

# **Appendix E** Barrier Design and Drainage Plans

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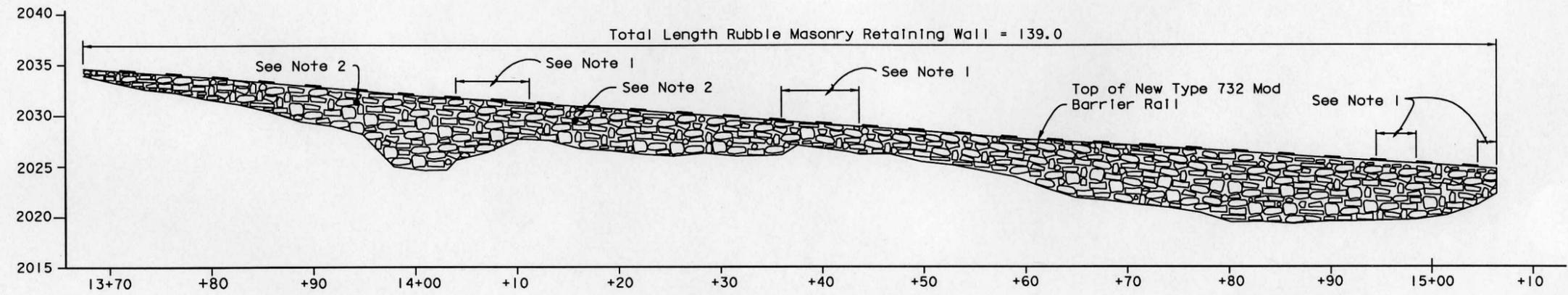
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03	ED	89			

