

Federal Highway Administration  
Central Federal Lands Highway Division  
**Point Reyes National Seashore**

CA PORE 10(4), 200(1), & 201(1)  
Project Delivery Plan

Prepared For:



U.S. Department of Transportation  
Central Federal Lands Highway Division



an Atkins company

**Federal Highway Administration  
Central Federal Lands Highway Division  
Project Delivery Plan**

**POINT REYES NATIONAL SEASHORE**

**Marin County, California**

**FHWA Project CA PORE 10(4), 200(1), & 201(1)**

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**Federal Highway Administration  
Central Federal Lands Highway Division  
National Park Scoping Report**

**POINT REYES NATIONAL SEASHORE**

**Marin County**

**California**



**FHWA Project CA PORE 10(4), 200(1), & 201(1)  
PMIS Nos. 145371 & 7136**

**Limantour Road, Lighthouse Road, & Chimney Rock Road**

**Prepared By:**



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A project scoping meeting and site review was conducted from November 3 to November 5, 2010. The following scoping report is based upon the review.

## **I. ROUTE DESCRIPTION**

**State:** California

**County:** Marin County

**National Park:** Point Reyes National Seashore

**Route Number and Name:** Limantour Road, Point Reyes Route 10  
Lighthouse Road, Point Reyes Route 200  
Chimney Rock Road, Route 201

**Route Location (include map):** Limantour Road, Route 10, begins at the intersection with Bear Valley Road and proceeds westward towards Limantour Beach. Lighthouse Road, Route 200, starts at the intersection of Sir Francis Drake Boulevard and Chimney Rock Road and extends westward to the Historic Point Reyes Lighthouse. Chimney Rock Road begins at the intersection of Sir Francis Drake Boulevard and Lighthouse Road and heads eastward and ends at Chimney Rock Parking Lot.

Laguna Road begins at the intersection with Limantour Road and proceeds eastward. Laguna Road provides access to the Environmental Education Center and parking lot. These improvements are included with Limantour Road.

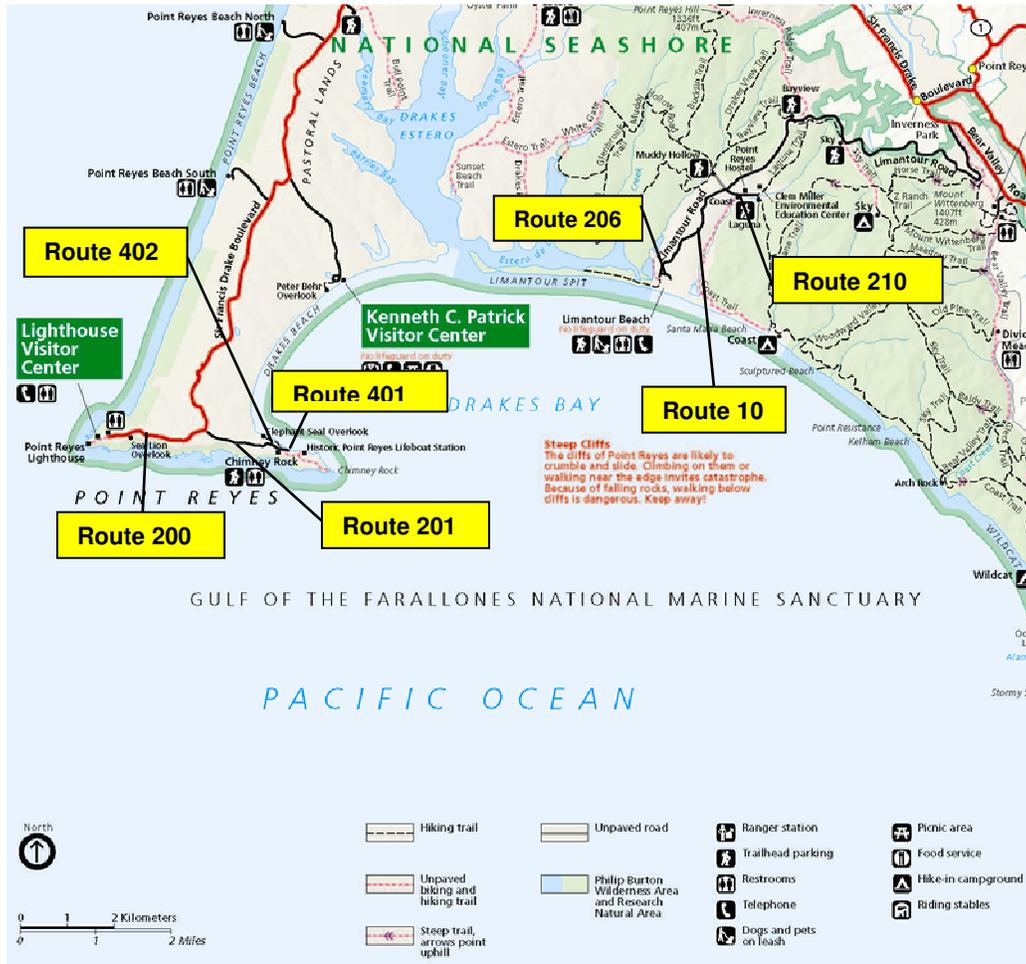
Limantour Beach Trail Access Road begins at Limantour Road and proceeds eastward. Limantour Beach Trail Access Road provides access to the south bathroom parking area and Limantour Beach Trail. These improvements are included with Limantour Road.

Lifeboat Station Road begins where Chimney Rock Road ends and continues eastward to the Historic Point Reyes Lifeboat Station. Lifeboat Station Road is not FLHP eligible therefore only pavement preservation improvements are provided and included with the Chimney Rock Road improvements.

Fish Docks (Mendoza) Road begins where Chimney Rock Road ends and continues north and westward to the Elephant Seal Overlook. Fish Docks (Mendoza) Road is not FLHP eligible therefore only pavement preservation improvements are provided and included with the Chimney Rock Road improvements.

Project work is located in Marin County, California. See Figure 1, for Project Location Map.

Figure 1 Project Location Map



- Route Length:** Point Reyes Route 10 (Limantour Road) → 7.52 miles  
 Point Reyes Route 206 (Limantour Beach Trail Access Road) → 0.37 miles\*\*  
 Point Reyes Route 210 (Laguna Road) → 0.55 miles\*\*  
 Point Reyes Route 200 (Lighthouse Road) → 1.48 miles\*  
 Point Reyes Route 201 (Chimney Rock Road) → 0.91 miles  
 Point Reyes Route 401 (Lifeboat Station Road) → 0.35 miles\*\*  
 Point Reyes Route 402 (Fish Docks (Mendoza) Road) → 0.13 miles\*\*

\*Improvements on Lighthouse Road, Point Reyes Route 200, are expected on only 1.30 miles of the total length of road. The limits for improvements are Station 700+00 (end of recent repair work) to 768+84.03 (proposed ADA parking area at Mission 66 garage).

\*\*Improvements to Limantour Beach Trail Access Road and Laguna Road will be incorporated with improvements to Limantour Road, CA PORE 10(4). Lifeboat Station Road and Fish Docks (Mendoza) Road are for park administrative use and not open to the public. Although these roads are not FLHP eligible, both roads are eligible for funding under the pavement preservation program.

**Maintaining Agency:** The National Park Service (NPS) maintains Limantour Road, Lighthouse Road, and Chimney Rock Road.

**Figure 2 Limantour Road**



**Figure 3 Lighthouse Road**



**Figure 4 Chimney Rock Road**



**Route Segments:**

**Segment 1: Limantour Road (Route 10)**

Functional Classification	Terrain	Type	Design Speed	Posted Speed	ADT*	Surface Type	Paved/ Bench Width	Structures on Segment
Class 1 Principal Park Road	Rolling	3R	35 and 25	35 and 25	377	Asphalt	23 to 36 foot paved/27 to 42 foot bench width	N/A

**Segment 2: Lighthouse Road (Route 200)**

Functional Classification	Terrain	Type	Design Speed	Posted Speed	ADT*	Surface Type	Paved/ Bench Width	Structures on Segment
Class 3 Special Purpose Park Road	Flat	3R	30	N/A	390	Asphalt	18 to 20 foot paved/18 to 25 foot bench width	N/A
Class 3 Special Purpose Park Road	Flat	3R	15	N/A	N/A	Asphalt	10 to 12 foot paved/14 foot bench width	N/A

*No posted speed limits are on Lighthouse Road. Existing survey is not available so the existing superelevations are unknown and not factored in the design speed. The design speed at the beginning of Lighthouse Road is anticipated to be 30 mph and change to 15 mph at approximately Station 755+00 (at the west side of the roundabout). Design speed assumptions are based on the scoping site review, preliminary horizontal geometry based on aerials, and the NPS: Park Road Standards.*

**Segment 3: Chimney Rock Road (Route 201)**

Functional Classification	Terrain	Type	Design Speed	Posted Speed	ADT*	Surface Type	Paved/ Bench Width	Structures on Segment
Class 3 Special Purpose Park Road	Flat	3R	15	15	390	Asphalt	10 to 14 foot paved/ 14 to 16 foot bench width	N/A

*\*Traffic counts from National Park Service Public Use Statistics Office. ADT is for current year (2010) based on counts from last 17 years. See Appendix 5f for ADT calculations. For future ADT data a traffic analysis will be performed at a later time. There is no data of pedestrian and/or bicycle use on any of the roads. Studies for pedestrian and/or bicycle use on the roads is not anticipated at this time.*

**Project Funding:**

**Fiscal Year:** The project is not currently identified for a program year in the Federal Lands Highway Program (FLHP). The project plans, specifications and estimate (PS&E) will be prepared as a backup project for FY 2012 funds. The project may be combined with the Golden Gate National Recreation Area Pavement Preservation work and included in the FY 2012 program.

**Funding Type:** Federal Lands Highway Program (FLHP)

**PMIS 145371 Amount:** CA PORE 10(4), \$ [REDACTED]

**PMIS 7136 Amount:** CA PORE 200(1) & 201(1), \$ [REDACTED]

A conceptual level cost estimate was prepared based on the scoping meeting and site visit conducted from November 3 to November 5, 2010. Escalation rates were calculated as of 4.5% (for 2011) and 5% (for 2012) and used in the cost estimate. A 25% contingency for miscellaneous items was also included in the cost estimate. The construction cost estimates for the project are anticipated to be:

CA PORE 10(4) (Limantour Road), \$ [REDACTED] (2012), \$ [REDACTED] k per mile cost  
CA PORE 200(1) & 201(1) (Lighthouse Road & Chimney Rock Road), \$ [REDACTED]  
(2012), \$ [REDACTED] k per mile cost

See Appendix 4 for conceptual cost estimate calculations.

**Seasonal Restrictions:**

Point Reyes National Seashore visitation peaks between Memorial Day and Labor Day but the visitation remains fairly constant year-round. Limantour Road has increased visitor use from August through October. Lighthouse Road and Chimney Rock Road have increased use from December through April for whale watching. There is a shuttle bus system for Lighthouse Road and Chimney Rock Road on weekends, weather permitting, from January to mid-April. On average, the shuttle buses run 20 days per year. During these times the roads are closed to private vehicles and all visitors are required to use the shuttle bus system. Throughout the day the shuttle buses make approximately 20 to 25 trips to Lighthouse Road and Chimney Rock Road. Shuttle bus dimensions are consistent with AASHTO's Intercity Bus (BUS-45) design vehicle.

**Construction Season:**

The construction season is anticipated from May through October with work limitations anticipated due to environmental resources including restrictions for sensitive biological species. Consultation with the U.S. Fish and Wildlife will be required to determine the exact restrictions and locations.

**Field Work Season:** Year-round

**Other Restrictions:** None known to exist.

## II. CONTACTS

The following people have been designated as primary contacts for Project Development activities that may occur subsequent to the scoping effort:

<b>NPS-Point Reyes National Seashore:</b> Name: Jeff Jewhurst Title: Roads & Trails Supervisor Address: 1 Bear Valley Road Point Reyes Station, CA 94956-9799	Phone: (415) 464-5158 Email: Jeffrey_Jewhurst@nps.gov
<b>NPS-PWRO:</b> Name: Justin DeSantis Title: Transportation Program Manager Address: 1111 Jackson Street, Suite 700 Oakland, CA 94607	Phone: (510) 817-1385 Email: Justin_DeSantis@nps.gov
<b>NPS-DSC:</b> Allen@dot.gov Name: Dennis Brookie Title: Project Manager Address: 12795 W. Alameda Parkway Denver, CO 80225-0287	Phone: (303) 969-2493 Email: Dennis_Brookie@nps.gov
<b>FHWA-CFLHD:</b> Name: Nate Allen Title: Project Manager Address: 12300 W. Dakota Avenue, Suite 380 Lakewood, CO 80228	Phone: (720) 963-3668 Email: Nathan.Allen@dot.gov
<b>Consultant:</b> Name: Kristin Lang Title: Project Manager Address: 4601 DTC Boulevard, Suite 700 Denver, CO 80237	Phone: (303)-221-7275 Email: kalang@pbsj.com

**AVAILABLE DATA**

<input checked="" type="checkbox"/> PMIS Data	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	CFLHD
<input type="checkbox"/> General Management Plan	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input checked="" type="checkbox"/> Road Inventory Program (RIP) Data	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	CFLHD
<input checked="" type="checkbox"/> As Builts / As Constructed	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	CFLHD
<input checked="" type="checkbox"/> Previous Project Plans	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	CFLHD/ NPS
<input type="checkbox"/> Construction Records	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Survey Data			
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<input type="checkbox"/> Digital Raster Graphics	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input checked="" type="checkbox"/> Quad Maps	<input type="checkbox"/> On File	<input checked="" type="checkbox"/> Available From:	
<input type="checkbox"/> GPS Trace / Data	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input checked="" type="checkbox"/> Utility Agreements	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	NPS
<input type="checkbox"/> Geographic Information Systems Data	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Right-of-Way Information	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Bridge Inspection Report	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Engineering Studies / Reports	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input checked="" type="checkbox"/> Geotechnical Reports	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	CFLHD
<input type="checkbox"/> Pavements/Materials Reports	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Hydraulics Report	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Bridge Scour Evaluation Report	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Transportation/Traffic Reports	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Accident Reports / Data	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input type="checkbox"/> Environmental Reports	<input type="checkbox"/> On File	<input type="checkbox"/> Available From:	
<input checked="" type="checkbox"/> National Park Map	<input checked="" type="checkbox"/> On File	<input type="checkbox"/> Available From:	

**III. FUNCTIONAL DISCIPLINE CONSIDERATIONS**

**A. SAFETY**

**1. Provide accident history, if available (Sources: NPS, County, State, Local Police or Denver Service Center may have data). If not available, obtain anecdotal accident information or look for evidence of crashes.**

- i. Date requested: November 3, 2010
- ii. Source: Point Reyes National Seashore
- iii. Describe number and types of crashes, severity and areas of concentration. Attach accident reports, if necessary, to help describe crash history:

Accident data has been requested. During the scoping kick-off meeting and field review, locations of safety concerns were discussed and identified. Based on Point Reyes NS staff experience, the following are safety concerns:

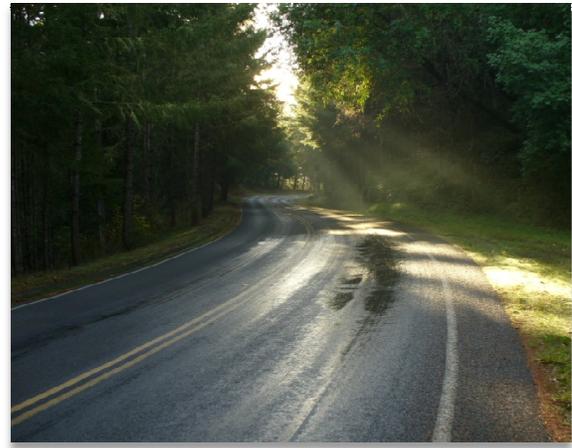
*Limantour Road*

- Various locations along the first one-third of the road are consistently wet from fog drip. When temperatures decrease the moisture on the road freezes creating ice on the road and unsafe driving conditions. See Figures 5 and 6.
- Approaches to the intersection of Limantour Road and Laguna Road have numerous sharp curves, steep profile grades, limited sight distance, and minimal signing. The intersection has had a truck with trailer rollover accident within the year according to Point Reyes NS staff. See Figures 7 through 11.
- Some areas of the road show damage with significant “shoving” of the asphalt which is a hazardous condition for bicycles. PRWO has agreed to provide funding to the park for these repairs in the Spring/Summer 2011.

**Figure 5**



**Figure 6**



**Figure 7**



**Figure 8**



**Figure 9**



**Figure 10**



**Figure 11**



*Lighthouse Road*

- Along Lighthouse Road there is an isolated location where sand drifts consistently cover or partially cover the road due to high winds. The consistent sand creates an unsafe driving condition. See Figures 12 and 13.

**Figure 12**



**Figure 13**



*Chimney Rock Road*

- Chimney Rock Road is a narrow two direction one way/one lane road with heavy tourist bus traffic during peak whale watching season from December to April. Existing pullouts for buses to pass are undersized and unpaved. The number of pullouts is also inadequate. Sight distance is limited throughout Chimney Rock Road due to the steep slopes, horizontal curvature, topography, roadside objects (i.e. existing rock), and frequent fog conditions. The heavy bus traffic on the one lane road with limited and undersized passing locations makes the entire length of Chimney Rock Road a safety concern. See Figures 14 and 15.

**Figure 14**



**Figure 15**



**2. Describe any potential problems with sight distance, clear zone, roadside hazards (including headwalls, culverts, trees, utilities, etc.), pedestrian or animal crossings or unusual traffic conditions:**

The approaches to the intersection of Limantour Road and Laguna Road have numerous sharp curves and steep profile grades with minimal sight distance. The intersection with Laguna and Muddy Hollow Roads also has limited sight distance from several directions. Steep slopes, horizontal curvature, topography, roadside objects (i.e. existing rock), and frequent fog conditions limit sight distance along Chimney Rock Road.

Clear zone appears to visually meet the standards for Lighthouse Road and Chimney Rock Road.

Clear zone is not within the specified standards for portions of Limantour Road. Some locations have guardrail to account for the insufficient clear zone. Steep slopes, culvert headwalls and structures, and vegetation are located near the edge of pavement. See Figures 16 through 20.

**Figure 16**



**Figure 17**



**Figure 18**



**Figure 19**



**Figure 20**



- 3. If the scope of the project is 3R and the profile of the roadway is raised, will the roadway and foreslopes still fit on the existing bench? Will the foreslopes still be an acceptable slope? Will the new pavement edge drop-offs be less than 2 inches in height?**

Based on the scoping field review, Limantour Road and Lighthouse Road appear to be in good condition. The potential proposed improvements for Limantour Road (including Limantour Beach Trail Access Road and Laguna Road) and Lighthouse Road include a pavement preservation treatment (chip seal) along the

entire length of both roads. Pavement patching and full depth pavement replacement is anticipated in damaged pavement areas but no profile grade raise is anticipated. Locations with significant asphalt “shoving” were identified during the scoping field review. PWRO has agreed to provide funding to the park for patching repairs in these locations in the Spring/Summer 2011.

Based on information from the park staff and the scoping field review, the pavement on Chimney Rock Road consists of a double chip seal on subbase. The existing asphalt will be removed and used as the new base prior to the overlay. The depth of the new structural section will be determined in the next design phase. The potential to widen the roadway was discussed but will be further reviewed based on design standards for a one way/ two direction road. The road has some existing bench but not a sufficient existing bench width to raise the roadway grades significantly. The final structural section will be recommended in the next project design phase.

**4. If the scope of the project is 3R and the profile of the roadway is raised, will roadside and median barriers be the correct height?**

Roadside barriers exist along Limantour Road and Lighthouse Road. The potential pavement improvements on Limantour Road and Lighthouse Road include a pavement preservation treatment (chip seal) along the entire length of road. Pavement patching and full depth pavement replacement is anticipated in damaged pavement areas but no profile grade raise is anticipated. The profile will not be raised with the chip seal so barriers will maintain existing heights. The guardrail on Lighthouse Road will be replaced to current safety standards.

**5. Does the existing guardrail meet current standards? Terminal sections? Bridge rail? Transitions? Other roadside or median barriers?**

*Limantour Road*

Existing guardrail replacement it is not anticipated at that this time. Further field work is required to determine if existing guardrail heights meet current standards. Existing guardrail terminal sections do not meet current standards; therefore, guardrail terminal sections will be replaced with crashworthy terminal sections. See Figures 21 through 25.

**Figure 21**



**Figure 22**



**Figure 23**



**Figure 24**



**Figure 25**



*Lighthouse Road*

Existing timber guardrail (between 742+35 and 745+63) does not meet current standards. See Figure 26. Replacement with Point Reyes NS approved crashworthy steel backed timber guardrail is anticipated.

**Figure 26**



**6. Any areas where guardrail should be added or removed?**

No guardrail addition or removal was identified during the scoping and other safety measures will be considered where clear zone does not meet the standards.

**7. Are sign supports crashworthy if located within the clear zone?**

All signs and posts will be replaced with crashworthy structures where necessary. To improve areas with safety issues, additional signage may be required.

**8. Are permanent sign panels in good condition for both day and night, clearly understood and in compliance with the *Manual on Uniform Traffic Control Devices (MUTCD)*? Are passing zones and other pavement markings appropriate?**

All sign panels will be replaced at the request of Point Reyes NS since they are not in good condition. Signs will be replaced for compliance with MUTCD and meet the Park requirements.

Limantour Road and Lighthouse Road are currently striped as no-passing zones with centerline reflectors for the entire length. Chimney Rock Road is a two directional/one-way road with no center stripe. The centerline and reflectors for Limantour Road and Lighthouse Road will be replaced in kind. The existing fog lines on Limantour Road will also be replaced in kind once the chip seal is completed. The addition of continuous fog lines are proposed on Lighthouse Road once the chip seal is completed. The fog lines on Chimney Rock Road will be replaced in kind once the overlay is completed. Additional striping for passing areas at proposed pullouts will be considered along Chimney Rock Road.

**9. Describe any special permanent traffic control management. Any special signs, markings, supports, rumble strips, or traffic signals required? Any new traffic patterns to be established?**

Currently, there is 1 cattle guard on Lighthouse Road and 3 cattle guards on Chimney Rock Road. Existing cattle guards will be replaced during construction.

One gate is located on Lighthouse Road which will be replaced with a more accessible gate for the ADA traffic.

No new traffic patterns are to be established with the roadway improvements.

**10. Describe temporary traffic control management. Include any restrictions for widths, seasons, structures, and so on. Any time of year when the road can be closed? Will the road be open to all vehicles or will use be restricted (shuttles only, school bus and mail vehicles only, etc.)?**

Point Reyes National Seashore visitation peaks between Memorial Day and Labor Day but the visitation remains fairly constant year-round. Limantour Road has increased visitor use from August through October. Lighthouse Road and Chimney Rock Road have increased use from December through April. There is a shuttle bus system for Lighthouse Road and Chimney Rock Road on weekends, weather permitting, from January to mid-April. On average, the shuttle buses run 20 days per year. During these times the roads are closed to private vehicles and all visitors are required to use the shuttle bus system. Throughout the day the shuttle buses make approximately 20 to 25 trips to Lighthouse Road and Chimney Rock Road. Shuttle bus dimensions are consistent with AASHTO's Intercity Bus (BUS-45) design vehicle.

Repair work completed on Limantour Road in October 2001 implemented road closures Monday through Friday from 8am-12 pm and 1pm-5pm. The park may allow similar closures for culvert replacements and landslide area work for Limantour Road.

Further analysis of temporary traffic control will be required during the design and coordinated with Point Reyes NS.

**11. Any temporary diversions to be constructed or detours that need to be planned? Consider existing bridge/structure locations and possible construction phasing requirements.**

None are anticipated at this time.

**12. Are there any traffic restrictions for rush hours, weekends, and holidays?**

The traffic restriction will need to be determined from NPS staff but it is anticipated that closures and delays will not be allowed during weekends and holidays.

## B. UTILITIES

- 1. Are there any known utilities that may need to be relocated or avoided? Describe the location and type of the utilities. Identify the agency(s) responsible for utility issue coordination, relocation, and for any costs associated with utility issues. Develop and include a contact list:**

Based on information from the Points Reyes NS staff, buried electric lines are located beginning at Drakes Summit, approximately Station 205+50, which cross the road through a utility trench and then run parallel to Limantour Road down to Limantour Beach. See Figure 27. The electric lines were placed underground in 1996. After the 1995 Mt. Vision Fire, the area was designated as wilderness and all utilities were placed underground by Point Reyes NS and then sold to PG&E. There is an Areawide Utility Contract between PG&E and Point Reyes NS (Contract No. GS-00P-07-BSD-0505). See Appendix 5g.

Telephone lines are located underground beginning at Drakes Summit, approximately Station 205+50, on the north side of Limantour Road and run parallel to Limantour Road down to Limantour Beach. See Figure 28.

At the intersection of Lighthouse Road and Chimney Rock Road, a sewage force main is located with no laterals. The sewage force main follows the existing perpendicular asphalt patch section across Lighthouse Road and is owned and maintained by Point Reyes NS.

**Figure 27**



**Figure 28**



- 2. List any special considerations regarding utilities (hazardous or environmentally sensitive situations, time restrictions on interruption of service, security sensitive utilities, the effect of changing grade above or below a utility, the time or process needed to redesign and relocate utilities [if known], etc.):**

Further investigation and coordination to occur during the design phase.

**3. Are there any existing utility agreements or easements between the roadway owner and the utility owner? What are the terms of the agreements and/or easements?**

There is an Areawide Public Utility Contract for Electric, Electric Transmission, Natural Gas, Gas Transportation, and Energy Management Services (Contract No. GS-00P-07-BSD-0505) between Point Reyes National Seashore and Pacific Gas and Electric Company. See Appendix 5g for terms of agreements.

**4. Are there any irrigation ditches within the project corridor? Are there time constraints or mandatory operation periods? List owner/contact person if available:**

There are no irrigation ditches within the project corridor.

**C. PERMITS**

PERMIT	REQUIRED?	TO BE OBTAINED BY:
<p><b><u>Corps of Engineers Section 404 Permit:</u></b></p> <p>Will the project require discharging fill into wetland(s)?</p> <p>Will the project require discharging fill into a perennial stream?</p> <p>Or</p> <p>Discharging fill into an intermittent or ephemeral stream?</p> <p>Or</p> <p>Discharging fill in a pond or lake?</p> <p>Will any fill be placed below the ordinary high water mark?</p> <p>Will there be any channelization or channel changes required?</p> <p>Is a Nationwide or Individual Permit Required?</p> <p>Take photos of any potential impact areas of wetlands and streams. Identify photo locations on a site map.</p> <p>*Photos are extremely helpful in assessing permit needs, in completing applications and providing the Corps useful information for their decision document. Photos are required as part of the documentation in some Corps Districts.</p>	<p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>Nationwide <input type="checkbox"/></p> <p>Individual <input type="checkbox"/></p>	

PERMIT	REQUIRED?	TO BE OBTAINED BY:
<p><b><u>NPDES Permit:</u></b></p> <p>Will 1 to 5 or 5 or more acres of land be disturbed?</p> <p>Is the project on Tribal lands?</p> <p>Is the project subject to any County or Local sediment/erosion management plan?</p> <p>Is the project subject to a State or Basin sediment/erosion management plan?</p> <p>Is the Park willing to assume responsibility for the NPDES Permit upon completion of construction?</p>	<p>1 to 5 <input checked="" type="checkbox"/></p> <p>5 or more <input type="checkbox"/></p> <p>No</p> <p>No</p> <p>Yes</p> <p>Yes</p>	<p>FHWA</p>
<p><b><u>Other Permits/Authorizations:</u></b></p> <p>Is an authorization required for any of the following?</p> <p>    Staging Area?</p> <p>    Disposal/Waste Area?</p> <p>    Material Source?</p> <p>    Asphalt or Concrete batch plant?</p> <p>    Utility line or buried pipe?</p> <p>    Other?</p> <p>State Dewatering permit?</p> <p>Local, County or State Air Quality Permit?</p> <p>County Road Access or Encroachment permit?</p> <p>State Highway Access or Encroachment permit?</p> <p>Stream alteration permit?</p> <p>Are you aware of any other permits that may be required?</p>	<p>Staging, disposal areas, material sources, and batch plants will be approved prior to construction. Utilities will be investigated as design proceeds.</p> <p>No</p> <p>No</p> <p>Yes</p> <p>No</p> <p>No</p> <p>No</p>	<p>CFLHD for construction signing on county roads</p>

**D. ENVIRONMENT**

<b>TASK</b>	<b>REQUIRED?</b>	<b>TO BE COMPLETED BY:</b>
<b><u>NEPA Document:</u></b>		
Who will complete the Environmental Screening Form (ESF)?	Yes	Point Reyes National Seashore & Denver Service Center
What is the anticipated type of document (Cat. Ex., environmental assessment [EA], or environmental impact statement [EIS])?	Cat. Ex.	Point Reyes National Seashore & Denver Service Center
Who made the determination?	Denver Service Center to determine	
Who will be doing the resource surveys (threatened and endangered species, rare plants, cultural resources, etc.)?	Yes	Point Reyes National Seashore & Denver Service Center
<b><u>FWS – Section 7 Concurrence:</u></b>		
Is a Biological Assessment/Evaluation required?	Yes	Point Reyes NS
Are there any state-listed species?	Yes	Point Reyes NS
Is the project located within 100 miles of the coast (National Oceanic and Atmospheric Administration [NOAA], Fisheries jurisdiction)?	Yes	Point Reyes NS
<b><u>SHPO – Section 106 Concurrence:</u></b>		
Are any items within the project area on or eligible for listing on the National Historic Register?	Yes (Lighthouse and Chimney Rock Roads)	Point Reyes NS
Is a Cultural Resource Survey required?	Yes	Point Reyes NS
<b><u>Tribal/TCP Issues:</u></b>		
Are there any tribes who will have an interest in the project?	No	Point Reyes NS
Are there any Traditional Cultural Properties (TCPs) near the road?	Unknown	Point Reyes NS

TASK	REQUIRED?	TO BE COMPLETED BY:
<b><u>Wetlands:</u></b>		
Is a wetland delineation survey required?	Yes	Point Reyes NS
<b><u>Other Concerns:</u></b>		
Is there any known or possible hazardous waste on the project (lead paint, asbestos, underground storage tanks, unidentified 55-gallon drums, abandoned buildings, etc.)?	No	
Is the road a designated Scenic Byway or Backway?	No	
Are there any rivers in the project area that are designated a State or National Wild and Scenic River?	No	
Are there any water quality issues that may require a monitoring plan?	Unknown	Point Reyes NS
Are any storm water management devices required? If so, what are the design criteria?	No	
Will there be a lot of controversy about the project? Are there active environmental groups in the area?	Not Anticipated	
Is there any wildlife or aquatic organism crossing/passage issues?	Unknown	Point Reyes NS

**E. SURVEY**

**1. Is any existing survey, mapping or Geographic Information System (GIS) information available?**

Some existing survey and mapping exists completed by the Federal Highway Administration (FHWA) during project ERFO PORE 10(3). Additional information will be obtained during the Spring of 2011.

**2. What type of survey is recommended for the project?**

- i. Describe the terrain: Rolling and Flat
- ii. Take pictures: Completed
- iii. Is it open to the sky for aerial topography (if sunlight can penetrate the tree canopy, LiDAR may be effective)? Not Recommended

- iv. Will there be any possible realignments? No
  - v. How wide a corridor will need to be mapped? On Chimney Rock Road 20' from existing edge of pavement on the downhill side (north side) and 30' from existing edge of pavement on the uphill side (south side). More detailed survey will be required for Chimney Rock Parking Lot, Lighthouse Road Parking Lots, roundabout at the end of Lighthouse Road, and specific locations (including but not limited to existing culvert replacements, existing paved ditches, and existing guardrails) along Limantour Road.
  - vi. Are recommendations consistent with the 3R Survey Matrix? Yes.
- 3. Are there special features that require precise location (walls, fences, complicated utilities, arch. sites, wetlands, bridges, other structures, etc.)?**
- Chimney Rock Parking Lot
  - Lighthouse Road Parking Lot Adjacent to Roundabout
  - Lighthouse Road Parking Lot near Mission 66 green garage
  - Roundabout at the end of Lighthouse Road
  - Existing culvert locations, existing paved ditch locations, and existing guardrail lengths and terminals along Limantour Road

**4. Are there any existing control monumentation records?**

No.

**5. Get GPS positions at the beginning, end and any significant locations throughout the project.**

GPS positions will be obtained along the centerline, the beginning, and the end of Limantour Road and Lighthouse Road.

**F. RIGHT OF WAY (ROW)**

**1. Is the project located entirely within the National Park? Are there any private parcels or in-holdings located along the project corridor?**

The project limits are located entirely within Point Reyes NS. There are private in-holdings along the route but are not anticipated to be affected.

**2. Are there any special ROW fencing requirements?**

No

**G. GEOTECHNICAL**

**1. Describe the soils in the project vicinity:**

Geotechnical field investigations will occur during the preliminary design in the Spring 2011. Soil types within the project will be identified at that time. See Appendix 5c for Preliminary Geotechnical and Pavement Investigation Plan.

**2. Any evidence of swelling/shrinking soils or areas of distress? Take pictures of distressed areas:**

During the scoping review, no visual evidence of areas of distress were noted due to swelling/shrinking soils.

**3. Are there any other obvious geological features on the project (sinkholes, slides, bogs, standing water, slope stability problems, etc.)?**

On Limantour Road near Station 213+00, approximately 700 feet west of Balboa Gate Road, a portion of the roadway embankment has failed. See Figure 29. Point Reyes NS park staff did not recall the year it had failed, possibly 2006. The embankment did show signs of recent movement and surface erosion. There were no visible signs of movement in the existing roadway surface during the scoping field review. Based on the current stability of the road, it was determined that a subsurface investigation (drilling) of this area would not be required and that the future project would not require any additional fill to the embankment.

**Figure 29**



There is an existing landslide on Limantour Road near Station 300+00. Point Reyes NS maintenance staff have observed cracks opening in the roadway. Cracks have been filled on a recurring basis. The cracks are associated with a slope failure (shallow landslide) in the embankment. The current active slide is adjacent to a previous slope failure that was repaired using a rock buttress. See Figures 30 through 33. The active portion of the current slope failure extends from centerline of the roadway to approximately 150 feet down the steep embankment.

**Figure 30**



**Figure 31**



**Figure 32**



**Figure 33**



**4. Any rock fall issues or considerations?**

There are no rock fall issues or considerations.

**5. Give locations of borrow pits, stone quarries or any material sources. Describe access and any restrictions:**

Materials source for project improvements will be determined during the design.

**6. Are any permits, easements or agreements necessary for drilling?**

Coordination with Point Reyes NS is required.

## H. PAVEMENTS

### 1. Describe any areas of pavement distress (take pictures):

#### *Limantour Road*

Based on the scoping field review, the overall pavement appears to be in good condition. There are several locations with pavement distress including shoving pavement, alligator cracking, and minor pavement cracking. High asphalt content is a potential source for the pavement shoving. The design phase will include a pavement analysis in the Spring 2011. The pavement analysis will evaluate existing conditions to determine the causes of pavement distress. See Figures 34 through 38.

**Figure 34**



**Figure 35**



**Figure 36**



**Figure 37**



**Figure 38**



*Lighthouse Road*

During the scoping field review the pavement was observed to be in overall good condition. There are isolated locations where there is damaged pavement. Most of the damaged sections appear to be caused by poor drainage leading to a saturated subgrade. See Figures 39 and 40.

**Figure 39**



**Figure 40**



*Chimney Rock Road*

A minor amount of pavement distress was observed during the scoping field review. There seemed to be a lack of subgrade in certain locations as well as damage to the edge of pavement throughout much of the road. The edge damage is caused by a lack of shoulder support. See Figures 41 through 44.

**Figure 41**



**Figure 42**



**Figure 43**



**Figure 44**



**2. Does the distress appear to be related to subgrade failures, oxidation, poor drainage or other problems? Are there areas that have required frequent maintenance?**

There are locations on Lighthouse Road with damaged pavement caused by water seeping into the subgrade. Along Chimney Rock Road there are areas with no subgrade and edge damage due to a lack of shoulder support.

The cracking requiring frequent filling by Point Reyes NS maintenance staff near Station 300+00 on Limantour Road is a result of the existing landslide in the area. Some of the damaged pavement and subgrade areas along Limantour Road are attributed to poor drainage and water seeping into the subgrade. See Figures 30 through 33.

**3. Any areas of special concern for pavement design (bus parking, bus stops, heavy pedestrian traffic, horse crossings, etc.)?**

Lighthouse Road and Chimney Rock Road are frequently used by tourist buses during whale watching season. During the pavement analysis, bus traffic will be factored in the pavement design alternatives recommendation. The parking areas also have bus stops which will be considered in the pavement design.

**4. For 3R projects, what is the anticipated structural section (i.e., pulverized pavement, new asphalt, foamed asphalt base course, etc.)?**

For Limantour Road and Lighthouse Road a pavement preservation (i.e. chip seal) is anticipated. Isolated areas of pavement distress will be removed and patched. Chimney Rock Road will more likely be 3R (resurfacing, restoration, and rehabilitation). The existing pavement width on Chimney Rock Road varies from 10' to 14'. Due to the heavy use by tourist buses, Chimney Rock Road will be reviewed for widening to provide a consistent 14' paved width. The pavement analysis will determine the final anticipated structural sections for each of the roads. Laguna Road and Limantour Beach Trail Access Road will include a pavement preservation treatment. Fish Docks (Mendoza) Road and Lifeboat Station Road will include a pavement preservation treatment.

**5. Is there any information on existing asphalt and base depths?**

According to the park staff, most of Limantour Road was surfaced with 3 inches of asphalt and later chip sealed. Near the intersection with Bear Valley Road, a fee station was planned which included the construction of a wider roadway template. The template was later reduced when the fee station was dropped. In this portion of the road, it appears that two asphalt sections are present. Both appear to be 2 – 3 inches. The type and thickness of the base material is not known at this time.

Lighthouse Road appears to have been surfaced with a 2 inch asphalt section placed on the native subgrade material. It also appears to have been chip sealed.

According to the park staff, Chimney Rock road has been surfaced with two separate applications of chip seal placed on the native subgrade material. Borings during the geotechnical investigation will reveal more accurate data regarding existing pavement depths.

## I. HYDROLOGY/HYDRAULICS

### 1. Photograph and describe location and type of known drainage problems.

#### *Limantour Road*

There are several locations along Limantour Road with drainage problems. At approximately Stations 12+00 and 55+67 there has been flooding and sediment deposition during major storms on the upstream side of the culverts. There is a damaged driveway culvert at Station 36+00. The bottoms have rotted out of culverts at approximately Stations 62+47, 140+06, and 159+95. Throughout Limantour Road there are plugged culverts requiring cleaning. Additionally, there are locations where there is no defined drainage path and runoff runs adjacent to the road. In some locations asphalt curb causes runoff to run parallel with the road instead of flowing away from the road like it is naturally sloped to do. Ditch capacity and erosion protection will be considered throughout Limantour Road. See Figures 45 through 54.

**Figure 45**



**Figure 46**



**Figure 47**



**Figure 48**



**Figure 49**



**Figure 50**



**Figure 51**



**Figure 52**



**Figure 53**



**Figure 54**



Possible drainage improvements along the road include, but are not limited to:

- Replacing or lining failing culverts
- Cleaning/refurbishing culverts
- Regrading and/or cleaning ditches
- Providing paved ditches
- Providing graded ditches
- Address ponding areas
- Modifying existing inlet conditions
- Providing outlet protection
- Providing permanent erosion control measures
- Inlet rundown aprons
- Sediment deposition at culvert crossing

Improvements will be made on a case by case basis where Point Reyes NS staff has identified drainage deficiencies.

#### *Lighthouse Road*

No major drainage issues were identified by park staff along Lighthouse Road. Minor drainage improvements, including ditch reconditioning and ditch grading, will be made as necessary on a case by case basis where drainage deficiencies have been identified.

#### *Chimney Rock Road*

Along the south side of Chimney Rock Road there was a lack of drainage structures and ditches for runoff from the fill side. See Figures 55 and 56. Drainage improvements to be considered for the road include adding culverts, providing paved ditches, providing curbs, and repairing eroded ditches.

**Figure 55**



**Figure 56**



- 2. Describe location, size, shape, material, and condition of all drainage structures to be retained. Describe evidence of scour/erosion at inlets/outlets, deposition of sediment or debris at inlets/outlets, abrasion or corrosion of pipe, presence of riprap aprons at inlets/outlets, any associated roadway embankment stability concerns. Photograph inlets, outlets, and other cited problems.**

All drainage structures located within the project corridor will be retained. Improvements to existing culverts include cleaning/refurbishing, repairing, extending, lining, and replacing. Appendix 5b summarizes the type and condition of all drainage structures identified during the scoping field visit.

- 3. Photograph and describe any channel migration concerns or anticipated stabilization work (photograph channel looking up and downstream).**

There will be no channel improvements proposed.

- 4. Does the project potentially impact a floodplain regulated by the Federal Emergency Management Agency (FEMA)? Is there potential for the floodplain to be encroached upon by roadway fill? If yes, get the name of the local floodplain administrator.**

No, not applicable.

- 5. Is there potential for embankment and/or retaining walls being located along streams/channels or floodplains? If yes, describe.**

No, not applicable.

- 6. Are there any overriding (superseding CFL Design Manual) local or state requirements for roadway overtopping, backwater, freeboard, design floods, or hydrologic methods at bridged waterways?**

No.

- 7. Is there a minimum design flood (in years) or other criteria proposed for culvert and/or roadway drainage design?**

The project is categorized as 3R and detailed extensive hydrology and hydraulic calculations will not be completed. Site reviews and discussions with Point Reyes NS staff will determine existing deficiencies and identify locations for additional drainage improvements. Existing drainage structures will not be redesigned or replaced to meet standard design criteria except at identified locations. Proposed drainage structures will be designed to meet standard criteria.

- 8. Any fish passage issues? If so, describe issues and locations.**

No

- 9. Is the project located within 100 miles of the West Coast NOAA fisheries jurisdiction?**

Yes

**10. Are any stream and/or floodplain restoration efforts anticipated? If so, describe.**

No.

**11. Are any low-water crossings anticipated? If so, describe.**

No.

**12. For existing bridges over waterways, has the bridge been evaluated for scour susceptibility? If yes, obtain Bridge Scour Evaluation Report.**

There are no existing bridges within the project limits. Not applicable.

**J. HIGHWAY DESIGN**

**1. Describe any horizontal and vertical alignment problems:**

Although there are numerous curves along the horizontal alignment of Limantour Road, no major problems were identified during the scoping field review. The vertical alignment has steep grades on Limantour Road on both sides of the intersection at Laguna Road with minimal signs.

No major problems were identified with the horizontal and vertical alignments for Lighthouse Road and Chimney Rock Road.

Design changes to horizontal and vertical alignments are not anticipated for any of the roads.

**2. Intersection problems:**

The intersection of Limantour Road and Laguna Road has limited sight distance in all directions.

**3. List the Public Access approach roads within the project limits (*it is not necessary to list all driveways, just public access roads*):**

Several private property in-holdings are located within Point Reyes NS with access from Limantour Road. Limantour Road also provides access to Limantour Beach, the Clem Miller Environmental Education Center (via Laguna Road), Sky Trailhead and campground, Laguna Trailhead (via Laguna Road), Muddy Hollow Trailhead (via Muddy Hollow Road), Coast Trailhead and campground (via Laguna Road), Bayview Trailhead, two scenic overlooks, an American Youth Hostel (via Laguna Road), and several park residences.

**4. Are there any private driveways within the project limits? List the approximate number of driveways.**

Yes, there are driveways within the project limits. The approximate number of driveways will be identified at the next design phase. Balboa Road is a non-park road at approximately Station 205+50.

**5. Maintenance Problems:**

No major highway design maintenance problems were identified during the scoping field review.

**6. Describe any parking areas and pullouts included in the project. Will the parking areas and pullouts be reconstructed? If so, who will provide the layouts?**

Improvements mentioned below will be incorporated in the design and in accordance with park recommendations.

*Limantour Road*

Improvements to Limantour Road will include improvements to Limantour Beach Trail Access Road and Laguna Road. Parking areas at the end of each road will also be included. Pavement preservation (i.e. chip seal) will be applied to the entire length of both roads and parking areas. Damaged pavement areas will be repaired with pavement patching and full depth replacement.

Paved aprons will be provided at pullouts, unpaved spur roads, and gravel parking lots, as identified by Point Reyes NS staff along Limantour Road. See Figures 57 and 58. The lookout pullout at approximately Station 127+00 will have a chip seal application.

**Figure 57**



**Figure 58**



*Lighthouse Road*

The parking lot at the end of Lighthouse Road will be evaluated for regrading to accommodate two Americans with Disabilities Act (ADA) compliant parking spots near the comfort station. See Figures 59 and 60. Split rail around the parking lot may be replaced and reconfigured to better direct pedestrian traffic. See Figures 61 and 62. ADA compliant access using a paved trail to the existing interpretive sign and overlook on the north side will also be analyzed. The existing gate on the Lighthouse Road may be replaced with an ADA compliant gate. Regrading of the existing roundabout may be required to meet ADA compliance for trail access to the interpretive sign and to accommodate the design vehicles. See Figures 63 and 64.

**Figure 59**



**Figure 60**



**Figure 61**



**Figure 62**



**Figure 63**



**Figure 64**



The parking lot near Mission 66 green garage at the end of Lighthouse Road will be restriped to provide one to two ADA compliant parking spots. See Figures 65 and 66. The white fence near the parking lot is historic and will not be disturbed during construction. See Figure 67.

**Figure 65**



**Figure 66**



**Figure 67**



*Chimney Rock Road*

The size, number, and sight distance for existing pullouts utilized for passing will be analyzed. Existing pullouts may need to be enlarged and additional pullouts may need to be added for the design vehicle and sight distance. All existing and proposed pullouts will be paved. Chimney Rock Road Parking Lot will be graded and paved. The addition of one to two ADA compliant parking spots adjacent to the comfort station will also be evaluated during design. Existing bus stops and comfort station approaches do not appear to be ADA compliant and will be reviewed during the design phase. Vehicle turning movement for turnarounds at the parking area will be examined in design. See Figures 68 through 74.

**Figure 68**



**Figure 69**



**Figure 70**



**Figure 71**



**Figure 72**



**Figure 73**



**Figure 74**



*Lifeboat Station & Fish Docks (Mendoza Road)*

Improvements to Lifeboat Station Road and Fish Docks (Mendoza) Road will involve chip seal application along the entire length of both roads. Although the roads are for administrative use only and not open to the public, both roads are eligible for funding under the pavement preservation program.

