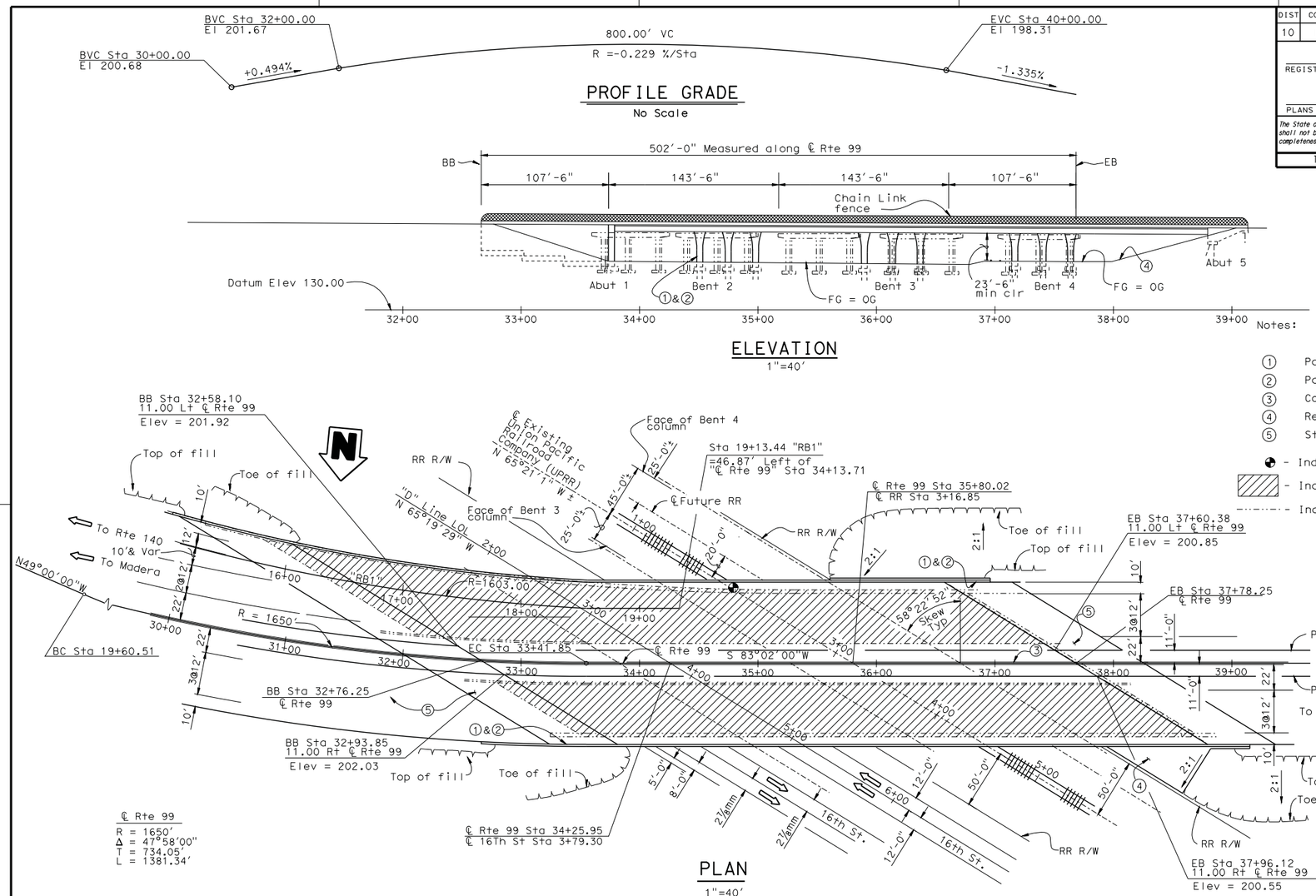

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
10	Mer	99	13.9 / 14.4		

X
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Keith Stillmukes — No. 68878 — Exp. 9/30/09 — CIVIL — STATE OF CALIFORNIA

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DESIGN	BY Keith Stillmunkes	CHECKED Sujan Talukder	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE			
DETAILS	BY Yingjue Feng	CHECKED Sujan Talukder	LAYOUT	BY Keith Stillmunkes	CHECKED Sujan Talukder		
QUANTITIES	BY X	CHECKED X	SPECIFICATIONS	BY X	PLANS AND SPECS COMPARED X		

