

FTA-FHWA Metropolitan Planning Organization Reviews: Planning Practice Under Intermodal Surface Transportation Efficiency Act and Clean Air Act Amendments

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The Clean Air Act Amendments of 1990 (CAAA) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) have changed how metropolitan planning organizations (MPOs) conduct transportation planning. The manners in which MPOs and their planning partners are responding to the challenges and opportunities of these acts are evaluated on the basis of comprehensive reviews of transportation planning in nine metropolitan areas. The reviews by FTA and FHWA, with assistance from the U.S. Department of Transportation's Volpe Center, evaluate compliance with federal regulations and policies and increasingly focus on responses to ISTEA and the CAAA as guidance evolves. The acts expect MPOs to provide leadership in defining a regional vision, selecting projects, and improving air quality. To succeed MPOs must overcome a period of diminished resources, technical capabilities, and institutional roles. Particularly in areas with severe air pollution, MPOs must work with other agencies to overcome institutional and technical barriers and identify affordable and politically supportable strategies that meet stringent air quality targets while accomplishing traditional transportation goals. Many MPOs approach ISTEA as a lever to overcome fragmentation and lead regions toward systemwide planning. To realize the promise of ISTEA and CAAA, long-range plans must become strategic, framing and evaluating financially realistic alternatives that can be used to guide elected officials and the public through the hard choices required to balance air quality and transportation concerns. Transportation improvement programs, which often consolidate decisions made outside the MPO process, must demonstrate links to the long-range plan and how projects are selected to accomplish regional objectives.

In rapid succession the Clean Air Act Amendments of 1990 (CAAA) and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) have drastically changed how metropolitan planning organizations (MPOs) conduct urban transportation planning. This paper provides insights into how MPOs are responding to the challenges and opportunities of these landmark acts. These observations are based on a series of comprehensive reviews of the planning process in the largest metropolitan areas being conducted jointly by the Office of Planning, FTA, and the Office of Environment and Planning, FHWA, with the assistance of the U.S. Department of Transportation's Volpe Center (1-3).

The reviews evaluate compliance by the MPOs and other transportation planning agencies in metropolitan areas with FTA and

FHWA regulations and policies (4-7). The reviews began with an evaluation of how successfully metropolitan areas satisfied the pre-ISTEA federal planning requirements. As the CAAA and ISTEA guidance has been finalized, the reviews have increasingly focused on responses by the largest metropolitan areas to the two acts—both on progress and innovative approaches and on the general problems encountered. The reviews are the basis for formal findings identifying necessary improvements to the planning process in each area issued in reports by the regional administrators of FTA and FHWA.

This paper analyzes some of the major trends identified in the reviews completed to date. The paper focuses on five topics related to sound planning under ISTEA and CAAA and analyzes practices observed in the nine reviews completed to date.

BACKGROUND

The independent planning reviews are being undertaken jointly by FHWA and FTA to determine how successfully the urban transportation planning process in each metropolitan area addresses broadly defined regional transportation needs and whether the planning process meets federal planning requirements. The first three pilot reviews began with site visits, which were conducted just before passage of ISTEA in December 1991.

Under the federal regulations in place before passage of ISTEA, metropolitan areas were required to apply a continuing, cooperative, and comprehensive (3C) transportation planning process. The process had to develop plans and programs that address transportation needs and that are consistent with the overall planned development in the metropolitan area. The planning process also was to be carried out by the MPOs in cooperation with the state and transit operators.

The state and the MPO were required to self-certify that the urban transportation planning process was in conformance with these regulations. Self-certification was intended to grant increased responsibility for transportation planning to states and MPOs and was a prerequisite for receiving federal funds for highway and mass transit projects. According to the joint planning regulations, self-certification did not relieve FHWA and FTA of oversight responsibilities and the obligation to review and evaluate the planning process. The first objective of the independent planning reviews was to allow FHWA and FTA to fulfill these responsibilities to evaluate the planning process and the credibility of the self-certification.

The ISTEA, which amended 23 United States Code (U.S.C.) and the Federal Transit Act, mandated fundamental changes to the metropolitan planning process. As explained in the March 2, 1993, Notice of Proposed Rulemaking (NPRM) for metropolitan planning (4), significant changes require that

- The long-range plan include environmental and intermodal considerations and provide a financially constrained 20-year vision of future transportation improvements;
- Transportation improvement programs (TIPs) function as strategic management tools to accomplish the objectives of the plan; TIPs are to be prioritized, financially constrained, and subjected to air quality conformity requirements in nonattainment areas;
- Planning emphasize the efficiency and performance of the overall system; and
- Strategies that consider the broad range of possible modes and their connectivity be developed and that 15 diverse and comprehensive factors, including congestion management strategies, travel demand reduction, land-use effects, and expansion of transit, be developed.

