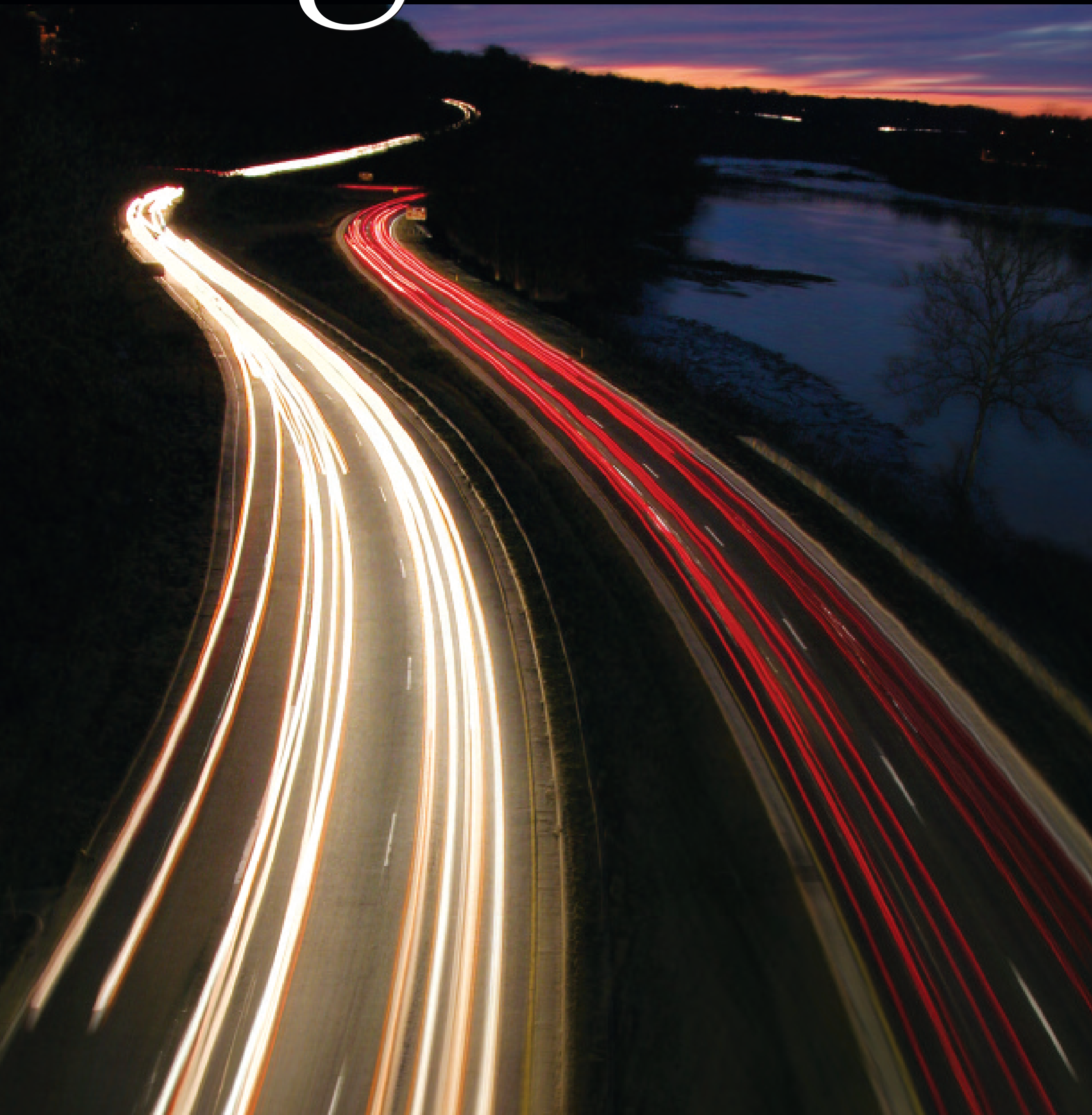
The Region

ANNUAL REVIEW OF TRANSPORTATION ISSUES IN THE WASHINGTON METROPOLITAN REGION

VOLUME 45 2006



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 non-voting 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.

2005 TPB Members

Officers

CHAIR
Phil Mendelson
District of Columbia

FIRST VICE CHAIR
Michael Knapp
Montgomery County

SECOND VICE CHAIR
Catherine Hudgins
Fairfax County

Board Members

Ludwig Gaines
City of Alexandria

Christopher Zimmerman
Arlington County

Gail Booker Jones
City of Bowie

Edith J. Patterson
Charles County

Andrew M. Fellows
City of College Park

Sharon Ambrose
District of Columbia

Kwame R. Brown
District of Columbia

Ellen McCarthy
District of Columbia

Michelle Pourciau
District of Columbia

Robert Lederer
City of Fairfax

Linda Smyth
Fairfax County

David Snyder
City of Falls Church

Bruce L. Reeder
Frederick County

Stanley Alster
City of Gaithersburg

Rodney M. Roberts
City of Greenbelt

D. M. "Mick" Staton, Jr.
Loudoun County

Harry J. Parrish, II
City of Manassas

Frank Jones
City of Manassas Park

Arthur Holmes
Montgomery County Executive

David C. Harrington
Prince George's County

Haitham A. Hijazi
Prince George's County Executive

W.S. Wally Covington, III
Prince William County

Robert Dorsey
City of Rockville

Kathryn Porter
City of Takoma Park

Carol S. Petzold
Maryland House of Delegates

John Giannetti
Maryland Senate

Harry Parrish
Virginia House of Delegates

Patricia S. Ticer
Virginia Senate

Nat Bottigheimer
Maryland DOT

Jo Anne Sorenson
Virginia DOT

Richard A. White
Washington Metropolitan AreaTransit Authority

Ex-Officio Members

Gary Henderson
Federal Highway Administration

Susan Borinsky
Federal Transit Administration

James Bennett
Metropolitan Washington Airports Authority

John V. Cogbill, III
National Capital Planning Commission

John Parsons
National Park Service

Robert Werth
Private Providers Task Force

2005 Metropolitan Washington Council of Governments

COG BOARD CHAIR
Judith F. Davis

COG PRESIDENT
Penelope A. Gross

COG EXECUTIVE DIRECTOR
David Robertson

COG DEPARTMENT OF TRANSPORTATION PLANNING DIRECTOR
Ronald F. Kirby

Contents

Making Progress on the Bumpy Road of Regionalism
Phil Mendelson, 2005 Transportation Planning Board Chair — 3

"What If" Study Looks at Shorter Commutes, More Travel Options
What if the region grew differently? The TPB's scenario study is looking at alternative visions of the future. — 5

Adding Toll Lanes to the Region's Travel Options
The TPB approved the region's first high occupancy/toll (HOT) lane project in 2005. We can expect more toll lane projects in the future. — 11

How Are We Doing? Looking at Priority Issues in the 2005 Long-Range Plan
The TPB took a closer look at three priority issues in 2005: Improving emergency preparedness, optimizing signal timing and promoting regional activity centers. — 17

Improving Demand Responsive Services for People with Disabilities
A report released by the Transportation Planning Board in February 2006 identified a number of shortcomings in MetroAccess, the region's public transit service for people with disabilities, and made a series of recommendations for improvement. — 23

In Brief — 27
- Region Still Facing Transportation Funding Crunch
- TPB Endorses Metro Funding Bill
- Base Closings Will Affect Regional Travel Patterns
- Meeting New Air Quality Standards
- Bike to Work Day Draws Thousands

The Region

Managing Editor: John Swanson
Design: Carla Badaracco

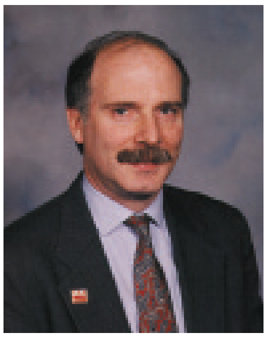
The Region is published by the Metropolitan Washington Council of Governments
777 N. Capitol St., N.E., Suite 300,
Washington, D.C. 20002-4239;
(202) 962-3200.

This publication was funded, in part, by grants from the District of Columbia Department of Transportation, the Maryland Department of Transportation, the Virginia Department of Transportation, the Federal Highway Administration and the Federal Transit Administration.
Publication No. 20066276.

Making Progress

Phil Mendelson, 2005 TPB Chairman

on the Bumpy Road of Regionalism



Are we making a difference in the lives of people in the Washington region? Are we forging a better future for our children? These are questions we need to continually ask, even as we work on regional problems that have no "silver bullet" solutions.

As 2005 chairman of the Transportation Planning Board, I am pleased to report that we are making progress on three key issues that affect the lives of us all: emergency preparedness, traffic operations, and improved coordination between land use and transportation planning.

Since September 11, 2001, the TPB has stepped up efforts to make sure the region is better prepared for potential major emergencies, as well as day-to-day incidents that tie up our transportation system. In 2005, the TPB took the lead in establishing an incident management program that will be responsible for regionwide communication—and thus coordination—among the region's different transportation agencies. Although this new regional program has not captured the public's attention like other transportation issues, it will have a major effect on improving our lives and making us safer.

