2005
Ten-Year State Highway Operation and Protection Plan

(Fiscal Years 2006/07 through 2015/16)

Prepared by: California Department of Transportation

May 1, 2005

Required by: Streets & Highways Code Section 164.6

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EXECUTIVE SUMMARY

The California Department of Transportation (Department) is responsible for maintaining, preserving, rehabilitating and operating approximately 50,000 lane miles of the existing transportation system's backbone, the State Highway System (SHS). The Department monitors the condition and operational effectiveness of the SHS through periodic inspections, traffic studies and system analysis. The Department uses the information obtained through these activities to prepare the Ten-Year State Highway Operation and Protection Plan (Plan) as required by Streets and Highways Code Section 164.6. The Plan provides input for the funding distribution in the Fund Estimate (FE) adopted by the California Transportation Commission (CTC) in August of each odd-numbered year. The FE, with its fiscal constraints, establishes the framework for how much State Highway Operation and Protection Program (SHOPP) work can be accomplished in the following four years. Subsequent Plans are greatly dependent on the level of resources provided in the FE.

Streets and Highways Code Section 164.6 requires the Plan to include identified needs for the ten-year period based on quantifiable accomplishments. Needs are the total costs of the proposed projects to take the current system condition to the levels identified in the goals. The Plan is to include a cost estimate for at least the first five years. Due to the immediate and intermediate funding constraints, the Department and the CTC recognize that the Plan must also contain a fiscally constrained recommendation for SHOPP funding for the FE period.

The total ten-year needs defined in the 2005 Ten-Year State Highway Operation and Protection Plan (2005 Plan) for the rehabilitation and operation of the SHS is $29.7 billion for the period from State Fiscal Year (FY) 2006/07 through FY 2015/16. This amount represents the current un-escalated construction and right-of-way acquisition costs. Adding project development costs increases the total costs of the needs to $39.23 billion over the ten-year period.

The ten-year funding identified in the 2005 Plan is based on achieving the goals of the Plan. Current needs are statewide and include all program areas within the SHOPP. System performance outcomes of implementing the 2005 Plan include a reduction in the number and severity of vehicle collisions, improved trip reliability, and increased mobility by addressing system operational deficiencies. The 2005 Plan is consistent with emerging system performance measures. Future Plans will be further refined as additional performance measures are developed and mature.

The 2005 Plan is the first developed in three years and identifies a significantly higher cost than the 2002 Ten-Year State Highway Operation and Protection Plan (2002 Plan). The 2002 Plan identified needs of $22 billion (excluding escalation factors and project development costs). The increased cost of the 2005 Plan is due to limited funding to implement the 2002 Plan and rapid increases in the commodity costs for construction materials.

Funding Reductions Cause Project Delays

The 2002 Plan defined the cost to achieve the program goals at over $22 billion (not including project development costs), or about double the annual funding level provided in the 2002 SHOPP. Although the CTC recognized the importance of continued funding for the SHOPP, declining resources in the overall transportation program resulted in a severely constrained 2004 FE. The FE provided approximately 60 percent of the annual resources needed to fully implement the 2002 Plan. Unanticipated declines in revenue below that assumed for the FE resulted in actual funding being even less. The fiscal realities of the last several years have prevented addressing all but the most immediate safety and emergency issues. This limited funding resulted in the deferral of work in the early years of the 2002 Plan into the 2005 Plan.

Increased Construction Costs

Construction costs have increased substantially since the 2002 Plan. During FY 2003/04 - FY 2004/05 construction seasons, it was not unusual to receive contractor bids 30 to 40 percent above project estimates made less than a year earlier. This impact has been reflected for all projects in the 2005 Plan.

Transportation funding continues in crisis and is not expected to achieve the level of resources needed to fully fund the rehabilitation needs identified in the 2005 Plan. The State Transportation Improvement Program (STIP) has not received appreciable funding in nearly three years. The Department does not believe that it is prudent or appropriate to recommend all transportation resources be devoted to SHOPP projects with funding totally eliminated for the STIP. Therefore, the Department recommends a fiscally constrained SHOPP funding level that provides a modest level of STIP funding.

The Department recommends a SHOPP funding level of $1.73 billion per year for the 2006 FE period, not including project development costs. The 2006 FE covers the first five years of the Plan (FY 2006/07 through FY 2010/11). Project development costs for SHOPP projects are approximately 32 percent of construction costs.

The Department's recommended funding level focuses on, 1) addressing emergency, mandated and safety issues, 2) rehabilitating the existing SHS sufficient to maintain it at its current service and, 3) delaying rehabilitation activities that would reduce the amount of distressed pavement or number of deficient bridges to beyond the FE timeframe. This requires the Department to find innovative ways to rehabilitate the system. The Department will reduce the cost of rehabilitation projects by focusing on the most critical elements of roadways and bridges, i.e., using preservation strategies in lieu of more costly major rehabilitation. Where possible, the Department will look for partnership opportunities through corridor concepts and partnership funding for mobility and available to construct improvements, the Department will continue efforts to streamline project delivery and minimize the support costs needed to deliver these projects.

Specifically, the recommended funding level will:

- Fully fund all emergency situations created by natural and catastrophic events.
- Fully fund all identified safety improvements, initiate a proactive safety program and complete all median barrier upgrades within five years.
- Fully fund all mandated programs to meet the statutory and regulatory time constraints imposed on each program.
- Fully fund all bridge scour, bridge seismic and transportation permits projects, maintain the bridge rehabilitation inventory at its current levels, and address the most critical situations in the bridge widening and bridge rail replacement areas.
- Partially fund the roadway rehabilitation and pavement preservation programs to maintain the inventory of distressed pavement at its current level, and address the most critical needs in protective betterments, drainage corrections and signs and lighting rehabilitation.
- Fully fund the Transportation Management System (TMS) program to provide the needed detections systems to improve system operations and implement transportation system performance measure. The recommended funding will also correct the highest priority operational improvements and keep the existing weigh stations functional and operating.
- Fully fund all identified worker safety maintenance access projects, roadside enhancements and safety roadside rest areas to comply with current code and mitigation requirements.
- Partially fund the highway planting to maintain the distressed planting at its current inventory.
- Delays beautification and modernization and construction of new safety roadside rest area to beyond the FE timeframe.
- Fully funds all equipment, maintenance, offices and laboratory facilities sufficient to meet building code and health and safety requirements. Delays funding for additional improvements.

