Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	1	41

STATE OF CALIFORNIA

ACHSSTPH-P371(003)E

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN RIVERSIDE COUNTY
NEAR ANZA AND AGUANGA
FROM 2.5 MILES EAST OF HOWARD ROAD
TO 0.9 MILE WEST OF BAHRMAN ROAD

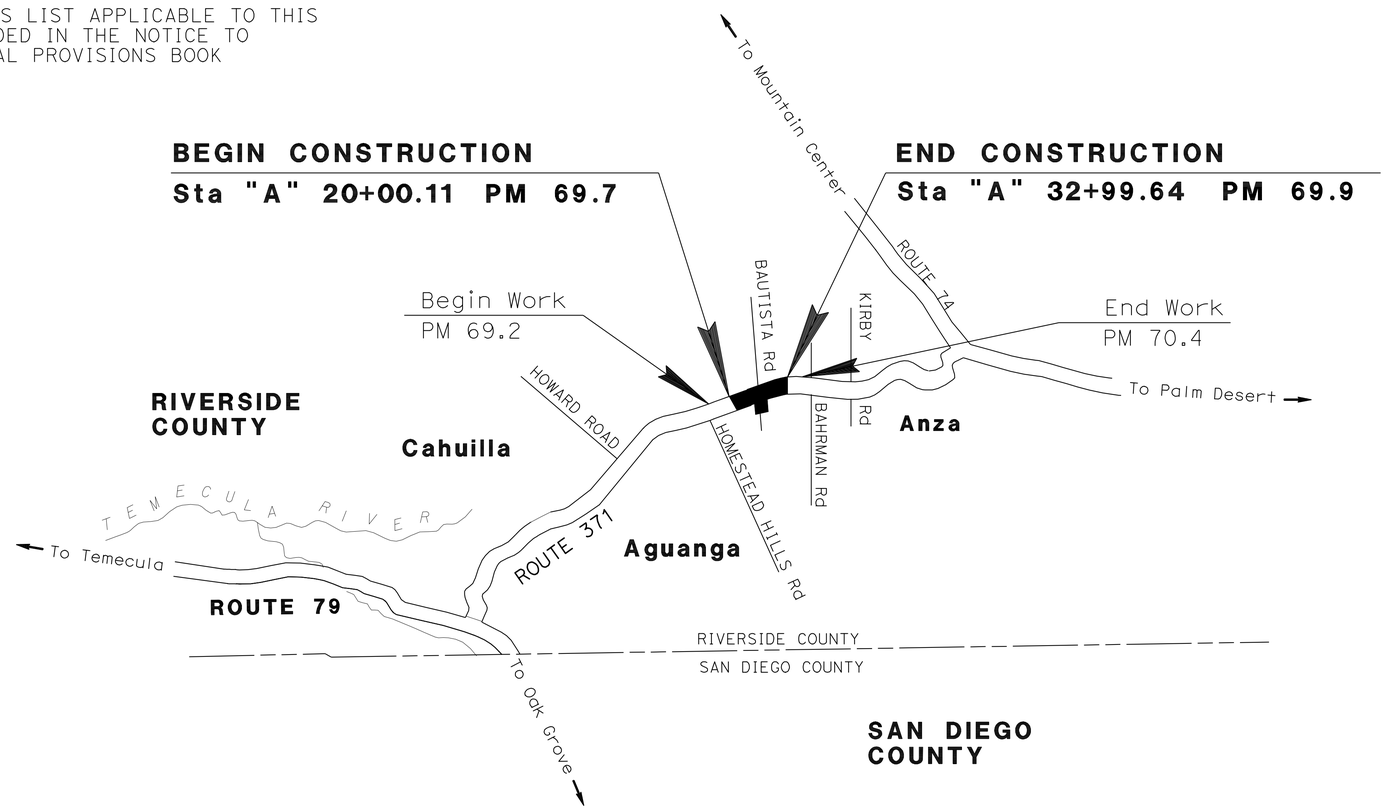
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

INDEX OF PLANS

1	TITLE AND LOCATION MAP
2-5	TYPICAL CROSS SECTIONS
6	LAYOUT
7	CONSTRUCTION DETAILS
8	TEMPORARY WATER POLLUTION CONTROL PLAN
9	EROSION CONTROL PLAN
10	CONTOUR GRADING
11	DRAINAGE PLAN
12	DRAINAGE PROFILES
13	DRAINAGE DETAILS
14	DRAINAGE QUANTITIES
15	UTILITY PLAN
16	CONSTRUCTION AREA SIGNS
17-20	STAGE CONSTRUCTION
21	STAGE CONSTRUCTION QUANTITIES
22-23	DETOUR QUANTITIES
24-27	PAVEMENT DELINEATION PLAN
28	PAVEMENT DELINEATION QUANTITIES
29	SIGN PLAN
30	SIGN QUANTITIES
31	SUMMARY OF QUANTITIES
32-41	REVISED AND NEW STANDARD PLANS

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

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.



NO SCALE

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

12-29-09
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

April 12, 2010
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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AECOM / LAN
1887 BUSINESS CENTER DR, SUITE 6
SAN BERNARDINO, CA 92408

CONTRACT No. **08-0L8104**

APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.

CONSULTANT DESIGN ENGINEER	REGISTRATION No.	LICENSE Exp DATE	CALTRANS DESIGN OVERSIGHT APPROVAL	DATE SIGNED
MARK GONZALEZ	C56288	12-31-10	HAISSAM YAHYA	12-31-09

LAST REVISION 02-02-10

DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:03

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	2	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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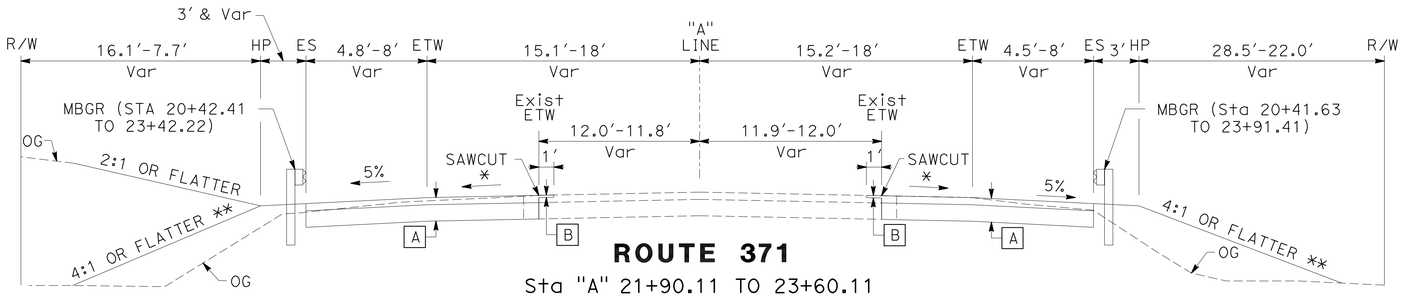
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATION AS SHOWN OR AS DIRECTED BY ENGINEER.



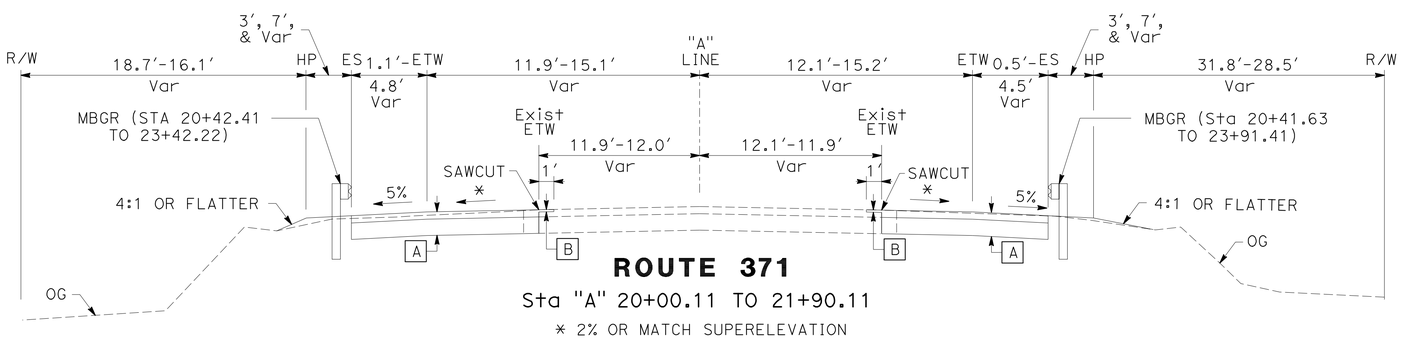
DESIGN DESIGNATION (ROUTE 371)

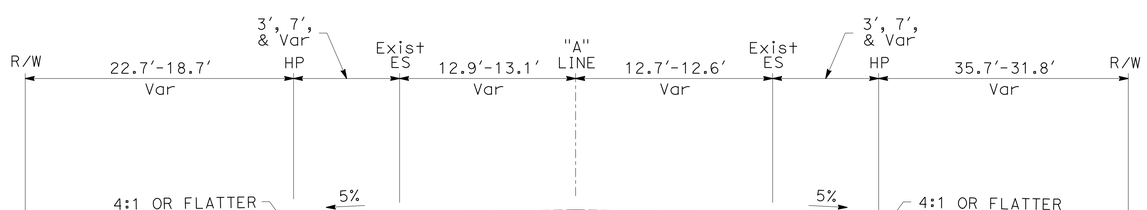
ADT (2010)	7,500	D	72%
ADT (2030)	10,500	T	3%
DHV	1,160	V	60 mph
ESAL	871,808	TI_{20}	9.0

PAVEMENT STRUCTURAL SECTIONS

A — 0.65' HMA (TYPE A)
0.35' CLASS 2 AB

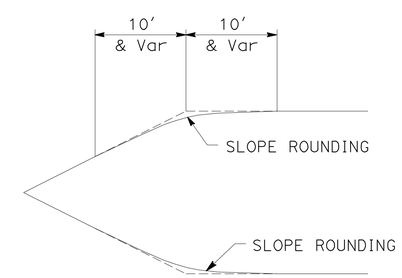
B — 0.15' COLD PLANE ASPHALT CONCRETE
0.15' HMA (TYPE A) OVERLAY





WB ROUTE 371
Sta "A" 19+70.00 TO 20+00.11

EB ROUTE 371
Sta "A" 19+71.16 TO 20+00.11



SLOPE ROUNDING DETAIL
(TYPICAL)

TYPICAL CROSS SECTIONS
NO SCALE

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10 | DATE PLOTTED => 24-MAR-2010 | TIME PLOTTED => 15:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	3	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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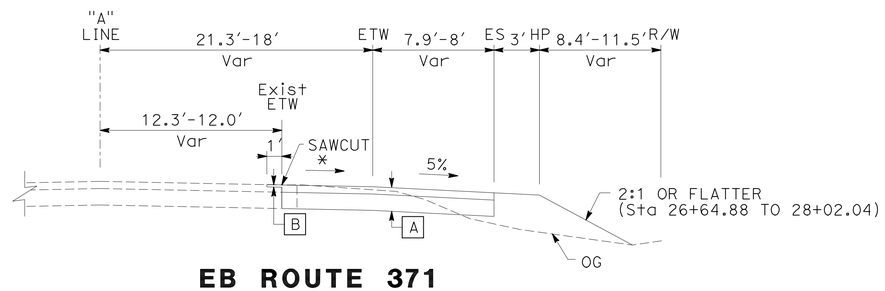
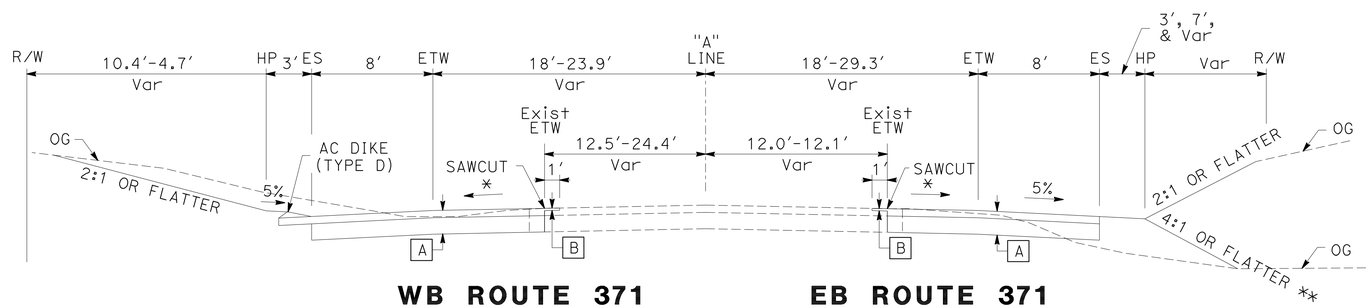


EB ROUTE 371

Sta "A" 26+82.38 TO 27+46.77

* 2% OR MATCH SUPERELEVATION



WB ROUTE 371

Sta "A" 25+26.48 TO 26+07.01

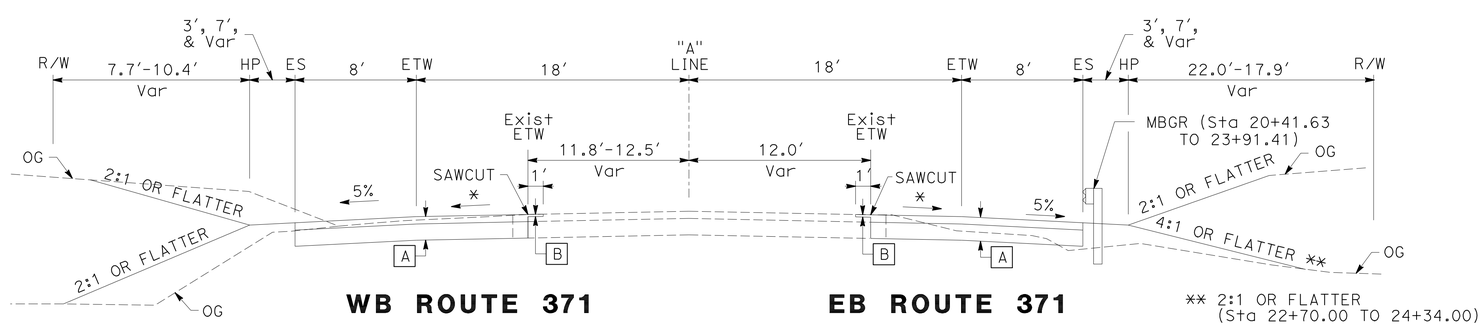
* 2% OR MATCH SUPERELEVATION

EB ROUTE 371

Sta "A" 24+27.52 TO 25+68.94

* 2% OR MATCH SUPERELEVATION

** 2:1 OR FLATTER (Sta 22+70.00 TO 24+34.00)



WB ROUTE 371

Sta "A" 23+60.11 TO 25+26.48

* 2% OR MATCH SUPERELEVATION

EB ROUTE 371

Sta "A" 23+60.11 TO 24+27.52

* 2% OR MATCH SUPERELEVATION

** 2:1 OR FLATTER (Sta 22+70.00 TO 24+34.00)

TYPICAL CROSS SECTIONS

NO SCALE

X-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: MARK GONZALEZ

CHECKED BY: KEEN POONG

REVISED BY

DATE REVISED

LAST REVISION 02-02-10

DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	4	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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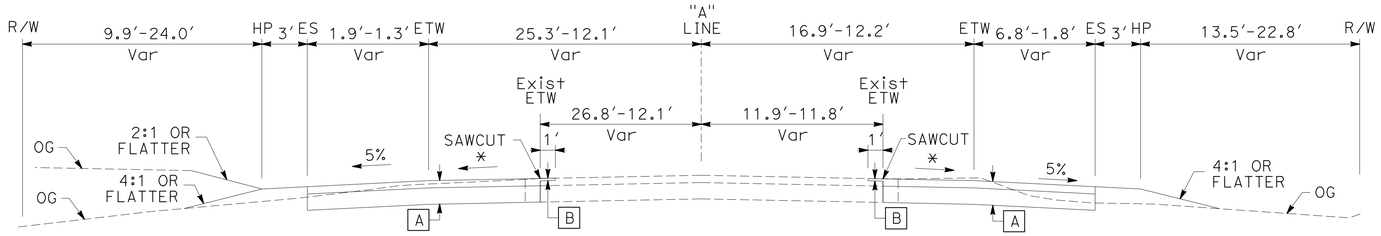


WB ROUTE 371

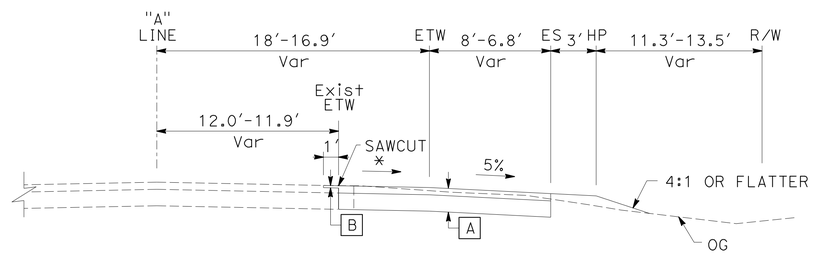
Sta "A" 30+02.58 TO 32+99.64

* 2% OR MATCH SUPERELEVATION

EB ROUTE 371

Sta "A" 30+02.58 TO 32+72.45

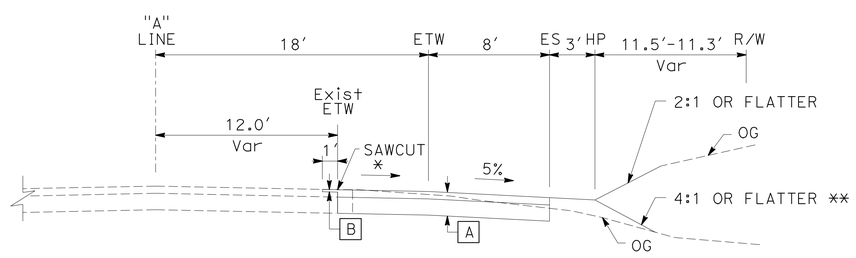
* 2% OR MATCH SUPERELEVATION



EB ROUTE 371

Sta "A" 29+39.64 TO 30+02.58

* 2% OR MATCH SUPERELEVATION



EB ROUTE 371

Sta "A" 27+46.77 TO 29+39.64

* 2% OR MATCH SUPERELEVATION

** 2:1 OR FLATTER
(Sta 26+64.88 TO 28+02.04)

TYPICAL CROSS SECTIONS

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10 | DATE PLOTTED => 24-MAR-2010 | TIME PLOTTED => 15:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	5	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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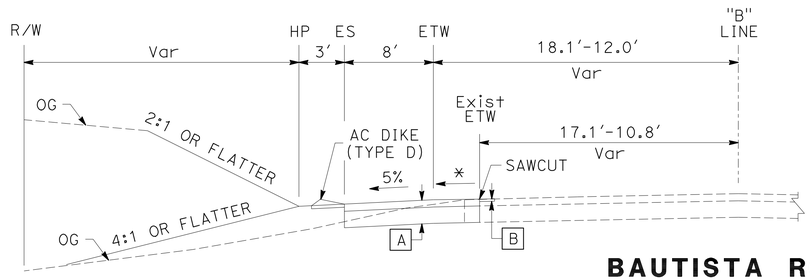
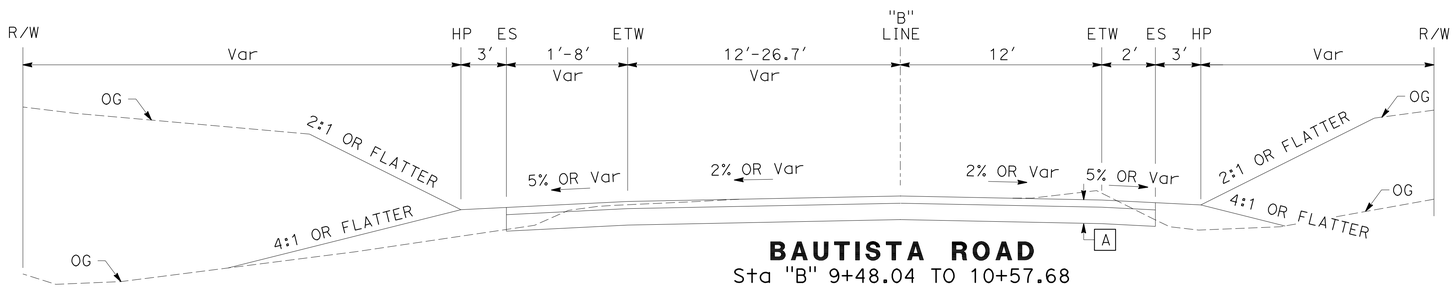


BAUTISTA ROAD
Sta "B" 11+80.65 TO 12+05.56
* 2% OR MATCH SUPERELEVATION



BAUTISTA ROAD
Sta "B" 9+48.04 TO 10+57.68

TYPICAL CROSS SECTIONS
NO SCALE

X-4

REVISED BY	DATE REVISED

MARK GONZALEZ — KEEN POONG
CALCULATED-DESIGNED BY — CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR — WILLIAM NASCIMENTO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:04

