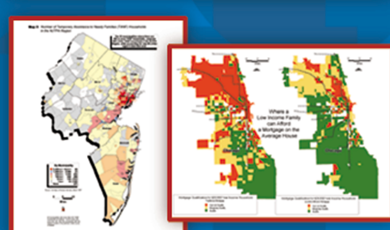
Transportation & Environmental Justice

JANUARY 2002



effective practices

U.S. Department of Transportation

Federal Highway Administration

Federal Transit Administration

Notice

Transportation and Environmental Justice Effective Practices

January 2002

U.S. Department of Transportation
Federal Highway Administration
Federal Transit Administration

Publication No. FHWA-EP-02-016

Introduction

"No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

- Title VI of the Civil Rights Act of 1964

"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994

In 1994, Executive Order 12898 directed every Federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies and activities on "minority populations and low-income populations." The Executive Order reinforced what had been law for more than three decades—Title VI of the Civil Rights Act of 1964. The Executive Order essentially reminded all government agencies receiving Federal funding that they are required to address discrimination as well as the consequences of all of their decisions or actions that might result in disproportionately high and adverse environmental and health impacts on minority and low-income communities.

In 1997, the U.S. Department of Transportation issued its *Order to Address Environmental Justice in Minority Populations and Low-Income Population (DOT Order)*. The *DOT Order* addressed the requirements of Executive Order 12898 and set forth DOT's policy to promote the principles of environmental justice in all programs, policies and activities under its jurisdiction. Since the *DOT Order* was issued, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have been working with their State and local transportation partners to make sure that the principles of environmental justice are integrated into every aspect of their mission.

The essence of effective environmental justice practice is summarized in three fundamental principles:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The FHWA and the FTA have embraced these principles as a means of improving transportation decision-making. Today, effective transportation decision-making requires understanding and addressing the unique needs of many different socioeconomic groups. Early, inclusive, and meaningful public involvement in transportation decision making is a proven means for designing transportation facilities that fit more harmoniously into communities. The involvement of people potentially affected by transportation projects including low-income and minority populations offers many benefits and does not impede the accomplishment of other DOT priorities such as safety and mobility.

The FHWA and the FTA have already developed a wide variety of environmental justice technical assistance and training materials intended for Federal transportation agency staff, State Departments of Transportation, Metropolitan Planning Organizations (MPOs), transit providers and other interested stakeholders and partners. These resources include:

- An FHWA/FTA joint web site at http://www.fhwa.dot.gov/environment/ej2.htm;
- A brochure, *An Overview of Transportation and Environmental Justice*;
- A booklet, *Transportation and Environmental Justice: Case Studies* (December 2000);
- A National Highway Institute training course, *Fundamentals of Environmental Justice*, *(Course 142042A)*; and other technical assistance training tools and activities.

With this booklet the FHWA and the FTA have brought together many recent and intriguing examples of the ways in which States, MPOs, and transit service providers are integrating the principles of environmental justice into their many activities. While touching upon the obligations of transportation agencies to address Title VI and environmental justice, the booklet's primary emphasis is on sharing the experiences of transportation agencies working toward the accomplishment of environmental justice in programs, plans, projects and other activities. Many of the examples illustrate that successful initiatives often promote public participation, partnerships and collaborative relationships with other government agencies as well as interested advocacy- or community-based organizations. All the examples show that both agencies and communities enjoy benefits from making a proactive commitment to the principles of environmental justice.

The booklet's examples are organized into separate chapters by the various stages of transportation decision making from Planning and Project Development, to Right-of-Way, Construction, and Operations and Maintenance. A separate chapter on Public Involvement is also provided that features some noteworthy practices, but public involvement processes are so central to environmental justice and good proactive planning that descriptions of involvement and outreach processes crosscut through all the chapters and many of the examples.

Each stage of transportation decision making is marked by distinct activities and unique challenges, but the principles of environmental justice should remain a constant and compelling touchstone for an agency and its practitioners throughout all stages of decision making. The need for this should not be surprising; transportation systems and services remain integral to our social and economic lives and the health and safety of our communities at all stages of decision making. In a pluralistic and democratic society, the transportation agency, the practitioner and the community cannot help but be intertwined in a continuing dialogue over the fairness and consequences of decisions even as the subject studies and activities vary by stage of decision making.

Achieving the goals of environmental justice is not an academic or desktop exercise; neither is it a checklist item to be dispatched as a mere administrative processing duty or a "boiler-plate" element routinely certified. And, there is certainly no "cookbook" method for its accomplishment. Meeting the goals of environmental justice is an active and continuing process that can be highly creative and challenging. At its core, environmental justice requires a commitment from its partners and stakeholders to be at once more ***inclusive***—to fully recognize and explore the needs of all its citizens when making transportation decisions—as well as more ***comprehensive*** in determining how existing transportation plans, projects and activities distribute their benefits and burdens across all socioeconomic groups.

The effective practices described in this booklet (see the accompanying summary table) include programs, projects and activities as well as data sources, analytical methods, and public involvement processes that have placed environmental justice principles at the center of transportation decision making. They are deemed "effective practices" because their application was consistent with the fundamental principles. But they are also effective because they clearly supported and improved decision-making processes. They not only delivered benefits to the affected low-income and minority populations, but the transportation agencies also received tangible and intangible benefits. Most notably, those agencies that have taken up the challenge proactively have often established more credibility with affected communities. This has led to better outcomes and broader support than otherwise might have been enjoyed.

The principles of environmental justice encourage several common activities, regardless of stage in the decision making process, that promise real benefits and improvements in transportation decision making:

- Deploy an array of public outreach strategies and involvement processes to fully engage and explore the needs of all affected populations in decision making;
- Access and integrate data collection, analysis and monitoring tools to assess the needs of, and analyze the potential impacts on minority and low-income population;
- Promote community-based partnerships and other creative means by which minority and low-income populations can learn about and improve the quality and usefulness of transportation in their lives;
- Partner with other public and private programs to leverage transportation agency resources as part of a common vision for communities; and
- Minimize and/or mitigate unavoidable impacts by identifying concerns early in the planning phases and promote offsetting initiatives and enhancement measures to benefit affected communities and neighborhoods.

This publication is not intended as a comprehensive catalogue or definitive textbook for the practice of environmental justice. Rather, it offers a "snapshot" of where we are at present in addressing the guidance and intent of the Executive Order 12898 and Title VI. The current "State-of-the-Practice" is not "static" but evolving relatively quickly; the practice will continue to make advancements as new Census data is released and as the community of committed practitioners and stakeholders share their experiences and absorb the lessons learned from prior initiatives. It is hoped that the practices described in this booklet will play their part, sparking agencies to take a closer look at their methods and stimulating the development of new strategies and approaches to ensure more equitable outcomes.

Practitioners are urged to reflect upon the effective practices described in this booklet and explore the analyses, processes and solutions that seem to best fit the needs and conditions relevant to their particular community, their mission, and their stage in the decision-making process. Practitioners are encouraged to reach out to the contacts and resources provided in this booklet to delve deeper into the subject matter and be prepared to improve upon the examples of effective practice illustrated in this publication.

These effective practices suggest that it is possible to meet the objectives of Title VI and the Executive Order on Environmental Justice no matter the size or resources available to the agency involved. Collectively, they illustrate that environmental justice principles are readily achievable and do not demand Herculean efforts or extraordinary resources. For the most part, agencies already possess many of the analytic tools, data sets and insights about public involvement processes needed to make environmental justice part of the agency's mission.

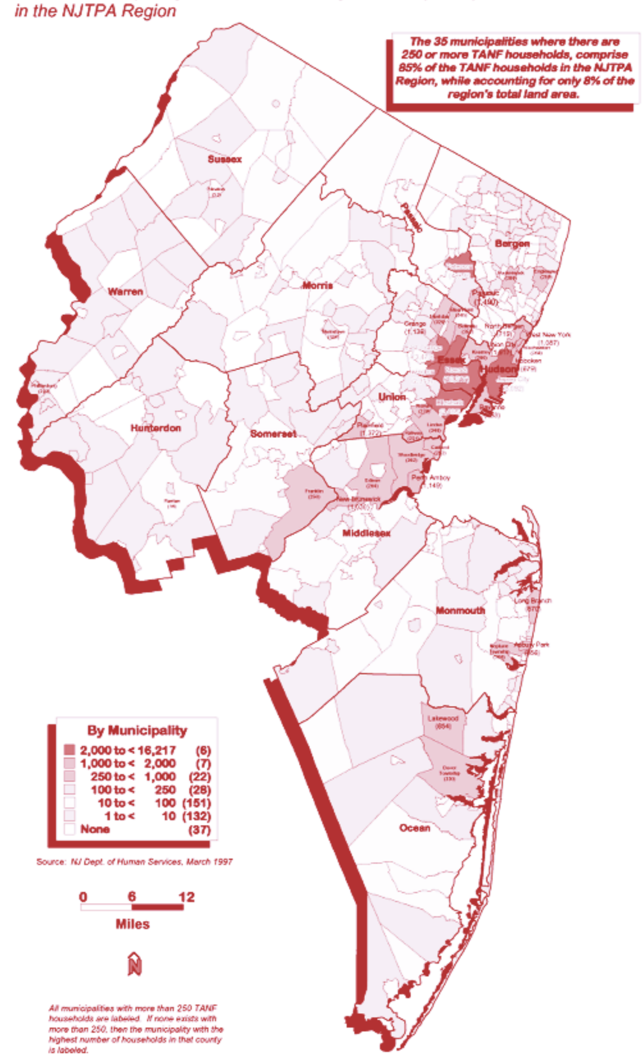
In the final analysis, the advancement of effective environmental justice practices depends upon the agency and the practitioner's commitment to "do the right thing." The booklet brings many effective practices forward for consideration, but the agency and the practitioner must resolve to use them. There are certainly many reasons for doing so: professional responsibility; legal and regulatory authority; recognition of the past historical treatment of the affected groups; belief in equal access to opportunities or social justice; or simply, a determination that the interest and concerns of communities in need must be addressed. Regardless, the FHWA and the FTA are certain that better transportation decisions will result from their application.

Summary of Environmental Justice Effective Practices, Topics, Stage of Decision Making, Agency Involvement								
Effective Practice	**Topics**	**Planning**	**Project Development**	**Right of Way**	**Construction**	**Operations and Maintenance**	**Public Involvement**	**Agency Involvement**
Introduction to Booklet								
Planning—Introduction								
Developing an Environmental Justice Element in State Planning and Research and Unified Planning Work Programs	• Policy and Resource Commitment	X						
Using Geographic Information Systems to Identify Populations and Evaluate Spatial Patterns of Benefits and Burdens	• Mappable Data Sets	X						
American Community Survey: New Data Source to Profile Communities	• Data Sources	X						U.S. Census Bureau
Community Impact Assessment Methods During Long Range Planning Process	• GIS Mapping • Data Sources • Public Involvement	X					X	Charlotte County-Punta Gorda MPO
Implementing Environmental Justice Community Dialogues	• Public Involvement • Utilizing Local Community Groups	X					X	Southern California Association of Governments
Performing Comparative Analyses Across Different Population Groups Using the Public Use Microdata Sample	• Data Sources	X						U.S. Census Bureau
Performing Crosstabulations for Environmental Justice Analysis with Census Transportation Planning Package	• Data Sets	X						U.S. Census Bureau
Establishing a Dialogue with Communities to Identify Relevant Performance Measures	• Outreach to Community-Based Organizations • Performance Measures	X						Boston MPO
Using GIS to Monitor the Spatial Location and Distribution of Benefits from Project Investments	• GIS Mapping • Accessibility Index • Public Involvement	X						Southeast Michigan Council of Governments
Expanding Public Involvement into a Continuing Program of Involvement and Assessment Processes	• Public Involvement • Performance Measures	X					X	Chicago Area Transportation Study
Putting the Family-Supporting Wage at the Center of Job Access Planning	• Data Sources • Analytical Methods • Job Access	X						East West Gateway Coordinating Council, St. Louis, MO
Targeting Communities of Concern in the Benefits and Burdens Analysis	• Quantitative Techniques • Accessibility Measures • Benefits and Burdens	X						Metropolitan Transportation Council
Establishing Meaningful Performance Measures for Benefits and Burdens Assessments	• Data Sources • Benefits and Burdens	X						

Summary of Environmental Justice Effective Practices, Topics, Stage of Decision Making, Agency Involvement								
Effective Practice (Continued)	**Topics**	**Planning**	**Project Development**	**Right of Way**	**Construction**	**Operations and Maintenance**	**Public Involvement**	**Agency Involvement**
Assessing the Air Quality Impacts of the Regional Transportation Plan	• Performance Measures • Environmental Studies	X						Southern California Association of Governments
Location Efficient Mortgages to Promote Investment and Transit Demand in the Inner Cities	• Transit-Oriented Development Incentive	X						Fannie Mae and The Institute for Location Efficiency
Project Development—Introduction								
Thinking More Broadly About Low-Income Communities	• Data Sources for Measuring Poverty		X					U.S. Department of Health and Human Services U.S. Census Bureau
Corridor O—Integrating Public Involvement Throughout the Project Development Process	• Environmental Studies • Public Involvement		X				X	Pennsylvania DOT
Reaching Communities Through Schools	• Public Outreach • School Curriculum		X				X	North Carolina DOT
Community Solutions—A Team Approach to Integrating Transportation and Community Development	• Intergovernmental Coordination		X				X	Oregon Livability Initiative
Leveraging Community Based Transportation Funding Sources to Benefit Local Communities	• Transportation Funding • Partnerships		X					FHWA FTA
Public Involvement—Introduction								
Evaluating the Effectiveness of Public Involvement Plans and Processes	• Public Involvement • Plan Evaluation	X					X	FHWA FTA
Developing a Public Involvement Manual to Enhance Involvement in Non-Traditional Transportation Stakeholder Communities	• EJ Dialogues • Agency Guidance Manual	X					X	Minnesota DOT
Bringing Representatives from Community-Based Groups onto Advisory Councils and Subcommittees	• Equity • Team-Oriented Approaches to Problem Solving	X					X	Baltimore Regional Transportation Board
Building on Successful Past Public Outreach Efforts	• Public Outreach for Low Income and Minority Concerns	X					X	Capitol Region Council of Governments
Tuning in to the Vision Athena Network: Integrating Distance Learning into the School Curriculum	• Distance Learning	X					X	Indiana MPO
Increasing Community Awareness Through Youth Career Training Programs	• Youth Training						X	Wisconsin DOT
Adult Education and Training in Public Involvement, Nondiscrimination and Environmental Justice	• Continuing Education and Training						X	The National Highway Institute and the National Transit Institute

Summary of Environmental Justice Effective Practices, Topics, Stage of Decision Making, Agency Involvement								
Effective Practice (Continued)	**Topics**	**Planning**	**Project Development**	**Right of Way**	**Construction**	**Operations and Maintenance**	**Public Involvement**	**Agency Involvement**
Attracting Nontraditional Participants into the Regional Transportation Planning Process	• Outreach Strategies • Long Range Transportation Plan	X					X	National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments
Right-of-Way—Introduction								
Tug Fork River Community: Remedying Substandard Conditions Through the Housing of Last Resort Provision	• Housing of Last Resort			X				West Virginia DOT FHWA
I-78/West Peddie Street Ramps Realignment Project: Using the Federal Functional Replacement Program	• Environmental Studies • Mitigation • Federal Functional Replacement			X				New Jersey DOT and FHWA
Construction—Introduction								
Committing to Construction Best Practices and Their Equitable Delivery to All Communities	• Community Advisory Councils • Impact Mitigation				X		X	
Preserving Access to Hub of Asian Culture	• Communications Strategies				X			New York City Transit
Operations and Maintenance—Introduction								
Using Geographic Information Systems for Mapping Crime and Service Levels	• GIS Mapping • FTA Transit Database					X		FTA
Improving Perception of Security Through Graffiti Management Programs	• Situational Crime Prevention					X		New York City Transit
State of the Buses—Monitoring Transit Service Performance with Annual Report Card	• Performance Measures • Communications Tool					X		Citizen Planning and Housing Association of Metropolitan Baltimore
Traffic Calming Designs to Create Mini-Neighborhoods, Prevent Crime and Restore Community Livability	• Livability • Safety/Crime Prevention					X	X	City of Dayton, Ohio
Building Sustainable Communities Through Dedicated Revenues for Reinvestment	• Partnerships • Improvement Districts • Crime Prevention Through Environmental Design					X		Orange Blossom Trail Development Board
Using Trailer Refrigeration Technology to Reduce Vehicle Emissions	• CMAQ Public-Private Partnerships • Emissions Reduction Technology					X		Clean Air Communities

Map 2: *Number of Temporary Assistance to Needy Families (TANF) Households in the NJTPA Region*



Planning

Planning

> **Planning:**
> **Typical Studies and Activities**
>
> - Policy Decisions
> - Systems Planning
> - Statewide and Metropolitan Planning
> - State Planning and Research (SPR)
> - The Unified Planning Work Program (UPWP)
> - Statewide Transportation Improvement Program (STIP)
> - Transportation Improvement Program (TIP)
> - Statewide Long Range Transportation Plan
> - Metropolitan Long Range Transportation Plan
> - The Public Involvement Plan
> - Needs Assessment Study
> - Congestion Mitigation System
> - Environmental Screening
> - Grants Administration and Funding

Although Title VI and environmental justice concerns are often raised during project development, Title VI applies equally to the processes and products of planning. In a joint memorandum issued to their field administrative offices on October 7th, 1999, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) gave clear notification of their intent to closely review the States and Metropolitan Planning Organization's (MPOs) compliance with Title VI during planning certification reviews conducted for Transportation Management Areas (TMAs) and through the statewide planning finding rendered at approval of the Statewide Transportation Improvement Program. The memo, *Implementing Title VI Requirements in Metropolitan and Statewide Planning* identifies a series of actions that can be taken to support Title VI compliance and environmental justice goals, improve planning performance, and minimize the potential for subsequent corrective actions and complaints.

Establishing one or more ***work elements*** in the State Planning and Research Work Program and the Unified Planning Work Program (UPWP) that address or enhance the agency's capacity to examine Title VI and environmental justice is an important first step. Several activities can be supported through such a work element such as assigning dedicated staff to work on geographic information system (GIS) mapping, improving analyses of travel demand modeling tools, or developing sub-contracting arrangements with public involvement specialists or community-based organizations to improve outreach to non-traditional participants. The work element can be used to engage multi-disciplinary teams to assess how environmental justice issues are being addressed by the agency.

Many States, MPOs and transit service providers need to develop or enhance their analytical capabilities to assess the distributional impacts—the benefits and burdens—of programs, plans and projects to affected communities. Developing a ***demographic profile*** that includes the identification and locations of low-income and minority populations is an essential research step. Census data has been and will continue to be an important resource for examining the spatial locations, social and economic characteristics and travel patterns of different socioeconomic groups. Several new valuable census products are to be released, but the practitioner should also not shy from exploring other administrative records. A more complete picture of communities in poverty can be drawn from descriptive indicators maintained by an array of other agencies (e.g., public health concerns, education, literacy and language, social service transfer payments, housing conditions). These indicators often portray existing needs faced by affected populations and communities in crisis. These administrative resources can also be an avenue for building productive, continuing and collaborative relationships with interested partnering agencies and organizations.

All sorts of ***collaborative planning*** and ***data sharing partnerships*** have been formed around the issues of community mobility and job access. Transportation agencies have built partnerships with labor department, health and social services agencies, and vocational education institutions as well as community-based organizations. These partnerships foster solutions for low-income and minority populations who must reliably reach key destinations such as employment centers, job-training centers, childcare facilities and healthcare institutions. Similarly, transportation planners should not underestimate the value of operations and maintenance data (e.g., operating service patterns, facility and road conditions, crime incidence, accident locations, maintenance and investment levels) for pinpointing needs and deficiencies relevant to existing low-income and minority populations or for beginning an assessment of the distribution of transportation benefits and burdens.

There are, of course, several study approaches and data resources that can be used to identify and address the needs and issues of concern and broaden the base of measures to be used to benchmark transportation agency performance with respect to low-income and minority populations. Several MPOs have formed ***environmental justice advisory groups, task forces, working groups*** and/or ***subcommittees*** to engage low-income and minority populations and community-based organizations in a continuing dialogue about data sources, analytical tools and relevant performance measures. Often stimulating spirited and incisive discussion, these processes have improved research approaches and raised important questions about the strengths and limitations of various methods and ***performance measures*** for depicting the benefits and burdens of transportation plans and improvement programs by socioeconomic group. Certainly, such processes can improve both the agency's and the community's appreciation for the challenges ahead—not only in the analysis—but in the formulation of solutions and next steps capable of delivering a more equitable and responsive transportation system to all communities.

Planning agencies can critically assess their current public involvement programs and plans and dismantle barriers to meaningful participation by diverse populations, including minority and low-income persons. Strategies need to be found to proactively reach minority and low-income populations. There is no "one-size-fits-all" means for reaching all communities; many creative involvement processes and techniques have been successfully employed inside and outside the meeting room. State DOTs and MPOs have assembled ***environmental justice dialogues, focus groups, workshops*** and ***charrettes*** for needs assessment studies and other statewide and regional planning processes to improve the exchange of information, identify needs, and facilitate problem-solving discussions to build consensus around plans and projects. Oftentimes, agencies have found considerable merit in establishing an on-going and continuous relationship with low-income and minority populations and their representatives through such events and processes. Agencies have not only developed a better understanding of community needs, but have strengthened community relationships to a point where further collaborative planning projects and community-based partnerships can be more readily undertaken.

This is particularly important today as transportation agencies have so many community-based funding resources at their disposal that are capable of bringing offsetting benefits and enhancements to communities. Many exciting programs have became available since the passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21). Transportation planners and environmental justice advocates should pay heed to the opportunities afforded by Congestion Mitigation Air Quality (CMAQ); Transportation Enhancements; Transit Enhancements; Job Access and Reverse Commute Grants; Transportation and Community and System Preservation Pilot Program, and Clean Fuels Formula Grants, among other sources. Similarly, greater flexibility in funding formulas and eligibility provisions has improved conditions for capital expenditures on transit, bicycles and pedestrians, and traffic calming, among other community-enhancing activities.

DEVELOPING AN ENVIRONMENTAL JUSTICE ELEMENT IN STATE PLANNING AND RESEARCH AND UNIFIED PLANNING WORK PROGRAMS

Effective Practices:

- Dedicating resources to an environmental justice work element.

Participants:

- Federal Highway Administration and Federal Transit Administration
- State Departments of Transportation
- Metropolitan Planning Organizations
- Transit Service Providers

Description

Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) personnel have been advised to substantiate, when conducting certification reviews of Metropolitan Planning Organizations (MPOs), State Departments of Transportation (State DOTs) and Transit Service Providers, how Title VI of the 1964 Civil Rights Act is addressed by the reviewed agency's public involvement and plan development processes. The FHWA and FTA issued a memorandum, *Implementing Title VI Requirements in Metropolitan and Statewide Planning* (October 7, 1999), that delineates a set of questions to review and verify compliance with Title VI. The memorandum also offers guidance that outlines options available to reviewers such as making recommendations for improvements or issuing a corrective action to direct compliance activities and rectify deficiencies.

The guidance makes clear that a commitment of budgetary and technical resources to State Planning Research (SPR) and Unified Planning Work Programs (UPWP) is an appropriate action to take for many agencies to improve their capacity to comply with Title VI. The SPR and UPWP should include an environmental justice work element that identifies improved strategies for outreach to minority and low-income populations and develops or enhances analytical capability to assess the impacts upon different socioeconomic groups of transportation plans and improvement programs.

Benefits

For the Agencies:

- Establishing a work element sets into motion a deeper self-examination by the agency of its practices in conducting meaningful public involvement and identifying the needs of low-income and minority populations.

For the Community:

- Communities will have better access to the decision-making processes that deeply affect the health and safety of their built environment and the quality and level of service of transportation systems and services in their community.

Contacts/Resources

More information about the memorandum, *Implementing Title VI Requirements in Metropolitan and Statewide Planning* (October 7th 1999), can be found at the FHWA/FTA website on Environmental Justice: http://www.fhwa.dot.gov/environment/ejustice/ej-10-7.htm

USING GEOGRAPHIC INFORMATION SYSTEMS TO IDENTIFY POPULATIONS AND EVALUATE SPATIAL PATTERNS OF BENEFITS AND BURDENS

Effective Practices:

- Taking full advantage of the capabilities of geographic information systems to advance needs identification and the assessment of benefits and burdens throughout all decision-making stages.

Participants:

- State Departments of Transportation
- Metropolitan Planning Organizations
- Transit Service Providers
- Community-Based Organizations
- Academic Institutions and Students
- Partnering Government Agencies

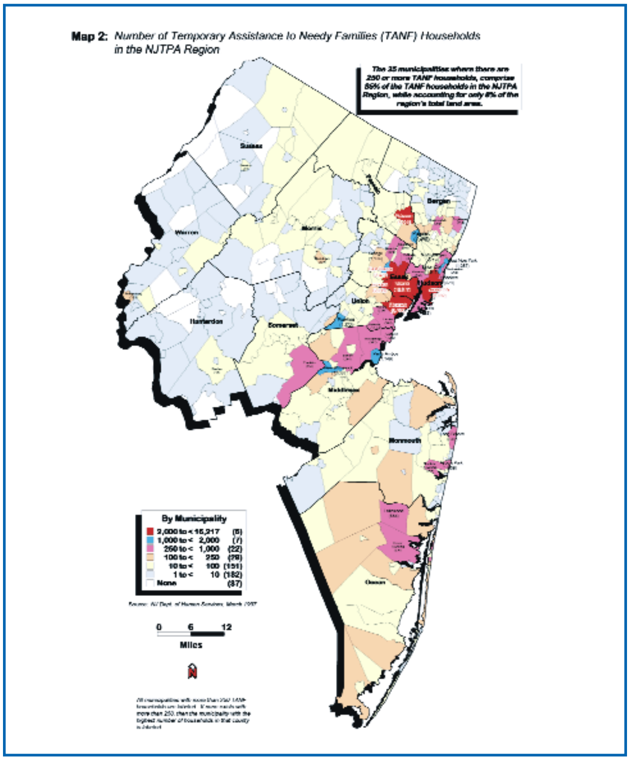
Description

Geographic Information Systems (GIS) are an excellent tool for comparing spatial data on the relative concentrations of low-income and minority populations and evaluating whether disproportionately high and adverse impacts or burdens fall upon areas more greatly concentrated by protected populations. The GIS will require Census TIGER/Line files that contain important digital data about the street network as well as key boundaries for reporting socioeconomic characteristics such as counties, municipalities, census tracts, block groups and blocks. TIGER files can be translated and imported as geographic files using GIS software such as Mapinfo, Arc/Info, ArcView, Maptitude, Atlas, and TransCAD. The Census of Population and Housing reports demographic and socioeconomic characteristics by geographic areas and also provides latitude and longitude information, thereby enabling a GIS to join the data with corresponding census boundaries from TIGER. TIGER files include critical data on street addresses which GIS mapping tools rely upon to facilitate the pinpointing or geo-coding of critical household destinations.

During the transportation planning stage, planners may be geo-coding and measuring accessibility (i.e., time and distances) to child care facilities, job training centers, social service agencies, retail stores, employment establishments, school facilities, hospitals, rail transit stations, bus stops, park and ride facilities, etc. GIS provides an excellent tool for the transit service planner laying out routes by analyzing population densities and key originating/destination node locations.

GIS tools support the importing and digitizing and overlaying of other relevant geographic boundaries. This essential capability facilitates consideration of traffic analysis zones, crime reporting units, school districts, neighborhoods, and planning districts. Investments and other resource allocation decisions can be improved when information is compiled about such factors as:

- Environment – air quality “hot-spots”, sensitive receptors for noise, known toxic and hazardous waste sites.
- Community – crime incidence, property values, building code violations, capital improvement investments, capital facility locations such as sewer treatment, jails, transfer facilities for solid waste, intermodal transfer facilities.
- Poverty – schools with children receiving free and reduced price lunches.
- Health – reported cases of asthma, and other health concerns.



- Streets, Traffic and Public Works – key accident locations, major congestion locations, maintenance yards, and maintenance investments for pavement, lighting, etc.
- Transportation Investments – locations of capital grant expenditures for system preservation and transportation enhancement projects.

Agencies interested in building and maintaining a comprehensive library of mappable data sets will find it beneficial to develop data-sharing partnerships with other government agencies. States and MPOs that maintain GIS systems can be of invaluable assistance for improving the quality of data available for consideration of environmental justice as projects move from the Planning to the Project Development stage. The availability of such central repositories of data offers community impact analysts a better starting platform for assessment of direct, indirect and cumulative effects in environmental studies required under the National Environmental Policy Act (NEPA).

Making better use of the data systems already in hand is an essential element of environmental justice. GIS systems are important tool for assessing how programs, policies, plans and existing activities are affecting low-income and minority populations. There is a wealth of information stored in the management information systems created by transportation agencies for operations and maintenance. Community-based organizations and environmental justice advocates work in communities where existing deficiencies in operating services, facility conditions and health and safety are paramount concerns. Agency transportation planners and decision makers face a very real challenge to better use GIS systems to clearly understand how benefits and burdens are distributed not only in future plans, but also in current operations.

Benefits

For the Agencies:

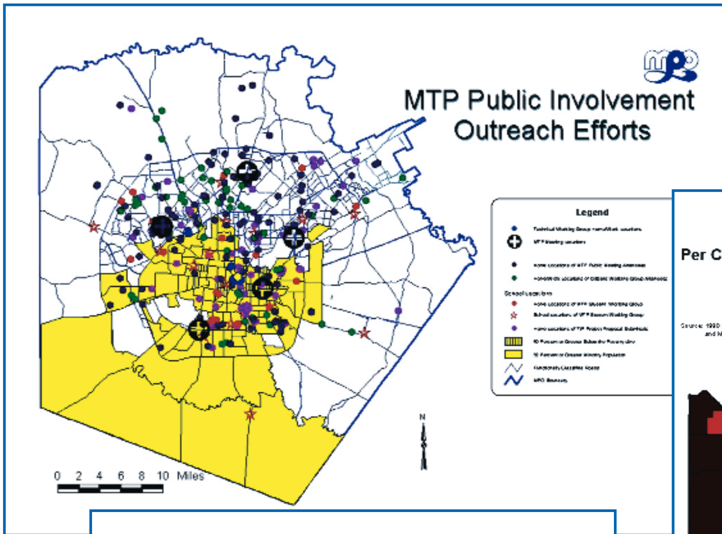
- States, MPOs and transit service providers who invest in GIS should be better informed about the current allocation of benefits and burdens and whether particular communities experience a disproportionate share of facilities that are detrimental to a community's livability and attractiveness.
- Transportation planners using GIS should be in an excellent position to observe whether standards are uniformly applied to the delivery of operating services and maintenance expenditures.

For the Community:

- GIS provides a platform for assessing the spatial patterns of human health, environmental and socioeconomic conditions as well as the distribution of current investment patterns, so as to avoid, minimize and mitigate disproportionately high and adverse effects on low-income and minority neighborhoods.