The following table summarizes the total ten-year funding need to achieve SHOPP program goals and the Departments recommended constrained annual SHOPP funding level for the 2006 FE period:

		Ten Year State Highway Operation and Protection Program (SHOPP) Needs (FY 2006/07-2015/16)			Recommended SHOPP Funding for 2006 Fund Estimate		
		Total Ten Years			Annual Average		
SHOPP PROGRAM	**ACCT. CODE**	**Cost ($M)**	**PERFORMANCE Units**		**Cost ($M)**	**PERFORMANCE Units**	
EMERGENCY RESPONSE							
Major Damage Restoration	201.130	**$ 590**	TBD	Locations	**$ 59**	TBD	Locations
COLLISION REDUCTION							
Safety Improvements	201.010	$ 2,080	3,900	Fatal & Injury Collision reduced	$ 208	390	Fatal & Injury Collision reduced
Collision Severity Reduction	201.015	$ 780	1,400	Fatal & Injury Collision reduced	$ 78	140	Fatal & Injury Collision reduced
Median Barrier Upgrade	201.020	$ 270	500	Fatal & Injury Collision reduced	$ 54	100	Fatal & Injury Collision reduced
Category Total		**$ 3,130**			**$ 340**		
MANDATES							
Relinquishments	201.160	$ 140	270	Centerline Miles	$ 14	27	Centerline Miles
Noise Attenuation for Schools	201.270	$ 10	TBD	Locations	$ 1	TBD	Locations
Railroad	201.325	$ 50	TBD	Locations	$ 5	TBD	Locations
Hazardous Waste Mitigation	201.330	$ 30	TBD	Locations	$ 3	TBD	Locations
Storm Water	201.335	$ 710	TBD	Locations	$ 71	TBD	Locations
ADA Curb Ramp Compliance	201.361	$ 10	TBD	Locations	$ 1	TBD	Locations
Category Total		**$ 950**			**$ 95**		
BRIDGE PRESERVATION							
Bridge Major Rehabilitation	201.110	$ 1,643	800	Bridges	$ 125	11	Bridges
Bridge Preservation	201.115	$ 470	3,000	Bridges	$ 47	300	Bridges
Bridge Scour Mitigation	201.111	$ 170	90	Bridges	$ 17	9	Bridges
Bridge Seismic Restoration	201.113	$ 420	190	Bridges	$ 42	19	Bridges
Bridge Widening	201.114	$ 46	20	Bridges	$ 2	1	Bridges
Trans Permit Requirements for Bridges	201.322	$ 120	60	Bridges	$ 12	6	Bridges
Bridge Rail Replacement/Upgrade	201.112	$ 363	478,800	Feet	$ 5	6,595	Feet
Category Total		**$ 3,232**			**$ 250**		
ROADWAY PRESERVATION							
Roadway Major Rehabilitation	201.120	$ 6,102	8,727	Lane Miles	$ 196	280	Lane Miles
Roadway Minor Rehabilitation	201.121	$ 4,973	14,815	Lane Miles	$ 347	1,734	Lane Miles
Pavement Preservation		$ 530	13,500	Lane Miles	$ 53	1,350	Lane Miles
Long-life Pavement Corridors	201.125	$ 1,000	500	Lane Miles	$ -	0	Lane Miles
Roadway Protective Betterment	201.150	$ 308	230	Locations	$ 13	12	Locations
Drainage System Restoration	201.151	$ 1,437	10,860	Drainage Systems	$ 25	190	Drainage Systems
Signs and Lighting Rehabilitation	201.170	$ 233	16,000	Signs	$ 2	140	Signs
Category Total		**$ 14,583**			**$ 636**		
MOBILITY IMPROVEMENT							
Operational Improvements	201.310	$ 2,750	60	Million Veh. Hr / yr	$ 55	1	Million Veh. Hr / yr
Transportation Management Systems	201.315	$ 1,800	60	Million Veh. Hr / yr	$ 180	6	Million Veh. Hr / yr
Weigh Stations & WIM Facilities	201.321	$ 110	TBD	Locations	$ 5	TBD	Locations
Category Total		**$ 4,660**			**$ 240**		
ROADSIDE PRESERVATION							
Highway Planting Restoration	201.210	$ 674	11,000	Acres	$ 23	375	Acres
Freeway Maintenance Access	201.230	$ 50	1,600	Locations	$ 5	160	Locations
Roadside Enhancement	201.240	$ 80	80	Locations	$ 8	8	Locations
Beautification and Modernization	201.245	$ 128	270	Centerline Miles	$ -	0	Centerline Miles
Safety Roadside Rest Area Restoration	201.250	$ 240	70	Locations	$ 24	7	Locations
New Safety Roadside Rest Areas	201.260	$ 278	36	Locations	$ -	0	Locations
Category Total		**$ 1,450**			**$ 60**		
FACILITY IMPROVEMENT							
Equipment Facilities	201.351	$ 110	21	Facilities	$ 5	1	Facilities
Maintenance Facilities	201.352	$ 423	120	Facilities	$ 25	6	Facilities
Office Buildings	201.353	$ 468	TBD	Facilities	$ 18	TBD	Facilities
Materials Lab	201.354	$ 124	20	Facilities	$ 6	1	Facilities
Category Total		**$ 1,125**			**$ 54**		
Cost as of January 1, 2004	**TOTAL**	**$ 29,720**			**$ 1,734**		

SECTION 1. INTRODUCTION

BACKGROUND

Streets and Highways Code Section 164.6 requires the Department to prepare a ten-year state rehabilitation plan for highways and bridges on the SHS. To comply with this requirement, the Department prepares the Plan that identifies rehabilitation needs, schedules for meeting those needs, and strategies for cost control and program efficiencies. The Plan is transmitted to the CTC by January of each odd-numbered year for their review and comment. The Plan is the basis for the Department's SHOPP budget request and capital program funding level. The approved SHOPP funding level is incorporated into the biennial FE adopted by the CTC in August of each odd-numbered year. The Plan is also transmitted to the Governor and Legislature by May of each odd-numbered year.

Government Code Section 14526.5 requires development of a four-year SHOPP. The SHOPP is a listing of projects proposed for construction consistent with the goals and priorities in the latest Plan. The actual SHOPP funding level is subject to the fiscal constraints in the adopted FE. SHOPP projects are limited to capital improvements relative to maintenance, safety and rehabilitation of State highways and bridges that do not add new capacity lanes to the system. These SHOPP projects address the highest priority for funding as defined in Streets and Highways Code Section 167.

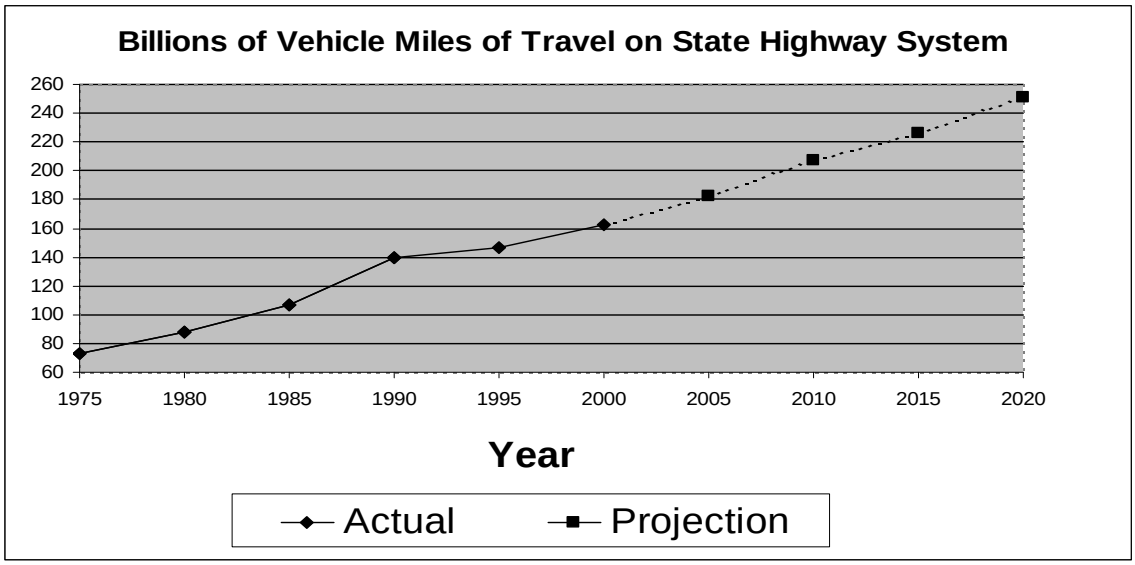
The 2005 Plan includes the period from State FY 2006/07 through FY 2015/16. It is divided into eight SHOPP categories that address emergency response, collision reduction, legislative and regulatory mandated actions, bridge preservation, roadway preservation, mobility improvement, and roadside preservation and facility improvements.

