MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

December 28, 2006

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Gwen Wright, Acting Chief
County-wide Planning Division

Richard C. Hawthorne, Chief
Transportation Planning

FROM: Larry Cole: 301-495-4528, for the Montgomery County Planning Department

DISCUSSION: Transportation Priorities: The Montgomery County 10-Year Transportation Program and the State Transportation Priority List

This memorandum contains in Attachment 1 the status of all the projects in the County's current 10-year transportation program, as requested by the Planning Board as part of your discussion on the CTP on October 26, 2006.

RECOMMENDATIONS

Staff recommends that the Board forward the following comments to the County Council, with a new priority list reflecting these changes (see Attachment 2):

General

We recommend that all of the projects on the list of joint priorities that is sent to the State Delegation also be listed in the County's 10-year transportation program.

Priority List of State Projects

We recommend the following changes to the current priority list of State projects, as reflected in the letter dated November 2, 2005, jointly signed by the County Executive and the Council President:

1. The Glenmont Parking Garage is now fully funded and should be deleted from the list.

2. The Needwood Road Bike Path, from the ICC to Beach Drive/Rock Creek Park should be added as a high priority for construction.

3. The Georgia Avenue (MD97)/Norbeck Road (MD28) interchange should replace Phase II of the Woodfield Road (MD124) widening project as the County's next construction priority after the I-270/Watkins Mill Road Extended interchange.

4. The Spencerville Road (MD198) widening from Layhill Road to Old Columbia Pike should be deleted from the priority list. This segment does not have high forecast traffic congestion in the near term since the ICC will take some of the traffic pressure off this road, and it is outside the State's Priority Funding Area. The project is also in the Upper Paint Branch Special Protection Area and a portion of it goes through the Spencerville Historic District, so it will require a significant effort to get this project designed and funded for construction, an effort that we believe should be put off until a later date.

5. The description of the County's #2 priority for new starts under the State's Development and Evaluation (D&E) program, Rockville Pike (MD355)/Cedar Lane interchange, should be expanded to encompass the segment of MD355 between Woodmont Avenue and the Capital Beltway (I-495) to reflect the general high level of congestion throughout this segment of MD355, its importance as an evacuation route from Washington to the Beltway, to reflect access changes at NIH, and to accommodate the BRAC-related relocation of employees from Walter Reed to the National Naval Medical Center.

6. The Rockville Pike (MD355)/Nicholson Lane interchange should be deleted from the priority list as it is not one of the most congested intersections and network improvements that are expected to be provided by developers in the near future will likely reduce the need for an interchange.

7. The Veirs Mill Road (MD586)/Randolph Road interchange should be deleted from the D&E priority list given the lack of current congestion following the recent at-grade improvements.

8. The scope of two D&E priorities - Veirs Mill Road (MD586) Bus Rapid Transit, Rockville to Wheaton, and University Boulevard (MD193) Bus Rapid Transit, Wheaton to Langley Park - should be increased to encompass pedestrian improvements along these routes, including enhanced lighting, to ensure safe access for transit patrons.

9. The Bi-County Transitway Spur, Langley Park to White Oak should be deleted from the list of priorities until it is approved as part of a Master Plan Amendment to incorporate the mainline of the Bi-County Transitway. The Council has not yet directed us to study this as part of the proposed Amendment.

10. Safety improvements should be made as soon as possible to the Rockville Pike (MD355)/Shady Grove Road intersection to reduce the high level of crashes that have been occurring the last three years.

State Transportation Participation

We recommend that the following candidates be funded as part of the County's State Transportation Participation program (in order of priority):

1. Rockville Pike (MD355)/Montrose Parkway interchange (Construction)

2. Needwood Road Bike Path, as part of ICC Bike Path (Construction)

3. Georgia Avenue (MD97)/Montgomery Hills reconstruction study (Development and Evaluation)

4. Full ICC Record of Decision (ROD) Bike Plan Implementation (Development and Evaluation)

5. Veirs Mill Road (MD586) Bus Rapid Transit and Pedestrian and Lighting Improvements, Rockville to Wheaton (Development and Evaluation)

6. University Boulevard (MD193) Bus Rapid Transit and Pedestrian and Lighting Improvements, Wheaton to Langley Park (Development and Evaluation)

7. Georgia Avenue (MD97)/Norbeck Road (MD28) interchange (Construction)

8. Georgia Avenue (MD97)/Brookeville Bypass (Construction)

The County's 10-year Transportation Program

The Planning Board recommends that the following projects be added to the County's 10-year transportation program (no priority noted):

1. Full implementation of the 2007 recommendations of Pedestrian Safety Advisory Committee

2. Continuous Lighting on State Highways in Urban Areas

3. Implementation of an "Every Light, Every Night" Policy for better streetlight operations in the county

4. Implementation of Access 2000 Pedestrian and Bicycle Access Improvements at Metro and MARC Stations

5. Full ICC ROD Bike Plan Implementation

6. Sidewalk Retrofit Program on Major Highways and Arterials in Urban Areas

7. Enhanced Bus Shelters on Major Transit Routes

(Staff makes no recommendation for prioritization of the projects in the 10-year program at this time. Most will become CIP projects and can be ranked as part of the CIP review process.)

INTRODUCTION

The Planning Board reviewed the draft FY2007-FY2012 Consolidated Transportation Program (CTP) on October 26, 2006 and provided comments to the County Council in advance of the CTP Tour meeting and the Delegation hearing on the CTP (see Attachment 3).

Staff is recommending in this memo that some changes and additions be made to the County's priority list for State projects, the update of which the County Council's Transportation and Environment Committee is anticipated to discuss in January or early February, followed by a full Council discussion. The County's official list of priorities for State projects will then be forwarded in a letter to the Montgomery County Delegation, jointly signed by the Council and the Executive. The last joint letter was sent on November 2, 2005 and is shown as Attachment 4.

Two years ago, the County's list of transportation priorities for new starts on State projects was expanded into the County's 10-year transportation program to encompass many County projects also. Attachment 1 shows the County's current 10-year transportation plan, dated Summer 2006, noting the current status of each of these projects, and where appropriate, their priority in the joint letter on State priorities. While the 10-year plan was intended to comprise the whole program for major transportation projects in the county, there are several projects in the 11/2/05 joint letter that do not appear in the Summer 2006 10-year plan. For clarity purposes in this discussion, staff has amended the list to include those projects also for the purpose of this discussion. However, ***staff believes that the Board should recommend to the Council that these two lists be reconciled, with all of the State priorities being selected from the 10-year plan.***

While staff is in agreement with most of the current State priorities, we believe that a general reassessment of the County's 10-year Transportation program is needed to ensure that it accurately reflects the County's needs and priorities, not just in transportation, but in furthering the County's overall planning goals.

Because of the large number of locations under discussion and the types of information to be considered, staff's presentation at the Board's meeting will rely on a graphic depiction that shows the candidate projects on countywide maps using our GOS platform. It is not feasible to produce these maps in a legible form in this memo.

TRANSPORTATION POLICY CONSIDERATIONS

Before discussing individual projects, staff offers the following policy issues for consideration in the affirmation or deletion of the projects on the current priority list and in the selection of new candidates for the list.

For the past few years, much of the discussion of transportation priorities on Montgomery County's roadways has been focused on improving the vehicular level of service during peak periods. Discussed less are other concerns such as the level of service for other users, safety, and how these roads operate during off-peak periods.

Several states and Federal agencies are evaluating alternative means to quantify and qualify Multi-modal Level of Service. Montgomery County has addressed the issue in part by allowing higher congestion levels in densely developed areas with good transit service, areas where pedestrian volumes and needs are highest.

Staff has considered the following topics in our priority recommendations to the Board and will be continuing to discuss how best to incorporate these considerations during our work on the County's Growth Policy in Spring 2007.

Congestion

With the advent of the Highway Mobility Report (HMR), we have a good tool to measure congestion, a tool that will be refined to a greater degree each year as our database of traffic data increases. The list of congested intersections exceeding the County's policy area standards is dynamic however with changes from one year to the next due to variations in traffic volumes, implementation of traffic signal timing changes, and other improvements. While it gives a good snapshot of what is happening on the ground, the variability means that one cannot use a single year's data to determine the priority of transportation projects. What staff has used is the current list, with consideration of which intersections have appeared on previous lists, in addition to traffic forecasts.

The current list of congested intersections exceeding the County's policy area standards is shown as Attachment 5, and now comprises 63 intersections. The list has been updated since the Board reviewed the HMR to reflect completed improvements at intersections and to reflect data received from SHA in their study of the effects of the interchange construction on US29. For those intersections that are also listed on the State's 2005 High Accident Location list (Attachment 6), the accident rate is also shown on Attachment 5 for ease in cross-referencing.

Staff will present a map at the Board's meeting showing the level of congestion for those intersections that are near or over the allowable CLV for the applicable area, as well as the relative traffic volumes for the intersections.

Traffic Forecasts

While current congestion is a significant consideration in the prioritization of projects, traffic forecasts are an essential tool for determining which facilities will continue to have problems as well as in determining which will need improvements before problems occur.

Network Connectivity

While developers are responsible for making individual transportation improvements in growing areas, government will continue to be responsible for ensuring that a sufficient transportation network is provided. As was seen in Clarksburg as an example, even where developers have been required to build substantial portions of the transportation infrastructure, the timing of those improvements can become a concern. A coordinated implementation is needed to ensure that they are done in a timely manner, with the County or State providing the higher-level facilities in many instances supported by developer fees. Improvements in how the County ensures that this will happen, whether by impact taxes, the establishment of development districts, or by other means, will be part of our Growth Policy discussions next Spring.

Base Realignment and Closures (BRAC)

Whereas developers can be required to mitigate the transportation impacts caused by their projects, the County and State have no regulatory power over the Federal Government. On earlier projects such as the Food and Drug Administration's consolidation in White Oak, their general stance has been that the additional jobs created are a benefit and that any necessary

transportation improvements should be locally funded. Therefore, staff believes that a greater weight needs to be given to transportation projects that would support employment expected at these Federal facilities.

