Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	6	939

Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

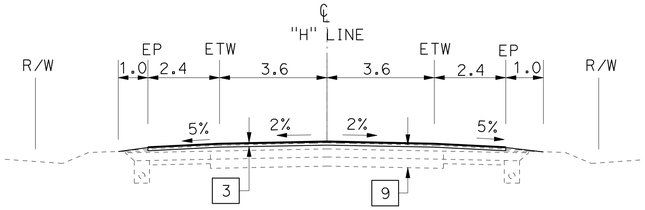
REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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

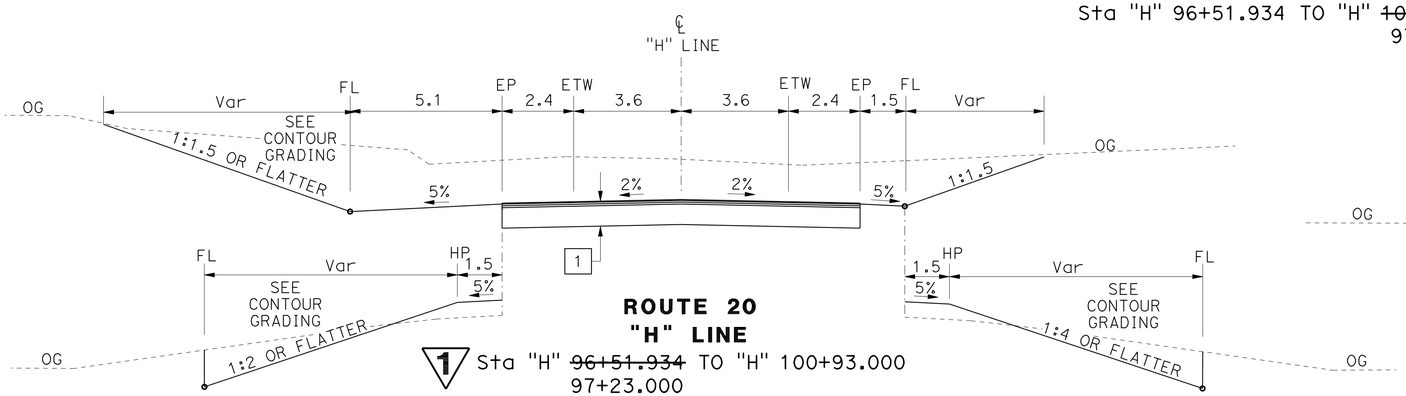
Caltrans Metric

NOTES:

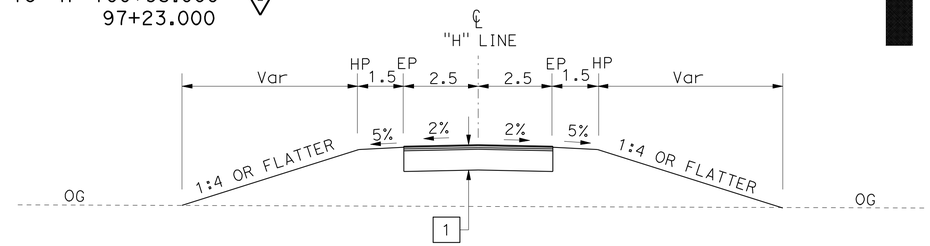
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.
3. FOR LOCATION OF HMA DIKE SEE LAYOUT SHEETS.
4. FOR LOCATION OF MBGR SEE CONSTRUCTION DETAILS.
5. WIDTHS SHOWN ON RAMP ARE NORMAL TO RAMP LAYOUT LINE.
6. SEE C-8 FOR DRAINAGE BASIN AND DITCH LOCATIONS.



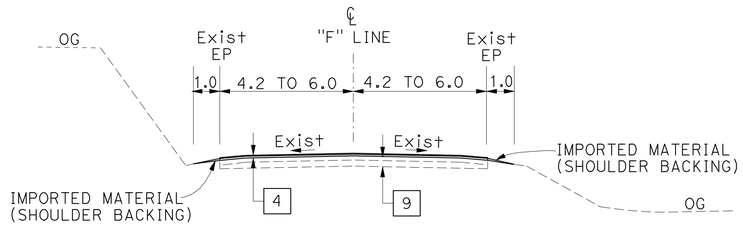
ROUTE 20
"H" LINE
Sta "H" 96+51.934 TO "H" ~~100+93.000~~ 97+23.000 1



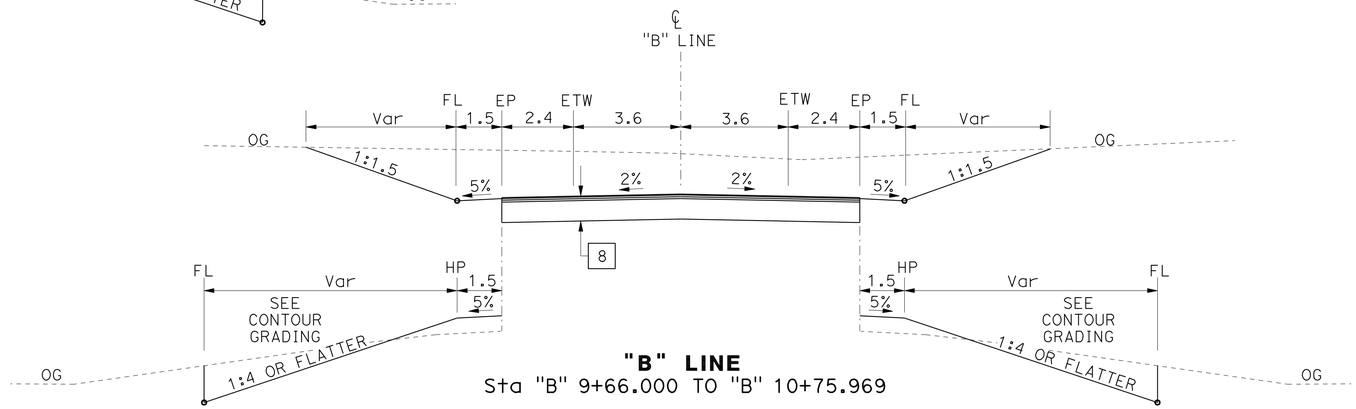
ROUTE 20
"H" LINE
1 Sta "H" ~~96+51.934~~ TO "H" 100+93.000
97+23.000



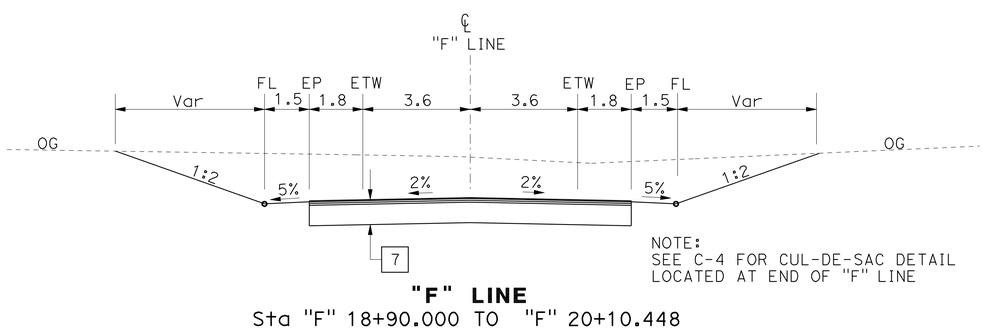
"H" LINE
Sta "H" 100+93.000 TO "H" 101+46.610



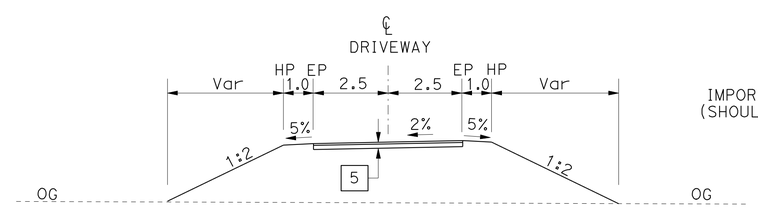
"F" LINE
Sta "F" 12+00.000 TO "F" 18+90.000



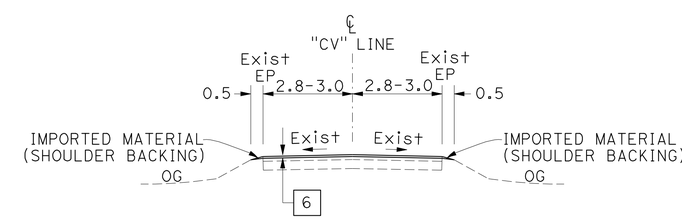
"B" LINE
Sta "B" 9+66.000 TO "B" 10+75.969



"F" LINE
Sta "F" 18+90.000 TO "F" 20+10.448



DRIVEWAYS



"CV" LINE
Sta "CV" 8+90.000 TO "CV"11+30.000

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

1 **REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012**

TYPICAL CROSS SECTIONS

NO SCALE

X-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY: MITCH ANDRUS
CHECKED BY: MELISSA HAURY
REVISED BY / DATE REVISED

LAST REVISION 06-01-11 DATE PLOTTED => 12-JUN-2012 TIME PLOTTED => 10:46

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	106	939

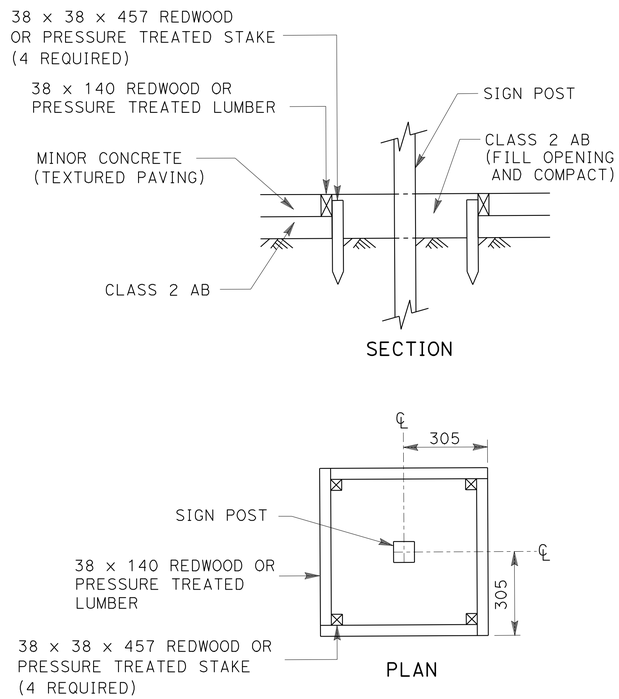
Donald C. Rushton 9-12-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Donald C. Rushton No. C35393 Exp. 9-30-13 CIVIL STATE OF CALIFORNIA