X
DESIGN ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

CU 10
EA 481001

BRIDGE NO.	EAST MERCED OVERHEAD (REPLACE)
39-0241	
POST MILE 14.10	RAILROAD SUBMITTAL NO. 1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

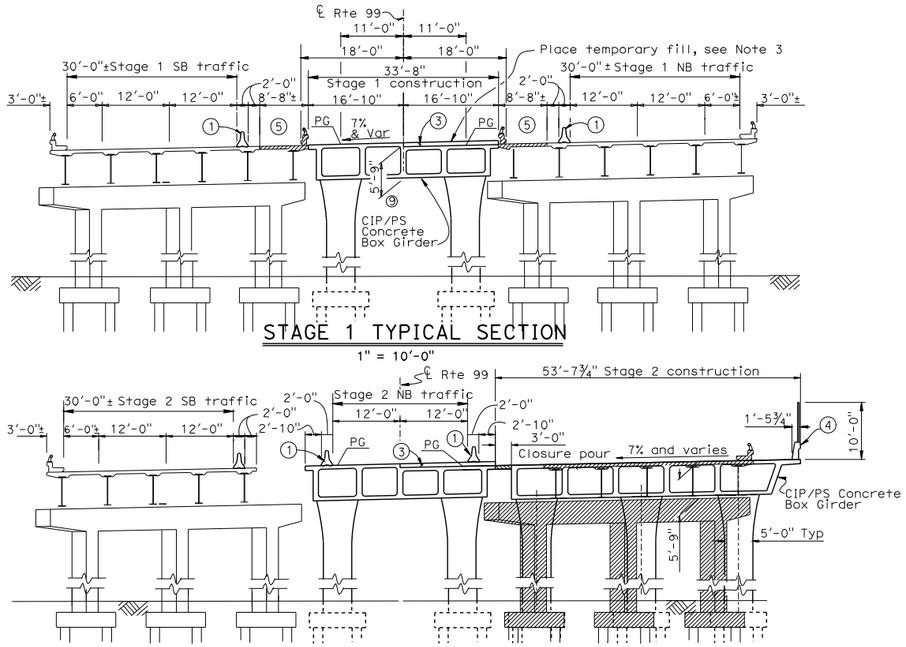
REVISION DATES										SHEET	OF
05-27-09										1	X

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => rr39-0241-a-gp1.dgn

USERNAME => s136697 DATE PLOTTED => 18-JUN-2009 TIME PLOTTED => 14:30

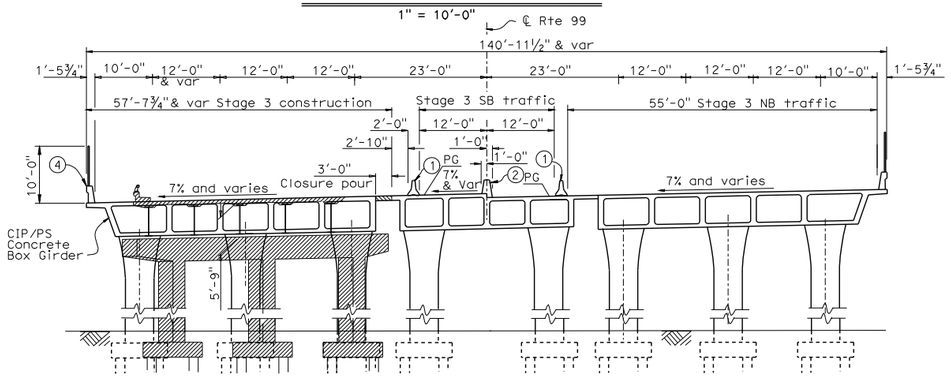


STAGE 1 TYPICAL SECTION

1" = 10'-0"

STAGE 2 TYPICAL SECTION

1" = 10'-0"



STAGE 3 TYPICAL SECTION

1" = 10'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
10	Mer	99	13.9 / 14.4		

REGISTERED CIVIL ENGINEER — X — DATE

REGISTERED PROFESSIONAL ENGINEER — Keith Stillmukes — No. 68878 — Exp. 9/30/09 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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Notes:

1. Temporary Rail Type K anchored to bridge deck, see Road Plans.
2. Concrete Barrier Type 60A Modified,to be placed after stage 3 construction is complete.
3. PCC overlay, Max height = 8", to be removed after stage 3 construction is complete.
4. Concrete Barrier Type 736 (Mod) with Chain Link Railing Type 7.
5. Removal limits, stage 1 construction.