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	6	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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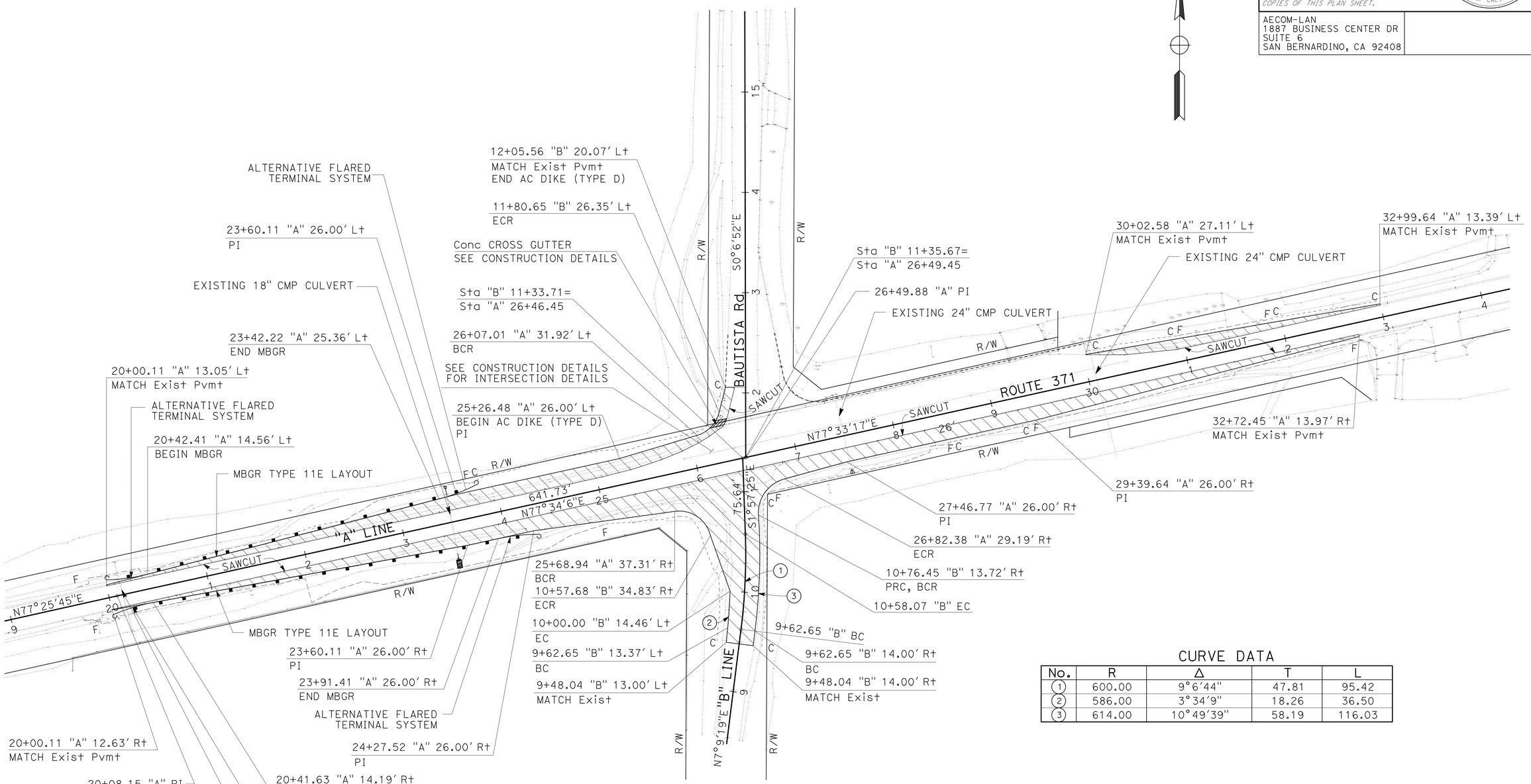
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND:

NEW PAVEMENT



CURVE DATA

No.	R	Δ	T	L
1	600.00	9°6'44"	47.81	95.42
2	586.00	3°34'9"	18.26	36.50
3	614.00	10°49'39"	58.19	116.03

LAYOUT

SCALE: 1" = 50'

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:05

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	7	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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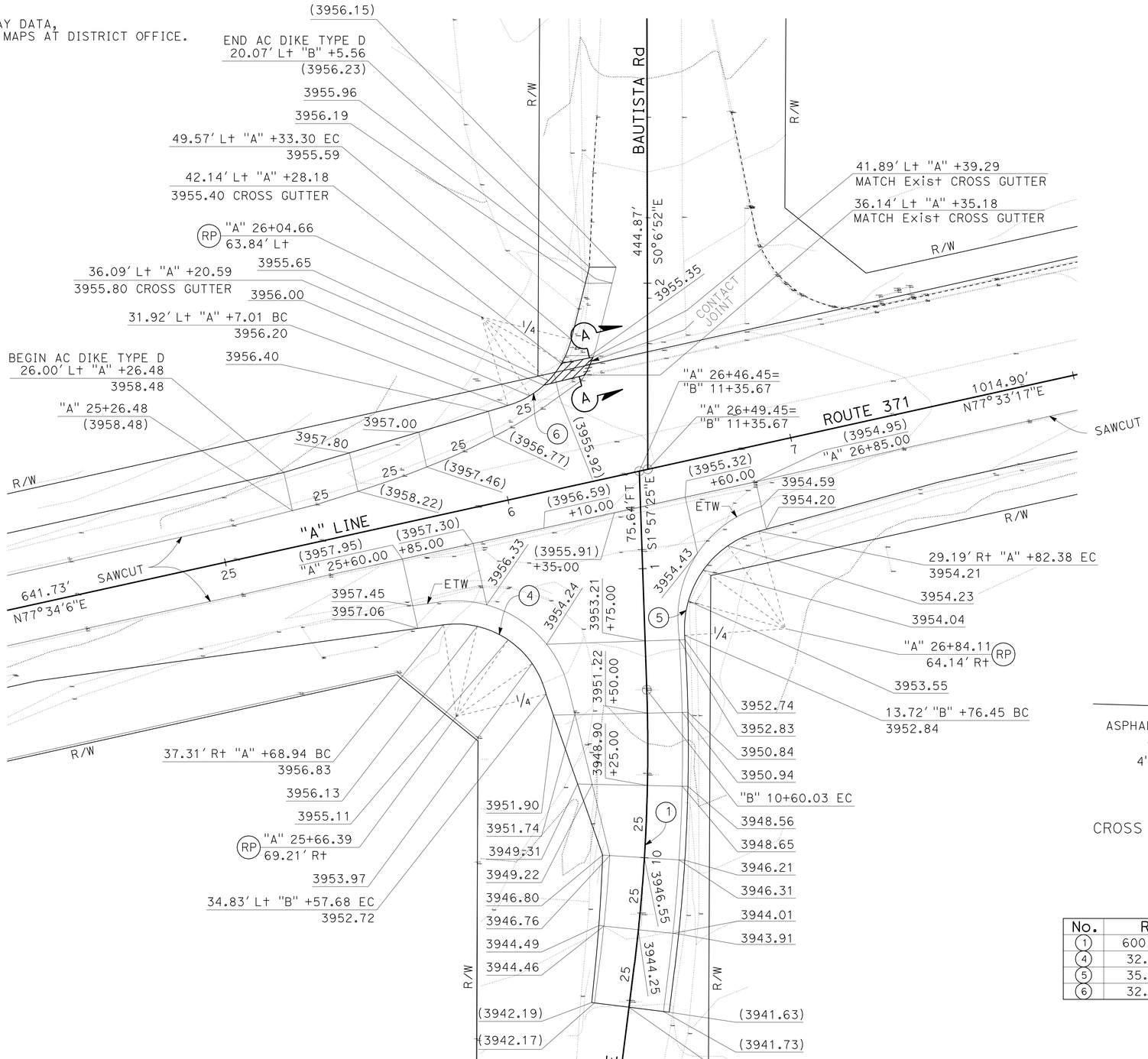
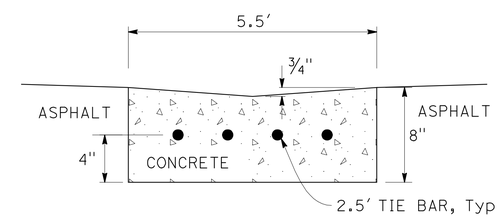
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.





CROSS GUTTER DETAIL AT CONTACT JOINT
SECTION A-A

CURVE DATA

No.	R	Δ	T	L
1	600.00	9°6'44"	47.81	95.42
4	32.00	83°59'48"	28.81	46.91
5	35.00	78°23'37"	28.54	47.89
6	32.00	59°18'31"	18.22	33.12

CONSTRUCTION DETAILS

SCALE: 1" = 20'

C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: MARK GONZALEZ

CHECKED BY: KEEN POONG

REVISED BY

DATE REVISED

LAST REVISION 02-02-10

DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:05

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	8	41

REGISTERED CIVIL ENGINEER — DATE: 12-29-09

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ROBERT WONG — No. C64734 — Exp. 06/30/11 — CIVIL — STATE OF CALIFORNIA

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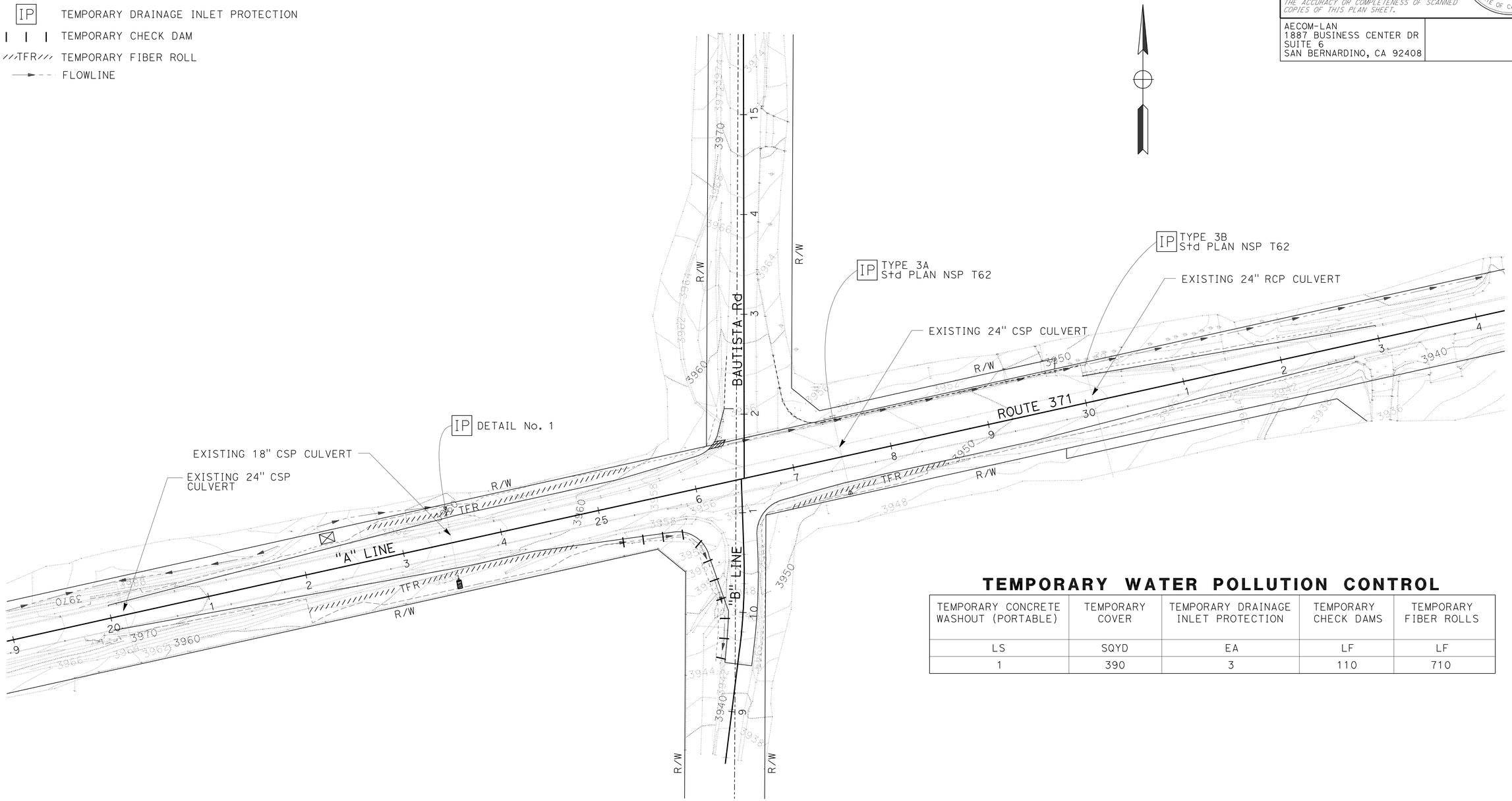
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTES:

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. LOCATION OF WATER POLLUTION CONTROL MEASURES ARE APPROXIMATE, ACTUAL LOCATION TO BE DETERMINED BY ENGINEER OF CONTRACTOR.

LEGEND:

- ⊠ TEMPORARY CONCRETE WASHOUT (PORTABLE)
- IP TEMPORARY DRAINAGE INLET PROTECTION
- | | | TEMPORARY CHECK DAM
- ///TFR/// TEMPORARY FIBER ROLL
- —►-- FLOWLINE



TEMPORARY WATER POLLUTION CONTROL

TEMPORARY CONCRETE WASHOUT (PORTABLE)	TEMPORARY COVER	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY CHECK DAMS	TEMPORARY FIBER ROLLS
LS	SQYD	EA	LF	LF
1	390	3	110	710

TEMPORARY WATER POLLUTION CONTROL PLAN

SCALE: 1" = 50'

WPC-1

THIS PLAN ACCURATE FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: XIAOXUE LI — CHECKED BY: HENG CHOW — REVISED BY — DATE REVISED

LAST REVISION 02-02-10 — DATE PLOTTED => 24-MAR-2010 — TIME PLOTTED => 15:05

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	9	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ROBERT WONG No. C64734 Exp. 06/30/11 CIVIL STATE OF CALIFORNIA

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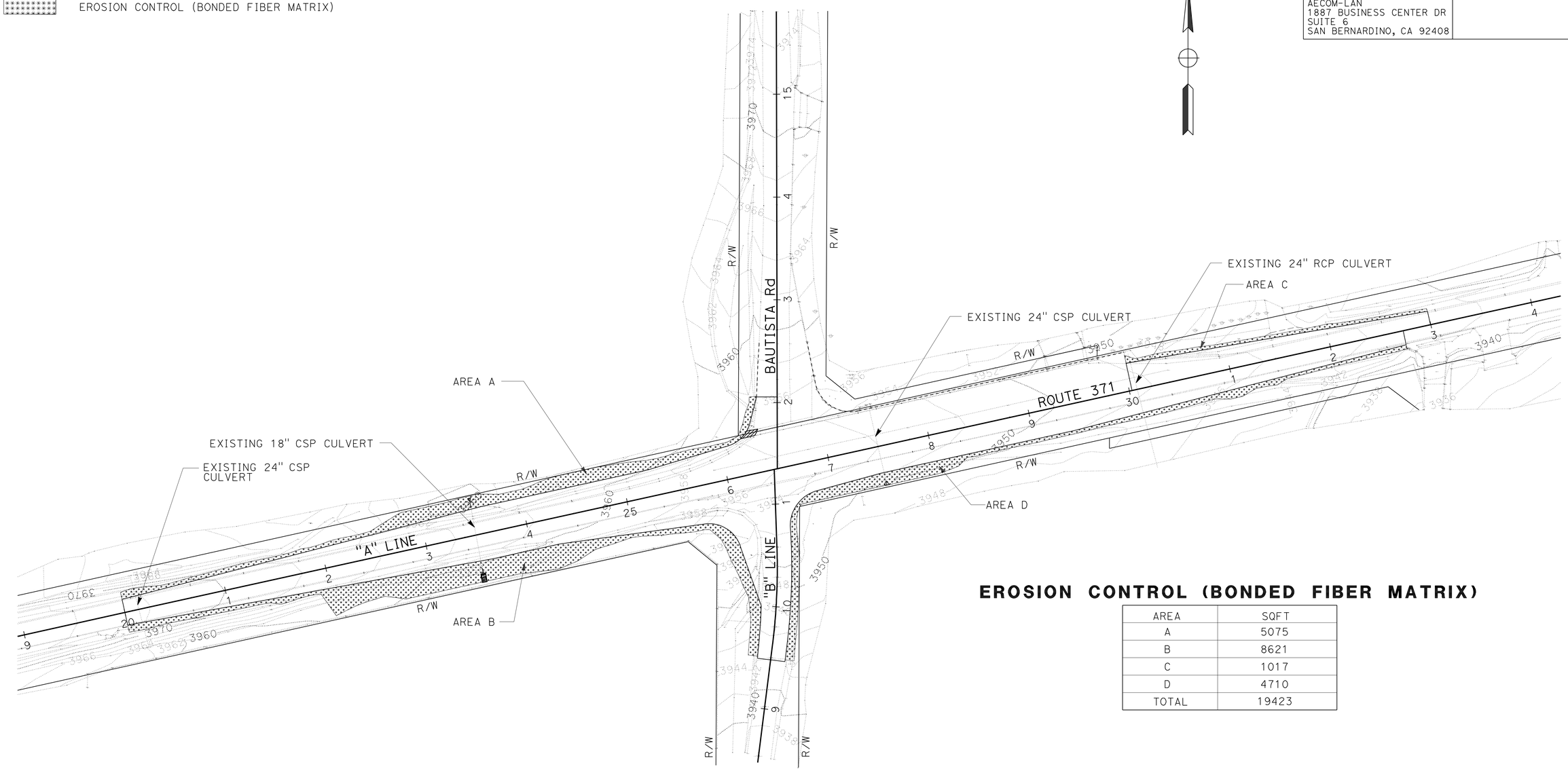
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTES:

1. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. LOCATION OF EROSION CONTROL WORK IS APPROXIMATE, ACTUAL LOCATION TO BE DETERMINED BY ENGINEER OF CONTRACTOR.

LEGEND:

EROSION CONTROL (BONDED FIBER MATRIX)



EROSION CONTROL (BONDED FIBER MATRIX)

AREA	SQFT
A	5075
B	8621
C	1017
D	4710
TOTAL	19423

EROSION CONTROL PLAN

SCALE: 1" = 50'

EC-1

THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: XIAOXUE LI

CHECKED BY: HENG CHOW

REVISED BY

DATE REVISED

LAST REVISION 02-02-10 | DATE PLOTTED => 24-MAR-2010 | TIME PLOTTED => 15:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	10	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MARK GONZALEZ
No. 73897
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

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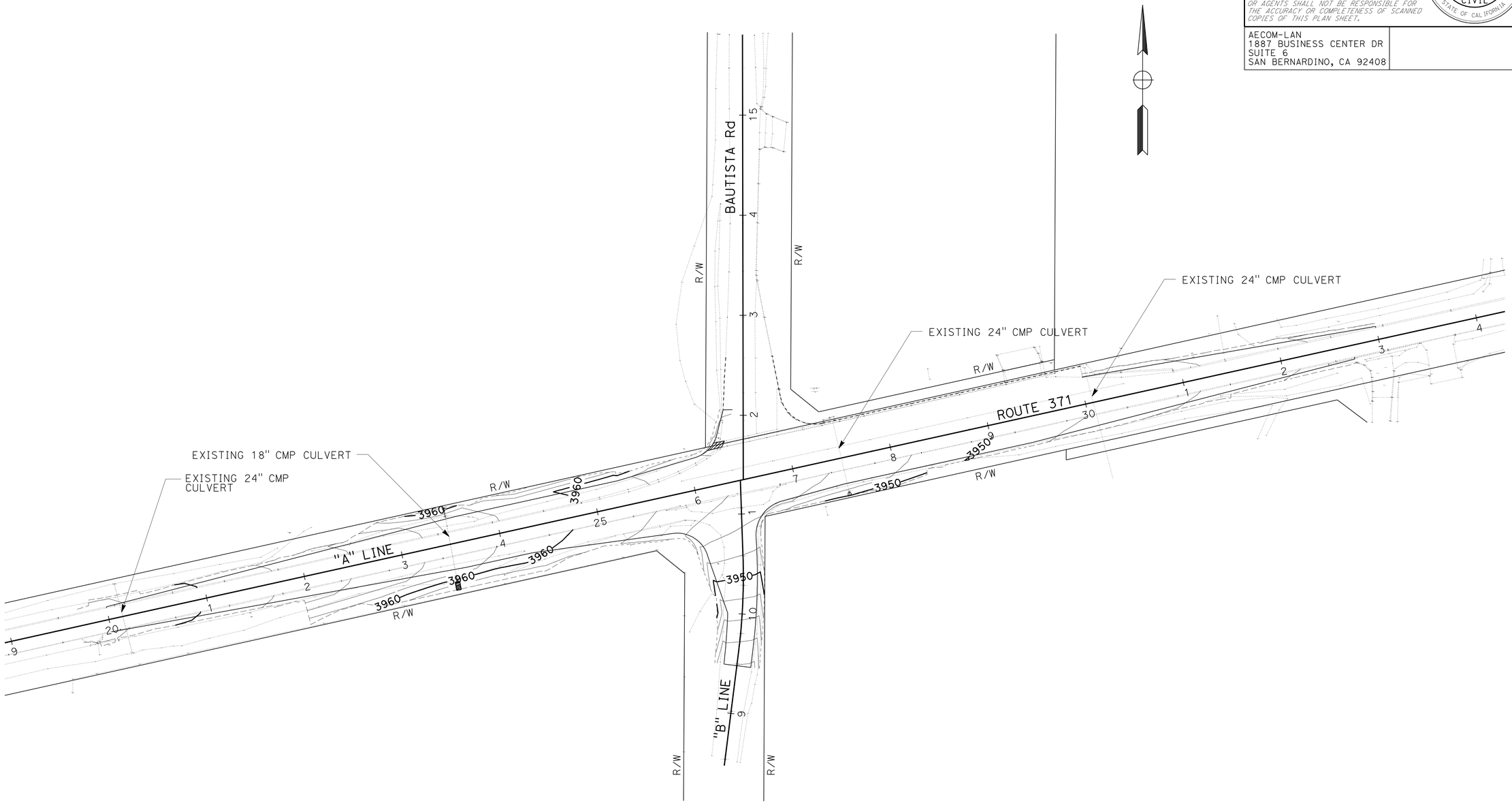
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.



