



FINAL REPORT

Supplemental PSR

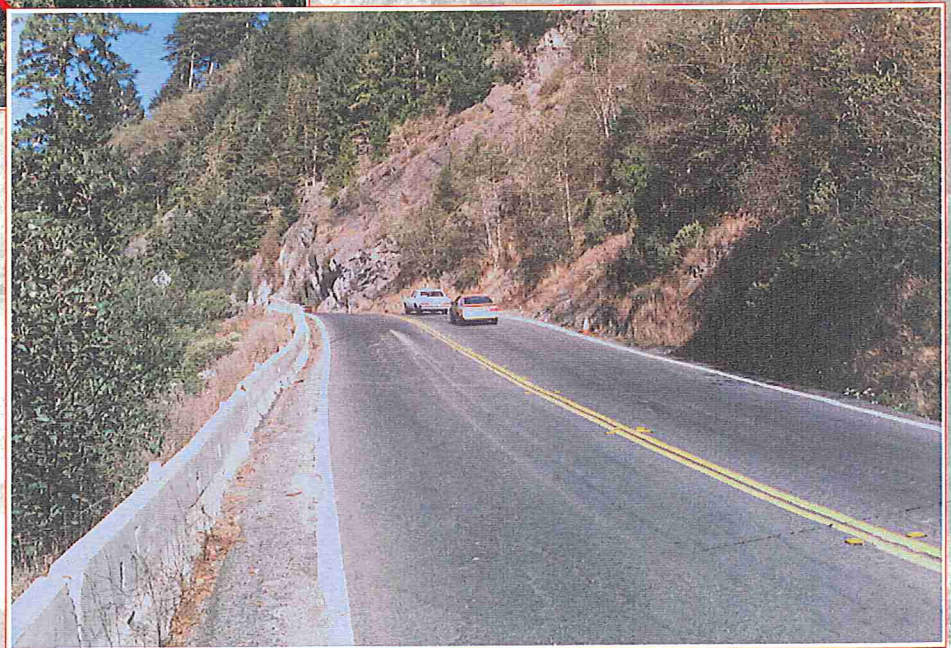
"Last Chance Grade" Approved

Route 101

7/30/03

Del Norte County

**01-DN-101
KP 23.8/25.0
(PM 14.8/15.6)**

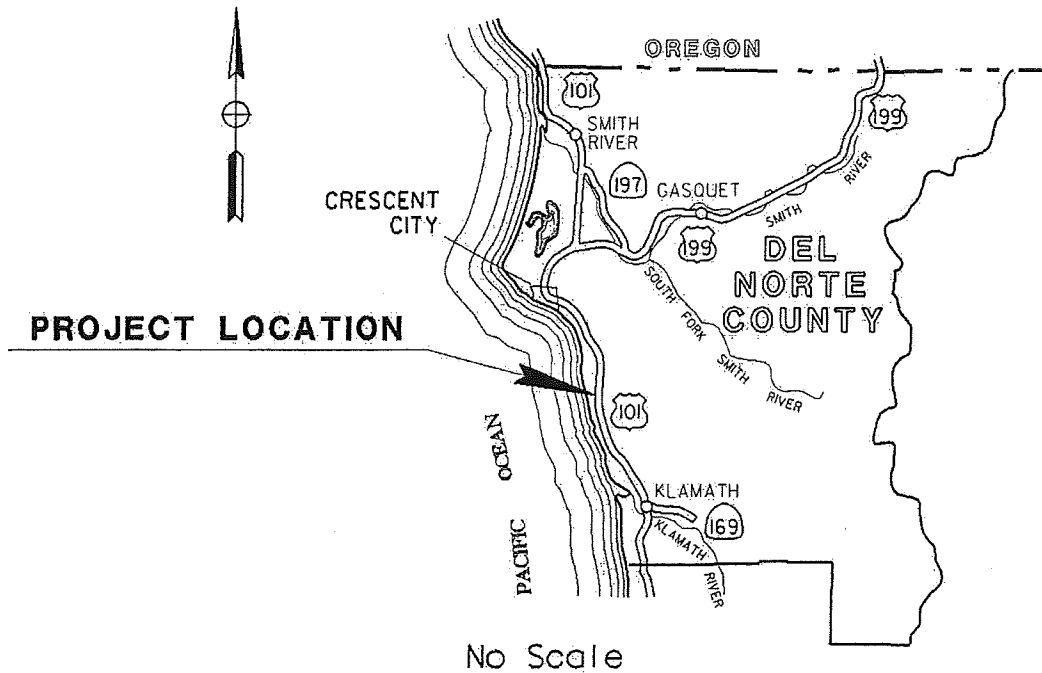






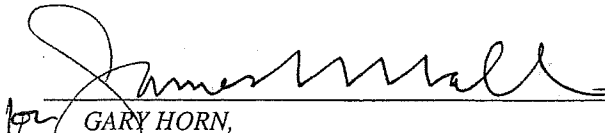
01-DN-101-KP-23.8/25.0
(PM 14.8 / 15.6)
03231 - 324700
201.150 (HA42)

SUPPLEMENTAL PROJECT STUDY REPORT




On Route 101 About 17 km North of Klamath
From 3.5 km North of Wilson Creek Bridge
To 4.7 km North of Wilson Creek Bridge


I have reviewed the right of way information contained in this Supplemental Project Study Report, and the R/W Data Sheet attached hereto, and find the data to be complete, current, and accurate:


 GARY HORN,
 NORTH REGION DIVISION CHIEF - RIGHT OF WAY

APPROVAL RECOMMENDED:


 GARY BANDUCCI, PROJECT MANAGER

APPROVED:


 RICK KNAPP, DISTRICT DIRECTOR

7/30/03
 DATE

SUPPLEMENTAL PROJECT STUDY REPORT

SUPPLEMENTAL PSR SUBMITTED BY

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7-18-03

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SUPPLEMENTAL PROJECT STUDY REPORT

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

LAST CHANCE GRADE EA 324700

01-DN-101-KP 23.8/25.0 (PM 14.8/15.6)

This Supplemental Project Study Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Mark Sobota P.E.
REGISTERED CIVIL ENGINEER

7/18/03
DATE

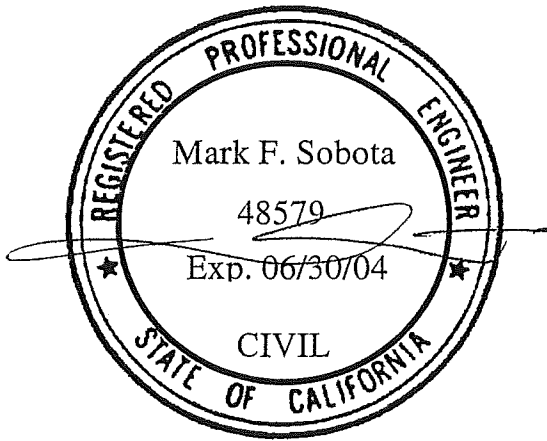


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1. INTRODUCTION

This project, commonly referred to as “Last Chance Grade,” is located on Route 101 about 17-km north of Klamath in Del Norte County and is situated on the bluffs adjacent to the Pacific coastline. The project is in the Del Norte Coast Redwoods State Park, which is within the Redwoods National and State Parks Boundaries.

The project site overlies difficult geology, the Franciscan Formation, which contributes to the distress present on the existing roadway. Large, deep-seated and shallow landslides are present along the entire project. Settlement frequently occurs during wet conditions, requiring inspection and maintenance efforts to avoid closure. There is a continuous risk of slipouts and slides that will close 1 or 2 lanes. The long-term results of the settlement are a poor vertical alignment and a rough ride for the traveling public. If the project is not constructed, it is anticipated that maintenance and emergency expenditures will continue at an increasing cost.

This Supplemental Project Study Report addresses the findings of the Preliminary Geotechnical Report and the Value Analysis Study; updates supporting information and includes Alternative 4 for programming.

In the original PSR the limits were described as in Del Norte County on Route 101 north of Klamath from approximately 16.7-km (10.4 miles) to 17.7-km (11.0) miles north of Route 101/169 Separation (Br. No. 10-26). These limits will be revised to accommodate staging detours. The proposed limits are now from KP 23.8 (PM 14.8) to KP 25.0 (PM 15.6) rather than KP 24.1 (PM 15.0) to KP 25.0 (PM 15.6).

2. BACKGROUND

The existing highway facility is a two-lane conventional highway with 3.6-meter lanes and shoulders that vary from 0.3 to 2.4 meters. The horizontal alignment is curvilinear, and the terrain is rolling to mountainous with grades varying between 0 and 9 percent. The roadway elevation varies from 200 to 260 meters in elevation.

On October 5, 1987, the District approved a Project Study Report proposing a new facility to bypass the Last Chance Grade segment (Post Mile 12.5 to Post Mile 16.3) of Route 101. At that time, the District felt that this was the solution to eliminate the threat of road closure and to reduce the burden of periodic maintenance effort. A Project Report was then started with a total of eight alternatives studied. The project was ultimately unprogrammed in the 1992 State Transportation Improvement Program (STIP) due to anticipated funding difficulties and to significant environmental impacts on State and Federal Park lands. During this process, it was agreed that studies to restore the existing alignment would be initiated and expedited through the State Highway Operation and Protection Program (SHOPP) process. As a result of the joint concerns of Caltrans, the Del Norte County Local Transportation Commission, and the public, a SHOPP Project Study Report (PSR) was completed and approved on 2/17/95, and is on file at the District 1 office. The 1995 PSR identified four alternatives (See the Alternatives section of this report).

A geotechnical study was conducted at last Chance Grade to investigate and make recommendations for the alignments discussed in the 1995 PSR. The subsurface geologic mapping significantly increased the limits of active landsliding. The revised limits of the landsliding affect all the alternatives under consideration in the 1995 PSR. Consequently, with this site geology none of the alternatives should be viewed as a permanent solution to existing terrain instability. A Preliminary Geotechnical Report dated May 2001 documents the findings of this geotechnical study.

A Value Analysis (VA) study, completed October 2002, was initiated with a focus on roadway stability of the existing highway corridor with minimization of impacts to State Park right-of-way and old growth trees. The study used a systematic application of recognized analytical techniques to identify a project's function, identify alternatives, and analyze the alternatives to identify the one that meets the project's function at the lowest overall cost. VA alternatives were established on improved performance, likelihood of implementation, least community impact, cost savings, or any combination of those criteria. Because the deep-seated slide cannot be stabilized by reasonable means, the VA study recognized some of the alternatives it developed were not a complete solution to terrain instability. The VA Team selected an alternative that is expected to have future maintenance resulting from movement of the deep-seated slide, but reduces the risk of slides and slipouts. Minimal right-of-way requirements and a relatively low cost, combined with significantly less environmental impacts, notably increase the value of the recommended alternative. As a result of the VA study, the Project Development Team (PDT), District 1 Executive Management and Del Norte County stakeholders accepted for the purpose of programming an alternative that focuses on constructing retaining walls to only address specific terrain instability locations.

3. NEED AND PURPOSE

The purpose of this project is to reduce the risk of road closures. The project will eliminate the roadway distortion from localized shallow slip plane movement and reduce the burden of periodic maintenance efforts associated with this roadway settlement. Closures associated with slipouts and maintenance efforts will be reduced. This project is needed to stabilize the downslope embankment supporting the roadway, minimize geologic impacts to State Park property and environmental resources, and to reduce the threat of closing Route 101, a major transportation route of interregional and interstate importance. This project is also needed to improve ridability and safety for the traveling public and maintenance personnel.

4. ALTERNATIVES

a) Original Alternatives:

The Project Study Report approved on February 17, 1995 identified four alternatives. The alternatives were developed to avoid the major active landslide limits. The 1995 PSR alternatives are summarized in the table below:

1995 PSR Summary of Alternatives

Alternative	Description	Cost
1	Realign highway in tunnel behind slide plane.	Roadway \$6,797,000 Structures \$28,350,000 <u>Right of Way \$528,000</u> Total (Call) \$35.2 million
2A	Minor roadway realignment and stabilize with a soldier pile tieback wall and slope stressing	Roadway \$10,461,000 Structures \$14,050,000 <u>Right of Way \$1,280,000</u> Total (Call) \$25.0 million
2B	Same as 2A except with an additional soldier pile tieback wall in place of slope stressing to minimize impacts to State park property.	Roadway \$5,400,000 Structures \$26,300,000 <u>Right of Way \$390,000</u> Total (Call) \$31.7 million
3	Major retreat behind the slide plane	Roadway \$39,500,000 Structures \$3,200,000 <u>Right of Way \$4,700,000</u> Total (Call) \$42.7 million

These alternatives were investigated in the Geotechnical Study and also were reviewed in the Value Analysis study. Each was found deficient due to unfeasible structure requirements or unacceptable impacts to State Park land and old growth redwood trees.

Alternative 1, to realign the highway in a tunnel behind the slide plane, was found to be impractical when the geotechnical study identified that a landslide mass previously considered dormant, was in fact potentially active to active. The original concept would have placed up to one half of the tunnel within this unstable area, and would have been expected to fail. The Value Analysis also considered a longer tunnel on the order of 1600m in length to bypass the unstable area. Considering the general instability of the area, however, there would still be significant risk of failure. The tunnel alternative is not considered feasible.

Alternative 2A, to place a soldier pile tieback wall on the left and slope stressing on the right, was found to provide some (but minimal) stability to the deep seated slide. This alternative might still fail during a seismic event. The slope stressing on the right would be extensive and would result in unacceptable impact to old growth redwoods and park resources.

Alternative 2B, to place soldier pile tieback walls on the left and right of the highway, was evaluated in the Geotechnical Study. It was determined this alternative was not capable of resisting forces developed by the deep-seated slide.

Alternative 3, to construct a retreat behind the slide plane, was found to be the only reasonable alternative in the Geotechnical Study. The Value Analysis considered this alternative, but expanded the length from the original PSR to account for the additional unstable area. The Value Analysis

found the deep excavation would be devastating to this portion of Del Norte Coast Redwoods State Park, and would also require a significant disposal site. This alternate was considered to have unacceptable impact to old growth redwoods and park resources.

b) Alternative 4 (Preferred):

This alternative proposes to construct five retaining walls and widen the existing roadway sufficiently to provide two 3.6-meter lanes and 1.2-meter shoulders throughout. At the request of the HQ Design Reviewer, the roadway will be widened at wall locations 1 and 4 to provide a 2.4-meter shoulder on the west side only for southbound traffic. The improvements will be on the current alignment in order to minimize environmental and right-of-way impacts. This alternative was recommended by the VA team and accepted for programming by the PDT, District 1 Executive Management and Del Norte County stakeholders. A PDT meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and refine the scope of the project. The PDT refined the locations of the walls in the alternative, and included improvements to the geometrics of the roadway caused by landsliding.

There is a continuous risk of slides and slipouts that could close 1 or both lanes of Route 101. This alternative will locally stabilize the landslides but not address the deep-seated slide. Maintenance efforts and the risk of closures will be reduced, but long-term maintenance associated with the deep slide will still be necessary for the walls. At the northerly end of the project, roadway settlement has adversely affected the profile of the highway. Roadway reconstruction of the northerly 300 meters will upgrade the vertical alignment. It is also proposed to improve the super elevation at the two smallest radii curves within the project limits with AC leveling and some structural section reconstruction.

The improvements will be on the current alignment to minimize environmental and right-of-way impacts. In order to avoid excavation into unstable and unpredictable slopes on the east side of the highway, all the widening will be to the west. Additional temporary and permanent right of way is anticipated.

It is also proposed to improve the super elevation at the two smallest radii curves within the project limits with AC leveling. The roadway then will be overlaid with OGAC at the completion of the project. Project layout maps and typical cross-sections of the proposed improvements are shown in Attachment B.

The existing alignment does not meet many current standards, but improvements to the geometrics are included in this project. Fact Sheets for exceptions to mandatory and advisory design standards have been prepared for non-standard shoulder widths, horizontal curve radii, stopping sight distance, vertical curves, superelevation and superelevation runoff rates. The Fact Sheets are included as Attachment C and Attachment D

It is estimated to take 850 working days to complete this project. Schematic maps and typical cross-sections of the proposed improvements are attached.

Alternative 4 – Preliminary Project Cost Estimate

District Cost.....	\$ 2,000,000
Structure Cost.....	\$ 6,110,000
<u>Right of Way Cost</u>	<u>\$ 7,300</u>
Total	\$ 8,117,300
Say	<u>\$ 8,120,000</u>

Impacts to Park land are regulated by section 4(F) of the Department of Transportation Act of 1966. The use of parkland can be approved only if there is no prudent and feasible alternative; and the project includes all possible planning to minimize harm to the Park. Alternatives which avoid impacts to Park land have partially been explored under the original Alternatives 1 and 2B. These alternatives were found to be either infeasible or incapable of resisting the deep-seated slide. In addition, Alternative 2B may have also required additional right of way from the Park. Existing right of way to the west is limited, while there is significant right of way to the east. An avoidance alternative involving significant realignment of the highway to the east would include excavation and/or structures in the unstable and unpredictable slopes. Direct and indirect environmental impacts would be expected as a result of severe disturbance to the terrain and redwoods. An avoidance alternative will likely be imprudent and infeasible, but further alternative development and evaluation will be performed during the project report phase.

5. RECOMMENDATION

Programming is recommended for this project at a total cost of \$8,120,000 to be funded with \$650,000 in demonstration funds, and the remaining \$7,470,000 will be funded from the 201.150 (HA42) Protective Betterment Program. All of the previously identified alternatives described in the Project Study Report approved on February 17, 1995 are above the recommended-programmed cost. The recently mapped landslides extensively affect all of the alternatives in the 1995 PSR, and Alternative 3 additionally has significant environmental impacts. For these reasons all of the alternatives in the 1995 PSR will be precluded from future consideration and study.

6. SYSTEM PLANNING

Statewide, Route 101 is of interregional and interstate significance, and is designated as a High Emphasis Focus route in the State Interregional Transportation Strategic Plan (ITSP). The route also serves other modes of transportation, including port access at Humboldt Bay and Crescent City Harbor, and commercial airport access at the regional Eureka/Arcata airport, and six local airports. The Concept for Route 101 from Big Lagoon in Humboldt County through the City of Crescent City to the Washington Boulevard Interchange in Del Norte County is to retain the existing facilities, while recognizing that some realignment may be necessary to bypass unstable areas.

For the past several years, the Regional Transportation Planning Agencies in District 1, and the North Coast County Supervisors Association (NCCSA) have recognized Route 101 as the highest priority

for improvement, and identified some specific undeveloped sections as critical level of service gaps. The highest priority for NCCSA on Route 101 in District 1 is this project.

7. ENVIRONMENTAL

A Preliminary Environmental Analysis Report (PEAR), Attachment E, was prepared for Alternative 4. Key environmental issues will be habitat removal or modification of listed species, impacts to old growth redwoods, aesthetics (including barrier rail design), water quality and erosion control, take of parkland, construction traffic delays and roadway stability. Studies required will include NES, Biological Assessment, tree survey, archaeological survey, Native American consultation, visual assessment, Section 4F Evaluation, water quality, and noise study. If it is determined that a disposal site is necessary, the location will need to be identified early so the necessary environmental surveys can be conducted. Permits to enter will be required from the Parks before some of the biological surveys can be conducted. It is recommended that external agencies such as CHP, DNLTCO, DPR, RNP and CCC be invited to participate as PDT members.

The anticipated CEQA environmental document will be EIR or possibly Negative Declaration with Caltrans as Lead Agency. The estimated NEPA document could be FONSI or EIS. The level of document is dependent upon magnitude of impacts and ability to mitigate.

There are seasonal construction restrictions relative to the Spotted Owl and Marbled Murrelet. Construction that is unusually loud will be restricted to the non-nesting season from September 16 to February 1 of each year. This type of construction is expected to be kept within the likely ambient noise levels.

It is likely that there will need to be mitigation for loss of habitat as well as for loss of old growth redwood trees. It is likely the projects, as scoped, will not impact any old growth trees, and it may well be possible to determine a lesser environmental document (i.e. ND/CE) is warranted. Coastal Commission will likely recommend stringent water quality BMP's as well as advocate for the most "see-through" barrier rail available.

8. HAZARDOUS MATERIAL / WASTE

An updated Initial Site Assessment (ISA), Attachment F, was completed on February 25, 2002. No hazardous waste issues were identified. However, the handling of yellow thermoplastic stripe in concentrations could be considered hazardous waste.

9. RIGHT OF WAY

A Right of Way Data Sheet, Attachment G, was prepared for this project. The estimated right of way cost is \$7,300.

Geologic instability has caused the roadway to historically move down the slope to the west. The existing right-of-way on the west varies from approximately 7 to 125 meters from the original centerline. Alternative 4 requires grading and access outside the right of way on the west side of the highway. Permanent easements will be required from the Del Norte Redwoods State Park to

maintain the planned retaining walls, and temporary construction easements are needed to access and construct the retaining walls.

There is no railroad involvement and there are no known utility conflicts.

10. STRUCTURES

An Advance Planning Study (APS), Attachment H, was prepared for Alternative 4. Alternative 4 plans to construct five retaining walls. The four walls on the west side are anticipated to be tie-back soldier pile walls. The retaining wall on the east side, Location 5, is proposed to be a soldier pile wall.

The project is within the Coastal Zone, regulated by the Coastal Commission. For a project of this scope the Coastal Commission is typically concerned with aesthetics and viewshed. The retaining walls may need to be aesthetically pleasing with a see-through barriers on top. The current proposal is to place cable railing on top of the retaining wall and Metal Beam Guardrailing (MBGR) in front of the railing at the edge of the shoulder. Additional funds have been included in the estimate to allow for aesthetic treatments. The retaining wall at Location 5 may be colored or could be modified with exposed timber lagging similar to walls at Cushing Creek. A concrete barrier at the base of the wall will be included for traffic safety.

The APS estimates for the walls at Location 1 and 4 have increased to account for 2.4 meter shoulders on the west side. The APS estimate has increased for the wall at Location 5 to account for reconstruction of the roadway. The preliminary estimated cost for the structures is as follows:

Retaining Wall:	
Wall #1	\$ 1,351,000
Wall #2	\$ 726,000
Wall #3	\$ 2,381,000
Wall #4	\$ 1,188,000
Wall #5	<u>\$ 458,600</u>
	Total <u>\$ 6,104,600</u>
	Say <u>\$ 6,110,000</u>

11. TRAFFIC DATA/ANALYSIS

a) Traffic Data:

The design period is based on estimated traffic 20 years after construction is completed in the year 2008.

DESIGN DESIGNATION AND TRAFFIC INDEX (TI)	
DN-101-KP 23.8/25.0 (PM 14.8/15.6)	
<u>Annual ADT:</u>	
Base Year 2001	4,300
Year 2008	4,900
Year 2028	6,620
<u>Peak Hour:</u>	
Base Year 2001	620
Year 2008	710
Year 2028	950
20 Year Directional (%)	60
20 Year Truck (%)	12
10 Year TI	9.0
20 Year TI	10.0

b) Traffic Analysis:

The Traffic Safety Office conducted a traffic collision analysis for the period (04/01/97 to 3/31/02). There were a total of 14 collisions within the project limits. Eight of the fourteen (57%) of these occurred in wet weather, and half of the total collisions were coded as “excess speed”, as the primary collision factor. Four of the collisions occurred in the northbound lanes of Route 101, and ten took place in the southbound direction. Compared to similar segments of highway, this location exceeds the statewide average rates for total, and fatal+injury collisions by 24% and 76%, respectively. The Collision Analysis is shown in the Appendix as Attachment I.

The placing of the OGAC surfacing in the recent past (7/00) reduced the collision rate along this segment of Route 101 from 0.19 per month to 0.10 per month. This project proposes resurfacing the roadway with OGAC at the completion of the project. OGAC surfacing will help to correct wet weather collisions.

The geometrics for the project will be improved in several ways, which will make the facility safer. Alternative 4 proposes to widen the existing roadway to provide two 3.6-meter lanes and 1.2-meter shoulders. At the request of the HQ Design Reviewer, the roadway will be widened at wall locations 1 and 4 to provide a 2.4-meter shoulder on the west side only for southbound traffic. The vertical

curve at the north end of the project will be improved to provide more stopping sight distance. It is also proposed to improve the super elevation at the two smallest radii curves within the project limits.

12. TRANSPORTATION MANAGEMENT PLAN

It is anticipated that long term one-way traffic control will be required for the construction of the retaining walls. A temporary traffic signal system is planned for the project. The signals will need a generator and some poles to run electrical to the flashing beacons on the advance warning signs.

Two stages have been planned for. It is anticipated that Stage 1 would involve construction of the wall at location 5, then with the signals in the same location, traffic will be switched to the northbound lanes and construction of the walls at locations 1 and 2 would be completed. The next stage, Stage 2, would move the signals to allow work on the walls at locations 3 and 4 with traffic in the northbound lanes.

During brief construction periods when roadway reconstruction is in progress, it is anticipated that traffic will need to drive on unpaved surfaces (compacted base). During these times, continuous flagging operations will be required until pavement is in place.

A Transportation Management Plan Data Sheet is included as Attachment J and was updated on July 15, 2003. Significant impacts are not anticipated, and anticipated traffic delays will be less than 30 minutes if the recommendations from the TMP are incorporated into the project. It is recommended to use a minimum of one 3.6-meter lane and a 1.2-meter shoulder during construction. Concurrent lane closures will not be allowed within the project limits, and advance flaggers will be required when one-way reversible traffic control is in affect.

13. GENERAL CONSIDERATIONS

a) Value Analysis

A Value Analysis (VA) study was completed in October 2002 for this project. The VA recommended an alternative based on improved performance, likelihood of implementation, least community impact and cost savings. The VA study recognized the selected alternative was not a complete solution to the terrain instability problems, due to the deep-seated slide. As a result of the VA study, the Project Development Team (PDT) accepted the alternative that focuses on constructing retaining walls to only address specific terrain instability locations. A Project Development Team (PDT) meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and refine the scope the project.

b) Materials/Disposal Sites:

Temporary storage of the excavated material from the retaining walls will be needed. The excavation will then be used for backfill and slope restoration. Temporary storage of the material is expected to occur south of the project within State right of way in wide areas adjacent to the shoulder at approximately PM 15.23(Rt), PM 15.1(Lt), PM 15.0(Lt), PM 14.85(Lt) and PM 14.37(Lt).

It is anticipated that the excavation from shoulder widening and vertical curve correction could partially be used at the locations of super elevation corrections, as the choker section. Excess excavation material will become the property of the contractor and is to be disposed of at a permitted off-site location.

Asphalt concrete grindings will be generated from cold planing open graded asphalt concrete pavement within the project limits. The Maintenance Department will salvage the excess grinding. It is anticipated that 1800 m³ will be generated.

Preliminary materials recommendations were provided on April 14, 2003. Recommendations for structural sections and alternative pipes were provided. A copy of the Preliminary Materials Recommendation is included as Attachment K.

c) Drainage Improvements:

There is no history of flooding problems at any of the locations. The field review of the culverts revealed scour at most of the outlets, deteriorating pipes and reduced hydraulic capacities. The existing culverts within the project vicinity will be replaced on their existing alignment. The existing culverts are at PM 15.01, 15.06, 15.20, 15.34 and 15.40. Rock Slope Protection (RSP) is planned at the outlet of four culverts to dissipate energy and reduce scour. Two new drainage inlets are proposed to handle roadway surface flow that would normally be directed to overside drains in the vicinity of the proposed retaining walls. A Preliminary Drainage Report is included as Attachment L.

d) Bicycle Considerations:

This segment of highway is on the Pacific Coast Bike Route. The project will widen the shoulders to 1.2 meters. If an alternative barrier to MBGR is required, bicycle railing will be included. Currently MBGR separates the bicyclists from the retaining wall with cable handrailing.

A 1.2-meter wide shoulder will be provided for bicyclists through the construction zone. During construction advance signing for motorists to watch for bicyclists will be provided.

e) Storm Water Management Plan:

Temporary erosion control Best Management Practices (BMP's) will be incorporated into the project to stabilize the soil and reduce sedimentation during construction. Adequate temporary and permanent soil stabilization and sediment control BMPs will be installed to reduce erosion and sedimentation from stormwater. Temporary construction and permanent BMPs may include mulches or blankets, straw bale barriers or fiber rolls, jute fiber netting, rock energy dissipation devices, and silt fences. A Preliminary Storm Water Data Report is included as Attachment M.

The project is up-gradient of an Area of Biological Significance. The State Water Resources Control Board determined that storm water discharges to an Area of Biological Significance constituted a non-point source discharge and therefore must comply with, at the time, the 1997 version of the Ocean Plan (Cease and Desist Order No. 00-87 for Crystal Cove issued by Santa Ana Regional Water Quality Control Board, SWRCB/OCC File 1-1350). Prominence of this issue will be determined through consultation with the North Coast RWQCB during the project report phase.

f) Landscaping/Erosion Control:

Permanent erosion control measures may include application of barley and straw.

g) Vegetation management:

To limit maintenance efforts and worker exposure to traffic, weed control mat or other approved weed abatement strategies will be used to reduce weed growth around MBGR and sign posts within the project limits.

h) Resource Conservation:

Metal beam guardrail elements will be reused where appropriate.

14. PRELIMINARY PROJECT COST ESTIMATE (Alternative 4)

Alternative 4 – Preliminary Project Cost Estimate

District Cost.....	\$ 2,000,000
Structure Cost.....	\$ 6,110,000
Right of Way Cost	\$ 7,300
Total	<u>\$ 8,117,300</u>
Say	<u>\$ 8,120,000</u>

The Preliminary Project Cost Sheet is included as Attachment N.

15. PROJECT FUNDING/SCHEDULING

Programming is recommended for this project in the 2007/2008 Fiscal Year of the 2004 SHOPP with a total capital construction cost of \$9,360,000 and a total capital right of way cost of \$8,000. It is further recommended to fund this using \$650,000 in demonstration funds with the remaining to be funded from the 201.150 (HA42) Protective Betterment Program. The proposed milestone schedule and Resource Report (support resource needs) are shown in Attachment O.

The attached schedule (also shown below) assumes using change control that will allow preliminary structures investigation by Structure Design to occur prior to PA&ED.

Project Schedule

<u>Milestone</u>	<u>Completion/Target Date</u>
Approve Project Initiation Document	August 1, 2003
Initiate surveys and geotechnical work	September 1, 2003
Start Environmental Studies	July 1, 2004
Draft Environmental Document	July 1, 2006
Final Environmental Document	December 1, 2006
Project Approval	January 1, 2007
Begin Design Engineering	September 1, 2005
Bridge Site Submittal	January 1, 2006
Right of way Maps	January 1, 2007
Structures PS&E	July 1, 2007
P&E	September 1, 2007
Completion of Plans, Specifications, and Estimates	November 1, 2007
Right-of-Way Certification	January 1, 2008
Ready to List	January 1, 2008
Ready to Advertise	March 1, 2008
Start Construction (Contract Award)	June 1, 2008
Contract Acceptance	October 1, 2010

16. DISTRICT CONTACTS

FUNCTIONAL AREA	NAME	CALNET PHONE	Public Phone
Project Manager	Gary Banducci	8-538-6640	(707) 445-6640
Chief, Design Branch E2	Dennis McBride	8-538-5878	(707) 441-5878
Project Engineer, Design Branch E2	Mark Sobota	8-538-6466	(707) 445-6466

17. PROJECT REVIEWS

A Value Analysis study was completed in October 2002.

A Project Development Team (PDT) meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and refine the VA project scope.

John Steele, Design Coordinator Division of Design, preliminarily reviewed the scope and cost of this project by phone on December 14, 2002. John Rocanova, HQ Design Reviewer, reviewed the proposed design exception at the District 1 Design E2 office on March 18, 2003. John Rocanova, at

the District Office, and John Steele by phone reviewed the project more thoroughly on May 28th, 2003.

Another PDT meeting was held on May 8, 2003. The PDT concurred with the recommended Alternative 4 for programming.

A Constructability meeting was held on July 2, 2003 and all comments have been incorporated into the report.

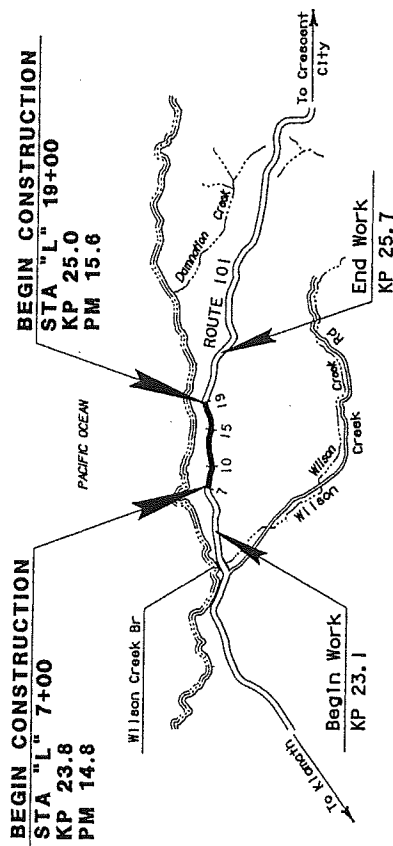
18. LIST OF ATTACHMENTS

- A. Location Map
- B. Typical Sections, Layouts, Profile and Super Elevation Diagram
- C. Fact Sheet for Exceptions to Mandatory Design Standards
- D. Fact Sheet for Exceptions to Advisory Design Standards
- E. Preliminary Environmental Analysis Report (PEAR)
- F. Initial Site Assessment
- G. Right of Way Data Sheet
- H. Advance Planning Study
- I. Collision Analysis
- J. Transportation Management Plan Data Sheet
- K. Preliminary Materials Recommendation
- L. Preliminary Drainage Report
- M. Preliminary Storm Water Data Report
- N. Preliminary Project Cost Estimate Summary
- O. Current Programming Sheet

INDEX OF SHEETS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY**
 IN DEL NORTE COUNTY
**ABOUT 17 km NORTH OF KLAMATH
 FROM 3.5 km NORTH OF WILSON CREEK BRIDGE
 TO 4.7 km NORTH OF WILSON CREEK BRIDGE**

To be supplemented by Standard Plans dated July, 1999



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET TOTAL SHEETS
01	DN	101	23.8/25.0	1



LOCATION MAP

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.

Contractors shall have a web site. To get to the web site, go to <http://www.dts.ca.gov>



ATTACHMENT A

LOCATION MAP



Project Engineer
 Date
 Registered Civil Engineer
 Please Approval Date

The Contractor shall possess the Class (or classes) of license as specified in the 'Notice to Contractors'.

No Scale

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	MARK SOBOTA	PROJECT ENGINEER
DATE	REVISOR	DATE	DESIGNED BY
			CHECKED BY
			DATE REVISED

- NOTES:**
- DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 - FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
 - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET TOTAL SHEETS
01	DN	101	23.8/25.0	

REGISTERED CIVIL ENGINEER

DATE: 06/20/00

NO. 8330-001

RECEIVED

REGISTERED PROFESSIONAL ENGINEER

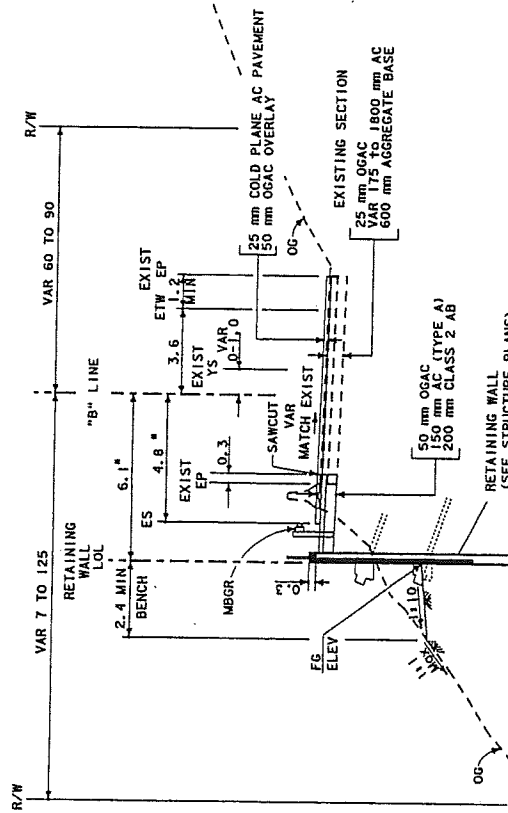
MARK SOBOTA

DATE: 06/20/00

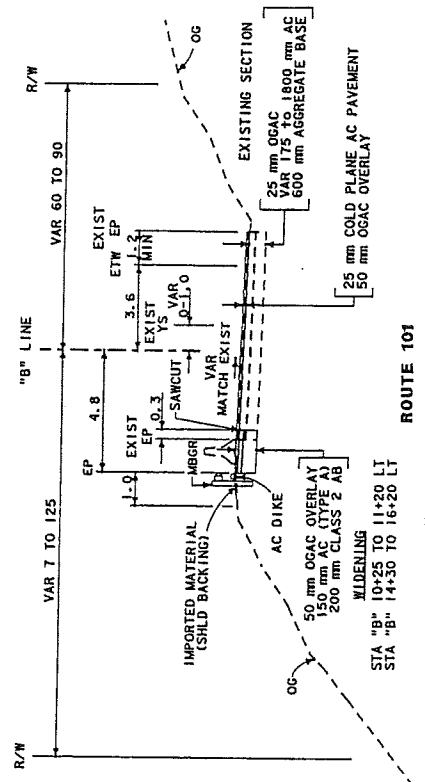
NO. 8330-001

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- ROUTE 101**
- STA "B" 10+25 TO 11+30 (LOCATION 1) (PM 15.02/15.07), ROADWAY WIDTH = 6.0 (SHLD = 2.4)
 - STA "B" 11+95 TO 12+60 (LOCATION 2) (PM 15.12/15.16)
 - STA "B" 13+25 TO 15+05 (LOCATION 3) (PM 15.20/15.31)
 - STA "B" 15+25 TO 16+10 (LOCATION 4) (PM 15.34/15.38), ROADWAY WIDTH = 6.0 (SHLD = 2.4)



STA "B" 10+00 TO 16+20 (PM 15.0/15.39)

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

ATTACHMENT B

TYPICAL CROSS SECTION X-1

NO SCALE

CU 03 231

EA 324700

USERNAME: TITOX

DGN FILE: TYPICAL.GEN

NOTES:

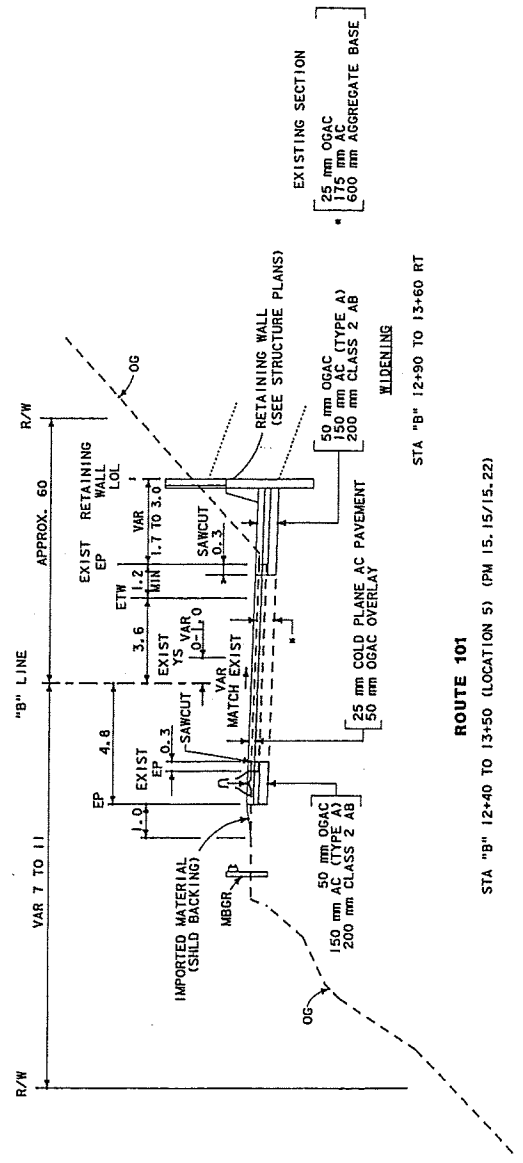
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
2. FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



DIST	COUNTY	ROUTE	KILOMETER POST NO.	TOTAL SHEETS
01	DN	101	23.8/25.0	
REGISTERED CIVIL ENGINEER 00/00/00				
PLANS APPROVAL DATE				
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DATE	REVISION	BY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN
 PROJECT ENGINEER
 MARK SOBOTA
 CHECKED BY
 DATE REVISION



TYPICAL CROSS SECTION X-2
 NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

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 DIST COUNTY ROUTE MILEAGE PER POST TOTAL SHEETS
 01 DN 101 23.8/25.0 10

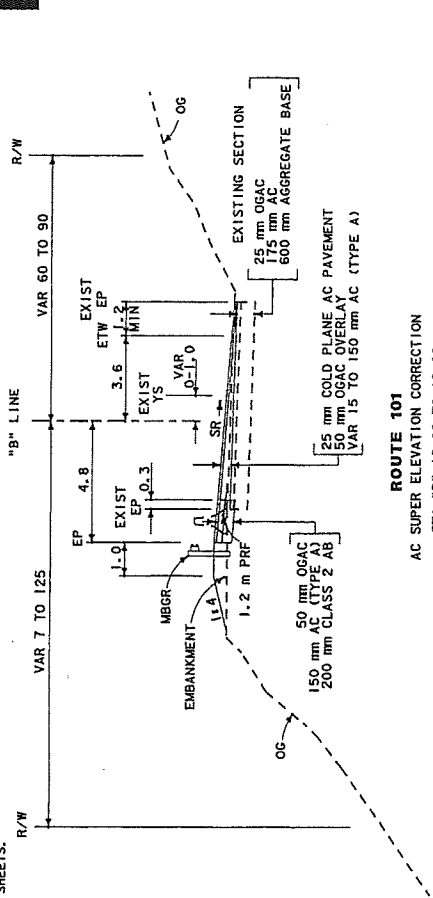
REGISTERED CIVIL ENGINEER 00/00000
 PROFESSIONAL ENGINEER
 MARK SOBOTA
 No. 48579
 Exp. 6-30-04
 STATE OF CALIF.