The proposed BRAC-related personnel transfers from Walter Reed Army Medical Center in Washington, DC to the National Naval Medical Center (NNMC) in Bethesda and to the Walter Reed Annex on Brookville Road in Silver Spring are also sizeable employee influxes that will have to be accommodated on existing roads, with no announced contribution from the Federal Government to support the transportation infrastructure. Between 1,000 and 2,500 additional personnel are anticipated at NNMC (1,889 are noted in the official BRAC report), as well as an additional approximately half a million patients and visitors per year. The effects of BRAC on the Walter Reed Annex are unclear.

Crash History

Safety data has not been considered to the same degree as congestion in determining the County's transportation priorities in the past. It is also important to note that collision data only represents those accidents that were reported to the police, which many collisions involving only property damage are not. The 2005 list of high accident locations on State highways is shown as Attachment 6. This data will be reflected in the displays at the Board's meeting. As with the traffic data however, the high accident locations vary significantly from year to year. Part of this may be due to roadway improvements being made, but all of the reasons are not clear at this time. Staff will be working on this issue, although we caution that accident statistics require a complex analysis that is only possible on a general basis with our current staffing.

The Montgomery County Police Department's report on pedestrian collisions is also shown as Attachment 7. This report notes that of the top ten roads in the county for pedestrian collisions, all are State roads, except for #9, Randolph Road.

Intersection Widenings and Safety

The intersection of Rockville Pike at Shady Grove Road was widened a few years ago as part of SHA's Congestion Relief Study (CRS) to provide the desired number of turn and auxiliary lanes. Following the improvements however, the intersection has become a high-accident location with 62 reported crashes in 2004 and 55 in 2005, significantly higher than any other intersection in the county. The crash rate and crash severity rate for 2005 were triple that of the intersection of Georgia Avenue and University Boulevard, by comparison. To compare, all four roads at these two intersections have six through lanes and have comparable traffic volumes, about 40,000 vehicles per day. But the Wheaton intersection is only half the size of the Shady Grove intersection (see Attachments 8 and 9, which are at the same plan scale). One significant difference between the two locations is that Wheaton has a grid of streets that accommodates some of the turning movements at the intersection that are prohibited at the intersection. Shady Grove does not have such a grid, and accommodating the turning movements requires longer crossing distances for pedestrians, more conflicts, and the absence of a crosswalk on the south leg of Rockville Pike. The majority of the crashes are noted as being left-turn-related.

Rockville Pike (MD355) at Shady Grove Road is noted as the intersection with the second highest accident rate for 2005 on Attachment 6. Staff also notes that two intersections on

Muncaster Mill Road (MD115), #6 at Shady Grove Road/Airpark Road and #8 at Muncaster Road/Redland Road, are also intersections where widenings were also completed in the last couple of years as part of the CRS program.

Staff believes that the presence of so many recently "improved" intersections on the high accident location list is a cause for concern and that further study is needed to determine the reason for the apparent correlation between decreased congestion and an increase in crashes. The results of such a study could affect the prioritization of future projects, or reveal design flaws that should be modified.

Emergency Preparedness

The main radial routes from the District of Columbia serve as evacuation routes in the event of an emergency. There are severe congestion problems on some of these routes, most notably Georgia Avenue, Rockville Pike, and Colesville Road inside the Beltway. Staff believes that a higher priority needs to be given to these routes, particularly those segments inside the Beltway, to ensure that they will be able to operate well in the event of an emergency.

Smart Growth

The State's Priority Funding Areas were created in response to Smart Growth concerns and the State will not fund improvements outside those areas except for reasons of safety. Staff recommends that the County adopt a similar policy as one strategy to limit growth in the Agricultural Reserve. While the purpose of today's discussion is to discuss transportation priorities, staff notes that several new public schools are proposed outside the PFA and that other parts of the County's budget might need to be modified to respond to a broad application of such a policy.

REASSESSING AND UPDATING PRIORITIES

When we go beyond the initial list of four projects, staff recommends that the County's 10-year transportation plan and priority list be reassessed. The current 10-year transportation plan is heavily weighted toward highway projects that would increase capacity and reduce congestion.

The improvements under the current 10-year plan would enable the share of rush hour transit work trips to grow from 15.2% of all work trips to 17.4%. In whole numbers, the rush hour transit work trips would grow by 26,000 additional riders by 2015, but non-transit rush hour trips would grow twice as fast. Despite the large increase in non-transit trips, rush hour congestion would be reduced from 39.6% to 32.6% by the implementation of the roadway projects in the 10-year plan in its current form.

Even with the transportation improvements that the Board requires of developers as a condition of approval, relief of existing congestion problems and additional capacity to accommodate new development will continue to be significant priorities and responsibilities for the County. But ***staff believes that the current 10-year plan targets should more broadly encompass project and programs designed specifically to address safety, transit, pedestrian, and bicyclist needs as the County's growth orientation shifts from suburban development to urban redevelopment.***

How should we use the County's funds to leverage State funds

The initial list of State projects to be partially funded with County funds has focused on roadway construction projects in the pipeline. In rethinking the County's priorities however, the question should also be asked: Rather than target capacity projects that SHA would pursue if it had sufficient funds, should we incentivize those projects that SHA has not expressed a great interest in doing on their own?

COMMENTS ON THE CURRENT STATE PRIORITY LIST

Construction

1. Glenmont Metro Garage: Fully funded.

2. Georgia Avenue (MD97)/Randolph Road interchange: Staff believes that the Council should advance the funds needed for the accelerated construction schedule.

3. I-270/Watkins Mill Road Extended interchange: This project would be a breakout from the I-270/US15 study. Developers are currently constructing the road and will provide almost all of the right-of-way. This project would alleviate congestion at three nearby intersections that also are high accident locations.

4. Woodfield Road (MD124) Widening (Phase II), from Midcounty Highway to South of Airpark Road: This segment does not have any intersections exceeding their congestion standard on the current list, although forecast traffic volumes show that it will be needed. ***Staff recommends that this project be made a lesser priority and that it should not be funded with State Transportation participation funds at this time.*** *(Phase I of the Woodfield Road widening project, from South of Airpark Road to Fieldcrest Road, which is already funded for construction, includes the Fieldcrest intersection which is listed as #27 on the list of most congested intersections. The latter project is anticipated by the Board to be reviewed as a Mandatory Referral on 2/1/07.)*

5. Brookeville Bypass (MD97): This project is on the DPWT's list of the next four candidate projects that could be partially funded by the County.

6. Georgia Avenue (MD97)/Norbeck Road (MD28): This project has been skipped as the next priority for County funding in favor of the two Woodfield Road projects on the construction list, #4 and #13. This intersection is listed as the fifth most congested intersection. ***Staff recommends that this project replace Phase II of the Woodfield Road widening as the #4 construction priority and that it be considered for funding with State Transportation participation funds.***

7. Clopper Road (MD117) Widening from I-270 to Seneca Creek State Park: Improvements to Clopper Road between I-270 and Firstfield Road were completed a year or so ago. Phases II and III are in design but are not yet funded for construction. "Production" advertisement dates are as follows: Phase II - 12/07; Phase III - 7/08. No intersections on Clopper Road currently appear on the list of the 63 intersections now exceeding their congestion standards (see Attachment 5), but Great Seneca Highway, which was

constructed in part as the relief road for Clopper Road has three: at Muddy Branch Road (#1), at Quince Orchard Road (#29), and at Kentlands Boulevard (#60). The Clopper Road project has been dormant for some time, but was recently restarted. Improvements along this road, which are almost ready for construction, could relieve traffic on Great Seneca Highway.

8. Spencerville Road (MD198) Widening from Old Columbia Pike to US29: While this is a widening project, it would also have safety benefits and commercial revitalization benefits.

9. Norbeck Road (MD28) Widening from Georgia Avenue (MD97) to Layhill Road (MD182): This project would address capacity problems in this segment of MD28.

10. US29/Fairland Road/Musgrove Road interchange: The Fairland Master Plan requires that an assessment be done of the traffic impacts of each interchange along US29 before proceeding with construction of the next. The construction of two interchanges is now complete and the third will be in the next few months. Staff has incorporated the study data provided by SHA so far into the list of congested intersections, which shows the Fairland Road intersection as #17. The intersection is also listed as #28 on the list of high accident locations.

11. Rockville Pike (MD355)/Montrose Parkway (Phase II) – CSX Grade Separation: This project is a needed safety and congestion project, however it would require the acquisition of approximately $10 million in property and businesses if it is not constructed with the Montrose parkway East project, a County project that is currently not funded for construction. The latter project is anticipated to be reviewed by the Planning Board in the next few months.

12. I-270/Newcut Road: Staff believes that the level of developer-funding that might be sought for this project should be addressed as part of the Growth Policy discussions.

13. Woodfield Road (MD124) Widening from Snouffer School Road to Airpark Road and from Field Crest Road to Warfield Road: ***Staff recommends that this project be moved to a lesser priority and not be funded with State Transportation participation funds at this time.***

14. Spencerville Road (MD198) from Layhill Road to Old Columbia Pike: SHA's MD28/MD198 Study is broken into three projects that are listed separately on the current priority list for construction funding, #'s 8, 9, and 14, for a total cost of $225 M. The Georgia Avenue/Norbeck Road interchange (#6) is an associated project that would cost an additional $75M. Staff believes that the ranking of these projects for the MD28/MD198 corridor is correct, and in particular that the interchange should move forward.

