DESIGN-BUILD DEMONSTRATION PROGRAM
PROJECT AUTHORIZATION REQUEST

SD-805 (PM 23.2/26.7)
11-2T2001
Construct One High Occupancy Vehicle (HOV)/Bus Rapid Transit (BRT) lane in each direction for approximately 3.5 miles on I-805 including the south facing Direct Access Ramps (DAR) at Carroll Canyon Road

Executive Summary

This project proposes to construct one HOV/BRT lane in each direction on I-805 from just north of SR-52 to just north of Mira Mesa Boulevard. Included with this project is the construction of the south facing Direct Access Ramps (DAR) at Carroll Canyon Road. These additional lanes will help to relieve congestion on I-805 and will provide a 3.5 mile HOV extension with the I-5 corridor thereby providing 14 miles of continuous HOV lanes. Environmental studies for the project have been completed and the project team has begun preliminary design.

The Department desires to utilize design-build on this project to achieve several important benefits including obtaining bids earlier in order to take advantage of the low bid prices, faster delivery, transfer of risk, and cost certainty. The Department expects to save nine months or more through the use of design-build. The Department is requesting authorization to award based on Low Bid. The Department believes that it will achieve value through price competition on this project. This project will utilize one of the 10 project slots authorized by Legislation for use of design-build contracting by the Department.

Background and Importance of Project

a. Description and Scope of the project

It is proposed to construct one HOV/BRT lane in each direction within the median of I-805 from just north of SR-52 to just north of Mira Mesa Boulevard. Included with the project is the construction of the south facing DAR at Carroll Canyon Road. The project is comprised of the following:

- Average 50’ median widening to provide the one HOV/BRT lane in each direction
- Median bridge widening at the Governor Drive undercrossing
- Inside and outside widening of the Rose Canyon Bridge and Overhead
- Inside and outside widening of the Carroll Canyon Bridge and Overhead
- New DAR Bridge over Carroll Canyon
- Construction of DAR retaining walls
- Outside widening of both northbound and southbound I-805 between Eastgate Mall Overcrossing and just north of Mira Mesa Boulevard

The project will require temporary construction easements for access to construct both the Rose Canyon Bridge and Overhead and the Carroll Canyon Bridge and Overhead. In addition to the temporary construction easements, additional right of way is required along the west side of the Carroll Canyon Bridge and Overhead.

b. Project Benefits

The scope of the entire I-805 North project is to construct two HOV/BRT lanes in each direction from SR-52 to just north of La Jolla Village Drive and construct one HOV/BRT lane in each direction from just north of La Jolla Village Drive to just north of Mira Mesa Boulevard. Other features of the project include the construction of a DAR at Nobel Drive, the south facing DAR at Carroll Canyon Road, and a direct HOV/BRT Connector from westbound SR-52 to northbound I-805 and the reverse direction. As the I-805 North total project cost is estimated at $600 million, the project has been separated into five different stages.

This project will construct the first of five stages which is one HOV/BRT lane in each direction including the south facing DAR at Carroll Canyon Rd. The primary benefit of this project stage is that the region obtains approximately 50% of the entire project's capacity with only about 20% of the project's costs. Other project benefits include:

- Providing facilities to enable the use of transit and encourage carpooling
- Increase mobility for all users of the I-805 within the project limits
- Maintain or improve current traffic levels of service and travel times within the project limits

c. Regional Significance

The I-805 freeway was opened to traffic in the early 1970's. It is a major north-south freeway beginning at its southern junction with I-5 near the international border with Mexico and continuing approximately 29 miles north where it again joins with I-5 in Sorrento Valley. I-805 runs generally parallel to I-5, traversing the center portion of the San Diego urbanized area. I-805 provides an alternative route for I-5 north-south movement of traffic through San Diego, bypassing Downtown San Diego and other urban areas. It provides direct access to the major employment centers in Otay Mesa, Kearny Mesa, University City and Sorrento Valley and is a major commute route.

Traffic currently using I-805 within the project limits is subjected to congestion and delay during peak periods. The delay occurs when there is a lack of other non-congested transportation options for motorists traveling through the project area. I-5 parallels I-805 to the west and is not a desirable option due to its congested state and the fact that the east-west links (SR-56, SR-52, I-8, and SR-94) that connect the two freeways are also heavily congested.

I-805 within the project limits currently has eight general-purpose lanes but lacks HOV lanes, managed lanes, or other dedicated facilities for transit or other modes of travel. I-805 within the project area currently operates at or near capacity during peak commute hours.