PLANS APPROVAL DATE
 The State of California or the affiant
 certifies that the affiant is duly
 licensed and qualified to practice
 the profession of civil engineering
 and that the affiant is the author
 or preparer of this plan sheet.

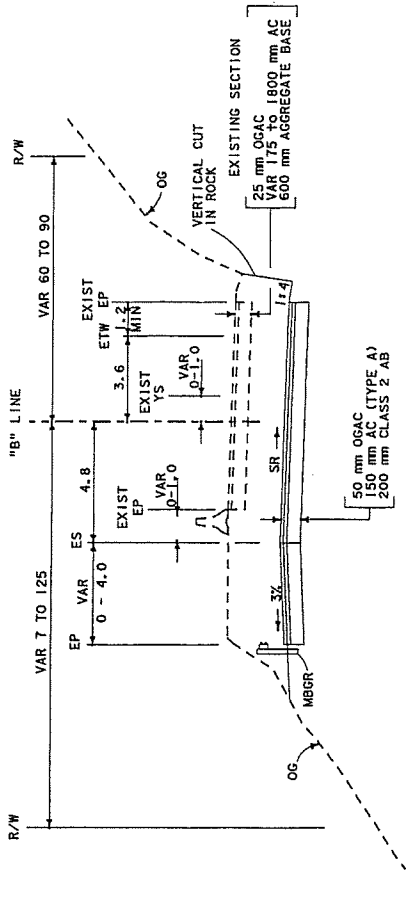
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NOTES:
 1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBGR TYPE AND LIMITS SEE LAYOUT AND QUANTITY SHEETS.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



ROUTE 101
 AC SUPER ELEVATION CORRECTION
 STA "B" 12+00 TO 12+80
 STA "B" 12+80 TO 14+00



ROUTE 101
 VERTICAL CURVE CORRECTION
 STA "B" 12+30 TO 13+50
 STA "B" 14+30 TO 15+90

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

FOR REFERRED PLANS ORIGINAL SCALE 15" IN MILLIMETERS

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EA 324700

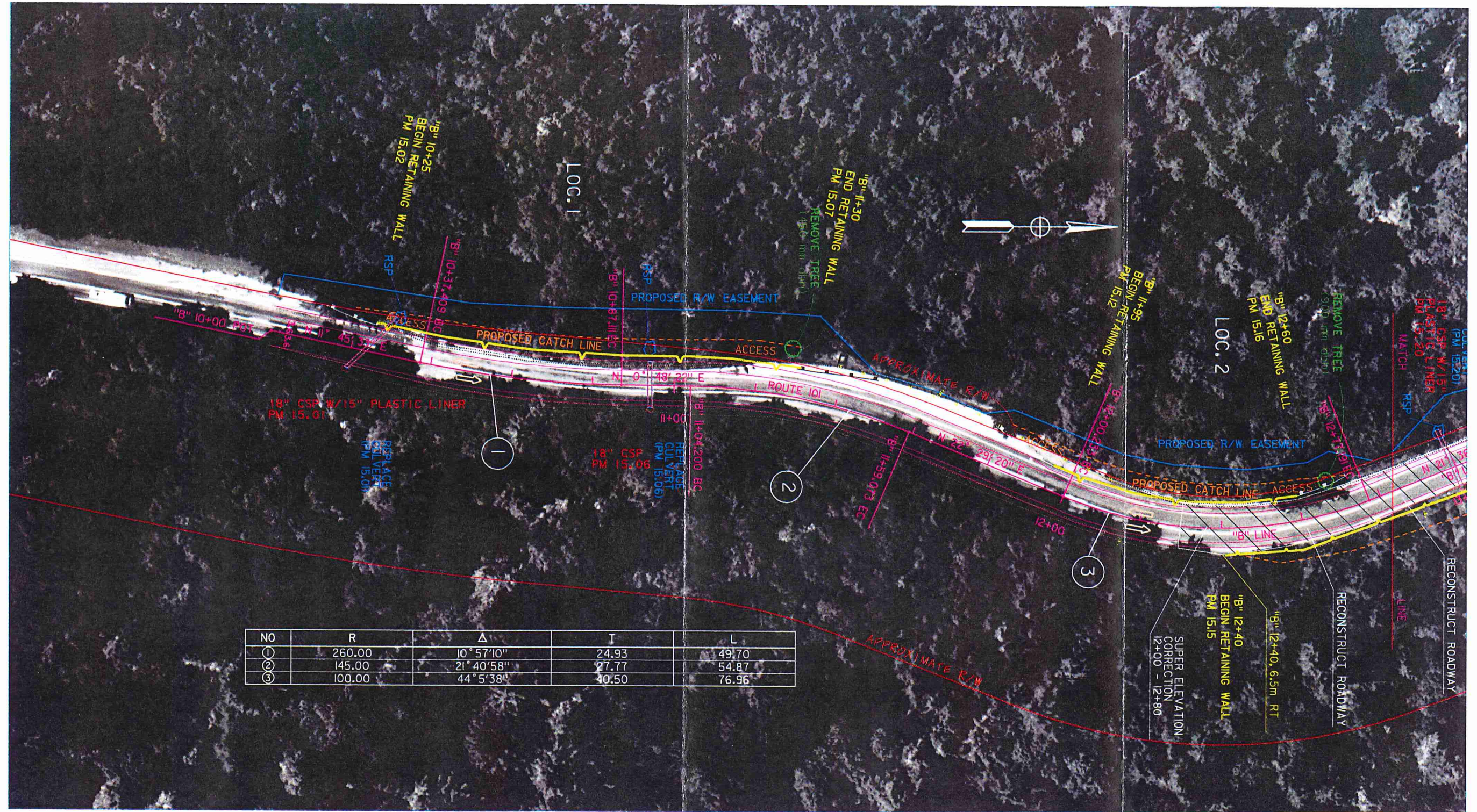
CU 03 231

NO SCALE

TYPICAL CROSS SECTION X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN		PROJECT ENGINEER		MARK SOBOTA		CHECKED BY		DATE	
PROJECT ENGINEER		DESIGNED BY		DATE		REVISOR		DATE		REVISION	

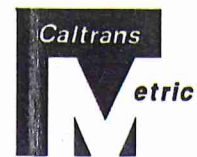
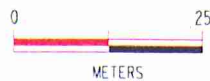
DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8/25.0	14.8/15.6



NO	R	Δ	T	L
①	260.00	10° 57' 10"	24.93	49.70
②	145.00	21° 40' 58"	27.77	54.87
③	100.00	44° 5' 38"	40.50	76.96

LEGEND

- CATCH LINES (CUT/FILL) - - - - -
- EXISTING RIGHT OF WAY - - - - -
- PROPOSED RIGHT OF WAY OR EASEMENT - - - - -
- PROPOSED RETAINING WALL - - - - -
- RECONSTRUCT ROADWAY - - - - -



DATE: 6/16/03

ATTACHMENT L-1
PROJECT LAYOUT MAP
LAST CHANCE GRADE ROADWAY STABILIZATION

PROJECT ENGINEER
MARK F. SOBOTA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

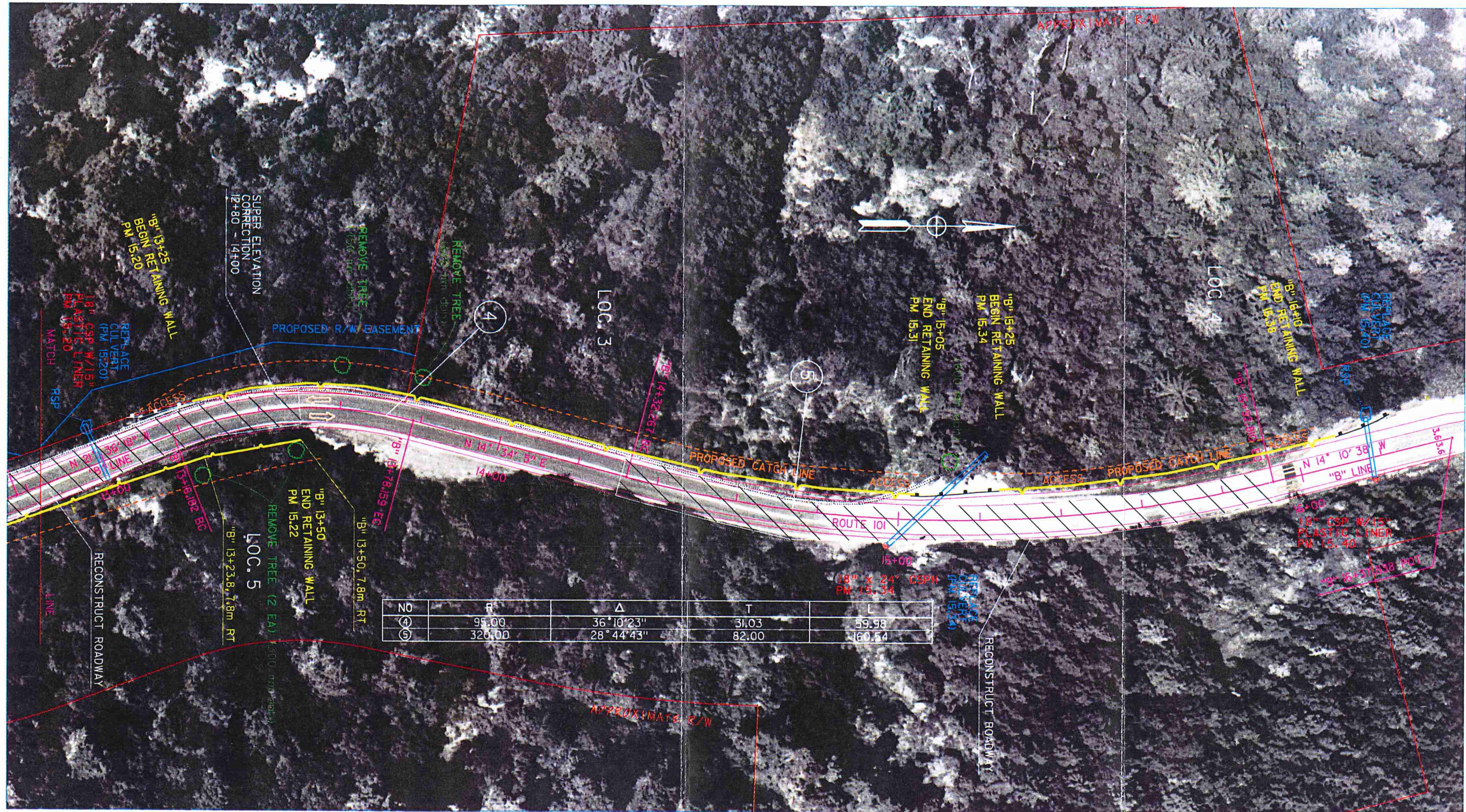
Caltrans, District 1
P. O. Box 3700
Eureka, CA 95502

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00-00-00 TIME PLOTTED => 09:00

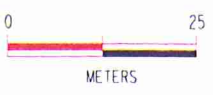
DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8/25.0	14.8/15.6



LEGEND

- CATCH LINES (CUT/FILL) - - - - -
- EXISTING RIGHT OF WAY - - - - -
- PROPOSED RIGHT OF WAY OR EASEMENT - - - - -
- PROPOSED RETAINING WALL - - - - -
- RECONSTRUCT ROADWAY - - - - -

Caltrans, District 1
P. O. Box 3700
Eureka, CA 95502



DATE: 6/16/03

ATTACHMENT L-2
PROJECT LAYOUT MAP
LAST CHANCE GRADE ROADWAY STABILIZATION

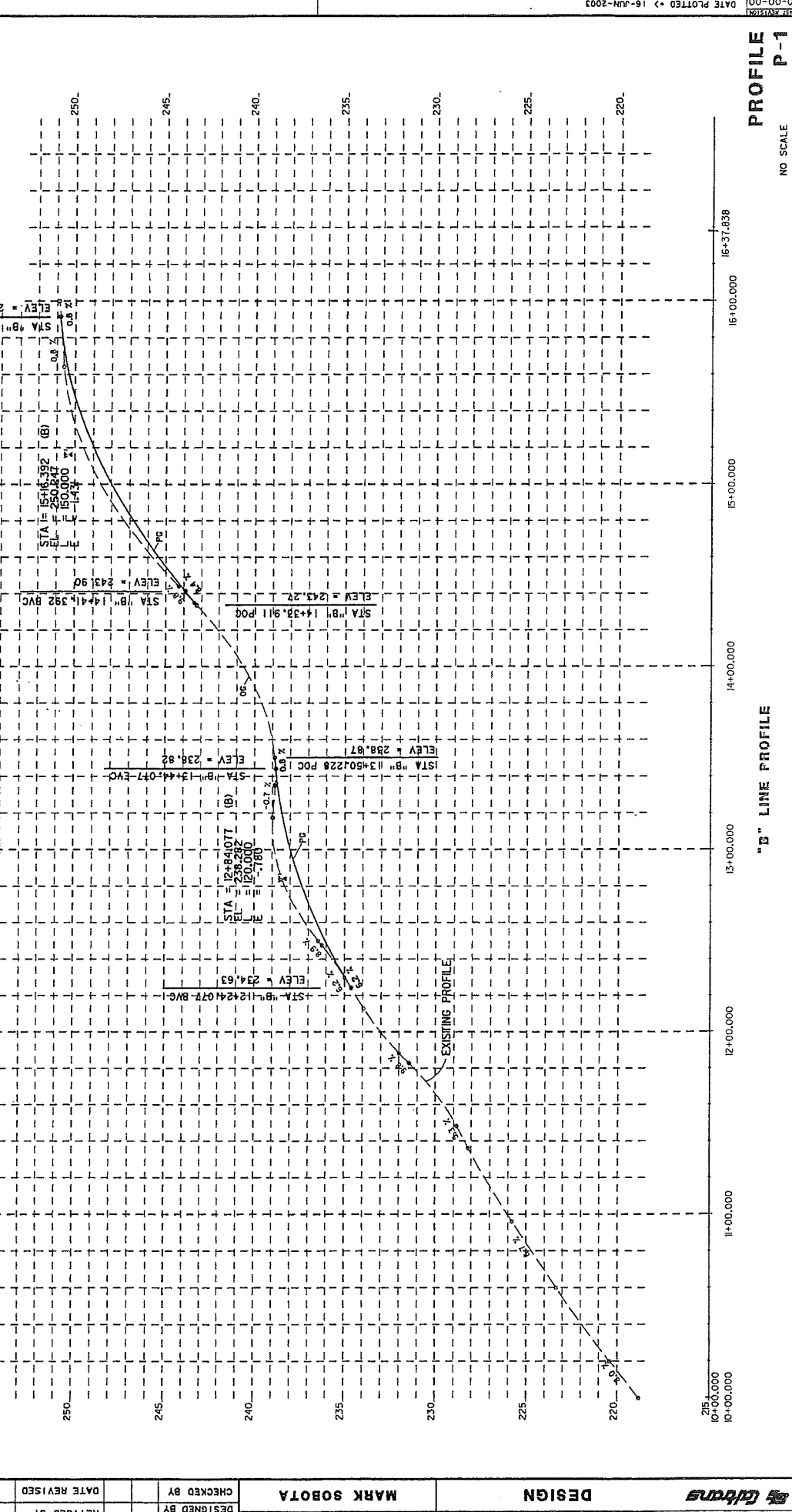
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
PROJECT ENGINEER
MARK F. SOBOTA

DIST	COUNTY	ROUTE	SECTION	POST MILE	SHEET NO.	TOTAL SHEETS
01	DN	101	23	8/25.0		

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 MARK SOBOTA
 49573
 CIVIL
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 STATE OF CALIFORNIA

PLANS APPROVAL DATE: 11/10/04
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	PROJECT ENGINEER	MARK SOBOTA
CHECKED BY	DATE	DESIGNED BY	DATE
REVISOR	DATE	DESIGNED BY	DATE

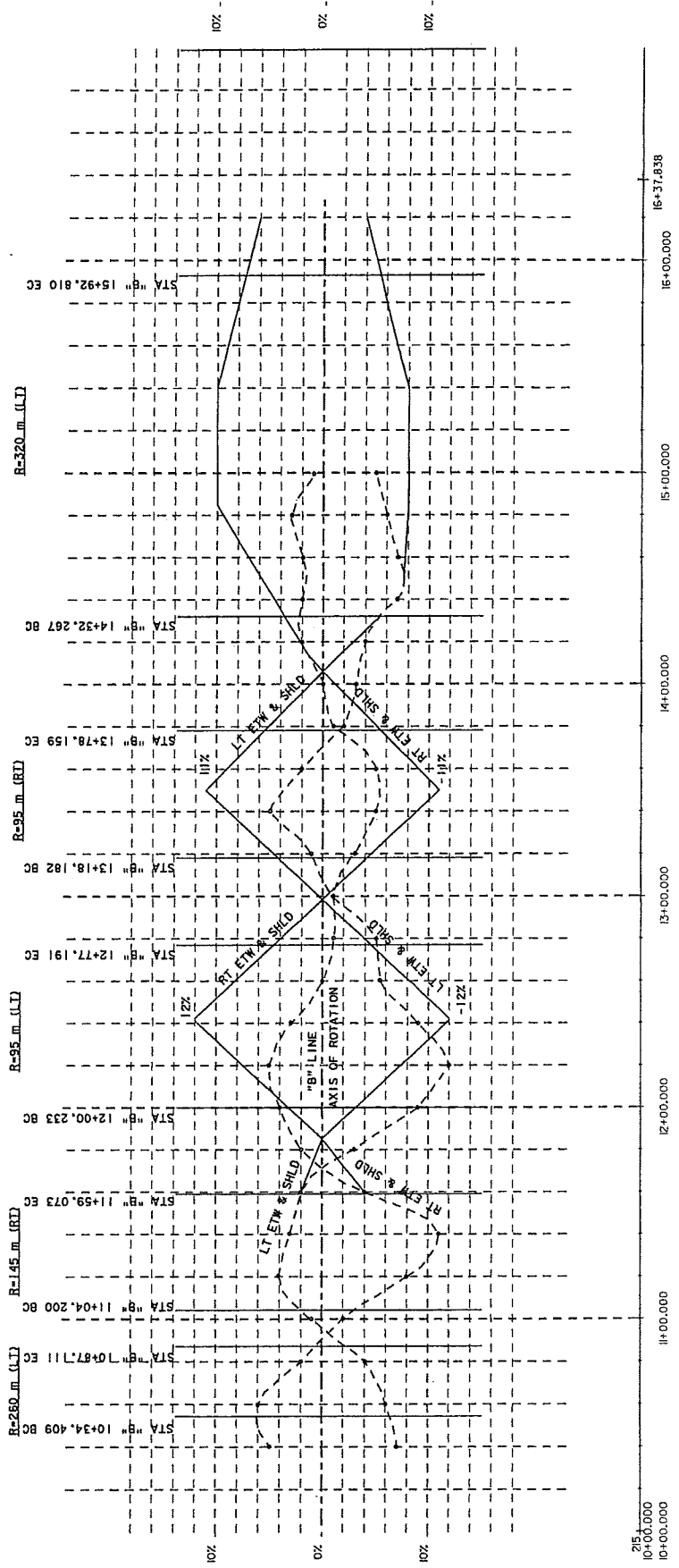


DIST	COUNTY	ROUTE	MILEAGE POST TOTAL PROJECT	SHEET TOTAL SHEETS
01	DN	101	23.8/25.0	

REGISTERED CIVIL ENGINEER 06/00/00
 PROFESSIONAL ENGINEER
 MARK SOBOTA
 NO. 49529
 CIVIL
 EXPIRES 06/30/05

PLANS APPROVAL DATE
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SUPERELEVATION DIAGRAM SE-1

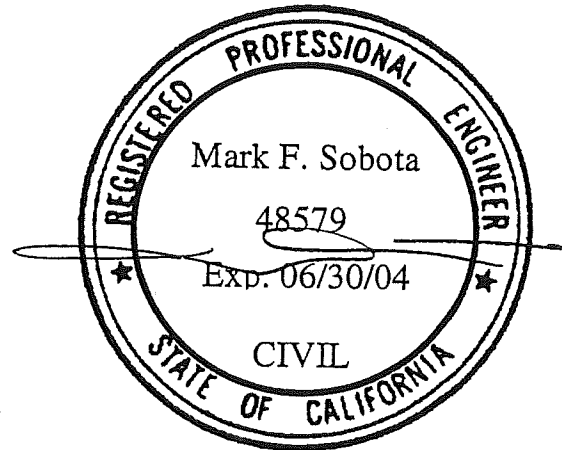
"B" LINE SUPER ELEVATION DIAGRAM

NO SCALE
 CU 03 231
 EA 324700

FOR REVISIONS: ORIGINAL
 SCALE: 1" = 10' HORIZONTAL
 1" = 10' VERTICAL
 USERNAME -> TIFEX
 DGN FILE -> super-dia.dgn



Fact Sheet Exceptions to Mandatory Design Standards



Prepared by:

Mark Sobota
Registered Civil Engineer

7/9/03
Date

8-538-6466
Telephone

Submitted by Dennis McBride
Dennis McBride, Branch Chief, Design E-2

7/9/03
Date 8-538-5878
Telephone

Recommended for Approval Gary M. Banducci
Gary M. Banducci, Project Manager

7/9/03
Date 8-538-6440
Telephone

Concurrence by Susan Tappan
Susan Tappan, Chief, Office of Design - Northwest

7/9/03
Date 8-538-5813
Telephone

Approved by John Steele
John Steele, Design Coordinator
Division of Design

7/10/03
Date 916-653-4937
Telephone



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)
03231 - 324700
\$8,000,000
201.150 (HA42)

1. PROPOSED PROJECT

A. Project Description:

This project proposes to address unstable areas in Del Norte County on Route 101 from KP 23.8 (PM 14.8) to KP 25.0 (PM 15.6), approximately 10 miles north of Klamath. The project will construct tieback soldier pile walls on the west side of the roadway and a soldier pile wall on the east side of the roadway. This will help to resist lateral shallow slope instabilities in areas of poorly consolidated materials on Route 101 in Del Norte county from KP 23.8 to 25.0 (PM 14.8 to 15.6). This segment of State Route 101 traverses Del Norte Coast Redwoods State Park and is the major transportation link between Humboldt and Del Norte counties.

A PSR was completed in February of 1995 that included 5 alternatives (including the "No Build). A geotechnical study was conducted to investigate and make recommendations for the alignments discussed in the PSR. The preliminary geotechnical report was completed May 31, 2001. A Value Analysis study was completed January of 2002, which identified alternatives to the 1995 PSR alternatives. The alternative recommended for programming is estimated to cost \$8,000,000. The project is to be funded with demonstration funds and from the 201.150 (SHOPP Roadway Protective Betterment) Program.

Programming Alternative (Supplemental PSR)

This alternative proposes to construct five retaining walls and widen the existing roadway sufficiently to provide two 3.6-meter lanes and 1.2-meter shoulders. Minor widening is needed to provide the desired roadway width of 9.6 meters. The improvements will be on the current alignment to minimize environmental and right of way impacts. This alternative was recommended by the VA team and accepted by the PDT, District 1 Executive Management and Del Norte County stakeholders. A PDT meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and refine the scope the project. The PDT refined the locations of the walls in the alternative, and included improvements to the geometrics of the roadway caused by landsliding. The project was further refined, at the request of the HQ Design Reviewer, to widen on the left at wall Locations 1 and 4 to provide a 2.4-meter shoulder for the southbound lanes.

This alternative will locally stabilize the landslide but not address the deep-seated slide. Maintenance efforts will be reduced, but long-term maintenance associated with the deep slide will still be necessary for the walls. At the northerly end of the project, roadway settlement has adversely affected the profile of the highway. Roadway reconstruction at two locations for a total of 300 meters will be done to upgrade the vertical alignment. It is also proposed to improve the super elevation at the two smallest radii curves within the project limits with AC leveling and some structural section reconstruction. Fact Sheets have been prepared for such items as non-standard shoulder widths, horizontal curve radii, stopping sight distance, vertical curves, superelevation and superelevation runoff rates.



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)

03231 - 324700

\$8,000,000

201.150 (HA42)

The entire roadway will be overlaid with OGAC at the completion of the project. It is estimated to take 850 working days to complete this project. Project layout maps and typical cross-sections of the proposed improvements are attached.

B. Existing Highway:

This segment of Route 101, which traverses mountainous terrain, is a 2-lane conventional highway. It is the primary north-south transportation corridor linking Humboldt and Del Norte counties. It is functionally classified as a Rural Principal Arterial Highway and is a Federal Aid Primary Route. It serves as a significant interregional and interstate route, with heavy use by logging, lumber trucks and recreational traffic in the summer months. Through the project limits Route 101 is a Non-Freeway, Non-Expressway forest highway through Del Norte Coast Redwoods State Park. It is officially designated as a Scenic Highway, and part of the "Pacific Coast Bike Route."

This segment of highway along the coastline; varying between 220 meters and 250 meters in elevation, traverses through mountainous, rocky terrain across an active deep-seated slip-plane. The existing roadbed through the project limits consists of two 3.3-m lanes with shoulder widths varying between 0.3 and 2.4 meters. The existing alignment consists of four tangents with lengths from 15 to 65 meters, connecting five curves with radii varying between 90 and 280 meters.

C. Safety Improvements:

The Traffic Safety Office conducted a collision analysis. The collision analysis is discussed in Section 4 of this report, and a copy is attached.

An open-graded asphalt overlay was placed in July 2000 to help reduce the collisions through the short radius curves. This project will continue to provide an Open Graded finish surfacing within the project limits.

The geometrics for the project will be improved in several ways, which will make the facility safer. Alternative 4 proposes to widen the existing roadway to provide two 3.6-meter lanes and 1.2-meter shoulders and install retaining walls. The project will also widen to the left at wall locations 1 and 4 to provide a 2.4-meter shoulder for the southbound lanes. The wall at location 5 provides more shoulder, which will improve the stopping sight distance around the curve. There are two vertical curves at the north end of the project which will be improved to provide more stopping sight distance, and it is also proposed to improve the super elevation at the two smallest radii curves within the project limits.



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)
 03231 - 324700
 \$8,000,000
 201.150 (HA42)

D. Total Project Cost:

The Preliminary Project Cost Estimate is:

District Cost.....	\$ 1,865,000
Structure Cost.....	\$ 6,110,000
<u>Right of Way Cost</u>	<u>\$ 7,300</u>
Total	\$ 7,982,300
Call	<u><u>\$ 8,000,000</u></u>

2. FEATURES REQUIRING AN EXCEPTION

A. Design Exception Feature #1

Non Standard Feature:

The proposed shoulders will be 1.2 meters paved on the right from PM 15.0 to PM 15.4 and 1.2 meters on the left from PM 15.1 to PM 15.31

Standards for which the exception is requested:

The mandatory shoulder width for this route is 2.4-m per Index 307.3 of the Highway Design Manual, and 2.4-m for minimum horizontal clearances for the clear recovery zone required by the Highway Design Manual Topic 309.1(3)c:

Reason For Requesting Exception:

The existing shoulders along this portion of Route 101 vary between 0.3 and 2.4-meters but have generally less than 1.2 meters. The proposed alternative of 1.2-m shoulders presents an improvement to the existing roadway geometrics. A 2.4-meter shoulder is proposed at wall locations 1 and 4 on the west side for southbound traffic. The proposed shoulder width is a balance between the Highway Design Manual (HDM) standard and the existing mountainous terrain limitations through the Del Norte Coast Redwoods State Park. The 1.2 meter shoulder is consistent with other recent projects in this segment. The roadway rehabilitation strategy for this segment where volumes exceed 6000 vehicles per day, as stated in the Route Concept Report dated October 2002, is a minimum 9.6 meter width, but the desired width is 12.0 meters.

To provide a continuous 2.4-m shoulders would require higher and longer retaining walls. Each retaining wall would increase in height by approximately 4 meters and in length by approximately 10 meters. The added costs to provide continuous 2.4-m shoulders would be approximately \$2,900,000 for structures and \$250,000 for roadway work. Wider shoulders would require approximately 200 m2 more R/W area from the State Park. Impacts to Park land are regulated by section 4(f) of the Department of Transportation Act of 1966. The use of parkland can be approved only if there is no prudent and feasible alternative; and the



project includes all possible planning to minimize harm to the Park. Wider shoulders would increase impacts to environmental resources. There would be a loss of habitat for sensitive species and an estimated 20 more trees would need to be removed, which would require mitigation.

B. Design Exception Feature #2

Non Standard Feature:

Existing profile grades vary to a maximum of 9.8%.

<u>Approximate Station</u>	<u>Grade</u>	<u>Proposed Grade</u>
10+20	8	8 (Same)
11+80	9.8	9.8 (Same)
12+50	8.9	6.2 (Improved)
14+40	9.8	8.4 (Improved)

Standard for which the exception is requested:

Section 204.3 and table 204.3 of the Caltrans Highway Design Manual, specify the maximum grade for mountainous rural highways to be 7%.

Reason For Requesting Exception:

The project overlies difficult geology, the Franciscan Formation, which contributes to the distress present on the existing roadway and distortions in the profile grade. Within the project limits the highway is on a continuous grade. The roadway changes by 30 meters in elevation. To improve the roadway would involve reconstructing the entire length of the project (600 meters). The roadway would need to be lowered which could involve structures and retaining walls. Alternatives would need to be developed to minimize impacts from the active slip plane or avoid the unstable terrain. The added costs to provide a maximum 7% profile grade would minimally cost \$10,200,000 for structure and roadway work. Traffic would be impacted significantly during construction. The road would have to be lowered and reconstructed in stages with half-width construction. The existing extremes in grade are at spot locations and are not sustained grades. The average grade through the project limits is 5.7%.



C. Design Exception Feature #3

Non Standard Feature:

Existing horizontal curve radii will be maintained.

<u>Stationing</u>	<u>Curve Radius</u>	<u>Cooresponding Design Speed (kph)</u>
10+34 – 10+90	262 (Lt)	80
11+05 – 11+55	134 (Rt)	50+
12+03 – 12+74	94 (Lt)	50-
13+20 – 13+78	92 (Rt)	50-
14+43 – 15+92	283 (Lt)	80+

Standards for which the exception is requested:

The posted speed is 88 km/hr. The minimum radius for a horizontal curve based on a design speed of 80 km/hr, (rural, mountainous terrain, and conventional highway) is 260-m, based on tables 101.2 and 203.2 of the Highway Design Manual, along with section 203.2. The 85th percentile of running speed within the project limits is 72 km/hr.

Reason For Requesting Exception:

Three of the five curves are below the required radius for a design speed of 80 km/hr. The existing alignment in mountainous terrain limits the alternatives to achieve the standard radii. To correct the curve radius would require a structure or a new alignment with significant cut slope retaining walls. Alternatives have been explored in the 1995 PSR for an ultimate realignment at a minimum cost of \$25,000,000. It should be noted that even those alternatives were found deficient due to unfeasibility or unacceptable impacts. Additional alternatives would need to be developed to minimize impacts from the active slip plane or avoid the unstable terrain. Additional right of way and significant environmental impacts would be associated with all the alternative alignments.

D. Design Exception Feature #4

Non Standard Feature:

Existing stopping sight distance for horizontal, and crest and sag vertical curves.



The details for the existing horizontal curves is listed below:

<u>Stationing</u>	<u>Curve Radius</u>	<u>Distance (m) to obstruction</u>	<u>Stopping Sight Distance</u>	<u>Corresponding Design Speed (km/hr)</u>
11+05 – 11+55	134 (Rt)	4.3	68	50
13+20 – 13+78	92 (Rt)	4.3	56	50-
14+43 – 15+92	149 (Lt)	3.1	84	60

The details for the existing vertical curves is listed below:

<u>Center PI Stationing</u>	<u>Curve Length</u>	<u>A (%)</u>	<u>Stopping Sight Distance</u>	<u>Corresponding Design Speed (km/hr)</u>
12+40	70 (Crest)	8	65-	50-
13+82	100 (Sag)	10.5	65-	50-
15+04	120 (Crest)	9.3	65+	50+

The project proposes to improve the two crest vertical curves:

<u>Center PI Stationing</u>	<u>Curve Length</u>	<u>A (%)</u>	<u>Stopping Sight Distance</u>	<u>Corresponding Design Speed</u>
12+40	120 (Crest)	6	90	60+ (Improved)
13+82	100 (Sag)	8	65	50 (Improved)
15+04	150 (Crest)	8.4	85	60 (Improved)

Standards for which the exception is requested:

The mandatory stopping sight distance is 130-m for a minimum design speed of 80 km/h per Table 201.1 of the Highway Design Manual. For a conventional highway in rural mountainous terrain the design speed can range from 60 to 80 km/hr, Table 101.2 HDM. The posted speed is 88 km/hr. The 85th percentile of running speed within the project limits is 72 km/hr.

Reason For Requesting Exception:

The five-year collision history does not indicate sight distance to objects in the roadway a contributory factor to any collisions. The minor shoulder widening included in the project will improve horizontal stopping sight distance, but additional width is needed to meet the current standard. The existing alignment in mountainous terrain limits the ability to improve horizontal sight distance. To correct the curve radius would require a structure or a new alignment with significant cut slope retaining walls. Alternatives have been explored in the 1995 PSR for an ultimate realignment at a minimum cost of \$25,000,000. It should be noted that even those alternatives were found deficient due to unfeasibility or unacceptable impacts. Additional alternatives would need to be developed to minimize impacts from the active slip



plane or avoid the unstable terrain. Additional right of way and significant environmental impacts would be associated with all the alternative alignments.

To improve the stopping sight distance on the crest and sag vertical curves would require improving the profile grade, as previously noted, at an additional cost of approximately \$10,200,000.

E. Design Exception Feature #5

Non Standard Feature:

The existing maximum superelevation rates are below current standards. The existing superelevation rates for each curve is shown as an attachment and listed below:

#	<u>Stationing</u>	<u>Curve Radius</u>	<u>Existing Superelevation</u>	<u>Standard</u>	<u>Proposed Superelevation</u>
1	10+34 – 10+90	262 (Lt)	6% Lt, -6% Rt	10%	No work
2	11+05 – 11+55	134 (Rt)	4% Lt, -8% Rt	12%	No work
3	12+03 – 12+74	94 (Lt)	5% Lt, -12% Rt	12%	12%, -12%
4	13+20 – 13+78	92 (Rt)	5% Lt, -5% Rt	12%	11%, -11%
5	14+43 – 15+92	283 (Lt)	4% Lt, -6% Rt	10%	10%

Standards for which the exception is requested:

Section 202.2 and Table 202.2 of the Highway Design manual state the superelevation rate shall be used for the given range of curve radii or figure 203.2 shall be used to determine the super elevation based on curve radii and comfortable speed.

Reason For Requesting Exception:

It is proposed to increase the superelevation as much as possible between the two tightest curves of Radii 94 and 92 meters. A maximum rate of change of 4% per 20 meters will be maintained for this improvement.

The existing alignment is in mountainous terrain, which limits the alternatives to achieve the standard superelevation rates. The existing terrain constrains the horizontal alignment and limits the available transition length between curves.

A wider shoulder exists on the left between curves 2 and 3. The lesser superelevation rate on the left helps with the transition to the wider shoulder. It is not recommended to increase the superelevation rates for these curves. To improve the superelevation for these curves would require improving the curves on a completely new alignment with large slopes and structures. Major environmental impacts involving tree removal, steep cuts and fills and additional right of way form Park land would be associated with these alternatives. The 1995 PSR explored alternatives at a minimum cost of \$25,000,000 that were found to be deficient due to unfeasibility or unacceptable impacts. Additional alternatives would need to be developed to



minimize impacts from the active slip plane or avoid the unstable terrain. Additional right of way and significant environmental impacts would be associated with all the alternative alignments.

3. TRAFFIC DATA

The following table provides the traffic data for the roadway segment in this project:

Average Annual Daily Traffic (2001)	4300 vehicles
Design Hourly Volume (2001)	620 vehicles
Average Annual Daily Traffic (2028)	6620 vehicles
Design Hourly Volume (2028)	950 vehicles

4. COLLISION ANALYSIS

A TASAS Table B report covering 04/01/97 through 03/31/02 lists a total of fourteen collisions. Eight of the fourteen collisions (57%) occurred under wet and/or slippery conditions. Seven of the fourteen, (50%) listed 'excess speed' as the primary collision factor (driving too fast for conditions). Ten of the fourteen collisions (71%) resulted in twenty-one injured persons. The Collision Analysis is included as attachments. A summary of the Table B report is given below:

01-DN-101; KP 23.8/25.0 (PM 14.8/15.6)					
Actual			Statewide		
Fatals	Fatals+Injury	Total	Fatals	Fatals+Injury	Total
0	1.53	2.14	0.036	0.87	1.73

5. INCREMENTAL IMPROVEMENTS

There are no alternatives that are intermediate in scope and cost between the proposed project and a project meeting applicable standards.

6. FUTURE CONSTRUCTION

There are no future projects programmed for this section of highway.



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)

03231 - 324700

\$8,000,000

201.150 (HA42)

7. PROJECT REVIEWS, CONCURRENCE

A Value Analysis study was completed October 2002.

A Project Development Team (PDT) meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and scope the project.

John Steele, Design Coordinator Division of Design, preliminarily reviewed the scope and cost of this project by phone on December 14, 2002. John Roccanova, HQ Design Reviewer, reviewed the proposed design exception at the District 1 Design E2 office on March 18, 2003. John Roccanova, at the District Office, and John Steele by phone reviewed the project more thoroughly on May 28th, 2003.

Another PDT meeting was held on May 8, 2003. The PDT concurred with the recommended alternative for programming.

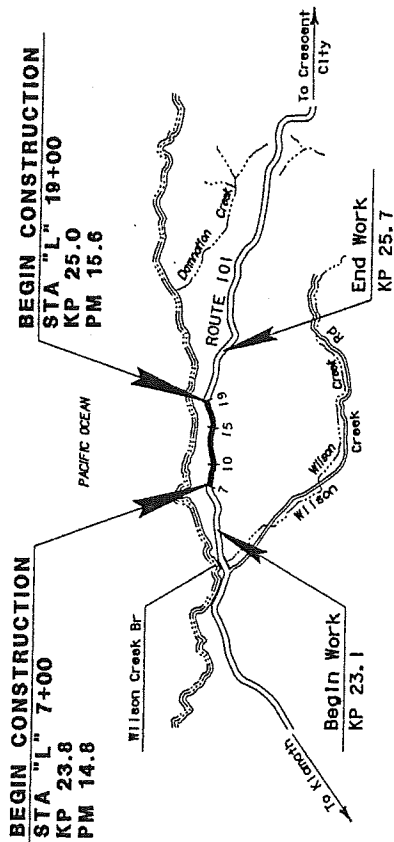
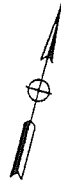
8. ATTACHMENTS

- Location Map
- Typical Sections (X-1, 2 & 3)
- Layouts (L-1, L-2)
- Profile (P-1)
- Superelevation Diagram (SE-1)

INDEX OF SHEETS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY**
 IN DEL NORTE COUNTY
 ABOUT 17 km NORTH OF KLAMATH
 FROM 3.5 km NORTH OF WILSON CREEK BRIDGE
 TO 4.7 km NORTH OF WILSON CREEK BRIDGE

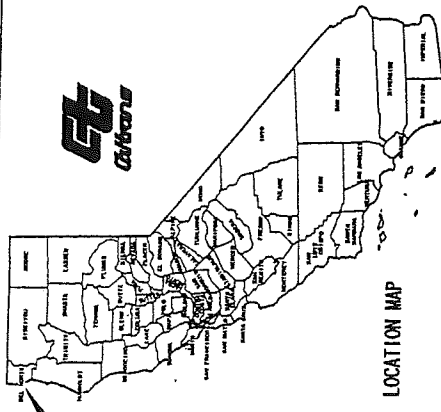
To be supplemented by Standard Plans dated July, 1999



BEGIN CONSTRUCTION
 STA "L" 7+00
 KP 23.8
 PM 14.8

BEGIN CONSTRUCTION
 STA "L" 19+00
 KP 25.0
 PM 15.6

DIST	COUNTY	ROUTE	TOTAL PROJECT SHEETS	SHEET NUMBER
01	DN	101	23, 8/25, 0	1



LOCATION MAP

The State of California, its officers and agents shall not be responsible for the accuracy or completeness of electronic copies of the plans herein.

