# REPORT TO COUNCIL
# City of Sacramento

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**915 I Street, Sacramento, CA 95814-2604**
**www. CityofSacramento.org**

**STAFF**
**October 16, 2007**

**Honorable Mayor and**
**Members of the City Council**

**Title: Interstate 5 (Boat Section) Rehabilitation Project**

**Location/Council District:** Citywide

**Recommendation:** Receive and file.

**Contact:** Hector Barron, City Traffic Engineer, (916) 808-2669; Nicholas Theocharides, Engineering Services Manager, (916) 808-5065

**Presenters:** Hector Barron and California Department of Transportation (Caltrans) staff

**Department:** Transportation

**Division:** Engineering Services

**Organization No:** 3439

## Description/Analysis

**Issue:** Interstate 5 is an important north-south link to the economic vitality of the West Coast. It is also a significant State of California and Sacramento regional facility. Within the City of Sacramento, Interstate 5 extends from the south city limits, through the Central City, to the northwest area of the City. The Average Annual Daily Traffic (AADT) is approximately 190,000 vehicles within the area of the Central City. It provides vehicular mobility within the area and provides access to the Central City which is the largest employment center in the region.

Within the Central City, a section of Interstate 5 consists of a 4,900-foot-long Riverfront Seal slab (aka Boat Section) generally within the area north of Capitol Mall and south of R Street. The facility is comprised of a concrete structure that resists buoyant forces of surrounding groundwater, which is influenced by the fluctuating levels of the nearby Sacramento River, and seals the groundwater from the roadbed. The Boat Section is in need of repair and rehabilitation due to long term exposure that has resulted in leaks and wearing surface failures and distress.

A rehabilitation project is proposed by Caltrans to replace the pavement wearing surface and drainage system in the Boat Section. Given the required work, it is expected that twenty-six stages will be needed during construction. Some stages will have short term on and off ramp closures and have impacts on the local street circulation system. Caltrans has developed a traffic management plan that is aimed at addressing traffic control and impacts during construction.

The project is expected to cost in the range of $55 million and take approximately two years to complete. Although it is a two year project, it is expected that impacts to the local street system will only occur in the first thirty weeks, starting in Spring 2008.

City staff has evaluated the proposed project and traffic management plan and expects that the project will have significant impacts on the local street circulation system. Significant public outreach and measures within the local street system are necessary in order to minimize and mitigate for project impacts.

**Policy Considerations:** The project is consistent with the City's Strategic Plan for improving and expanding public safety, achieving sustainability and livability, and expanding economic development throughout the City.

**Environmental Considerations:** This informational item does not constitute a "project" and therefore is exempt from the California Environmental Quality Act (CEQA) according to Section 15061(b)(1) and 15378(b)(3) of the CEQA guidelines. The Boat Section Rehabilitation project will need to comply with the applicable requirements of CEQA in which Caltrans is the lead agency and National Environmental Policy Act (NEPA) in which the Federal Highway Administration is the lead agency.

**Rationale for Recommendation:** No recommendation necessary. The purpose of the report is strictly informational.

**Financial Considerations:** The estimated costs, associated with City required traffic control and public outreach, for the Boat Section Rehabilitation project is expected to be in the range of $400,000. It is anticipated that agreements with Caltrans will be necessary in order to reimburse the City for work required on this project. Staff will return to Council for approval of the necessary agreements.

**Emerging Small Business Development (ESBD):** None, since no goods or services are being pursued with this action.

Respectfully Submitted by: _____
Nicholas Theocharides
Engineering Services Manager

Approved by: _____
Jerry Way
Director of Transportation

Recommendation Approved:

_____
RAY KERRIDGE
for City Manager

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**Attachment 1**

## Background Information

Interstate 5 is an important north-south link to the economic vitality of the West Coast. Stretching from Blaine, Washington on the Canadian border, to San Ysidro, California on the Mexican border, it connects all of the major population centers of the western seaboard. It is designated as a North American Free Trade Agreement (NAFTA) route, an Intermodal Corridor of Economic Significance and part of the Department of Defense Priority Network. It is also a significant State of California and Sacramento regional facility.

