

The Region

VOLUME 48 2009

Annual Review of
Transportation Issues
in the Washington
Metropolitan Region

Rearview VISION

Looking Back at 10 YEARS since
Approval of the TPB VISION



The Region 2009 | Rearview Vision

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

What is the TPB?

Transportation planning at the regional level is coordinated in the Washington area by the National Capital Region Transportation Planning Board (TPB). The TPB is staffed by the Department of Transportation Planning of the Metropolitan Washington Council of Governments (COG).

Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia, and the District of Columbia, local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies.

The TPB was created in 1965 by local and state governments in the Washington region to respond to a requirement of 1962 highway legislation for establishment of official Metropolitan Planning Organizations (MPOs). The TPB became associated with the Metropolitan Washington Council of Governments in 1966, serving as COG's transportation policy committee. In consultation with its technical committee, the TPB is responsible for directing the continuing transportation planning process carried on cooperatively by the states and local communities in the region.

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The Vision recognized that issues like congestion, growth and air quality do not confine themselves to the boundaries of local or state jurisdictions. Therefore we needed to tackle these problems from a regional perspective.

Finding Common Purpose in Our Diverse Region

By Phil Mendelson, 2008 TPB Chair

The Washington region is a magnificent composition of different traditions, life-styles and physical environments. We are a diverse region, and that diversity makes us strong. As local leaders, we know that celebrating our local strengths and making our individual communities more attractive will make our region more attractive as a whole.

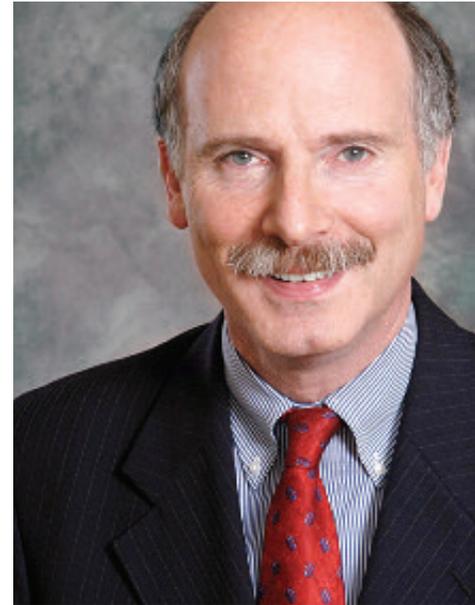
Diversity is also a strength in our metropolitan transportation system. We are served by a variety of options for getting around, including an extensive road network, a world-class transit system, plenty of opportunities for walking and bicycling, and specialized services for disadvantaged individuals and communities. All these options reduce our reliance on driving.

Of course, too much transportation diversity without coordination would not be a good thing. In 1998, the Transportation Planning Board adopted a regional policy framework, the Vision, to guide our transportation investments into the 21st Century. The Vision recognized that issues like congestion, growth and air quality do not confine themselves to the boundaries of local or state jurisdictions. Therefore we needed to tackle these problems from a regional perspective.

Ten years later, the new century is well underway and this edition of *The Region* takes a look back at what we've accomplished and what we still need to do. We can be proud of a number of achievements in developing and maintaining a multi-modal transportation system, protecting the environment, ensuring accessibility for disadvantaged populations and other challenges. But, plenty of challenges remain, especially to address the continuing funding shortfall, persistent congestion and incident management.

As a D.C. Councilmember, I have been a member of the TPB for the past ten years, and I have been honored to serve as its chairman three times—in 2002, 2005 and 2008. During these years, I have witnessed a growing sense of common purpose and a willingness to collaborate across both sides of the Potomac.

In the coming decade, regional cooperation will become more essential as the challenges are likely to become even greater. I feel confident that we are up to the task. As a metropolitan planning organization, I believe the TPB has built a solid reputation for problem-solving and cooperation. I look forward to enhancing that role in the future, as we face the challenge of addressing key transportation priorities to create a region that is both sustainable and economically strong.





“Without a master plan, our debates have no context, and they have no framework.”

Rearview VISION

Ten years ago, the Transportation Planning Board came to unanimous agreement on the Vision, a long-range transportation policy framework for the Washington region. The Vision contains a set of goals and objectives that have influenced nearly all the activities of the TPB. More broadly, the core values of the Vision are woven into transportation planning activities at many levels throughout the region.

The TPB approved the Vision in October 1998 following a public involvement process that lasted three years, beginning with the “Getting There” outreach campaign, in which more than 2,200 ideas were collected from all parts of the region. This broad outreach was followed by a more intensive consultation process through weekly task force meetings, which engaged more than 130 individuals and groups. While there were real differences among participants, there were also significant areas of agreement. The TPB built upon these common themes in developing the final Vision document.

When the Vision planning process was launched in 1995, TPB Chairman Stephen Del Giudice spoke of the need for a policy document that would guide the region’s transportation investments into the 21st Century. “Without a master plan, our debates have no context, and they have no framework,” said Del Giudice. “There is nothing to measure individual projects against. Discord and chaos are natural consequences of the absence of a master plan. We owe it to ourselves to move beyond that.”

Ten years later, how has the region measured up in achieving the goals of the Vision? This edition of the Region is designed to evaluate our progress, consider our unfinished business and highlight new issues that have emerged since the Vision was approved.

STAN PUSTYLNIK

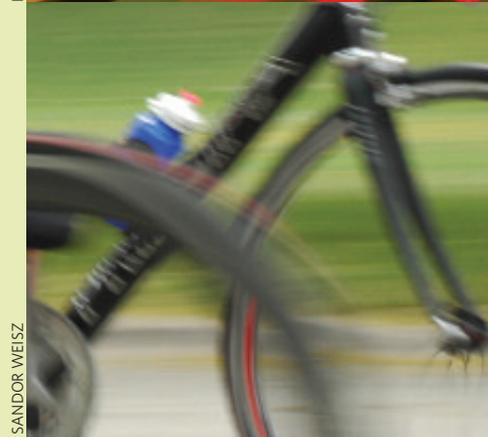
The Policy Goals of the TPB Vision

Adopted in 1998, the Vision is the policy framework guiding the work of the Transportation Planning Board.

- 1 The Washington metropolitan region's transportation system will provide **reasonable access at reasonable cost** to everyone in the region.
- 2 The Washington metropolitan region will develop, implement, and maintain an **interconnected transportation system** that enhances quality of life and promotes a strong and growing economy throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, services and recreation in a walkable environment.
- 3 The Washington metropolitan region's transportation system will give **priority to management, performance, maintenance, and safety** of all modes and facilities.
- 4 The Washington metropolitan region will use the **best available technology** to maximize system effectiveness.
- 5 The Washington metropolitan region will plan and develop a transportation system that enhances and protects the **region's natural environmental quality, cultural and historic resources, and communities**.
- 6 The Washington metropolitan region will achieve **better inter-jurisdictional coordination** of transportation and land use planning.
- 7 The Washington metropolitan region will achieve **enhanced funding mechanisms** for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.
- 8 The Washington metropolitan region will support **options for international and inter-regional travel and commerce**.



RYAN HEALY



SANDOR WEISZ



MICHAEL GALKOVSKY





Looking at the Core Principles of the TPB Vision

In the past decade, a handful of essential concepts from the TPB Vision have emerged as core principles for regional transportation planning in metropolitan Washington. These core principles are highlighted throughout this chapter and serve as measures of success. The Vision’s eight policy goals can be found on the preceding page. The entire text of the Vision—which includes 84 goals, objectives and strategies—can be found in a separate document produced as a companion to this edition of *The Region* magazine.

■ Provide a Range of Transportation Options

In a truly accessible system, driving should not be our only option for getting around. Objective 1 under Goal 1 of the Vision called for a “comprehensive range of choices for users of the region’s transportation system.”

Diversity in our transportation investments

In the past decade, regional leaders have sought to provide balance in their allocation of transportation revenues. The TPB’s Constrained Long-Range Plan (CLRP), which is a reflection of regional transportation priorities, features a wide range of projects of all modes—trains, buses, pedestrian and bicycle facilities, as well as roads.

