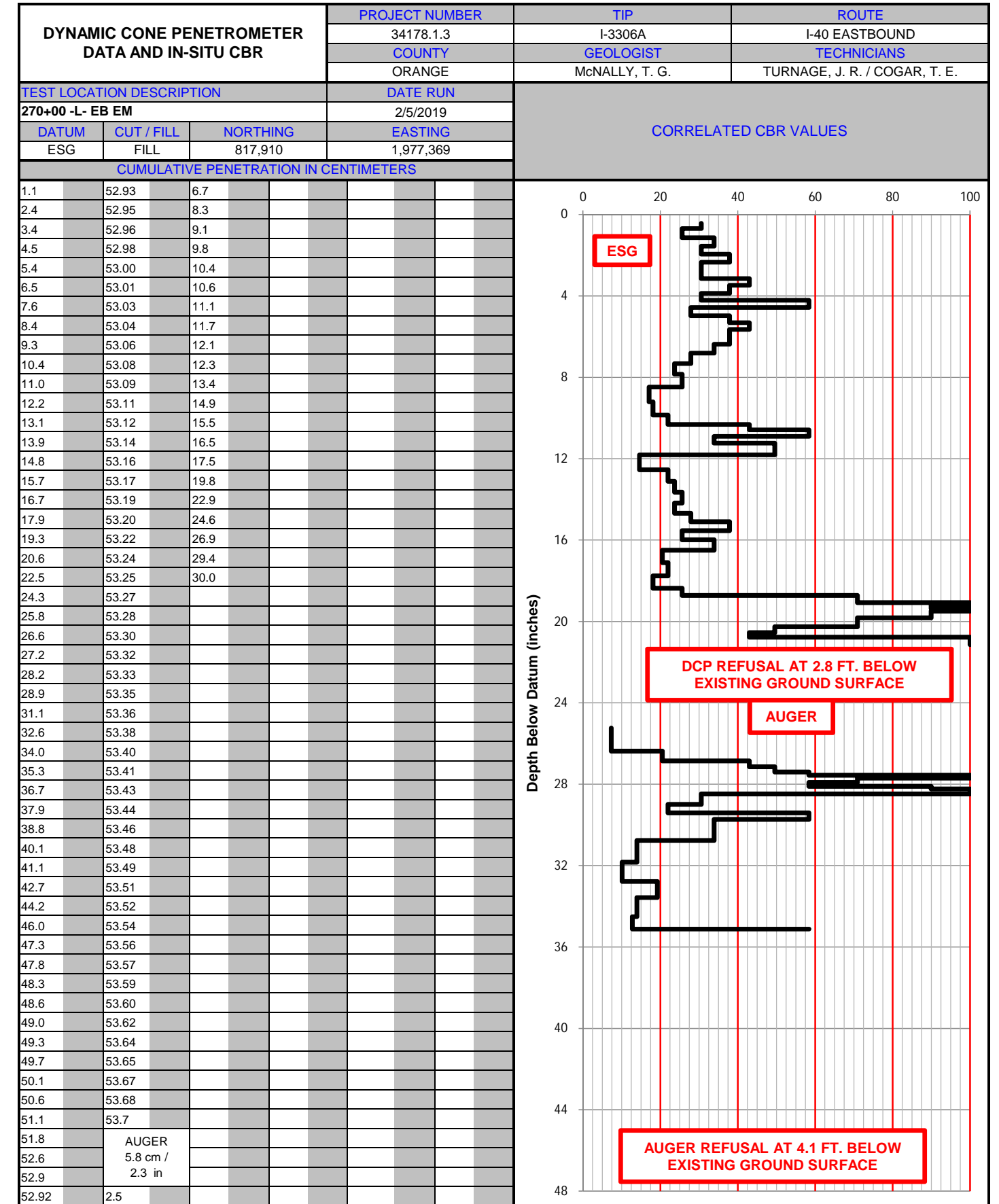


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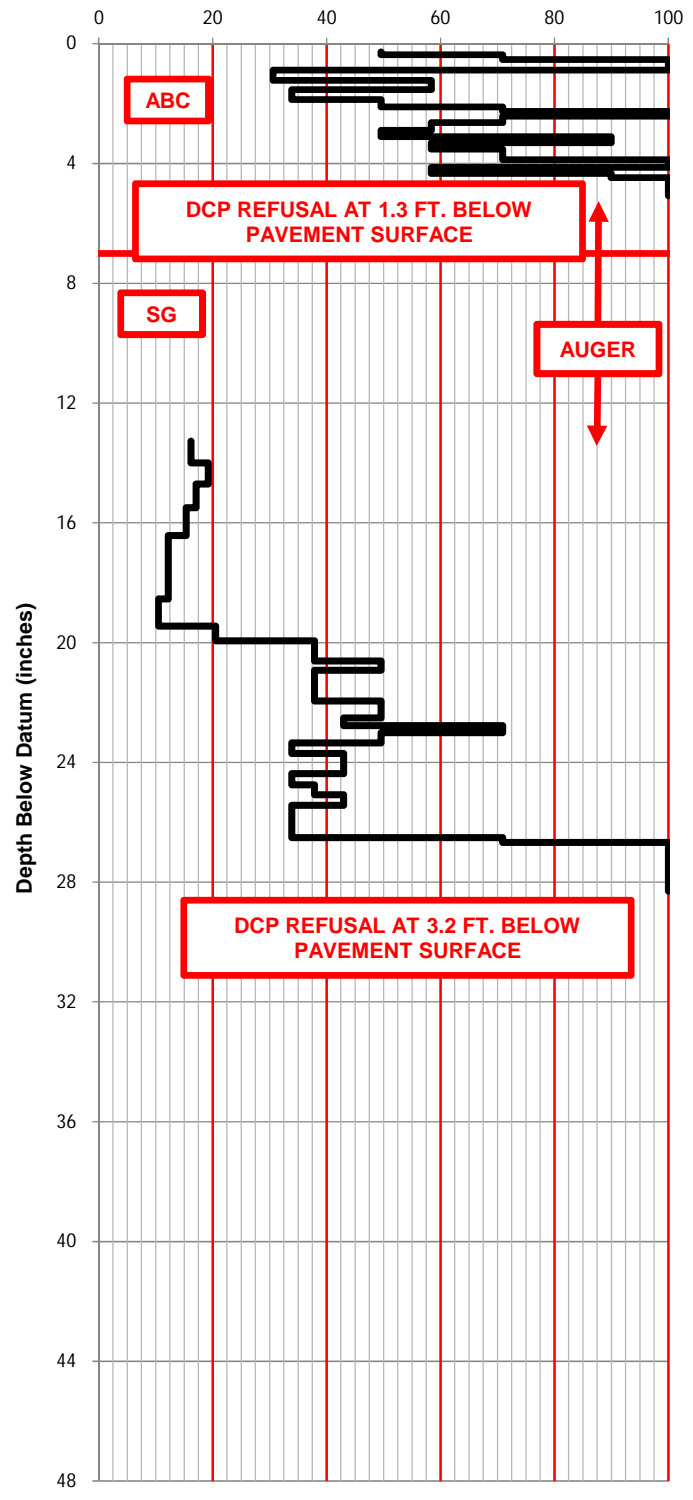
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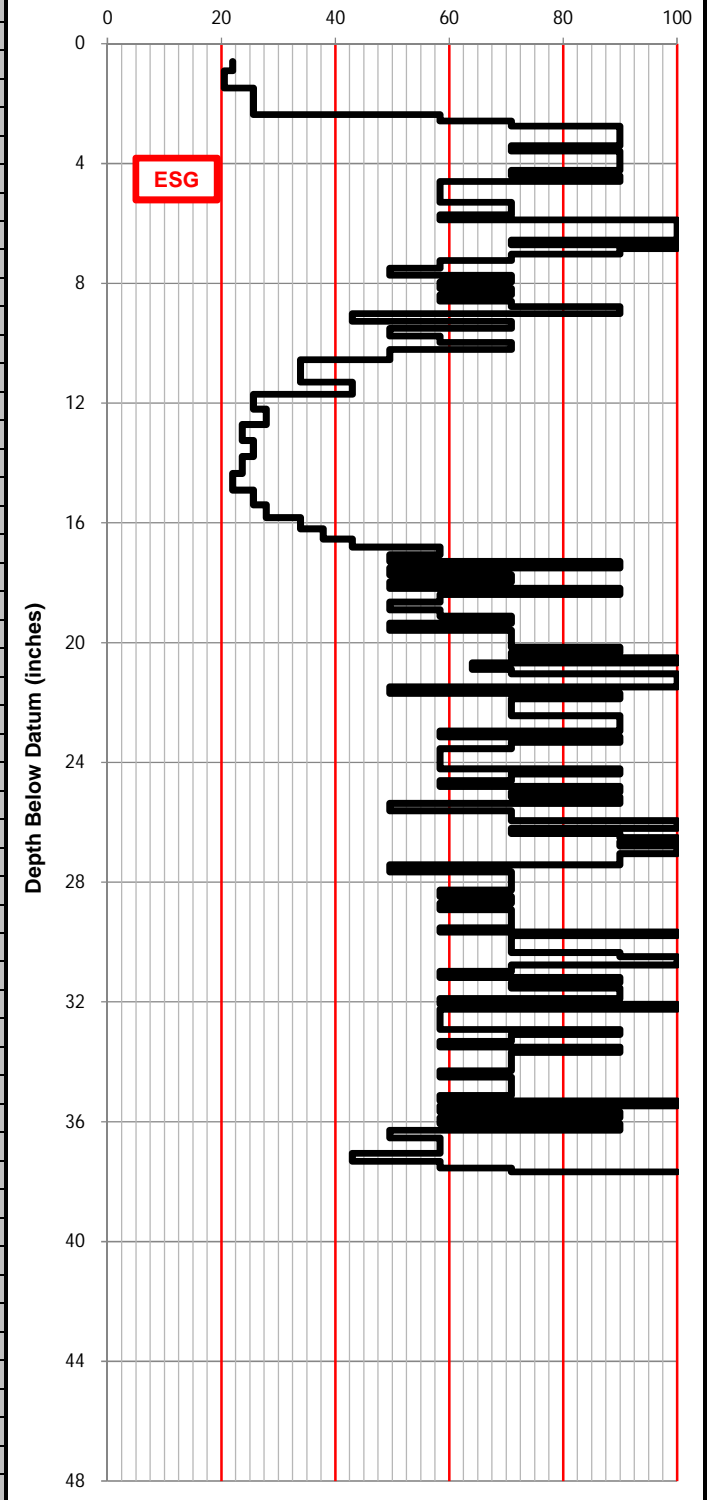
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
275+00 -L- EB OSS				DATE RUN	CORRELATED CBR VALUES	
2/5/2019						
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	817,439	1,977,521			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.7	12.50	37.7				
1.2	12.52	38.0				
1.5	12.54	38.2				
1.7	12.56	38.4				
2.8	12.58	38.5				
3.4	12.60	38.7				
4.4	12.62	38.8				
5.1	12.64	39.0				
5.6	12.66	39.2				
5.9	12.68	39.3				
6.4	12.70	39.5				
7.0	12.72	39.6				
7.7	12.74	39.8				
8.1	12.76	39.87				
8.7	12.78	39.93				
9.2	12.80	40.0				
9.7	12.82	40.06				
10.0	12.84	40.13				
10.2	12.86	40.2				
10.8	12.88	40.26				
11.2	12.90	40.32				
11.5		40.4				
11.7	AUGER	40.45				
11.9	17 cm / 6.7 in	40.52				
11.92	2.8	40.58				
11.94	4.8	40.65				
11.96	6.5	40.7				
11.98	8.4	40.78				
12.00	10.5	40.84				
12.02	13.1	40.9				
12.04	15.7	40.97				
12.06	18.7	41.04				
12.08	20.3	41.10				
12.10	21.2	41.15				
12.12	22.1	41.19				
12.14	22.8	41.24				
12.16	23.7	41.28				
12.18	24.6	41.33				
12.20	25.5	41.37				
12.22	26.2	41.42				
12.24	26.9	41.46				
12.26	27.7	41.51				
12.28	28.2	41.55				
12.30	28.9	41.60				
12.32	29.9	41.64				
12.34	30.7	41.69				
12.36	31.5	41.73				
12.38	32.5	41.78				
12.40	33.4	41.82				
12.42	34.2	41.87				
12.44	35.2	41.91				
12.46	36.2	41.96				
12.48	37.2	42.0				



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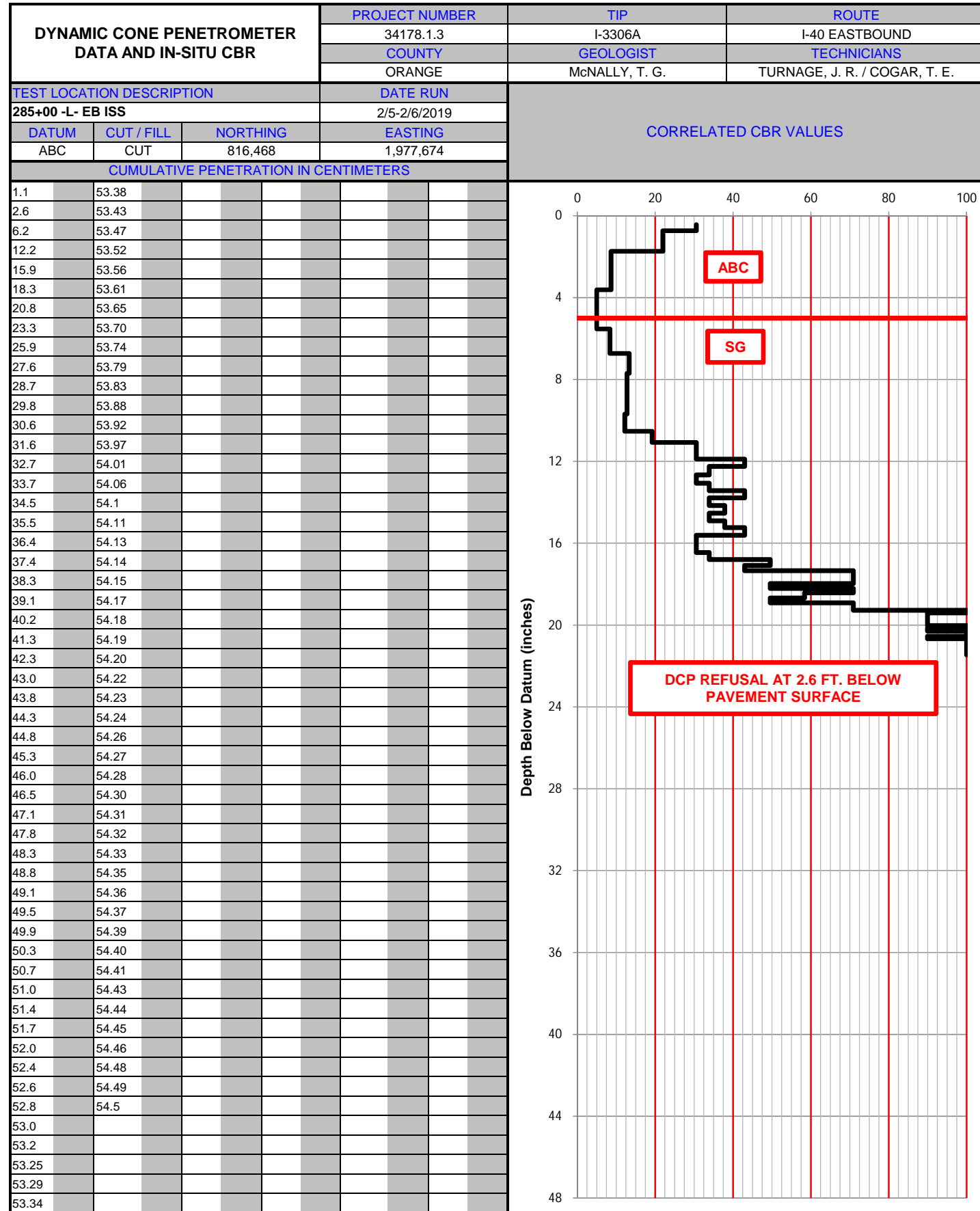


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
280+00 -L- EB EM				DATE RUN	CORRELATED CBR VALUES	
2/5-2/6/2019						
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	816,964	1,977,660			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.5	34.3	65.8	90.4			
3.1	35.7	66.0	90.8			
4.4	37.2	66.3	91.4			
5.7	38.5	66.8	91.8			
6.3	39.7	67.2	92.5			
6.8	40.7	67.5	93.1			
7.2	41.6	67.9	93.7			
7.6	42.4	68.2	94.5			
8.0	43.0	68.5	95.1			
8.4	43.7	68.9	95.6			
8.9	44.1	69.3	95.8			
9.3	44.8	70.0				
9.7	45.3	70.5				
10.1	46.0	71.0				
10.5	46.4	71.5				
11.0	47.0	72.1				
11.4	47.7	72.6				
12.0	48.3	73.2				
12.6	48.8	73.7				
13.2	49.5	74.2				
13.7	50.0	74.7				
14.2	50.5	75.3				
14.8	51.0	75.4				
15.1	51.4	75.9				
15.4	51.9	76.4				
15.6	52.3	76.9				
15.8	52.8	77.3				
16.1	53.3	77.6				
16.4	53.6	77.9				
16.9	53.9	78.4				
17.2	54.2	79.0				
17.6	54.9	79.4				
18.1	55.3	79.9				
18.7	55.8	80.3				
19.4	56.3	80.7				
19.9	56.8	81.3				
20.5	57.2	81.6				
21.0	57.6	82.2				
21.6	58.0	82.8				
22.1	58.6	83.4				
22.5	59.0	83.8				
23.3	59.5	84.3				
23.8	60.1	84.9				
24.5	60.7	85.3				
25.1	61.3	85.8				
25.6	61.7	86.3				
26.3	62.2	86.8				
27.3	62.8	87.4				
28.3	63.2	87.9				
29.1	63.7	88.4				
30.4	64.1	88.9				
31.6	64.8	89.5				
33.0	65.3	89.8				

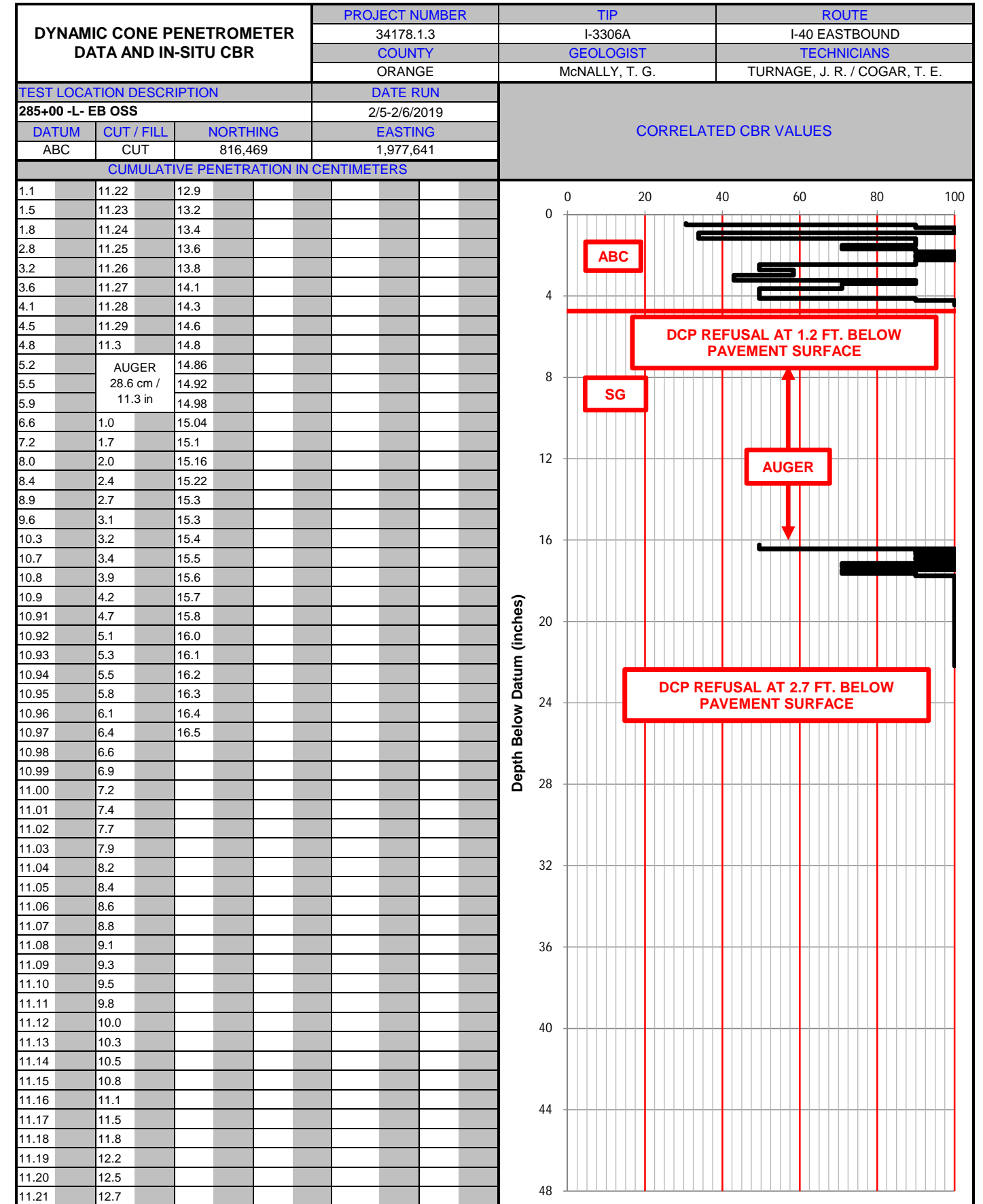


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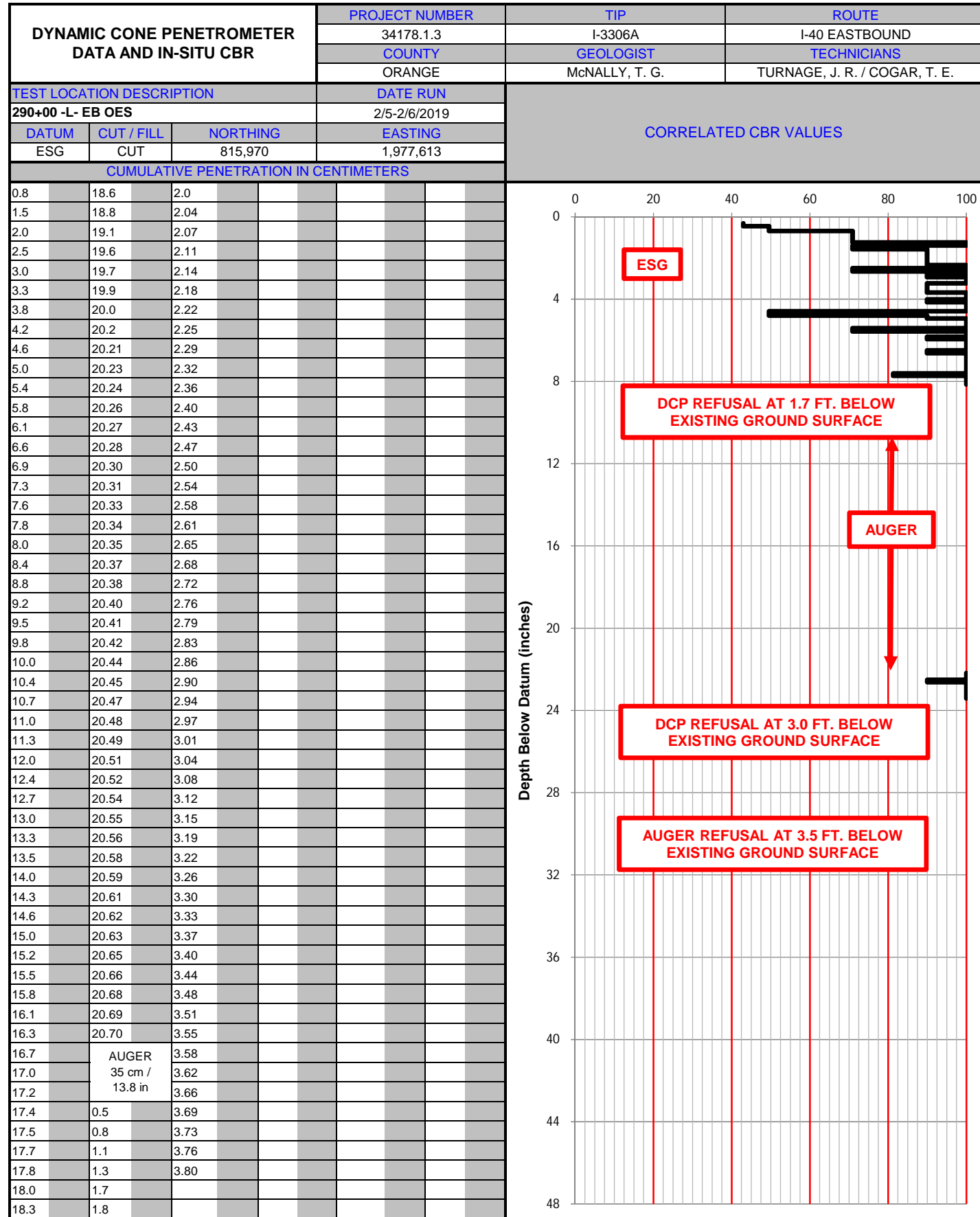


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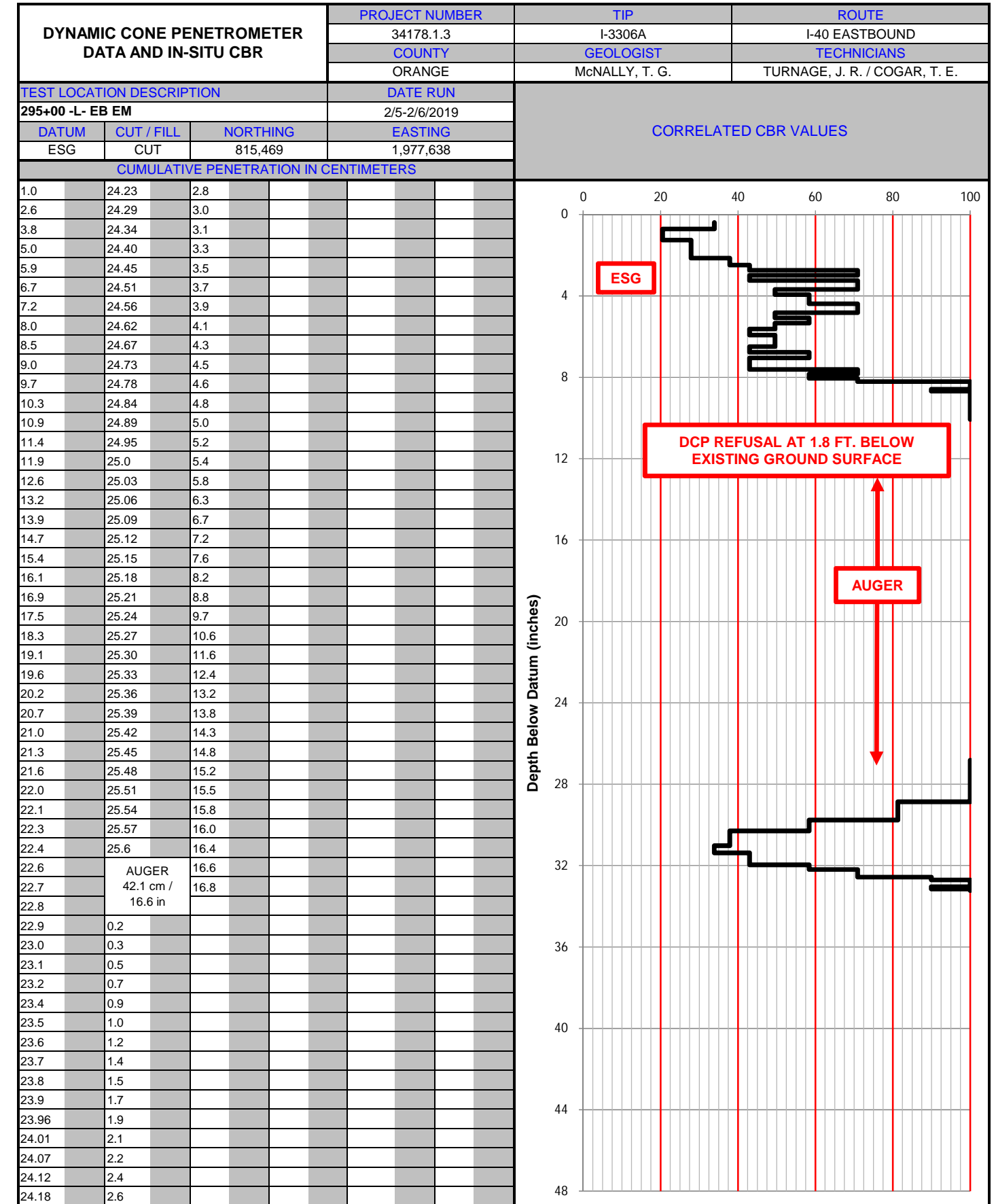


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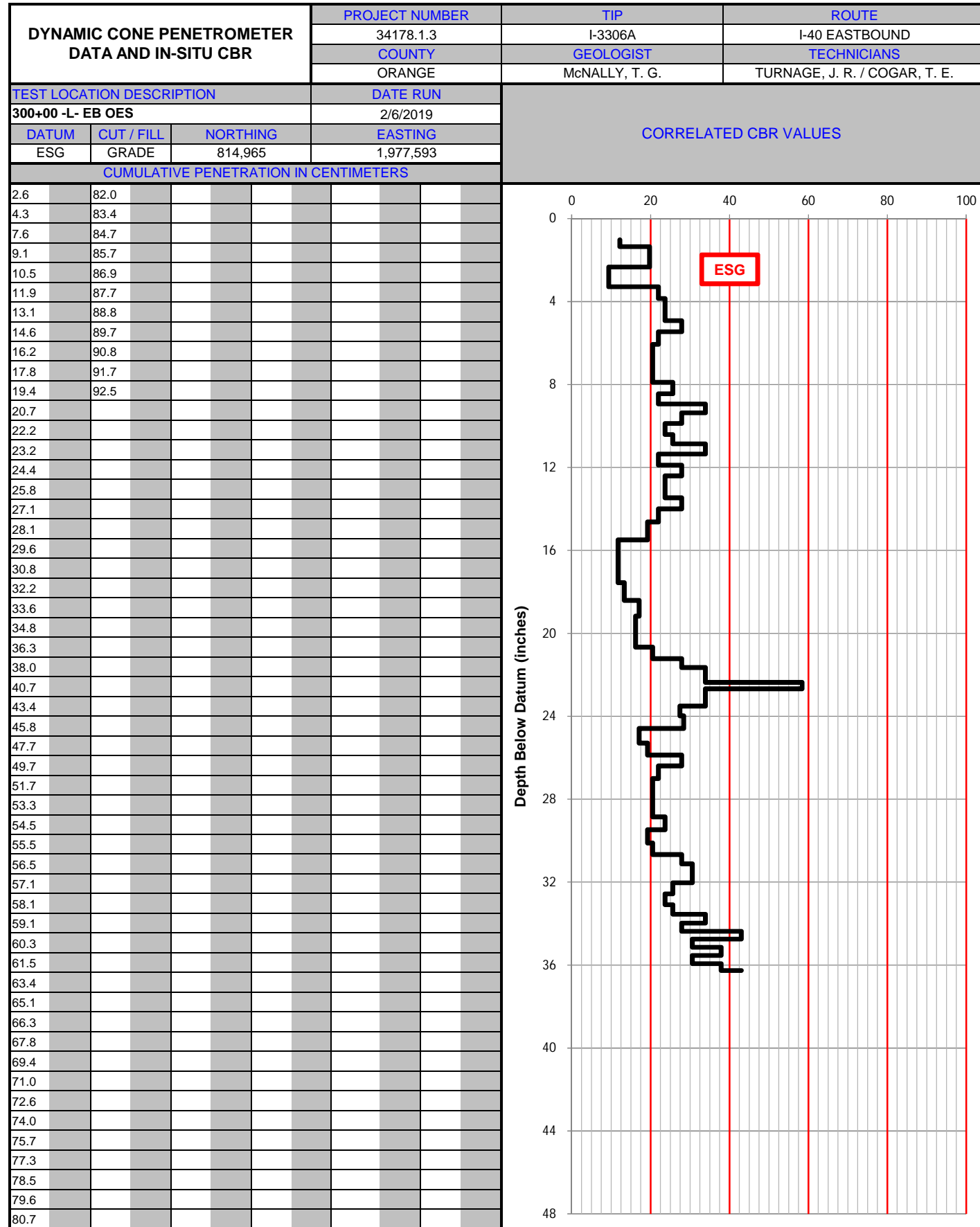


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

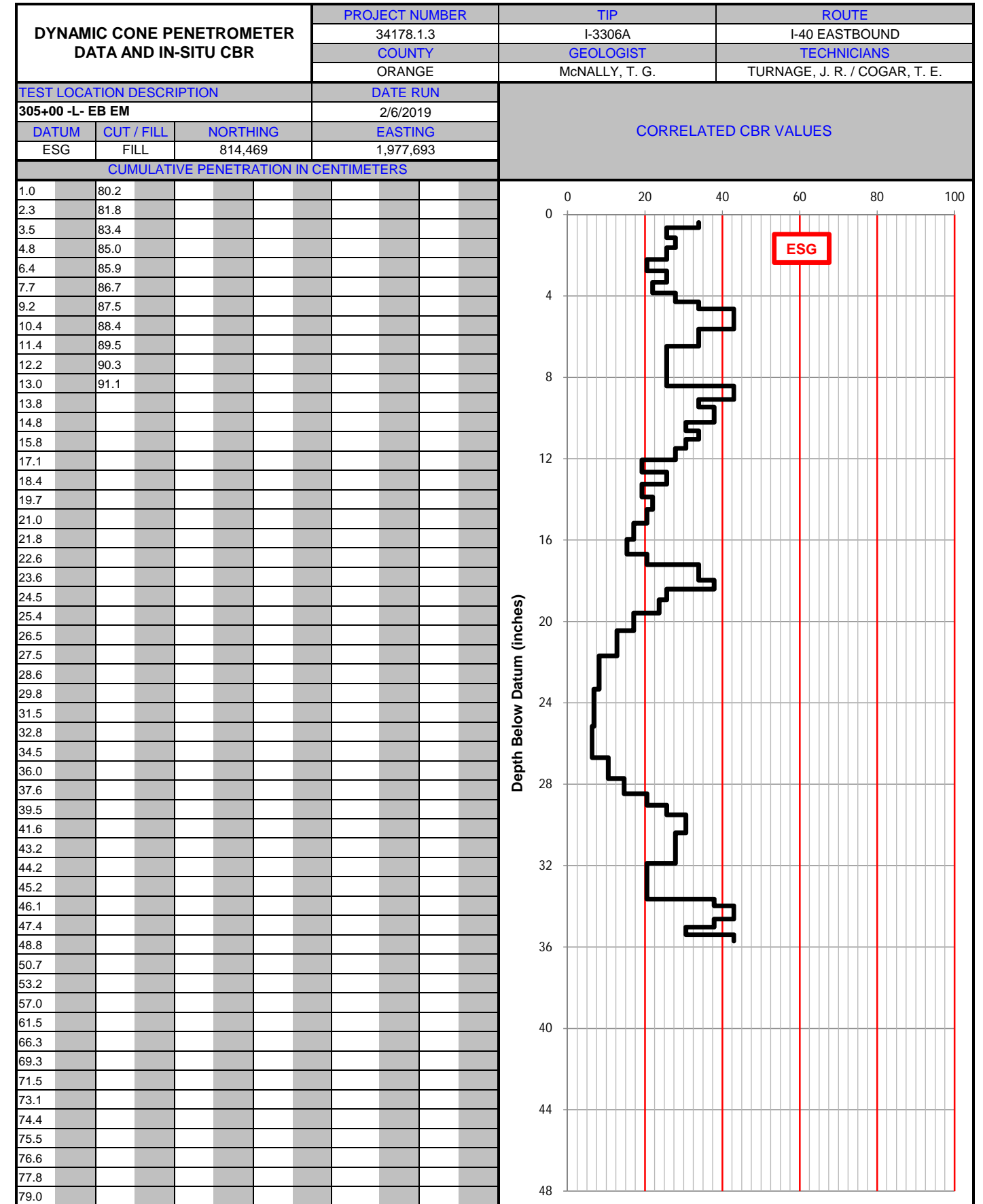


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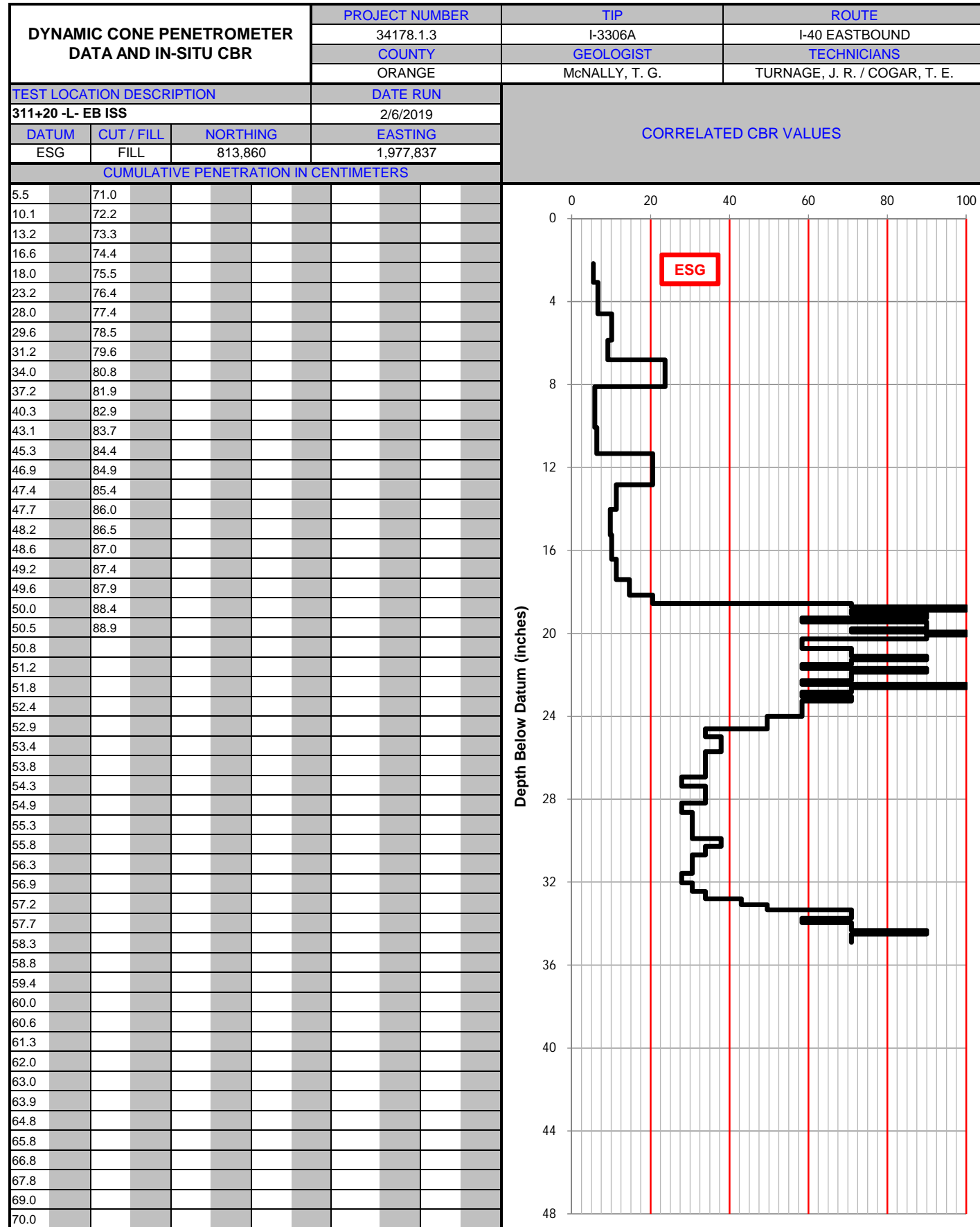
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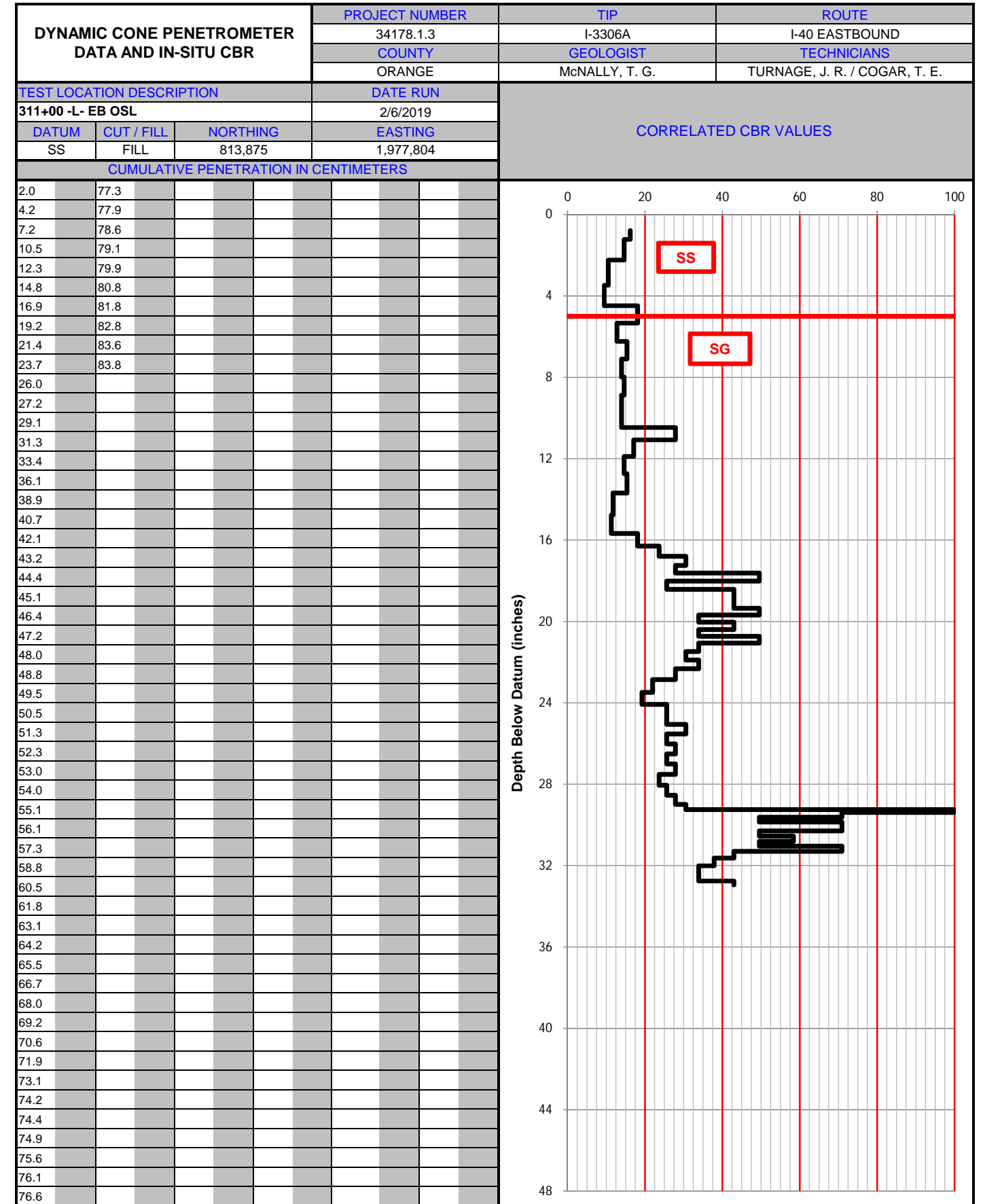
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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





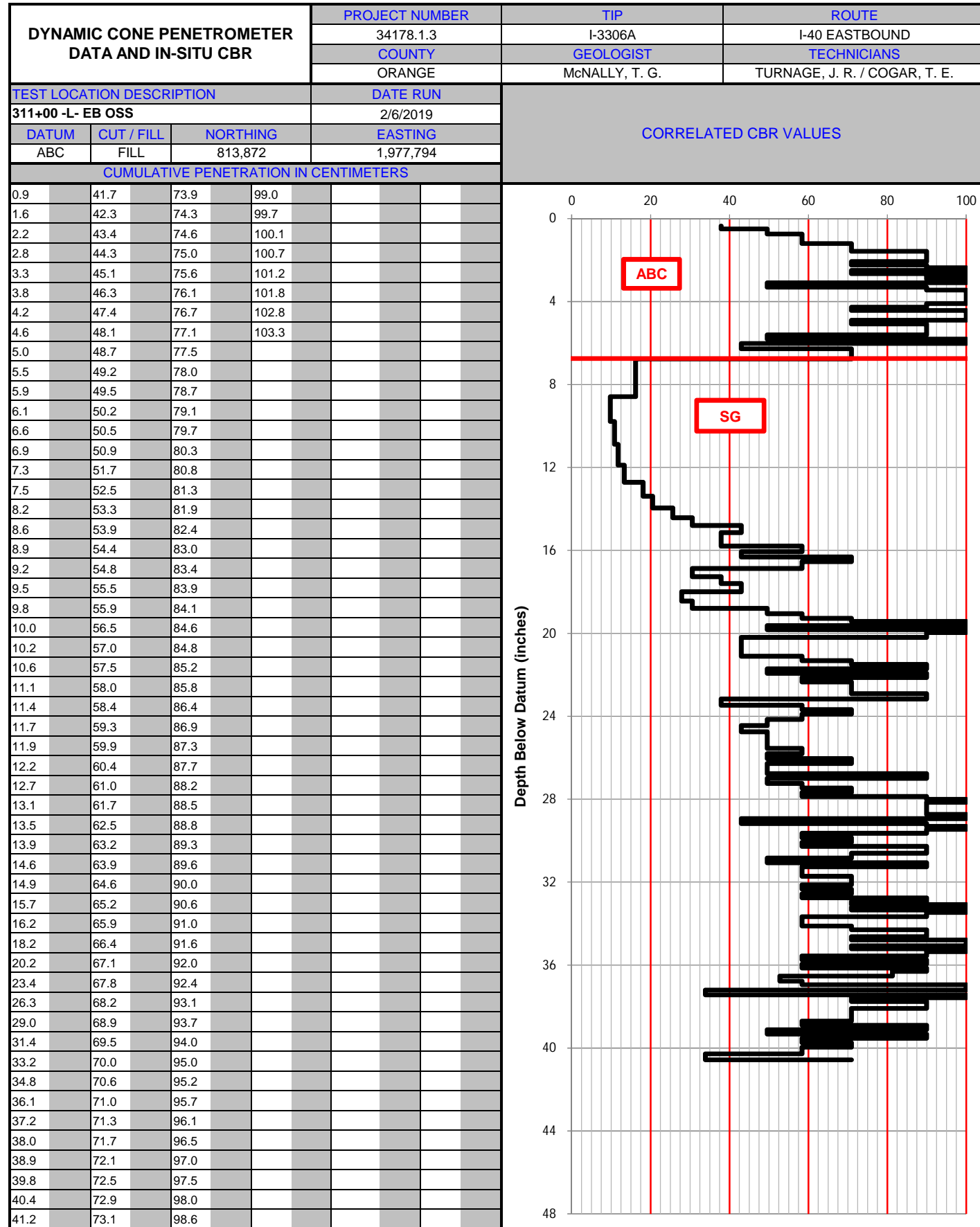


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

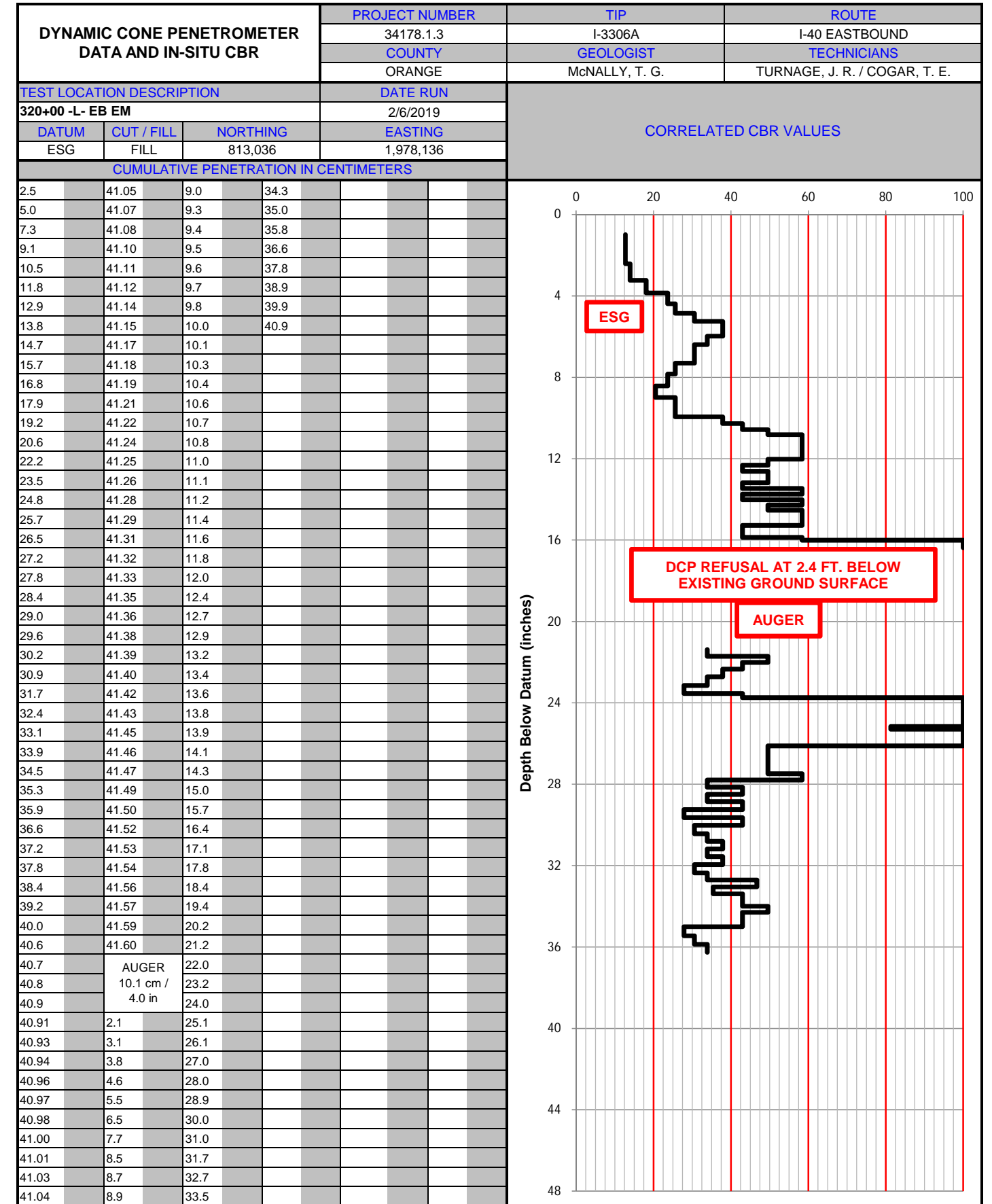


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 CTBC = Cement-Treated Base Course  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



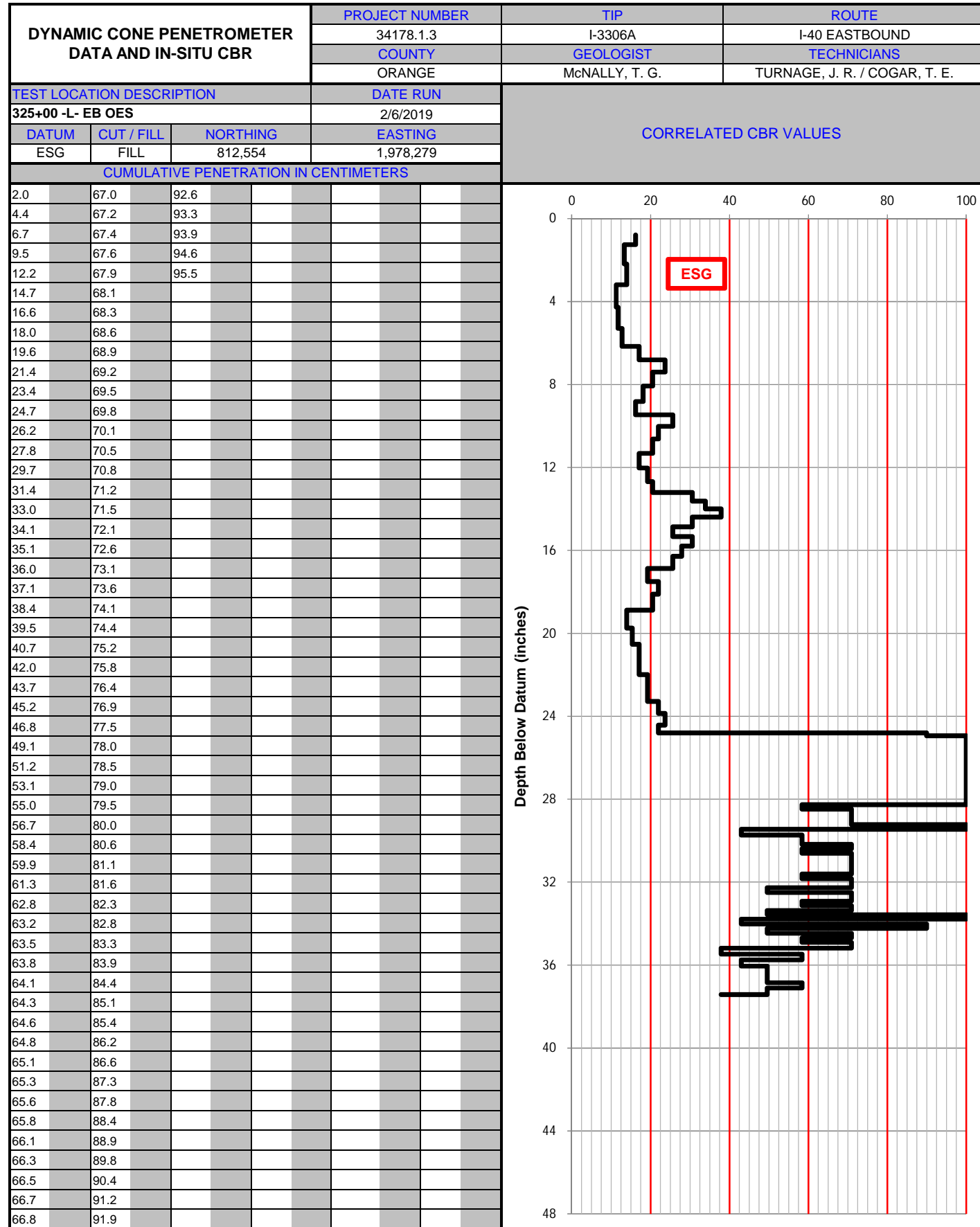


Notes:  
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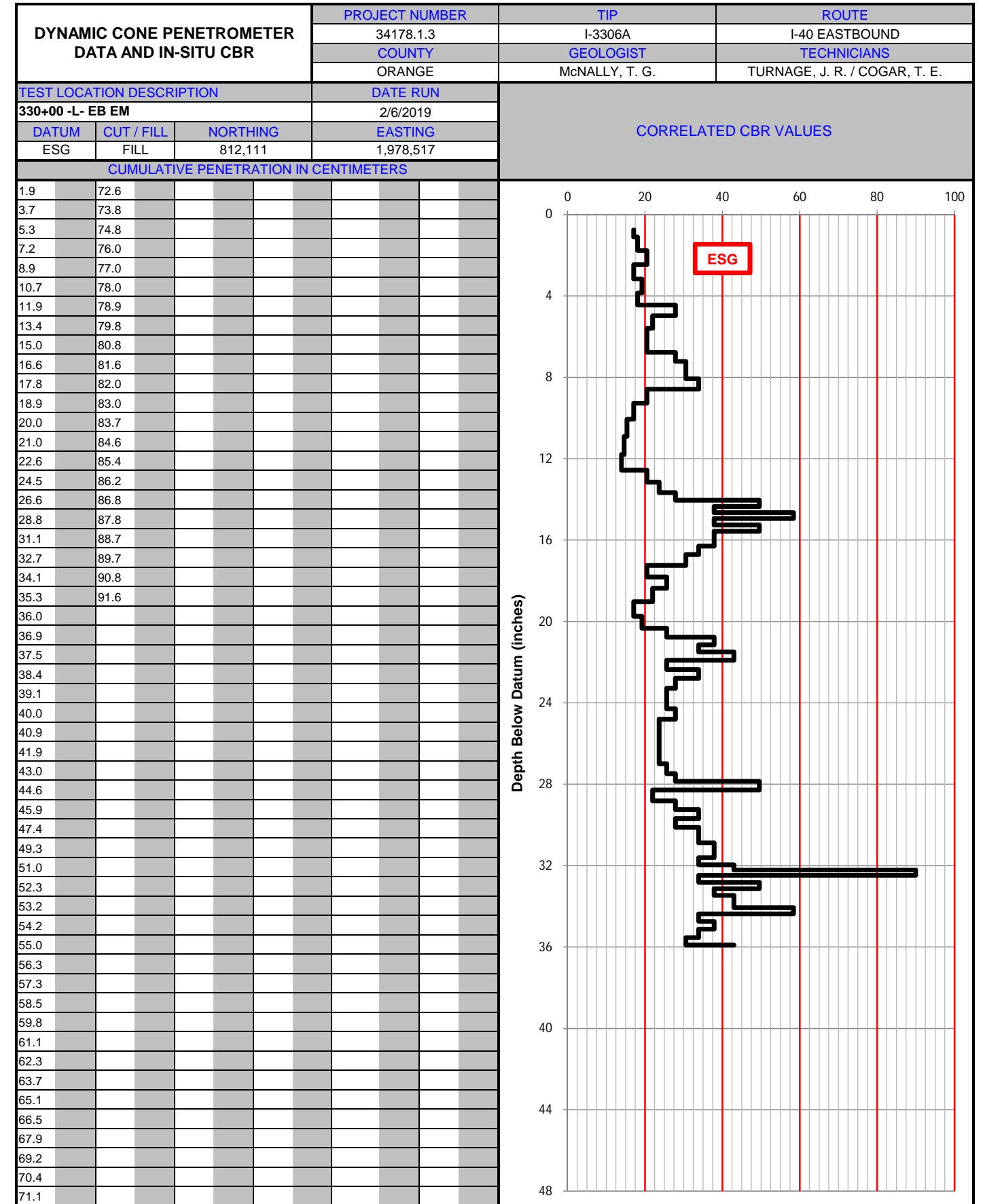


Notes:  
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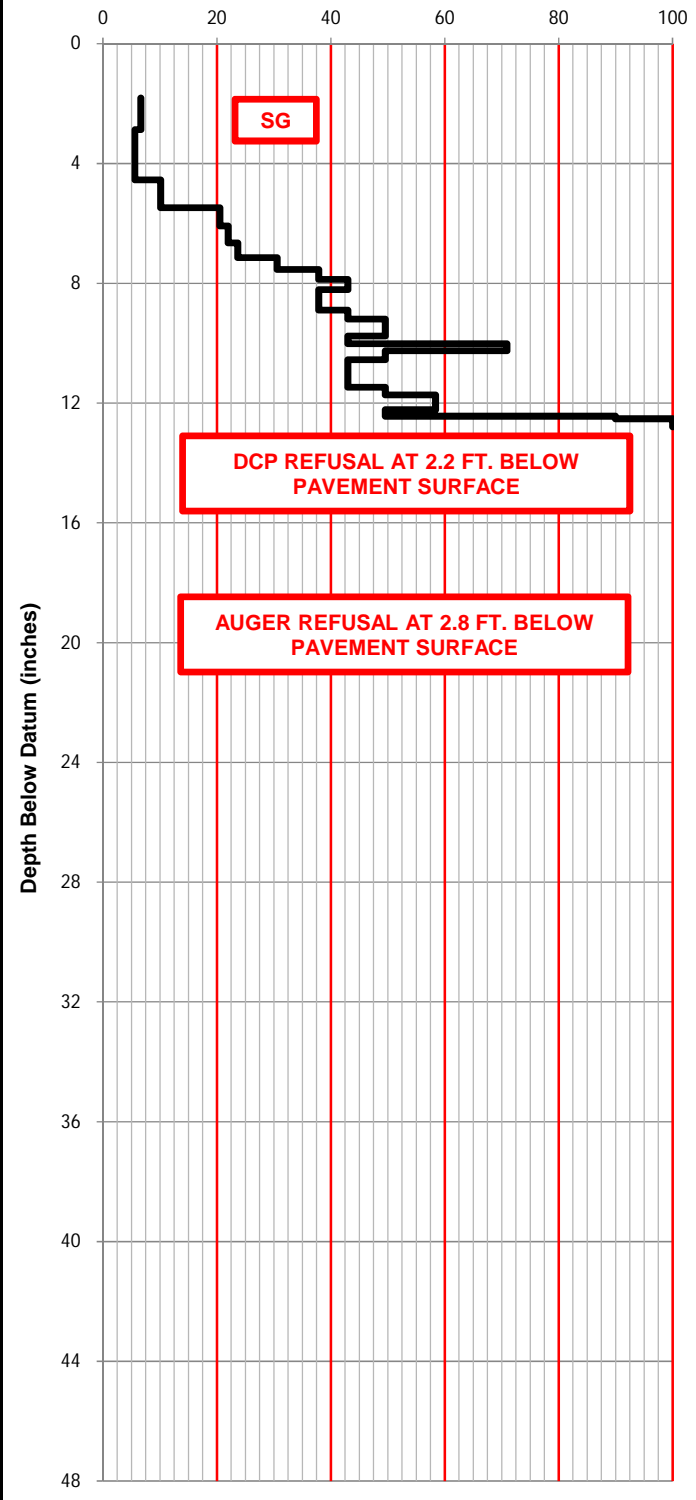
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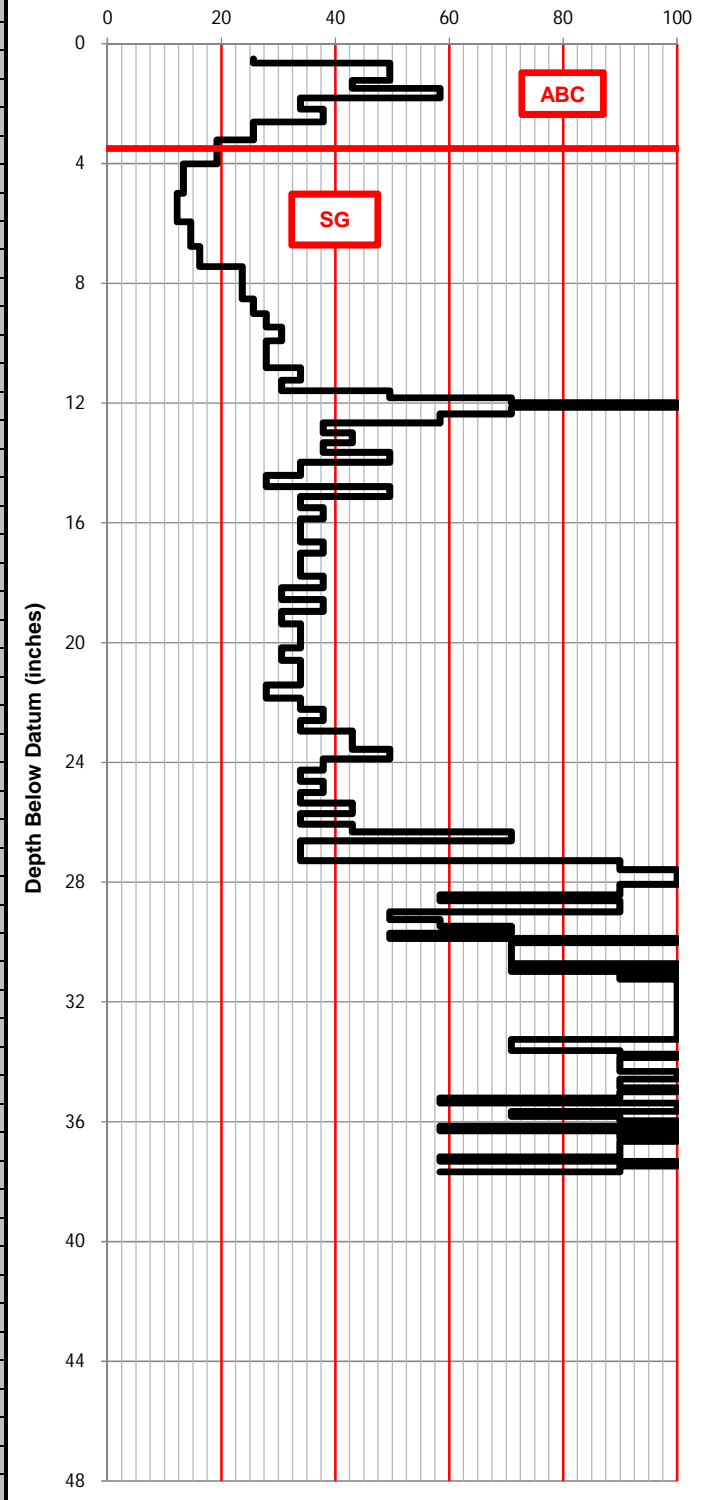
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
335+00 -L- EB ISS				2/6/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
SG	FILL	811,652	1,978,718			
CUMULATIVE PENETRATION IN CENTIMETERS						
4.6	32.21					
10.0	32.22					
13.1	32.23					
14.7	32.25					
16.2	32.26					
17.6	32.28					
18.7	32.29					
19.6	32.3					
20.4	32.32					
21.3	32.33					
22.2	32.35					
23.0	32.36					
23.7	32.37					
24.4	32.39					
25.2	32.4					
25.7	32.42					
26.4	32.43					
27.2	32.44					
28.0	32.46					
28.8	32.47					
29.5	32.49					
30.1	32.5					
30.7						
31.4						
31.8						
31.81						
31.83						
31.84						
31.86						
31.87						
31.88						
31.9						
31.91						
31.93						
31.94						
31.95						
31.97						
31.98						
32.0						
32.01						
32.02						
32.04						
32.05						
32.07						
32.08						
32.09						
32.11						
32.12						
32.14						
32.15						
32.16						
32.18						
32.19						



Notes:  
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

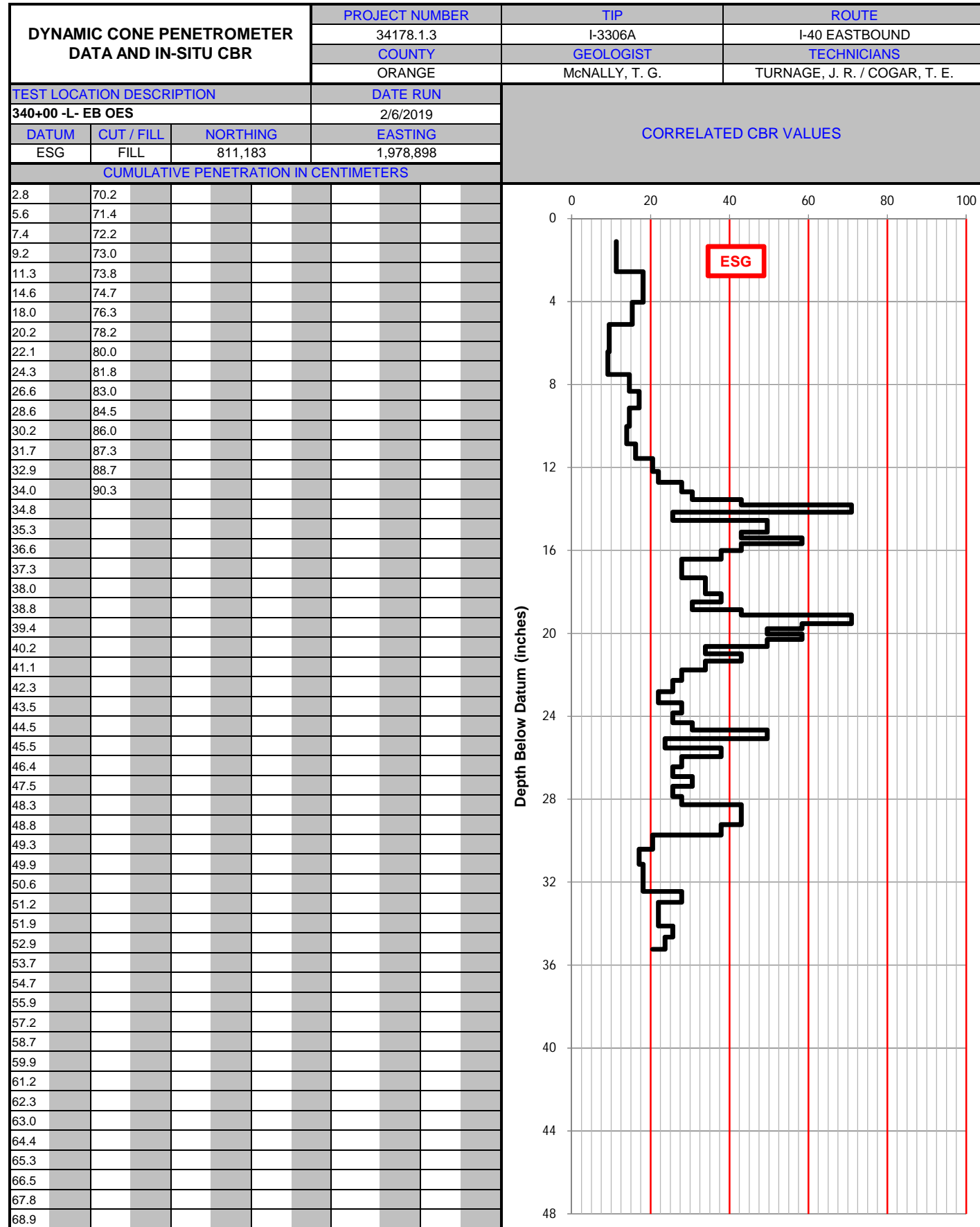


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
335+00 -L- EB OSS				2/6/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	FILL	811,639	1,978,688			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.3	57.9	82.7				
2.0	58.7	83.0				
2.7	59.5	83.2				
3.5	60.2	83.5				
4.1	61.1	83.7				
5.1	62.1	84.0				
6.0	63.0	84.2				
7.3	64.0	84.7				
9.0	64.8	85.2				
11.4	65.8	85.6				
14.0	66.6	85.8				
16.2	67.1	86.2				
18.2	68.1	86.6				
19.6	69.1	87.0				
21.0	69.5	87.3				
22.3	69.9	87.6				
23.5	70.2	88.0				
24.6	70.5	88.4				
25.8	70.8	88.7				
27.0	71.1	89.1				
28.0	71.5	89.7				
29.1	71.9	90.0				
29.8	72.5	90.3				
30.3	72.9	90.8				
30.6	73.3	91.2				
31.1	74.0	91.5				
31.7	74.6	92.1				
32.6	75.1	92.3				
33.4	75.8	92.7				
34.3	76.0	92.9				
35.0	76.5	93.3				
36.0	77.0	93.7				
37.2	77.5	94.1				
37.9	78.0	94.7				
38.9	78.1	94.9				
39.8	78.6	95.0				
40.8	78.8	95.4				
41.8	79.2	96.0				
42.7	79.5					
43.7	79.7					
44.7	79.9					
45.6	80.1					
46.7	80.3					
47.6	80.5					
48.7	80.7					
49.7	80.9					
50.7	81.1					
51.8	81.3					
52.8	81.5					
53.8	81.7					
55.0	82.0					
56.0	82.2					
56.9	82.5					

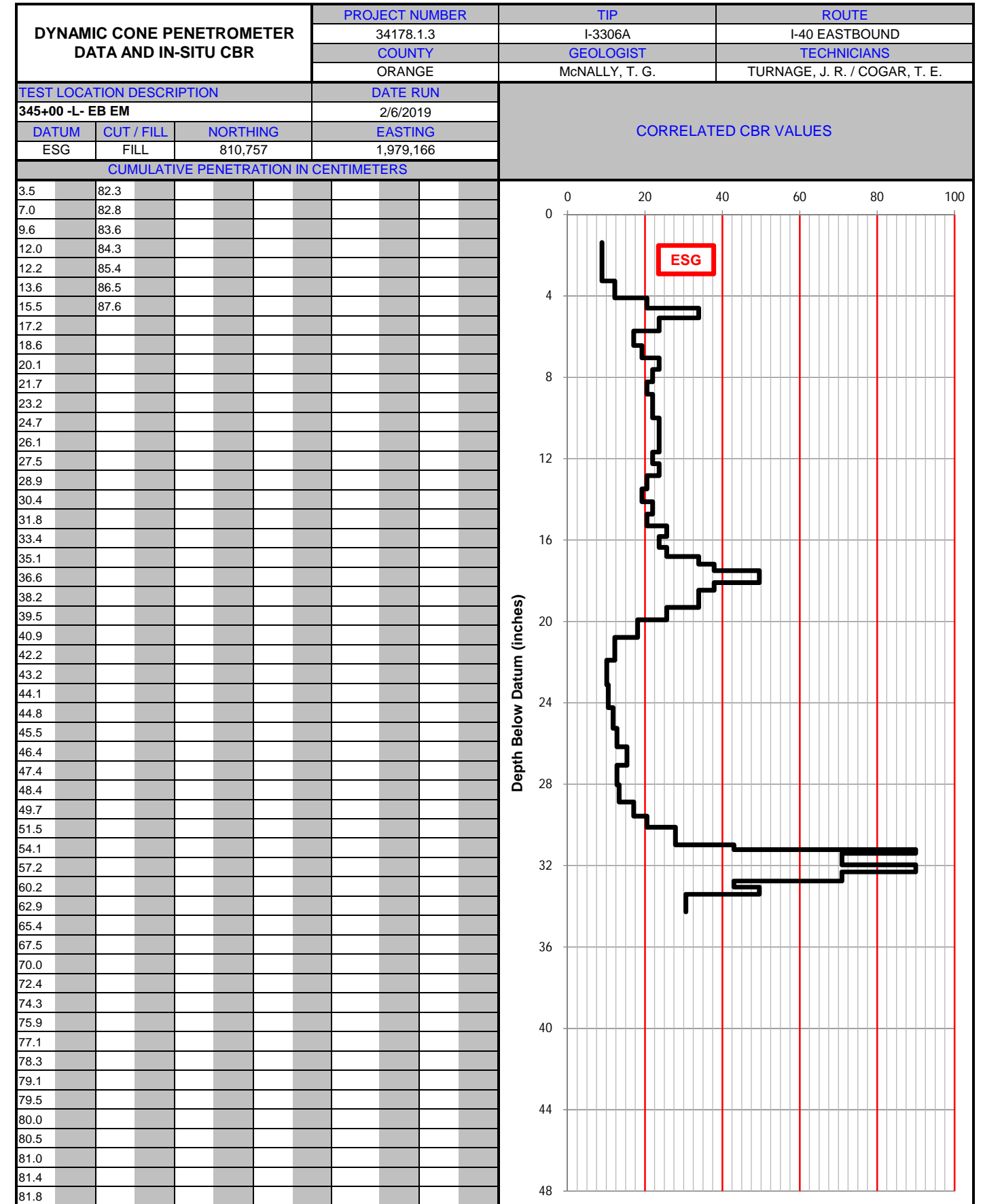


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





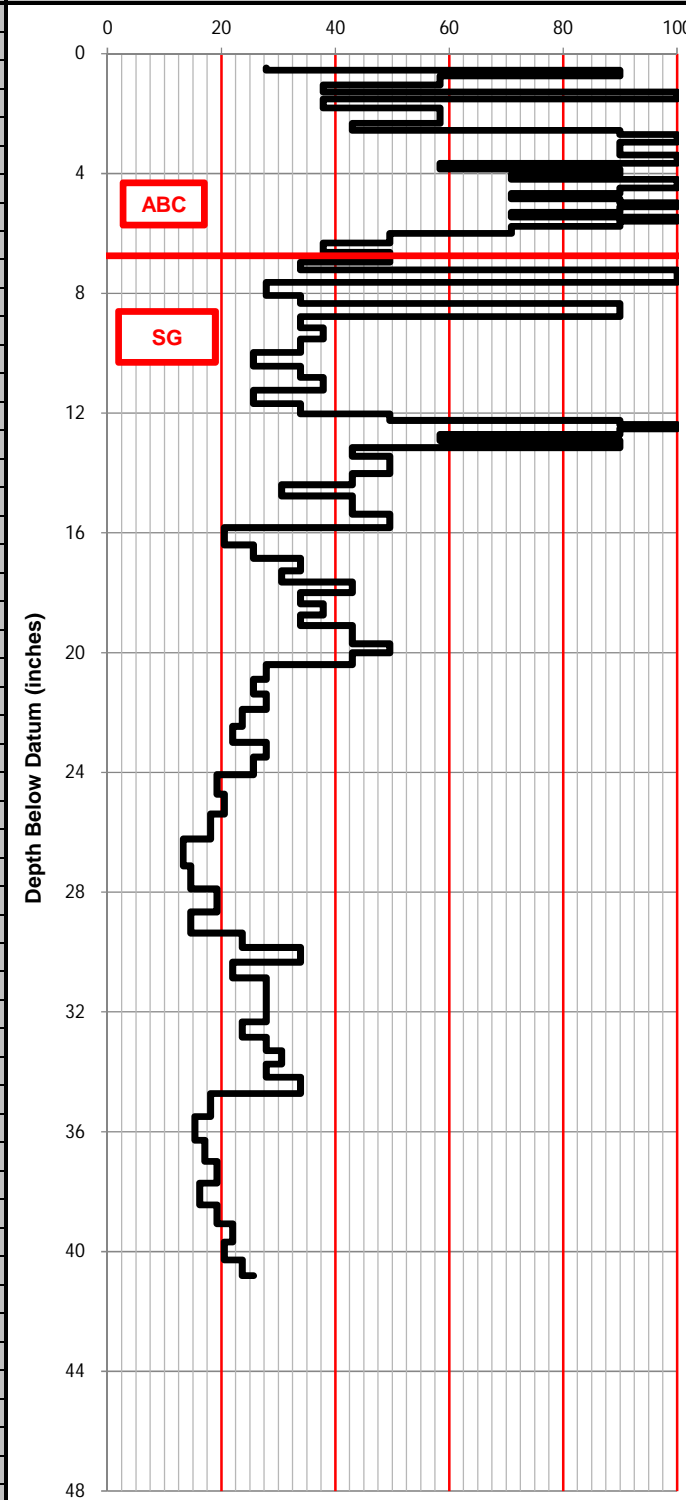
Notes:  
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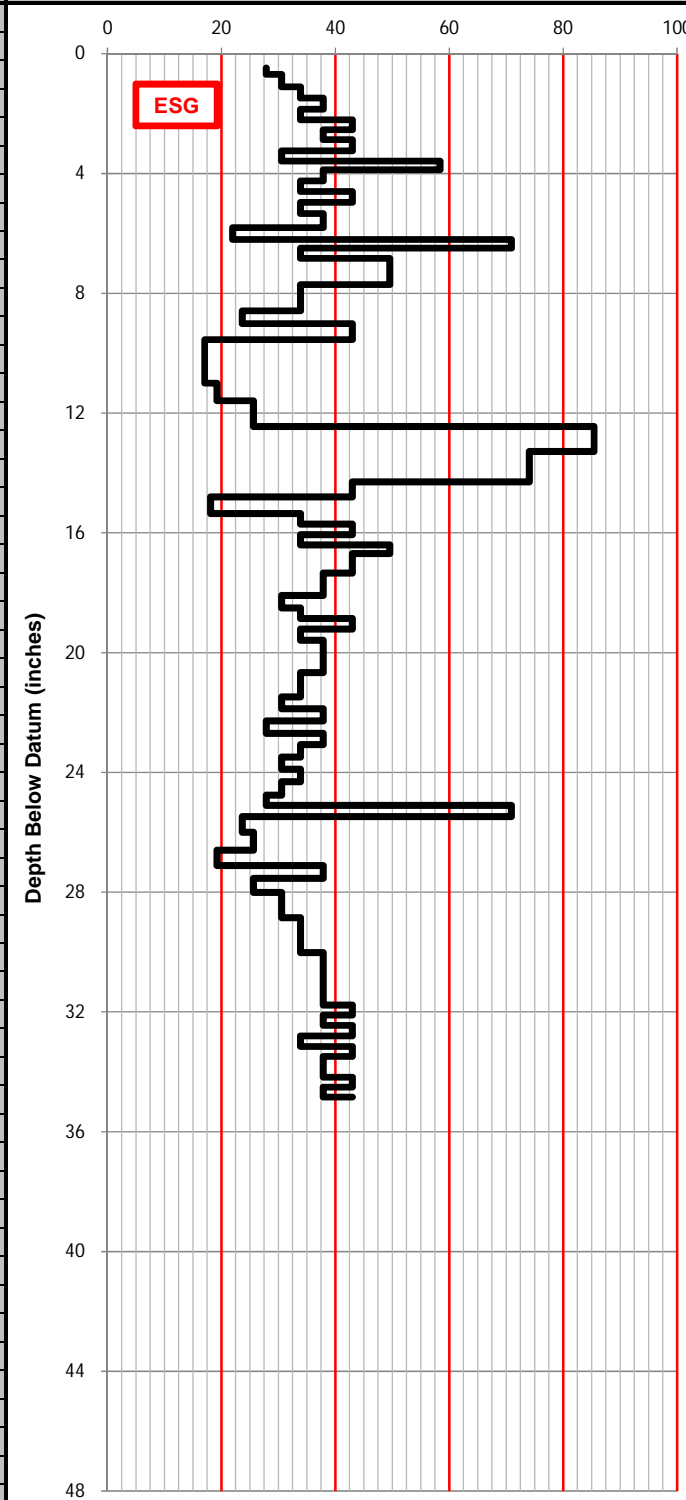
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
350+00 -L- EB OSS				2/6-2/7/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	GRADE	810,298	1,979,368			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	32.0	98.5				
1.6	32.6	100.0				
2.2	33.0	101.6				
3.1	33.8	103.0				
3.4	34.5	104.3				
4.3	35.2					
4.9	36.0					
5.5	37.1					
6.3	37.9					
6.7	38.7					
7.0	39.4					
7.3	41.0					
7.7	42.3					
8.1	43.3					
8.5	44.4					
8.7	45.2					
9.0	46.2					
9.6	47.1					
10.0	48.1					
10.5	48.9					
10.8	49.7					
11.0	50.4					
11.2	51.2					
11.6	52.4					
12.1	53.7					
12.5	54.9					
12.8	56.3					
13.2	57.8					
13.7	59.0					
14.0	60.3					
14.4	62.0					
14.9	63.6					
15.6	65.4					
16.5	67.8					
17.2	70.0					
18.2	71.7					
18.5	73.9					
18.8	75.3					
20.0	76.3					
21.0	77.8					
21.4	79.0					
21.8	80.2					
22.8	81.4					
23.7	82.8					
24.7	84.0					
26.0	85.1					
27.0	86.3					
27.9	87.3					
29.2	89.1					
30.2	91.2					
30.9	93.1					
31.3	94.8					
31.6	96.8					