The proposed project is identified in the San Diego Association of Government (SANDAG) 2007-2008 Revenue Constrained Regional Transportation Plan (RTP) which was found to be conforming by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) on December 10, 2007. The funding for the project will come from federal, state, and local sources.

d. Project status

i. Stage of Development

The Project Approval and Environmental Document (PA/ED) was completed on December 30, 2010 with a Negative Declaration/Finding of No Significant Impact. The project is currently in the early design phase. The project team is assembling needed project documents and working on defining the scope of the Stage 1 project in order to prepare the Request for Proposals.

ii. Current Schedule

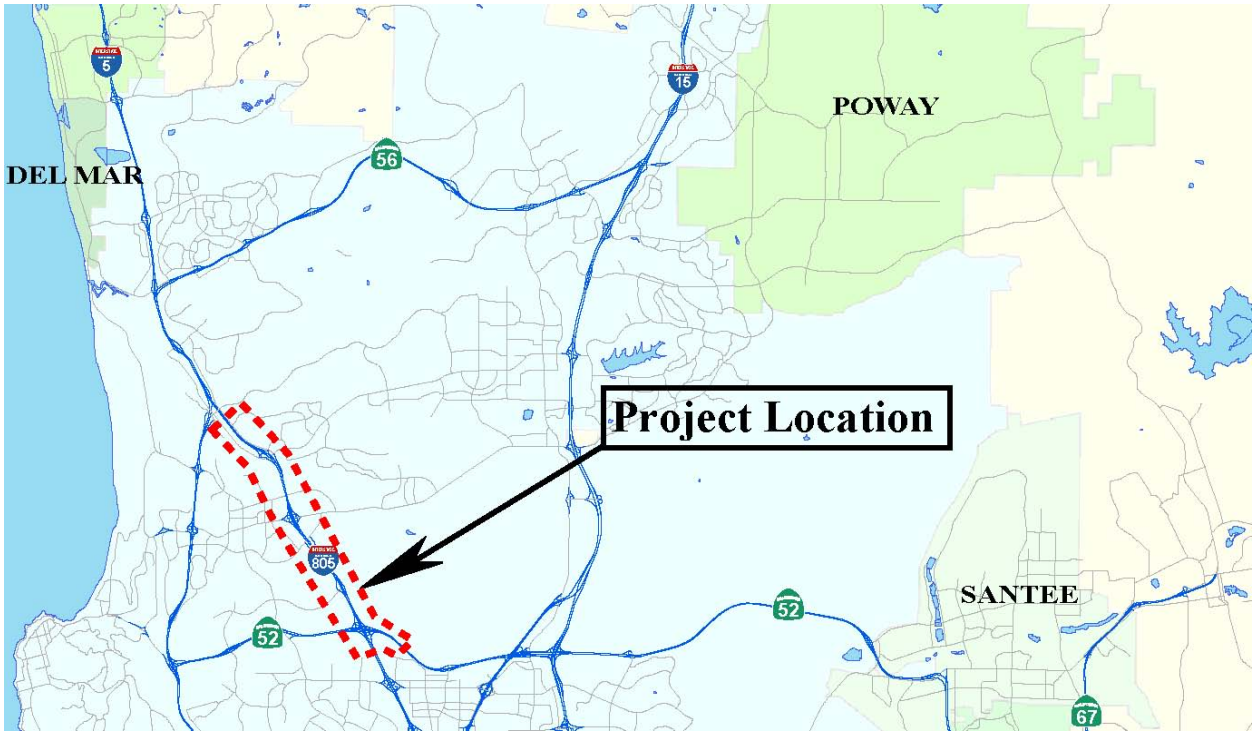
The current project schedule utilizing design-bid-build is as follows:

Project Approval and Environmental Document (PA/ED)	12/30/10	(Actual)
Ready to List	9/30/13	
Advertise	11/30/13	
Award Contract	2/28/14	
Construction Contract Acceptance	9/30/16	

e. Project Cost Estimate

Construction Capital	$124,250,000
Right of Way Capital	$3,236,000
Total Capital	$127,486,000
PA&ED	$11,924,000
PS&E	$14,830,000
Right of Way Support	$2,047,000
Construction Support	$18,637,000
Total Support	$47,438,000
Total Project Cost	$174,924,000

f. Vicinity Map



Justification for Design-Build Authorization

a. Summary of Analysis and Steps Taken To Date

The Department made a call for projects in April of 2009 in anticipation of the California Transportation Commission's (CTC) approval of the Design-Build Program Guidelines. Initial screening criteria were for projects that were fully funded, that had achieved environmental clearance, and with minimal right of way involvement. The nominated projects were then presented to the Department's Design-Build Steering Committee for approval. The projects were compared to the draft CTC guidelines to ensure that they met the proposed criteria and the Steering Committee approved the initial four projects at its August 2009 meeting.

The Department's approach to the Design-Build Demonstration Program is to begin with smaller and simpler projects to test the methodology before attempting larger and more complex projects. The Department intends to utilize the lessons learned on these first projects to ensure success on the next set of projects.

