



APPENDIX A6: OPERATIONAL CONCEPTS BY SERVICE CATEGORY

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Operational Concepts for Traffic Management

User Service	Organization	Roles and Responsibilities
Traffic Control (I)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Establish statewide policies for traffic management, including coordination with other agencies. ▪ (Current) Fund traffic control programs (includes funds through State Highway Operation and Protection Program (SHOPP)). ▪ (Current) Establish cooperative agreements for inter-regional traffic management. ▪ (Current) Establish statewide criteria for communication, data collection, and data exchange among agencies for traffic management purposes. ▪ (Current and Proposed) Ensure security around key transportation infrastructure throughout the state. ▪ (Current) Facilitate sharing of real-time traffic information with local jurisdictions and other agencies.
Traffic Control (I) (continued)	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Lead role in implementation, operation and maintenance of traffic control on state freeways and rural state highways. ▪ (Current) Share real-time traffic information and traffic control actions with other agencies. ▪ (Current) Provide real time traffic information on state freeways. Obtain cooperation from other parties, such as media, to expand the information sources on traffic conditions for use in traffic management. ▪ (Current) Implement and operate HOV lanes on freeways, in partnership with regional agencies. ▪ (Current) Implement and operate traffic control under adverse weather conditions, such as fog, snow. ▪ (Current) Provide aid to CHP (such as incident information or traffic control). ▪ (Current) Establish cooperative agreements for local and regional traffic management. ▪ (Current) Implement and operate compatible data (includes video) exchange and communication with local agencies for regional traffic management. ▪ (Current) Implement and operate surveillance equipment on state freeways, and share video images with other agencies, such as local counties and cities. ▪ (Current) Implement and operate road closures under adverse weather conditions, such as fog or snow. ▪ (Current) Develop and maintain regional database of road closures due to constructions or other events.

Operational Concepts for Traffic Management (continued)

User Service	Organization	Roles and Responsibilities
Traffic Control (I) (continued)	CHP	<ul style="list-style-type: none"> ▪ (Current) Direct traffic at incident scenes. ▪ (Current) Enforce traffic violations on state freeways. ▪ (Current) Implement road closures under heavy traffic or extreme adverse weather conditions, such as tulle fog, heavy snow. ▪ (Current) Assist Caltrans with en-route driver information such as inclement weather closures. ▪ (Current) Request lifting of lane closures or opening HOV lanes to single occupant vehicles to increase traffic flows during major incidents.
	Regional agencies	<ul style="list-style-type: none"> ▪ (Current) Implement traffic control for its regions. ▪ (Current) Reduce emissions within their regions through reduced congestion. ▪ (Current) Implement and operate HOV lanes on freeways, in partnership with Caltrans.
	Local agencies	<ul style="list-style-type: none"> ▪ (Current) Implement and operate traffic control on surface streets to reduce recurrent congestion on interregional arterials. ▪ (Current and Proposed) Share real-time traffic information and traffic control actions with Caltrans and adjacent jurisdictions for traffic management purposes. ▪ (Current and Proposed) Implement and operate traffic control and surveillance equipment on surface streets, and sharing of video images with Caltrans and other agencies.
Incident Management (I)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Establish statewide policies on incident management, including institutional relationships with other agencies. ▪ (Current) Handle major incidents that affect inter-urban travel, such as disaster evacuation. Assume a lead role in developing evacuation plans for various regions in the state, with input and cooperation from the local districts, counties, cities, CHP and MPOs. ▪ (Proposed) Establish cooperative agreements for inter-regional disaster evacuation. Caltrans currently leads or participates in several regional disaster response efforts. ▪ (Proposed) Improve hazardous material movement information management in cooperation with the CHP. ▪ (Current) Coordinate Statewide Hazardous Materials (HAZMAT) transportation routes and procedures, including: <ul style="list-style-type: none"> – Load restrictions – Load securement requirements – Safety requirements



Operational Concepts for Traffic Management (continued)

User Service	Organization	Roles and Responsibilities
Incident Management (I) (continued)	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Assume a lead role in traffic diversion and implementation of traffic management schemes for incidents on state freeways. ▪ (Current) Integrate various incident detection sources into regional incident databases for more timely accident and incident identification. ▪ (Current) Implement and operate road closures on state freeways and state highways under adverse weather conditions, such as fog, snow. Provide weather conditions and forecasts to travelers. ▪ (Current) Implement and operate planned road closures on freeways and state highways. Provide advanced information to travelers. ▪ (Current) Establish or participate in cooperative agreements for local and regional incident management.
	CHP	<ul style="list-style-type: none"> ▪ (Current) Assume a lead role in handling and clearance of incidents on state freeways. ▪ (Current) Assist Caltrans in integrating various incident detection sources into regional incident databases for dissemination to travelers. ▪ (Proposed) Improve hazardous material movement information management in cooperation with Caltrans. ▪ (Current) Provide real-time incident information to Caltrans relating to state freeways and rural state highways.
	Local Police Depts.	<ul style="list-style-type: none"> ▪ (Current) Assume a lead role in handling and clearance of incidents on interregional surface streets.
	Regional agencies	<ul style="list-style-type: none"> ▪ (Current) Implement incident management programs.
	Local agencies	<ul style="list-style-type: none"> ▪ (Current) Assume lead roles in traffic management for incidents on interregional surface streets.
	Service Authority for Freeway Emergencies (SAFE)	<ul style="list-style-type: none"> ▪ (Current) Implement call-box programs on freeways and highways (possibly including free cellular phone programs for motorists with mobility impairments). Implement service patrols.