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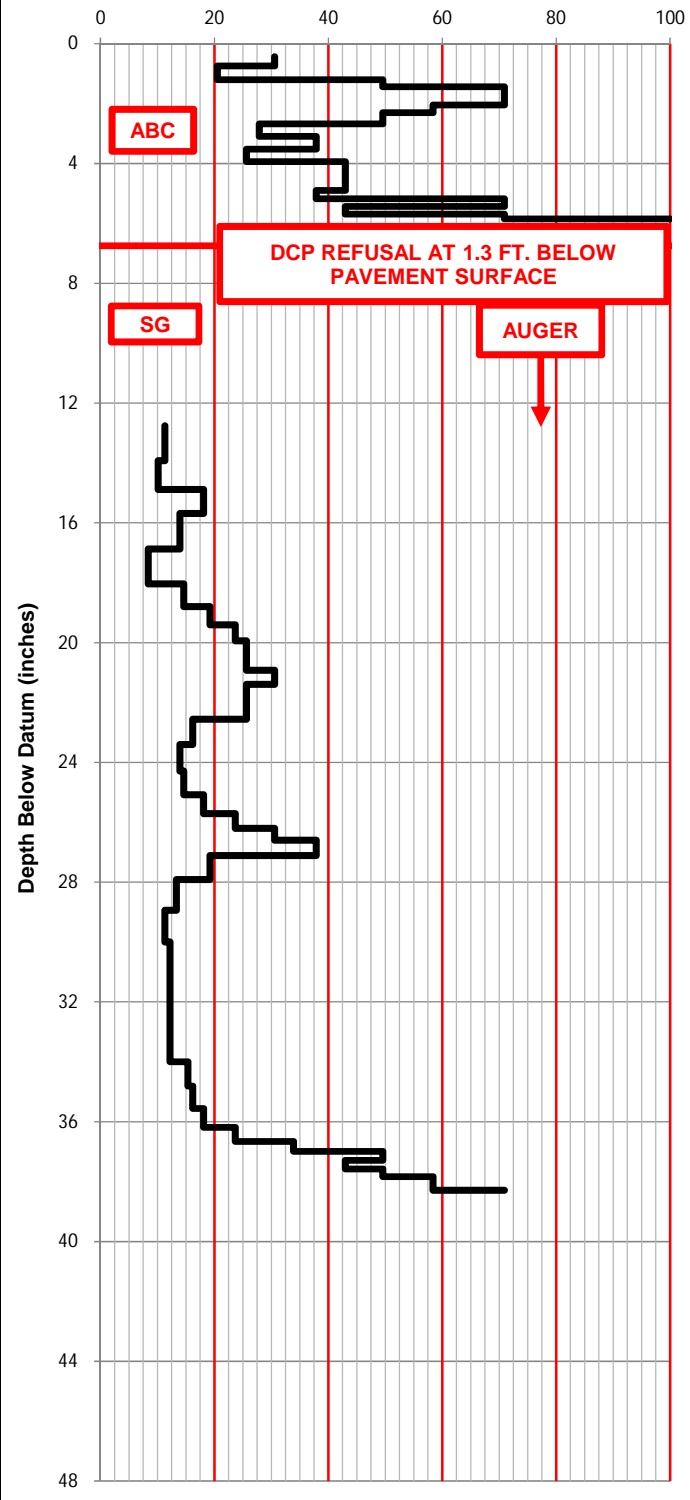
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
356+00 -L- EB EM				2/6-2/7/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	809,804	1,979,716			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.2	49.3					
2.3	50.2					
3.3	51.1					
4.2	52.0					
5.2	53.0					
6.0	54.0					
6.9	55.1					
7.7	56.0					
8.8	57.2					
9.4	58.1					
10.3	59.1					
11.3	60.2					
12.1	61.2					
13.1	62.3					
14.0	63.5					
15.5	64.0					
16.0	65.4					
17.0	66.7					
17.7	68.4					
18.4	69.3					
19.1	70.6					
20.1	71.7					
21.1	72.8					
22.5	73.8					
23.3	74.8					
25.2	75.8					
27.1	76.7					
28.8	77.6					
30.1	78.5					
31.4	79.4					
31.8	80.3					
32.2	81.1					
32.7	82.0					
33.1	82.8					
33.5	83.8					
34.0	84.6					
34.5	85.5					
34.9	86.4					
35.4	87.2					
35.9	88.1					
36.7	88.9					
38.5						
39.5						
40.3						
41.3						
42.0						
42.8						
43.6						
44.5						
45.4						
46.5						
47.5						
48.3						



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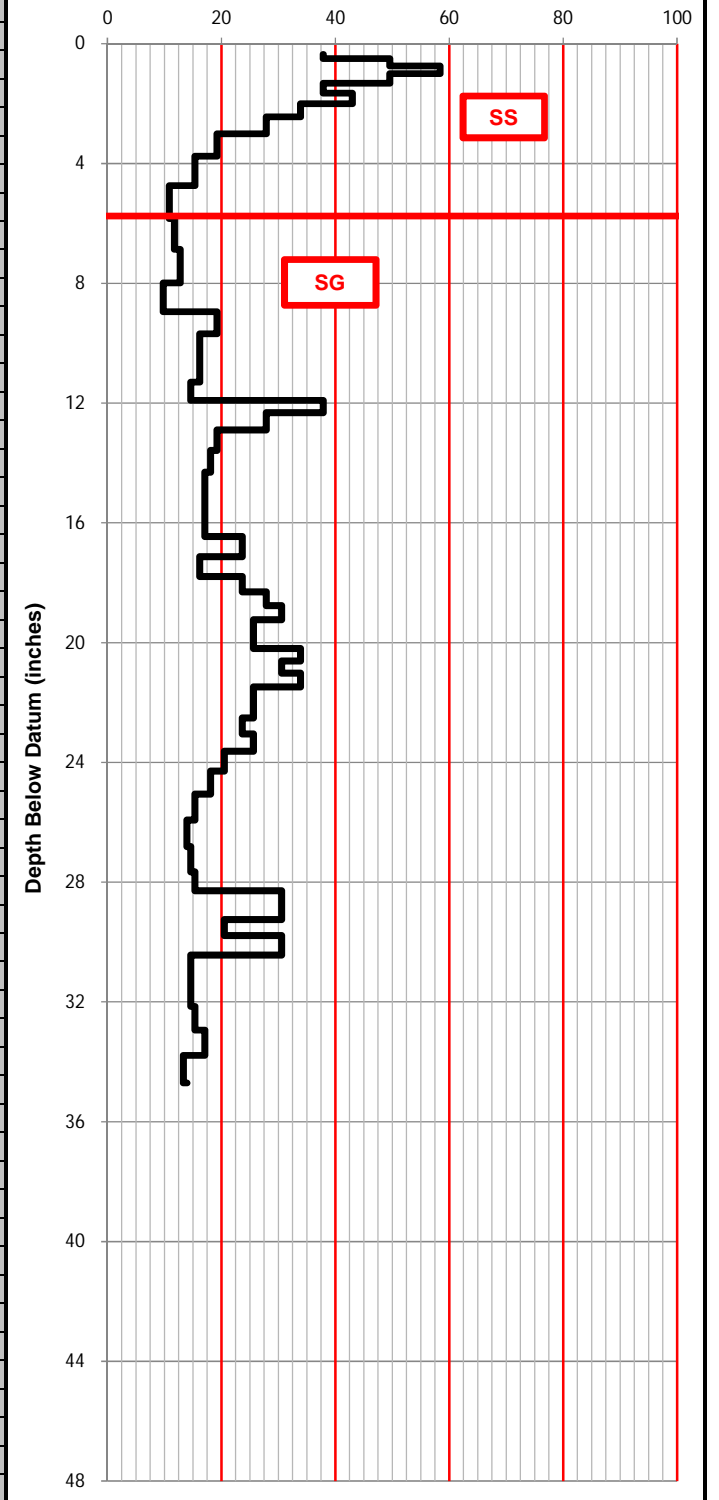
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
360+00 -L- EB ISS				DATE RUN		
				2/6-2/7/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	FILL	809,489	1,979,966			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.1	64.3					
2.7	65.3					
3.4	66.0					
3.9	66.8					
4.4	67.5					
4.9	68.1					
5.5	68.7					
6.2	69.2					
7.4						
8.3						
9.6						
10.4						
11.2						
12.0						
12.9						
13.4						
14.2						
14.7						
15.0						
AUGER						
13.3 cm /						
5.2 in						
2.7						
5.5						
8.6						
10.4						
12.7						
16.4						
18.6						
20.3						
21.7						
23.0						
24.3						
25.4						
26.7						
28.0						
30.0						
32.3						
34.5						
36.3						
37.7						
38.8						
39.7						
41.4						
43.8						
46.6						
49.2						
51.8						
54.4						
57.0						
59.1						
61.1						
62.9						



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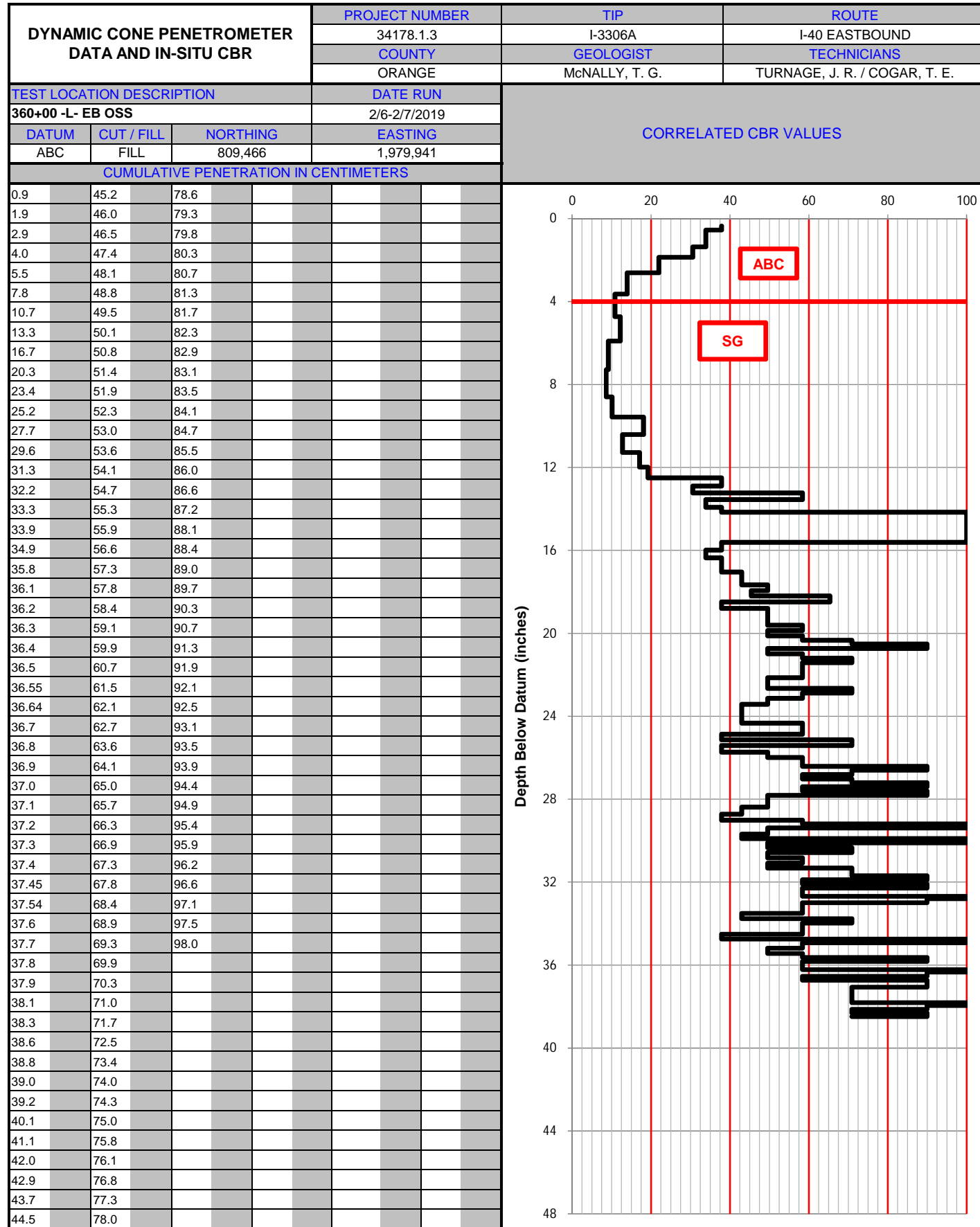


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
360+00 -L- EB ISL				DATE RUN		
				2/6-2/7/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
SS	FILL	809,486	1,979,962			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.9	87.0					
1.6	89.3					
2.2						
2.9						
3.8						
4.6						
5.6						
6.8						
8.5						
10.6						
13.5						
16.2						
18.7						
21.9						
23.6						
25.6						
27.6						
29.8						
30.7						
31.9						
33.6						
35.4						
37.3						
39.2						
41.1						
42.5						
44.5						
45.9						
47.1						
48.2						
49.5						
50.8						
51.8						
52.9						
53.9						
55.2						
56.5						
57.9						
59.2						
60.8						
62.6						
64.7						
67.0						
69.2						
71.3						
72.4						
73.5						
75.1						
76.2						
78.4						
80.6						
82.7						
84.6						

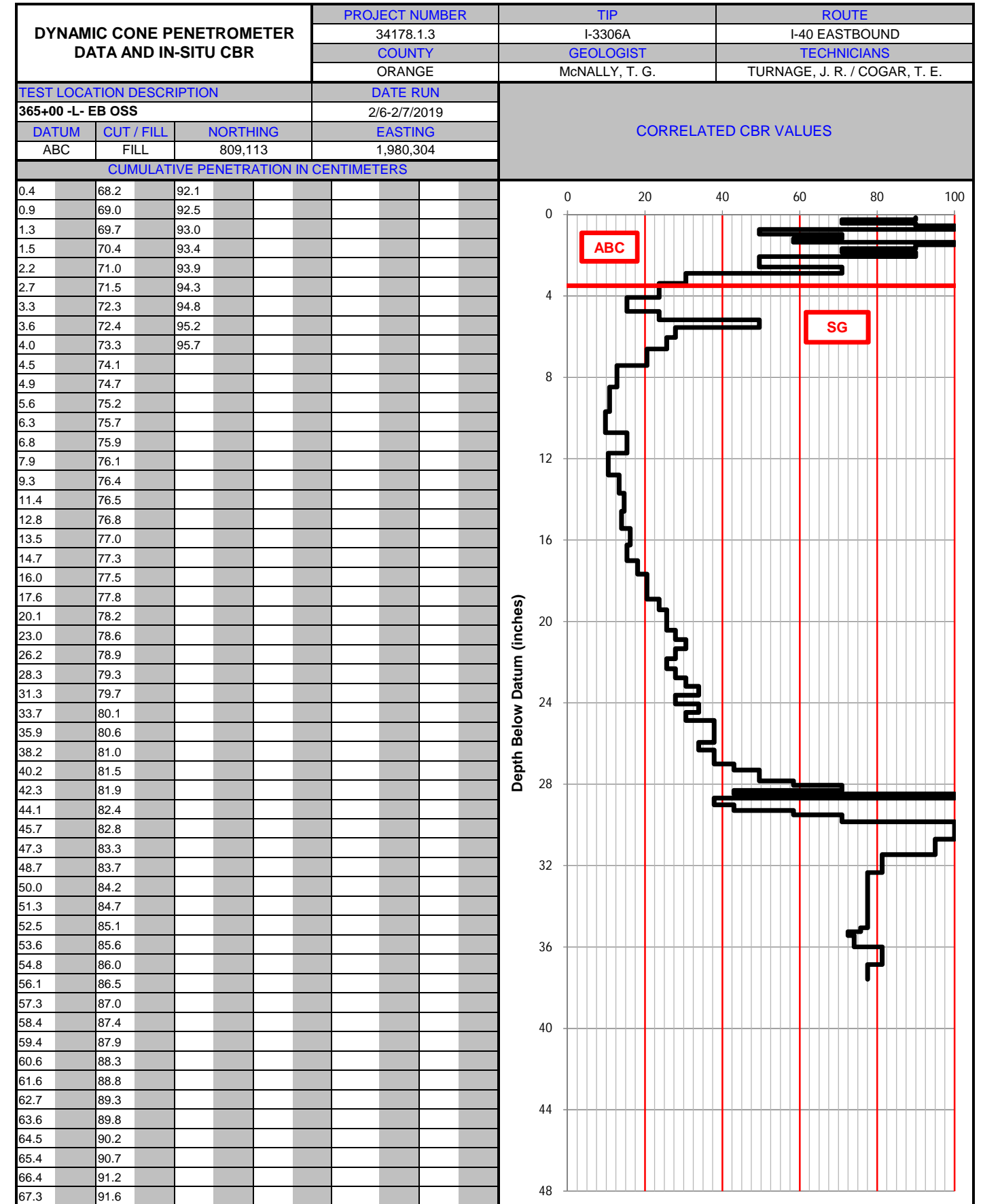


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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)





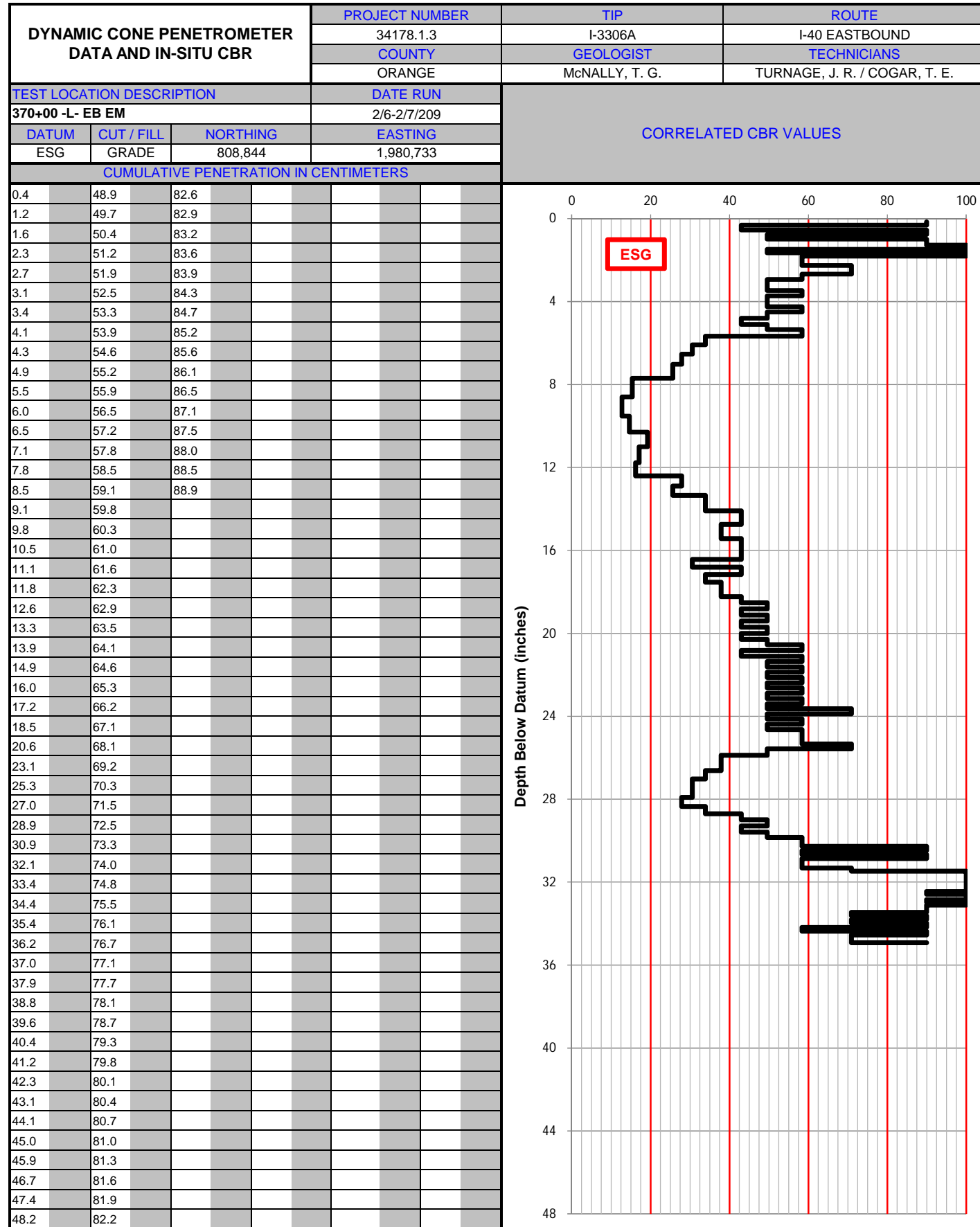
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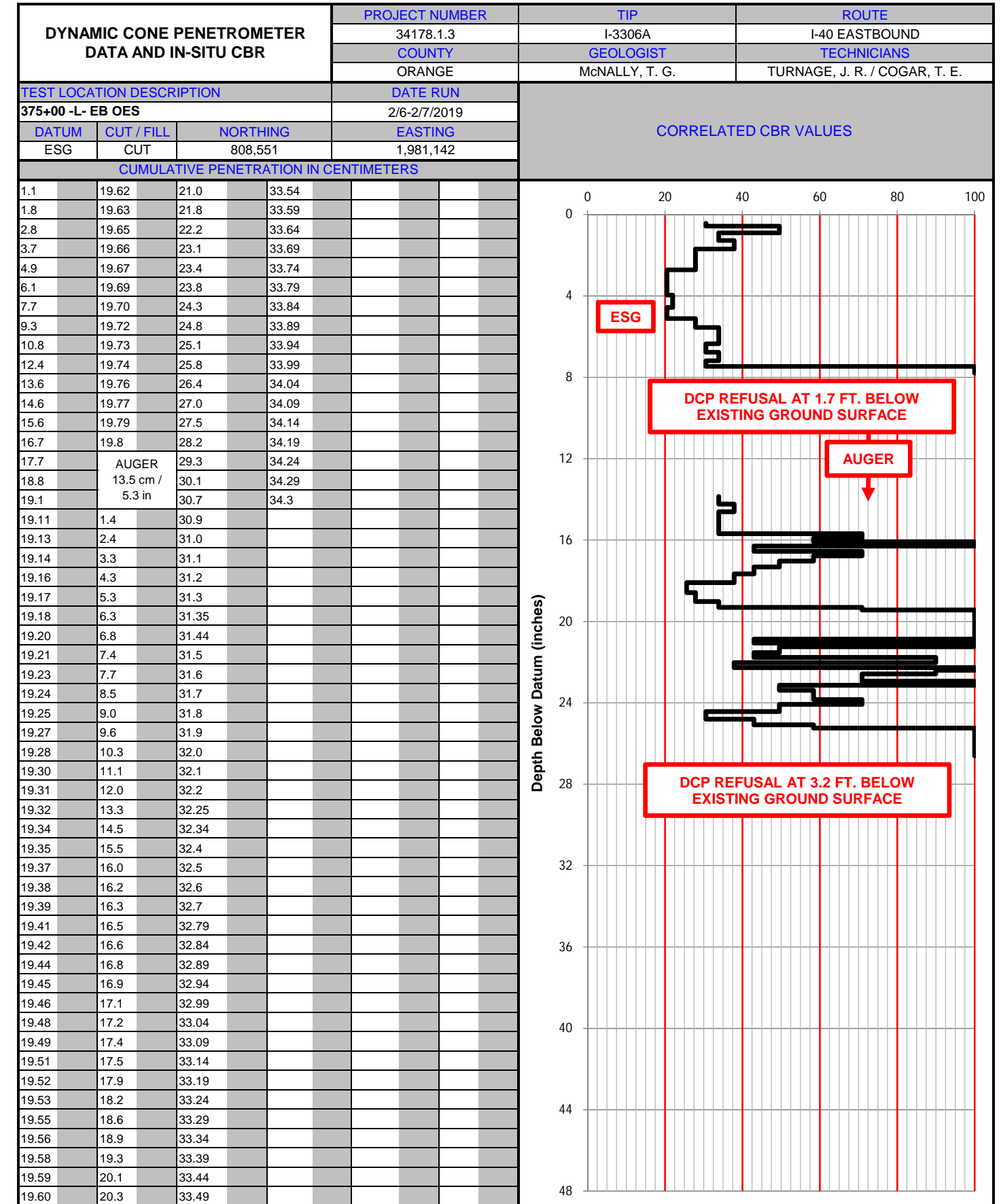
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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)







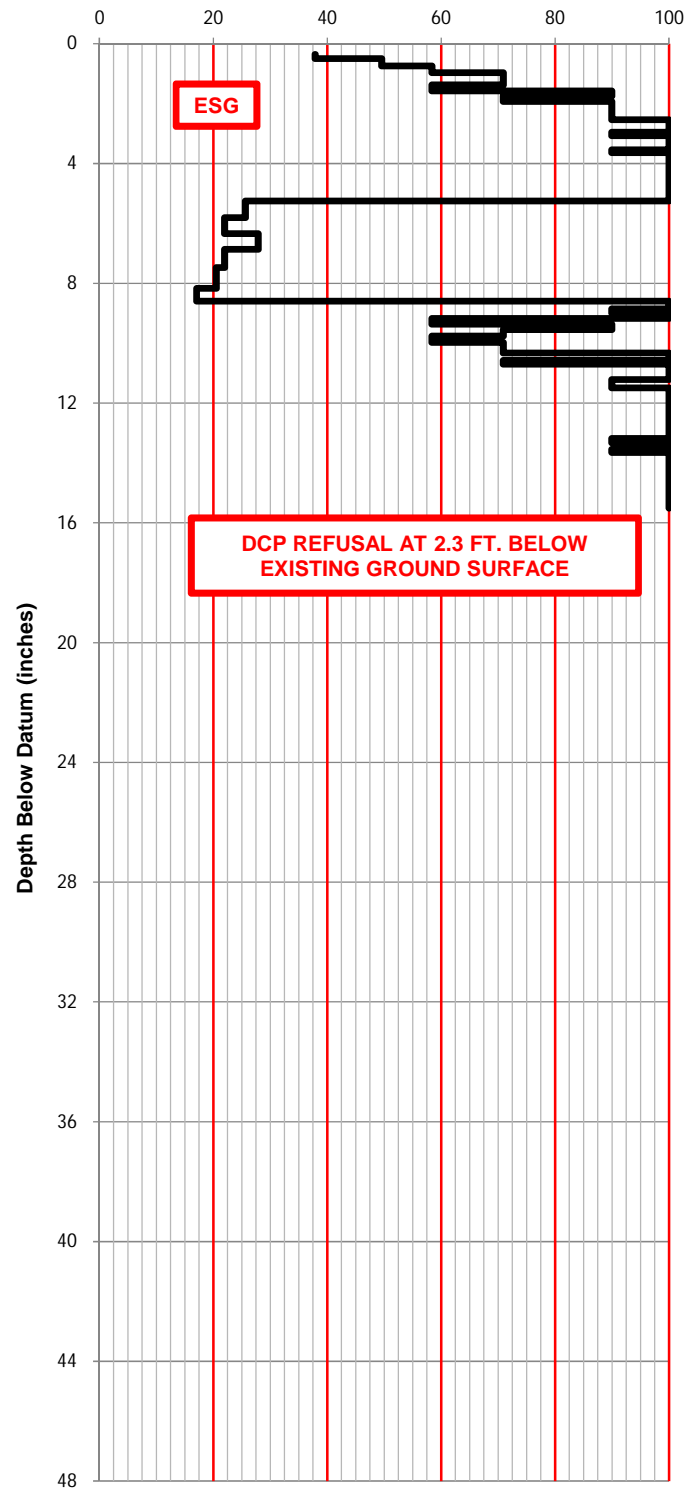
Notes:  
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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



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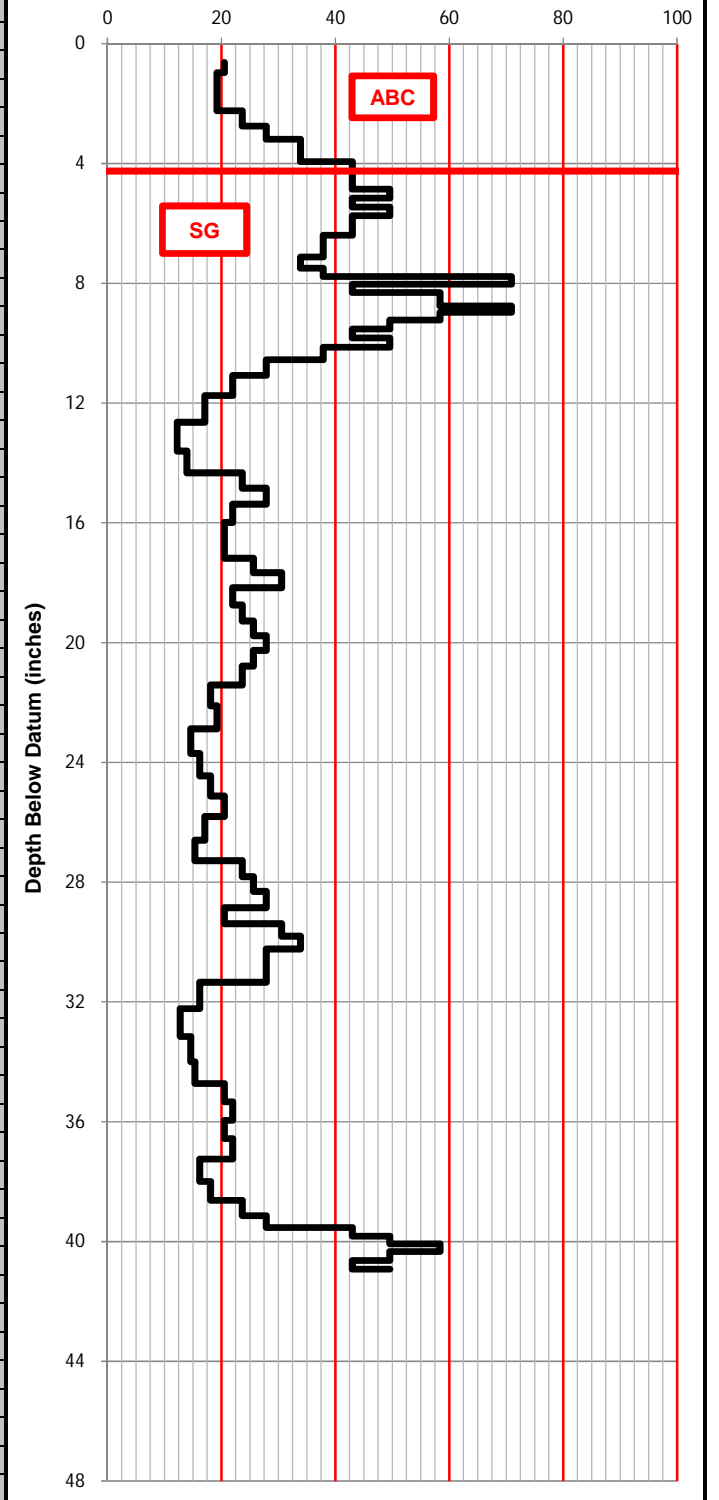
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
380+00 -L- EB EM				2/6-2/7/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	808,351	1,981,603			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.9	26.1	37.4				
1.6	26.4	37.5				
2.2	26.6	37.6				
2.7	27.1	37.65				
3.2	27.3	37.72				
3.8	27.5	37.8				
4.2	27.8	37.86				
4.7	28.1	37.93				
5.1	28.3	38.0				
5.5	28.7	38.04				
5.9	29.1	38.08				
6.3	29.3	38.12				
6.6	29.5	38.16				
6.8	29.8	38.2				
7.1	30.1	38.24				
7.3	30.4	38.28				
7.7	30.7	38.32				
7.9	31.0	38.36				
8.2	31.2	38.4				
8.5	31.5	38.46				
8.8	31.8	38.52				
9.2	32.0	38.58				
9.3	32.3	38.64				
9.4	32.6	38.7				
9.7	32.9	38.76				
9.9	33.1	38.82				
10.1	33.3	38.88				
10.4	33.7	38.94				
10.6	34.0	39.0				
10.9	34.2	39.04				
11.1	34.6	39.08				
11.4	34.7	39.12				
11.6	34.9	39.16				
11.8	35.2	39.2				
12.0	35.4	39.24				
12.3	35.6	39.28				
12.4	35.7	39.32				
12.7	36.0	39.36				
14.0	36.2	39.4				
15.5	36.3					
16.7	36.4					
18.2	36.5					
19.8	36.58					
21.7	36.66					
22.0	36.74					
22.3	36.8					
22.7	36.9					
23.0	37.0					
23.6	37.1					
24.0	37.1					
24.5	37.2					
25.1	37.3					
25.6	37.4					



Notes:  
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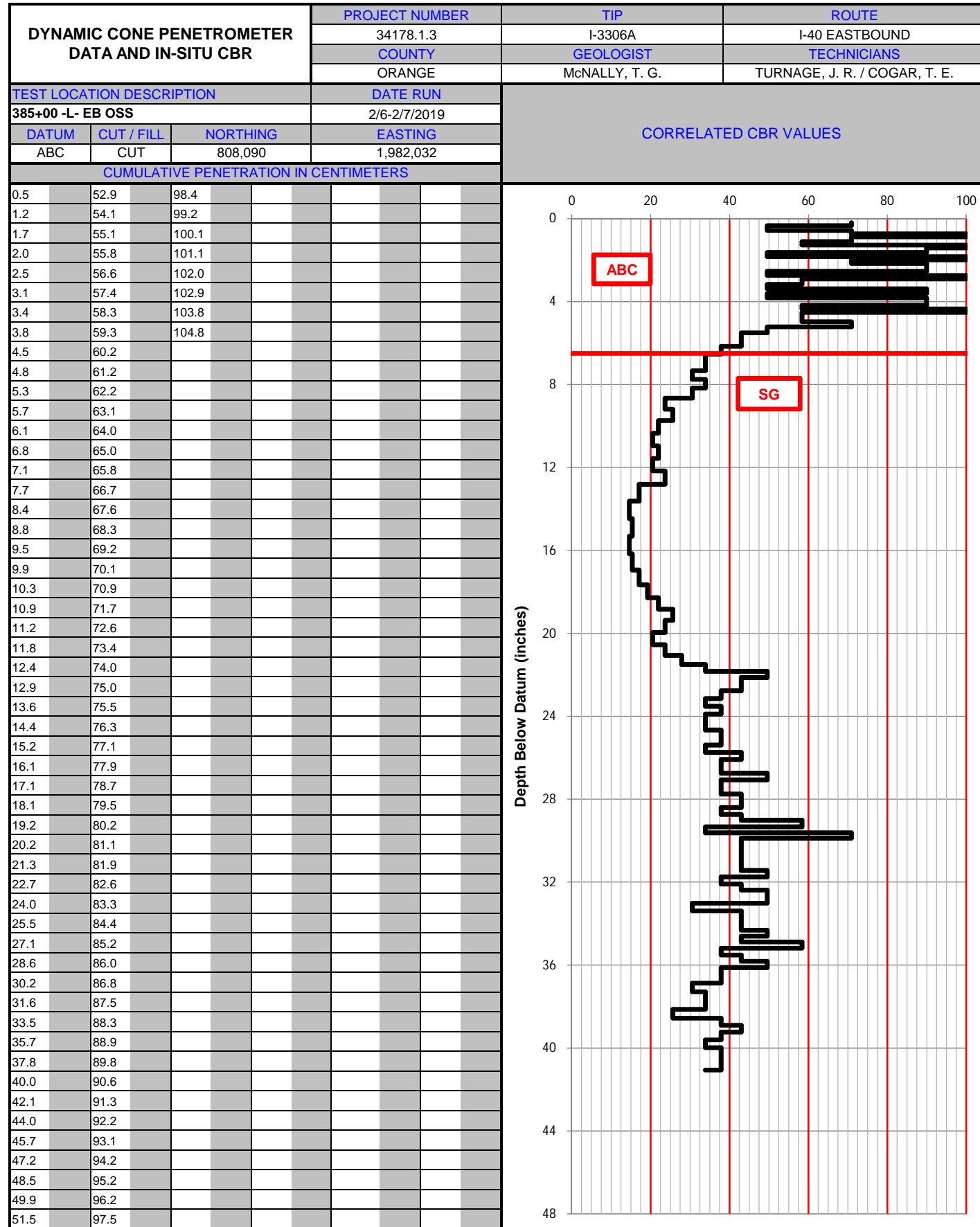


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
385+00 -L- EB ISS				2/6-2/7/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	808,118	1,982,047			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.6	66.5					
3.3	68.6					
5.0	70.0					
6.4	71.3					
7.6	72.5					
8.6	74.1					
9.6	75.2					
10.4	76.2					
11.2	77.4					
12.0	78.6					
12.7	80.6					
13.5	83.1					
14.2	85.3					
15.0	87.4					
15.8	89.0					
16.7	90.5					
17.6	92.1					
18.6	93.6					
19.5	95.6					
20.0	97.4					
20.8	98.8					
21.4	100.0					
22.0	100.8					
22.5	101.5					
23.1	102.1					
23.8	102.8					
24.6	103.6					
25.3	104.3					
26.2						
27.4						
28.9						
30.8						
33.4						
35.7						
37.1						
38.3						
39.8						
41.4						
43.0						
44.3						
45.4						
46.9						
48.3						
49.6						
50.8						
52.1						
53.5						
55.3						
57.0						
59.2						
61.2						
63.0						
64.6						

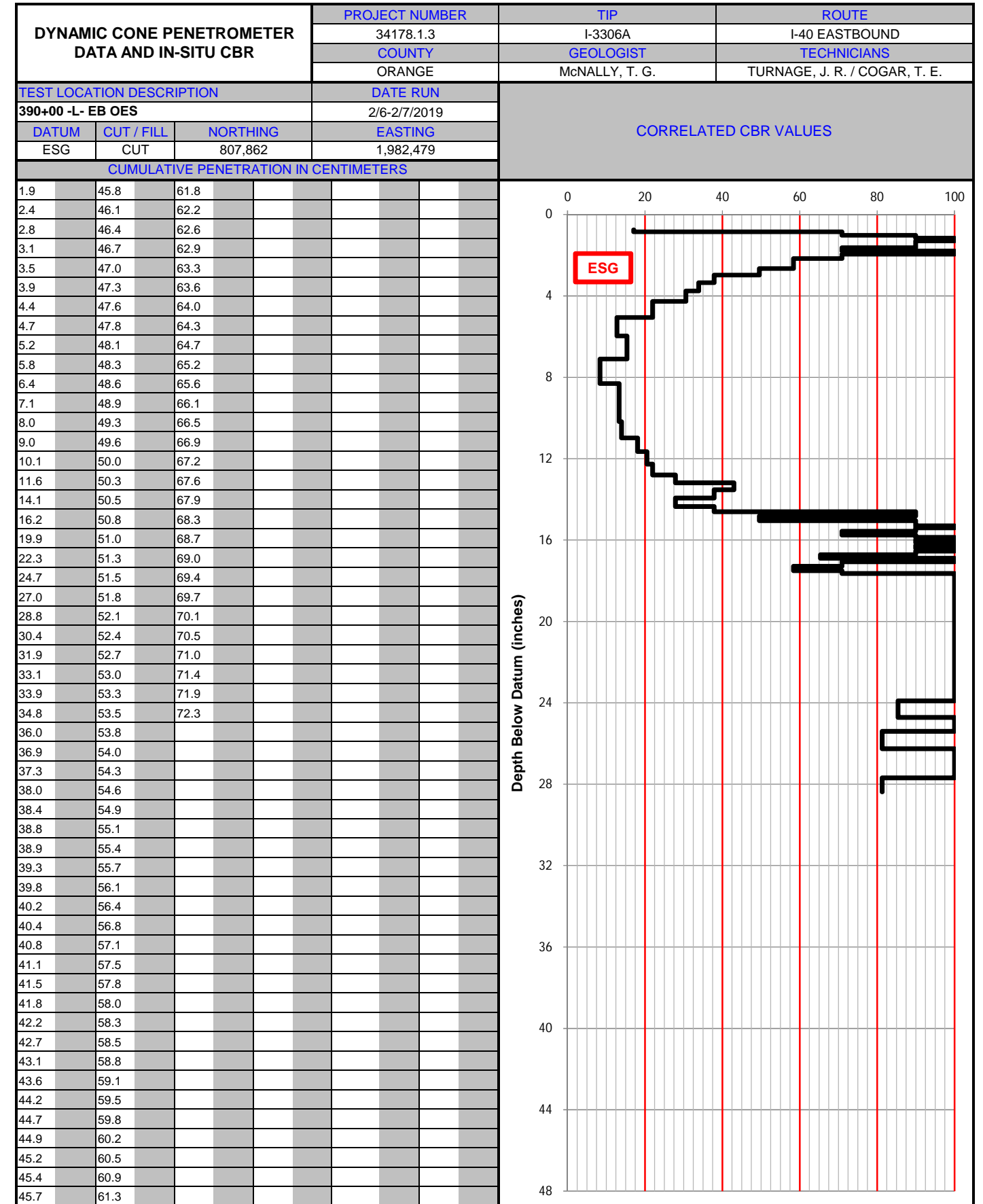


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



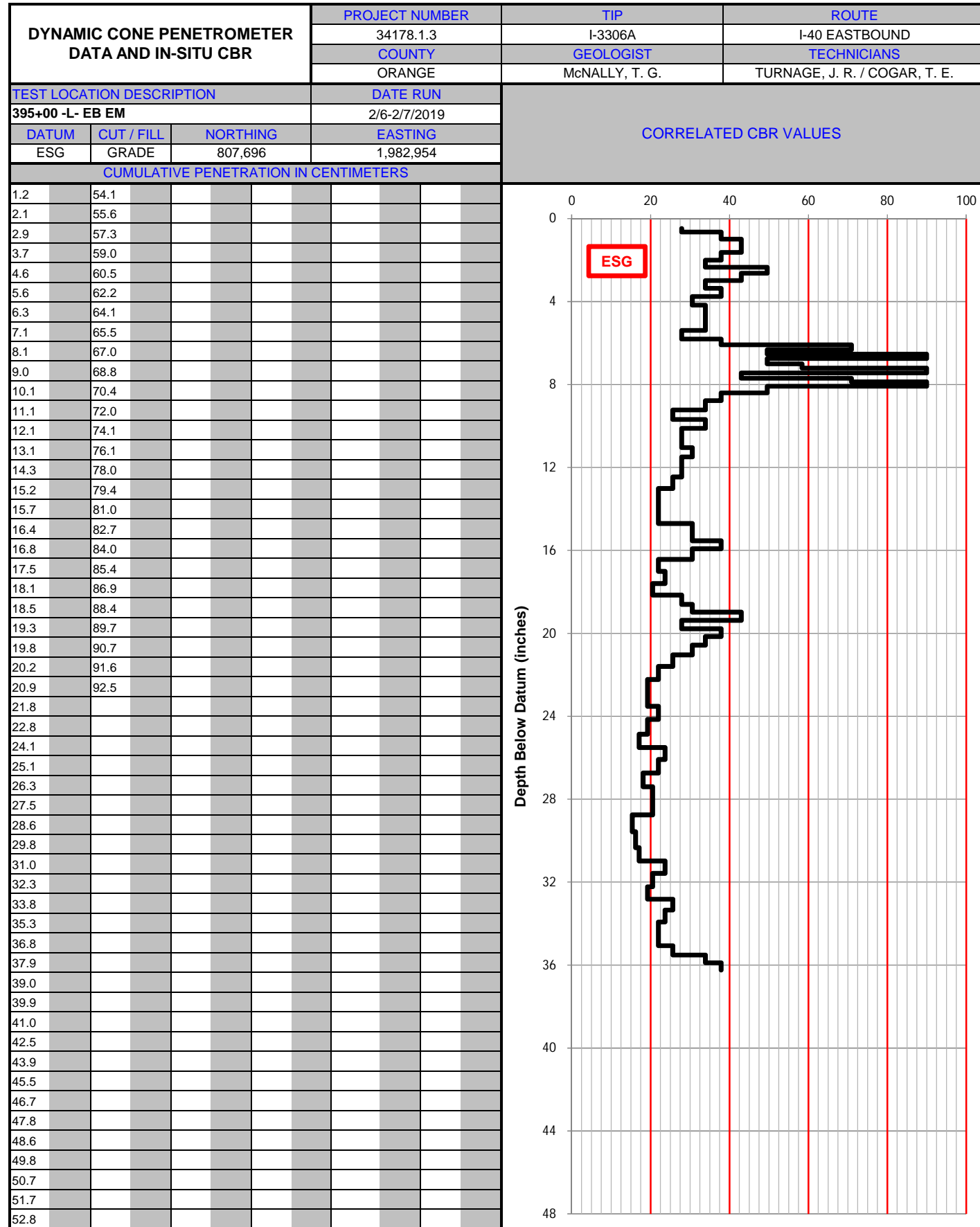


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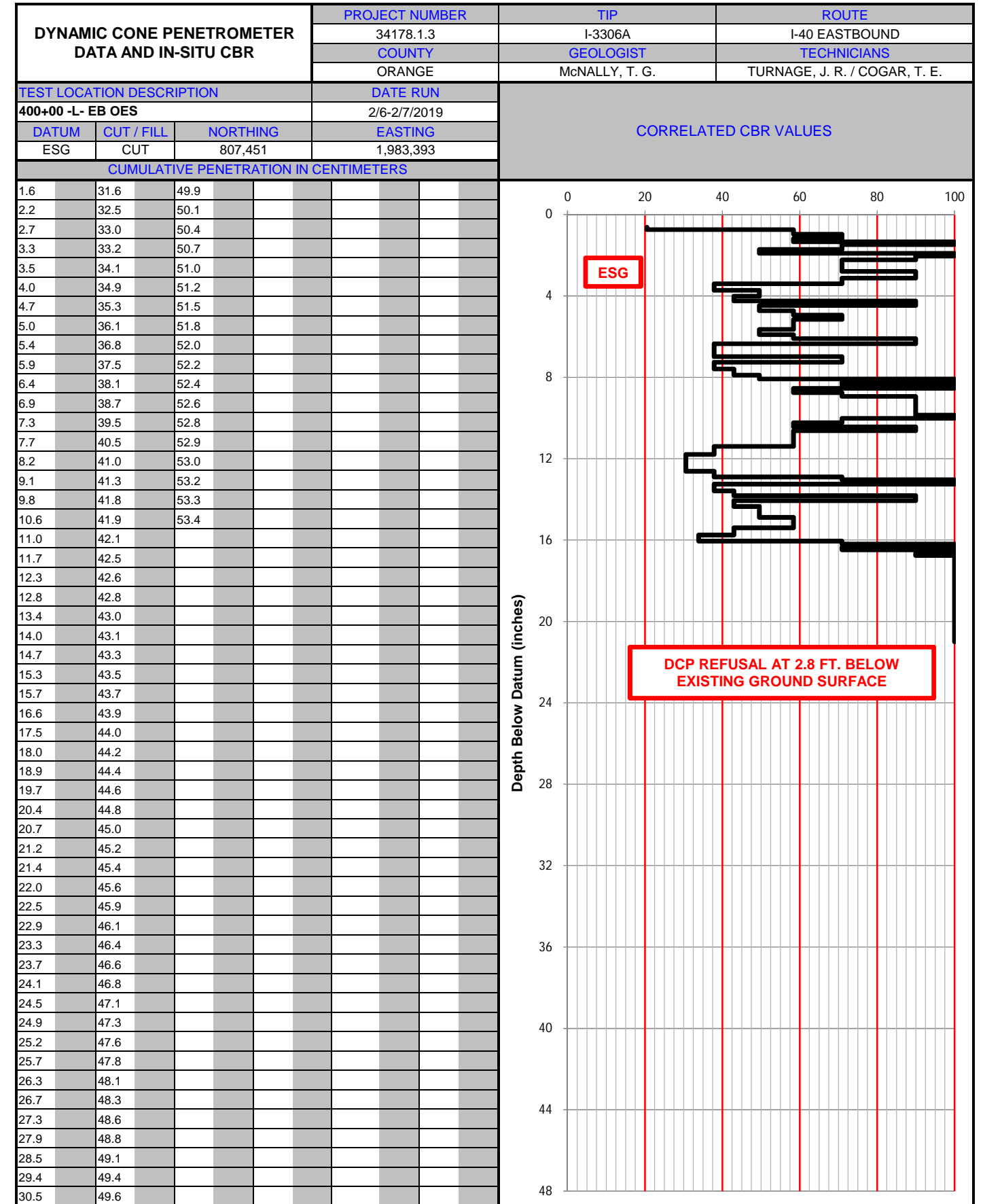


Notes:  
 SG = Subgrade  
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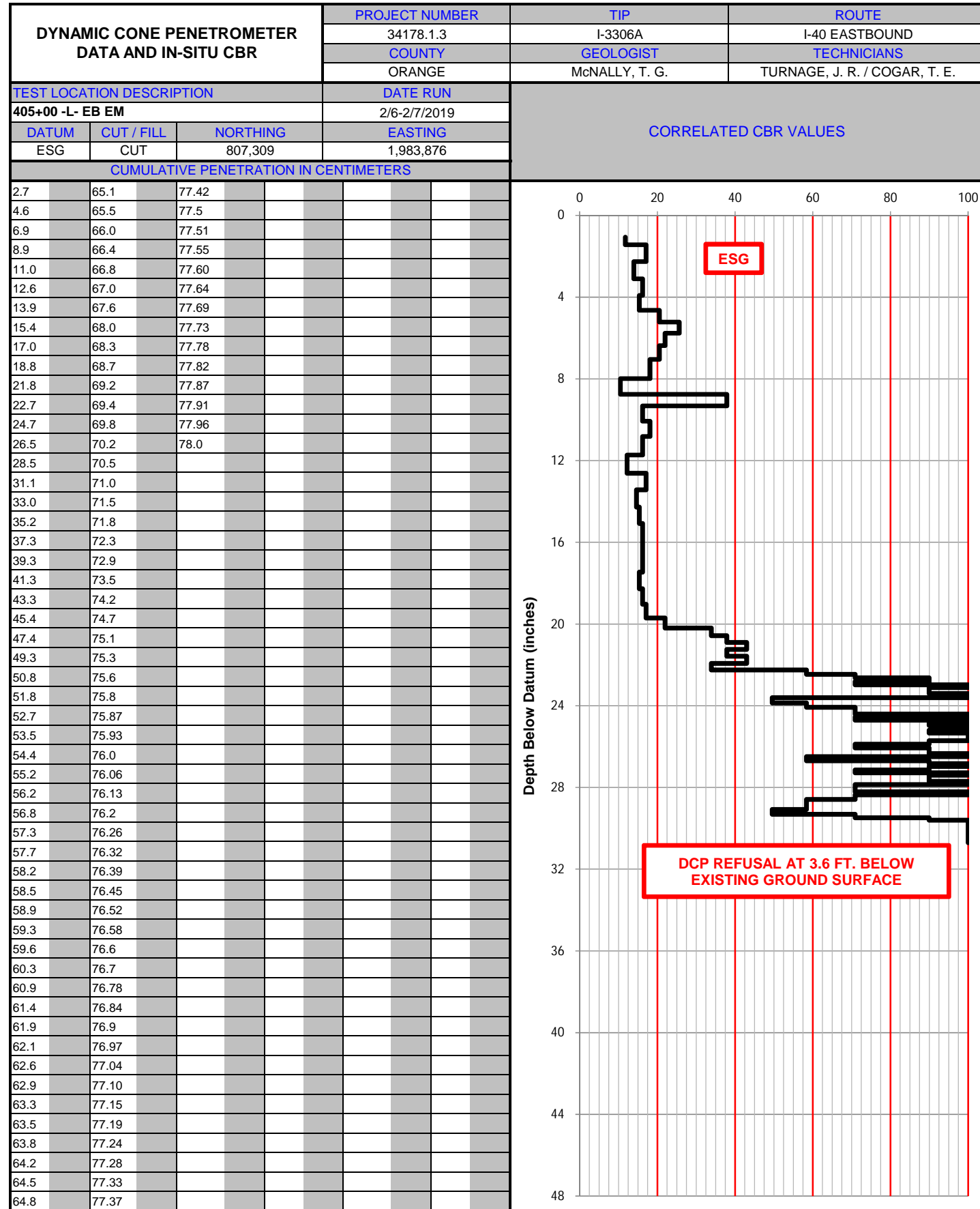


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

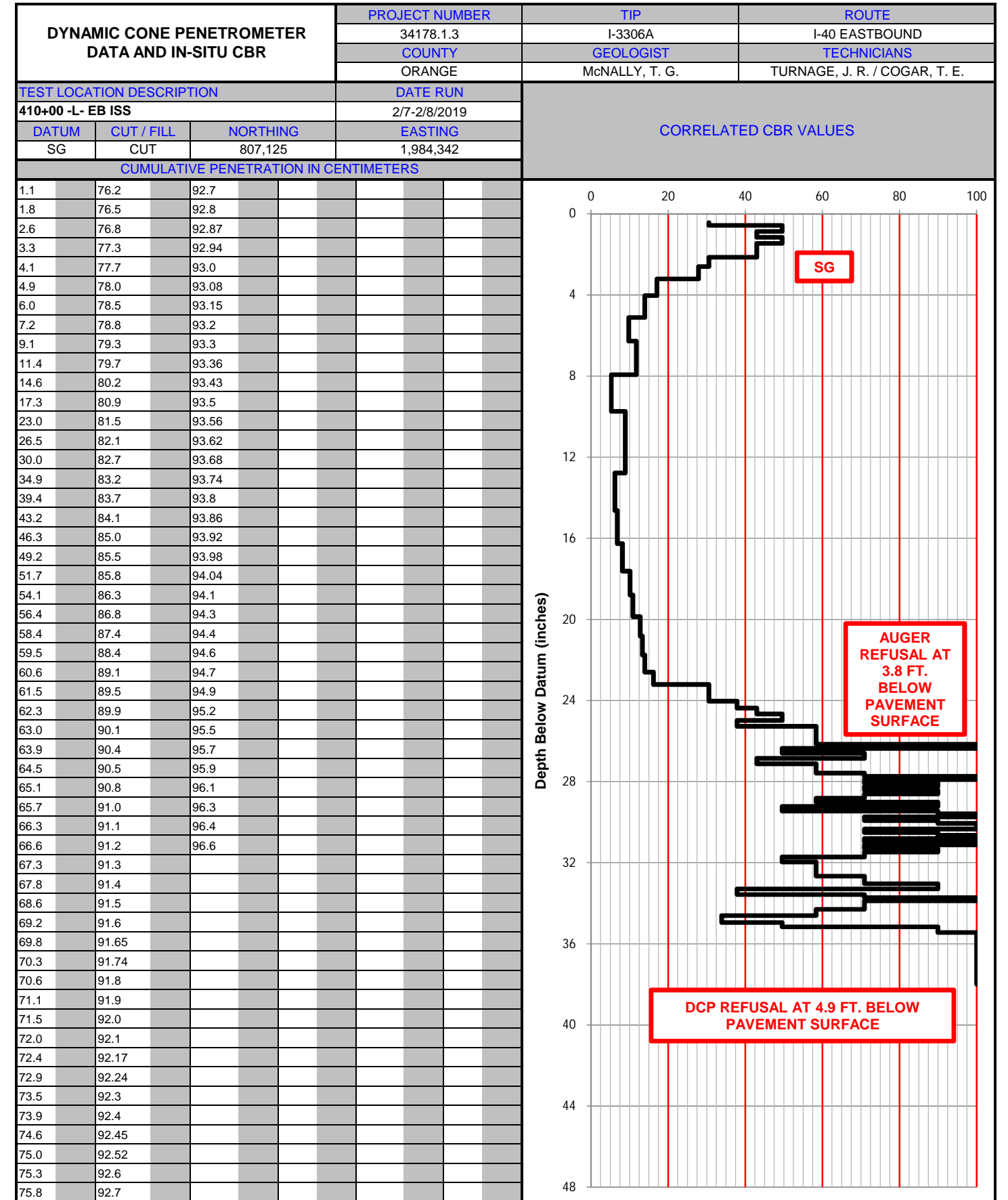


Notes:  
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 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



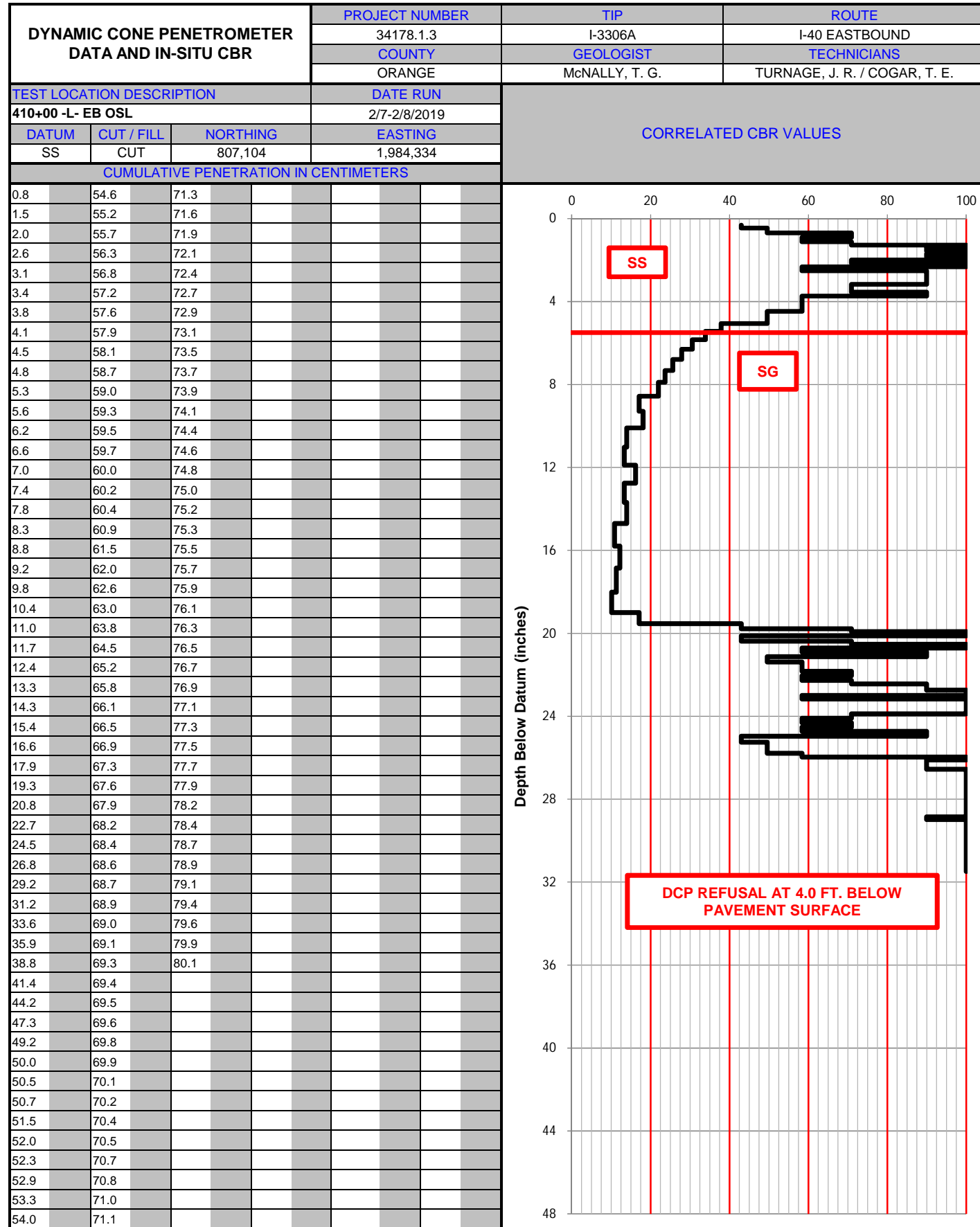


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

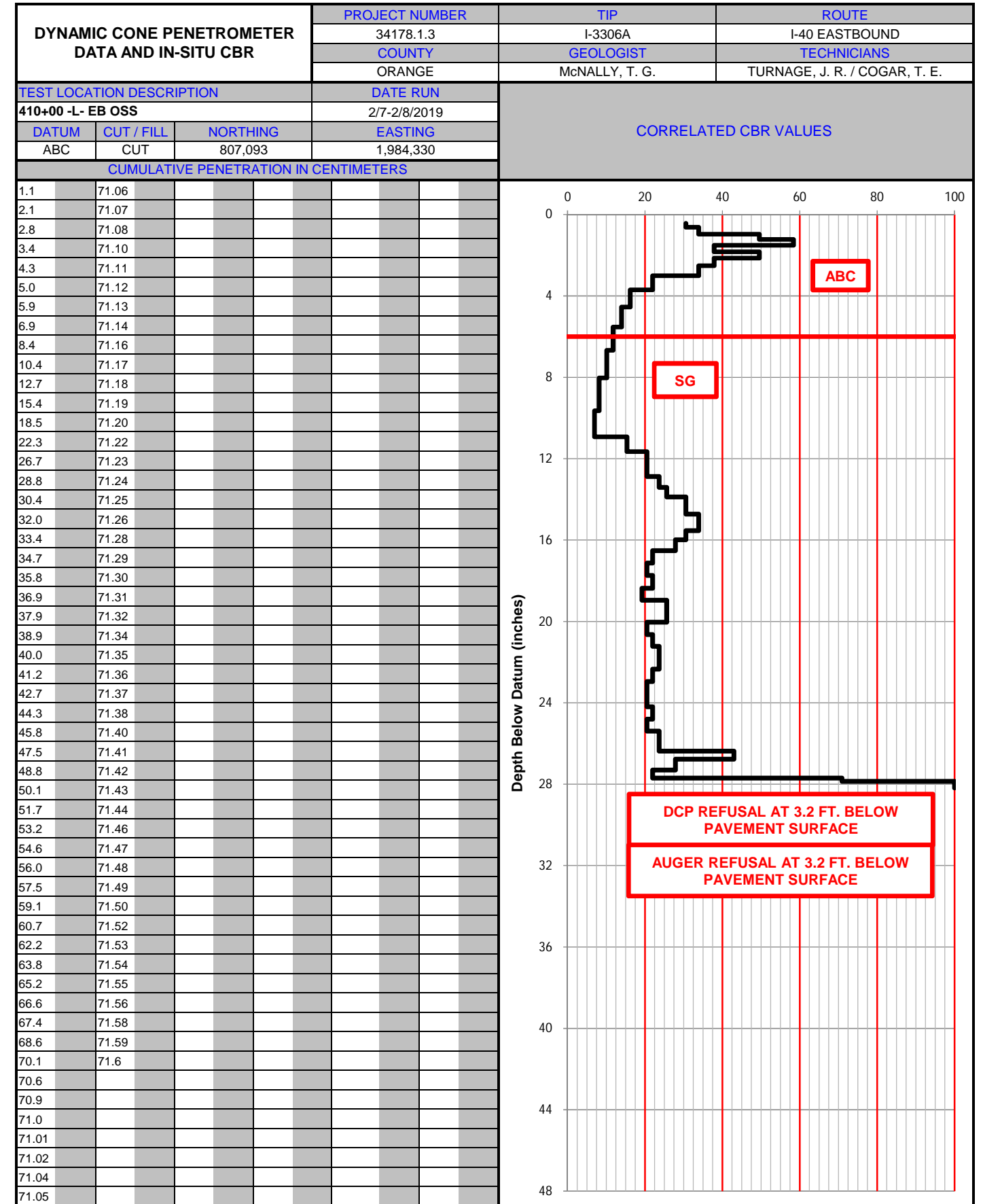


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 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



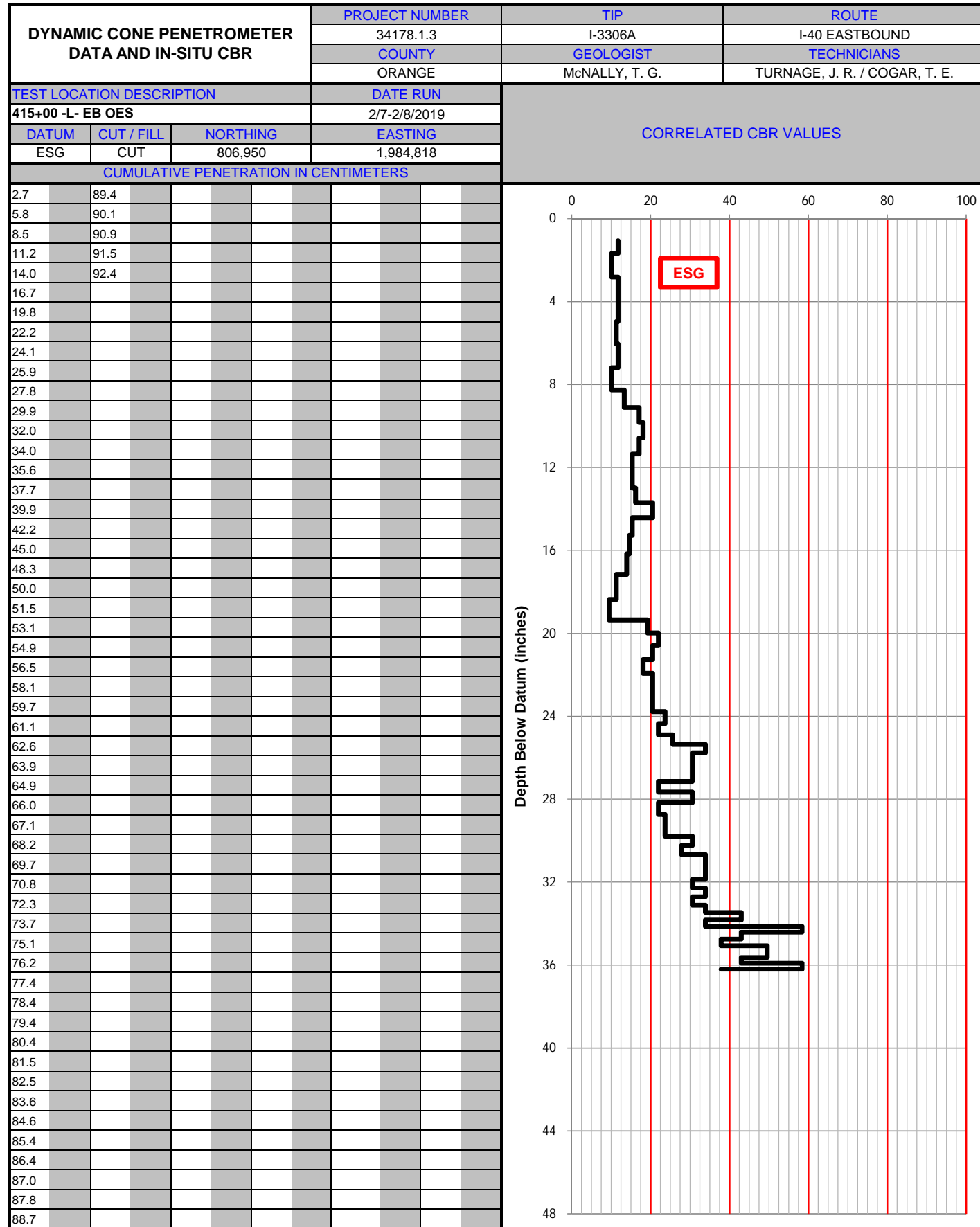


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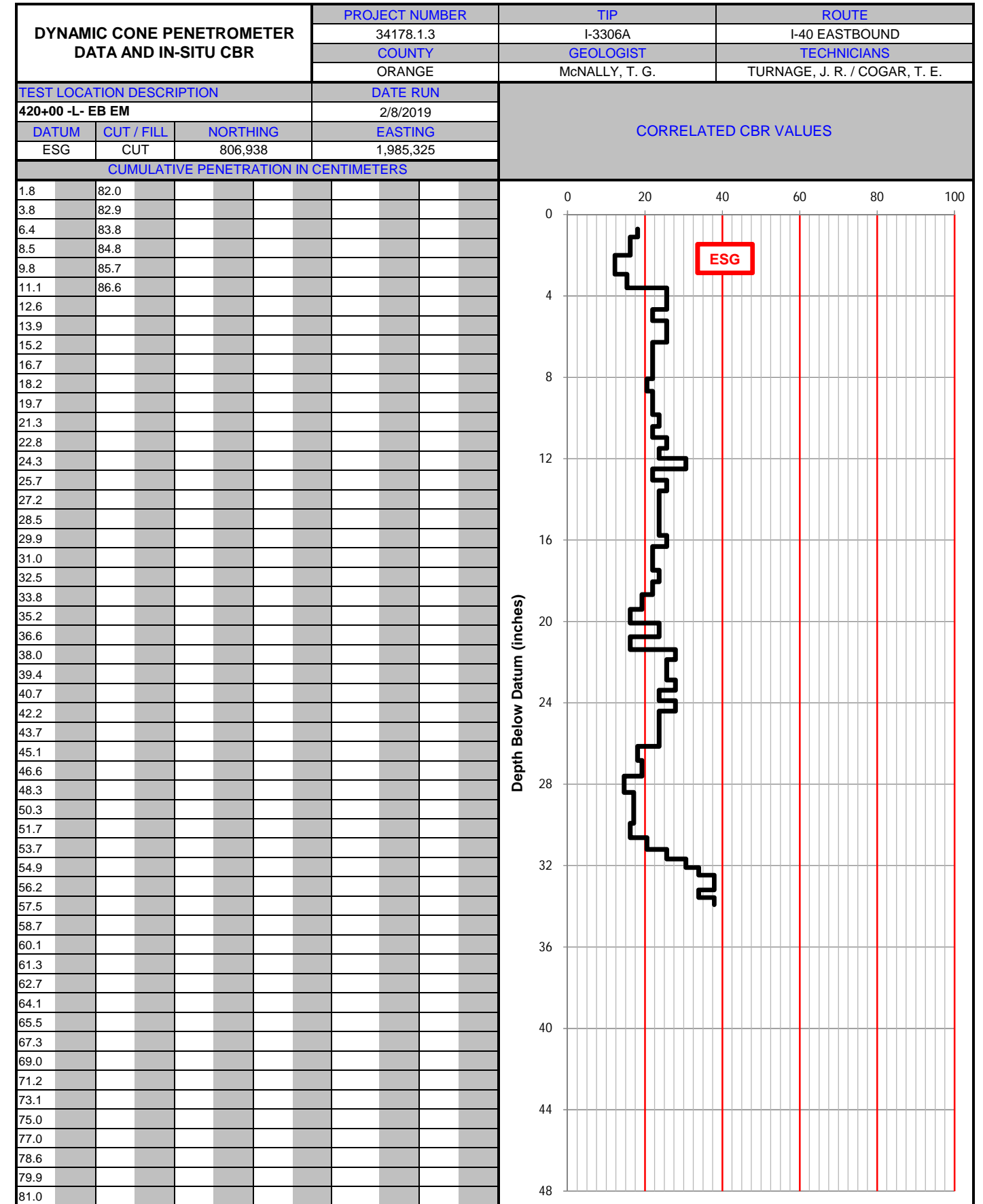


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 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



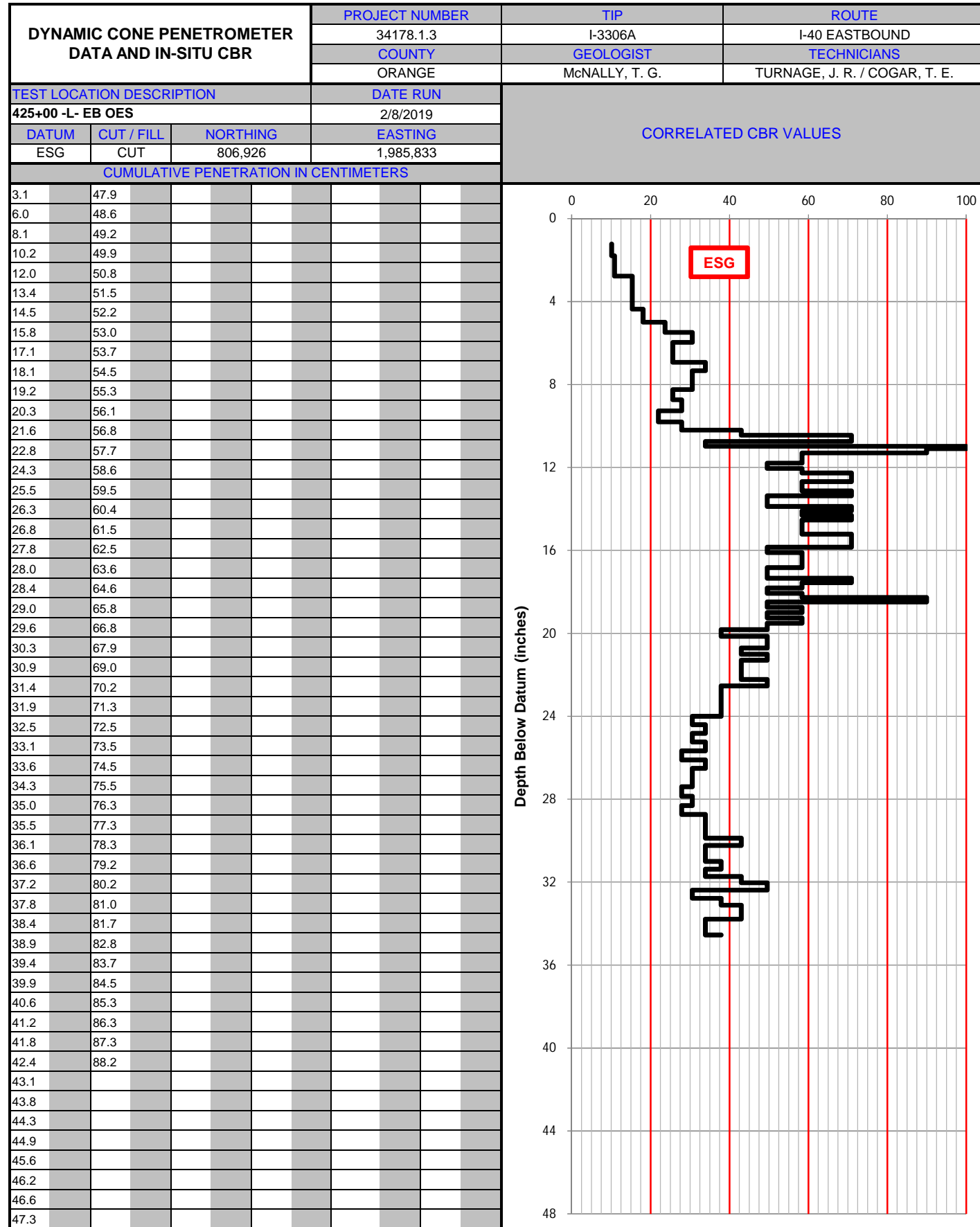


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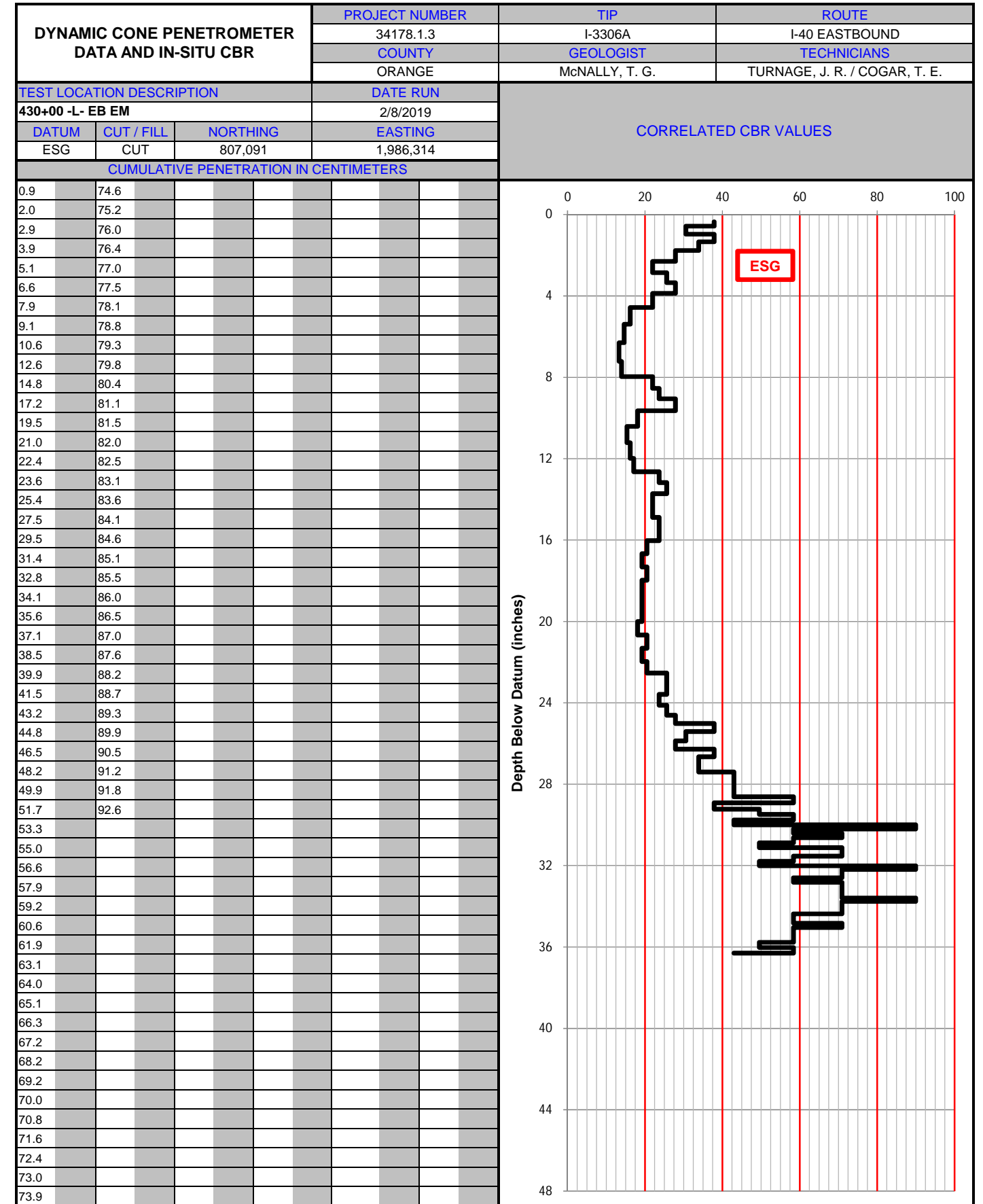


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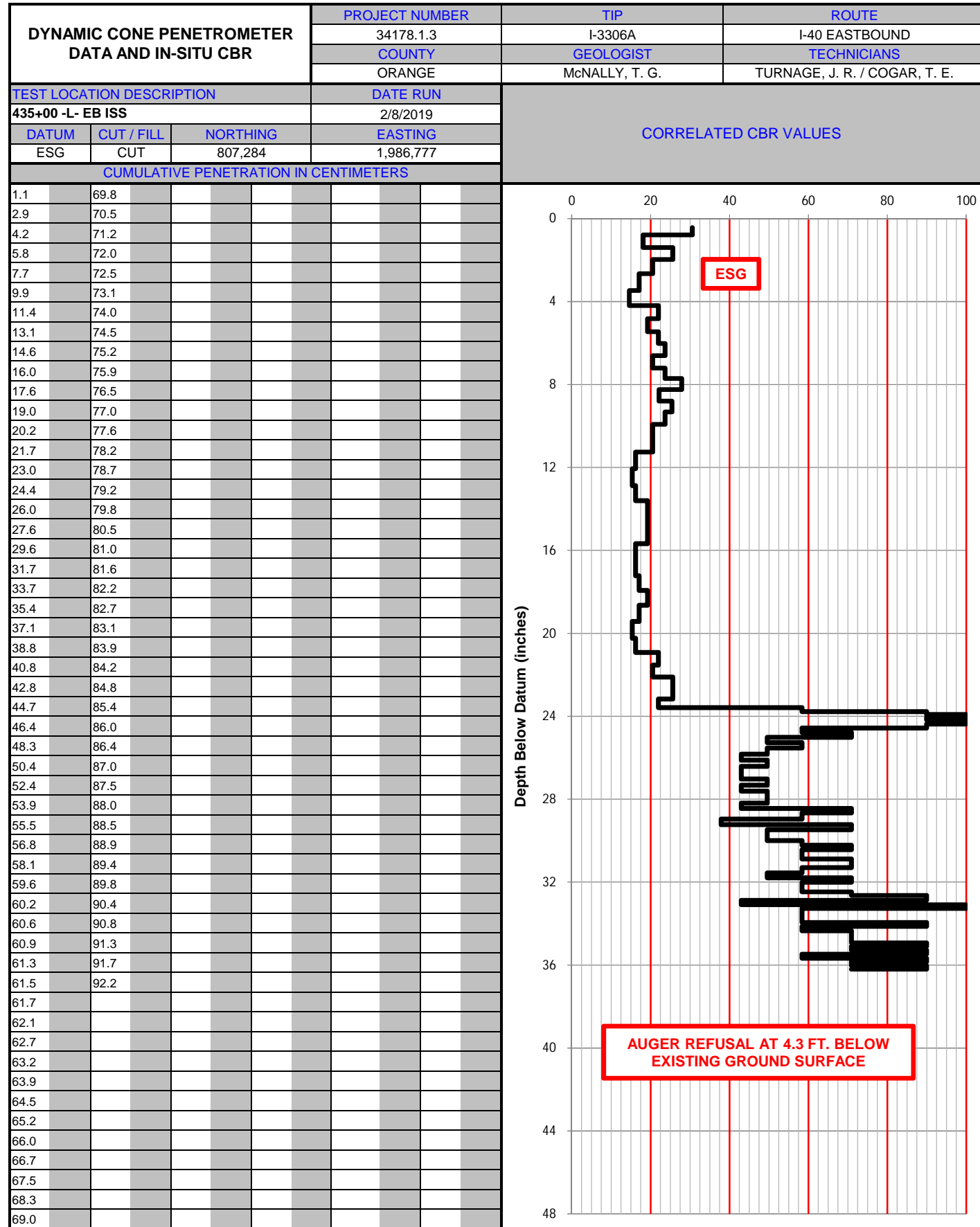
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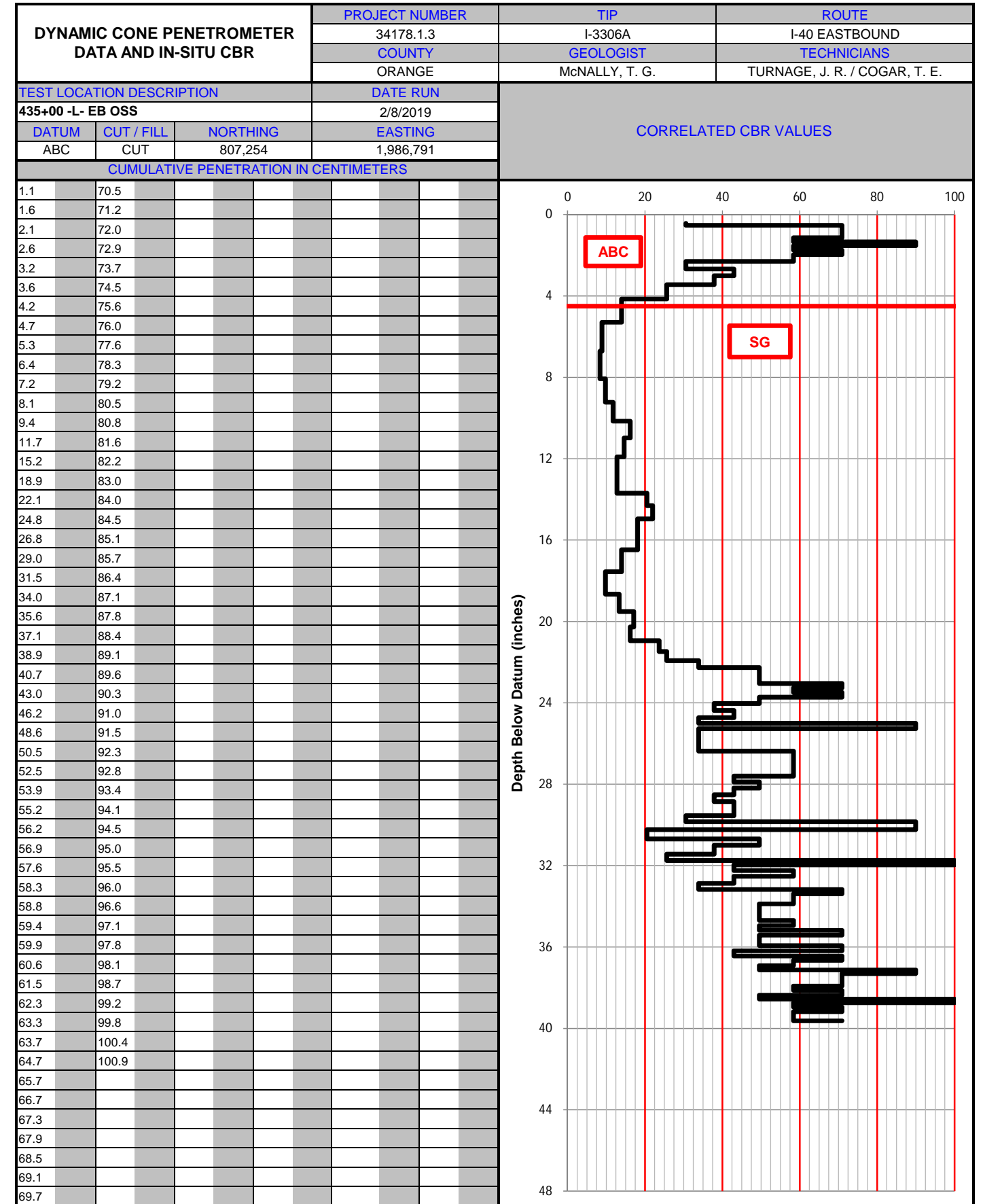
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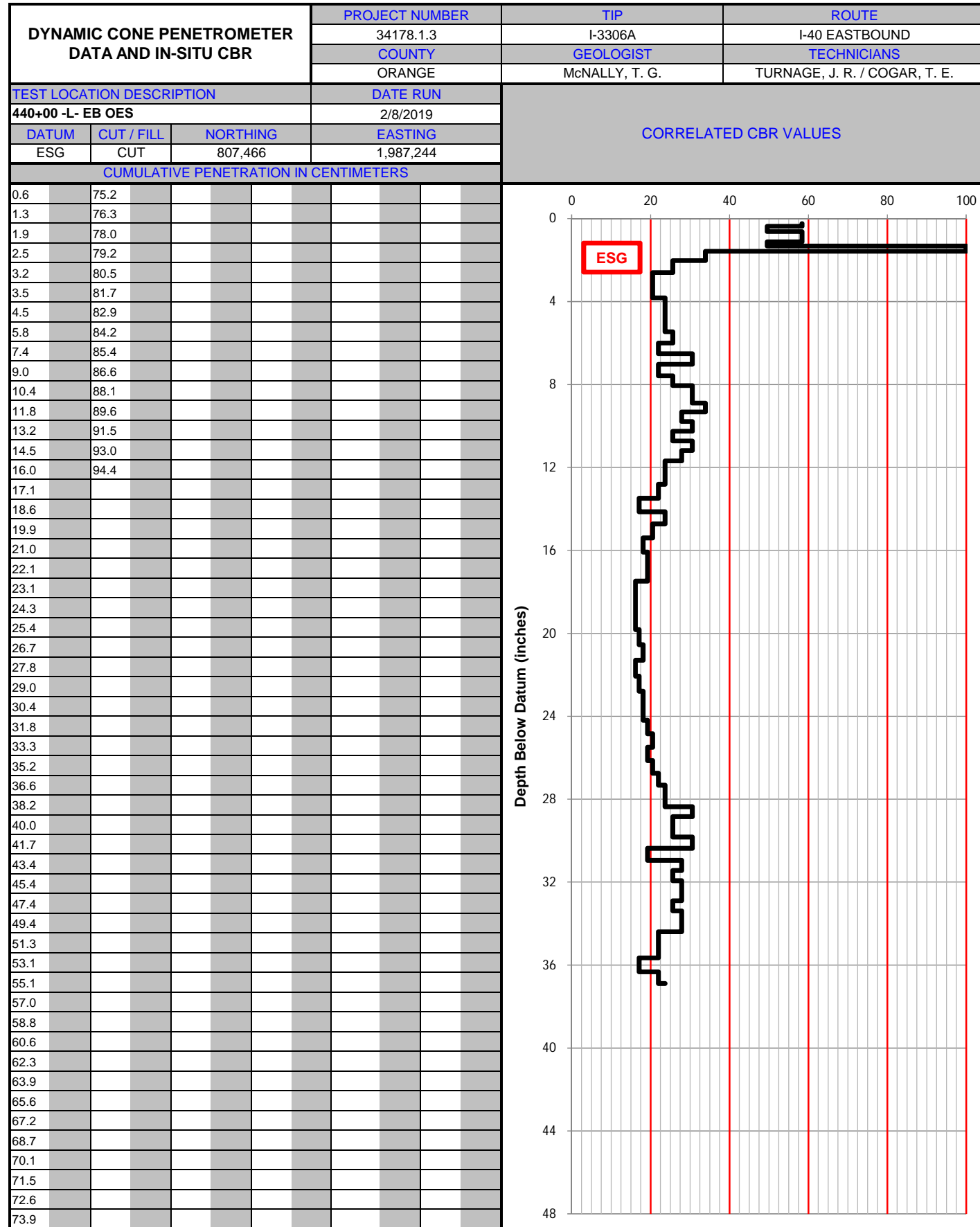