    The construction of the ICC appears imminent and the ICC study shows that there will be a reduction in the future traffic increase on this segment of MD198, which is estimated to cost $115M and is outside the Priority Funding Area (PFA). The project is also in the Upper Paint Branch Special Protection Area and a portion of it goes through the

Spencerville Historic District. Any State-funded improvements along MD198 in this segment would probably be limited to safety improvements only, consistent with MD's Smart Growth legislation. ***Staff recommends that this project be dropped from the priority list.***

15. First Street (MD 28)/Veirs Mill Road (MD 586)/Wooton Parkway interchange: This intersection is #13 on the list of most congested intersections. The City of Rockville has expressed a desire to pursue a study in conjunction with interchanges at Hungerford Drive (MD 355)/Middle Lane and at Rockville Pike (MD 355)/Veirs Mill Road (MD 28) rather than design this one first.

Development and Evaluation (Planning) - Highway

1. Georgia Avenue (MD97)/Montgomery Hills reconstruction: The Georgia Avenue (MD97) reconstruction in Montgomery Hills has been at the top of the County's priority list to enter the State's Development and Evaluation program since 1999, but no planning or design work has been done. It would be a difficult project with lots of coordination needed with property and business owners and utility relocation, but it is one of the highest volume non-interstate roads in the state and the beltway interchange is one of the highest volume interchanges in the state. While the project is listed as a County priority for commercial revitalization, there are significant congestion problems, including one of the county's most congested intersections at Forest Glen Road. (The intersection is shown as #3 on the latest list, but recent traffic signal phasing changes should improve conditions a bit.). That intersection was also one of highest in the State's 2004 list of high accident locations. There have also been recent requests from the public for a tunnel under Georgia Avenue at this intersection. There are a number of issues that need to be addressed here that the State has so far been unwilling to tackle in a comprehensive way, but has instead implemented smaller projects that have sometimes had inadvertent adverse impacts. This project should be listed as a BRAC project given the fact that staff are proposed to be moved from the main campus of Walter Reed Army Medical Center (WRAMC) to the Walter Reed Annex on Brookville Road. It is also an important evacuation route from Washington, DC. ***Staff recommends that the much-needed comprehensive study and design of the Georgia Avenue/Montgomery Hills project be funded as part of the Council's new initiative.***

2. Rockville Pike (MD355)/Cedar Lane interchange: This intersection is currently listed as the fourth most congested intersection in the county. This intersection would have a BRAC impact from the relocation of employees from WRAMC to the National Naval Medical Center (NNMC); it is adjacent to another major federal facility, the National Institutes of Health, which has had changes in driveway access because of security concerns; and Rockville Pike is an important evacuation route from Washington, DC. While improvements are needed at this location, staff notes that two nearby intersections on the Pike are also high on the list of congested intersections, South Drive/Wood Road entrances to NNMC (#6) and Pooks Hill Road near the Beltway (#10). Rather than study the Cedar Lane intersection in isolation, ***staff recommends the County's #2 priority for the D&E program be expanded to encompass the segment of Rockville Pike (MD355) between Woodmont Avenue and the Capital Beltway (I-495).***

3. Midcounty Highway Extended, from Intercounty Connector to Shady Grove Road: This project would provide a better connection between Upper Montgomery County and the ICC and would alleviate congestion that would otherwise occur on Shady Grove Road and other area roads with the construction of the ICC.

4. Frederick Road (MD355)/Gude Drive interchange: This project appears as #30 on the list of congested intersections, but has also appeared on the list previously.

5. Great Seneca Highway (MD119) flyover at Sam Eig Highway: This intersection is not currently listed as being over its congestion standard, but three other intersections on MD119 are. Given the growth of employment in this area, staff believes that this project should remain on the candidate list.

6. Frederick Road (MD355) widening from 2,000 feet south of Brink Road to the future Clarksburg Bypass: A significant segment of the proposed study is now underway by developers, and it is possible that more of the road will end up being designed and constructed by developers also. Travel time runs have revealed that there is a significant traffic bottleneck in this segment of MD355, as discussed in the 2006 HMR.

7. Rockville Pike (MD355)/Nicholson Lane interchange: This project does not appear as on the list of the 63 most congested intersections. The extension of Executive Boulevard south to tie into Rockville Pike will likely occur as part of development in the near future and should reduce the traffic load on this intersection. Staff believes that this is not a high priority and that network improvements would be the preferred solution in the near-term. The White Flint Sector Plan update will consider whether this project is needed in the long-term. ***Staff recommends that this interchange be deleted from the priority list.***

8. Frederick Road (MD355) reconstruction in Old Town Gaithersburg: This project would consist of streetscaping and pedestrian improvements. Staff believes that the priority seems appropriate but is not recommending a Board comment since the City of Gaithersburg has its own planning responsibility.

9. Veirs Mill Road (MD586)/Randolph Road interchange: This intersection does not appear on the current list of 63 intersections exceeding their congestion standard. **Staff recommends that it be deleted from the priority list.**

10. Veirs Mill Road widening from Randolph Road to Twinbrook Parkway: The need for this project will be much greater if the Montrose Parkway East project is built. Staff recommends that this project be retained on the list until a decision is made on the Montrose Parkway East project

11. I-270/Gude Drive: This interchange is in the City of Rockville Master Plan. The construction of this interchange could increase the need for improvements at the MD355/Gude Drive intersection (D&E priority #4 above).

12. Laytonsville Bypass (MD108): The Laytonsville Bypass project would be similar to the Brookeville Bypass (MD97) in that it is intended to remove through traffic from the center of one of the county's historic towns. Because the Brookeville Bypass would be

outside the PFA, the County had to agree to several conditions in order to keep the planning for the project on track. The Town of Laytonsville has recently created a new alignment for the proposed Laytonsville Bypass that is wholly within the town limits to conform to the funding constraints of the State's Smart Growth legislation. The northern half of this roadway would be within an area that was recently annexed to the Town, although staff is unsure whether some mechanism is needed to amend the PFA limits to encompass this annexed area. The congestion at the Laytonsville Road (MD108)/Brink Road/Sundown Road is fairly minor at present, so the real issue is one of community and historic preservation. Staff does not believe that this is a high priority, but is not recommending a Board comment since the Town of Laytonsville has its own planning responsibility and it is currently the last on the list in this category.

Development and Evaluation (Planning) – Transit

With the exception of the Bi-County Transitway Spur noted as part of #4 on the Council's current list, which has not been evaluated yet, staff believes that all of the transit projects on the list below are valuable and needed projects. Since cost data for these projects have been developed at different times and to different levels of accuracy, staff does not have sufficient information to change the ranking of these projects.

1. Veirs Mill Road (MD586) Bus Rapid Transit, Rockville to Wheaton: Staff concurs that this is the highest priority but notes that Veirs Mill Road has a very high occurrence of pedestrian collisions. The road is listed as having the third highest number of pedestrian collisions in the county in 2005, despite the fact that it is far shorter than the #1 and #2 roads (see Attachment 7, page 4).

Review of Pedestrian Collision Data: Since the rankings used in the report are strictly on a "by road" basis, staff has calculated the pedestrian collisions per mile of road for the top five roads:
• Rockville Pike/Frederick Road (MD355): 33 collisions on a 26.83-mile road equals a rate of 1.2 pedestrian collisions per mile.
• Georgia Avenue (MD97): 18 collisions on an 18.22-mile road equals a rate of one pedestrian collision per mile.
• Veirs Mill Road (MD586): 17 collisions on a 5.78-mile road equals a rate of 2.9 pedestrian collisions per mile.
• University Boulevard (MD193): 16 collisions on a 6.7-mile road equals a rate of 2.4 pedestrian collisions per mile.
• Connecticut Avenue (MD185): 11 collisions on an 8.3-mile road equals a rate of 1.3 pedestrian collisions per mile.

Staff notes that the pedestrian collision rates for Veirs Mill Road and for University Boulevard, currently the #3 priority below, are double those of the other three roads in the top five. Both roads have also been the location of pedestrian fatalities in the last few years (see Attachment 7, page 7).

Safe pedestrian access is a critical component of public safety and necessary to accommodate and promote the use of transit. ***Staff recommends that the scope of this study be expanded to encompass pedestrian safety improvements, including street lighting, along this roadway, and***

to take more of Complete Streets approach to design. This approach will be discussed in greater detail in the memo to the Board on the Road Code update, scheduled to be discussed at the January 4, 2006 meeting also.

2. Georgia Avenue (MD97) Busway, Glenmont to Olney: Staff notes that there has been pressure to widen the Georgia Avenue (MD97) intersections with Connecticut Avenue (MD185) and with Old Baltimore Road, widenings that would have adversely affected the ability of the busway to be constructed in the future. Rather than acquire more right-of-way, SHA decided to drop the proposed improvements, but this issue may arise again, as it already has for a second time at the Old Baltimore Road intersection.

3. University Boulevard (MD193) Bus Rapid Transit, Wheaton to Langley Park: This project appears very cost-effective and could be implemented incrementally. It would link to the Takoma-Langley Park Transit Center now programmed for construction. Enhanced J4 bus service is anticipated to begin shortly. A full planning study and rapid implementation would support that effort. As with the University Boulevard BRT study, staff recommends that this project be expanded to encompass pedestrian safety and street lighting improvements. Staff is concerned that there may be more of an immediate need for these improvements rather than for the Georgia Avenue Busway, but that more data and a more significant technical effort are required before we can recommend a change in these priorities.

4. North Bethesda Transitway, Grosvenor to Montgomery Mall; and Bi-County Transitway Spur, Langley Park to White Oak: These two studies are not contiguous and should be split into separate priorities. However, staff believes that the latter study should be dropped in favor of a recommendation to the study team for the Bi-County Transitway to consider this possible connection in the future. Staff notes that while the mainline of the Bi-County Transitway is under study by the State, it is not a Master Plan facility. The spur should be considered in the context of any Master Plan Amendment to incorporate a Bi-County Transitway alignment. Until then, staff believes that it should not be funded for planning given limited resources.

NEW ADDITIONS TO THE STATE PRIORITY LIST

As part of the Board's discussion in December, the Board should consider recommending that the Council add the study the implementation of the full ICC Bicycle and Pedestrian Plan to the County's list of priorities for new starts under SHA's Construction and Development and Evaluation Programs.