Operational Concepts for Traveler Information

User Service	Organization	Roles and Responsibilities
Pre-trip travel information (IR)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Fund inter-regional and statewide traveler information programs. ▪ (Current) Data fusion of regional and statewide traveler information on state freeways and rural state highways. ▪ (Current) Develop and maintain statewide database of road closures due to constructions or other events. ▪ (Current) Establish communications and data exchange criteria for statewide use. ▪ (Proposed) Establish and implement statewide traveler information strategy for truckers and frequent inter-regional travelers.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Assume a lead role in implementation, operation and maintenance of pre-trip travel information relating to conditions of state freeways and rural state highways. ▪ (Current) Obtain cooperation from other parties, such as media, to expand the information sources on traffic conditions for traveler information. ▪ (Current) Implement and operate traffic advisories under adverse weather conditions, such as fog or snow. ▪ (Current) Provide weather conditions and forecasts to travelers. ▪ (Proposed) Inventory/disseminate data from additional sources (for example, using AVL data from buses),
	Regional Agencies	<ul style="list-style-type: none"> ▪ (Current and Proposed) Fund and implement traveler information for its regions. ▪ (Current and Proposed) Monitor effectiveness of pre-trip traveler information as perceived by users and transportation agencies. Track usage statistics to assess market penetration of the traveler information system(s), and to direct marketing efforts. Survey users for suggestions and improvements.
Pre-trip travel information (IR) (continued)	Local/ regional agencies	<ul style="list-style-type: none"> ▪ (Current and Proposed) Implement and operate traveler information within its jurisdiction.
	Media, ISP and other private sector partners	<ul style="list-style-type: none"> ▪ (Current) Independently implement and operate helicopter patrols and other means to obtain real-time traveler information. ▪ (Current) Share traveler information with public agencies. ▪ (Current) Disseminate traveler information through various means.

Operational Concepts for Traveler Information (continued)

User Service	Organization	Roles and Responsibilities
En-route Driver Information (IR)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Proposed) Fund inter-regional and statewide en-route driver information programs. ▪ (Current) Facilitate sharing of real-time en-route driver information with private sector. ▪ (Current and Proposed) Data fusion of regional and statewide traveler information on state freeways and rural state highways. ▪ (Current) Establish communications and data exchange standards for statewide use for traveler information purposes. ▪ (Proposed) Establish and implement statewide traveler information strategy for truckers and frequent inter-regional travelers.
En-route Driver Information (IR) (continued)	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Assume a lead role in implementation, operation and maintenance of en-route driver information relating to conditions of state freeways and rural state highways. ▪ (Current) Obtain cooperation from other parties, such as media, to expand the information sources and dissemination means of en-route driver information. ▪ (Current) Implement and operate en-route traffic advisories and/or road closures under adverse weather conditions, such as fog or snow. ▪ (Proposed) Inventory/disseminate data from additional sources (for example, using AVL data from buses),
	Regional Agencies	<ul style="list-style-type: none"> ▪ (Current and Proposed) Fund and implement en-route driver information for its regions. ▪ (Current and Proposed) Monitor effectiveness of en-route traveler information as perceived by users and transportation agencies. Track usage statistics to assess market penetration of the traveler information system(s), and to direct marketing efforts. Survey users for suggestions and improvements.
	Local agencies	<ul style="list-style-type: none"> ▪ (Current and Proposed) Implement and operate en-route driver information within its jurisdiction. ▪ Provide real time traffic information on surface streets to public.
	Media, ISP and other private sector partners	<ul style="list-style-type: none"> ▪ (Current) Independently implement and operate en-route driver information systems. ▪ (Current) Share en-route driver information with public agencies.

Operational Concepts for Goods Movement

User Service	Organization	Roles and Responsibilities
Commercial Vehicle Electronic Clearance (S)	Federal	<ul style="list-style-type: none"> ■ (Current) Establish commercial vehicle and carrier regulations. National, interstate and intrastate regulations are adopted and enforced by California state regulatory agencies. (Many state regulatory agencies then develop, adopt and enforce additional regulations as described below). ■ (Current) Provide resources to state and local agencies in national and international goods movement tracking, regulations, and data sharing. ■ (Current) In cooperation with the International Registration Plan, Inc., (IRP) Clearinghouse, administer the electronic clearinghouse for jurisdictions in the US and Canada which provides for payment of license fees on the basis of fleet miles operated in various jurisdictions. ■ (Current) Administer the International Fuel Tax Agreement (IFTA) Clearinghouse, which is a national clearinghouse to allocate fuel taxes between multiple states for motor carrier activities across jurisdictional lines.
	California CVO Council (supported by the Inter-Agency Coordination Task Force)	<ul style="list-style-type: none"> ■ (Current) Provide guidance for statewide CVO (commercial vehicle operation) activities. Coordination will be supported by the Inter-agency Coordination Task Force (ICTF), consisting of the following agencies: <ul style="list-style-type: none"> – Caltrans – Department of Motor Vehicles (DMV) – California Highway Patrol (CHP) – Board of Equalization (BOE) <p>Additional agencies on the council include:</p> <ul style="list-style-type: none"> – California Trucking Association – National Private Truck Council – United Highway Carriers Association



Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Commercial Vehicle Electronic Clearance (S) (continued)	CHP	<ul style="list-style-type: none"> ▪ (Current) Review and adopt interstate and intrastate federal regulations pertaining to loading, load securement, and size requirements, for materials other than household goods. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to loading, load securement and size. ▪ (Proposed) Help lead efforts for statewide coordination of data and regulatory activities for goods movement. ▪ (Current) Develop educational materials and deliver courses to inform shippers, drivers, and carriers about clearance requirements. For example, current educational programs include seminars on size and weight guidelines. ▪ (Current) Issue oversize/overweight (OS/OW) permits. ▪ (Current) Operate statewide Commercial Vehicle Enforcement Facilities (Weigh Stations or Truck Scales). ▪ (Current) Develop and implement operational improvements to reduce clearance times at weigh stations, inspection stations, and borders. ▪ (Current) Maintain a driver log containing profile data for enforcement purposes. ▪ (Proposed) Provide one stop or no stop credential services to Commercial Vehicle carriers. ▪ (Current) Facilitate electronic collection of inspection data and electronically forward to a CHP headquarters database and then to SAFETYNET, a federal commercial vehicle information system database. ▪ (Proposed) Implement and operate Electronic Clearance Systems for International Borders, in cooperation with Customs Office of INS. ▪ (Proposed) Test and expand use of the automated citation writing devices that use digitized driver's license data at fixed and mobile commercial vehicle inspection facilities.



Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Commercial Vehicle Electronic Clearance (S) (continued)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Establish statewide design standards for weigh stations, inspection stations, and borders. ▪ (Proposed) Promote safety through statewide driver education. ▪ (Proposed) Provide traveler information for drivers and carriers. ▪ (Proposed) Help lead efforts for statewide coordination of data and regulatory activities for goods movement. ▪ (Proposed) Coordinate with adjoining states to link regulatory, traveler information, and data exchange systems in line with federal and national initiatives and guidelines. ▪ (Current) Maintain updated map and listing of statewide Commercial Vehicle Enforcement Facilities (Weigh Stations or Truck Scales) and Mainline Bypass Systems (PrePass™ locations). ▪ (Current) Operate Weigh-in-Motion systems which collect real-time vehicle data such as axle and gross weight, axle spacing (for vehicle classification), and speeds, 24 hours a day. As of 2003 there are 85 Weigh-in-Motion locations across the state. ▪ (Current) Operate PrePass™, California's automated preclearance system which uses transponder technology to verify weight, size and safety requirement adherence. As of 2003 there are 35 PrePass™ locations throughout the state. ▪ (Current) Maintain and disseminate data regarding the state highway network and vehicle restrictions on various highways. ▪ (Current) Conduct and support research on goods movement impacts and trends statewide. Facilitate inter-agency communications and agreements regarding action plans and alternatives. ▪ (Proposed) Support an intermodal information system. Distribute or provide real-time information regarding the status of operations at the Mexican border, and at intermodal shipping ports. ▪ Promote the ability to use a standard transponder technology for any activity that uses Automatic Vehicle Identification.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Promote inter-agency communications for Commercial Vehicle electronic clearance on local level. ▪ (Current) Design and build infrastructure to improve clearance times at weigh stations, inspection stations, and borders.

Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Commercial Vehicle Electronic Clearance (S) (continued)	DMV	<ul style="list-style-type: none"> ▪ (Current) Review and adopt federal regulations pertaining to registration, permits and licenses. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to registration, permits and licenses. ▪ (Proposed) Help lead efforts for statewide coordination of data and regulatory activities for goods movement. ▪ (Current) Issue photo identification licenses and maintain database of drivers. ▪ (Current) Administer the Employee Pull Notice (EPN) Program, which maintains driver's license records and continually checks for specified "action/activity" violations such as accidents, convictions, or any other actions taken against the driving privilege. If any of these action/activities occur for that specified employer, a record is generated and mailed to that employer. The data is privacy protected; after the employer is notified under the EPN program, the data is destroyed. Furthermore, the data cannot be combined with any other information.
	California Public Utilities Commission	<ul style="list-style-type: none"> ▪ (Current) Review and adopt any federal regulations pertaining to transport of household goods. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to transport of household goods. ▪ (Current) Issue licenses for household goods carriers upon verification of adherence to financial and safety requirements.
	Local and regional public stakeholders (e.g., Ports)	<ul style="list-style-type: none"> ▪ (Proposed) Coordinate with other local, regional, and state-level agencies to link regulatory, traveler information, and data exchange systems.
Automated Roadside Safety Inspection (S)	California CVO Council (supported by the Inter-Agency Coordination Task Force)	<ul style="list-style-type: none"> ▪ (Current) Provide guidance for statewide CVO (commercial vehicle operation) activities. Coordination will be supported by the Inter-agency Coordination Task Force (ICTF), consisting of the following agencies: <ul style="list-style-type: none"> – Caltrans – Department of Motor Vehicles (DMV) – California Highway Patrol (CHP) – Board of Equalization (BOE) <p>Additional agencies on the council include:</p> <ul style="list-style-type: none"> – California Trucking Association – National Private Truck Council – United Highway Carriers Association



Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Automated Roadside Safety Inspection (S) (continued)	Commercial Vehicle Carriers and Fleet Managers	<ul style="list-style-type: none"> ▪ (Current) Partner with government agencies (including Caltrans) to develop and deploy advanced technology systems to create a cooperative operating and regulatory environment which improves the efficient and safe movement of commercial vehicles and the performance of highway systems.
	CHP	<ul style="list-style-type: none"> ▪ (Current) Review and adopt interstate and intrastate federal regulations pertaining to loading, load securement, size, safety and hazardous materials requirements, for materials other than household goods. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to loading, load securement, size, safety and hazardous materials. ▪ (Current) Develop educational materials and deliver courses to inform shippers, drivers, and carriers about safety in goods transportation and at terminals. For example, current educational programs include vehicle and carrier inspection requirements, HAZMAT transportation requirements, rules of the road, and licensing requirements. ▪ (Current) Lead roadside safety inspection operations. ▪ (Current) Operate weigh stations. ▪ (Current) Provide and automate carrier, vehicle, and driver safety and credential information to fixed and mobile roadside inspection stations. ▪ (Current) Promote inter-agency communications for Commercial Vehicle automated roadside safety inspection on statewide and local levels. ▪ (Current) Provide current information to roadside enforcement officers. ▪ (Current) Implement operational improvements to reduce clearance times at roadside safety inspection stations. ▪ (Current) Establish connectivity with electronic screening system providers for the purpose of facilitating the efficient movement of commercial vehicles through inspection facilities. ▪ (Proposed) Provide a means for linking carrier safety performance with the vehicle registration process, in cooperation with the DMV.
	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Establish statewide standards for infrastructure design of roadside safety inspection sites. ▪ (Current) Promote inter-agency communications for Commercial Vehicle automated roadside safety inspection on statewide level.



Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Automated Roadside Safety Inspection (S) (continued)	Air Resources Board	<ul style="list-style-type: none"> ▪ (Current) Review and adopt federal regulations pertaining to exhaust emission requirements and motor vehicle emissions control devices. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to exhaust emission requirements and motor vehicle emissions control devices.
On-board Safety Monitoring (S)	California CVO Council (supported by the Inter-Agency Coordination Task Force)	<ul style="list-style-type: none"> ▪ (Current) Provide guidance for statewide CVO (commercial vehicle operation) activities. Coordination will be supported by the Inter-agency Coordination Task Force (ICTF), consisting of the following agencies: <ul style="list-style-type: none"> – Caltrans – Department of Motor Vehicles (DMV) – California Highway Patrol (CHP) – Board of Equalization (BOE) <p>Additional agencies on the council include:</p> <ul style="list-style-type: none"> – California Trucking Association – National Private Truck Council – United Highway Carriers Association
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Lead the infrastructure design of roadside safety inspection sites. ▪ (Current) Promote inter-agency communications for Commercial Vehicle automated roadside safety inspection on a local level. ▪ (Current) Design and build infrastructure to improve clearance times at roadside safety inspection stations. ▪ (Current) Design and build weigh stations and weigh-in-motion stations.
	CHP	<ul style="list-style-type: none"> ▪ (Current) Lead on-board safety monitoring of Commercial Vehicles statewide. ▪ (Current) Promote inter-agency communications for Commercial Vehicle on-board safety monitoring on statewide and local levels. ▪ (Current) Implement and operate automatic safety inspection devices.
	DMV	<ul style="list-style-type: none"> ▪ (Current) Establish regulations to enhance on-board safety monitoring.
	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Proposed) Promote inter-agency communications for Commercial Vehicle on-board safety monitoring on statewide level.

Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
On-board Safety Monitoring (S) (continued)	Air Resources Board	<ul style="list-style-type: none"> ▪ (Current) Review and adopt federal regulations pertaining to exhaust emission requirements and motor vehicle emissions control devices. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to exhaust emission requirements and motor vehicle emissions control devices.
	Commercial Vehicle Carriers and Fleet Managers	<ul style="list-style-type: none"> ▪ (Current) Implement on-board monitoring systems that provide the sensory, processing, storage, and communications functions necessary to support safe and efficient commercial vehicle operations. Such systems will also provide two-way communications between the commercial vehicle drivers, their fleet managers, and roadside officials; and provide HAZMAT response teams with timely and accurate cargo contents information after a vehicle incident.
Commercial Vehicle Administrative Processes (S)	California CVO Council (supported by the Inter-Agency Coordination Task Force)	<ul style="list-style-type: none"> ▪ (Current) Provide guidance for statewide CVO (commercial vehicle operation) activities. Coordination will be supported by the Inter-agency Coordination Task Force (ICTF), consisting of the following agencies: <ul style="list-style-type: none"> – Caltrans – Department of Motor Vehicles (DMV) – California Highway Patrol (CHP) – Board of Equalization (BOE) <p>Additional agencies on the council include:</p> <ul style="list-style-type: none"> – California Trucking Association – National Private Truck Council – United Highway Carriers Association
	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Facilitate cooperative agreements for Commercial Vehicle administrative processes. ▪ (Current) Promote inter-agency communications for Commercial Vehicle administrative processes on statewide level. ▪ (Current) Streamline regulations for commercial vehicles. ▪ (Current) Establish statewide regulations and restrictions for oversize and overweight vehicles. ▪ (Current) Obtain updated information related to counting, classifying and speed monitoring of all vehicles and the weighing of trucks and buses at weigh-in-motion sites throughout the state.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Process oversize and overweight (OS/OW) vehicle permits.

Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Commercial Vehicle Administrative Processes (S) (continued)	CHP	<ul style="list-style-type: none"> ▪ (Current) Facilitate cooperative agreements for Commercial Vehicle administrative processes. ▪ (Current) Promote inter-agency communications for Commercial Vehicle administrative processes on statewide level. ▪ (Current) Review, adopt and enforce pertinent federal regulations pertaining to loading, load securement, size and safety requirements for materials other than household goods. Develop, adopt and enforce state-level regulations as needed. State-level regulations usually expand upon federal regulations in the above areas. ▪ (Current) Issue Carrier Identification Numbers as part of the requirements for a Motor Carrier Permit (MCP), for carriers other than household goods carriers (household goods carriers are regulated by the California Public Utilities Commission). The MCP program is administered jointly by the DMV. ▪ (Current) Enforce compliance with Motor Carrier Property Permit regulations. ▪ (Current) Maintain a driver log containing profile data for enforcement purposes.
	DMV	<ul style="list-style-type: none"> ▪ (Current) Issue Motor Carrier Permits (MCPs) for carriers other than household goods carriers (household goods carriers are regulated by the California Public Utilities Commission). An MCP grants the carrier authority to commercially operate motor vehicles on California Highways. The MCP program is administered jointly with the CHP. ▪ (Current) Administer applicable fees for truck weight requirements. ▪ (Proposed) Develop a direct electronic interface with insurance companies for exchange of insurance and safety status.
	California Board of Equalization	<ul style="list-style-type: none"> ▪ (Current) Administer fuel tax programs.
	California Public Utilities Commission	<ul style="list-style-type: none"> ▪ (Current) Issue licenses for household goods carriers upon verification of adherence to financial and safety requirements.



Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Hazardous Material Incident Response (S)	California CVO Council (supported by the Inter-Agency Coordination Task Force)	<ul style="list-style-type: none"> ▪ (Current) Provide guidance for statewide CVO (commercial vehicle operation) activities. Coordination will be supported by the Inter-agency Coordination Task Force (ICTF), consisting of the following agencies: <ul style="list-style-type: none"> – Caltrans – Department of Motor Vehicles (DMV) – California Highway Patrol (CHP) – Board of Equalization (BOE) Additional agencies on the council include: <ul style="list-style-type: none"> – California Trucking Association – National Private Truck Council – United Highway Carriers Association
	Commercial Vehicle Carriers and Fleet Managers	<ul style="list-style-type: none"> ▪ (Current) Facilitate cooperative agreements for Commercial Vehicle administrative processes.
	Federal	<ul style="list-style-type: none"> ▪ (Current) Establish commercial vehicle regulations.
	CHP	<ul style="list-style-type: none"> ▪ (Current) Lead HAZMAT Incident response efforts by assuming the role of scene commander. Coordinate with Caltrans Maintenance personnel and Traffic personnel for cleanup and traveler information dissemination. ▪ (Current) Review and adopt interstate and intrastate federal regulations pertaining to hazardous materials requirements. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to hazardous materials. ▪ (Current) Develop educational materials and deliver courses to inform shippers, drivers, and carriers about safety and security of HAZMAT transport. For example, current educational programs recommend photo and electronic identification programs, security training for personnel, and the use of Global Positioning Systems (GPS) to track HAZMAT loads where possible. ▪ (Current) Enforcement of HAZMAT routes. ▪ (Current) Obtain up-to-date information on the safety fitness of commercial motor carriers and hazardous material shippers subject to the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. ▪ (Current) Enforce HAZMAT regulations for commercial vehicles. ▪ (Proposed) Coordinate and share HAZMAT information with adjoining states.



Operational Concepts for Goods Movement (continued)

User Service	Organization	Roles and Responsibilities
Hazardous Material Incident Response (S) (continued)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Develop statewide HAZMAT incident evacuation routes.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Implement HAZMAT diversion routes. ▪ (Current) Assist CHP to expedite HAZMAT incident response. ▪ (Proposed) Provide information relating to HAZMAT incidents on state freeways to public.
	Local and Regional Agencies	<ul style="list-style-type: none"> ▪ (Proposed) Provide information relating to HAZMAT incidents on arterials and surface streets to public.
	DMV	<ul style="list-style-type: none"> ▪ (Current) Establish HAZMAT regulations while meeting up-to-date Federal guidelines.
	California Environmental Protection Agency, Division of Toxic Substances Control	<ul style="list-style-type: none"> ▪ (Current) Issue registrations for all HAZMAT carriers operating within California. HAZMAT carriers must comply with the CHP and Federal (US DOT) regulations. ▪ (Current) Maintain searchable database of registered HAZMAT carriers.



