

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	601	617

*Gary Parikh*  
 GEOTECHNICAL PROFESSIONAL DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
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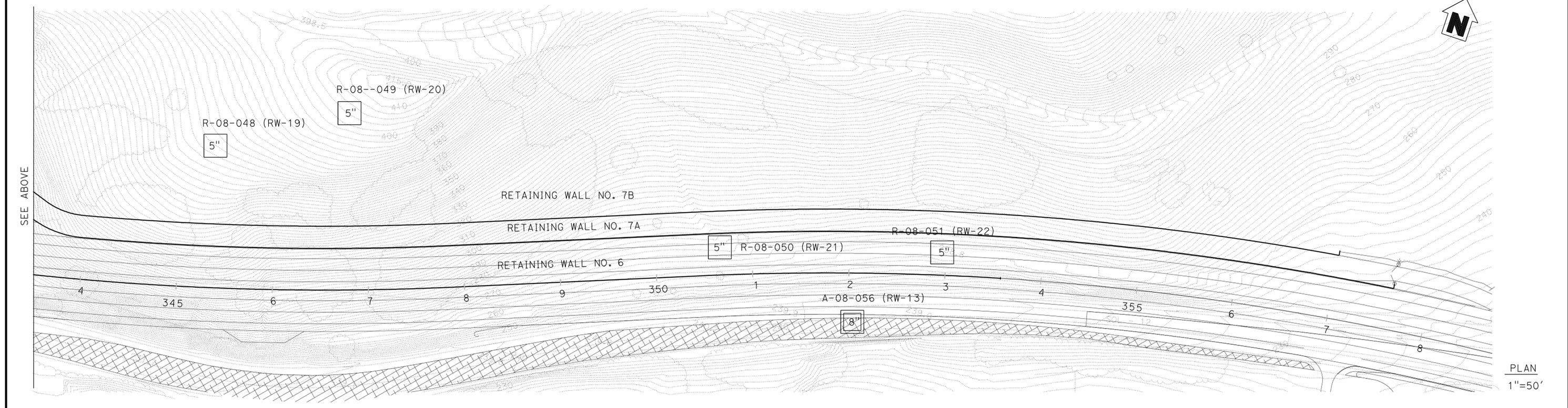
REGISTERED PROFESSIONAL ENGINEER  
 GARY PARIKH  
 No. G.E. 666  
 Exp. 12/31/11  
 STATE OF CALIFORNIA

**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE CA 95131

**BENCHMARKS:**

Benchmark No. 6 - Set 2" brass disk (California Department of Transportation SW-532) in concrete along the southerly side of eastbound Highway 12, at PM 1.30, about 400 feet east of callbox SO-12-012; approximately 10.5 feet southerly of eastbound edge of pavement; approximately 39.6 feet easterly of power pole; approximately 12.4 feet northwesterly of chain link fence post. Elevation: 232.057 Northing: 1836982.8840 Easting: 6510677.3300

Benchmark No. 7 - Set 1" iron pipe with red plastic plug and tack (California Department of Transportation SW-534) along the southerly side of eastbound Highway 12, at PM 1.68, behind the guard rail; approximately 3.2 feet northerly of a black chain link fence, approximately 31.5 feet northwesterly of black chain link fence post. Elevation: 237.559 Northing: 1837356.8140 Easting: 6512667.0800

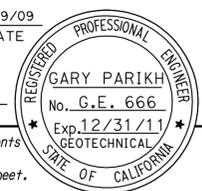


<i>Tracy L. Bertram</i> DESIGN OVERSIGHT 1-7-10 SIGN OFF DATE	DRAWN BY L. TRAN CHECKED BY F. WANG	V. SANTOS FIELD INVESTIGATION BY: DATE: N/A	<b>PREPARED FOR THE          STATE OF CALIFORNIA          DEPARTMENT OF TRANSPORTATION</b>	F. WANG PROJECT ENGINEER	BRIDGE NO. 23E0012/ 23E0013 POST MILES 1.2/1.2	<b>ROUTE 12/JAMESON CANYON ROAD PROJECT          LOG OF TEST BORINGS NO. 7</b>
065 GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 06-01-09)				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 04264 EA 264131	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 7/29/09, 11/6/09, 12/9/09

SHEET 162 OF 171

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	602	617

*Gary Parikh*  
 GEOTECHNICAL PROFESSIONAL DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
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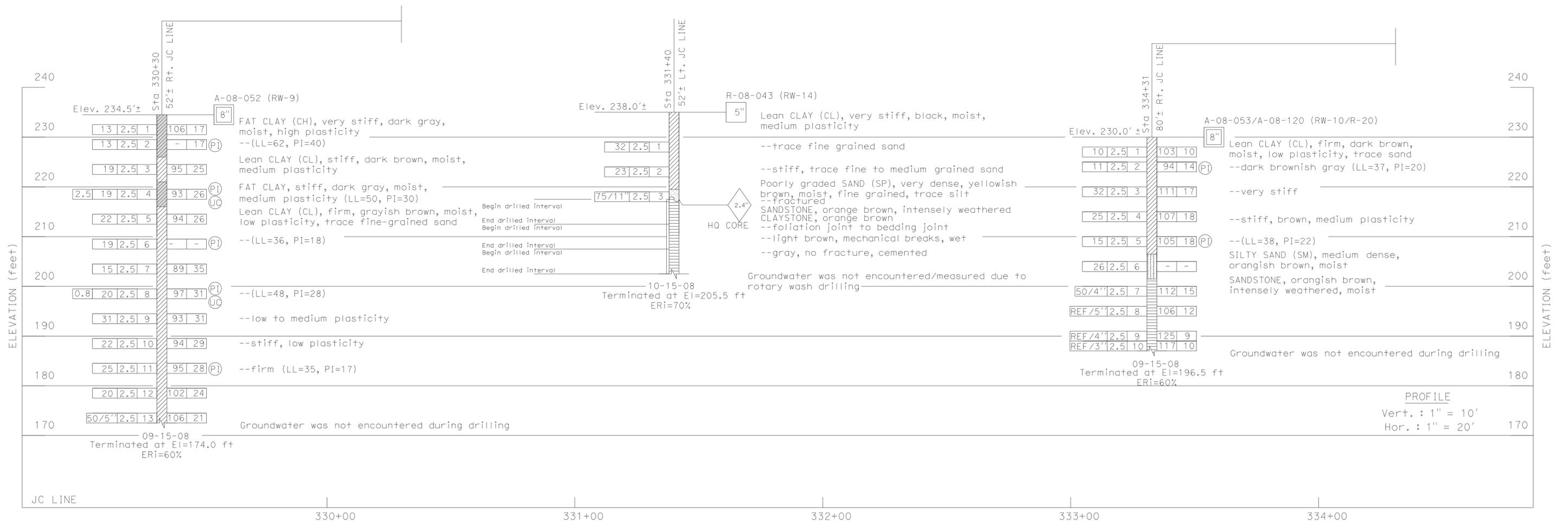
**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE, CA 95131

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)

Notes:  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop (Automatic Hammer)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

All dimensions are in feet unless otherwise shown



<i>Tracy L. Bertram</i> DESIGN OVERSIGHT 1-7-10 SIGN OFF DATE	DRAWN BY L. TRAN CHECKED BY F. WANG	V. SANTOS FIELD INVESTIGATION BY: DATE: SEPTEMBER 2008 & OCTOBER 2008	<b>PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION</b> F. WANG PROJECT ENGINEER	BRIDGE NO. 23E0012/23E0013 POST MILES 1.2/1.2	<b>ROUTE 12/JAMESON CANYON ROAD PROJECT</b> <b>LOG OF TEST BORINGS NO. 8</b>
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 04264 EA 264131	DISREGARD PRINTS BEARING EARLIER REVISION DATES	SHEET 163 OF 171

USERNAME => H11enard DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:27

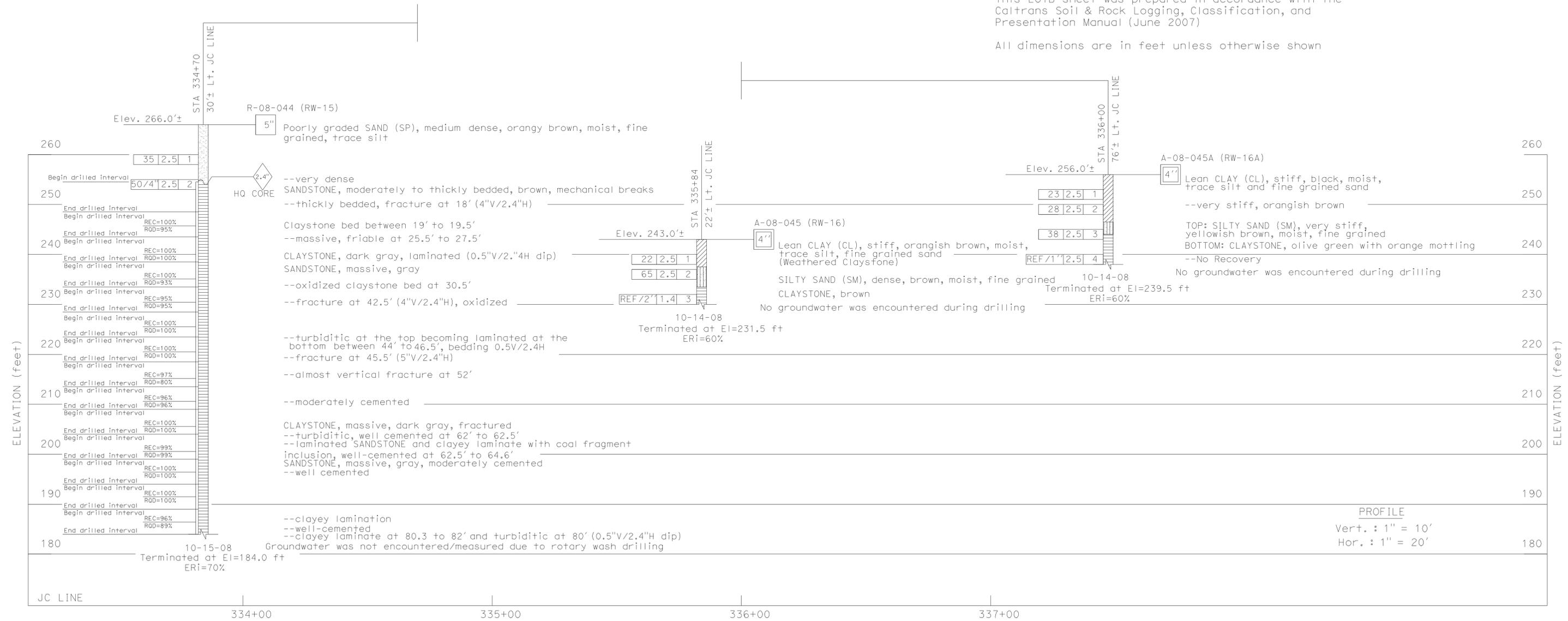
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	603	617
 GEOTECHNICAL PROFESSIONAL			12/9/09	DATE	
11-22-10			PLANS APPROVAL DATE		
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<b>PARIKH CONSULTANTS, INC.</b> 2360 QUME DRIVE, SUITE A SAN JOSE, CA 95131					

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)

Notes:  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop  
 (Automatic Hammer)

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All dimensions are in feet unless otherwise shown



  
 DESIGN OVERSIGHT  
 Tracy L. Bertram  
 1-7-10  
 SIGN OFF DATE

DRAWN BY L. TRAN  
 CHECKED BY F. WANG

V. SANTOS  
 FIELD INVESTIGATION BY:  
 DATE: OCTOBER 2008

**PREPARED FOR THE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION**

F. WANG  
 PROJECT ENGINEER

BRIDGE NO. 23E0012/23E0013  
 POST MILES 1.2/1.2  
**ROUTE 12/JAMESON CANYON ROAD PROJECT**  
**LOG OF TEST BORINGS NO. 9**

USERNAME => H:\lenard DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	604	617

Notes:  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop (Automatic Hammer)

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

All dimensions are in feet unless otherwise shown

*Gary Parikh*  
 GEOTECHNICAL PROFESSIONAL DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
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**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE CA 95131



<i>Darcy B. Bertram</i> DESIGN OVERSIGHT Tracy L. Bertram 1-7-10 SIGN OFF DATE	DRAWN BY L. TRAN CHECKED BY F. WANG	V. SANTOS FIELD INVESTIGATION BY: DATE: OCTOBER 2008	<b>PREPARED FOR THE          STATE OF CALIFORNIA          DEPARTMENT OF TRANSPORTATION</b>	BRIDGE NO. 23E0012/23E0013 POST MILES 1.2/1.2 <b>ROUTE 12/JAMESON CANYON ROAD PROJECT          LOG OF TEST BORINGS NO. 10</b>
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3		CU 04264 EA 264131	DISREGARD PRINTS BEARING EARLIER REVISION DATES REVISION DATES: 1/9/09, 11/9/09, 12/9/09 SHEET 165 OF 171

065 GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 06-01-09) FILE => 23E0015X-Z-LOTB10.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	605	617

