

Region Still Facing Transportation Funding Squeeze

Funding remains tight for the Washington region's transportation system, according to a preliminary financial report presented to the Transportation Planning Board on November 16.

Despite a number of recent funding initiatives, the vast majority of anticipated funding 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 preliminary observations as part of a status report on the

financial analysis that his firm is conducting for the 2006 update to the TPB's Constrained Long-Range Transportation Plan (CLRP). Federal law requires the TPB to conduct a financial analysis every three years. The analysis includes roads, transit and other modes, and measures revenues against anticipated expenditures.

Since the last financial plan analysis in 2003, Mr. Reno noted, 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.

Mr. Reno also noted that legislation introduced in July 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

Despite recent funding initiatives, the vast majority of future money will be needed to maintain and operate the system already in place.

Traffic Signal Retiming Program Exceeds 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



See **Signal Optimization** on page 7

See **Funding** on page 2

Funding *continued from page 1*

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.

Although encouraging, these changes are not expected to significantly reduce the long-term funding squeeze 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

All new expansion projects for next year's plan update will require project-specific funding plans with identified revenues.

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."

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

This decrease, combined with increasing construction costs, has created a major funding gap. The Chamber found that

Nationwide, the Federal Highway Trust Fund Highway Account could have a negative balance as early as 2008.

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 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

TPB Alphabet Soup

CAC	- Citizens Advisory Committee
CLRP	- Constrained Long-Range Plan
COG	- Metropolitan Washington Council of Governments
DDOT	- District Department of Transportation
FHWA	- Federal Highway Administration
FTA	- Federal Transit Administration
MDOT	- Maryland Department of Transportation
MDPC	- Metropolitan Development Policy Committee
MWAQC	- Metropolitan Washington Air Quality Committee
SAFETEA-LU	- "Safe, Accountable, Flexible, Efficient Transportation Equity Act: Legacy for Users"
TIP	- Transportation Improvement Program
TPB	- Transportation Planning Board
VDOT	- Virginia Department of Transportation
WMATA	- Washington Metropolitan Area Transit Authority

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.

For more information go to www.mwcog.org and see Agenda Item 9 under the TPB's Past Meeting Documents for November 16. ■

TPB Releases Fine Particle Pollution Analysis

A TPB analysis has found that vehicle emissions of fine particle pollutants will decrease by nearly half during the coming decades. The analysis shows that the region's transportation plans will meet interim federal regulations regarding the control of particulate matter measuring 2.5 micrometers (PM_{2.5}).

Under the interim regulations, issued by the U.S. Environmental Protection Agency in March, the TPB is required to show that future vehicle emissions of PM_{2.5} will not exceed 2002 levels. The TPB analysis forecasted direct emissions of particles, as well as emissions of nitrogen oxides (NO_x) which is a PM_{2.5} "precursor" – a key ingredient of the particulate pollution that forms in the atmosphere after emissions.

On November 16, the TPB released a draft "conformity finding" for PM_{2.5} showing that the region's 2005 Constrained Long-Range Transportation Plan (CLRP) and FY 2006-2011 Transportation Improvement Program (TIP) conform to interim EPA regulations on PM_{2.5}. The TPB is scheduled to vote on the conformity finding on December 21.

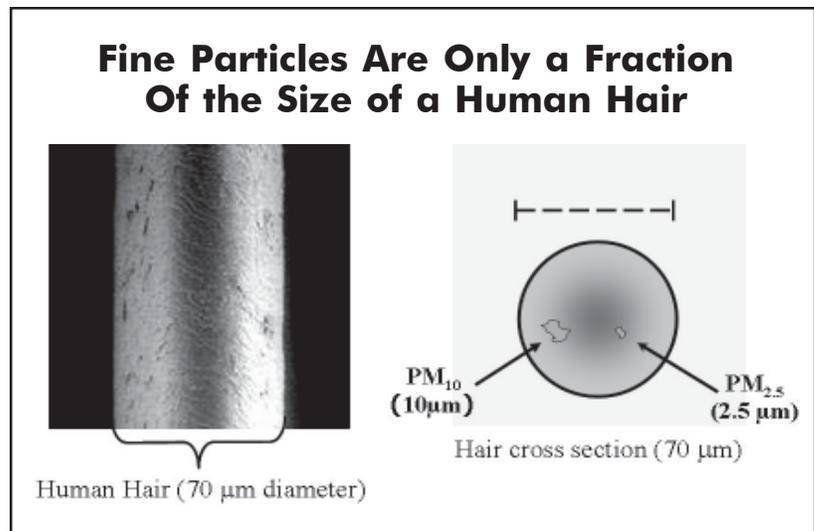
The Metropolitan Washington Air Quality Committee (MWAQC) is developing an air quality plan containing ceilings ("emissions budgets") on permissible vehicle emissions

levels for PM_{2.5}. Future TPB conformity findings will be required to meet these ceilings.

