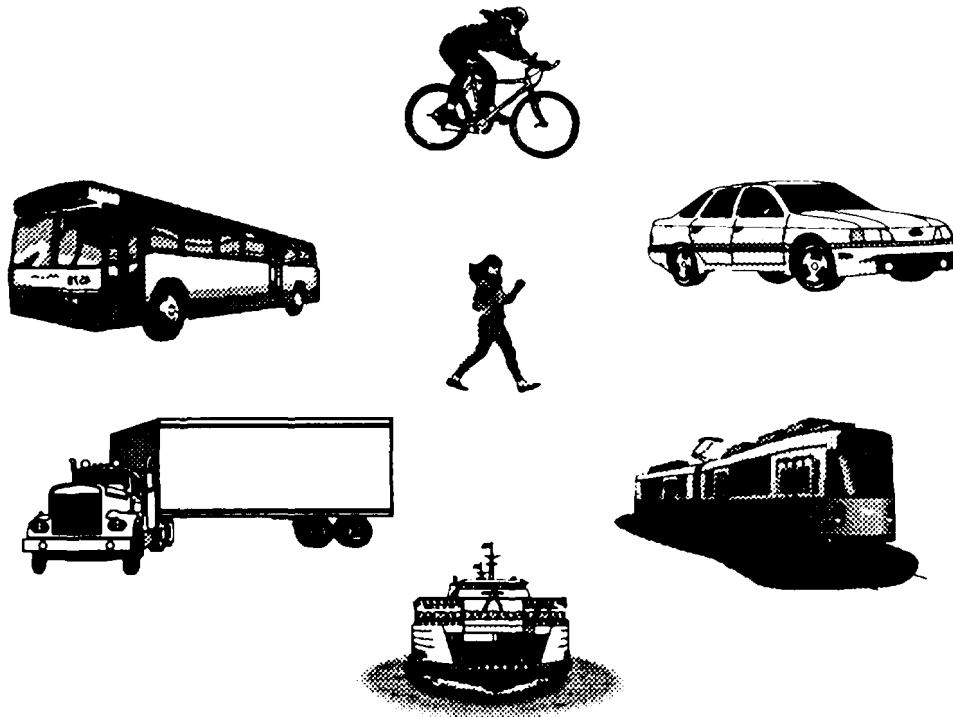


REVIEW OF THE TRANSPORTATION PLANNING PROCESS IN THE SOUTHERN CALIFORNIA METROPOLITAN AREA

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The federal review team, consisting of staff from FTA Headquarters and Region IX, FHWA Headquarters and the California Division, and the Volpe Center, participated in the site visit in Los Angeles and reviewed drafts of the report. Richard Torbik, Chief of the FHWA Planning Programs Division, Dean Smeins, Chief of the FHWA Planning Operations Branch, and Michael Jacobs, Chief of the Volpe Center Service Assessment Division, provided valuable comments on the report. Participating state, regional, and local staff are listed in Appendix 1.

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Glossary of Acronyms

ADA	Americans With Disabilities Act
CAAA	Clean Air Act Amendments of 1990
CAC	Citizens Advisory Committee
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBD	Central Business District
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CIP	Capitol Improvement Program
CMP	Congestion Management Program
CTC	County Transportation Commission
FAUS	Federal Aid Urban System
FHWA	Federal Highway Administration, US Department of Transportation
FTA	Federal Transit Administration, US Department of Transportation
FY	Fiscal Year
EIR	Environmental Impact Report
HOV	High Occupancy Vehicle
I&M	Inspection and Maintenance
ITP	Integrated Transportation Plan
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
LACMTA	Los Angeles County Metropolitan Transportation Authority
LOS	Level of Service
MPO	Metropolitan Planning Organization
NEPA	National Environmental Protection Act
OCTA	Orange County Transportation Authority
OCTD	Orange County Transit District
O & M	Operating and Maintenance
OWP	Overall Work Program (also UPWP)
PAC	Political Advisory Committee
RCP	Regional Comprehensive Plan
RCS	Route Contribution System
RCTC	Riverside County Transportation Commission
RME	Regional Mobility Element
RMP	Regional Mobility Plan
RTA	Riverside Transit Agency
SANBAG	San Bernardino Association of Governments
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAQMP	South Coast Air Quality Management Plan
SCRTD	Southern California Rapid Transit District
SIP	State Implementation Plan
SRTP	5-Year Short Range Transit Plan
STP	Surface Transportation Program
3-C	Continuing, Cooperative, and Comprehensive Planning Process
TCM	Transportation Control Measure
TDA	Transportation Development Act

Glossary of Acronyms (continued)

TDM	Transportation Demand Management
TDME	Transportation Demand Management Element
TIAP	Transportation Impact Analysis Program
TIP	Transportation Improvement Program
TSM	Transportation Systems Management
UPWP	Unified Planning Work Programs
UTPP	Urban Transportation Planning Process
VHT	Vehicle Hours Travelled
VMT	Vehicles Miles Travelled
Volpe Center	Volpe National Transportation Systems Center, US Dept. of Transportation

I. Summary of Findings and Suggestions

This formal, comprehensive review of the planning process in the Southern California metropolitan area, conducted by Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) headquarters and regional staff, with input from state, regional and local transportation entities, takes the place of the 1992 planning review of the Southern California Metropolitan Planning Organization (MPO) which otherwise would be conducted by FHWA field and FTA regional staff.

The planning process of the Southern California Association of Governments (SCAG) is being conducted in conformance with the regulations in 23 CFR Part 450. Based on the review, the federal team concluded that the continuing, cooperative, and comprehensive (3C) planning process produced adequate planning products and used acceptable planning tools. These conclusions are based on the regulations in effect at the time of the review. Efforts were being made to implement a multi-modal planning approach, and the California Department of Transportation (Caltrans), the major transit operators, and local units of government were involved in this process.

The planning activities conducted by SCAG were carried out in accordance with FHWA and FTA regulations, policies, and procedures in effect at the time of the review. However, it should be noted that the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which became law after the site review was conducted, necessitates major changes in the planning process and will require formal federal certification of the planning process. This report provides suggestions to strengthen the process in developing the next long-range transportation plan, Transportation Improvement Program (TIP), and State Implementation Plan (SIP). This review will also assist the Southern California metropolitan area to meet the evolving requirements of ISTEA, and in particular, to prepare for future formal certification.

This section summarizes findings and suggestions that are developed in detail in the text of the report. Sections of the report where each summary point is discussed are noted in parentheses.

A. Organization and Management of the Los Angeles Area Planning Process

- 1. Overall quality of the planning process** -- The review team commends SCAG for the rigor and technical quality of its planning process. In particular, the Regional Mobility Plan (RMP) reviewed is a model application of "outcome-based" planning, linking long-range regional objectives to realistic and comparable scenarios. The report quantifies how each scenario would reach crucial outcomes, including mandated air quality improvements, and make clear the trade-offs in costs and results between plan components (e.g., expanded transit or demand management). This level of technical analysis focuses political decision-making on the difficult decisions facing the metropolitan area. (III, IV)
- 2. Reevaluation of roles and responsibilities** -- SCAG and the county transportation commissions (CTCs) should reevaluate their relationships and responsibilities, identify

areas for improved integration and coordination, and pursue any necessary updates to Memorandums of Understanding, particularly as required to respond to ISTEA. (III, IV, V)

3. **Subregional planning process** -- SCAG is commended for its recent initiatives to develop a subregional planning process. This seems appropriate considering the size and complexity of the metropolitan area, and the state and federal mandates that define broad-ranging requirements for SCAG and the CTCs. SCAG is encouraged to pursue these initiatives and to coordinate closely and formally the subregional process with the functions of the CTCs.
4. **Broadening of the Unified Planning Work Programs (UPWP)** -- The UPWP should be broadened to incorporate all regionally significant transportation planning activities in the Los Angeles metropolitan area, regardless of the funding source. Significant transportation planning efforts by Caltrans, the CTCs, the air quality district, the major transit operators and others should be incorporated into the UPWP to encourage integration, reduce redundancy, and contribute to a comprehensive view of multimodal planning in the metropolitan area. (III, IV, VI)
5. **Prospectus** -- SCAG is commended for developing a regional prospectus that updates and describes planning operations of regional and local agencies and explains how these organizations meet state and federal transportation and environmental laws and regulations. The prospectus eases public understanding of complex agency responsibilities, and will encourage improved public participation, as envisioned by ISTEA. SCAG is encouraged to keep the prospectus current as roles and responsibilities shift to meet evolving federal and state requirements. (III.C.)
6. **Planning bibliography** -- SCAG should prepare and update a bibliography on a regular basis for all UPWP end products and make it available to participating agencies, private groups, and the public. (III)

Products of the Planning Process

1. **Strong public participation** -- SCAG and the other regional agencies are commended for their public participation programs, which involve representation and input on transportation needs from all levels of government, transit operators, the public, and other interest groups. Efforts to assure representation of the extremely diverse ethnic groups in the metropolitan area are impressive.

SCAG is also commended for its intent to strengthen participation by developing a formal public participation program, with citizen evaluation and strong financial commitment. SCAG is encouraged to make these improvements, which are consistent with the direction of ISTEA. (IV. and V.E.)

2. **Addition of regionally significant projects** -- The TIP and RMP include projects and funding sources from the federal government. In the future, these documents could be expanded to describe regionally significant transportation projects funded by other

levels of government and the private sector. This would improve understanding by the public and others of region-wide transportation plans, encourage regional coordination, and improve opportunities for assessing the benefits from all programmed transportation improvements. TIP conformity determinations under the Clean Air Act Amendments of 1990 (CAAA) will require consideration of emissions from non-federal as well as federal transportation projects. (IV)

3. **Enhancement of multi-modal perspective** -- The transportation planning products contain multimodal information, but because the process of assembling the information is sequential, the perspective was not as multi-modal as will be required for compliance with the evolving policies of the CAAA and ISTEA. Accordingly, it is recommended that new procedures be adopted to enhance the multi-modal perspective in future transportation planning products. For example, under the Interim Guidance to ISTEA, suballocated Surface Transportation Program (STP) funds should not be distributed to jurisdictions or modes by formula; instead, regions should develop criteria to allocate these flexible funds. (IV)
4. **Strengthening of links to CTCs** -- From a regional perspective, there could be more definitive and substantial linkages between the short and long-range plans of the CTCs and the transit operators and the region's long-range transportation and air quality plans. In the future, competition for flexible ISTEA funds may require transit and highway proposals to be presented in terms of quantifiable contributions to regional transportation objectives. (IV and VII)
5. **The CAAA, ADA, and ISTEA** -- The requirements of the CAAA and the Americans with Disabilities Act, as information was available at the time, were incorporated into the transportation planning process, and the objectives of these acts were supported by transportation planning and development activities. Because new guidance is being made available on the CAAA and ISTEA, the means of incorporating these requirements and objectives into the planning process should be revised to reflect the latest information as quickly as it becomes available. (IV)
6. **Financially constrained plan** -- In future years, the region's long-range transportation plan should be financially constrained and include a financial plan that demonstrates that it can be implemented. This will be crucial in addressing ISTEA requirements. (IV.A.)

C. The 3-C Transportation Planning Process

1. **Evaluate major investments** -- SCAG, in conjunction with Caltrans, the CTCs, and the public transit systems, could evaluate the costs and results of major transportation investments in the region. Such an effort would provide a means of both determining the relative success of major investments and better informing future investment decisions. A formal process for monitoring and reporting program operations would also improve planning efforts. (V.A., V.B.)

2. **Develop formal monitoring and evaluation program** -- The Los Angeles metropolitan area could develop a formal program to monitor and evaluate elements of the massive program of new infrastructure. Because of the complexity of the issues in the metropolitan area and the inherent uncertainties in planning assumptions and the models used to test them, it would appear that the region would benefit from the increased "learning," adaptation, and flexibility that would result from evaluation. (V)
3. **Communicate with Caltrans** -- Caltrans should inform SCAG of all approved projects. (V)
4. **Address ISTEA fifteen factors** -- The 3-C planning process should be reviewed to insure that the fifteen transportation factors developed in ISTEA are being adequately addressed.

D. Tools for Transportation Planning

1. **Centralized data source** -- SCAG should provide a centralized source for planning development data used in forecast models and in model validation. (VI.A.)
2. **Updated travel demand models** -- Involved agencies should update the regional travel demand models. Sufficient resources should be made available so that model revisions can proceed expeditiously. (VI.A.)
3. **Monitoring system for changes in travel** -- SCAG could develop and manage a system to facilitate monitoring changes in travel relative to forecasts and progress toward achieving vehicle miles travelled (VMT) growth reduction goals. (VI.A.)
4. **New data** -- Methods to take advantage of new sources of data on trip making, for example, generated by both the Inspection and Maintenance, and Employer Trip Reduction requirements of the CAAA, could be developed. (VI.A.)
5. **Cost monitoring** -- SCAG and the implementing agencies should adopt methods through which transportation costs will be regularly monitored, projected, and reported to SCAG. As the central regional planning agency, the MPO should maintain current and thorough cost data. (VI.B.)

E. Ongoing Transit Planning

1. **Add non-federal projects to TIP** -- Regionally significant, non-federally funded transit projects should be included in the TIP, because conformity with the SIP requirements under the CAAA will be determined based on a comprehensive analysis of all regional transportation projects. (VII.A.)

2. **Utilize public transit performance indicators** -- The public transit operators use comprehensive sets of performance indicators to measure progress toward achieving service goals, set standards, and adjust service. Monitoring of ridership is used effectively as a means of gauging the quality of existing transit service and evaluating the need for new service. (VII.B.)

3. **Integrate planning by transit operators** -- The transit operators prepare thorough capital budgets, operating plans, and needs assessments. The planning activities of the transit operators could be more fully integrated in the regional planning efforts led by SCAG. For example, the transit operators could participate with SCAG, Caltrans, and the County Transportation Commissions in determining which projects will be included in the TIP for funding with flexible ISTEA funds. (VII)

II. Introduction

A. Background

This report is an evaluation of transportation planning in the Southern California metropolitan area, based on an independent review conducted September 16-20, 1991. The report summarizes the results of the review and concludes with a series of findings and suggestions on planning based on the evaluation. Between the time of the site visit and publication of this report, earlier drafts have gone through comprehensive and lengthy stages of review, comment, and revision by the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Southern California Association of Governments (SCAG).