The region’s commitment to public transit is demonstrated by its level of investment. Approximately 55 percent of the total funding in the CLRP over the years 2007 to 2030 is expected to be used for building, maintaining and operating public transit. These projects include the region’s priciest transportation investment—the Dulles Metrorail extension—but also less expensive measures, such as improvements in bus services.

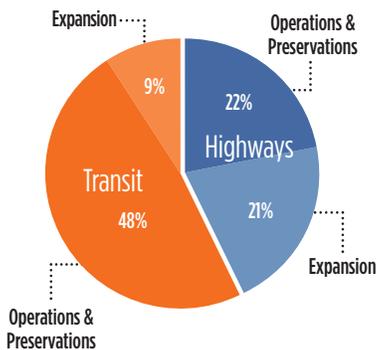
From the Vision Plan,
implement,
and maintain
a truly
integrated,
multi-modal
regional
transportation
system.

Goal 1, Strategy 1



UMAIR BADEEU

Anticipated Transportation Expenditures (2007-2030)



More than half of the region's transportation funds are dedicated to public transit, according to the TPB's 2006 Constrained Long-Range Plan. Seventy percent of anticipated funding will be dedicated to operations and preservation of highways and transit systems.

In addition to selective expansion of the region's major highway and transit systems, regional leaders have increased funding and planning for pedestrian and bicycle facilities over the past decade. In 2006, the Transportation Planning Board approved the region's first comprehensive region-wide bicycle and pedestrian plan, which lists more than 500 projects and establishes a policy framework for future bike/ped planning.

Multi-modal planning also includes other travel options and services—including ridesharing, teleworking and paratransit—which are described elsewhere in this publication. But perhaps most importantly, a multimodal approach to transportation means that projects are often not defined by a single mode. For example, the high-occupancy/toll (HOT) lanes projects currently under construction in Northern Virginia include extensive express bus services.

Using different modes

The region's commitment to a multimodal system is paying off. Public transit in the Washington region is well used. More than 15 percent of all daily work trips throughout the region are taken on Metrorail, Metrobus and local jurisdictional buses, and commuter rail. On a nationwide basis, Metrorail ranks second only to New York City's subway in the number of riders it serves. The Metrobus system ranks fifth nationwide in ridership.

Carpooling is also popular in our region. According to the 2007/2008 Household Travel Survey, about five percent of commuters used carpools or vanpools to get to work on a regular basis. And more and more people in the region are telecommuting—working at home or from satellite locations. The survey found that seven percent of the region's workforce works from home on a daily basis.

Even in our car-dominated culture, walking is still a primary means of travel. According to the 2007 American Community Survey from the U.S. Census Bureau, the District of Columbia currently ranks second among major U.S. cities in the number of commuters who walk to work.

From the Vision Increased transit, ridesharing, bicycling and walking mode shares. **Goal 5, Objective 3**

Across the region, local jurisdictions are looking at ways they can develop vibrant, walkable communities by providing a mix of jobs, housing and retail in close proximity, and by ensuring access to public transit and other alternatives to driving.

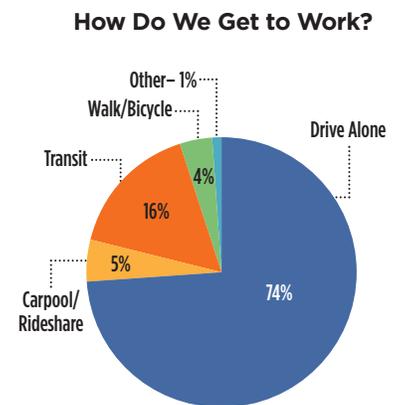
Nevertheless, automobile travel continues to dominate our travel habits. More than 80 percent of daily trips in the region, including both work and non-work trips, are made by car. Automobile ownership is high and continues to grow faster than the increase in households, jobs or licensed drivers. There is now approximately one vehicle for every licensed driver. Ninety percent of residents age 16 and above have drivers' licenses.

■ **Coordinate Transportation and Land-Use Planning**

The Vision stressed the importance of using land efficiently so that travel demand can be reduced and a variety of transportation modes can be effective. In particular, the Vision called for more compact development in regional activity centers, which are intended to be focal points for jobs and housing in locations outside the urban core that are accessible to transportation.

Although land-use planning powers in the United States lie mostly with local governments, transportation planning most often occurs at the state and regional levels. The TPB officials who put together the Vision believed that it was time to bring these planning activities from state and local entities into closer alignment.

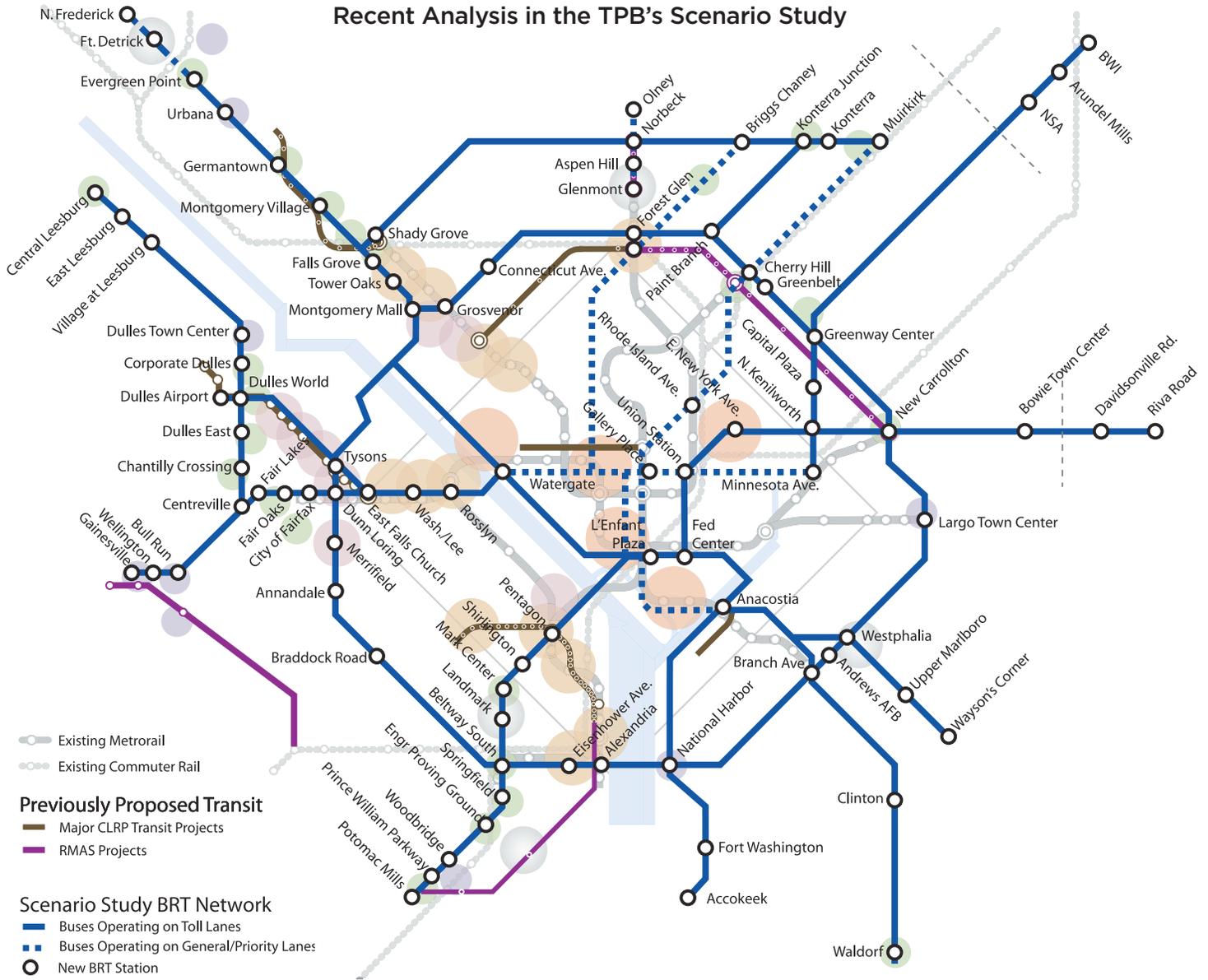
The TPB and other regional leaders have made progress in coordinating regional land-use and transportation through a number of initiatives:



According to the TPB's 2007/2008 Household Travel Survey, 16 percent of people use transit to get to work. But car use still dominates our commuting patterns.