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. PM_{2.5} 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.

In the Washington region, coal combustion is estimated to contribute 49-66 percent of PM_{2.5} pollution and motor vehicles contribute 10-29 percent.

Last December, U.S. EPA designated the Washington region as a non-attainment area for federal air quality standards for fine particles (PM_{2.5}). The TPB is required under federal



law to show that transportation-related emissions will contribute to the region's efforts to meet federal standards for PM_{2.5}.

For more information go to www.mwcog.org and see Agenda Item 9 under the TPB's meeting documents for December 21. ■

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Activity Centers Maps Update Planned for 2006

The COG/TPB regional activity centers maps – which are intended to identify focal points for job and housing growth, and nodes for transportation linkages – are scheduled for an update in 2006.

Fifty-eight centers were defined in a set of maps released in 2002. The current list of activity centers includes established places like Downtown Washington, Bethesda and Tysons Corner, as well as emerging centers like Largo in Prince George's County and the "Corporate Dulles" center in Loudoun County.

At the TPB meeting on November 16, Paul DesJardin of the Council of Governments staff said that the activity centers maps will be updated next year to reflect recent changes in local land use plans and forecasts.

The Metropolitan Development Policy Committee (MDPC) and the Planning Directors Technical Advisory Committee, with input from the TPB, will guide the update of the activity centers maps. MDPC is a policy committee at the Council of Governments responsible for regional land use issues.

The origin of the activity centers maps can be traced to the TPB Vision, the region's transportation policy framework, which promoted transportation linkages among "a healthy regional core and dynamic regional activity centers with a mix of jobs, housing and services." Through the Vision, the TPB directed staff to develop a "composite general land use and transportation map of the region that identifies the key elements needed for regional transportation planning – regional activity centers, principal transportation corridors and facilities, and designated 'green space'" (Goal 6, Objective 1).

The data source for the activity centers maps is COG's Cooperative Land Use Forecasts, which reflect local land use plans and are based on the local jurisdictions' projections of population, households and employment. MDPC

and the Planning Directors update the Cooperative Forecasts on a regular basis.

Centers and clusters

After the activity centers were developed in 2002, they were grouped into larger activity "clusters" to better represent concentrations of housing and employment located along major transportation corridors. The Planning Directors

Centers vs. Clusters

Activity Centers (58)

- 4% of region's land area
- 50% of the region's jobs in 2030
- 10% of the region's households in 2030

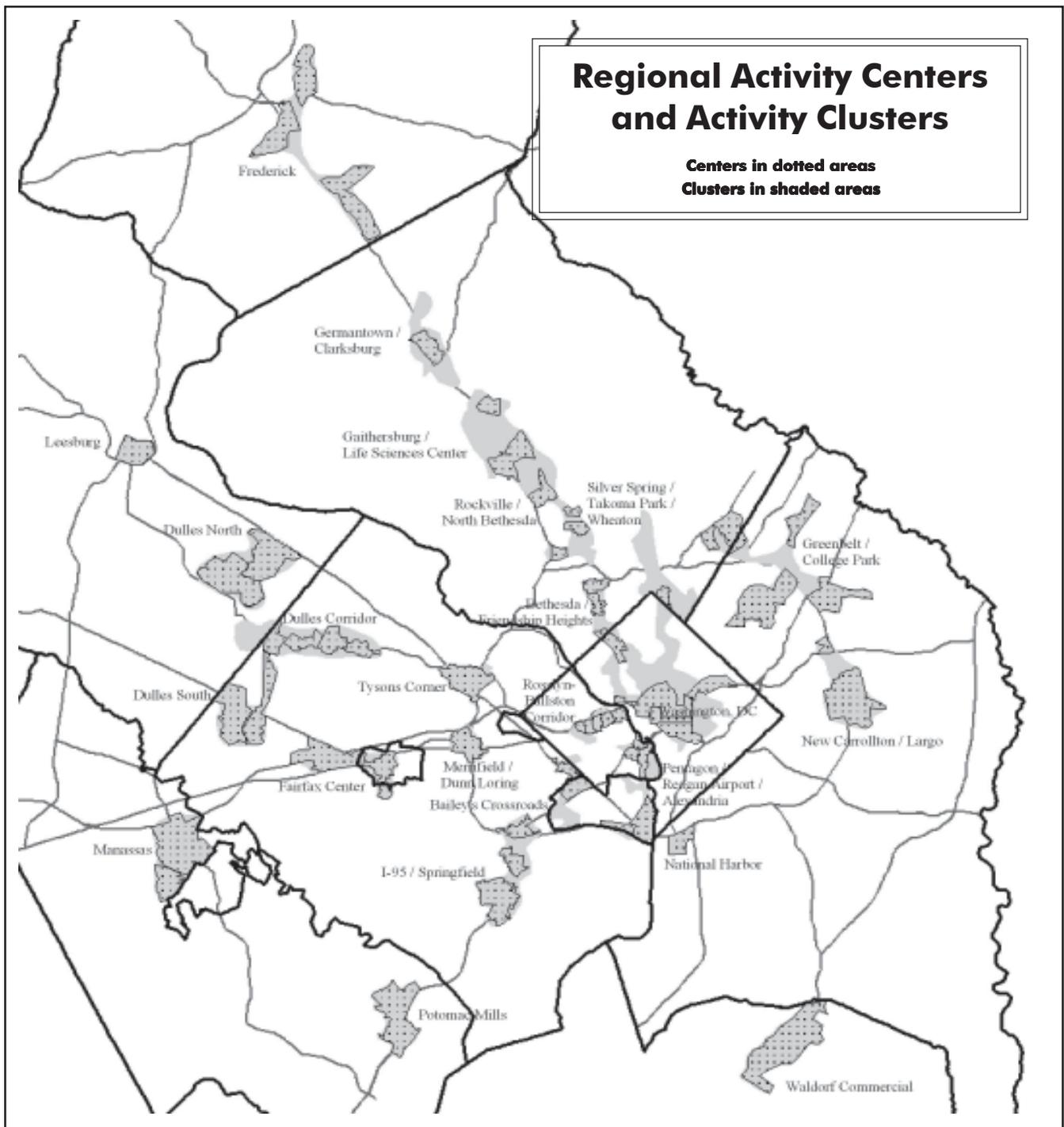
Activity Clusters (24)

