SHOPP Asset Management Pilot Request Form

SHOPPCPR: Ver 3 11/14

Submittal Date: 08/14/2015

Division of Transportation Programming
State Highway Operation and Protection Program (SHOPP)

Project Manager: PAUL Y. HSU

Phone: (619) 688-3157

Dist	County	Route	Prefix	PM	Prefix	PM	EA	PPNO	Project ID
11	San Diego	5		29		34.2	TBD	TBD	TBD

☐ Includes Multiple Locations (Complete Page 2 of this Form)

MPO: SANDAG

Project Location/Description (Include the nearest city, town or landmark)

In San Diego County, In San Diego County on I-5 from Genesee Ave to Del Mar Heights Rd.

Need for project and proposed improvements (Elaborate using PID language)

This pilot project proposes the use of asset management principles to address the overall transportation needs on Interstate 5 (I-5) in San Diego County. This pilot project will describe the mobility improvements, safety, and rehabilitation needs and will propose the corresponding programming for each component. This pilot project is a multi-agency partnership between the San Diego Association of Governments (SANDAG), Caltrans HQ Programming and Caltrans District 11. The project proposes to construct rumble strips on both the inside and outside shoulders within the project limits (201.015). At the ramp/street connection of each interchange it is proposed to place blank out, no right turn signs to protect bicyclists (201.015). Several pipes within the project limits need repair. The system performance, fix it first repair strategy is to use a cured in place resin and felt liner which are inserted into the distressed culverts to restore proper flow (201.151). A ramp meter will be installed on the SB I-5 ramp at Genesee Ave. (201.315). The project will improve approximately 2 miles of an existing bike path from the north end of Sorrento Valley Road to Carmel Valley Road (201.015).

PA&ED / M200	12/31/2016	R/W Cert / M410	12/01/2017	CCA / M600	12/01/2019
PS&E / M380	10/01/2017	RTL / M460	01/31/2018	END Project / M800	07/01/2020

Capital ($1,000)
(Escalated to FY of Programming)

	FY	Cost
R/W	2016/17	$50
Construction	2017/18	$3,850
	Total Capital	$3,900

Support ($1,000)

	FY	Cost
PA & ED	2016/17	$350
PS & E	2016/17	$575
R/W	2016/17	$20
Construction	2017/18	$780
	Total Support	$1,725

Legislative District Numbers
(Separate multiple Districts with a comma)

State Assembly	77
State Senate	38
Congressional	52

☐ Approved ☐ Denied

CAPITAL CONSTRUCTION COST ESCALATION RATE: 3%

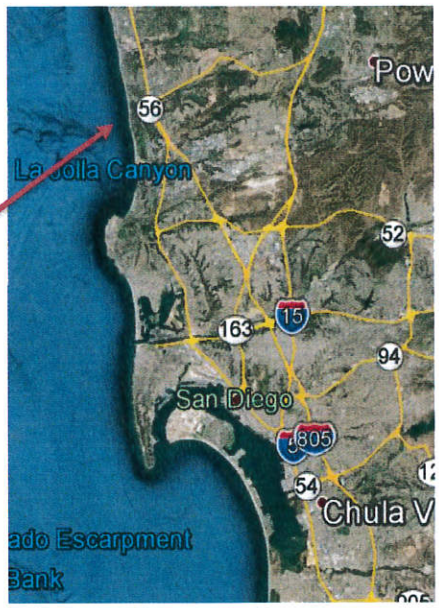
District SFP (Print)	JOE R. HULL	District SFP (Sign)		Phone	(619) 688-3633
District Director (Print)	LAURIE S. BERMAN	District Director (Sign)		Phone	(619) 688-6668
SHOPP Exec. (Print)		SHOPP Exec. (Sign)		Phone	

SHOPP Asset Management

Caltrans

DISTRICT 11
SAN DIEGO AND IMPERIAL COUNTIES

Project Area, I-5/I-805 Merge



SHOPP Asset Management Pilot Nomination

This pilot project proposes the use of asset management principles to address the overall transportation needs on Interstate 5 (I-5) in San Diego County. This pilot project will describe the mobility improvements, safety, and rehabilitation needs and will propose the corresponding programming for each component. This pilot project is a multi-agency partnership between the San Diego Association of Governments (SANDAG), Caltrans HQ Programming and Caltrans District 11.

