

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	CONSTRUCTION AREA SIGNS
3-5	REVISED STANDARD PLANS

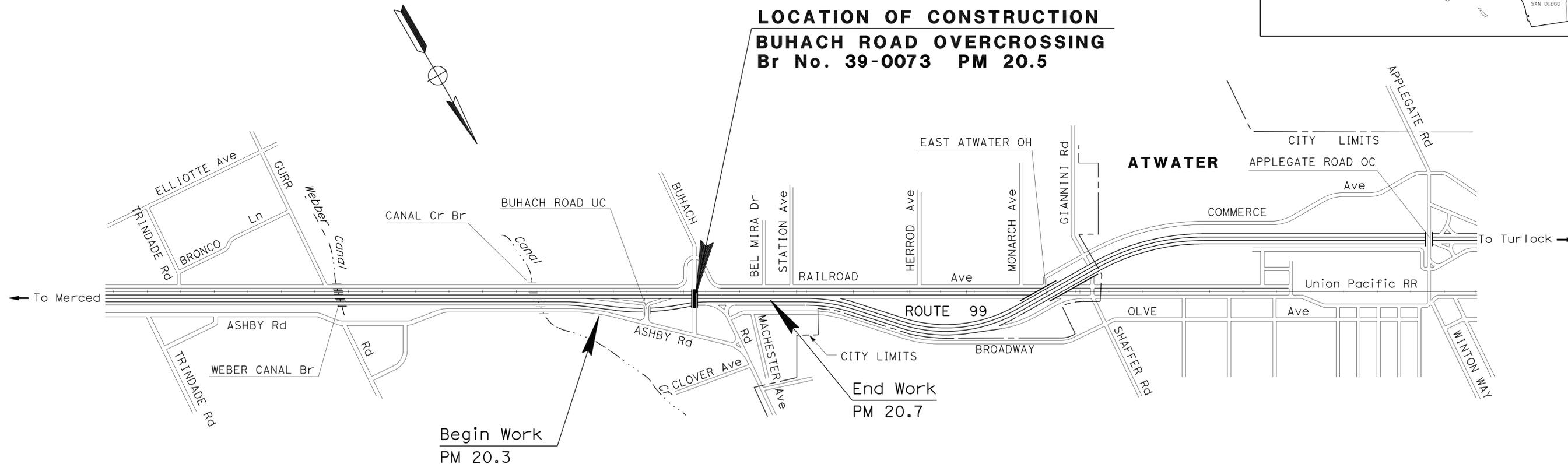
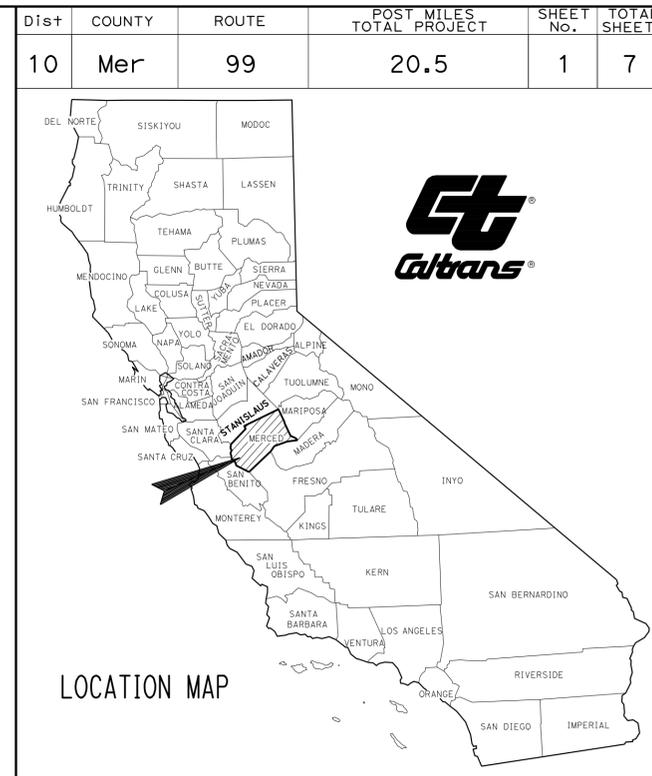
STRUCTURE PLANS

6-7 BUHACH ROAD OC Br No. 39-0073

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN MERCED COUNTY
NEAR ATWATER
AT BUHACH ROAD OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER	ALVIN MANGINDIN
DESIGN ENGINEER	ALVIN MANGINDIN

Bruce G. Sumida 11/4/09
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
 January 11, 2010
 PLANS APPROVAL DATE
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.

