ER-19B1(004)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	1	34

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN HUMBOLDT COUNTY NEAR REDCREST FROM 1.3 MILES NORTH OF THE REDCREST UC TO 1.8 MILES SOUTH OF BEAR CREEK BRIDGE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

INDEX OF PLANS

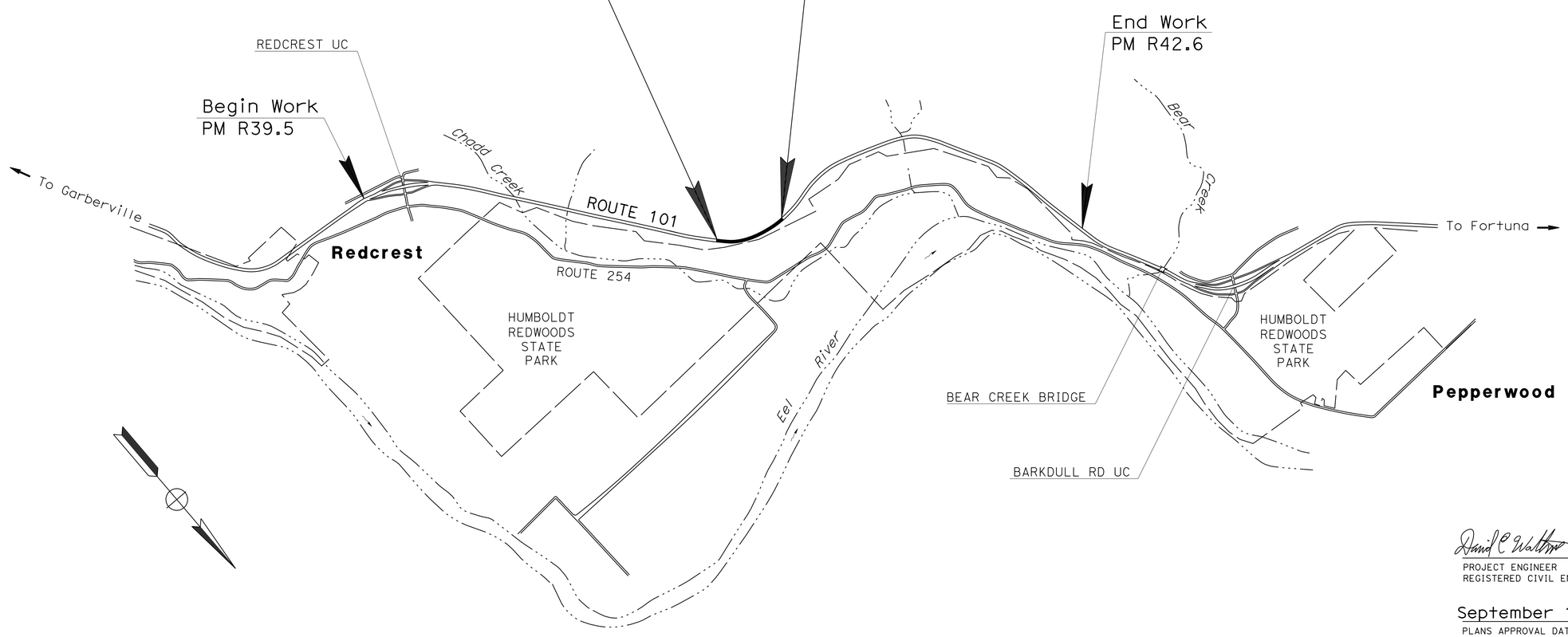
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	TYPICAL CROSS SECTIONS
4-5	LAYOUTS
6	TEMPORARY WATER POLLUTION CONTROL QUANTITIES
7-15	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
16	CONSTRUCTION AREA SIGNS
17-18	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN
19	TRAFFIC HANDLING QUANTITIES
20-23	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
24	SUMMARY OF QUANTITIES
25	EROSION CONTROL TABLES AND QUANTITIES
26	EROSION CONTROL PLAN
27-34	REVISED STANDARD PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

LOCATION MAP

BEGIN CONSTRUCTION
Sta "A1" 263+12.16 PM R40.9

END CONSTRUCTION
Sta "A1" 279+22.17 PM R41.2



NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT MANAGER: TALITHA HODGSON
DESIGN ENGINEER: FERMIN BARRIGA

PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE: 9-15-14

September 15, 2014
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — DAVID C WATKINS — No. C65734 — Exp. 9-30-15 — 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.

CONTRACT No.	01-0B4104
PROJECT ID	0112000125

LAST REVISION 09-03-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	2	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

PLANS APPROVAL DATE 9-15-14

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SEE LAYOUT SHEETS FOR EXACT LOCATIONS AND TYPE OF DIKE.
3. SELECTED MATERIAL CONSISTS OF THE TOP 18" OF EXCAVATED MATERIAL; IT IS TO BE PLACED BETWEEN THE VOIDS IN THE RSP ROCKS AND TO 4" ABOVE THE RSP.

ABBREVIATIONS:

CP	CATCH POINT
HP	HINGE POINT
GPI	GEOSYNTHETIC PAVEMENT INTERLAYER
SEG	SUBGRADE ENHANCEMENT GEOTEXTILE
PMCTB	PLANT MIXED CEMENT TREATED BASE
PM	PERMEABLE MATERIAL

STRUCTURAL SECTION

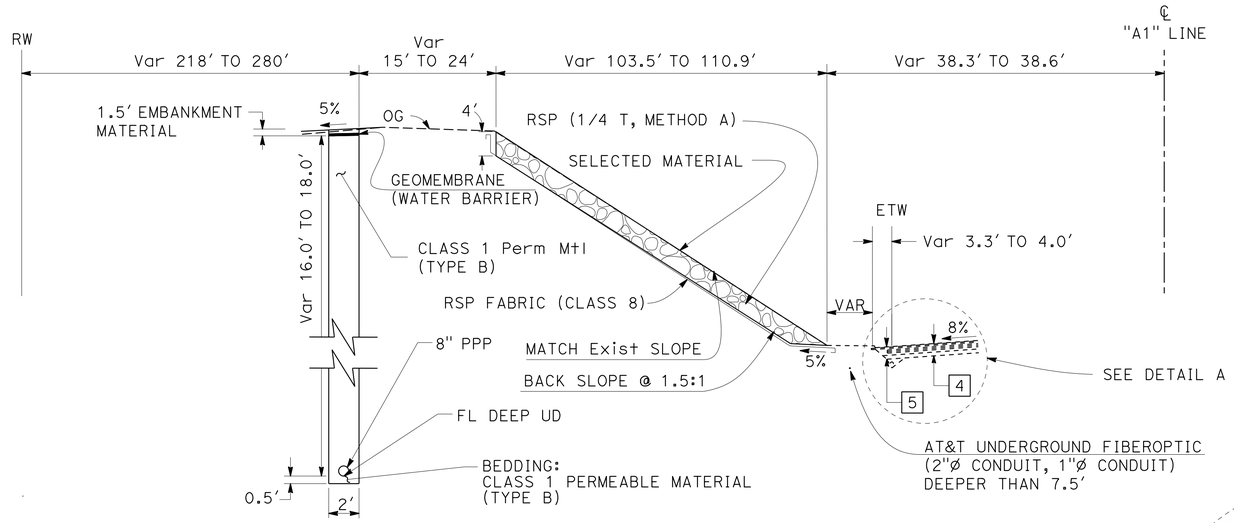
1
- 0.10' HMA-OPEN GRADED (OGFC)
- 0.15' HMA (TYPE A)
- GPI
- 0.40' HMA (TYPE A)
- 1.70' CLASS 2 AB
- SEG, CLASS B2

2
- 0.10' HMA-OPEN GRADED (OGFC)
- 0.25' HMA (TYPE A)
- 0.35 COLD PLANE AC PAVEMENT

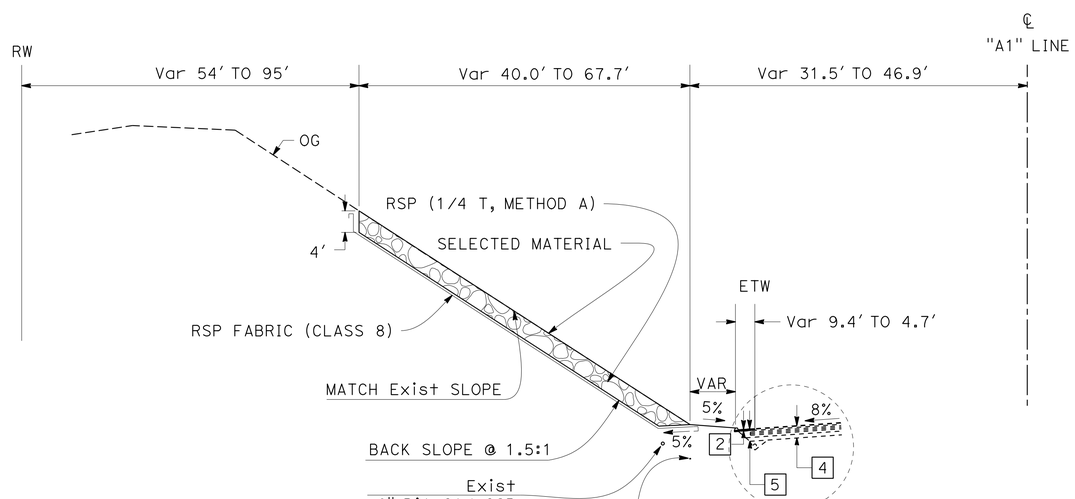
3
- 0.10' HMA-OPEN GRADED (OGFC)
- 0.15' HMA (TYPE A)
- GPI
- 0.25 COLD PLANE AC PAVEMENT

4
- Exist
- 0.10' OGFC
- 0.25' AC (TYPE A)
- 0.33' AC (TYPE B)
- 0.33' CLASS 'A' PMCTB
- 0.33' CLASS 'B' PMCTB
- 0.5' CLASS 1 AB
- 0.83' PM

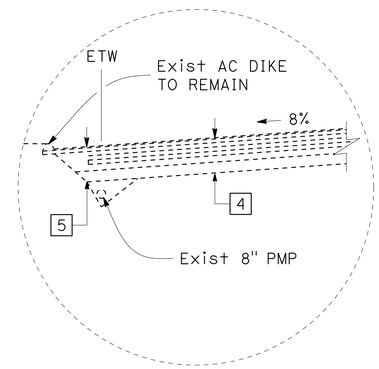
5
- Exist
- 0.10' OGFC
- 0.24' AC (TYPE A)
- 0.33' AC (TYPE B)
- 2.70' AS



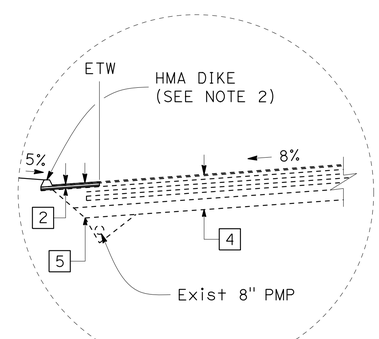
Sta "A1" 274+09.18 TO Sta "A1" 275+87.09 Lt



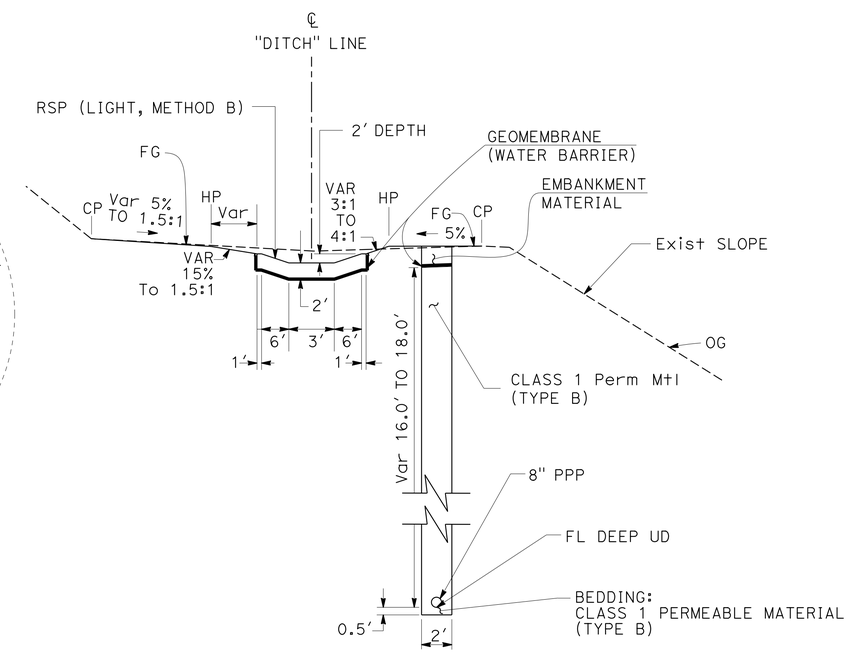
Sta "A1" 263+12.16 TO Sta "A1" 266+17.67 Lt



DETAIL A



DETAIL B



Sta "DITCH" 0+02.00 TO Sta "DITCH" 4+57.50
(Sta "A1" 266+90.65 TO Sta "A1" 271+91.24 Lt)

TYPICAL CROSS SECTIONS

NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION DIVISION OF ENGINEERING
Caltrans

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: MAHBOOBEH DEILAMI
CHECKED BY: DAVID C. WATKINS
REVISED BY | DATE REVISED

LAST REVISION 09-17-14 | DATE PLOTTED => 31-DEC-2014 | TIME PLOTTED => 10:52

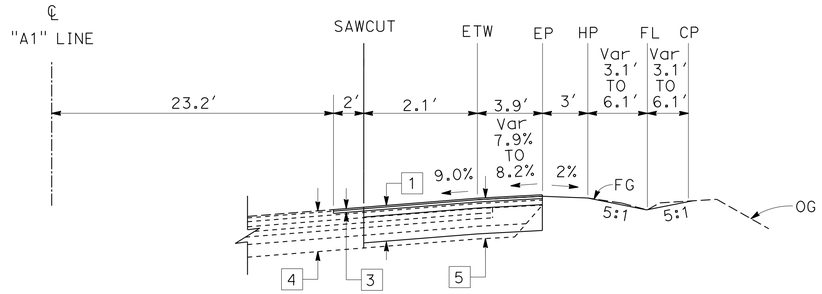
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	3	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

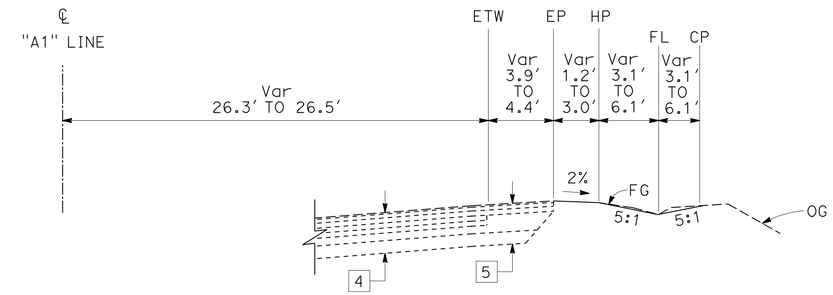
9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA

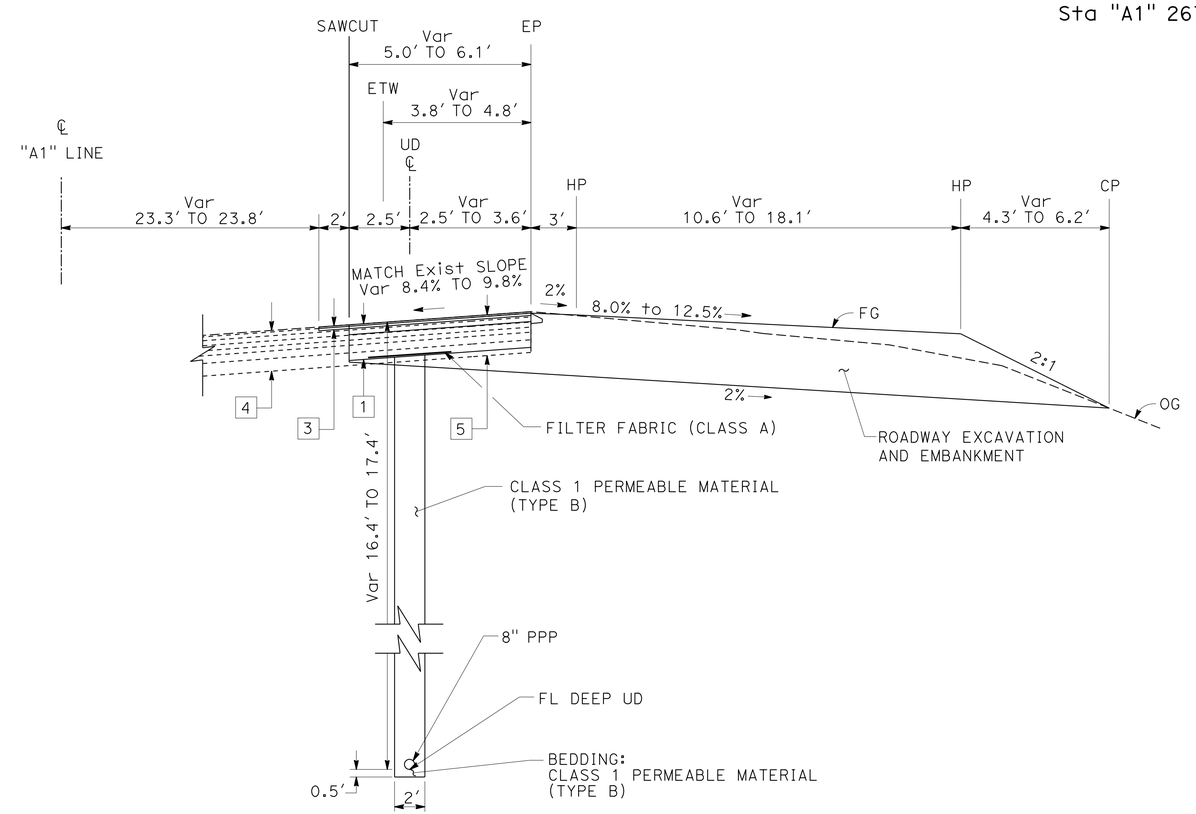
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



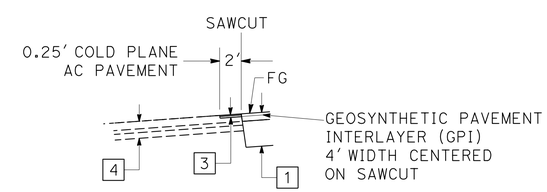
Sta "A1" 267+21.00 TO Sta "A1" 267+22.92 Rt



Sta "A1" 267+22.92 TO Sta "A1" 267+37.95 Rt



Sta "A1" 265+67.79 TO Sta "A1" 267+21.00 Rt



PAVEMENT JOINT DETAIL

TYPICAL CROSS SECTIONS

NO SCALE

X-2

REVISED BY	DATE REVISED
X	X
X	X

MAHBOOBEH DEILAMI — CALCULATED-DESIGNED BY
DAVID C. WATKINS — CHECKED BY
FERMIN BARRIGA — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION DIVISION OF ENGINEERING

LAST REVISION 09-17-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	4	34

David C Watkins 9-15-14
REGISTERED CIVIL ENGINEER DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