From the Vision The Washington metropolitan region will achieve better inter-jurisdictional coordination of transportation and land use planning. **Goal 6**

Recent Analysis in the TPB's Scenario Study



This map shows a network under analysis in 2009 as part of the TPB's Scenario Study. The network includes extensive bus rapid transit (BRT) services, along with public transit projects identified through the Regional Mobility and Accessibility Study (RMAS) and projects already included in the TPB's Constrained Long-Range Plan (CLRP). The faded circles indicate regional activity centers, which are intended to be focal points for jobs and housing, and nodes for transportation linkages.

Promoting activity centers

The concept of "regional activity center" was perhaps the most resonant term that emerged from the TPB Vision ten years ago. The Vision defined the activity centers as places that would have "a mix of jobs, housing, services and recreation in a walkable environment." The Vision did not specify where these centers would be, but it did call upon the region to establish a process to "define and identify existing and proposed regional activity centers."



From the Vision ... a healthy regional core and dynamic regional activity centers with a mix of jobs, housing and services in a walkable environment. **Goal 2**

The Washington region's activity centers were identified in 2002 (and updated in 2007) in a series of six maps. The COG Planning Directors Technical Advisory Committee developed the maps, with review by a joint task force including members of the TPB and the COG Board of Directors. The data source for the activity centers maps is COG's Cooperative Forecasts, which are based on the local jurisdictions' projections of population, households and employment. The TPB emphasized that the maps would be descriptive not prescriptive; although the maps reflected currently approved land use forecasts, this portrayal was not intended to imply the future "should" look this way.

Since their approval, the activity centers have been used as a basis for regional analysis of the TPB's Constrained Long-Range Plan and to look at various transportation and land-use scenarios. The concept of activity centers has also influenced master plan development at the county level throughout the region.

Scenario planning

The TPB launched its scenario study, the Regional Mobility and Accessibility Study, in 2000 as a way to look outside the financial constraints of the region's long-range transportation plan. What would happen, the study team asked, if we looked at scenarios that changed some of our assumptions about future trends? How many more people would use public transit if we built more rail lines? How much would driving be reduced if commuters lived closer to their jobs?





The scenario study used different building blocks to develop the scenarios. For the land-use shifts, the scenarios moved jobs and housing into regional activity centers. For the transportation components, the scenarios have looked at adding networks of new public transit lines and variably priced lanes.

The study demonstrated positive impacts. “We know there are steps we can take to improve livability and mobility,” said 2006 TPB Chairman Michael Knapp. “The TPB’s Regional Mobility and Accessibility Study has confirmed that we can make a positive impact on future transportation conditions by locating housing and jobs closer together, approving development closer to transit stations, and expanding our network of public transit lines to support regional activity centers.”

In 2008, the TPB’s Scenario Study Task Force began work on two new scenarios. The *What Would It Take?* Scenario will lay out strategies to achieve an ambitious reduction in carbon dioxide (CO₂) emissions. The CLRP Aspirations Scenario will identify and analyze potential priorities for the TPB’s Constrained Long-Range Plan update in 2010. These two scenarios are scheduled for completion in 2009.



Transportation/Land-Use Connections (TLC) Program

Through the activity centers project and the scenario study, regional leaders at the TPB and COG have promoted policies to address the challenges of growth at the regional level. In 2007, the TPB established the Transportation/Land- Use Connections (TLC) program to help encourage the implementation of these policies at the local level. The TLC Program is designed to be part of a larger strategy for encouraging community leaders to “think regionally and act locally” in their efforts to improve the coordination between transportation and land-use planning.

“Every jurisdiction in this region is already working hard on projects and policies that implement common-sense strategies identified through the TPB’s scenario study,” said Montgomery Council Member President

The TLC program is designed to help communities successfully meet the challenges that lie behind concepts such as “transit-oriented development” (TOD) and “complete streets.”

Michael Knapp when he served as TPB chair in 2006 and spearheaded the establishment of the TLC Program. “At the TPB we want to provide support for these efforts, and help to put them into a regional context, in which good experiences can be shared and encouraged.”

The TLC program provides a regional clearinghouse and develops toolkits on implementation practices that can be used across the region. The program also provides technical assistance to individual TPB member jurisdictions.

Technical assistance projects are designed to help communities successfully meet the challenges that lie behind concepts such as “transit-oriented development” (TOD) and “complete streets.” Many of the projects funded through the program have been intended to spur and enhance TOD, which seeks to take advantage of land near transit stations and reduce automobile dependency. Several projects, including one at Prince George’s Plaza, promote a “complete streets” approach in transportation planning, which recognizes that streets should be designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and bus riders of all ages and abilities. Communities working on small area plans or plans for specific corridors have looked to the TLC program to provide niche assistance in places like South Washington Street in Falls Church, or Langley Park on the border of Prince George’s and Montgomery counties.

The TPB expanded the TLC Program in 2008 to provide increased funding for individual projects and to develop regional “toolkits” to address implementation challenges—such as designing policies to bring development to activity centers (particularly affordable housing), and to address different perspectives on density and congestion at the regional and local levels. In future phases, regional leaders at the TPB would like to use the program to promote the implementation of specific transportation projects that have been identified or highlighted through the TLC technical assistance projects.



M. V. JANTZEN



MATTHEW BRADLEY

From the Vision

Adequate maintenance, preservation, rehabilitation, and replacement of existing infrastructure.

Goal 3, Objective 1



LARRY LEVINE, WMATA

■ **Prioritize Maintenance and Safety**

The Vision recognized that we must protect our infrastructure investments with repair and maintenance activities. Highways must be resurfaced. Buses must be repaired. Metrorail cars must be replaced. Citizens need to know they will be able to count on the safe and reliable operation of the transportation system today and tomorrow.

The biggest slice of the pie

In part, today's maintenance challenge is the price of yesterday's successful construction programs. Our major facilities are aging and need upkeep. Older transit and highway systems cost more to maintain, just as older homes do. The TPB's current financial analysis indicates that 75 percent of available funding over the coming decades will be needed just to operate and maintain the system that is already in place.

The region's transportation implementing agencies consider maintenance and rehabilitation to be their first priorities when selecting projects for the TPB's long-range plan and six-year program. The TPB has continually focused attention on maintenance and rehabilitation. In 2004, the TPB issued a report called "Time to Act," which found that the region needed to double anticipated transportation revenues in the next six years to fund key priorities, mostly related to maintenance and safety.

A focus on pedestrian safety

Transportation safety concerns extend beyond maintenance challenges, particularly when it comes to pedestrians. According to TPB statistics, pedestrian fatalities account for one fifth of the region's traffic deaths, close to 81 fatalities a year. A study in September 2005 by Inova Regional Trauma Center and the TPB found that the responsibility for pedestrian accidents is shared, almost equally, between drivers and pedestrians.

To raise awareness about this problem, the TPB has conducted a month-long media campaign called Street Smart every year since 2002.

From the Vision Support the implementation of effective safety measures... Goal 3, strategy 3



In 2007, the TPB decided to step up these educational efforts by conducting the campaign twice a year instead of just once. To fund additional media coverage, TPB member jurisdictions have increased funding contributions for Street Smart.

Street Smart is an educational effort directed at motorists, pedestrians and bicyclists, with the goal of reducing pedestrian and bicyclist injuries and deaths. A single campaign consists of a one-month wave of radio, transit, internet, and outdoor advertising. Evaluations of the Street Smart campaign show that it is having an impact. For example, 14 percent of survey respondents reported having to “swerve to avoid a pedestrian in the last seven days” compared to 32 percent in 2002.

Pedestrian safety advocates emphasize “three E’s”: education, engineering, and enforcement. Street Smart focuses on education, but the campaign has been combined with stepped-up law enforcement efforts throughout the region, including increased ticketing of drivers, pedestrians and cyclists. To promote more effective law enforcement, the region hosts an annual seminar on best practices in pedestrian enforcement for law enforcement officers. Ongoing engineering initiatives include improvements in signals, markings and sightlines on streets. Technology is also improving pedestrian safety through the use of devices such as laser detectors and signs for crosswalks that flash when pedestrians are present.

