

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

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

| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | R-2000AF | 1 | 44 |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 34365.1.30 | NHF-0540(13) | PE | |
| 34365.2.31 | NHF-0540(13) | ROW & UTIL. | |
| 34365.3.ST1 | STM-0540(15) | CONST. | |

CONTENTS

| LINE | STATION | PLAN | XSECT |
|--------|----------------|-------|-------------|
| -L- | 12+50 to 34+00 | 4,5 | |
| -L- | 34+00 to 47+00 | 5,6 | 12-19 |
| -L- | 47+00 to 52+50 | 6 | |
| -L- | 52+50 to 54+00 | 6 | 20,21 |
| -L- | 54+00 to 57+02 | 6,7 | |
| -YI- | 42+08 to 42+50 | 9 | |
| -YI- | 42+50 to 44+00 | 9,10 | 22 |
| -YI- | 44+00 to 46+00 | 10 | |
| -YI- | 46+00 to 59+00 | 10,11 | 23-28 |
| -YI- | 59+00 to 60+00 | 11 | |
| -CD- | 10+00 to 14+00 | 9 | 29-31 |
| -CD- | 14+00 to 17+00 | 9 | |
| -CD- | 17+00 to 30+50 | 8,9 | 32-41 |
| -CD- | 30+50 to 31+43 | 8 | |
| -RP2B- | 10+00 to 24+50 | 7,8 | |
| -RP2B- | 24+50 to 30+62 | 6,7 | 20,21,42-44 |
| -RP2B- | 30+62 to 32+24 | 6 | |
| -LP1B- | 10+00 to 15+38 | 4 | |

ROADWAY
SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 34365.1.30 (R-2000AF) F.A. PROJ. NHF-0540(13)
COUNTY WAKE & DURHAM
PROJECT DESCRIPTION NORTHERN WAKE FREEWAY INTERCHANGE IMPROVEMENTS AT I-540 AND I-40

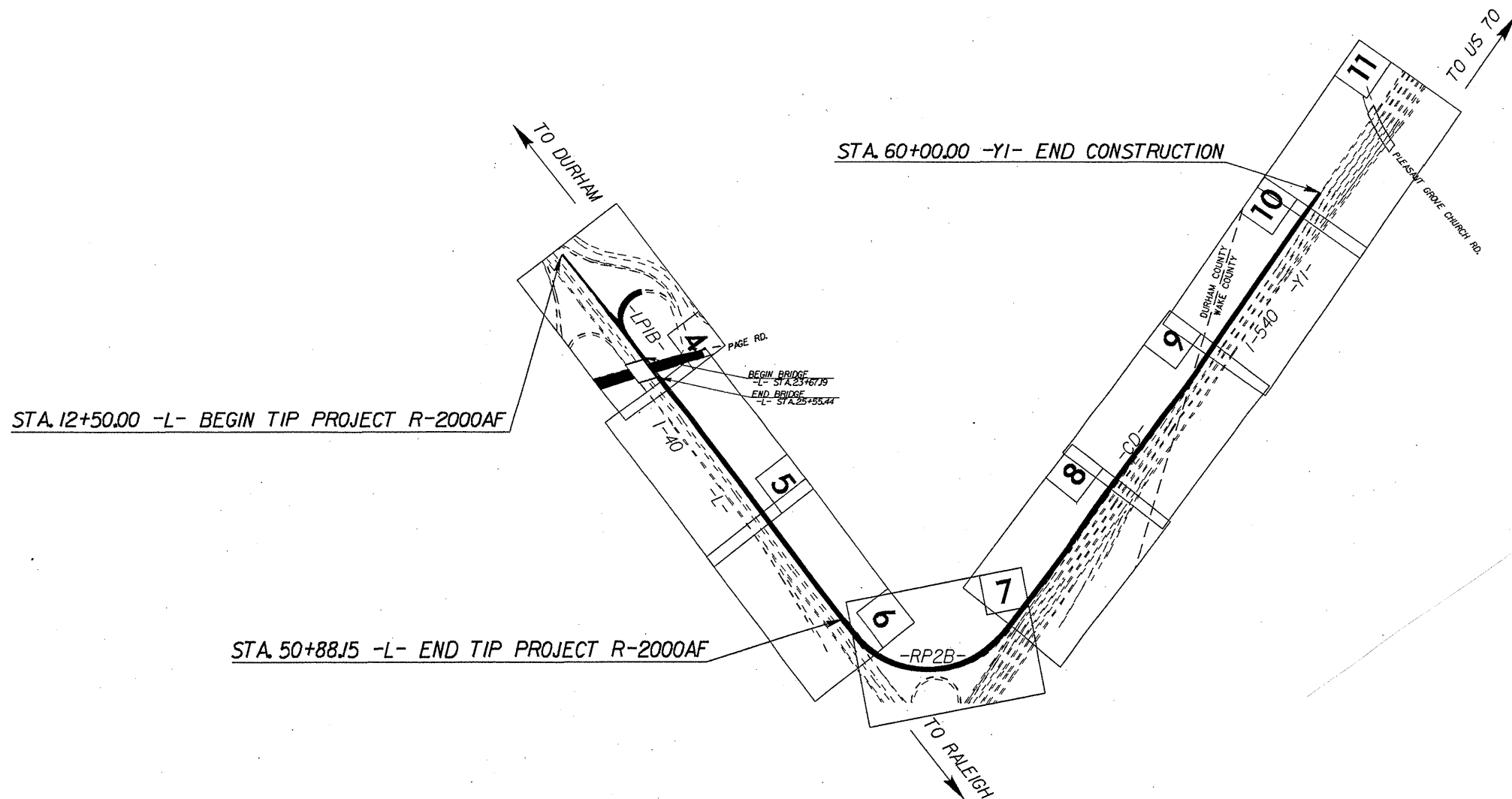
INVENTORY

CAUTION NOTICE
THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

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

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN PLANS 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 THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

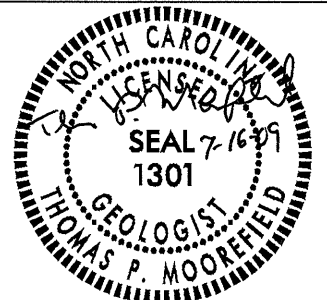
CONTRACT: C202277 ID: R-2000AF



NAD 83/NSRS 2007

- PERSONNEL
- J.I. MILKOVITS, JR.
 - N.D. MOHS
 - C.D. CZJAKA
 - H.R. CONLEY
 - J.R. MATULA
 - T.P. MOOREFIELD

INVESTIGATED BY T.P. MOOREFIELD
CHECKED BY N.T. ROBERSON
SUBMITTED BY N.T. ROBERSON
DATE JULY 2009



DRAWN BY: T.T. WALKER, T.P. MOOREFIELD

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

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

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Main content table with columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION, PLASTICITY, COLOR.

| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | R-2000AF | 2A | 44 |
| STATE PROJ. NO. | P.A. PROJ. NO. | DESCRIPTION | |
| 34365.1.30 | NHF-0540(13) | PE | |
| 34365.2.31 | NHF-0540(13) | ROW & UTIL. | |

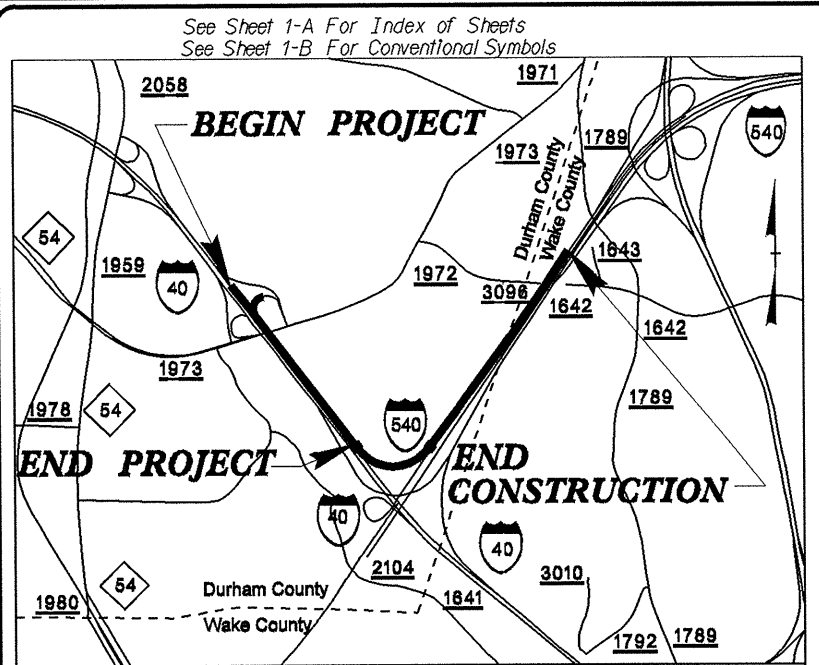
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE & DURHAM COUNTIES

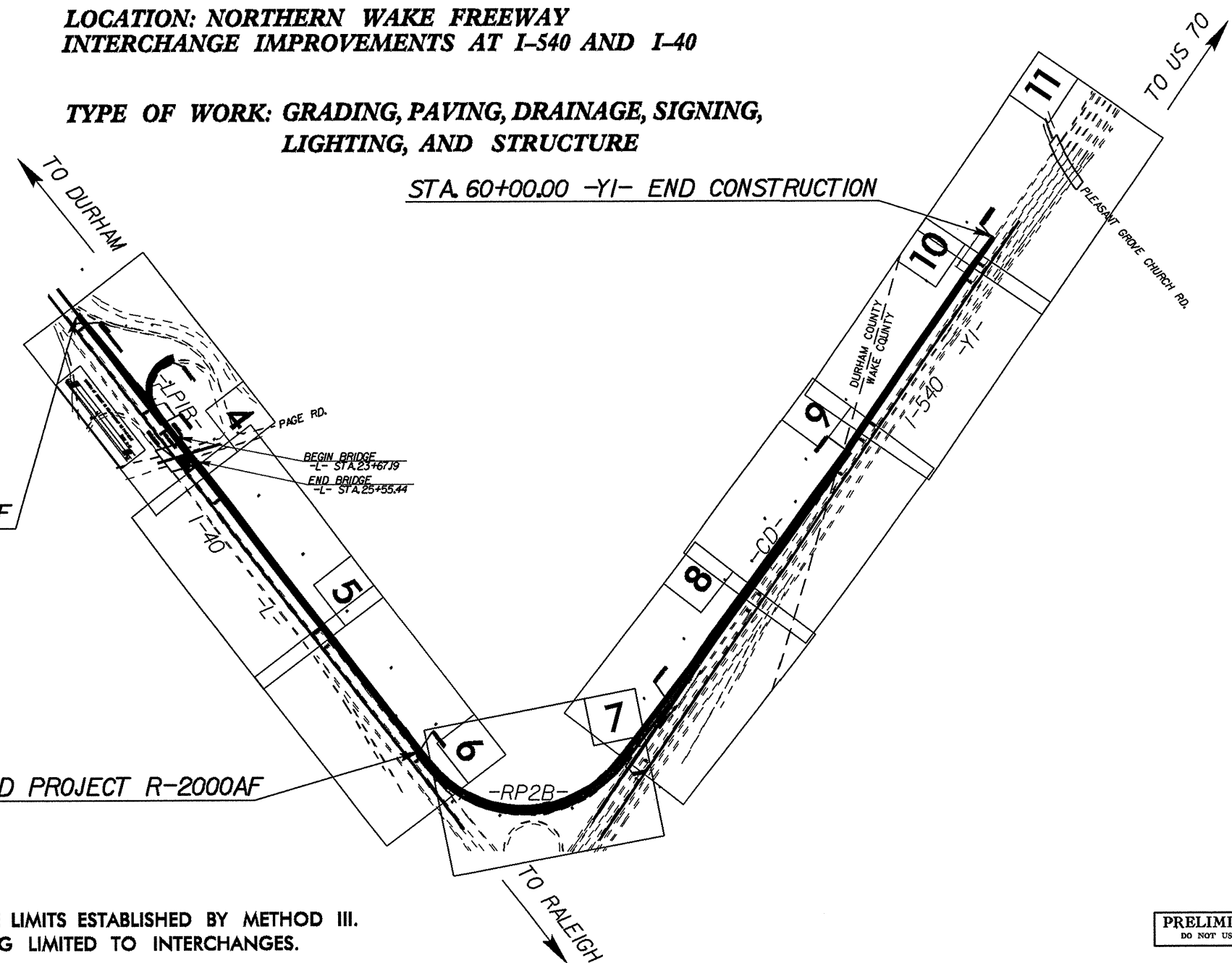
LOCATION: NORTHERN WAKE FREEWAY
INTERCHANGE IMPROVEMENTS AT I-540 AND I-40

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING,
LIGHTING, AND STRUCTURE

STA. 60+00.00 -YI- END CONSTRUCTION



VICINITY MAP



STA. 12+50.00 -L- BEGIN TIP PROJECT R-2000AF

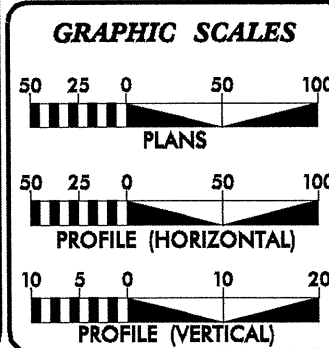
STA. 51+07.56 -L- END PROJECT R-2000AF

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: R-2000AF

CONTRACT: C202277



DESIGN DATA

| | | |
|-------------------------|---|---------|
| ADT 2010 | = | 172,900 |
| ADT 2030 | = | 190,200 |
| DHV | = | 11 % |
| D | = | 60 % |
| T | = | 12 % * |
| V | = | 70 MPH |
| * (TTST 6% + DUAL 6%) | | |
| FUNC CLASS - INTERSTATE | | |

PROJECT LENGTH

| | | |
|--|---|-------------|
| LENGTH ROADWAY STATE PROJECT R-2000AF | = | 1.860 MILES |
| LENGTH STRUCTURES STATE PROJECT R-2000AF | = | 0.035 MILES |
| TOTAL LENGTH STATE PROJECT R-2000AF | = | 1.895 MILES |

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

| | |
|--------------------------------------|---|
| 2006 STANDARD SPECIFICATIONS | |
| RIGHT OF WAY DATE: MARCH 20, 2009 | BRENDA MOORE, P.E. PROJECT ENGINEER |
| LETTING DATE: JANUARY 19, 2010 | THAD F. DUNCAN, P.E. PROJECT DESIGN ENGINEER |

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER P.E.

NAD 83/NSRS 2007



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

Beverly Eaves Perdue
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

Eugene A. Conti
SECRETARY

July 16, 2009

STATE PROJECT: 34365.1.30 (R-2000AF)
FEDERAL PROJECT: NHF-0540(13)
COUNTIES: Wake and Durham
DESCRIPTION: Northern Wake Freeway Interchange Improvements at I-540 and I-40
SUBJECT: Geotechnical Report – Inventory

Project Description

This project consists of adding a lane to the existing collector (-CD-) and on-ramp (-RPB2-) from southbound I-540 (-Y1-) to the I-40 (-L-) and Page Rd. interchange. The project includes adding an additional outside lane to the I-40 bridge over Page Rd. and improvements to the exit (-LP1B-) to Page Rd. The entire project is within existing NCDOT right-of-way.

The geotechnical field investigation was conducted during October 2008 and June 2009. An ATV-mounted CME-550 drill machine was used during the 2008 field investigation, with Standard Penetration Tests performed in each boring. The cut slopes on -RP2B- were investigated with rod soundings and hand augers after the alignment was revised in April 2009. Representative soil samples were collected for visual classification in the field and submitted for laboratory analysis by NCDOT's Materials and Tests Unit. The field investigation focused on the slope cuts required for the widening. Selected borings from the pavement investigation have been utilized in this report.

The following alignments, totaling 1.2 miles, were investigated. Subsurface soil cross-sections of these alignments are included in this report:

| <u>Line</u> | <u>Station</u> |
|-------------|----------------|
| -L- | 34+00 to 54+00 |
| -Y1- | 42+08 to 60+00 |
| -CD- | 10+00 to 31+43 |
| -RP2B- | 24+50 to 30+62 |

Areas of Special Geotechnical Interest

- 1) **Highly Plastic Clay Soils**: A single occurrence of highly plastic clay soil (Plasticity Index greater than 25) is noted below:

| <u>Alignment</u> | <u>Station</u> | <u>Offset</u> |
|------------------|----------------|---------------|
| -Y1- | 54+00 | 145 LT |

Discussion of these highly plastic clay soils is located in the section titled "Soil Properties".

- 2) **Non-crystalline Rock**: The non-crystalline rock on this project includes Triassic sandstone and siltstone and was encountered in the following borings:

| <u>Alignment</u> | <u>Station</u> | <u>Offset</u> |
|------------------|----------------|---------------|
| -L- | 34+00 | 105 LT |
| -L- | 36+00 | 110 LT |
| -L- | 38+00 | 120 LT |
| -L- | 39+00 | 175 LT |
| -L- | 39+50 | 112 LT |
| -L- | 39+50 | 117 LT |
| -L- | 40+00 | 172 LT |
| -L- | 41+00 | 105 LT |
| -L- | 42+00 | 105 LT |
| -L- | 42+00 | 110 LT |
| -L- | 42+15 | 180 LT |
| -L- | 43+00 | 170 LT |
| -L- | 45+00 | 180 LT |
| -L- | 46+00 | 155 LT |
| -Y1- | 52+00 | 145 LT |
| -Y1- | 56+00 | 125 LT |
| -CD- | 10+00 | 75 RT |
| -CD- | 12+00 | 60 RT |
| -CD- | 18+00 | 70 RT |
| -CD- | 20+00 | 95 RT |
| -CD- | 22+00 | 95 RT |
| -CD- | 24+00 | 90 RT |
| -CD- | 26+00 | 80 RT |

Excavation of non-crystalline rock may require blasting (for further details see the discussion of Rock Properties below).

- 3) **Degradable Rock**: Degradable rock is defined as rock material (including both weathered rock and non-crystalline rock) which exhibits high slaking characteristics when exposed to air and water (see discussion of Rock Properties below for further explanation). Degradable rock was encountered in the following areas:

| <u>Line</u> | <u>Station</u> |
|-------------|----------------|
| -L- | 39+90 to 45+60 |
| -Y1- | 42+08 to 43+55 |
| -Y1- | 50+45 to 52+70 |
| -CD- | 10+00 to 13+20 |
| -CD- | 17+75 to 27+70 |
| -CD- | 28+30 to 28+80 |
| -RP2B- | 24+70 to 30+10 |

- 4) **Slope Failure:** An inactive slope failure is present in the cut slope left of -L- Sta. 45+00 to 46+00. The failure is contained within the upper half of the slope and has not affected the adjacent roadway shoulder. A discussion of the failure follows below.

Physiography and Geology

The project is located in the central Piedmont area of North Carolina. The terrain at the top of the existing cut slopes appears to have been graded back to the right-of-way fence. Small to medium-sized pine trees and small hardwood trees occur at the top of the slopes. Grass, weeds, and briars grow on the cut slopes as well. The existing cut slopes on -CD- and -Y1- have scattered areas of unvegetated soil and weathered rock. A lake is present at the base of the existing embankment right of -RP2B- Sta. 14+00 to 18+00. Rip rap slope protection is present at the base of this 40 to 45-foot high embankment.

The project is located within the Durham sub-basin of the Deep River Triassic Basin. Soils are derived from the weathering of the underlying bedrock composed of Triassic age sedimentary rocks, which include interbedded sandstone and siltstone.

Soil Properties

Soils encountered at the project site include roadway embankment soils and Triassic residual soils.

Roadway embankment soil shown on this project includes the existing fill areas, and the soil that has been placed beneath the existing travel lanes and the adjacent paved, and unpaved, shoulder areas. The existing embankments, constructed in the early '90's, were not investigated. The roadway embankment soil beneath, and adjacent to, the existing pavement was investigated by the Geopavement Section. Samples from the pavement investigation indicate that these embankment soils consist of brown, moist, stiff to hard, sandy silt and sandy clay (AASHTO classifications of A-4 and A-6).

The Triassic residual soils are derived from the in-place weathering of the underlying Triassic siltstone and sandstone bedrock. Red-brown, stiff to very stiff, sandy silt (A-4) is the most common residual soil in the project area. Stiff to hard, sandy clay (A-6) and silty clay (A-7-5 and A-7-6), and minor amounts of red-brown, medium dense, silty sand (A-2-4) are also present. A twelve-foot thick zone of Triassic residual, highly plastic clay was encountered in the slope cut at -Y1- Sta. 54+00/145 LT. Plasticity indices ranged from 45 to 50. This zone of highly plastic clay is interpreted to be 245 feet in length along the proposed cut section.

Rock Properties

Weathered rock in the Triassic Basin is derived from the underlying Triassic non-crystalline siltstone and sandstone. The weathered rock in the slope cuts is primarily weathered Triassic siltstone. Previous construction experience, as well as slake testing of similar weathered rock samples from nearby projects, has demonstrated that these weathered siltstones are moderately to highly degradable when exposed to water and air.

The weathered rock on the project is underlain by Triassic non-crystalline rock, primarily indurated siltstone and minor amounts of sandstone. These non-crystalline rocks, which are often interbedded with degradable, weathered siltstone and shale layers, are considered to be degradable as well.

The degradable rock areas, noted above in the "Areas of Special Geotechnical Interest" include both weathered rock and non-crystalline rock.

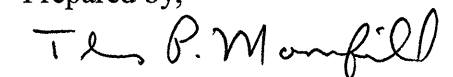
Slope Failure

An inactive slope failure is present in the cut slope left of approximately -L- Sta. 45+00 to 46+00. The failure is contained within the upper half of the slope. A four-foot deep trench has developed along a scarp near the top of the slope. Vertical displacement of the ground surface across the trench is approximately two feet down slope. The trench is two to three feet in width. The toe of the failure is approximately 3 feet left of the ditch line and 23 feet from the paved shoulder. The existing slopes in this part of the cut are 2:1 (H:V). The cross-sections through the failure are not detailed enough to represent the failure. The failure will be removed during the construction of the proposed 3:1 (H:V) cut slopes.

Groundwater

Groundwater was not encountered during the investigation of this project. The investigation was conducted during a period of exceptional drought. Based on the investigation, groundwater is not anticipated to cause problems during construction.