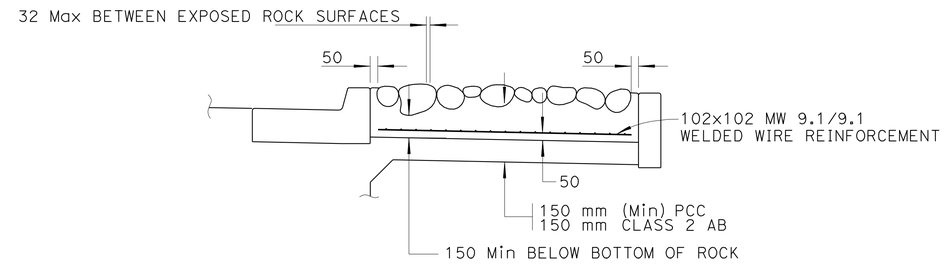
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric



OPENING FOR SIGN POST IN MINOR CONCRETE (TEXTURED PAVING)

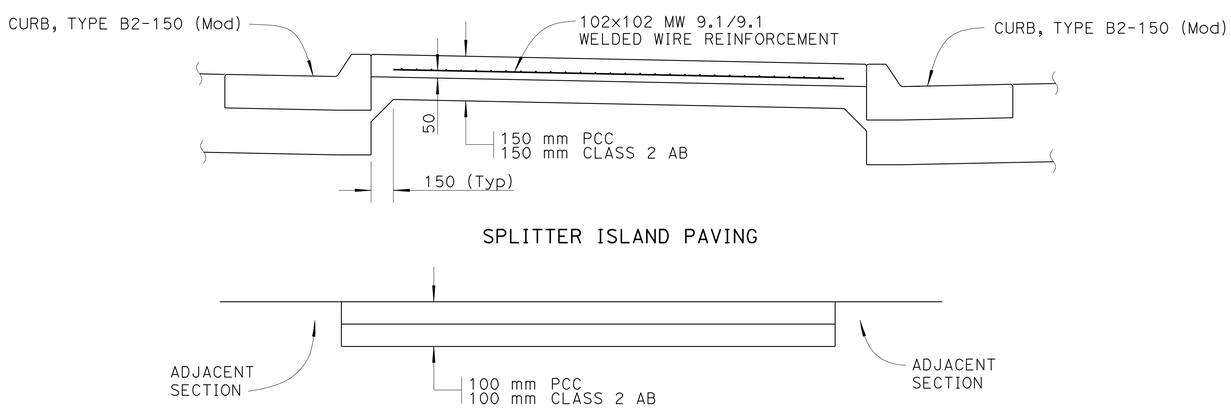
NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.



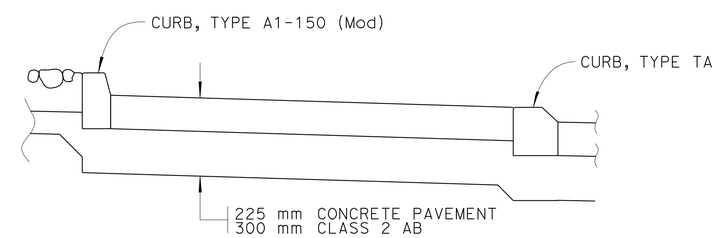
NOTES:

1. PLACE ROCK FLATTEST SIDE UP
2. 25 mm MAXIMUM VERTICAL DIFFERENCE BETWEEN ADJACENT ROCK SURFACES
3 PLACE TOP OF ROCK 25 TO 40 mm ABOVE CONCRETE SURFACE
4 SET CONCRETE SURFACE FLUSH WITH ADJACENT TOP OF CURB

ROCK BLANKET



SPLITTER ISLAND PAVING



TRUCK APRON

1 MULTI-USE PATH

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

ROUNDABOUT STRUCTURAL SECTION DETAILS CONSTRUCTION DETAILS

NO SCALE

C-34

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: David G. Kelley
CALCULATED-DESIGNED BY: DONALD C. RUSHTON
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 12-31-09
DATE PLOTTED =>
TIME PLOTTED =>

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	241	939

Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

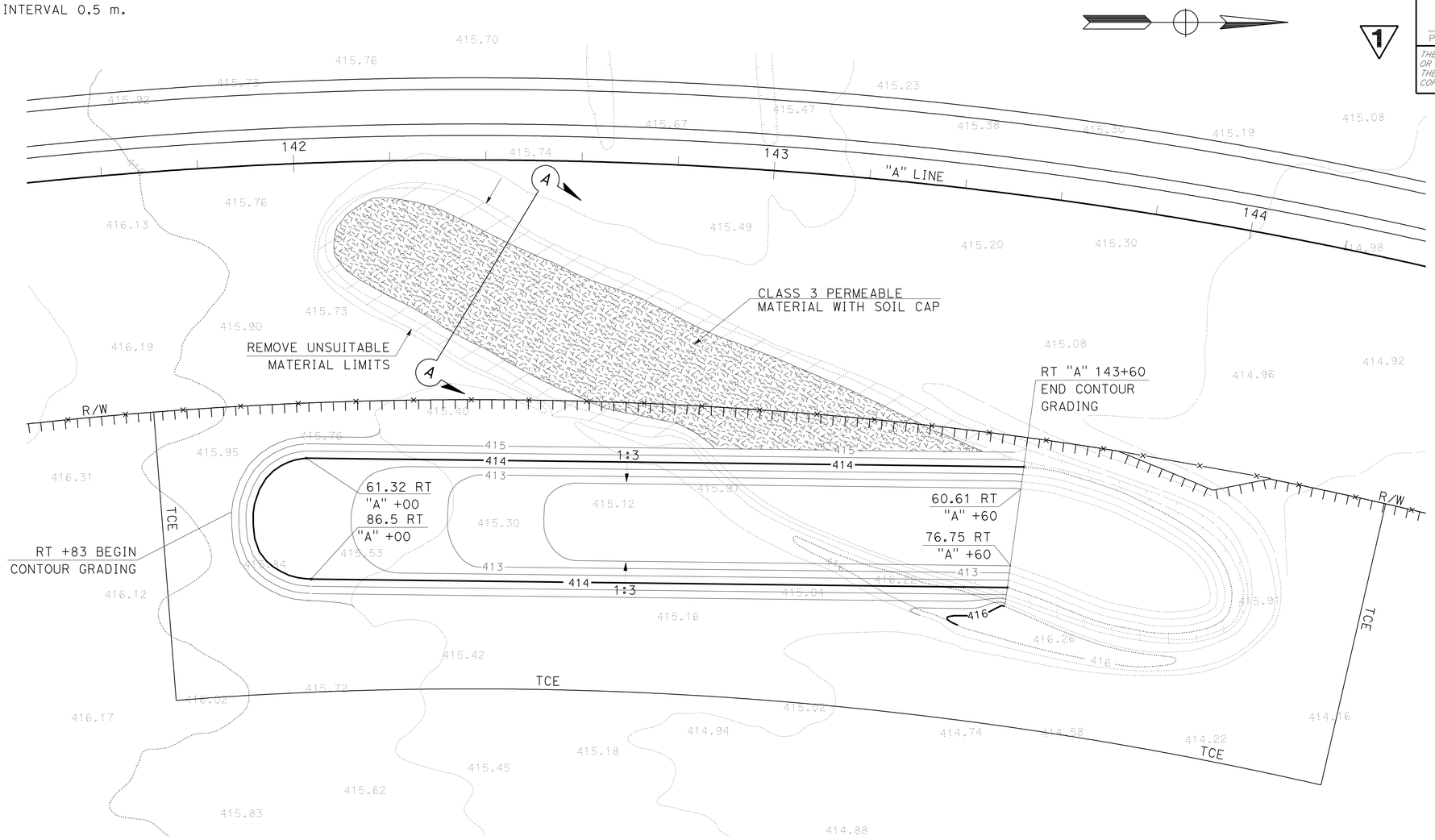
REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

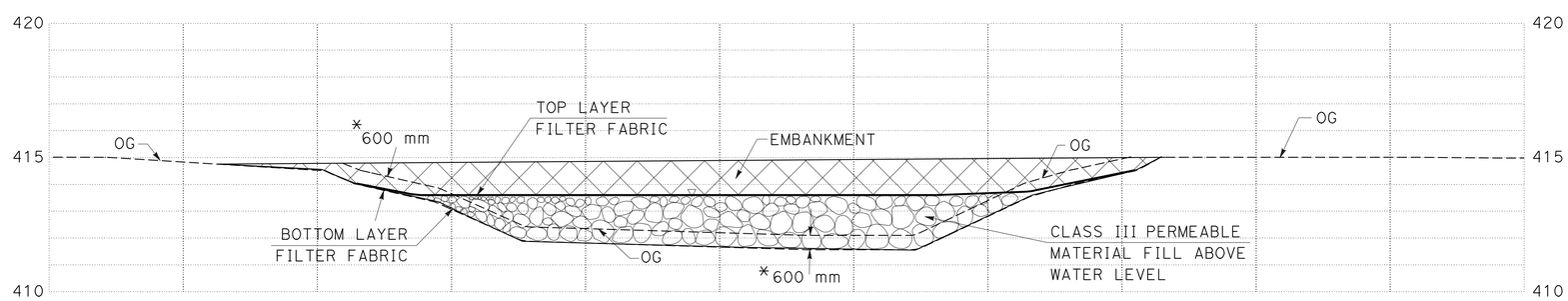
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

NOTES:

1. THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY.
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
3. CONTOUR INTERVAL 0.5 m.