The Street Smart Campaign is supported through member local government contributions, Federal Highway Administration safety funding administered through the state departments of transportation, and private contributions.



STEVE FERNIE



From the Vision
Improved
management
of weather
emergencies
and major
incidents.

Goal 4, Objective 3

■ Enhance Management of the Existing System

When the Vision was developed ten years ago, regional leaders already understood that our transportation problems would not be solved just by building new roads and transit facilities. We need to better manage the system that is already in place.

Ten years later, our region's transportation system in many ways operates more efficiently through the use of technology. Management and operations improvements keep the system moving by providing better traveler information, keeping one-time incidents from tying up traffic, and smoothing out little snags—like payment systems—that slow down the flow of people and goods.

The Metro system's SmarTrip card, for example, has improved the travel experiences of more than 1.5 million current card users. These reusable farecards, which are embedded with computer chips, are usable in all Metrorail stations, on all Metrobuses and at Metro-operated parking lots. SmarTrip can also be used on nearly all other local public transit systems in the Washington Metropolitan Area.

Acting through its Management, Operations and Intelligent Transportation Systems (MOITS) committees, the TPB has been a persistent champion for a wide range of management and operations improvements. The MOITS committees have been particularly active in finding ways to coordinate incident management. Nationwide, more than 50 percent of highway congestion is estimated to result from non-recurring incidents, such as motor vehicle crashes.

The terrorist attacks of September 11, 2001 made incident management and emergency response a more immediate priority. The TPB and COG have provided leadership in establishing both interim and more permanent coordination systems for incident response. The TPB recently shepherded the implementation of the Metropolitan Area Transportation Operations Coordination (MATOC) Program, which will enhance the availability of real-time transportation information for the public as well as



From the Vision Compliance with federal clean air, clean water and energy conservation requirements, including reductions in 1999 levels of mobile source pollutants. **Goal 5, Objective 4**

strengthening coordination among transportation agencies. The development of MATOC is described more extensively on pages 24-26.

Traffic signal optimization has been another interest area of the TPB and MOITS. Timing of an individual signal must be balanced for traffic loads, cross traffic, left and right turns, and pedestrians, with safety the paramount consideration. Under certain conditions, multiple signals in a corridor with a predominating directional flow can be timed for “progression,” reducing delays for traffic in that flow. Good engineering practice recommends that signals be checked for possible re-timing at least once every three years, to account for growth and other changes in traffic patterns. Signal optimization was first brought to the fore in the region in 2002 as an air quality measure. The TPB and MOITS continue to encourage efforts by the region’s transportation agencies to keep up with signal optimization not only for its inherent air quality benefits, but also for congestion management purposes.



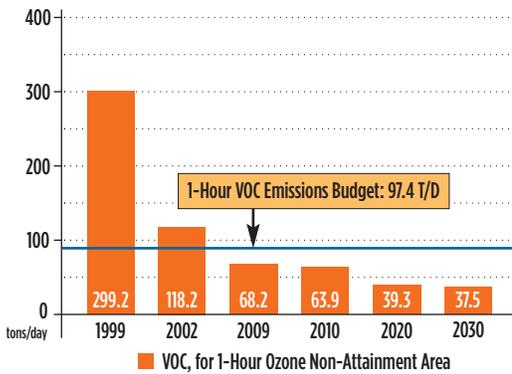
■ **Improve Air Quality**

Emissions from motor vehicles have a direct and negative impact on human health. The Vision recognized clean air as a major concern for transportation planning.

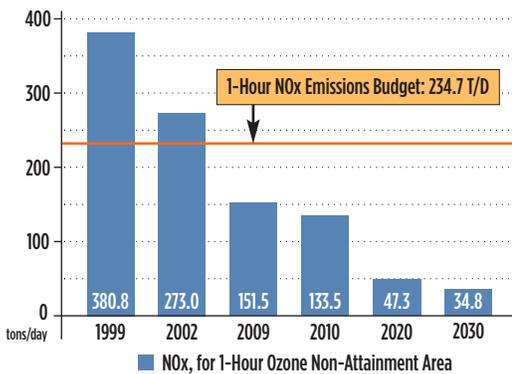
Ten years ago, the challenge of improving air quality was dominant on the TPB agenda—from both a technical and a policy perspective. Today, air quality planning in the region has made tremendous strides. Although the Washington region does not yet meet federal standards for ground-level ozone and fine particulate matter, we are on track to meet those targets in the near future.



VOC Emissions 1999-2030



NOx Emissions 1999-2030



Meeting Federal Air Standards

The Washington region is expected to achieve federal air quality standards for ground-level ozone and particulate matter within the next couple of years. These charts show steady reductions in VOCs and NOx, which are precursor compounds that combine in sunlight to form ozone.

Forecasting travel and emissions

Sometimes called smog, ozone is formed on hot summer days when volatile organic compounds (VOC) and nitrogen oxides (NOx) combine in sunlight. Fine particle pollution is a mixture of microscopic solid and liquid particles suspended in the air. Scientists agree that ground-level ozone and fine particulate matter are harmful to human health. These pollutants damage lungs and airways, and are particularly threatening to sensitive populations, including children, the elderly and people with respiratory diseases.

In our multi-state region, the Metropolitan Washington Air Quality Committee (MWAQC) is responsible for developing a regional air quality plan that demonstrates how the region will achieve federal air quality standards. Like the TPB, MWAQC is an independent body at the Council of Governments that includes local and state representatives from across the region.

Transportation plays a big role in the push toward cleaner air. The regional air quality plan contains ceilings on transportation-related emissions and the TPB must show that the region's transportation system will not exceed these ceilings, now and in the future. In practice, this means that every time the TPB amends its long-range transportation plan and six-year Transportation Improvement Program (TIP) in a way that might affect air quality, it must also approve an analysis (called a "conformity determination") that shows that emissions targets will be achieved.

Considerable technical effort goes into the TPB's emissions forecasting. The staff uses computer models to estimate travel patterns and congestion levels that will be produced by the transportation systems laid out in the TPB's transportation plans. Using those travel forecasts, an air quality model then estimates emissions levels from motor vehicles (measured in tons per day) that will be produced in future years. In 2004, the Transportation Research Board at the National Academies completed an extensive review of the TPB's travel forecasting procedures.



The results from this review have been used to enhance the TPB's modeling capabilities.

In order to help meet air quality targets, the TPB identifies packages of Transportation Emissions Reductions Measures (TERMs) including ridematching services, telecommuting programs, improved bicycle and transit facilities, clean fuel vehicle programs, traffic signal optimization and other programs.

Meeting the goals

The Washington region's latest air quality plans show that we are on track to meet federal air quality standards in the near future. This represents a significant environmental achievement, especially in light of the fact that in recent years the U.S. Environmental Protection Agency (EPA) has issued new, more stringent air quality requirements for both ozone and particulate matter.

The region will achieve the new federal standard for ozone by the fall of 2009. For fine particle matter, data for 2005 and 2006 show that national standards have already been met. The regional plan for particulate matter shows continued compliance with the standards into the future.

How have these reductions been achieved? The anticipated declines are linked to a variety of emission controls, including cleaner vehicle technology, coupled with the gradual removal of highly polluting cars from our roads.

The news isn't all good, however. Our success in reducing ozone and particulates has been overtaken by a new, more daunting emissions challenge—global climate change caused by increasing levels of carbon dioxide (CO₂). Climate change was not directly addressed in the TPB Vision. However, the Vision's call for environmental stewardship does provide the foundation for current regional efforts to confront this challenge. See pages 26-28 for more information on the Washington region's activities to confront climate change.

From the Vision
Reduction
of per capita
vehicle miles
traveled
(VMT).
Goal 5, objective 5

From the Vision Reduction in reliance on the single-occupant vehicle (SOV) by offering attractive, efficient and affordable alternatives. **Goal 5, Objective 2**



■ Promote Alternatives to Solo Driving

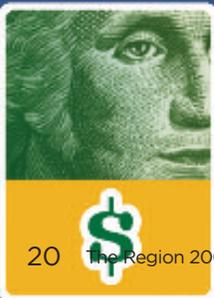
The Vision recognized that many of its goals—including improving air quality, reducing congestion and promoting activity centers—cannot be achieved without a reduction in driving. But reducing the time we spend in our cars is not just a means; it is also an end. People who drive less have more time with family and friends, and more time to be productive members of society.