ICC Bike Path (Development and Evaluation)

A bike path along the ICC's entire length is recommended in both the 2005 Countywide Bikeways Functional Master Plan and the 1998 Countywide Park Trails Plan. As part of the ICC Record of Decision (ROD), the State Highway Administration has committed to construct only 7.7 miles of the path adjacent to the highway. The SHA has also promised to work with the County to implement the ICC Bicycle and Pedestrian Plan included in the ROD, intended to serve the same function as the full-length bike path along the entire highway.

To date, the State has not committed any funding assistance to help implement the ICC Bicycle and Pedestrian Plan, nor has the State conducted a feasibility analysis to be sure the pieces of the plan not being built as part of the highway project can be implemented. For example, several segments of the plan recommend an on-road bike route to serve as the alternative to the bike path. Planning Department staff's position is that the plan must accommodate all potential trail users and ability levels. On-road bike lanes or shared travel lanes do not accommodate average/beginner/child bicyclists or pedestrians. Therefore, segments of the Plan that recommend on-road bike facilities also require off-road facilities (sidewalks or shared use paths) so that all trail user groups and abilities are adequately accommodated.

The Planning Board is scheduled to receive a briefing on the ICC ROD Bike Plan on the same day as this item. ***Staff recommends that the ICC ROD Bike Plan be added to the State priority list and that it be partially funded under the County's State Transportation Participation program.***

Needwood Road Bike Path (Construction)

Planning for the rest of the ICC Bike Plan is recommended above, but the construction of the path along Needwood Road, from the ICC to Beach Drive/Rock Creek Park needs to be advanced, not only for accessibility, but for safety reasons also. This issue will be discussed in greater detail during the Board's ICC Bike Plan discussion.

Rockville Pike (MD355)/Shady Grove Road (Construction - Safety)

Safety improvements should be made to the Rockville Pike (MD355)/Shady Grove Road intersection to reduce the high level of crashes that have been occurring the last couple of years, as discussed above. While staff believes that these improvements should be made as soon as possible, we are not recommending the priority for the Construction projects be changed. This project should be done, as a separate, immediate safety need.

NEW CANDIDATES FOR THE COUNTY'S 10-YEAR TRANSPORTATION PROGRAM

Full implementation of the 2007 recommendations of Pedestrian Safety Advisory Committee

The County's Blue Ribbon Panel on Pedestrian and Traffic Safety was created in response to a significant rise in pedestrian fatalities and issued its final report in January 2002. While the Panel's goal was to reduce the number of pedestrian fatalities by January 2005, the number has actually risen to seventeen for 2006, as of the date of this memo.

The Pedestrian Safety Advisory Committee has recommended to the new County Executive and Council that twenty steps be taken in 2007 to address the need for greater safety (see Attachment 10). Many of these recommendations were in the original 2002 report but never implemented. Staff recommend that full implementation of the recommendations of the Blue Ribbon Panel on Pedestrian Safety be adopted as one of the County's priorities, not just for the ten-year plan, but to be implemented in the coming year.

Trips on the county's Ride On buses have increased by 2 million over the past two years, and ridership has increased more than 50 percent in the last ten years. Beyond the need to make the needed improvements for safety's sake, pedestrian improvements are also needed to support transit usage, keeping transit patrons safe traveling to and from bus stops.

Every Light, Every Night

Many streetlights across the county are out on any given day and many are out for long periods of time. DPWT has no staff permanently assigned to monitoring street light outages and relies on reports from citizens, either by telephone or by e-mail on their website. Staff in the Urban Districts do have this responsibility but the same problems occur in these areas also.

DPWT owns the streetlights that are on their own poles and is responsible for their maintenance. Pepco is responsible for the maintenance of lights that are on utility poles. Even after the outages are reported to Pepco, it often takes months for the lights to be fixed or replaced. One possible reason for this is that Pepco is paid for each light on a monthly basis whether or not the light is working. Functioning streetlights are a critical safety component of the transportation system, particularly for pedestrians who typically do not have their own illumination devices, unlike drivers and even many bicyclists. Poor roadway lighting has been indicated as a contributing factor in a high percentage of the county's pedestrian fatalities. The lack of a fully functioning system is a public safety problem.

The City of Philadelphia has an "Every Light, Every Night" policy, intended to keep all streetlights functioning at all times. Their success rate is greater than 99% (see Attachment 11). Staff recommends that the County institute such a program and that it be made one of the County's priorities in the 10-year transportation program.

Continuous Lighting on State Highways in Urban Areas

As discussed as part of the recent Mandatory Referral of the project to construct an interchange at Rockville Pike (MD355) and Montrose Parkway, SHA's lighting policy is not to provide continuous lighting along State highways, but to provide lighting only at intersections and generally only signalized intersections.

SHA's lighting policy is at odds with the safety needs of the general public, particularly so in urban areas. Most of the Montgomery County's pedestrian fatalities occur on State highways. A significant percentage of those fatalities have occurred during the early morning and evening hours in areas when the low level of lighting was indicated as a factor.

The American Association of State Highway and Transportation Officials (AASHTO) is the agency that provides policy guidance to its members, including the State of Maryland. AASHTO published the latest edition of its Roadway Lighting Design Guide in October 2005. To quote from its guidance on "streets and highways other than freeways (including walkways and bicycle ways)":

"The literature is replete with data demonstrating the value of fixed lighting for facilities without access control and the resulting benefits to the public. Some of the elements that warrant the lighting of urban streets and highways are traffic volumes (both vehicles and pedestrians), at-

grade intersections, turning movements, signalization, and varying geometrics. The need for street and highways lighting in areas with frequent inclement weather should be considered. In addition to its safety benefits, lighting may serve as a crime deterrent, may aid law enforcement agencies, may contribute to user comfort, and often contributes to community pride. These benefits may serve as a basis for the local government agency to pay an appreciable percentage of the cost of, or wholly finance, the installation, maintenance, and operation of the lighting facilities." AASHTO recommends continuous lighting for commercial areas, and higher levels than normal are recommended to be considered.

Staff recommends that the County institute a program of providing retrofit lighting along State highways in urban areas. Staff believes that SHA is concerned with the cost of providing continuous lighting and is wary of consenting to providing such lighting even when it is requested by Montgomery County for fear of the cost implications statewide. But it is the right thing to do.

The Board recommended as part of the MD355/Montrsoe Parkway interchange project that SHA's lighting policy be revised to meet the latest AASHTO guidance on the best lighting levels for pedestrians, bicyclists, and drivers. The Board also endorsed the statement that if the cost impact of implementing such a policy would be too great for the State to bear, SHA should consider instituting a standard cost-sharing formula with local government similar to that for noise barriers. Even in the absence of such a standard policy being instituted, staff recommends that the County begin a retrofit program for lighting on State highways.

Access 2000 – Pedestrian and Bicyclist Improvements

SHA undertook a study of the pedestrian and bicycle improvements that were needed to improve access to rail stations in response to a law passed in 1995 by the State Legislature. Staff worked closely with SHA to determine the needed improvements at each Metro and MARC Station. Very little of the proposed improvements were implemented before the funding was deleted however. Given the competition for State funding, ***staff recommends that the Access 2000 program be revived as a County project and added to the 10-year transportation program.***

Staff notes that the Countywide Bikeways Functional Master Plan recommends a focus on improving bike access to transit, and WMATA has a current program to improve pedestrian and bicyclist access to transit. The latter's program will likely be more localized than the Access 2000 program was intended to be.

Other Sidewalk Retrofits on Major Highways and Arterials in Urban Areas

The following table of State highways in urban areas of Montgomery County shows SHA's ratings of the Bicycle Level of Service (BLOC) and the percentage of these roadway centerline miles that have sidewalks.

Table A: Bicycle and Pedestrian Access							
Bicycle/Pedestrian Measures	2002	2003	2004	2005	2006 (Actual)	2006 (Target)	Target Date
% of State owned roadway centerline miles with a BLOC grade "D" or better	77%	78%	81%	80%	79%	80%	7/07
Centerline mileage of State-owned highways with designated bicycle lanes/routes	8 miles	40.6 miles	186 miles	455.4 miles	680 miles	700 miles	7/07
% of State owned roadway centerline miles within urban areas that have sidewalks	20%	24.60%	26%	28.60%	NA	30%	12/06

The sidewalk percentage on the above chart is not intended to reflect the percentage of roads that sidewalks on both sides, so some of the roads have a sidewalk only on one side. This is a concern when the topic is State highways in urban areas when the roads are often wide with high traffic volumes.

Staff would also like to emphasize that SHA's goal is only to have sidewalks on 30% of the State roads in urban areas of Montgomery County. Staff believes that the goal is inadequate, does not reflect a need to improve pedestrian safety in densely developed urban areas, and does not serve to promote the goal of transit use, since most State highways serve as transit routes.

While the County has a sidewalk retrofit program already, ***staff recommends that priority be given to constructing sidewalk retrofits on Major Highways and Arterials in urban areas and that this be added to the County's 10-year transportation plan.***

Enhanced Bus Shelters on Major Transit Routes

Enhanced bus shelters are needed to provide better service to transit patrons and to attract new patrons. Metro is moving ahead with its real-time information program and Arlington County has had a program in the Columbia Pike corridor for some time. Network infrastructure deficiencies however are preventing the wide-scale deployment of "real time" transit signs at bus stops in Montgomery County. Because of these deficiencies, DPWT has refused to accept bus shelters that are equipped to give patrons real-time information, and have also refused to accept heated bus shelters, even though developers have agreed to provide them as part of their trip mitigation efforts.

Staff recommends that the County establish a program for enhanced bus shelters on major transit routes as one of its priority programs to ensure that established county policies to reduce the reliance on single-occupant vehicles are supported. DPWT may not be able to support these facilities with their current budget and staffing but these associated costs need to be identified so that the County can best leverage private investment.