FINDINGS

The SHS includes approximately 15,000 centerline miles (50,000 lane-miles), over 12,000 bridges, over 200,000 culverts and drainage facilities, signs and lighting fixtures, over 25,000 acres of landscape and irrigation systems, 88 safety roadside rests, transportation management systems including traffic surveillance and vehicle detection devices, traveler information signs and traffic management centers, and 53 commercial truck weigh and inspection facilities. The physical condition and the operational efficiencies of the SHS can be described by the following attributes.

- **The system is valuable.** The SHS is one of California's most valuable resources. It provides for the movement of people and goods statewide. The system is vital to California's economy by linking the Pacific Rim and Mexico to markets and manufacturing centers throughout the country.

- **The system is aging.** Much of the highway system was built in the 1950s, 60s, and 70s. Some of the system has not been rehabilitated since it was originally built. Over 50 percent of the State highway bridges are over 30 years old. An increasing number are reaching the age where major rehabilitation or replacement will be required. More than one-fifth of the system's pavement needs rehabilitation.
- **Demand for use of the system is growing.** Annual vehicle miles traveled (VMT) on the SHS have increased from 139 billion miles traveled in 1990 to 162 billion in 2000, an increase of 17 percent. Between 2000 and 2020, the annual VMT is projected to increase to nearly 251 billion, a 55 percent increase. During this same period, the volume of freight carried on the SHS is projected to increase 31 percent from 586 million tons to 770 million tons annually.



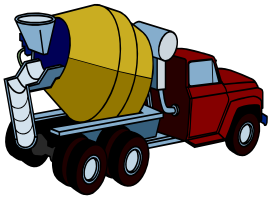
- **The rate of system deterioration is accelerating.** Increasing VMT combined with the age of the system is causing a faster rate of pavement deterioration, new accident concentration locations, and increasing hours of traffic congestion.
- **Needs are statewide.** While specific needs vary in different parts of the State because of unique weather, geographic and development conditions, all parts of the State have needs that are funded through the SHOPP.
- **New mandates.** New laws and regulations, not considered when the system was built, require additional resources. One such requirement is the federal Clean Water Act controlling storm water run-off.
- **Aging support facilities.** Many of the Department's operational and support buildings do not meet current standards such as Americans with Disabilities Act (ADA) requirements; fire, life, health, and safety codes; and seismic, energy, security, and operational requirements. Some maintenance stations cannot even accommodate the new larger and more efficient equipment used today.

CHANGES SINCE THE 2002 STATE HIGHWAYS OPERATION AND PROTECTION PLAN (2002 PLAN)

The 2002 Plan was the first to identify specific, quantifiable program goals for each SHOPP category and had a capital outlay cost of over $22 billion to achieve these goals and performance outcomes. Although the 2005 Plan reviewed and generally verified those goals for current applicability, it must be considered as a new and independent assessment. The 2005 Plan is "zero based" in that it does not simply update the 2002 Plan, but rather is a new definition of the SHOPP projects and their costs to achieve the goals. The specific project definition used in the 2005 Plan is a significant improvement in developing costs and timing needed to achieve the goals.

- **The 2002 Plan was not fully implemented.** The 2002 Plan had an annual average funding need of $2.2 billion per year, or about $9 billion for the four years of the SHOPP Program. While the priorities as defined in statute (Streets and Highways Code, Section 167) were considered in the development of the FE, insufficient funding was available for the 2004 SHOPP ($5.5 billion) to fully implement the 2002 Plan. This required at least $3.5 billion (plus additional cost due to construction inflation and continuing deterioration) to be deferred to later years and to be reconsidered in the 2005 Plan.
- **Deferred actions require increased solutions.** This 2005 Plan is a summary of the cost of the appropriate solution to address current and upcoming system deficiencies. If the existing condition is allowed to deteriorate, the scope of work needed to rehabilitate the facility will continue to increase and the life of the facility is reduced.
- **Increased construction cost inflation.** Construction costs have increased substantially beyond the consumer cost inflation since the 2002 Plan. During the FY 2003/04 - FY 2004/05 construction seasons, it was not unusual to receive contractor's bids 30 to 40 percent above project estimates made less than a year earlier. This has been reflected for all future projects in this Plan. The following exhibit illustrates the historic cost increase for various construction items commonly used in SHOPP projects.

Average Highway Contract Prices

	1980 $	1990 $	2000 $	2004 $
Roadway Excavation Per Cubic Yard	2.10	4.73	6.21	13.36
Aggregate Base Per Ton	8.38	12.05	11.14	17.40
Asphalt Concrete Pavement Per Ton	25.51	30.77	45.12	52.91
 Portland Cement Concrete Pavement Per Cubic Yard	55.18	68.93	78.14	210.35
Class "A" Portland Cement Concrete Structure Per Cubic Yard	235.45	295.24	363.59	530.00

- 2004 is an average of the first three calendar quarters pending full year prices.
- From California Department of Transportation, "Average Highway Contract Prices - Exhibit B."

PROCESS IMPROVEMENTS

The Department continues to define and implement process improvements to expedite the delivery and management of projects and programs. Some of these improvements have already been implemented and have yielded positive results. The remaining improvements should be fully implemented over the next two-year period.

- **District Ten-Year Implementation Plans.** Each of the Department's 12 Districts has developed a proposed Plan to identify project needs and priorities to achieve its portion of the statewide goals. These district Plans ensure that proposed projects are consistent with statewide SHOPP goals and provide specific project information to local and regional agencies on proposed SHOPP actions.
- **Pavement Research.** The Department continues to work with U.C. Berkeley industry, and other research programs to create pavement mixes that improve the ride quality and extend the life of the facility. A steering committee has been established to focus on opportunities to test and implement recommended changes.
- **Pavement and Safety Rehabilitation Delegation.** In 1999 and 2000, the California Transportation Commission (CTC) delegated to the Department the authority to allocate construction funds for pavement rehabilitation and safety projects that are programmed in the SHOPP. This delegation expedited advertising and award of construction for these projects by about 30 days per project. With the current funding situation, the CTC has temporarily suspended the rehabilitation delegation authority. It is strongly recommended that this delegation be reactivated and that the allocation delegation be expanded to include all programmed projects that have been formally adopted by the CTC.
- **SHOPP Cost Effectiveness Study.** The objective of this project is to develop a user-friendly investment analysis tool for the SHOPP. The tool will incorporate a priority-setting system and lifecycle cost and/or benefit-cost analysis into the SHOPP investment decision-making process to optimize and prioritize investments among major SHOPP categories, as well as among programs and projects within each category. The tool would allow the user to formulate alternative scenarios of the SHS condition and performance and investment needs to select an optimal mix of categories and a set of cost-effective projects in each category of the SHOPP. It will also be flexible and interactive so that the user can customize and control the scenarios and the project selection by the model. A request for proposal has been prepared to select an appropriate consultant for this project. The tool is expected to be available for use in the development of the 2007 Plan.