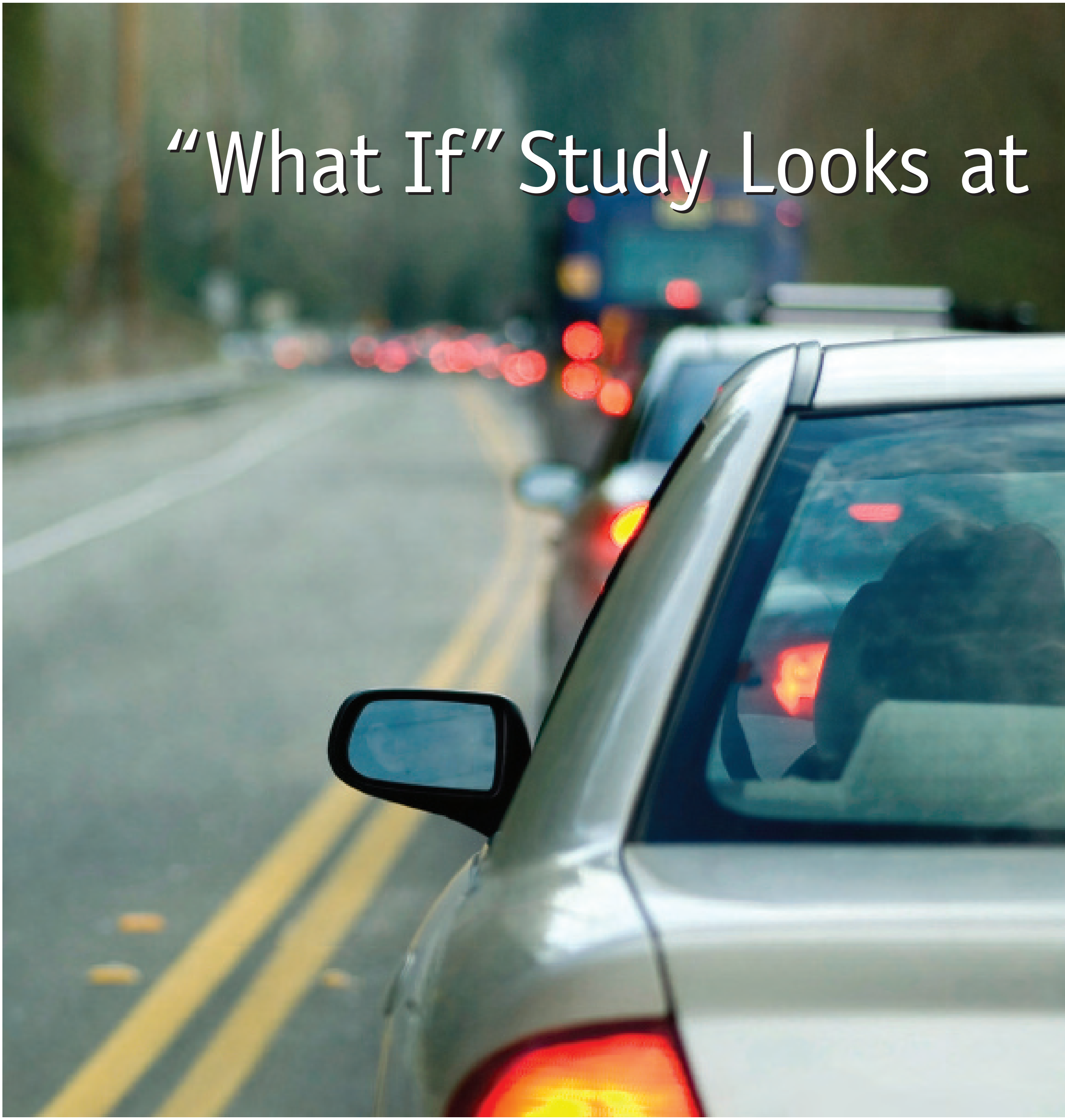
We also have worked as a region to improve transportation operations. In 2002, for example, the TPB established regional goals for retiming stoplights to improve traffic flow, reduce emissions and improve safety. In 2005, we learned that those regional goals for traffic signal "optimization" have been exceeded. Small adjustments in signal timing have produced big reductions in driver frustration.

Finally, we are working to understand and address the effects of housing and job growth on transportation demand. At the TPB and COG, we have examined a number of planned and potential land use shifts. We have analyzed the region's long-range transportation plan, plans for military base closures, and a series of hypothetical land use and transportation scenarios through the Regional Mobility and Accessibility Study. With this information available, transportation leaders can give high priority to projects that advance the TPB's goals. In the years ahead, I would like the region to do more to improve the correlation between land use and transportation planning.

Big challenges lie ahead. I believe that some problems can—and must—be taken care of comprehensively, once and for all. For example, we need to secure reliable and dedicated funding for the Metro system as soon as possible. But other challenges will remain with us for a long time. These include growth and development issues, traffic congestion, air quality, and homeland security. We must be diligent in pressing for solutions, recognizing successes when they occur and not becoming complacent or defeated when progress moves too slowly.

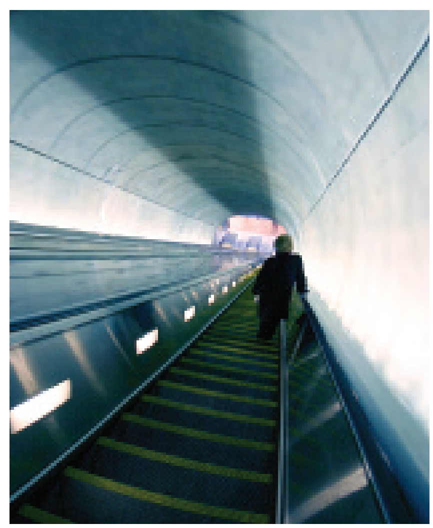
Regionalism can often be a bumpy road. But it is a worthwhile commitment that ultimately will make the entire metropolitan area a better place to live, work, play and learn.

"What If" Study Looks at



Shorter Commutes, More Travel Options

The Washington region is growing at a rapid pace. By 2030, we will have added 1.2 million new jobs and more than 1.6 million new people, according to Council of Governments forecasts. This robust economic growth will support a continuing high standard of living in the region, but it will also present fundamental challenges to our quality of life, including increased congestion on our roads, trains and buses.



In the years to come, commuting is expected to be more frustrating than ever. According to current forecasts, people will live farther from their jobs in 2030, and will be more and more dependent on their cars. The average person will drive more every day. The percentage of commuters using transit will stagnate or decline. Stop-and-go congestion on our highways will become pervasive.

The road ahead does not look very appealing, but does the future have to be so bleak? What if we changed current plans and forecasts? What if we shortened commutes by moving jobs and households closer together? What if we gave people more travel options—more trains and buses, more walkable communities? What if we added a network of express toll lanes?

The TPB's Regional Mobility and Accessibility Study has been looking at a number of alternative visions of the future that address these and other "what if" questions.

Advancing the Vision

The TPB launched the study in 2000 to look at land use and transportation scenarios that are not part of current regional plans. A key purpose of the study was to see if there are actions the region's leaders might take to better meet the objectives of the TPB Vision, the regional transportation policy framework adopted in 1998.

Among its many goals and objectives, the TPB Vision calls for an increase in transit use and a reduction in driving. The Vision also stressed the need for better coordination between land use and transportation, with an emphasis on regional activity centers—places that are intended to be focal points for jobs and housing, and nodes for transportation linkages. The Regional Mobility and Accessibility Study has focused on these elements of the Vision.

The TPB Vision calls for an increase in transit use, a reduction in driving, and better coordination between land use and transportation, with an emphasis on regional activity centers.

The land use scenarios for the study were initiated by a number of "what if" questions, such as: What if more people who lived here worked here? What if there were more development on the eastern side of the region? What if more people lived and worked close to transit?

Based on such "what if" questions, five land use scenarios were developed:

- **More Households** would increase the total number of households in the region.
- **Households In** would move households into inner jurisdictions.
- **Jobs Out** would shift jobs to outer jurisdictions.
- **Region Undivided** would move jobs and housing to the region's eastern side.
- **Transit-Oriented Development** would put more jobs and households close to transit.


DALLAS AREA RAPID TRANSIT

New public transit lines, beyond those already included in the region's plan for 2030, were layered onto the study's land use scenarios.

These land use alternatives all promote concentrated land use patterns by shifting a significant portion of future growth into or close to regional activity clusters. (The *clusters* are consolidated, somewhat larger versions of the regional activity *centers*.)

The study is not founded on unrealistic assumptions. The land use scenarios only shifted growth that is forecast to occur between 2010 and 2030; they did not move existing jobs and households. This means the amount of growth that was "in play" for the study represented a relatively small percentage of total jobs and households. For example, the scenarios affected less than 15 percent of households expected to exist in 2030.

Packages of new public transit facilities beyond those already present in the 2030 baseline have been layered onto each land use scenario. The new rail and bus lines chosen for inclusion are all unfunded projects that are featured in various state and local plans. These transit networks reflect the large variety of projects that

BEYONDDC.COM

The scenario study would shift a significant portion of future growth into regional activity clusters.

are being discussed in individual jurisdictions throughout the region—including D.C. light rail projects, the Bi-County Transitway (Purple Line) in Maryland, and rail to Centreville in Virginia.

Highways are next on the study's agenda. TPB staff is currently analyzing a network of new toll lanes, including variably priced lanes on the Beltway and other Interstate highways. (See map in next chapter on page 14.)