Another example of where more trip mitigation support is needed is the issue of the scarcity of light industrial areas where shuttle contractors can store and service vehicles. In this case, our

master planning, facility planning and design and programming efforts of our public facilities (e.g., county service parks for maintaining vehicles) may want to more proactively consider possible ways (in this through shared space) to support shuttle services. Staff will continue our work on this issue and provide more information to the Board at a later date.

BACKGROUND

Council action on the CTP earlier in 2006

In 2006, the Council voted to add $160 million in funding to accelerate State and WMATA capital projects that will add road or transit capacity. Except for the first four projects appropriated for FY07 (see below), none of these funds will be spent unless there is a cost-sharing agreement with the State – i.e., the County will not appropriate funds unless there is a suitable match of newly programmed money from the State. ***Only projects in the most recent Council/Executive joint priority letter will be eligible for such funding.***

The Council appropriated $19,555,000 for FY07 for the four projects, even without the promise of a State match. By the time the proposal was put together the state's FY07 budget was already set, and the Council did not want these projects to slip. The four projects are:

- Construction of the second garage at the Glenmont Metro Station
- Final design and right-of-way for the Georgia Avenue/Randolph Road interchange
- Final design for the I-270/Watkins Mill Road interchange
- Final design for the southern entrance to the Bethesda Metro Station

By putting additional funds on the table for State projects, the County has created the opportunity for the State to get more bang for the buck by doing these projects, an approach that Howard County has also been using.

The other State projects that have been identified by DPWT for the next group to be funded under the State Participation program are:

- Rockville Pike (MD355)/Montrose Parkway interchange
- Woodfield Road (MD124) Widening Phase 2
- Georgia Avenue (MD97)/Brookeville Bypass
- Clopper Road (MD117) Widening Phases 2 and 3

Although the Georgia Avenue (MD97)/Norbeck Road (MD28) interchange is higher on the construction priority list than Clopper Road Widening, the former would cost about twice as much as the latter and there appears to be insufficient funds for both.

Staff does not believe that these recommendations have been officially submitted by DPWT to the Council. As discussed above, staff recommends that a different set of projects and studies to be funded by the County.

LC:ba
Attachment

STATUS OF ALL PROJECTS IN THE COUNTY'S 10-YEAR TRANSPORTATION PROGRAM
As of 12/18/06

New Roads		Status
RD-1√	Bordly Drive – extend to Georgia Avenue	Completed.
RD-2	Burtonsville Access Road	This project is currently scheduled to begin construction in July 2007.
RD-3	Century Boulevard/Crystal Rock Drive Loop	This project is scheduled to begin construction in August 2007.
RD-4	Chapman Ave/Citadel Ave – Nicholson La to Randolph Rd	Three segments of this project remain to be built. The segment from Nicholson Lane to south of Marinelli Road is scheduled to begin construction in November 2007. The segment from Marinelli Road to Old Georgetown Road would be built as part of the LCOR development. The preliminary design for the segment between just north of Old Georgetown Road to Randolph Road has been completed, but the project is not yet funded for construction.
RD-5	Dorsey Mill Road – Century Blvd to Observation Drive	Developers will be constructing the roadway segments leading up to the bridge over I-270. The bridge is listed in the CIP as a facility planning candidate for which work would start beyond FY08.
RD-6	Father Hurley Boulevard Extended over CSX RR	This project is scheduled to begin construction in March 2008.
RD-7 **Con- #5**	Georgia Avenue (MD 97) Bypass around Brookeville	Preliminary engineering has been done for this project but it is not funded for construction.
RD8√	Germantown Road – Scenery Drive to Watkins Mill Road	Completed.
RD-9	Intercounty Connector – I-370 to I-95	This project is included in the draft FY2007 CTP. If approved by the Legislature, construction would begin in 2007.
RD-10	Snowden Farm Parkway – Clarksburg Road to MD 355	This project will be constructed by developers.
RD-11	Snowden Farm Parkway – Ridge Road to Clarksburg Road	This project will be constructed by developers.
RD-12	Midcounty Highway – Middlebook Road to Ridge Road	DPWT is currently working on the alternatives analysis report. The draft project Planning Prospectus is anticipated to be reviewed in December 2009.
RD-13 **Con- #11**	Montrose Parkway – I-270 to Veirs Mill Road	The segment west of Old Old Georgetown Road, Montrose Parkway West, is under construction, to be completed in May 2008. The interchange at Rockville Pike is discussed below. The segment east of Parklawn Drive, Montrose Parkway East, is funded for 30% design only and is anticipated to be reviewed by the Board in Spring 2007 as a Mandatory Referral. The grade-separation of the parkway over the CSX tracks is not funded for design; while the project is not listed separately in the 10-year program, it is noted as #11 on the priority list for State construction projects.
RD-14	Nebel Street Extended – Randolph Road to Bou Avenue	This project is scheduled to begin construction in September 2007.
RD-15	Observation Drive – extend north to Stringtown Road	The draft project Planning Prospectus is anticipated to be reviewed in November 2007.
RD-16	Rainbow Drive – extend to Ridge Road	No action.
RD-17	Silver Spring CBD Ripley District – local street network	The Council voted not to fund the design of this project, leaving the implementation to developers as part of their transportation requirements. The extension of Dixon Avenue from Bonifant Street to Ripley Street through the

√ Project completed

		public parking garage will be undertaken by KSI. The extension of Ripley Street from Dixon Avenue to the intersection of Bonifant Street and Ramsey Avenue will be undertaken by KSI and by DPWT as part of the Silver Spring Transit Center project.
RD-18	Stringtown Road – I-270 to MD 355	This project is anticipated to be completed shortly, although the approval of the Gateway Commons Site Plan Amendment is still at issue.
RD-19√	Valley Park Drive – extend to Ridge Road	Completed.
RD-20	Watkins Mill Road Ext. – MD 355 to Clopper Road	This project will be constructed by developers and is anticipated to be completed next year.
RD-21 **D&E-#3**	Midcounty Highway – Shady Grove Road to ICC	This segment of Midcounty Highway was studied as part of the ICC but will not be designed or constructed as part of that project.
RD-22	Woodfield Road Extended – MD 108 to MD 27	This project is currently scheduled to begin construction in November 2007.
D&E-#12	Laytonsville Road (MD108)/Laytonsville Bypass	***This project is listed as #12 on the priority list for projects to enter the State's D&E program, but is not listed in the County's 10-year program.***

	Road Widenings	Status
WI-1√	Briggs Chaney Road – Castle Blvd to Dogwood Drive	Completed.
WI-2	Clopper Road (MD 117) – Little Seneca Park to MD 118	Preliminary design completed but not funded for construction.
WI-3 **Con- #7**	Clopper Road (MD 117) – west of Quince Orchard Road	Preliminary design completed but not funded for construction.
WI-4√	Darnestown Road (MD 28) – Gt. Sen. Hwy to Riffle Ford Rd	Completed.
WI-5 **D&E-#6**	Frederick Road (MD 355) – Ridge Road to near Comus Rd	The limits of the project listed as a D&E priority are from 2,000 feet south of Brink Road to the planned Clarksburg Bypass (Relocated MD355), slightly shorter than the description in the 10-year program. Because of the large amount of development activity in this area, there are now discussions with developers who are required to make improvements along MD355 in this area about achieving a unified design for the southern end of this segment of MD355.
WI-6	Goshen Road – Gaithersburg City Limits to Warfield Road	This project is funded for 30% design only and is anticipated to be reviewed by the Board as a Mandatory Referral in March 2007.
WI-7	Great Seneca Hwy (MD 119) – MD 28 to Middlebrook Road	No action.
WI-8	Greencastle Road – Robey Road to Prince George's Country	This project is scheduled to begin construction in April 2007.
WI-9	I-270 HOV Lanes – Gaithersburg to Frederick County	The DEIS for the whole I-270/US15 Corridor Study is anticipated to be completed in Summer 2007, and the Preliminary Engineering and final EIS in Fall 2008. SHA's Western Mobility Study, a joint study with the Virginia Department of Transportation, is scheduled to be completed in Summer 2007 also. The latter study's limits are along I-270 from I-370 to the western spur interchange with the Capital Beltway (I-495), and along the Beltway across the American Legion Bridge to Georgetown Pike (VA193)
WI-10	I-495 HOV Lanes – I-270 West Spur to Virginia	See the description for WI-9 above.
WI-11	Layhill Road (MD 182) – Longmead to Norbeck Road	No action.
WI-12	Longdraft Road – Clopper Road to Quince Orchard Road	The Facility Planning Project Prospectus is anticipated to be reviewed by the Planning Board in February 2007.
WI-13	Middlebrook Road – MD 355 to Midcounty Highway	This project is scheduled to begin facility planning by FY08.

√ Project completed

WI-14 **Con- #'s 9& 14**	Norbeck & Spencerville Roads – Georgia Ave to Burtonsville	The study was put on hold until a decision on the ICC was made. It has since been restarted but staff's sense is that it is not moving very quickly.
WI-15	Redland Road – Crabbs Branch Way to Needwood Road	Construction on Phase I of this project is scheduled to be completed in March 2007. Construction of Phase II is scheduled to begin in March 2008 and be completed in March 2009.
WI-16√	Shady Grove Road – Centerway Road to Woodfield Road	Completed.
WI-17	Snouffer School Road – Centerway Road to Woodfield Road	The preliminary design of this project has been completed but it has not been funded for construction.
WI-18 **D&E- #10**	Veirs Mill Road (MD 586) – Randolph Rd to Twinbrook Pkwy	No action. The Aspen Hill Master Plan states that the widening of Veirs Mill Road north of Montrose Parkway may not be needed if the parkway is built. The Montrose parkway East project will likely be reviewed by the Board as a Mandatory Referral in Spring 2007, but this design has not been coordinated with any future Veirs Mill Road widening.
WI-19 **Con- #'s 4 &13**	Woodfield Road (MD 124) – Midcounty Hwy to Warfield Rd	Phase I of this project from Airpark Road to Fieldcrest Road is scheduled to begin construction in Spring 2007. The other two segments are not funded for construction.