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

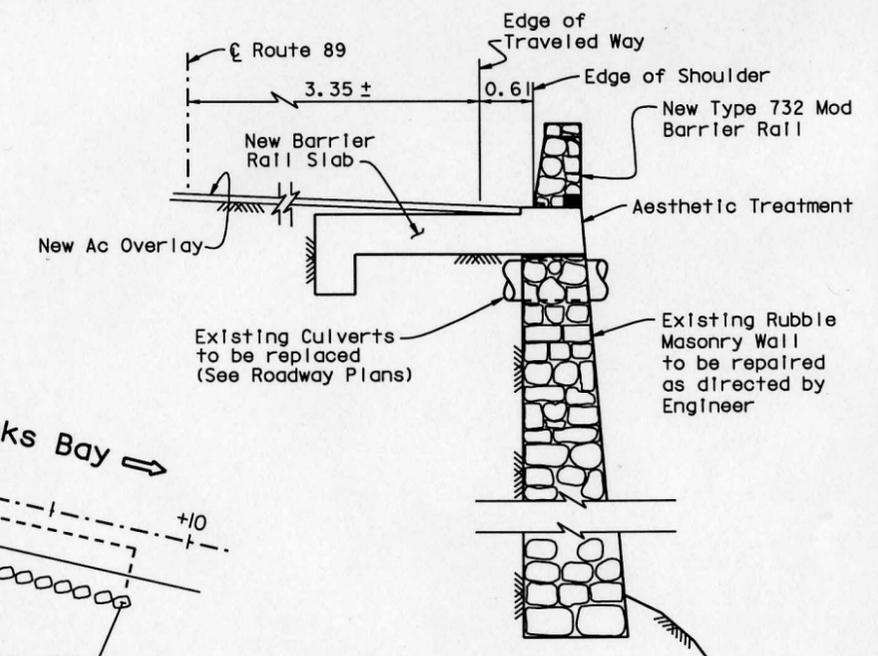
PLANS APPROVAL DATE \_\_\_\_\_

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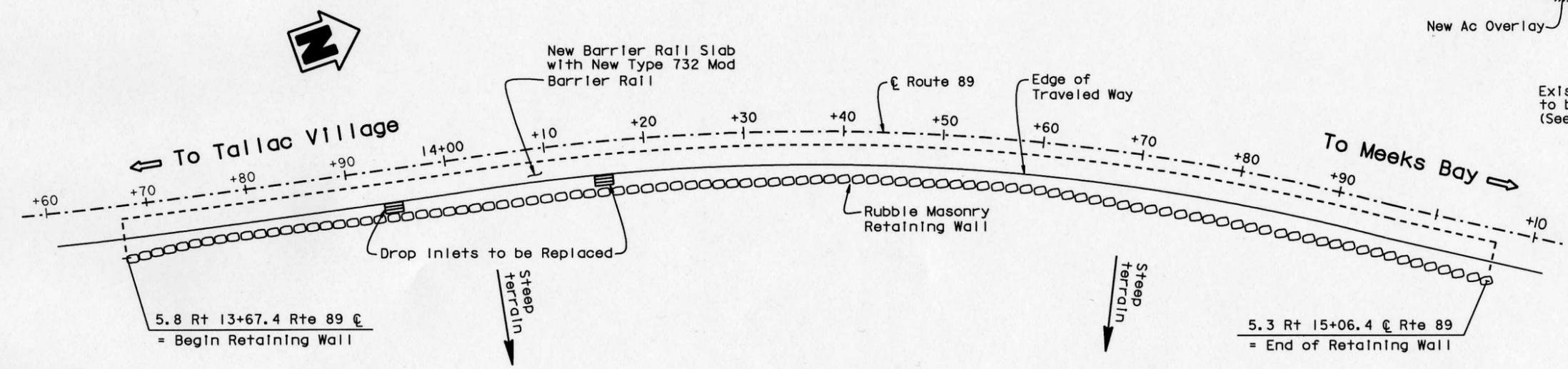
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**DEVELOPED ELEVATION**  
1:250



**TYPICAL SECTION**  
SCALE 1:40



**PLAN**  
1:250

**NOTES:**

1. Approx locations of missing portions of Walls to be replaced with salvaged rock and new type 732 Mod Barrier Rail as directed by Engineer
2. Culverts to be replaced (See Roadway Plans)



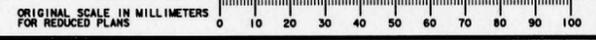
DESIGN	BY G. Slocum	CHECKED N. Nguyen	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY E. Montevirgen	CHECKED N. Nguyen	LAYOUT	BY G. Slocum
QUANTITIES	BY G. Slocum	CHECKED N. Nguyen	SPECIFICATIONS	BY G. Slocum

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
STRUCTURE DESIGN  
DESIGN BRANCH 2

BRIDGE NO.	EMERALD BAY ROCK BARRIER RAIL (REPLACE)
KILOMETER POST	26.61/26.77
<b>GENERAL PLAN</b>	

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN



CU 03  
EA 4C2501  
FILE => aagp.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
	10-09-04 10-20-04 10-12-04		