*Gary Parikh*  
 GEO. TECHNICAL PROFESSIONAL DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
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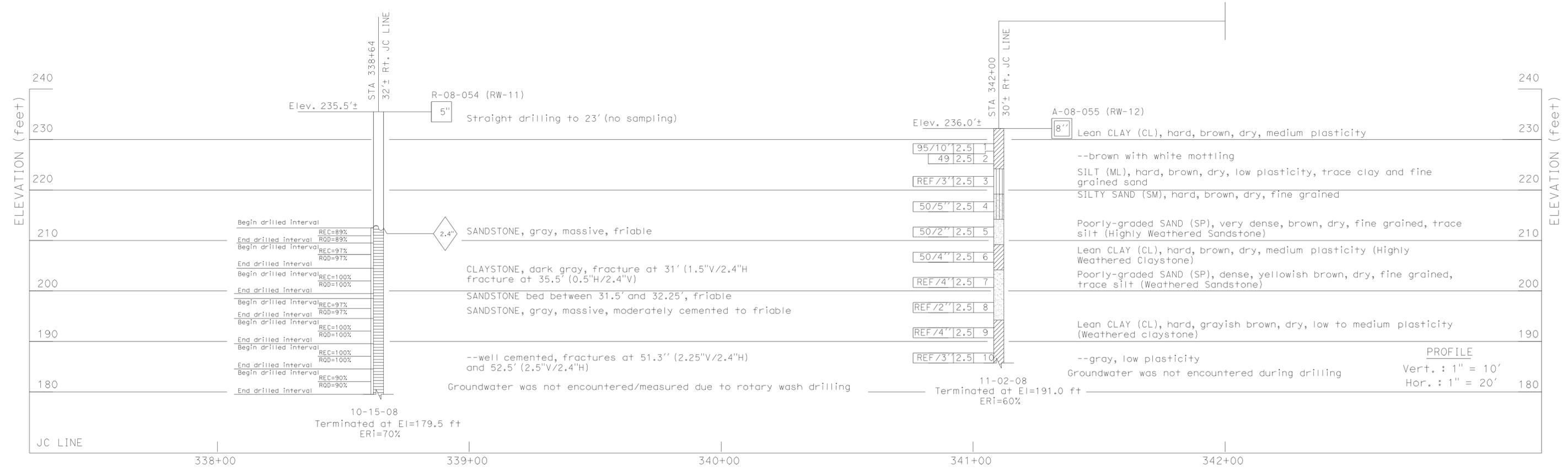
**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE, CA 95131

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)

Notes:  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop (Automatic Hammer)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

All dimensions are in feet unless otherwise shown



*Tracy L. Bertram*  
 DESIGN OVERSIGHT Tracy L. Bertram  
 1-7-10  
 SIGN OFF DATE

DRAWN BY L. TRAN  
 CHECKED BY F. WANG

V. SANTOS  
 FIELD INVESTIGATION BY:  
 DATE: OCTOBER 2008 & NOVEMBER 2008

**PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION**

F. WANG  
 PROJECT ENGINEER

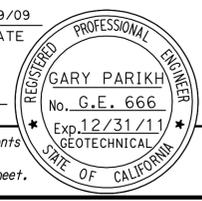
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 POST MILES 1.2/1.2  
**ROUTE 12/JAMESON CANYON ROAD PROJECT**  
**LOG OF TEST BORINGS NO. 11**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	606	617

12/9/09  
DATE

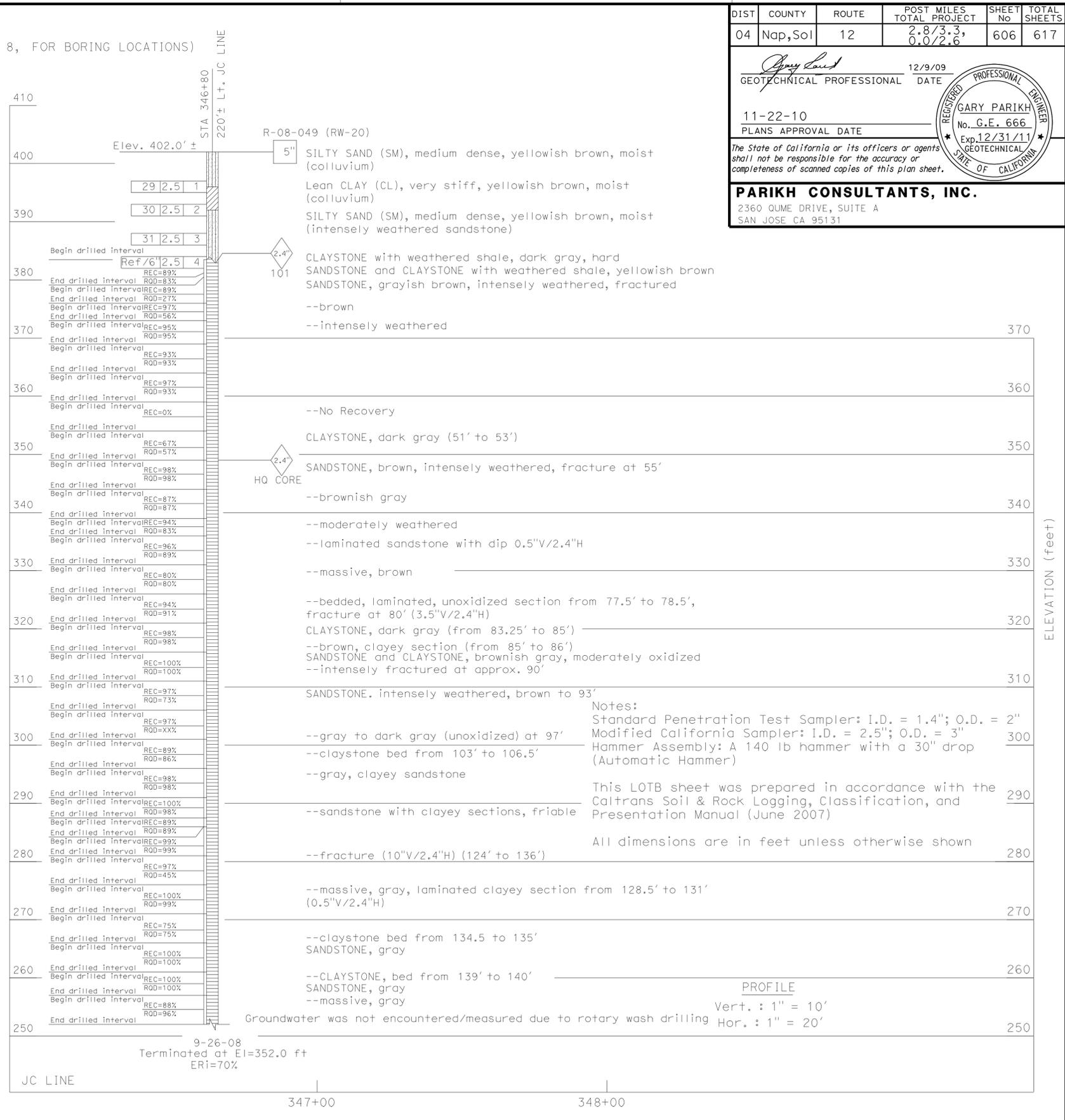
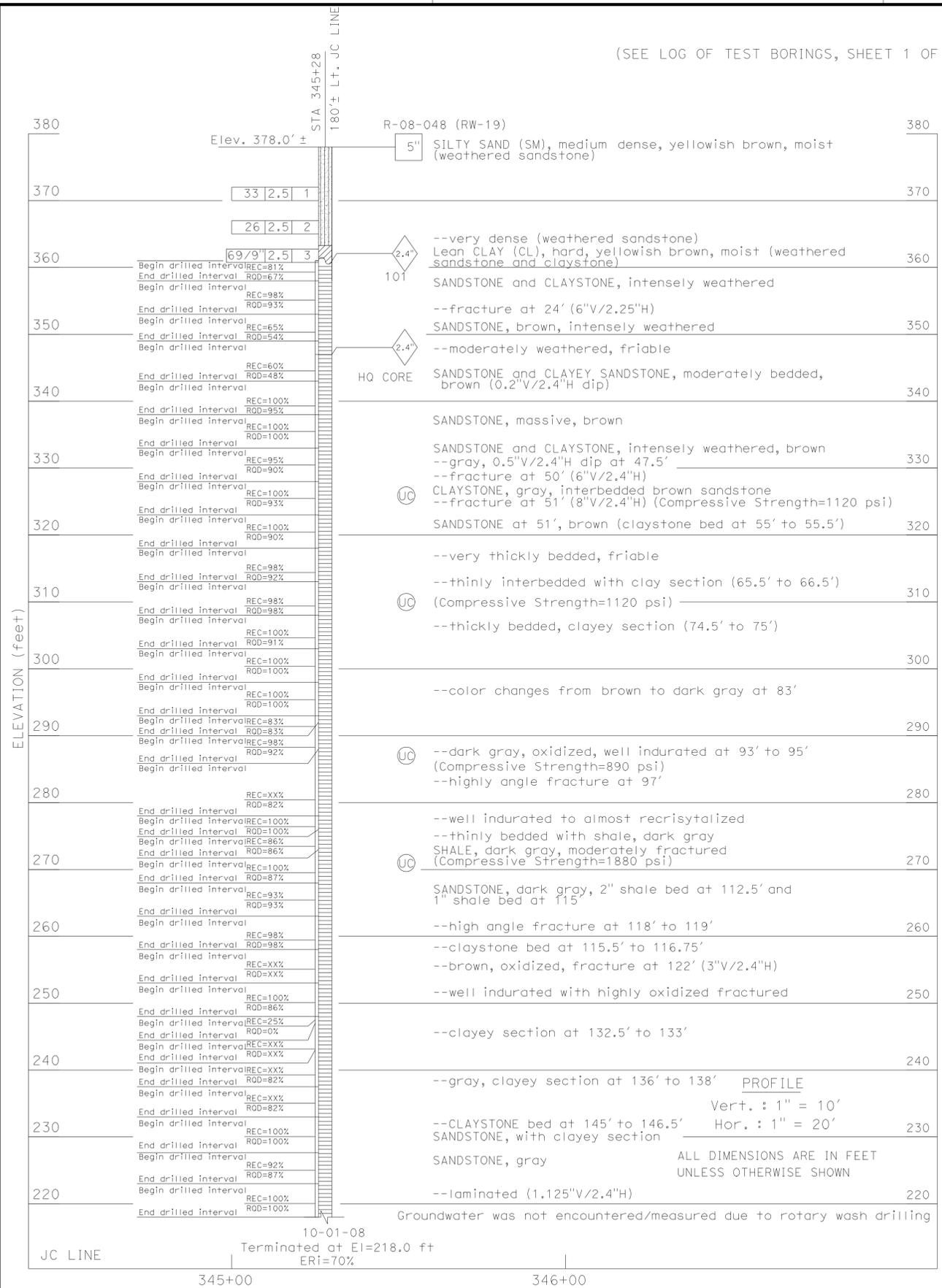
11-22-10  
PLANS APPROVAL DATE

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**PARIKH CONSULTANTS, INC.**  
2360 QUME DRIVE, SUITE A  
SAN JOSE, CA 95131

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)



DESIGN OVERSIGHT  
1-7-10  
SIGN OFF DATE

DRAWN BY L. TRAN  
CHECKED BY F. WANG

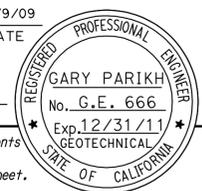
V. SANTOS  
FIELD INVESTIGATION BY:  
DATE: SEPTEMBER 2008 & OCTOBER 2008

PREPARED FOR THE  
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 23E0012/23E0013  
POST MILES 1.2/1.2  
**ROUTE 12/JAMESON CANYON ROAD PROJECT**  
**LOG OF TEST BORINGS NO. 12**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	607	617

  
 GEO TECHNICAL PROFESSIONAL DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
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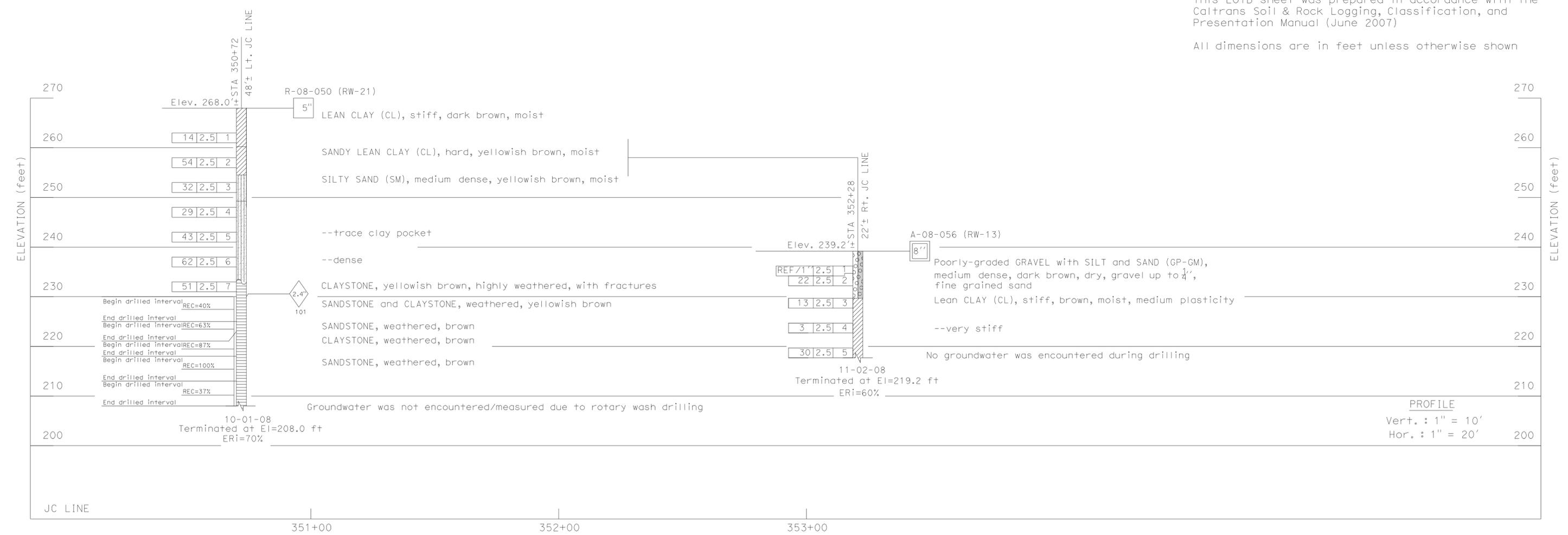
**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE, CA 95131