**7. Are projected bicycle and pedestrian uses accommodated?**

Shoulder widths are not provided to accommodate bicycles; therefore, bicycle use is limited. Pedestrian use is limited and primarily at parking areas and scenic pullouts that are located off the roadway. Due to minimal bicycle and pedestrian uses located along the project corridor, additional accommodations for these uses will not be made. Adding ADA compliant parking spaces accommodates uses at the parking areas for pedestrians.

**8. Are any retaining walls needed along the project? What types of retaining walls will be considered?**

No new retaining walls will be along the project corridor.

**9. Describe other roadway features to be rehabilitated or rebuilt (i.e., picnic areas, entrance gates, concession areas, rest areas, bus shelters, etc.). Who will provide design plans?**

Improvements to parking areas are discussed in question 6.

**10. Any vistas or vegetation to preserve (take pictures):**

No.

**11. Is there a specific seeding season for revegetation efforts? Will the Park be performing any seeding? Obtain the seed mix from the Park for incorporation into the Special Contract Requirements.**

Seeding for revegetation efforts will be discussed in more detail with the Denver Serviced Center and Point Reyes NS during the design.

**12. Any special architectural or decorative aspects to be incorporated into design (stone masonry guard wall, stone curb, rock facing, etc.)?**

Not applicable.

**13. Are there any realignment options that should be considered? Describe the alternatives and reasons for evaluation:**

No, the existing roadway alignments will be maintained.

**14. Is this project part of a series of projects? Is it completion of a defaulted contract? Describe any projects, under design or construction by any agency that may affect this project:**

This is not part of a series of projects or the completion of a defaulted contract. There are no other projects that would affect this project.

**15. Have there been any construction problems on previous projects? Contact the Construction office for further details:**

The last repair work on Limantour Road was a chip seal and completed by the Park in October 2005. The Point Reyes NS and CFLHD staff will be consulted about any previous construction problems.

**16. Discuss any restrictions for construction equipment (limited working space, no driving on newly paved areas, etc.):**

Not applicable.

**17. Are there load or hauling restrictions on the project or on roads leading to the project?**

No.

**18. List potential staging areas and any restriction or access problems:**

Further investigation of staging areas will occur during design. Restrictions and access problems are not anticipated.

**19. Any potential water sources within or near the project?**

Potential water sources have not been identified at this time. Further investigation of potential water sources will occur during design.

**20. Are there plans or proposals for other developments along the route that could interfere or be coordinated with the road project?**

There are no plans or proposals for other developments along the project corridor.

**21. Is there any way to get a report or listing from maintenance personnel about problem sites, accident history or other areas of concern?**

Point Reyes NS staff identified known problem locations during the scoping trip. Point Reyes NS is in the process of gathering existing accident data.

**22. Any special fencing (wildlife, landscaping, bison containment) along the project? Will it need to be replaced in kind or with another type? Take pictures of special fencing to be replaced in kind:**

The fencing at Chimney Rock Road will be maintained for the cattle.

**23. Identify any design concerns not previously covered. These may include political and legal concerns, expected materials shortages, impacted property owners, any compensatory work regarding impacted property, any public opposition to the project, any potentially dangerous situations to CFLHD employees:**

Point Reyes National Seashore is extremely supportive of the proposed improvements due to reduced maintenance activities upon completion.

**K. BRIDGE**

**1. Provide available structure site data. Document typical roadway section, approach rail, potential environmental issues, and apparent ROW limits. When available, obtain roadway plan and profile sheets, mapping, and ROW limits.**

There are no existing structures within project limits.

**2. Describe existing structures (bridges, retaining walls, tunnels). Include type, span lengths, dimensions, apparent condition, railing, and existing utilities. Describe bridge opening (waterway) characteristics. Document any visible scour, deposition of sediment, or apparent instabilities around the structure. When available, obtain as-built plans, inspection reports, structure ratings, and foundation and hydraulic information. Provide photos of all structures, any apparent deficiencies, and upstream and downstream stream channels.**

There are no bridge structures within the project limits.

**3. Discuss preliminary options for structure type, layout, and alignment. Identify proposed structure requirements, including number of lanes, sidewalk, utility, overload vehicle, and aesthetic requirements.**

New structures are not proposed within the project limits.

## **IV. PROPOSED IMPROVEMENTS**

Provide a narrative or brief description of the proposed improvements for each functional area

### **A. SAFETY**

Locations identified by park staff will be evaluated for improvement at reducing safety concerns. Anticipated improvement include, but are not limited to, drainage improvements, signing improvements, sight distance improvements (along Chimney Rock Road and the intersection of Limantour and Laguna Road), pavement widening (along Chimney Rock Road to provide a consistent 14' pavement width), pavement replacement, guardrail terminal section replacement, guardrail replacement, and pullout improvements.

Replace all MUTCD signs and posts to meet current standards.

### **B. UTILITIES**

A Utility Quality Level D is recommended for this project. This includes acquiring utility information from records, research, or oral history. This level of service will provide a “feel” for the overall utilities. Project improvement work is minimal in utility locations so existing utilities should be maintained without disturbance.

### **C. PERMITS**

Obtain permitting based upon environmental investigations.

### **D. ENVIRONMENT**

Denver Service Center will complete a preliminary environmental screening of the project to verify the level of environmental compliance required. A Categorical Exclusions (CatEx) is currently expected. Documentation for the CatEx will be completed by Denver Service Center including resources studies in consultation with Point Reyes NS. Construction restrictions for sensitive species will be incorporated as needed.

### **E. SURVEY**

Detailed survey will be required for Chimney Rock Road, Chimney Rock Parking Lot, Lighthouse Road Parking Lot, the roundabout at the end of Lighthouse Road, and specific locations on Limantour Road (including but not limited to existing culvert replacements, existing paved ditches, and existing guardrails).

Handheld GPS centerline survey will be completed for the remaining portions of the routes

### **F. RIGHT OF WAY**

There is no ROW involvement. The entire project limits are within the park boundary. Private in-holdings are located throughout the project limits.

## **G. GEOTECHNICAL**

A geotechnical investigation will be conducted in the landslide area on Limantour Road near Station 300+00. A potential solution to mitigate movement in this area is Expanded Polystyrene (EPS) Geofoam.

## **H. PAVEMENTS**

A pavement analysis will be completed and include:

- Drilling the existing pavement to evaluate existing conditions
- Evaluating resurfacing alternatives
- Providing recommendations for the selected pavement alternative with life cycle costs
- Confirming or refuting scoping field review pavement treatment recommendations

Limantour and Lighthouse Road will require less drilling because the existing pavement was observed to be in good condition. Chimney Rock Road will require a more extensive analysis because of the existing conditions of the current road.

Pavement preservation (i.e. chip sealing) and damaged pavement patching is anticipated for Limantour Road, Limantour Beach Trail Access Road (& parking area), Laguna Road (& parking area), Lighthouse Road (including parking area & roundabout), Lifeboat Station Road, and Fish Docks (Mendoza) Road. Full 3R (resurfacing, restoration, and rehabilitation) improvements are anticipated for Chimney Rock Road.

## **I. HYDROLOGY/HYDRAULICS**

### *Limantour Road*

Possible drainage improvements along the road include, but are not limited to:

- Replacing or lining failing culverts
- Cleaning/refurbishing culverts
- Regarding and/or cleaning ditches
- Providing paved ditches
- Providing graded ditches
- Address ponding areas
- Modifying existing inlet conditions
- Providing outlet protection
- Providing permanent erosion control measures
- Inlet rundown aprons
- Sediment deposition at culvert crossing

Improvements will be made on a case by case basis where Point Reyes NS staff have identified drainage deficiencies.

*Lighthouse Road*

Minor drainage improvements will be made as necessary on a case by case basis where drainage deficiencies have been identified. These improvements include, but are not limited to, ditch reconditioning and ditch grading.

*Chimney Rock Road*

Drainage improvements to be considered for the road include adding culverts, providing paved ditches, providing curbs, and repairing eroded ditches.

Ditch stability and erosion will be evaluated throughout the project.

**J. HIGHWAY DESIGN**

Design changes to horizontal and vertical alignments are not anticipated for any of the roads.

Improvements mentioned below will be incorporated in the design and in accordance with park recommendations.

*Limantour Road*

Limantour Beach Trail Access Road and Laguna Road improvements will be included with improvements to Limantour Road. Parking areas at the end of each road will also be included. Proposed improvements include a chip seal along the entire length of both roads and parking areas. Pavement patching and full depth replacement is included for damaged pavement areas.

Paved aprons will be provided at pullouts, unpaved spur roads, and gravel parking lots, as identified by Point Reyes NS staff along Limantour Road. The pullout at approximately Station 127+00 will have a chip seal application.

*Lighthouse Road*

The parking lot at the end of Lighthouse Road will be evaluated for regrading to accommodate two Americans with Disabilities Act (ADA) compliant parking spots near the comfort station. Split rail around parking lot may be replaced and reconfigured to better direct pedestrian traffic. ADA compliant access using a paved trail to the existing interpretive sign and overlook on the north side will also be analyzed. The existing gate on the paved trail may be replaced with an ADA compliant gate. Regrading of the existing roundabout may be required to meet ADA compliance for trail access to the interpretive sign and to accommodate the design vehicle.

The parking lot near Mission 66 green garage will be restriped to provide one to two ADA compliant parking spots. The white fence near the parking lot is historic and will not be disturbed during construction.

### *Chimney Rock Road*

Improvements to Chimney Rock Road pavement will likely be 3R (resurfacing, restoration, and rehabilitation). Existing pavement width on Chimney Rock Road varies from 10' to 14'. Widening to provide a consistent 14' width pavement section will be analyzed during the design phase.

The size, number, and sight distance for existing pullouts utilized for passing will be analyzed. Existing pullouts may need to be enlarged and additional pullouts may need to be added for the design vehicle and sight distance. All existing and proposed pullouts will be paved. Chimney Rock Road Parking Lot will be graded and paved. The addition of one to two ADA compliant parking spots adjacent to the comfort station will also be evaluated during design. Regrading may be required to add ADA compliant parking spots. Existing bus stops and comfort station approaches will be reviewed for ADA compliance. Bus turning movement for turnarounds at the parking area will be examined in design.

### *Lifeboat Station & Fish Docks (Mendoza Road)*

Improvements to Lifeboat Station Road and Fish Docks (Mendoza) Road include chip seal application along the entire length of both roads. These roads are for park administrative use and not open to the public. Under the pavement preservation program both roads are eligible for funding.

## **K. BRIDGE**

There are no bridges within the project limits.

**HIGHWAY DESIGN STANDARDS**

Limantour Road, Route 10, is classified as a Principal Park Road. Functional classification is in accordance with *Park Road Standards* and Recreational Road in accordance with the American Association of State Highway and Transportation Officials (AASHTO). The speed limit posted at the beginning of Limantour Road is 35 mph and changes to 25 mph at approximately Station 185+60.

Design Standards      X   AASHTO (2004)      X   NPS           OTHER

Design Vehicle:   Conventional School Bus (S-BUS-36)  

Design Speed:   35   (mph)    Posted Speed Limit:   35   (mph)

DESIGN CRITERIA	EXISTING CONDITIONS	STANDARD	PROPOSED	REMARKS/ POSSIBLE VARIANCES
Travel Way Width (m or ft)	22 to 26 ft.	18 ft.* See discussion below	Maintain existing	
Shoulder Width (m or ft)	4 to 11 ft.	2 ft.* See discussion below	Maintain existing	
Horizontal Curvature (min. radius, m or ft)	Varies	340 ft. @ 6% 380 ft. @ 6%**	Maintain existing	There are numerous curves that likely do not meet standard.
Superelevation (%)	Varies	6% Max.	Maintain existing	
Superelevation Runoff (m or ft)	Unknown	116 ft.	Maintain existing	
Vertical Curvature (K value = L/A)		K sag = 49 K crest = 29 K crest = 20**	K sag = exist. K crest = exist.	
Crown (%)	Varies	2%	2%	
Gradient (max. %)	Varies	9%	Maintain existing	Some locations may be greater than standard
Stopping Sight Distance (m or ft)		250 ft. 205 ft. **	Maintain existing	Horizontal sight distance not met in some locations due to tight curves, steep sideslopes and grades, and park vegetation
Horizontal Clearance to Structures (m or ft) (tunnels and bridge underpasses)		N.A.		
Vertical Clearance to Structures (m or ft)		N.A.		
Bridge Width (m or ft)		N.A.		
Bridge Loading (MS or HS)		N.A.		
Bridge Railing (AASHTO Criteria or Crash Tested)		N.A.		

Design Speed: 25 (mph) Posted Speed Limit: 25 (mph)

DESIGN CRITERIA	EXISTING CONDITIONS	STANDARD	PROPOSED	REMARKS/ POSSIBLE VARIANCES
Travel Way Width (m or ft)	22 to 26 ft.	18 ft.* See discussion below	Maintain existing	
Shoulder Width (m or ft)	4 to 11 ft.	2 ft.* See discussion below	Maintain existing	
Horizontal Curvature (min. radius, m or ft)	Varies	144 ft. @ 6% 185 ft. @ 6%**	Maintain existing	There are numerous curves that likely do not meet standard.
Superelevation (%)	Varies	6% Max.	Maintain existing	
Superelevation Runoff (m or ft)	Unknown	103 ft.	Maintain existing	
Vertical Curvature (K value = L/A)		K sag = 26 K crest = 12 K crest = 8**	K sag = exist. K crest = exist.	
Crown (%)	Varies	2%	2%	
Gradient (max. %)	Varies	10%	Maintain existing	Some locations may be greater than standard
Stopping Sight Distance (m or ft)		155 ft. 125 ft.**	Maintain existing	Horizontal sight distance not met in some locations due to tight curves, steep sideslopes and grades, and park vegetation.
Horizontal Clearance to Structures (m or ft) (tunnels and bridge underpasses)		N.A.		
Vertical Clearance to Structures (m or ft)		N.A.		
Bridge Width (m or ft)		N.A.		
Bridge Loading (MS or HS)		N.A.		
Bridge Railing (AASHTO Criteria or Crash Tested)		N.A.		

**HIGHWAY DESIGN STANDARDS**

Lighthouse Road, Route 200, is classified as a Special Purpose Park Road. Functional classification is in accordance with *Park Road Standards* and Recreational Road in accordance with the American Association of State Highway and Transportation Officials (AASHTO). No posted speed limits are on Lighthouse Road. Existing survey is not available so existing superelevations are unknown and not factored in the design speed. The design speed at the beginning of Lighthouse Road is anticipated to be 30 mph and change to 15 mph at approximately Station 755+00 (at the west side of the roundabout). Design speed assumptions are based on scoping site review, preliminary horizontal geometry based on aerials, and NPS: Park Road Standards.

Design Standards      X   AASHTO (2004)      X   NPS           OTHER

Design Vehicle:   Intercity Bus (BUS-45)  

Design Speed:   30   (mph)    Posted Speed Limit:   not posted   (mph)

DESIGN CRITERIA	EXISTING CONDITIONS	STANDARD	PROPOSED	REMARKS/ POSSIBLE VARIANCES
Travel Way Width (m or ft)	18 to 20 ft.	18 ft.* See discussion below	Maintain existing	
Shoulder Width (m or ft)	0 to 1 ft.	2 ft.* See discussion below	Maintain existing	
Horizontal Curvature (min. radius, m or ft)	Varies	231 ft. @ 6% 275 ft. @ 6%** 185 ft. @ 6%***	Maintain existing	
Superelevation (%)	Varies	6% Max.	Maintain existing	
Superelevation Runoff (m or ft)	Unknown	109 ft.	Maintain existing	
Vertical Curvature (K value = L/A)		K sag = 37 K crest = 19 K crest = 13**	K sag = exist. K crest = exist.	
Crown (%)	Varies	2%	2%	
Gradient (max. %)	Varies	7%	Maintain existing	
Stopping Sight Distance (m or ft)		200 ft. 165 ft.**	Maintain existing	
Horizontal Clearance to Structures (m or ft) (tunnels and bridge underpasses)		N.A.		
Vertical Clearance to Structures (m or ft)		N.A.		
Bridge Width (m or ft)		N.A.		
Bridge Loading (MS or HS)		N.A.		

DESIGN CRITERIA	EXISTING CONDITIONS	STANDARD	PROPOSED	REMARKS/ POSSIBLE VARIANCES
Bridge Railing (AASHTO Criteria or Crash Tested)		N.A.		

Design Vehicle: Passenger Car (P)

Design Speed: 15 (mph) Posted Speed Limit: 15 (mph)

DESIGN CRITERIA	EXISTING CONDITIONS	STANDARD	PROPOSED	REMARKS/ POSSIBLE VARIANCES
Travel Way Width (m or ft)	10 to 12 ft.	14 ft. Max.* See discussion below	Maintain existing	
Shoulder Width (m or ft)	0 to 1 ft.	0 ft.* See discussion below	Maintain existing	
Horizontal Curvature (min. radius, m or ft)	Varies	39 ft. @ 6% 65 ft. @ 6%**	Maintain existing	
Superelevation (%)	Varies	6% Max.	Maintain existing	
Superelevation Runoff (m or ft)	Unknown	92 ft.	Maintain existing	
Vertical Curvature (K value = L/A)		K sag = 27 K crest = 12	K sag = exist. K crest = exist.	
Crown (%)	Varies	2%	2%	
Gradient (max. %)	Varies	8%	Maintain existing	
Stopping Sight Distance (m or ft)		160 ft. 130 ft.**	Maintain existing	
Horizontal Clearance to Structures (m or ft) (tunnels and bridge underpasses)		N.A.		
Vertical Clearance to Structures (m or ft)		N.A.		
Bridge Width (m or ft)		N.A.		
Bridge Loading (MS or HS)		N.A.		
Bridge Railing (AASHTO Criteria or Crash Tested)		N.A.		

**HIGHWAY DESIGN STANDARDS**

Chimney Rock Road, Route 201, is classified as a Special Purpose Park Road. Functional classification is in accordance with *Park Road Standards* and Recreational Road in accordance with the American Association of State Highway and Transportation Officials (AASHTO). The posted speed limit on Chimney Rock Road is 15 mph.

Design Standards      X   AASHTO (2004)      X   NPS    \_\_\_\_\_ OTHER

Design Vehicle:      Intercity Bus (BUS-45)  

Design Speed:      15   (mph)    Posted Speed Limit:      15   (mph)

DESIGN CRITERIA	EXISTING CONDITIONS	STANDARD	PROPOSED	REMARKS/ POSSIBLE VARIANCES
Travel Way Width (m or ft)	10 to 14 ft.	14 ft. Max* See discussion below	14 ft.	Potential pavement widening
Shoulder Width (m or ft)	0-4 ft.	0 ft.* See discussion below	Maintain existing	
Horizontal Curvature (min. radius, m or ft)	Varies	39 ft. @ 6% 65 ft. @ 6%**	Maintain existing	
Superelevation (%)	Varies	6% Max.	Maintain existing	
Superelevation Runoff (m or ft)	Unknown	92 ft.	Maintain existing	
Vertical Curvature (K value = L/A)		K sag = 27 K crest = 12	K sag = exist. K crest = exist.	
Crown (%)	Varies	2%	2%	
Gradient (max. %)	Varies	8%	Maintain existing	
Stopping Sight Distance (m or ft)		160 ft. 130 ft.**	Maintain existing	
Horizontal Clearance to Structures (m or ft) (tunnels and bridge underpasses)		N.A.		
Vertical Clearance to Structures (m or ft)		N.A.		
Bridge Width (m or ft)		N.A.		
Bridge Loading (MS or HS)		N.A.		
Bridge Railing (AASHTO Criteria or Crash Tested)		N.A.		

\* Standards are in accordance with NPS: *Park Road Standards, 1984.*

\*\* Standards are in accordance with AASHTO 2001 *Guidelines for Geometric Design of Very Low-Volume Roads (ADT ≤ 400)*

All other design standards are in accordance with AASHTO 2004 *Geometric Design of Highways and Streets (Green Book) 2004.*

The NPS Standards for varying ADT's are shown below:

Average Daily Traffic (ADT)	Number of Lanes	Minimum Lane Width	Minimum Shoulder Width	Lane Surface Type(s)
200-400	2	9	2	Gravel/Paved

*Traffic counts from National Park Service Public Use Statistics Office. See Appendix 5f for ADT calculations. There is no data of pedestrian and/or bicycle use on any of the roads. Studies for pedestrian and/or bicycle use on the roads is not anticipated at this time.*

NPS Park Road Standards and AASHTO Green Book 2004 recommend the total roadway width (including shoulders) for low volume, one lane, one way roads should not exceed 14 feet because of the tendency of drivers to use a wider facility as a two lane road.

**Roadside Design:**

*(Discuss recommended clear zone, proposed clear zone and any reasons for variations)*

The AASHTO Roadside Design Guide states for 3R projects emphasis should be placed on addressing areas with known safety problems related to clear zone width. The design guide further states, if a roadway has substandard clear zone and no significant accident history, slope flattening and traffic barriers are not necessarily recommended. The approaches and the intersection at Limantour and Laguna Road were identified as locations with safety concerns due to minimal sight distances. Sight distance as well as signing will be improved in this area.

All other locations where clear zone criteria are not met, a variance from the recommended guidelines will be required. Due to the steep slopes, sharp horizontal curves, roadside hazards, impacts to natural resources, and topography it is not feasible to meet the desirable clear zone.

**Approved for Distribution:**

\_\_\_\_\_  
**Project Manager**

\_\_\_\_\_  
**Date**

**DISTRIBUTION**

**Point Reyes National Seashore**

- David Brouillette, Chief of Facility Maintenance
- John Foster, Acting Chief of Maintenance
- Jeff Jewhurst, Roads & Trails Supervisor
- Dave Demko, Park Engineer
- Levi McIsaac, Engineering Equipment Operator Leader
- William Shook, Cultural Resources

**National Park Service – PWRO**

Justin DeSantis, Transportation Program Manager  
Sarah Raube, Landscape Architect

**National Park Service – DSC**

Dennis Brookie, Project Manager

**Federal Highway Administration, Central Federal Lands Highway Division (CFLHD)**

Nate Allen, Project Manager  
Ryan Olson, Highway Design Manager  
Jill Mathewson, Lead Designer  
Bob Bell, Survey Manager  
Braden Peters, Geotechnical Engineer  
Richard Duval, Pavements Team Leader  
Scott Hogan, Hydraulics Team Leader  
Ed Demming, Safety & Traffic Team Leader  
Andy Byra, Acting Planning and Programs Engineer

**Consultant**

Kristin Lang, Project Manager - PBS&J  
Rick Andrew, Geotechnical Engineer - Yeh and Associates

Central files –

Author Name: Date: File Information/Location

# **PROJECT AGREEMENT**

**COMPREHENSIVE PROJECT AGREEMENT**  
*United States Department of the Interior / National Park Service*



**POINT REYES NATIONAL SEASHORE**  
**Chip Seal and Replace Failing Sections of Limantour Road**  
**PMIS 145371**  
**Rehabilitate Lighthouse, Chimney Rock and Lifeboat Station Roads**  
**PMIS 7136**  
**FHWA Project Number CA PRA PORE 10(4), 200(1) & 201(1)**  
**Project Design**  
**Marin County, California**

**December 1, 2010**

**Between the National Park Service,  
Point Reyes National Seashore (PORE), Pacific West Region (PWR), Denver Service Center  
and the  
Federal Highway Administration, Central Federal Lands Highway Division (FHWA-CFLHD)**

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*This agreement describes specific project requirements to be fulfilled and duties to be performed by all parties to produce or supply the services and products as agreed to below.*

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**AGREED:**

\_\_\_\_\_  
Dennis Brookie, Project Manager, Denver Service Center, NPS Date

\_\_\_\_\_  
Nate Allen, Project Manager, FHWA-CFLHD Date

\_\_\_\_\_  
Cicely Muldoon, Superintendent, Point Reyes National Seashore Date

\_\_\_\_\_  
Christine Lehnertz, Regional Director, Pacific West Region Date

PORE 145371 Chip Seal and Replace Failing Sections of Limantour  
PORE 7136 Rehab. Lighthouse and Chimney Rock Roads

## **PROJECT BACKGROUND**

This project is not currently funded for a program year in the FLHP. However, the project plans, specifications and estimate will be prepared for available FY 2012 funding and beyond. The two projects were originally estimated for \$ [REDACTED] (PMIS 145371) and [REDACTED] (PMIS 7136). However, during the site scoping trip conducted on November 3-5, 2010 it was determined that the scope of PMIS 145371 needs to be revised. The PMIS was revised and estimated at \$ [REDACTED]0. Additionally, PMIS 7136 was revised to include Lighthouse Road and Chimney Rock Road. However, the Lifeboat Station Road was changed to pavement preservation project. Additionally, Fish Dock Access Road was added as a pavement preservation project. These roads are both administrative roads and determined to not be eligible for FLHP funding, but they are both ideal candidates for pavement preservation.

## **PROJECT PURPOSE**

These two PMIS projects will be combined into one design package with separate schedules for the individual roads so that the projects can be awarded individually as funding permits. The project purpose is to rehabilitate the Limantour Road, Lighthouse Road, Chimney Rock Road, Fish Docks Access Road, Lifeboat Station Road and Laguna Road. These roads have been evaluated by the Federal Highway Administration Road Inventory Program and determined to be poor. The roads will receive minor repairs that will improve the overall condition of the drainage, pavement surface and related appurtenances intended to improve the safety of the roadway and prolong the road's lifespan.

## **OVERALL PROJECT SCOPE**

**Limantour Road** - The scope of the Limantour Road will likely be a pavement preservation including a surface treatment of the 7.59 x 2 lane-miles of asphalt. The project will require patching damaged pavement and slump areas, the addition of paved driveway aprons, drainage improvements (i.e. replacing or lining failing culverts, cleaning/refurbishing culverts, regrading and/or cleaning ditches, providing paved ditches, address ponding areas, modifying existing inlet conditions, providing outlet protection, providing permanent erosion control measures, inlet rundown aprons, sediment deposition at culvert crossings, etc.) . The project will also include repairing the land slide site where constant movement necessitates frequent crack repair. There is also guardrail that requires replacement with crashworthy guardrail terminal. The project will also potentially repair damaged pavement and subgrade in utility trench areas as well as striping, signage and other minor safety and ADA/ABAAS improvements.

**Laguna Road** - The scope of the Laguna Road is pavement preservation of the 0.66 x 1 lane-mile roadway. This spur road serves as the access route to the Environmental Education Center Parking lot.

**Chimney Rock Road** - The scope of the Chimney Rock Road and Parking Lot will be 3R including resurfacing, restoration and rehabilitation within the existing 1.0 x 1 lane-mile roadway bench. Specific improvements may include; adding a 1'-0" pavement widening, enlarging the existing pullouts for sight distance required for bus passing, drainage improvements as necessary, replace 3 existing cattle guards, striping, signing and other minor safety and ADA/ABAAS improvements.

**Lighthouse Road** - The scope of the Lighthouse Road and Parking Lots will likely be a pavement preservation including a surface treatment of the 2.12 x 2 lane-miles of asphalt. The project will require patching damaged pavement areas, potential full depth pavement replacement and recessed pavement markers where sand continuously blows across and drifts on the road. Also anticipated in the project scope will be drainage improvements, replacement of one cattle guard, potentially regrading the parking lot at the

end of the Lighthouse Road to accommodate ADA/ABAAS parking spaces for the restroom and possible accessible route to the interpretive sign and overlook at the parking lot. The project may also provide striping of the parking lot at the ADA restroom and garages at the Lighthouse Parking area. The project will include striping, signage and other minor safety and ADA/ABAAS improvements and may include a split rail and timber backed guardrail replacement.

**Lifeboat Station Road** – The scope of the Lifeboat Station Road is pavement preservation of the 0.3 miles x 1 lane-mile roadway. This spur road serves as the access to the Lifeboat Station off of the Chimney Rock Parking Lot.

**Fish Docks Access Road** – The scope of the Fish Docks Access Road is pavement preservation of the 0.2 x 1 lane-mile roadway. This spur road serves as the access to the overlook at the area called Fish Docks.

**Project Background for Limantour Road** - The Limantour Road is the sole vehicle and emergency response route to the Limantour beach, the Clem Miller Environmental Education Center, and American Youth Hostel, and several park residences, including required occupancy law enforcement and utilities systems repair staff. This road was also proven critical during the 1995 fire evacuation for the Vision Fire. Point Reyes National Seashore receives over 2.2 million visitors per year, and Limantour Road serves as a gateway to premier scenic and recreational opportunities. The scientific and educational values of the park's natural resources are so significant that the entire park has been designated as part of the Central California Coast International Biosphere Reserve.

The roadways were inventoried by the FHWA in 2004 with an average Pavement Condition Rating of 56(poor), an average Rutting Condition Index of 51(Poor) and an average Surface Condition Rating of 45(poor). Limantour Road is reaching the end of its design life and is showing signs of imminent pending failure with perpendicular cracks, longitudinal fissures, slumps, failing sub-base, and a severely decaying and failing culvert system.

**Project Background for Lighthouse and Chimney Rock Roads** – These two roads are in similar condition to Limantour Road. The roads are heavily used by visitors during the whale and Elephant Seal watching season. The visitation is so high that a shuttle system has now been implemented during the whale watching season. This shuttle system provides full size buses on weekends and holidays from December through April. The Lighthouse Road serves as the sole ingress and egress to the Lighthouse area for other agencies who conduct research in the park; the USGS, Scripps Institute, and UC Berkeley Seismic Lab. The Chimney Rock Road is the sole vehicular and emergency response route to the Chimney Rock area as well as to a park residence and utility system. Both roads have key operational park service residences at the end of each roadway.

The NPS and FHWA recognize the value of sustainable design strategies and principles of sustainable design will be incorporated into the planning, design, construction and operation of these support facilities. DSC will evaluate sustainable energy alternatives for the overall design of the facility.

### **ROLES AND RESPONSIBILITIES:**

The roles and responsibilities of the project team are generally defined as follows:

**Park point of contact (POC) Responsibilities:** Functions as primary park contact on a day-to-day basis to address project questions and issues, provides timely input of project information, and provides consolidated comments on the project documents to the DSC PM on behalf of the park. Convenes and coordinates Interdisciplinary Team (IDT) review and meetings. Coordinates and manages compliance efforts in order to meet project timelines.

**NPS Regional Line Item Construction Program Coordinator:** Acts as a liaison with the National Park Service Washington Office (WASO) on applicable matters; coordinates and/or participates in necessary project reviews; ***monitors and approves project funding requests***. Ensures project compliance with programmatic, regional and national guidelines, policies, and standards. Functions as the primary regional project contact.

**DSC PM:** The DSC PM is responsible as the primary DSC point of project contact for maintaining clear communications with their FHWA counterpart throughout the life of the project. The DSC PM is responsible for jointly coordinating with the Park and FHWA, developing the Project Agreement, distribution of all review documents and consolidation of all NPS comments for presentation to the FHWA. In addition, the DSC PM is responsible for the review and comment on the 30%, 70% and 95% Plans, Specifications, and Estimate submittals and landscape architectural elements of the design, including components such as the horizontal and vertical cross sections, layout, clearing limits, grading, drainage, erosion control, details, revegetation, parking areas and associated site elements, structures and furnishings such as walks, fences, walls, lighting, signs, etc. The DSC PM is responsible for coordinating the DSC and PORE compliance efforts, for achieving project compliance milestones and providing review of all natural and cultural resource issues to ensure that the Park Mission, NPS goals and Park road standards are maintained.

**FHWA/CFLHD PM:** The emphasis of the CFLHD PM will be the development of highway design PS & E and construction contract award and administration. This includes the coordination of all project development and construction issues associated with highway design including the technical areas needed to complete these projects (geometric, geotechnical, safety, materials, etc), unless agreed to otherwise.

ACTIVITY	ORGANIZATION	INDIVIDUAL/PHONE No.
Compliance		
Arch Survey Environmental Management	PORE PORE	Jeff Jewhurst
Project Agreement	DSC	Dennis Brookie
Design		
Lead Designer/AE review	PBS&J	Kristin Lang (303) 221-7275
Project Manager/AE Mgr	FHWA	Nate Allen

Project Management	FHWA/DSC	Allen/Brookie
Project Management	FHWA/DSC	Allen/Brookie
Project Budget	FHWA/DSC	Allen/Brookie
Project Schedule	FHWA/DSC	Allen/Brookie
Project Funding	PWR	Justin DeSantis
Points of Contact		Nate Allen (720) 963-3668
FHWA		Justin DeSantis (510) 817-1385
PWR/FLHP Funding Manager		Jeff Jewhurst (415) 464-5158
PORE		Dennis Brookie (303) 969-2493
DSC		

**PRODUCTS AND SERVICES**

**FHWA-CFLHD:**

- Develop PS & E documents.
- Participate in on-site plan-in-hand reviews.
- Produce hydrological and geotechnical engineering studies and reports.
- Advertise and award construction contract.
- Administer construction contract.

**PORE:**

- Prepare needed compliance documents for project review and recommendations for approval.
- Oversee NHPA Section 106 and Native American consultation, with DSC preparing the documentation.
- Prepare environmental work for Biological Assessment (BA), and Categorical Exclusion (CE), including resource surveys required to support NHPA and NEPA.
- Preparation and submittal of all permits required for construction.
- If required prepare mapping of noxious, exotic, sensitive and T&E plant species within project work limits.
- If required, provide plant salvage and replanting of T&E or other sensitive or valuable plants within construction limits as needed.
- Participate in on-site plan-in-hand reviews. Provide assistance regarding resource protection, and air operations during construction.
- Update project database (PEPC) with technical reviews, reports, designs

**DSC:**

- Preparation of materials for DAB as needed.
- Coordinate and participate in on-site plan-in-hand reviews. Provide oversight during construction, review and approval of submittals, and draft letter of final acceptance for the Superintendent’s signature.

## **PROJECT MILESTONES, RESPONSIBLE OFFICE and PROJECTED SCHEDULE**

<b>Milestone</b>	<b>Responsible Office</b>	<b>Date of Completion</b>
Begin Project Scoping and Compliance	DSC	November 2010
Comprehensive PA Completion	DSC	December 2010
Determination of CE or EA	PORE	February 2011
30% Field Review	FHWA	June 2011
NEPA Complete (CatEx)	PORE	November 2011
PWR Project Review (Request DAB ISR)	PORE/PWR/DSC	December 2011
Section 106 MOA signed	DSC/PORE	November 2011
70% Field Review	FHWA	November 2011
Final Design Review (95%)	FHWA	February 2012
PWR Director's Approval	DSC/PORE	April 2012
Prepare and Sign Contract Documents	FHWA	April 2012
Advertise	FHWA	October 2012
Open Bids	FHWA	November 2012
Award Construction Contract	FHWA	December 2012
Preconstruction Conference	FHWA	May 2013
Notice to Proceed	FHWA	May 2013
Begin Construction	FHWA	May 2013
Final Project Acceptance	PORE/PWR/FHWA/DSC	November 2013

### **FUNDING**

Funding Source: Federal Lands and Highway Program (FLHP)  
Programmed Net Construction: \$ [REDACTED]

### **PROJECT AGREEMENT AMENDMENT PROCESS**

The project agreement may be amended by any party to the agreement, subject to the concurrence by all original signatories. Circumstances that may result in an amendment to this agreement include any major changes in scope, schedule, products, budgets, milestone dates, and key positions. Amendments will be in

the form of revisions to the original agreement or changes documented through standard correspondence or electronic mail. Distribute project agreement amendments to all signatories of the original agreement.

**CONFLICT RESOLUTION ESCALATION MATRIX**

<b>FHWA</b>	<b>NPS</b>	<b>Time to Resolve</b>
Lead Designer/Project Manager Project Engineer	PORE - Park Coordinator DSC – Project Manager	5 Working Days
Project Manager/Construction Operations Engineer	DSC – Project Manager FLHP - Coordinator Park Superintendent	5 Working Days
Project Management Engineer Construction Engineer	Deputy Regional Director - DSC - Chief, Park Roads & Parkways Branch	5 Working Days
CFLHD Division Engineer	Regional Director DSC – Chief, Transportation Division	5 Working Days

# **RISK AND OPPORTUNITY MANAGEMENT PLAN**



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## **RISK AND OPPORTUNITY MANAGEMENT PLAN**

**Project Name:** Limantour Road, Lighthouse Road, & Chimney Rock Road  
Project Number CA PORE 10(4), 200(1), & 201(1)

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**Project Manager:** Nate Allen, FHWA and Kristin Lang, PBS&J

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### **1. Instructions for Using this Document**

#### **Section I Risk Assessment Questionnaire**

- **Use Section I** of this template to identify risks and opportunities that will impact the project and the level of threat or benefit they pose to the project's success. In this section, characteristics are grouped in typical categories of project risk and opportunity. High, medium and low risk or opportunity ratings are assigned to descriptions of each project characteristic. **This list of potential risks and opportunities is not exhaustive and is intended to provide a starting point only.**
- The completed questionnaire and checklist will identify the project's risk and opportunity factors. The results from the completed questionnaire and checklist should be used as guidelines; there may be other factors that will lower or raise the risk level. Having many high-risk characteristics does not necessarily mean the project will fail. **However, it does mean that a plan must be put into place to address each potential high-risk factor.**

#### **Section II Typical High-Risk Problems/Response Actions –**

- **Use Section II** of this template to analyze identified risks and opportunities and plan appropriate responses. Early warning signs and examples of problems that may result from certain types of high risks are listed alongside examples of activities that may be undertaken to mitigate or respond to each risk.
- For each high-risk factor identified in *Section I*, create a response plan in the *Risk Response Plan* document to ensure that the risk is mitigated and does not impact project success. Consider the example activities in *Section II* as examples of potential responses. **The project team may suggest additional response actions.** After creating response plans for all the high-risk factors, look at the medium-level risks to determine whether the impact is severe enough to warrant an entry into the *Risk Response Plan* as well. If so, create entries in the *Risk Response Plan* for the medium-risk factors. Low-risk factors may be considered assumptions, that is, there is a potential for problems, but because the risk is low, you are “assuming” that the condition will not occur. The *Risk Response Plan* is used throughout the project to monitor and control risks.



**Section I Risk and Opportunity Identification and Assessment Questionnaire**

Characteristics	Low Impact	Medium Impact	High Impact
<b>ORGANIZATION</b>			
<b>A. Project Scope</b>			
<b>A1</b> The scope of the project is:	<input checked="" type="checkbox"/> Well-defined and understood	<input type="checkbox"/> Somewhat defined, but subject to change	<input type="checkbox"/> Poorly defined and/or likely to change
<b>A2</b> All Cooperating Agencies are:	<input checked="" type="checkbox"/> identified and Committed	<input type="checkbox"/> Identified and not committed	<input type="checkbox"/> Unknown
<b>A3.</b> Historical information is (e.g. as-built, traffic/accident data):	<input checked="" type="checkbox"/> Available		<input type="checkbox"/> Not available
<b>A4.</b> Environmental Constraints:	<input checked="" type="checkbox"/> Categorical Exclusion	<input type="checkbox"/> Environmental Assessment	<input type="checkbox"/> Environmental Impact Statement
<b>B. Project Schedule</b>			
<b>B1.</b> Are the project's major milestones:	<input checked="" type="checkbox"/> Flexible - may be established by the project team	<input type="checkbox"/> Firm - pre-established	<input type="checkbox"/> Fixed - pre-established by a specific commitment or legal requirement and beyond the team's control
<b>B2.</b> The total estimated effort hours are:	<input checked="" type="checkbox"/> Less than 2,000	<input type="checkbox"/> Between 2,000 and 5,000	<input type="checkbox"/> Greater than 5,000
<b>B3.</b> Project duration (design) is estimated at:	<input checked="" type="checkbox"/> Less than 2 years	<input type="checkbox"/> 2 to 4 years	<input type="checkbox"/> Greater than 4 years
<b>C. Project Budget</b>			
<b>C1.</b> The project budget (Preliminary Engineering) is based upon:	<input checked="" type="checkbox"/> CFLHD Work Breakdown Structure Spreadsheet		<input type="checkbox"/> Other methods or techniques
<b>C2.</b> The Preliminary Construction Cost Estimate is based upon:	<input type="checkbox"/> CFLHD Risk Based Spreadsheet		<input checked="" type="checkbox"/> Other methods or techniques
<b>C3.</b> Program amount matches or exceeds the estimated cost and is stable.	<input type="checkbox"/> Funding is greater than estimated construction cost and/or is expected to be stable.	<input type="checkbox"/> Funding meets estimated construction cost and expected to remain relatively stable.	<input checked="" type="checkbox"/> Funding is less than estimated construction cost and/or its stability is highly uncertain.
<b>D. Management/Senior Leadership Support</b>			
<b>D1.</b> The project sponsor (FLMA, State, County) is: NPS	<input checked="" type="checkbox"/> Identified and committed	<input type="checkbox"/> Identified	<input type="checkbox"/> Not identified or not committed



**Section I Risk and Opportunity Identification and Assessment Questionnaire**

Characteristics	Low Impact	Medium Impact	High Impact
<b>E. Project Human Resources</b>			
<b>E1.</b> The Project Manager's experience and training is:	<input checked="" type="checkbox"/> Recent success in managing projects similar to this one	<input type="checkbox"/> Recent success in managing a project not similar to this one or trained and no actual experience	<input type="checkbox"/> No recent experience or project management training
<b>E2.</b> Describe the experience of cross functional team personnel with the tools and techniques to be used.	<input checked="" type="checkbox"/> Experienced in use of tools and techniques	<input type="checkbox"/> Formal training in use of tools and techniques but little or no practical experience	<input type="checkbox"/> No formal training or practical experience in use of tools and techniques
<b>E3.</b> The cross functional team is:	<input type="checkbox"/> Located together		<input checked="" type="checkbox"/> Dispersed at multiple sites
<b>F. Other Business or Organizational Impacts</b>			
<b>F1</b> CFLHD processes, procedures, policies require:	<input type="checkbox"/> Little or no change	<input checked="" type="checkbox"/> Occasional to frequent changes	<input type="checkbox"/> Substantial change
<b>F3.</b> The number of functional areas the project will affect are:	<input type="checkbox"/> 1-4	<input type="checkbox"/> 4-6	<input checked="" type="checkbox"/> 6 or more
<b>GENERAL – Technical and Performance Risks</b>			
<b>G. Technology</b>			
<b>G1.</b> The technology being utilized consists of:	<input checked="" type="checkbox"/> Mature (existing design software, hardware, languages, databases, and tools)	<input type="checkbox"/> Emerging	<input type="checkbox"/> Leading Edge (new design software, hardware, languages, databases, or tools (or new releases))
<b>G2.</b> The technical requirements for this project are:	<input checked="" type="checkbox"/> Similar to others in CFLHD		<input type="checkbox"/> New and complex
<b>PROJECT MANAGEMENT - Planning, Issue and Change Management, Quality Assurance</b>			
<b>I. Evaluation of PM Risks</b>			
<b>I1.</b> The overall assessment of Project Management risk	<input checked="" type="checkbox"/> The project is well planned and will be carried out in a manner consistent with the CFLHD project management guidelines		<input type="checkbox"/> Planning for this project is inconsistent, incomplete or in other ways of poor quality AND/OR there are problems with project process that must be addressed
<b>EXTERNAL – Vendor, Legal, Environmental, Regulatory,</b>			
<b>J.A/E</b>			
<b>J1.</b> If project is outsourced:	<input checked="" type="checkbox"/> A/E is familiar in this market		<input type="checkbox"/> A/E is new to this market



## Section I Risk and Opportunity Identification and Assessment Questionnaire

Characteristics	Low Impact	Medium Impact	High Impact
J2. Are A/E firms required and committed to the project?	<input type="checkbox"/> No – A/E firms are not required	<input type="checkbox"/> Yes – Some A/E firms are required (less than 50%) and are expected to be signed before start of project	<input checked="" type="checkbox"/> Yes – Project will be staffed by A/E and/or contractors' commitment is not expected to be complete prior to start of project

## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<b>A. Scope</b>	
<p><b>A1. The scope of the project is poorly defined:</b></p> <ul style="list-style-type: none"> <li>▪ Hard to provide sound estimates</li> <li>▪ May spend time and cost on areas out of scope</li> <li>▪ Hard to gather concise requirement</li> <li>▪ Difficult to write project definition and work plan</li> <li>▪ Hard to invoke scope-change procedures</li> <li>▪ Project deliverables are poorly defined</li> </ul>	<ul style="list-style-type: none"> <li>▪ Focus on firming up scope in the planning process</li> <li>▪ Define various components of scope, such as what departments are affected, what deliverables are expected, what type of information is required</li> <li>▪ Clearly define what is out of scope for the project</li> <li>▪ Begin to define business requirements at a high level and then work upward to define scope</li> <li>▪ Ask project sponsor to make decision on conflicting scope statements</li> <li>▪ Document all scope assumptions when providing estimates of work, cost, or duration</li> <li>▪ Use pictures or diagrams to communicate scope and options</li> <li>▪ Establish firm scope-change procedures up front</li> <li>▪ Ensure the project definition and business requirements are formally approved and signed off on</li> <li>▪ Distribute scope statements to all stakeholders for confirmation</li> <li>▪ Do not begin project until scope is clear</li> </ul>
<p><b>A2. The stakeholders are unknown:</b></p> <ul style="list-style-type: none"> <li>▪ Not knowing the stakeholders early in the project phase will impact the scope of the project</li> <li>▪ A new stakeholder that was not identified earlier who have a potential negative influence in the project</li> </ul>	<ul style="list-style-type: none"> <li>▪ Allocate more time to identify all potential stakeholders early in the process</li> <li>▪ Conduct public meetings if necessary very early in the planning process to identify all stakeholders</li> <li>▪ Get the public involved.</li> </ul>



## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<p><b>A3. Historical information is not available:</b></p> <ul style="list-style-type: none"> <li>▪ Will require work and resources to create data (traffic data, pavement analysis, accident data)</li> <li>▪ Hard to estimate scope and cost</li> </ul>	<ul style="list-style-type: none"> <li>▪ Try to contact the Agency/County to find information</li> <li>▪ Conduct traffic counts early in the process to assess traffic trends and forecast future demands</li> <li>▪ Conduct public meeting to gather historical data, accidents, maintenance areas.</li> <li>▪ Get seed funds to conduct traffic studies early in the process</li> </ul>
<p><b>A4. Environmental constraints:</b></p> <ul style="list-style-type: none"> <li>▪ If a project requires an EIS, the risk is very high due to the environmental analysis and mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Consider other project alternatives</li> <li>▪ Consider reducing the scope of work</li> <li>▪ Try to get buy-in from all the stakeholders early in the process on the preferred alternative</li> <li>▪ If internal environmental staff is not experienced, get the A/E environmental firm involved early in the process.</li> </ul>
<b>B. Schedule</b>	
<p><b>B1. The project's major milestones and operational dates are fixed. They were pre-established externally or by legal requirements beyond control of the project team:</b></p> <ul style="list-style-type: none"> <li>▪ Work must be scheduled to fit within this schedule constraint</li> <li>▪ Most likely the schedule requirements will be impossible to meet</li> <li>▪ Hurried activity and schedule requirements will cause errors</li> <li>▪ Will create conflicts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Re-negotiate schedule requirements to fit required activities</li> <li>▪ Re-negotiate scope to limit activities deemed doable in allotted time</li> <li>▪ Establish new agreements with client agencies/customers</li> <li>▪ Put aggressive project tracking and monitoring plan in place</li> <li>▪ Communicate status reports on regular basis</li> </ul>
<p><b>B2. High number of estimated effort hours:</b></p> <ul style="list-style-type: none"> <li>▪ Implication of a high number of effort hours is that there are many people involved and more complexity</li> <li>▪ Harder to communicate effectively with the team</li> <li>▪ Bottlenecks can occur when decisions are needed quickly</li> <li>▪ More chance of people problems</li> <li>▪ Increased chance of turnover</li> <li>▪ More people to train</li> </ul>	<ul style="list-style-type: none"> <li>▪ Use a project management tool to control resource utilization</li> <li>▪ Have team members utilize weekly status reports to report on progress against their assigned work plan activities</li> <li>▪ Organize team-building activities to build cohesion</li> <li>▪ Schedule status meetings to keep people informed of project status</li> <li>▪ Utilize structured internal procedures for scope, issue, quality, and risk management</li> <li>▪ Break the project into smaller, shorter tasks</li> <li>▪ Reduce available project work time per person, per day to recognize additional people and team-related activities</li> </ul>



## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<p><b>B3. Long estimated project duration:</b></p> <ul style="list-style-type: none"> <li>▪ Harder to manage the schedule</li> <li>▪ Easier for the team and the customer to drift or lose focus</li> <li>▪ More chance that project will lose organizational commitment</li> <li>▪ More chance business requirements will change</li> <li>▪ More chance of change in software or hardware versions</li> <li>▪ Difficult to instill sense of urgency at the beginning of project</li> <li>▪ More chance of team and customer turnover</li> </ul>	<ul style="list-style-type: none"> <li>▪ Break the project into smaller, shorter subprojects</li> <li>▪ Identify clear milestones to check that the project is on schedule</li> <li>▪ Be diligent using formal change management procedures</li> <li>▪ Rotate team members into different roles to keep up the interest level</li> <li>▪ Strive to get ahead of schedule as early as possible.</li> <li>▪ Instill a sense of urgency from the start of the project</li> <li>▪ Organize team-building activities to build cohesion and reduce friction</li> </ul>
<b>C. Budget</b>	
<p><b>C1. Project budget was not established with any proven tool or by any experienced person:</b></p> <ul style="list-style-type: none"> <li>▪ Budget will most likely not be accurate</li> <li>▪ Budget will not be structured in manor to facilitate tracking and control.</li> <li>▪ There will be unrealistic expectations for what can be accomplished within the budget.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Re-estimate the project using proven tools and experienced personnel</li> <li>▪ Revise scope to fit within the funding available</li> <li>▪ Don't start the project until a better budget can be established</li> </ul>
<p><b>C2. Project funding is less than the estimated cost and is unstable:</b></p> <ul style="list-style-type: none"> <li>▪ Project will be unable to fulfill expectations</li> <li>▪ Project will likely exceed it's funding</li> </ul>	<ul style="list-style-type: none"> <li>▪ Renegotiate scope to fit within the funding available</li> <li>▪ Don't start the project until an adequate budget or lesser scope is established</li> </ul>
<b>D. Management/Senior Leadership Support</b>	
<p><b>D1. The project sponsor is not identified or not enthusiastic:</b></p> <ul style="list-style-type: none"> <li>▪ Project may not get the resources it needs</li> <li>▪ Project may not have the long-term commitment needed</li> <li>▪ Political battles may delay the project</li> <li>▪ Issues and change requests may not be resolved in a timely manner</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a strong steering committee to help guide the project</li> <li>▪ Establish a process for resolving disputes between departments</li> <li>▪ Try to identify a different sponsor</li> <li>▪ Ask the sponsor to delegate full authority to another person who can act on their behalf</li> <li>▪ Don't start the project</li> </ul>



## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<b>E. Human Resources</b>	
<p><b>E1. Project management experience is light:</b></p> <ul style="list-style-type: none"> <li>▪ May take longer to define the project and build work plan</li> <li>▪ May make more mistakes in judgment, causing rework and project delays</li> <li>▪ More difficulty organizing and managing a complex project</li> <li>▪ May not be familiar with sound project management practices</li> <li>▪ May not know when to call for help</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide up-front project management training</li> <li>▪ Designate a more senior person to coach and mentor the project manager</li> <li>▪ Break the project into smaller pieces that are easier to manage</li> <li>▪ Put a strong quality-assurance process in place to ensure the project is on the right track</li> <li>▪ Make sure the major deliverables are formally approved</li> <li>▪ Utilize strong team leaders and team members to bring additional experience to bear</li> </ul>
<p><b>E2. Project management processes are unfamiliar or will not be used:</b></p> <ul style="list-style-type: none"> <li>▪ Team may have a difficult time understanding how to raise issues, scope changes, and risks</li> <li>▪ Project may get out of control as the internal processes become more complex and harder to manage</li> <li>▪ Communication will tend to be poorer</li> <li>▪ Project deliverables might be completed in different formats</li> <li>▪ Issues may not be addressed in a timely manner, scope changes may be adopted without thought of impact to the project, risks may be ignored, and quality may be compromised</li> <li>▪ Chance that the project may be in trouble before it is recognized</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide training to the project manager and project team on sound project management processes and procedures utilizing both the internal and external processes for delivering projects at CFLHD</li> <li>▪ Assign an experienced project management coach or mentor to the project</li> <li>▪ Break the project into smaller pieces that can be managed with less-rigorous project management</li> <li>▪ Define and gain approval for a set of project management procedures before the project starts, including issues management, change management, risk management, and quality management</li> <li>▪ Create a solid communication plan to ensure everyone knows what's going on and can provide feedback</li> <li>▪ Solicit input on issues, risk, scope change, and quality concerns on an ongoing basis</li> </ul>
<p><b>E3. Project team is located in dispersed locations:</b></p> <ul style="list-style-type: none"> <li>▪ Harder to communicate effectively</li> <li>▪ Less team interaction and cohesion</li> <li>▪ Harder to build personal relationship with the entire team</li> <li>▪ Some members may feel isolated and not a part of the team</li> <li>▪ Technology problems may result in productivity decrease</li> </ul>	<ul style="list-style-type: none"> <li>▪ Try to get the team into one location, at least for the length of the project</li> <li>▪ Create an aggressive communication plan to ensure the team communicates effectively</li> <li>▪ Hold regular meetings where the entire team meets face-to-face</li> <li>▪ Schedule team-building activities where the entire team meets face-to-face</li> <li>▪ Have backup methods to communicate if the primary technology fails</li> <li>▪ Maintain frequent contact by phone with remote team members</li> <li>▪ Create a central repository to hold the project documentation that all team members can access</li> </ul>



## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<b>F. Business or Organizational Impacts</b>	
<p><b>F1. CFLHD processes and policies require substantial change:</b></p> <ul style="list-style-type: none"> <li>▪ Policy changes could delay the project</li> <li>▪ People will be confused with new processes, which will affect their ability to utilize the solution</li> <li>▪ Possibility that new processes will not be fully integrated at first</li> <li>▪ Possible void if new processes don't fully cover all contingencies</li> <li>▪ System functions may not be used if not supported by correct procedures</li> <li>▪ Substantial change in processes may result in destructive behavior</li> <li>▪ People may fear loss of jobs in a new organization</li> </ul>	<ul style="list-style-type: none"> <li>▪ Document all current policies and processes and ensure that they are correct</li> <li>▪ Communicate precisely how the new processes differ from the old ones</li> <li>▪ Communicate potential changes as far in advance as possible</li> <li>▪ Ensure the customers are defining the process and policy changes</li> <li>▪ Have one person responsible for all process and policy changes</li> <li>▪ Create an aggressive communication plan to keep customers engaged and informed</li> <li>▪ Use the new processes in a pilot project first to ensure they are workable and correct</li> <li>▪ Include the successful implementation of new policies and processes as part of the performance criteria for managers</li> <li>▪ Be open to customer input on process changes—for better ideas and to allow them to feel they have impact</li> </ul>
<p><b>F2. High number of functional disciplines are affected:</b></p> <ul style="list-style-type: none"> <li>▪ Coordination is more complex</li> <li>▪ Approvals can be more cumbersome and lengthy</li> <li>▪ More difficult to reach consensus</li> <li>▪ More people and groups to involve in planning and requirements</li> <li>▪ Harder to know the major stakeholders of the various departments</li> <li>▪ Implementation is harder and more complex</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a formal approval process</li> <li>▪ Create a steering committee to represent the entire stakeholder community</li> <li>▪ Keep the sponsor engaged and ready to intervene in the various departments</li> <li>▪ Include representative from each organization in requirements, quality assurance, and testing</li> <li>▪ Include opportunities for people from the various departments to meet and interact</li> <li>▪ Work with the team on strict adherence to overall project objectives and priorities</li> <li>▪ Use consensus-building techniques when at all possible</li> </ul>
<b>G. Technology</b>	



## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<p><b>G1 The project technology is new and unfamiliar (or new releases):</b></p> <ul style="list-style-type: none"> <li>▪ Learning curve may result in lower initial productivity</li> <li>▪ May be integration problems between old and new technology</li> <li>▪ Resistance to technology changes may cause the project to be delayed</li> <li>▪ May be difficulty testing the new technology</li> <li>▪ Technology may not be installed or configured correctly, which will lead to project delays</li> <li>▪ New tools can lead to longer delivery times</li> <li>▪ New technology may require substantial conversion efforts</li> <li>▪ System performance may be poor while expertise is gained in optimizing and configuring the technology</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide as much training on the new technology as practical, as early as possible</li> <li>▪ Train everyone who needs to install, use, or support the new technology</li> <li>▪ Make arrangements to rely on vendor technical specialists, when needed</li> <li>▪ Use outside consultants who are familiar with the technology</li> <li>▪ Make sure there is an adequate test environment where the technology can be utilized without affecting production</li> <li>▪ Ensure that solid analysis is completed regarding the new technology functions, features, and capabilities</li> <li>▪ Create procedures and standards for how the new technology should be utilized</li> <li>▪ Create a pilot test or prototype to utilize the new technology in a small way at first</li> </ul>
<p><b>G2 The technical requirements are new and complex:</b></p> <ul style="list-style-type: none"> <li>▪ May be difficult to understand the requirements and the implications of design decisions</li> <li>▪ May be integration issues between old and new technology</li> <li>▪ May be difficulty testing the complex technology</li> <li>▪ The more complex the technology, the greater the risk that problems will occur</li> <li>▪ Problems with incompatible technologies may not be uncovered until integration or system testing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Utilize system and technical design documents to clearly lay out how the technology fits together</li> <li>▪ Define the overall system technical architecture and have it approved by knowledgeable people in your company</li> <li>▪ Create a pilot project to utilize the new technology in a small way at first</li> <li>▪ Try to substitute more proven and familiar technology in the architecture</li> </ul>
<b>H. Performance</b>	
<p><b>H1. Performance objectives are unclear or unstated or unrealistic (e.g. everything will be perfect)</b></p> <ul style="list-style-type: none"> <li>▪ The project team may be bogged down trying to meet minor performance objectives while the major ones are slipping away</li> <li>▪ The team may be subject to imposition of new performance requirements during the project if they are not written down at the start</li> <li>▪ This could be a no-win project since it is not possible to meet unrealistic objectives</li> </ul>	<ul style="list-style-type: none"> <li>▪ Make sure that all performance objectives are in writing, agreed to by the project team and approved by the Sponsor</li> <li>▪ Insist that any change in expectations regarding performance objectives be issued as a formal Change Request</li> </ul>



## Section II Typical High-Risk Problems/Response Actions

High-Risk Factors/Potential Problems	Risk Response Actions
<b>I. Project Management</b>	
<b>I1. Planning for this project is inconsistent, incomplete or in other ways of poor quality AND/OR there are problems with project process that must be addressed:</b> <ul style="list-style-type: none"> <li>▪ Work on the project may be uncoordinated and unproductive</li> <li>▪ The project may be subject to Scope Creep</li> <li>▪ With poor or absent project plans it is unlikely that the project will meet performance objectives</li> </ul>	<ul style="list-style-type: none"> <li>▪ Follow the Organization's Project Management Methodology</li> <li>▪ Complete the recommended project templates and obtain approval from key stakeholders</li> <li>▪ Address and correct any identified project process issues</li> <li>▪ Follow and update the project plans throughout project execution</li> </ul>
<b>J. A/E Firm</b>	
<b>J1. A/E firm is new to this market:</b> <ul style="list-style-type: none"> <li>▪ Possibility that A/E firm may not survive and leave you with no support</li> <li>▪ Learning curve might delay start of project</li> <li>▪ No prior relationships from which to build a quick partnership</li> <li>▪ Unfamiliar with CFLHD processes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Train A/E staff early in the process</li> <li>▪ Make sure the A/E is a part of the project team early in the process</li> <li>▪ Maintain an A/E log to track problems with the deliverables</li> <li>▪ Establish agreements with the A/E firm stipulating support level and problem resolution times</li> </ul>



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**Risk Response Plan** - For each high-risk factor identified in *Section I*, a *Risk Response Plan* is described in the following sections to ensure that the risk is mitigated and does not impact project success.

## **ORGANIZATION**

### **A. Project Scope**

The Denver Service Center (NPS-DSC) will prepare the NEPA Documentation and environmental clearances. The completion of a Cat-Ex is anticipated. Risk response actions are:

- NPS will complete resource assessments prior to the NEPA clearance process. Potential issues are cultural and potential time restrictions for T&E and sensitive species.
- Continuously coordinate with NPS-DSC to eliminate improvements that are of concern

### **B. Project Schedule**

CA PORE 10(4), 200(1), and 201(1) are not identified for a program year in the Federal Lands Highway Program (FLHP). The project plans, specifications, and estimate (PS&E) will be prepared for excess FY 2012 funding. The size of the scope and budget may increase the chances of funding the project in FY 2012.

The NEPA clearance schedule will be established during the 30% design. 30% design is anticipated to be complete by June 2011 with 70% design complete by November 2011. There is sufficient time between the anticipated programmed date and the 30%-70% design to complete the NEPA clearance. Risk response actions are:

- Complete preliminary design and conduct review with environmental at the 70% design field review. NEPA is anticipated to be complete by November 2011.

### **C. Project Budget**

The project funding based on the PMIS for CA PORE 10(4), 200(1), and 201(1), is estimated to be an approximate value of \$ [REDACTED] which is less than the proposed conceptual construction estimate of \$ [REDACTED]. The funding for this project is not a definitive programmed amount and the budget will be based on available excess funding. Based upon the scope of proposed improvements, the current programmed amount is less than the construction estimate. To meet desirable improvements established in project scope, the project budget will exceed available funding. Scope of improvements will need to be refined to fit improvements within programmed budget but because of the close proximity this will be a minor effort as the design progresses. The original programmed amount as defined in the PMIS didn't include the additional roads for pavement preservation which accounts for some of the overage in the budget. The programmed amount should be revised to account for these items as appropriate.

The preliminary cost estimate was prepared by estimating the major work items, using a 25% contingency for unused items, and applying a 4.5% (2011) and 5% (2012) inflation factor. Inflation is variable and continuous monitoring of the construction estimate will occur to identify concerns as the design is advanced.

### **D. Management/Senior Leadership Support**

There are no high-risk concerns.

### **E. Project Human Resources**

CFLHD, PBS&J, and NPS-DSC are all located in Denver and have previous working relationships.

### **F. Other Business or Organizational Impacts**

Organization turn-over is occasional and there will be multiple functional disciplines involved. Risk response actions are:

- Documentation of project decisions
- The potential loss of a key team member can be offset with other team members



**GENERAL – Technical and Performance Risks**

**G. Technology**

There are no high-risk concerns.

**PROJECT MANAGEMENT - Planning, Issue and Change Management, Quality Assurance**

**I. Evaluation of PM Risks**

There are no high-risk concerns.

**EXTERNAL – Vendor, Legal, Environmental, Regulatory,**

**J. A/E**

A/E is large firm with multiple staff members that could complete the work.

# **CONCEPTUAL COST ESTIMATES**

**ENGINEER'S ESTIMATE ESCALATION COMPUTATION**

PROJECT NO. AND NAME <b>CA PORE 10(4)</b>	PROJECT TYPE (see definitions below), <b>General Construction</b>
PROJECT MANAGER <b>Nate Allen</b>	ATTACH ORIGINAL ESTIMATE (Use separate sheet for each schedule and option)

PROGRAM AMOUNT DATE <b>09/30/12</b>	PROGRAM AMOUNT \$ [REDACTED]
ENGINEER'S ESTIMATE DATE <b>12/01/10</b>	ENGINEER'S ESTIMATE [REDACTED]
ESCALATED ENGINEER'S ESTIMATE DATE <b>09/30/12</b>	ESCALATED ENGINEER'S ESTIMATE \$ [REDACTED]

**CALCULATIONS**

Begin Date <sub>2</sub>	End Date <sub>2</sub>	Escalation rate per year <sub>3</sub>	# Months projecting <sub>4</sub>	Escalation (approx., rounded up to nearest \$5,000)	Escalated Engineer's Estimate (does not include CE)
<b>December 1, 2010</b>	<b>December 31, 2010</b>	3.80%	0.99	\$ [REDACTED]	[REDACTED]
<b>January 1, 2011</b>	<b>December 31, 2011</b>	4.50%	12.00	\$ [REDACTED]	\$ [REDACTED] 0
<b>January 1, 2012</b>	<b>September 30, 2012</b>	5.00%	9.00	\$ [REDACTED]	\$ [REDACTED] 0
<b>Total Escalation</b>				\$ [REDACTED]	

**ESCALATION**

<b>June 1, 2009</b>	<b>December 31, 2009</b>
General Const. project:	2.5%
Asphalt Paving project:	2.5%
<b>January 1, 2010</b>	<b>December 31, 2010</b>
General Const. project:	3.8%
Asphalt Paving project:	3.8%
<b>January 1, 2011</b>	<b>December 31, 2011</b>
General Const. project:	4.5%
Asphalt Paving project:	4.5%
<b>January 1, 2012</b>	<b>December 31, 2012</b>
General Const. project:	5.0%
Asphalt Paving project:	5.0%
<b>January 1, 2013</b>	<b>December 31, 2015</b>
General Const. project:	6.0%
Asphalt Paving project:	6.0%

**DEFINITIONS**

**General Construction project:** This type of project does not have paving as the only major cost item. It should have several items that make up the majority of the cost.

**Asphalt Paving project:** This type of project has paving as the major cost item.

**INSTRUCTIONS**

- 1). Select either 'General Construction' or 'Asphalt Paving' from the pulldown list.
- 2). Begin and End dates must be within the escalation rate dates for each period.
- 3). Escalation rates are selected by the application from the values listed.
- 4). Months between the Begin and End dates are calculated by the application.

CONCEPTUAL LEVEL ESTIMATE OF PROBABLE CONSTRUCTION COSTS					
LIMANTOUR ROAD, CA PORE 10(4)					
PAY ITEM	ITEM DESCRIPTION	Unit	2010 UNIT COST	QUANTITY	2010 TOTAL
15101-0000	MOBILIZATION (12% OF TOTAL COST)	LPSM		ALL	
15201-0000	CONSTRUCTION SURVEYING AND STAKING (3% OF TOTAL COST)	LPSM		ALL	
15401-0000	CONTRACTOR TESTING (3% OF TOTAL COST)	LPSM		ALL	
15701-0000	SOIL EROSION CONTROL (2% OF TOTAL COST)	LPSM		ALL	
20303-1600	REMOVAL OF PAVEMENT, ASPHALT	SQYD		667	\$6,670.00
20401-0000	ROADWAY EXCAVATION	CUYD		2,700	
20425-1000	DITCH EXCAVATION (GRADE DITCH)	LNFT		500	
30101-0000	AGGREGATE BASE	TON		980	
30302-1000	DITCH RECONDITIONING	LNFT		3,000	
61702-0000	TERMINAL SECTION	EACH		16	
40301-0000	HOT ASPHALT CONCRETE PAVEMENT	TON		198	
40910-0200	SURFACE TREATMENT AGGREGATES, DESIGNATION 1B	SQYD		130,620	
40940-1300	EMULSIFIED ASPHALT, GRADE CRS-2P	TON		203	
41101-0000	PRIME COAT	TON		1	
41411-1000	CRACK, CLEANING AND SEALING	MILE		9	
42801-0000	FLEXIBLE PAVEMENT, FULL DEPTH PATCH	SQYD		2,740	
60501-0000	STANDARD UNDERDRAIN SYSTEM	LNFT		500	\$57,500.00
60201-0600	18" PIPE CULVERT	LNFT		80	
60201-0800	24" PIPE CULVERT	LNFT		160	
60201-1400	60" PIPE CULVERT	LNFT		80	
60202-0600	36" EQUIVALENT DIAMETER ARCH OR ELLIPTICAL PIPE CULVERT	LNFT		160	
60704-0000	CLEANING CULVERTS IN PLACE	EACH		24	
60707-0900	LINING 48-INCH PIPE CULVERT	LNFT		80	
60707-1000	LINING 54-INCH PIPE CULVERT	LNFT		80	\$80,000.00
63501-0000	TEMPORARY TRAFFIC CONTROL (8-10% OF TOTAL COST)	LPSM		ALL	
TBD	EXPANDED POLYSTYRENE (EPS) GEOFOAM	CUYD		2,300	\$230,000.00
	SAFETY IMPROVEMENTS (STRIPING, SIGNING, ETC.) (2% OF TOTAL COST)	LPSM		ALL	
	<b>SUB TOTAL:</b>				
				CONTINGENCY 25%	
	<b>TOTAL 2010 CONSTRUCTION COST:</b>				
				INFLATION - 2010 TO 2012	
	<b>TOTAL ENGINEERS ESTIMATE OF PROBABLE CONSTRUCTION COST 2012</b>				<b>\$0</b>

\* For inflation refer to FHWA's Engineer's Estimate Escalation Computation Spreadsheet Attached Separately

COST PER MILE BASED UPON DETAILED ESTIMATE: \$



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 10(4)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
<b>DATE :</b>	<b>16-Dec-10</b>
<b>CHECKED BY :</b>	<b>KAL</b>
<b>DATE :</b>	<b>17-Dec-10</b>
<b>JOB No :</b>	<b>100017577</b>

an **Atkins** company

CA PORE 10(4), Route 10 - 7.59 miles			Limantour Road
<b>Pavement Preservation, Chip Seal</b>			
<b>Surface Treatment Aggregates</b>			
<i>Surface Treatment Aggregates, Designation 1B. Designation and grading of surface treatment aggregates will be updated upon completion of pavement investigation.</i>			
<b>Limantour Road, Route 10</b>			
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
2.5	32	46,933	47,000
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
5.02	24	70,682	71,000
<b>Limantour Beach Trail Access Road, Route 206</b>			
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.37	22	4,775	4,800
Parking Lot (at end of the road)	Area (SF)	Total (SY)	Total Rounded (SY)
	7,602	845	850
<b>Laguna Road, Route 210</b>			
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.66	16	6,195	6,200
Parking Lot (at end of the road)	Area (SF)	Total (SY)	Total Rounded (SY)
	6,891	766	770



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 10(4)**

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an **Atkins** company

CA PORE 10(4), Route 10 - 7.59 miles						Limantour Road
<b>Emulsified Asphalt</b>						
<i>Emulsified Asphalt, Grade CRS-2P. Grade of emulsified asphalt will be updated upon completion of pavement investigation.</i>						
<b>Limantour Road, Route 10</b>						
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
2.5	32	46,933	0.37	238.7	73	73
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
5.02	24	70,682	0.37	238.7	110	110
<b>Limantour Beach Trail Access Road, Route 206</b>						
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.37	22	4,775	0.37	238.7	7	8
Parking Lot (at end of the road)	Area (SF)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	7,602	845	0.37	238.7	1	1
<b>Laguna Road, Route 210</b>						
Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.66	16	6,195	0.37	238.7	10	10
Parking Lot (at end of the road)	Area (SF)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	6,891	766	0.37	238.7	1	1



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 10(4)**

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<b>CA PORE 10(4), Route 10 - 7.59 miles</b>		<b>Limantour Road</b>		
<b>Crack, Cleaning and Sealing</b>				
The entire lengths of Limantour Road, Limantour Beach Trail Access Road, and Laguna Raod will be repaired with crack, cleaning and sealing.				
<b>Limantour Road, Route 10</b>				
Total Length (MILES)	Total Rounded (MILES)			
7.52	8			
<b>Limantour Beach Trail Access Road, Route 206</b>				
Total Length (MILES)	Total Rounded (MILES)			
0.37	0.4			
<b>Laguna Road, Route 210</b>				
Length of Roadway (MILES)	Total Rounded (MILES)			
0.66	0.7			
<b>Flexible Pavement, Full Depth Patch</b>				
Locations with damaged pavement will be repaired with flexible pavement, full depth patching.				
Final locations for pavement patching will be updated upon completion of pavement investigation.				
<b>Limantour Road, Route 10</b>				
Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
5	100	32	1,778	1,800
<b>Limantour Beach Trail Access Road, Route 206</b>				
Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
8	25	22	489	490
<b>Laguna Road, Route 210</b>				
Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
10	25	16	444	450



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 10(4)**

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**CA PORE 10(4), Route 10 - 7.59 miles** **Limantour Road**

**Landslide Stabilization**

There is an existing landslide on Limantour Road near Station 300+00. The landslide movement will be mitigated with subexcavation, aggregate base, Expanded Polystyrene (EPS) Geofoam, and pavement patching (includes superpave pavement, prime coat, tack coat, and fog seal). The area is approximately 6,000 SF (250' length x 24' width). Pavement treatment recommendations will be updated upon completion of pavement investigation.

**Removal of Pavement, Asphalt**

Length (FEET)	Width (FEET)	Total (SY)
250	24	667

**Roadway Excavation**

Assume 12' total, 10' for Expanded Polystyrene (EPS) Geofoam and 2' for aggregate base. Will be updated after pavement investigation is complete.

Length (FEET)	Width (FEET)	Depth (FEET)	Total (CY)	Total Rounded (CY)
250	24	12	2,667	2,700

**Expanded Polystyrene (EPS) Geofoam**

Assume 10'. Will be updated after pavement investigation is complete.

Length (FEET)	Width (FEET)	Depth (FEET)	Total (CY)	Total Rounded (CY)
250	24	10	2,222	2,300

**Aggregate Base**

Assume 2'. Will be updated after pavement investigation is complete.

Length (FEET)	Width (FEET)	Depth (FEET)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
250	24	2	139	1,668,000	834	840

**Hot Asphalt Concrete Pavement**

Assume 3". Will be updated after pavement investigation is complete.

Length (FEET)	Width (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
250	24	3	145.2	217,800	109	110

**Prime Coat**

Length (FEET)	Width (FEET)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
250	24	0.27	233	0.8	0.8



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 10(4)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
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<b>CHECKED BY :</b>	<b>KAL</b>
<b>DATE :</b>	<b>17-Dec-10</b>
<b>JOB No :</b>	<b>100017577</b>

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CA PORE 10(4), Route 10 - 7.59 miles							Limantour Road	
<b>Parking Pullouts/Trailhead Parking</b>								
Assume 8 parking pullouts/trailhead parking areas will require 4' paved aprons. Specific locations and sizes of parking pullouts/trailhead parking areas will be obtained at the next field review.								
<b>Aggregate Base</b>								
Assume 5". Will be updated after pavement investigation is complete.								
Number of Locations	Length (FEET)	Width (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)	
8	150	4	5	139	278,000	139	140	
<b>Hot Asphalt Concrete Pavement</b>								
Assume 3". Will be updated after pavement investigation is complete.								
Number of Locations	Length (FEET)	Width (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)	
8	150	4	3	145.2	174,240	87	88	
<b>Prime Coat</b>								
Number of Locations	Length (FEET)	Width (FEET)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)		
8	150	4	0.27	233	0.6	0.6		



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 10(4)**

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<b>CA PORE 10(4), Route 10 - 7.59 miles</b>	<b>Limantour Road</b>
<p><b>Guardrail Terminal Sections</b>  Based on current RIP data, there are 8 locations with existing guardrail. All guardrail terminal sections will be replced and assume 2 terminal sections per location of guardrail.  Total number of guardrail terminal sections is 16.</p> <p><b>Cleaning Culverts in Place</b>  Based on the scoping site review, existing culverts will be cleaned as necessary. Assume 24 culverts for cleaning.</p> <p><b>Lining Culvert</b>  Based on the scoping site review, some cross-culverts will require lining. Approximately 2 existing cross-culverts will be lined.  Assume 1 cross-culvert with average lenth 80 LF and a pipe size of 48"  Assume 1 cross-culvert with average lenth 80 LF and a pipe size of 54"</p> <p><b>Proposed Culvert</b>  Based on the scoping site review, some cross-culverts will require replacement due to failing conditions. Approximately 6 existing cross-culverts will be replaced.  Assume 2 cross-culverts with average lenth 80 LF and a pipe size of 36" equivalent diameter arch or elliptical.  Assume 1 cross-culvert with average lenth 80 LF and a pipe size of 18".  Assume 2 cross-culverts with average lenth 80 LF and a pipe size of 24".  Assume 1 cross-culvert with average lenth 80 LF and a pipe size of 60".</p> <p><b>Standard Underdrain System</b>  Based on the scoping site review, underdrain will be added at strategic locations to be determined. Assume 500 LF of underdrain.</p> <p><b>Ditch Excavation (Grade Ditch)</b>  Based on the scoping site review, graded ditches will be added at strategic locations to be determined. Assume 500 LF of graded ditches.</p> <p><b>Ditch Reconditioning</b>  Based on the scoping site review, existing ditches will require reconditioning at strategic locations to be determined.  Assume approximately 3,000 LF of the existing roadside ditches will require reconditioning.</p>	

**ENGINEER'S ESTIMATE ESCALATION COMPUTATION**

PROJECT NO. AND NAME <b>CA PORE 200(1) &amp; 201(1)</b>	PROJECT TYPE (see definitions below), <b>Asphalt Paving</b>
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PROJECT MANAGER <b>Nate Allen</b>	ATTACH ORIGINAL ESTIMATE (Use separate sheet for each schedule and option)
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PROGRAM AMOUNT DATE <b>09/30/12</b>	PROGRAM AMOUNT [REDACTED]
ENGINEER'S ESTIMATE DATE <b>12/01/10</b>	ENGINEER'S ESTIMATE \$ [REDACTED]
ESCALATED ENGINEER'S ESTIMATE DATE <b>09/30/12</b>	ESCALATED ENGINEER'S ESTIMATE \$ [REDACTED]

**CALCULATIONS**

Begin Date <sub>2</sub>	End Date <sub>2</sub>	Escalation rate per year <sub>3</sub>	# Months projecting <sub>4</sub>	Escalation (approx., rounded up to nearest \$5,000)	Escalated Engineer's Estimate (does not include CE)
<b>December 1, 2010</b>	<b>December 31, 2010</b>	3.80%	0.99	\$ [REDACTED]	\$ [REDACTED] 0
<b>January 1, 2011</b>	<b>December 31, 2011</b>	4.50%	12.00	\$ [REDACTED]	\$ [REDACTED] 0
<b>January 1, 2012</b>	<b>September 30, 2012</b>	5.00%	9.00	\$ [REDACTED]	\$ [REDACTED] 0
<b>Total Escalation</b>				\$ [REDACTED]	

**ESCALATION**

<b>June 1, 2009</b>	<b>December 31, 2009</b>
General Const. project:	2.5%
Asphalt Paving project:	2.5%
<b>January 1, 2010</b>	<b>December 31, 2010</b>
General Const. project:	3.8%
Asphalt Paving project:	3.8%
<b>January 1, 2011</b>	<b>December 31, 2011</b>
General Const. project:	4.5%
Asphalt Paving project:	4.5%
<b>January 1, 2012</b>	<b>December 31, 2012</b>
General Const. project:	5.0%
Asphalt Paving project:	5.0%
<b>January 1, 2013</b>	<b>December 31, 2015</b>
General Const. project:	6.0%
Asphalt Paving project:	6.0%

**DEFINITIONS**

**General Construction project:** This type of project does not have paving as the only major cost item. It should have several items that make up the majority of the cost.

**Asphalt Paving project:** This type of project has paving as the major cost item.

**INSTRUCTIONS**

- 1). Select either 'General Construction' or 'Asphalt Paving' from the pulldown list.
- 2). Begin and End dates must be within the escalation rate dates for each period.
- 3). Escalation rates are selected by the application from the values listed.
- 4). Months between the Begin and End dates are calculated by the application.

**CONCEPTUAL LEVEL ESTIMATE OF PROBABLE CONSTRUCTION COSTS**

**LIGHTHOUSE ROAD AND CHIMNEY ROCK ROAD, CA PORE 200(1) AND 201(1)**

PAY ITEM	ITEM DESCRIPTION	Unit	2010 UNIT COST	QUANTITY	2010 TOTAL
15101-0000	MOBILIZATION (12% OF TOTAL COST)	LPSM	\$	ALL	\$
15201-0000	CONSTRUCTION SURVEYING AND STAKING (3% OF TOTAL COST)	LPSM	\$	ALL	\$
15401-0000	CONTRACTOR TESTING (3% OF TOTAL COST)	LPSM	\$	ALL	\$
15701-0000	SOIL EROSION CONTROL (2% OF TOTAL COST)	LPSM	\$	ALL	\$
20302-1400	REMOVAL OF GUARDRAIL, TIMBER	LNFT	\$		\$ .00
20303-1600	REMOVAL OF PAVEMENT, ASPHALT	SOYD	\$	7,940	\$
20420-0000	EMBANKMENT CONSTRUCTION	CUYD	\$	99	\$
20425-1000	DITCH EXCAVATION (GRADE DITCH)	LNFT	\$	100	\$
30101-0000	AGGREGATE BASE	TON	\$	600	\$
30302-1000	DITCH RECONDITIONING	LNFT	\$	500	\$
61702-0000	TERMINAL SECTION	EACH	\$	2	\$
40301-0000	HOT ASPHALT CONCRETE PAVEMENT	TON	\$	1,608	\$
40910-0200	SURFACE TREATMENT AGGREGATES, DESIGNATION 1B	SOYD	\$	28,920	\$
40940-1300	EMULSIFIED ASPHALT, GRADE CRS-2P	TON	\$	45	\$
41101-0000	PRIME COAT	TON	\$	12	\$
41411-1000	CRACK, CLEANING AND SEALING	MILE	\$	3	\$
42801-0000	FLEXIBLE PAVEMENT, FULL DEPTH PATCH	SOYD	\$	1,307	\$
60201-0800	24" PIPE CULVERT	LNFT	\$	64	\$
60901-2300	CURB, ASPHALT, 6-INCH DEPTH	LNFT	\$	4,900	\$
60908-1000	PAVED DITCH, ASPHALT	SOYD	\$	1,400	\$
61701-1400	GUARDRAIL SYSTEM G4, TYPE 2, CLASS B WOOD POSTS	LNFT	\$	330	\$
61903-0300	CATTLE GUARD, 16 FEET	EACH	\$	3	\$
61903-0500	CATTLE GUARD, 20 FEET	EACH	\$	1	\$
63501-0000	TEMPORARY TRAFFIC CONTROL (8-10% OF TOTAL COST)	LPSM	\$	ALL	\$
TBD	ADA COMPLIANT GATE	EACH	\$	1	\$
	SAFETY IMPROVEMENTS (STRIPING, SIGNING, ETC.) (2% OF TOTAL COST)	LPSM	\$	ALL	\$
	<b>SUB TOTAL:</b>				\$ 00
	CONTINGENCY			25%	\$
	<b>TOTAL 2010 CONSTRUCTION COST:</b>				\$
	INFLATION - 2010 TO 2012				\$
	<b>TOTAL ENGINEERS ESTIMATE OF PROBABLE CONSTRUCTION COST 2012</b>				\$

\* For inflation refer to FHWA's Engineer's Estimate Escalation Computation Spreadsheet Attached Separately

COST PER MILE BASED UPON DETAILED ESTIMATE: \$



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 200(1)**

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<b>JOB No :</b>	<b>100017577</b>

an **Atkins** company

**CA PORE 200(1), Route 200 - 1.30 miles** **Lighthouse Road**

**Pavement Preservation, Chip Seal**

**Surface Treatment Aggregates**

*Surface Treatment Aggregates, Designation 1B. Designation and grading of surface treatment aggregates will be updated upon completion of pavement investigation.*

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.87	20	10,208	11,000

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.43	12	3,027	3,100

Roundabout	Area (SF)	Total (SY)	Total Rounded (SY)
	5,806	645	650

Parking Lot (next to roundabout)	Area (SF)	Total (SY)	Total Rounded (SY)
	15,778	1,753	1,800

Parking Lot (next to Mission 66 green garage)	Area (SF)	Total (SY)	Total Rounded (SY)
	2,493	277	280

**Emulsified Asphalt**

*Emulsified Asphalt, Grade CRS-2P. Grade of emulsified asphalt will be updated upon completion of pavement investigation.*

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.87	20	10,208	0.37	238.7	16	16

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.43	12	3,027	0.37	238.7	5	5

Roundabout	Area (SF)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	5,806	645	0.37	238.7	1	1

Parking Lot (next to roundabout)	Area (SF)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	15,778	1,753	0.37	238.7	3	3



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 200(1)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
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<b>JOB No :</b>	<b>100017577</b>

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**CA PORE 200(1), Route 200 - 1.30 miles** **Lighthouse Road**

Parking Lot (next to Mission 66 green garage)	Area (SF)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	2,493	277	0.37	238.7	0.4	1

**Crack, Cleaning and Sealing**

The entire length of Lighthouse Road will be repaired with crack, cleaning and sealing.

Total Length (MILES)	Total Rounded (MILES)
1.30	1.3

**Flexible Pavement, Full Depth Patch**

Locations with damaged pavement will be repaired with flexible pavement, full depth patching.  
 Final locations for pavement patching will be updated upon completion of pavement investigation.

Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
3	100	20	667	670

**Parking Lot (next to roundabout)**

Area adjacent to the comfort station will be regraded for ADA compliance. Assume approximately 25% of parking lot area will be regraded.

**Removal of Pavement, Asphalt**

Area (SF)	Total (SY)	Total Rounded (SY)
3,945	438	440

**Aggregate Base**

Assume 5". Will be updated after pavement investigation is complete.

Area (SF)	Depth (INCHES)	Weight Conversion (LBS/CF)	TOTAL (LBS)	Total (TONS)	Total Rounded (TONS)
3,945	5	139	228,452	114	120



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 200(1)**

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CA PORE 200(1), Route 200 - 1.30 miles					Lighthouse Road	
<b>Prime Coat</b>						
Length (FEET)	Width (FEET)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)	
250	24	0.27	233	0.8	0.8	
<b>Hot Asphalt Concrete Pavement</b>						
<i>Assume 3". Will be updated after pavement investigation is complete.</i>						
Length (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	TOTAL (LBS)	Total (TONS)	Total Rounded (TONS)	
250	3	145.2	9,075	5	5	
<b>ADA Compliant Gate</b>						
The gate adjacent to the roundabout on Lighthouse Road limits accessibility of the road beyond to people with ADA needs. During design the gate will be reviewed for replacement with an ADA compliant gate.						
<b>Cattle Guard</b>						
The existing cattle guard will be replaced. Total number of cattle guards requiring replacement is 1. Assume 20' gate.						
<b>Existing Guardrail Removal and Proposed Guardrail Placement</b>						
Existing timber guardrail will be replaced with a crashworthy criteria meeting guardrail. The existing guardrail is approximately 330 LF. Total length of proposed guardrail is 330 LF.						
<b>Guardrail Terminal Sections</b>						
Existing timber guardrail will be replaced with a crashworthy criteria meeting guardrail. There will be 2 terminal sections for the proposed guardrail. Total number of guardrail terminal sections is 2.						
<b>Ditch Excavation (Grade Ditch)</b>						
Based on the scoping site review, graded ditches will be added at strategic locations to be determined. Assume 100 LF of graded ditches.						
<b>Ditch Reconditioning</b>						
Based on the scoping site review, existing ditches will require reconditioning at strategic locations to be determined. Assume approximately 500 LF of the existing roadside ditches will require reconditioning.						



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 201(1)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
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<b>JOB No :</b>	<b>100017577</b>

an **Atkins** company

**CA PORE 201(1), Route 201 - 0.91 miles** **Chimney Rock Road**

**Removal of Pavement, Asphalt**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Area (SF)	Total (SY)	Total Rounded (SY)
0.91	14	67,267	7,474	7,500

**Aggregate Base**

Number of Pullouts	Length of Pullout (FEET)	Width of Pullout (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
4	100	10	5	139	231,667	116	120

Parking Lot (with comfort station)	Area (SF)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
	12,383	5	139	717,182	359	360

**Prime Coat**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.91	14	0.27	233	8.7	8.7

Number of Pullouts	Length of Pullout (FEET)	Width of Pullout (FEET)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
4	100	10	0.27	233	0.5	0.6

Parking Lot (with comfort station)	Area (SF)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	12,383	0.27	233	1.6	1.6

**Hot Asphalt Concrete Pavement**

*Assume 3". Will be updated after pavement investigation is complete.*

Length of Roadway (MILES)	Existing EOP Width (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
0.91	14	3	145.2	2,441,799	1,221	1,300

Number of Pullouts	Length of Pullout (FEET)	Width of Pullout (FEET)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
4	100	10	3	145.2	145,200	73	73

Parking Lot (with comfort station)	Area (SF)	Depth (INCHES)	Weight Conversion (LBS/CF)	Total (LBS)	Total (TONS)	Total Rounded (TONS)
	12,383	3	145.2	449,503	225	230



SUBJECT: UPDATED QUANTITIES  
PROJECT: CA PORE 201(1)

COMPLETED BY :	BCBS
DATE :	16-Dec-10
CHECKED BY :	KAL
DATE :	17-Dec-10
JOB No :	100017577

an **Atkins** company

**CA PORE 201(1), Route 201 - 0.91 miles** **Chimney Rock Road**

**Pavement Preservation, Chip Seal**

**Surface Treatment Aggregates**

Surface Treatment Aggregates, Designation 1B. Designation and grading of surface treatment aggregates will be updated upon completion of pavement investigation.

**Chimney Rock Road, Route 201**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.91	14	7,474	7,500

Number of Pullouts	Length of Pullout (FEET)	Width of Pullout (FEET)	Total (SY)	Total Rounded (SY)
4	100	10	444	450

Parking Lot (with comfort station)	Area (SF)	Total (SY)	Total Rounded (SY)
	12,383	1,376	1,400

**Lifeboat Station Road, Route 401**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.35	9	1,848	1,900

**Fish Docks (Mendoza) Road, Route 402**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Total Rounded (SY)
0.13	11	839	840



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 201(1)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
<b>DATE :</b>	<b>16-Dec-10</b>
<b>CHECKED BY :</b>	<b>KAL</b>
<b>DATE :</b>	<b>17-Dec-10</b>
<b>JOB No :</b>	<b>100017577</b>

an **Atkins** company

**CA PORE 201(1), Route 201 - 0.91 miles** **Chimney Rock Road**

**Emulsified Asphalt**

*Emulsified Asphalt, Grade CRS-2P. Grade of emulsified asphalt will be updated upon completion of pavement investigation.*

**Chimney Rock Road, Route 201**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.91	14	7,474	0.37	238.7	12	12

Number of Pullouts	Length of Pullout (FEET)	Width of Pullout (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
4	100	10	444	0.37	238.7	1	1

Parking Lot (with comfort station)	Area (SF)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
	12,383	1,376	0.37	238.7	2	2

**Lifeboat Station Road, Route 401**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.35	9	1,848	0.37	238.7	3	3

**Fish Docks (Mendoza) Road, Route 402**

Length of Roadway (MILES)	Existing EOP Width (FEET)	Total (SY)	Weight Conversion (GAL/SY)	Weight Conversion (GAL/TON)	Total (TONS)	Total Rounded (TONS)
0.13	11	839	0.37	238.7	1	1



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 201(1)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
<b>DATE :</b>	<b>16-Dec-10</b>
<b>CHECKED BY :</b>	<b>KAL</b>
<b>DATE :</b>	<b>17-Dec-10</b>
<b>JOB No :</b>	<b>100017577</b>

an **Atkins** company

<b>CA PORE 201(1), Route 201 - 0.91 miles</b>	<b>Chimney Rock Road</b>
---	--------------------------

**Crack, Cleaning and Sealing**

The entire lengths of Chimney Rock Road, Lifeboat Station Road, and Fish Docks (Mendoza) Road will be repaired with crack, cleaning and sealing.

**Chimney Rock Road, Route 201**

Total Length (MILES)	Total Rounded (MILES)
0.91	1.0

**Lifeboat Station Road, Route 401**

Total Length (MILES)	Total Rounded (MILES)
0.35	0.4

**Fish Docks (Mendoza) Road, Route 402**

Length of Roadway (MILES)	Total Rounded (MILES)
0.13	0.2

**Flexible Pavement, Full Depth Patch**

Locations with damaged pavement will be repaired with flexible pavement, full depth patching.  
 Final locations for pavement patching will be updated upon completion of pavement investigation.

**Chimney Rock Road, Route 201**

Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
3	100	14	467	470

**Lifeboat Station Road, Route 401**

Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
3	25	9	75	75

**Fish Docks (Mendoza) Road, Route 402**

Number of Locations	Length (FEET)	Width (FEET)	Total (SY)	Total Rounded (SY)
3	25	11	92	92



**SUBJECT: UPDATED QUANTITIES**  
**PROJECT: CA PORE 201(1)**

<b>COMPLETED BY :</b>	<b>BCBS</b>
<b>DATE :</b>	<b>16-Dec-10</b>
<b>CHECKED BY :</b>	<b>KAL</b>
<b>DATE :</b>	<b>17-Dec-10</b>
<b>JOB No :</b>	<b>100017577</b>

an **Atkins** company

**CA PORE 201(1), Route 201 - 0.91 miles** **Chimney Rock Road**

**Embankment Construction**

Assume 8" of embankment for pullouts. Will be updated after pavement investigation is complete.

Number of Pullouts	Length of Pullout (FEET)	Width of Pullout (FEET)	Depth (INCHES)	Total (CF)	Total (CY)
4	100	10	8	2,667	99

**Cattle Guard**

The existing cattle guards will be replaced. Total number of cattle guards requiring replacement is 3. Assume 16' gates.

**Proposed Culvert**

Based on the scoping site review, additional cross-culverts will be added at strategic locations to be determined. Assume 4 new cross-culverts with average length of 16 LF. Total LF = 64 LF. Pipe size is assumed to be 24".

**6" Asphalt Curb**

Based on the scoping site review, a paved ditch and 6" asphalt curb will be added along the south side of the road.

Asphalt Curb Length (MILES)	Asphalt Curb Length (FT)	Total Rounded (FT)
0.91	4805	4,900

**Paved Asphalt Ditch**

Based on the scoping site review, a paved ditch and 6" asphalt curb will be added along the south side of the road. Assume 2.5' wide paved ditches.