A team of representatives from the FHWA Headquarters and Division offices; FTA Headquarters and Regional offices; and the John A. Volpe National Transportation Systems Center, Research and Special Programs Administration, of the U.S. Department of Transportation met with representatives of SCAG, which is the Metropolitan Planning Organization (MPO), the California Department of Transportation (Caltrans), and regional and local agencies to conduct the review.

Prior to the site visit, the team reviewed extensive documentation on the planning process in the area. The site visit consisted of structured meetings with staff from regional, local, and state agencies responsible for transportation and air quality planning, and the major public transit providers. Participants in the review are listed in Appendix 1. The agenda for the meetings is presented in Appendix 2. The team also conducted follow-up discussions after the meetings.

The federal regulations, set forth in 23 CFR Part 450, are designed to ensure that urban areas apply a continuing, cooperative, and comprehensive transportation planning process to develop plans and programs which address identified transportation needs in the area, and which are consistent with the overall planned development of the metropolitan area. The state and the MPO must self-certify that the Urban Transportation Planning Process (UTPP) is in conformance with these regulations.

Self-certification is intended to grant increased responsibility for transportation planning to states and MPOs. Self-certification is also a prerequisite for receiving federal funds for highway and mass transit projects. Certification statements must be provided to FHWA and FTA with each new or substantially revised Transportation Improvement Program (TIP).

As stated in the preamble to the FHWA/FTA joint planning regulations in the June 30, 1983 **Federal Register**, self-certification does not relieve FHWA and FTA of oversight responsibilities and the obligation to review and evaluate the planning process. These responsibilities are discharged through periodic policy and technical committee meeting attendance and review of related program documentation, including the Unified Planning Work Programs (UPWP), technical reports, the TIP, and grant progress reports.

Periodic independent reviews are also appropriate mechanisms for evaluating the planning process. The FHWA and FTA judge the credibility of the self-certification independently to enable the FTA Regional Administrators/Area Directors and FHWA Division Administrators to make the statutory findings required under Section 8(c) of the Federal Transit Act and 23 U.S.C. Section 134, on behalf of the Secretary of Transportation. This ensures that the planning process is being carried out by the MPO, in cooperation with the state and transit operators, in a fashion consistent with the joint planning regulations.

This formal comprehensive review of the planning process in the Southern California metropolitan area, conducted by FHWA and FTA Headquarters and Regional staff (Appendix 1), with input from state, regional, and local transportation entities, takes the place of the 1992 planning review of the Los Angeles MPO which otherwise would be conducted by FHWA field and FTA regional staff. SCAG has been found to be in conformance with the regulations in 23 CFR Part 450. In addition, the review team has made a series of observations and suggestions on planning practice, as summarized in Section I of this report.

B. Scope of the Planning Review

The review was undertaken to allow FHWA and FTA to determine how successfully the UTPP addresses broadly defined regional transportation needs, and whether the planning process meets the requirements of the joint planning regulations. Another purpose of this review was to assess the ability of the existing planning process to address broader responsibilities as described under the guidelines implementing the Clean Air Act Amendments of 1990 (CAAA), and as proposed in the reauthorization of the surface transportation legislation. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which became law after the site review was conducted, includes a requirement for federal certification of the planning process in metropolitan areas over 200,000 population. It is expected that this review will assist the Southern California metropolitan area to meet evolving requirements of ISTEA and to prepare for future formal certification reviews.

The review focused on transportation and air quality planning activities of SCAG; the South Coast Air Quality Management District (SCAQMD); the Los Angeles, San Bernardino, Riverside, and Orange County Transportation Commissions; and area transit operators -- Orange County Transportation Authority (OCTA), San Bernardino Omnitrans, the Riverside Transit Agency (RTA), and the Southern California Rapid Transit District (SCRTD). After the site review, the Los Angeles County Transportation Commission merged with SCRTD to become the Los Angeles County Metropolitan Transportation Commission (LACMTA), and the Orange County Commission was reorganized to become the Orange County Transportation Authority (OCTA).

The team reviewed support documentation that included the State Implementation Plan (SIP), which is the California state air quality planning document; the TIP; the long-range transportation plan for the Los Angeles Region; the UPWP; and other technical materials related to the UTPP. (Documents reviewed are listed in Appendix 3.) As required by the federal joint planning regulations, the MPO and state certify that the planning process is being carried out

in accordance with applicable legal and regulatory requirements. This certification takes the form of a series of statements that respond to seven certification "factors" which broadly address the elements described in section 450.114 of the federal regulations.

C. Objectives of the Planning Review

In conducting the planning review, the objectives of FHWA and FTA are to determine if the following conditions exist:

- regional transportation planning is a continuing, cooperative, and comprehensive process (3-C process) that results in the development and support of transportation improvements for the Los Angeles Region;
- the transportation planning process involves representation and input on transportation needs from all levels of government, transit operators, the public, and other interest groups;
- the UPWP adequately reflects all aspects of the UTPP and all transportation planning in the area;
- the transportation planning products, including the TIP and Long-Range Transportation Plan, reflect the identified transportation needs, priorities, and funding resources;
- products of the transportation planning process are multi-modal in perspective, complete, based on current information, and interrelated;
- requirements and objectives of the CAAA, and Americans With Disabilities Act (ADA) are incorporated into the planning process and supported by transportation development activities;
- regional planning agencies are adjusting to the evolving requirements of ISTEA, including future formal certification reviews; and
- planning activities of SCAG, the MPO, are conducted in accordance with FHWA and FTA UTPP regulations, policies, and procedures.

D. Local Transportation Issues

To understand the regional context in which transportation planning is performed in the Los Angeles region, the review team identified the following major transportation issues facing the area.

Congestion, Growth, and Air Quality

Issue 1: As a result of federal and state laws, reduction of automobile emissions is a dominant transportation objective for the region, and must be balanced against traditional transportation objectives in transportation planning and programming -- improved mobility, congestion reduction, and economic growth. Los Angeles is the only non-attainment area in the nation classified as "extreme" for ozone non-attainment and is one of only three areas classified as "serious" for carbon monoxide, under the CAAA. The three air basins in the area account for violations of ambient air quality five times that of the next worse basin. The basins have climate conditions that limit the effect of transportation strategies.

Issue 2: Development of air pollution and congestion reducing strategies consistent with economic growth is the central transportation, and arguably, public policy, issue facing the region. Economic growth is essential to provide good jobs to the growing population, particularly during periods of recession. However, congestion and air pollution are so severe that the metropolitan area may become unattractive to employers and citizens. Many of the interventions being considered to reduce congestion and air pollution are perceived as harmful to economic growth.

Issue 3: Growth management was identified by staff as SCAG's number one concern. The Regional Growth Management plan forecasted 18.3 million people in the metropolitan area by 2010, up from 13.7 million in 1989, and an increase in daily person trips of 42 percent. In 1991, population growth was already 600,000 ahead of this prediction.

Where the increased population resides and works will have a major impact on congestion and air quality. For example, the Regional Mobility Plan (RMP) strategies, to match jobs to housing, substantial transit investments, and trip reduction through telecommunications, could create a denser area with reduced congestion and air pollution than would continuation of current trends toward expansion into the desert and other distant suburbs.

Issue 4: Although growth management is identified as the most significant component of the RMP, there does not appear to be a regional political consensus in support of proposed actions, for example, balancing jobs and housing. A key premise of the plan is that there is no regional authority to accomplish these actions. According to the RMP, if the local government cooperation necessary to implement proposed growth management is not forthcoming, corrections to the Plan will be required.

Even assuming success of the growth management component, VMT reductions expected from other components of the RMP appear highly optimistic. For example, transit ridership is expected to increase from 6.6 to 19.3 percent of home-to-work trips, and three million daily work trips (20 percent) are expected to be eliminated through telecommuting and demand management, beyond employee trip

reductions realized through Regulation XV (see IV.A.). Elimination of the growth management component will require even more ambitious and optimistic results from the other plan components. (See discussions in III.B. - SCAQMD and IV.A.)

Issue 5: The metropolitan area is implementing an extensive trip reduction program that requires employers of over 100 employees to increase the vehicle occupancy of their employees, as mandated by state Regulation XV and the CAAA. This costly and complex approach to changing travel behavior is controversial. Some groups propose lowering the threshold to employers of 50 employees, while others support replacing this "regulatory" approach with a "market driven" approach, for example, trading credits, relying on pricing, or utilizing other incentives.

Issue 6: There is a lack of affordable housing in neighborhoods that are near primary job opportunities and are perceived to be safe and have good schools. As a result, housing is distant from jobs, commutes are long, and congestion is increasing. Data, however, indicate that commute times are increasing at a greater rate than distances.

Issue 7: Despite CAAA requirements that discourage the addition of highway capacity in non-attainment areas, the RMP includes 1,846 lane miles of new general purpose highway (generally outside of L.A. County) and 1,251 lane miles of new High Occupancy Vehicle (HOV) lanes (page I-7). Highway capacity expansion could increase Vehicle Miles Travelled (VMT), weaken the jobs-housing balance, result in litigation from environmentalists, and create CAAA conformity problems.

Issue 8: "Technology forcing" initiatives to reduce emissions, which rely upon technology that does not yet exist, including requirements for extremely low or non-polluting automobiles and buses, may not command a market of sufficient scale to support new fuel and vehicle production and distribution systems.

Funding

Issue 9: SCAG staff believe that the agency is being given more responsibility, particularly under the CAAA and ISTEA, while total funds available for planning are decreasing.

Issue 10: Citizen concern over congestion and air pollution has generated support for state legislation, in advance of federal action, on clean air and congestion management and state and regional tax increases to fund transit and mobility initiatives. For example, voters approved Proposition A in 1980 to increase sales tax in Los Angeles County by one-half cent to improve public transit in the County and to construct rapid rail systems.

Airports/Ports

Issue 11: Congestion and environmental impacts of major airports have led to active consideration of additional airport sites and high-speed rail connections to service them.

Issue 12: Truck access to airports and the three seaport facilities is essential to the growing economy, but congestion problems are leading to political demands to restrict trucking. In addition, the Alameda project, to consolidate traffic from the three major rail carriers in conjunction with port plans, seems to be funded at such a slow rate that project benefits may be postponed almost indefinitely.

III. Organization and Management of the Planning Process

A. Metropolitan Planning Organization (MPO) Designation

SCAG is an association of general purpose governments from the six counties (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial) and over 180 cities in the region. SCAG is designated as the MPO by the Governor of California. SCAG is the MPO for the nine urbanized areas centered in the Los Angeles area and encompassing most of Southern California.

The San Diego urbanized area has its own MPO and planning process. The urban transportation planning process and transportation plans are coordinated with the San Diego process through the efforts of Caltrans and through coordination of technical and policy advisory committees and staff. The Executive Director of SCAG commented that coordination with San Diego could be better.

B. MPO Members - Roles and Responsibilities

SCAG

SCAG is made up exclusively of the cities and counties, and represented by elected officials (mayors, city council members, and county supervisors) from those jurisdictions. Implementing agencies, including the LACMTA, the Orange County Transportation Authority (OCTA), Omnitrans, the Riverside Transit Agency (RTA), and Caltrans are not voting members of the MPO. State law has designated SCAG as a regional transportation planning agency. While the roles of the various planning and implementing agencies appear straight-forward on the surface, roles are actually more complex and are defined by an evolving structure of partnerships and memoranda of understanding. According to SCAG staff, where there is a need, the agency attempts to execute new agreements setting forth responsibilities.

In addition to the transportation role, SCAG provides a forum for the development of options and discussion of a wide range of other issues such as growth management, housing, water and sewer, and economic development strategy.

There is both a downward and upward flow of information and involvement in the region. SCAG is responsible for regional planning and sets the framework for county and subregional plans. The regional TIP is composed of projects proposed by the counties, state, and transit agencies that are consistent with the regional plan.

SCAG's General Assembly is convened annually to define the region's long-range goals. The General Assembly is SCAG's overall governing body, and is made up of one voting delegate -- an elected official -- from each city and county in the region; the exceptions are Los Angeles County with two delegates and the city of Los Angeles with three delegates.

SCAG's Regional Council, made up of 70 elected officials representing the 62 subregional planning districts and the six member counties of SCAG, writes policies that will accomplish the goals set by the General Assembly. These policies guide the SCAG planning staff. The Regional Council meets once a month.

There are three standing committees of the Regional Council -- the Implementation Committee, the Planning Committee, and the Administrative Committee. These integrative committees review the recommendations for the three policy advisory committees -- Transportation and Communications, Energy and Environment, Intergovernmental Review, and Community, Economic, and Human Services Development -- and recommend Regional Council action. The Policy Committees' voting members include representatives from the Regional Council, subregional organizations, CTCs, and Caltrans. Ex-officio (non-voting) members include representatives from the Regional Advisory Council and single purpose regional/subregional agencies, including the Air Quality Districts. The CTCs, including LACMTC and OCTA, which are responsible for transit operations in their counties, are voting members of the Policy Committees; other transit operators are not directly represented either as voting or non-voting members.

The Regional Advisory Council is intended to provide a major opportunity for non-profit and private sector interests to contribute directly to the development of regional policies. Effort is made to assure racial and ethnic diversity on the Regional Advisory Council and to reflect the changing demographic characteristics of Southern California.

SCAG has an Executive Director who oversees the work of four departments: Forecasting, Analysis, and Modeling; Planning and Policy; Government and Public Affairs; and Administration. SCAG staff has expertise in diverse areas including transportation planning, economic analysis and modeling, forecasting, and environmental analysis. SCAG's transportation planning group represents a multi-modal planning approach -- planning encompasses freight and passenger aspects, as well as road, transit, rail, and air modes.