Project Background:
Various components on I-5 from south of the Genesee Avenue Interchange to the Carmel Valley Road Interchange are proposed to address SHOPP related improvements by bundling or packaging these improvements together to minimize construction impacts and reduce costs for engineering support for the improvements. The project components are shown in Table 1 below:

Table 1

Item/ Prgm.	PM (I-5)	Description	Cost components.	Cost Includes 50% contingencies
Collision Reduction .015	29-34.2	Rumble Strips, Type A40B, 55,000 LF	$10/LF	$ 825,000
ITS .315	29.32	Ramp Meter: SB I-5, Genesee Ave. on ramp	$300,000 LS	$ 450,000
Culvert .151	31.78	Reline pipe, 700' due to corrosion. 2 flared end sections	54" cured in place, $800 LF	$ 840,000
Culvert .151	33.01	Reline pipe 300' 36" ID due to corrosion, 2 flared end sections	36" cured in place, $400LF	$ 180,000
Bike Path upgrade .015	Old Sorrento Valley Rd.	12' bike path, Sorrento Valley Rd to Carmel Valley Road, 1.5 miles	500,000 per mile	$1,125,000
Bike path safety .015	Bikes on shoulder	Blank out no left turn signs	$35,000 per location (4)	$ 210,000
Total				$3,630,000
			2-Year escalation @ 3%	$3,850,000

Safety:

This project proposes rumble strips on both the inside and outside shoulders within the project limits. The complex I-5/I-805 merge area, which includes HOV lanes in each direction, warrant rumple strips along shoulders adjacent to the travelled way. The 'rumbling' when a vehicle leaves the travelled way creates a distinct warning sound and vibration throughout the vehicle and is very effective in helping drivers that they need to correct their steering to put their vehicle back into the travel lane. This improves motorist safety. Please see Exhibit 1.

Bikes are permitted on the shoulders of I-5 in the project area between the Genesee Avenue Interchange and the Sorrento Valley Road interchange. At the ramp/street connection of each interchange it is proposed to place Blank out, *no right turn* signs to protect bicyclists. The blank out signs are a bicycle safety improvement to protect cyclist from turning automobile traffic.

Sustainability, Stewardship and Economy:

The District NPDES/Storm Water Compliance branch states that the basic soils in the project area are naturally quite corrosive causing premature failure of the typical galvanized corrugated steel pipe (CMP) drainage culverts used. Several pipes within the project limits need repair. The system performance, fix it first repair strategy, is to use a cured in place resin and felt liner which are inserted into the distressed culverts to restore proper flow. The new plastic layer is smoother than the existing galvanized pipe layer resulting in a slight increase in hydraulic capacity which could reduce flooding. By preserving the culverts in place, this would allow pipes to be repaired and reinforced without much excavation minimizing impacts on traffic. This is to be much less expensive than a traditional remove and replace technique that would normally require roadway closures or detours. Also preventing pipe collapses minimize sink holes and other types of pavement failures.

The project proposes to add a ramp meter at the onramp at Genesee Avenue to SB I-5 to improve control and management of traffic flows along I-5. The objective is to reduce traffic congestion, delays and greenhouse gases improving system performance along the I-5 corridor. Please see Exhibit 1.

Improve Community Mobility and Access:

An existing two mile, badly worn, informal bikeway exists along the old alignment of the Old Sorrento Valley Road. The project will improve the existing path to better access for all types of bicycles to travel the connection from the north end of Sorrento Valley Road to Carmel Valley Road. The roadway is no longer open to vehicular traffic and has not been maintained. As such, bicycle commuter traffic is limited due to the current condition of the surface. The upgrade will enhance transportation connectivity and add an alternate mode to travel to the business area of Sorrento Valley. Please see Exhibit 4.

This proposal will:

Support sustainable growth and improves quality of life for stakeholders, enhancing community livability,
Enhance public spaces by allowing easier and closer observation of the lagoon.
Can be used to commute to work as it connects residential areas with employment centers in Carmel Valley and Sorrento Valley,
Encourage the use of both pedestrian and bicycle/non-motorized transit improving air quality and reducing greenhouse gas emissions/carbon footprint.

System Performance:

Adding the Genesee Avenue, I-5 onramp system will allow traffic to be better metered based on performance as measured on I-5 traffic detection systems. This will improved travel time reliability.