Paved Ditch Length (MILES)	Paved Ditch Width (FT)	Paved Ditch (SY)	Total Rounded (SY)
0.91	2.5	1,335	1,400

# **PLANS AND TYPICAL SECTIONS**

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	A1	A1

# U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

PLANS FOR PROPOSED

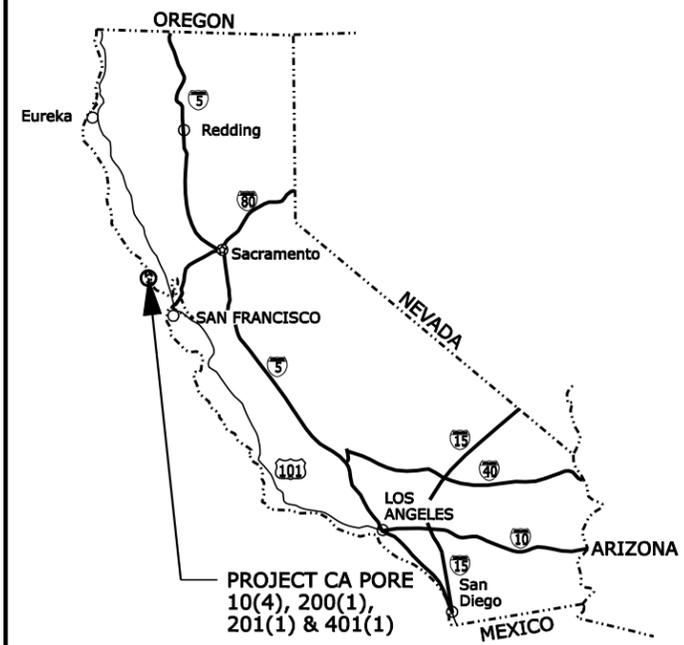
## CA PORE 10(4), 200(1), & 201(1) **LIMANTOUR ROAD, LIGHTHOUSE ROAD, & CHIMNEY ROCK ROAD**

POINT REYES NATIONAL SEASHORE  
MARIN COUNTY

LENGTH OF:

LIMANTOUR ROAD, 10(4) 7.52 miles  
LIGHTHOUSE ROAD, 200(1) 1.30 miles  
CHIMNEY ROCK ROAD, 201(1) 0.91 miles

INDEX TO SHEETS	
SHEET	DESCRIPTION
A1	TITLE SHEET
C1-C7	LIMANTOUR ROAD PLAN
C8	CHIMNEY ROCK ROAD PLAN
C9	LIFEBOAT STATION ROAD PLAN
C10-C11	LIGHTHOUSE ROAD PLAN



**KEY MAP OF CALIFORNIA**

**TYPE OF CONSTRUCTION:**  
Drainage, pavement rehabilitation, asphalt surfacing, and erosion control,

**DESIGN DESIGNATIONS:**

Limantour Road - 10(4)	Lighthouse Road - 200(1)	Chimney Rock Road - 201(1)
ADT (20xx) ----- xx	ADT (20xx) ----- xx	ADT (20xx) ----- xx
ADT (20xx) ----- xx	ADT (20xx) ----- xx	ADT (20xx) ----- xx
DHV ----- xx	DHV ----- xx	DHV ----- xx
D ----- xx%	D ----- xx%	D ----- xx%
T ----- xx%	T ----- xx%	T ----- xx%
V ----- 35/25	V ----- 30/15	V ----- 15
e(max) ----- 6%	e(max) ----- 6%	e(max) ----- 6%

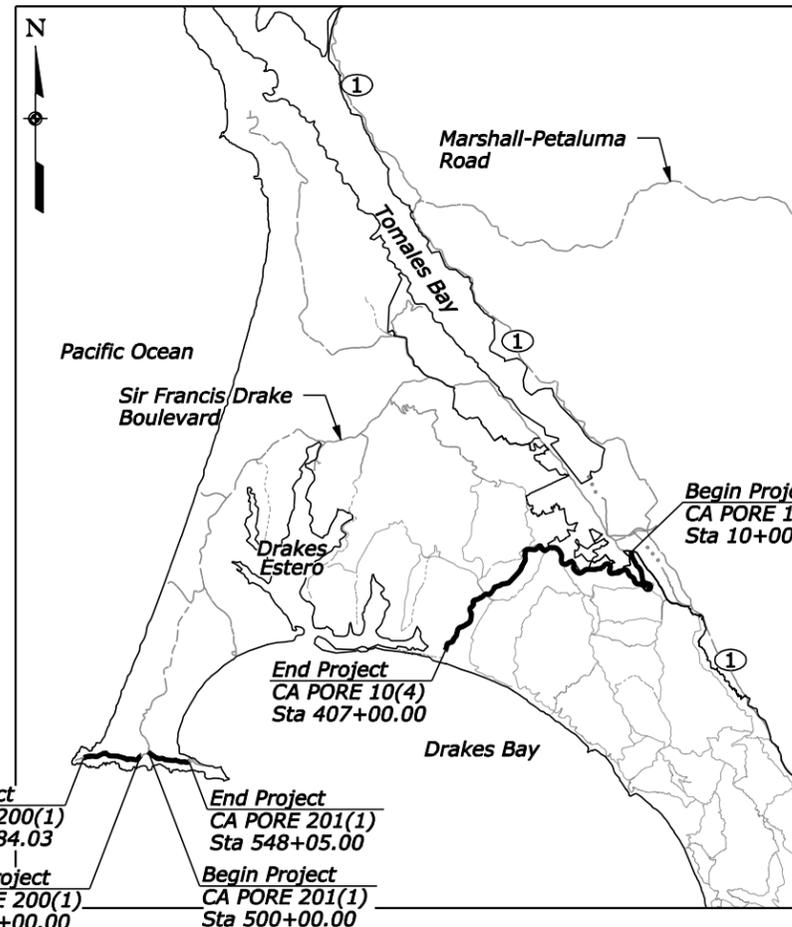
**U.S. CUSTOMARY DIMENSIONS:**  
Slopes are expressed as RISE:RUN

**SPECIFICATIONS:**  
"STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-03, U.S. CUSTOMARY UNITS"



**PRELIMINARY SCOPING**  
**December 16, 2010**  
**NOT FOR CONSTRUCTION**

**CALL BEFORE YOU DIG:**  
Underground Service Alert North  
1-800-227-2600



PLANS PREPARED BY



FOR



**U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION  
DENVER, COLORADO**

**RECOMMENDED:**

\_\_\_\_\_  
DIVISION ENGINEER, CENTRAL FEDERAL LANDS HIGHWAY DIVISION DATE: \_\_\_\_\_

\_\_\_\_\_  
SUPERINTENDENT, POINT REYES NATIONAL SEASHORE DATE: \_\_\_\_\_

**APPROVED:**

\_\_\_\_\_  
REGIONAL DIRECTOR, PACIFIC WEST REGION NATIONAL PARK SERVICE DATE: \_\_\_\_\_

12/20/2010 10:28:53 AM S:\Transport\100017577-Limantour\HwyDes\Draw\Sheets\A-Gen\_Sht\TTL\_10(4).dgn

PROJECT MANAGER	LEAD DESIGNER
NATHAN ALLEN	PBS&J

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	C1	C11



\$\$\$\$\$DATE\$\$\$\$\$ \$TIMES\$ \$\$\$\$\$\$GHI\$\$\$\$\$

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**LIMANTOUR ROAD**

Sheet 1 of 7

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	C2	C11



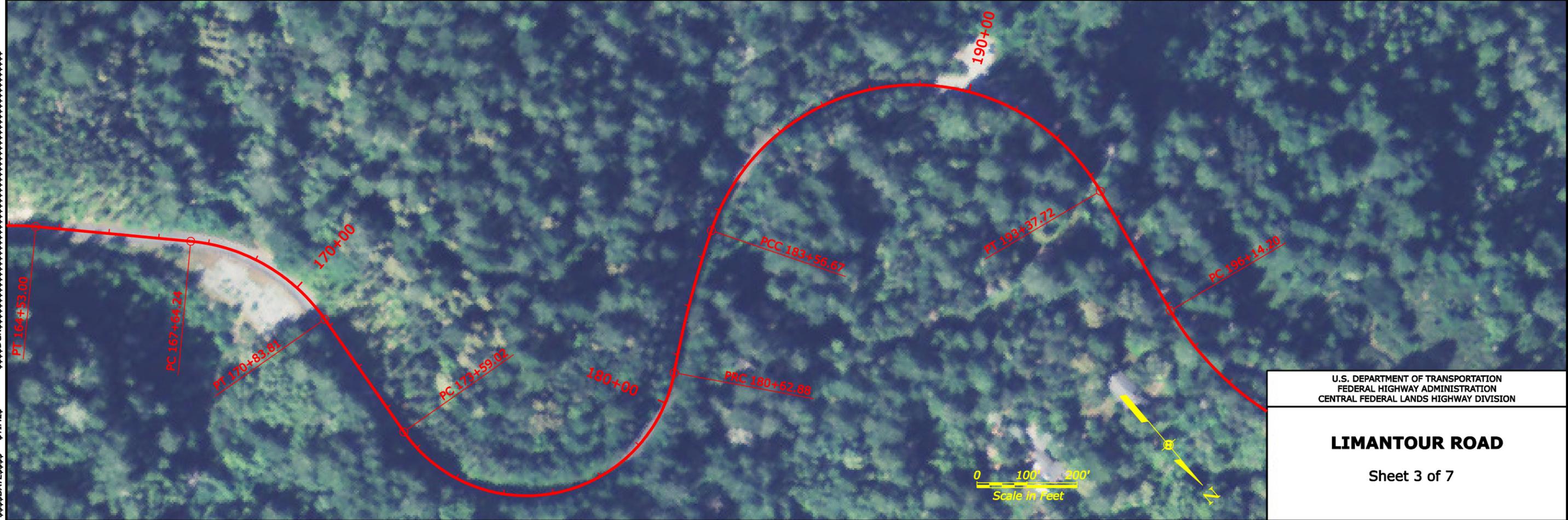
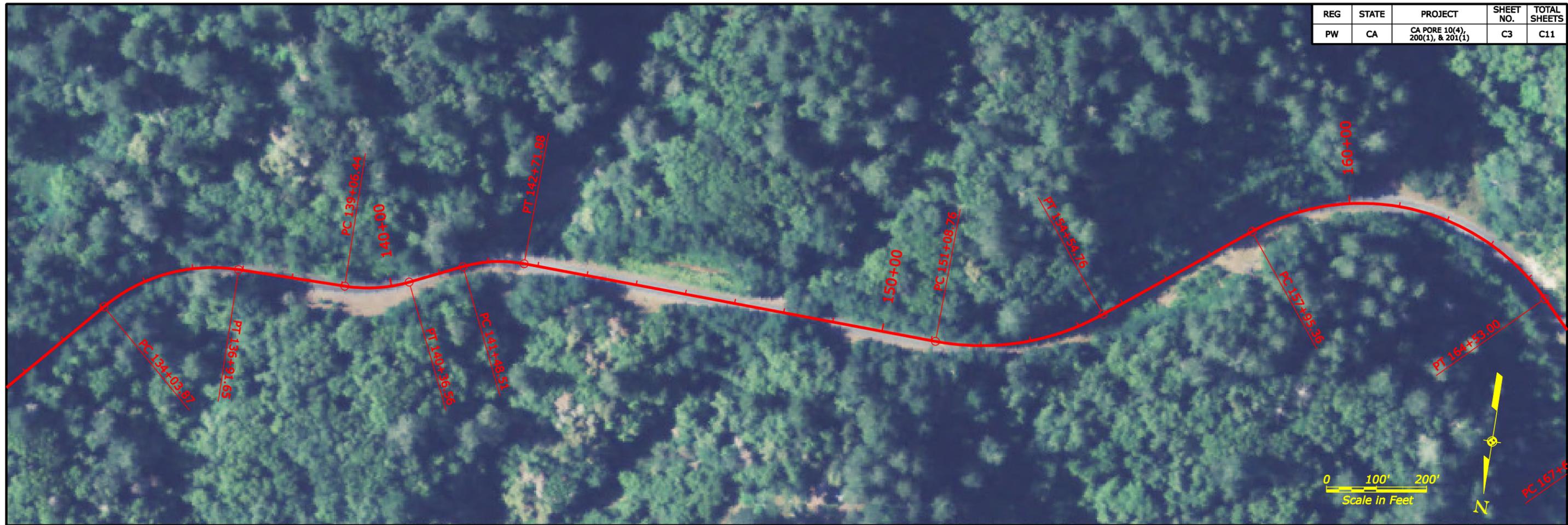
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 \$TIMES  
 \$\$\$\$\$\$DATE\$\$\$\$\$

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**LIMANTOUR ROAD**

Sheet 2 of 7

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	C3	C11



\*\*\*\*\*  
 \$\$\$DGN\$\$\$  
 \$TIMES\$  
 \$\$\$DATES\$\$\$

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

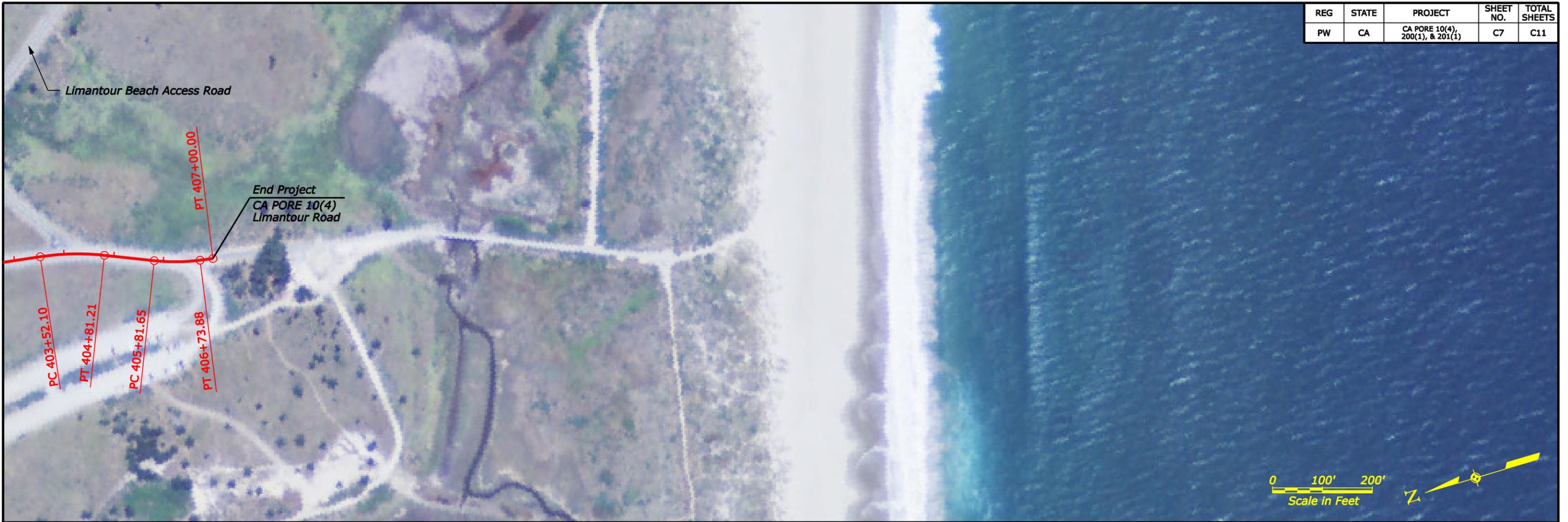
**LIMANTOUR ROAD**  
 Sheet 3 of 7







REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	C7	C11



\$\$\$\$DATES\$\$\$ \$TIMES\$ \$\$\$DGN\$\$\$

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**LIMANTOUR ROAD**

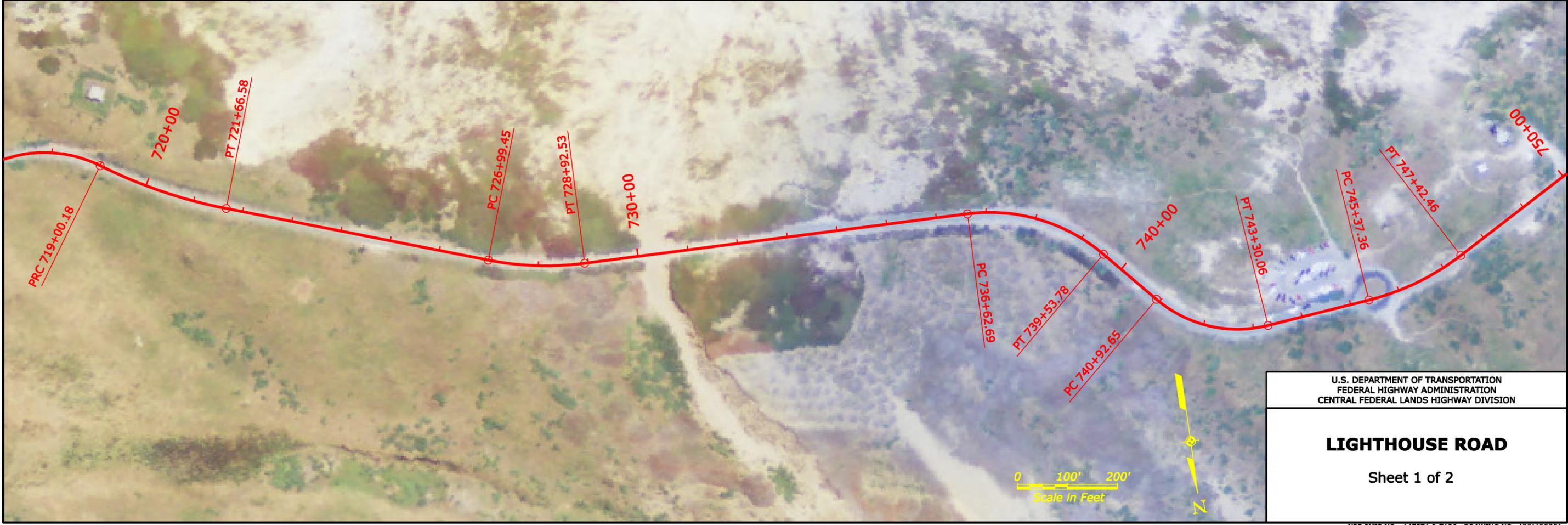
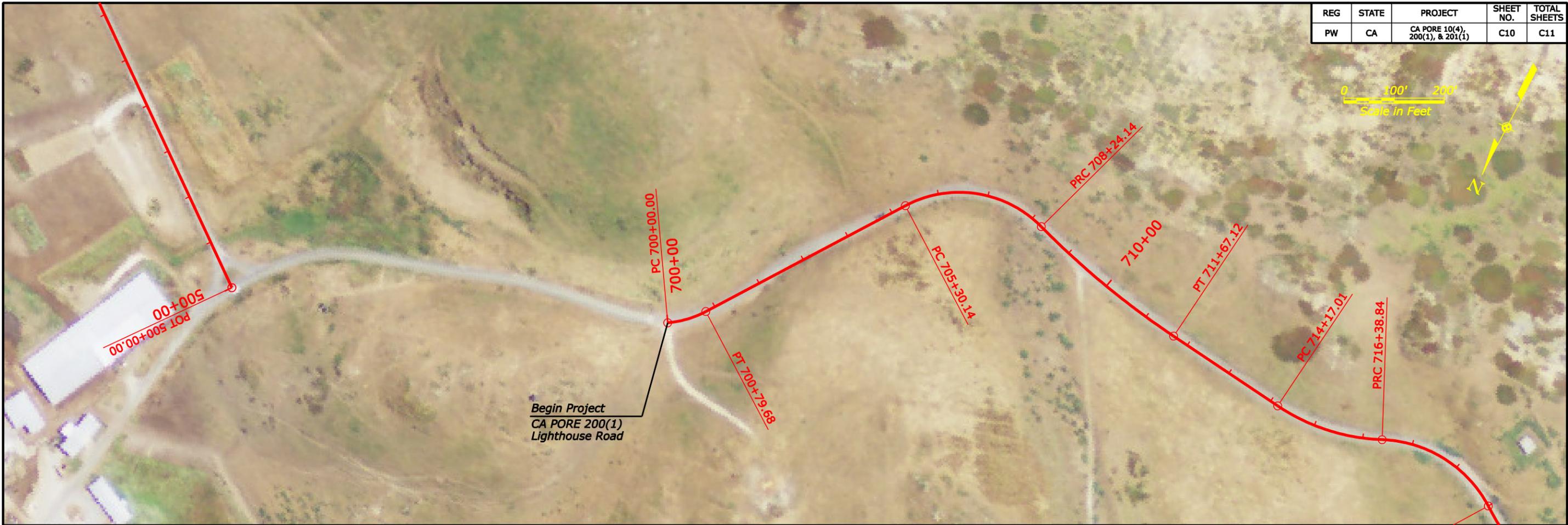
Sheet 7 of 7





REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	C10	C11

0 100' 200'  
Scale In Feet



0 100' 200'  
Scale In Feet



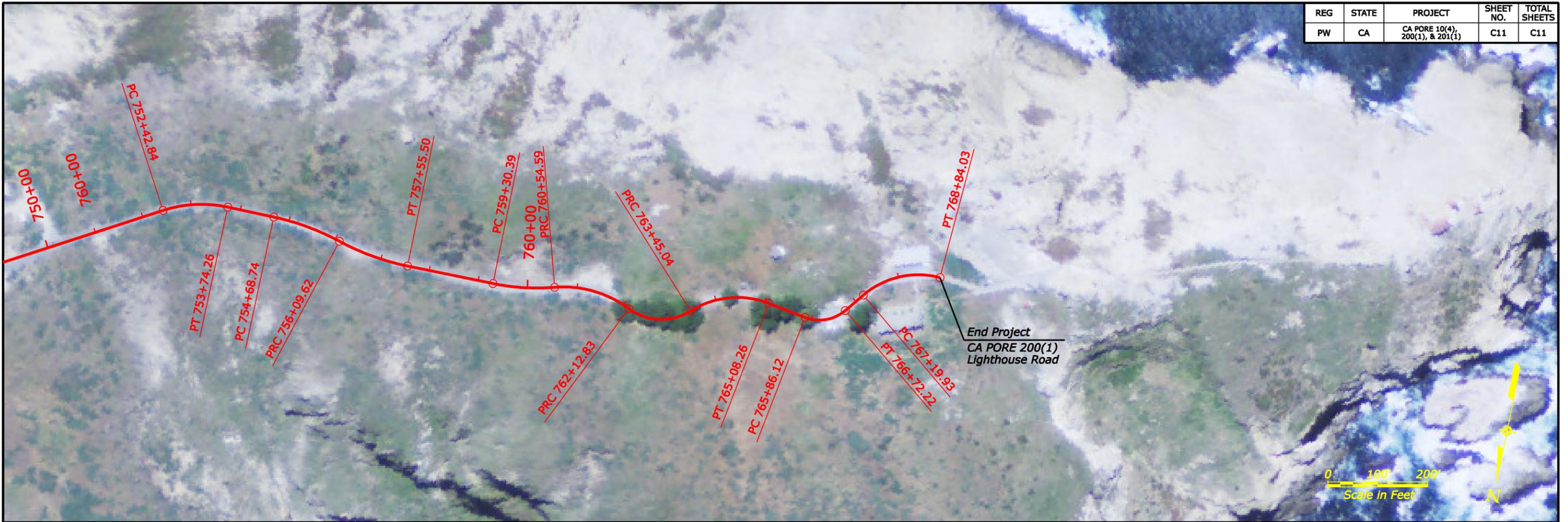
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**LIGHTHOUSE ROAD**

Sheet 1 of 2

\*\*\*\*\*  
\$\$\$\$\$DGN\$\$\$\$\$  
\$\$\$\$\$  
\$TIMES\$  
\$\$\$\$\$DATE\$\$\$\$\$

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
PW	CA	CA PORE 10(4), 200(1), & 201(1)	C11	C11



End Project  
CA PORE 200(1)  
Lighthouse Road

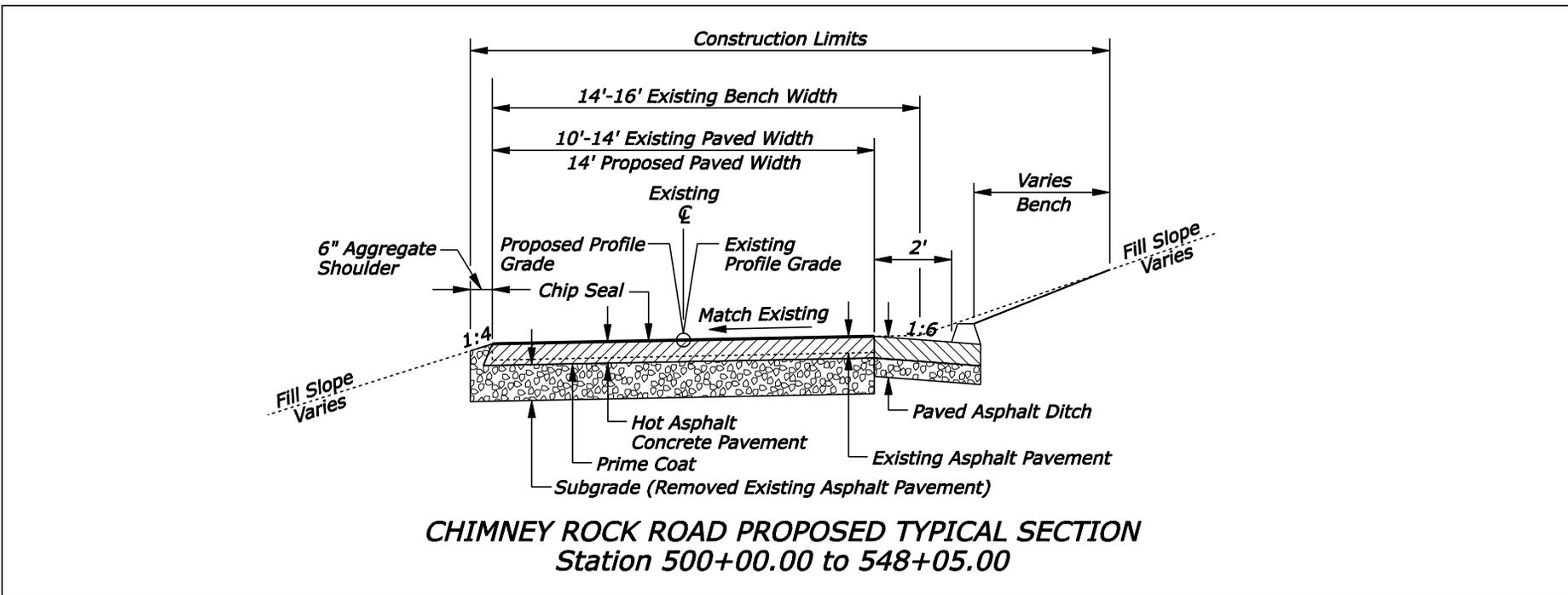
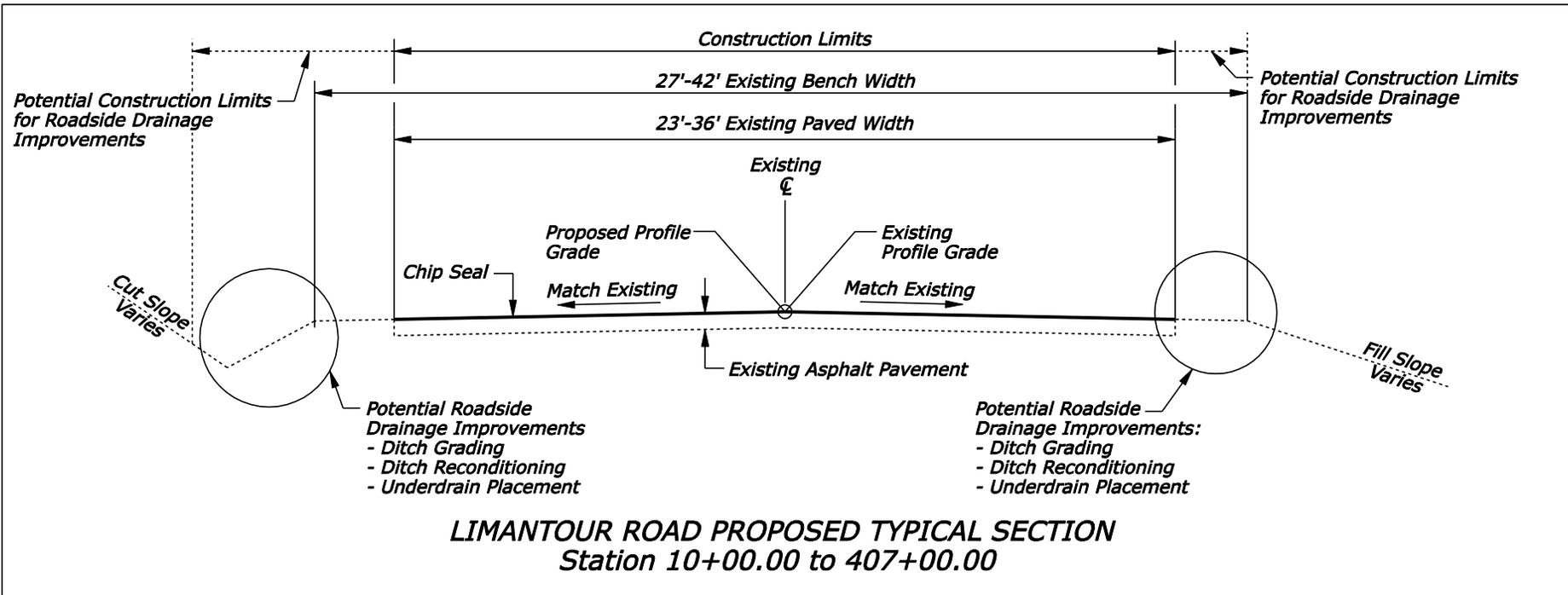
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Scale in Feet

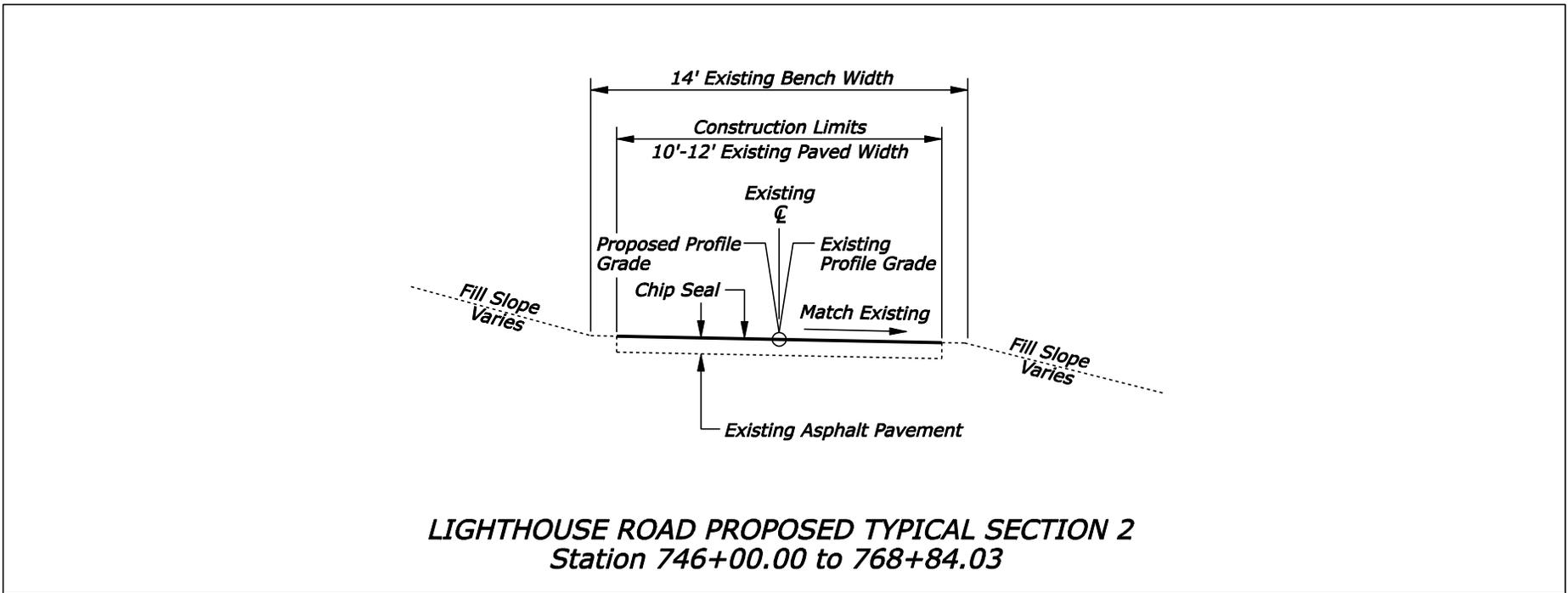
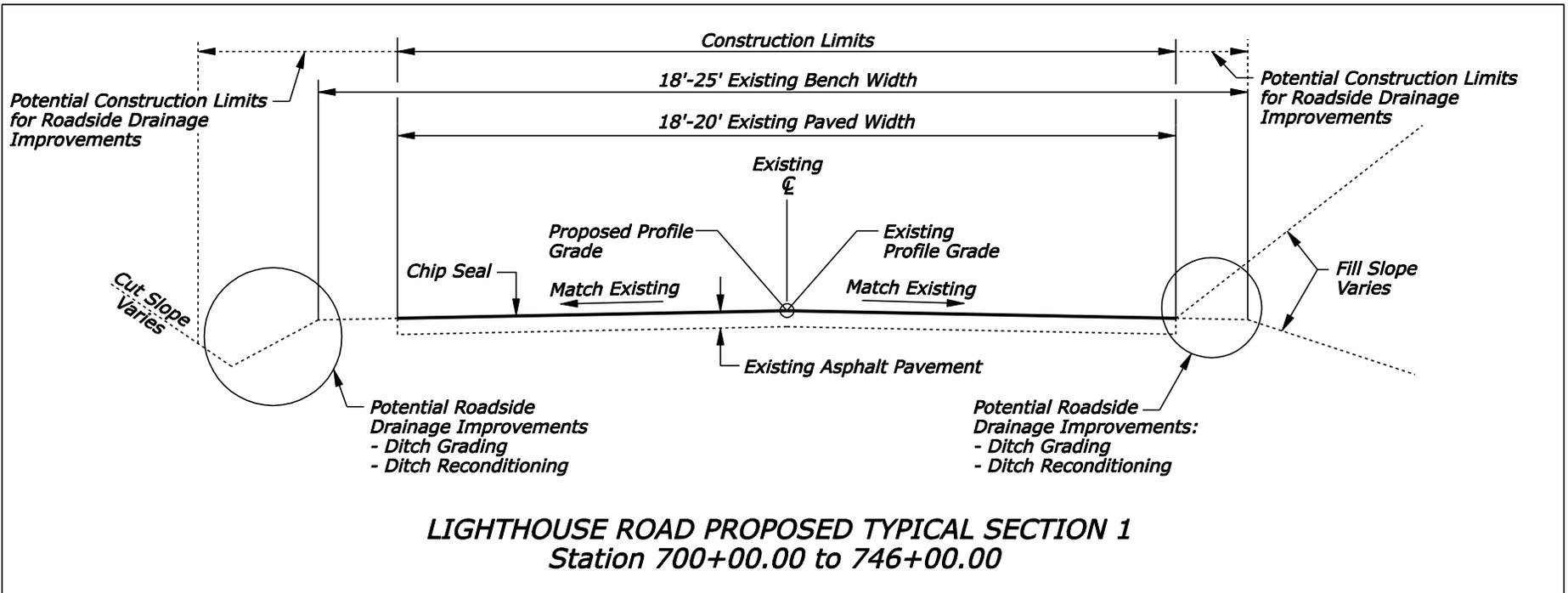
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U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**LIGHTHOUSE ROAD**

Sheet 2 of 2





# **DRAINAGE STRUCTURE INVENTORY**

Drainage Structure Inventory																							
Location	Figure	Station	Size	Shape	Material	Condition	Scouring		Sediment/Debris		Pipe		End Treatments		Riprap Aprons		Clean Out	Lining	Regrade		Replace		
							Inlet	Outlet	Inlet	Outlet	Abrasion	Corrosion	Inlet	Outlet	Inlet	Outlet			Inlet	Outlet			
Limantour Road	1	12+00	45" x 29"	Elliptical	CMP	Sited Flooding area	X	X	X	X		X									X		
			45" x 29"	Elliptical	CMP	Sited Flooding area	X	X	X	X		X											X
	2	28+90	36"	Circular	CMP			X					X	X			X						
	3	36+00	42"	Circular	CMP	Midway transitions to HDPE										X	X						
			50"	Circular	HDPE			X								X	X						
			18"	Circular	CMP	Crushed Pipe Midway																	X
	4	55+67	53" x 34"	Elliptical	CMP	Sited Flooding area												X					
			45" x 29"	Elliptical	CMP	Sited Flooding area													X				
	5	62+47	60"	Circular	CMP	Bottom rotted out, steady flowing stream				X	X		X	X								X	
	6	75+00	30"	Circular	CMP	pipe rundown				X			X			X							
	7	78+00	18"	Circular	CMP	Stormdrain system: Good condition												X					
			12"	Circular	CMP	Stormdrain system: Good condition													X				
			24"	Circular	CMP	Stormdrain system: Good condition													X				
8	104+88	18"	Circular	CMP													X						
9	106+27	18"	Circular	CMP														X					
		18"	Circular	CMP	scouring at exit			X										X					
10	109+00	18"	Circular	CMP	Pipe rundown												X						
11	111+00	18"	Circular	CMP	Pipe rundown												X						
12	112+00	18"	Circular	CMP	Pipe rundown												X						
13	115+00	36"	Circular	CMP	Pipe riser with debris reflector												X						

Drainage Structure Inventory																						
Location	Figure	Station	Size	Shape	Material	Condition	Scouring		Sediment/Debris		Pipe		End Treatments		Riprap Aprons		Clean Out	Lining	Regrade		Replace	
							Inlet	Outlet	Inlet	Outlet	Abrasion	Corrosion	Inlet	Outlet	Inlet	Outlet			Inlet	Outlet		
Limantour Road	14	120+73	24"	Circular	CMP	Stormdrain System											X					
			18"	Circular	CMP	Stormdrain System												X				
	15	140+06	48"	Circular	CMP	Sited Flooding Area				X								X				
	16	140+16	36"	Circular	CMP													X				
	17	142+19	18"	Circular	CMP	Stormdrain System												X				
			24"	Circular	CMP	Stormdrain System													X			
	18	159+95	54"	Circular	CMP	Flows through and Underneath									X			X	X			
	19	160+05	48"	Circular	CMP													X				
	20	189+00	24"	Circular	CMP	Slanted CMP Riser Inlet, 9-10' of Debris Blockage				X			X					X				
	21	208+50	30"	Circular	CMP	PVC Liner and Inlet Encased in Cement				X			X			X					X	
	22	214+75	24"	Circular	CMP	PVC Liner														X	X	
23	321+22	12"	Circular	CMP	Stormdrain												X		X			
		12"	Circular	CMP	Stormdrain: Outfall Location Undetermined													X			X	X
Chimney Rock Road	24	524+00	12"	Circular	CMP															X	X	
	25	546+53	12"	Circular	CMP																	X
	26	751+00	18"	Circular	PVC															X	X	

\*Locations and stations are approximate and based on the scoping field review.

**Figure 1– Station 12+00**



**Figure 1b – Station 12+00**



**Figure 2 – Station 28+90**



**Figure 3 – Station 36+00**



**Figure 4 – Station 55+67**



**Figure 5 – Station 62+47**



**Figure 6 – Station 75+00**



**Figure 7 – Station 78+00**



**Figure 8 – Station 104+88**



**Figure 9 – Station 106+27**



**Figures 10 and 11 – Station 109+00 and 111+00**



**Figure 12 – Station 112+00**



**Figure 14 – Station 120+73**



**Figure 15 – Station 140+06**



**Figure 17 – Station 142+19**



**Figure 18 – Station 159+95**



**Figure 19 – Station 160+05**



**Figure 20 – Station 189+00**



**Figure 21 – Station 208+50**



**Figure 22 – Station 214+75**



**Figure 23 – Station 321+22**



**Figure 24 – Station 524+00**



**Figure 25 – Station 546+53**



**Figure 26 – Station 751+00**



# **PRELIMINARY GEOTECHNICAL AND PAVEMENT INVESTIGATION PLAN**

**Point Reyes Preliminary Geotechnical and Pavement Investigaion Plan**  
**CA PORE 10(4), 200(1), 201(1)**  
**December 2010**

**Limantour Road**

Investigation Type	Location	Approximate Offset (ft)	Marked in Field	Proposed Structure	Roadway Fill/Cut Height	Structure Height (ft)	Target Boring Depth (ft)	Minimum Boring Depth* (ft)	Drill Rig Type	Native Soil/Rock Type Expected	Sampling	Testing
Boring	~0.5 Mile frequency (16 borings)	Varies	No	Pavement	0	0	5'	3'	Truck	Silty Sand	Bulk	Soil Classification, pH, soluble sulfates, R-value
Boring	Random distressed pavement (6 borings)	Varies	No	Pavement	0	0	5'	3'	Truck	Silty Sand	Bulk	Soil Classification, pH, soluble sulfates, R-value
Boring	300+80	10' RT; Roadway Shoulder	No	Landslide	0	15'	30'	25' with 10' min in Bedrock	Truck	Slide Debris/Rocky Fill	SPT	Soil Classification, density, Moisture Content
Boring	301+20	10' RT; Roadway Shoulder	No	Landslide	0	15'	30'	25' with 10' min in Bedrock	Truck	Slide Debris/Rocky Fill	SPT	Soil Classification, density, Moisture Content, Inclinator
Boring	302+00	10' RT; Roadway Shoulder	No	Landslide	0	15'	30'	25' with 10' min in Bedrock	Truck	Slide Debris/Rocky Fill	SPT	Soil Classification, density, Moisture Content
Boring	301+20	30' RT	No	Landslide	0	15'	30'	25' with 10' min in Bedrock	Limited Access	Slide Debris/Rocky Fill	SPT	Soil Classification, density, Moisture Content, Inclinator

**Point Reyes Preliminary Geotechnical and Pavement Investigaion Plan**  
**CA PORE 10(4), 200(1), 201(1)**  
**December 2010**

**Chimney Rock Road**

Investigation Type	Location	Approximate Offset (ft)	Marked in Field	Proposed Structure	Roadway Fill/Cut Height	Structure Height (ft)	Target Boring Depth (ft)	Minimum Boring Depth* (ft)	Drill Rig Type	Native Soil/Rock Type Expected	Sampling	Testing
Boring	~0.5 Mile frequency (4 borings)	Varies	No	Pavement	0	0	5'	3'	Truck	Silty Sand	Bulk	Soil Classification, pH, soluble sulfates, R-value
Boring	Parking area pavement (2 borings)	Varies	No	Pavement	0	0	5'	3'	Truck	Silty Sand	Bulk	Soil Classification, pH, soluble sulfates, R-value

**Lighthouse Road**

Boring	~0.5 Mile frequency (5 borings)	Varies	No	Pavement	0	0	5'	3'	Truck	Silty Sand	Bulk	Soil Classification, pH, soluble sulfates, R-value
Boring	Parking area pavement (2 borings)	Varies	No	Pavement	0	0	5'	3'	Truck	Silty Sand	Bulk	Soil Classification, pH, soluble sulfates, R-value

Column Description

Investigation Type: Boring/ Seismic Line/ Rock Survey

Location: Station as shown on Preliminary Design Plans

Approximate Offset: Approx. Offset from proposed CL, may be adjusted in the field to accomidate access

Marked in Field: Not marked

Proposed Structure: Primary purpose for investigation; Cut, Fill, MSE, RSS, Landslide, Pavement

Roadway Fill/Cut Height: Proposed Fill or Cut from Existing Roadway to Proposed Roadway Finished Grade

Structure Height: Height from proposed road to foundation or top of cut

Target Boring Depth: Estimated Minimum Required Boring Depth In Soil

Minimum Boring Depth: Minimum Boring Depth if Bedrock Is Encountered\*

\* Drill a minimum of 10-15 feet of bedrock up to Target Boring Depth

Drill Rig Type: Truck Mounted or Limited Access (LA)

Rock Type Expected: Bedrock Rock Type Expected From Soil Survey; Sandstone, conglomerate

# **PMIS REPORT**

Project Identification - PMIS 145371	
<b>Project Title:</b> Replace Failing Limantour Road	<b>Project Total Cost:</b> \$ ██████████ 0
<b>Park/Unit:</b> Point Reyes National Seashore	<b>Region:</b> Pacific West
<b>States:</b> CA	<b>Congressional District:</b> CA06
<b>Old Package Number:</b>	<b>Reference Number:</b> 8536
<b>Project Type:</b> Facility , Non-historic	<b>Financial System Package Number:</b> PORE 145371
<b>Contact Person:</b> Ed Walls	<b>Contact Phone:</b> (415) 464-5153
Project Status - PMIS 145371	
<b>Date Created:</b> 04/03/08	<b>Review Status:</b> Region-Reviewed on 08/21/2008
<b>Date of Last Update:</b> 11/29/10	<b>Updated By:</b> Jeffrey Jewhurst
Project Narratives - PMIS 145371	
<p><b>Description</b></p> <p>The scope of this project involves chipsealing approximately 7.59 X 2 lane-miles of asphalt, perform occasional slump improvements, repair/replace approximately 20 deficient or failed culverts, remove and patch deficient asphalt surface, rebuild deficient curbing, eliminate curbing where hydrologically not required, repave drain aprons, and armoring downhill slope of failing road prism. This FHA Functional Class I Road is experiencing failures that require strategic engineered solutions and construction beyond the capabilities of Point Reyes National Seashore Facility Management. Sections of this road are experiencing failures within its prism resulting from outdated construction techniques and failed drainage structures. Recycled materials (on-site and imported) will be utilized whenever possible. Two double-36" culvert cross-drains should be replaced with pre-cast concrete box or bottomless aluminum arched culverts. This comprehensive rehabilitation will greatly improve the road's overall stability and reliability.</p>	
<p><b>Justifications</b></p> <p>This road was inventoried by FHWA in 2006 with an average Pavement Condition Rating (PCR) of 60 (poor), an average Rutting Condition Index (RCI) of 49 (poor), and an average Surface Condition Rating of 47 (poor). Limantour Road is reaching the end of its design life and is showing signs of fatigue with perpendicular cracks, ravelling, longitudinal fissures, slumps, failing subbase, and a severely decaying and failing culvert system.</p> <p>Factor 1: Protects visitor and employee health and safety: Limantour Road is the sole vehicular and emergency response route to Limantour Beach, the Clem Miller Environmental Education Center, an American Youth Hostel, and several park residences, including required occupancy law enforcement and utilities systems repair staff. The Daily Traffic Count for Limantour Road can exceed several hundred vehicles. The road also serves as emergency egress for the communities of Inverness and Inverness Park and was proven vital and effective during the 1995 Vision Fire. This project will correct the road's operational deficiencies, ensuring consistent and reliable access.</p>	

Factor 2: Protect government investment: This road was inventoried by FHWA in 2004 with an average Pavement Condition Rating (PCR) of 56 (poor), an average Rutting Condition Index (RCI) of 51 (poor), and an average Surface Condition Rating of 45 (poor). Limantour Road is reaching the end of its design life and is showing signs of imminent pending failure with perpendicular cracks, longitudinal fissures, slumps, failing sub-base, and a severely decaying and failing culvert system. With a Cost Replacement Value of \$ [REDACTED] 00, rebuilding this road proves to be a fiscally wise strategy. Bringing this road to excellent condition will make it possible for park maintenance operations to conduct routine and cyclic maintenance to maintain and extend the life of the road.