Caltrans now has a web site! To get to the web site, go to <http://www.dot.ca.gov>



LOCATION MAP



Project Engineer Date
 Registered Civil Engineer

Plans Approval Date

The Contractor shall possess the Class (or classes) of license as specified in the "Notice to Contractors".

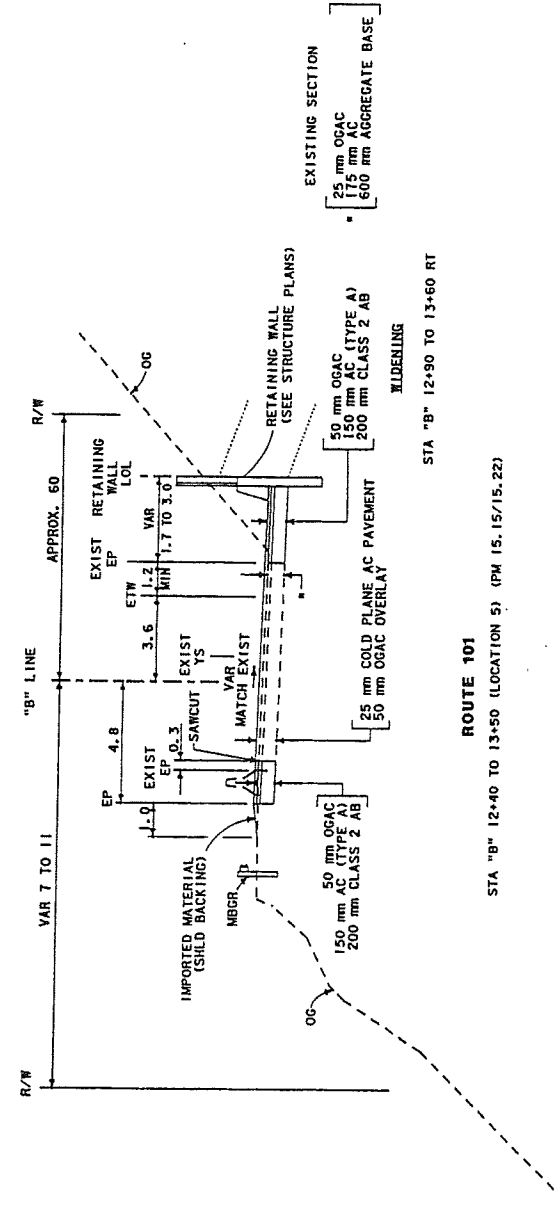
No Scale

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN		PROJECT ENGINEER		MARK SOBOTA		CHECKED BY		DATE REVISIED	
CALCULATED/		DESIGNED BY		DATE		REVISIED BY		DATE		REVISIED	

- NOTES:**
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



KILOMETER POST MILESTAGE TOTAL		PROJECT NO.		SHEETS	
01	DN	101	23.8/25.0		
REGISTERED CIVIL ENGINEER					
DATE: 02/02/00					
PLANS APPROVAL DATE: 02-20-00					
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Get from user box a web site to go to the web site, go to the http://www.dgs.ca.gov					



TYPICAL CROSS SECTION X-2

NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

USE NAME -> TIFX
DGN FILE -> typical.dgn

CU 03.231

EA 324700

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN		PROJECT ENGINEER		MARK SOBOTA		CHECKED BY		DATE	
REVISOR		REVISION		DATE		DESIGNED BY		DATE		REVISOR	
REVISOR		REVISION		DATE		DESIGNED BY		DATE		REVISOR	

- NOTES:**
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



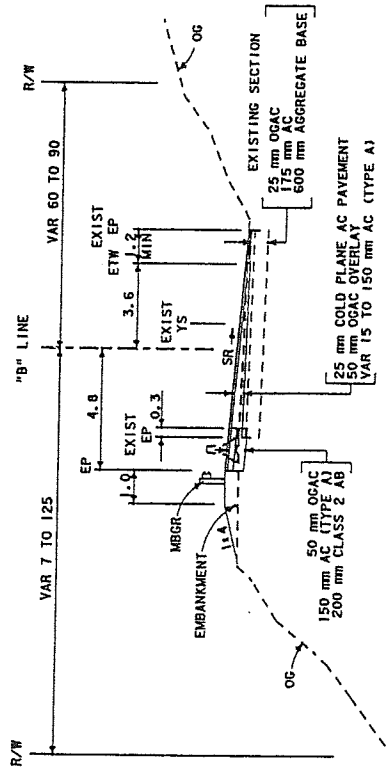
ROUTE	101	KILOMETERS POST MILESTONES	23.8/25.0
COUNTY	01	TOTAL PROJECT SHEETS	1
DN	101	PROJECT NO.	00/00/00

REGISTERED CIVIL ENGINEER

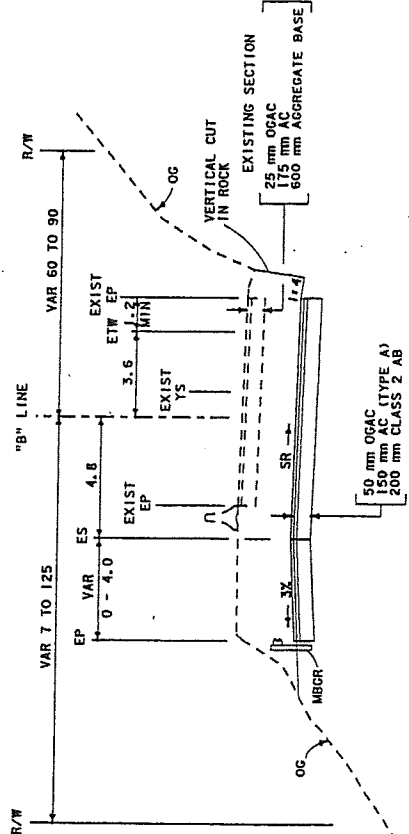
PLANS APPROVAL DATE: 06-30-07
 MARK SOBOTA
 CIVIL ENGINEER

The State of California or its officers or agents shall not be responsible for the consequences of alterations made to these plans after the date of their approval.

Contact our fax or web site. To get the web site, go to: <http://www.dgs.ca.gov>



ROUTE 101
 AC SUPER ELEVATION CORRECTION
 STA "B" 12+00 TO 12+80
 STA "B" 12+80 TO 14+00



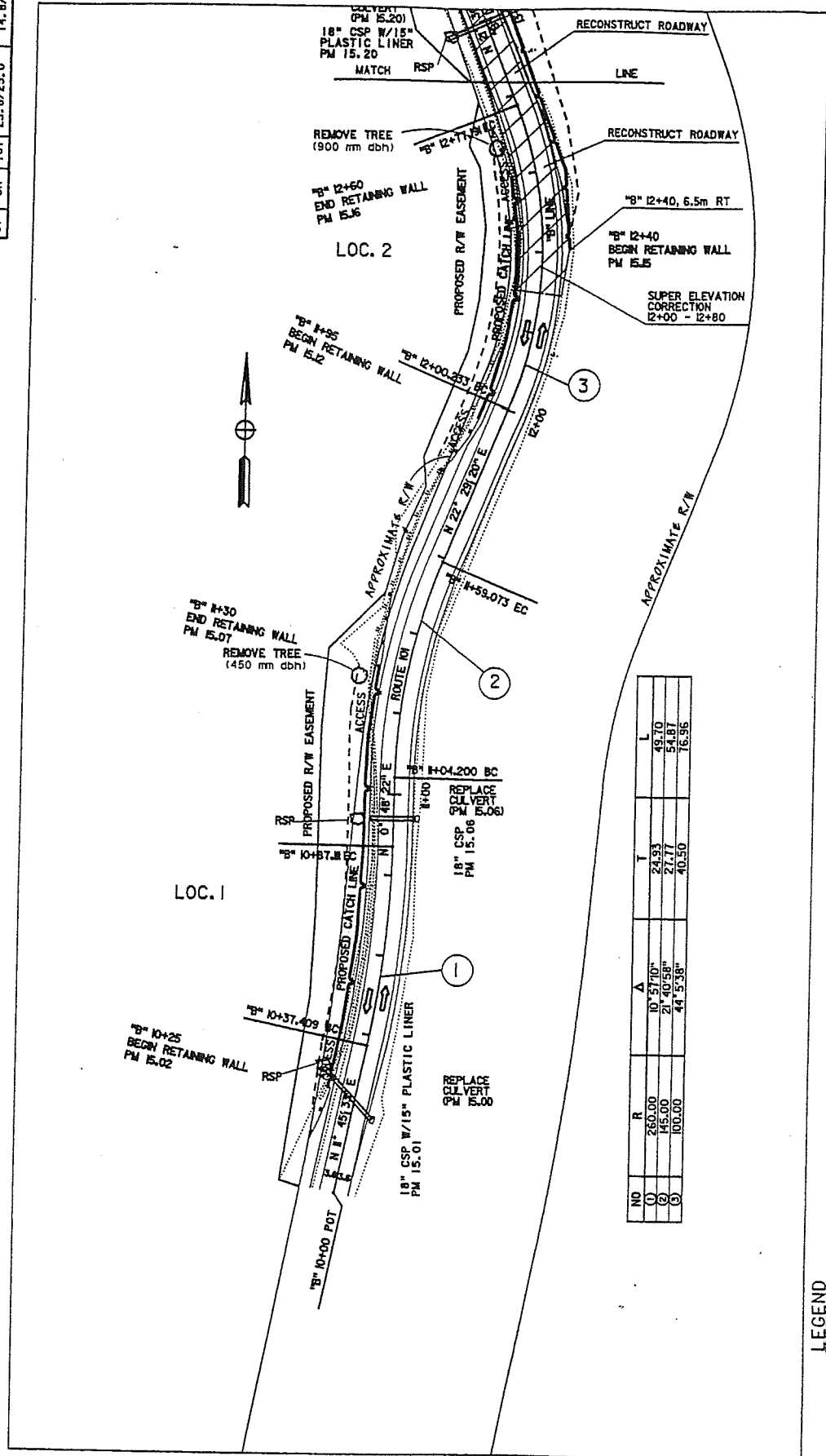
ROUTE 101
 VERTICAL CURVE CORRECTION
 STA "B" 12+30 TO 13+50
 STA "B" 14+30 TO 15+90

TYPICAL CROSS SECTION X-3

NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
 FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS
 USERNAME -> FIFIX
 DGN FILE -> typical3.dgn

DIST	COUNTY	ROUTE	KILOMETER	POST	MILE	POST
01	DN	101	23.8/25.0		14.8/15.6	



NO	R	Δ	T	L
1	260.00	10° 57' 00"	24.93	49.70
2	145.00	21° 40' 58"	27.77	54.87
3	100.00	44° 5' 38"	40.50	76.96

LEGEND
 CATCH LINES (CUT/FILL) - - - -
 EXISTING RIGHT OF WAY - - - -
 PROPOSED RIGHT OF WAY OR EASEMENT - - - -
 PROPOSED RETAINING WALL - - - -
 RECONSTRUCT ROADWAY - - - -

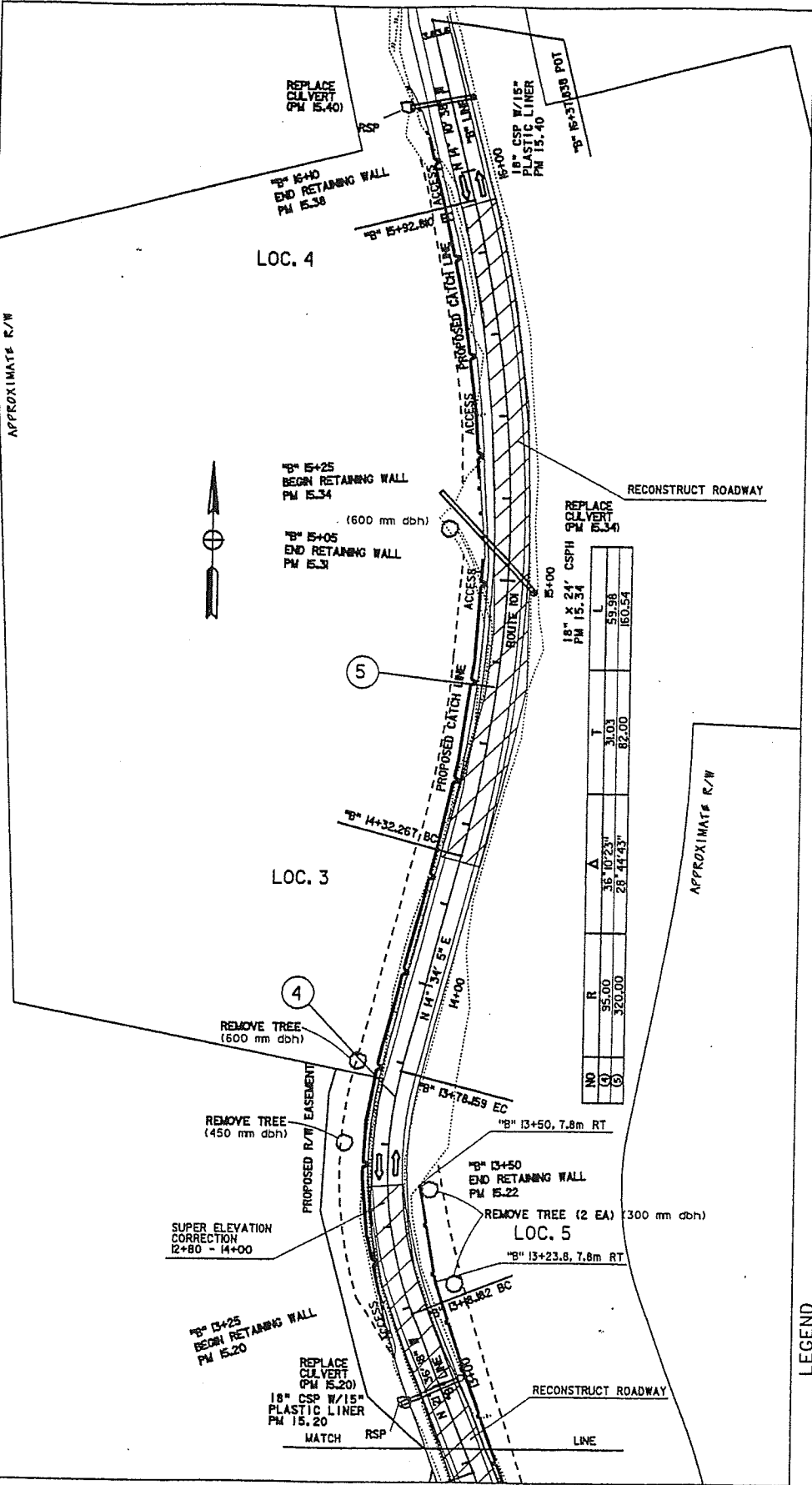
Caltrans, District 1
 P. O. Box 3700
 Eureka, CA 95602

etrip
 DATE: 8/18/03

ATTACHMENT L-1
PROJECT LAYOUT MAP
 LAST CHANCE GRADE ROADWAY STABILIZATION

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8/25.0	14.8/15.6

APPROXIMATE R/W



NO	R	A	T
1	54.00	38°10'23"	31.03
2	30.00	28°44'43"	82.00
		18" X 24" CSPH	
		PM 15.34	
		L	
		59.98	
		160.54	

APPROXIMATE R/W

LEGEND

- CATCH LINES (CUT/FILL) -----
- EXISTING RIGHT OF WAY _____
- PROPOSED RIGHT OF WAY OR EASEMENT _____
- PROPOSED RETAINING WALL _____
- RECONSTRUCT ROADWAY _____

Caltrans, District I
 P. O. Box 3700
 Eureka, CA 95602

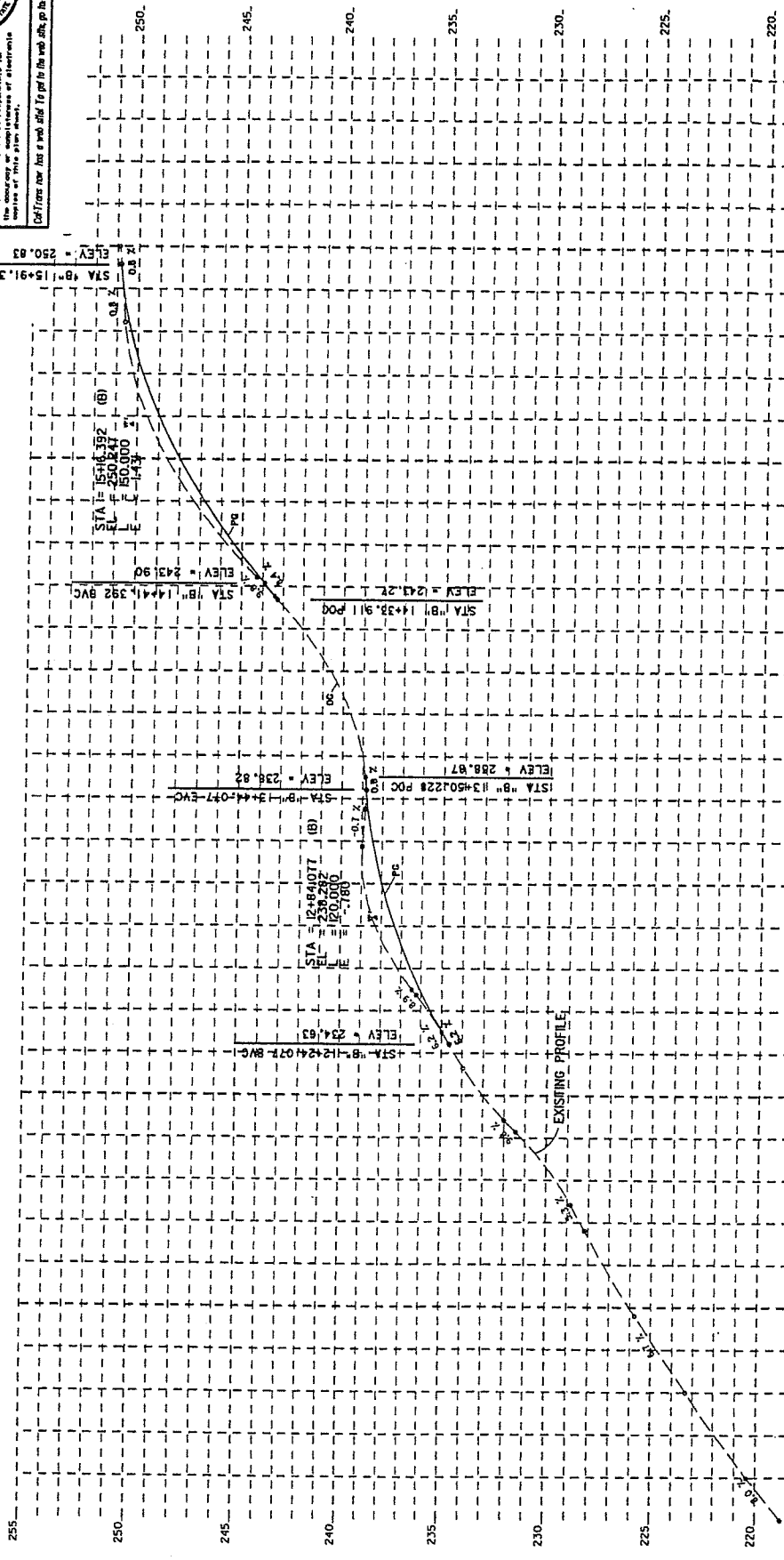


DATE: 6/10/03



ATTACHMENT L-2
PROJECT LAYOUT MAP
 LAST CHANCE GRADE ROADWAY STABILIZATION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER		DESIGNED BY		CHECKED BY		DATE	
CONTRACT NO.		MARK SOBOTA		DATE REVISOR		DATE REVISOR		DATE	



etrio
California

REGISTERED CIVIL ENGINEER
 PROJECT NO. 23-B/25-0
 COUNTY DN
 ROUTE 101
 TOTAL SHEETS 12
 SHEET NO. 1

PLANS APPROVAL DATE
 MARK SOBOTA
 CIVIL
 DATE 08-30-10
 PROJECT NO. 23-B/25-0

PROFILE P-1

NO SCALE

CU 03 231

"B" LINE PROFILE

FOR REQUARED PLANS ORIGINAL SCALE IS IN MILLIMETERS

USE: DRAWING TO FILE
 DGN FILE -> 08-30-10.dgn

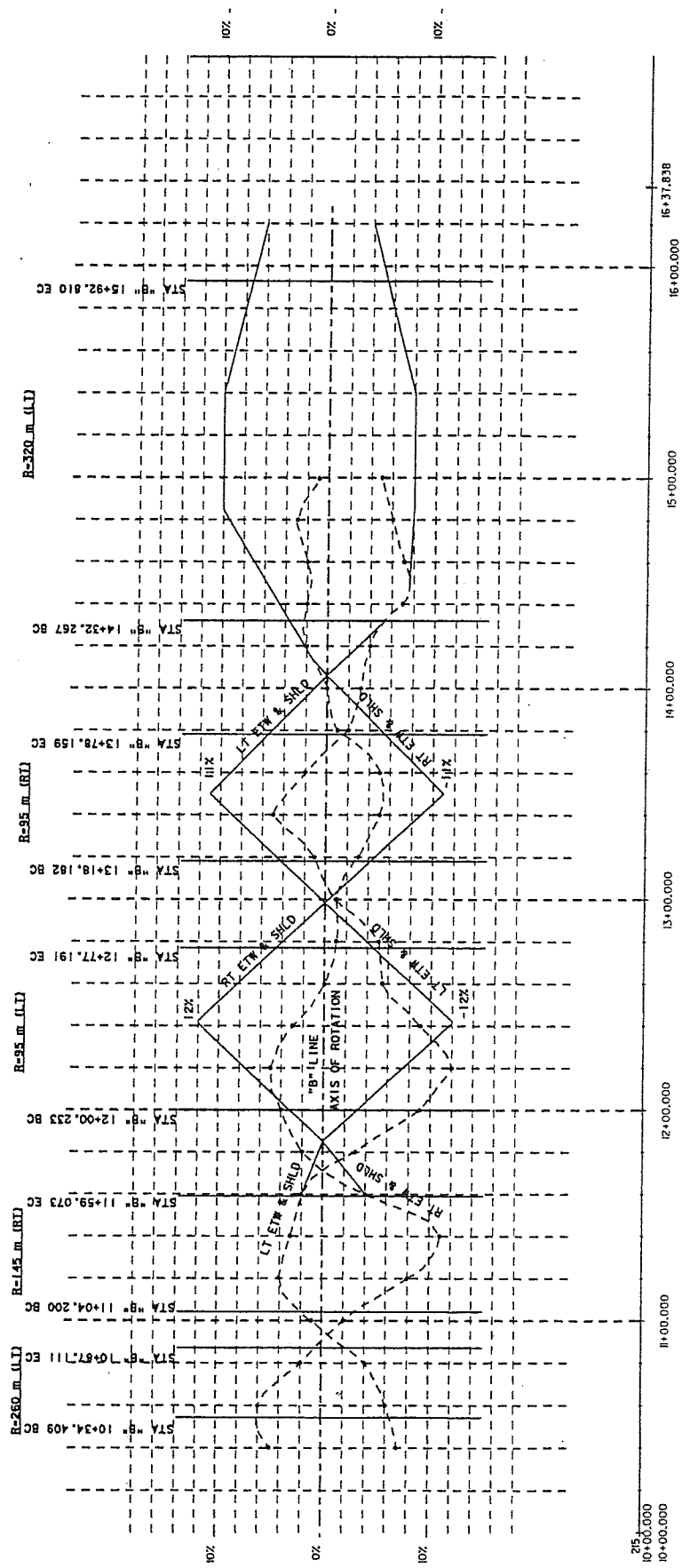
DATE PLOTTED -> 16-JUN-2003

DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS
01	DN	101	23	25
DATE PLOTTED: 16-JUN-2003				



REGISTERED CIVIL ENGINEER
 PLANS APPROVAL DATE: 06/06/03
 The State of California, in its sovereign capacity, does not assume any liability for the consequences of the use of these plans.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER	MARK SOBOTA	DESIGN
DESIGNED BY	DATE	CHECKED BY	DATE REVISD	REVISD



"B" LINE SUPER ELEVATION DIAGRAM

SE-1

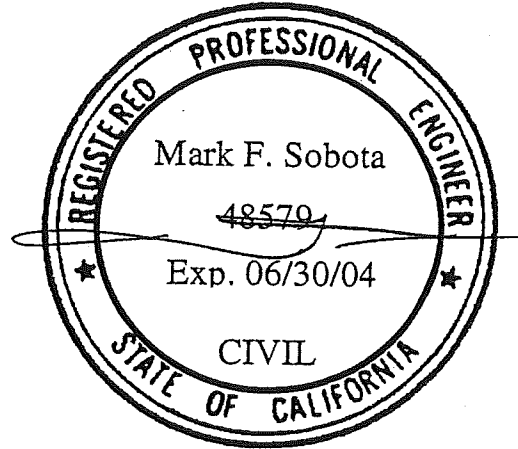
NO SCALE

FOR REVERSED PLANS ORIGINAL COPY IS IN MULTICOPY SET

DATE PLOTTED: 16-JUN-2003



Fact Sheet Exceptions to Advisory Design Standards



Prepared and Submitted by:

Mark Sobota
Registered Civil Engineer

7/9/03
Date

85386466
Telephone

Submitted by:

Dennis McBride
Dennis McBride, Sr. Design Engineer

7/10/03 8-538-6440
Date Telephone

Recommended for Approval:

Gary M. Banducci
Gary M. Banducci, Project Manager

7/10/03 8-538-5878
Date Telephone

Concurrence by:

John Roccanova
John Roccanova, HQ Design Reviewer

7/11/03 916-653-4937
Date Telephone

Concurrence by:

Martin D. Van Landt
Martin D. Van Landt, Deputy District Director,
Maintenance and Operations, District 1

7/17/03 8-538-6393
Date Telephone

Approved by:

Susan Tappan
Susan Tappan, Chief, Office of Design - Northwest

7/17/03 8-538-5813
Date Telephone



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)

03231 - 324700

\$8,000,000

201.150 (HA42)

1. PROPOSED PROJECT

A. Project Description:

This project proposes to address the most unstable areas within the project limits by constructing maintenance tieback soldier pile walls on the left below the roadway and a soldier wall in the cut slope on the right. This will help to resist lateral shallow slope instabilities in areas of poorly consolidated materials on Route 101 in Del Norte county from KP 23.8 to 25.0 (PM 14.8 to 15.6). This segment of State Route 101 traverses Del Norte Coast Redwoods State Park and is the major transportation link between Humboldt and Del Norte counties. A PSR was completed in February of 1995 that included 5 alternatives (including the "No Build"). A geotechnical study was conducted to investigate and make recommendations for the alignments discussed in the PSR. The preliminary geotechnical report was completed May 31, 2001. A Value Analysis study was completed January of 2003, which identified alternatives to the 1995 PSR alternatives. The alternative recommended for programming is estimated to cost \$8,000,000. The project is to be funded with demonstration funds and from the 201.150 (SHOPP Roadway Protective Betterment) Program.

Programming Alternative (Supplemental PSR)

This alternative proposes to construct five retaining walls and widen the existing roadway sufficiently to provide two 3.6-meter lanes and 1.2-meter shoulders. Minor widening is needed to provide the desired roadway width of 9.6 meters. The improvements will be on the current alignment to minimize environmental and right-of-way impacts. The original alternative was recommended by the VA team and accepted by the PDT, District 1 Executive Management and Del Norte County stakeholders. A PDT meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and refine the scope the project. The PDT refined the locations of the walls in the alternative, and included improvements to the geometrics of the roadway caused by landsliding. The project was further refined, at the request of the HQ Design Reviewer, to widen on the left at wall locations 1 and 4 to provide a 2.4-meter shoulder for the southbound lanes.

This alternative will locally stabilize the landslide but not address the deep-seated slide. Maintenance efforts will be reduced, but long-term maintenance associated with the deep slide will still be necessary for the walls. At the northerly end of the project, roadway settlement has adversely affected the profile of the highway. Roadway reconstruction at two locations for a total of 300 meters will be done to upgrade the vertical alignment. It is also proposed to improve the super elevation at the two smallest radii curves within the project limits with AC leveling and some structural section reconstruction. Fact Sheets have been prepared for such items as non-standard shoulder widths, horizontal curve radii, stopping sight distance, vertical curves, superelevation and superelevation runoff rates.

The entire roadway will be overlaid with OGAC at the completion of the project. It is



estimated to take 850 working days to complete this project. Project layout maps and typical cross-sections of the proposed improvements are attached.

B. Existing Highway:

This segment of Route 101, which traverses mountainous terrain, is a 2-lane conventional highway. It is the primary north-south transportation corridor linking Humboldt and Del Norte counties. It is functionally classified as a Rural Principal Arterial Highway and is a Federal Aid Primary Route. It serves as a significant interregional and interstate route, with heavy use by logging, lumber trucks, and recreational traffic in the summer months. Through the project limits Route 101 is a Non-Freeway, Non-Expressway forest highway through Del Norte Coast Redwoods State Park. It is officially designated as a Scenic Highway, and part of the "Pacific Coast Bike Route." This segment of highway along the coastline, varying between 220 meters and 250 meters in elevation, traverses through mountainous, rocky terrain across an active deep-seated slip-plane. The existing roadbed through the project limits consists of two 3.3-m lanes with shoulder widths varying between 0.3 and 2.4 meters. The alignment consists of four tangents with lengths from 15 to 65 meters, connecting five curves with radii varying between 90 and 280 meters.

C. Safety Improvements:

The Traffic Safety Office conducted a collision analysis. The collision analysis is discussed in Section 4 of this report and a copy is attached.

There were three Table C traffic investigations, between 01/10/96 and 12/09/99, which occurred within the project limits. A Table C report lists high collision concentration locations. An open-graded asphalt overlay was placed in July 2000 to help reduce the collisions through the short radius curves. An examination of Table C data shows no high collision frequency spot locations within the proposed project limits since July 2000. This project will continue to provide an Open Graded finish surfacing within the project limits.

The geometrics for the project will be improved in several ways, which will make the facility safer. Alternative 4 proposes to widen the existing roadway to provide two 3.6-meter lanes and 1.2-meter shoulders and install retaining walls. The project will also widen to the left at locations 1 and 4 to provide a 2.4-meter shoulder for the southbound lanes. The wall at location 5 provides more shoulder, which will improve the stopping sight distance around the curve. There are two vertical curves at the north end of the project which will be improved to provide more stopping sight distance, and it is also proposed to improve the super elevation at the two smallest radii curves within the project limits.



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)
 03231 - 324700
 \$8,000,000
 201.150 (HA42)

D. Total Project Cost:

The Preliminary Project Cost Estimate is:

District Cost.....	\$ 1,865,000
Structure Cost.....	\$ 6,110,000
<u>Right of Way Cost</u>	<u>\$ 7,300</u>
Total	\$ 7,982,300
Call	<u>\$ 8,000,000</u>

2. FEATURES REQUIRING AN EXCEPTION

A. Design Exception Feature #1:

Non Standard Feature:

The superelevation runoff transitions between curves are non-standard.

#	<u>Curve Stationing</u>	<u>Curve Radius</u>	<u>Std Runoff length</u>	<u>Existing Runoff length (In, Out)</u>
1	10+34 – 10+90	262 (Lt)	75	N/A, 15
2	11+05 – 11+55	134 (Rt)	90	25, 45
3	12+03 – 12+74	94 (Lt)	90	55, 60
4	13+20 – 13+78	92 (Rt)	90	55, 55
5	14+43 – 15+92	283 (Lt)	75	40, N/A

	<u>Between Curves</u>	<u>Distance Between Curves</u>	<u>Existing Rate per 20m Between Curves</u>	<u>Proposed Rate per 20m Between Curves</u>
Reversing	1 and 2	15	4%	No work
Reversing	2 and 3	45	6%	5%
Reversing	3 and 4	45	3%	4%
Reversing	4 and 5	65	2%	4%

Standards for which the exception is requested:

Section 202.5(2) and Table 202.5A of the Highway Design Manual states that two-thirds of the superelevation runoff should be on the tangent and one-third within the curve.

Section 202.5(3) of the Highway Design Manual states that the rate of change of cross slope should not exceed 4% per 20m, and Section 203.6 states on reversing curves when the



connecting tangents are not long enough to accommodate the standard superelevation runoff, then the 4% per 20m rate of change of cross slope should govern.

Reason For Requesting Exception:

The project proposes to increase the superelevation rate at curves 3 and 4, which consequently increases the rate of change of cross slope between the curves. The tangent length between the reversing curves does not provide enough length for a standard superelevation transition, but the rate of change of cross slope will exceed 4% per 20 meters between curves 2 and 3.

The existing terrain constrains the horizontal alignment and limits the lengths for runoff and transition between curves. To increase the distance and transition lengths between the reversing curves would require a completely new alignment with large slopes and structures. Alternatives have been explored in the 1995 PSR for an ultimate realignment at a minimum cost of \$25,000,000. It should be noted that even those alternatives were found deficient due to unfeasibility or unacceptable impacts. Additional alternatives would need to be developed to minimize impacts from the active slip plane or avoid the unstable terrain. Additional right of way from Park land and significant environmental impacts involving tree removal and possible loss of habitat for sensitive species would be associated with all the alternative alignments.

3. TRAFFIC DATA

The following table provides traffic data for the roadway segment in this project:

Average Annual Daily Traffic (2001)	4300 vehicles
Design Hourly Volume (2001)	620 vehicles
Average Annual Daily Traffic (2028)	6620 vehicles
Design Hourly Volume (2028)	950 vehicles

4. COLLISION ANALYSIS

A TASAS Table B report covering 04/01/97 through 03/31/02 lists a total of fourteen collisions. Eight of the fourteen collisions (57%) occurred under wet and/or slippery conditions. Seven of the fourteen, (50%) listed 'excess speed' as the primary collision factor (driving too fast for conditions). Ten of the fourteen collisions (71%) resulted in twenty-one injured persons. The Collision Analysis is included as attachments. A summary of the Table B report is given below:



01-DN-101; KP 23.8/25.0 (PM14.8/15.6)

03231 - 324700

\$8,000,000

201.150 (HA42)

01-DN-101; KP 23.8/25.0 (PM 14.8/15.6)					
Actual			Statewide Average		
Fatals	Fatals+Injury	Total	Fatals	Fatals+Injury	Total
0	1.53	2.14	0.036	0.87	1.73

5. INCREMENTAL IMPROVEMENTS

There are no alternatives that are intermediate in scope and cost between the proposed project and a project meeting applicable standards.

6. FUTURE CONSTRUCTION

There are no future projects programmed for this section of highway.

7. PROJECT REVIEWS, CONCURRENCE

A Value Analysis study was completed October 2002.

A Project Development Team (PDT) meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and scope the project.

John Steele, Design Coordinator Division of Design, preliminarily reviewed the scope and cost of this project by phone on December 14, 2002. John Roccanova, HQ Design Reviewer, reviewed the proposed design exception at the District 1 Design E2 office on March 18, 2003. John Roccanova, at the District Office, and John Steele by phone reviewed the project more thoroughly on May 28th, 2003.

Another PDT meeting was held on May 8, 2003. The PDT concurred with the recommended alternative for programming.

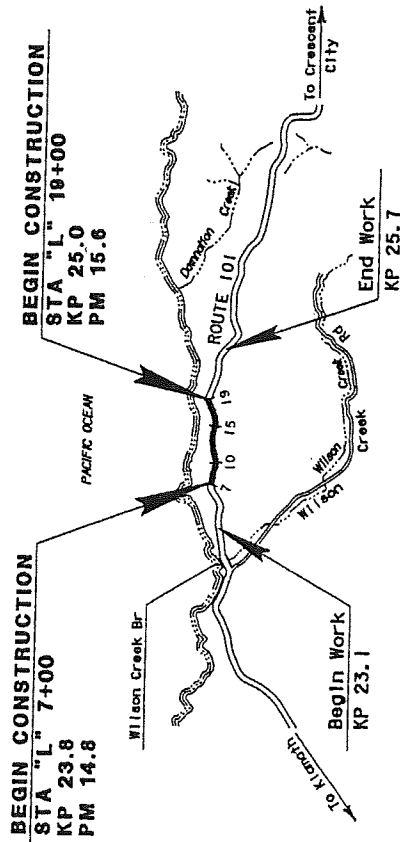
8. ATTACHMENTS

Location Map
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Layouts (L-1, L-2)
Profile (P-1)
Superelevation Diagram (SE-1)

INDEX OF SHEETS

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 DEPARTMENT OF TRANSPORTATION
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 STATE HIGHWAY
 IN DEL NORTE COUNTY
 ABOUT 17 km NORTH OF KLAMATH
 FROM 3.5 km NORTH OF WILSON CREEK BRIDGE
 TO 4.7 km NORTH OF WILSON CREEK BRIDGE

To be supplemented by Standard Plans dated July, 1999



The Contractor shall possess the Class (or classes) of license as specified in the "Notice to Contractors".