RELATIONSHIP TO OTHER INITIATIVES

Five-Year Maintenance Plan

Streets and Highways Code Section 164.6 also requires the Department to prepare a five-year Maintenance Plan that addresses the maintenance needs of the SHS. Together, the 2005 Plan and the 2005 Maintenance Plan attempt to balance resources between SHOPP and maintenance activities in order to achieve identified milestones and goals at the lowest possible long-term total cost.

The 2005 Maintenance Plan recommended a permanent increase of $45.8 million in the annual Maintenance budget. The total annual preventive maintenance funding of $147 million would produce future SHOPP cost avoidance of approximately $1 billion; $546 million for roadway, $492 million for structures, and $75 million for drainage. The 2005 Maintenance Plan also proposes to emphasize preservation. This 2005 Plan implements this recommendation by including $53 million of roadway projects to preserve 1,350 lane miles of pavement, $47 million of bridge projects to preserve 300 bridges, and $5 million of drainage projects to preserve 90 culverts.

Transportation System Performance Measures

The Administration has initiated an effort with transportation stakeholders to define a set of customer-oriented Transportation System Performance Measures. The intent of this effort is to establish desired performance outcomes and associated key indicators that measure the transportation system's effectiveness in achieving those outcomes. The system measures are intended to help guide future transportation investment decisions and to improve the effectiveness and efficiency of transportation decision-making. This 2005 Plan continues to refine its use of performance measures.

The Department is also developing Organizational Performance Measures that complement the Transportation System Performance Measures. The Department's Organizational Performance Measures are intended to address the Department's responsiveness and effectiveness in meeting State goals. The 2005 Plan directly addresses the Department's goals by:

- **Safety** – providing the safest transportation system in the nation for users and workers. The Plan includes strategies and targeted funding levels that will improve motorist and worker safety.
- **Reliability** – providing dependable travel times. The Plan identifies the preservation and rehabilitation needs of the State's bridges and highways to maintain a reliable system. The Plan also identifies mobility and operational needs to reduce congestion and increase reliability.

- **Performance** – optimizing transportation system throughput. The Plan includes operational, technology and system management improvements that optimize the system throughput.
- **Stewardship** – preserving and enhancing California's resources and investments. The main objective of the Plan is to preserve and protect the SHS, one of the State's most valuable resources.

Assembly Bill 857 (2002 - Wiggins) Requirements

Assembly Bill 857 requires that each functional plan follow the State planning priorities intended to promote social equity, support a prosperous economy, and protect the environment (3 E's) and to promote public health and safety. The Department has developed the 2005 Plan consistent with these priorities. The 2005 Plan responds to the maintenance, preservation, safety and operations needs of the SHS on a statewide basis, defines programmatic actions that can reasonably be accomplished and recommends priority actions on a technical merit basis that also supports the state planning priorities.

SECTION 2. TEN-YEAR COSTS AND RECOMMENDED FUNDING LEVEL

The 2005 Plan identifies total needs of approximately $29.7 billion over the ten-year period of State FY 2006/07 through FY 2015/16. Due to continued financial challenges, the Department proposes a fiscally constrained SHOPP funding of $1.73 billion per year for the five-year 2006 FE period. The following section contains a description of the ten-year needs and associated goals and planned accomplishments, and the recommended constrained funding recommendation and, in some cases, revised goals and accomplishments. The comparison is described for each of the eight SHOPP categories. A more detailed description for each category and sub-program is contained in Appendix B of this document.

Emergency Response Category

Program Goal. Restore the SHS to its pre-existing condition following catastrophic natural damage events. This program supports the Stewardship goal in the Department's Organizational Performance Measures.

Ten-Year SHOPP costs to address all identified needs: $0.59 billion over ten-years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Open all damage closures within 180 days of the event. 2. Provide a permanent restoration within three years of the event.
Recommended SHOPP funding for 2006 FE: $59 million per year
Accomplishments with Recommended Funding: Fully meet goals for five-year FE period, no change in accomplishments.

Collision Reduction Category

Program Goal. Improve motorist safety by reducing fatal and injury collisions by 10 percent during the ten-year life of this Plan. Achieving this goal will result in about 20 fewer fatal collisions and 610 fewer injury collisions per year when compared to the number in 2000. This program supports the Safety goal in the Department's Organizational Performance Measures.

Ten-Year SHOPP costs to address all identified needs	$3.130 billion over Ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Construct safety improvements at locations with known or potential accident concentrations. 2. Widen shoulders and install guardrails to reduce the severity of collisions. 3. Install new median barrier where warranted. 4. Replace all 181 miles of existing non-standard median barrier by 2010.	
Recommended SHOPP funding for 2006 FE:	$340 million per year
Accomplishments with Recommended Funding: Fully meet goals for five-year FE period, no change in accomplishments. • NOTE: All existing non-standard median barriers will be replaced within five-year FE period.	

Mandates Category

Program Goal. To respond to time sensitive projects and activities as required in statute or legal mandates. This program supports the Stewardship goals in System Performance Measures.

Ten-Year SHOPP costs to address all identified needs	$0.95 billion over ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Implement and maintain an effective statewide Storm Water Management Plan. 2. Insure all curb ramps on SHS are ADA compliant. 3. Remove all known Hazardous Waste that will not be mitigated by other actions 4. Provide Five Railroad Grade Crossings improvements per year on the SHS. 5. Provide for all requested school noise attenuation per statute. 6. Provide for relinquishments of SHS segments as defined and requested in statute.	
Accomplishments with Recommended Funding:	
Revision in Planned Goals and Accomplishments: Fully meet goals for five-year FE period, no change in accomplishments.	

Bridge Preservation Category

Program Goal. Prevent structure failure by preserving the structural and functional integrity of all bridges owned by the State. This program supports the reliability, safety and stewardship goals in System Performance Measures. The ten-year cost to address all identified needs in this category is $3.232 billion. The Department recommended funding level for the 2006 FE period is $250 million per year.

Ten-Year SHOPP costs to address all identified needs $3.232 billion over ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Replace or rehabilitate distressed and functionally deficient bridges to reduce inventory from current 800 bridges to 400. 2. Rehabilitate all 90 bridges vulnerable to scour. 3. Upgrade 400,000 lineal feet of deficient bridge railings. 4. Upgrade all 190 seismically vulnerable bridges. 5. Widen 20 specific bridges to meet Federal commitments. 6. Upgrade 60 weak or low bridges that restrict the passage of extra-legal permit goods movement loads.
Recommended SHOPP funding for 2006 FE: $250 million per year
Accomplishments with Recommended Funding: The Department will focus on preservation over rehabilitation where practicable. The recommended funding level will meet the goals of the first five years of the plan for some Bridge Preservation programs: 1. Maintain current inventory of distressed bridges by replacing or rehabilitating 11distressed and functionally deficient bridges per year. 2. Rehabilitate 9 bridges vulnerable to scour per year to meet goal for first five years. 3. Upgrade 6,600 lineal feet of deficient bridge railings per year. 4. Upgrade 19 seismically vulnerable bridges per year to meet goal for first five years. 5. Widen 1 bridge per year to meet Federal commitment. 6. Upgrade 6 weak or low bridges per year that restrict the passage of extra-legal permit goods movement loads to meet goal for first five years.