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

USERNAME => t3banner DATE PLOTTED => 24-DEC-2004 TIME PLOTTED => 08:30

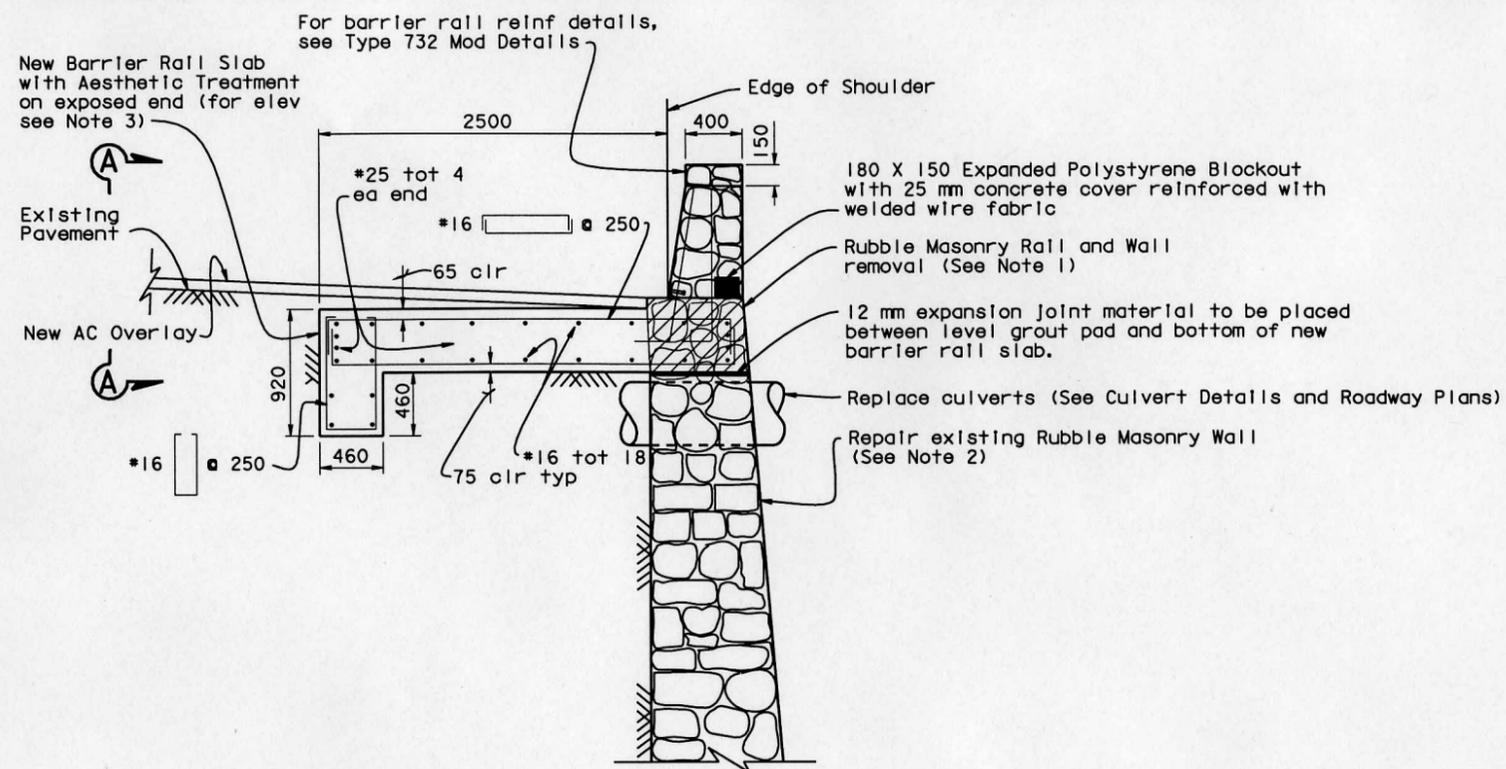
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03	ED	89			