The transition between pre- and post-ISTEA periods was smooth for the independent planning reviews. The reviews began with a broad interpretation of the joint planning regulations, expanding from a foundation of the 3C process to consider good planning practice. From their beginning the reviews focused on three things: (a) the extent to which working relationships between MPOs and their planning partners were clearly defined and cooperative, (b) technical capabilities for transportation and air quality modeling, and (c) the effectiveness of public participation. This focus anticipated many of the planning considerations and requirements in ISTEA.

As the transportation planning requirements of CAAA and ISTEA have evolved, the reviews have increasingly emphasized second and third objectives. Second, the reviews allow FHWA and FTA to assess the ability of the metropolitan planning processes to address the evolving requirements of CAAA and ISTEA. And third, the reviews assist metropolitan areas in preparing for future federal certifications of the planning process, as required by ISTEA for metropolitan areas with more than 200,000 population. Areas that fail to receive certification will be sanctioned by having federal funds withheld under the circumstances discussed in the Final Rule. The planning reviews involve a federal team from FHWA headquarters and regional and division offices, FTA headquarters and regional offices, and the Volpe Center of the U.S. Department of Transportation. During site visits the team meets with representatives of all agencies involved in regionally significant transportation planning in each area, including MPOs, state departments of transportation (DOTs), state and regional air quality agencies, public transit operators, and county or city planning departments.

The reviews are based on an open-ended exchange of information built around a structured and disciplined framework. The comprehensive and multimodal approach fosters an understanding of the local planning context and encourages the systematic view envisioned by ISTEA. For each area federal staff gain appreciation for the unique planning environment and identify the strengths and weaknesses of the planning process and barriers that must be overcome to meet the requirements of ISTEA. The MPO and other planning agencies receive a clearer sense of the changes required to meet ISTEA expectations. Both federal and local participants benefit from the opportunity to take a comprehensive view of the met-

ropolitan transportation system and to discuss concerns, problems, and solutions.

Candor is encouraged because the assessments are not certification reviews. And because each area's planning process is undergoing a period of transition and uncertainty, federal and regional staff approach the reviews with great interest and intensity. By consensus each team has developed extensive and specific findings on necessary improvements, presented in a formal report issued by the regional administrators of FTA and FHWA.

The fourth objective of the planning reviews is to identify and analyze national trends in metropolitan planning under CAAA and ISTEA. This paper represents the initial effort to perform cross-cutting analysis by synthesizing findings from the reviews completed to date:

<i>Site</i>	<i>Date of Visit</i>
Kansas City	1991
Chicago	1991
Los Angeles	1991
Pittsburgh	1991
Houston	1992
Twin Cities	1992
Portland	1992
Sacramento	1993
Denver	1993

SUMMARY OF MAJOR FINDINGS

This paper provides insights into current planning practices and the gap between this status quo and important expectations of ISTEA and CAAA. The analysis focuses on five important aspects of metropolitan transportation planning, contrasting what the federal team looked for in good planning practice, as defined by the joint planning requirements and later by the two acts, to what it found in practice.

The status quo and the expected characteristics of the planning process under the ISTEA and CAAA can be considered two ends of a spectrum. Table 1 describes a spectrum of planning practice in the five areas considered in this paper. At one end the status quo is based on generalized problems common to many but not necessarily all of the areas evaluated. At the other end are ISTEA and CAAA goals or expectations for transportation planning.

The difficulty is that because both ends of the spectrum are in great flux, attempts at definition are analogous to shooting at two rapidly moving targets. The planning process is changing in all of the metropolitan areas evaluated, primarily in response to the two acts. Work on some of the reviews began before passage of ISTEA, and some mandated changes will not have to be in place until future years. As a result planning processes were being evaluated against standards that were not completely formalized at the time of the reviews. The intent of the reviews was to provide constructive guidance on how to modify current practices to meet standards not yet finalized. This analysis concentrates on trends rather than on observed practices, many of which have already been modified. The planning practices of individual metropolitan areas should actually be placed somewhere between the two ends of the spectrum. Although practices in most areas are moving toward the right end of the spectrum, the speed of movement will be of major concern.