Looking at scenario results

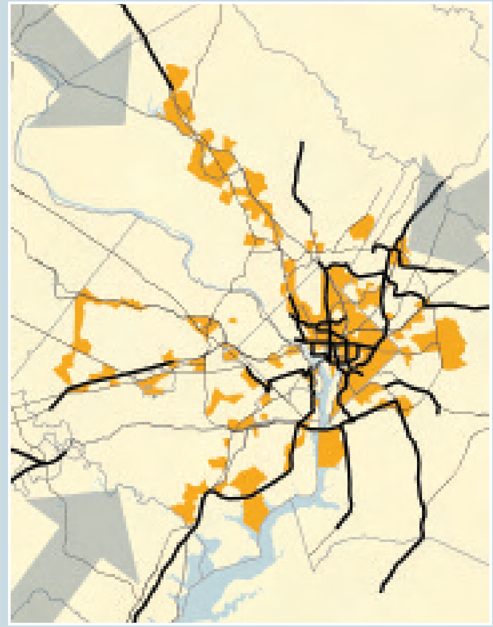
TPB staff has analyzed the five land use scenarios, combined with additional transit, using the TPB's travel forecasting model. To date, the analysis has focused on the transportation effects of the various alternatives, including changes in congestion, transit use and vehicle miles of travel. And on these measures, the scenarios produce positive results. When compared to the 2030 baseline, all five alternatives would slow the anticipated growth in congestion and driving, and in most cases, would increase transit use.

The analysis has already influenced policy-making. The "More Households" scenario, for example, underlined the need to increase the housing supply in the region—and the transportation benefits that might come when such an increase is concentrated in activity clusters. Using the land use assumptions of this scenario, the region's planning directors and COG's Metropolitan Development Policy Committee decided that the latest round (Round 7.0) of the region's Cooperative Land Use Forecasts should increase the number of households planned for 2030 by more than 120,000.

All five scenarios use different means to achieve the same objectives of bringing people and jobs closer together, and improving the transportation connections between them. The scenarios are not mutually exclusive; in many ways they are similar and complementary. All the scenarios, for example, try to focus more development around transit, not just the Transit-Oriented Development alternative. The final step in the study will be the creation of ***composite scenarios*** that emphasize common themes and combine positive features of these distinct scenarios.

More Households Scenario

What if more people who work here lived here?



The Challenge:
New housing is not keeping up with job growth. Many commuters are living outside the immediate region—as far away as West Virginia and Pennsylvania.

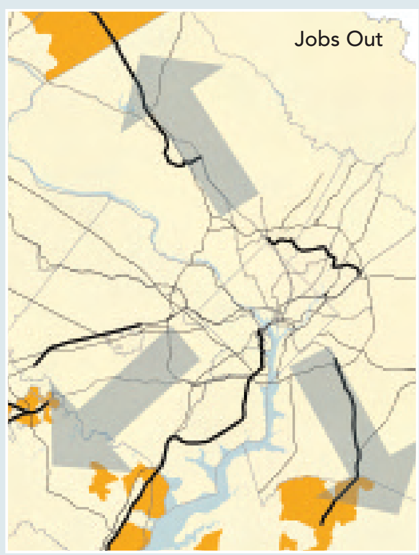
The Scenario:

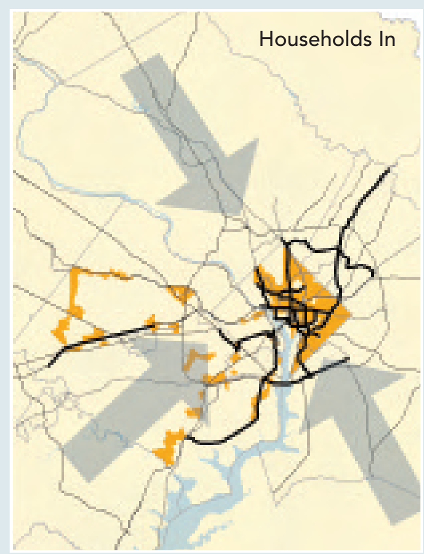
- Adds 216,000 new households beyond the number in current land use plans. The households would be added in or close to regional activity centers to balance forecast job growth (represented by gold areas on the map).
- Adds an extensive transit network beyond what is currently assumed to be planned and funded: 30 miles of new Metrorail, 30 miles of new commuter rail; 218 miles of new light rail and bus rapid transit; 180 miles of new light rail and bus rapid transit.

Analysis Results:
This scenario produces the largest impacts on congestion, vehicle miles of travel (a measure of how much we drive) and transit use. Even with a lot more people living in the region under "More Households," an average person in 2030 would drive 22 miles per day, compared to 24 miles per day if current trends continue—a decrease of two miles per day. What's more, the amount of total vehicle miles of travel on the region's roads would be less with "More Households" than under the study's 2030 baseline.

Jobs Out & Households In Scenarios

What if people lived closer to their jobs?





The Challenge:
The length of the average commute is growing as housing continues to boom in outer jurisdictions while jobs remain concentrated in the region's core and inner suburbs.

The Scenarios:

- "Jobs Out" shifts 82,000 new jobs (11% of forecast growth) to outer jurisdictions.
- "Households In" shifts 84,000 new households (23% of the forecast growth between 2010 and 2030) to inner jurisdictions.
- Transit networks (beyond what is currently assumed to be planned and funded) were tailored to both scenarios (thick lines on the maps).

Analysis Results:
Compared to the 2030 baseline, both scenarios would have positive impacts on trends in congestion and vehicle miles of travel. The "Jobs Out" scenario would cause a small decrease in regionwide transit use, compared to the 2030 baseline. Although transit use would increase in the outer suburbs, this would not be enough to offset the effects on overall transit use in the inner jurisdictions.

Region Undivided Scenario

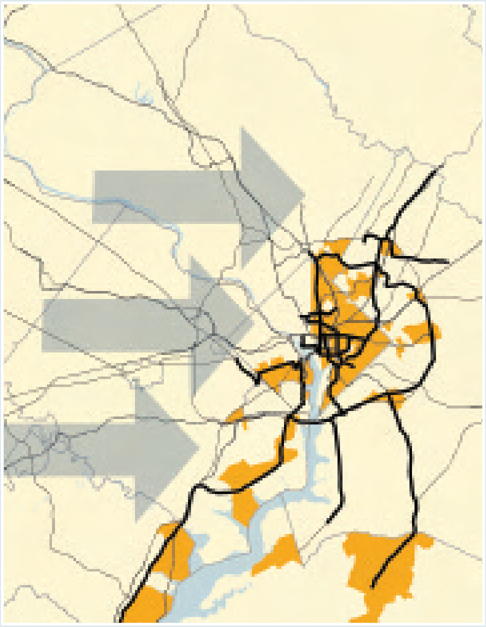
What if there were more development on the eastern side of the region?

The Challenge:
People on the eastern side of the region are commuting long distances to jobs in the west due to uneven development patterns.

The Scenario:

- Shifts 57,000 new households (16% of forecast growth) and 114,000 new jobs (15% of forecast growth) from west to east (gold areas on the map).
- Adds an extensive transit network (thick black lines on the map): 13 miles of new Metrorail; 180 miles of new light rail and bus rapid transit. These additional projects are beyond what is currently assumed to be planned and funded.

Analysis Results:
Encouraging more development and providing transit options on the eastern side of the region would improve travel conditions throughout the region, compared to the 2030 baseline.



Local impacts would be even bigger for many scenarios...
Under the "Region Undivided" scenario, transit commute trips to the Largo area would more than double, increasing the transit commute mode share from 9% to 15%.

Transit-Oriented Development Scenario

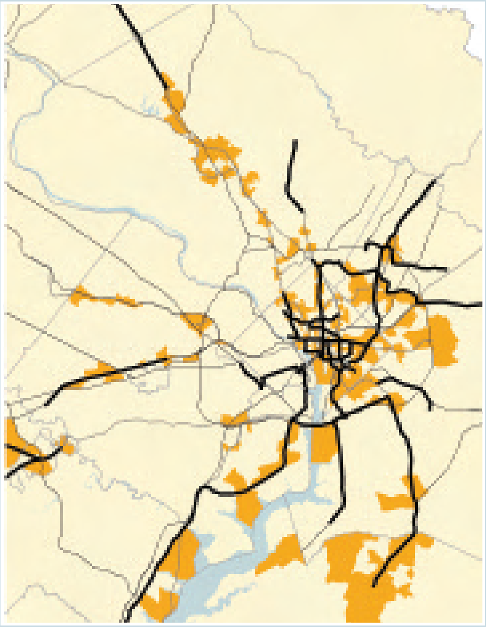
What if more people lived and worked closer to transit?

The Challenge:
70% of new jobs and 80% of new housing in the coming decades will not be easily accessible to transit.

The Scenario:

- Locates 125,000 new households (35% of forecast growth) and 150,000 new jobs (19% of forecast growth) closer to transit stations—within a half-mile radius (represented by gold areas on the map).
- Adds an extensive transit network (beyond those currently assumed to be planned and funded): 30 miles of new Metrorail, 30 miles of new commuter rail; 218 miles of new light rail and bus rapid transit; 180 miles of new light rail and bus rapid transit.

Analysis Results:
The "Transit-Oriented Development" scenario would produce positive regionwide results similar to the "Region Undivided" scenario. Compared to the 2030 baseline, driving and congestion would decrease and transit trips would increase.



"We need to think about how the study can feed back into planning decisions."

—Michael Knapp,
2006 TPB chairman

From "What If" to "How To"

The Regional Mobility and Accessibility Study has been designed as a "what if" study, not a "how to" study. It intentionally put aside questions regarding implementation, including political challenges and funding shortfalls.

But questions about implementation cannot be put aside for long. TPB members and staff have started to investigate how to integrate the study into the development of the TPB's Constrained Long-Range Transportation Plan (CLRP) and into planning efforts at the state and local levels.