Contacts/Resources

The Bureau of Transportation Statistics website is a valuable resource for those interested in GIS: http://www.bts.gov/gis/


MTP Public Involvement
Outreach Efforts
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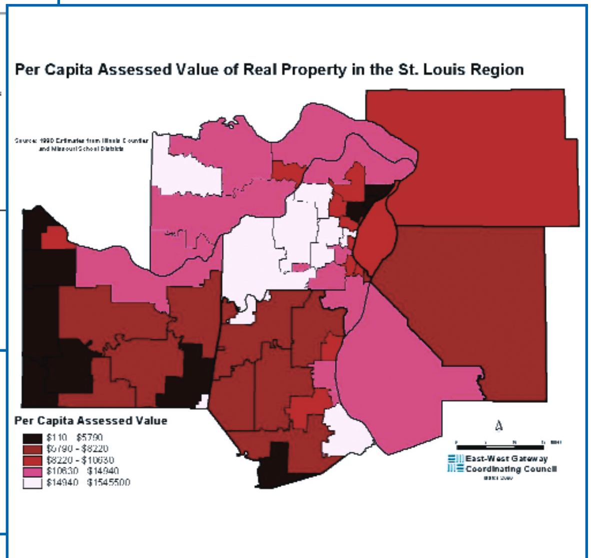
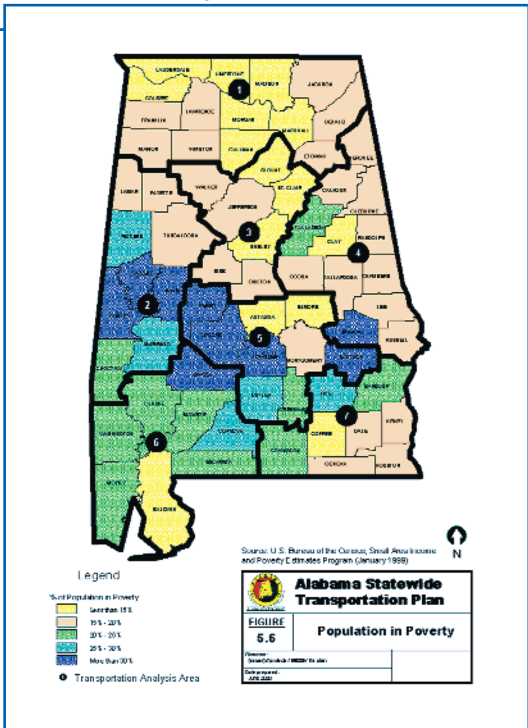

Per Capita Assessed Value of Real Property in the St. Louis Region
Per Capita Assessed Value
$110 - $5790
$5790 - $8220
$8220 - $10630
$10630 - $14940
$14940 - $1545500
East-West Gateway
Coordinating Council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Transportation Analysis Area
Source: U.S. Bureau of the Census, Small Area Income and Poverty Estimates Program (January 1999)
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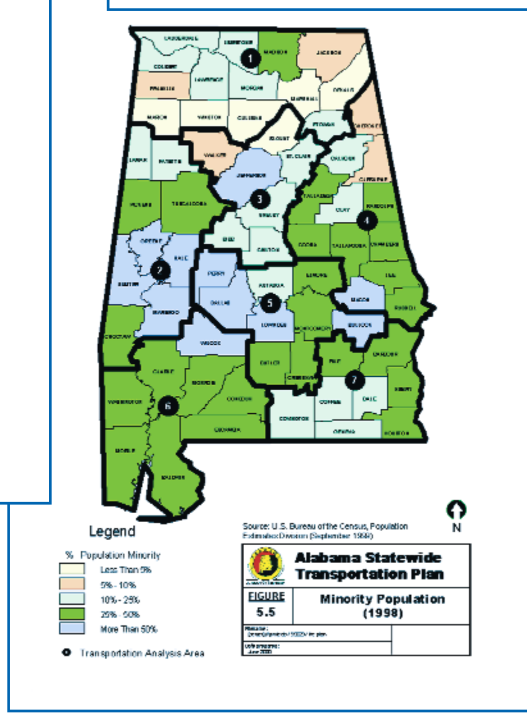
Alabama Statewide
Transportation Plan
FIGURE
5.6
Population in Poverty


Legend
% Population Minority
Less Than 5%
5% - 10%
10% - 25%
25% - 50%
More Than 50%
Transportation Analysis Area
N
Alabama Statewide
Transportation Plan
FIGURE
5.5
Minority Population
(1998)

AMERICAN COMMUNITY SURVEY: NEW DATA SOURCE TO PROFILE COMMUNITIES

U.S. Census Bureau

Effective Practice:

New data resource to prepare more accurate, timely and comprehensive profile of America's communities.

Participants:

The American Community Survey will be valuable to transportation and other government agencies, nongovernmental organizations, market researchers, academic institutions, students, and the public.

Description

The American Community Survey (ACS) will give an up-to-date statistical picture for planning and evaluating public programs every year, not just once in ten years. Communities will be able to track changes in the well-being of children, families, and the elderly; determine the social impacts of transportation investments; evaluate programs such as welfare and workforce diversification; and monitor the effects of programs and plans that assist low-income and minority populations.

The decennial census has two parts: 1) it counts the population; and 2) for the administration of federal programs and the distribution of billions of federal dollars, it obtains demographic, housing, social, and economic information by asking a 1-in-6 sample of households to fill out a "long form." Since this is done only once every 10 years, long-form information becomes out of date. Planners and other data users are reluctant to rely on it for decisions that are expensive and affect the quality of life of thousands of people. The ACS is a way to provide the data communities require every year instead of once in ten years.

The ACS is being evaluated and tested by the Census Bureau for select areas. Plans are to implement the ACS in every county of the United States with an annual sample of three million housing units. When fully operational in 2004, the ACS will provide estimates of demographic, journey-to-work, housing, social, and economic characteristics every year for all states, as well as for all cities, counties, metropolitan areas, and population groups of 65,000 people or more. For small areas and population groups of 20,000 or less, it will take five years to accumulate a large enough sample to provide estimates with accuracy similar to the decennial census. That means updated information for areas such as neighborhoods will be available starting in 2008 and every year thereafter.

The ACS will report summary data for population and housing estimates, cross tabulated by various characteristics, down to the block-group level. The summary data will be similar to the Summary Tape Files (STF) of the 1990 decennial census records, and are designed to provide statistics with greater subject and geographic detail than possible with printed reports.

The ACS will release a microdata file each year patterned after the five percent Public Use Microdata Sample (PUMS) file of the 1990 decennial census records. The microdata file allows for two different units of analysis: housing unit and person. The microdata file includes as many records as possible and shows the lowest level of geography possible within confidentiality constraints. Users of the ACS data can customize tabulations to examine the information in the way that best serves their needs. The ACS will provide more timely data for making estimates of various concepts for small geographic areas. In essence, detailed data from national household surveys (whose samples are too small to provide reliable estimates for states or localities) can be combined with data from the ACS to create reliable estimates for small geographic areas.

Benefits

For the Agencies:

- Collect accurate, timely data about the location of low-income and minority populations as well as detailed information about place-of-work, means of transportation, private vehicle occupancy, time leaving for work, and travel time to work. The data will enable monitoring of changes in travel patterns for evaluating programs, plans and projects. Data users will find available other timely demographic, housing, social, and economic data that can be compared across states, communities, and population groups including by race, ethnicity and income.

For the Community:

- Communities can use the data, to track the well-being of their children, families, and the elderly; determine where to site new transportation systems and other facilities; and evaluate transportation investments for their ability to meet local needs as well as to assess potential impacts.

Contacts/Resources

More information about the ACS at:
Website: http://www.census.gov/acs/www/

The American Community Survey is NOT a head count. We will still do the decennial census short form to count the population and will continue to work between censuses with states to get the yearly estimates of the population of states and counties. Because it does not count the population, the American Community Survey is NOT a means of apportioning Congressional seats. It is designed to get social, economic, and housing information every year to show trends and changes at the community level...

....We are using the word "community" in the broad sense. It refers to population subgroups as well as to geographic units like cities, states, or counties. In the past, population subgroups only received information once in 10 years; those groups tend to be too small to show any information in the national surveys which are conducted between decennial censuses. Now, we will have information every year about groups such as the oldest old (those 85 and older); teenage mothers in school and those who are working; college graduates; or specific race and ethnic groups such as Vietnamese, Mexican-Americans, and American Indian tribes.

— from slideshow posted on the U.S. Census Bureau's American Community Survey website.

AMERICAN COMMUNITY SURVEY
U.S. CENSUS BUREAU

COMMUNITY IMPACT ASSESSMENT METHODS DURING THE LONG RANGE PLANNING PROCESS

Charlotte County-Punta Gorda Metropolitan Planning Organization

Effective Practices:

- Using GIS to improve identification of low-income and minority populations for Long Range Plan.
- Taking public involvement processes directly into low-income neighborhoods to identify needs and potential solutions.
- Performing community impact assessment methods during the Long Range Plan process.

Participants:

Charlotte County-Punta Gorda MPO (CCMPO), Charlotte County, Florida

Description

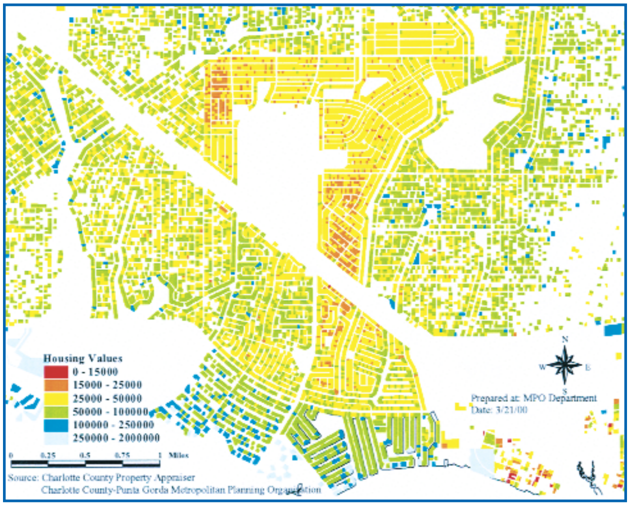
The Charlotte County-Punta Gorda MPO (CCMPO) is a small, southwestern Florida MPO that has creatively integrated post-census data and GIS mapping to better assess the location and needs of low-income and minority populations for its Long Range Plan (LRP). Making good use of its data and mapping tools, CCMPO steered its public outreach program toward greater inclusiveness and successfully employed community impact assessment methods during the preparation of the LRP.

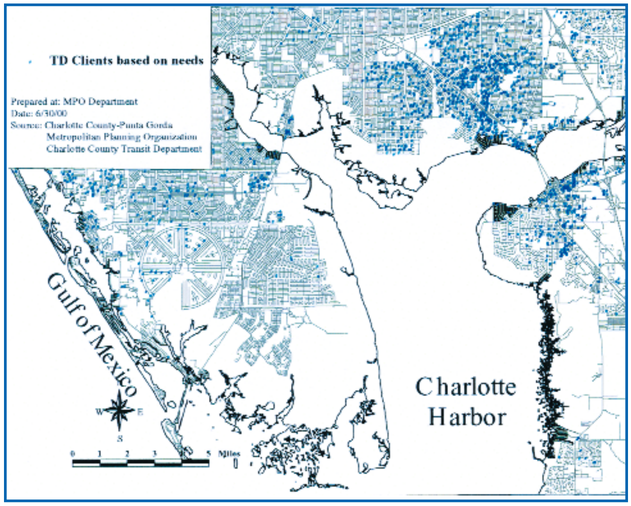
In response to the Executive Order 12898 on Environmental Justice, the Florida Department of Transportation (FDOT) Environmental Management Office developed the Community Impact Assessment (CIA) Strategic Plan. The FDOT philosophy is to bring public participation to all communities and, thereby, ensure that traditionally underserved neighborhoods are not overlooked.

Although CIA was developed with project development and environmental studies in mind, FDOT has promoted the application of CIA methods as part of the MPO Long Range Transportation Plan process. The intensive community outreach process is viewed as entirely consistent with environmental streamlining; many transportation projects that emerge from such a process will enjoy widespread local support because they advance the community's livability.

As implemented by the CCMPO in its Long Range Plan, CIA is a community-based public involvement process that is primarily grounded in neighborhood participation. The term "community" is broadly defined; it can be a demographic community, an organization community (e.g., church or service club), and a geographic community (e.g., neighborhood). The CIA process involves a significant commitment of time and resources – comparable to preparing a travel demand forecasting model. MPO staff participated in the normally scheduled meetings hosted by groups representing these communities. Often, these meetings were in the early mornings, evenings and weekends to accommodate the work schedules of residents.

The CCMPO used a combination of secondary data and neighborhood-based public involvement to reach traditionally underrepresented populations. In addition to the standard method of using census block group data to map demographic variables, the MPO employed several types of data sets:





- **Property Appraiser Data.** The CCMPO mapped residential property valuation data by parcel to pinpoint the spatial patterns of low-value housing stock and, thereby, the probable location of low-income residents. The parcel-specific data set allowed the agency to uncover potential "pockets" of poverty that would be masked by more aggregate data sets such as "block group" or "census tract." The property valuation data were made available in a digital format from the county appraiser.
- **Geographic Community Data.** The CCMPO obtained the most recent civic association and civic organization mailing lists from the County Community Development Department and from the Charlotte County Chamber of Commerce a year prior to the due date of the LRP Update. Correspondences were sent to each group giving the opportunity to invite the MPO to present its LRP and discuss issues pertinent to that community or organization. The correspondences to the neighborhood associations also included a map with instructions to draw the boundaries of their neighborhood. GIS maps were then created for these neighborhoods with different maps containing the locations of neighborhood associations, municipal service benefit units, neighborhood watch groups, election precincts, community service organizations and churches.
- The CCMPO used a third major data source for identifying low-income neighborhoods during the plan process—the **Charlotte County Transportation Disadvantaged (TD) Client Data.** This state-level data source, maintained by each Florida county, reports the addresses of low-income residents who depend on public transportation for mobility, for dispatching purposes. The data set did not reveal particular concentrations of low-income neighborhoods, but rather illustrated the dispersed spatial pattern of the transit-dependent populations. The map clarified the importance to the CCMPO of building a paratransit "Dial-a-Ride" program rather than fixed-route public transit system to meet local transit demand. The imminent inception of the "Dial-a-Ride" program was also credited with heightening community interest in the 2000 LRP above previous MPO plans.

Concentrations of low-value single-family housing structures were pinpointed. Organizations representing each such area were identified, thereupon, the CCMPO made a formal request to attend and speak at a normally scheduled meeting. At each such meeting, CCMPO staff outlined: the LRP plan process; proposed projects in their area, and previous issues that had emerged from the community. Staff then opened the floor to discussion about the existing projects, concerns, and what participants wanted as future improvements with thorough attention given to each transport mode.

All needs that had a level of community consensus were included in the LRP multi-modal needs assessment. Concerns about *existing* projects were forwarded to the appropriate officials usually at the FDOT or Charlotte County Public Works Department. Community priorities were considered for the Plan as well as for more immediate funding. The process uncovered several community priorities that received immediate funding commitments in the Transportation Improvement Program (TIP). Finally, each neighborhood was evaluated regarding recent and committed transportation improvements and impacts, as well as neighborhood comments on proposed projects.

The CCMPO developed the *Strings and Ribbons* game as a means for discovering community priorities at workshops and public meetings. Participants, working in small groups, huddle over a GIS map of the existing and committed Federal-aid highway system and sidewalks/bikeways. Each person is given a length of ribbon reflecting the amount of 2-lane road/road widening that can be built with 1 year of Federal/State road funding. String is also handed out representing the amount of sidewalk that can be built with a year's worth of federal surface transportation funding. The strings and ribbons may be exchanged, dollar for dollar, representing the funding flexibility under the Transportation Equity Act for the 21st Century (TEA-21). The participants are free to trade their strings and ribbons, or sidewalks and roads, for other improvements such as buses, trails, interchanges, bridges, rail depot renovation, and landscaping. Participants glue their preferred mix of projects to the areas they believe deserve improvements. Group members are given ample time to haggle and debate each other's priorities. This process allows the community to show the MPO exactly how they would allocate transportation funds in the near-term.

Benefits

For the Agencies:

- Closer ties were forged with individual neighborhoods and their respective organizations.
- Community-based process uncovered several projects that were immediately funded and welcomed by the community.
- The administrative data resources used in this study improved the agency's understanding of the actual residential locations of target populations and highlighted the limitations of an over-reliance on more aggregate-level census data. The validity of this CIA method was further confirmed once the MPO analyzed newly-released Census 2000 *block-level* data by race compiled for redistricting purposes. Using GIS, that data set substantiated the dispersed pattern of minority residents.

For the Community:

- Greater priority was given to a flexible paratransit dial-a-ride program instead of the more traditional fixed-route transit system to better meet the needs of Punta Gorda's dispersed low-income residents.
- The CIA process revealed community values and priorities and several needed improvements were identified that met specific neighborhood concerns in the areas of access management, sidewalk improvements, road and bridge maintenance, and pedestrian crossing equipment.

Contacts/Resources

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...the CIA process identifies community values, issues, problems, and affordable solutions in concert with other programs early in transportation decision-making.

— Florida DOT, CIA Strategic Plan

IMPLEMENTING ENVIRONMENTAL JUSTICE COMMUNITY DIALOGUES

Southern California Association of Governments

Effective Practices:

- Implementing "environmental justice community dialogues" to assure that traditionally underrepresented groups can meaningfully participate in planning processes in a more informal setting.
- Tapping consultants, community-based and faith-based organizations with specialized expertise, local knowledge or high credibility in targeted communities.

Participants:

- Southern California Association of Governments (SCAG)

Description

Transportation needs assessments should be performed during the transportation planning phase to identify and build support for transportation solutions acceptable to a diverse set of stakeholders. The Southern California Association of Governments (SCAG) instituted "environmental justice community dialogues" to assure that traditionally underrepresented groups can participate meaningfully in planning processes. Community dialogues are more informal than public information meetings or public hearings. They are generally smaller in size and encourage discussions and reactions. The audiences can be deliberately comprised of low-income and minority populations. Where appropriate, basic information is provided about the agency, its functions, and the purpose of a Regional Transportation Plan (RTP). As the discussion evolves with each group in a single meeting or a series of continuing or recurring meetings, specific needs and issues of concern and highly valued improvements can be registered as input for the RTP process.

All agencies should be prepared to "tap" external resources—such as contractors, community groups, skilled facilitators, or experts at state and local agencies—as needed. SCAG retained communications consultants to facilitate regular meetings and workshops including these informal "environmental justice dialogues." The consultants supplemented SCAG's database of community contacts with their exceptional working knowledge of networks of community organizations and associations.

Benefits

For the Agencies:

- Provides an opportunity to explore the specific needs, key issues of concern, and highly valued solutions and improvements for the RTP, the Transportation Improvement Program and other planning activities and processes.

For the Community:

- Smaller, more intimate groups create a less intimidating environment where productive discussions can often take place.

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PERFORMING COMPARATIVE ANALYSES ACROSS DIFFERENT POPULATION GROUPS USING THE PUBLIC USE MICRODATA SAMPLE

U.S. Census Bureau

Effective Practices:

- Analyzing travel behavior and needs of low-income and minority populations through tabulations performed using The Public Use Microdata Sample (PUMs).
- Using PUMs in partnerships with labor, social services, economic development and educational agencies and academic institutions to promote exploration of the occupational mix of employment sectors for job access planning.

Participants:

- Transportation Agencies
- Labor, Health and Social Services, and numerous other Federal, State and Local agencies
- Academic institutions

Description

The PUMs data set contains records from the long-form census survey—a rich source of travel, housing and socioeconomic data from a cross-section of U.S. households. The Southern California Association of Governments (SCAG) used the data source to analyze the journey-to-work patterns by socioeconomic characteristics such as race and income-level:

- Whether socioeconomic backgrounds caused significant differences in travel times—they did not.
- Whether transportation mode made large differences in travel time—almost 75 percent of transit users incurred more than 30 minutes travel time to work compared to less than 40 percent of auto users.
- Whether low-income and minority commuters relied more upon public transit—low-income commuters were four times more likely to take public transportation than high-income commuters.

PUMs is one of several useful data sources for job access and reverse commute planning. Low-income and welfare-to-work populations are part of a critical transit-dependent segment whose needs must be closely evaluated to establish effective transit solutions. Transportation agencies must find ways to bridge the gap between job locations and residences, and to do so effectively, give attention to the training and educational needs and staffing requirements of various industry sectors. Job access studies can take a closer look at the staffing needs—the occupational mix and basic educational attainment requirements of job openings.

For a recent study in Atlanta, PUMs data helped labor market and transportation analysts distinguish entry-level jobs and other occupations most suitable to persons with limited formal education or training. PUMs reports both occupation and industry employment and, therefore, supports a bridge table or matrix that suggests the types of occupational openings from employment growth in a given industry. Labor agencies and academic institutions have used PUMs to assess the education attainment levels held by persons in various industries and occupations.

Benefits

For the Agencies:

- Identifies the transportation mode and travel time of low income and minority populations as part of a planning process that seeks to identify the needs of all communities.
- A relatively low-cost means for assessing the occupational and educational requirements of various employment sectors to realistically assess demand for transit options.

For the Community

- A data resource to help determine where new transportation systems can efficiently serve low-income and minority communities.
- An important tool in the planning process that communities should consider to ascertain whether benefits and burdens are equitably distributed.

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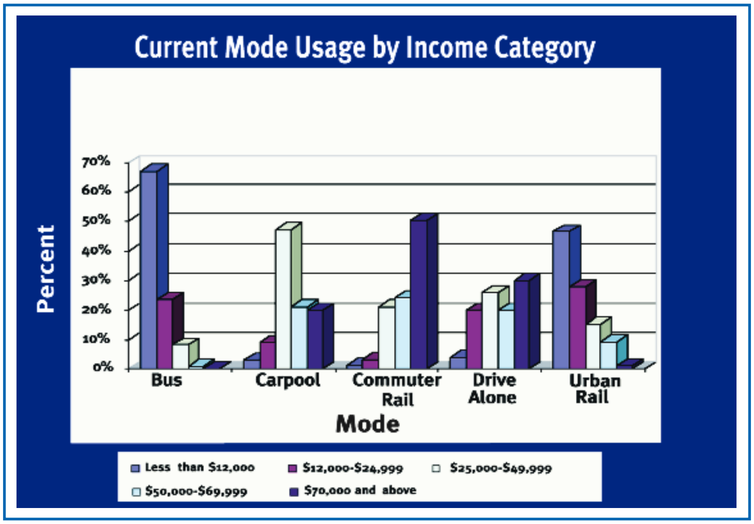

PERFORMING CROSSTABULATIONS FOR ENVIRONMENTAL JUSTICE ANALYSIS WITH CENSUS TRANSPORTATION PLANNING PACKAGE

U.S. Census Bureau

Effective Practice:

Using travel information crosstabulated by relevant race and income categories available with the Census Transportation Planning Package 2000 (CTPP 2000).

Participants:

The CTPP 2000 is a cooperative effort sponsored by the State Departments of Transportation under a pooled funding arrangement with the American Association of State Highway and Transportation Officials (AASHTO).

The CTPP is expected to be primarily of interest to State Departments of Transportation, Metropolitan Planning Organizations and Transit Service Providers, but other agencies and stakeholders will be interested in this data source including:

- Other Government Agencies
- Non-Governmental Organizations—Private-Sector, Community-Based, Environmental Advocacy
- Academic Institutions and Students
- The Media
- Market Analysts
- The Public

Description

The CTPP is a set of special tabulations from the decennial census designed for transportation planners. The CTPP contains tabulations by place of residence and by place of work, and reports the travel flows between the home and work place. The new CTPP data sets, due to be released in the Spring of 2003, will enable the user to crosstabulate travel patterns by a much greater number of variables than with the 1990 CTPP.

The Census Transportation Planning Package Working Group is currently designing specifications for the software to improve the ease of use and functionality of the CTPP 2000 data. The goal is to have software that provides an easy way for users to access the data, without sophisticated database or geographic information system (GIS) expertise.

The CTPP software will perform three main functions:

- Finding a CTPP table;
- Browsing or examining the data; and
- Saving, printing or exporting the data to other formats.

Users will be guided to prepare a table by selecting options for geography and data. This is a key change from the CTPP 1990 version. To examine CTPP 2000 data with the software, users will be able to view crosstabulated data from a specific table and a targeted geographic area simultaneously without having to export the data into another software package. Options will also be provided to aggregate categories, summarize the data, and export it into such formats as ASCII, GIS, spreadsheets and databases. The CTPP 2000 software will also allow the user to create and print simple maps without a separate GIS or mapping software.

Overall, the CTPP 2000 will increase the number of available variables and enable user–specified crosstabulations. For example, between 6 and 7 variables from the Census long form will be able to be viewed for the same geographic area, helping the user determine even minute details about low-income and minority communities.

Benefits

For the Agencies:

- Pending approval by the Census Bureau's Disclosure Review Board (DRB), the Census Bureau intends to provide data for a detailed geographic summary level for State DOTs and MPOs.
- Agencies will have updated information about place-of-work, means of transportation, private vehicle occupancy, time leaving for work, and travel time to work.
- Data users will find that transportation and travel flow data can be crosstabulated by race, ethnicity and income and compared between and within states, metropolitan areas, and communities.

For the Community:

- Communities anticipate being able to use the data to help determine where new transportation systems and other facilities can best serve low-income and minority communities.
- The CTPP is expected to help neighborhood groups assess the potential impacts of transit services on low income and minority populations.

Contacts/Resources

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More information about the CTPP:
CTPP Hotline – (202) 366-5000
http://www.fhwa.dot.gov/ctpp/about.htm

ESTABLISHING A DIALOGUE WITH COMMUNITIES TO IDENTIFY RELEVANT PERFORMANCE MEASURES

The Boston Metropolitan Planning Organization

Effective Practices:

- Devise ways to include low-income and minority communities in the development of planning products and review of the planning process.
- Development of meaningful performance measures.

Participants:

- Boston Metropolitan Planning Organization
- Community-based advocacy organizations
- Federal Highway Administration/Federal Transit Administration Certification Team

Description

The Boston Metropolitan Planning Organization (MPO) developed an action plan to address the specific requirements of the DOT Order on Environmental Justice and to ensure that all identified populations are treated equitably by the planning process and by the decisions made as a result of that process. In its most recent Regional Transportation Plan (RTP), the Boston MPO describes its approach to addressing environmental justice.

First, the MPO expanded its public outreach efforts to low-income and minority communities. Initially, the MPO reached out to community-based advocacy groups who serve the needs of low-income and minority residents and incorporated recommendations for seeking greater involvement from targeted communities by:

- Selecting locations accessible by public transportation.
- Choosing venues in or near low-income communities.
- Involving representatives from diverse stakeholders.
- Expanding the contact list to include numerous community-based organizations and non-profit groups.
- Devising media strategies appropriate to expanding outreach (e.g., announcements in transit vehicles, direct mail, ads in local and ethnic newspapers).

The MPO's initial outreach meetings were successful in facilitating a non-confrontational and consensus-building dialogue between MPO members and representatives of community groups. The process led to the involvement of knowledgeable stakeholders from various communities, the identification of transportation needs and concerns, and the development of short-range indicators for measuring existing conditions related to environmental justice.

Second, the MPO developed measures to test the achievement of environmental justice for its RTP and other planning documents. The MPO created Geographic Information System (GIS) maps showing the location of low-income populations, minority populations, and transit-dependent (i.e., "zero-vehicle") households from the census. Under the RTP, a low-income census tract was defined as one where the median income was equal to 75 percent or less of the median income for the MPO region. The maps and data sets were then displayed at public meetings to facilitate an informed dialogue. The

meetings led to selection of performance measures, adopted by the MPO in consultation with the MPO's newly formed Environmental Justice Ad Hoc Committee, which could be developed with currently available data. The agency acknowledged that future efforts would need to focus upon developing additional measures that require gathering more data by the MPO and its member agencies.

"Transit Access" was measured by the MPO by overlaying bus and rapid transit systems on maps of the low-income and minority populations. The GIS map analysis indicated that the regional public transit system provides a high degree of access to minority and low-income riders —over 70 percent of low-income and minority census tracts are located within one-quarter mile of available bus or rapid transit service as compared to less than 15 percent for non-low-income and non-minority tracts.

However, this broad definition of "transit access" alone does not adequately encapsulate the issues actually facing transit-dependent populations. Consistent with the Federal Transit Administration's Title VI program guidelines (FTA Circular C.4702.1), other relevant *service* measures should be analyzed to identify how responsive transit service is to affected populations, including:

- **Frequency of Transit Service.** The MPO examined scheduled headways for minority and low-income bus routes. Based on scheduled transit headways, minority and low-income bus riders have more frequent bus and trolley service, especially during the peak-periods. But, these populations are often solely dependent on transit service for access to jobs and other essential trips—many of which occur for second or third shifts (i.e., in the early mornings and/or late evenings and weekends). In reviewing this measure, it was recognized that *actual* performance can deviate from *schedule*d headways and that this gap warranted further investigation.
- **Crowding or Load Factor.** A load factor is a measure of transit crowding based on the number of transit passengers forced to stand on a given route. The MPO found that bus routes that serve minority and low-income populations are more crowded and exhibit an increased load factor (passenger/seats). This means that low-income and minority transit riders are more likely to be forced to stand for all or part of their ride than non-minority and non-low income riders.
- **Transit Vehicle Assignment.** This measure compares the conditions of transit vehicles across the system by affected communities. The MPO found that the average bus assigned to minority and low-income routes was newer and more likely to have air conditioning than other routes. However, the MPO is still evaluating data on the level of maintenance provided for buses traveling on such routes.

Benefits

For the Agencies:

- The MPO has further refined its analytical measures to include transit mobility that will examine specific origin-destination pairs, major employment centers offering service jobs, and other destinations integral to having opportunities in society (e.g., schools and hospitals).
- The MPO is also further refining its transit service measures taking a closer look at transit amenities such as shelter availability.
- The MPO is committed to a more complete use of its highway modeling capabilities to assess the equity implications of safety, condition of infrastructure including bridges, impacts of the roadway network on "host" neighborhoods, and the distribution of benefits provided by the highway network.

For the Community:

- The needs of low-income and minority populations and the issue of service equity have received greater attention due to the processes and analyses of Title VI and environmental justice.
- As awareness of environmental justice has been elevated, MPO member agencies have taken notice. The Massachusetts Bay Transit Authority recently instituted free bus-to-bus transfers and introduced discounted weekly unlimited-use bus/subway passes to address the needs of low-income riders who found the cost of a monthly "combo" pass excessive. The changes ameliorated the most adverse effects of a fare increase upon transit-dependent, low-income riders.
- As part of its long range planning process, the Boston MPO has established a general advisory committee, known as the Regional Partnership for Mass Transportation (RPMT). The role of RPMT, which includes community representatives from the Transit Riders Union and the Environmental Justice Ad-Hoc Committee, is to advise the MPO on how to better serve those individuals which utilize its mass transportation services.

Challenges Ahead

The MPO's positive strategy and initial efforts were commended in a Transportation Planning Certification Report prepared by the FHWA/FTA review team. However, the MPO's certification was conditioned upon the agency taking further actions to address environmental justice. In preparing its RTP, the MPO also acknowledged that its efforts were a "work in progress" and that its analytical tools to measure the achievement of environmental justice needed improvement. Toward this end, the MPO set aside resources in its most recent Unified Work Plan Program (UPWP) to refine and expand its transit and highway measures as well as build upon a successful model of working with the Environmental Justice Ad Hoc Committee.

With these tools and processes in place, the major challenge remains to incorporate key findings related to environmental justice into future RTP and TIP products. A plan or process to periodically assess the effectiveness of outreach and measurement techniques is one measurable step toward meeting this challenge.

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USING GIS TO MONITOR THE SPATIAL LOCATION AND DISTRIBUTION OF IMPACTS FROM PROJECT INVESTMENTS

Southeast Michigan Council of Governments

Effective Practices:

- Using GIS tools to support an evaluation of the fairness of the distribution of anticipated impacts of projects proposed in the Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP).
- Developing a transportation accessibility index to measure improved accessibility to jobs from the proposed program of RTP investments.

Participants:

- Southeast Michigan Council of Governments, Detroit, Michigan

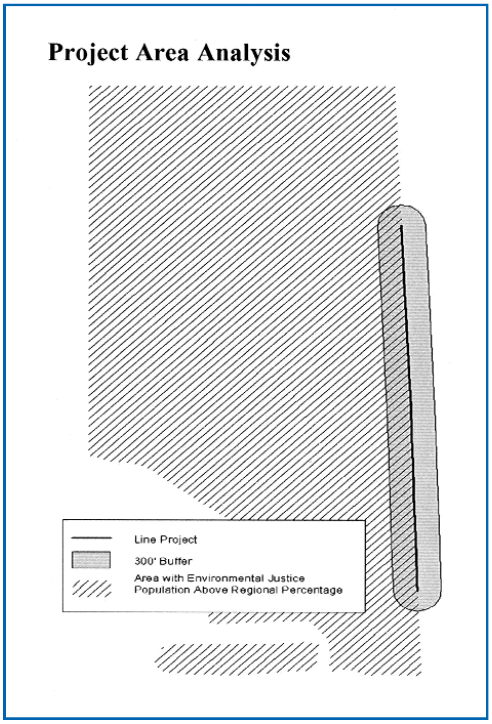
Description

The Southeast Michigan Council of Governments (SEMCOG), the Metropolitan Planning Organization (MPO) for a seven-county region, is responsible for multi-modal transportation planning including the development of the region's long-range transportation plan and three-year Transportation Improvement Program. As part of its environmental justice evaluation of its transportation planning process, SEMCOG used its GIS capabilities to prepare overlay maps of its proposed capital projects atop a map of sub-areas within the metropolitan region with proportionately higher concentrations of low-income households and minority persons. SEMCOG's methodology involved several steps:

Mapping Projects by Category. Initially, project mapping focused on project types that might have adverse impacts on nearby residents (e.g., road widening that might involve right-of-way acquisition, projects dividing neighborhoods, freeway ramp closures impeding access, etc.). Staff completed the initial review and then provided identical maps in the draft 2025 RTP document for all to consider during the public review process. No comments were received regarding these maps. Subsequent mapping—and the analytical mapping methods described below in more detail—focused on four categories of projects in the FY 2002-2004 TIP anticipated to deliver *benefits to* communities: preservation, safety, enhancement, and bridge.

Defining Population "Thresholds". Areas with high "EJ Populations" were established by comparing the percentage of minority persons in a census "block" or low-income households in a census "block group" to the regional benchmark share (i.e., the EJ population's share of the total region). If the EJ population percentage within a given area exceeds its regional share percentage, the area surpasses the "threshold" and is considered to have a regionally significant percentage of low-income populations or minority populations. The purpose of using threshold criteria is to focus analytical attention on transportation investment levels in areas with relatively high concentrations of minority populations and low-income populations. SEMCOG actually developed several "threshold" criteria definitions in order to test the sensitivity of its findings.

GIS Area Analysis. SEMCOG sought to geo-code as many of the over 1,900 projects identified in the 2025 RTP and the over 600 in the TIP, as possible. Projects with specific known locations were distinguished from



"line item" projects with an overly broad or unknown geographic scope or purpose thereby unsuitable for more precise mapping (e.g., citywide signalization improvements or line items such as "resurface 50 miles"). Once projects were digitally mapped, the GIS was programmed to assign a 300-foot buffer around each project and calculate the total area in acres around the project. The program then calculated the ratio of that project area covered by a regionally significant minority populations or low-income populations to the total project area. For example, a project with an environmental justice (EJ) ratio equal to .5, means that 50 percent of the area surrounding the project is home to a significant concentration of minority persons or low-income households and 50 percent is not. The total of the EJ and non-EJ ratios equals one.