Factor 3: Improves operational efficiency: Failures of this roads surface frequently occur and park Roads and Trails Branch staff are able to make only minimal repairs (i.e.- patching small potholes, crack sealing). The failed surface and subsurface drainage system has proven to be a direct causal factor in accelerated deterioration of road surface, failure of the road's prism, sub-base erosion, and removal of fines from compacted fill. Degraded paved culvert aprons have allowed for erosion of downhill outflow areas. With failure to fund and complete this project, it is anticipated that road maintenance costs will increase exponentially.

Factor 4: Improves visitor services: Point Reyes National Seashore receives over 2.2 million visitors per year, and Limantour Road serves as a gateway to premier scenic and recreational opportunities. Limantour provides access to Limantour Beach, the Clem Miller Environmental Education Center, Sky Trailhead and campground, Laguna Trailhead, Muddy Hollow Trailhead, Coast Trailhead and campground, Bayview Trailhead, two scenic overlooks, an American Youth Hostel, and several park residences, including required occupancy law enforcement and utilities systems repair staff. These areas are regularly patrolled and serviced by park staff; their continuing function equals visitor satisfaction and is linked directly to a well performing road.

Factor 5: Protects natural resources: Limantour Road spans several important drainages above populated areas and part of the fragile Tomales Bay watershed. One area, known as Haggerty Gulch, has an extensive sub-drain culvert system that has severe rust-through and compromised structural integrity. Failure of these engineered spans could prove catastrophic to the health of this pristine Bay, as well as the adjacent community. The failed culverts and improperly designed drop inlets accelerate sediment deposition in the Tomales Bay watershed.

**Measurable Results**

Limantour Road Asset #00002545 API 88 Beginning FCI: 0.425 Ending FCI: 0.016

**DOI Categories of Facilities Maintenance and Construction Needs - PMIS 145371**

**DOI Total Score: 898**

**DOI Ranking Factor Score: 880**

**Deferred Maintenance Needs**

**Capital Improvement Needs**

Critical Health and Safety Deferred Maintenance Need	80%
Critical Resource Protection Deferred Maintenance Need	0%
Critical Mission Deferred Maintenance Need	20%

Critical Health and Safety Capital Improvement Need	0%
Critical Resource Protection Capital Improvement Need	0%
Energy Policy, High Performance Sustainable Building Capital Improvement Need	0%

Other Deferred Maintenance Need	0%	Code Compliance Capital Improvement Need	0%
		Other Capital Improvement Need	0%

**Project Activities, Assets, Emphasis Areas - PMIS 145371**

<b>Activities</b>	<b>Assets [ Primary - Roads and Bridges ]</b>
<ul style="list-style-type: none"> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Road - Paved</li> </ul>

<b>Emphasis Areas</b>	<b>Resources</b>
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**Project Prioritization Information - PMIS 145371**

<b>Unit Priority:</b> 265 IN FY 2010	<b>Unit Priority Band:</b> HIGH
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**Project Capital Asset Accounting Determination Results Summary - PMIS 145371**

<b>Capital Asset Accounting Determination Data displayed below needs recertification before the component can be funded.</b>	
Non-Heritage Assets, Other Fixed Asset Structures	Separate Non-Heritage, Other Fixed Asset Structures accounts are REQUIRED. Non-Heritage, Other Fixed Asset Structures Accounts are established by coding "WP" in the G/L Post Type field and "OS" in the PROJ GROUP field of the FFS PROJ table when they are established.

**Project Assistance Needs - PMIS 145371**

<b>Is Assistance Needed:</b> Yes [From Region]	
<b>Project Assistance Needed in the Following Areas:</b>	
<ul style="list-style-type: none"> <li>Architectural and Engineering Services</li> <li>Compliance</li> </ul>	

**Related OFS Funding Requests- PMIS 145371**

<b>Request ID:</b> 7326	<b>Request title:</b> \$ [REDACTED] and 5.0 FTE to Correct Operational Maintenance Deficiencies
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**Project Funding Component - PMIS 145371A**

<b>Funding Component Title:</b> Replace Failing Limantour Road	<b>Funding Component Request Amount:</b> \$ [REDACTED]0
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<b>Funding Component Reference Number ( Multi-purpose ):</b>	<b>Funding Component Type:</b> Non-recurring
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<b>Funding Component Description:</b>	
<b>Initial Planned FY:</b> 2012	<b>Requested Funding FY:</b> 2012
<b>Review Status:</b> Region-reviewed on 08/21/2008	
<b>Date of Park Submission:</b> 08/21/2008	<b>Submitted By:</b> Ed Walls, Ewalls@Nps.Gov (Ed_Walls)
<b>Upper-level Review Status:</b>	<b>Fee-demo Submission Number:</b>
<b>Formulated FY:</b> 2015	<b>Funded FY:</b>
<b>Formulated Amount:</b> \$ [REDACTED] 00	<b>Funded Amount:</b>
<b>Formulated Funding Source:</b> FLHP Category I - 3R	<b>Funded Funding Source:</b>
<b>Formulated Program:</b> Other Program	<b>Funded PWE Accounts:</b>

**Related PEPC Information**

Related PEPC Project Number	Compliance Status	Expected Compliance Date
No Related PEPC Project Numbers Specified.		

**Component Cost Estimates**

<b>Labor Cost Type:</b> Not Requested	<b>Related Parent FMSS Work Order Number:</b> 1171538
<b>Estimated By:</b> Ed Walls, Ewalls@Nps.Gov	<b>Date of Estimate:</b> 04/03/2008
<b>Estimate in 2008 dollars</b>	<b>Class of Estimate:</b> C

Item	Description	Qty	Unit	Unit Cost	Item Cost
Replace/Rehabilitate Failing Culvert System	Remove/replace or rehabilitate deformed, rusted-out, undermined and otherwise failed culverts.	20	Each	\$ [REDACTED]	\$ [REDACTED]
Repair Surface	Grind and replace failed asphalt surface, repair occasional slump area, repave drain aprons, chipseal entire surface.	7.59	Miles	[REDACTED]	\$ [REDACTED] 0
<b>Component Funding Request</b>					\$ [REDACTED] 0

**Eligible Funding Sources and Funding Priorities**

Funding Source	Unit Priority at Formulation	Regional Priority	National Priority	Year Unit-Prioritized
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FLHP-Highway Safety Program				
Federal Lands and Highways Program				
FLHP Category I - 3R		34		
FLHP Category I - 4R				
FLHP Category II - Completion of Parkway Gaps Auth. by Congress				

**Component Completion Report**

<b>Component Start Date:</b>	<b>Component Completion Date:</b>
<b>Completion Report Date:</b>	<b>Created By:</b>
<b>Change in Condition:</b>	<b>Report Last Updated By:</b>
<b>As Built Drawing or Report Number:</b>	<b>As Built Drawing or Report Title:</b>
<b>Location of Original As Built Drawing or Report:</b>	<b>As Built Drawing or Report Author:</b>
<b>Superintendent Approval Date:</b>	<b>Superintendent Certification:</b>
<b>Brief Quantified Description of Final Product/Outcome:</b>	

Project Identification - PMIS 7136	
<b>Project Title:</b> Rehabilitate Lighthouse and Chimney Rock Roads	<b>Project Total Cost:</b> ██████████
<b>Park/Unit:</b> Point Reyes National Seashore	<b>Region:</b> Pacific West
<b>States:</b> CA	<b>Congressional District:</b> CA06
<b>Old Package Number:</b>	<b>Reference Number:</b> 8536 FLHP
<b>Project Type:</b> Facility , Historic	<b>Financial System Package Number:</b> PORE 007136
<b>Contact Person:</b> Ed Walls	<b>Contact Phone:</b> 415-464-5153
Project Status - PMIS 7136	
<b>Date Created:</b> 02/29/00	<b>Review Status:</b> Park-Approved on 03/12/2002
<b>Date of Last Update:</b> 11/19/10	<b>Updated By:</b> Jeffrey Jewhurst
Project Narratives - PMIS 7136	
<p><b>Description</b></p> <p>This project will repair and improve 2.12 miles of the Lighthouse Road Route 0200, the 1.0 of Chimney Rock Road Route 201, and the Chimney Rock Parking Lot. Both roads are in extremely poor condition. These roads were originally unimproved dirt roads that have been chip sealed. Without a proper road base, drainage, culvert repairs, asphalt patching/replacement and chipseal, these roads will not be able to hold together or withstand the increase in traffic that they will see in the next several years. ADA parking and accesability issues shall be adressed, as well as upgrading sections of defeceint, obsolete guard rail. Existing cattle guards and gates shall be replaced with fixtures of sturdier, updated design.</p>	
<p><b>Justifications</b></p> <p>In 1999, Federal Highway Administration developed the Federal Highway Administration Road Inventory Team which prepared a Road Inventory Report on all paved surfaces in Point Reyes National Seashore. Their report indicates that these roadways are in poor condition.</p> <p>Since the establishment of the Seashore in 1962, vehicle traffic has steadily increased to the current level. Park visitation has reached 2.5 million individuals per year, of which one million travel over this section of road to visit the Lighthouse area. The roads need installation of culverts for proper drainage; the existing cattle guards are inadequate and need replacement, and re-paving of the surface to proper grade.</p> <p>Due to the increase in visitor vehicle use of the Lighthouse and Chimney Rock areas during the whale and Elephant Seal watching season, a visitor shuttle system has been implemented. This shuttle system provides full size buses on weekends and holidays from December to April as the required transportation system used by park visitors to access the Lighthouse and Chimney Rock areas.</p> <p>Lighthouse Road Route 0200</p>	

Factor 1: Protects visitor and employee health and safety: Lighthouse Road Route 0200 - One million vehicles per year travel over this section of road to visit the Lighthouse area. It is the sole vehicular and emergency response route to the Lighthouse as well as park residences and utility systems. The road also serves as egress for other agencies who conduct research in this park: the USGS, Scripps Institute, and UC Berkeley Seismic Lab. This project will correct the road's operational deficiencies, ensuring consistent and reliable access.

Factor 2: Protect government investment: This road was inventoried by FHWA in 2006 with an average Pavement Condition Rating (PCR) of 39 (poor), an average Roughness Condition Index (RCI) of 37 (poor), and an average Surface Condition Rating (SCR) of 45 (poor). Lighthouse Road has reached the end of its design life and is showing signs of imminent failure with perpendicular cracks, longitudinal fissures, and major slumps. With a Cost Replacement Value of \$ [REDACTED] 0, rebuilding this road proves to be a fiscally wise strategy. Bringing this road to excellent condition will make it possible for park maintenance operations to conduct routine and cyclic maintenance to extend the life of the road.

Factor 3: Improves operational efficiency: Failures of the Lighthouse Road's surface frequently occur and park Roads and Trails Branch staff are able to make only minimal repairs (i.e. - patching potholes). The failed surface and subsurface drainage system has proven to be a direct causal factor in accelerated deterioration of road surface, failure of the road's prism, sub-base erosion, and removal of fines from compacted fill. Failure to fund and complete this project means road maintenance costs will increase exponentially.

Factor 4: Improves visitor services: Point Reyes National Seashore receives over 2.2 million visitors per year, and Lighthouse Road serves as a gateway to premier scenic and recreational opportunities. Lighthouse Road provides access to the Historic Lighthouse, several park residences, and utility systems. These areas are regularly patrolled and are serviced by park staff; their continuing function equals visitor satisfaction and is linked directly to a well performing road.

Factor 5: Protects Natural & Historic Cultural Resources: Lighthouse Road currently has a road surface that consists of a thin layer (approximately 1 inch) of asphalt surface which is in poor condition. A short section is used as a public road for disabled visitors, and access to the Lighthouse parking area. It is not possible to make changes in road alignment or grade due to a Native American archeological site and narrow road prism.

#### Chimney Rock Road Route 0201

Factor 1: Protects visitor and employee health and safety: Chimney Rock Road Route 0201 - It is the sole vehicular and emergency response route to the Chimney Rock area as well as to a park residence and utility system. The Daily Traffic Count for Chimney Rock Road can exceed a hundred vehicles. The road serves as egress for several trails, the Boathouse Road, and two piers. This project will correct the road's operational deficiencies, ensuring consistent and reliable access.

Factor 2: Protect government investment: This road was inventoried by FHWA in 2006 with an average Pavement Condition Rating (PCR) of 28 (poor), an average Roughness Condition Index (RCI) of 47 (poor), and an average Surface Condition Rating (SCR) of 20 (poor). Chimney Rock Road has reached the end of its design life and is showing signs of imminent failure with perpendicular cracks, longitudinal fissures, and major slumps. With a Cost Replacement Value of \$ [REDACTED] 0, rebuilding this road proves to be a fiscally wise strategy. Bringing this road to excellent condition will make it possible for park maintenance operations

to conduct routine and cyclic maintenance to extend the life of the road.

Factor 3: Improves operational efficiency: Failures of the Chimney Rock Road's surface frequently occur and park Roads and Trails Branch staff are able to make only minimal repairs (i.e. - patching potholes). The failed surface and subsurface drainage system has proven to be a direct causal factor in accelerated deterioration of road surface, failure of the road's prism, sub-base erosion, and removal of fines from compacted fill. Failure to fund and complete this project means that road maintenance costs will increase exponentially.

Factor 4: Improves visitor services: Point Reyes National Seashore receives over 2.2 million visitors per year, and Chimney Rock Road serves as a gateway to premier scenic and recreational opportunities. This road provides access the Historic Chimney Rock Boathouse, and several park residences, and utilities systems. It also provides access to the park's premier wildflower viewing areas. These areas are regularly patrolled and are serviced by park staff; their continuing function equals visitor satisfaction and is linked directly to a well performing road.

Factor 5: Protects Natural & Historic Cultural Resources: Chimney Rock Road currently has a road surface that consists of a thin layer (approximately 1 inch) of asphalt surface which is in poor condition. A short section is used as a public road for disabled visitors, and access to the Boathouse parking area. It is not possible to make changes in road alignment or grade due to a narrow road prism.

**Measurable Results**

Maintain and restore 3.52 miles of visitor use roads and access to significant natural and cultural resources.

**DOI Categories of Facilities Maintenance and Construction Needs - PMIS 7136**

<b>DOI Ranking Factor Score: 460</b>		<b>DOI Ranking Factor Score — FY07 and prior: NA</b>	
<b>Deferred Maintenance Needs</b>		<b>Capital Improvement Needs</b>	
Critical Health and Safety Deferred Maintenance Need	10%	Critical Health and Safety Capital Improvement Need	0%
Critical Resource Protection Deferred Maintenance Need	0%	Critical Resource Protection Capital Improvement Need	0%
Critical Mission Deferred Maintenance Need	90%	Energy Policy, High Performance Sustainable Building Capital Improvement Need	0%
Other Deferred Maintenance Need	0%	Code Compliance Capital Improvement Need	0%
		Other Capital Improvement Need	0%

**Project Activities, Assets, Emphasis Areas - PMIS 7136**

<b>Activities</b>	<b>Assets</b>
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<ul style="list-style-type: none"> <li>Maintenance</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Road - Paved</li> </ul>		
<b>Emphasis Areas</b> <ul style="list-style-type: none"> <li>Deferred Maintenance</li> <li>Health and Safety</li> <li>FLHP Reauthorization, Cat. I</li> </ul>	<b>Resources</b>		
<b>Project Prioritization Information - PMIS 7136</b>			
<b>Unit Priority:</b> 125 <b>IN FY</b> 2010	<b>Unit Priority Band:</b> HIGH		
<b>Project Capital Asset Accounting Determination Results Summary - PMIS 7136</b>			
<p><b>Capital Asset Accounting Determination Data displayed below needs recertification before the component can be funded.</b></p> <table border="1"> <tr> <td> Non-Heritage Assets, Other Fixed Asset Structures </td> <td> Separate Non-Heritage, Other Fixed Asset Structures accounts are REQUIRED. Non-Heritage, Other Fixed Asset Structures Accounts are established by coding "WP" in the G/L Post Type field and "OS" in the PROJ GROUP field of the FFS PROJ table when they are established. </td> </tr> </table>		Non-Heritage Assets, Other Fixed Asset Structures	Separate Non-Heritage, Other Fixed Asset Structures accounts are REQUIRED. Non-Heritage, Other Fixed Asset Structures Accounts are established by coding "WP" in the G/L Post Type field and "OS" in the PROJ GROUP field of the FFS PROJ table when they are established.
Non-Heritage Assets, Other Fixed Asset Structures	Separate Non-Heritage, Other Fixed Asset Structures accounts are REQUIRED. Non-Heritage, Other Fixed Asset Structures Accounts are established by coding "WP" in the G/L Post Type field and "OS" in the PROJ GROUP field of the FFS PROJ table when they are established.		
<b>Project Assistance Needs - PMIS 7136</b>			
<b>Is Assistance Needed:</b> No			
<b>Project Funding Component - PMIS 7136A</b>			
<b>Funding Component Title:</b> Rehabilitate Lighthouse Chimney Rock and Lifeboat Roads	<b>Funding Component Request Amount:</b> <span style="background-color: black; color: black;">XXXXXXXXXX</span>		
<b>Funding Component Reference Number ( Multi-purpose ):</b>	<b>Funding Component Type:</b> Non-recurring , Deferred		
<b>Funding Component Description:</b> Grind and Repaving surfaces			
<b>Initial Planned FY:</b> 2004	<b>Requested Funding FY:</b> 2012		
<b>Review Status:</b> Park-submitted			
<b>Date of Park Submission:</b> 03/24/2002	<b>Submitted By:</b>		
<b>Upper-level Review Status:</b>	<b>Fee-demo Submission Number:</b>		
<b>Formulated FY:</b>	<b>Funded FY:</b>		
<b>Formulated Amount:</b>	<b>Funded Amount:</b>		
<b>Formulated Funding Source:</b>	<b>Funded Funding Source:</b>		

<b>Formulated Program:</b>	<b>Funded PWE Accounts:</b>
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**Related PEPC Information**

Related PEPC Project Number	Compliance Status	Expected Compliance Date
No Related PEPC Project Numbers Specified.		

**Component Cost Estimates**

<b>Labor Cost Type:</b> Not Requested	<b>Related Parent FMSS Work Order Number:</b> 849583
<b>Estimated By:</b> Edward J Walls	<b>Date of Estimate:</b> 03/12/2002
<b>Estimate in 2002 dollars</b>	<b>Class of Estimate:</b> C

Item	Description	Qty	Unit	Unit Cost	Item Cost
Lighthouse Road Grinding & Repaving		1	Lump	\$ [REDACTED]	\$ [REDACTED] 5
Chimney Rock Grinding & Repaving		1	Lump	\$ [REDACTED]	\$ [REDACTED]
Lifeboat Station Road		1	Lump	\$ [REDACTED]	\$ [REDACTED]
<b>Component Funding Request</b>					\$ [REDACTED]

**Eligible Funding Sources and Funding Priorities**

Funding Source	Unit Priority at Formulation	Regional Priority	National Priority	Year Unit-Prioritized
FLHP-Highway Safety Program	149			2007
Federal Lands and Highways Program	149			2007
FLHP Category I - 3R	149	38		2007
FLHP Category I - 4R	149			2007
FLHP Category II - Completion of Parkway Gaps Auth. by Congress	149			2007

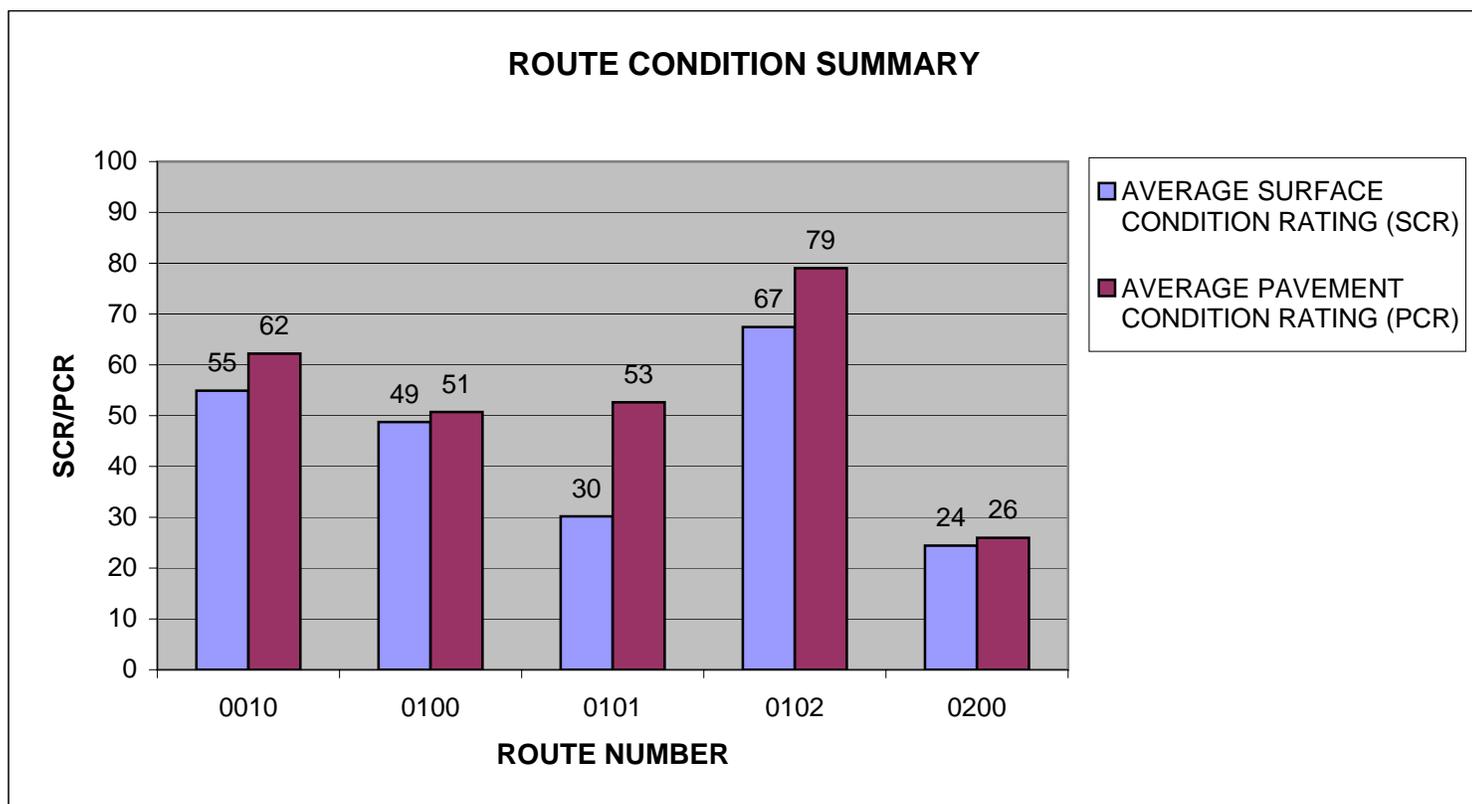
**Component Completion Report**

<b>Component Start Date:</b>	<b>Component Completion Date:</b>
<b>Completion Report Date:</b>	<b>Created By:</b>
<b>Change in Condition:</b>	<b>Report Last Updated By:</b>
<b>As Built Drawing or Report Number:</b>	<b>As Built Drawing or Report Title:</b>
<b>Location of Original As Built Drawing or Report:</b>	<b>As Built Drawing or Report Author:</b>
<b>Superintendent Approval Date:</b>	<b>Superintendent Certification:</b>
<b>Brief Quantified Description of Final Product/Outcome:</b>	

# RIP DATA

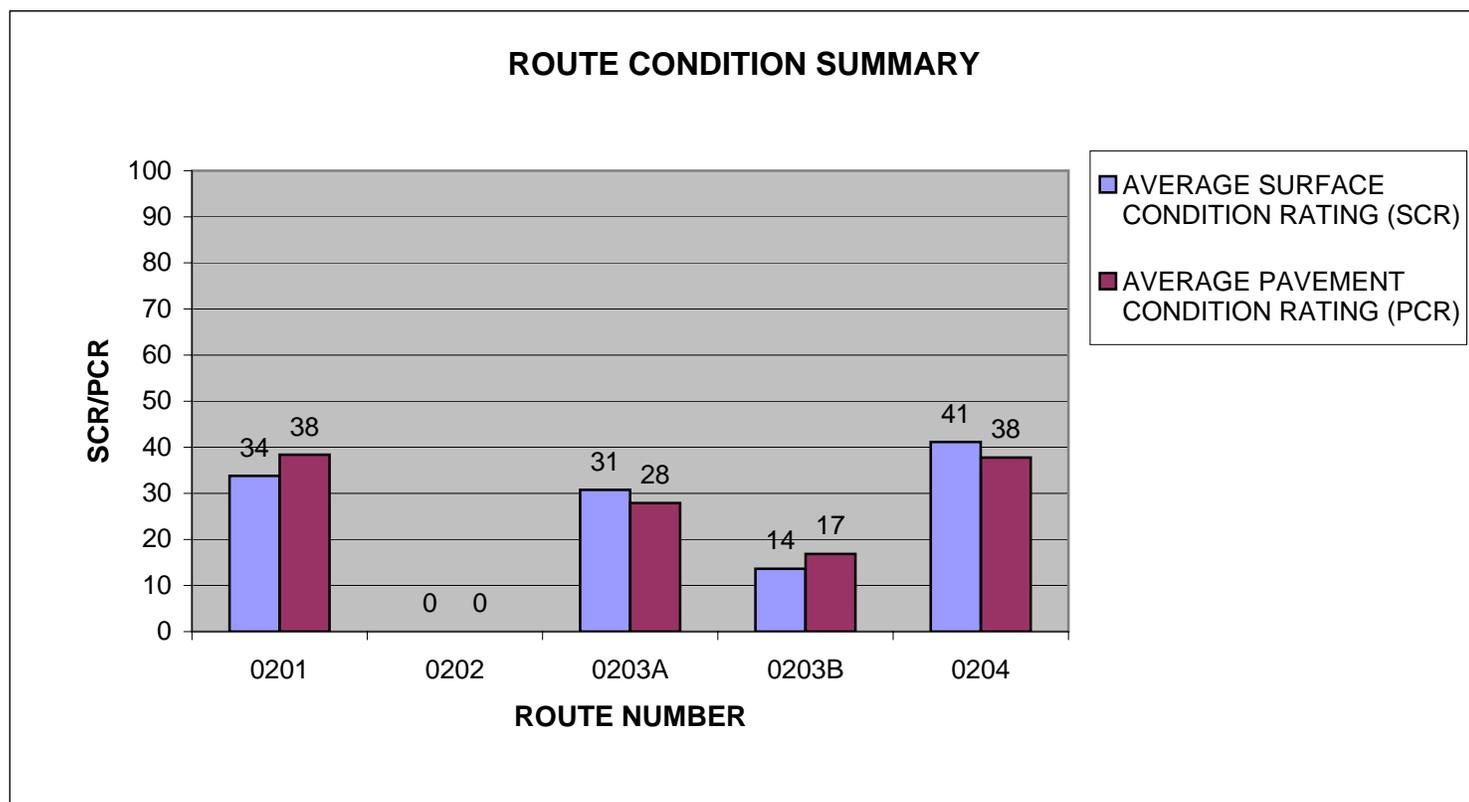
# PORE: ROUTE CONDITION SUMMARY

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	ROUTE LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0010	LIMANTOUR ROAD	1	7.57	ASPHALT	55	62
0100	SOUTH BEACH ROAD	2	0.70	ASPHALT	49	51
0101	DRAKES BEACH ROAD	2	1.50	ASPHALT	30	53
0102	NORTH BEACH ROAD	2	0.60	ASPHALT	67	79
0200	LIGHTHOUSE ROAD	3	1.48	ASPHALT	24	26



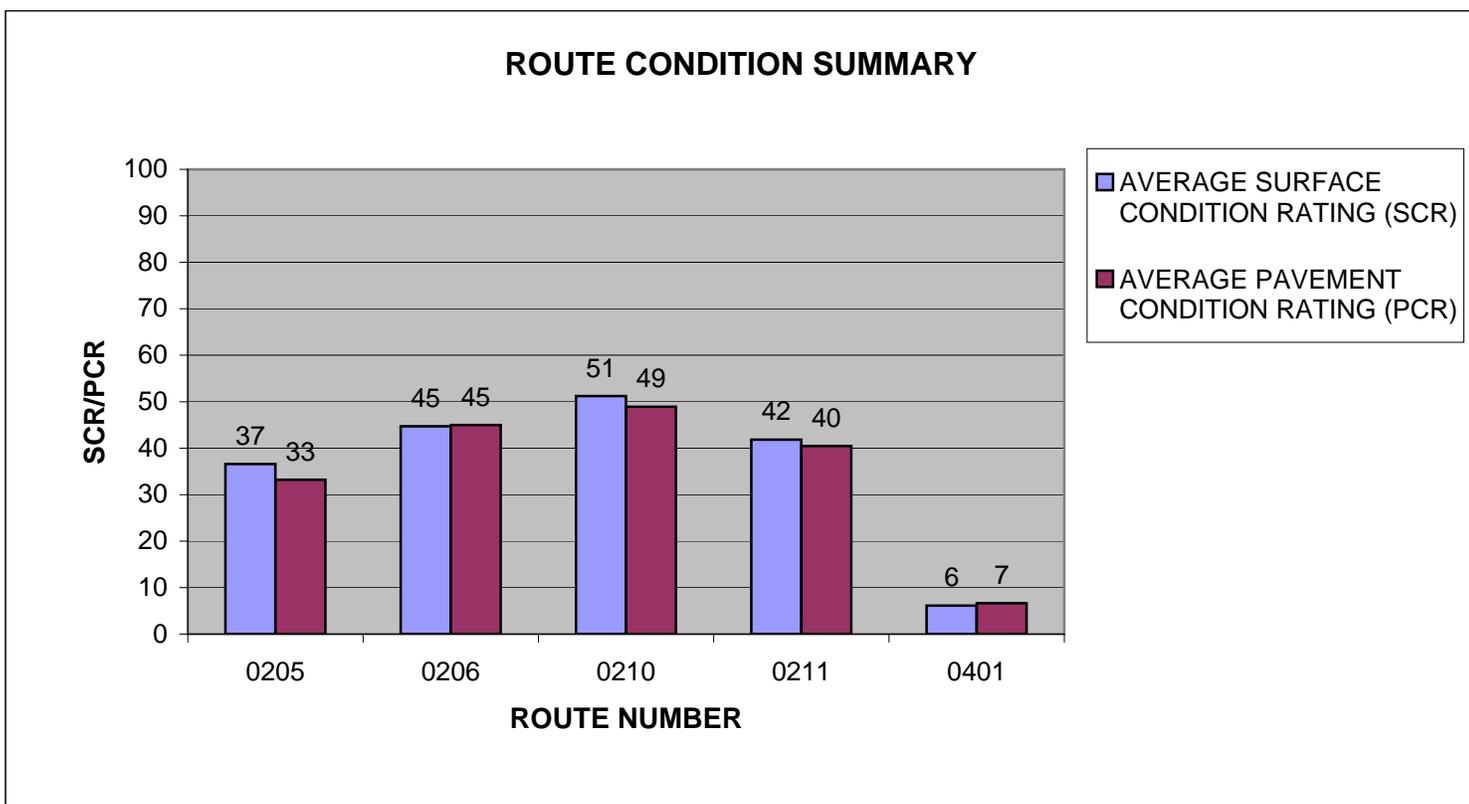
# PORE: ROUTE CONDITION SUMMARY

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	ROUTE LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0201	CHIMNEY ROCK ROAD	3	0.91	ASPHALT	34	38
0202	SCHOONER BAY ROAD (OYSTER FARM ROAD)	3	0.76	ASPHALT	0	0
0203A	ESTERO TRAILHEAD ROAD	3	0.97	ASPHALT	31	28
0203B	HOME RANCH ROAD	6	0.68	ASPHALT	14	17
0204	MOUNT VISION ROAD	3	3.86	ASPHALT	41	38



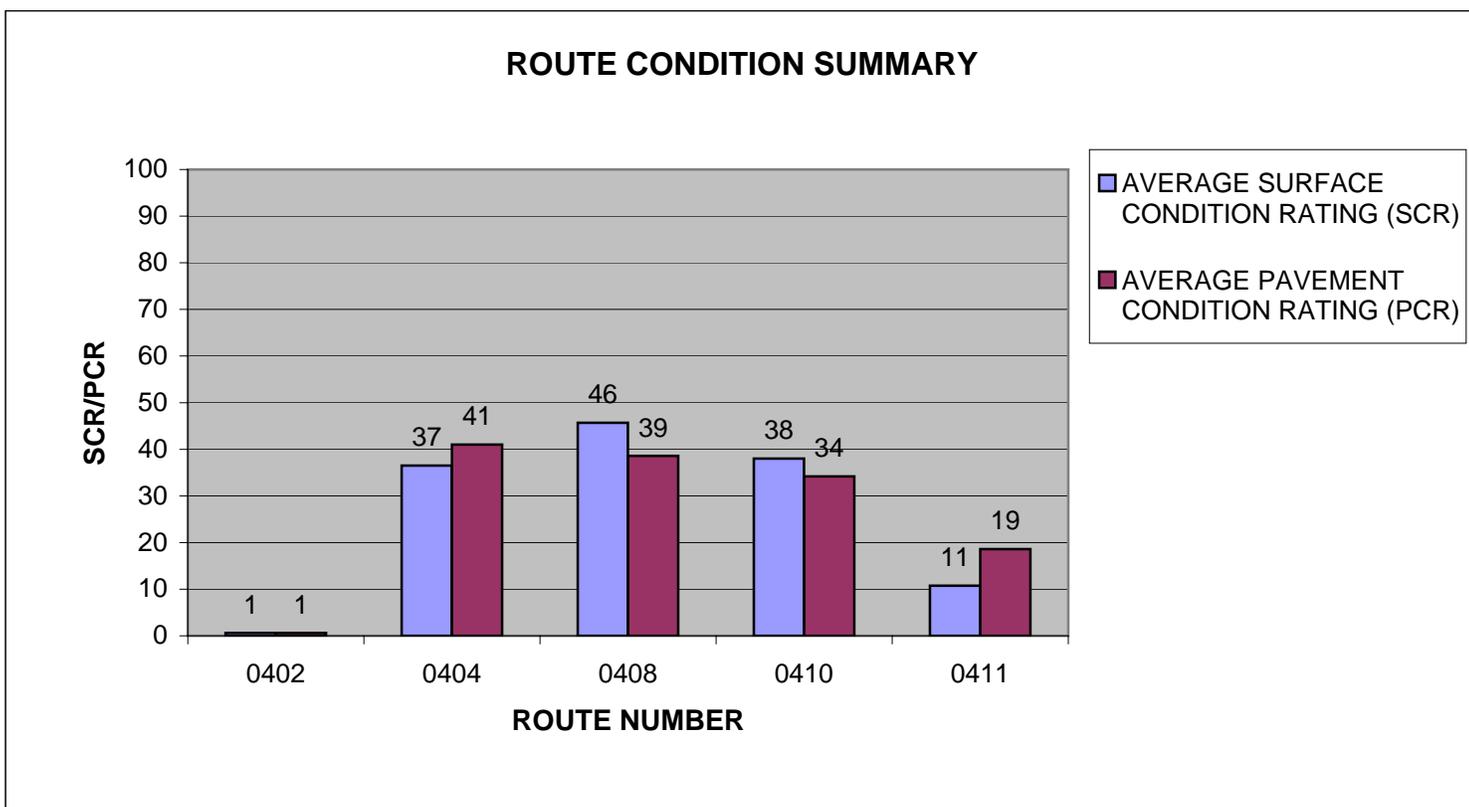
# PORE: ROUTE CONDITION SUMMARY

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	ROUTE LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0205	MCCLURE BEACH ACCESS ROAD	3	0.2	ASPHALT	37	33
0206	LIMANTOUR BEACH TRAIL ACCESS ROAD	3	0.37	ASPHALT	45	45
0210	LAGUNA ROAD	3	0.65	ASPHALT	51	49
0211	BEAR VALLEY TRAILHEAD ROAD	3	0.33	ASPHALT	42	40
0401	LIFEBOAT STATION ROAD	5	0.35	ASPHALT	6	7



# PORE: ROUTE CONDITION SUMMARY

ROUTE NUMBER	ROUTE NAME	FUNCT CLASS	ROUTE LENGTH	SURFACE TYPE	AVERAGE SURFACE CONDITION RATING (SCR)	AVERAGE PAVEMENT CONDITION RATING (PCR)
0402	FISH DOCKS (MENDOZA) ROAD	6	0.13	ASPHALT	1	1
0404	LIMANTOUR RESIDENCE ROAD WEST	5	0.08	ASPHALT	37	41
0408	MORGAN HORSE RANCH ROAD	5	0.24	ASPHALT	46	39
0410	BEAR VALLEY MAINTENANCE ACCESS ROAD	5	0.22	ASPHALT	38	34
0411	NORTH OPERATIONS CENTER ROAD	3	0.24	ASPHALT	11	19



# NPS/RIP Route ID Report

Road Inventory Program 07/17/2007

(Numerical By Route #)

Page 1 of 8

Shading Color Key:

Red text denotes approx. mileage

White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, ARAN not Driven

Black = Paved State, Local or Private non-NPS Routes, ARAN Driven

  = Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## PORE

### POINT REYES NATIONAL SEASHORE

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description		Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
				From	To									
0010	000025 45		LIMANTOUR ROAD	FROM ROUTE 5002, BEAR VALLEY ROAD	TO ROUTE 0945, LIMANTOUR BEACH MAIN PARKING		7.570	0.000	7.570	1	2	0	AS	3, 4
0100	000025 27		SOUTH BEACH ROAD	FROM ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO ROUTE 0909, SOUTH BEACH PARKING		0.700	0.000	0.700	2	2	0	AS	2
0101	000025 12		DRAKES BEACH ROAD	FROM ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO ROUTE 0911, DRAKES BEACH PARKING		1.500	0.000	1.500	2	2	0	AS	2
0102	000025 20		NORTH BEACH ROAD	FROM ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO ROUTE 0910, NORTH BEACH PARKING		0.600	0.000	0.600	2	2	0	AS	2
0103	89529		SACRAMENTO LANDING ROAD	FROM ROUTE 0104, L RANCH ROAD	TO SACRAMENTO LANDING		0.000	1.100	1.100	2	1	0	GR	
0104	000024 80		L RANCH ROAD	FROM PIERCE POINT ROAD (COUNTY)	TO RESIDENCES AND UTILITIES		0.000	2.600	2.600	2	2	0	GR	
0105	000026 04		PALOMARIN ROAD	FROM MESA ROAD (COUNTY)	TO ROUTE 0936, PALOMARIN TRAILHEAD PARKING		0.000	1.200	1.200	2	2	0	GR	
0106	12318		OLEMA MARSH ROAD	FROM BEAR VALLEY ROAD (COUNTY)	TO RESIDENCE UTILITY		0.000	0.300	0.300	2	1	0	GR	
0107	32708		MUDDY HOLLOW ROAD	FROM ROUTE 0010, LIMANTOUR ROAD	TO ROUTE 0943, MUDDY HOLLOW PARKING		0.000	0.200	0.200	2	1	0	GR	
0108	46133		BEAR VALLEY TRAIL ROAD	FROM ROUTE 0211, BEAR VALLEY TRAILHEAD ROAD	TO GLEN TRAIL		0.000	3.100	3.100	2	1	0	GR	
0200	000024 91		LIGHTHOUSE ROAD	FROM END OF ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO LIGHT HOUSE APARTMENT GARAGES		1.480	0.000	1.480	3	2	0	AS	2
0201	000024 99		CHIMNEY ROCK ROAD	FROM END OF ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO ROUTE 0401, LIFE BOAT STATION ROAD AT ROUTE 0917, CHIMNEY ROCK TRAILHEAD PARKING		0.910	0.000	0.910	3	1	0	AS	2
0202	89543		SCHOONER BAY ROAD (OYSTER FARM ROAD)	FROM ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO DRAKES BAY OYSTER PARKING		0.060	0.700	0.760	3	2	0	AS	2
0203A	000025 35		ESTERO TRAILHEAD ROAD	FROM ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)	TO ROUTE 0203B AT CATTLE GUARD JUST PAST ROUTE 0918		0.970	0.000	0.970	3	1	0	AS	3
0203B	99954		HOME RANCH ROAD	FROM CATTLEGUARD AT END OF ROUTE 0203A	TO END OF PAVEMENT AT HOME RANCH		0.680	0.000	0.680	6	1	0	AS	3

# NPS/RIP Route ID Report

Road Inventory Program 07/17/2007

(Numerical By Route #)

Page 2 of 8

Shading Color Key:

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White = Paved Routes, ARAN Driven

Yellow = Unpaved Routes, ARAN not Driven

Blue = All Paved Parking Areas

Green = All Unpaved Parking Areas

Grey = Paved Routes, ARAN not Driven

Black = Paved State, Local or Private non-NPS Routes, ARAN Driven

■ = Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## PORE

### POINT REYES NATIONAL SEASHORE

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
0204	00002534		MOUNT VISION ROAD	FROM ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD) TO ROUTE 0919, MOUNT VISION TRAILHEAD UPPER PARKING		3.860	0.000	3.860	3	2	0	AS	3
0205	32713		MCCLURE BEACH ACCESS ROAD	FROM END OF ROUTE 5003, PIERCE POINT ROAD AT ROUTE 0921, PIERCE POINT UPPER PARKING TO ROUTE 0912, MCCLURE BEACH PARKING		0.200	0.000	0.200	3	2	0	AS	1
0206	35177		LIMANTOUR BEACH TRAIL ACCESS ROAD	FROM ROUTE 0010 AT MP 7.49 ON LEFT TO ROUTE 0904, LIMANTOUR BEACH TRAIL PARKING SOUTH		0.370	0.000	0.370	3	2	0	AS	3
0210	12324		LAGUNA ROAD	FROM ROUTE 0010 AT MP 5.94 TO ROUTE 0942, ENVIRONMENTAL ED CENTER PARKING		0.650	0.000	0.650	3	1	0	AS	3
0211	32719		BEAR VALLEY TRAILHEAD ROAD	FROM ROUTE 5002, BEAR VALLEY ROAD (COUNTY ROAD) TO ROUTE 0108, BEAR VALLEY TRAIL ROAD AT ROUTE 0914, BEAR VALLEY TRAILHEAD PARKING		0.330	0.000	0.330	3	2	0	AS	4
0213	00002592		FIVE BROOKS ROAD	FROM HIGHWAY 1 TO ROUTE 0939, FIVE BROOKS TRAILHEAD PARKING		0.000	0.200	0.200	3	1	0	GR	
0214	12326		COAST CAMP ROAD	FROM ROUTE 0210, LAGUNA ROAD TO COAST CAMPGROUND		0.000	2.900	2.900	3	1	0	GR	
0215	12327		SKY CAMP ROAD	FROM ROUTE 0010 TO SKY CAMPGROUND		0.000	1.300	1.300	3	1	0	GR	
0216	12328		GLEN CAMP ROAD	FROM STEWART TRAIL ROAD TO GLEN CAMPGROUND		0.000	1.200	1.200	3	1	0	GR	
0217	3107		MARSHALL BEACH TRAIL ROAD	FROM ROUTE 0104, L RANCH ROAD TO MARSHALL BEACH CAMPGROUND		0.000	1.200	1.200	4	1	0	GR	
0218	32722		WILDCAT CAMPGROUND ROAD	FROM ROUTE 0219, STEWART TRAIL ROAD TO WILDCAT CAMPGROUND		0.000	1.200	1.200	3	1	0	GR	
0219	34147		STEWART TRAIL ROAD	FROM FIVE BROOKS PARKING TO ROUTE 0216, GLEN CAMP ROAD		0.000	5.400	5.400	3	1	0	GR	
0401	32716		LIFEBOAT STATION ROAD	FROM END OF ROUTE 0201, CHIMNEY ROCK ROAD (BEAR RIGHT) TO ROUTE 0944, END OF PAVEMENT AT LIFEBOAT STATION PARKING		0.350	0.000	0.350	5	1	0	AS	2
0402	103737		FISH DOCKS (MENDOZA) ROAD	FROM ROUTE 0401, LIFE BOAT STATION ROAD, AT MP 0.00 TO END OF PAVEMENT AT DOCKS		0.130	0.000	0.130	6	1	0	AS	2
0403	89457		RED BARN CLASSROOM ROAD	FROM ROUTE 0211, BEAR VALLEY TRAILHEAD ROAD TO RED BARD		0.000	0.300	0.300	5	1	0	GR	
0404	35179		LIMANTOUR RESIDENCE ROAD WEST	FROM ROUTE 0010, LIMANTOUR ROAD, AT MP 7.34 ON RIGHT TO ROUTE 0905, LIMANTOUR RESIDENCE ROAD WEST PARKING		0.080	0.000	0.080	5	1	0	AS	3