Roadway Preservation Category

Program Goal. Preserve the existing roadway facilities to their constructed standards and to replace or repair those roadway facilities as required. Achieving this goal will result in smoother pavements, reduced operating costs for motorists, and improved reliability of the system. This program supports the Reliability and Stewardship goals in the Department's Organizational Performance Measures. The ten-year cost to address all identified needs in this category is $14.583 billion. The Department recommended funding level for the 2006 FE period is $636 million per year.

Ten-Year SHOPP costs to address all identified needs $14.583 billion over ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Reduce the current inventory of distressed and rough riding pavement from current 11,824 lane miles to 5,500. 2. Provide permanent solutions to 230 locations that are prone to repeated catastrophic damage closures. 3. Replace or rehabilitate 10,900 deficient drainage structures. 4. Upgrade 16,000 signs and lighting structures to current standards.
Recommended SHOPP funding for 2006 FE: $636 million per year
Accomplishments with Recommended Funding: The Department will focus on preservation over rehabilitation where practicable. The recommended funding level will reduce goals of the first five years of the plan for all Roadway Preservation programs. 1. Maintain the current inventory of distressed and rough riding pavement at the current 11,824 lane miles. 2. Provide permanent solutions to 12 locations per year that are prone to repeated catastrophic damage closures. 3. Replace or rehabilitate 190 deficient drainage structures per year. 4. Upgrade 140 signs and lighting structures to current standards per year

Mobility Category

Program Goal. Reduce the total delay on State highways by 120 million vehicle hours annually by FY 2015/16 using SHOPP eligible actions. Increase the safety and mobility of goods movement. This program supports the Reliability and Safety goals in the Department's Organizational Performance Measures.

Fulfilling the goal of the Mobility Category requires the implement the TMS Plan. The TMS Plan is a critical requirement to implement System performance Measures and more effectively manage the capacity of the existing system.

Ten-Year SHOPP costs to address all identified needs $4,660 billion over ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Implement operational improvements and transportation management systems to reduce delay by 120 million vehicle hours annually. 2. Install 11,000 field elements and 1,360 miles of Fiber Optics per the TMS Master Plan. 3. Improve existing truck safety inspection facilities and construct 7 new inspections facilities and weigh stations.
Recommended SHOPP funding for 2006 FE: $240 million per year
Accomplishments with Recommended Funding: The Department will install all field elements planned for the five-year FE period. The recommended funding level for operational improvements is reduced to 20 percent of identified needs. The Department will maintain inspection facilities at existing level of service. 1. Implement operational improvements and transportation management systems to reduce delay by 7 million vehicle hours annually. 2. Install 1,100 field elements and 136 miles of Fiber Optics per year per the TMS Master Plan. 3. Maintain level of service for existing truck safety inspections facilities and weigh stations to required standards.

Roadside Preservation Category

Program Goal. Preserve roadside facilities to their original character, improve the safety, maintainability and compatibility of the roadside, and comply with statutory mandates. Achieving this goal will assist in meeting motorist and worker safety goals, environmental mitigation promises and statutory requirements. Additionally, this category will improve coordination with community character and enhance the livability of the neighborhoods through which State highway facilities pass. This program supports the Safety and Stewardship goals in the Department's Organizational Performance Measures.

Ten-Year SHOPP costs to address all identified needs $1.450 billion over ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Replace or rehabilitate 11,500 acres of planting and irrigation system deficiencies. 2. Provide 1,600 new safe access points to minimize worker exposure to traffic. 3. Rehabilitate 70 existing safety roadside rests to meet existing laws and regulations, expand parking, and provide security. 4. Construct 36 new safety roadside rest areas. 5. Enhance 80 roadside locations to meet prior project mitigation requirements
Recommended SHOPP funding for 2006 FE: $60 million per year
Accomplishments with Recommended Funding: The Department will maintain existing roadside planting and facilities at their current level of service. No new roadside rest area facilities will be constructed. The Department will construct all workers safe access points proposed over the five-year FE period. 1. Replace or rehabilitate 375 acres of planting and irrigation system deficiencies per year. 2. Provide 160 new safe access points per year to minimize worker exposure to traffic. 3. Rehabilitate 7 existing safety roadside rests per year to meet existing laws and regulations. 4. Construct no new safety roadside rest areas. 5. Enhance 8 roadside locations per year to meet all project mitigation requirements planned for the five-year FE period.

Transportation Facilities Category

Program Goal. Maintain the Department's support facilities to standards required by various laws, regulations, efficiency requirements, and agreements. Activities have been identified which, when implemented, will result in facilities that are safe and efficient for Department employees and the general public. This program supports the Stewardship and Performance Improvement goals in the Department's Organizational Performance Measures.

Ten-Year SHOPP costs to address all identified needs $1.125 billion over ten years
Ten-Year SHOPP Planned Goals and Accomplishments: 1. Provide maintenance, laboratory, office and shop facilities that comply with the ADA, are energy efficient and secure. (21 equipment facilities, 120 maintenance facilities, 12 office buildings and 20 materials facilities projects). 2. Bring facilities up to functional operating standards.
Recommended SHOPP funding for 2006 FE: $54 million per year
Accomplishments with Recommended Funding: The Department to upgrade facilities to be ADA compliant, energy efficient and secure. Other upgrades will be deferred. 1. Provide maintenance, laboratory, office and shop facilities that comply with the ADA, are energy efficient and secure. (1 equipment facility, 6 maintenance facilities, to be determined number of office buildings, and 2 materials facilities projects per year).

SECTION 3. IMPLEMENTING THE DEPARTMENT'S RECOMMENDED SHOPP FUNDING LEVEL

The Department's recommended funding level for the SHOPP in the 2006 FE would result in an average annual funding increase of approximate $275 million (19 percent) when compared with the adopted 2004 SHOPP. Much of this increased funding will be eroded due to the inflationary effects of the rapidly increasing construction cost index. The Collision Reduction Category and the Mobility Category are proposed for increased funding when compared to the 2004 SHOPP. The increased funding in the Mobility Category is primarily to install field elements necessary to accurately measure and manage the system's performance per the Transportation System Management Plan. All other categories will experience relatively unchanged funding levels or slight decreases in funding.

The recommended funding levels for the different SHOPP categories reflect the Department's priorities in safety and in implementing Transportation System Performance Measures. The Department will review individual SHOPP programs to ensure that the strategies adopted are the most cost effective means to achieve the defined goals and outcomes.

The preservation and restoration categories present the most significant challenges for the Department. Some of the more complicated and costly roadway and bridge rehabilitation projects may be deferred to the 2008 SHOPP. The Bridge Preservation Category funding will allow the Department to perform major rehabilitation on a relatively small number of the most critical and costly bridge structures. Many other bridges will receive preservation treatments that focus on specific structural members instead of a broader, more expensive rehabilitation of the entire structure. Similarly, the majority of the projects selected for Roadway Preservation Category funding must be those that propose low-cost preservation treatment only or propose rehabilitation activities limited to pavement treatments only. Specific work items to widen shoulders, upgrade drainage facilities, install new signs and construct other roadside improvements may not be included in the scope of many Roadway Preservation Category projects. This approach is consistent with and will be coordinated with the preventative maintenance approach described in the Department's Five-Year Maintenance Plan.

SHOPP funding for Mobility Category funding must be coordinated with mobility improvements funded through the STIP or from local sources. The Transportation Management System Plan lays the framework for the management tools required to manage and measure the SHS. Recommended SHOPP funding for operational improvements is intended to provide an incentive to transportation partners to invest Regional Transportation Improvement Program or other regionally controlled funding on the SHS to implement corridor operation improvement strategies in lieu of operation fixed at spot location that may only move congestion from one bottleneck to the next.