▨ - Indicates limits of removal

▨ - Indicates closure pour

Railroad Traffic

Falsework opening required over UPRR (Name of RR)

Vertical Clearance	Horizontal Clear Width
21'-0"	24'-0"

DESIGN	BY Keith Stillmunkes	CHECKED Sujan Talukder	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE			
DETAILS	BY Yingjue Feng	CHECKED Sujan Talukder	LAYOUT	BY Keith Stillmunkes	CHECKED Sujan Talukder		
QUANTITIES	BY X	CHECKED X	SPECIFICATIONS	BY	PLANS AND SPECS COMPARED X		

X
DESIGN ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 7

CU 10
EA 48100K

BRIDGE NO.	EAST MERCED OVERHEAD (REPLACE)
39-0241	
POST MILE 14.10	RAILROAD SUBMITTAL NO. 2

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES									SHEET	OF
05-27-09									2	X

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

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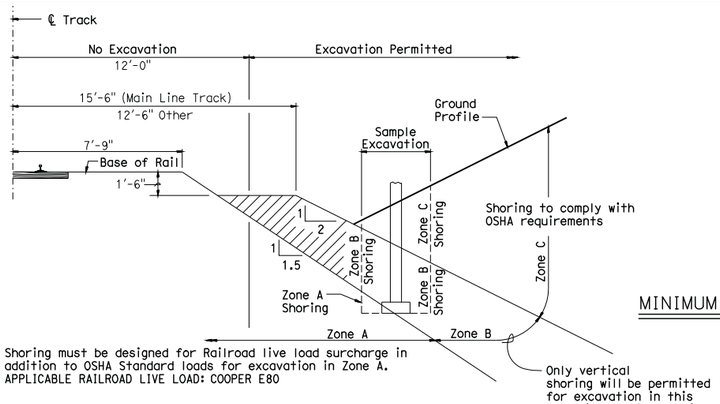
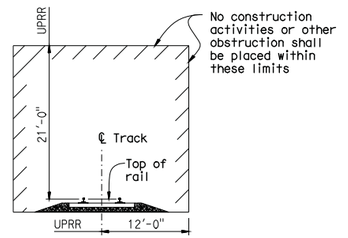
GENERAL SHORING NOTES:

1. All dimensions are measured perpendicular to ℄ Track.
2. Prior to commencing any work, the contractor shall submit for approval by the Railroad detailed plans indicating the nature and extent of the track protection shoring proposed. The contractor shall install the temporary shoring system per the approved plans. Design of the temporary shoring system to comply with current RAILROAD GUIDELINES FOR TEMPORARY SHORING.
3. For excavations which encroach into Zone A or B, shoring plans shall be accompanied by design calculations. Plans and calculations must be signed and stamped by a Professional Engineer registered in the state of California.

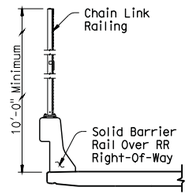


GENERAL EXCAVATION ZONES



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

(NORMAL TO RAILROAD)



TYPICAL FENCE ON BARRIER DETAIL

THE FOLLOWING INFORMATION PER RAILROAD GUIDELINES SHALL BE PROVIDED ON THE BRIDGE PLANS

Railroad General Plan (GP):

