Caltrans I-5 Improvement Plan
Shasta County

Introduction

In April 2009, the Shasta County Regional Transportation Planning Agency (SCRTPA) released the *Shasta County Regional Improvement Program (SCRIP) Nexus Study* to support impact fees on new development to fund transportation projects on Interstate 5 (I-5). Public hearings were held in the cities within Shasta County. The fees were approved by the City of Shasta Lake. Shasta County chose not to hold a public hearing to vote on implementation after the cities of Anderson and Redding chose not to approve the SCRIP fees. The Plan would only be implemented if all four jurisdictions approved the program.

The California Environmental Quality Act (CEQA) requires that transportation impacts from local development projects be identified and that significant impacts be mitigated, including impacts to the state highway system. Individual developments should contribute their "proportional share" of costs to mitigate the traffic impacts of their projects. The term "proportional share" means the percentage of mitigation costs attributable to a project as determined by the percentage of additional traffic a project will contribute to the state highway system.

The Caltrans I-5 Improvement Plan (Plan) is to serve as a starting point for discussion with local approving agencies, the developer, and Caltrans on what may be acceptable to mitigate I-5 traffic impacts. It is not intended to serve as the only traffic analysis required, nor as a comprehensive list of options that will meet the mitigation needs of a project. Specific mitigation projects and proportional share fees will be determined and negotiated with lead agencies on a case-by-case basis.

Purpose of this Plan

The Plan will serve as a high level implementation document for improvements to I-5 within Shasta County that will meet the needs of the traveling public, mitigate development impacts, and accommodate future growth. The costs associated with the projects (Table 2) are planning level estimates only. Actual project costs would be determined when project specifics are more fully identified.

Plan Area

The Caltrans I-5 Improvement Plan (Plan) begins at the Tehama / Shasta County line and extends north to the I-5 / State Route 151 overcrossing or postmiles 0.0 to 24.08, but is limited to the existing four-lane highway sections. The Plan includes only the I-5 mainline and does not include interchanges, ramps, or local roads.

Need for Projects

The most recent Level of Service (LOS) and Traffic Volume data compiled by Caltrans for the I-5 Transportation Concept Report was based on the Shasta County Travel Demand Model, and was used in the Shasta County SCRIP Nexus Study. See Table 1 for specific freeway segment information. In 2005 the Peak Hour LOS on most I-5 freeway segments in Shasta County was B or C. It is forecast that if no I-5 improvements are made, the LOS for four-lane segments in Shasta County would reach F by 2030. The LOS

would be improved to LOS C or D in these same segments with the addition of a third through lane in each direction on I-5.

The Shasta County Travel Demand Model projects growth in Shasta County to occur at rates from 1 to 2 percent annually depending upon the type of development, with residential development estimated at 1.4 percent annually. The rates are forecasted through the 2030 year (Fix Five Partnership Impact Fee Nexus Study, page 2). It is acknowledged that these growth percentages have not been realized due to the current economic climate. However, it is still anticipated that projected growth will result in the same LOS figures presented in Table 1.

Table 1: I-5 2005 and 2030 Level of Service and Traffic Volumes
Shasta County

			Peak Hour Level of Service			Average Daily Volumes		Peak Hour Volumes	
Segment	Location	Postmile	2005	2030 Unimproved	2030 Improved	2005	2030	2005	2030
7S	Shasta County border to 4th Street OC	0 - 0.9	C	F	C	42,000	84,000	5,300	6,700
8	4th Street OC to SR 273	0.9 - 3.6	D	F	C	52,000	94,000	5,400	7,400
9	SR 273 to Riverside Ave OC	3.6 - 6.7	C	F	C	52,000	93,000	5,700	7,500
10	Riverside Ave OC to S. Bonneyview OC	6.7 - 12.2	C	F	D	55,000	92,000	5,700	7,500
11	S Bonneyview OC to I-5/SR 44	12.2 - 15.6	C	F	D	62,000	103,000	6,500	8,300
12	I-5/SR 44 to SR 273 North	15.6 - 18.8	D	F	D	58,000	99,000	6,300	8,000
	North SR 273 to SR 151 OC	18.8 - 22.2	B	C	C	46,500	65,000	4,700	5,200
13	SR 151 to Mountain Gate OC	22.2 - 24.8	B	D	B	21,800	37,000	3,800	4,800

2030 Unimproved LOS assumes no improvements made to I-5.
2030 Improved assumes the addition of a third lane in each direction on I-5.