Defining and implementing specific strategies to accomplish the required rehabilitation and operation improvements under the Department's recommended funding level will continue prior to the adoption of the 2006 SHOPP. These efforts will also lead to improvements in development of the 2007 Ten-Year SHOPP. The Department recognizes the need to more effectively engage stakeholders in the development of corridor concepts that include safety, rehabilitation and operational improvement strategies in addition to addressing capacity and other system needs. The timing and methods for rehabilitation and restoration would be coordinated for an entire corridor or major segment of the system consistent with the functional characteristics and operational needs of the corridor. System performance measures that are appropriate for the functional characteristics of the corridor will allow the Department to monitor and measure the performance of the system. Deficiencies in physical condition or operational effectiveness will be the basis for capital outlay investments.

The Department will continue discussions with the CTC and other transportation stakeholder to ensure that the recommended funding level for the SHOPP in the 2006 FE and planned improvements responsibly respond to the current needs of the system

APPENDIX A. REQUIREMENTS OF GOVERNMENT CODE SECTION 164.6

Senate Bill 1098, Chapter 212, Statutes of 2004, amended Section 164.6 of the Streets and Highways Code to change the schedule for development of the Ten-Year State Rehabilitation plan in odd years to coincide with development of the FE and to include provisions for a Five-Year Maintenance Plan.

The 2005 Plan represents the state rehabilitation plan as required by Streets and Highways Code Section 164.6.

Text of Streets and Highways Code Section 164.6.

164.6. (a) The department shall prepare a 10-year state rehabilitation plan for the rehabilitation and reconstruction, or the combination thereof, by the State Highway Operation and Protection Program, of all state highways and bridges owned by the state. The plan shall identify all rehabilitation needs for the 10-year period beginning on July 1, 1998, and ending on June 30, 2008, and shall include a schedule of improvements to complete all needed rehabilitation during the life of the plan not later than June 30, 2008. The plan shall be updated every two years beginning in 2000. The plan shall include specific milestones and quantifiable accomplishments, such as miles of highways to be repaved and number of bridges to be retrofitted. The plan shall contain strategies to control cost and improve the efficiency of the program, and include a cost estimate for at least the first five years of the program.

(b) The department shall prepare a five-year maintenance plan that addresses the maintenance needs of the state highway system. The plan shall be updated every two years, concurrent with the rehabilitation plan described in subdivision (a). The maintenance plan shall include only maintenance activities that, if the activities were not performed, could result in increased State Highway Operation and Protection Program costs in the future. These activities may include roadway, structural, and drainage maintenance. The maintenance plan shall identify any existing backlog in these maintenance activities and shall recommend a strategy, specific activities, and an associated funding level to reduce or prevent any backlog during the plan's five-year period. The maintenance plan shall include specific goals and quantifiable accomplishments, such as lane-miles of highway to be repaved and the number of bridge decks to be sealed. The maintenance plan shall contain strategies to control cost and improve the efficiency of these maintenance activities, and include a cost estimate for the five years of the plan.

(c) The rehabilitation plan and the maintenance plan shall attempt to balance resources between State Highway Operation and Protection Program activities and maintenance activities in order to achieve identified milestones and goals at the lowest possible long-term total cost. If the maintenance plan recommends increases in maintenance spending, it shall identify projected future State Highway Operation and Protection Program costs that would be avoided by increasing maintenance spending. The department's maintenance division shall develop a budget model that allows it to achieve the requirements of this subdivision.

(d) The rehabilitation plan shall be submitted to the commission for review and comments not later than January 31 of each odd-numbered year, and shall be transmitted to the Governor and the Legislature not later than May 1 of each odd-numbered year. The maintenance plan shall be transmitted to the Governor, the Legislature, and the commission not later than January 31 of each odd-numbered year.

(e) The rehabilitation plan and the maintenance plan shall be the basis for the department's budget request and for the adoption of fund estimates pursuant to Section 163.

APPENDIX B. PROGRAM DESCRIPTIONS, GOALS AND COSTS

The SHOPP contains eight categories of funding. Each category includes several related programs to jointly achieve similar goals and outcomes. The section to follow defines the goals of each category and, where appropriate, related programs within each category included in the SHOPP. Information is included to define methods to identify and quantify the needs and track accomplishments. The known and anticipated needs of the SHS over the 10-year period of the 2005 Plan and the associated costs to address the needs are defined. Finally, the Department's recommended funding level is presented with corresponding accomplishments that can be achieved over the five-year FE period.

EMERGENCY RESPONSE CATEGORY

Program Goal. Restore the SHS to its pre-existing condition following catastrophic natural damage events. This program supports the Stewardship goal in the Department's Organizational Performance Measures. The ten-year cost to address all identified needs in this category is $590 million. The Department recommended funding level for the 2006 FE period is $59 million per year.

Major Damage Restoration

- **Ten-Year needs and costs.**

  Reopen damaged roadways within 180 days of a catastrophic event and provide a permanent restoration within three years of the event. While these events cannot be predicted, historically the emergency reopening portion of this activity has required over $50 million annually. The estimated cost for this activity is $590 million.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Fully fund the defined need at $59 million per year.

COLLISION REDUCTION CATEGORY

Program Goal. Improve motorist safety by reducing fatal and injury collisions by 10 percent during the ten-year life of this Plan. Achieving this goal will result in about 20 less fatal collisions and 610 less injury collisions per year when compared to the number in 2000 (see the following charts). This program supports the Safety goal in the Department's Organizational Performance Measures. The ten-year cost to address all identified needs in this category is $3.130 billion. The Department recommended funding level for the 2006 FE period is $340 million per year.

The Department's top priority is to reduce the number and severity of accidents. Actions that reduce the number of accidents, fatalities and injuries include:

Safety Improvements

- **Ten-Year needs and costs.**

  Investigate all safety locations as they are identified, and program those with a Safety Index greater than 200. This is expected to result in 3900 fewer fatal and injury collisions over the ten-year life of the Plan. These projects are the Department's highest priority. Historically, over 20 locations per year have been improved. The estimated cost for this activity is $2.080 billion.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Fully fund the need at $208 million per year.

Collision Severity Reduction

- **Ten-Year needs and costs.**

  Implement improvements based on recommendations of the "Run Off the Road" task force to widen shoulders and install guardrails and rumble strips at key locations statewide. "Run Off the Road" accidents result in 34 percent of the fatal accidents on the SHS. This is expected to result in 1,400 fewer fatal and injury collisions over the ten-year life of the Plan. The estimated cost for this activity is $780 million.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Fully fund the Need at $78 million per year.

Upgrade Median Barriers

- **Ten-Year needs and costs.**

  Replace the remaining 181 miles of median barriers that do not meet current federal safety standards. This is expected to result in 1000 fewer fatal and injury collisions over the ten-year life of the Plan. The estimated cost for this activity is $270 million.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Accelerate this program to be completed within five years at an annual cost of $54 million per year.

MANDATED ACTIONS CATEGORY

Program Goal. To respond to time sensitive projects and activities as required in statute or legal mandates. This program supports the Stewardship goals in System Performance Measures. The activities address only those actions that have been defined or mandated to date. This program is still undergoing development and the impacts of existing statutes and developing regulations are still being evaluated and litigated. The ten-year cost to address all identified needs in this category is $950 million. The Department recommended funding level for the 2006 FE period is $95 million per year.