Comparing Project Acreage Benefiting EJ Populations Against Regional Acreage for EJ Populations. SEMCOG calculated an "EJ ratio" for each RTP project category by summing all of the acreage of mapped projects in EJ areas and dividing by the total project area. EJ ratios were compared against a regional benchmark derived from census data. The equity of impacts was determined by comparing the EJ project areas to the regional ratios. By one calculation, SEMCOG found that 26 percent of the area surrounding TIP preservation projects were home to significant concentrations of low-income populations and minority populations compared to a regional area analysis indicating 12 percent of the Southeast Michigan region covered by minority populations or low-income populations. With this data, SEMCOG observed that it would be reasonable to conclude that preservation projects were being equitably distributed in the 2025 RTP.

Project Cost Analysis. SEMCOG also produced GIS project cost analysis for mapped projects as well as line item projects. The GIS program developed by SEMCOG was modified to allow for a comparison of investment levels—not just projects—in EJ and non-EJ areas. Preservation projects comprised 40 percent of capital funds in the 2025 RTP while capacity projects accounted for 12 percent of total capital funds.

SEMCOG adopted a different methodology to assess roadway capacity projects (e.g., road widening or new road construction). SEMCOG employed its travel demand forecasting model to create an *accessibility index*. The index accounts for the "attractiveness" of each zone (e.g., number of jobs) and a measure of the separation between zones based upon travel times. Essentially, a higher accessibility index indicates a zone with good accessibility. The MPO then assessed the *net change*—before and after implementation of projects—to measures of accessibility and travel time to jobs, medical care, shopping, and educational opportunities. The process flags those zones where accessibility to other zones would be made worse after projects are completed. SEMCOG then assessed whether the zones suffering adverse accessibility impacts were disproportionately located in areas of low-income populations and minority populations. It should be noted that the accessibility index did not consider transit since the travel demand forecasting model lacked a transit component when SEMCOG prepared its 2025 RTP. However, SEMCOG is in the final stages of upgrading its model and plans to analyze transit accessibility in future studies including environmental justice analyses.

Benefits

For the Agencies:

- Supplementing rigorous public involvement processes, the GIS and travel demand forecasting analyses give SEMCOG valuable analytical tools to assess and adjust, where recurring imbalances are revealed, the equity of its transportation investment program.

For the Community:

- The public can review GIS maps and monitor environmental justice findings about the fairness of the RTP and TIP project lists over time and develop independent, informed conclusions as to the MPO's investment priorities.
- Mapping typically beneficial projects raises the community's awareness of key transportation funding sources capable of improving safety and the quality of the built environment.

Lessons Learned

SEMCOG has honed the effective use of GIS as an analytical tool for environmental justice analyses with its successive application in the RTP, and then later, TIP processes. However, SEMCOG cautions against making environmental justice analyses a purely "desktop exercise" :

- *Environmental justice is clearly not only about the numbers.* The technical analyses highlight potential problems and focus attention on patterns of inequality. The GIS work is one method for gauging the success of planning efforts. However, establishing meaningful public involvement processes that engage low-income and minority populations is the most important activity of the plan.
- Public involvement processes are integral to identifying benefits and burdens measures that are most relevant to affected communities; SEMCOG staff recognize that such input provides valuable guidance on how to "fine-tune" future analyses.
- SEMCOG warns against generalizing from a single year's data; a particular sub-area may receive few or no benefits in one time period, but enjoy extensive benefits in the next. Recurring imbalances in the distribution of benefits require greater scrutiny of the root causes. When feasible, appropriate changes should be made to address imbalances that cannot be justified.

Challenges Ahead

SEMCOG plans to incorporate a transit component into its travel demand forecasting model. Enhancing the model's multimodal capabilities will allow the assignment of trips to transit service and facilitate a better understanding of transit service areas, level of transit services, and geographic origin of transit users among other issues.

SEMCOG also plans on tracking its GIS and travel demand forecasting model analyses described above over time. Tracking shifting investment priorities over time will allow the MPO to assemble a robust data set and gain the vantage point to assess with certainty the equity implications of its investment program.

Contacts/Resources

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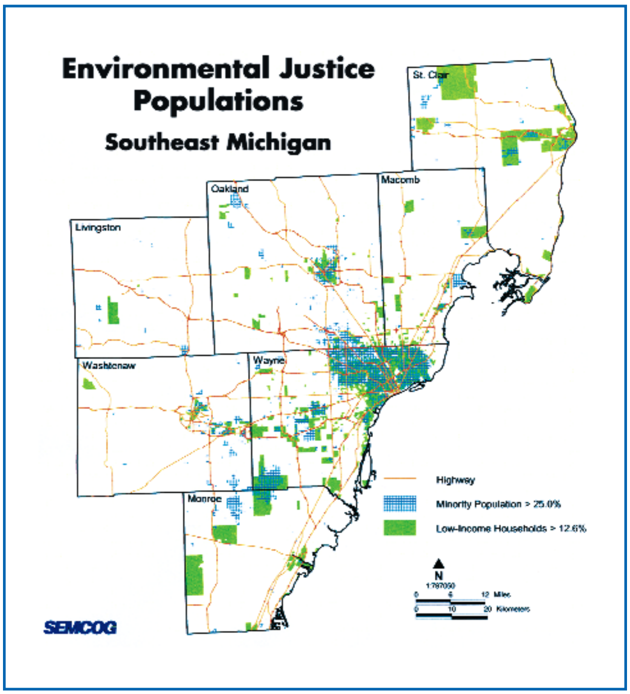

EXPANDING PUBLIC INVOLVEMENT INTO A CONTINUING PROGRAM OF INVOLVEMENT AND ASSESSMENT PROCESSES

Chicago Area Transportation Study (CATS)

Effective Practices:

- Adopting a Public Involvement Plan that promotes an early and continuing engagement with all community groups including low-income and minority populations in regional plans and capital programs.
- Identifying and holding meetings with community leaders to outline future strategies for outreach and to recruit members for task forces and advisory groups.

Participants:

- Chicago Area Transportation Study
- Public Involvement Task Force

Description

After the completion of the initial 2020 Regional Transportation Plan (RTP), CATS, the Chicago metropolitan region's Metropolitan Planning Organization, elevated its successful Public Involvement Working Group to task force status and expanded its membership. The Public Involvement Task Force (PITF) then proceeded to update the *Public Involvement Plan*. The *Public Involvement Plan* calls for easy-to-read summaries on major CATS activities and policy documents. Several other actions were taken to foster understanding of the planning process and dismantle barriers to participation for all interested citizens including:

- Development of a web site with significant portions available in Spanish.
- Preparation of a popular summary of the plan.
- Preparation of a *Citizen's Guide to Public Involvement* in both English and Spanish and a brochure, *What is CATS?*.

Beyond the publication of needed documents, CATS made a commitment to enhance public involvement by reserving 50 percent of its task force membership to participants from special interest and citizen groups. All RTP Committee meetings along with other CATS committees, subcommittees and task forces were open to the public. Each meeting was listed on the CATS telephone hotline and website. Straightforward procedures made it simple to add interested parties to mailing lists to get notices and meeting materials.

CATS also added a work element in the 2001 Unified Work Program (UPWP) for public involvement activities *specifically targeted* to low-income and minority communities. The element supplements its larger, general public information and participation work element.

During the plan update process, CATS initiated an outreach program to the Hispanic and African-American communities. The MacArthur Foundation and the Center for Neighborhood Technology hosted separate meetings with Hispanic and African-American leaders to explore outreach strategies for CATS and Northeastern Illinois Planning Commission (NIPC). These meetings introduced the transportation planning process and solicited support for expanded outreach within targeted communities. Equally important, these meetings were a means for recruitment of membership for various CATS task forces.

CATS has implemented several other outreach strategies to engage communities and improve its understanding of local concerns:

- Meetings with most of Chicago's Hispanic aldermen were held to discuss the RTP's impacts and to enlist their support for holding community meetings about transportation issues.
- CATS staff attended meetings and events of faith-based organizations and their leadership to reach members of the African-American community.
- CATS staff have attended civic and county fairs, a Mexican-American Independence Day Breakfast, and Town Meetings to answer questions, distribute brochures and solicit public involvement.

These activities were in addition to the agency's fourteen meetings for the plan update. At these meetings, citizens were given a forum not only to discuss issues raised by the future plan, but also to voice their concerns about the current transportation system and services. CATS also routed non-transportation service-related comments to appropriate agencies. Public meeting notes were taken and circulated.

Benefits

For the Agencies:

- Creates conditions for better transportation decisions that will meet the needs of diverse communities.
- Improves potential for selection of projects that will avoid disproportionately high and adverse effects on minority and low-income populations.

For the Community:

- Provides communities with opportunities to learn about and improve the quality and usefulness of transportation in their lives.
- Strengthens ties between community institutions and public agencies (officials and staff) responsible for transportation investments and services.

Challenges Ahead

The PITF oversees and provides direction for all CATS outreach processes. However, CATS also has created a Community Mobility Task Force (CMTF) that provides suggestions to the PITF. The CMTF provides an opportunity for laypersons, citizens, and stakeholders to be heard on community mobility, access to jobs, public participation and other transportation issues. The CMTF and its Access Measures Working Group have reviewed the original RTP's use of performance measures and defined improvements to accessibility and other environmental justice measures for plan updates and the 2030 RTP.

With its last two UPWPs, CATS has reserved resources to investigate effective measures of environmental justice. In 2000, CATS sought the assistance of the Urban Transportation Center at the University of Illinois (UTC) to perform an independent "Environmental Justice Assessment". CATS has concluded that an ongoing process of analysis of these measures has already stimulated a closer look at the fairness of agency activities, priorities and funding programs. In the future, CATS will need to make model modifications, refine data collection and identify ways to use its modeling process to inform its 2030 RTP process and to evaluate its performance in terms of benefits and burdens.

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PUTTING THE FAMILY-SUPPORTING WAGE AT THE CENTER OF JOB ACCESS PLANNING

East-West Gateway Coordinating Council, St. Louis, Missouri

Effective Practices:

- Benchmarking the needs of low-income households through family-supporting wage studies.
- Applying "cluster analysis" to target "good jobs" for job access planning studies.

Participants:

- East-West Gateway Coordinating Council

Description

Select MPOs have studied the pathways, or career development steps, needed to avoid "dead-end" jobs and meet financial responsibilities without dependence upon public assistance. "Family-supporting" wage studies take a critical look at occupational job openings and their unequal capacity to support the quality-of-life needs of families, children and communities. The studies look at the costs of living—housing, utilities, food, child care, transportation, taxation, and other expenses—and the wages needed to sustain a single-earner and two-earner family household. By reporting this benchmark annually, the East-West Gateway Coordinating Council, the St. Louis region's MPO, stays focused upon the actual needs and support systems required to assist families and communities escape poverty. Through graphic illustrations, the wage study reminds policy makers and the public of the integral link between education and training and rising wages. Similarly, these studies emphasize the importance of strong partnerships with training providers, social service institutions, and dependable, responsive transportation agencies to facilitate job-seeking workers entry into the labor market and to ensure sustainable employment.

Transportation planners who are engaged in job access planning for low-income and transit-dependent households need to be mindful that many occupations with the highest number of annual openings may not pay a family-supporting wage, or may be in firms or sectors with high turnover rates. Firms and industries whose policies and track record demonstrate a commitment to developing career advancement paths and lasting employment opportunities for their employees make the most promising partners. While predicting "winners" or "losers" in our rapidly evolving economy is a perilous and humbling undertaking, transportation programs should look closely and target economic sectors and industry "clusters" with a strong potential and/or history of growth. States and MPOs should closely coordinate and/or partner their job access projects with economic development entities—state agencies, local governments, private business and industry assocations. These entities keep their finger on the pulse of the region's economy—its strengths, weaknessses and areas of greatest competitiveness—typically devoting resources toward networking with businesses and forging stronger business-government relationships.

The State of Missouri, for example, has identified seven industry clusters of particular promise for its future: biomedical/biotechnology; advanced manufacturing; information and media; recreation and tourism; agribusiness; financial services, and transportation services. The locations of these firms have been mapped for the St. Louis region. However, mapping is but one step in an in-depth process of targeting viable private sector partners in growth sectors and relationship-building with industry insiders. Workforce development agencies use this planning process to establish a productive dialogue, define shared opportunities, and devise a "one-stop" program for integrating social services, workforce readiness training, and transportation services.

The idea of linking low-income job-seekers to robust industry clusters challenges customary assumptions about where the kind of entry-level jobs exist for which welfare recipients with little experience can qualify. However, the East-West Gateway Coordinating Council in St. Louis found that these growth sectors offered a surprising degree of advancement and growth from their starting wage levels.

Benefits

For the Agencies:

- Benchmarking the data received from family-wage studies allows State DOTs and MPOs to stay focused upon the actual needs and support systems required to assist families and communities escape poverty
- These studies promote the value of strong partnerships among training providers, social service institutions, and transportation agencies to facilitate entry into the labor market and ensure sustainable employment

For the Community:

- Transportation programs that deliver the most sustainable results will be those that target robust economic sectors and industry clusters to help the low-income sector commute to employment opportunities
- Partnerships are forged with transportation agencies and other entities to help facilitate entry into the labor market and sustainable employment.

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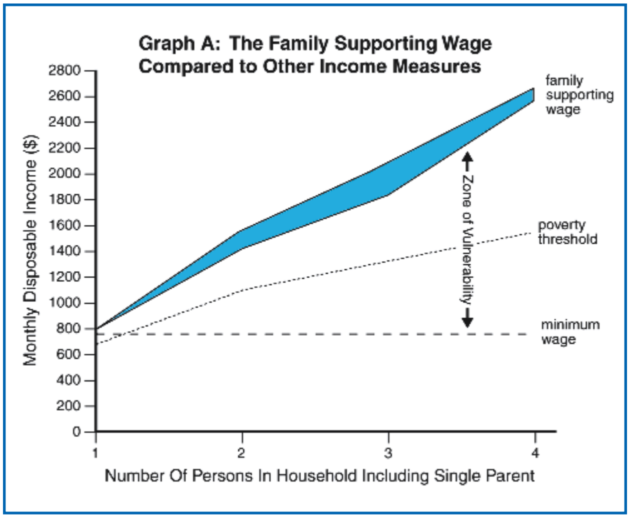
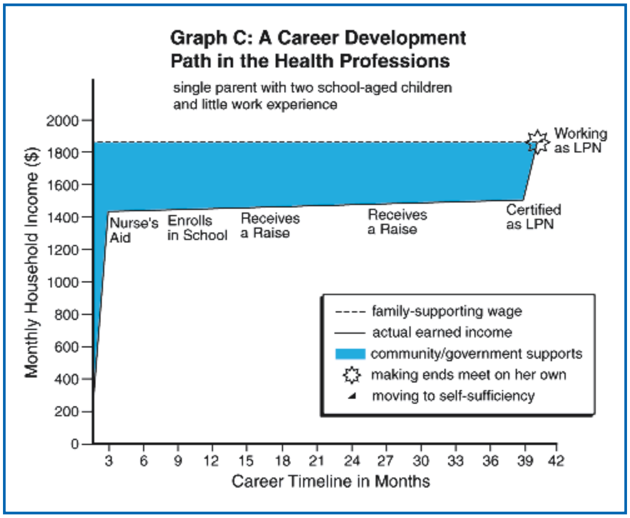
East-West Gateway Coordinating Council, *St. Louis Regional Transportation Plan for the Access to Jobs, Part A: Issues and Strategies,* December 1998.





TARGETING COMMUNITIES OF CONCERN IN THE BENEFITS AND BURDENS ANALYSIS OF THE REGIONAL TRANSPORTATION PLAN

Metropolitan Transportation Commission

Effective Practices:

- Evaluating benefits and burdens of transportation investments on low-income and minority populations using travel demand modeling tools, performance measures and GIS.
- Crafting new initiatives that respond to the concerns of advisory group participants and the needs of communities.

Participants:

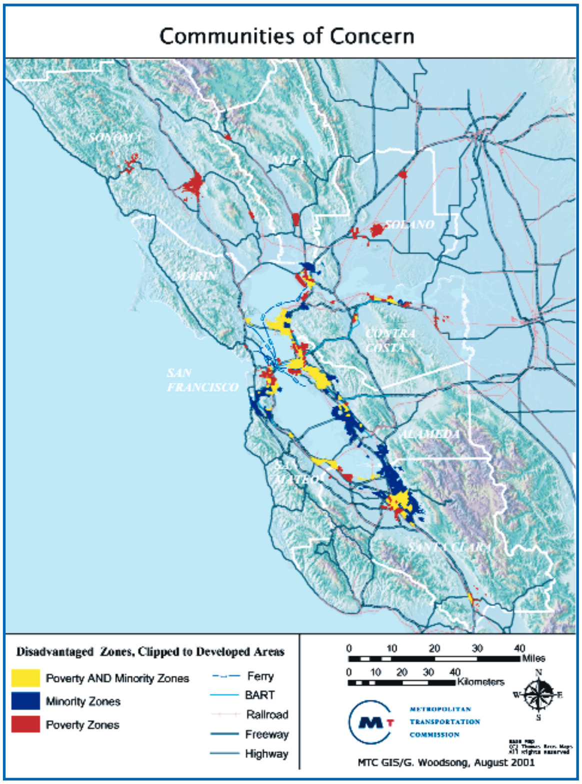
- Metropolitan Transportation Commission
- Environmental Justice Advisory Group
- Minority Citizens Advisory Committee

Description

The Metropolitan Transportation Commission (MTC), the San Francisco Bay Area's Metropolitan Planning Organization (MPO), refined its approach to assessing the equity of transportation system investments with its 2001 Update to the Regional Transportation Plan (RTP). Responding to the comments of its Environmental Justice Advisory Group (EJAG), a diverse committee convened to review and assist MTC in crafting analyses for the 2001 RTP, MTC adjusted its analytic framework to improve its "understandability" and its focus on specific communities of concern.

In 1998, MTC prepared an Equity Analysis for its RTP and, in so doing, became one of the first MPOs to undertake such an analysis for a Long-Range Plan. MTC's initial equity analysis had assessed the changes in mobility for 38 selected "disadvantaged communities". Applying an analytically rigorous methodology, MTC had developed transit and automobile accessibility measures to assess the equity of investment decisions and compare the performance of these measures with and without the proposed plan. Using detailed traffic analysis zone-level data, MTC had computed both "raw" accessibility measures for "disadvantaged communities" and "weighted" accessibility measures that incorporated both "threshold" (i.e., number of jobs reachable within X-minutes of given zone) and "gravity" (i.e., number of jobs in each zone weighted in inverse proportion to travel time from the zone of residence) based computations of zonal accessibility.

With its 2001 study, MTC began by revisiting with the EJAG the definitions for "disadvantaged communities" used previously. Emerging from this review process was the concept of "communities of concern"—target communities for which the potential social impacts of future transportation investments were to receive close scrutiny. Release of the Census 2000 race/ethnicity data in March 2001 offered the opportunity to take a fresh look at minority neighborhoods in the region. The considerable diversity of the Bay Area metropolitan region complicates the task of developing meaningful definitions to target such communities of concern. The region's "minorities" are, in fact, the demographic majority with over 50 percent of the population falling into one of the "minority" categories of the U.S. Department of Transportation Order on Environmental Justice. Therefore, to truly target communities of concern, a zone had to have at least 70 percent of its population as "minority" or have more than 30 percent of its population with incomes 200 percent below the poverty level. This approach led to the selection of 333 zones out of 1,099 Travel Analysis Zones (TAZs) of the MTC Travel Demand Forecast



Model. Forty-two target communities were represented by this screening criteria including larger areas such as Fruitvale/East Oakland, Hayward/Union City, and Daly City.

Once the minority and low-income areas were identified, MTC analyzed the effects of existing systems and proposed plans on the population groups residing in these areas. Accessibility and mobility performance measures used in the analysis included the following:

- **Accessibility to Jobs.** The number and percentage of all jobs within 15, 30 and 45 minutes of the identified communities by mode;
- **Travel Time**. Aggregate travel time and average travel time for work and non-work trips by mode;
- **Transit Travel Time to Major Job Centers.** Travel time by transit from minority and low-income communities to major job centers; and
- **Accessibility Evaluation.** Accessibility by income quartile.

Several alternatives were evaluated with these four performance measures including the Baseline Conditions, No-Project Future, the RTP Project Future and several other future alternatives. For each alternative, the analysis compared whether the jobs accessibility and travel time measures were at least comparable between low-income and minority communities and non-minority and not-low-income populations.

Communities of concern had equal or greater accessibility to jobs and employment centers as non-minority and not-low-income populations according to the study findings. MTC made several observations, in explaining these findings, generally relevant to other metropolitan regions. First, many low-income and minority communities are located in the urban core. Thus, they are relatively near traditional regional employment and activity centers and existing transportation systems. Trips tend to be shorter and the mass transit and highway networks are more extensive in these areas. Second, MTC's RTP policies are somewhat more focused on system preservation over capacity expansion further benefiting residents of the traditional core over the suburban and exurban areas. Third, MTC allocates relatively more resources for transit to encourage options to cars and to provide transit services for transit dependent populations.

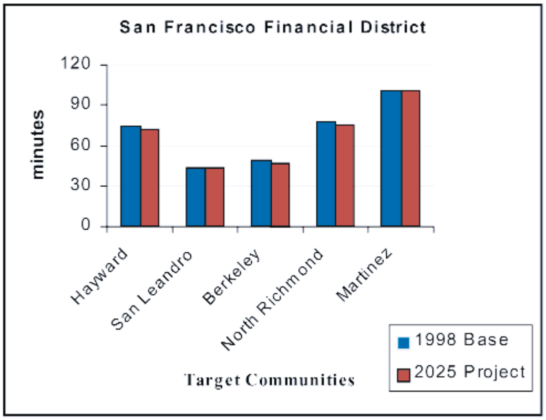
Notwithstanding these findings, the MPO compiled other evidence and was often reminded, at public meetings and by the EJAG, of the vital importance of transit for low-income persons to reach work, school, childcare, medical services and other needed services and opportunities. The barriers faced by low-income transit-dependent populations in reaching employment and other needed services (e.g., travel costs, time, and time and day-of-week services to destination location) have lead the agency to undertake a more in-depth study of the need and requirements for a Lifeline Transit Network. The Lifeline Transit Network—an exercise in identifying gaps in the transit system and finding ways to overcome those gaps—was identified as one of the most concrete ways that MTC could address the needs of low-income and transit-dependent households.

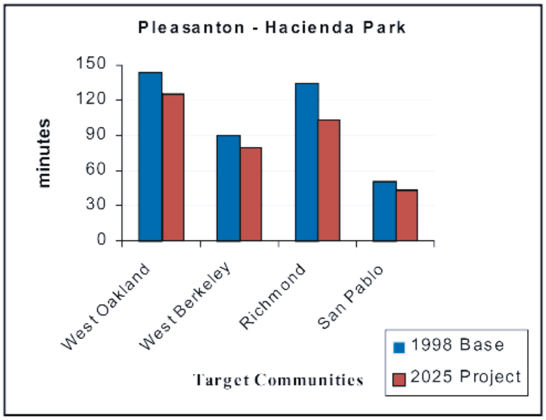
Benefits

For the Agencies:

- MTC, like other MPOs, was called upon to advance the state-of-the-practice by better understanding and communicating the equity

Transit Travel Times (assuming walk access) from Selected Minority and Low-Income Communities to Selected Job Centers, Comparison of 1998 Base and 2025 RTP





impacts of its investment priorities. To do so, the agency refined its analytical methods and performance measures to enable consideration of whether, and to what extent, job access and travel times varied by race and income and by mode.

- Sufficient information was compiled to take a closer look at social impacts of transportation systems—identify communities of concern, compare the equity of impacts, engage interested community-based organizations—and devise initiatives to improve access and transit services for low-income and minority populations.

For the Community:

- The process combined analytical methods with opportunities to give feedback in the form of advisory and working groups and public involvement meetings. Thus, interested participants had opportunities to learn more about the transportation system and discuss needs and preferences, concerns, and proposed solutions.

Lessons Learned

MTC's Environmental Justice Report concludes that any comprehensive RTP equity analysis will need to rely upon several different approaches; there is no "one size fits all" strategy. MTC found that valuable information was derived from its travel demand model and accessibility analyses. For the MPO, the analytical tool was one valuable means, albeit imperfect, for understanding how the broader transportation system serves low-income and minority populations. Properly used, the tool became one means for promoting further dialogue about equity with community-based organizations and the interested stakeholders.

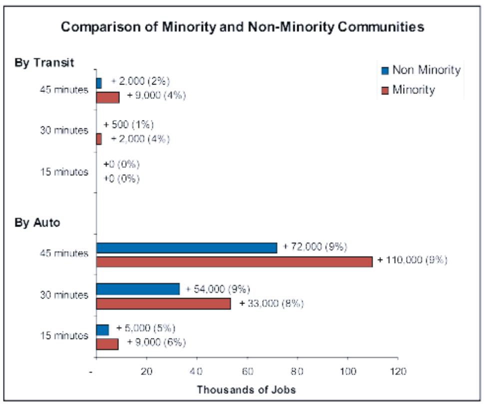
However, several EJAG participants wanted to expand the analysis to other activities of concern, such as grocery stores, higher education, child care, job locations with 24-hour activity, etc. For them, MTC's analytical methods lacked the depth and nuance to adequately depict the complexity of "real-world" travel conditions—the spatial and temporal gaps of the existing transit system experienced by transit-dependent populations trying to meet their basic needs. For MTC staff, the problem was that only limited region-wide data existed for some non-work destinations (e.g., colleges); databases reporting the location of grocery stores, childcare centers and other essential services were not available at the regional-level. Accessibility to total employment, which was used as a surrogate for accessibility to all non-work activities, seemed to these EJAG participants as a poor substitute measure.

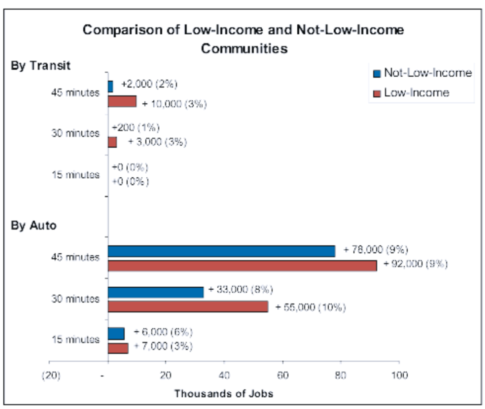
Instead, the EJAG and the MPO's Minority Citizens Advisory Committee members advocated for a greater focus upon the Lifeline Transit System concept among other equity initiatives. By identifying the spatial and time-of-day gaps in transit services and devising workable solutions for transit improvements of the system, the Lifeline Transit System network has been characterized as a “safety net” that will ensure that basic transportation needs are met.

Challenges Ahead

MTC concluded that several issues raised by EJAG participants in the RTP equity study were best addressed outside the RTP update process and with the participation of other partnering agencies and community organizations at the table. MTC identified several “new equity initiatives” that emerged from its environmental justice discussions that are likely to part of the MPO’s future activities:

Number of Jobs Accessible by Transit and Auto Change from the No Project to the Project





Lifeline Transit System. MTC has already begun to prepare GIS maps of existing transit routes, overlain atop locations of low-income residents and neighborhoods, to ascertain what service gaps exist to frequently mentioned or desired destinations. Maps will reviewed by transit operators and confirmed with communities. Several outreach meetings will be held and the study will include an implementation plan that will identify funding sources.

Transit Affordability Study. MTC, in a collaborative effort with transportation, social service agencies, and community-based organizations, will examine cost barriers to transit usage and solutions for low-income persons. The study will also test the feasibility of **Subsidized Transit Fares for Low-Income School Children.** The latter pilot program will offer a subsidized transit pass for students from low-income families in select school districts.

Transportation for Livable Communities (TLC). Ongoing support is provided for planning, capital, and housing incentive funds to aid communities with redevelopment activities and to promote affordable housing.

Community Transportation Plans. Modeled after their TLC program, such studies identify transportation needs and solutions within disadvantaged communities and are a collaborative effort with community-based organizations, transit agencies, and other transportation agencies.

Low-Income Flexible Transit (LIFT). LIFT offers operating support for fixed-route and non-traditional transportation services.

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ESTABLISHING MEANINGFUL PERFORMANCE MEASURES FOR BENEFITS AND BURDENS ASSESSMENTS

Effective Practices:

- Using performance measures to develop a comprehensive assessment of benefits and burdens.

Participants:

- Metropolitan Planning Organizations
- State Departments of Transportation
- Transit Service Providers

Description

Several different performance measures have been employed by agencies to develop meaningful assessments of benefits and burdens in the transportation planning process and to improve decision making. Performance measures are often the subject of deliberate discussions with environmental justice task forces or working groups familiar with their region and the analytical tools and data available to the agency. The relevance, timeliness and clarity of measures can be confirmed through the use of public involvement processes. The discussions and evaluation process may involve the ranking of measures based on relative importance, quality of data, time constraints, available budgetary resources and explanatory power. Clearly, not all measures will be appropriate for every agency.

Depending on the agency's mission and stage in the decision making process, performance measures may fall into several general categories including accessibility and mobility, operational efficiency, safety, system preservation, quality of life, economic development, and health and the environment. The next page presents a sample list of performance measures, many of which can be readily adapted to facilitate comparisons by race/ethnicity and/or income.

Benefits

For the Agencies:

- Monitors benchmark conditions, flags deficiencies and enables measurement of progress toward reaching goals and improving conditions.
- Ensures that decision makers have a comprehensive foundation to prioritize and select projects.
- Institutionalizes the consideration of social impacts when evaluating transportation investment strategies.

For the Community:

- Explicit reporting framework allows for public scrutiny and review of decision making priorities as they affect various populations.
- Open system that can be evaluated and improved upon by informed agencies and persons.
- Informs community about regional demographics, accessibility, travel times, and highway and transit investments for different segments.

Contacts/Resources

To learn more about performance measures:
http://www.ops.fhwa.dot.gov/Travel/Deployment_Task_Force/perf_measures.htm

To learn more about the Federal Transit Administration's National Transit Database, a valuable resource for reporting and comparing transit performance measures:
http://www.fta.dot.gov/library/ntd/mtd/toc.html

Sample List of Relevant Performance Measures

Accessibility	Operational Efficiency	Safety	System Preservation	Quality of Life	Economic Development	Health and Environment
Access to Jobs or Opportunities: – % of population within accessible distance to needed institutions or services (e.g., hospitals, education, retail) by race/ethnicity and income – Average # of jobs within X minutes by mode – % of non-work trips in X minutes by mode – Average travel time to work by mode – Average cost of travel **Transit:** – Frequency of transit service – % of routes with headways every X minutes by time of day – On-time performance by route – % of population within X miles of fixed-route transit service – % of workforce reaching workplace by transit within X time with no more than two transfers **Transit Frequency:** – # of zero-car households/persons – % of transit-dependent population served – # of transit demand-responsive trip requests – % of transit-demand responsive trip requests met	**Transit Ridership:** – Per capita – Ridership-to-capacity ratio – Per route mile – # of public transportation trips – Loading factors — total seats to passenger ratio – Average wait time to board transit	**High Accident Locations:** – Pedestrian, bicycle – Automobile – Accidents per year **Fatalities (or Injuries):** – Pedestrian, bicycle – Automobile – Accidents per year **Perception of Safety:** – Customer Perception **Crime Incidents at Facilities:** – Quality-of-Life Crime Incidents (e.g., disorderly conduct, drunken-ness, trespassing, vandalism) – Property Crime Incidents (e.g. fare evasion, thefts, burglary) – Violent Crime Incidents (e.g., murder, robbery, rape, assault) – Weighted Service Calls (time spent on incident)	**Transit Service and Conditions:** – Average age of vehicle equipment – Condition of vehicle equipment – Remaining service life of equipment – Missed trips due to operational failures – Customer perception of system conditions **Budgetary Expenditures:** – % of budget allocated to system preservation projects – Flexible funding dollars programmed for non-highway projects – # and dollar value of CMAQ (Enhancements, TCSP, Job Access, etc.) funds by community – Current Average Maintenance Costs – # and type of transit projects funded – # of lane miles let to contract for resurfacing	**Customer Perceptions:** – Commute times – Livability of environment – Access to opportunities – Air quality – Crime and safety **Customer Satisfaction:** – Snow removal – Complaint resolution – Facility conditions	**Job Access:** – % of region's unemployed or poor that cite transportation access as a principal barrier to seeking employment – % of employers that report difficulty in accessing desired labor supply due to transportation	**Environmental Impacts:** – Carbon monoxide and small particulate air toxics exposure (by race/ethnicity and income) – Exposure to Noise Levels Exceeding Thresolds (by race/ethnicity and income)

ASSESSING THE AIR QUALITY IMPACTS OF THE REGIONAL TRANSPORTATION PLAN

Southern California Association of Governments

Effective Practices:

- Integrating air quality impacts as part of a comprehensive set of performance measures to assess environmental justice benefit and burdens.
- Bringing equity dimensions of environmental impacts into regional planning.