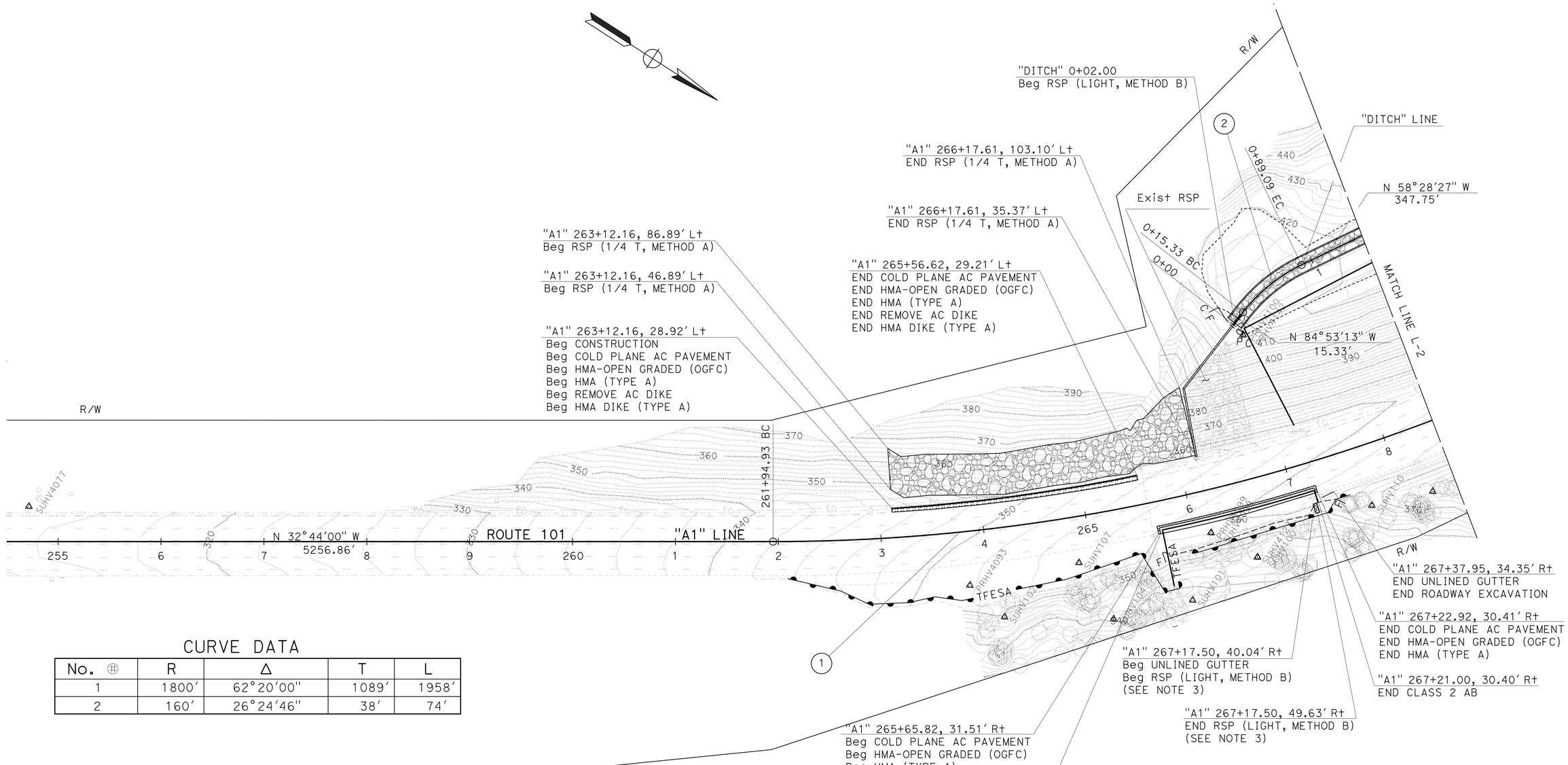
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. LOCATIONS OF FACILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. RSP DIMENSIONS ARE 4′ WIDE BY 2′ DEEP.

LEGEND:

TFESA — TEMPORARY FENCE (TYPE ESA)

HUMBOLDT
REDWOOD CO
APN 209-351-07



CURVE DATA

No. ⊕	R	Δ	T	L
1	1800′	62°20′00"	1089′	1958′
2	160′	26°24′46"	38′	74′

LAYOUT

SCALE: 1" = 50′ **L-1**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: MAHBOOBEH DEILAMI
CHECKED BY: FERMIN BARRIGA
FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
DIVISION OF ENGINEERING
Caltrans

LAST REVISION 09-17-14 | DATE PLOTTED => 31-DEC-2014 | TIME PLOTTED => 10:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	5	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

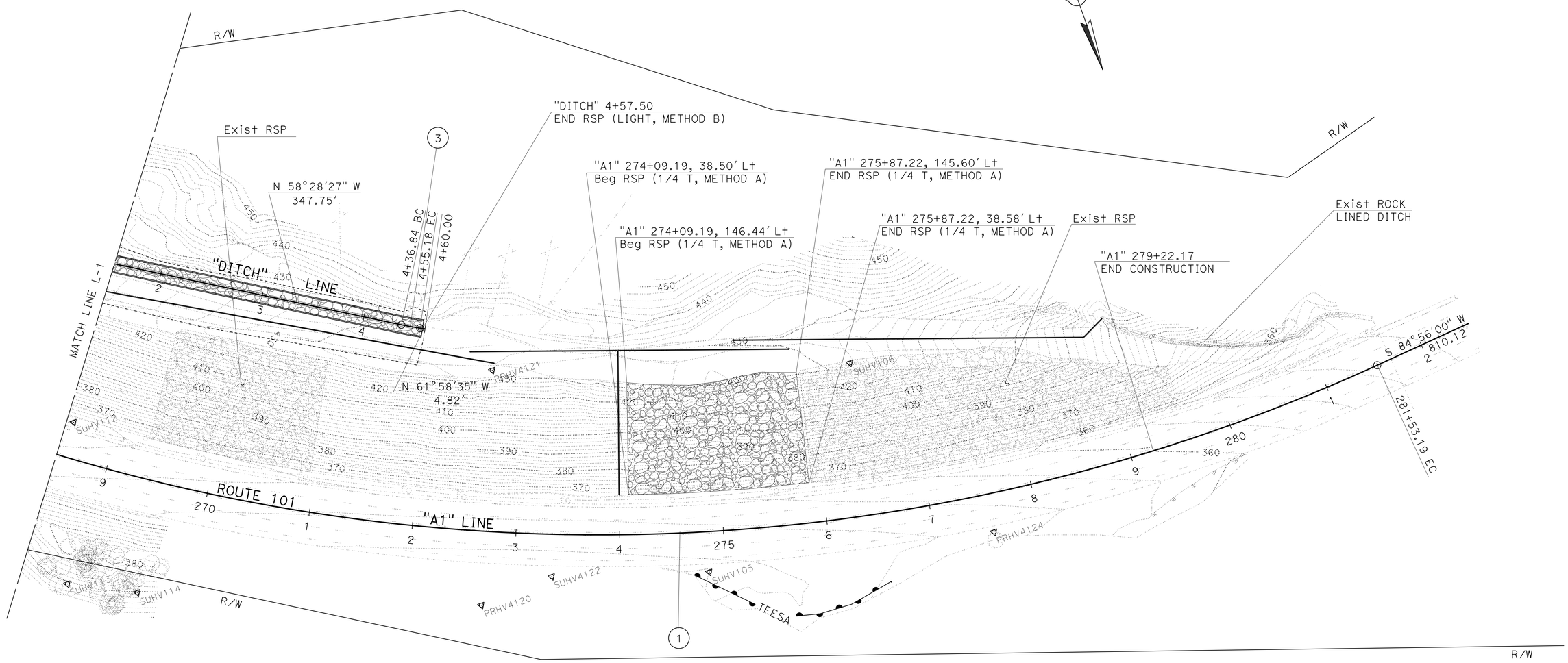
9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR LEGEND INFORMATION, SEE LAYOUT SHEET L-1.



CURVE DATA

No. ⊕	R	Δ	T	L
1	1800'	62°20'00"	1088.69'	1958.26'
3	300'	03°30'08"	9.00'	18.00'

LAYOUT

SCALE: 1" = 50' **L-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: MAHBOOBEH DEILAMI
CHECKED BY: FERMIN BARRIGA
REVISED BY / DATE REVISED

LAST REVISION 09-17-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	6	34

David C Watkins 9-15-14
REGISTERED CIVIL ENGINEER DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DAVID C WATKINS
No. C65734
Exp. 9-30-15
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.

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

STATION	TEMPORARY FENCE (TYPE ESA)	TEMPORARY CHECK DAM	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY SILT FENCE	TEMPORARY FIBER ROLL	TEMPORARY COVER	TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	TEMPORARY GRAVEL BAG BERM	RAIN EVENT ACTION PLAN	STORM WATER SAMPLING AND ANALYSIS DAY	STORM WATER ANNUAL REPORT
	LF	LF	EA	LF	LF	SQYD	SQYD	LF	EA	EA	EA
"A1" 263+50 TO 278+50	837	80	3	3,307	2,287	2,643	2,643	62	1	2	1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: SALAHUDDIN CHOWDHURY
CHECKED BY: JOSE LUIS VALDEZ
REVISED BY: X X
DATE REVISED: X X

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

WPCQ-1

LAST REVISION 08-26-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	7	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. CONTRACTOR SHALL PROTECT IN PLACE EXIST DRAINAGE INLET.
3. LOCATIONS OF Exist FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. FOR ADDITIONAL INFORMATION, SEE DRAINAGE DETAILS SHEET DD-1 AND DD-2, DRAINAGE PROFILES SHEETS DP-1 AND DP-2 AND DRAINAGE QUANTITIES SHEET DQ-1.

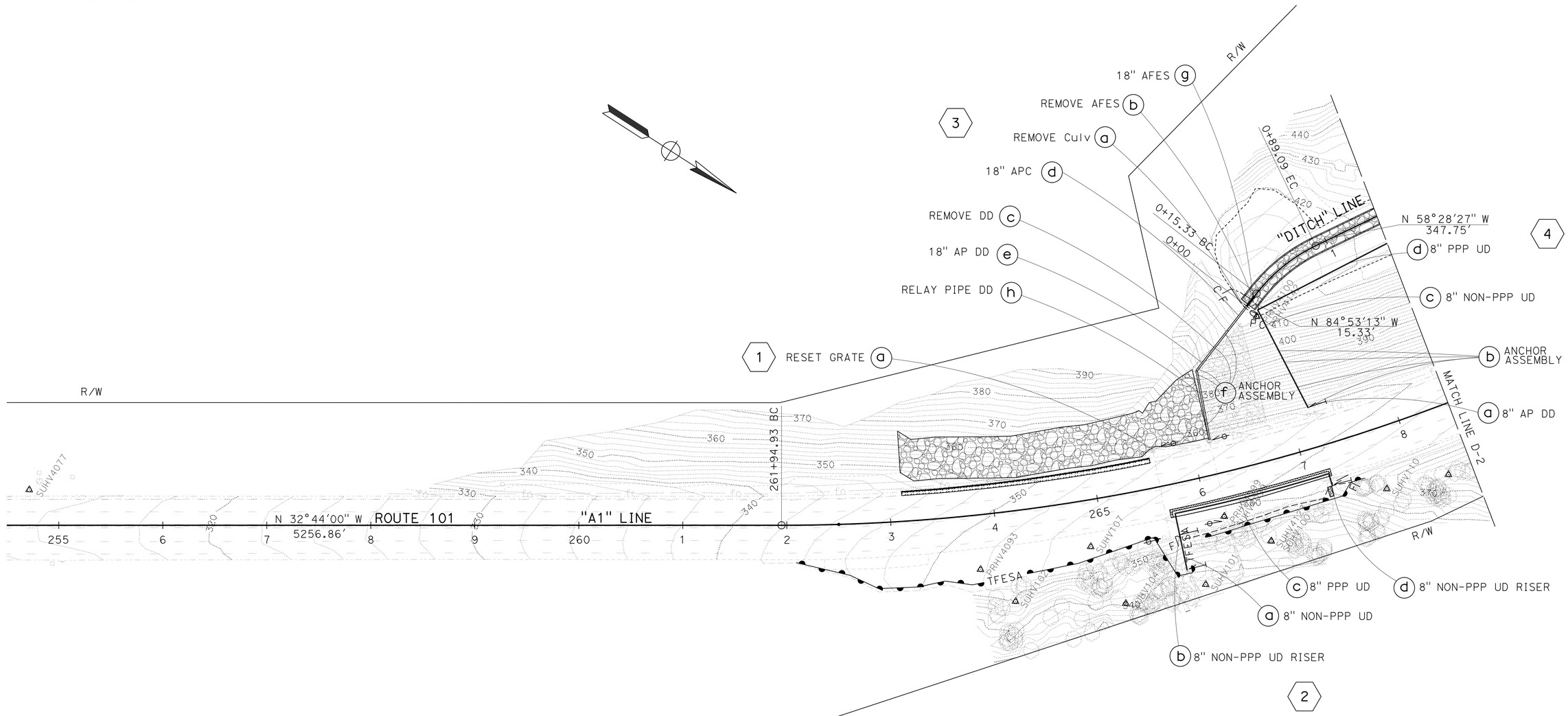
LEGEND:

RSP

MARKER (CULVERT)

UNDERDRAIN MARKER

TFESA — TEMPORARY FENCE (TYPE ESA)



APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: CARMEN RODRIGUEZ

CHECKED BY: DAVID C. WATKINS

REVISED BY | DATE REVISED

LAST REVISION 09-17-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	8	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

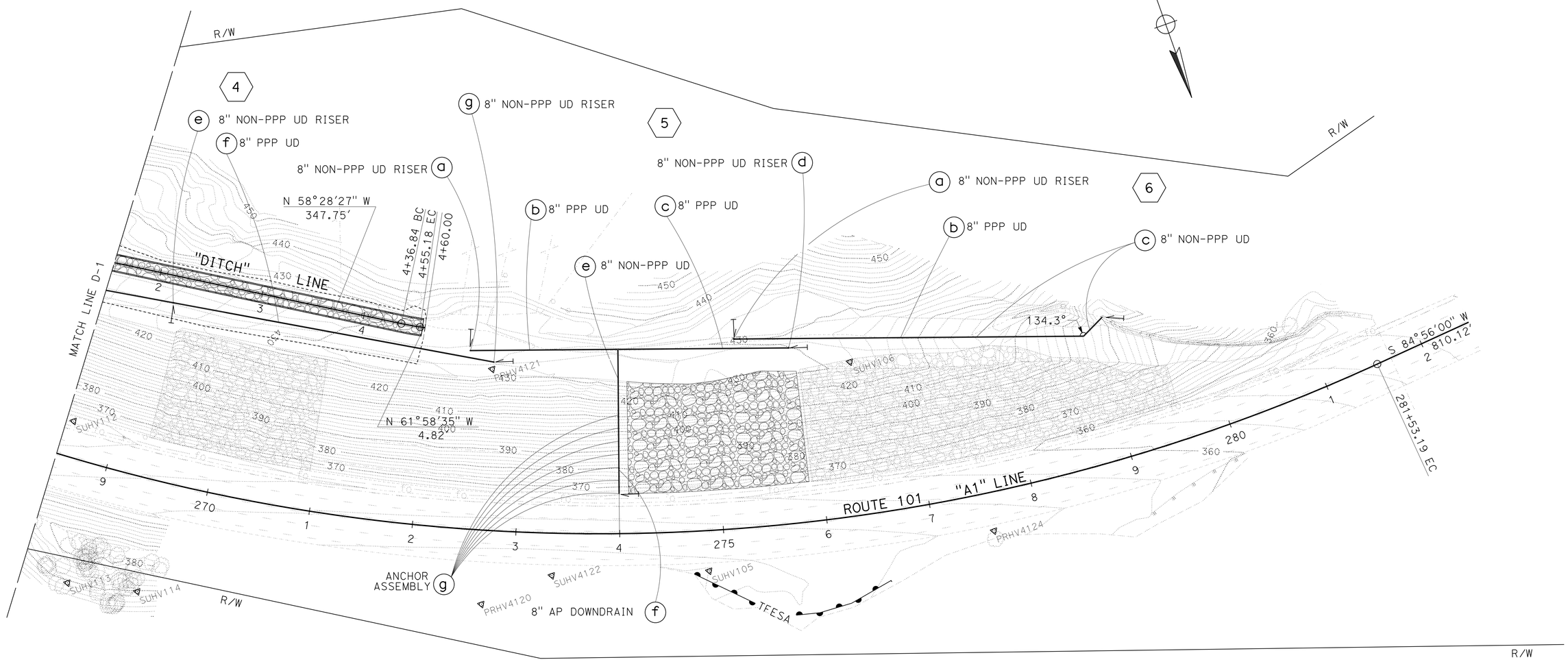
9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR LEGEND INFORMATION, SEE DRAINAGE PLAN SHEET D-1.
3. CONTRACTOR SHALL PROTECT IN PLACE Exist DRAINAGE INLET.
4. LOCATIONS OF Exist FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
5. FOR ADDITIONAL INFORMATION, SEE DRAINAGE DETAILS SHEET DD-1 AND DD-2, DRAINAGE PROFILES SHEETS DP-2 TO DP-4 AND DRAINAGE QUANTITIES SHEET DQ-1.



APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: DAVID C. WATKINS
CHECKED BY: CARMEN RODRIGUEZ
REVISED BY
DATE REVISED

LAST REVISION 09-17-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	9	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

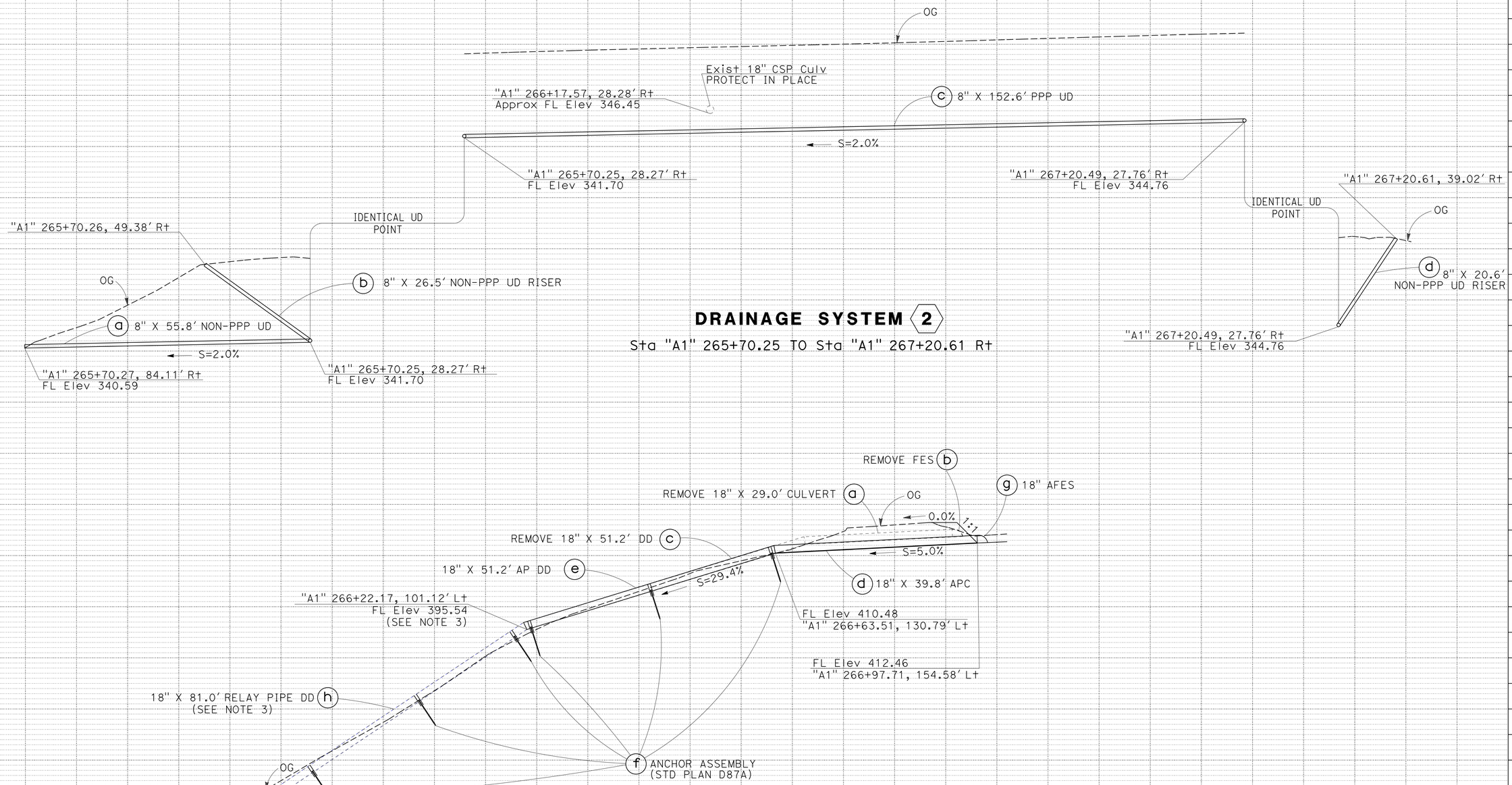
PLANS APPROVAL DATE 9-15-14

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE DRAINAGE DETAIL SHEET DD-1 FOR MORE INFORMATION ON THE DEEP UNDERDRAINS.
3. RELAY UP TO THE ENTIRE 81' OF Exist 18" DD TO ALLOW FOR RECONSTRUCTION/RECOMPACTION OF THE Exist CUT SLOPE. RECONNECT NEW AND RELAY PIPE DOWNDRAINS AFTER SLOPE RECOMPACTION.



DRAINAGE PROFILES

SCALE: Horiz: 1" = 10'
Vert: 1" = 10'

DP-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: FERMIN BARRIGA
CHECKED BY: CARMEN RODRIGUEZ

REVISED BY | DATE REVISED

LAST REVISION 09-02-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	10	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

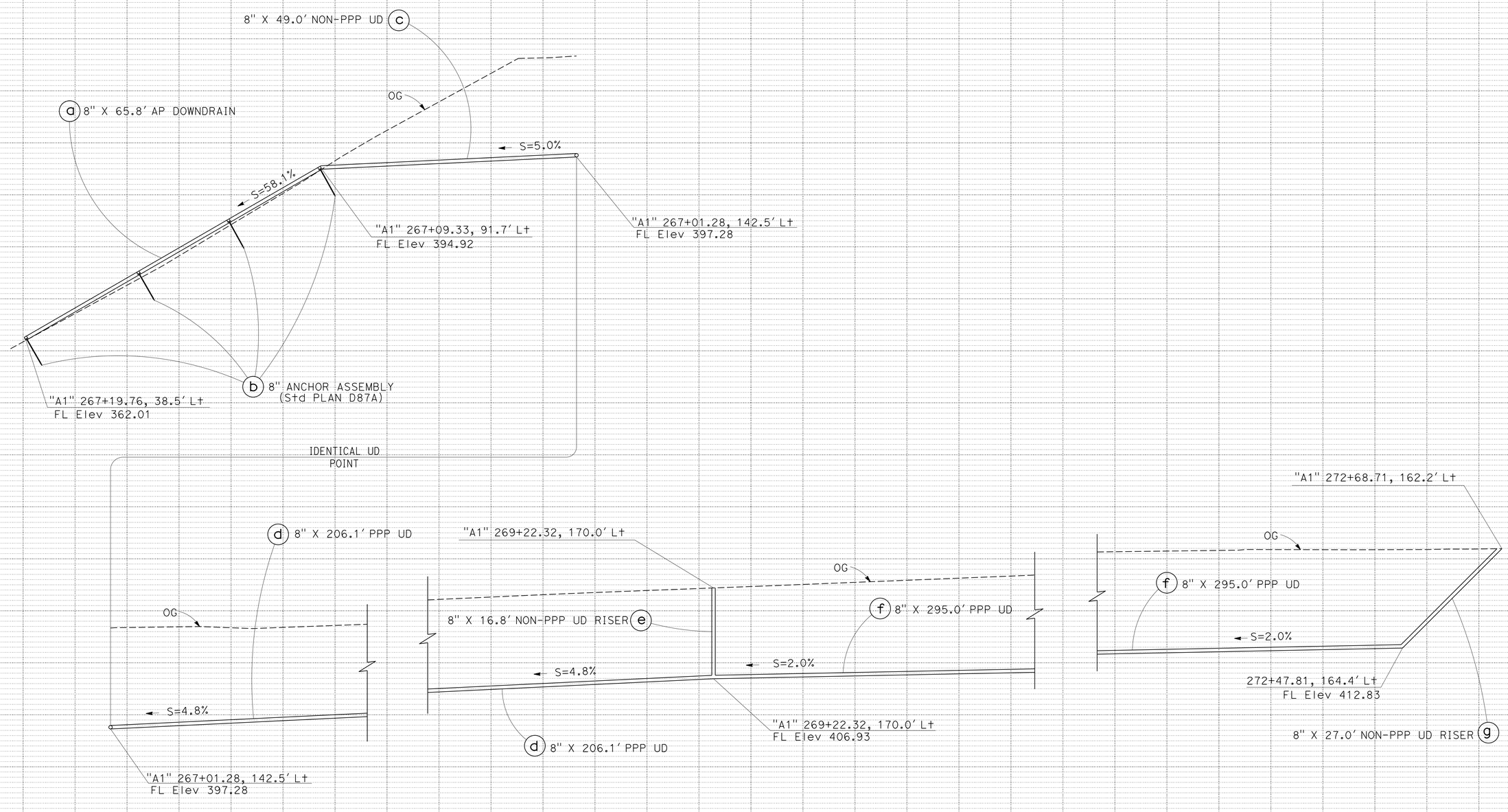
9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE DRAINAGE DETAIL SHEET DD-1 FOR MORE INFORMATION ON THE DEEP UNDERDRAINS.



DRAINAGE SYSTEM 4

Sta "A1 267+07.83 TO Sta "A1" 172+68.71 Lt

DRAINAGE PROFILES

SCALE: Horiz: 1" = 10'
Vert: 1" = 10'

DP-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: CARMEN RODRIGUEZ
CHECKED BY: DAVID C. WATKINS

REVISED BY | DATE REVISED

LAST REVISION 09-03-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	11	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA

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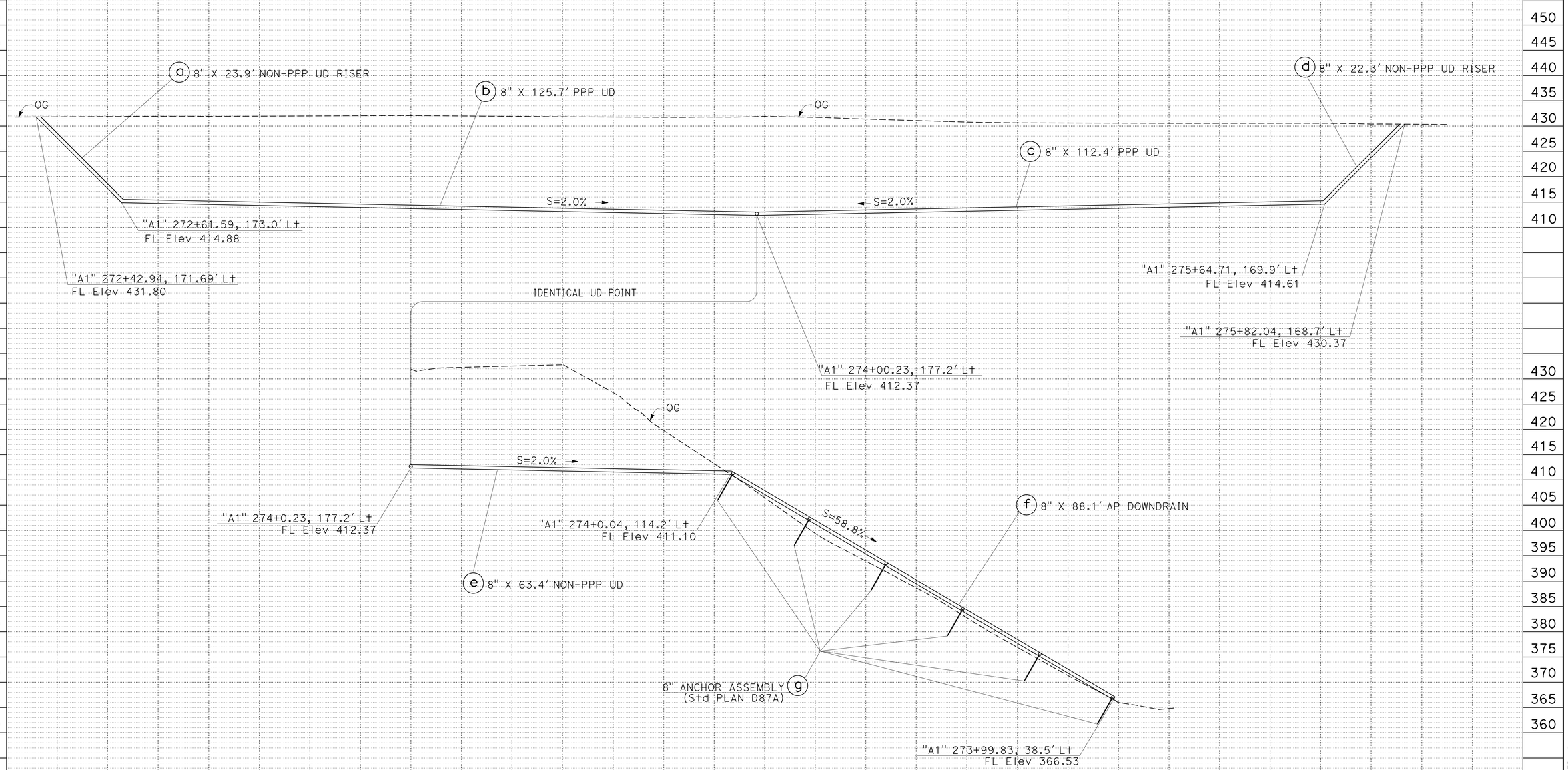
NOTES:

1. FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE DRAINAGE DETAIL SHEET DD-1 FOR MORE INFORMATION ON THE DEEP UNDERDRAINS.



DRAINAGE SYSTEM 5

Sta "A1 273+42.94 TO Sta "A1" 275+8.04 Lt

DRAINAGE PROFILES

SCALE: Horiz: 1" = 10'
Vert: 1" = 10'

DP-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: DAVID C. WATKINS
CHECKED BY: CARMEN RODRIGUEZ
REVISED BY / DATE REVISED

LAST REVISION 08-28-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	12	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

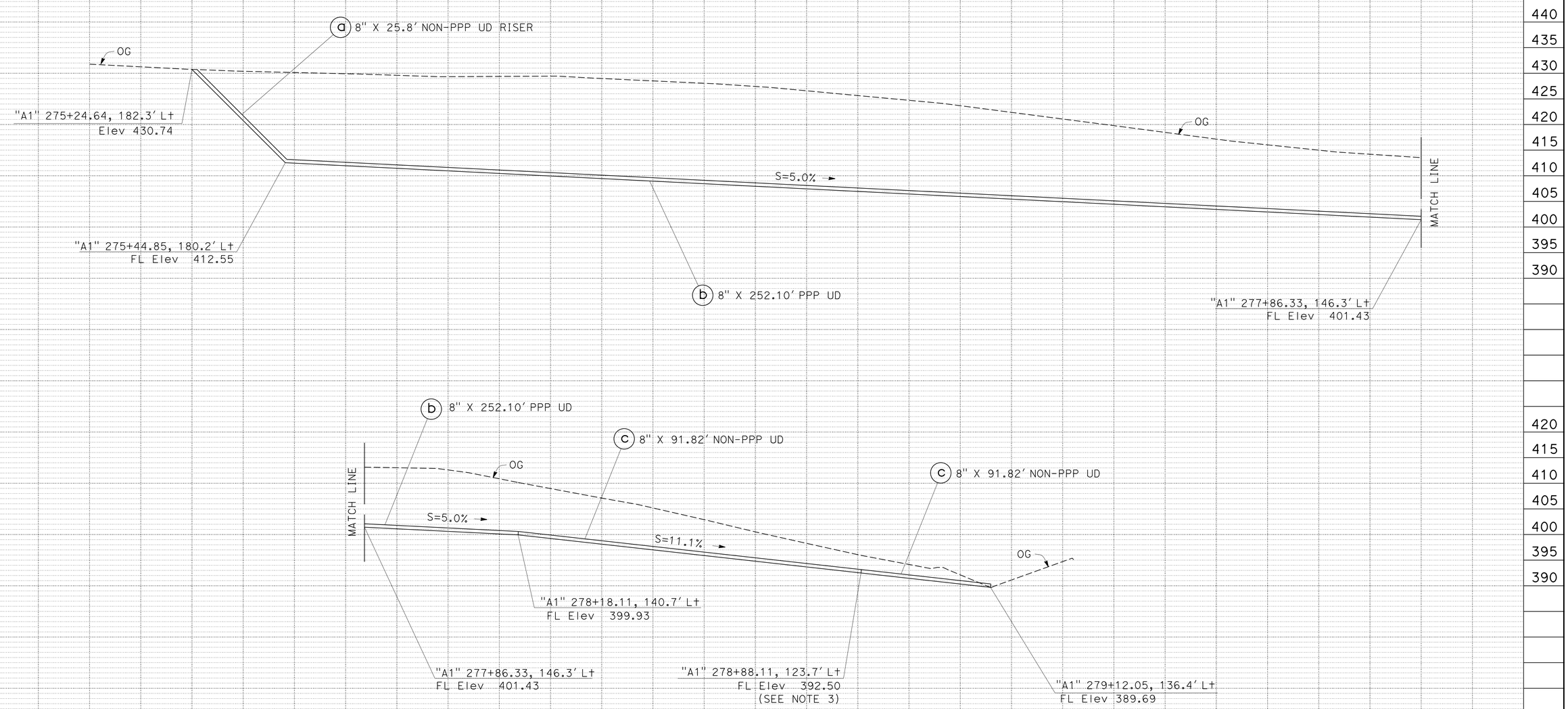
9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. FOR COMPLETE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE DRAINAGE DETAIL SHEET DD-1 FOR MORE INFORMATION ON THE DEEP UNDERDRAINS.
3. SEE DRAINAGE PLAN SHEET D-2, DRAINAGE SYSTEM 6. OUTLET PP ANGLE IS 134.3°.



DRAINAGE SYSTEM 6

Sta "A1 275+24.64 TO Sta "A1" 279+12.05 Lt

DRAINAGE PROFILES

SCALE: Horiz: 1" = 10'
Vert: 1" = 10'

DP-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: DAVID C. WATKINS
CHECKED BY: CARMEN RODRIGUEZ
REVISED BY / DATE REVISED

LAST REVISION 09-03-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

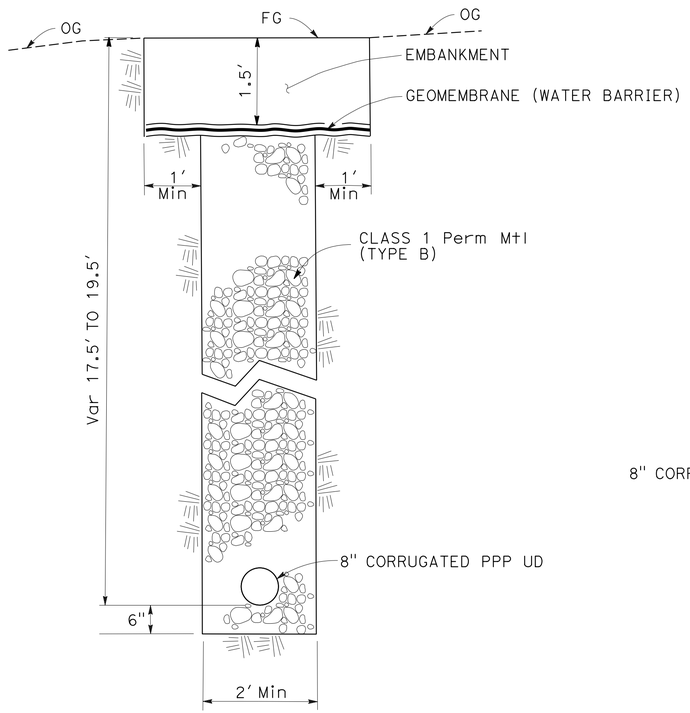
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	13	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