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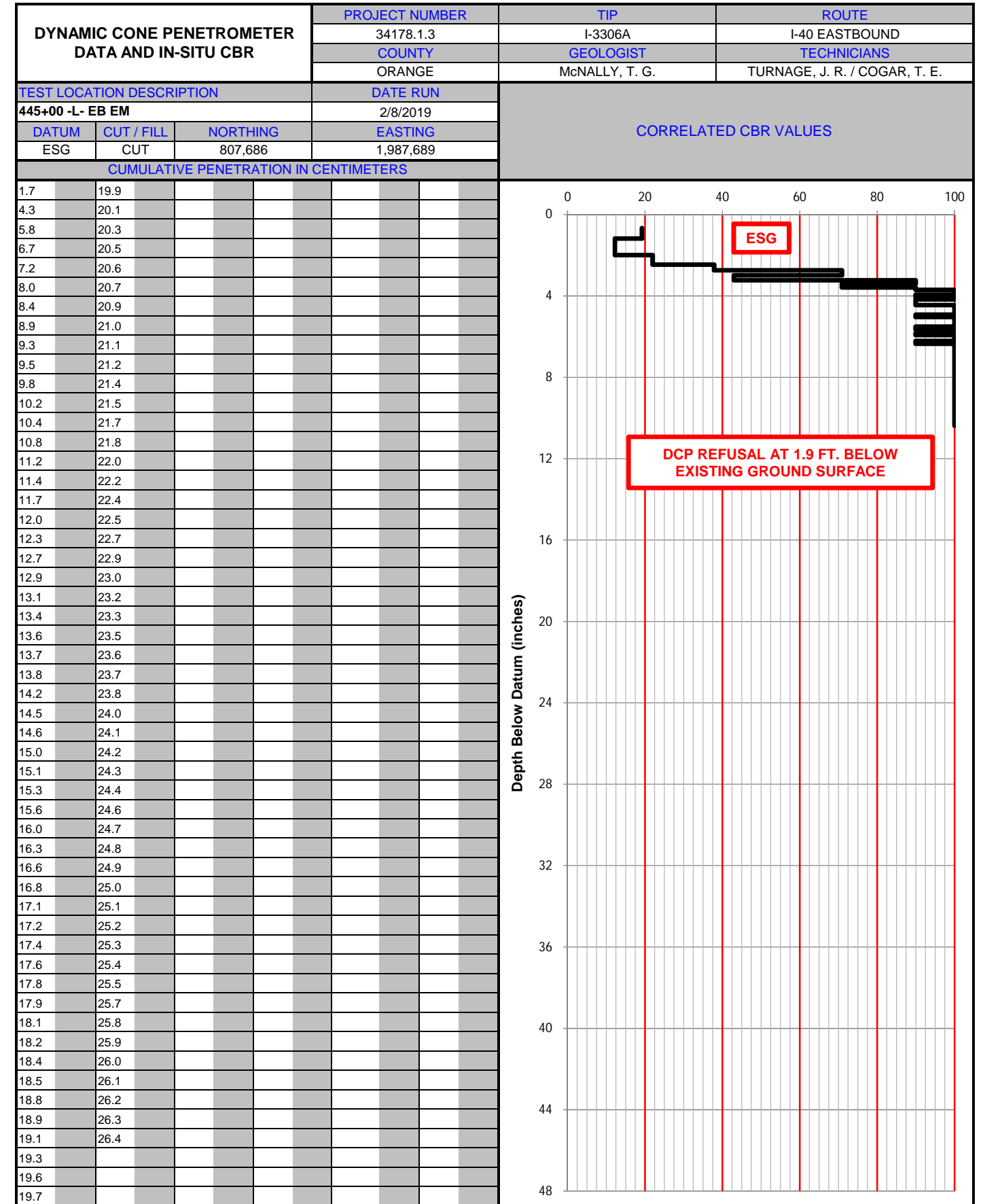


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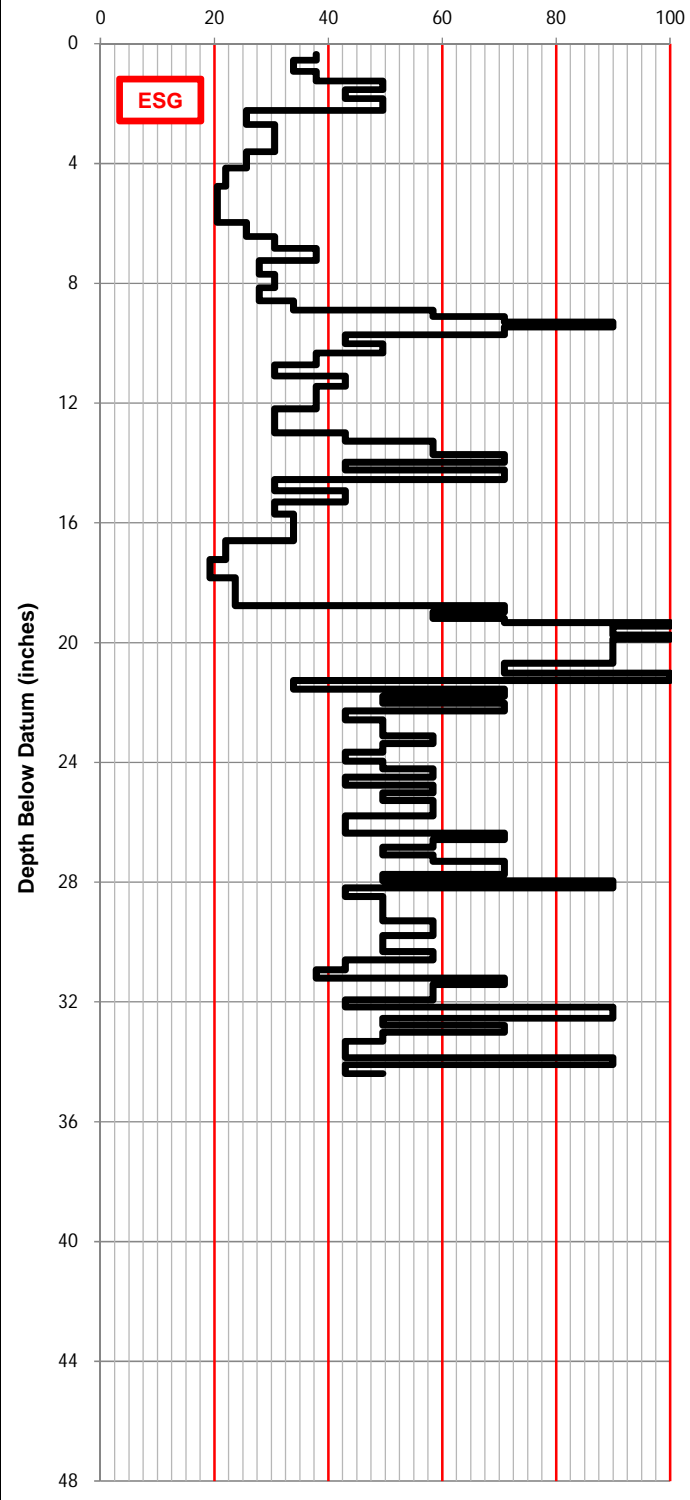
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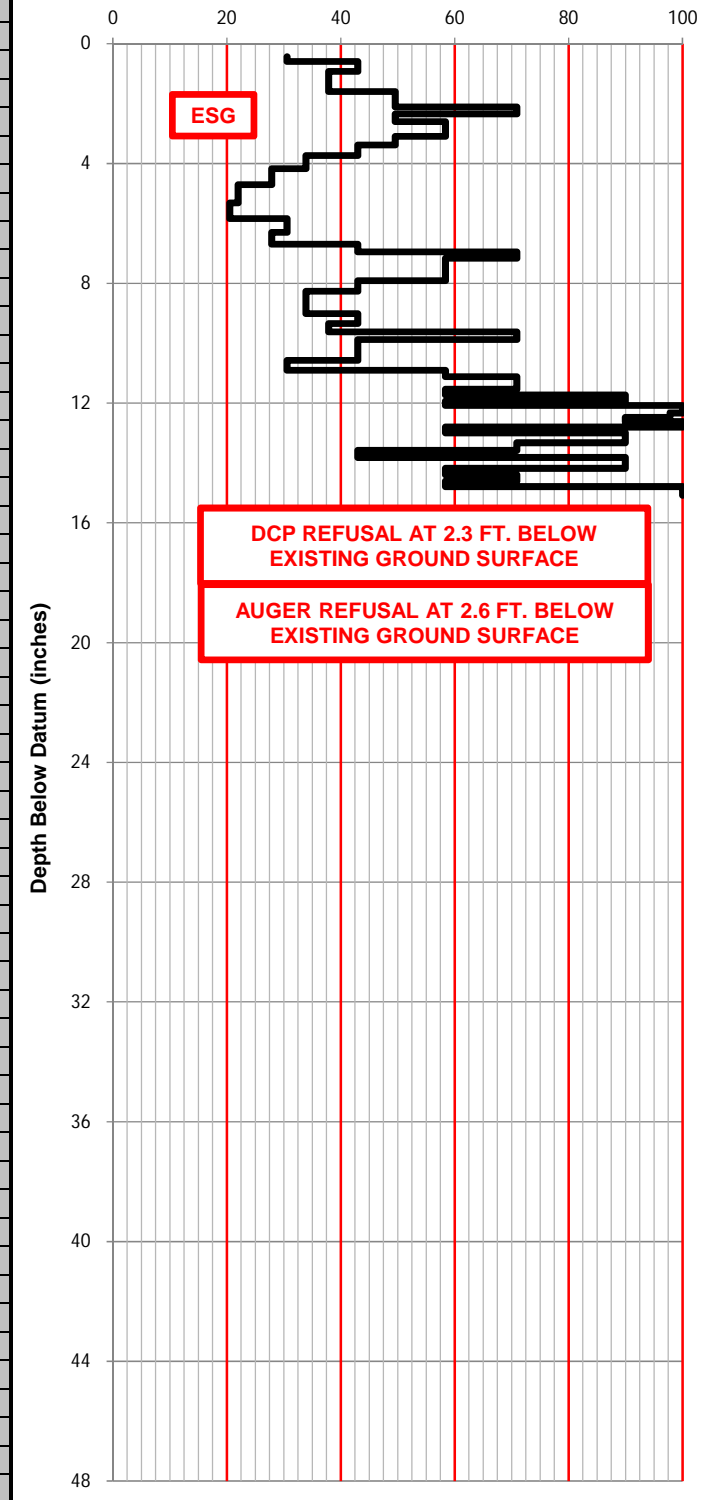
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
450+00 -L- EB OES				2/8/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	807,763	1,988,180			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.9	50.0	82.3				
1.9	50.3	83.0				
2.8	50.7	83.5				
3.5	51.1	84.2				
4.3	51.5	85.0				
5.0	51.9	85.8				
6.3	52.3	86.2				
7.4	52.8	87.0				
8.5	53.3	87.7				
9.8	53.5					
11.3	54.5					
12.9	55.0					
14.5	55.7					
15.8	56.2					
16.9	57.0					
17.8	57.7					
19.0	58.4					
20.1	59.0					
21.3	59.7					
22.3	60.5					
22.9	61.2					
23.4	61.8					
23.8	62.6					
24.3	63.2					
25.1	63.9					
25.8	64.5					
26.7	65.1					
27.8	65.9					
28.6	66.7					
29.5	67.2					
30.4	67.8					
31.5	68.5					
32.6	69.1					
33.4	69.6					
34.0	70.1					
34.6	70.8					
35.1	71.2					
35.9	72.0					
36.4	72.7					
37.5	73.4					
38.3	74.1					
39.4	74.7					
40.4	75.3					
41.4	76.0					
42.9	76.7					
44.6	77.3					
46.0	78.1					
47.4	79.0					
47.9	79.5					
48.5	80.1					
49.0	80.7					
49.2	81.5					
49.6	81.9					



Notes:  
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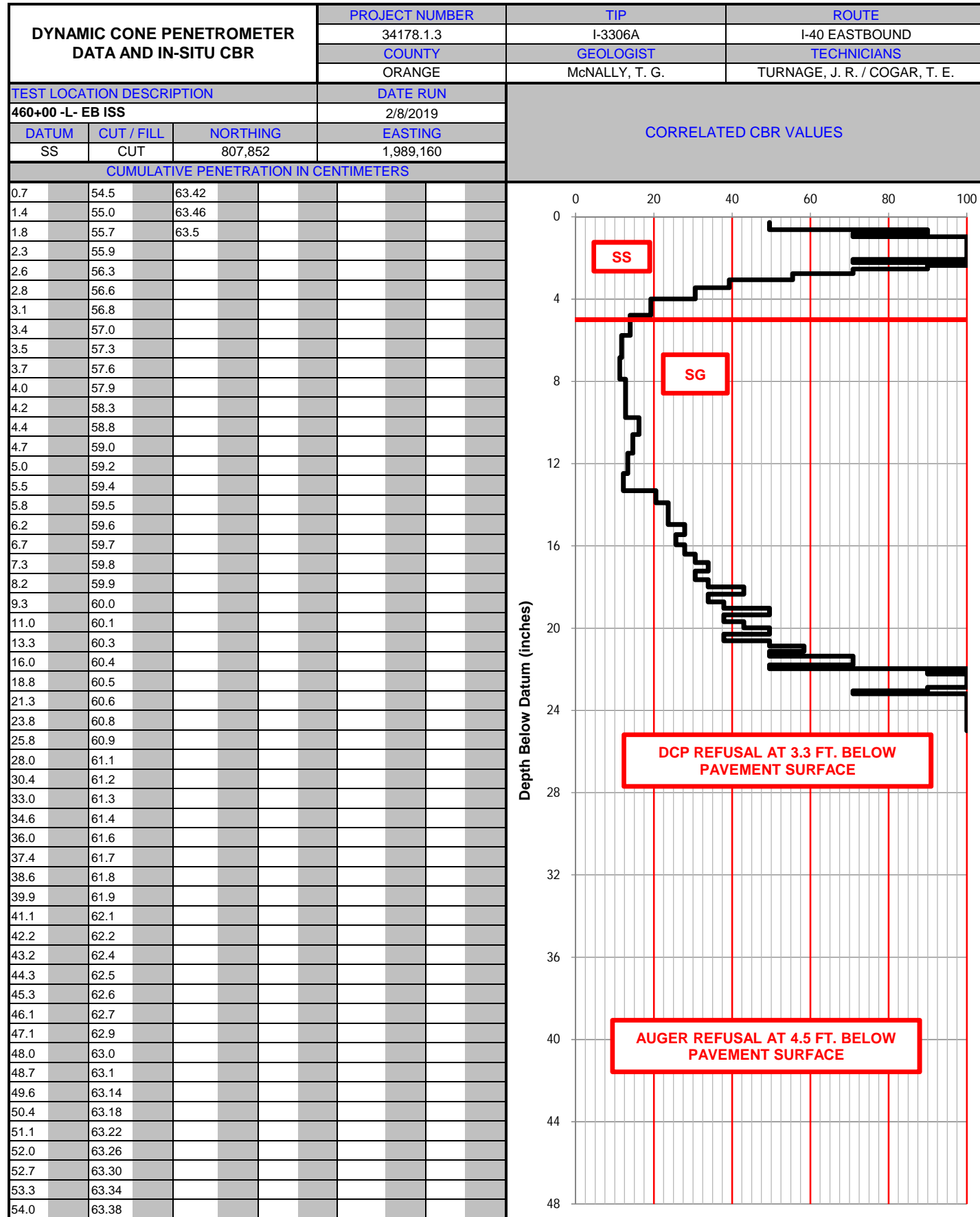


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
455+00 -L- EB EM				2/8/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	807,866	1,988,664			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.1	37.7					
1.9	37.8					
2.8	37.81					
3.7	37.82					
4.4	37.83					
5.1	37.84					
5.6	37.85					
6.3	37.86					
6.9	37.87					
7.5	37.88					
8.2	37.89					
9.0	37.9					
10.0	37.91					
11.2	37.92					
12.7	37.93					
14.3	37.94					
15.4	37.95					
16.6	37.96					
17.4	37.97					
18.3	37.98					
18.3	37.99					
19.1	38.0					
19.7	38.01					
20.5	38.02					
21.5	38.03					
22.5	38.04					
23.3	38.05					
24.2	38.06					
24.7	38.07					
25.5	38.08					
26.3	38.09					
27.4	38.1					
28.0	38.11					
28.5	38.12					
29.0	38.13					
29.6	38.14					
30.0	38.15					
30.6	38.16					
30.8	38.17					
31.1	38.18					
31.5	38.19					
31.9	38.2					
32.2	38.21					
32.8	38.22					
33.2	38.23					
33.6	38.24					
34.1	38.25					
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35.3	38.27					
35.7	38.28					
36.3	38.29					
36.8	38.3					
37.4						

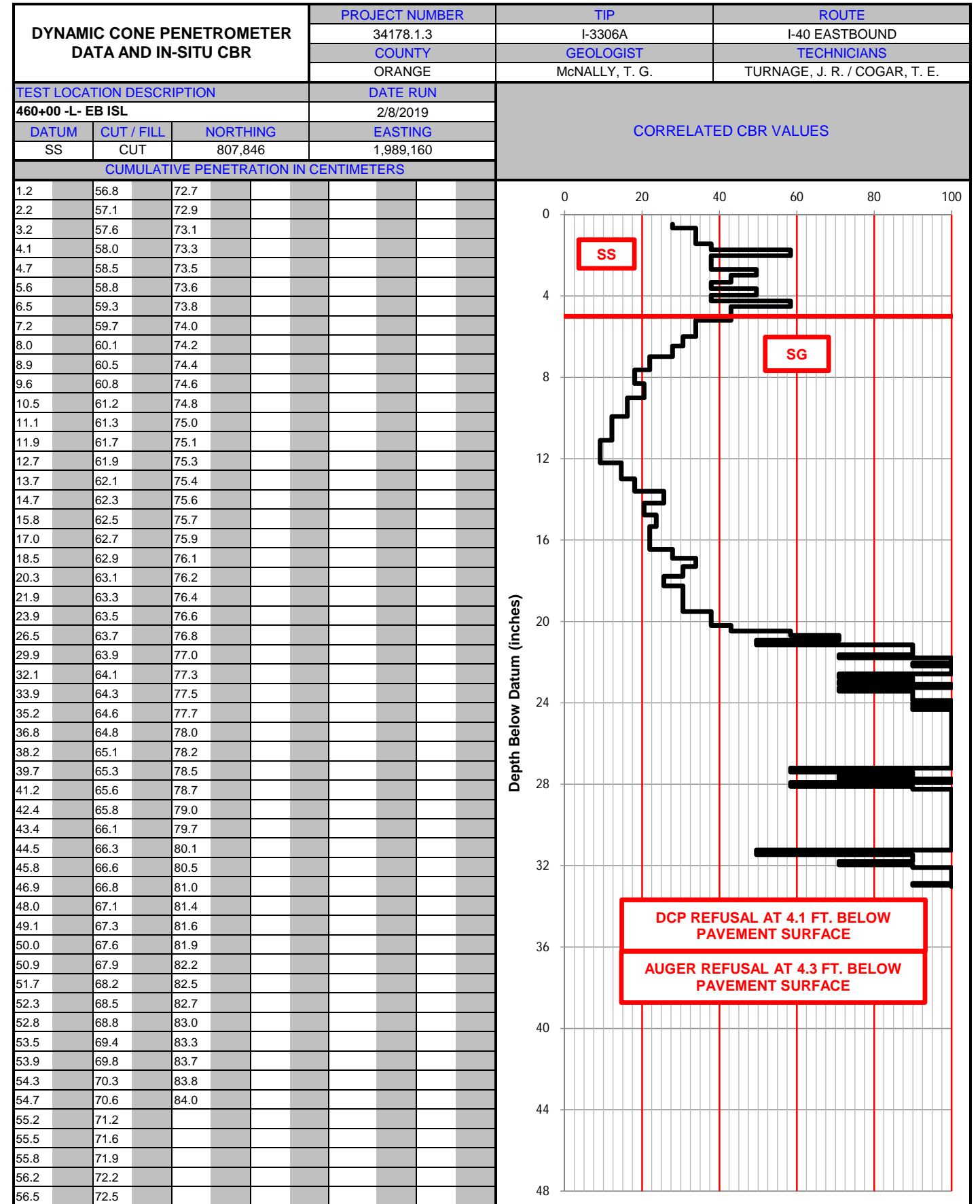


Notes:  
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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



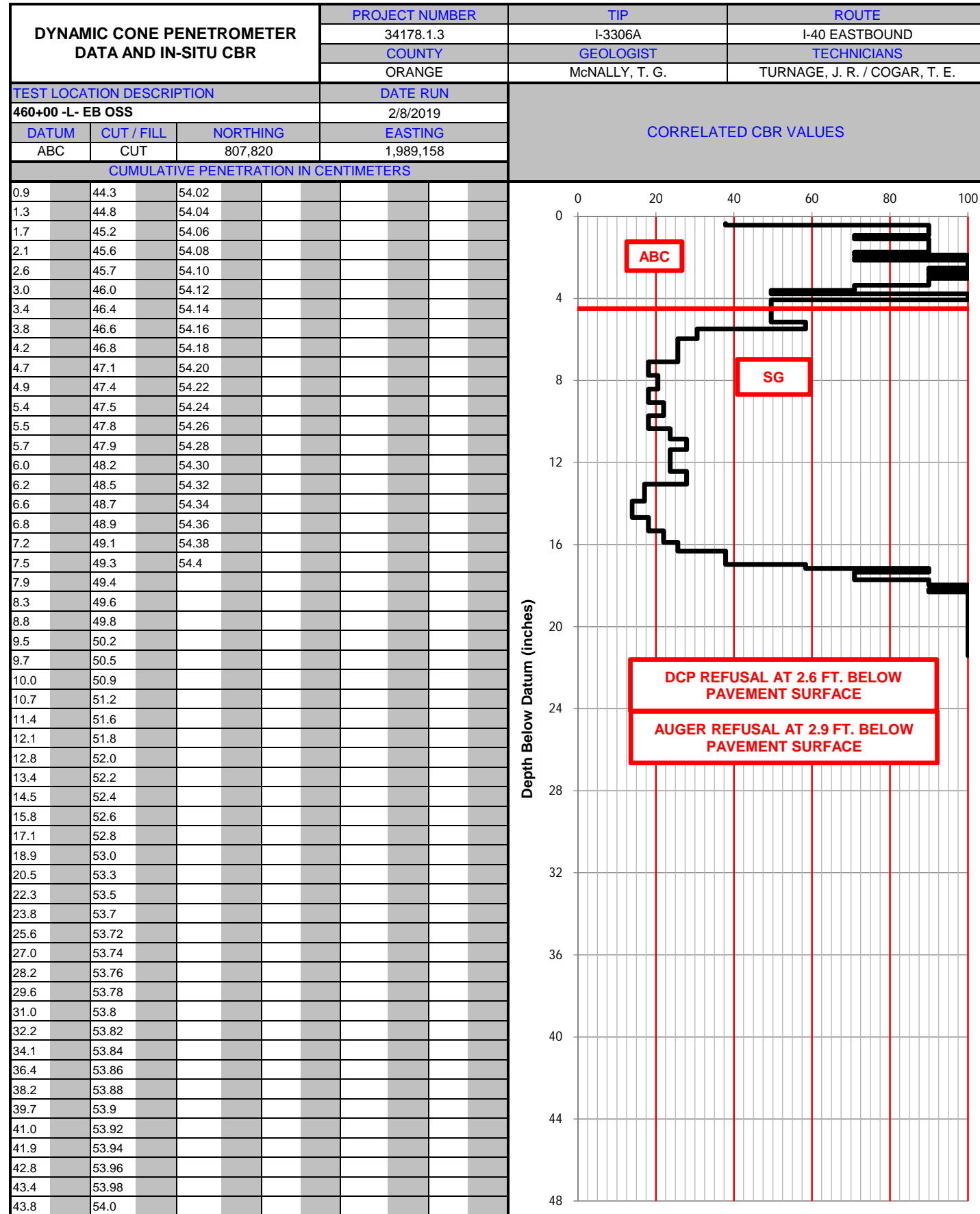


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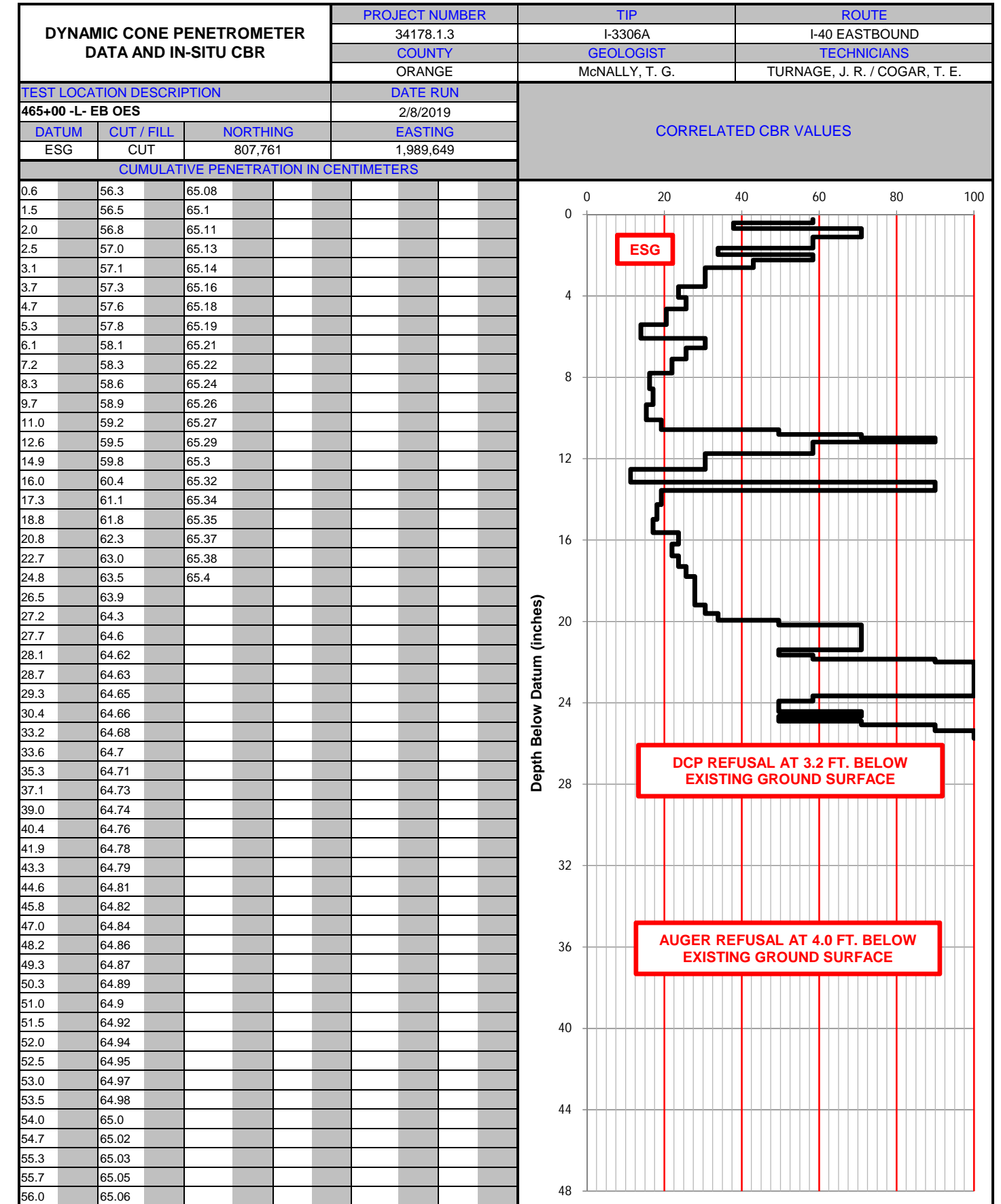


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 CTBC = Cement-Treated Base Course  
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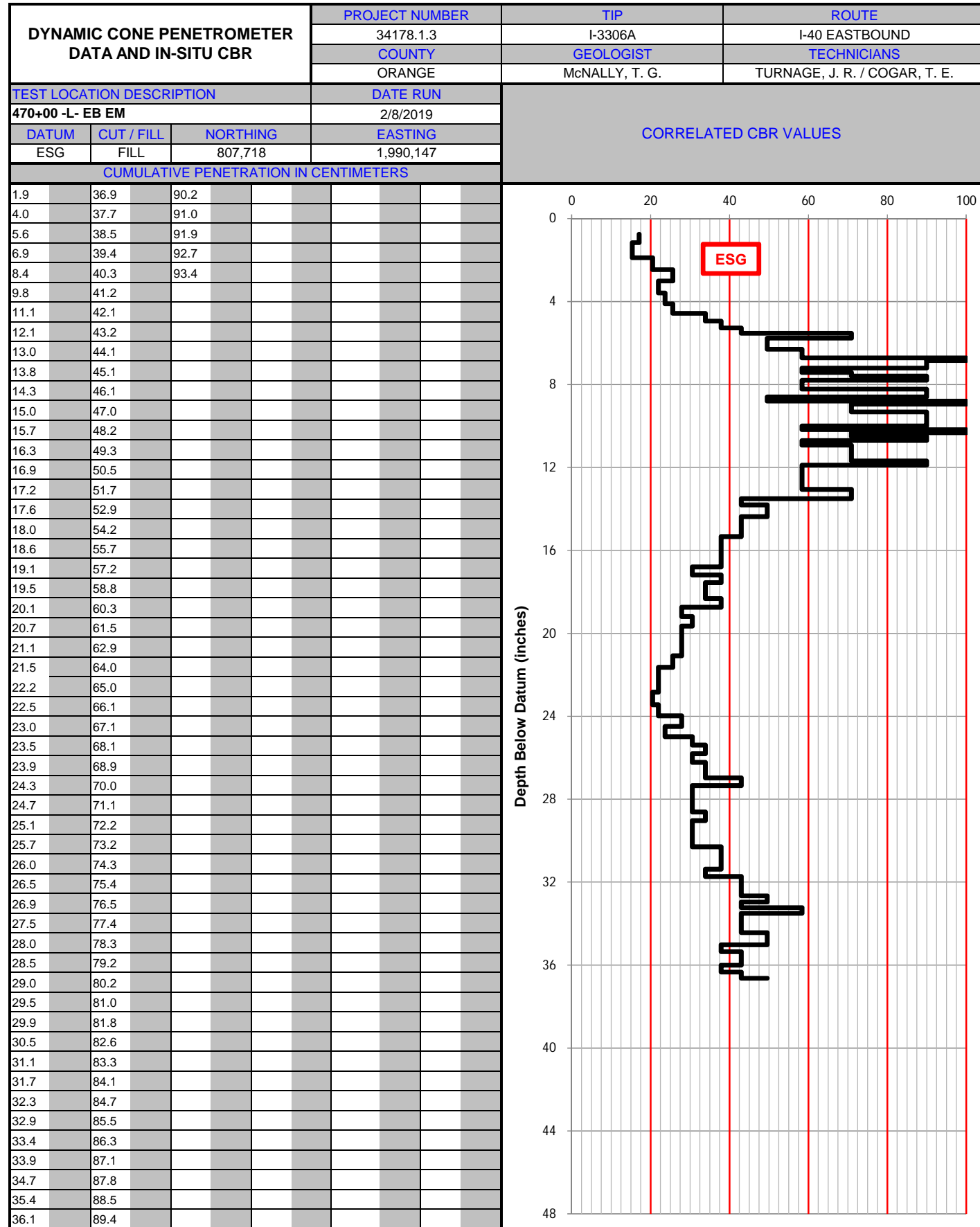


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 ABC = Aggregate Base Course  
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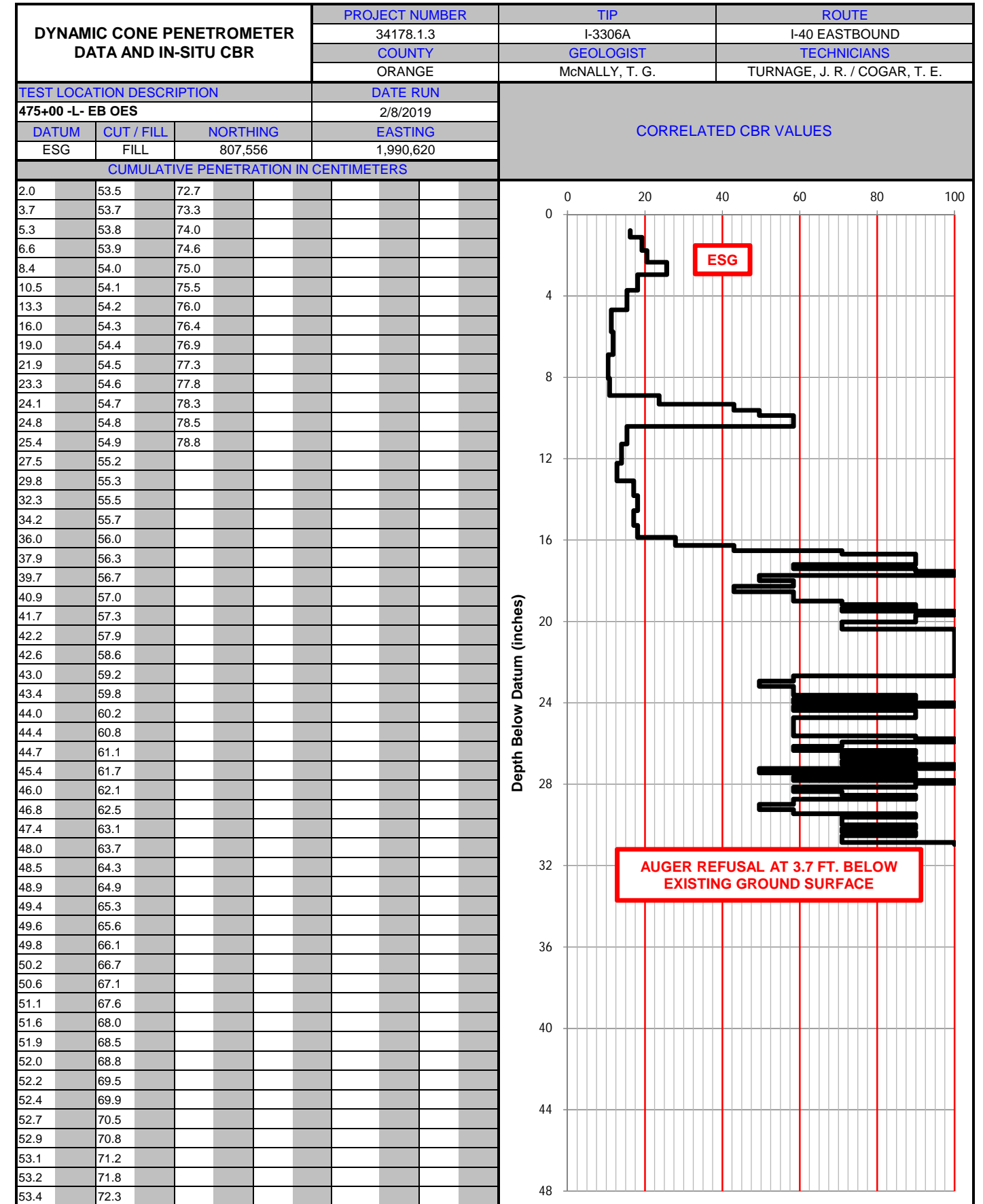


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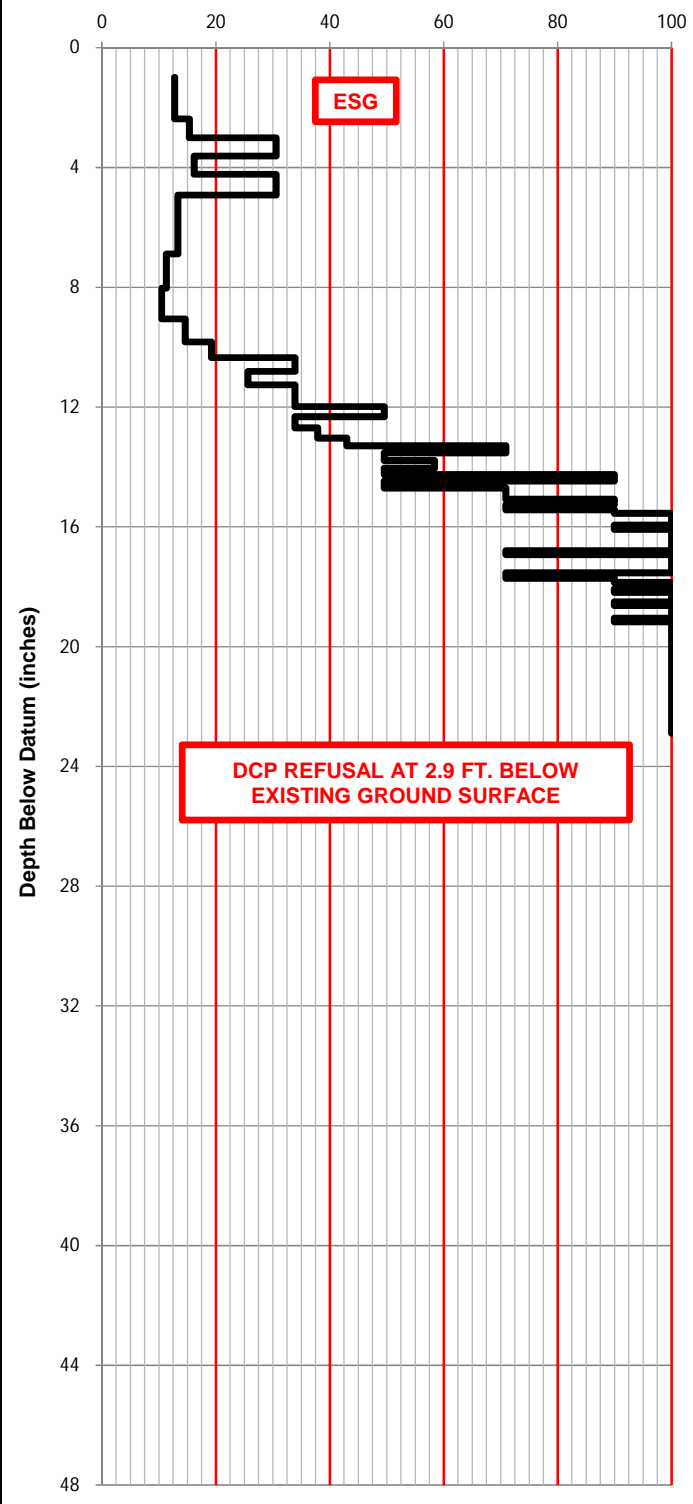
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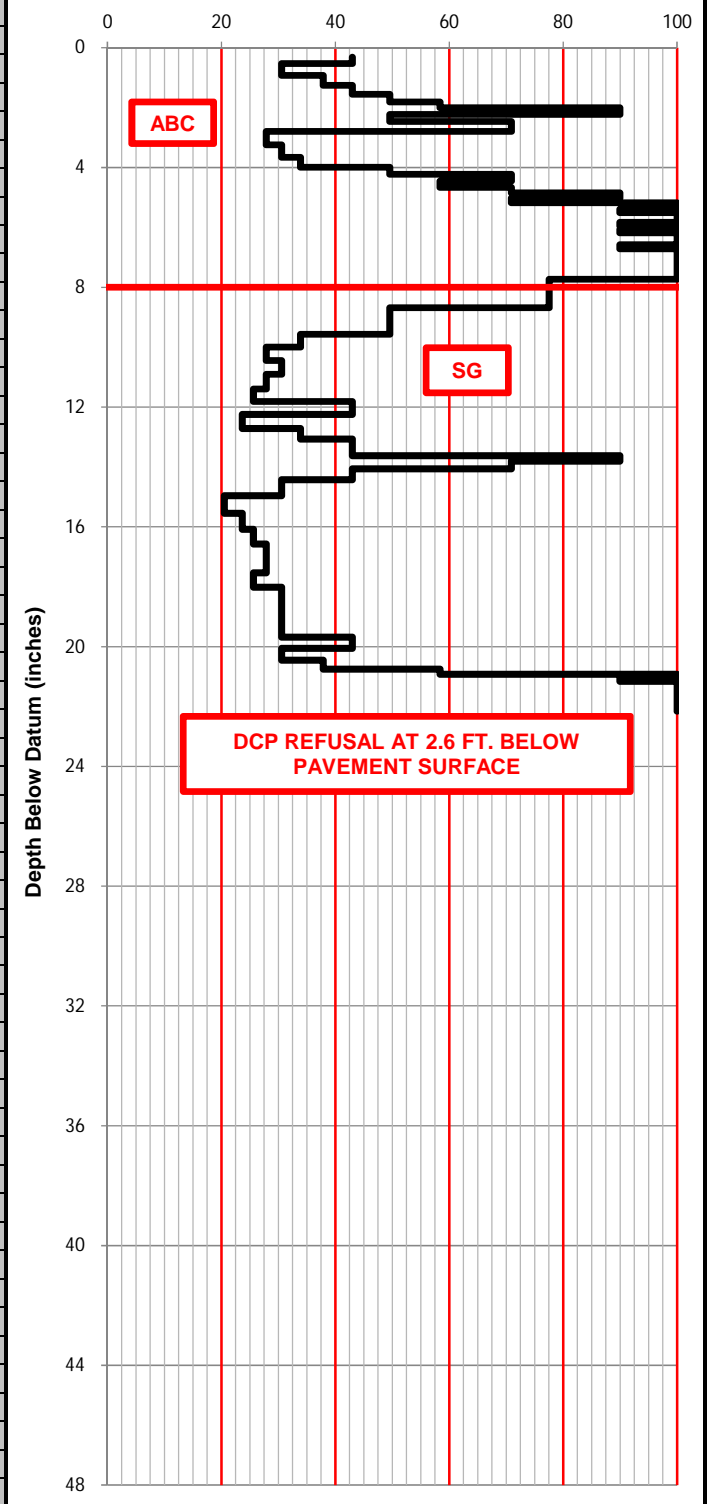
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
480+00 -L- EB EM				2/8/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	807,449	1,991,108			
CUMULATIVE PENETRATION IN CENTIMETERS						
2.5	45.7	56.0				
5.0	46.1	56.3				
7.1	46.3	56.5				
8.2	46.6	56.7				
10.2	46.8	57.0				
11.3	47.2	57.2				
13.7	47.4	57.4				
16.1	47.6	57.48				
18.9	47.8	57.56				
21.9	47.9	57.64				
24.1	48.0	57.72				
25.8	48.1	57.80				
26.8	48.2	57.88				
28.1	48.6	57.96				
29.1	48.8	58.04				
30.1	49.0	58.12				
30.8	49.2	58.2				
31.8	49.3					
32.7	49.5					
33.5	49.7					
34.0	49.8					
34.7	49.9					
35.3	50.1					
36.0	50.2					
36.4	50.3					
37.1	50.5					
37.6	50.6					
38.1	50.8					
38.5	50.9					
39.0	51.1					
39.4	51.2					
39.6	51.4					
39.9	51.5					
40.1	51.7					
40.3	51.8					
40.7	52.0					
41.0	52.2					
41.2	52.3					
41.4	52.5					
41.6	52.7					
41.9	52.9					
42.1	53.1					
42.4	53.4					
42.9	53.6					
43.1	53.8					
43.3	54.0					
43.5	54.3					
43.8	54.5					
44.1	54.8					
44.3	55.0					
44.8	55.3					
45.2	55.5					
45.5	55.8					



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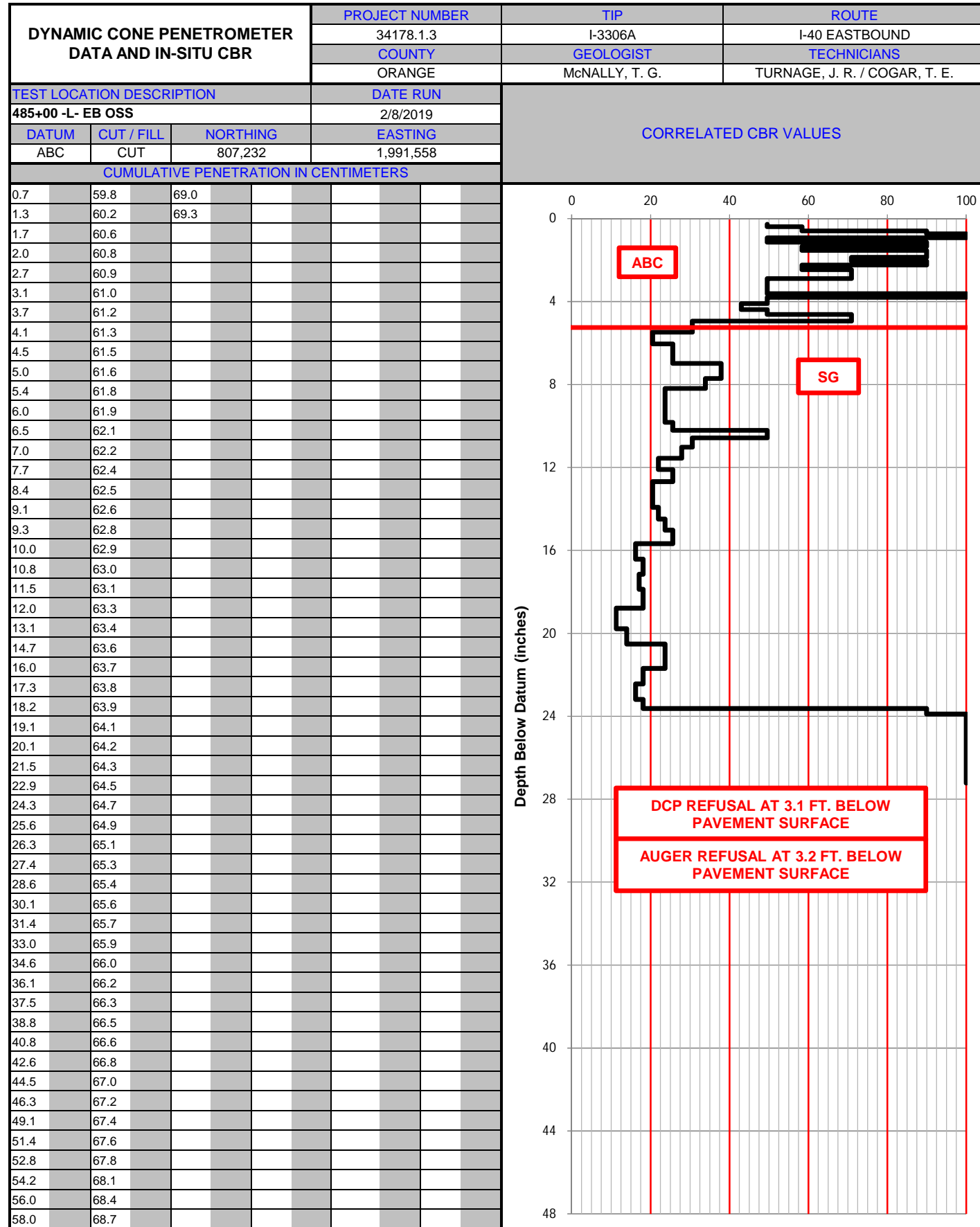


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
485+00 -L- EB ISS				2/8/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ABC	CUT	807,263	1,991,571			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.8	27.1	55.48				
1.9	28.3	55.5				
2.8	29.6	55.52				
3.6	30.4	55.54				
4.3	31.8	55.56				
4.9	32.8	55.58				
5.3	33.6	55.6				
6.0	34.4	55.62				
6.5	34.8	55.64				
7.7	35.3	55.66				
8.8	36.1	55.68				
9.8	37.2	55.7				
10.5	38.8	55.73				
11.0	40.2	55.76				
11.6	41.5	55.79				
12.1	42.7	55.82				
12.5	43.9	55.85				
13.0	45.2	55.88				
13.3	46.3	55.91				
13.5	47.4	55.94				
13.9	48.5	55.97				
14.1	49.6	56.0				
14.3	50.4	56.03				
14.6	51.5	56.06				
15.0	52.4	56.09				
15.2	53.0	56.12				
15.6	53.3	56.15				
15.8	53.7	56.18				
16.1	53.8	56.21				
16.2	54.1	56.24				
16.3	54.3	56.27				
16.5	54.4	56.3				
16.9	54.5					
17.2	54.6					
17.5	54.7					
17.6	54.76					
17.7	54.82					
17.9	54.88					
18.2	54.94					
18.5	55.0					
18.8	55.06					
19.1	55.12					
19.4	55.18					
19.9	55.24					
20.3	55.3					
20.8	55.32					
21.2	55.34					
21.7	55.36					
22.4	55.38					
23.1	55.4					
23.8	55.42					
24.8	55.44					
26.0	55.46					

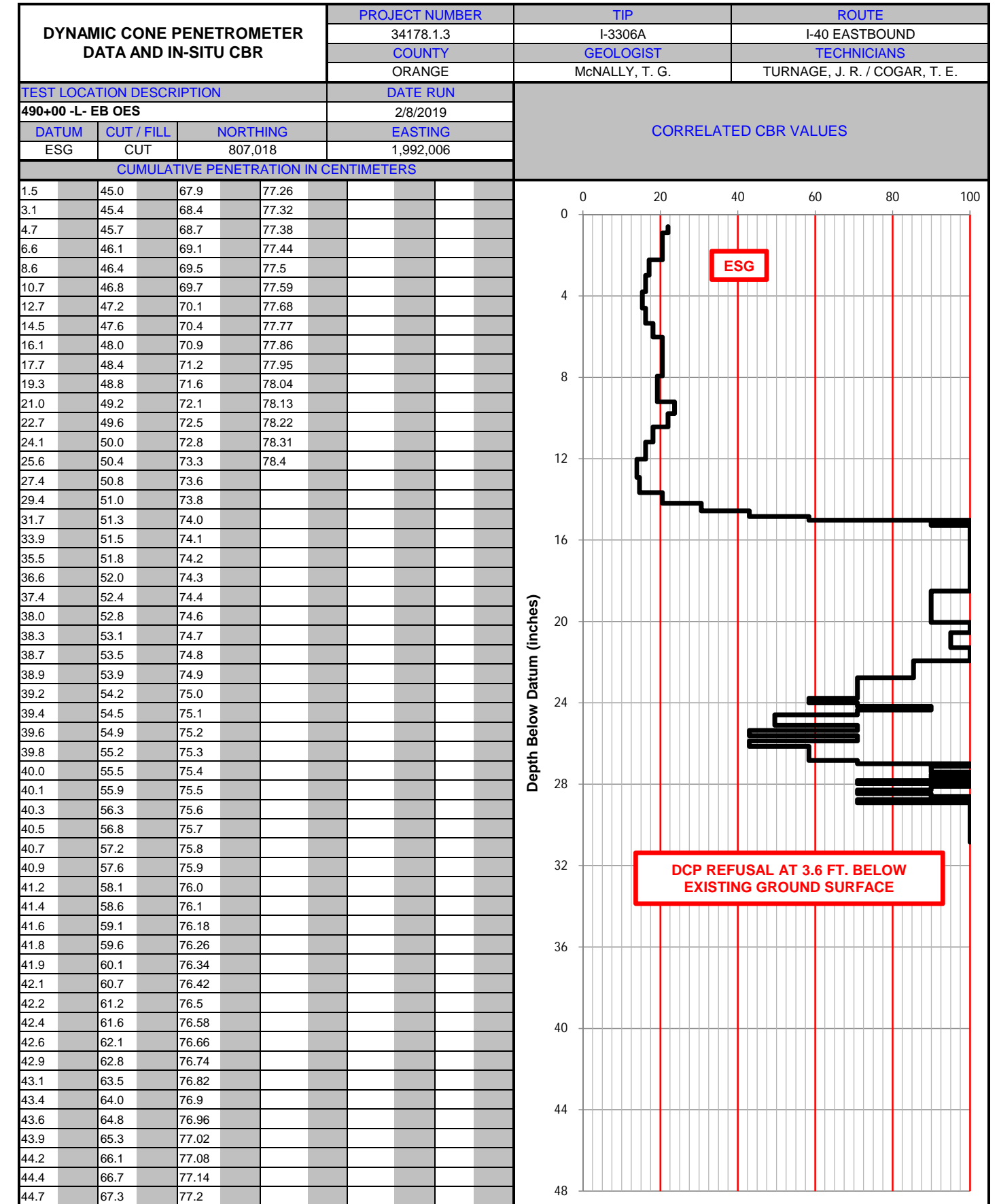


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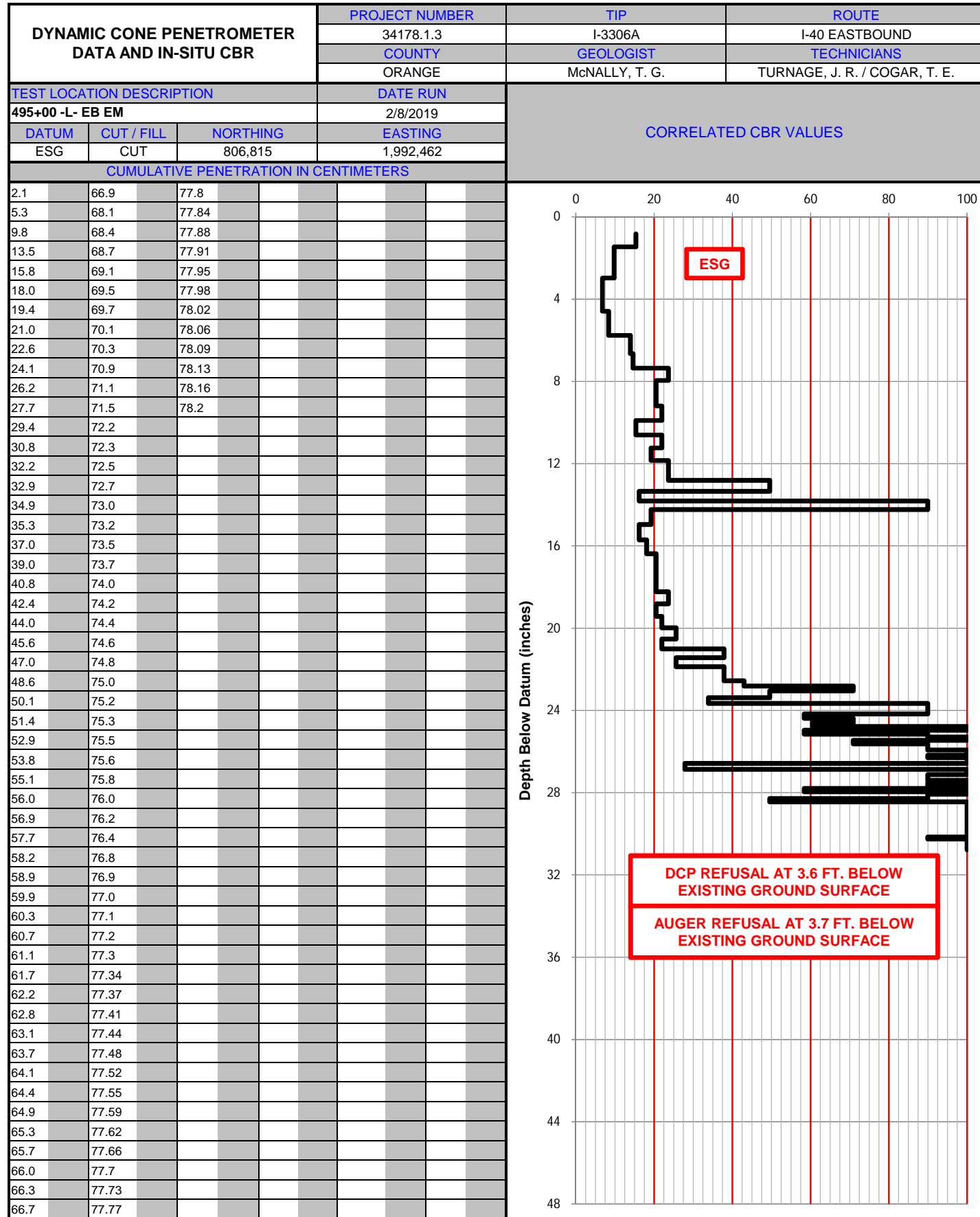
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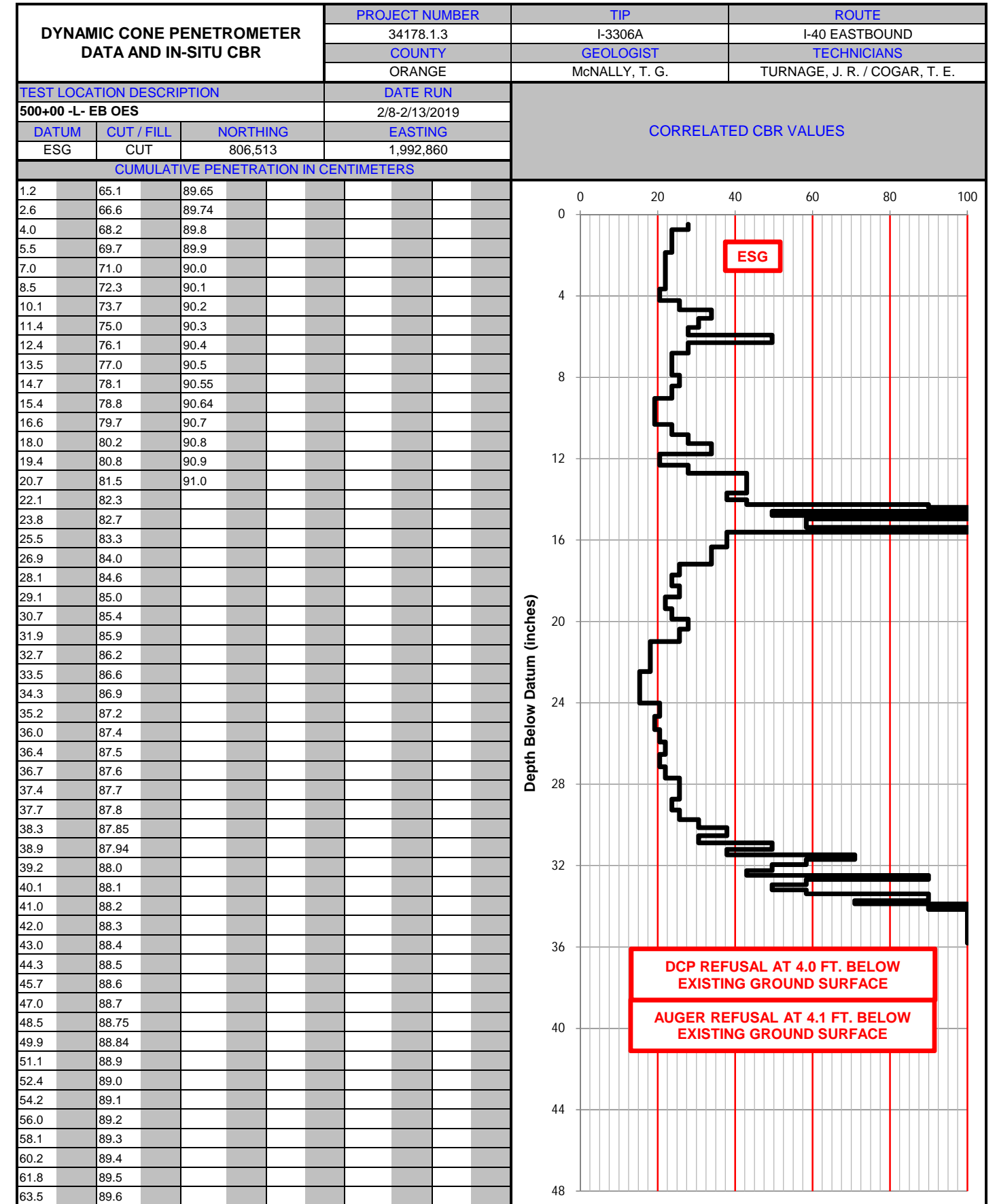
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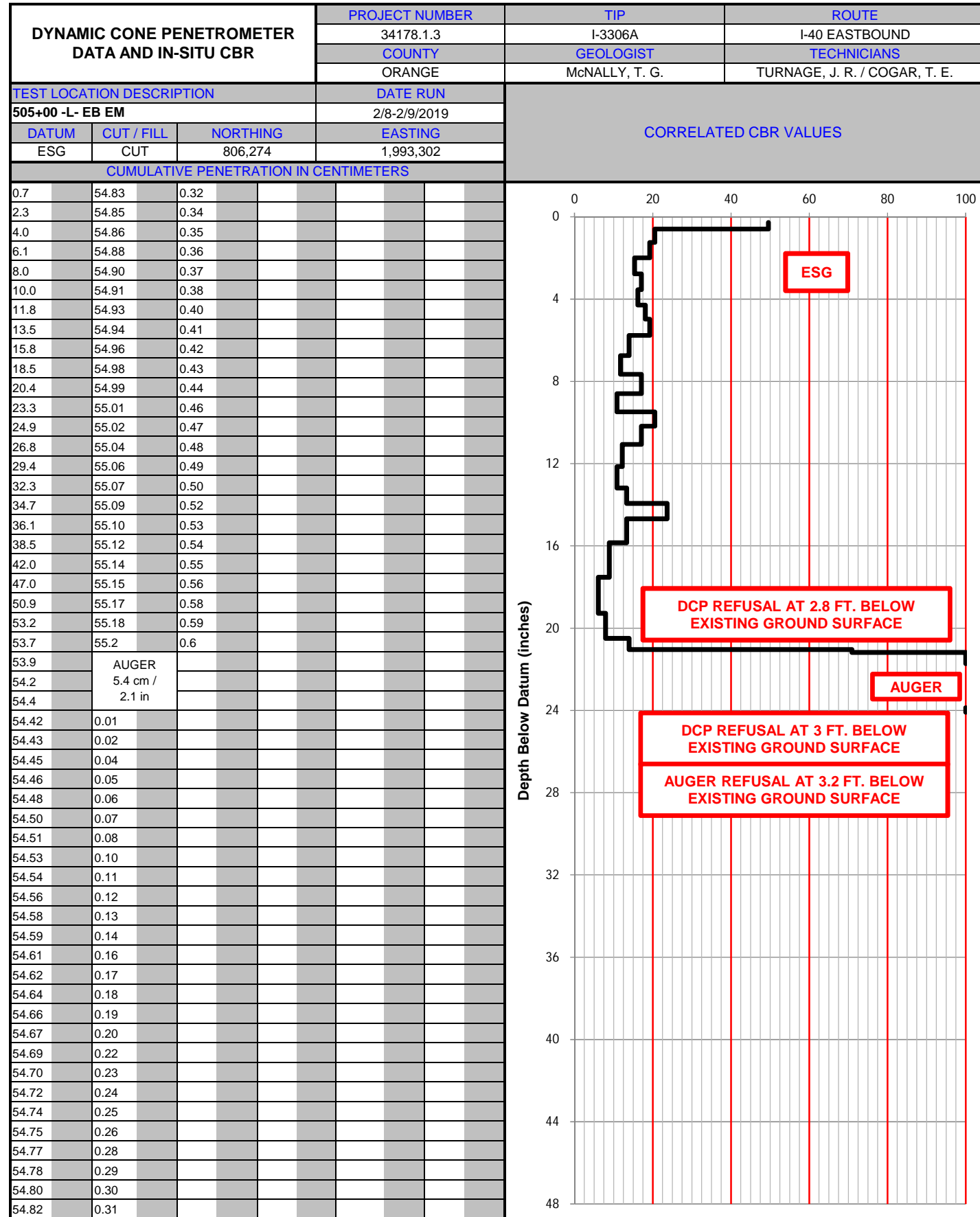


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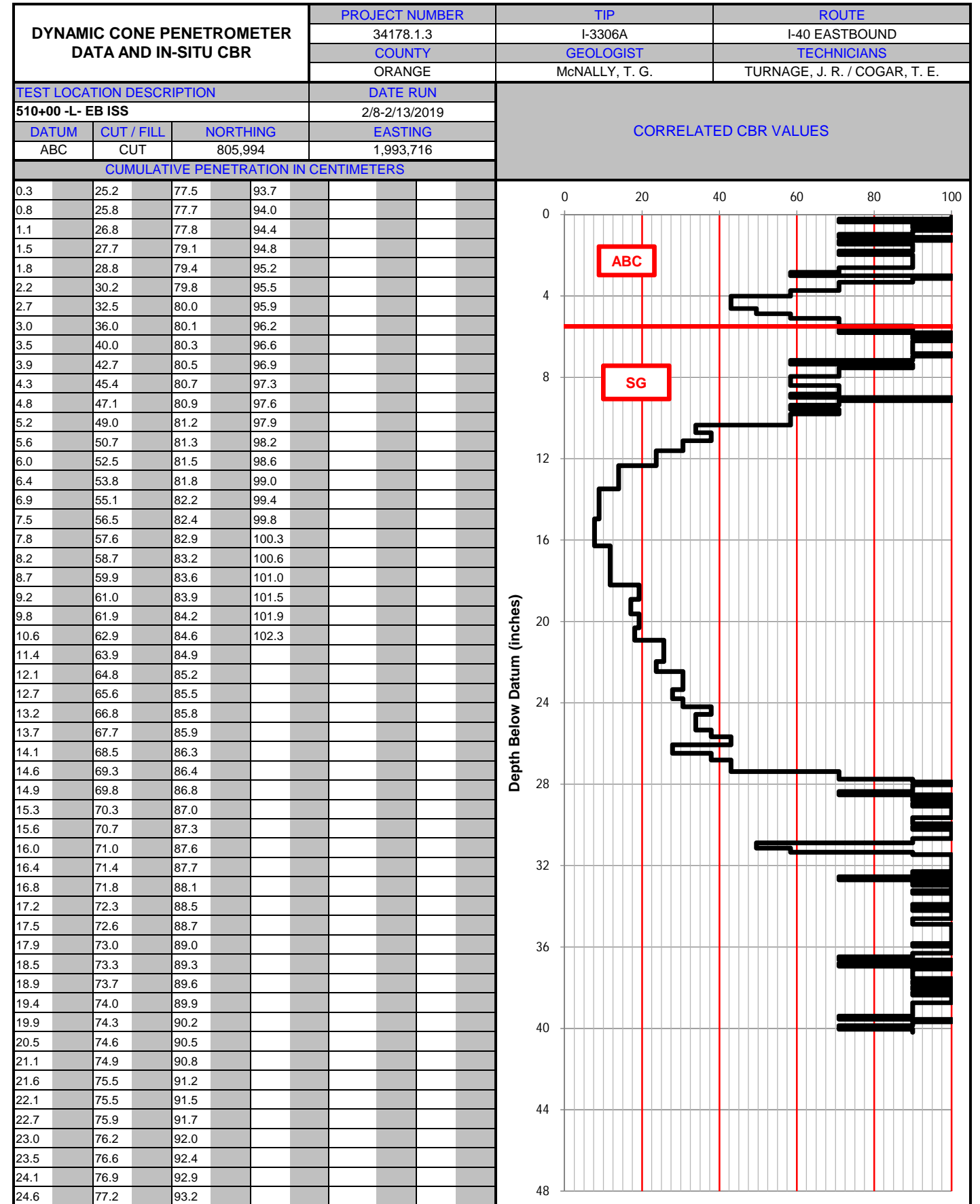


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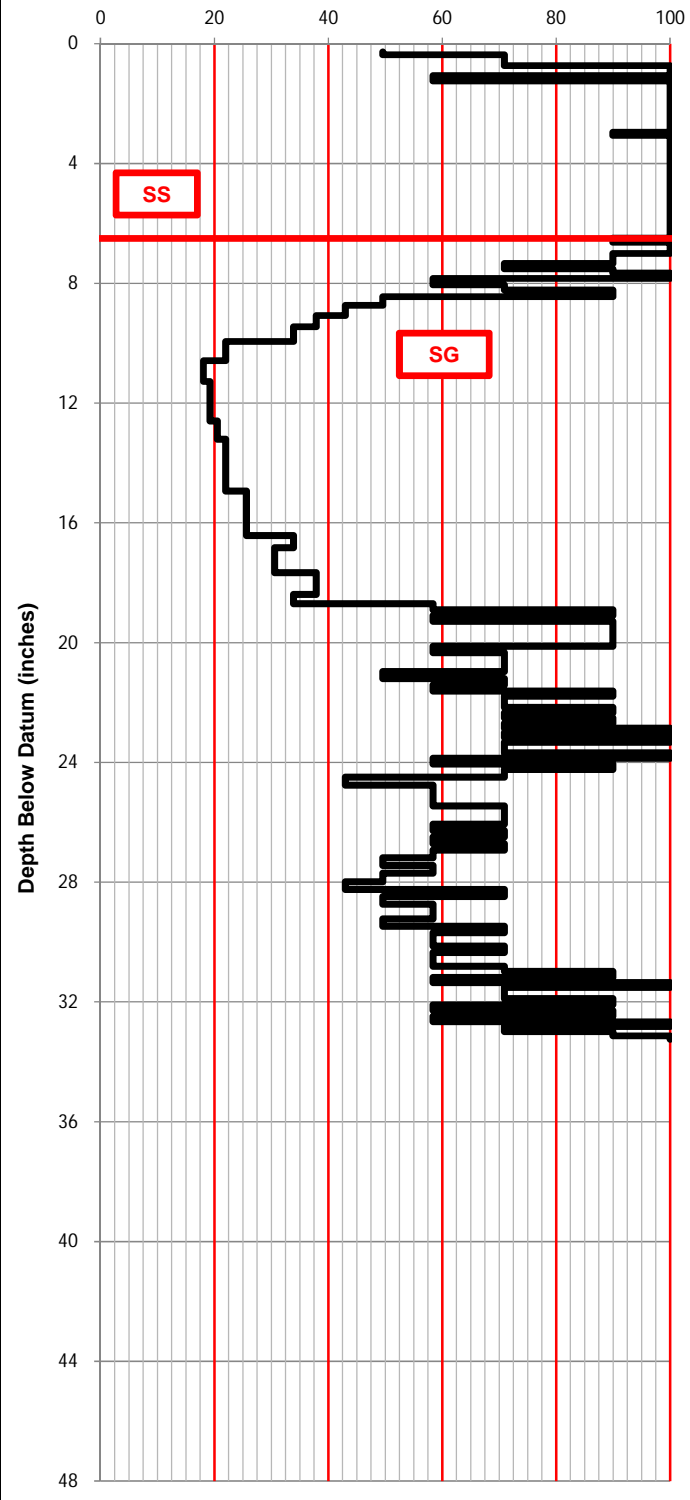
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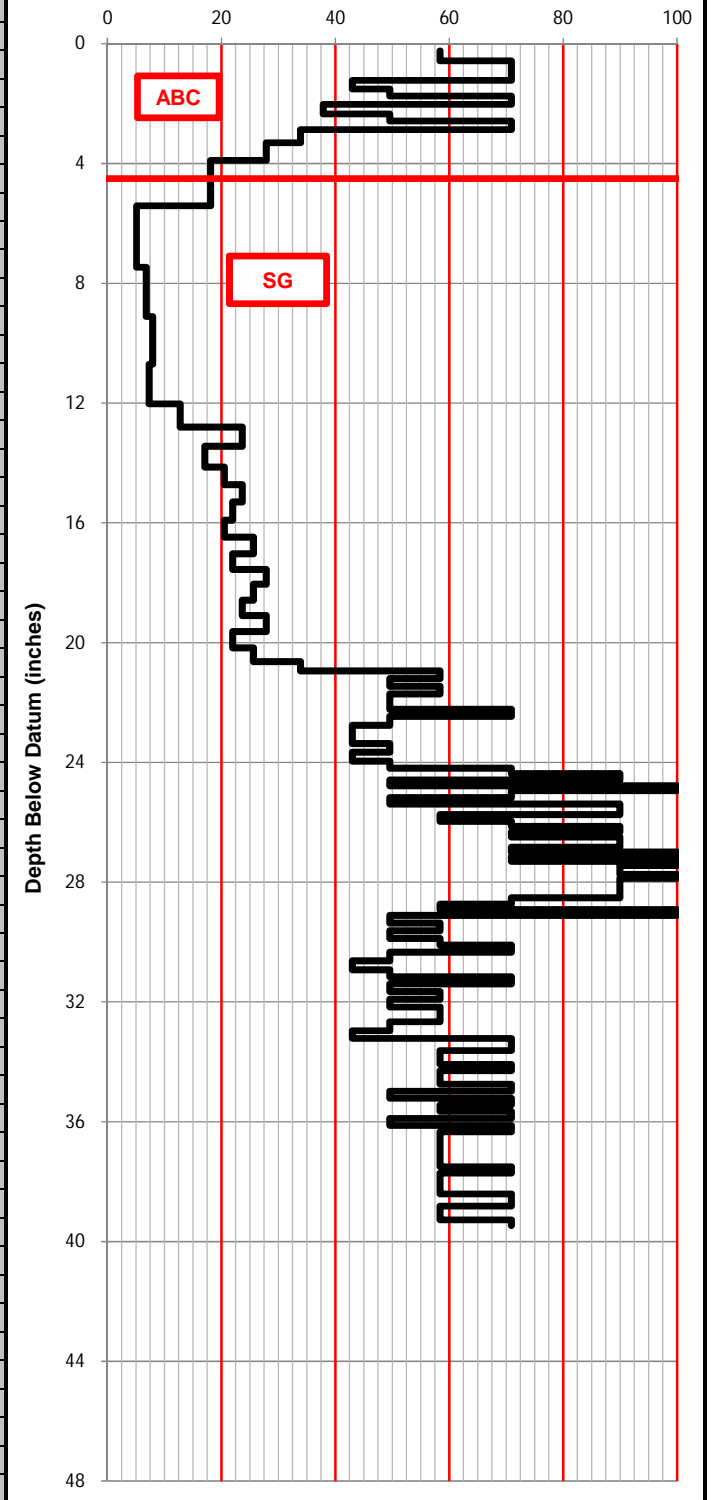
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE				McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		
510+00 -L- EB OSL				2/8-2/13/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
SS	CUT	805,974	1,993,703			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.7	10.4	26.0	65.4			
1.2	10.5	27.8	65.9			
1.7	10.6	29.5	66.5			
2.0	10.7	31.2	67.0			
2.3	10.8	32.8	67.6			
2.4	10.9	34.3	68.1			
3.0	11.0	35.8	68.7			
3.3	11.1	37.3	69.4			
3.5	11.3	38.6	70.0			
3.7	11.4	39.9	70.7			
4.0	11.6	41.2	71.5			
4.2	11.7	42.2	72.0			
4.4	11.8	43.3	72.7			
4.6	11.9	44.4	73.3			
4.9	12.1	45.3	73.9			
5.0	12.2	46.2	74.6			
5.2	12.3	47.2	75.1			
5.5	12.4	47.8	75.7			
5.7	12.6	48.2	76.3			
5.9	12.7	48.8	76.8			
6.1	12.9	49.2	77.4			
6.3	13.0	49.6	78.0			
6.5	13.2	50.0	78.5			
6.7	13.4	50.4	78.9			
6.9	13.5	50.8	79.5			
7.0	13.7	51.4	79.8			
7.1	13.9	51.9	80.3			
7.2	14.1	52.4	80.8			
7.3	14.3	52.9	81.2			
7.7	14.5	53.6	81.8			
7.8	14.7	54.1	82.2			
8.0	14.9	54.7	82.8			
8.1	15.2	55.1	83.1			
8.3	15.5	55.6	83.6			
8.4	15.8	56.1	84.0			
8.5	16.1	56.5	84.3			
8.7	16.3	57.0	84.6			
8.8	16.7	57.4				
9.0	17.0	57.9				
9.1	17.3	58.2				
9.2	17.6	58.7				
9.3	18.0	59.0				
9.4	18.4	59.5				
9.5	18.9	60.0				
9.6	19.3	60.3				
9.7	19.6	60.9				
9.8	20.2	61.3				
9.8	20.7	61.8				
9.9	21.1	62.6				
10.0	21.8	63.2				
10.1	22.6	63.8				
10.2	23.5	64.4				
10.3	24.5	64.9				



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

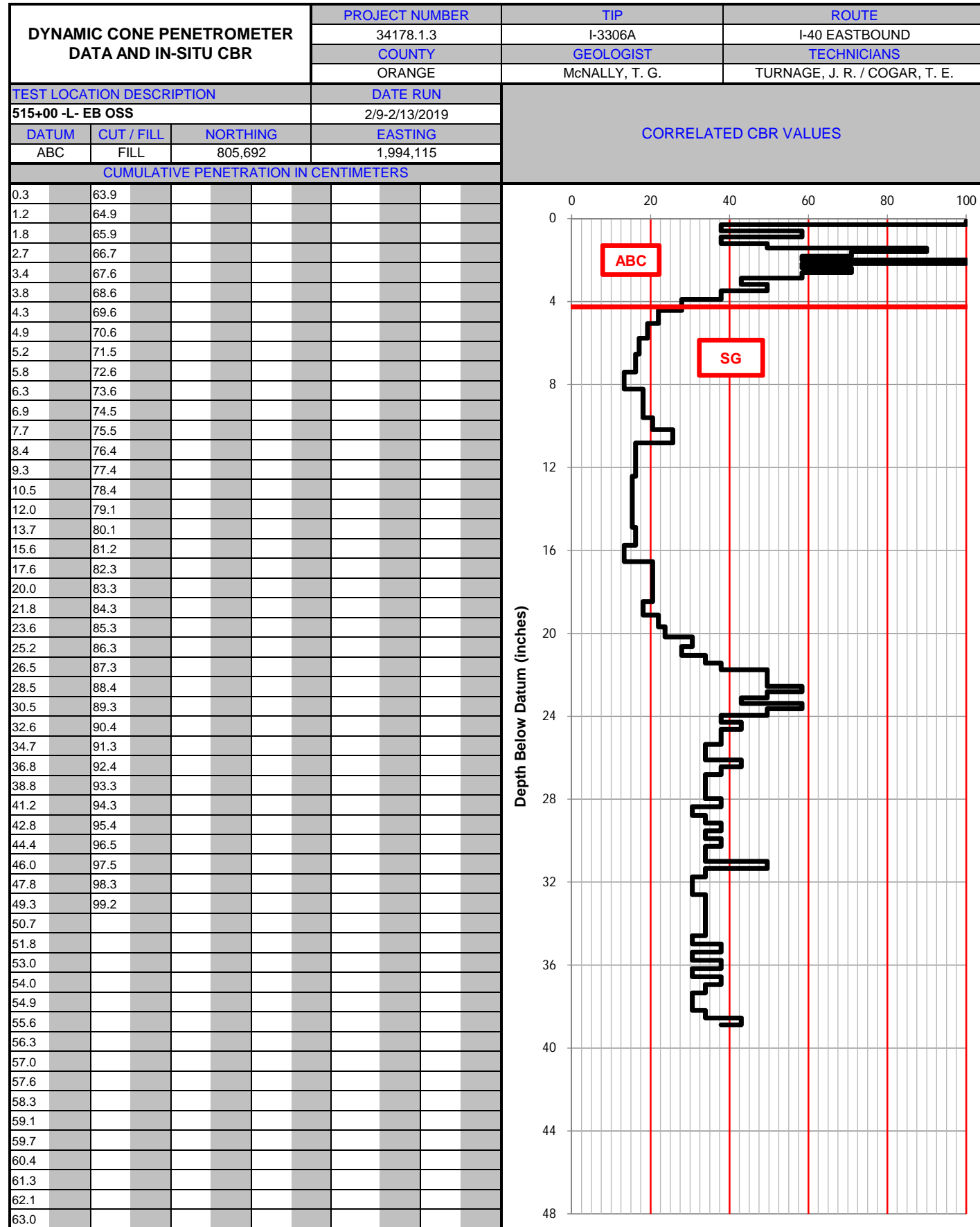


DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EASTBOUND
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE				McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.	
TEST LOCATION DESCRIPTION				DATE RUN		
510+00 -L- EB OSS				2/8-2/13/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ABC	CUT	805,967	1,993,698			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.6	65.1	93.8				
1.2	65.7	94.4				
1.7	66.2	95.0				
2.2	66.6	95.5				
2.7	67.1	96.1				
3.5	67.5	96.7				
4.2	67.9	97.3				
4.7	68.4	97.8				
5.6	68.7	98.3				
6.3	69.2	98.9				
6.8	69.5	99.5				
7.8	69.9	100.0				
9.0	70.3	100.5				
10.8	70.6					
16.7	71.0					
21.2	71.4					
25.1	71.8					
29.3	72.2					
31.8	72.7					
33.2	73.3					
35.1	73.6					
36.7	74.3					
38.1	74.9					
39.6	75.6					
41.2	76.2					
42.5	76.7					
44.0	77.4					
45.2	78.2					
46.5	78.9					
47.9	79.4					
49.1	80.1					
50.6	80.7					
51.9	81.4					
52.9	82.0					
53.5	82.6					
54.2	83.3					
54.8	84.1					
55.5	84.6					
56.2	85.1					
56.7	85.7					
57.4	86.3					
58.2	86.8					
59.0	87.4					
59.7	88.0					
60.5	88.5					
61.2	89.2					
61.7	89.7					
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63.6	92.0					
64.3	92.6					
64.7	93.2					