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)

Notes:  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop (Automatic Hammer)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

All dimensions are in feet unless otherwise shown



  
 DESIGN OVERSIGHT  
 1-7-10  
 SIGN OFF DATE

DRAWN BY L. TRAN  
 CHECKED BY F. WANG

V. SANTOS  
 FIELD INVESTIGATION BY:  
 DATE: OCTOBER 2008 & NOVEMBER 2008

**PREPARED FOR THE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION**

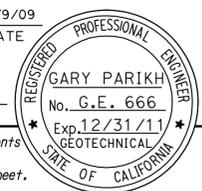
F. WANG  
 PROJECT ENGINEER

BRIDGE NO.  
 23E0012/  
 23E0013  
 POST MILES  
 1.2/1.2

**ROUTE 12/JAMESON CANYON ROAD PROJECT**  
**LOG OF TEST BORINGS NO. 13**

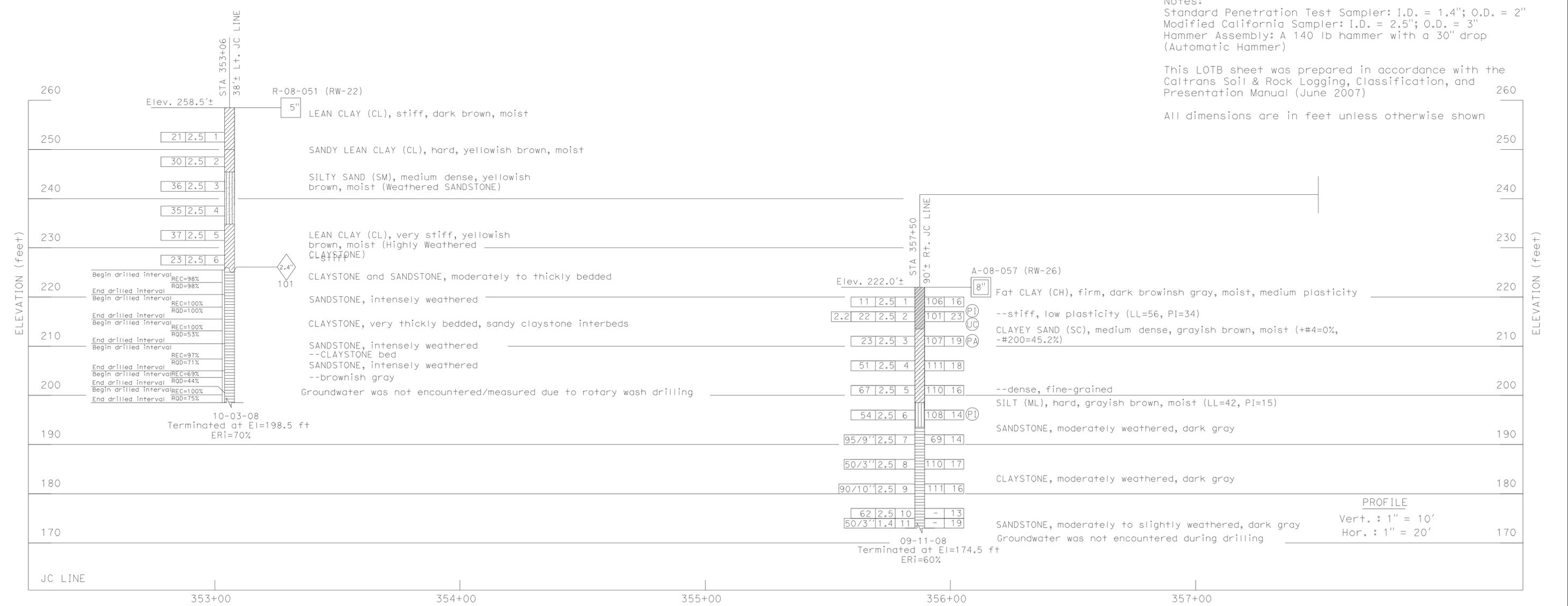
USERNAME => H110909 DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:27

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	608	617


  
 12/9/09 DATE  
 11-22-10 PLANS APPROVAL DATE  
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**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE, CA 95131

(SEE LOG OF TEST BORINGS, SHEET 1 OF 8, FOR BORING LOCATIONS)



 DESIGN OVERSIGHT Tracy L. Bertram 1-7-10 SIGN OFF DATE	DRAWN BY <b>L. TRAN</b>	V. SANTOS FIELD INVESTIGATION BY: DATE: SEPTEMBER 2008 & OCTOBER 2008	<b>PREPARED FOR THE          STATE OF CALIFORNIA          DEPARTMENT OF TRANSPORTATION</b>	F. WANG PROJECT ENGINEER	BRIDGE NO. 23E0012/ 23E0013 POST MILES 1.2/1.2	<b>ROUTE 12/JAMESON CANYON ROAD PROJECT          LOG OF TEST BORINGS NO. 14</b>
	CHECKED BY <b>F. WANG</b>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 04264 EA 264131	DISREGARD PRINTS BEARING EARLIER REVISION DATES 1/9/09 11/9/09 12/9/09	SHEET <b>169</b>	

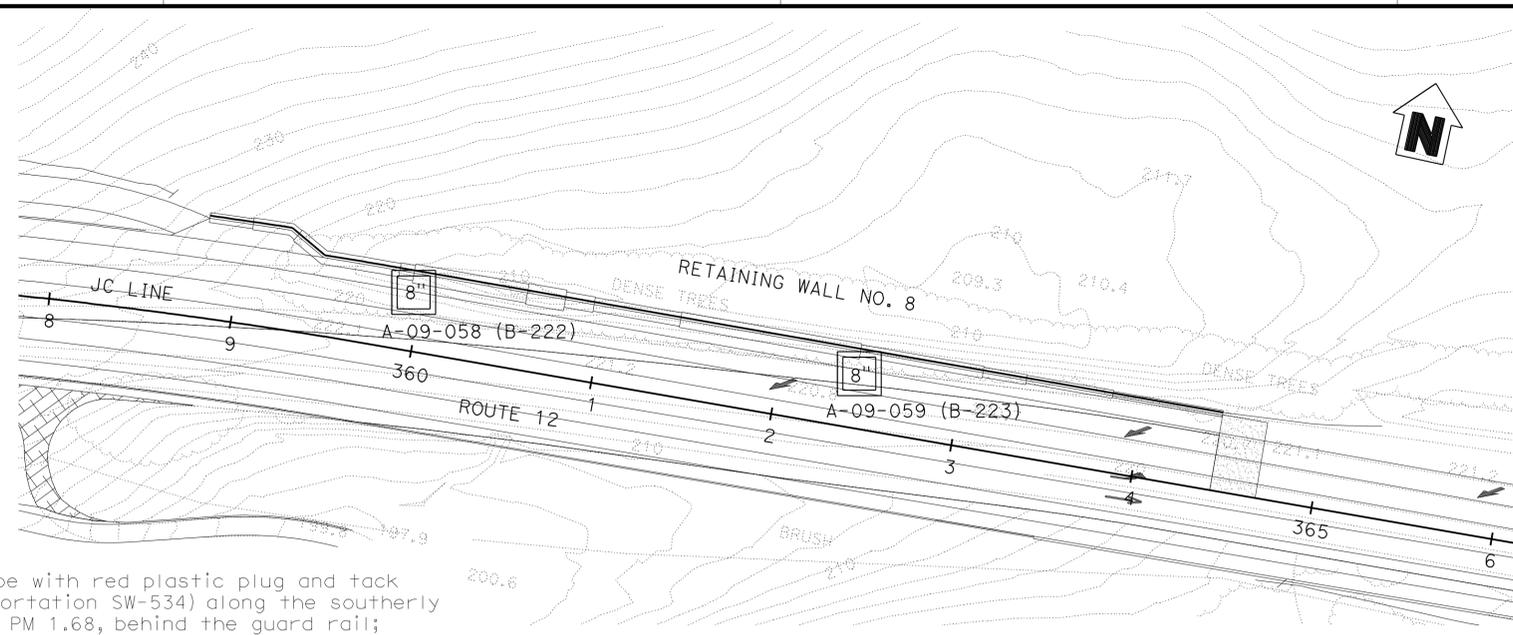
065 GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 06-01-09) FILE => 23E0015X-z-LOTB14.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	609	617

11-22-10  
 PLANS APPROVAL DATE

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**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE CA 95131



**BENCHMARKS:**  
 Benchmark No. 7 - Set 1" iron pipe with red plastic plug and tack (California Department of Transportation SW-534) along the southerly side of eastbound Highway 12, at PM 1.68, behind the guard rail; approximately 3.2 feet northerly of a black chain link fence, approximately 31.5 feet northwesterly of black chain link fence post. Elevation: 237.559

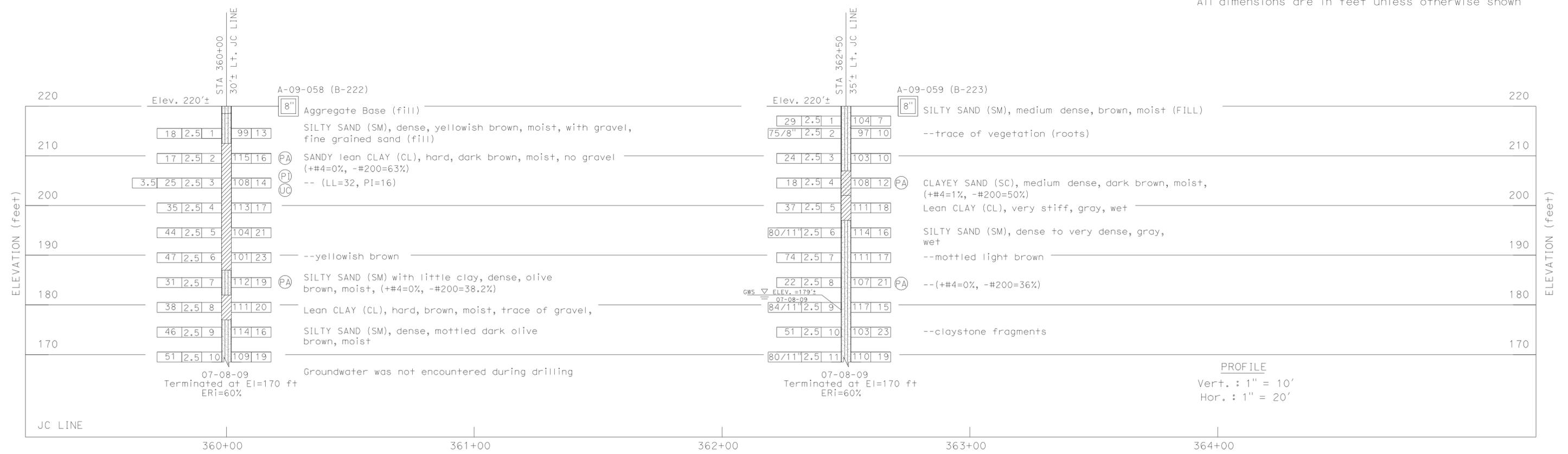
Northing: 1837356.8140 Easting: 6512667.0800  
 Benchmark No. 8 - Set 2" brass disk (California Department of Transportation SW-535) in concrete along the northerly side of westbound Highway 12, at PM 1.8, approximately 13 feet northerly of westbound edge of pavement, approximately 14.4 feet northeasterly of sign post; approximately 10.8 feet southeasterly of chain link fence gate post; approximately 14.7 feet southwesterly of chain link fence gate post. Elevation: 224.537  
 Northing: 1837498.3850 Easting: 6513192.8270

PLAN  
1"=50'

**Notes:**  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop (Automatic Hammer)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

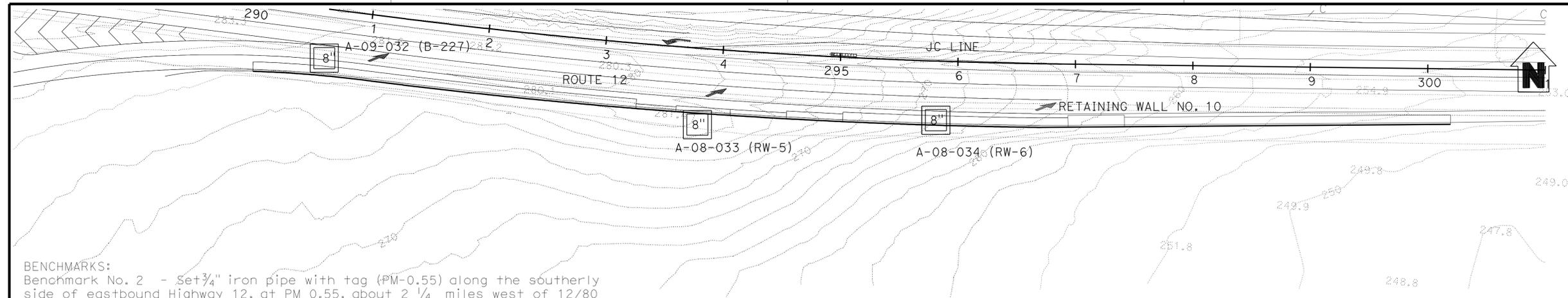
All dimensions are in feet unless otherwise shown



PROFILE  
 Vert. : 1" = 10'  
 Hor. : 1" = 20'