Organizational Excellence:

Developing these objectives improved internal communication with maintenance, collaboration and a positive work environment with specialty groups, engineering peers and others demonstrating increased sensitivity and service to stakeholder needs. Developing and delivering these objectives will provide an opportunity for collaborative partnerships with other agencies.

Funding/Programming/Schedule

Project Milestones		Schedule Delivery Date (Month/Day/Year
PA & ED*	M200	December 31, 2016
Project PS&E	M380	October 1, 2017
R/W Cert	M410	December 1, 2017
Ready to List	M460	January 31, 2018
Award	M495	June 1, 2018
Begin Construction	M500	July 1, 2018
Contract Acceptance	M600	December 1, 2019
End Project	M800	July 1, 2020

*The I-5 corridor has a FEIR/FEIS. A reevaluation will be completed for the Project as needed

Event	Estimated Cost
PA & ED	$ 350,000
PS&E	$ 575,000
Right of Way Support	$ 20,000
Right of Way Capital	$ 50,000
Construction Support	$ 780,000
Construction Capital	$ 3,850,000
Total Project Cost	$ 5,625,000

Project Personnel:

Project Engineer, Edmund R. Kennedy, PE, 619-688-3647
Project manager, Paul Y. Hsu, PE, 619-688-3157

Recommendation:

Approval of this SHOPP funding proposal will allow creation of one or more Project Study Reports to further develop these ideas leading towards development and construction of the proposed work.

Attachments:

Exhibit 1 Ramp meter location.
Exhibit 2 Example of culvert failure at PM 31.78
Exhibit 3 Example of culvert failure at PM 33.01
Exhibit 4 Old Sorrento Valley Road bike path.

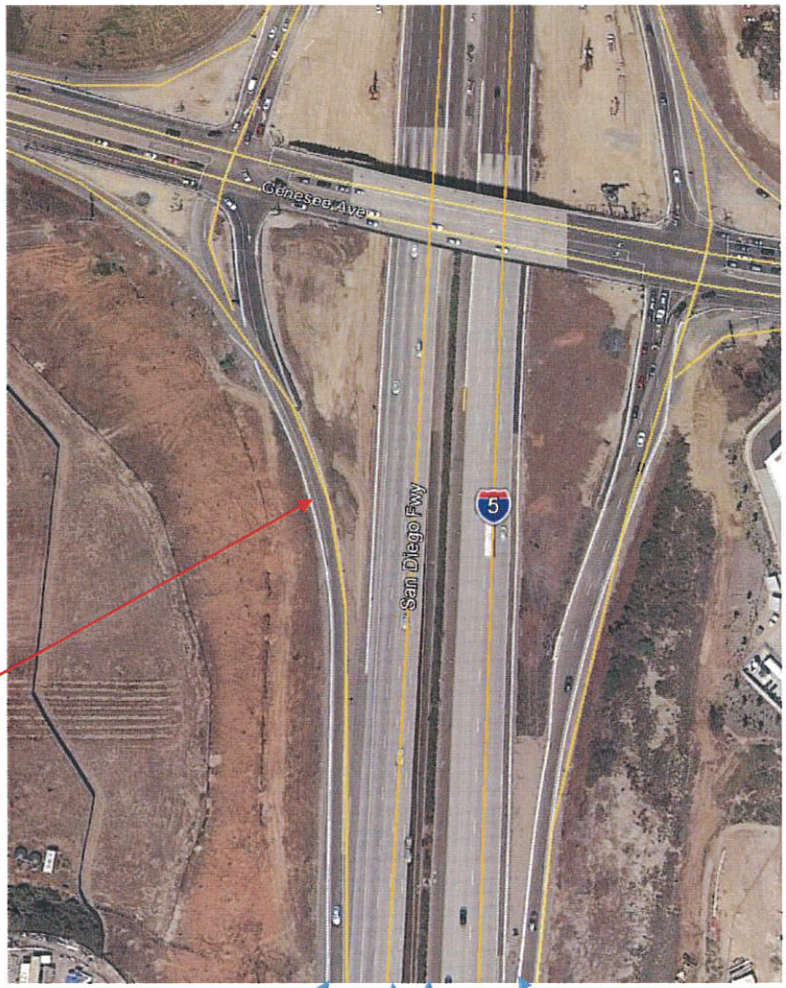
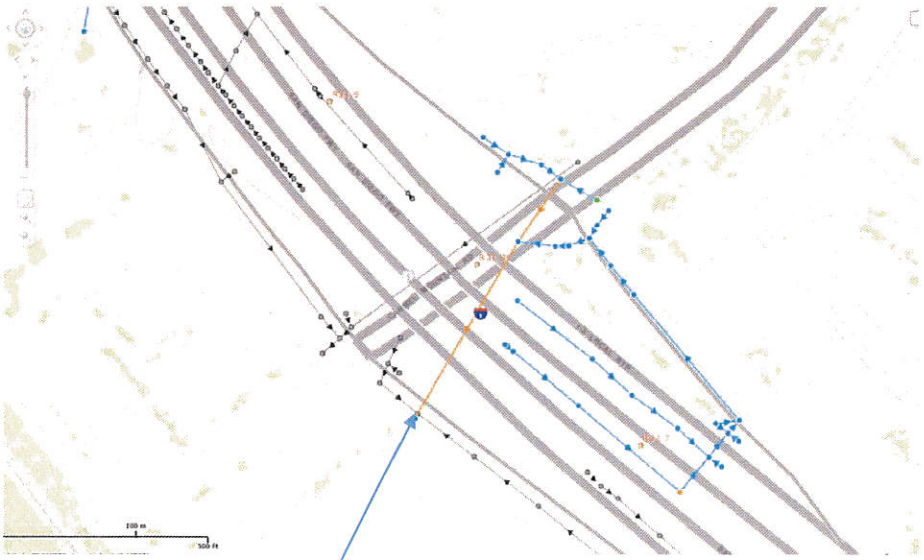