TABLE 1 Spectrum of Planning Practice

Aspect	Status Quo	ISTEA/CAAA Goals
1. General MPO role	Removed from major decisions	Broker, leader, consensus builder
2. Long range plan	Single scenario Focus on 1 or 2 modes	Alternative scenarios Multi-modal and inter-modal. Focus on system performance. Incorporates 15 factors.
3. Links between Plan and TIP	Not clearly established.	Clearly established. TIP - strategic management tool.
4. Fiscally constrained Plan/TIP	No.	Yes.
5. Public role		
Participation	Limited -- e.g., hearings on draft Plan/TIP.	Actively encouraged. Early and substantive.
Representation	Limited.	Broad - public/private sector, citizens.

MPO Roles and Responsibilities

Expectations

The federal team looked for collaborative and well-coordinated working relationships between the MPO and other agencies involved in regionally significant transportation planning in each metropolitan area. In most cases this includes city or county planning groups, state DOTs, transit operators, or other MPOs serving the same area. In air quality nonattainment areas, state or regional air quality management agencies often play major roles in transportation planning.

Beyond collaborative working relationships, ISTEA and CAAA clearly expect the MPO to play a pivotal role in metropolitan planning, whether as a leader, manager, or builder of consensus among other agencies that can have different perspectives and priorities. The planning process should be a disciplined and structured effort that is the basis for programming of investments and not a paper exercise to meet federal requirements, largely disconnected from important transportation decisions.

CAAA and ISTEA leave many of the details of the working relationships between the MPO and the other agencies to local negotiation. The acts, however, mandate significant responsibilities for MPOs, including air quality conformity determinations for the plan and the TIP; development of a multimodal and financially constrained plan, with a realistic long-range vision; working cooperatively with the state and transit operators to develop a financially constrained and prioritized TIP; and selection of all projects for the TIP (except for the national highway system, bridge, interstate maintenance, and federal land highway programs), in consultation with the state and transit operators in areas with populations of more than 200,000.

Observations

The MPOs in the Twin Cities (Minneapolis and St. Paul, Minn.) and Portland, Oreg., clearly play roles as consensus builders and successfully coordinate planning processes that influence the long-term directions of their areas and guide the programming of transportation investments. Both MPOs appear to be in strong positions to modify their planning processes to meet the requirements of ISTEA and CAAA. It is important to note that both of these MPOs have

broad powers under state statutes that predate ISTEA and have a history of regional leadership.

In the Twin Cities, Metro Council is authorized by state statute to prepare and adopt a comprehensive development guide consisting of policy statements, goals, standards, programs, and maps prescribing the orderly economic development of the metropolitan area. The guide includes direction for land use, parks and open space, airports, highways, transit services, and many public buildings. A Transportation Advisory Board (TAB) manages the 3C process and functions as a forum for cooperative decision making by local elected officials, citizens, and major transportation agencies. The TAB assigns funding priorities and adopts programs, which can be approved or disapproved by the council.

The Twin Cities' long-range transportation plan anticipated important emphases of ISTEA. The plan was oriented toward maintenance of the region's existing transportation system and achievement of system efficiencies by making greater use of underused facilities.

The Portland MPO, Metro, conducts its transportation planning process primarily through the Joint Policy Advisory Committee on Transportation (JPACT). JPACT broadly represents the metropolitan area and is charged with coordinating development of plans defining required regional transportation improvements, forming a consensus of governments on prioritization of improvements, and promoting implementation of identified priorities.

The Denver MPO, the Denver Regional Council of Governments, has recently had its role revised in response to ISTEA. It has the sole responsibility for project selection, and all projects must be included in the long-range transportation plan. The MPO is leading a process to revise the long-range plan in response to changing economic conditions and the new requirements of ISTEA.

In some other areas evaluated significant aspects of transportation planning occurred outside the MPO-led process. Important metropolitan planning and investment programming decisions appeared to be determined primarily by states or transit operators, which discouraged consideration of the extent to which these investments accomplished areawide objectives as defined in a long-range plan. Major resource allocation decisions for planning, capital, and operating funds were not based on a top-down long-range planning process led by the MPO. The long-range regional transit planning efforts dealt with many of the agency-level decisions as predetermined rather than as subject to influence through long-range planning.