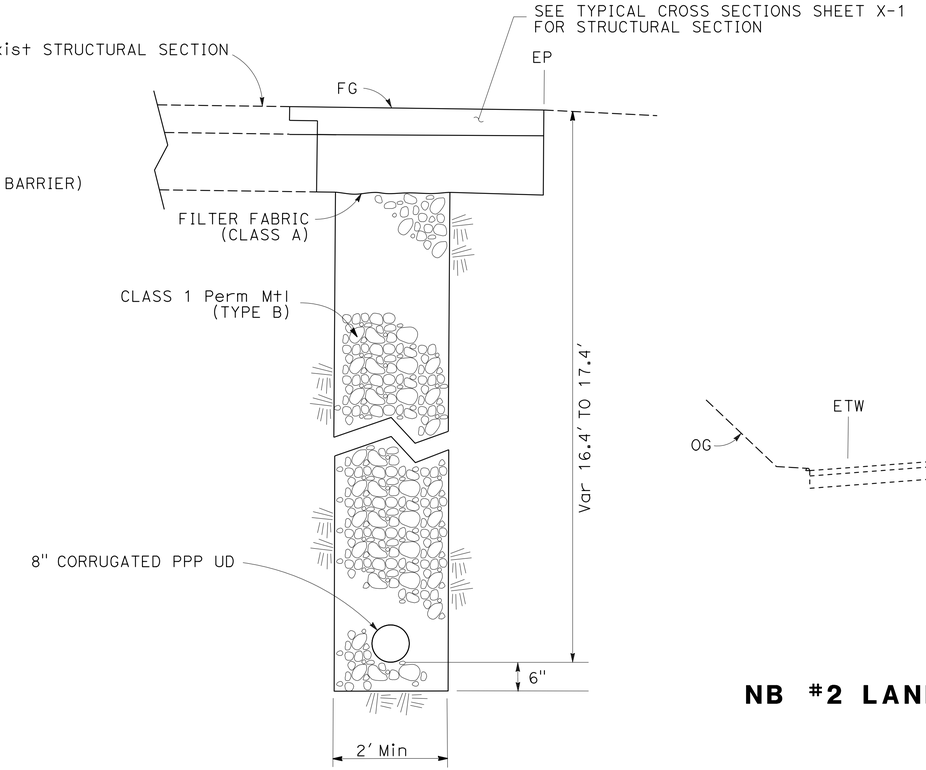
PLANS APPROVAL DATE 9-15-14

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

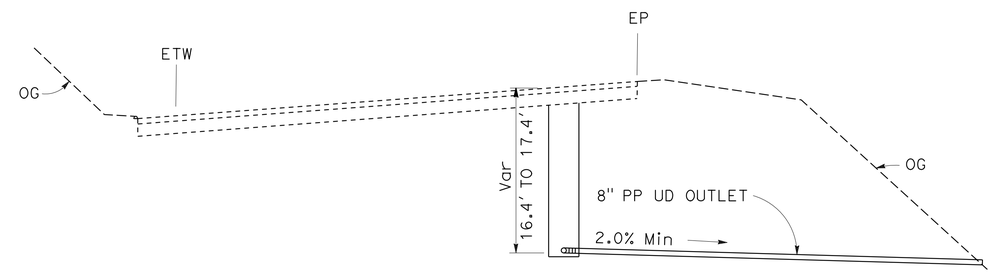


UNDER UNPAVED SHOULDER / DITCH



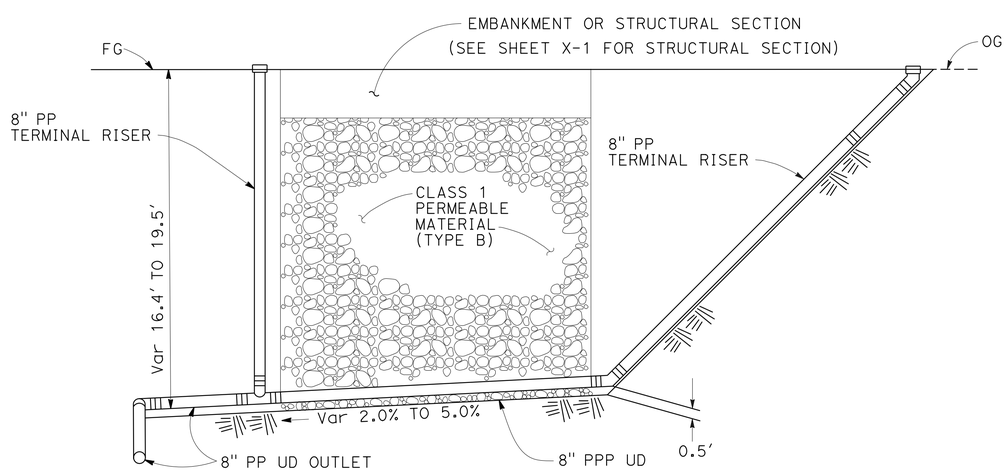
UNDER PAVEMENT

DEEP UNDERDRAIN TYPICAL SECTIONS



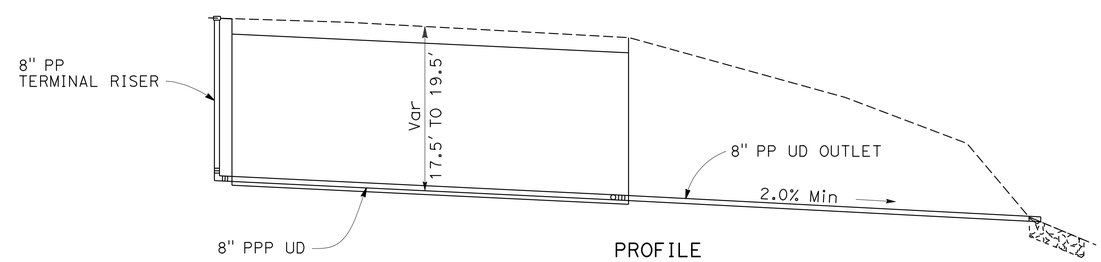
PROFILE

NB #2 LANE, SHOULDER & EMBANKMENT DEEP UD



PROFILE

DEEP UNDERDRAIN



PROFILE

SB BENCH DEEP UD

UNDERDRAIN OUTLET DETAILS

DRAINAGE DETAILS

NO SCALE

DD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION DIVISION OF ENGINEERING
Caltrans

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: DAVID C. WATKINS
CHECKED BY:

REVISED BY: CARMEN RODRIGUEZ
DATE REVISED:

LAST REVISION 09-02-14
DATE PLOTTED => 31-DEC-2014
TIME PLOTTED => 10:52

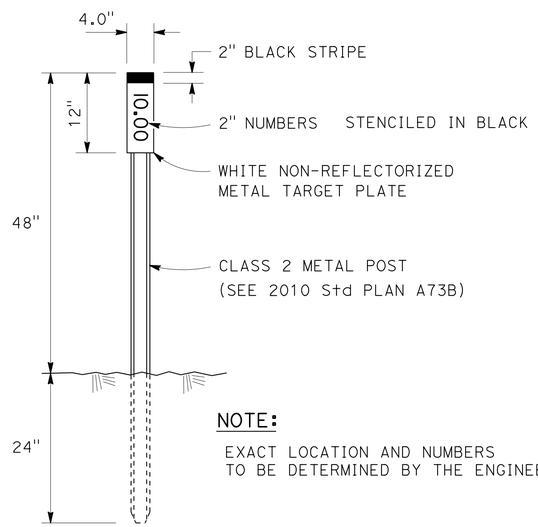
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	14	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

PLANS APPROVAL DATE 9-15-14

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA

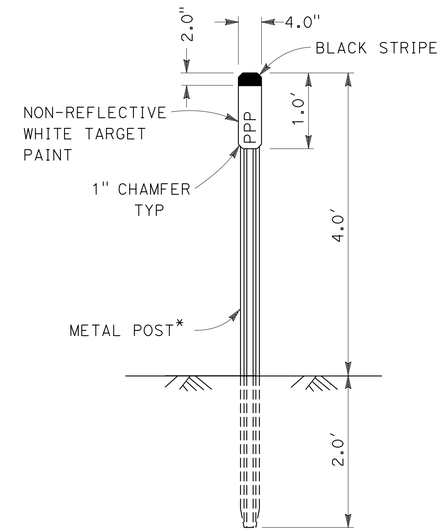
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



NOTE:

EXACT LOCATION AND NUMBERS TO BE DETERMINED BY THE ENGINEER.

MARKER (CULVERT)



* SEE 2010 STANDARD PLAN A73B FOR METAL POST DETAILS

UNDERDRAIN MARKER

DRAINAGE DETAILS

NO SCALE

DD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

NORTH REGION DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: CARMEN RODRIGUEZ

CHECKED BY: DAVID C. WATKINS

REVISED BY: X X

DATE REVISED: X X

LAST REVISION 09-17-14 DATE PLOTTED => 08-DEC-2014 TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	15	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY
2. S=STANDARD, P=POSITIVE AND D=DOWNDRAIN

APC AND AP DD ALLOWABLE PIPE MATERIAL & PROTECTION

DESIGNATION	TYPE				
	GALVANIZED CSP		GALVANIZED POLYMERIC SHEET COATED CSP	PLASTIC PIPE (PP) HIGH DENSITY POLYETHYLENE	RCP (TYPE II MODIFIED OR TYPE IP MODIFIED CEMENT)
	SIZE	THICKNESS	THICKNESS	SIZE	SIZE
18" APC	18"	0.168" (8 GAGE)	0.109" (12 GAGE)	18"	18"
18" AP DD	18"	0.109" (12 GAGE)	0.079" (14 GAGE)	-	-
8" AP DD	8"	0.109" (12 GAGE)	0.079" (14 GAGE)	-	-

3. FOR MINIMUM ALLOWABLE CLASSES OF RCP AND THE METHOD OF BACKFILL AND EXCAVATION TO BE USED, SEE Std PLAN A62D AND A62DA.
4. FOR RCP UTILIZING TYPE II MODIFIED OR TYPE IP MODIFIED CEMENT, THE CONCRETE SHALL HAVE A MAXIMUM WATER-TO-CEMENT RATIO OF 0.40.

DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE PROFILES SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○	REMOVE CULVERT LF	REMOVE DOWNDRAIN EA	REMOVE FES EA	RELAY PIPE DOWNDRAIN LF	RESET FRAME AND GRATE EA	18" APC LF	8" PPP UNDERDRAIN LF	8" NON-PPP UNDERDRAIN LF	8" ANCHOR ASSEMBLY EA	18" ANCHOR ASSEMBLY EA	18" AP DD LF	8" AP DD LF	18" AFES EA	(N) PIPE JOINT CLASSIFICATION TYPE	(N) CLASS 1 PERMEABLE MATERIAL (TYPE B) CY	GEOMEMBRANE (WATER BARRIER) * SQYD	DESCRIPTION	STATION LIMITS	DRAINAGE PLAN SHEET No.	DRAINAGE PROFILES SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○
D-1	-	1	a					1												RESET PLATE GRATE	"A1" 265+61.62, 34.69' Lt	D-1	-	1	a
D-1	DP-1	2	a								55.8									8" NON-PPP UNDERDRAIN OUTLET	"A1" 265+70+25, 28.27' Rt TO 265+70.27, 84.11' Rt	D-1	DP-1	2	a
			b								26.5									8" NON-PPP UNDERDRAIN RISER	"A1" 265+70.25, 28.27' Rt TO 265+70.26, 49.38' Rt				b
			c							152.6								170.8		8" PPP UD	"A1" 265+70.25, 28.27' Rt TO 267+20.49, 27.76' Rt				c
			d								20.6									8" NON-PPP UNDERDRAIN RISER	"A1" 267+20.49, 27.76' Rt TO 267+20.61, 39.02' Rt				d
D-1	DP-1	3	a	29.0																REMOVE 29.0' OF Exist 18" METAL CULVERT	"A1" 266+62.85, 131.01' Lt TO 266+92.92, 151.71' Lt	D-1	DP-1	3	a
			b			1														REMOVE Exist FES					b
			c		1															REMOVE 51.2' OF Exist 18" DOWNDRAIN PIPE	"A1" 266+22.17, 101.12' Lt TO 266+63.51, 130.79' Lt				c
			d						39.8								S			18" X 39.8' APC, S=5.0%	"A1" 266+63.51, 130.79' Lt TO 266+97.71, 154.58' Lt				d
			e											51.2			D			18" X 51.2' AP DD: CONNECT TO Exist DD	"A1" 266+22.17, 101.12' Lt TO 266+63.51, 130.79' Lt				e
			f										6							6 - 18" ANCHOR ASSEMBLY UNITS	"A1" 266+18.12, 33.23'' Lt TO 266+63.51, 130.79' Lt				f
			g													1				18" ALTERNATIVE FLARED END SECTION	"A1" 266+97.71, 154.58' Lt				g
			h				81.0													18" X 81.0' RELAY PIPE DOWNDRAIN	"A1" 266+18.12, 33.23' Lt TO 266+22.17, 101.12' Lt				h
D-1	DP-2	4	a												65.8		D			8" X 70.9' AP DOWNDRAIN	"A1" 267+19.26, 38.5' Lt TO 267+07.83, 99.1' Lt	D-1	DP-2	4	a
			b									4								4 - 8" ANCHOR ASSEMBLY UNITS	"A1" 267+19.26, 38.5' Lt TO 267+07.83, 99.1' Lt				b
			c								49.0									8" X 38.3' NON-PPP UD	"A1" 267+07.83, 99.1' Lt TO 266+99.95, 136.8' Lt				c
			d							206.1								666.4	225.6	8" X 212.6' PPP UD, S=4.8%	"A1" 266+99.95, 136.8' Lt TO 269+22.32, 170.0 Lt				d
D-2	DP-2	4	e								16.8									8" X 16.8' NON-PPP UNDERDRAIN RISER	"A1" 269+22.32, 170.0' Lt	D-2	DP-2	4	e
			f							295.0										8" X 295.0' PPP UD, S=2.0%	"A1" 269+22.32, 170.0' Lt TO 272+47.81, 164.4' Lt				f
			g								27.0									8" X 27.0' NON-PPP UNDERDRAIN RISER	"A1" 272+47.81, 164.4' Lt TO 272+68.71, 162.2' Lt				g
D-2	DP-3	5	a								23.8									8" X 23.9' NON-PPP UNDERDRAIN RISER	"A1" 272+42.94, 171.7' Lt TO 272+61.59, 173.0' Lt	D-2	DP-3	5	a
			b							125.7								169.4	69.4	8" X 125.7' PPP UD, S=2.0%	"A1" 272+61.59, 173.0' Lt TO 274+00.23, 177.2' Lt				b
			c							112.4								183.7	72.7	8" X 112.4' PPP UD, S=2.0%	"A1" 274+00.23, 177.2' Lt TO 275+64.71, 169.9' Lt				c
			d								22.3									8" X 22.3' NON-PPP UNDERDRAIN RISER	"A1" 275+64.71, 169.9' Lt TO 275+82.04, 168.7' Lt				d
			e								63.4									8" X 63.4' NON-PPP UNDERDRAIN	"A1" 274+00.04, 114.2' TO 274+00.23, 177.2' Lt				e
			f												88.1		D			8" X 88.1' AP DOWNDRAIN	"A1" 273+99.83, 38.5' TO 274+00.04, 114.2' Lt				f
			g									6								6 - 8" ANCHOR ASSEMBLY UNITS	"A1" 273+99.83, 38.5' TO 274+00.04, 114.2' Lt				g
D-2	DP-4	6	a								25.8									8" X 25.8' NON-PPP UNDERDRAIN RISER	"A1" 275+24.64, 182.3' Lt TO 275+44.85, 180.2' Lt	D-2	DP-4	6	a
			b							252.1								306.1	113.2	8" X 252.10' PPP UD, S=5.0%	"A1" 275+44.85, 180.2' Lt TO 278+18.11, 140.7' Lt				b
			c								91.8									8" X 91.82' NON-PPP UNDERDRAIN	"A1" 278+18.11, 140.7' Lt TO 279+12.05, 136.4' Lt				c
SUBTOTAL																			480.9						
TOTAL				29.0	1	1	81.0	1	39.8	1,143.9	422.9	10	6	51.2	153.9	1									

* - SEE SUMMARY OF QUANTITIES SHEET Q-1 FOR TOTAL QUANTITY.

DRAINAGE QUANTITIES
DQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: CARMEN RODRIGUEZ
CHECKED BY: DAVID C. WATKINS
REVISED BY / DATE REVISED

LAST REVISION 09-09-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	16	34

David C Watkins 9-15-14
REGISTERED CIVIL ENGINEER DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL STATIONARY MOUNTED CONSTRUCTION AREA SIGNS, SEE TRAFFIC HANDLING QUANTITIES SHEET THQ-1.

LEGEND

(X) CONSTRUCTION AREA SIGN LETTER

SIGN - SINGLE POST

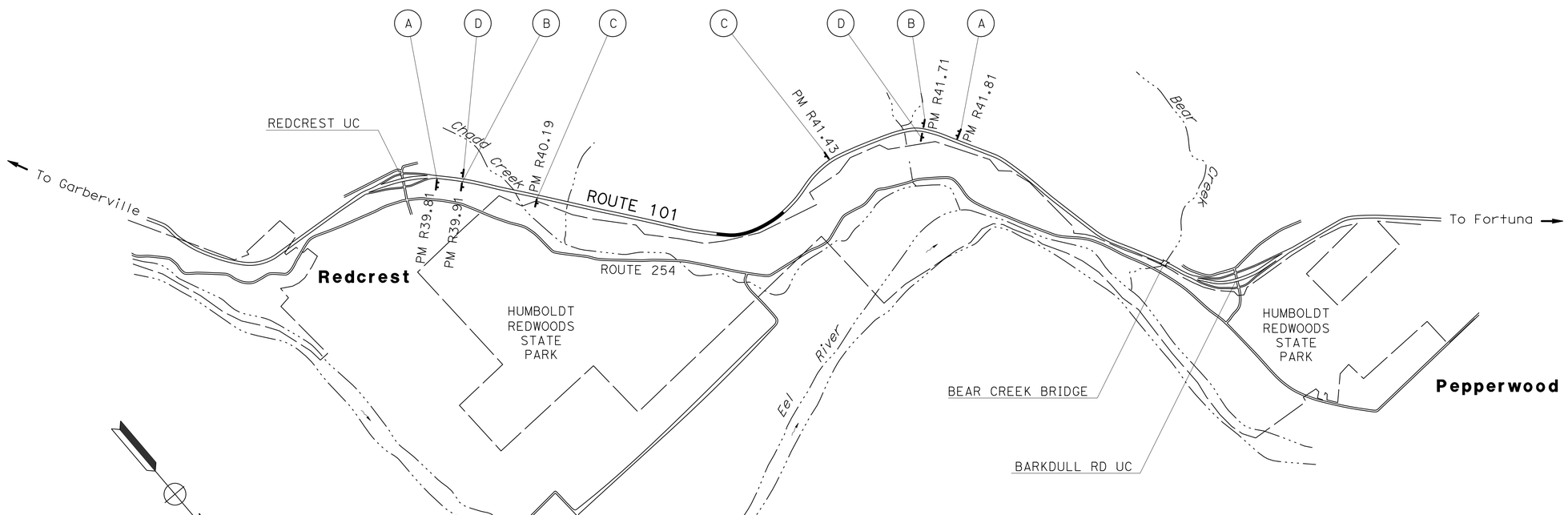
SIGN - TWO POSTS

(CA) CALIFORNIA SIGN CODE

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE FEDERAL	SIGN CODE CALIFORNIA	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER * OF SIGNS
A	—	C40	144" x 60"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 8"	2
B	W20-1	—	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	2
C	W11-1	—	36" x 36"	BICYCLE SYMBOL	1 - 4" x 6"	2
	W16-1	—	24" x 30"	SHARE THE ROAD		
D	G20-2	—	48" x 24"	END ROAD WORK	1 - 4" x 6"	2

* - SEE TRAFFIC HANDLING QUANTITIES SHEET THQ-1 FOR TOTAL QUANTITY.



APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA

REVISED BY | DATE REVISED

LAST REVISION 08-07-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	17	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

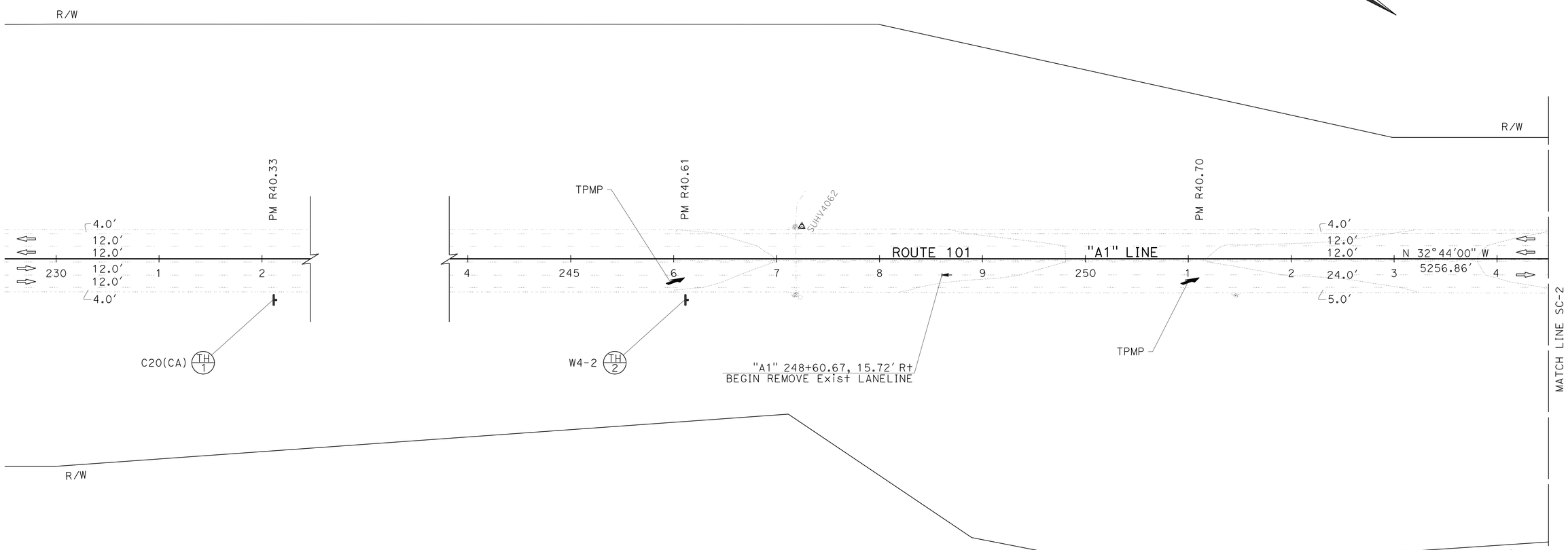
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEETS CS-1 AND THQ-1.
3. ALL SIGN CODES SHOWN ARE FEDERAL SIGN CODES UNLESS OTHERWISE DESIGNATED AS CALIFORNIA SIGN CODES.
4. ALL TRAFFIC PLASTIC DRUMS SHALL BE INSTALLED ON 50′ CENTERS UNLESS OTHERWISE SHOWN.
5. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

LEGEND

- TFESA — TEMPORARY FENCE (TYPE ESA)
- TEMPORARY RAILING (TYPE K)
- TRAFFIC PLASTIC DRUM
- DIRECTION OF TRAFFIC
- SIGN - SINGLE POST
- (CA) — CALIFORNIA SIGN CODE
- TYPE VI ARROW
- LIMIT OF STRIPING PATTERN OR STRIPE REMOVAL
- NO / X — PAVEMENT DELINEATION DETAIL NUMBER P=PAINT
- TH / XX — STATIONARY MOUNTED CONSTRUCTION AREA SIGN NUMBER

ABBREVIATIONS

TPMP TEMPORARY PAVEMENT MARKING (PAINT)



APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

SCALE: 1" = 50′

SC-1

REVISED BY	DATE REVISED
x	x
x	x

CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA
FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION DIVISION OF ENGINEERING

LAST REVISION 09-17-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	18	34

David C Watkins 9-15-14
REGISTERED CIVIL ENGINEER DATE

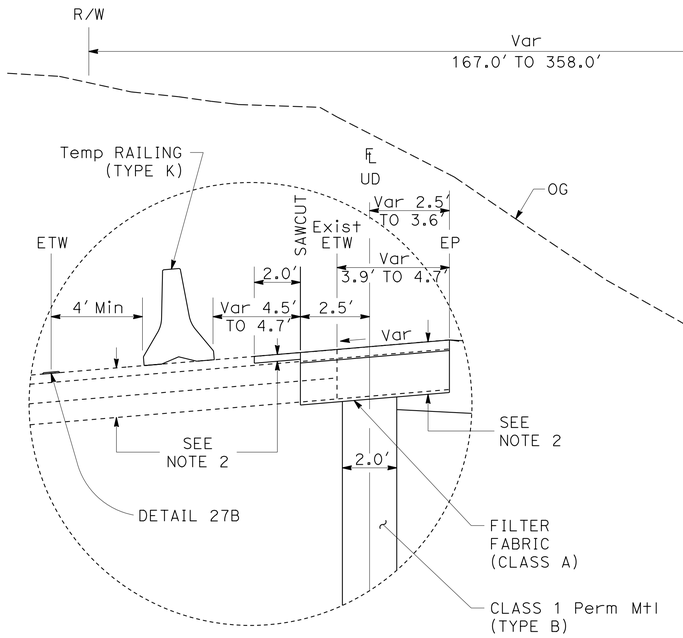
9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

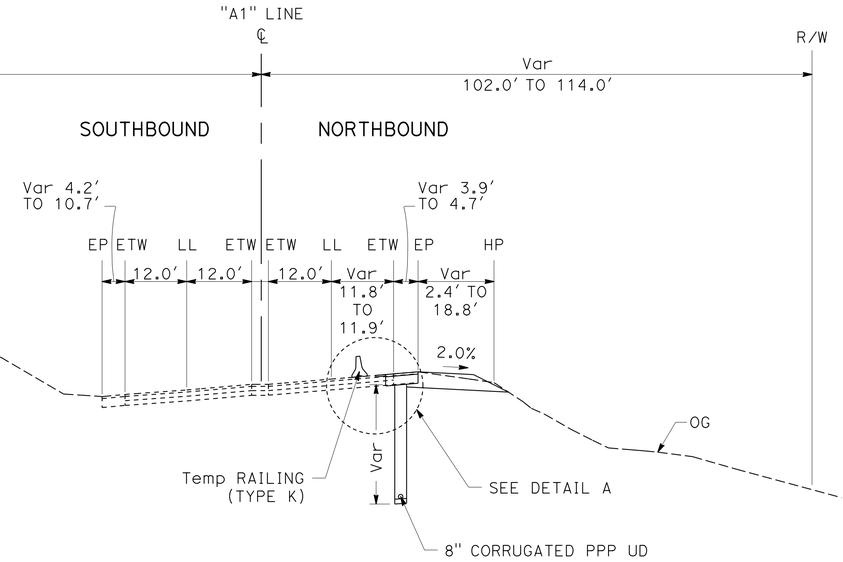
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR STRUCTURAL SECTIONS SHOWN, SEE TYPICAL CROSS SECTIONS SHEET X-1.
3. FOR ADDITIONAL STAGE CONSTRUCTION AND TRAFFIC HANDLING NOTES, SEE STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN SHEET SC-1.



DETAIL A

NO SCALE

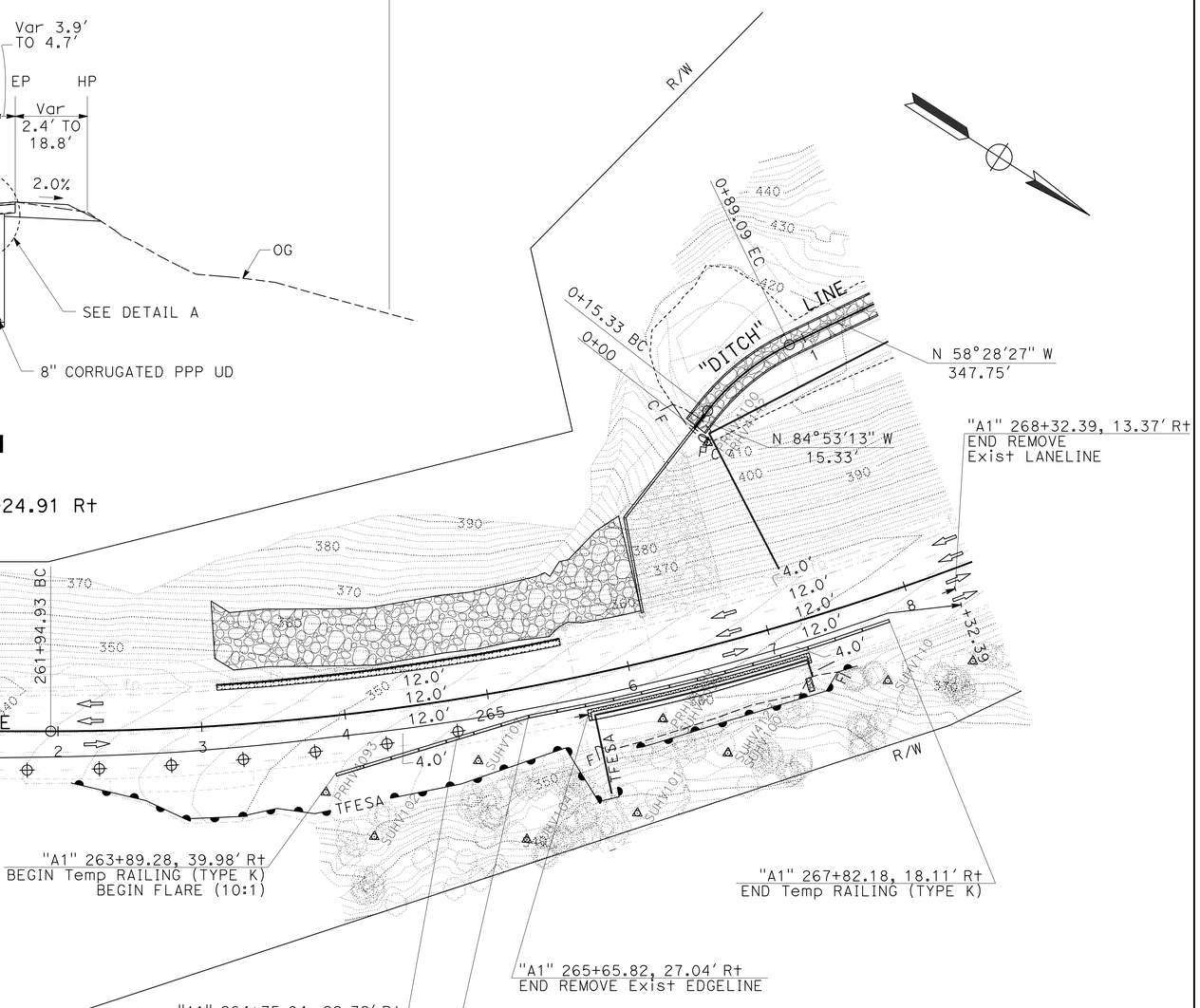


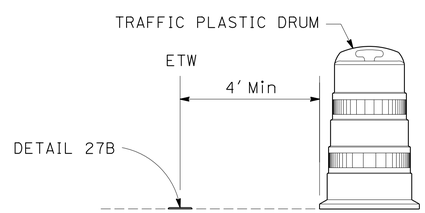
ROUTE 101

TYPICAL SECTION

NO SCALE

Sta "A1" 265+65.82 TO "A1" 267+24.91 Rt





NOTE: EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.

TRAFFIC PLASTIC DRUM DETAIL

NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

SC-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION DIVISION OF ENGINEERING
Caltrans

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA
REVISED BY: X X
DATE REVISED: X X

LAST REVISION 09-17-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	19	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

NOTES:

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. FOR ADDITIONAL CONSTRUCTION AREA SIGNS, SEE SHEET CS-1.
3. ALL SIGN CODES SHOWN ARE FEDERAL SIGN CODES UNLESS OTHERWISE DESIGNATED AS CALIFORNIA SIGN CODES.
4. ALL TRAFFIC PLASTIC DRUMS SHALL BE INSTALLED ON 50' CENTERS UNLESS OTHERWISE SHOWN.

ADDITIONAL STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE FEDERAL	SIGN CODE CALIFORNIA	PANEL SIZE	SIGN MESSAGE	NUMBER OF POST AND SIZE	NUMBER OF SIGNS
TH 1	——	C20	48" x 48"	RIGHT LANE CLOSED AHEAD	1 - 6" x 6"	1
TH 2	W4-2	——	48" x 48"	RIGHT LANE ENDS SYMBOL	1 - 6" x 6"	1
					SUBTOTAL FROM SHEET CS-1	8
					TOTAL	10

TRAFFIC PLASTIC DRUM

STAGE	SHEET No.	LOCATION	EA
1	SC-2	FROM "A1" 255+11.08 TO "A1" 264+75.84 R†	20
		TOTAL	20

REMOVE PAVEMENT MARKER

STAGE	SHEET No.	LOCATION	DESCRIPTION	EA
1	SC-1/SC-2	FROM "A1" 248+60.67 TO "A1" 268+32.39 R†	LANELINE	206
			TOTAL	206

TEMPORARY RAILING (TYPE K)

STAGE	SHEET No.	LOCATION	LENGTH LF
1	SC-2	FROM "A1" 263+89.28 TO "A1" 267+82.18 R†	400.0
		TOTAL	400.0

NOTE: FOR INSTALLATION LOCATION, SEE STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN SHEET SC-2.

REMOVE THERMOPLASTIC TRAFFIC STRIPE

STAGE	SHEET No.	LOCATION	DESCRIPTION	LENGTH LF
1	SC-1/SC-2	FROM "A1" 248+60.67 TO "A1" 268+32.39 R†	LANELINE	492
1	SC-2	FROM "A1" 256+10.67 TO "A1" 265+65.82 R†	RIGHT EDGELINE	961
			TOTAL	1,453

TEMPORARY PAVEMENT MARKING (PAINT)

STAGE	SHEET No.	LOCATION	(N) TYPE	AREA SQFT
1	SC-1	"A1" 246+10.67, 21.39' R†	TYPE VI ARROW	42.0
1	SC-1	"A1" 251+10.67, 21.39' R†	TYPE VI ARROW	42.0
1	SC-2	"A1" 256+10.67, 21.39' R†	TYPE VI ARROW	42.0
			TOTAL	126.0

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

TEMPORARY TRAFFIC STRIPE (PAINT)

STAGE	SHEET No.	LOCATION	(N) DETAIL NUMBER	LENGTH LF
1	SC-2	FROM "A1" 256+10.67 TO "A1" 268+32.39 R†	27B	1,229
			TOTAL	1,229

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

TRAFFIC HANDLING QUANTITIES

THQ-1

REVISED BY	DATE REVISED
JOSE LUIS VALDEZ	FERMIN BARRIGA

CALCULATED-DESIGNED BY	CHECKED BY
FERMIN BARRIGA	

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION DIVISION OF ENGINEERING
Caltrans

LAST REVISION 09-17-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	20	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

PLANS APPROVAL DATE 9-15-14

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA

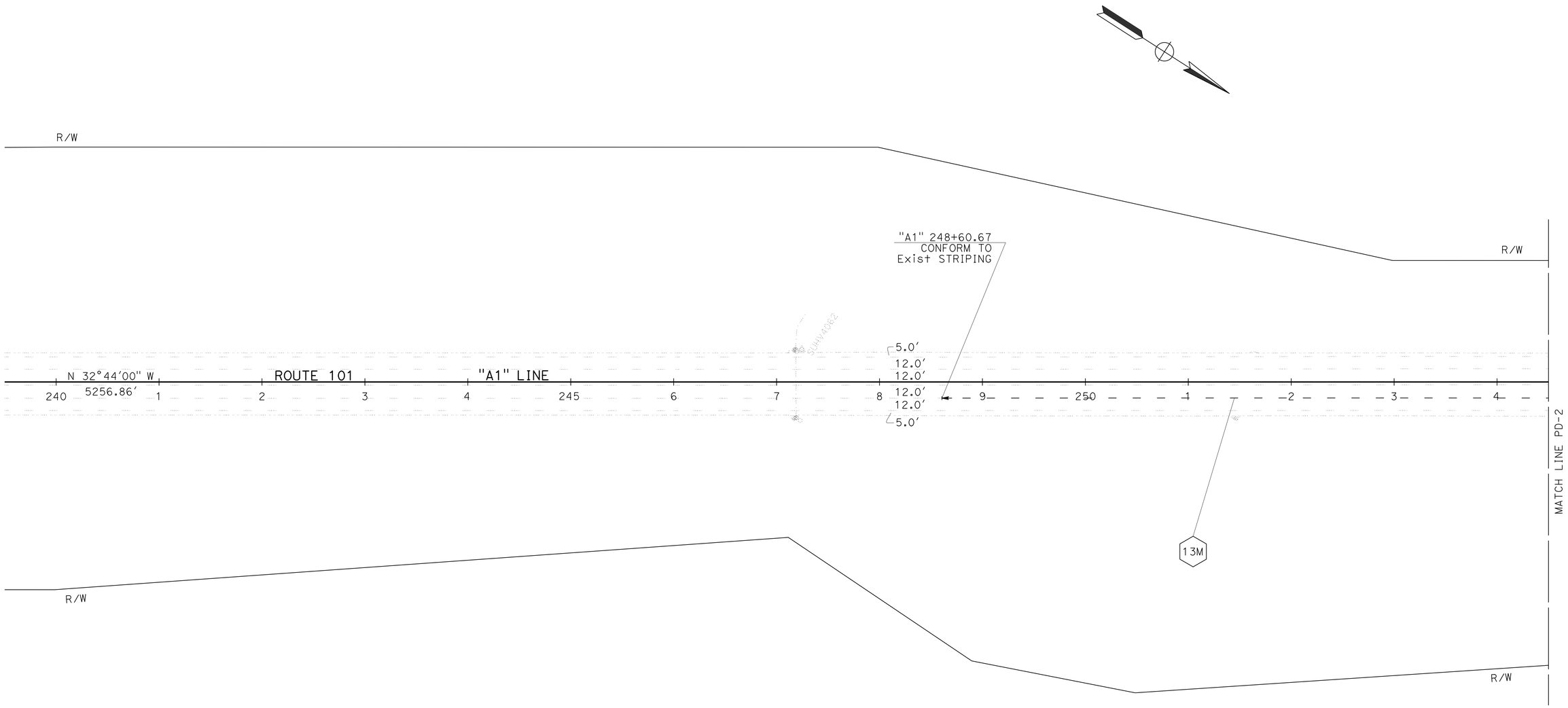
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL LANES SHALL BE 12′ WIDE UNLESS OTHERWISE SHOWN.
3. FOR PAVEMENT DELINEATION DETAILS AND QUANTITIES, SEE SHEET PDQ-1.

