

# RDSC-PRIORITIZED STRATEGIC RESEARCH QUESTIONS

(as of April 4, 2008)

## **Strategic Research Priorities: RDSC approved the following nine Strategic Research Questions (SRQs) as Strategic Research Priorities for Fiscal Year (FY) 08/09 funding:**

- M1 DATA - How can we improve/enhance data collection and interpretation across modes?
- M2 INTEGRATED CORRIDOR MANAGEMENT - How can we optimize movement through a corridor?
- M5 TRAVEL DEMAND MANAGEMENT (REAL-TIME) - What are the most effective real-time strategies to influence travel demand?
- M6 TRAVEL DEMAND MANAGEMENT (SYSTEM ELEMENTS) - What transportation system elements and land use options are most effective in reducing travel demand by enhancing choices?
- M8 GOODS MOVEMENT - How can we improve goods movement throughout the State to generate jobs, increase mobility and relieve traffic congestion, improve air quality and protect public health, enhance public and port safety and improve California's quality of life?
- SF1 DESIGN/CONSTRUCTION - What design features and construction standards can be utilized to improve highway safety?
- SF4 PROACTIVE SAFETY - What can Caltrans do to mitigate collisions?
- ST6 CLIMATE CHANGE - How can Strategic Growth Planning be advanced through addressing climate change adaptations and mitigations?
- ST9 TRANSPORTATION INFRASTRUCTURE (e.g. Pavement, Structures, Maintenance Stations, Office Buildings, and others not listed) - How can we optimize the performance of our transportation infrastructure?

## **Best Practices: RDSC approved the following 15 SRQs for Preliminary Investigations to identify Best Practices:**

- M3 INCIDENT MANAGEMENT - How can we manage incidents to reduce effects on traffic and improve system reliability?
- M4 ACTIVE TRAFFIC MANAGEMENT - What are the most effective ways to manage vehicles on the roadway?
- M9 SUSTAINABLE TRANSPORTATION AND COMMUNITIES - How can we integrate the transportation system into the community so society benefits?
- SF3 WORKER SAFETY - What tools, technologies, and policies should be researched and implemented to improve administrative and engineering safety controls in the work environment?
- SF5 REACTIVE SAFETY - What can Caltrans do once collisions occur?
- SF6 DRIVER BEHAVIOR - How can we influence/educate drivers to operate their vehicles more safely?
- ST2 LIFECYCLE BUDGETING FOR INFRASTRUCTURE - How can we better measure the impact of asset decisions on Caltrans finances?
- ST3 LIFECYCLE COSTS - How can we incorporate lifecycle cost analysis into decision-making?
- ST5 NATURAL AND PHYSICAL ENVIRONMENT - What can we do to reduce impacts to the natural and physical environment?
- ST7 ASSET MANAGEMENT - How can we improve corporate inventory of assets and information (from structures to salamanders)?
- SV3 INNOVATION - How can Caltrans foster innovation and risk-taking?
- SV4 EMPLOYEE RETENTION - What are the most effective strategies to attract, select, and retain employees?
- SV6 TOOLS - What tools are needed to properly perform each job in Caltrans?
- D4 PURPOSE AND NEED - How can we establish and meet the purpose and need of the project throughout the project development process?
- D6 ENGINEERING ESTIMATES - How can Caltrans improve the accuracy of capital cost estimates?

## **Low Priority: RDSC identified the following 14 SRQ as Low Priority for FY 08/09 funding:**

- M7 SYSTEM DESIGN - How do we design State highway facilities to maximize movement of people and goods?
- SF2 ORGANIZATIONAL/INSTITUTIONAL - What organizational and institutional changes lead to improved safety?
- D1 SCHEDULE - How can we set and meet realistically aggressive schedules?
- D2 PROJECT MANAGEMENT - How can we effectively and efficiently manage delivery throughout the life of projects?
- D3 PRIORITIZATION AND SELECTION - How can we prioritize projects so the most needed projects are delivered with the available resources?
- D5 QUALITY - How do we ensure that the quality level of project deliverables match the purpose and need of the project?
- D7 CAPITAL COST - How can we get the best value from capital dollars?
- D8 CAPITAL SUPPORT COSTS - How can we use support resources most efficiently?
- SV1 TRAINING - What competencies are not adequately addressed by existing training and how might these competencies be developed?
- SV2 COMMUNICATION - What are the most effective ways to improve communication between Caltrans management and employees?
- SV5 QUALITY SERVICE - What skills are necessary to develop an excellent workforce that provides quality service?
- ST1 FINANCIAL FLEXIBILITY - How can State funding be used more flexibly to meet performance-based needs?
- ST4 CULTURAL RESOURCES - How can we better manage our cultural resources?
- ST8 EXCESS PROPERTY MANAGEMENT - How can we better approach asset management and excess land disposal in a business-like manner?