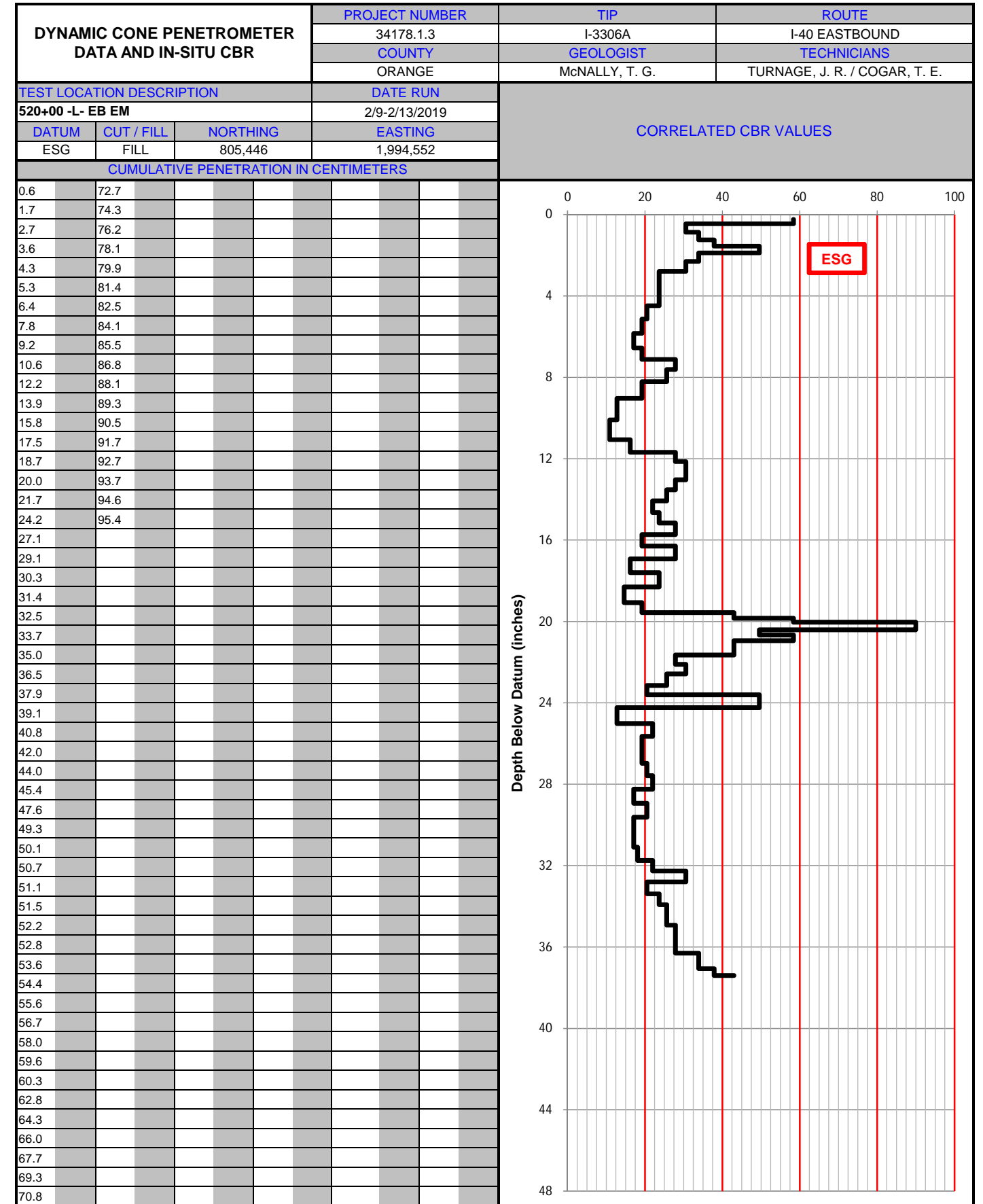


Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



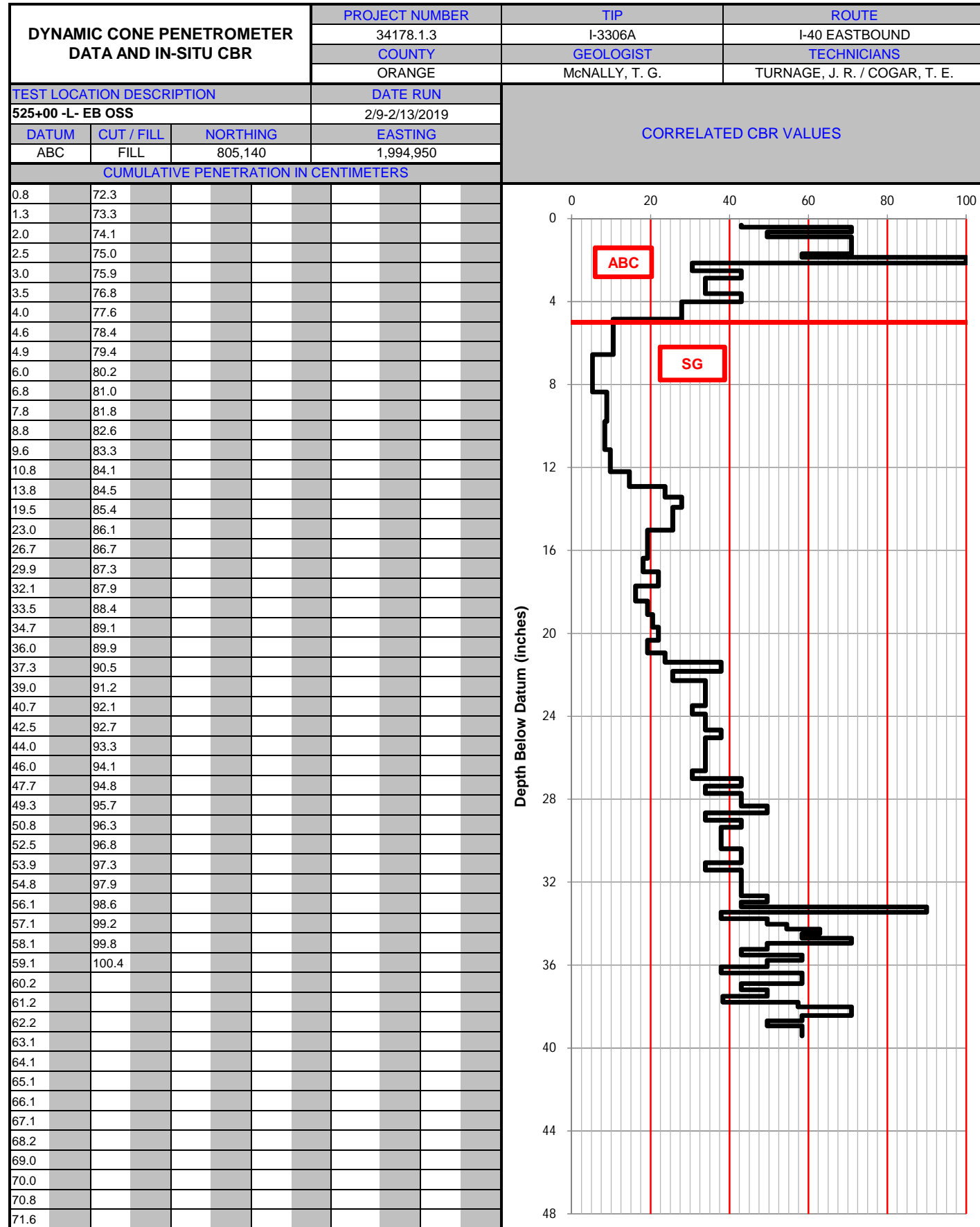


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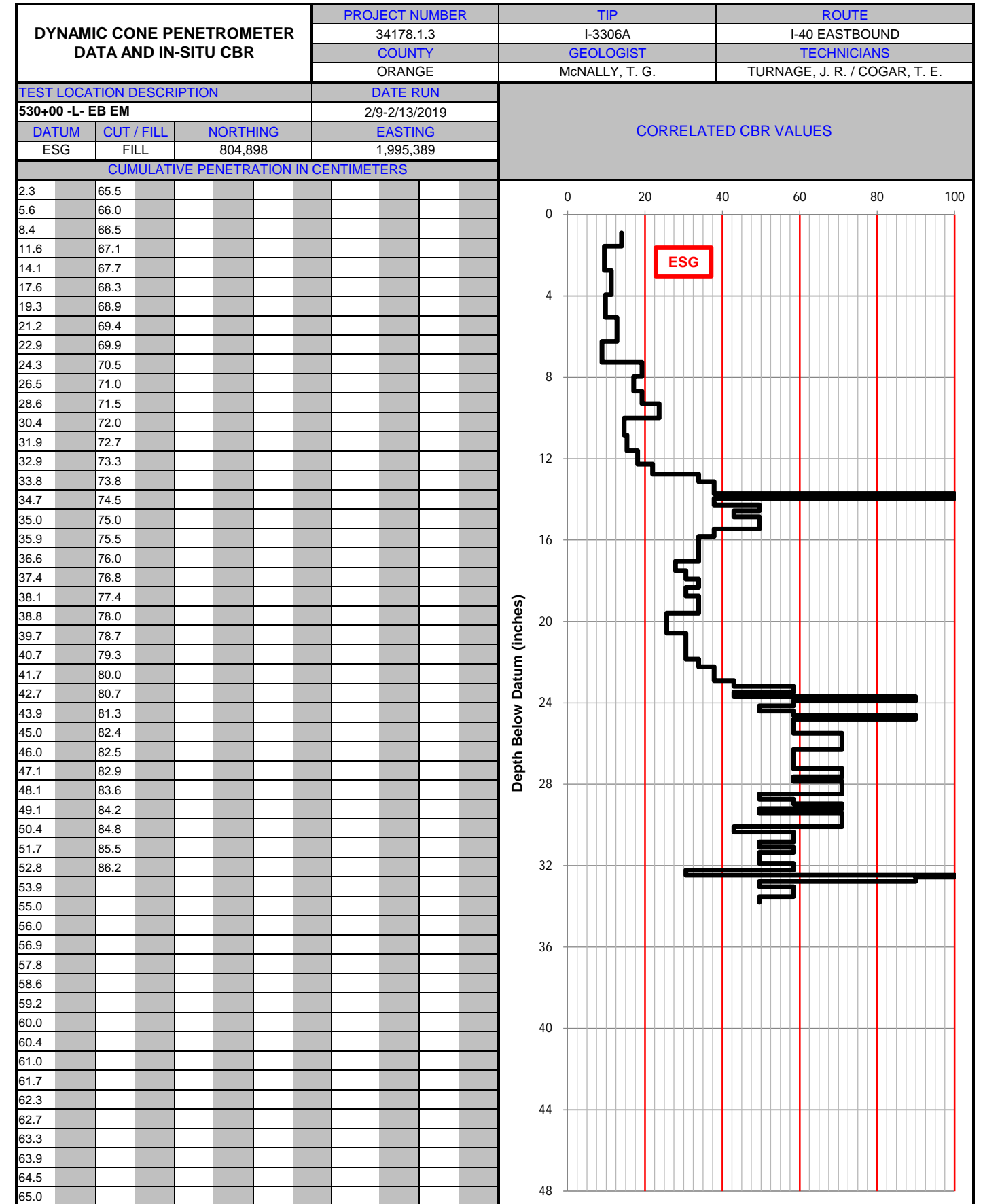


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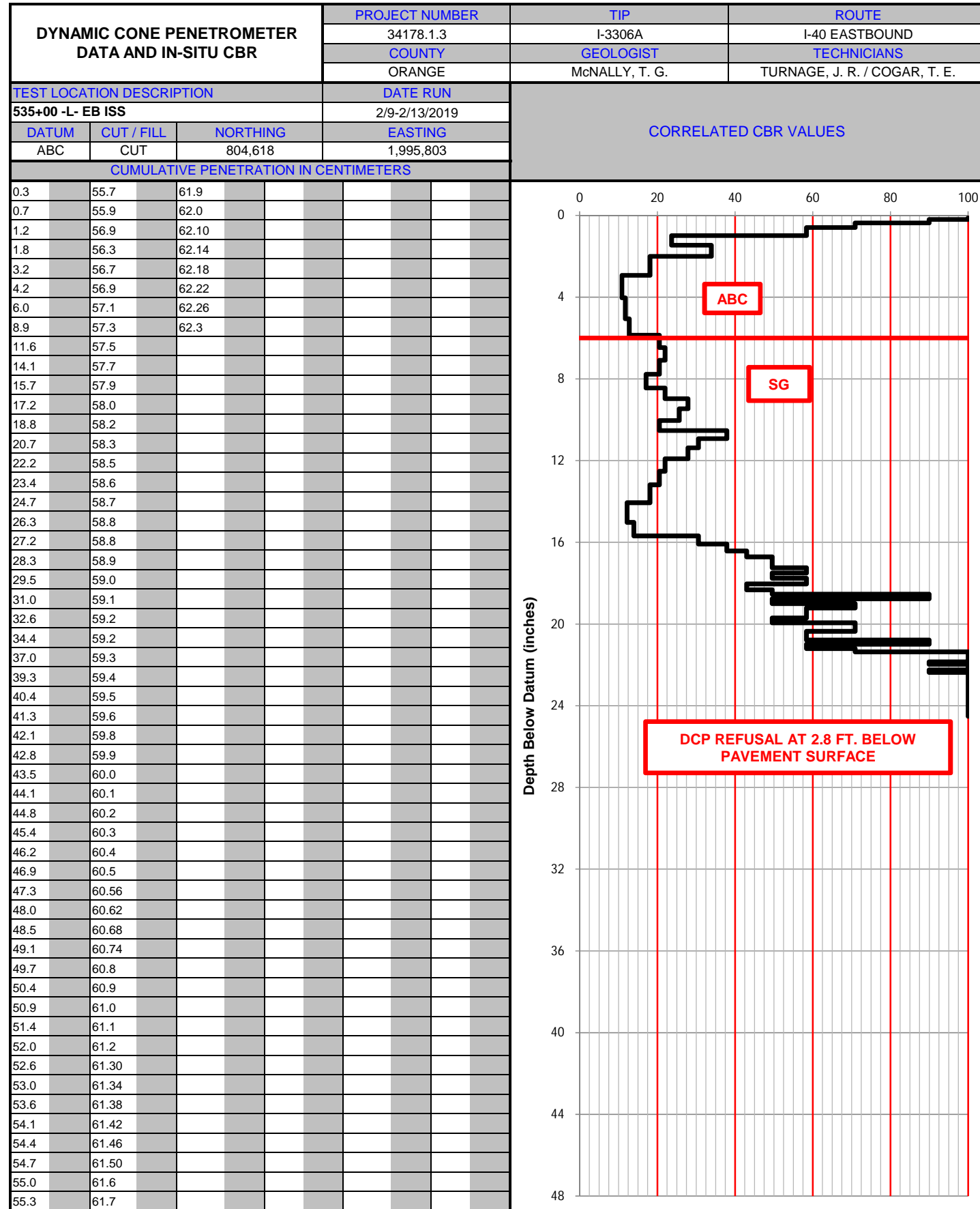


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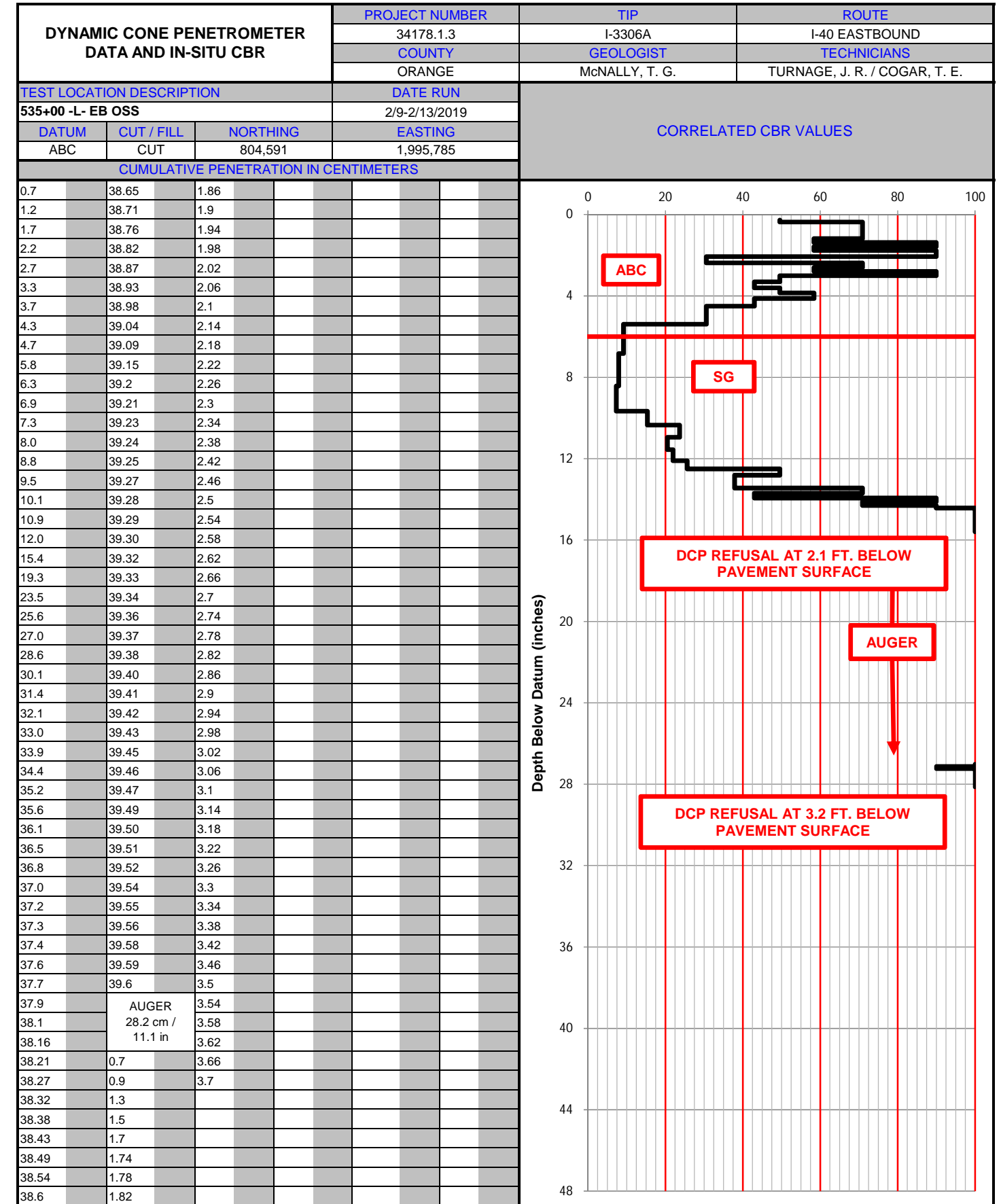


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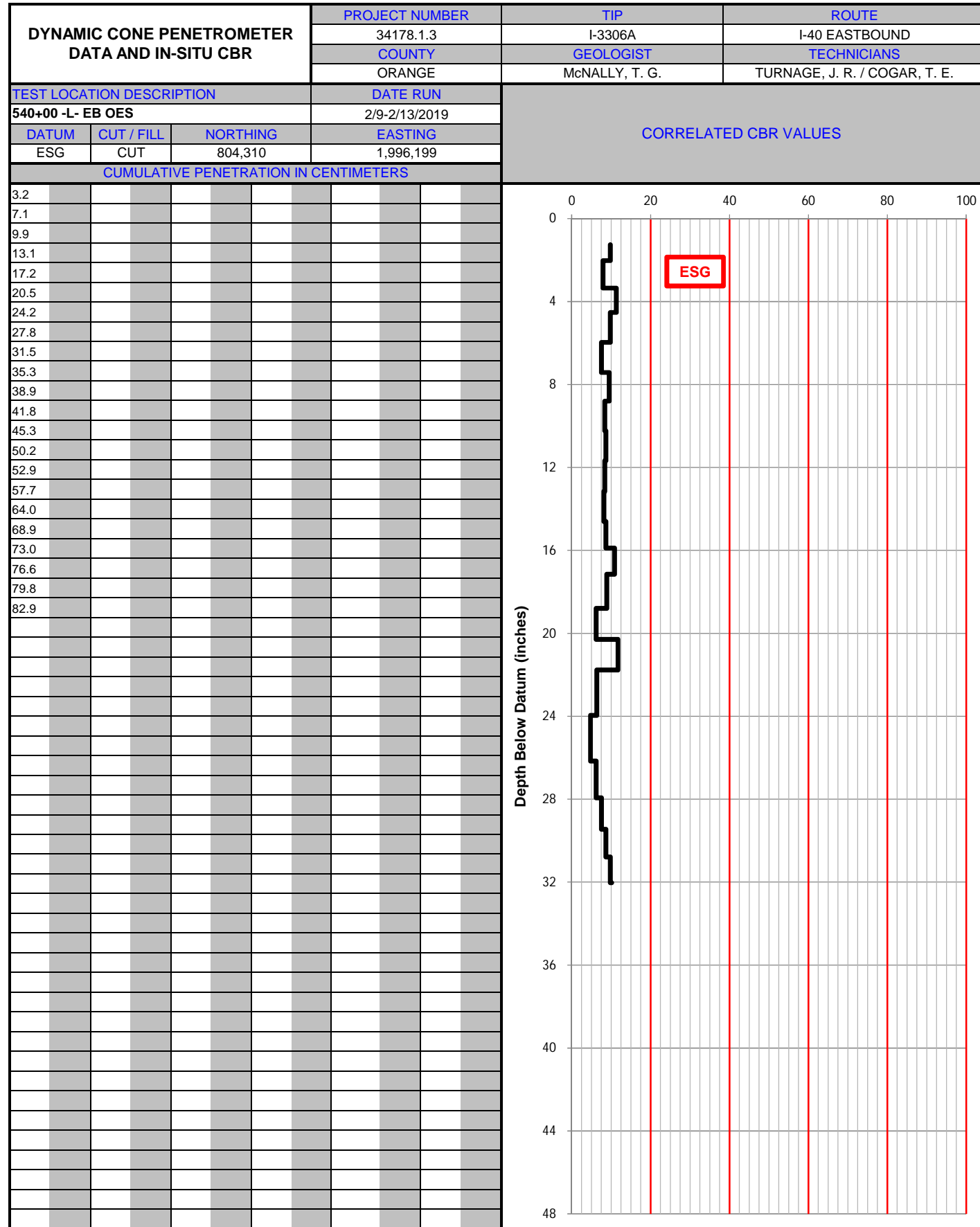


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 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

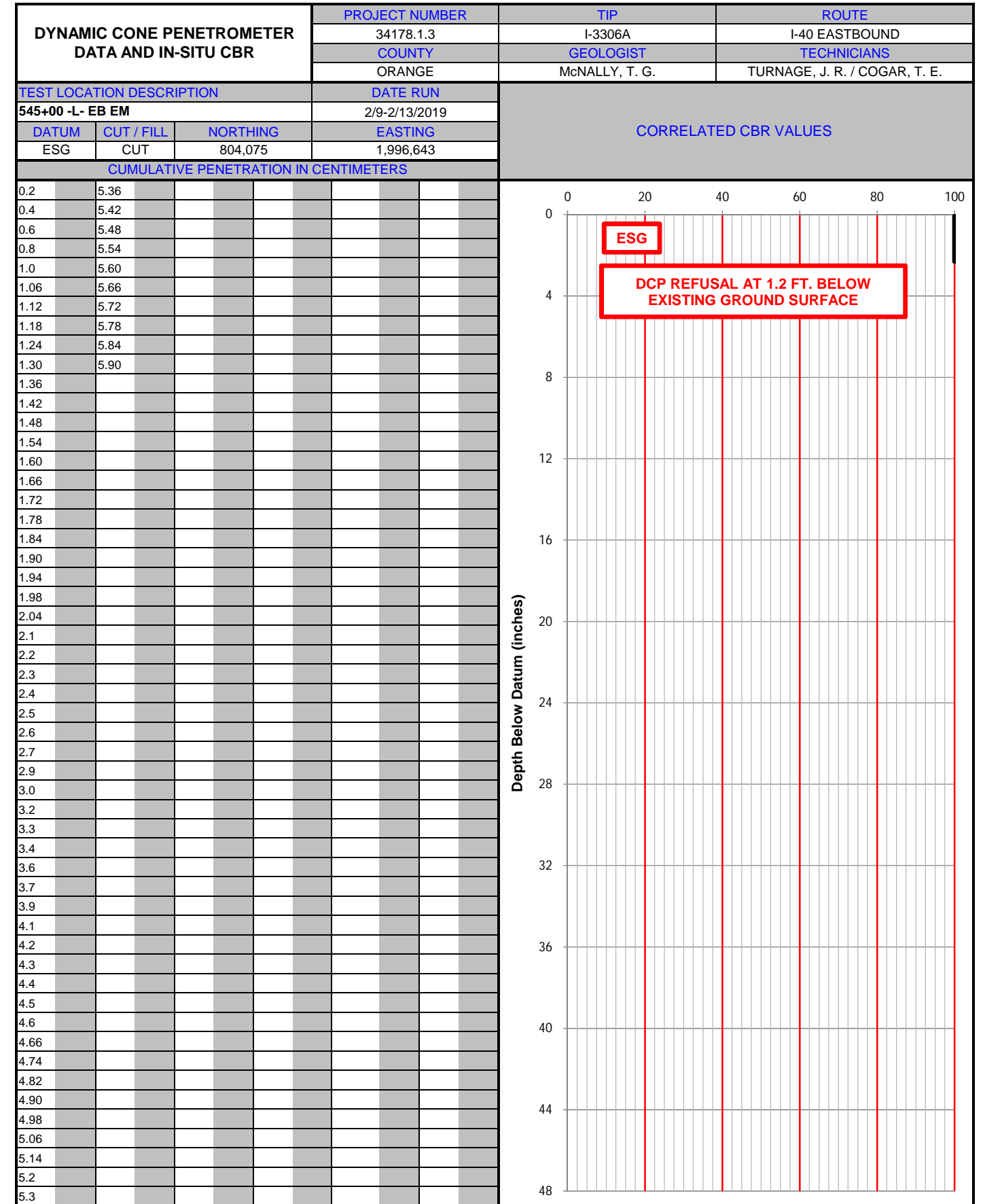


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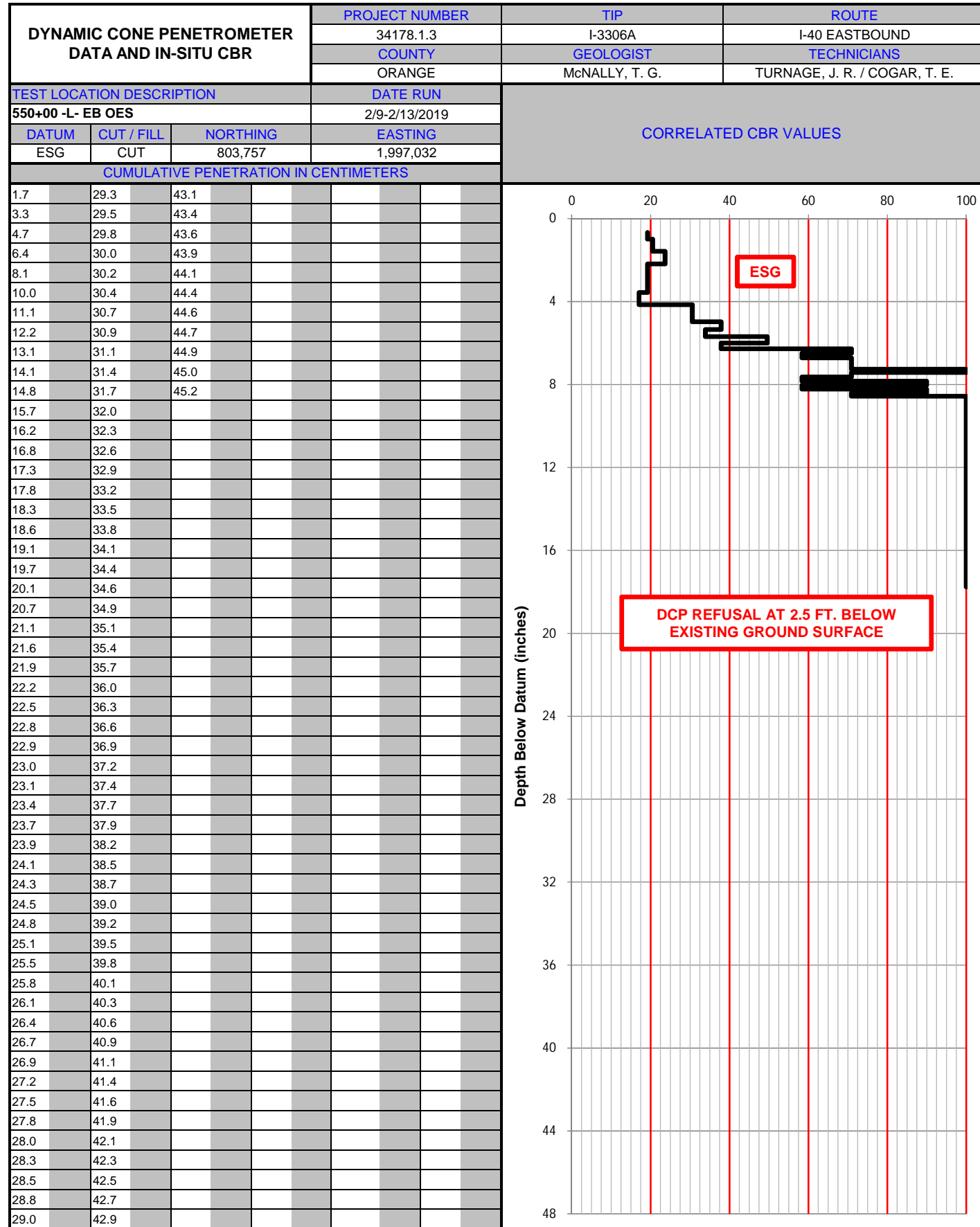


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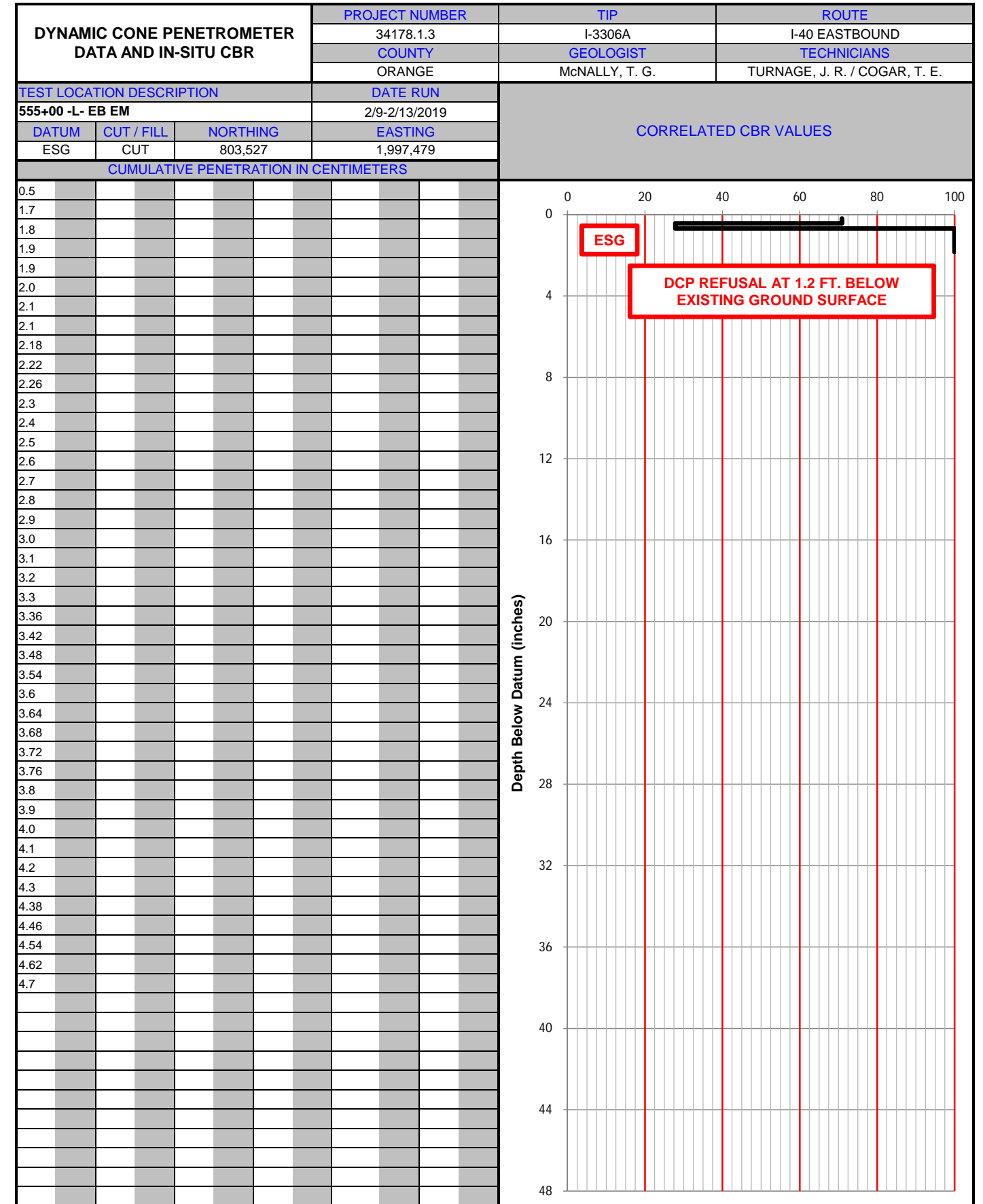


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Notes:  
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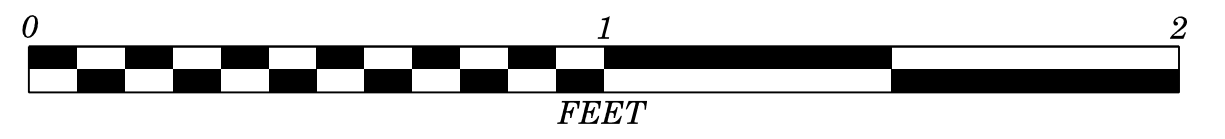
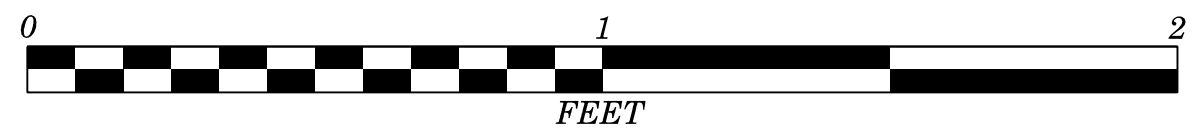
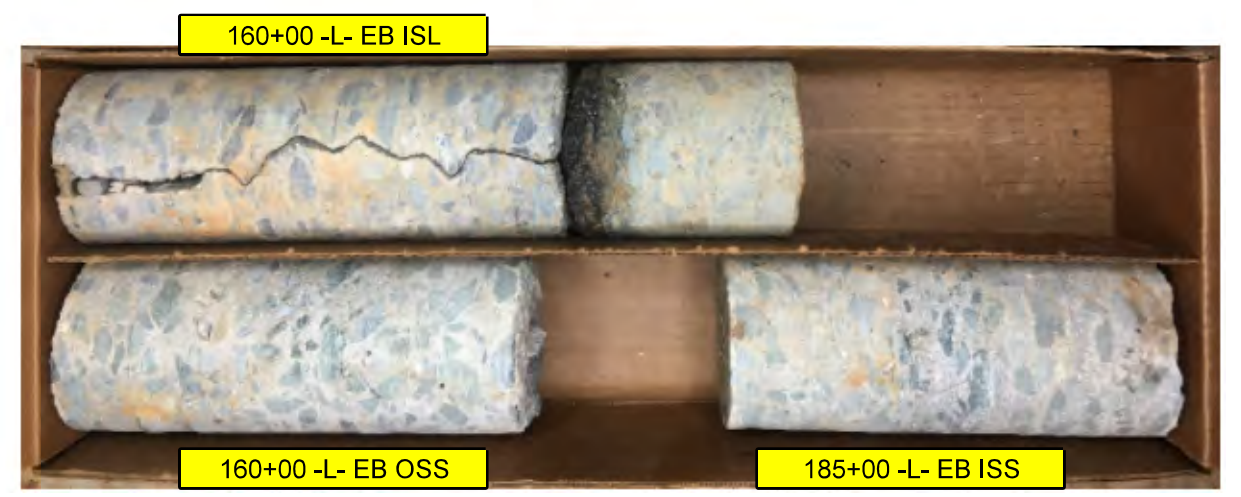
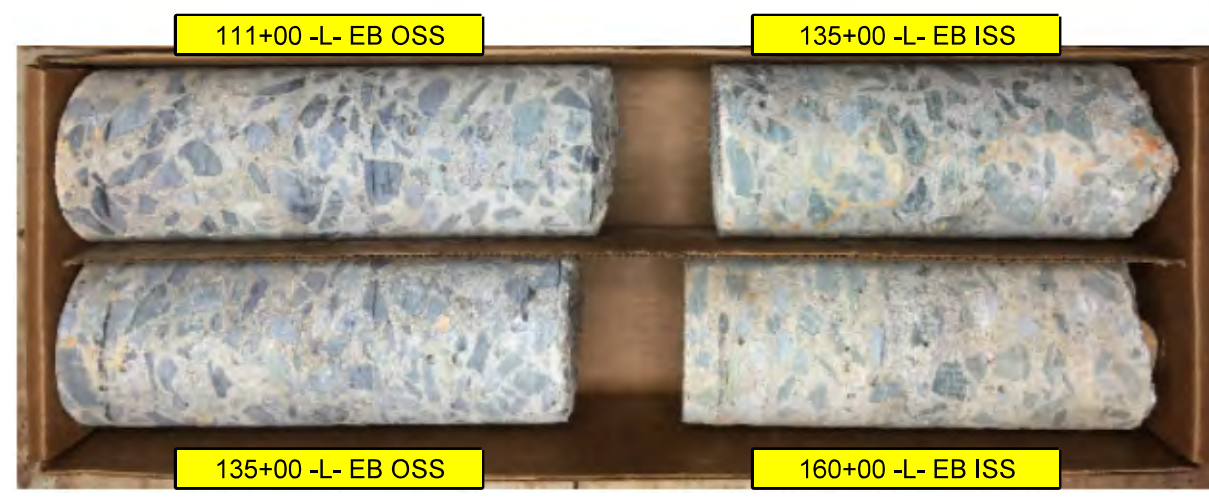
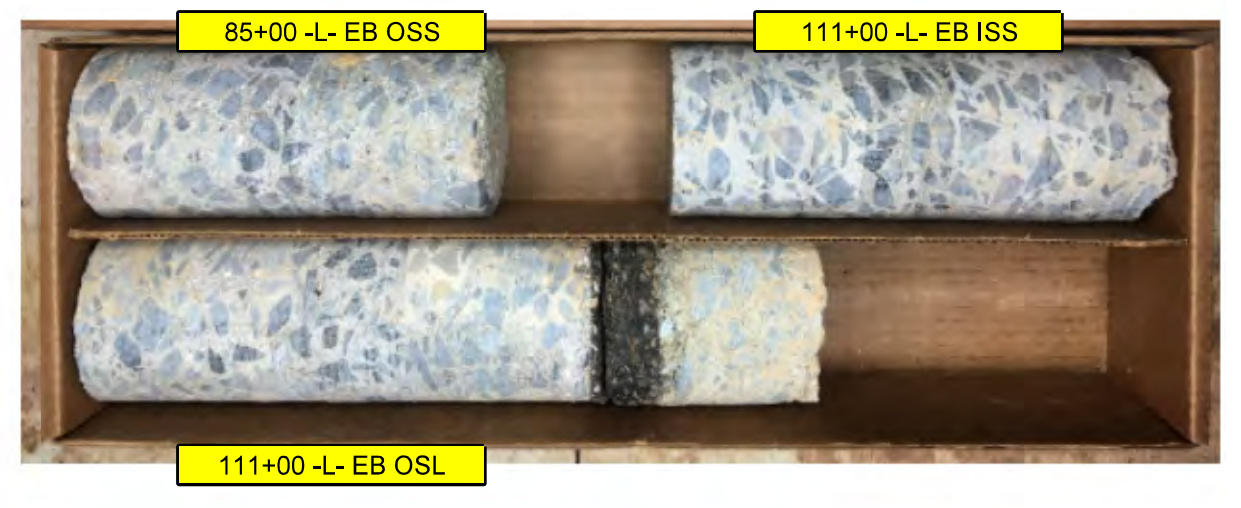
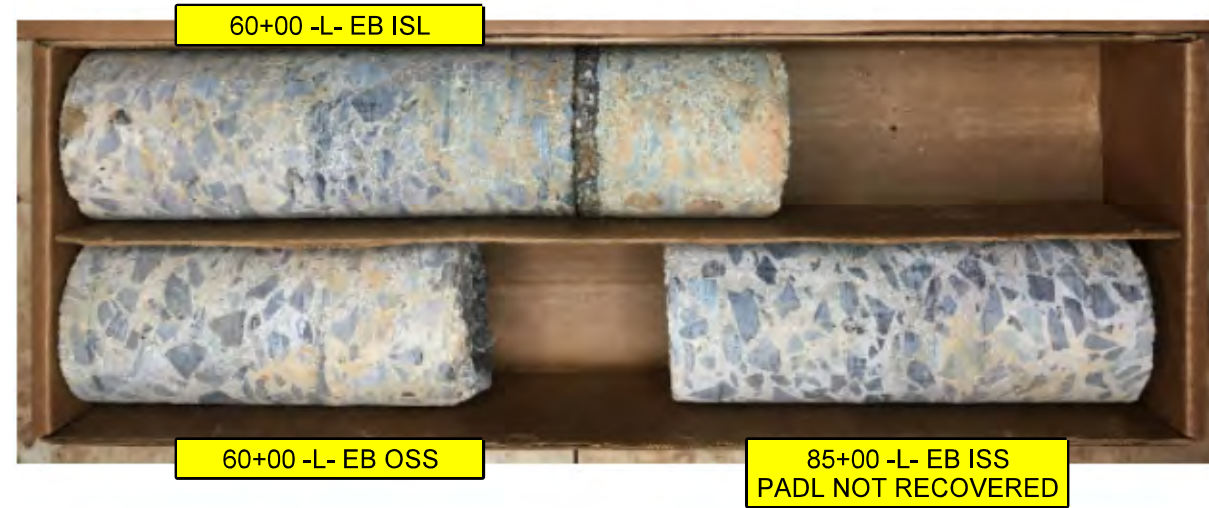
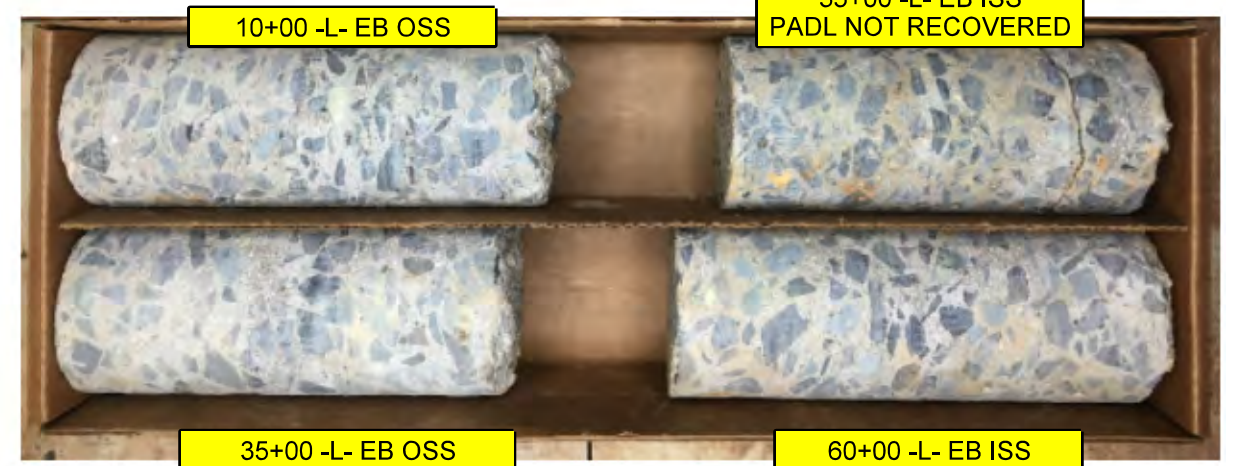
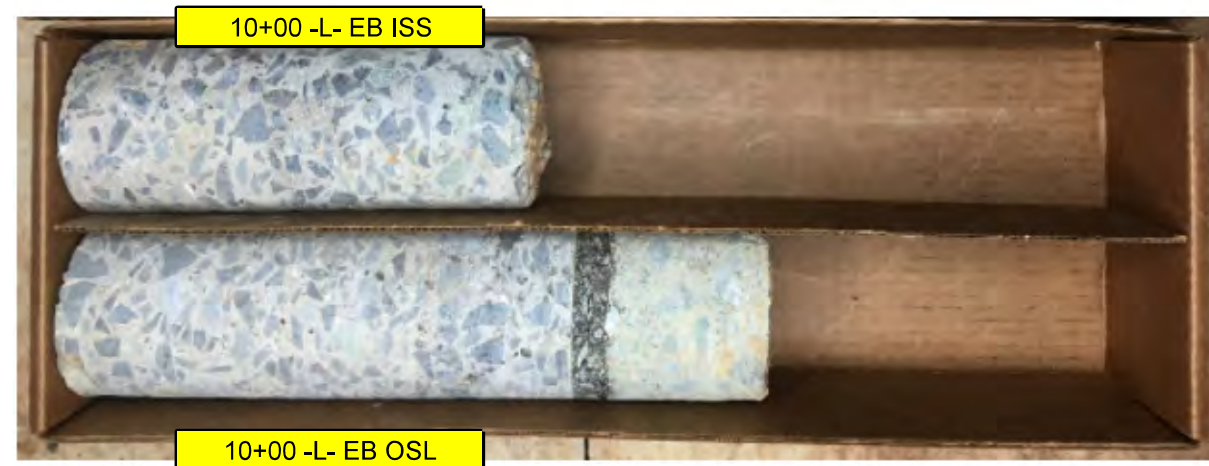




# PAVEMENT CORE PHOTOGRAPHS

I-40 EASTBOUND

PROJECT REFERENCE NO.	SHEET NO.
I-3306A	272



# PAVEMENT CORE PHOTOGRAPHS

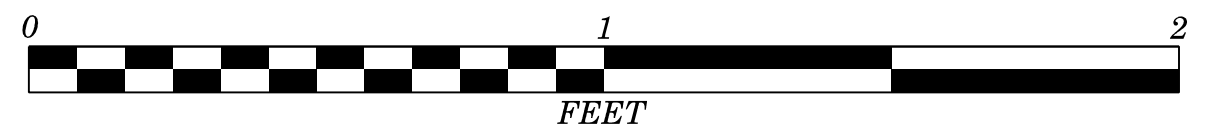
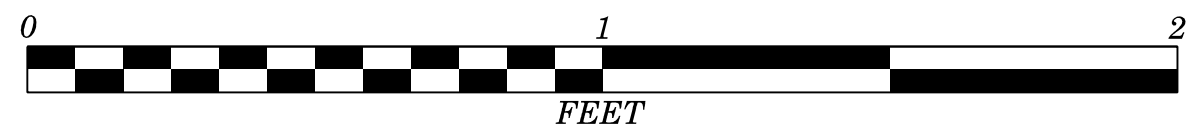
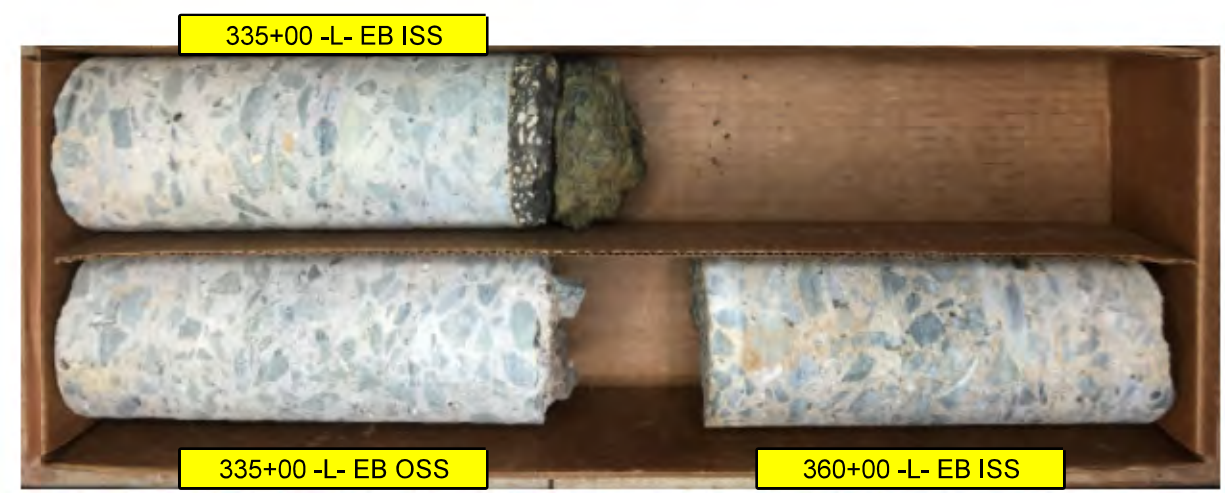
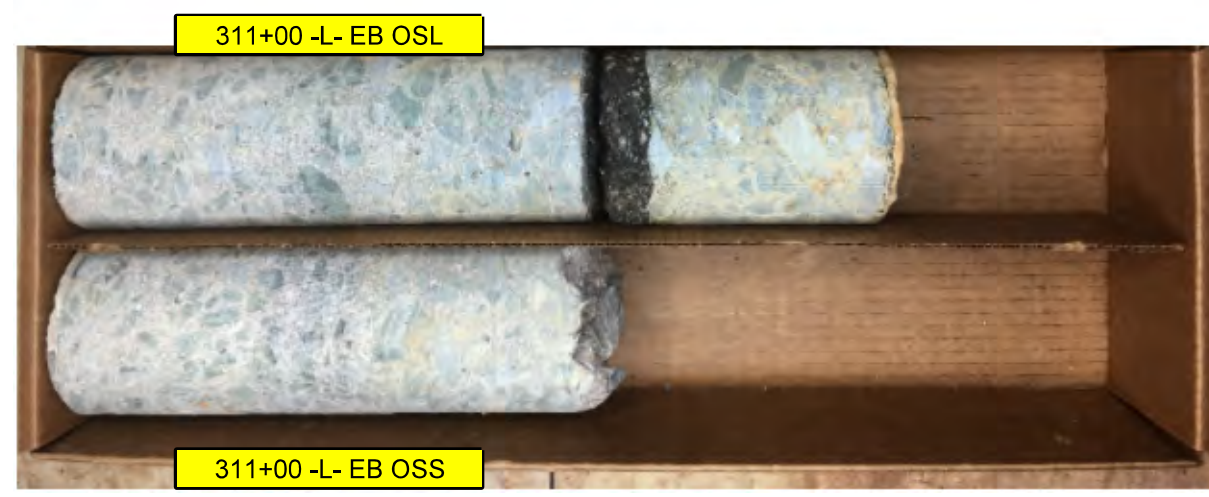
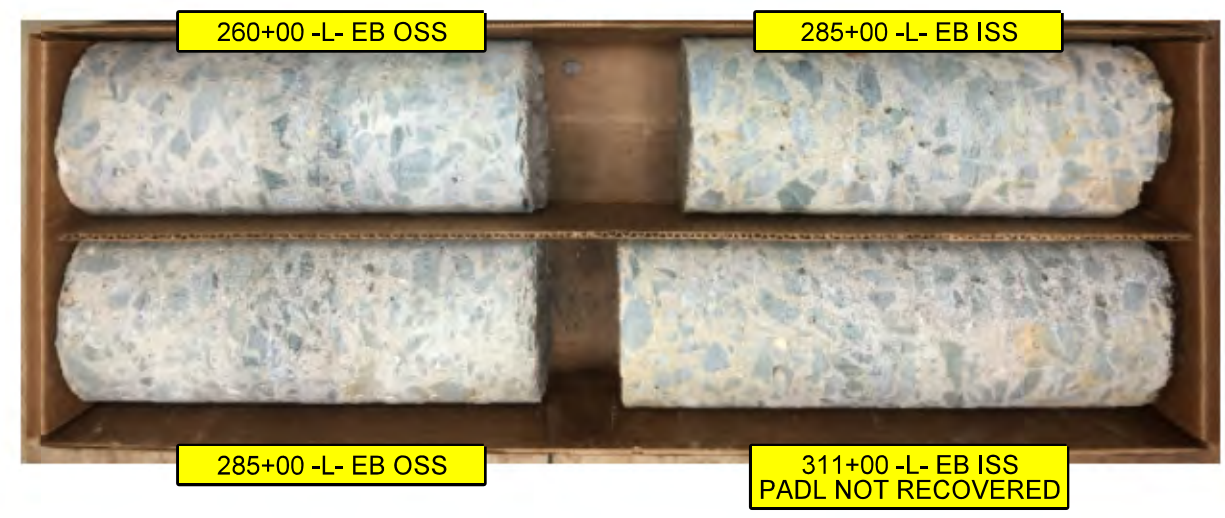
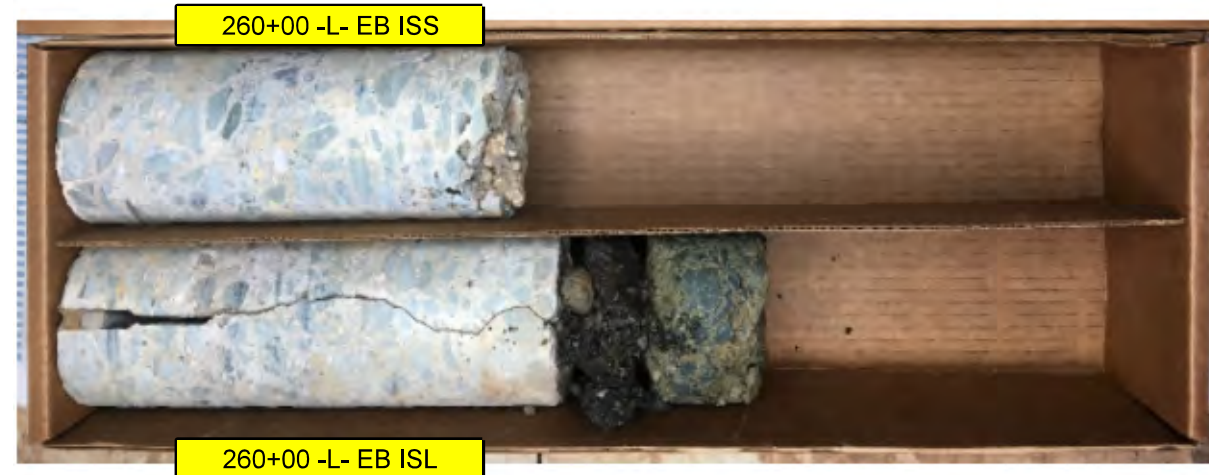
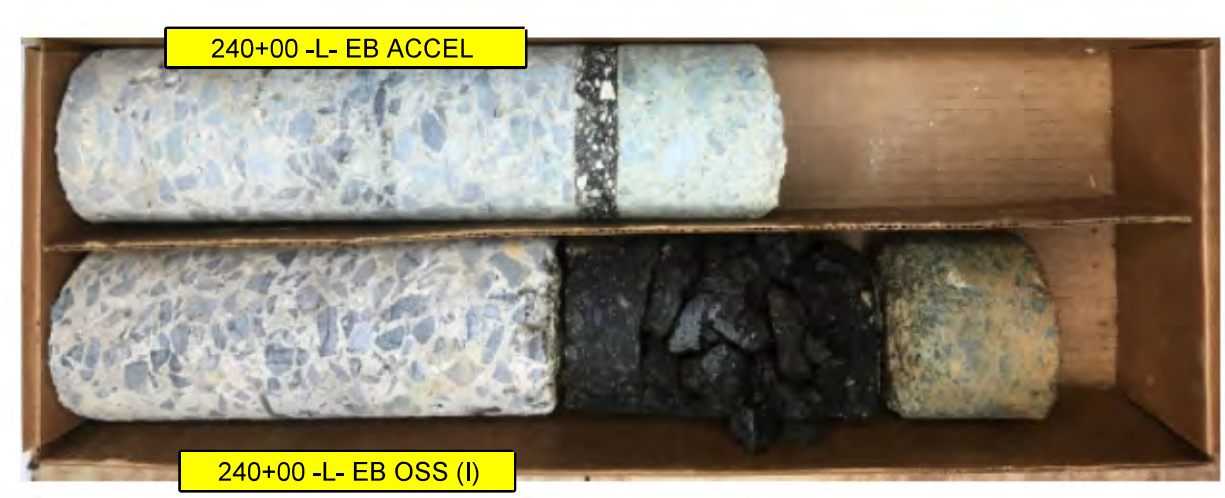
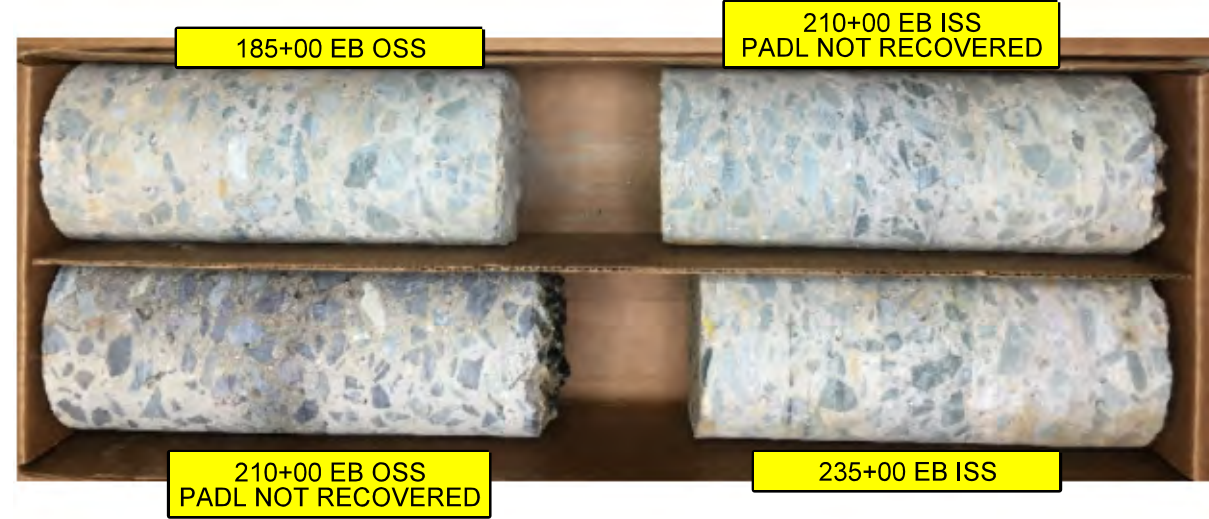
I-40 EASTBOUND

PROJECT REFERENCE NO.

I-3306A

SHEET NO.

273



# PAVEMENT CORE PHOTOGRAPHS

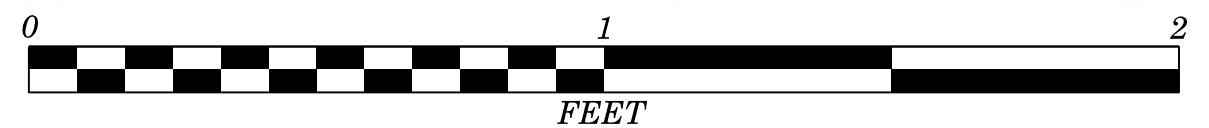
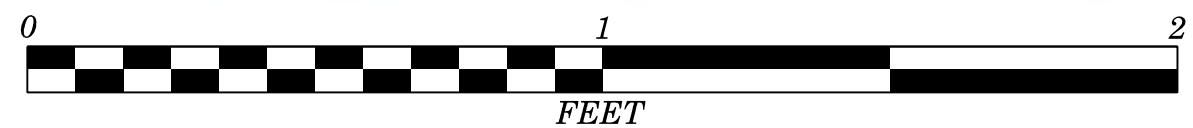
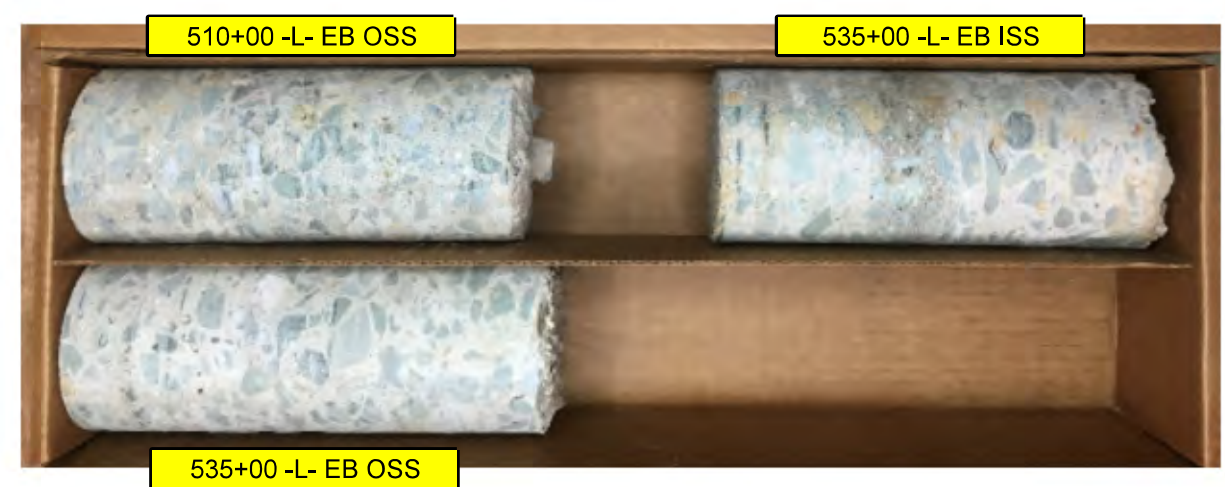
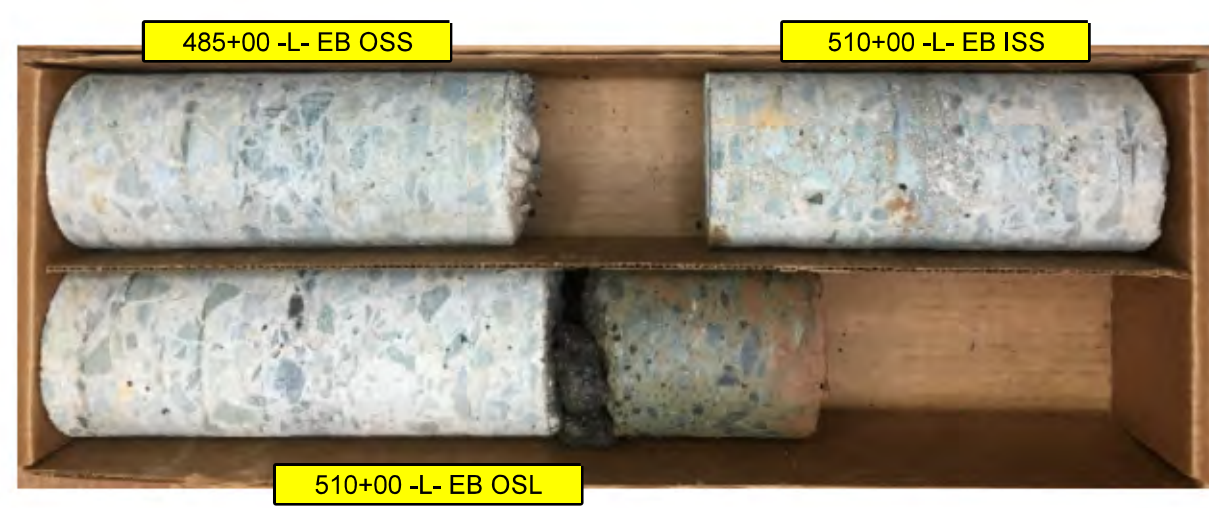
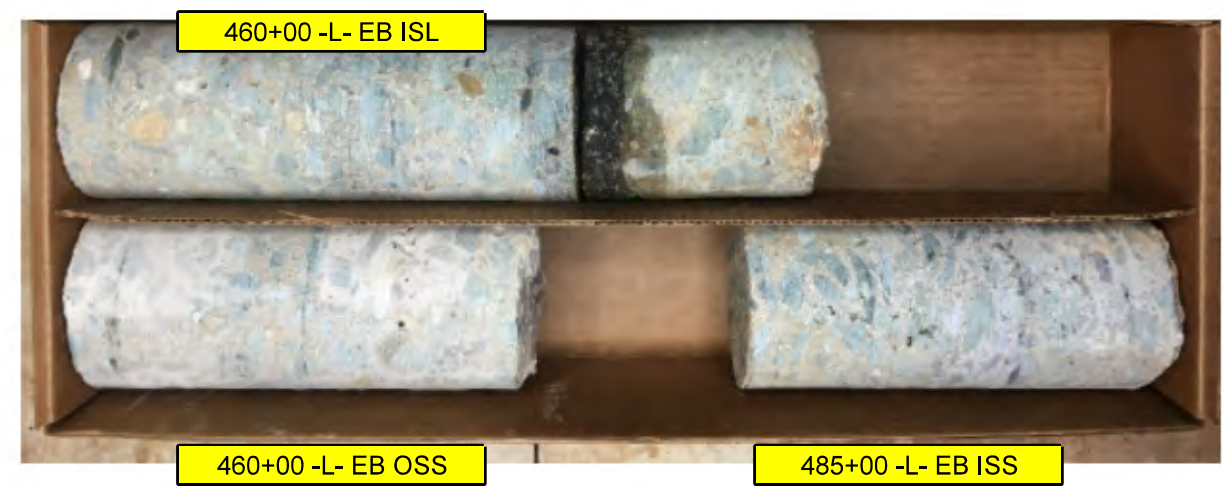
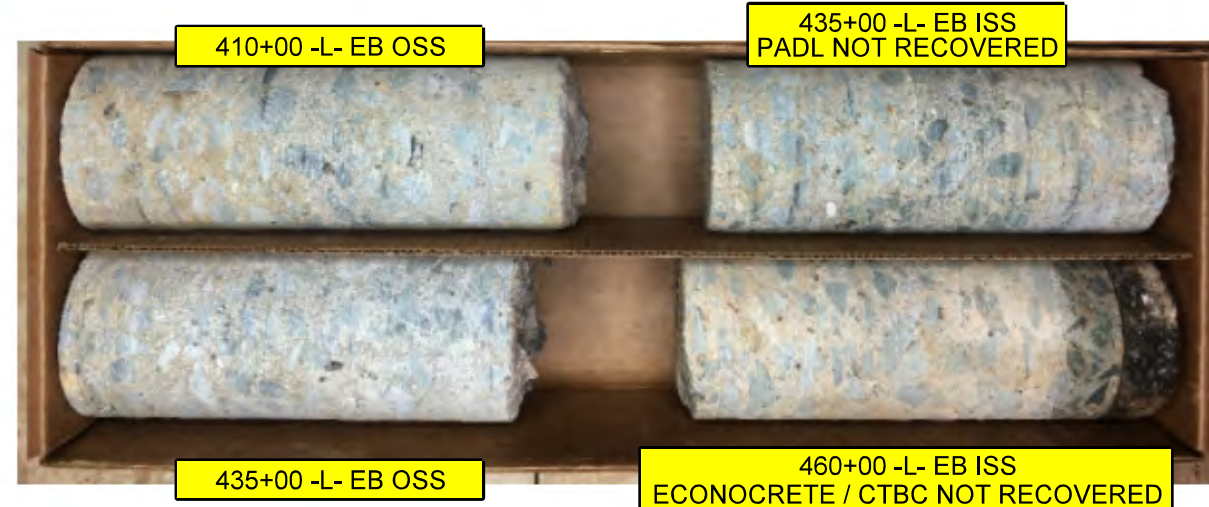
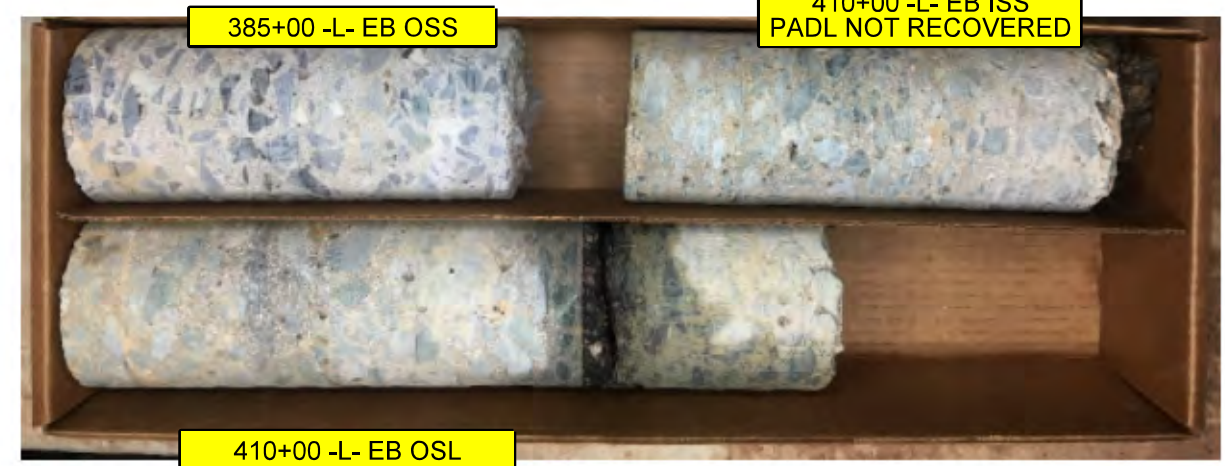
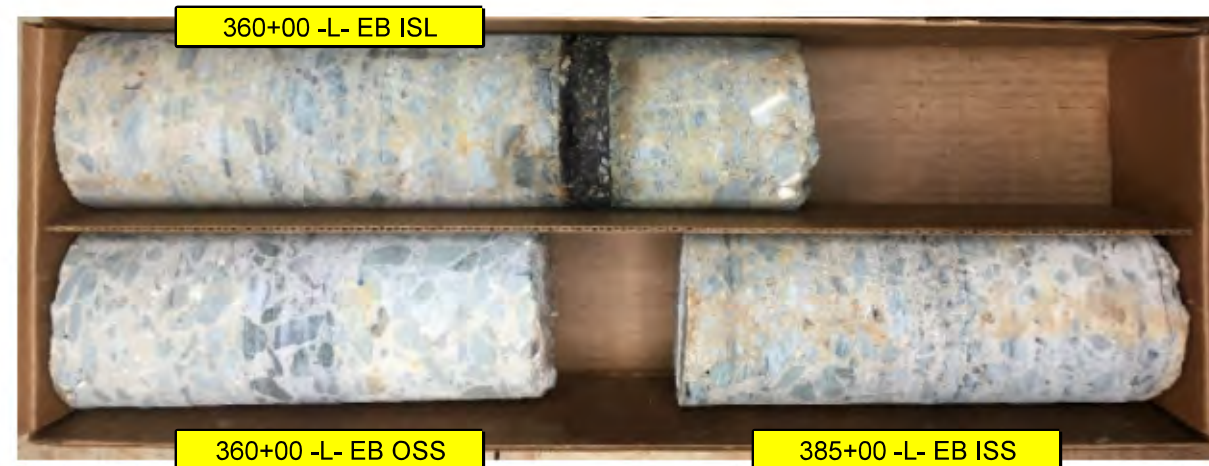
I-40 EASTBOUND

PROJECT REFERENCE NO.

I-3306A

SHEET NO.

274



**PROJECT: 34178**

**REFERENCE: I-3306A**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	275	329

## ***APPENDIX F***

***PAVEMENT INVESTIGATION DATA SHEETS -Y2RPD-  
DYNAMIC CONE PENETROMETER DATA -Y2RPD-  
PAVEMENT CORE PHOTOGRAPHS -Y2RPD-***

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	OLD NC 86 TO I-40 EB RAMP

<b>Date:</b>	2/05/2019
<b>Notes By:</b>	TIM MCNALLY

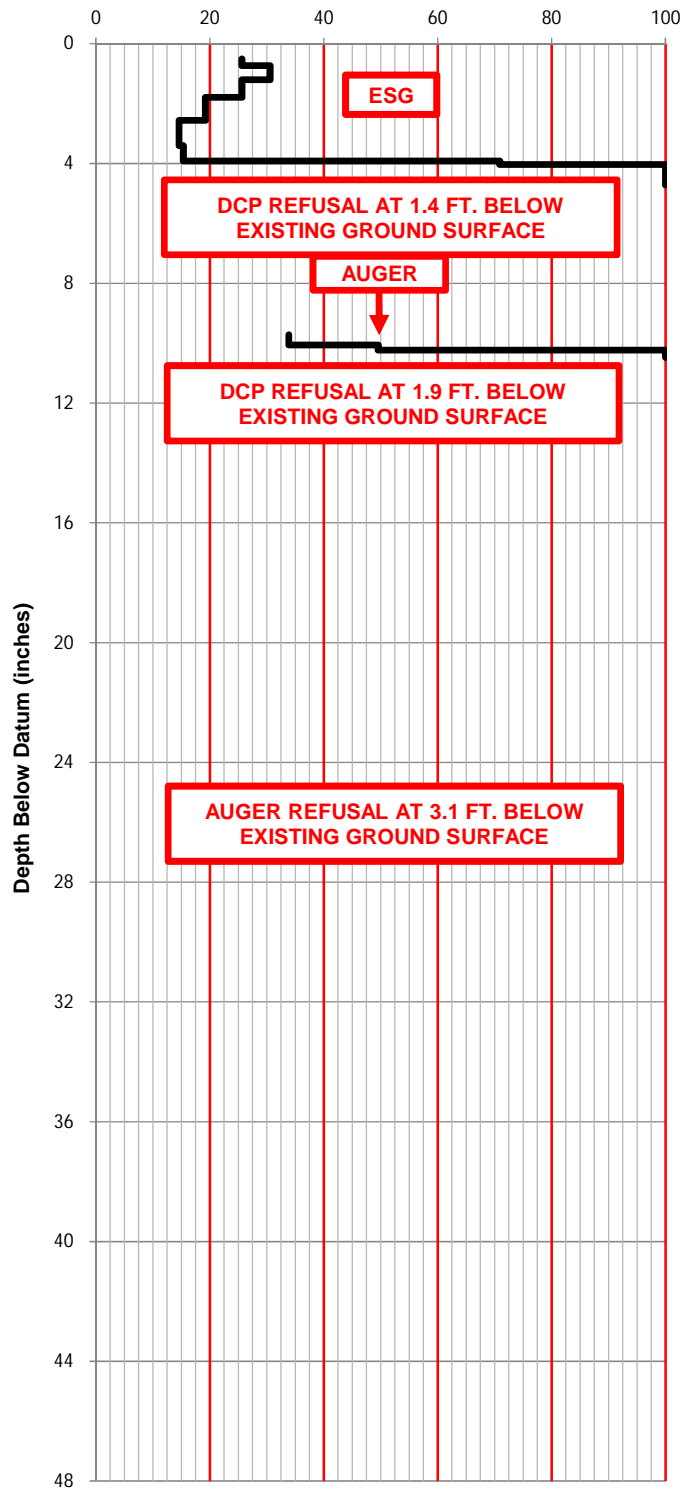
Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture		Probe Depth (feet)	Northing	Easting		
13+00 -Y2RPD- EB OSS	CUT 8	EB ACCEL 14.0	EB OSS 4.0	3.0 FW	C	CONCRETE PADL 6.0" (15.0)	9.0							DRAIN ENCOUNTERED AT 3.0' FW BELOW PADL SEE 13+00 -Y2RPD- EB OES FOR SUBGRADE DESCRIPTION AND DCP					DIAMOND GRINDING MODERATE SEVERITY SPALLING ON LONGITUDINAL JOINT BETWEEN EB ACCEL AND EB OSS	831,912	1,971,571
13+00 -Y2RPD EB OES			EB ISS 4.0	9.5 FW										0' - 3.1' RESIDUAL: BROWN, C-F SANDY CLAY	S-146	A-6	M	AR 3.1	MODERATE SEVERITY SPALLING ON TRANSVERSE JOINTS IN EB ACCEL EB OSS / EB OES DROP OFF	831,906	1,971,569
18+25 -Y2RPD- EB OES	CUT 10	EB ACCEL 14.0	EB OSS 4.0	10.0 FW	C									0' - 6.0' RESIDUAL: BROWN-TAN WITH RED, C-F SANDY CLAY	REF S-120	A-6	M	6	DIAMOND GRINDING	831,699	1,972,043
			EB ISS 4.0																		

**Notes:**

NB = Northbound	OSL = Outside Lane	COL = Collector Lane	LTL = Left Turn Lane	RT = Right	RT LN = Right Lane	OSS = Outside Shoulder	OES = Outside Earth Shoulder	FW = From White Line
SB = Southbound	CL = Center Lane	ACCEL = Acceleration Lane	CTL = Center Turn Lane	LT = Left	LT LN = Left Lane	ISS = Inside Shoulder	EM = Earth Median	FY = From Yellow Line
EB = Eastbound	ISL = Inside Lane	DECEL = Deceleration Lane	RTL = Right Turn Lane	(I) = Inside		PS = Paved Shoulder		AR = Auger Refusal
WB = Westbound	MP = Mile Post			(O) = Outside				NM = Not Measured



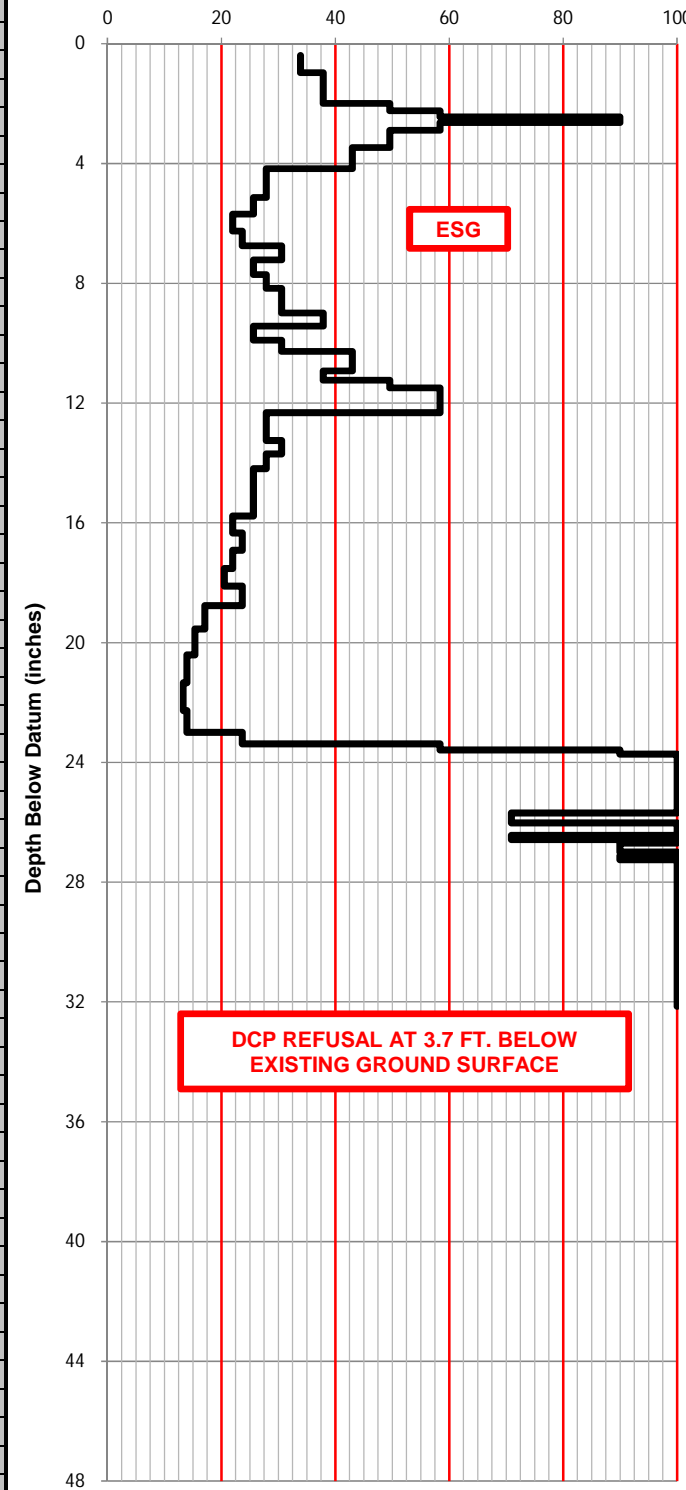
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				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
DATE RUN		CORRELATED CBR VALUES				
2/5/2019						
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	831,906	1,971,569			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.3	11.840	3.010				
2.4	11.872	3.020				
3.7	11.904	3.030				
5.4	11.936	3.040				
7.6	11.968	3.050				
9.7	12.0	3.060				
10.2	AUGER 11.5 cm / 4.5 in	3.070				
10.3		3.080				
10.4		3.090				
10.432	0.7	3.1				
10.464	1.7					
10.496	2.4					
10.528	2.6					
10.560	2.610					
10.592	2.620					
10.624	2.630					
10.656	2.640					
10.688	2.650					
10.720	2.660					
10.752	2.670					
10.784	2.680					
10.816	2.690					
10.848	2.700					
10.880	2.710					
10.912	2.720					
10.944	2.730					
10.976	2.740					
11.008	2.750					
11.040	2.760					
11.072	2.770					
11.104	2.780					
11.136	2.790					
11.168	2.800					
11.200	2.810					
11.232	2.820					
11.264	2.830					
11.296	2.840					
11.328	2.850					
11.360	2.860					
11.392	2.870					
11.424	2.880					
11.456	2.890					
11.488	2.900					
11.520	2.910					
11.552	2.920					
11.584	2.930					
11.616	2.940					
11.648	2.950					
11.680	2.960					
11.712	2.970					
11.744	2.980					
11.776	2.990					
11.808	3.000					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
TEST LOCATION DESCRIPTION 18+25 -Y2RPD- EB OES				34178.1.3	I-3306A	OLD NC 86 TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
DATE RUN		CORRELATED CBR VALUES				
2/5/2019						
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	831,699	1,972,043			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.0	60.4	73.5				
2.0	60.5	73.8				
2.9	60.8	74.1				
3.8	60.9	74.2				
4.7	61.0	74.3				
5.4	61.2	74.5				
6.0	61.5	74.6				
6.4	61.7	74.7				
7.0	62.0	74.9				
7.7	62.2	75.2				
8.4	62.4	75.4				
9.2	62.6	75.7				
10.0	62.8	75.9				
11.2	63.0	76.1				
12.4	63.2	76.4				
13.7	63.4	76.6				
15.2	63.5	76.9				
16.6	63.7	77.1				
17.7	63.9	77.3				
19.0	64.1	77.5				
20.2	64.3	77.8				
21.3	64.6	78.0				
22.4	64.8	78.2				
23.3	65.0	78.4				
24.6	65.5	78.5				
25.7	66.0	78.7				
26.5	66.2	78.8				
27.3	66.5	79.0				
28.2	66.7	79.2				
28.9	66.9	79.3				
29.5	67.4	79.5				
30.1	67.6	79.6				
30.7	68.0	79.8				
31.9	68.4	79.9				
33.1	68.7	80.0				
34.2	69.1	80.1				
35.4	69.3	80.2				
36.7	69.6	80.4				
38.0	69.8	80.5				
39.3	70.1	80.6				
40.8	70.3	80.7				
42.2	70.6	80.8				
43.7	70.8	80.9				
45.3	71.1	81.0				
46.7	71.3	81.1				
48.6	71.6	81.1				
50.7	71.8	81.2				
53.0	72.0	81.3				
55.4	72.2	81.4				
57.7	72.4	81.5				
59.1	72.6	81.5				
59.7	72.9	81.6				
60.1	73.2	81.7				



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



# PAVEMENT CORE PHOTOGRAPHS

OLD NC 86 TO I-40 EB RAMP

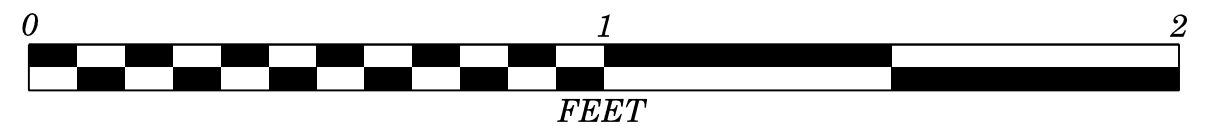
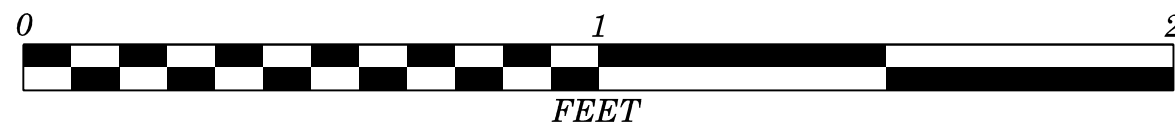
PROJECT REFERENCE NO.