- 14% of region's land area
 - 70% of the region's jobs in 2030
 - 31% of the region's households in 2030
-

Technical Advisory Committee believed the clusters would be a useful tool because the more narrowly defined centers excluded large concentrations of housing located immediately adjacent to employment areas.

The 58 activity centers will contain slightly more than half of the region's anticipated jobs and about 10 percent of households in the year 2030. In comparison, the 24 activity clusters will contain about 70 percent of the region's jobs and approximately 31 percent of households in 2030. The centers comprise 4 percent of the region's land area; the clusters comprise 14 percent of the region's land.

The TPB's scenario study (the Regional Mobility and Accessibility Study) is using the activity clusters as key building blocks. All the land use scenarios in the study would shift anticipated development to regional activity clusters. For example, a scenario that increases the number of anticipated households in the



region by 200,000 would put all that growth in the activity clusters.

More recently, the activity centers maps have been used to analyze the region’s long-range transportation plan (the CLRP). In October, TPB staff presented an analysis of the relationship among activity clusters, planned transportation improvements and forecasted land-use patterns.

(See “Plan Will Increase Transit Access to Activity Clusters” in the November TPB News).

TPB staff has used the activity clusters rather than centers in these analyses because the clusters more closely align to the traffic analysis zones used in the TPB’s travel forecasting models. Proponents of the clusters

Activity Clusters *continued on page 4*

Activity Centers *continued from page 3*

have also noted that their larger land areas and existing concentrations of housing provide a more realistic framework for increasing future land-use densities, especially for households.

But the clusters have their critics. At recent TPB meetings, Chris Zimmerman of the Arlington County Board raised objections to the use of activity clusters because they are larger than activity centers and therefore less walkable and less accessible to transit. "If you take the larger areas... and you have things farther apart, you will have a lot more car trips," he said.

Fairfax County Supervisor Cathy Hudgins said that using the clusters as a tool for analysis was not necessarily inconsistent with the regional goal of encouraging more concentrated development. "We will not be able to deal with the growth that we are anticipating by only looking at a radius of a half or quarter mile from transit," she said.

For more information go to www.mwco.org and see Agenda Item 14 under the TPB's Past Meeting Documents for November 16. ■

Other November Agenda Items

The TPB's November agenda also included:

- Briefing on the draft *Call for Projects* document and schedule for the 2006 Constrained Long-Range Plan (CLRP) and the FY 2007-2012 Transportation Improvement Program (TIP). Compared to previous years, the Call for Projects, formerly called the Solicitation Document, has been streamlined and the CLRP schedule has been extended to allow more time for analysis.
- Briefing on proposed *amendments to the FY 2006 Unified Planning Work Program (UPWP)* to address requirements in the new federal surface transportation reauthorization legislation. The "Safe, Accountable, Flexible, Efficient Transportation Equity Act: Legacy for Users" (SAFETEA-LU) Act, increased funding

and planning requirements for the TPB and other metropolitan planning organizations (MPOs). The proposed UPWP amendments would increase the TPB work program by approximately 40 percent (\$3 million) through June 30, 2006. ■