 DESIGN OVERSIGHT Tracy L. Bertram 1-7-10 SIGN OFF DATE	DRAWN BY L. TRAN	V. SANTOS FIELD INVESTIGATION BY: DATE: JULY 2009	<b>PREPARED FOR THE          STATE OF CALIFORNIA          DEPARTMENT OF TRANSPORTATION</b>	F. WANG PROJECT ENGINEER	BRIDGE NO. 23E0014 POST MILES 1.7	<b>ROUTE 12/JAMESON CANYON ROAD PROJECT          LOG OF TEST BORINGS NO. 15</b>
	CHECKED BY F. WANG	CU 04264 EA 264131	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 7/20/09 11/16/09 12/9/09	SHEET 170 OF 171	

OGS GEOTECHNICAL LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 06-01-09) ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3 FILE => 23E0015X-z-LOTB15.dgn



**BENCHMARKS:**  
 Benchmark No. 2 - Set 3/4" iron pipe with tag (PM-0.55) along the southerly side of eastbound Highway 12, at PM 0.55, about 2 1/4 miles west of 12/80 Interchange, approximately 17.7 feet southerly of eastbound edge of pavement, approximately 1.9 feet southerly of marker; approximately 15.4 feet easterly of water valve; approximately 8.5 feet northerly of chain link fence. Northing: 1837766.8170 Easting: 6506863.1580

Benchmark No. 3 - Set 2" brass disk with iron pipe (California Department of Transportation SOL-48) in concrete along the southerly side of eastbound Highway 12, on dirt shoulder, approximately 150 feet easterly of Spurs trail, approximately 150 feet westerly of centerline of driveway for mailing address no. 1394; approximately 29 feet southerly of edge of pavement; approximately 2.8 feet northerly of a white board fence. Elevation: 251.036 Northing: 1837729.6610 Easting: 6508101.0390

PLAN  
1"=50'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	610	617

12/9/09  
 DATE  
 GARY PARIKH  
 No. G.E. 666  
 Exp. 12/31/11  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA

11-22-10  
 PLANS APPROVAL DATE

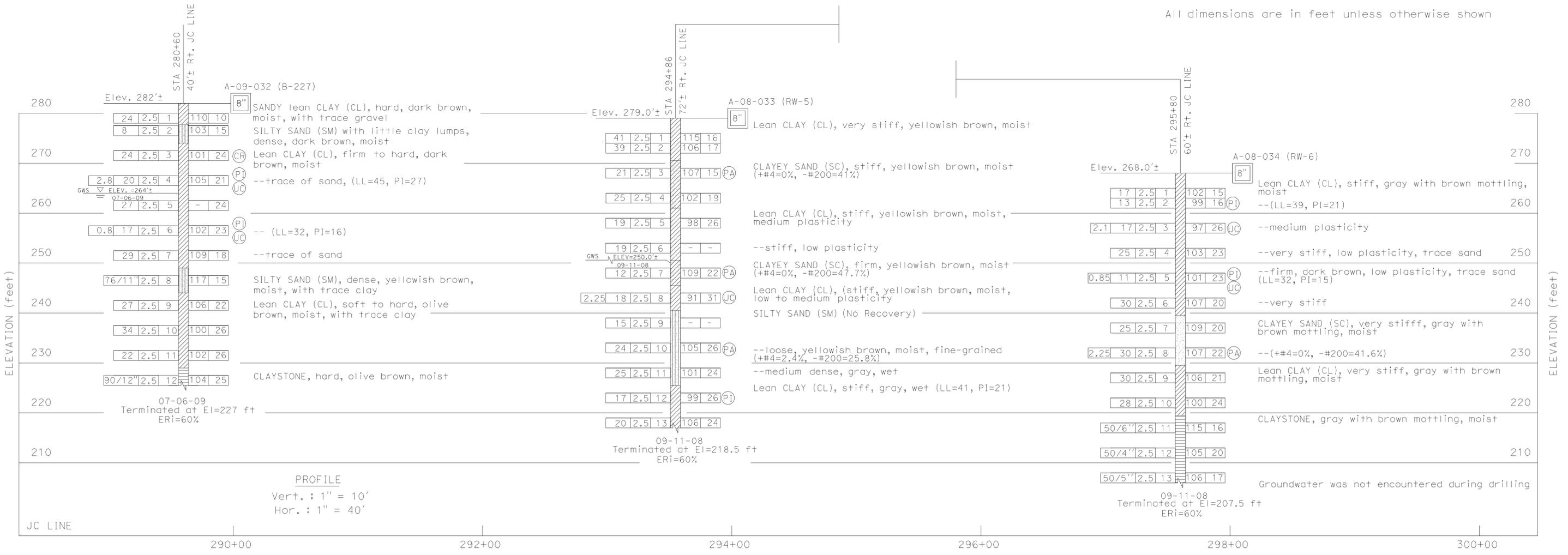
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**PARIKH CONSULTANTS, INC.**  
 2360 QUME DRIVE, SUITE A  
 SAN JOSE, CA 95131

**Notes:**  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop (Automatic Hammer)

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All dimensions are in feet unless otherwise shown



PROFILE  
 Vert. : 1" = 10'  
 Hor. : 1" = 40'

 DESIGN OVERSIGHT 1-7-10 SIGN OFF DATE	DRAWN BY L. TRAN CHECKED BY F. WANG	V. SANTOS FIELD INVESTIGATION BY: DATE: SEPTEMBER 2008 & JULY 2009	<b>PREPARED FOR THE          STATE OF CALIFORNIA          DEPARTMENT OF TRANSPORTATION</b>	F. WANG PROJECT ENGINEER	BRIDGE NO. 23E0015 POST MILES 0.4	<b>ROUTE 12/JAMESON CANYON ROAD PROJECT</b> <b>LOG OF TEST BORINGS NO. 16</b>
	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 04264 EA 264131	DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET 171 OF 171

USERNAME => H:\eng\ DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:28

**STANDARD PLANS MAY 2006**

- A10A Abbreviations (Sheet 1 of 2)
- A10B Abbreviations (Sheet 2 of 2)
- A10C Symbols (Sheet 1 of 2)
- A10D Symbols (Sheet 2 of 2)
- A62B Limits of Payment for Excavation and Backfill-Bridge Surcharge and Wall
- A62E Excavation and Backfill Cast-in-Place Reinforced Concrete Box and Arch Culverts
- A85 Chain Link Fence
- B0-1 Bridge Details
- B0-3 Bridge Details
- B3-1 Retaining Wall Type 1 - H=4' THRU 30'
- B3-8 Retaining Wall Details No. 1
- B3-9 Retaining Wall Details No. 2
- B11-51 Tubular Hand Railing
- B11-55 Concrete Barrier Type 732A
- D80 Cast-in-Place Reinforced Concrete Single Box Culvert

Standard Plan Sheet No. Detail No.

**INDEX TO PLANS**

Sht No.	TITLE
1	GENERAL PLAN
2	STRUCTURE PLAN
3	WALL DETAILS
4	TUBULAR HANDRAILING
5	SOIL LEGEND No. 1
6	SOIL LEGEND No. 2
7	LOG OF TEST BORINGS

**LEGEND**

- Indicates new construction
- - - - - Indicates existing structure
- ① Concrete Barrier Type 732A
- ② Tubular Handrailing (Modified)
- ③ Chain Link Fence (Type CL-4)
- ④ Concrete Barrier (Type 60C) see 'Road Plans'
- ⑤ 1 1/4" Dia Gas with 4" Steel tube

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	611	617

*P. K. Chen* 12/09/09  
 REGISTERED STRUCTURAL ENGINEER DATE

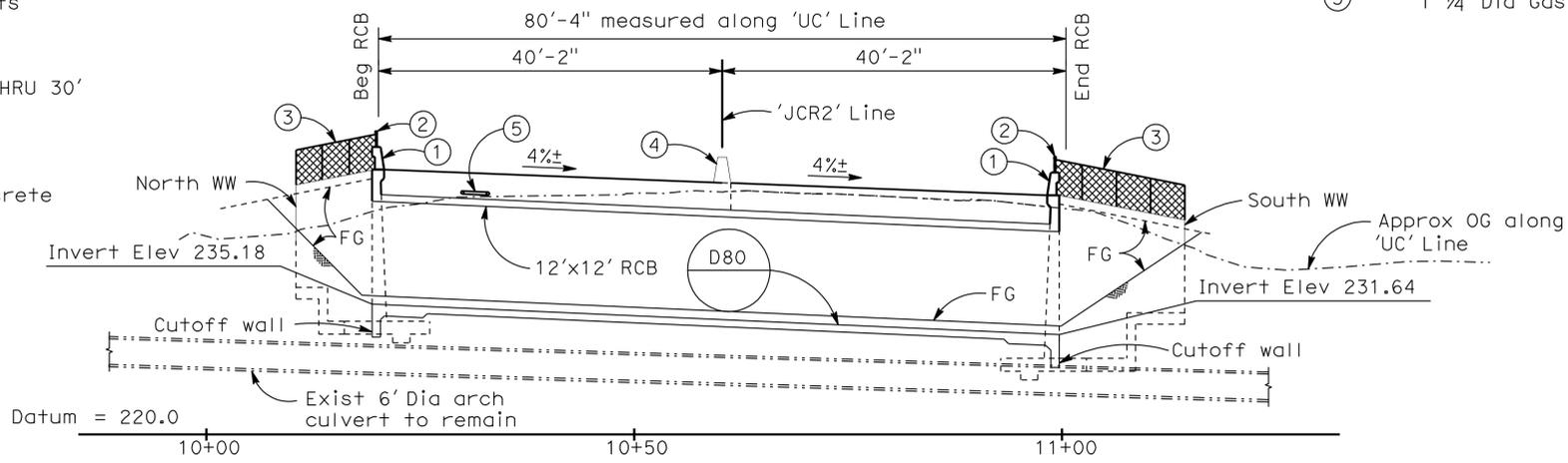
11-22-10  
 PLANS APPROVAL DATE

PO-KANG CHEN  
 No. S3112  
 Exp. 9/30/11  
 STRUCTURAL  
 STATE OF CALIFORNIA

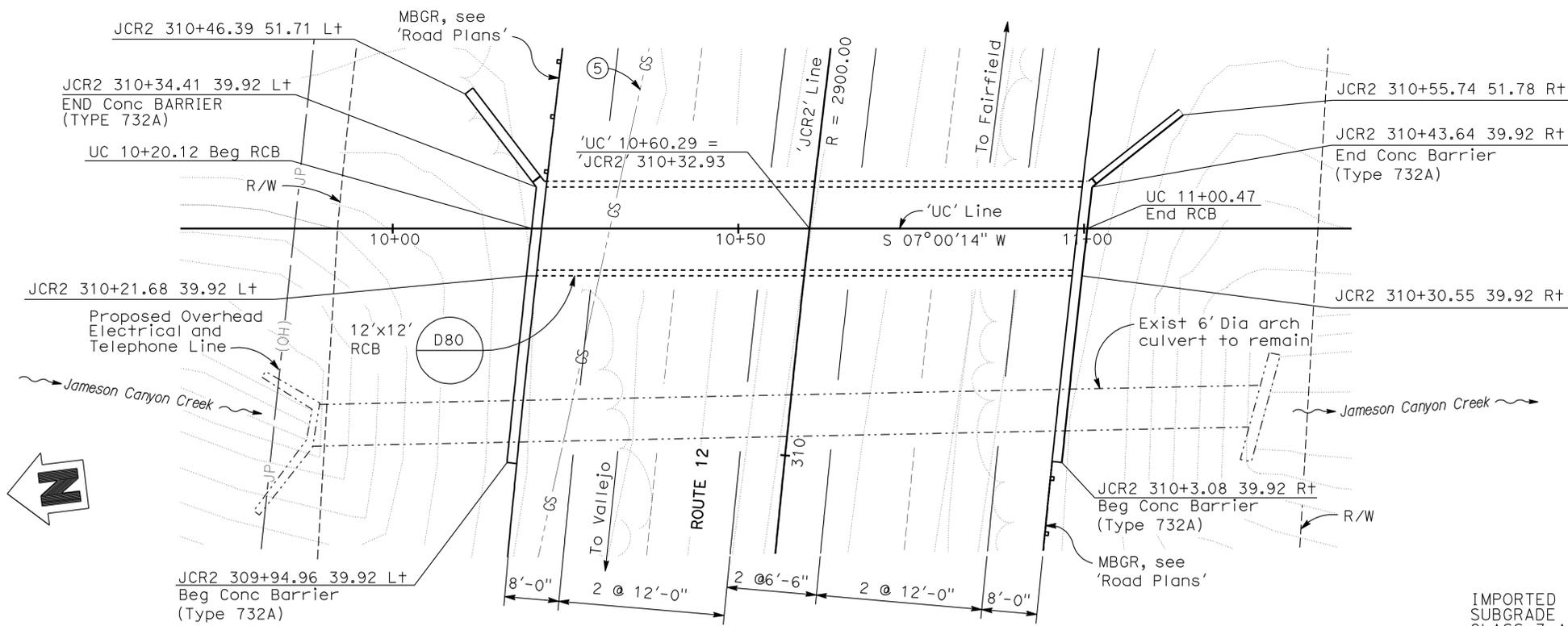
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SOLANO TRANSPORTATION AUTHORITY  
 ONE HARBOR CENTER, SUITE 130  
 SUISUN CITY, CA 94585

