

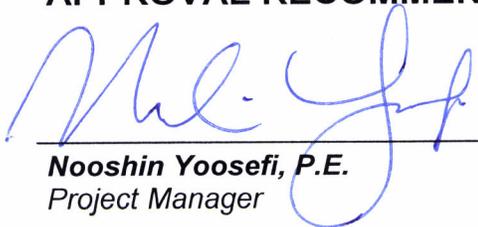
# SUPPLEMENTAL CAPITAL PREVENTIVE MAINTENANCE PROJECT REPORT

To

## Request Programming in the 2012 SHOPP

On Route State Route 01  
Between Goldenwest Street (PM 25.89)  
And Orange/L.A County Line (PM 33.7 2)

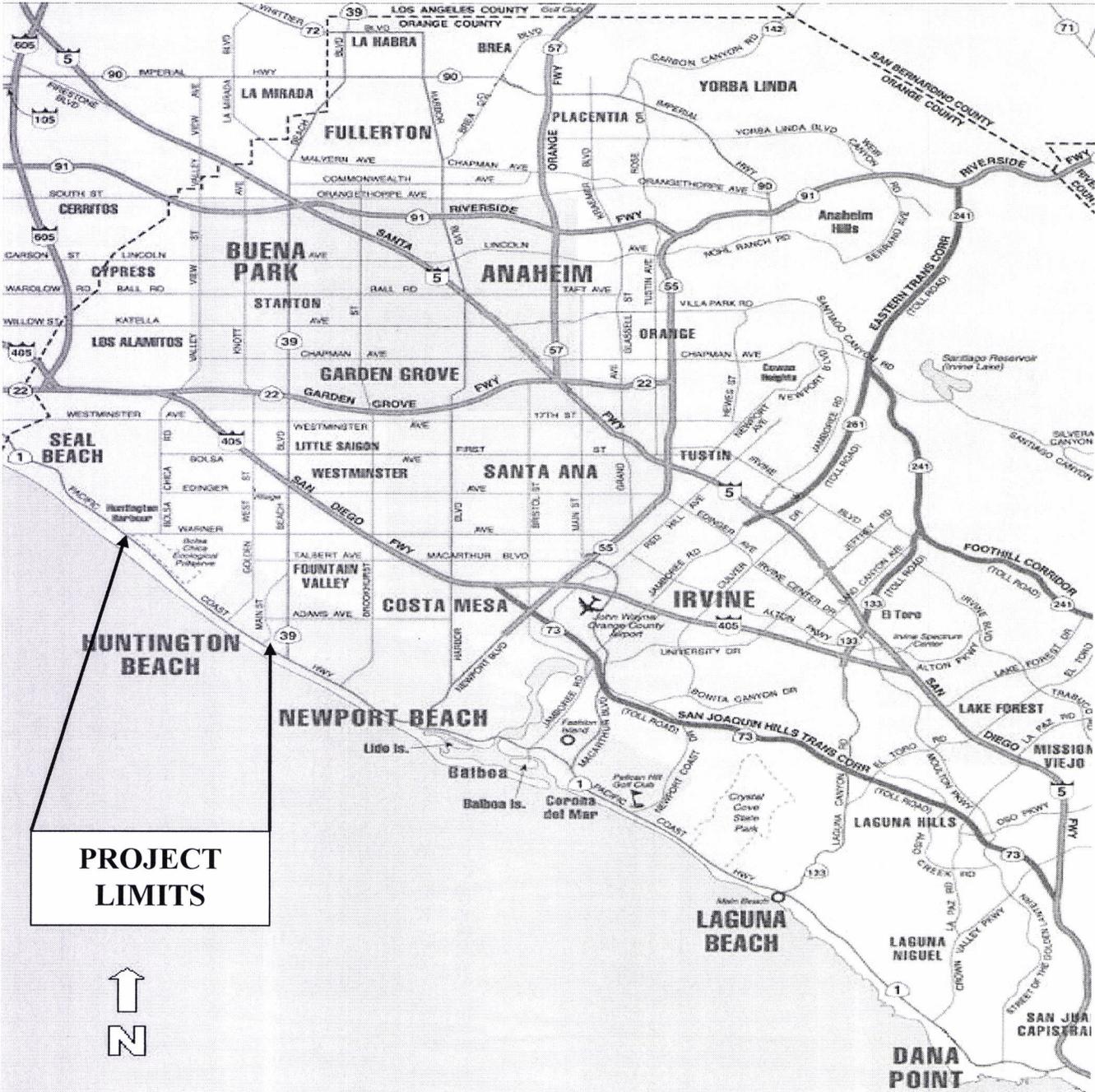
**APPROVAL RECOMMENDED BY:**

 9/11/11  
**Nooshin Yoosefi, P.E.** **Date**  
Project Manager

**APPROVED BY:**

 9/11/11  
**Cindy Quon** **Date**  
District Director

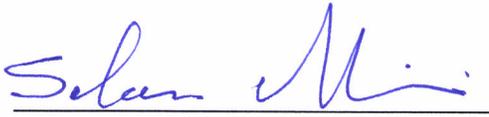
# LOCATION MAP



**State Route 1 (SR-1) from Goldenwest Street (PM 25.89) to Orange/L.A. County Line (PM 33.72) in the City of Seal Beach, County of Orange**