In 1992-1993, SCAG began a process to decentralize regional planning. Starting with existing institutional arrangements, thirteen subregions were asked to develop policies and strategies for the Regional Comprehensive Plan (RCP) and to participate in monitoring the RCP (see IV.A.). Each subregion entered into a memorandum of understanding with SCAG which prescribes SCAG's and the subregion's roles in and contributions to the regional planning process. SCAG has allocated the full increase in planning funding from ISTEA (about \$4 million) to the subregions for planning tasks, which are typically subcontracted for the subregion by SCAG.

Involvement of the subregions is in its early stage. According to SCAG, the relationship is evolving between the new subregional process and the planning activities of the county commissions. The LACMTA participates in activities of the LA County subregions. SCAG expects the emergence and viability of the subregions to provide the foundation for SCAG planning success. According to SCAG, the ability to develop "implementable and sound regional policies will be a direct reflection of the success of subregionalism."

SCAQMD

SCAQMD has primary responsibility for air quality issues under California law within the South Coast Air Basin, including Los Angeles, Riverside, and Orange Counties, and the non-desert portion of San Bernardino County. As the MPO, SCAG also plays a role in transportation planning related to air quality. Under state law, SCAG is mandated to develop sections of the Air Emissions Inventory and prepare land use, transportation, and energy conservation components of the South Coast Air Quality Management Plan (SCAQMP) for the South Coast Air Basin. Under federal law, SCAG is the regional agency responsible for SIP development.

The SCAQMP, last published in 1991, is jointly developed by SCAG and SCAQMD, and is an example of strong technical coordination resulting in highly integrated transportation and air quality planning. For example, the same growth forecasts were used to develop the air quality, mobility, and growth management plans.

Although Ventura and Imperial Counties are within SCAG's jurisdiction, they are in separate air basins and have separate agencies producing their own air quality management plans. SCAG does play a role in developing the air quality plans for these air basins.

Relations between SCAG and SCAQMD are evolving; tensions based on differences in approach, priorities, and policies for solving the significant regional air quality and transportation problems are inevitable. For example, SCAG and SCAQMD had a major difference over approaches to growth management in the update to the SCAQMP. SCAG describes growth management as fundamental to the overall effectiveness of the RMP, but it did not provide enforcement mechanisms for the jobs/housing balance and other possible growth management strategies, instead leaving implementation to local initiatives. SCAQMD, believing that this approach was too vague, proposed the removal of growth management from the air plan. SCAG countered that growth management was crucial to the balanced approach of the air and mobility plans and complemented the other components of new facilities, demand management, and systems management.

The third memorandum of understanding with the SCAQMD was being prepared at the time of this review. Under this memorandum, SCAG is responsible for "conformance findings" while the air quality district is responsible for program implementation under state law.

County Transportation Commissions

The six county transportation commissions play an important role in transportation planning and programming in the SCAG metropolitan area. The review team met with representatives of the Los Angeles, Orange, Riverside, and San Bernardino Transportation Commissions. After the site review, the Los Angeles and Orange County Commissions were reorganized to become the LACMTA, and the OCTA.

LACMTA and OCTA have extensive staffs and conduct a range of short and long-range transportation planning at very comprehensive levels. Planning by the Riverside and San Bernardino commissions appeared to have a more short-range concentration, and to be tied closely to long-range planning efforts of SCAG.

The commissions are responsible for implementation of the state Congestion Management Program (CMP), mandated in legislation and voter-approved propositions. State laws require counties to have a CMP with a process for analyzing the transportation impacts of land use decisions by local jurisdictions. The transportation system for CMP purposes is "all state highways and principal arterials at a minimum" (OCTA CMP). The CMP must set congestion limits based on traffic levels of service, and include costs of mitigation.

The San Bernardino County CMP was being developed by the San Bernardino Association of Governments (SANBAG) at the time of the review. This CMP was described as setting congestion limits for key portions of the county road network, with targets for transit service to mitigate land use impacts. Omnitrans, the area transit operator, expected to integrate these targets into its revised Short Range Transit Plan.

Additional discussion of the short and long-range planning conducted by San Bernardino, Riverside, and Orange County follows in section VII.

The Los Angeles County Metropolitan Transportation Authority (LACMTA) is responsible under state law for programming all state and federal transit and highway revenues in LA County. LACMTA is also designated as the CMP Agency. To meet these roles, LACMTA is developing in-house technical capability to perform transportation planning functions. (See section IV for additional discussion of the Los Angeles County CMP.)

Observations and Suggestions

- 1) **The RMP as a model long range plan** -- The review team commends SCAG for the rigor and technical quality of its planning process. In particular, the Regional Mobility Plan is a model application of "outcome-based" planning, linking long-range regional objectives to realistic and comparable scenarios. These scenarios quantify how each region would reach crucial outcomes, including mandated air quality improvements, and make clear the trade-offs in costs and results between plan components (e.g., expanded transit or demand management). This level of technical analysis focuses political decision-making on the difficult decisions facing the region.
- 2) **The reevaluation of MPO and county transportation commission roles** -- SCAG and the CTCs are encouraged to continue to reevaluate their relationships and responsibilities, identify areas for improved integration and coordination, and pursue any necessary updates to memoranda of understanding, particularly as required to respond to ISTEPA. State law and ballot initiatives have given the CTCs important transportation funding and other responsibilities. As a result, the CTCs conduct significant transportation planning and programming. The two largest commissions -- LACMTA and OCTA -- perform many aspects of long-range planning and produce county transportation improvement programs that are the basis for the regional TIP. The problem is that the connection between planning by SCAG and the county transportation commissions could be more clearly established.

While not required by ISTEA unless the MPO is redesignated, the interim guidance to ISTEA encourages that agencies that operate major modes of transportation be given a voice in the MPO decision-making process. The major operators do not have direct votes on the SCAG General Assembly or Regional Council. However, the LA and Orange County transportation commissions, which are responsible for transit operations in their counties, are represented on policy advisory committees.

The planning process of the county transportation commissions is not subject to the same rigorous federal mandates applied to the SCAG process. SCAG and the commissions might consider modifications that would apply the discipline of "outcome-based" results, as encouraged by the CAAA and ISTEA, to county plans, and more substantially link those plans to the regional plan.

- 3) **The importance of subregional planning** -- SCAG is commended for its recent initiatives to develop a subregional planning process. This seems very appropriate considering the size and complexity of the region, and the federal and state mandates that define broad ranging requirements for SCAG and the CTCs. SCAG is encouraged to pursue these initiatives, and to coordinate closely and formally the subregional process with the functions of the CTCs.
- 4) **A regional prospectus** -- SCAG is commended for developing a regional prospectus that updates descriptions of planning operations of regional and local agencies and explains how these organizations comply with state and federal transportation and environmental laws and regulations. The prospectus eases public understanding of complex agency roles and responsibilities and will encourage improved public participation, as envisioned by ISTEA. SCAG is encouraged to keep the prospectus current as roles and responsibilities shift to meet evolving federal and state requirements.
- 5) **The updating of agreements** -- SCAG's agreements with county transportation commissions could be updated to reflect changing roles and responsibilities, particularly those relating to the federal CAAA and ISTEA. This may be difficult to clarify because of the blurring of short and long-term, and regional and sub-regional planning responsibilities. Coordination between SCAG and the county commissions is crucial to effective long-range regional planning; coordination will require negotiation and formal agreements on roles and responsibilities -- it will not evolve gradually.

C. Unified Planning Work Program

In accordance with joint FHWA/FTA planning regulations, SCAG annually prepares a UPWP which addresses the transportation planning and management activities to be funded by each federal modal agency. Areas of emphasis include the following:

- program management and administration;
- general development and comprehensive planning;
- long-range transportation planning (system level, corridor and project level);
- financial planning;
- short-range transportation planning;

- Transportation Improvement Plan (TIP);
- elderly and handicapped transportation;
- participation of private operators in the planning process;
- rural and specialized transportation;
- suburban mobility initiatives;
- special studies for the private sector;
- goods movements studies; and
- Los Angeles International airport and aviation systems planning.

Descriptions of each major area of emphasis include objectives, status, the work program (1991-1993), major actions anticipated each year, and end products.

The UPWP is primarily SCAG's work program, although it includes a limited number of rural transit planning projects run by transit operators, and funded by the state through SCAG. SCAG also uses the UPWP as a guide to inform other agencies and the public about the scope of activities related to transportation planning and management within the urban area. Work items are prepared that fulfill federal transportation planning requirements and address regional transportation problems.

The UPWP has four sections: Regional Plan; Monitoring/Conformity; Data Base and Modeling; and Other Programs. Although there is insufficient funding to cover all activities, plan components mandated by the federal or state government are fully funded. Studies that analyze specific regional plan policies that are not mandated are carried over to later years. Similarly, some data base and modeling activities have uncertain funding sources; presumably, these projects will be carried over to subsequent years.

Although approximately \$114,000 in Section 9 funds are included in the program and are allocated to subregional planning studies, SCAG has adopted a policy indicating that its priority for Section 9 funds is operating/capital assistance for transit services.

Observations and Suggestions

- 1) **Overall UPWP** -- SCAG's UPWP is well-written and organized.
- 2) **Inclusion of all significant activities** -- SCAG has included only federally funded work items in its UPWP. The UPWP satisfies SCAG's responsibility to reflect the needs and policy priorities of the region. However, some important planning activities not conducted by SCAG, such as LACMTA's 30-year plan, congestion management plans by each CTC, and transportation-related studies by SCAQMD, are neither included nor referenced.

The joint planning regulations require that all transportation planning activities be included in the UPWP whether or not they are federally funded. Because the UPWP excludes significant activities that are solely funded by state and local sources, it does not provide a complete picture. Future UPWPs should reflect all significant projects, regardless of their funding source. This inclusion would encourage an integrated and comprehensive understanding of area-wide highway and transit service planning, which is primarily

funded with state and local funds. It will also improve the quality of the 3-C planning process, provide a better coordinated and informed mechanism for programming scarce resources, and increase the likelihood that capital investments will be based on comprehensive planning.

- 3) **Continuous progress in carrying out the work program** -- There have been no audit problems; according to SCAG, all funds are expended per annum, and progress reports (including project "closeout" final reports) are in good order and reflect continuous progress in carrying out the work program. Limited planning funds and staff shortages have slowed progress in carrying out all of the work items in the UPWP, and limited related policy analysis and documentation of the process.
- 4) **Public information on the planning process** -- SCAG is commended for producing a Regional Prospectus on the region's transportation planning process. This document adds clarity and discipline to the complex organizational responsibilities, and makes the planning process more comprehensible to the public and other interested parties. The Prospectus describes how SCAG is responding to ISTEA, and could continue to be revised to reflect future responses to both ISTEA and the CAAA.
- 5) **Creation of an OWP for county-level planning tasks** -- LACMTA is conducting numerous transportation studies to support development of its projects. There is, however, no annual county-level Unified Work Program to provide organization and context to these efforts. LACMTA might consider developing such a document on an annual basis to be incorporated into the regional OWP. Other CTCs could also consider developing similar documents to be included in the regional OWP.
- 6) **Maintenance of an updated bibliography** -- SCAG could maintain an updated bibliography and list of planning materials. These documents would be a valuable resource to all the participants and others interested in the planning process, which is extremely complex in the LA region. SCAG could prepare and update a bibliography on a regular basis for all UPWP end products (plans, maps, reports, technical memoranda, videos and slides, brochures, computer software and programs), regardless of the funding source and responsible agency.

D. Self-Certification

Caltrans conducts a year-end review and certification process in which SCAG is asked to provide assurance of sound fiscal management and to address certification issues. A three page list of questions about the elements of the planning process is provided to SCAG. The written answers are discussed at an annual meeting.

The questions cover endorsement of the TIP, preparation and endorsement of the regional plan, the UPWP, conformity and consistency of transportation and air quality plans and programs, the 3-C elements, disadvantaged business enterprise, and public participation. The most recent review was conducted on June 13, 1991.

In addition, the state Transportation Development Act (TDA) requires a triennial performance audit by an entity independent of SCAG. This audit focuses on SCAG's internal management and how the agency perceives itself and is viewed in the region. The April 1990 audit recommends, among other things, that SCAG create a library to centralize the location of its documents and resources. It also recommends that SCAG expand the UPWP or create a new document which includes all projects underway in the region.

IV. Products of the Process

A. Transportation Plan

SCAG

The Regional Mobility Plan (RMP) reviewed by the federal team was completed in 1989 and reaffirmed on September 6, 1990. Conformity of the RMP to the SIP was reaffirmed by the SCAG Executive Committee on September 5, 1991. The RMP serves as the regional transportation plan required by the federal and state governments. Together with the Regional Growth Management and Regional Air Quality Management Plans, the RMP forms the overall Regional Strategic Plan. Transportation and environmental concerns are coordinated with the combined development of the RMP and the region's air quality management plan for the South Coast Air Basin; the mobility plan was incorporated in its entirety as a component of the region's air quality management plan.

The RMP was scheduled to be revised due to changes in funding (state gas tax increase, county 1/2 cent sales tax measures), programming, and federal and state requirements (air quality conformity, transportation control measures, congestion management programs, and ISTEA). The next long-range transportation plan for the metropolitan area will be set forth in the Regional Comprehensive Plan (RCP), which will be reaffirmed or updated every two years, by requirement of state law. The RCP includes the Regional Mobility, Growth Management, Air Quality, and Housing Elements. The next RCP, including the Regional Mobility Element (RME) is scheduled for adoption in late 1993. The 1993 RME will be reviewed for conformity with the CAAA and is expected to address ISTEA requirements, including being financially constrained and providing a financial plan that demonstrates that it can be implemented.

The RMP reviewed by the federal team is designed to achieve the transportation mobility levels of 1984, as measured in expected system hours of delay. The SCAG Executive Committee selects a mobility strategy after disseminating a preliminary draft plan of several mobility scenarios for public review and discussion. The strategy selected in the RMP has four components - growth management, transportation system management, transportation demand management, and facility development.

The RMP incorporates the plans of Caltrans over a ten year period and projects new ideas over a twenty year planning horizon. This measure allows public debate about long-term direction with minimal disruption of existing agency plans.

Growth management and urban development issues are addressed in the land use component of the mobility plan, which has set forth a goal to balance jobs and housing in subareas of the region. This goal has been modified to incorporate VMT reductions as local surrogates.