LEGEND

- LIMIT OF STRIPING PATTERN
- No. — PAVEMENT DELINEATION DETAIL NUMBER
- DELINEATOR (CLASS 1)
- s= — DELINEATOR SPACING
- H/P — HIGHWAY POST MARKER



PAVEMENT DELINEATION PLAN

SCALE: 1" = 50′

PD-1

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA

REVISED BY: X X
DATE REVISED: X X

LAST REVISION 09-17-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	21	34

David C Watkins 9-15-14
REGISTERED CIVIL ENGINEER DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DAVID C WATKINS
No. C65734
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA

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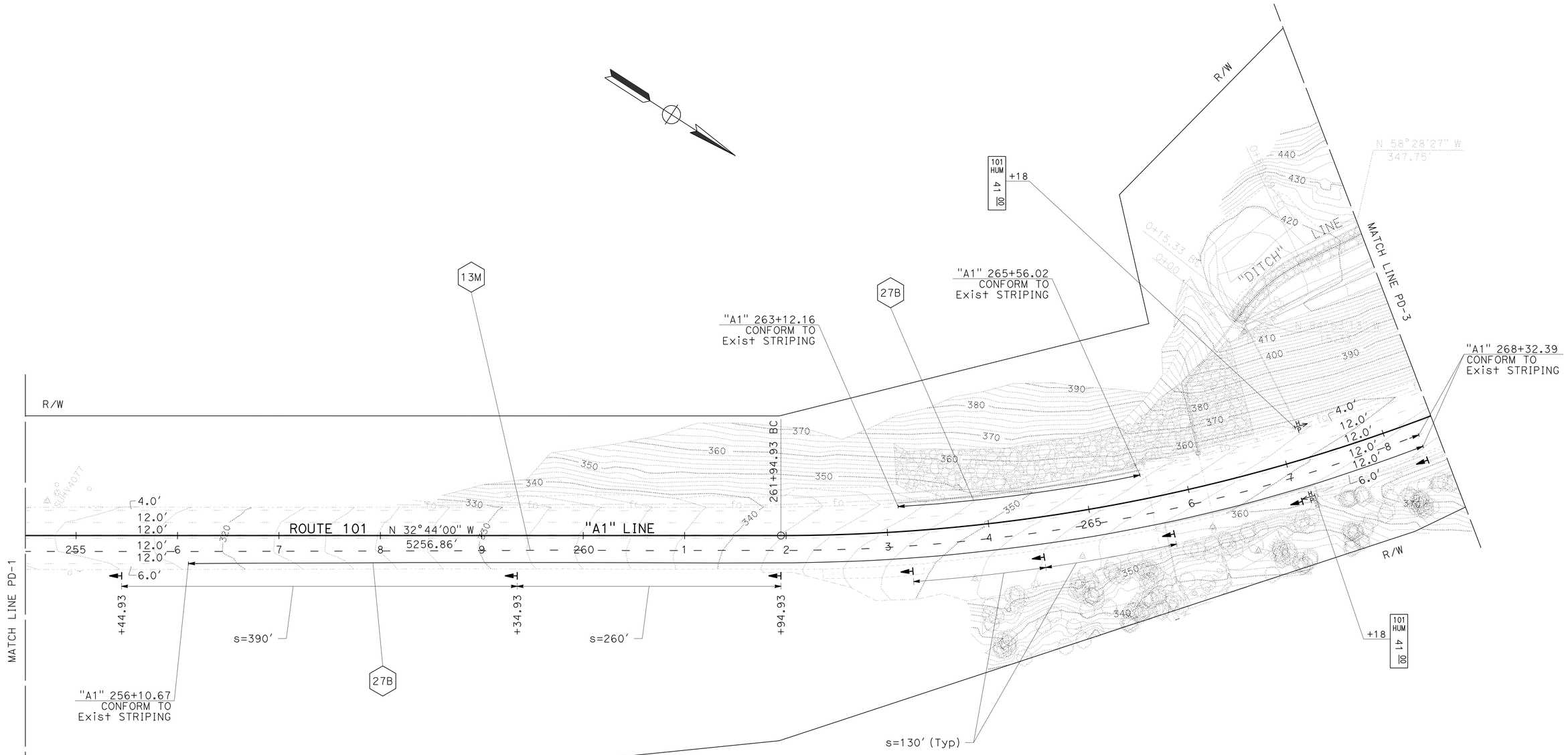
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL DELINEATORS (CLASS 1) SHALL BE TYPE E UNLESS OTHERWISE SHOWN.
3. ALL DELINEATORS (CLASS 1) SHALL BE INSTALLED ON 130' CENTERS UNLESS OTHERWISE SHOWN.



PAVEMENT DELINEATION PLAN

SCALE: 1" = 50'

PD-2

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Caltrans
NORTH REGION
DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA

REVISED BY: X X
DATE REVISED: X X

LAST REVISION 09-17-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	22	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
DAVID C WATKINS
No. C65734
Exp. 9-30-15
CIVIL
STATE OF CALIFORNIA

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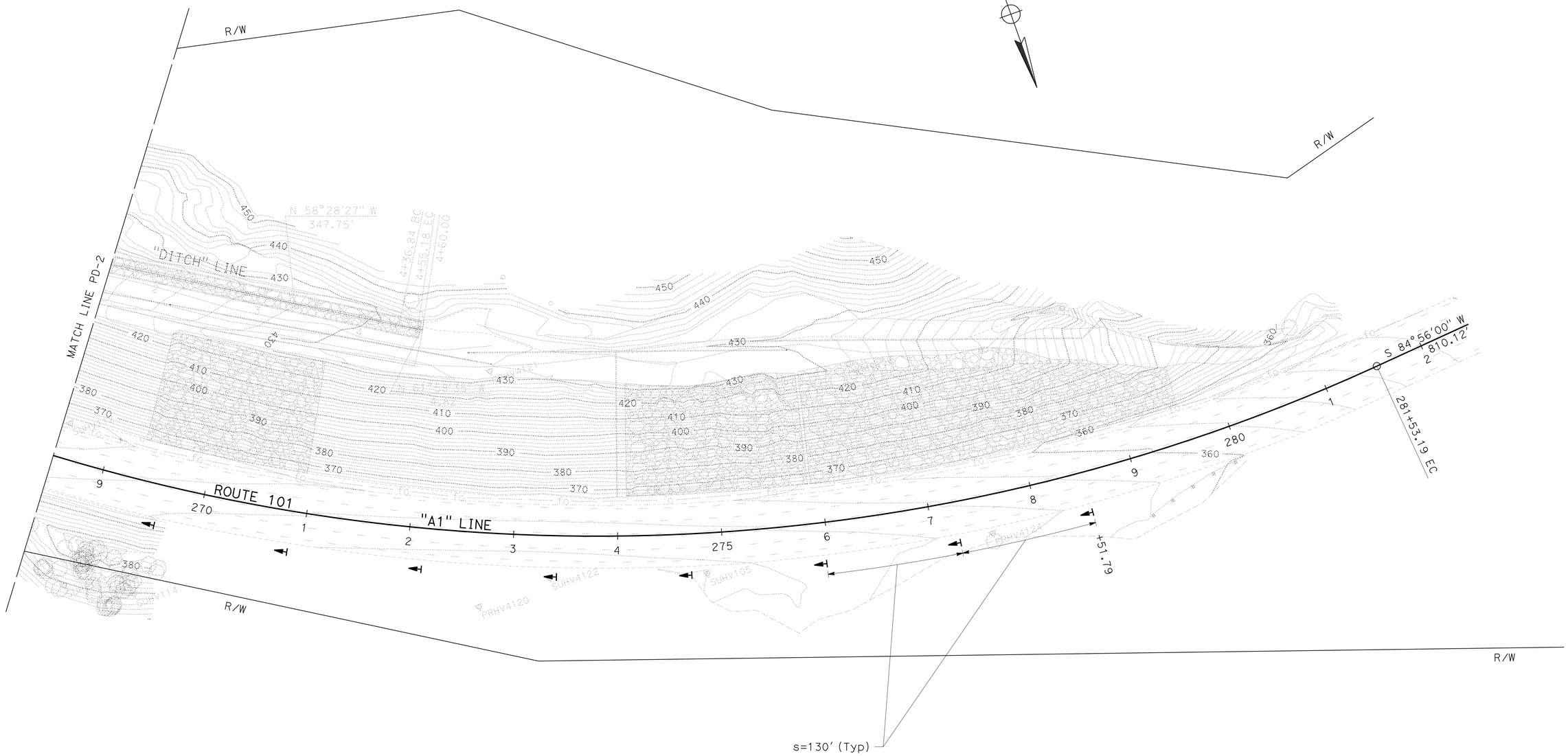
3. ALL DELINEATORS (CLASS 1) SHALL BE INSTALLED ON 130' CENTERS UNLESS OTHERWISE SHOWN.



PAVEMENT DELINEATION PLAN

SCALE: 1" = 50'

PD-3

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIVISION OF ENGINEERING

FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA

REVISED BY: X X
DATE REVISED: X X

LAST REVISION 09-17-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	23	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

PLANS APPROVAL DATE 9-15-14

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA

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NOTE:

1. DETAIL 13M IS A COMBINATION OF STANDARD DETAILS 12 AND 13 AS SHOWN ON THE 2010 STANDARD PLAN A20A.

LEGEND

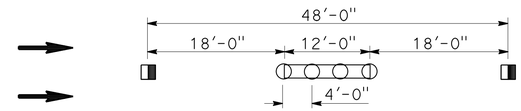
- TYPE A WHITE NON-REFLECTIVE
- TYPE G ONE-WAY CLEAR RETROREFLECTIVE

LINES

- 4" WHITE
- DIRECTION OF TRAVEL

4" THERMOPLASTIC TRAFFIC STRIPE

DETAIL NUMBER	LF
27B	1,472
TOTAL	1,472



DETAIL 13M
(SEE NOTE 1)

LANELINES
(MULTILANE HIGHWAYS)

NO SCALE

4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 18-12)

DETAIL NUMBER	LF
13M	1,977
TOTAL	1,977

DELINEATOR - HIGHWAY POST MARKER

SHEET No.	DELINEATOR (CLASS 1) TYPE E	MILEPOST MARKER
	EA	EA
PD-2	8	2
PD-3	8	
TOTAL	16	2

PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION	DESCRIPTION	PAVEMENT MARKER (RETROREFLECTIVE)	PAVEMENT MARKER (NON-REFLECTIVE)
			EA	EA
PD-1/PD-2	FROM "A1" 248+60.67 TO "A1" 268+32.39 R†	LANELINE	42	164
		TOTAL	42	164

PAVEMENT DELINEATION DETAILS AND QUANTITIES

PDQ-1

REVISED BY	DATE REVISED
X	X
X	X

CALCULATED-DESIGNED BY: JOSE LUIS VALDEZ
CHECKED BY: FERMIN BARRIGA
FUNCTIONAL SUPERVISOR: FERMIN BARRIGA

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LAST REVISION 08-13-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	24	34

REGISTERED CIVIL ENGINEER 9-15-14 DATE

9-15-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER DAVID C WATKINS No. C65734 Exp. 9-30-15 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.

ABBREVIATIONS

GPI GEOSYNTHETIC PAVEMENT INTERLAYER
SEG SUBGRADE ENHANCEMENT GEOTEXTILE

ROADWAY QUANTITIES SUMMARY TABLE

SHEET No.	L+/R+	LOCATION/ STATION LIMITS "A1" LINE	HMA (TYPE A)	HMA- OPEN GRADED (OGFC)	ASPHALT (BINDER, GPI)	GPI	SEG, CLASS B2	CLASS 2 AB	ROADWAY * EXCAVATION	(N) EMBANKMENT
			TON	TON	TON	SQYD	SQYD	CY	CY	CY
		SOUTHBOUND MAINLINE								
L-1	L+	263+12.16 TO 265+56.62	16.79	6.21						
		SUBTOTAL	16.79	6.21						
		NORTHBOUND MAINLINE								
L-1	R+	265+65.82 TO 267+22.92	39.68	8.39	0.09	73.40				
L-1	R+	265+67.79 TO 267+21.00					97.8	55.40		
L-1	R+	265+67.79 TO 267+37.95							379.71	318.40
		SUBTOTAL	39.68	8.39	0.09	73.40	97.8	55.40	379.71	318.40
		PLACE HMA DIKE (TYPE A)								
L-1	L+	263+12.16 TO 265+56.62	6.82							
		SUBTOTAL	6.82							
		TOTAL	63.29	14.60	0.09	73.8	97.8	55.40	379.71	318.40

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

MARKERS

SHEET No.	MARKER (CULVERT)	UNDERDRAIN MARKER
	EA	EA
D-1	4	4
D-2		7
TOTAL	4	11

ROCK SLOPE PROTECTION

SHEET No.	STATION LIMITS	L+/R+	RSP (1/4T,* METHOD A)	RSP (LIGHT, METHOD B)	RSP FABRIC (CLASS 8)	GEOMEMBRANE (WATER BARRIER)	SELECTED * MATERIAL
			CY	CY	SQYD	SQYD	CY
L-1	"A1" 263+12.16 TO "A1" 266+17.61	L+	1,684.32		1,726.61		300.00
L-1/L-2	"DITCH" 0+00.00 TO "DITCH" 4+60.00	L+/R+		594.89		1,104.81	
L-2	"A1" 274+09.19 TO "A1" 275+87.22	L+	3,961.30		2,708.30		700.00
L-1	"A1" 267+17.50, 40.04' R+	R+		2.84	10.33		
	SUBTOTAL FROM SHEET DQ-1					480.93	
	TOTAL		5,645.62	597.73	4,445.24	1,585.74	1,000.00

* - 1,000 CY OF ROADWAY EXCAVATION AND/OR RSP EXCAVATION IS TO BE USED AS SELECTED MATERIAL.
SEE TYPICAL CROSS SECTIONS SHEET X-1 AND EROSION CONTROL PLAN SHEET EC-1 FOR LOCATIONS.

COLD PLAINE AC PAVEMENT

SHEET No.	L+/R+	LOCATION/ STATION LIMITS "A1" LINE	AREA
			SQYD
L-1	L+	263+12.16 TO 265+56.62	100.72
L-1	R+	265+65.82 TO 267+22.92	38.33
		TOTAL	139.05

DITCH EXCAVATION

L+/R+	SHEET No.	STATION LIMITS "DITCH" LINE	(N) LENGTH	DITCH EXCAVATION	(N) EMBANKMENT
			LF	CY	CY
L+/R+	L-1/L-2	0+00.00 TO 4+60.00	460.0	1,383.22	541.58
			TOTAL	1,383.22	541.58

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

AC DIKE

SHEET No.	L+/R+	LOCATION/ STATION LIMITS "A1" LINE	REMOVE AC DIKE	PLACE HMA DIKE (TYPE A)	HMA ** (TYPE A)
			LF	LF	TON
L-1	L+	263+12.16 TO 265+56.62	240.6	240.6	6.8
		TOTAL	240.6	240.6	6.8

** - SEE ROADWAY QUANTITIES SUMMARY TABLE THIS SHEET FOR TOTAL QUANTITY.

TACK COAT

STATION LIMITS "A1" LINE	(N) AREA	VOLUME	DESCRIPTION
	SQYD	TON	
263+12.16 TO 265+56.62 L+	100.70	0.03	SOUTHBOUND MAINLINE - (HMA, TYPE A)
265+65.82 TO 267+22.92 R+	136.09	0.04	NORTHBOUND MAINLINE - (HMA, TYPE A)
TOTAL		0.07	

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

SUMMARY OF QUANTITIES

Q-1

REVISED BY | DATE REVISED
MAHBOOBEH DEILAMI | FERMIN BARRIGA
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: FERMIN BARRIGA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION DIVISION OF ENGINEERING

LAST REVISION 09-09-14 | DATE PLOTTED => 31-DEC-2014 TIME PLOTTED => 10:52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	25	34

Laura Lazzarotto
LICENSED LANDSCAPE ARCHITECT

9-15-14
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
Laura Lazzarotto
Signature
8-31-15
Renewal Date
9-15-14
Date
STATE OF CALIFORNIA

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SEED MIX 1

SEED	BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
MIX 1	ELYMUS ELYMOIDES[1] (BOTTLEBRUSH SQUIRRELTAIL)	45	30
	FESTUCA IDAHOENSIS[1] (IDAHO FESCUE)	55	8
	ACHILLEA MILLEFOLIUM [1] (WHITE YARROW)	40	2
	HORDEUM VULGARE (COMMON BARLEY)	75	70
	NEMOPHILA MENZIESII [1] (BABY BLUE EYES)	75	10
	VULPIA MICROSTACHYS [1] (SIX WEEKS FESCUE)	75	6

[1]SEED PRODUCED IN CALIFORNIA ONLY.

EROSION CONTROL QUANTITIES

DESCRIPTION	HYDROSEED (SQFT)	STRAW (SQFT)	HYDROMULCH (SQFT)	FIBER ROLLS
				LF
EC TYPE 1	88,640	88,640	88,640	3500

FIBER ROLLS

SEQUENCE	ITEM	MATERIAL		REMARKS
		DESCRIPTION	TYPE	
FIBER ROLLS MUST BE INSTALLED BEFORE EROSION CONTROL	FIBER ROLLS	FIBER ROLL	TYPE B 8" TO 10" Dia	TYPE 1 FIBER ROLL INSTALLATION

EROSION CONTROL TYPE 1

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE
		DESCRIPTION	TYPE	
STEP 1	HYDROSEED	SEED	MIX 1	126 LB/ACRE
		FIBER	WOOD	1200 LB/ACRE
STEP 2	STRAW	STRAW	WHEAT &/OR BARLEY	3 TON/ACRE
STEP 3	HYDROMULCH	FIBER	WOOD	1200 LB/ACRE
		TACKIFIER	PSYLLIUM	140 LB/ACRE

EROSION CONTROL TABLES AND QUANTITIES

ECL-1

REVISED BY | DATE REVISED
LAURA LAZZAROTTO | RON FLORY
CALCULATED-DESIGNED BY | CHECKED BY
SENIOR LANDSCAPE ARCHITECT | RON FLORY
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
LANDSCAPE

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LAST REVISION 07-30-14
DATE PLOTTED => 08-DEC-2014
TIME PLOTTED => 12:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	26	34

Laura Lazzarotto
LICENSED LANDSCAPE ARCHITECT

9-15-14
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
Laura Lazzarotto LA 4906
Signature
8-31-15
Renewal Date
9-15-14
Date
STATE OF CALIFORNIA

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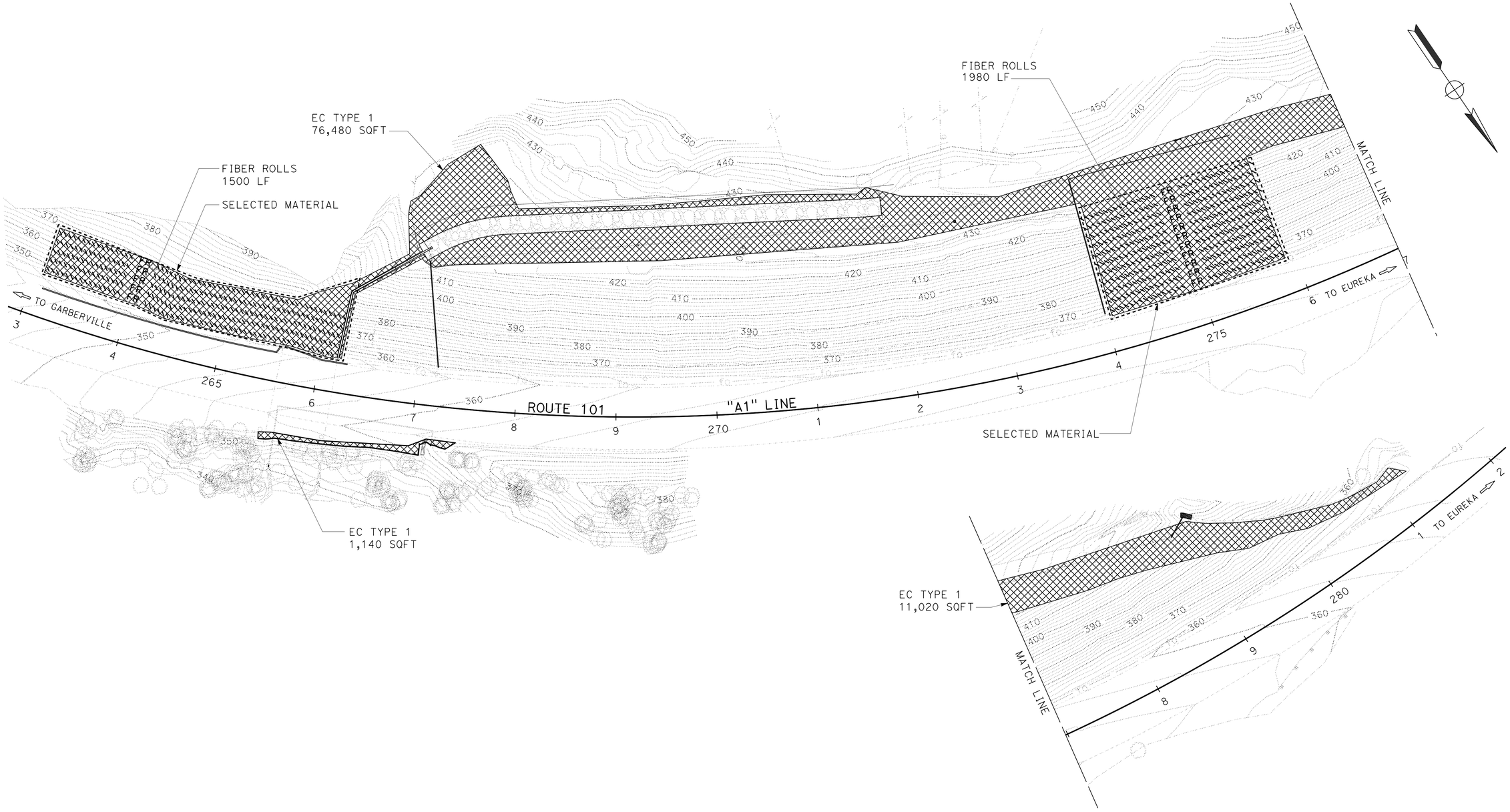
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:

EC TYPE 1

SELECTED MATERIAL



EROSION CONTROL PLAN

SCALE: 1" = 50'

EC-1

APPROVED FOR LANDSCAPE WORK ONLY

REVISED BY | DATE REVISED

LAURA LAZZAROTTO | RON FLORY

CALCULATED-DESIGNED BY | CHECKED BY

SENIOR LANDSCAPE ARCHITECT | RON FLORY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION 07-30-14 | DATE PLOTTED => 08-DEC-2014 | TIME PLOTTED => 12:45

BORDER LAST REVISED 7/2/2010 | USERNAME => s130875 | DGN FILE => 112000125te001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0314 | PROJECT NUMBER & PHASE 01120001251

M

Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED,
	MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
Mtl	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT

N

N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE

O

Oblr	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN

P

P	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE,
	PRECAST
PCC	POINT OF COMPOUND CURVE,
	PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE,
	PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm Mtl	PERMEABLE MATERIAL

P continued

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
ℙ,PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE,
	TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE,
	PLASTIC PIPE,
	POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT

Q

Qty	QUANTITY

R

R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED,
	REINFORCEMENT,
	REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT,
	REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION,
	REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD,
	RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

S

S	SOUTH,
	SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND,
	SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
℄	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL,
	SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK,
	SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES

T

T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
Tel	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

T continued

TS	TRANSVERSE,
	TRAFFIC SIGNAL,
	TUBULAR STEEL
Typ	TYPICAL

U

UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS

V

V	VALVE,
	DESIGN SPEED
Var	VARIABLE,
	VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME

W

W	WEST,
	WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE

X

X Sec	CROSS SECTION
Xing	CROSSING

Y

Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	27	34

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Grace M. Tsushima No. C49814 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 9-15-14

UNIT OF MEASUREMENT SYMBOLS:

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

TABLE A

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

TABLE B

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft^3, pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
ø	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kip	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ABBREVIATIONS (SHEET 2 OF 2)

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	28	34

REGISTERED CIVIL ENGINEER

April 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

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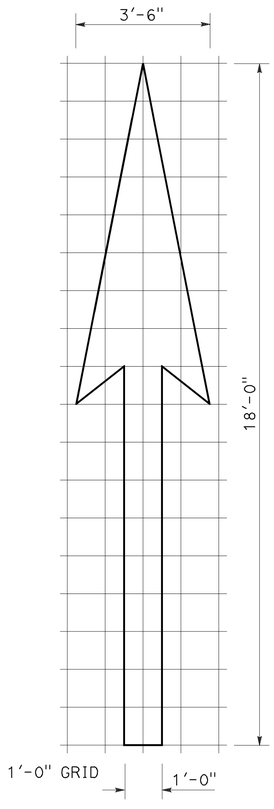
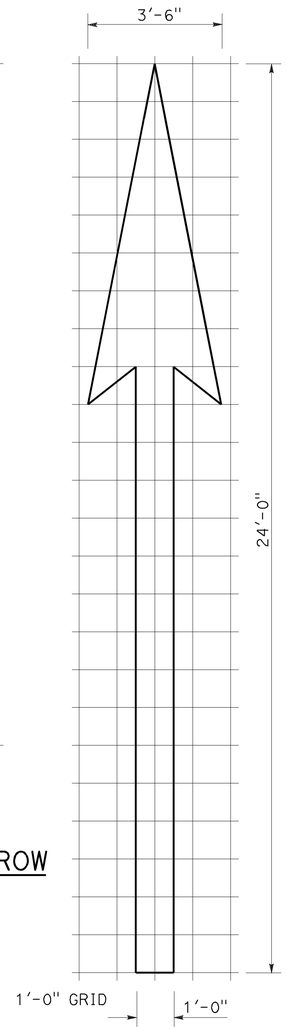
TO ACCOMPANY PLANS DATED 9-15-14

2010 REVISED STANDARD PLAN RSP A24A



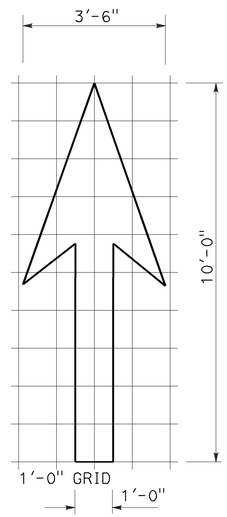
A=25 ft^2

TYPE I 18'-0" ARROW



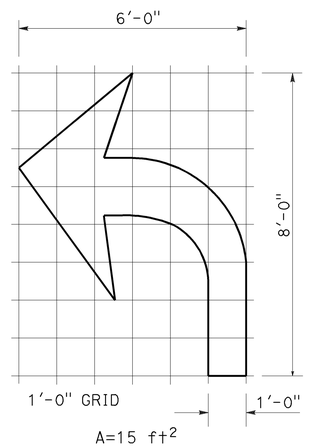
A=31 ft^2

TYPE I 24'-0" ARROW



A=14 ft^2

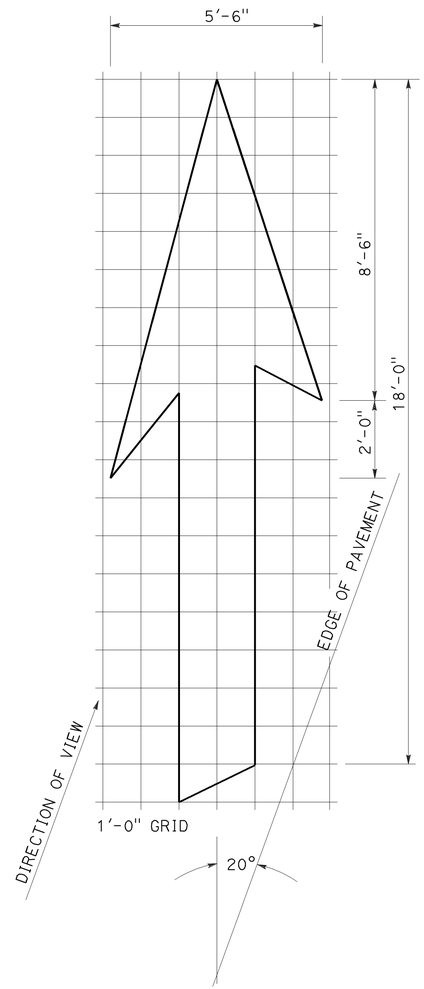
TYPE I 10'-0" ARROW



A=15 ft^2

TYPE IV (L) ARROW

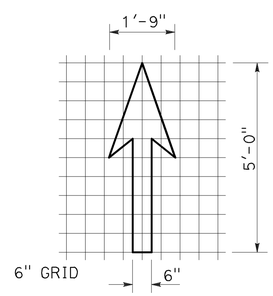
(For Type IV (R) arrow, use mirror image)



A=42 ft^2

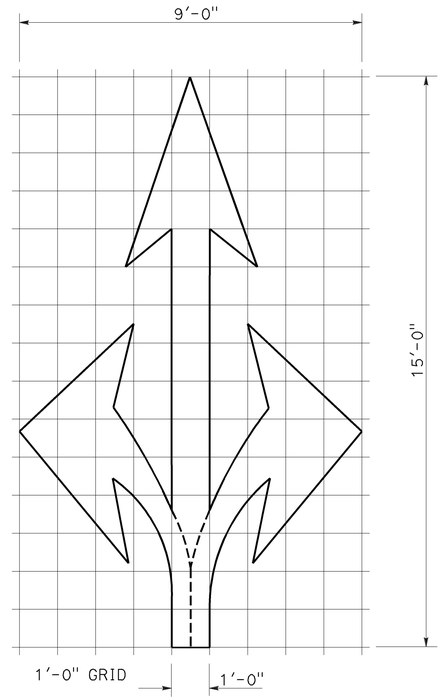
TYPE VI ARROW

Right lane drop arrow
(For left lane, use mirror image)



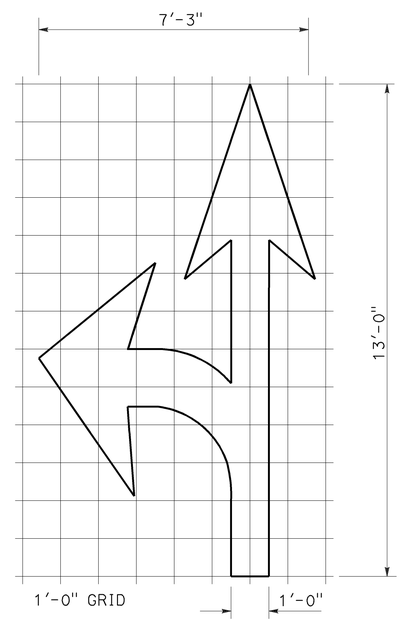
A=3.5 ft^2

BIKE LANE ARROW



A=36 ft^2

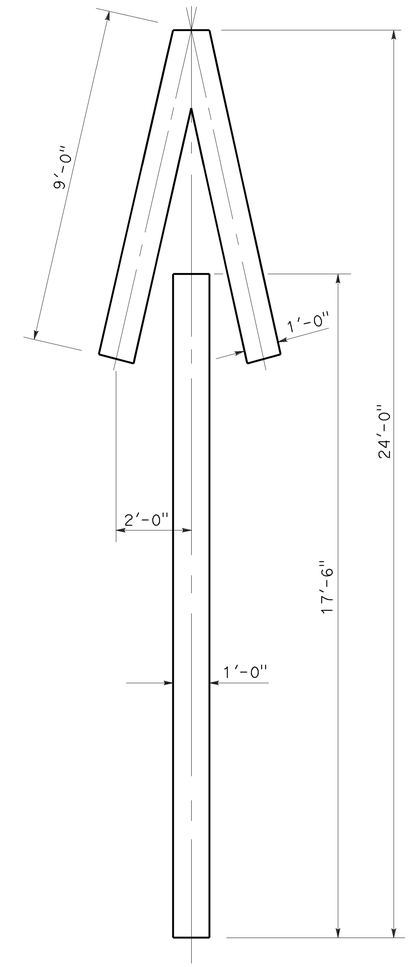
TYPE VIII ARROW



A=27 ft^2

TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



A=33 ft^2

TYPE V ARROW

NOTE:
Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS ARROWS

NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

3-14-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	29	34

REGISTERED CIVIL ENGINEER

July 18, 2014
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Carl M. Duan No. C59976 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA

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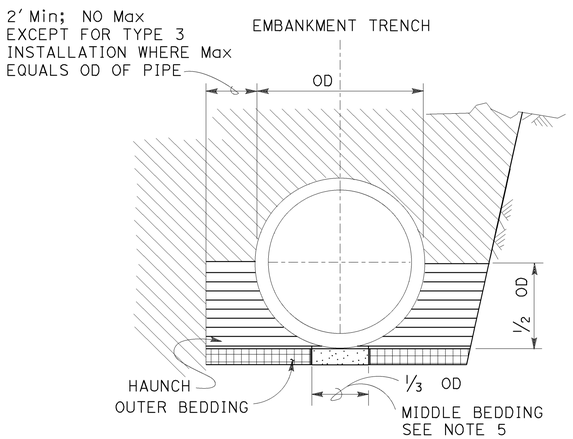
TO ACCOMPANY PLANS DATED 9-15-14

DESIGN NOTES:

Design: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments. ACPA DESIGN DATA 1, October 2007. INDIRECT DESIGN METHOD

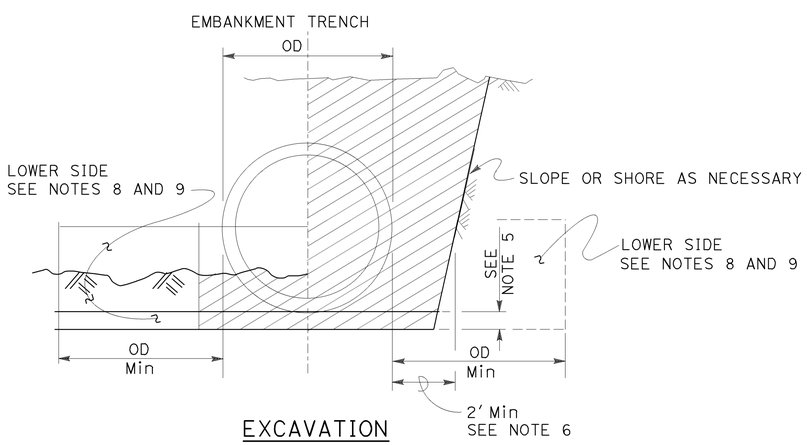
Soil: w Fe = 162 pcf Installation Type 1
w Fe = 168 pcf Installation Types 2 & 3
w = Unit weight of soil (pcf)
Fe = Soil-structure interaction factor



BACKFILL

LEGEND:

- ROADWAY EMBANKMENT
- STRUCTURE BACKFILL (CULVERT) FOR HAUNCH SEE NOTE 6
- STRUCTURE BACKFILL (CULVERT) FOR OUTER BEDDING SEE NOTE 6
- LOOSE BACKFILL
- STRUCTURE EXCAVATION (CULVERT)



EXCAVATION

INSTALLATION TYPE 1:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 30 and the maximum percentage passing the No. 200 sieve size shall be 12.

INSTALLATION TYPE 2:

The haunch and outer bedding shall be compacted to a minimum 90 percent relative compaction. In addition, the minimum sand equivalent in these areas shall be 25.

INSTALLATION TYPE 3:

The haunch and outer bedding shall be compacted to a minimum 85 percent relative compaction. 90 percent relative compaction will be required where the fill over the pipe is less than 4′-0″ or ½ OD. In addition, the minimum sand equivalent in these areas shall be 25 and the material shall not contain rocks, broken concrete, or other solid material exceeding 3″ in greatest dimension.

INSTALLATION TYPE 1

MINIMUM CLASS AND D-LOAD	COVER	
	60″ Dia AND SMALLER	OVER 60″ Dia TO 120″ Dia Max
CLASS II 1000D	14.9′	12.9′
CLASS III 1350D	15.0′ - 21.9′	13.0′ - 18.9′
CLASS III SPECIAL 1700D	22.0′ - 27.9′	19.0′ - 24.9′
CLASS IV 2000D	28.0′ - 32.9′	25.0′ - 29.9′
CLASS IV SPECIAL 2500D	33.0′ - 41.9′	30.0′ - 38.9′
CLASS V 3000D	42.0′ - 49.9′	39.0′ - 46.9′
CLASS V SPECIAL 3600D	50.0′ - 60.0′	47.0′ - 58.0′

INSTALLATION TYPE 2

MINIMUM CLASS AND D-LOAD	COVER	
	60″ Dia AND SMALLER	OVER 60″ Dia TO 120″ Dia Max
CLASS II 1000D	11.9′	9.9′
CLASS III 1350D	12.0′ - 15.9′	10.0′ - 14.9′
CLASS III SPECIAL 1700D	16.0′ - 20.9′	15.0′ - 19.9′
CLASS IV 2000D	21.0′ - 24.9′	20.0′ - 23.9′
CLASS IV SPECIAL 2500D	25.0′ - 31.9′	24.0′ - 30.9′
CLASS V 3000D	32.0′ - 37.9′	31.0′ - 37.9′
CLASS V SPECIAL 3600D	38.0′ - 46.0′	38.0′ - 46.0′

INSTALLATION TYPE 3

MINIMUM CLASS AND D-LOAD	COVER	
	60″ Dia AND SMALLER	OVER 60″ Dia TO 120″ Dia Max
CLASS II 1000D	8.9′	5.9′
CLASS III 1350D	9.0′ - 11.9′	6.0′ - 10.9′
CLASS III SPECIAL 1700D	12.0′ - 15.9′	11.0′ - 13.9′
CLASS IV 2000D	16.0′ - 18.9′	14.0′ - 17.9′
CLASS IV SPECIAL 2500D	19.0′ - 24.9′	18.0′ - 22.9′
CLASS V 3000D	25.0′ - 29.9′	23.0′ - 28.9′
CLASS V SPECIAL 3600D	30.0′ - 36.0′	29.0′ - 35.0′

NOTES:

1. Unless otherwise shown on the plans or specified in the special provision, the Contractor shall have the option of selecting the class of RCP and the type of installation to be used, provided the height of cover does not exceed the value shown for the RCP selected.
   Example: 24″ RCP culvert with maximum cover of 24′-0″ the options are:
   a) Class III Special or stronger with Installation Type 1.
   b) Class IV or stronger with Installation Type 2.
   c) Class IV Special or stronger with Installation Type 3.
   Cover is defined as the maximum vertical distance from top of the pipe to finished grade within the length of any given culvert.
2. The class of RCP and Installation Type selected shall be the same throughout the length of any given culvert.
3. The "length of any culvert" is defined as the culvert between:
   a) Successive drainage structure (inlets, junction boxes, headwalls, etc.).
   b) A drainage structure and the inlet or outlet end of the culvert.
   c) The inlet and outlet end of the culvert when there are no intervening drainage structures.
4. Oval and arch shaped RCP shall not be used.
5. Bedding depth: 1/25 OD Min, not less than 3″.
6. Slurry cement backfill may be substituted for backfill in the outer bedding and haunch areas. If slurry is used, the outer and middle beddings shall be omitted. Prior to installation, the soil under the middle ⅓ of the outside diameter of the pipe shall be softened by scarifying or other means to a minimum depth of 1/25 OD, but not less than 3″. Where slurry cement backfill is used, clear distance to trench wall may be reduced as set forth in the Standard Specifications.
7. Backfill shall be placed full width of excavation except where dimensions are shown for backfill width or thickness. Dimensions shown are minimum.
8. Lower side shall be suitable material as determined by the Engineer. Otherwise it shall be considered unsuitable as set forth in of the Standard Specifications. See Note 9.
9. Where the pipe is placed in a trench, if the trench walls are sloped at 5 vertical to 1 horizontal or steeper for at least 90 percent of the trench height or up to not less than 12″ from the grading plane, the firmness of the soil in the lower side need not be considered.
10. Non-reinforced precast concrete pipe sizes 3′-0″ or smaller may be placed under installation Types 1, 2 or 3.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