Prepared by,



Thomas P. Moorefield
Project Geological Engineer

EARTHWORK BALANCE SHEET

Volumes in Cubic Yards

PROJECT TIP # R-2000AF

COUNTY Wake

DATE 10/9/2009

33/44
SHEET 1 OF 1 SHEET

| LINE | STATION | STATION | TOTAL EXCAV. (UNCL.) | ROCK EXCAV. | UNDERCUT EXCAV. | UNSUIT. EXCAV. | SUITABLE EXCAV. | TOTAL EMB. | ROCK EMB. | EARTH EMB. | EMBANK. 20% | BORROW | ROCK WASTE | SUITABLE WASTE | UNSUIT. WASTE | TOTAL WASTE |
|---|----------|----------|----------------------|-------------|-----------------|----------------|-----------------|------------|-----------|------------|-------------|--------|------------|----------------|---------------|-------------|
| L | 12+50 | 23+56.26 | 1,338 | | | | 1,338 | 208 | | 208 | 250 | | | 1,088 | | 1,088 |
| L | 25+56.37 | 54+00 | 14,218 | | 72 | 1,451 | 12,767 | 2,446 | | 2,446 | 2,935 | | | 9,832 | 1,523 | 11,355 |
| LP1B | 12+50 | 15+36 | 463 | | | | 463 | | | | | | | 463 | | 463 |
| RP2B | 10+00 | 29+00 | 6,064 | | 1,288 | 1,195 | 4,869 | 5,432 | | 5,432 | 6,518 | 1,649 | | | 2,483 | 2,483 |
| CD | 10+00 | 30+50 | 16,262 | 2,600 | | 5,518 | 8,144 | 990 | | 990 | 1,188 | | 2,600 | 6,956 | 5,518 | 15,074 |
| Y1 | 42+08 | 60+00 | 8,827 | | 764 | 1,810 | 7,017 | 79 | | 79 | 95 | | | 6,922 | 2,574 | 9,496 |
| PROJECT SUBTOTAL | | | 47,172 | 2,600 | 2,124 | 9,974 | 34,598 | 9,155 | | 9,155 | 10,986 | 1,649 | 2,600 | 25,261 | 12,098 | 39,959 |
| WASTE IN LIEU OF BORROW | | | | | | | | | | | | -1,649 | | -1,649 | | -1,649 |
| LOSS DUE TO CLEARING & GRUBBING | | | -3,825 | | | | -3,825 | | | | | | | -3,825 | | -3,825 |
| PROJECT TOTAL | | | 43,347 | 2,600 | 2,124 | 9,974 | 30,773 | 9,155 | | 9,155 | 10,986 | | 2,600 | 19,787 | 12,098 | 34,485 |
| AJUST. TO ROCK WASTE | | | | | | | | | | | | | 520 | | | 520 |
| GRAND TOTAL | | | 43,347 | | 2,124 | | | | | | | | 3,120 | 19,787 | 12,098 | 35,005 |
| SAY | | | 43,500 | | | | | | | | | | | | | |
| SHOULDER BORROW = 8,600 CY | | | | | | | | | | | | | | | | |
| CLASS IV SUBGRADE STABILIZATION = 5,900 TONS | | | | | | | | | | | | | | | | |
| EST. SELECT GRANULAR MATERIAL AS PER GEOTECHNICAL UNIT = 500 CY | | | | | | | | | | | | | | | | |
| DRAINAGE DITCH EXCAVATION = 370 CY | | | | | | | | | | | | | | | | |
| PAVEMENT STRUCTURE VOLUME -L- = 4,900 CY | | | | | | | | | | | | | | | | |
| PAVEMENT STRUCTURE VOLUME -RP2B- = 3,300 CY | | | | | | | | | | | | | | | | |
| PAVEMENT STRUCTURE VOLUME -CD- = 2,400 CY | | | | | | | | | | | | | | | | |
| PAVEMENT STRUCTURE VOLUME -Y1- = 2,100 CY | | | | | | | | | | | | | | | | |

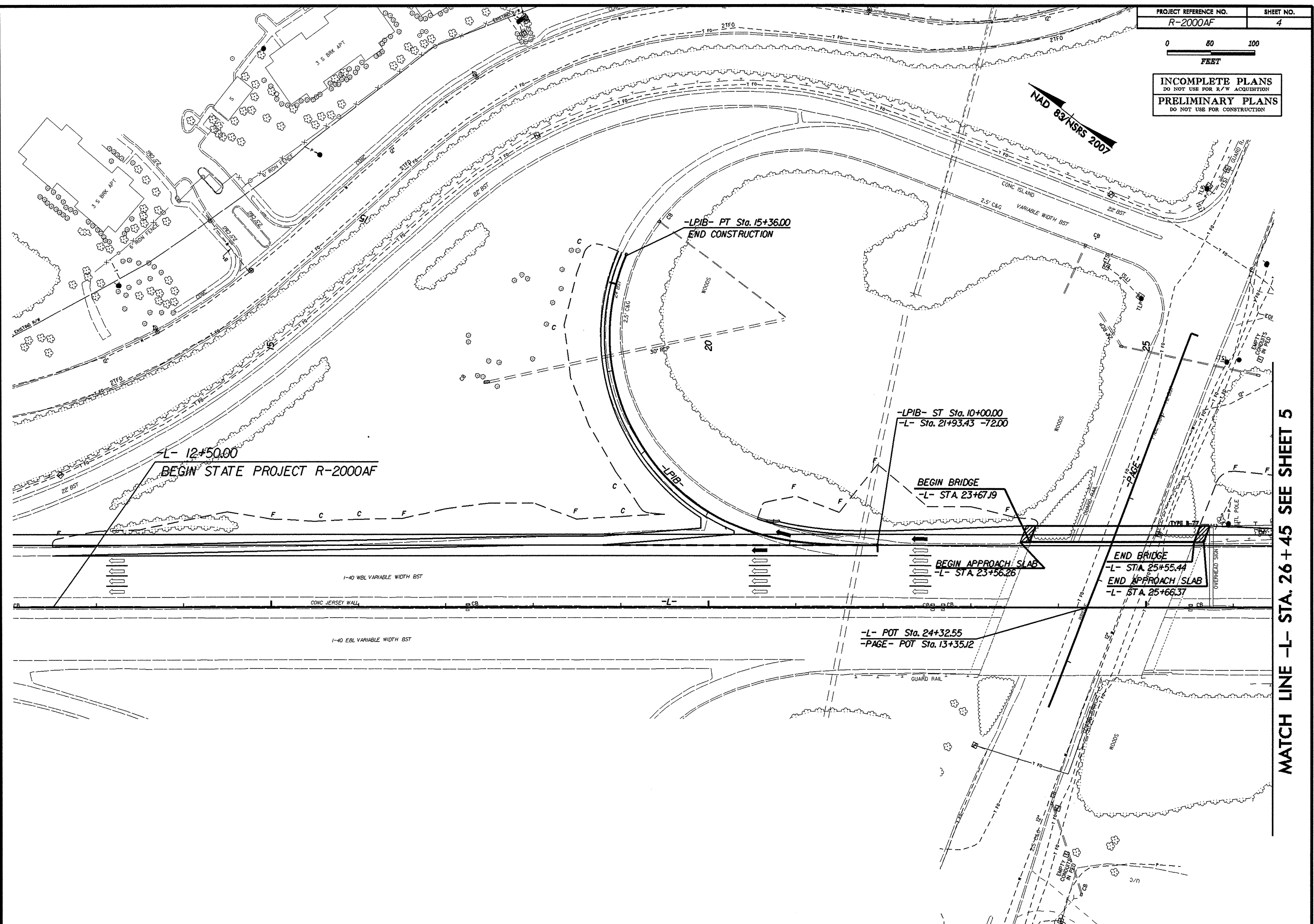
* EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

5/14/99



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007



MATCH LINE -L- STA. 26 + 45 SEE SHEET 5

165-MUL-2009 12:45
 V:\2000AF_GEO_Plan\ACADD_GEO\TECHN\Plan\2000af_geo_inv004_004.dgn
 AT 12:45:32

5/14/99

| | |
|-----------------------------------|----------------|
| PROJECT REFERENCE NO. R-2000AF | SHEET NO. 5 |
|-----------------------------------|----------------|

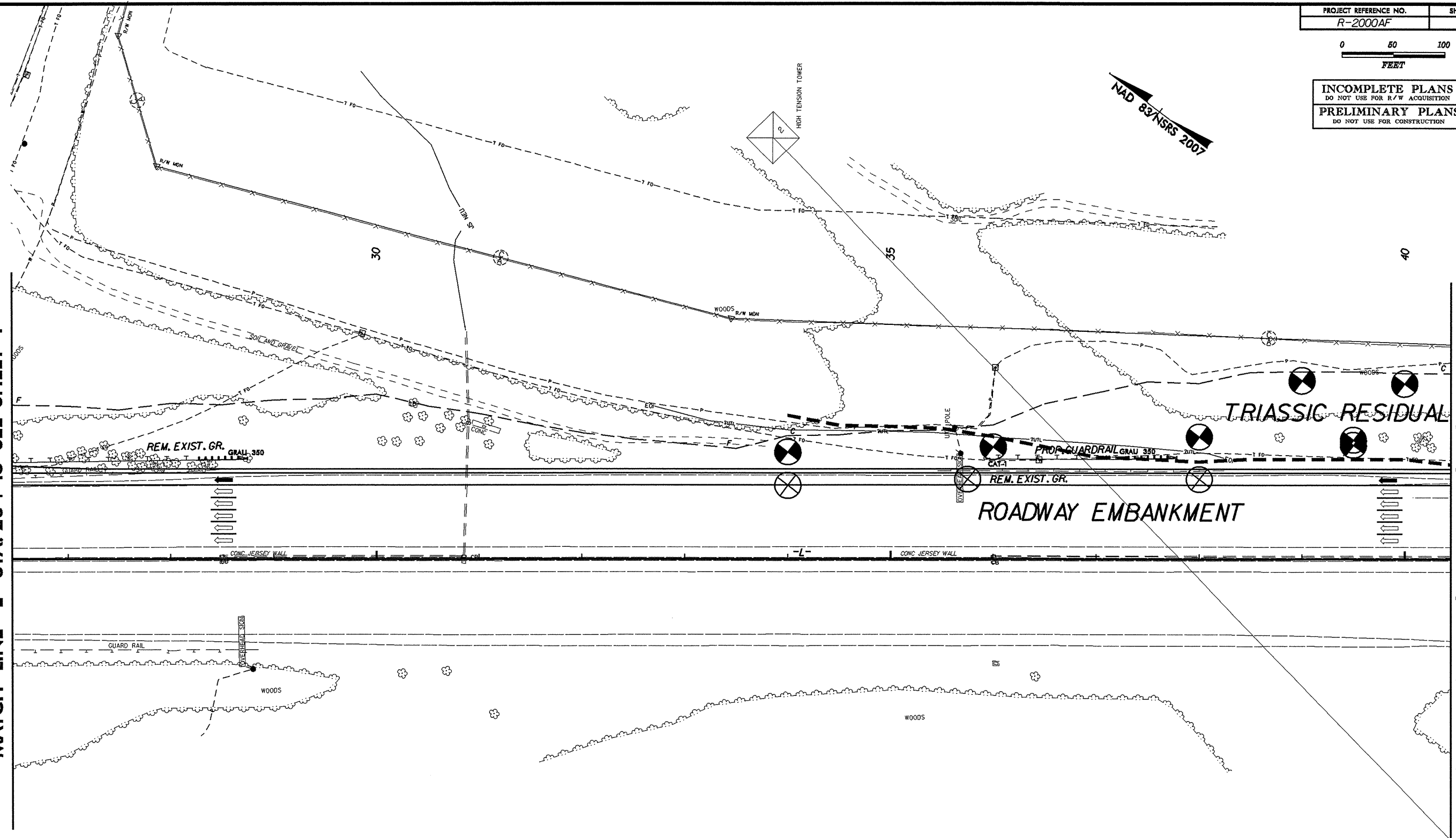


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83 NSRS 2007

MATCH LINE -L- STA. 26 + 45 SEE SHEET 4

MATCH LINE -L- STA. 40 + 45 SEE SHEET 6



I:\S-1111-2009 12:45
 R-2000AF_GEO_Plan\1-CADD_GEOTECH\PlanProf\1-2000af_geo.mv005_005.dgn
 11/12/09 11:24:32

5/14/99

| | |
|-----------------------------------|----------------|
| PROJECT REFERENCE NO. R-2000AF | SHEET NO. 6 |
|-----------------------------------|----------------|

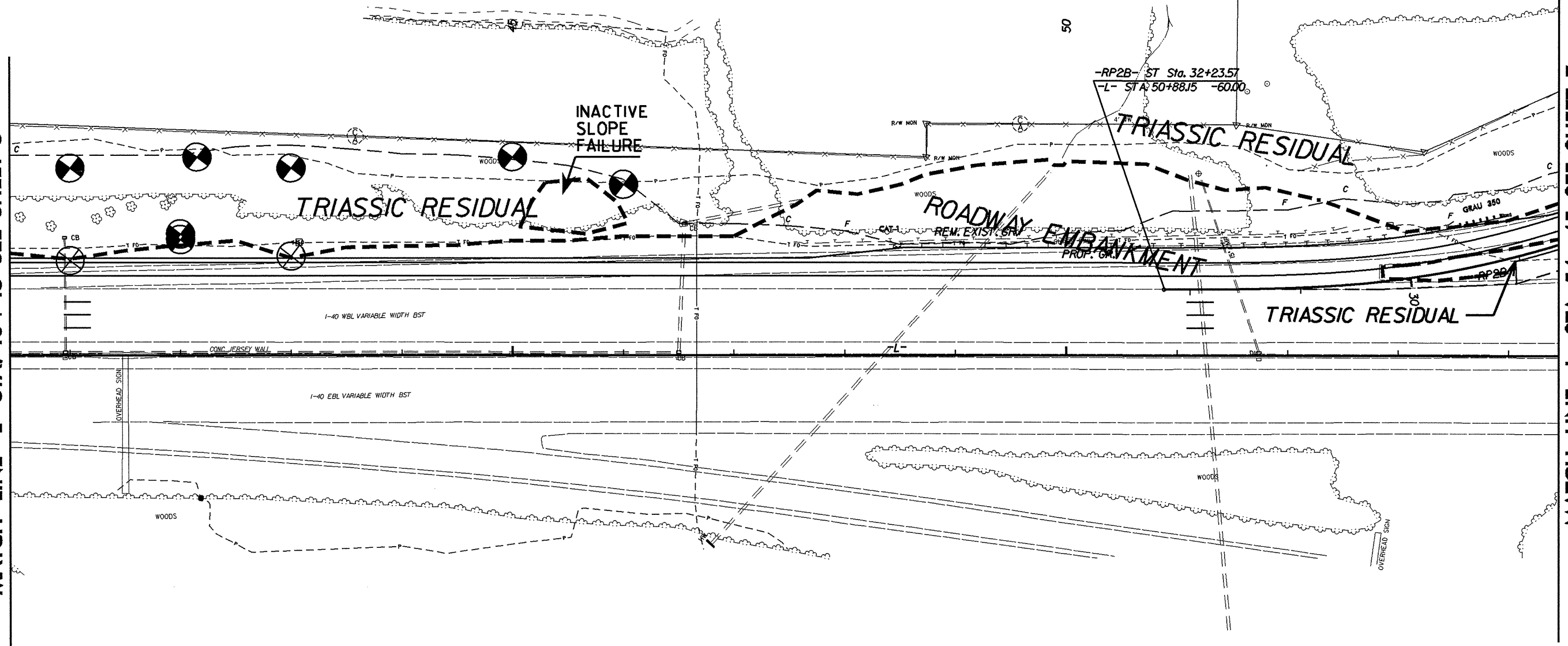


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

MATCH LINE -L- STA. 40 +45 SEE SHEET 5

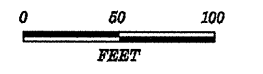
MATCH LINE -L- STA. 54 +45 SEE SHEET 7



22-JUL-2009 10:31
N:\2000af\geo\2000af\planprof\1-2000af_geo.rvt_006_006.dgn

5/14/99

| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| R-2000AF | 7 |



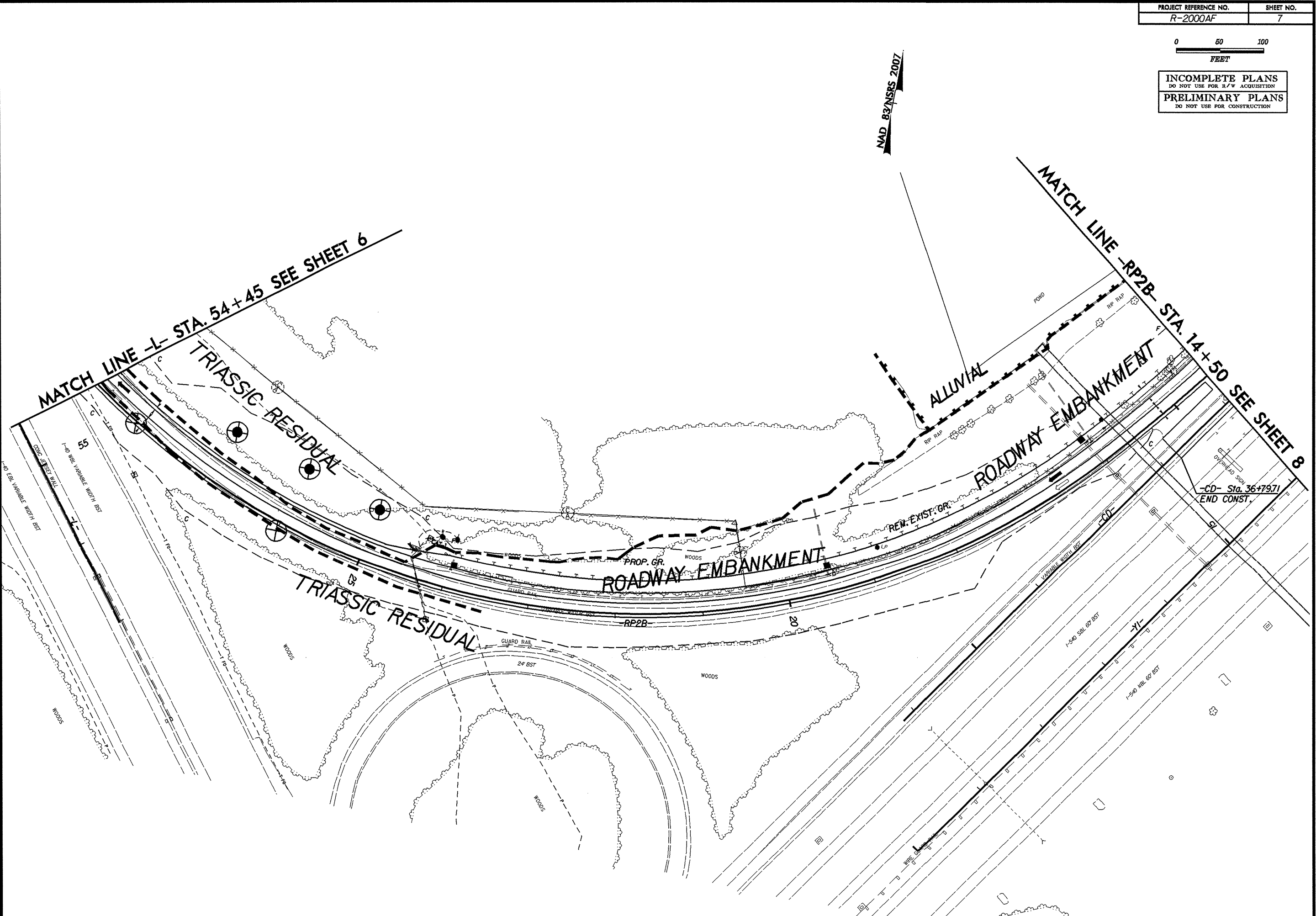
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83 NSRS 2007

MATCH LINE -L- STA. 54+45 SEE SHEET 6

MATCH LINE -RP2B- STA. 14+50 SEE SHEET 8



20-AUG-2009 14:25
P:\2000s\15000\15000.dwg
20-AUG-2009 14:25
P:\2000s\15000\15000.dwg

5/14/99

| | |
|-----------------------------------|----------------|
| PROJECT REFERENCE NO. R-2000AF | SHEET NO. 8 |
|-----------------------------------|----------------|

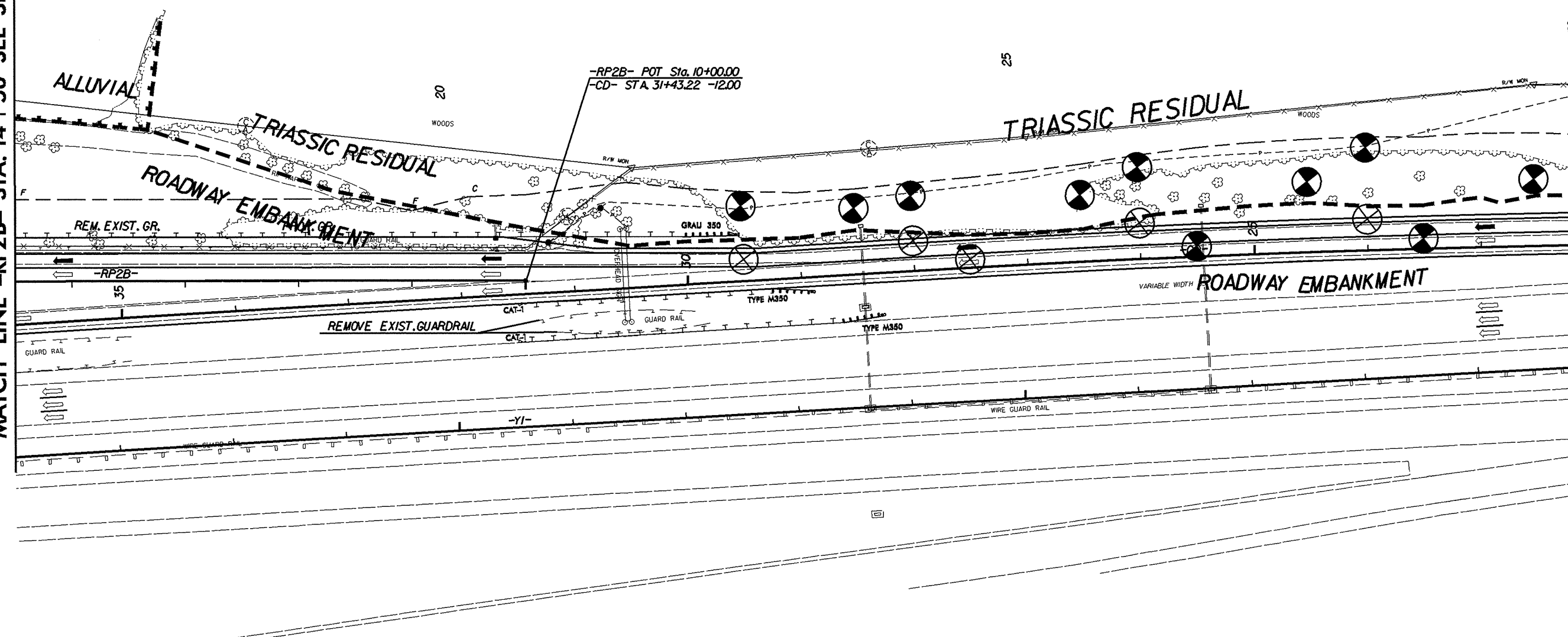


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/MSXS 2007

MATCH LINE -RP2B- STA. 14+50 SEE SHEET 7

MATCH LINE -CD- STA. 22+09 SEE SHEET 9



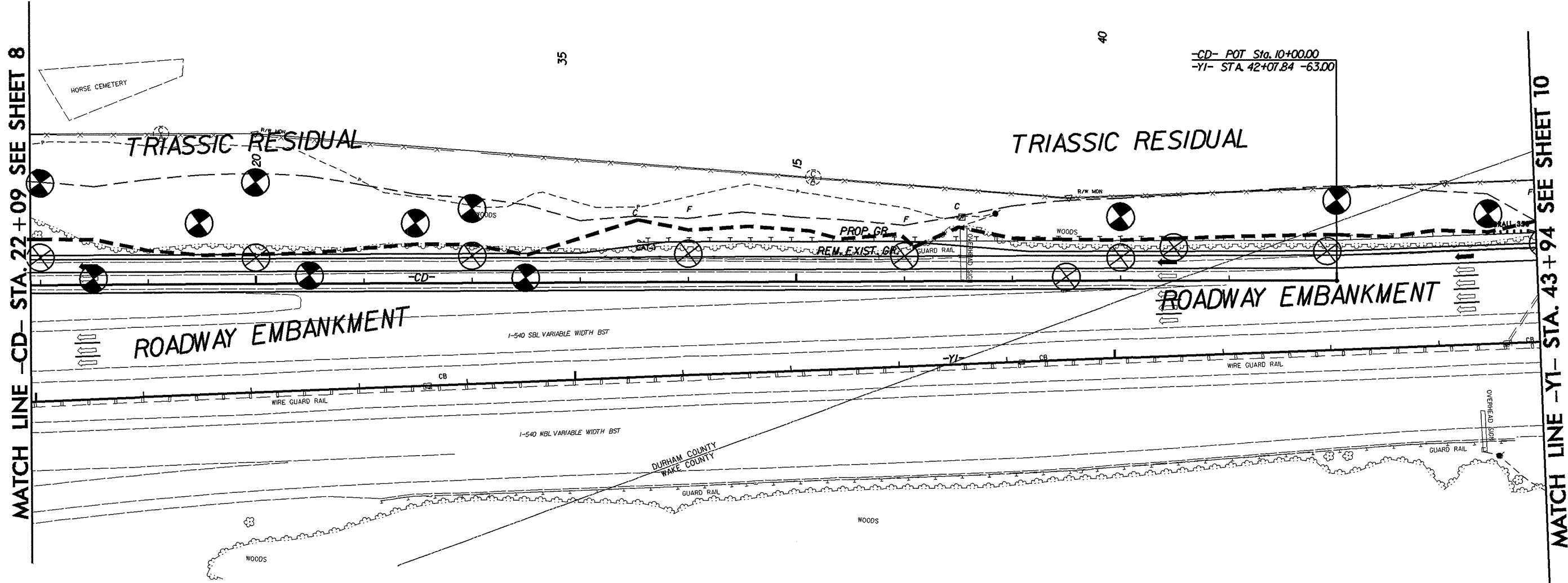
I:\6-111-2009\12-45
 162000AF_GEO_TOW
 \CADD\GEO\TECH\PlanProf\1-2000af_geo_inv008_008.dgn
 Date: 05/14/99

5/14/99



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/MSRS 2007



J:\2000AF\GEO\PROF\2000af\geo\inv009_009.dgn
16-JUL-2009 12:45
R-2000AF_GEO_PROF_2000af_009.dgn