1. Centerline of bridge and/or centerline of project.
2. Track layout and limits of railroad right-of-way with respect to centerline of main lines.
3. Future tracks, access roadways and identify the existing tracks as main, siding or spur etc.
4. Location of minimum vertical clearance.
5. Minimum horizontal clearance at right angle from the centerlines of the nearest existing or future track to the face of obstruction such as substructure above grade or foundation below grade.
6. Horizontal spacing at right angle between the centerlines existing and/or future tracks.
7. Limits of shoring and minimum distance at right angle from the centerline of the nearest tracks.
8. Toe of slope and/or limits of retaining wall.
9. Railroad Milepost and direction of increasing Milepost.
10. Limits of barrier rail and fence combination over the railroad right-of-way.
11. Depth of foundation below bottom of tie.
12. Existing and proposed ground line & roadway profile.
13. Type of slope paving.
14. Total width of superstructure.
15. Width of shoulder and/or sidewalk.
16. Top and bottom of pier protection wall elevation relative to top of the rail elevation and cross-sectional dimensions.
17. Top of rail elevation information as shown in the table for all tracks with permanent vertical clearance of less than 24 feet. (This information is only required for new structures)

Foundation Plan:

1. Existing contours.
2. All existing facilities and utilities.
3. Direction of flow for all drainage system within the project limits.

RAILROAD GENERAL NOTES:

1. Railroad requires review and approval of all submittals for shoring, demolition, erection and falsework. No work shall be allowed prior to written railroad approval. Allow a minimum of four weeks for the review and approval of each submittal unless specified otherwise in the contract special provisions. Specific conditions or complex scope of submittals may substantially increase the time for review.
2. The proposed grade separation project shall not increase the quantity and/or characteristics of the flow in the railroad 's ditches and/or drainage structures. Deck drains over the railroad right of way shall not be allowed. The flow from the deck shall be contained and directed away from the railroad drainage system.
3. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the railroad authority for approval prior to beginning any construction activities.
4. The contractor must submit a proposed method of erosion and sediment control within the railroad right-of-way and have the method approved by the railroad.
5. All shoring systems that impact the railroad's operations and/or supports the railroad's embankment shall be designed and constructed per current Railroad Guidelines for Temporary Shoring.
6. All demolitions within the railroad right-of-way and/or demolition that may impact the railroad's tracks or operations shall be in compliance with the current Railroad Demolition Guidelines.
7. All erection over the railroad right-of-way shall be designed such that there is no interruption to the railroad's normal operation. Any train traffic interruption shall require prior railroad approval in writing.
8. All construction phases that may impact the railroad's normal operation shall be designed to cause no interruption to the railroad operation. Any train traffic interruption closure shall require prior railroad approval in writing.
9. All falsework clearances shall comply with the minimum construction clearances envelope.
10. All permanent clearances shall be verified prior to completion of the project.
11. For all railroad coordination during construction refer to the railroad's special provisions within the Contract Special Provisions documents and the approved Construction and Maintenance (C & M) Agreement.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	Mer	99	13.9 / 14.4		

REGISTERED ENGINEER - CIVIL

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SPECIAL DETAIL

RAILROAD SUBMITTAL NO. 3

MINIMUM RAILROAD REQUIREMENTS FOR OVERHEAD STRUCTURES

EAST MERCED OVERHEAD (REPLACE)

BRIDGE NO. 39-0241

POST MILE 14.10

STANDARD DRAWING

FILE NO. xs11-010-X

APPROVED BY RAJ MANGAT (RESPONSIBLE TECHNICAL SPECIALIST)

APPROVAL DATE 02-01-08

RELEASED BY SHANNON POST (RESPONSIBLE OFFICE CHIEF)

RELEASE DATE - -

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

CU 10
EA 481001

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. 01/11/08)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

SHEET OF

USERNAME => s136697

rr_xs11-010.dgn

DATE PLOTTED => 18-JUN-2009 TIME PLOTTED => 14:30

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
10	Mer	99	13.9 / 14.4		

REGISTERED CIVIL ENGINEER X DATE

PLANS APPROVAL DATE

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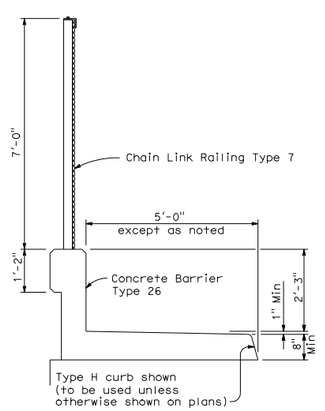