CONTOUR GRADING

SCALE: 1" = 50'

G-1

THIS PLAN ACCURATE FOR CONTOUR GRADING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	11	41

REGISTERED CIVIL ENGINEER — DATE 12-29-09

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ROBERT WONG — No. C64734 — Exp. 06/30/11 — CIVIL — STATE OF CALIFORNIA

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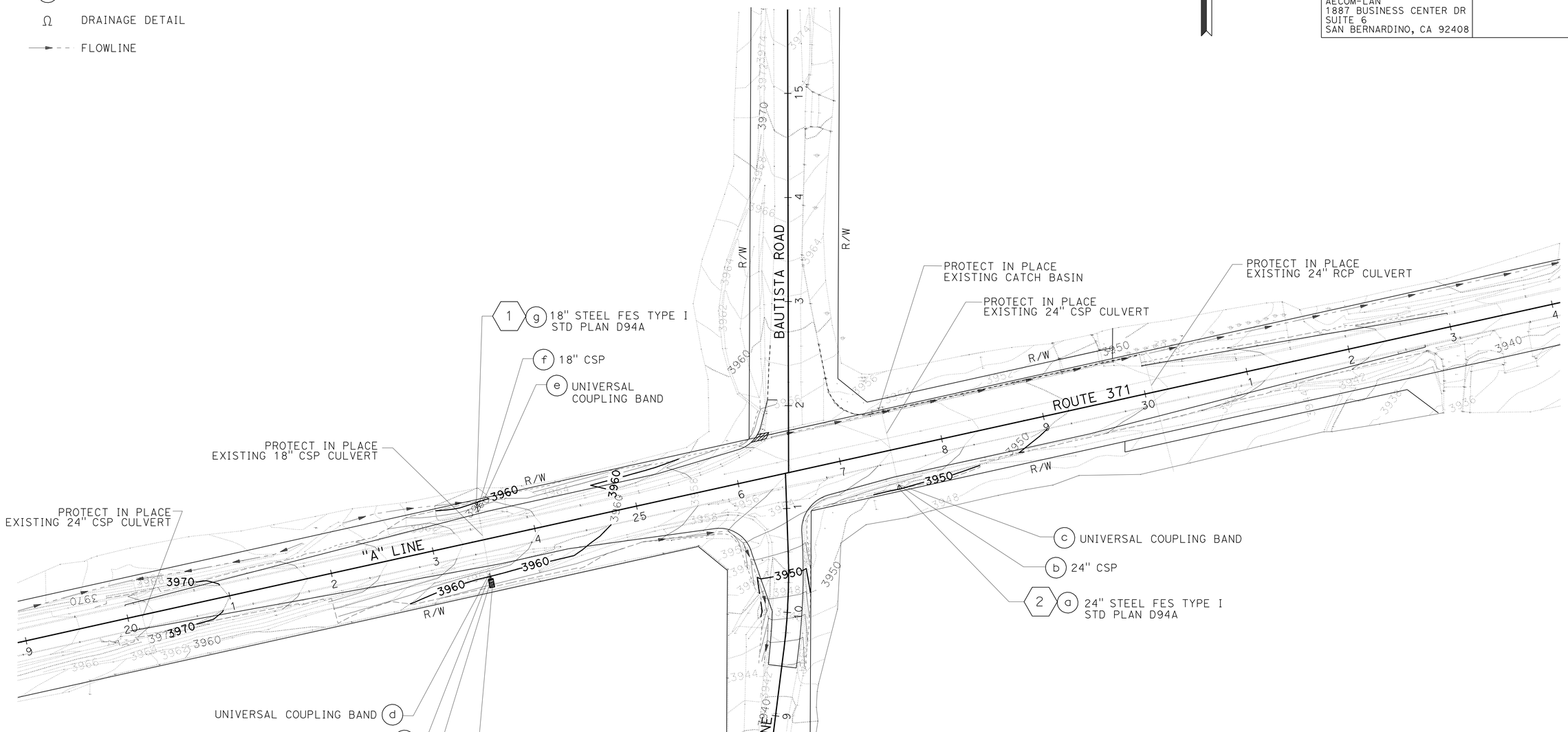
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

FOR COMPLETE RIGHT OF WAY DATA,
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND:

- (X) DRAINAGE SYSTEM No.
- (×) DRAINAGE UNIT No.
- Ω DRAINAGE DETAIL
- FLOWLINE



1 2

DRAINAGE PLAN

SCALE: 1" = 50'

D-1

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: XIAOXUE LI
CHECKED BY: HENG CHOW
REVISED BY
DATE REVISED

LAST REVISION 02-02-10 | DATE PLOTTED => 24-MAR-2010 | TIME PLOTTED => 15:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	12	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ROBERT WONG No. C64734 Exp. 06/30/11 CIVIL STATE OF CALIFORNIA

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LAN ENGINEERING CORP
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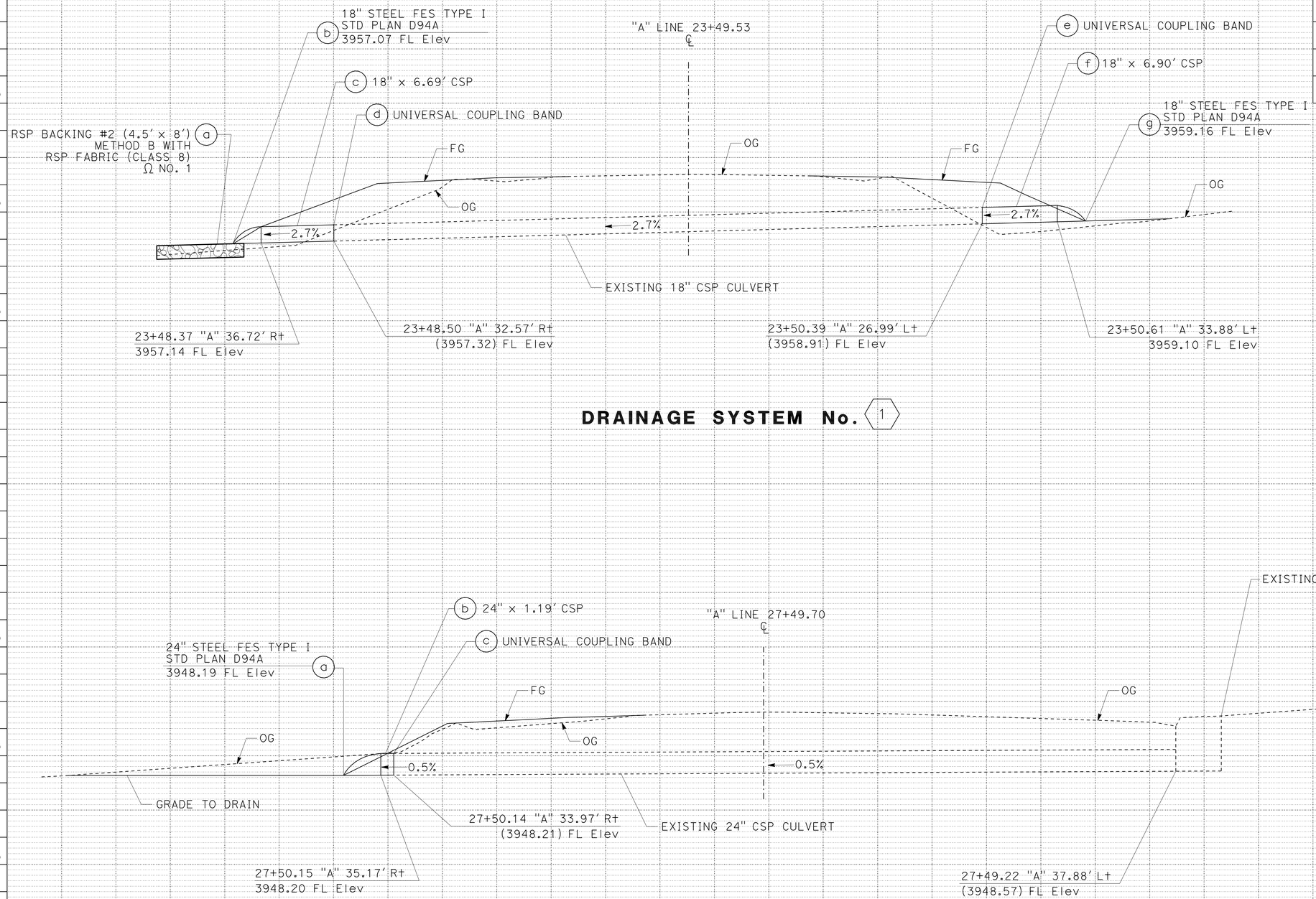
SUITE 6
SAN BERNARDINO, CA 92408



1 2

DRAINAGE PROFILES

SCALE: Horiz 1" = 5'
Vert 1" = 5'

DP-1

REVISED BY	DATE REVISED
PHONG MAI	HENG CHOW

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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08	Riv	371	69.7/69.9	13	41

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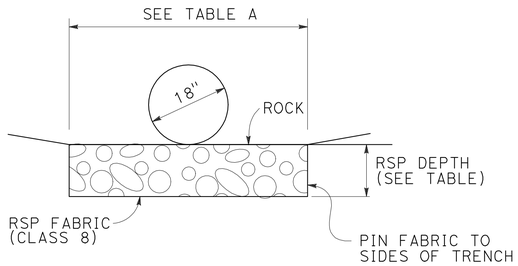
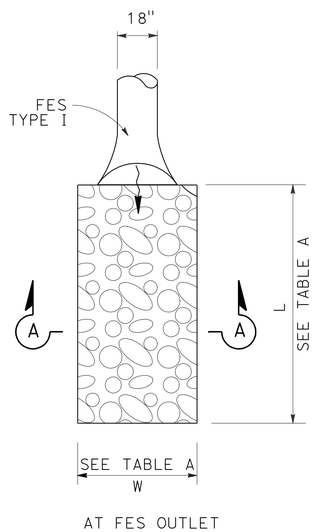


SECTION A-A



AT FES OUTLET

PLAN

NOTE:

RSP FABRIC SHALL NOT PROTUDE ABOVE GROUND. TRIM FABRIC BELOW GROUND TO NO MORE THAN TWO INCHES BELOW GROUND SURFACE.

TABLE A

RSP SUMMARY				
DRAINAGE SYSTEM No. /ELEMENT	W	L	SIZE	Min RSP DEPTH
1a	4.5′	8′	BACKING #2	1.25′

ROCK SLOPE PROTECTION DETAILS
DRAINAGE DETAIL No.1

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DATE REVISED

DRAINAGE DETAILS
NO SCALE
DD-1

LAST REVISION 02-02-10
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	14	41

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DRAINAGE QUANTITIES

DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○	18" CORRUGATED STEEL PIPE (0.079in, ANNULAR) LF	24" CORRUGATED STEEL PIPE (0.079in, ANNULAR) LF	18" STEEL FLARED END SECTION EA	24" STEEL FLARED END SECTION EA	UNIVERSAL COUPLING BAND (N) EA	RSP RSP FABRIC (CLASS 8) SQYD	RSP BACKING #2, METHOD B CY	PIPE JOINT CLASSIFICATION	DESCRIPTION	STATION	DRAINAGE PLAN SHEET No.	DRAINAGE SYSTEM No. ⬡	DRAINAGE UNIT ○
		a						7.5	1.7		RSP BACKING #2, METHOD B WITH RSP FABRIC (CLASS 8)	"A" LINE 23+49.53			a
		b			1						18" STEEL FLARED END SECTION TYPE I				b
		c	6.69								18" CORRUGATED STEEL PIPE				c
D-1	1	d					1			S	UNIVERSAL COUPLING BAND		D-1	1	d
		e					1			S	UNIVERSAL COUPLING BAND				e
		f	6.90								18" CORRUGATED STEEL PIPE				f
		g			1						18" STEEL FLARED END SECTION TYPE I				g
		a				1					24" STEEL FLARED END SECTION TYPE I	"A" LINE 27+49.70			a
D-1	2	b		1.19							24" CORRUGATED STEEL PIPE		D-1	2	b
		c					1			S	UNIVERSAL COUPLING BAND				c
TOTAL			13.59	1.19	2	1	3	7.5	1.7						

(N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY
S - STANDARD JOINT

CALCULATED-DESIGNED BY PHONG MAI
CHECKED BY HENG CHOW
REVISED BY
DATE REVISED

CONSULTANT FUNCTIONAL SUPERVISOR WILLIAM NASCIMENTO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DRAINAGE QUANTITIES

DQ-1

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:07

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	15	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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SUITE 6
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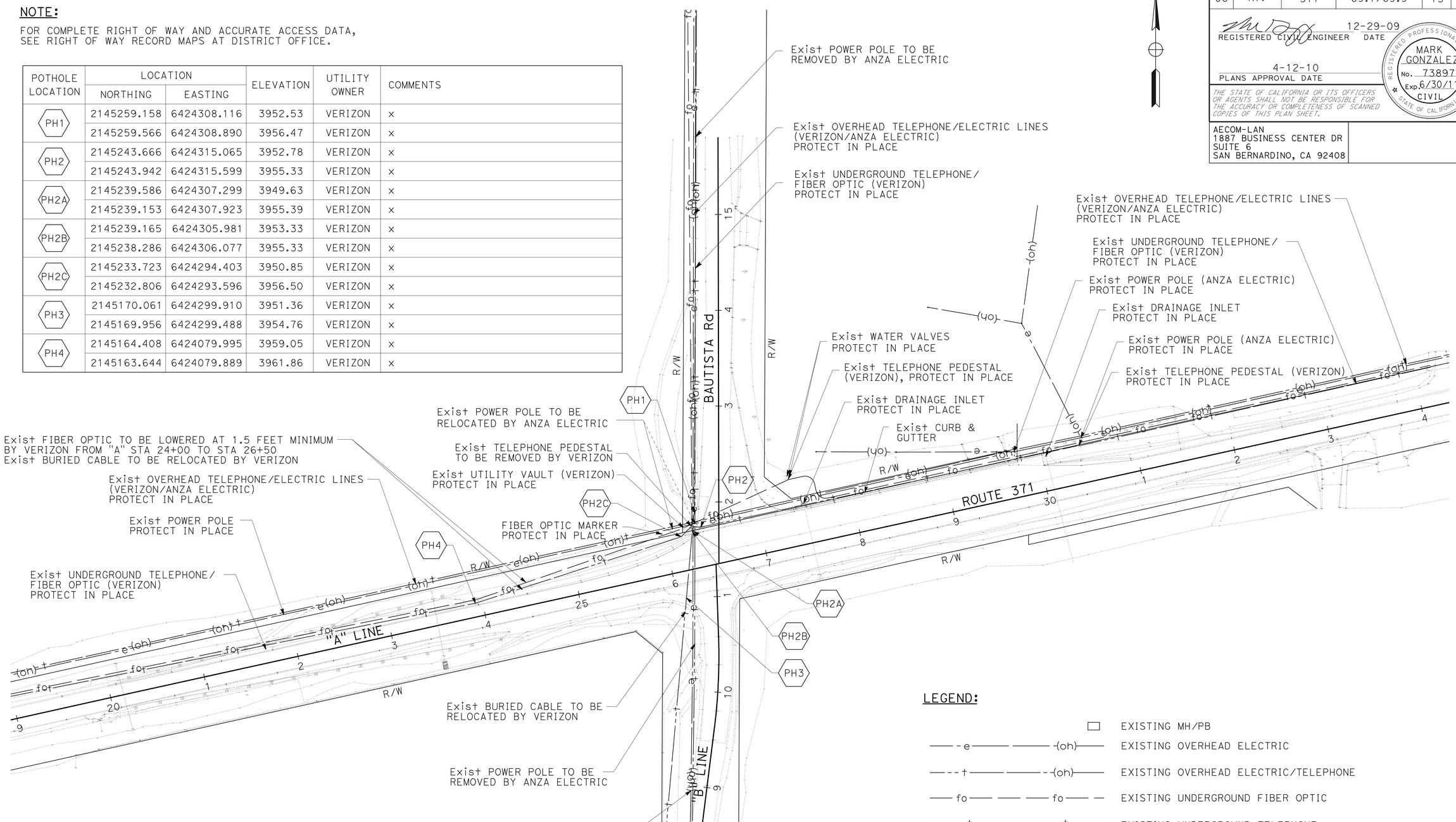
NOTE:

FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

POTHOLE LOCATION	LOCATION		ELEVATION	UTILITY OWNER	COMMENTS
	NORTHING	EASTING			
PH1	2145259.158	6424308.116	3952.53	VERIZON	x
	2145259.566	6424308.890	3956.47	VERIZON	x
PH2	2145243.666	6424315.065	3952.78	VERIZON	x
	2145243.942	6424315.599	3955.33	VERIZON	x
PH2A	2145239.586	6424307.299	3949.63	VERIZON	x
	2145239.153	6424307.923	3955.39	VERIZON	x
PH2B	2145239.165	6424305.981	3953.33	VERIZON	x
	2145238.286	6424306.077	3955.33	VERIZON	x
PH2C	2145233.723	6424294.403	3950.85	VERIZON	x
	2145232.806	6424293.596	3956.50	VERIZON	x
PH3	2145170.061	6424299.910	3951.36	VERIZON	x
	2145169.956	6424299.488	3954.76	VERIZON	x
PH4	2145164.408	6424079.995	3959.05	VERIZON	x
	2145163.644	6424079.889	3961.86	VERIZON	x



LEGEND:

□	EXISTING MH/PB
—— e —— —— (oh) ——	EXISTING OVERHEAD ELECTRIC
—— t —— —— (oh) ——	EXISTING OVERHEAD ELECTRIC/TELEPHONE
—— fo —— —— fo ——	EXISTING UNDERGROUND FIBER OPTIC
—— t —— —— t ——	EXISTING UNDERGROUND TELEPHONE

UTILITY PLAN

SCALE: 1" = 50'

U-1

THIS PLAN ACCURATE FOR UTILITY INFORMATION ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: PHONG MAI
CHECKED BY: HENG CHOW
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 24-MAR-2010
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	16	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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SUITE 6
SAN BERNARDINO, CA 92408

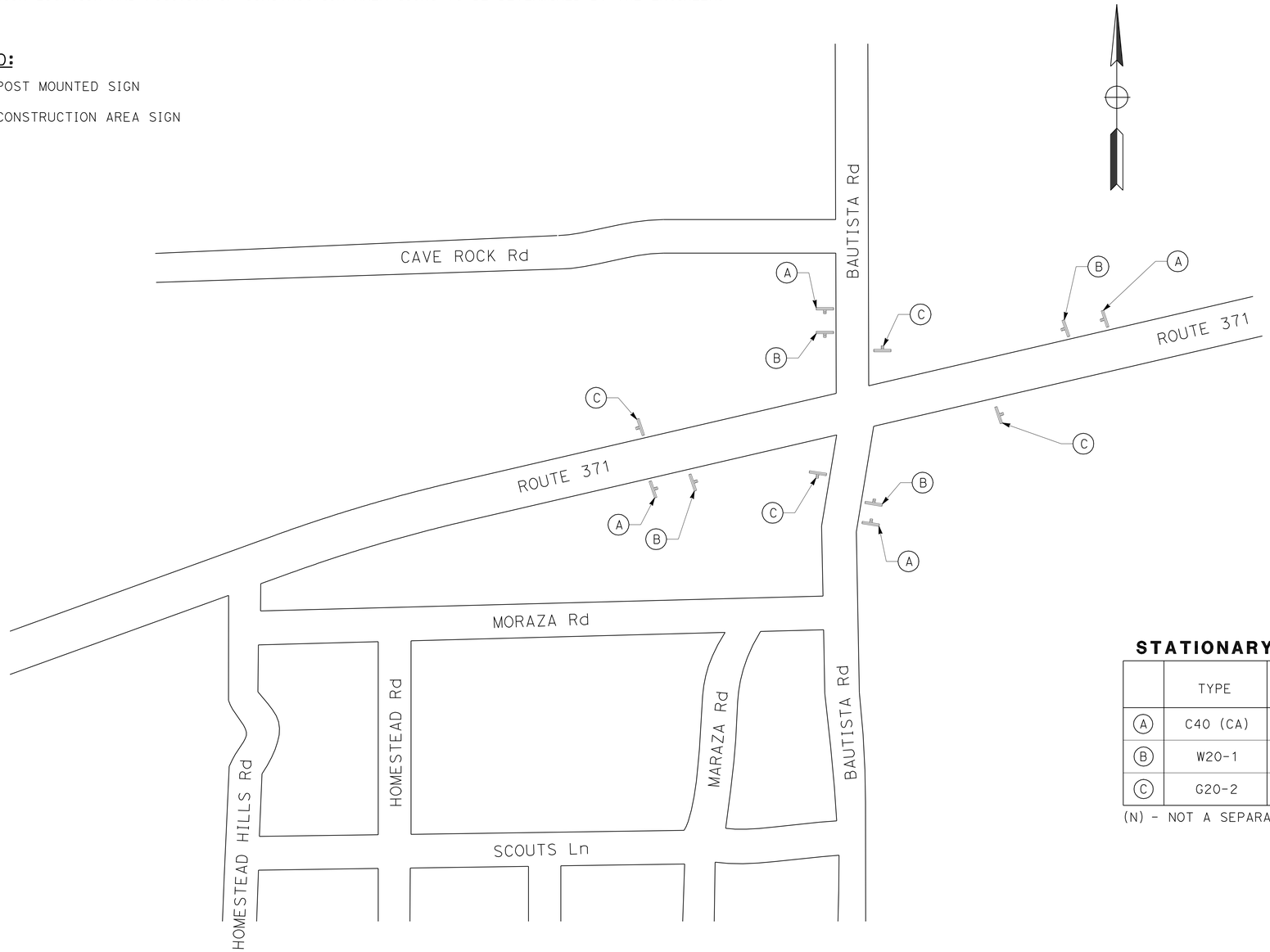
NOTE:

EXACT SIGN LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.