Known actions to respond to mandates include:

Relinquishments.

- **Ten-Year needs and costs.**

  Bring conventional roadways to physical conditions defined in individual agreements with local agencies, allowing the local agencies to accept responsibility and authority for those routes. These routes function as local streets and roads and decisions regarding their operation are most appropriately made at the local level. This program is based on historical levels of requests for such responsibility transfers and is estimated to cost $140 million.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Fully fund the Need at $14 million per year

Noise Attenuation for Schools

- **Ten-Year needs and costs.**

  Reduce the roadway noise impacting school classrooms as mandated by Section 216 of the Streets and Highways Code. This program is based on historical levels of requests and is estimated to cost $10 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund the Need at $1 million per year

Railroad Grade Crossing.

- **Ten-Year needs and costs.**

  Improve at grade railroad grade crossings on the SHS. Federal Section 130 funds are earmarked specifically (and only) for these activities. The California Public Utilities Commission is responsible for prioritizing locations for upgrade within California. Historically this activity has resulted in improving five at-grade crossings per year. This program supports the Safety goal in the Department's

Organizational Performance Measures. The estimated cost for this activity is $50 million.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Fully fund the need at $5 million per year

Hazardous Waste Mitigation.

- **Ten-Year needs and costs.**

  Remove or contain hazardous waste at locations that will not naturally dissipate and where no other capital project is planned. The cost of this program is based on historical needs and is estimated to cost $30 million.

- **Recommended SHOPP funding for 2006 Fund Estimate.**

  Fully fund the need at $3 million per year

Storm Water.

- **Ten-Year needs and costs.**

  Implement and maintain an effective statewide Storm Water Management Plan as mandated by the State Water Resources Control Board Storm Water Permit that was issued to the Department in 1999 or other court orders. It requires the control of pollutants washed from State highways and property by rainfall or other surface runoff. Specific projects are currently programmed into the SHOPP. This program supports the Stewardship goal in the Department's Organizational Performance Measures. While current program requirements are still evolving as legal and regulatory issues are being clarified, the current estimated cost of this activity is $710 million.

  The activities that have been identified include:

  - Constructing several types of experimental and/or untested structural Best Management Practices (BMP) pilots to treat storm water runoff from portions of the Department's Right-of-Way. Construct 89 BMPs at 70 locations statewide from FY 2005/06 - FY 2007/08.
  - Establishing permanent vegetation on disturbed slopes to decrease erosion and enhance infiltration and trap sediment and other particulates as required by regulatory agencies and court stipulations.
  - Improving drainage systems to minimize non-point pollution runoff into the Tahoe Basin. Improve erosion control and water quality of storm water runoff and replace guardrail system to improve public safety.

Recommended SHOPP funding for 2006 Fund Estimate:

Fully fund the need at $71 million per year.

Americans with Disabilities Act (ADA) Curb Ramp Compliance

- **Ten-Year needs and costs:**

  Upgrade all qualified curb locations to be ADA compliant by the mandated date of 2008. The estimated cost for this activity is $5 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund the need at $1 million per year for the five-years of the FE.

BRIDGE PRESERVATION CATEGORY

Program Goal. Prevent structure failure by preserving the structural and functional integrity of all bridges owned by the State. This program supports the Reliability, Safety and Stewardship goals in System Performance Measures. The ten-year cost to address all identified needs in this category is $3.232 billion. The Department recommended funding level for the 2006 FE period is $250 million per year. This funding level emphasizes preservation as a cost-effective approach to maintain bridges.

Actions to meet the goal include:

Bridge Rehabilitation.

- **Ten-Year needs and costs:**

  Reduce the inventory of distressed and functionally deficient bridges from the 803 bridges to 400 by FY 2015/16. This activity replaces or rehabilitates bridges, which if untreated, could fail. Additionally, as defined in the Five-Year Maintenance Plan, 3,000 bridges will receive preventive treatment to decrease future rehabilitation needs. The estimated cost for this activity is $2.013 billion.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $172 million per year. This funding level will allow implementing the preventive treatment defined in the Five-Year Maintenance Plan while maintaining the inventory of deficient bridges at the current level.

Bridge Scour Mitigation.

- **Ten-Year needs and costs:**

  Mitigate all scour critical bridges within five years of a scour determination. Currently there are 86 scour bridges that require work. Both within California and nationally, more bridges have been lost due to scour than any other cause. The estimated cost for this activity is $170 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund the Need at $17illion per year.

Bridge Seismic

- **Ten-Year needs and costs:**

  Upgrade all vulnerable bridges as additional seismic locations are identified and additional research indicates vulnerability to seismic events. Currently 186 bridges are identified as vulnerable. The estimated cost for this activity is $420 million

- **Recommended SHOPP funding for 2006 Fund Estimate**

  Fully fund the need at $42 million per year.

Bridge Widening

- **Ten-Year needs and costs:**

  Widen 20 bridges to fulfill past commitments to the Federal Highway Administration. No future commitments are anticipated. The estimated cost for this activity is $46 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $2 million per year to widen one bridge per year.

Transportation Permit Requirements for Bridges

- **Ten-Year needs and costs:**

  Upgrade 60 bridges that cannot accommodate extra-legal transportation permit loads. This activity will reduce out of direction travel and decrease the operating cost of good movement travel. The estimated cost of this activity is $120 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund the Need at $12 million per year.

Bridge Rail Replacement

- **Ten-Year needs and costs:**

  Upgrade 404,000 lineal feet of bridge rails to current standard. The current inventory of deficient bridge rails is 804,000 lineal feet. The new standards rails provide enhanced ability to prevent a vehicle from leaving the structure. The estimated cost for this activity is $363million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $5 million per year to allow addressing the most critical 6,600 lineal feet of deficient bridge rail per year.

ROADWAY PRESERVATION CATEGORY

Program Goal. Preserve the existing roadway facilities to their constructed standards and to replace or repair those roadway facilities as required. Achieving this goal will result in smoother pavements, reduced operating costs for motorists, and improved reliability of the system. This program supports the Reliability and Stewardship goals in the Department's Organizational Performance Measures. The ten-year cost to address all identified needs in this category is $14.583 billion. The Department recommended funding level for the 2006 FE period is $636 million per year. This funding level emphasizes preservation as a cost-effective approach to maintain the roadway and its appurtances.

Activities to accomplish the roadway preservation goal include:

Roadway Rehabilitation, Pavement Preservation and Long Life Pavement

- **Ten-Year needs and costs:**

  Use the most cost-effective methods to reduce the existing 11,824 lane-miles of distressed pavement (rough riding and structurally failing) to 5,500 lane-miles by 2015/16. These activities incorporate the recommendations in the Five-Year Maintenance Plan. Analysis is underway to achieve this goal sooner. The estimated cost for roadway rehabilitation and preservation work is $12.605 billion.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund these activities at $596 million per year to allow maintaining the inventory of distressed lane miles at about 12,000.

Roadway Protective Betterments

- **Ten-Year needs and costs:**

  Provide permanent solutions to 230 locations that are prone to repeated catastrophic damage closures. This will result in a reduction in major damage and less severe interruptions to motorists. The estimated cost for this activity is $308 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $ 13 million per year to address the most critical 12 locations per year.

Drainage Corrections.