Operational Concepts for Electronic Toll Collection

User Service	Organization	Roles and Responsibilities
Electronic Payment Services (S)	California State Legislature	<ul style="list-style-type: none"> ▪ (Current) Mandate toll agencies' adherence to statewide standard for Electronic Toll Collection. ▪ (Current) Mandate that toll agencies participate in a data registration process with the State. The "data" in data registration refers to record types which may be developed for future applications of the toll transponder technology. Unique data types would facilitate interregional interoperability of ETC equipment. Currently registered data types include codes for readers polling transponders, and codes for transponders sending data to readers. Future data types depend on desired applications of the transponder technology (for example, data pertaining to travel times or vehicle locations, or data pertaining to non-transportation applications such as retail transactions). ▪ (Proposed) Mandate one non-proprietary standard for all forms of electronic payment (toll and transit, or at least one standard for tolls, and one standard for transit).
	Caltrans	<ul style="list-style-type: none"> ▪ (Current) Developed Title 21, the standard for two way communications for Automatic Vehicle Identification (AVI) equipment. Electronic Toll Collection is the first application for which the standard was developed. ▪ (Current) Act as Title 21 Standard monitoring authority; maintain and update standard as necessary. ▪ (Current) Administer data registration process for standard; authorize use of new data record types. ▪ (Current) Identify and support innovative (transportation-related) applications of anonymous toll user data using the same or an interoperable technology. For example, the transponder reader technology is being tested in the Bay Area to provide motorist travel times from different origins and destinations. ▪ (Proposed) Respond to inquiries from potential toll agencies and vendors regarding interoperability of equipment.
Electronic Payment Services (S) (continued)	Caltrans (continued)	<ul style="list-style-type: none"> ▪ (Proposed) As the Title 21 standard matures, ensure that new toll agencies and vendors are aware of the data registration process. ▪ (Proposed) As technologies mature, if a new and separate standards setting organization is established, pass Caltrans' role as standards monitoring authority to this new organization. ▪ (Current) Facilitate inter-agency communication between toll operating agencies. ▪ (Current) Monitor and publicize projects on which toll revenues are spent. Provide information on percentage of project financed with tolls, and time period over which financing occurs.



Operational Concepts for Electronic Toll Collection (continued)

User Service	Organization	Roles and Responsibilities
Electronic Payment Services (S, I)	<p>Local Toll Operating Agencies currently include:</p> <ul style="list-style-type: none"> ▪ Caltrans, ▪ Orange County Transportation Authority, ▪ Transportation Corridor Agencies, ▪ San Diego Association of Governments, and ▪ Golden Gate Bridge, Highway and Transportation District 	<ul style="list-style-type: none"> ▪ (Current) “Local” responsibilities will remain with these agencies. These roles and responsibilities are described by regional architectures and are not carried forward by the California Statewide ITS Architecture and System Plan project. “Local” roles and responsibilities include examples such as: <ul style="list-style-type: none"> – Operate and maintain local toll collection on respective agency-owned facility/facilities. – Define fare structures. – Select and implement technologies and policies regarding toll evasion (for example, video capture of license plate information). – Identify and process toll violations. – Provide anonymous toll usage data to support other agency planning or operations (i.e., travel times). – Other local roles and responsibilities for operations and implementation. <p>Some or all of these responsibilities could be consolidated among the local agencies, in the form of consolidated service centers, consolidated transponder procurements, or a consolidated electronic clearinghouse provider.</p> ▪ (Current) Support standards allowing interoperability of FasTrak™ on facilities throughout the state. ▪ (Current) Develop policies pertaining to transponder distribution, and user payment schemes (for interoperability of transponders among toll facilities).
Electronic Payment Services (S, I) (continued)	Local Toll Operating Agencies (continued)	<ul style="list-style-type: none"> ▪ (Proposed) Support continuing investigations and research into other payment applications using the same or an interoperable technology (for example, using transponders to pay for gas, or to pay for food purchases at drive-through restaurants). ▪ (Current) Support continuing investigations and research into other (non-payment) applications using the same or an interoperable technology. For example, the transponder reader technology is being tested in the Bay Area to provide motorist travel times from different origins and destinations.



Operational Concepts for Electronic Fare Payment

User Service	Organization	Roles and Responsibilities
Electronic Payment Services (I)	Regional agencies	<ul style="list-style-type: none"> ▪ (Current) Facilitate inter-agency partnerships. Provide a possible forum in which to address any points of disagreement among the agencies or between the agencies and users or potential users. ▪ (Current) Develop inter-agency participation agreements or Memoranda of Understanding (MOUs) pertaining to agency responsibilities and administrative duties. ▪ (Current) Disseminate information to passengers regarding electronic payment structure and benefits. Provide details about coverage area. Publicize purchase locations and website.
	Local and Regional Transit Agencies	<ul style="list-style-type: none"> ▪ (Current) Ensure continued interoperability of equipment for multi-agency electronic fare payment (including vending machines and card readers). ▪ (Current) Disseminate information to passengers regarding multi-agency electronic payment systems and benefits. ▪ (Proposed) Maintain and provide anonymous ridership data for operational planning and analysis.
Electronic Payment Services (S,I)	Private Industry	<ul style="list-style-type: none"> ▪ (Current) Continue to research and develop integrated solutions for transit and other financial applications, adhering to statewide and national standards as they develop to ensure interoperability.
	Caltrans	<ul style="list-style-type: none"> ▪ (Proposed) Mandate one non-proprietary standard for all forms of electronic payment (toll and transit, or at least one standard for tolls, and one standard for transit).