5/14/99

| | |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| R-2000AF | 10 |



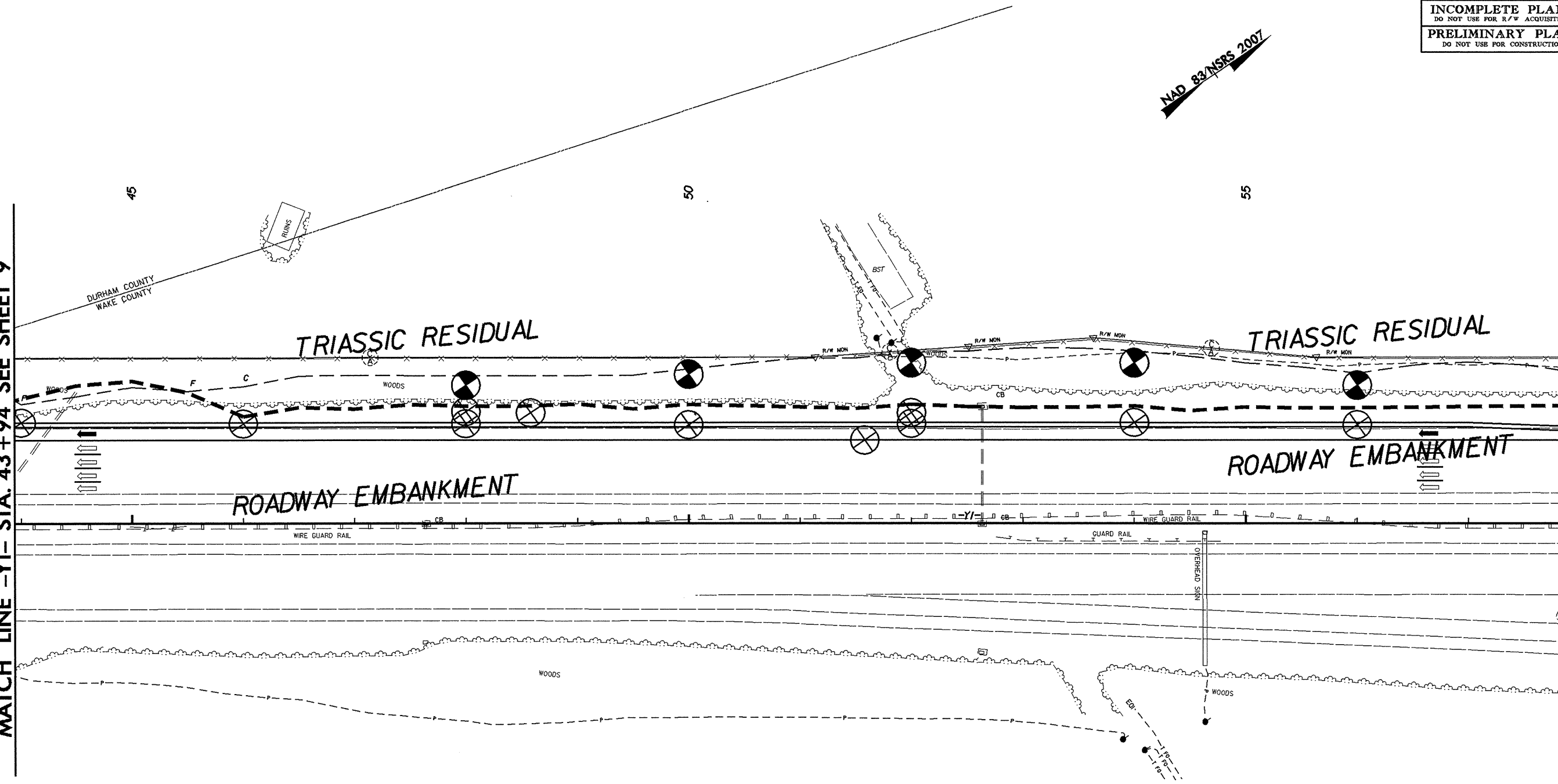
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

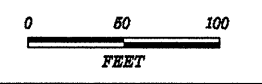
NAD 83/MSRS 2007

MATCH LINE -YI- STA. 43 + 94 SEE SHEET 9

MATCH LINE -YI- STA. 57 + 94 SEE SHEET 11



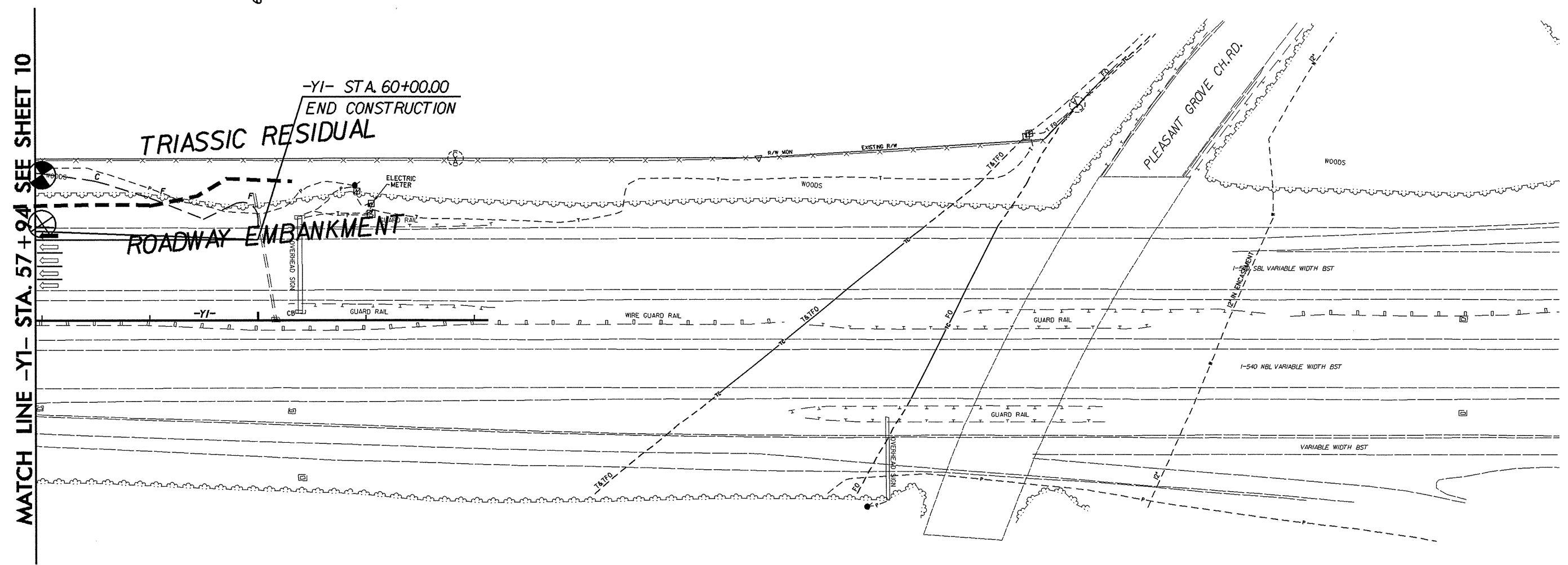
P:\R2000AF\GEO\501\1\1\CADD_GEO\TECHN\PlanPr\of\V-2000af-geo_rnv010_010.dgn
16-JUL-2009 12:45
User: BT



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/NSRS 2007

80



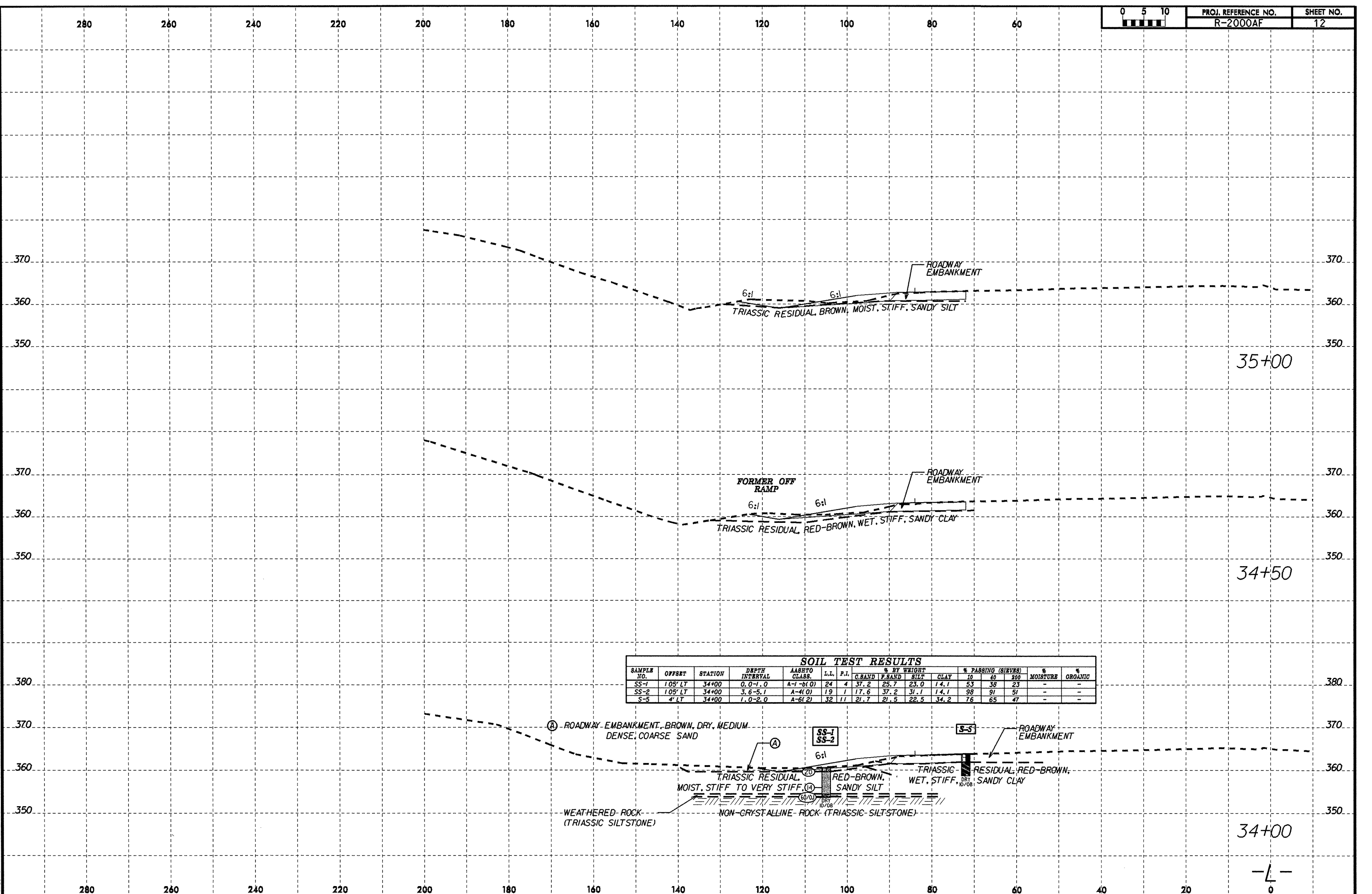
MATCH LINE -YI- STA. 57+94 SEE SHEET 10

5/14/99

IP:\R2000AF_GEO\RDW\CADD_GEO\TECH\Plan\Prof\1-2000af_geo_rnw\011_011.dgn
12:45
5/14/99

8/23/99
 I:\JUL-2009\1248
 L:\V\RO\Rel\af\GEJ21824
 T:\walker

280 260 240 220 200 180 160 140 120 100 80 60



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|----------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | G.BAND | F.BAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-1 | 1.05' LT | 34+00 | 0.0-1.0 | A-1-(0) | 24 | 4 | 37.2 | 25.7 | 23.0 | 14.1 | 53 | 38 | 23 | - | - |
| SS-2 | 1.05' LT | 34+00 | 3.6-5.1 | A-1(0) | 19 | 1 | 17.6 | 37.2 | 31.1 | 14.1 | 98 | 91 | 51 | - | - |
| S-5 | 4' LT | 34+00 | 1.0-2.0 | A-6(2) | 32 | 11 | 21.7 | 21.5 | 22.5 | 34.2 | 76 | 65 | 47 | - | - |

35+00

34+50

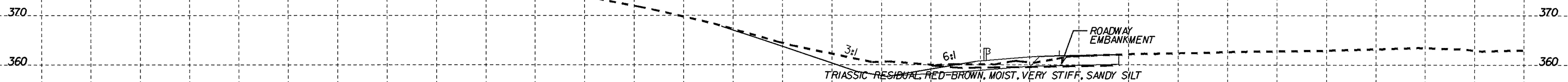
34+00

-L-

8/23/99

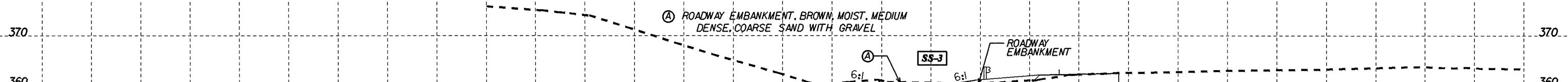
280 260 240 220 200 180 160 140 120 100 80 60

0 5 10
PROJ. REFERENCE NO. R-2000AF SHEET NO. 13



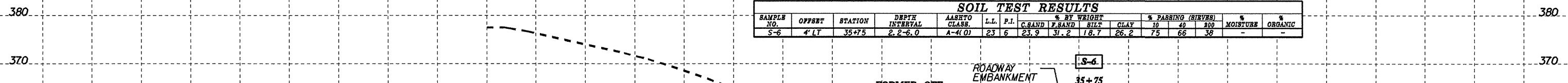
36+50

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|---------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-3 | 110' LT | 36+00 | 3.6-5.1 | A-4(0) | 21 | 5 | 22.6 | 33.7 | 27.5 | 16.2 | 99 | 89 | 49 | - | - |



36+00

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-6 | 4' LT | 35+75 | 2.2-6.0 | A-4(0) | 23 | 6 | 23.9 | 31.2 | 18.7 | 26.2 | 75 | 66 | 38 | - | - |



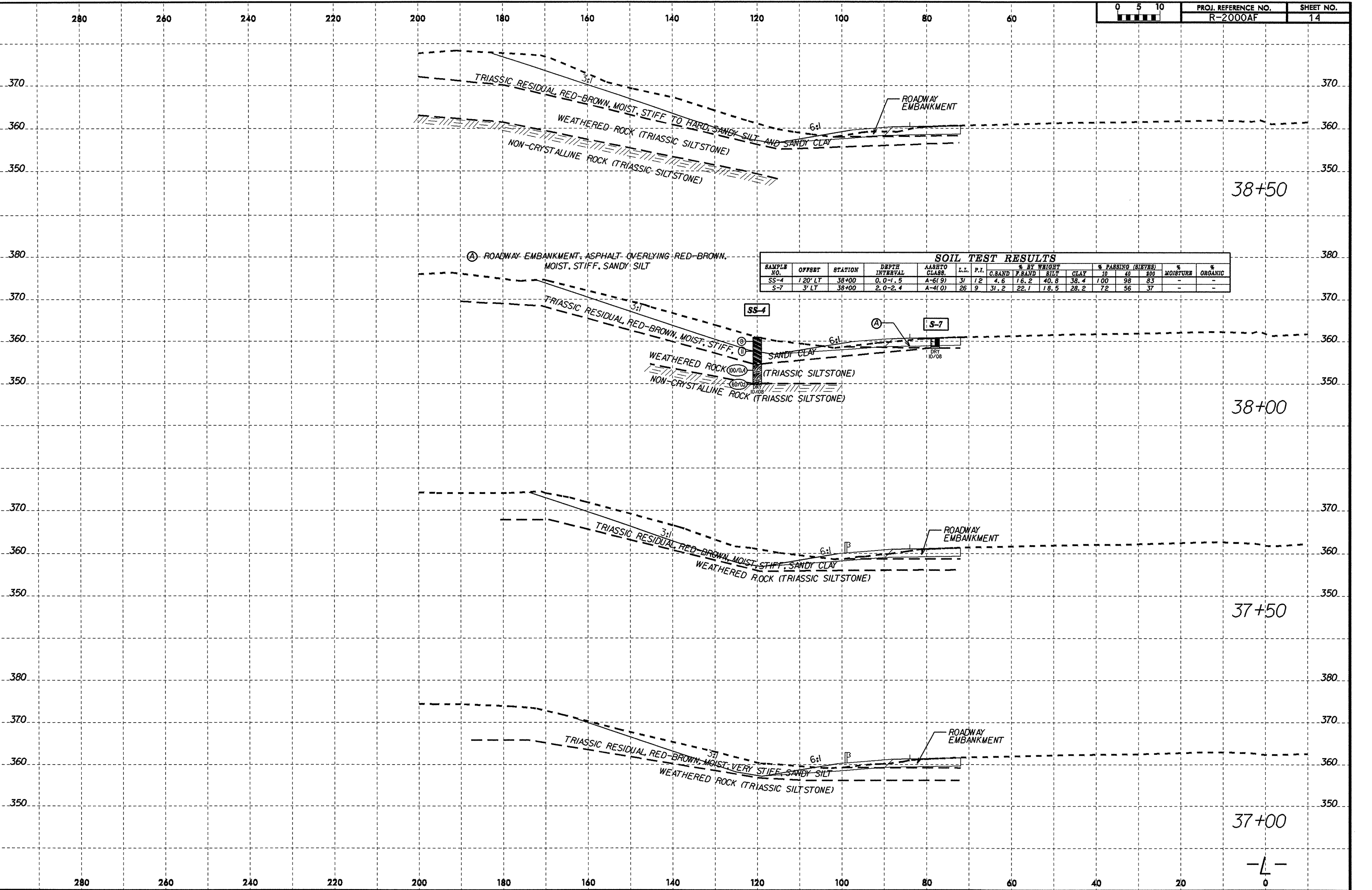
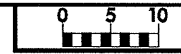
35+50

-L-

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

I:\JUL-2009\1248 L:\VEED\Relegh Af\GEO\248324.ttwlker

16-JUL-2009 12:48
 \\s:\projects\station\TIP\R2000AF_GEO_RDWY_CADD_GEO\TECH\asc\2000af_gco_xsl.dgn
 User: geotechnical



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|-----------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | G.SAND | F.SAND | SILT | CLAY | 10 | 40 | 80 | | |
| SS-4 | 1' 20" LT | 38+00 | 0.0-1.5 | A-6(9) | 31 | 12 | 4.6 | 16.2 | 40.8 | 38.4 | 100 | 98 | 83 | - | - |
| S-7 | 3' LT | 38+00 | 2.0-2.4 | A-4(0) | 26 | 9 | 31.2 | 22.1 | 18.5 | 28.2 | 72 | 56 | 37 | - | - |

38+50

38+00

37+50

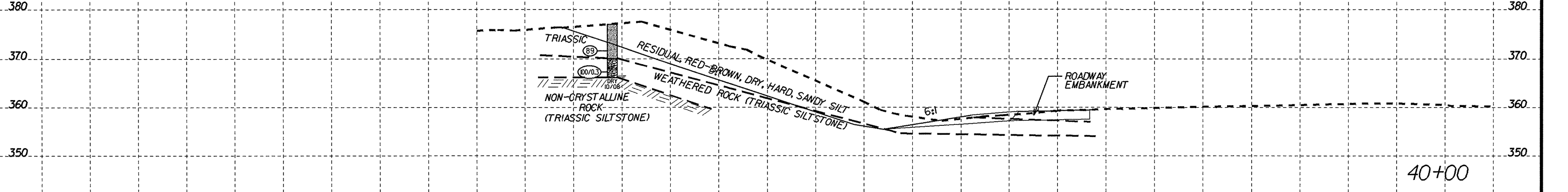
37+00

-L-

280 260 240 220 200 180 160 140 120 100 80 60

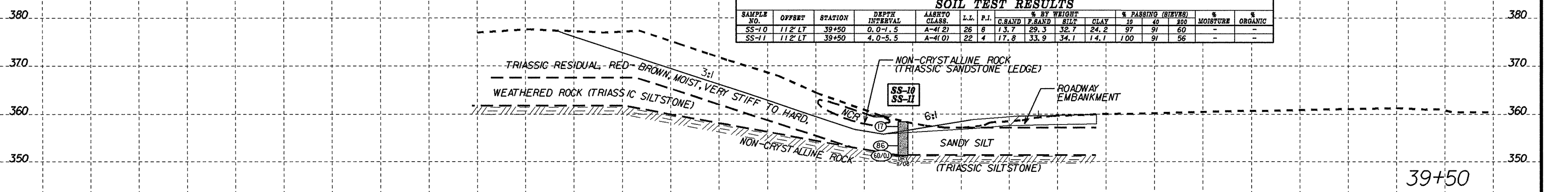


PROJ. REFERENCE NO. R-2000AF SHEET NO. 15



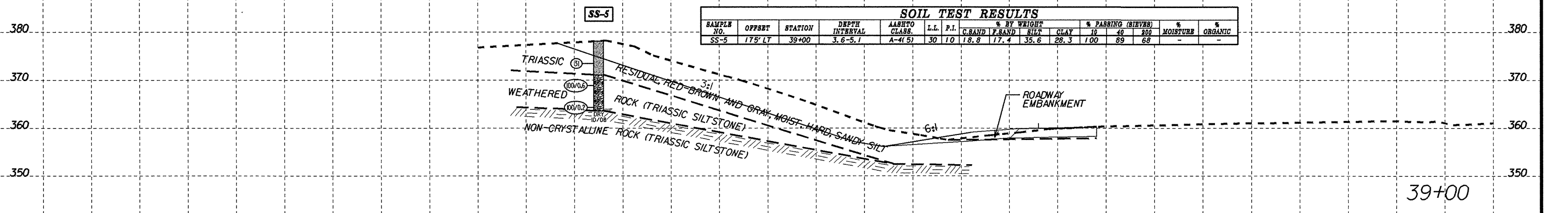
SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C.BAND | F.BAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-10 | 112' LT | 39+50 | 0.0-1.5 | A-4(2) | 26 | 8 | 13.7 | 29.3 | 32.7 | 24.2 | 97 | 91 | 60 | - | - |
| SS-11 | 112' LT | 39+50 | 4.0-5.5 | A-4(0) | 22 | 4 | 17.8 | 33.9 | 34.1 | 14.1 | 100 | 91 | 56 | - | - |



SOIL TEST RESULTS

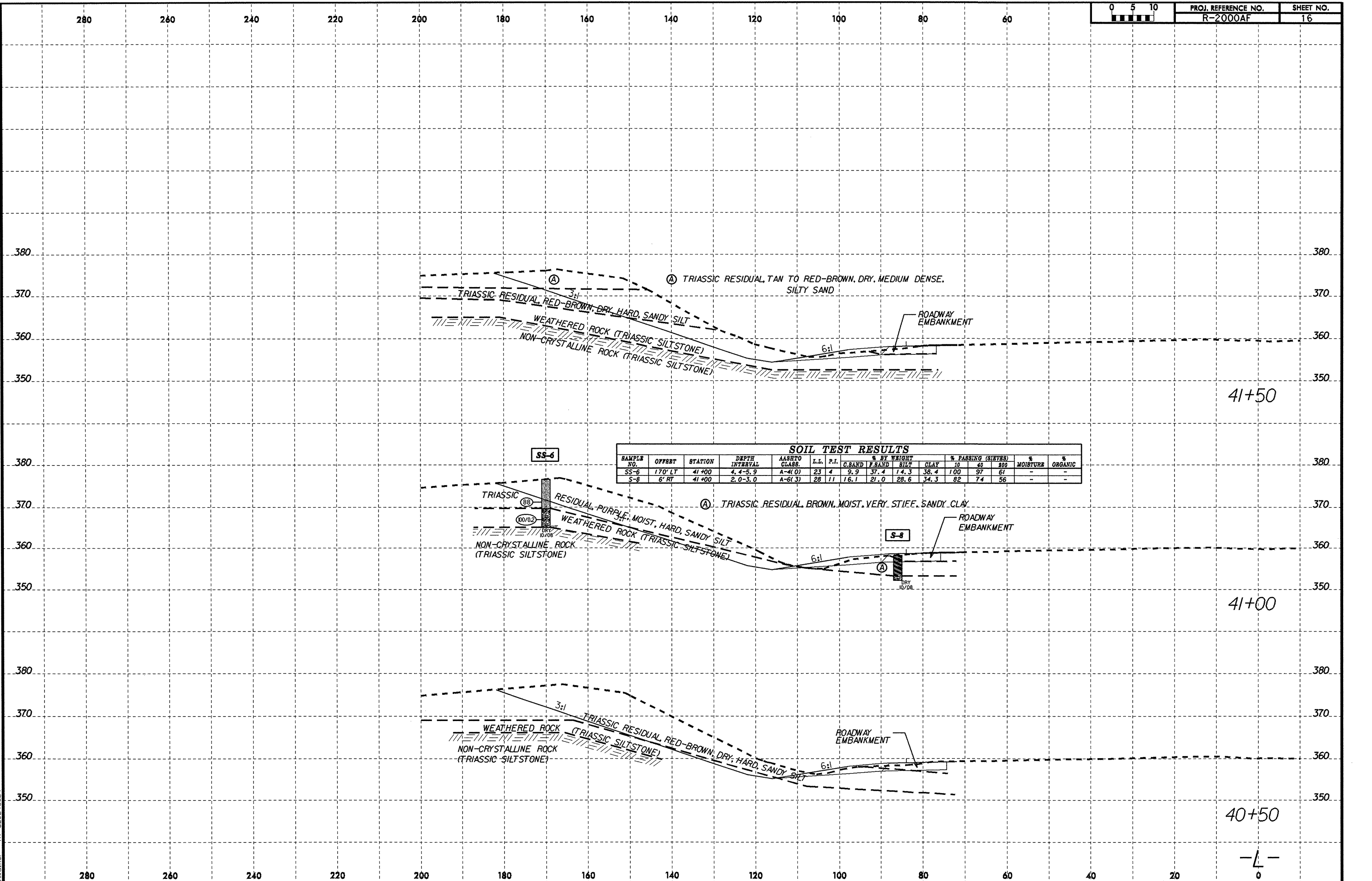
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C.BAND | F.BAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-5 | 175' LT | 39+00 | 3.6-5.1 | A-4(5) | 30 | 10 | 18.8 | 17.4 | 35.6 | 28.3 | 100 | 89 | 68 | - | - |



280 260 240 220 200 180 160 140 120 100 80 60 40 20 0

I:\JULY-2009\2248\Investigation\TIP\R2000AF_GEO.RDWY.CADD.GEOTECH\ysec\y2000af-geo.xst.dgn
 User: jwalker Date: 7/23/09 Time: 12:48 PM

8/23/99
 I:\JUL-2009\1248\15\ERD\00\000af\TIP\R2000AF_GEO.ROWY\CADD.GEOTECH\scv2000af_geo_xsl.dgn
 1248
 15
 15