Sources: Caltrans, Willdan, MuniFinancial, SCRIP 2009

Project Identification

Currently, most sections of I-5 within Shasta County are two lanes in each direction, with interchanges spaced throughout to provide access to the local road system. Caltrans traffic analysis, as published in the *June 2008 I-5 Transportation Concept Report*, indicates that traffic volumes will increase by the 2030 year so that the Level of Service in the four-lane sections will be reduced in the peak hour timeframes to LOS F.

If I-5 were expanded to three lanes in each direction, the 2030 year peak hour LOS would be C / D. Please see Table 2 for specific information on the project locations and planning-level costs.

Other transportation projects that should be analyzed include ramp metering (see District 2 Ramp Meter policy), merge/diverge analysis for ramp operation, and signal modifications at ramp termini. Additional transportation improvement projects not specifically mentioned here should also be considered to improve the short-term operation of the freeway and interchanges.

Table 2: I-5 Improvement Project Costs (2007 dollars)
Shasta County

				Roadway		Structures		
Segment	Location	Post – miles	Miles	Construction	Support	Construction	Support	Total
7S	Shasta County border to 4th Street OC	0 – 0.9	0.9	$6,000,000	$1,620,000	$11,500,000	$3,105,000	$22,225,000
8	4th Street OC to SR 273	0.9 – 3.6	2.7	Funded by Proposition 1B CMIA				
9	SR 273 to Riverside Ave OC	3.6 – 6.7	3.1	$25,000,000	$6,750,000	$30,000,000	$8,100,000	$69,850,000
10	Riverside Ave OC to S. Bonneyview OC	6.7 – 12.2	5.5	$30,000,000	$8,100,000			$38,100,000
11	S Bonneyview OC to I-5/SR 44 connect	12.2 – 15.6	3.4	Funded by Proposition 1B CMIA savings				
12	I-5/SR 44 to SR 273 North	15.6 - 18.8	3.2	$20,000,000	$5,400,000	$7,000,000	$1,890,000	$34,290,000
	North SR 273 to SR 151 OC	18.8 - 22.2	3.4	Already 6 lanes - additional lanes not needed				
13	SR 151 to Mountain Gate OC	22.2 - 24.8	2.6	$16,000,000	$4,320,000	$2,000,000	$540,000	$22,860,000
	Total		18.7	$122,000,000	$32,940,000	$60,500,000	$16,335,000	$187,325,000

Sources: Caltrans, Willdan, MuniFinancial

Funding Plan

The following are funding sources that may be used to fund I-5 improvements:

- The State Transportation Improvement Program (STIP) is a transportation improvement funding program that can be used for capacity-increasing state highway projects. The two STIP funding sources for highway projects are the Regional Transportation Improvement Program (RTIP) and the Interregional Transportation Improvement Program (ITIP).

  - **Regional Transportation Improvement Program** (RTIP) funding for regional improvements is derived from the State Transportation Improvement Program (STIP). Seventy-five percent of the STIP funds go to the Regional Transportation Planning Agencies to set priorities for these funds.

The agencies may prioritize I-5 improvements subject to approval by the California Transportation Commission (CTC).

The regional shares are anticipated to be between $3.5 and $5.5 million per year. Over 20 years, this equates to $70-$110 million. RTIP funds (excluding the ITIP funds) may be used for local street and road projects, as well as State highway projects. There will be other state highway system needs in the next 20 years. These fund estimates are optimistic and are likely to be the maximum funding levels that can be assumed. This Plan assumes that $55 million of Regional Transportation Improvement Program funding may be used to build a third lane on I-5 (Table 3) over the next 20 years.