"We need to think about how the study can feed back into planning decisions," said Michael Knapp, Montgomery County councilmember and 2006 TPB chairman. Some leaders maintain the study should be used to promote policy changes. When study results were presented in January 2006, Barry Miller of the D.C. Office of Planning said the analysis effectively can be used to support efforts to focus growth on the eastern side of the region. Jim Zook, planning director for Fairfax County, emphasized that the study highlights the "absolute need to invest more in transportation."

In recent years, the TPB's Citizens Advisory Committee has conducted public forums on the scenario study, called "What if the Washington Region Grew Differently?" The discussions at these meetings often focused on real-world, "how to" concerns.

"Your scenarios include rail on the Wilson Bridge," said a forum participant in Oxon Hill. "How are we going to get that funded and built?"

"The study would increase densities, but what about all the localized traffic that those densities will generate?" asked a participant in a forum near Dulles.

"You're talking about more housing, but the real question is whether that housing will be *affordable*," said a citizen in Takoma Park.

The scenario study is designed to focus attention on such questions. TPB staff plan to continue outreach efforts to inform citizens throughout the region about the study and spur discussion of the issues it raises. It will be up to community leaders at the local, state and regional levels to determine how the analysis can be used in the real world of public decision-making.

Beltway HOT lanes set to open in 2010

Adding Toll Lanes to the Region's Travel Choices

The marketplace of travel choices in the Washington region is being expanded to include high occupancy/toll (HOT) lanes—a new kind of highway that combines features of toll roads and carpool lanes.

In October 2005, the TPB approved the region's first planned HOT lanes for 15 miles of the Capital Beltway (I-495) in Virginia between the Springfield Interchange (I-395/495) and Georgetown Pike (VA 193), which is just south of the American Legion Bridge.

"The addition of HOT lanes to the region's transportation plans provides another alternative to improve the flow of traffic," said Catherine Hudgins, Fairfax County Supervisor, after the TPB approved the project.

Dealing with Beltway congestion

The Capital Beltway is a fitting location for the debut of HOT lanes. While much of the world sees the Beltway as a metaphor for American political power, people in the Washington region have come to see it as a symbol of the congestion that is choking our communities.

"It's 64 miles of asphalt and concrete, a misshapen doughnut that circles the capital and hums with the wheels of more than 1.8 million vehicles a day," wrote reporter John Kelly in the *Washington Post* on April 27, 2006. The Beltway "not only fills our dreams and nightmares but resonates across the country and around the world."

Ever since the Beltway was opened in 1964, the departments of transportation in Virginia and Maryland have been trying to keep ahead of congestion. The Beltway was last widened in 1977.

Since the mid-1990s, Virginia has been planning to expand the Beltway with HOV lanes. But a VDOT study in 2002 found that HOV alternatives would be enormously expensive—at least $2.5 billion—and were not likely to be built in the near future.

A few months after that study was released, a private firm—the Fluor Daniel Corporation—offered a new solution to Beltway congestion: Let the private sector build and operate high occupancy/toll lanes—HOT lanes—and pay for the project with toll revenues.

In June 2002, Fluor Daniel submitted an unsolicited proposal to build HOT lanes under Virginia's Public-Private Transportation Act, which allows private entities to acquire, build, improve, maintain and/or operate transportation facilities. In response to the Fluor Daniel proposal, VDOT advertised for competing bids, but none were received.

FLUOR DANIEL

SAN DIEGO ASSOCIATION OF GOVERNMENTS

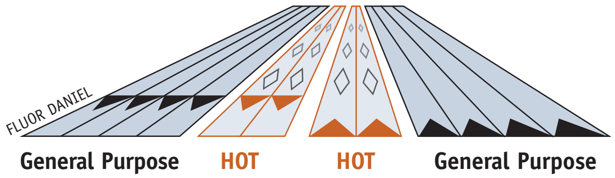
New technologies have made variably priced lanes feasible. Customers affix transponders to their windshields. When they use the lanes, overhead antennae read the transponders and deduct tolls from previously established accounts.

How do HOT lanes work? Carpoolers generally use the lanes for free, while everybody else pays a toll. Usually the tolls are automatically adjusted based on levels of congestion.

Here's the HOT lane plan in a nutshell:

- Fluor Daniel will build four additional lanes on 15 miles of the Beltway between the Springfield Interchange and a point just south of the American Legion Bridge.
- Electronic transponders on the windshields of cars will automatically deduct the HOT lane tolls, which will vary based on time of day or congestion levels. Prices are expected to range between $1 and $5.
- HOT lanes have been built elsewhere in the country, but the Beltway HOT lanes project would be the first in the Washington region.

The HOT lane project carries a pricetag of nearly $900 million. It will be funded by toll revenue bonds and federal loans. The debt will be repaid through toll revenues.



A cross section of the Beltway showing HOT lane configuration

Throughout 2003 and 2004, VDOT studied the HOT lane project. In January 2005, the Commonwealth Transportation Board—which acts as the board of directors for VDOT—approved the project. In April, VDOT signed a comprehensive agreement with Fluor Daniel to proceed.

In October 2005, the TPB voted to include the HOT lanes project in the region's Constrained Long-Range Transportation Plan (CLRP) and the fiscal year 2006-2011 Transportation Improvement Program (TIP). Under federal law, all regionally significant projects must be included in the CLRP and TIP before final planning and construction.

Fluor Daniel estimates the project will take four years to build. The completion date is currently set at 2010.

Some reservations have been expressed about the project. One concern is that it may not sufficiently accommodate transit. Some environmental groups have opposed the HOT lane project because they believe the state should have more extensively studied a proposal to convert an existing general purpose lane to a HOT lane, along with building one new lane.

More toll projects expected

The Beltway widening is planned as the first HOT lane project in the region, but it is not the first new toll lane project. The Intercounty Connector in Maryland, which the TPB added to CLRP in 2004, is planned to have variably priced tolls. When it opens in 2010, the ICC will cost 20¢ per mile during peak periods and 15¢ during off-peak hours.

We can expect more toll lane projects to be proposed in the future. Transportation funding continues to be tight and congestion is rapidly getting worse. 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.

The TPB has taken a lead in promoting "value pricing" options, 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 toll-collection technologies and a new sense of public support meant that toll lanes suddenly seemed politically viable.

New Terms to Describe an Old Idea

Here are some of the terms used to describe the new types of toll roads:

- **Variably priced lanes**—This umbrella term includes HOT lanes and other express toll facilities. Prices change automatically, based on congestion levels and other factors. As traffic gets heavier, tolls typically go up. Variable pricing has become possible in recent years because technologies now permit electronic toll collection and automatic price adjustment.
- **High occupancy/toll (HOT) lanes**—These variably priced lanes generally permit carpoolers to drive for free, while others pay a toll.
- **Express toll lanes**—Toll facilities that are variably priced, but not necessarily free for carpoolers.

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, chaired by Maryland State Delegate Carol Petzold, approved a set of 11 goals to guide the development of a regional system of "variably priced lanes." The TPB approved those goals in April 2005. The complete text of the goals is provided on page 15.

The TPB's Value Pricing Task Force developed a regionwide variably priced lane scenario for the Regional Mobility and Accessibility Study. See pages 4-10 for more information about the regional scenario analysis.

The term "variably priced lanes" broadly includes HOT lanes and other express toll facilities. Variably priced lanes are defined as toll facilities on which prices change automatically, based on congestion levels or other factors. As traffic gets heavier, prices typically go up. Variable pricing has become possible in recent years because technologies now permit electronic toll collection and automatic price adjustment.

The goals approved by the TPB promote regional coordination among jurisdictions as they consider and plan variably priced lane projects in the coming years. Among other things, the TPB stressed the significance of public transit in a number of the goals, including Goal 5, which states that "transit bus service should be an integral part of a system of variably priced lanes."

In addition to working on value pricing policies, the TPB is analyzing a network of variably priced lanes as part of the Regional Mobility and Accessibility Study. (For a description of this scenario study, see the preceding chapter). This extensive, regionwide toll lane scenario (see map at left) will complement the various land use and transit scenarios that have already been studied.

An idea whose time has come

Because transportation funding is expected to remain tight into the foreseeable future, the emergence of toll financing presents new opportunities to get long-delayed projects built. The region's state DOTs are all considering tolls for a number of new facilities that otherwise would be very difficult to fund.

But tolling will also present new challenges as the private sector and market forces play a growing role in transportation planning and programming. And community leaders will also face new challenges in ensuring timely public information and involvement.

Regional coordination will also be a continuing challenge. As the Washington region moves forward with plans to develop variably priced lanes, regional leaders must work to ensure that toll facilities in different jurisdictions work together as a seamless, multi-modal system. The TPB will be an essential forum for this ongoing coordination.

Task Force Principles

Goals for a Regional System of Variably Priced Lanes
TPB Task Force on Value Pricing for Transportation

Approved by the Transportation Planning Board, April 20, 2005

As the Washington region moves forward with plans to develop variably priced lanes, it is anticipated that a system of variably priced lanes will be implemented in phases, likely with one corridor or segment at a time. The following goals can help guide the regional development of variably-priced lanes that work together as a multi-modal system, while addressing the special policy and operational issues raised by the multi-jurisdictional nature of this area.