*REMOVE UNSUITABLE MATERIAL

SECTION A-A

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CONTOUR GRADING

SCALE 1:500

G-12

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY: MITCH ANDRUS
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED =>
TIME PLOTTED =>

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	241A	939

Mitch Andrus 6-8-12
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

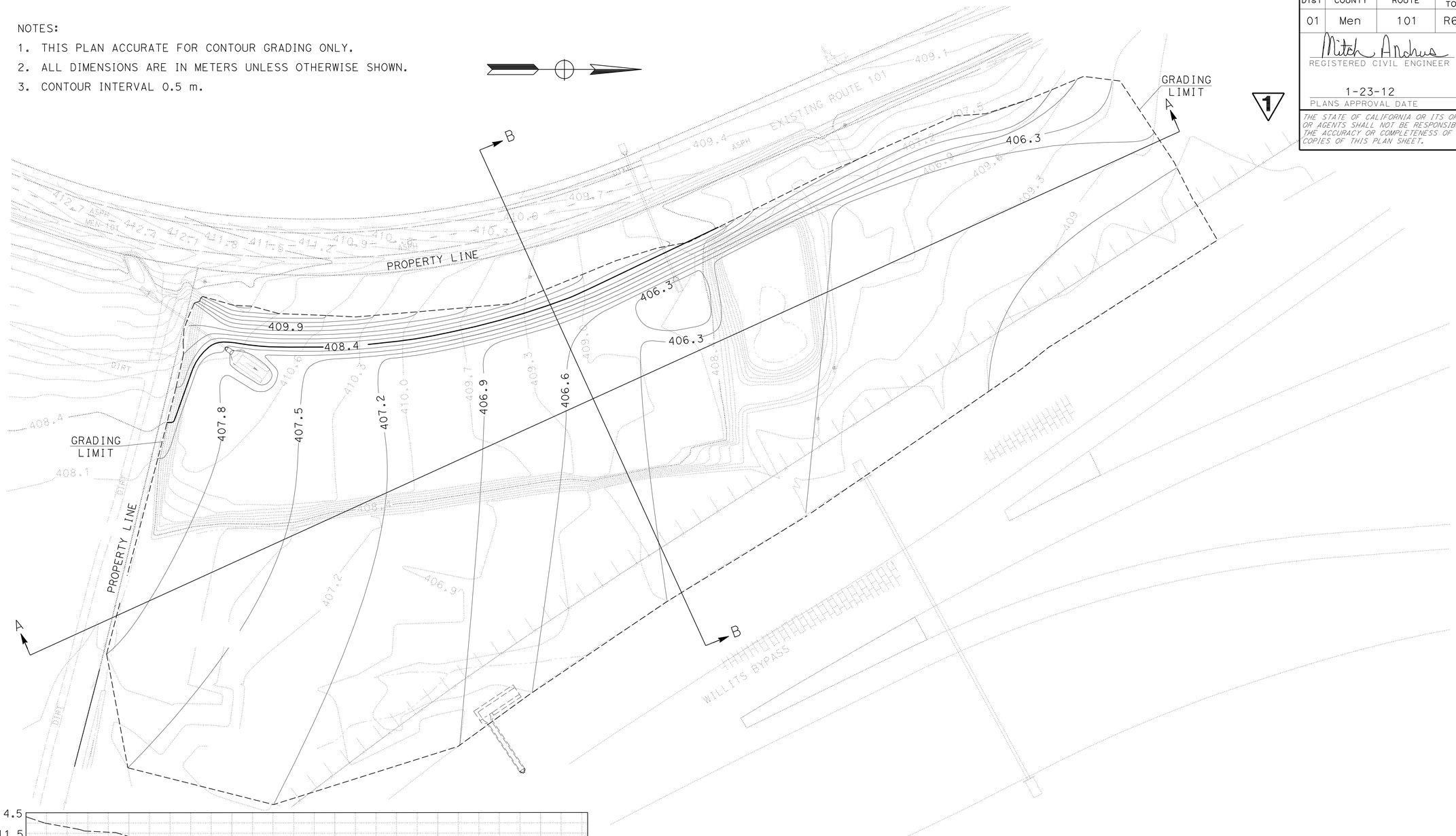
REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

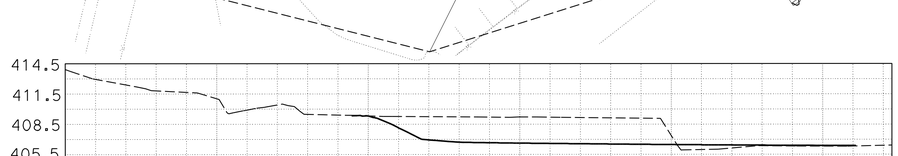
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Caltrans Metric

NOTES:

1. THIS PLAN ACCURATE FOR CONTOUR GRADING ONLY.
2. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
3. CONTOUR INTERVAL 0.5 m.





SECTION B-B

SECTION A-A

TYPICAL SECTIONS

1 ADDED PER ADDENDUM No. 1 DATED JUNE 13, 2012

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

CONTOUR GRADING

SCALE 1:500

G-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY: MITCH ANDRUS
CHECKED BY: KARA BRIMHALL
REVISED BY / DATE REVISED

LAST REVISION 06-08-12 | DATE PLOTTED => 12-JUN-2012 | TIME PLOTTED => 10:47

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ROCK SLOPE PROTECTION DETAILS (INCLUDING RSP FABRIC) SEE SHEET DD-1, 2 & 13.
3. FOR ALTERNATIVE PIPE CULVERTS SEE SHEET ~~DQ-17~~ DQ-20. 1
4. CONTOURS SHOWN ARE ORIGINAL GROUND.
5. FOR DETENTION BASIN DETAILS SEE SHEET DD-14 THRU DD-21. FOR DETENTION BASIN QUANTITIES SEE SHEET DQ-16.
6. AC DIKE SHOWN ON LAYOUT SHEETS.
7. FOR BIOSWALE DETAILS NOT SHOWN, SEE LANDSCAPE PLAN SHEETS.
8. FOR BRIDGE OUTLET DETAILS NOT SHOWN, SEE DRAINAGE DETAIL SHEET DD-7.

ABBREVIATIONS

CFES - CONCRETE FLARED END SECTION
DB - DETENTION BASIN
(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
T - Tonne
TCE - TEMPORARY CONSTRUCTION EASEMENT

LEGEND

DRAINAGE SYSTEM NUMBER
TEMPORARY DRAINAGE SYSTEM NUMBER
DRAINAGE DETENTION BASIN NUMBER
DRAINAGE UNIT

Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	242	939

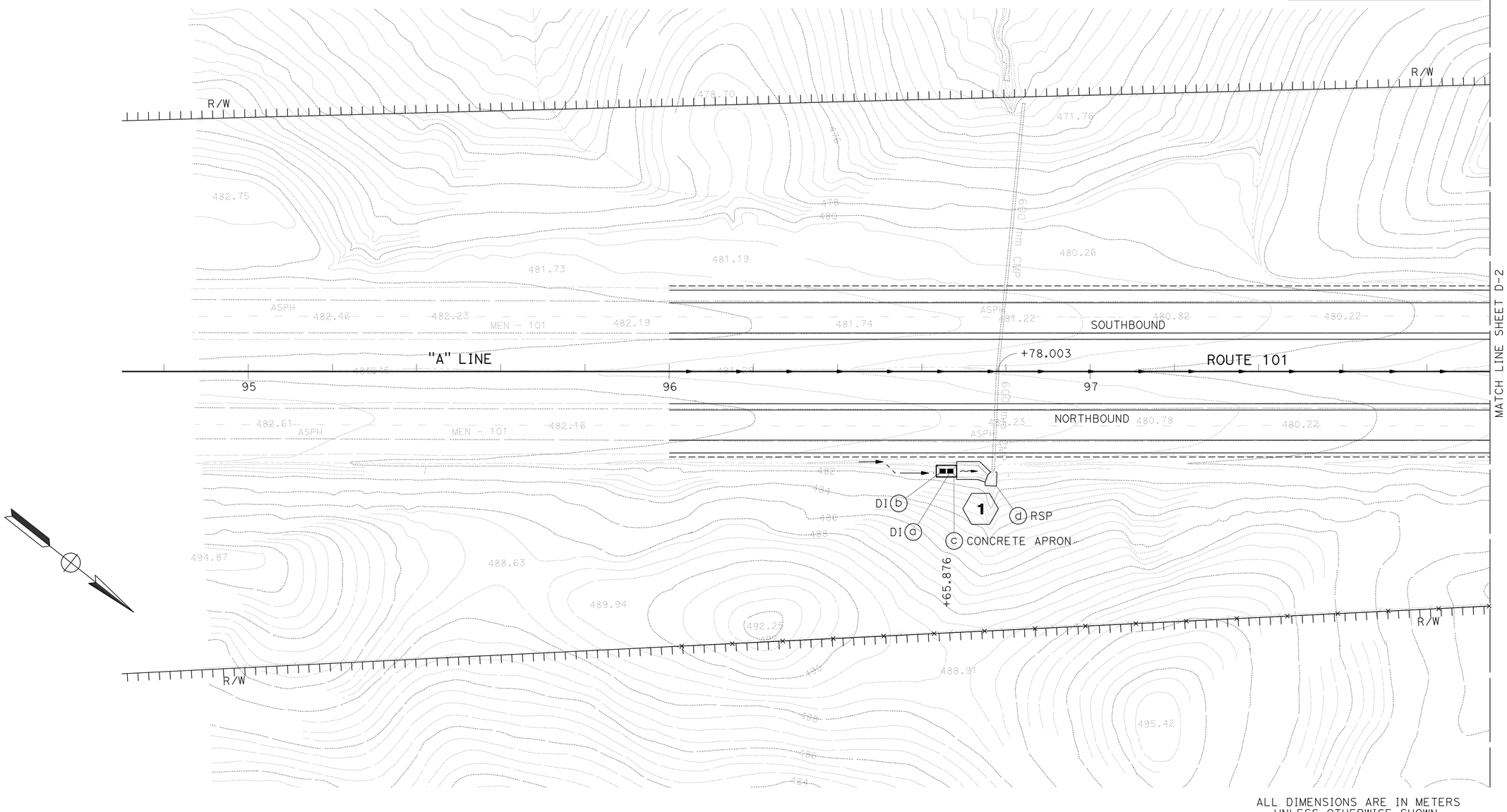
Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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