SHEET NO.

I-3306A

278

13+00 -Y2RPD- EB OSS  
PADL NOT RECOVERED



**PROJECT: 34178**

**REFERENCE: I-3306A**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	279	329

## **APPENDIX G**

**PAVEMENT INVESTIGATION DATA SHEETS -Y3RPC-  
DYNAMIC CONE PENETROMETER DATA -Y3RPC-  
PAVEMENT CORE PHOTOGRAPHS -Y3RPC-**



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 WB TO NEW HOPE CHURCH RD RAMP

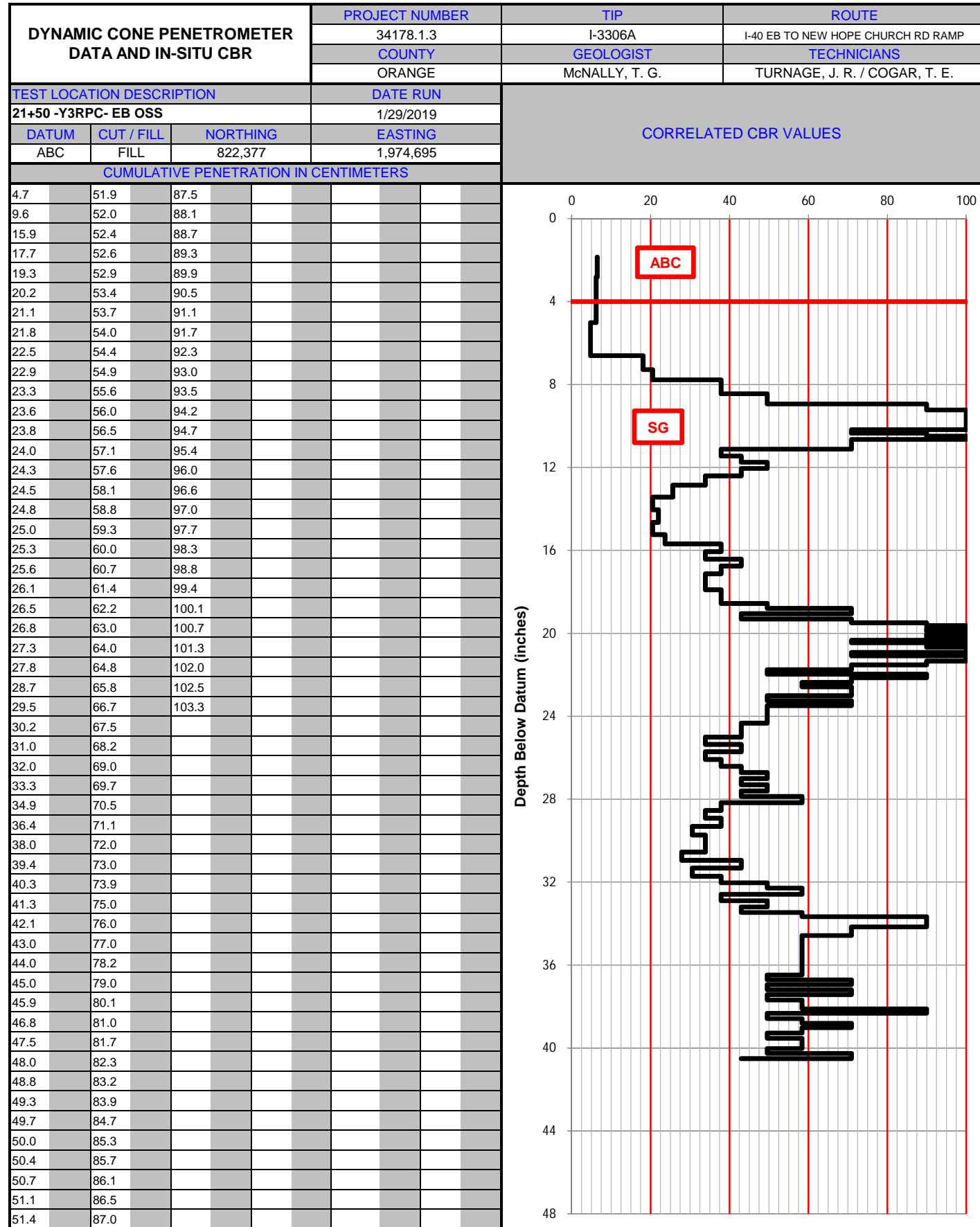
<b>Date:</b>	1/29/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number		AASHTO Classification	Soil Moisture	Probe Depth (feet)	Northing	Easting
21+50 -Y3RPC- EB OSS	FILL 6	EB DECEL 13.0	EB OSS 4.0	3.5 FW	S (LT)	CONCRETE ABC (12.0)	8.0			4.0		1.0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	S-92	A-6	M	6	DIAMOND GRINDING  LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN EB DECEL WHEEL PATH	822,377	1,974,695
21+50 -Y3RPC- EB OES			EB ISS 4.0	8.0 FW								0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-92	A-6	M	6		822,376	1,974,686
23+50 -Y3RPC- EB OES	FILL 10	EB LTL 15.0	EB OSS 3.0	9.5 FW	C							0' - 6.0' ROADWAY EMBANKMENT: BROWN WITH TAN, C-F SANDY CLAY	REF S-92	A-6	M	6	DIAMOND GRINDING  MODERATE SEVERITY REFLECTIVE CRACKING IN EB ASPHALT DECEL, EB LTL, AND EB RTL  ASPHALT IN TURN LANES	822,181	1,974,743
		EB RTL 12.0	EB ISS 1.0																

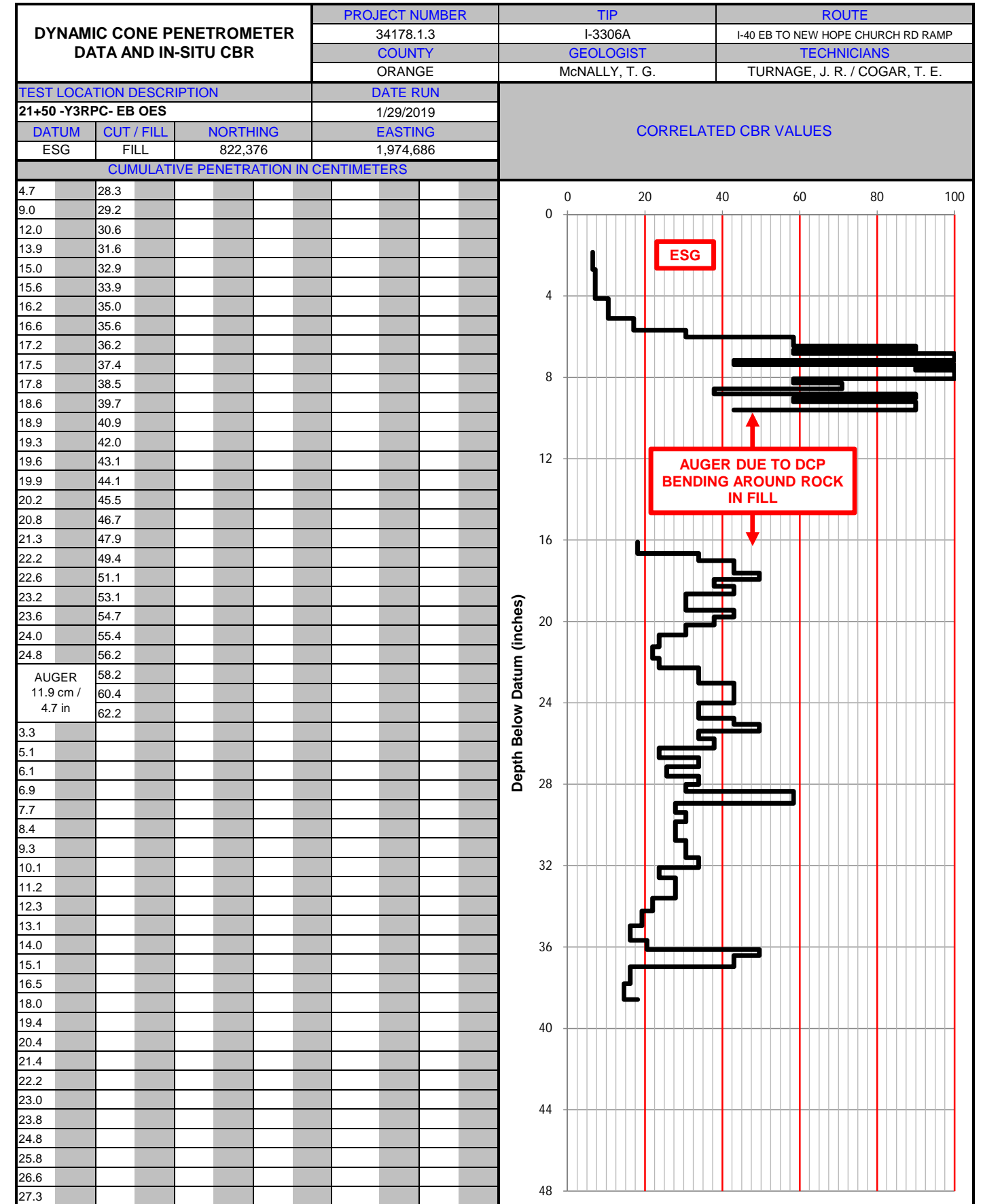
**Notes:**

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured





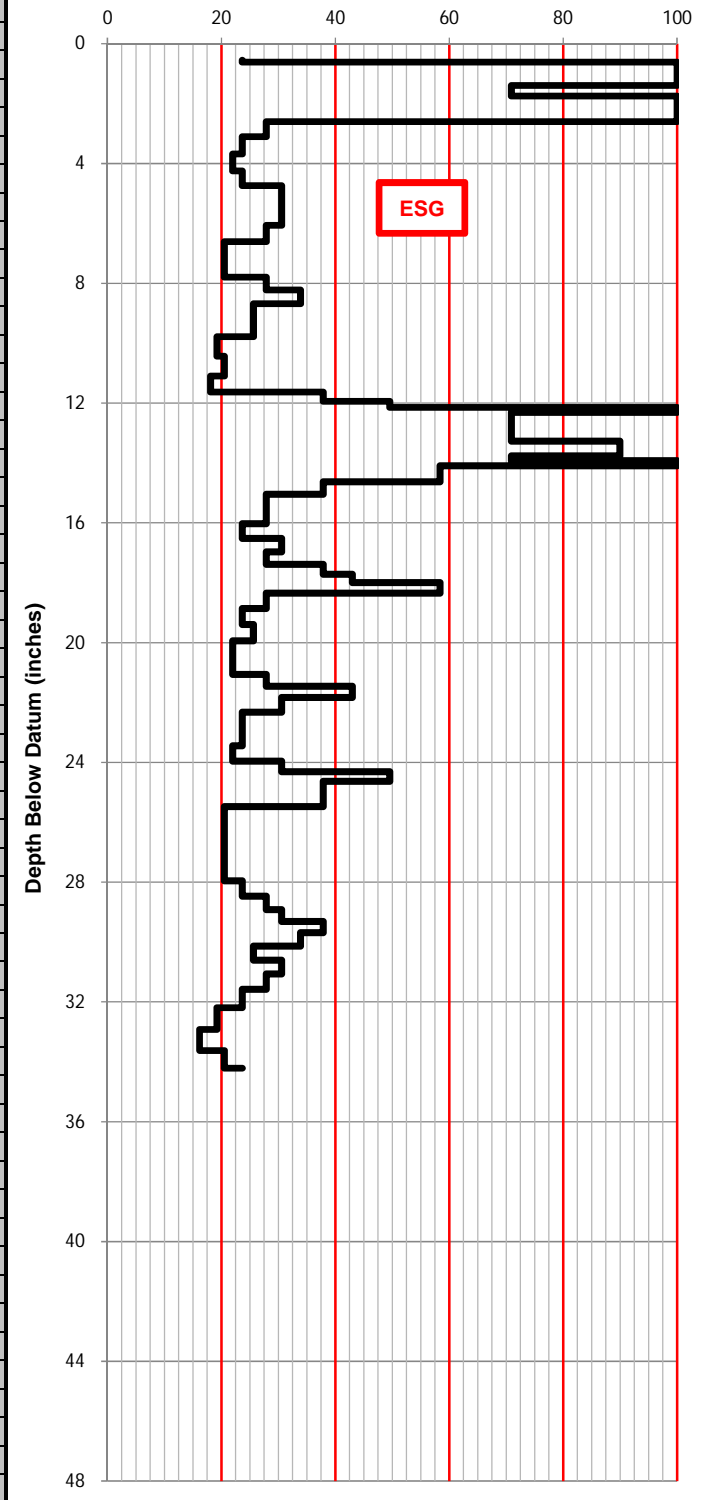
Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 EB TO NEW HOPE CHURCH RD RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.				
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
23+50 -Y3RPC- EB OES				1/29/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	FILL	822,181	1,974,743			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.4	37.6					
1.7	38.8					
2.0	40.0					
2.1	41.4					
2.4	42.5					
2.5	43.7					
2.7	44.6					
2.9	45.4					
3.0	46.0					
3.1	47.2					
3.2	48.6					
3.3	49.9					
3.8	51.4					
4.3	52.9					
4.6	54.1					
4.8	54.9					
5.0	56.0					
5.3	57.4					
5.4	58.8					
5.7	60.3					
6.0	61.4					
7.2	62.1					
8.6	63.0					
10.1	63.9					
11.5	65.5					
12.6	67.1					
13.7	68.7					
14.8	70.3					
16.0	71.7					
17.6	72.9					
19.2	74.0					
20.4	74.9					
21.4	75.9					
22.7	77.2					
24.0	78.3					
25.7	79.5					
27.3	80.9					
29.1	82.6					
30.0	84.6					
30.7	86.2					
31.0	87.6					
31.5						
32.0						
32.5						
33.0						
33.5						
33.9						
34.3						
34.7						
35.2						
35.5						
36.1						
36.7						



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)

# PAVEMENT CORE PHOTOGRAPHS

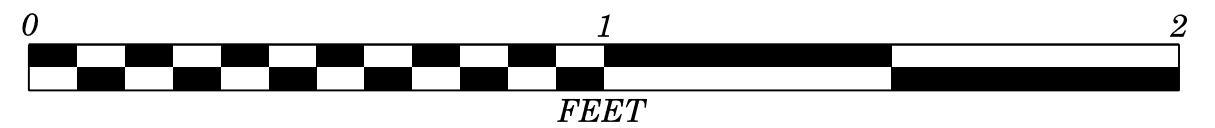
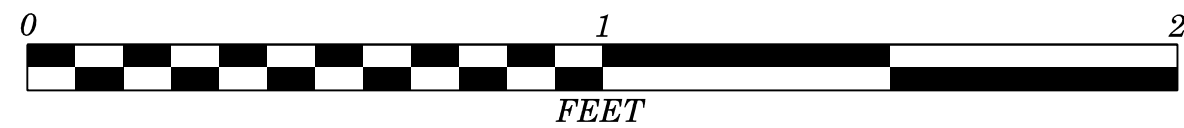
I-40 EB TO NEW HOPE CHURCH ROAD RAMP

PROJECT REFERENCE NO.

SHEET NO.

I-3306A

283



**REFERENCE: I-3306A**

**PROJECT: 34178**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	284	329

## **APPENDIX H**

**PAVEMENT INVESTIGATION DATA SHEETS -Y3RPA-  
DYNAMIC CONE PENETROMETER DATA -Y3RPA-**

**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	I-40 WB TO NEW HOPE CHURCH RD RAMP

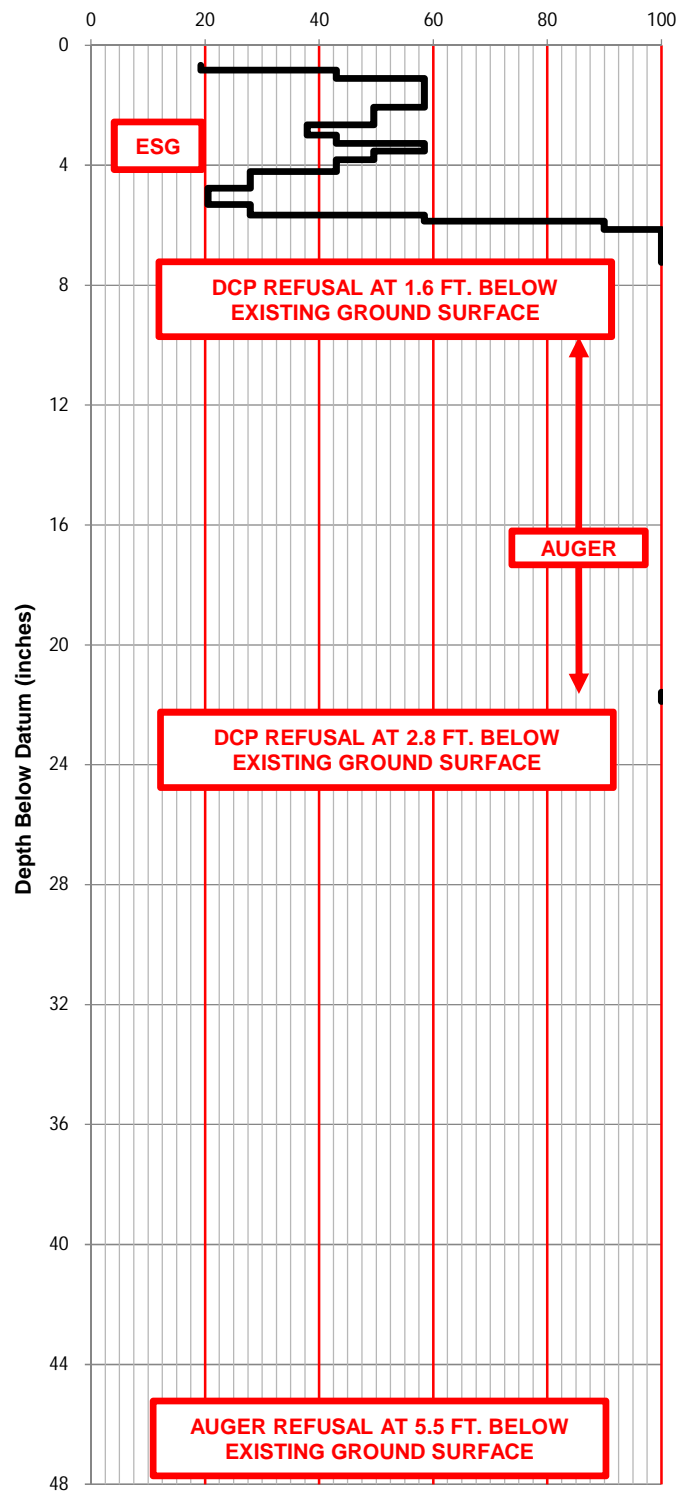
<b>Date:</b>	2/09/2019
<b>Notes By:</b>	TIM MCNALLY

Test Location	Cut or Fill (Estimated Depth in feet)	Width		Offset Distance (feet)	Crown "C" or Super "S"	Pavement Structure, Thickness						Subgrade				Pavement Notes	GPS Coordinates			
		Lane(s) (feet)	Shoulder(s) (feet)			Pavement Layering / Total to Subgrade in inches	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture		Probe Depth (feet)	Northing	Easting	
22+00 -Y3RPA- WB OES	CUT 6	WB DECEL 14.0	WB ISS 4.0	7.5 FW	C								0' - 5.5' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	S-193	A-6	M	AR 5.5	DIAMOND GRINDING MODERATE SEVERITY SPALLING ON TRANSVERSE JOINTS IN WB DECEL EB OSS / OES DROP OFF	822,339	1,975,469
			WB OSS 4.0																	
24+00 -Y3RPA- WB OES	CUT 4	WB LTL 17.0	WB ISS 2.0	5.5 FW	C								0' - 2.6' RESIDUAL: BROWN, SILTY CLAY	S-194	A-7-6	M	6	ASPHALT PAVEMENT HIGH SEVERITY BLOCK CRACKING IN EB RTL	822,536	1,975,413
		WB RTL 14.0	ISLAND 2.0										2.6' - 6.0' RESIDUAL: BROWN-TAN, C-F SANDY CLAY	REF S-193	A-6	M		LOW SEVERITY TRANSVERSE CRACKING IN WB OSS, WB ISS, WB RTL, AND WB LTL MODERATE SEVERITY TRANSVERSE AND LONGITUDINAL CRACKING IN CONCRETE PAVEMENT DECEL BEFORE ASPHALT PAVEMENT TURN LANES		
			WB OSS 2.0																	

**Notes:**  
 NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside



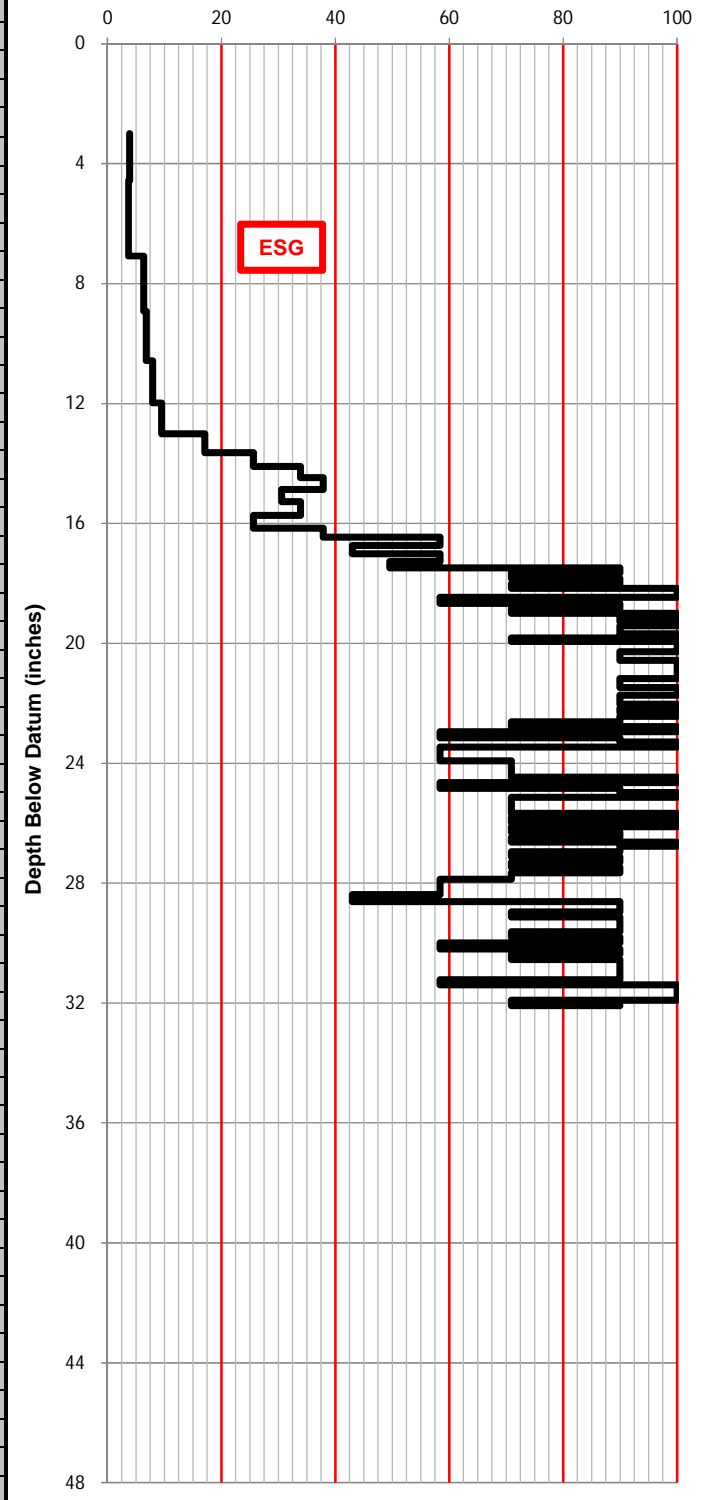
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO NEW HOPE CHURCH RD RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
22+00 -Y3RPA- WB OES				2/9/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	822,339	1,975,469			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.7	18.0	0.66				
2.5	18.08	0.67				
3.1	18.12	0.69				
3.7	18.16	0.70				
4.3	18.20	0.72				
4.9	18.24	0.74				
5.6	18.28	0.75				
6.3	18.32	0.77				
7.2	18.36	0.78				
8.0	18.4	0.8				
8.6						
9.3	AUGER					
10.1	36.4 cm / 14.3 in					
11.3	0.02					
12.9	0.03					
14.1	0.05					
14.7	0.06					
15.1	0.08					
15.5	0.10					
15.7	0.11					
15.9	0.13					
16.1	0.14					
16.2	0.16					
16.3	0.18					
16.36	0.19					
16.44	0.21					
16.5	0.22					
16.6	0.24					
16.7	0.26					
16.76	0.27					
16.84	0.29					
16.9	0.30					
17.00	0.32					
17.04	0.34					
17.08	0.35					
17.12	0.37					
17.16	0.38					
17.20	0.40					
17.24	0.42					
17.28	0.43					
17.32	0.45					
17.36	0.46					
17.40	0.48					
17.46	0.50					
17.52	0.51					
17.58	0.53					
17.64	0.54					
17.70	0.56					
17.76	0.58					
17.82	0.59					
17.88	0.61					
17.94	0.62					
18.0	0.64					



**Notes:**  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	I-40 WB TO NEW HOPE CHURCH RD RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
				ORANGE	McNALLY, T. G.	TURNAGE, J. R. / COGAR, T. E.
TEST LOCATION DESCRIPTION				DATE RUN		
24+00 -Y3RPA- WB OES				2/9/2019		
DATUM	CUT / FILL	NORTHING	EASTING	CORRELATED CBR VALUES		
ESG	CUT	822,536	1,975,413			
CUMULATIVE PENETRATION IN CENTIMETERS						
7.6	57.2	80.8				
15.6	57.7	81.3				
20.4	58.0	81.7				
24.9	58.6					
28.8	59.0					
32.1	59.3					
34.0	59.9					
35.3	60.5					
36.3	61.0					
37.2	61.5					
38.3	62.0					
39.3	62.3					
40.6	62.9					
41.5	63.3					
42.1	63.6					
42.9	64.1					
43.5	64.6					
44.2	65.1					
44.6	65.3					
45.1	65.8					
45.5	66.1					
46.0	66.6					
46.3	67.0					
46.6	67.5					
47.2	67.8					
47.6	68.2					
48.1	68.7					
48.4	69.1					
48.8	69.6					
49.1	70.0					
49.5	70.5					
49.9	71.1					
50.1	71.7					
50.6	72.5					
50.7	72.9					
51.0	73.3					
51.3	73.8					
51.7	74.2					
52.1	74.6					
52.4	75.0					
52.7	75.5					
53.0	75.9					
53.3	76.5					
53.6	76.9					
54.0	77.4					
54.4	77.8					
54.7	78.2					
55.0	78.6					
55.4	79.0					
55.8	79.6					
56.1	79.9					
56.5	80.2					
56.8	80.5					



**Notes:**  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



**PROJECT: 34178**

**REFERENCE: I-3306A**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	287	329

## ***APPENDIX I***

***PAVEMENT INVESTIGATION DATA SHEETS -YSRPD-  
DYNAMIC CONE PENETROMETER DATA -YSRPD-  
PAVEMENT CORE PHOTOGRAPHS -YSRPD-***



**PAVEMENT INVESTIGATION DATA SHEET**

<b>Project:</b>	34178.1.3
<b>TIP:</b>	I-3306A

<b>County:</b>	ORANGE
<b>Route:</b>	NC 86 TO I-40 EB RAMP

<b>Date:</b>	2/02/2019
<b>Notes By:</b>	TIM MCNALLY

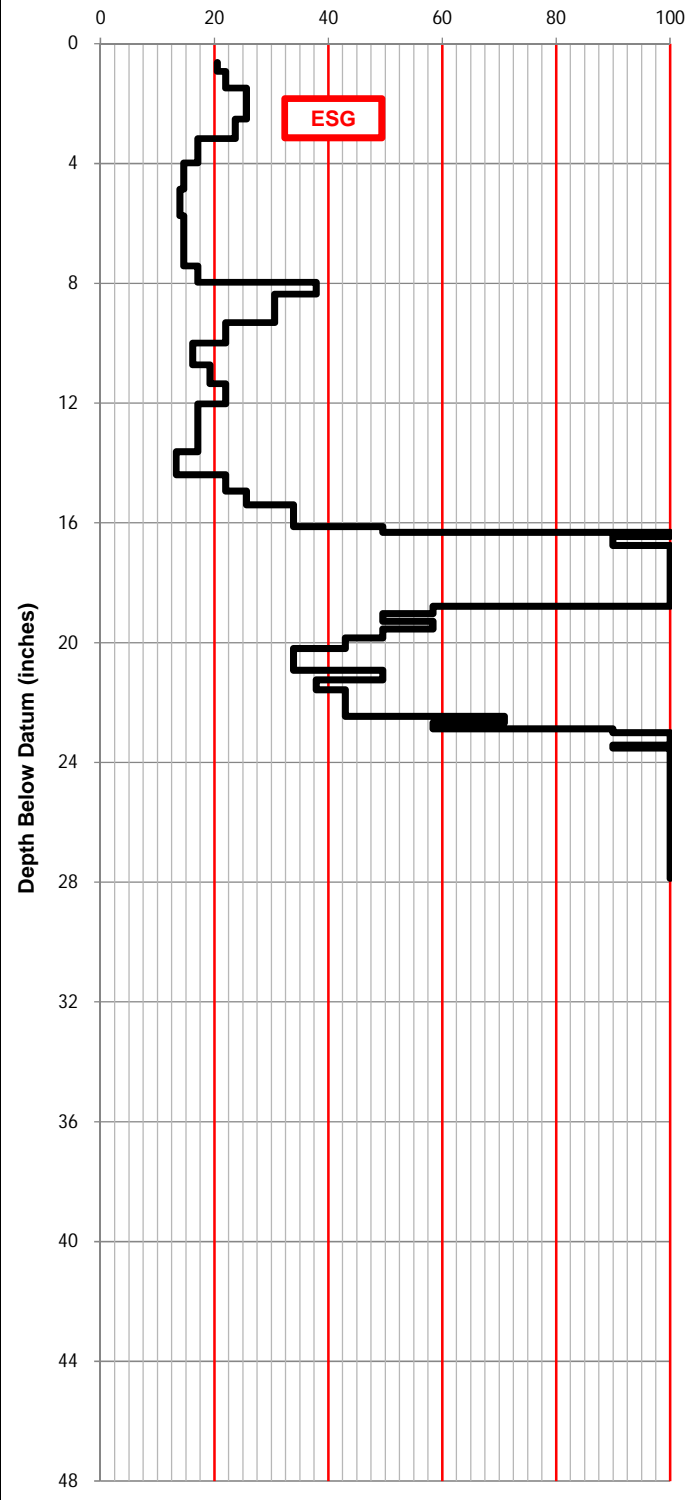
Test Location	Cut or Fill (Estimated Depth in feet)	Width		Pavement Structure, Thickness							Subgrade				GPS Coordinates				
		Lane(s) (feet)	Shoulder(s) (feet)	Offset Distance (feet)	Crown "C" or Super "S"	Pavement Layering / Total to Subgrade in inches)	Concrete (inches)	Asphalt (inches)	Econcrete / CTBC (inches)	ABC (inches)	Stabilized Subgrade (inches)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (feet)	Pavement Notes	Northing	Easting
17+00 -Y5RPD- EB OSS	CUT 8	EB ACCEL 14.0	EB OSS 4.0	2.0 FW	C	CONCRETE PADL 6.0" (13.5)	7.5										DIAMOND GRINDING LOW SEVERITY SPALLING ON TRANSVERSE JOINTS IN EB OSS AND EB ACCEL LOW SEVERITY CRACKING ON EB OSS CONCRETE EDGE	807,770	1,982,464
			EB ISS 4.0																
17+00 -Y5RPD- EB OES				8.5 FW													EB OSS / OES DROP OFF	807,764	1,982,463
21+00 -Y5RPD- EB OES	CUT 8	EB ACCEL 14.0	EB OSS 4.0	12.0 FW	C												DIAMOND GRINDING EB OSS / OES DROP OFF	807,834	1,982,069
			EB ISS 4.0																

Notes:

NB = Northbound    OSL = Outside Lane    COL = Collector Lane    LTL = Left Turn Lane    RT = Right    RT LN = Right Lane    OSS = Outside Shoulder    OES = Outside Earth Shoulder    FW = From White Line  
 SB = Southbound    CL = Center Lane    ACCEL = Acceleration Lane    CTL = Center Turn Lane    LT = Left    LT LN = Left Lane    ISS = Inside Shoulder    EM = Earth Median    FY = From Yellow Line  
 EB = Eastbound    ISL = Inside Lane    DECEL = Deceleration Lane    RTL = Right Turn Lane    (I) = Inside    PS = Paved Shoulder    AR = Auger Refusal  
 WB = Westbound    MP = Mile Post    (O) = Outside    NM = Not Measured



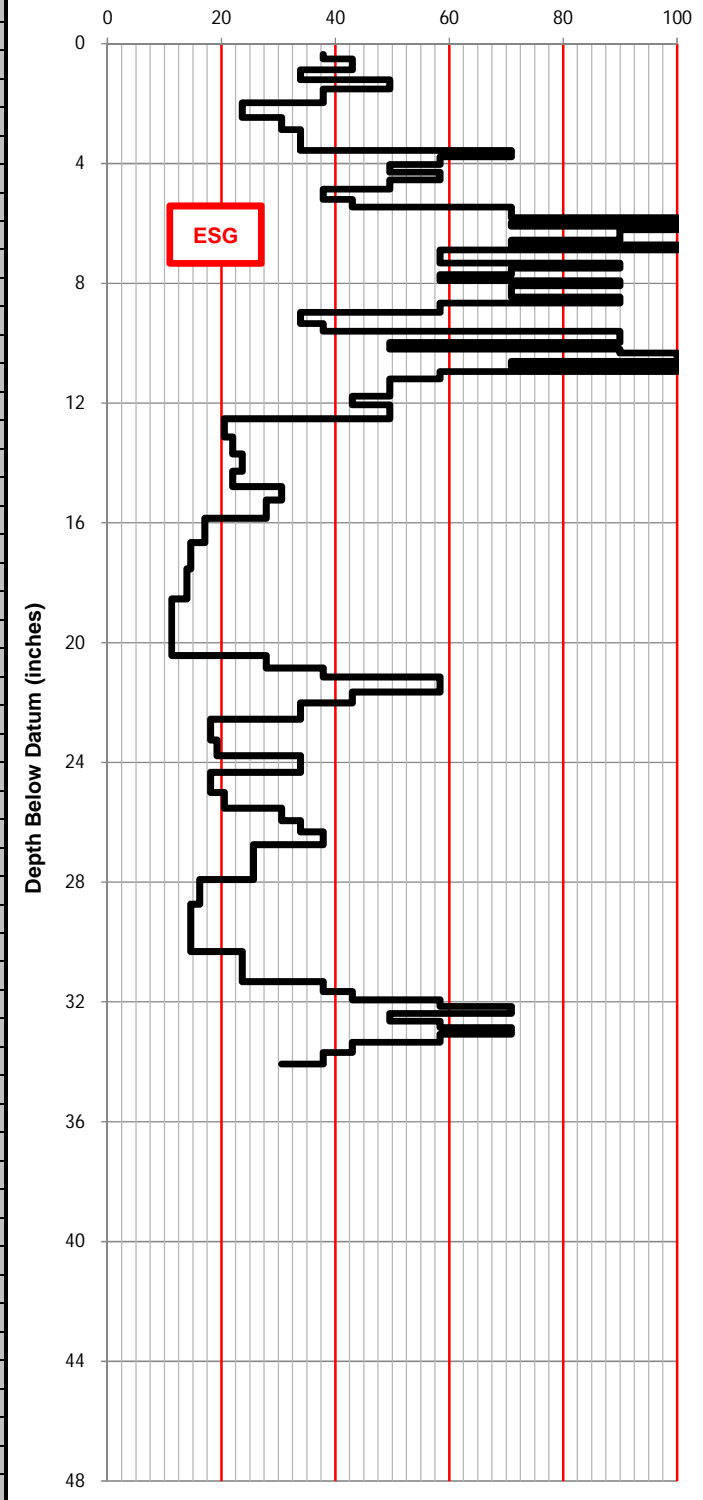
DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	NC 86 TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
17+00 -Y5RPD- EB OES				2/2/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	807,764	1,982,463			
CUMULATIVE PENETRATION IN CENTIMETERS						
1.6	50.8	69.0				
3.1	51.8	69.2				
4.4	52.8	69.4				
5.7	53.5	69.6				
7.1	54.4	69.8				
9.0	55.2	70.0				
11.2	56.0	70.2				
13.5	56.8	70.4				
15.7	57.3	70.5				
17.9	57.9	70.7				
19.8	58.3	70.9				
20.7	58.6					
21.8	58.8					
22.9	59.0					
24.4	59.3					
26.4	59.7					
28.1	59.8					
29.6	60.1					
31.5	60.4					
33.4	60.5					
35.8	60.7					
37.3	61.0					
38.6	61.2					
39.6	61.5					
40.6	61.8					
41.3	62.1					
41.6	62.4					
42.0	62.7					
42.4	63.0					
42.7	63.3					
42.8	63.6					
43.0	63.8					
43.2	64.1					
43.4	64.4					
43.7	64.7					
43.9	64.9					
44.2	65.2					
44.4	65.4					
44.7	65.7					
45.0	65.9					
45.3	66.2					
45.5	66.4					
45.8	66.7					
46.1	66.9					
46.4	67.1					
46.6	67.3					
46.9	67.6					
47.1	67.8					
47.4	68.0					
48.0	68.2					
48.7	68.4					
49.3	68.6					
50.0	68.8					



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



DYNAMIC CONE PENETROMETER DATA AND IN-SITU CBR				PROJECT NUMBER	TIP	ROUTE
				34178.1.3	I-3306A	NC 86 TO I-40 EB RAMP
				COUNTY	GEOLOGIST	TECHNICIANS
TEST LOCATION DESCRIPTION				DATE RUN	CORRELATED CBR VALUES	
21+00 -Y5RPD- EB OES				2/2/2019		
DATUM	CUT / FILL	NORTHING	EASTING			
ESG	CUT	807,834	1,982,069			
CUMULATIVE PENETRATION IN CENTIMETERS						
0.9	37.0					
1.7	38.1					
2.7	39.3					
3.4	41.2					
4.3	43.4					
5.7	45.7					
6.8	48.5					
7.8	51.3					
8.8	52.5					
9.3	53.4					
9.9	54.0					
10.6	54.6					
11.2	55.4					
11.9	56.4					
12.8	58.2					
13.6	59.9					
14.1	60.9					
14.6	62.7					
14.9	64.3					
15.4	65.4					
15.6	66.4					
16.0	67.3					
16.4	68.6					
16.9	69.9					
17.2	71.9					
17.8	74.1					
18.4	76.3					
18.8	77.7					
19.3	79.1					
19.9	80.0					
20.3	80.8					
20.8	81.4					
21.3	81.9					
21.7	82.6					
22.3	83.2					
23.3	83.7					
24.2	84.3					
24.6	85.1					
25.0	86.0					
25.7	87.1					
26.1						
26.4						
26.7						
27.2						
27.5						
28.1						
28.8						
29.5						
30.3						
31.0						
32.6						
34.1						
35.5						



Notes:  
 SG = Subgrade  
 SS = Stabilized Soil  
 CTBC = Cement-Treated Base Course  
 ABC = Aggregate Base Course  
 ESG = Estimated Subgrade (Approximately 1 foot below the existing ground surface)



# PAVEMENT CORE PHOTOGRAPHS

NC 86 TO I-40 EB RAMP

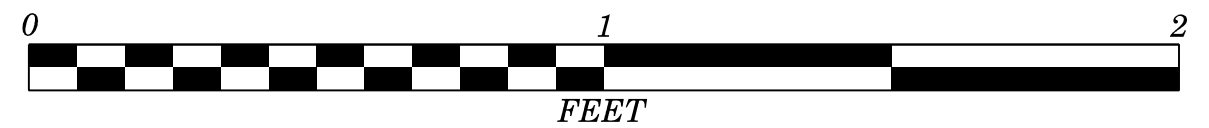
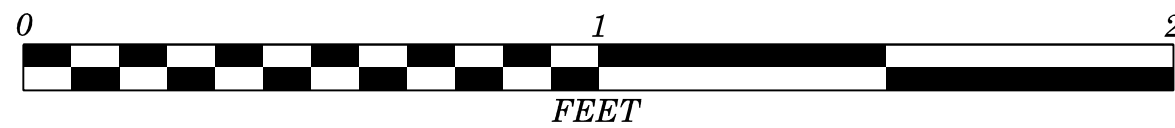
PROJECT REFERENCE NO.

SHEET NO.

I-3306A

290

17+00 -Y5RPD- EB OSS  
PADL NOT RECOVERED



**REFERENCE: I-3306A**

**PROJECT: 34178**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3306A	291	329

# ***APPENDIX J***

***LABORATORY TESTING SUMMARY  
PROCTOR, CBR, CHEMICAL TESTING***

### LABORATORY TESTING SUMMARY

PROJECT NUMBER: 70185313

TIP: I-3306A

COUNTY: ORANGE

DESCRIPTION: I-40 from I-85 to Durham County Line

Sample No.	Station	Alignment	Location	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
									Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
S-1*	50+00	- L -	WB EM	10.0 FY	1.0-3.5	A-7-6 (29)	60	32	8.2	8.6	27.3	55.9	3	96	91	82	8.5	--
S-2*	115+00	- L -	WB EM	14.0 FY	1.0-4.0	A-7-6 (13)	45	22	17.0	16.8	26.1	40.1	6	93	82	64	11.8	--
S-3*	250+00	- L -	WB EM	10.0 FY	1.0-3.5	A-6 (5)	36	16	26.1	19.1	24.5	30.3	13	84	68	49	5.8	--
S-4*	335+00	- L -	EB EM	15.0 FY	1.0-4.0	A-6 (3)	33	14	31.7	23.6	20.4	24.3	8	90	71	44	5.9	--
S-5*	410+00	- L -	EB EM	11.0 FY	1.0-4.0	A-6 (6)	38	16	24.8	22.7	19.0	33.5	5	94	80	53	3.7	--
S-6*	545+00	- L -	EB EM	16.0 FY	1.0-3.5	A-6 (3)	32	13	29.5	20.3	28.0	22.2	1	84	64	46	3.0	--
S-7	555+00	- L -	WB OES	16.5 FW	0.0-4.0	A-6 (15)	37	21	1.7	28.0	32.0	38.3	0	100	100	79	5.2	--
S-8	545+00	- L -	WB OES	14.0 FW	0.0-5.5	A-6 (4)	34	18	18.5	28.4	22.7	30.4	6	77	69	45	14.9	--
S-9	535+00	- L -	WB OSS	7.5 FW	1.1-6.0	A-6 (9)	32	17	6.2	28.7	29.3	35.8	0	96	93	68	9.5	--
S-10	530+00	- L -	WB OSS	6.0 FW	1.25-6.0	A-6 (4)	30	12	13.6	40.3	21.1	25.0	0	98	92	54	16.1	--
S-11	520+00	- L -	WB OSS	6.5 FW	1.3-6.0	A-6 (5)	30	14	10.8	40.7	24.6	23.9	0	99	94	56	16.4	--
S-12	485+00	- L -	WB OSS	7.5 FW	1.3-6.0	A-6 (1)	27	11	23.8	24.9	24.9	26.4	10	77	67	43	14.8	--
S-13	480+00	- L -	WB OES	17.0 FW	0.0-6.0	A-6 (8)	39	20	19.3	19.6	21.5	39.6	5	85	74	55	13.3	--
S-14	470+00	- L -	WB OES	15.0 FW	0.0-6.0	A-7-6 (16)	44	26	13.1	22.2	20.9	43.8	0	97	90	68	29.0	--
S-15	460+00	- L -	WB OSS	5.5 FW	1.1-6.0	A-6 (6)	39	20	21.7	19.7	23.2	35.4	15	77	65	48	22.7	--
S-16	455+00	- L -	WB OES	12.0 FW	0.0-6.0	A-6 (4)	33	16	28.8	22.3	16.4	32.5	0	90	73	48	12.3	--
S-17	445+00	- L -	WB OES	13.0 FW	0.0-6.0	A-6 (7)	38	16	20.1	27.1	20.1	32.7	0	100	92	57	17.6	--
S-18	435+00	- L -	WB OSS	6.5 FW	1.0-6.0	A-6 (11)	40	20	15.4	22.3	19.0	43.3	2	98	93	65	25.9	--
S-19	430+00	- L -	WB OES	15.0 FW	0.0-6.0	A-4 (1)	24	8	32.3	25.1	22.1	20.5	0	97	76	46	4.7	--
S-20	540+00	- L -	WB EM	8.0 FY	0.0-6.0	A-6 (4)	27	15	27.7	28.0	22.4	21.9	0	100	88	49	8.1	--
S-21	525+00	- L -	WB EM	5.5 FY	0.0-6.0	A-6 (10)	40	25	11.8	29.5	25.6	33.1	1	87	82	56	14.5	--
S-22	515+00	- L -	WB EM	7.5 FY	0.0-6.0	A-6 (8)	35	18	12.2	32.6	24.8	30.4	1	97	92	60	15.9	--
S-23	510+00	- L -	WB ISS	5.0 FY	1.25-6.0	A-7-6 (25)	53	29	5.5	15.1	26.1	53.3	1	98	95	81	24.6	--
S-24	500+00	- L -	WB EM	7.0 FY	0.0-3.9	A-6 (7)	37	21	20.8	26.0	24.2	29.0	7	89	79	52	12.2	--
S-25	490+00	- L -	WB EM	7.0 FY	0.0-5.1	A-6 (1)	28	11	33.7	23.2	21.7	21.4	9	83	63	40	7.8	--
S-26	475+00	- L -	WB EM	7.0 FY	0.0-6.0	A-6 (3)	36	17	23.0	20.4	25.0	31.6	21	70	59	43	15.3	--
S-27	465+00	- L -	WB EM	7.0 FY	1.9-6.0	A-4 (3)	29	9	30.3	17.3	23.0	29.4	0	99	77	55	8.7	--
S-28	425+00	- L -	WB EM	7.0 FY	0.0-4.0	A-6 (3)	31	13	24.0	30.2	21.3	24.5	0	98	85	50	15.9	--
S-29	410+00	- L -	WB ISS	3.0 FY	0.7-4.6	A-7-6 (7)	43	24	20.9	21.3	16.8	41.0	21	74	64	46	16.9	--
S-30	405+00	- L -	WB OES	13.0 FW	0.0-2.7	A-6 (6)	38	18	24.3	21.6	17.1	37.0	6	90	77	52	30.6	--
S-31	385+00	- L -	WB OSS	12.0 FW	1.3-6.0	A-6 (11)	40	22	17.8	17.7	24.0	40.5	7	90	79	62	21.3	--
S-32	380+00	- L -	WB OES	13.0 FW	0.0-5.0	A-7-6 (11)	41	19	12.3	16.6	29.9	41.2	4	86	79	65	23.8	--
S-33	370+00	- L -	WB OES	13.5 FW	0.0-6.0	A-7-6 (19)	52	28	13.9	14.3	24.0	47.8	4	91	83	69	17.1	--
S-34	356+00	- L -	WB (ACCEL)	5.5 FW	1.75-6.0	A-7-6 (4)	43	18	30.8	22.6	19.5	27.1	8	81	64	42	27.8	--
S-35	345+00	- L -	WB OES	14.0 FW	0.0-3.5	A-6 (7)	39	19	19.2	20.2	22.3	38.3	10	83	74	54	19.8	--
S-36	335+00	- L -	WB OSS	6.0 FW	1.0-6.0	A-6 (5)	34	15	26.7	23.0	21.7	28.6	3	93	77	51	14.5	--
S-37	320+00	- L -	WB OSS	5.5 FW	1.25-6.0	A-6 (6)	35	16	25.7	23.5	19.3	31.5	0	97	82	54	13.5	--
S-38	295+00	- L -	WB OES	13.0 FW	0.0-3.0	A-2-6 (0)	26	12	55.8	15.5	13.2	15.5	17	58	31	18	5.1	--
S-39	400+00	- L -	WB EM	6.5 FY	0.0-6.0	A-6 (4)	30	13	21.5	28.8	23.4	26.3	0	98	87	55	15.4	--
S-40	390+00	- L -	WB EM	7.5 FY	0.0-6.0	A-6 (13)	39	18	8.2	18.9	41.6	31.3	0	96	91	76	18.2	--

\*Denotes bulk sample collected for Standard Proctor, CBR, and chemical stabilization laboratory testing  
 FY - From Yellow  
 FW - From White

*Stephanie H. Huffman*

Certified Lab Technician Signature

114-01-1203

Certification Number

**LABORATORY TESTING SUMMARY**

PROJECT NUMBER: 70185313

TIP: I-3306A

COUNTY: ORANGE

DESCRIPTION: I-40 from I-85 to Durham County Line

Sample No.	Station	Alignment	Location	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
									Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
S-41	375+00	- L -	WB EM	6.5 FY	0.0-4.2	A-6 (7)	40	19	24.7	17.3	21.4	36.6	5	89	73	54	10.3	--
S-42	350+00	- L -	WB EM	7.0 FY	0.0-6.0	A-6 (3)	34	17	36.1	20.4	21.3	22.2	1	88	65	42	18.7	--
S-43	335+00	- L -	WB ISS	3.5 FY	1.0-3.8	A-6 (6)	36	18	25.6	22.1	23.3	29.0	2	94	79	53	14.2	--
S-44	311+00	- L -	WB ISL	2.5 FW	1.25-1.75	A-4 (0)	37	8	37.6	25.3	22.8	14.3	6	87	64	36	22.0	--
S-45	300+00	- L -	WB EM	6.0 FY	0.0-6.0	A-7-6 (11)	42	19	15.5	16.6	31.2	36.7	4	91	81	65	15.3	--
S-46	290+00	- L -	WB EM	6.0 FY	0.0-6.0	A-4 (0)	24	7	33.6	26.7	23.7	16.0	0	96	75	43	4.2	--
S-47	285+00	- L -	WB ISS	7.5 FY	1.0-6.0	A-4 (1)	25	9	36.5	23.5	23.4	16.6	0	98	74	44	5.9	--
S-48	275+00	- L -	WB EM	6.5 FY	0.0-6.0	A-6 (9)	39	20	17.9	19.1	26.7	36.3	7	89	79	60	22.2	--
S-49	265+00	- L -	WB EM	8.0 FY	0.0-5.5	A-7-6 (10)	41	23	19.4	18.6	25.8	36.2	8	86	75	57	20.3	--
S-50	260+00	- L -	WB ISS	3.0 FY	1.25-2.4	A-7-6 (12)	44	22	19.0	17.3	30.2	33.5	2	94	82	63	18.0	--
S-51	240+00	- L -	WB EM	5.5 FY	0.0-6.0	A-7-6 (17)	47	25	14.8	16.5	25.8	42.9	1	97	88	70	14.3	--
S-52	225+00	- L -	WB EM	7.5 FY	0.0-3.1	A-7-6 (12)	43	20	15.4	21.4	26.8	36.4	2	95	86	65	16.7	--
S-53	210+00	- L -	WB ISL	4.5 FY	1.9-6.0	A-7-6 (11)	44	23	23.3	15.8	23.4	37.5	4	92	76	59	15.2	--
S-54	200+00	- L -	WB EM	7.0 FY	0.0-6.0	A-6 (6)	34	14	22.2	16.5	31.6	29.7	5	87	72	58	14.6	--
S-55	190+00	- L -	WB EM	6.5 FY	0.0-2.6	A-7-6 (33)	62	36	6.3	12.4	19.4	61.9	1	99	95	84	19.7	--
S-56	200+00	- L -	WB OSS	7.5 FW	0.4-6.0	A-2-6 (1)	39	16	29.0	16.0	20.7	34.3	29	60	47	35	16.0	--
S-57	175+00	- L -	WB EM	5.5 FY	0.0-6.0	A-6 (6)	39	17	22.0	16.3	24.5	37.2	11	78	65	51	31.5	--
S-58	165+00	- L -	WB EM	8.0 FY	0.0-6.0	A-6 (5)	36	15	24.9	15.8	23.0	36.3	10	80	65	50	17.7	--
S-59	160+00	- L -	WB ISS	3.5 FY	1.25-6.0	A-7-5 (15)	45	18	5.0	10.0	37.5	47.5	1	89	86	78	28.8	--
S-60	150+00	- L -	WB EM	8.0 FY	0.0-6.0	A-2-4 (0)	24	8	45.7	17.9	17.6	18.8	12	70	45	28	6.3	--
S-61	140+00	- L -	WB EM	9.5 FY	0.0-6.0	A-7-6 (20)	49	23	9.6	12.2	23.8	54.4	0	98	92	80	23.2	--
S-62	135+00	- L -	WB ISS	3.5 FY	1.0-6.0	A-6 (4)	36	14	23.0	16.1	23.6	37.3	13	78	65	50	19.0	--
S-63	125+00	- L -	WB EM	5.5 FY	1.8-6.0	A-6 (6)	34	14	18.7	24.8	25.8	30.7	0	97	87	59	18.4	--
S-64	115+00	- L -	WB EM	9.0 FY	0.0-6.0	A-6 (8)	38	16	15.5	17.4	27.3	39.8	5	89	80	63	19.4	--
S-65	111+00	- L -	WB ISS	3.0 FY	1.0-3.5	A-7-6 (21)	51	24	7.6	9.5	27.6	55.3	2	97	92	82	23.2	--
S-66	100+00	- L -	WB EM	9.5 FY	0.0-6.0	A-7-6 (10)	44	20	16.7	14.1	30.5	38.7	10	82	72	59	26.2	--
S-67	90+00	- L -	WB EM	8.5 FY	0.0-6.0	A-7-6 (27)	57	29	7.3	9.8	29.3	53.6	1	97	93	83	28.8	--
S-68	65+00	- L -	WB EM	8.0 FY	0.0-3.0	A-7-6 (21)	52	27	10.4	12.5	25.6	51.5	2	94	88	76	18.9	--
S-69	60+00	- L -	WB ISS	3.0 FY	1.25-6.0	A-7-6 (35)	64	35	5.9	8.2	25.5	60.4	1	99	95	87	31.6	--
S-70	40+00	- L -	WB EM	7.5 FY	0.0-6.0	A-7-6 (9)	51	27	14.1	12.2	28.8	44.9	4	93	83	71	24.5	--
S-71	170+00	- L -	WB OSS	4.5 FW	3.5-6.0	A-7-6 (10)	42	20	17.6	12.7	27.1	42.6	3	85	74	62	12.7	--
S-72	160+00	- L -	WB OSL	3.0 FW	1.4-1.9	A-7-5 (9)	44	13	17.4	15.9	36.0	30.7	0	98	86	69	38.9	--
S-73	145+00	- L -	WB OES	14.0 FW	0.0-6.0	A-7-6 (18)	46	21	8.2	12.8	28.8	50.2	0	99	94	81	22.5	--
S-74	111+00	- L -	WB OSS	6.0 FW	1.25-6.0	A-7-6 (14)	47	21	11.9	11.0	28.4	48.7	8	88	80	70	19.3	--
S-75	105+00	- L -	WB OSS	5.0 FW	1.25-6.0	A-7-6 (19)	51	28	12.4	12.1	29.8	45.7	4	91	83	71	22.8	--
S-76	85+00	- L -	WB OSS	6.0 FW	1.5-6.0	A-6 (6)	35	13	20.6	19.5	33.0	26.9	1	95	82	61	17.7	--
S-77	80+00	- L -	WB OES	15.0 FW	4.5-6.0	A-7-6 (9)	44	20	23.9	11.5	24.4	40.2	3	86	69	58	17.8	--
S-78	60+00	- L -	WB OSL	4.5 FW	1.9-6.0	A-7-5 (24)	59	28	9.1	10.0	27.4	53.5	1	94	88	78	30.1	--
S-79	45+00	- L -	WB OES	13.0 FW	1.75-6.0	A-7-5 (13)	43	13	5.5	12.6	46.8	35.1	0	99	96	85	27.2	--
S-80	35+00	- L -	WB OSS	6.5 FW	1.25-6.0	A-7-6 (24)	62	39	6.8	8.2	21.6	63.4	3	76	72	66	29.7	--

\*Denotes bulk sample collected for Standard Proctor, CBR, and chemical stabilization laboratory testing  
 FY - From Yellow  
 FW - From White

*Stephanie H. Huffman*

Certified Lab Technician Signature

114-01-1203

Certification Number

**LABORATORY TESTING SUMMARY**

PROJECT NUMBER: 70185313

TIP: I-3306A

COUNTY: ORANGE

DESCRIPTION: I-40 from I-85 to Durham County Line

Sample No.	Station	Alignment	Location	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
									Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
S-81	25+00	-L-	WB EM	7.0 FY	3.8-6.0	A-6 (10)	39	17	14.5	19.8	27.5	38.2	0	97	88	69	15.6	--
S-82	15+00	-L-	WB EM	8.0 FY	0.0-6.0	A-6 (5)	32	13	22.2	18.3	31.7	27.8	7	88	75	56	10.5	--
S-83	10+00	-L-	WB ISL	4.0 FY	2.0-3.75	A-7-6 (11)	47	22	19.1	14.3	31.2	35.4	6	82	71	58	22.9	--
S-84	10+00	-L-	WB ISS	3.5 FY	2.4-3.4	A-6 (4)	40	17	20.0	14.9	28.3	36.8	17	65	55	44	25.9	--
S-85	15+00	-YFLYAREV-	WB EM	7.5 FY	0.0-6.0	A-6 (3)	30	13	28.5	17.2	26.7	27.6	5	82	64	47	6.1	--
S-86	20+00	-YFLYAREV-	WB EM	9.0 FY	2.4-6.0	A-7-6 (5)	42	21	19.1	15.8	27.8	37.3	9	63	55	43	21.2	--
S-87	23+00	-YFLYAREV-	WB ISL	4.0 FY	1.25-6.0	A-6 (7)	37	15	20.3	17.9	32.0	29.8	3	90	77	60	10.4	--
S-88	30+00	-L-	WB OES	14.0 FW	0.0-6.0	A-7-5 (10)	41	11	9.2	11.8	33.8	45.2	0	99	94	81	32.9	--
S-89	20+00	-L-	WB OES	14.0 FW	0.0-6.0	A-7-6 (5)	43	20	23.5	14.9	28.3	33.3	17	70	58	45	12.4	--
S-90	23+00	-YFLYAREV-	WB OES	8.0 FW	0.0-3.3	A-7-6 (8)	42	20	22.6	16.0	23.6	37.8	7	85	71	55	17.7	--
S-91	26+00	-YFLYAREV-	WB OES	7.5 FW	0.0-6.0	A-6 (6)	33	14	20.8	22.1	28.8	28.3	2	94	82	58	7.0	--
S-92	21+50	-Y3RPC-	EB OSS	3.5 FW	1.0-6.0	A-6 (6)	38	17	21.7	20.5	29.9	27.9	1	83	71	52	17.9	--
S-93	55+00	-YRPD-	EB OES	14.0 FW	0.0-1.9	A-6 (5)	36	13	22.8	17.2	25.0	35.0	3	85	72	54	21.4	--
S-94	55+00	-YRPD-	EB OES	14.0 FW	1.9-6.0	A-7-6 (16)	42	19	10.0	10.8	43.7	35.5	0	99	93	82	15.8	--
S-95	50+00	-YRPD-	EB OES	13.5 FW	0.0-6.0	A-7-5 (13)	46	15	9.6	18.5	37.3	34.6	0	99	94	77	51.6	--
S-96	40+00	-YRPD-	EB OES	14.0 FW	0.0-6.0	A-6 (5)	39	16	14.7	15.4	29.5	40.4	8	66	59	49	21.9	--
S-97	20+00	-YRPD-	EB ACCEL	4.0 FW	1.8-4.6	A-7-6 (10)	42	19	19.9	15.2	28.8	36.1	5	90	77	62	19.6	--
S-98	10+00	-L-	EB OSS	6.0 FW	1.3-6.0	A-6 (8)	39	14	16.2	16.5	27.0	40.3	5	92	82	66	23.0	--
S-99	10+00	-L-	EB OSL	3.5 FW	1.6-2.6	A-7-6 (6)	42	19	18.2	14.9	25.2	41.7	12	69	60	49	23.8	--
S-100	25+00	-L-	EB OES	12.5 FW	0.0-6.0	A-6 (7)	38	11	12.5	19.5	29.3	38.7	0	96	88	71	31.4	--
S-101	35+00	-L-	EB OSS	7.5 FW	1.2-6.0	A-7-6 (13)	46	23	14.1	14.8	27.8	43.3	8	86	77	65	29.9	--
S-102	50+00	-L-	EB OES	14.5 FW	0.0-6.0	A-7-5 (19)	53	22	8.5	7.2	29.5	54.8	2	90	84	77	33.1	--
S-103	60+00	-L-	EB OSS	6.0 FW	1.1-6.0	A-7-5 (24)	56	25	6.7	12.2	26.7	54.4	1	98	93	83	35.2	--
S-104	65+00	-L-	EB OSS	5.5 FW	1.25-4.5	A-7-6 (9)	42	19	16.0	16.0	25.6	42.4	6	84	75	60	19.8	--
S-105	85+00	-L-	EB OSS	6.5 FW	1.2-6.0	A-7-6 (30)	70	46	10.7	14.2	17.2	57.9	2	84	78	67	19.4	--
S-106	90+00	-L-	EB OES	14.0 FW	0.0-6.0	A-7-5 (21)	55	25	9.7	8.7	22.5	59.1	5	92	85	77	35.7	--
S-107	30+00	-YRPD-	EB EM	7.0 FY	0.0-6.0	A-7-6 (15)	44	22	14.3	13.6	32.9	39.2	0	96	87	73	15.2	--
S-108	20+00	-YRPD-	EB EM	8.0 FY	0.0-6.0	A-7-6 (8)	41	18	19.8	14.7	23.0	42.5	5	83	71	57	22.3	--
S-109	15+00	-YRPD-	EB EM	9.0 FY	0.0-6.0	A-6 (9)	40	16	19.1	15.3	34.8	30.8	1	95	82	66	15.7	--
S-110	15+00	-YRPD-	EB ISS	3.0 FY	1.2-3.5	A-7-6 (11)	43	25	22.8	14.4	31.0	31.8	7	87	72	58	18.5	--
S-111	10+00	-L-	EB ISS	2.5 FY	1.25-4.0	A-7-6 (23)	54	30	13.0	10.7	22.2	54.1	1	94	85	75	25.1	--
S-112	20+00	-L-	EB EM	6.0 FY	0.0-6.0	A-7-6 (18)	54	29	9.6	11.0	20.2	59.2	2	79	74	65	25.6	--
S-113	45+00	-L-	EB EM	9.0 FY	0.0-6.0	A-7-6 (22)	53	26	9.4	10.2	27.7	52.7	1	96	90	80	21.9	--
S-114	70+00	-L-	EB EM	6.0 FY	0.0-6.0	A-7-6 (15)	47	24	15.6	15.4	25.9	43.1	4	92	82	67	18.6	--
S-115	80+00	-L-	EB EM	13.0 FY	3.0-6.0	A-7-6 (29)	57	35	11.3	7.8	25.8	55.1	2	96	87	80	30.1	--
S-116	85+00	-L-	EB ISS	3.5 FY	0.0-6.0	A-7-6 (10)	43	22	18.3	17.1	19.9	44.7	6	83	73	57	19.4	--
S-117	95+00	-L-	EB EM	6.0 FY	0.0-6.0	A-7-6 (10)	44	22	18.1	15.0	20.5	46.4	10	81	70	57	18.1	--
S-118	105+00	-L-	EB EM	10.0 FY	0.0-6.0	A-7-6 (14)	50	26	13.0	14.0	25.4	47.6	6	78	72	60	22.8	--
S-119	111+00	-L-	EB ISS	3.0 FY	1.3-6.0	A-7-6 (15)	47	20	10.7	11.8	29.8	47.7	2	94	87	75	27.8	--
S-120	119+50	-L-	EB EM	8.0 FY	0.0-3.2	A-6 (6)	39	18	23.5	21.5	19.8	35.2	7	89	75	52	16.9	--

\*Denotes bulk sample collected for Standard Proctor, CBR, and chemical stabilization laboratory testing

FY - From Yellow

FW - From White

*Stephanie H. Huffman*

Certified Lab Technician Signature

114-01-1203

Certification Number

**LABORATORY TESTING SUMMARY**

PROJECT NUMBER: 70185313

TIP: I-3306A

COUNTY: ORANGE

DESCRIPTION: I-40 from I-85 to Durham County Line

Sample No.	Station	Alignment	Location	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
									Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
S-121	130+00	-L-	EB EM	9.5 FY	0.0-6.0	A-7-6 (6)	41	15	21.8	15.5	28.6	34.1	10	83	70	55	23.7	--
S-122	115+00	-L-	EB OES	12.0 FW	0.0-6.0	A-7-6 (26)	58	30	10.1	9.4	27.6	52.9	2	96	89	80	31.9	--
S-123	140+00	-L-	EB OES	14.5 FW	0.0-6.0	A-7-6 (18)	46	22	10.3	11.9	27.5	50.3	1	98	91	79	20.8	--
S-124	150+00	-L-	EB OES	14.5 FW	0.0-6.0	A-7-6 (10)	41	20	18.0	16.3	20.2	45.5	7	89	79	61	18.8	--
S-125	160+00	-L-	EB OSS	7.0 FW	1.25-6.0	A-6 (4)	29	11	22.9	18.5	21.9	36.7	2	93	78	58	6.7	--
S-126	165+00	-L-	EB OES	11.5 FW	0.0-6.0	A-7-6 (11)	43	23	20.9	14.2	23.4	41.5	8	86	72	58	24.0	--
S-127	175+00	-L-	EB OES	13.0 FW	0.0-6.0	A-6 (1)	34	13	29.7	20.4	18.9	31.0	25	66	53	36	10.9	--
S-128	190+00	-L-	EB OES	13.0 FW	0.0-6.0	A-6 (2)	35	14	31.4	20.9	17.9	29.8	18	76	60	39	24.1	--
S-129	200+00	-L-	EB OES	13.5 FW	0.0-6.0	A-7-6 (7)	41	19	23.2	17.9	23.4	35.5	9	86	72	54	18.9	--
S-130	215+00	-L-	EB OES	13.5 FW	0.0-6.0	A-7-6 (11)	44	24	22.2	17.0	24.1	36.7	7	89	75	58	25.2	--
S-131	225+00	-L-	EB OES	12.0 FW	0.0-6.0	A-6 (8)	39	19	21.5	22.5	25.0	31.0	3	94	80	58	14.8	--
S-132	21+00	-Y5RPD-	EB OES	12.0 FW	1.0-6.0	A-6 (4)	36	18	29.7	21.3	17.8	31.2	12	81	64	43	9.5	--
S-133	17+00	-Y5RPD-	EB OES	8.5 FW	0.0-4.0	A-6 (8)	38	20	21.0	22.5	22.5	34.0	2	93	81	57	21.1	--
S-134	17+00	-Y5RPD-	EB OES	8.5 FW	4.0-6.0	A-6 (7)	33	14	12.9	23.9	34.0	29.2	1	96	88	67	13.3	--
S-135	145+00	-L-	EB EM	8.0 FY	2.5-6.0	A-7-6 (14)	52	28	14.4	13.4	17.7	54.5	6	78	71	59	25.9	--
S-136	160+00	-L-	EB ISS	3.5 FY	1.2-6.0	A-4 (2)	29	9	24.2	17.2	18.6	40.0	3	87	72	54	10.4	--
S-137	170+00	-L-	EB EM	7.5 FY	0.0-6.0	A-7-6 (12)	45	22	16.8	14.5	23.8	44.9	9	86	76	62	18.7	--
S-138	180+00	-L-	EB EM	7.0 FY	0.0-3.0	A-7-6 (12)	42	21	16.8	19.2	21.6	42.4	0	96	86	65	23.9	--
S-139	185+00	-L-	EB ISS	3.0 FY	1.25-3.2	A-6 (5)	36	14	24.1	21.2	17.3	37.4	4	90	77	53	18.6	--
S-140	195+00	-L-	EB EM	6.0 FY	0.0-6.0	A-7-6 (15)	46	24	15.2	15.9	24.8	44.1	3	93	84	67	18.9	--
S-141	204+00	-L-	EB EM	8.5 FY	0.0-6.0	A-7-6 (15)	46	26	15.6	18.6	26.4	39.4	5	93	84	65	20.3	--
S-142	235+00	-L-	EB ISS	3.0 FY	1.1-6.0	A-7-6 (17)	46	30	16.7	17.7	31.0	34.6	2	94	84	65	14.6	--
S-143	245+00	-L-	EB EM	6.0 FY	0.0-6.0	A-7-6 (10)	44	22	15.2	20.5	29.2	35.1	3	83	74	58	19.8	--
S-144	255+00	-L-	EB EM	8.5 FY	0.0-6.0	A-6 (5)	33	13	19.7	27.9	19.8	32.6	2	97	87	55	10.5	--
S-145	260+00	-L-	EB ISS	3.5 FY	0.8-6.0	A-6 (3)	33	12	21.1	23.3	19.7	35.9	11	82	71	49	15.8	--
S-146	13+00	-Y2RPD-	EB OES	9.5 FW	0.0-3.1	A-6 (9)	40	17	17.8	19.3	28.7	34.2	3	95	85	63	14.4	--
S-147	235+00	-L-	EB OES	9.0 FW	0.0-6.0	A-7-6 (19)	53	27	13.5	17.7	39.0	29.8	1	96	89	70	15.7	--
S-148	240+00	-L-	EB ACCEL	6.5 FW	1.9-6.0	A-7-6 (11)	42	21	17.2	19.0	27.4	36.4	3	93	82	63	18.4	--
S-149	250+00	-L-	EB OES	13.0 FW	0.0-3.5	A-7-6 (7)	41	20	20.6	18.8	21.2	39.4	17	77	67	50	17.2	--
S-150	250+00	-L-	EB OES	13.0 FW	3.5-5.5	A-6 (1)	31	12	31.6	18.9	18.8	30.7	16	75	57	40	7.7	--
S-151	265+00	-L-	EB OSS	6.0 FW	1.3-6.0	A-6 (5)	36	15	21.0	22.1	24.2	32.7	7	85	73	52	16.2	--
S-152	275+00	-L-	EB OSS	5.0 FW	1.8-6.0	A-6 (4)	32	13	25.7	24.0	24.4	25.9	5	90	75	50	10.5	--
S-153	285+00	-L-	EB OSS	7.0 FW	1.25-6.0	A-6 (10)	39	24	16.2	24.3	26.0	33.5	8	87	79	56	7.5	--
S-154	300+00	-L-	EB OES	12.0 FW	0.0-6.0	A-6 (7)	38	17	24.3	19.2	26.3	30.2	3	92	75	57	18.2	--
S-155	311+00	-L-	EB OSS	5.5 FW	1.5-6.0	A-6 (5)	34	15	21.8	21.4	27.8	29.0	4	90	76	55	18.0	--
S-156	335+00	-L-	EB OSS	6.5 FW	1.1-6.0	A-6 (5)	35	16	26.2	22.6	21.2	30.0	3	93	77	52	13.1	--
S-157	340+00	-L-	EB OES	14.5 FW	0.0-6.0	A-6 (5)	39	16	22.7	18.1	17.9	41.3	5	80	68	51	18.4	--
S-158	350+00	-L-	EB OSS	5.5 FW	1.6-6.0	A-6 (1)	30	13	41.4	20.3	15.1	23.2	5	86	59	37	8.5	--
S-159	360+00	-L-	EB OSS	7.5 FW	1.1-3.5	A-7-6 (31)	61	40	12.1	11.1	24.5	52.3	1	98	91	77	19.2	--
S-160	360+00	-L-	EB OSS	7.5 FW	3.5-6.0	A-7-6 (15)	45	24	16.3	12.3	26.4	45.0	3	92	81	69	27.3	--

\*Denotes bulk sample collected for Standard Proctor, CBR, and chemical stabilization laboratory testing  
 FY - From Yellow  
 FW - From White

*Stephanie H. Huffman*

Certified Lab Technician Signature

114-01-1203

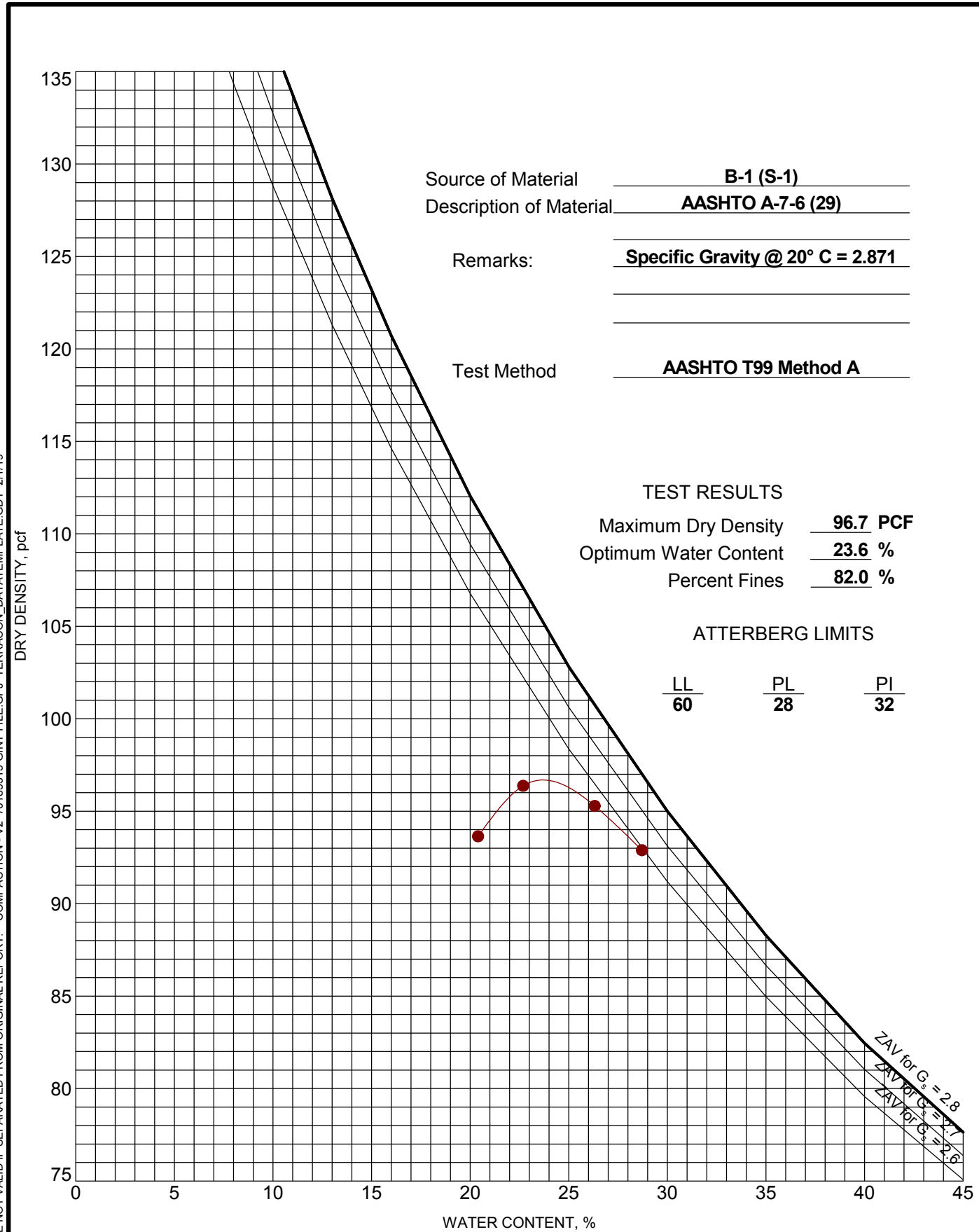
Certification Number





# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material B-1 (S-1)  
 Description of Material AASHTO A-7-6 (29)  
 Remarks: Specific Gravity @ 20° C = 2.871  
 Test Method AASHTO T99 Method A

**TEST RESULTS**  
 Maximum Dry Density 96.7 PCF  
 Optimum Water Content 23.6 %  
 Percent Fines 82.0 %

**ATTERBERG LIMITS**  
 LL 60 PL 28 PI 32

# REPORT FOR CALIFORNIA BEARING RATIO

SHEET 297 OF 329



2401 Brentwood Road, Suite 107  
 Raleigh, NC 27604  
 919-873-2211

Service Date: 01/15/19  
 Report Date: 02/01/19

**Client**  
 NCDOT - Geotechnical Engineering Unit  
 Attn: Mike Whalen  
 1589 Mail Service Center  
 Raleigh, North Carolina 27699-1500

**Project**  
 I13306A - I40 - DB PDI  
 I-40  
 Hillsborough, North Carolina

Project No. 70195313

## SAMPLE INFORMATION

Sample Number: S-1 Proctor Method: AASHTO T99 - Method A  
 Boring Number: B-1 Maximum Dry Density (pcf): 96.7  
 Sample Location: Bulk Sample Optimum Moisture: 23.6  
 Depth: 0-3.5' Liquid Limit: 60  
 Material Description: AASHTO A-7-6 (29) Plasticity Index: 32

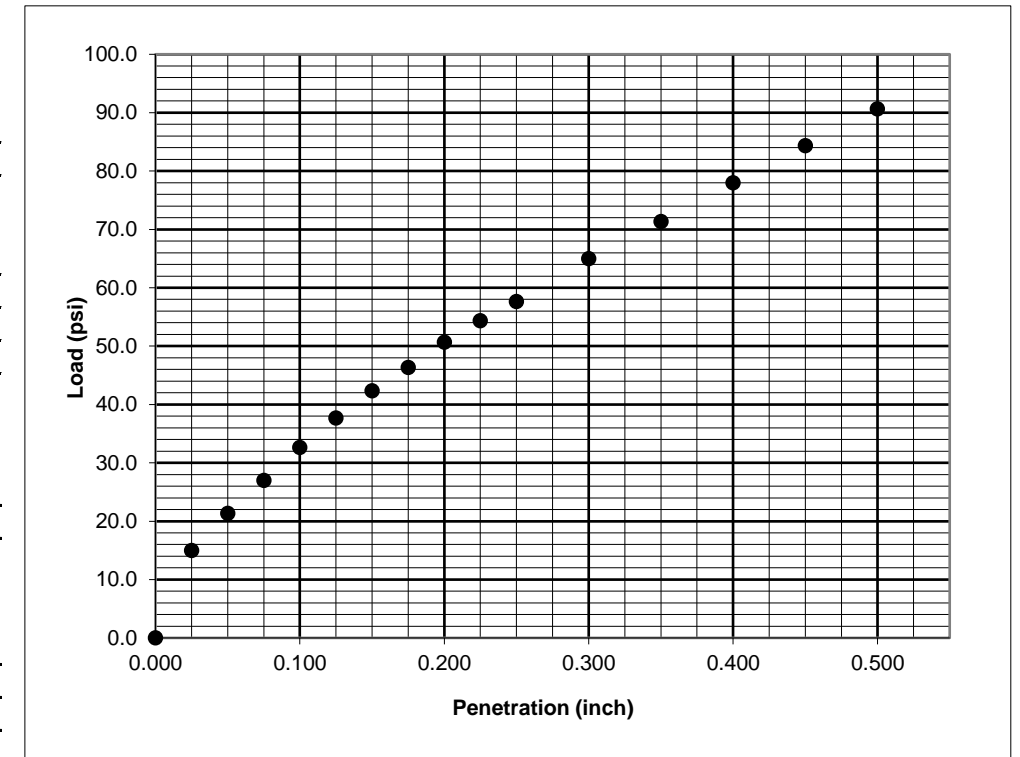
## CBR TEST DATA

CBR Value at 0.100 inch 3.3  
 CBR Value at 0.200 inch 3.4

Surcharge Weight (lbs) 10  
 Soaking Condition Soaked  
 Length of Soaking (hours) 96  
 Swell (%) 3.8

**DENSITY DATA**  
 Dry Density Before Soaking (pcf) 96.0  
 Compaction of Proctor (%) 99.3

**MOISTURE DATA**  
 Before Compaction (%) 23.6  
 After Compaction (%) 23.6  
 Top 1" After Soaking (%) 35.4  
 Average After Soaking (%) 30.0



## Comments:

Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman  
 Reported To: Matt Alexander  
 Contractor:  
 Report Distribution

Reviewed by: Matthew J. Alexander  
 Geotechnical Project Manager

Test Methods: AASHTO T193

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 70195313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