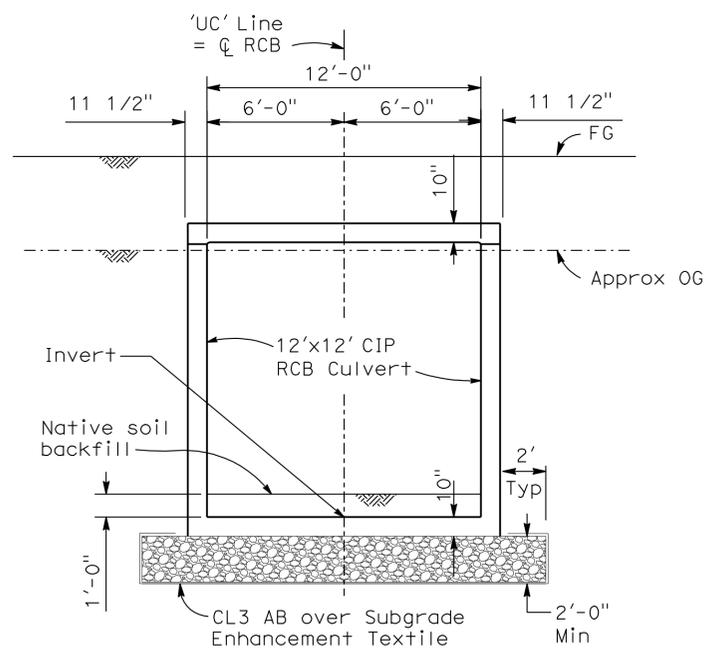
MARK THOMAS & COMPANY, INC.  
 1960 ZANKER ROAD  
 SAN JOSE, CA 95112



**ELEVATION**  
 3/16" = 1'-0"



**PLAN**  
 3/16" = 1'-0"



**TYPICAL SECTION**  
 1/4" = 1'-0"

**Notes:**  
 1. Contractor shall verify all controlling field dimensions before ordering or fabricating any material.  
 2. For utilities, see 'Road Plans'

CATTLE CREEK WILDLIFE UNDERCROSSING QUANTITIES		23-WLUC
IMPORTED BORROW (LIGHTWEIGHT AGGREGATE)		450 CY
SUBGRADE ENHANCEMENT GEOTEXTILE		470 SQYD
CLASS 3 AGGREGATE BASE		280 CY
STRUCTURAL CONCRETE, BOX CULVERT		240 CY
CHAIN LINK FENCE (TYPE CL-4)		32 LF
TUBULAR HANDRAILING (MODIFIED)		82 LF
CONCRETE BARRIER (TYPE 732A)		82 LF

*Tracy L. Bertram*  
 DESIGN OVERSIGHT  
 1-7-10  
 SIGN OFF DATE

DESIGN	BY	CHECKED	LOAD FACTOR DESIGN
DESIGN	P. PARK	H. MISTRY	
DETAILS	P. PARK	H. MISTRY	
QUANTITIES	P. PARK	J. CHIU	

LAYOUT	BY	CHECKED	SPECIFICATIONS	BY	CHECKED
LAYOUT	V. LUCHESSI	P. PARK	SPECIFICATIONS	H. MISTRY	P. CHEN

**PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION**

HARSHAD MISTRY  
 PROJECT ENGINEER

BRIDGE NO.	POST MILES
23 WLUC	0.8

**WILD LIFE BOX CULVERT GENERAL PLAN**

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.2/25/05)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CU 04264  
 EA 264141

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)		
8/05/09	11/06/09	12/09/09

SHEET	OF
1	7

USERNAME => HLenard DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	612	617

**P. K. Chen** 12/09/09  
 REGISTERED STRUCTURAL ENGINEER DATE

11-22-10  
 PLANS APPROVAL DATE

No. S3112  
 Exp. 9/30/11  
 STRUCTURAL  
 STATE OF CALIFORNIA

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SOLANO TRANSPORTATION AUTHORITY  
 ONE HARBOR CENTER, SUITE 130  
 SUISUN CITY, CA 94585

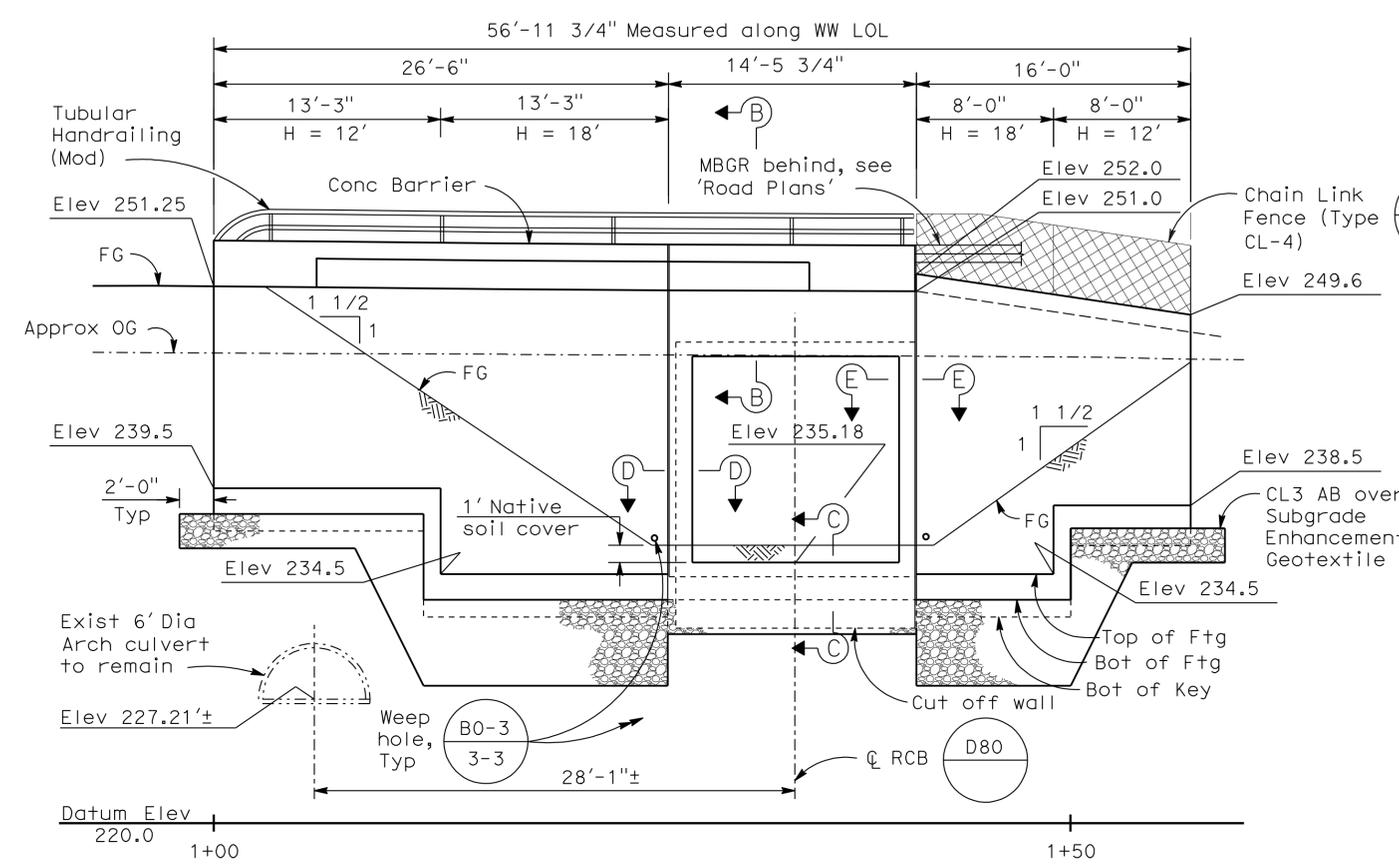
MARK THOMAS & COMPANY, INC.  
 1960 ZANKER ROAD  
 SAN JOSE, CA 95112

**LEGEND**

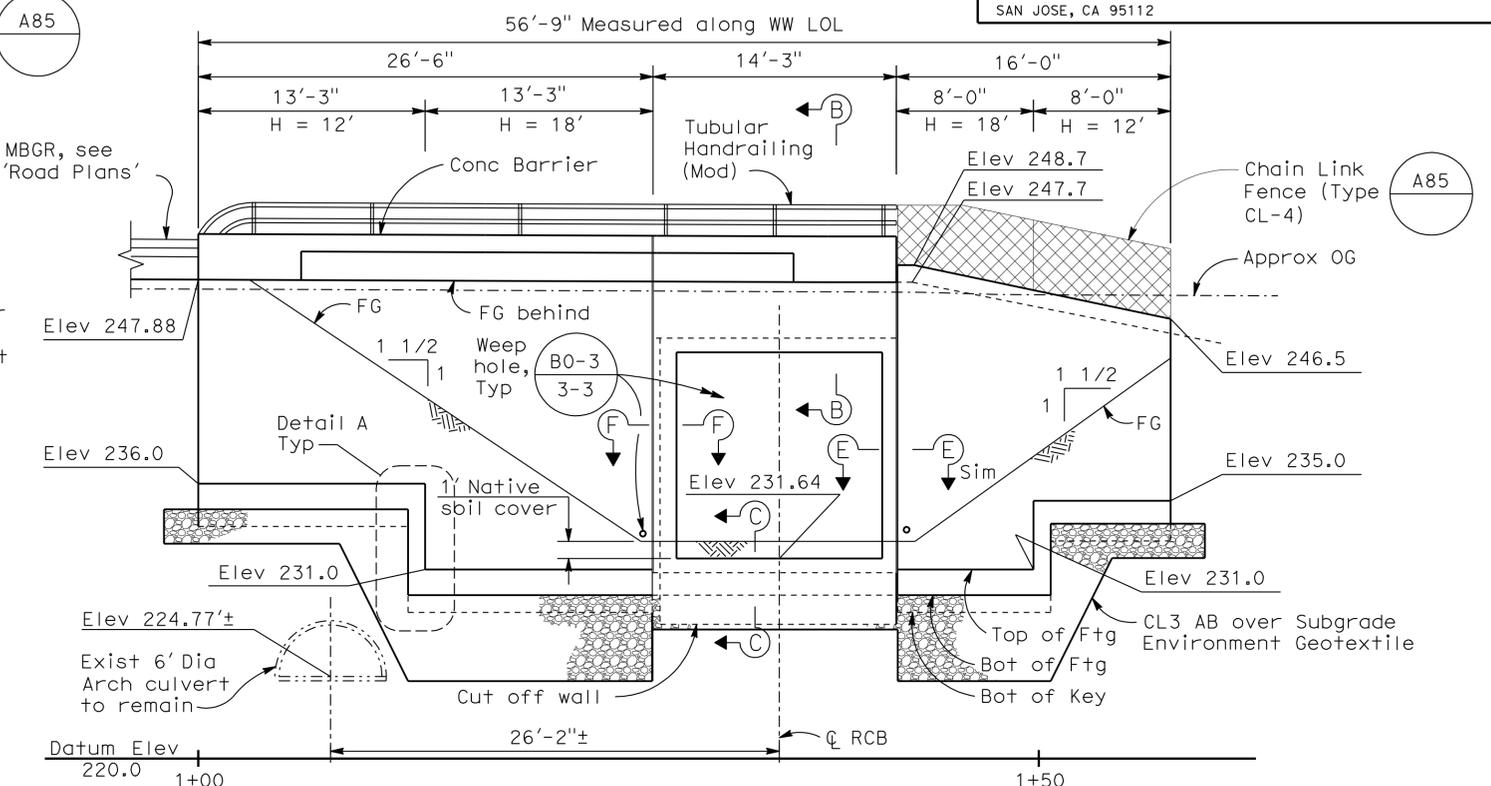
————— Indicates new construction  
 - - - - - Indicates existing structure

Notes:

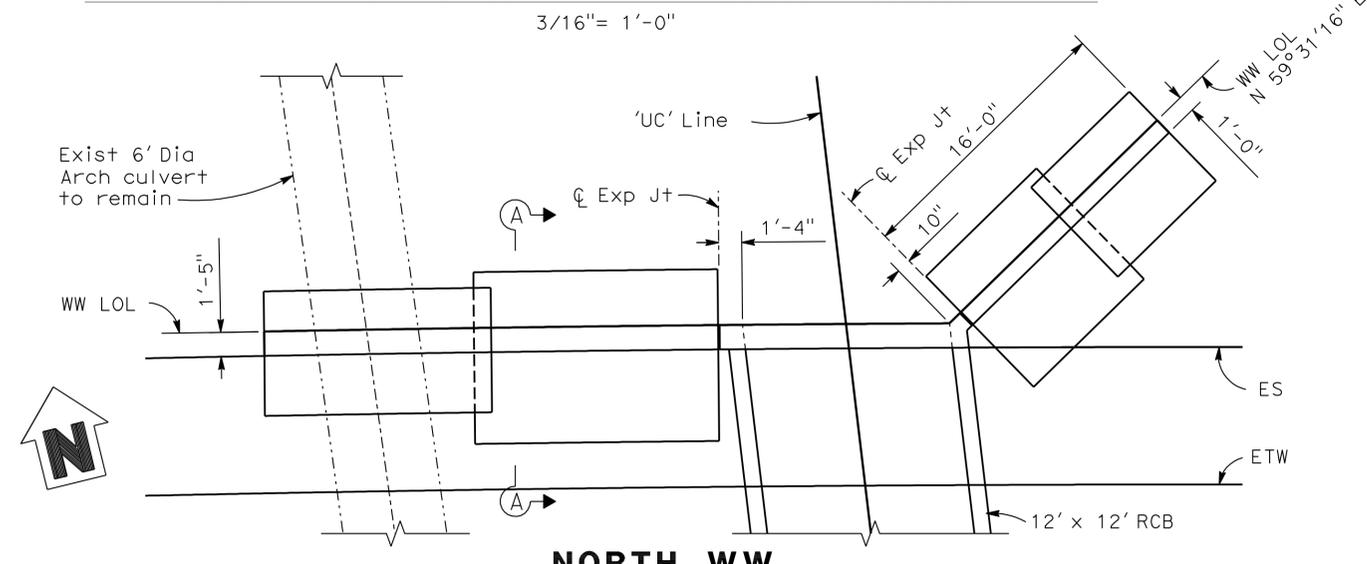
- Contractor shall verify all controlling field dimensions before ordering or fabricating material.
- For 'Section A-A', 'Section B-B', 'Section C-C', 'Section D-D', 'Section E-E', 'Section F-F' and 'Detail A', see "Wall Details" sheet.