DS No.	FOR MORE INFORMATION SEE SHEET		
	DP-	DD-	ECD-
1	1	5,6,7,10,11	-



1 **REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012**

APPROVED FOR DRAINAGE WORK ONLY.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

DRAINAGE PLAN

SCALE 1:500

D-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY: KAO THAO
CHECKED BY: SCOTT FOSTER
REVISED BY: MGA
DATE REVISED: 05-30-11

LAST REVISION 08-09-11
DATE PLOTTED => 12-JUN-2012
TIME PLOTTED => 10:47

NOTES:

1. ALLOWABLE ALTERNATIVES FOR APC & AFES FOR ALL DRAINAGE SYSTEMS ON SHEET D-1 TO D-33 ARE LISTED ON ~~THIS SHEET~~ DQ-20. (1)
2. SEE SHEET DQ-18 FOR DETENTION BASIN QUANTITIES.
3. SEE SHEET DQ-18 FOR BRIDGE RSP QUANTITIES.
4. SEE STRUCTURE PLANS FOR ADDITIONAL QUANTITIES.

ABBREVIATIONS

CFES - CONCRETE FLARED END SECTION
DB - DETENTION BASIN
(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
T - Tonne
P - POSITIVE JOINT CLASSIFICATION
S - STANDARD JOINT CLASSIFICATION

LEGEND

DRAINAGE SYSTEM NUMBER
TEMPORARY DRAINAGE SYSTEM NUMBER
DRAINAGE DETENTION BASIN NUMBER
DRAINAGE UNIT

Caltrans Metric

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	389	939

Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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

DRAINAGE QUANTITIES

REMOVE ITEMS								Misc ITEMS							CONCRETE AND STEEL						APC				AFES				RCP		CFES	RSP									JACKED PIPE								
	ABANDON CULVERT	ABANDON RCB	REMOVE RCB CULVERT	REMOVE WINGWALL	REMOVE CULVERT	REMOVE INLET	REMOVE FES	REMOVE HEADWALL	NPS 6 SUPPLY LINE (BRIDGE)	(N) SLURRY BACKFILL	(N) MINOR CONCRETE	CABLE RAILING	MISCELLANEOUS IRON AND STEEL	DRAINAGE INLET MARKER (STAMPED CONCRETE INLET)	DRAINAGE INLET MARKER (PLASTIC)	CLASS 2 CONCRETE (WINGWALLS)	CLASS 1 CONCRETE (BOX CULVERT)	MINOR CONCRETE (MINOR STRUCTURE)	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	BAR REINFORCING STEEL (WINGWALLS)	BAR REINFORCING STEEL (BOX CULVERT)	450 mm ALTERNATIVE PIPE CULVERT	600 mm ALTERNATIVE PIPE CULVERT	900 mm ALTERNATIVE PIPE CULVERT	1200 mm ALTERNATIVE PIPE CULVERT	450 mm ALTERNATIVE FLARED END SECTION	600 mm ALTERNATIVE FLARED END SECTION	900 mm ALTERNATIVE FLARED END SECTION	1200 mm ALTERNATIVE FLARED END SECTION	900 mm REINFORCED CONCRETE PIPE	1050 mm REINFORCED CONCRETE PIPE	900 mm CONCRETE FLARED END SECTION	CLEAN SAND AND GRAVEL	RSP (BACKING No. 1, METHOD B)	RSP (LIGHT, METHOD B)	RSP (1/4 T, METHOD B)	RSP (1/2 T, METHOD A)	RSP (1 T, METHOD B)	RSP FABRIC	(N) PERMEABLE MATERIAL	(N) PERMEABLE MATERIAL FABRIC	900 mm REINFORCED CONCRETE PIPE (CLASS III)	1200 mm REINFORCED CONCRETE PIPE (CLASS III)	80 mm PLASTIC PIPE (OUTLET)	DRAINAGE PLAN SHEET No.	DRAINAGE PROFILE No.	DRAINAGE SYSTEM No.	DRAINAGE UNIT	STATION	DESCRIPTION
m	EA	EA	EA	EA	m	EA	EA	EA	m	m^3	m^3	m	kg	EA	EA	m^3	m^3	m^3	m^3	kg	kg	m	m	m	m	EA	EA	EA	EA	m	m	EA	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	m^2	m	m	m						
													85					0.86																				0.34	3.68				1	1	1	a	"A" 96+65.876	Mod G1-DI (H=1.22) GRATE TYPE 600-13
													85					0.86																				0.34	3.68							b		Mod G1-DI (H=1.22) GRATE TYPE 600-13
														1					2.08																												c		CONCRETE APRON (Dbl G1-DI)
																																			3.6			13.0									d		RSP (LIGHT, METHOD B)
													85					0.86																				0.34	3.68				2	1	2	a	"A" 98+49.578	Mod G1-DI (H=1.22) GRATE Type 600-13
													85					0.86																				0.34	3.68							b		Mod G1-DI (H=1.22) GRATE TYPE 600-13
														1					2.08																												c		CONCRETE APRON (Dbl G1-DI)
																																			23.7			86.1									d		RSP (LIGHT, METHOD B)
													85					1.19																				0.34	3.68				2	1	3	a	"A" 98+63.487	Mod G1-DI (H=1.83) GRATE TYPE 600-13
																																			6.5			21.0									b		RSP (LIGHT, METHOD B)
																																			6.3			24.6									c		RSP (LIGHT, METHOD B)
																			1.50																												d		CONCRETE APRON (G1-DI)
																																			4.9			15.6							3	-	4	a	"A" 100+00.326	RSP (LIGHT, METHOD B)
													85					0.86																				0.34	3.68				3	2	5	a	"U2" 101+57.578	Mod G1-DI (H=1.22) GRATE TYPE 600-13
													85					0.86																				0.34	3.68							b		Mod G1-DI (H=1.22) GRATE TYPE 600-13
														1					2.08																												c		CONCRETE APRON (Dbl G1-DI)
																																			4.1			14.6									d		RSP (LIGHT, METHOD B)
																																			15.0			57.3									e		RSP (LIGHT, METHOD B)
													85					1.18																				0.45	4.46				3	2	6	a	"A" 100+86.210	Mod G2-DI (H=1.22) GRATE TYPE 600-13
													85					1.18																				0.45	4.46							b		Mod G2-DI (H=1.22) GRATE TYPE 600-13
																																			2.2			9.6									c		RSP (LIGHT, METHOD B)
														1					2.17																												d		CONCRETE APRON (Dbl G2-DI)
																																			12.7			37.6									e		RSP (LIGHT, METHOD B)
						1																																					3	3	7	a	"U" 102+76.434	REMOVE FES
																							2.25																								b		600 mm APC
													85					5.29																												c		G2-DI (H=3.69) GRATE TYPE 600-13
																							30.48																								d		600 mm APC
														1					1.83																												e		CONCRETE APRON (G2-DI)
																																			33.3			110.9									f		RSP (LIGHT, METHOD B)
																												1																				g		600 mm AFES
						1							850	5				14.00	11.74				32.73				1							112.3			390.3	3.28	34.68				SHEET TOTAL					

(1) REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

DRAINAGE QUANTITIES
DQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY: KAO THAO
CHECKED BY: SCOTT FOSTER
REVISED BY: MGA
DATE REVISED: 05-30-11