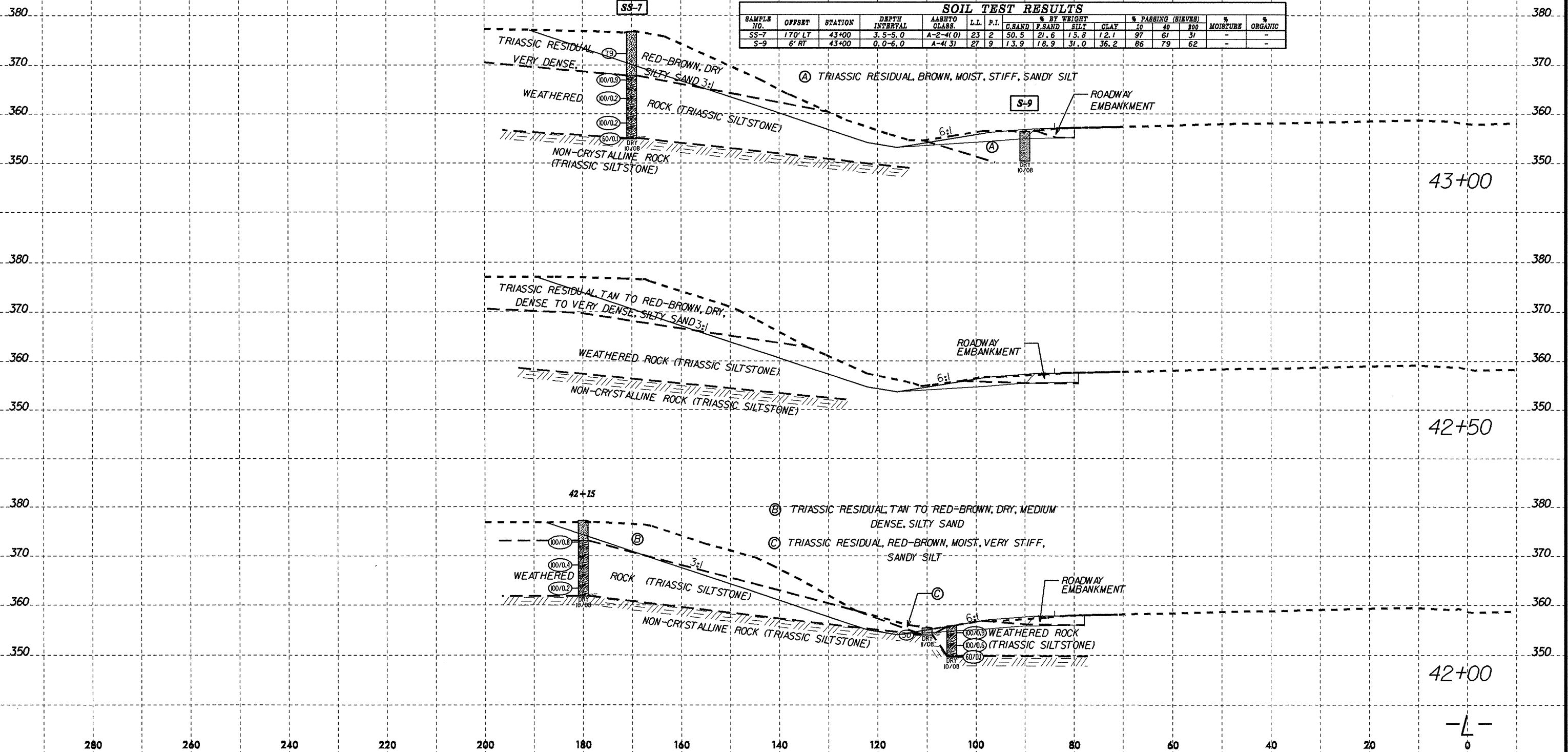


| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIZES) | | | % MOISTURE | % ORGANIC | |
|------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|-------------------|-----|----|------------|-----------|-----|
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | | | 200 |
| SS-6 | 170' LT | 41+00 | 4.4-5.9 | A-4(0) | 23 | 4 | 9.9 | 37.4 | 14.3 | 38.4 | 100 | 97 | 67 | - | - |
| S-8 | 6' RT | 41+00 | 2.0-3.0 | A-6(3) | 28 | 11 | 16.1 | 21.0 | 28.6 | 34.3 | 82 | 74 | 56 | - | - |

-L-

8/23/99

280 260 240 220 200 180 160 140 120 100 80 60

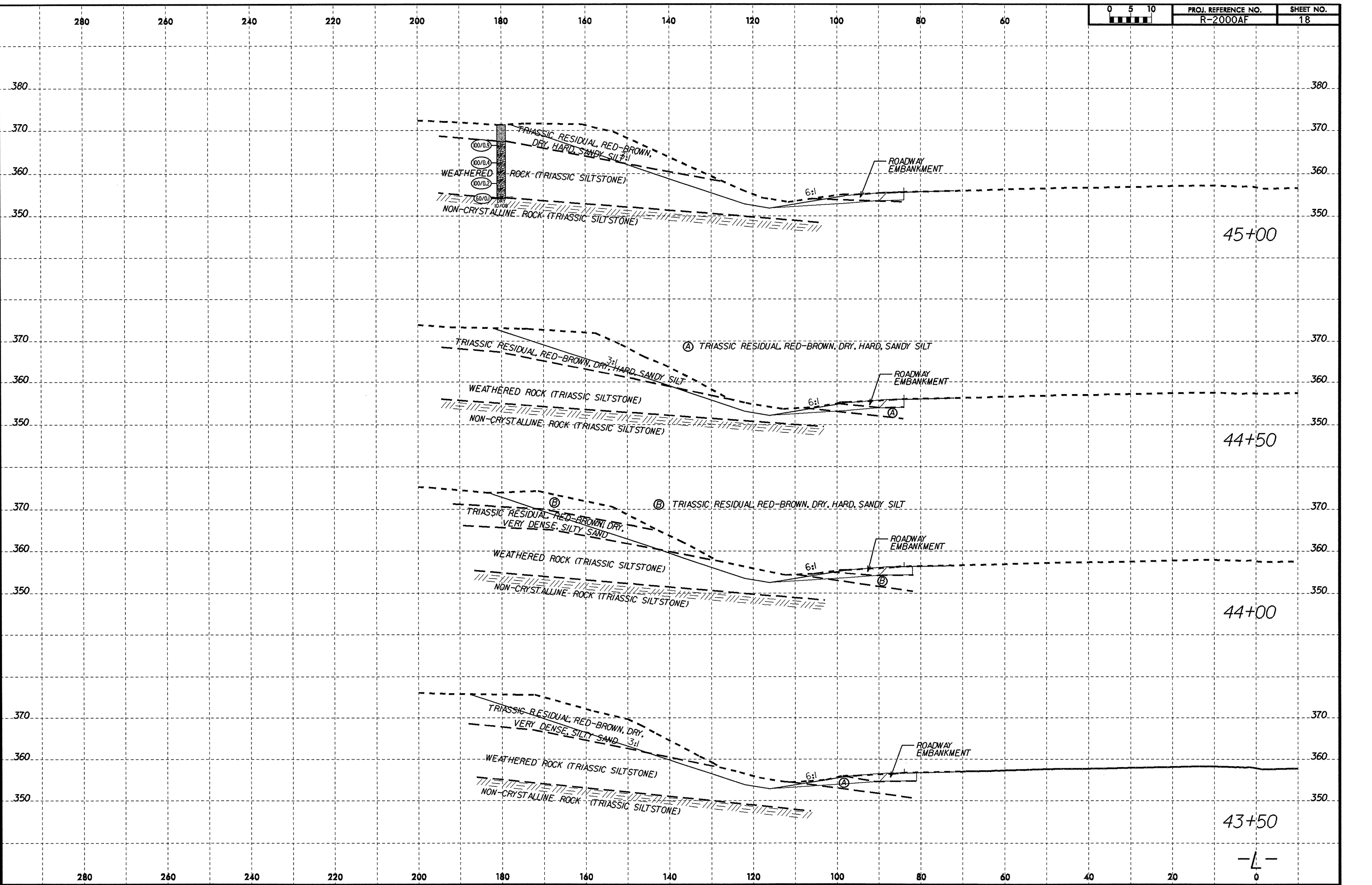


SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-7 | 170' LT | 43+00 | 3.5-5.0 | A-2-4(0) | 23 | 2 | 50.5 | 21.6 | 15.8 | 12.1 | 97 | 61 | 31 | - | - |
| S-9 | 6' RT | 43+00 | 0.0-6.0 | A-4(3) | 27 | 9 | 13.9 | 18.9 | 31.0 | 36.2 | 86 | 79 | 62 | - | - |

I:\JUL-2009\2448\PROJECT\station\TIP\R2000AF_GEO_ROWY\CADD_GEO\TECH\asc\2000af-geo-ssi-1.dgn
 8/23/99 11:51 AM
 T.Walker

8/23/99



I:\JUL-2009\12448 L:\ERON\ Raleigh GEOTECH\2000af_geo_xsl1.dgn

43+50

44+00

44+50

45+00

-L-

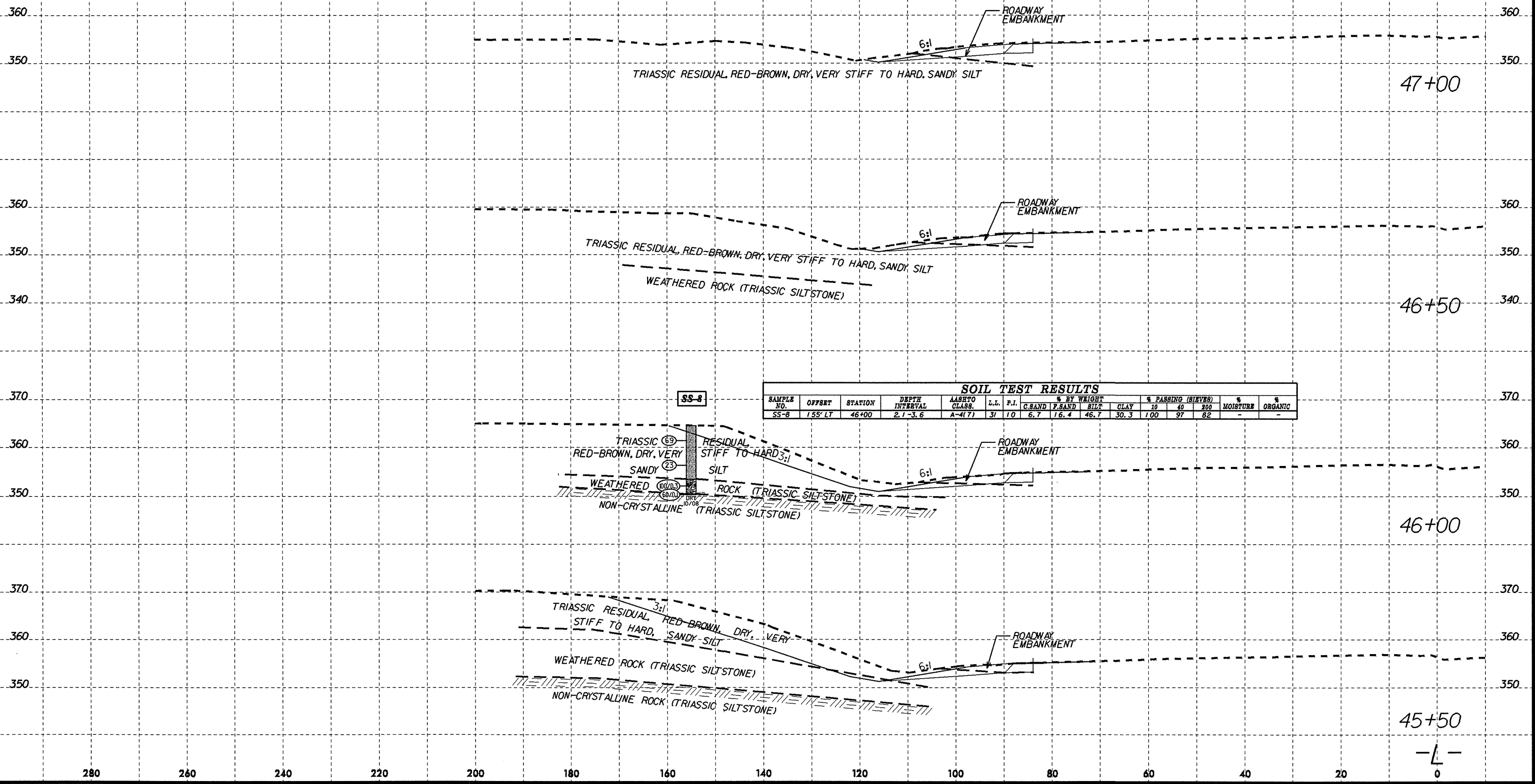
B.23/99

280 260 240 220 200 180 160 140 120 100 80 60



PROJ. REFERENCE NO.
R-2000AF

SHEET NO.
19



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | ASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | |
|------------|---------|---------|----------------|--------------|------|------|-------------|--------|------|--------------------|-----|----|------------|-----------|-----|
| | | | | | | | G.SAND | F.SAND | SILT | CLAY | 10 | 40 | | | 200 |
| SS-8 | 155' LT | 46+00 | 2.1-3.6 | A-4(7) | 31 | 10 | 6.7 | 16.4 | 46.7 | 30.3 | 100 | 97 | 82 | - | - |

47+00

46+50

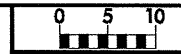
46+00

45+50

-L-

I:\JUL-2008\1249\15_VERTY\Station\TIP\R2000AF_GEO_RDWY\CADD_GEO\TECH\ssc\2000af-geo_xst_1.dgn

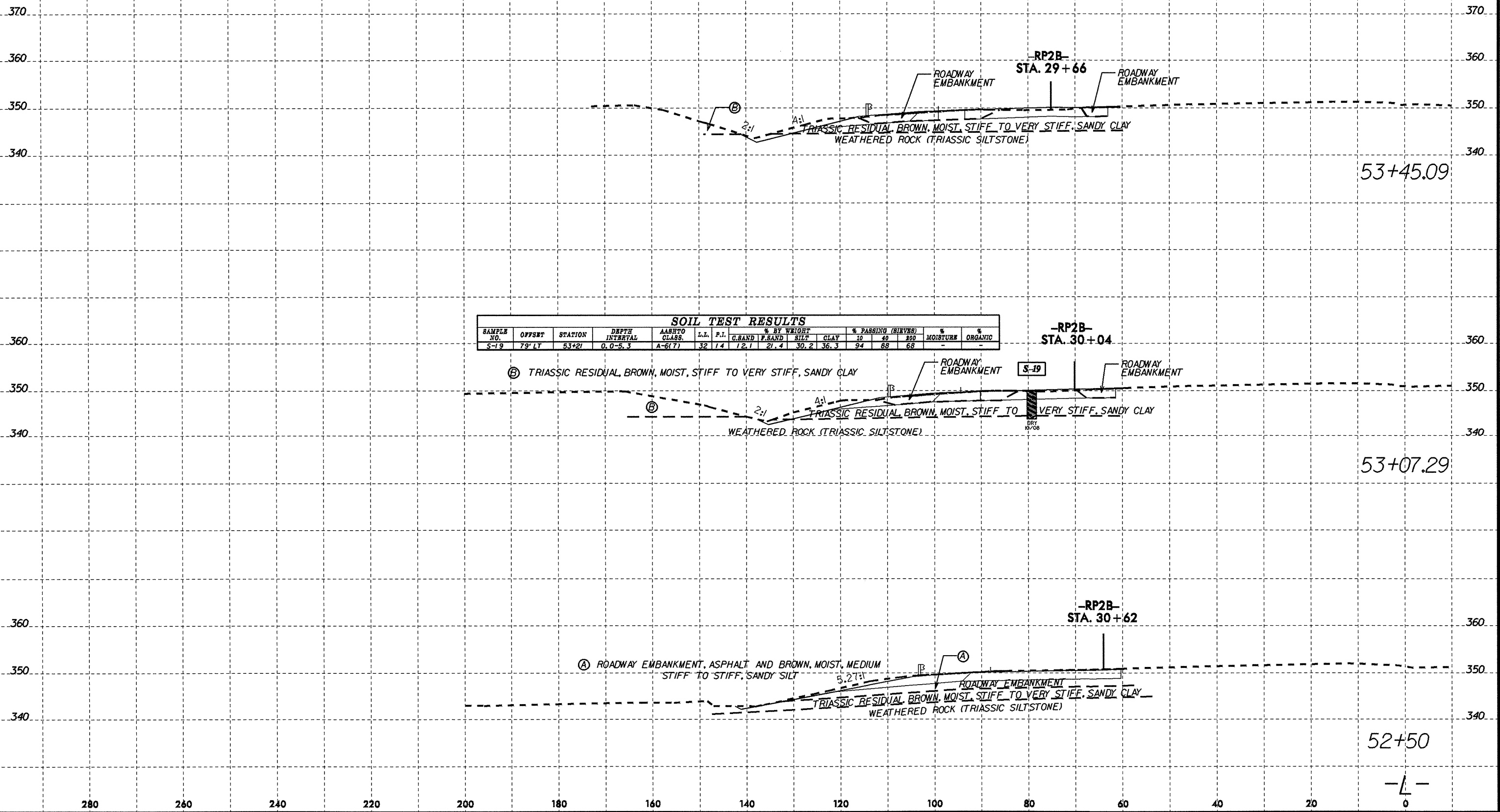
8/23/99



PROJ. REFERENCE NO.
R-2000AF

SHEET NO.
20

280 260 240 220 200 180 160 140 120 100 80 60



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-19 | 79' LT | 53+21 | 0, 0'-5, 3 | A-6(7) | 32 | 14 | 72.1 | 21.4 | 30.2 | 36.3 | 94 | 88 | 68 | - | - |

ⓑ TRIASSIC RESIDUAL, BROWN, MOIST, STIFF TO VERY STIFF, SANDY CLAY

ⓑ TRIASSIC RESIDUAL, BROWN, MOIST, STIFF TO VERY STIFF, SANDY CLAY
WEATHERED ROCK (TRIASSIC SILTSTONE)

Ⓐ ROADWAY EMBANKMENT, ASPHALT AND BROWN, MOIST, MEDIUM STIFF TO STIFF, SANDY SILT

Ⓐ ROADWAY EMBANKMENT, ASPHALT AND BROWN, MOIST, MEDIUM STIFF TO STIFF, SANDY SILT
TRIASSIC RESIDUAL, BROWN, MOIST, STIFF TO VERY STIFF, SANDY CLAY
WEATHERED ROCK (TRIASSIC SILTSTONE)

53+45.09

53+07.29

52+50

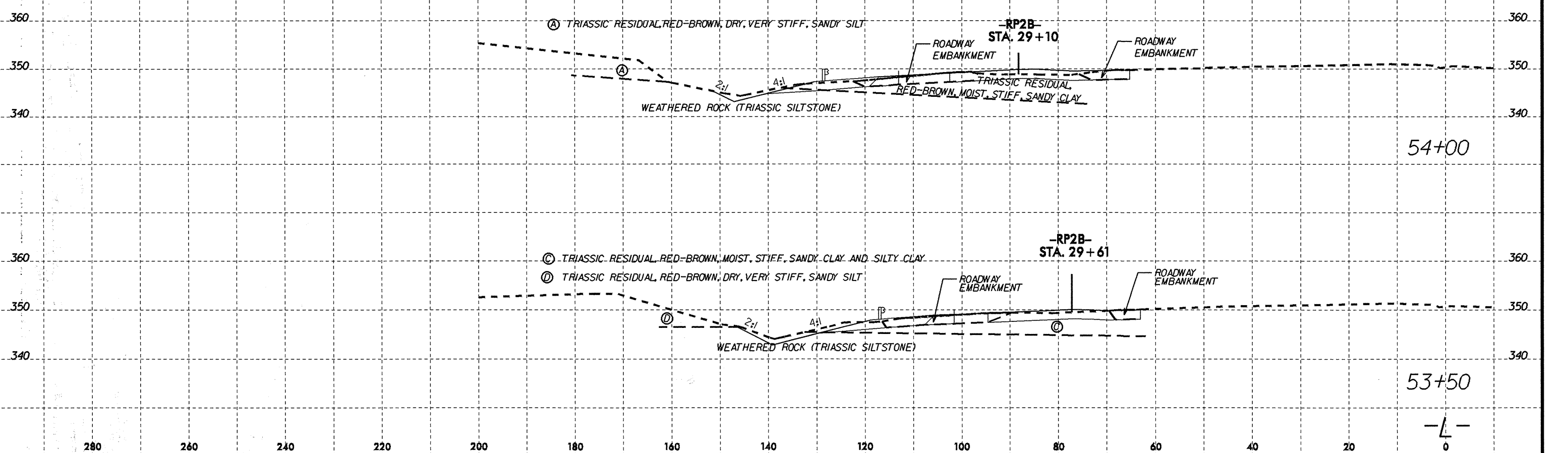
-L-

16-JUL-2009 12:49
I:\GIS\2009\1249
16-JUL-2009 12:49
I:\GIS\2009\1249

B:\23\99
6 JUL 2006 12:49
C:\JED\Cal\proj\TIP\R2000AF_GEO_RDWY\CADD_GEO\RDWY\CADD_GEO\RDWY\2000af_v2000af.gao_xst.l.dgn
T:\work\A\1\21824

280 260 240 220 200 180 160 140 120 100 80 60

| | | |
|--------|---------------------------------|-----------------|
| 0 5 10 | PROJ. REFERENCE NO. R-2000AF | SHEET NO. 21 |
|--------|---------------------------------|-----------------|



54+00

53+50

-L-

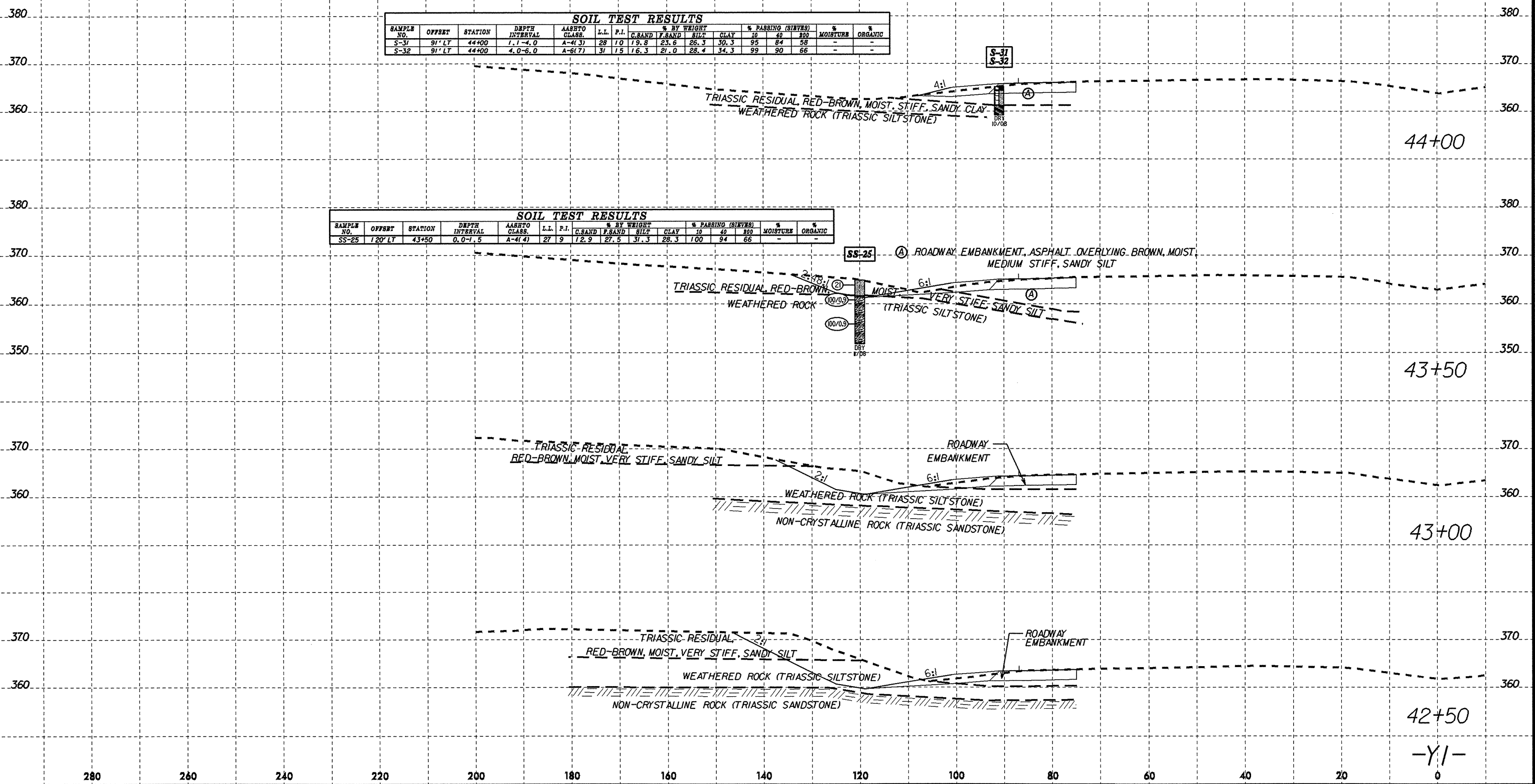
B:23/99

280 260 240 220 200 180 160 140 120 100 80 60

0 5 10
PROJ. REFERENCE NO. R-2000AF SHEET NO. 22

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-31 | 91' LT | 44+00 | 1.1-4.0 | A-4(3) | 28 | 10 | 19.8 | 23.6 | 28.3 | 30.3 | 95 | 84 | 58 | - | - |
| S-32 | 91' LT | 44+00 | 4.0-6.0 | A-6(7) | 31 | 15 | 16.3 | 21.0 | 28.4 | 34.3 | 99 | 90 | 66 | - | - |