To prepare for the use of design-build, the Department has been developing templates for the Request for Qualification (RFQ) and Request for Proposal (RFP) documents. The templates were posted for industry review between December 2, 2009 and January 8, 2010. The Department expects to achieve consistency in contract documents by developing these templates.

The Project Team will be using the templates to develop the project RFP. Upon CTC authorization, the Project Team will be prepared to release the RFQ and RFP documents per the proposed implementation schedule contained in this Authorization Request.

b. Procurement Type Requested (Low Bid)

The Department is requesting authorization to utilize Low Bid procurement for this project. The Department has utilized its five Best Value slots per the CTC Guidelines, but can still obtain value by utilizing a Low Bid design-build award method. The RFQ process will also allow the Department to evaluate qualifications and prequalify firms for this type of work.

c. Implementation Schedule

The following is the proposed schedule for delivery of this project utilizing design-build:

PA/ED	12/2010
Request for Qualifications	5/2011
Request for Proposals	10/2011
R/W Certification	10/2011
Award Contract	1/2012
Construction Contract Acceptance	12/2015

d. Expected Design-Build Benefits

Thirty-two states have design-build authority and have used design-build to deliver a large number of projects. There have also been a number of studies that have documented the benefits of design-build over the design-bid-build method of contracting. Based on the results achieved by other state departments of transportation that have utilized the design-build and the available research, the Department anticipates achieving the following benefits by using design-build on this project:

i. Schedule Acceleration - Under design-build, portions of the design and construction phases are overlapped leading to significant time savings. Improved coordination between the designer and the builder lead to better constructability and improved efficiency. The design-builder is also able to order critical materials earlier and schedule subcontractors more effectively. Finally, the designer is able to design the project to take advantage of the contractor's strengths (equipment, materials on hand, and expertise). Each of these benefits can lead to significant time savings. It is anticipated that design-build will enable this project to be completed about 9 months earlier than by design-bid-build.

ii. Innovation –The innovation in the design-build process is the early involvement of the contractor that enables engineering considerations to be incorporated into the design phase and enhances the constructability of the engineered project plans. Interjecting contractor knowledge early into design can foster creative engineering and construction solutions as well as possible innovation available in the staging of construction and maintenance of traffic. Design-build projects have the ability to lessen the impact on the

traveling public by shortening overall construction schedule while allowing the contactor maximum flexibility.

iii. Risk Transfer - The design-build process allows for transfer of risks including cost escalation and schedule delays. The design-build contract is for a firm fixed price and a schedule guarantee for the work. The contractor is responsible for completing the scope of the work in accordance with the schedule. This would include responsibility for the schedule performance of subcontractors after the initial award. The contractor is responsible for any increase in the quantities of commodities, labor, and any other units that evolve as design is advanced.

iv. Cost Certainty - Because design-build projects are awarded on a fixed price basis, with limited opportunities for cost growth, the Department will have greater certainty regarding the total project cost at a fairly early stage of the process. Under the design-build delivery methodology, the contractor provides the Department with a fixed price for the construction before detailed design is complete and then is responsible for working with the designer to make sure that price remains fixed.

v. Others - Allow early lock-in of lower construction material/labor pricing, since it is anticipated the project will be awarded 14 months earlier by using the design-build process than by using the normal design-bid-build process.

e. Proposed Project Funding Plan

This project is fully funded and the sources of funding are as follows:

Local (TransNet II) funds	$52,335,000
CMAQ funds	$97,814,000
Regional Surface Transportation Program	22,775,000
State Local Partnership Program (Prop 1B)*	$2,000,000
Total Programming	$174,924,000

* Funds will be programmed at March 2011 CTC meeting.

f. Project Considerations

i. Project Eligibility

This project will have State and Local Partnership Program funds in the amount of $2,000,000 and is therefore eligible for the Design-Build Demonstration Program pursuant to authorization by the California Transportation Commission.

ii. State or local project

This is a State Project on the State Highway System and will fill one of the ten slots allocated to the Department by statute.

iii. Selection Method (low bid / best value)

Department is requesting authorization to award based on Low Bid.

iv. Geographic Location (north/south)

This project is in San Diego County and will be a "South" project as defined by the CTC Guidelines.

v. Project Size

With a total cost estimate of over $127 million, this project falls in the category of projects between $20 and $200 million.

Conclusion/Summary

The Department desires to utilize the design-build method of contracting for this project to achieve several important benefits including schedule acceleration, risk transfer, and cost certainty. The project meets the eligibility requirements as outlined in the CTC's Design-Build Guidelines approved in September 2009. It is requested that the CTC authorize the use of design-build method of procurement for this project with a Low Bid award.

Attachment
Design-Build Project Selection Tool