LAST REVISION 11-30-11
DATE PLOTTED => 12-JUN-2012
TIME PLOTTED => 10:47

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	408	939

Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

DRAINAGE QUANTITIES SUMMARY

	REMOVE ITEMS							Misc ITEMS							CONCRETE AND STEEL						APC				AFES				RCP		CFES	RSP									JACKED PIPE			
	ABANDON CULVERT	ABANDON RCB	REMOVE RCB CULVERT	REMOVE WINGWALL	REMOVE CULVERT	REMOVE INLET	REMOVE FES	REMOVE HEADWALL	NPS 6 SUPPLY LINE (BRIDGE)	(N) SLURRY BACKFILL	(N) MINOR CONCRETE	CABLE RAILING	MISCELLANEOUS IRON AND STEEL	DRAINAGE INLET MARKER (STAMPED CONCRETE INLET)	DRAINAGE INLET MARKER (PLASTIC)	CLASS 2 CONCRETE (WINGWALLS)	CLASS 1 CONCRETE (BOX CULVERT)	MINOR CONCRETE (MINOR STRUCTURE)	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	BAR REINFORCING STEEL (WINGWALLS)	BAR REINFORCING STEEL (BOX CULVERT)	450 mm ALTERNATIVE PIPE CULVERT	600 mm ALTERNATIVE PIPE CULVERT	900 mm ALTERNATIVE PIPE CULVERT	1200 mm ALTERNATIVE PIPE CULVERT	450 mm ALTERNATIVE FLARED END SECTION	600 mm ALTERNATIVE FLARED END SECTION	900 mm ALTERNATIVE FLARED END SECTION	1200 mm ALTERNATIVE FLARED END SECTION	900 mm REINFORCED CONCRETE PIPE	1050 mm REINFORCED CONCRETE PIPE	900 mm CONCRETE FLARED END SECTION	CLEAN SAND AND GRAVEL	RSP (BACKING No. 1, METHOD B)	RSP (LIGHT, METHOD B)	RSP (1/4 T, METHOD B)	RSP (1/2 T, METHOD A)	RSP (1 T, METHOD B)	RSP FABRIC	(N) PERMEABLE MATERIAL	(N) PERMEABLE MATERIAL FABRIC	900 mm REINFORCED CONCRETE PIPE(CLASS III)	1200 mm REINFORCED CONCRETE PIPE (CLASS III)	80 mm PLASTIC PIPE (OUTLET)	SHEET NO.
	m	EA	EA	EA	m	EA	EA	EA	m	m^3	m^3	m	kg	EA	EA	m^3	m^3	m^3	m^3	kg	kg	m	m	m	m	EA	EA	EA	EA	m	m	EA	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	m^2	m	m	m	
							1						850	5				14.00	11.74				32.73				1									112.3				390.3	3.28	34.68				SHEET DQ-1 TOTAL
					102.60								425	5				11.53	11.59			53.01	103.63				2									107.3				309.1	0.34	3.68				SHEET DQ-2 TOTAL
					111.70							6.10	510	4	2			12.33	6.00			60.37	70.24	21.34			2									92.3				297.5						SHEET DQ-3 TOTAL
					12.60								935	6	6			15.97	9.78			101.77	90.61				1									47.4				163.9						SHEET DQ-4 TOTAL
					87.80								680	7	1			9.09	10.60			61.78	70.11	79.25		1	3	2									105.5				252.5	0.45	4.46				SHEET DQ-5 TOTAL
49.37					143.60	1	3			14.41		7.02	255	3				10.00	4.67			12.04	115.82				3				143.26						182.4				354.9	0.45	4.46				SHEET DQ-6 TOTAL
												10.97	765		9			18.86				109.13	36.58			1	2			67.06		1					93.3				269.0	1.70	18.40		47.24		SHEET DQ-7 TOTAL
									12.40		9.45	29.67	595		7	44.86	83.33	8.33		2392	8376	181.06				2										1632.5				915.7						SHEET DQ-8 TOTAL
	1		2							31.69	16.05	37.63	255		3	31.18	58.61	13.55		1240	8281	27.44	21.34			1	1									71.5	340.6		213.3	894.4	0.98	9.42	121.92			SHEET DQ-9 TOTAL
					11.50							18.30	170		2			16.47				37.11	27.43			1	1									80.6				239.1	0.90	8.92	273.78			SHEET DQ-10 TOTAL
					52.00	2	2						442	2	4			6.36	3.00			12.20	97.19				5									19.0				72.8						SHEET DQ-11 TOTAL
			1	2									782		11			16.37				163.18	18.29			4										23.4				92.7						SHEET DQ-12 TOTAL
													1122	2	14			25.69	3.27			206.11				1										3.4				12.9						SHEET DQ-13 TOTAL
													833	2	9			18.61	3.20			146.97	140.28				4									38.2				134.3	0.45	4.46				SHEET DQ-14 TOTAL
													680	2	6			10.41	3.50			61.07	78.45				4					2				49.9				166.5	0.45	4.46	76.20			SHEET DQ-15 TOTAL
					33.60	1	2	1					255	1	2			7.75	2.00			26.92	24.21			1						4				52.9				165.0	0.45	4.46	90.22			SHEET DQ-16 TOTAL
					65.90			1				6.10						6.04					13.72	57.91				2								40.7				118.7						SHEET DQ-17 TOTAL
							1						340			38.21		4.57		980		51.81	1.19			2							1214.7	9131.1	4500.0	2400.5	1575.3		1299.3					900.0	SHEET DQ-18 TOTAL
										275.43														578.91	37.63			18	2								230.3				580.3						SHEET DQ-19 TOTAL
49.37	1	1	4		621.30	4	9	2	12.4	321.53	25.50	115.79	9894	39	76	114.25	141.94	225.93	69.35	4612	16657	1311.97	941.82	737.41	37.63	14	29	22	2	67.06	143.26	7	1214.7	9131.1	7482.9	2741.1	1575.3	213.3	6728.9	9.45	97.40	562.12	47.24	900.0	GRAND TOTAL

APC ALLOWABLE PIPE MATERIAL

DRAINAGE SYSTEM No.	TYPE: CORRUGATED STEEL PIPE (CSP) (2.77 mm THICK)	CORRUGATED STEEL PIPE (CSP) (3.51 mm THICK)	CORRUGATED STEEL PIPE (CSP) (4.27 mm THICK)	POLYMERIC SHEET COATED CORRUGATED STEEL PIPE (PSCCSP) (2.01 mm THICK)	POLYMERIC SHEET COATED CORRUGATED STEEL PIPE (PSCCSP) (2.77 mm THICK)	CORRUGATED ALIMINIZED STEEL PIPE (CASP)	PLASTIC PIPE (PP) (TYPE S)	REINFORCED CONCRETE PIPE (RCP)
13,15,17,18,22			X		X	X	X	X
7,23,25,37,38,40			X		X	X	X	NO
24,26,41,87-88,90,91,94			X	X		X	X	X
14,31,42-47,49,50,54,56,59,62-70, 72-76,77-80,82,83		X		X		X	X	X
30,32,33,34,36	X			X		X	X	X
TEMPORARY DRAINAGE SYSTEM No.								
T-1,T-2,T-10		X		X		X	X	X
T-3 TO T-9			X		X			X
DETENTION BASIN No.								
DB-2			X		X	X	X	NO
DB-4,DB-5		X		X		X	X	X

1 TYPE S = SMOOTH INTERIOR
CASP PIPE THICKNESS IS THE SAME AS CSP PIPE THICKNESS.

AFES ALLOWABLE END TYPES

APC PIPE TYPES (ALL SIZES)	TYPE: CONCRETE FLARED END SECTION (CFES) SIZE (mm)	STEEL FLARED END SECTION (STEEL FES) SIZE (mm)
CSP	ALL	ALL
PSCCSP	ALL	ALL
CASP	ALL	ALL
PP, TYPE S	ALL	NONE
RCP	ALL	ALL

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

DRAINAGE QUANTITIES
DQ-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

CALCULATED-DESIGNED BY	KAO THAO	REVISED BY	MGA
CHECKED BY	SCOTT FOSTER	DATE REVISED	05-30-11
FUNCTIONAL SUPERVISOR	DOUGLAS S. JONES		

LAST REVISION DATE PLOTTED => 12-JUN-2012
TIME PLOTTED => 10:47
12-02-11

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	514	939

Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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

EARTHWORK SUMMARY

STATION TO STATION		ROADWAY EXCAVATION (m^3)	ROADWAY EMBANKMENT (N) (m^3)	IMPORTED BORROW (m^3)
"A" 96+00.000	"A" 111+80.000	125000	65500	
"AS" 40+00.000	"AS" 52+26.724	13501	33676	
"AN" 30+00.000	"AN" 42+71.106	8267	25309	
"A" 124+00.000	"A" 150+24.216	21389	245375	
"W" 150+88.346	"W" 172+91.903	1666	191535	
"NW1" 172+91.903	"NW1" 177+43.754	0	197097	
"W" 177+40.000	"W" 180+20.000	0	135749	
"NW2" 180+20.000	"NW2" 190+70.000	2627	60304	
"U1" 99+48.581	"U1" 105+82.478	241347	33	
"U2" 100+80.000	"U2" 105+66.883	51280	8874	
"U3" 106+73.943	"U3" 110+30.000	24130	12913	
"U4" 105+43.196	"U4" 110+50.000	3982	7059	
"H" 96+50.510	"H" 101+84.915	58721	676	
"QM1" 173+39.985	"QM1" 177+44.360	68	98503	
"QM2" 173+40.000	"QM2" 178+25.248	333	86368	
"QM3" 182+00.000	"QM3" 178+91.264	0	27678	
"QM4" 178+19.128	"QM4" 182+99.268	0	31650	
"B" 9+66.000	"B" 11+10.950	0	9750	
"F" 12+00.000	"F" 20+10.448[a]	1025	461	
"BERM1" 10+16.000	"BERM1" 10+72.000	15	661	
"DW9" 10+05.400	"DW9" 10+10.483	0	2	
"DW10" 10+01.800	"DW10" 10+47.040	46	6	
	SUB TOTAL(1):	553397	1239180	
LOCATION				
ROUNDABOUT		0	43588	
"U1" GORE		61	0	
"U2" GORE		49	0	
"U3" GORE		39	0	
"U4" GORE		59	0	
"QM1" GORE		35	0	
"QM2" GORE		67	0	
"QM3" GORE		50	0	
"QM4" GORE		26	0	
STABILIZATION TRENCH SYSTEM "U3"[b]		4596	0	
STAGE CONSTRUCTION		434	0	
"D" LINE WETLAND REHAB WORK RT "D" 20+20.00 TO "D" 23+80.00 (SEE C-46 & C-47)		32900	0	
LOCAL TOPSOIL[c]		70000	38000	
CONTOUR GRADING QUANTITIES NOT REFLECTED ABOVE[d]	AHU3	7697	0	
	AHU2	2361	0	
	AHU1	44094	0	
	DB-7[e]	2528	0	
	WBQM1	0	1835	
	WBQM2	0	643	
	WBQM3	0	1033	
	WBQM4	0	23	
	SUB TOTAL(2):	164996	85122	
TOTAL		718393	1324302	740452[f]

(N) NOT A SEPERATE PAY ITEM, FOR INFORMATION ONLY
a INCLUDES "DW6", "DW7", "DW8" & CUL-DE-SAC
b SEE C-10 FOR STABILIZATION TRENCH SYSTEM DETAILS.
c SEE C-51 TO C-81 FOR DETAILS.
d SEE G-1 FOR LOCATIONS.
e SEE D-27 FOR DETAILS.
f INCLUDES GRADING FACTOR OF 0.9.