# NPS/RIP Route ID Report

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## PORE

### POINT REYES NATIONAL SEASHORE

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
0902C	89508		BEAR VALLEY HQ RESIDENTS PARKING	ADJACENT TO ROUTE 0410 AT MP 0.1 ON RIGHT		0.000	0.000	0.000		0	5,761	AS	4
0902D	103628		BEAR VALLEY BLDG 77 PARKING	ADJACENT TO ROUTE 0410 AT MP 0.05 ON LEFT		0.000	0.000	0.000		0	12,602	AS	4
0903	89516		LIGHTHOUSE RESIDENCE PARKING	ADJACENT TO ROUTE 0200 AT MP 1.4 ON RIGHT		0.000	0.000	0.000		0	1,056	AS	2
0904	89517		LIMANTOUR BEACH TRAIL PARKING SOUTH	AT END OF ROUTE 0206		0.000	0.000	0.000		0	10,129	AS	3
0905	104911		LIMANTOUR RESIDENCE ROAD WEST PARKING	AT END OF ROUTE 0404		0.000	0.000	0.000		0	2,824	AS	3
0906	89440		BAYVIEW TRAIL PARKING (ADAMS PIT)	ADJACENT TO ROUTE 0010		0.000	0.000	0.000		0	0	GR	
0907	89439		SKY TRAILHEAD PARKING	ADJACENT TO ROUTE 0010		0.000	0.000	0.000		0	0	GR	
0908	89441		LIMANTOUR BUS PARKING (ED CENTER)	ADJACENT TO ROUTE 0010		0.000	0.000	0.000		0	0	GR	
0909	89514		SOUTH BEACH PARKING	AT END OF ROUTE 0100		0.000	0.000	0.000		0	96,010	AS	2
0910	89512		NORTH BEACH PARKING	AT END OF ROUTE 0102		0.000	0.000	0.000		0	35,758	AS	2
0911	89513		DRAKES BEACH PARKING	AT END OF ROUTE 0101		0.000	0.000	0.000		0	202,486	AS	2
0912	89509		MCCLURE BEACH PARKING	AT END OF ROUTE 0205		0.000	0.000	0.000		0	15,649	AS	1
0913	89420		MOUNT VISION MIDDLE PARKING (BISHOP PINES TRAILHEAD)	ADJACENT TO ROUTE 0010		0.000	0.000	0.000		0	0	GR	
0914	89437		BEAR VALLEY TRAILHEAD PARKING	AT END OF ROUTE 0211		0.000	0.000	0.000		0	0	GR	
0915	89518		LAGUNA TRAILHEAD PARKING	ADJACENT TO ROUTE 0210 AT MP 0.5 ON RIGHT		0.000	0.000	0.000		0	6,891	AS	3
0917	89429		CHIMNEY ROCK TRAILHEAD PARKING	AT END OF ROUTE 0201, CHIMNEY ROCK ROAD		0.000	0.000	0.000		0	0	GR	
0918	89423		ESTERO TRAILHEAD PARKING	AT END OF ROUTE 0203		0.000	0.000	0.000		0	0	GR	
0919	89422		MOUNT VISION TRAILHEAD UPPER PARKING	AT END OF ROUTE 0204		0.000	0.000	0.000		0	0	GR	

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Grey = Paved Routes, ARAN not Driven

Black = Paved State, Local or Private non-NPS Routes, ARAN Driven

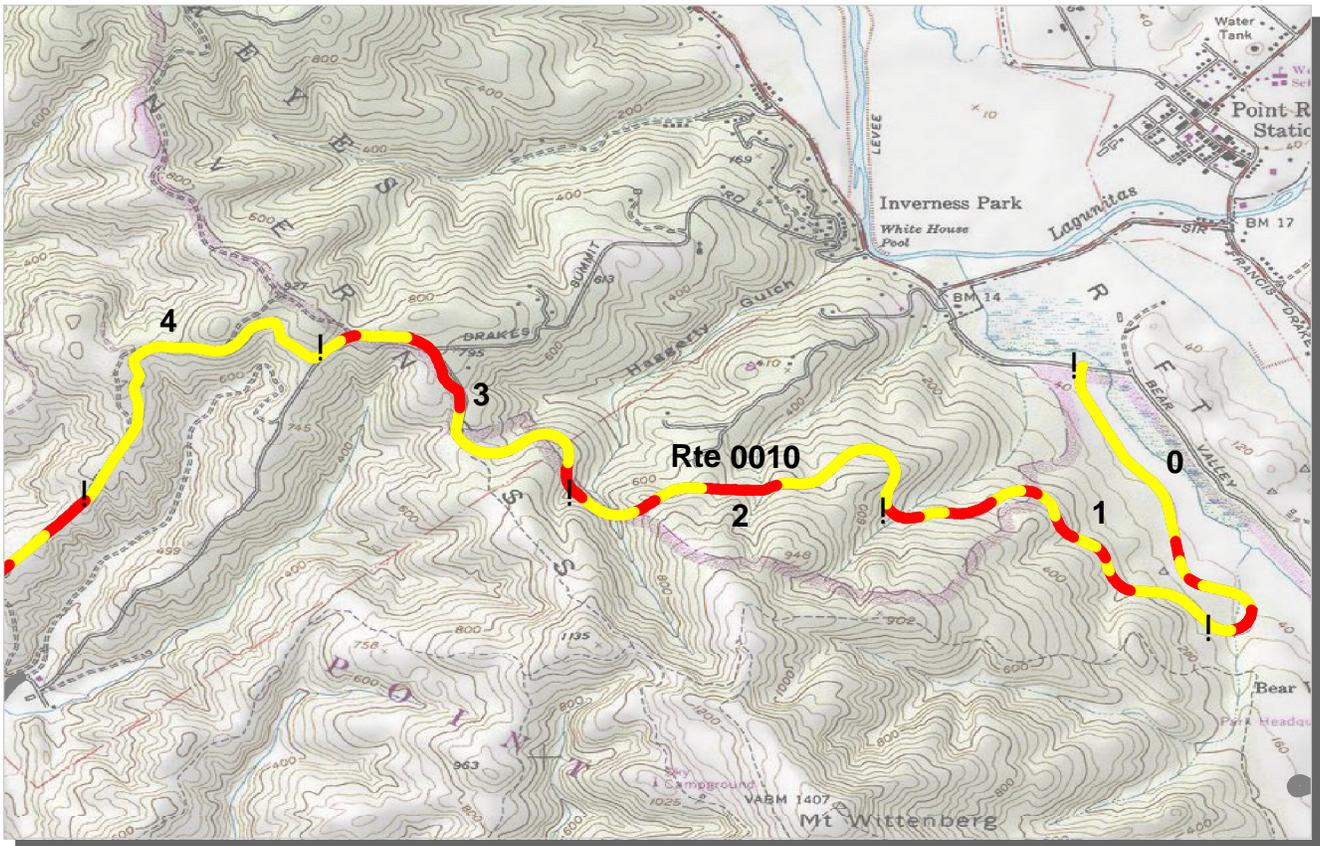
  = Concession Route Flag ON

\*\* Unpaved Routes displayed on report were obtained from FMSS database and not inventoried by Road Inventory Program (RIP)

## PORE

### POINT REYES NATIONAL SEASHORE

Rte. No.	FMSS No.	Concess Route	Route Name	Route Description From To	Maint. District	Paved Miles	Un-Paved Miles	Total Route Length	Func. Class	Rte. Lanes	Manual Rated SQ/FT	Surf. Type	Area Maps
0921	89430		PIERCE POINT UPPER PARKING	ADJACENT TO ROUTE 5003, PIERCE POINT ROAD		0.000	0.000	0.000		0	0	GR	
0922	89428		CHIMNEY ROCK UPPER PARKING	ADJACENT TO ROUTE 0201		0.000	0.000	0.000		0	0	GR	
0923	89425		BULL POINT TRAILHEAD PARKING	ADJACENT TO ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)		0.000	0.000	0.000		0	0	GR	
0924	89427		ABBOTS LAGOON TRAILHEAD PARKING	ADJACENT TO ROUTE 5003, PIERCE POINT ROAD		0.000	0.000	0.000		0	0	GR	
0925	103636		MORGAN HORSE RANCH HANDICAP PARKING	ADJACENT TO ROUTE 0408 AT MP 0.1		0.000	0.000	0.000		0	674	AS	4
0927	89510		MCI EXHIBIT PARKING	ADJACENT TO ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)		0.000	0.000	0.000		0	4,634	AS	2
0930	89515		LIGHTHOUSE VISITOR PARKING	ADJACENT TO ROUTE 0200 AT MP 1.1 ON LEFT		0.000	0.000	0.000		0	17,118	AS	2
0931	89511		NDOC OFFICE PARKING	AT END OF ROUTE 0411		0.000	0.000	0.000		0	21,351	AS	2
0932	102181		NEW FIRE STATION PARKING	ADJACENT TO ROUTE 0410		0.000	0.000	0.000		0	0	GR	
0933	14603		MARSHALL BEACH UNPAVED PARKING	ADJACENT TO ROUTE 0104, L RANCH ROAD		0.000	0.000	0.000		0	0	GR	
0934	89419		MOUNT VISION OVERLOOK LOWER PARKING	ADJACENT TO ROUTE 0204, MOUNT VISION ROAD		0.000	0.000	0.000		0	0	GR	
0935	89424		COAST GUARD CEMETARY PARKING	ADJACENT TO COAST GUARD ENTRANCE ROAD		0.000	0.000	0.000		0	0	GR	
0936	89431		PALOMARIN TRAILHEAD PARKING	ADJACENT TO ROUTE 0105 PALOMARIN ROAD		0.000	0.000	0.000		0	0	GR	
0937	89432		PALOMARIN SURFER BEACH TRAILHEAD PARKING	ADJACENT TO ROUTE 0105, PALOMARIN ROAD		0.000	0.000	0.000		0	0	GR	
0938	89433		PALOMARIN PRBO PARKING	ADJACENT TO ROUTE 0105, PALOMARIN ROAD		0.000	0.000	0.000		0	0	GR	
0939	89434		FIVE BROOKS TRAILHEAD PARKING	ADJACENT TO ROUTE 0213, FIVE BROOKS ROAD		0.000	0.000	0.000		0	0	GR	
0940	89435		TOMALES BAY (MARTINELLI'S) TRAILHEAD PARKING	ADJACENT TO STATE HIGHWAY 1		0.000	0.000	0.000		0	0	GR	



PCR    Poor ■    Fair ■    Good ■    Excellent ■  
           (<=60)                    (61 - 84)                    (85 - 94)                    (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**PACIFIC WEST REGION**  
**PORE : POINT REYES NATIONAL SEASHORE**

**ROUTE: 0010 LIMANTOUR ROAD** **TOTAL LENGTH: 7.57 Miles**

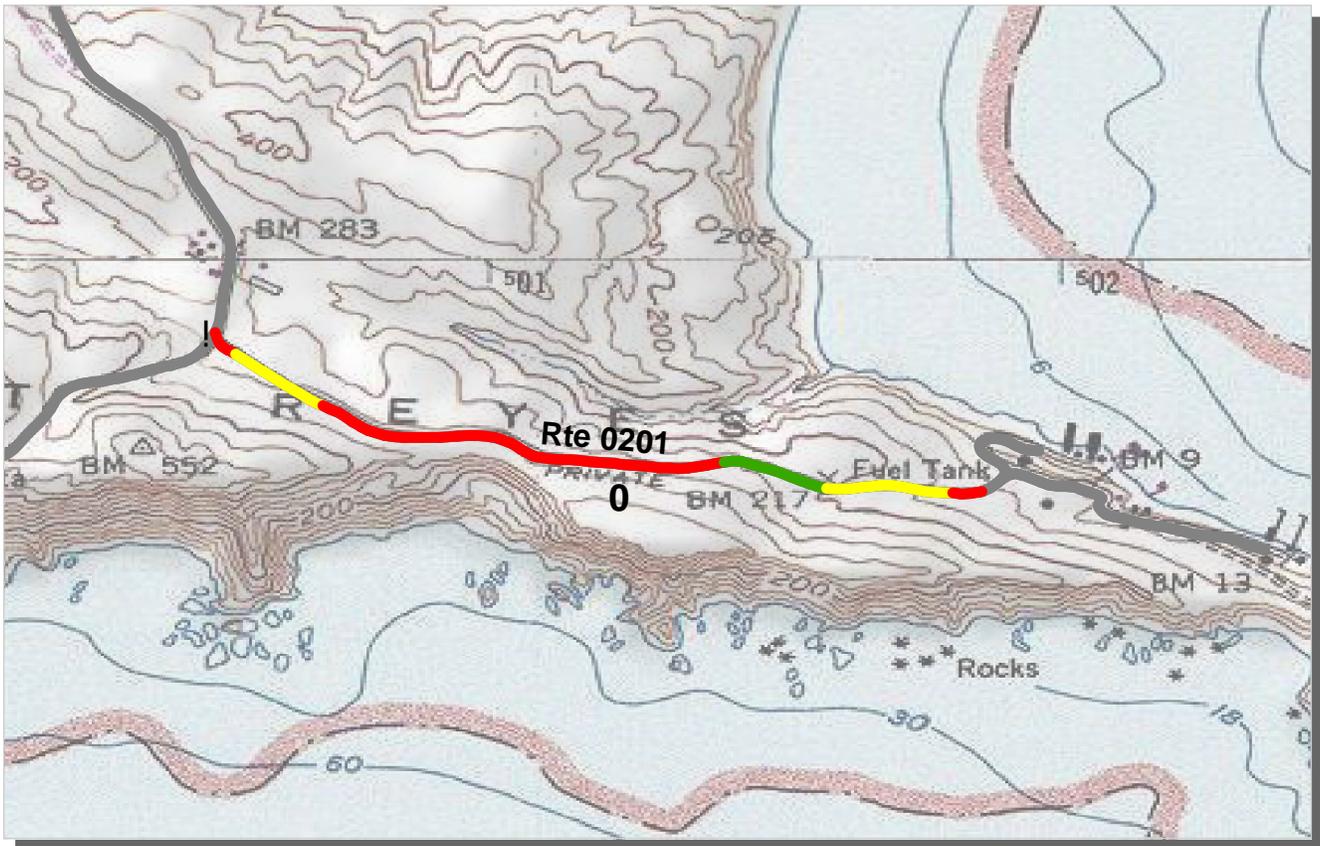
Section Number	0	1	2	3	4
Section Length (mi)	1.00	1.00	1.00	1.00	1.00
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2	2	2	2	2
Paved Width (ft)	31	36	33	29	23
Lane Width (ft)	13	16	14	13	11
Shoulder Width Right (ft)**	4	3	1	4	4
Shoulder Width Left (ft)**	9	3	4	6	8
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	44	53	52	58	56
PCR (Pavement Condition Rating)	62	61	63	62	67
<b>Distress Index Values</b>					
Alligator Cracking Index	99	100	100	100	100
Longitudinal Cracking Index	95	98	98	99	100
Transverse Cracking Index	96	96	98	98	99
Patching Index	100	100	100	100	100
Rutting Index	55	60	56	61	58
Roughness Condition Index (RCI)	91	72	79	69	84

**ROUTE: 0010 LIMANTOUR ROAD**

\*\* Shoulder widths are measured from video at 0.50 mile intervals along route tangents. Visibility of actual shoulders in video images may affect accuracy of measured shoulder widths.







PCR	Poor	<span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>	Fair	<span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span>	Good	<span style="display:inline-block; width:15px; height:15px; background-color:green;"></span>	Excellent	<span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span>
		(≤60)		(61 - 84)		(85 - 94)		(95 - 100)

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**PACIFIC WEST REGION**  
**PORE : POINT REYES NATIONAL SEASHORE**

**ROUTE: 0201 CHIMNEY ROCK ROAD** **TOTAL LENGTH: 0.91 Miles**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.91				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	1				
Paved Width (ft)	14				
Lane Width (ft)	14				
Shoulder Width Right (ft)**	4				
Shoulder Width Left (ft)**	0				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	34				
PCR (Pavement Condition Rating)	39				
<b>Distress Index Values</b>					
Alligator Cracking Index	45				
Longitudinal Cracking Index	99				
Transverse Cracking Index	98				
Patching Index	99				
Rutting Index	70				
Roughness Condition Index (RCI)	52				

**ROUTE: 0201 CHIMNEY ROCK ROAD**

\*\* Shoulder widths are measured from video at 0.50 mile intervals along route tangents. Visibility of actual shoulders in video images may affect accuracy of measured shoulder widths.



PCR    Poor █    Fair █    Good █    Excellent █  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

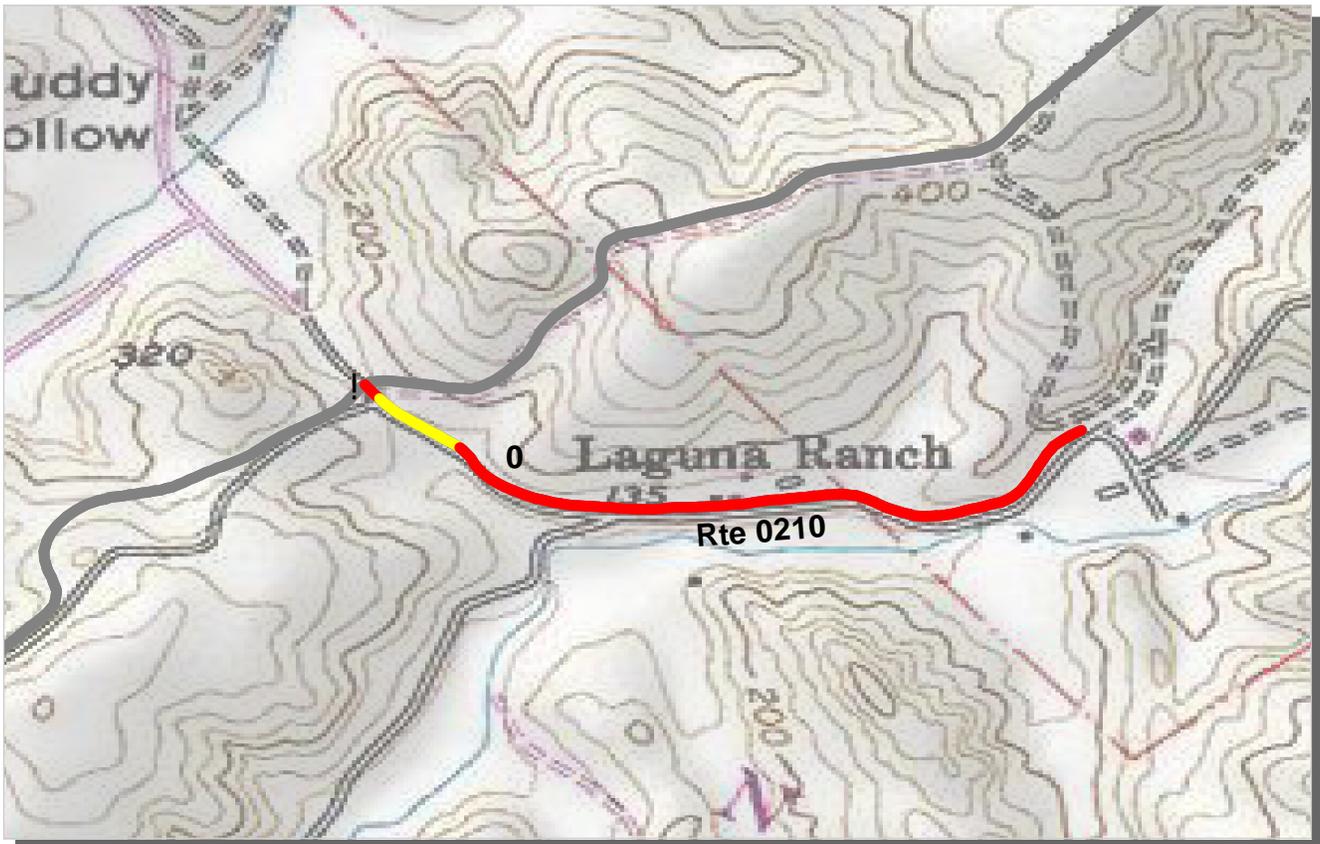
**PACIFIC WEST REGION**  
**PORE : POINT REYES NATIONAL SEASHORE**

**ROUTE: 0206 LIMANTOUR BEACH TRAIL ACCESS ROAD    TOTAL LENGTH: 0.37 Miles**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.37				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	22				
Lane Width (ft)	10				
Shoulder Width Right (ft)**	5				
Shoulder Width Left (ft)**	3				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	45				
PCR (Pavement Condition Rating)	45				
<b>Distress Index Values</b>					
Alligator Cracking Index	100				
Longitudinal Cracking Index	99				
Transverse Cracking Index	98				
Patching Index	100				
Rutting Index	48				
Roughness Condition Index (RCI)	46				

**ROUTE: 0206 LIMANTOUR BEACH TRAIL ACCESS ROAD**

\*\* Shoulder widths are measured from video at 0.50 mile intervals along route tangents. Visibility of actual shoulders in video images may affect accuracy of measured shoulder widths.



0

PCR    Poor █    Fair █    Good █    Excellent █  
           (<=60)            (61 - 84)            (85 - 94)            (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

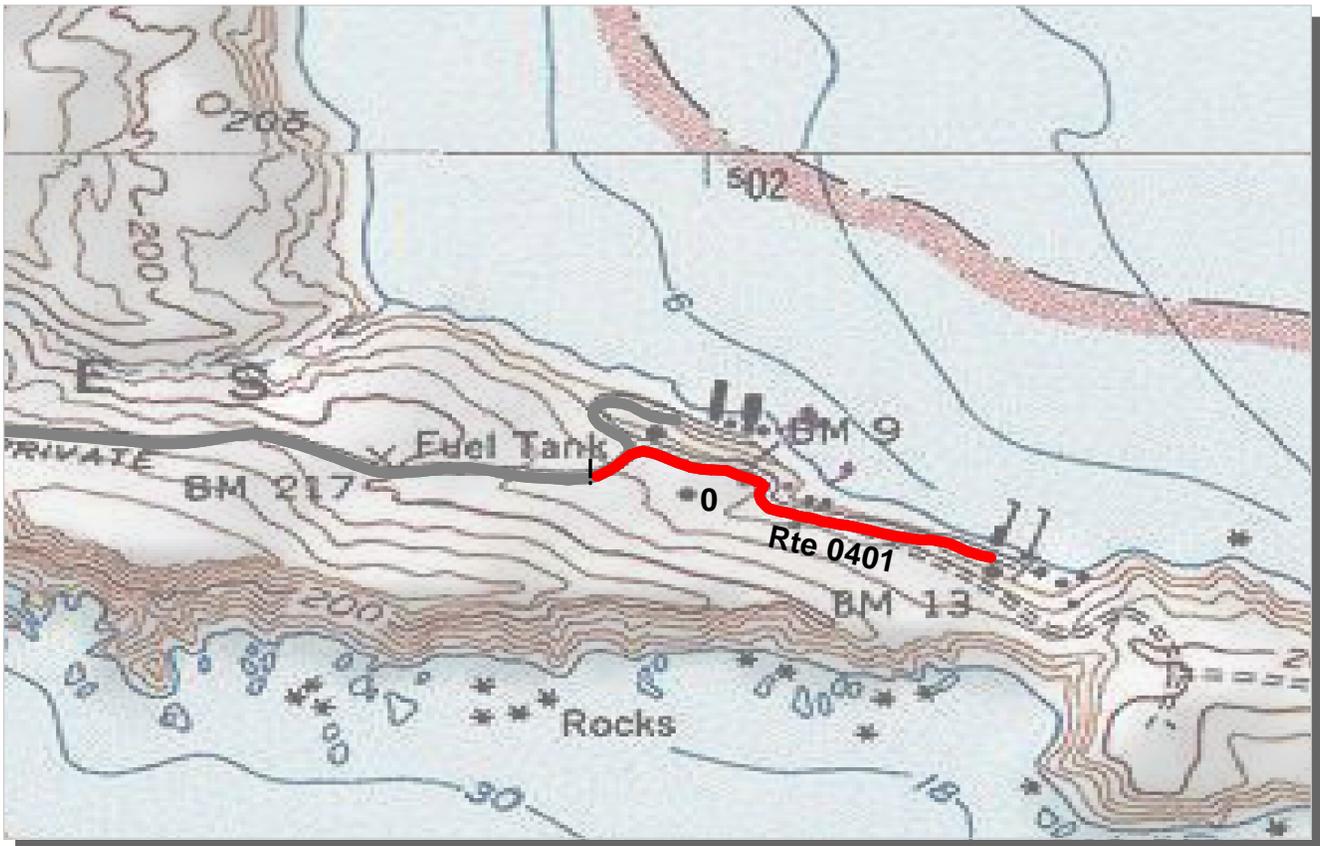
**PACIFIC WEST REGION**  
**PORE : POINT REYES NATIONAL SEASHORE**

**ROUTE: 0210 LAGUNA ROAD** **TOTAL LENGTH: 0.65 Miles**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.65				
<b>Traffic</b>	AADT SADT ADT Date Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	2				
Paved Width (ft)	16				
Lane Width (ft)	8				
Shoulder Width Right (ft)**	3				
Shoulder Width Left (ft)**	4				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	50				
PCR (Pavement Condition Rating)	48				
<b>Distress Index Values</b>					
Alligator Cracking Index	94				
Longitudinal Cracking Index	99				
Transverse Cracking Index	97				
Patching Index	100				
Rutting Index	60				
Roughness Condition Index (RCI)	46				

**ROUTE: 0210 LAGUNA ROAD**

\*\* Shoulder widths are measured from video at 0.50 mile intervals along route tangents. Visibility of actual shoulders in video images may affect accuracy of measured shoulder widths.



PCR    Poor ■    Fair ■    Good ■    Excellent ■  
           (<=60)                    (61 - 84)                    (85 - 94)                    (95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

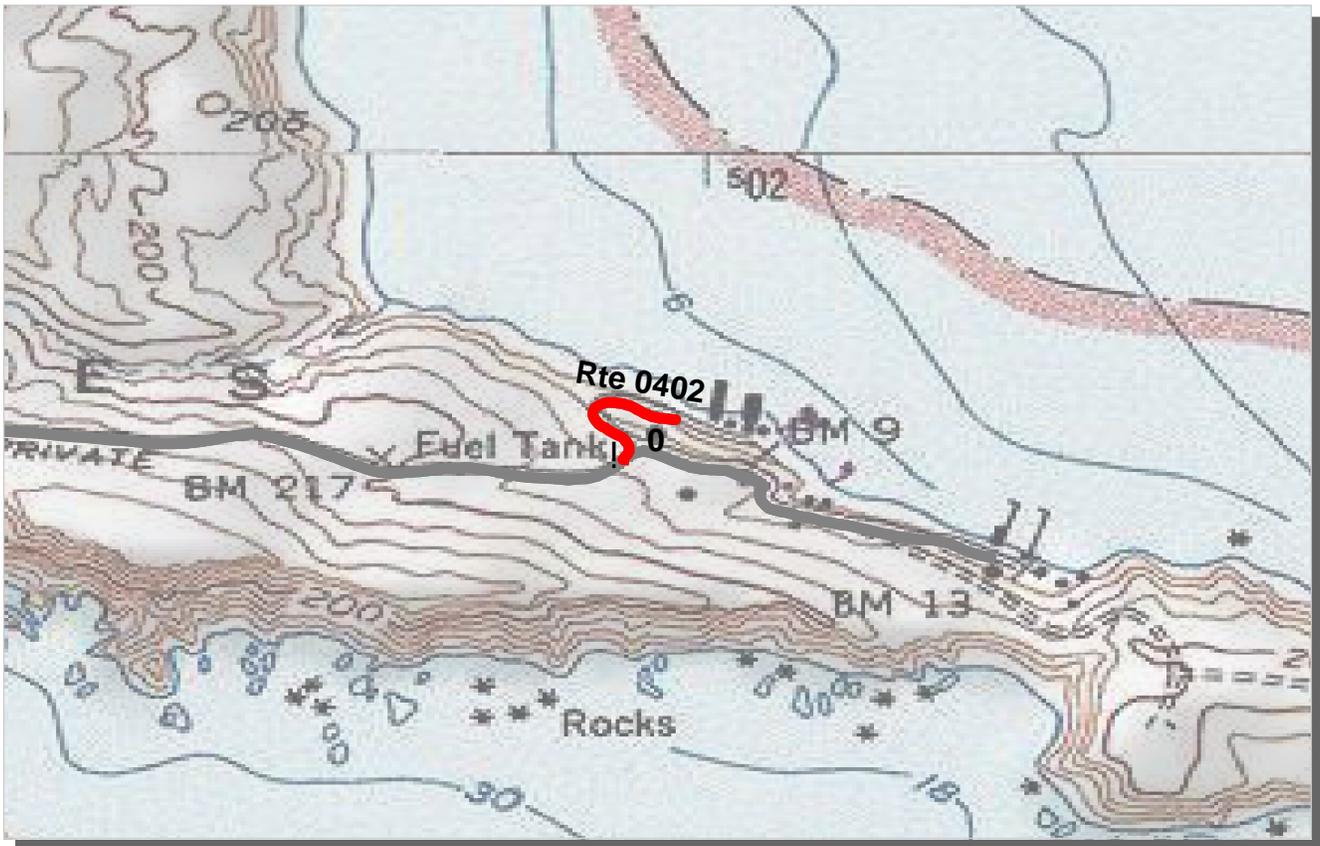
**PACIFIC WEST REGION**  
**PORE : POINT REYES NATIONAL SEASHORE**

**ROUTE: 0401 LIFEBOAT STATION ROAD** **TOTAL LENGTH: 0.35 Miles**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.35				
<b>Traffic</b>	AADT SADT ADT Date Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	1				
Paved Width (ft)	13				
Lane Width (ft)	12				
Shoulder Width Right (ft)**	2				
Shoulder Width Left (ft)**	1				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	8				
PCR (Pavement Condition Rating)	8				
<b>Distress Index Values</b>					
Alligator Cracking Index	16				
Longitudinal Cracking Index	95				
Transverse Cracking Index	96				
Patching Index	99				
Rutting Index	74				
Roughness Condition Index (RCI)	33				

**ROUTE: 0401 LIFEBOAT STATION ROAD**

\*\* Shoulder widths are measured from video at 0.50 mile intervals along route tangents. Visibility of actual shoulders in video images may affect accuracy of measured shoulder widths.



PCR	Poor	<span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>	Fair	<span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span>	Good	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen;"></span>	Excellent	<span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span>
		(≤60)		(61 - 84)		(85 - 94)		(95 - 100)

\* If the PCR rating is not available for a section, the SCR rating will be displayed. See appendix for definitions and formulas.

**PACIFIC WEST REGION**  
**PORE : POINT REYES NATIONAL SEASHORE**

**ROUTE: 0402 FISH DOCKS (MENDOZA) ROAD** **TOTAL LENGTH: 0.13 Miles**

<b>Section Number</b>	0				
<b>Section Length (mi)</b>	0.13				
<b>Traffic</b>	Traffic data may be found at <a href="http://www.efl.fhwa.dot.gov">www.efl.fhwa.dot.gov</a> Click on NPS Traffic Data (Note: Not all parks have traffic data)				
<b>Cross Section Information</b>					
Number of Lanes	1				
Paved Width (ft)	11				
Lane Width (ft)	10				
Shoulder Width Right (ft)**	0				
Shoulder Width Left (ft)**	0				
<b>Roadway Condition Information</b>					
SCR (Surface Condition Rating)	1				
PCR (Pavement Condition Rating)	1				
<b>Distress Index Values</b>					
Alligator Cracking Index	21				
Longitudinal Cracking Index	96				
Transverse Cracking Index	97				
Patching Index	98				
Rutting Index	48				
Roughness Condition Index (RCI)	NC				

**ROUTE: 0402 FISH DOCKS (MENDOZA) ROAD**

\*\* Shoulder widths are measured from video at 0.50 mile intervals along route tangents. Visibility of actual shoulders in video images may affect accuracy of measured shoulder widths.

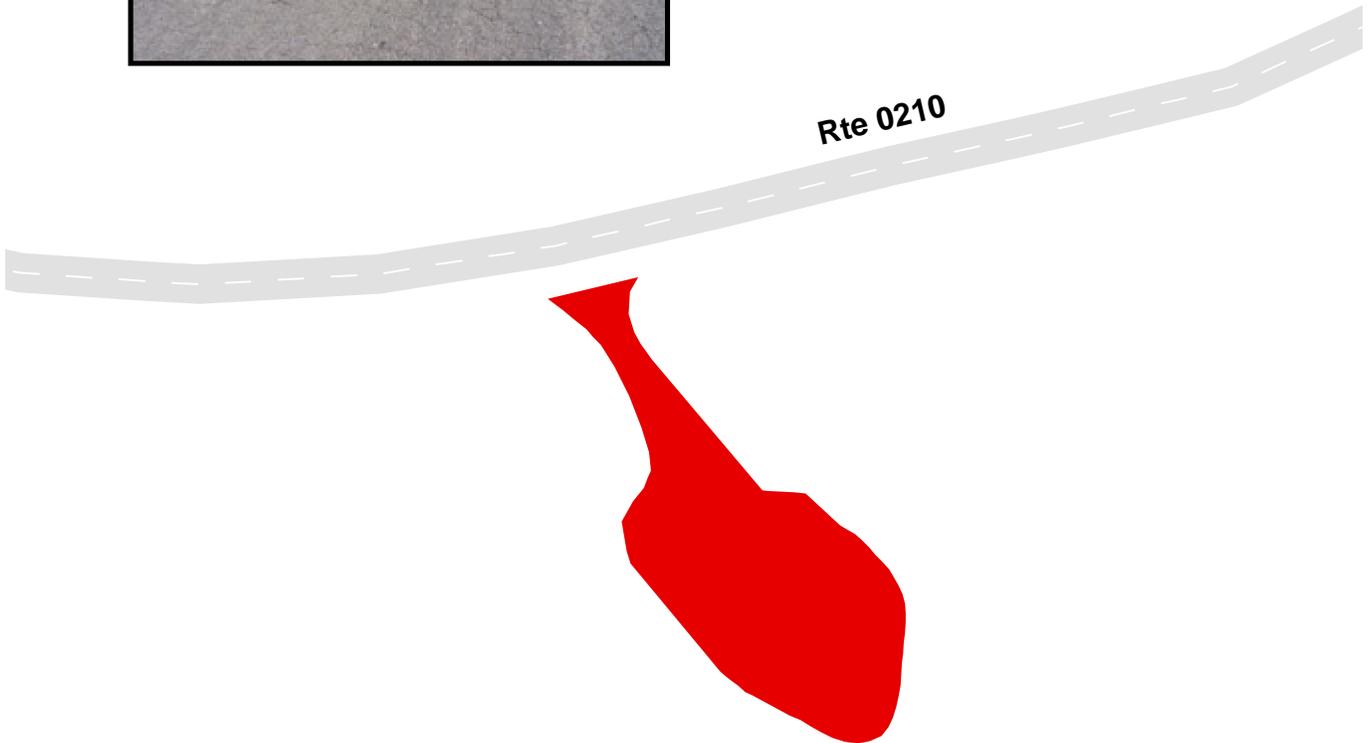
# POINT REYES NATIONAL SEASHORE

## Route 0915

LAGUNA TRAILHEAD PARKING  
 ADJACENT TO ROUTE 0210 AT MP 0.5 ON RIGHT

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0915	PUBLIC	5/12/2006	6891	0.12	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	NO CURB	POOR/45

\* Lane miles are based on 11' lane widths



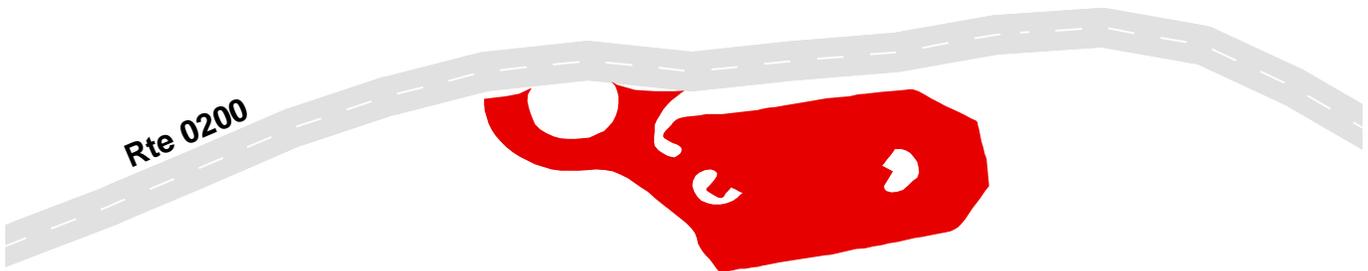
# POINT REYES NATIONAL SEASHORE

## Route 0930

LIGHTHOUSE VISITOR PARKING  
 ADJACENT TO ROUTE 0200 AT MP 1.1 ON LEFT

Route Number	Public / NonPublic	Date Visited	Area (sq ft)	Lane Miles *	Surface Type
0930	PUBLIC	5/11/2006	17118	0.29	AS
Culverts	Drop Inlets	Gates	Curb & Gutter	Curb	PCR
0	0	0	NO CURB AND GUTTER	ASPHALT CURB	GOOD/90

\* Lane miles are based on 11' lane widths



## PORE: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0010 LIMANTOUR ROAD	ROUTE 0100 SOUTH BEACH ROAD	ROUTE 0101 DRAKES BEACH ROAD	ROUTE 0102 NORTH BEACH ROAD	ROUTE 0200 LIGHTHOUSE ROAD	ROUTE 0201 CHIMNEY ROCK ROAD	UNIT
BARRIER	2,904	0	0	0	322	0	LINEAR FEET
BOLLARD	0	0	0	0	0	0	LINEAR FEET
BRIDGE	0	0	0	0	0	0	EACH
CABLE	0	0	0	0	0	0	LINEAR FEET
CATTLE GUARD	0	0	0	0	1	3	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	12,683	1,151	12,461	4,425	84	0	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
FIRE HYDRANT	0	0	0	0	2	0	EACH
GATE	1	0	0	0	1	1	EACH
GUARD/GUIDE RAIL	2,904	0	0	0	322	0	LINEAR FEET
GUARD/GUIDE WALL	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	16	3	3	4	12	7	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	2	0	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
SIGN	63	5	11	6	29	13	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TEMPORARY BARRIER	0	0	0	0	0	0	LINEAR FEET
TRAFFIC LIGHT	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TURNOUT	0	0	0	0	0	0	LINEAR FEET

Notice: Culverts and drop inlets were marked only on a limited number of roads in Cycle 4, therefore the culvert and drop inlet count above includes only those select roads, plus culverts and drop inlets in paved parking areas.

## PORE: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0202 SCHOONER BAY ROAD (OYSTER FARM ROAD)	ROUTE 0203A ESTERO TRAILHEAD ROAD	ROUTE 0203B HOME RANCH ROAD	ROUTE 0204 MOUNT VISION ROAD	ROUTE 0205 MCCLURE BEACH ACCESS ROAD	ROUTE 0206 LIMANTOUR BEACH TRAIL ACCESS ROAD	UNIT
BARRIER	0	0	0	0	0	0	LINEAR FEET
BOLLARD	0	0	0	0	0	0	LINEAR FEET
BRIDGE	0	0	0	0	0	0	EACH
CABLE	0	0	0	0	0	0	LINEAR FEET
CATTLE GUARD	1	4	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	0	0	0	0	0	0	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
FIRE HYDRANT	0	0	0	0	0	0	EACH
GATE	0	1	1	2	0	0	EACH
GUARD/GUIDE RAIL	0	0	0	0	0	0	LINEAR FEET
GUARD/GUIDE WALL	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	3	7	1	9	2	3	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	0	0	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
SIGN	3	5	2	4	3	17	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TEMPORARY BARRIER	0	0	0	0	0	0	LINEAR FEET
TRAFFIC LIGHT	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TURNOUT	0	0	0	0	0	0	LINEAR FEET

Notice: Culverts and drop inlets were marked only on a limited number of roads in Cycle 4, therefore the culvert and drop inlet count above includes only those select roads, plus culverts and drop inlets in paved parking areas.

## PORE: ROUTE MAINTENANCE FEATURES SUMMARY

FEATURE	ROUTE 0210 LAGUNA ROAD	ROUTE 0211 BEAR VALLEY TRAILHEAD ROAD	ROUTE 0401 LIFEBOAT STATION ROAD	ROUTE 0402 FISH DOCKS (MENDOZA) ROAD	ROUTE 0404 LIMANTOUR RESIDENCE ROAD WEST	ROUTE 0408 MORGAN HORSE RANCH ROAD	UNIT
BARRIER	0	121	0	0	0	0	LINEAR FEET
BOLLARD	0	0	0	0	0	0	LINEAR FEET
BRIDGE	0	0	0	0	0	0	EACH
CABLE	0	0	0	0	0	0	LINEAR FEET
CATTLE GUARD	0	0	0	0	0	0	EACH
CULVERT	0	0	0	0	0	0	EACH
CURB	0	0	0	0	0	222	LINEAR FEET
DROP INLET	0	0	0	0	0	0	EACH
FIRE HYDRANT	0	1	0	0	1	3	EACH
GATE	1	1	2	1	0	0	EACH
GUARD/GUIDE RAIL	0	121	0	0	0	0	LINEAR FEET
GUARD/GUIDE WALL	0	0	0	0	0	0	LINEAR FEET
INTERSECTION	5	12	4	2	3	8	EACH
LOW WATER CROSSING	0	0	0	0	0	0	EACH
LOW WATER CROSSING	0	0	0	0	0	0	LINEAR FEET
MILE MARKER	0	0	0	0	0	0	EACH
OVERHEAD SIGN	0	0	0	0	0	0	EACH
OVERPASS	0	0	0	0	0	0	EACH
PARK BOUNDARY	0	0	0	0	0	0	EACH
PAVED DITCH	0	0	0	0	0	0	LINEAR FEET
PULLOUT	0	0	0	0	0	0	EACH
RAILROAD CROSSING	0	0	0	0	0	0	EACH
RETAINING WALL	0	0	0	0	0	0	EACH
SIGN	15	28	6	4	4	7	EACH
STATE BOUNDARY	0	0	0	0	0	0	EACH
TEMPORARY BARRIER	0	0	0	0	0	0	LINEAR FEET
TRAFFIC LIGHT	0	0	0	0	0	0	EACH
TUNNEL	0	0	0	0	0	0	EACH
TURNOUT	0	0	0	0	0	0	LINEAR FEET

Notice: Culverts and drop inlets were marked only on a limited number of roads in Cycle 4, therefore the culvert and drop inlet count above includes only those select roads, plus culverts and drop inlets in paved parking areas.