EXCAVATION AND BACKFILL CONCRETE PIPE CULVERTS INDIRECT DESIGN METHOD

NO SCALE

RSP A62DA DATED JULY 18, 2014 SUPERSEDES STANDARD PLAN A62DA DATED MAY 20, 2011 - PAGE 24 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A62DA

2010 REVISED STANDARD PLAN RSP A62DA

5-13-14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	30	34

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Michael Janzen
No. 44788
Exp. 03-31-14
CIVIL
STATE OF CALIFORNIA

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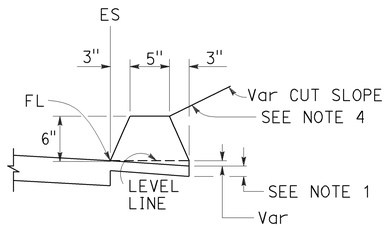
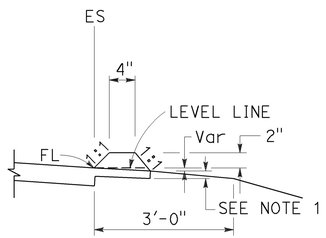
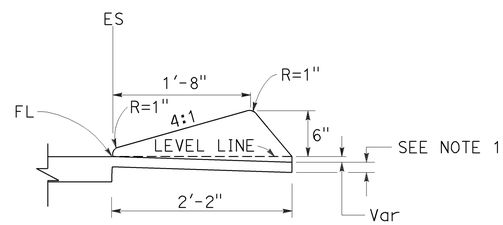
TO ACCOMPANY PLANS DATED 9-15-14



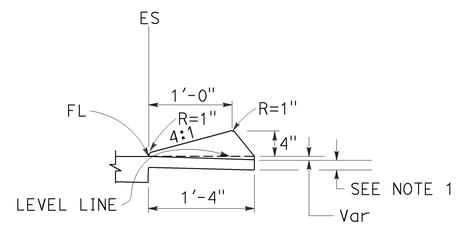
TYPE A
See Note 3



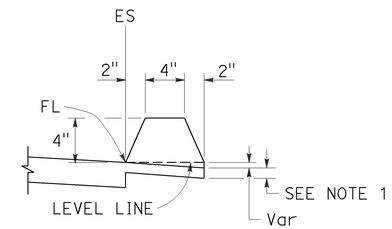
TYPE C



TYPE D

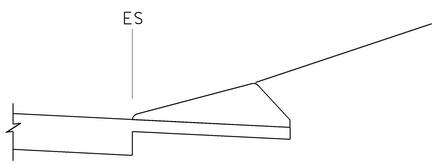


TYPE E

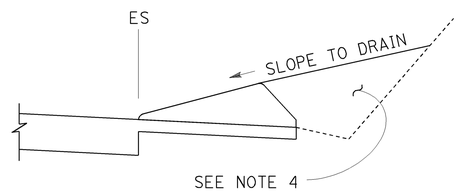


TYPE F
See Note 5

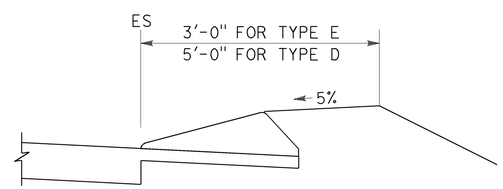
DIKES



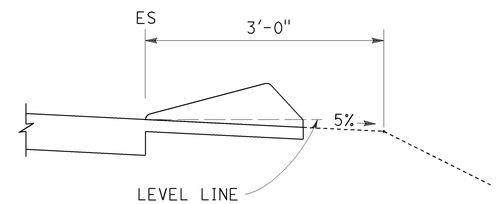
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

1. For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
2. Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
3. Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
4. Fill and compact with excavated material to top of dike.
5. Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES

NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87B

2010 REVISED STANDARD PLAN RSP A87B

6-27-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	31	34

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Gurinderpal Bhullar
No. C48815
Exp. 9-30-14
CIVIL
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 9-15-14

2010 REVISED STANDARD PLAN RSP T9

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING

SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
					X	Y	Z **
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

* - For other offsets, use the following merging taper length formula for L:
For speed of 40 mph or less, $L = WS^2/60$
For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
W = Width of offset in feet
S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING

SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Longitudinal buffer space or flagger station spacing

*** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommmended distances.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	32	34

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 9-15-14

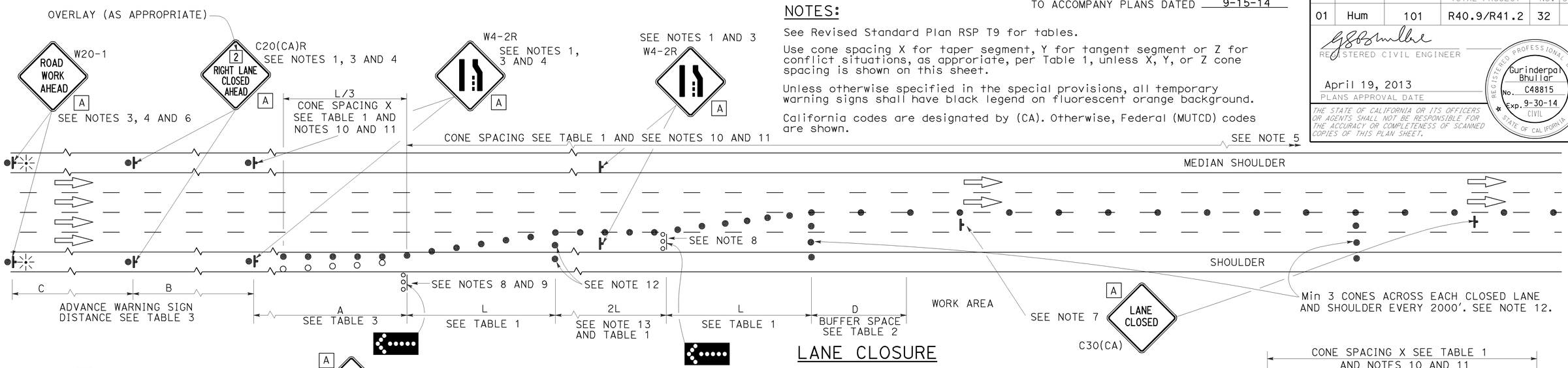
NOTES:

See Revised Standard Plan RSP T9 for tables.

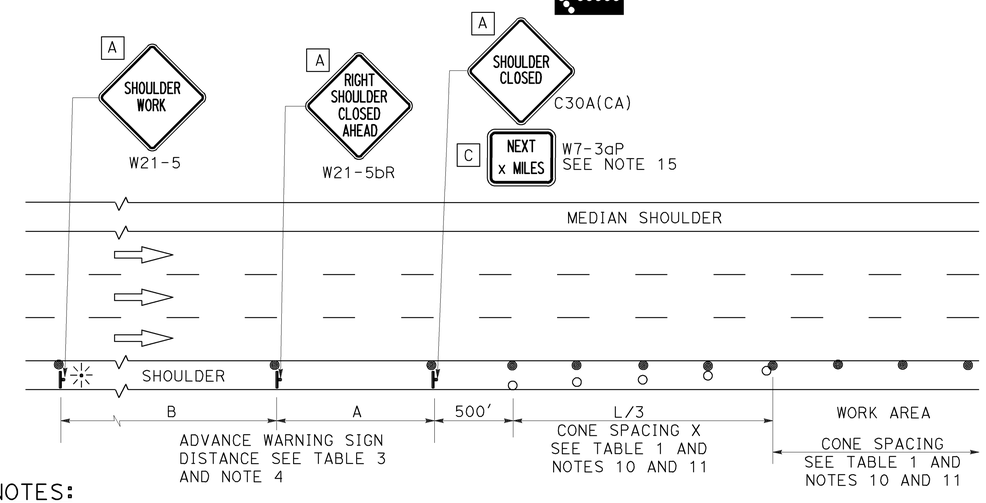
Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

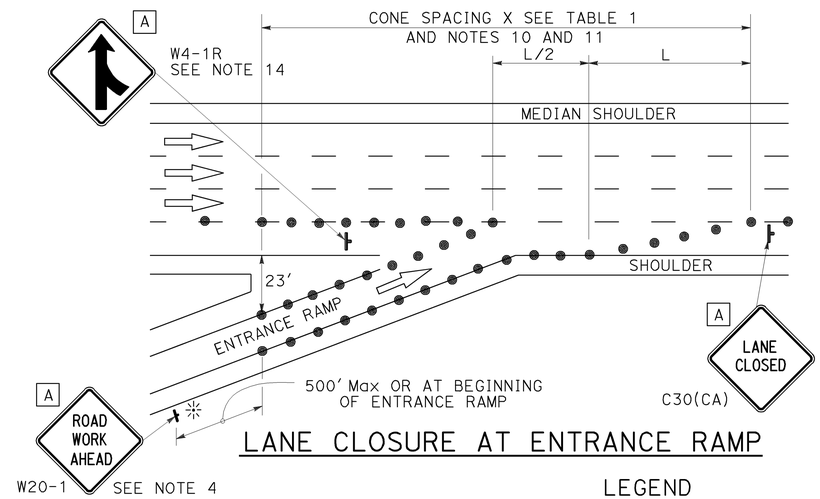
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



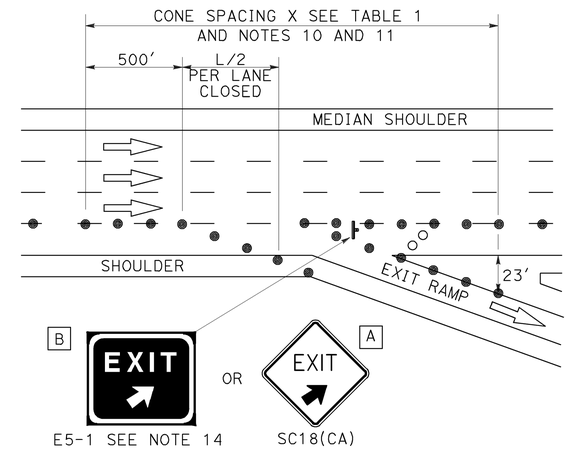
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT ENTRANCE RAMP



LANE CLOSURE AT EXIT RAMP

NOTES:

1. Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
   a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
   b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
5. A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
6. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
7. Place a C30(CA) sign every 2000' throughout length of lane closure.
8. One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
9. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
12. Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
13. Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
14. Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) and W4-1 signs shall be used as shown.
15. A W7-3aP "NEXT____ MILES" plaque must be used if theshoulder closure extends beyond the distance that can be perceived by road users.

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

A	48" x 48"
B	72" x 60"
C	36" x 30"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON FREEWAYS AND EXPRESSWAYS

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T10

2010 REVISED STANDARD PLAN RSP T10

12-18-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	33	34

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 9-15-14

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

A	48" x 48"
B	24" x 24"
C	36" x 18"

NOTES:

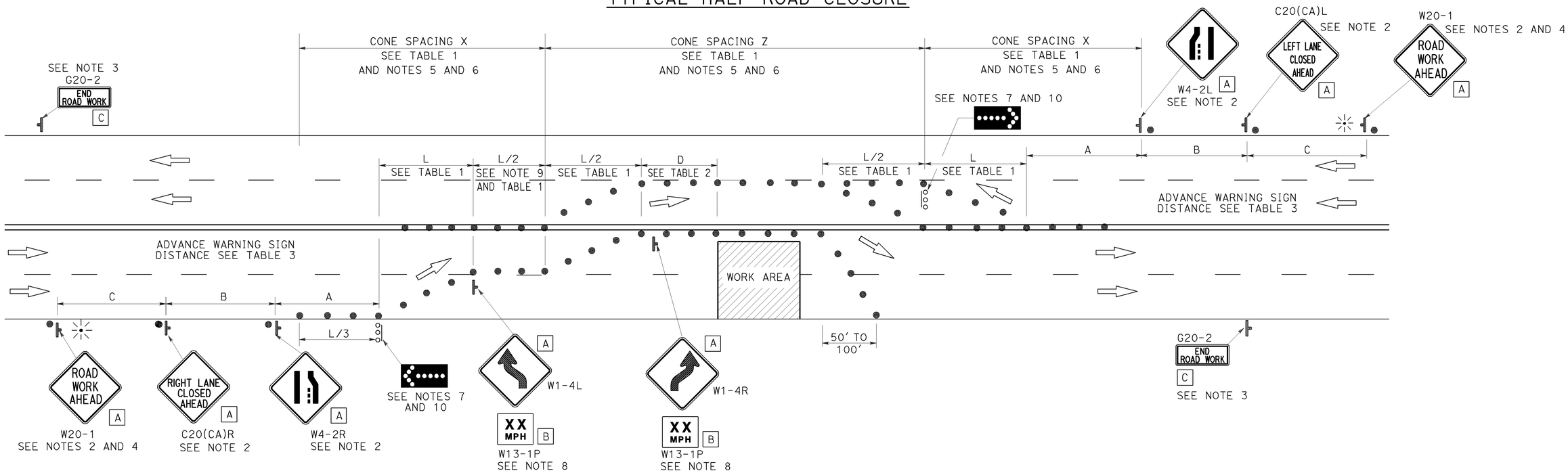
See Revised Standard Plan RSP T9 for tables.

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as approriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL HALF ROAD CLOSURE



NOTES:

1. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closure unless, otherwise directed by the Engineer.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A G20-2 "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a C20(CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow signs shall be either Type I or Type II.
8. Advisory speed will be determined by the Engineer. The W13-1P Plaque will not be required when advisory speed is more than the posted or maximum speed limit.
9. Unless otherwise specified in the special provisions, the tangent (L/2) shall be used.
10. A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR HALF ROAD CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS AND EXPRESSWAYS

NO SCALE

RSP T12 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T12
DATED MAY 20, 2011 - PAGE 240 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T12

2010 REVISED STANDARD PLAN RSP T12

4-2-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Hum	101	R40.9/R41.2	34	34

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Gurinderpal Bhullar No. C48815 Exp. 9-30-14 CIVIL STATE OF CALIFORNIA

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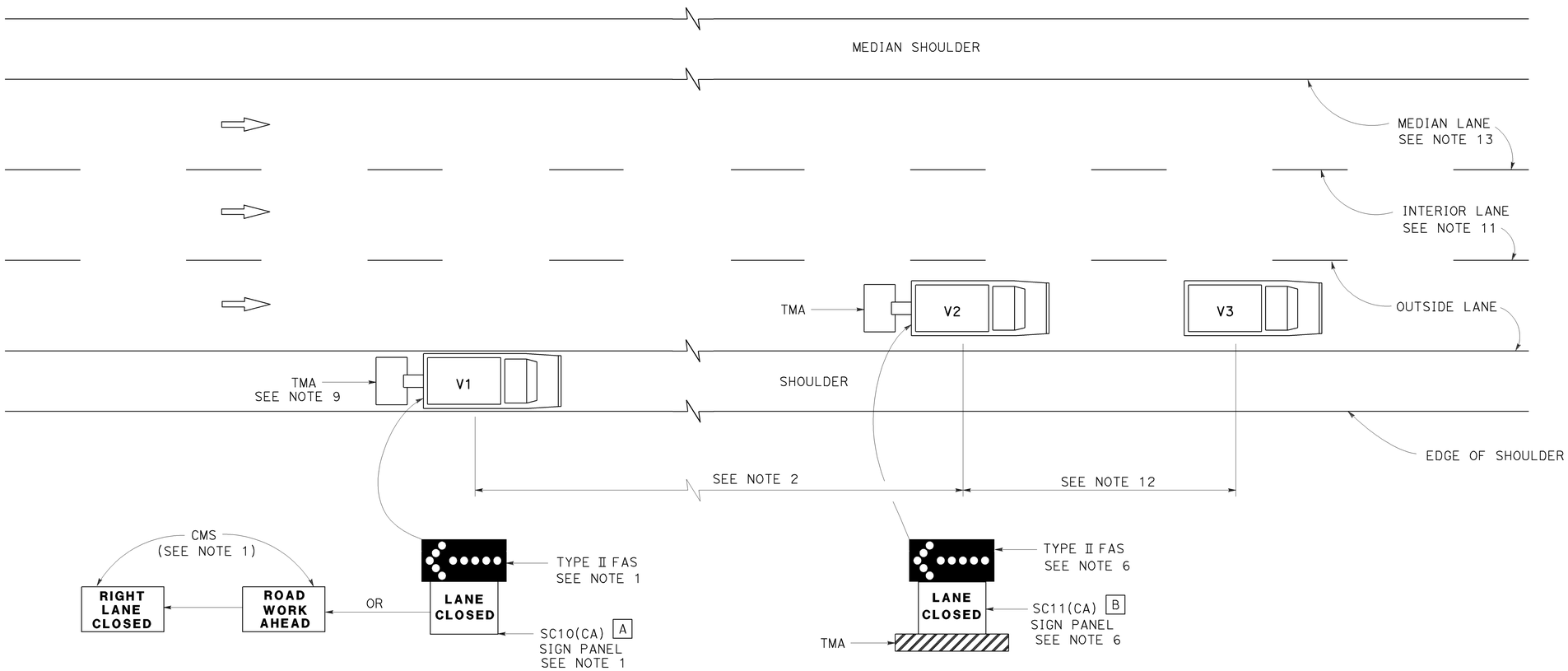
TO ACCOMPANY PLANS DATED 9-15-14



MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

SIGN PANEL SIZE (Min)

A 66" x 36"

B 54" x 42"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
	FLASHING ARROW SIGN (FAS)
CMS	CHANGEABLE MESSAGE SIGN
TMA	TRUCK-MOUNTED ATTENUATOR

NOTES:

1. Either a changeable message sign or a SC10(CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "RIGHT LANE CLOSED" message. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right and the changeable message sign shall show "LEFT LANE CLOSED".
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500′ should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500′.
5. Vehicle-mounted sign panels shall have Type III or above retroreflective sheeting, black on white, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Shadow vehicle V2 shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
8. All vehicles shall be equipped with flashing or rotating amber lights.
9. If sign vehicle V1 encroaches into the traffic lane due to insufficient shoulder width, sign vehicle V1 shall be equipped with a truck-mounted attenuator. Sign vehicle V1 shall stay as close to the edge of shoulder as practicable.
10. Where workers would be on foot in the work area, a stationary type lane closure (Revised Standard Plan T10, T11, etc., as applicable) shall be used instead of this plan.
11. For moving lane closure on interior lane of multilane highways, use Revised Standard Plan T16.
12. The spacing between work vehicle(s) and the shadow vehicles, and between each shadow vehicle should be minimized to deter road users from driving in between.
13. When the work/application vehicle V3 occupies the median lane, sign vehicle V1 should drive in the median shoulder and indicate left lane closed ahead.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS

NO SCALE

RSP T15 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T15
DATED MAY 20, 2011 - PAGE 243 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T15

2010 REVISED STANDARD PLAN RSP T15

12-18-12