There are short and long-range components for each of the four strategies that comprise the mobility plan's multi-modal approach. The programmatic actions that comprise each component are designed to be consistent with air quality objectives, and with local jurisdictions' growth management and housing policies.

The RMP has a multi-modal focus -- it includes street and highway improvements, multiple-person occupancy programs (e.g., car and vanpooling) and HOV facilities, an extensive transit development program, and non-motorized (e.g., pedestrian and bikeway) facilities and services. Each "modal" element has been designed to contribute to specified system performance goals set by SCAG, but as noted below, the achievement of these goals presumes fully funded implementation (which was not the case). Also, explicit tradeoffs between distinct modal elements are not made; rather, the strategy represents an amalgamation of distinct elements.

Interim population, employment, travel, and congestion estimates were developed to assess conformity for the TIP and reaffirm conformity for the RMP. These were based, however, on 1989 data and estimates. The 1993 RME will reflect new census information.

The stated mobility goal in the year 2010 relies on a significant societal behavior change, with three million person trips per day avoided through the use of telecommuting, in addition to a major change in development patterns toward a greater jobs/housing balance.

The RMP establishes a two level distinction between constrained and unconstrained projects. Within each major category (for example, highway, transit, and demand management) it identifies projected revenue shortfalls. However, in developing specific projects, it does not distinguish "constrained" or priority projects, to be funded from available resources, from those of lower priority ("unconstrained"), to be funded out of any available new resources. Although at an aggregate level the RMP identifies shortfalls, the plan and its long-range projects are not resource constrained. It assumes required resources will be provided by the political process to reach specified goals. Projects, however, cannot be funded with existing resources. For example, the transit capital investment and operating subsidy anticipated to achieve a transit mode share of 19 percent (up from approximately 4 percent) is substantially unfunded.

The update to the plan is expected to develop more stringent funding criteria and apply them to general initiatives. This will be important for determining conformity with the SIP and meeting ISTEA requirements. For example, transit programs in the SCAG Mobility Plan may lack adequate capital or operating subsidy funding sources. This could prevent including these programs in the conformity analysis and result in nonconformity if these programs are necessary to meet emission reduction targets by reducing congestion and automobile emissions.

The plan incorporates opportunities for private sector involvement. The majority of transportation demand management strategies are employer based. Since the adoption of the plan, market-based strategies have been strengthened in the air quality management plan and will be expanded in the 1993 RME.

Although growth management is a key regional priority, there does not appear to be formal regional authority to manage or limit growth. The existing regional plan has included a growth management component that has had limited success. Considering this, the goal of the plan to

maintain 1984 levels of mobility may not be possible. "Jobs-housing balance," an essential component of the SCAG Mobility Plan to reduce congestion, has generated intense opposition as interfering with local land use control, however, no comparably powerful substitute strategies have emerged.

Other agencies

Other public agencies in the Los Angeles metropolitan area undertake a wide range of strategic, long-range, and short-range transportation planning efforts. The review team received copies of long-range multi-modal planning documents from Los Angeles and Orange County.

LACMTA has produced the following long-range documents to provide overall direction to transportation plans and programs in the county:

- 30-Year Integrated Transportation Plan (ITP)
- Congestion Management Program (CMP)

The 30-Year ITP provides a framework for developing strategic programs and applying resources to achieve LACMTA's transportation objectives. The ITP will be used as a building block for SCAG's revised RMP, the Air Quality State Implementation Program, and LA County's transit operators' Short-Range Transit Plans (SRTPs).

The ITP contains a combination of highway, bus, rail, and Transportation Demand Management (TDM) strategies. The highway component emphasizes HOV lanes and TDM. The ITP contains projects to widen freeways and close gaps. The bus component focuses on increasing the county's fixed route bus fleet more than 50 percent, and the dial-a-ride fleet. The rail component includes funding for 210 miles of urban rail and 190 miles of commuter rail new start projects. The TDM component focuses on increased ridesharing, flexible work hours, telecommuting, and incentive pricing strategies.

Financial analysis of the 30-Year ITP indicates that there are adequate finances to support the \$150.3 billion plan. Eighty-eight percent will be provided locally or from state sources. Although there are adequate financial resources in the aggregate, the plan phases project implementation to match funding availability over the 30-year plan horizon.

The ITP includes five generic rail projects, expansion of the electrified bus fleet to meet the 30 percent bus electrification goal established in the 1991 SCAQMP, and additional HOV facilities. Although the plan identifies possible funding for these projects, it implies that none is currently available.

Under California law, LACMTA is responsible for developing the **Congestion Management Program** for Los Angeles County to reduce congestion and improve air quality. The CMP was created to accomplish the following:

- make the most effective use of all transportation modes (highways, streets and roads, rail, bus, demand management, bicycle and pedestrian travel) in managing congestion through the CMP process;

- require local jurisdictions to examine the impact of land use decisions on the regional transportation system and be responsible for mitigating these impacts; and
- develop transportation solutions that also work toward improving air quality.

Consistent with California statutes, the draft CMP includes:

A 1,000 mile **CMP Highway/Roadway System Component** containing all existing state highways and principal arterials. This component is consistent with the System of Regional Significance identified in the SCAG Regional Mobility Plan. A minimum Level of Service (LOS) of E will be used as a basis for the system, except in the case where the area has a LOS of F.

A **CMP Transit System Component** focuses on regionally significant transit service, defined as routes which currently provide services in the CMP Roadway Network. Also included is the Metro Rail Blue Line and several bus feeders to rail stations. The transit network will be monitored to gauge how effectively transit relieves traffic congestion.

The CMP recommends that new transit funding sources, such as Proposition C and the CMP Deficiency Plan fees, be used for projects to reduce congestion. The CMP also recommends transit/land-use coordination by involving transit operators in development decisions. The CMP Transit Monitoring Network is consistent in concept with the long distance, line haul network of the RMP's Transit Program.

The **Transportation Demand Management Element (TDME)** responds to the state requirement for a trip reduction and travel demand element to reduce congestion and improve air quality. The TDME is linked to the SCAQMP by requiring local jurisdictions to establish ordinances mandating employers of more than 100 people to prepare trip reduction plans that meet SCAQMD average weekly ridership standards (Regulation XV), and implement the above noted transit/land-use coordination activities, including a "tool box" of measures to be addressed by new developers.

The **Transportation Impact Analysis Program (TIAP)** focuses on the impact assessment of new development on the CMP system and local responsibilities to prepare a Deficiency Plan. A county-wide mitigation fee would be used to fund the Deficiency Plan improvements.

The TIAP includes a Deficiency Plan Development Process, which includes the means for identifying deficiencies that fail to meet LOS standards, and a plan of improvements to address the deficiencies. SCAQMD will provide candidate projects. During the next year, LACMTA will perform a mitigation fee/nexus study to tie regional development to transportation impacts. Fees will be collected from local jurisdictions to fund county-wide traffic mitigation projects.

The Capital Improvement Program (CIP) responds to the requirement that the CMP contain a seven year CIP to maintain or improve transit performance and the level of service on the CMP highway system, and to mitigate regional transportation impacts. The CIP includes projects competing for state Flexible Congestion Relief Funds, a \$3 billion, 10-year program that funds transportation projects which reduce or avoid congestion on the CMP system, and Traffic System Management funds (\$1 Billion over a 10-Year period). These projects, which were developed from an evaluation of projects submitted by the county and local jurisdictions, will be used in the development of the LA County TIP.

The CMP summarizes implementation responsibilities for LACMTA and the local jurisdictions. The CMP also identifies enforcement procedures for non-compliance, including its mandate to notify the state Controller to withhold gas tax funds available for local street and highway improvements.

The LACMTA was to develop an Environmental Impact Report (EIR) for the CMP prior to its scheduled adoption in 1992. During this period, LACMTA expected to carry out the following:

- conduct traffic counts to determine LOS standards;
- develop in-house travel demand forecasting models. LACMTA has previously relied upon the use of SCAG's demand forecasting packages and the efforts of consultants. This package, Tranplan, will be developed for a transportation network that will be at a finer level of detail than the SCAG network. LACMTA is coordinating its efforts with SCAG to ensure consistency with SCAG's transportation network and version of Tranplan; and
- develop local mitigation projects and add these to the CIP after the land-use program is developed and implemented.

The OCTA conducts an impressive range of strategic and long-range planning. The following planning documents were reviewed:

Congestion Management Program -- as mandated by state CMP legislation (see above). The Orange County CMP demonstrates clear linkages to the RMP and SCAQMP (see above).

Freeway Program Strategic Plan -- to define an aggressive program for freeway and transitway projects on four corridors, to be completed by the year 2002. The plan includes scope, costs, and interagency responsibilities for implementation.

Final Summary Report -- Countywide Rail Study -- an analysis of rail and other alternatives through the year 2010.

Revised Traffic Improvement and Growth Management Plan -- a general public outreach document contrasting long-range population and employment trends to the expansion of transportation infrastructure, and building a case for passage of a county-wide one-half cent addition to sales tax for transportation.

Observations and Suggestions

SCAG

- 1) **Overall plan** -- The RMP developed by SCAG and participating agencies is innovative and comprehensive. Combined with the growth management and air quality management plans, the RMP represents a model of coordinated long-range planning and accessible technical information that should raise the level of policy debate and decision-making.

The documents demonstrate clear links between air quality, growth management, and mobility concerns, and provide the costs, travel delays, vehicle miles traveled, and air pollution emissions of long-range regional alternatives. The RMP is particularly successful at defining long-term alternative scenarios, quantifying the costs and results of each, and encouraging informed long-term public policy making. It is clear to decision-makers, for example, that rejection of one component of a scenario, for example, job/housing balances, will place severe demands on remaining components, for example, transit or demand management.

- 2) **Financially constrained plan** -- The 1993 RME will be reviewed for conformity with the CAAA and should address ISTEA planning requirements, including being financially constrained and providing a financial plan that demonstrates that it can be implemented.

Areas for consideration include the following:

- 3) **Constrained projects** -- The RME should develop more stringent funding criteria and apply them to general initiatives and categories of projects and should include a financial plan demonstrating that the resources are available to implement. This will be crucial if the plan is going to meet the ISTEA requirement.
- 4) **Long-range goals** - The primary mobility goal of reducing hours of delay to 1984 levels could be reconsidered. At lower speeds, in the range of 35 to 40 mph, system performance in terms of capacity, air quality, and fuel consumption is improved. Thus, the question of what standard "reduced delay" is to be measured against requires further analysis and deliberation. Although diversion to multiple-occupancy vehicles such as buses and carpools can increase commute times, it may also further other objectives.

"Delay" could therefore be one of many, but not the sole regional goal. An alternative view of mobility as a weighted average of job, shopping, and social/recreational opportunities within a specified travel time by any mode may be another definition of the objective worth developing.

- 5) **Land use policy intervention** -- Opposition has developed in local jurisdictions to land use policy intervention to achieve the jobs/housing balance element of the RMP. An alternative to consider and test is the degree to which transportation investments, the primary leverage of the UTP process, can approach this goal without explicit land-use policy intervention. Targeting selective types of infrastructure and service levels to specific subareas might achieve a "natural" jobs/housing balance outcome. The negative reaction might be toward regulations and disincentives; the use of more positive incentives, though costly, might allow consensus and ultimate acceptance of a jobs/housing balance policy.

Positive incentives that could be explored include transfers of development rights and employer-based programs that would encourage short commutes by employees.

- 6) **Tests of alternative scenarios** -- In the metropolitan area, residents experience extremely long commute times and trip lengths, in effect, they are paying a "congestion tax." Further analysis could determine possible consequences, including moves toward a "natural" jobs/housing balance as decisions on location are made by individuals and firms to mitigate the "congestion tax." Lower prices for public transportation might be tested as a "carrot" alternative to the congestion tax or as a partial substitute for transit capital investment.
- 7) **Performance indicators for constrained and unconstrained programs** -- The RMP analyzes the effect on a regionally determined set of system performance indicators of the unconstrained program of projects (assumes no funding constraint). Since ISTEA requires a financially constrained plan, SCAG should also do the same type of analysis for the constrained program set to provide decision-makers with a clear understanding of what a range of resources will buy relative to the "no-build" alternative. Analysis of this sort will also permit decision-makers to know what the incremental benefit will be from committing additional resources to transportation improvements.
- 8) **Assumptions embedded in scenarios** -- For telecommuting (and other work/schedule changes) to eliminate three million person trips per day will require a dramatic shift from current societal behavior. Realization of this result, which is equivalent in addition of capacity to doubling freeway miles, is fundamental to the success of the plan.

The RCP could provide detailed analysis of scenarios which assume that this complete result will not occur, and that the population growth will need to be served through other strategies. This level of technical information on costs and impacts would raise the level of informed public debate and policy choices to an even higher level. At the very least, it could establish the limits of transportation policy interventions.

- 9) **Other networks** -- School busing networks, social service agency transportation systems, and company sponsored subscription bus or other systems represent a parallel public transit system not accounted for in the traditional transportation planning process. With the magnitude of pressure on the system predicted in the RMP analysis, new ways of integrating these traditionally separate systems might yield major benefits. Explicit modeling of these trips and transit systems could be explored.

- 10) **Goods movement** -- Since ISTEA directs that one of the fifteen factors that must be considered is methods to enhance efficient movement of freight, the RME should consider goods movement in a comprehensive and integrated fashion. Improved goods movement is essential to the economic survival of the region. There are a number of potentially conflicting policies affecting goods movement that must be resolved. On the one hand, port expansion programs and the trend toward "just-in-time" shipping to improve competitiveness will tend to increase truck trips. Road congestion and the range of transportation control measures, however, are forcing adoption of traffic policies that restrict peak hour truck movement and otherwise complicate trucking operations.
- 11) **SCAG's role** -- SCAG should play an active role as MPO in inter-county coordination of planning. For example, SCAG could be responsible for assuring coordination of design and operation of inter-county transport facilities (e.g., the location of the termini of HOV facilities; lane continuity and transitions based on traffic performance rather than political boundaries). In addition, SCAG should play a major role in discouraging strategies that shift congestion from one subarea to another (i.e., spillover effects) and are self-defeating from a larger regional perspective.