FILTER FABRIC

DESCRIPTION	QTY (m^2)	NOTES
LANDSCAPE DESIGN	528	SEE LD-5 FOR QUANTITY.
SLOPE STABILIZATION	1234	SEE Q-7 FOR QUANTITY.
POND RELOCATION	5568	SEE THIS SHEET FOR QUANTITY.
TOTAL	7330	

ROADWAY EXCAVATION (TYPE DC)

310 m^3

Caltrans Metric

ROADWAY QUANTITIES SUMMARY

STATION TO STATION		CLASS 2 AGGREGATE BASE (m^3)	HOT MIX ASPHALT (TONNE)	RUBBERIZED HOT MIX ASPHALT (GAP GRADED) (TONNE)	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED) (TONNE)	GEOSYNTHETIC PAVEMENT INTERLAYER (m^2)	PAVING ASHPHALT BINDER, GPI (TONNE)	TACK COAT (TONNE)
"A" 96+00.000	"A" 111+80.000	14463	3144	6667	2258	13419	15.2	45.6
"AS" 40+00.000	"AS" 52+26.724	9885	2149	2149	1075	0	0	19.0
"AN" 30+00.000	"AN" 42+71.106	7333	1594	1594	797	0	0	14.1
"A" 124+00.000	"A" 148+67.750	19437	8726	8726	4363	0	0	77.1
"W" 150+88.346	"W" 172+91.903	4639	1009	1009	505	0	0	9.0
"NW1" 172+91.903	"NW1" 177+43.754	3915	852	852	426	0	0	7.6
"W" 177+40.000	"W" 180+20.000	1480	322	322	161	0	0	2.9
"NW2" 180+20.000	"NW2" 190+70.000	8576	1865	2305	1059	1679	1.9	18.7
"U1" 99+48.581	"U1" 105+82.478	3144[a]	675	728[e]	202	33	0.1	6.1
"U2" 100+80.000	"U2" 105+66.883	2388[a]	512	550[e]	155	7	0.1	4.6
"U3" 106+73.943	"U3" 110+30.000	1523[a]	326	354[e]	163	0	0	2.9
"U4" 105+43.196	"U4" 110+50.000	2723[a]	381	627[e]	292	0	0	5.2
"H" 96+49.920	"H" 101+46.614	3300	728	952	423	853	1.0	7.6
"QM1" 173+39.985	"QM1" 177+43.484	1878[a]	404	429[e]	202	0	0	3.6
"QM2" 173+40.000	"QM2" 178+25.248	2409[a]	514	564[e]	257	0	0	4.6
"QM3" 181+92.763	"QM3" 178+91.264	1256[a]	266	303[e]	133	0	0	2.4
"QM4" 178+19.128	"QM4" 182+39.963	1769[a]	381	401[e]	191	0	0	3.4
"B" 9+66.000	"B" 11+44.307	899	257	252	108	0	0	2.3
"F" 12+00.000	"F" 20+10.448[b]	1735	1410	1410	708	6881	7.8	12.5
"DW9" 10+05.400	"DW9" 10+10.483	6	0	7	0	0	0	0
"DW10" 10+01.800	"DW10" 10+47.040	29	0	31	0	0	0	0
"CV" 8+90.000	"CV" 11+30.000	0	0	211	0	1402	1.6	0
	SUB TOTAL(1):	92787	25515	30443	13478	24274	27.7	249.2
ROUNDABOUT[c]		3000	609	0	254	0	0	0
STAGE CONSTRUCTION		482	625	0	0	0	0	0
HMA DIKE(TYPE C, TYPE E AND TYPE F)[d]		0	119	0	0	0	0	0
~~PLACE HMA (MISCELLANEOUS AREA)[d]~~		~~0~~	~~121~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
	SUB TOTAL(2):	3482	~~1474~~ 1353	0	254	0	0	0
	TOTAL:	96269	~~26989~~ 26868	30443	13732	24274	27.7	249.2

a INCLUDES STAMPED ASPHALT CI 2 AB QUANTITY.
b INCLUDES "DW6", "DW7", "DW8" & CUL-DE-SAC.
c SEE SHEETS C-14 THROUGH C-42 FOR DETAILS.
d SEE Q-3 FOR QUANTITY TABLES.
e INCLUDES STAMPED ASPHALT HMA QUANTITY. SEE STAMPED ASPHALT TABLE BELOW.

STAMPED ASPHALT

SHEET	DESCRIPTION	QUANTITY (m^2)	QUANTITY (TONN)*
L-3	"U1" GORE	302	37.7
L-3	"U2" GORE	241	30.1
L-8	"U3" GORE	191	23.8
L-8	"U4" GORE	294	36.7
L-28	"QM1" GORE	171	21.3
L-28	"QM2" GORE	333	41.6
L-32	"QM3" GORE	249	31.0
L-32	"QM4" GORE	131	16.3
	TOTAL:	1912	238.5

*INCLUDED IN ROADWAY QUANTITIES SUMMARY. SEE THIS SHEET.

POND RELOCATION+

REMOVE UNSUITABLE MATERIAL	CLASS 3 PERMEABLE MATERIAL	FILTER FABRIC*
1600 m^3	3216 m^3	5568 m^2

+ SEE L-18, G-12 AND G-13 FOR ~~+ SEE L-18 AND G-12 FOR~~ POND RELOCATION DETAILS.
* SEE TOTAL THIS SHEET

ROCK BLANKET

ROUNDABOUT	QUANTITY (m^2)
LEG A-B	219
LEG C	105
LEG D	103
LEG F-E	164
LEG H-G	161
CENTRAL ISLAND	226
TOTAL:	978

SEE SHEETS C-14 TO C-42 FOR DETAILS.

REMOVE ASPHALT CONCRETE SURFACING

1340 m^2

SEE SC-31 FOR DETAILS.

REMOVE BASE AND SURFACING

1180 m^2

SEE C-21 TO C-23 & C-26 FOR DETAILS.

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

SUMMARY OF QUANTITIES

Q-1

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY / CHECKED BY
REVISED BY / DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

LAST REVISION 11-15-11 | DATE PLOTTED => 12-JUN-2012 | TIME PLOTTED => 13:28

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	101	R69.4/R78.9	516	939

Mitch Andrus 9-22-11
REGISTERED CIVIL ENGINEER DATE

1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MITCH ANDRUS No. C48753 Exp. 9-30-12 CIVIL STATE OF CALIFORNIA

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

Caltrans Metric

COLD PLANE ASPHALT CONCRETE PAVEMENT

(25 mm MAXIMUM)

	STATION TO STATION		QUANTITY (m^2)
NB	"A" 96+00.00	"A" 101+20.00	6025
SB	"A" 96+00.00	"A" 103+65.00	7395
	"NW2" 188+20.00	"NW2" 190+70.00	1814
	STAGE CONSTRUCTION		
	SHEETS SC-3 & SC-4		160
		SUBTOTAL (25 MAX):	15394

(60 mm MAXIMUM)

	STATION TO STATION		QUANTITY (m^2)
NB	"A" 96+00.00	"A" 96+54.00	632
SB	"A" 96+00.00	"A" 96+54.00	632
	"H" 96+49.92	"H" 97+23.00	853
	"NW2"189+70.00	"NW2" 190+70.00	1090
		SUBTOTAL(60 MAX):	3207
		TOTAL:	18601

1

~~PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)~~

~~STATION TO STATION~~			~~QUANTITY (m2)~~	~~QUANTITY (TONNE)~~
~~LT "AS"~~	~~51+85.00~~	~~103+43.90~~	~~43.93~~	~~18.12~~
~~LT "A"~~	~~125+10.00~~	~~125+41.50~~	~~33.17~~	~~13.68~~
~~LT "A"~~	~~129+28.00~~	~~129+62.00~~	~~35.80~~	~~14.77~~
~~LT "A"~~	~~131+40.00~~	~~131+84.00~~	~~46.33~~	~~19.11~~
~~LT "A"~~	~~147+40.00~~	~~147+87.00~~	~~49.48~~	~~20.41~~
~~RT "QM2"~~	~~177+25.00~~	~~177+56.00~~	~~32.64~~	~~13.46~~
~~RT "QM4"~~	~~178+55.00~~	~~178+83.00~~	~~29.48~~	~~12.16~~
~~RT "QM4"~~	~~179+90.95~~	~~180+12.00~~	~~22.16~~	~~9.14~~
		~~TOTAL:~~	~~292.99~~	~~120.86~~
		~~TOTAL (ROUNDED):~~	~~293~~	~~121~~