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-25 | 120' LT | 43+50 | 0.0-1.5 | A-4(4) | 27 | 9 | 12.9 | 27.5 | 31.3 | 28.3 | 100 | 94 | 66 | - | - |



44+00

43+50

43+00

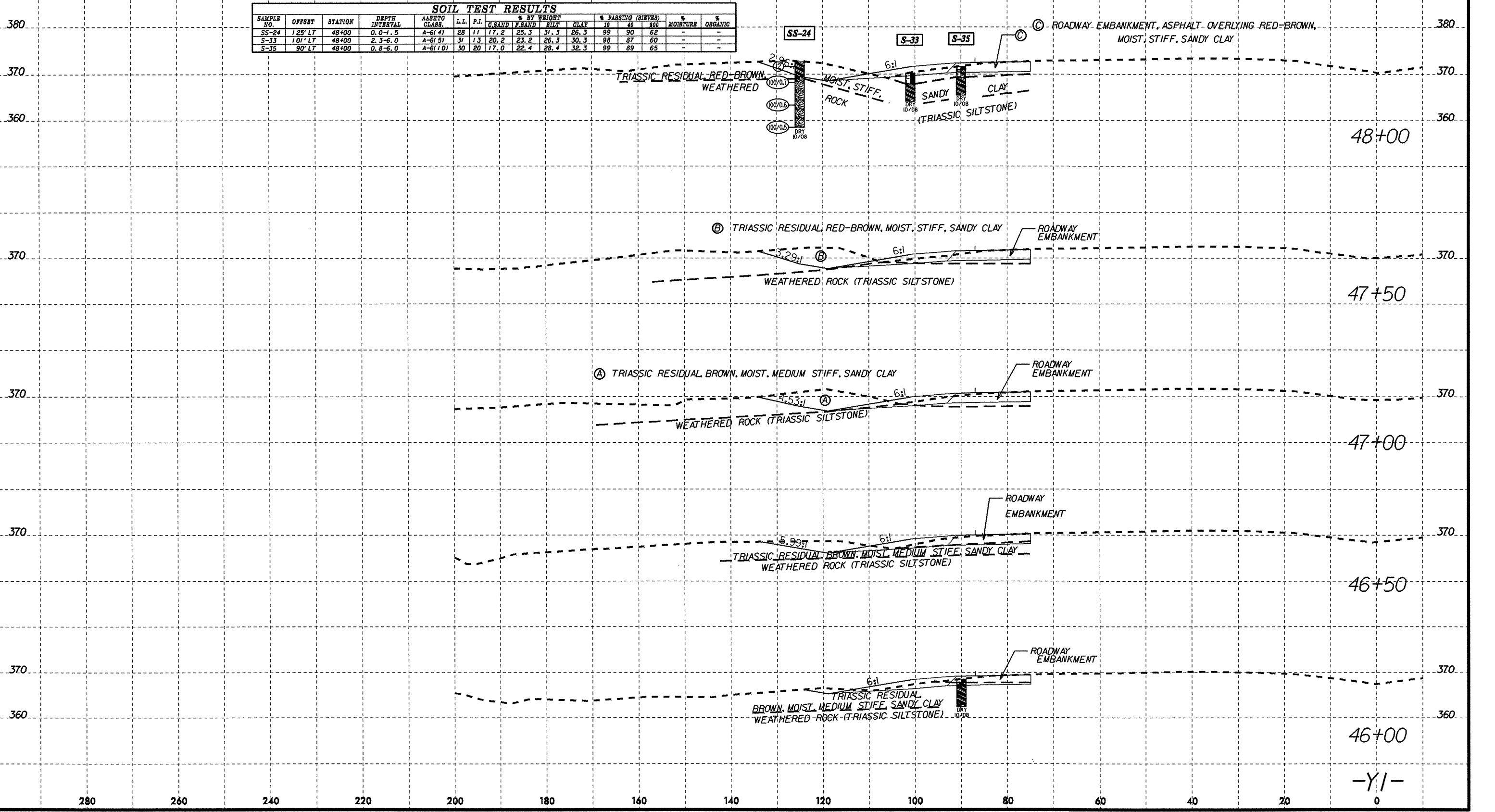
42+50

-Y1-

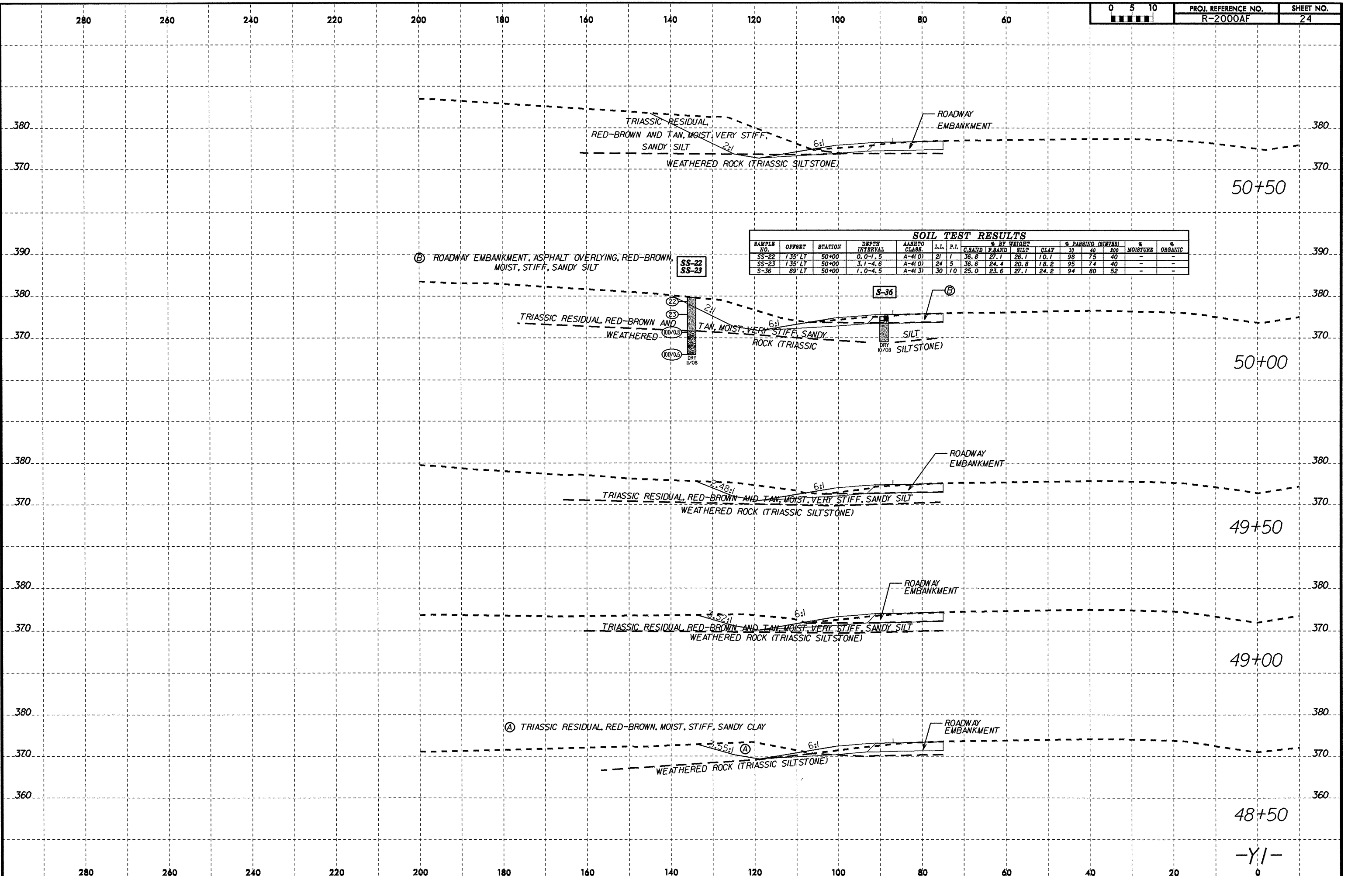
16-JUL-2009 12:49
I:\Projects\2009\1249
T:\Users\j...
16-JUL-2009 12:49
I:\Projects\2009\1249
T:\Users\j...

8/23/99
 I:\JUL-2008\12448
 C:\EDY\Projects\11\IP\R2000AF_GEO\RDWY\CADD\GEO\TECH\XSEC\IR2000AF_GEO.XSL.Y1.dgn
 C:\EDY\Projects\11\IP\R2000AF_GEO\RDWY\CADD\GEO\TECH\XSEC\IR2000AF_GEO.XSL.Y1.dgn
 C:\EDY\Projects\11\IP\R2000AF_GEO\RDWY\CADD\GEO\TECH\XSEC\IR2000AF_GEO.XSL.Y1.dgn

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|---------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | G. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-24 | 125' LT | 48+00 | 0.0-1.5 | A-6(4) | 28 | 11 | 17.2 | 25.3 | 31.3 | 26.3 | 99 | 90 | 62 | - | - |
| S-33 | 101' LT | 48+00 | 2.3-6.0 | A-6(5) | 31 | 13 | 20.2 | 23.2 | 26.3 | 30.3 | 98 | 87 | 60 | - | - |
| S-35 | 90' LT | 48+00 | 0.8-6.0 | A-6(10) | 30 | 20 | 17.0 | 22.4 | 28.4 | 32.3 | 99 | 89 | 65 | - | - |

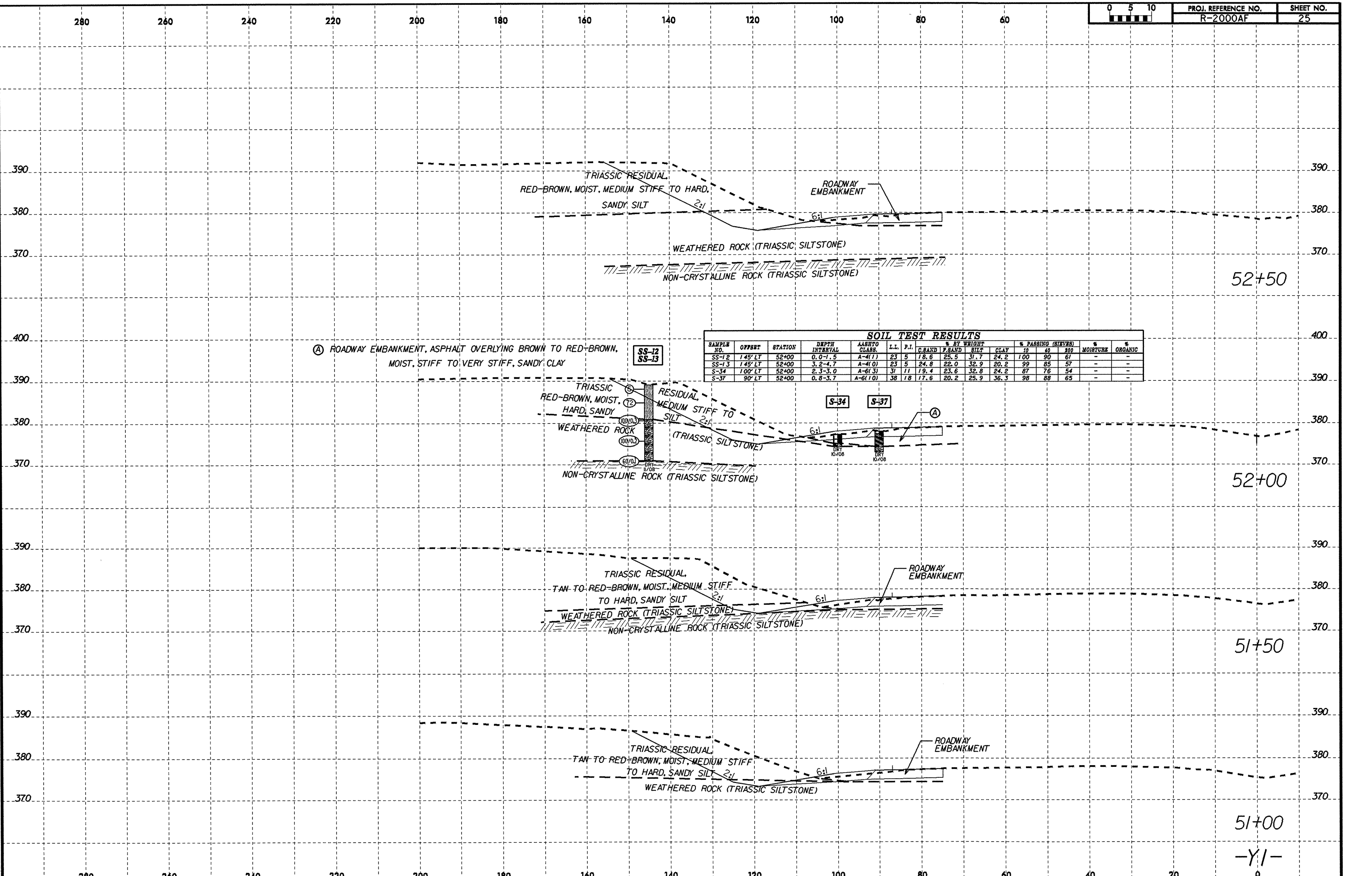


8/23/99
 I:\JUL-2009\1249
 1\GEO\REF\GEO\Investigation\TIP\R2000AF_GEO_ROW\CADD\GEO\TECH\ssc\R2000AF_Geo_xsl.Y1.dgn
 11/11/08
 11/11/08



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|----------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | LABETD CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 60 | | |
| SS-22 | 1.35' LT | 50+00 | 0.0-1.5 | A-4(0) | 21 | 1 | 36.8 | 27.1 | 26.1 | 10.1 | 98 | 75 | 40 | - | - |
| SS-23 | 1.35' LT | 50+00 | 3.1-4.6 | A-4(0) | 24 | 5 | 36.6 | 24.4 | 20.8 | 18.2 | 95 | 74 | 40 | - | - |
| S-36 | 89' LT | 50+00 | 1.0-4.5 | A-4(3) | 30 | 10 | 25.0 | 23.6 | 27.1 | 24.2 | 94 | 80 | 52 | - | - |

8/23/99
 I:\JUL-2006\12-49
 L:\PROJ\2000AF\GEO\RDWY\CADD_GEO\TECH\AC\R2000AF_Geo_xst.Y1.dgn
 tvaiker



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|---------|---------|----------------|---------------|------|------|-------------|---------|------|--------------------|-----|----|------------|-----------|-----|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | |
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | | | 200 |
| SS-12 | 145' LT | 52+00 | 0.0-1.5 | A-4(1) | 23 | 5 | 18.6 | 25.5 | 31.7 | 24.2 | 100 | 90 | 61 | - | - |
| SS-13 | 145' LT | 52+00 | 3.2-4.7 | A-4(1) | 23 | 5 | 24.8 | 22.0 | 32.9 | 20.2 | 99 | 85 | 57 | - | - |
| S-34 | 100' LT | 52+00 | 2.3-3.0 | A-6(3) | 31 | 11 | 19.4 | 23.6 | 32.8 | 24.2 | 87 | 76 | 54 | - | - |
| S-37 | 90' LT | 52+00 | 0.8-3.7 | A-6(1) | 38 | 18 | 17.6 | 20.2 | 25.9 | 36.3 | 98 | 88 | 65 | - | - |

(A) ROADWAY EMBANKMENT, ASPHALT OVERLYING BROWN TO RED-BROWN, MOIST, STIFF TO VERY STIFF, SANDY CLAY

SS-12
 SS-13

S-34

S-37

52+50

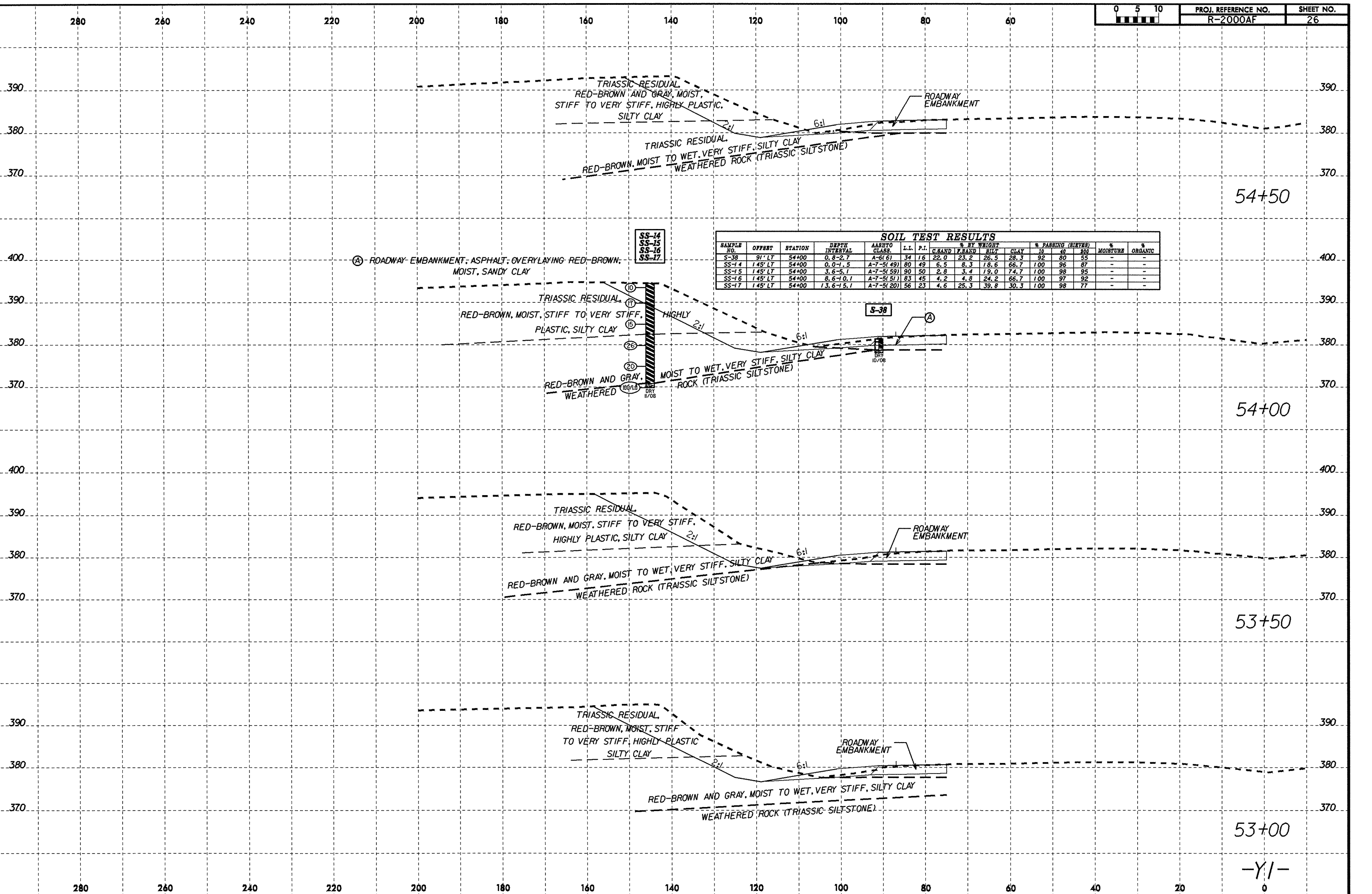
52+00

51+50

51+00

-Y1-

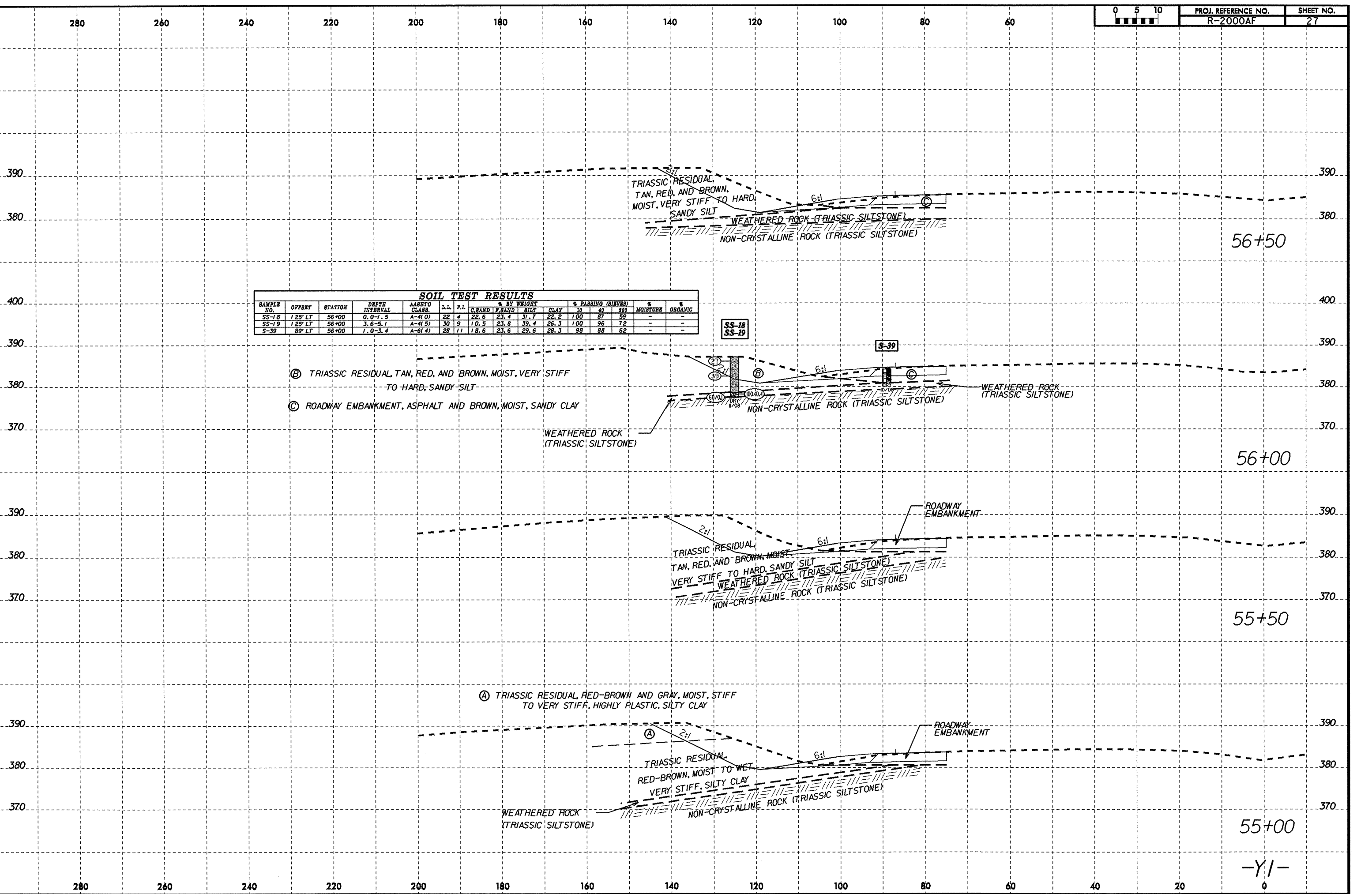
B/23/99



| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | ASTM CLASS. | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIZES) | | % MOISTURE | % ORGANIC | |
|------------|----------|---------|----------------|-------------|------|------|-------------|------|------|-------------------|------|------------|-----------|----|
| | | | | | | | SAND | SILT | CLAY | 75 | 200 | | | |
| S-38 | 91' LT | 54+00 | 0.8-2.7 | A-61 | 34 | 16 | 22.0 | 23.2 | 26.5 | 28.3 | 92 | 80 | 55 | |
| SS-14 | 1.45' LT | 54+00 | 0.0-1.5 | A-7-51 | 49 | 80 | 6.5 | 8.3 | 18.6 | 66.7 | 100 | 96 | 87 | |
| SS-15 | 1.45' LT | 54+00 | 3.6-5.1 | A-7-51 | 59 | 90 | 2.8 | 3.4 | 19.0 | 74.7 | 100 | 98 | 95 | |
| SS-16 | 1.45' LT | 54+00 | 8.6-10.1 | A-7-51 | 51 | 83 | 4.5 | 4.2 | 24.2 | 66.7 | 100 | 97 | 92 | |
| SS-17 | 1.45' LT | 54+00 | 13.6-15.1 | A-7-51 | 20 | 56 | 23 | 4.6 | 25.3 | 39.8 | 30.3 | 100 | 98 | 77 |

I:\JL\2009\249\investigation\TIP\R2000AF_GEO_RDWY\CADD_GEO\TECH\asc\R2000AF_Geo_xst_11.dgn
 15:46:10 11/13/09
 Twalker

8/23/99
 I:\JULY-2009\1249\15-LEO\Geo\Station\TIP\R2000AF_GEO.RDWY.CADD.GEOTECH\sec\R2000AF_Geo_xst_11.dgn
 T:\walker