PROJECT: I3306A - I40 - D8 PDI

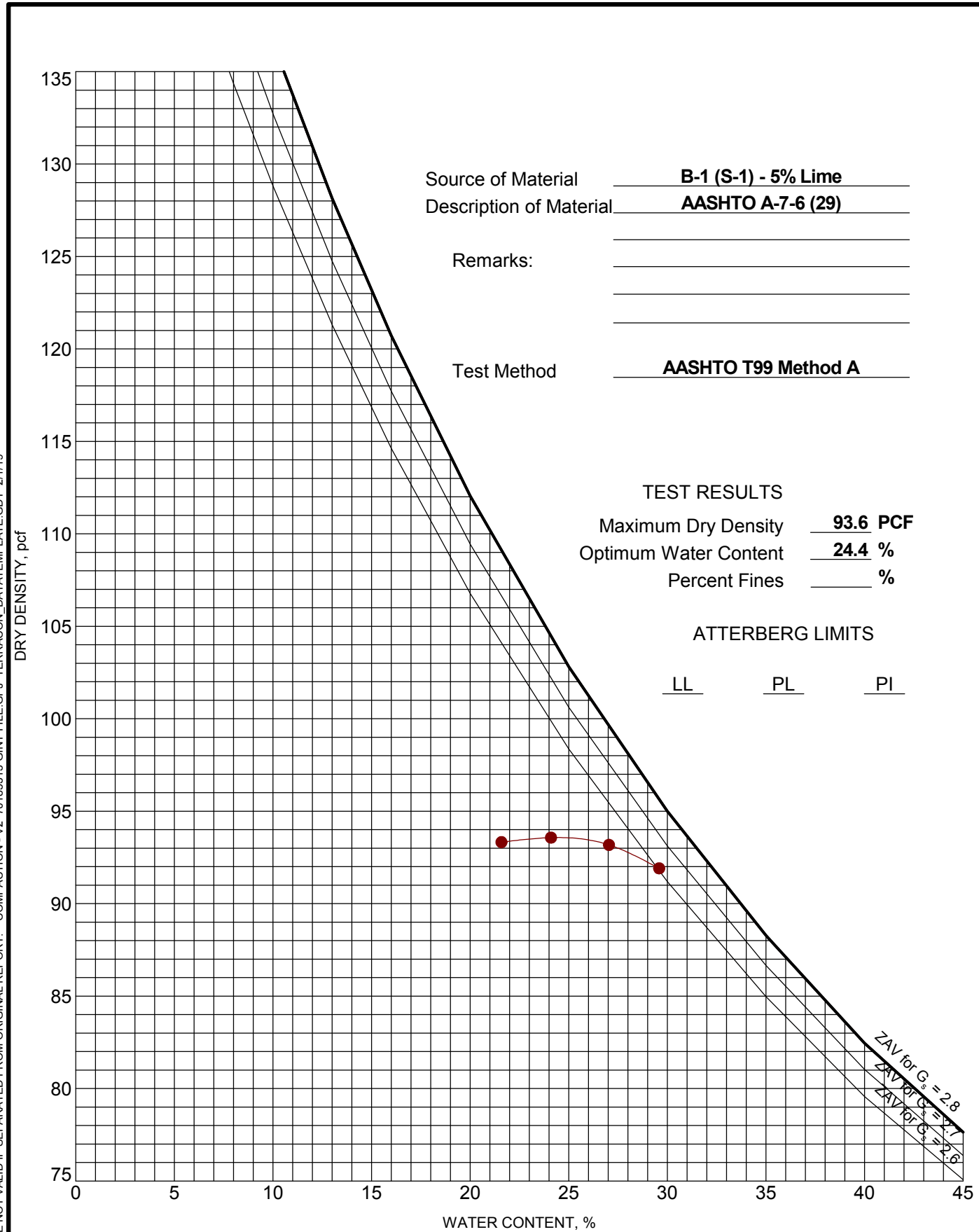
SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

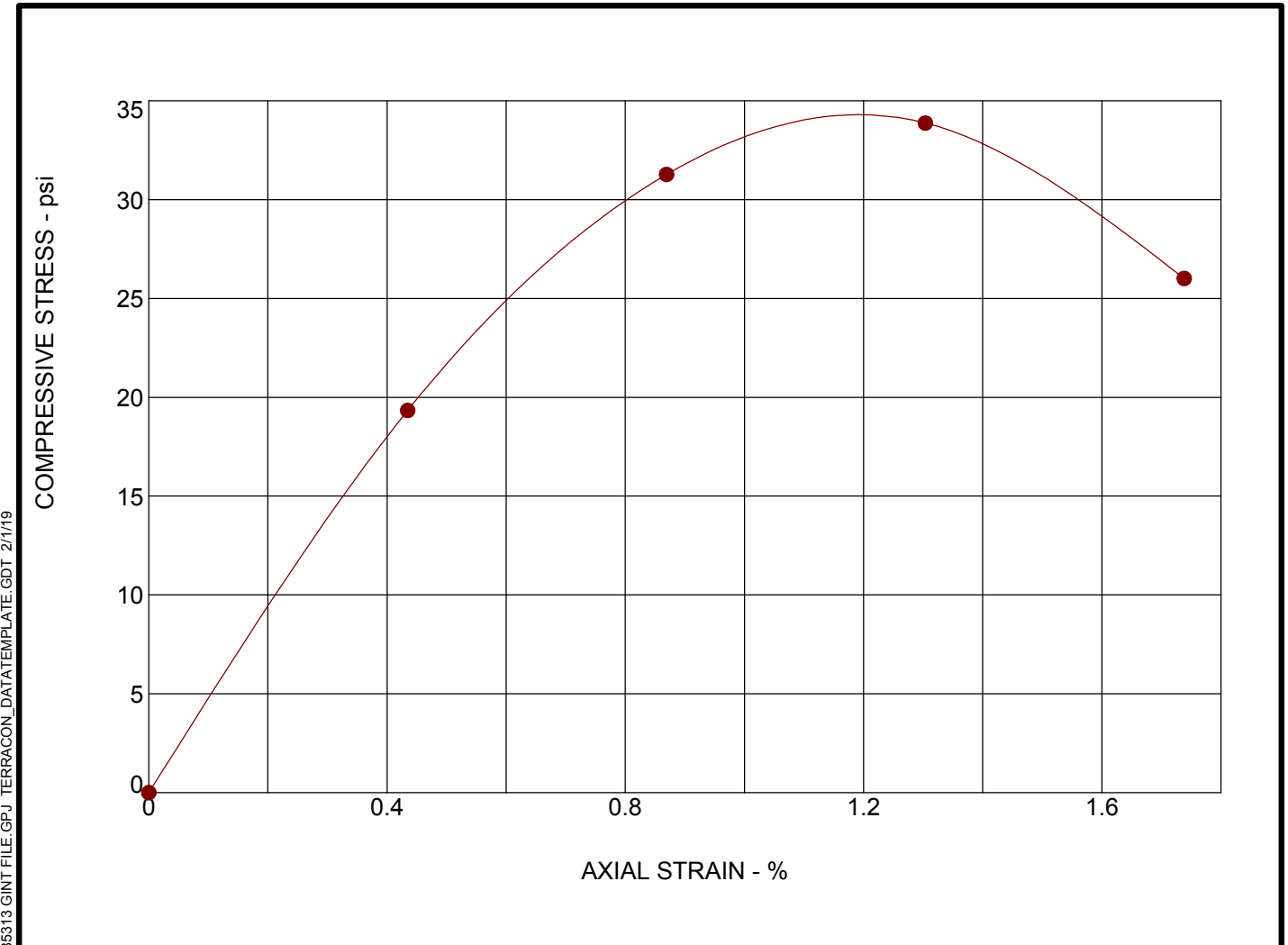
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 SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	24
Dry Density:	pcf	88
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	34
Undrained Shear Strength:	(psi)	17
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: B-1 (S-1) - 4% Lime - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

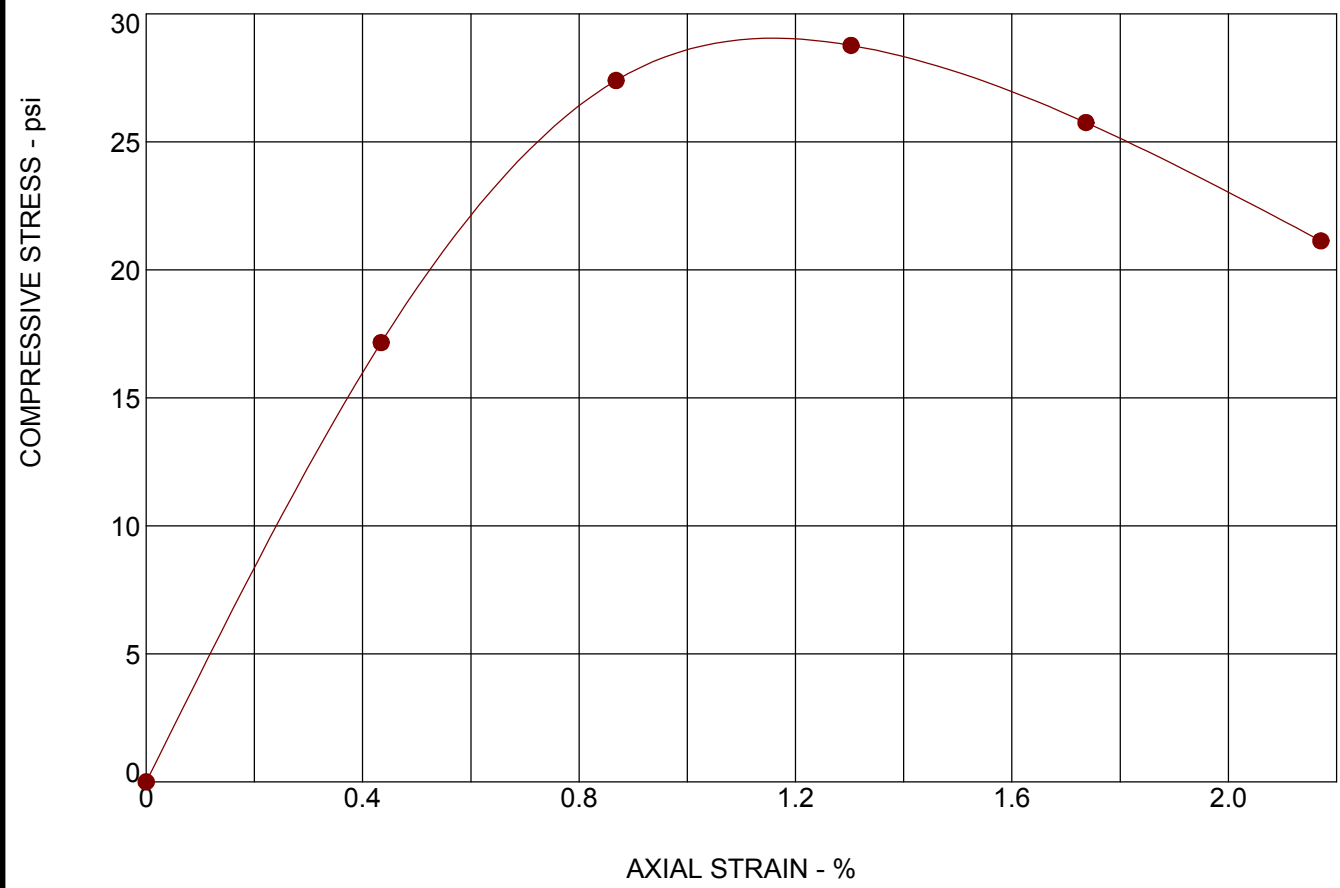
SITE: I-40  
 Hillsborough, North Carolina



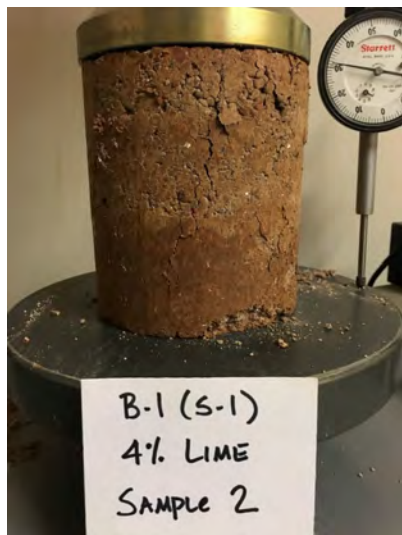
PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	24
Dry Density:	pcf	88
Diameter:	in.	4.00
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	29
Undrained Shear Strength:	(psi)	14
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-1 - 4% Lime - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

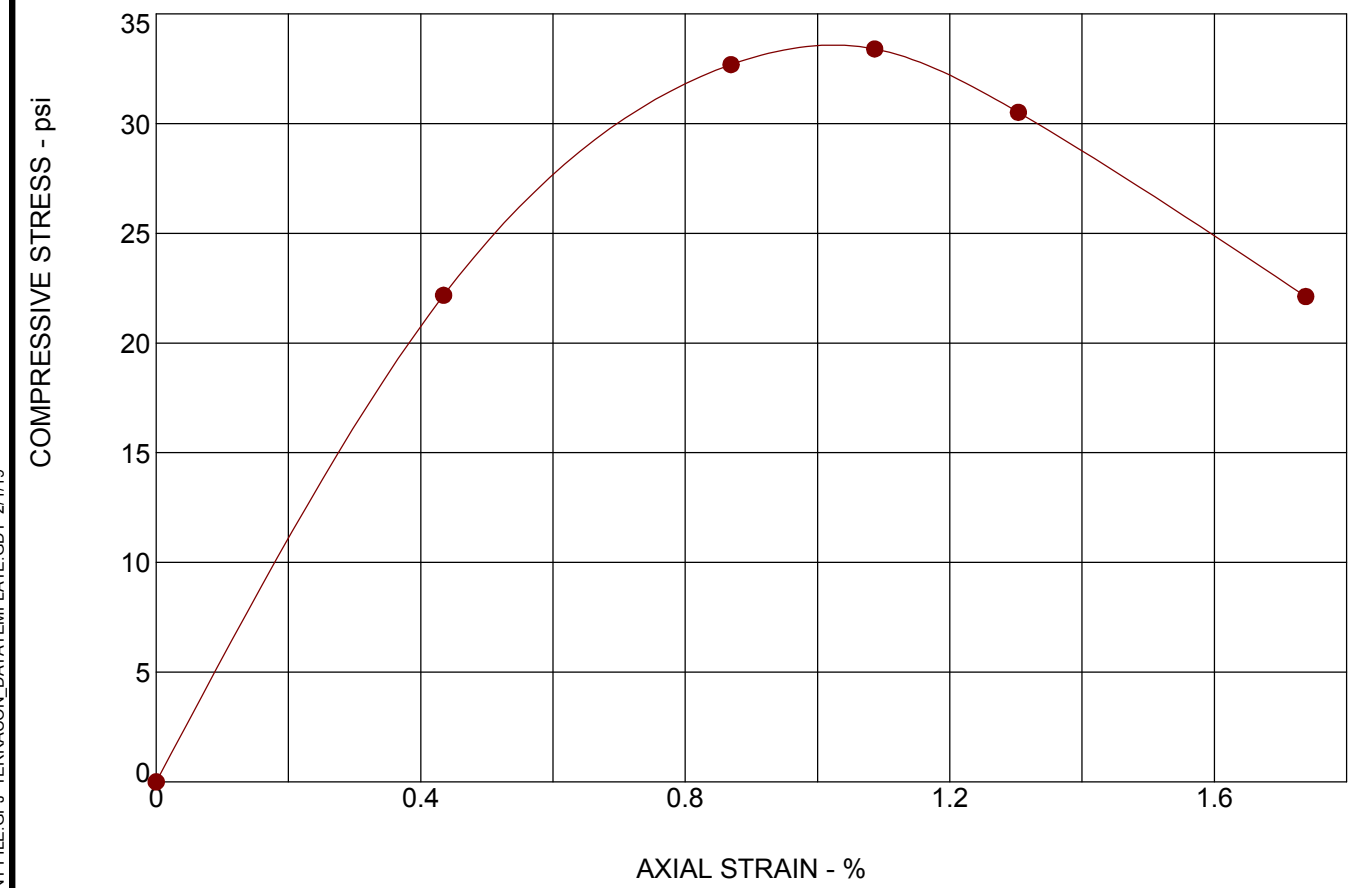


CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

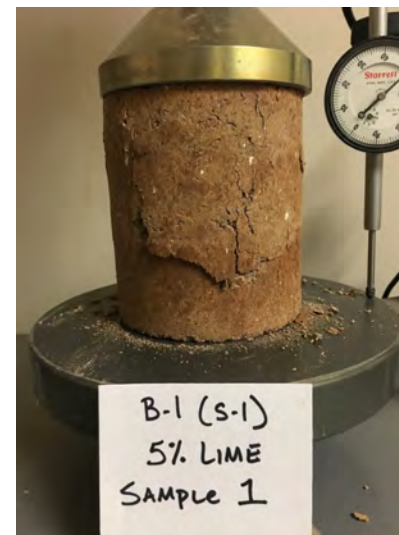
EXHIBIT: B-2

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	24
Dry Density:	pcf	89
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	33
Undrained Shear Strength:	(psi)	17
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-1 - 5% Lime - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina



CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

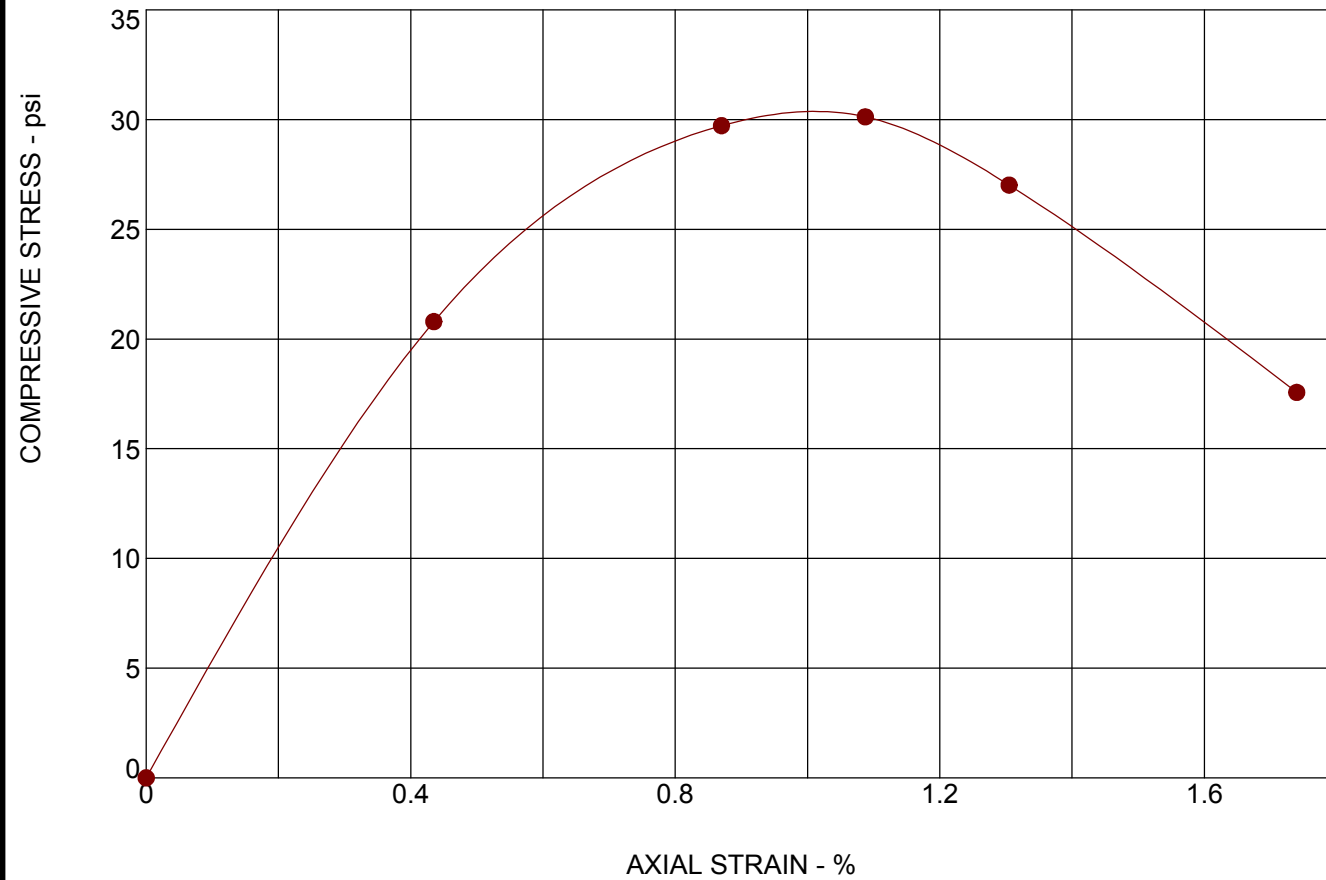
EXHIBIT: B-3

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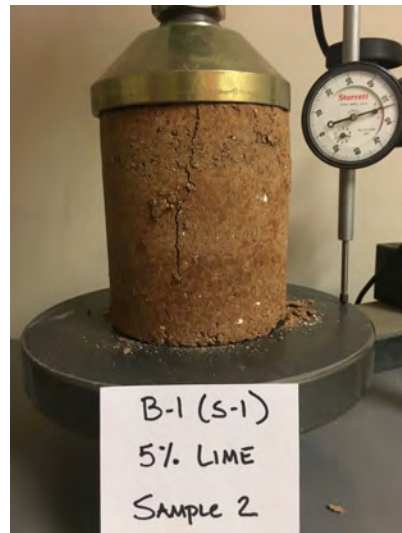
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	26
Dry Density:	pcf	87
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	30
Undrained Shear Strength:	(psi)	15
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-1 - 5% Lime - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
----	----	----	----------------------

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina

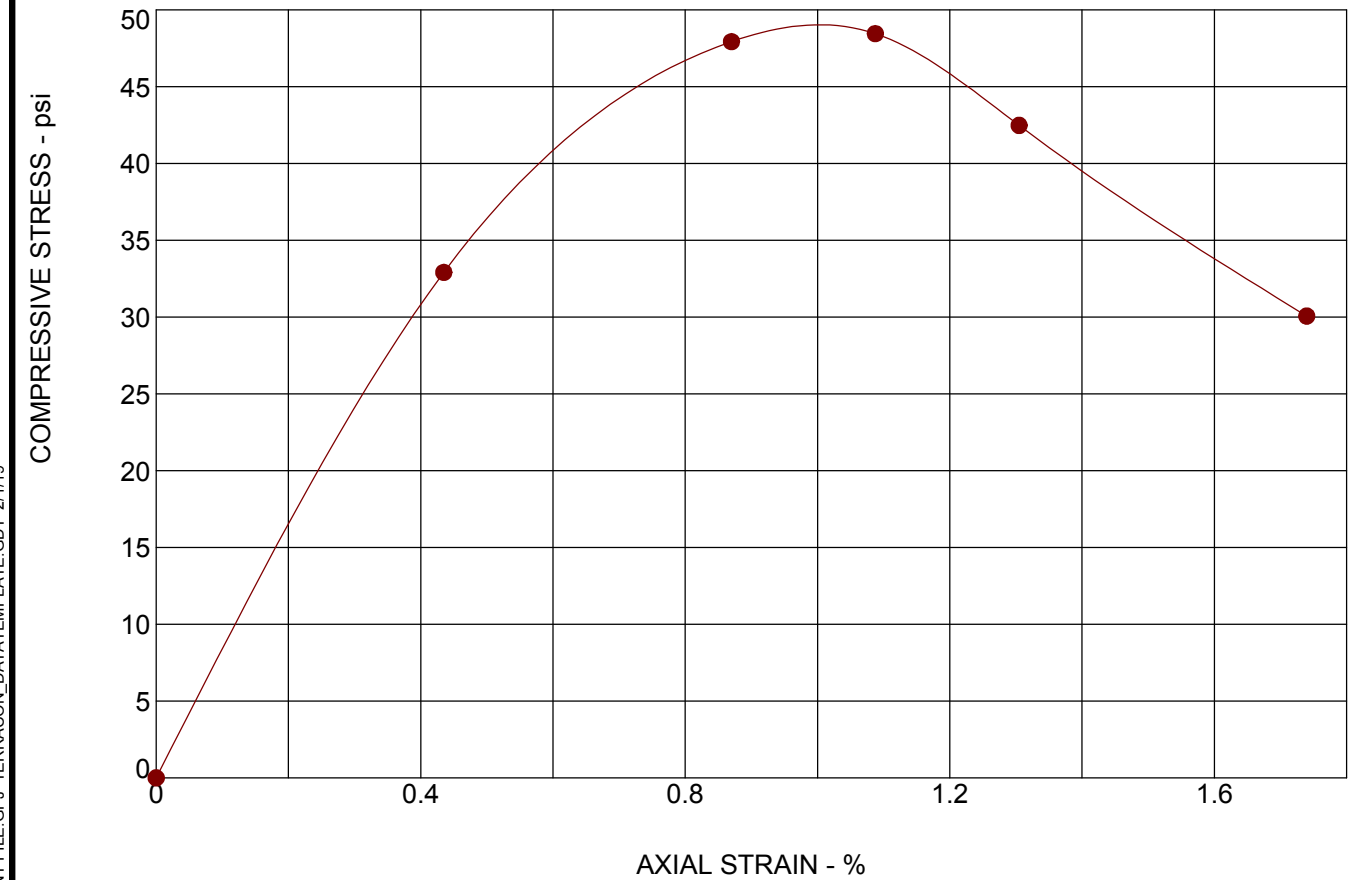


PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

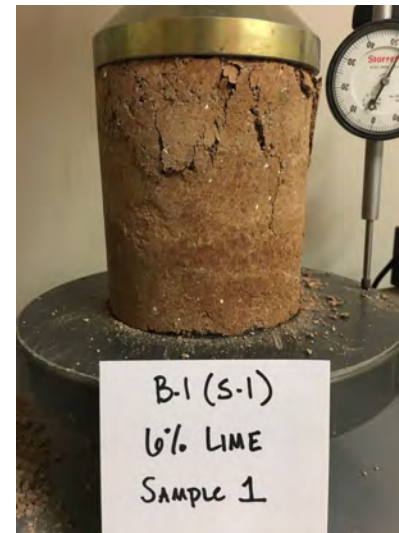
EXHIBIT: B-4

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	24
Dry Density:	pcf	88
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	48
Undrained Shear Strength:	(psi)	24
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-1 - 6% Lime - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
----	----	----	----------------------

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



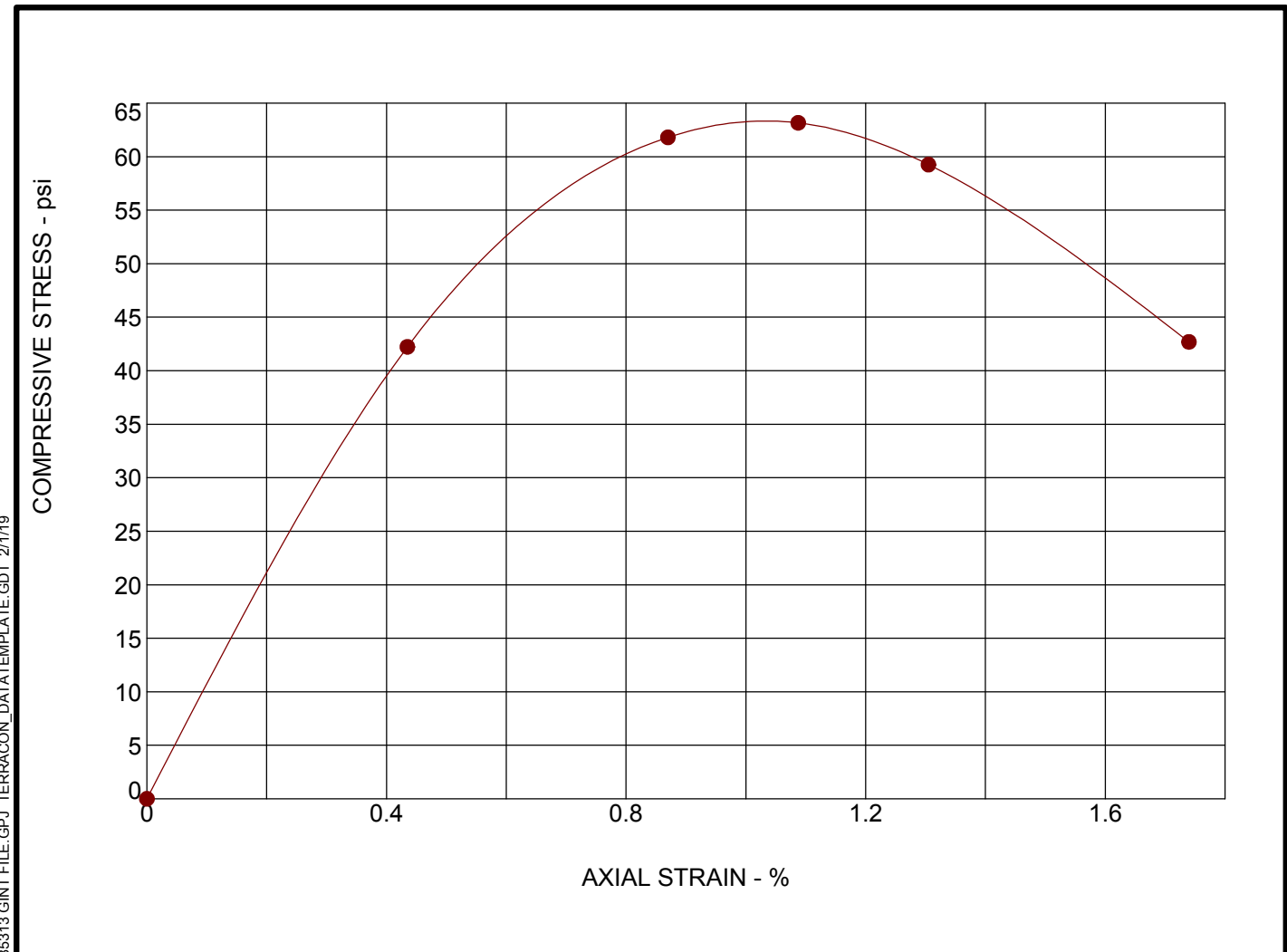
PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

EXHIBIT: B-5

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

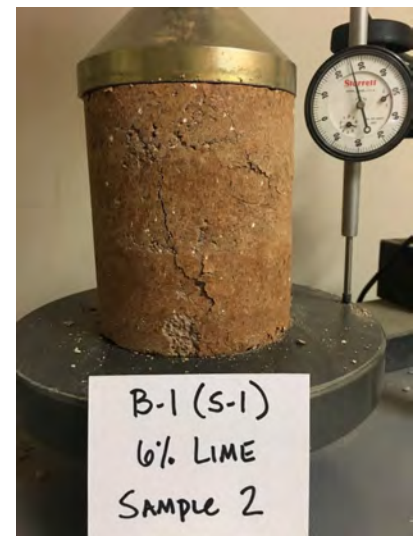
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

**SPECIMEN FAILURE PHOTOGRAPH**



**SPECIMEN TEST DATA**

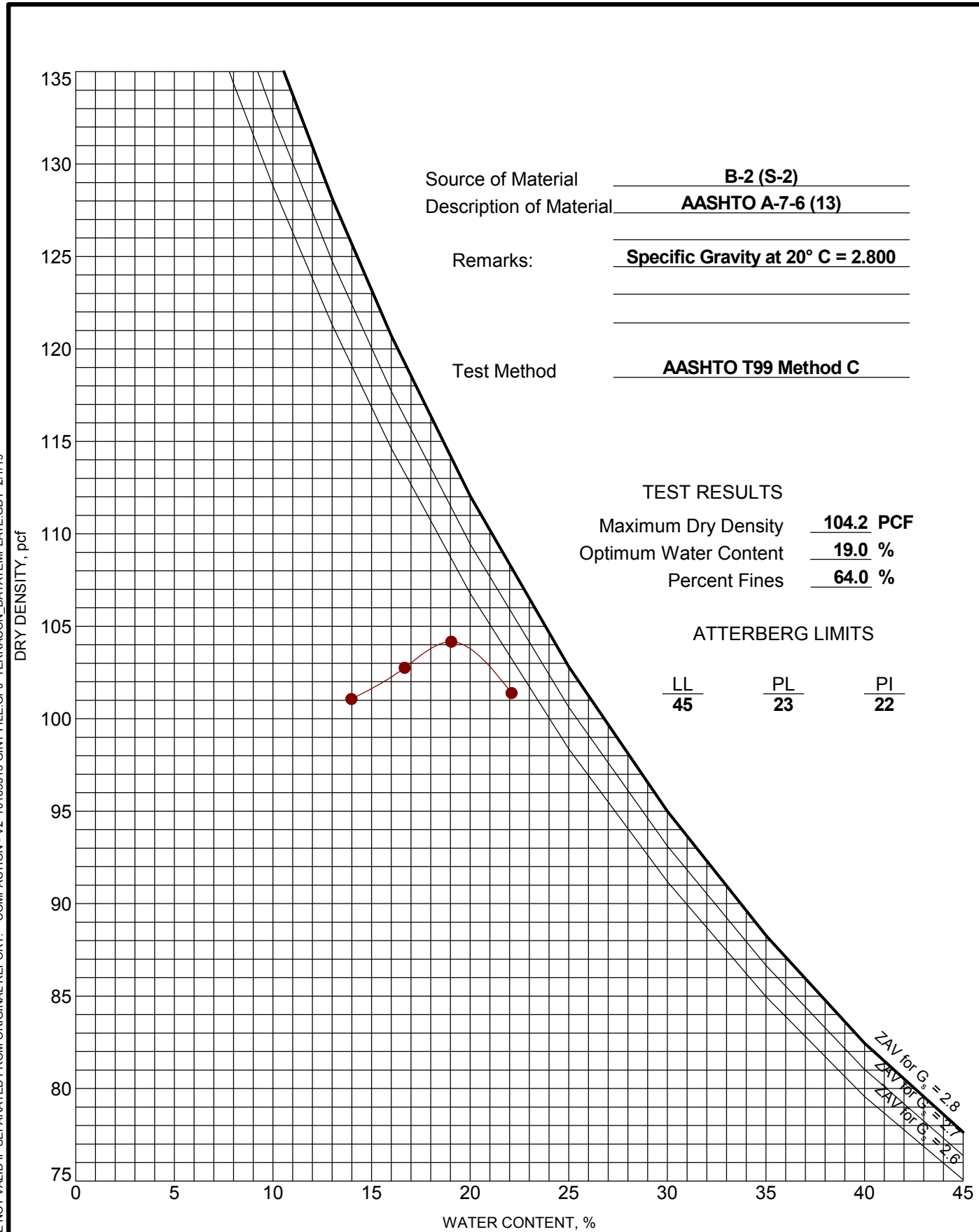
Moisture Content:	%	24
Dry Density:	pcf	89
Diameter:	in.	4.00
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	63
Undrained Shear Strength:	(psi)	32
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample	SAMPLE LOCATION: S-1 - 6% Lime - Sample 2 @ 0 - 3.5 feet
SAMPLE DESCRIPTION:	LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI	 <p>2401 Brentwood Rd, Ste 107 Raleigh, NC</p>	PROJECT NUMBER: 70185313
SITE: I-40 Hillsborough, North Carolina		CLIENT: NCDOT - Geotechnical Engineering Unit Raleigh, North Carolina
		EXHIBIT: B-6

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material B-2 (S-2)  
 Description of Material AASHTO A-7-6 (13)  
 Remarks: Specific Gravity at 20° C = 2.800  
 Test Method AASHTO T99 Method C

**TEST RESULTS**  
 Maximum Dry Density 104.2 PCF  
 Optimum Water Content 19.0 %  
 Percent Fines 64.0 %

**ATTERBERG LIMITS**  
 LL 45    PL 23    PI 22

# REPORT FOR CALIFORNIA BEARING RATIO

SHEET 302 OF 329



2401 Brentwood Road, Suite 107  
 Raleigh, NC 27604  
 919-873-2211

**Service Date:** 01/15/19  
**Report Date:** 02/01/19

**Client**  
 NCDOT - Geotechnical Engineering Unit  
 Attn: Mike Whalen  
 1589 Mail Service Center  
 Raleigh, North Carolina 27699-1500

**Project**  
 I13306A - I40 - DB PDI  
 I-40  
 Hillsborough, North Carolina

Project No. 70195313

## SAMPLE INFORMATION

Sample Number: S-2    Proctor Method: AASHTO T99 - Method C  
 Boring Number: B-2    Maximum Dry Density (pcf): 104.2  
 Sample Location: Bulk Sample    Optimum Moisture: 19.0  
 Depth: 0-4'    Liquid Limit: 45  
 Material Description: AASHTO A-7-6 (12)    Plasticity Index: 22

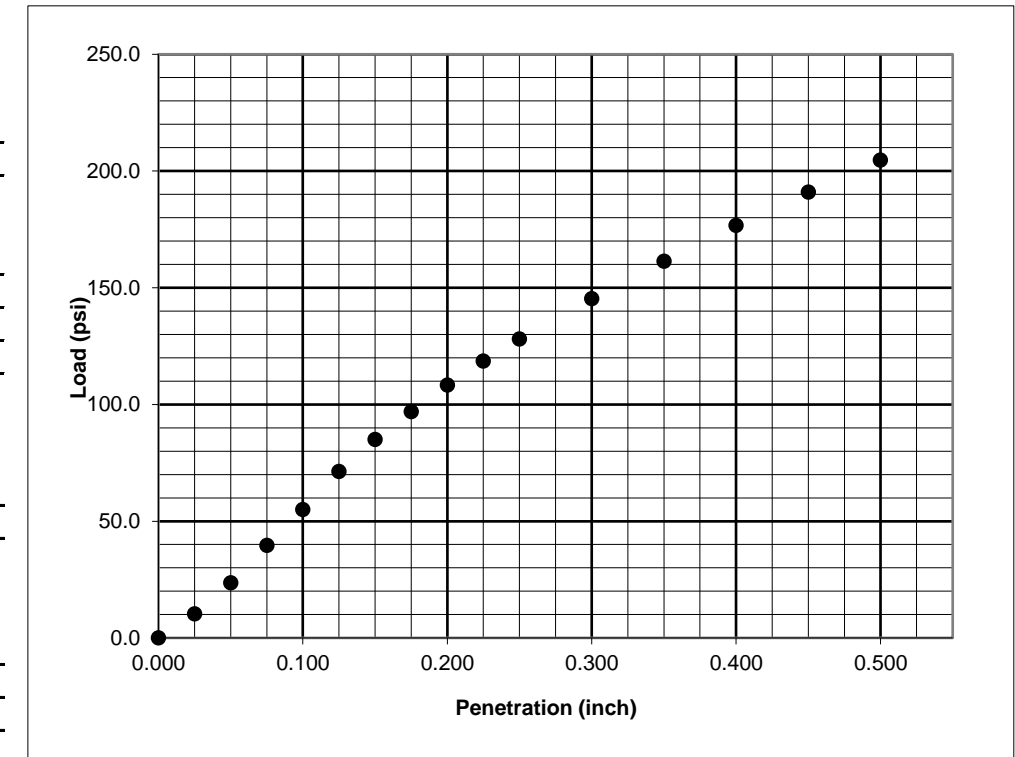
## CBR TEST DATA

CBR Value at 0.100 inch 5.5  
 CBR Value at 0.200 inch 7.2

Surcharge Weight (lbs) 10  
 Soaking Condition Soaked  
 Length of Soaking (hours) 96  
 Swell (%) 1.9

**DENSITY DATA**  
 Dry Density Before Soaking (pcf) 104.8  
 Compaction of Proctor (%) 100.5

**MOISTURE DATA**  
 Before Compaction (%) 19.0  
 After Compaction (%) 18.5  
 Top 1" After Soaking (%) 25.3  
 Average After Soaking (%) 22.6



## Comments:

**Services:** Obtain soil sample and test for California Bearing Ratio

**Terracon Rep:** Stephanie Huffman  
**Reported To:** Matt Alexander  
**Contractor:**  
**Report Distribution**

**Reviewed by:** Matthew J. Alexander  
 Geotechnical Project Manager

**Test Methods:** AASHTO T193

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

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PROJECT: I3306A - I40 - D8 PDI

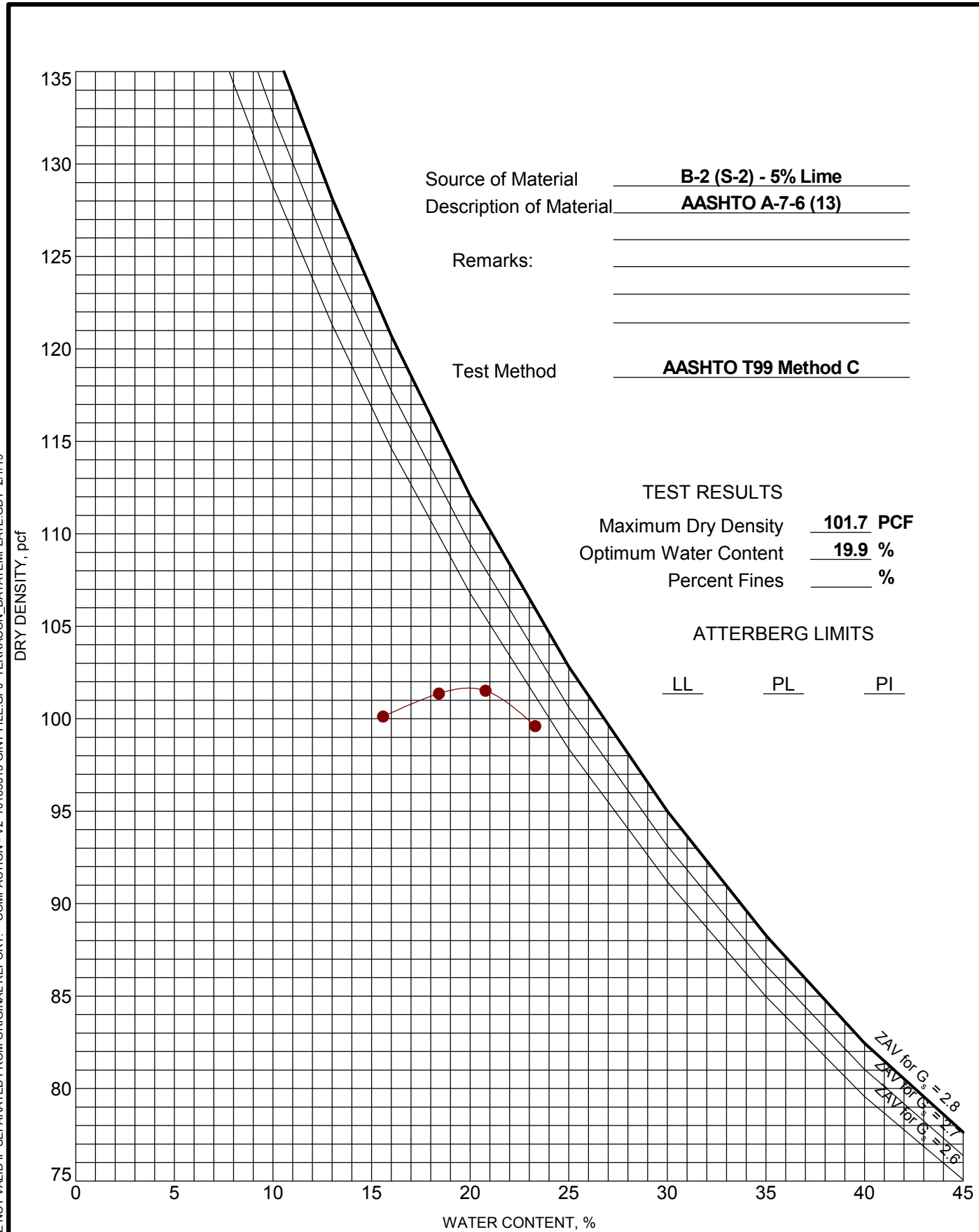
SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: **B-2 (S-2) - 5% Lime**  
 Description of Material: **AASHTO A-7-6 (13)**

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Method: **AASHTO T99 Method C**

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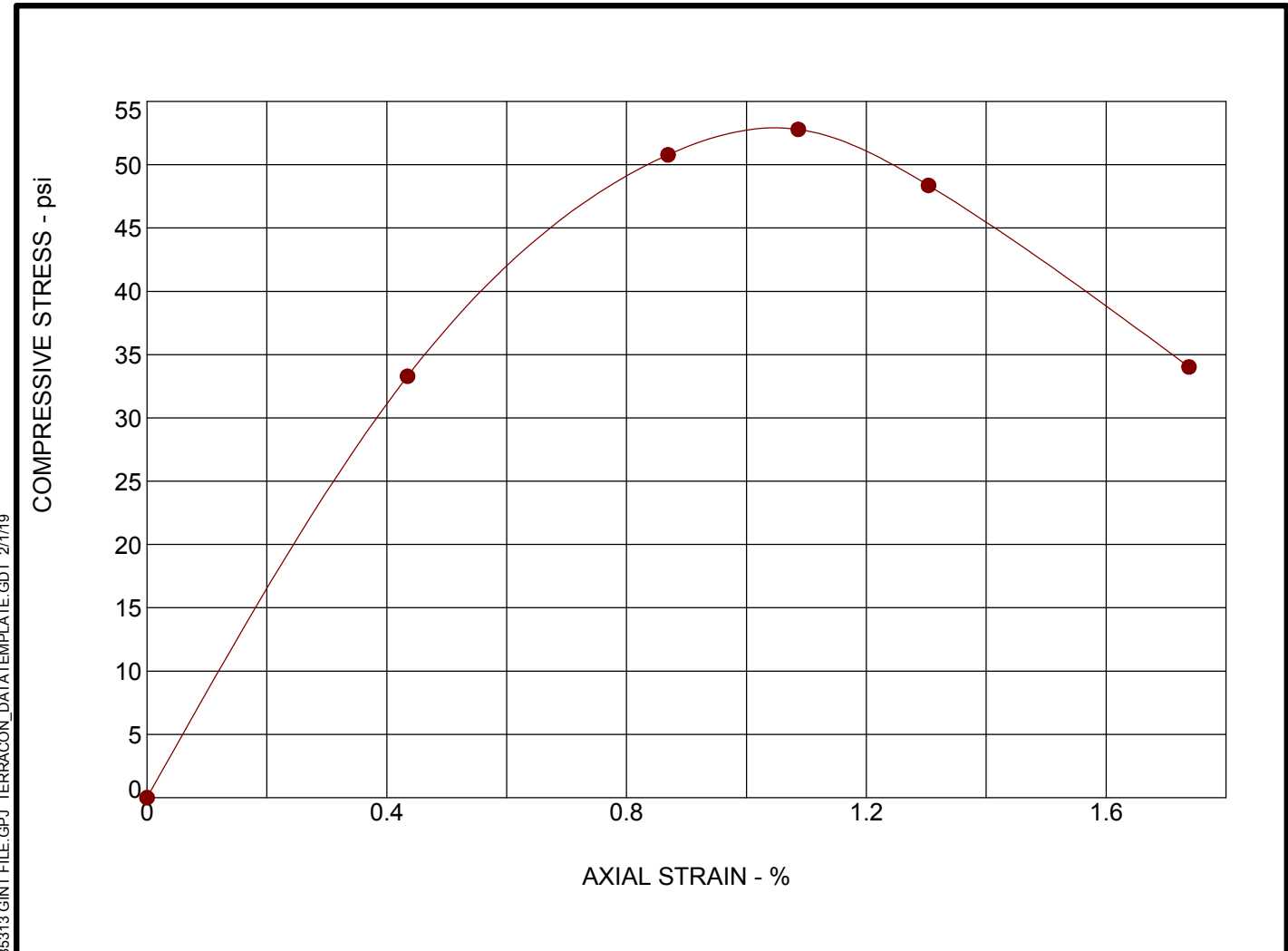
PROJECT: I3306A - I40 - D8 PDI  
 SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

SPECIMEN FAILURE PHOTOGRAPH	SPECIMEN TEST DATA
	Moisture Content: _____ % 19
	Dry Density: _____ pcf 96
	Diameter: _____ in. 4.00
	Height: _____ in. 4.60
	Height / Diameter Ratio: _____ 1.15
	Calculated Saturation: _____ %
	Calculated Void Ratio: _____
	Assumed Specific Gravity: _____
	Failure Strain: _____ % 1.09
	Unconfined Compressive Strength (psi) 53
Undrained Shear Strength (psi) 26	
Strain Rate: _____ in/min 0.0650	
Remarks: _____	

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-2 - 4% Lime - Sample 1 @ 0 - 4 feet  
 SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI  
 SITE: I-40  
 Hillsborough, North Carolina

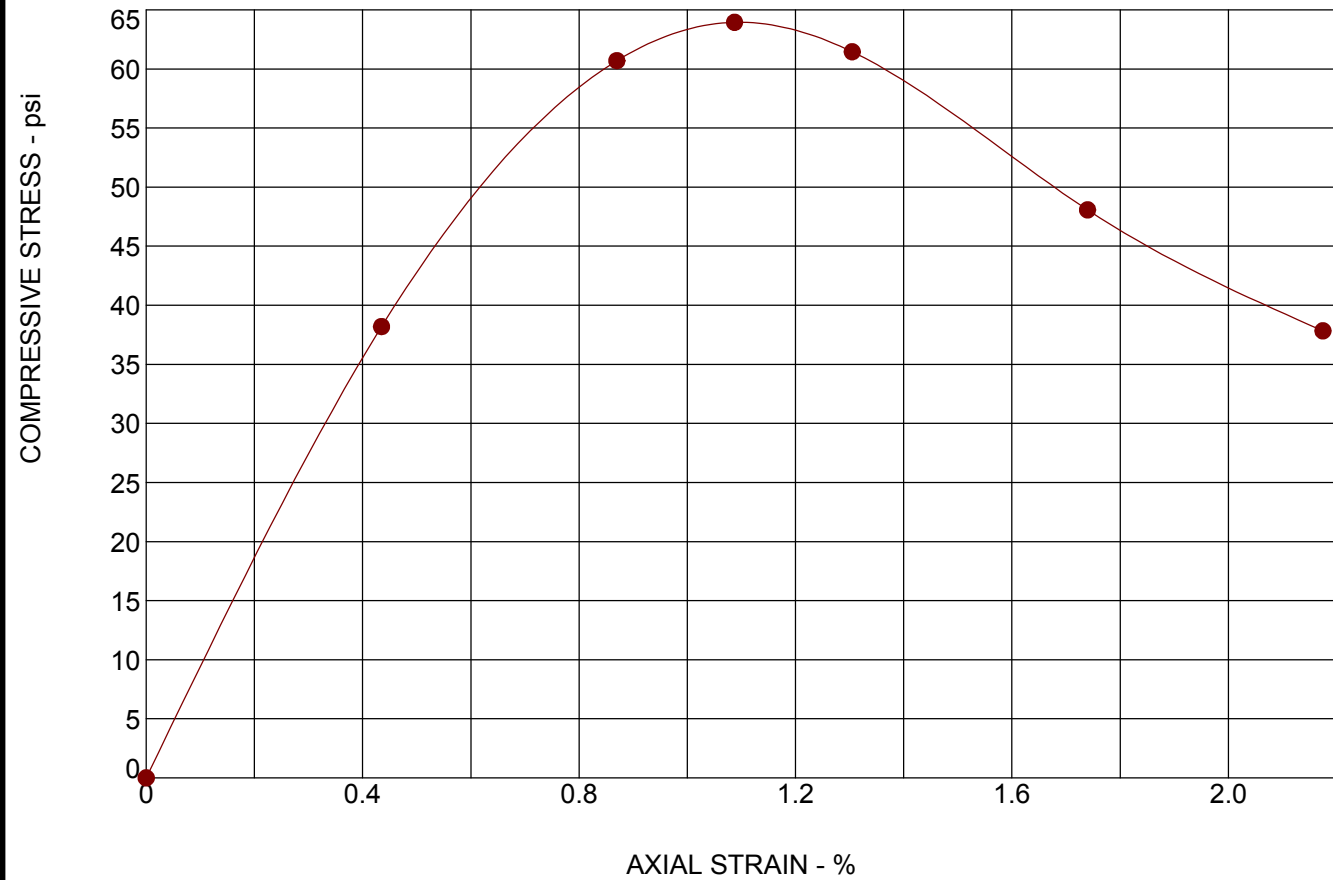


PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

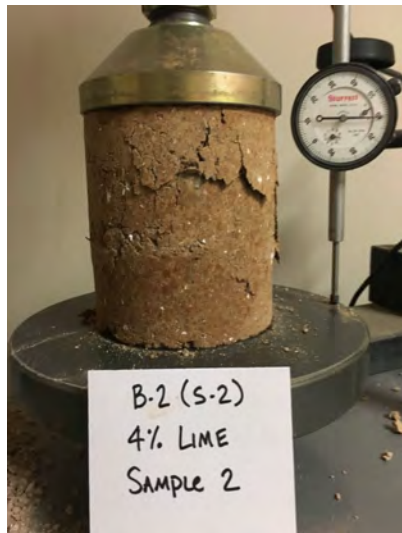


# UNCONFINED COMPRESSION TEST

ASTM D2166



## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	19
Dry Density:	pcf	96
Diameter:	in.	4.00
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	64
Undrained Shear Strength:	(psi)	32
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: GRAB	SAMPLE LOCATION: S-2 - 4% Lime - Sample 2 @ 0 - 4 feet
SAMPLE DESCRIPTION:	LL    PL    PI    Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

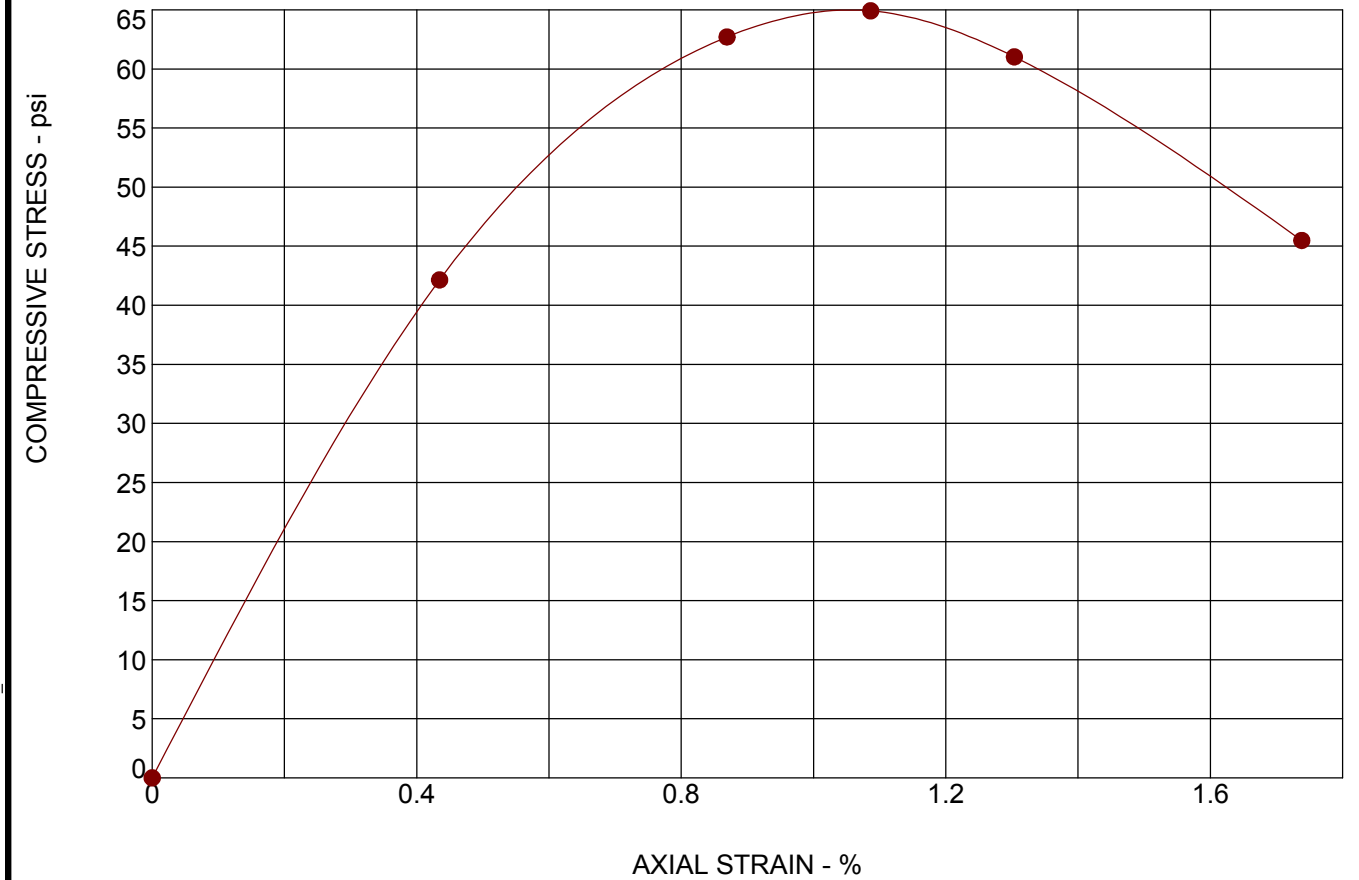
SITE: I-40  
Hillsborough, North Carolina



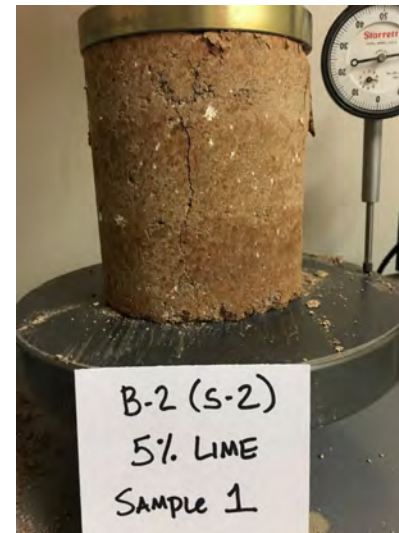
PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-2

# UNCONFINED COMPRESSION TEST

ASTM D2166



## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	19
Dry Density:	pcf	97
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	65
Undrained Shear Strength:	(psi)	32
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample	SAMPLE LOCATION: S-2 - 5% Lime - Sample 1 @ 0 - 4 feet
SAMPLE DESCRIPTION:	LL    PL    PI    Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



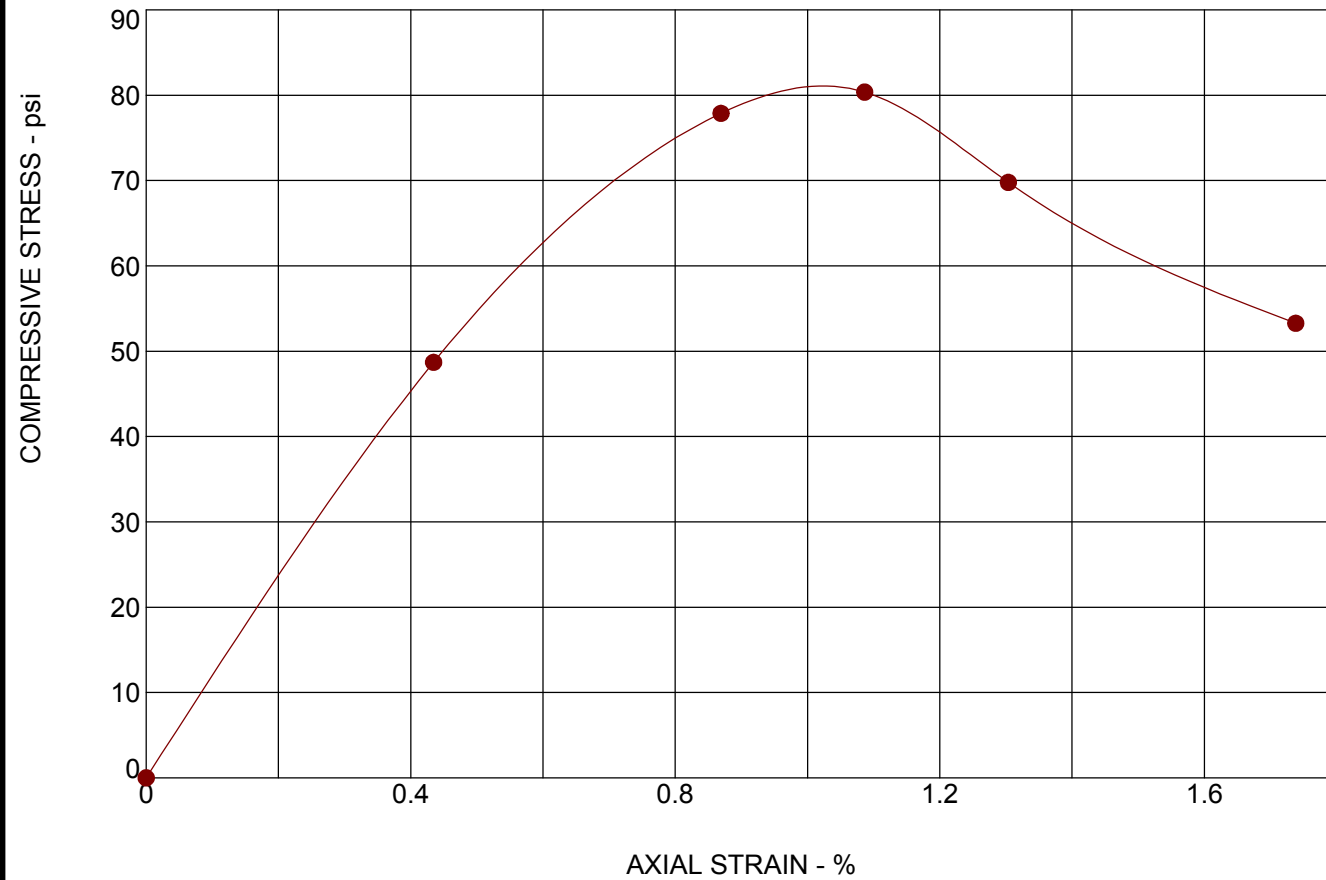
PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-3

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

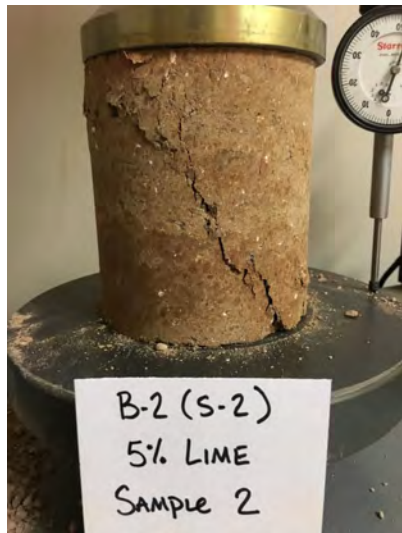
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	19
Dry Density:	pcf	97
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	80
Undrained Shear Strength:	(psi)	40
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-2 - 5% Lime - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL PL PI Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



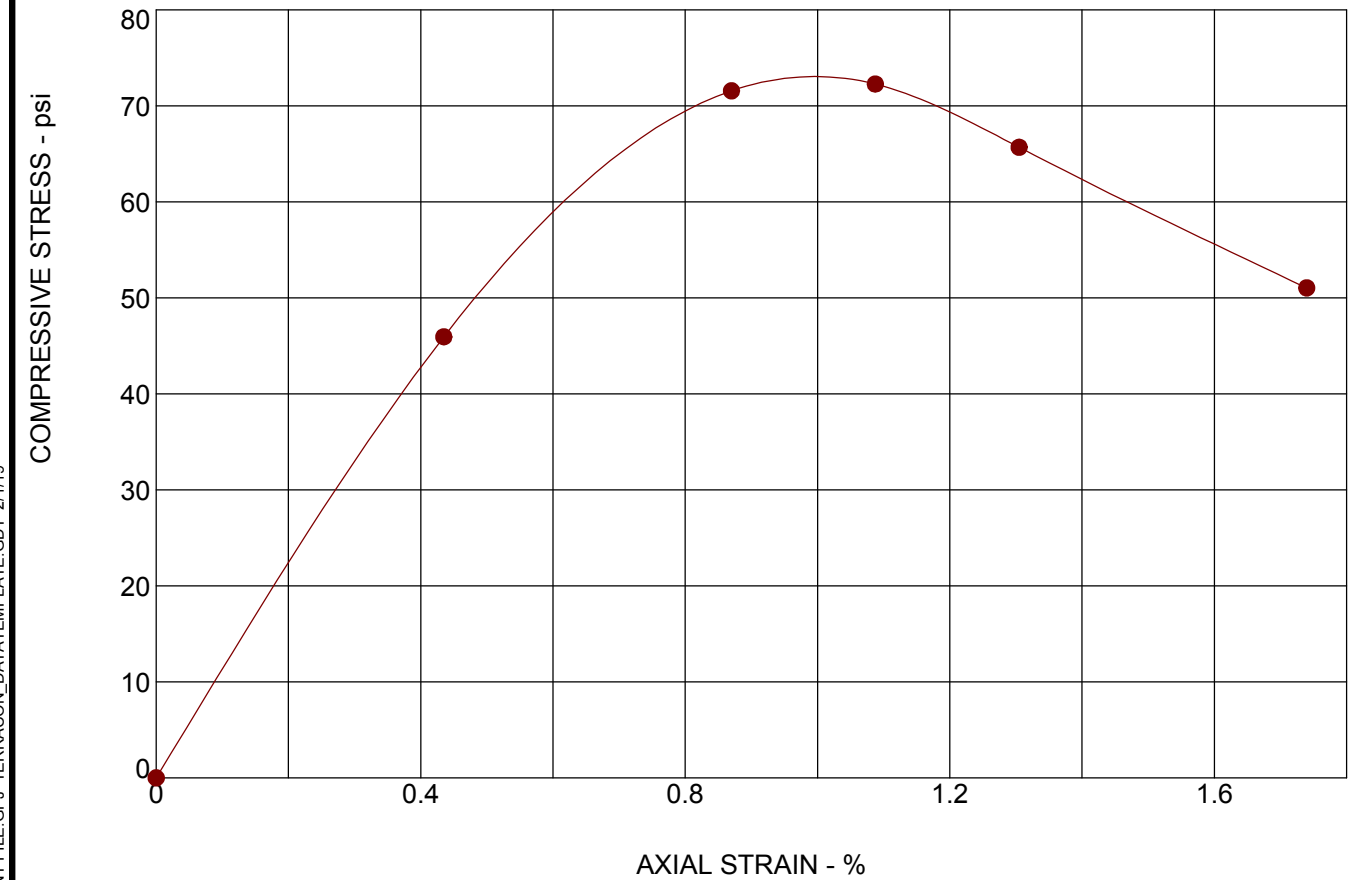
PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

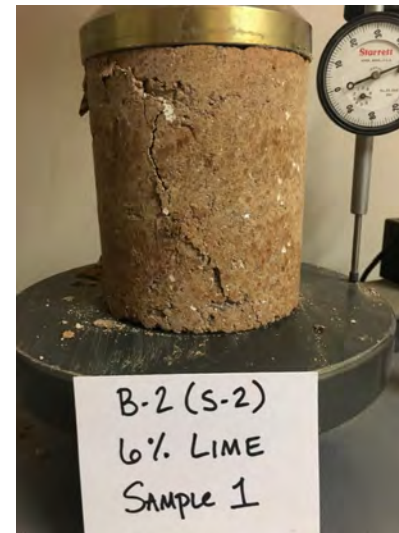
EXHIBIT: B-4

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	20
Dry Density:	pcf	96
Diameter:	in.	4.00
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	72
Undrained Shear Strength:	(psi)	36
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-2 - 6% Lime - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL PL PI Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313

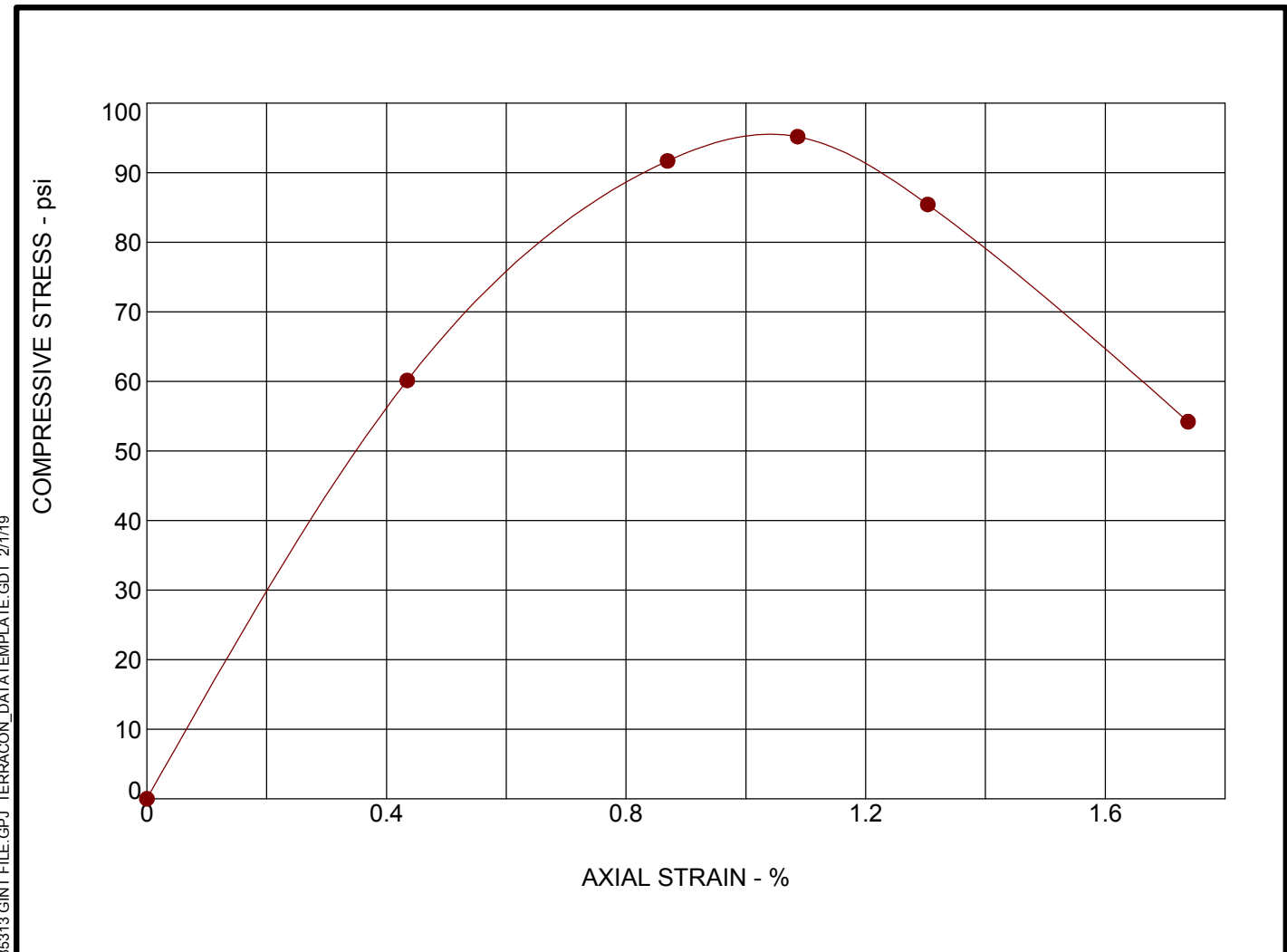
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

EXHIBIT: B-5

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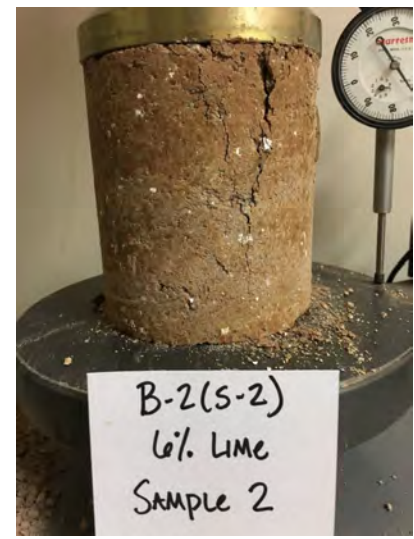
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

**SPECIMEN FAILURE PHOTOGRAPH**



**SPECIMEN TEST DATA**

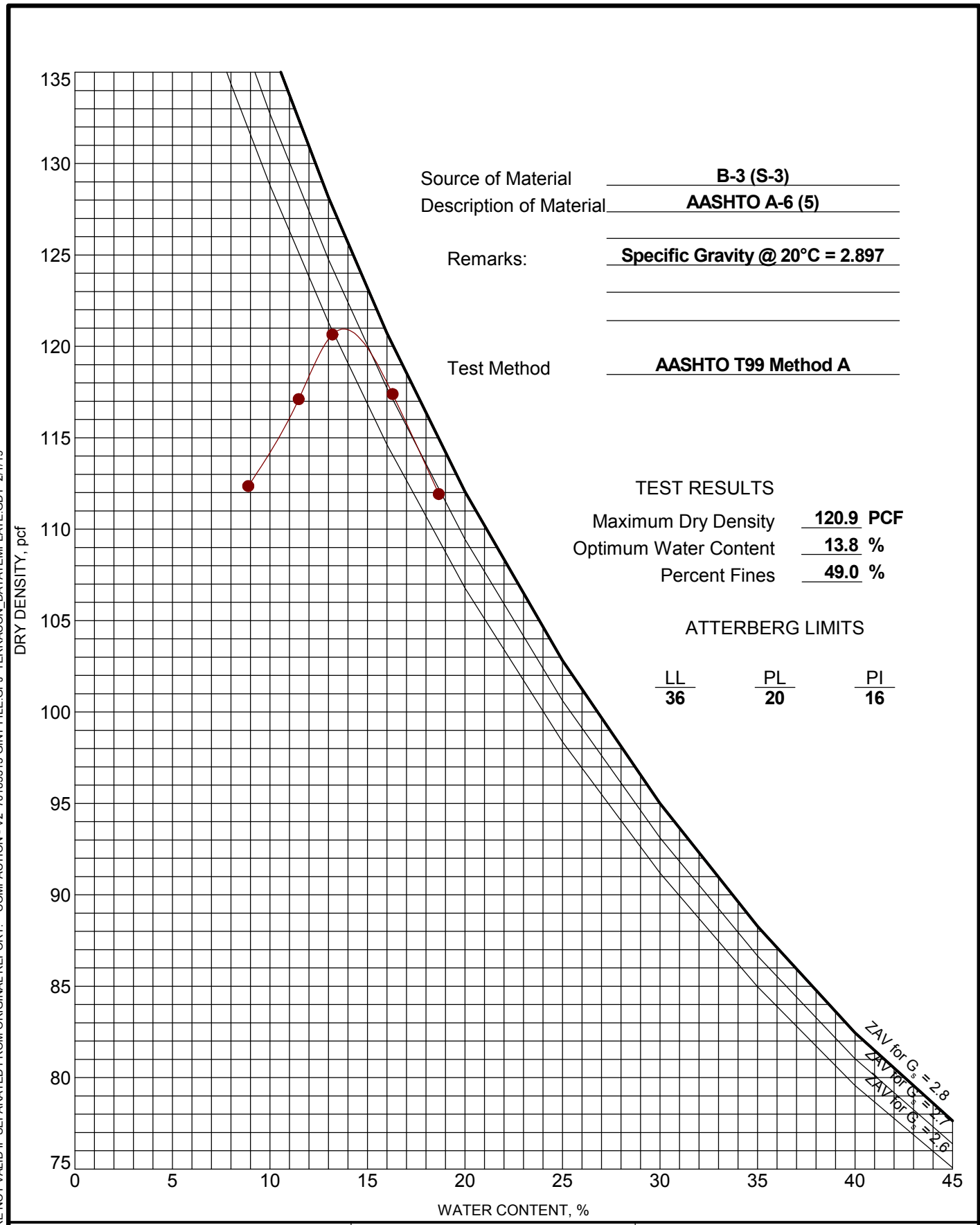
Moisture Content:	%	19
Dry Density:	pcf	96
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	95
Undrained Shear Strength:	(psi)	48
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample	SAMPLE LOCATION: S-2 - 6% Lime - Sample 2 @ 0 - 4 feet
SAMPLE DESCRIPTION:	LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI	 <p>2401 Brentwood Rd, Ste 107 Raleigh, NC</p>	PROJECT NUMBER: 70185313
SITE: I-40 Hillsborough, North Carolina		CLIENT: NCDOT - Geotechnical Engineering Unit Raleigh, North Carolina
		EXHIBIT: B-6

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material B-3 (S-3)  
 Description of Material AASHTO A-6 (5)  
 Remarks: Specific Gravity @ 20°C = 2.897  
 Test Method AASHTO T99 Method A

**TEST RESULTS**  
 Maximum Dry Density 120.9 PCF  
 Optimum Water Content 13.8 %  
 Percent Fines 49.0 %

**ATTERBERG LIMITS**  
 LL 36 PL 20 PI 16

# REPORT FOR CALIFORNIA BEARING RATIO

SHEET 307 OF 329



2401 Brentwood Road, Suite 107  
 Raleigh, NC 27604  
 919-873-2211

**Service Date:** 01/15/19  
**Report Date:** 02/01/19  
**Client:** NCDOT - Geotechnical Engineering Unit  
 Attn: Mike Whalen  
 1589 Mail Service Center  
 Raleigh, North Carolina 27699-1500

**Project:** I13306A - I40 - DB PDI  
 I-40  
 Hillsborough, North Carolina

Project No. 70195313

## SAMPLE INFORMATION

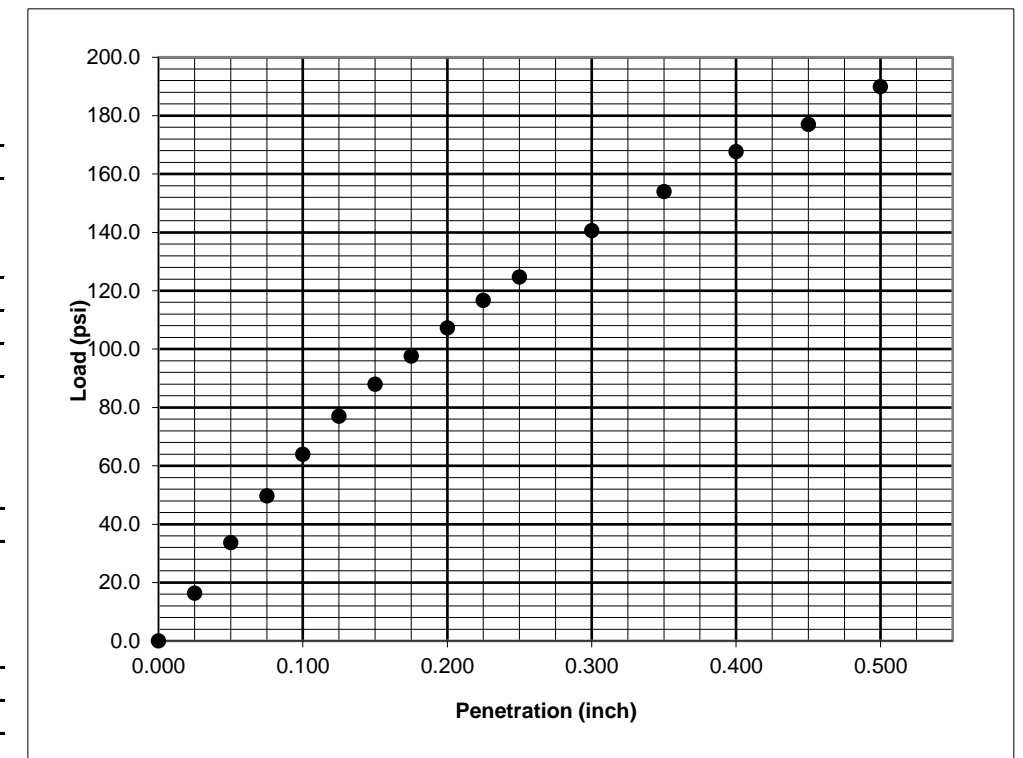
Sample Number: S-3 Proctor Method: AASHTO T99 - Method A  
 Boring Number: B-3 Maximum Dry Density (pcf): 120.9  
 Sample Location: Bulk Sample Optimum Moisture: 13.8  
 Depth: 0-3.5' Liquid Limit: 36  
 Material Description: AASHTO A-6 (5) Plasticity Index: 16

## CBR TEST DATA

CBR Value at 0.100 inch 6.4  
 CBR Value at 0.200 inch 7.2  
 Surcharge Weight (lbs) 10  
 Soaking Condition Soaked  
 Length of Soaking (hours) 96  
 Swell (%) 1.3

**DENSITY DATA**  
 Dry Density Before Soaking (pcf) 119.8  
 Compaction of Proctor (%) 99.1

**MOISTURE DATA**  
 Before Compaction (%) 13.4  
 After Compaction (%) 13.4  
 Top 1" After Soaking (%) 19.2  
 Average After Soaking (%) 17.1



## Comments:

**Services:** Obtain soil sample and test for California Bearing Ratio

**Terracon Rep:** Stephanie Huffman  
**Reported To:** Matt Alexander  
**Contractor:**  
**Report Distribution**

**Reviewed by:** Matthew J. Alexander  
 Geotechnical Project Manager

**Test Methods:** AASHTO T193

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 70195313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
 Hillsborough, North Carolina



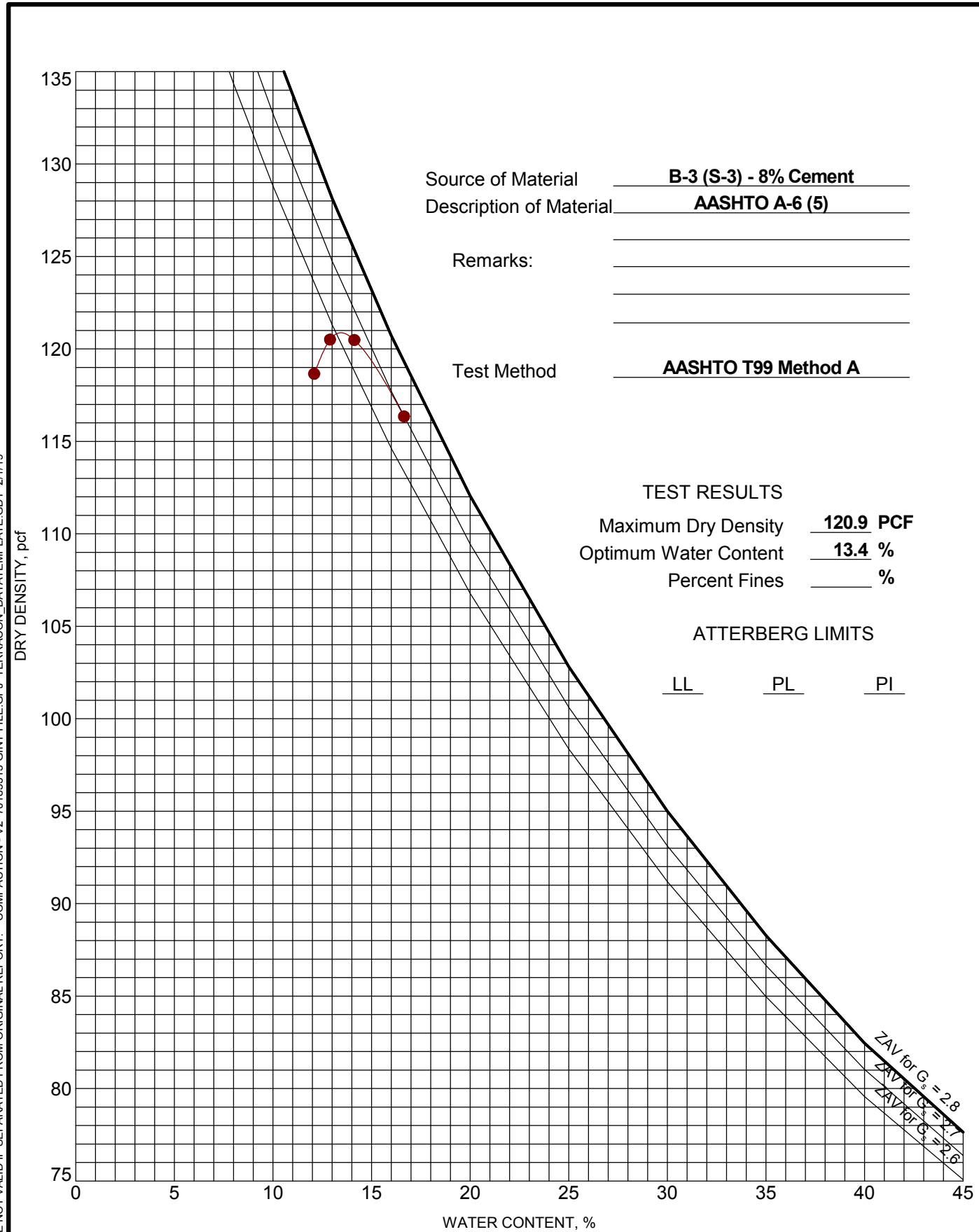
PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina

EXHIBIT: B-1

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

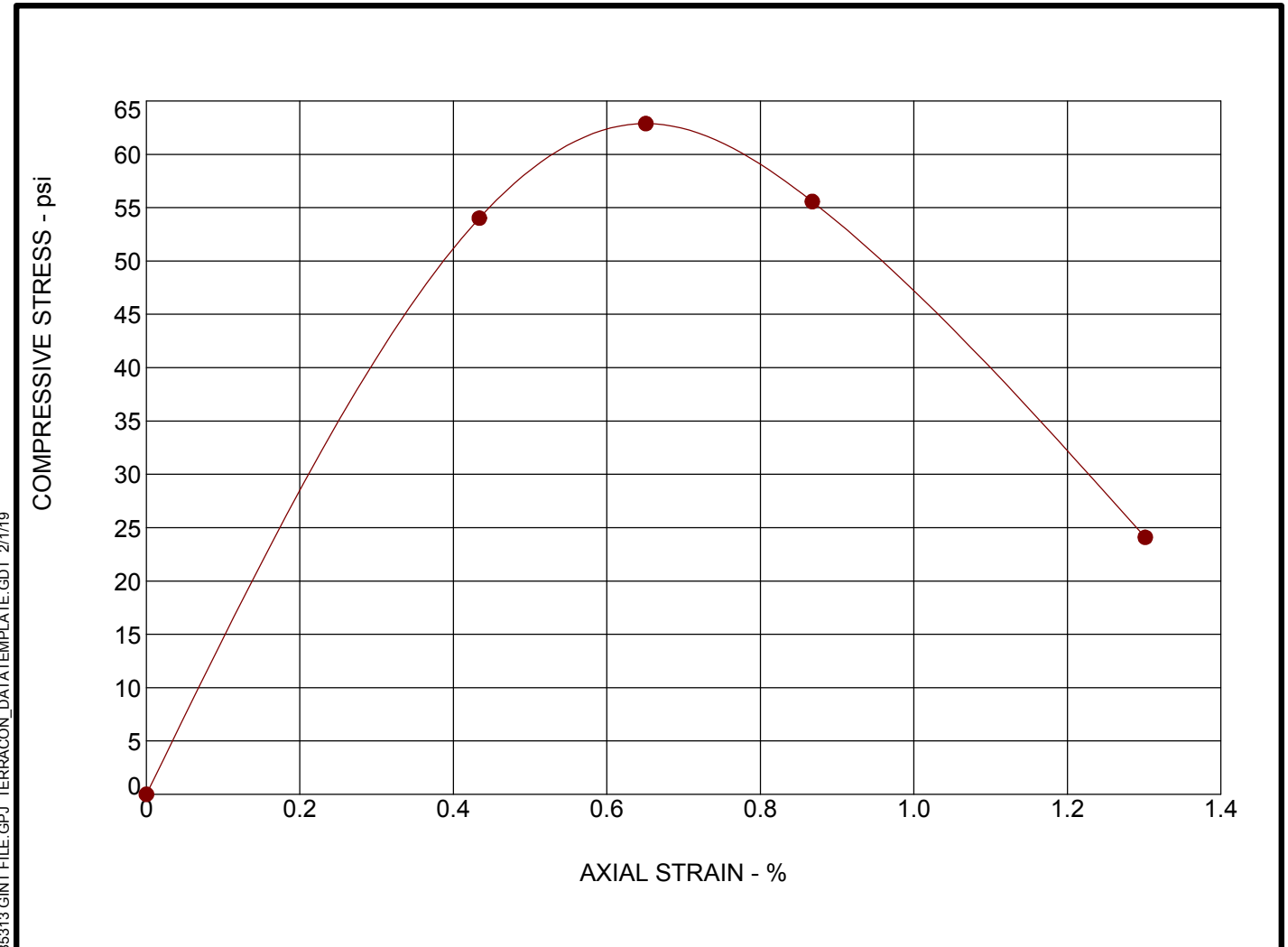
PROJECT: I3306A - I40 - D8 PDI  
 SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

SPECIMEN FAILURE PHOTOGRAPH		SPECIMEN TEST DATA	
<p>B-3 (S-3) 6% CEMENT SAMPLE 1</p>	Moisture Content:	%	18
	Dry Density:	pcf	112
	Diameter:	in.	4.01
	Height:	in.	4.61
	Height / Diameter Ratio:		1.15
	Calculated Saturation:	%	
	Calculated Void Ratio:		
	Assumed Specific Gravity:		
	Failure Strain:	%	0.65
	Unconfined Compressive Strength	(psi)	63
Undrained Shear Strength:	(psi)	31	
Strain Rate:	in/min	0.0650	
Remarks:			

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-3 - 6% Cement - Sample 1 @ 0 - 3.5 feet  
 SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

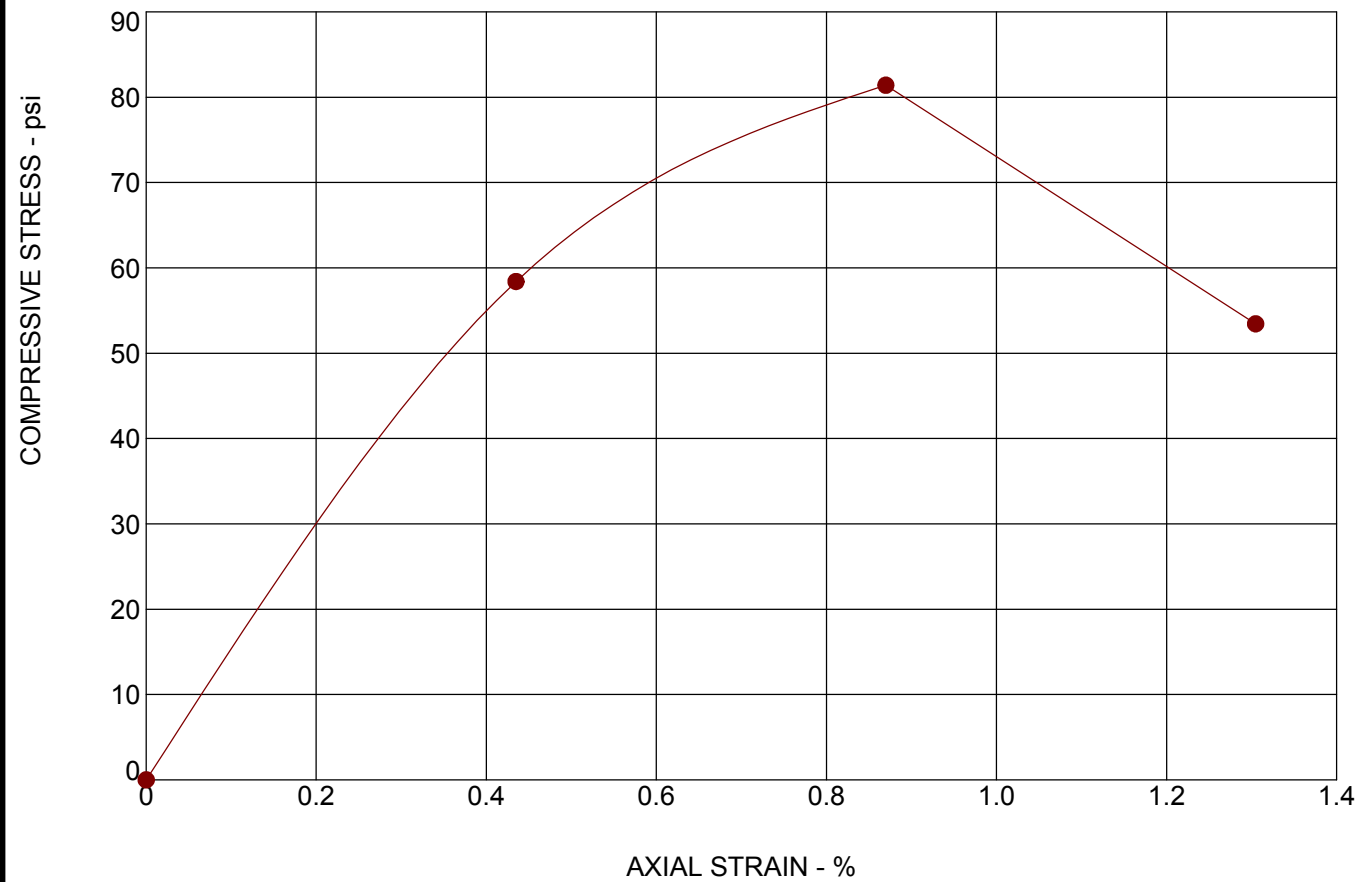
PROJECT: I3306A - I40 - D8 PDI  
 SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	17
Dry Density:	pcf	115
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	0.87
Unconfined Compressive Strength	(psi)	81
Undrained Shear Strength:	(psi)	41
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-3 - 6% Cement - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL PL PI Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



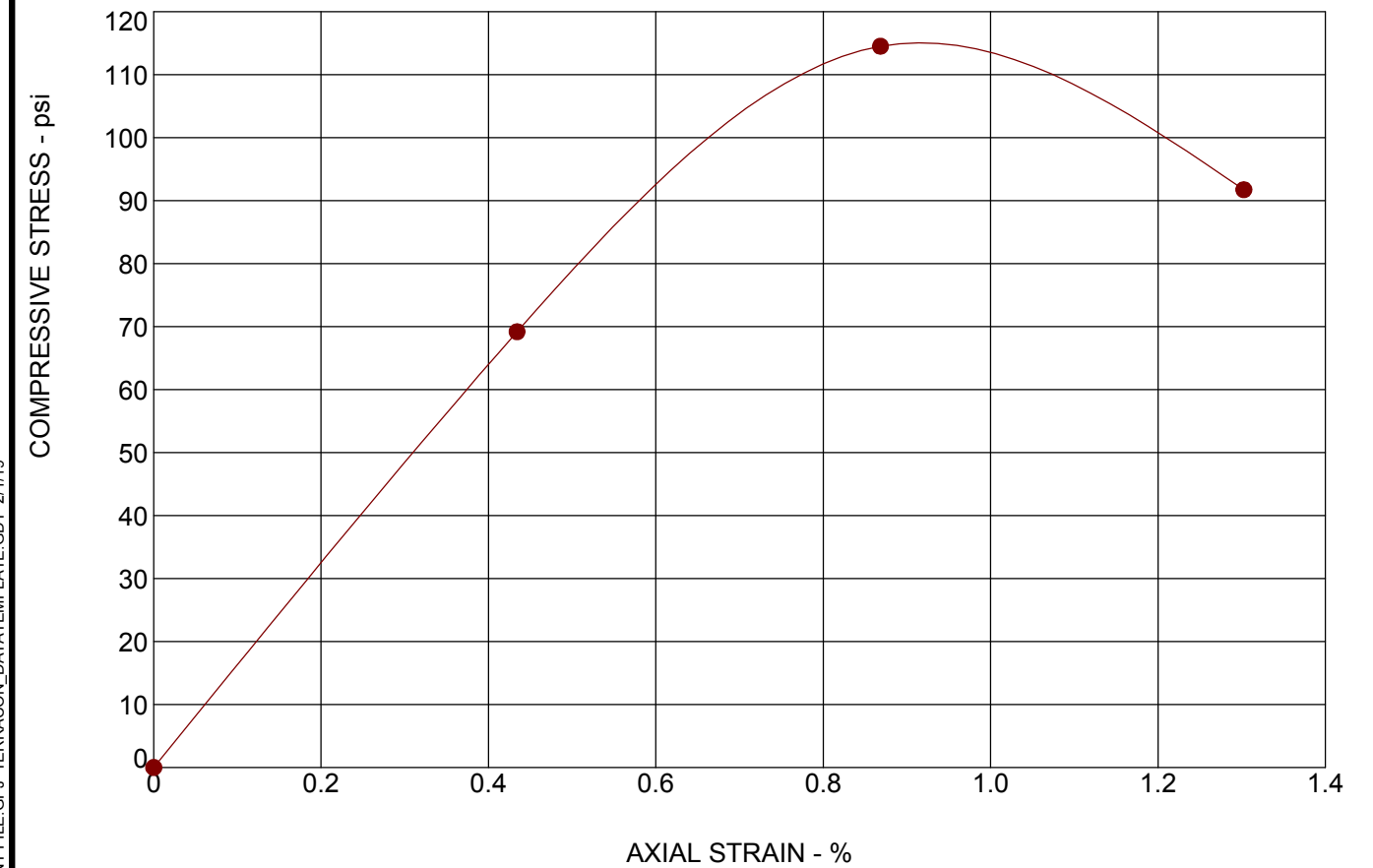
PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

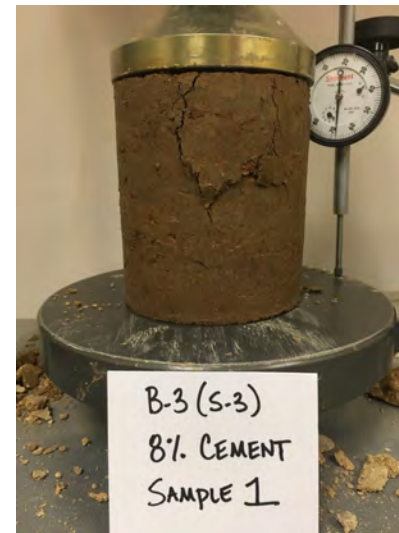
EXHIBIT: B-2

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	116
Diameter:	in.	4.02
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	0.87
Unconfined Compressive Strength	(psi)	115
Undrained Shear Strength:	(psi)	57
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-3 - 8% Cement - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL PL PI Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

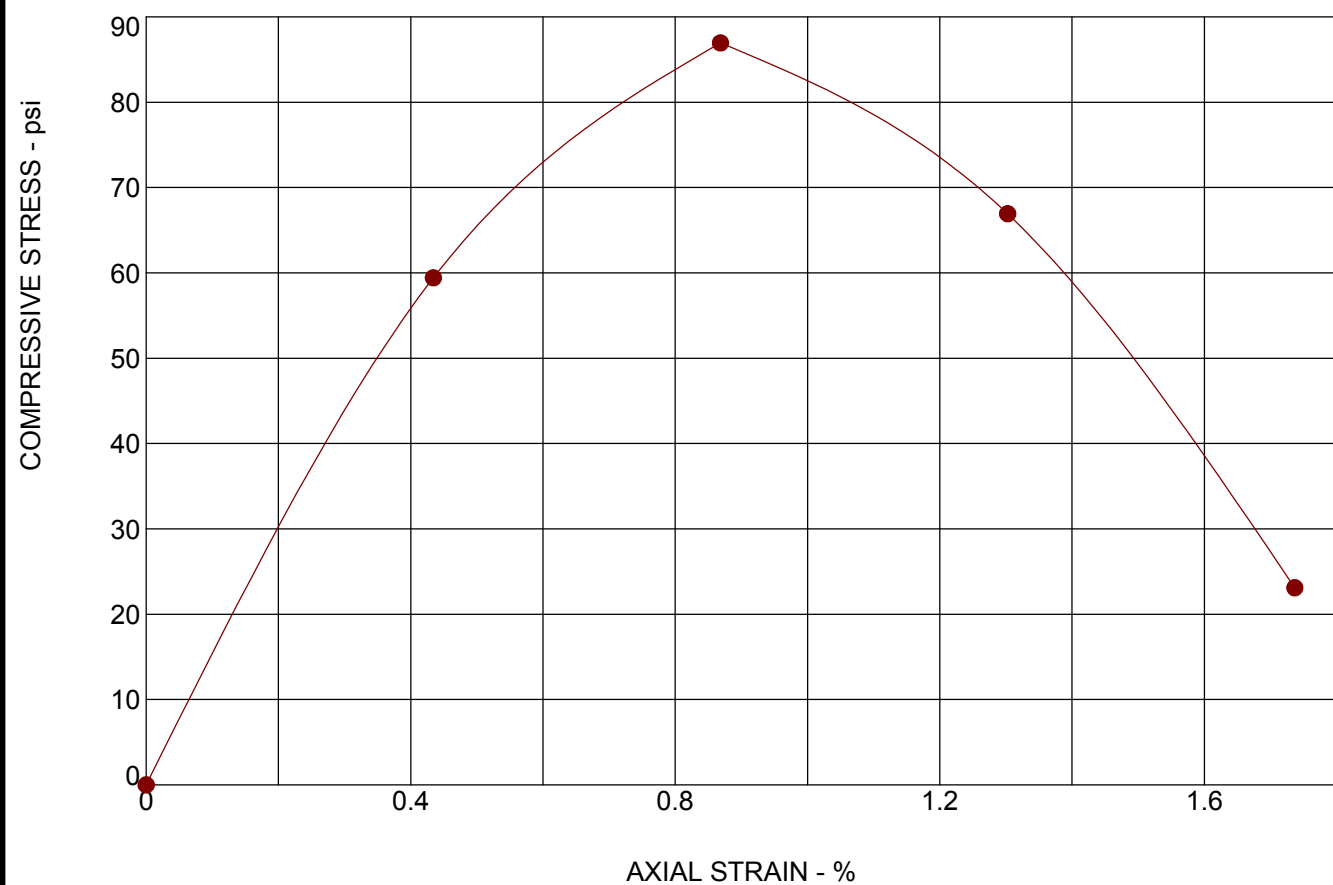
EXHIBIT: B-3

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	17
Dry Density:	pcf	114
Diameter:	in.	4.01
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	0.87
Unconfined Compressive Strength	(psi)	87
Undrained Shear Strength:	(psi)	43
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-3 - 8% Cement - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

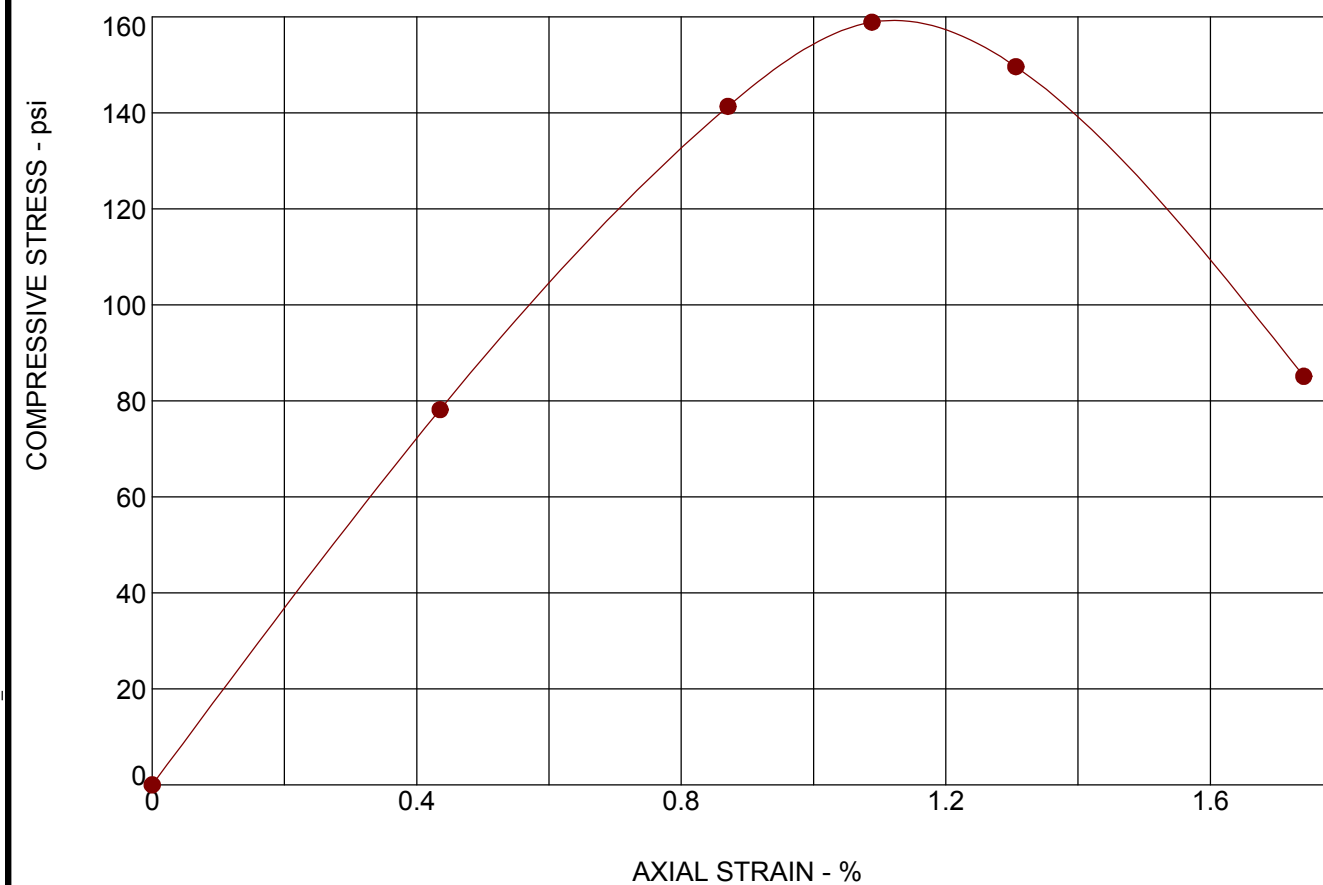
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-4

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	17
Dry Density:	pcf	116
Diameter:	in.	4.02
Height:	in.	4.59
Height / Diameter Ratio:		1.14
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	159
Undrained Shear Strength:	(psi)	79
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-3 - 10% Cement - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



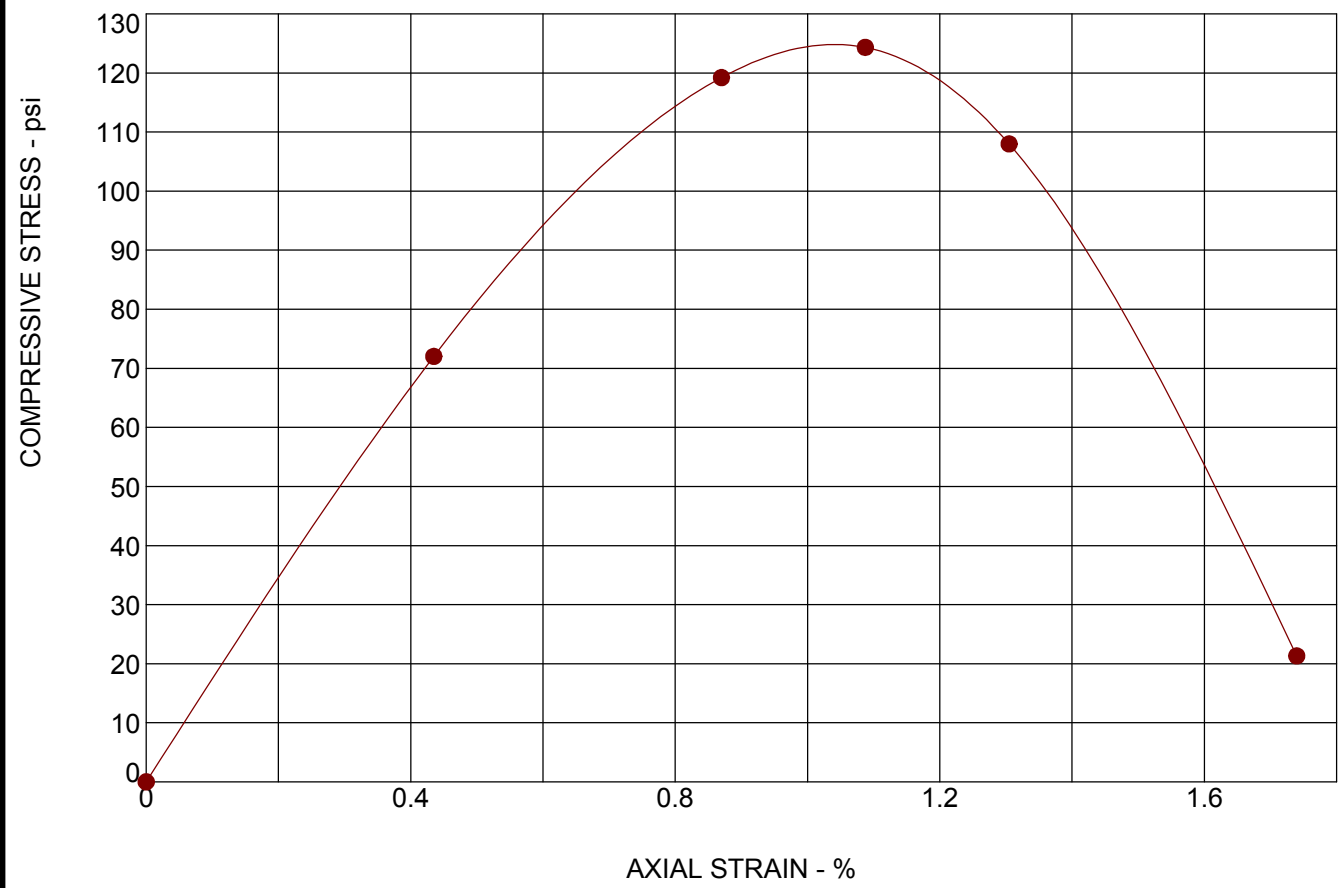
PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-5

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

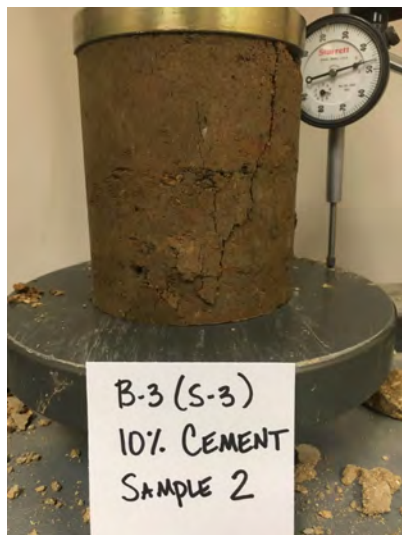
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

# UNCONFINED COMPRESSION TEST

ASTM D2166



## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	114
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	124
Undrained Shear Strength:	(psi)	62
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-3 - 10% Cement - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

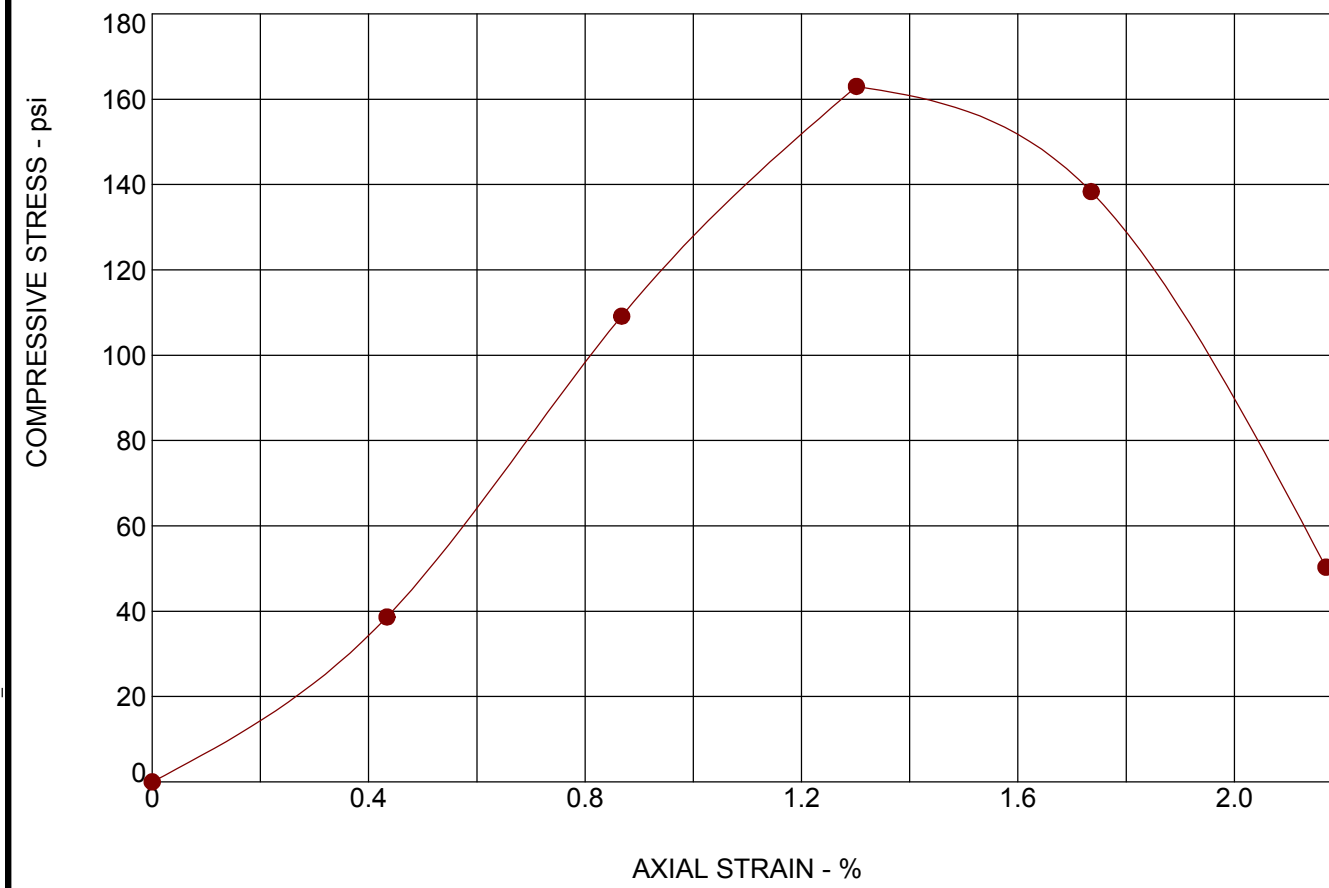
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-6

# UNCONFINED COMPRESSION TEST

ASTM D2166



## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	116
Diameter:	in.	4.02
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	163
Undrained Shear Strength:	(psi)	81
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-3 - 12% Cement - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina

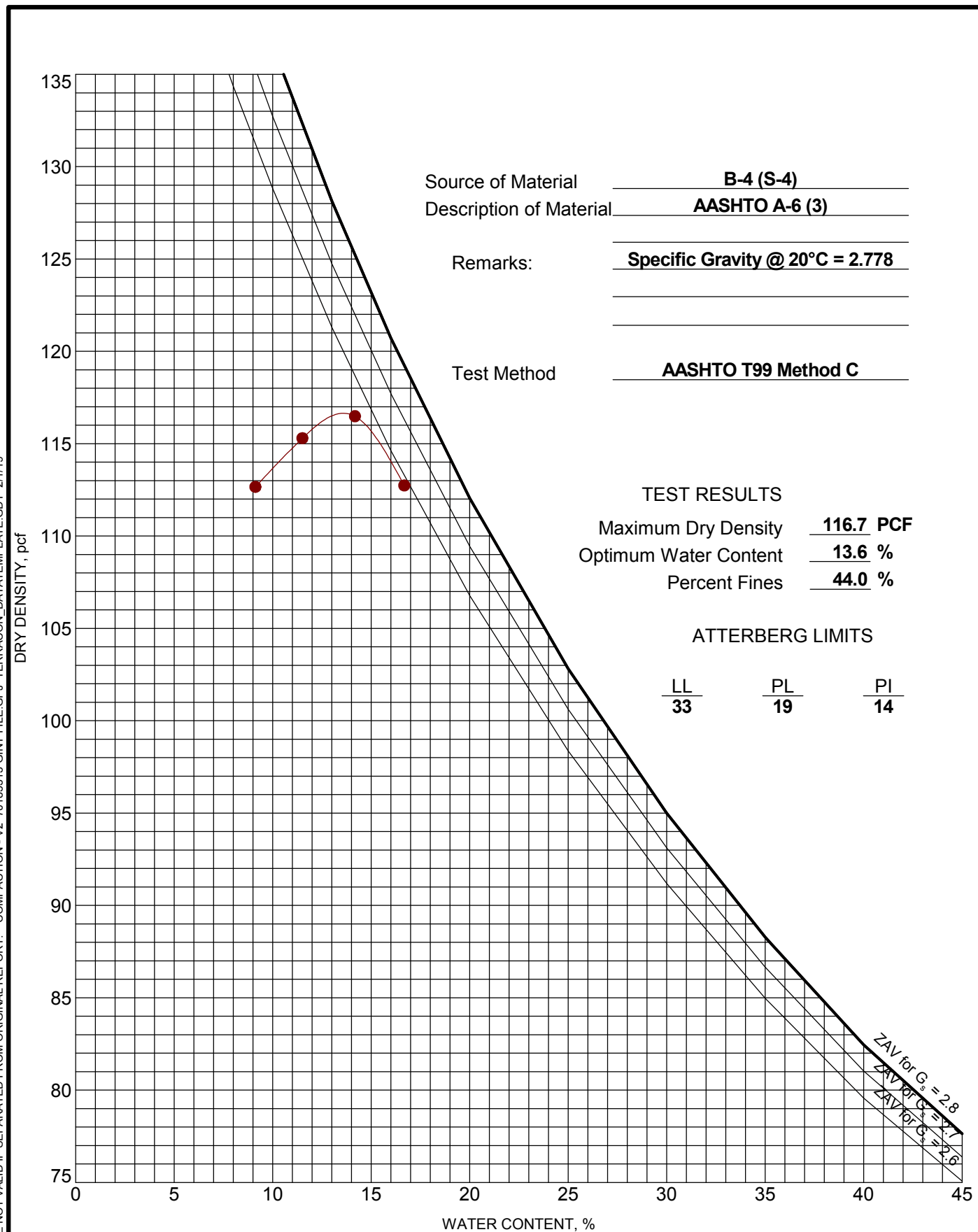


PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-7



# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: B-4 (S-4)  
 Description of Material: AASHTO A-6 (3)  
 Remarks: Specific Gravity @ 20°C = 2.778  
 Test Method: AASHTO T99 Method C

**TEST RESULTS**  
 Maximum Dry Density: 116.7 PCF  
 Optimum Water Content: 13.6 %  
 Percent Fines: 44.0 %

**ATTERBERG LIMITS**

LL: 33      PL: 19      PI: 14

# REPORT FOR CALIFORNIA BEARING RATIO

SHEET 312 OF 329



2401 Brentwood Road, Suite 107  
 Raleigh, NC 27604  
 919-873-2211

Service Date: 01/15/19

Report Date: 02/01/19

**Client**

NCDOT - Geotechnical Engineering Unit  
 Attn: Mike Whalen  
 1589 Mail Service Center  
 Raleigh, North Carolina 27699-1500

**Project**

I13306A - I40 - DB PDI  
 I-40  
 Hillsborough, North Carolina

Project No. 70195313

**SAMPLE INFORMATION**

Sample Number:	<u>S-4</u>	Proctor Method:	<u>AASHTO T99 - Method A</u>
Boring Number:	<u>B-4</u>	Maximum Dry Density (pcf):	<u>116.7</u>
Sample Location:	<u>Bulk Sample</u>	Optimum Moisture:	<u>13.6</u>
Depth:	<u>0-4'</u>	Liquid Limit:	<u>33</u>
Material Description:	<u>AASHTO A-6 (3)</u>	Plasticity Index:	<u>14</u>

**CBR TEST DATA**

CBR Value at 0.100 inch: 9.0  
 CBR Value at 0.200 inch: 10.5

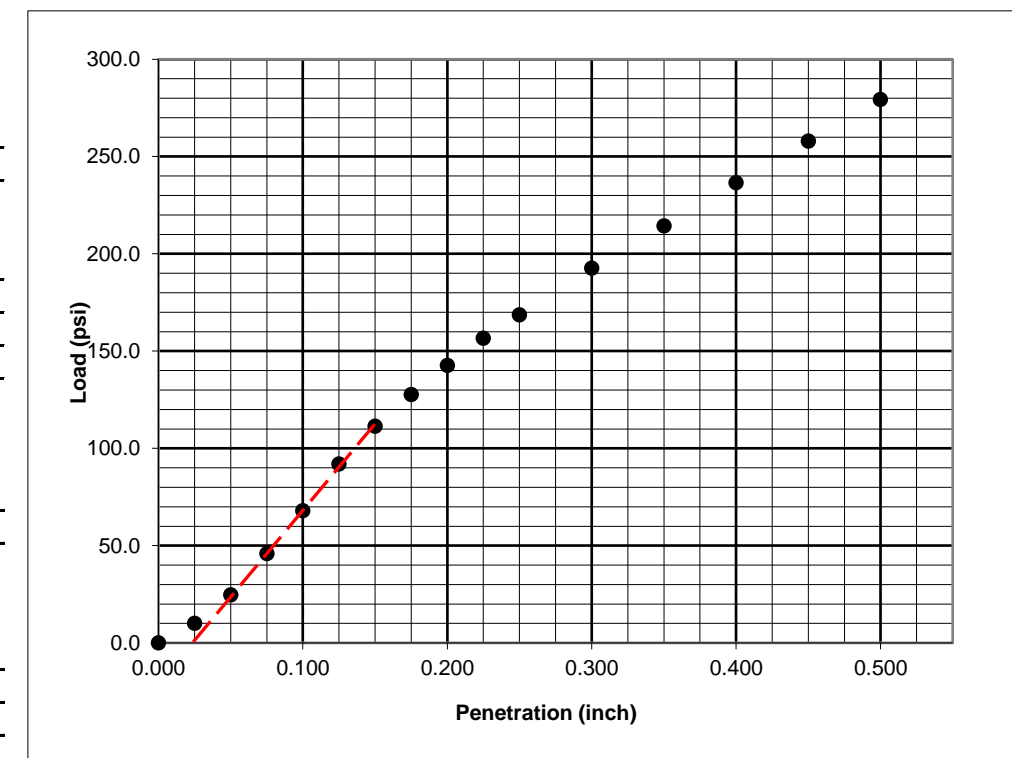
Surcharge Weight (lbs): 10  
 Soaking Condition: Soaked  
 Length of Soaking (hours): 96  
 Swell (%): 1.4

**DENSITY DATA**

Dry Density Before Soaking (pcf): 118.1  
 Compaction of Proctor (%): 101.2

**MOISTURE DATA**

Before Compaction (%): 13.5  
 After Compaction (%): 12.6  
 Top 1" After Soaking (%): 17.3  
 Average After Soaking (%): 16.1



**Comments:**

Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman

Reported To: Matt Alexander

Contractor:

Report Distribution

Reviewed by: \_\_\_\_\_

Matthew J. Alexander  
 Geotechnical Project Manager

Test Methods: AASHTO T193

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 70195313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
 Hillsborough, North Carolina



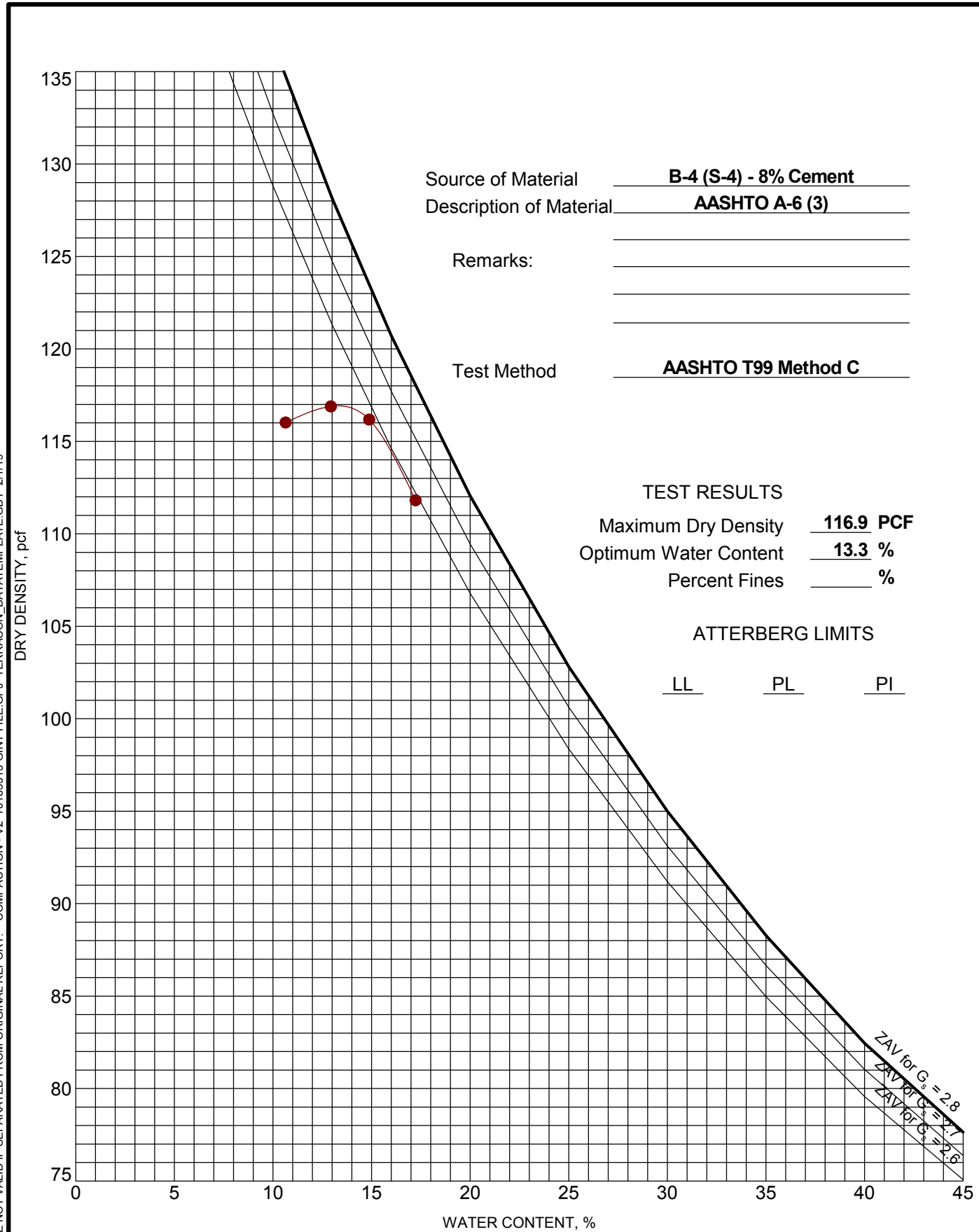
PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina

EXHIBIT: B-1

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

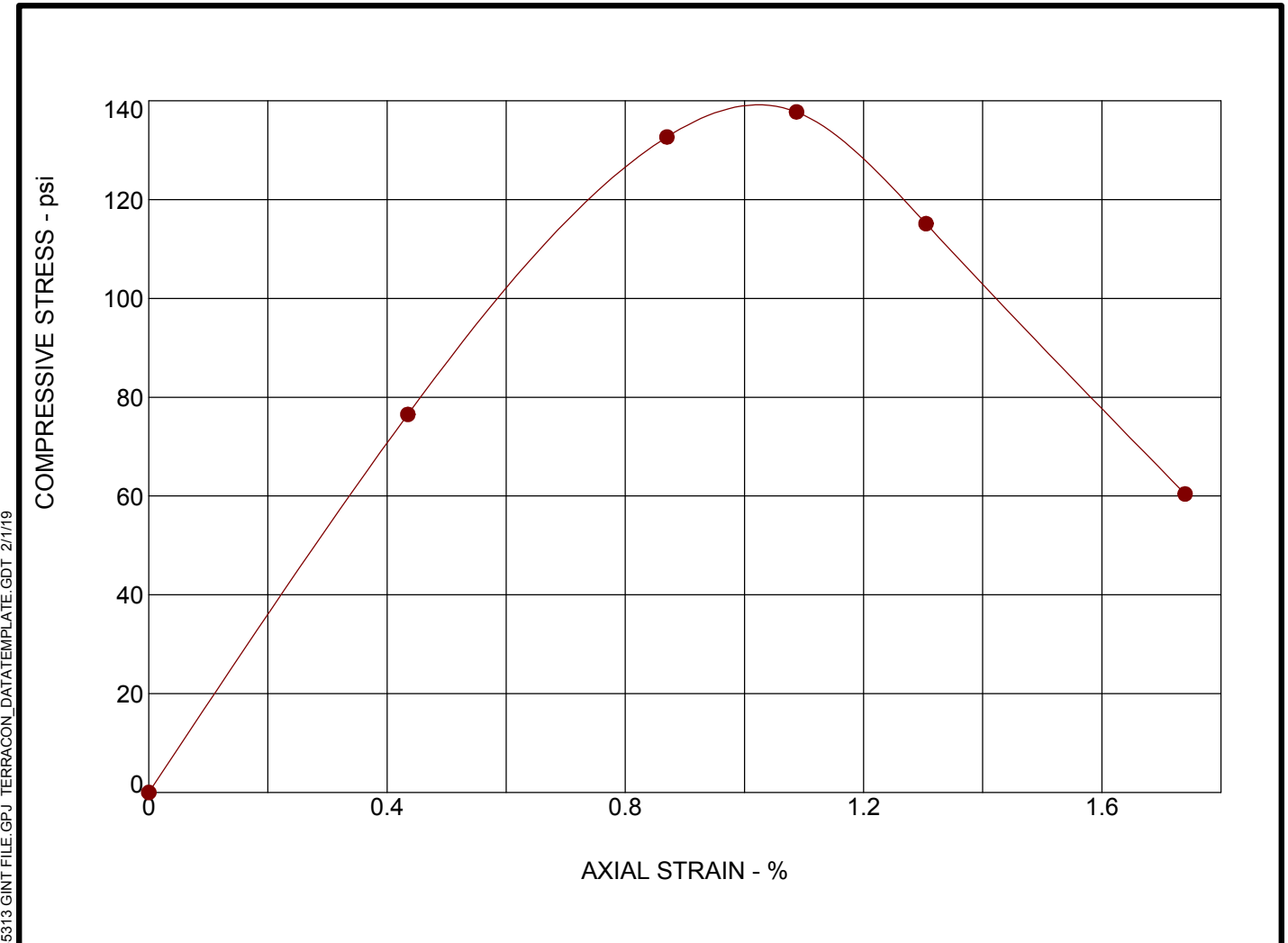
PROJECT: I3306A - I40 - D8 PDI  
 SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

SPECIMEN FAILURE PHOTOGRAPH	SPECIMEN TEST DATA	
	Moisture Content:	% 16
	Dry Density:	pcf 113
	Diameter:	in. 4.01
	Height:	in. 4.60
	Height / Diameter Ratio:	1.15
	Calculated Saturation:	%
	Calculated Void Ratio:	
	Assumed Specific Gravity:	
	Failure Strain:	% 1.09
	Unconfined Compressive Strength	(psi) 138
	Undrained Shear Strength:	(psi) 69
	Strain Rate:	in/min 0.0650
	Remarks:	

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-4 - 6% Cement - Sample 1 @ 0 - 4 feet  
 SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

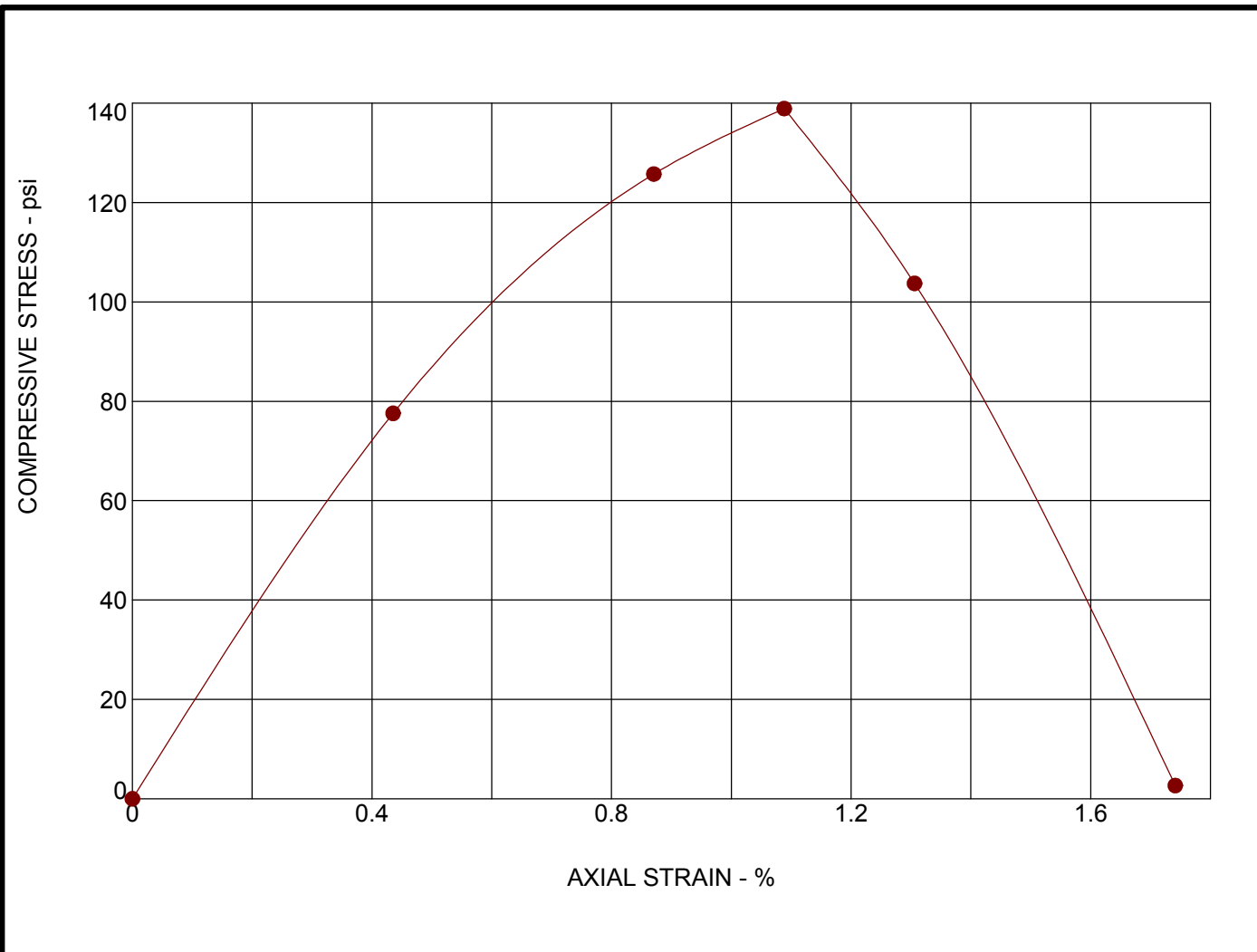
PROJECT: I3306A - I40 - D8 PDI  
 SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	112
Diameter:	in.	4.01
Height:	in.	4.59
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	139
Undrained Shear Strength:	(psi)	69
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-4 - 6% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
----	----	----	----------------------

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina

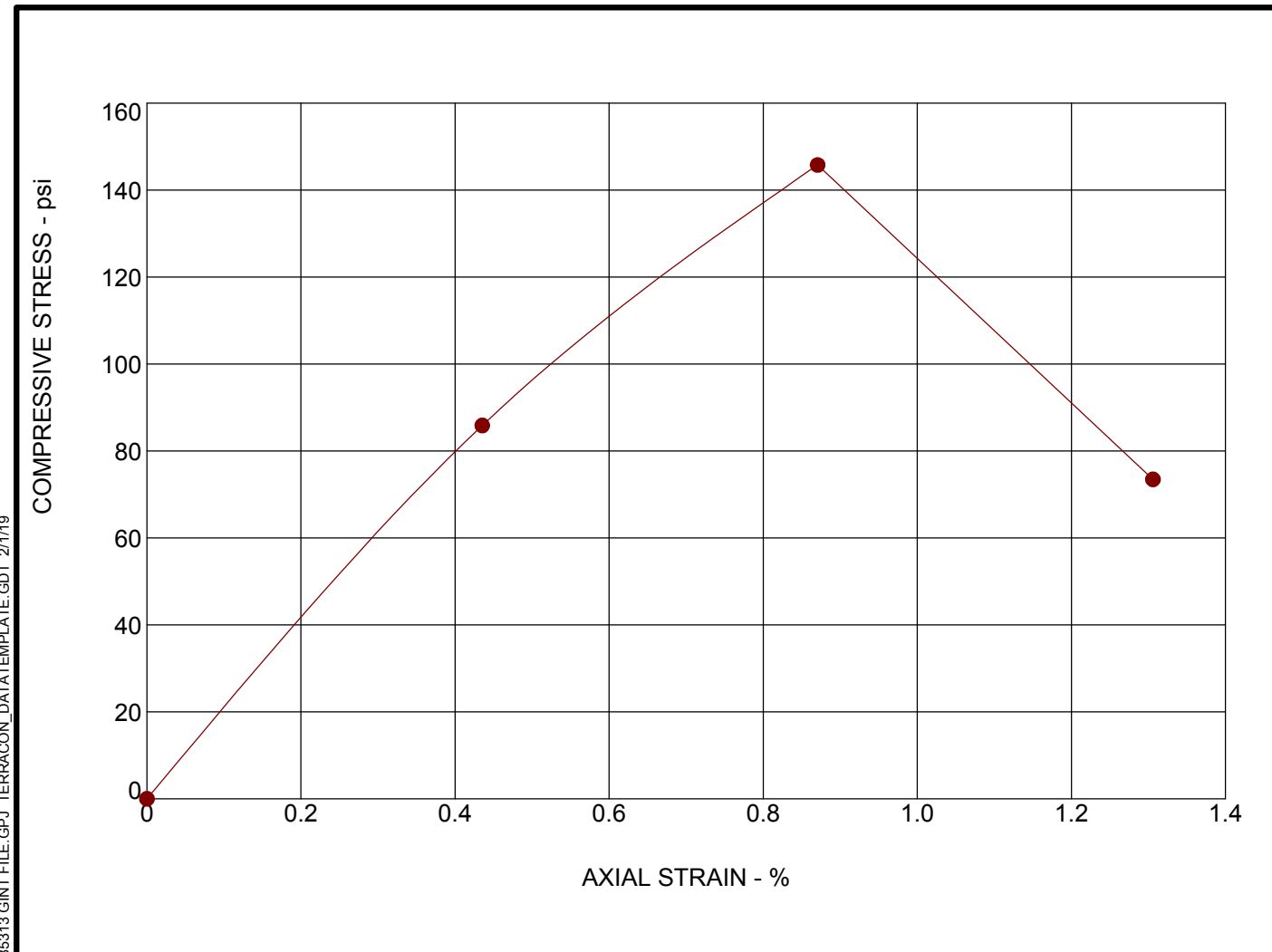


PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

EXHIBIT: B-2

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	111
Diameter:	in.	4.00
Height:	in.	4.59
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	0.87
Unconfined Compressive Strength	(psi)	146
Undrained Shear Strength:	(psi)	73
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-4 - 8% Cement - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
----	----	----	----------------------

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

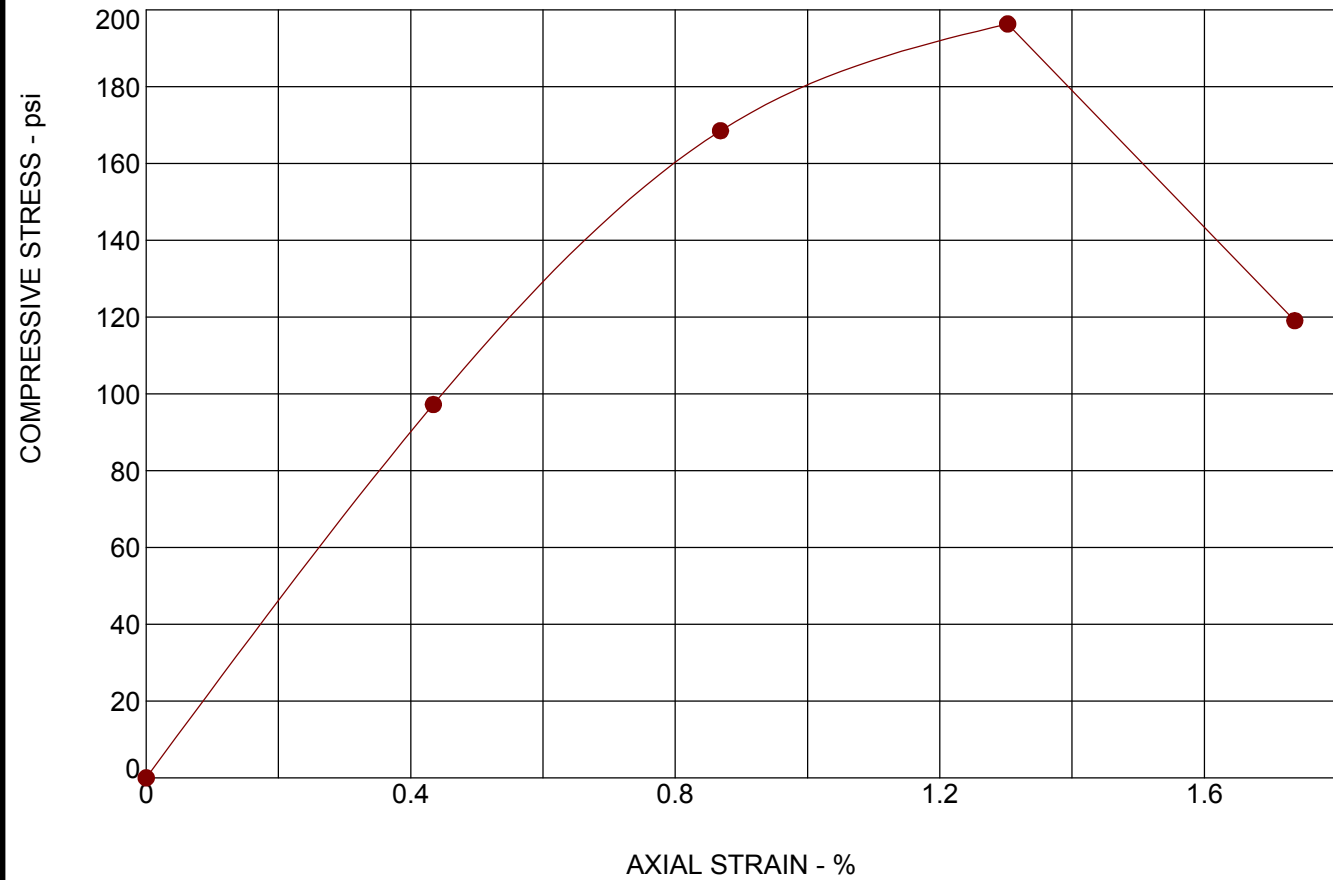
EXHIBIT: B-3

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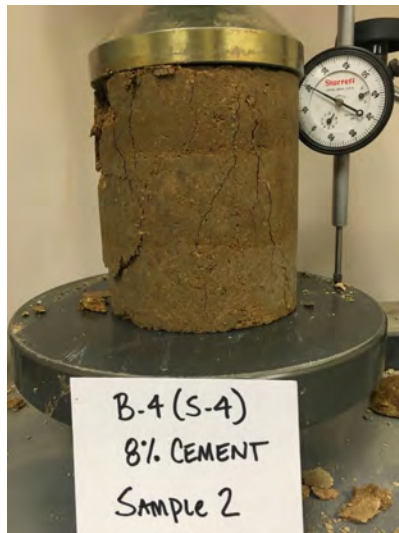
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

# UNCONFINED COMPRESSION TEST

ASTM D2166



## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	112
Diameter:	in.	4.01
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	196
Undrained Shear Strength:	(psi)	98
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-4 - 8% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
----	----	----	----------------------

PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

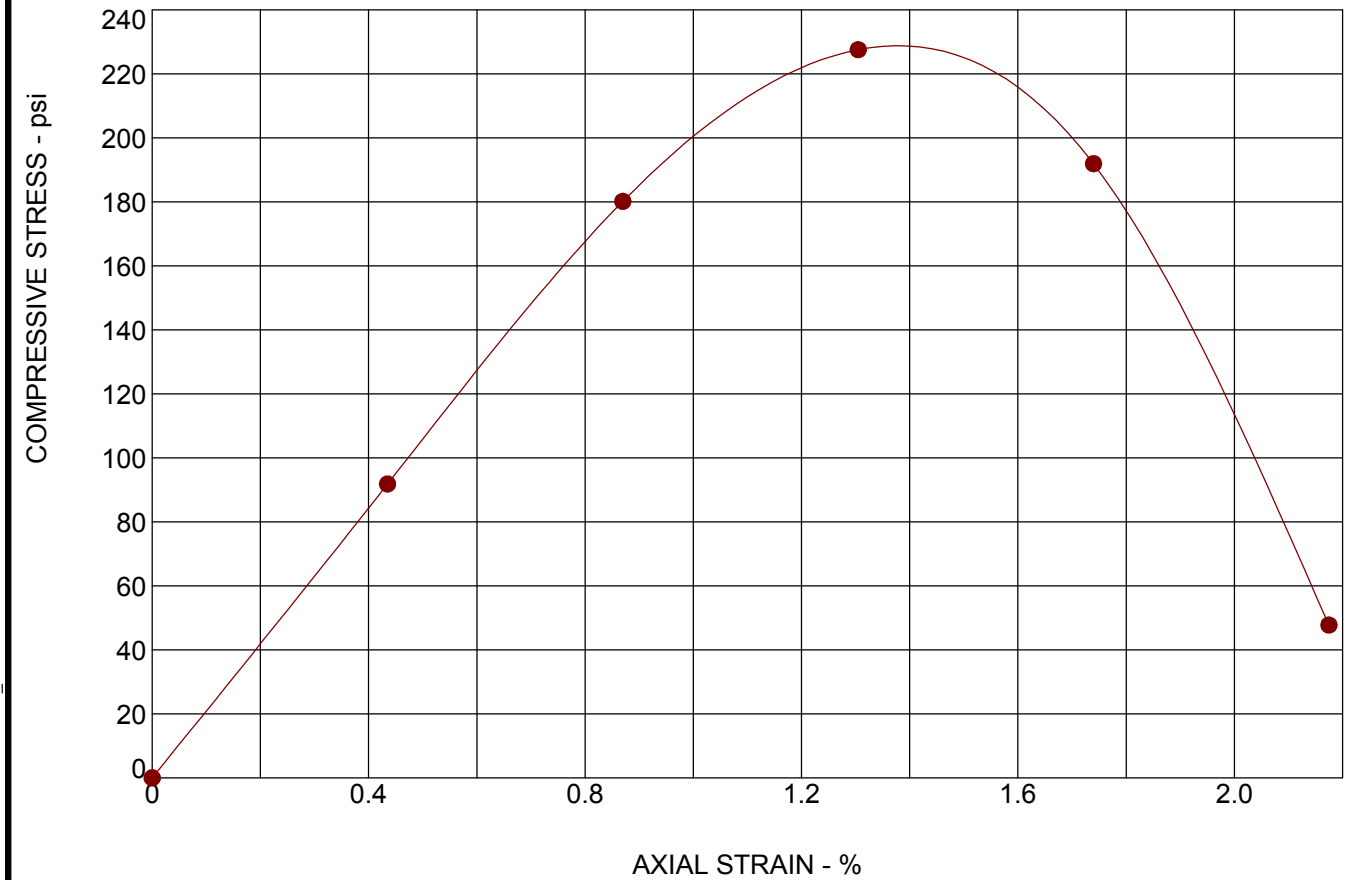
**Terracon**  
2401 Brentwood Rd, Ste 107  
Raleigh, NC

CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

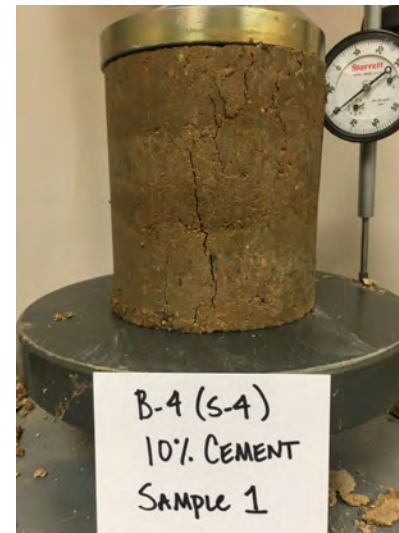
EXHIBIT: B-4

# UNCONFINED COMPRESSION TEST

ASTM D2166



## SPECIMEN FAILURE PHOTOGRAPH



## SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	112
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	228
Undrained Shear Strength:	(psi)	114
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-4 - 10% Cement - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
----	----	----	----------------------

PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

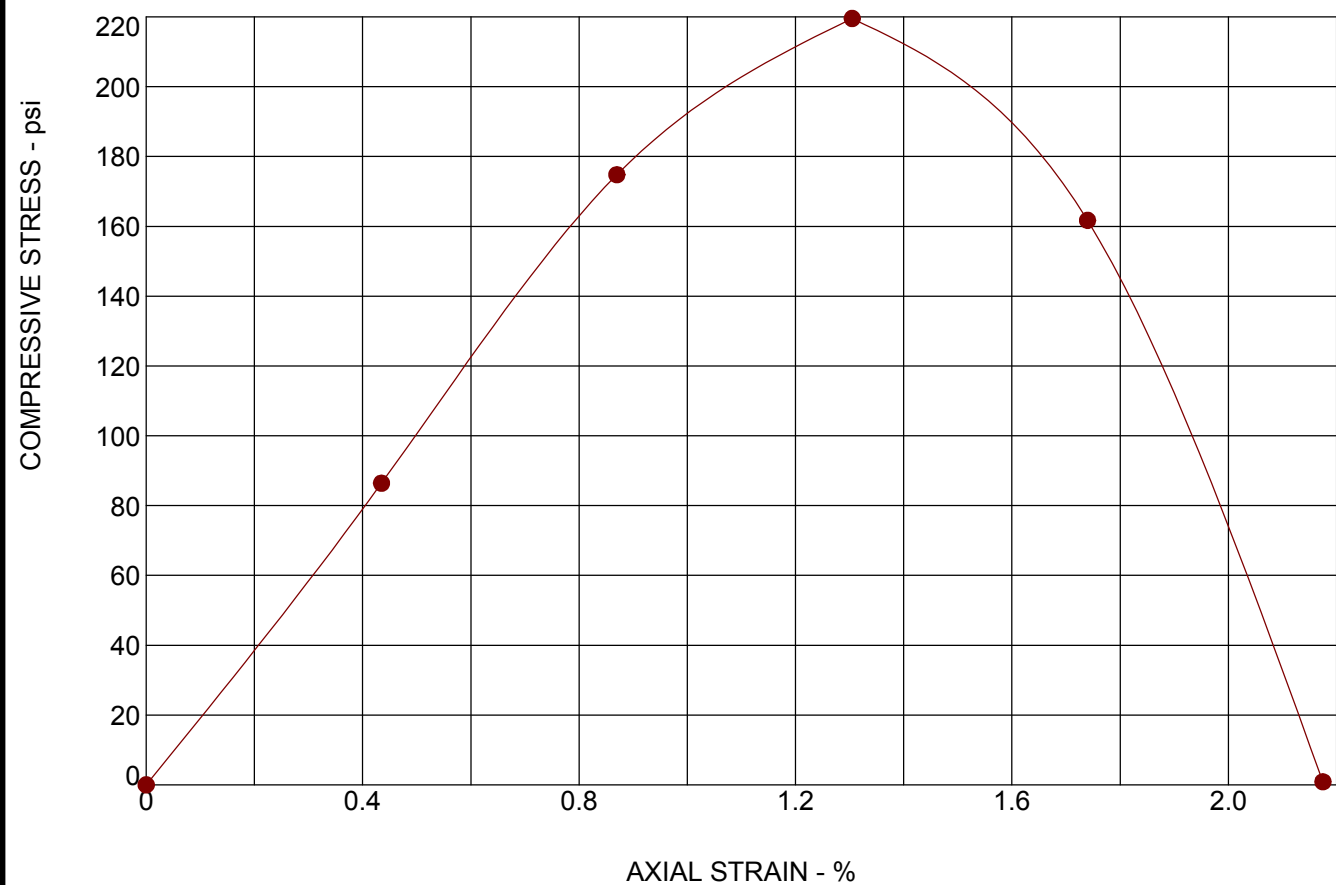
**Terracon**  
2401 Brentwood Rd, Ste 107  
Raleigh, NC

CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

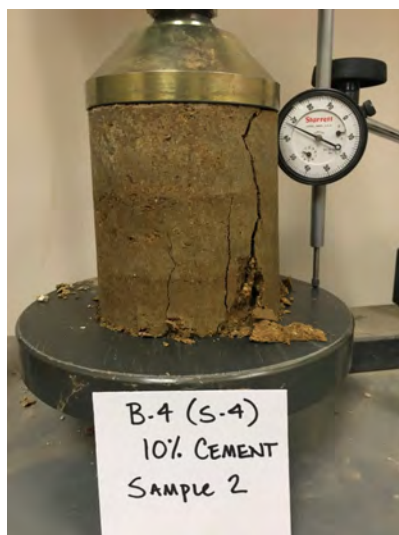
EXHIBIT: B-5

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	112
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	220
Undrained Shear Strength:	(psi)	110
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-4 - 10% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

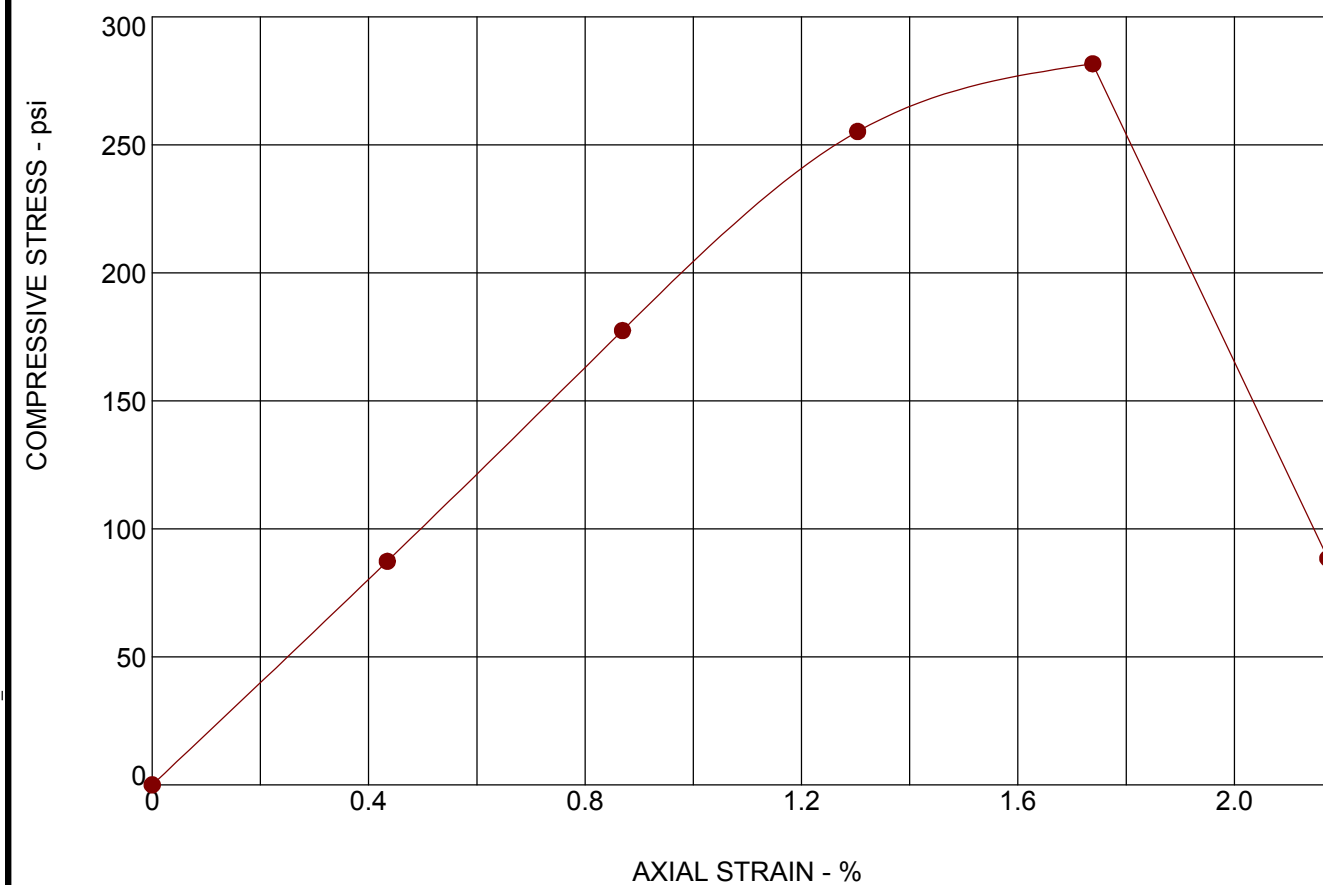
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-6

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	16
Dry Density:	pcf	112
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.74
Unconfined Compressive Strength	(psi)	282
Undrained Shear Strength:	(psi)	141
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-4 - 12% Cement - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina

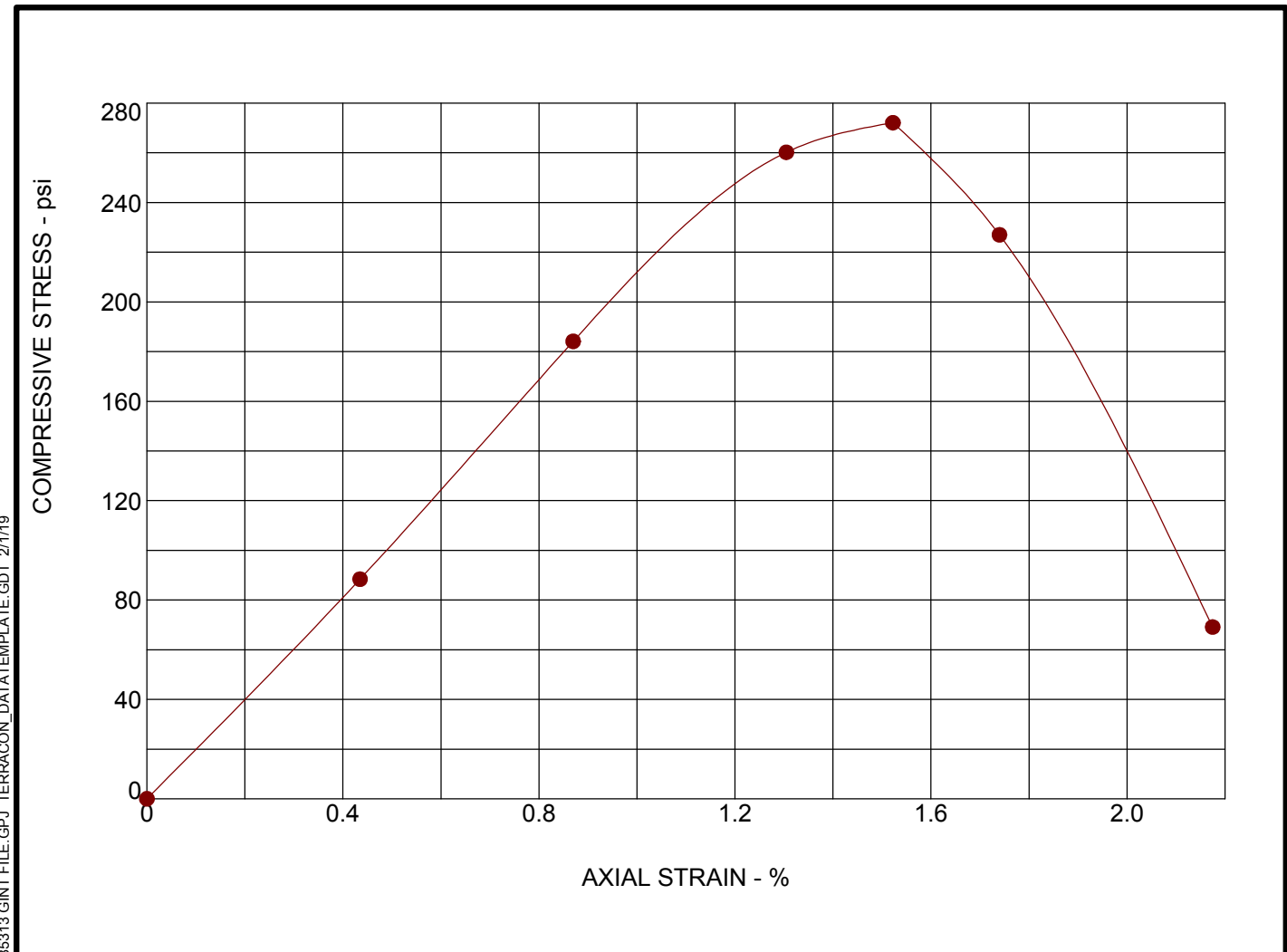


PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-7

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

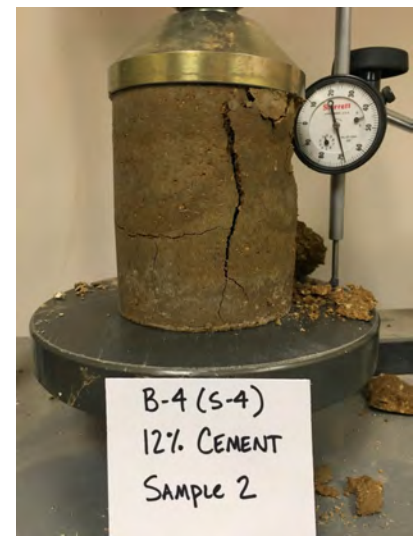
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

**SPECIMEN FAILURE PHOTOGRAPH**



**SPECIMEN TEST DATA**

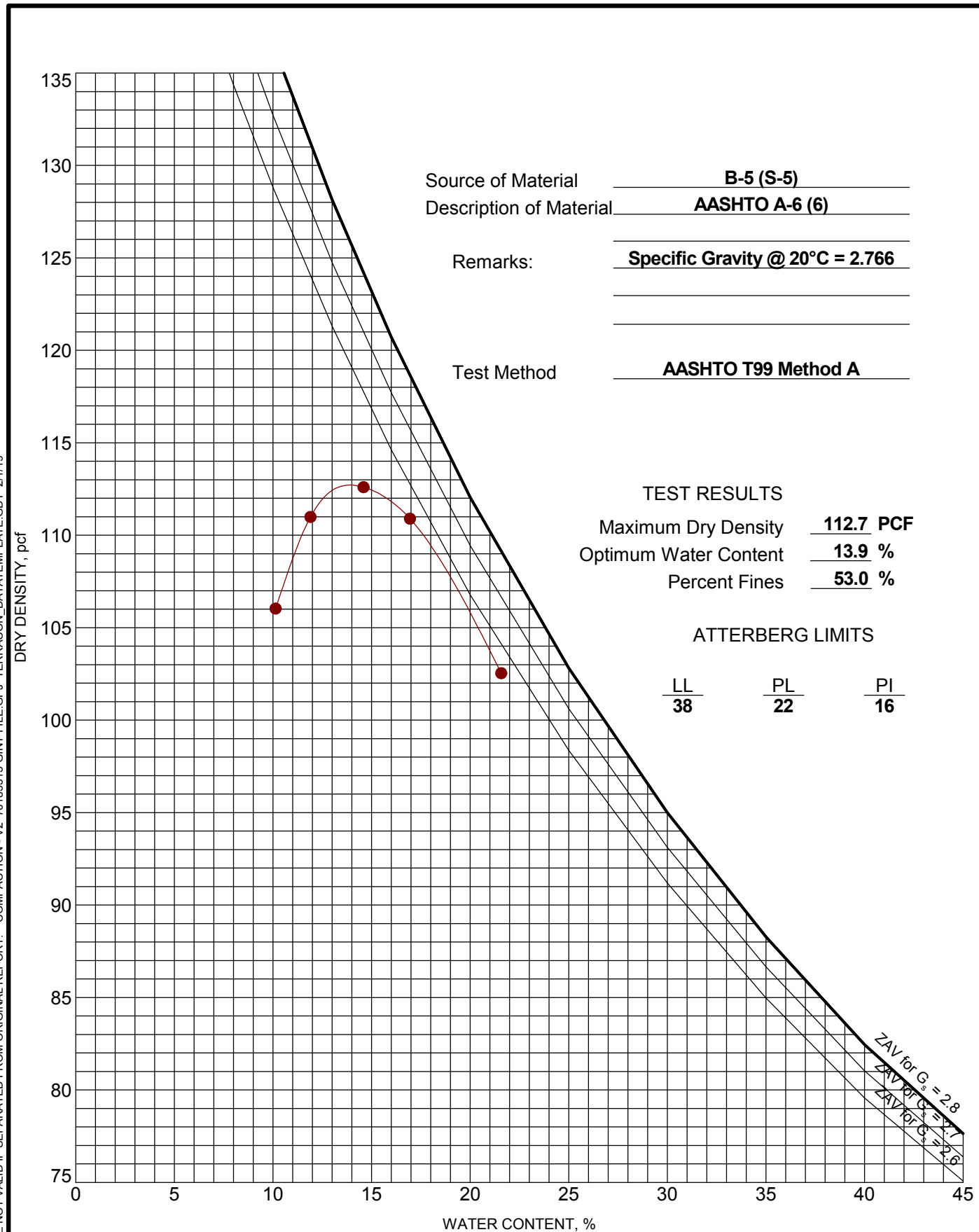
Moisture Content:	%	16
Dry Density:	pcf	112
Diameter:	in.	4.01
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.52
Unconfined Compressive Strength	(psi)	272
Undrained Shear Strength:	(psi)	136
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample	SAMPLE LOCATION: S-4 - 12% Cement - Sample 2 @ 0 - 4 feet
SAMPLE DESCRIPTION:	LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI	 <p>2401 Brentwood Rd, Ste 107 Raleigh, NC</p>	PROJECT NUMBER: 70185313
SITE: I-40 Hillsborough, North Carolina		CLIENT: NCDOT - Geotechnical Engineering Unit Raleigh, North Carolina
		EXHIBIT: B-8

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material B-5 (S-5)  
 Description of Material AASHTO A-6 (6)  
 Remarks: Specific Gravity @ 20°C = 2.766  
 Test Method AASHTO T99 Method A

**TEST RESULTS**  
 Maximum Dry Density 112.7 PCF  
 Optimum Water Content 13.9 %  
 Percent Fines 53.0 %

**ATTERBERG LIMITS**  
 LL 38 PL 22 PI 16

# REPORT FOR CALIFORNIA BEARING RATIO

SHEET 318 OF 329



2401 Brentwood Road, Suite 107  
 Raleigh, NC 27604  
 919-873-2211

Service Date: 01/15/19  
 Report Date: 02/01/19

**Client**  
 NCDOT - Geotechnical Engineering Unit  
 Attn: Mike Whalen  
 1589 Mail Service Center  
 Raleigh, North Carolina 27699-1500

**Project**  
 I13306A - I40 - DB PDI  
 I-40  
 Hillsborough, North Carolina

Project No. 70195313

## SAMPLE INFORMATION

Sample Number:	<u>S-5</u>	Proctor Method:	<u>AASHTO T99 - Method A</u>
Boring Number:	<u>B-5</u>	Maximum Dry Density (pcf):	<u>112.7</u>
Sample Location:	<u>Bulk Sample</u>	Optimum Moisture:	<u>13.9</u>
Depth:	<u>0-4'</u>	Liquid Limit:	<u>38</u>
Material Description:	<u>AASHTO A-6 (6)</u>	Plasticity Index:	<u>16</u>

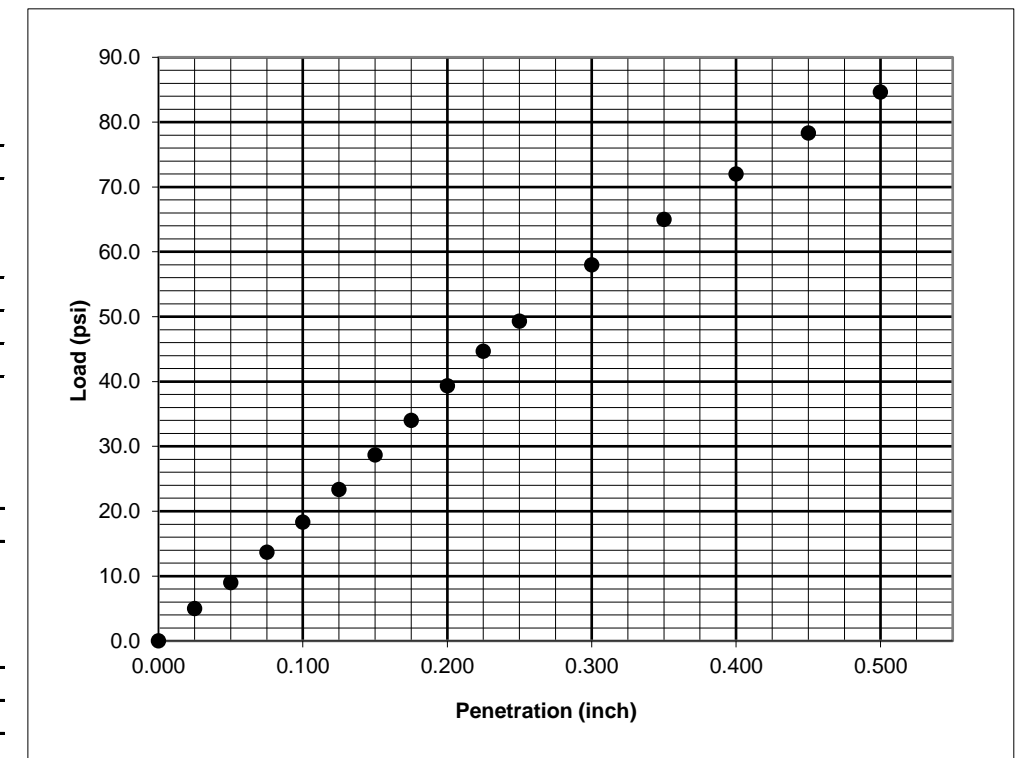
## CBR TEST DATA

CBR Value at 0.100 inch 1.8  
 CBR Value at 0.200 inch 2.6

Surcharge Weight (lbs) 10  
 Soaking Condition Soaked  
 Length of Soaking (hours) 96  
 Swell (%) 4.3