Participants:

- Southern California Association of Governments (SCAG)

Description

Preparing for its most recent 2001 Regional Transportation Plan (RTP) update, the Southern California Association of Governments (SCAG) drafted a *Compliance Procedure for Environmental Justice in the Transportation Planning Process*. The compliance procedures manual indicated SCAG's intent and a methodology to include air quality analysis among a comprehensive set of equity performance measures that address: 1) environmental, health and safety; and 2) socioeconomic equity. SCAG's regional transportation model produces transportation link data as an input to a model that estimates pollutant emissions from mobile sources. SCAG's analysis was based on mobile source emission quantities as an approximate indicator of personal exposure to pollution, since it was beyond the scope and resources of the study to estimate pollutant dispersion and air quality (i.e., pollutant concentrations). Where possible, the analysis calculated impacts for the plan as a whole by summing up localized (but not project-specific) data.

Total emissions of all pollutants except sulfur oxides and particulate matter (PM_{10}) in the region are anticipated to decrease substantially compared to existing conditions with or without the Plan, due to a combination of measures being taken to meet air quality standards. Further, the Plan demonstrates conformity with regional air quality management plans that call for reductions in emissions of air pollutants. The Plan achieves these reductions through investments that alleviate roadway congestion, reduce travel distances and times, and promote viable modal alternatives to the car. The air quality analysis was based on a comparison between the Plan and Baseline conditions rather than a comparison of the Plan with the existing conditions in order to focus on the differences made by the Plan. The term "Baseline" is used to describe the conditions that would prevail in the horizon year for the Regional Transportation Plan (RTP) if the Plan investments were not made.

Due to the reliance on emission quantities rather than concentrations, the environmental justice analysis focused on PM_{10} and carbon monoxide (CO), pollutants that tend to have localized as well as region-wide effects. SCAG calculated the change in emissions exposure due to the Plan for CO and PM_{10} (from exhaust and tire and brake wear) as well as for the portion of PM_{10} that is emitted in heavy-duty vehicle exhaust, which is of regional concern due to the potential for cancer risk from diesel exhaust. The analysis calculated *weighted average emissions exposure*, a measure that weighs exposure by population group (i.e., income segment, ethnic, elderly, and disabled populations), and found that the Plan would not place disproportionate burdens on minority, low-income, elderly or disabled populations. In fact, weighted average air emissions exposure for all groups would be less under the Plan than under the Baseline.

Benefits

For the Agencies:

- Provides an opportunity to identify and address disproportionate impacts on environmental justice communities under the Regional Transportation Plan.
- Allows for a standardized way to guide and inform the transportation planning process.

For the Community:

- Offers objective ways to assess the probable impact of the plan on populations of concern.
- Raises the issue of health and environmental impacts within a framework that considers whether, and to what extent, effects may be borne unequally by various affected populations.

Challenges Ahead

The adverse health effects of exposure to elevated levels of carbon monoxide (CO) and Particulate Matter (PM) are well-documented and will undoubtedly continue to the subject of intensive research and a battleground for regulatory policy and environmental justice advocacy in the coming years. Poor air quality presents health risks to all populations, but some communities shoulder a disproportionately greater burden by their proximity to polluting facilities and mobile source emissions. Continuing advancements in science and public health will place new challenges on transportation agencies, environmental analysts and transportation planners to keep pace and develop new analytical methods and preventive strategies that are responsive to community health concerns. SCAG's efforts to establish environmental, health and safety performance measures and assess their equity implications suggest that other transportation agencies may be challenged to follow suit in the coming years to similarly refine their modeling and analytical tools and reexamine their investment priorities.

Contacts/Resources

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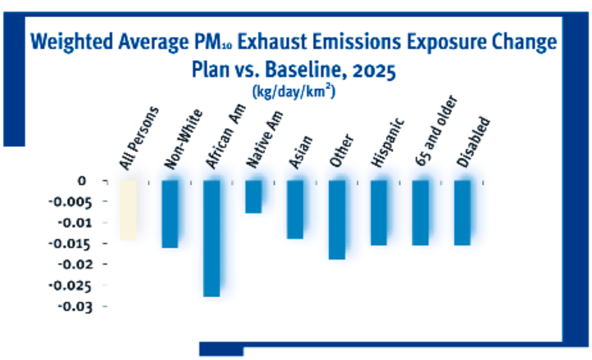
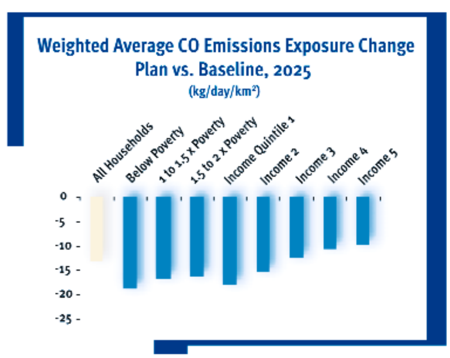
The Environmental Protection Agency (EPA) has set national air quality standards for six common pollutants including carbon monoxide and particulate matter. More information on all these pollutants can be found at the following EPA website: http://www.epa.gov/oar/urbanair/6poll.html

The EPA's Office of Transportation and Air Quality maintains a website reporting information about the relationship between transportation and air quality: http://www.epa.gov/otaq/

Asthma-related hospitalizations have risen disproportionately for inner-city children, and in particular for minority populations. The EPA maintains a website devoted to asthma issues: http://www.epa.gov/children/asthma.htm





LOCATION EFFICIENT MORTGAGES TO PROMOTE INVESTMENT AND TRANSIT DEMAND IN THE INNER CITIES

Fannie Mae and the Institute for Location Efficiency

Effective Practices:

- Providing special mortgage rates to households that are less auto-dependent.

Participants:

- Fannie Mae
- The Institute for Location Efficiency includes membership organizations: the Center for Neighborhood Technology, the Natural Resources Defense Council and the Surface Transportation Policy Project
- Research and Development funders include: the Federal Transit Administration, the U.S. Department of Energy, the U.S. Environmental Protection Agency and several foundations

Description

Location efficiency is the ability to live in a neighborhood where the goods and services you need and want are either close by or within easy access by public transportation. When people live in a location efficient community, they can function without a car, or if they own one, they can drive it less. Location efficiency, which can be measured, converts into financial savings as compared with living in a less efficient neighborhood.

The Location Efficient Mortgage (LEM) is an innovative $100 million mortgage product now offered by Fannie Mae, the nation's largest supplier of home mortgage funds, in a pilot demonstration program being administered in Chicago, Los Angeles County, the San Francisco Bay Area, and Seattle. The LEM is ideal for the prospective homeowner who would like to purchase a home in an urban neighborhood and rely upon public transportation and locally available services and amenities rather than operate a private vehicle.

The program extends homeownership eligibility to those who may not qualify for a traditional mortgage. The LEM relaxes select underwriting standards due to transportation cost savings. The LEM offers highly attractive qualifying standards: Housing-to-Income ratios of 35 percent and Total Debt-to-Income ratios of 45 percent. The major difference between the innovative LEM and a conventional mortgage is that the LEM takes into account transportation-related savings – the Location Efficiency Value (LEV) – captured by urban households relying upon public transportation and nearby local shopping and services. Under the LEM program, Fannie Mae acknowledges the value of the LEV; thus, the LEM borrower may be able to qualify for a mortgage or secure a larger mortgage than possible with a more conventional loan. Depending on location, household size and auto-ownership, a LEM borrower may reasonably expect to manage a mortgage between $15,000 and $50,000 larger than available with other mortgage products.

Benefits

For the Agencies:

- Boosts demand for public transit, walking and biking.
- Reduces automobile-related costs (e.g., accidents, street repair, pollution, etc.).
- Encourages homeownership which often stabilizes property values and creates more cohesive communities.

- Promotes livable, walkable and transit-friendly communities.

For the Community

- Delivers homeownership opportunities to those who normally could not afford it.
- Reduces fuel consumption and reduces local air pollution from cars by encouraging homeownership in compact communities.
- Stabilizes and revitalizes urban neighborhoods by creating additional local demand for consumer services and cultural amenities.

Lessons Learned

The LEM resulted from a three-year long research program led by three non-profit organizations: the Center for Neighborhood Technology (CNT), the Natural Resources Defense Council (NRDC) and the Surface Transportation Policy Project (STPP). The research program analyzed the driving habits of people living in select metropolitan areas. They found that city dwellers in compact, urban neighborhoods served by public transit own fewer cars per households and drive fewer miles than people who live in sprawl or rural settings. They do not need a car as often. The total vehicle miles traveled (VMT) by a household are also influenced by income and household size. The research study used the term “Location Efficiency” to describe the combination of conditions under which some urban households devote substantially less of their income to meet their day-to-day transportation needs.

- The LEM can measure the difference and predict the savings that will result from living at a particular address rather than in a significantly less accessible location.
- The LEM’s increased buying power depends on neighborhood conditions such as household density and how close bus stops and/or train stations are to the home chosen by the prospective purchaser.
- Savings and buying power differ from place-to-place.

Challenges Ahead

LEM-type loans are now available in Seattle, San Francisco and Chicago and are likely to be available soon in Philadelphia and Atlanta. If the Fannie Mae demonstration program is successful, the LEM could become available nationwide. Technical assistance and training programs are needed to educate lenders about the LEM and the value of transportation cost savings by location.

Transportation agencies can forge local partnerships with the banking community and give technical support about how to identify transportation costs savings within a metropolitan region. By drawing on land use information such as population density, public transit routes and facilities, and census information on car ownership and driving levels, a lender can better predict how much a household in a particular location will spend on transportation.

Contacts/Resources

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Fannie Mae
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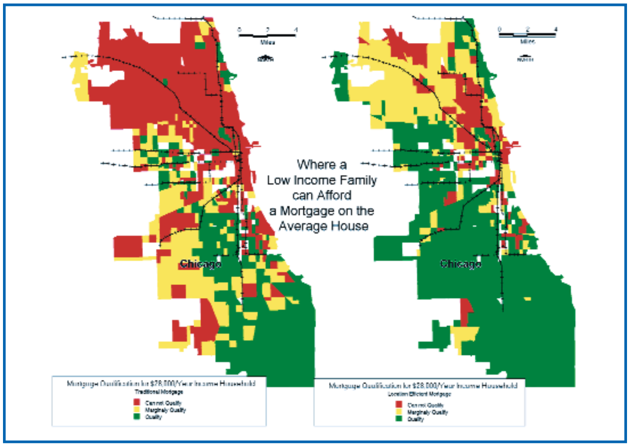
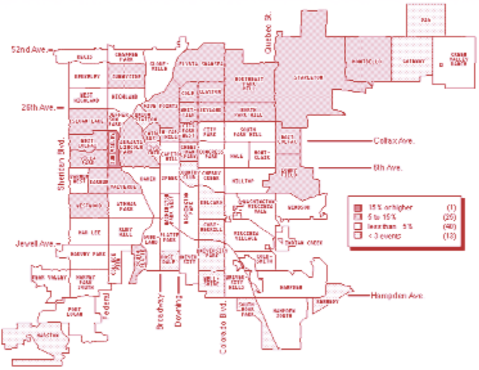
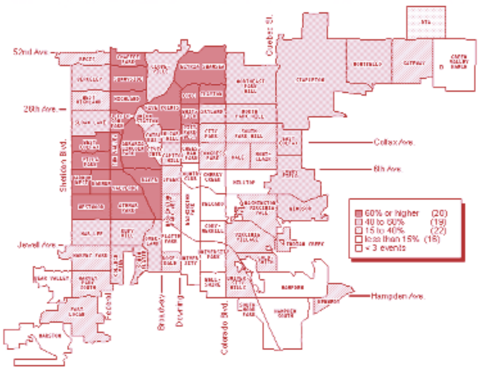
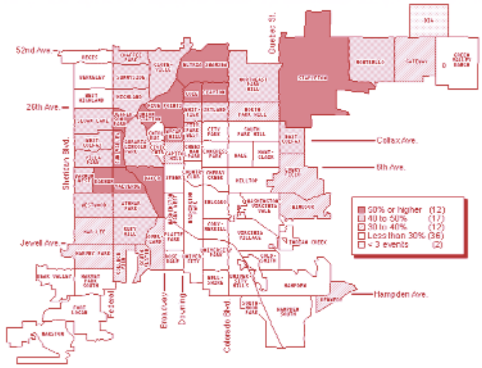
Web site: www.locationefficiency.com









Project Development

Project Development

Project Development: Typical Studies and Activities

Essential Elements of the National Environmental Policy Act (NEPA) Process Include:

- Purpose and Need Development
- Project Scoping
- Alternatives Development
- Public Involvement
- Interagency cooperation and coordination
- Analysis of Reasonable Alternatives
- Environmental impact analysis
- Community Impact Assessment
- Mitigation and Enhancements
- Documentation and Commenting
- Location studies
- Preliminary Design and Feasibility
- Compliance of other laws
- Permitting Decisions

In preparing the *Department of Transportation Order to Address Environmental Justice in Minority Populations and Low-Income Population* (the DOT Order), the DOT made clear its intent to see that agencies consider and address the interests and well-being of minority populations and low-income populations during transportation decision making processes including project development. The DOT Order noted that these considerations are not new, but are embodied in National Environmental Policy Act (NEPA), Title VI, and other transportation laws and regulations. Thus, agencies must be prepared to ***identify and avoid discrimination and avoid disproportionately high and adverse effects*** on minority populations and low-income populations.

To accomplish this, several strategies are described in the DOT Order, but certainly the practitioner will need to identify and evaluate the adverse environmental, public health, and interrelated social and economic effects of projects. Measures should be considered in a logical environmental sequencing that first tries to ***avoid***, then ***minimize*** and/or ***mitigate*** the disproportionately high and adverse effects. This process should also consider the potential and effect of delivering ***offsetting benefits and opportunities that will enhance communities, neighborhoods, and individuals.***

Certainly, Title VI and environmental justice considerations should be a part of the ***scoping*** stage in the NEPA process, which provides early identification of public and agency issues. But, ideally, this should not be the agencies first contact with minority and low-income populations as their concerns should already be on the table from earlier planning activities. Preferably, their input should be instrumental in shaping the purpose and need and the identification of feasible alternatives for projects during transportation planning.

Input to the Project Development process really begins far earlier than the design and analysis of a surface transportation project. Protecting and enhancing environmental and socioeconomic factors should be an important consideration in identifying projects during the Planning stage. The Department of Transportation's planning regulations (see 23 C.F.R. 450) require metropolitan planning organizations (MPOs) and States to "seek out and consider the needs of those traditionally underserved by existing transportation systems, including, but not limited to, low-income and minority households." Moreover, Federal agencies are encouraged to integrate the National Environmental Policy Act (NEPA) review process with other planning and engineering studies at the earliest possible time to ensure that planning and other decisions reflect environmental values and to avoid potential conflicts and delays later in the process.

Engaging in the ***Community Impact Assessment (CIA)*** process is the most effective method for preventing disproportionately high and adverse effects. Community impact assessment is a process to evaluate the effects of a proposed transportation action on a community and its quality of life. This assessment should cover topics of importance to people, such as mobility, safety, employment effects, relocation, isolation and other community issues. While often conducted during the Project Development stage in a process that satisfies NEPA requirements, CIA methods have also been carried out in the Planning stage by MPOs. Regardless, an important goal of the CIA is to develop a better understanding of community values, issues, problems and priorities. Often characterized by intensive proactive community outreach, CIA processes have succeeded in identifying projects and/or alternatives with widespread community support. For this reason, the CIA process has been touted by some of its proponents as a strategy for "streamlining" project development.

The CIA process is but one means for advancing the principle that ***meaningful public involvement should be conducted "early and often."*** Those responsible for environmental considerations during Project Development should set aside sufficient resources and prepare their scope of work fully mindful of the need to elicit public involvement opportunities, evaluate their results, and solicit input from affected minority and low-income populations in considering alternatives. For example, practitioners should be prepared to make adjustments when public meetings have low attendance levels or fail to attract minority or low-income populations affected by a project. In such circumstances, the public involvement practitioner or the community impact specialist may need to be an advocate for actions to correct defects in the outreach strategy. This may not always easy in the face of budgetary and scheduling constraints or other organizational pressures.

Ideally, the practitioner will have already developed a ***Public Involvement Plan (PIP)*** that defines proposed strategies after a careful assessment of the locations and needs of the diverse populations of the affected community. This can be a subtle and demanding process; the insights of seasoned public involvement personnel or the participation of leaders with credibility in the communities can truly benefit a project development team. Beyond census data, there are many data sources, community organizations and local institutions to regard in designing outreach strategies and an effective PIP. The PIP must anticipate and overcome barriers such as language differences, illiteracy, constraining work schedules, distrust of authority, cultural customs, traditions or historical factors influencing a population's willingness to participate.

There is a growing body of public involvement examples that point to effectiveness of reaching diverse communities through attendance at variety of functions and informal settings. To raise the profile of projects and attract participants, project development teams are increasingly going into the public schools to hold contests, develop newsletters, design relevant curriculum, attend parent-teacher conferences, or give presentations. The interaction may deliberately engage students, but often the strategy attracts the interest and eventual participation of the parents. So, too, practitioners have attended church and civic association functions to meet in a non-threatening setting and stimulate meaningful input. There are, of course, other types of problem-solving meetings such as ***workshops*** and ***design charrettes*** where participants are given a one-time or continuing role in actively identifying needs, developing evaluation criteria for ranking and selecting alternatives, or designing projects to mitigate or enhance communities.

It is the responsibility of the FHWA and the FTA and the implementing agency to ensure that mitigation and enhancement commitments made in the environmental document, as well as those contained in permits, are carried out. Oftentimes, a ***summary of mitigation/enhancement commitments*** are best included in the environmental decision documents (i.e., the Categorical Exclusion, the Finding of No Significant Impact, or Record of Decision). These commitments need to be properly disseminated to personnel who must carry forward their provisions during subsequent stages such as right-of-way, construction and operations and maintenance. Monitoring and enforcement programs should also be adopted to see that promises are kept and "next steps" are taken.

THINKING MORE BROADLY ABOUT LOW-INCOME COMMUNITIES

U.S. Census Bureau and U.S. Department of Health and Human Services

Effective Practices:

Employing census, administrative records, and other data resources to identify the location, profile the characteristics, and assess the needs of low-income populations.

Participants:

- U.S. Department of Health and Human Services
- U.S. Census Bureau
- The Piton Foundation
- National Neighborhood Indicators Partnership
- City and County of Denver

Description

Understanding the size and location of low-income and minority populations is a crucial first step toward assessing the needs of all segments of the population and determining whether specific transportation plans and projects are consistent with the fundamental principles of environmental justice. The *1997 DOT Order To Address Environmental Justice in Minority and Low-Income Populations* defines "low income" to be a person whose median household income is at or below the Department of Health and Human Services (HHS) poverty guidelines. There are several data resources that agencies can use to assist in the identification of low-income populations and to begin to think more broadly about the needs of low-income communities.

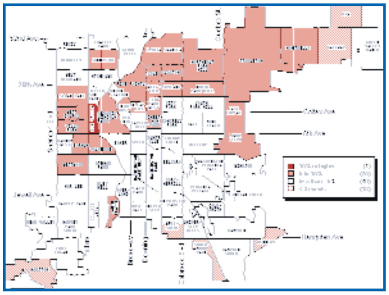
First, there are two slightly different versions of the federal poverty measure:

- the Poverty Thresholds; and
- the Poverty Guidelines.

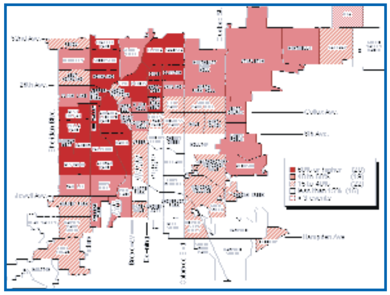
The **Poverty Thresholds** are the original version of the federal poverty measure. Updated annually by the U.S. Census Bureau, the thresholds are used mainly for statistical purposes such as for preparing estimates of the *number of Americans in poverty* each year. Official poverty population figures are calculated using the poverty thresholds and not the poverty guidelines. The poverty thresholds since 1980 and weighted average poverty thresholds since 1959 are available on the Census Bureau's Web site. Poverty thresholds are not adjusted for regional cost-of-living differences throughout the United States.

The **Poverty Guidelines**, by contrast, are issued by the HHS each year in the *Federal Register*. The guidelines are a simplification of the poverty thresholds and are employed for administrative purposes—for instance, determining financial eligibility for certain federal programs. Several Federal programs use the guidelines (or percentage multiples of the guidelines—for instance, 125 percent or 185 percent of the guidelines) in determining eligibility including Head Start, the Food Stamp Program, the National School Lunch Program, the Low-Income Home Energy Assistance Program, and the Children's Health Insurance Program.

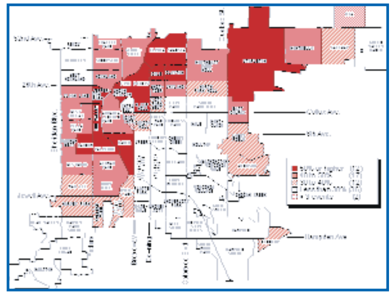
The poverty guidelines (unlike the poverty thresholds) are designated by the year in which they are issued. For instance, the guidelines issued in February 2001 are designated the 2001 poverty guidelines. However, the 2001 HHS poverty guidelines only reflect price changes



Percent of Children on TANF



Percent DPS Students on Free School Lunch



% Students Scoring in Lowest Percentile on ITBS in '99-'00

through calendar year 2000; accordingly, they are approximately equal to the Census Bureau poverty thresholds for calendar year 2000.

The U.S. Census Bureau collects and reports data on income and poverty for several geographic regions including states, metropolitan regions, cities and counties, places and small areas such as census tracts, block groups and blocks. Currently, however, this comprehensive effort occurs only once every ten years. Therefore, income and poverty data from this source may not be timely and may prove inaccurate in its reporting of local conditions over time. There are also some geographic limitations to the reporting of this data; data may not be available for specific small areas in some regions and communities.

Faced with these limitations, the practitioner may create a more timely and well-rounded profile of low-income communities by supplementing Census poverty data with other administrative record data sources. Below are several resources used to create indicators of poverty and community conditions.

Free and Reduced Price Lunch Program. The National School Lunch Program (NSLP) is a federally assisted meal program, administered by the U.S. Department of Agriculture, operating in more than 96,000 public and nonprofit private schools and residential child care institutions. Children from families with incomes at or below 130 percent of the poverty level are eligible for free meals. Those between 130 percent and 185 percent of the poverty level are eligible for reduced-price meals. School Districts compile *participation rates* by school that can be crosstabulated by other demographic characteristics. With due sensitivity to the "catchment area" or travel patterns of students into the school, practitioners can map this data to derive a timely proxy measure for poverty and low-income communities. Both transportation planners and community impact analysts have found this data source useful during the planning and project development stages (e.g., environmental reviews) of decision-making.

Food stamps. The U.S. Department of Agriculture maintains data at the zip code level that may be available from state food stamp offices.

Medicaid. The HHS and the Health Care Financing Administration maintain data kept current by zip code and/or statewide.

Establishment Payroll and Employment and Occupational Openings. The U.S. Bureau of Labor Statistics and individual state labor departments (a.k.a., employment agencies) maintain important data on employment trends, unemployment and labor force participation. The state labor agencies maintain the ES-202 employment program data and perform studies about occupational openings, wage levels and skill requirements by industry. Job access studies benefit greatly from forging partnerships and using data sets from labor agencies.

Serious Crime and Property Crime data can pinpoint troubled areas in need of creative investments and other strategies to improve safety and prevent crime.

State and School District Education Reports. State and local school districts compile important data about literacy or language proficiency and reading test scores. Public involvement specialists may be particularly interested in developing appropriate community-responsive strategies (e.g., multi-lingual publications) where indicators report high percentages of *children reading in the lowest quartile or students that are not English proficient.*

Neighborhood Indicators Project. The non-profit Piton Foundation, in partnership with the City and County of Denver, maintains *Neighborhood Facts*, a neighborhood-level information system that reports basic census demographics, vital health statistics, safety/crime, social services and educational data sets for 79 City of Denver neighborhoods. The Denver project, part of a National Neighborhood Indicators Project (NNIP), regularly updates and displays data on the Foundation's highly accessible web site. The goal of the *Neighborhood Facts* project is to build the capacities of distressed urban neighborhoods by disseminating information useful to local government and community leaders. The NNIP maintains partners in several metropolitan areas including: Atlanta, Boston, Baltimore, Cleveland, Indianapolis, Miami, Milwaukee, Oakland, Philadelphia, Providence, and Washington, D.C. In Denver, the neighborhood indicators project compares the social conditions by city neighborhoods and draws upon numerous measures and data sources, including but certainly not limited to:

- *Percentage of persons on public assistance* provided by Denver Department of Social Services and by the Colorado Department of Human Services.
- *Percentage of children and adults on Temporary Assistance to Needy Families (TANF)* provided by Denver Department of Social Services and by Colorado Department of Human Services.
- *Percentage of children under 12 years of age in subsidized child care* provided by the Colorado Department of Human Services.
- *Percentage of children receiving free school lunch* provided by Denver Public Schools.
- *Publicly subsidized housing* calculated by the Denver Housing Authority, U.S. Department of Housing and Urban Development and Colorado Housing Finance Authority.

Benefits

For the Agencies:

- Non-census administrative records are crucial resources that can provide timely, locally relevant data that will lead to a better understanding of the needs and conditions of low-income communities.

For the Community:

- Community leaders with a commanding familiarity with neighborhood indicator data sets can better influence policy making and successfully advocate for comprehensive solutions involving transportation investments, improved service delivery and other needed resources to improve safety and quality-of-life.

Contacts/Resources

The FHWA/FTA Environmental Justice website maintains several useful links to data resources:

http://www.fhwa.dot.gov/environment/ejustice/lib/lib_linksdata.htm

Other useful links:
U.S. Census Bureau, Poverty Data and Definitions:
http://www.census.gov/hhes/www/poverty.html

U.S. Department of Health and Human Services, Poverty Guidelines:
http://aspe.hhs.gov/poverty/poverty.htm

U.S. Department of Agriculture, Free and Reduced Price Lunch Program:
http://www.fns.usda.gov/cnd/Lunch/Website

The Piton Foundation Neighborhood Facts website:
www.piton.org

National Neighborhood Indicators Partnership website:
http://www.urban.org/nnip/index.htm

CORRIDOR O – INTEGRATING PUBLIC INVOLVEMENT THROUGHOUT THE PROJECT DEVELOPMENT PROCESS

Pennsylvania Department of Transportation

Effective Practices:

- Designing the project development process to encourage meaningful public and agency participation "early and often".
- Building trust with communities by engaging interested parties throughout project development.

Participants:

- Pennsylvania Department of Transportation
- Citizens Advisory Committee
- Federal and State Resource Agencies
- The Public

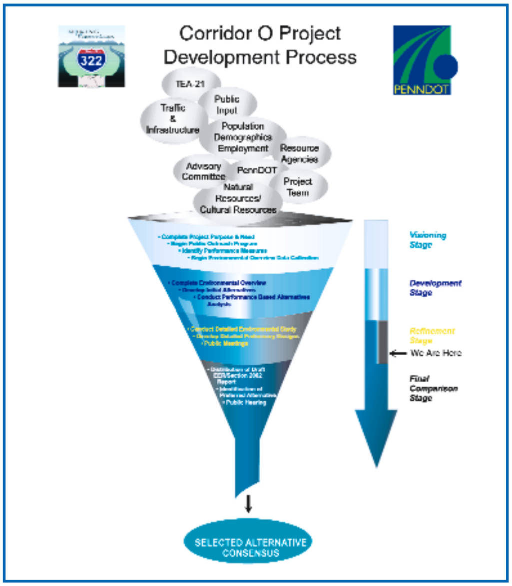
Description

Corridor O is an unfinished element of the Appalachian Development Highway System, a network of 4-lane roadways intended to bring regional connectivity and improved access to rural areas within the Appalachian Region. Authorized in the Transportation Equity Act (TEA-21), the Corridor O project includes feasibility and environmental studies of improvements for existing U.S. Route 322 from I-99 to I-80 in central Pennsylvania. Although this legislation exempted Corridor O from formal Federal environmental reviews, the project development process employed by the Pennsylvania Department of Transportation (PENNDOT) remains an excellent example of how to integrate a program of continuous public and agency involvement throughout project planning, preliminary engineering and design, and environmental review stages of study.

PENNDOT devised a highly interactive 4-stage project development process for the Corridor O project. The adopted approach fully reflects the State Transportation Department's commitment to public involvement processes, *early and often*, to eliminate alternatives that are technically infeasible or objectionable to communities and to build widespread support for a preferred alternative. These stages are described below.

Visioning Stage. This initial stage, coinciding with the formulation of the traditional purpose and need statement had the project been subject to National Environmental Policy Act (NEPA) compliance, involved extensive public outreach and supporting planning activities. PENNDOT held a series of meetings to identify project needs, sensitive environmental resources and areas of concern for the public and the resource agencies. This information was placed on project area maps and supplemented with a baseline overview of environmental, cultural resource and socioeconomic data. This stage included:

- **Holding six Citizen Advisory Committee (CAC) meetings and one public meeting.** The CAC was a key means for exchange of information between the community and the project team. The CAC included "members" (i.e., local officials from counties, municipalities, civic organizations) and "friends" (i.e., representatives from environmental groups, political organizations, educational institutions) who were allowed to comment and observe CAC proceedings. The CAC raised issues of concern and offered comments from the perspective of the stakeholder interests they represented. The CAC also relayed information presented by the project team back to their constituencies.



- **Creation of Project Performance Measures.** Concepts and concerns voiced by the public, the CAC, resource agencies and PENNDOT were developed into nearly 40 separate performance measures organized into 4 main categories: transportation; community and land use; environmental; and engineering factors. These measures became important evaluation criteria for assessing the feasibility of alternatives.
- **An Alternatives Analysis Process.** Methods were developed for weighing, comparing and, ultimately, advancing a select set of alternatives capable of meeting project needs.

Development Stage. Initial alternatives were generated at an Alignment Drawing Workshop attended by the CAC and Federal and State resource agencies in March 2000. The participants, divided into 3 working teams, developed several dozen preliminary alignments which were then mapped and made available for public review and comment by means of a web site, project newsletter, project office and a round of public meetings held in May 2000. After incorporating comments, the Project Team refined and evaluated the preliminary alignments against the Project Performance Measures, utilizing traffic models, engineering studies, and environmental and community impact assessment methods. At a subsequent Refinement Workshop held in July 2000 with the CAC and resource agencies, preliminary alignments were grouped into Alternative Development Zones (ADZs). By definition, ADZs were groups of alignments that met performance measures; each ADZ represented a corridor of 1000 feet in width. This process narrowed the number of ADZs to be advanced for more detailed studies. Workshop results were again widely distributed for public review, mirroring the process of outreach and public meeting used for the earlier Alignment Drawing Workshop. ADZs were further modified pursuant to comments made by the CAC, resource agencies and the public.

Refinement Stage. The Project Team designed initial engineering alternatives within ADZs that sought to minimize environmental and community impacts while advancing project needs. These alternatives were unveiled at an Initial Alternatives Workshop in February 2001. At this 3rd workshop, CAC and Federal and State agencies were given an opportunity to further modify alternatives to minimize impacts. The refined alternatives were subsequently presented at public meetings held in late February. This stage includes detailed engineering and environmental studies and further refinements to the design alternatives stemming from workshop and public meetings.

Final Comparison Stage. During this stage, the preferred alternative will be recommended after the alternatives are weighed against the Project Performance Measures and Project Need. This stage will include the preparation of formal environmental clearance documents and will, like previous stages, involve the CAC, resource agencies and the public.

The Corridor O Project Team has sought to remove barriers to participation by engaging people informally within their communities and by holding “low-key” events throughout the process. The team’s motto, “Take it to them, don’t wait for them to come to us”, has been the inspiration for: information and activity booths at community fairs; public meetings in an open house format at nearby community centers and schools; a logo design contest organized for public schools; a speakers bureau; and the deployment of mobile units to visit grocery stores and convenience food outlets, among other places. The mobile unit campaign brings project information directly to communities such as fact sheets, newsletters, small alignment maps, magnets, and pencils.

Several other outreach techniques have also been designed to raise public awareness and encourage participation from all communities within the Corridor O project region, including low-income populations. An informative project newsletter and website have regularly documented the project issues and study progress. A local project office has been equipped with "design theatre computers"—a GIS system enabling quick study of areas of concern—and the website is also accessible. Open house sessions during evenings and weekends have been held in the project office to reach working households.

Benefits

For the Agencies:

- The cornerstone of PENNDOT's 4-stage project development process is public and agency involvement—*early and often*. Early public involvement is expected to lead to a better understanding of the concerns and issues of the public and resource agencies. The process is expected to yield *fewer surprises*, ultimately ensuring that time and resources are wisely spent, conflicts are reduced, and projects are not doomed for failure as they move into design and environmental phases.

For the Community:

- The project development process is an open and iterative process, creating stages of accountability; community representatives and the general public have numerous opportunities to assess PENNDOT's progress and determine whether they have been responsive to public concerns.
- Extensive involvement gives the public and resource agencies more insight and influence over the development of alternatives. Being part of the process, the public has a greater appreciation for the basis of certain decisions and priorities.