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | |
|------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|--------------------|--------|---------|------------|-----------|---|
| | | | | | | | C SAND | F SAND | SILT | NO. 40 | NO. 60 | NO. 100 | | | |
| SS-18 | 125' LT | 56+00 | 0.0-1.5 | A-4(0) | 22 | 4 | 22.6 | 23.4 | 31.7 | 22.2 | 100 | 87 | 59 | - | - |
| SS-19 | 125' LT | 56+00 | 3.6-5.1 | A-4(5) | 30 | 9 | 10.5 | 23.8 | 39.4 | 26.3 | 100 | 96 | 73 | - | - |
| S-39 | 89' LT | 56+00 | 1.0-3.4 | A-6(4) | 28 | 11 | 18.6 | 23.6 | 29.6 | 28.3 | 98 | 88 | 62 | - | - |

- ⓑ TRIASSIC RESIDUAL, TAN, RED, AND BROWN, MOIST, VERY STIFF TO HARD, SANDY SILT
- ⓒ ROADWAY EMBANKMENT, ASPHALT AND BROWN, MOIST, SANDY CLAY

Ⓐ TRIASSIC RESIDUAL, RED-BROWN AND GRAY, MOIST, STIFF TO VERY STIFF, HIGHLY PLASTIC, SILTY CLAY

TRIASSIC RESIDUAL
TAN, RED, AND BROWN,
MOIST, VERY STIFF TO HARD,
SANDY SILT

WEATHERED ROCK (TRIASSIC SILTSTONE)
NON-CRYSTALLINE ROCK (TRIASSIC SILTSTONE)

WEATHERED ROCK (TRIASSIC SILTSTONE)

TRIASSIC RESIDUAL
TAN, RED, AND BROWN, MOIST,
VERY STIFF TO HARD, SANDY SILT
WEATHERED ROCK (TRIASSIC SILTSTONE)
NON-CRYSTALLINE ROCK (TRIASSIC SILTSTONE)

WEATHERED ROCK (TRIASSIC SILTSTONE)

TRIASSIC RESIDUAL
RED-BROWN, MOIST TO WET,
VERY STIFF, SILTY CLAY

WEATHERED ROCK (TRIASSIC SILTSTONE)
NON-CRYSTALLINE ROCK (TRIASSIC SILTSTONE)

56+50

56+00

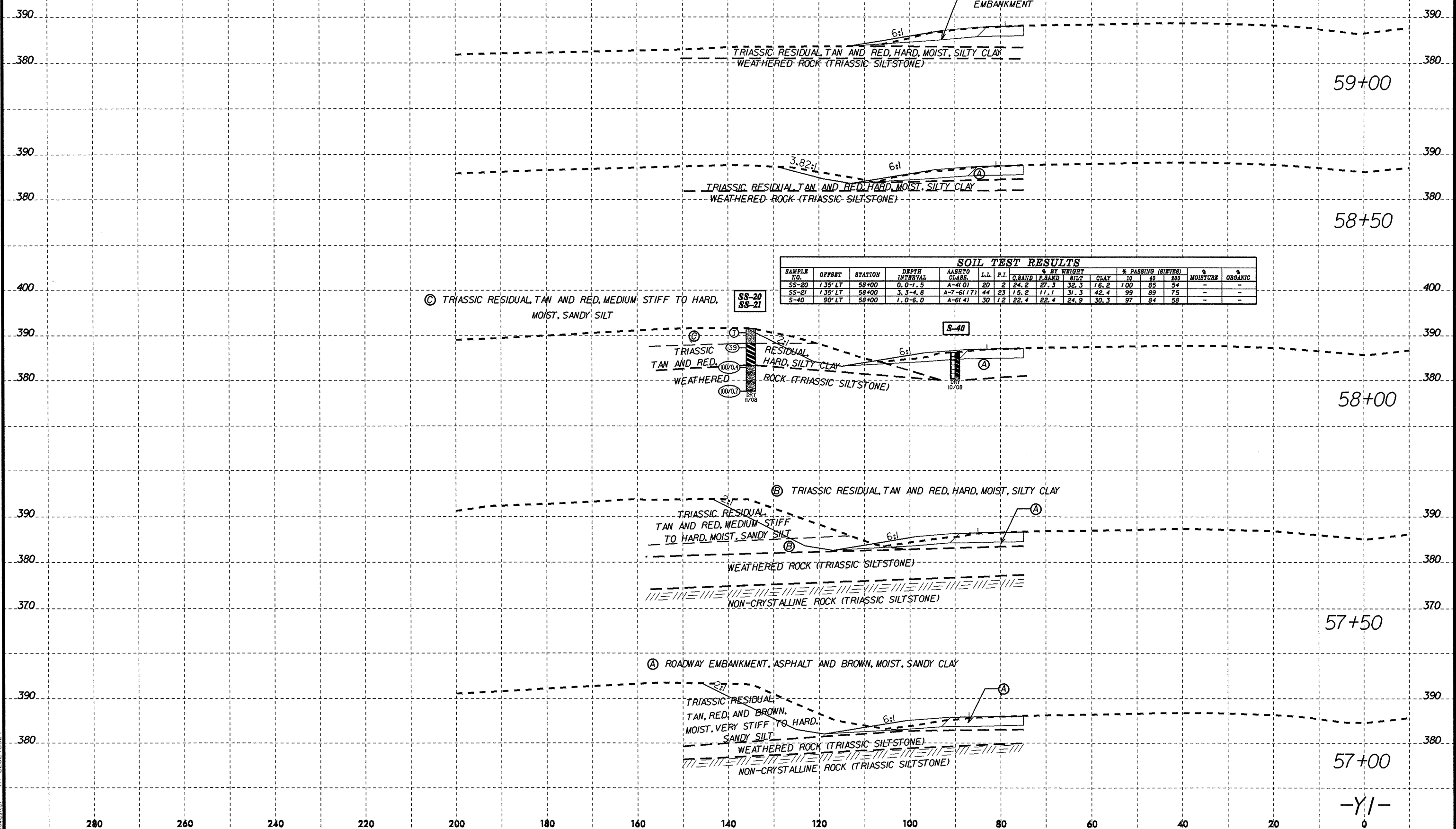
55+50

55+00

-Y/-

B/23/93

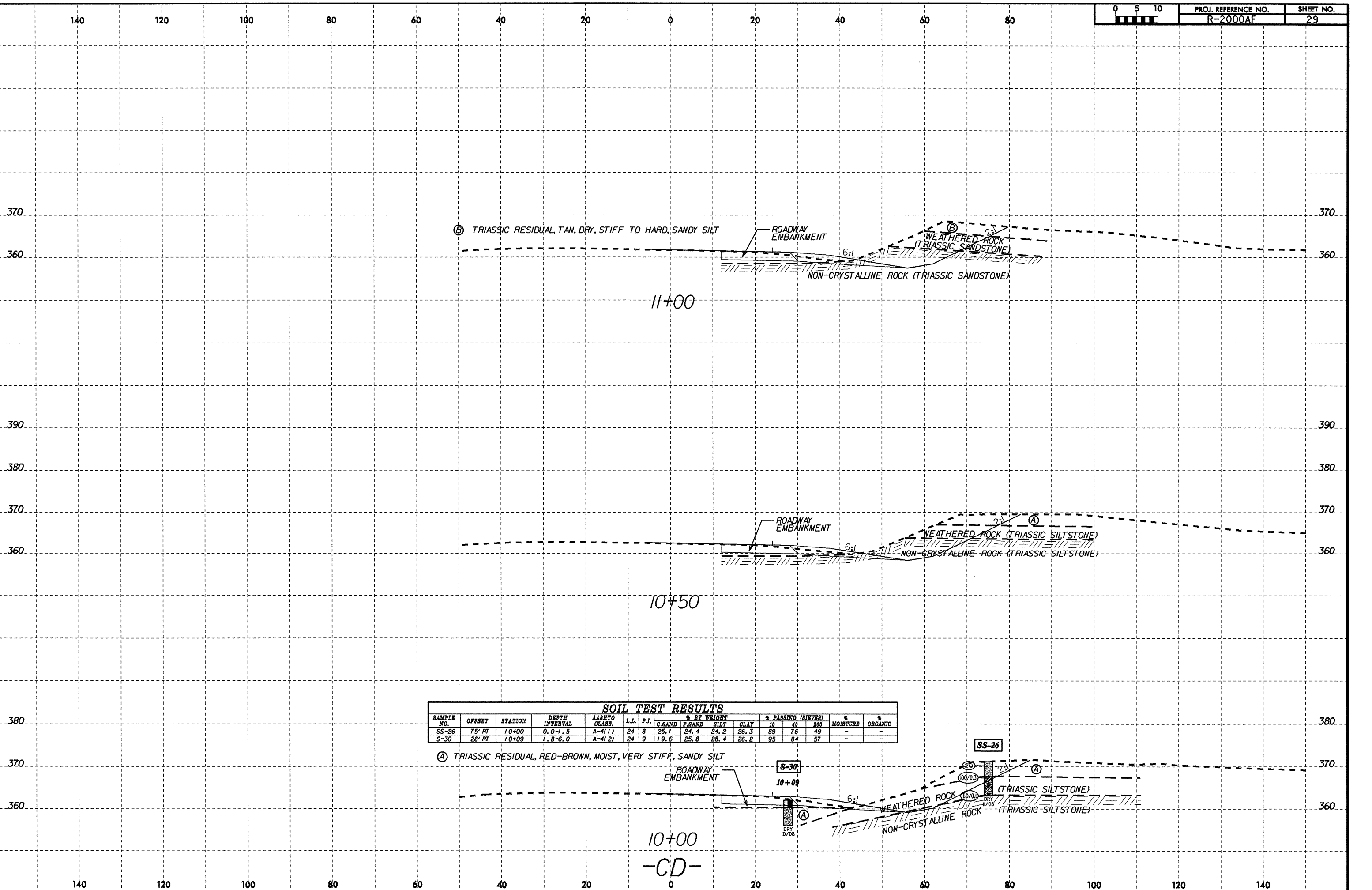
280 260 240 220 200 180 160 140 120 100 80 60



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|----------|---------|----------------|--------------|------|------|-------------|------|------|--------------------|-----|-----|------------|-----------|---|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | LABBYO CLASS | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | |
| | | | | | | | SAND | SILT | CLAY | 10 | 40 | 200 | | | |
| SS-20 | 1.35' LT | 58+00 | 0.0-1.5 | A-4(0) | 20 | 2 | 24.2 | 27.3 | 32.3 | 16.2 | 100 | 85 | 54 | - | - |
| SS-21 | 1.35' LT | 58+00 | 3.3-4.8 | A-7-6(17) | 44 | 23 | 15.2 | 11.1 | 31.3 | 42.4 | 99 | 89 | 75 | - | - |
| S-40 | 90' LT | 58+00 | 1.0-6.0 | A-6(4) | 30 | 12 | 22.4 | 22.4 | 24.9 | 30.3 | 97 | 84 | 58 | - | - |

16-Jul-2009 12:49
C:\Users\jstinson\TIP\R2000AF_GEO.RD.VY\CADD.GEOTECH\asc\R2000AF_Geo_xst.Y1.dgn
16-Jul-2009 12:49
C:\Users\jstinson\TIP\R2000AF_GEO.RD.VY\CADD.GEOTECH\asc\R2000AF_Geo_xst.Y1.dgn

8/23/99



SOIL TEST RESULTS

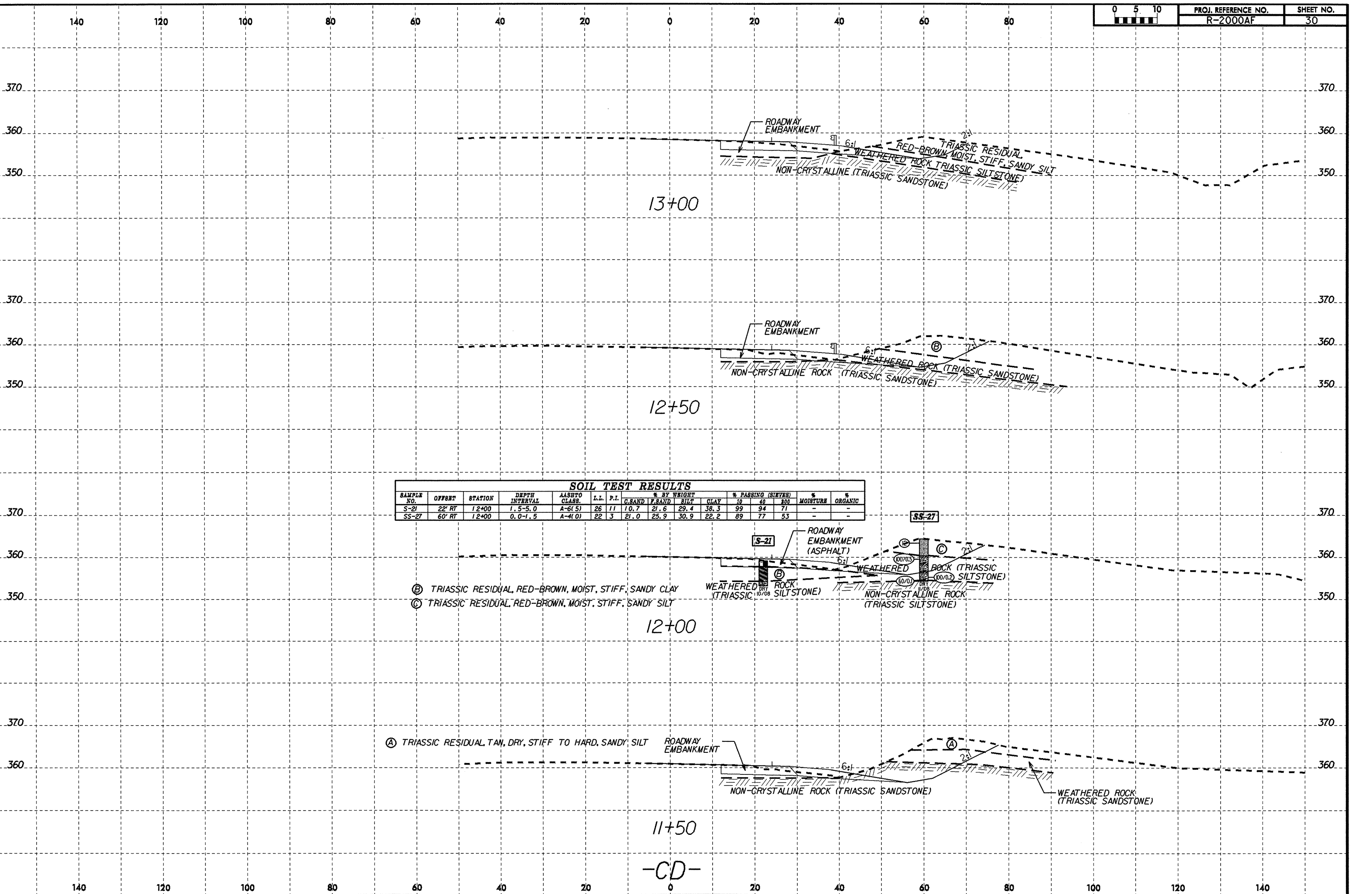
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | MOISTURE | ORGANIC |
|------------|--------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|----------|---------|
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| SS-26 | 75' RT | 10+00 | 0.0-1.5 | A-4(1) | 24 | 8 | 25.1 | 24.4 | 24.2 | 26.3 | 89 | 76 | 49 | - | - |
| S-30 | 28' RT | 10+09 | 1.8-6.0 | A-4(2) | 24 | 9 | 19.6 | 25.8 | 28.4 | 26.2 | 95 | 84 | 57 | - | - |

(A) TRIASSIC RESIDUAL, RED-BROWN, MOIST, VERY STIFF, SANDY SILT

I:\JUL-2009\1249 L:\FERO\Projects\1249\CD\Geo\CD.dgn

-CD-

8/23/99



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | ASTM CLASS. | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | |
|------------|--------|---------|----------------|-------------|------|------|-------------|-----------|------|--------------------|--------|---------|------------|-----------|---|
| | | | | | | | SAND | FINE SAND | SILT | NO. 10 | NO. 40 | NO. 200 | | | |
| S-21 | 22' RT | 12+00 | 1.5-5.0 | A-6(1.5) | 26 | 11 | 10.7 | 21.6 | 29.4 | 38.3 | 99 | 94 | 71 | - | - |
| SS-27 | 60' RT | 12+00 | 0.0-1.5 | A-4(0) | 22 | 3 | 21.0 | 25.9 | 30.9 | 22.2 | 89 | 77 | 53 | - | - |

- ⓑ TRIASSIC RESIDUAL, RED-BROWN, MOIST, STIFF, SANDY CLAY
- ⓒ TRIASSIC RESIDUAL, RED-BROWN, MOIST, STIFF, SANDY SILT

- ⓐ TRIASSIC RESIDUAL, TAN, DRY, STIFF TO HARD, SANDY SILT

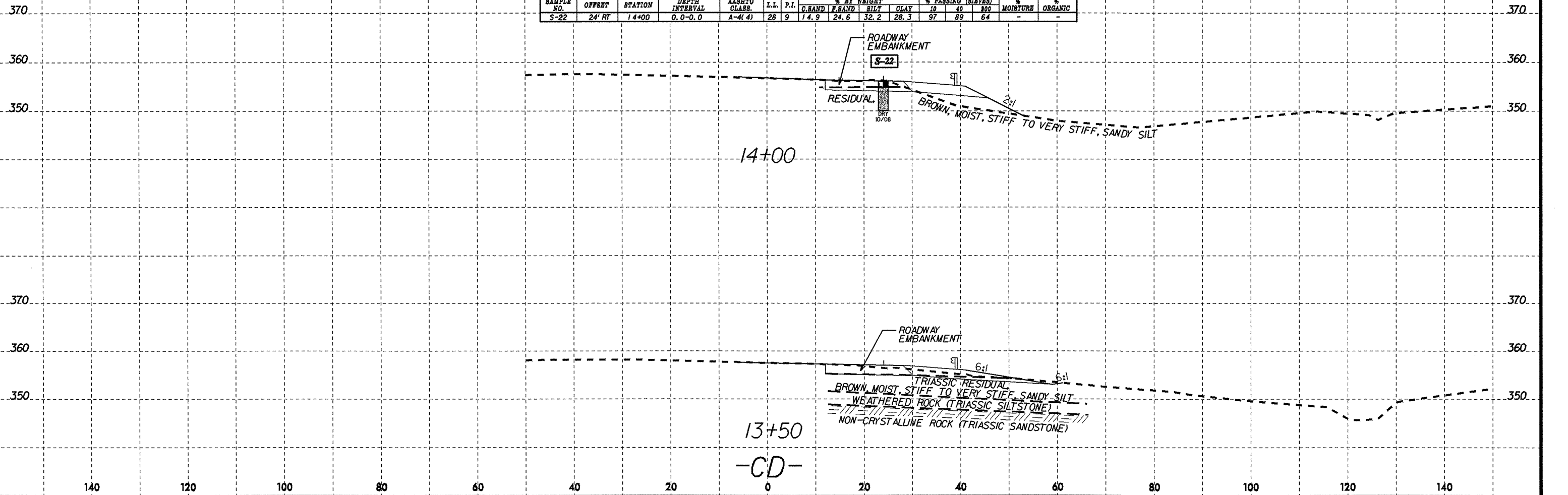
I:\6-JUL-2009 12:49 L:\EFO\Relief\CD\CD.dgn

8/23/99

140 120 100 80 60 40 20 0 20 40 60 80

SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|--------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-22 | 24' RT | 14+00 | 0.0-0.0 | A-4(4) | 28 | 9 | 14.9 | 24.6 | 32.2 | 28.3 | 97 | 89 | 64 | - | - |

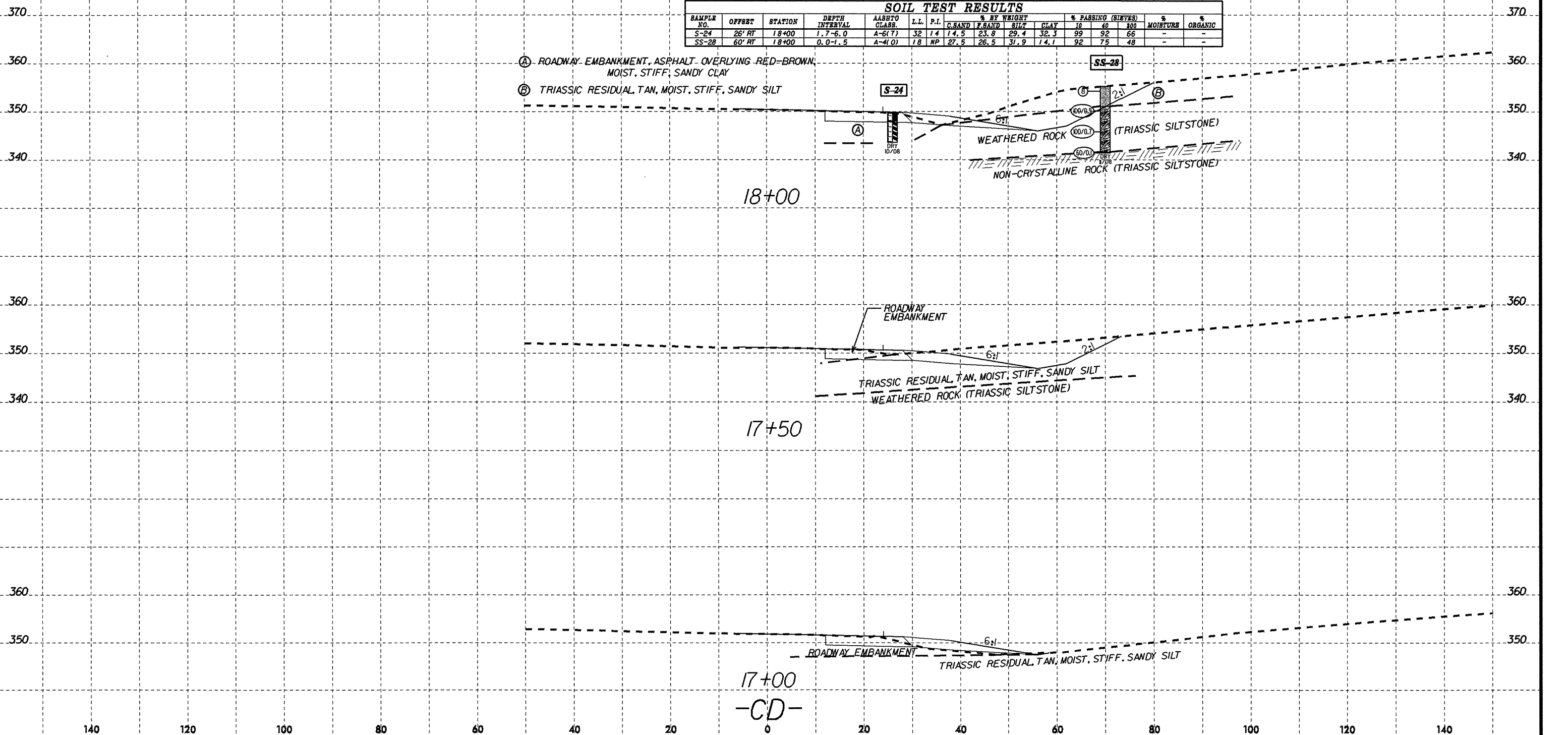


14+00

13+50

-CD-

I:\JUL-2009\1249\Investigation\TIP\R2000AF_GEO_RDWY\CADD_GEO\TECH\asc\R2000AF_Geo_xst_CD.dgn
15:40:00 10/10/09
T:\walker