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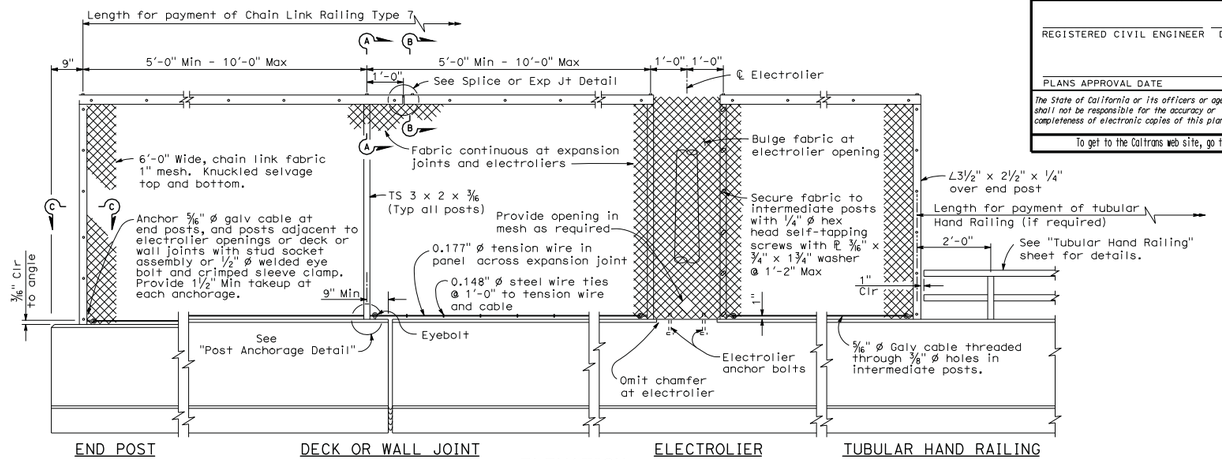

ELEVATION
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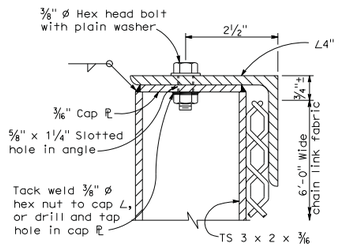
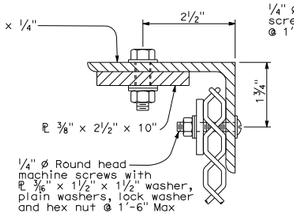


SECTION A-A



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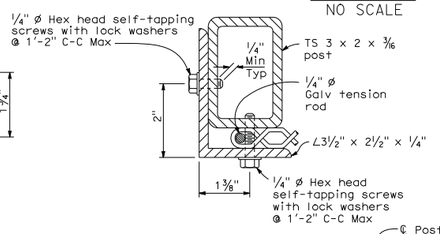

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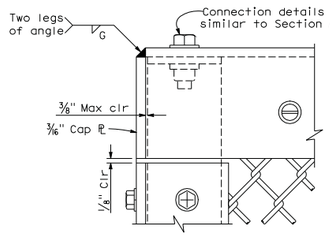

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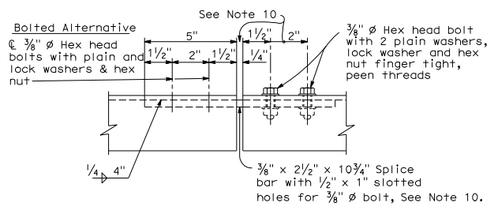

SPLICE OR EXPANSION JOINT DETAIL
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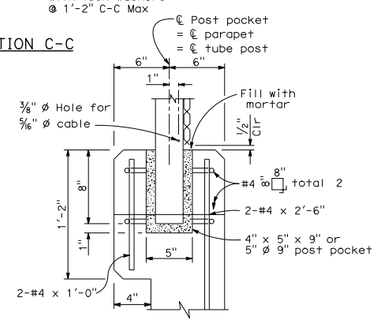

POST ANCHORAGE DETAIL
NO SCALE

NOTES:

1. Railing assembly except chain link fabric to be galvanized after fabrication.
2. Posts shall be vertical.
3. Railing shall conform to horizontal and vertical alignment. When railing is placed on a curved horizontal alignment with radius of 148'-0" or less, thread the 5/16" ø cable through 3/8" ø welded eye rods embedded 4" into the top of the concrete parapet and equally spaced to limit the midordinate distance between the 5/16" ø cable and the curve to 1" maximum. Horizontal angle shall be bent to conform to horizontal alignment if radius is 148'-0" or less and may be on 10'-0" chords if radius is over 148'-0"
4. Horizontal angle shall be continuous over not less than two intermediate posts, except that a shorter length is permitted at expansion joints, electroliers and other rail discontinuities.
5. When rail is on slope, place fabric parallel to slope.
6. Alternative details may be submitted by Contractor for Engineer's approval.
7. For details and reinforcement not shown see Standatd Plan B11-54.
8. See Project Plans for limits of Chain Link Railing Type 7.
9. Provide thimbles at all cable loops.
10. Expansion joint same dimension as expansion joint in deck or wall. Increase slotted hole length and splice bar length correspondingly.

DESIGN	BY Keith Stillmunkes	CHECKED Sujan Talukder	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO. 39-0241
DETAILS	BY Yingjue Feng	CHECKED Sujan Talukder	LAYOUT BY Keith Stillmunkes	CHECKED Sujan Talukder			POST MILE 14.10
QUANTITIES	BY X	CHECKED X	SPECIFICATIONS BY X	PLANS AND SPECS COMPARED X			

X
DESIGN ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 10
EA 481001

CHAIN LINK RAILING TYPE 7 - MODIFIED
EAST MERCED OVERHEAD (REPLACE)
RAILROAD SUBMITTAL NO. 4

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 05-28-09

REVISION DATES | SHEET 1 | OF X

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
10	Mer	99	13.9 / 14.4		

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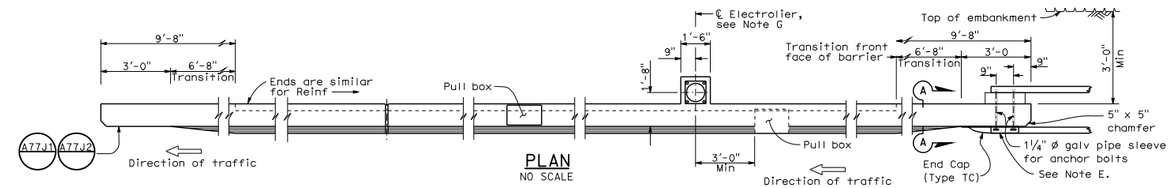

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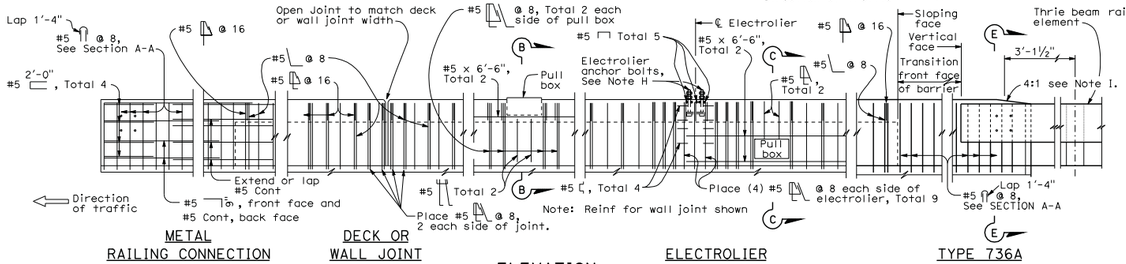
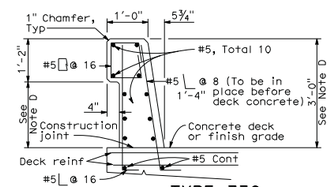
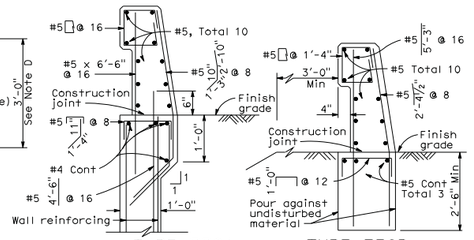