No Scale

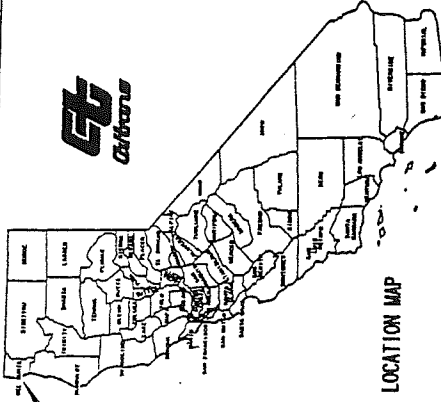
FORM 800-06-03-07 (REV. 3/2001)

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

0 20 40 60 80

IMPROVE YOUR PROJECT WITH US

DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS
01	DN	101	23.8/25.0	1



LOCATION MAP



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

Customers now has a web site! To get to the web site, go to <http://www.dtd.ca.gov>



LOCATION MAP



Project Engineer
Registered Civil Engineer

Plans Approval Date

Contract No. EA 000000
CU 00000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN		PROJECT ENGINEER		MARK SOBOTA		CHECKED BY		DATE		REVISOR		DATE	

- NOTES:
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



DIST.	COUNTY	ROUTE	TOTAL PROJECT LENGTH	SHEET NO.	TOTAL SHEETS
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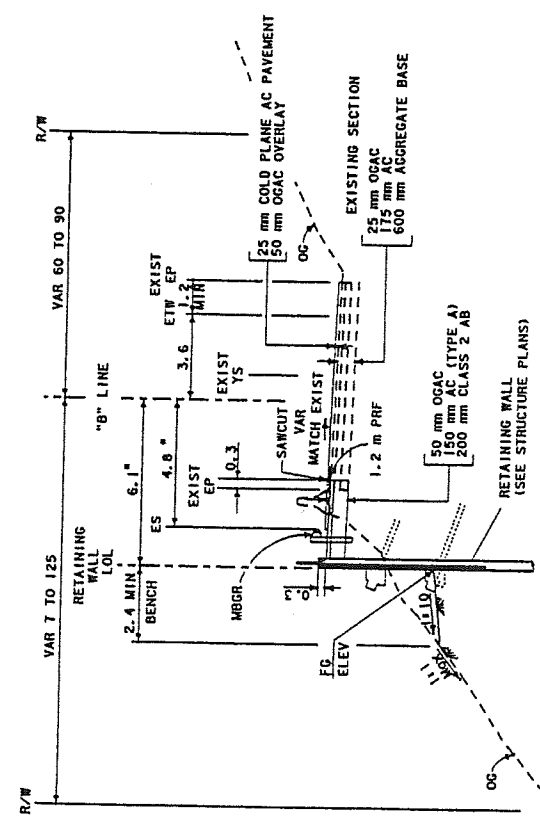
REGISTERED CIVIL ENGINEER

AMIEL SOBOTA
48579
E-30-00
CIVIL

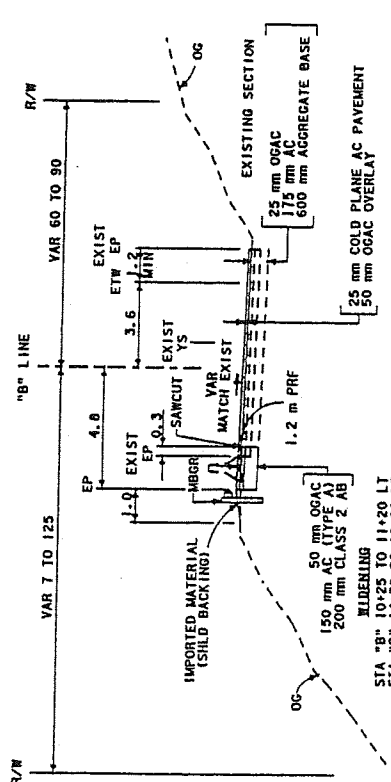
PLANS APPROVAL DATE: 8-30-00

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Call from now on a web site to get the web site for the MPN/View/Redesign



- ROUTE 101
- * STA "B" 10+25 TO 11+30 (LOCATION 1) (PM 15.02/15.07), ROADWAY WIDTH = 6.0 (SHLD = 2.4)
 - * STA "B" 11+95 TO 12+60 (LOCATION 2) (PM 15.12/15.16)
 - * STA "B" 13+25 TO 15+05 (LOCATION 3) (PM 15.20/15.31)
 - * STA "B" 15+25 TO 16+10 (LOCATION 4) (PM 15.34/15.38), ROADWAY WIDTH = 6.0 (SHLD = 2.4)



- ROUTE 101
- * STA "B" 10+00 TO 16+20 (PM 15.0/15.39)

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

SCALE: 1:50 (HORIZONTAL)
SCALE: 1:20 (VERTICAL)

USERNAME -> TIRX
DDN FILE -> tpic01a.dgn

TYPICAL CROSS SECTION X-1

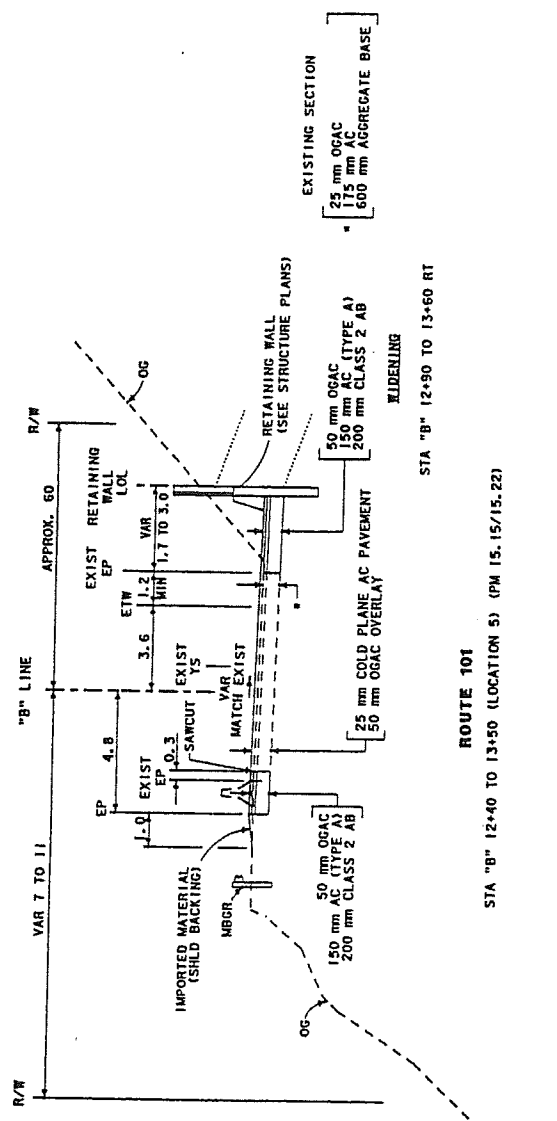
NO SCALE

CU 03 231

EA 324700

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER		MARK SOBOTA		DESIGN	
CALCULATED/		DESIGNED BY		CHECKED BY		DATE	
REVISIONS		REVISIONS		REVISIONS		REVISIONS	

- NOTES:
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBRG LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



DIST	COUNTY	ROUTE	PROJECT NO.	TOTAL SHEETS
01	DN	101	23.8/25.0	25

REGISTERED CIVIL ENGINEER

MARK SOBOTA
E-310-04
CIVIL

PLANS APPROVAL DATE: _____

By _____
The undersigned certifies that he or she is the engineer responsible for the design, preparation, or supervision of the preparation of this plan sheet.

Call your local office for the location of this plan sheet.

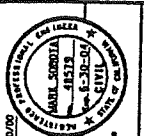


TYPICAL CROSS SECTION X-2
NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
FOR REDUCED PLANS ORIGINAL SCALE IS IN METERS

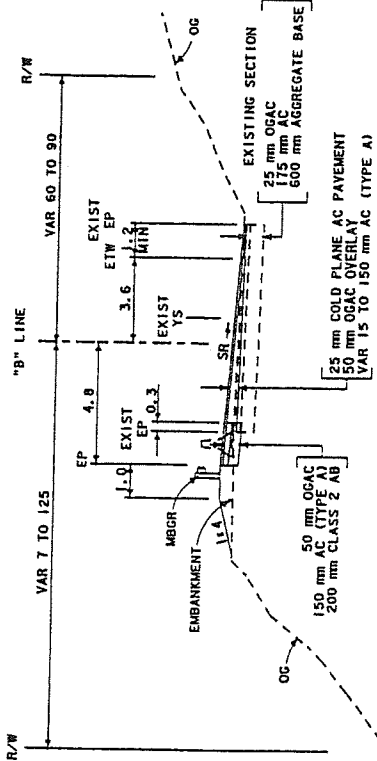
DATE: 01/01/01
 COUNTY: DN
 ROUTE: 101
 TOTAL PROJECT NO.: 23. B/25. 0
 SHEET NO.: 01

REGISTERED CIVIL ENGINEER: 00/00/00
 PROJECT NO.: 23. B/25. 0
 SHEET NO.: 01

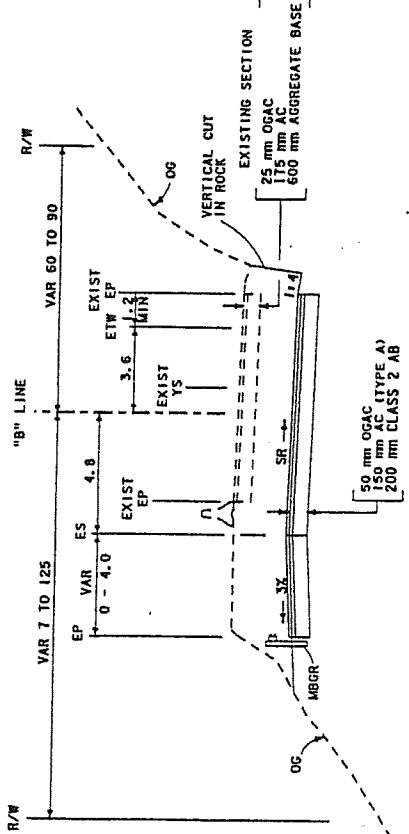


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER	MARK SOBOTA
DESIGN		DESIGNED BY	MARK SOBOTA
DATE	REVISOR	DATE	REVISOR

- NOTES:
- DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 - FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
 - SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



ROUTE 101
 AC SUPER ELEVATION CORRECTION
 STA "B" 12+00 TO 12+80
 STA "B" 12+80 TO 14+00



ROUTE 101
 VERTICAL CURVE CORRECTION
 STA "B" 12+30 TO 13+50
 STA "B" 14+30 TO 15+90

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

SCALE: 1" = 10' (VERTICAL)
 1" = 20' (HORIZONTAL)

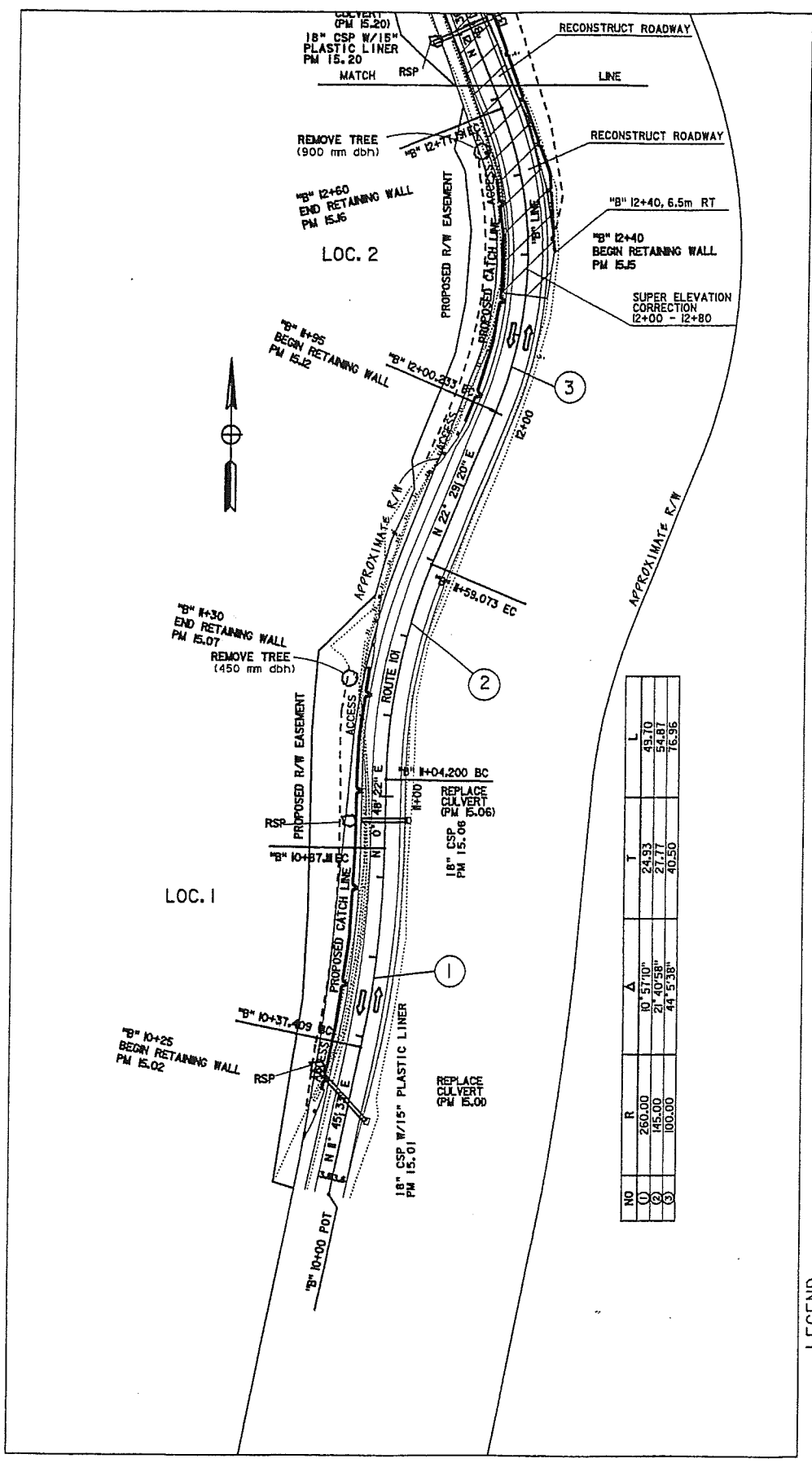
DATE PLOTTED: 16-JUN-2003

TYPICAL CROSS SECTION X-3
 NO SCALE

CU 03 231

EA 324700

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8725.0	14.8715.6

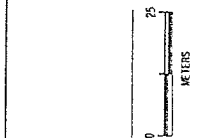


NO	R	A	T	L
1	260.00	10' 57.70"	24.93	49.70
2	145.00	21' 40.58"	27.77	54.87
3	100.00	44' 5.38"	40.50	76.36

ATTACHMENT L-1
PROJECT LAYOUT MAP
 LAST CHANCE GRADE ROADWAY STABILIZATION



DATE: 6/16/03



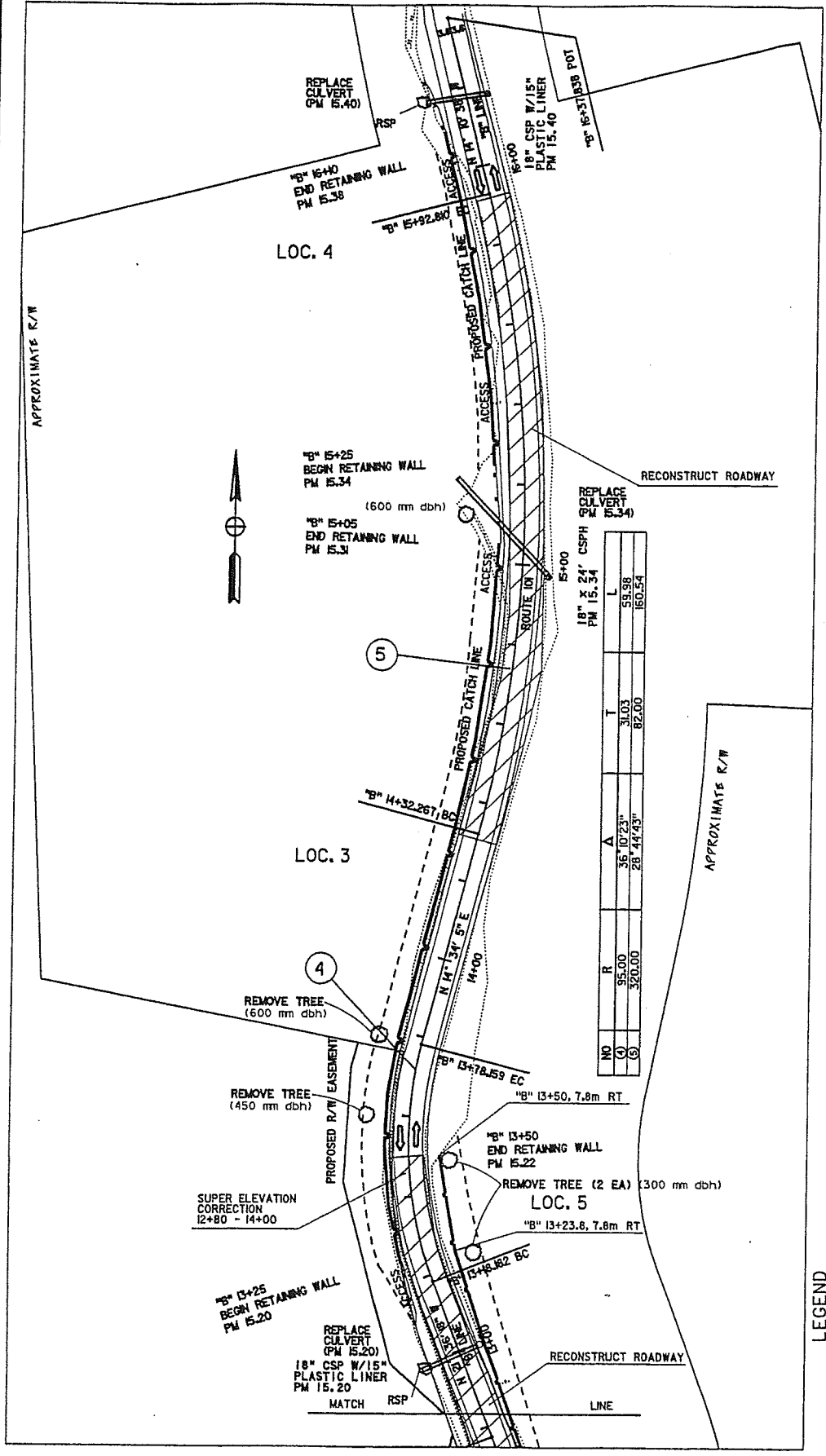
LEGEND
 CATCH LINES (CUT/FILL) - - - - -
 EXISTING RIGHT OF WAY OR EASEMENT _____
 PROPOSED RETAINING WALL _____
 RECONSTRUCT ROADWAY _____

California, District 1
 P. O. Box 3700
 Eureka, CA 95502

MARK F. SOBOTA
 PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8725.0	14.8715.6

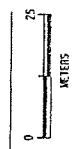


NO	R	Δ	L
1	95.00	36°10'23"	59.98
2	320.00	28°44'43"	150.54
3			82.00
4			31.03
5			15.34

ATTACHMENT L-2
PROJECT LAYOUT MAP
 LAST CHANGE GRADE ROADWAY STABILIZATION



DATE: 6/16/03

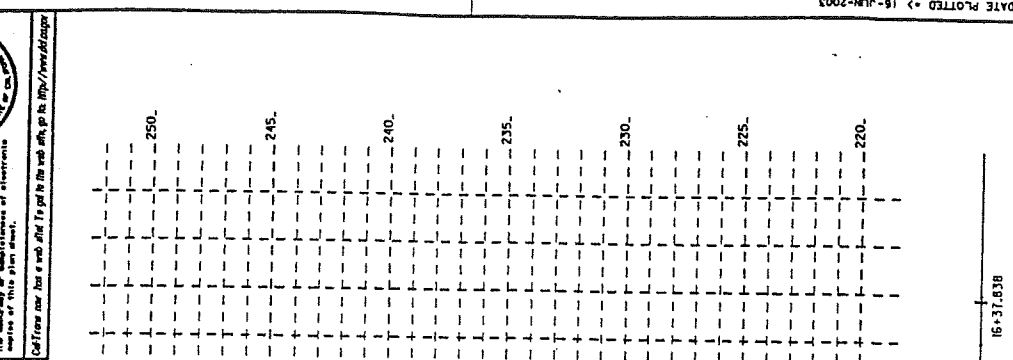


- LEGEND**
- CATCH LINES (CUT/FILL) - - - - -
 - EXISTING RIGHT OF WAY - - - - -
 - PROPOSED RIGHT OF WAY OR EASEMENT - - - - -
 - PROPOSED RETAINING WALL - - - - -
 - RECONSTRUCT ROADWAY - - - - -

C. Mearns, Director I
 P. O. Box 8700
 Eureka, CA 95602

DIST COUNTY ROUTE PROJECT TOTAL PROJECT DATE
 01 DN 101 23. B/25. 0

etrio
 REGISTERED CIVIL ENGINEER 0000090
 PROFESSIONAL SEAL NUMBER
MARK SOBOTA
 48519
 CIVIL
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for errors or omissions or consequences of reliance on this plan sheet.
 California has a web site for getting the web info at: <http://www.dgs.ca.gov>



"B" LINE PROFILE
 NO SCALE
 CU 03 231
 EA 324100
 USERNAME: 57717*
 Job: FILE -> design.dgn

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	PROJECT ENGINEER	MARK SOBOTA	DESIGNED BY	DATE
DESIGN	CHECKED BY		DATE REVISED BY	
	DATE		DATE REVISED	

10+00.000
 10+00.000
 10+00.000

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER		MARK SOBOTA		DESIGN	
CALCULATED/DESIGNED BY		CHECKED BY		DATE		DATE	
REVISOR		REVISOR		DATE		DATE	



COUNTY	ROUTE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
01	DN	101	23	25

DATE PLOTTED => 16-JUN-2003

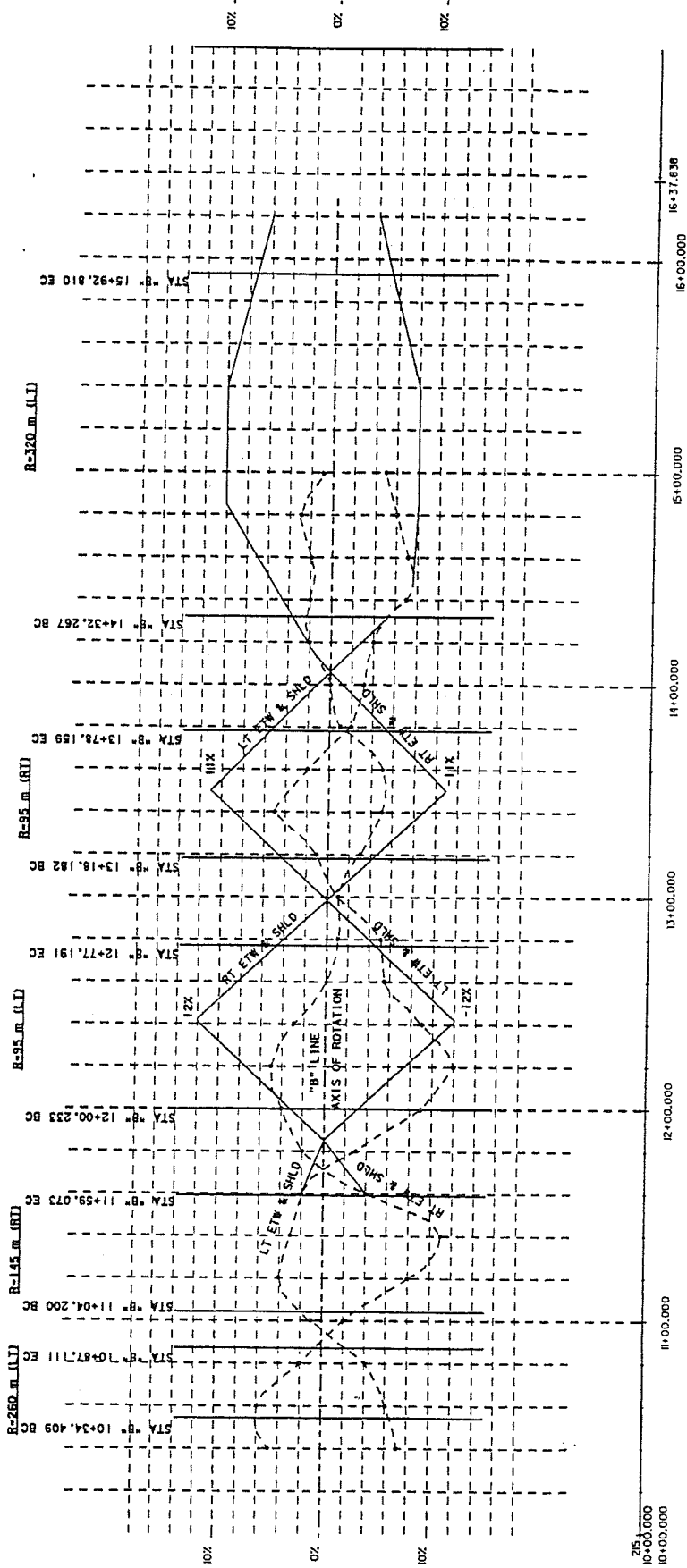
REGISTERED CIVIL ENGINEER 000000

MARK SOBOTA
18513
CIVIL
EXPIRES 06-30-05

PLANS APPROVAL DATE

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SUPERELEVATION DIAGRAM SE-1

NO SCALE

"B" LINE SUPER ELEVATION DIAGRAM

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS
 0 10 20 30 40 50
 DISTANCE IN FEET
 DISTANCE IN METERS

CU 03 231

EA 324100



Preliminary Environmental Analysis Report

Project Information

District 01 County DN Route 101 Kilometer Post (Post Mile) 23.8/25.0 (14.8/15.6)
EA 324700

Project Title: Stabilize Roadway at Last Chance Slide

Project Manager: Gary Banducci Phone # 445-6440

Project Engineer: Dennis McBride Phone # 441-5878

Environmental Branch Chief: Deborah Harmon Phone # 445-6416

Environmental Planner Generalist: Phone #

Project Description

Purpose and Need: Limit the movement of the existing roadway with retaining walls. Large, deep-seated and shallow landslides are present along the entire project. Settlement frequently occurs during wet conditions, requiring inspection and maintenance efforts to avoid closure. Project is needed in order to reduce the threat of closing Route 101—a major transportation route of interregional and interstate importance, reduce the burden of periodic maintenance efforts and minimize geologic and storm damage impacts to State and National Park property and environmental resources.

Description of work: Project consists of constructing five retaining walls and widening the existing roadway sufficiently to provide two 3.6 meter lanes and 1.2 meter shoulders throughout the project limits. Work includes vegetation and tree removal, construction of access roads, widening the existing roadway, construction of retaining walls, disposal/borrow sites, and drainage improvements. Project would include staged construction with signal system which would require generator and advance warning signs.

Alternatives: A PSR was completed in 1995 which evaluated tunnel, bypass, and retaining wall options and the identified alternative for programming was a realignment alternative for \$42.7 million. More recently a VA Study was completed in October 2002 and determined that the tunnel and bypass alternatives were not feasible due to the extent of the deep-seated landslide and/or unacceptable impacts and the scope of the original project was reduced to stabilizing roadway on current alignment. Current PSR identifies an alternative that locally stabilizes the landslide that will result in reduced maintenance efforts although this alternative does not address the deep-seated slide and long-term maintenance associated with the deep slide will still be necessary for the walls.

This alternative includes improving two vertical curves (Sta 12+30 to 13 + 50 and Sta 14 +30 to 15 +90) as well as constructing five retaining walls. Wall locations are as follows: 1) PM15.02/15.07 84 meter in length, average height is 7.1 meters. 2) PM 15.12/15.16 66 meters in length, average height is 6.1 meters. 3) PM 15.20/15.31 180 meters in length, average height 7.1 meters. 4) PM 15.34/15.38 70 meters in length, average height 7.1 meters. 5) PM 15.19/15.22 51 meters in length, average height is 2.6 meters. The wall at location 5 is the only wall above the road. This alternative also includes some drainage improvements (culverts at PM 15.01, 15.06, 15.20, 15.34, and 15.40). Culverts will be replaced

on their existing alignment. If terrain permits, RSP will be placed at outlet of some culverts. Roadwork also includes improving the super elevation at the two smallest radii curves with AC leveling, some structural section reconstruction and placing OGAC. This alternative includes \$7,000 for R/W. Total cost is \$7.7 million.

The Del Norte Coast Redwoods State Park surrounds the project site which is within the Redwoods National Park boundary. The alternative described above would necessitate permanent and temporary easements from the parkland. An alternative that avoids take of parkland will be need to be developed.

In addition, it is possible that during project development process various combinations of the walls mentioned above or possibly various modifications of the walls described above may be developed into independent alternatives. For example, one variation under consideration would be widening the roadway at wall locations 1 and 4 to provide a 2.4 meter shoulder on the southbound lane.

The environmental document will also include the no build alternative.

Anticipated Environmental Approval

<u>CEQA</u>	<u>NEPA</u>
<input type="checkbox"/> Categorical/Statutory Exemption	<input type="checkbox"/> Categorical Exclusion
<input checked="" type="checkbox"/> Negative Declaration / focused ND	<input checked="" type="checkbox"/> Finding of No Significant Impact
<input checked="" type="checkbox"/> Environmental Impact Report	<input checked="" type="checkbox"/> Environmental Impact Statement

Anticipated CEQA environmental document EIR or possibly Negative Declaration with Caltrans as Lead Agency. Estimated NEPA document could be FONSI or EIS. Level of document is dependent upon magnitude of impacts and ability to mitigate. Allow 30-36 months for PAED. Estimate resources at 4138 hours for Environmental Management. Add an additional 136 hours for Hazardous Wastes and an additional 278 hours for Water Quality(NPDES unit). This comes to a total of 4552 hours or 2.6 PY.

PSR Summary Statement

Key environmental issues will be habitat removal or modification of habitat of listed species, impacts to old growth redwoods, aesthetics (including barrier rail design), water quality and erosion control, take of parkland, construction traffic delays and roadway stability. Studies required will include NES, Biological Assessment, tree survey, archaeological survey, Native American consultation, visual assessment, Section 4F Evaluation, water quality, and noise study. If it is determined that disposal site is necessary, the location will need to be identified early so the necessary environmental surveys can be conducted. Permits to enter will be required from the Parks before some of the biological surveys can commence. Recommend that external agencies such as CHP, DNLTCO, DPR, RNP, and CCC be invited to participate as PDT members. The resource estimates assumes no cultural resources eligible for listing on the National Register of Historic Places will be identified within the APE. Nor does it assume a Phase 1.5 or Phase 2 archaeological effort will be necessary. No environmental surveys were conducted in preparation for this PEAR. The majority of information for this PEAR is garnered from previous projects in the near vicinity.

Special Considerations

Project requires temporary and permanent easements from State and National Parks and thus a 4F Evaluation will be required. Close coordination with these agencies will be necessary. It is likely that

seasonal work windows (no work between February 1 through September 15) for certain types of construction activities (activities resulting in noise louder than ambient traffic or tree removal) to minimize impacts to listed bird species will also be required. It is likely that any removal of old growth redwood trees would be controversial and be considered a significant impact. Any redwood, spruce, or firs over eleven inches dbh that would be removed would likely be considered an adverse effect on listed species and trees proposed for removal would need confirmation as to presence of nests. Placing fill within canopy of trees would also likely be considered an adverse effect as it may affect the long term viability of the tree. Some of the biological surveys may have to be conducted during either breeding season or blooming season in order to verify presence/absence. Because of the lack of detours, the public will be very interested in construction impacts such as proposed traffic delays. Recommend an intensive public education/outreach be developed to ensure the public is aware of project, why it's needed, and what Department is doing to minimize delays.

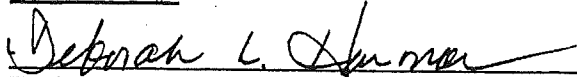
Anticipated Project Mitigation

It is likely that there will need to be mitigation for loss of habitat as well as for loss of old growth redwood trees. Coastal Commission will likely recommend stringent water quality BMP as well as advocate for the most "see-through" barrier rail available.

Disclaimer


This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Study Report. Changes in project scope, alternatives, or environmental laws will require a re-evaluation of this report.

Reviewed by:



Environmental Office Chief

Date: June 13, 2003



Project Manager

Date: 6/13/03

Environmental Technical Reports or Studies Required

	Study	Document	N/A
Community Impact Study	<input type="checkbox"/>	X	<input type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	X
Section 4(f) Evaluation	X	<input type="checkbox"/>	<input type="checkbox"/>
Visual Resources	X	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality	X	<input type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	<input type="checkbox"/>	X	<input type="checkbox"/>
Noise Study	X	<input type="checkbox"/>	<input type="checkbox"/>
Air Quality Study	<input type="checkbox"/>	X	<input type="checkbox"/>
Paleontology	<input type="checkbox"/>	X	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	X
Cumulative Impacts	X	<input type="checkbox"/>	<input type="checkbox"/>
Cultural			
ASR	X	<input type="checkbox"/>	<input type="checkbox"/>
HSR	<input type="checkbox"/>	X	<input type="checkbox"/>
HASR	<input type="checkbox"/>	X	<input type="checkbox"/>
HPSR	X	<input type="checkbox"/>	<input type="checkbox"/>
Section 106 / SHPO	X	<input type="checkbox"/>	<input type="checkbox"/>
Native American Coordination	X	<input type="checkbox"/>	<input type="checkbox"/>
Other			
Finding of Effect _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data Recovery Plan _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous Waste			
ISA (Additional)	X	<input type="checkbox"/>	<input type="checkbox"/>
PSI	<input type="checkbox"/>	<input type="checkbox"/>	X
Other			
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological			
Endangered Species (Federal)	X	<input type="checkbox"/>	<input type="checkbox"/>
Endangered Species (State)	X	<input type="checkbox"/>	<input type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	X	<input type="checkbox"/>	<input type="checkbox"/>
Biological Assessment (USFWS, NMFS, State)	X	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input type="checkbox"/>	X	<input type="checkbox"/>
Invasive Species	<input type="checkbox"/>	X	<input type="checkbox"/>
Natural Environment Study	X	<input type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	X
Other			
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permits			
401 Permit Coordination	X	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination	<input type="checkbox"/>	X	<input type="checkbox"/>
1601 Permit Coordination	X	<input type="checkbox"/>	<input type="checkbox"/>

City/County Coastal Permit Coordination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
State Coastal Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NPDES Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion of Technical Review

Socio-economic and Community Effects. The project is not expected to have any substantial adverse effects on the local community or the economy.

Farmlands. N/A

4(f) Impacts. The project as currently proposed requires permanent take of Del Norte Coast Redwoods State Park as well as Redwoods National Park which will require a 4(f) Evaluation be prepared.

Visual Effects. A visual assessment will be required and should include potential project effects and any appropriate mitigation. Design of guardrail or walls above the roadway (walls visible to the motorist) may require visual impact mitigation. Tree removal must be minimized to reduce the effect on the visual setting. Vegetation removal may be a sensitive issue. Affecting the character of rock outcrops may be of concern. Views of the roadway by hikers from the DeMartin coastal trail would need to be considered.

Water Quality and Erosion. The site should be evaluated for potential water quality impacts associated with the project. If site dewatering is required for new construction, a dewatering plan is required. Site access for construction must be included in any water quality analysis. Potential for discharge onto the beach will be a concern.

Floodplain. A floodplain evaluation report may need to be prepared.

Air and Noise. Potential noise impacts would be primarily associated with construction effects to listed species, especially if nesting occurs within one quarter mile of the project site. Del Norte County is not currently in violation of federal or state air quality standards associated with motor vehicle emissions.

Wild and Scenic River. N/A

Cultural Resources. An archeological survey will be required for the project. The proposed Area of Potential Effect (APE) must include all access roads, work areas and staging areas beyond the existing paved highway. A historic survey of resources may be required. Any subsequent changes in project scope may require additional archaeological or historical review.

Native American Coordination. Consultation with pertinent Native American tribes or groups will need to occur.

Hazardous Waste/Materials. An Initial Site Assessment (ISA) to address the potential for hazardous waste was prepared on February 25, 2002. No hazardous waste issues were identified. However, the handling of yellow thermoplastic stripe in concentrations could be considered hazardous wastes.

Biological Resources. This project may affect sensitive biological resources. Formal consultation with the USFWS on Northern Spotted Owl and Marbled Murrelet may be required. Bird and bat surveys should be completed in the spring/summer season. Other known sensitive biological resources in the general project vicinity that would need to be surveyed would include the following: Olympic salamander, tailed frog, Northern red-legged frog, yellow-legged frog, Del Norte Salamander, Townsend's big-eared bat, white-footed vole, red tree vole, Pacific fisher,

Humboldt marten. Presence/absence surveys for these species may also require seasonal restrictions.

Wetlands. A delineation of jurisdictional wetlands and waters of the United States needs to be done. Executive Order 11990 requires an avoidance alternative analysis for wetland impacts unless there is no practicable alternative available. Impacts to waters of the U.S. and wetlands from the project and any temporary access roads will need to be quantified.

Invasive Pest Plant Species. Executive Order 13112 requires that any Federal action may not cause or promote the spread or introduction of invasive species. Parks and CA Coastal Commission will likely require natives from the project area for any revegetation efforts as well as have specific requirements for the erosion control mix.

Right-of-Way Relocation or Staging Area. Permanent and temporary Right-of-Way is indicated for this project. Possible material sites and disposal sites are indicated, but not identified. These areas, which must be identified prior to initiating environmental studies, will require complete environmental evaluation as part of this project.

Mitigation. Mitigation for temporary and permanent impacts to sensitive biological resources (wetlands, riparian vegetation, regulated plants and animals) will be required. Mitigation for impacts to waters of the United States may be required. Construction windows between February 1 and September 15 may be required for Northern Spotted Owl and Marbled Murrelet mitigation. If other sensitive species are found to be present in the project limits additional construction windows may also apply. Modification of habitat for listed species will also likely result in the need for mitigation. Any removal of old growth redwoods would likely require mitigation. Parks and CA Coastal Commission will likely require aesthetic mitigation for wall treatments, barrier rail, as well as for vegetation removal. Reasonable mitigation costs are generally considered to be up to 10% of the project cost. For this project, mitigation could include restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement; and aesthetic treatments. It is premature to estimate a cost for the mitigation or prepare Attachment A, PEAR Mitigation and Compliance Cost Estimate.

Permits. Permits from the State Department of Fish and Game (1601), U. S. Army Corps of Engineers (a Nationwide 404 Permit would likely be applicable if any 404 permit is required), the Regional Water Quality Control Board (401), and Coastal Development Permit from CA Coastal Commission will be required. Additional permits for the material site and disposal site may be required.

Coastal Zone. This project is within the coastal jurisdiction and will require either a County Coastal Development Permit and/or a permit from the CA Coastal Commission.

Mitigation and Compliance Cost Estimate

Dist.-Co.-Rte.-PM: DN-101-14.8/15.6 EA:324700
 Project Description: Roadway Protective Betterment
 Person completing form/Dist. Branch.: Hansen - 03-171 Branch E-1
 Project Manager: Banducci Phone number: 445-6440
 Date: 07-14-03 SJH

	Mitigation			Compliance
	Project Feature ¹	Enviro. Obligation ²	Statutory Require. ³	Permit & Agreement ⁴
Fish & Game 1601 Agreement				\$2
Coastal Development Permit				\$1
State Lands Agreement				NA
NPDES Permit				Unknown
COE 404 Permit- Nationwide		None		No fee
COE 404 Permit- Individual				No Fee
COE Section 10 Permit		None		None
COE Section 9 Permit				None
Other:				
Water Quality Certification 401		None		\$3
Noise attenuation		None		
Special landscaping: (included in Landscape Arch. Assessment Sheet)		\$ 3		Wall appearance
Archaeological		None		
Biological: 6 trees , 900-mm DBH (included in Landscape Arch. Assessment Sheet)		\$ 8		Trees
Historical		None		
Scenic resources		None		
Wetland/riparian		None		
Other:				
CDFG CEQA Neg. Dec. review				\$ 3
TOTAL (Enter zeros if no cost)		\$ 11		\$ 9

- Costs are to be reported in \$1,000's.
- Costs are to include all costs to complete the commitment including: capital outlay and staff support; cost of right-of-way or easements; long-term monitoring and reporting, and; any follow-up maintenance.
- After approval by the Project Manager **a copy of the completed form is to be included in the PR/PSSR and a copy sent to Headquarters Environmental Program, attention: John Hebner.**

¹ Mitigation Caltrans would normally do if not required by a permit or environmental agreement.

² Mitigation Caltrans would not normally do but is required by conditions of a permit or environmental agreement.

³ Mitigation Caltrans would not normally do and is not required by a permit or Enviro. agreement but is required by a law.

⁴ Non-mitigation Caltrans would not normally do but is required by conditions of a permit or agreement.

State of California

Business, Transportation and Housing Agency

Memorandum

To : MARK SOBOTA
Project Engineer

Date : February 25, 2003

File No. : 01-DN-101-KP 23.8/25.0
(PM 14.8/15.6)
01-324700
Stabilize Roadway

Original signed by

ISA #94-023 Update

From : JON HEDLUND
North Region Hazardous Waste Office, Eureka

Subject : Initial Site Assessment Update

This Initial Site Assessment (ISA) is updated from the April 12, 1994 ISA for the above-referenced project. Construction work will include providing 1.2m shoulders and stabilizing the roadway with retaining walls on the existing alignment. There is proposed acquisition of a right of way easement for undeveloped property owned by Del Norte Coast Redwoods State Park.

The project locations are not listed on the current *Hazardous Waste and Substances Site List*. This ISA indicates no hazardous waste issues.

However, if existing yellow thermoplastic stripe will be removed from the pavement surface as a separate operation—such as by grinding or sand blasting the stripe from the road or bridge surfaces—the removed striping will be considered hazardous waste, and attention to safe work practices and disposal will be necessary. On the other hand, if yellow thermoplastic striping is ground up with and de-concentrated by the pavement grindings—such as during digout operations—it is not considered hazardous waste.

If there are any changes to the scope of the project or if right of way acquisition is proposed, please send a request for an updated ISA. Communications may be directed to me at Extension 6325 (Calnet 538-6325/707-445-6325).

cc: DLHarmon
GBanducci
JHHall
1-MSuchanek
1-JDHedlund 2-File
SPedersen/HazWas Chron File
Chron File
2-LLFields Prgm. Mgt. Code 6-0

MEMORANDUM

ATTACHMENT G

To: MR. DENNIS McBRIDE, Chief
Design North Branch E2
Department of Transportation, District 3

Attention Mark Sobota
Project Engineer

Date: June 12, 2003

DN-101 PM 15.0/15.6
E.A. 324700
Stabilize Roadway: Nr Klamath
approx. 16.7 to 17.7 KM N/O Rte
101/169 Separation #01-26

Alternate No. N/A


From: DEPARTMENT OF TRANSPORTATION
North Region Right of Way - Eureka

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on information received from you on May 28, 2003, and the following assumptions and limiting conditions.

Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.