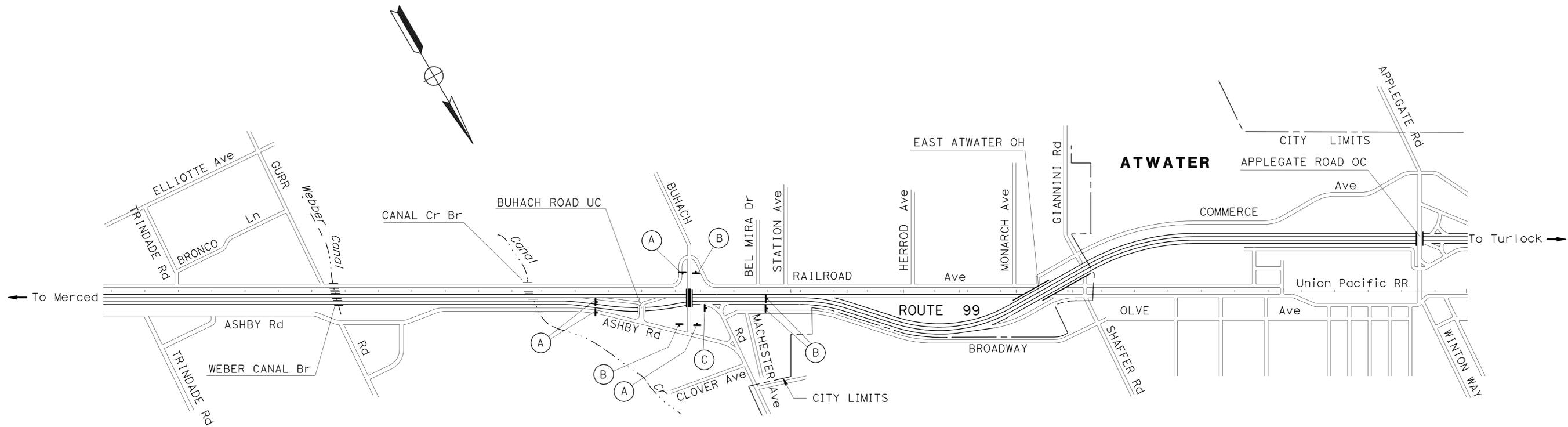
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Mer	99	20.5	2	7

Bruce G. Sumida 11/4/09
 REGISTERED CIVIL ENGINEER DATE
 1-11-10
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRUCE G. SUMIDA
 No. 51870
 Exp. 6/30/10
 CIVIL
 STATE OF CALIFORNIA

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STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	No. OF POSTS AND SIZE	No. OF SIGNS	SIGN MESSAGE
(A)	W20-1	48" x 48"	1 - 6" x 6"	4	ROAD WORK AHEAD
(B)	G20-2	36" x 18"	1 - 4" x 6"	4	END ROAD WORK
(C)	SC6-4	48" x 60"	1 - 6" x 6"	1	RAMP CLOSED

NOTE: EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

CONSTRUCTION AREA SIGNS

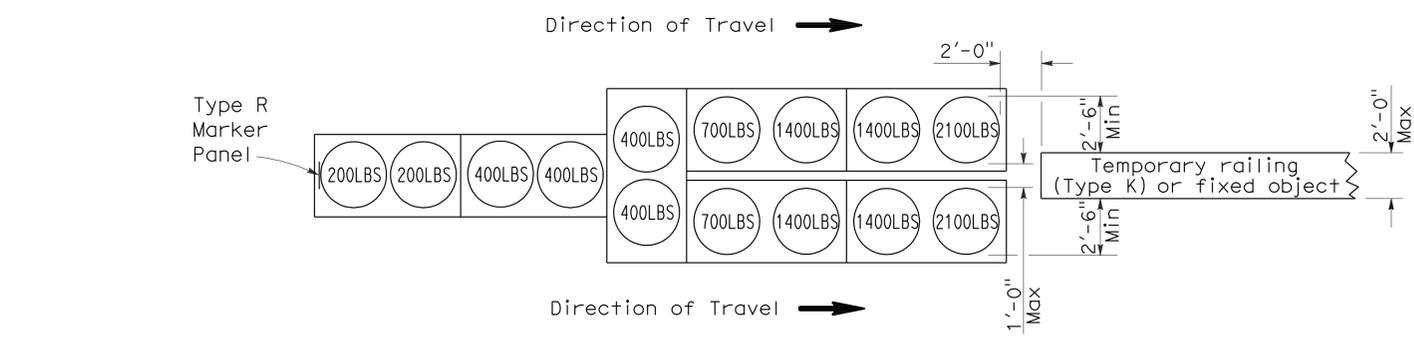
NO SCALE

CS-1

THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

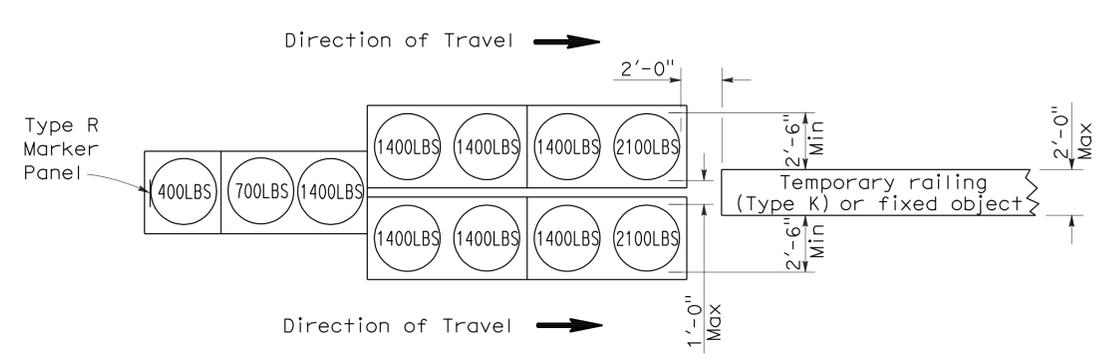
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
 MAINTENANCE
 FUNCTIONAL SUPERVISOR: ALVIN MANGINDIN
 CALCULATED/DESIGNED BY: THOA HUYNH
 CHECKED BY: THOA HUYNH
 REVISIONS: BS 10/19/09