- **Interregional Transportation Improvement Program** (ITIP) is also funded from STIP, with Caltrans setting priorities and requires approval by the CTC. Twenty-five percent of the STIP funds are committed to the ITIP, which is dedicated to interregional State highway improvements. I-5 improvements would be eligible for funding from this source. However, statewide project needs far outweigh the availability of funding from this source. Historically, the CTC has prioritized funds to regions that have agreed to pay for a portion of a highway project with a local (non-state) funding source such as tax measure or impact fee funds. This Plan assumes that $55 million of ITIP funding may be available to match the RTIP funding (Table 3) over the next 20 years.

- State Highway Operation and Protection Plan (SHOPP) funding is prioritized by Caltrans and approved by the CTC. SHOPP funds are for the maintenance and operation of the State highway system through rehabilitation, capital maintenance, safety, storm damage, and other programs. SHOPP funding cannot be used for capacity improvements.

- Bond Funding – Proposition 1B funds provided about $19.1 billion from bond sales for transportation projects. The Cottonwood Hills Truck Climbing Lane and the South Redding 6-Lane projects, both on I-5, were funded through Proposition 1B. Proposition 1B funding is a one-time source of transportation funding, not an ongoing funding source. Additional bond funding cannot be relied upon in the near future.

- The U.S. Congress (Federal) may also provide future funding opportunities through earmarked legislation or other federal legislation that is not known at this time. Recent examples of unanticipated federal transportation funding opportunities include the American Recovery and Reinvestment Act (ARRA and TIGER funds).

- Federal Transportation Reauthorization. The previous federal transportation authorization bill expired on September 30, 2009 and is being extended for short periods of time. A new transportation bill is being formulated. It is not known at this time what the reauthorization bill will look like or what funding opportunities will be available.

- Local sales tax measures. Nineteen California counties, comprising 83% of the state's population, have imposed local sales tax measures (self-help counties) to help pay for local transportation projects. It is not anticipated that Shasta County will impose a local transportation sales tax in the near future.

- Local Development Funds are developer-paid funding to offset impacts caused by development projects. Table 13 on Page 49 of the *Shasta County Regional Improvement Program Impact Fee Nexus Study* showed the maximum attributable fee for new development to be $2,190 per equivalent dwelling unit (EDU). This figure represents the average allowable fee attributable to new development based on the assumption all new development in the region would participate. Analysis of individual developments may yield a higher or lower figure depending on the development. The *Fix Five Partnership; Phase I Impact Fee Nexus Study* shows the same amount on page 50, Table 11. This amount is not proposed as a fee schedule, but only restates the amounts arrived at in previously completed proposed fee program nexus studies for the I-5 Corridor in Shasta County. The analysis was done on a regional level, not a project or location-specific level. Since this fee was not adopted, the assumptions in the two studies are not valid for specific project mitigation. Caltrans will work with the lead agency to determine project specific mitigation based on the mutually agreed project specific impact studies.

Table 3: I-5 Improvements Anticipated Funding

Cost of Projects in Shasta County		$187,325,000
Funding for additional lanes on I-5 in next 20 years:		
STIP (RTIP/ITIP)	$110,000,000	
Other Sources *	$ 77,325,000	
Total	**$187,325,000**	

*Future bonds, federal earmarks, developer mitigation, etc.

Suggested Documents to Review

- Caltrans District 2 Ramp Meter policy
- Caltrans Guide for the Preparation of Traffic Impact Studies
- Caltrans District 2 Origination & Destination Traffic Study (2007)
- Caltrans I-5 Transportation Concept Report
- draft 2010 Shasta County Regional Transportation Plan
- Shasta County Regional Transportation Improvement Program
- Fix 5 Nexus Study

Sources of Information

Sources of information for this Plan were obtained from the *2010 Shasta County Regional Transportation Plan, Shasta County Regional Improvement Program Nexus Study, Fix Five Partnership Phase I Impact Fee Nexus Study,* and *Caltrans I-5 Transportation Concept Report.*

Plan approved by:

9/13/10

JOHN BULINSKI, P.E. Date
District Director