LEGEND:

POST MOUNTED SIGN

(X) CONSTRUCTION AREA SIGN



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

	TYPE	PANEL SIZE (INCH)	SIGN MESSAGE	No.OF POST AND SIZE (INCH)	No. OF SIGNS (N)
(A)	C40 (CA)	72" X 36"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2 - 6" x 6"	4
(B)	W20-1	48" X 48"	ROAD WORK AHEAD	1 - 6" x 6"	4
(C)	G20-2	36" X 18"	END ROAD WORK	1 - 4" x 4"	4

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

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: YOUICHI NAKAGAWA

CHECKED BY: KEEN POONG

REVISED BY

DATE REVISED

LAST REVISION 02-02-10 | DATE PLOTTED => 24-MAR-2010 | TIME PLOTTED => 15:07

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REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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SUITE 6
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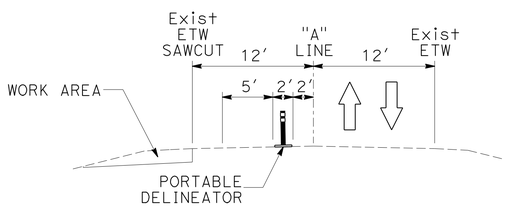
GENERAL NOTES (ALL STAGES):

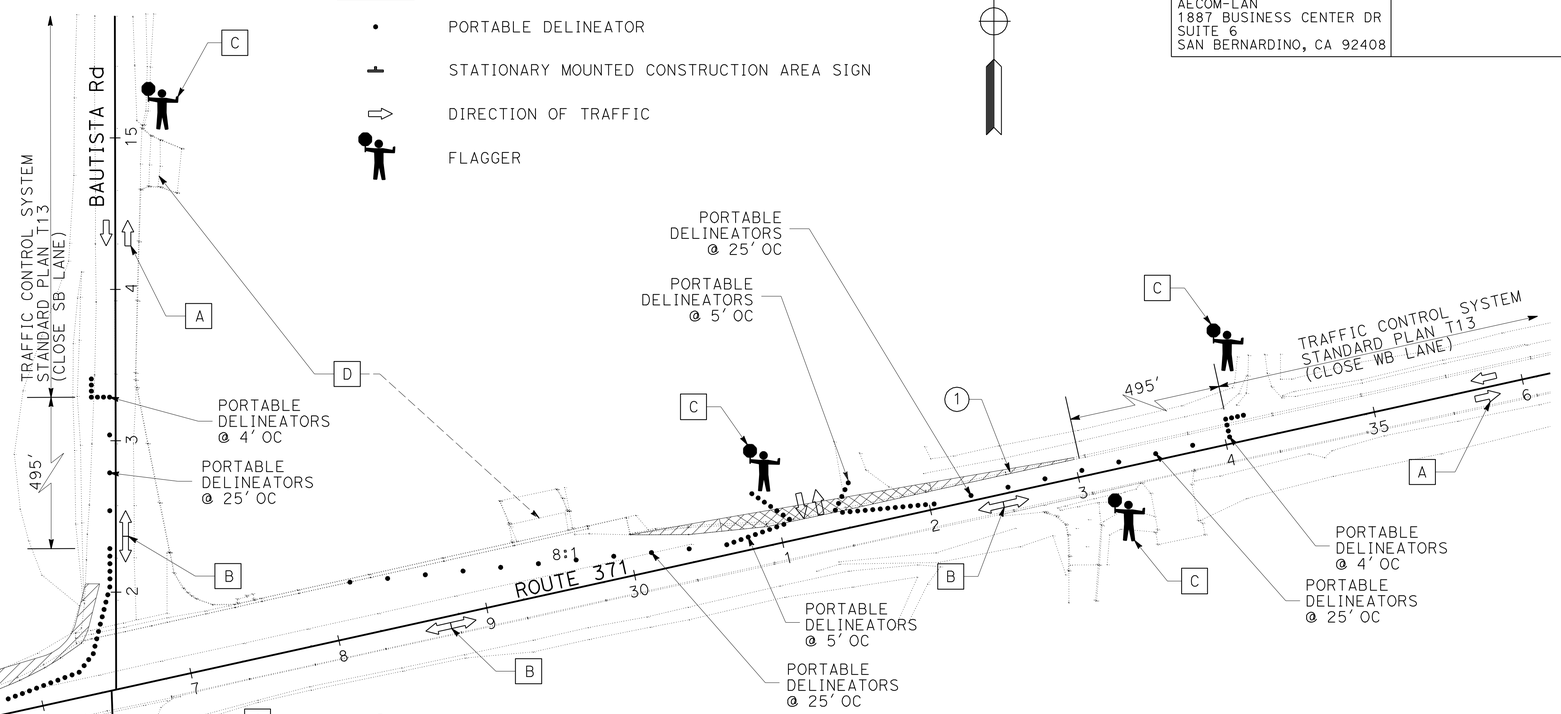
1. ALL CONFLICTING SIGNING, STRIPING, REFLECTOR AND PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO STARTING WORK ON EACH STAGE.
2. ALL STAGE CONSTRUCTION STRIPING AND PAVEMENT MARKING SHALL BE PAINTED (2 COATS), UNLESS OTHERWISE NOTED IN PLAN.
3. CONTRACTOR SHALL REFER TO SPECIAL PROVISIONS REGARDING THE USE OF PORTABLE CHANGEABLE MESSAGE SIGNS.
4. THE DESCRIPTIVE TERM - 'JOIN' OR 'MATCH', WHEN USED ON THE PLANS, REFERS TO THE JOINING OF STAGE CONSTRUCTION STRIPING WITH EXISTING, ULTIMATE OR PREVIOUS STAGE CONSTRUCTION DELINEATION UNLESS OTHERWISE NOTED.
5. CONTRACTOR TO TREAT ANY EXCAVATION DEEPER THAN FIVE FEET, WHERE PEOPLE ARE EXPECTED TO ENTER, AS A CONFINED SPACE PER STATE STANDARD SPECIFICATIONS.
6. EXACT LOCATION FOR CONSTRUCTION AREA SIGNS TO BE APPROVED BY ENGINEER.

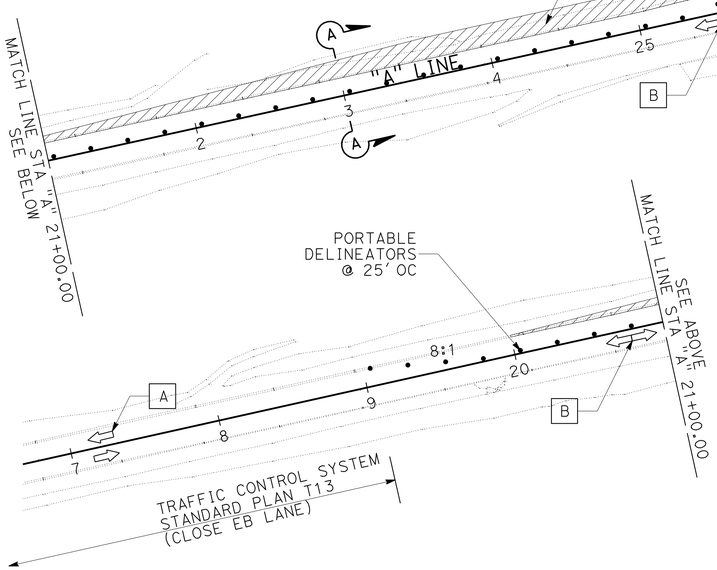
LEGEND

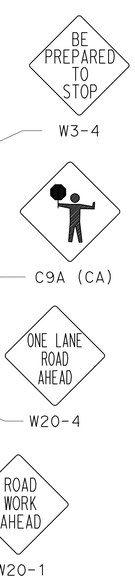
- CONSTRUCT THIS STAGE
- CONSTRUCT WHILE KEEPING ACCESS OPEN
- NO CONSTRUCTION DURING NIGHT
- CONSTRUCTED IN PREVIOUS STAGE
- PORTABLE DELINEATOR
- STATIONARY MOUNTED CONSTRUCTION AREA SIGN
- DIRECTION OF TRAFFIC
- FLAGGER



SECTION A-A
NO SCALE







TRAFFIC HANDLING NOTES:

- [A] TRAFFIC REMAINS IN THE EXISTING CONFIGURATION.
- [B] ONE LANE, TWO WAY TRAFFIC CONTROL AS DIRECTED BY FLAGGERS.
- [C] FLAGGERS SHOULD STAND IN A CONSPICUOUS PLACE, BE VISIBLE TO APPROACHING TRAFFIC AS WELL AS APPROACHING VEHICLES AFTER THE FIRST VEHICLE HAS STOPPED. DURING THE HOURS OF DARKNESS, THE FLAGGING-STATION AND FLAGGER SHALL BE ILLUMINATED AND CLEARLY VISIBLE TO APPROACHING TRAFFIC. THE ILLUMINATION FOOTPRINT OF THE LIGHTING ON THE GROUND SHALL BE AT LEAST, 20' IN DIAMETER. PLACE A MINIMUM OF FOUR CONES AT 50' INTERVALS IN ADVANCE OF FLAGGER STATION.
- [D] DRIVEWAY ALONG ROUTE 371 TO BE CLOSED. TRAFFIC TO USE DRIVEWAY ALONG BAUTISTA ROAD.

CONSTRUCTION NOTES:

(1) SAWCUT AND CONSTRUCT LANE WIDENING

STATE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 1 DAYTIME)
SCALE: 1" = 50'

SC-1

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	18	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

PLANS APPROVAL DATE 4-12-10

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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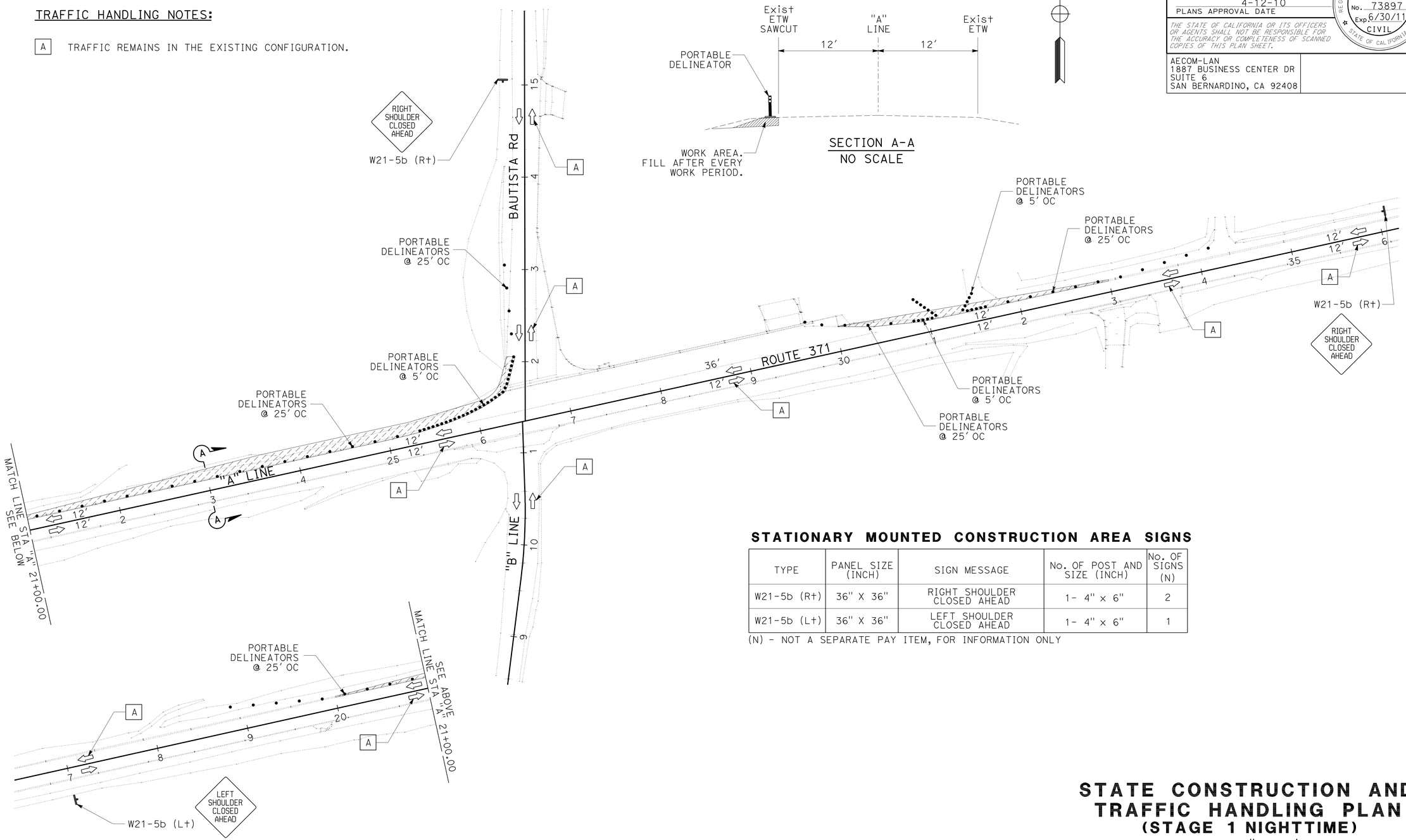
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTES

FOR SITE CONFIGURATION INFORMATION ONLY (NO WORK TO BE PERFORMED DURING NIGHT TIME STAGE).
CONTRACTOR SHALL CONFIGURE SITE AS SHOWN AT THE COMPLETION OF EACH DAY TIME OPERATION.

TRAFFIC HANDLING NOTES:

A TRAFFIC REMAINS IN THE EXISTING CONFIGURATION.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

TYPE	PANEL SIZE (INCH)	SIGN MESSAGE	No. OF POST AND SIZE (INCH)	No. OF SIGNS (N)
W21-5b (Rt)	36" X 36"	RIGHT SHOULDER CLOSED AHEAD	1- 4" x 6"	2
W21-5b (Lt)	36" X 36"	LEFT SHOULDER CLOSED AHEAD	1- 4" x 6"	1

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

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY

STATE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 1 NIGHTTIME)

SCALE: 1" = 50'

SC-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
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DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:08

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	19	41

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4-12-10
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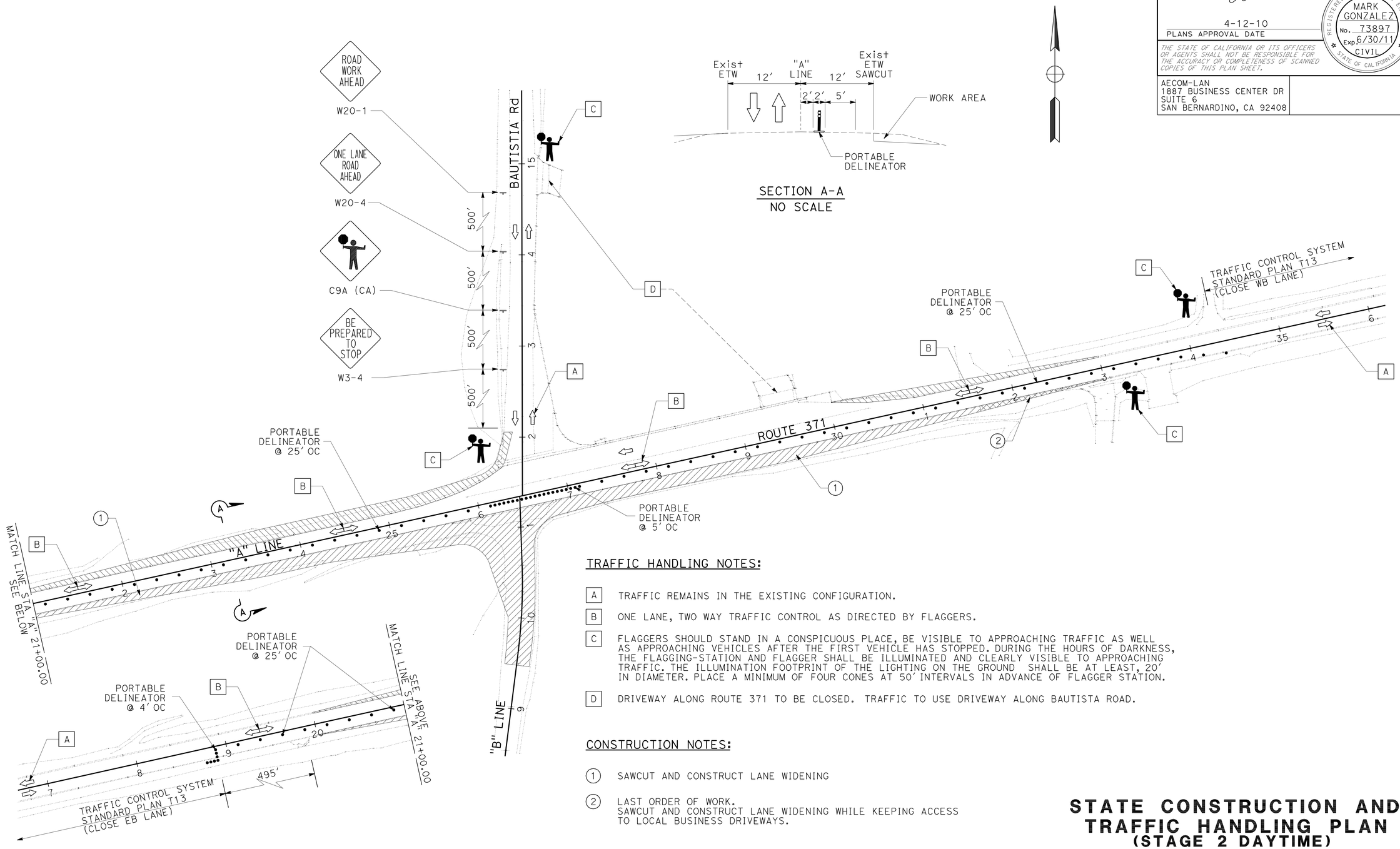

TRAFFIC HANDLING NOTES:

A TRAFFIC REMAINS IN THE EXISTING CONFIGURATION.

B ONE LANE, TWO WAY TRAFFIC CONTROL AS DIRECTED BY FLAGGERS.

C FLAGGERS SHOULD STAND IN A CONSPICUOUS PLACE, BE VISIBLE TO APPROACHING TRAFFIC AS WELL AS APPROACHING VEHICLES AFTER THE FIRST VEHICLE HAS STOPPED. DURING THE HOURS OF DARKNESS, THE FLAGGING-STATION AND FLAGGER SHALL BE ILLUMINATED AND CLEARLY VISIBLE TO APPROACHING TRAFFIC. THE ILLUMINATION FOOTPRINT OF THE LIGHTING ON THE GROUND SHALL BE AT LEAST, 20' IN DIAMETER. PLACE A MINIMUM OF FOUR CONES AT 50' INTERVALS IN ADVANCE OF FLAGGER STATION.

D DRIVEWAY ALONG ROUTE 371 TO BE CLOSED. TRAFFIC TO USE DRIVEWAY ALONG BAUTISTA ROAD.

CONSTRUCTION NOTES:

1 SAWCUT AND CONSTRUCT LANE WIDENING

2 LAST ORDER OF WORK.
SAWCUT AND CONSTRUCT LANE WIDENING WHILE KEEPING ACCESS TO LOCAL BUSINESS DRIVEWAYS.

STATE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2 DAYTIME)

SCALE: 1" = 50'

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY

SC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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REVISED BY
DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	20	41

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4-12-10
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NOTES

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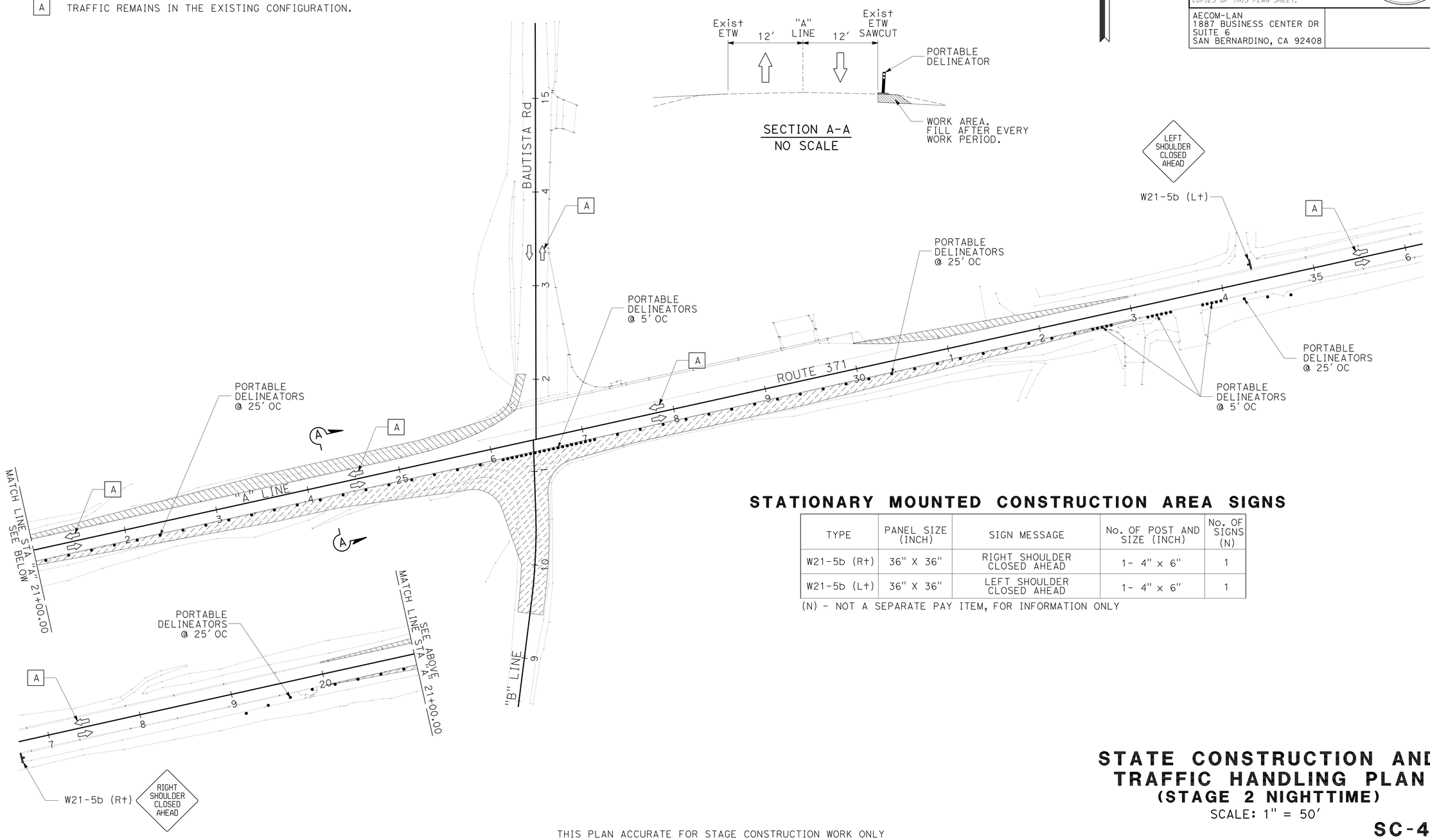
CONTRACTOR SHALL CONFIGURE SITE AS SHOWN AT THE COMPLETION OF EACH DAY TIME OPERATION.

TRAFFIC HANDLING NOTES:

A TRAFFIC REMAINS IN THE EXISTING CONFIGURATION.