The TPB established its Commuter Connections programs in 1974 (originally called the Commuter Club) to encourage commuters to cut back on driving to work alone. Because of Commuter Connections, drivers in the Washington region made 117,000 fewer trips in 2008 and reduced their driving by nearly 2.4 million miles. The program is a network of public and private transportation organizations, including the TPB and COG, state funding agencies and local organizations.

The Commuter Connections work program includes the following key elements:

- The Commuter Operations Center provides **ridematching services** to commuters through a central toll free number “1-800-745-RIDE.”
- **Guaranteed Ride Home** provides users of alternative commute modes up to four free rides home per year in a taxi or rental car in the event of an unexpected personal or family emergency or unscheduled overtime.
- **A marketing program** promotes the benefits of alternative commute options, including mass transit, car/vanpooling, teleworking, bicycling and walking. The marketing program is aimed at persuading commuters to switch from driving alone to alternative commute modes, as well as reinforcing the commuting habits of people who do not drive alone.
- **Employer Outreach** supports marketing and outreach efforts to the region’s employers to encourage use by their employees of alternative

COMMUTER CONNECTIONS
A SMARTER WAY TO WORK



SAVE SOME GREEN.
RIDESHARE.

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commute modes. For example, a number of programs are designed to promote bicycling, including Bike-to-Work Day, a regional Bicycling Guide, and assistance to employers in holding bicycling seminars for their employees. A regional “Live Near Your Work” program was introduced in 2007.

- **Telework assistance** provides information to employers on the benefits of teleworking and assists them in setting up programs that allow employees to work at home or in satellite locations.
- **Monitoring and Evaluation activities** help the TPB to understand the impacts of Commuter Connections’ various programs and how they might be enhanced.

In addition to providing alternatives to solo driving, the TPB’s Commuter Connections programs have been shown to reduce vehicle emissions, which is the primary reason most of these program activities were initially implemented. Every day, the programs are estimated to reduce nitrogen oxides (NOx) by over one ton and volatile organic compounds (VOCs) by over one-half ton.

These measures of effectiveness have shown that Commuter Connections is among the most effective commuter assistance programs in the nation in terms of providing alternatives to solo driving and reducing vehicle emissions.

■ Ensure Accessibility for Disadvantaged Populations

Vulnerable groups and individuals can get left out of our fast-paced transportation system. Seniors get stuck at home. People in wheelchairs can be forced to rely upon the goodwill of strangers. Former welfare recipients who are juggling several jobs can be left out in the cold. The Vision noted the importance of providing “fair and reasonable opportunities” for people with special needs.

To deal with these varied challenges in a holistic manner, the TPB established the Access for All Advisory Committee in 2001. The AFA advises the TPB on transportation issues that are important to low-income and minority communities, and people with disabilities. It includes more than 20 representatives of interest groups from throughout the region. A member of the TPB chairs the committee.



From the Vision The Washington metropolitan region’s transportation system will provide reasonable access at reasonable cost to everyone in the region. **Goal 1**





From the Vision A web of multi-modal transportation connections which provide convenient access (including improved mobility with reduced reliance on the automobile) between the regional core and regional activity centers, reinforcing existing transportation connections and creating new connections where appropriate. **Goal 2, Objective 3**

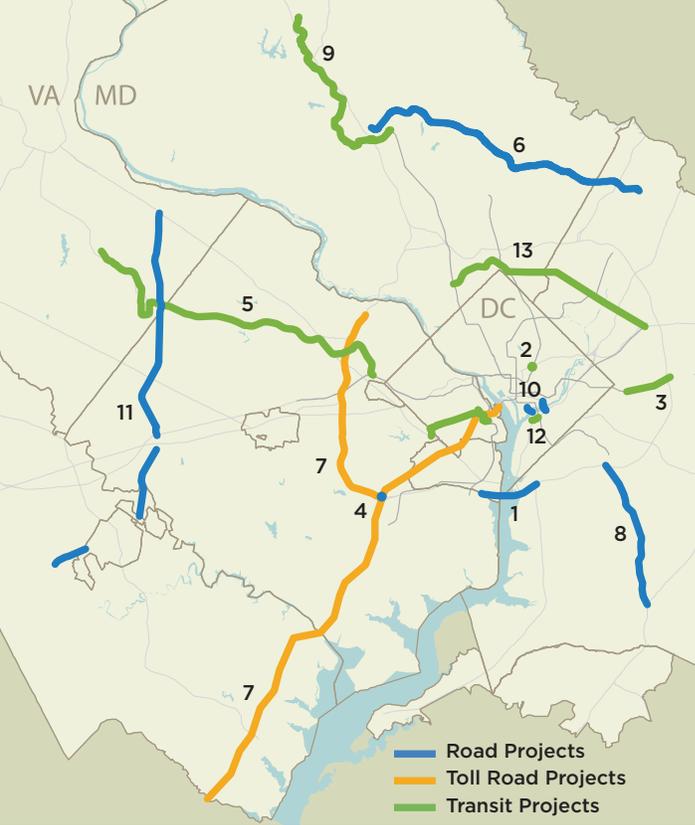
Since its founding in 2001, the Access for All Advisory Committee has raised concerns that may not get adequate attention in other transportation planning forums. In particular, the group has focused attention on the concerns of people with disabilities and has made recommendations regarding their access to transportation services, specifically MetroAccess. The committee has also worked to promote better transit information for populations with limited English skills, raise awareness about transit-oriented development, pedestrian and bike safety, and highlight the need for adequate funding for local bus services on which low-income people are particularly dependent.

As part of its mission to ensure access for all, the TPB has played a stronger and more direct role in the provision of transportation services for disadvantaged populations. In 2006, it assumed a new responsibility as the “designated recipient” of funding under the federal Job Access/Reverse Commute (JARC) and New Freedom programs. Administered by the Federal Transit Administration, the programs are designed to improve transportation services for people with disabilities, lower-incomes or limited access to transit. As part of this responsibility, the TPB administers the competitive selection and funding of projects. Recent recipients have included projects to provide shuttle bus services, wheelchair accessible taxicabs and travel assistance and training programs.

■ Provide New Capacity When Appropriate

In a growing region, new transportation capacity is necessary. But in a world of tight budgets, political challenges and environmental awareness, we need to be sure we are building the right projects. The Vision emphasized that new capacity should connect regional activity centers, reinforce existing transportation connections, and include a range of transportation modes.

In the past ten years, regional leaders have approved a range of projects that meet these basic objectives. The Wilson Bridge and the Springfield Interchange, for example, relieve critical bottlenecks and reinforce existing



connections. Rail to Dulles will provide public transit to Tysons Corner and Dulles Airport. The Beltway HOT lanes and the Intercounty Connector provide new circumferential capacity—expanding the web of connections that the Vision encouraged.

The planning activities for all these major projects have been extensive and lengthy. In some cases, such as the Intercounty Connector, projects have stirred up controversy. But in all cases, the TPB has served as the forum where these new projects are tied together into a regional network designed to reflect the goals of the Vision.

■ Achieve Funding Sustainability

If you don't have enough money for next year, it's hard to have a vision for the next 20-30 years. In 1998, TPB leaders realized that their goals for the next Century were contingent on whether reliable funding could be identified for our long-term transportation needs. The Vision specifically called for "enhanced funding mechanism(s)" for transportation.

Although there have been some successes, funding for transportation remains tight. Critical needs are not being addressed or are being deferred. Visionary projects have remained dreams.

A more complete overview of the region's transportation funding story is provided in Chapter 3, "Unfinished Business."

BIG-TICKET PROJECTS

These are some of the high-profile projects that have been built in the past ten years or approved by the TPB for inclusion in the Constrained Long-Range Plan (CLRP).