Challenges Ahead

During the Visioning Stage, an initial Environmental Evaluation technical study was prepared that included a section about Environmental Justice. Prepared before the release of Census 2000 data, this baseline study identified areas of concentrated low-income housing such as trailer-home parks and the fact that few minorities reside in the region. This section had little current information to report about the region's poverty conditions at the time of its preparation. Still, Corridor O made a substantive effort toward the accomplishment of environmental justice through its commitment to designing meaningful opportunities for all communities, including low-income and minority populations, to participate in the alternatives selection, design and environmental review processes.

The Visioning Stage report also indicates that more detailed environmental justice analyses are to be conducted during the alternative refinement and final comparison stages. During these final stages, the important but sometimes competing values represented by the many project performance measures will have to be resolved in the selection of a preferred alternative and in the preparation of defensible environmental clearance documents. From the perspective of environmental justice, the challenge for all parties involved in this exciting and intensive process must be an outcome that does it justice—a project without disproportionate and adverse impacts on low-income and minority populations.

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REACHING COMMUNITIES THROUGH SCHOOLS

North Carolina Department of Transportation

Effective Practices:

Reaching out to minority and low-income households through activities for school children.

Participants:

- North Carolina Department of Transportation (NCDOT)
- Pollocksville Elementary School – Principal, Teacher, and School Children

Description

During the early stages of an environmental impact statement (EIS) process for U.S. Route 17 in rural North Carolina, the individual tasked with the responsibility to prepare a community impact assessment (CIA) was looking for a way to ensure the participation of low income and minority communities in the development of alternatives and impact assessment. During the scoping phase, the Principal of a local elementary school in the project corridor was contacted to obtain demographic information about her students as well as to find out the date of the school's next Parent-Teachers Association (PTA) meeting for the purposes of informing parents about the project and the EIS.

The Principal was able to supply very useful information about the racial distribution and number of children enrolled in the free and reduced lunch program. The program uses the U.S. Department of Health and Human Services' income figures to determine program eligibility and is an excellent proxy measure for identifying low-income communities. Using the school-supplied data, the CIA analyst learned that just under 70 percent of the students were minorities and came from low-income households.

The Principal also confirmed that a sizeable percentage (35 to 40 percent) of the parents of the school children were illiterate or semi-literate and, thus, traditional newsletters and other written material would prove inadequate as the sole means for disseminating news about the project. The CIA analyst knew that illiteracy had a chilling effect on participation in public involvement processes. She hoped to use the PTA meeting to collect names and expand the future mailing list and answer questions about the project.

In return for the demographic information, the principal asked for a presentation about the project tailored to her fourth and fifth grade students. The students received not only a slide presentation—"Where Do Roads Come From"—but also a "take home" item for the parent's signature and a "reward certificate" for returning the "take home" item. The presentation was aimed at showing the students that putting a road anywhere was a complex process. Students were instructed that many different types of professionals were involved, that numerous laws had to be followed, that an extensive list of human and natural concerns had to be considered and that an array of visual communication techniques were needed to communicate with the public.

During the session, students were asked to show where they would put a new road, to take the sheet home with them so that they could talk with their parents about what they had learned, and to get their parents to sign the sheet. Students were promised a certificate as a junior environmentalist for its prompt return. Nearly all students were rewarded with this certificate.

Benefits

For the Agencies:

- Reaching out to the PTA and relying upon the school children to talk with their parents were strategies intended to work around the limitations of newsletters in a community that may include illiterate household heads.
- Promoting awareness of the transportation decision-making process and the project will improve meeting attendance levels and understanding of the purpose and need and impacts of the project.

For the Community:

- Using the school's PTA meetings as a forum to increase public participation is a proactive strategy to involve more minority and low income residents. Using this method instead of just newsletters is a strategy to ensure participation by all community groups.
- Educating students and parents about the complex transportation decision-making process reduces the barriers to participation and gives traditionally underserved communities an opportunity to influence project outcomes.

Challenges Ahead

This approach proved so successful the CIA analyst has resolved to develop other "take-home items" such as a newsletter and a questionnaire written at the fourth/fifth grade level so that children may read to their parents and interview them. The questionnaire will elicit information to promote a well-attended public hearing (i.e. parental preferences by day of week, time, place) in an effort to surmount the participation barriers faced when adults must work second and third shifts. The newsletter will also give important information about preferred alternatives to increase awareness about the transportation project.

Educating school children in the transportation and environmental process will take other forms before the project is over. For example, children using the school library will be given bookmarks that describe key resource issues (e.g., what is an endangered species?) when they take out books from the library. Children who collect the full set of bookmarks will be rewarded with a prize for their efforts. Thus, through the distribution of bookmarks, the school will both encourage reading and continually remind children and parents of the project.

Finally, NCDOT has recognized the value from a public relations and public outreach standpoint of reaching communities through programs and curriculum in the schools. NCDOT has resolved to replicate this approach elsewhere in the state.

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Project Development

COMMUNITY SOLUTIONS — A TEAM APPROACH TO INTEGRATING TRANSPORTATION AND COMMUNITY DEVELOPMENT

Oregon Livability Initiative

Effective Practices:

Collaborative problem solving through interagency partnerships.

Participants:

The State of Oregon's Community Solutions Team includes cabinet-level representation from the following state agencies:

- Oregon Department of Transportation
- Oregon Economic and Community Development Department
- Department of Environmental Quality
- Oregon Housing and Community Services
- Department of Land Conservation and Development

Description

Transportation systems and services are a vital, but certainly not the sole, concern of state and local governments and citizens focused on building more livable communities. Advocates of the livability agenda put the concept of "place" at center-stage. Transportation is cast in a supporting role: one of several participating agencies in a multi-agency, multi-disciplinary approach to problem-solving and community-building.

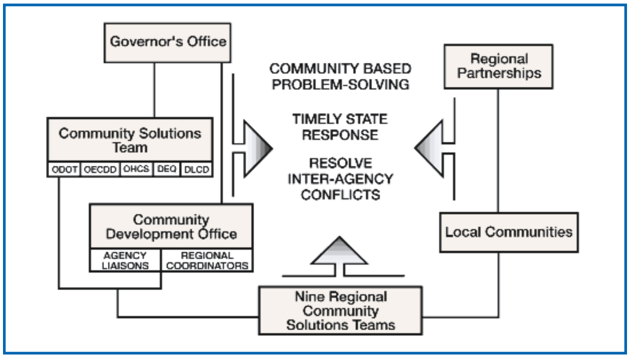
In 1999, the Oregon State Legislature endorsed the Oregon Livability Initiative. The Initiative includes several program areas that can be highly beneficial to distressed communities in need of development and redevelopment funding. These include:

- Revitalizing urban centers, downtowns and main streets;
- Reducing sprawl and traffic congestion;
- Increasing the supply of affordable housing; and
- Rebuilding rural and distressed economies.

Nine regional Community Solutions Teams (CST), composed of field staff from each of five participating CST agencies work directly with local governments on specific issues, problems and opportunities. The CST effort is coordinated through the Community Development Office (CDO), an interagency office within Oregon's Department of Administrative Services. The office is comprised of senior level staff "on loan" from the participating CST agencies and regional coordinators stationed throughout the state. The Office is charged with promoting the CST approach and the goals of the Livability Initiative within state and local government.

The State Legislature also created the Community Incentive Fund. The Fund uses lottery-backed bonds to revitalize downtowns and main streets and to address other locally determined community development projects. The Oregon Department of Transportation (ODOT) has been a participating agency in the CST program and has leveraged the Fund to deliver enhancements to low-income and rural communities such as Lakeview, Oregon.

Getting Beneath the Surface of a Pavement Project. Lakeview is a small rural town of just under 2,500 people near Oregon's southern border with California and Nevada. Lakeview is typical of many communities in rural Oregon that depend on resource extraction and management—it has a disproportionate number of low-income families



compared to the State as a whole, and a very high concentration of single parent households with small children. Lakeview's tax base is small with few resources to undertake anything beyond basic municipal services. As with many rural towns in central Oregon, the state highway serves as a main thoroughfare supporting small town business and cultural life. ODOT proposed a major repaving project for US 395 and Oregon 140—both of which bring regional access to Lakeview's business, restaurant and shopping areas.

After taking a look at the situation, ODOT identified the kinds of improvements that were needed beyond just repaving. They included new approaches to on-street parking, replacement of sidewalks, and possible relocation of utilities. Just before the first round of public meetings, the ODOT Area Manager borrowed a cherry picker from Pacific Power, a local utility, and took a few pictures of the local downtown. Then, using the reprographics shop at the Salem headquarters of ODOT, the photos were rendered to show how the downtown might look if parking, paving and utility relocation were tackled all at once.

After the second meeting, ODOT and the citizens had come up with a list of possible improvements. These included the basics originally proposed, plus tree plantings, benches, new planters and other amenities. That is when ODOT realized that they could better support the local vision for a new Main Street by working with the Community Solutions Team. As the Team began to identify sources of grants and funding, they also discovered new issues that needed to be addressed. The existing sewer and water system was 80 years old. So, the CST developed a plan and secured funding to replace the water and sewer systems at the same time as the paving project was undertaken. The Team also identified an historic building with an old awning that needed repairs. They secured funding to restore the building and design street lighting consistent with the historic character of the building.

When the project was completed, the CST had not only tackled a broad range of transportation, economic development, historic preservation and infrastructure replacement issues, but they had secured the funding for a financially strapped rural town and saved everyone time and money by coordinating the design, development and construction of the project among a variety of state agencies. In the past, these projects would have been undertaken independently, if at all, and the fragmented approach would have resulted in both added frustration and extra expense. With the CST approach, local governments that represent low-income and rural areas have better access to existing state agency programs and have the opportunity to build trust relationships with the people representing the state in their regions.

Benefits

For the Agencies:

- Needs identification and problem solving can give State transportation agencies an opportunity to work effectively with regional and local governments.
- Through partnering, locally appropriate solutions can be devised that integrate needed services, investments and actions

For the Community:

- Transportation agencies will not always be at the center, but are often an integral part of a larger problem solving effort focused on the community as a whole.
- Promoting solutions and working together with state agencies and other partners produces superior results while leveraging limited resources.

Contacts/Resources

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Project Development

LEVERAGING COMMUNITY BASED TRANSPORTATION FUNDING SOURCES TO BENEFIT LOCAL COMMUNITIES

Federal Highway Administration and Federal Transit Administration

Effective Practices:

- Using enhancement funds to deliver benefits and involvement processes that will improve the quality-of-life of low-income and minority communities.

Participants:

- Federal Highway Administration (FHWA) and Federal Transit Administration (FTA)
- State Departments of Transportation and Transit Service Providers
- Bureau of Indian Affairs
- Cities, Towns and Villages
- Community organizations and many other stakeholders

Description

The development of a highway system to ensure the efficient movement of people and goods was a core mission of the nation's surface transportation program for many decades. This mission is now viewed as largely complete. The nation enjoys unparalleled mobility benefits, but this accomplishment has not come without costs. Responding to concerns about traffic congestion, air quality, and open space, Congress established several programs through the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). These programs shifted the Federal focus on transportation from building highways to funding, linked to more comprehensive planning considerations, of a multi-modal transportation system. The Transportation Enhancements (TE) Program was and remains a key element for bringing about this change in focus and encouraging a new way of thinking about transportation's role in preserving quality-of-life and the development of sustainable communities. Congress clearly renewed its commitment to the TE program with The Transportation Equity Act for the 21st Century (TEA-21) with the provision of an additional \$3.8 billion through 2003.

The FHWA and FTA have separate TE programs, but they have both unleashed many creative and exciting "success stories". Often enthusiastically welcomed by residents and businesses, TE projects have been known to build community interest through workshops, design charettes, and public art projects. TE funds may be used for several purposes, depending on the agency, including but not limited to:

- pedestrian and bicycle facilities including safety and educational activities for pedestrians and bicyclists;
- bus shelters;
- public art;
- conversion of abandoned railways to trails;
- historic preservation, rehabilitation and operations of historic transportation facilities;
- transit connections to parks;
- landscaping and scenic beautification such as tables, benches, trash receptacles and street lighting;

- enhanced access to person with disabilities to mass transportation; and
- transportation museums, tourist and welcome centers.

TE projects can transform the built environment, changing local perceptions of security and safety, making areas more livable, establishing "places", and creating the conditions for attracting private investment:

- The **Harlem Gateway Corridor** project is a transportation enhancement project with ISTEA and TEA-21 funding from the New York Department of Transportation. The goal of the project is to create a "gateway entrance" to Harlem that reminds people of the community's rich history and culture through urban design improvements. The project incorporates commemorative elements and public art in the streetscape to build cultural and community pride, depicting such historical figures as Duke Ellington, Langston Hughes and Bessie Smith as well as lesser known artists, educators and religious leaders. The finished product comibines landscaping, lighting, street furniture, public art and other amenities that enhance the northern boundary of Central Park which has suffered from inferior design standards in the past.
- The **Saltillo Plaza** in Austin Texas is an enhancement-funded pedestrian plaza adjacent to the Austin-Burnet steam train line located in a predominantly Hispanic, low-income area of east Austin. The train itself has become a tourist attraction and area residents use the plaza to display arts and crafts. The Saltillo Plaza project is a joint project of Capital Metro, the City of Austin and a local community organization, Ole Mexico, which played a major role in advancing the project.
- The **Fort Washakie Pathway**, located on the Wind Indian Reservation in Alaska, is a TE project locally sponsored by the Shoshone-Arapahoe Joint Business Council. The pathway was built in the late 1990s as a safe travel route for residents of the reservation. Previously, Wind Indian Reservation residents were forced to walk on dangerous roadway shoulders to get to the Bureau of Indian Affairs and the Tribal Council offices.

Benefits

For the Agencies:

- Building trust and credibility with the community by delivering projects that improve the quality-of-life and address the needs of minority and low-income persons.
- Gaining appreciation for the value of partnerships and involvement processes that leverage the capabilities of local communities.
- Creating desirable "places" near transportation facilities can set into motion a "virtuous cycle" of private investments that can create more demand for transit facilities.

For the Community:

- Establishing more livable communities can create a sense of pride in local communities that is contagious.
- Creating projects that ensure pedestrian safety, access and other building and streetscape improvements can help spur economic development opportunities within local communities and create improved transportation options.

Contacts/Resources

An excellent overview of the Transportation Enhancements program can be found at: http://www.enhancements.org/enhancements.html

Public Involvement

Public Involvement

Public Involvement:
Typical Studies and Activities

- Preparing Public Involvement Plan
- Forming committees, task forces, advisory groups
- Scoping and consultation with leadership
- Identifying and engaging underserved populations
- Designing outreach methods and media strategies
- Using non-traditional places and events to engage stakeholders
- Creating incentives for participation
- Translating materials and multi-lingual communications
- Reducing barriers to involvement
- Forging partnerships with organizations and agencies
- Determining type of meeting, organizing features and ground rules
- Preparing meeting materials
- Involving people face-to-face in meetings
- Leading outreach
- Distributing and posting information
- Documenting and obtaining feedback from participants

Most of us accept that government has an important role to play in marshalling the resources to build and preserve transportation systems to ensure inter-regional and local mobility of persons and goods and to safeguard our national security. Historically, transportation agencies defined their mission as the swift and effective completion of projects to improve mobility and safety. The gravity of the transportation problems that were faced by the nation led to widespread acceptance of the mission's importance, and few questioned that its accomplishment could be anything but synonymous with the advancement of the public good. Agencies had the authority and believed they had the technical expertise to both determine and fulfill transportation needs. This responsibility led some agencies to undervalue the importance of community interaction, reducing the level of responsiveness and overall accountability to the public.

In recent years, we have learned many lessons about the impacts of transportation systems on the human environment. The public has become increasingly aware of the influence of transportation investments on urban form, economic competitiveness and community quality-of-life. We know that transportation systems can present not just opportunities but also threats to the public health, safety and welfare when communities are too isolated—or too overwhelmed by construction or operations.

Over the last 50 years, landmark legislation like the Federal-aid Highway Act of 1950 and the Federal Transit Laws originally enacted in 1964, gave important new opportunities for interested persons to voice their perspectives. The Civil Rights Act of 1964 ensured that individuals will not be denied an equal right to participate on the basis of race, color or national origin in all programs receiving Federal-aid assistance. With the National Environmental Policy Act of 1969 (NEPA) and the Federal-aid Highway Act of 1970, the opportunity for public involvement was decisively established throughout the location and design processes. In 1991, the Intermodal Surface Transportation Efficiency Act extended the opportunity for public involvement into the transportation planning process.

We also have new techniques and ideas about how to effectively reach out to diverse communities. Many of these methods have been well tested over the last 30 years while others such as the use of electronic media continue to be refined.

The nation's experience in planning and building transportation infrastructure suggests that public involvement is more than just a public hearing, or a meeting scheduled at the end of the process to share findings. ***Early and continuous*** public involvement programs offer an effective means for learning about community values and impacts. The public may be less inclined to place roadblocks late in the plan and project development stages when earlier public involvement processes have been marked by idea-sharing, respectful discussions, joint problem-solving exercises and other evidence of a sincere commitment to a continuing dialogue and the building of a long-term collaborative relationship.

The full and fair participation by all potentially affected communities in the transportation decision-making process is a core principle of environmental justice. Agencies can devise more appropriate community-responsive solutions when the public, in all its diversity, has offered its perspectives and insights. Through meaningful public involvement processes, minority and low-income populations are given an opportunity to be heard and their needs considered. Public involvement can assist agencies to better understand a community's values, past history and unique characteristics; to consider how existing and planned systems and services deliver access to opportunities and influence the quality-of-life for these communities; to provide insight into what communities may find acceptable in the way of avoidance mitigation, or design solutions; and to create a better understanding of possible offsetting initiatives and enhancements that could fit more harmoniously into affected communities and neighborhoods.

Through relationship-building and formation of ***advisory groups*** with communities and their leadership, agencies are better able to rigorously evaluate practicable alternatives and feasible mitigation. This type of meaningful public participation can enhance the credibility of the agency's decision-making processes and outcomes. Participation in the advisory group process also can be an effective recruitment tool for bringing new participants and stakeholders into future transportation planning and project development processes.

Gaining meaningful public involvement can also be fostered through ***informal outreach*** activities in a variety of settings and is certainly not confined to public meetings. Increasingly, transportation agencies are frequenting non-transportation functions (e.g., churches, clubs, fairs, etc.) to reach communities and explore how transportation is experienced daily in the course of their lives. Practitioners are looking to the schools and the classroom to inspire, enlist, and engage children and their parents in planning and community impact assessment. The public meeting remains a necessary, valued and economical means of exchanging perspectives, but there are also numerous barriers to soliciting meaningful participation through public meetings. Minority and low-income populations, in particular, may face obstacles to participation caused by such "chilling-effect" factors as language differences, literacy, logistics, child-care, or meeting times that conflict with evening hours of work or school.

Formalizing and coordinating public involvement efforts in a ***Public Involvement Plan*** is a key step in integrating environmental justice into the decision-making process. The Public Involvement Plan is a core product in urban regions for defining strategies, targeting communities and partners, designing outreach materials and activities, establishing documentation responsibilities and standards, and assessing overall performance in engaging minority and low-income populations in decision-making processes. The document can articulate strategies and actions that will eliminate barriers to participation. It serves as a procedural guide for officials and staff that describes effective activities to ensure compliance with environmental justice in transportation planning and project development processes. It is also a living document to be revised as necessary to encourage self-assessment and improvement.

Ultimately, the groundwork laid through credible outreach and involvement processes should prepare transportation agencies to make better use of partnerships and take better advantage of collaborative planning and project development opportunities in tandem with other non-transportation agencies and community-based organizations. If involved early, the public can more readily identify and assume its role in the partnership; there is less reason for confrontation and distrust, there is more room for creativity, collaboration and the leveraging of resources.

Implementation of effective public involvement techniques may not be easy. The transportation agency and practitioner should not be surprised if a new or renewed commitment to open public involvement processes are met by apathy and suspicion in various communities. Many government agencies—not just transportation agencies—have a mixed record of commitment to inclusiveness. Past government investments and siting activities have not always been benign or fair. Against these facts, many citizens, particularly in predominantly minority and low-income communities, may be apprehensive or indifferent to participating in transportation decision-making processes. This obstacle may be overcome through proactive outreach strategies that increase public involvement and prove to the communities that their suggestions and input will be seriously considered in the decision-making process.

Public Involvement

EVALUATING THE EFFECTIVENESS OF PUBLIC INVOLVEMENT PLANS AND PROCESSES

Federal Highway Administration and Federal Transit Administration

Effective Practice:

- Ensuring that public involvement processes are periodically reviewed for their effectiveness in giving full and open access to all.
- Seeking out and considering the needs of the traditionally underserved by existing transportation systems, including low-income and minority populations.

Participants:

- Federal Highway Administration/Federal Transit Administration
- State Departments of Transportation
- Metropolitan Planning Organizations
- Transit Service Providers

Description

Under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and continuing under the Transportation Equity Act for the 21st Century in 1998 (TEA-21), State Departments of Transportation (State DOTs) and Metropolitan Planning Organizations (MPOs) are expected to develop proactive public involvement processes. Many States and MPOs have taken steps to regularly monitor, evaluate and readjust their public involvement plans to eliminate barriers to participation and support early and continuing involvement of the public in developing plans and programs.

A well-thought out and documented public involvement plan will examine and promote strategies to engage all sectors of the public including low-income and minority populations. The public involvement plan will specifically spell out methods and actions the agency intends to take to consider the needs of those traditionally underserved by existing transportation systems including, but not limited to, low-income and minority persons.

In its joint memorandum of October 7, 1999, *Implementing Title VI Requirements in Metropolitan and Statewide Planning,* the FHWA/FTA enumerated several questions pertaining to public involvement to aid in reviewing and verifying compliance with Title VI of the Civil Rights Act of 1964. The questions, to be posed during planning certification reviews of the MPO and in discussions surrounding the Statewide Transportation Improvement Program (STIP), seek evidence that specific strategies for engaging low-income and minority populations have been developed. FHWA/FTA review teams want evidence that outreach strategies are being explicitly evaluated for their effectiveness and improved upon as needed. The Federal review teams also assess the mechanisms that States and MPOs have put in place to effectively ensure that the issues and concerns raised by targeted populations are documented and considered in decision-making processes.

Benefits

For the Agencies:

- Encourages the development of a continuing public involvement program that should lead to more effective outreach to traditionally underserved communities.

- Institutionalizes the proper documentation and regular monitoring of public involvement activities to enable agencies to assess their actual performance and identify areas in need of improvement.
- Opens a process of engagement and dialogue that can be used to recruit minority and low-income participants to join citizen advisory committees and other task forces.

For the Community:

- Dismantles barriers to participation, increases access to decision makers, facilitates communications, and creates opportunities to educate representatives of low-income and minority populations about transportation systems and solutions.
- Provides a forum and opportunity to express community needs and propose preferred solutions to meet these needs.

Challenges Ahead

FHWA/FTA certification reviewers and the reviewed agencies both face significant challenges when endeavoring to evaluate and improve upon the effectiveness of public involvement in the context of Title VI and environmental justice. FHWA/FTA reviewers are reminded to review the record of complaints or concerns raised regarding Title VI in the planning process under review. Engaging and involving representatives of minority and low-income groups to hear their views about the planning process and the agency's performance is an integral part of the certification review process. Federal reviewers are given the authority to issue a corrective action in the certification report—among other possible actions—when a reviewed agency has not conducted a formal evaluation of their public involvement processes or when the reviewed agency must still make significant improvements.

For the reviewed agencies, in addition to a formal evaluation of public involvement, the implementing guidance also suggests several other actions that the States and MPOs may reasonably take to eliminate barriers to participation. For example, they are encouraged to:

- Consult with local organizations that represent low-income and minority populations.
- Utilize appropriate media (such as print, television, radio, etc.) to develop targeted campaigns.
- Make funds available to local organizations that represent targeted populations to facilitate participation in planning processes.
- Develop evidence that the issues and concerns of low-income and minority populations are being appropriately considered in decision-making processes.

Contacts/Resources

More information can be found about legislation and guidance, case studies, effective techniques and research about public involvement at:
http://www.fhwa.dot.gov/environment/pubinv2.htm

Case study examples of public involvement evaluation can be found at:
http://wwwcf.fhwa.dot.gov/environment/pubcase.htm

The FHWA/FTA Memorandum of October 7th 1999, *Implementing Title VI Requirements in Metropolitan and Statewide Planning* can be found at:
http://www.fhwa.dot.gov/environment/ejustice/ej-10-7.htm

DEVELOPING A PUBLIC INVOLVEMENT MANUAL TO REACH NON-TRADITIONAL STAKEHOLDER COMMUNITIES

Minnesota Department of Transportation

Effective Practice:

- Identify and build better relationships with non-traditional transportation stakeholders.
- Create a forum for dialogue and two-way learning so that stakeholders are better prepared to participate in the planning, project development and design stages.
- Prepare a Public Involvement Guide for planning and project development managers to enhance public involvement and ensure the protection of non-traditional transportation stakeholder communities.

Participants:

- Minnesota Department of Transportation
- Non-traditional stakeholder groups

Description

In July, 1999, the Minnesota Department of Transportation (Mn/DOT) issued a comprehensive public involvement guide for their planners and project managers, *Hear Every Voice: a Guide to Public Involvement at Mn/DOT (Hear Every Voice).* Part of the background for *Hear Every Voice* came from Mn/DOT's informational handbook for planning and project managers, *Methods and Approaches to Enhance Involvement in Non-Traditional Transportation Stakeholder Communities and Neighborhoods (Handbook)* in April 1997. The *Handbook* and *Hear Every Voice* were created to guide state transportation practitioners toward effective practices to enhance and incorporate public involvement into decision-making processes. The need for the *Handbook* emerged as a product of Mn/DOT's Non-Traditional Transportation Stakeholder Dialogue Project conducted in 1995 and 1996.

The Dialogue Project included 18 dialogue meetings throughout the Minneapolis-St.Paul metropolitan area to hear community issues and perspectives regarding transportation and the public involvement process. Proactive outreach sessions were held with four racial and ethnic groups: African Americans, Native Americans, Mexican Americans and Asian Americans. The Native American group was comprised of three tribal organizations. Each outreach session was held in settings within the targeted community—not city hall or a state office building—and due sensitivity was given to understanding each group's leadership and cultural perspectives. For instance, outreach activities to American Indian tribes were coordinated with tribal councils.

These meetings were productive and led to 21 recommendations. A Mn/DOT Response Team then determined which recommendations were most feasible to implement over various time frames and which members of the agency would be given implementation responsibilities. The development of *Hear Every Voice* was a result of one of these recommendations. Its adoption as Mn/DOT's official guide for public involvement effectively integrated many of the recommendations into agency practice and encouraged planners and project managers to use the full array of methods and techniques identified in the Dialogue Project.

Hear Every Voice recommends several measures for meaningful involvement of non-traditional participants in the transportation decision making process:

- Provide early and continuing public involvement opportunities throughout the process.
- Ensure a process for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low income and minority households that may face challenges accessing employment and other amenities.
- Overcome common barriers to full participation by encouraging project managers to reach out to local community organizations and their leaders.
- Research the culture, customs, language and communication styles of participants.
- Identify bilingual speakers, provide interpreters, and distribute multi lingual notices, fact sheets, and newsletters.
- Schedule meetings or other face-to-face interactions at a time and place that accommodates participant's schedules.
- Consider financially subsidizing participants, such as providing transit or taxi fare, child care, refreshments, or other incentives.
- Develop and keep up-to-date mailing lists including organizations and associations with low income, minority, elderly and disabled.

Benefits

For the Agencies:

- Proactive public involvement initiatives can create higher degrees of trust among low-income and minority population groups, leading to more effective discussions and greater potential to build productive bridges between communities and transportation agencies.

For the Community:

- When residents are invited to the table to participate in planning and project design processes "early and often", resulting projects are more likely to reflect the community's own plans and fit more harmoniously into the community.

Lessons Learned

The Handbook promotes several valuable lessons:

On Reaching/Recruiting Members of the Community:

- Go where the people are—attend fairs, community events and district council meetings. Sponsor a transportation fair. Arrange one-on-one visits with community residents and other non-threatening formats to encourage idea exchange.

On Conducting Group Dialogues:

- Allow for individual differences to be acknowledged and respected. Help create a culture of cooperation and shared leadership. Encourage collaboration, partnerships and inclusion.

On Conflict Management:

- Define group maintenance issues such as establishing ground rules. Attend to conflict at once or it will escalate. Clarify issues and look for areas of common ground rather than "work through" opposing issues.

Contacts/Resources

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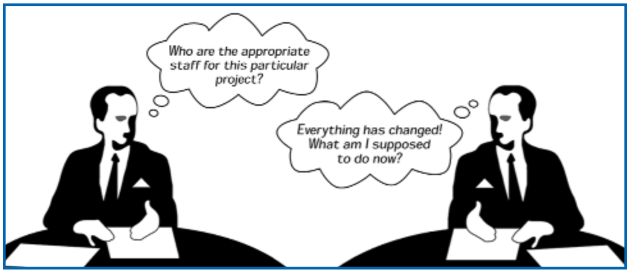
The handbook, *Methods and Approaches to Enhance Involvement in Non-Traditional Transportation Stakeholder Communities and Neighborhoods* can be viewed at the following website:
http://www.dot.state.mn.us/pubinvolve/pdf/nontradfinalreport.pdf



Public Involvement

BRINGING REPRESENTATIVES FROM COMMUNITY-BASED GROUPS ONTO ADVISORY COUNCILS AND SUBCOMMITTEES

Baltimore Regional Transportation Board

Effective Practices:

- Inviting advocates for minority and low-income populations to learn about and participate on a continuing basis in the development of transportation policies through advisory councils and subcommittees.

Participants:

- Baltimore Regional Transportation Board
- Equity Subcommittee members included several community groups—Baltimore Urban League, Citizens Advisory Committee, Empower Baltimore Management Corporation, Environmental Defense, and Developmental Disabilities Council of Maryland

Description

The Federal Highway Administration and Federal Transit Administration made clear their intent to ensure compliance with Title VI and promote the principles of environmental justice during the planning stage with its October 7th 1999 memorandum, *Implementing Title VI Requirements in Metropolitan and Statewide Planning*. The memorandum lists questions that should be raised by FHWA/FTA teams during planning certification reviews and discussions held as part of statewide planning findings:

- Overall Strategies and Goals
- Service Equity
- Public Involvement

In response to the October 7th memorandum, and to an MPO-commissioned report about equity prepared by a private consultant, the Baltimore Regional Transportation Board (BRTB), the MPO for the Baltimore region, developed a work item in its FY1999 Unified Planning Work Program (UPWP) that initiated several activities to advance consideration of environmental justice in regional transportation planning processes. An Equity Subcommittee was formed in January 2000 to facilitate greater representation from non-traditional participants.

The Equity Subcommittee's initial role was to advise BRTB on an appropriate scope of activities to assess environmental justice. At its inception, the Subcommittee formed two separate working groups that met regularly to hear presentations and discussions that covered both public involvement and data analyses. The full Equity Subcommittee also held regular meetings to bring everyone together. The Equity Subcommittee then prepared a report concluding that improving public involvement and data analysis is an evolutionary process. The recommendations included but were not limited to the following:

Continued Subcommittee Involvement. The Subcommittee suggested that the Equity Subcommittee had an important and continuing oversight function to perform, commenting on activities such as the Transportation Improvement Program (TIP), UPWP, Long-Range Plan (LRP), and access-to-jobs initiatives.

Improved Education and Outreach. The Subcommittee identified the need for more widespread training of BRTB staff and citizens to overcome the barriers to public involvement. For example, the BRTB was asked to host training courses given by FHWA staff about environmental justice and equity. Other recommendations included:

- Hiring outreach staff and utilizing community resources such as planning groups and community councils to understand and provide outreach to low-income and minority communities.
- Working with a few communities as "test case" examples before working with the entire region.
- Revising newsletters to be less technical and distributed to more community groups.
- Encouraging feedback to newsletters and documents.
- Educating elected officials on the overall regional and local environmental justice/equity issues.
- Using the established Citizens Advisory Committee (CAC) to invite low-income and minority groups to discussions and meetings.

New Data Activities. The Subcommittee also developed recommendations about needed mapping and modeling improvements including:

- Maps of the locations of minority and low-income communities;
- Analysis of the spatial relationship between the location of low-income communities and transportation projects planned for the next 20 years;
- Analysis of the spatial relationship between low-income communities and employment centers for the next 20 years; and
- Accessibility analyses focused upon job access and access to "opportunities" such as healthcare, schools/colleges, retail, and recreation.

Benefits

For the Agencies:

- Through regular contact with advocacy and community groups, the needs of communities may be better integrated into data collection, analytical processes and decision making.
- The agency can more readily gauge potential reaction to plans, projects and activities as well as better inform community leadership about the reasons for various decisions.

For the Community:

- Community leaders can learn more about transportation—data, methods, funding sources, partnership opportunities—and potentially gain a better foothold to influence decisions and improve the quality and usefulness of transportation in the lives of the communities they represent.

Challenges Ahead

The BRTB gave a formal response to each of the Subcommittee recommendations in March 2001. In doing so, the agency committed to taking several actions such as adding more diversity to its CAC, addressing environmental justice populations in mapping for its upcoming LRP, and enhancing the accessibility analysis to assess non-work trips such as to shopping and schools. Equally important, the BRTB embraced the concept of an Equity Subcommittee and the value of a continuing process to get diverse input on issues related to equity and environmental justice. Next steps include focusing upon appropriate tasks and identifying potential new members.