SOIL TEST RESULTS

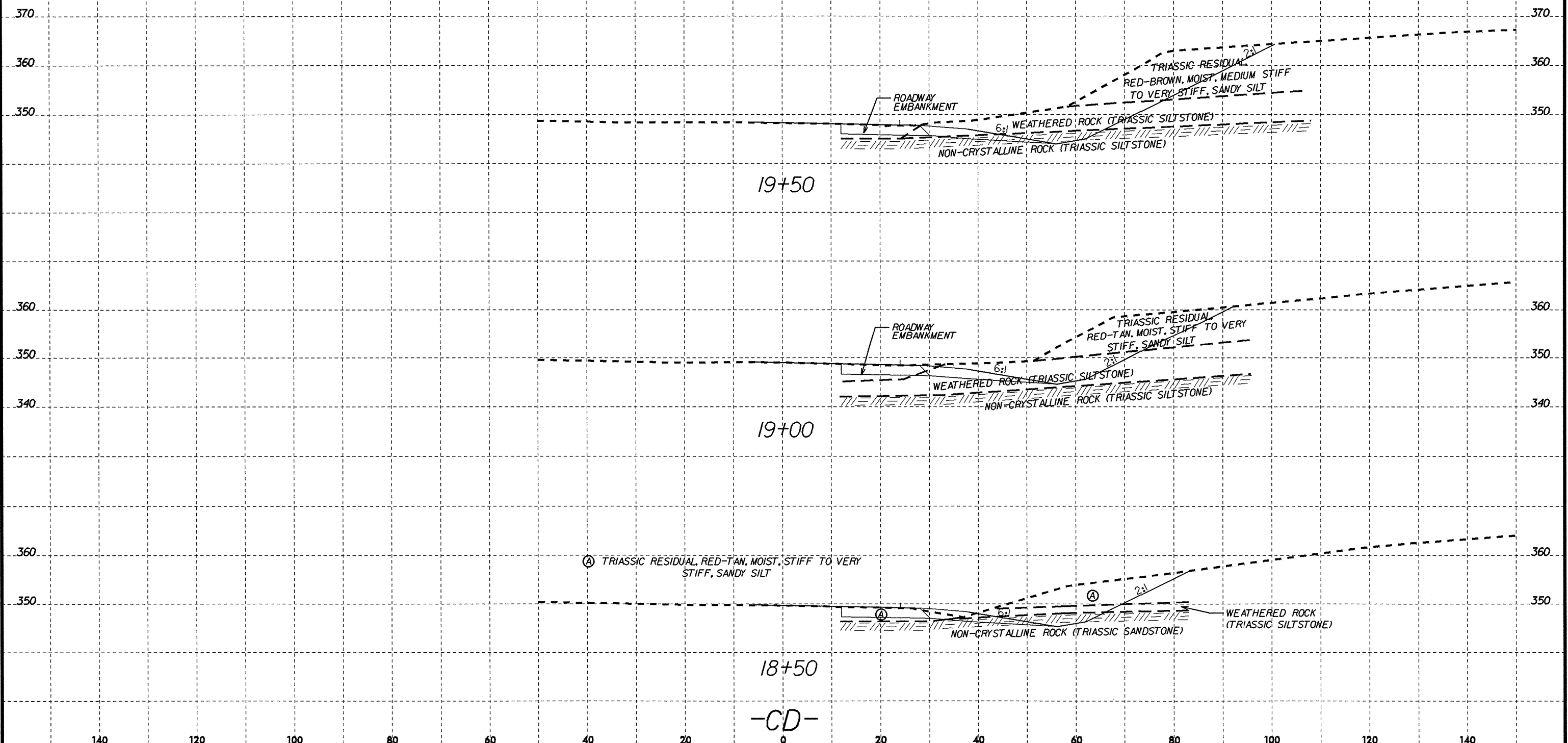
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|--------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-24 | 26' RT | 18+00 | 1.7-6.0 | A-6(7) | 32 | 14 | 14.5 | 23.8 | 29.4 | 32.3 | 99 | 92 | 66 | - | - |
| SS-28 | 60' RT | 18+00 | 0.0-1.5 | A-4(O) | 18 | NP | 27.5 | 26.5 | 31.9 | 14.1 | 92 | 75 | 48 | - | - |

- Ⓐ ROADWAY EMBANKMENT, ASPHALT OVERLYING RED-BROWN, MOIST, STIFF, SANDY CLAY
- Ⓑ TRIASSIC RESIDUAL TAN, MOIST, STIFF, SANDY SILT

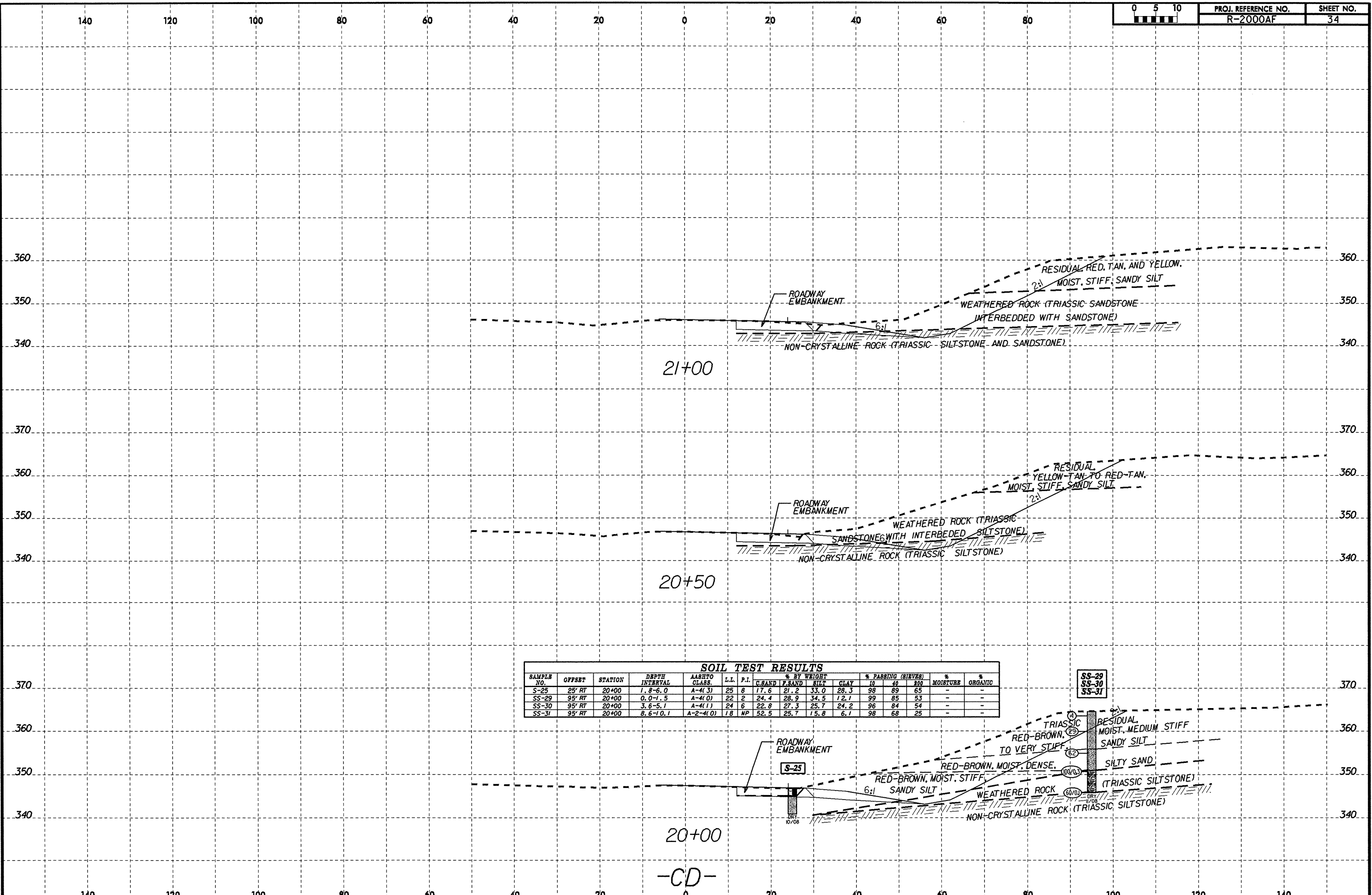
8/23/99
I:\JUL-2009\1249
L:\V\REF\Relief\CD\CD.dgn
t\walker

140 120 100 80 60 40 20 0 20 40 60 80

| | | |
|--------|---------------------------------|-----------------|
| 0 5 10 | PROJ. REFERENCE NO. R-2000AF | SHEET NO. 33 |
|--------|---------------------------------|-----------------|



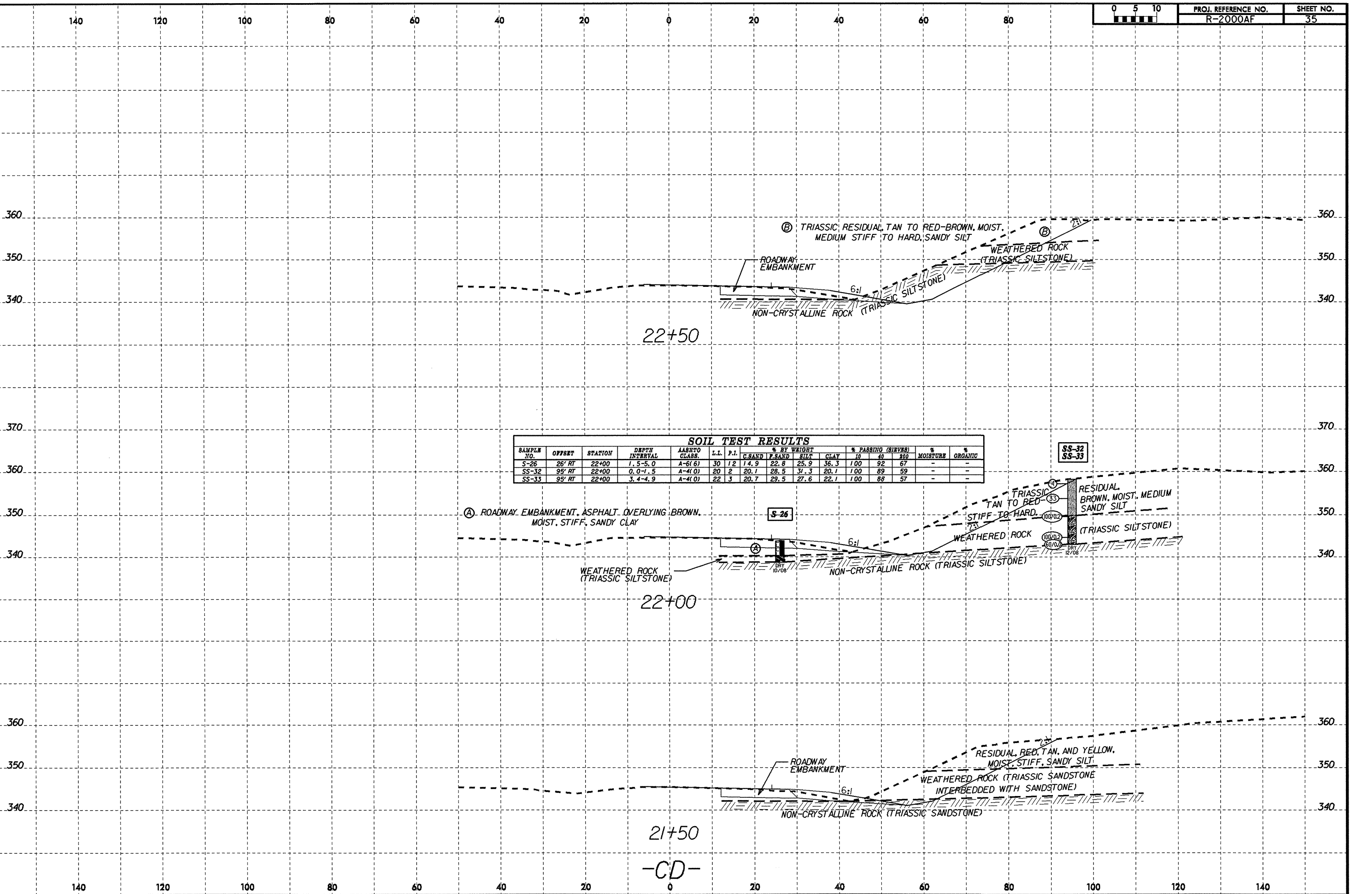
8/23/99
 I:\JULY-2009\1249
 L:\VRO\Projects\TIP\NR2000AF_GEO\RDWY\CADD_GEO\TECH\XSC\NR2000AF_GEO.XSL_CD.dgn
 twalker



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIKYZ8) | | | % MOISTURE | % ORGANIC |
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-25 | 25' RT | 20+00 | 1.8-6.0 | A-4(3) | 25 | 6 | 17.6 | 21.2 | 33.0 | 28.3 | 98 | 69 | 65 | - | - |
| SS-29 | 95' RT | 20+00 | 0.0-1.5 | A-4(0) | 22 | 2 | 24.4 | 28.9 | 34.5 | 12.1 | 99 | 85 | 53 | - | - |
| SS-30 | 95' RT | 20+00 | 3.6-5.1 | A-4(1) | 24 | 6 | 22.8 | 27.3 | 25.7 | 24.2 | 96 | 84 | 54 | - | - |
| SS-31 | 95' RT | 20+00 | 8.6-10.1 | A-2-4(0) | 18 | MP | 52.5 | 25.7 | 15.8 | 6.1 | 98 | 68 | 25 | - | - |

-CD-

8/23/99



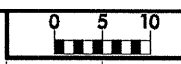
| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|----|-----|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASTHO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIRYES) | | | % MOISTURE | % ORGANIC |
| | | | | | | | G.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-26 | 26' RT | 22+00 | 1.5-5.0 | A-6(6) | 30 | 12 | 14.9 | 22.8 | 25.9 | 36.3 | 100 | 92 | 67 | - | - |
| SS-32 | 95' RT | 22+00 | 0.0-1.5 | A-4(0) | 20 | 2 | 20.1 | 28.5 | 31.3 | 20.1 | 100 | 89 | 59 | - | - |
| SS-33 | 95' RT | 22+00 | 3.4-4.9 | A-4(0) | 22 | 3 | 20.7 | 29.5 | 27.6 | 22.1 | 100 | 88 | 57 | - | - |

16-JUL-2009 12:49 L:\VFD\Relief\At GE3248324

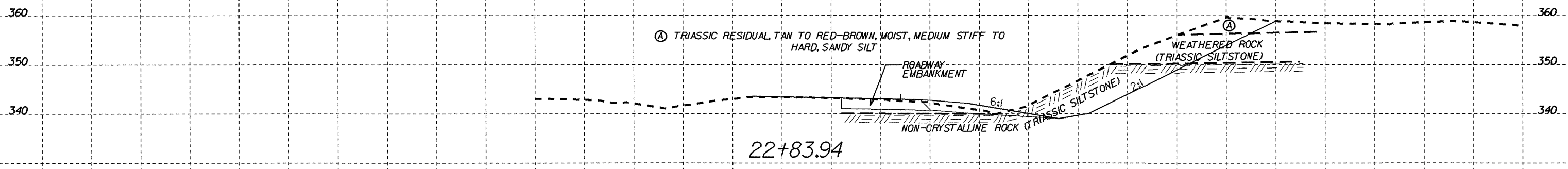
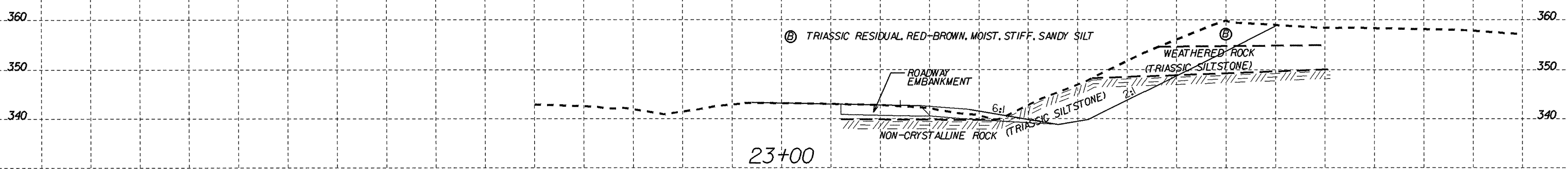
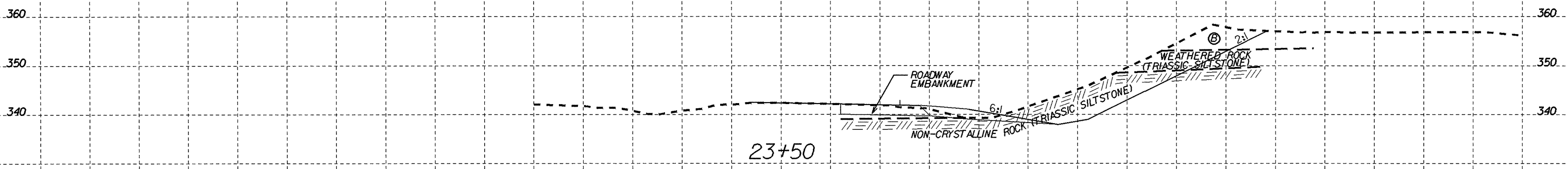
-CD-

8/23/99

140 120 100 80 60 40 20 0 20 40 60 80



PROJ. REFERENCE NO. R-2000AF SHEET NO. 36



-CD-

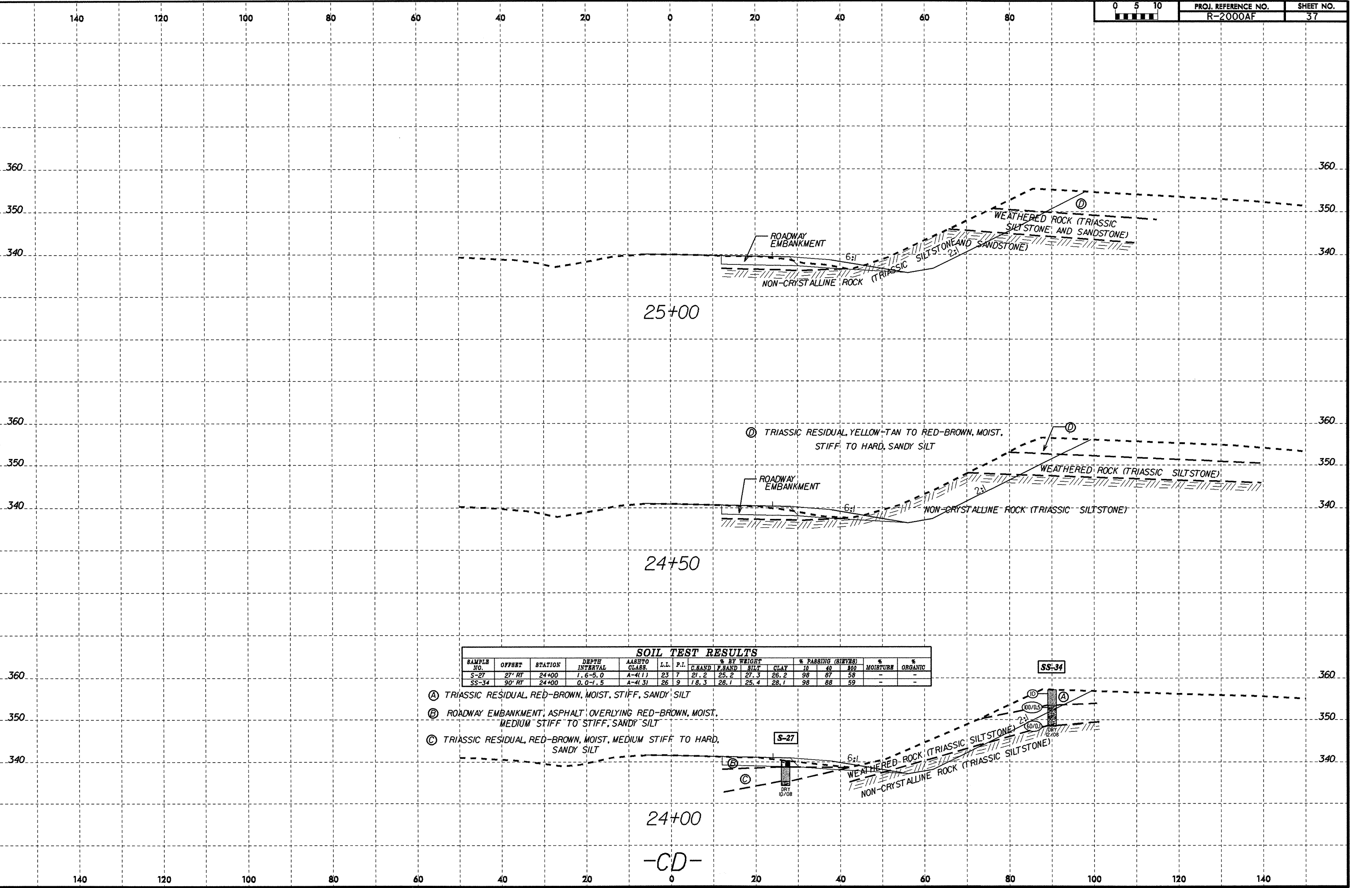
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

16-JUL-2009 12:48 L:\VRO\Projects\Station\TIP\R2000AF_GEO_ROW\CA00_GEO\TECH\XSC\R2000AF_Geo_xst_CD.dgn

8/23/09
I:\JUL-2008\1248
C:\ECON\Projects\GEOTECH\Site\Geo\2000AF_CD.dgn
C:\ECON\Projects\GEOTECH\Site\Geo\2000AF_CD.dgn



| | |
|---------------------------------|-----------------|
| PROJ. REFERENCE NO. R-2000AF | SHEET NO. 37 |
|---------------------------------|-----------------|



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. P.I. | | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|--------|---------|----------------|---------------|-----------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | L.L. | P.I. | G. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-27 | 27' RT | 24+00 | 1.6-5.0 | A-4(1) | 23 | 7 | 21.2 | 25.2 | 27.3 | 26.2 | 98 | 87 | 58 | - | - |
| SS-34 | 90' RT | 24+00 | 0.0-1.5 | A-4(3) | 26 | 9 | 18.3 | 28.7 | 25.4 | 28.1 | 98 | 88 | 59 | - | - |

- (A) TRIASSIC RESIDUAL, RED-BROWN, MOIST, STIFF, SANDY SILT
- (B) ROADWAY EMBANKMENT, ASPHALT OVERLYING RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, SANDY SILT
- (C) TRIASSIC RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF TO HARD, SANDY SILT

S-27

DRY 10/08

SS-34

(A)

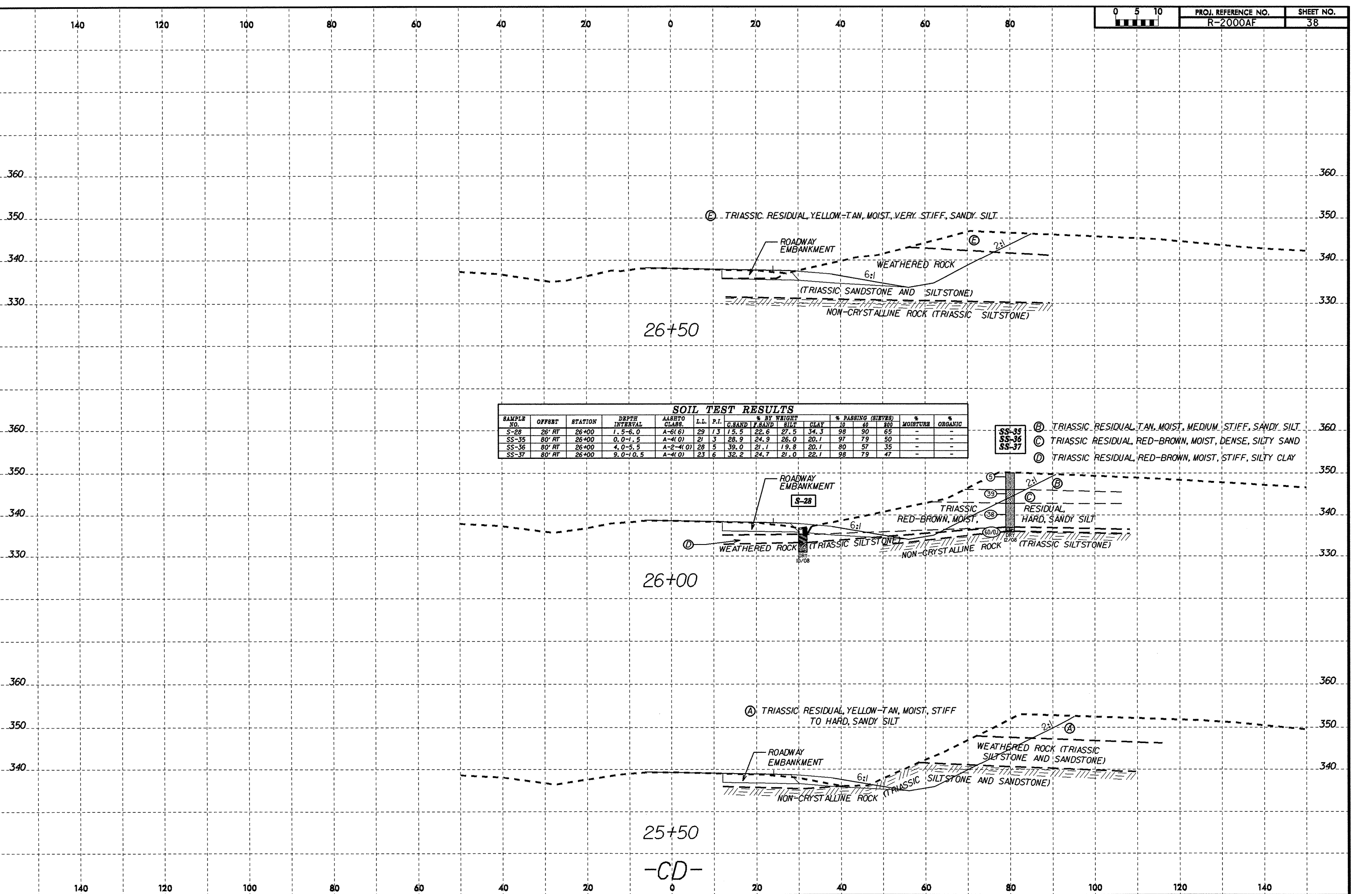
(B)

(C)

24+00

-CD-

8/23/99
 16-JUL-2009 12:49
 I:\projects\station\TIP\R2000AF_GEO\RDWY\CADD\GEOTECH\sec\R2000AF_Geo_xsl_CD.dgn
 User: jcalder
 Title: R2000AF