Operational Concepts for Public Transportation

User Service	Organization	Roles and Responsibilities
Public Transportation Management (L and I)	Public Utilities Commission	<ul style="list-style-type: none"> ▪ (Current) Provide statewide safety design standards for light-rail/road and rail/road interface to reduce accidents, while utilizing ITS technologies. ▪ (Current) Regulate Amtrak California, inter-regional rail travel provided by Amtrak.
	State of California	<ul style="list-style-type: none"> ▪ (Current) Provide funding for Amtrak California, inter-regional rail travel provided by Amtrak. ▪ (Proposed) Develop statewide disaster evacuation plans utilizing public transit.
	Local transit agencies	<ul style="list-style-type: none"> ▪ (Current and Proposed) Provide inter-modal interchanges for inter-regional travelers.
	Inter-regional transit providers	<ul style="list-style-type: none"> ▪ (Current and Proposed) Promote reliability of inter-regional service ▪ (Current and Proposed) Provide interface with regional transit services ▪ (Current and Proposed) Promote travelers' security
En-route Transit Information (L and I)	State of California	<ul style="list-style-type: none"> ▪ (Current and Proposed) Facilitate inter-modal transit information sharing among regions to form a statewide database.
	Local transit agencies	<ul style="list-style-type: none"> ▪ (Current and Proposed) Provide inter-modal transit information across different providers.

Operational Concepts for State-level Archived Data

User Service	Organization	Roles and Responsibilities
7.1 Archived Data Function (S)	Caltrans	<ul style="list-style-type: none"> ▪ (Current role) Collect data from Caltrans roads (state freeways and state highways statewide) [this is a transportation management role necessary to archive data]. ▪ Archive state data on a statewide basis. ▪ (Current role) Provide archived data to PeMS. ▪ Collect and archive data from additional sources such as other archived data services, CHP, CVISN, PeMS, local and regional agencies (as desired by those agencies), and others. ▪ Clearly define requirements for data for measurement standards, frequency of updates, data fusion and aggregation, presentation (graphical user interface), accessibility of data, and duration of storage for state level data. ▪ Clearly define performance measurements for quality, quantity, and timeliness of data updates. ▪ Provide access to archived data. ▪ Maintain operations of statewide archived data system. ▪ Publicize locations of information and instructions to access the information. ▪ Document information use restrictions, policies, and instructions for accessing and using data. ▪ Provide resource to regions by allowing them to partner in the archived data service.
	CHP	<ul style="list-style-type: none"> ▪ Provide data for archiving to the statewide service.
	Regional Agencies	<ul style="list-style-type: none"> ▪ Collect, archive and provide access to archived local, arterial-based data on a regional basis (this would remain a locally implemented, operated, and maintained service and as such should be defined at a regional level).
	UC Berkeley	<ul style="list-style-type: none"> ▪ (Current role) "Operate" and maintain PeMS, which manages and calculates available data from Caltrans on a statewide basis. ▪ (Current role) User of the archived data (used for monitoring Caltrans system performance). ▪ (Current role) Provide access to aggregated, archived data to users via the PATH web site.



Operational Concepts for Maintenance and Construction Management

User Service	Organization	Roles and Responsibilities
Maintenance and Construction Operations (S)	Caltrans HQ	<ul style="list-style-type: none"> ▪ (Proposed) Develop and maintain statewide standards for roadway pavement condition proactive maintenance on state highways. ▪ (Proposed) Implement, operate, and maintain a database that includes data for pavement conditions and repair schedules statewide. ▪ (Existing) Provide resources for districts to implement and operate fleet tracking and management systems as needed by districts.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Proposed) Provide pavement condition and repair schedule data to statewide database. ▪ (Existing and proposed) Implement, operate and maintain fleet tracking and management systems for maintenance vehicles as needed in each District.

Operational Concepts for Vehicle Safety and Control

User Services	Organization	Roles and Responsibilities
Intersection Collision Avoidance (P) Vision Enhancement for Crash Avoidance (P) Automated Vehicle Operation (P)	Private Sector	<ul style="list-style-type: none"> ▪ (Current) Lead the research, development, implementation, operation and maintenance of in-vehicle systems. ▪ (Current) Lead the research and development of roadside systems.
	Federal	<ul style="list-style-type: none"> ▪ (Current) Lead research and development of roadside systems on a national basis. ▪ (Current) Provide a resource to states and regional/local agencies for implementation of roadside systems. ▪ (Current) Provide a resource to states and regional/local agencies for guidance on liability risk assessment of roadside systems and vehicle-roadway interactions. ▪ (Current) Coordination with private sector for vehicle-roadside interactions on a national basis.
Intersection Collision Avoidance (P) Vision Enhancement for Crash Avoidance (P) Automated Vehicle Operation (P) (continued)	Caltrans	<ul style="list-style-type: none"> ▪ (Current) Lead research and development of roadside systems within the State of California. ▪ (Current) Assess liability risk of roadside systems and vehicle-roadway interactions specific to the State of California. ▪ (Potential) Provide a resource to regional/local agencies for guidance on liability risk assessment of roadside systems and vehicle-roadway interactions. ▪ (Current) Coordination with private sector for vehicle-roadside interactions in California. ▪ (Current) Fund research for in-vehicle technologies for specific application to maintenance vehicles and partner with other research partners in Advanced Highway Maintenance and Construction Technology Research Center.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Potential) Implementation, operation and maintenance of roadside systems on state freeways and state highways for intersection collision avoidance. ▪ (Potential) Implementation, operation and maintenance of roadside systems on state freeways and state highways for vision enhancement for crash avoidance.
	Regional Agencies	<ul style="list-style-type: none"> ▪ (Potential) Implementation, operation and maintenance of roadside systems as applicable to solve regional or local agency needs on local streets
	Universities and other Research Partners	<ul style="list-style-type: none"> ▪ (Current) Lead research and development of roadside systems within the State of California. ▪ (Current – UC Davis) Lead research for in-vehicle technologies for specific applications to maintenance vehicles and partner with other research partners in Advanced Highway Maintenance and Construction Technology Research Center.