Built Since 1998

1. Woodrow Wilson Bridge
2. New York Avenue Metro Station
3. Metro to Largo
4. Springfield Interchange

Approved in the CLRP

5. Dulles Corridor Rapid Transit
6. Intercounty Connector
7. Virginia HOT Lanes Projects (Beltway and I-95/395)
8. MD 5 widening
9. Corridor Cities Transitway
10. DC Bridge Projects (11th Street Bridge and Frederick Douglas Memorial Bridge with South Capitol Street Corridor)
11. VA 28 - Upgrade and widen
12. Light Rail - Anacostia and Columbia Pike
13. Purple Line (only the portion between Bethesda and Silver Spring currently in the CLRP)



DEPT. OF DEFENSE AND GERRY J. GILMORE

The Changing Context: What Wasn't on the Radar Screen in 1998?

Two international concerns—terrorism and climate change—have been pushed to the top of the global agenda since 1998, the year the Vision was approved. These challenges have obvious transportation implications and the TPB has been working to address these issues in the Washington region.

Improving Incident Response Coordination

On the morning of September 11, 2001, transportation questions were on everyone's minds: "Is the Metro open? What route should I take home? Can I pick up my kids at school?"

In those terrifying moments, people were caught off guard. Most transportation and emergency systems worked well that day and emergency workers responded heroically to the attack on the Pentagon. But the event also showed that the region needed to ensure that its emergency transportation management capabilities were better prepared to handle future events.

Prior to September 11, management and operations (M&O) improvements—which include measures such as better traveler information, seamless payment systems and improved accident response coordination—were already considered a priority in the Washington region. The terrorist attacks put M&O improvements on the "front burner."

The TPB and its regional partners have been involved in a number of activities, interim and permanent, to improve emergency response capabilities. In recent years, the TPB has shepherded the development of the Metropolitan Area Transportation Operations Coordination (MATOC)



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MATOC will help transportation agencies recognize and detect potential “ripple effects” that occur from incidents. The tools developed through the program can be used to notify agencies of those ripple effects, help coordinate the management of traffic and transit impacts, and inform the public with verified and consistent information about traffic and transit conditions.

“MATOC is not an entity that will actually manage incidents or situations,” explained Richard Steeg of VDOT who currently serves as the organization’s chair. “It is an entity that will provide information and coordination. The folks who are actively engaged in the here-and-now are not in a position to stop and ask questions about the regional implications of whatever has happened, be it weather or a traffic incident. We believe that the need for broader ‘situational awareness’ will be addressed by MATOC.”

The goals of the MATOC Program include:

- Improving technological systems for sharing transportation information among agencies involved in managing regional incidents;
- Enhancing the transportation sector’s standard operating procedures and notification practices for incidents; and
- Providing more timely and accurate transportation information to the public during incidents.





The program is building on current relationships among the region's emergency and transportation personnel. MATOC operating agency participants are the departments of transportation in Virginia, Maryland and the District of Columbia, as well as the Washington Metropolitan Area Transit Authority (WMATA). Initial funding for the program was provided through a SAFETEA-LU grant secured by Virginia Congressman James Moran with matching funds from the state departments of transportation.

Responding to Climate Change

In 1998 when the TPB Vision was approved, Al Gore was the U.S. vice president, not an environmental celebrity, and global warming seemed like just one more item in a long list of vague threats. Today, climate change has moved to the top of the world's environmental agenda. We have come to understand that greenhouse gases are warming the planet at an alarming rate and that human activity is a major cause.

In the US, the transportation sector is responsible for just under 30 percent of total human-related emissions of carbon dioxide (CO₂), which is considered the primary greenhouse gas. A variety of options for reducing these emissions are on the table: we can drive more fuel efficient vehicles, we can use fuel or vehicles that produce little or no CO₂, or we can travel more efficiently. All these options would provide essential contributions and it is unlikely that any single approach will solve the problem of climate change.

The TPB has long been grappling with the challenge of reducing driving—measured as vehicle miles traveled (VMT). Ten years ago, the TPB Vision called for a reduction in per capita VMT. In recent years, the TPB's scenario analysis has examined alternative growth scenarios with the goal of reducing driving in the region.

The TPB's Scenario Study Task Force has decided to focus its new *What Would it Take?* Scenario on CO₂ reductions because of the growing urgency of global warming. In addition, many strategies to reduce CO₂

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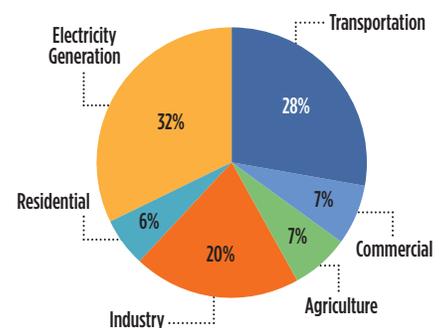
emissions also provide spillover benefits of reduced congestion, improved air and water quality and greater energy efficiency.

The TPB's new *What Would It Take?* Scenario is looking at an ambitious performance target for reducing CO₂ emissions. With that target in mind, regional planners are determining what combination of interventions would be needed to achieve the established CO₂ reduction goals. This scenario has become an important part of a greater set of activities at the Council of Governments related to climate change, including the approval of the COG Climate Change Report in November 2008. That report contained regional targets that would reduce greenhouse gas emissions from all sources to 20 percent below 2005 levels by 2020, and 80 percent below 2005 levels by 2050. These goals reflect international scientific consensus about the minimum steps we must take as a planet if we intend to limit the most catastrophic impacts of climate change.

The *What Would it Take?* Scenario is looking at a variety of CO₂ reduction strategies, including improvements in fuel efficiency, alternative fuels and new technologies, and a host of changes designed to reduce vehicle miles traveled and increase transportation system efficiency. These latter factors might include land-use patterns that facilitate walking, biking and transit use; variably priced travel lanes to manage congestion; improved traffic operations and incident management; and wider availability of alternatives to single-occupant vehicle travel. Meeting the targets for CO₂ reduction will require a spectrum of solutions, both large and small. In the realm of transportation and land use planning, TPB members have emphasized that "one size will not fit all."

In the arena of land use, for example, the scenario is looking at large-scale land-use changes, such as increased infill development in places that are near transit station areas and more mixed-use, transit-oriented development throughout the region. Such land-use shifts could be tailored to induce targeted changes in travel behavior, such as increased

US Greenhouse Gas Emission by Sector

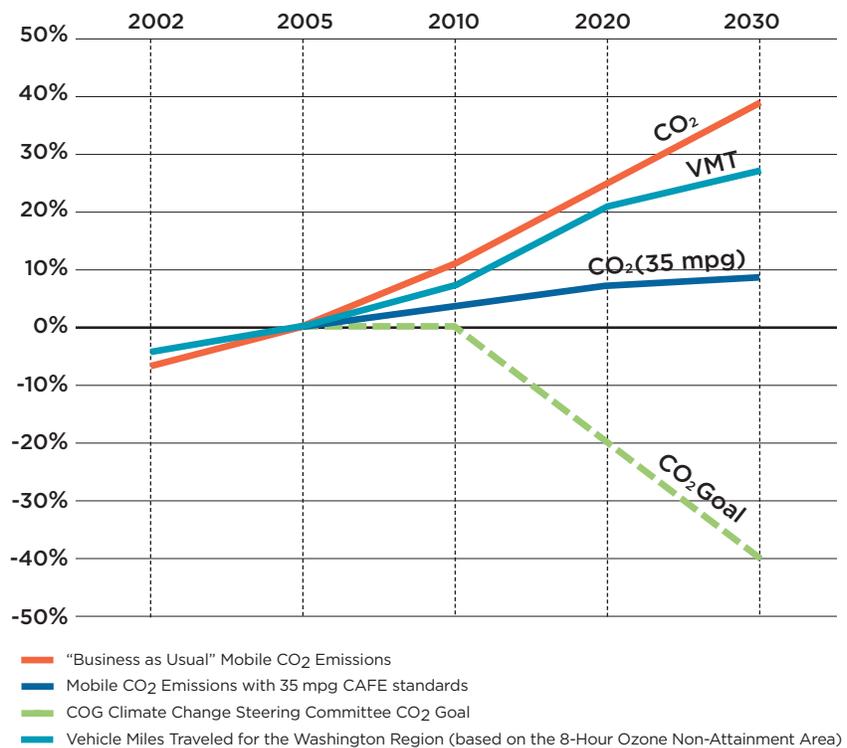




use of transit and carpools, more trips on foot or by bicycle, increased telecommuting or carpooling and increased opportunities for trip-chaining (making one trip with several purposes).