**DEVELOPED MIRRORRED ELEVATION - NORTH WW**

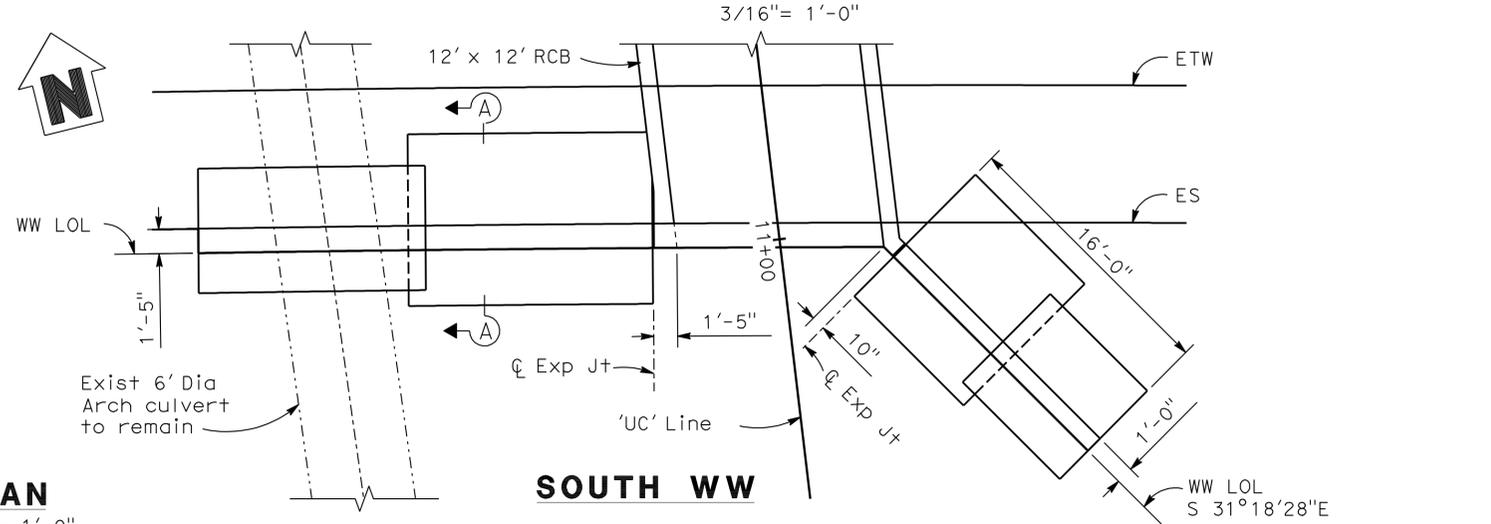


**DEVELOPED ELEVATION - SOUTH WW**



**NORTH WW**

**PLAN**  
 3/16" = 1'-0"



**SOUTH WW**

DESIGN OVERSIGHT	DESIGN BY P. PARK	CHECKED H. MISTRY	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	HARSHAD MISTRY PROJECT ENGINEER	BRIDGE NO. 23 WLUC	<b>WILD LIFE BOX CULVERT</b>			
SIGN OFF DATE	DETAILS BY P. PARK	CHECKED H. MISTRY			POST MILE 0.8	<b>STRUCTURE PLAN</b>			
DESIGN DETAIL SHEET (ENGLISH) (REV. 2/25/05)	QUANTITIES BY P. PARK	CHECKED J. CHIU		CU 04264 EA 264141	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)			
			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	8/05/09	11/06/09	12/09/09	SHEET 2	OF 7

USERNAME => HLenard DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	613	617

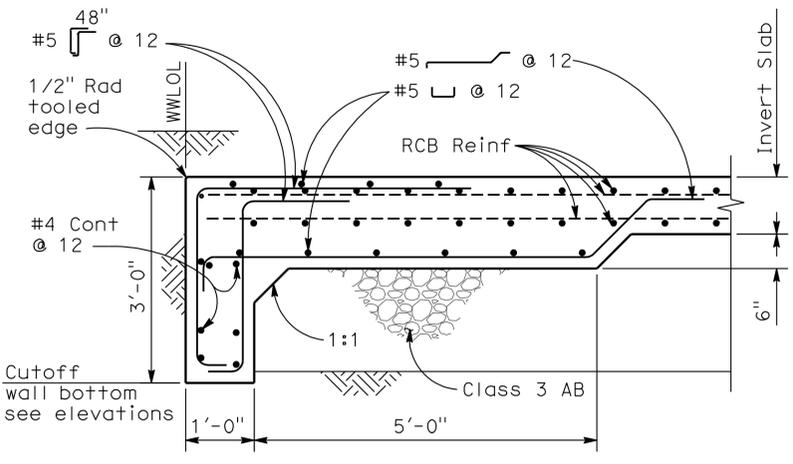
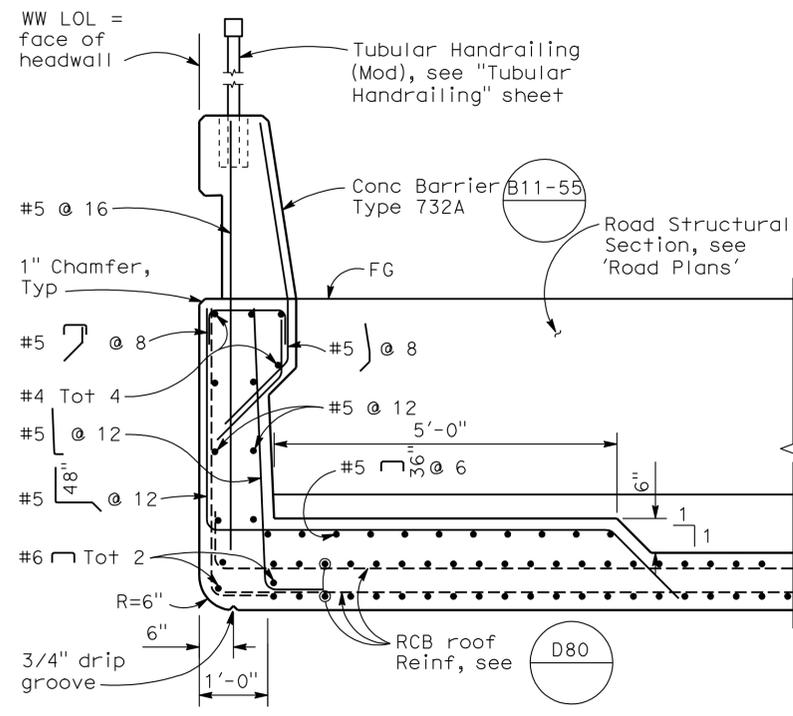
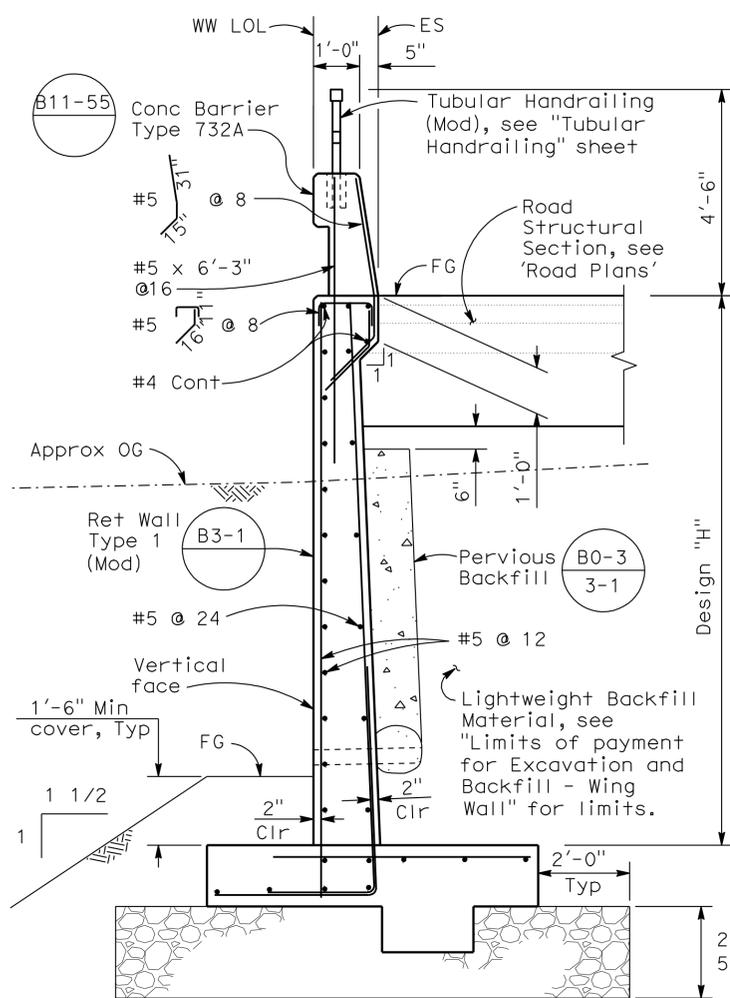
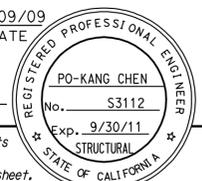
**P. K. Chen** 12/09/09  
REGISTERED STRUCTURAL ENGINEER DATE

11-22-10  
PLANS APPROVAL DATE

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ONE HARBOR CENTER, SUITE 130  
SUISUN CITY, CA 94585

MARK THOMAS & COMPANY, INC.  
1960 ZANKER ROAD  
SAN JOSE, CA 95112



**SECTION C-C**  
3/4" = 1'-0"

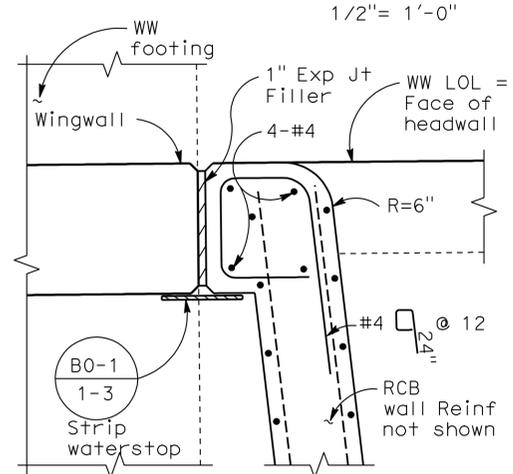
**SECTION B-B**  
3/4" = 1'-0"

Note: For details not shown, see 'Section A-A'

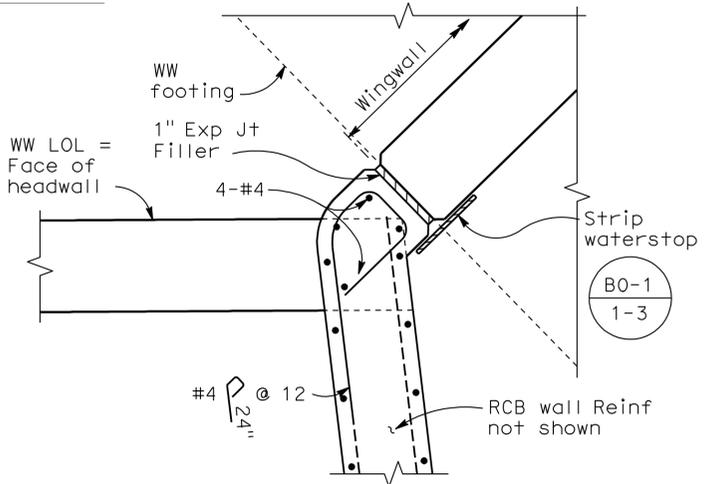
Notes:  
1. For Wingwall details not shown, see B3-1 & B3-8

2. For Concrete Barrier details not shown, see B11-55

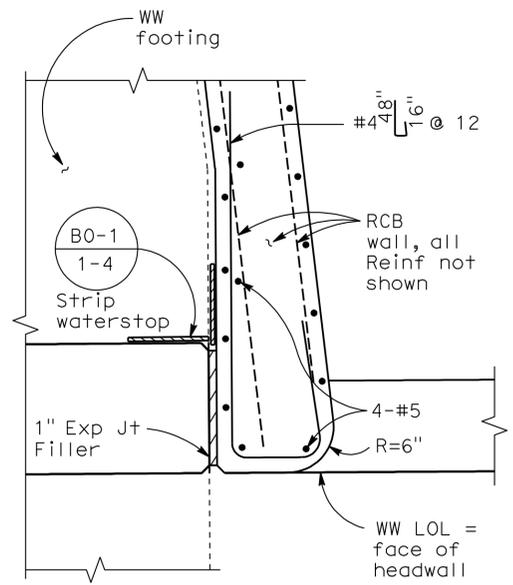
**SECTION A-A: WINGWALL**  
1/2" = 1'-0"