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

TYPE	PANEL SIZE (INCH)	SIGN MESSAGE	No. OF POST AND SIZE (INCH)	No. OF SIGNS (N)
W21-5b (Rt)	36" X 36"	RIGHT SHOULDER CLOSED AHEAD	1- 4" x 6"	1
W21-5b (Lt)	36" X 36"	LEFT SHOULDER CLOSED AHEAD	1- 4" x 6"	1

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

STATE CONSTRUCTION AND TRAFFIC HANDLING PLAN
(STAGE 2 NIGHTTIME)

SCALE: 1" = 50'

SC-4

THIS PLAN ACCURATE FOR STAGE CONSTRUCTION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	21	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MARK GONZALEZ
No. 73897
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

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SUITE 6
SAN BERNARDINO, CA 92408

PORTABLE DELINEATORS

STAGE	PLAN SHEET No.	PORTABLE DELINEATORS
		EA
STAGE 1, DAYTIME	SC-1	157
STAGE 1, NIGHTTIME	SC-2	96*
STAGE 2, DAYTIME	SC-3	102*
STAGE 2, NIGHTTIME	SC-4	93*
	TOTAL	157

* - THIS QUANTITY IS NOT INCLUDED IN THE TOTAL (BEING REUSED).

STAGE CONSTRUCTION AND TRAFFIC HANDLING QUANTITIES

SCQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	22	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 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.

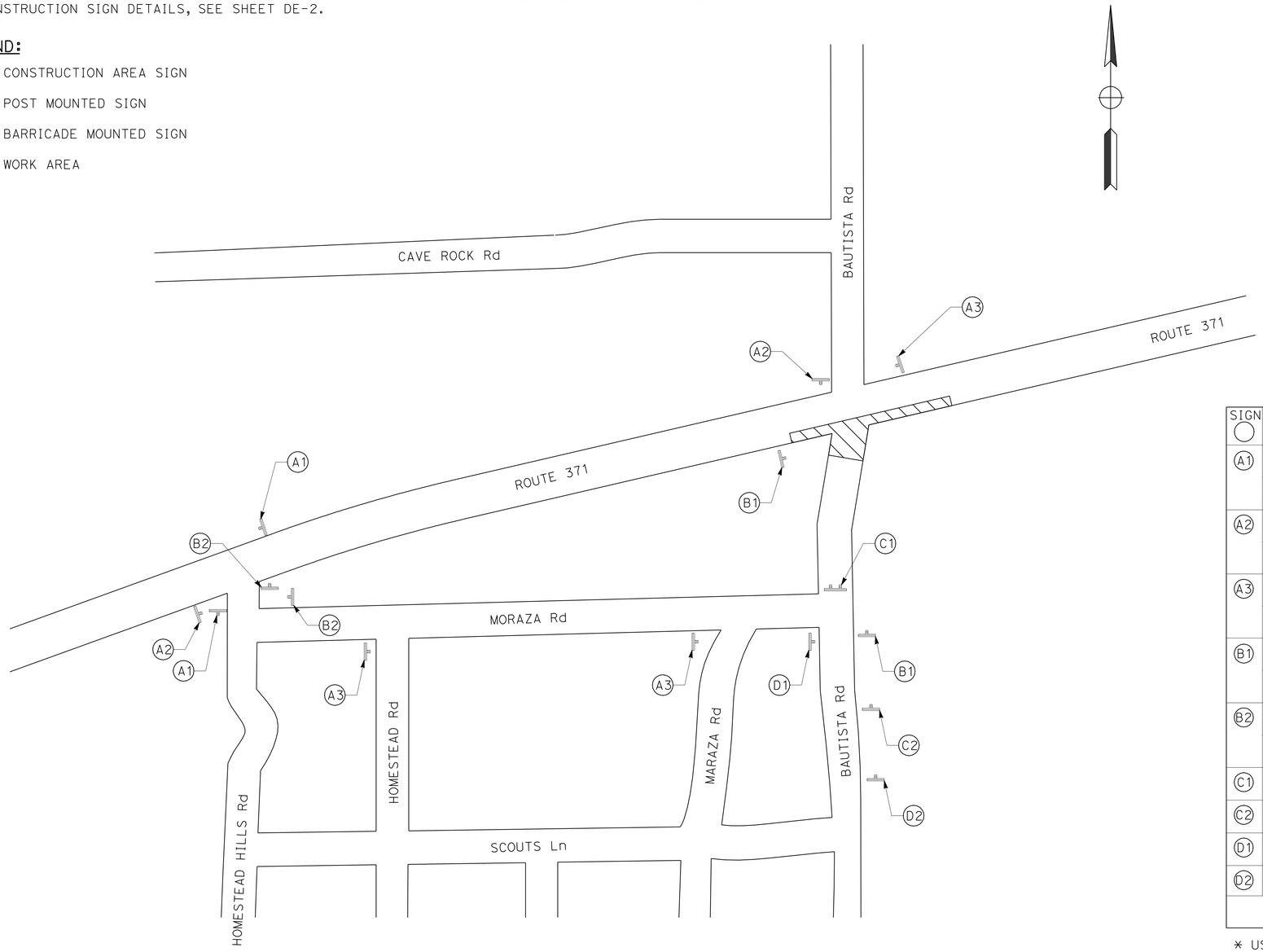
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

EXACT SIGN LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS TO BE DETERMINED BY THE ENGINEER.
FOR CONSTRUCTION SIGN DETAILS, SEE SHEET DE-2.

LEGEND:

- (XX) CONSTRUCTION AREA SIGN
- POST MOUNTED SIGN
- BARRICADE MOUNTED SIGN
- WORK AREA



STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN	TYPE	PANEL SIZE	SIGN MESSAGE	No.OF POST AND SIZE (INCH)	No.OF SIGNS
A1	D3-1*	36" X 12"	BAUTISTA Rd SB	1-3.5" X 3.5"	2
	M4-10(LT)	48" X 18"	DETOUR		2
A2	D3-1*	36" X 12"	BAUTISTA Rd SB	1-3.5" X 3.5"	2
	M4-10(RT)	48" X 18"	DETOUR		2
A3	D3-1*	36" X 12"	BAUTISTA Rd SB	1-3.5" X 3.5"	3
	SC3(CA)	48" X 18"	DETOUR		3
B1	D3-1*	36" X 12"	BAUTISTA Rd NB	1-3.5" X 3.5"	2
	M4-10(LT)	48" X 18"	DETOUR		2
B2	D3-1*	36" X 12"	BAUTISTA Rd NB	1-3.5" X 3.5"	2
	M4-10(RT)	48" X 18"	DETOUR		2
C1	R11-4	60" X 30"	ROAD CLOSED TO THRU TRAFFIC	2-TYPE III BARRICADES	2
C2	W20 - 3	48" X 48"	ROAD CLOSED AHEAD	1-6" X 6"	1
D1	M4-8a	18" X 24"	END DETOUR	1-3.5" X 3.5"	1
D2	W20 - 2	48" X 48"	DETOUR AHEAD	1-6" X 6"	1
				TOTAL	27

* USE ORANGE FOR BACKGROUND COLOR OF SIGNS

DETOUR PLAN
(STAGE 2)
NO SCALE

THIS PLAN ACCURATE FOR DETOUR CONSTRUCTION WORK ONLY

DE-1

REVISED BY | DATE REVISED
YOUICHI NAKAGAWA | KEEN POONG
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR | WILLIAM NASCIEMENTO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	23	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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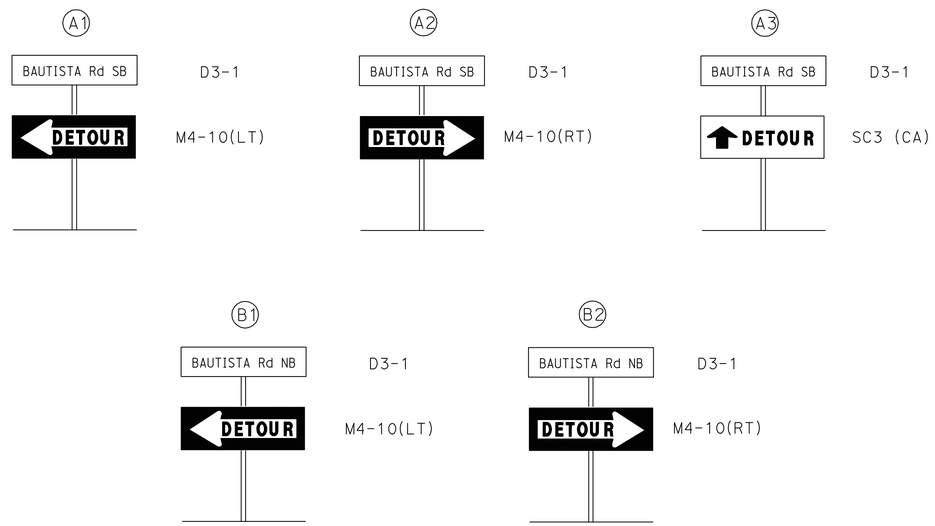
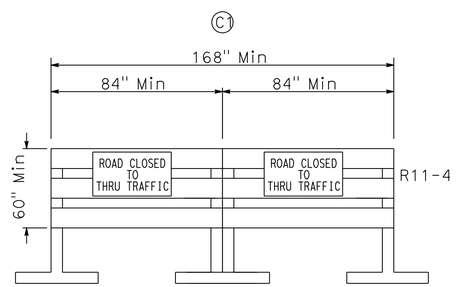
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.





PLACE 2 TYPE III BARRICADES WITH
1 R11-4 SIGNS

DETOUR PLAN
(STAGE 2)

NO SCALE **DE-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO
CALCULATED-DESIGNED BY: YOUICHI NAKAGAWA
CHECKED BY: KEEN POONG
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DATE REVISED

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08	Riv	371	69.7/69.9	24	41

REGISTERED CIVIL ENGINEER DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MARK GONZALEZ
No. 73897
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

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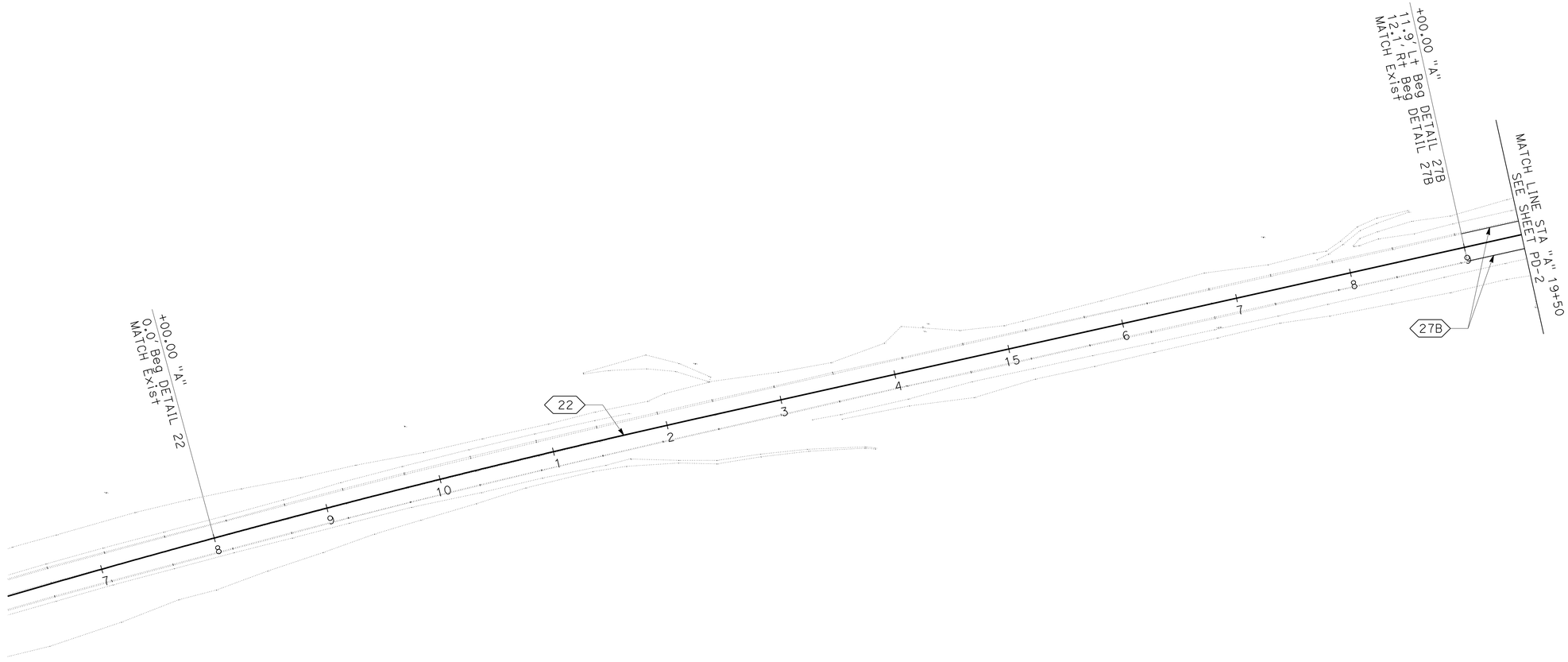
SAN BERNARDINO, CA 92408

NOTE:

1. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE CURRENT STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2006.
2. ALL CONFLICTING STRIPING AND PAVEMENT MARKING NOT SHOWN ON THE PLANS SHALL BE REMOVED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER.

LEGEND

XX PAVEMENT DELINEATION DETAIL



PAVEMENT DELINEATION PLAN

SCALE: 1" = 50'

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION WORK ONLY

PD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	25	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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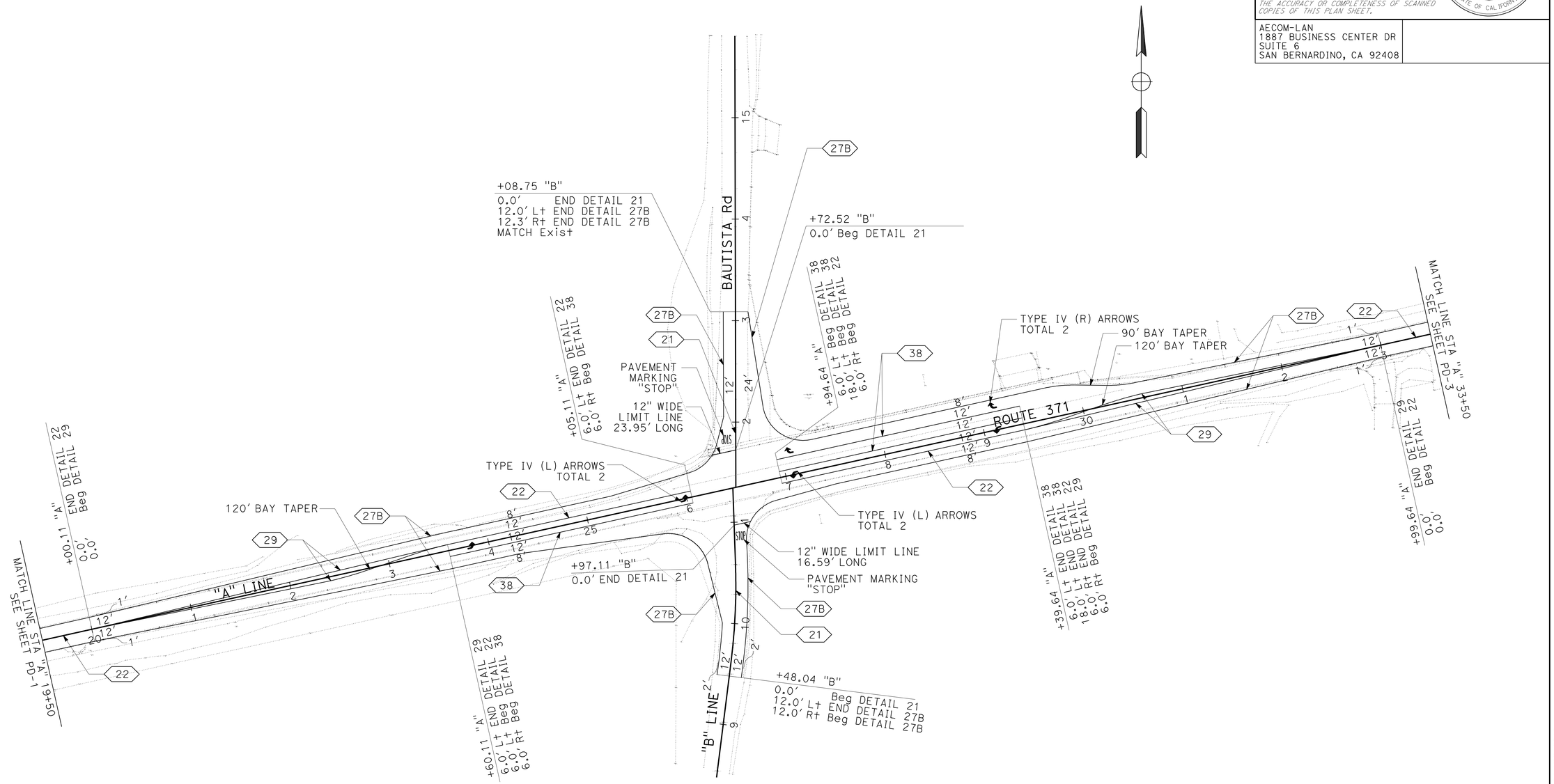

PAVEMENT DELINEATION PLAN

SCALE: 1" = 50'

PD-2

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG
REVISED BY
DATE REVISED

LAST REVISION 02-02-10
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	28	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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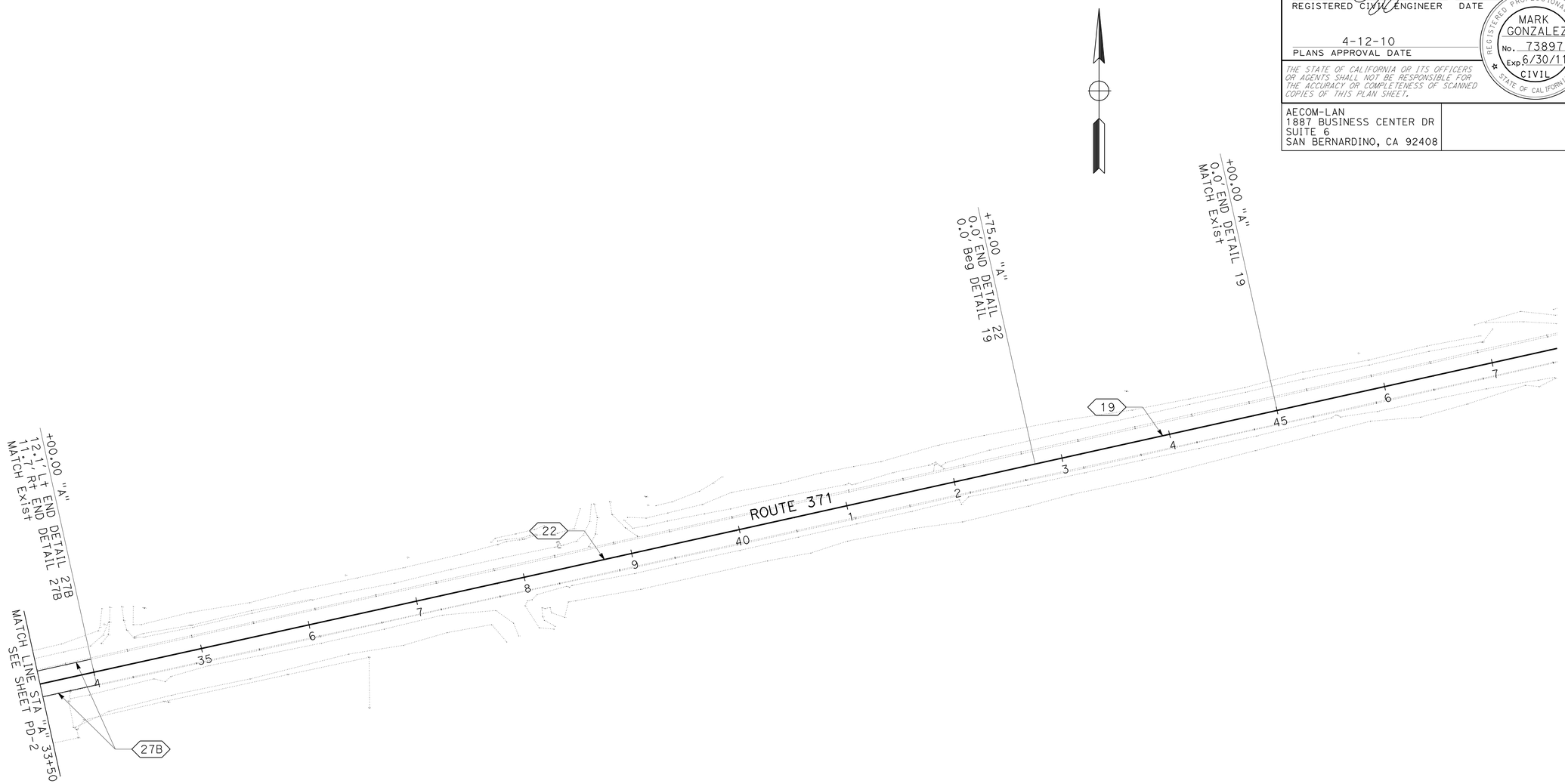

PAVEMENT DELINEATION PLAN

SCALE: 1" = 50'

PD-3

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®

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CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG

REVISED BY
DATE REVISED

LAST REVISION 02-02-10
DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	27	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

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REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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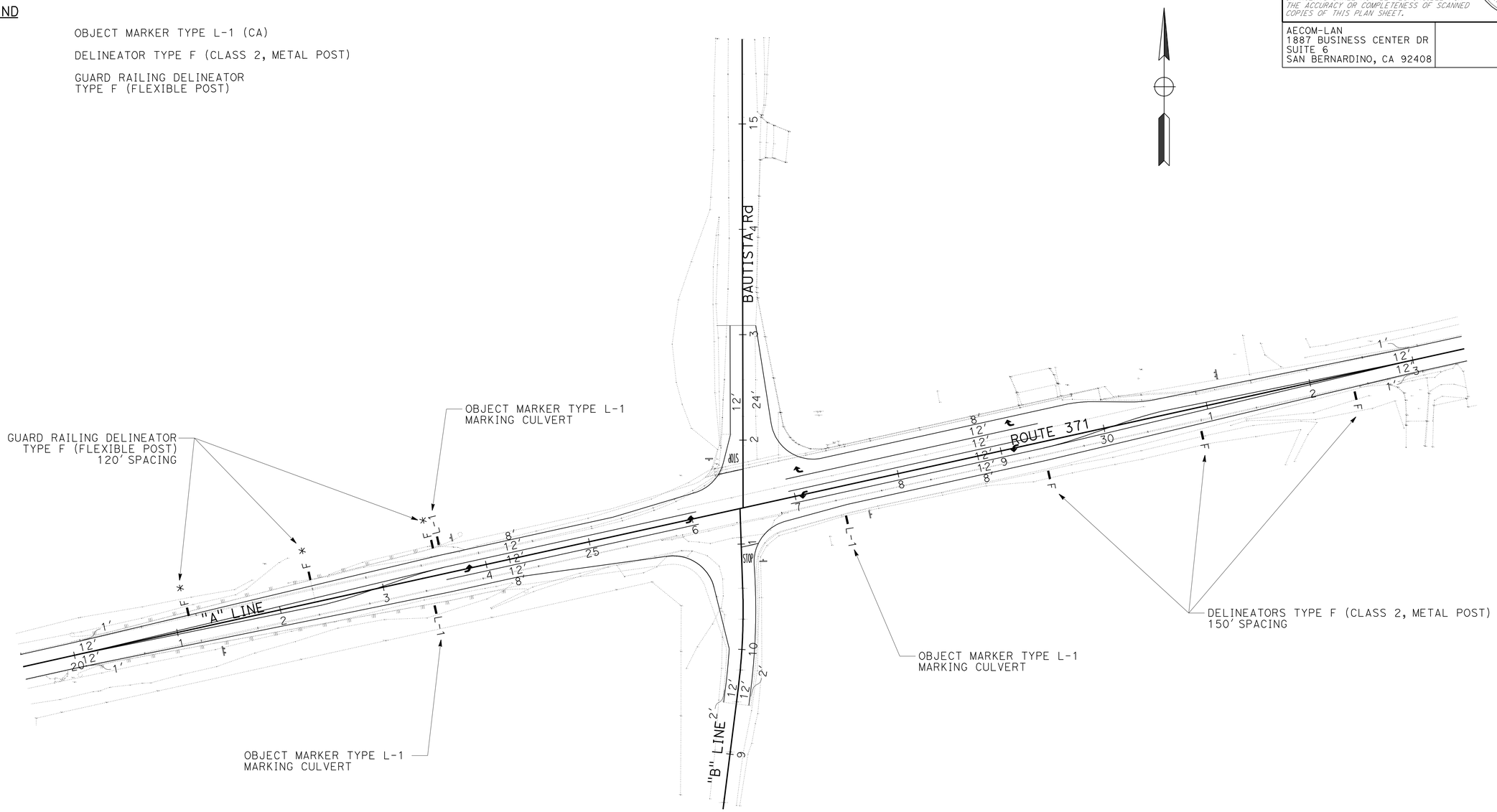
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

1. ALL OBJECT MARKERS AND PAVEMENT DELINEATORS SHALL BE IN CONFORMANCE WITH THE CURRENT STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2006.
2. ALL CONFLICTING OBJECT MARKERS AND PAVEMENT DELINEATORS NOT SHOWN ON THE PLANS SHALL BE REMOVED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER.