REGISTERED CIVIL ENGINEER DATE \_\_\_\_\_

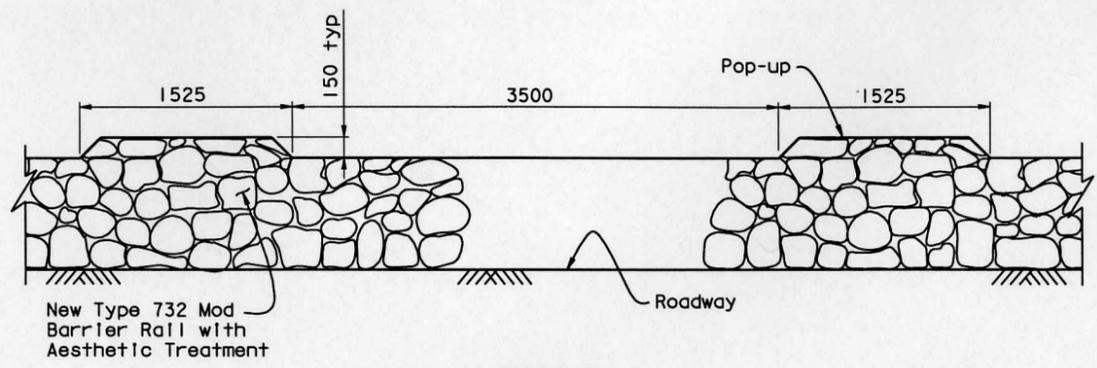
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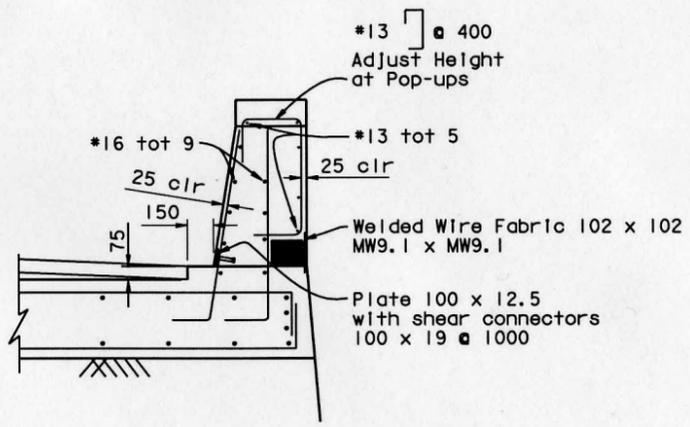
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**BARRIER SLAB DETAILS**  
SCALE 1:25



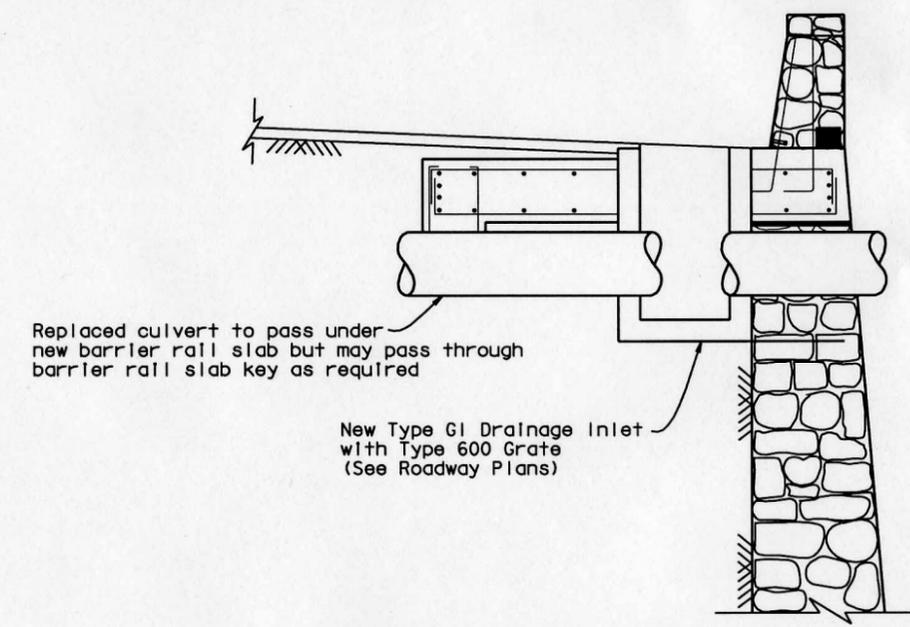
**VIEW A-A**  
SCALE 1:25



**TYPE 732 MOD DETAILS**  
SCALE 1:20

**NOTES:**

- Existing rubble masonry barrier rail and wall to be removed to an elevation 50 mm below bottom of new barrier slab. The top of remaining wall to be leveled with a smooth grout pad. Removed rocks to be salvaged for use in wall repairs.
- Rubble masonry wall repair to be directed by an Engineer in field:
  - Replace missing rocks or inappropriate size rocks from previous repairs per prior agreement with local agencies.
  - Re-grout joints between rocks.
- Barrier Rail Slab to be poured level in transverse direction and follow Edge of Shoulder profile in longitudinal direction. (Slab at Edge of Shoulder to be flush with exist pavement.)
- All exposed concrete surfaces to receive aesthetic treatment to match existing rubble masonry barrier rail.
- All reinforcement to be post-fabricated epoxy coated rebar.