1. Operations, enforcement, reciprocity, technology, and toll-setting policies should be coordinated to ensure seamless connections between jurisdictional boundaries. The region should explore options for accommodating different eligibility requirements in different parts of the system of variably-priced lanes without inconvenience to the users.
2. The variably-priced lanes should be managed so that reasonably free-flowing conditions are maintained.
3. Electronic toll collection devices should be integrated and interoperable among the District of Columbia, Maryland and Virginia, and should work with other multi-state electronic toll collection systems, such as E-Z Pass℠.
4. To ensure safety and to maintain speeds of variably-priced lanes on high-speed facilities, one lane with a wide shoulder consistent with applicable FHWA guidelines should be provided at a minimum. Optimally, two lanes should be provided in each direction (or two lanes in the peak direction by means of reversible lanes) where possible.
5. Given the significant peak-hour congestion in the Washington area, transit bus service should be an integral part of a system of variably-priced lanes, beginning with project planning and design, in order to move the maximum number of people, not just the maximum number of vehicles.
6. Transit buses should have reasonably free-flowing and direct access to variably-priced lanes from major activity centers, key rail stations, and park-and-ride lots, so that transit buses do not have to cross several congested general purpose lanes.
7. Transit buses using the variably-priced lanes should have clearly designated and accessible stops at activity centers or park-and-ride lots, and signal priority or dedicated bus lanes to ensure efficient access to and from activity centers.
8. The region urges that the Congress and the Federal Transit Administration (FTA) recognize variably-priced lanes as fixed guideway miles so that federal transit funding does not decrease as a result of implementing variably-priced lanes.
9. The Washington region currently has approximately 200 miles of HOV lanes and a significant number of carpoolers, vanpoolers and other HOV-eligible vehicles. If the introduction of variably-priced lanes changes the eligibility policies for use of existing HOV facilities, transitional policies and sunset provisions should be set and clearly stated for all the users.
10. As individual phases of a system of variably-priced lanes are implemented, users of the lanes should be able to make connections throughout the region with minimal inconvenience or disruption.
11. Toll revenues from variably-priced lane projects may finance construction, service debt, and pay for operation and maintenance of the priced lanes. Should toll lanes operate at a revenue surplus, consideration should be given to enhancing transit services.

How Are We Doing? Looking at Priority Issues in the 2005 Long-Range Plan

In 2005, TPB Chairman Phil Mendelson requested that the TPB take a closer look at three priority issues: Improving emergency preparedness, optimizing signal timing and promoting regional activity centers. These priorities are derived from the TPB Vision, the regional transportation policy framework adopted by the board in 1998.

PRIORITY #1

Improve interagency coordination for incident management

Creating a regional coordination program

A truck overturns on the Beltway. A building fire closes a major roadway. Service to a transit station is interrupted due to police activity. Such events occur frequently in the Washington region. The immediate scenes of these incidents are handled with skill by responsible police, fire, transportation, and other responder personnel. Following well-established incident command procedures, they work to clear the problem as quickly as possible while protecting safety and security.

These occurrences, however, also can have impacts on the transportation system far from the incident scene, generating major traffic tie-ups or transit delays. On-scene responders often are too busy to spend significant time addressing these faraway secondary "ripple effects" affecting thousands of people. Until now, the region has addressed such ripple effects on a case-by-case basis without a single, designated regionwide entity responsible for coordination.

Following from the experiences of the 9/11 attacks and other major incidents, TPB has partnered with the region's major transportation agencies in creating the Regional Transportation Coordination Program (RTCP). At the initiative of U.S. Congressman Jim Moran, a $1.6 million grant to jumpstart the RTCP was provided in the 2005 SAFETEA-LU federal transportation reauthorization legislation.

"We need to coordinate construction schedules. We need to coordinate the way we address traffic incidents. And we certainly need to communicate better so that we can immediately figure out the most efficient way to deal with transportation crises as they arise," Congressman Moran told the TPB in April 2005.

The SAFETEA-LU funding enabled the District of Columbia, Maryland, and Virginia Departments of Transportation and the Washington Metropolitan Area Transit Authority, with the support of TPB staff, to initiate the program. In October 2005, TPB amended the region's Constrained Long-Range Transportation Plan (CLRP) and the six-year Transportation Improvement Program (TIP) to include the RTCP.

Also in late 2005 and early 2006, with support from the District Department of Transportation, the U.S. Department of Transportation's Volpe Center research arm provided expert advice and consultation on how to establish the program. The Volpe study confirmed that an RTCP can add benefit to the incident management work each transportation agency already does. Volpe noted that regional capability shortfalls exist without designated accountability for handling regional coordination activities. Volpe also noted that such a program does not have to be a bureaucracy, nor a bricks-and-mortar center, but rather a committed cooperative effort among key agencies. Volpe identified a number of organizational options for the RTCP, which are being considered by the partner agencies.

The next step upon completion of the Volpe study was to engage staff on an initial basis to support RTCP implementation. A program manager and technical support team, contracted by COG and TPB from the private sector, were to be in place by mid-2006. Development activities are to proceed throughout 2006, with the RTCP ramped up on an incremental basis.

The RTCP partners are also working with the University of Maryland Center for Advanced Transportation Technology on a separate, but related project—the Regional Integrated Transportation Information System (RITIS). RITIS will provide real-time transportation data compiled from each of the region's transportation agencies, and thus will be the primary source of information used within the RTCP.

The RTCP partners will have three major focuses to accomplish improved regional transportation communications and coordination.

A first focus will be to improve the technological systems by which transportation agencies can share data automatically. Advanced and emerging technologies will lessen the need to depend on busy personnel for information sharing, and will aid the accuracy and timeliness of shared data. RITIS will be a critical element.

The second focus will be on how agencies and personnel coordinate during incidents, based upon standard operating procedures and notification practices. Transportation response personnel have made great strides in recent years to strengthen multi-agency coordination, and the RTCP will support further improvements.

The third focus will be on using enhanced technologies and procedures to ensure that timely, accurate transportation information is provided to the public during incidents. Though the RTCP will not replace the public's reliance on broadcast and other media for transportation information, it will improve the quality and timeliness of the information available through the media sources. RITIS will also be a critical element here.

Challenges that remain include securing sustained long-term funding for the RTCP, and achieving better technical and procedural integration with public safety agencies and other non-transportation partners. The overall task of regional transportation coordination during incidents is a challenging one, but a task nonetheless that must be addressed. The RTCP will achieve success when the wide range of regional stakeholders, from the transportation agencies to public safety personnel to the general public, can rely on the program as the keystone to addressing the transportation ripple effects of incidents.

"We need to coordinate construction schedules. We need to coordinate the way we address traffic incidents. And we certainly need to communicate better so that we can immediately figure out the most efficient way to deal with transportation crises as they arise."

— U.S. Congressman Jim Moran

PRIORITY #2

Implement Traffic Signal Optimization

The TPB's signal retiming program has exceeded goals

Hundreds of traffic signals across the region have been retimed over the past three years to improve traffic flow and reduce emissions, according to reports from the departments of transportation in Maryland, Virginia and the District of Columbia.

These improvements, known as "traffic signal optimization," exceed a regional goal established by the Transportation Planning Board in 2002. Only 45 percent of the region's signals were optimized in 2002, compared with 68 percent in 2005.

In 2002, the TPB adopted the signal optimization goal as a Transportation Emissions Reduction Measure (TERM). The board implements TERMs to help meet regional emissions reduction goals, which the federal Clean Air Act requires.

The original TPB goal called for the number of optimized signals to increase from 2,100 to 3,000. By the fall of 2005, that goal has been exceeded with the optimization of more than 3,200 signals regionwide. The air quality benefits of the optimization programs were greater than originally expected.

Engineers determine optimized signal timings based on a combination of traffic volume counts, travel time observations and computer analysis. The result for any one driver may not appear to be "optimal," due to high traffic loads, cross-traffic or other factors, but overall system delay should be reduced. An engineering rule of thumb recommends checking signal timing at least every three years as traffic patterns evolve.

Measuring benefits

The improvements aim to reduce travel times, delays and the frequency of stops. Although the results varied significantly around the region, the most common improvements were in the range of 5 to 20 percent.

For example, travel times were cut 5 percent on a 14-mile segment of Georgia Avenue (MD 97) between Olney, Maryland and the District of Columbia border. Drivers experienced a 12 percent reduction in travel times on the 5-mile portion of Georgia Avenue in D.C. between the Maryland line and Rhode Island Avenue.

The cost of optimizing an intersection is approximately $3,000. Analysis performed by contractors for the Maryland State Highway Administration estimated a benefit of about $10 in time and fuel savings for each $1 spent on optimization.

The signal optimization program occurs within a larger context of traffic engineering activities. Since 2002, approximately 250 new signals have been installed. Specialized timing plans have been developed for emergencies, and in the case of Virginia, for holiday shopping traffic near major shopping facilities. And on a routine basis, agencies perform systems monitoring and maintenance, respond to public inquiries and perform spot-checks.

The traffic engineer's toolbox holds a number of options for continued improvement, including technical upgrades such as pedestrian countdown signals and bus signal prioritization, which is being tested on Route 1 in Fairfax County and Columbia Pike in Arlington.

BEYONDDC.COM

PRIORITY #3

Identify how projects or proposals support the regional core and regional activity centers

Plan will increase transit access to activity clusters

New rail projects in the region's 2005 Constrained Long-Range Plan (CLRP) will increase transit access to regional "activity clusters," according to a report presented to the TPB in October 2005. The analysis also found that a high percentage of commuters use transit to travel to activity clusters, particularly "core" clusters in the District of Columbia, Alexandria, and Arlington County.