To accompany plans dated 1-11-10



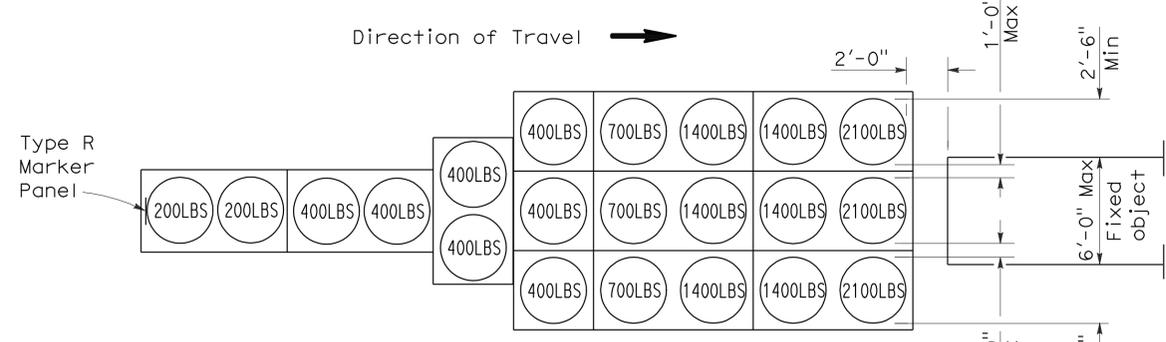
ARRAY 'TU14'

Approach speed 45 mph or more



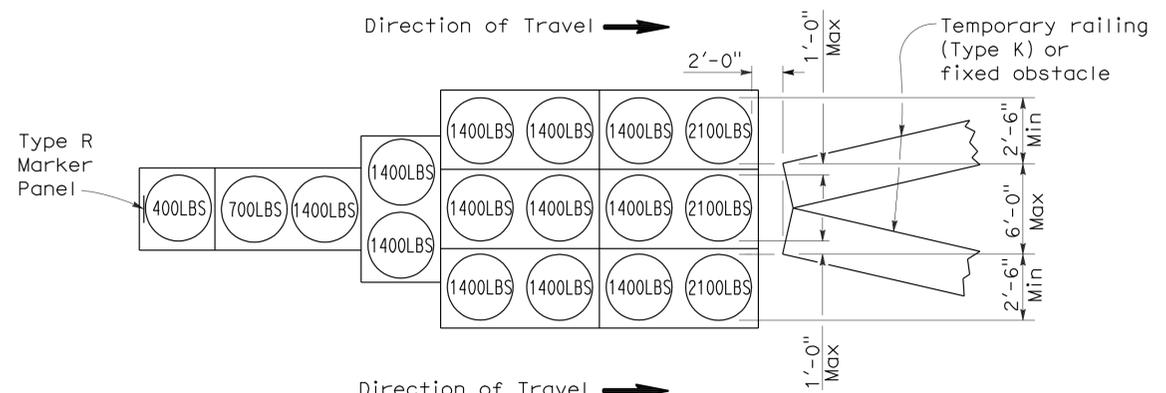
ARRAY 'TU11'

Approach speed less than 45 mph



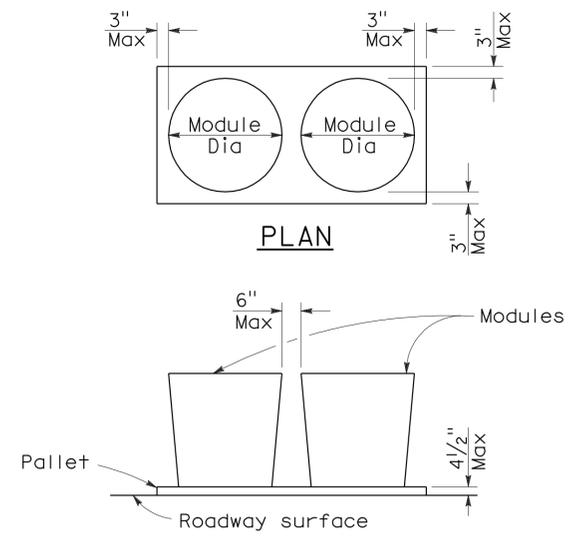
ARRAY 'TU21'

Approach speed 45 mph or more



ARRAY 'TU17'

Approach speed less than 45 mph



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.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	20.5	4	7

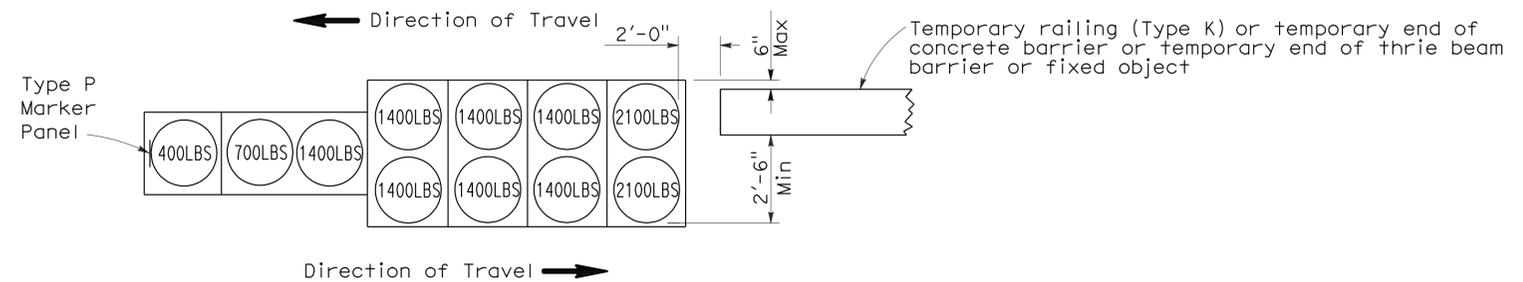
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 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.