LEGEND

L-1	OBJECT MARKER TYPE L-1 (CA)
F	DELINEATOR TYPE F (CLASS 2, METAL POST)
F *	GUARD RAILING DELINEATOR TYPE F (FLEXIBLE POST)



PAVEMENT DELINEATION PLAN
(OBJECT MARKERS AND DELINEATORS)

SCALE: 1" = 50'

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION WORK ONLY

PD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: MARK GONZALEZ
CHECKED BY: KEEN POONG

REVISED BY | DATE REVISED

LAST REVISION 02-02-10 | DATE PLOTTED => 24-MAR-2010 | TIME PLOTTED => 15:10

BORDER LAST REVISED 4/11/2008

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

USERNAME => ecano
DGN FILE => 80L810na004.dgn

CU 08367

EA 0L8101

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	371	69.7/69.9	28	41

REGISTERED CIVIL ENGINEER 12-29-09 DATE

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THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE) AND PAVEMENT MARKERS

SHEET No.	STATION LIMITS	LOCATION	DETAIL No. OR PAVEMENT MARKING	PAVEMENT MARKER RETROREFLECTIVE-RECESSED TYPE D	PAVEMENT MARKER RETROREFLECTIVE-RECESSED TYPE G	PAVEMENT MARKER RETROREFLECTIVE-RECESSED TYPE H	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE) 4" YELLOW	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE) 4" WHITE	THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE) 8" WHITE
				EA			LF		
PD-1	"A" 8+00.00 TO "A" 19+50.00	CL	22	98			1150		
	"A" 9+00.00 TO "A" 19+50.00	WB	27B					50.1	
	"A" 9+00.00 TO "A" 19+50.00	EB	27B					50.1	
PD-2	"A" 19+50.00 TO "B" 13+08.75	WB	27B					830.1	
	"B" 13+08.75 TO "A" 33+50.00	WB	27B					778.1	
	"A" 19+50.00 TO "B" 9+48.04	EB	27B					789.2	
	"B" 9+48.04 TO "A" 33+50.00	EB	27B					853.1	
	"A" 19+50.00 TO "A" 20+00.11	CL	22	6			50		
	"A" 23+60.11 TO "A" 26+05.11	CL	22	22			245		
	"A" 26+94.64 TO "A" 29+39.64	CL	22	22			245		
	"A" 32+99.64 TO "A" 33+50.00	CL	22	6			50.3		
	"A" 20+00.11 TO "A" 23+60.11	WB	29	32			360.1		
		EB	29	32			360.5		
	"A" 29+39.64 TO "A" 32+99.64	WB	29	32			360.5		
		EB	29	32			360.1		
	"A" 23+60.11 TO "A" 26+05.11	EB	38		23				245
	"A" 27+94.64 TO "A" 29+39.64	WB	38		23				490
	"B" 9+48.04 TO "B" 10+97.11	CL	21				149.1		
	"B" 11+72.52 TO "B" 13+08.75	CL	21				136.2		
PD-3	"A" 33+50.00 TO "A" 34+00.00	WB	27B					50	
	"A" 33+50.00 TO "A" 34+00.00	EB	27B					50	
	"A" 33+50.00 TO "A" 42+75.00	CL	22	79			925		
	"A" 42+75.00 TO "A" 45+00.00	CL	19	6		21	225		
			TOTAL	367	46	21	4617	3451	735

THERMOPLASTIC PAVEMENT MARKING

SHEET No.	STATION LIMITS	LOCATION	DETAIL No. OR PAVEMENT MARKING	THERMOPLASTIC PAVEMENT MARKING EA	THERMOPLASTIC PAVEMENT MARKING SQFT
PD-2	"A" 23+80.00 TO 26+00.00	EB	TYPE IV(L)	2	30
	"A" 27+00.00 TO 29+20.00	WB	TYPE IV(L)	2	30
	"A" 27+00.00 TO 29+20.00	WB	TYPE IV(R)	2	30
	"B" 10+86.25	NB	"STOP"	1	22
	"B" 11+83.21	SB	"STOP"	1	22
	"B" 10+97.10	NB	LIMIT LINE	1	17
	"B" 11+72.52	SB	LIMIT LINE	1	24
			TOTAL		175

DELINEATORS

SHEET No.	STATION LIMITS	LOCATION	CLASS 2 (METAL POST) TYPE F	GUARD RAILING DELINEATOR (FLEXIBLE POST) TYPE F
			EA	EA
PD-4	"A" 20+00.11 TO 32+99.96	EB	3	0
	"A" 20+00.11 TO 32+99.96	WB	0	3
		TOTAL	3	3

PAVEMENT DELINEATION REMOVAL

SHEET No.	STATION LIMITS	LOCATION	DETAIL No. OR PAVEMENT MARKING	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE	REMOVE PAVEMENT MARKER	REMOVE THERMOPLASTIC PAVEMENT MARKING
				LF	EA	SQFT
PD-1, PD-2, PD-3	"A" 8+00 TO 23+75	CL	19	1575	99	
	"A" 23+75 TO 26+50	CL	22	275	12	
	"A" 26+50 TO 29+75	CL	19	325	21	
	"A" 29+75 TO 45+00	CL	6	1525	85	
	"B" 11+50 TO 23+08.75	CL	21	1160		
	"B" 11+75	SB	"STOP"			22
	"B" 11+75	SB	LIMIT LINE			24
			TOTAL	4860	217	46

OBJECT MARKERS

SHEET No.	STATION LIMITS	LOCATION	TYPE L-1(CA)
			EA
PD-4	"A" 20+00.11 TO 32+99.96	EB	2
	"A" 20+00.11 TO 32+99.96	WB	1
		TOTAL	3

PAVEMENT DELINEATION QUANTITIES

PDQ-1

REVISED BY | DATE REVISED
MARK GONZALEZ | KEEN POONG
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR | WILLIAM NASCIMENTO
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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REGISTERED CIVIL ENGINEER 12-29-09 DATE

4-12-10
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MARK GONZALEZ No. 73897 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

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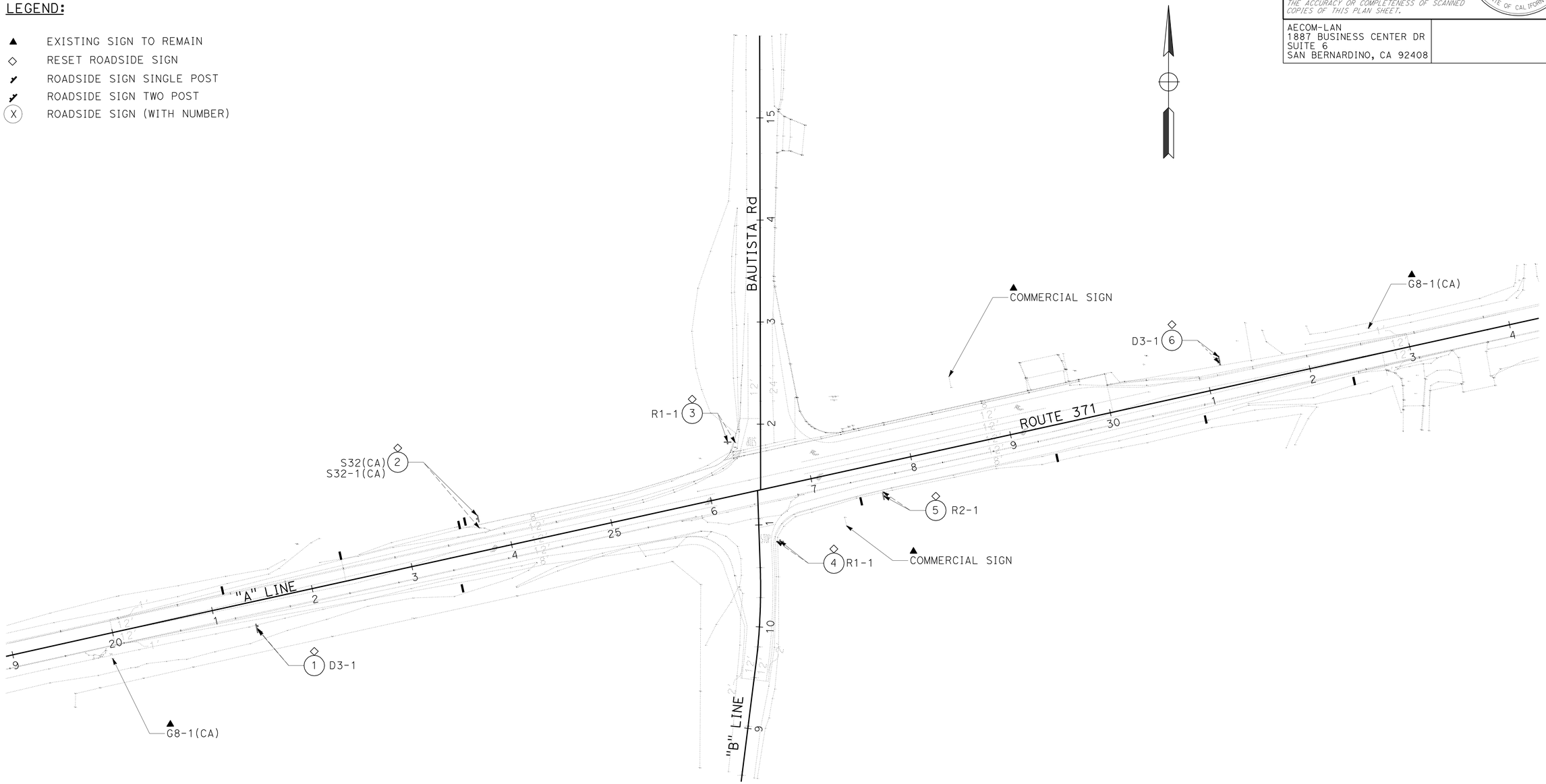
AECOM-LAN
1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

NOTE:

1. EXACT SIGN LOCATION TO BE APPROVED BY THE ENGINEER.
2. ALL SIGNING SHALL BE IN CONFORMANCE WITH THE CURRENT STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2006.
3. FOR COMPLETE RIGHT OF WAY DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND:

- ▲ EXISTING SIGN TO REMAIN
- ◇ RESET ROADSIDE SIGN
- ROADSIDE SIGN SINGLE POST
- ROADSIDE SIGN TWO POST
- (X) ROADSIDE SIGN (WITH NUMBER)



SIGN PLAN

SCALE: 1" = 50'

S-1

THIS PLAN ACCURATE FOR SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

CONSULTANT FUNCTIONAL SUPERVISOR: WILLIAM NASCIMENTO

CALCULATED-DESIGNED BY: YOUICHI NAKAGAWA

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REVISED BY / DATE REVISED

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1887 BUSINESS CENTER DR
SUITE 6
SAN BERNARDINO, CA 92408

ROADSIDE SIGN QUANTITIES

SHEET No.	POST No.	CODE	DESCRIPTION	RESET ROADSIDE SIGN ONE POST	RESET ROADSIDE SIGN TWO POST
				EA	EA
S-1	1	D3-1	BAUTISTA RD		1
	2	S32(CA)	ADPOT-A-HIGHWAY ED & BRENDA FRIES	1	
		S32-1(CA)	HIGHWAY CLEANING (SYMBOL)		
	3	R1-1	STOP SIGN	1	
	4	R1-1	STOP SIGN	1	
	5	R2-1	SPEED LIMIT 55	1	
	6	D3-1	BAUTISTA RD		1
			TOTAL	4	2

SIGN QUANTITIES
SQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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ROADBED

PLAN SHEET No.	STATION	CLASS 2 AGGREGATE BASE	HOT MIX ASPHALT (TYPE A)	COLD PLANE ASPHALT CONCRETE
		CY	TON	SQYD
L-1	"A" 20+00.11 TO 32+99.96 "B" 9+50.00 TO 12+05.56	390	1490	250
	TOTAL	390	1490	250

EARTHWORK

PLAN SHEET No.	ROADWAY EXCAVATION	(N) EMBANKMENT	IMPORTED BORROW
	CY		
L-1	480	990	460
TOTAL	480	990	460

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

METAL BEAM GUARD RAILING

PLAN SHEET No.	STATION	MBGR (STEEL POST)	ALTERNATIVE FLARED TERMINAL SYSTEM
		LF	EA
L-1	"A" 20+41.63 TO 23+91.41 R+	350	2
L-1	"A" 20+42.41 TO 23+42.22 L+	300	2
	TOTAL	650	4

AC DIKE (TYPE D)

PLAN SHEET No.	STATION	AC DIKE (TYPE D)
		LF
L-1	"A" 25+26.48 TO "B" 12+05.56	139.6
	TOTAL	139.6

MINOR CONCRETE (GUTTER)

PLAN SHEET No.	STATION	CROSS GUTTER
		LF
C-1	"A" 26+20.58 TO 26+39.29	18.7
	TOTAL	18.7

SUMMARY OF QUANTITIES
Q-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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DATE PLOTTED => 24-MAR-2010
TIME PLOTTED => 15:11

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	32	41

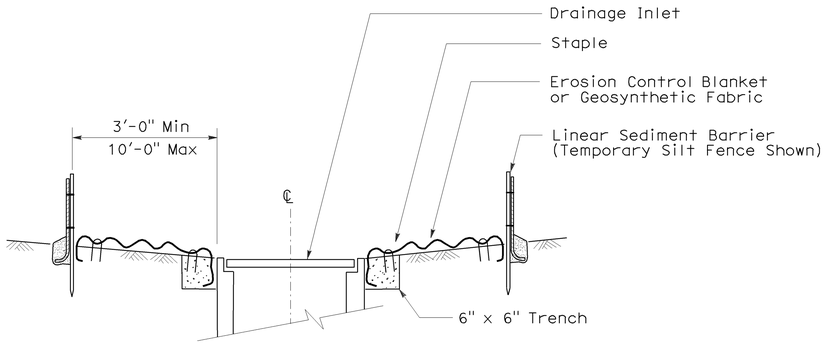
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS Approval DATE

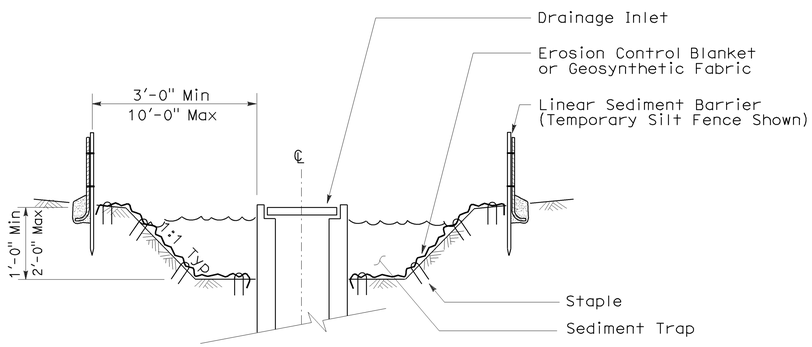
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

LICENSED LANDSCAPE ARCHITECT
Robert B. Schott 3893
Signature
11-04-08
Renewal Date
08-11-08
Date
STATE OF CALIFORNIA

To accompany plans dated April 12, 2010



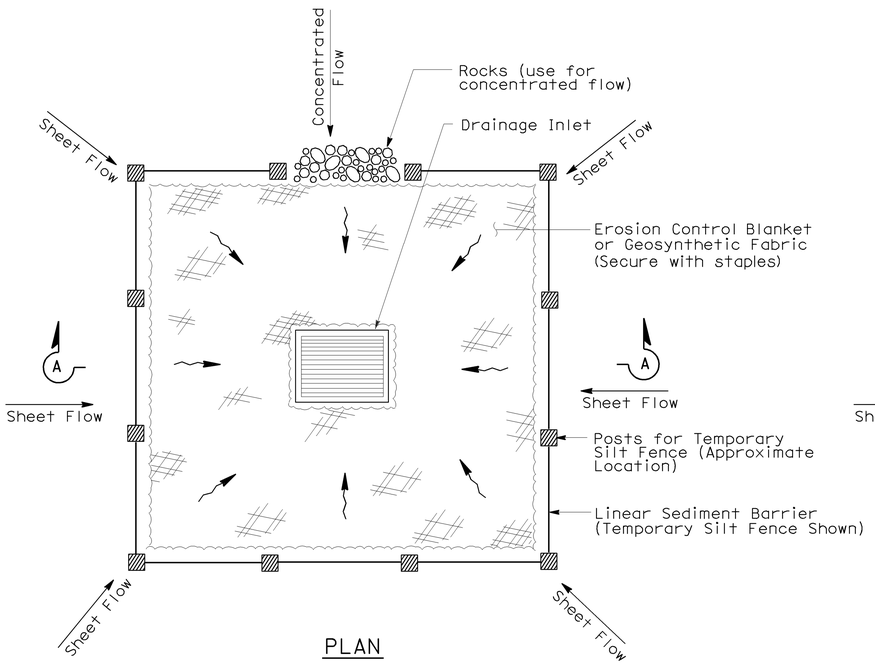
SECTION A-A



SECTION B-B

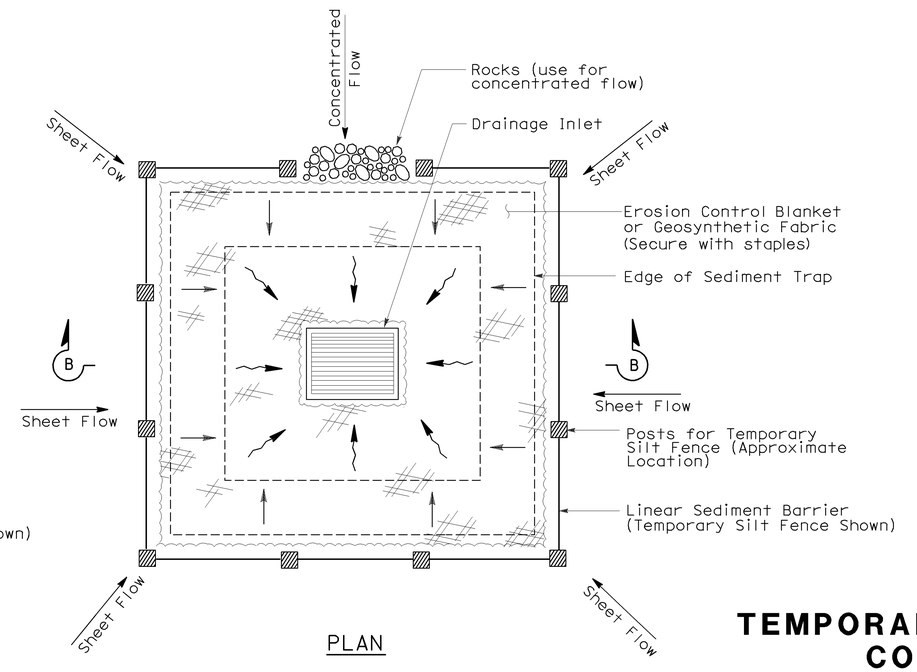
NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.



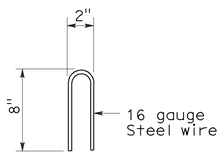
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

Nsp t61 dated august 15, 2008 supplements the standard plans book dated may 2006.