Although rigorous planning often occurred at subregional levels, the perspective and priorities of these agencies were often different from those of the overall region. For example, transit operators may use long-range planning to make program decisions, but out of necessity their major concerns may be operational and financial—to meet fare box recovery requirements, reduce deficits, or eliminate inefficient service. For transit operators these concerns can take precedence over broader regional priorities, for example, assigning resources to the projects that most cost-effectively reduce air pollution, regardless of whether the projects are transit, highway, or transportation control measures. In one example a transit operator's plans resulted in construction of a reserved busway without substantial consideration of the feasibility of including other high-occupancy vehicles, which might have reduced bus speeds and efficiency but which also could produce systemwide mobility or air pollution benefits. In another case suballocations were based on historical formulas and not on long-range planning, which is specifically discouraged by the ISTEA Final Rule.

In many areas evaluated the MPO received a prioritized and financially constrained list of projects for the TIP from implementing and other participating agencies, including the state, transit operators, and in the case of the California areas, county transportation commissions. For California MPOs this is encouraged by state planning requirements that define responsibilities for county commissions similar to those defined for MPOs by ISTEA. This general approach, in which the MPOs receive inputs for the TIP that are prioritized and financially constrained outside the overall planning process, is inconsistent with ISTEA, which requires the development of prioritized and financially constrained areawide long-range plans and programs. At its worst some MPO processes are reduced to combining rather than integrating program documents to reflect systemwide objectives. This reduces the likelihood that transportation resources will be allocated on the basis of areawide priorities, including improved air quality and systemwide efficiency.

Although early efforts led by MPOs to develop criteria for allocating ISTEA flexible funds were modest, there was some positive movement in this direction. In the Twin Cities, Metro Council has formed an ISTEA work group to identify ISTEA responsibilities and priorities, reach agreement on organizational roles, and determine procedures for distributing the flexible funds in the ISTEA programs. The work group proposed roles and responsibilities for the Minnesota DOT (Mn/DOT) to play in the allocation of flexible funds and a 2-year timetable for making decisions, completing planning tasks, and satisfying mandates related to ISTEA. The work group was developing formal criteria to use in the evaluation and selection of projects in competitions for the flexible funds, including consideration of population, vehicle or lane miles, or gas tax revenue generation as the basis for allocation of Surface Transportation Program (STP) funds by the state to regions. The work group took a strong position against formula-based sub-allocation of flexible funds within the region to jurisdictions or to modes.

In Sacramento the MPO had developed flexible STP guidelines that will allow for the selection of projects that meet the travel demand needs identified during the planning process. The STP guidelines were developed through a committee structure that included all modes and transportation interests in the region. The guidelines were evaluated by approximately 100 different agencies and jurisdictions. At the time of the review the MPO was developing criteria that would allow direct comparisons between highway and transit projects.

The Sacramento region was well-positioned to realize the potential of the flexible funding feature because of its transit, congestion, and air quality management planning. Flexible funds could be used to fund projects proposed by the county congestion management agencies or by the transit operator to expand the light rail system. The MPO also had a project selection process for the TIP that will ease fund transfers to finance a range of transportation projects on the basis of projections of revenues, need, readiness, and eligibility.

Development of Scenarios in Long-Range Plans

Expectations

The federal team looked for long-range plans that perform a strategic function for the overall planning process. The plan should identify the key issues that will affect the region over the next 20 years, including demographics, the availability of resources, and the condition of the transportation infrastructure. Although the plan can encourage innovative thinking on future directions, it should also move the area toward a realistic single future vision by consensus of decision makers and the broad public. The future will ultimately be defined in terms of a preferred transportation alternative based on a disciplined look at the reality that each area faces—financial limitations, air quality targets, and other local goals. The analysis that supports the selected alternative should be clear. Preferably, the plan will define and evaluate several distinct alternatives in terms of broad costs and benefits and the ability to accomplish clearly stated areawide goals.

Identification and evaluation of alternative scenarios in the long-range plan are important means of demonstrating the complex trade-offs involved when limited resources are applied to air quality, mobility, and other fundamental transportation concerns. A clear picture of the costs and benefits of alternatives is necessary to focus decision makers and the public on the difficult choices facing metropolitan areas, particularly those in severe air quality nonattainment categories.