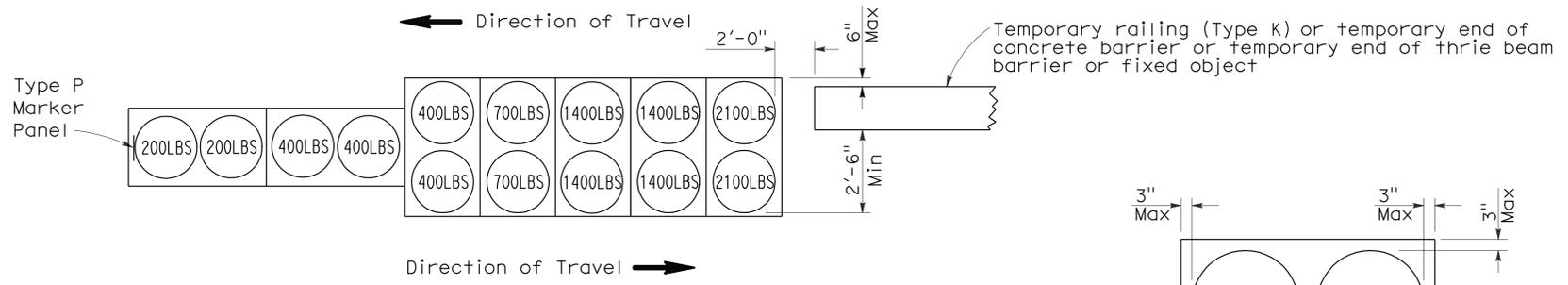
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 1-11-10



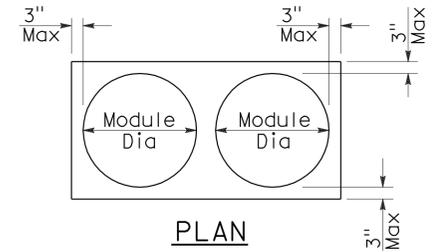
ARRAY 'TB11'

Approach speed less than 45 mph

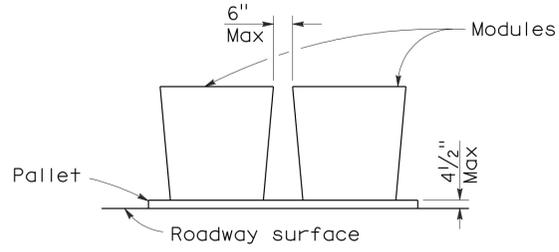


ARRAY 'TB14'

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	20.5	5	7

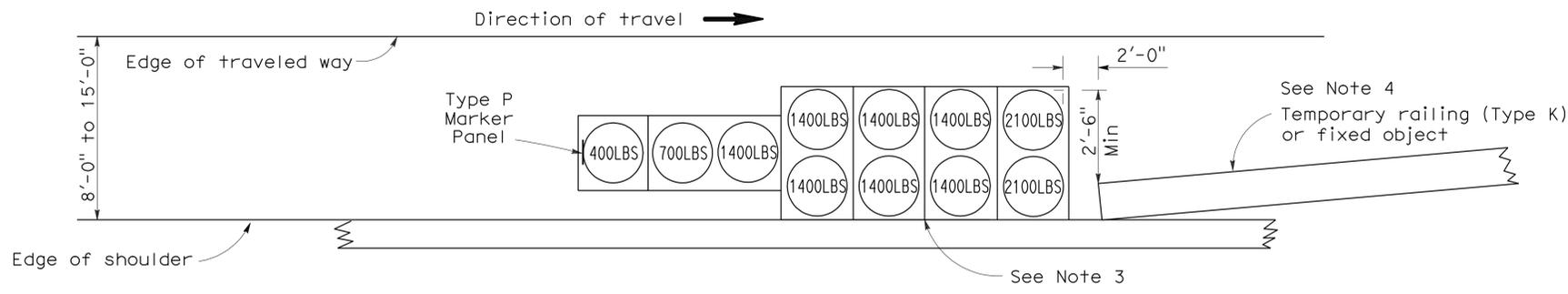
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

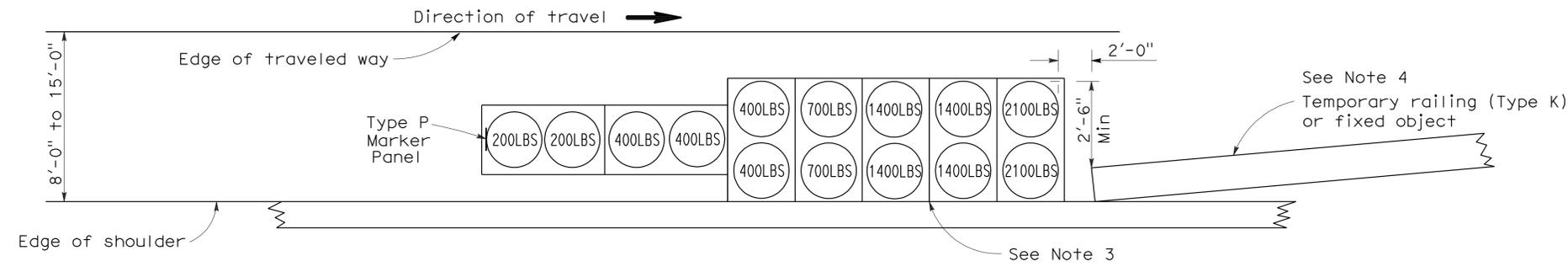
Randell D. Hiatt
REGISTERED PROFESSIONAL ENGINEER
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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To accompany plans dated 1-11-10