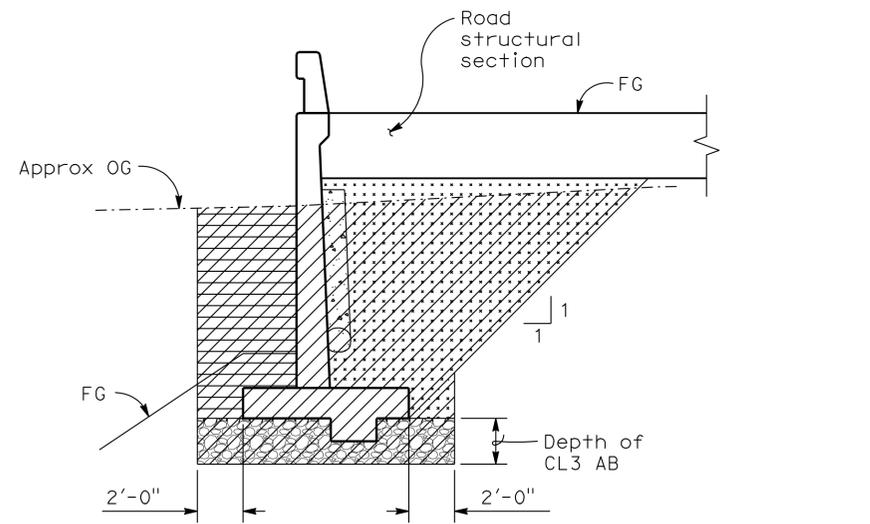
**SECTION D-D**  
1" = 1'-0"



**SECTION E-E**  
1" = 1'-0"



**SECTION F-F**  
1" = 1'-0"



Structure Excavation  
Structure Backfill  
CL3 AB  
Imported Borrow (Lightweight Aggregate)

**LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - WING WALL**  
No Scale

DESIGN OVERSIGHT	DESIGN BY P. PARK	CHECKED H. MISTRY	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	HARSHAD MISTRY PROJECT ENGINEER	BRIDGE NO. 23 WLUC	<b>WILD LIFE BOX CULVERT WALL DETAILS</b>
SIGN OFF DATE	DETAILS BY P. PARK	CHECKED H. MISTRY			POST MILE 0.8	
DESIGN DETAIL SHEET (ENGLISH) (REV. 2/25/05)	QUANTITIES BY P. PARK	CHECKED J. CHIU		CU 04264 EA 264141	REVISION DATES (PRELIMINARY STAGE ONLY) 8/05/09 11/06/09 12/09/09	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

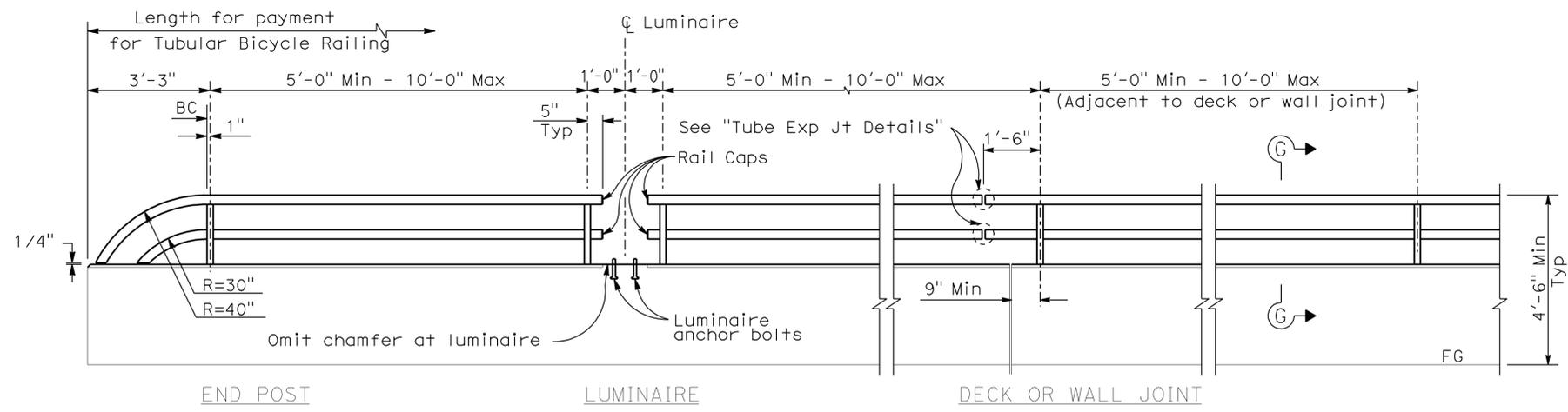
FILE => 23WLUC-g-1wd01.dgn

USERNAME => HLenard DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:28

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	614	617

**P. K. Chen**  
 REGISTERED STRUCTURAL ENGINEER DATE 12/09/09  
 PLANS APPROVAL DATE 11-22-10  
 No. S3112  
 Exp. 9/30/11  
 STATE OF CALIFORNIA  
 REGISTERED PROFESSIONAL ENGINEER  
 PO-KANG CHEN  
 No. S3112  
 Exp. 9/30/11  
 STRUCTURAL

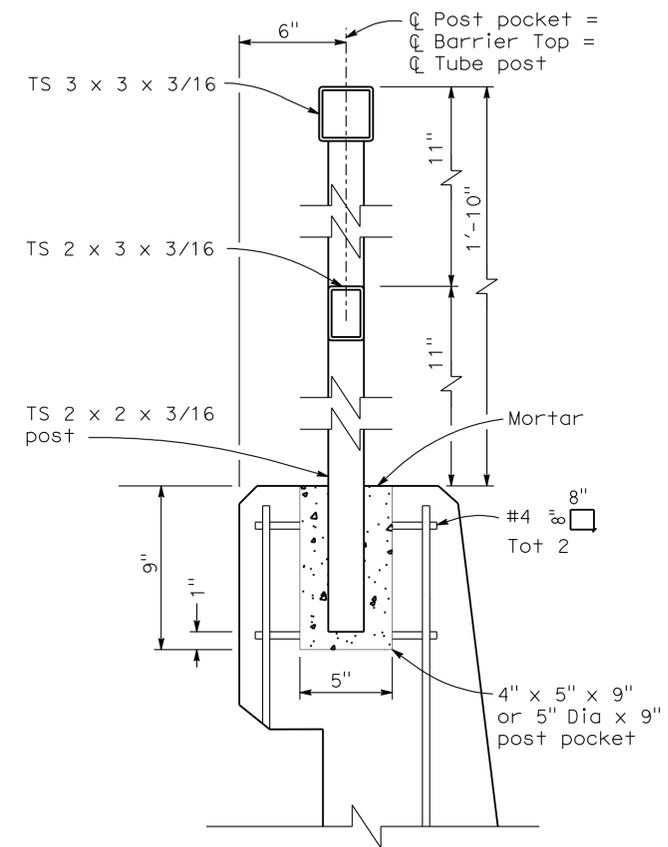
SOLANO TRANSPORTATION AUTHORITY  
 ONE HARBOR CENTER, SUITE 130  
 SUISUN CITY, CA 94585  
 MARK THOMAS & COMPANY, INC.  
 1960 ZANKER ROAD  
 SAN JOSE, CA 95112



END POST                      LUMINAIRE                      DECK OR WALL JOINT

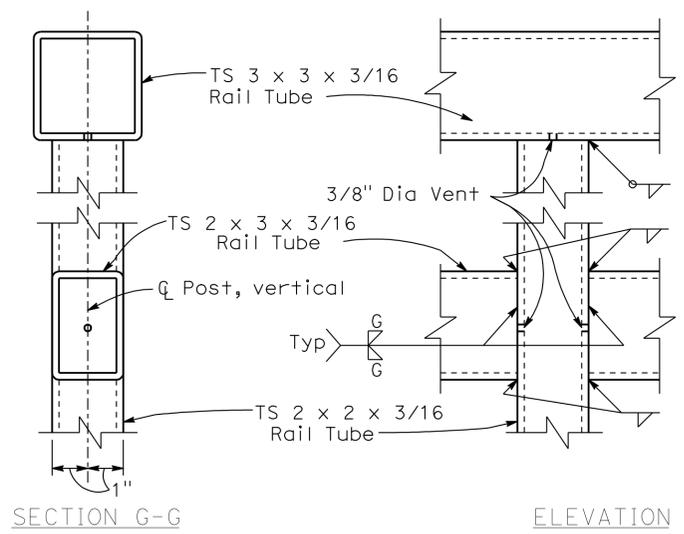
**Notes:**

1. The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
2. Galvanize rail assembly after fabrication.
3. All post shall be vertical.
4. Rail tubes shall be shop bent and fabricated to fit horizontal and vertical curves.
5. Expansion joints shall be located at 30'-0" Max.
6. Top rail tube shall be continuous over not less than two posts except a short length is permitted near deck or wall joints, electroliers, or other rail discontinuities.
7. For Railing details not shown or noted, see (B11-51)



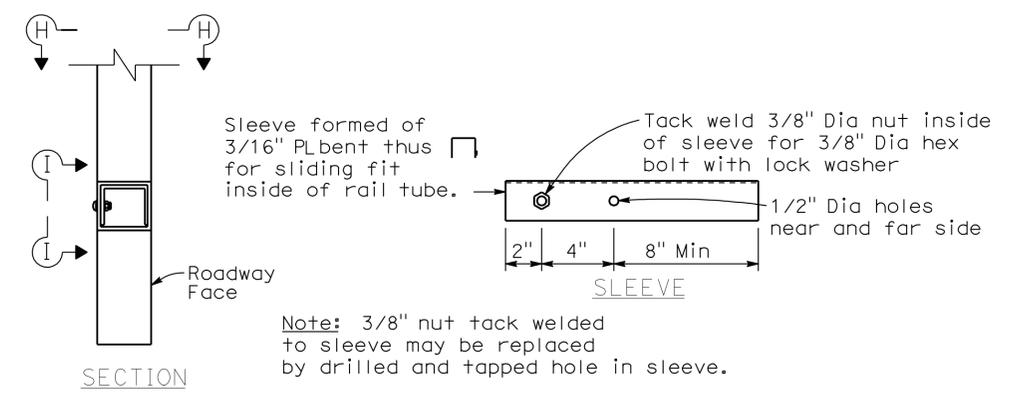
**POST ANCHORAGE DETAILS** (B11-51)

**ELEVATION**



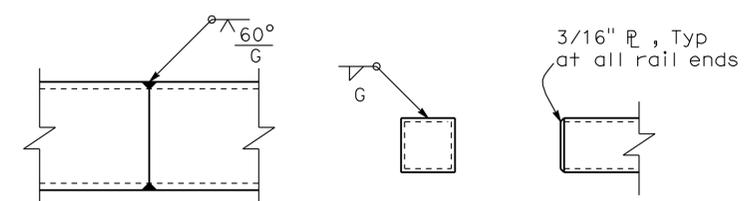
SECTION G-G                      ELEVATION

**RAIL CONNECTION DETAILS**

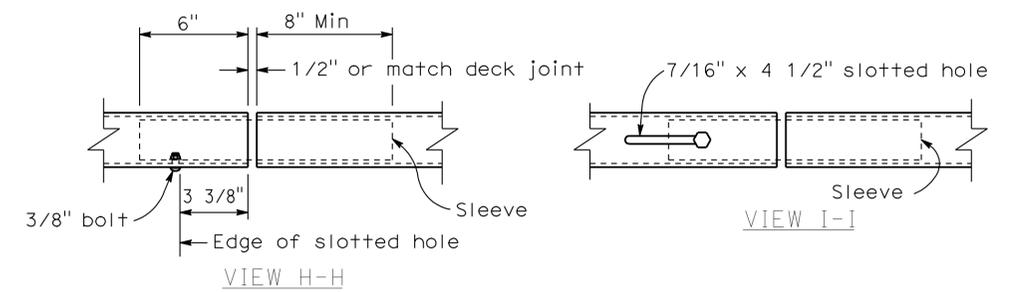


SECTION

Note: 3/8" nut tacked welded to sleeve may be replaced by drilled and tapped hole in sleeve.



**TUBE-WELDED SPLICE RAIL CAP**



VIEW H-H

VIEW I-I

**TUBE EXPANSION JOINT DETAILS**

DESIGN OVERSIGHT Tracy L. Bertram  
 1-7-10  
 SIGN OFF DATE

DESIGN	BY H. MISTRY	CHECKED P. PARK
DETAILS	BY H. MISTRY	CHECKED P. PARK
QUANTITIES	BY P. PARK	CHECKED S. GARAPALLY

PREPARED FOR THE  
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

HARSHAD MISTRY  
 PROJECT ENGINEER

BRIDGE No.	23 WUC
POST MILE	0.8

**WILD LIFE BOX CULVERT**  
**TUBULAR HANDRAILING (MODIFIED)**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap, Sol	12	2.8/3.3, 0.0/2.6	615	617

*Gary Parikh*  
 REGISTERED CIVIL ENGINEER DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
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**PARIKH CONSULTANTS, INC.**  
 2360 OUME DRIVE, SUITE A  
 SAN JOSE CA 95131

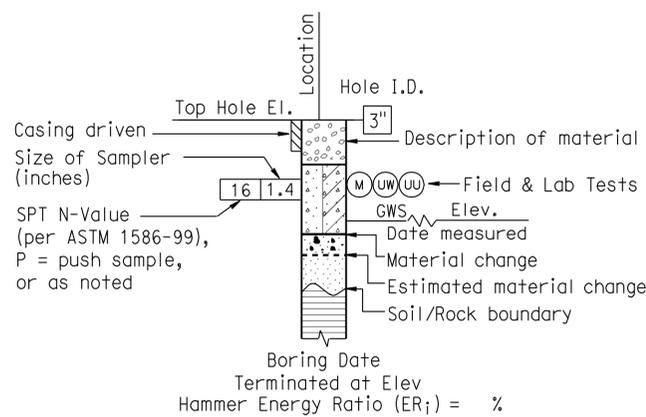
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