	Bridge Replacements	**Status**
BR-1√	Clarksburg Road	Completed.
BR-2	Deer Park Drive	The draft Facility Planning Project Prospectus is anticipated to be completed in July 2007. The implementation of this project appears to depend on coming to an agreement with the Town of Washington Grove.
BR-3√	Goshen Road	Completed.
BR-4√	Howard Chapel	Completed.
	Bridge Replacements	**Status**
BR-5	Mouth of Monocacy Road	This project is under construction.
BR-6√	Rock Creek Trestle	Completed.
BR-7√	Wayne Avenue	Completed.
BR-8	Brink Road	This project is under construction.
BR-9√	Inwood Avenue	Completed.
BR-10	Nicholson Lane	This project is scheduled to begin construction in June 2007.
BR-11	White Ground Road	This project was funded for design but is on hold because of Rustic Road concerns about a wider bridge.
	Grade Separated Interchange Improvements	**Status**
GS-1	Columbia Pike (US 29)/ Briggs Chaney Road	Under construction, to be completed in June 2007.
GS-2 **Con- #10**	Columbia Pike (US 29)/Fairland Road	Some final design work has been done for this project but it is not funded for construction.
GS-3√	Columbia Pike (US 29)/East Randolph Road	Completed.
GS-4√	Columbia Pike (US 29)/Sandy Spring Road (MD 198)	Completed.
GS-5	Frederick Road (MD 355)/Gude Drive	This project was considered for at-grade improvements as part of the Congestion Relief Study, but an interchange was determined to be needed. The design of the interchange is not funded.
GS-6 **Con- #6**	Georgia Avenue (MD 97)/Norbeck Road (MD 28)	Preliminary design has been completed. The project is not funded for construction.
GS-7 **Con- #2**	Georgia Avenue (MD 97)/Randolph Road	The project is in final design and is partially funded for right-of-way acquisition. If the agreement between DPWT

√ Project completed

		and SHA is approved by the Council and the Legislature, the final design would be fully funded. The construction is not funded however and given the utility relocations that would have to be done in advance, the project will likely not begin construction before Fall 2010.
GS-8 **D&E-#5**	Great Seneca Highway (MD119)/Sam Eig Highway	At-grade improvements were recently completed at this intersection.
GS-9	Hungerford Drive (MD 355)/Middle Lane	This project was studied but determined to be infeasible because of cost. The City of Rockville has requested that this study be restarted.
GS-10	Rockville Pike (MD 355)/Veirs Mill Road (MD 28)	As with the above project, this project was studied but determined to be infeasible because of cost. The City of Rockville has requested that this study be restarted.
GS-11√	I-270/Clopper Road (MD 117)	Completed.
GS-12√	I-270/Democracy Boulevard	Completed.
GS-13√	I-270/Fernwood Road	Completed.
GS-14√	I-270/Old Georgetown Road (MD 187) Rockledge Drive	Completed.
GS-15 **Con- #3**	I-270/Watkins Mill Road	No significant design work on the I-270 interchange has begun, although it has been studied as part of the overall I-270/US15 study.
GS-16 **Con- #15**	First Street (MD 28)/Viers Mill Road (MD 586)/Wooton Parkway	Unlike GS-9 and GS-10, SHA decided to pursue the design of this project, although it wasn't funded for construction. The City of Rockville has expressed a desire to pursue a study all three projects at the same time rather than design this one first.
GS-17	Rockville Pike (MD 355)/Montrose Road/Montrose Pkwy	Construction of the interchange at Rockville Pike is now scheduled to begin construction in 2007 or early 2008.
GS-18 **D&E-7**	Rockville Pike (MD 355)/Nicholson Lane	No action.
Con- #12	I-270/Newcut Road	***This project is listed as #12 on the priority list for State construction projects, but is not listed in the County's 10-year program.***
D&E- #1	Rockville Pike (MD 355)/Cedar Lane	***This project is listed as #2 on the priority list for projects to enter the State's D&E program, but is not listed in the County's 10-year program.***
D&E- #4	Rockville Pike (MD 355)/Gude Drive	***This project is listed as #4 on the priority list for projects to enter the State's D&E program, but is not listed in the County's 10-year program.***
D&E- #9	Veirs Mill Road (MD586)/Randolph Road	***This project is listed as #9 on the priority list for projects to enter the State's D&E program, but is not listed in the County's 10-year program. At-grade improvements were recently completed at this intersection.***
D&E- #11	I-270/Gude Drive	***This project is listed as #11 on the priority list for projects to enter the State's D&E program, but is not listed in the County's 10-year program. At-grade improvements were recently completed at this intersection.***

	Intersection Improvements	Status
IN-1√	Clopper Rd (MD 117)/Quince Orchard Road (MD 124)	Completed.
IN-2	Colesville Road (US 29)/Dale Drive	This project is in a very early stage of design but is scheduled to begin construction in March 2009.
IN-3√	Connecticut Avenue (MD 185)/East/West Hwy (MD 410)	Completed.
IN-4√	Connecticut Avenue (MD 185)/Veirs Mill Road (MD 586)	Completed.
IN-5√	Falls Road (MD 189)/River Road (MD 190)	Completed.
IN-6√	East West Highway (MD 410)/16th Street (MD 390)	Completed.

√ Project completed

IN-7√	Frederick Road (MD 355)/Shady Grove Road	Completed.
IN-8√	Great Seneca Hwy (MD 119)/Muddy Branch Road	Completed.
IN-9√	Montgomery Village Avenue (MD 124) /Lost Knife Road	Completed.
IN-10√	Montgomery Village Avenue (MD 124) /Midcounty Hwy	Completed.
IN-11√	Montrose Road / East Jefferson Street	Completed.
IN-12√	New Hampshire Avenue (MD 650) / FDA	Completed.
IN-13√	Old Georgetown Road (MD 187) / Democracy Blvd	Completed.
IN-14√	Old Georgetown Road (MD 187) /Tuckerman Lane	Completed.
IN-15	Randolph Road / Parklawn Drive	No action.
IN-16√	Rockville Pike (MD 355) / Jones Bridge Road	Completed.
IN-17√	Shady Grove Road / Gaither Road	Completed.
IN-18√	Veirs Mill Road (MD 586) / Aspen Hill Road	Completed.
IN-19√	Veirs Mill Road (MD 586) / Randolph Road	Completed.
IN-20√	Veirs Mill Road (MD 586) / Twinbrook Parkway	Completed.

	Bike Paths	Status
BK-1	Capital Crescent Trail – Bethesda to Silver Spring	Awaiting resolution of Bi-County Transitway study.
BK-2√	Falls Road Bike Path – Potomac	This segment references the safety improvement that eliminated the double crossing of Falls Road south of River Road, which has been completed.
BK-3√	Forest Glen Ped. Bridge – Forest Glen Road to Mont. Hills	Completed.
BK-4	Metropolitan Branch Trail – Silver Spring to DC	The draft project Prospectus is anticipated to be reviewed by the Board in January 2007.
BK-5√	North Bethesda Trail – Cedar Lane to Tuckerman Lane	This project is intended to infill missing segments of the trail and is essentially done.
BK-6	Silver Spring Green Trail – Fenton St to Sligo Ck Parkway	The project was funded for construction but is on hold pending the selection of a Locally Preferred Alternative for the BCT (see TR-6).
BK-7	Woodglen Avenue Trail – Marinelli Road to Nicholson Lane	The project to construct the roadway and bike path was put on hold after the completion of facility planning, in part because of a ROW problem with the adjacent condominium owners to the west. It may be pursued as part of a proposed development on the lot to the east.
BK-8	Shady Grove Access Bike Path	This project is anticipated to begin construction in 2007.

	Commercial Revitalization Projects	Status
CR-1 **D&E- #8**	Frederick Avenue (MD 355) in Gaithersburg	No action.
CR-2 **D&E- #1**	Georgia Avenue (MD 97) in Montgomery Hills	No action.
CR-3 **Con- #8**	Spencerville Road (MD 198) in Burtonsville	The study was put on hold until a decision on the ICC was made. It has since been restarted but staff's sense is that it is not moving very quickly, but SHA has agreed to move this project ahead of the rest of the study.
CR-4	University Boulevard (MD 193) in Langley Park	Pedestrian safety improvements are currently being constructed at the New Hampshire Avenue (MD650) intersection and just to the west, but the full scope of improvements envisioned by the International Corridor Study is not designed or funded for construction.