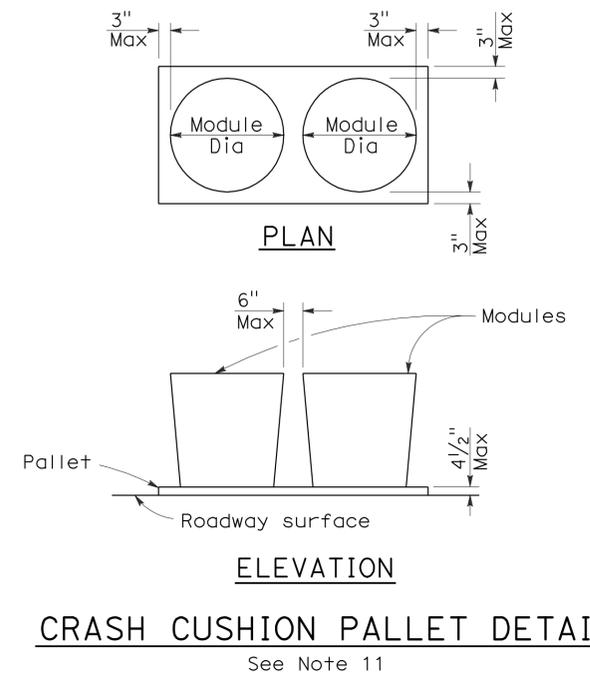
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9

NOTES:

- (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.
- All sand weights are nominal.
- 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.
- 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.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- 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.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.



CRASH CUSHION PALLET DETAIL
See Note 11

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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	20.5	6	7

REGISTERED CIVIL ENGINEER: *Quang M. Vo* DATE: 10-28-09

PLANS APPROVAL DATE: 1-11-10

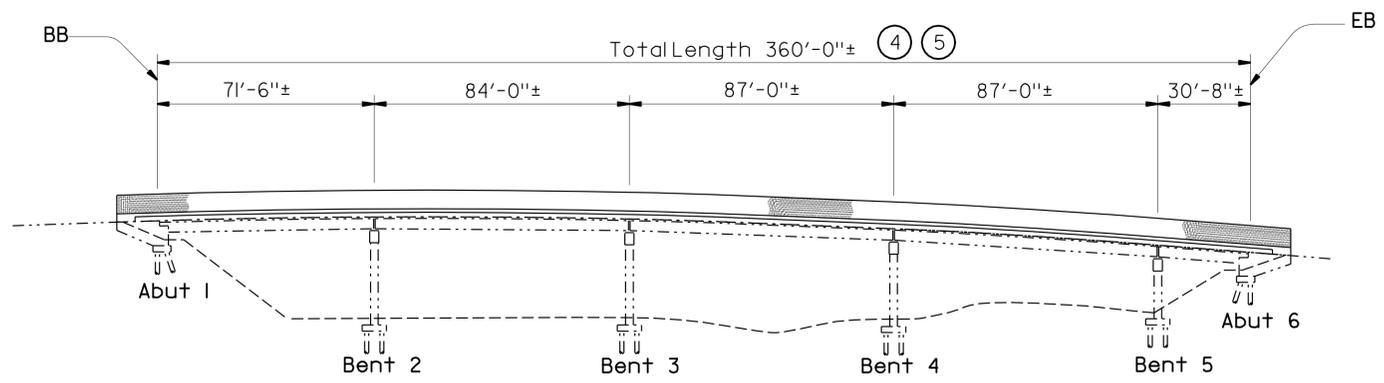
REGISTERED PROFESSIONAL ENGINEER: QUANG M. VO No. C 055211 Exp. 6-30-10 CIVIL