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|--------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-28 | 26' RT | 26+00 | 1.5-6.0 | A-6(6) | 29 | 13 | 15.5 | 22.6 | 27.5 | 34.3 | 98 | 90 | 65 | - | - |
| SS-35 | 80' RT | 26+00 | 0.0-1.5 | A-4(0) | 21 | 3 | 28.9 | 24.9 | 26.0 | 20.1 | 97 | 79 | 50 | - | - |
| SS-36 | 80' RT | 26+00 | 4.0-5.5 | A-2-4(0) | 28 | 5 | 39.0 | 21.1 | 19.8 | 20.1 | 80 | 57 | 35 | - | - |
| SS-37 | 80' RT | 26+00 | 9.0-10.5 | A-4(0) | 23 | 6 | 32.2 | 24.7 | 21.0 | 22.1 | 98 | 79 | 47 | - | - |

- SS-35 (B) TRIASSIC RESIDUAL, TAN, MOIST, MEDIUM STIFF, SANDY SILT
- SS-36 (C) TRIASSIC RESIDUAL, RED-BROWN, MOIST, DENSE, SILTY SAND
- SS-37 (D) TRIASSIC RESIDUAL, RED-BROWN, MOIST, STIFF, SILTY CLAY

26+50

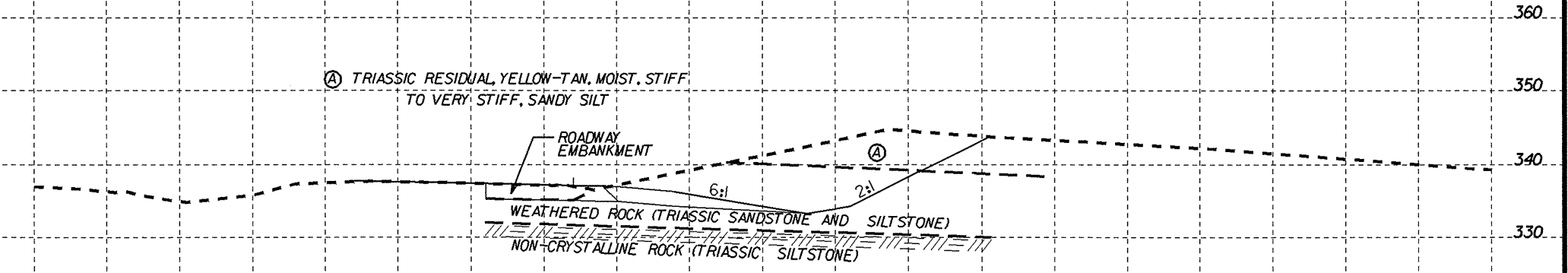
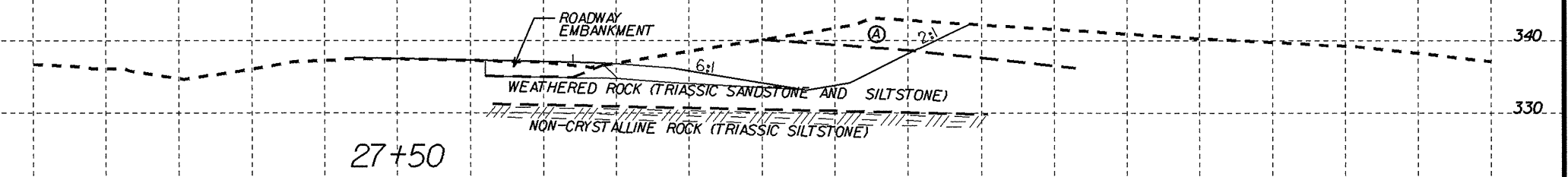
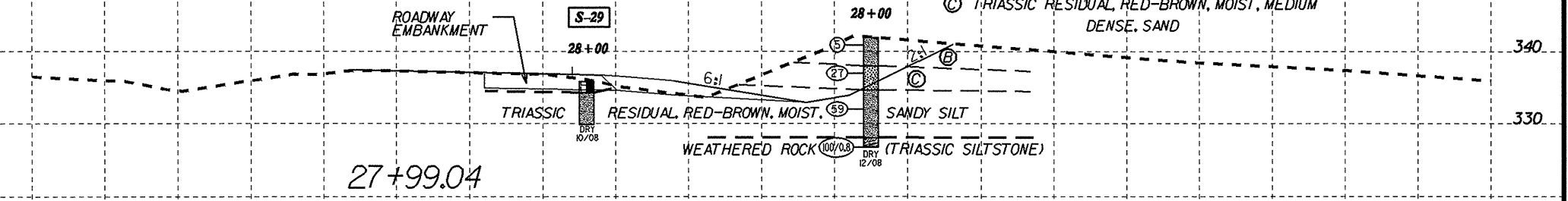
26+00

25+50

-CD-

8/23/99
 20-AUG-2008 14:31
 I:\projects\geotecn\proj\20000af\geo_rdw\cadd\geotech\se\20000af_geo_xst_cd.dgn
 T. WALKER

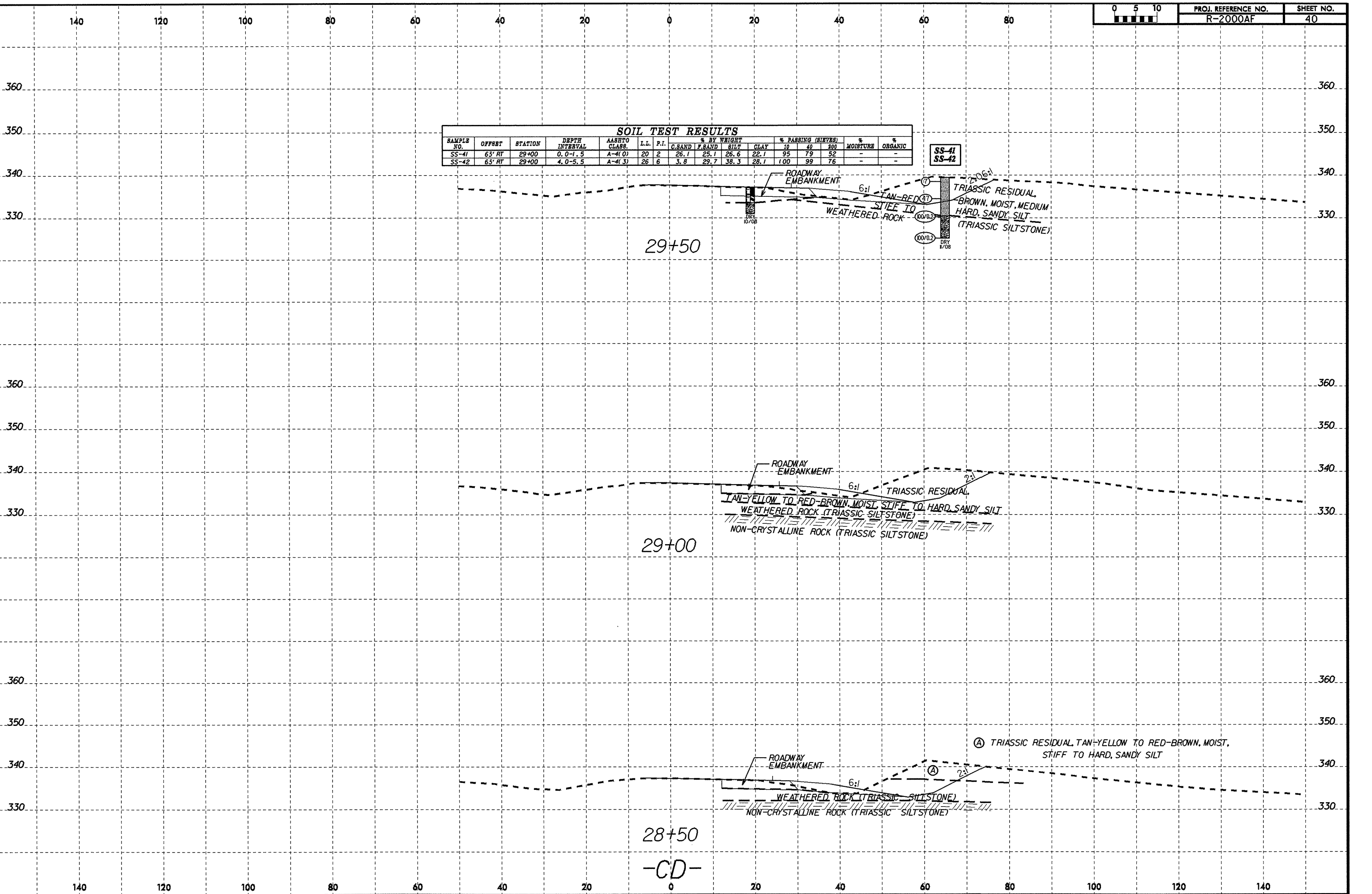
| SOIL TEST RESULTS | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|--------|--------|------|------|--------------------|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | C.SAND | F.SAND | SILT | CLAY | % PASSING (SIEVES) | % MOISTURE | % ORGANIC |
| | | | | | | | | | | | 10 | 40 | 200 |
| S-29 | 26' RT | 28+00 | 1.6-6.0 | A-1(2) | 23 | 8 | 18.2 | 25.4 | 30.2 | 26.2 | 99 | 90 | 62 |
| SS-38 | 63' RT | 28+00 | 0.0-1.5 | A-1(0) | 17 | 2 | 30.8 | 23.5 | 27.6 | 18.1 | 99 | 80 | 50 |
| SS-39 | 63' RT | 28+00 | 3.9-5.4 | A-2-4(0) | 27 | 7 | 46.6 | 21.3 | 14.0 | 18.1 | 95 | 63 | 34 |
| SS-40 | 63' RT | 28+00 | 8.9-10.4 | A-4(1) | 23 | 5 | 6.6 | 33.2 | 36.1 | 24.1 | 100 | 97 | 70 |



-CD-

8/23/99

| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|--------------|------|------|-------------|---------|------|--------------------|--------|---------|------------|-----------|---|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS | L.L. | P.I. | % BY WEIGHT | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | |
| | | | | | | | C. SAND | F. SAND | SILT | NO. 10 | NO. 40 | NO. 200 | | | |
| SS-41 | 65' RT | 29+00 | 0.0-1.5 | A-4(0) | 20 | 2 | 26.1 | 25.1 | 26.6 | 22.1 | 95 | 79 | 52 | - | - |
| SS-42 | 65' RT | 29+00 | 4.0-5.5 | A-4(3) | 26 | 6 | 3.8 | 29.7 | 38.3 | 28.1 | 100 | 99 | 76 | - | - |



29+50

29+00

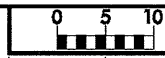
28+50

-CD-

I:\JUL-2009\1249
 L:\V\REF\REF\Investigation\TIP\R2000AF_GEO_ROWY\CADD_GEO\TECH\ssc\R2000AF_Geo_xst_CD.dgn
 11/11/09 10:10 AM
 ttwalker

8/23/99

IS: JUL - 2009 12:49
C:\GEO\Projects\TIP\R2000AF_GEO\RDWY\CA00.GEOTECH\src\R2000AF_Geo_xsl_CD.dgn
twalker



| PROJ. REFERENCE NO. | SHEET NO. |
|---------------------|-----------|
| R-2000AF | 41 |

140

120

100

80

60

40

20

0

20

40

60

80

360

350

340

330

360

350

340

330

360

350

340

330

360

350

340

330

30+50

30+00

-CD-

ROADWAY EMBANKMENT

TRIASSIC RESIDUAL
TAN-RED-BROWN, MOIST, MEDIUM STIFF TO HARD, SANDY SILT
WEATHERED ROCK (TRIASSIC SILTSTONE)

6:1

3.25'

ROADWAY EMBANKMENT

TRIASSIC RESIDUAL
TAN-RED-BROWN, MOIST, MEDIUM STIFF TO HARD, SANDY SILT
WEATHERED ROCK (TRIASSIC SILTSTONE)

6:1

3.25'

140

120

100

80

60

40

20

0

20

40

60

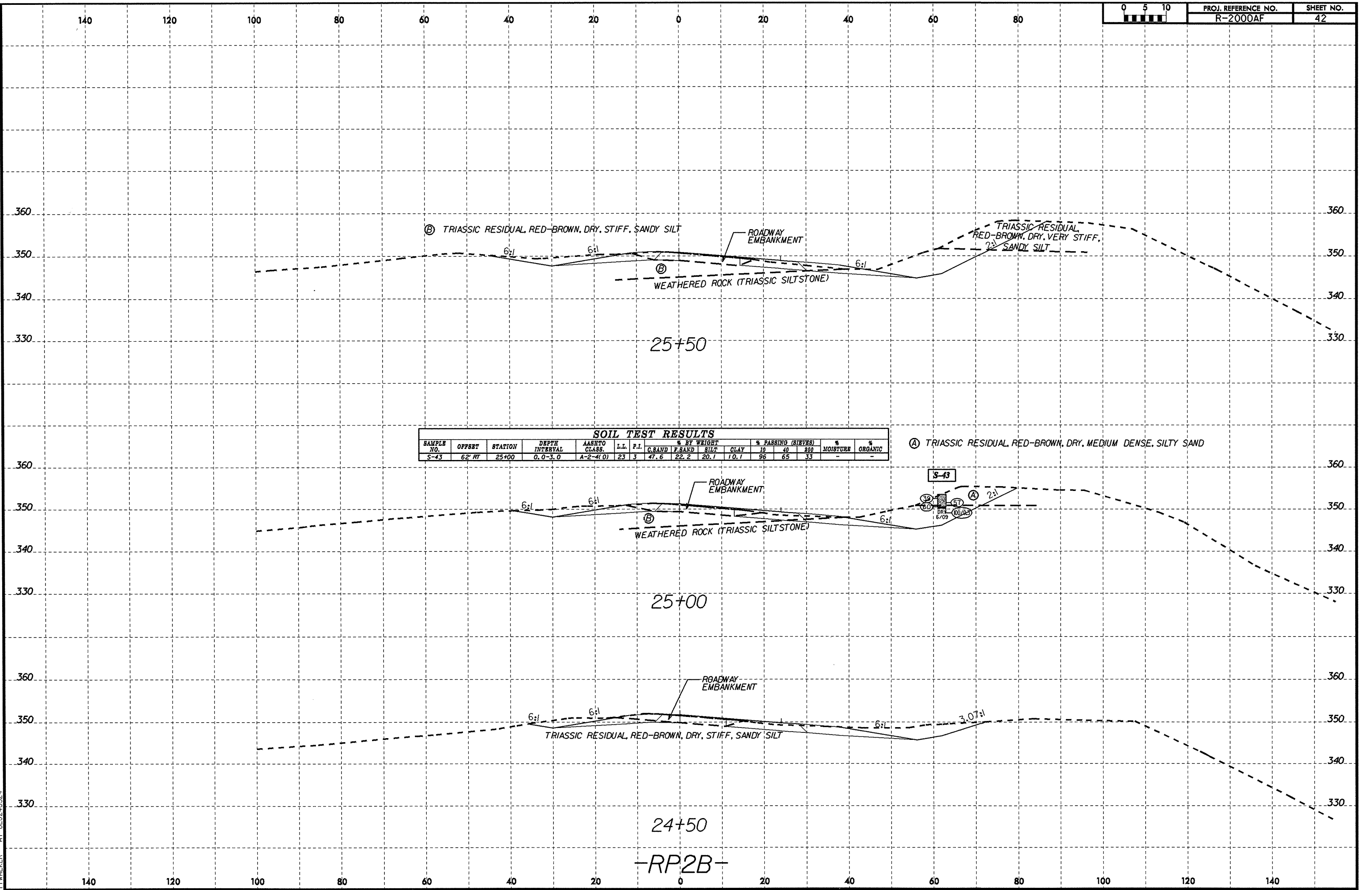
80

100

120

140

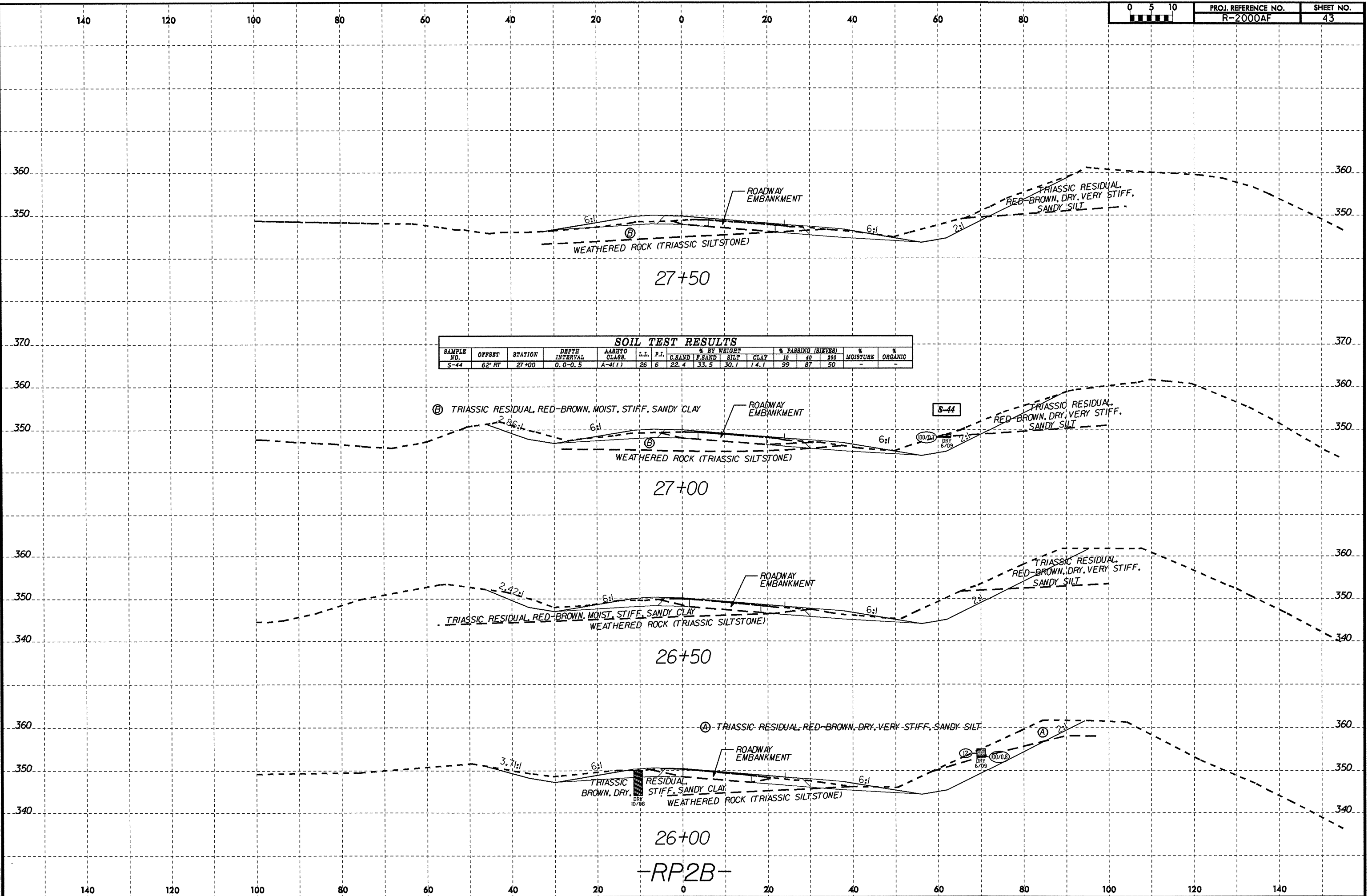
8/23/99
 20-AUG-2009 14:21
 H:\WORK\ER\10521832\10521832.dgn
 \p\2000af-geo-rdw\cadd\geotech\ssc\2000af-geo-ss1-rp2b.dgn



| SOIL TEST RESULTS | | | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|------------|-----------|---|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | % MOISTURE | % ORGANIC | |
| | | | | | | | G. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-43 | 62' RT | 25+00 | 0.0-3.0 | A-2-4(0) | 23 | 3 | 47.6 | 22.2 | 20.1 | 10.1 | 96 | 65 | 33 | - | - |

-RP2B-

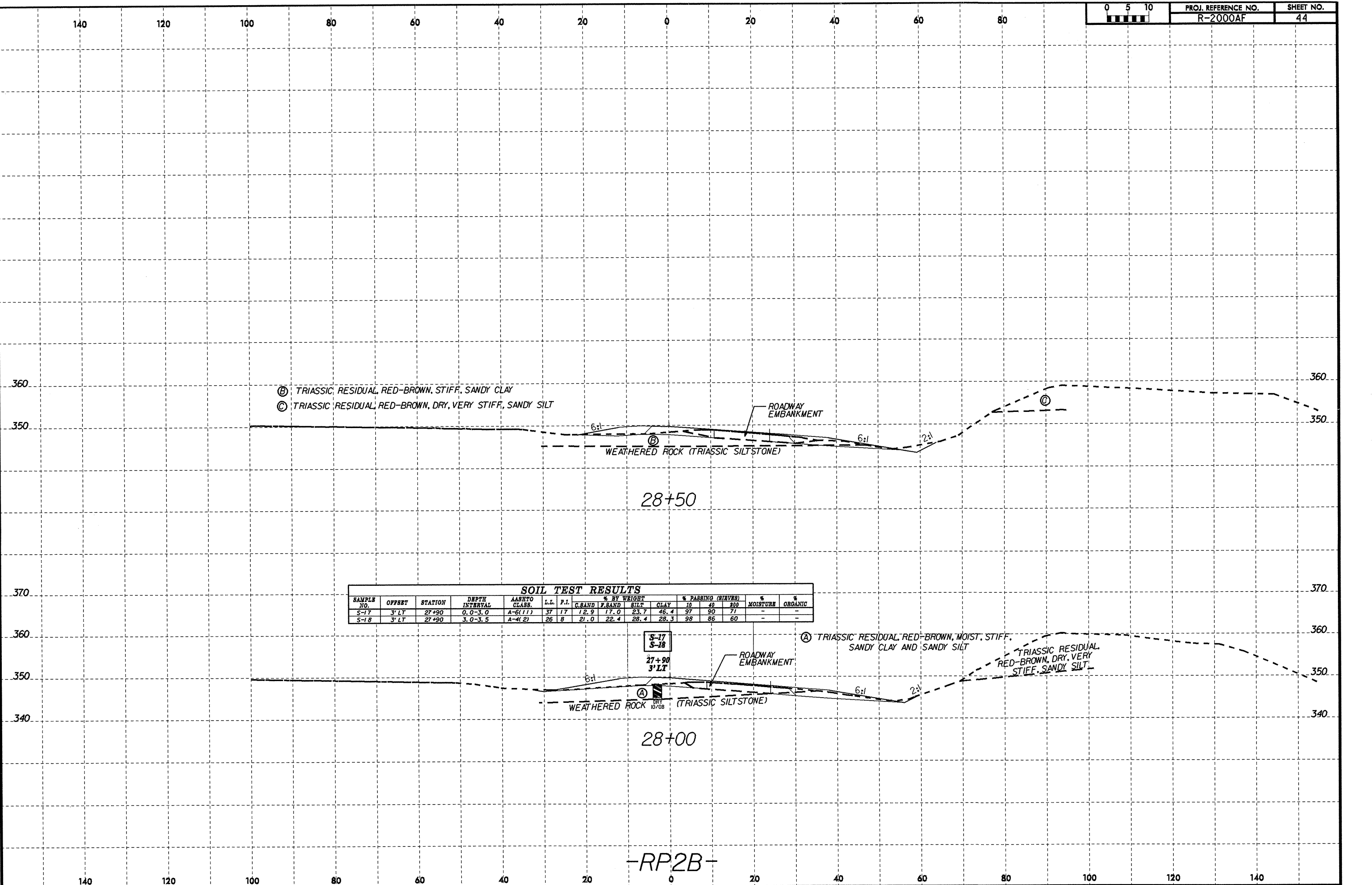
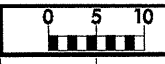
8/23/99
 20-AUG-2009 14:22
 I:\projects\geotechnical\hp\2000\af\geo\rdwy\CADD_GEO\TECH\yso\R2000AF_Geo_xst1_RP2B.dgn
 T. WALKER



| SOIL TEST RESULTS | | | | | | | | | | | | | |
|-------------------|--------|---------|----------------|---------------|------|------|---------|---------|------|------|--------------------|------------|-----------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | C. SAND | F. SAND | SILT | CLAY | % PASSING (SIEVES) | % MOISTURE | % ORGANIC |
| | | | | | | | | | | | 10 | 40 | 200 |
| S-44 | 6' RT | 27+00 | 0.0-0.5 | A-4(1) | 26 | 6 | 22.4 | 33.5 | 30.1 | 14.1 | 99 | 87 | 50 |

26+00
-RP2B-

8/23/99



SOIL TEST RESULTS

| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC |
|------------|--------|---------|----------------|---------------|------|------|-------------|---------|------|------|--------------------|----|-----|------------|-----------|
| | | | | | | | C. SAND | F. SAND | SILT | CLAY | 10 | 40 | 200 | | |
| S-17 | 3' LT | 27+90 | 0.0-3.0 | A-6(11) | 37 | 17 | 12.9 | 17.0 | 23.7 | 46.4 | 97 | 90 | 71 | - | - |
| S-18 | 3' LT | 27+90 | 3.0-3.5 | A-4(2) | 26 | 8 | 21.0 | 22.4 | 28.4 | 28.3 | 98 | 86 | 60 | - | - |

-RP2B-

16-JUL-2009 12:49 L:\ERD\Realegh\Projects\geotechn\TIP\R2000AF_GEO\RDWY\CADD\GEO\TECH\XSC\R2000AF_GEO_XS1_RP2B.dgn