Operational Concepts for Emergency Management

User Service	Organization	Roles and Responsibilities
Emergency Notification and Personal Security (S)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current) Establish statewide standards for emergency notification, call boxes, etc. in cooperation with the CHP, the DMV and regional agencies. Statewide legislation established the SAFE (Service Authority for Freeways and Expressways) program which is administered separately by the different regions in the state. ▪ (Current) Establish and maintain statewide response procedures for emergencies in cooperation with other statewide agencies such as CHP, and local or regional police, fire and emergency services. Procedures include areas such as the following: <ul style="list-style-type: none"> – traffic rerouting plans – dissemination of information to the public
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Implement emergency notification and response as outlined in statewide plans and standards, and further outlined in local response plans.
Emergency Notification and Personal Security (S) (continued)	CHP	<ul style="list-style-type: none"> ▪ (Current) Establish statewide standards for emergency notification, call boxes, etc. in cooperation with Caltrans, the DMV and regional agencies. ▪ (Current) Respond to emergencies through the different regional dispatch centers. Assume the role of scene commander. ▪ (Current) Operate freeway service patrols. ▪ (Current) Establish statewide response procedures for emergencies in cooperation with other statewide agencies such as Caltrans, and local or regional police, fire and emergency services.
	Regional Agencies	<ul style="list-style-type: none"> ▪ (Current) Implement travelers' aid such as service patrols.
	SAFE	<ul style="list-style-type: none"> ▪ (Current) Implement call boxes throughout freeways and rural highways in the State. Different regions throughout the state operate their SAFE programs independently from each other, but in cooperation with Caltrans, the CHP and the DMV.
	DMV	<ul style="list-style-type: none"> ▪ (Current) Bill and collect a fee on state motor vehicle registrations (fee is \$1.00 as of 2003) to fund SAFE. Revenues are transferred to the appropriate regional entities who administer SAFE. Statewide legislation ensures that these fee revenues can only be used for implementation, maintenance and operation of travelers' aid services, such as call boxes and roving tow truck patrols.
Disaster Response and Evacuation (S & IR)	Caltrans Headquarters	<ul style="list-style-type: none"> ▪ (Current and Proposed) Coordinate development of disaster response and evacuation plans for different regions, and establish inter-regional disaster response plans.
	Caltrans Districts	<ul style="list-style-type: none"> ▪ (Current) Develop disaster response and evacuation plans for each region. ▪ (Current) Pre-plan emergency traffic diversion schemes.



Operational Concepts for Emergency Management (continued)

User Service	Organization	Roles and Responsibilities
Disaster Response and Evacuation (S & IR) (continued)	CHP	<ul style="list-style-type: none"> ▪ (Current) Assist to develop, implement and maintain disaster response plans. ▪ (Current) Lead HAZMAT Incident response efforts by assuming the role of scene commander. Coordinate with Caltrans Maintenance personnel and Traffic personnel for cleanup and traveler information dissemination. ▪ (Current) Review and adopt interstate and intrastate federal regulations pertaining to hazardous materials requirements. Further refine or develop additional regulations at the state level. ▪ (Current) Enforce regulations adopted at the state level pertaining to hazardous materials. ▪ (Current) Coordinate Statewide Hazardous Materials (HAZMAT) transportation routes and procedures, including: <ul style="list-style-type: none"> – Load restrictions – Load securement requirements – Safety requirements ▪ (Current) Develop educational materials and deliver courses to inform shippers, drivers and carriers about safety and security of HAZMAT transport. For example, current educational programs recommend photo and electronic identification programs, security training for personnel, and the use of Global Positioning Systems (GPS) to track HAZMAT loads where possible. ▪ (Current) Enforce HAZMAT routes. ▪ (Current) Obtain up-to-date information on the safety fitness of commercial motor carriers and hazardous material shippers subject to the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. ▪ (Current) Enforce HAZMAT regulations for commercial vehicles. ▪ (Proposed) Coordinate and share HAZMAT information with adjoining states.
	Regional Agencies (MPOs and RTPAs)	<ul style="list-style-type: none"> ▪ (Current) Assist to develop disaster response plans for ITS Planning regions.
	Local counties and cities	<ul style="list-style-type: none"> ▪ (Current and Proposed) Assist to develop disaster response plans utilizing surface streets.