METAL RAILING CONNECTION — DECK OR WALL JOINT — ELECTROLIER (See Note F) — TYPE 736A

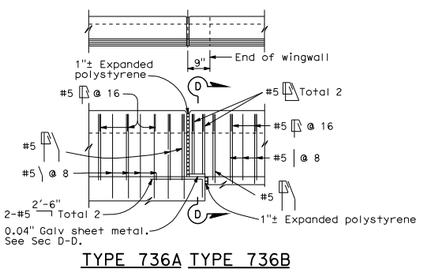
ELEVATION
NO SCALE



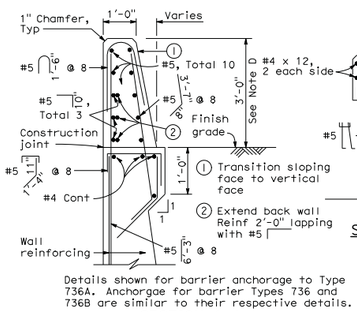
TYPE 736



TYPE 736A — TYPE 736B



TYPE 736A TYPE 736B



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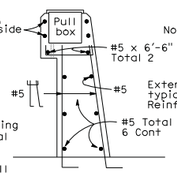

SECTION B-B
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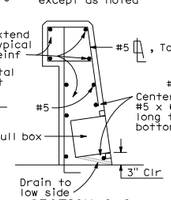
Note: Types 736A & 736B are similar to Type 736 except as noted



SECTION C-C
See Notes
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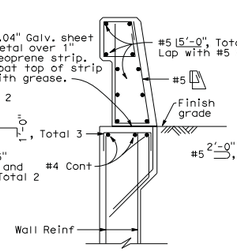

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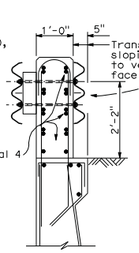

SECTION E-E
See Notes
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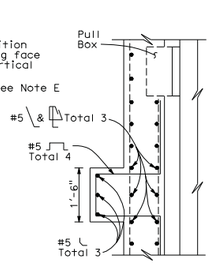

SECTION F-F
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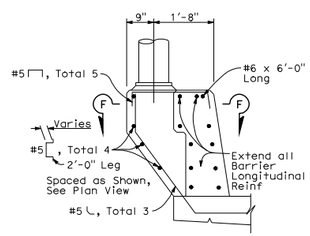

PEDESTAL ELEVATION

NOTES:

A. Walls are to be backfilled before barrier is placed.

B. Clearance to reinforcing steel in barrier to be 1", except as noted. Longitudinal reinforcement to stop at all expansion joints.

C. See Project Plans for locations of electroliers and pull boxes.

D. Dimensions may vary with roadway cross slope and with certain thickness of surfacing. See Project Plans.

E. For typical metal railing connection details not shown, see Standard Plans A77J1 and A77J2.

F. See Standard Plans ES-9A, ES-9B, ES-9C, ES-9D and ES-9E for electrical details. The maximum number of conduits in the barrier is limited to two (2) 2" conduits along with one (1) 3" conduit. When a 3" conduit is used, it is restricted to the base of the barrier.

G. For electrolier mounting details, See Standard Plans ES-6A and ES-6B.

H. Minimum concrete edge distance, to the reinforcing shown, shall be maintained. Edge distance may be adjusted to accommodate increase in concrete cover for architectural treatment.

I. Taper the top of the end of the bridge railing at 4:1 to match the top elevation of the thrie beam rail element.

DESIGN	BY Keith Stillmunkes	CHECKED Sujan Talukder	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY"; PERMIT DESIGN VEHICLE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH 7	BRIDGE NO. 39-0241
DETAILS	BY Yingjue Feng	CHECKED Sujan Talukder	LAYOUT BY Keith Stillmunkes	CHECKED Sujan Talukder			POST MILE 14.10
QUANTITIES	BY X	CHECKED X	SPECIFICATIONS BY X	PLANS AND SPECS COMPARED X			

X
DESIGN ENGINEER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 10
EA 481001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES								SHEET	OF
05-28-09								1	X

CONCRETE BARRIER TYPE 736

EAST MERCED OVERHEAD (REPLACE)

RAILROAD SUBMITTAL NO. 5

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.07-24-06)

FILE => rrb11-56.dgn

USERNAME => s136697 DATE PLOTTED => 18-JUN-2009 TIME PLOTTED => 14:31