Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

Section # Page #	Description	Date
Section 1.7 Page 2	Modify 1st sentence of 2nd paragraph to read: An LOTB is typically associated with a structure, is part of the Project Plans, and has an accompanying Test Boring Layout sheet that presents location information of the test borings in a plan view.	3/2022
Figure 2-3 Page 7	Part 8, *Hole Completion,* 2th bullet is amended to read: • *Sealing Method (e.g., grout, dry bentonite chips)*	10/2015
Figure 2-3 Page 7	Add new: • Part 9, "***Instrumentation Installed***"	10/2015
Figure 2-3 Page 7	Item 4 is amended to read: o Northing and Easting, local coordinate reference system (required)	8/2018
Page 10	Add new: Section 2.5.1.3, "***Description of Isolated Interbeds/layer***" *For small isolated layers or interbeds, it is acceptable to call out the isolated layer without having to create a new layer as long as the following conditions are met: (1) the isolated layer must be 2 feet thick or less, and (2) the isolated layer must be described completely per Sec. 2.5.1, and (3) predominant soil description above and below the isolated layer are the same.* *Poorly Graded SAND (SP); dense; brown; moist; fine sand.* *6-inch thick interbed of Fat Clay (CH); very stiff; black; moist; PP=3 tsf.*	10/2015
Page 10	Change **2.5.1.3 Description of Fills** to **2.5.1.4**	10/2015
Section 2.5.2 Page 11	The 2nd paragraph is amended to read: *The ASTM procedure for identifying and describing fine-grained and coarse-grained soil is only applicable to material passing the 3-inch sieve. The percentage(s) of cobbles and/or boulders (if encountered) must be reported per Section 2.5.17* ***and the group name must be modified accordingly.***	10/2015

Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

<table>
<tr><th>Section #
Page #</th><th>Description</th><th>Date</th></tr>
<tr><td>Section 2.5.2
Page 11</td><td>The text is modified as follows:

The group name for a soil with a borderline symbol must be the group name for the first symbol. <s>except for:</s>
<s>• CL/CH lean to fat CLAY</s>
<s>• ML/CL CLAYEY SILT, and</s>
<s>• CL/ML SILTY CLAY”</s></td><td>10/2015</td></tr>
<tr><td>Sec. 2.5.2
Page 11</td><td>Dual Symbol is modified as follows:

A dual symbol is two symbols separated by a hyphen, e.g., GP-GM, SW-SC, GW-GC. They are used to indicate that a soil has about 10% fines.</td><td>10/2015</td></tr>
<tr><td>Figure 2-13
Page 17</td><td>The figure is amended to read:

Percent or Proportion of Soil, Pp
<table>
<tr><th>Description</th><th>Criteria</th></tr>
<tr><td>Trace</td><td>Particles are present but estimated to be less than 5%</td></tr>
<tr><td>Few</td><td>5 - 10%</td></tr>
<tr><td>Little</td><td>15 - 25%</td></tr>
<tr><td>Some</td><td>30 - 45%</td></tr>
<tr><td>Mostly</td><td>50 - 100%</td></tr>
</table></td><td>10/2015</td></tr>
<tr><td>Figure 2-14
Page 17</td><td>The figure is amended to read:

Particle Size, Ps
<table>
<tr><th>Description</th><th>Sieve Size</th><th>Approximate Particle Size (in)</th></tr>
<tr><td>Boulder</td><td>Greater than 12 in.</td><td>12 < Ps</td></tr>
<tr><td>Cobble</td><td>3 - 12 in.</td><td>3 < Ps ≤ 12</td></tr>
<tr><td>Coarse Gravel</td><td>3/4 - 3 in.</td><td>3/4 < Ps ≤ 3</td></tr>
<tr><td>Fine Gravel</td><td>No. 4 - 3/4 in.</td><td>1/5 < Ps ≤ 3/4</td></tr>
<tr><td>Coarse Sand</td><td>No. 10 - No. 4</td><td>1/16 < Ps ≤ 1/5</td></tr>
<tr><td>Medium Sand</td><td>No. 40 - No. 10</td><td>1/64 < Ps ≤ 1/16</td></tr>
<tr><td>Fine Sand</td><td>No. 200 - No. 40</td><td>1/300 < Ps ≤ 1/64</td></tr>
<tr><td>Fines</td><td>Passing No. 200</td><td>Ps ≤ 1/300</td></tr>
</table></td><td>10/2015</td></tr>
</table>

Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

<table>
<tr><th>Section #
Page #</th><th>Description</th><th>Date</th></tr>
<tr><td>Sec. 2.5.19
Page 21</td><td>“Additional Comments”, add bullet:

• No SPT recovery from elev. XX to elev. XX</td><td>10/2015</td></tr>
<tr><td>Figure 2-23
Page 22</td><td>Item 11, “Relative Strength of Intact Rock”, is amended to read:

<table><tr><td>11</td><td>Relative Strength of Intact Rock</td><td></td><td>3.3</td><td></td><td>○</td></tr></table></td><td>10/2015</td></tr>
<tr><td>Section
2.6.1.3
Page 23</td><td>Add the following to the end of the section:

If subsequent changes only occur in the soil properties, these changes can be shown independently in parentheses.

SEDIMENTARY ROCK (SANDSTONE); medium grained; gray; intensely weathered; soft; unfractured (Well-graded SAND (SW); medium dense; moist; medium sand; weak cementation)

(dense)

(medium dense)</td><td>10/2015</td></tr>
<tr><td>Figure 2-44
Page 36-37</td><td>Add new row:

<table><tr><th>Test Method(s)</th><th>Test Name</th><th>Material Required</th><th>Typical Sample Size/Type</th><th>TL-101 Required</th></tr><tr><td>ASTM D 6467</td><td>Drained Residual Shear Strength</td><td>1 lb.</td><td>1 Tube</td><td>No</td></tr></table>Also:
• Replace “ASTM D 5333” with ASTM D 4546”
• Delete “ASTM D 427”
• Replace “ASTM D 2938” with “ASTM D 7012 Method C”
• Replace “ASTM D 4767” with “ASTM D 7263”</td><td>10/2015</td></tr>
<tr><td>Figure 4-3
Page 54</td><td>Change location information to Northing and Easting</td><td>8/2018</td></tr>
<tr><td>Section 5.1
Page 57</td><td>Modify 1st sentence to read:

An LOTB is typically associated with a structure, is part of the Project Plans, and has an accompanying Test Boring Layout sheet that presents location information of the test borings in a plan view.</td><td>3/2022</td></tr>
<tr><td>Figure 5-1
Page 58</td><td>Replace Figure 5-1 with:

• Figure 5-1A, Test Boring Layout
• Figure 5-1B, Log of Test Borings</td><td>3/2022</td></tr>
</table>

Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

Section # Page #	Description	Date
Section 5.2.1 Page 59	Entire section replaced with: **5.2.1 - Contents and Characteristics of the LOTB and Test Boring Layout Sheets** As part of the project plans, the Log of Test Borings (LOTB) and Test Boring Layout (Layout) sheets are displayed as separate plan sheets, and together they: • Present the boring logs on an elevation scale. • Present a plan view showing the location of each boring relative to an alignment and/or existing or planned facility or structure. • Present the type(s) of drilling method(s) used to perform the investigation, the type(s) of sampling performed, and how the sampler was advanced. • Present the location and description, both graphical and written, of the types of soil and rock encountered within the borehole. • Present the types of field and laboratory testing performed. • Present field and laboratory test data. • Are optimized for printing on full-size plan sheets (24" x 36") and typically reproduced on 11" x 17" sized paper. • Allow presentation of more than one boring log per plan sheet. • Are accompanied by LOTB legend sheets.	3/2022

Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

Section # Page #	Description	Date
Section 5.2.2 Page 59	Entire section replaced with: **5.2.2 - Notes on the LOTB and Layout Sheets** Each LOTB and Layout sheet must contain a note section for presentation of relevant factual data and one of the following two notes: If the procedures of this manual were followed without exception, then the following note must be placed on the LOTB sheet: *"This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (Date)"* If the procedures of this manual were followed without exception, then the following note must be placed on the Test Boring Layout sheet: *"This Test Boring Layout sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (Date)"* If an exception to the procedures of this manual has been approved and implemented, then the notes must be modified to read: *"This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (Date) except as noted below"* and *"This Test Boring Layout sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (Date) except as noted below"* Optional notes may include: • Changes in drilling equipment • Site observations • Other drilling observations • Depth and length of no recovery • No SPT recovery from elevation XX to elevation XX Do not repeat the procedures or requirements set forth in this manual in the notes section. Notes specific to a borehole should be presented on the LOTB sheet. Only notes that are generalized for the project and/or alignment are presented on the Layout sheet.	3/2022
Section 5.2.3 Page 59	Entire section replaced with: **5.2.3 - LOTB and Layout Sheet Formatting** Plan sheets must be prepared in accordance with this manual and the Caltrans *Plans Preparation Manual*. The plan sheet border must present the following:	3/2022

Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

Section # Page #	Description	Date
Section 5.2.3.1 Page 59	Replace item ”a” with: a) The State of California Registered Civil Engineer, Geotechnical Engineer, Structure Engineer (for Layout only), Certified Engineering Geologist, or Professional Geologist seal with the signature, date, license number, and registration certificate expiration date of the Geoprofessional in responsible charge of the LOTB sheet;	3/2022
Section 5.2.3.2 Page 60	Replace items “c” and “d” with: c) “DRAWN BY”: The name of the Engineering Graphics Unit person who prepared the LOTB and draft Layout sheet. d) “CHECKED BY”: The name of the person who performed the quality control check of the LOTB and Layout sheet	3/2022
Section 5.2.3.3 Page 60-61	Entire section replaced with: **5.2.3.3 - Plan View – Layout** a) The first project plan sheet(s) for test borings is used entirely for the Layout and consists of a Plan View and a Borehole Location Table. b) Multiple Layout sheets must be numbered with reference to the stationing of the control line (i.e., showing the first sheet with the lowest stationing and the last sheet with the highest stationing). c) “BENCH MARK” provide a note stating “Bench Marks shown on the Log of Test Borings sheets are for Design purposes only. For complete list of survey monuments for this project, see Survey Control information provided in the ROADWAY PLANS.” d) Show the scale directly below the Plan View label. e) Show a North arrow. f) Lines or control lines shown in the Plan View must be consistent with those shown on the General Plan sheet. g) Show stationing and names for control lines. Stationing must increase from left to right. Show a minimum of two stations on all lines. h) Show control line intersection stationing and bearings. i) Show names and directions of nearest cities. j) Show names and directions of stream flows when applicable. k) Show Table listing Hole Identification, Alignment Name, and Station and Offset Plot boring locations with symbols as shown in the legend to identify drilling methods (e.g., auger hole, rotary hole, cone penetration). The Hole Identification must be presented with each symbol.	3/2022

Section # Page #	Description	Date
Section 5.2.3.4 Page 61	Entire section replaced with: **5.2.3.4 - Profile View – LOTB** a) Show the location, description, and elevation of the bench mark used for determining the top of boring elevations under the heading "BENCH MARK". Identify the vertical datum (National Geodetic Vertical Datum, U.S. Geological Survey, U.S. Coast & Geodetic Survey, District, etc.) used to determine the benchmark elevations. b) Show the elevations and grid lines on both the left and right margins. Numerical values must be in multiples of 10 (e.g. 20, 10, 0, -10, -20). c) Show the Hole Identification, top of hole elevation, Northing and Easting at the top of each boring log. d) Show types and diameters of drill tools. e) Show the completion date of boring (m/d/y) at the bottom of each boring log. f) Show "Terminated at EL. XX'" to indicate the bottom of boring elevation. g) Show the SPT hammer energy ratio, "Hammer Energy Ratio (ER_i) = XX%," at the bottom of each boring. h) Provide groundwater information for each boring. If groundwater was measured, show the date(s) and elevation(s) of groundwater measurement(s). If groundwater was not encountered, state "*Groundwater was not encountered in boring(s) ####".* If groundwater was encountered but not measured, state "*Groundwater was encountered in boring(s) ####, but elevation was not measured*." i) Show results from the Standard Penetration Test (SPT) at relevant elevations along the left side of the boring log *(see Appendix A.8)*. j) Show types of field and laboratory tests with symbols as indicated in the legend, at relevant elevations along the right side of the boring log. k) Show the Profile scales (horizontal and vertical) under the heading "PROFILE". l) Show RQD and/or recovery along the left side of the boring log.	3/2022
Section 5.2.4.3 Page 61-62	Replace item "c" with: c) The State of California Registered Civil Engineer, Geotechnical Engineer, Structure Engineer (for Layout sheet only), Certified Engineering Geologist, or Professional Geologist seal with the signature, date, license number, and registration certificate expiration date of the Geoprofessional in responsible charge of the LOTB sheet.	3/2022

Soil and Rock Logging, Classification, and Presentation Manual (2010)
Erratum Sheet