The plan should not be static, out-of-date, or an advocacy document but should represent current critical thinking on how best to deal with future challenges. The plan should not be a means of justifying a previously selected set of projects in the TIP; instead, the TIP should be a carefully selected and prioritized set of projects that can be used to implement long-term directions from the plan. The plan should be a cohesive and distinct product that will provide a single source of direction for the area; it should not be a mechanical merger or consolidation of subregional or single-mode plans, although these efforts should be consistent and compatible with the long-range plan and will be important resources in its development.

ISTEA requires consideration of multimodal solutions to the area's most pressing future transportation problems and explicit consideration of 15 factors throughout the planning process and in the products of the process, including the long-range plan and the TIP. The 15 factors include congestion management strategies, travel demand reduction, land-use effects, expansion of transit, and improved transit security. The team looked for serious consideration of a broad range of strategies in the plan. If the selected alternative did not reflect broad strategies, the plan should indicate that these strategies were considered and rejected in terms of their ability to accomplish regional objectives. The team looked for breadth of approach to long-range planning that indicated the ability to adapt to ISTEA requirements.

Observations

The plan developed by SCAG, the MPO for the Los Angeles metropolitan area, provided an excellent example of how a set of clear alternatives can be presented in terms of costs and benefits, including reduction of vehicle miles traveled and air pollution. This approach can encourage understanding of the unavoidable trade-offs between strategies to meet air quality, mobility, and other targets. For Los Angeles, the only metropolitan area in the extreme nonattainment class for ozone, evaluation and selection of cost-effective strategies for reaching attainment should dominate the planning process. The scenarios developed by SCAG encouraged decision makers to focus on what results will be required from specific strategies, including significant growth in transit, reduced trips through telecommuting, and an improved jobs-housing balance to meet extremely demanding air quality and other objectives. Rejection or reduction of one strategy can then be analyzed in terms of the additional burdens placed on the other strategies.

The Sacramento plan presented five different mobility options to guide the region through the year 2010. The building block approach used to develop these options consisted of adding or combining transit expansion, development of high-occupancy vehicle (HOV) lanes, roadway improvements (based on 2010 congestion projections), changes in land use, and transportation congestion management strategies. After evaluation of the different options using performance criteria, the MPO staff concluded that the mobility option that combined the different elements performed the best. A basic option was then presented and evaluated, and additional options were created by adding one or more actions. By describing the ramifications of incremental actions, this approach successfully demonstrated the thinking behind the selected alternative.

Both the Portland and Twin Cities plans presented a multimodal strategy for the areas, with complete descriptions of the transportation projects chosen for eventual implementation. However, neither provided a thorough description of the process that created the vision or the range of investment alternatives considered in the planning process. The emphasis was on moving ahead with programming rather than on demonstrating the analysis that led to the selected long-term alternative.

In Chicago the 1989 long-range plan adopted by the MPO identified the choices that must be made between travel modes such as automobiles and transit and between different transit providers competing for limited resources. Rather than presenting and contrasting multiple scenarios, the proposed plan needed major facilities, such as highways and rail lines, and estimated the resulting financial needs through 2010.

The Kansas City plan did not propose alternative land-use and transportation scenarios. Instead, the plan presented a single future scenario (with separate highway and transit components) based on the extrapolation of historical development trends. The plan revision was expected to take a broader look at approaches to land use.

The plan for Houston included different transportation options, but two of the options focused on roadway improvements, with minimal consideration of the transit or other measures the region might consider to comply with CAAA and ISTEA.

Denver is revising its long-range plan in accordance with ISTEA. The revised plan will be fiscally constrained and will be based on changed demographic and economic assumptions. This revision is being done both in response to ISTEA and because of changing economic conditions.

Clear Linkages Between Long-Range Plan and TIP

Expectations

The federal teams looked for clear and substantial connections between the strategic direction set in the plan and the short-term actions in the TIP. A connection between an unconstrained or wish list plan and a TIP that is primarily a list of projects without explicit criteria for selection is inadequate. Transportation projects should be selected on the basis of cost and performance—their ability to accomplish the objectives of the plan.

These general expectations for the reviews anticipated the requirements in the ISTEA Interim Guidance and Rule for consistency between the plan and the TIP and related discussion in the NPRM for metropolitan planning. (4) The NPRM proposed that the plan be “the central mechanism for structuring effective investments.” Also, “The financial constraint of the plan would be reflected in more detailed fashion in the TIP.” The TIP must become a management tool, “establishing an overall program strategy reflecting the transportation plan.”