PLACE HOT MIX ASPHALT DIKE

STATION TO STATION				(TYPE C) QUANTITY (m)	(TYPE C) QUANTITY (Tonne)	(TYPE F) QUANTITY (m)	(TYPE F) QUANTITY (Tonne)	(TYPE E) QUANTITY (m)	(TYPE E) QUANTITY (Tonne)
"A" SB LT	97+16.50	"A" SB LT	97+66.00			49.50	1.98		
"A" SB LT	97+66.00	"A" SB LT	97+85.00	19.00	0.43				
"A" NB RT	97+02.50	"A" NB RT	97+22.00	19.50	0.44				
"A" NB RT	97+22.00	"A" NB RT	97+33.33			11.33	0.45		
"A" NB RT	102+77.00	"A" NB RT	102+97.00	20.00	0.45				
"A" NB RT	102+97.00	"A" NB RT	105+70.52			273.52	10.94		
"H" RT	96+53.35	"H" RT	96+72.00			18.65	0.75		
"H" RT	96+72.00	"H" RT	96+92.00	20.00	0.45				
"H" LT	96+49.92	"H" LT	97+63.00			113.08	4.52		
"H" LT	97+63.00	"H" LT	97+83.00	20.00	0.45				
"H" LT	100+48.00	"H" LT	100+68.00	20.00	0.45				
"H" LT	100+68.00	"U4" LT	105+64.62			30.22	1.21		
"U4" RT	105+64.61	"H" RT	101+26.00			42.39	1.70		
"H" LT	101+26.00	"H" LT	101+45.00	19.00	0.43				
"U4" LT	105+95.86	"U4" LT	106+20.00					24.20	1.63
"U4" RT	106+63.00	"U4" RT	106+75.00	12.00	0.27				
"U4" RT	106+75.00	"U4" RT	107+20.03			45.03	1.80		
"A" NB RT	106+29.41	"A" NB RT	107+03.38			73.97	2.96		
"A" SB LT	106+56.28	"A" SB LT	107+30.52			74.24	2.97		
"A" NB RT	107+70.12	"A" NB RT	108+50.14					80.02	5.40
"A" SB LT	107+96.56	"A" SB LT	108+26.00			29.44	1.18		
"A" SB LT	108+26.00	"A" SB LT	108+53.59	27.59	0.62				
"A" SB LT	108+53.59	"A" SB LT	109+11.46					57.87	3.91
"U3" LT	108+39.23	"U3" LT	108+62.00			22.77	0.91		
"U3" LT	108+62.00	"U3" LT	108+75.60	13.60	0.31				
"AS" SB LT	124+94.00	"A" SB LT	125+59.99			65.99	2.64		
"A" SB LT	126+19.19	"A" SB LT	128+51.00			231.81	9.27		
"A" SB LT	129+23.00	"A" SB LT	129+34.62	11.62	0.26				
"A" NB LT	133+73+76	"A" NB LT	133+93.00	12.04	0.27				
"A" NB LT	133+93.00	"A" NB LT	134+07.59			14.59	0.58		
"A" NB LT	134+71.87	"A" NB LT	134+79.00			7.13	0.29		
"A" NB LT	134+79.00	"A" NB LT	135+05.00	26.00	0.59				
"A" SB LT	145+73.00	"A" SB LT	145+92.00	19.00	0.43				
"A" SB LT	145+92.00	"A" SB LT	146+00.00			8.00	0.32		
"A" SB LT	147+10.00	"A" SB LT	148+70.20			160.20	6.41		
"A" NB LT	167+76.55	"A" NB LT	167+84.00			7.45	0.30		
"A" NB LT	167+84.00	"A" NB LT	168+04.00	20.00	0.45				
"A" NB LT	172+76.00	"A" NB LT	173+62.50					86.50	5.84
"A" NB LT	170+10.00	"A" NB LT	171+42.66					132.66	8.95
"A" NB LT	171+42.66	"A" NB LT	171+54.00	11.34	0.26				
"A" NB LT	171+54.00	"A" NB LT	171+61.69			7.69	0.31		
"A" NB LT	172+49.03	"A" NB LT	172+57.00			7.97	0.32		
"A" NB LT	172+57.00	"A" NB LT	172+76.00	19.00	0.43				
"QM1" LT	175+06.00	"QM1" LT	177+21.00			215.00	8.60		
"QM1" LT	177+21.00	"QM1" LT	177+32.93	11.93	0.27				
			TOTAL(TABLE 1):	336.80	7.60	1509.97	60.41	381.25	25.73

PLACE HOT MIX ASPHALT DIKE

STATION TO STATION				(TYPE C) QUANTITY (m)	(TYPE C) QUANTITY (Tonne)	(TYPE F) QUANTITY (m)	(TYPE F) QUANTITY (Tonne)	(TYPE E) QUANTITY (m)	(TYPE E) QUANTITY (Tonne)
"QM1" LT	177+32.93	"QM1" LT	177+43.48					10.55	0.71
"W" SB LT	177+48.00	"W" SB LT	177+68.00	20.00	0.45				
"W" SB LT	177+68.00	"W" SB LT	177+83.08			15.08	0.60		
"QM4" RT	178+71.00	"QM4" RT	179+26.00					55.00	3.71
"QM4" RT	178+26.00	"QM4" RT	179+45.00	19.00	0.43				
"QM4" RT	178+45.00	"QM4" RT	179+53.05			8.05	0.32		
"W" SB LT	178+33.10	"W" SB LT	178+40.00			6.90	0.28		
"W" SB LT	178+40.00	"W" SB LT	178+60.00	20.00	0.45				
"W" SB LT	178+60.00	"W" SB LT	179+01.00					41.00	2.77
"W" SB LT	179+01.00	"W" SB LT	179+23.00	22.00	0.50				
"W" SB LT	179+23.00	"W" SB LT	179+35.95			12.95	0.52		
"QM3" LT	178+91.26	"QM3" LT	179+08.75					17.49	1.18
"QM3" LT	179+42.51	"QM3" LT	180+98.00			155.49	6.22		
"W" NB LT	179+81.33	"W" NB LT	179+89.00			7.67	0.31		
"W" NB LT	179+89.00	"W" NB LT	180+08.00	19.00	0.43				
"W" NB LT	180+08.00	"NW2" RT	180+40.00					32.00	2.16
"NW2" RT	185+20.00	"NW2" RT	185+40.00	20.00	0.45				
"NW2" RT	185+40.00	"NW2" RT	185+81.00			41.00	1.64		
"NW2" RT	185+81.00	"NW2" RT	186+02.00	20.00	0.45				
			TOTAL (TABLE 2):	140.00	3.16	247.14	9.89	156.04	10.53
			TOTAL (TABLE 1):	336.80	7.60	1509.97	60.41	381.25	25.73
			TOTAL (TABLE 1 + TABLE 2):	476.80	10.76	1757.11	70.30	537.29	36.26
			*TOTAL (ROUNDED):	477	11	1758	71	538	37

*QUANTITIES ARE INCLUDED IN THE ROADWAY QUANTITIES SUMMARY TABLE. SEE Q-1.

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

SUMMARY OF QUANTITIES

Q-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans 03-DESIGN EAST

FUNCTIONAL SUPERVISOR: DOUGLAS S. JONES
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 11-28-11 DATE PLOTTED => 12-JUN-2012 TIME PLOTTED => 10:48

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	101	R69.4/R78.9	854	939

REGISTERED CIVIL ENGINEER 9-15-11 DATE

1-23-12
PLANS APPROVAL DATE

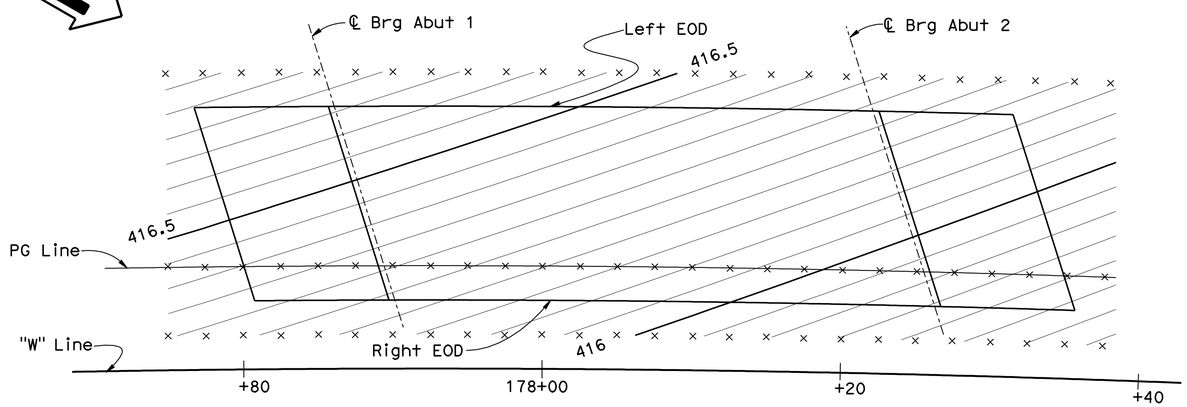
REGISTERED PROFESSIONAL ENGINEER M. Friedheim No. 57968 Exp. 06-30-12 CIVIL STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

1

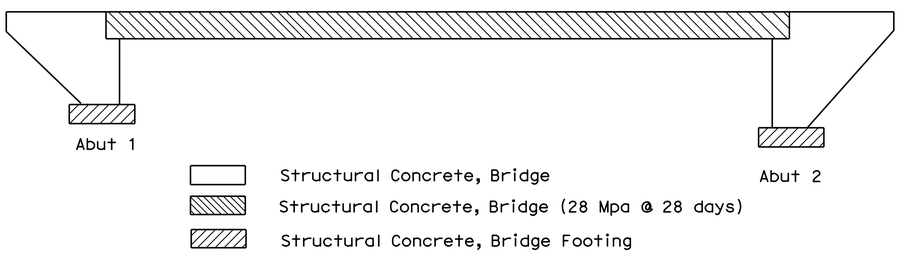
Notes:

1. × = 2.5 m interval measured along station line
2. Contours do not include camber
3. Contour interval = 0.05 m



DECK CONTOURS

1:200



CONCRETE STRENGTH AND TYPE LIMITS

No Scale

PILE DATA TABLE					
Location	Pile Type	Nominal Resistance		Design Tip Elevations	Specified Tip Elevations
		Compression	Tension		
Abut 1	HP 250 x 85	1150 KN	0 KN	380.5 (1)	380.5
Abut 2	HP 250 x 85	1150 KN	0 KN	380.5 (1)	380.5

Note: Design Pile Tip Elevation is controlled by the following demand: (1) compression

QUAIL MEADOWS UC 10-0173
QUANTITIES

STRUCTURE EXCAVATION (BRIDGE)	246	m^3
STRUCTURE BACKFILL (BRIDGE)	145	m^3
FURNISH STEEL PILING (HP 250 X 85)	1 016	m
DRIVE STEEL PILE (HP 250 X 85)	32	EA
PRESTRESSING CAST-IN-PLACE CONCRETE	LUMP	SUM
STRUCTURAL CONCRETE, BRIDGE FOOTING	51	m^3
STRUCTURAL CONCRETE, BRIDGE	407	m^3
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	69	m^3
ARCHITECTURAL TEXTURE	15	m^2
JOINT SEAL (MR 50 MM)	26	m
BAR REINFORCING STEEL (BRIDGE)	51 100	kg
TUBULAR BICYCLE RAILING (MODIFIED)	100	m
CONCRETE BARRIER (TYPE 736 MODIFIED)	100	m

GENERAL NOTES (LOAD FACTOR DESIGN)

DESIGN: Bridge Design Specifications - April 2000 (LFD) (1996 AASHTO with interims and revisions by Caltrans).