The concept of activity "centers" and "clusters" was a key component of the TPB Vision, a policy document adopted in 1998 to guide the development of the CLRP. Goal 2 of the Vision states that the region's transportation system should promote a "healthy regional core and dynamic regional activity centers with a mix of jobs, housing and services in a walkable environment."

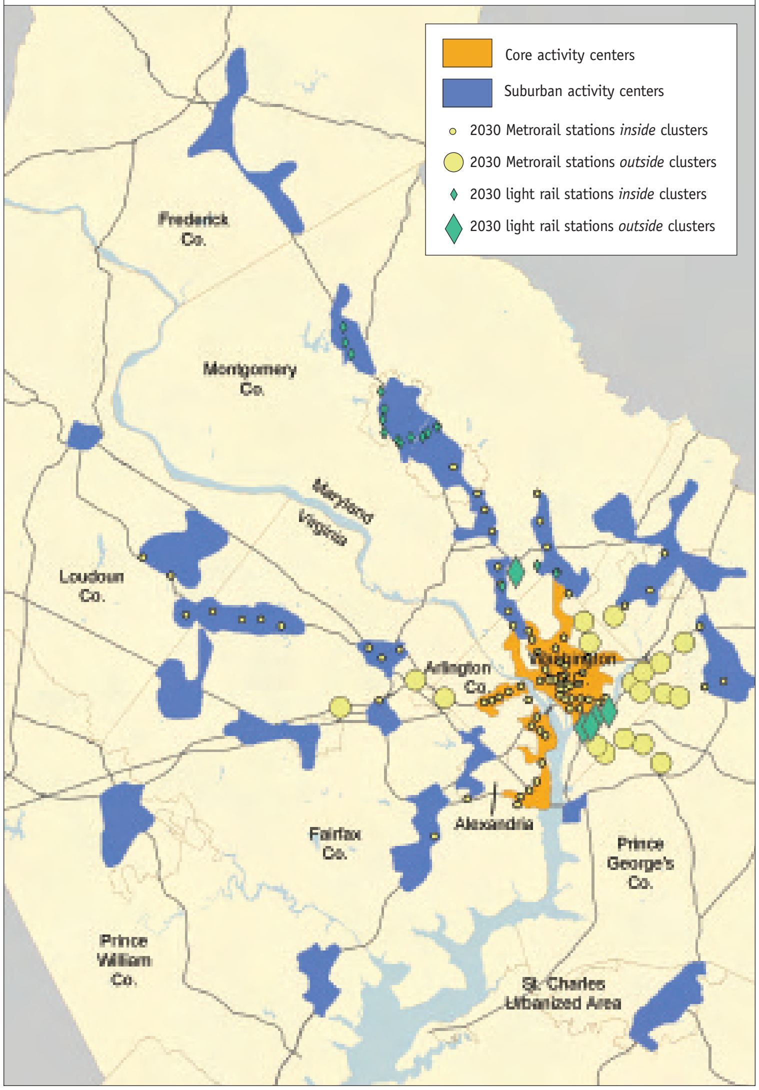
TPB and COG worked together to develop regional activity center maps, which were published in 2002 and will be updated in 2006 based on the recently adopted Round 7 cooperative forecasts. To simplify the maps and to include areas within major transportation corridors, activity centers were grouped into larger "clusters."

The transportation/land use connection

In early 2005, the TPB asked implementing agencies to place a high priority on considering how projects support the regional core and regional activity centers when submitting projects for the CLRP and TIP. To help illuminate the relationship between activity centers, planned transportation improvements, and forecast land-use patterns, TPB staff conducted an analysis of the draft 2005 CLRP. The analysis focused on activity clusters, rather than centers, because the clusters are better aligned with the transportation analysis zones used to forecast future land use and travel patterns.

The analysis showed that in 2002, only 11 out of 24 activity clusters had Metrorail stations. By the year 2030, an additional 5 clusters will gain Metrorail or light rail stations, due to the extension of Metrorail to Dulles Airport and Loudoun County in Virginia, and construction of the Corridor Cities Transitway along I-270 in Maryland. In both 2002 and 2030, 11 out of 24 clusters have commuter rail stations.

Metro and Light Rail Stations and Activity Clusters



The TPB analysis looked at the relationship between activity clusters and the region's long-range transportation plan.

On the other hand, not all rail stations are located in activity clusters. In 2002, 64 out of 83 Metrorail stations were located in activity clusters. Most of the rail stations outside activity clusters are located in the eastern half of the District of Columbia and in Prince George's County. Not enough jobs are located in these areas for them to qualify as regional activity clusters, but the potential for new transit-oriented development is high. All new Metrorail stations and 16 out of 21 new light rail stations will be located in activity clusters.

Jobs, housing and commuting

Across the entire region, only 38 percent of households were located in activity clusters in 2002; by 2030, the number will increase to 40 percent. The concentration of jobs in activity clusters will remain steady at 70 percent. Although the absolute number of jobs and households is forecast to increase in core clusters, the regional share of jobs and households in these clusters is forecast to decrease. The fastest growth rates are expected in the suburban activity clusters.

Commuting patterns are expected to reflect these changes in land use. The share of all auto commute trips that go to suburban activity clusters is forecast to increase from 44 percent in 2002 to 47 percent in 2030. The share of auto commute trips that go to areas outside activity clusters is also forecast to increase, from 33 to 35 percent. In contrast, the share of auto commute trips that go to core activity clusters is forecast to decrease from 23 percent to 18 percent. Over 90 percent of transit commute trips go to activity clusters, both now and in future forecasts.

The percent of commuters that take transit is particularly high in the core clusters, at 39 percent in 2002 and increasing to 43 percent in 2030. This transit "mode share" is five times the mode share in suburban clusters and 10 times the mode share for areas outside the clusters.

Although the analysis found a number of positive signs, such as the increased transit access to activity clusters, some TPB members expressed concern that the regional transportation plan was not doing enough to promote activity clusters. "What we are seeing is that there isn't as good a correlation [between land use and transportation planning] as we would like," said TPB Chair Phil Mendelson.

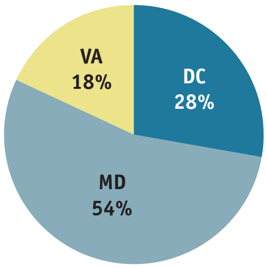
Recommendations for improvement at MetroAccess

Improving Demand Responsive Services for People with Disabilities

A report released by the Transportation Planning Board in February 2006 identified a number of shortcomings in MetroAccess, the region's public transit service for people with disabilities, and made a series of recommendations for improvement.

The report, "Improving Demand Responsive Services for People with Disabilities in the Washington Region," is the first comprehensive study of the MetroAccess system operated by the Washington Metropolitan Area Transit Authority (WMATA).

WMATA PHOTO BY LARRY LEVINE



Who Uses MetroAccess?
- 24% are wheelchair users
- 64% are female
- 51% are African American
- Median income is $24,000
- Median age is 60

Source: WMATA Survey, December 2002

An active steering committee comprising a wide range of stakeholders guided the study. Committee participants included persons with disabilities, the WMATA Office of MetroAccess, and local paratransit providers and human service agencies.

"The purpose of this study is to review innovative practices and to provide recommendations to the Metro Board," said Kathryn Porter, chair of the TPB Access for All Advisory Committee. "Some of the problems becoming evident now are actually manifestations of longer term issues. We hope the board will take a look at the recommendations we're making and really take them into consideration."

The report identified shortcomings in existing paratransit services from the perspective of customers, human service agencies, and transportation providers. They included:

- Poor communication with customers;
- Late pick-ups and excessively long travel times;
- No same-day service;
- Lack of wheelchair-accessible cabs;
- Inadequate handling of customer complaints.

The TPB's Access for All Advisory Committee made the following five priority recommendations:

1. **Improve information on MetroAccess**
   MetroAccess should provide extensive, well-organized information in multiple, accessible formats, and make this information widely available.
2. **Improve the MetroAccess complaint process**
   Complaints should be handled entirely within WMATA (not by the provider or broker), should be linked with first-hand observations of specific vehicles and drivers, and should be categorized and tracked. Customers should receive meaningful and timely feedback.
3. **Create an effective MetroAccess users group**
   A new user group should be established to bring together users, transportation providers, and management staff. The user group should be able to communicate directly with the WMATA Board, and should be involved in monitoring customer satisfaction.
4. **Provide premium same-day taxi service to MetroAccess users**
   WMATA should implement a pilot program allowing users to call taxi companies directly and pay a subsidized fare (higher than the MetroAccess fare), based on successful programs in Baltimore, Houston, Seattle and Chicago. In addition to providing users with more options, a steady demand for same-day service creates additional incentive for accessible taxicabs.
5. **Conduct an on-going review of MetroAccess**
   An independent review of MetroAccess should be conducted by January 2007 with involvement from persons with disabilities and the TPB Access for All Advisory Committee.

Baltimore has a successful same-day taxi service offered to registered paratransit users.

Other study recommendations

Create a door-to-door service policy—To respond to the need of some people with disabilities to have additional service beyond "curb-to-curb", and to respond to recent FTA guidance on "origin to destination" service, WMATA should create and implement a door-to-door service policy.

Adopt a more user-friendly "no-show" and "late cancellation" policy—The policy should consider the percentage of trips missed, not just the absolute number; define late cancellations as one or two hours before the scheduled trip; not count trips missed for reasons beyond the rider's control; and inform riders of their right to appeal.