Right of Way Lead Time will require a minimum of 15 months after we receive first appraisal maps, utility conflict maps, and the necessary environmental clearance and freeway agreements have been approved and obtained. Additionally a minimum of 12 months will be required after receiving the last appraisal map to Right of Way for certification.



DAVE MCCANLESS,
Senior Right of Way Agent
Project Delivery
Eureka

Attachments:
Right of Way Data Sheet

cc. Gary Banducci

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY DATA SHEET



Date: June 12, 2003

DN-101 PM 15.0/15.6
 E.A. 324700
 Stabilize Roadway: Nr Klamath approx. 16.7 to
 17.7 KM N/O Rte 101/169 Separation #01-26

1. Right of Way Cost Estimate:

	Current Value Future Use	Escalation Rate	Escalated Value
A. Total Acquisition Cost	\$2,800	0%	\$2,800
B. Mitigation acquisition & credits	\$0		\$0
C. Project Development Permit Fees	\$3,500	0%	\$3,500
Subtotal	\$6,300		\$6,300
D. Utility Relocation (State Share) (Owner's share: _____)	\$0		\$0
E. Relocation Assistance (RAP)	\$0		\$0
F. Clearance/Demolition	\$0		\$0
G. Title & Escrow	\$1,000	0%	\$1,000
H. Total Estimated Right of Way Cost	\$7,300	Rounded	\$7,300
I. Construction Contract Work	\$0		

2. Current Date of Right of Way Certification

December 1, 2007

3. Parcel Data:

Type	Dual/Appr	Utilities	RR Involvements
X 0		U4 - 1 0	None X
A 0		- 2 0	C&M Agrmt
B 3		- 3 0	Svc Contract
C 0	0	- 4 0	Easements
D 0	0	U5 - 7 1	Rights of Entry
		- 8 0	Clauses
		- 9 0	
Total 3			
Misc. R/W Work			
R/W:	0.40AC		RAP Displ N/A
Excess:	N/A	No. Excess Pcls: 0	Clear/Demo N/A
Mitigation:	N/A		Const Permits N/A
			Condemnation 0
			USA Involvement Yes

4. Are there any major items of construction contract work?

Yes _____ No X

RIGHT OF WAY DATA SHEET

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).

Project requires one permanent easement and two temp. easements from Redwood National/State Parks. Total land value estimated to be \$2000. The three trees to be removed are estimated at \$800. There appears to be no utility involvement but utility verification is recommended. Permit fees are included in case they are necessary.

6. Are any properties acquired for this project expected to be rented, leased, or sold?
Yes _____ No X

7. Is there an effect on assessed valuation? Yes _____ Not Significant _____
No X

8. Are utility facilities or rights of way affected? Yes X No _____
Utility relocations are not anticipated; however, utility verifications will be required.

9. Are railroad facilities or rights of way affected? Yes _____ No X

10. Were any previously unidentified sites with hazardous waste and/or material found?
Yes _____ None Evident X

11. Are RAP displacements required? Yes _____ No X
No. of single family No. of business/nonprofit
No. of multi-family No. of farms

Based on Draft/Final Relocation Impact Statement/Study dated N/A
it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

12. Are there material borrow and/or disposal sites required?
Yes _____ No X

13. Are there potential relinquishments and/or abandonments?
Yes _____ No X


14. Are there any existing and/or potential airspace sites?
Yes _____ No X

15. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated.)


Right of Way Lead Time will require a minimum of 15 months after we receive first appraisal maps, utility conflict maps, and the necessary environmental clearance and freeway agreements have been approved and obtained. Additionally a minimum of 12 months will be required after receiving the last appraisal map to Right of way for certification.

16. Is it anticipated that Caltrans will perform all Right of Way work?
Yes X No _____

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY DATA SHEET

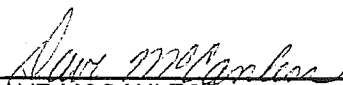
Evaluation Prepared By: 
Right of Way: _____
CHRIS MARSHALL

Date 6/12/03

Reviewed By:
RW Project Coordinator: 
AUDREY OAKLEY

Date 6/12/03

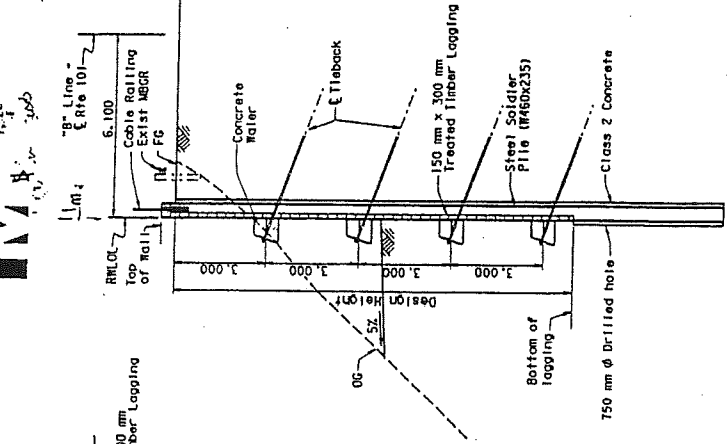
I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper, subject to the limiting conditions set forth, and I find this Data Sheet to be complete and current.


DAVE MCCANLESS,
Senior Right of Way Agent
Project Delivery
Eureka

6/12/03
Date

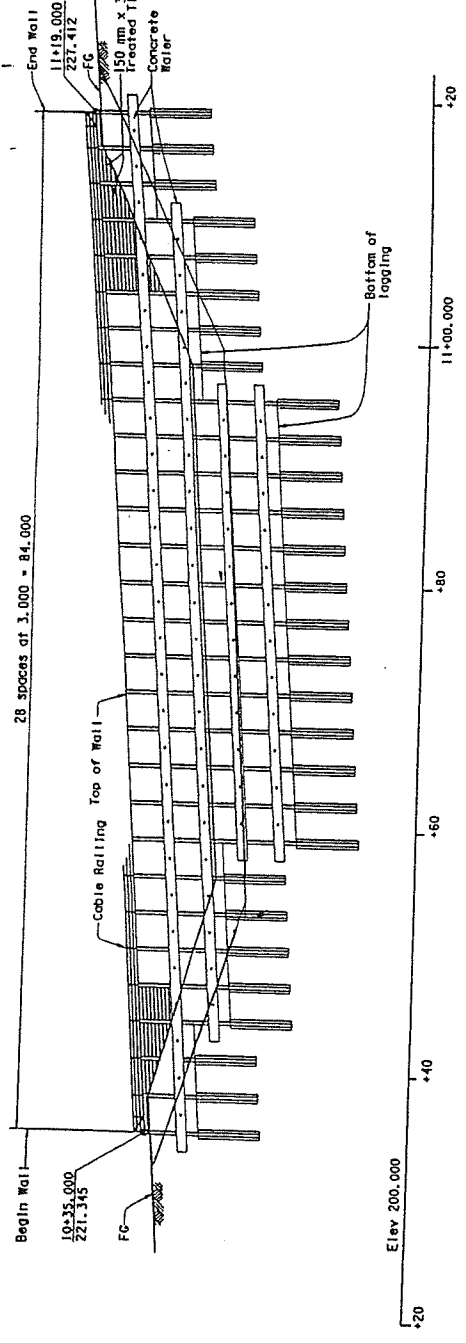
ADVANCE PLANNING STUDY

DIST	COUNTY	ROUTE	TOTAL AREA ACRES
01	DN	101	23.8725-0

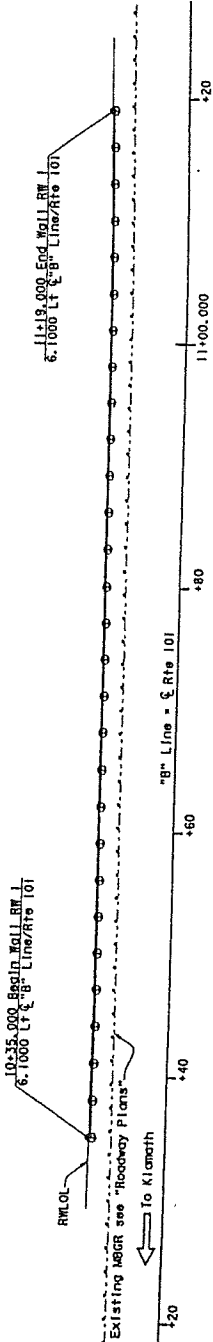


TYPICAL SECTION
1:180

DATE OF ESTIMATE	05-09-03 DM
BRIDGE REMOVAL	
STRUCTURE DEPTH	
LENGTH	84,000 m
HEIGHT (Average)	7,100 m
AREA	596 m ²
COST / m ² INCLUDING 10% MOBILIZATION	\$ 1701.00
25% CONTINGENCY	
TOTAL COST	\$ 1,014,000.00



ELEVATION (MIRRORED)
1:200



PLAN
1:200

Assumptions:

- ① Signalized one-way traffic will be required for slope construction
- ② Soldier Piles should be embedded in bedrock
- ③ Tieback should be anchored into bedrock
- ④ Maximum and average wall heights are assumed 13,000 m and 7,100 m, respectively

FILED LOCATED AT: des5/misc/110	
DESIGNED BY: Curt Duman	DATE: 03-03
DRAWN BY: AC NBD18	DATE: 04-11
CHECKED BY:	DATE:
APPROVED BY: <i>Shy Blakesley</i>	DATE: 5/13/03
FILE: 101-001-000-00	

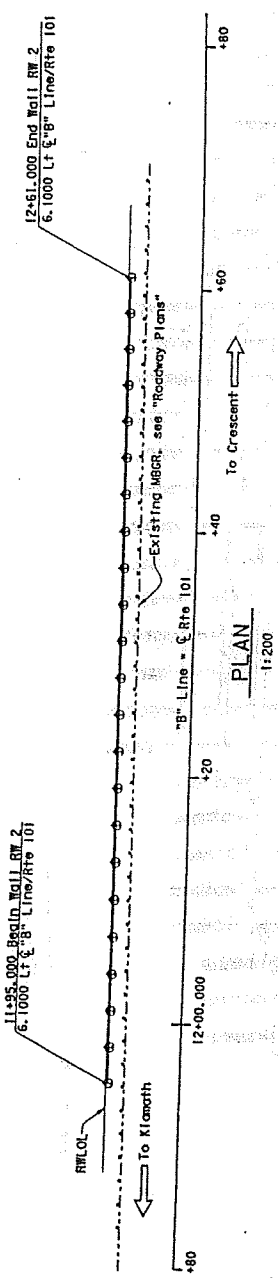
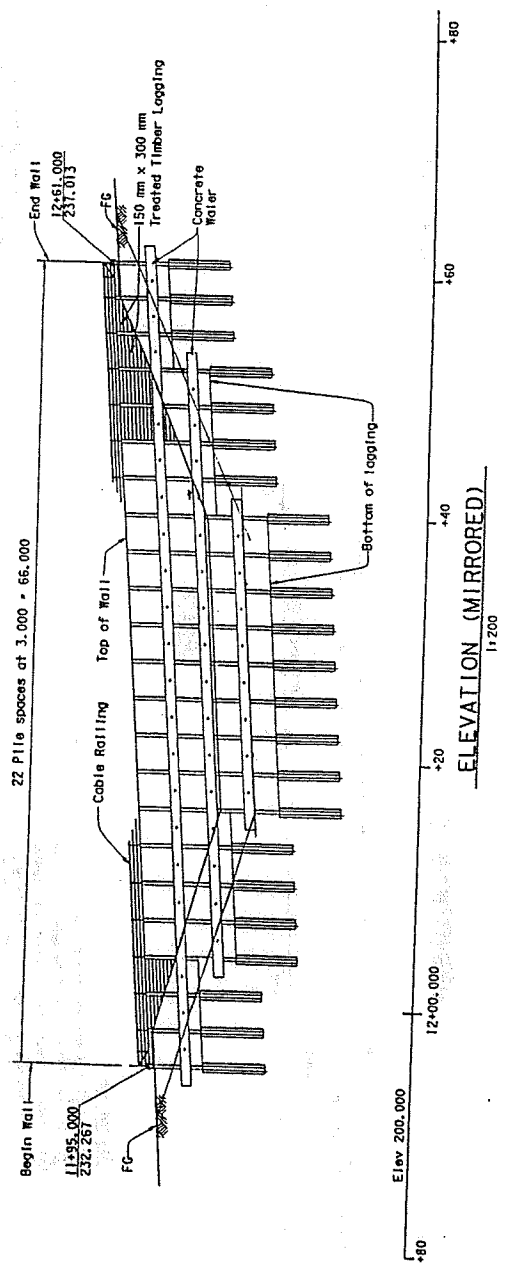
STRUCTURE DESIGN SECTION
5

PLANNING STUDY	
RTE 101 RW LOCATION	
BRIDGE NO.	01
SCALE:	1:24700

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

Metric

DIST	COUNTY	ROUTE	PROJECT
01	DN	101	23.8/25.0



TYPICAL SECTION
1:80

DATE OF ESTIMATE	05-09-03 DM
BRIDGE REMOVAL	
STRUCTURE DEPTH	66.000 m
LENGTH	6.100 m
HEIGHT (Average)	403 m'
AREA	403 m'
COST/M ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$ 1801.00
TOTAL COST	\$ 726,000.00

- Assumptions:**
- ① Signalized one-way traffic will be required for stage construction
 - ② Solder Piles should be embedded in bedrock
 - ③ Tieback should be anchored into bedrock
 - ④ Maximum and average wall heights are assumed 11,000 m and 6,100 m, respectively

File located at des5/misc/tifo

DESIGNED BY	Carl Duon	DATE	03-03
DRAWN BY	AC Nab16	DATE	04-24
CHECKED BY		DATE	
APPROVED	<i>Alex Blakely</i>	DATE	5/15/03

FILE -> 101_P-02.003.001

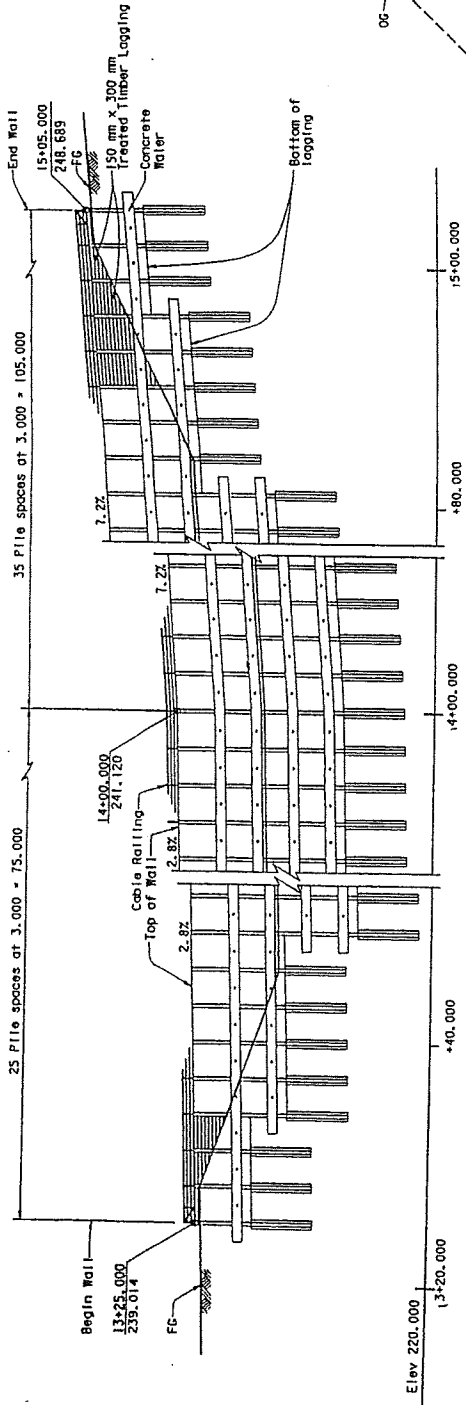
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STRUCTURE DESIGN SECTION
5

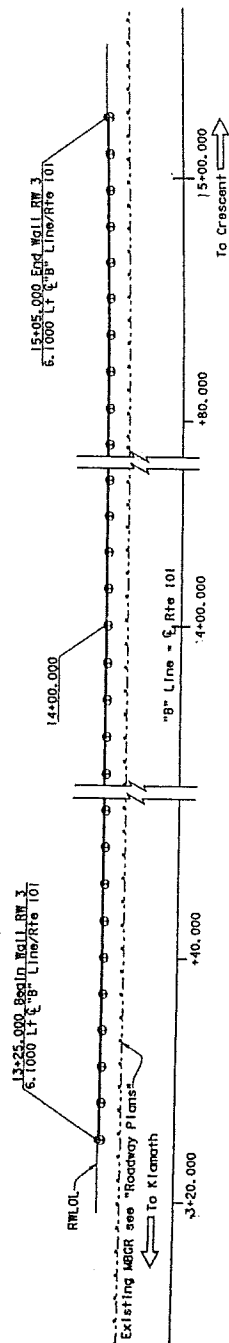
PLANNING STUDY
RTE 101 RW LOCATION 2

BRIDGE NO. 0101
SCALE: AS SHOWN EA 324700

DIST	COUNTY	ROUTE	PROJECT
01	DN	101	23.8/25.0



ELEVATION (MIRRORED) 1:200



TYPICAL SECTION 1:80

DATE OF ESTIMATE	05-09-03 DM
BRIDGE REMOVAL	
STRUCTURE DEPTH	180.000 m
LENGTH	7.100 m
HEIGHT (Average)	1278 m ²
AREA	1863.00
COST/28 m ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$ 2.381.000.00
TOTAL COST	\$ 2.381.000.00

- Assumptions:
- ① Signalized one-way traffic will be required for slope construction
 - ② Soldier Piles should be embedded in bedrock
 - ③ Tieback should be anchored into bedrock
 - ④ Maximum end average wall heights are assumed 13.000 m and 7.100 m respectively

File located at des65/misc/1110

DESIGNED BY	Cori Ducht	DATE	03-03
DRAWN BY	AC Nobile	DATE	04-25
CHECKED BY		DATE	
APPROVED	<i>Doug Blakesley</i>	DATE	7/3/03

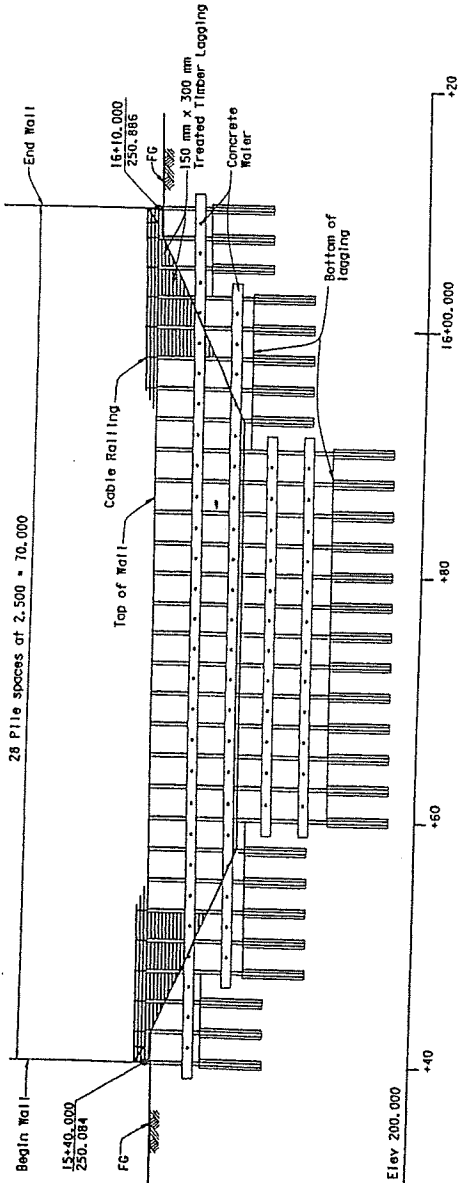
STRUCTURE DESIGN SECTION **5**

PLANNING STUDY
RTE 101 RW LOCATION 3

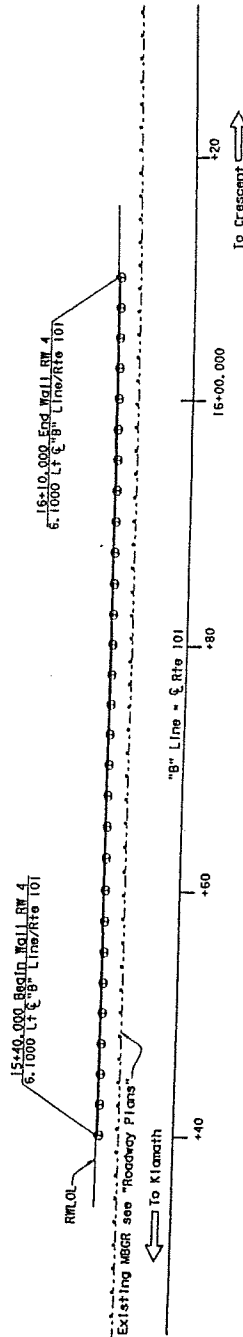
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

BRIDGE NO.	0101
SCALE	EA 324700

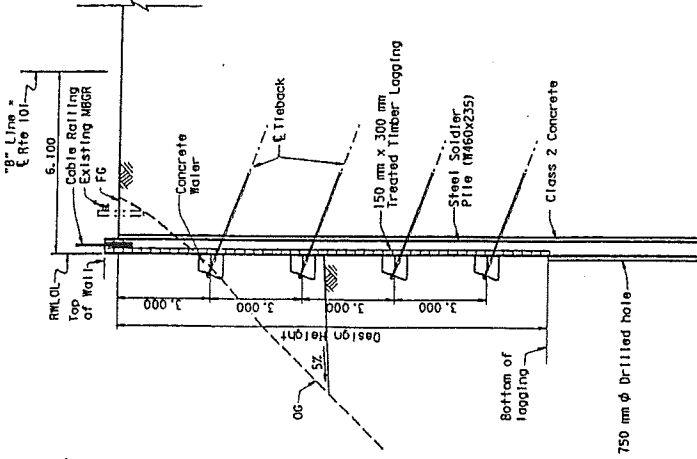
BISZ	COUNTY	ROUTE	KILOMETERS POST TOTAL PROJECT
01	DN	101	23.8/25.0



ELEVATION (MIRRORED) 1:200



PLAN 1:200



TYPICAL SECTION 1:80

DATE OF ESTIMATE	05-09-03 DM
BRIDGE REMOVAL	
STRUCTURE DEPTH	
LENGTH	70.000 m
HEIGHT (Average)	7.100 m
AREA	532 m ²
COST/00 m ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$ 1718.00
TOTAL COST	\$ 914,000.00

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STRUCTURE DESIGN SECTION	5
PLANNING STUDY	RTE 101 RW LOCATION 4
BRIDGE NO.	CU 01
SCALE	EX 3:24700

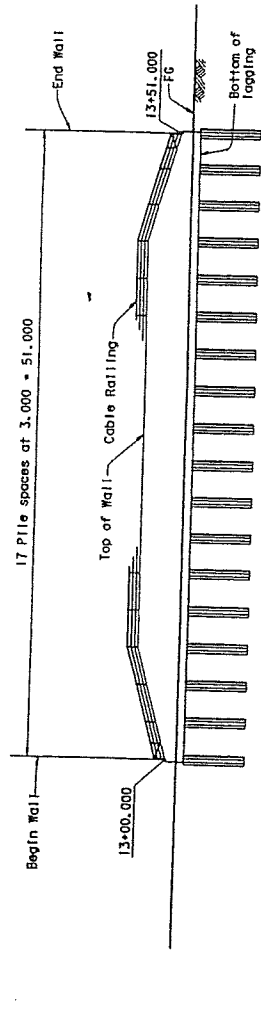
FILED BY	Carl Duon	DATE	03-03
DRAWN BY	AC Noble	DATE	04-11
CHECKED BY		DATE	
APPROVED	<i>Harry Cleberly</i>	DATE	5/1/03

File located at des5/misc/tito

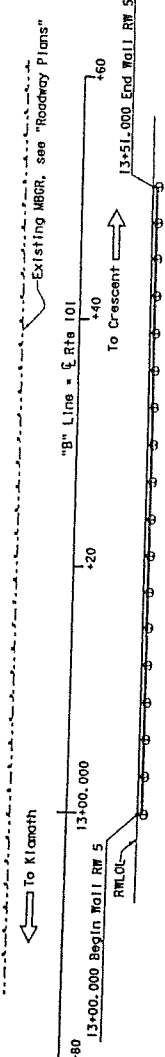
- Assumptions:
- ① Signalized one-way traffic will be required for stage construction
 - ② Soldier Piles should be embedded in bedrock
 - ③ Tieback should be anchored into bedrock
 - ④ Maximum end overage wall heights are assumed 14,000 m and 7,100 m, respectively



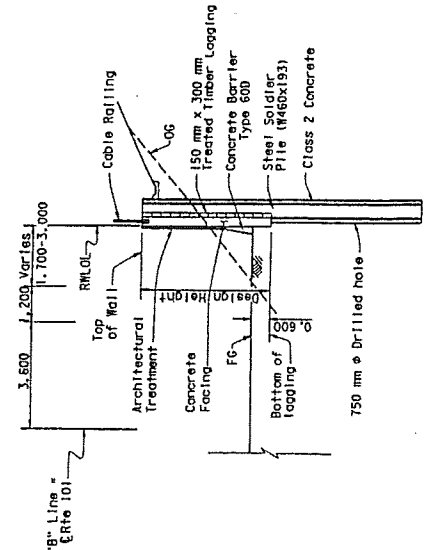
DIST	COUNTY	ROUTE	PROJECT
01	DN	101	23.8725.0



ELEVATION (MIRRORED)
1:200



PLAN
1:200



TYPICAL SECTION
1:80

DATE OF ESTIMATE	05-09-03 DM
BRIDGE REMOVAL	
STRUCTURE DEPTH	51.000 m
LENGTH	2.800 m
HEIGHT (Average)	1.33 m*
AREA	
COST/M ² INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$ 1571.00
TOTAL COST	\$ 209.000.00

File located at des5/mlac/tifo

DESIGNED BY	Carl Duon	DATE	03-03
DRAWN BY	AC Nodrig	DATE	04-24
CHECKED BY		DATE	
APPROVED	<i>Larry Blakelien</i>	DATE	5/7/03

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

STRUCTURE DESIGN SECTION	5
PLANNING STUDY	RTE 101 RW LOCATION 5
BRIDGE NO.	0101
SCALE	AS SHOWN
FILE NO.	EA 324700

- Assumptions:
- 1 Signalized one-way traffic will be required for stage construction
 - 2 Soldier Piles should be embedded in bedrock
 - 3 Maximum and average wall heights are assumed 4.000 m and 2.500 m, respectively

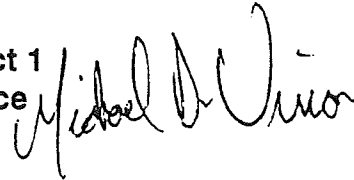
Memorandum**ATTACHMENT I**

To: DENNIS MCBRIDE, CHIEF
Design E2

Date: March 1, 2003
File: DN-101 KP 23.8/25.0
(PM 14.8/15.6)
01-324700

Attention: Mark Sobota
Project Engineer

From: DEPARTMENT OF TRANSPORTATION – District 1
FOR RALPH MARTINELLI, Chief, Traffic Safety Office



Subject: Collision Analysis

Per your request dated February 5, 2003, 5-year Table B (04/01/97 to 03/31/02) is attached for your use. The collision data indicates a total of 14 collisions occurred within these project limits. Compared to similar segments of highway, this location exceeds the statewide average rates for total and fatal+injury collisions by ^{24%}20% and ⁷⁶24%, respectively. Ten of the 14 collisions (71%) resulted in injury totalling 21 injured persons. Eight of 14 collisions (57%) were coded as wet collisions and half of the total collisions were coded as excess speed for the primary collision factor.

add
6/9/03

Of concern are fixed objects which protrude above a traversible embankment or an opening into which a vehicle can drop. On cross drain structures, use a traversible design, extend drainage structures, or shield the structure. On parallel drainage structures, either eliminate the structure, use a traversible design, move the structure laterally, or shield the structure.

If you have questions or need additional information, please call Mike Vina at Calnet 538-6585.

Attachment

cc: GBanducci

- 1-MDVanZandt
- 2-RMMartinelli
- 3-MDVina
- 4-AJCarter
- 5-SLF/File

TRANSPORTATION MANAGEMENT PLAN DATA SHEET

(REVISED 7/15/03)

To: Mark Sobota
Project Engineer – Design E2

Date: July 15, 2003
File: 01-DN-101 KP 23.8/25.0
(PM 14.8/15.6)

From: Department of Transportation
District 1 - Office of Traffic Operations

Work: Construct Retaining Walls and
Roadway Reconstruction
EA: 01-324700

1. Construction Project Information

Location: Last Chance Grade area located approximately 3.5 North of Wilson Creek Bridge, in Del Norte County.

Length of Project: 1.2 kilometers (0.8 miles).

Type of Work: Construct five retaining walls and roadway reconstruction, including: earthwork, retaining wall foundation installation, concrete work, structure backfill, culvert replacement, staged traffic control, saw cutting, paving, striping and final cleanup.

Anticipated Traffic Control: Staged traffic control using one-way reversible traffic control with traffic actuated temporary signals and/or using flaggers.

Estimated Maximum Delay due to Traffic Control: 5 minutes with traffic actuated temporary signal control.
10 minutes with conventional one-reversible traffic control using flaggers.

Estimated Corridor Delay: Determined Yearly.

Peak Hour Traffic Volumes: 610 vehicles.

Peak Month Average Daily Traffic: 6,200 vehicles.

Duration of Project: 850 working days.

Estimated Start of Construction: Summer 2008.

DOT Contact for TMP Issues: John P Carson (707) 445-6377

Alternate DOT Contact: Timothy L Boesé (707) 445-6689

2. Recommendation

- Significant traffic impacts are not anticipated provided that the following recommendations are incorporated into the project. In accordance with Deputy Directive-60, District Lane Closure Review Committee approval is not required for projects whose anticipated traffic delay is less than 30 minutes.
- An updated Transportation Management Plan should be requested during the Design Phase.

Hours of Work

- Except during staged construction, the full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays, designated legal holidays and the day preceding designated legal holidays, after 3:00 p.m. on Fridays and when construction operations are not actively in progress. If a legal holiday falls on a Monday the full width of the traveled way shall be open on the preceding Friday.

Special Events

Except during staged construction, the full width of the traveled way shall be open for use by public traffic from the preceding Friday to the following Monday for the following Special Events:

- The 4th of July and Labor Day Weekend are annual events, which are likely to cause significant congestion.
- Contact should be made with Jedediah Smith Redwoods State Park to advise them of work schedules and to determine exact dates of Jamming at the Jed (usually the second weekend in September) and any other festivals, which may require work suspension to avoid excessive traffic volumes to the park.

Public Notice

- Upon receipt of notice that the traveled way for a direction of travel will be narrowed to less than 4.42 meters, the Resident Engineer shall promptly notify the District Permits Engineer.
- The District Public Information Officer, (707) 445-6444, should be contacted two weeks in advance of the start of construction.
- Any emergency service agency whose ability to respond to incidents will be affected by any lane closure must be notified prior to that closure.
- The Resident Engineer should provide information to businesses before and during project work that impacts business. Funding should be provided for the Resident Engineer to print and distribute flyers to the affected businesses and residents.

Traffic Control

- It is anticipated that one-way reversible control (*Traffic Control System for Lane Closure on Two Lane Conventional Highways*) will be a sufficient means of traffic control for this project. A minimum of one 3.6 meter lane and a 1.2 meter shoulder shall be open at all times. The maximum length of closure, with flagger control, shall not exceed 600 meters.
- During brief construction periods when roadway reconstruction is in progress, it is anticipated that traffic will need to drive on unpaved surfaces (compacted base). During these times, continuous flagging operations will be required until the pavement is in place. Refer to 24-Hour Flagging Requirements section.
- It is anticipated that long-term one-way reversible traffic control using a temporary traffic-actuated signal will be required for the construction of the retaining walls. Refer to Temporary Signal System Requirements section for preliminary design and system layout criteria.
- The construction of the five retaining walls will require a minimum of two construction stages using temporary signal systems, due to the maximum separation allowed between detector loops and the signal controller, specified in the Temporary Signal System Requirement section. During Stage 1, it is anticipated that construction will be staged such that the walls at Locations No. 1, No. 2 and No. 5 may be constructed concurrently using a single temporary signal system. During Stage 2, it is anticipated that construction will be staged such that the walls at Location No. 3 and Location No. 4 may be constructed concurrently using a single temporary signal system.
- Concurrent lane closures shall not be allowed within the project limits.
- Due to the curvilinear nature of Route 101 in this location, advance flaggers are recommended for end of queue protection during one-way reversible traffic control. All flaggers shall be equipped with radio communication devices.
- A minimum of one PCMS in advance of either end of the construction site (two PCMS per location) shall be required in order to notify the public of the closures related to this project.
- This section of Route 101 is part of the Pacific Coast Bike Route. Bicycles and pedestrians shall be accommodated through the work zone.
- "Watch for Bicycles signs" should be placed, in each direction of travel, prior to the construction zone.

- Include SSP 12-220 within the special provisions to allow the coordination of closures in this project with closures in other nearby projects. State Contract for EA: 355000, Raise Grade (01-DN-101-PM 23.9/24.6) is expected to be in progress during the construction period for this project.
- Based upon the COZEEP Guidelines (CPB 99-6) there are a several potential risk factors associated with the project which may necessitate the need for COZEEP. The risk factors associated with this project include: lane closure with one-way control, workers exposed to traffic, night construction activity, end of queue management, speed management, and significant truck volumes. The decision to use COZEEP and the potential costs need to be assessed by the Project Engineer.

24-Hour Flagging Requirements

- It is anticipated that continuous 24-hour flagging operations may be required during staged construction and/or during periods when traffic will need to be driving on compacted base.
- The cost for 24-hour flagging, including advance flaggers, is approximately \$2,200 per 8-hour shift or \$6,600 per 24-hours. This cost is exclusive of providing illuminated flag stations for night work. Flagging costs should be verified with Cindy Graham, Chief of Engineering Services, at (707) 445-6330.

Temporary Signal System Requirements

- If long term one-way traffic control with a temporary traffic-actuated signal is anticipated for construction, the maximum separation between the advance detector loops and the signal controller shall not exceed 300 meters (1,000 feet). In addition, the following criteria should be considered by the Project Engineer prior to making the decision to use a temporary signal system:
 - The placement of the signal head requires adequate sight distance so those motorists have adequate time to slow and stop behind the stop bar.
 - Adequate sight distance leading into the project area is necessary for advancing vehicles to avoid rear-end collisions with stopped queued vehicles.
 - It is preferable, although not mandatory, that the line of sight be maintained for vehicles directly behind opposing stop bars.
 - Accesses to side roads shall not be permitted between the limit lines (i.e. Stop Bars).
 - A backup power supply for the temporary signal system would need to be provided by a portable generator. The noise impact by the generator would need to be addressed in the environmental document and may require mitigation.

Construct Retaining Walls and Roadway Reconstruction

- Signal timing is based on a number of factors, but generally, the cycle time would not be allowed to exceed 5 minutes.
- The Temporary Signal System shall provide an adequate parking location for signal-maintenance vehicles. This pull-off location shall allow proper access of the signal controller and the generator.
- Advanced warning signs with 300mm flashing beacons as shown in Traffic Manual Typical Application 5-12 on page 5-107, shall be provided with the signal system. The signal system shall have a full compliment of advance warning signs.
- The cost associated with a temporary signal system with a conventional power source is estimated to be between \$100,000.00 and \$120,000.00 per signal system.
- Electrical Maintenance (825-0590 or 441-2004) should be contacted 15 days in advance of picking up State-furnished Traffic Signal Controller Assemblies, and 5 days in advance of the preliminary field test of each of the signals.
- Include in a memo to the R. E. that Traffic Electrical (445-6338) and Electrical Maintenance (825-0590 or 441-2004) should be contacted 10 days in advance of each of the anticipated traffic signal turn-ons.
- Each signal system should be thoroughly and satisfactorily tested prior to scheduling the initial turn-on. Upon successful completion of the functional test, Traffic Electrical (445-6338) and Electrical Maintenance (825-0590 or 441-2004) shall be contacted 5 days in advance of the initial turn-on.
- The time of day of the initial turn-on shall be prior to 1:00 p.m. The Initial turn-on shall not be allowed to take place on Fridays, Saturdays, Sundays, designated legal holidays and the day preceding designated legal holidays.

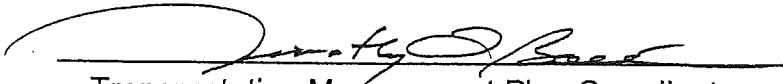
3. Contingency Plan

If congestion or delays exceed original estimates due to unforeseen events, such as work-zone collision, higher than predicted traffic demand, or delayed closures, the contractor and the Resident Engineer shall use all appropriate resources to restore or minimize effects on traffic. These contingencies should include:

- Calling for CHP or other emergency personnel in the event of a work-zone collision.
- Picking up the lane closure as soon as it is safe to do so to mitigate significant delay.
- Assigning personnel to work end-of queue protection.

4. Approval

Approved by:



Transportation Management Plan Coordinator

AML: aml

CC: 1) JPCarson, 2) TLBoesé 3) AMLal
RMMartinelli, 2)MDVina, 3) SLFerguson, 4) File
GBanducci
DPMcbride
MRMartin
Rick Lingford
File

State of California

Business, Transportation and Housing Agency

MemorandumTo: Dennis McBride, Chief
Design Branch E-2

Date: April 14, 2003

Attn: Mark Sobota

File: 01-DN-101-KP 23.8/25.0
(PM 14.8/15.6)
01-324700From: DEPARTMENT OF TRANSPORTATION - North Region
Michael Stapleton - North Region, Eureka Materials Engineer

Subject: Preliminary Materials Recommendation

In response to a request from Mark Sobota dated March 11, 2003, personnel from the Eureka materials lab conducted a field review and took soil samples from several locations within the project limits to determine the R-value (resistance to deformation), of the basement soils, along with testing to determine alternate pipe culverts to be used.

Based on these soils having a tested R-value greater than 50, and a 20 year traffic index of 10.0, the following structural sections are recommended for any widening within the project limits.

Structural Section (each is structurally equivalent)

Alternative	<u>OGAC</u>	<u>DGAC Type A</u>	<u>AB Class 2</u>
1	50 mm	150 mm	200 mm
2	50 mm	255 mm	---

Notes:

- Local or imported borrow used to construct embankment, must meet a minimum R-value of 50 when placed within 1.2 meters of finished grade.
- When a widened shoulder or new structural section is constructed to adjoin an existing structural section, pavement reinforcing fabric (PRF) should be placed so that it will overlap the new/existing joint by 0.6 m on each side. Placement of the PRF should be as low in the DGAC as possible and on the same plane for both the existing structural section and the new structural section. This will help prevent reflective cracking from the underlying joint. DGAC should be placed at a minimum of 45 mm cover thickness.

Material Specifications:

- Dense Graded Asphalt Concrete (DGAC): Shall be Type A, 19 mm Maximum, Medium conforming to Section 39 of the Standard Specifications.
- Open Graded Asphalt Concrete (OGAC): Shall be aggregate with a 25 mm Maximum aggregate gradation, with a compacted thickness of 50 mm. The aggregate for use in the 25 mm OGAC mixture shall have a minimum of 90% aggregate with two mechanically, freshly fractured faces determined by California Test Method 205.

Grading Requirements

Sieve Sizes	Percentage Passing
37.5 mm (1.5")	100
25 mm (1")	99-100
19 mm (0.75")	85-96
12.5 mm (0.5")	55-71
4.75 mm (#4)	10-25
2.36 mm (#8)	6-16
75 um (#200)	1-6

- Paint Binder (Tack Coat): Shall be CRS2, conforming to Section 94, "Asphaltic Emulsions," of the Standard Specifications.
- Asphalt Binder: Shall be PBA grade 1 for dense graded asphalt concrete and PBA grade 6a for open graded.
- Aggregate Base (AB): Shall be Class 2, conforming to Section 26 of the Standard Specifications.

Pipe Culvert

Based on soil samples taken and tested from post miles 15.01, 15.06, 15.20, 15.34 and 15.40, the following culvert is approved, giving a 50 year service life.

- 2.0 mm (14 gage) galvanized, bituminous coated, corrugated steel pipe conforming to Section 66 of the Standard Specifications.

Note:

Plastic and concrete reinforced pipes were not considered due to the high potential for abrasion and unstable soils.

If you have any questions, please call Dave Waterman at X-6355.