LACMTA

- 12) **Danger of "sub-optimization"** -- Related to the above issue is the potential danger of "sub-optimization." For example, siting park-n-ride facilities in the outlying counties may be more effective in intercepting long-haul trips that contribute heavily to regional VMT. Los Angeles County's Transportation Systems Management (TSM) strategies would then have a better chance of effectively dealing with its traffic to the degree that other traffic has been "siphoned off" before it ever reaches Los Angeles County.
- 13) **Clarification of rail methodology** -- The methodology used to predict patronage for rail projects in LACMTA's 30-Year Integrated Transportation Plan needs to be clarified. What assumptions are made about other parts of the "system" in place when modeling rail patronage for each rail segment or project? How many rail trips for each project, considered separately, represent "transfers" from other rail lines? How does this affect cost/revenue ratios?

B. Transportation Improvement Program

SCAG

The TIP development process is essentially a "bottom up" procedure. SCAG reviews programs prepared by Caltrans, county, city, and transit agencies, which are prioritized by county for: consistency with the mobility plan; conformity with transportation control measures in the SIP; and priority of HOV lanes over mixed flow. County TIPs are required to be consistent with available funds. These multimodal TIPs are submitted to SCAG, whose Executive Board can delete projects which do not conform. This rarely occurs, but SCAG can and does effect changes by negotiation. As an example, the design for a proposed toll road was scaled down;

the toll road was not required to provide an HOV lane, but an agreement was reached to monitor vehicle occupancy, which is difficult, to assure an "equal outcome" in its passenger-carrying capacity.

SCAG is considering development of a more formal process for involving the public in the TIP formulation, similar to that of the state and federal processes to review environmental projects. SCAG circulated the TIP before convening a public hearing on it.

Fund estimates by Caltrans are also used to constrain the TIP. If the state modifies the TIP, SCAG must concur or the project is blocked.

SCAG has difficulty tracking project development because it is not informed about highway project approvals. It does not, in any case, make a special effort to monitor implementation of projects in the TIP, considering that to be an implementing agency responsibility.

The state allocated Federal Aid Urban System (FAUS) funds to the counties by formula. The MPO does not track these funds. Since local governments are very interested in retaining these funds, there has been no difficulty in developing eligible projects. Under ISTEA, suballocated STP funds should not be further distributed to counties by formula.

Under state law SCAG may not add a project to an endorsed TIP. Therefore, it appears that modifications to the TIP must go through the entire development process. This probably occurs less frequently than annually.

Finally, the TIP process has different time schedules for highway and transit program approvals. The state highway TIP is due on December 1 of each year, while the transit TIP is due on July 1. SCAG does not feel this affects coordination of highway and transit projects. For allocation of ISTEA flexible funds, a time frame should be developed to assure full consideration of highway, transit, and other eligible projects.

Other agencies

LACMTA produces a Short-Range Transit Plan (SRTP) and Transportation Improvement Program to provide programming direction for multi-modal projects in the county. The transit operators in the other counties reviewed (Orange, San Bernardino, and Riverside) provided short range plans and TIPs, which are discussed in Section VII.

The LACMTA SRTP provides operating strategies for LA County's transit operations, documents assessments of the transit operators' financial capabilities and capacity, and presents a one year bus capital program and a multi-year rail capital program. The LACMTA capital programs in the SRTP are incorporated in the region's Transportation Improvement Program and reviewed for conformity with the SCAQMP.

The LACMTA SRTP notes the potential shortfall of funding to replace its buses as well as to expand the fleet. The SRTP also notes concerns about closing the gap in its operating budget. These issues reflect the potential inability to provide funds for the bus system to support the ITP, CMP, RMP, and SCAQMP, as well as the new fixed guideway systems. Furthermore, near-

term projections of revenues to fund the plan, although reduced, appear inconsistent with recent trends and may result in additional funding shortfalls.

Observations and Suggestions

- 1) **Include contingent transportation control measures (TCMs)** -- Because amendments to the TIP under current statutory regulations are time-consuming and cumbersome, the TIP could include contingent TCMs that would be implemented when CAAA emission thresholds are exceeded. This would allow contingent TCMs to be implemented without the delay of the amendment process.
- 2) **Develop links between the TIP and the Plan** -- To assure that the TIP is consistent with the RMP, the connections between these documents should be better developed. The RMP appears to minimize conflict with the agencies by accommodating their short-range plans. However, combined transit and highway capital investment strategies could address the jobs/housing balance and telecommunications goals of the RMP, moving the transportation systems towards the transportation, economic, energy, and air quality goals. The TIP reflects the separately determined short-range plans of the transit providers and Caltrans. There is little apparent multimodal cross-fertilization or emphasis.
- 3) **Link county CMPs to the RME and the TIP** -- The Congestion Management Programs (CMP) of the counties could become a major source of RME and TIP projects in the future, and should support the RME. If the CMPs and RME are developed independently, they could undermine each other. This makes it more important for the regional TIP to become a policy instrument with project selection, California Environmental Quality Act (CEQA), and National Environmental Protection Act (NEPA) processes all presented as related and synergistic elements in strategies to realize RME long-range objectives. Because the CMP can either reinforce or undermine the transit friendly design of urban development and urban streets, it is important that the multimodal integration of transit and auto initiatives at the design level be encouraged in procedures for eligibility for TIP, and CEQA and NEPA processing.
- 4) **Ensure ISTEA flexibility and fiscal reality** -- The RME and the TIP must be fiscally constrained and reflect financial plans that demonstrate they can be implemented. Inadequate funding for transit projects is a significant problem. Making tradeoffs to fund balanced regional programs could test the institutional flexibility of Caltrans, city, county, transit, and SCAG, and their ability to develop multimodal strategies.
- 5) **Monitor Caltrans projects** -- Caltrans could develop improved procedures to notify SCAG of the implementation of stages of projects. These procedures could be formally defined and tightened to improve SCAG's ability to monitor projects, and as a result, encourage successful implementation of programs in the region. This disciplined approach should also be applied to projects in the metropolitan area undertaken by other implementors. Improved involvement of SCAG is consistent with emphases on coordination and cooperation in ISTEA.

- 6) **Track project implementation** -- SCAG needs to track project implementation to determine general consistency with the short and long-range transportation plans, and as part of the TIP conformity determinations. Unless projects are actually implemented according to their planned design scope and scheduled timing, credits for regional VMT and emission reductions cannot be taken.

V. Elements of the 3-C Transportation Planning Process and Related Activities

A. Evaluation of Major Transportation Investments of the Past Twenty Years

No evaluation efforts have been undertaken to determine the actual versus forecasted impact of major transportation investments, although this will be required for transportation control measures associated with air quality planning. The SCAG staff indicated that, in general, growth has been consistently underforecasted. SCAG has suggested that the FHWA fund a study of a major highway project in the country to study actual versus forecasted impact. Similar studies for region's have been completed, but these may not fit the Southern California experience.

During the past thirty years, numerous major transportation facilities have been constructed. Nevertheless, there has been very little review of their impact. LACMTA staff felt that because external factors in the metropolitan area have been so dynamic, it would not be practical to evaluate the effects of major investments.

Observations and Suggestions

- 1) **Formal monitoring and evaluation** -- The LA metropolitan area could develop a formal plan to monitor and evaluate the massive program of new infrastructure (e.g., HOV facilities, an extensive network of light rail and heavy rail transit lines, additional commuter rail facilities).

Because of the complexity of the issues in the metropolitan area and the inherent uncertainties in the assumptions and models used to test plan alternatives, it would appear that the region would benefit from the increased "learning," adaptation and flexibility that would result from evaluation. Results from a thorough monitoring and evaluation program can improve future plans and project appraisals. Operational considerations, such as bus feeder plans, fare integration, and parking policies, can be designed based on actual travel response data (i.e., time-dependent station boardings, time-dependent station-to-station trip patterns, transfer volumes, access modes and volumes).

A monitoring and evaluation program will ease future conformity determinations because "before" and "after" measured pollutant concentration levels (distinct from but a function of vehicle emission rates) could be correlated with changes in traffic flow induced by infrastructure investments (for example, implementation of an HOV facility, or a park-n-ride facility). A good monitoring program can facilitate planning corrections (and implementing actions) required to insure that air quality standards are achieved. Improved monitoring will be required through the range of management systems described in ISTEA.

B. Monitoring, Surveillance and Reporting

There is no region-wide formal monitoring and surveillance plan that documents the type and frequency of data collected or who collects, stores, and maintains it. The only related work in the SCAG work program is the annual Highway Performance Management Survey data required to be collected by FHWA. This data describes average daily traffic, safety data, pavement condition, amount of truck traffic, and capital improvement for arterials and collectors. It is provided by local agencies, assembled by SCAG, and transmitted to Caltrans. Cordon counts are collected by the city of Los Angeles and the transit district every three years. Caltrans counts each link of the state highway system every year.

The LACMTA and OCTA monitor the physical condition and performance of transit facilities and services of their county transit operators through their short-range transit planning and TIP processes. For example, OCTA uses a microcomputer-based Route Contribution System (RCS) to collect data and identify the specific costs and fare revenues associated with each OCTD fixed-route in service during any accounting period. Input includes: miles and hours per route; operator pay hours and fringe benefits; maintenance costs; fuel, tire and lubricant costs. Output includes: route rankings based on cost recovery; performance indicators, such as cost per vehicle service hour and per vehicle service mile; farebox recovery percentage; and passengers per vehicle service hour and per vehicle service mile.

Other useful indicators developed by OCTD for management and policy decision-making purposes include: service reliability; customer complaints per 100,000 passengers; miles between road calls; collision accidents per 100,000 vehicle miles; percentage of trips with a call-time-to-pickup within 40 minutes; percentage of trips with a pickup-to-delivery within 30 minutes; customer complaints per 10,000 passengers; and miles between road calls.

Demographic data comes from the most recent census data, supplemented by mortality data from the state health department. SCAG uses census tract-based traffic analysis zones and relies on employment data provided by the state. Employment data must usually be disaggregated to traffic analysis zones using a SCAG computer model. Most of the income data is provided by the state Franchise Tax Board.

Recent SCAG data collection efforts include: a 17,000 household travel survey (origin-destination) to update trip data; an interactive/iterative data program to accumulate city and county collected data, disaggregate it into traffic zones, and provide it to smaller jurisdictions; creation of a database from surveys monitoring the public's awareness of transportation issues and opinions on new transportation approaches.

LACMTA has relied upon data collected by Caltrans, SCAG, LA County's transit operators, and local jurisdictions. LACMTA collects its own transportation information for specific studies when no other sources are available.

Observations and Suggestions

- 1) **Data from ISTE A management systems** -- SCAG could insure that data collected and reports generated from the development of the six management systems mandated in ISTE A are useful to SCAG and its constituent agencies in monitoring and evaluating plans and projects. (Note that this site review occurred before guidance on the management systems was available.)

SCAG could develop a plan and an inter-agency coordination process to assist the state in its development and implementation of projects for highway pavement, bridges, highway safety, traffic congestion, public transportation facilities and equipment, and intermodal transportation facilities and systems (ref., Section 1034, ISTE A).

- 2) **HOV usage** -- A major strategic component of the RMP is the ride-sharing program and the extensive network of HOV facilities. SCAG could continuously collect sampled data on vehicle occupancy to insure and confirm that the passenger-carrying capacity of HOV facilities is maintained according to the long-run mobility plan. Similarly, SCAG could continuously collect data for the "system" performance indicators (RMP p. I-15) that were used originally to test plan alternatives.
- 3) **Data collection opportunities** -- New opportunities for data collection are potentially available. VMT could be monitored by obtaining mileage information from the inspection and maintenance (I&M) program administered by SCAQMD, giving a 100 percent sample of the vehicles registered in the region. In addition, the Regulation XV process provides ongoing surveillance of journey to work behavior for firms with over 100 employees.

C. Ongoing and Corridor Multi-Modal Planning Approach

Corridor planning studies have historically been done outside of the regional planning process, by Caltrans or other agencies, often without federal funds. SCAG staff pointed out that almost every corridor study done during the past 20 years has had some involvement by SCAG, ranging from review, to providing data, to participating on technical advisory committees. The corridor studies are also used as input to the regional mobility plan. Even with the requirement that these studies be included in the UPWP, coordination with the regional planning process is difficult. Most studies are the responsibility of implementors such as Caltrans and the transit agencies. Even joint studies do not have major involvement by MPO.

SCAG prefers an area approach to subregional studies rather than a linear approach. When corridor studies are undertaken, SCAG is represented on technical advisory committees. Because of the special air quality problems for Southern California, all such studies must give special consideration to system management/congestion management.

Examples of corridor studies include:

- Ventura County Area Study
- Airport Southwest Study
- LAX Area TSM/Corridor Study

- I-405 North Corridor Study
- San Pedro Bay Ports Access Study
- Los Angeles-San Diego (LOSSAN) State Rail Corridor Study

These studies focus on particular problem areas and are important initiatives. The area approach identifies local issues to address to assure that goals of the CMP are to be pursued in a manner consistent with the long-range strategy of the RMP. As a result, the corridor studies can become an important building block for the regional plan and TIP. For example, the studies can provide additional data and insight to integrate goods movement and port development into the RMP by examining the merits and interactions of dedicated lanes, truck restrictions or prioritization, transit-friendly design, and jobs/housing balance. The studies also support CEQA and NEPA environmental analysis at the detailed project design and scoping levels.

LACMTA has no county-wide urban development goals. Land-use, demographic, and socio-economic projections are prepared by the local jurisdictions and are aggregated to and adjusted against regional level projections developed by SCAG. No adjustments are made at the county level. LA County uses this information as input in its transportation planning process.

There has been no multi-modal systems planning at the county level. The efforts required under the CMP focus on major roadways and performance measured in traffic levels of service. Priority corridors have been determined through systems-level planning activities performed by SCAG.