December Agenda

The TPB's December agenda will include:

- Actions related to the *fine particles (PM2.5) air quality conformity assessment* for the 2005 Constrained Long-Range Transportation Plan (CLRP) and FY 2006-2011 Transportation:
 - *Review of comments* received regarding the draft PM2.5 conformity assessment and acceptance of recommended responses.
 - *Approval* of the PM2.5 conformity assessment.
- Election of *TPB officers* for 2006.
- Appointment of six members designated by the 2005 *Citizens Advisory Committee (CAC)* to the CAC for the year 2006.
- Approval of final *Call for Projects document* for the 2006 Constrained Long-Range Transportation Plan (CLRP) and FY 2007-2012 Transportation Improvements Program (TIP).
- Approval of *amendments to FY 2006 Unified Planning Work Program (UPWP)* to address requirements in the federal surface transportation reauthorization legislation (SAFETEA-LU) that was approved by Congress in July.
- Update on potential activities to identify *dedicated funding for the Washington Metropolitan Area Transit Authority (WMATA)*.
- Status report on the regional *transportation coordination program*.
- Briefing on a proposal to develop a report on progress toward meeting the needs described in the 2004 "*Time to Act*" brochure, which highlighted the region's near-term transportation capital funding needs.
- Report on the regional *pedestrian and bicycle safety education campaign*. ■

Signal Optimization *continued from page 1*

signals were optimized in 2002, compared with 68 percent today.

Results of the optimization program were reported at the TPB meeting on November 16.

Three years ago, 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 are required by the federal Clean Air Act.

The original TPB goal called for the number of optimized signals to increase from 2,100 to 3,000. Today, that goal has been exceeded with the optimization of more than 3,200 signals

regionwide.



Traffic signal optimization is a cost-effective way to reduce congestion.

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 because 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

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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 air quality benefits of the optimization programs were greater than originally expected. TPB staff analysis showed that nitrogen oxides (NOx) were reduced 0.62 tons per day (versus the original projection of 0.27) and volatile organic compounds (VOCs) were reduced by 0.72 tons per day (versus the original projection of 0.67).

The report to the TPB noted that signal optimization 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 priority corridors, which are being tested on Route 1 in Fairfax County and Columbia Pike in Arlington.

For more information go to www.mwcog.org and see Agenda Item 15 under the TPB's Past Meeting Documents for November 16. ■

Calendar of Events

Dates and times subject to change. All meetings are at COG unless otherwise indicated. If you are in need of special assistance to participate in meetings, please call (202) 962-3315 or (202) 962-3213 (TDD). Bicycle racks are located in the parking garage at 777 N. Capitol St., NE (Enter from 1st Street).

December 2005

- 2 TPB Technical Committee (9 am)
- 2 TPB Steering Committee (noon)
- 6 Regional Transportation Demand Management (TDM) Marketing Group (10 am)
- 13 Commuter Operations Center Subcommittee (10 am)
- 13 Management, Operations and Intelligent Transportation Systems (MOITS) Policy and Technical Task Forces Joint Meeting (12:30 pm)
- 15 TPB Citizens Advisory Committee (6 pm)
- 16 Joint Technical Working Group for the Regional Mobility and Accessibility Study (noon)
- 21 Transportation Planning Board (noon)**

January 2006

- 4 Telecommuting Ad-Hoc Group (10 am)
- 6 TPB Technical Committee (9 am)
- 6 TPB Steering Committee (noon)
- 10 Management, Operations and Intelligent Transportation Systems (MOITS) Policy and Technical Task Forces Joint Meeting (12:30 pm)
- 11 Bike to Work Day Steering Committee (10 am)
- 12 TPB Citizens Advisory Committee (6 pm)
- 13 Joint Technical Working Group for the Regional Mobility and Accessibility Study (noon)
- 17 Employer Outreach Ad-Hoc Group (10 am)
- 17 Commuter Connections Subcommittee (noon)
- 17 Bicycle and Pedestrian Subcommittee (1 pm)
- 18 Transportation Planning Board (noon)**
- 20 Travel Forecasting Subcommittee (9:30 am)
- 26 Aviation Technical Subcommittee (10:30 am)
- 26 TPB Access for All Advisory Committee (noon)

February 2006

- 3 TPB Technical Committee (9 am)
- 3 TPB Steering Committee (noon)
- 7 Regional Transportation Demand Management (TDM) Marketing Group (10 am)
- 9 TPB Citizens Advisory Committee (6 pm)
- 10 Joint Technical Working Group for the Regional Mobility and Accessibility Study (noon)
- 14 Management, Operations and Intelligent Transportation Systems (MOITS) Policy and Technical Task Forces Joint Meeting (12:30 pm)
- 15 Transportation Planning Board (noon)**

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