Observations

The Twin Cities and Portland metropolitan areas provided clear demonstration of the links between plans and TIPs. However, as noted above, plans for both areas began with a single selected alternative. By providing a more developed strategic context for the selected alternative, future plans in both areas could provide more substantial justification for the TIPs.

The Twin Cities Metro Council successfully documented the regional planning context for the TIP’s development and the issues and policies that affected project selection. The Metro Council initiated the TIP process by requesting that Mn/DOT and the Regional Transit Board (RTB) submit projects for evaluation by the TAB and the MPO. The process ensured that the TIP reflects the region’s priorities, as expressed not only in the long-range transportation and air quality control plans but also in long-range plans of the RTB and Mn/DOT and in local comprehensive plans for land use and transportation.

The Portland area TIP began with an explanation of how the capital improvement component of the plan will be implemented, described which projects will be given priority, and balanced local and regional needs. According to the MPO the baseline consistency of the TIP with the regional transportation plan (RTP) was established in updates of the regional transportation model. Proposed elements of the plan are added to the model to simulate expected future transportation system performance. TIP projects were compared with this projection to determine consistency. As the regional system of project selection is modified to ensure compliance with the multimodal and efficiency criteria of ISTEA, the MPO will require that local and special district projects include a statement of consistency with the RTP.

In the Los Angeles area the TIP reflected the separately determined short-range plans of the region’s transit providers, the county commissions, and the California Department of Transportation (Caltrans). Limited links to the regional mobility plan and its goals were developed.

In another area the MPO had the authority to approve and disapprove TIP projects proposed by implementing agencies, but this authority appeared to be exercised primarily when projects

exceeded funding constraints. Thus, implementors were not forced to view how their projects fit into the overall regional big picture. Project rankings and selection were primarily determined by the implementors.

The documentation of the planning basis for many of the projects in the Kansas City TIP was not strongly developed. Links between TIP projects and the long- and short-range elements of the plan or connection to explicit regional objectives for energy conservation and improved air quality were not clearly documented.

One area did not clearly establish a regional planning process as the guiding mechanism for selecting the projects in its TIP. Long-term regional criteria and objectives identified by the MPO did not necessarily determine the contents of the TIP. Projects were included on the basis of negotiations between elected officials and implementing modes. For example, the state DOT and the toll road authority appeared to make highway fund decisions and transit operators appeared to make transit fund decisions based primarily on their own criteria and objectives. The MPO incorporated these priorities into the TIP.

The MPO in Denver has revised its TIP selection process to fully comply with ISTEA. Proposals are submitted to the MPO for review. Proposals must have been included in the long-range plan to be considered. The MPO uses criteria based on ISTEA in evaluating projects, and all projects in the TIP are fully funded. The TIP covering 1993 to 1995 was developed by this process.

Financial Constraints on Long-Range Plans and TIPs

Expectations

The plan should not be a wish list with unfunded projects. An unconstrained plan avoids controversy by including projects from all constituents, but it lacks the discipline necessary to guide a metropolitan area toward programming scarce resources to solve combinations of air quality, mobility, growth, or other pressing problems. Although the plan must be constrained and should develop realistic alternatives, it can also provide value by developing unconstrained alternatives as a means of advocating imaginative and challenging future visions of transportation systems for the metropolitan area. If alternatives are presented that are beyond the means of currently identifiable resources, projects can be prioritized to clarify what would be funded if different levels of new revenues are available.

The ISTEA requires that plans be financially constrained over a 20-year time horizon, comparing existing and proposed revenues with the costs of constructing and operating the planned system. TIPs and plans must be financially constrained and prioritized; overprogramming is not allowed. For nonattainment areas financial constraint is the key link between CAAA and ISTEA, with requirements for conformity reviews of both the plan and TIP by the MPO, FTA, and FHWA.

Observations

Typically the MPOs evaluated did not reflect financial constraints and prioritization in their plans or TIPs. Most of the MPOs, however, indicated that in response to ISTEA they expected to incorporate these difficult but crucial dimensions in their next plans and TIPs.

At an aggregate level the Los Angeles plan identified shortfalls, although the plan and its long-range projects were not resource con-

strained. It assumed that the resources required would be provided by the political process to reach specified goals. The 1992 update was intended to develop more stringent funding criteria and to apply them to general initiatives. This will be important to determine conformity with the State Implementation Plan (SIP) and to meet other ISTEA requirements.