12-ORA-1  
PM 25.89 / 33.72  
12840-0H160K  
Program Code: 20.10.201.121  
September 2011

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



**Solomon Mishkanian**  
REGISTERED CIVIL ENGINEER

9/1/11

DATE



**SUPPLEMENTAL  
CAPITAL PREVENTIVE MAINTENANCE PROJECT REPORT**

This Supplemental Capital Preventive Maintenance Project Report to a Capital Preventive Maintenance Project Report (CAPM PR) is being prepared to accommodate changes in the construction cost; programming funding; pavement condition and pavement recommendation.

The item unit cost of capital construction cost estimate has changed in the last six years. This report reflects a cost decrease from the recently completed projects due to the above changes. The following Table 1 shows the updated cost for the project.

**Table 1. Updated Construction Cost Estimate for Supplemental CAPM-PR**

| <b>Roadway</b> | <b>Structure</b> | <b>Right of Way</b> | <b>Total Project Cost</b> |
|----------------|------------------|---------------------|---------------------------|
| \$4,570,000    | \$0              | \$39,000            | \$4,609,000               |

**Table 2. Previous Construction Cost Estimate from CAPM-PR**

| <b>Roadway</b> | <b>Structure</b> | <b>Right of Way</b> | <b>Total Project Cost</b> |
|----------------|------------------|---------------------|---------------------------|
| \$7,410,000    | \$0              | \$39,000            | \$7,449,000               |

This is a candidate project in the 2012 State Highway Operational Protection Program (SHOPP) for funding in the Fiscal Year 2012/2013.

**1. Introduction:**

This Supplemental CAPM-PR has been prepared to reflect the recent changes in:

- (a) The unit costs and quantities of construction materials and labor costs.
- (b) The proposed funding and programming year.
- (c) Pavement condition.
- (d) Pavement recommendation.

**A. Quantities and Estimated Costs:**

The project is estimated at a cost of \$4,609,000 in 2011 dollars, with the revised cost break down shown in section 2.

**B. Program & Schedule:**

The project is proposed for funding in the 2012 State Highway Operation and Protection Plan (SHOPP) as a CAPM project program code 20.10.201.121. This project is proposed for construction in Fiscal Year 2012/2013.

**C. The pavement conditions:**

The 2009 pavement condition is as follows:

Major structural Deficiencies 8.5%  
IRA (MAX): 155      IRA (average): 127  
Alligator A Cracking: 3.2%      Alligator B Cracking: 4.3%  
Patching: 0%      Rutting: None      Bleeding: None      Raveling:  
0%

**Flexible Pavement Deflection Study Data**

The standard overlay design thickness for a flexible pavement CAPM project with an IRI less than 170 at the time of PS&E is 0.15' when a

rubberized asphalt pavement overlay is used and 0.20' for all other types of asphalt binder pavements (i.e. -conventional asphalt, or any other department-approved modified binder). A 0.20' overlay of rubberized asphalt may be appropriate in certain circumstances and may be utilized with the concurrence of the HQ Pavement Program Advisor or Pavement Program Manager.

For flexible pavement CAPM projects with an IRI greater than 170 the standard overlay design thickness is 0.25', which is to be placed in two lifts. In locations where it is needed to maintain profile grade and/or vertical clearance, the existing pavement may be planed up to the depth of the dense or gap graded layer, up to a maximum thickness of 0.25'. If the repairs needed to improve the ride cannot be adequately addressed within the parameters of this DIB, the project should be developed utilizing a roadway rehabilitation strategy.

**D. The pavement recommendation:**

Based on the 2009 Pavement Condition Survey (PCS) data

1. From Goldenwest Street to Warner Ave.  
Due to High Alligator "B" Cracking, Cold-plane 0.2 ft existing pavement structural section and replace with 0.2 ft of new rubberized asphalt concrete – gap graded (RAC-G) on the traveled lanes and shoulders.
2. From Warner Avenue to Orange/County Line  
Due to just oxidized pavement surface and no surface cracking, place 0.1 ft of rubberized asphalt concrete – gap graded (RAC-G) on the traveled lanes and shoulders.