The TPB is scheduled to complete the *What Would It Take?* Scenario in mid-2009, along with a *CLRP Aspirations Scenario*, which will identify and analyze potential priorities for the TPB's Constrained Long-Range Plan update in 2010. In 2009, the new scenarios will be presented to the public as part of a new round of public involvement activities to discuss and develop a set of priorities for the region to pursue, including key transportation projects and regional growth policies.

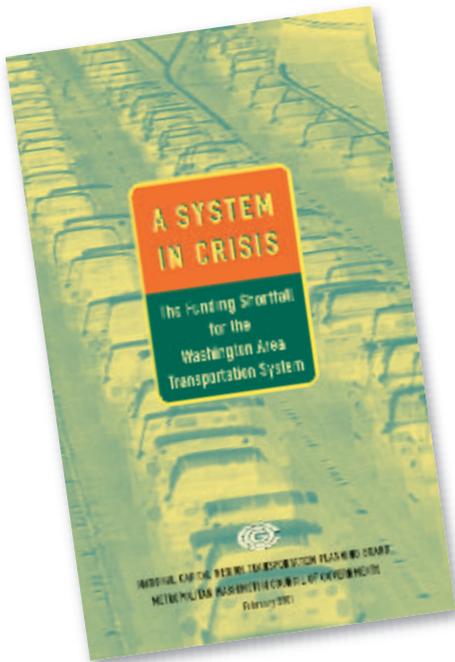
CO₂ Emissions: Projected Versus Goal



New federal fuel efficiency (CAFE) standards will slow the increase in transportation-related (mobile source) emissions of CO₂. But much deeper cuts are needed to achieve significant reductions below today's CO₂ levels.



Unfinished Business: The Continuing Transportation Funding Shortfall



High hopes, incremental solutions, major disappointments. In the past ten years, regional leaders have had a mixed record in addressing the transportation funding shortfall.

There have been some successes. Funding for the Metro system has become more stable with the commitment of additional state and local funding through the Metro Matters program. New road capacity has increasingly been financed by toll revenues.

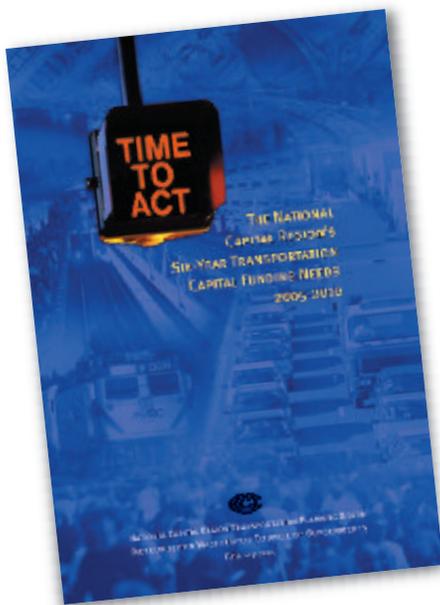
But across the Washington region, transportation funding remains tight. As the nation moves into recession in 2009, state and local budgets are being slashed. Important transportation projects are likely to be deferred yet again.

Shining a Spotlight on Funding

Ten years ago when the Vision was approved, the TPB was already facing a stark financial reality: revenues were not keeping up with needs. The Metro system and Interstate Highways were no longer new. Maintenance and rehabilitation expenses were expected to soak up the vast majority—70 to 80 percent—of future transportation revenues.

The TPB Vision responded to the funding challenge by calling for the establishment of an “enhanced funding mechanism(s) for regional transportation priorities.” The decision makers who put together the Vision decided not to get too specific about the exact nature of this funding mechanism, including how it would be funded, what the potential revenue sources might be, and how transportation priorities would be determined. But the message was clear: increased funding was essential.

The Metro system, once shiny and new, has begun to show its age. An increasingly larger portion of funds is now dedicated to maintenance and rehabilitation.



Picking up on the Vision's call for enhanced funding, the TPB in 2000 convened a high-level forum of decision makers at Union Station to address the regional transportation funding shortfall, which was increasingly labeled a "crisis." The 2000 update to the TPB's long-range transportation plan highlighted the far-reaching extent of the financial squeeze, noting that the region needed an increase of 50 percent to meet the region's transportation needs. "For some years, we have known that current funding sources are inadequate to meet our growing transportation needs, but this year we found out just how inadequate these funding sources really are," said Kathy Porter, 2000 TPB chair.

The short-term funding picture has been even bleaker. A TPB analysis in 2004, called "Time to Act," found that available funding would meet less than half of the region's critical transportation needs between 2005 and 2010. "We are not talking about amenities here," said TPB Chairman Christopher Zimmerman when the study was released. "We have a choice about what our very near future will look like."

The funding needs of the Washington Metropolitan Area Transit Authority (WMATA) are particularly critical. The Metro system, once shiny and new, has begun to show its age. An increasingly larger portion of funds is now dedicated to maintenance and rehabilitation. In 2004, following the Time to Act report, the WMATA board approved a funding scheme called "Metro Matters" which committed \$3.3 billion over six years from state and local governments to purchase new buses and rail cars and fund basic infrastructure investments. But even at the time, it was clear that Metro Matters was a stop-gap solution.

In October 2008 Congress passed federal legislation authorizing \$1.5 billion in federal funding over the next ten years. U.S. Representative Tom Davis of Virginia introduced the legislation in 2005. The federal dollars are contingent upon Maryland, Virginia and D.C. providing one-for-one matching dollars, and require management changes, including



the permanent establishment of an inspector general position and expansion of the WMATA board to include federal representatives: two voting, two nonvoting. The board currently has 12 members, six voting and six nonvoting.

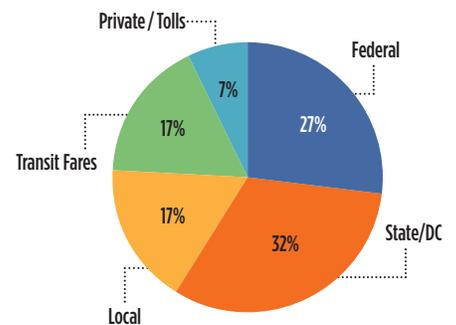
The Davis legislation will provide a total infusion of \$3 billion over ten years, which will be used to buy rail cars and buses, and repair leaky tunnels and deteriorating station platforms. WMATA estimates it needs to purchase more than 300 railcars to replace the original, deteriorating ones. The funding only applies to capital and preventive maintenance expenses on existing WMATA systems, and may not be used to increase the mileage of the rail system.

A boost of \$3 billion will go a long way toward addressing Metro’s funding uncertainties. But it only represents a portion of anticipated needs. In October 2008, as Congress was wrapping up the funding bill, Metro General Manager John B. Catoe Jr. announced that the system needs more than \$11 billion over 10 years—about double the rate of capital investment spending each year since 2002—to maintain and improve its services. Daunting challenges remain.

Tolls Are a Growing Funding Source

Another development in recent years has been the changing attitude toward tolls. Just over a decade ago, a proposal to finance the new Woodrow Wilson Bridge with tolls was not politically acceptable. Today, three out of the five most expensive projects planned for the next six years are toll projects—Virginia’s two HOT lanes projects (on the Beltway and I-95/39) and Maryland’s Intercounty Connector. The TPB’s 2006 long-range financial analysis found that tolls and private sources can be expected to provide seven percent of anticipated revenues between now and 2030. A similar analysis in 2003 found that toll and private money accounted for just one percent of anticipated revenues.

Anticipated Transportation Revenues (2007-2030)



The TPB’s 2006 long-range financial forecast found that tolls and private sources will provide seven percent of anticipated revenues between now and 2030. Toll and private money accounted for just one percent of expected revenues in a similar analysis in 2003.