The Los Angeles MPO assessed TIPs prepared by Caltrans, counties, and transit agencies, which were prioritized for consistency with the mobility plan, for conformity with transportation control measures in the SIP, and to ensure priority of HOV lanes over mixed-flow lanes. County TIPs must be constrained by the funds available. The transit agencies consistently faced funding shortfalls for TIP implementation.

Chicago's long-range transportation plan proposed maintenance and expansion that will cost \$25 billion through 2010, but its optimistic funding availability forecast fell short of providing the required revenues, and its pessimistic forecast fell very short. Shortfalls could be substantial enough to require reconsideration of basic transportation and land-use strategies. The first step in creation of the TIP, which was fiscally constrained, was adoption by the MPO of fiscal marks for the federal portion of the program. These marks guided the development of lists of projects by implementing agencies, as discussed above.

The TIPs for the Pittsburgh and Houston areas were overprogrammed. The Pittsburgh TIP had a substantial funding shortfall, particularly for the transit portion, which was not prioritized. The Houston MPO estimated that the TIP was approximately 50 percent overprogrammed, and in the 1992 fiscal year less than half of the programmed projects were implemented.

Despite an explicit priority for fiscal restraint in the Twin Cities, the proposed level of highway and transit activity in the plan appeared to be highly optimistic. Metro Council estimated a shortfall as high as \$2.1 billion by 2010 for metropolitan highway system improvements, reflecting projection of a significant reduction in state transportation expenditures. To support transit operating costs and the construction of three light rail lines, an additional approximately \$1.3 billion was required for the planning period.

The Twin Cities plan attempted to preserve the existing level of regional mobility through the year 2010 while minimizing expenditures. Metro Council recognized national and local economic and financial pressures and attempted to balance mobility and maintenance of quality of life with limited long-term funding. The council's *Metropolitan Development and Investment Framework* emphasized careful management of regional resources by placing the highest investment priority on servicing existing development within the urban service area.

Portland's ambitious 10- and 20-year scenarios described in the plan were not prioritized or financially constrained and faced large funding shortfalls. The MPO, however, had developed an aggressive strategy for creating new funding sources.

The Portland TIP was not overprogrammed; funds had been obligated for the projects listed. During its development the proposed program in the current TIP was determined to cost more than the available funding allows. The MPO worked with the Oregon Department of Transportation (ODOT) to equalize costs and funding. Projects dropped from the TIP because of insufficient funds were maintained in the plan for later consideration.

The Sacramento plan was significantly underfunded. Even though different options for financing the shortfall were explored in the plan, the region was struggling to identify new revenue sources that would be publicly and politically acceptable. The lack of a

financially constrained plan, as required by the ISTEA, was an issue between the MPO and the U.S. DOT.

Denver's long-range plan included more than \$11 billion in transportation investment, although revenue estimates projected that only \$4 billion will be available in 2010. The MPO is studying new sources of revenue and planned to develop a financially constrained 2015 long-range plan based on the 2010 plan to meet the ISTEA deadline. The MPO also intended to produce a 2020 plan that will respond to other ISTEA requirements.

Public Participation

Expectations

The teams looked for demonstration of substantial public participation, with "public" broadly defined to include a range of public agencies, citizens and advocacy groups, and the private sector. A public participation process that relies primarily on formal public hearings to assess drafts of plans, TIPs, or other planning products was considered inadequate. The preferred approach—which encourages early involvement in identifying long- and short-range strategies, in the 3C process down to the corridor or project level, and in programming—is an ideal that is difficult to accomplish. Members of the public are likely to react to decisions that seem to directly affect them but to have difficulty investing the time necessary to become involved in the complexities of long-range planning. Ideally, planning staff will assist the public in participating throughout the technical planning process. Broad public involvement is crucial to building the political consensus necessary to support controversial transportation decisions, including those required for severe nonattainment areas to meet air quality goals.

The ISTEA Rule requires "a proactive public involvement process," including access to complete technical and policy information, timely notices, full access to key decisions, and support for early and continuing involvement in plan and TIP development.

Observations

For several of the areas public participation could be more formally expanded to improve representation throughout the planning process of groups such as large employers; labor, employer, and development associations; environmental organizations; and minority groups.

In Los Angeles SCAG had a Regional Advisory Council of 50 members drawn from business, church groups, and universities to make recommendations to the Executive Committee on proposed plans. A deliberate attempt was made to get the private sector, minority groups, women, and the disadvantaged involved on this committee. Also, opinion surveys and public hearings were used to sample citizen opinion. All area studies had a policy advisory committee on which private citizens sat. SCAG did believe that additional efforts were required to evaluate the impact of transportation planning on the citizenry at large. The county transportation commissions and transit operators maintained their own outreach programs.