Corridor planning has focused on the development of fixed transit guideway systems with consultants performing the technical work for LACMTA. LACMTA has performed site-specific studies and studies related to restructuring the county bus service. Nevertheless, further corridor level and local site planning apparently will be required to refine transportation and cost estimates for the fixed guideway and local projects in the ITP and the CMP, and to provide a foundation for the programmed expansion of LA County's bus fleet, as called for in these documents. LACMTA coordinates corridor planning for fixed highway and HOV facilities.

These plans and programs reflect an increased orientation toward multi-modal TSM and congestion management efforts.

D. Consideration of Air Quality

Attainment Status

As the only metropolitan area in the U.S. to be placed in the "extreme" category for ozone under the CAAA, the Los Angeles Region has the greatest ozone problem in the United States. In addition, it is designated as "serious" for carbon monoxide. This is due to a combination of climactic conditions, extremely high population and economic activity, extensive vehicle ownership and use, and growing VMT compounded by increasing congestion.

The Los Angeles area is further along using implementation strategies than other metropolitan areas in the U.S. because of the California Clean Air Act (CCAA) passed in 1989, prior to the federal CAAA. The framework and implementation of the California law are similar to those

of the CAAA, and are more stringent in some aspects. Under the CCAA, air quality plans for areas which had not met state standards were due in July 1991. The final federal regulations were not available at the time of this review. Consequently, the conformity analysis required by October 1, 1992, was performed during the summer, in accordance with the Interim Conformity Guidance, based upon the most recent population, employment, travel, and congestion estimates. The RMP is based on very aggressive assumptions about the jobs/housing balance, substitution of telecommuting for travel, and mode shift to transit.

While the findings of conformance with the Clean Air Act were satisfied in 1992, it would be prudent to prepare considerably more analysis in anticipation of the final regulations which required a new conformance finding on October 1, 1992. Several features are likely to need more analysis and documentation. For example, by the next conformity finding, considerably more could be known about the validity of the jobs/housing balance strategy, the telecommuting strategy, and the implications of (and likelihood of implementing) the 1,846 lane miles of general purpose highway and 1,251 lane miles of HOV/transitway listed in the RMP (page I-7). Consideration of these and other TCMs could thus be strengthened in the development of the transportation plan.

California Clean Air Act

The California law provides a two-pronged approach to Clean Air transportation efforts. First, Technological Improvements are intended to improve fuel, fuel handling and distribution, and vehicle design and maintenance. Second, Transportation Control Strategies reduce vehicle hours travelled (VHT), VMT, and vehicle trips through transportation infrastructure and management changes. The law encourages the use of TCMs to reduce the growth in vehicle trips, VMT and VHT, which could offset any technological improvements.

Technological Improvements

The California law includes "technology forcing" provisions which require that certain proportions of the vehicle fleet emit extremely low pollutants, even though technology to achieve these goals does not yet exist. The strategy aims to create a market demand to "force" the development of the new technology and a distribution system to support it. If the market does not respond to this strategy, or there are not further improvements, for example, in inspection and maintenance, there will be more reliance on TCMs through the Control Strategy.

Another aspect of the "technology forcing" strategy is the requirement to shift buses to a cleaner fuel. This could strain the ability of transit providers to renew and expand their bus fleets, possibly reducing the transit agency's ability to play the larger role in reducing auto use, as envisioned in the RMP. Targeting buses would solve a small fraction of the diesel problem, because buses constitute a small proportion of diesels in operation (most are trucks). In addition, the small market created may not attract industry to produce appropriate engines or develop fuel distribution systems.

Within SCRTD, preparations are underway to explore conversion to methanol. Other potential fuels are also being evaluated. At the same time, requirements later in the decade to convert part of the fleet to electricity could make bus procurement and maintenance complex and expensive.

Transportation Control Strategies

One major initiative of the SCAQMD, Regulation XV, requires employers of over 100 employees to increase average vehicle occupancy to over 1.5 persons per auto. This employer-focused approach is also mandated in the CAAA for the eight urbanized areas classified as severe or extreme. Regulation XV is an important part of marketing by SCRTD, the OCTD, Riverside Transit Agency, and Omnitrans.

SCAQMD can affect a large number of commuters by dealing with the roughly 10 percent of firms in the metropolitan area employing over 100 people, which account for 35 to 40 percent of area employees. Plans from approximately 6,500 of the 8,000 firms in this category had been processed, and approximately 12 percent had met their targets at the time of this review. There is discussion of expanding the regulation to include employers of 50 or more employees, which would increase results, but require substantially more resources.

Coordination of Air Quality Activities with the UPWP and TIP

The UPWP includes actions to coordinate the information and groups necessary to organize and integrate transportation and air quality planning. This is difficult because of the separate but overlapping roles of SCAG and SCAQMD. Also, extensive studies related to air quality are conducted by the transit and county agencies; because funds for many of these studies are not federal or are from non-transportation funds, these efforts have not been coordinated through the UPWP process. In the future, the UPWP should reflect all significant planning in the transportation/clean air area, regardless of funding source, and identify the primary agencies responsible, and their relationships.

Conclusion

One of the dominant transportation issues facing the Los Angeles area is the contribution of mobile source emissions to urban air pollution. The CAAA require the transportation planning process to contribute to reducing mobile source emissions by developing strategies to promote efficient modes of travel while reducing single occupant vehicle use. The CAAA are reinforced by ISTEA and stringent state air quality requirements.

At the same time, because of the severity of the air quality situation, there are likely to be challenges to the validity of the processes and plans; it would be appropriate to take early action to strengthen the analytical basis of the documentation, make appropriate changes in plans, and strengthen the TIP preparation processes as an instrument of policy.

Observations and Suggestions

The conformity of the RMP with CAAA requirements was not a major issue at the time of the review because (among other factors) there were no final regulations on determination of conformity for the Clean Air Act. It would be prudent to anticipate problems with the next certification, and begin any necessary revision to the RME.

- 1) **Support for jobs/housing balance** -- The jobs/housing balance component was an essential element in reaching an outcome for the year 2010 consistent with reasonable economic and population growth, and clean air objectives. While documenting the value of a jobs/housing balance is a useful aspect of the planning process, the regional air and mobility plans could fully develop alternatives without land-use intervention if there is no support to implement it.
- 2) **Mechanisms to implement telecommuting** -- There do not appear to be mechanisms in place to achieve the three million daily person trips reduction assumed to be displaced by telecommuting and other strategies to eliminate home-work trips. Technical analysis is required of how this process will work and of emissions reductions.
- 3) **Capacity expansion** -- The ability to add over 1,800 lane miles of general purpose highway, while satisfying federal and state mandates to reduce VMT, is questionable and could be challenged in court. More extensive analysis of alternatives, including evaluating systems with no addition of general purpose lanes or fewer additional lane miles, seems necessary to anticipate such challenges.
- 4) **HOV expansion** -- Addition of over 1,200 lane miles of HOV lanes might also be challenged as encouraging VMT growth, and outweigh incentives for carpool or transit utilization. Evaluation of alternatives, including the potential to use these lanes for buses and trucks or to construct fewer lane miles, would be valuable for justification of this component of the plan.
- 5) **Shift to transit** -- The plan relies on a massive increase in transit usage by the year 2010 from a 4 percent to a 19 percent overall trip share. To accommodate this expansion alone would require major increases in the bus fleet and operational subsidies, neither of which can be financed with currently available funds. Since ISTEA requires that future plans and updates be fiscally constrained and include a financial plan that demonstrates that it can be implemented, new sources of funds must be found. Analysis of the sensitivity of the plan to this transit share assumption could identify the magnitude of the "other" measures required to compensate if adequate funds are not provided, or ridership is not captured.
- 6) **"Natural" jobs/housing balance** -- Prediction in the RMP of tremendous congestion in the "no intervention" scenario could be improbable if residents reach a threshold beyond which they will not commute. Some have suggested that economic activity simply will leave the region, and the skilled population will follow the jobs. While this may not be a desirable strategy to reduce VMT, it could be analyzed and documented as a possible result in the "no intervention" scenario. Another hypothesis might be to assume that the

"perceived congestion tax" associated with congestion is nonlinear, and the marginal value of time in commuting escalates once the commute exceeds some socially accepted norm. A "natural" jobs/housing balance might set in, characterized by fewer VMT than that which was predicted for the "no-intervention" scenario.

- 7) **Inclusion of transportation/air planning in the UPWP** -- The UPWP should reflect all significant planning in the combined transportation and clean air area, regardless of funding source, and identify the primary responsible agencies and their relationships.
- 8) **National interest in Regulation XV** -- The region's experience with Regulation XV could provide a new source of information on individual behavior of interest to planners in other regions.
- 9) **Citizen involvement** -- Efforts to increase citizen awareness and secure support for Regulation XV are impressive.
- 10) **ISTEA factors** -- The planning process should be reviewed to ensure that the fifteen ISTEA factors will be adequately addressed in the future.

E. Outreach Efforts

SCAG uses an extensive committee structure to bring local government units, state and county agencies, and private citizens into the planning process (see Section III).

SCAG's Regional Advisory Council is composed of 50 citizens, other than elected officials, representing business, church groups, and universities. The Council makes recommendations to the Executive Committee on proposed plans. A deliberate attempt is made to get the private sector, minorities, women, and the disadvantaged involved in this group.

Opinion surveys and public hearings are used to sample citizen opinion. All area studies have a policy advisory committee on which private citizens sit. SCAG does feel that additional efforts are required to follow the process put forth in the federal OMB Circular 102 to formalize the process for evaluating the impact of transportation planning on the citizenry at large.

SCAG intends to enable or create a public participation program for each new plan and project which will inform, involve, and incorporate public opinion into the planning process. Parties to be notified include elected officials, local governments, public agencies, business, interest groups, minorities, transit operators, and health and handicapped groups. SCAG also intends to spend 10 percent of the total planning budgets on its public participation program, which itself will be subject to citizen evaluation.

The CTCs maintain their own outreach programs. For example, LACMTA has a Technical Advisory Committee which it uses to foster interagency communication with local jurisdictions. There is also a Citizen Advisory Committee to advise the LACMTA Board. The Area Teams, which conduct studies and EIRs, work with municipalities, local Chambers of Commerce, homeowner associations and other civic groups. Each team meets monthly with the municipalities in its area to discuss on-going studies, projects, and issues.

The LA CMP was developed through interaction with both a Technical Forum Committee and Policy Advisory Committee (PAC). The PAC represents a cross-section of cities, public agencies, public interest groups, corporations, and developers. The Technical Forum Committee meets regularly with the staff of LA County's 89 jurisdictions to discuss technical issues related to the CMP. A monthly newsletter is mailed to interested parties.

LACMTA has developed a policy related to the involvement of the private sector. Area Teams meet with private developers on potential joint development projects. As noted above, the private sector participated on the CMP PAC. In addition, there is a Private Sector Forum composed of private bus companies that meet quarterly to review potential route modifications or facilities improvements and potential private sector involvement.

Observations and Suggestions

Public participation -- SCAG and the other regional agencies are commended for their public participation programs, which involve representation and input on transportation needs from all levels of government, transit operators, the public, and other interest groups. Efforts to assure representation of the extremely diverse ethnic groups in the metropolitan area are impressive. SCAG is also commended for demonstrating its commitment to strengthen participation by developing a formal program with citizen involvement and a financial commitment. SCAG is encouraged to make these improvements, which are consistent with the direction of ISTEA.

VI. Tools, Skills and Data Base for Transportation Planning

A. Travel Demand Forecasting

The size of the region, complexity of its population, and severity of the air pollution result in a challenging planning environment. Observations of the modelling process in the Southern California metropolitan area focused on data collection, agency coordination, and technical processes.

Travel demand modelling is performed by a number of agencies in the Southern California region, including SCAG, Caltrans, LACMTA, and OCTA. The metropolitan area is to be commended for maintaining a modelling task force, consisting of 20 to 25 individuals from these agencies, which has the responsibility for coordination of modelling activities throughout the region.

Data Collection

Population projections for the metropolitan area are developed using a standard cohort approach which differs somewhat from other areas by considering international out-migration and immigration. The process is further complicated by illegal immigration. SCAG population estimates differ from those of the California Department of Finance. The methodology used by SCAG is based on intensive demographic analysis. SCAG's population forecast is based on equilibrium with the jobs forecast, not on the basis that congestion and growth control will limit economic growth.

Employment estimates are made using shift/share models beginning with national and then state projections. Regional employment growth by sector is estimated based on past trends. This process may overstate employment growth in industries that may be adversely impacted by actions taken to enforce compliance with air quality standards. As a result, the metropolitan area may want to investigate the implications of air quality compliance on the growth of potentially affected industries.

Currently, there are no plans to use the commute data required by Regulation XV for modelling. This data could prove useful for the regional transportation models. Further, over time this data could help provide the basis for models which predict the impact of various transportation control strategies.

The regional travel demand models are generally based on data collected many years ago (1967 and 1976) and are not well structured to estimate transit demand. The mode split and transit network components of the models are very crude. Transit demand validation is based on aggregate data so that the ability of the models to reflect current demand must be questioned. In a metropolitan area planning major transit improvements, this is a serious planning deficiency raising questions about the accuracy of any estimates of transit ridership. In comments on a draft of this report, SCAG staff described the travel demand models as upgraded with more recent data, but they did not provide additional details.

A major effort to update the travel demand models has been undertaken by the region, starting with a survey of 17,000 households. This data along with the 1990 census journey-to-work data provides the basis for the development of refined models for the region.

Collection of data on current transit riders through an on-board survey is a critical element required to complete this major recalibration. The data collected should be relevant to the travel demand forecasting process (for example, trip purpose, socio-economic characteristics of the trip-maker, origin and destination, and other information). This information is essential for model validation. We do not believe that a credible transit forecasting process for the metropolitan area can be developed without a survey which identifies existing transit ridership.

Resources must soon be made available for this major model recalibration effort. The data manipulation and analysis and model calibration and validation effort will require considerable resources if it is to be accomplished in a timely manner. The timeliness of this effort is extremely critical given the importance of accurate modelling projections for air quality conformance and transportation infrastructure planning.

Agency Coordination

Coordination is necessary among all agencies with an interest in modelling in the metropolitan area so that resulting models will fit the needs of interested agencies. The results of the model calibration effort will have implications for many agencies in the region. New models should provide the foundation for project planning models throughout the region.