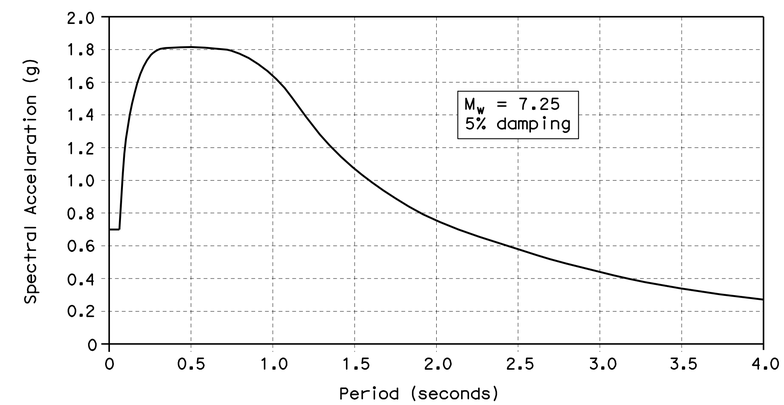
Project Specific Design Criteria - March 2009.

SEISMIC DESIGN: Caltrans SDC Version 1.4 - June 2006

DEAD LOAD: Includes 1675 Pa for future wearing surface. Includes 1460 N/m for future utilities.

LIVE LOAD: HS20-44 and alternative and permit design load.

SEISMIC LOADING: Modified Caltrans Seismic Design Criteria for Soil Profile Type D, PBA = 0.7 g. See Response Spectrum below.



REINFORCED CONCRETE:

fy = 420 MPa
f'c = 25 MPa (See concrete strength and type limits for exceptions)

Transverse Deck Slab (working stress design)
fs = 140 MPa
f'c = 8 MPa
n = 10

PRESTRESSED CONCRETE: See "Prestressing Notes" on Girder Layout sheet

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

Caltrans Metric

	BY	CHECKED
DESIGN	A. Tern	H. Fang
DETAILS	L. Wang	H. Fang
QUANTITIES	A. Tern	H. Fang

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 2

BRIDGE NO. 10-0173
KILOMETER POST R77.541

WILLITS BYPASS
QUAIL MEADOWS UC
DECK CONTOURS

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 01
EA 262001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 05-16-08 08-05-08 08-14-08 09-25-08 09-30-08 10-03-08 1-27-09

SHEET 2 OF 15

FILE => 10-0173_iddc.dds

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

USERNAME => s121614 DATE PLOTTED => 12-JUN-2012 TIME PLOTTED => 10:48

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Men	101	R69.4/R78.9	899	939

REGISTERED CIVIL ENGINEER 9-15-11 DATE

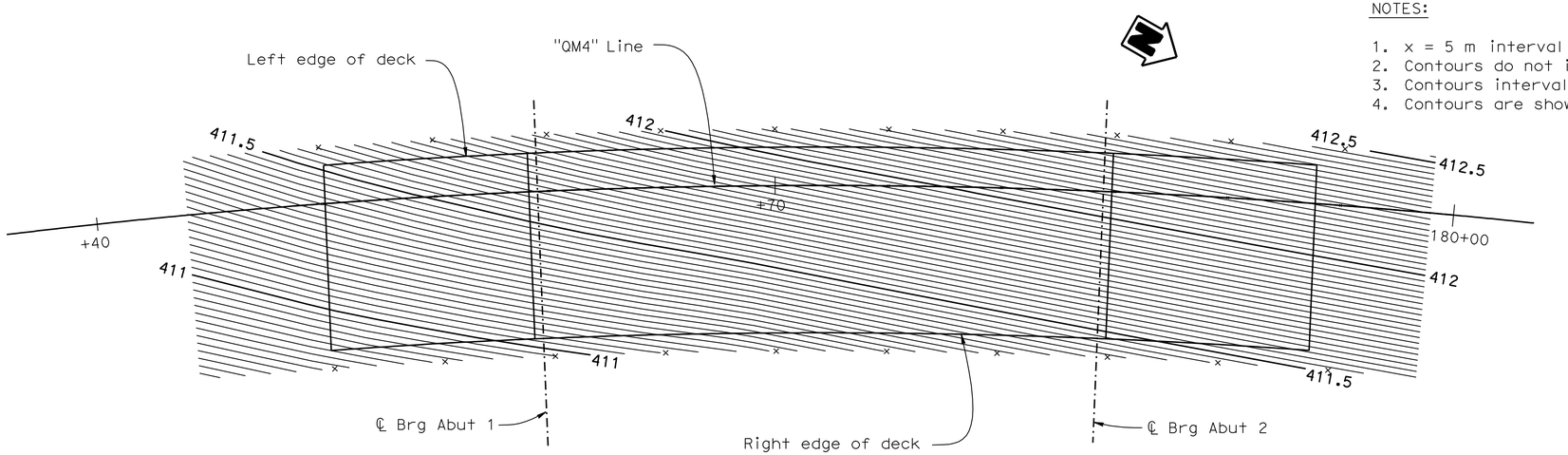
1-23-12
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER M. Friedheim No. 57968 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

NOTES:

1. x = 5 m interval measured along station line
2. Contours do not include camber
3. Contours interval = 0.025 m
4. Contours are shown in meters



DECK CONTOURS

1:125

INDEX TO PLANS

1. GENERAL PLAN
2. DECK CONTOURS
3. FOUNDATION PLAN
4. ABUTMENT LAYOUT
5. ABUTMENT DETAILS 1
6. ABUTMENT DETAILS 2
7. TYPICAL SECTION
8. GIRDER LAYOUT
9. BOTTOM GIRDER REINFORCEMENT
10. AESTHETIC DETAILS
11. STRUCTURE APPROACH TYPE N(9S)
12. STRUCTURE APPROACH DRAINAGE DETAILS
13. TUBULAR BICYCLE RAILING
14. LOG OF TEST BORINGS

GENERAL NOTES (LOAD FACTOR DESIGN)

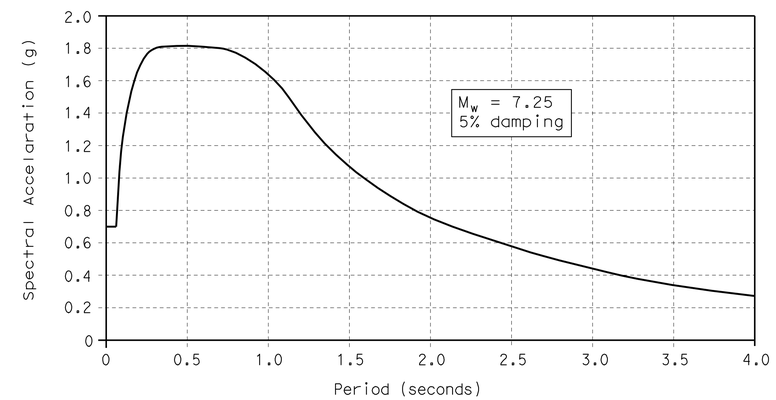
DESIGN: Bridge Design Specifications - April 2000 (LFD) (1996 AASHTO with interims and revisions by Caltrans).
Project Specific Design Criteria - March 2009.

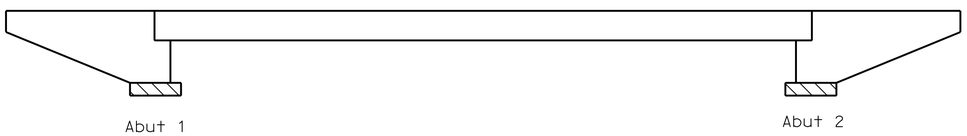
SEISMIC DESIGN: Caltrans SDC version 1.4 - June 2006

DEAD LOAD: Includes 1675 Pa for future wearing surface.

LIVE LOAD: HS20-44 and alternative and permit design load.

SEISMIC LOADING: Modified Caltrans Seismic Design Criteria for Soil Profile Type D, PBA = 0.7 g. See Response Spectrum below.





Structural Concrete, Bridge (f'c = 25 MPa @ 28 days)
Structural Concrete, Bridge Footing

CONCRETE STRENGTH AND TYPE LIMITS

No Scale

REINFORCED CONCRETE:
fy = 420 MPa
f'c = 25 MPa (See concrete strength and type limits for exceptions)

Transverse Deck Slab (working stress design)
fs = 140 MPa
f'c = 8 MPa
n = 10

STANDARD PLANS DATED JULY 2004

A10A	ACRONYMS AND ABBREVIATIONS (A-L)
A10B	ACRONYMS AND ABBREVIATIONS (M-Z)
A10C	SYMBOLS
A10D	SYMBOLS
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL-BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-5	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 50 MM)
B7-1	BOX GIRDER DETAILS
B11-55	CONCRETE BARRIER TYPE 732
B11-56	CONCRETE BARRIER TYPE 736
RSP ES-9B	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)
RSP ES-9C	ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)

STANDARD PLAN SHEET NO.

DETAIL NO.

PILE DATA TABLE

Location	Pile Type	Nominal Resistance		Design Tip Elevations	Specified Tip Elevations
		Compression	Tension		
Abut 1	HP 250 x 62	800 KN	0 KN	383.0 (1)	383.0
Abut 2	HP 250 x 62	800 KN	0 KN	383.0 (1)	383.0

Tip elevation controlled by the following demands:
(1) Compression

1 REVISED PER ADDENDUM No. 1 DATED JUNE 13, 2012

Caltrans Metric

	BY	CHECKED
DESIGN	K. Selventhiran	M. Jimenez
DETAILS	J.Yang	M. Jimenez
QUANTITIES	M. Khalaf	A. Ahmed

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 2

BRIDGE NO. 10-0174S
KILOMETER POST R77.701

WILLITS BYPASS
UPP CREEK (NB ON-RAMP)
DECK CONTOURS

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 01
EA 262001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 10-31-08 12-09-08 01-12-09 01-30-09 3-04-09

SHEET 2 OF 14

FILE => 10-0174s_ddc01.add

STRUCTURES DESIGN DETAIL SHEET (METRIC) (REV.03-17-04)

USERNAME => s121614 DATE PLOTTED => 12-JUN-2012 TIME PLOTTED => 10:48