Provide clear public information about changes to the eligibility process and get feedback from users—Clear information about the changes to the eligibility process should be readily available to clarify the goals of the changes. Users should have the opportunity to comment and understand what will change, when and for what reason.

Use incentives and subsidies to encourage more wheelchair-accessible taxicabs—Local governments should establish a pilot program to provide the financial subsidies and incentives necessary to encourage taxis and other transportation firms to provide a sufficient supply of accessible service.

Provide several different types of travel training, suited to different users, and make these services widely available—WMATA and local transit agencies should coordinate the provision of travel training to people with a wide range of disabilities.

Improve bus and rail accessibility—Transit agencies and local governments should provide information on accessible bus stops, improve pedestrian access to bus stops, purchase more low-floor buses, and thoroughly train bus and rail staff on disability issues and ADA requirements.

Coordination of specialized services

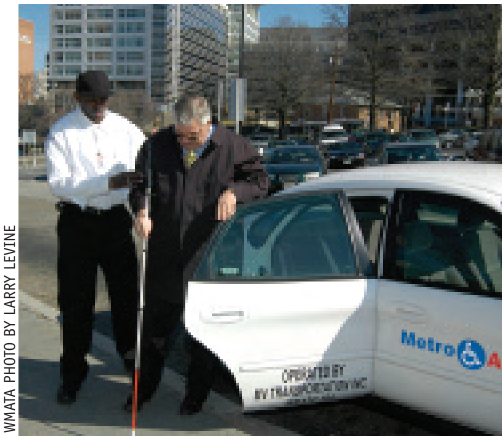
In addition to MetroAccess, more than 60 local government and non-profit programs provide specialized transportation services for people with disabilities. Medicaid is the second largest provider of specialized transportation services, next to MetroAccess. The study recommends that:

Local jurisdictions should explore opportunities for collaboration. In addition to the coordination that is already occurring at the local level, human service agencies and transit providers could consider coordinating regularly scheduled paratransit trips and broadening local alternatives to MetroAccess; and

The region should explore additional opportunities, such as a regional information clearinghouse and an accessible taxi program, through regional Human Service Transportation Coordination planning efforts.

When the Access for All report was released in February 2006, the recommendations were featured in the *Washington Post* and on local radio and television news broadcasts. In response to the recommendations, the WMATA Board of Directors created an ad hoc committee to further examine opportunities for improvement. In June 2006, the WMATA Board adopted some of the study's recommendations and is further examining cost implications of others. To see the full report, go to www.mwcog.org/transportation/committee/afa.

WMATA PHOTO BY LARRY LEVINE



MetroAccess service is currently "curb-to-curb" but some customers need door-to-door service.

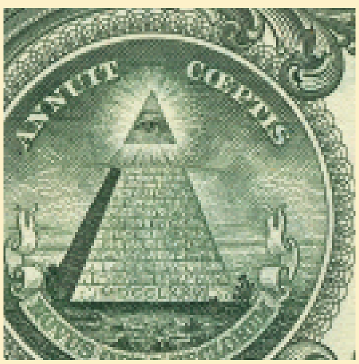
Many, but not all of the region's buses are wheelchair accessible.

Accessible sidewalks and bus stops are needed to provide people with disabilities full access to the bus and rail system.

In Brief

Region Still Facing Transportation Funding Crunch

Funding remains tight for the Washington region's transportation system, according to a preliminary financial report prepared for the Transportation Planning Board in December 2005. Despite a number of recent funding initiatives, the vast majority of anticipated revenue will be needed to maintain and operate the transportation systems that are already in place, said Arlee Reno of the firm Cambridge Systematics. Mr. Reno presented these observations as part of a status report on the financial analysis that his firm has been conducting for the 2006 update to the TPB's Constrained Long-Range Transportation Plan (CLRP). Federal law requires the financial analysis as part of the CLRP update. The analysis includes roads, transit and other modes, and measures revenues against anticipated expenditures.



Since the last financial plan analysis in 2003, regional leaders have implemented some important financial initiatives. Toll revenues have been established as a key funding source for a number of major projects, including Dulles Rail, Maryland's Intercounty Connector and the Beltway HOT (high occupancy/toll) lanes project in Virginia. Funding for Metro was increased in 2004 through the "Metro Matters" program, which provided urgent funding for rehabilitation and capacity needs.

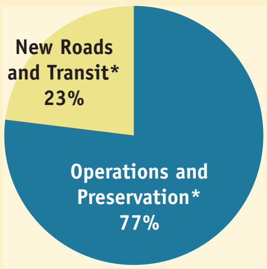
Legislation introduced in July 2005 by Virginia Congressman Tom Davis could dramatically improve the financial stability of the Washington Metropolitan Area Transit Authority (WMATA), which runs Metro. The Davis bill would authorize $1.5 billion in federal capital funds to be provided over 10 fiscal years beginning in fiscal year 2007. These federal funds are contingent, however, on state/local matches from dedicated sources, and Mr. Reno cautioned that the process for establishing these funding sources is expected to take considerable time. (See "TPB Endorses Metro Funding Bill" on page 29.)

Although encouraging, these changes are not expected to significantly reduce the long-term funding shortfall that the region's transportation system has been facing for a number of years, according to Mr. Reno. "We do not expect a significant change in the overall revenue picture presented in prior CLRP updates," he said.

Given the continued funding shortfall, Mr. Reno said, a number of desirable projects will be left out of the plan. He said the region should explore enhancements to existing sources or new funding sources, and should consider funding initiatives undertaken in other regions.

Because no significant sources of new revenues are anticipated, all new expansion projects for the 2006 plan update will require project-specific funding plans with identified revenues, such as the financial plans provided for the ICC or the Beltway HOT lanes. However, Mr. Reno noted that project-based funding agreements are "not substitutes for broad-based funding sources such as fuel taxes and other user fees." CONTINUED ON PAGE 28

Most Transportation Dollars Are Needed for Maintenance



Little money is available for new transportation projects.

* Based on region's 2003 Constrained Long-Range Plan

CONTINUED FROM PAGE 27

The Washington region is not unique in facing these challenges. On a nationwide basis, transportation funding is increasingly tight, according to a report titled "The Future of Highway and Public Transportation Funding," issued by the U.S. Chamber of Commerce in November. The report found that revenue from federal motor fuel taxes has lost about one-third of its purchasing power because the tax rates are not indexed to inflation.

This decrease, combined with construction costs increasing at a rate greater than overall inflation, has created a major funding gap. The Chamber found that the average annual gap to "maintain" the highways and transit system through 2015 is $50 billion, while the annual gap to "improve" the system is $107 billion. The Federal Highway Trust Fund Highway Account could have a negative balance as early as 2008.

As a short-term measure, the U.S. Chamber of Commerce said that indexing federal motor fuel taxes to inflation would provide the most immediate and substantial impact. The report also noted that fuel taxes and other existing fees should be increased at all levels of government. Other revenue measures, including innovative financing tools and private sector financing, would provide modest, but important, impacts.

In the long-term, the Chamber report suggested that states consider implementing fees on vehicle-miles-of-travel (VMT), which would charge drivers for the number of miles they travel. The report suggested a two-tiered mileage-based revenue system comprising 1) state-based VMT fees and 2) regional or local-option VMT fees. The state-based fee would be charged for all miles driven in a state and would likely replace current state motor fuel taxes. The regional or local fee would be charged for miles driven on congested roadways, especially during peak periods, to manage congestion.

Increased Road Construction Costs, 1996-2006

Increased costs for road construction can be attributed to several factors, including rising costs for oil, asphalt, steel, and cement. The graph shows the change over the last decade in the Producer Price Index for Highway and Street Construction.

TPB Endorses Metro Funding Bill

Eight-car Metro trains and hundreds of new Metrobuses are among the improvements that could be funded through federal legislation introduced by U.S. Representative Tom Davis of Virginia on July 28, 2005. The Davis bill, H.R. 3496, would authorize $1.5 billion in federal funds over 10 years for the Washington Metropolitan Area Transit Authority (WMATA), which runs the Metro system. This federal funding would require an equivalent state or local match and would only apply to capital expenses, not operating needs.

WMATA PHOTO BY LARRY LEVINE

Federal funding in the bill would be contingent upon amendments to the WMATA Compact, the agreement among member jurisdictions establishing the ground rules for the transit agency. The Davis bill requires the Compact to be amended to establish dedicated funding sources for WMATA, to include two federal appointees on the WMATA Board and to establish an inspector general reporting to the Board.

The Davis bill would extend the relief provided by the "Metro Matters" funding package of 2004. Metro Matters provided approximately $500 million in capital needs that had been deferred. However, it will buy only four years of basic improvements. WMATA would need a new funding agreement in 2008 in order to avoid a renewed funding shortfall anticipated in 2010.

The Davis bill would provide funding for 340 new rail cars-enough for the entire rail system to run eight-car trains. The funding would buy 275 new buses and three new garages. The bill would pay for station improvements, including more elevators, more escalators and bigger mezzanines at congested stations. A variety of pedestrian and bicycle improvements would also be funded, along with continued system rehabilitation.

At the TPB meeting on September 21, 2005, board members expressed enthusiasm for the prospect of new funding. In a resolution, the TPB expressed its "deep appreciation and support for efforts by Congressman Tom Davis and the region's congressional delegation to provide significant federal funding to meet WMATA's needs…." The TPB did express concerns about a provision in the Davis bill requiring that all local and state funding for Metro, including funding for operating expenses, must come from dedicated sources. The TPB resolution specified that the board "does not endorse any limit on the sources of funds that local jurisdictions may rely on to support WMATA."