Technical Process

While several agencies in the metropolitan area have their own travel demand modelling capabilities, there is general consistency in the use of major inputs, such as population and employment projections and trip tables. However, several significant differences in modelling exist between the SCAG and SCRTD models. While each model uses the same population and employment projections, the agencies use different distribution models resulting in different trip tables with the same inputs. The SCRTD system uses "K" factors for work trips, which are developed from the 1980 census journey-to-work data, while SCAG's distribution model does not contain these factors. Significant differences also exist in transit coding conventions, path choice, trip stratification and mode split equations.

Certainly, each modelling system has different purposes. SCAG is dealing with regional modelling issues in which auto traffic is the dominant mode, while SCRTD is concerned with a more accurate estimation of transit ridership. Even with different modeling objectives, the SCAG and SCRTD models should use the same total trip tables and trip stratifications. To the extent possible, they should use the same transit coding conventions, path choice criteria, and mode split models. The more detailed transit treatment which is necessary in the SCRTD models should not result in totally different path choice and mode split models as is currently the case. The calibration of new models, mentioned earlier, using data from the 1991 survey of 17,000 households and the 1990 census journey-to-work information, should be an opportunity to develop models for SCRTD and SCAG which are consistent.

LACMTA is developing an expanded modelling capability. The agency planned to have its models operational by June, 1992. The models are intended to support LACMTA's major transit planning process as well as its development of congestion management plans. Modelling for congestion management plans will, of necessity, be at a much finer level of detail than is accomplished with the SCAG modelling process. Still, there will be a need for LACMTA modelling to adhere to trip making totals and other relevant information developed by SCAG. We are very concerned that the models developed by LACMTA for corridor transit planning be consistent with those used by SCAG. At a minimum, this requires distribution models, transit networks, path choice, and mode split models to be consistent. To accomplish this, LACMTA should actively participate in the model revisions mentioned above, and LACMTA's corridor planning models should be developed with active involvement by SCAG.

To confirm that modelled traffic results are useful for air quality analysis, both simulated traffic speeds and volumes must be reasonably accurate. Currently, SCAG assesses only the accuracy of simulated traffic volumes. SCAG should also assess the accuracy of simulated traffic speeds.

Currently, if projections show that Regulation XV requirements are not met, compliance is accomplished by reallocating single occupant trips into higher occupant modes. This provides a trip table that presumes achievement of Regulation XV goals, but provides no insight into the necessary measures or the efficacy of the proposed programs. Similarly, the modified work week program is assumed to result in a 30 percent across-the-board trip reduction. The concern is that simply removing these trips from the trip table could lead to under-estimates of expected auto volumes. A better means of estimating the implications of Regulation XV is needed.

Although some data on highway system performance are collected and reported by Caltrans, and SCRTD collects and reports similar data for its operations, SCAG has no formal program for surveillance and monitoring of travel behavior and transportation system performance. SCAG could improve region-wide monitoring of changes in travel relative to forecasts by developing and managing a system that defines the items to be monitored, identifies organizational responsibilities, and brings together data collected by the various agencies.

Observations and Suggestions

New missions generated by the CMP and CAAA have prompted a multiplicity of modeling capacity occurring at the county, transit agency, and state agency level. Extensive effort goes into communication among the various groups to maintain consistency in basic assumptions and approaches.

Recommendations for enhancing SCAG's capabilities in the area of tools, skills and data include:

- 1) **Provide a centralized data source** -- SCAG should provide a centralized source for planning development data used in forecast models and in model validation. (VI.A.)
- 2) **Update regional travel demand models** -- Involved agencies should update the regional travel demand models. Sufficient resources should be made available so that model revisions can proceed expeditiously.

- 3) **Assess accuracy of simulated traffic speeds** -- In order to be useful for air quality analysis, both simulated traffic speeds and volumes must be reasonably accurate. SCAG already assesses the accuracy of simulated traffic volumes, but, in addition, it could also assess the accuracy of simulated traffic speeds.
- 4) **Monitor travel behavior** -- Some data on highway system performance is collected and reported by Caltrans, and SCRTD collects and reports similar data for its operations. SCAG, however, has no formal program for surveillance and monitoring of travel behavior and transportation system performance. A system managed by SCAG could improve the ability to monitor changes in travel relative to forecasts and progress toward achieving VMT growth reduction goals.
- 5) **Develop methods for use of new data sources** -- Methods to take advantage of new sources of data on trip making, generated by the Inspection and Maintenance and Regulation XV aspects of the Clean Air Act, could be developed. The commute data required by Regulation XV could be useful for the regional transportation models. In the future, this data could provide the basis for models which predict the impact of various transportation control strategies.
- 6) **Estimate Regulation XV impacts** -- A better means of estimating the implications of Regulation XV could be considered. Currently, if projections show that Regulation XV requirements are not met, compliance is accomplished by reallocating single occupant modes. This provides a trip table that presumes achievement of Regulation XV goals, but provides no insight into the measures necessary for the efficacy of the programs proposed. Similarly, the modified work week program is assumed to result in a 30 percent across-the-board trip reduction. Removing these trips from the trip table could lead to underestimation of expected auto volumes, while providing no insight into the measures necessary to meet the Regulation XV requirements and possibly producing misleading travel estimates.

B. Costing Methodologies

The long-range transit element of the transportation plan consists of the capital analysis undertaken by SCRTD and the other transit implementors and their contractors. Capital and Operating and Maintenance (O&M) costs for the transit components were also developed by the implementors (see Section VII). Actual costs for building light rail systems in other corridors were used to estimate capital costs for the light rail systems presented in the transition analysis document.

SCRTD O&M costs for bus service (using local wage rates) were used to estimate projected O&M costs for the light rail system. Capital costs associated with fleet replacement and modernization are based on standard engineering cost estimates using life cycle data for the current fleet.

For new highway projects, capital costs are based on surveys of locally completed projects. No right-of-way costs, however, are included in the capital cost estimates. O&M costs are also based on local data; generally, O&M costs per annum are calculated as a standard percentage

of capital costs. However, historical O&M costs were used for consistency and feasibility checks for projects documented in the TIP.

Observations and Suggestions

- 1) **Costing methodologies** -- In general, costing methodologies of SCAG, Caltrans, and the implementors are competent and appropriate.
- 2) **Other sources of O&M rail costs** -- Projection of O&M costs for light rail and rapid transit could use historic costs from other transit operators to improve the accuracy of rail cost projections derived from SCRTD's bus costs. For example, the Section 15 data base provides complete historic O&M costs for all U.S. rail operators. Most rail operators provide maintenance costs for cars, track, stations, and communication systems, which can be used to derive a range of O&M unit costs.

VII. Ongoing Transit Planning

A. Organizational Issues

The review team met with staff from the major transit operators in Los Angeles, Riverside, San Bernardino, and Orange Counties, and reviewed written documents from their planning processes. The figures cited in this report were derived from these documents, unless otherwise noted.

Omnitrans, the principal provider of public transit within San Bernardino County, serves fourteen area cities and unincorporated areas. Omnitrans has a 480 square mile service area and serves over 1,000,000 people. SANBAG is the county transportation commission and provides subregional planning for Omnitrans. Omnitrans operates approximately 58 fixed route motorbuses and contracts for 52 demand response vehicles.

Although LA County has fifteen fixed route transit operators, the Southern California Transit District (SCR TD) is the dominant operator. As of April 1993, SCR TD merged with the Los Angeles County Transportation Commission to form the LACMTA. SCR TD provides bus service on 209 routes with over 1,900 buses. SCR TD also operates the Metro Rail Blue Line. Unlinked 1990 transit boardings totalled approximately 408.6 million, more than 85 percent of fixed route service in LA County. There are also fifty cities providing community and shuttle services. Seventy operators provide either paratransit service to the general public or specialized agency service.

Riverside County and the twelve cities of its western region established the Riverside Transit Agency (RTA) to operate public transit service, either directly or under contract. RTA staff coordinate agency planning with SCAG, Caltrans, and the Riverside County Transportation Commission (RCTC) through membership on standing technical committees.

The Orange County Transportation Authority (OCTA) was formed in 1991 through consolidation of the Orange County Transit District (OCTD) and the Orange County Transportation Commission. OCTD maintains a separate legal identity, as operator and planner of public transportation. The same board represents both OCTA and OCTD. OCTD operates approximately 330 fixed route motorbuses, and contracts for demand response and additional bus service. OCTD is actively planning commuter rail links with its neighboring counties and transitways.

The four operators provide a limited share of trips in this automobile dominated region. Although SCR TD provides 6.6 percent of home-to-work trips, the RMP identifies an optimistic increase to 19 percent by 2010. As another example of the modest regional trip share of transit, OCTD provides only 1.2 percent of person trips in its service area, which is projected to remain constant through the year 1998.

At the time of the review, SCRTD was governed by an eleven member Board of Directors appointed by locally elected officials. Five members were appointed by the Los Angeles County Board of Supervisors, two by the Mayor of the City of Los Angeles with the concurrence of the City Council, and four by a selection committee representing the other 84 cities in the District.

SCRTD is guided by a 5-Year Short-Range Transit Plan (SRTP) for the Fiscal Year (FY) 1992-96 period. It is updated annually. The plan, which was approved by the SCRTD Board in March 1991, is a compendium of the following five volumes:

The Business Plan is the strategic planning instrument for SCRTD; it states the agency's goals and objectives, and presents the agency's financial plan.

The Technical Document tracks SCRTD's progress toward achieving the goals and objectives identified in the previous year's plan.

The Facilities Plan outlines SCRTD's goals and objectives, plans, issues and problems for the fixed support facilities, and extends beyond the five year horizon.

The Guideway Plan provides operating plans, costs, and supporting services for the bus and fixed guideway systems currently under construction. Also presented is SCRTD's joint development and value capture activities and the status of bus route electrification studies mandated by the SCAQMP.

The Capital Plan identifies the projects over the next five years that must be undertaken to meet various mandates, defines the projects that ensure SCRTD is able to provide service at current levels, and includes an expansion element to address overcrowding on SCRTD services.

The SRTP reflects a multi-modal approach. It generally remains consistent with the RMP and LACMTA's Draft CMP; presents strategies for operating and supporting LA County's new fixed guideway system and existing bus services; responds to the SCAQMP; and includes private sector, ridesharing, and paratransit services. The SRTP also notes areas, under the responsibility of other agencies, that would improve the attractiveness of transit and help manage congestion. The SRTP identifies a substantial shortage of funds to address bus vehicle and facility replacement/rehabilitation and service expansion. This may affect SCRTD's ability to respond fully to the RMP, SCAQMP and LACMTA's CMP, SRTP and TIP, as well as to provide support to the new fixed guideway systems.

Only those planning efforts by SCRTD that are federally funded are programmed in the regional overall work program (OWP). The OWP does not reflect regionally significant transit planning efforts that are conducted without federal funds. SCRTD does not have an integrated document to provide organization and context to its planning efforts. SCRTD could consider developing a document something like the region's OWP to describe its own planning. This document could then be an input to the regional OWP.

A great deal of the planning by all four operators is funded with local resources and does not appear in the UPWP. In addition, the long-range plans appear to respond, to a great degree, to the political process, with less connection to the operating and funding realities of the transit providers. Short run issues bypass the transportation planning process because the UPWP does not include locally funded congestion management and transit initiatives, and the TIP does not affect the short-range program of the individual agencies. Long-range planning is bypassed by referendum and county decisions on major capital investment. The linkage of planning to action, such as capital investment, is unclear.

Observations and Suggestions

- 1) **Formally develop linkages between transit and regional plans** -- Strategic plans and short-term elements of the two larger operators -- SCRTD and OCTD -- are particularly strong and are linked to the SCAG RMP and the district's air and transportation plan (SCAQMP). Although references are made in the RTA and Omnitrans SRTPs to these regional plans and their objectives, linkages between these transit plans and the objectives of the two regional plans are not formally developed.
- 2) **Broaden the UPWP** -- The UPWP should be broadened to incorporate all transportation planning activities in the Los Angeles metropolitan area, regardless of funding source. The UPWP should present a single, integrated picture of regional transportation planning. (III.C.)

B. Performance of Existing Service and Development of New Services

SCRTD reviews its service on a continuing basis. Boardings and schedule performance data are collected regularly. Point checks are made regularly on all routes with more frequent surveys taken on routes with fluctuating ridership. Route schedule adjustments are made three times a year based upon the analysis of this information.

In addition, SCRTD performs a comprehensive review of its entire service structure once every three years. The services are compared against the Board's policy for cost-effectiveness. Key criteria include boardings per service hour, passenger miles per revenue mile, and revenue per service mile. Central Business District (CBD) cordon counts are performed every three years under a coordinated effort led by the City of Los Angeles. The last comprehensive review was performed in 1989; the next was scheduled to occur in 1992.

SCRTD uses a cost allocation model for route level and segment planning. It is a matrix model which is based upon bus miles and bus hours and is adjusted every six months.

The above information is shared with SCAG and LACMTA. Similarly, SCRTD obtains demographic and origin-destination information from SCAG.

The RTA Board approves a Service Performance Standards policy that sets standards for a range of operational characteristics, including bus stop spacing, loading, on-time performance, and maintenance. RTA's performance evaluation includes the 25 percent of service provided under contract.

Currently, special attention is being given to providing planning support to the development and service implementation of the new fixed guideway systems. These concerns are reflected in SCRTD's SRTP.

The extremely high SCRTD bus load factor could indicate that the market is underserved. However, the operation costs of new rail starts are leading to consideration of a cut in bus service because of lack of operating support and funding. Labor agreements also appear to limit the amount of work contracted out, and physical expansion appears to be proceeding without a comprehensive labor strategy.

Omnitrans and RTA appear to use private vendors for new routes successfully.

OCTD, RTA, and Omnitrans have thorough methods for evaluating service, including complete and balanced sets of performance measures to identify service to expand or eliminate.