**DENSITY DATA**  
 Dry Density Before Soaking (pcf) 112.1  
 Compaction of Proctor (%) 99.5

**MOISTURE DATA**  
 Before Compaction (%) 13.9  
 After Compaction (%) 13.3  
 Top 1" After Soaking (%) 23.7  
 Average After Soaking (%) 19.4



## Comments:

Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman  
 Reported To: Matt Alexander  
 Contractor:

## Report Distribution

Reviewed by: Matthew J. Alexander  
 Geotechnical Project Manager

## Test Methods: AASHTO T193

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

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PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
 Hillsborough, North Carolina



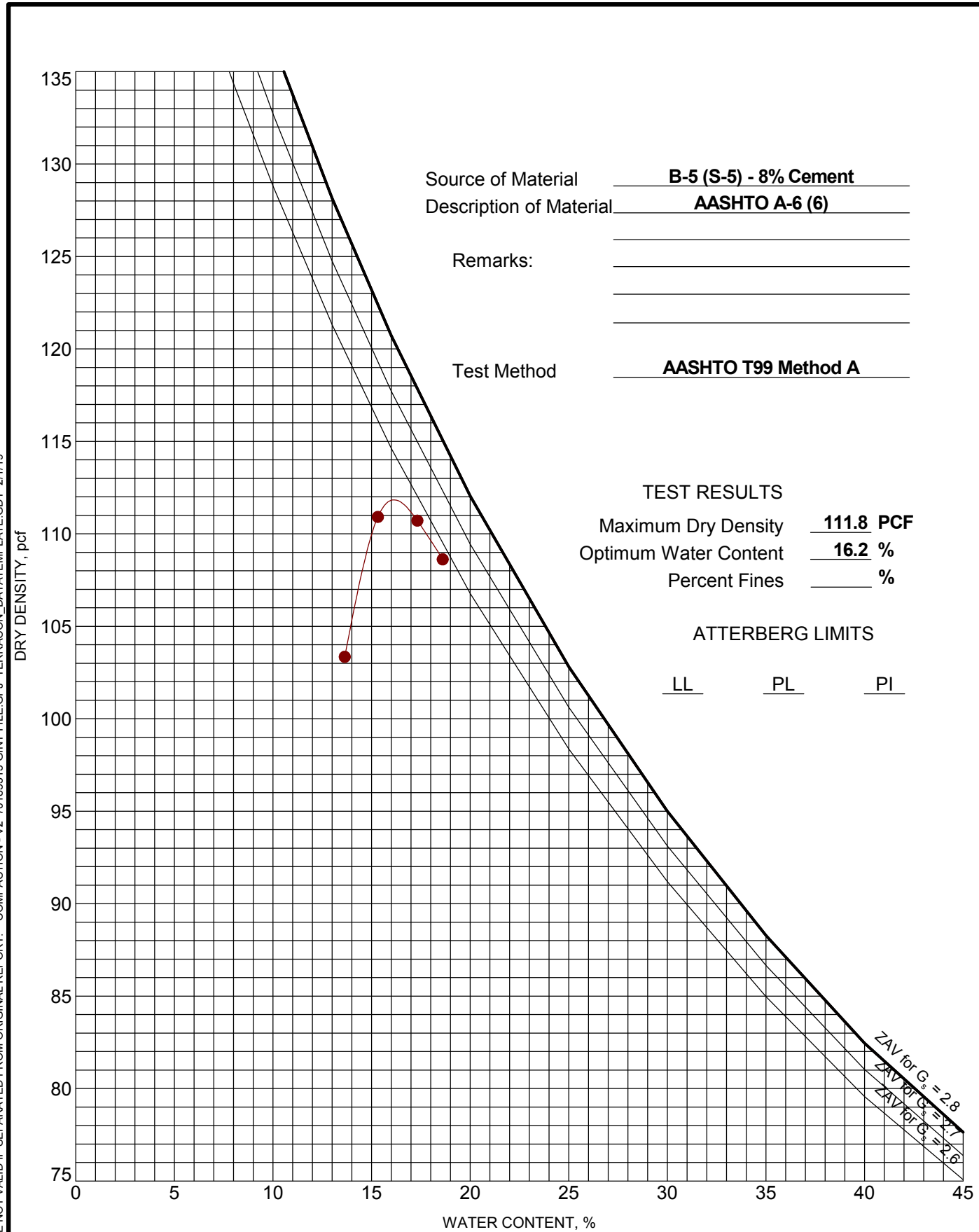
PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina

EXHIBIT: B-1

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



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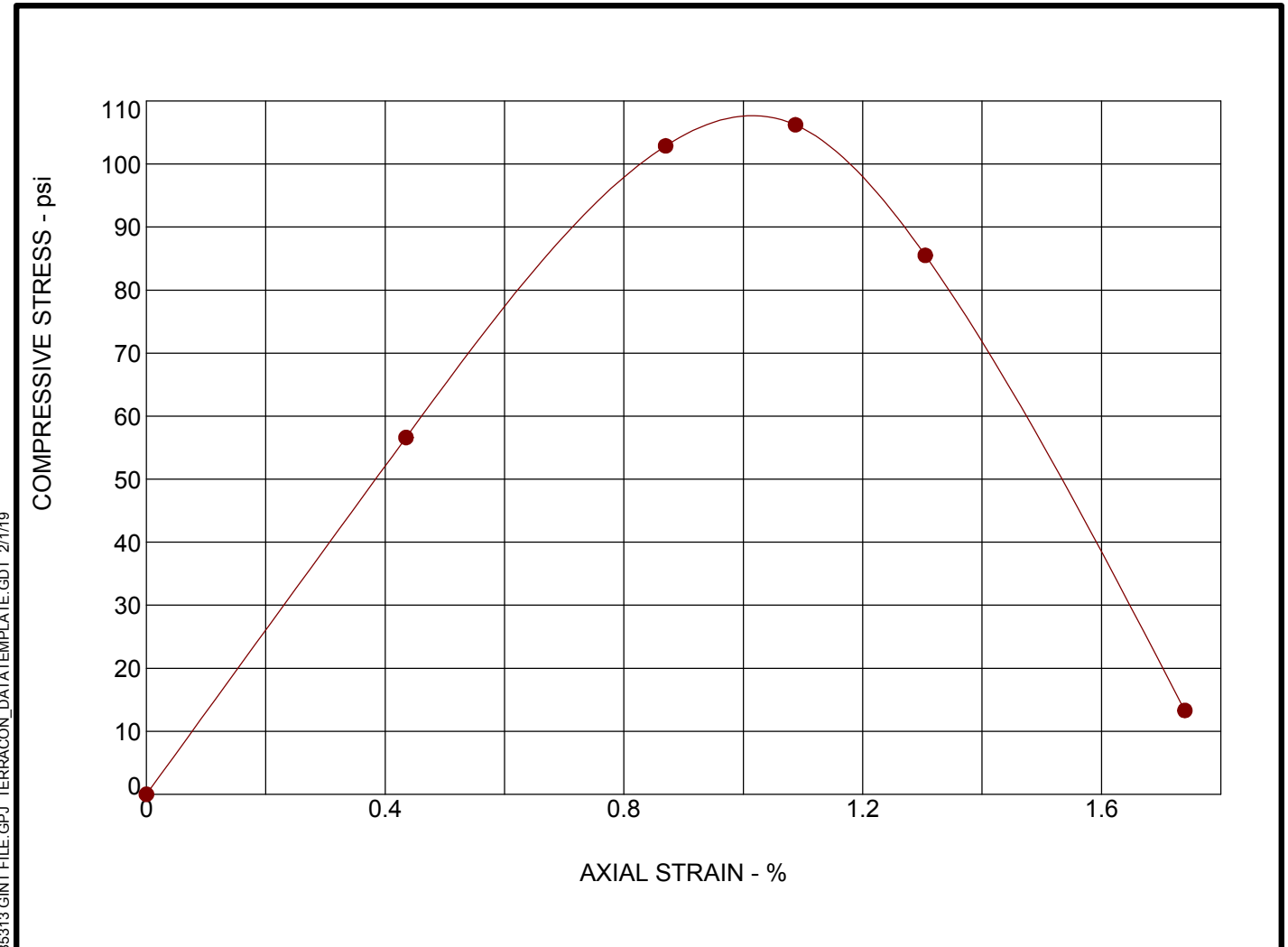
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



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Moisture Content:	%	19
Dry Density:	pcf	105
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	106
Undrained Shear Strength:	(psi)	53
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-5 - 6% Cement - Sample 1 @ 0 - 4 feet  
 SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina

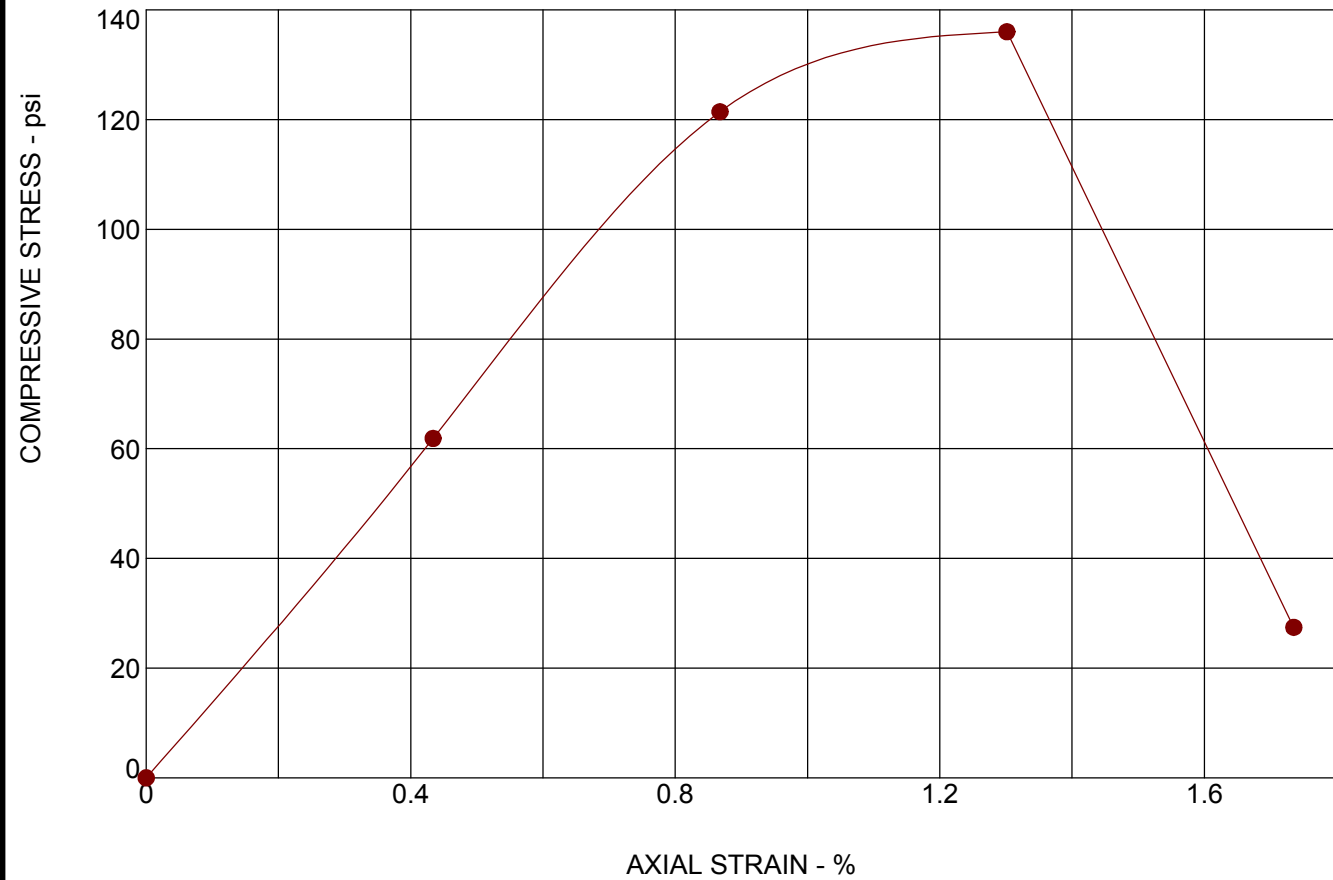


PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1



# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	18
Dry Density:	pcf	107
Diameter:	in.	4.02
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	136
Undrained Shear Strength:	(psi)	68
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 6% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

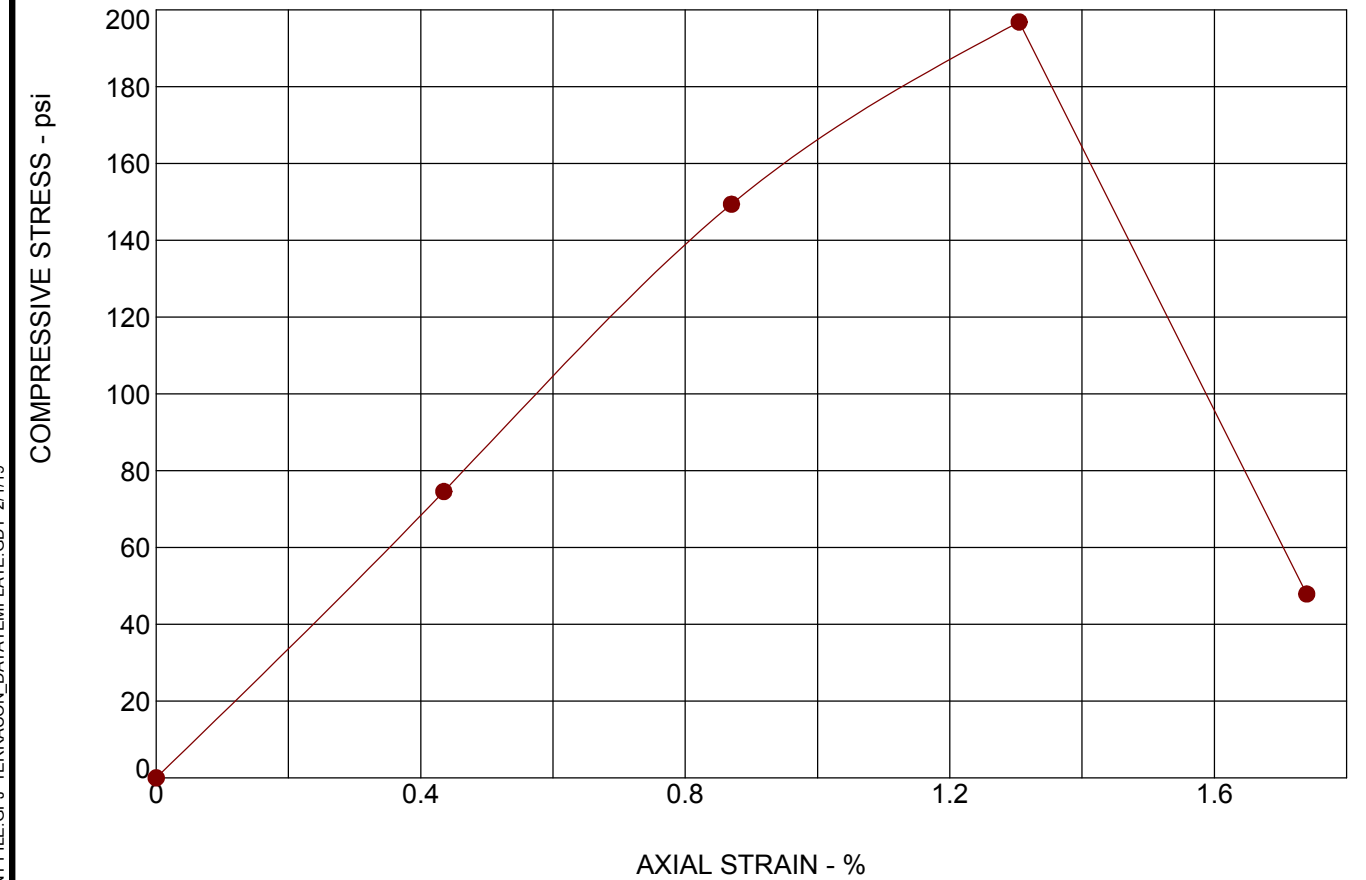


CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

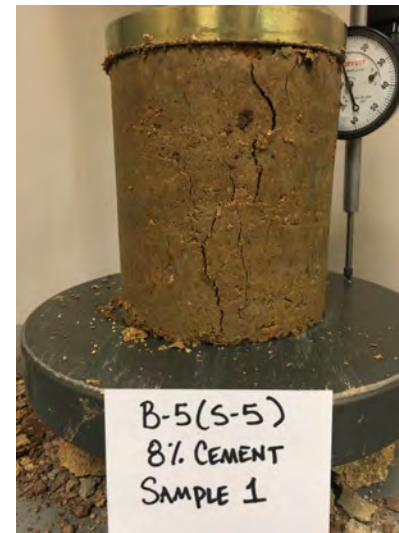
EXHIBIT: B-2

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	18
Dry Density:	pcf	107
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	197
Undrained Shear Strength:	(psi)	98
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 8% Cement - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina



CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

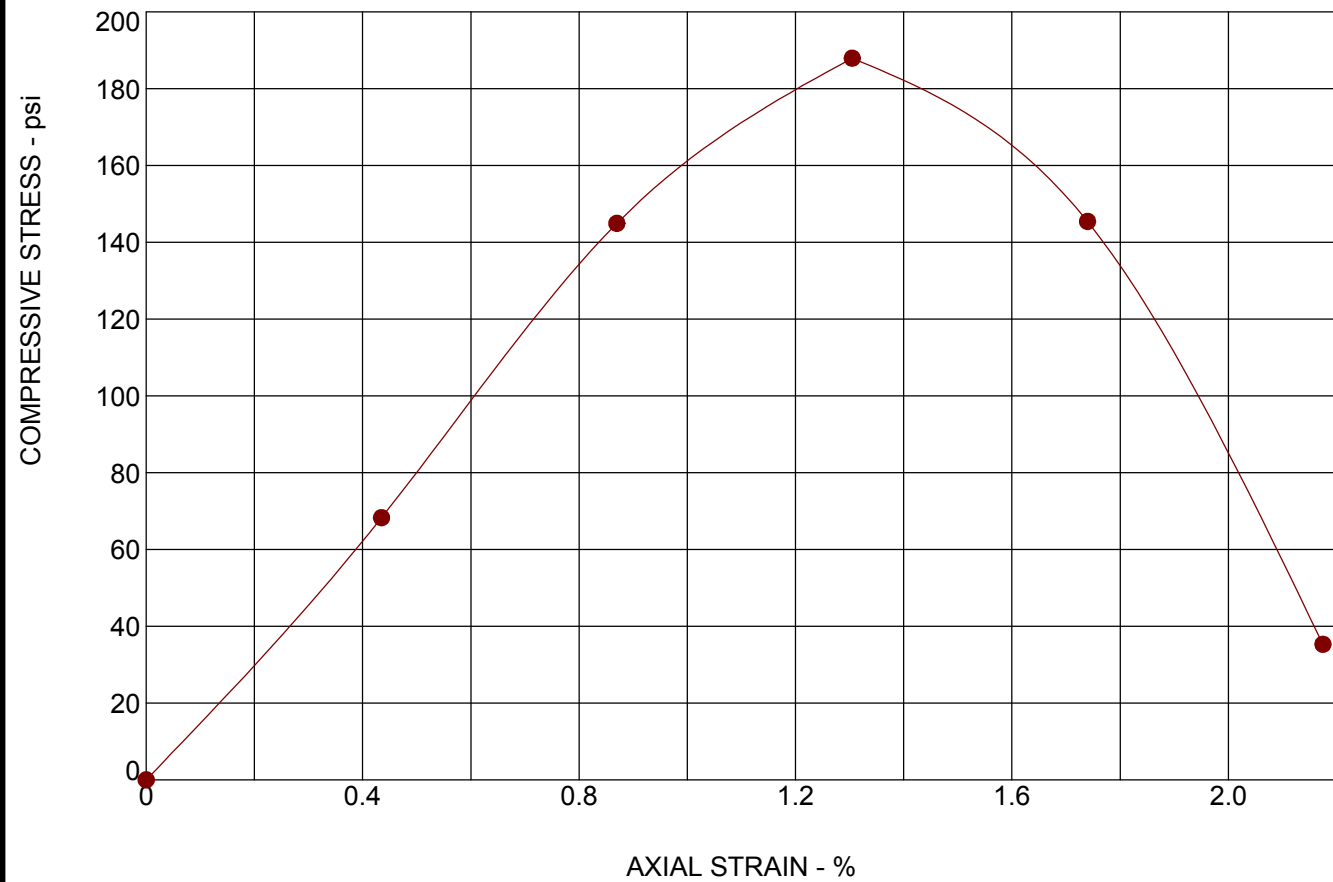
EXHIBIT: B-3

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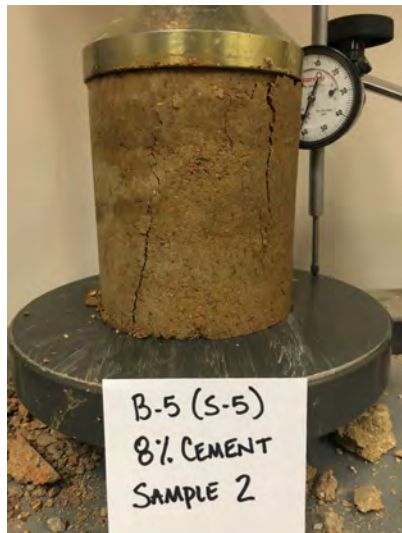
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# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	17
Dry Density:	pcf	107
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	188
Undrained Shear Strength:	(psi)	94
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 8% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

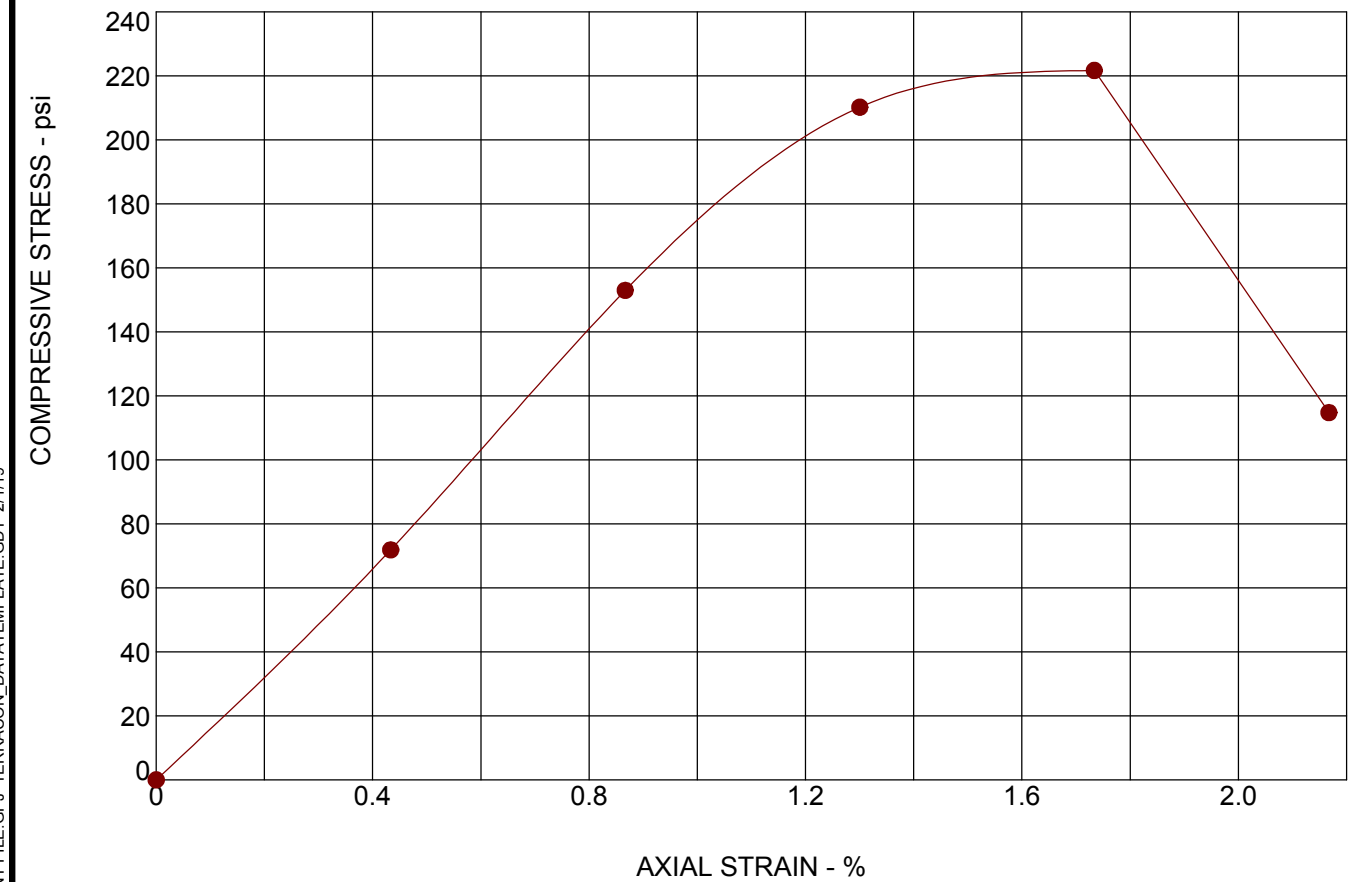


CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

EXHIBIT: B-4

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	18
Dry Density:	pcf	107
Diameter:	in.	4.02
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.73
Unconfined Compressive Strength	(psi)	222
Undrained Shear Strength:	(psi)	111
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 10% Cement - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina



CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

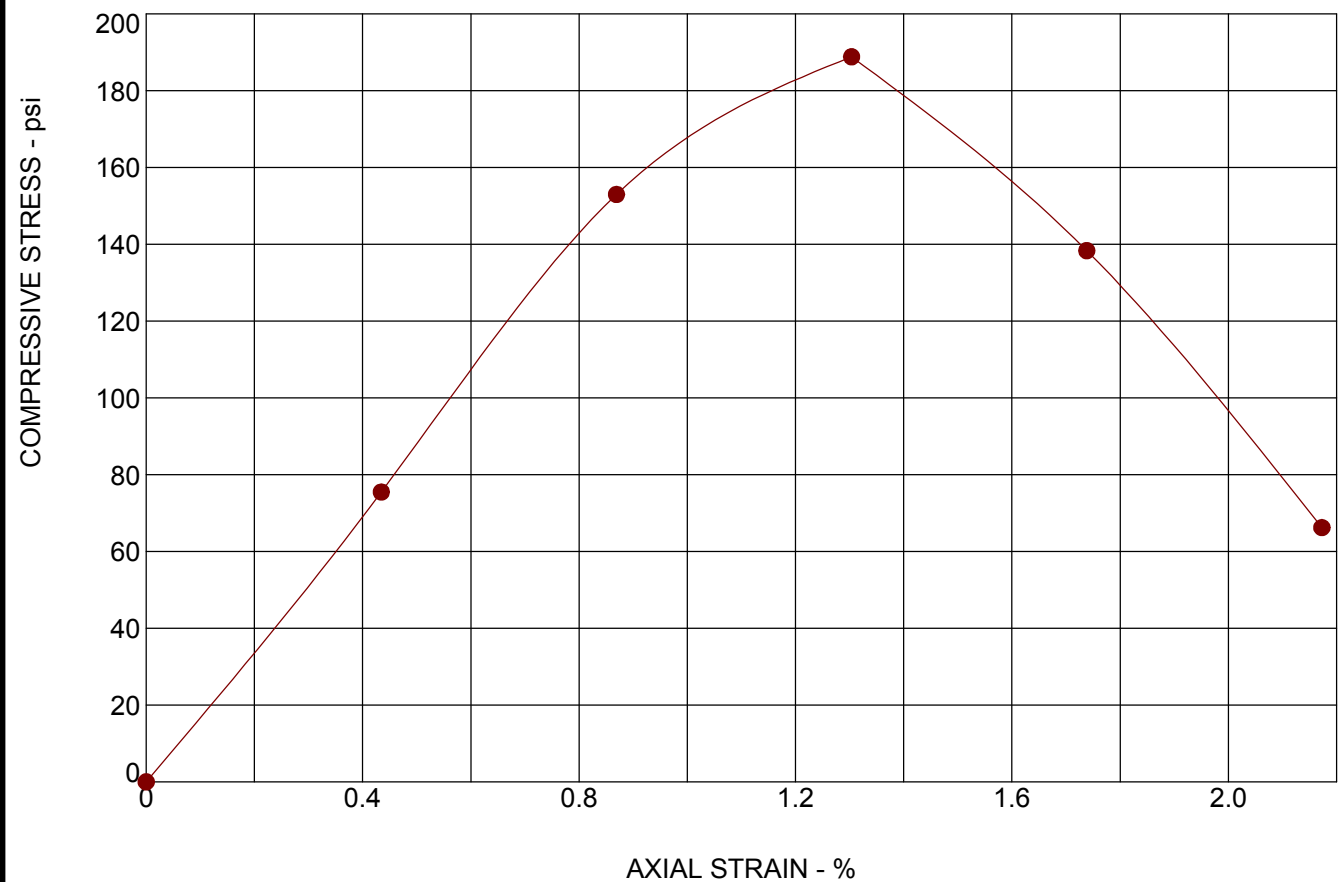
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# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	17
Dry Density:	pcf	106
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	189
Undrained Shear Strength:	(psi)	94
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 10% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL PL PI Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

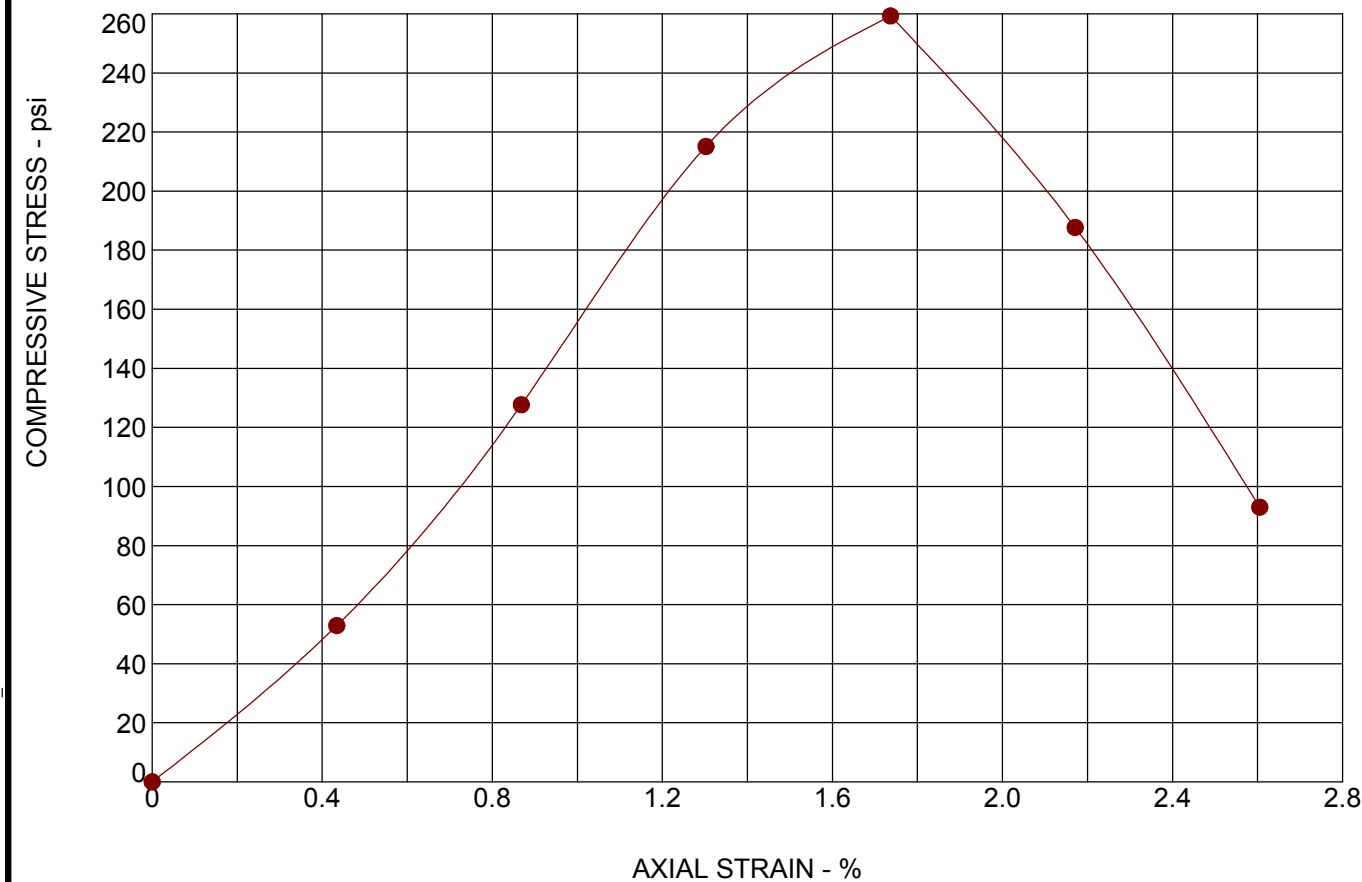


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Raleigh, North Carolina

EXHIBIT: B-6

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	18
Dry Density:	pcf	107
Diameter:	in.	4.02
Height:	in.	4.61
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.74
Unconfined Compressive Strength	(psi)	259
Undrained Shear Strength:	(psi)	130
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 12% Cement - Sample 1 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL PL PI Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina



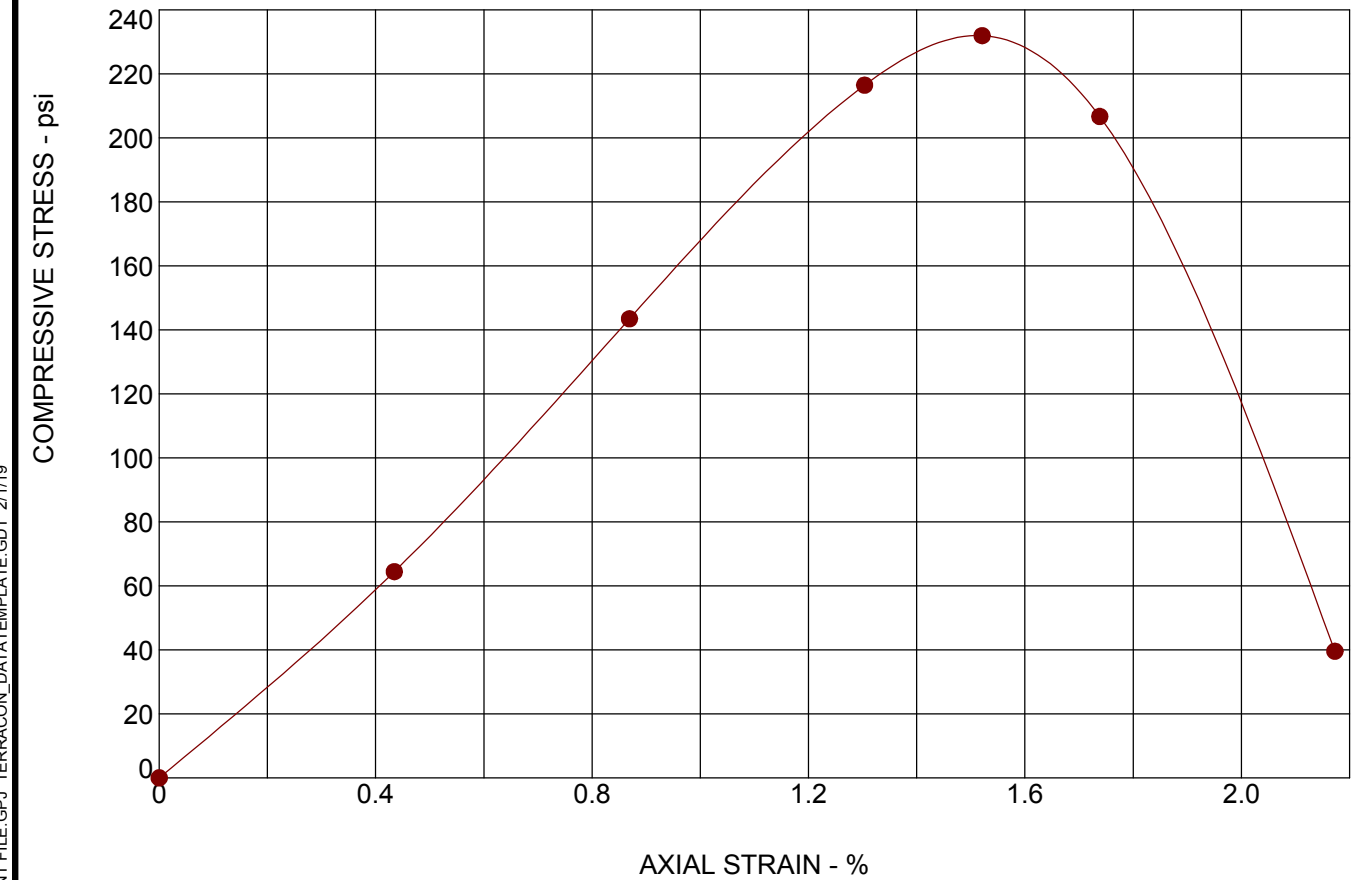
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Raleigh, North Carolina

EXHIBIT: B-7

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ASTM D2166



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**SPECIMEN FAILURE PHOTOGRAPH**



**SPECIMEN TEST DATA**

Moisture Content:	%	18
Dry Density:	pcf	106
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.14
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.52
Unconfined Compressive Strength	(psi)	232
Undrained Shear Strength:	(psi)	116
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-5 - 12% Cement - Sample 2 @ 0 - 4 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



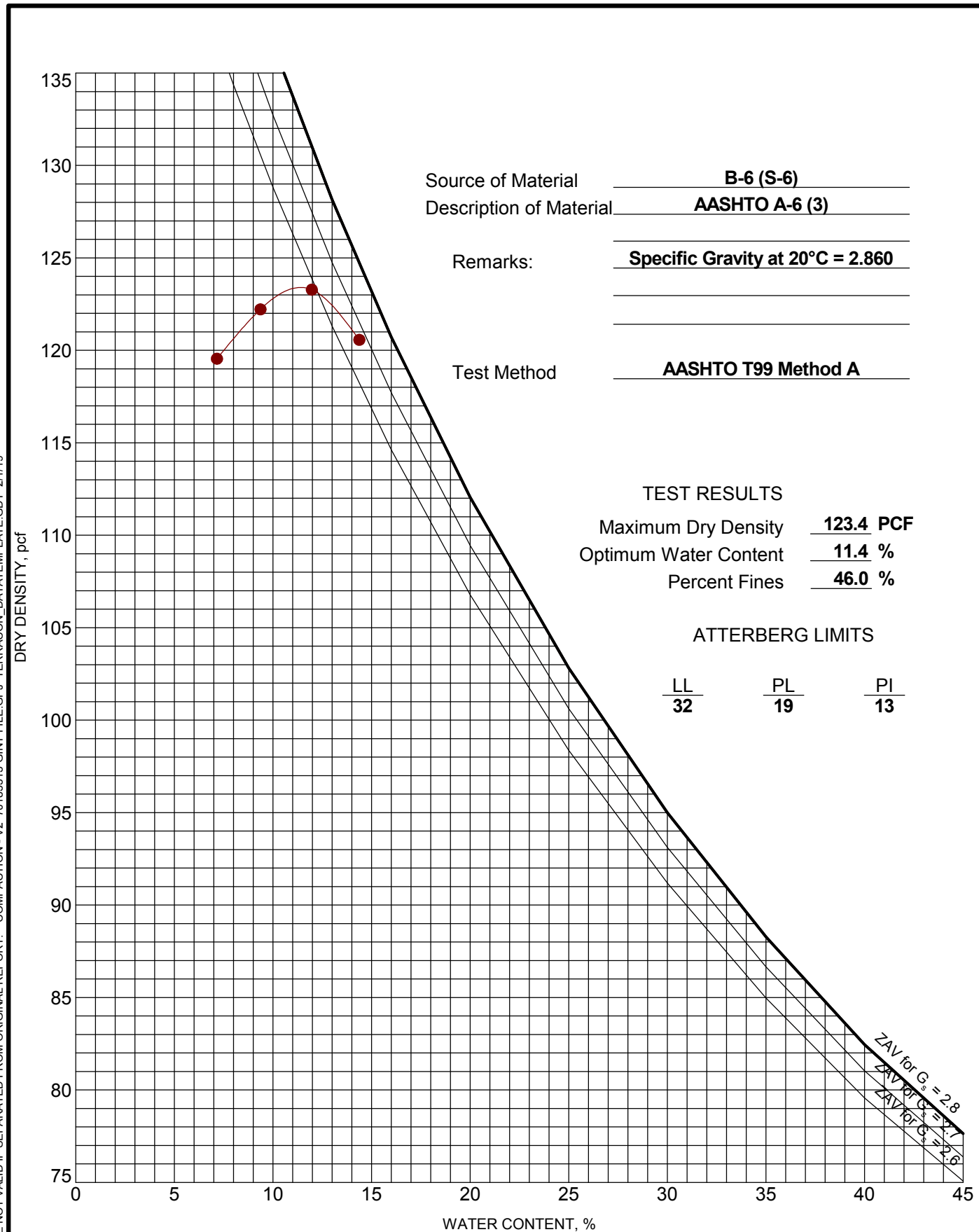
PROJECT NUMBER: 70185313

CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

EXHIBIT: B-8

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material B-6 (S-6)  
 Description of Material AASHTO A-6 (3)  
 Remarks: Specific Gravity at 20°C = 2.860  
 Test Method AASHTO T99 Method A

**TEST RESULTS**  
 Maximum Dry Density 123.4 PCF  
 Optimum Water Content 11.4 %  
 Percent Fines 46.0 %

**ATTERBERG LIMITS**  

LL	PL	PI
32	19	13

ZAV for  $G_s = 2.8$   
 ZAV for  $G_s = 2.7$   
 ZAV for  $G_s = 2.6$

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
 Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# REPORT FOR CALIFORNIA BEARING RATIO

SHEET 324 OF 329



2401 Brentwood Road, Suite 107  
 Raleigh, NC 27604  
 919-873-2211

Service Date: 01/15/19

Report Date: 02/01/19

## Client

NCDOT - Geotechnical Engineering Unit  
 Attn: Mike Whalen  
 1589 Mail Service Center  
 Raleigh, North Carolina 27699-1500

## Project

I13306A - I40 - DB PDI  
 I-40  
 Hillsborough, North Carolina

Project No. 70195313

## SAMPLE INFORMATION

Sample Number:	B-6	Proctor Method:	AASHTO T99 - Method A
Boring Number:	B-6	Maximum Dry Density (pcf):	123.4
Sample Location:	Bulk Sample	Optimum Moisture:	11.4
Depth:	0-3.5'	Liquid Limit:	32
Material Description:	AASHTO A-6 (3)	Plasticity Index:	13

## CBR TEST DATA

CBR Value at 0.100 inch 3.2  
 CBR Value at 0.200 inch 3.2

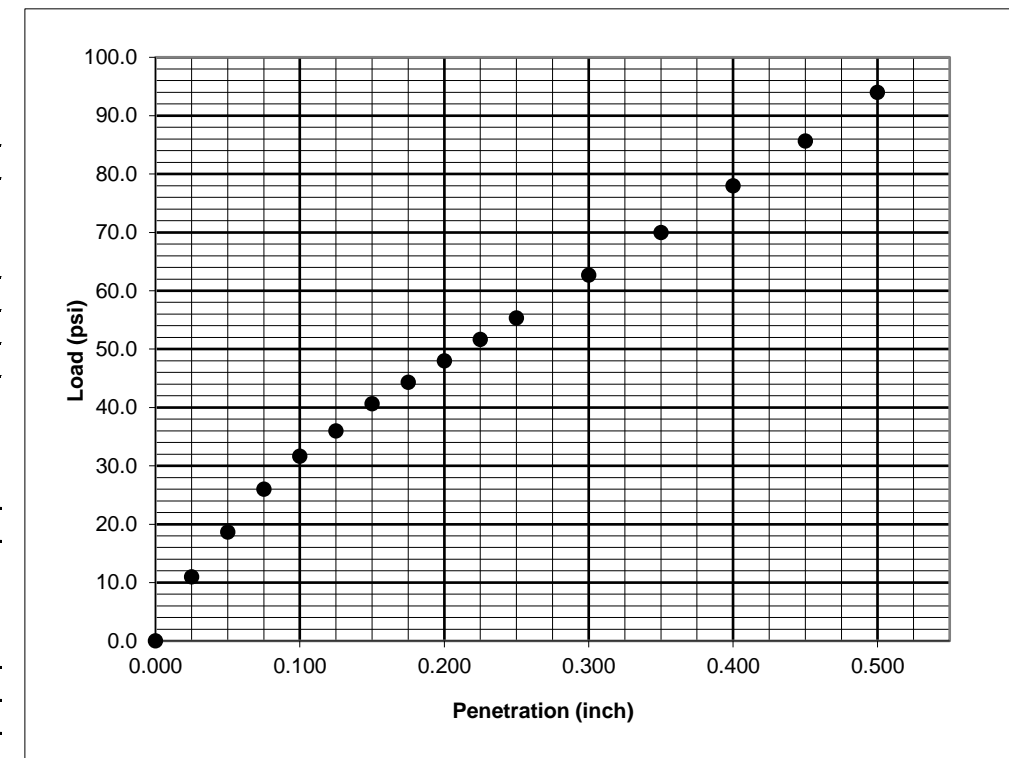
Surcharge Weight (lbs) 10  
 Soaking Condition Soaked  
 Length of Soaking (hours) 96  
 Swell (%) 2.2

## DENSITY DATA

Dry Density Before Soaking (pcf) 123.4  
 Compaction of Proctor (%) 100.0

## MOISTURE DATA

Before Compaction (%) 11.2  
 After Compaction (%) 10.8  
 Top 1" After Soaking (%) 17.8  
 Average After Soaking (%) 15.2



## Comments:

Services: Obtain soil sample and test for California Bearing Ratio

Terracon Rep: Stephanie Huffman

Reported To: Matt Alexander

Contractor:

Report Distribution

Reviewed by: \_\_\_\_\_

Matthew J. Alexander  
 Geotechnical Project Manager

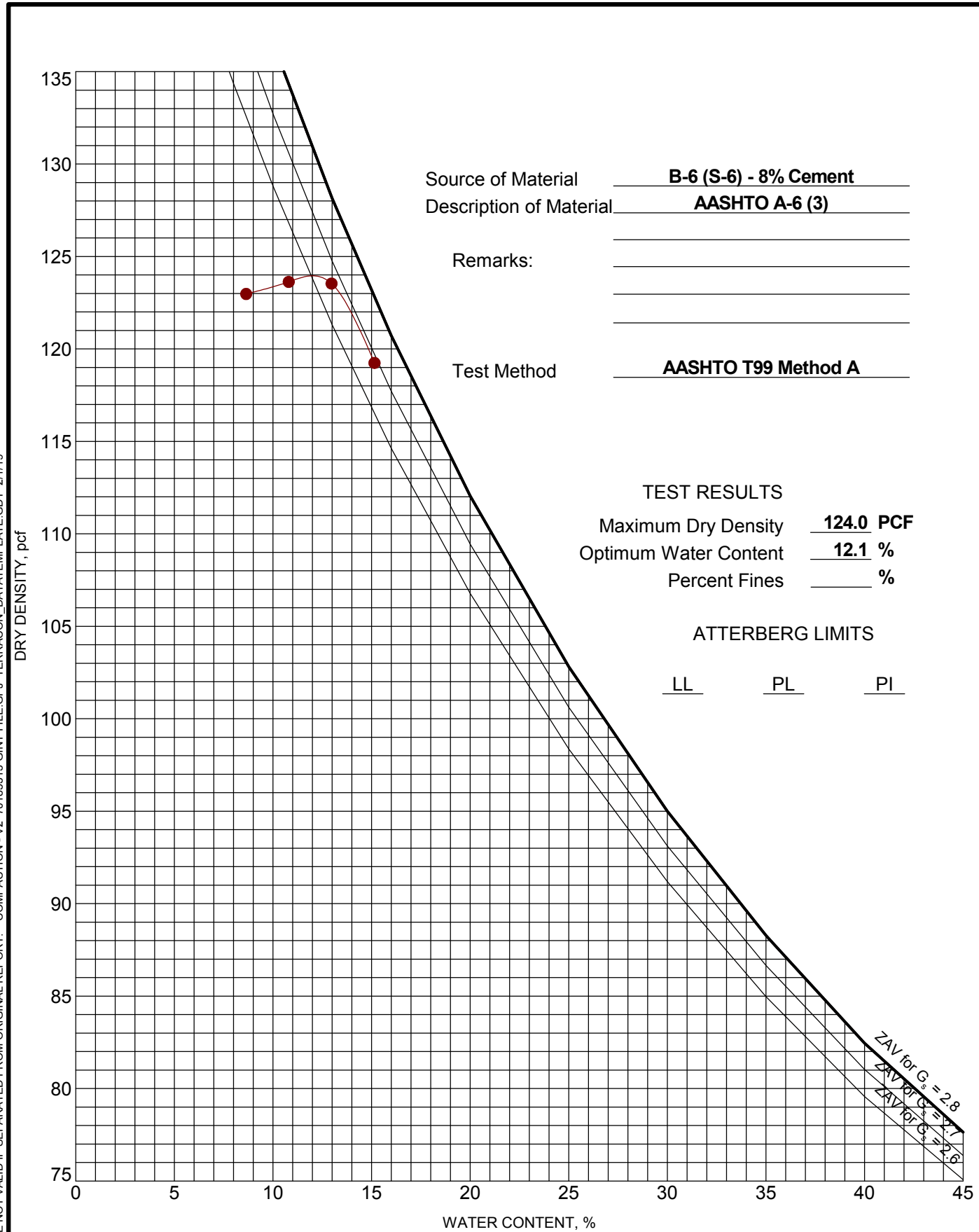
Test Methods: AASHTO T193

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written approval of Terracon. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

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# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



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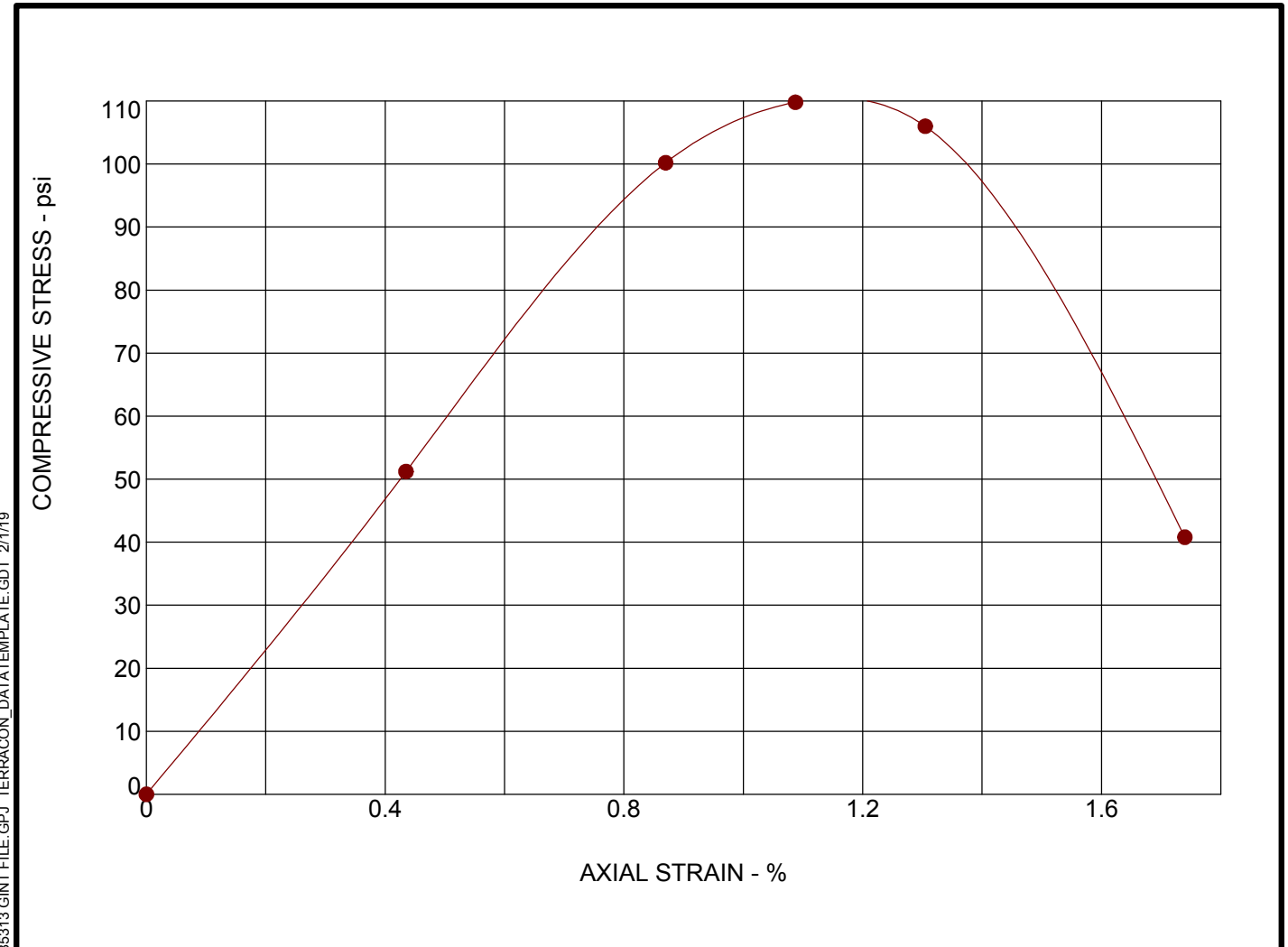
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
 CLIENT: NCDOT - Geotechnical Engineering Unit  
 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



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SPECIMEN FAILURE PHOTOGRAPH	SPECIMEN TEST DATA	
<p>B-6 (S-6) 6% CEMENT SAMPLE 1</p>	Moisture Content:	% 15
	Dry Density:	pcf 117
	Diameter:	in. 4.02
	Height:	in. 4.60
	Height / Diameter Ratio:	1.15
	Calculated Saturation:	%
	Calculated Void Ratio:	
	Assumed Specific Gravity:	
	Failure Strain:	% 1.09
	Unconfined Compressive Strength	(psi) 110
Undrained Shear Strength:	(psi) 55	
Strain Rate:	in/min 0.0650	
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-6 - 6% Cement - Sample 1 @ 0 - 3.5 feet  
 SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

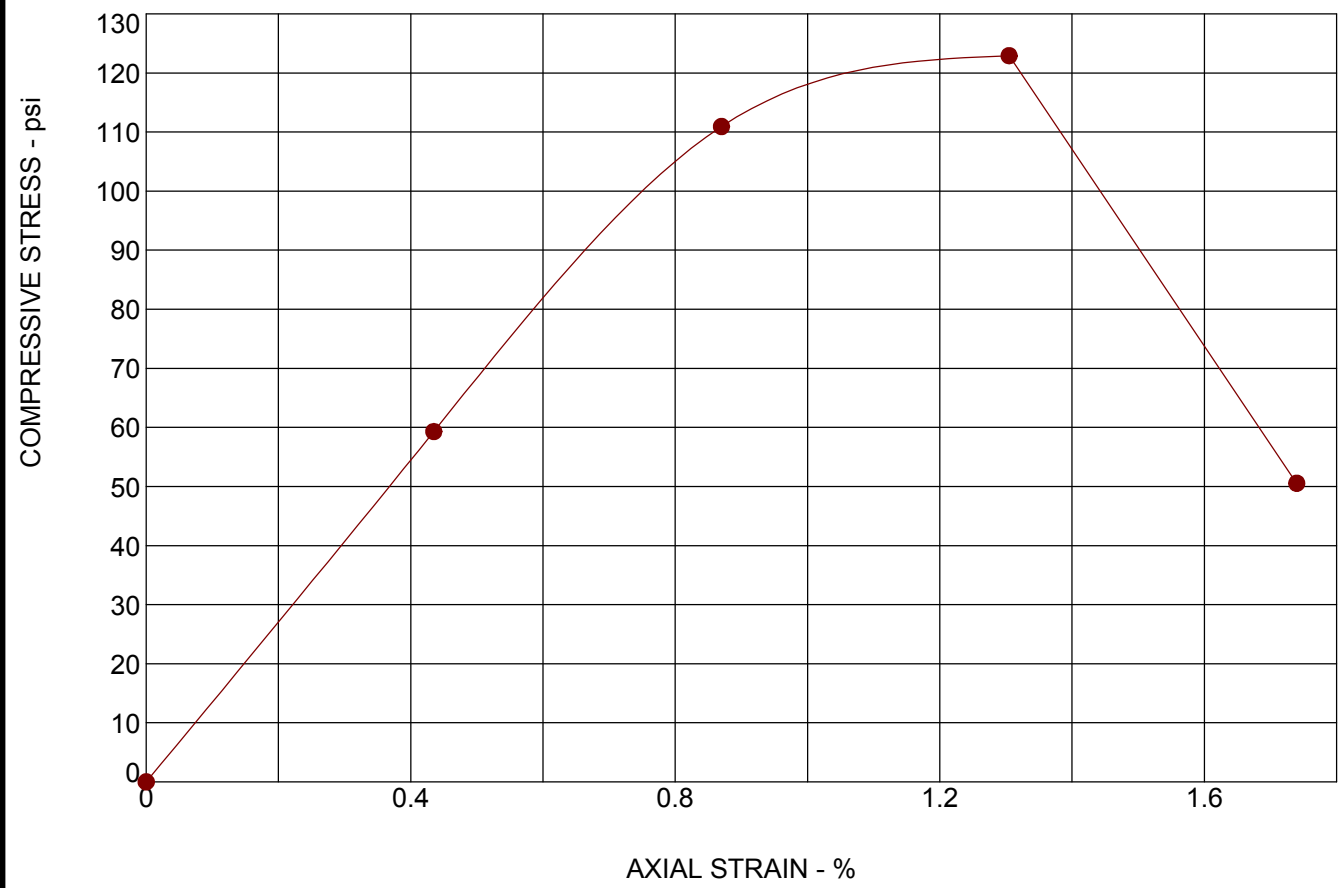
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PROJECT NUMBER: 70185313  
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 Raleigh, North Carolina  
 EXHIBIT: B-1

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	117
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	123
Undrained Shear Strength:	(psi)	61
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-6 - 6% Cement - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina

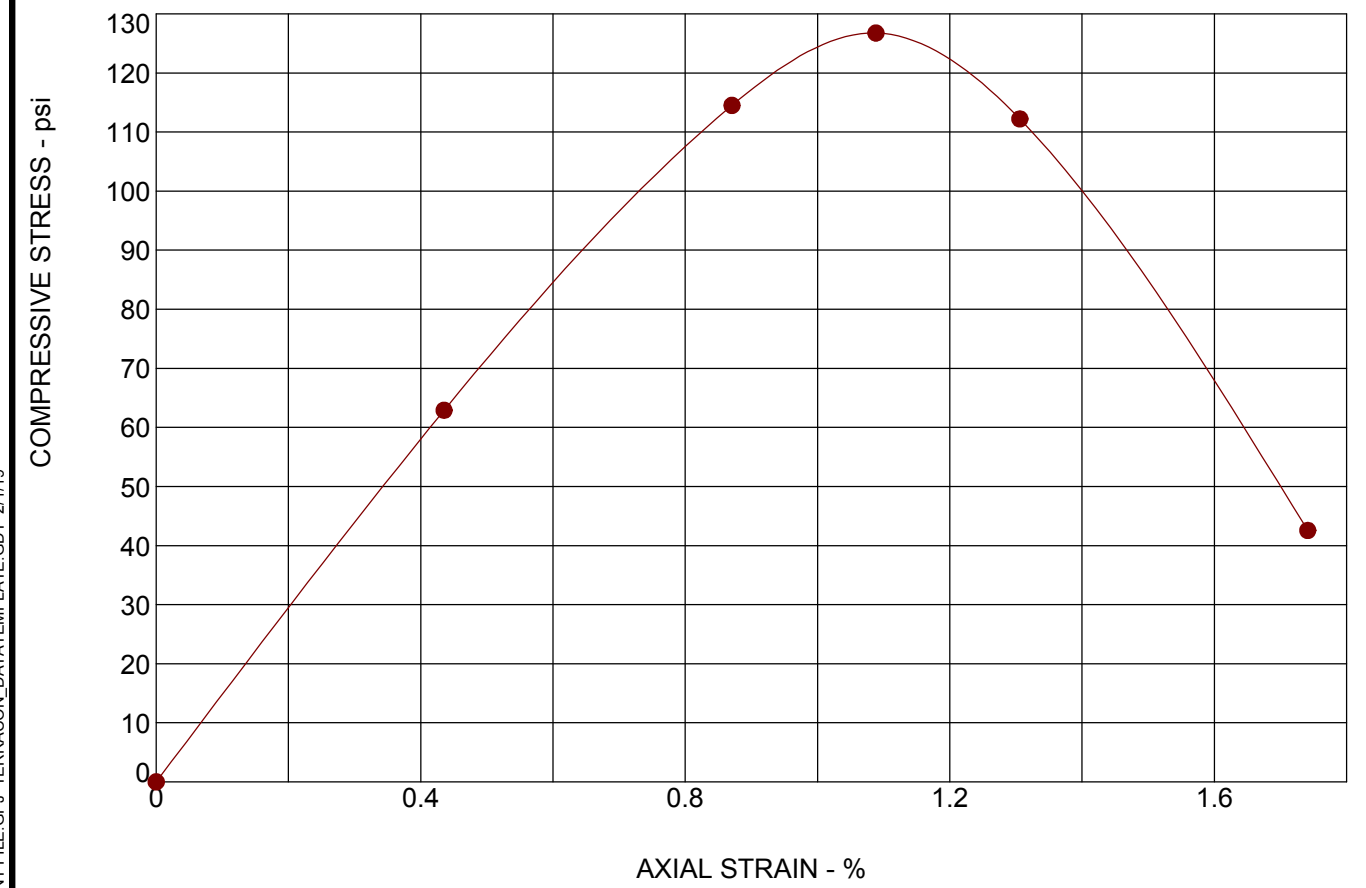


CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

EXHIBIT: B-2

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	117
Diameter:	in.	4.02
Height:	in.	4.59
Height / Diameter Ratio:		1.14
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.09
Unconfined Compressive Strength	(psi)	127
Undrained Shear Strength:	(psi)	63
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample

SAMPLE LOCATION: S-6 - 8% Cement - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:

LL	PL	PI	Percent < #200 Sieve
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PROJECT: I3306A - I40 - D8 PDI

PROJECT NUMBER: 70185313

SITE: I-40  
Hillsborough, North Carolina



CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina

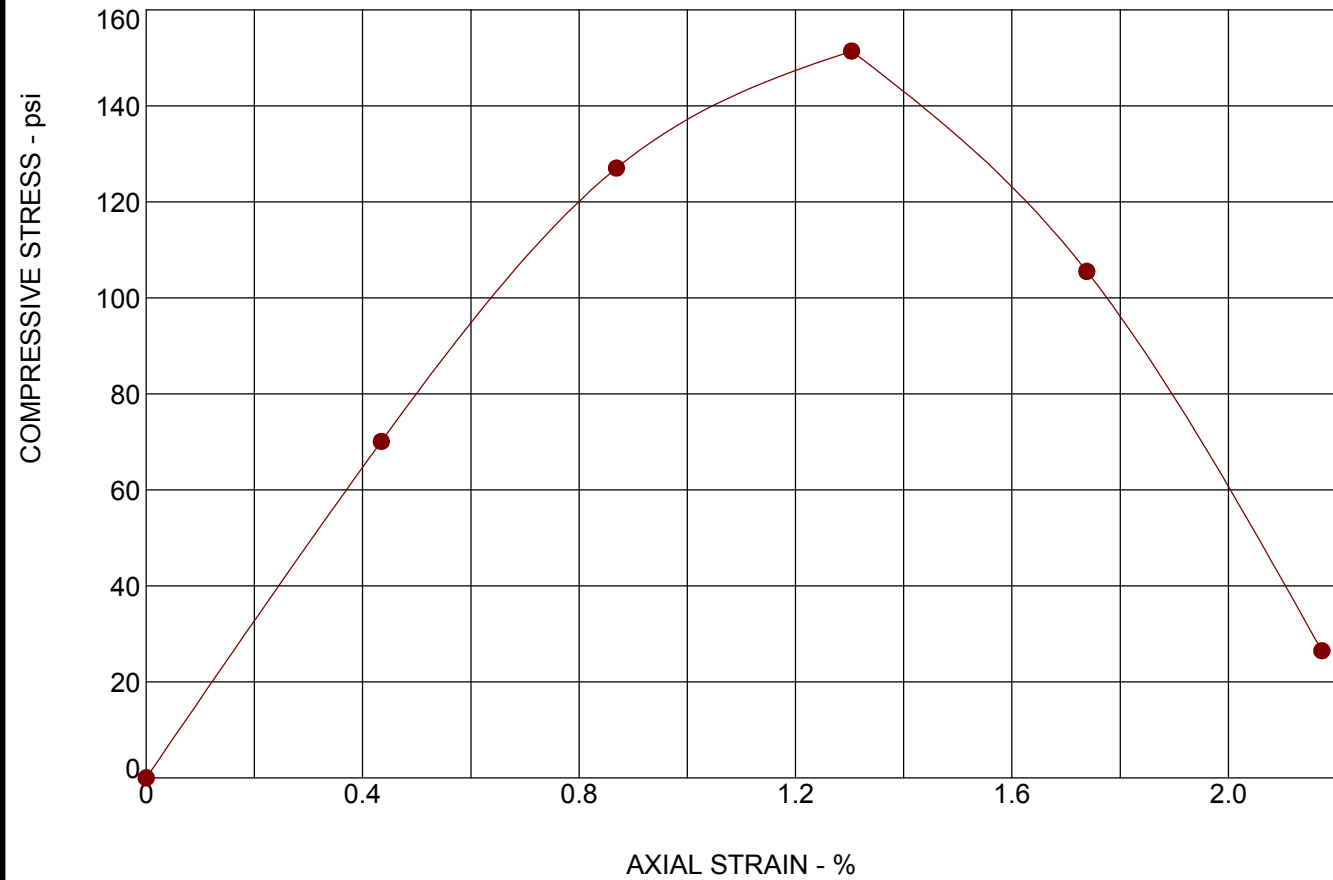
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# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	118
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	151
Undrained Shear Strength:	(psi)	76
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-6 - 8% Cement - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

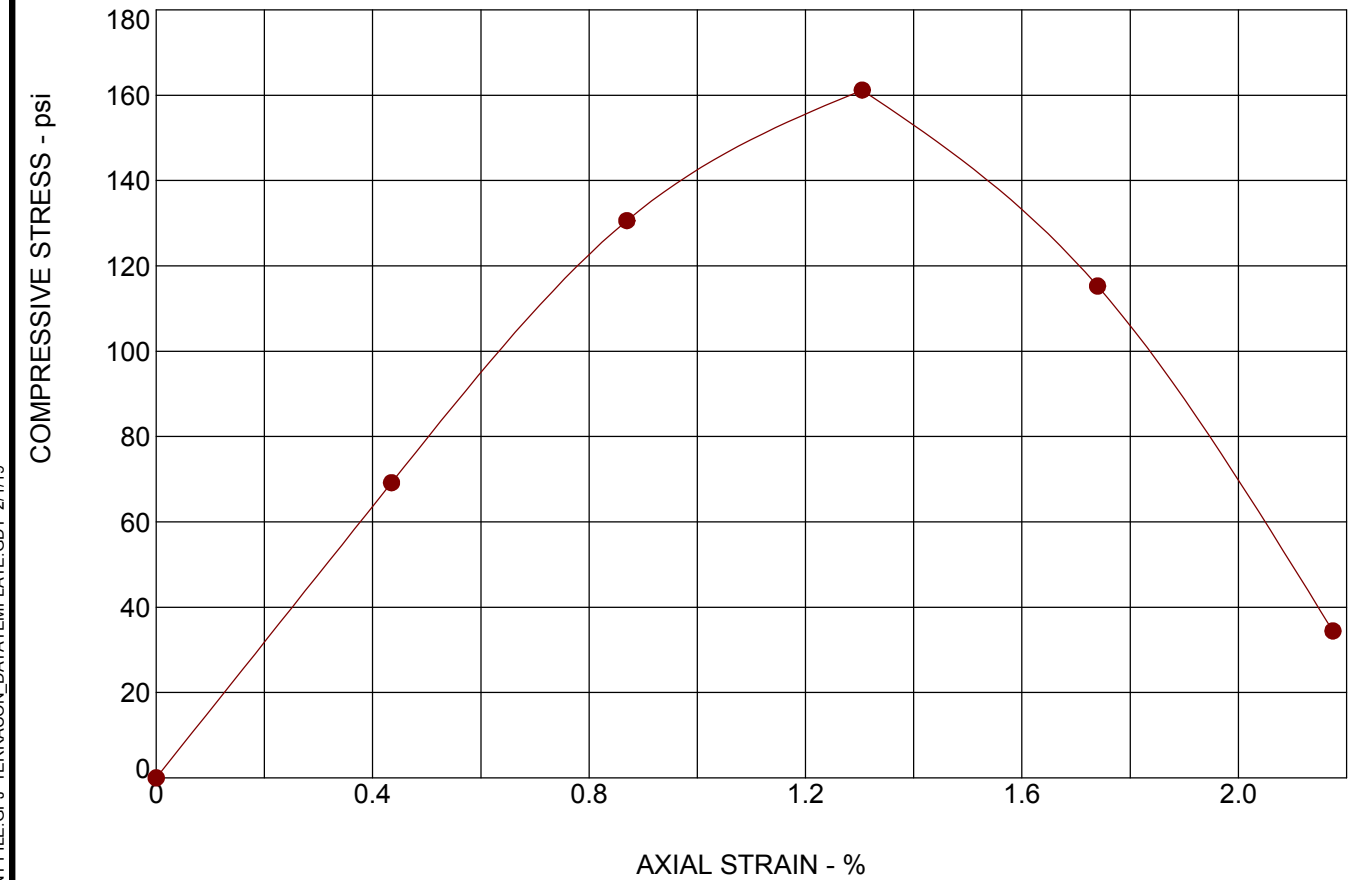
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-4

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	117
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.30
Unconfined Compressive Strength	(psi)	161
Undrained Shear Strength:	(psi)	81
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-6 - 10% Cement - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-5

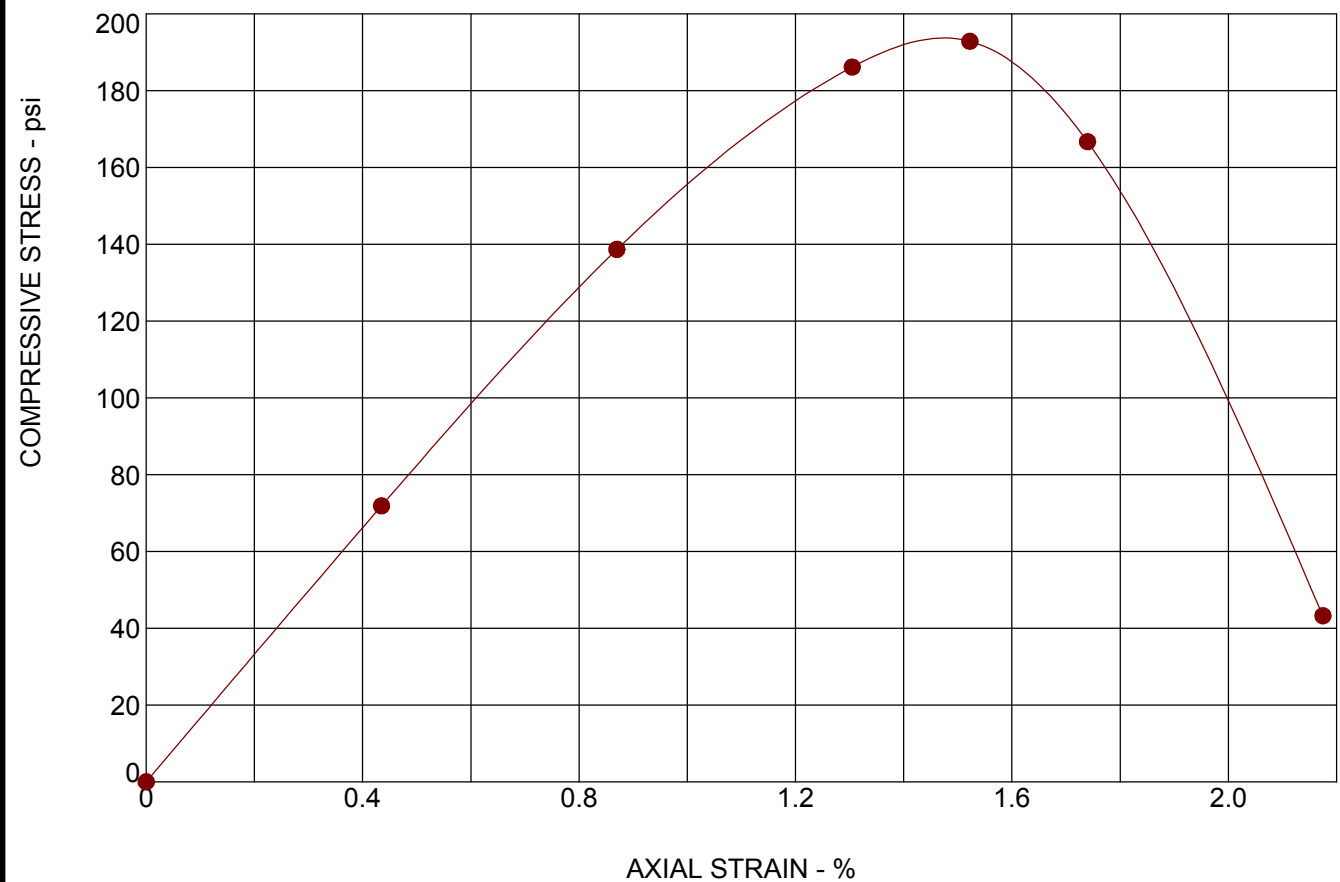
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19



# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	118
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.52
Unconfined Compressive Strength	(psi)	193
Undrained Shear Strength:	(psi)	96
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-6 - 10% Cement - Sample 2 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

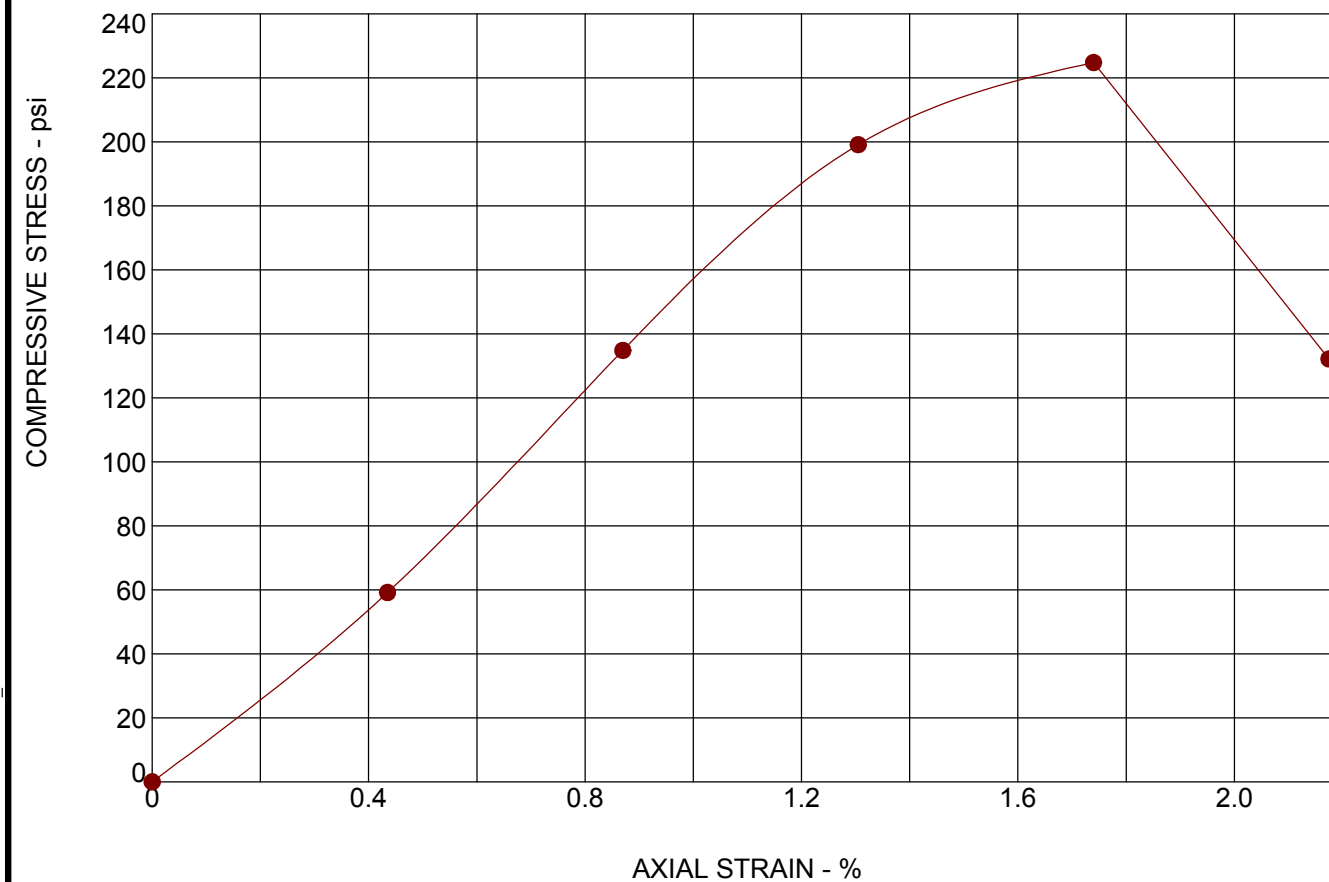
SITE: I-40  
Hillsborough, North Carolina



PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-6

# UNCONFINED COMPRESSION TEST

ASTM D2166



### SPECIMEN FAILURE PHOTOGRAPH



### SPECIMEN TEST DATA

Moisture Content:	%	15
Dry Density:	pcf	118
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.14
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.74
Unconfined Compressive Strength	(psi)	225
Undrained Shear Strength:	(psi)	112
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample      SAMPLE LOCATION: S-6 - 12% Cement - Sample 1 @ 0 - 3.5 feet

SAMPLE DESCRIPTION:      LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI

SITE: I-40  
Hillsborough, North Carolina

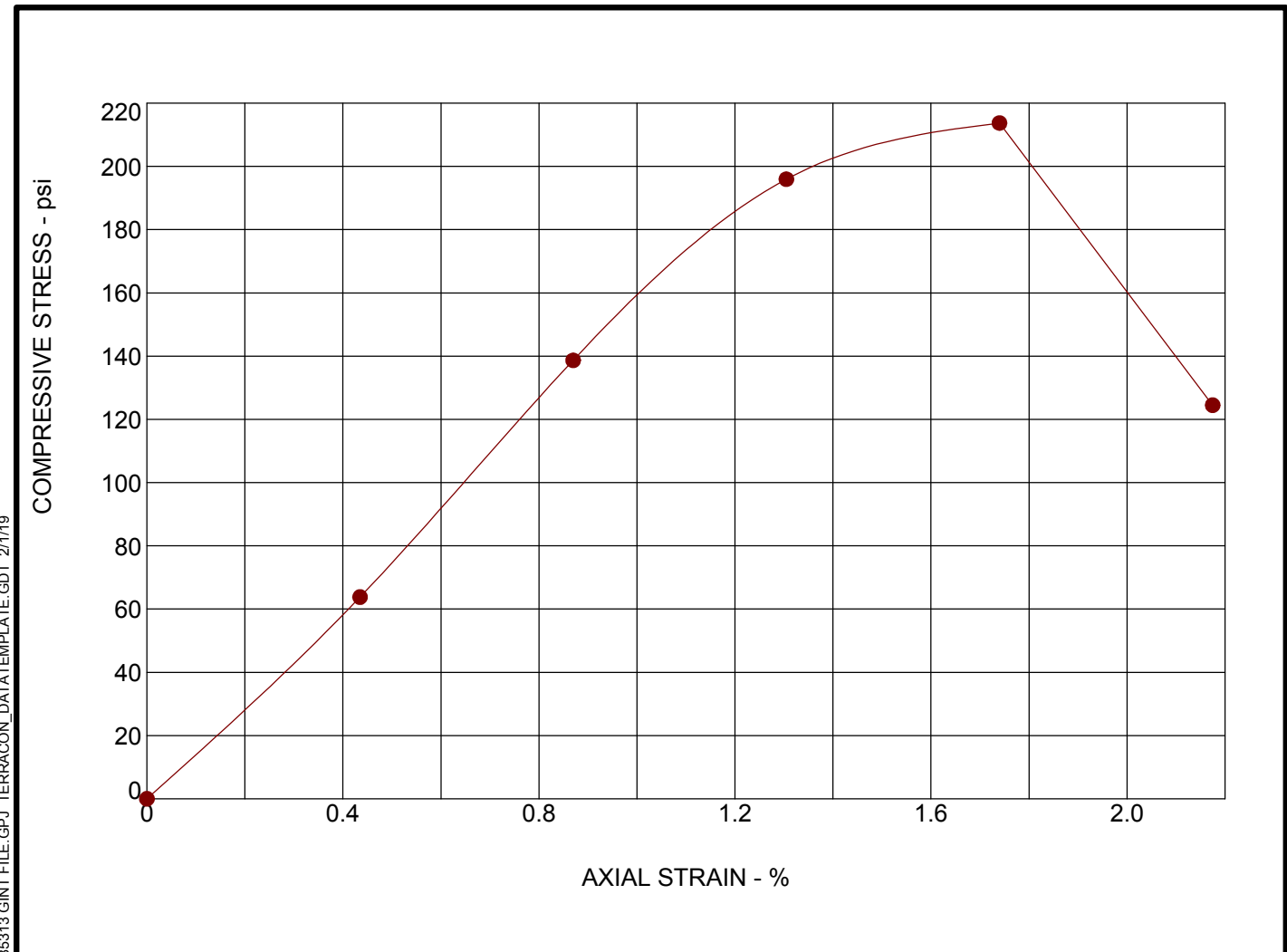


PROJECT NUMBER: 70185313  
CLIENT: NCDOT - Geotechnical Engineering Unit  
Raleigh, North Carolina  
EXHIBIT: B-7

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LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

ASTM D2166



LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. UNCONFINED WITH PHOTOS 70185313 GINT FILE.GPJ TERRACON\_DATATEMPLATE.GDT 2/1/19

**SPECIMEN FAILURE PHOTOGRAPH**



**SPECIMEN TEST DATA**

Moisture Content:	%	15
Dry Density:	pcf	118
Diameter:	in.	4.02
Height:	in.	4.60
Height / Diameter Ratio:		1.15
Calculated Saturation:	%	
Calculated Void Ratio:		
Assumed Specific Gravity:		
Failure Strain:	%	1.74
Unconfined Compressive Strength	(psi)	214
Undrained Shear Strength:	(psi)	107
Strain Rate:	in/min	0.0650
Remarks:		

SAMPLE TYPE: Remolded Sample	SAMPLE LOCATION: S-6 - 12% Cement - Sample 2 @ 0 - 3.5 feet
SAMPLE DESCRIPTION:	LL      PL      PI      Percent < #200 Sieve

PROJECT: I3306A - I40 - D8 PDI		PROJECT NUMBER: 70185313
SITE: I-40 Hillsborough, North Carolina		CLIENT: NCDOT - Geotechnical Engineering Unit Raleigh, North Carolina
		EXHIBIT: B-8