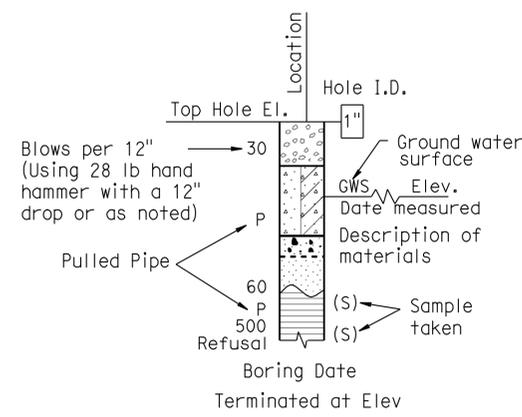
BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

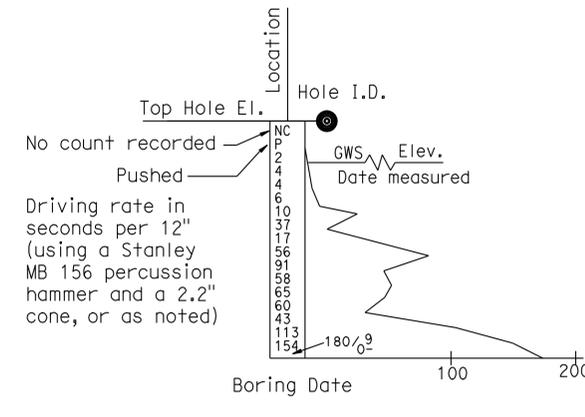
PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



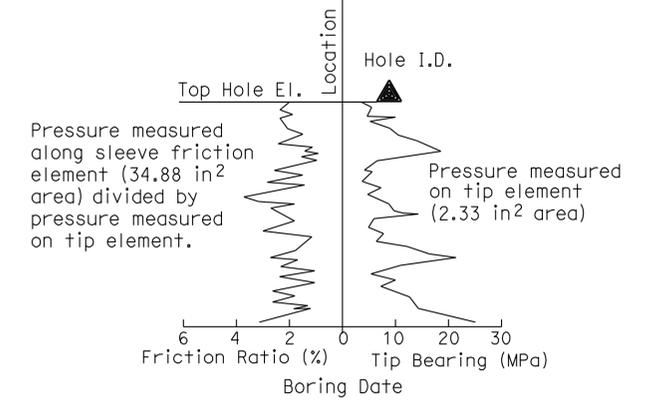
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) SOUNDING

*Tracy L. Bertram*  
 DESIGN OVERSIGHT  
 1-7-10  
 SIGN OFF DATE

DRAWN BY L. TRAN  
 CHECKED BY F. WANG

V. SANTOS  
 FIELD INVESTIGATION BY:  
 DATE: AUGUST 2009 TO OCTOBER 2009

PREPARED FOR THE  
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

F. WANG  
 PROJECT ENGINEER

BRIDGE NO.  
 23 WLUC  
 POST MILES  
 0.8

**WILD LIFE BOX CULVERT**  
**SOIL LEGEND NO. 1 OF 2**

USERNAME => H11engard DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:29

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap,Sol	12	2.8/3.3, 0.0/2.6	616	617

*Gary Parikh*  
 REGISTERED CIVIL ENGINEER DATE 12/9/09  
 11-22-10  
 PLANS APPROVAL DATE  
 GARY PARIKH  
 No. G.E. 666  
 Exp. 12/31/11  
 GEOTECHNICAL  
 STATE OF CALIFORNIA  
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 SAN JOSE CA 95131

GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	Well-graded GRAVEL		Lean CLAY
	Well-graded GRAVEL with SAND		Lean CLAY with SAND
	Poorly graded GRAVEL		Lean CLAY with GRAVEL
	Poorly graded GRAVEL with SAND		SANDY lean CLAY
	Well-graded GRAVEL with SILT		SANDY lean CLAY with GRAVEL
	Well-graded GRAVEL with SILT and SAND		GRAVELLY lean CLAY
	Well-graded GRAVEL with CLAY (or SILTY CLAY)		GRAVELLY lean CLAY with SAND
	Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		SILTY CLAY
	Poorly graded GRAVEL with SILT		SILTY CLAY with SAND
	Poorly graded GRAVEL with SILT and SAND		SILTY CLAY with GRAVEL
	Poorly graded GRAVEL with CLAY (or SILTY CLAY)		SANDY SILTY CLAY
	Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		SANDY SILTY CLAY with GRAVEL
	SILTY GRAVEL		GRAVELLY SILTY CLAY
	SILTY GRAVEL with SAND		GRAVELLY SILTY CLAY with SAND
	CLAYEY GRAVEL		SILT
	CLAYEY GRAVEL with SAND		SILT with SAND
	SILTY, CLAYEY GRAVEL		SILT with GRAVEL
	SILTY, CLAYEY GRAVEL with SAND		SANDY SILT
	Well-graded SAND		SANDY SILT with GRAVEL
	Well-graded SAND with GRAVEL		GRAVELLY SILT
	Poorly graded SAND		GRAVELLY SILT with SAND
	Poorly graded SAND with GRAVEL		ORGANIC lean CLAY
	Well-graded SAND with SILT		ORGANIC lean CLAY with SAND
	Well-graded SAND with SILT and GRAVEL		ORGANIC lean CLAY with GRAVEL
	Well-graded SAND with CLAY (or SILTY CLAY)		SANDY ORGANIC lean CLAY
	Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		SANDY ORGANIC lean CLAY with GRAVEL
	Poorly graded SAND with SILT		GRAVELLY ORGANIC lean CLAY
	Poorly graded SAND with SILT and GRAVEL		GRAVELLY ORGANIC lean CLAY with SAND
	Poorly graded SAND with CLAY (or SILTY CLAY)		ORGANIC SILT
	Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		ORGANIC SILT with SAND
	SILTY SAND		ORGANIC SILT with GRAVEL
	SILTY SAND with GRAVEL		SANDY ORGANIC SILT
	CLAYEY SAND		SANDY ORGANIC SILT with GRAVEL
	CLAYEY SAND with GRAVEL		GRAVELLY ORGANIC SILT
	SILTY, CLAYEY SAND		GRAVELLY ORGANIC SILT with SAND
	SILTY, CLAYEY SAND with GRAVEL		ORGANIC fat CLAY
	PEAT		ORGANIC fat CLAY with SAND
	COBBLES		ORGANIC fat CLAY with GRAVEL
	COBBLES and BOULDERS		SANDY ORGANIC fat CLAY
	BOULDERS		SANDY ORGANIC fat CLAY with GRAVEL
			GRAVELLY ORGANIC fat CLAY
			GRAVELLY ORGANIC fat CLAY with SAND

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166)
	Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N <sub>60</sub> (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

*Tracy L. Bertram*  
 DESIGN OVERSIGHT  
 1-7-10  
 SIGN OFF DATE

DRAWN BY L. TRAN  
 CHECKED BY F. WANG

V. SANTOS  
 FIELD INVESTIGATION BY:  
 DATE: AUGUST 2008 TO OCTOBER 2009

PREPARED FOR THE  
**STATE OF CALIFORNIA**  
 DEPARTMENT OF TRANSPORTATION

F. WANG  
 PROJECT ENGINEER

BRIDGE NO.  
 23 WJUC  
 POST MILES  
 0.8

**WILD LIFE BOX CULVERT**  
**SOIL LEGEND NO. 2 OF 2**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	Nap,Sol	12	2.8/3.3, 0.0/2.6	617	617

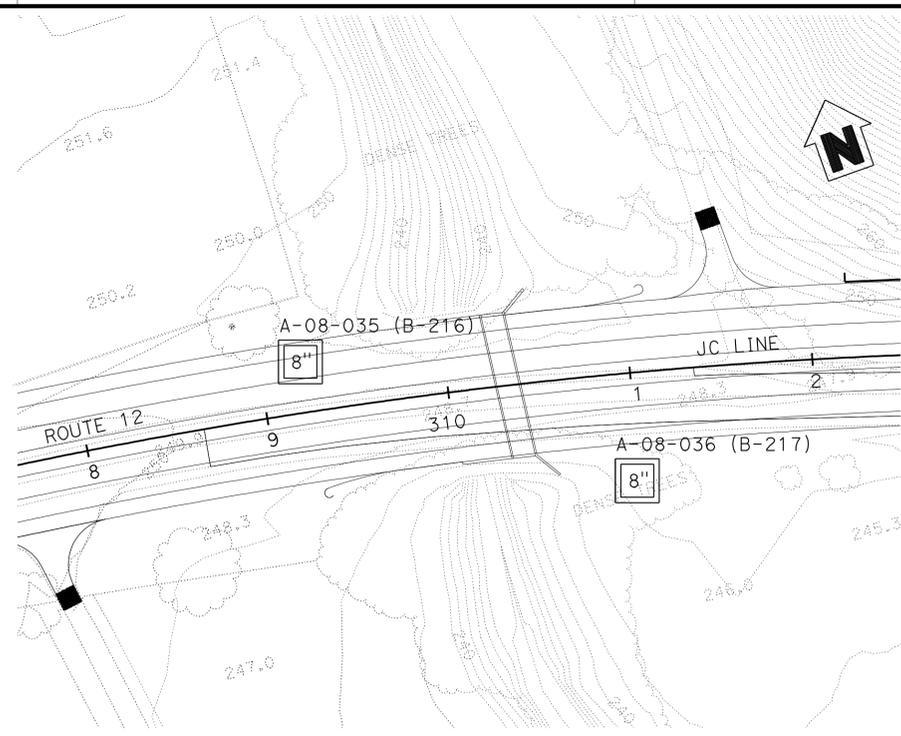
*Gary Parikh*  
 GEO. TECHNICAL PROFESSIONAL DATE 12/9/09

11-22-10  
 PLANS APPROVAL DATE

*GARY PARIKH*  
 No. G.E. 666  
 Exp. 12/31/11  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA

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 2360 QUME DRIVE, SUITE A  
 SAN JOSE, CA 95131



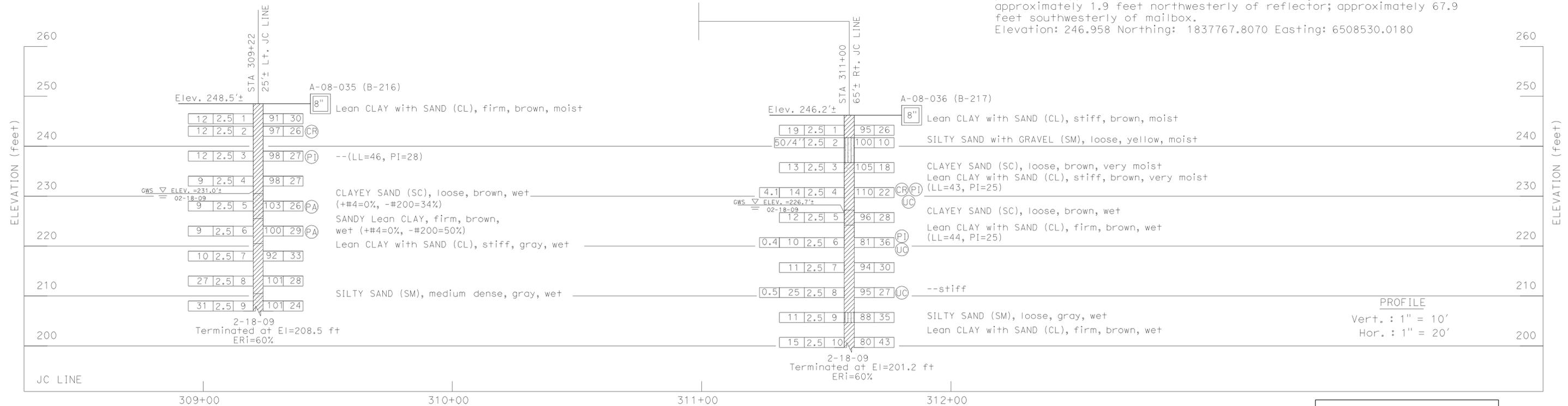
Notes:  
 Standard Penetration Test Sampler: I.D. = 1.4"; O.D. = 2"  
 Modified California Sampler: I.D. = 2.5"; O.D. = 3"  
 Hammer Assembly: A 140 lb hammer with a 30" drop  
 (Automatic Hammer)

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (June 2007)

All dimensions are in feet unless otherwise shown

BENCHMARKS:  
 Benchmark No. 3 - Set 2" brass disk with iron pipe (California Department of Transportation SOL-48) in concrete along the southerly side of eastbound Highway 12, on dirt shoulder, approximately 150 feet easterly of Spurs trail, approximately 150 feet westerly of centerline of driveway for mailing address no. 1394; approximately 29 feet southerly of edge of pavement; approximately 2.8 feet northerly of a white board fence.  
 Elevation: 251.036 Northing: 1837729.6610 Easting: 6508101.0390

Benchmark No. 4 - Set 2" brass disk (California Department of Transportation SW-530) in concrete along the northerly side of westbound Highway 12, at PM 0.8, about 1.75 miles west of 12/80 Interchange, approximately 34.8 feet northerly of westbound edge of pavement; approximately 78.7 feet westerly of gas marker, approximately 1.9 feet northwesterly of reflector; approximately 67.9 feet southwesterly of mailbox.  
 Elevation: 246.958 Northing: 1837767.8070 Easting: 6508530.0180



*Tracy L. Bertram*  
 DESIGN OVERSIGHT  
 1-7-10  
 SIGN OFF DATE

DRAWN BY L. TRAN  
 CHECKED BY F. WANG

V. SANTOS  
 FIELD INVESTIGATION BY:  
 DATE: FEBRUARY 2009

PREPARED FOR THE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

F. WANG  
 PROJECT ENGINEER

BRIDGE NO.  
 23WLUC  
 POST MILES  
 0.8

**WILD LIFE BOX CULVERT**  
**LOG OF TEST BORINGS**

FILENAME => H:\Legend DATE PLOTTED => 23-NOV-2010 TIME PLOTTED => 10:29