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Public Involvement

BUILDING ON SUCCESSFUL PAST PUBLIC OUTREACH EFFORTS

Capitol Region Council of Governments

Effective Practice:

- Collaboration with low-income and minority communities to develop a program of continuous outreach and involvement that addresses their concerns.

Participants:

- Capitol Region Council of Governments, Hartford, CT
- Federal Transit Administration
- City of Hartford Neighborhood Redevelopment Zones
- Citizens' Organizations and Church Groups

Description

The Capitol Region Council of Governments (CRCOG) was selected to receive an Environmental Justice Challenge Grant from the Federal Transit Administration (FTA). The grant supports several initiatives:

- Formation of an Advisory/Steering Committee comprised of community representatives to comment on processes and analyses for evaluating environmental justice issues;
- Development of profiles of target communities;
- Evaluation of community involvement techniques;
- Design of analytical techniques to assess impacts of plans on low-income and minority groups;
- Review and evaluation of CRCOG programs and policies; and
- Evaluation of the results of the Challenge Grant process.

Before receiving the Challenge Grant, CRCOG had drawn favorable attention for its successful Jobs Access Program and for its commitment to outreach in cooperation with local planning entities, Neighborhood Redevelopment Zones (NRZs). This cooperative relationship was developed during the Route 44 Corridor Study for Albany Avenue. That process effectively addressed a long-running dispute over the effects of urban highway construction on low-income and minority neighborhoods in Hartford. Both programs had forged direct contacts with low-income and minority groups and established dialogues with community service agencies and neighborhood representatives. In the case of the Jobs Access Program, dialogues uncovered solutions to pressing transportation needs and further encouraged new labor-force entrants to participate in the multi-agency program coordinated by CRCOG. In the case of the Route 44 Corridor Study, local churches, community groups and NRZs worked together to recommend strategies that were responsive to the needs of the many communities affected by the project. CRCOG modified its approach as the project progressed, and adopted a neighborhood-level involvement program to more effectively integrate concerns expressed by the community.

FTA's Challenge Grant contributed funds to improve methods for assessing and measuring the ways in which plans and projects may affect low-income and minority populations in the Greater Hartford region. Based on their past outreach methods, CRCOG assumed that organizations with a history of prior participation would readily respond to a call to meet and create a committee dealing with the broad issues of environmental justice. Using their own letterhead and reserving space at offices in downtown Hartford, CRCOG notified their extensive list of interested parties and set a meeting time of 10:00AM to kick-off this initiative. Only 5 citizens and community representatives attended. The meeting was held as planned, but CRCOG knew that they had to "go back to the drawing board" if they wanted the initiative to succeed.

For the second meeting, CRCOG worked more closely with service agencies and grassroots organizations with direct ties to the community. CRCOG extended invitations to an even wider group of community representatives and key individuals to broaden the Advisory Committee's membership. Prior to the second meeting CRCOG staff followed up the invitations with direct telephone contacts. A well-known and highly respected member of the local community was hired to serve as a facilitator to guide the workshop discussions and act as a neutral, third-party.

The second meeting drew a broad cross-section of people from many church and community organizations. The meeting was held in a building that housed a local artists' collaborative located in the neighborhood most directly affected by the Route 44 Corridor Study. The new format and approach fostered an enthusiastic discussion of the key objectives and issues to be addressed under the Challenge Grant. Participants evaluated past CRCOG public involvement efforts and explored new ideas. Participants discussed ways that CRCOG could improve, long-term, its public outreach and involvement program.

CRCOG is now looking forward to working with the community to develop "measures of effectiveness" that will be meaningful and helpful to their continuing efforts.

Benefits

For the Agencies:

- Early participation of affected community members is helping to identify issues and information helpful to the community and the agency.
- Responsiveness to the specific stated needs for information by low-income and minority community representatives enhances agency credibility.
- Reliance on strategic partnerships with other local and grassroots organizations produced a demonstrable improvement in both participation levels and acceptance of a new element in the planning process.

For the Community:

- Working within existing organizational structures provides confidence that community views will be heard, and that venues and agendas will be developed that matter to those who are willing to participate.
- Citizens invited to communicate preferences and objectives early in the planning process develop a better understanding of the data, analytic tools and evaluation objectives than those presented with these same materials as a *fait accompli*.

Lessons Learned

CRCOG's initial bumpy road and the agency's subsequent recovery generated several valuable insights:

- Look to past successes as a model for developing new initiatives. However, do not assume that a previously successful agency initiative can be automatically translated into success in a new context.
- Use the venues and communications vehicles (e.g., newsletters and meeting places) of local, active community groups to begin the process of outreach.
- Working with smaller localized groups and neighborhood organizations promotes and sustains trust-building relationships.
- By engaging neighborhoods in local issues, discussion and interest in broader regional issues can be developed. Neighborhood groups most often view transportation as but one aspect of community building. Transportation planners need partners to field other issues important to the community.
- Trust building is a continuous process that requires recognition of mutual needs for information sharing and control, especially in the initial phases of new planning initiatives.

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Public Involvement

TUNING IN TO THE VISION ATHENA NETWORK – INTEGRATING DISTANCE LEARNING INTO THE SCHOOL CURRICULUM

Indianapolis Metropolitan Planning Organization

Effective Practice:

Using a videoconferencing network to implement distance-learning projects involving school children, transportation agencies, and community leaders.

Participants:

- Indianapolis Metropolitan Planning Organization
- IndyGo / Indianapolis Public Transportation Corporation
- Center for Interactive Learning and Collaboration
- Indiana Department of Transportation
- Participating high schools and middle schools

Description

The Indianapolis MPO, in coordination with the Center for Interactive Learning and Collaboration (CILC), has participated in distance-learning projects with Indiana's public schools. The CILC is a non-profit corporation whose mission is to encourage distance-learning technologies to enhance educational opportunities for students. Distance learning is delivered to Indiana classrooms through the "Vision Athena" videoconferencing network.

The Vision Athena Network gives students the means to communicate with peers at other schools, collect data, and collaborate with government officials, local community leaders, industry experts, planners, engineers, and environmental scientists to study real-life problems. Project issues are integrated into the curriculum for classes in social studies, science, mathematics, art and the environment. Students formulate recommendations and share their findings in presentations with city and community leaders. Upon completion of their project, students are also given an opportunity to exhibit their models and findings in local museums and community centers.

Transportation-related studies are well-suited to distance-learning methods:

- Students worked with the Indianapolis MPO to identify proposed locations for bicycle routes.
- Working with IndyGo, the Indianapolis public transit provider, students studied public transportation needs. Depending on the high school, students surveyed the needs of communities and passengers; proposed design changes for bus shelters; and assessed how the transit system can better accommodate foreign visitors and immigrants.
- For the Northeast Corridor major investment study, students met with the Indianapolis MPO to investigate traffic congestion and mobility problems experienced in the fastest growing areas of the Indianapolis metropolitan area.

Benefits

For the Agencies:

- Brings increased attention and interest to agencies' projects.
- Generates participation of new segments of the population in the transportation planning process overseen by the Indianapolis MPO.
- Invites new perspectives and innovative "out-of-the-box" thinking.

For the Community:

- Introduces middle school and high school students from diverse backgrounds, including low-income and minority households, to the problems and issues of transportation.
- Allows students to work together to address common problems.
- Reduces barriers to participation in the public involvement process.
- Exposes youth to role models working in the "real-world."
- Gives students a sense of ownership and a feeling of accomplishment.
- Students pass on information to those at home, raising awareness about transportation issues within the community.

Challenges Ahead

The distance-learning education model can effectively bring communities and stakeholders into partnerships with transportation agencies in the planning and project development stages of decision making. The Indiana Department of Transportation is committed to this model for the I-69 project between Indianapolis and Evansville. Four central and southern Indiana middle and high schools will explore alternatives and assess environmental, community, and economic impacts of the project. This is the first long-term, multi-year project involving the state transportation agency as well as schools outside of Indianapolis / Marion County.

Proponents of the distance-learning model advocate its use on other community-oriented projects. Community organizations can use distance-learning to heighten interest and increase public participation levels as part of a strategy to build consensus and recommend locally preferred solutions. CILC suggests that eligible community projects meet the following criteria to be suitable for distance-learning methods:

- Authentic community issues must be under study by the community organization.
- The study issue warrants an interdisciplinary approach.
- A minimum of three months of classroom study of the issue should be given and there must be a research component to the study.
- School partners are prepared to collaborate.
- Funding partners are available.
- An opportunity for student solutions to be incorporated into the organization's proposals.
- A community awareness element will be included, allowing students to make presentations or contribute to publications.

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Public Involvement

INCREASING COMMUNITY AWARENESS THROUGH YOUTH CAREER TRAINING PROGRAMS

Wisconsin Department of Transportation

Effective Practice:

Investing in the Future- Innovative Youth Transportation Career Awareness Project.

Participants:

- Wisconsin Department of Transportation (WisDOT)
- Dozens of industry, labor and community organizations
- Government agencies
- Students in the fifth through eighth grades

Description

WisDOT sponsors youth-based training programs to promote awareness of careers in transportation. Participation in these training programs allows a diverse group of inner city, rural and urban school children to be exposed to transportation-related programs and careers as well as the job skills needed in the industry. The program:

- Introduces a diverse group of youth to careers in the transportation industry.
- Offers hands-on skill training through involvement with construction projects, site visits, and meetings with industry representatives.
- Demonstrates the link between education in math, science and language with careers.
- Provides simulated project experiences such as reading plans, taking measurements, identifying tools and machinery, building span bridges, rockets and AM crystal radios, surveying land, visiting construction sites and industries, and team building all of this with emphasis on safety. Planned activities include laboratory experiments and computer aided drafting and engineering.

Since the program began in 1999, over a 100 youth in the fifth through eighth grades have attended this week-long summer project each year. Participants include a mix of boys and girls from both central city and rural communities, with a variety of ethnic groups represented. The program is state funded and is free for its participants. Field trips are taken to observe professionals working on WisDOT road construction projects and handle industry machinery. In the past, visits have been arranged to construction companies, an active quarry, an asphalt plant and gravel pit, Coast Guard and aviation sites. Presentations have been given across the country and a video called, “Career Awareness Project Wisconsin” was developed to promote the concept and disseminate lessons learned about this program.

Benefits

For the Agencies:

- Introduces Wisconsin’s youth to the transportation industry, improving the image of the transportation and construction sectors among parents, students and educators
- Promotes the development of a trained and skilled workforce for these industries in the future.

For the Community:

- Creates an integrated environment in which youth are brought together to participate in team-building exercises that increase their self-esteem, environmental awareness, and understanding of various construction concepts.
- Engages and sensitizes an array of industry and government partners about the circumstances and concerns of youth. Leverages the resources of numerous partners to instruct and/or fund field trips for children to observe the operations of transportation facilities and projects.
- Potentially attracts a more diverse workforce into the transportation profession that has traditionally offered good-paying jobs and significant opportunities for career development and advancement.

Lessons Learned

A self assessment of the program revealed the following:

- Hands on activities and field trips offered best opportunity to learn.
- Most successful presentations were by those who presented their industry and job as fun and exciting through interactive involvement with participants.
- Packed too much work and not enough fun into week.
- Kids felt that the most important lesson learned was they could make friends with anyone.
- Kids adjusted better to diversity than adults did.

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Public Involvement

ADULT EDUCATION AND TRAINING IN PUBLIC INVOLVEMENT, NONDISCRIMINATION AND ENVIRONMENTAL JUSTICE

The National Highway Institute and the National Transit Institute

Effective Practice:

- Educating practitioners regarding the importance and effectiveness of integrating public involvement into each stage of the transportation decisionmaking process.

Participants:

- Federal Highway Administration
- Federal Transit Administration
- State Departments of Transportation
- Metropolitan Planning Organizations
- Transit Service Providers
- Consultants and Other Transportation Practitioners

Description

Ensuring the full and fair participation by all potentially affected communities in the transportation decision-making process is a fundamental principle of environmental justice. Establishing meaningful public involvement processes is an integral means for equitably delivering benefits to all communities as well as avoiding disproportionately high and adverse effects of programs, plans and activities on low-income and minority populations. Public involvement and accomplishing environmental justice are deeply intertwined.

The National Highway Institute (NHI) and the National Transit Institute (NTI) conduct adult education training courses for transportation practitioners in the area of public involvement. The NHI conducts a course, *Public Involvement and the Transportation Decision Making Process (Course Number 14236)*, and the NTI has its own course, *Public Involvement in Transportation Decision Making*. These two courses both touch upon specific strategies appropriate to reaching out to low-income and minority populations.

The NHI Course provides practical information to conduct public involvement processes and techniques. With the National Environmental Policy Act (NEPA) as a backdrop—in addition to related laws, regulations and policies—classroom exercises provide participants with opportunities to design public education, public involvement, advisory and joint planning activities. In addition, there is a focus on interagency coordination and decision-making forums, as well as implementation and evaluation plans. The tools explored in the course include consensus building, conflict resolution, problem solving and process improvement.

The NTI course teaches participants the importance of public involvement in the planning and project development stages of decision making. The course addresses such issues as:

- Developing effective public involvement plans
- Using appropriate tools and techniques
- Tailoring a public involvement plan
- Including minority, low-income, and multicultural communities
- Dealing with apathy
- Resolving conflicts
- Using limited resources efficiently
- Evaluating the effectiveness of a public involvement plan

The FHWA and the FTA both run courses, seminars and/or workshops in nondiscrimination. For example, the FHWA currently runs a course, *Preventing Discrimination in the Federal-Aid Program: A Systematic Interdisciplinary Approach.* This training course emphasizes an interdisciplinary approach for the early recognition of potential adverse impacts that might be discriminatory so as to avoid these impacts and work for alternative solutions in all stages of the Federal-Aid Highway Program (e.g. planning, project development, construction and research). It also stresses the need for interdisciplinary staff to be involved in the development and implementation of Title VI plans that recipients must prepare to meet their nondiscrimination obligations.

The FHWA and the FTA have also jointly developed a course, *Fundamentals of Environmental Justice.* After the completion of this two-day course, course participants will be able to:

- Define Environmental Justice and Title VI of the Civil Rights Act of 1964.
- Explain the relationship between Environmental Justice and Title VI.
- List and explain the fundamental principles of Environmental Justice.
- Apply the principles of Environmental Justice to their work.
- Explain why the accomplishment of Environmental Justice applies to every stage of transportation decision making and identify how it improves decision making.
- Describe the benefits of Environmental Justice in transportation decision making and the opportunities for partnership among all stakeholders.

Benefits

For the Agencies:

- Adult training courses give agencies a chance to bring together agency personnel, consulting practitioners and other participants to present formal course materials and promote group discussion and reflection about subject topics.
- Courses tend to allow for "hands-on" workshops and participants are given a supportive environment to "retool". Agencies can pursue excellence when participants understand the evolving regulatory environment, accept the emerging challenges and remain motivated to adopt state-of-the-art practices.
- Adult training courses give the interested participant greater exposure to effective tools and the "cutting edge" of their chosen profession.

For the Community:

- Participants learn the value of incorporating the public into the transportation decision-making processes using several effective techniques. Communities benefit from involvement processes that are sensitized to, and attack, barriers to participation.
- Transportation practitioners who are sensitized to the fundamentals of environmental justice, nondiscrimination, and effective public involvement will be more likely to design programs, plans and activities to reflect community values and concerns in all stages of transportation decision making.

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Public Involvement

ATTRACTING NONTRADITIONAL PARTICIPANTS INTO THE REGIONAL TRANSPORTATION PLANNING PROCESS

National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments

Effective Practices:

Proactive outreach methods to target groups that traditionally have not been involved in the region's transportation planning process.

Participants:

- National Capital Region Transportation Planning Board
- Federal Highway Administration
- Entidad Civica y Organizacional de Latinos of Langley Park, MD
- Anacostia Coordinating Committee
- Arlington Educational and Employment Program, Arlington, VA
- Prince William Senior Centers, Manassas and Woodbridge, VA

Description

Public participation and input into regional transportation planning in the metropolitan Washington region, as in most major cities in the United States, has generally been dominated by middle-class, predominantly white citizens representing various interest groups. The Transportation Planning Board (the TPB), which is the metropolitan planning organization for the Washington region, conducted a broad-based public outreach campaign in 1995 and 1996 to obtain more diverse citizen input for its long-range transportation vision planning process.

The TPB decided to conduct an "Enhanced Outreach Project" to get more diverse citizen input for its Long Range Transportation Plan (LRP) process. It wanted a visioning process to work toward consensus about desired features and improvements to the transportation system. Outreach consultants and community leaders who were intimately familiar with the targeted communities were engaged to organize and conduct brainstorming sessions, focus groups, and surveys as part of the process. The project was successful in attracting low-income and minority populations, non-English speaking and elderly into the process. New ideas were suggested and the ideas of these groups were often similar to other groups.

The TPB report, *A System that Serves Everyone: Attracting Nontraditional Participants into the Regional Transportation Planning Process*, provides a highly readable account of the outreach methods used in the various targeted communities. The report documents key findings but also describes important steps taken along the way. For example, initial consultations were undertaken with community leaders and organizations—in advance of carrying out more formal and informal outreach activities—to discuss how best to reach out to target populations. The report reflects upon these lessons learned, highlighting several noteworthy outreach activities:

- Small focus groups facilitated an exchange of information and an identification of needs as expressed by key community leaders or "gatekeepers".
- Brochures and flyers were distributed in Spanish and English.
- A traveling van exhibit visited neighborhood civic and commercial institutions such as shopping centers, community fairs, and transit stations. The van's panels displayed basic facts in English and Spanish. It was an effective and non-intimidating means for soliciting concerns and new ideas. Greater inclusiveness was accomplished as many nontraditional participants were reached.
- Postcard questionnaires and a random phone survey were implemented.
- A video was prepared, *Reaching Out to Everyone*, describing the involvement process and challenges.

Benefits

For the Agencies:

- Traveling van exhibit and other outreach techniques increased the number of non-traditional participants, reaching neighborhoods and residents who otherwise may not have received information.
- Outreach activities yielded several new ideas as well as a focused concern on the needs of current transit users such as improving transit service connections.

For the Community:

- Participants were given more opportunities to share their concerns and needs and identify potential solutions to their problems as part of the plan process.

Lessons Learned

The TPB reported several "lessons learned" that were noteworthy:

About Brainstorming Sessions:

- It was extremely helpful to have a person familiar with each target community make the primary contact with community leaders
- No single organization or individual was indispensable for establishing communication links with new participants. Gaining the approval of a "gatekeeper" proved to be of little relevance to the limited exercise of citizen brainstorming in an area with a large, diverse and dynamic population.

About Planning an Outreach Campaign:

- It was beneficial to have community leadership involved in tailoring participation. The community groups provided guidance on the tone and content of meeting fliers, times and locations for meetings, and forms of needed assistance to foster participation.
- Face-to-face conversations—whether in interviews, focus groups, or other informal settings—were very effective as it allowed for open-ended discussions. This was especially important when dealing with people and issues that were not well-known to the planning organization.

- Focus groups provided more details and were more effective at revealing the *underlying reasons* for concerns and suggestions for improvement than larger community meetings and brainstorming sessions.
- Literacy rates must be considered when planning outreach activities. Oral interviews proved more satisfactory than questionnaires.
- Follow-Up Meetings with participants from previous meetings were proven to be helpful and productive, allowing for more information exchange and more ideas being shared.
- Paying a stipend to co-sponsoring organizations, facilitators, and focus group participants was found to be very important.

About Traveling Van Exhibit:

- The van was a less flexible and effective tool than hoped; permits were needed in certain areas, poor weather cancelled visits and it was costly to operate.
- Portable displays were an effective alternative to the van.

Challenges Ahead

The TPB was awarded an Environmental Justice Challenge Grant from FTA. Under the grant, the TPB in 2001 established the "Access for All Advisory Committee" to provide advice on how to address concerns of low-income, minority and disabled communities in the regional transportation planning process. It is chaired by an elected official. The committee's main task, with the assistance of local planning staff and community groups, is to identify projects, programs, services and issues that are important to these communities and to determine how they can be addressed in the update of the LRP and the Transportation Improvement Program.

The LRP's long-term time focus on 2025 can be frustrating to many participants who are more interested in seeing their current and habitual problems addressed. To earn the goodwill of participants, it is essential that non-LRP issues uncovered during these outreach processes get forwarded to appropriate agencies. Similarly, to foster trust and ensure continuing involvement, new participants are expecting to see some short-term actions and concrete improvements—a challenge for the vision planning process and future LRPs.

Discussions that are laced with technical jargon can pose problems for some nontraditional participants as with other participants. Outreach methods that give ordinary citizens and highly informed citizen activists a forum for equal interchange is a challenge for future initiatives to broaden citizen participation in transportation planning.

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Right of Way

Right of Way

Right-of-Way:
Typical Studies and Activities

A. Project Development
- Environmental impacts and public involvement
- Right-of-way plans

B. Appraisals and Valuation
- Meetings with owners
- Acquiring agency valuation approval
- Appraisal reports

C. Acquisition of Real Property
- Written offer and negotiations
- Payment before possession
- 90-Day notice to vacate

D. Relocation Assistance and Payments
- Adequate notice
- Guarantee of comparable dwelling
- Relocation assistance advisory services
- Payments: Moving and replacement costs

E. Property Management
- Pre-construction
- Post-construction

Personal property rights in the United States are deeply ingrained in our history, and enshrined in our constitution as a fundamental right. But even the most powerful and affluent individuals may have their private property taken for a public purpose. Often referred to as the "takings clause", the Fifth Amendment of the U.S. Constitution is explicit about the conditions under which real property can be acquired against the will of the owner:

"No person shall . . . be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use without just compensation."

—Fifth Amendment, U. S. Constitution

The *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (as amended) provides important protections and benefits for people affected by Federal and federally-assisted projects. Congress enacted this law to ensure that people whose real property is acquired, or who move as a result of projects receiving Federal funds, will be treated fairly and equitably and will receive assistance in moving from the property they occupy. Extensive regulations and guidelines have been developed by the U.S. Department of Transportation to implement in spirit the *Uniform Act.*

The right-of-way professional is expected to move step-by-step through a uniform set of policies and procedures for developing appraisals and valuations, making an offer for the property, negotiating to a settlement, and, when absolutely necessary, exercising condemnation proceedings to acquire the property. Condemnation, the legal process of acquiring private property for public use or purpose through the acquiring agency's power of eminent domain, is usually not used until all attempts to reach a mutually satisfactory agreement through negotiations have failed. An acquiring agency then goes to court to acquire the needed property. Those who are displaced may be eligible for relocation assistance. These steps seem straightforward and are intended to protect those who will be displaced and those whose property is being acquired, but the right-of-way practitioner still must be prepared for the very personal and emotionally charged issues that may be raised during this process.

Our nation's historical promise of equality and fairness has not always been kept when governmental agencies have sited municipal facilities, like waste treatment plants or invested in major infrastructure improvement projects, like our urban highway system. There is ample historical evidence that predominantly minority and low-income communities—often among the least politically powerful—were disproportionately subjected to either displacement or the burdens caused from living in the shadow of region-serving facilities and infrastructure. Environmental justice principles and practice are designed to identify and address the inequities that are the legacy of past practice. Strong resentment or distrust can be especially intense for those minority and low-income persons whose experience with government has been generally negative. Recognizing this history of inequitable siting policy—the very roots of the environmental justice movement—should foster the sensitivity and empathy needed to truly help those now facing displacement and relocation.

Displacing or relocating a household, an extended family or a business can trigger major life-changing impacts. Right-of-way practitioners may be the first personal contacts that people in the community directly affected by a project have with a government agency. This encounter with property owners and tenants may uncover previously unforeseen needs that are delicate and challenging to address; the practitioner must be prepared to act compassionately and take the time to do what is right. The right-of-way professional must be conversant with a network of social services agencies and community service providers who are capable of helping those displaced adjust to significant disruptions.

The effects of a major transportation project can extend well beyond those households and business directly in the path of a project. Right-of-way takings can have disruptive secondary effects such as a loss of business and the tearing apart of long-standing social relationships and community cohesion. Discovering the interrelationships and interdependencies of families, communities, civic institutions and businesses is not always easy, often demanding time and resources, initiative, and curiosity. Language differences and illiteracy can create further barriers to discovery. Once conditions are better understood, the practitioner still must ascertain whether these strong ties can be preserved through various mitigation remedies from the transportation agency.

Those working on right-of-way matters should look to become involved early in project development, alignment selection, and the coordination of projects selected for construction. In the early planning and project development stages, issues often involve not only the people who own and occupy the property needed for the project, but the adjoining property owners and occupants, surrounding neighborhoods, and the community as a whole. Since the relocation of occupants can have a significant adverse impact as well as be costly and time-consuming, it should be considered early. The earlier problems are identified, the easier it may be to eventually avoid, minimize or mitigate adverse effects. Right-of-way activities also need to be carefully coordinated with other elements of the project to ensure that the appraisals, negotiations, relocation efforts, and property management, including any utility work, are accomplished in a professional, legal and timely manner.

While displacement and relocation are often unwelcome, the right-of-way program has brought positive improvements to many individuals and communities. Many people who live in substandard housing and who are displaced by a project may be eligible to receive a ***replacement housing payment*** to acquire decent, safe and sanitary housing. Tenants often become owners when their rental units are acquired because their rental assistance payments can be flexibly applied to a downpayment. Similarly, the ***Housing of Last Resort*** provision gives an agency more flexibility in funding replacement housing if a program or project cannot proceed on a timely basis because comparable replacement housing is unavailable within the monetary limits set by the Act. The ***Federal Functional Replacement Program*** will pay the necessary cost to replace a publicly-owned facility with a similar facility that offers the same utility, including betterments and enlargements required by present-day local laws, codes, and reasonable prevailing standards for similar facilities in the area (see 23 CFR 710.509). When used creatively and in conjunction with a multi-agency approach to problem-solving, many of the difficult issues surrounding real property acquisition can be addressed.

Finally, it should not be forgotten that functionally obsolete or physically deficient facilities can be a blighting factor for a community, hindering its development and redevelopment potential. Such facilities are not only detrimental to the health, safety and welfare of the larger community, but also to its current occupants. There are many successful examples where right-of-way professionals have been able to get involved early enough in planning and project development to become true partners with community-based organizations, municipalities and other transportation and non-transportation agencies. When right-of-way issues are addressed "head-on" early in the planning and project development stages, projects may be able to be designed to meet the goals of multiple parties. Where blighting conditions were once seen as intractable, the skills and resources of the right-of-way practitioner, in tandem with partnering agencies, may be a catalyst for real improvements in the lives of individuals and communities.

TUG FORK RIVER COMMUNITY: REMEDYING SUBSTANDARD CONDITIONS THROUGH THE HOUSING OF LAST RESORT PROVISION

West Virginia Department of Transportation and Federal Highway Administration

Effective Practice:

- Exercising the Housing of Last Resort provision to improve the housing stock for displaced and relocating low-income rural residents.
- Sensitively and creatively managing the relocation process to preserve community and address the needs of individual households.

Participants:

- West Virginia State Department of Transportation
- Federal Highway Administration

Description

The *Uniform Relocation Assistance Act and the Real Property Policies Act of 1970* consolidated diverse relocation assistance requirements found in Federal legislation and regulations and provided uniform and equitable treatment of displaced persons. The *Uniform Act* includes a Housing of Last Resort provision which gives an agency more flexibility in funding replacement housing if a program or project cannot proceed on a timely basis because "comparable" replacement housing is unavailable within the monetary limits set by the Act.

What does "comparable" mean? A comparable replacement dwelling must be decent, safe and sanitary, and functionally equivalent to your present dwelling. While not necessarily identical to your present dwelling, a comparable replacement dwelling should be capable of contributing to a comparable style of living and should contain amenities similar to those found in the dwelling from which you are being displaced. A comparable replacement dwelling should be:

- Adequate in size to accommodate the occupants (e.g., you and your family).
- Located in an area that is not subject to unreasonable adverse environmental conditions.
- Located in an area that is not less desirable than your present location with respect to public utilities and commercial and public facilities.
- Reasonably accessible to your place of employment.
- Located on a site that is typical in size for residential development with normal site improvements.
- Currently available on a private market.
- Within your ***financial means.***

What if there is little comparable housing? Should the absence of comparable housing threaten the viability of a project, the State Department of Transportation may be able to solve the problem through the Housing of Last Resort administrative process. Any decision to exercise Housing of Last Resort must be justified on a case-by-case basis, for good cause, or by a determination that:

- There is little, if any, comparable replacement housing available to displaced persons within an entire program or project area; and therefore, last resort housing assistance is necessary for the area as a whole; and

- The program or project cannot be completed in a timely manner without Housing of Last Resort assistance; and
- The method selected for providing last resort housing is cost-effective, considering all elements that contribute to total program or project costs.

The Agency may supply the necessary housing in a number of ways, such as:

- The purchase of an existing comparable residential property and making it available to the displaced person in exchange for the displacement property.
- The relocation and rehabilitation (if necessary) of a dwelling purchased from the project area by the Agency and making it available to the displaced person in exchange for the displacement property.
- The purchase, rehabilitation and/or construction of additions to an existing dwelling to make it comparable to a particular displacement property.
- The purchase of land and the construction of a new replacement dwelling comparable to a particular displacement property when comparables are not otherwise available.
- The purchase of an existing dwelling, removal of barriers and/or rehabilitation of the structure to accommodate a handicapped, displaced person when suitable comparable replacement dwelling are not available.
- A replacement housing payment in excess of the maximum payment limits.
- A direct loan which will enable the displaced person to construct or contract for the construction of a decent, safe, and sanitary replacement dwelling.

All eligible displaced persons are given freedom of choice in the selection of replacement housing, and the agency will not require any displaced person, without his/her written consent, to accept a replacement dwelling provided by the agency. If a displaced person declines replacement housing offered by the agency, the displaced person may secure a replacement dwelling of his/her choice, providing it meets housing standards.

In rural West Virginia, a new highway planned along the Tug Fork River was expected to cause the relocation and displacement of over 200 households—many of whom lived in sub-standard housing. Using Housing of Last Resort, the state of West Virginia was able to spend money to either install septic systems or connect houses to public water supplies. By the end of the Tug Fork project, every one of the 200 impacted households within the small, rural community was able to move into a home that was up to code.

Benefits

For the Agencies:

- Enabled the DOT to overcome obstacles to completion of a transportation project, creating jobs and improved accessibility by advancing the project, while simultaneously upgrading the housing stock for relocating households.

For the Community:

- Displaced households were relocated from sub-standard housing stock because of the Housing of Last Resort provision.

Contacts/Resources

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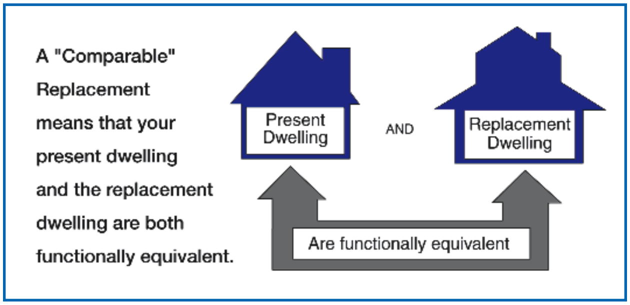
Further information about right-of-way laws, regulations, and best practices can be accessed at the following website: http://www.fhwa.dot.gov/realestate/research.htm



I-78/WEST PEDDIE STREET RAMPS REALIGNMENT PROJECT: USING THE FEDERAL FUNCTIONAL REPLACEMENT PROGRAM

New Jersey Department of Transportation and Federal Highway Administration

Effective Practice:

- Relocating functionally obsolete school facility located adjacent to heavily traveled highway access ramps to improve pedestrian safety and expedite highway ramp improvements.

Participants:

- New Jersey Department of Transportation
- Federal Highway Administration
- The City of Newark and Newark Public Schools
- The North Jersey Transportation Planning Authority
- State of New Jersey Department of Education
- Belmont-Runyon Elementary School Parent-Teacher Association
- Interfaith Clergy Alliance

Description

When constructed in the late 1960s, the Interstate 78 (I-78) West Peddie Street ramps in Newark, New Jersey were only intended as temporary structures to be removed once the NJ 75 Freeway (NJ 75) was built. Planned as a regional connector linking I-78 and Interstate 280, NJ 75 was intended to divert regional truck traffic off neighborhood streets. However, this highway was strongly opposed by minority communities in several of the City's neighborhoods. The proposed NJ 75 project, a two-mile stretch slicing through dense urban neighborhoods in Newark's South and Central Ward, threatened to be costly and disruptive with substantial right-of-way acquisition, condemnation and relocation costs.

In the late 1970s, after it became apparent that that NJ 75 was not going to be further advanced, the *Newark Highway Access Feasibility Study* examined alternative ramp configurations in the vicinity of I-78/West Peddie Street as well as interim improvements to channel regional traffic and address pedestrian safety issues In 1984, an Environmental Assessment (EA) was prepared, based on these recommendations, by the New Jersey Department of Transportation (NJDOT) and approved by the Federal Highway Administration (FHWA). Although the intent was to improve traffic flow, remove truck traffic from residential streets, and address pedestrian safety problems, no alternative was implemented due to a lack of funding and because no consensus could be reached on a particular alternative.