Attachments

DW:dw
 cc: G Banducci
 D McBride
 M Sobota
 Lab Files





ATTACHMENT L

01-DN-101-KP-23.8/25.0
(PM 14.8 / 15.6)
03 231 - 324700
201.150 (HA42)

Last Chance Grade

On Route 101 in Del Norte County about 17 km North of Klamath from 3.5 km north of Wilson Creek Bridge to 4.7 km north of Wilson Creek Bridge

PRELIMINARY DRAINAGE REPORT

Prepared by:

Mark Sobota, PE, MBA
Project Engineer, Design E2



1. Project Description

This project proposes to construct five retaining walls and widen the existing roadway sufficiently to provide two 3.6 m lanes and 1.2 m shoulders. The vertical curve at the north end of the project will be improved to provide more stopping sight distance. It is also proposed to improve the superelevation at the two smallest radii curves within the project limits. The roadway then will be overlaid with an OGAC at the completion of the project. All of the existing culverts within the project vicinity will be replaced on their existing alignment. Two new drainage inlets are proposed to handle flow at the proposed retaining walls. Project layout maps and typical cross-sections of the proposed improvements are attached.

2. Hydrology

The drainage basin maps and hydrology calculations for the systems that had hydrology studies are attached. The drainage basin boundaries were identified from field investigations, survey data elevations, and topographic maps.

All of the drainage system work will be designed to maintain the existing drainage quantities and flow patterns and to not affect the existing hydrologic conditions.

3. Hydraulic Methodology

Considering the minor size of the existing drainage basins, low complexity and history of the existing drainage system upstream, engineering judgement will primarily determine of the scope of the improvements. Culvert capacity, adjacent channels, downstream channel

conditions, upstream land use, facility performance and flooding history will be taken into consideration. All cross culverts will be checked to pass a 25-year storm event using the Rational Method or National Flood Frequency Regional equations.

4. Drainage Design

There is no history of flooding problems at any of the locations. The field review of the culverts revealed scour at most of the outlets, deteriorating pipes and reduced hydraulic capacities. All of the existing culverts within the project vicinity will be replaced on their existing alignment. The existing culverts are at PM 15.01, 15.06, 15.20, 15.34 and 15.40. Rock Slope Protection (RSP) is proposed at the outlet of four of the culverts to dissipate energy and reduce scour. Two new drainage inlets are proposed to handle roadway surface flow that would normally be directed to overside drains in the vicinity of the proposed retaining walls.

Drainage Systems 1 (PM 15.01): The existing culvert is a 450 mm x 32.3 m corrugated metal pipe cross culvert with a concrete box inlet.

The preliminary recommendation is to replace the existing culvert to upgrade the pipe. The new facility will be a 600 mm alternative pipe cross culverts, approximately 32.3 m in length. RSP is recommended at the outlet. The concrete box inlet on the east side of the highway will remain.

Drainage System 2 (PM 15.06): The existing system is a 450 mm x 12.8 m corrugated metal pipe cross culvert and a CSP inlet.

The existing culvert is in the location of planned retaining wall #2. The wall will be built to accommodate the new pipe. The preliminary recommendation is to replace the existing culvert to accommodate for the shoulder widening and upgrade the pipe. The new facility will be a 600 mm alternative pipe cross culverts, approximately 12.8 m in length. A downdrain will be needed to align the pipe with the slope. RSP is recommended at the outlet. The inlet on the east side of the highway is a concrete box inlet and will remain.

New Drainage System 2A (PM 15.12): A drainage inlet is proposed on the west side of the highway at the edge of pavement in front of the retaining wall to channel storm water similar to an overside drain. The outlet pipe will be a 450 mm alternative pipe.

Drainage System 3 (PM 15.20): The existing system is a 450 mm x 16.5 m corrugated metal pipe cross culvert with a plastic pipe liner and a CSP inlet.

The preliminary recommendation is to replace the existing culvert to upgrade the pipe. The new facility will be a 600 mm alternative pipe cross culverts, approximately 16.5 m in length. The CSP inlet on the east side of the highway will remain. RSP is recommended at the outlet.

Drainage System 4 (PM 15.34): The existing system is a 600 mm x 33.5 m plastic pipe cross culvert on a skew with a plastic pipe down drain. The inlet is a CSP inlet.

The culvert is in an area of planned roadway reconstruction to improve the profile by lowering the roadway grade. The preliminary plan is to replace the existing inlet and culvert on its current alignment. The new facility will be a 600 mm alternative pipe cross culverts, approximately 33.5 m in length. The CSP inlet on the east side of the highway will remain.

New Drainage System 4A (PM 15.35): A drainage inlet is proposed on the west side of the highway at the edge of pavement in front of the retaining wall to channel storm water similar to an overside drain. The outlet pipe will be a 450 mm alternative pipe.

Drainage System 5 (PM 15.40): The existing system is a 450 mm x 17.1 m corrugated metal pipe cross culvert with a CSP inlet.

The preliminary recommendation is to replace the existing culvert to upgrade the pipe. The new facility will be a 600 mm alternative pipe cross culvert, approximately 17.1 m in length. RSP is recommended at the outlet. The CSP inlet on the east side of the highway will remain.

5. Floodplain

The project is neither in a jurisdictional floodplain nor in a floodplain associated with any other drainage.

6. Disposal Site

Approximately 2000 cubic meters of asphalt concrete grindings will be generated from cold planing open graded asphalt concrete pavement within the project limits. Excess material will become property of the contractor and is to be disposed of at a permitted off-site location.

During construction temporary storage of the excavated material from the retaining walls will be needed. Approximately 3200 cubic meters of material will be generated. The excavation will then be used for backfill and slope restoration. It is also anticipated that 170 cubic meters of excavation from the areas of shoulder widening and the vertical curve correction could partially be used as the choker section for the locations of super elevation correction. Approximately 300 cubic meters of excess material will be generated. Excess material will become property of the contractor and is to be disposed of at a permitted off-site location. The contractor and must comply with the Storm Water Management Plan.

7. Storm Water Quality

This project is exempt from permanent treatment Best Management Practices (BMPs). Permanent BMPs, which are being considered include rock slope protection at the outlet of four culverts, as a form of energy dissipation to help prevent scour; and fiber rolls could also be added to the existing draining entrance swales and outlets for erosion control.

Temporary BMPs recommended for construction will be included in the Special Provisions, Water Pollution Control Program (WPCP).

8. Conclusion

This report preliminarily concludes that the proposed drainage improvements will adequately handle anticipated storm water drainage. These improvements should have no significant adverse hydraulic impacts to the highway or adjacent properties.

9. District Contact

Gary Banducci, Project Manager, CALNET 538-6440

Dennis McBride, Chief, Design Branch E2, CALNET 538-5878

Mark Sobota, Project Engineer, Design Branch E2, CALNET 538-6466

10. Attachments

Location Map

Typical Cross Sections

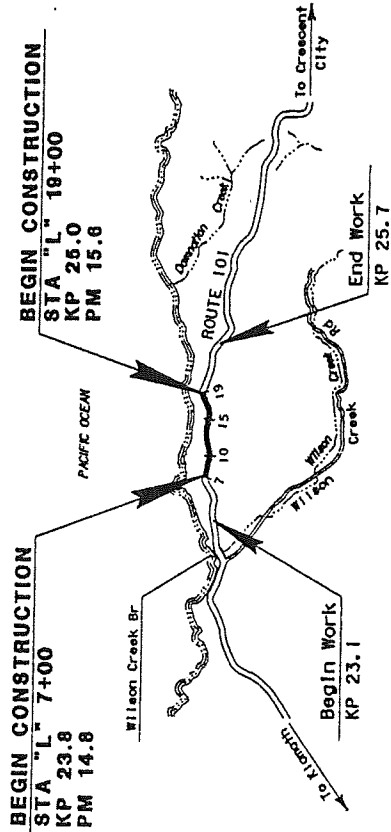
Layout Sheets

Preliminary Storm Water Data Report

INDEX OF SHEETS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN DEL NORTE COUNTY
 ABOUT 17 km NORTH OF KLAMATH
 FROM 3.5 km NORTH OF WILSON CREEK BRIDGE
 TO 4.7 km NORTH OF WILSON CREEK BRIDGE

To be supplemented by Standard Plans dated July, 1999

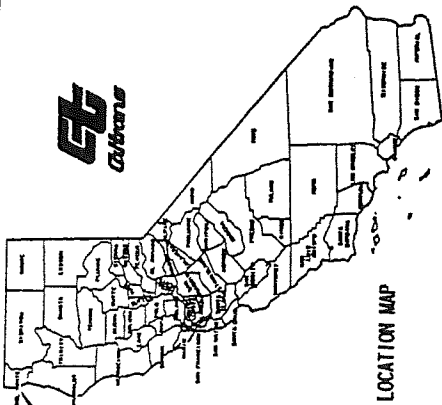


The Contractor shall possess the Class (or classes) of license as specified in the "Notice to Contractors".

No Scale

Form 00-00-00 Rev. 1/83

DIST	COUNTY	ROUTE	PROJECT TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
01	DN	101	23.8/25.0	1	1



LOCATION MAP

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LOCATION MAP



Project Engineer Date
Registered Civil Engineer

Plans Approved Date

Contract No.

CU 00000

EA 000000

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

00-00-00

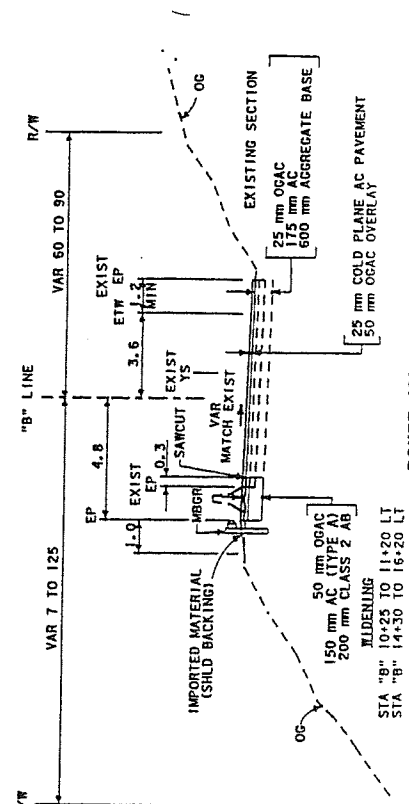
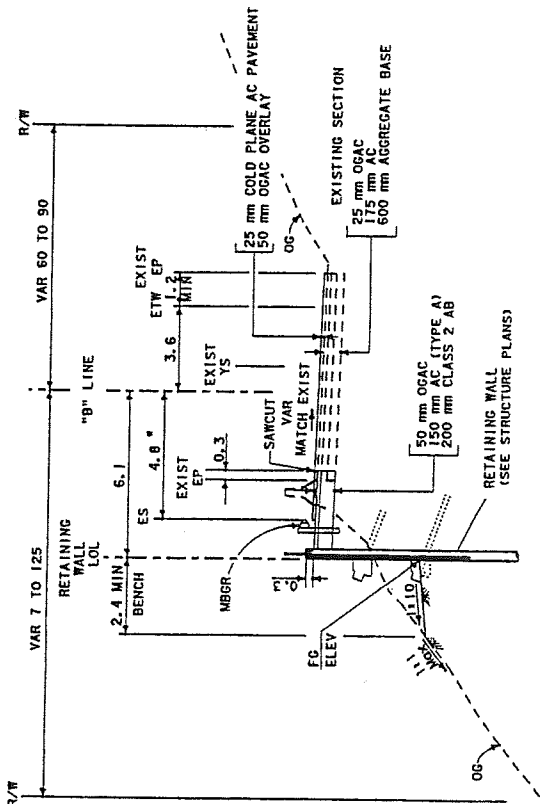
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER		MARK SOBOTA		DESIGN	
CALCULATED/DESIGNED BY		CHECKED BY		DATE		DATE	
REVISIONS		REVISIONS		DATE		DATE	
REVISIONS		DATE		REVISIONS		DATE	

NOTES:
 1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DRE AND MBGR LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



DIST	COUNTY	ROUTE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
01	DN	101	23-8/25-0		

REGISTERED CIVIL ENGINEER
 00/00/00
 40579
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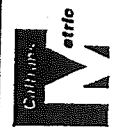


TYPICAL CROSS SECTION X-1
 NO SCALE

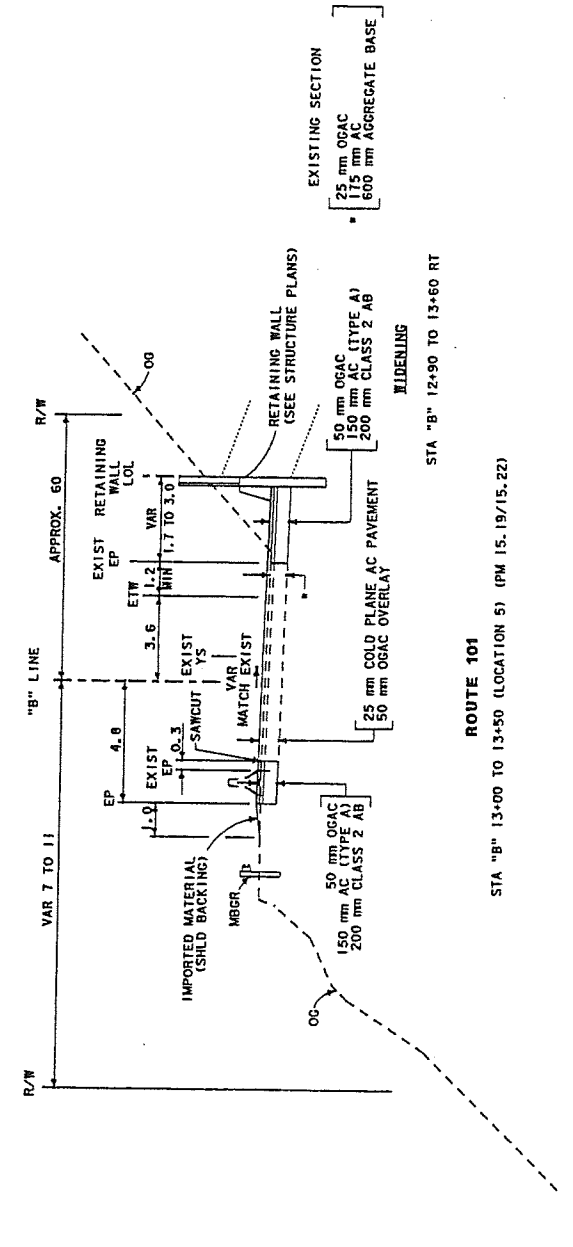
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN		PROJECT ENGINEER		MARK SOBOTA	
DATE	REVISION	DATE	REVISION	DESIGNED BY	CHECKED BY	DATE	REVISION

- NOTES:
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBRG LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.



DIST	COUNTY	ROUTE	FILE NO.	SHEET NO.
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REGISTERED CIVIL ENGINEER 00/00/00				
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TYPICAL CROSS SECTION X-2
NO SCALE

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DATE PLOTTED: 03-JUN-2003
DATE: 03-11-2001

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	PROJECT ENGINEER	MARK SOBOTA	CHECKED BY	DATE	REVISOR	DATE

- NOTES:**
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBR LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

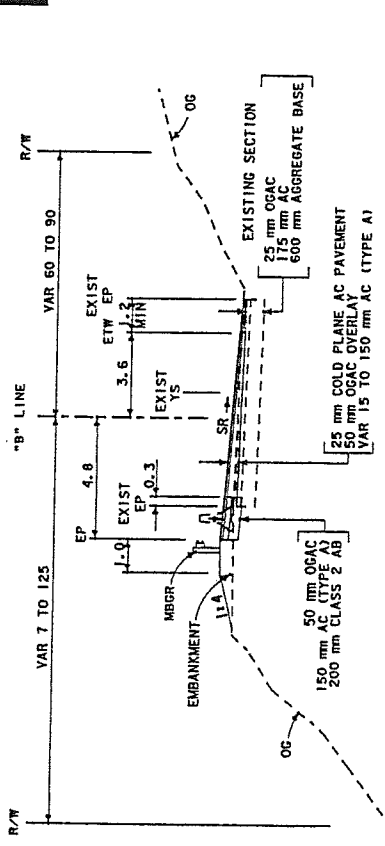


DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
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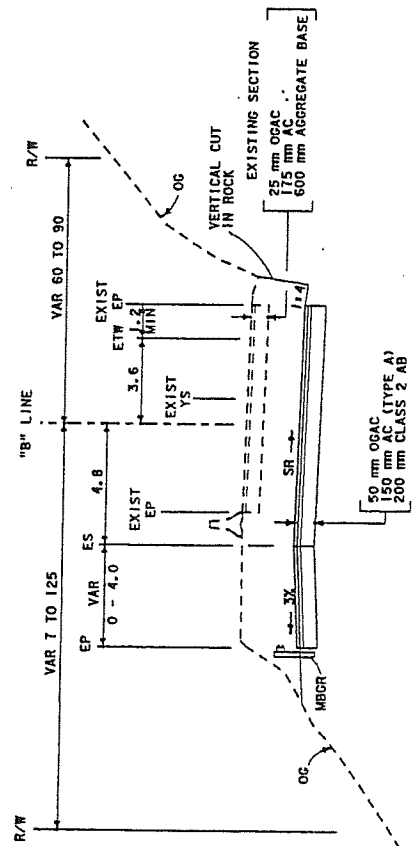
REGISTERED CIVIL ENGINEER
000000

PLANS APPROVAL DATE: 4/25/19
MARK SOBOTA
CIVIL
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ROUTE 101
AC SUPER ELEVATION CORRECTION
STA "B" 12+00 TO 12+80
STA "B" 12+80 TO 14+00

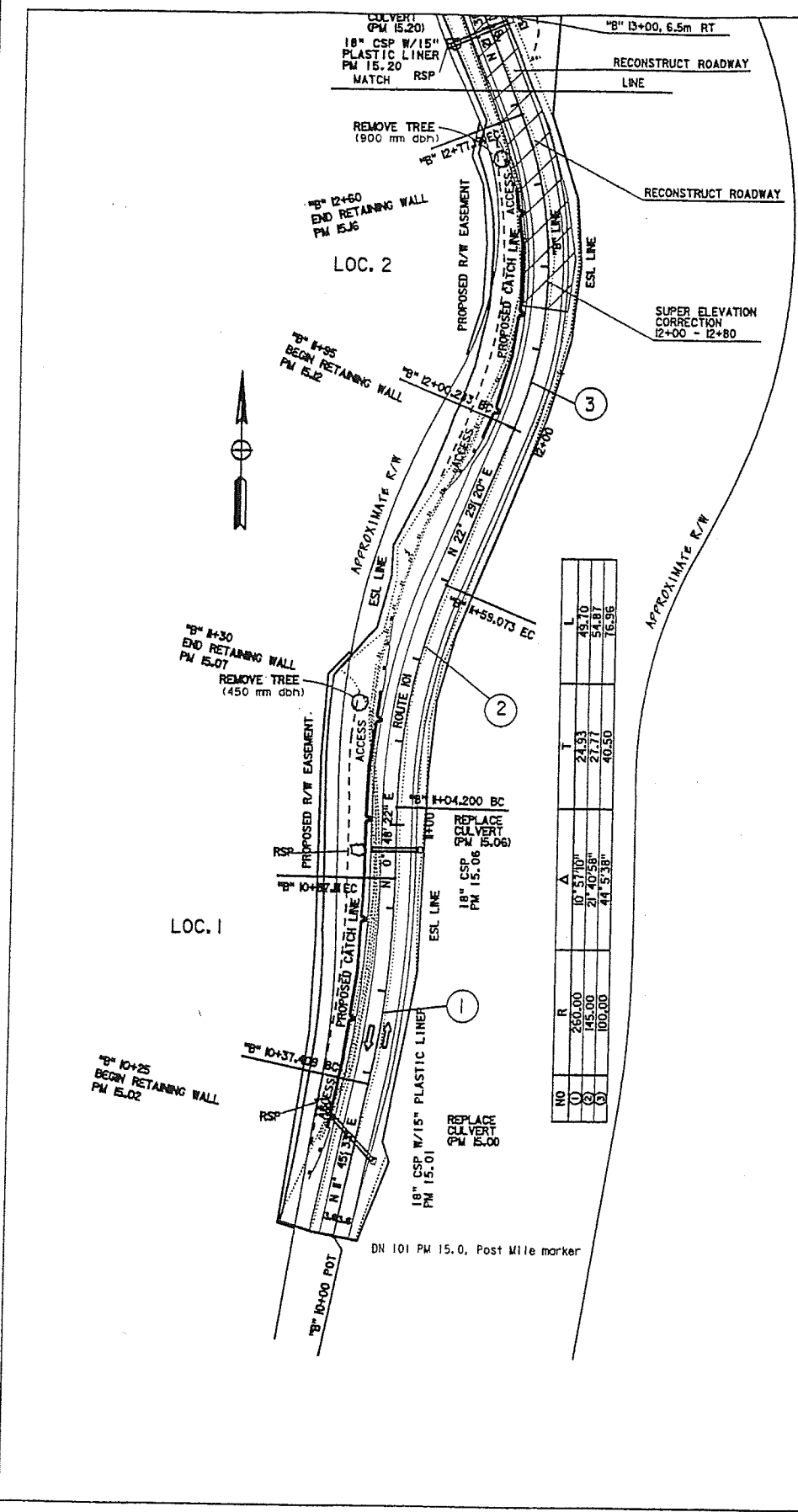


ROUTE 101
VERTICAL CURVE CORRECTION
STA "B" 12+30 TO 13+50
STA "B" 14+30 TO 15+90

TYPICAL CROSS SECTION X-3
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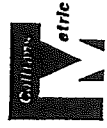
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01	DN	101	23.8725.0	MILE POST	14.8/15.6
DIST		COUNTY	ROUTE	KILOMETER POST	



NO	R	A	I	L
1	260.00	10° 57' 10"	24.93	49.70
2	145.00	21° 45' 36"	27.77	54.87
3	100.00	44° 5' 31"	40.50	76.96

ATTACHMENT L-1
PROJECT LAYOUT MAP
 LAST CHANCE GRADE ROADWAY STABILIZATION



DATE: 4/18/03



- LEGEND**
- CATCH LINES (CUT/FILL) -----
 - EXISTING RIGHT OF WAY OR EASEMENT _____
 - PROPOSED RIGHT OF WAY OR EASEMENT _____
 - ENVIRONMENTAL STUDY LIMIT _____
 - PROPOSED RETAINING WALL _____

Caltrans, District 1
 P.O. Box 3700
 Eureka, CA 96502

324700

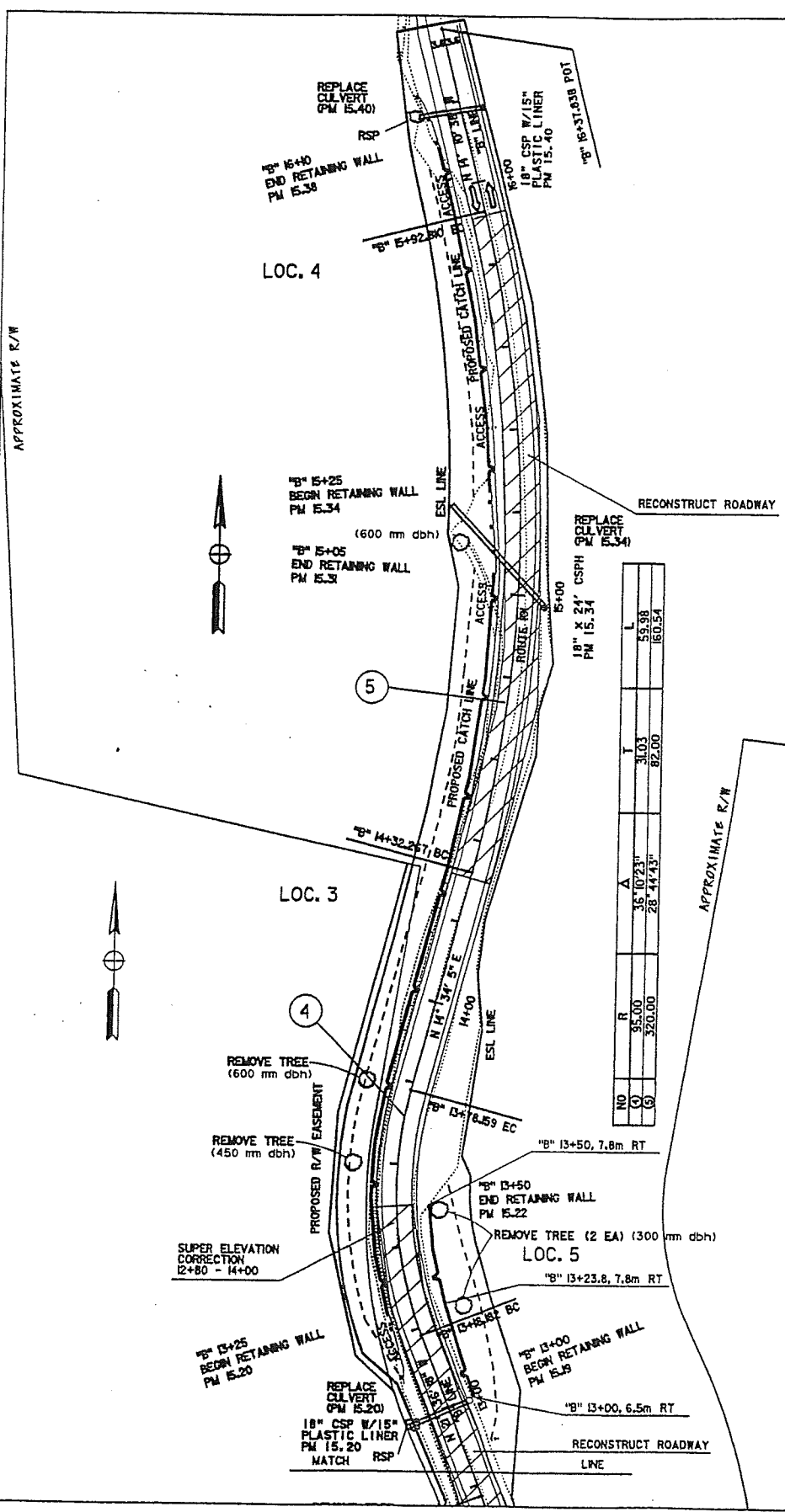
DATE PLOTTED: 11-JAN-2005
 TIME PLOTTED: 14:13

MARK F. SOBOTA
 PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8/25.0	14.8/15.6

APPROXIMATE R/W

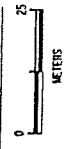


NO	R	Δ	T	L
1	95.00	35°10'23"	31.03	55.93
2	320.00	28°44'43"	82.00	160.54

ATTACHMENT L-2
PROJECT LAYOUT MAP
 LAST CHANGE GRADE ROADWAY STABILIZATION



DATE: 4/18/03



LEGEND
 CATCH LINES (CUT/FILL) - - - -
 EXISTING RIGHT OF WAY - - - -
 PROPOSED RIGHT OF WAY OR EASEMENT - - - -
 ENVIRONMENTAL STUDY LIMIT - - - -
 PROPOSED RETAINING WALL - - - -

Caltrans, District 1
 P. O. Box 3700
 Eureka, CA 95502

MARK F. SOBOTA
 PROJECT ENGINEER

324700

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DIS1	COUNTY	ROUTE	PROJECT	SHEET NO.	TOTAL SHEETS
01	DN	101	23. B/25. 0		

REGISTERED CIVIL ENGINEER 00/00/00

PLANS APPROVAL DATE 05/29/03

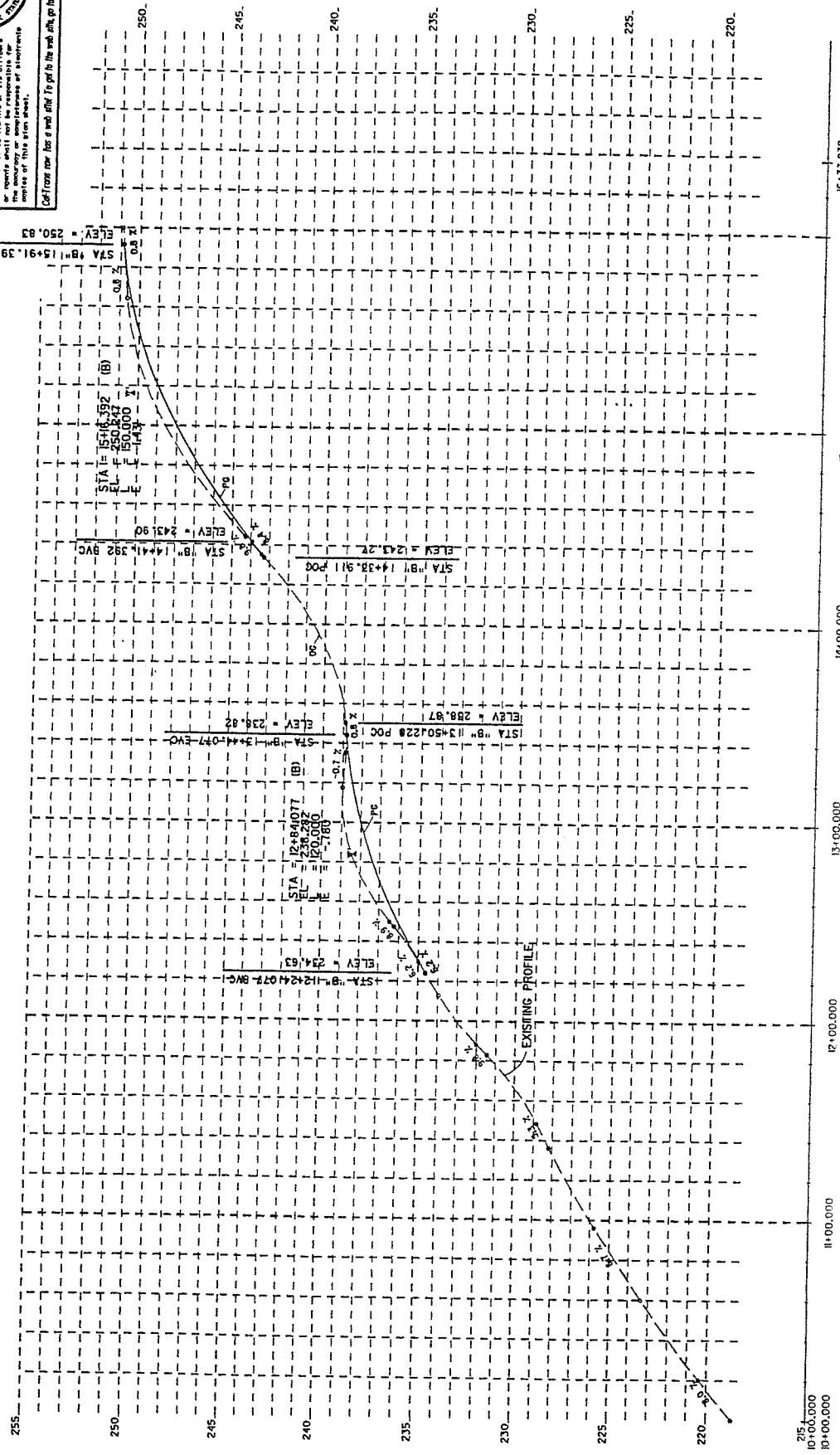
MARK SOBOTA 4579

REGISTERED PROFESSIONAL ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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"B" LINE PROFILE

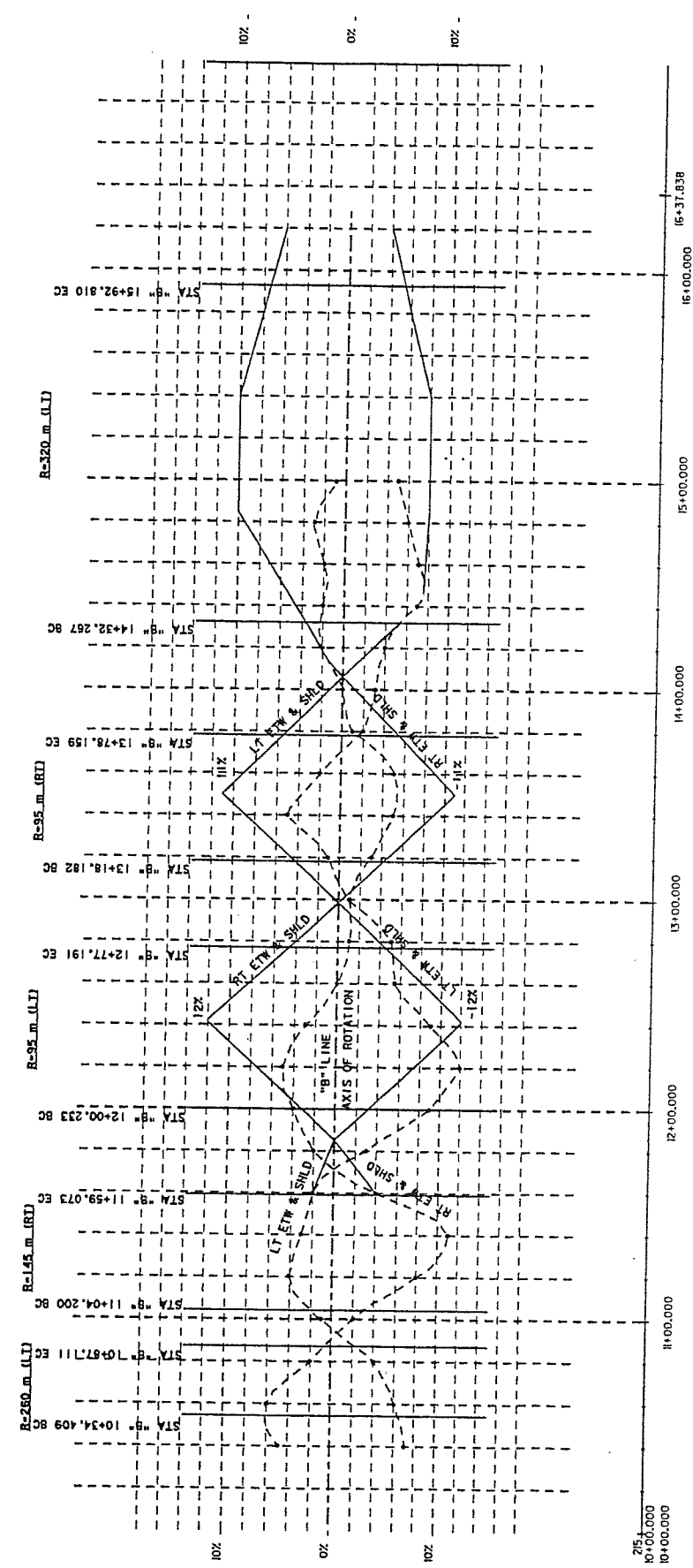
FOR REDUCED PLANS ORIGINAL SCALE IS IN METERS

US 101

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER		MARK SOBOTA	
DESIGNED BY		CHECKED BY		DATE	
REVISOR		DATE		REVISOR	
DATE		DATE		DATE	

SUPERELEVATION DIAGRAM
NO. SCALE **SE-1**

"B" LINE SUPER ELEVATION DIAGRAM



REGISTERED CIVIL ENGINEER
00700700

PLANS APPROVAL DATE
08/25/03

REGISTERED CIVIL ENGINEER
MARK SOBOTA
48579
E-30-015
CIVIL
STATE OF CALIFORNIA

CONFIRMATION: has a web site to go to the web site go to: <http://www.dcr.ca.gov>



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PROJECT ENGINEER		MARK SOBOTA		DESIGN	
CALCULATED/DESIGNED BY		CHECKED BY		DATE REVISIED BY		DATE REVISIED	

DIST	COUNTY	ROUTE	ALIGNMENT	PROJECT	SHEET NO.	TOTAL SHEETS
01	DN	101		23. 8/25. 0		



ATTACHMENT M

01-DN-101-KP-23.8/25.0 (PM 14.8 / 15.6)

03 231 - 324700

201.150 (HA42)

PID phase 4/25/2003

Last Chance Grade

On Route 101 in Del Norte County about 17 km North of Klamath from 3.5 km north of Wilson Creek Bridge to 4.7 km north of Wilson Creek Bridge

PRELIMINARY STORM WATER DATA REPORT

Regional Water Quality Control Board(s): North Coast RWQCB

Project Manager: Gary Banducci

Is the Project exempt from incorporating Treatment BMPs? Yes No
If yes, attach the Exemption Documentation Form

Estimated Construction Start Date: October 1, 2007

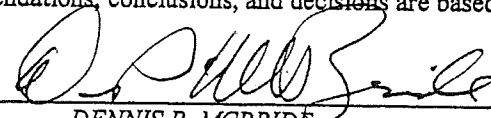
Notification of Construction (NOC) Date to be Submitted: N/A (< 1.0 acre disturbed soil)

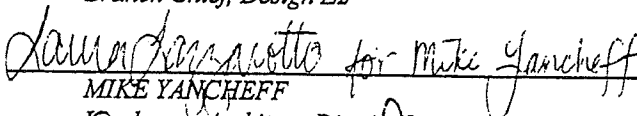
Notification of ADL reuse (if yes, provide date) Yes Date _____ No N/A

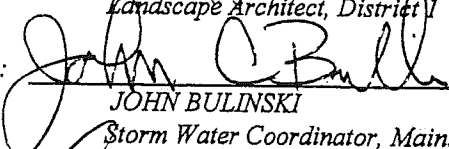
Separate Dewatering Permit (if yes, permit no.) Yes Permit # _____ No N/A


I have reviewed the storm water quality design issues contained in the Storm Water Data Report and Attachments attached hereto, and find the data to be complete, current, and accurate:


This Storm Water Data Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based. (PE stamp required at P&E to OE)

Reviewed by:  4-25-03 (707) 441-5878
DENNIS P. MCBRIDE
Branch Chief, Design E2
Date Telephone

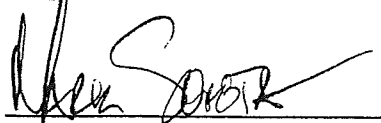
Reviewed by:  4-30-03 (707) 445-6474
MIKE YANCHEFF
Landscape Architect, District I
Date Telephone

Reviewed by:  5/1/03 (707) 441-2014
JOHN BULINSKI
Storm Water Coordinator, Maintenance Engineering
Date Telephone

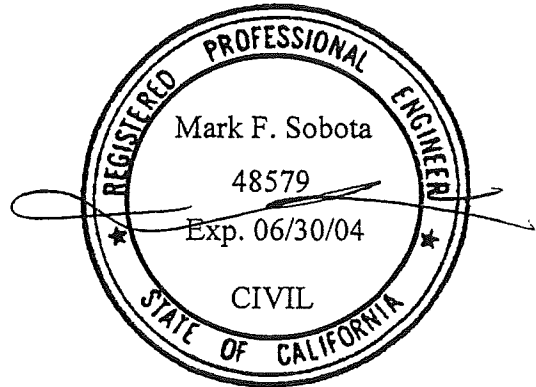
Reviewed by:  4/29/03 (707) 445-5201
DAVID MELENDREZ
NR NPDES Coordinator, Eureka
Date Telephone

APPROVAL
RECOMMENDED:  4/29/03 (707) 445-6440
GARY BANDUCCI
Project Manager, District I
Date Telephone

Prepared by:



Mark Sobota, PE, MBA
Project Engineer, Design E2



1. Project Description

This project, commonly referred to as “Last Chance Grade,” is located on Route 101 about 17-km north of Klamath in Del Norte County and is situated on the bluffs adjacent to the Pacific coastline. The project site overlies difficult geology, the Franciscan Formation, which contributes to the distress present on the existing roadway. Large, deep-seated and shallow landslides are present along the entire project. Settlement frequently occurs during wet conditions, requiring inspection and maintenance efforts to avoid closure. The long-term results of the settlement are a poor vertical alignment and a rough ride for the traveling public. If the project is not constructed, it is anticipated that maintenance expenditures will continue and increase.

This alternative proposes to construct five retaining walls and widen the existing roadway sufficiently to provide two 3.6-meter lanes and 1.2-meter shoulders. This alternative was recommended by the VA team and accepted by the PDT, District 1 Executive Management and Del Norte County stakeholders. A PDT meeting was held in the field on December 12, 2002 to review the findings of the Value Analysis Study and scope the project. The PDT refined the locations of the walls in the alternative, and included improvements to the geometrics of the roadway caused by landsliding. This alternative will locally stabilize the landslide but not address the deep-seated slide. Maintenance efforts will be reduced, but long-term maintenance associated with the deep slide will still be necessary for the walls.

Minor widening is needed to provide the desired roadway width. The improvements will be on the current alignment to minimize environmental and right-of-way impacts. At the northerly end of the project, roadway settlement has adversely affected the profile of the highway. Roadway reconstruction of the northerly 300 meters will restore the vertical alignment to meet stopping sight distance standards.