	Light Rail Lines, Busways, & Bus Rapid Transitways (BRT)	Status
TR-1	Clarksburg Transit Center	The facility planning for this project is scheduled to be completed by FY08.
TR-2	Colesville Rd (US 29) BRT – Burtonsville to Silver Spring	No action.
TR-3	Corridor Cities Transitway - Shady Grove to Clarksburg	The DEIS is anticipated to be completed in Summer 2007, and the Preliminary Engineering and final EIS in Fall

√ Project completed

		2008.
TR-4	Four Corners Transit Center	No action.
TR-5	Georgia Avenue (MD 97) Busway – Glenmont to Olney	No action.
TR-6	Inner Purple Line (light rail) – Bethesda to New Carrollton	The selection of mode (rail vs. bus) has not yet been determined. The DEIS is anticipated to be completed in Spring 2007, and the selection of the Locally Preferred Alternative in Fall 2007.
TR-7 **D&E#T4**	Inner Purple Line Spur – Langley Park to White Oak	No action.
TR-8	Olney Transit Center	The facility planning for this project is scheduled to be completed after FY12.
TR-9	Randolph Road BRT – Columbia Pike to Rockville Pike	No action.
TR-10	Silver Spring Transit Center	Construction of the interim operation facilities has begun; the permanent facility is scheduled to be completed by Fall 2009.
TR-11	Takoma / Langley Transit Center	The project is funded but right-of-way negotiations have delayed the start of construction.
TR-12 **D&E#T3**	University Blvd (MD 193) BRT – Langley Park to Wheaton	The facility planning for this project is scheduled to be completed after FY12.
TR-13 **D&E#T1**	Veirs Mill Road (MD 586) BRT – Wheaton to Rockville	The facility planning for this project is scheduled to begin by FY08.
TR-14	White Oak Transit Center	The project is scheduled to begin construction in Spring 2008.
D&E#T4	North Bethesda Transitway: Grosvenor Metro Station to Montgomery	***This project is listed as #4 on the priority list for transit projects (jointly with TR-7, described above) to enter the State's D&E program, but is not listed in the County's 10-year program.***

	Parking Garages and Lots	**Status**
PK-1√	Bethesda / Cheltenham Parking Garage	Completed.
PK-2√	Damascus Park and Ride Lot	Completed.
PK-3 **Con- #1**	Glenmont Metro Garage	The project is anticipated to begin construction this year.
PK-4√	Grosvenor Metro Garage	Completed.
PK-5	Norbeck Road Park & Ride Lot Enhancements	This project would likely be done in conjunction with the Georgia Avenue (MD97) interchange project (GS-6) above.
PK-6√	Shady Grove Metro Parking Garage	Completed.
PK-7√	Silver Spring Silver Circle Parking Garage	Completed.
PK-8√	Silver Spring Town Center Garage	Completed.

	Safety Improvements	**Status**
SA-1	Fairland Road – Columbia Pike to Prince George's Co.	The project began construction in Decmber 2006 and is anticipated to be completed in May 2008.
SA-2	Goshen Road – north of Warfield Road	No action.
SA-3	Layhill /Norwood Roads (MD 182) – Ednor Road to MD 108	No action.
SA-4√	Muncaster Mill Road – Shady Grove Road to Norbeck Road	Completed.
SA-5√	Muncaster Road – at Rock Creek	Completed.
SA-6√	Old Columbia Pike – Nalls Lane to East Randolph Road	Completed.
SA-7	Quince Orchard Road – Darnestown Rd to Muddy Branch Rd	The realignment of the road south of Horse Center Way (through Muddy Branch park and south to Muddy Branch Road) was deleted from the project by the Council. The segment near Quince Orchard High School has been completed. Construction of Phase II between the school and Horse center Way is scheduled to begin in May 2007 and be completed in February 2008.
SA-8	Travilah Road – Darnestown Road to Dufief Mill Road	Construction is scheduled to begin in March 2007 and be completed in March 2008.

√ Project completed

ATTACHMENT 2

STAFF- RECOMMENDED STATE PRIORITY LIST
For the Planning Board's consideration on 1/4/07

Construction – Safety

1. Rockville Pike (MD355)/Shady Grove Road intersection

Construction

1. Georgia Avenue (MD97)/Randolph Road interchange
2. I-270/Watkins Mill Road Extended interchange
3. Needwood Road Bike Path, from the ICC to Beach Drive/Rock Creek Park
4. Georgia Avenue (MD97)/Norbeck Road (MD28)
5. Brookeville Bypass (MD97)
6. Spencerville Road (MD198) Widening from Old Columbia Pike to US29
7. Norbeck Road (MD28) Widening from Georgia Avenue (MD97) to Layhill Road (MD182)
8. US29/Fairland Road/Musgrove Road interchange
9. Rockville Pike (MD355)/Montrose Parkway (Phase II) – CSX Grade Separation
10. Clopper Road (MD117) Widening from I-270 to Seneca Creek State Park
11. Woodfield Road (MD124) Widening (Phase II), from Midcounty Highway to South of Airpark Road
12. Woodfield Road (MD124) Widening from Snouffer School Road to Airpark Road and from Field Crest Road to Warfield Road
13. First Street (MD 28)/Veirs Mill Road (MD 586)/Wooton Parkway interchange

Development and Evaluation - Highway

1. Georgia Avenue (MD97)/Montgomery Hills reconstruction
2. Rockville Pike (MD355) from Woodmont Avenue and the Capital Beltway (I-495)
3. Full ICC ROD Bike Plan

4. Midcounty Highway Extended, from Intercounty Connector to Shady Grove Road

5. Frederick Road (MD355)/Gude Drive interchange

6. Great Seneca Highway (MD119) flyover at Sam Eig Highway

7. Frederick Road (MD355) widening from 2,000 feet south of Brink Road to the future Clarksburg Bypass

8. Frederick Road (MD355) reconstruction in Old Town Gaithersburg

9. Veirs Mill Road widening from Randolph Road to Twinbrook Parkway

10. I-270/Gude Drive

11. Laytonsville Bypass (MD108)

Development and Evaluation – Transit

1. Veirs Mill Road (MD586) Bus Rapid Transit and Pedestrian and Lighting Improvements, Rockville to Wheaton

2. Georgia Avenue (MD97) Busway, Glenmont to Olney

3. University Boulevard (MD193) Bus Rapid Transit and Pedestrian and Lighting Improvements, Wheaton to Langley Park

4. North Bethesda Transitway, Grosvenor to Montgomery Mall

2006-1434

MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

OFFICE OF THE CHAIRMAN

November 1, 2006

The Honorable George Leventhal
President
Montgomery County Council
100 Maryland Avenue
Rockville, Maryland 20850

RE: Consolidated Transportation Program
Maryland Department of Transportation
FY2007-FY2012

Dear Mr. Leventhal:

The Planning Board discussed the State's draft FY2007-FY2012 Consolidated Transportation Program (CTP) at our regularly scheduled meeting on October 26, 2006. We would like to transmit the following comments for the Councilmembers' consideration in preparing your questions and comments to the Maryland Department of Transportation at the Tour meeting on November 2, 2006.

The draft CTP shows a reduction in funding for the Corridor Cities Transitway (CCT) and the Bi-County Transitway (BCT) studies in the current fiscal year and a two-year delay in the completion of these studies. The Board is particularly concerned about any delay for the latter project because the timing of the selection of the locally preferred alternative alignment may affect the full protection of any needed right-of-way. In a response to a request for clarification by our staff after the Board's meeting, MDOT's Director of Planning and Capital Programs, Samuel F. Minnitte, Jr. has stated that the changes in funding are errors by lower level staff attempting to reconcile cash flow in the overall MTA budget and that these errors will be corrected in the final CTP. Given the importance of these studies however, ***we believe that the Council should reiterate the need to keep these studies on track and request that MDOT publicly confirm that the changes in the funding schedule for the CCT and BCT shown in the draft CTP will be reversed.***

The Georgia Avenue (MD 97)/Montgomery Hills study has languished at the top of the County's priority list to enter the Development and Evaluation program since 1999. We believe that this project should be included in the FY07 CTP and that this study should include review of the proposed pedestrian tunnel under Georgia Avenue at the Forest Glen

Attachment 3

8787 Georgia Avenue, Silver Spring, Maryland 20910 Phone: 301.495.4605 Fax: 301.495.1320
www.MCParkandPlanning.org E-Mail: mcp-chairman@mncppc.org

Metro Station. We also recommend that the Council include partial funding for this study in the County's State Transportation Participation PDF in order to make this project a reality.

The Intercounty Connector (ICC) project has been added to the CTP but that project does not include several significant segments of the Master Planned bikeway along this facility. ***The Board believes that the project to fill in the gaps of the ICC bikeway should be included in the FY07 CTP.***

The above Board recommendations are offered in advance of our overall assessment of the County's priorities for both the State's and the County's transportation programs. We have requested that our staff prepare a packet for our consideration on this topic for discussion in December 2006, with the intent that our comments be ready for the next Council's discussion of this topic early next year.

Thank you for your consideration of our comments.

Sincerely,

Royce Hanson

RH:LC/cm
Cc: Councilmember Phil Andrews
Councilmember Howard Denis
Councilmember Nancy Floreen
Councilmember Mike Knapp
Councilmember Tom Perez
Councilmember Marilyn Praisner
Councilmember Steve Silverman
Councilmember Michael Subin

OFFICE OF THE COUNTY EXECUTIVE
ROCKVILLE, MARYLAND 20850

Douglas M. Duncan
County Executive

November 2, 2005

The Honorable Ida Ruben, Chair
Montgomery County Senate Delegation
422 Miller Senate Office Building
Annapolis, Maryland 21401

The Honorable Charles Barkley, Chair
Montgomery County House Delegation
222 Lowe Office Building
Annapolis, Maryland 21401

Dear Senator Ruben and Delegate Barkley:

We have recently revised the State transportation priorities we transmitted to you on November 4, 2004, based on recent announcements by the Maryland Department of Transportation (MDOT) and on a review of the Planning Board's new Highway Mobility Report. This letter describes our updated sets of priorities for currently unfunded State transportation projects and planning studies.

We appreciate the State having fully funded the Intercounty Connector for completion by 2010. However, there are four other projects of regional and statewide significance that are most critical and should proceed to completion as quickly as possible. In alphabetical order, they are: the Bi-County Transitway; the Corridor Cities Transitway; the I-270 widening for high-occupancy-vehicle (HOV) or high-occupancy-toll (HOT) lanes north of Shady Grove; and the I-495 widening for HOV or HOT lanes between the I-270 West Spur and Virginia. While there are issues to be worked out on important aspects of some of these projects, decisions must be made and funding must be identified promptly to move them forward to completion.

There are also two projects of local importance which require significant changes from what is shown in the Draft 2006-2011 Consolidated Transportation Program (CTP). These are high priority projects that have been previously identified by the Executive and Council to the State and/or Federal Delegations. They are:

1. Accelerate the start of construction of the interchange of Rockville Pike (MD 355) with Montrose Parkway by two years—from FY 2010 (as shown in the Draft) to FY 2008—in order to permit the most seamless coordination with the County's Montrose Parkway West project, and to cause the least disruption to area residents. Montrose Parkway West is currently under construction; the full cost of this $68.2 million project is being funded entirely by the County.