Section # Page #	Description	Date
Figure 5-3 Page 63	Add: • *Groundwater symbol to CPT boring* • *Next to the diamond "symbol", add Hole Type "RC" and Description "Rotary core with continuously-sampled, self-casing wire-line"*	10/2015
Figure 5-4 Page 64	Under Field and Laboratory Testing: • Add "DR – Drained Residual Shear Strength (ASTM D 6467)" • Replace "CL – Collapse Potential (ASTM D 5333)" with "CL – Collapse Potential (ASTM D 4546)" • Delete "SL – Shrinkage Limit (ASTM D 427)" • Replace "Unconfined Compression – Rock (ASTM D 2938)" with "Unconfined Compression – Rock (ASTM D 7012 Method C)" • Replace "UW – Unit Weight (ASTM D 4767)" with "UW – Unit Weight (ASTM D 7263)"	10/2015
Section A.10 Page 81	End of second paragraph, add: • *"Mechanical breaks must be fitted together and counted as one piece."*	10/2015

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER   X DATE

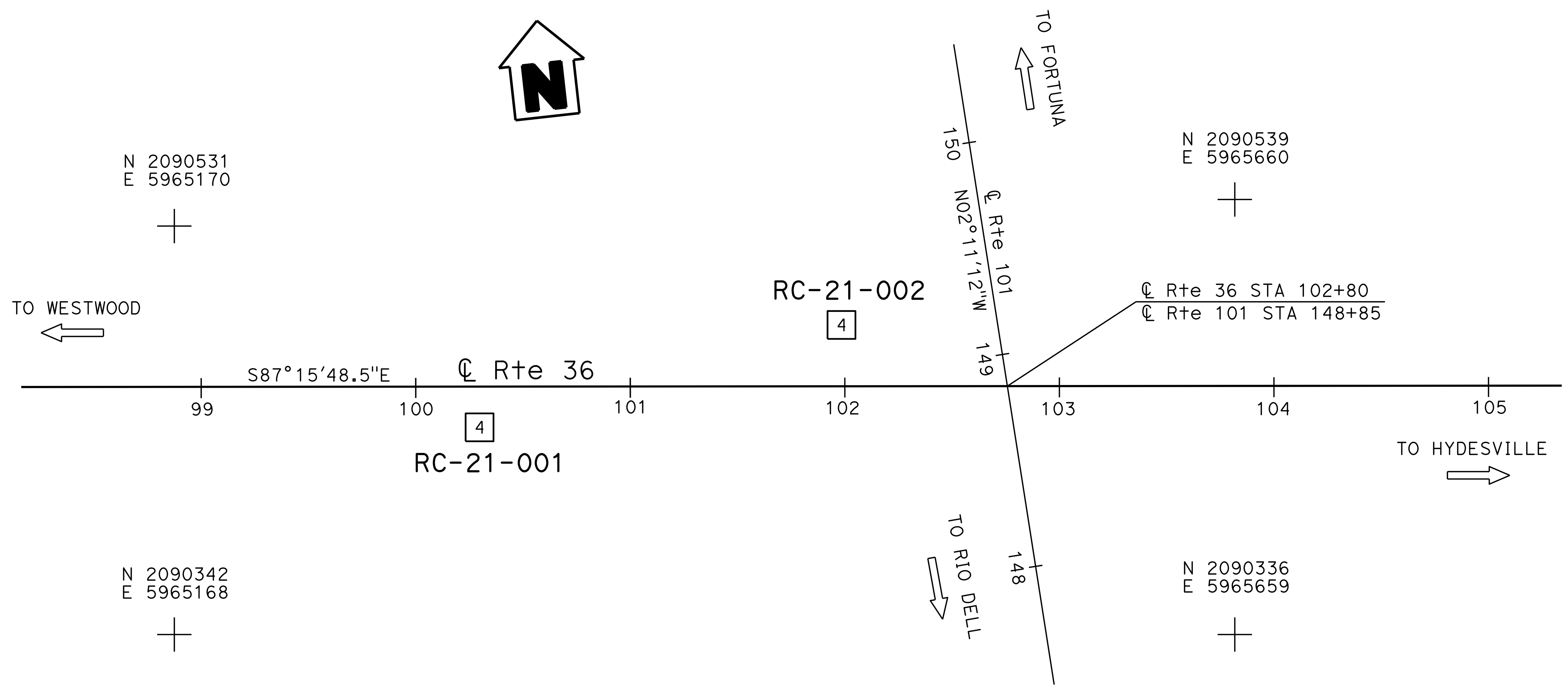
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
X
No. X
Exp. X
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

This Test Boring Layout sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).