For the Chicago area the major source of citizen input to the CATS transportation planning process, including development of the long-range plan and TIP, was indirect, through the local elected officials who serve on the Policy Committee. Public concerns, including requests for information and comments on plans, were primarily communicated through the Council of Mayors and regional

councils to CATS. The Council of Mayors provided a forum for disseminating information and solicited comments on regional transportation plans and programs. In addition CATS Policy Committee representatives met with individual citizens and groups at the regional councils, and the transit agencies often presented projects and programs to the councils for review.

In Kansas City the MPO primarily relied on public meetings for input in the preparation of the plan. During the controversial investigation of transportation and land-use options within the urban core, the MPO held 12 public meetings.

The Houston MPO provided an effective means, through membership on subcommittees, for citizens, representatives of environmental action groups, and private transit operators to participate in the planning process.

The Twin Cities has a strong tradition of citizen participation, encouraged by controversies over highway construction, the transfer of Interstate highway funds, airport noise, largescale real estate developments, and proposed light rail construction. This tradition was enhanced by the Metro Council, the RTB, and Mn/DOT's commitments to actively recruiting citizens for their advisory committees. To involve the general public in the planning, development, and implementation of regional plans and policies, Metro Council and RTB had an open appointment policy and a program to actively recruit citizens to sit on advisory committees.

Public participation in Portland occurred through citizen advisory committees for all corridor studies, public meetings to update the plan process, and citizen membership on the Transportation Policy Alternatives Committee (TPAC). Metro appointed six citizens as TPAC representatives. According to Metro the general public was not easily attracted to planning activities, and citizen input came late in the process of updating the last plan, despite TPAC's inclusive membership. Metro expected involvement to increase in the next 2 years through the Region 2040 process, during which public forums and publications will encourage participation in developing a vision for the Portland region. The 17 members of the Metro Joint Policy Advisory Committee on Transportation included representatives from the counties, the city of Portland, Metro Council, the Washington-State portion of the region, the regional transit operator, the Port of Portland, ODOT, and the Oregon Department of Environmental Quality.

After passage of ISTEA the Sacramento MPO took steps to enhance citizen participation in the planning process. This consisted of the formation of three different subregional groups to represent local concerns. These groups report to the MPO's Air Quality and Transportation Committee. The MPO also formed a task force to address bikeway and pedestrian issues and an ad hoc environmental group.

The Denver MPO provides a variety of opportunities for citizen participation. Plans, TIPs, and other planning products are presented before public meetings and hearings. Citizens are represented on task forces established to address regional planning issues. The private sector is represented on task forces and is involved in public meetings and public hearings. The MPO makes an effort to include private representatives on the Transportation Planning Committee and to expand public participation opportunities for both citizens and the private sector.

CONCLUSION

MPOs are now expected to exercise leadership in defining a regional vision for the future, in selecting projects, and in improving

mobility and air quality. To do this they must overcome a period in which their resources, technical capabilities, and institutional roles were diminished. In the metropolitan areas with severe air pollution MPOs also must overcome institutional and technical barriers and work with other regional agencies to identify affordable and politically supportable mixes of transportation strategies that can include new automotive and fuel technologies, better management of systems, expanded public transit, pricing, or landuse controls that not only meet stringent air quality targets but also improve mobility and accomplish other traditional transportation objectives. In other metropolitan areas with more modest air pollution, some MPOs welcome ISTEA as a lever to use in overcoming fragmentation and leading regions toward multimodal and systemwide planning.

The reviews have identified several general problems in the planning process that must be overcome if the promises of ISTEA and CAAA are to be realized. Most long-range plans must become more strategic through the framing and evaluation of realistic future alternatives. Alternatives must be financially constrained and presented in a way that guides decision makers and the public through the technical and political trade-offs and hard choices that are unavoidable if air quality and transportation concerns are to be balanced. And long-range plans must be clearly linked to annual transportation improvement programs. These programs, which in some regions are consolidations of planning and programming decisions made outside the MPO process, must be broadened to demonstrate how the projects selected accomplish regional objectives and to consider the costs and benefits of a range of projects. Substantial consideration not only of transit and highway projects but also of other initiatives that respond to the 15 ISTEA factors should be demonstrated.

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