Regional leaders convened a summit on October 3 to discuss how to pursue dedicated funding sources. Among other things, participants examined legislative options at the state level to provide the state/local match for the proposed federal funding, as well as discussing the process of establishing an inspector general for WMATA.

In response to the Davis bill, the D.C. Council approved legislation in April 2006 to set aside 0.5 percent of the retail sales tax for maintaining and improving the Metro system. That legislation was dependent, however, on action by the Maryland and Virginia state legislatures, and the federal government. By mid-2006, the general assemblies in Annapolis and Richmond had not yet acted to provide the necessary state matches for the Davis bill.

On Capitol Hill, the House passed the bill in July 2006 and sent it to the Senate for consideration. Regional leaders at the TPB vowed to keep working to secure funding for Metro.

Base Closings Will Affect Regional Travel Patterns

The Pentagon's 2005 Base Realignment and Closure (BRAC) plan will increase driving and decrease transit use, according to a regional analysis of land use and transportation impacts conducted by the TPB and the Council of Governments (COG) in 2005. On a regional scale the transportation and land use impacts of the BRAC proposal appear relatively small, but at a jurisdictional or community level, the effects will be significant. The results of this COG/TPB analysis were presented at the TPB meeting on July 20, 2005. The findings were also sent to the federal BRAC Commission.

The Department of Defense released its nationwide package of BRAC recommendations on May 13. On September 9, the nine-member federal BRAC commission approved 86 percent of the Pentagon's proposals. President Bush concurred with the commission's recommendations and on November 9, Congress allowed them to pass into law.

Key Findings

In the Washington region, the BRAC changes generally follow a pattern of shifting jobs out from the central jurisdictions of the District of Columbia, Arlington and Alexandria to military facilities in outer suburban locations.

The analysis forecasted the anticipated effects of the BRAC recommendations, and compared them with previous land use and transportation forecasts for 2010 and 2020. Key findings in the COG/TPB analysis included the following:

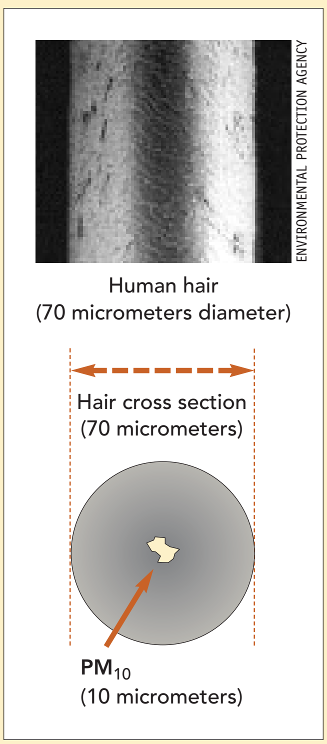
- Employment forecasts for 2010 would drop by 15,000 jobs in the metropolitan Washington region. But for 2020, the new forecasts anticipate 13,700 more jobs than originally projected.
- Jurisdictions expected to see an initial employment decline related to BRAC changes will include Arlington County, Alexandria and the District of Columbia.
- Fairfax County will be the largest recipient of jobs under BRAC—14,500 by 2010 and 21,400 by 2020. Most of these new jobs will be located at Fort Belvoir.
- Arlington County will lose the most jobs—approximately 19,300 in 2010 and 6,600 in 2020. The job decreases in the inner jurisdictions will be less severe in later years after redevelopment is completed in places like Crystal City in Arlington and the Walter Reed Hospital location in the District of Columbia.
- The region will see approximately 8,500 more homes in 2020 than originally anticipated. Prince William County will experience the greatest increase with 3,000 more households.
- Forecasted public transit use will be reduced by approximately 1.8 percent in 2010. By 2020, regional transit trips will be 0.5 percent less than originally expected.
- Automobile commutes will increase in 2010 by roughly 26,800 trips (0.1%). For 2020, vehicle trips will increase by 85,000 (0.3%).
- Vehicle miles of travel (VMT) will increase by more than 73,800 (0.04%) in 2010 and more than 133,400 (0.1%) in 2020.

A number of existing military facilities are slated for large job increases, including Fort Belvoir in Fairfax County, Quantico Marine Base in Prince William and Stafford counties, Fort Meade in Howard County, and Andrews Air Force Base in Prince George's County.

After gaining thousands of jobs, these facilities will generate more traffic. For example, the COG/TPB analysis found that in 2010, Fort Belvoir will attract nearly 34,400 more driving trips per day than under the previous forecasts, a 57 percent increase. In 2020, Fort Belvoir will attract 38,400 more driving trips—an increase of 48 percent over previous forecasts for 2020.

Meeting New Air Quality Standards

The TPB is taking steps to ensure the region's transportation plans comply with new, more stringent air quality requirements for ground-level ozone and fine-particle pollution. The U.S. Environmental Protection Agency issued regulations in April 2004 guiding the implementation of the new 8-hour standard for ozone, which replaced the previously accepted measure, known as the one-hour standard.



Fine particles are only a fraction of the size of a human hair.

The one-hour standard was set at 120 parts per billion, measured over one hour. The 8-hour standard is set at 80 parts per billion averaged over an eight-hour period. The new standard is designed to protect vulnerable groups—including children, asthmatics, and the elderly—who can be harmed by prolonged exposure to ozone levels that were permissible under the one-hour standard.

Ozone is measured on a continual basis by 18 monitors that are set up throughout the region. When a monitor registers an exceedance of the standard, that episode counts as an exceedance for the whole region.

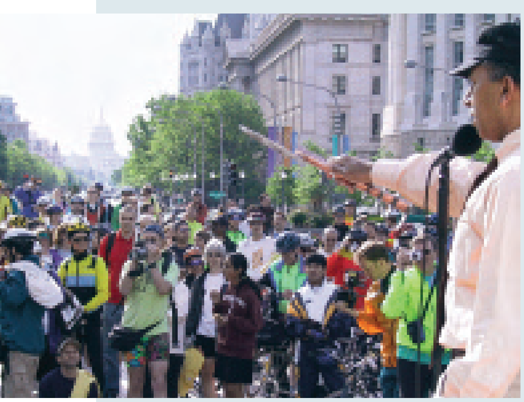
In March 2005, EPA released interim regulations to implement the new PM2.5 standard for fine particulate pollution. The PM2.5 standard replaced the previous PM10 standard.

Fine-particle pollution is a mixture of microscopic solid and liquid particles suspended in the air. Particles as small as 2.5 micrometers—a fraction the size of a human hair-have been linked to health problems. PM2.5 can cause a variety of respiratory problems, including chronic bronchitis and asthma. The American Heart Association has found that fine-particle pollution increases the risk of heart attack, stroke and cardiovascular disease.

The TPB has demonstrated that the region's 2005 Constrained Long-Range Plan (CLRP) and Transportation Improvement Program (TIP) comply with interim federal regulations for PM2.5 and ozone. In 2006, the Metropolitan Washington Air Quality Committee (MWAQC) will update the region's air quality plan to establish ceilings on transportation-related emissions for these two pollutants. In the future, the TPB will be required to show that forecasted emissions for several milestone years through 2030 will not exceed those emissions ceilings.

Bike to Work Day Draws Thousands

Bicycling reduces congestion, improves air quality, and provides a healthy and inexpensive alternative for commuters. Each spring the TPB's Commuter Connections program coordinates the regional Bike to Work Day, in cooperation with the Washington Area Bicyclist Association (WABA), to increase awareness of bicycling as a viable means of getting to and from work throughout the National Capital area.



WASHINGTON AREA BICYCLIST ASSOCIATION

WABA initiated Bike to Work Day in D.C. more than a decade ago. In 2001, Commuter Connections joined forces with WABA and expanded it to a region-wide level. Over the years, participation has grown from hundreds of cyclists to record numbers, exceeding 6,000 in 2006. Today it is one of the nation's largest Bike to Work days.

To organize the event, Commuter Connections hosts a Bike to Work Day Steering Committee that brings local city and county governments together to plan the festivities. Commuter Connections also coordinates the marketing and communications efforts, including radio ads, posters and other media outreach; and secures sponsors to help underwrite items such as the free T-shirts.

Bike to Work Day encourages many commuters to try bicycle commuting for the first time. In a recent survey of participants, 23 percent of respondents said they had not commuted by bike before they participated. Beginners gain confidence by riding alongside experienced cyclists in organized commuter convoys. Bicyclists converge at more than 20 "pit stop" celebrations located strategically throughout the region in D.C., Maryland and Virginia.

Commuter Connections also offers bicycle planning services to employers located in the region. Employers are encouraged to host their own Bike to Work Day events and to promote cycling year-round through commuter benefit programs.

In addition to encouraging bicycle commuting, Bike to Work Day also showcased other alternative commute programs such as the Guaranteed Ride Home Program. GRH, a free service of Commuter Connections, provides commuters who vanpool, carpool, bicycle, walk, or take transit at least twice a week, with up to four emergency rides home from work per year when they encounter an unexpected personal emergency or unscheduled overtime.

"Biking to work is great for the environment and individual fitness," said Montgomery County Councilmember Michael Knapp. "And with gas prices around $3 per gallon, it is also a smart way to reduce commuting expenses. This event is a great opportunity for commuters to give bicycling to work a try."

Membership of the National Capital Region Transportation Planning Board

Metropolitan Washington Council of Governments
777 North Capitol Street NE
Suite 300
Washington, DC 20002-4239
(202) 962-3200
www.mwcog.org