Genesee Ave
San Diego Fwy
5
N
Proposed
Ramp Meter
Location
Rumble Strip typical locations.

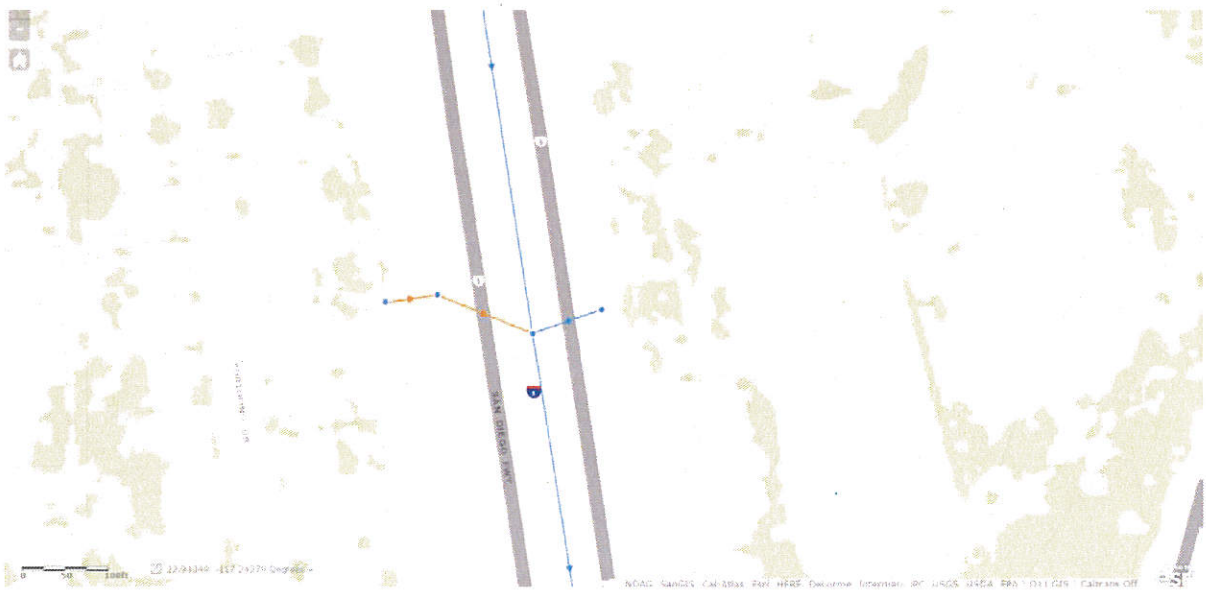
Exhibit 1

Typical corrosion related culvert failure in project area under I-5 at post mile 31.78



Location of failing culvert.

Typical corrosion related culvert failure in project area at post mile 33.01.



Proposed Old Sorrento Valley Road Bike Path,
Sorrento Valley Road to Carmel Valley Road

Exhibit 4