**CULVERT DETAILS**  
No Scale



DESIGN	BY G. Siocum	CHECKED N. Nguyen
DETAILS	BY E. Montevirgen	CHECKED N. Nguyen
QUANTITIES	BY G. Siocum	CHECKED N. Nguyen

STATE OF CALIFORNIA	
DEPARTMENT OF TRANSPORTATION	
DIVISION OF ENGINEERING SERVICES	
STRUCTURE DESIGN	
BRIDGE NO.	EMERALD BAY ROCK BARRIER RAIL (REPLACE)
KILOMETER POST	26.61/26.77
DESIGN BRANCH 2	
CU 03	EA 4C2501

BRIDGE NO.	EMERALD BAY ROCK BARRIER RAIL (REPLACE)
KILOMETER POST	26.61/26.77
DESIGN BRANCH 2	
CU 03	EA 4C2501

EMERALD BAY ROCK BARRIER RAIL (REPLACE)	
BARRIER AND BARRIER SLAB DETAILS	
BRIDGE NO.	EMERALD BAY ROCK BARRIER RAIL (REPLACE)
KILOMETER POST	26.61/26.77
DESIGN BRANCH 2	
CU 03	EA 4C2501

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FILE => abbsd.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
10-12-04		

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

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 NORTH REGION DESIGN AND ENGINEERING  
 SERVICES - HYDRAULICS

**Caltrans**

PROJECT ENGINEER  
 ROBERT PETERSON

CALCULATED/  
 DESIGNED BY

CHECKED BY

DATE

REVISED BY

DATE REVISED



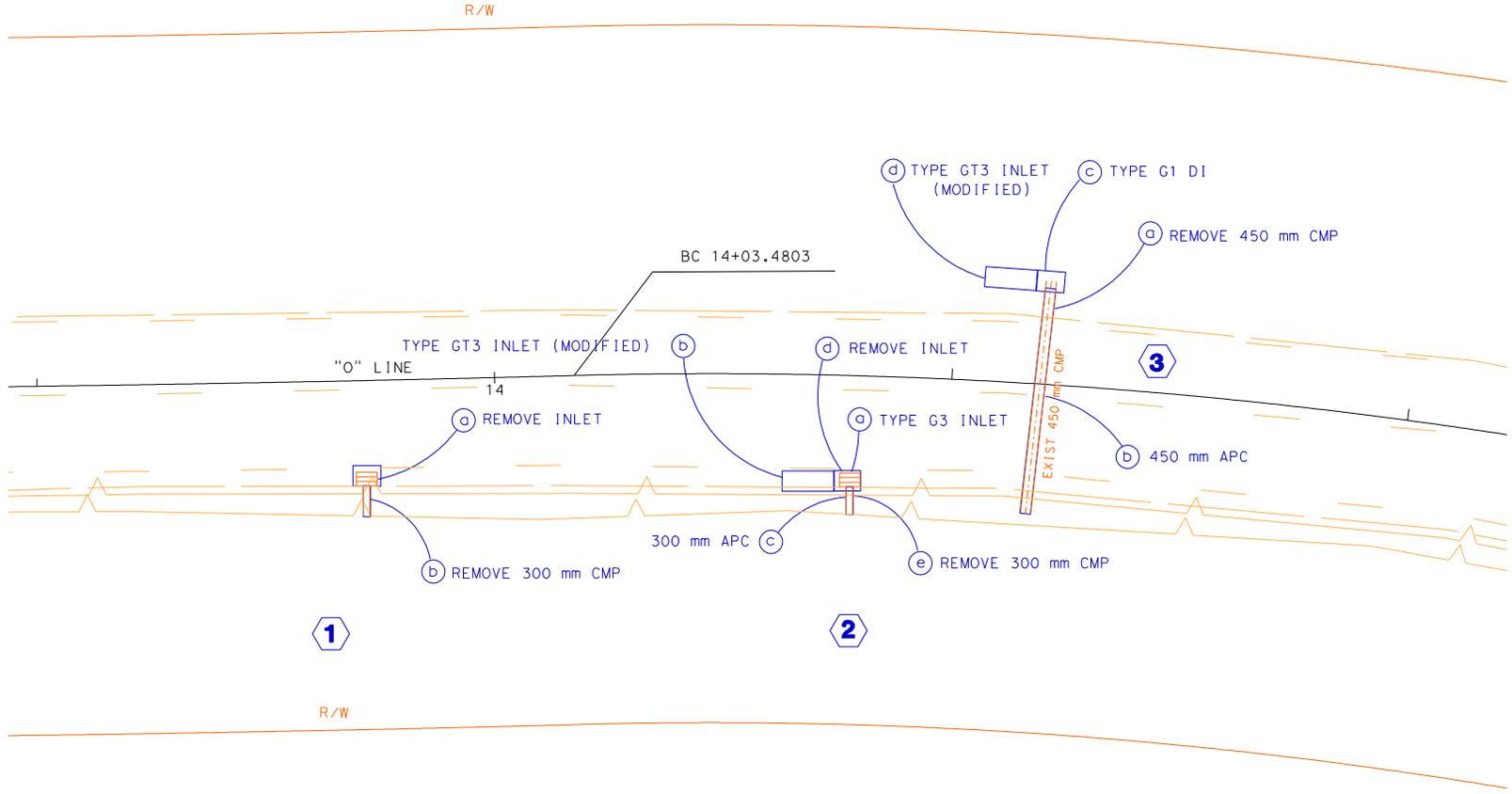
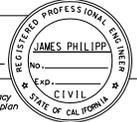
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REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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**DRAINAGE PLAN**

SCALE 1:100

D-1

RELATIVE BORDER SCALE 1:5 IN MILLIMETERS

0 20 40 60 80

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 DGN FILE => #REQUEST

CU 03312

EA 4C2500

LAST REVISION DATE PLOTTED => DATE  
 00-00-00 TIME PLOTTED => TIME

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2026		2034		2032	
2030		2030		2030	
2028		2028		2028	
2026		2026		2026	