Newark's South Ward residents always objected to the speeding regional traffic spilling onto local neighborhood streets, but were particularly concerned that the ramps' configuration posed a continuing threat to the safety of children attending the nearby Belmont-Runyon Elementary School. Situated in one of Newark's poorest neighborhoods, the school reports an enrollment that is 100 percent minority, 96 percent of whom participate in the free-lunch program.

The worst fears of local community residents were realized in March, 1997. Eight-year-old, Terrell James, was struck

and killed by a hit-and-run motorist, a teenager, who apparently regularly journeyed from his distant Jersey shore suburb to Newark to purchase heroin. The motorist, traveling with several friends in his black mustang, was making his way home through the 3rd grader's neighborhood, past the Belmont-Runyon school, toward the I-78 ramps when the incident occurred.

The hit-and-run death spurred community protests including a weekly vigil organized by an alliance of local clergy at the scene of the boy's death. This protest and other activities prompted several responses by state and local officials. The Newark Police began—with varied degrees of success—to crack down on speeding and other traffic violations as well as drug trafficking. City officials in cooperation with the Newark Public Schools and NJDOT relocated a playground away from the highway ramps. The City also created a truck route and installed traffic control measures such as rumble strips, pedestrian crossings, and turning restrictions in the interim. Additionally, State legislators drafted "Terrell's Law", a proposed New Jersey Law—not yet passed—prohibiting the construction of a school and a highway ramp within 1,000 feet of each other.

For its part, NJDOT hastened to streamline the project development process, expediting new engineering and environmental studies to reconfigure the I-78 ramps. NJDOT agreed at the request of the City of Newark to consider ramp realignment and intersection improvements. The recommended design improvements required geometric changes to the ramps that necessitated the relocation of the existing elementary school to a new site, approximately two blocks away. The FHWA and NJDOT also allocated funds for the long-needed relocation of the elementary school to a nearby vacant tract. In the aftermath of the tragedy, the local MPO, the North Jersey Transportation Planning Authority (NJTPA), assisted in the outreach processes at a time when community distrust was particularly great. Meetings at the NJTPA were held with community leaders and members of the public to explore design solutions that would address neighborhood concerns.

The Federal Functional Replacement Program (FFRP) became a key tool for surmounting long-standing constraints to project implementation that involved the need to relocate the elementary school. Federal funding was earmarked for the acquisition, relocation and replacement of the elementary school away from the I-78 access ramps. The FFRP program will pay the necessary cost to replace a publicly-owned facility with a similar facility that offers the same utility, *including betterments and enlargements required by present-day local laws, codes, and reasonable prevailing standards for similar facilities in the area* (see 23 CFR 710.509). To date, approximately $16 million of federal funding has been allocated for the relocation of the elementary school. A new EA was completed by May 2000 with a Finding of No Significant Impact (FONSI) issued by the FHWA by September 2000. The project is now in its Final Design stage and construction is expected to commence once the school has been relocated and occupied.

Benefits

For the Agencies:

- Diverts regional "through" traffic and truck traffic away from the community.
- Replaces what were intended to be temporary ramps yet have been in place for over 30 years.

For the Community:

- Replaces a physically and functionally deficient elementary school and separates regional traffic from the vicinity of the elementary school.

Lessons Learned

Observation of the process and interviews with key players have revealed the following:

- A galvanized community is a powerful political force and can act as a catalyst for action.
- The FFRP is an important and creative tool for transportation *and* community planners seeking to redress long-standing problems in low-income and minority communities—areas often burdened by aging or obsolete community facilities and poorly designed and intrusively located transportation systems.
- Local communities have a difficult time understanding the operating boundaries between state and local government. Early stakeholder identification and the introduction of a Citizen Advisory Committee comprised of government officials and local citizens served to foster greater awareness and understanding of the roles, responsibilities and interrelationships between the various government agencies involved in the project.

Contacts/Resources

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... b) ***Federal participation****. Federal-aid funds may participate in functional replacement costs only if:*

(1) Functional replacement is permitted under State law and the State Transportation Department (STD) elects to provide it.

(2) The property in question is in public ownership and use.

(3) The replacement facility will be in public ownership and will continue the public use function of the acquired facility.

(4) The State has informed the agency owning the property of its right to an estimate of just compensation based on an appraisal of fair market value and of the option to choose either just compensation or functional replacement.

(5) The FHWA concurs in the STD determination that functional replacement is in the public interest.

(6) The real property is not owned by a utility or railroad.

— excerpted from CFR 710.509, Functional replacement of real property in public ownership

Construction

Construction

Construction:
Typical Studies and Activities

- Post-Planning and Project Development review of changed conditions
- Public Relations, Education and Outreach
- Community Advisory Councils/Traffic Management Committees
- Traffic and safety prediction modeling and impact analysis
- Traffic Management Plans
- Contracting and bidding procedures
- Fulfill pre-construction mitigation commitments
- Construction program design
- Notice of Construction
- Implement Best Management Practices
- Monitor performance and impacts
- Utilize technologies for traveler and traffic information
- Document, manage and resolve citizen complaints
- Review policies and procedures periodically

Transportation connects us to opportunities. In situations where there is a particular "incident" that creates a disruption in the transportation system, travelers can adjust to or "go with the flow" by altering travel patterns or substituting for a "preferred" destination. However, in most cases, construction—especially for major transportation improvement projects—requires long-term and significant adjustments to the ways in which people use the transportation system.

Construction is often the most sensitive phase of a project because it disrupts the normal, routine ways of making our transportation connections. Often, construction activities disrupt long-standing patterns of movement and means of access to important personal and community services in a neighborhood. Even though transportation construction projects are designed to provide future benefits such as more access, better mobility and improved safety, their immediate impacts are characterized by delays, detours, and disruptions in the normal routines and activities.

Of course, it is not only the traveling public that can be adversely affected by construction. Local communities bear the brunt of the disturbance and disruption where construction occurs in the form of noise, dust, flooding, truck traffic and traffic queuing, or unwelcome street and sidewalk closures. The adverse effects can, at times, threaten the livability and vitality of the neighborhood and the local businesses upon which residents depend.

Identifying and addressing the adverse effects of construction and carrying out, proactively, community involvement processes focused upon what to expect and how to cope with construction effects remain essential challenges for transportation agencies and their contracting representatives. The degree to which construction actually produces disproportionate burdens on low-income and minority populations depends on how impacts are managed and communicated by the transportation agency in charge of the project, and by the magnitude of the public health, safety and welfare impacts faced by the community and its affected individuals.

Overcoming communications barriers presented by language and literacy within affected communities is one of the most important challenges to address during the construction phase. Those without English language proficiency are particularly vulnerable when information is conveyed—for example, detour signage, variable message displays, brochures, radio broadcasts—without respect to the unique needs of specific populations. Similarly, there may be highly valued cultural traditions and customs—not always readily apparent to the outsider—that link people in affected communities to particular businesses and institutions. These ties may be particularly strong for certain minority populations seeking to retain their cultural identity.

No less than other transportation decision-making stages such as planning and project development, construction stage impacts can often be avoided, minimized and/or mitigated by maintaining strong working relationships with existing community institutions. Collaboration with locally respected institutions is important for keeping communications channels open between affected populations and those that can be of assistance with addressing construction issues. Such institutions may include churches, social service agencies, cultural and ethnic associations, neighborhood and business associations, schools and hospitals, and other respected local community facilities and organizations. Their prior experience working with minority groups and low-income populations, often as trusted institutions of the community, can foster productive discussions that can be particularly valuable in addressing the more stressful consequences of construction.

The construction stage is not divorced from other stages of transportation decision making. Prior stages of planning, project development and right-of-way as well as the on-going responsibility of delivering maintenance and operating services to communities leave their mark on the built environment, the quality of existing services, and the degree of trust placed in governing institutions by the community and its various populations. Many construction personnel have little reason or incentive to reflect upon this past history and the legacy created from this accumulation of past investments and activities. Their focus is on carrying out their more pressing job functions. But, transportation agencies have a different charge; they are better served by learning of this past and developing appropriate strategies and incentives for achieving greater continuity with other stages of decision making.

The practitioner with strong ties to communities and their institutions may quickly develop a more complete picture of the subject project—what alternatives were considered and rejected, how local concerns were treated, what mitigation commitments were made, or whether off-setting benefits and enhancements were or could be programmed as part of this or another project. This past should be of great importance because carrying out prior mitigation commitments is essential. Similarly, the past project history will likely point to important concerns to address and opportunities for employing appropriate best construction practices that can avoid or minimize adverse effects.

In the last analysis, professionalism, empathy and responsiveness are the key traits needed from the transportation practitioner who interacts with residents and businesses faced with construction impacts. Every aspect of construction—from communications and construction program design, to mitigation and complaint resolution—should be infused by this empathy and respect, and by a passion to "do the right thing" as communities encounter the threats, challenges and opportunities created by construction.

Construction

COMMITTING TO CONSTRUCTION BEST PRACTICES AND THEIR EQUITABLE DELIVERY TO ALL COMMUNITIES

Effective Practices:

- Ensuring continuity between project development, right-of-way, and construction phases by honoring commitments set forth as mitigation in the Final Environmental Clearance documentation (i.e., Record of Decision, Finding of No Significant Impact or Categorical Exclusion).
- Communicating project information to the public in an accurate, timely and accessible fashion.
- Creating processes for community involvement before construction begins and to register concerns during construction.
- Compensating impacts with mitigation and enhancements.

Participants:

- Federal Highway Administration and Federal Transit Administration
- State Transportation Departments and Transit Service Providers
- Counties and Local Municipalities
- Community Organizations, Neighborhood and Business Associations, Public

Description

Transportation projects generally *promise* future benefits such as more access, mobility, and safety. But, the construction process itself *actually* delivers a more immediate experience filled with delays, detours, and disruptions in the normal routines and activities. The traveling public may face only minor inconveniences, or far more significant impairment to mobility and access to opportunities. Of course, the adverse effects of construction fall not only upon the traveler, but also upon those who are not venturing out of their homes or neighborhoods. Dust, noise, vibration, and a stream of rerouted traffic and trucks hauling heavy equipment or dirt can overwhelm a neighborhood's character and threaten the quality-of-life, health or safety of residents and businesses. Community institutions and businesses may also become isolated, losing traditional sources of support and consumer demand from pedestrian foot-traffic, passing vehicles, or transit users. Clearly, construction breeds a multitude of issues and complaints that demand prompt solutions and empathy from the transportation practitioner. The highest degree of professionalism and commitment to "customer service" are needed from those entrusted with the responsibilities for construction whether a government agency, contractor or the worker on-site.

Today, more attention than ever is being given to sharing and promoting good examples of construction best practices within the community of practitioners. Establishing forums for early and continuous public involvement, coordinating with key locally respected community institutions to improve outreach and gain a greater sensitivity to community needs, and devising appropriately tailored management plans and communications strategies are touted as construction best practices. These and several other activities have their roots in principles of fair treatment, a commitment to public participation, and to avoidance, minimization and mitigation of adverse impacts. Those interested in the accomplishment of environmental justice should recognize and embrace such best practices and seek their equitable application for *all* communities and for *all* populations including low-income and minority populations.

Community Advisory Councils. A Community Advisory Council (CAC) can be an effective vehicle for facilitating community input during the project development, right-of-

way and construction stages. The CAC, comprised of businesses, neighborhood associations, and other interested parties, can provide a vital forum for giving feedback to transportation and municipal officials about outstanding concerns. The City of Columbus, Ohio effectively deployed a CAC when neighborhood objections arose surrounding a proposed freeway interchange project. The CAC provided a forum for these parties to contribute to the process, and the coordinated effort resulted in the creation of a Memorandum of Agreement (MOA) between the CAC, the City, and the State Transportation Department. The MOA memorialized the proceedings and lead to design compromises that accommodated some of the CAC's most pressing concerns.

Traffic Management Committees. Traffic Management Committees or Workgroups meet on a regular basis to discuss work zone issues and problems affecting the local community and especially nearby residents. The Workgroup may include construction and contractor personnel, police agencies, fire departments, local city engineering and traffic engineering departments, local businesses, schools, hospitals, shopping centers, churches and other community institutions, and neighborhood associations. Such committees can also oversee the preparation of a **Traffic Management Plan (TMP).** The TMP is a program of operational and demand management strategies to maintain acceptable levels of traffic flow during construction. It should reflect community concerns and communities should be able to monitor them periodically for their effectiveness.

Reliable Communications with the Community. Inadequate and inconsistent information about a construction project is a frequent complaint for those whose daily routines are disturbed. Construction start dates, periods of construction, detours, and changes in schedules can be very disruptive to businesses and daily commuters. The clarity and frequency of information plays a large role in shaping public opinion about the project. Newsletters, brochures, variable message signs, posters, special frequency radio broadcasts, internet sites, pre-construction informational meetings, monthly traffic management meetings, guest speakers at community events (e.g., schools, chamber of commerce, etc.), video displays, manned display tables are only a few of the means for commonly reaching and communicating with communities. Caltrans distributed a quarterly newsletter, the *Cypress Link*, to provide the community with information on the rebuilding of the Cypress Freeway in West Oakland. Newsletters typically describe the project status, transit line or highway lane closures, detour routes, access to area businesses, and what other work zone restrictions are likely to be in effect for the next few weeks.


Cypress LINK

Construction Update: Changes Along Seventh Street

Storefront Field Offices. Field offices that are located near construction sites, but which are very accessible to local residents and businesses can improve project-team coordination, foster community goodwill, and promote more rapid response to individual complaints. Keeping records that indicate the language proficiency of employees and contractors or staffing field offices and information tables with persons with multi-lingual skills are effective means for delivering more direct and useful services to affected communities.

Mitigation Commitments on Contract Specifications and Drawings. Mitigation commitments made in the Final NEPA environmental clearance documentation (i.e., FEIS/ROD, EA/FONSI, CE) during the project development stage need to be incorporated into subsequent contract specifications and drawings. Faithful adherence to general environmental best practices—not just on paper, but in practice—can address concerns about health, safety, and other environmental issues. For example, noise and vibration practices should: minimize night-time activities in residential areas as much as possible; re-route truck traffic away from residential streets; use noise blankets on equipment and quiet-use generators; consider alternative construction methods such as sonic or vibratory pile-driving; and combine noisy operations to occur in the same time period. Monitoring traffic, visual impacts (e.g., equipment and materials staging areas), truck routes and times of operation, noise levels and vibration, air quality, flooding, and other impacts are recommended. Adequate information regarding these concerns should be made available to the public and the public should be given an appropriate forum to register their concerns when commitments are not being met.

Mitigate Before Construction. Where possible from a construction staging standpoint, implement mitigation measures that can have a beneficial effect on communities *before* major construction begins. For example, construct permanent sound barriers prior to roadway improvements or light rail transit construction.

Compensation with Enhancements. Communities that will bear adverse effects from construction projects serving regional transportation may be deserving of greater priority for other community-based projects and enhancements. Compensatory enhancements may include repaving roads, better street signage, installing noise buffers, landscaping, improving curbing and sidewalks, trails, bikeways, lighting, etc.

Contract Provisions Requiring Work Plan. Each construction contractor should be expected to submit a work plan outlining work schedules, traffic control, access provisions, and intended mitigation measures prior to initiating construction.

Create Incentives for Contractor Compliance. No community should be plagued by slow construction projects with frequent delays or poorly managed work sites. With proper incentives and disincentives, contractors can be encouraged to faster completion or to follow work practices that help communities cope with projects. For example, the Utah Transit Authority concluded that their Design/Build (D/B) contractor for a fixed guideway light rail transit system in Salt Lake County could earn an incentive fee for performance in the areas of maintenance of traffic and access, business and residential impact mitigation, public information and community relations. The D/B contractor meets regularly with a Community Coordination Team comprised of community volunteers along the alignment and other stakeholders who give feedback and recommend a fair and reasonable incentive fee based on the contractor's performance.

Benefits

For the Agencies:

- Trust and credibility with the community can be fostered by incorporating public participation and ensuring continuity throughout all decision-making stages.
- State and local transportation agencies and contractors get a greater sense of what the community needs and conflicts are more easily resolved when proactive forums are established.
- Efficiency and timeliness can be improved when conflicts that result in law suits and work stoppage are reduced.

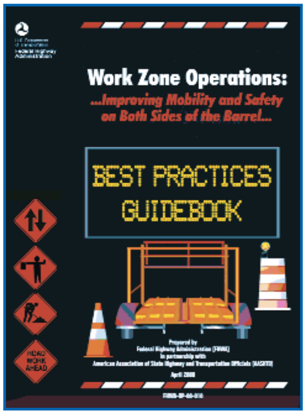
For the Community:

- Local agencies, businesses, and neighborhoods know where they can go to get reliable answers to their questions.
- Business and community-based organizations can be strengthened by building working relationships with City, State and Federal agencies.

Contacts/Resources

For more information on construction effective practices, go to the FHWA Website at:
http://www.ops.fhwa.dot.gov/wz/bestprac.htm

The FTA's "Lessons Learned Program" website shares experiences about transit capital expenditures and construction:
http://www.fta.dot.gov/library/program/ll/toc/toc.htm



PRESERVING ACCESS TO HUB OF ASIAN CULTURE

Metropolitan Transit Authority — New York City Transit

Effective Practices:

- Devising communications and transit service strategies to minimize disruptions during construction.

Participants:

- Metropolitan Transit Authority - New York City Transit Authority
- NYC Department of Transportation
- NYC Community Boards
- Chinatown Community Activists (Grand Coalition)

Description

New York City Transit is the largest agency in the Metropolitan Transportation Authority's (MTA) network. Each day, more than 6 million people use MTA's subway, bus and rail network. In 1984, the New York City Department of Transportation (NYC DOT) began rehabilitation of the Manhattan Bridge in lower Manhattan—a project that is not scheduled for completion until 2004. The Manhattan Bridge supports two sets of tracks bringing transit service from Brooklyn to Manhattan—the 6th Avenue line and the Broadway line. Both subway lines serve lower Manhattan, with station stops at Canal Street and Grand Street in the Chinatown area. The two stations are approximately seven blocks apart.

In 1988, MTA closed the Broadway line's tracks to subway service while that side of the bridge was rehabilitated, shifting lower Manhattan service to the 6th Avenue line. Before this change took place, the Canal Street Station served riders in the Chinatown area, and both the Grand Street and the Canal Street Stations had roughly equal train service from Brooklyn. For the past 13 years, while the Broadway side of the bridge was rehabilitated, the Chinatown section of lower Manhattan was served through the Grand Street station using the 6th Avenue line.

By the summer of 2001, the Broadway lines were re-opened for service as NYC DOT began the final stage of the Manhattan Bridge rehabilitation. This meant closing down the 6th Avenue tracks and providing service to Chinatown on the Broadway line instead of the 6th Avenue line. Thus, it became physically impossible to serve the Grand Street Station from Brooklyn. Coupled with other shuttle and temporary service changes in the Chinatown neighborhoods of lower Manhattan, the net effect was a virtual closing of the Grand Street Station. MTA anticipates service to be curtailed through 2004, after which both the Broadway and 6th Avenue lines are expected to operate normally for the first time in over 20 years.

MTA conducted an analysis of local ridership patterns to determine the most practical kind of service to offer during the 3-year construction period. They concluded that a shuttle service between Grand Street and the nearest subway station at Broadway-Lafayette would accommodate peak hour travel during the normal weekday commute periods. But, the reduced service to Grand Street Station and the substitution of a bus shuttle service between Grand Street and the nearby Canal Street Station were greeted with vocal opposition by some area merchants, residents and community activists.

Although Chinatown has been an identifiable ethnic neighborhood in lower Manhattan for nearly 100 years, its character changed significantly over the past decade. Significant Asian immigration to New York City and the

Chinatown neighborhoods put tremendous pressure on retail and residential rents, forcing established families and businesses into other neighborhoods in New York City—predominantly Brooklyn and Queens. The journey to work and trip-patterns for shopping and services were deeply affected by the long-term re-routing of subway services. Many Chinatown residents and businesses never realized that the subway services that they were using were only "temporary."

There were other, more subtle changes, too. The Cantonese community, long the mainstay of Chinatown, maintained close connections with both their ethnic roots and the political establishment in New York City. However, recent Chinese immigrants, who entered the country in large numbers during the past decade, came primarily from the poorer, southern province of Fujian. The newly arrived Fujianese, often unable to make living and working arrangements either in Chinatown proper or in areas of Brooklyn and Queens recently settled by the Cantonese, dispersed throughout much of the Northeast and Midwest. The lack of language skills and the paucity of ethnically-oriented services in far-flung communities meant that even Fujianese families as far away as Miami and Chicago came to New York to shop, bank, meet friends, consult traditional doctors and pay bills. Many of these visitors relied on public transportation to provide access to the traditional business centers in lower Manhattan's Chinatown.

Although the diversions from the Grand Street Station were considered temporary by the MTA, local businesses feared that the service changes would drastically reduce customers and revenues. These concerns were heightened because the predominantly ethnic Chinese business activity in the Grand Street Station area had grown substantially in the 13 years that the area was served by re-routed Broadway service.

Citizens from Chinatown and Sunset Park in Brooklyn were concerned that a reduction in transit access to the area would cause irreparable damage to the economic vitality of area businesses and to a way of life for its residents and workers that had become established over the past decade. Local merchants and citizen representatives sought more extensive shuttle service, increased local and express bus service between Manhattan and other boroughs, and extended hours of service for nearby subway lines. The track changes and service plans were also unveiled during an election season; several political candidates vying for an open seat on the City Council representing the Chinatown area seized upon the changes to connect with local voters.

After a series of conferences and negotiations, brokered by the New York State Assembly Speaker, whose district includes much of Chinatown, and the Governor's office, a solution to the 3-year Grand Street closing was devised that built on previous community outreach by MTA and provided additional resources—approximately $2 million more per year—to address station closure impacts. The Grand Street shuttle train would be extended to the West 4th Street Station where customers could transfer to additional subway routes (similar to the original proposal). In addition, the hours of operation of Brooklyn through-service on a nearby subway line would be extended from peak-only to full service from 5:00AM through 10:00PM for the duration of the three-year Manhattan Bridge construction project.

The MTA's public information program plays a continuing role in communicating with the various ethnic Chinese communities served by the re-routed lines and instituting special services for the duration of the Manhattan bridge project. MTA officials and senior staff met with Community Boards and business groups and held several public hearings to let business and residents know of service changes and disruptions. An extensive multi-language public information campaign was instituted with posters in subway stations and on-board trains, advertisements in local ethnic news outlets (both print media and radio), train announcements and brochures in several languages, and system-wide distribution of brochures detailing changes and offering travel guidance. A multi-lingual "Hot Line" designed to answer customer questions about the proposed service changes was also established.

The MTA's public relations staff also offered to schedule visits with large employers and institutions affected by the service changes—providing individual travel planning assistance for affected employees at these events. And, large numbers of MTA staff were available to explain, in-person, the multi-language brochures and offer guidance at each of the stations on lines that feed into the affected 6th Avenue and Broadway lines several weeks before and after the service change-over. The MTA also provided information tables in the 6th Avenue stations where service was no longer available, staffed by customer service representatives with the necessary language skills, to assist riders in finding new ways to reach their desired destinations.

Benefits

For the Agencies:

- Demonstrated the necessary flexibility to respond in a positive manner, establishing remedial strategies that addressed community concerns.
- Additional contacts were established within the Chinatown community to discuss future service issues.

For the Community:

- Maintained a workable level of services to the businesses and residences of Chinatown that are very transit-dependent.
- Helped Community Boards and local businesses to understand the complexities and limitations of MTA options during extended construction operations.
- Served as a unifying, community-based effort to meet the special needs of the community.

Lessons Learned

Construction impacts are often perceived differently by operating agencies and local residents who endure the "temporary" disruptions of construction. Agencies should err on the side of caution and flexibility—implement proactive strategies of outreach, deploy multi-lingual communications tools, enlist community-based organizations knowledgeable about local customs, and explore feasible mitigation strategies for temporary impacts—when their projects may disrupt communities and cultures for which they are generally unfamiliar. The agency analyst should acknowledge his/her limitations as an outsider; recognize that a proactive outreach process may best identify needs and patterns hidden from the view of most outside observers. Other lessons include:

- Even established ethnic communities can change relatively quickly, and subtly, while major, long-term construction projects are underway.
- Neighborhood "transit hubs" often serve as important and unique business and cultural connections for ethnic groups from throughout an urban area, not just those located in the immediate station areas.
- Cultural and economic ties cannot be readily discovered from the "usual" review of ridership numbers or from secondary data or windshield investigations of business patterns in the immediate neighborhood surrounding a transit facility—especially when these facilities serve populations with unique cultural, language and business needs.
- Projects and activities unfold within a political as well as social context; public agencies must be sensitive to this context and how it may affect the outcome.

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Operations and Maintenance

Operations and Maintenance

Operations and Maintenance: Typical Studies and Activities

Highways:
- Plowing and snow removal
- Pothole and surface maintenance
- Parking
- Traffic signalization
- Noise barriers
- Safety features
- Location of maintenance facilities (e.g., salt sheds)
- Landscaping
- Grade crossings
- Bikeways and Pedestrian facilities
- Information dissemination

Transit:
- Rate and fare changes
- Vehicle crowding/loading factors
- Operating headways/schedules
- Vehicle condition and maintenance
- Service features and route selections—modifications, extensions, disruptions, deletions
- Transit stop locations
- Transit amenities
- Location of maintenance facilities (e.g., transit, bus garages)
- Police, safety and security
- Park and ride and modal interfaces
- Weather protection
- Pedestrian facilities
- Information dissemination

Operations and Maintenance involves managing and maintaining our transportation systems and services, but it is hardly a routine matter to responsively and creatively attend to the fruits of our earlier accomplishments in the planning, project development, right-of-way, and construction stages. O&M is about more than keeping what we have built in good working order. It is the basis for future planning and project development. Good planning takes a careful look at what "is" and then asks "What should be?" In that sense, O&M represents the beginning of the planning process, because without a clear understanding of the current operating environment, it is very hard to develop the plans and projects needed to improve it.

Delivery of fair and equitable transportation services and systems is a core principle of environmental justice. When high standards are set and uniformly applied, O&M expenditures can deliver real benefits that sustain or improve the appearance of the built environment and enhance the quality-of-life experienced daily by residents, workers and businesses within communities. By contrast, underinvestment— coupled with low standards of service and maintenance—can produce deficient physical facilities and services truly detrimental to the health, safety and welfare of communities. Low-income communities, in particular, typically beset with higher levels of poverty and unemployment, cannot endure for long the consequences of such neglect. Such communities may become further isolated and segregated from areas with job growth and integral educational, health and social services. Similarly, poorly maintained facilities cannot attract the discretionary investments essential to sustaining the welfare of its residents or the life of the community. Infrastructure investment including transportation systems and services are central to shaping our perceptions of a place and bringing real accessibility and opportunities to it. Unquestionably, the operations and maintenance stage, tending to the ongoing needs of these systems and services, will deeply influence the quality-of-life, safety, and economic integration of minority and low-income communities.

The quality of O&M—its reliability, comfort, promptness, responsiveness, cleanliness—sends a clear message about how our society values our community and how our communities value their transportation resources. When low-income or minority communities experience lower standards of service than more affluent communities, citizens of these communities are given the impression that benefits are prioritized to areas and persons of higher social and economic status. The message, of course, is one that challenges fundamental principles of fairness, equality and access to opportunity deeply held by Americans.

More troubling, however, is the message received when a community and its workers, families and children discover that their health and safety are endangered by a pattern of underinvestment or poor maintenance. Vandalized street furniture, inoperable emergency telephones, broken lights, schedules and maps that are outdated or obscured by graffiti are a too familiar part of the landscape in some communities, at some rail stations and some bus stops.

Social science and urban design literature on ***crime prevention*** suggest that the quality of the physical landscape sends important cues to citizens (and criminals) about society's tolerance for disorder. So, issues related to ***maintenance*** must play an important role in evaluating the distribution of benefits and burdens from the perspectives of low-income and minority communities. Uniformly safe and clean facilities and satisfactory services suggest that our society can be civilized and orderly. By contrast, facilities plagued by vandalism, petty crime, blight and deterioration contribute to a more disturbing and fatalistic perception that our society is out-of-control, marked by lawlessness and insecurity.

Many low-income and minority community residents come to accept low maintenance standards and poor conditions as routine, as the "facts on the ground." Unfortunately, poor maintenance and inadequate security measures can lead to fatal and near-fatal consequences. It should not be forgotten that minorities and low-income persons are more likely to be victimized by crime than other populations. Statistics from the U.S. Department of Justice, National Crime Victimization Survey (January 2001) show that African Americans are victimized by personal crimes (i.e., robbery, assault, battery, rape, purse-snatching, etc.) at a 30 percent higher rate than whites. Persons earning less than $15,000 per year are burdened with a 55 percent greater rate of victimization that those earning more than that amount. With such disparities, transportation practitioners should assess—quantitatively and through community involvement processes—whether their O&M expenditures adequately and effectively address safety considerations in *all* communities.

Evaluating and analyzing patterns of underinvestment in maintenance-related activities requires both a method of assessing the quality of facilities and their location relative to low-income and minority populations. In this regard, Geographic Information Systems (GIS) can play an important role. By integrating information from a variety of sources—those entities dealing with physical infrastructure and those responsible for crime and safety on transit systems and surrounding communities—and mapping this information relative to the transit system, planning and operating agencies can begin to assess the burdens or consequences of poor maintenance on low-income and minority populations.

While the condition and maintenance of transit and roadway infrastructure is an important element of environmental justice, the ***delivery of services*** is of fundamental importance, especially to transit dependent populations. Service equity must be evaluated using both condition and performance measures of the highway and transit systems in question. Such measures as age and condition of equipment, crowding, headways, peak and off-peak service frequency and the equity of planned investments in future services all characterize the level of services provided by transportation systems. Indirect measures of service delivery should also be considered. These include access to transit as measured by the distances patrons must walk to get to stations and bus stops, the location of transit-related amenities such as shelters and seating capacity in waiting areas, and in-vehicle conditions affecting service quality such as seating/standee ratios, boarding and alighting capacity and equitable vehicle assignments to routes throughout the system. Service equity is a key topic when reviewing and verifying compliance with Title VI during certification reviews of state and metropolitan planning processes.

O&M expenditures are an integral element of an overall strategy for creating desirable places and an improved quality-of-life. Maintaining high and consistent standards in the operations and maintenance phase are an important ingredient in the shaping of community perspectives about the livability of a local environment as well as about values of the society. The delivery of fair and equitable transportation systems and services is a core principle of environmental justice and an achievable goal during operations and maintenance.

Operations and Maintenance

USING GEOGRAPHIC INFORMATION SYSTEMS FOR MAPPING CRIME AND SERVICE LEVELS

Federal Transit Administration

Effective Practices:

- Linking crime and other service characteristics to a spatial representation of the system.
- Organizing resources to address disproportionate occurrences of safety and service-related activity.
- Benchmarking and monitoring performance of crime prevention measures.

Participants:

- Federal Transit Administration
- Transit Cooperative Research Program (TCRP)

Description

Geographic Information Systems (GIS) can play a valuable role as a problem-solving tool for transportation agencies that closely monitor performance. GIS can make vivid use of data records compiled by agencies by clarifying the locational patterns of customer complaints, accidents, inadequate facilities, crime incidence and many other performance measures. GIS is being integrated effectively into the operations and activities of transit and transportation agencies, police departments, city governments, community-based organizations and advocacy groups to understand these spatial patterns and devise long-term and short-term strategies to address them.

Recent guidelines reported under the TCRP research program describe alternative methods and illustrate examples of "best practices" for transit agencies to present and analyze crime data and statistics. In combination with revised reporting categories and procedures for National Transit Database (NTD) annual reports (using Safety and Security Form 205), transit agencies can move beyond reporting just crimes for which an arrest has been made (the old system) and track indicators that reflect early warning signs (e.g., signs of disorder suggested in vandalism and public drunkenness) that influence perceptions of fear and are often a precursor to more serious criminal activity.

Transit police/security managers use data for a number of purposes including tactical crime analysis (specific and immediate needs), strategic analysis (long-term crime trends), and administrative activities (presenting accomplishments to outside agencies and the public). The new FTA guidelines offer ways of developing and mapping data that track criminal activity and gauge the potential of future activity – often before it actually happens. Data is available to monitor specific categories such as:

- **Standard of Conduct Crimes**—Minor crimes that degrade the overall quality of the transit service, interfere with the passengers using the system, and limit the ability to provide passengers with an inviting environment.
- **Property Crimes**—Property crimes include burglary and larceny (which includes pickpocketing, purse snatching, and thefts from motor vehicles), motor vehicle theft and fare evasion.
- **Violent Crimes**—Violent crimes include homicide, robbery, assault, and rape. Although they are relatively infrequent, these offenses require extensive time and resources from police/security.

Each of these activities are categorized not only by type, but by location. Locations can include:

- In-vehicle (both with respect to operators and passengers)
- Station platforms
- Other transit property
- In proximity to transit facilities.

Mapping data can greatly advance a transit agency and community's ability to attack the problems and perceptions of a place or service. Mapping can foster communications and problem-solving by multi-disciplinary and inter-agency teams of individuals (e.g., city and transit police, transit and municipal planners, municipal officials and neighborhood leaders). Together or individually, the GIS analyst can analyze the frequency and spatial patterns of various forms of criminal activity, look for early warning signs indicating the need for a greater commitment of resources as well as identify high-crime locations.