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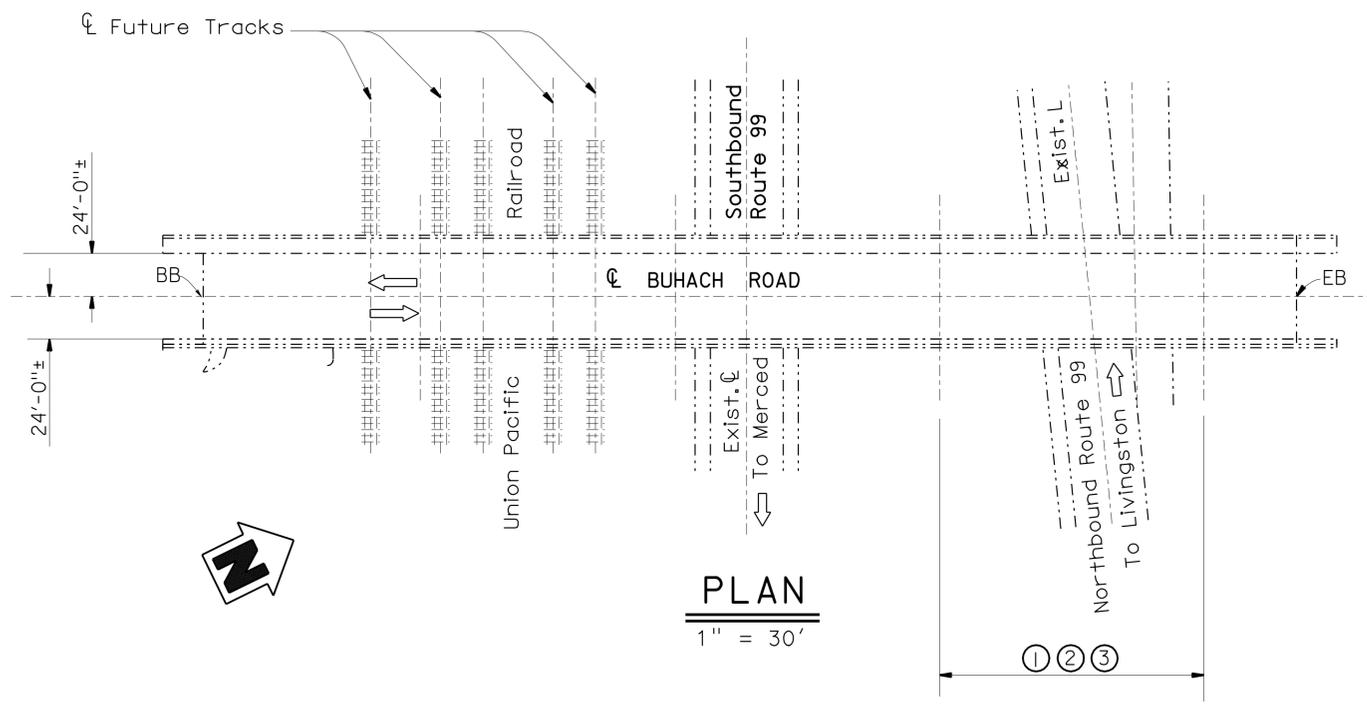
NOTES: (APPLY TO ALL SHEETS)

----- Indicates existing.

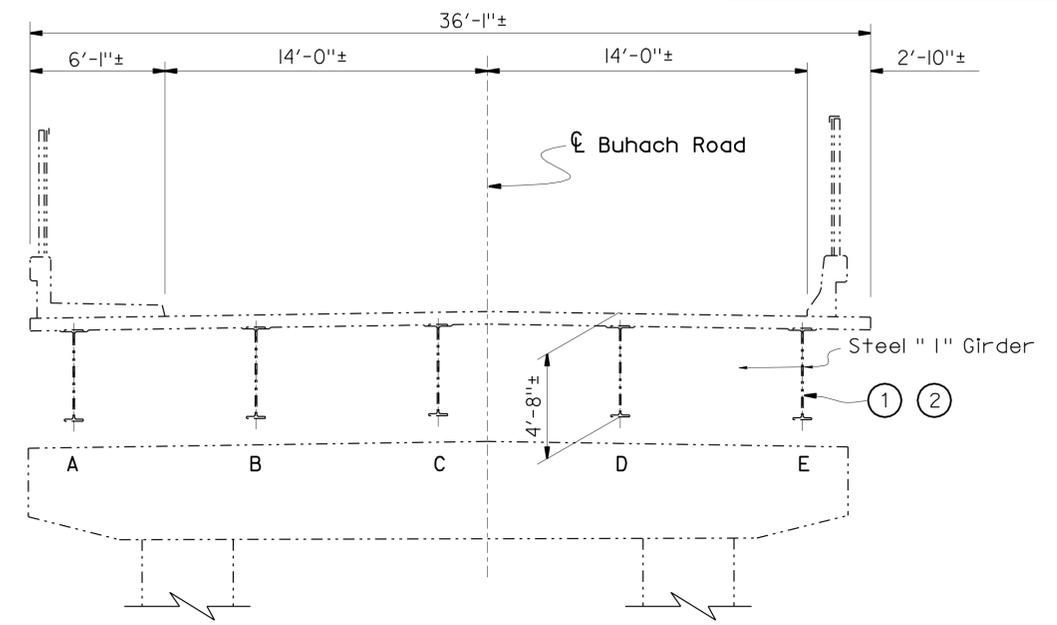
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



ELEVATION
1" = 30'



PLAN
1" = 30'



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

NOTES:

- ① Heat straighten damaged steel girder.
- ② Replace damaged stiffener, see REPAIR DETAILS NO. 1 sheet for details.
- ③ Spot blast clean and paint undercoat and finish coat of all girder areas that are heat straightened, see "REPAIR DETAILS NO. 1" sheet for limits.
- ④ Spot blast clean and paint undercoat all delaminated areas.
- ⑤ Clean and paint undercoat and finish coat of existing structural steel bridge.

STANDARD PLANS DATED MAY 2006

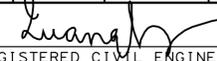
SHEET NO.	TITLE
A10A	ACRONYMS AND ABBREVIATIONS (SHEET 1 OF 2)
A10B	ACRONYMS AND ABBREVIATIONS (SHEET 2 OF 2)