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NORTH REGION DESIGN AND ENGINEERING  
SERVICES - HYDRAULICS

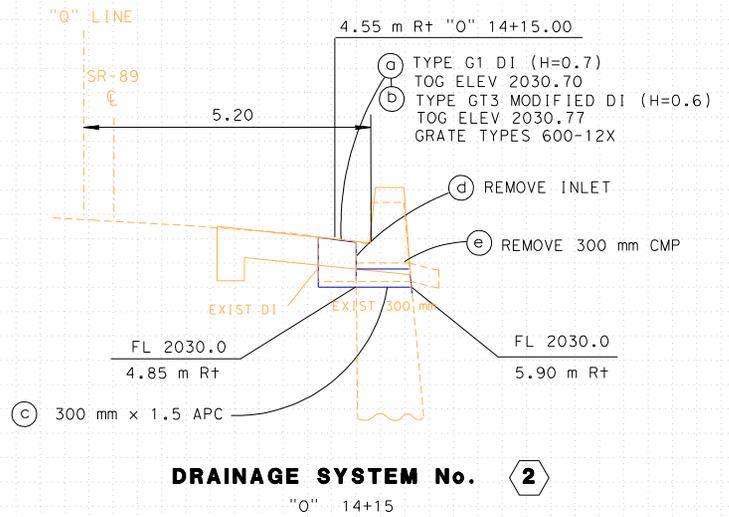
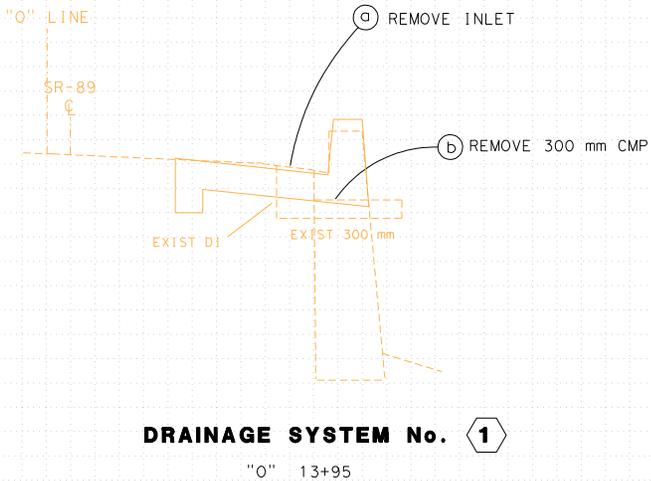
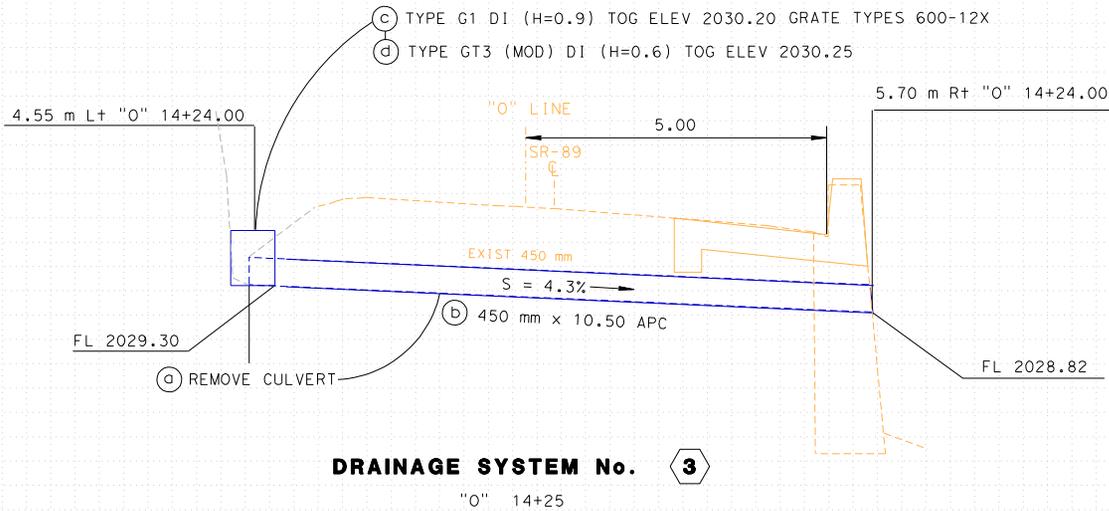
PROJECT ENGINEER  
ROBERT PETERSON

CALCULATED/  
DESIGNED BY

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DATE

REVISOR



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**DRAINAGE PROFILES**  
SCALE 1:200

**D-2**

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	89	26.79/26.94	2	4

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PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
JAMES PHILIPP  
No. 10101  
Exp. 12/31/2010  
CIVIL  
STATE OF CALIFORNIA

RELATIVE BORDER SCALE  
1:5 IN MILLIMETERS

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DGN FILE => #REQUEST

CU 03312

EA 4C2500

LAST REVISION DATE PLOTTED => DATE  
00-00-00 TIME PLOTTED => TIME

DATE: 05-Nov-04 13:24  
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 NORTH REGION DESIGN AND ENGINEERING SERVICES - HYDRAULICS