By overlaying such information on other maps describing low-income populations or census information indicating the distribution of minority groups, relationships between transit-oriented crime and its incidence in specific communities can be determined. These patterns can also be reviewed against condition assessments, station investment levels, operational resource commitments and the success of various crime prevention strategies. In combination with other measures that help benchmark crime reporting such as measures of service calls, incident analysis, dispatch response, and "call handling time", GIS mapping can help develop effective strategies that target areas for crime prevention measures.

Benefits

For the Agencies:

- Ability to spot patterns of criminal and anti-social activity in time to take positive preventive action.
- Mechanism to communicate problems and potential "hot spots" internally and to policy-makers.
- Feedback tool to test the effectiveness of a variety of crime prevention strategies.
- Possibility to create a better "perception" of safety as well as to deliver safer transit experiences.

For the Community:

- More responsiveness from transit policing agencies.
- Better personal security on transit facilities.
- Improved perception of area may yield better conditions for private investment and retention of residents and business.

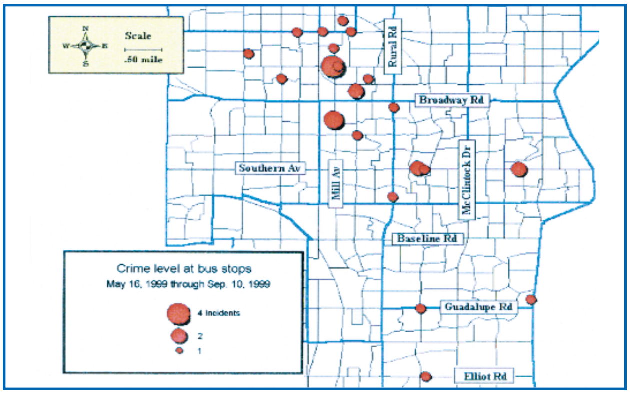
Lessons Learned

Uniform collection of crime data is an important first step toward addressing both serious criminal acts and disorderly conduct activity that detract from an area's perceived livability. Increasingly, communities want opportunities to independently review data and work with police and transit agencies to improve policing strategies and explore solutions. We are learning that:

- Data can be effectively used to focus on areas in need of concentrated enforcement activity. These areas need not only policing resources, but also crime prevention through design solutions that create objectively safer environments.
- Mapping and reporting of crime data, when used in a collaborative problem-solving framework, can foster effective crime reduction strategies and practices.

Contacts/Resources

Guidelines for Collecting, Analyzing, and Reporting Transit Crime Data, Transit Cooperative Research Program, sponsored by the Federal Transit Administration, Research Results Digest, January 2001— Number 41. Website: http://www4.national-academies.org/trb/crp.nsf



Operations and Maintenance

IMPROVING PERCEPTION OF SECURITY THROUGH GRAFFITI MANAGEMENT PROGRAMS

New York City Transit Authority

Effective Practices:

- Applying Situational Crime Prevention (SCP) principles to improve transit security.
- Aggressively addressing quality-of-life violations that signal neighborhood decline.

Participants:

- Metropolitan Transit Authority—New York City Transit Authority
- New York City Transit Police (now merged with New York City Police Department)

Description

The New York City subway system was plagued by graffiti, among other signs of disorder, for many years. Managers had succumbed to the widespread belief that nothing could be done about graffiti. But today, New York City subways are among the cleanest in the world, thanks to the Clean Car Program initiated in 1984 by New York City Transit (NYCTA).

NYCTA adopted several basic principles of Situational Crime Prevention (SCP) to accomplish this herculean task. SCP uses design solutions and integrates them with management policy and legal/prosecution tactics to address problematic physical conditions, modify existing operating procedures, and devise specific strategies to prevent a particular crime in a particular situation. In transit security, SCP focuses on the reduction of opportunities and the removal of "negative space". Opportunity refers to the physical or situational components of the context of the crime, rather than the motivation of the offender. Negative space refers to those spaces that might inherently promote illegal or illegitimate activity (e.g., isolated areas). This framework relies on a standard research and action methodology consisting of five sequential stages:

- Collecting data relevant to the specific crime problem.
- Analyzing the specific situational conditions that facilitate such criminal activity.
- Analyzing the costs and benefits of various methods of deterring such criminal activity.
- Implementing the most promising countermeasure.
- Monitoring and evaluating the results of the particular implementation plan.

NYCTA arrived at a successful multi-disciplinary, cross-agency, problem solving approach that virtually eliminated graffiti. The idea was straightforward: once a train was entered into the program and cleaned, it would never again be used while graffiti was on it and graffiti "artists" would never see their "tags"—their gang-related or graffiti-related nicknames—on clean trains again. Graffiti might appear on cars that were not yet part of program, but not on clean cars. Initially, trains were pulled out of service, cleaned, and entered into the Clean Car Program. Any further graffiti was removed from cars within two hours. Otherwise, the car was taken out of service until it could be cleaned. Transit police were assigned to ride full time on the first clean trains and to protect clean trains in special yards.

An immediate and steadfast commitment to graffiti eradication enabled NYCTA to “deny benefits” to graffiti-artists by eliminating the core rationale for their behavior—the desire for their works to be seen and circulated in public. Through the rapid removal program for graffiti and repair of vandalism, NYCTA was able to send a message to both “graffiti-artists” and the riding public about their resolve to vigilantly wipe out the graffiti problem. For their part, working in tandem with operations, transit police sought to root out offenders through intensive debriefings, confidential informants, computer tracking, and a dedication to surveillance activities. The police and various District Attorney offices also established special arrest and prosecution programs to target graffitists who hit clean trains. This included the pursuit of stiffer sentences involving jail time for what some might have formerly argued were “victimless crimes”.

Benefits

For the Agencies:

- Reduction in perception of danger resulted in wider acceptance of transit as a safe alternative mode, which has led, over time, to higher ridership and overall patronage.
- Successful implementation created an environment in which additional safety, crime prevention and station/vehicle enhancements could occur.

For the Community:

- Improved “perception of safety” due to noticeably cleaner, graffiti-free cars.
- Transformed transit station areas from “targets” for crime to “havens” for security in the communities they served.

Lessons Learned

Actual crime levels and patron *perceptions* of crime and safety deeply affect community’s struggling to enhance their livability and attract investments for a sustainable future for its residents and businesses. Transit agencies struggle daily with the problem of *patron fear* and the discomfort that fear of crime creates for communities, riders and employees. *Signs of disorder* such as graffiti, drunkenness, and vandalism feed this fear. NYCTA ‘s anti-graffiti program recognizes that people pick up important cues from their immediate environment about what society will tolerate as an appropriate standard of conduct. The failure to address signs of disorder sends a powerful and unsettling message that disorder may be tolerated.

- Pay attention to early warning signs and order maintenance. Do not ignore quality-of-life violations, as they can be pre-crime indicators. Establishing consistently high and uniform standards and benchmarking performance can yield significant results.
- Seemingly intractable problems can be addressed with an *absolute and dedicated commitment* of agency resources. Small successes can yield significant gains in community perceptions about the transit system and transit station stop.
- Interdepartmental coordination (policing, reporting, maintenance) is needed to amass the diverse resources and create the synergies to truly change public perceptions and behavior.

Contacts/Resources

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Transit Security Handbook, Prepared for the: Volpe National Transportation Systems Center.

Operations and Maintenance

STATE OF THE BUSES – MONITORING TRANSIT SERVICE PERFORMANCE WITH ANNUAL REPORT CARD

Citizens Planning and Housing Association of Metropolitan Baltimore

Effective Practices:

- Using an annual report card to measure, monitor and publicize the quality of transit service.
- Deploying performance measures and annual reporting to bring greater attention to the concerns of transit riders.

Participants:

- Citizens Planning and Housing Association
- Mass Transit Administration
- Open Society Institute

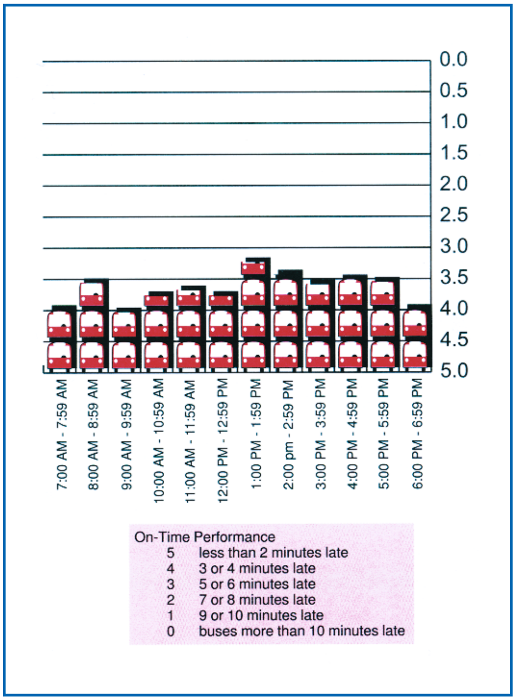
Description

The 60-year-old, Baltimore-based civic organization, the Citizens Planning and Housing Association (CPHA) created an annual *State of the Buses* Report Card to measure the quality of transit service, monitor performance over time, and win better service for riders and communities by bringing greater attention to transit service issues. Inspired by the highly visible New York Public Interest Research Group's (NYPIRG) Straphangers Campaign report cards of New York City transit operations, *State of the Subway* and *State of the Buses*, CPHA released its inaugural report card in the fall of 1999.

The first report card examined 13 topics from the perspective of the customer including: "on-time" performance; seating availability; bus and bus stop cleanliness; wheelchair accessibility; seating and shelter at bus stops; the condition of windows and seats; air conditioning; the adequacy of schedules and maps; route markings on buses; and the helpfulness of drivers in calling out stops. The selected indicators were culled from a list of more than 30 potential indicators identified in the early planning stages of the project after review of transit service quality literature; indicators were discarded that were not sufficiently fact-based or defensibly objective. For example, the organization chose not to measure driver attitudes towards passengers because perceptions might vary from observer to observer. Resource limitations were a factor in keeping the list to a manageable number of standards.

Before finalizing its study approach, the CPHA met with the Mass Transit Administration (MTA), the state agency that operates the bus system in the Baltimore metropolitan region, to review the proposed indicators and rating criteria. After discussions, several indicators were changed to better reflect MTA's service standards and operating procedures. For example, the CPHA actually made more stringent its "on-time" performance standard after it learned of MTA's performance goals. Allowing the agency to review the study plan fostered more cooperation and goodwill between the two organizations and added to the report card's relevance and credibility. Before releasing findings, the CPHA also gave the MTA an opportunity to review and comment on study findings.

Methodology. Observations were conducted along the 45 bus routes that carried the most daily ridership in the core service area of Baltimore City, Baltimore County and Anne Arundel County. Over the course of one month, five trained observers—each of whom had received a 3-day training, part of which was conducted by MTA—were dispatched weekdays between 7AM and



7PM to observe the quality of bus service. Observation times and locations were determined by a random sample of current published bus timetables. Sample observations on a given route were generally weighted in accordance with the amount of service on each route. Thus, AM and PM peak periods each received approximately 40 percent of the observations with the other 20 percent conducted midday.

Before boarding, visual surveys were made of each bus stop as well as the exterior condition of the arriving bus. Once aboard, the observer made their observations of the interior, sat toward the rear of the bus, listened for driver announcements, and recorded overall findings. During the study period, more than 650 observations of bus service were made. Nearly a dozen volunteers made spot checks of the trained observers for quality control purposes.

Scoring. Each indicator was assessed a point value, which was then divided by the number of total possible points. An academic-style letter grade, with "A" indicating excellent and "F" indicating failing, was then given based on the numerical grade. The report card discussed each indicator and rating and gave recommendations for improvement. Scores for individual bus routes were presented in a matrix listing of all indicators. The final report was prepared brochure-style and distributed to the public and the media.

Funding. The total cost of the initial survey and report was estimated at $12,000 for a 3-month effort. Funding was provided in part by a grant from the Soros Foundation's Open Society Institute. Professional staffing was supplemented with 10 high-school observers. The City of Baltimore made available high-school youth for the project who were enlisted in a summer jobs program. The MTA donated bus passes for the observers.

Timing of Report. The *State of the Buses* reports are intended to bring more attention to issues faced by transit riders and create the political conditions for funding transit improvements. The 1999 report card was issued before passage of farebox recovery legislation favored by transit advocates, environmentalists, workforce development organizations and others. The 2000 report card was released in advance of the Maryland Governor's $500 million, six-year transit initiative that included measures to reduce transit fares, add more bus service, restore subway service on Sundays, and provide a 3-year "farebox recovery" exemption to build ridership on new services. The 2001 report card kicks off a campaign to target and improve the condition of bus stops and bus shelters.

CPHA recognized that it takes more than studies to change transit policy in the region. In Spring 1999, the CPHA formed the Transit Riders League of Metropolitan Baltimore, a grassroots-level organization, whose goals include building and mobilizing a committed membership base to advocate for service quality improvements and the needs of the riders of public transportation.

Benefits

For the Agencies:

- Independently funded and conducted research can be a credible means for gauging customer satisfaction as well as bringing more attention to the need for transit service improvements and additional resources.
- Collaboration with a responsible community-based organization can leverage the agency's limited resources without a significant expenditure of public funds.

For the Community:

- Objective, rider-oriented analysis of transit services followed by constructive recommendations for improvements allow the concerns of the average citizen to be voiced to the agency in an accessible format.
- Publicizing the conditions and needs of public transit created more favorable conditions among voters and public officials to make improvements.

Lessons Learned

The transit service agency and the transit advocacy organization generally share a common goal: the delivery of high quality transit service. But the two organizations may differ about the means–the priorities, strategies or timing for accomplishing this goal. This is to be expected; they do not share the same mission statement or place at the table in the decision-making process.

Preparing an independent report card about agency performance may be perceived as a threat or challenge to the transit service provider. An overly defensive posture on the part of an agency can impede a real opportunity to better understand customer needs, find common ground and leverage agency resources with dedicated partners. The transit advocacy organization, seeking to influence transportation policy, faces the real challenge of debating and defining strategies and tactics appropriate to the political moment. The board, staff or membership may differ on the degree to which the organization should adopt a strategy of cooperation or confrontation. Inevitably, there are some tactics that may not be warmly welcomed by the transit agency.

In this case, the CPHA and the MTA were able to work cooperatively. Both sides worked to strategize how the results would be used once compiled. Their cooperation helped advance the shared goal of long-term improvements for transit services. CPHA used the study process to forge a stronger relationship between the MTA and the community in transportation policy.

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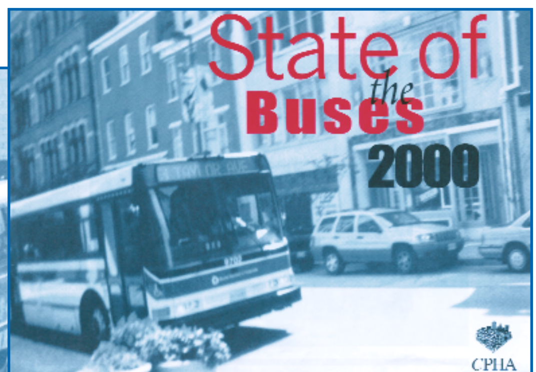

Operations and Maintenance

TRAFFIC CALMING DESIGNS TO CREATE MINI-NEIGHBORHOODS, PREVENT CRIME AND RESTORE COMMUNITY LIVABILITY

City of Dayton, Ohio

Effective Practices:

- Employing traffic calming and crime prevention principles to create livable communities.
- Involving residents in defining workable design solutions appropriate to the community.
- Leveraging Community Development Block Grant funds to address neighborhood issues including transportation solutions.

Participants:

- City of Dayton, Ohio
- The Five Oaks Community Neighborhood Association

Description

Five Oaks is an older urban core area a few miles north of downtown Dayton, Ohio. As the Dayton metropolitan region expanded through suburbanization, the social composition of the Five Oaks neighborhood evolved from being white, working- and middle-class homeowners to a racially-mixed, predominantly rental community. Located between the suburbs and the downtown, the interior streets of Five Oaks were beset with through-traffic, as commuters diverted from traffic-saturated arterials along the periphery of the community. The community's livability and attractiveness for quiet homeownership, available in more distant suburbs, was compromised.

As this transition took place, housing prices were too low to pay off mortgages. Without an incentive to maintain and invest in their property, many homeowners moved away. The single-family housing stock was often converted, sometimes illegally and inadequately, into rental units. The number of absentee landlords grew; the condition of the housing stock deteriorated. Nearly half of the remaining owner-occupied dwellings poured onto the market. Homes were sold at "fire sale" prices – mere fractions of their replacement costs. Slumlords, failing to properly manage and maintain the rental stock, "milked" their properties and dragged the community past the "tipping point". Adjacent homeowners had little reason to maintain their dwellings and were seemingly helpless, alongside city officials, to stop a rising tide of violent crime, illicit activities and physical blight. The area became the province of gangs, drug dealers, pimps and prostitutes, forcing residents and children into their homes and off the street.

The City of Dayton was desperate to find an approach appropriate to the scale of the problem to counteract the area's decline. Its solution, the *Defensible Space Plan (DSP)*, dramatically altered the street layout of Five Oaks to create a series of *mini-neighborhoods. Defensible space* is established by marshaling urban design elements to foster community residents' sense of ownership and control over contested territory. In this case, the Five Oaks neighborhood was encouraged to devise a street closure plan that would eliminate through-traffic and, by limiting vehicular access, enhance residents' perception of control over their neighborhood.

The DSP, while initially controversial, eventually became a highly successful grassroots effort. Meetings were held to educate and build support within the city staff and community about the principles, strategies and tactics of

defensible space. Once the principles were outlined, community residents attending design workshops were invited to draw out appropriate neighborhood boundaries and street closures and participate actively in the planning of their community's future.

Ultimately, the City of Dayton created 10 *mini-neighborhoods*—generally 3 to 6 streets grouped together by the strategic placement of gates to form cul-de-sacs. In total, 35 streets and 25 alleys were closed; distinctive stripes of paving stones, and portal markers were installed to clearly demarcate entranceways and reinforce perceptions of the territory as "private." The cost of the project was inexpensive by street construction standards—$693,000 total or about $10,000 per street – and funding by the City of Dayton came predominately through the U.S. Housing and Urban Development, Community Development Block Grant Program.

Street closures placed severe limitations on vehicular access. It created new challenges for local drivers and the delivery of select municipal services (e.g., snow plowing, fire and emergency services), but the net benefits for Five Oaks residents were far greater. The DSP exerted *natural access control* by limiting motor vehicle access to a single entrance or portal. Would-be criminals were faced with the prospect of retracing their steps to exit. Funneling access through a gauntlet in this way facilitates *natural surveillance*—the risk of being observed by watchful residents and getting caught if engaged in criminal conduct. By carving out short cul-de-sacs from long through streets, the Five Oaks neighborhood enjoyed a significant reduction in traffic. The improvements fostered increased community ties and easier recognition of strangers—a key accomplishment for bringing the community under the control of its residents. Residents noticed both a reduction in through traffic and a limited drop in drug trafficking. Overall, the DSP brought increased safety, higher property values and greater community cohesion among local residents.

Benefits

For the Agencies:

- Five Oaks' traffic volume plummeted 67 percent and car accidents dropped by 40 percent according to a city study conducted within a year of implementation.
- The police reported that overall crime had dropped 26 percent, violent crime was down 50 percent, and other serious crimes had dropped to their lowest level in 5 years. Crime and traffic were not displaced to nearby neighborhoods as initially feared. More recent data from the police affirm the lasting gains in crime reduction.
- Five Oaks housing values increased 15 percent in the first year, compared to just a 4 percent regional increase.

For the Community:

- The University of Dayton's Social Science Research Center surveyed 191 residents and found that the DSP fostered community cohesiveness:
- 39 percent of residents said they knew their neighbors better than before the improvements.
- 24 percent found it easier to recognize strangers.
- 36 percent reported more involvement in community activities via block groups, neighborhood watches and civic groups.

Lessons Learned

Oscar Newman, an esteemed urban planner who has promoted defensive space principles for more than 30 years, was an active strategist and participant in the Five Oaks project. Writing about his experience, he offers several valuable lessons suggesting the DSP is but one dramatic action among several needed community-building measures:

Allow Residents to Create Their Own Mini-Neighborhoods. It is critical that residents from every street be involved in the process of defining boundaries and street closings. In the Five Oaks community, residents actively participated in numerous public meetings and were thus able to personally shape the new geography. This process helped forge physical communities where residents knew each other and a sense of stability and community cohesion could be established. Other cities efforts to block off streets, without citizen input, have generally been unsuccessful.

Ensure a Threshold Level of Homeownership. Greater ties to a community are often created through homeownership. A successful neighborhood DSP benefits from individuals who are committed to an area; renters often do not stay in a community long enough to build these ties. Newman estimated that *at least* 40 percent resident homeowners were required, but conceded that the number may be lower where there is a tradition of long-term renters. Such groups inject stability and cohesion into the local neighborhoods. Programs to encourage and educate first time homeowners are important allied measures.

Need for High Quality Schools. If a neighborhood hopes to attract and maintain working and middle class families it must have access to good schools. The Five Oaks community residents believed that the community benefited from its central location near 3 parochial schools. Other communities, without parochial schools, have worked to create magnet schools of high quality or participated actively in improving local public schools.

Implement Stringent Code Enforcement Procedures. *Code teams* can bring building inspectors together with the police or fire marshall to implement an enforcement regime that warns that code violations are arrestable offenses and that immediate court appearances are within the City's authority. This more aggressive approach brings quicker compliance and investments to remedy physical signs of neglect and abandonment that are bringing the community down.

Coordinate Police Activities with Target Areas. Maintaining a continual police liaison with the community and active participation in community planning meetings are key steps that the police must take to build trust and neighborhood-wide support. This trust is essential if community residents are to overcome their fears and act in a united fashion to report signs of criminal activity.

Challenges Ahead

The current challenge facing the residents of Five Oaks is providing a sustainable funding source for the repair and maintenance of the neighborhood gates. Vandals cut gate bars, damage exterior structures with their vehicles and break gate locks. The initial capital funding source for the gates was the CDBG program, but it paid only for the installation of the barriers and gates. The City must now set aside annual operations and maintenance funding to properly maintain its investment. Other communities have used self-sustaining *special assessment districts* to initially fund and maintain improvements.

Contacts/Resources

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To learn more about the Five Oaks Community Project and defensible space principles:
http://www.nhi.org/online/issues/93/defense.html and
http://www.huduser.org/publications/pdf/def.pdf

To learn more about Traffic Calming measures:
http://wwwcf.fhwa.dot.gov/environment/tcalm/index.htm

Five Oaks demonstrates that once people come together within their own mini-neighborhood, they reach out to other neighborhoods and to the larger urban community. In other cities, mini-neighborhood plans have not only arrested decline; they have made people realize they could be effective in intervening to change things.

-Oscar Newman, "Defensible Space",
Shelterforce Online, May/June 1997.

Operations and Maintenance

BUILDING SUSTAINABLE COMMUNITIES THROUGH DEDICATED REVENUES FOR REINVESTMENT

Orange Blossom Trail Development Board

Effective Practices:

- Establishing improvement districts for sustainable neighborhoods.
- Committing to Crime Prevention Through Environmental Design (CPTED) principles.
- Forging community and industry partnerships.

Participants:

- Florida Department of Transportation
- Orange County Government
- Orange Blossom Trail Development Board
- Trail Business Association
- Utility companies, construction engineers and several other parties engaged in the redevelopment of the Orange Blossom Trail

Description

The idea for an Orange Blossom Trail Development Board (OBTDB) was born out of "OBT Task Force" meetings in 1984. The task force was formed through a local citizen's group to address troubling issues facing the area. With the Greater Orlando Chamber of Commerce's backing, the "OBT Task Force" organized and met regularly, discussing such corridor area problems as high crime, prostitution, drug activities, and a general decline in the physical condition of the area.

The OBTDB was incorporated in January 1985 for the purpose of planning and implementing projects to revitalize the Orange Blossom Trail (OBT). The OBTDB was established with an Interlocal Agreement between Orange County and the City of Orlando detailing its purpose, representation, funding, and liability. The OBTDB is accountable to the Board of Orange County Commissioners and the Orlando City Council. It operates as a non-profit Florida Corporation and is considered a "quasi-governmental" agency.

The Orange County Commission initially created two Municipal Services Taxing Unit (MSTU) Districts to fund beautification improvements to the Orange Blossom Trail area. The MSTUs tax commercial and industrial property owners who front the Orange Blossom Trail as well as other non-residential properties in the district. The Board also administers the Orange County Community Redevelopment Agency (CRA) Projects that are funded by ad valorem taxes on new or expanded developments in the area.

The physical transformation of the Orange Blossom Trail, including its expansion from 4 lanes to 7 lanes, took 3 years and was completed by the spring of 1998. The OBT improvement program is far more than simply a roadway capacity expansion project; several project elements are intended to revitalize and enhance the OBT. The streetscape has been markedly improved, utility poles and overhead wires have been nearly eliminated, and streetscaping and landscaping of public areas (including an on-going maintenance program managed by the OBTDB) is in place. Projects developed with the CRA are designed to aid in redevelopment efforts and include housing, landscaping, parks, crime prevention and infrastructure improvements. The Board also administers the Safe Neighborhood Program and works with local law enforcement and the community to find workable solutions to crime problems.

In addition, the OBTDB is the managing partner of the OBT Swing and Serve Program. The program is geared toward offering formal after-school activities such as tennis, soccer and tutoring programs for at-risk youth. Finally, the OBTDB is the managing partner in the OBT Safe Neighborhood Program which is funded by revenue collected from those committing crimes, as part of Orange County's Crime Prevention Trust Fund. The Board works in conjunction with the OBT Safe Neighborhood Advisory Council in allocating crime prevention dollars to help combat crime and reduce the negative impacts of crime in the neighborhood.

Benefits

For the Agencies:

- For Florida DOT, the project provided the kind of community support and local "champion" needed to assure that the $50 million investment in highway improvements would generate meaningful, long-term benefits to the community.
- For Orange County (which contributed $6 million) and the City of Orlando (which, through its utilities commission contributed $7.7 million), the establishment of the OBTDB assured local oversight, accountability, and community-based direct action with established institutions.
- For the OBTDB, earmarked MSTU funding contributes $7.5 million as well as financial sustainability, stable management and the resources to implement corridor-wide and community-based programs and enhancement projects sought by local residents and businesses.

For the Community:

- Needs articulated through the initial meetings of the Task Force such as crime prevention, neighborhood revitalization and employment opportunity development were addressed by a community-based organization capable of leveraging infrastructure investments.
- Through the OBTDB, the corridor's image was transformed from a run-down neighborhood with significant social problems to a thriving, business and family-oriented center with the resources to maintain and advance community-based initiatives.
- Other businesses (including BellSouth Telecommunications, Florida Power Corporation, Martin Marietta Information Systems, Orange County Public Utilities, People's Gas Company (now TECO) and Time Warner Cable) have been tapped to provide more than $6 million to underground utilities. There is no motivation for the companies, they are just giving back to the community.

Lessons Learned

The success of the on-going OBT program offers several valuable lessons:

- Transportation investments, coupled with private sources and broad-based enhancement funding, can be a catalyst for achieving multiple objectives.
- Transportation investments can stabilize and improve property values and economic activity that can, in turn, provide the financial basis for delivering long-term benefits to a neighborhood.
- Principles of CPTED and partnerships involving both businesses and residents can transform neighborhoods.

Contacts/Resources

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Operations and Maintenance

USING TRAILER REFRIGERATION TECHNOLOGY TO REDUCE VEHICLE EMISSIONS

Clean Air Communities

Effective Practices:

- Using innovative electrification technologies to reduce air emissions in low-income and minority communities.
- Exploring the new public-private partnership provisions of the Congestion Mitigation Air Quality (CMAQ) program, a FHWA/FTA funding program, to leverage investments including for clean-air technologies.

Participants:

Clean Air Communities (CAC) is a new, nonprofit enterprise dedicated to the implementation of air pollution emissions reduction strategies in low-income communities and neighborhoods disproportionately affected by air pollution. CAC is a collaborative effort among the following organizations:

- Consolidated Edison
- Natural Resources Defense Council
- New York State Department of Environmental Conservation
- Northeast States Clean Air Foundation/Northeast States for Coordinated Air Use Management

The Hunts Point Market project includes:

- Sustainable South Bronx
- New York Power Authority
- IdleAire Technologies Corporation

Description

Clean Air Communities (CAC) is funding the installation of an innovative refrigerated truck trailer electrification technology at New York City's Hunts Point Cooperative Market. Located in the predominantly minority South Bronx, Hunts Point Market is the world's largest wholesale food distribution center. Initially, the Truck Stop Electrification (TSE) project will include equipment capable of accommodating 32 trucks on a 24-hour per day basis. At full operation, the 32-bay project is expected to achieve significant health, environmental and economic benefits by eliminating the idling of diesel engines parked at the market. The project will reduce over 15 tons of nitrogen oxides, 2,000 tons of carbon dioxide and almost one ton of toxic particulate matter emissions annually.

The Hunts Point project is a collaborative effort drawing assistance from several private and public partners. Over its planned 15 year lifetime, the entire project is expected to cost almost $1 million dollars, a sum which includes the purchase, design, installation and operating cost of the IdleAire electrification technology. Of this amount, $450,000 has been provided by the New York Power Authority with additional funds coming from CAC and other sources. Notably, the project also leverages $25,000 in Congestion Mitigation Air Quality (CMAQ) funds.

Since its inception under the Intermodal Surface Transportation Act of 1991 (ISTEA), the CMAQ Program has served as an important incubator for locally-initiated, innovative approaches to the delivery of transportation systems, services and technologies that address air quality and congestion. With passage of the Transportation Equity Act of the 21st Century, the CMAQ program's purpose is reaffirmed and further encouraged to explore the potential of public-private

partnerships to advance a greater number of innovative clean-air transportation initiatives. However, as with every CMAQ project, each public-private partnership proposal must survive a competitive process. Each project submitted is ranked using a cost-effectiveness test focused on emissions reduction benefits per dollar spent. Typically, projects are funded that provide more "bang for the buck" in terms of emissions reduction benefits.

On the west coast, the Riverside County Transportation Commission, with participation from Southern California Edison and Costco Wholesale, is considering whether to authorize CMAQ funds for a similar project at Costco's Mira Loma Warehouse and Distribution Center in Riverside, California. Project proponents are attempting to obtain CMAQ funds to write down some of the capital expenses, currently estimated at around $100,000.

Both Hunts Point Market and the proposed Costco Project recognize that pooling public and private resources can speed the application of clean air technology to areas where truck terminal and distribution facilities are sited–often co-located in proximity to low-income and minority neighborhoods. While the Costco project has not yet formally obtained CMAQ funding, both projects are examples of how partnerships can be structured to leverage resources such as CMAQ, to address the concerns of low-income and minority communities.

Benefits

For the Agencies:

- CMAQ and other community-based funding sources can leverage non-agency resources to meet health and air quality concerns of urban communities and deliver desired air quality emission benefits.
- Public-private partnerships can speed adoption of desired clean-air technologies and congestion mitigation improvements to "hot spot" areas.

For the Community:

- Improved air quality for the residents of the area.
- Innovative technology deployment may spur other investment and create new jobs in the community.
- Public-private partnerships can be a means for building sustainable communities and strengthening local institutions.

Lessons Learned

The subject projects offer some lessons learned:

- CMAQ's new public-private partnerships can be used by non-profit as well as "for-profit" entities to leverage needed investments. In addition to demonstrating emissions reduction benefits, CMAQ guidelines require that such partnerships have a legal, written agreement in place that defines the terms and conditions of asset disposition in the event of ownership changes and bankruptcy among other issues.
- The model in terms of operational costs, cost-sharing, funding, and legal instruments for delivering anti-idling electrification technologies has been established and may be "ripe" for proliferation in communities that are ready.

Contacts/Resources

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For more information about CAC:
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"…CMAQ funded projects should be for the good of the general public. Public-private partnerships may be eligible, however, so long as a public good (i.e., reduced emissions) results from the project."

—from FHWA's CMAQ Program Guidance, February 2000.

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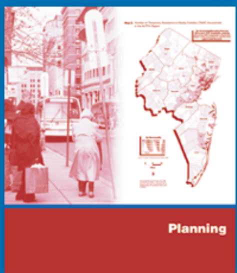
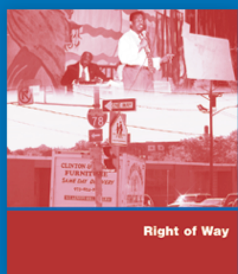
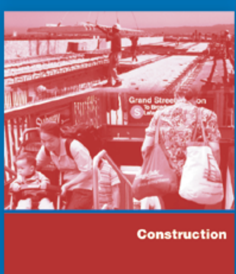
"No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

– Title VI of the Civil Rights Act of 1964







"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations."

– Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994

The FHWA and FTA maintain a web site devoted to Environmental Justice. The web site contains this effective practices booklet and other technical assistance information on legislation and guidance, case studies, resources, publications, and DOT contacts. To visit this web site: www.fhwa.dot.gov/environment/ej2.htm

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