It is also proposed to improve the super elevation at the two smallest radii curves within the project limits with AC leveling. The roadway then will be overlaid with OGAC at the completion of the project. Project layout maps and typical cross-sections of the proposed improvements are attached.

Approximately 2000 cubic meters of asphalt concrete grindings will be generated from cold planing open graded asphalt concrete pavement within the project limits. Excess material will become property of the contractor and is to be disposed of at a permitted off-site location.

During construction temporary storage of the excavated material from the retaining walls will be needed. Approximately 3500 cubic meters of material will be generated. The excavation will then be used for backfill and slope restoration. It is also anticipated that 170 cubic meters of excavation from the areas of shoulder widening could be used for the subgrade and choker section for the locations of super elevation correction. Approximately 3000 cubic meters of excess material will be generated. Excess material will become property of the contractor and is to be disposed of at a permitted off-site location. The contractor and must comply with the Storm Water Management Plan.

2. Storm Water Site Data and Quality Design Issues

The North Coast Regional Water Quality Control Board (RWQCB) has jurisdiction within the project limits.

The receiving water within the project limits is the Pacific Ocean. The receiving water is not a 303(d) listed water body. There are no hazardous materials identified within the project limits. The primary pollutant of concern in this area is sediment, and the potential pollutant sources would include the cut and fill slopes. Potential storm water impacts may be from asphalt products, non-storm water, cleaning agents, sediment, fuel, construction equipment fluids and vehicle fluids. Measures to avoid and reduce potential impacts from the work area and contractor staging area will be specified in the Water Pollution Control Plan (WPCP) developed by the Contractor and submitted to Caltrans for approval prior to work. The WPCP will incorporate applicable construction BMPs for the project. The receiving water bodies are not considered High-Risk areas used for municipal or domestic water supply.

The rainy season has been defined by the RWQCB as October 1 through May 1. There are seasonal construction restrictions relative to the Spotted Owl and Marbled Murrelet: Construction that is unusually loud will be restricted to the non-nesting season of September 16 to February 1.

There are slope stabilization concerns in areas where slopes are steeper than 1:2 (v:h) at the base of the new retaining walls. Cut and fill slopes will be created at each of the retaining walls. Access roads for the construction of the retaining walls and a bench at the base of the wall will expose the existing slopes. The steepest slope will be at 1:1 (v:h) to match the existing terrain.

The project budget includes \$2,500 for WPCP development and \$ 7,000 for water pollution control, plus a 20% contingency.

3. Regional Water Quality Control Board Agreements

Currently, there are no negotiated understandings or agreements with the North Coast RWQCB for this project.

4. Proposed Design Pollution Prevention BMPs

This project will not change existing flow paths, flow volume, or change runoff channels or cross drains. The permanent design pollution prevention BMPs to be included in this project are: rock slope protection at the outlets of the culverts and fiber rolls, added to the existing draining entrance and/or exit swales.

Disturbed slopes will be re-vegetated and have erosion control. Vegetated surfaces will feature native plants. Erosion control will utilize the seed mixture, mulch, tackifier and fertilizer, as recommended by the District Landscape Architect.

5. Proposed Permanent Treatment BMPs

This project involves roadway reconstruction. All the widening will be within the limits of proposed retaining walls. No permanent treatment BMPs are incorporated (see exemption form).

6. Construction Cost Information

Alternative 4 – Preliminary Project Cost Estimate (Recommended for programming)

District Cost.....	\$ 1,500,000
Structure Cost.....	\$ 4,800,000
Right of Way Cost	\$ 500,000
Total	\$ 6,800,000

7. Maintenance BMPs

No drain inlet stenciling is required.

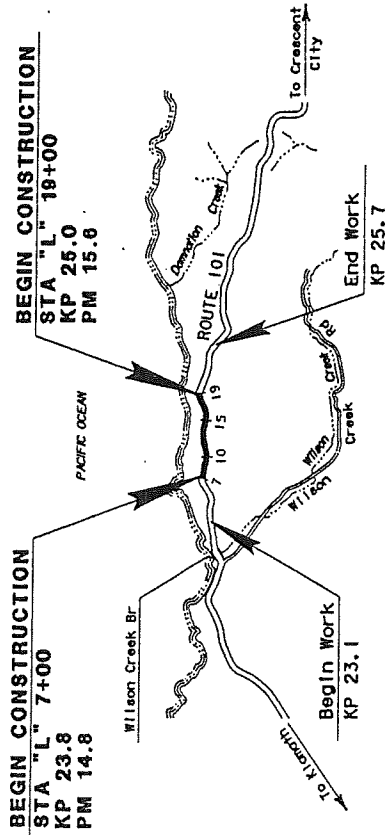
8. Attachments

- Location Map
- Typical Cross Sections (X1, X2, X3)
- Layouts (L1, L2)
- Profile
- Super Elevation Diagram
- Exception Documentation Form
- Storm Water Checklists (NOT INCLUDED)
- Topographical Map
- Rain Intensity Map
- Preliminary Drainage Report

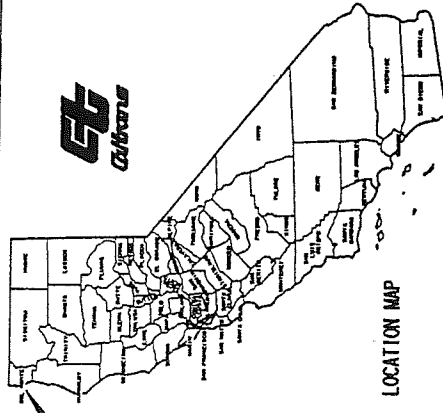
INDEX OF SHEETS

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
 PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN DEL NORTE COUNTY
 ABOUT 17 km NORTH OF KLAMATH
 FROM 3.5 km NORTH OF WILSON CREEK BRIDGE
 TO 4.7 km NORTH OF WILSON CREEK BRIDGE

To be supplemented by Standard Plans dated July, 1999



DIST	COUNTY	ROUTE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
01	DN	101	23.8/25.0	1	1



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 Contractors may use a web site to get the files for this plan sheet.



LOCATION MAP



Project Engineer:
 Date:
 Registered Civil Engineer

Prints Approval Date

The Contractor shall possess the Class (or classes) of license as specified in the "Notice to Contractor".

No Scale

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
2. FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

DATE	REVISION BY	CHECKED BY	PROJECT ENGINEER	DESIGN	STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
			MARK SOBOTA		



DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS
01	DN	101	23	8/25

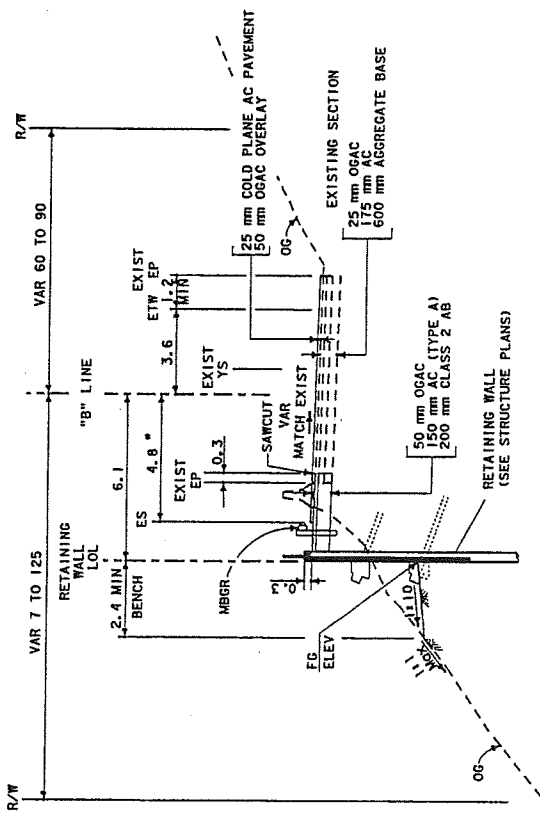
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE: 09/00/00

MARK SOBOTA
No. E-30-00
CIVIL ENGINEER

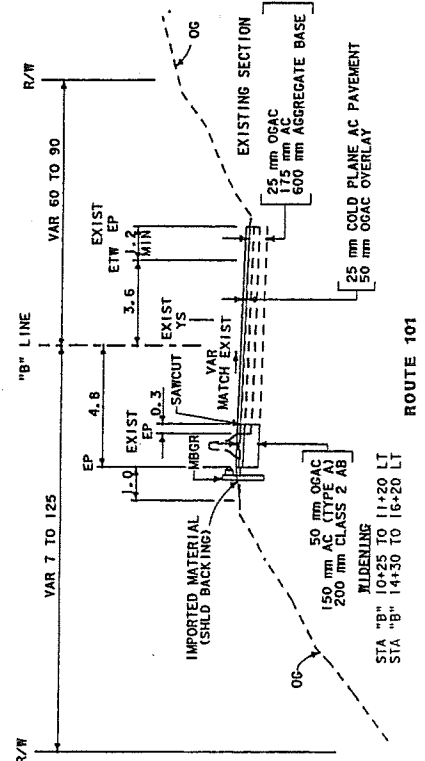
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ROUTE 101

- STA "B" 10+25 TO 11+30 (LOCATION 1) (PM 15.02/15.07), ROADWAY WIDTH = 6.0 (SHLD = 2.4)
- STA "B" 11+95 TO 12+60 (LOCATION 2) (PM 15.12/15.16)
- STA "B" 13+25 TO 15+05 (LOCATION 3) (PM 15.20/15.31)
- STA "B" 15+25 TO 16+10 (LOCATION 4) (PM 15.34/15.38), ROADWAY WIDTH = 6.0 (SHLD = 2.4)



ROUTE 101

STA "B" 10+00 TO 16+20 (PM 15.0/15.39)

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

DIST	COUNTY	ROUTE	TOTAL SHEETS	SHEET NO.
01	DN	101	23	8/25-0

REGISTERED CIVIL ENGINEER	00/00/00
PLANS APPROVAL DATE	

PROFESSIONAL SEAL	NO. INCLER
MARK SOBOTA	48579
CIVIL	EXPIRES 8-30-04

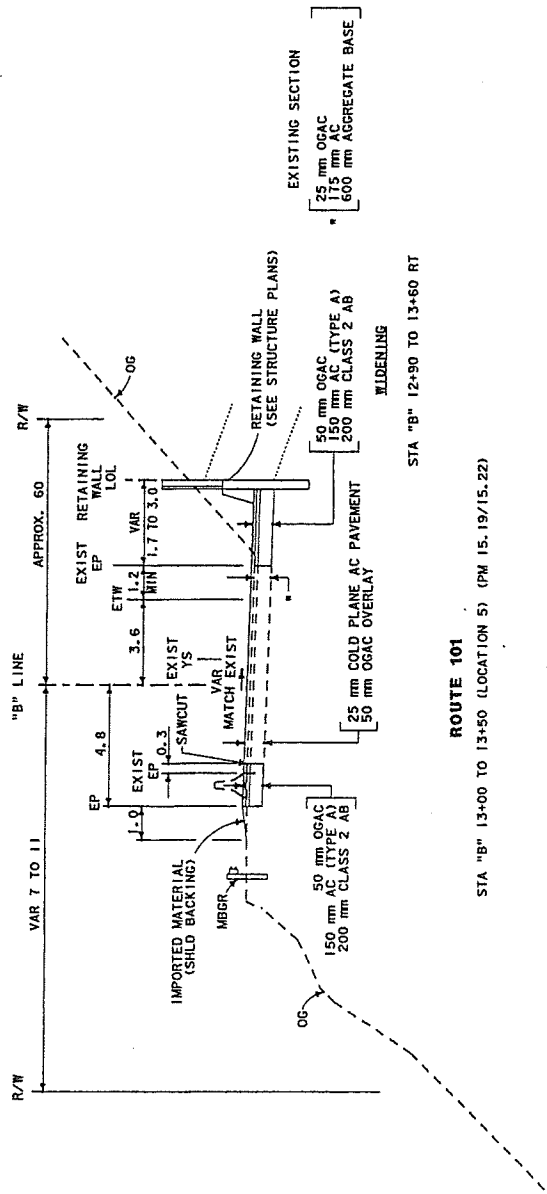
The State of California or its officers or agents shall not be responsible for the consequences or liabilities of any person who may rely on the contents of this plan.

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- NOTES:
1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 2. FOR AC DIKE AND MBGR LIMITS SEE LAYOUT SHEET.
 3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	MARK SOBOTA	PROJECT ENGINEER
DATE	DESIGNED BY	CHECKED BY	DATE
	REVISOR BY		DATE



TYPICAL CROSS SECTION X-2
NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

USERNAME -> j119x
DGN FILE -> Typical.a.dgn

CU 03 231

EA 324700

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO THE TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
2. FOR AC DKE AND MBGR LIMITS SEE LAYOUT SHEET.
3. SUPERELEVATION AS SHOWN OR AS DIRECTED BY THE ENGINEER.

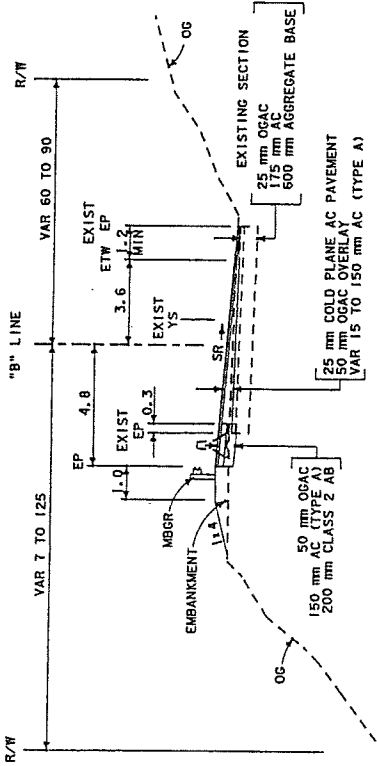


DIST	COUNTY	ROUTE	SALANCE FOR POST	SHEET	TOTAL
01	DN	101	23, 8/25-0		

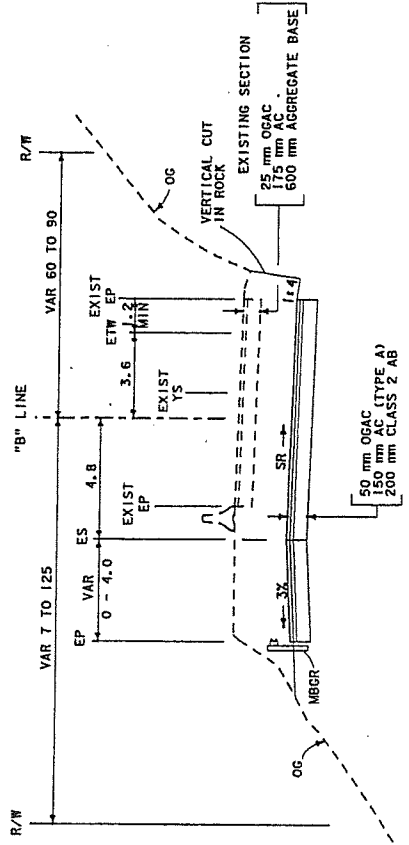
REGISTERED CIVIL ENGINEER	80/00/00
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PLANS APPROVAL DATE	8-30-04
APPROVED FOR THE OFFICE	48279
OR COMPLETE OF THIS SHEET	
OR COMPLETE OF THIS SHEET	

Call Trans. per. has a web site. To get to the web site, go to: <http://www.cullinans.com>



ROUTE 101
AC SUPER ELEVATION CORRECTION
STA "B" 12+00 TO 12+80
STA "B" 12+80 TO 14+00



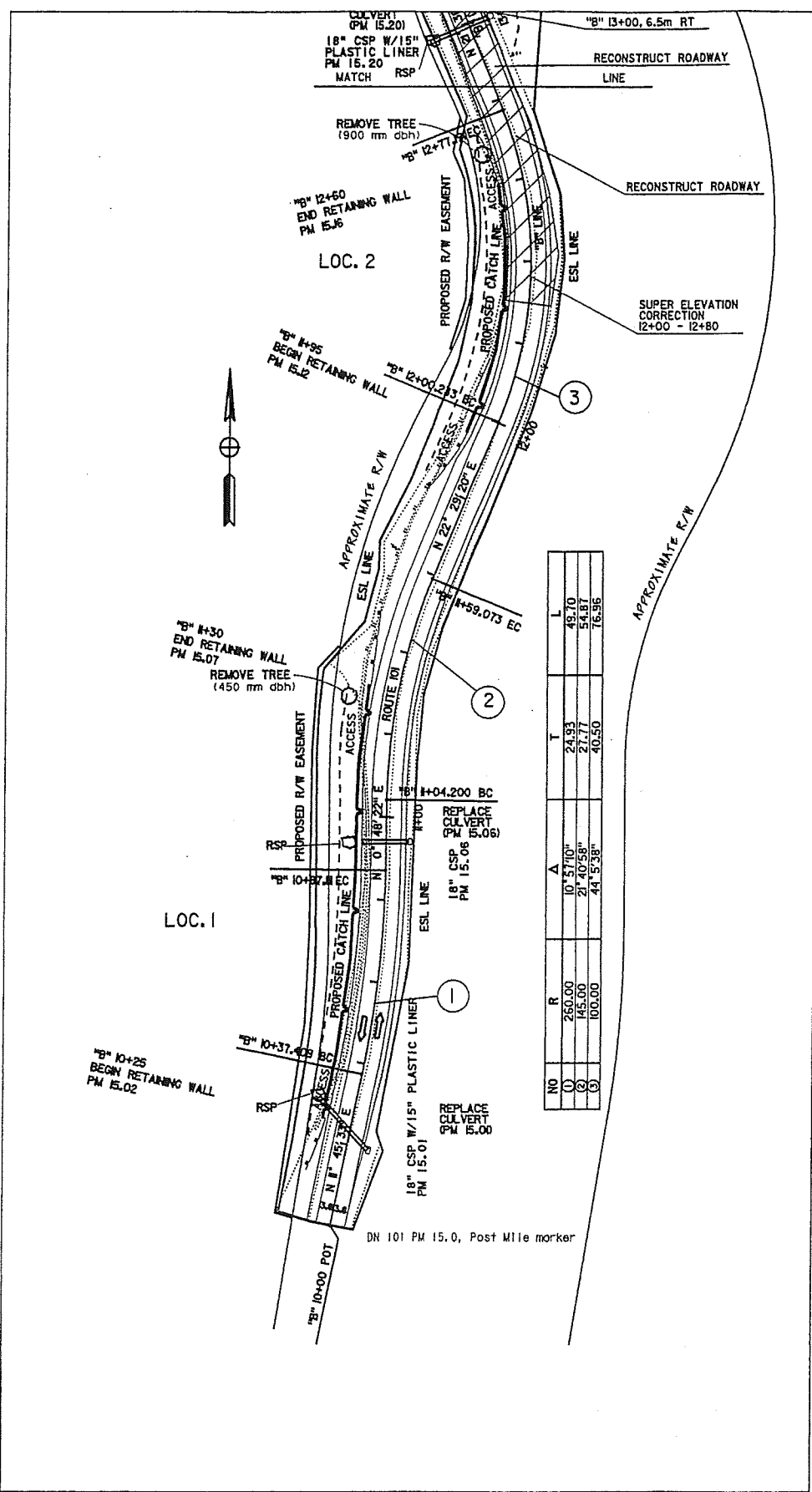
ROUTE 101
VERTICAL CURVE CORRECTION
STA "B" 12+30 TO 13+50
STA "B" 14+30 TO 15+90

TYPICAL CROSS SECTION
NO SCALE
X-3

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	PROJECT ENGINEER	MARK SOBOTA
CHECKED BY	DATE	REVISOR	DATE
DESIGNED BY	DATE	REVISOR	DATE

DIST	COUNTY	ROUTE	KILOMETER	POST	MILE	POST
01	DN	101	23.8/25.0		14.8/15.6	



ATTACHMENT L-1
PROJECT LAYOUT MAP
 LAST CHANCE GRADE ROADWAY STABILIZATION



DATE: 4/18/03

LEGEND

- CATCH LINES (CUT/FILL)
- - - - - EXISTING RIGHT OF WAY OR EASEMENT
- _____ PROPOSED RIGHT OF WAY OR EASEMENT
- _____ ENVIRONMENTAL STUDY LIMIT
- _____ PROPOSED RETAINING WALL

Caltrans, District 1
 P.O. Box 3700 95602
 Eureka, CA

324700

USER: MARK F. SOBOTA
 FILE: 2135001.plt

MARK F. SOBOTA
 PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DIST	COUNTY	ROUTE	KILOMETER POST	MILE POST
01	DN	101	23.8/25.0	14.8/15.6

DATE PLOTTED: 11-14-03
 DATE REVISION: 00-00-00

APPROXIMATE R/W

APPROXIMATE R/W

APPROXIMATE R/W

APPROXIMATE R/W

APPROXIMATE R/W

APPROXIMATE R/W

LOC. 4

LOC. 3

LOC. 5

"B" 15+25
 BEGIN RETAINING WALL
 PM 15.34
 (600 mm dbh)

"B" 15+05
 END RETAINING WALL
 PM 15.31

REMOVE TREE
 (600 mm dbh)

REMOVE TREE
 (450 mm dbh)

"B" 13+25
 BEGIN RETAINING WALL
 PM 15.20

REPLACE
 CULVERT
 (PM 15.20)

18" CSP W/15"
 PLASTIC LINER
 PM 15.20

MATCH
 RSP

"B" 13+50, 7.8m RT

"B" 13+50
 END RETAINING WALL
 PM 15.22

REMOVE TREE (2 EA) (300 mm dbh)

"B" 13+23.8, 7.8m RT

"B" 13+00, 6.5m RT

REPLACE
 CULVERT
 (PM 15.40)

RSP

"B" 16+40
 END RETAINING WALL
 PM 15.38

"B" 15+92.80
 BC

ACCESS

PROPOSED CATCH LINE

18" CSP W/15"
 PLASTIC LINER
 PM 15.40

"B" 16+31.838 POT

RECONSTRUCT ROADWAY

REPLACE
 CULVERT
 (PM 15.34)

18" X 24" CSPH
 PM 15.34

NO	R	A	T	L
(1)	35.00	36° 10' 23"	31.03	35.96
(2)	320.00	28° 44' 43"	82.00	160.54



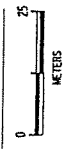
ATTACHMENT L-2

PROJECT LAYOUT MAP

LAST CHANCE GRADE ROADWAY STABILIZATION



DATE: 4/18/03



LEGEND

- CATCH LINES (GUT/FILL) - - - - -
- EXISTING RIGHT OF WAY - - - - -
- PROPOSED RIGHT OF WAY OR EASEMENT - - - - -
- ENVIRONMENTAL STUDY LIMIT - - - - -
- PROPOSED RETAINING WALL - - - - -

Cullinane, District 1
 P. O. Box 3700
 Eureka, CA 96502

324700

USE MAP -> 11000
 USE TITLE -> 2-1058000-00-00

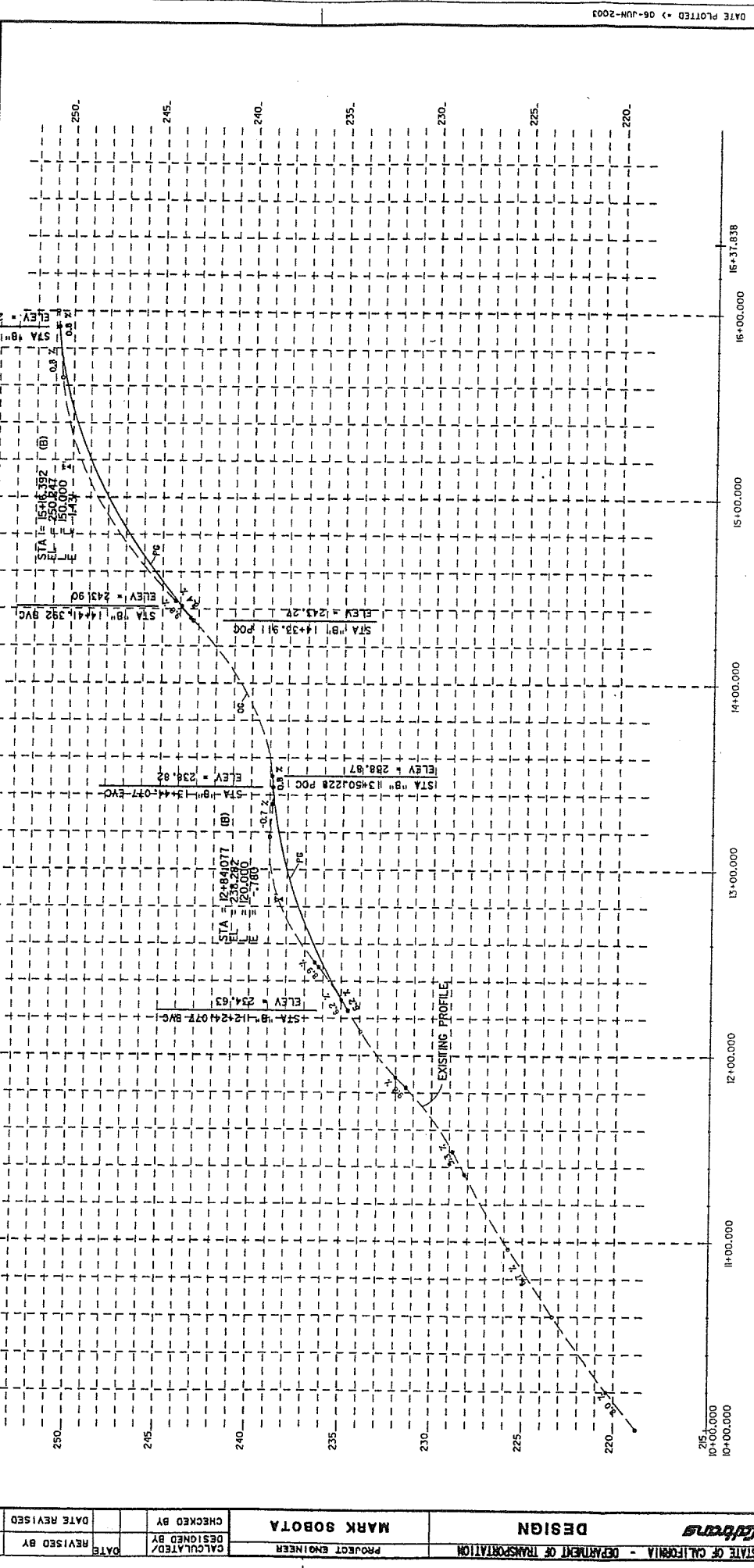
MARK F. SOBOTA
 PROJECT ENGINEER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



DIST	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
01	DN	101	23.8/25.0		

DATE	REVISIONS	DESIGNED BY	CHECKED BY



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT ENGINEER
MARK SOBOTA
DESIGN
CALCULATED/DESIGNED BY
DATE REVISIONS

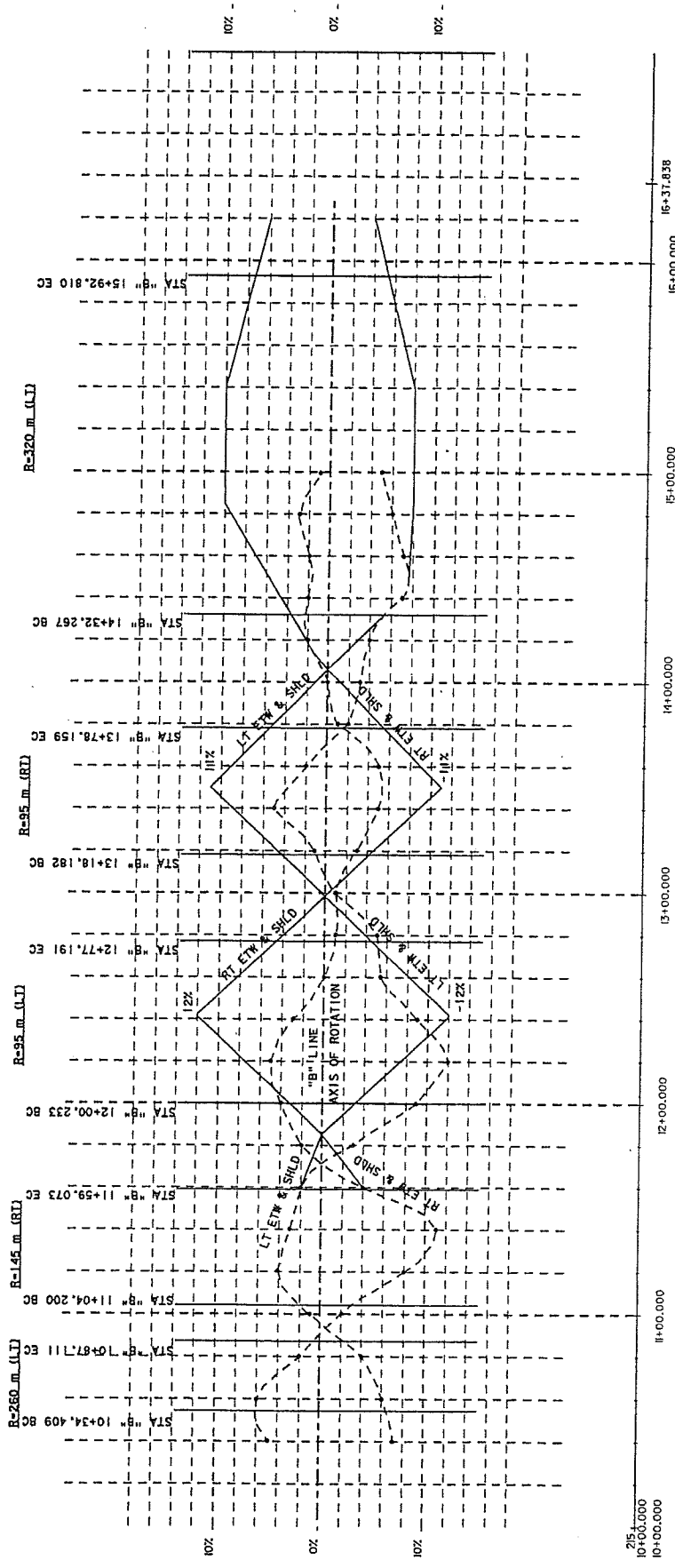
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00/00/00
PLANS APPROVAL DATE
08/25/03
MARK SOBOTA
48519
Exp. 8-30-04
CIVIL
State of Cal. No. 10000

DATE PLOTTED => 06-JUN-2003

SUPERELEVATION DIAGRAM SE-1

NO SCALE

"B" LINE SUPER ELEVATION DIAGRAM



DIST	COUNTY	ROUTE	SHEET NO.	TOTAL SHEETS
01	DN	101	23	25

PROJECT TOTAL PROJECT 23.8/25.0

REGISTERED CIVIL ENGINEER 00/00/00

MARK SOBOTA 48319

PLANS APPROVAL DATE 08-30-03

REGISTERED CIVIL ENGINEER

DATE PLOTTED > 11-JUN-2003



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	MARK SOBOTA	PROJECT ENGINEER
CHECKED BY	DATE REVISSED	DESIGNED BY	DATE

Appendix E

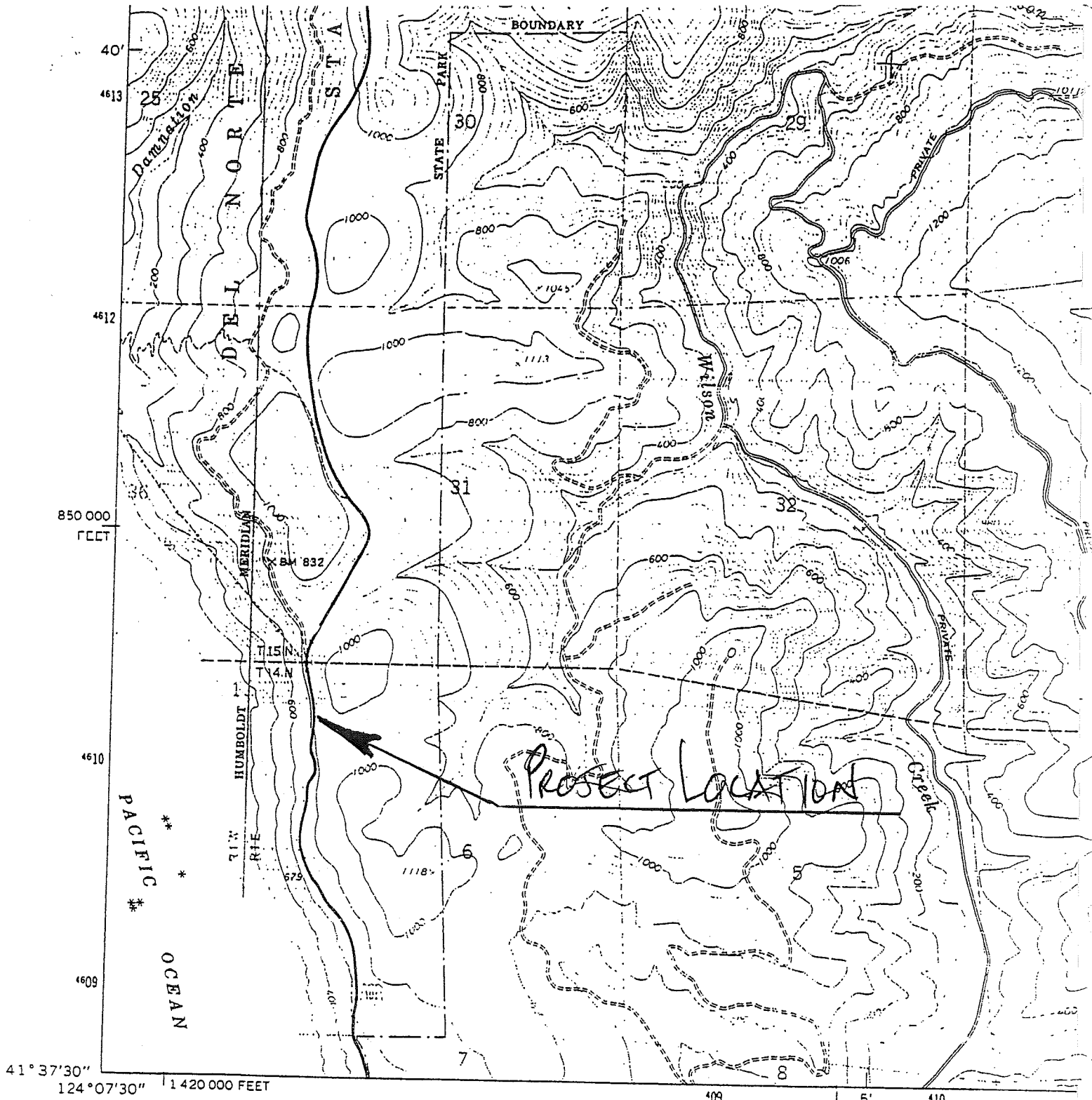
Exemption Documentation Form

See Section 4, Figure 4-1, Project Exemption Criteria for Treatment BMPS Only.

DATE: 04-16-03

EA: 324700

NO.	CRITERIA	YES ▶	NO ▶	SUPPLEMENTAL INFORMATION FOR EXEMPTION
1.	Start			Go to 2
2.	Will there be direct or indirect discharge to surface water?	✓		If yes, go to 3 If no, project is exempt. Comment on location of project relative to nearest receiving water.
3.	Is this an emergency project?		✓	If yes, project is exempt If no, go to 4
4.	Is it a new facility?		✓	If yes, go to 12 If no, go to 5. Document why it is or not considered a new facility (new construction, major reconstruction, significant construction or reconstruction projects are considered new.)
5.	Will there be a change in line/grade or hydraulic capacity? <i>REPLACE 450MM WITH 600MM</i>	✓		If yes, go to 6 If no go to 8. Briefly describe existing and new slope.
6.	Is disturbed soil area <u>greater than or equal to 2 hectares?</u> <i>.3ha</i>		✓	If yes, go to 12 If no, go to 7. Provide disturbed soil area in hectares.
7.	Part of a common plan of development?		✓	If yes, go to 12 If no, go to 8.
8.	Do the project limits encroach upon a High Risk Area?		✓	If yes, go to 12 If no, go to 9. Document source.
9.	Are there location specific requirements established by the RWQCB or other local agencies?		✓	If yes, go to 12 Briefly describe. If no, go to 10.
10.	Are there Municipal Separate Storm Sewer System (MS4) specific requirements?		✓	If yes, go to 11. Briefly describe. If no, project is exempt.
11.	Will the storm drain system be modified, replaced or upgraded?			If yes, go to 12 If no, project is exempt, go to 13.
12.	Consider approved Treatment BMPs.			Project is not exempt based on this criteria. Go to Section 5.5 for BMP Evaluation and Selection Process and Checklist T-1 and Decision Tree T-1 in this Appendix.
13.	Document for Annual Report and project files by completing this Exemption Documentation Form and the SWDR.			Attach this form to the Annual Report and the SWDR.
14.	End			



Mapped, edited, and published by the Geological Survey

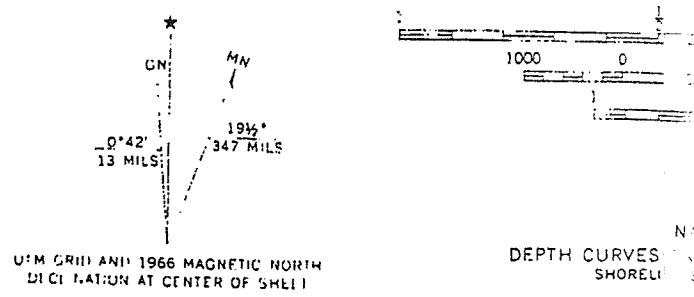
Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1964. Field checked 1966

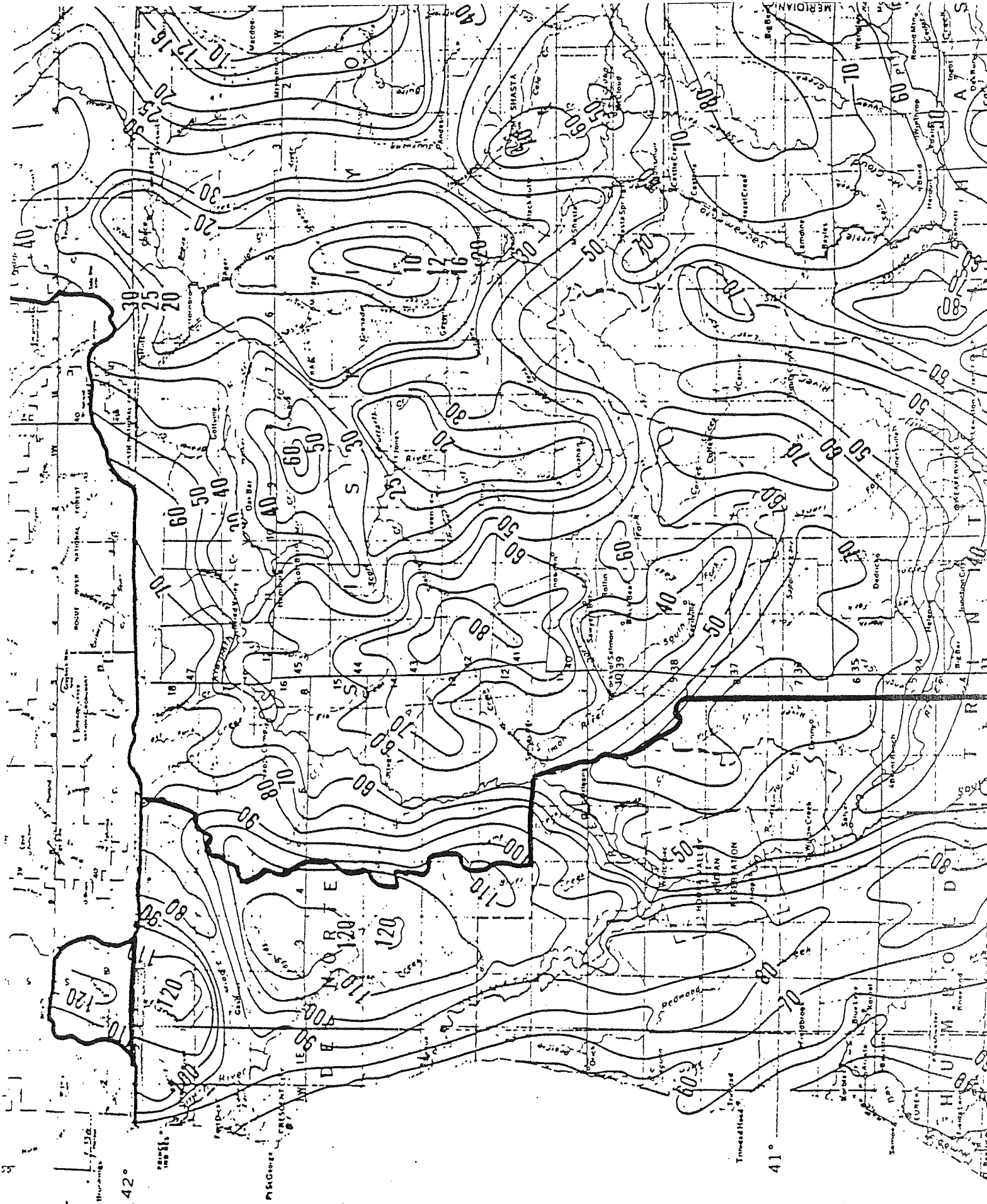
Selected hydrographic data compiled from USC&GS surveys (1929)
This information is not intended for navigational purposes

Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 1
1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

Certain land lines are omitted because of insufficient data



FOR SALE BY U. S. GEOLOGICAL SURVEY
A FOLDER DESCRIPTION



PRELIMINARY PROJECT COST ESTIMATE SUMMARY



01-DN-101
 Supplemental PSR
 KP 23.8/25.0 (PM 14.8/15.6)
 324700
 201.150 (HA42)

In Del Norte County on Route 101 near Klamath approximately 16.7km to 17.7km north of Route 101/169 Separation (Br. No. 10-26) (KP 24.1/25.1).