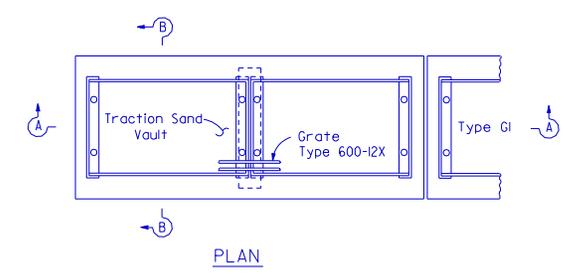
PROJECT ENGINEER  
 ROBERT PETERSON

CALCULATED/  
 DESIGNED BY

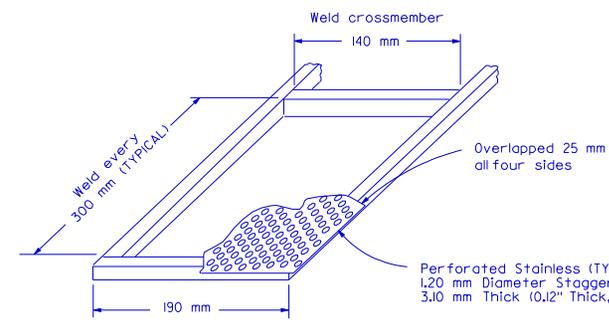
DATE REVISOR BY  
 DATE REVISOR BY

NOTES:

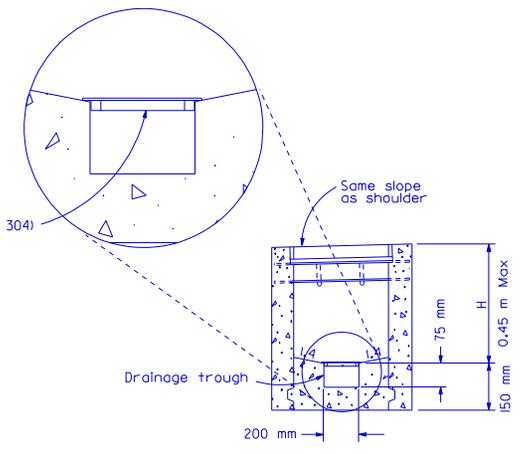
FOR DETAILS NOT SHOWN SEE STD. PLANS D73 AND D74A



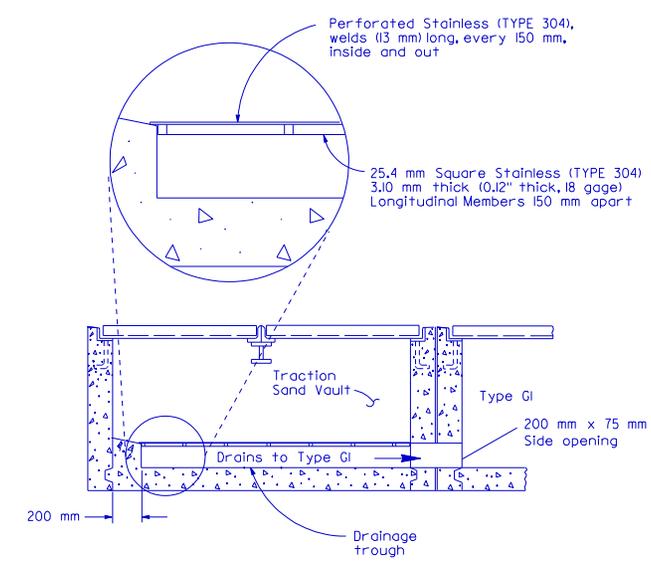
TYPE GT3 (MODIFIED)



GRATE DETAIL  
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SECTION B-B



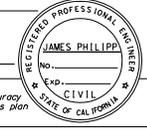
SECTION A-A

DRAINAGE SYSTEM ② AND ③



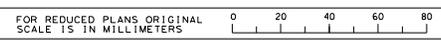
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**DRAINAGE DETAILS**  
 NO SCALE

D-3



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CU 03312 EA 4C2500

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 03-15-01 TIME PLOTTED => 8:11 AM