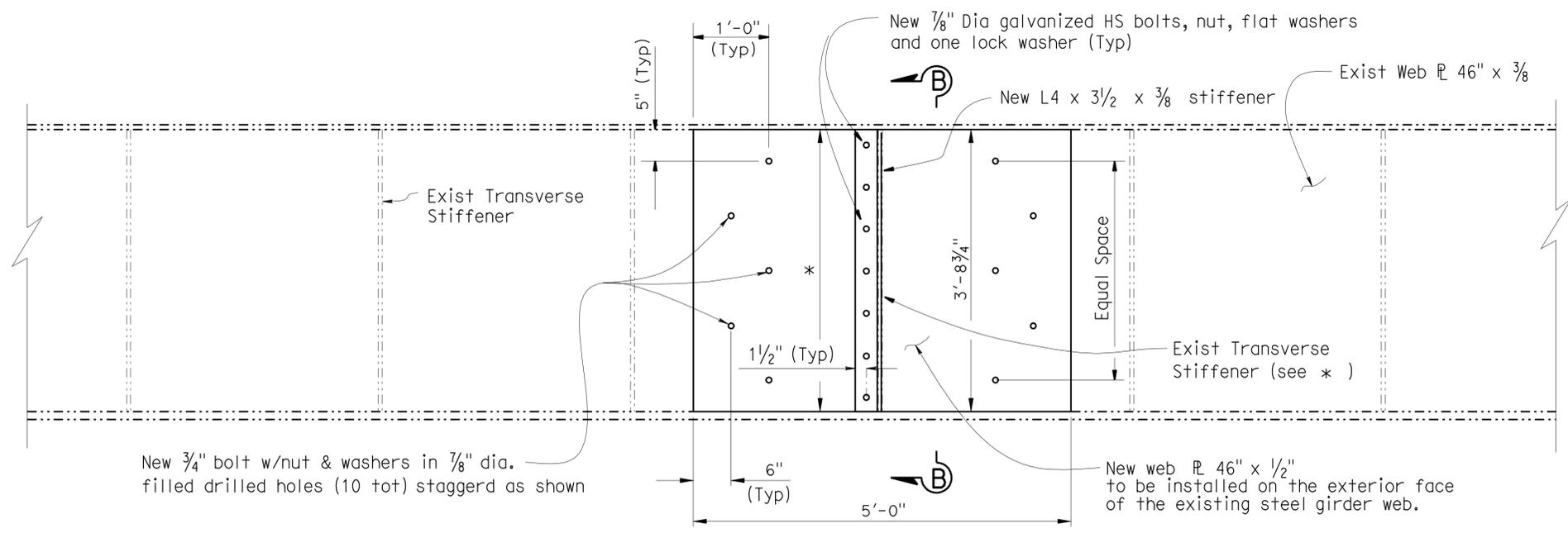
QUANTITIES
BUHACH ROAD OVERCROSSING
BRIDGE NO. 39-0073

INDEX TO PLANS

SHEET No.	TITLE	BRIDGE REMOVAL (PORTION)	LUMP SUM
1	GENERAL PLAN	STRUCTURAL STEEL (BRIDGE)	450 LB
2	REPAIR DETAILS NO. 1	HEAT STRAIGHTEN STEEL GIRDER	LUMP SUM
		CLEAN STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP SUM
		PAINT STRUCTURAL STEEL (EXISTING BRIDGE)	LUMP SUM
		CLEAN AND PAINT STRUCTURAL STEEL	LUMP SUM
		SPOT BLAST CLEAN AND PAINT UNDERCOAT	2,130 SQFT
		WORK AREA MONITORING	LUMP SUM

 DESIGN ENGINEER 10-28-09	DESIGN BY: Quang Vo	CHECKED: Don Acoba	LAYOUT BY: David Kish	CHECKED: Quang Vo	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO.: 39-0073	BUHACH ROAD OVERCROSSING (REPAIR) GENERAL PLAN
	DETAILS BY: David Kish	CHECKED: Don Acoba	BY: Iwa Huang	PLANS AND SPECIFICATIONS COMPARED: Iwa Huang		POST MILE: 20.52	
QUANTITIES BY: Quang Vo				CHECKED: Don Acoba	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3		DISREGARD PRINTS BEARING EARLIER REVISION DATES: 7-06-09 7-10-09 8-24-09 8-26-09
STRUCTURES MAINTENANCE GENERAL PLAN & DETAIL SHEET (ENGLISH) (REV. 10/17/07)					CU 10 EA OT8801	SHEET 1 OF 2	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	20.5	7	7
			10-28-09	DATE	
REGISTERED CIVIL ENGINEER			DATE		
1-11-10			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.					
					



New 3/4" bolt w/nut & washers in 7/8" dia. filled drilled holes (10 tot) staggered as shown

Note: Existing damaged intermediate stiffeners, total (1) to be removed and replaced.

PARTIAL GIRDER ELEVATION

1" = 1'

NOTES:

- ① Indicates Heat straighten damaged steel girders.
- ② Indicates remove and replace damaged intermediate stiffener
- * Approximate location weld lengths to be ground flush without damage to the existing girder. All ground flush weld areas shall have 2 undercoats of paint applied before finished paint.

GENERAL NOTES LOAD FACTOR DESIGN

DESIGN: BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO with Interims and Revisions by CALTRANS)

DEAD LOAD: Includes 35 psf for future wearing surface.