Within the City of Sacramento, Interstate 5 extends from the south city limits, through the Central City, to the northwest area of the City. The Average Annual Daily Traffic (AADT) is approximately 190,000 vehicles within the area of the Central City. It is both a regionally and locally significant facility that provides vehicular mobility within the area and provides access to the Central City which is the largest employment center in the region. It is located on the west side of the Central City with multiple access points. These access points are heavily used by residents and commuters within the City of Sacramento.

## Existing Boat Section

Within the Central City, a section of Interstate 5 consists of a 4,900-foot-long Riverfront Seal slab (aka Boat Section) generally within the area north of Capitol Mall and south of R Street. The Boat Section, which was constructed in 1970, carries eight lanes of traffic for a distance of approximately one mile with access primarily via interchanges at Richards Boulevard, I Street, J Street, L Street, P Street, and Q Street.

The facility is comprised of a reinforced concrete substructure topped with a lightly reinforced Portland Cement Concrete (PCC) wearing pavement surface. The substructure consists of two different structure types, a gravity section and a pile section. These sections resist the buoyant forces of surrounding groundwater, which is influenced by the fluctuating levels of the nearby Sacramento River, and seals the groundwater from the roadbed. Groundwater elevations are controlled during flood stages by a protective de-watering well system that activates at critical high elevations. Surface drainage systems carry away both infiltrated groundwater and surface water runoff.

Numerous construction defects in the Boat Section have resulted in leaks around the joint seals and wearing surface failures and distress. Inspections dating back more than 30 years have documented a long history of heavy cracking in the concrete deck slab and plugging of the drainage system which may render it ineffective. The maintenance history for this section dates back to the original construction. In some years Caltrans bridge crews have spent up to 20% of its annual budget managing

pavement problems. High traffic volumes and reduced shoulders make repair and rehabilitation work difficult and challenging.

**Boat Section Rehabilitation**

The rehabilitation project proposes to replace the pavement wearing surface and drainage system in the Boat Section. Specifically it will remove and replace the wearing surface, add a dewatering system, repair leaking joints and seals, install instrumentation in the slab to monitor critical pressure, and install additional de-watering wells to help reduce buoyant forces on the seal slab due to a high groundwater elevations during flood stage events of the Sacramento River.

Given the required work, it is expected that twenty-six stages will be needed during construction. It is expected that at minimum each on and off ramp will need to be closed during some of the construction stages. Most significantly the southbound on-ramp from I Street will need to be closed for 39 days and the northbound off-ramp from J Street will need to be closed 28 days. Most other ramps will require extended weekend closures yet will reopen at the start of the work week.

The project is expected to cost in the range of $55 million and take approximately two years to complete. Although it is a two year project, it is expected that impacts to the local street system will only occur in the first thirty weeks, starting in Spring 2008.

**Construction Traffic Management**

Several traffic management options were evaluated by Caltrans that would minimize the impact of traffic during construction. The evaluation considered criteria including traffic delays, construction duration, and project cost. In summary the traffic management strategy considers the following:

- Restricts traffic impacts due to construction to one construction season.
- Maintains 3 lanes of traffic in each direction at all times and maintains weekend capacity.
- Truck traffic is redirected and/or restricted from using the Boat Section.
- Construction is allowed 24 hours a day.
- No ramp and traffic restrictions during the Jazz Festival.
- Minimal ramp and traffic restrictions on special days (Amgen Tour of California, Pacific Rim Street Festival, Gold Rush Days, and the California International Marathon).
- Contractor incentive clauses aimed at minimizing ramp closure durations.
- Significant Public Outreach before and during construction.

- Formation of a multi-agency execution team that coordinates activities during construction.

**Local Impacts**

City staff evaluated the proposed project and traffic management plan. In summary, it is expected that the project will have significant impacts to the local street circulation system. It is expected that motorists will try to avoid impacted portions of the Boat Section and/or ramps thereby increasing volumes on Central City streets. Staff will need to take an active role prior and during construction in order to minimize impacts.

The following are some tasks that may be required to best address the potential impacts:

- Close coordination with Caltrans staff before and during construction.
- Public Outreach before and during construction.
- Data collection and monitoring of key corridors and intersections.
- Flaggers at key intersections.
- Traffic signal re-timing of intersections.
- Detour signs on local streets.
- Coordination with other construction projects and special events.