Construct five retaining walls, reconstruct roadway, improve super elevation and widen the existing roadway sufficiently to provide two 3.6-meter lanes and 1.2-meter shoulders.

Alternate 4

TOTAL ROADWAY ITEMS	\$	2,000,000
TOTAL STRUCTURE ITEMS	\$	<u>6,110,000</u>
SUBTOTAL CONSTRUCTION COSTS	\$	8,110,000
TOTAL RIGHT OF WAY (Current Cost)	\$	<u>7,300</u>
	Total	<u>8,117,300</u>
TOTAL PROJECT CAPITAL OUTLAY COSTS (Call)	\$	<u><u>8,120,000</u></u>

Reviewed by District Program Manager Richard Muller

Approved by Project Manager Cary Banducci Date 7/15/03

I. ROADWAY ITEMS

<u>Section 1 (Earthwork)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
Clearing & Grubbing	-	LS	10,000	10,000
Remove Tree	-	LS	3,000	3,000
Roadway Excavation (Widening)	250	M3	70	17,500
Roadway Excavation (Superelevation Correction)	250	M3	70	17,500
Roadway Excavation (Vertical Curve Correction)	3370	M3	30	101,100
Imported Material (Shoulder Backing)	70	M3	80	5,600
			Subtotal Earthwork	\$ 154,700

<u>Section 2 (Pavement Structural Section)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
DGAC (Mainline Widening – lanes and shoulders)	300	TONN	70	21,000
DGAC Pavement (Superelevation Correction)	540	TONN	70	37,800
DGAC Pavement (Vertical Curve Correction)	1000	TONN	70	70,000
Class 2 Aggregate Base (Mainline Widening – lanes and shoulders)	110	M3	65	7,150
CL 2 AB (Superelevation Correction)	190	M3	65	12,500
CL 2 AB (Vertical Curve Correction)	540	M3	65	35,100
OGAC Overlay of AC Pavement	1200	TONN	85	102,000
Cold Plane AC Pavement	7700	M2	10	77,000
Replace AC Surfacing	20	M3	525	10,500
Pavement Reinforcing Fabric	1200	M2	4.5	5,400
			Subtotal Pavement Structural Section	\$ 378,450

<u>Section 3 (Drainage)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
Remove Culvert	120	M	40	5,000
Place Culvert/Inlets		LS	8000	8,000
Rock Slope Protection	10	M3	200	2,000
			Subtotal Drainage	\$ 15,000

<u>Section 4 (Specialty Items)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
Highway Mitigation Planting	-	LS	7,500	7,500
Erosion Control	0.4	HA	20,000	8,000
Weed Control Mat	480	M	30	14,400
Prepare Water Pollution Control Plan	-	LS	2,500	2,500
Water Pollution Control Plan	-	LS	7,000	7,000
			Subtotal Specialty Items	\$ 39,400

<u>Section 5 (Traffic)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
Traffic Control System	-	LS	70,000	70,000
Construction Area Signs	-	LS	5,000	5,000
Portable Changeable Message Signs	2	EA	12,500	25,000
Temporary Traffic Signal System	-	LS	200,000	200,000
Temporary Railing (Type K)	1020	M	60	65,000
Traffic Striping	-	LS	10,000	10,000
Place MBGR (or decorative concrete barrier)	480	M	280	135,000
Terminal Systems	4	EA	10,000	40,000
Remove MBGR	80	M	30	2,500
Remove K-Rail	420	M	20	8,500
			Subtotal Traffic	\$ 561,000

TOTAL SECTIONS 1 thru 5 \$ 1,148,550

<u>Section 6 (Minor Items)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
Progress Schedule (CPM)	-	LS	30,000	30,000
Time Related Overhead (850 Wdays)	-	LS	150,000	150,000
Remove AC Dike	200	M	5	1,000
Place AC Dike	320	M	10	4,000
			Subtotal Minor Items	\$ 185,000

TOTAL MINOR ITEMS \$ 185,000

SUBTOTAL Sections 1 thru 6 \$1,333,550

Section 7 (Mobilization) (10% x Subtotal Sections 1 thru 6) \$ 133,355

TOTAL ROADWAY MOBILIZATION \$ 133,355

Section 8 (Supplemental Work and Contingencies)

Contingencies (25% x Subtotal Sections 1 thru 6) \$ 333,387

<u>(Supplemental Work)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Item Cost</u>
Maintain Traffic	65	Days	1,500	97,500
Storm Water Maintenance	-	LS	2,500	2,500
COZEEP	-	LS	22,000	22,000
RE Office	42	Month	1,500	63,000
Partnering	-	LS	5,000	5,000
Sign Panels	-	LS	1,000	1,000
			Supplemental Work Subtotal	\$ 191,000

TOTAL SUPPLEMENTAL WORK AND CONTINGENCIES \$ 524,387

TOTAL ROADWAY ITEMS \$ 1,991,292
 (Total Sections 1 thru 8)

CALL \$ 2,000,000

Estimate Prepared By: Mark Sobota



Phone# 445-6466

Date 7/14/03

Estimate Checked By: Steven Blair



Phone# 445-6453

Date 7/14/03

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)	Structure (4)	Structure (5)
Retaining Wall	Loc. 1	Loc. 2	Loc. 3	Loc. 4	Loc. 5
Total Area (m2)					
Footing Type	Pile	Pile	Pile	Pile	Pile
Cost Per m ² (incl. 10% mobilization and 20% contingency)	1701	1801	1863	1718	1571
Base APS cost	1,014,000	726,000	2,381,000	914,000	209,000
Additional Area for 2.4m shoulder on west side	198			264	
Additional length for vertical curve correction					156
Additional cost	337,000	726,000	2,381,000	274,000	249,600
Total Cost for Structure	1,351,000	726,000	2,381,000	1,188,000	458,600
Note: Railroad Related Costs N/A				Total	6,104,600

TOTAL STRUCTURE ITEMS say \$ 6,110,000
 (Sum of Structure Items)

III. RIGHT OF WAY ITEMS

Current Value

A. Acquisitions (Easements)	\$ 2,800
B. Project Development Permit Fees	\$ 3,500
C. Utility Relocation (State share)	\$ 0
D. Relocation Assistance	\$ 1,000
E. Clearance/Demolition	\$ 0
F. Title and Escrow Fees	\$ 0
G. Construction Contract Work (N/A)	<u>\$ 0</u>

TOTAL RIGHT OF WAY ITEMS \$ 7,300
 (Current Value)

PROGRAMMING SHEET

Project Manager:	GARY BANDUCCI	01-DN-101 KP23.8/25.0(PM 14.8/15.6)
Date:	07/17/03	EA 01-324700 20.10.201.150 Stabilize Roadway

PROJECT SCHEDULE

MILESTONE	DATE
Begin Environmental Document (M020)	N/A
Begin Project Report (M040) (Begin Design of Project)	N/A
Circulate Environmental Document (M120)	7/1/06
Project Approval & Environmental Document (M200)	1/1/07
District Submits Bridge Site Data to Structures (M221)	1/1/06
Right of Way Maps (M224)	1/1/07
Draft Structures Plans, Specifications & Estimate (M378)	7/1/07
Project Plans, Specifications & Estimate (M380)	11/1/07
Right of Way Certification (M410)	1/1/08
Ready to List (M460)	1/1/08
HQ Advertise (M480)	3/1/08
Approve Construction Contract (M500)	6/1/08
Contract Acceptance (M600)	10/1/10

Escalation Factors Used: Capital: 3.4%	2003 COSTS
Support: 2.3%	Const: \$8,110
	R/W: \$8

PROJECT COSTS BY SB45 CATEGORY								Costs are in thousands of dollars	
CAPITAL COSTS	03/04	04/05	05/06	06/07	07/08	08/09	FUTURE	TOTAL	
Right of Way	\$ -	\$ -	\$ -	\$ -	\$ 8	\$ -	\$ -	\$ 8	
Construction	\$ -	\$ -	\$ -	\$ -	\$ 9,360		\$ -	\$ 9,360	
CAPITAL TOTAL								\$ 9,368	

SUPPORT COSTS								
Environmental	\$ 219	\$ 230	\$ 235	\$ 110	\$ 9	\$ -	\$ -	\$ 803
Design	\$ 133	\$ 135	\$ 196	\$ 1,110	\$ 380	\$ -	\$ -	\$ 1,953
Right of Way	\$ -	\$ -	\$ -	\$ 44	\$ 44	\$ 4	\$ 8	\$ 100
Construction	\$ -	\$ -	\$ -	\$ -	\$ 38	\$ 469	\$ 653	\$ 1,159
SUPPORT COSTS								\$ 4,016

TOTAL PROJECT COSTS \$ 13,384

SUPPORT TO CAPITAL RATIO/% 43%

PID COSTS								
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

SUPPORT PY'S by DIVISION								
Number of Hours in a PY: 1758								

PROJECT SUPPORT IN PYS								
	03/04	04/05	05/06	06/07	07/08	08/09	FUTURE	TOTAL
Transportation Planning	1.04	1.13	1.13	1.26	0.44	0.05	0.07	5.1
District Design	1.15	1.22	1.22	3.44	2.06	0.56	0.85	10.5
Right of Way	0.01	0.01	0.01	0.01	0.41	0.03	0.06	0.5
District Construction	0.03	0.03	0.03	0.20	0.22	1.48	1.94	3.9
ESC Design	0.78	0.79	1.17	4.74	0.63	0.41	0.58	9.1
ESC Construction	0.00	0.00	0.00	0.04	0.12	1.23	1.61	3.0
TOTAL	3.00	3.17	3.56	9.69	3.87	3.76	5.12	32.2

Comments:

RESOURCES ASSIGNED FOR 32470_

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
01-MODAL-TRANSP-RATED	32470_ .0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	01.800-MODAL_EXEC_MGMT-1	01.MTO1.800	1
32470_ .0.100.15	PROJ MGMT - PS&E COMPONENT		1/1/07	517	6/7/08	0	01.800-MODAL_EXEC_MGMT-1	01.MTO1.800	1
32470_ .0.100.20	PROJ MGMT - CONSTR COMPONENT		6/1/08	1309	1/1/12	0	01.800-MODAL_EXEC_MGMT-1	01.MTO1.800	1
01-MAINT-RATED	32470_ .0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	01.601-MAINT-ENGINEER-1	01.MA01.601	6
32470_ .3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING		7/1/03	1096	7/1/06	5	01.601-MAINT-ENGINEER-1	01.MA01.601	6
32470_ .2.175	CIRCULATE DED & SELECT PREFERRED PRO		7/1/06	92	10/7/06	0	01.601-MAINT-ENGINEER-1	01.MA01.601	10
32470_ .3.185.15	PERF PRELIM DSGN		7/1/06	184	1/1/07	0	01.601-MAINT-ENGINEER-1	01.MA01.601	82
32470_ .0.100.15	PROJ MGMT - PS&E COMPONENT		1/1/07	517	6/7/08	0	01.601-MAINT-ENGINEER-1	01.MA01.601	10
32470_ .2.205	OB1 PERMITS/AGREMENTS & ROUTE ADOPTIO		1/1/07	243	9/7/07	0	01.601-MAINT-ENGINEER-1	01.MA01.601	5
32470_ .3.230	PREP DRAFT PS&E		1/1/07	243	9/7/07	0	01.601-MAINT-ENGINEER-1	01.MA01.601	16
32470_ .4.200	COORDINATE UTIL		1/1/07	1826	1/1/12	0	01.601-MAINT-ENGINEER-1	01.MA01.601	5
32470_ .3.255	CIRCULATE/REV & PREP FNL DISTRICT PS		9/1/07	61	11/1/07	0	01.601-MAINT-ENGINEER-1	01.MA01.601	5
32470_ .0.100.20	PROJ MGMT - CONSTR COMPONENT		6/1/08	1309	1/1/12	0	01.601-MAINT-ENGINEER-1	01.MA01.601	5
32470_ .5.270	PERF CONSTR ENGRG & GENERAL CONTRACT		6/1/08	852	10/7/10	0	01.601-MAINT-ENGINEER-1	01.MA01.601	3
32470_ .5.285	PREP & ADMINISTER CONTRACT CHANGE OR		6/1/08	852	10/7/10	0	01.601-MAINT-ENGINEER-1	01.MA01.601	75
01-TRAF-MGMT-RATED	32470_ .0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	01.385-TRAF_OPS-N-1	01.TM01.385	21
32470_ .3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING		7/1/03	1096	7/1/06	5	01.385-TRAF_OPS-N-1	01.TM01.385	16
32470_ .2.160.15.20	PREP DRAFT PROJ RPT		8/1/03	1065	7/1/06	0	01.380-TRAF_ENGR-1	01.TM02.380	4
32470_ .2.175	CIRCULATE DED & SELECT PREFERRED PRO		7/1/06	92	10/7/06	0	01.390-ELEC_SYS-DESIGN-1	01.TM03.390	1
32470_ .3.185.15	PERF PRELIM DSGN		7/1/06	184	1/1/07	0	01.390-ELEC_SYS-DESIGN-1	01.TM03.390	8
32470_ .2.180	PREP & APPROVE PROJ RPT & FNL ENVIRO		10/1/06	92	1/1/07	0	01.380-TRAF_ENGR-1	01.TM02.380	6
							01.365-TRAF_ENGR-1	01.TM02.365	5
							01.390-ELEC_SYS-DESIGN-1	01.TM03.390	9
							01.380-TRAF_ENGR-1	01.TM02.380	6
							01.365-TRAF_OPS-N-1	01.TM01.365	30

RESOURCES ASSIGNED FOR 32470_

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED	
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0			22	
32470_	.2.205	OBT PERMITS/AGREEMENTS & ROUTE ADOPTIO	1/1/07	243	9/1/07	0	01.365-TRAF_OPS-N-1 01.380-TRAF_ENGR-1	01.TM01.365 01.TM02.380	20	
32470_	.3.230	PREP DRAFT PS&E	1/1/07	243	9/1/07	0	01.390-ELEC_SVS-DESIGN-1 01.397-PERMITS-ENCR-1	01.TM03.390 01.TM04.397	15	
32470_	.4.200	COORDINATE UTIL	1/1/07	1826	1/1/12	0	01.390-ELEC_SVS-DESIGN-1 01.365-TRAF_OPS-N-1 01.380-TRAF_ENGR-1	01.TM03.390 01.TM01.365 01.TM02.380	124	
32470_	.3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	01.397-PERMITS-ENCR-1	01.TM04.397	4	
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	01.390-ELEC_SVS-DESIGN-1 01.365-TRAF_OPS-N-1 01.380-TRAF_ENGR-1	01.TM03.390 01.TM01.365 01.TM02.380	52	
32470_	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	01.365-TRAF_OPS-N-1	01.TM01.365	20	
32470_	.5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	01.390-ELEC_SVS-DESIGN-1 01.397-PERMITS-ENCR-1 01.365-TRAF_OPS-N-1 01.380-TRAF_ENGR-1	01.TM03.390 01.TM04.397 01.TM01.365 01.TM02.380	92	
01-PROJ-DEV-RATED	32470_	.1.150	DEV PROJ INITIATION DOC [PID]	11/1/93	473	2/17/95	100	01.216-PROJ_PLNG-1	01.PD01.216	8
01-ENGR-MGMT-RATED	32470_	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	01.100-ENGR_EXEC_MGMT-1 01.106-PROJ_MGRS-1 01.140-PROJ_SCHED-1	01.EM05.100 01.EM01.106 01.EM02.140	753
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	01.106-PROJ_MGRS-1 01.140-PROJ_SCHED-1	01.EM01.106 01.EM02.140	438	
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	01.106-PROJ_MGRS-1 01.140-PROJ_SCHED-1	01.EM01.106 01.EM02.140	188	
01-ADMIN-RATED	32470_	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	01.005-RESOURCE_MGMT-1 01.019-TRAINING-1 01.030-REPRO-1 01.035-BUSINESS_MGMT-1 01.037-PUBLIC_INFO-1 01.073-INFO_SVCS-1 01.091-CLERICAL_SUPP-1 01.040-EEO-1	01.AD10.005 01.AD23.013 01.AD04.030 01.AD19.035 01.AD11.037 01.AD08.073 01.AD06.091 01.AD20.040	83
32470_	.2.180	PREP & APPROVE PROJ RPT & FNL ENVIRO	10/1/06	92	1/1/07	0	01.091-CLERICAL_SUPP-1	01.AD20.040	2	
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	01.005-RESOURCE_MGMT-1 01.013-TRAINING-1	01.AD10.005 01.AD23.013	29	

RESOURCES ASSIGNED FOR 32470_

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
							01.030-REPRO-1	01.AD04.030	1
							01.035-BUSINESS_MGMT-1	01.AD19.035	6
							01.037-PUBLIC_INFO-1	01.AD11.037	4
							01.073-INFO_SVCS-1	01.AD08.073	10
							01.091-CLERICAL_SUPP-1	01.AD06.091	3
							01.040-EEO-1	01.AD20.040	1
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	01.005-RESOURCE_MGMT-1	01.AD10.005	29
							01.013-TRAINING-1	01.AD23.013	2
							01.030-REPRO-1	01.AD04.030	1
							01.035-BUSINESS_MGMT-1	01.AD19.035	6
							01.037-PUBLIC_INFO-1	01.AD11.037	4
							01.073-INFO_SVCS-1	01.AD08.073	10
							01.091-CLERICAL_SUPP-1	01.AD06.091	3
							01.040-EEO-1	01.AD20.040	1
03-CONST-RATED									
32470_	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/1/95	4386	1/1/07	70	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	20
32470_	.3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING	7/1/03	1096	7/1/06	5	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	125
32470_	.3.185.15	PERF PRELIM DSGN	7/1/06	184	1/1/07	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	125
32470_	.2.180	PREP & APPROVE PROJ RPT & FNL ENVIRO	10/1/06	92	1/1/07	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	100
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	19
32470_	.3.230	PREP DRAFT PS&E	1/1/07	243	9/1/07	0	03.599-CONST_SAFETY-1	03.CN06.599	20
32470_	.3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	100
32470_	.3.260	PREP CONTRACT DOCS	11/1/07	121	3/1/08	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	7
32470_	.4.300	PERF FNL PAW ENGRG ACTIVITIES	1/1/08	1461	1/1/12	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	15
32470_	.3.265	ADVERTISE/OPEN BIDS/AWARD & APPROVE	3/1/08	92	6/1/08	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	13
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	50
32470_	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	03.511-CONST_OFC-CN01.511-1	03.CN01.511	50
32470_	.5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	5687
32470_	.5.290	RESOLVE CONTRACT CLAIMS	6/1/08	1309	1/1/12	0	03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	5500
32470_	.5.295	ACPT CONTRACT/PREP FNL CONSTR TEST &	10/1/10	92	1/1/11	0	03.511-CONST_OFC-CN01.511-1	03.CN01.511	175
							03.501-CONST_EXEC_MGMT-NORTH-CN07.501-1	03.CN07.501	12
							03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	242
							03.511-CONST_OFC-CN01.511-1	03.CN01.511	142
							03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	100
							03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	151
							03.511-CONST_OFC-CN01.511-1	03.CN01.511	95
							03.590-CONTRACT_CLAIMS-1	03.CN04.590	6
							03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	50
							03.511-CONST_OFC-CN01.511-1	03.CN01.511	88
							03.522-FIELD_CONST_ENGR_1-CN02.522-1	03.CN02.522	78
							03.511-CONST_OFC-CN01.511-1	03.CN01.511	10
03-RIGHT-OF-WAY-RATED									
32470_	.0.100.05	PROJ MGMT - PID COMPONENT	11/1/93	473	2/1/95	100			25

RESOURCES ASSIGNED FOR 32470.

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
							03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	21
32470	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	03.406-RW_PLNG_&_MGMT-RW01.406-1	03.RW01.406	4
32470	.2.160.15.20	PREP DRAFT PROJ RPT	8/1/03	1085	7/1/06	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	19
32470	.2.165.10	PERF GENERAL ENVIRO STUDIES	8/1/03	1085	7/1/06	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	10
32470	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	34
32470	.4.200	COORDINATE UTIL	1/1/07	1826	1/1/12	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	20
32470	.4.195	RW PROP MGMT & EXCESS LAND	7/1/07	1645	1/1/12	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	40
32470	.4.225	OBT RW INTERESTS FOR PROJ RW CERTI	7/1/07	184	1/1/08	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	60
32470	.4.245	POST RW CERTIFICATION WORK	1/1/08	1096	1/1/11	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	668
32470	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	03.430-RW_ACQUISITION-OPC OF RW04.430-1	03.RW04.430	8
32470	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	53
							03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	10
							03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	20
							03.400-RW_EXEC_MGMT-GENERAL-1	03.RW10.400	20
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	286
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	113
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	130
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	23
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	266
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	113
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	130
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	16
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	12
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	4
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	4
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	4
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	4
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	195
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	40
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	150
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	5
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	66
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	80
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	28
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	6
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	52
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	22
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	8
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	8
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	8
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	8
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	8
							03.390-ELEC_SVS-MRYSVL-TM03.390-1	03.TM03.390	45
							03.397-PERMITS-ENCR-TM04.397-1	03.TM04.397	10
							03.371-TRAF_OPS-EUREKA281-TM01.371-1	03.TM01.371	4

RESOURCES ASSIGNED FOR 32470

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
							03.349-HAZ_WASTE-EUREKA-ES13.349-1	03.ES13.349	2
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	27
32470	.3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING	7/1/03	1096	7/1/06	5	03.310-SURVEYS-RW_ENGR-ES04.310-1	03.ES04.310	2
							03.313-HYDRAULICS-EUREKA/281-ES06.313-1	03.ES06.313	524
							03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	22
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	294
							03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	11
							03.317-MATLS_LAB-MRY SVL-ES08.317-1	03.ES08.317	182
32470	.2.160.15.20	PREP DRAFT PROJ RPT	8/1/03	1065	7/1/06	0	03.349-HAZ_WASTE-EUREKA-ES13.349-1	03.ES13.349	15
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	2582
							03.310-SURVEYS-RW_ENGR-ES04.310-1	03.ES04.310	10
							03.318-MATLS_LAB-EUREKA-ES08.318-1	03.ES08.318	1240
32470	.2.165.10	PERF GENERAL ENVIRO STUDIES	8/1/03	1065	7/1/06	0	03.319-MATLS_LAB-REDDING-ES08.319-1	03.ES08.319	1308
32470	.3.185.15	PERF PRELIM DSGN	7/1/06	184	1/1/07	0	03.313-HYDRAULICS-EUREKA/281-ES06.313-1	03.ES06.313	24
							03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	3
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	511
							03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	23
							03.318-MATLS_LAB-EUREKA-ES08.318-1	03.ES08.318	261
32470	.2.180	PREP & APPROVE PROJ RPT & FNL ENVIRO	10/1/06	92	1/1/07	0	03.318-MATLS_LAB-EUREKA-ES08.318-1	03.ES08.318	10
32470	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	03.319-MATLS_LAB-REDDING-ES08.319-1	03.ES08.319	182
							03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	35
32470	.2.205	OBT PERMITS/AGREEMENTS & ROUTE ADOPTIO	1/1/07	243	9/1/07	0	03.319-MATLS_LAB-REDDING-ES08.319-1	03.ES08.319	3
32470	.3.235	MITIGATE ENVIRO IMPACTS & CLEAN UP H	1/1/07	304	11/1/07	0	03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	9
32470	.3.230	PREP DRAFT PS&E	1/1/07	243	9/1/07	0	03.318-MATLS_LAB-EUREKA-ES08.318-1	03.ES08.318	5
							03.313-HYDRAULICS-EUREKA/281-ES06.313-1	03.ES06.313	4
							03.349-HAZ_WASTE-EUREKA-ES13.349-1	03.ES13.349	8
							03.287-PS&E/OE-EUREKA-ES01.287-1	03.ES01.287	10
							03.313-HYDRAULICS-EUREKA/281-ES06.313-1	03.ES06.313	1686
							03.318-MATLS_LAB-EUREKA-ES08.318-1	03.ES08.318	71
							03.341-LNDSOP_ARCH-ES11.341-1	03.ES11.341	75
							03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	7
32470	.4.220	PERF R/W ENGRG	1/1/07	181	7/1/07	0	03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	200
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	1333
							03.310-SURVEYS-RW_ENGR-ES04.310-1	03.ES04.310	658
32470	.4.225	OBT R/W INTERESTS FOR PROJ R/W CERTI	7/1/07	184	1/1/08	0	03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	20
32470	.3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	88
							03.310-SURVEYS-RW_ENGR-ES04.310-1	03.ES04.310	540
							03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	10
							03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	23
							03.309-SURVEYS-FLD-ES04.309-1	03.ES04.309	1357
							03.313-HYDRAULICS-EUREKA/281-ES06.313-1	03.ES06.313	7
							03.318-MATLS_LAB-EUREKA-ES08.318-1	03.ES08.318	10
							03.341-LNDSOP_ARCH-ES11.341-1	03.ES11.341	40
							03.287-PS&E/OE-EUREKA-ES01.287-1	03.ES01.287	6
32470	.3.260	PREP CONTRACT DOCS	11/1/07	121	3/1/08	0	03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	566
							03.287-PS&E/OE-EUREKA-ES01.287-1	03.ES01.287	728
32470	.4.300	PERF FNL R/W ENGRG ACTIVITIES	1/1/08	1461	1/1/12	0	03.287-PS&E/OE-EUREKA-ES01.287-1	03.ES01.287	45
							03.302-DRAFTING_SVCS-NORTH-ES02.302-1	03.ES02.302	35
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	10
							03.308-SURVEYS-OFC-ES04.308-1	03.ES04.308	90

RESOURCES ASSIGNED FOR 32470_

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
	32470_4.300	PERF FNL RW ENGRG ACTIVITIES	1/1/08	1461	1/1/12	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	72
	32470_3.265	ADVERTISE/OPEN BIDS/AWARD & APPROVE	3/1/08	92	6/1/08	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	6
	32470_0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	8
	32470_5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	12
	32470_5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	152
	32470_5.290	RESOLVE CONTRACT CLAIMS	6/1/08	1309	1/1/12	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	8
	32470_5.285	ACPT CONTRACT/PREP FNL CONSTR EST &	10/1/10	92	1/1/11	0	03.231-DESIGN-E2-PD02.231-1	03.PD02.231	9
	03-TRANSP-PLNG-RATED						03.231-DESIGN-E2-PD02.231-1	03.PD02.231	25
	32470_0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	10
	32470_2.160.15.20	PREP DRAFT PROJ RPT	8/1/03	1065	7/1/06	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	1716
	32470_2.165.10	PERF GENERAL ENVIRO STUDIES	8/1/03	1065	7/1/06	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	1708
	32470_2.175	CIRCULATE DED & SELECT PREFERRED PRO	7/1/06	92	10/1/06	0	03.164-TRANSP_PLING-NPDES_MANAGER.164-1	03.TP01.164	8
	32470_2.180	PREP & APPROVE PROJ RPT & FNL ENVIRO	10/1/06	92	1/1/07	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	4076
	32470_0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	511
	32470_2.205	OBT PERMITS/AGREMENTS & ROUTE ADOPTIO	1/1/07	243	9/1/07	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	600
	32470_3.235	MITIGATE ENVIRO IMPACTS & CLEAN UP H	1/1/07	304	11/1/07	0	03.164-TRANSP_PLING-NPDES_MANAGER.164-1	03.TP01.164	56
	32470_3.230	PREP DRAFT PS&E	1/1/07	243	9/1/07	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	511
	32470_3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	03.164-TRANSP_PLING-NPDES_MANAGER.164-1	03.TP01.164	4
	32470_0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	471
	32470_5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	03.164-TRANSP_PLING-NPDES_MANAGER.164-1	03.TP01.164	40
	32470_5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	1086
	32470_5.290	RESOLVE CONTRACT CLAIMS	6/1/08	1309	1/1/12	0	03.198-SPECIAL_FUND_PROJ-1	03.TP10.198	64
	03-ENGR-MGMT-RATED						03.164-TRANSP_PLING-NPDES_MANAGER.164-1	03.TP01.164	154
	32470_0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	03.171-ENV_PLING-EUREKA-TP12.171-1	03.TP12.171	40

RESOURCES ASSIGNED FOR 32470

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
							03.140-PROJ_SCHED-EM02.140-1	03.EM02.140	17
32470	.3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	03.146-PROG_MGMT-CAP_PROG_MGMT_SUPPORT-E	03.EM03.146	4
32470	.3.260	PREP CONTRACT DOCS	11/1/07	121	3/1/08	0	03.146-PROG_MGMT-CAP_PROG_MGMT_SUPPORT-E	03.EM03.146	35
							03.146-PROG_MGMT-CAP_PROG_MGMT_SUPPORT-E	03.EM03.146	5
							03.146-PROG_MGMT-CAP_PROG_MGMT_SUPPORT-E	03.EM03.146	5
59-STRUC-FNDS-RATED							59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	25
32470	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70			
32470	.3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING	7/1/03	1096	7/1/06	5			3485
32470	.2.160.15.20	PREP DRAFT PROJ RPT	8/1/03	1065	7/1/06	0	59.316-GEO TECH-GEOTECHNICAL_SUPPORT-SF02	59.SF02.316	58
							59.322-GEO TECH-STRUCTURES_FOUNDATIONS-1	59.SF03.322	1490
32470	.2.165.10	PERF GENERAL ENVIRO STUDIES	8/1/03	1065	7/1/06	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	1947
32470	.3.215	PREP STRUC GENERAL PLANS	1/1/06	365	1/1/07	0	59.316-GEO TECH-GEOTECHNICAL_SUPPORT-SF02	59.SF02.316	13
							59.322-GEO TECH-STRUCTURES_FOUNDATIONS-1	59.SF03.322	4
32470	.3.185.15	PERF PRELIM DSGN	7/1/06	184	1/1/07	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	194
							59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	19
							59.322-GEO TECH-STRUCTURES_FOUNDATIONS-1	59.SF03.322	203
32470	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	59.296-DRAFTING_SVCS-OSF-SF01.296-1	59.SF01.296	1534
							59.316-GEO TECH-GEOTECHNICAL_SUPPORT-SF02	59.SF02.316	13
32470	.3.240	PREP DRAFT STRUC PS&E	1/1/07	181	7/1/07	0	59.322-GEO TECH-STRUCTURES_FOUNDATIONS-1	59.SF03.322	58
32470	.3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	1450
32470	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	13
32470	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	25
							59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	25
32470	.3.240	PREP DRAFT STRUC PS&E	1/1/07	181	7/1/07	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	16
32470	.3.255	CIRCULATE/REV & PREP FNL DISTRICT PS	9/1/07	61	11/1/07	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	56
32470	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	10
32470	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	168
							59.316-GEO TECH-GEOTECHNICAL_SUPPORT-SF02	59.SF02.316	12
32470	.5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	156
32470	.5.290	RESOLVE CONTRACT CLAIMS	6/1/08	1309	1/1/12	0	59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	20
							59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	12
59-ENGR-SYS-RATED							59.346-CONSULTANT_SVCS-CONTRACT_MGMT_SUP	59.ES12.346	114
32470	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	59.287-PS&E/OE-SPEC_PRODUCTION/REVIEW-ES	59.ES01.287	104
							59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	2
							59.308-SURVEYS-PI_NORTH-ES04.308-1	59.ES04.308	7
32470	.3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING	7/1/03	1096	7/1/06	5	59.318-MATLS_LAB-STRUC_MATLS-ES08.318-1	59.ES08.318	72
							59.319-MATLS_LAB-TEST_& TECH-ES08.319-1	59.ES08.319	40
							59.317-MATLS_LAB-RIGID_PAVE_& STRUC_CONC	59.ES08.317	30
32470	.2.160.15.20	PREP DRAFT PROJ RPT	8/1/03	1065	7/1/06	0	59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	2
32470	.3.210	PREP PRELIM STRUC DSGN DATA	1/1/06	384	12/1/06	0	59.308-SURVEYS-PI_NORTH-ES04.308-1	59.ES04.308	50
							59.323-GEO TECH-DESIGN_NORTH-SF03.323-1	59.SF03.323	500

RESOURCES ASSIGNED FOR 32470

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
32470	.3.215	PREP STRUC GENERAL PLANS	1/1/06	365	1/1/07	0	59.319-MATLS_LAB-TEST_&_TECH-ES08.319-1	59.ES08.319	5
32470	.3.185.15	PERF PRELIM DSGN	7/1/06	184	1/1/07	0	59.317-MATLS_LAB-RIGID_PAVE_&_STRUC_CONC	59.ES08.317	63
32470	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	59.319-MATLS_LAB-TEST_&_TECH-ES08.319-1	59.ES08.319	3
							59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	10
							59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	2
32470	.3.235	MITIGATE ENVIRO IMPACTS & CLEAN UP H	1/1/07	304	11/1/07	0	59.308-SURVEYS-PI_NORTH-ES04.308-1	59.ES04.308	1
							59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	44
32470	.3.240	PREP DRAFT STRUC PS&E	1/1/07	181	7/1/07	0	59.317-MATLS_LAB-RIGID_PAVE_&_STRUC_CONC	59.ES08.317	20
							59.319-MATLS_LAB-TEST_&_TECH-ES08.319-1	59.ES08.319	277
							59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	10
							59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	151
							59.318-MATLS_LAB-STRUC_MATLS-ES08.318-1	59.ES01.290	76
32470	.3.250	PREP FNL STRUC PS&E PKG	9/1/07	61	11/1/07	0	59.318-MATLS_LAB-STRUC_MATLS-ES08.318-1	59.ES08.318	40
							59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	40
32470	.3.265	ADVERTISE/OPEN BIDS/AWARD & APPROVE	3/1/08	92	6/1/08	0	59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	32
							59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	8
32470	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	12
							59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	8
32470	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	4
							59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES01.290	25
							59.317-MATLS_LAB-RIGID_PAVE_&_STRUC_CONC	59.ES08.317	25
							59.319-MATLS_LAB-TEST_&_TECH-ES08.319-1	59.ES08.319	8
							59.318-MATLS_LAB-STRUC_MATLS-ES08.318-1	59.ES08.318	100
32470	.5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	59.290-PS&E/OE-COST_ESTIMATES-ES01.290-1	59.ES08.318	845
							59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	8
32470	.5.290	RESOLVE CONTRACT CLAIMS	6/1/08	1309	1/1/12	0	59.287-PS&E/OE-SPEC_PRODUCTION/REVIEWS	59.ES01.287	4
							59.318-MATLS_LAB-STRUC_MATLS-ES08.318-1	59.ES08.318	25
59-ESC-OE-RATED									
32470	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70			8
32470	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	59.291-ESC_Ps&E/OE-PROJECT_CONTROL_&_SUP	59.OE03.291	8
32470	.3.260	PREP CONTRACT DOCS	11/1/07	121	3/1/08	0	59.291-ESC_Ps&E/OE-PROJECT_CONTROL_&_SUP	59.OE03.291	8
32470	.3.265	ADVERTISE/OPEN BIDS/AWARD & APPROVE	3/1/08	92	6/1/08	0	59.285-ESC_Ps&E/OE-PS&E-OE01.285-1	59.OE01.285	295
							59.286-ESC_Ps&E/OE-CONT_PROG_&_SVS-OE02	59.OE02.286	295
							59.285-ESC_Ps&E/OE-PS&E-OE01.285-1	59.OE01.285	256
							59.291-ESC_Ps&E/OE-PROJECT_CONTROL_&_SUP	59.OE03.291	70
							59.302-DRAFTING_SVCS-PROJ_PLANS-OE06.302	59.OE06.302	33
32470	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.291-ESC_Ps&E/OE-PROJECT_CONTROL_&_SUP	59.OE03.291	51
								59.OE06.302	102
43-ENVIR-RATED									10
32470	.3.235	MITIGATE ENVIRO IMPACTS & CLEAN UP H	1/1/07	304	11/1/07	0			10
59-CONST-RATED									
32470	.0.100.10	PROJ MGMT - PA&ED COMPONENT	2/17/95	4336	1/1/07	70	43.174-ENV_PLING-ARCHEAOL-1	43.TP04.174	20
							59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	44

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
32470_	.3.215	PREP STRUC GENERAL PLANS	1/1/06	365	1/1/07	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	4
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	44
32470_	.3.240	PREP DRAFT STRUC PS&E	1/1/07	181	7/1/07	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	44
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	59
32470_	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	57
32470_	.5.285	PREP & ADMINISTER CONTRACT CHANGE OR	6/1/08	852	10/1/10	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	4800
32470_	.5.290	RESOLVE CONTRACT CLAIMS	6/1/08	1309	1/1/12	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	157
32470_	.5.295	ACPT CONTRACT/PREP FNL CONSTR EST &	10/1/10	92	1/1/11	0	59.540-FIELD_CONST-CONST_OFFICE_A-CN02.5	59.CN02.540	109
59-PROJ-DEV-RATED									
32470_	.1.150	DEV/PROJ INITIATION DOC [PID]	11/1/93	473	2/17/95	100	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	219
32470_	.0.100.10	PROJ MGMT - PA&E COMPONENT	2/17/95	4336	1/1/07	70	59.235-DESIGN-BRIDGE_DESIGN_BRANCH_5-PD0	59.PD04.235	203
32470_	.3.185.10	PERF DSGN SURVEYS & PHOTOG MAPPING	7/1/03	1086	7/1/06	5	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	26
32470_	.2.160.15.20	PREP DRAFT PROJ RPT	8/1/03	1065	7/1/06	0	59.228-DESIGN-BRDG_AESTHETICS/MODELS-PD0	59.PD07.228	35
32470_	.3.210	PREP PRELIM STRUC DSGN DATA	1/1/06	334	12/1/06	0	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	149
32470_	.3.215	PREP STRUC GENERAL PLANS	1/1/06	365	1/1/07	0	59.228-DESIGN-BRDG_AESTHETICS/MODELS-PD0	59.PD07.228	60
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	545
32470_	.3.240	PREP DRAFT STRUC PS&E	1/1/07	181	7/1/07	0	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	350
32470_	.3.250	PREP FNL STRUC PS&E PKG	9/1/07	61	11/1/07	0	59.228-DESIGN-BRDG_AESTHETICS/MODELS-PD0	59.PD07.228	35
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.289-DRAFTING_SVCS-DRAFTING-BRDG_DES_N	59.PD13.289	180
32470_	.5.270	PERF CONSTR ENGRG & GENERAL CONTRACT	6/1/08	852	10/1/10	0	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	28
32470_	.5.295	ACPT CONTRACT/PREP FNL CONSTR EST &	10/1/10	92	1/1/11	0	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	5651
59-ENGR-MGMT-RATED									
32470_	.0.100.10	PROJ MGMT - PA&E COMPONENT	2/17/95	4336	1/1/07	70	59.220-DESIGN-MGMT_BRDG_DES_NORTH-PD04.2	59.PD04.220	4216
32470_	.0.100.15	PROJ MGMT - PS&E COMPONENT	1/1/07	517	6/1/08	0	59.228-DESIGN-BRDG_AESTHETICS/MODELS-PD0	59.PD07.228	1420

RESOURCES ASSIGNED FOR 32470_

EA	TASK ID	TASK NAME	START	DAYS	END	%	RESOURCES	RES ID	HRS PLANNED
32470_	.0.100.20	PROJ MGMT - CONSTR COMPONENT	6/1/08	1309	1/1/12	0	59.141-PROJ_SCHED-PROJ_MGMT-SUPPORT-EM02	59.EM02.141	8
									104
							59.110-PROJ_MGRS-PROJ_COORDINATION_ENGR-	59.EM01.110	100
							59.141-PROJ_SCHED-PROJ_MGMT-SUPPORT-EM02	59.EM02.141	4
Total									59144