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010: LIMANTOUR ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 5002, BEAR VALLEY ROAD
0.000	0.000	INTERSECTION	RIGHT	ROUTE 5002 (BEAR VALLEY ROAD)
0.000	0.000	SIGN	N/A	GUIDE, DRAKES BEACH LIGHTHOUSE 19 INFORMATION
0.000	0.000	INTERSECTION	LEFT	ROUTE 5002 (BEAR VALLEY ROAD)
0.011	0.011	SIGN	RIGHT	REGULATORY, STOP
0.041	0.041	SIGN	RIGHT	GUIDE, POINT REYES NATIONAL SEASHORE
0.087	0.087	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.109	0.109	SIGN	RIGHT	GUIDE, PET RESTRICTIONS ON LIMANTOUR BEACH
0.151	0.151	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
0.279	0.279	SIGN	RIGHT	GUIDE, NO HUNTING CAMPING BY PERMIT ONLY
0.368	0.454	CURB	RIGHT	
0.672	0.672	SIGN	RIGHT	REGULATORY, NO TRAVEL TRAILERS
0.746	0.746	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
0.784	0.784	GATE	N/A	HORIZONTAL AND VERTICAL BARS
0.862	0.862	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
0.878	0.878	INTERSECTION	LEFT	UNPAVED FIRE LANE
0.897	1.024	CURB	RIGHT	
0.995	0.998	CURB	LEFT	
0.999	1.081	CURB	LEFT	
1.066	1.066	SIGN	RIGHT	REGULATORY, NPS LIM 10
1.085	1.243	CURB	LEFT	
1.227	1.359	CURB	RIGHT	
1.343	1.436	CURB	LEFT	
1.435	1.508	CURB	RIGHT	
1.511	1.543	CURB	RIGHT	
1.512	1.707	CURB	LEFT	
1.628	1.704	GUARD/GUIDE RAIL	RIGHT	
1.731	1.828	CURB	RIGHT	
1.942	1.997	GUARD/GUIDE RAIL	RIGHT	
1.950	2.095	CURB	RIGHT	

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010: LIMANTOUR ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
1.963	2.004	GUARD/GUIDE RAIL	LEFT	
2.039	2.081	CURB	LEFT	
2.083	2.347	CURB	LEFT	
2.104	2.104	SIGN	RIGHT	REGULATORY, NPS LIM 20
2.355	2.693	CURB	RIGHT	
2.488	2.558	GUARD/GUIDE RAIL	RIGHT	
2.508	2.555	GUARD/GUIDE RAIL	LEFT	
2.620	2.620	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
2.752	2.810	CURB	LEFT	
2.773	2.882	CURB	RIGHT	
2.879	3.067	GUARD/GUIDE RAIL	RIGHT	
2.887	3.066	CURB	RIGHT	
2.920	2.995	CURB	LEFT	
3.003	3.033	GUARD/GUIDE RAIL	LEFT	
3.088	3.202	CURB	LEFT	
3.163	3.163	SIGN	RIGHT	REGULATORY, NPS LIM 30
3.164	3.164	SIGN	RIGHT	REGULATORY, NPS LIM 30
3.323	3.323	SIGN	RIGHT	REGULATORY, SPEED LIMIT 35
3.325	3.325	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
3.396	3.396	SIGN	RIGHT	GUIDE, SKY TRAILHEAD
3.440	3.440	INTERSECTION	LEFT	ROUTE 0907 (SKY TRAILHEAD PARKING)
3.611	3.611	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
3.666	3.666	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
3.693	3.693	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
3.751	3.751	INTERSECTION	RIGHT	UNPAVED FIRE LANE
4.202	4.202	SIGN	RIGHT	REGULATORY, NPS LIM 40
4.209	4.209	SIGN	RIGHT	REGULATORY, NPS LIM
4.227	4.227	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
4.227	4.227	SIGN	RIGHT	WARNING, 15 MPH
4.452	4.452	SIGN	RIGHT	GUIDE, BAYVIEW TRAILHEAD

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010: LIMANTOUR ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
4.463	4.463	INTERSECTION	RIGHT	ROUTE 0906 (BAYVIEW TRAIL PARKING (ADAMS PIT))
4.496	4.496	SIGN	RIGHT	GUIDE, BAY VIEW TRAILHEAD
4.497	4.497	SIGN	RIGHT	GUIDE, BAY VIEW TRAILHEAD
4.552	4.552	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
4.661	4.661	SIGN	RIGHT	WARNING, ELK CROSSING NEXT 3 MILES
5.237	5.237	SIGN	RIGHT	REGULATORY, NPS LIM 50
5.239	5.239	SIGN	RIGHT	REGULATORY, NPS LIM 50
5.353	5.353	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
5.387	5.387	SIGN	RIGHT	GUIDE, ENVIRONMENTAL EDUCATION CENTER BUS PARKING
5.411	5.411	INTERSECTION	LEFT	ROUTE 0908 (LIMANTOUR BUS PARKING (ED CENTER))
5.459	5.459	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
5.501	5.544	GUARD/GUIDE RAIL	RIGHT	
5.570	5.570	SIGN	RIGHT	WARNING, 17% GRADE
5.570	5.570	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
5.611	5.611	SIGN	RIGHT	WARNING, 15 M.P.H.
5.611	5.611	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
5.879	5.879	SIGN	RIGHT	GUIDE, YOUTH HOSTEL ENVIRONMENTAL EDUCATION CENTER
5.895	5.895	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
5.914	5.914	SIGN	RIGHT	GUIDE, MUDDY HOLLOW LIMANTOUR BEACH
5.936	5.936	INTERSECTION	LEFT	ROUTE 0210 (LAGUNA ROAD)
5.936	5.936	INTERSECTION	RIGHT	ROUTE 0107 (MUDDY HOLLOW ROAD)
6.057	6.057	SIGN	RIGHT	WARNING, 15 MPH
6.057	6.057	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT
6.252	6.252	SIGN	RIGHT	REGULATORY, NPS LIM 60
6.253	6.253	SIGN	RIGHT	REGULATORY, NPS LIM 66
6.599	6.599	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
6.874	6.874	INTERSECTION	LEFT	UNPAVED ROAD
6.949	6.949	SIGN	RIGHT	WARNING, 15 M.P.H.
6.949	6.949	SIGN	RIGHT	WARNING, GRAPHIC SIGN, NO TEXT

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0010: LIMANTOUR ROAD

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<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
7.183	7.183	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
7.196	7.196	SIGN	RIGHT	REGULATORY, SPEED LIMIT 25
7.290	7.290	SIGN	RIGHT	REGULATORY, NPS LIM 70
7.292	7.292	SIGN	RIGHT	REGULATORY, NPS LIM 70
7.335	7.335	INTERSECTION	LEFT	ROUTE 0500 (LIMANTOUR RESIDENCE ROAD EAST)
7.342	7.342	INTERSECTION	RIGHT	ROUTE 0404 (LIMANTOUR RESIDENCE ROAD WEST)
7.470	7.470	SIGN	RIGHT	GUIDE, CAMPING BY PERMIT ONLY
7.480	7.480	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
7.494	7.494	INTERSECTION	LEFT	ROUTE 0206 (LIMANTOUR BEACH TRAIL ACCESS ROAD)
7.501	7.501	SIGN	LEFT	GUIDE, GRAPHIC SIGN, NO TEXT
7.501	7.501	SIGN	LEFT	WARNING, NOT A THROUGH STREET
7.501	7.501	SIGN	RIGHT	GUIDE, GRAPHIC SIGN, NO TEXT
7.501	7.501	SIGN	RIGHT	WARNING, NOT A THROUGH STREET
7.521	7.521	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
7.535	7.535	SIGN	RIGHT	REGULATORY, NO PARKING ON ROADWAY
7.542	7.542	INTERSECTION	LEFT	PAVED FIRE ROAD
7.548	7.548	INTERSECTION	LEFT	ROUTE 0010 (LIMANTOUR ROAD)
7.554	7.554	SIGN	LEFT	REGULATORY, KEEP RIGHT
7.569	7.569	SIGN	RIGHT	GUIDE, HORSE TRAILERS 500 FT
7.570	7.570	INTERSECTION	N/A	ROUTE 0945 (LIMANTOUR BEACH MAIN PARKING)
7.570	7.570	ROUTE END	N/A	TO ROUTE 0945, LIMANTOUR BEACH MAIN PARKING

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0200: LIGHTHOUSE ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM END OF ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0201 (CHIMNEY ROCK ROAD)
0.000	0.000	INTERSECTION	LEFT	ROUTE 0201 (CHIMNEY ROCK ROAD)
0.004	0.004	SIGN	RIGHT	GUIDE, BEACHES CHIMNEY ROCK NO BUSES
0.019	0.019	INTERSECTION	LEFT	ROUTE 0201 (CHIMNEY ROCK ROAD) SPUR & ROUTE 0200 (LIGHTHOUSE ROAD) SPUR
0.175	0.175	CATTLE GUARD	N/A	
0.179	0.179	INTERSECTION	RIGHT	UNPAVED ROUTE, AUTHORIZED VEHICLES ONLY
0.179	0.179	SIGN	RIGHT	REGULATORY, AUTHORIZED VEHICLES ONLY
0.299	0.299	SIGN	LEFT	GUIDE, HAZARDOUS CLIFFS NO CLIMBING OR HIKING ON CLIFFS
0.362	0.362	INTERSECTION	RIGHT	UNPAVED ROUTE, AUTHORIZED VEHICLES ONLY
0.365	0.365	SIGN	RIGHT	REGULATORY, AUTHORIZED VEHICLES ONLY
0.421	0.421	SIGN	RIGHT	GUIDE, HAZARDOUS CLIFFS NO CLIMBING OR HIKING ON CLIFFS
0.527	0.527	INTERSECTION	LEFT	UNPAVED ROAD
0.723	0.723	SIGN	RIGHT	WARNING, CAUTION SAND DRIFT
0.808	0.808	SIGN	RIGHT	WARNING, CAUTION SAND DRIFT
0.846	0.907	GUARD/GUIDE RAIL	LEFT	
0.846	0.846	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.875	0.875	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.889	0.889	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.901	0.901	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.919	0.919	SIGN	LEFT	REGULATORY, NO PARKING ON PAVEMENT
0.927	0.927	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.977	0.977	SIGN	RIGHT	REGULATORY, NO PARKING THIS SIDE OF ROAD
0.978	0.978	SIGN	LEFT	REGULATORY, NO PARKING THIS SIDE OF ROAD
1.019	1.019	SIGN	LEFT	REGULATORY, NO PARKING THIS SIDE OF ROAD
1.019	1.019	SIGN	RIGHT	REGULATORY, NO PARKING THIS SIDE OF ROAD
1.038	1.054	CURB	RIGHT	
1.039	1.039	INTERSECTION	LEFT	ROUTE 0930 (LIGHTHOUSE VISITOR PARKING)

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0200: LIGHTHOUSE ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
1.043	1.043	SIGN	LEFT	REGULATORY, KEEP RIGHT
1.048	1.048	SIGN	RIGHT	REGULATORY, NO PARKING BUS STOP
1.052	1.052	SIGN	RIGHT	REGULATORY, KEEP RIGHT
1.054	1.054	SIGN	RIGHT	REGULATORY, NO PARKING BUS STOP
1.054	1.054	SIGN	LEFT	REGULATORY, UNABLE TO READ FROM VIDEO
1.057	1.057	INTERSECTION	LEFT	ROUTE 0930 (LIGHTHOUSE VISITOR PARKING)
1.059	1.059	GATE	N/A	
1.059	1.059	SIGN	LEFT	GUIDE, POINT REYES LIGHTHOUSE VISITOR CENTER OPEN 10 TO 4:30 LIGHTHOUSE STAIRS OPEN 10 TO 4:30 CLOSED TUESD
1.059	1.059	SIGN	RIGHT	GUIDE, DRAKES BEACH CAFE OPEN FRI - MON 10 AM - 6 PM WEATHER PERMITTING
1.062	1.062	SIGN	RIGHT	GUIDE, AND AUTHORIZED VEHICLES ONLY
1.071	1.071	SIGN	RIGHT	GUIDE, 0.4 MILE
1.138	1.138	INTERSECTION	LEFT	UNPAVED ROAD
1.335	1.335	SIGN	RIGHT	REGULATORY, RESERVED PARKING
1.352	1.352	INTERSECTION	LEFT	HANDICAP PARKING
1.357	1.357	SIGN	RIGHT	REGULATORY, PRIVATE ROAD NO THRU TRAFFIC
1.449	1.449	INTERSECTION	RIGHT	ROUTE 0903 (LIGHTHOUSE RESIDENCE PARKING)
1.449	1.449	SIGN	RIGHT	GUIDE, PARK RESIDENCES DO NOT DISTURB
1.451	1.451	FIRE HYDRANT	RIGHT	
1.480	1.480	FIRE HYDRANT	RIGHT	
1.480	1.480	INTERSECTION	LEFT	LIGHTHOUSE APARTMENT GARAGES
1.480	1.480	ROUTE END	N/A	LIGHT HOUSE APARTMENT GARAGES

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0201: CHIMNEY ROCK ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM END OF ROUTE 5001, SIR FRANCIS DRAKE BOULEVARD WEST (COUNTY ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0200 (LIGHTHOUSE ROAD)
0.000	0.000	INTERSECTION	N/A	ROUTE 5001 (SIR FRANCIS DRAKE BOULEVARD WEST)
0.007	0.007	SIGN	RIGHT	GUIDE, LIGHTHOUSE CHIMNEY ROCK NO BUSES
0.014	0.014	INTERSECTION	RIGHT	ROUTE 0200 (LIGHTHOUSE ROAD) SPUR AND ROUTE 0201 (CHIMNEY ROCK ROAD) SPUR
0.022	0.022	SIGN	RIGHT	GUIDE, RESTRICTION 24 FT TOTAL LENGTH
0.034	0.034	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.037	0.037	CATTLE GUARD	N/A	
0.091	0.091	CATTLE GUARD	N/A	
0.113	0.113	SIGN	RIGHT	WARNING, 15 M.P.H.
0.113	0.113	SIGN	RIGHT	WARNING, SLOW
0.210	0.210	SIGN	RIGHT	GUIDE, HAZARDOUS CLIFFS NO CLIMBING OR HIKING ON CLIFFS
0.314	0.314	INTERSECTION	RIGHT	UNPAVED ROAD
0.320	0.320	GATE	N/A	ROPE OR CABLE
0.321	0.321	SIGN	RIGHT	GUIDE, NO DOGS BEYOND THIS POINT
0.321	0.321	SIGN	RIGHT	GUIDE, NO BICYCLES BEYOND THIS POINT
0.750	0.750	SIGN	RIGHT	WARNING, SLOW
0.750	0.750	SIGN	RIGHT	WARNING, 15 MPH
0.808	0.808	CATTLE GUARD	N/A	
0.877	0.877	SIGN	RIGHT	GUIDE, CHIMNEY ROCK TRAILHEAD
0.891	0.891	INTERSECTION	RIGHT	ROUTE 0917 (CHIMNEY ROCK TRAILHEAD PARKING)
0.896	0.896	SIGN	RIGHT	REGULATORY, UNABLE TO READ FROM VIDEO
0.896	0.896	SIGN	RIGHT	WARNING, UNABLE TO READ FROM VIDEO
0.910	0.910	INTERSECTION	N/A	ROUTE 0401 (LIFEBOAT STATION ROAD)
0.910	0.910	INTERSECTION	RIGHT	ROUTE 0917 (CHIMNEY ROCK TRAILHEAD PARKING)
0.910	0.910	ROUTE END	N/A	TO ROUTE 0401, LIFE BOAT STATION ROAD AT ROUTE 0917, CHIMNEY ROCK TRAIL LEAD PARKING

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0206: LIMANTOUR BEACH TRAIL ACCESS ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010 AT MP 7.49 ON LEFT
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010 (LIMANTOUR ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010 (LIMANTOUR ROAD)
0.004	0.004	SIGN	RIGHT	GUIDE, GRAPHIC SIGN, NO TEXT
0.004	0.004	SIGN	RIGHT	WARNING, NOT A THROUGH STREET
0.012	0.012	SIGN	RIGHT	REGULATORY, STOP
0.025	0.025	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.087	0.087	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.087	0.087	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.141	0.141	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.141	0.141	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.201	0.201	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.201	0.201	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.257	0.257	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.258	0.258	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.312	0.312	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.312	0.312	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.366	0.366	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.366	0.366	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.370	0.370	INTERSECTION	N/A	ROUTE 0904 (LIMANTOUR BEACH TRAIL PARKING SOUTH)
0.370	0.370	SIGN	LEFT	REGULATORY, KEEP RIGHT
0.370	0.370	ROUTE END	N/A	TO ROUTE 0904, LIMANTOUR BEACH TRAIL PARKING SOUTH

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0210: LAGUNA ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

FROM MILEPOST	TO MILEPOST	FEATURE	SIDE	COMMENT
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0010 AT MP 5.94
0.000	0.000	INTERSECTION	LEFT	ROUTE 0010 (LIMANTOUR ROAD)
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0010 (LIMANTOUR ROAD)
0.007	0.007	SIGN	RIGHT	REGULATORY, STOP
0.011	0.011	SIGN	RIGHT	GUIDE, POINT REYES-CLEM MILLER ENVIRONMENTAL EDUCATION CENTER
0.011	0.011	SIGN	RIGHT	GUIDE, POINT REYES HOSTEL OVERNIGHT ACCOMMODATIONS OPEN TO PUBLIC 4:30 PM
0.027	0.027	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.081	0.081	SIGN	RIGHT	WARNING, SOFT SHOULDER
0.229	0.229	INTERSECTION	RIGHT	UNPAVED FIRE ROAD
0.382	0.382	SIGN	LEFT	REGULATORY, NO PARKING ANY TIME
0.384	0.384	SIGN	RIGHT	REGULATORY, NO PARKING ANY TIME
0.501	0.501	SIGN	RIGHT	REGULATORY, SPEED LIMIT 15
0.504	0.504	SIGN	RIGHT	GUIDE, P
0.511	0.511	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.513	0.513	INTERSECTION	RIGHT	ROUTE 0915 (LAGUNA TRAILHEAD PARKING)
0.515	0.515	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.515	0.515	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.540	0.540	SIGN	RIGHT	REGULATORY, AUTHORIZED VEHICLES ONLY
0.549	0.549	GATE	N/A	
0.552	0.552	SIGN	LEFT	GUIDE, POINT REYES ENVIRONMENTAL EDUCATION CENTER
0.565	0.565	SIGN	RIGHT	REGULATORY, SPEED LIMIT 5 WHEN CHILDREN ARE PRESENT
0.650	0.650	INTERSECTION	RIGHT	ROUTE 0942 (ENVIRONMENTAL ED CENTER PARKING)
0.650	0.650	ROUTE END	N/A	TO ROUTE 0942, ENVIRONMENTAL ED CENTER PARKING

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0401: LIFEBOAT STATION ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.000	0.000	ROUTE BEGIN	N/A	FROM END OF ROUTE 0201, CHIMNEY ROCK ROAD (BEAR RIGHT)
0.000	0.000	INTERSECTION	N/A	ROUTE 0201 (CHIMNEY ROCK ROAD)
0.003	0.003	SIGN	RIGHT	REGULATORY, AUTHORIZED VEHICLES ONLY
0.027	0.027	SIGN	RIGHT	GUIDE, ELEPHANT SEAL OVERLOOK
0.031	0.031	INTERSECTION	LEFT	ROUTE 0402 (FISH DOCKS (MENDOZA ROAD))
0.076	0.076	SIGN	RIGHT	GUIDE, UNABLE TO READ FROM VIDEO
0.079	0.079	SIGN	RIGHT	REGULATORY, AREA CLOSED TO PEDESTRIAN TRAFFIC BEYOND THIS POINT
0.087	0.087	SIGN	LEFT	GUIDE, GRAPHIC SIGN, NO TEXT
0.087	0.087	SIGN	RIGHT	GUIDE, PARK RESIDENCE PLEASE RESPECT PRIVACY OF OCCUPANTS
0.087	0.087	GATE	N/A	HORIZONTAL AND VERTICAL BARS
0.144	0.144	INTERSECTION	RIGHT	UNPAVED ROAD, TO WATER TANK
0.163	0.163	GATE	N/A	
0.347	0.347	INTERSECTION	N/A	ROUTE 0944 (LIFE BOAT STATION PARKING)
0.350	0.350	ROUTE END	N/A	TO ROUTE 0944, END OF PAVEMENT AT LIFEBOAT STATION PARKING

# PORE: ROUTE MAINTENANCE FEATURES ROAD LOG

## ROUTE 0402: FISH DOCKS (MENDOZA) ROAD

**Notice:** Culverts and drop inlets were marked only on select roads and are reflected in the Road Logs. Culverts and drop inlets were inventoried in paved parking areas and can be found in the Parking Lot Condition Rating Sheets (Section 7), and in the Parkwide Maintenance Features Summary (Section 8).

<b>FROM MILEPOST</b>	<b>TO MILEPOST</b>	<b>FEATURE</b>	<b>SIDE</b>	<b>COMMENT</b>
0.000	0.000	ROUTE BEGIN	N/A	FROM ROUTE 0401, LIFE BOAT STATION ROAD, AT MP 0.00
0.000	0.000	INTERSECTION	RIGHT	ROUTE 0401 (LIFEBOAT STATION ROAD)
0.010	0.010	INTERSECTION	LEFT	ROUTE 0401 (LIFEBOAT STATION ROAD)
0.018	0.018	SIGN	RIGHT	GUIDE, DOCKS CLOSED TO PUBLIC USE LOCKED GATE AHEAD
0.054	0.054	SIGN	LEFT	WARNING, WARNING HELP PROTECT OUR WILDLIFE DON'T FEED, TOUCH, OR DISTURB MARINE WILDLIFE IT'S HARMFUL AND ILL
0.085	0.085	GATE	N/A	HORIZONTAL AND VERTICAL BARS
0.085	0.085	SIGN	N/A	REGULATORY, GRAPHIC SIGN, NO TEXT
0.085	0.085	SIGN	N/A	REGULATORY, GRAPHIC SIGN, NO TEXT
0.130	0.130	ROUTE END	N/A	TO END OF PAVEMENT AT DOCKS

# **TRAFFIC DATA AND ADT CALCULATIONS**

# Point Reyes National Seashore

## PUBLIC USE COUNTING AND REPORTING INSTRUCTIONS

Following are detailed instructions for collecting and reporting data to be entered on Form 10-157, Revised, Monthly Public Use Report by Point Reyes National Seashore. These instructions are effective the date of issuance and will continue in effect unless changed by amendment or by memorandum from the Socio-Economic Studies Division to the superintendent approving a requested change.

Each item below describes the procedures to be followed in collecting public use data and summarizing the various elements of those data for entry on the corresponding line on the 10-157, Monthly Public Use Report.

### Recreation Visits

#### SOUTH DISTRICT

1. A pneumatic tube traffic counter is located across the entrance lane to the visitor center. The traffic count is multiplied by the persons-per-vehicle (PPV) multiplier of 4.
2. A pneumatic tube traffic counter is located across the entrance lane to Limantour. The traffic count is multiplied by the PPV multiplier of 2.
3. A pneumatic tube traffic counter is located across the entrance/exit lanes to Five Brooks. The traffic count is divided by two to adjust for cars entering and exiting the unit. The adjusted traffic count is multiplied by the PPV multiplier of 2.
4. A pneumatic tube traffic counter is located across the entrance/exit lanes to Palomarin. The traffic count is divided by two to adjust for cars entering and exiting the unit. The adjusted traffic count is multiplied by the PPV multiplier of 2.
5. The estimated vehicle count by park rangers at Bolinas Ridge, Commonweal, and Tocaloma. The vehicle count is multiplied by the PPV multiplier of 2.

#### NORTH DISTRICT

6. A pneumatic tube traffic counter is located across the entrance lane to Pierce Point Road. The traffic count is multiplied by the PPV multiplier of 4.
7. A pneumatic tube traffic counter is located across the entrance lane to Sir Francis Drake Road. The traffic count is multiplied by the PPV multiplier of 4.

**Total recreation visitors are the sum of the visitation at the north and south districts.**

### Non-recreation Visits

Non-recreation visitors are estimated as 2,149 per month.

## Recreation Visitor Hours

### SOUTH DISTRICT

1. The number of visitors to the Bear Valley area is multiplied by 5 hours.
2. The number of visitors to the Limantour area is multiplied by 5 hours.
3. The number of visitors to the Five Brooks area is multiplied by 5 hours.
4. The number of visitors to the Palomarin area is multiplied by 3 hours.
5. The number of visitors to the Bolinas Ridge area is multiplied by 4 hours.
6. The number of visitors to the Five Brooks Stables is multiplied by 2 hours.
7. The number of overnight stays in the South District is multiplied by 17 hours.
8. The number of visitors at Stewarts Horse Camp for day use is multiplied by 2 hours.
9. The number of visitors staying overnight at Stewarts Horse Camp is multiplied by 17 hours.
10. The number of visitors staying overnight at the Youth Hostel is multiplied by 17 hours.

### NORTH DISTRICT

North District hours are determined by estimating visitor use at various areas using pre-determined multipliers in Table 1. The estimated visitor use is multiplied by the length of stay multiplier. The areas are then summed for total visitor hours for the north district.

Table 1  
Estimated Visitor Use by Location and Length of Stay Multiplier

Location	Multiplier	Length of Stay
McClures Beach	Total visitors at Pierce Point Road is multiplied by 0.30	5 Hours
Pierce Point Ranch	Total visitors at Pierce Point Road is multiplied by 0.25	5 Hours
Kehoe Beach	Total visitors at Pierce Point Road is multiplied by 0.25	5 Hours
Abbott's Lagoon	Total visitors at Pierce Point Road is multiplied by 0.20	5 Hours
Tomales Bay	Total visitors at Pierce Point Road is multiplied by the seasonal factor for Tomales Bay in Table 2.	5 Hours
Headlands	Total visitors at Headlands, as determined by traffic count	1 Hour
Drakes Beach	Total visitors at Sir Francis Drake Road is multiplied by the seasonal factor for Drakes Beach in Table 2	3 Hours
North Beach	Total visitors at Sir Francis Drake Road is multiplied by the seasonal factor for North Beach in Table 2	3 Hours
South Beach	Total visitors at Sir Francis Drake Road is multiplied by the seasonal factor for South Beach in Table 2	3 Hours
Mt. Vision	Total visitors at Sir Francis Drake Road is multiplied by 0.07	2 Hours
Estero Trail	Total visitors at Sir Francis Drake Road is multiplied by 0.05	3 Hours

Table 2  
Seasonal Adjustment Factors by Location and by Month

Month	Tomales Bay	Drakes Beach	North Beach	South Beach
Jan	0.17	0.31	0.22	0.13
Feb	0.17	0.39	0.41	0.12
Mar	0.18	0.26	0.39	0.09
Apr	0.20	0.28	0.35	0.09
May	0.23	0.32	0.27	0.10
Jun	0.25	0.59	0.22	0.09
Jul	0.25	0.40	0.22	0.10
Aug	0.25	0.37	0.25	0.09
Sep	0.23	0.55	0.33	0.10
Oct	0.19	0.35	0.42	0.10
Nov	0.17	0.23	0.29	0.10
Dec	0.17	0.21	0.22	0.09

### Non-recreation Visitor Hours

Non-recreation visitor hours are estimated as one hour per visit.

### Overnight Stays

Concessionary Lodging - American Youth Hostel

The number of visitors staying overnight as reported by the concessionary.

Concessionary Campgrounds - Stewarts Horse Camp

The number of visitors staying overnight as reported by the concessionary.

NPS Backcountry - Miscellaneous Sites

The number of overnight stays by backcountry campers.

## Special Use Data

- Line a. The number of visitors at Sir Francis Drake
- Line b. The number of visitors at Bear Valley
- Line c. The number of visitors at Palomarin
- Line d. The number of visitors at Limantour
- Line e. The number of visitors at Five Brooks
- Line f. The number of visitors at the Rental stables
- Line g. The number of visitors at Pierce Point Ranch
- Line h. The number of visitors at Bolinas Ridge
- Line i. The number of visitors at the North District
- Line j. The number of visitors at the South District
- Line k. The number of visitors at the Outlier trail heads
- Line n. The number of buses

# NPS Stats

National Park Service Public Use Statistics Office

National Park Service  
U.S. Department of the Interior


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## Point Reyes NS

### TRAFFIC COUNT AT BEAR VALLEY VC

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	11,434	10,551	14,316	14,087	13,868	13,140	16,261	17,064	16,254	12,296		
2009	11,105	7,069	13,177	17,514	16,701	14,420	19,286	19,104	16,561	13,220	11,229	6,804
2008	8,227	10,051	16,977	11,116	16,023	15,105	21,215	18,777	13,192	13,312	13,129	10,369
2007	11,682	8,185	12,166	18,162	15,039	14,149	22,733	16,405	16,183	12,543	12,233	9,818
2006	12,613	7,123	10,218	10,302	15,852	13,540	21,739	17,904	15,414	15,156	13,148	8,532
2005	8,448	8,999	12,138	8,600	16,872	17,515	17,515	18,648	19,334	18,550	15,874	7,664
2004	9,975	7,106	12,349	9,696	10,837	16,882	15,488	15,488	17,704	10,496	9,951	7,863
2003	8,817	9,938	12,592	13,268	16,036	18,502	20,901	19,150	14,229	16,964	11,063	5,062
2002	9,999	8,293	14,029	17,024	17,766	15,000	19,500	18,644	14,832	16,884	10,454	8,749
2001	9,813	9,299	15,013	16,005	17,788	15,145	19,481	17,930	17,930	11,956	13,923	9,143
2000	9,743	7,673	14,594	15,467	16,346	19,691	18,348	16,167	14,703	14,102	11,242	9,989
1999	8,893	9,328	12,489	16,023	14,642	17,580	18,012	18,197	14,448	14,735	10,979	10,256
1998	7,896	7,167	14,109	17,084	35,052	36,006	38,006	22,122	18,192	16,106	9,768	9,891
1997	8,944	13,596	15,697	17,105	24,012	17,200	18,996	22,371	14,980	16,748	9,474	10,318
1996	8,244	9,718	13,155	21,355	22,312	17,941	20,258	21,110	14,538	9,526	11,378	6,997
1995	2,010	9,445	4,073	16,008	17,643	16,043	21,971	19,841	16,915	16,260	10,107	2,734
1994	10,710	9,445	16,964	17,390	17,160	17,766	19,059	17,818	14,167	21,376	10,035	4,016

## TRAFFIC COUNT AT BROOKS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	994	888	1,116	1,464	1,389	1,836	1,538	1,796	2,011	986		
2009	1,160	740	1,116	1,837	1,656	1,373	1,765	2,165	1,714	1,375	1,189	852
2008	502	741	1,805	1,355	1,509	2,153	1,423	2,918	1,981	835	1,554	1,045
2007	684	646	1,282	2,201	1,231	1,988	1,692	2,452	2,066	762	519	1,089
2006	722	630	969	1,473	1,664	2,707	1,719	2,171	1,964	883	501	790
2005	465	606	1,075	897	1,030	1,105	1,105	1,164	1,071	676	531	982
2004	1,448	1,162	2,345	1,632	1,835	2,205	2,085	2,085	1,039	864	441	699
2003	1,242	1,402	1,466	1,630	2,038	1,844	2,542	2,489	1,581	1,963	1,142	744
2002	765	1,555	1,769	1,590	2,303	2,190	2,304	2,456	1,532	1,409	1,460	1,043
2001	1,446	931	1,661	1,850	2,295	1,913	2,328	2,073	2,073	1,506	1,612	1,271
2000	1,493	924	1,951	1,811	2,367	2,182	2,263	1,958	2,003	1,495	1,151	1,093
1999	908	1,119	1,343	1,755	1,924	2,333	2,309	1,960	1,910	1,975	1,557	1,191
1998	551	336	686	1,165	3,203	1,975	2,437	2,593	2,012	2,006	1,240	1,265
1997	417	1,548	1,771	2,007	2,433	2,080	2,289	3,556	2,195	1,912	1,158	1,186
1996	942	609	374	1,776	1,960	2,302	2,499	3,134	1,721	1,559	1,350	761
1995	670	1,385	1,832	877	1,970	1,897	2,373	1,591	1,199	299	1,329	559
1994	1,055	702	787	603	206	1,463	2,069	4,312	1,776	2,170	1,137	888

## TRAFFIC COUNT AT HEADLANDS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500		
2009	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000

2008	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2007	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2006	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2005	6,300	8,500	8,500	10,500	10,500	10,000	10,000	10,000	10,000	8,500	5,000	5,000
2004	6,300	8,500	8,500	10,500	10,500	10,000	10,000	10,000	10,000	8,500	4,500	5,000
2003	8,710	8,472	9,002	12,226	13,045	11,001	11,501	10,200	12,438	8,800	4,500	5,000
2002	4,000	3,944	7,274	10,901	9,008	10,108	8,129	9,467	8,512	12,060	5,786	7,115
2001	4,006	5,827	7,041	9,181	8,886	9,992	9,051	10,235	10,235	9,144	4,231	1,935
2000	577	10,684	8,090	8,211	9,058	10,233	10,324	10,039	10,990	8,639	5,963	6,503
1999	8,716	12,684	12,126	12,910	12,554	9,070	13,624	9,936	7,968	5,029	1,979	8,223
1998	8,923	6,022	12,170	13,019	12,359	4,326	8,023	9,112	9,253	11,835	9,929	7,490
1997	4,389	7,760	12,860	9,302	11,802	10,212	9,236	12,591	8,050	9,712	10,044	8,556
1996	7,736	5,613	12,743	10,809	10,305	9,407	10,497	10,520	9,680	6,183	4,720	4,895
1995	5,839	7,815	8,769	11,484	691	9,450	10,831	12,624	9,480	7,434	6,313	7,559
1994	11,847	9,416	15,342	13,523	8,857	9,130	9,318	11,218	8,878	8,169	4,913	7,559

#### TRAFFIC COUNT AT LIMANTOUR

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	4,271	4,671	5,942	7,229	7,071	10,799	8,219	7,870	9,875	5,043		
2009	6,366	2,920	5,526	7,557	7,296	7,276	9,165	9,996	8,033	5,977	6,032	3,923
2008	3,746	5,079	8,854	6,511	8,698	9,080	10,025	10,553	7,300	7,417	7,135	6,686
2007	5,541	4,218	6,403	8,148	7,777	7,794	9,799	7,575	7,753	6,753	6,828	5,449
2006	5,691	4,543	5,163	6,031	8,542	8,125	11,791	9,238	7,382	8,129	6,041	4,832
2005	4,283	4,260	7,685	6,057	7,169	8,195	8,195	8,085	7,049	8,351	6,863	3,058

2004	5,048	4,647	9,592	6,887	7,581	9,768	7,608	7,608	10,095	4,975	5,407	4,070
2003	5,265	6,281	6,998	6,177	8,324	8,590	11,045	10,386	8,087	9,105	8,910	3,051
2002	3,558	7,342	7,413	5,517	8,467	9,781	10,696	9,550	7,403	8,818	5,742	4,938
2001	4,574	5,040	7,034	7,832	9,858	7,091	10,468	9,755	9,755	7,362	8,494	6,014
2000	4,166	5,342	6,038	7,652	7,759	10,007	11,344	9,344	10,166	5,319	6,088	7,143
1999	4,361	5,142	6,124	7,905	7,033	9,970	11,356	9,314	8,364	8,744	5,133	5,480
1998	3,918	2,121	7,337	8,396	11,481	10,989	11,913	13,454	10,002	9,530	4,754	4,804
1997	4,943	2,905	7,967	8,691	11,295	10,156	10,198	12,416	8,906	9,696	4,867	5,827
1996	5,089	4,393	9,924	10,128	9,544	10,874	12,202	12,401	7,915	6,983	6,186	3,906
1995	3,273	7,224	5,767	7,685	8,190	8,889	12,860	11,590	8,779	4,770	6,627	3,207
1994	5,193	4,690	9,008	8,195	8,788	9,146	9,733	20,025	7,151	5,500	8,016	4,335

**TRAFFIC COUNT AT PALOMARIN**

	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUN</b>	<b>JUL</b>	<b>AUG</b>	<b>SEP</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>
2010	1,727	1,703	2,212	2,601	2,763	3,410	2,733	2,989	3,420	1,573		
2009	2,231	1,914	2,212	5,398	2,345	2,482	3,445	3,407	2,745	2,035	2,064	1,557
2008	1,689	2,379	3,572	2,108	3,010	2,771	3,309	3,266	2,313	2,735	2,963	2,414
2007	2,252	1,404	2,261	3,242	2,782	2,833	4,382	3,150	3,417	2,616	3,001	2,361
2006	2,141	1,537	1,683	1,574	2,753	2,746	4,553	2,969	2,546	2,603	2,235	1,798
2005	838	1,762	2,749	3,033	3,697	2,847	2,847	2,869	2,851	2,245	2,361	1,318
2004	302	456	883	1,165	3,790	2,362	2,239	2,239	1,096	1,441	2,000	1,522
2003	2,181	3,054	2,726	2,726	3,465	3,497	1,662	1,563	1,752	2,175	1,347	466
2002	1,723	3,123	2,914	2,350	3,142	3,793	3,630	4,453	2,734	2,810	2,480	1,919
2001	2,041	2,006	3,447	3,126	3,848	2,821	3,443	3,735	3,735	2,757	3,442	2,587

2000	2,510	2,017	3,404	3,121	3,805	3,292	3,666	3,409	3,757	2,552	2,491	1,878
1999	2,027	1,402	2,840	3,390	3,349	1,769	1,397	3,684	3,029	3,492	2,551	2,389
1998	2,032	1,574	2,833	3,515	6,819	3,661	3,911	4,929	2,336	1,374	2,496	2,022
1997	2,437	2,940	3,242	3,494	3,325	2,122	3,737	4,980	3,803	3,818	2,514	2,639
1996	318	671	3,212	4,015	2,555	3,654	3,784	3,807	3,050	3,076	2,565	1,721
1995	1,808	2,835	2,667	2,119	2,950	2,770	2,869	2,542	1,849	1,478	991	327
1994	2,388	2,317	2,846	3,633	3,223	3,405	3,127	6,764	2,818	3,754	2,362	2,289

**TRAFFIC COUNT AT PIERCE POINT ROAD**

	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUN</b>	<b>JUL</b>	<b>AUG</b>	<b>SEP</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>
2010	6,247	5,054	7,635	7,697	5,783	13,140	8,033	11,035	11,765	6,666		
2009	7,066	4,681	7,635	10,797	10,794	9,589	11,706	12,744	10,810	7,844	7,313	5,443
2008	5,745	7,132	9,595	6,109	8,490	6,588	9,328	15,306	10,363	8,427	9,650	6,793
2007	7,500	5,640	7,953	10,074	9,018	6,490	10,793	9,981	9,760	6,874	7,590	6,790
2006	6,536	5,975	5,109	3,107	5,659	6,060	12,382	10,212	8,977	7,358	4,236	5,804
2005	1,445	5,154	2,398	1,799	4,012	10,001	10,001	8,045	6,133	5,997	4,627	2,320
2004	6,200	8,200	8,440	6,929	8,724	8,139	6,812	6,812	8,212	2,837	2,837	1,695
2003	9,067	8,825	9,535	10,450	11,151	9,827	8,853	9,014	11,319	10,350	6,000	8,000
2002	6,502	9,902	9,745	8,503	8,715	8,120	13,500	9,329	8,479	16,080	8,897	9,266
2001	6,952	15,890	8,187	8,513	7,430	9,529	12,156	9,959	9,959	6,866	40,361	1,875
2000	3,758	7,924	10,050	8,475	8,030	8,529	13,220	9,749	8,099	10,382	6,879	6,952
1999	7,576	10,096	10,292	10,025	10,747	8,862	12,609	12,944	6,191	4,620	2,436	6,720
1998	6,654	5,534	9,710	10,847	9,798	5,734	6,519	6,618	8,902	13,252	6,956	8,673
1997	4,970	8,567	10,423	9,985	12,986	9,494	9,365	10,117	8,881	11,328	8,312	6,596

1996	6,890	5,382	8,467	8,821	4,098	8,860	9,231	9,279	8,730	7,740	4,301	4,740
1995	5,024	7,783	4,290	12,184	8,002	8,920	9,410	9,891	8,940	6,328	7,154	6,384
1994	14,226	3,220	3,509	3,629	9,044	8,600	8,068	10,494	8,381	6,994	4,413	6,384

**TRAFFIC COUNT AT SIR FRANCIS DRAKE BLVD**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	13,599	12,797	16,336	16,214	14,119	20,271	15,286	16,061	16,847	13,176		
2009	14,731	13,000	20,000	18,424	17,209	16,109	18,921	19,444	16,244	14,018	13,760	13,861
2008	10,931	13,379	20,966	13,604	17,877	16,823	21,169	22,618	16,000	15,786	27,225	14,111
2007	14,149	12,022	16,336	21,475	16,779	15,530	28,906	17,818	19,438	15,204	14,504	14,723
2006	10,347	13,092	13,206	13,305	18,992	17,432	30,989	19,584	16,987	16,879	16,602	10,516
2005	12,780	12,994	20,373	11,324	21,829	18,416	18,416	19,614	19,050	14,868	16,621	9,552
2004	14,000	16,000	20,891	18,860	17,656	18,758	16,768	16,768	21,606	13,296	13,296	12,330
2003	14,707	16,099	17,293	16,917	15,949	23,391	25,680	18,607	19,698	16,394	12,500	14,500
2002	14,202	13,405	22,054	20,319	19,587	20,002	22,573	21,193	19,119	25,608	14,711	15,714
2001	14,038	7,231	16,846	18,232	18,966	22,365	24,850	24,563	24,563	19,023	10,290	8,445
2000	12,877	13,931	22,045	19,966	18,881	20,523	25,001	23,931	21,209	14,753	15,816	19,337
1999	14,184	25,202	22,999	19,646	21,235	20,583	27,734	23,637	17,137	10,593	5,543	18,345
1998	14,447	11,412	17,150	19,466	17,815	4,671	20,435	23,635	20,002	25,438	16,373	10,763
1997	12,866	18,235	23,066	19,400	22,616	25,464	24,002	25,321	17,339	18,180	13,778	15,982
1996	16,853	14,442	22,765	25,750	10,372	22,602	23,938	22,816	19,589	17,200	12,470	11,600
1995	13,390	18,911	18,791	22,968	17,921	22,725	25,856	26,827	22,644	16,862	17,549	18,507
1994	24,107	21,869	32,642	27,010	21,592	22,405	22,296	26,537	21,823	19,117	12,596	18,507

Point Reyes NS

TRAFFIC COUNT AT HEADLANDS (i.e. CHIMNEY ROCK AND LIGHTHOUSE ROADS)												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500		
2009	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2008	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2007	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2006	6,300	8,500	8,500	10,500	10,500	10,000	10,500	10,000	10,000	8,500	4,500	5,000
2005	6,300	8,500	8,500	10,500	10,500	10,000	10,000	10,000	10,000	8,500	5,000	5,000
2004	6,300	8,500	8,500	10,500	10,500	10,000	10,000	10,000	10,000	8,500	4,500	5,000
2003	8,710	8,472	9,002	12,226	13,045	11,001	11,501	10,200	12,438	8,800	4,500	5,000
2002	4,000	3,944	7,274	10,901	9,008	10,108	8,129	9,467	8,512	12,060	5,786	7,115
2001	4,006	5,827	7,041	9,181	8,886	9,992	9,051	10,235	10,235	9,144	4,231	1,935
2000	577	10,684	8,090	8,211	9,058	10,233	10,324	10,039	10,990	8,639	5,963	6,503
1999	8,716	12,684	12,126	12,910	12,554	9,070	13,624	9,936	7,968	5,029	1,979	8,223
1998	8,923	6,022	12,170	13,019	12,359	4,326	8,023	9,112	9,253	11,835	9,929	7,490
1997	4,389	7,760	12,860	9,302	11,802	10,212	9,236	12,591	8,050	9,712	10,044	8,556
1996	7,736	5,613	12,743	10,809	10,305	9,407	10,497	10,520	9,680	6,183	4,720	4,895
1995	5,839	7,815	8,769	11,484	691	9,450	10,831	12,624	9,480	7,434	6,313	7,559
1994	11,847	9,416	15,342	13,523	8,857	9,130	9,318	11,218	8,878	8,169	4,913	7,559

SUM	AADT	Peak ADT	Peak Month
93,300	256		
102,800	282	350	APR
102,800	282	350	APR
102,800	282	350	APR
102,800	282	350	APR
102,800	282	350	APR
102,800	282	350	APR
102,300	280	350	APR
114,895	315	421	MAY
96,304	264	389	OCT
89,764	246	341	SEP
99,311	272	382	FEB
114,819	315	453	FEB
112,461	308	434	APR
114,514	314	415	MAR
103,108	282	411	MAR
98,289	269	407	APR
118,170	324	495	MAR

Average Peak ADT = 390

TRAFFIC COUNT AT LIMANTOUR												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	4,271	4,671	5,942	7,229	7,071	10,799	8,219	7,870	9,875	5,043		
2009	6,366	2,920	5,526	7,557	7,296	7,276	9,165	9,996	8,033	5,977	6,032	3,923
2008	3,746	5,079	8,854	6,511	8,698	9,080	10,025	10,553	7,300	7,417	7,135	6,686
2007	5,541	4,218	6,403	8,148	7,777	7,794	9,799	7,575	7,753	6,753	6,828	5,449
2006	5,691	4,543	5,163	6,031	8,542	8,125	11,791	9,238	7,382	8,129	6,041	4,832
2005	4,283	4,260	7,685	6,057	7,169	8,195	8,195	8,085	7,049	8,351	6,863	3,058
2004	5,048	4,647	9,592	6,887	7,581	9,768	7,608	7,608	10,095	4,975	5,407	4,070
2003	5,265	6,281	6,998	6,177	8,324	8,590	11,045	10,386	8,087	9,105	8,910	3,051
2002	3,558	7,342	7,413	5,517	8,467	9,781	10,696	9,550	7,403	8,818	5,742	4,938
2001	4,574	5,040	7,034	7,832	9,858	7,091	10,468	9,755	9,755	7,362	8,494	6,014
2000	4,166	5,342	6,038	7,652	7,759	10,007	11,344	9,344	10,166	5,319	6,088	7,143
1999	4,361	5,142	6,124	7,905	7,033	9,970	11,356	9,314	8,364	8,744	5,133	5,480
1998	3,918	2,121	7,337	8,396	11,481	10,989	11,913	13,454	10,002	9,530	4,754	4,804
1997	4,943	2,905	7,967	8,691	11,295	10,156	10,198	12,416	8,906	9,696	4,867	5,827
1996	5,089	4,393	9,924	10,128	9,544	10,874	12,202	12,401	7,915	6,983	6,186	3,906
1995	3,273	7,224	5,767	7,685	8,190	8,889	12,860	11,590	8,779	4,770	6,627	3,207
1994	5,193	4,690	9,008	8,195	8,788	9,146	9,733	20,025	7,151	5,500	8,016	4,335

Average Peak ADT = 377

Seasonal Factor

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	0.79504	1.18761	1.07268	1.36924	1.32507	1.30404	1.32507	1.26197	1.30404	1.07268	0.00000	0.00000
2009	0.72157	1.07786	0.97355	1.24270	1.20262	1.18353	1.20262	1.14535	1.18353	0.97355	0.53259	0.57267
2008	0.72157	1.07786	0.97355	1.24270	1.20262	1.18353	1.20262	1.14535	1.18353	0.97355	0.53259	0.57267
2007	0.72157	1.07786	0.97355	1.24270	1.20262	1.18353	1.20262	1.14535	1.18353	0.97355	0.53259	0.57267
2006	0.72157	1.07786	0.97355	1.24270	1.20262	1.18353	1.20262	1.14535	1.18353	0.97355	0.53259	0.57267
2005	0.72157	1.07786	0.97355	1.24270	1.20262	1.18353	1.14535	1.14535	1.18353	0.97355	0.59176	0.57267
2004	0.72510	1.08312	0.97831	1.24878	1.20849	1.18931	1.15095	1.15095	1.18931	0.97831	0.53519	0.57547
2003	0.89258	0.96121	0.92251	1.29466	1.33682	1.16494	1.17860	1.04527	1.31711	0.90181	0.47652	0.51239
2002	0.48904	0.53386	0.88932	1.37719	1.10132	1.27700	0.99386	1.15744	1.07537	1.47446	0.73098	0.86988
2001	0.52546	0.84621	0.92356	1.24440	1.16556	1.35432	1.18720	1.34251	1.38726	1.19940	0.57347	0.25381
2000	0.06841	1.40240	0.95914	1.00594	1.07391	1.25365	1.22400	1.19021	1.34639	1.02423	0.73053	0.77099
1999	0.89379	1.44005	1.24347	1.36799	1.28736	0.96109	1.39708	1.01889	0.84432	0.51570	0.20970	0.84323
1998	0.93420	0.69803	1.27415	1.40847	1.29394	0.46801	0.83997	0.95399	1.00104	1.23907	1.07418	0.78417
1997	0.45127	0.88336	1.32225	0.98830	1.21347	1.08499	0.94963	1.29459	0.85528	0.99858	1.06714	0.87972
1996	0.88340	0.70964	1.45516	1.27545	1.17676	1.11002	1.19868	1.20131	1.14223	0.70605	0.55696	0.55897
1995	0.69946	1.03648	1.05045	1.42154	0.08278	1.16976	1.29746	1.51225	1.17348	0.89053	0.78145	0.90550
1994	1.18041	1.03871	1.52864	1.39231	0.88249	0.94002	0.92842	1.11774	0.91407	0.81394	0.50584	0.75316

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2010	0.70838	0.85772	0.98552	1.23895	1.17278	1.85079	1.36318	1.30530	1.69243	0.83642	0.00000	0.00000
2009	0.93615	0.47541	0.81262	1.14833	1.07291	1.10563	1.34775	1.46995	1.22066	0.87894	0.91660	0.57689
2008	0.48424	0.72689	1.14453	0.86972	1.12437	1.21287	1.29591	1.36416	0.97511	0.95878	0.95307	0.86428
2007	0.77633	0.65428	0.89710	1.17963	1.08960	1.12838	1.37289	1.06130	1.12245	0.94613	0.98853	0.76344
2006	0.78363	0.69258	0.71093	0.85813	1.17621	1.15608	1.62359	1.27204	1.05036	1.11934	0.85956	0.66535
2005	0.63633	0.70072	1.14176	0.92989	1.06510	1.25812	1.21753	1.20119	1.08218	1.24071	1.05363	0.45433
2004	0.71364	0.72734	1.35603	1.00607	1.07173	1.42694	1.07555	1.07555	1.47471	0.70332	0.78987	0.57538
2003	0.67222	0.88786	0.89348	0.81495	1.06278	1.13330	1.41019	1.32605	1.06694	1.16249	1.17552	0.38954
2002	0.46952	1.07266	0.97822	0.75229	1.11731	1.33373	1.41145	1.26022	1.00947	1.16363	0.78298	0.65162
2001	0.57737	0.70435	0.88789	1.02157	1.24436	0.92492	1.32136	1.23136	1.27240	0.92929	1.10792	0.75914
2000	0.54279	0.77059	0.78670	1.03022	1.01093	1.34729	1.47803	1.21744	1.36870	0.69302	0.81966	0.93067
1999	0.57742	0.75377	0.81084	1.08155	0.93120	1.36407	1.50358	1.23321	1.14434	1.15774	0.70229	0.72558
1998	0.46739	0.28013	0.87526	1.03498	1.36961	1.35462	1.42115	1.60498	1.23295	1.13687	0.58603	0.57309
1997	0.59468	0.38694	0.95849	1.08045	1.35888	1.26258	1.22690	1.49375	1.10718	1.16651	0.60506	0.70104
1996	0.60193	0.57528	1.17381	1.23787	1.12887	1.32905	1.44325	1.46679	0.96739	0.82595	0.75607	0.46200
1995	0.43368	1.05974	0.76413	1.05221	1.08519	1.21706	1.70397	1.53569	1.20200	0.63203	0.90736	0.42493
1994	0.61278	0.61272	1.06296	0.99926	1.03700	1.11522	1.14851	2.36298	0.87196	0.64901	0.97743	0.51154

**PGE-NPS AREAWIDE  
UTILITY CONTRACT**

Areawide Public Utility Contract

for

**Electric, Electric Transmission, Natural Gas, Gas  
Transportation, and Energy Management Services**

Contract No. GS-00P-07-BSD-0505

between the

**United States of America**

and

**Pacific Gas and Electric Company**

Negotiated Areawide Contract  
**No. GS-00P-07-BSD-0505**

between the  
United States of America  
and  
Pacific Gas and Electric Company

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NEGOTIATED AREAWIDE CONTRACT  
No. **GS-00P-07-BSD-0505**

BETWEEN THE  
UNITED STATES OF AMERICA  
AND  
**PACIFIC GAS AND ELECTRIC COMPANY**

THIS AREAWIDE CONTRACT FOR electric, electric transmission, natural gas, gas transportation and energy management service is executed this 28<sup>th</sup> day of ~~Feb~~, 2007, between the UNITED STATES OF AMERICA, acting through the Administrator of General Services (hereinafter referred to as the "Government"), pursuant to the authority contained in Section 201(a) of the Federal Property and Administrative Services Act of 1949, as amended, 40 U.S.C. 501(b)(1), and Pacific Gas and Electric Company, a corporation organized and existing under the laws of the State of California, and having its principal office and place of business at 77 Beale Street, San Francisco, CA 94105 (hereinafter referred to as the "Contractor");

*WHEREAS*, the Contractor is a gas and electric utility company that is regulated by the California Public Utilities Commission (CPUC) at the state level and by the Federal Energy Regulatory Commission (FERC) at the federal level;

*WHEREAS*, the Contractor now has on file with the CPUC and FERC and/or with such other regulatory bodies as may have jurisdiction over the Contractor (hereinafter referred to collectively as the "Commissions") all of its effective tariffs, rate schedules, riders, rules and regulatory terms and conditions of service, as applicable;

*WHEREAS*, electric, electric transmission, natural gas, gas transmission and energy management services are types of services that are customarily used by the general public and in other aspects meets the criteria necessary to be considered a Commercial Item as defined in the Federal Acquisition Regulation (FAR), 48 CFR 41.201;

*WHEREAS*, with some exceptions, the Government is generally required by Chapter 1 of Title 48 of the Federal Acquisition Regulation (FAR), 48 CFR 41.204, to enter into a bilateral contract for electric, electric transmission, natural gas, gas transmission and energy management services at each Federal facility where the value of the utility service provided is expected to exceed \$100,000 per year;

*WHEREAS*, where the Government has an areawide contract in effect with a particular utility then such utility service is normally to be procured thereunder;

*WHEREAS*, the Government has a present and continuing requirement for electric, electric transmission, natural gas, gas transportation and energy management services from the Contractor under the Areawide Public Utilities Contract for electric, electric transmission, natural gas, gas transmission and energy management services (Contract No. GS-OOP-97-BSD-0043) that expires on February 28, 2007, or under some other service arrangement; and

*WHEREAS*, the Contractor and the Government mutually desire that this Areawide Contract be used by the agencies of the Government in obtaining electric, electric transmission, natural gas, gas transportation and energy management services from the Contractor and to facilitate partnering arrangements as encouraged and authorized by P.L. 102-486 (Energy Policy Act of 1992) 10 U.S.C. 2865 and 42 U.S.C. 8256);

*NOW, THEREFORE*, in consideration of the premises and mutual covenants herein contained, the parties hereby agree as follows:

## ARTICLE 1. DEFINITIONS.

**1.1.** As used in this contract,

(a) the term "Areawide Contract" means this master contract entered into between the Government and Contractor to cover the utility service acquisitions of all Federal agencies from Contractor within the boundaries of the Contractor's certificated service territory as defined by the CPUC, for a period not to exceed ten (10) years.