Observations and Suggestions

- 1) **Strong service planning** -- The transit providers appear to do a skillful job both of providing service on the most necessary corridors and of matching service to ridership. The providers also have thorough methods in place to evaluate service.
- 2) **Transit implications of Regulation XV** -- Although OCTD, Omnitrans, and RTA recognize the importance of Regulation XV to their operations and opportunities, this concern could be translated into more specific near and long-term strategies in their plans.

C. Transit Structure, Vehicle and Equipment Planning

SCRTD's Facilities Plan addresses the need for existing bus support facilities and reactivated facilities for the new bus services identified in the RMP. The Plan also addresses facility issues related to the new rail systems as well as park and ride facilities. A skeletal plan is presented to upgrade fuel tanks for the use of alternate fuels.

The engineering department regularly inspects the facilities. This review is reflected annually in the SRTP Facilities Plan. According to the Facilities Plan, SCRTD will be developing a plan in FY 92 for the reassignment of bus lines to minimize deadhead costs. The Facility Plan provides criteria for determining the location of additional support facilities.

Preventive maintenance for vehicles is performed on time change intervals that are reevaluated every two to three years. The facility improvement planning efforts give extensive consideration to the new rail facility and the expansion of service called for in the RMP, and are reflected in the SRTP.

OCTD, RTA, and Omnitrans, which are primarily bus operators, demonstrate adequate fleet condition surveys and planning.

Observations and Suggestions

A multi-modal approach to capital planning -- SCRTD's capital planning process could explore more modal possibilities, including combinations of bus and rail service. For example, SCRTD could examine the capital costs of fixed route bus service with and without complementary rail service.

D. Transit Management Analysis

SCRTD maintains various programs to provide planning support in the management of its system. The previously mentioned criteria and schedules for reviewing service are key components.

SCRTD has an established training program, assessing training needs every two to three years. These evaluations have resulted in programs to address literacy and other language concerns related to mechanics' ability to read manuals and directions, driver sensitivity to the public, and career development for women and minorities.

SCRTD funds a sophisticated safety planning program under its Risk Management Department. The department focuses on strategies for containing and funding the costs associated with accidents, injuries and damage to SCRTD property arising from transportation services through the functions of loss prevention, loss control, data analysis and risk financing. The data processing staff provides coordination in the design modification, and implementation of reports for new and existing management information systems (MIS), microcomputer, and claims administration systems. Statistical analysis is used to integrate claims and accident data to produce, develop, and communicate statistics for: compliance requirements; loss prevention analyses; service cost projections; financial and claims audit reports; operating cost comparisons; and reserve funding forecasts.

In-service and on-property accident information is recorded, maintained, analyzed, and reported on a quarterly basis. Liability and financial risks are evaluated on a regular basis. Safety evaluations and plans are developed for the operating departments.

In addition, the following are major recent and on-going planning support activities:

- Development of an Emergency Preparedness Plan;
- Evaluation of Risk Management MIS Systems;
- Evaluation of safety issues related to the Metro Rail Blue Line; and
- Development of a rail safety database for safety statistics, regulatory reporting, and rail program performance reporting.

Observations and Suggestions

- 1) **Expand management analysis** -- OCTD is a moderate size transit system, and RTA and Omnitrans operate less than 100 buses each. As such, their planning focuses on both service standards and evaluation, and financial planning. With potentially growing demands on transit in the region, including involvement in Regulation XV programs, and shifting demographics, the three operators could undertake some expanded management analysis, possibly of training needs and labor availability, to anticipate the demands for increased service.

E. Financial Planning

The financial condition of SCRTD and its financial capacity to cover capital and operating costs are regularly assessed. Plans and TIPs are compared against financial projections by the Comptroller, Planning, and Management and Budget Offices. Each task is evaluated to determine whether there is adequate funding for the task.

These activities are reflected in the SRTD's Business Plan, which notes potential shortages of funds to support the current fleet and to provide the expanded fleet called for in the SCAQMP, LACMTA Congestion Management Program, and the new fixed guideway system. LACMTA's allocation of Proposition C funds is of particular concern. Apparently the current forecasted growth in TDA, Proposition A, and Proposition C subsidies and revenues may be overestimated when compared to recent experiences. For example, the forecasted growth in the case of TDA and Proposition A funds is 6 percent, in contrast to recent experienced growth of less than 2.5 percent.

As mentioned above, the triennial review of bus routes involves consideration of financial criteria for all four operators reviewed.

Observations and Suggestions

Applications for strengthened financial planning -- The transit operators demonstrate the ability to conduct routine financial planning, but the financial basis on which to expand and operate transit could be improved. A stronger case for funding transit projects, particularly using ISTEA flexible funds, could be established if operators demonstrate how their projects contribute to regional objectives, including air quality.

F. Planning for Americans with Disabilities Act

Observations and Suggestions

Progress toward full accessibility - Because California had a similar statute before the 1990 ADA, the bus fleets are almost fully accessible. Patronage by the disabled community is low. Federal regulation seems to require the expansion of the more popular and convenient accessible paratransit systems.

G. Outreach Activities

SCRTD's Local Government Community Affairs Office is responsible for citizen outreach. Although there do not appear to be formalized policies or procedures for monitoring citizens' views of SCRTD, the operator has a continuing program of ridership surveys. Most studies related to service have a citizen participation component. The Bus/Rail Integration Plan for the Metro Rail Blue Line included a comprehensive public participation component, including community meetings, brochures, and news releases. The SRTP has been provided to all city administrators, and the city's advisory and public interest groups.

SCRTD has a Minority Participation Program that works through legislators, churches, and advisory councils located in minority neighborhoods. Brochures and information pieces are written in English and Spanish.

Planning to encourage participation by private enterprises is another key outreach activity. SCRTD participates in the CTC's Private Sector Forum. The triennial evaluations of the bus routes include evaluations of opportunities to contract to the private sector for operation of routes. Private sector participation is also considered for new and existing routes where more than 25 percent of the route miles are to be adjusted. Fully-allocated cost and marginal cost models are used for this evaluation. SCRTD maintains a list of private operators for contracting purposes.

The greatest obstacle to contracting is the current union agreement requiring that the local union be recognized as the bargaining unit for any contracted service. This has impeded or prevented various privatization efforts. LACMTA is pursuing joint development projects in planning fixed guideway system in LA County. The SRTP emphasizes land massing and higher density as key components of the Station Area Specific Plan.

OCTD has a Citizens' Advisory Committee (CAC) consisting of 40 volunteers from throughout the community. Some are unaffiliated, and others represent business, educational organizations, senior citizen or handicapped groups, and other groups. The CAC participates in the development of the SRTP. OCTD also has an Accessible Service Advisory Committee, which has assisted staff with development of the ADA implementation plan.

RTA has a Citizens Advisory Committee, while Omnitrans relies on public hearings, ad hoc citizens groups convened for special issues, and comments from standing groups outside of Omnitrans and SANBAG.

RTA, Omnitrans, and OCTD have formal privatization policies developed to comply with FTA requirements. Approximately 25 percent of RTA's total revenue hours are provided under contracts. Contracts, including revenue service and management, account for 14 percent of RTA's total budget.

Observations and Suggestions

- 1) **Successful outreach** -- SCRTD and OCTD have particularly strong outreach strategies. The four operators have developed effective mechanisms to work with employers through the Regulation XV mechanism, and with real estate developers through CEQA and NEPA.
- 2) **Omnitrans outreach** -- Omnitrans could consider forming its own standing citizens advisory group to provide consistent input throughout the planning process from a broad range of public constituencies.

H. Planning Activities for a Drug-Free Work Place

SCRTD has a Drug-Free Work Place Program with counseling and random testing. Monthly reports, that include tracking of applicants and current employees found to be using drugs, analyze drug use and the effectiveness of the rehabilitation programs.

I. Transit Capital and Operating Plans and Programs

As stated, the SRTP is the key strategic planning document for SCRTD. It contains a detailed set of programs which reflect the planning efforts noted above. The SRTP notes planning that supports its development and references documents in which the criteria related to these programs are detailed.

OCTD, Omnitrans, and RTA have developed strong capital and operating plans as part of their SRTPs.

APPENDIX 1

Participants in Los Angeles Pilot Review

US Dept. of Transportation

Federal Transit Administration

Headquarters:

Robert Kirkland, Chief, Resource Management Division
Brian Sterman, Deputy Regional Administrator (Region II)
Deborah Burns, Office of Planning, Planning Review Program Manager
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Region IX:

Stewart F. Taylor, Regional Administrator
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Volpe National Transportation Systems Center

William Lyons, Volpe Center Project Manager
Michael Jacobs, Chief, Service Assessment Division
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Vincent Paparella (consultant)

APPENDIX 1 (continued)

Participating Regional Agencies

Southern California Association of Governments

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APPENDIX 1 (continued)

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APPENDIX 1 (continued)

Riverside County Transportation Commission

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Riverside Transit Agency

Barbara Bray, Transit Planner
Fina Clemente

Omnitrans

Daniel Brogan, Director of Planning

City of Los Angeles, Department of Transportation

Jim McLaughlin, Chief, Transportation Programs

APPENDIX 2

Agenda for Los Angeles Pilot Urban Transportation Planning Review Meeting

September 16-20, 1991

Southern California Association of Governments
818 West Seventh Street, 12th Floor
Los Angeles, CA 90017-3435

Monday, September 16

1:00 - 4:30

General Session at SCAG Offices

Stewart Taylor, FTA
Dennis Scovill, FHWA

Welcome and introductory remarks

Brian Sterman, FTA
Richard Torbik, FHWA

Objectives for planning review

SCAG

Introductory remarks

Introduction of participants

William Lyons,
Volpe Center/USDOT

Overview of meeting and schedule
Discussion of urban transportation planning process
(Roman numerals following topics refer to
previously distributed questionnaire, which provides
discussion questions).

Format for general and breakout sessions - topic
overview from SCAG and appropriate agencies
followed by discussions led by review team
members.

Discussion of how the planning process works in
the Los Angeles Region

Vincent Paparella
Volpe Center/USDOT

Local transportation issues (I.B)

Organization and management of the process -
Agencies' roles and responsibilities (II)

Products of the process (III)

APPENDIX 2 (continued)

Tuesday, September 17

9:00 – 11:30

Vincent Paparella,
Volpe Center/USDOT

Continuation of General Session at SCAG Offices

Elements of 3-C process (multi-modal dimension) (IV)

1:30 – 4:00

General Session at South Coast Air Quality Management District

Approach to air quality (Clean Air Act) (IV.D)

SCAG/SCAQMD

Presentation

Fred Salvucci, Volpe Center/USDOT

Discussion

Wednesday, September 18

9:00 – 4:00

Breakout Session at SCAG Main Office

Tools, Skills and Database for Transportation Planning (V)

SCAG

Presentation

Ron Jensen-Fisher, FTA

Discussion

9:00 – 12:00

Breakout Session at SCAG Riverside Regional Office

County-wide ongoing transit planning (VI)

Riverside and San Bernardino
County Commissions, Transit Agencies

Presentations

William Lyons
Volpe Center/USDOT

Discussion

Organizational issues – strategic planning (VI.A)

Service performance and development (VI.B)

Structure, vehicle, and equipment planning (VI.C)

Transit management analysis (VI.D)

Financial planning (VI.E)

Americans with Disabilities Act (VI.F)

Outreach (citizen and minority participation, private sector involvement) (VI.G)

APPENDIX 2 (continued)

Wednesday, September 18 (continued)

Planning for a Drug-Free Work Place (VI.H)

Transit Capital/Operating Plans and Programs (VI.I)

1:00 – 5:00

Breakout Session at Orange County Transportation Authority Offices

William Lyons
Volpe Center/USDOT

Repeat format from Riverside/San Bernardino session.

Thursday, September 19

9:00 – 11:30

Breakout Session at SCAG Offices

Presentation and discussion on county-wide transportation planning process, ongoing transit planning, and related issues (IV, V.B and VI)

Los Angeles County Metropolitan Transportation Commission

Presentation

Brian Sterman, FTA

Discussion

1:00 – 5:00

Breakout Session at Southern California Transit District Offices

Presentation and discussion on ongoing transit planning, and related issues (IV, V.B and VI)

SCRTD

Presentations

Brian Sterman, FTA

Discussion

Friday, September 20

9:00 – 11:00

General Session at SCAG Offices

Continuation of previous sessions as required

11:00 – 1:00

General Session at SCAG Offices

FTA/FHWA

Meeting summary -- Findings and follow-up actions

Regional concerns

Next steps

APPENDIX 3

Documentation Provided by Los Angeles Regional Agencies

Southern California Association of Governments

"Staying Ahead of Tomorrow - Your Guide to SCAG."

Long Range Transportation Plan - "Regional Mobility Plan."

Transportation Improvement Program - "Regional Transportation Improvement Program, 1991-97."

Unified Planning Work Program - "Overall Work Program, 1991-1992, May 1991."

"Draft Final: 1991 Air Quality Management Plan, South Coast Air Basin, May 1991."

"Final Report: Conformity of SCAG's 1989 Regional Mobility Plan and SCAG's FY 1991/97 Regional Transportation Improvement Program Under the 1990 Clean Air Act Amendments."

"Transportation Area Studies for the Southern California Region, July, 1991."

"Regional Growth Management Plan, February 1989."

Orange County Transportation Authority

"Route 55 Commuter Study, February 1988."

"Short Range Transit Plan and Transportation Improvement Program for FY 1992-1998."

"Measure M: Freeway Program Strategic Plan, April 1991."

"Congestion Management Program, July 1991."

"Final Summary Report: Countywide Rail Study, September 3, 1991" (DRAFT).

"Revised Traffic Improvement and Growth Management Plan."

APPENDIX 3 (continued)

Los Angeles County Metropolitan Transportation Authority

"Short Range Transit Plan and Transportation Improvement Program, June 26, 1991."

"Proposed 30-Year Integrated Transportation Plan, September 5, 1991."

"Short Range Transit Plan, FY 1992-1996" (SCRTD).

Riverside Transit Agency

"Short Range Transit Plan, Fiscal Years 1992-1996."

"Capital Replacement Program, August 1991."

Omnitrans

"Short Range Transit Plan: Policy, Needs Assessment and Service Plan, Fiscal Years 1992-1998."