NEW STANDARD PLAN NSP T61

2006 NEW STANDARD PLAN NSP T61

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	33	41

Robert B. Schott
LICENSED LANDSCAPE ARCHITECT

August 15, 2008
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott 3332 — Signature 11-04-08 Renewal Date — 08-11-08 Date — STATE OF CALIFORNIA

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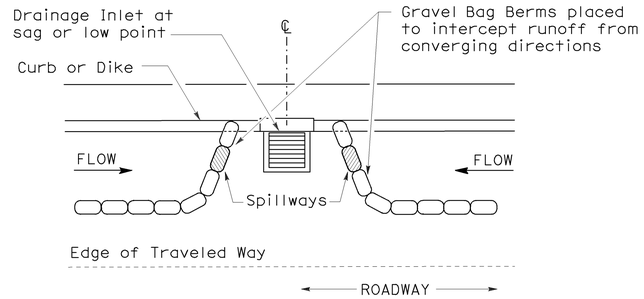
To accompany plans dated April 12, 2010



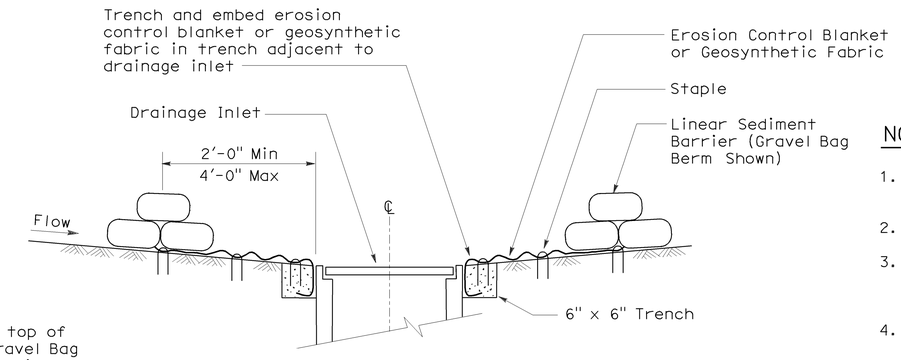
PLAN

CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)

GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100′	75′	50′	25′	12′

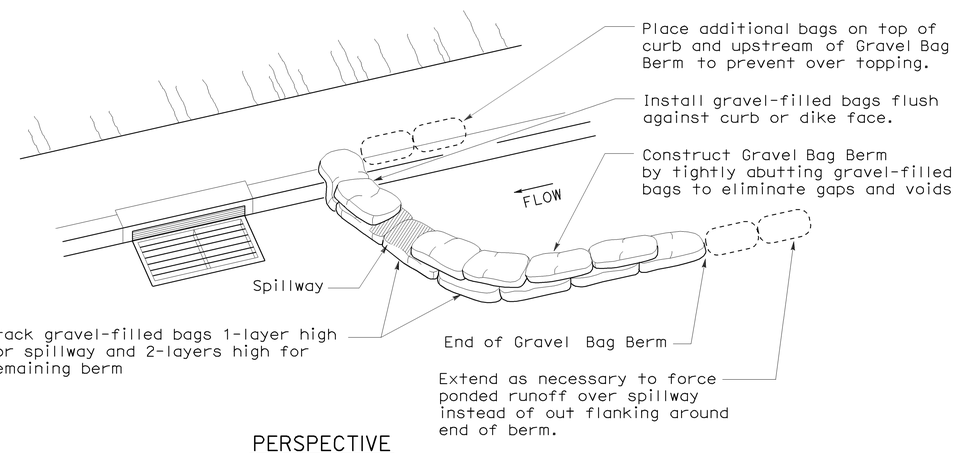
For slope of less than 1%, install barriers only if erosion/sediment is prevalent



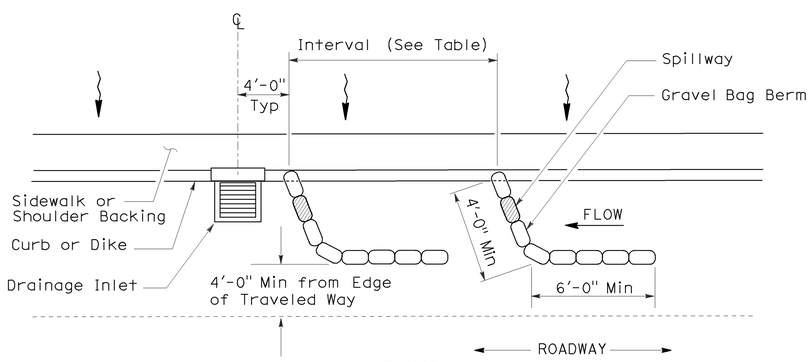
SECTION A-A

NOTES:

1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.

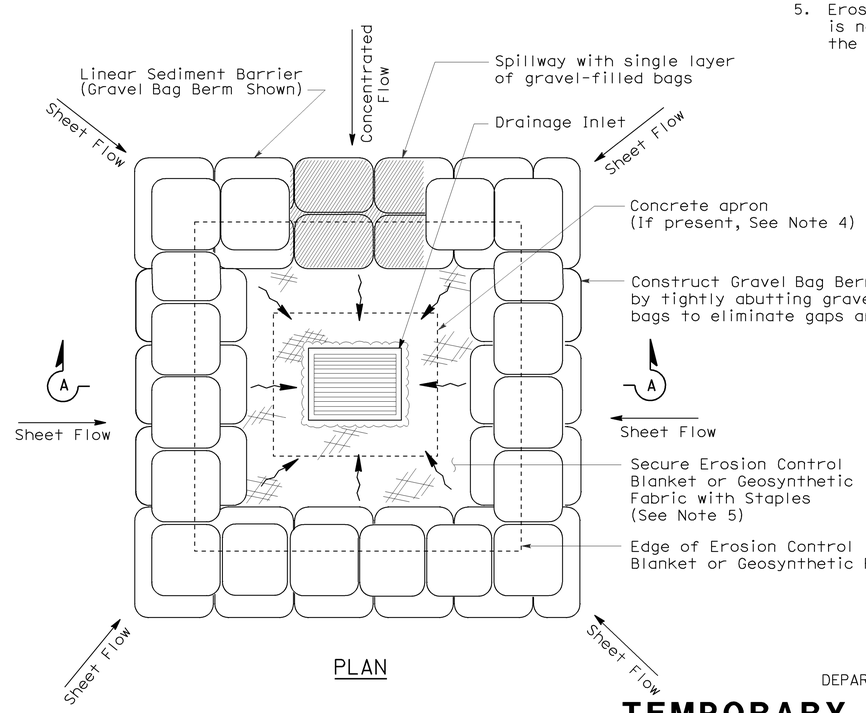


PERSPECTIVE



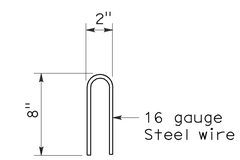
PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)



PLAN

TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T62

2006 NEW STANDARD PLAN NSP T62

7-11-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	34	41

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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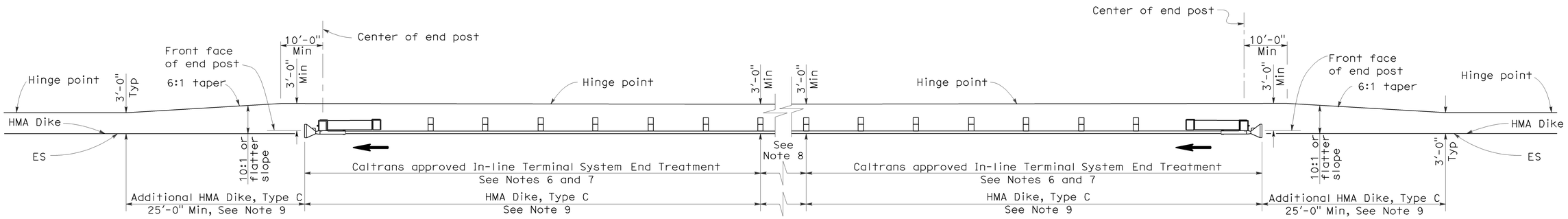
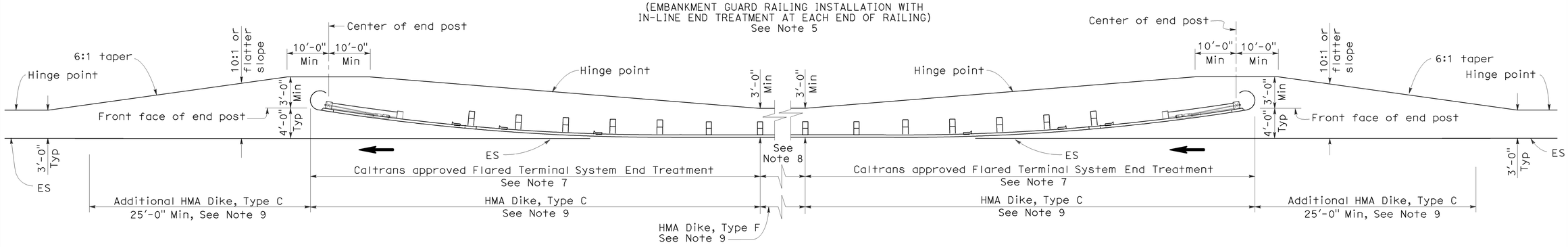
To accompany plans dated April 12, 2010



TYPE 11D LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 5



TYPE 11E LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH FLARED END TREATMENT AT EACH END OF RAILING)
See Note 5

NOTES:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. Direction of adjacent traffic indicated by ⟶.
5. Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embankment slopes and a crashworthy end treatment is required for both directions of traffic.
6. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system end treatment to be used will be shown on the Project Plans.
8. Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
9. Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR EMBANKMENTS

NO SCALE

RSP A77E2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E2
DATED MAY 1, 2006 - PAGE 49 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E2

2006 REVISED STANDARD PLAN RSP A77E2

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	35	41

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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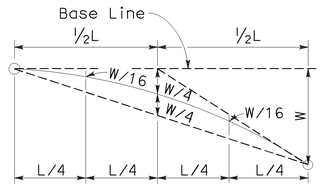
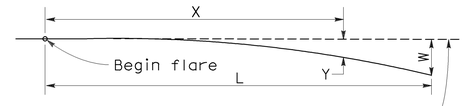
To accompany plans dated April 12, 2010



TYPICAL PARABOLIC LAYOUT

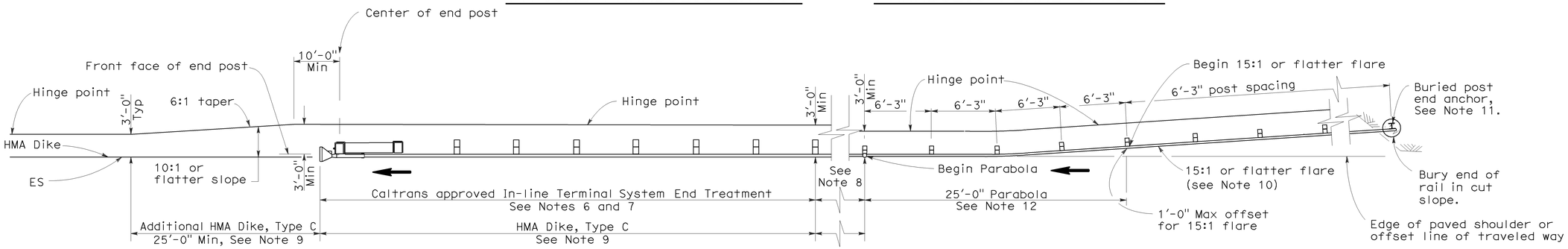


Base Line (Edge of paved shoulder or offset line of edge of traveled way)

$$Y = \frac{WX^2}{L^2}$$

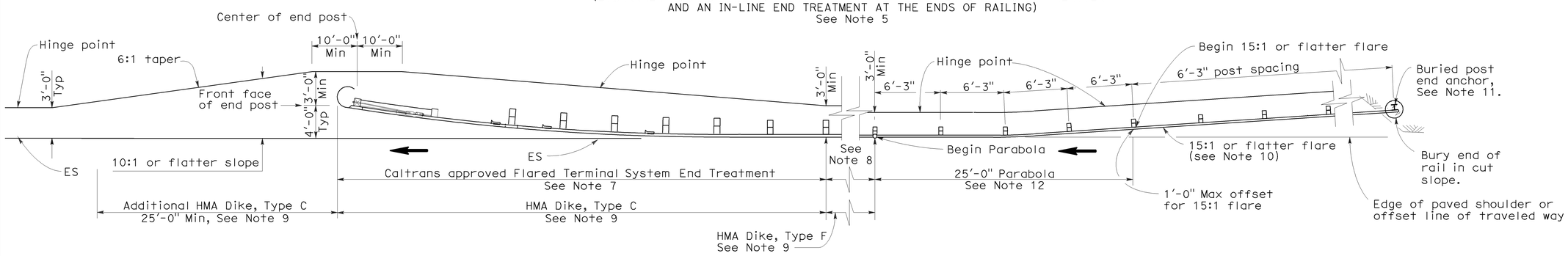
Y = Offset from base line
W = Maximum offset
X = Distance along base line
L = Length of flare

PARABOLIC FLARE OFFSETS



TYPE 11K LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AND AN IN-LINE END TREATMENT AT THE ENDS OF RAILING)
See Note 5



TYPE 11L LAYOUT

(EMBANKMENT GUARD RAILING INSTALLATION WITH A BURIED END ANCHOR TREATMENT AND A FLARED END TREATMENT AT THE ENDS OF RAILING)
See Note 5

NOTES:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood post with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. Direction of adjacent traffic indicated by ⟶.
5. Layout Types 11D through 11L, shown on the A77E Series of Revised Standard Plans, are typically used where guard railing is recommended to shield embamkment slopes and a crashworthy end treatment is required for both directions of traffic.
6. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system end treatment to be used will be shown on the Project Plans.
8. Dependent on site conditions (embankment height and side slope), construction of additional guard railing (length equal to multiples of 12'-6" with 6'-3" post spacing) may be advisable.
9. Where placement of dike is required with guard railing installations, see Revised Standard Plan RSP A77C4 for dike positioning details.
10. The 15:1 or flatter flare used with buried end anchors is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of guard railing within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
11. For details of the buried post end anchor used with Type 11K and 11L Layouts, see Standard Plan A77I2.
12. For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Revised Standard Plan RSP A77E1.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR EMBANKMENTS

NO SCALE

RSP A77E6 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77E6 DATED MAY 1, 2006 - PAGE 53 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77E6

2006 REVISED STANDARD PLAN RSP A77E6

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	36	41

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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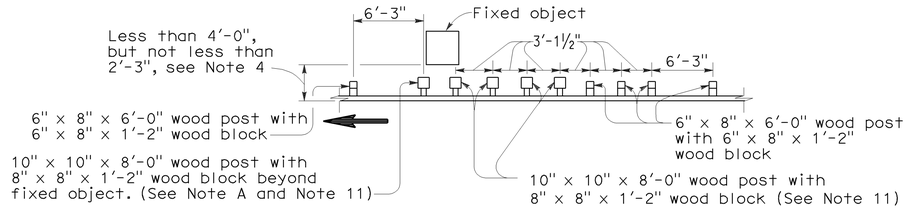
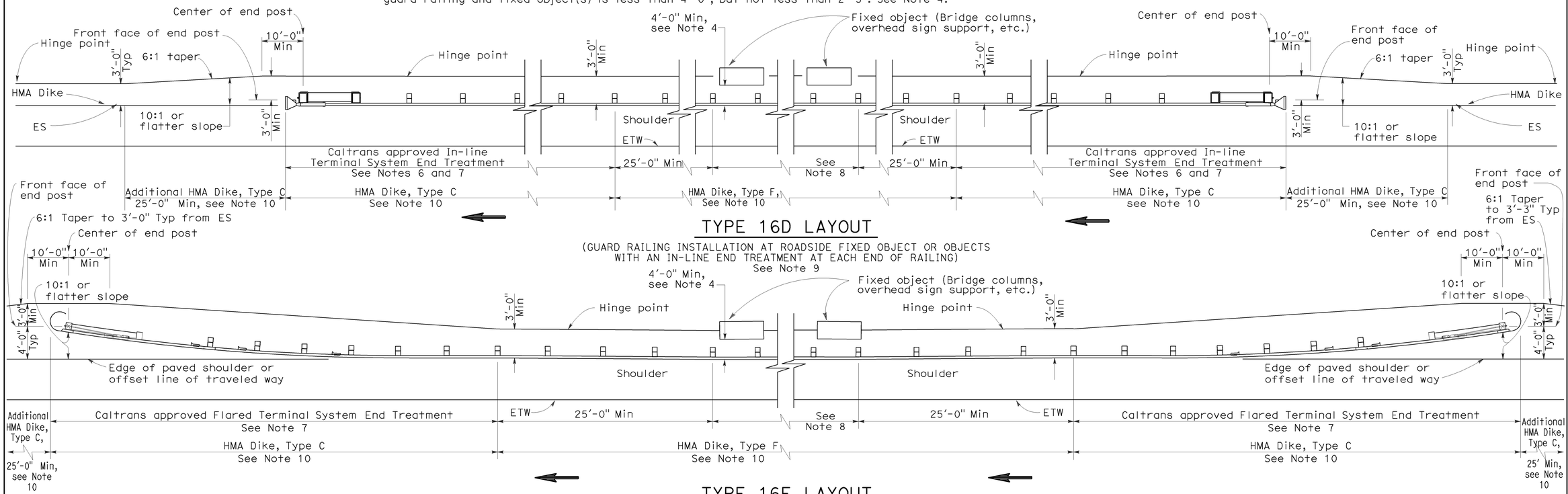
To accompany plans dated April 12, 2010



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1½" center to center spacing are to be used between fixed object(s).

STRENGTHENED RAILING SECTIONS FOR FIXED OBJECT

Use strengthened railing sections with Layout Types 16D or 16E where minimum clearance between the guard railing and fixed object(s) is less than 4'-0", but not less than 2'-3". See Note 4.



TYPE 16D LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH AN IN-LINE END TREATMENT AT EACH END OF RAILING)
See Note 9

TYPE 16E LAYOUT

(GUARD RAILING INSTALLATION AT ROADSIDE FIXED OBJECT OR OBJECTS WITH A FLARED END TREATMENT AT EACH END OF RAILING)
See Note 9

NOTES:

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind standard guard railing sections with post spacing at 6'-3". Construct guard railing as shown in the detail "Strengthened Railing Sections for Fixed Objects" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 2'-3". Where the clearance is less than 2'-3", a concrete wall or barrier should be constructed to shield the fixed object(s).
5. Direction of adjacent traffic indicated by ⟶ .
6. In-line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system to be used will be shown on the Project Plans.
8. As site conditions dictate, construct additional guard railing to shield fixed object(s). Additional guard railing length equal to multiples of 12'-6". Post spacing at 6'-3", except as specified in Note 4.
9. Layout Types 16D through 16L, shown on the A77G Series of Revised Standard Plans, are typically used where guard railing is recommended to shield roadside fixed object(s) and a crashworthy end treatment is required for both directions of traffic.
10. Where placement of dike is required with guard railing, see Revised Standard Plan RSP A77C4 for dike positioning details.
11. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic block may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the "Strengthened Railing Sections Detail."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

METAL BEAM GUARD RAILING TYPICAL LAYOUTS FOR ROADSIDE FIXED OBJECTS

NO SCALE

RSP A77G4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77G4
DATED MAY 1, 2006 - PAGE 62 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77G4

2006 REVISED STANDARD PLAN RSP A77G4

12-10-07

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	37	41

Raymond Don Tsztoo
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Raymond Don Tsztoo No. C37332 Exp. 6-30-08 CIVIL STATE OF CALIFORNIA

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ANNULAR AND HELICAL PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W OR A	PIPE WALL THICKNESS CSP	PIPE WALL THICKNESS CAP	BAND THICKNESS CSP	BAND THICKNESS CAP	BAR AND STRAP (CSP ONLY) STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	ANGLE DIMENSIONS CSP	ANGLE DIMENSIONS CAP	BOLTS (No.- Dia) CSP	BOLTS (No.- Dia) CAP	RIVETS ANGLE TO BAND CSP	RIVETS ANGLE TO BAND CAP	SPOT WELDS ANGLE TO BAND CSP
TWO PIECE INTEGRAL FLANGE	1½′ × ¼"	6"-10"	7"	0.052"-0.079"	0.048"-0.060"	0.052"	0.060"							2-⅜"	2-⅜"			
		12"-18"	7"	0.052"-0.079"		0.064"								2-½"				
	2⅔" × ½"	12"-24"	7"	0.052"-0.079"	0.060"-0.105"	0.064"	0.060"							2-½"	2-½"			
UNIVERSAL	2⅔" × ½"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"					2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	3-½"
		42"-60"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"					2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		THROUGH 72"	12"	0.052"-0.168"	0.164"	0.052"	0.105"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		78"-84"	16¼"	0.168"		0.079"		DOUBLE 0.079"	½"	⅞"	32 ksi							
ANNULAR	2⅔" × ½"	THROUGH 36"	7"	0.064"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	2-½"	2-½"	3-⅜"	3-⅜"	3-½"
		42"-72"	12"	0.064"-0.168"	0.075"-0.164"	0.052"	0.105"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		78"-84"	12"	0.168"		0.079"		0.109"	½"	⅞"	45 ksi	2" × 2" × 3/16"		3-½"		3-⅜"		5-½"
	3" × 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"		3-½"		3-⅜"		5-½"
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	½"	⅞"	45 ksi	2" × 2" × 3/16"		3-½"		4-⅜"		
		42"-108"	14"		0.060"-0.135"		0.060"						2" × 2" × 3/16"		3-½"		3-⅜"	
HELICAL	2⅔" × ½"	THROUGH 36"	12"	0.052"-0.138"	0.060"-0.135"	0.052"	0.060"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	3-½"
		42"-72"	12"	0.052"-0.168"	0.075"-0.164"	0.052"	0.060"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		78"-84"	12"	0.168"		0.079"		0.109"	½"	⅞"	45 ksi	2" × 2" × 3/16"		3-½"		3-⅜"		5-½"
	3" × 1"	48"-90"	14"	0.064"-0.109"		0.052"		0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"		3-½"		3-⅜"		5-½"
		96"-120"	14"	0.079"-0.109"		0.052"		0.109"	½"	⅞"	45 ksi	2" × 2" × 3/16"		3-½"		4-⅜"		
		42"-108"	14"		0.060"-0.135"		0.060"						2" × 2" × 3/16"		3-½"		3-⅜"	
HUGGER	2⅔" × ½" REROLLED END	12"-54"	4"	0.052"-0.109"		0.052"						2½" × 1½" × 3/16"	2½" × 1½" × 3/16"	1-½"				3-½"
		60"-66"	4"	0.109"		0.064"						2½" × 1½" × 3/16"	2½" × 1½" × 3/16"	1-½"				3-½"
		36"-48"	4"	0.138"		0.064"						2½" × 1½" × 3/16"	2½" × 1½" × 3/16"	1-½"				3-½"
		THROUGH 72"	10½"	0.052"-0.168"		0.052"		0.079"	½"	⅞"	32 ksi							
		78"-84"	10½"	0.168"		0.079"		0.109"	½"	⅞"	45 ksi							
	3" × 1" REROLLED END	48"-90"	10½"	0.064"-0.109"		0.052"		0.079"	½"	⅞"	32 ksi							
		96"-120"	10½"	0.079"-0.109"		0.052"		0.109"	½"	⅞"	45 ksi							
	5" × 1" REROLLED END	48"-66"	7½"	0.064"-0.109"		0.064"		0.079"	½"	⅞"	32 ksi	2½" × 1½" × 3/16"	2½" × 1½" × 3/16"	1-½"				3-½"
		72"-90"	7½"	0.064"-0.079"		0.064"		0.079"	½"	⅞"	32 ksi	2½" × 1½" × 3/16"	2½" × 1½" × 3/16"	1-½"				3-½"
		48"-90"	7½"	0.064"-0.138"		0.064"		0.079"	½"	⅞"	32 ksi							
		48"-120"	12" SEE	0.064"-0.109"		0.064"		0.079"	½"	⅞"	32 ksi							
		48"-84"	12" NOTE	0.138"		0.064"		0.079"	½"	⅞"	32 ksi							
		90"-120"	12" 11	0.138"		0.064"		DOUBLE 0.079"	½"	⅞"	32 ksi							

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION	PIPE SIZE	W	PIPE WALL THICKNESS SSRP	PIPE WALL THICKNESS ASRP	BAND THICKNESS SSRP	BAND THICKNESS ASRP	BAR AND STRAP (SSRP ONLY) STRAP THICKNESS	BOLTS Dia	BAR Dia	BAR YIELD STRENGTH	ANGLE DIMENSIONS SSRP	ANGLE DIMENSIONS ASRP	BOLTS (No.- Dia) SSRP	BOLTS (No.- Dia) ASRP	RIVETS ANGLE TO BAND SSRP	RIVETS ANGLE TO BAND ASRP	SPOT WELDS ANGLE TO BAND SSRP
ANNULAR	2⅔" × ½" * REROLLED END	24"-36"	12"	0.064"-0.109"	0.060"-0.105"	0.052"	0.060"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		42"-60"	12"	0.064"-0.109"	0.075"-0.105"	0.052"	0.105"	0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		66"-72"	12"	0.064"-0.109"		0.052"		0.079"	½"	⅞"	32 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
		78"-114"	12"	0.079"-0.109"		0.079"		0.109"	½"	⅞"	45 ksi	2" × 2" × 3/16"	2" × 2" × 3/16"	3-½"	3-½"	3-⅜"	3-⅜"	5-½"
HUGGER	2⅔" × ½" * REROLLED END	24"-72"	10½"	0.064"-0.109"		0.052"		0.079"	½"	⅞"	32 ksi							
		78"-84"	10½"	0.109"		0.079"		0.109"	½"	⅞"	45 ksi							

* See Note 14.