(b) the term "Agency" means any Federal department, agency, or independent establishment in the executive branch of the Government, any establishment in the legislative or judicial branches of the Federal Government, or any wholly/mixed ownership Government corporation, as defined in the Government Corporation Control Act, a list of which Agencies may be found at ADM 4800.2E on the General Services Administration website;

(c) the term "Ordering Agency" means any Agency that enters into a bilaterally executed Authorization for procurement of electric, electric transmission, natural gas, gas transportation, energy management services, and other services provided by PG&E that are regulated or otherwise authorized by the CPUC under this Areawide Contract;

(d) the term "Authorization" means an order form used to acquire utility services under this areawide contract (see Exhibit "A" Authorization for Electric Service and Exhibit "B" Authorization for Natural Gas Service);

(e) the term "Termination Authorization" means an order form used to discontinue or disconnect services under this Areawide Contract (See Exhibit "A" Authorization for Electric Service and Exhibit "B" Authorization for Natural Gas Service);

(f) the term "Service" means any electric, electric transmission, natural gas or gas transportation services or energy management services generally available from the Contractor pursuant to Contractor's Tariffs or the Contractor's Terms and Conditions, whichever is applicable;

(g) the term "Electric Service" means regulated electric commodities, transmission, distribution, and/or related services, and other services provided by PG&E that are regulated or otherwise authorized by the CPUC;

(h) the term "Gas Service" means regulated gas commodity, where applicable, transportation, distribution, and/or related services, and other services provided by PG&E that are regulated or otherwise authorized by the CPUC;

(i) the term "Energy Conservation Measure" means any specific energy related or water service intended to provide energy savings and/or demand reduction in Federal facilities (Reference Article 18 herein) ; and

(j) the term "Energy Management Service (EMS)" means any project that reduces and/or manages energy demand and/or usage in a facility as well as energy audits and any ancillary services necessary to ensure the proper operation of the energy conservation measure. Such measures include, but are not limited to, operating and maintenance and commissioning services (Energy Conservation Measure and Demand Side Management Measure are considered equivalent terms.) To be considered an EMS measure, the measure must satisfy all of the following requirements:

1. the EMS measure must produce measurable energy reductions or measurable amounts of controlled energy and/or water use;
2. The EMS measure must be directly related to the use of energy or directly control the use of energy or water;
3. The preponderance of work covered by the EMS measure (measured in dollars) must be for items 1 and 2 above; and
4. The EMS measure must be an improvement to real property or any action that is necessary to ensure the functionality of the EMS measure.

(k) the term "Contractor's Tariffs" means CPUC and FERC utility service Tariffs, and includes rate schedules, riders, rules, regulations, and regulated terms and conditions of service as may be modified, amended or supplemented by the Contractor from time to time and, approved by the Commissions;

(l) the term "Contractor's Terms and Conditions" for this Agreement , means the terms, conditions, policies, payment terms and prices established by the Contractor for those services that are provided pursuant to this Contract but not specifically subject to Commission approval;

(m) the term "Connection Charge" means a Contractor's charge(s) for facilities on the Contractor's side of the delivery point which facilities (1) are required to make connections with the nearest point of supply and (2) are in accordance with the Contractor's Tariffs and the Commission's rules and regulations, installed, owned, maintained and operated by the Contractor;

(n) the term "Class of Service" or "Service Classification" means those categories of service established in the Contractor's Tariff as filed with the Commission;

**1.2.** This Article is hereby expanded to include the additional definitions contained in FAR Clause 52.202-1, Definitions (MAY 2001), 48 C.F.R. 52.202-1, and Contractor's tariffs, all of which are incorporated herein by reference.

## **ARTICLE 2. SCOPE AND DURATION OF CONTRACT.**

**2.1.** This Areawide Contract shall be in effect on and after the 1<sup>st</sup> day of March, 2007, and shall continue for a period of ten (10) years, except that the Government, pursuant to the clause contained in FAR 52.249-2 (48 C.F.R. 52.249-2), incorporated into this areawide contract under Article 14.1-25, or the Contractor, upon 60 days written notice to the Government, and without liability to the Government or any ordering agency, may terminate this areawide contract, in whole or in part, when it is in their respective interest to do so, provided, however, that neither the stated duration of this areawide contract nor any other termination of it, in whole or in part, pursuant to such incorporated clause, this Article 2.1, or otherwise, shall be construed to affect any obligation for any payment, charge, rate, or other matter that may be imposed pursuant to the Contractor's tariffs, rates, rules, regulations, riders, practices, or terms and conditions of service as may be modified, amended, or supplemented by the Contractor and approved from time to time by the Commission.

**2.2.** Authorizations may be executed under this Areawide Contract at any time during the term of the contract, up to and including the last effective date. Any Authorization negotiated and executed during the term of Contract No. GS-00P-97-BSD-0043 shall be valid during the term of this contract provided the total term of the individual Authorization does not exceed ten (10) years.

**2.3** The provisions of this Areawide Contract shall not apply to the Contractor's service to any Agency until both the ordering Agency and the Contractor execute a written Authorization for Service. Upon bilateral execution of an Authorization, the Contractor agrees to furnish to the ordering Agency, and the ordering Agency agrees to purchase from the Contractor, the above noted services for the installation(s) or facilities named in the Authorization pursuant to the terms of this Areawide Contract.

**2.4.** Nothing in this Areawide Contract shall be construed as precluding the ordering Agency and the Contractor from entering into an Authorization for negotiated rates or service of a special nature, provided such negotiated rates or service are in accordance with the rules and regulations of the Commissions, if applicable.

## **ARTICLE 3. EXISTING CONTRACTS.**

**3.1.** The parties agree that an Agency currently acquiring service from the Contractor under a separate written contract may continue to do so until that contract expires or until such time as the Agency and the Contractor mutually agree to terminate that separate written contract and have such service provided pursuant to this Areawide Contract by executing an appropriate Authorization or Authorizations.

**3.2.** Existing special rates and services of a special nature currently provided under a separate written contract may be continued under the Authorizations described in Article 3.1 if requested by the Ordering Agency and agreed upon by the Contractor.

## **ARTICLE 4. AUTHORIZATION PROCEDURE AND SERVICE DISCONNECTION.**

**4.1.** To obtain or change service under this Areawide Contract, the ordering Agency shall complete the appropriate Authorization and forward it to the Contractor. Upon the request of the ordering Agency, the Contractor shall endeavor to provide reasonable assistance to the ordering Agency in selecting the service classification which may be most favorable to the ordering Agency and consistent with regulation and past practices/limitations on applicability. Upon execution of an Authorization by both the Contractor and the ordering Agency, the date of initiation or change in service shall be effective as of the date specified in the Authorization. An executed copy of the Authorization shall be transmitted by the ordering Agency to GSA at the address provided in Article 16.1. Nothing in this Areawide Contract shall be construed as precluding the ordering Agency and the Contractor from entering into an Authorization for negotiated rates or service(s) of a special nature, provided such negotiated rates or service are in accordance with the rules and regulations of the Commissions, if applicable. All Service furnished under this Areawide Contract shall be in accordance with PG&E's effective tariff schedules, which shall at all times be subject to such changes or modifications as the Commissions may direct from time-to-time in the exercise of their jurisdiction.

**4.2.** During the term of this Areawide Contract, effective Authorizations need not be amended, modified, or changed by an Ordering Agency to reflect changes in: accounting and appropriation data, the Contractor's tariff, the Contractor's cost of purchased fuel, or the estimated annual cost of service. Such changes are considered internal to the party involved. Where changes are required in effective Authorizations because of a change in the service requirements of an Ordering Agency, an amended Authorization shall be mutually agreed upon and executed.

**4.3.** An ordering Agency or the Contractor may discontinue service provided pursuant to this Areawide Contract to a particular Federal facility or installation by delivering a written Termination Authorization to the other. Such discontinuance of service by an ordering Agency or the Contractor shall be in accordance with the terms of this Areawide Contract and the Contractor's tariffs.

**4.4.** Prior to entering into an Authorization for goods and/or services generally available from other sources on a competitive basis, the Contracting Officer shall obtain a justification for utilizing other than full and open competition in accordance with the policies and procedures described in Subpart 6.3 of the Federal Acquisition Regulations. A sample justification for other than full and open competition for energy management services can be found in the booklet entitled "Procuring Energy Management Services with the Utility Areawide contract which is located on the General Services Administration's website.

#### **ARTICLE 5. RATES, CHARGES, AND PUBLIC REGULATION.**

**5.1** A complete listing of all Contractor's Tariffs is available to the Government and any ordering Agency electronically at the Contractor's website accessible via [www.PGE.com](http://www.PGE.com).

**5.2.** Subject to the provisions of Article 2.3, all electric, electric transmission, natural gas, gas transportation, energy management, and other services provided by PG&E that are regulated or otherwise authorized by the CPUC, purchased under this Areawide Contract, as well as any other action under this Areawide Contract shall be in accordance with, and subject to, the Contractor's Tariffs, except to the extent that same are preempted by Federal law. Throughout the term of the Contract, the Government shall have full access to the Contractor's currently effective Tariffs. In the event the Contractor's Tariffs become inaccessible via the internet or the ordering Agency does not have access to the internet, the Contractor agrees to provide newly effective or amended Tariffs in accordance with the Contractor's Tariff distribution practices, policies and procedures applicable to all customers.

**5.3.** If, during the term of this Areawide Contract, the Commission approves a change in rates for services specified in Authorizations in effect hereunder, the Contractor agrees to continue to furnish, and the ordering Agency agrees to continue to pay for, those services at the newly approved rates from and after the date such rates are made effective. As provided in Article 4.2, modification of any Authorization hereunder is not necessary to implement higher or lower rates.

**5.4.** The Contractor hereby represents and warrants to the Government that the service rates available to any Ordering Agency hereunder shall at all times not exceed those available to any other customer served under the same service classification for the same or comparable service, under like conditions of use. Nothing herein shall require the Contractor to apply service rates that are inapplicable to the Ordering Agency.

**5.5.** Reasonable written notice via an Authorization shall be given by the ordering Agency to the Contractor, at the address provided in Article 16.2, of any material changes proposed in the volume or characteristic of utility services required by the Ordering Agency.

**5.6.** To the extent required by the Contractor's Tariffs, the Commission's rules and regulations, or the Contractor's policies and practices applicable to all customers, and in accordance therewith, any necessary extension, alteration, relocation, or reinforcement of the Contractor's transmission or distribution lines, related special facilities, service arrangements, demand side management services (including any rebates to which the ordering Agency may be entitled), energy audit services, or other services required or requested by an ordering Agency shall be provided and, as applicable, billed for, by the Contractor. To the extent available from the Contractor, the Contractor shall provide and, as applicable, bill for such technical assistance on or concerning an ordering Agency's equipment (such as the inspection or repair of such equipment) as may be requested by such ordering Agency. The charges for such technical assistance shall be calculated at the time the technical assistance is rendered, as mutually agreed upon by the Contractor and the Agency, and shall comply with Contractor's Tariffs, if applicable. The Authorization or any other agreement used to obtain and provide the matters, services, or technical assistance described in this Article 5.6 shall contain information descriptive of the matters, services, or technical assistance required or requested, including the amount of (or method to determine) any payment to be made by the ordering Agency to the Contractor for the provision of said matters, services, or technical assistance.

**5.7.** Any charges for matters or services referenced in Article 5.6 hereof which are not established by the Contractor's Tariffs shall be subject to audit by the ordering Agency prior to payment; provided, however, that notwithstanding such right to audit, payment for the matters and services referenced in Article 5.6 thereof shall not be unreasonably withheld or denied. The Contractor further warrants and represents to the Government that charges for the matters or services referenced in Article 5.6 hereof will not exceed the charges billed to other customers of the Contractor served under the same service classification for like matters or services provided under similar circumstances.

**5.8.** The requirements of the Disputes clause at FAR 52.233-1 are supplemented to provide that matters involving the interpretation of Contractor's Tariffs are subject to the jurisdiction and regulation of the utility rate commission having jurisdiction.

#### **ARTICLE 6. BILLS AND BILLING DATA.**

The electric, electric transmission, natural gas, gas transportation and energy management services supplied hereunder shall be billed to the ordering Agency at the address specified in each Authorization. Bills shall be submitted in original only, unless otherwise specified in the Authorization. All bills shall contain such data as is required by the Commissions to

substantiate the billing, and such other reasonable and available data as may be requested by the ordering Agency, provided that such other data are contained in bills provided to other customers of the Contractor served under the same service classification as the ordering Agency.

#### **ARTICLE 7. PAYMENTS FOR SERVICES.**

**7.1.** The ordering Agency shall effect payment of all bills for regulated services rendered under this Contract in accordance with the terms of the Contractor's Tariff. Payment for service shall be due and payable within fifteen (15) days from date of presentation. Changes in the Contractor's Tariff provisions for the payment of bills shall supersede the provisions of this paragraph.

**7.2.** The ordering Agency will make invoice payments for services not subject to the direct oversight of the Commission in accordance with the provisions of the FAR Subpart 52.232-25 (Article 14.1-16). The interest rate for late payments made pursuant to this clause shall be computed in accordance with the Office of Management and Budget prompt payment regulations at 5 C.F.R. 1315.

**7.3.** Payments hereunder shall not normally be made in advance of services rendered in accordance with 48 C.F.R. Subpart 32.4 unless required by the Contractor's Tariff.

**7.4.** Each payment made by Treasury check to the Contractor shall include the Contractor's billing stub(s), or a Government or ordering Agency payment document, that clearly and correctly lists all of the Contractor's account numbers to which the payment applies and the dollar amount applicable to each account. If payment is by Electronic Funds Transfer either through the Automated Clearing House (ACH) or the Federal Reserve Wire Transfer System, the provisions of FAR Subpart 52.232-34 shall apply (See Article 14).

#### **ARTICLE 8. CONTRACTOR-OWNED METERS.**

**8.1.** Metering equipment of standard manufacture suitable to measure all utility services supplied by the Contractor hereunder shall be furnished, installed, calibrated and maintained by the Contractor, as prescribed by Contractor's tariffs. In the event any meter fails to register or registers incorrectly, as determined by the regulations of the Commission, billing adjustments shall be made in accordance with such regulations.

**8.2.** The Contractor, so far as possible, shall read all meters monthly in accordance with the Contractor's Tariff and the Commission's regulations.

**8.3.** Meters shall be inspected upon installation at no direct charge to the Ordering Agency. Subsequent inspection, periodic testing, repair, and replacement of meters shall be done in such place and manner as provided by the Commissions' regulations. Upon notice that a meter is failing to register correctly, the Contractor shall take immediate steps to effect replacement or repair. Ordering Agencies shall have the right to request a meter test in accordance with the procedures prescribed in the Commissions' regulations. The tests and applicable meter accuracy standards are those set forth in the Commissions' regulations. The expense of meter tests shall be borne by the party designated as responsible therefore in the Commissions' regulations.

**8.4.** For the purposes of this Article, references to meters shall apply only to Contractor-owned metering devices installed and maintained by the Contractor in accordance with Commission guidelines for utility service(s). References to meters under this Article shall not apply to meters that are to be installed by the Contractor at the request of an Ordering Agency, to be owned by the Government as a part of an Authorization for energy management service or other service.

#### **ARTICLE 9. EQUIPMENT AND FACILITIES.**

**9.1.** Subject to the provisions of Article 5.6 hereof, the responsibility for owning, furnishing, installing, and maintaining all equipment and facilities (other than meters) required to supply service at the delivery point(s) specified in an Authorization shall be determined in accordance with the Contractor's regulated Tariffs. The ordering Agency shall provide, free of charge to the Contractor, mutually agreeable locations on its premises for the installation of meters and such other equipment furnished and owned by the Contractor and necessary to supply service hereunder. The Contractor shall, at all times during the life of this Areawide Contract, operate and maintain at its expense such equipment or facilities as for which it has responsibility in accordance with this Article 9.1, and shall assume all taxes and other charges in connection therewith. Notwithstanding anything to the contrary in FAR 52.241-5 (Contractor's Facilities (FEB 1995)), to the extent required by the Contractor's Tariffs and the Commissions' rules and regulations, and in accordance thereof, such equipment and facilities as for which the Contractor has responsibility in accordance with this Article 9.1 shall be removed, or any underground equipment or facilities for which the Contractor has responsibility in accordance with this Article 9.1, such underground equipment or facilities may be abandoned, and in both cases, the Agency's premises restored, by the Contractor at its expense, within a reasonable time after discontinuance of service to the ordering Agency.

**9.2.** All necessary rights-of-way, easements and such other rights necessary to permit the Contractor to perform under this contract shall be obtained and the expense for same borne in accordance with the Contractor's Tariffs and the Commissions' rules and regulations.

**9.3** Any special or added facilities installed at the Government's request shall be installed in accordance with PG&E's Rule 2.

#### **ARTICLE 10. LIABILITY.**

**10.1.** If the Government and/or an Ordering Agency has limited or restricted the Contractor's right of access under Article 11 and thereby interfered with the Contractor's ability to supply service or to correct dangerous situations which are a threat to public safety, the Government shall be responsible for any liability resulting from such restricted or limited access to the extent permitted by law and authorized by appropriations. This Article (10.1) shall not be construed to limit the Government's liability under applicable law.

**10.2.** The Contractor's liability to the Government and to any Ordering Agency for any failure to supply service, for any interruptions in service, and for any irregular or defective service shall be determined in accordance with the Contractor's tariffs.

**10.3.** Except as provided above, and in accordance with the Contractor's Tariff and Terms and Conditions of Service, the Government shall not be liable for damage or injury to any person or property, including death, occasioned solely by the Contractor's, its employees' or agents' negligent installation, use, operation or intentional misuse of the Contractor's equipment or facilities.

**10.4.** In accordance with the Contractor's Tariff and/or Terms and Conditions of Service, neither the Contractor nor its employees or agents, shall be liable for damage or injury to any person or property, including death, occasioned solely by the negligent installation, use, operation or intentional misuse of Contractor's equipment or facilities by the Government, its employees or agents.

**10.5.** The Contractor shall not be liable for incidents arising out of or in any way connected with the violation or compliance with any local, state or federal environmental law or regulation resulting from pre-existing conditions at a Government job site, release or spill of any pre-existing hazardous materials or waste, or out of the management and disposal of any pre-existing contaminated soils or ground water, hazardous or non-hazardous, removed from the ground as a result of work performed by the Contractor.

**10.6.** The Government agrees to accept full responsibility for and bear all costs associated with pre-existing environmental liability. Responsibility for testing, abatement, remediation, and/or disposal of hazardous material, including, but not limited to, contaminated soil, lead paint, asbestos, fuel oil, or underground fuel oil tanks, shall remain with the Government. Where there is reason to suspect that hazardous material is present at the work site, or where hazardous material is encountered during the course of work being performed, the Contractor shall stop work; notify the Contracting Officer and Activity personnel, and request that the Government test the work site for such hazardous material and appropriately abate and dispose of such hazardous material. Once the work site has been cleared of all hazardous material, the Contractor shall resume work in that area.

#### **ARTICLE 11. ACCESS TO PREMISES.**

**11.1.** The Contractor shall have access to the premises served at all reasonable times during the term of this Areawide Contract and at its expiration or termination for the purpose of reading meters, making installations, repairs, or removals of the Contractor's equipment, or for any other proper purposes hereunder; provided, however, that proper military or other governmental authority may limit or restrict such right of access in any manner considered by such authority to be reasonably necessary or advisable.

#### **ARTICLE 12. PARTIES OF INTEREST.**

**12.1.** This Areawide Contract shall be binding upon and inure to the benefit of the successors, legal representatives, and assignees of the respective parties hereto.

**12.2.** When the Contractor becomes aware that a change in ownership has occurred, or is certain to occur, the Contractor shall notify the Contracting Officer at the address provided in Article 16.1 within thirty (30) days of such ownership change. In the event the Contractor fails to make the notification required by this Article 12.2, the Government cannot guarantee the payment of outstanding invoices in accordance with the provisions of Article 7.1.

#### **ARTICLE 13. REPRESENTATIONS AND CERTIFICATIONS.**

**13.1.** This Areawide Contract incorporates by reference the representations and certifications made by the Contractor on Form PBS 3503 which is on file with the Government.

## ARTICLE 14. SUPPLEMENTAL CLAUSES.

### 14.1. 52.252-2 Clauses Incorporated by Reference. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address (es): <http://www.arnet.gov>.

#### FAR REF      Federal Acquisition Regulation

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address (es): <http://www.arnet.gov>.

	<u>FAR REF</u>	<u>Federal Acquisition Regulation</u>
(1)	52.202-1	Definitions (JUL 2004)
(2)	52.203-3	Gratuities (APR 1984)
(3)	52.203-5	Covenant Against Contingent Fees (APR 1984)
(4)	52.203-6	Restrictions on Subcontractor Sales to the Government (JUL 1995)
(5)	52.203-7	Anti-Kickback Procedures (JUL 1995)
(6)	52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
(7)	52.204-4	Printed/Copied Double-Sided on Recycled Paper (AUG 2000)
(8)	52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment (JUL 1995)
(9)	52.211-10	Commencement, Prosecution and Completion of Work (APR 1984)*
(10)	52.215-19	Notification of Ownership Changes (OCT 1997)
(11)	52.219-8	Utilization of Small Business Concerns (MAY 2004)
(12)	52.219-9	Small Business Subcontracting Plan (JAN 2002)
(13)	52.222-21	Prohibition of Segregated Facilities (FEB 1999)
(14)	52.222-26	Equal Opportunity (APR 2002)
(15)	52.223-14	Toxic Chemical Release Reporting (AUG 2003)
(16)	52.229-1	State and Local Taxes (APR 1984)
(17)	52.232-5	Payments under Fixed-Price Construction Contracts (SEP 2002)*
(18)	52.232.25	Prompt Payment (OCT 2003)
(19)	52.232-23	Assignment of Claims (JAN 1986)
(20)	52.232-34	Electronic Funds Transfer Payment (MAY 1999)
(21)	52.233-1	Disputes (JULY 2002)
(22)	52.236.5	Material and Workmanship (APR 1984)*
(23)	52.237-2	Protection of Government Buildings, Equipment, and Vegetation (APR 1984)
(24)	52.241-2	Order of Precedence – Utilities (FEB 1995)
(25)	52.241-3	Scope and Duration of Contract (FEB 1995)*
(26)	52.241-4	Change in Class of Service (FEB 1995)*
(27)	52.241-5	Contractor's Facilities (FEB 1995)*
(28)	52.241-7	Changes in Rates or Terms and Conditions of Service for Unregulated Services (FEB 1995)*
(29)	52.241-11	Multiple Service Locations (FEB 1995)*
(30)	52.242-13	Bankruptcy (JUL 1995)
(31)	52.243-1	Changes-Fixed Price(AUG 1987)
(32)	52.244-5	Competition in Subcontracting (Dec 1996)
(33)	52.249-	Default (Particular version to be specified in Exhibit)*
(34)	52.249-2	Termination for Convenience of the Government (Fixed Price)(MAY 2004)
(35)	52.253-1	Computer Generated Forms (JAN 1991)
(36)	52.2332-27	Prompt Payment for Construction Contracts (FEB 2002)*

Clauses marked with an asterisk (\*) are only applicable if checked on a Exhibit, and only to the work ordered on that Exhibit

### 14.2 Repeal of Clauses During Term of Contract.

If, during the term of this Areawide Contract, any of the clauses contained in this Article are repealed, revoked, or dissolved by the Government, then such clauses shall no longer be part of this contract as of the date of such repeal, revocation, or dissolution. The elimination of these clauses by reason of such repeal, revocation, or dissolution shall not affect the continuing validity and effectiveness of the remainder of the contract or other clauses referenced in this Article.

## **ARTICLE 15. SMALL BUSINESS SUBCONTRACTING PLAN**

**15.1.** Attached hereto and made a part hereof by reference is a SUBCONTRACTING PLAN FOR SMALL BUSINESS CONCERNS, SMALL BUSINESS CONCERNS OWNED AND CONTROLLED BY SOCIALLY & ECONOMICALLY DISADVANTAGED INDIVIDUALS, HUB ZONE BUSINESS CONCERNS, WOMAN OWNED SMALL BUSINESS CONCERNS, VETERAN-OWNED SMALL BUSINESSES CONCERNS AND DISABLED VETERAN-OWNED BUSINESSES negotiated between the Contractor and the Government, which is applicable on a company wide basis pursuant to the requirements of Section 211 of P.L. 95-507, as amended (15 U.S.C. 637(d)). The Contractor expressly understands that this subcontracting plan is an annual plan and hereby agrees to submit a new subcontracting plan by November 30<sup>th</sup> of each year during the life of this Contract.

**15.2.** Information and announcements concerning current developments in the GSA Small Business Subcontracting Program are available on the GSA Energy Center web site accessible via <http://www.gsa.gov/energy>.

## **ARTICLE 16. NOTICES**

**16.1.** Unless specifically provided otherwise, all notices required to be provided to the Government under this Areawide Contract shall be mailed to: U. S. General Services Administration, Energy Center of Expertise (PLA), 301 7th Street, SW, Room 4004, Washington, DC 20407.

**16.2.** All inquiries and notices to the Contractor regarding this Areawide Contract shall be mailed to: Pacific Gas and Electric Company, Corporate Account Manager, Corporate Account Services, 77 Beale Street, Room 1941E, Mail Code B19C, P. O. Box 770000, San Francisco, CA 94177-0001 or to such other person as the Contractor may hereafter designate in writing.

**16.3** All communications to PG&E regarding legal matters of this Areawide Contract shall be mailed to: General Counsel, Law Department, Pacific Gas and Electric Company, P. O. Box 7442, San Francisco, CA 94120.

**16.4.** The Contractor shall provide GSA with a copy of all fully executed Exhibit "A" Authorization for Utility Service including any applicable attachments at the address provided in Article 16.1.

## **ARTICLE 17. REPORTING**

The Contractor shall provide, as prescribed and directed by the Contracting Officer, an annual report on Subcontracting Plan Achievements, in accordance with the approved subcontracting plan for small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals by April 1 of each year during the life of this Areawide Contract. The report shall be submitted electronically utilizing the Small Business Administration's Electronic Subcontracting Reporting System. The website address of system can be found at <http://www.esrs.gov>.

## **ARTICLE 18. UTILITY ENERGY SERVICE CONTRACTS.**

**18.1. Measurement and verification:** Energy Conservation Measures (ECM) will not be normally considered unless a net overall energy usage or cost reduction can be demonstrated and verified. Verification standards for energy projects are established in the North-American Energy Measurement and Verification Protocol (NEMVP), published by the Department of Energy's Federal Energy Management Program (FEMP).

**18.2.** Unless otherwise provided by law, the following provisions shall apply:

(a) Payment for energy conservation measures, when authorized as Energy Management Service (EMS), shall be equal to the direct cost of capital or financing amortized over a negotiated payment term commencing on the date of acceptance of the completed installation;

(b) The payment term for Authorizations involving energy conservation measures should be calculated to enable the Ordering Agency's payment(s) to be lower than the estimated cost savings to be realized from its implementation. In no event, however, shall this term exceed 80% of the useful life of the equipment/material to be installed.

**18.3. Subcontracting:** The Contractor may perform any or all of its requested services through subcontractors, including its unregulated affiliates. ECM subcontractors shall be competitively selected in accordance with FAR 52.244-5 (Article 14.1-24 herein). Subcontractor selection shall be based on cost, experience, past performance and other such factors as the Contractor and the Ordering Agency may mutually deem appropriate and reasonably related to the Government's minimum requirements. Upon request by the Government, the Contractor shall make available to the contracting officer all documents related to the selection of a subcontractor. In no event shall the service be provided by subcontractors listed as excluded from Federal Procurement Programs maintained by GSA pursuant to 48 C.F.R. 9.404 (Article 14.1-8 herein).

**18.4.** For all Authorizations involving Energy Conservation Measures, it is desirable to have a Warranty Clause that addresses the specific needs and requirements of the work being performed and equipment that is to be provided by the Contractor, however, in the absence of a Warranty Clause in the Authorization the following language will serve as the default Clause:

The Company shall pass through to the Agency all warranties on equipment installed or provided by it or its subcontractors on Government property with the following representation:

PACIFIC GAS AND ELECTRIC COMPANY ACKNOWLEDGES THAT THE UNITED STATES OF AMERICA WILL OWN OR LEASE THE EQUIPMENT AND/OR MATERIALS BEING INSTALLED OR SUPPLIED HEREUNDER, AND, ACCORDINGLY, AGREES THAT ALL WARRANTIES SET FORTH HEREIN, OR OTHERWISE PROVIDED BY LAW IN FAVOR OF COMPANY SHALL INURE ALSO TO THE BENEFIT OF THE UNITED STATES AND THAT ALL CLAIMS ARISING FROM ANY BREACH OF SUCH WARRANTIES OR AS A RESULT OF DEFECTS IN OR REPAIRS TO SUCH EQUIPMENT OR SUPPLIES MAY BE ASSERTED AGAINST PACIFIC GAS AND ELECTRIC COMPANY OR MANUFACTURER DIRECTLY BY THE UNITED STATES.

**18.5.** The Contractor shall submit to GSA a copy of all preliminary energy audit results or energy conservation measure analysis for review and approval. Upon approval of the preliminary audit or analysis and a receipt of a notice to proceed, the Contractor may negotiate Task Orders with the Ordering Agency for the implementation of the energy conservation measures described in the preliminary documents. The Contractor shall provide GSA with copies of fully executed Exhibit " \_ " Authorizations for Energy Management Service resulting from approved energy audits including any applicable attachments at the address provided in Article 16.1.

**18.6. Contractor's Responsibilities under Contract:**

(a) The Contractor shall not provide Energy Management Service to Federal facilities unless the facility is a current customer or prospective customer of the regulated utility within the franchised service territory of the utility company providing such services.

(b) The work that is to be performed under the UESC contract shall be limited to work resulting in a direct reduction in energy usage (see Article 1.1(j)) and any modification or repair that is necessary as a direct result of the installation of the Energy Conservation Measure.

#### **ARTICLE 19. MISCELLANEOUS.**

**19.1. Contract administration:** The Ordering Agency shall assist in the day-to-day administration of the utility service being provided to it under an Authorization.

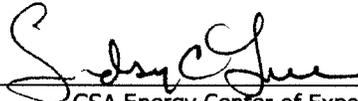
**19.2. Anti-Deficiency:** Unless otherwise authorized by Public Law or Federal Regulation, nothing contained herein shall be construed as binding the Government to expend, in any one fiscal year, any sum in excess of the appropriation made by Congress for that fiscal year in furtherance of the matter of the contract or to involve the Government in an obligation for the future expenditure of monies before an appropriation is made (Anti-Deficiency Act, 31 U.S.C. 1341.A.1).

**19.3. Obligation to Serve:** Nothing contained in this contract shall obligate the Contractor to take any action which it may consider to be detrimental to its obligations as a public utility.

**19.4 Term of Authorizations:** It is recognized that during the life of this contract, situations and/or requirements may arise where it may be desirable that the term of service to an ordering Agency's facility extend beyond the term of this contract. In such event, the particular Authorization involved may specify a term extending beyond the term of this contract, provided that is within the contracting authority of the ordering agency and appropriate termination liability provisions have been negotiated between the Contractor and Ordering Agency to address unamortized balances for connection charge or energy management service projects.

IN WITNESS WHEREOF, the parties have executed this contract as of the day and the year first above written.

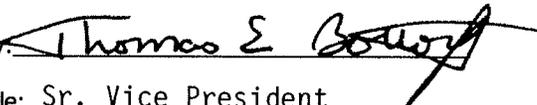
UNITED STATES OF AMERICA  
Acting through the Administrator  
of General Services

By:   
GSA Energy Center of Expertise  
Contracting Officer

ATTEST:

By:   
GSA Energy Center of Expertise

PACIFIC GAS AND ELECTRIC COMPANY

By:   
Title: Sr. Vice President

ATTEST:

By:   
Title: ASSISTANT CORPORATE SECRETARY

CERTIFICATE

ASSISTANT  
CORPORATE

I, ERIC MONTRAMBERT, certify that I am SECRETARY of Pacific Gas and Electric Company, named as Contractor in the negotiated Areawide public utility contract No. GS-OOP-07-BSD-0505\_\_\_; that THOMAS C. BOSTORFF, who signed said contract on behalf of the Contractor, was then SR. VICE PRESIDENT of said Corporation; and that said contract was duly signed for and on behalf of said Corporation and is within the scope of its corporate powers.

/s/ *Eric Montmart*

(Corporate Seal)

**EXHIBIT "A"**

Contractor's ID NO. \_\_\_\_\_ (Optional)  
Ordering Agency's ID \_\_\_\_\_ (Optional)

**PACIFIC GAS AND ELECTRIC COMPANY**  
AUTHORIZATION FOR ELECTRIC SERVICE, ELECTRIC TRANSMISSION SERVICE, CHANGE IN ELECTRIC SERVICE,  
OR DISCONNECTION OF ELECTRIC SERVICE UNDER  
CONTRACT NO. **GS-OOP-07-BSD-0505**

Ordering Agency: \_\_\_\_\_  
Address: \_\_\_\_\_

Pursuant to Contract No. GS-OOP-07-BSD-0505 between the Contractor and the United States Government and subject to all the provisions thereof, service to the United States Government under such contract shall be rendered or modified as hereinafter stated. Contract Article 2 and 4 shall be followed for the initiation of service under this contract.

PREMISES TO BE SERVED: \_\_\_\_\_  
SERVICE ADDRESS: \_\_\_\_\_

NATURE OF SERVICE:  Connect,  Change,  Disconnect,  Continue Service,  Transmission  
 Line Extension, Alteration, Relocation, or Reinforcement,  Special Facilities,  Other

OTHER TERMS AND CONDITIONS: \_\_\_\_\_  
Attach any other relevant terms and conditions under which service will be provided.

POINT OF DELIVERY: \_\_\_\_\_

TERM OF SERVICE: From \_\_\_\_\_ through \_\_\_\_\_.

SERVICE HEREUNDER SHALL BE UNDER RATE SCHEDULE NO. \_\_\_\_\_\*, Hereafter amended or modified by the regulatory body having jurisdiction. (see article 5 of this contract.)

ESTIMATED ANNUAL ENERGY USAGE: \_\_\_\_\_ KWH, ESTIMATED DEMAND: \_\_\_\_\_ KW

ESTIMATED ANNUAL SERVICE COST: \$ \_\_\_\_\_

ESTIMATED CONNECTION/SPECIAL FACILITIES CHARGE: \$ \_\_\_\_\_ (if applicable)\*\*

ACCOUNTING AND APPROPRIATION DATA FOR SERVICE: \_\_\_\_\_  
FOR CONNECTION/SPECIAL FACILITIES CHARGE: \_\_\_\_\_

**CLAUSES INCORPORATED BY REFERENCE (Check applicable clauses):**

- (1) \_\_\_\_\_ 52.241-3 *Scope and Duration of Contract (FEB 1995)*
- (2) \_\_\_\_\_ 52.241-4 *Change in Class of Service (FEB 1995)*
- (3) \_\_\_\_\_ 52.241-5 *Contractor's Facilities (FEB 1995)*
- (4) \_\_\_\_\_ 52.241-7 *Change in Rates or Terms and Conditions of Service for Regulated Services (FEB 1995) (Use Full Text of Clause)*
- (5) \_\_\_\_\_ 52.241-11 *Multiple Service Locations (FEB 1995)*

**BILLS WILL BE RENDERED TO THE ORDERING AGENCY FOR PAYMENT AT THE FOLLOWING ADDRESS:**

\_\_\_\_\_ in \_\_\_\_\_ copies.  
The foregoing shall be effective upon the return of the fully executed original Authorization by the Contractor to the ordering Agency.

**ACCEPTED:**

\_\_\_\_\_  
(Ordering Agency)

By: \_\_\_\_\_  
Authorized Signature  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

PACIFIC GAS AND ELECTRIC COMPANY  
(Contractor)

By: \_\_\_\_\_  
Authorized Signature  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\* Include a reference to the applicable rate schedule, and attach a copy of such schedule.

\*\* If necessary, attach and make part hereof supplemental agreements or sheets that cover required connection or extension charges and special facilities or service arrangements. (See Article 5 of this Contract for instructions.)

**NOTE:**

A fully executed copy of this Authorization shall be transmitted by the ordering Agency to the Energy Center of Expertise (PLA), General Services Administration, Washington, DC 20407.

**EXHIBIT "B"**

Contractor's ID NO. \_\_\_\_\_ (Optional)  
Ordering Agency's ID \_\_\_\_\_ (Optional)

**PACIFIC GAS AND ELECTRIC COMPANY**  
AUTHORIZATION FOR NATURAL GAS SERVICE, GAS TRANSPORTATION SERVICE, CHANGE IN NATURAL GAS SERVICE,  
OR DISCONNECTION OF NATURAL GAS SERVICE UNDER  
**CONTRACT NO. GS-OOP-07-BSD-0505**

Ordering Agency: \_\_\_\_\_  
Address: \_\_\_\_\_

Pursuant to Contract No. GS-OOP-07-BSD-0505 between the Contractor and the United States Government and subject to all the provisions thereof, service to the United States Government under such contract shall be rendered or modified as hereinafter stated. Contract Article 2 and 4 shall be followed for the initiation of service under this contract.

PREMISES TO BE SERVED: \_\_\_\_\_  
SERVICE ADDRESS: \_\_\_\_\_

NATURE OF SERVICE:  Change,  Disconnect,  Continue Service,  Gas Transportation,  
 Line Extension, Alteration, Relocation, or Reinforcement,  Special Facilities,  Other

OTHER TERMS AND CONDITIONS: \_\_\_\_\_  
Attach any other relevant terms and conditions under which service will be provided.

POINT OF DELIVERY: \_\_\_\_\_

TERM OF SERVICE: From \_\_\_\_\_ through \_\_\_\_\_.

SERVICE HEREUNDER SHALL BE UNDER RATE SCHEDULE NO. \_\_\_\_\_\*, Hereafter amended or modified by the regulatory body having jurisdiction. (see article 5 of this contract.)

ESTIMATED ANNUAL NATURAL GAS USAGE: \_\_\_\_\_ THERMS,

ESTIMATED ANNUAL SERVICE COST: \$ \_\_\_\_\_

ESTIMATED CONNECTION/SPECIAL FACILITIES CHARGE: \$ \_\_\_\_\_ (if applicable)\*\*

ACCOUNTING AND APPROPRIATION DATA FOR SERVICE: \_\_\_\_\_  
FOR CONNECTION/SPECIAL FACILITIES CHARGE: \_\_\_\_\_

**CLAUSES INCORPORATED BY REFERENCE (Check applicable clauses):**

- (1) \_\_\_\_\_ 52.241-3 *Scope and Duration of Contract (FEB 1995)*
- (2) \_\_\_\_\_ 52.241-4 *Change in Class of Service (FEB 1995)*
- (3) \_\_\_\_\_ 52.241-5 *Contractor's Facilities (FEB 1995)*
- (4) \_\_\_\_\_ 52.241-7 *Change in Rates or Terms and Conditions of Service for Regulated Services (FEB 1995) (Use Full Text of Clause)*
- (5) \_\_\_\_\_ 52.241-11 *Multiple Service Locations (FEB 1995)*

BILLS WILL BE RENDERED TO THE ORDERING AGENCY FOR PAYMENT AT THE FOLLOWING ADDRESS:

\_\_\_\_\_ in \_\_\_\_\_ copies.  
The foregoing shall be effective upon the return of the fully executed original Authorization by the Contractor to the ordering Agency.

ACCEPTED:

\_\_\_\_\_  
(Ordering Agency)

By: \_\_\_\_\_  
Authorized Signature

Title: \_\_\_\_\_

Date: \_\_\_\_\_

PACIFIC GAS AND ELECTRIC COMPANY  
(Contractor)

By: \_\_\_\_\_  
Authorized Signature

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\* Include a reference to the applicable rate schedule, and attach a copy of such schedule.

\*\* If necessary, attach and make part hereof supplemental agreements or sheets that cover required connection or extension charges and special facilities or service arrangements. (See Article 5 of this Contract for instructions.)

**NOTE:**

A fully executed copy of this Authorization shall be transmitted by the ordering Agency to the Energy Center of Expertise (PLA), General Services Administration, Washington, DC 20407.

**EXHIBIT "C"**

Contractor's ID NO. \_\_\_\_\_ (Optional)  
Ordering Agency's ID NO. \_\_\_\_\_ (Optional)

**PACIFIC GAS AND ELECTRIC COMPANY**  
**AUTHORIZATION FOR ENERGY MANAGEMENT SERVICES**  
**CONTRACT NO. GS-OOP-07-BSD-0505**

Ordering Agency: \_\_\_\_\_  
Address: \_\_\_\_\_

Pursuant to Contract No. GS-OOP-07-BSD-0505 between the Contractor and the United States Government and subject to all the provisions thereof, service to the United States Government under such contract shall be rendered or modified as hereinafter stated. Contract Articles 2 and 4 shall be followed for the initiation of service under this contract.

PREMISES TO BE SERVED: \_\_\_\_\_  
SERVICE ADDRESS: \_\_\_\_\_

NATURE OF SERVICE:  Preliminary Energy Audit       ECP Feasibility Study       ECP Engineering & Design Study  
 Energy Conservation Project (ECP) Installation       Demand Side Management (DSM) Project  
 Other (See Remarks Below)

SERVICE HEREUNDER shall be provided consistent with the Contractor's applicable tariffs, rates, rules, regulations, riders, practices, and/or terms and conditions of service, as modified, amended or supplemented by the Contractor and approved, to the extent required, by the Commission. (See Article 5 of this contract.)

POINT OF DELIVERY: \_\_\_\_\_

ESTIMATED PROJECT COST: \$ \_\_\_\_\_

ACCOUNTING AND APPROPRIATION DATA: \_\_\_\_\_

**LIST OF ATTACHMENTS:**

- |  |  |  |  |
|--|--|--|--|
| <input type="checkbox"/> General Conditions  | <input type="checkbox"/> Payment Provisions    | <input type="checkbox"/> Special Requirements  | <input type="checkbox"/> Economic Analysis     |
| <input type="checkbox"/> Facility/Site Plans | <input type="checkbox"/> Historical Data       | <input type="checkbox"/> Utility Usage History | <input type="checkbox"/> ECP Feasibility Study |
| <input type="checkbox"/> Design Drawings     | <input type="checkbox"/> Design Specifications | <input type="checkbox"/> Certifications        | <input type="checkbox"/> Commission Schedules  |

**CLAUSES INCORPORATED BY REFERENCE (Check applicable clauses):**

- (1)  52.211-10 Commencement, Prosecution and Completion of Work (APR 1984)
- (2)  52.232-5 Payments under Fixed-Price Construction Contracts (SEP 2002)  
Supersedes provisions of payment clauses in Article 14.
- (3)  52.236-5 Material and Workmanship (APR 1984)
- (4)  52.241-8 Change in Rates or Terms and Conditions of Service for Unregulated Services (FEB 1995) (Use full Text of Clause)
- (5)  52.243-1 Changes-Fixed Price (AUG 1987)
- (6)  52.249-\_\_\_ Default (\_\_\_\_\_) (Specify appropriate Clause)

In addition, the Contracting Officer negotiating the terms and conditions under this authorization shall supplement the above-referenced clauses with clauses for the appropriate type of contract.

REMARKS:

ACCEPTED:

\_\_\_\_\_  
(Ordering Agency)

PACIFIC GAS AND ELECTRIC COMPANY  
(Contractor)

By: \_\_\_\_\_  
Authorized Signature

By: \_\_\_\_\_  
Authorized Signature

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Telephone No. \_\_\_\_\_

Telephone No. \_\_\_\_\_

**NOTE:**

A fully executed copy of this Authorization shall be transmitted by the ordering Agency to the Energy Center of Expertise (PLA), General Services Administration, Washington, DC 20407.