The Beltway HOT lanes initiative is the reincarnation of a project that has long been on the back burner because of funding problems. Since the early 1990s, Virginia has been studying expansion of the Beltway with HOV lanes, but in 2002 the project was estimated at \$2.5 billion, a pricetag that was well beyond public sector resources. However, a couple months after that estimate was released, a private firm, the Fluor Daniel Corporation, offered a new solution: Let the private sector build and operate high-occupancy/toll (HOT) lanes, and pay for the project with toll revenues. (HOT lanes permit carpoolers to use the lanes for free, while tolls are paid by those not considered “high-occupancy.”) In 2005, the TPB approved the project for inclusion in the region’s long-range plan. The Beltway HOT lanes are expected to be open in 2013.

We can expect more toll lane projects in the future. Transportation funding continues to be tight and congestion is rapidly getting worse. The TPB has taken a lead in looking at pricing policies, including toll lanes. In 2003, the TPB convened more than 200 elected officials, community leaders, planners and academics for a conference that explored innovative pricing strategies. It was the region’s first major public event to discuss “value pricing,” which, in the terminology of transportation planning, means giving drivers and transit riders the option of paying an extra fee for the value of reduced congestion.

The conference helped to galvanize regional interest in tolling as a solution to the region’s perpetual transportation funding shortfall. New electronic toll-collection technologies and a new sense of public support meant that toll lanes suddenly seemed viable. Following the 2003 conference, the TPB established a “Value Pricing Task Force” to develop regional goals and policies for our multi-state region. In 2005, the Value Pricing Task Force approved a set of principles to guide the development of a regional system of “variably priced lanes.”

A TPB scenario analysis, released in 2008, analyzed the potential effects of widespread road pricing in the Washington region. The study

Only a decade ago, tolls were considered politically unacceptable, but today the public seems to be demanding more transportation options and is willing to pay for them.

“Evaluating Alternative Scenarios for a Network of Variably Priced Highway Lanes in the Metropolitan Washington Region” outlined several different scenarios for adding new priced lanes, pricing existing highways, and enhancing bus services. The study was funded by the Federal Highway Administration of the US Department of Transportation.

The results of this analysis demonstrated that toll rates would need to vary significantly by segment, direction and time-of-day in order to maintain free-flowing conditions on the new networks of toll lanes. Toll rates would range from a low of 20 cents per mile to over \$2.00 per mile on the “Maximum Capacity” scenario, where all the variably priced lanes were either newly added lanes or conversions of existing carpool lanes.

High-quality public transit was integral to the scenario analysis. “The key thing... is to really look at how we create affordable transit for people who now must drive because they have no realistic alternative,” said Falls Church Councilmember David Snyder.

The analysis was designed to elicit discussion, not to provide conclusive answers. “This is not a proposal, it’s a ‘what if’ study that provides very interesting insight into the implications of tolling for our region,” said Arlington County Board Member Chris Zimmerman.

The Shortfall Continues

Despite additional funding for Metro and the increased use of tolls, the transportation funding shortfall continues to grow. A 2006 TPB financial analysis found that although transportation revenues have actually increased since 2003 (the 2005 federal transportation reauthorization legislation—SAFETEA-LU—provided a major boost), the shortfall has still increased because, in large part, construction costs have eaten up much of the gain in revenue. During the years 2004-2006, nationwide construction expenditures jumped about 28 percent, compared to an increase of just 17 percent over the eight years prior to 2004. These rises were linked to increasing global demand for concrete, asphalt and other materials.



A TPB financial study in 2006 forecasted that the states will provide 32 percent of anticipated transportation dollars between 2007 and 2030.

A similar analysis in 2003 found that funding from the states and DC would make up 43 percent of revenues.

Several efforts to raise revenues in Virginia have been stymied. In November 2002, voters rejected a referendum that would have increased the sales tax by a half cent and used the revenue for transportation projects. In February 2008, the Virginia Supreme Court invalidated a package of taxes and fees that the Northern Virginia Transportation Authority (NVTA) planned to use for transportation priorities. The Court ruled that the NVTA could not raise and spend such revenues because it is not a directly elected body.

The national funding picture is equally grim. The collapse of the I-35W Bridge in Minnesota in August of 2007 illustrated the fragile state of our nation's infrastructure and leaders from all political parties have increasingly recognized that transportation is woefully underfunded. In their 2007 report to the President and Congress, the National Surface Transportation Policy and Revenue Study Commission said "We need to invest at least \$225 billion annually from all sources for the next 50 years to upgrade our existing system to a state of good repair and create a more advanced surface transportation system to sustain and ensure strong economic growth for our families. We are spending less than 40 percent of this amount today."

Balances in the Federal Highway Trust Fund (HTF) are rapidly diminishing, especially in the Highway Account. A major reason for this decline is that Congress has not raised the national fuel tax to keep pace with inflation and funding needs. In 2007, the U.S. Department of the Treasury and the Congressional Budget Office projected that by the end of Federal Fiscal Year 2009, the Highway Account of the Highway Trust Fund would have a negative balance of between \$4 and \$5 billion if no corrective actions were taken. A one-time fix was applied to the shortfall in 2008, which simply meant the problem was deferred to the next fiscal year.

As the nation headed into recession in 2008, state and local governments faced severe budget crises that undermined transportation funding even further. The new Obama administration offered relief through an infrastructure stimulus package, approved in January 2009, which provided \$700 million for transportation in the Washington region. These funds will largely be spent on deferred maintenance.





Looking Forward

Short-term funding infusions are not enough; more systemic change is needed. The upcoming authorization of the federal transportation legislation offers an opportunity to restructure the nation's transportation policy and to substantially increase funding levels over the long term. The new legislation is due by September 30, 2009, the date when the current SAFETEA-LU legislation expires.

In September 2008, the TPB approved a set of policy principles expressing the board's aspirations for the future federal program. The Policy Principles call for more funding, more attention to metropolitan-level challenges and more balance among transportation modes.

According to Ron Kirby, Director of Transportation Planning for the TPB, the Policy Principles "reflect the growing consensus across the nation that the current structure of federal transportation funding is ill-suited to addressing pressing needs for system maintenance, new infrastructure, and the increasingly urgent problems of congestion, rising energy costs, and global warming."

In order to tackle these problems, the funding shortfall must be solved. Chris Zimmerman, Arlington County Board Member said it was important to "clearly advocate for raising the gas tax, and call for authorization to occur on time so that additional funding is not delayed."

Empowering metropolitan-level planning and decision making is also essential. "I think there is a real opportunity presented by this bill" said Tim Lovain, Alexandria City Council Member. "There's the very real possibility that this authorization will redirect a substantial share of resources to metropolitan regions."

TPB Chairman Phil Mendelson summed up the goals for 2009. "These principles say that there should be a substantial increase in funding and that there should be a more even-handed process for assessing all modal options," he said. "We're going to be referring to these principles quite a bit over the next year."

Policy Principles for the 2009 Authorization of Federal Surface Transportation Programs

National Capital Region Transportation Planning Board

- 1 Fundamental changes are needed in the current structure and funding of federal surface transportation programs: current planning, programming, and environmental processes are overly cumbersome and inefficient, and inadequate funding levels are resulting in serious under-investment in transportation.
- 2 An explicit program focus is needed to put and keep the nation's transportation infrastructure in a state of good repair, and to ensure that it is operated efficiently and safely.
- 3 Decisions on investment in new transportation capacity should be based on a rigorous and comprehensive analysis of economic, social and environmental benefits and costs, which assesses all modal and intermodal options with uniform evaluation procedures and criteria.
- 4 Federal transportation policy should provide for increased federal funding focused on metropolitan congestion and other metropolitan transportation challenges, with stronger partnerships between federal, state, regional and local transportation officials.
- 5 A substantial increase in federal transportation funding will be needed to address the current under-investment in the nation's transportation system, and should be sought from:
 - Increases in federal fuel taxes or other user-based taxes and fees;
 - Pricing strategies enabled by emerging technology for all modes of travel, including rates that vary by time of day, type of vehicle, level of emissions, and specific infrastructure segments used;
 - Inclusion of major transportation investments in legislation to create national infrastructure banks or bonding programs; and
 - Auction of pollution emissions allowances.

Approved September 17, 2008

**Membership of the
National Capital Region
Transportation
Planning Board**





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