**2. Cost Estimate Break Down:**

| <u>Structural Section Work</u> | <u>Quantity</u> | <u>Unit</u> | <u>Unit cost</u> | <u>Cost</u>        |
|--------------------------------|-----------------|-------------|------------------|--------------------|
| Cold Plane AC Pvmt (0.2 ft)    | 123,200         | SqYd        | \$1.50           | \$184,800          |
| RAC-G of AC pavement           | 24,996          | Ton         | \$80.00          | \$1,999,680        |
| Remove existing AC dike        | 1,500           | LF          | \$2.50           | \$3,750            |
| Place new AC dike              | 1,500           | LF          | \$2.50           | \$3,750            |
| <b>SUBTOTAL (1)</b>            |                 |             |                  | <b>\$2,191,980</b> |

| <u>Non-Structural Section Work</u>             | <u>Quantity</u> | <u>Unit</u> | <u>Unit cost</u> | <u>Cost</u> |
|--|-----------------|-------------|------------------|-------------|
| Traffic Control System                         | 130             | Day         | \$3,000          | \$390,000   |
| Portable CMS                                   | 4               | EA          | \$15,000         | \$60,000    |
| Traffic Stripes (Solid & Broken Thermoplastic) | 20,000          | LF          | \$0.25           | \$5,000     |
| Pavement Markings (Arrows & Words)             | 4,500           | SF          | \$2.75           | \$12,375    |
| Temporary Stripes (Tape)                       | 200,000         | LF          | \$1.00           | \$200,000   |
| Pavement Markers (Retro-reflective)            | 2,000           | EA          | \$3.25           | \$6,500     |
| Pavement Markers (Non-reflective)              | 5,000           | EA          | \$1.60           | \$8,000     |
| Manholes and Valves (lowered / raised)         | 40              | EA          | \$1,500          | \$60,000    |
| Access Ramps                                   | 40              | EA          | \$3,500          | \$140,000   |
| Metal Beam Guard Railing                       | 2,000           | Ft2         | \$16             | \$32,000    |
| MBGR Terminal with ET                          | 4               | EA          | \$12,500         | \$50,000    |
| Loop Detectors                                 | 100             | EA          | \$500.00         | \$50,000    |
| Roadside Signs                                 | 1               | LS          | \$10,000.00      | \$10,000    |
| Preparation of Water Pollution Control Program | 1               | LS          | \$7,000.00       | \$7,000     |

|  |   |    |             |          |
|--|---|----|-------------|----------|
| Water Pollution Control                            | 1 | LS | \$49,500.00 | \$49,500 |
| Addition Water Pollution<br>Control (Supplemental) | 1 | LS | \$10,000.00 | \$10,000 |
| RE Office  | 1 | LS | \$50,000.00 | \$50,000 |
| Traffic Management Plan<br>(TMP)                   | 1 | LS | \$70,000.00 | \$70,000 |
| Public Awareness Campaign                          | 1 | LS | \$60,000.00 | \$60,000 |
| COZEEP   | 1 |    | \$50,000.00 | \$50,000 |

**SUBTOTAL (2) \$1,320,375**

**SUM OF SUBTOTALS \$3,512,355**

Mobilization (10%) **\$351,236**

20% Contingency **\$702,471**

**TOTAL ROADWAY COST \$4,570,000**

**TOTAL R/W COST \$39,000**

**TOTAL PROJECT COST \$4,609,000**

**RECOMMENDED BY:**

for   
**MASSOUD TAJIK**  
Branch Chief, Maintenance  
Program Advisor

9/1/2011  
Date

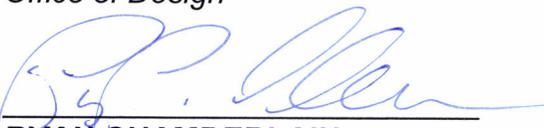
for   
**CONSTANTINO STAMATION**  
Branch Chief,  
Project Studies Unit

9/01/2011  
Date

**CONCURRENCE:**

  
**FRANK LIN**  
Office Chief,  
Office of Design

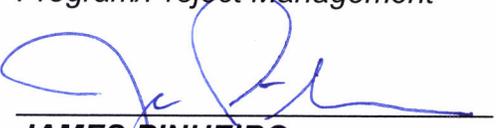
9/1/2011  
Date

  
**RYAN CHAMBERLAIN**  
Deputy District Director  
Planning and Local Assistance

9/1/11  
Date

  
**ADNAN MAIAH**  
Acting Deputy District Director  
Program/Project Management

9-1-11  
Date

  
**JAMES PINHEIRO**  
Deputy District Director  
Operations and Maintenance

9/6/11  
Date