See 2018 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.



PLAN
1" = 40'

BOREHOLE LOCATION TABLE					
HOLE ID	Northing	Easting	℄ Rte 36		
			Station	Offset (ft)	Rt/Lt
RC-21-001	2090438.2	5965310.7	100+30.2	18.8	Rt
RC-21-002	2090481.1	5965476.6	101+96.1	27.8	Lt

DESIGN	BY X	CHECKED X
DETAILS	BY X	CHECKED X

GEOTECHNICAL SERVICES FIELD INVESTIGATION BY: X

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH X

BRIDGE No. XX-XXXX
POST MILE X.X

PROJECT TITLE
TEST BORING LAYOUT

OGS CIVIL LOG OF TEST BORINGS SHEET
(ENGLISH) (REVISION 5/28/2021)

DATE PLOTTED => 15-APR-2022   TIME PLOTTED => 15:31
FILE => example test boring layout w USERNAME => s132428 ized.dgn

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: XXXX
PROJECT NUMBER & PHASE: XXXXXXXXXX1

COUNTY/ROUTE: XXX/XXX
CONTRACT No.: XX-XXXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET	OF
X	X

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
No. X
Exp. X
CIVIL
STATE OF CALIFORNIA

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BENCH MARK

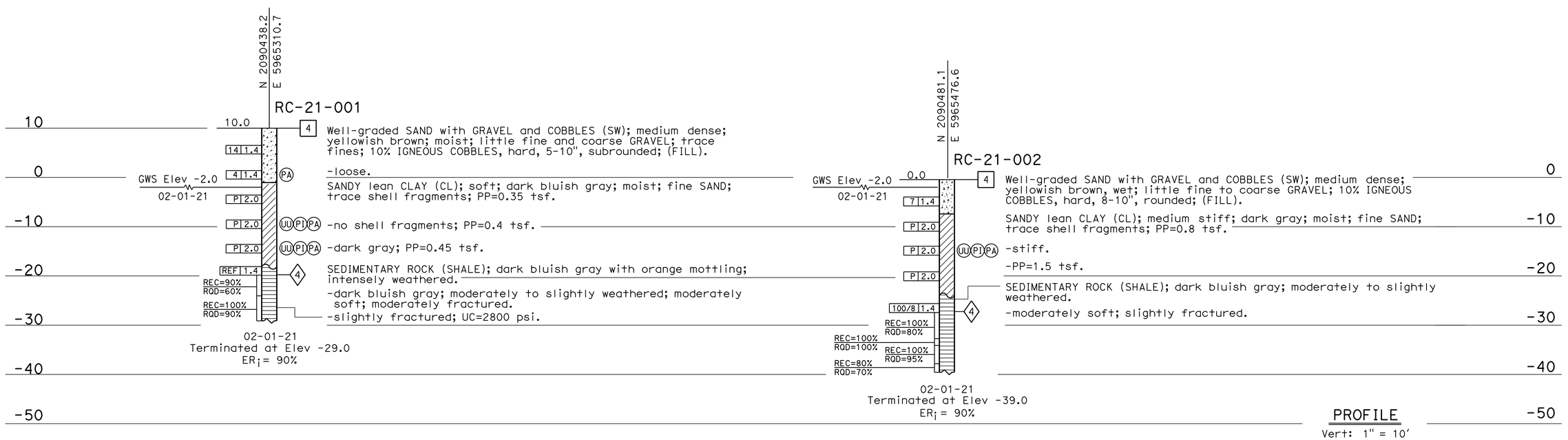
BM PRHV 38 Elev 12.3
N 2090438.12
E 5695410.34
Vert: NAVD88
Horiz: NAD83 (1991)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).

See 2018 Standard Plans A10F and A10G for Soil Legend, and A10H for Rock Legend.

NOTE:

Sporadic boulders at the ground surface up to 20" diameter.



GEOTECHNICAL SERVICES			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH X	BRIDGE No. XX-XXXX	PROJECT TITLE
FUNCTIONAL SUPERVISOR: X	DRAWN BY: X	FIELD INVESTIGATION BY: X			POST MILE X.X	LOG OF TEST BORINGS X OF X

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 5/28/2021)

DATE PLOTTED => 15-APR-2022 TIME PLOTTED => 15:30
FILE => example log of test boring.dgn USERNAME => s132428

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: XXXXXXXXX1

COUNTY/ROUTE: XXX/XXX
CONTRACT No.: XX-XXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
				X	X