- **Ten-Year needs and costs:**

  Replace or rehabilitate 10,900 deteriorated drainage facilities**.** The Department has placed particular emphasis on rehabilitating drainage structures that have deteriorated and could result in erosion of roadway support materials and

catastrophic failure of the roadway. The estimated cost for this total activity is $1.437 billion.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $25 million per year to allow full development of this activity and to address the most critical 190 drainage facilities per year.

Signs and Lighting Rehabilitation

- **Ten-Year needs and costs:**

  Bring 26,000 signs and light fixtures to current standards. This activity has been highlighted nationally due to the aging population and their deteriorating vision capabilities. The estimated cost for this activity is $233 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $2 million per year to allow addressing the most critical 140 sign structures per year.

MOBILITY CATEGORY

Program Goal. Reduce the total delay on State highways by 120 million vehicle hours annually by FY 2015/16 using SHOPP eligible actions. Increase the safety and mobility of goods movement. This program supports the Reliability and Safety goals in the Department's Organizational Performance Measures. The ten-year cost to address all identified needs in this category is $4,660 billion. The Department recommended funding level for the 2006 FE period is $240 million per year.

The proposed activities to attain these goals are based on making modifications and adjustments to maximize capacity of existing highway facilities. The activities defined also form the basic level of activities, including system monitoring, needed to implement Transportation System Performance Measures. Because congestion reducing activities can be funded by funding sources other than the SHOPP, the Department continues to work with other transportation service providers to develop strategies and funding commitments to jointly develop regionally effective programs.

The activities to meet the mobility goal are:

Operational Improvements

- **Ten-Year needs and costs:**

  Reduce recurring delays to motorists by 60 million vehicle-hours of delay per year by FY 2015/16 by eliminating 470 traffic bottlenecks on congested and priority goods movement corridors. The estimated cost for this activity is $2.750 billion.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $ 55 million per year to annually address the most critical locations and reduce congestion by one million vehicle hours per year.

Transportation Management Systems

- **Ten-Year needs and costs:**

  Reduce non-recurring delays to motorists by 60 million vehicle-hours of delay by 2015/16 through improved detection, verification and removal of traffic incidents, and through improved real-time traveler information on congested and priority goods movement corridors. The estimated cost for this activity is $1.80 billion.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund the Need at $180 million per year.

Weigh Stations

- **Ten-Year needs and costs:**

  Improve commercial vehicle safety, operation and compliance by maintaining existing commercial vehicle inspection facilities and building two new facilities every three years. Such activities also support Homeland Security by providing a monitoring of commodities and vehicles entering California. These new facilities are consistent with the approved development plan jointly prepared by the Department and the California Highway Patrol. The estimated cost for this activity is $110 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $5 million per year to allow maintaining existing facilities in a safe and operationally efficient manner. The recommendation does not propose any new facilities during the FE timeframe.

ROADSIDE PRESERVATION CATEGORY

Program Goal. Preserve roadside facilities to their original character, improve the safety, maintainability and compatibility of the roadside, and comply with statutory mandates. Achieving this goal will assist in meeting motorist and worker safety goals, environmental mitigation promises and statutory requirements. Additionally, this category will improve coordination with community character and enhance the livability of the neighborhoods through which State highway facilities pass. This program supports the Safety and Stewardship goals in the Department's Organizational Performance Measures. The 10-year cost to address all identified needs in this category is $1.450 billion. The Department recommended funding level for the 2006 FE period is $60 million per year.

The following activities have been identified to meet the goal:

Highway Planting Restoration.

- **Ten-Year needs and costs:**

  Reduce the inventory of deficient or dying landscape from 12,000 acres to 500 acres by 2015/16. The estimated cost for this activity is $674 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $23 million per year to address annual increases to the deficient inventory and allow the total inventory to remain at 12,000 acres.

Freeway Maintenance Access

- **Ten-Year needs and costs:**

  Allow safe maintenance worker access to existing roadside facilities at 1,600 locations. The estimated cost for this activity is $50 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund this activity at $5 million per year.

Roadside Enhancements

- **Ten-Year needs and costs:**

  Provide statutorily required roadside enhancements and environmental mitigation. These future mandates cannot be fully defined ahead of time, but 81 commitments are required to be fulfilled at this time. The estimated cost for this activity is $80 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund this activity at $8 million per year to mitigate existing commitments.

Beautification and Modernization (B&M)

- **Ten-Year needs and costs:**

  Implement 69 miles of demonstration projects and 198 miles of additional projects as defined in the 2000 B&M report to the Legislature. This activity will improve worker safety and reduce life cycle costs of the SHS by upgrading or replacing deteriorated facilities. It also supports the Department's Context Sensitive Solutions policy and improves the compatibility of the SHS with the adjacent community. The estimated cost for the activity is $128 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Delay any funding for this activity until after the FE timeframe.

Safety Roadside Rest Areas Restoration

- **Ten-Year needs and costs:**

  Correct all code and statute deficiencies at 23 rest area units by 2007/08 and increase utility, restroom and parking capacity at 44 additional units by 2015/16. The estimated cost for this activity is $240 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fully fund this activity at $24 million per year.

New Safety Roadside Rest Areas

- **Ten-Year needs and costs:**

  Add 36 new Safety Roadside Rest Areas to the system. The focus of this program is to partner with private enterprises to provide this enhanced service. This program will increase highway safety and reduce driver fatigue by providing sufficient stopping or resting locations for both personal and commercial vehicles. The estimated cost for the Department's portion of this partnership activity is $278 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Delay any funding for this activity until after the FE timeframe.

TRANSPORTATION FACILITIES CATEGORY

Program Goal. Maintain the Department's support facilities to standards required by various laws, regulations, efficiency requirements, and agreements.

Four activities have been identified which, when implemented, will result in facilities that are safe and efficient for Department employees and the general public. This program supports the Stewardship and Performance Improvement goals in the Department's Organizational Performance Measures. The ten-year cost to address all identified needs in this category is $1.125 billion. The Department recommended funding level for the 2006 FE period is $54 million per year.

Equipment Facilities

- **Ten-Year needs and costs:**

  Update two facilities per year to meet health and safety standards and to ensure facilities are adequate to accommodate today's equipment. The estimated cost for this activity is $110 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $5 million per year to allow addressing one facility per year with health and safety code deficiencies.

Maintenance Facilities

- **Ten-Year needs and costs:**

  Update 12 facilities per year to conform to health and safety standards and achieve operational efficiencies. The estimated cost for this activity is $423 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $25 million per year to allow addressing six facilities per year with health and safety code deficiencies.

Office Buildings

- **Ten-Year needs and costs:**

  Provide office facilities that are safe, compliant with statutes and regulations, energy and operationally efficient, and secure. Achieving this goal will meet statutory, regulatory and functional operating requirements and is consistent with the statutory required Five-Year Facilities Plan. This Need includes developing and constructing eight new office facilities by FY 2015/16, completing seismic retrofit of three district offices, and completing six-office facility upgrade. This program supports the Safety, Stewardship and Performance Improvement goals in the Department's Organizational Performance Measures. The current estimated cost for this activity is $464 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $14 million per year to allow addressing facilities with health and safety code deficiencies.

Materials Laboratories

- **Ten-Year needs and costs:**

  Update two facilities per year to conform to health and safety standards and achieve operational efficiencies. The estimated cost for this activity is $124 million.

- **Recommended SHOPP funding for 2006 Fund Estimate:**

  Fund this activity at $6 million per year to allow addressing one facility per year with health and safety code deficiencies.