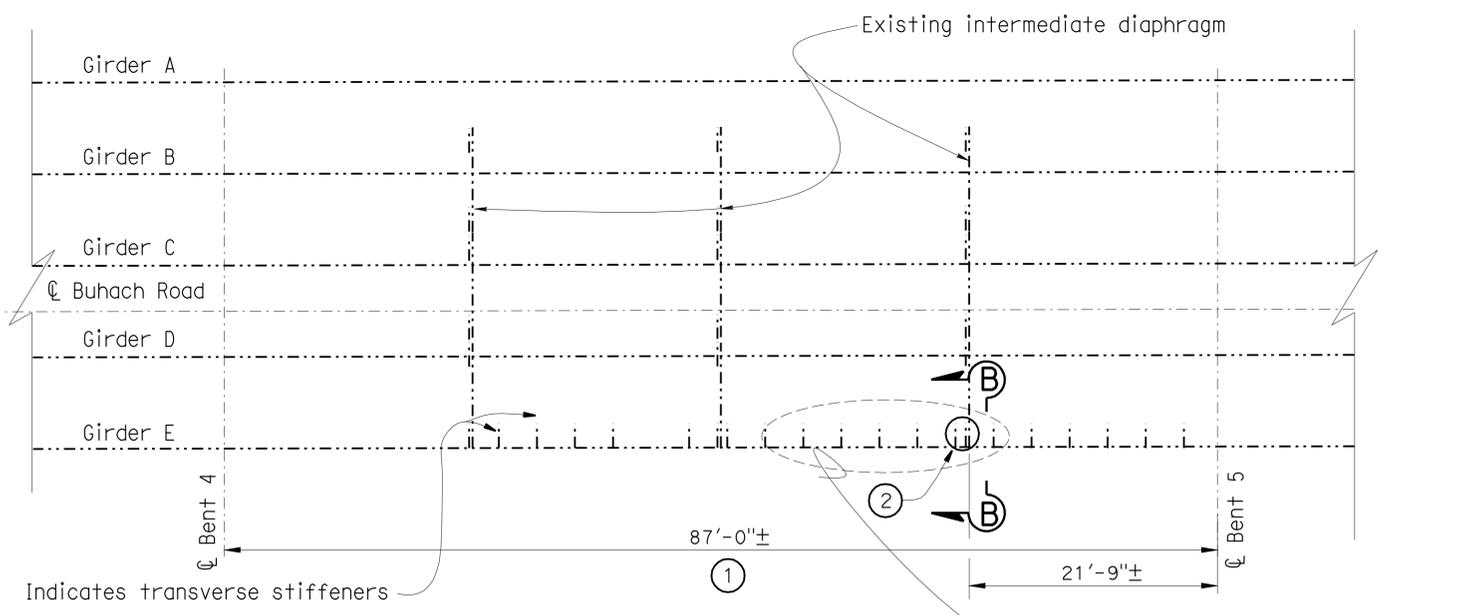
LIVE LOADING: HS20-44 and alternative

REINFORCED CONCRETE: $f_y = 60,000$ psi
 $f'_c = 3,250$ psi
 $n = 9$
Transverse Deck Slabs (Working Stress Design)
 $f_s = 20,000$ psi
 $f_c = 1,200$ psi
 $n = 10$

STRUCTURAL

STEEL: $f_y = 50,000$ psi

HS THREADED BOLTS : ASTM: A325, Type I

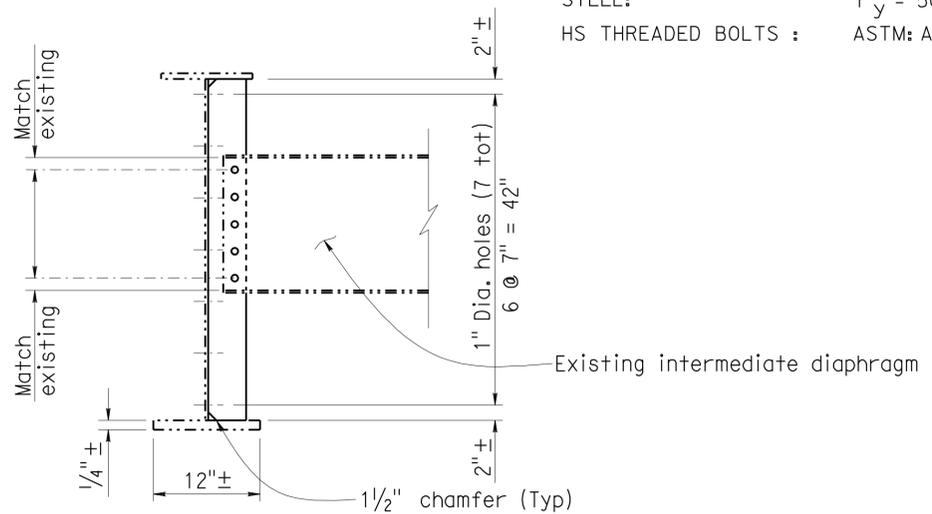


Pay limits for repair of damaged girder

See "PARTIAL GIRDER ELEVATION"

PARTIAL GIRDER LAYOUT

1/8" = 1'



SECTION B-B

1" = 1'

DESIGN	By	Quang Vo	CHECKED	Don Acoba	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO.	39-0073	BUHACH ROAD OVERCROSSING (REPAIR) REPAIR DETAILS NO. 1		
	DETAILS	By	D. Kish / N. Kelly	CHECKED			Don Acoba	POST MILE		20.52	
	QUANTITIES	By	Quang Vo	CHECKED			Don Acoba	CU 10604 EA 0T8801		DISREGARD PRINTS BEARING EARLIER REVISION DATES	<table border="1"> <tr> <td>7-06-09</td> <td>7-10-09</td> <td>7-16-09</td> <td>8-24-09</td> </tr> </table>
7-06-09	7-10-09	7-16-09	8-24-09								
STRUCTURES MAINTENANCE GENERAL PLAN & DETAIL SHEET (ENGLISH) (REV. 10/17/07)					ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	REVISION DATES		SHEET 2 OF 2		