14. All profiles of Spiral Rib Pipe (¾" × ¾" ribs at 7½" pitch and ¾" × 1" ribs at 11½" pitch in both steel and aluminum and ¾" × 1" ribs at 8½" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2⅔" × ½" annual corrugations with a minimum of two full corrugations at each end.

NOTES:

To accompany plans dated April 12, 2010

1. All ferrous metal coupling band connection hardware shall be galvanized or electro-plated in accordance with the Standard Specifications.
2. For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
3. Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
4. Use 1¼" gage line dimension on attached angle leg for rivets and spot welds.
5. Band thickness shall not be less than:
   a. 3 standard thicknesses lighter than the thickness of the pipe for Corrugated Steel Pipe.
   b. 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 0.060" for Corrugated Aluminum Pipe.
6. Dimensions, thicknesses and strengths shown are minimum.
7. For pipe arches use same width band as for round pipe of equal periphery.
8. Fillet welds of equivalent strenght may be substituted for spot welds or rivets.
9. Spot welds shall develop minimum required strength of strap.
10. Pipe with rerolled ends having at least two 2⅔" × ½" annular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2⅔" × ½" corrugations.
11. In the case of H-12 huggerbands, two piece bands are required for diameters through 96" and three piece bands are required for diameters 102" through 120".
12. Two piece bands are required for pipes greater than 42" diameter.
13. The 2¼" × 2" × 0.109" thick galvanized die-formed angle connector may be used in lieu of the 2" × 2" × 3/16" angle connector for standard joints only on pipes through 72" diameter.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CORRUGATED METAL PIPE COUPLING DETAILS No. 5 STANDARD JOINT

NO SCALE

RSP D97E DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97E
DATED MAY 1, 2006 - PAGE 187 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP D97E

2006 REVISED STANDARD PLAN RSP D97E

4-2-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	38	41

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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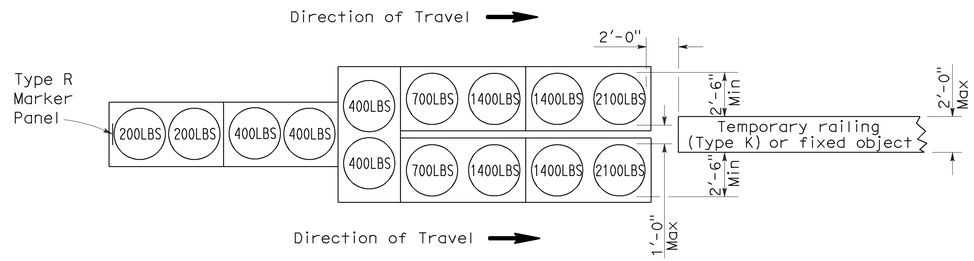
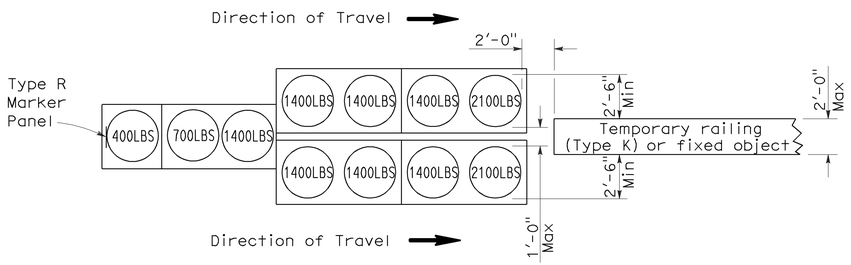
To accompany plans dated April 12, 2010



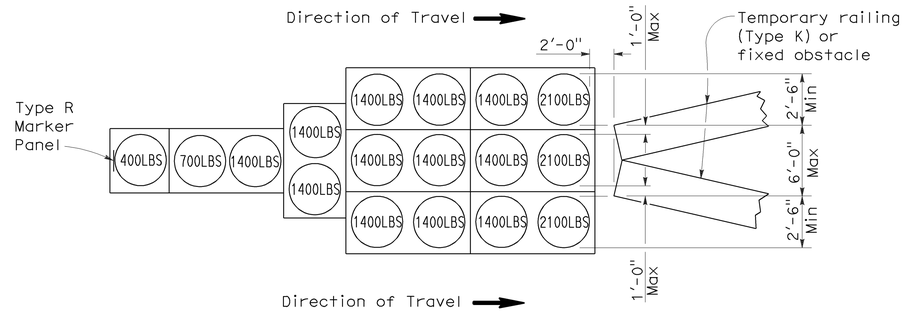
ARRAY 'TU14'

Approach speed 45 mph or more



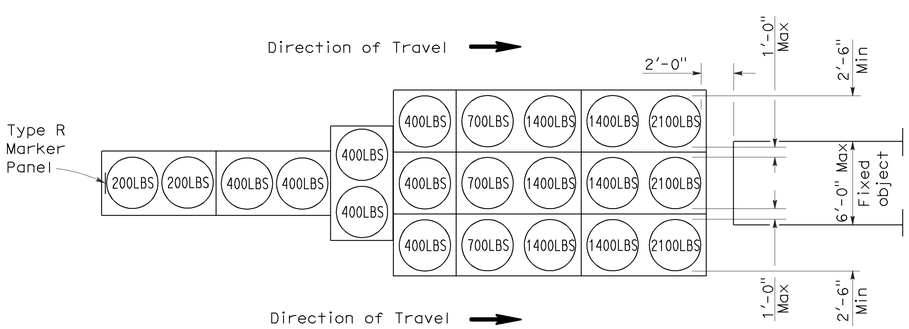
ARRAY 'TU11'

Approach speed less than 45 mph



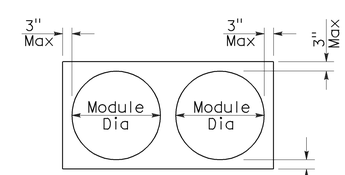
ARRAY 'TU17'

Approach speed less than 45 mph

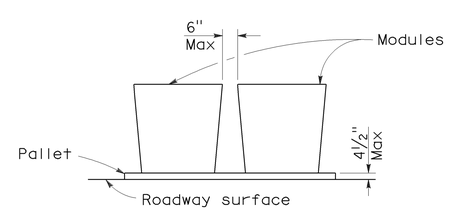


ARRAY 'TU21'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	39	41

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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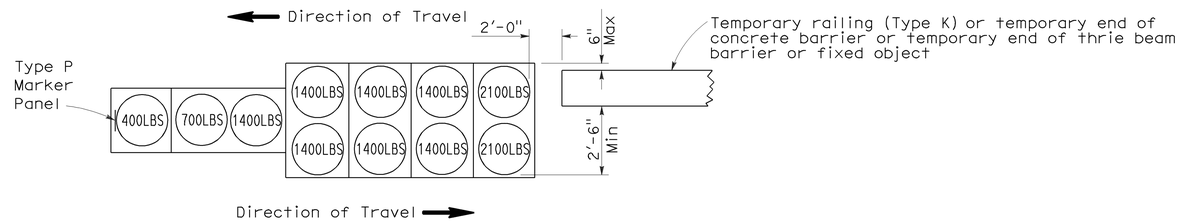
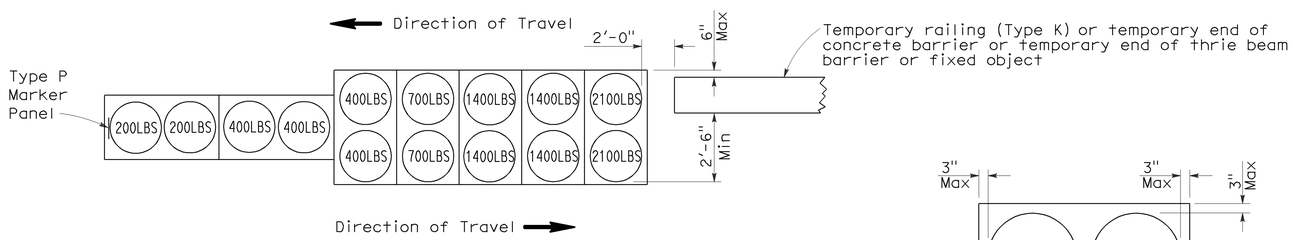
To accompany plans dated April 12, 2010



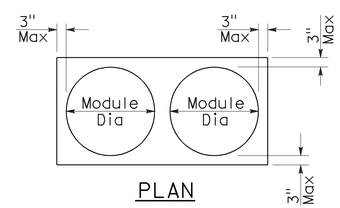
ARRAY 'TB11'

Approach speed less than 45 mph

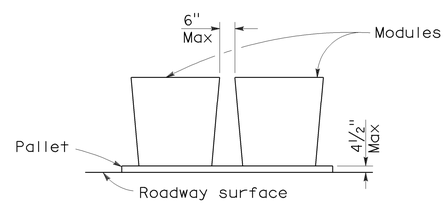


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	40	41

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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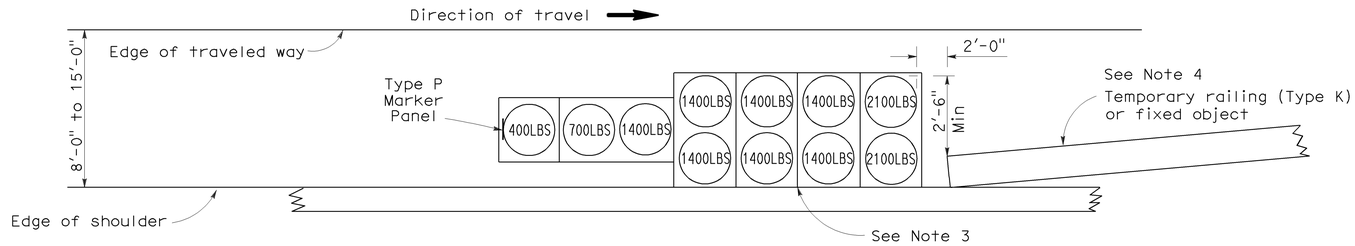
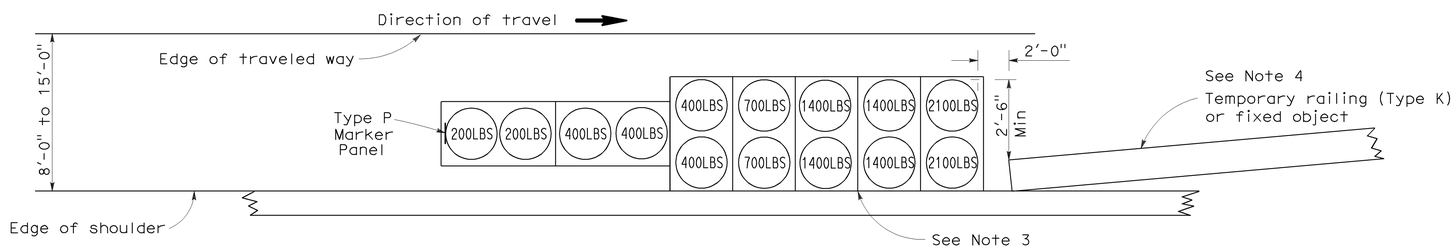
To accompany plans dated April 12, 2010



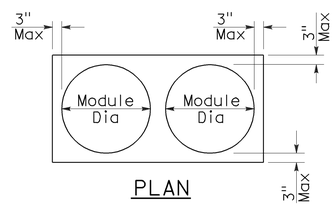
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

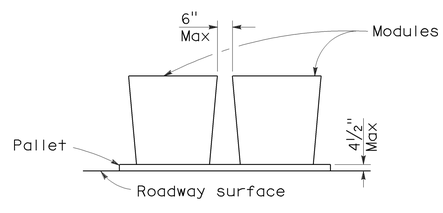


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

5-15-08

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	371	69.7/69.9	41	41

LICENSED LANDSCAPE ARCHITECT

April 3, 2009
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT — Robert B. Schott, 3332 — 11-30-10 Renewal Date — 2-25-09 Date — STATE OF CALIFORNIA

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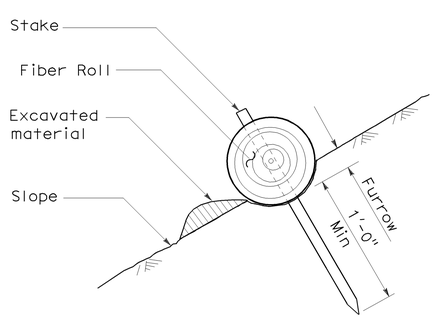
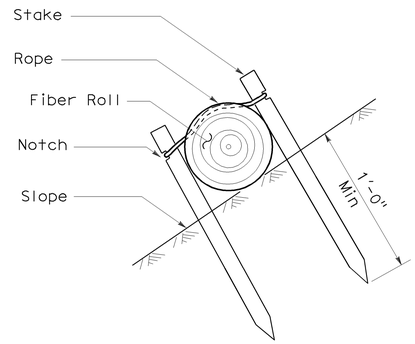
To accompany plans dated April 12, 2010

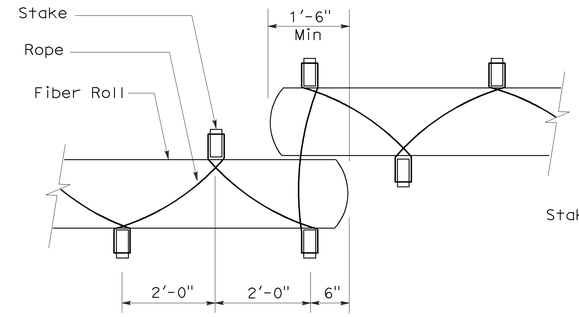


SECTION

TEMPORARY FIBER ROLL (TYPE 1)

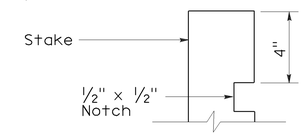


SECTION



PLAN

TEMPORARY FIBER ROLL (TYPE 2)

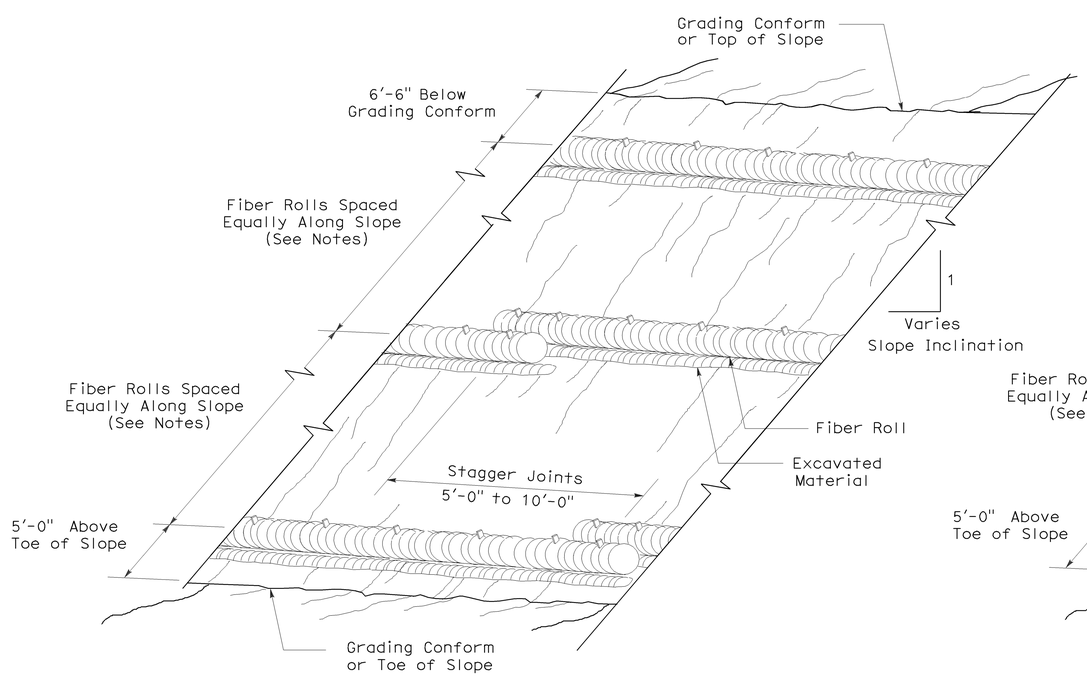


ELEVATION

STAKE NOTCH DETAIL

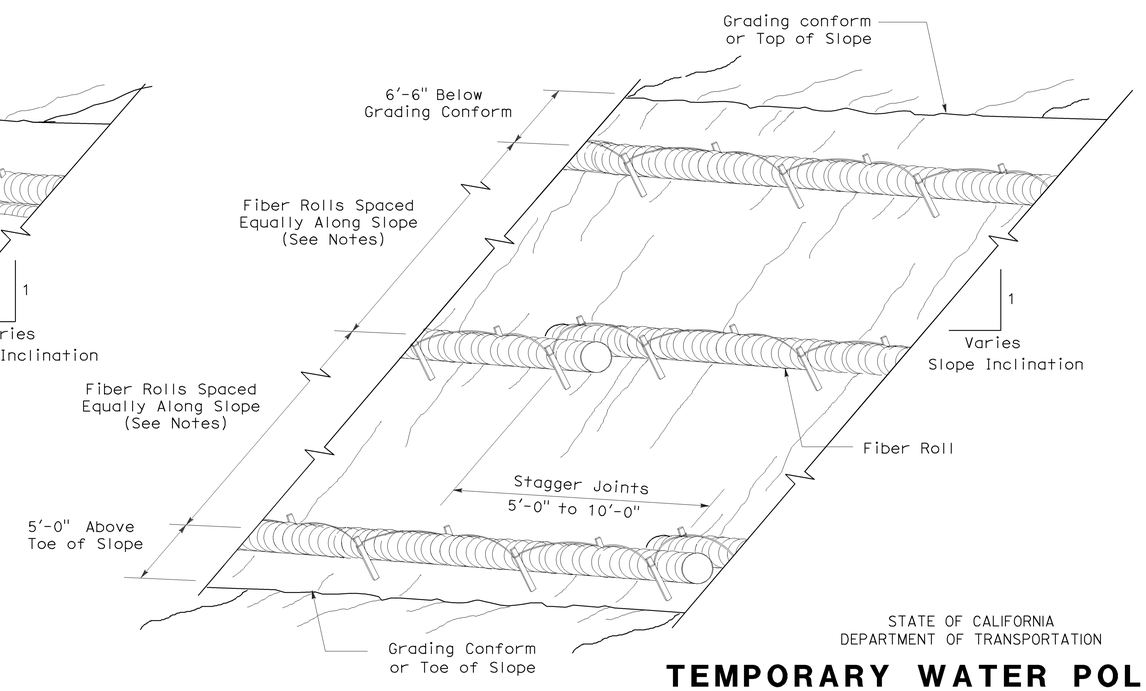
NOTES:

1. Temporary fiber roll spacing varies depending upon slope inclination.
2. Installations shown in the perspectives are for slope inclination of 10:1 and steeper.



PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 1)



PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 2)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY FIBER ROLL)

NO SCALE

RSP T56 DATED APRIL 3, 2009 SUPERSEDES STANDARD PLAN T56
DATED MAY 1, 2006 - PAGE 232 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T56

2006 REVISED STANDARD PLAN RSP T56

2-23-09