2. Provide $5.26 million in additional funding for the Silver Spring Transit Center to fully fund the 20% match for Federal aid that has been included in the recently approved Federal transportation authorization. This project has undergone a significant increase in scope which is not reflected in the $41 million funding level as shown in the Draft.

Attachment 4

Our priority rankings for projects that will be ready for construction funding during the next six years and are currently in the design or project-planning stages are listed below. The funding to be programmed to complete each project is also indicated as well.

1.	Glenmont Metro Garage: State contribution to build a second garage	$6M
2.	Georgia Avenue/Randolph Road: build grade-separated interchange	$48M
3.	I-270/Watkins Mill Road Extended (Phase 1): build grade-separated interchange*	$103M
4.	Woodfield Road: widen to 6 lanes, Midcounty Hwy to Snouffer School Road**	$60M
5.	Georgia Avenue: build 2-lane bypass around Brookeville	$17M
6.	Georgia Avenue/Norbeck Road: build grade-separated interchange	$75M
7.	Clopper Road: improve intersections from I-270 to Seneca Creek State Park	$39M
8.	Spencerville Road: widen to 4 lanes with a median from Old Columbia Pike to US 29	$30M
9.	Norbeck Road: widen to 4 lanes from Georgia Avenue to Layhill Road	$80M
10.	US 29/Fairland Road/Musgrove Road: build grade-separated interchange	$67M
11.	Rockville Pike/Montrose Parkway (Phase 2): build bridge over CSX Railroad***	$62M
12.	I-270/Newcut Road: build grade separated interchange	$64M
13.	Woodfield Road: widen to 6 lanes from Snouffer School Road to Airpark Road and from Fieldcrest Road to Warfield Road**	(see #4)
14.	MD 28/198: widen to 4 lanes from Layhill Rd to Old Columbia Pike	$115M
15.	Veirs Mill Rd/First St: build grade-separated interchange	$54M

* Significant savings may be obtained by dedication of right-of-way by new development.
** The total cost of #4 and #13 is $60M. Segmented cost estimates are not yet available.
*** Significant savings may be obtained by coordination with the County's Montrose Parkway East project.

The total funding that needs to be programmed to complete these 15 projects is $820 million. MDOT is already investing over $43 million to plan, design, and buy land for these projects.

Our priority rankings for highway projects to be added to the Development & Evaluation (D&E) Program are:

1. Georgia Avenue (MD 97): reconstruction in Montgomery Hills
2. Rockville Pike (MD 355)/Cedar Lane: grade-separated interchange
3. Midcounty Highway Extended: construction from Intercounty Connector to Shady Grove Road
4. Frederick Road (MD 355)/Gude Drive: grade-separated interchange
5. Great Seneca Highway (MD 119): flyover at Sam Eig Highway
6. Frederick Road (MD 355): widening from 2000' south of Brink Road to future Frederick Road/Clarksburg Bypass
7. Rockville Pike (MD 355)/Nicholson Lane: grade-separated interchange
8. Frederick Road (MD 355): reconstruction in Old Town Gaithersburg
9. Veirs Mill Road (MD 586)/Randolph Road: grade-separated interchange
10. Veirs Mill Road (MD 586): widening from Twinbrook Parkway to Randolph Road
11. I-270/Gude Drive: grade-separated interchange
12. MD 108 Bypass around Laytonsville

Our priority rankings for transit projects to be added to the D&E Program are:

1. Veirs Mill Road (MD 586) Bus Rapid Transit: Rockville to Wheaton
2. Georgia Avenue (MD 97) Busway: Glenmont to Olney
3. University Blvd. (MD 193) Bus Rapid Transit: Wheaton to Langley Park
4. North Bethesda Transitway: Grosvenor to Montgomery Mall and White Oak Connector from Bi-County Transitway

Studies #1-3 in this list would be coordinated between the State Highway Administration and the Maryland Transit Administration. For these studies we also request that a continuous bikeway be planned throughout their entire lengths.

If you need any clarifications about our recommendations, please contact us.

Sincerely,

Thomas E. Perez, President
County Council

Douglas M. Duncan
County Executive

DMD:TEP:go

cc: The Honorable Robert L. Ehrlich, Governor, State of Maryland
Robert L. Flanagan, Secretary, Maryland Department of Transportation
Derick Berlage, Chair, Montgomery County Planning Board

Congested Intersections - Critical Lane Volumes (CLVs)
Ranked by Percentage CLV Exceeds LATR Standard

INTERSECTION NAME	COUNT DATE	E_CLV	CLV STAND	POLICY AREA	CLV/ LATR	% EXCEED	ACC_ RATE
Great Seneca Hwy (MD 119) at Muddy Branch Rd**	10/5/2005	2073	1450	Gaithersburg City	1.43	**43.0%**	
Frederick Rd(MD 355) at Ridge Rd (MD 27)*	9/8/2004	1981	1450	Germantown East	1.37	**36.6%**	
Georgia Ave (MD 97) at Forest Glen Rd (MD 192)**	8/28/2003	2106	1600	Kensington/Wheaton	1.32	**31.6%**	
Rockville Pike (MD 355) at W Cedar Ln*	4/5/2005	2103	1600	Bethesda/Chevy Chase	1.31	**31.4%**	0.57
Georgia Ave (MD 97) at Norbeck Rd (MD 28)*	9/11/2003	1896	1500	Aspen Hill	1.26	**26.4%**	0.62
Rockville Pike (MD 355) at South/Wood/NNMC	6/9/2004	2022	1600	Bethesda/Chevy Chase	1.26	**26.4%**	
Columbia Pike (US 29) at Southwood	10/28/2004	2015	1600	Kensington/Wheaton	1.26	**25.9%**	
Connecticut Ave (MD 185) at Jones Bridge Rd	6/11/2003	1974	1600	Bethesda/Chevy Chase	1.23	**23.4%**	
Norbeck Rd (MD 28) at Avery Rd	10/12/2005	1815	1500	Rockville City	1.21	**21.0%**	
Rockville Pike (MD 355) at Pooks Hill Rd	6/8/2004	1923	1600	Bethesda/Chevy Chase	1.20	**20.2%**	
Darnestown Rd (MD 28) at Riffle Ford Rd	11/9/2004	1769	1475	North Potomac	1.20	**19.9%**	
Colesville Rd (US 29) at Sligo Crk Pkwy/St Andrews	12/8/2005	1917	1600	Silver Spring/Takoma Park	1.20	**19.8%**	
Veirs Mill Rd (MD 586) at First St (MD 28)*	11/15/2005	1789	1500	Rockville City	1.19	**19.3%**	
Georgia Ave (MD 97) at Emory Ln	9/9/2003	1741	1475	Olney	1.18	**18.0%**	
Columbia Pike (US 29) at Briggs Chaney Rd★	2/4/2004	1770	1500	Fairland/White Oak	1.18	**18.0%**	1.61
Muncaster Rd at MD 108	6/3/2004	1638	1400	Patuxent	1.17	17.0%	
Georgia Ave (MD 97) at MD 108	12/14/2005	1722	1475	Olney	1.17	16.7%	
Columbia Pike (US 29) at Fairland Rd*	5/24/2006	1745	1500	Fairland/White Oak	1.16	16.3%	0.76
Burtonsville Blv (Old US 29) at Burtonsville Xing SC	6/2/2004	1628	1400	Patuxent	1.16	16.3%	
Key West Ave (MD 28) at Shady Grove Rd	9/27/2005	1733	1500	Rockville City	1.16	15.5%	
Connecticut Ave (MD 185) at East West Hwy (MD 410)	3/18/2004	1831	1600	Bethesda/Chevy Chase	1.14	14.4%	
Frederick Rd (MD 355) at Clarksburg Rd (MD 121)	8/24/2005	1653	1450	Clarksburg	1.14	14.0%	
Norbeck Rd (MD 28) at Bauer Dr*	10/20/2005	1710	1500	Aspen Hill	1.14	14.0%	
Columbia Pike (US 29) at Lockwood Dr	10/26/2004	1699	1500	Fairland/White Oak	1.13	13.3%	
Old Georgetown Rd (MD 187) at Tuckerman Ln	5/26/2005	1746	1550	North Bethesda	1.13	12.6%	0.81
Veirs Mill Rd (MD 586) at Twinbrook Pkwy	6/9/2004	1743	1550	North Bethesda	1.12	12.5%	
Woodfield Rd (MD 124) at Fieldcrest/Hadley Farms	3/10/2005	1620	1450	Montgomery Village/Airpark	1.12	11.7%	
Mont. Village Ave at Chris/Lost Knife	11/4/2004	1613	1450	Montgomery Village/Airpark	1.11	11.2%	
Great Seneca Hwy (MD 119) at Quince Orchard Rd (MD 124)**	4/6/2006	1607	1450	Gaithersburg City	1.11	10.8%	
Hungerford Ln (MD 355) at Gude Dr*	10/26/2004	1656	1500	Rockville City	1.10	10.4%	
New Hampshire Ave (MD 650) at Lockwood Dr	11/17/2004	1644	1500	Fairland/White Oak	1.10	9.6%	0.65
Frederick Rd (MD 355) at Montgomery Village Ave (MD 124)	5/5/2005	1589	1450	Gaithersburg City	1.10	9.6%	0.59
Layhill Rd (MD 182) at Belpre/Bonifant Rd	9/15/2005	1633	1500	Aspen Hill	1.09	8.9%	
Frederick Rd (MD 355) at King Farm Blvd	4/15/2004	1952	1800	Shady Grove	1.08	8.4%	
Frederick Rd (MD 355) at Christopher St	11/9/2004	1566	1450	Gaithersburg City	1.08	8.0%	
Muncaster Mill Rd (MD 115) at Needwood Rd	4/12/2005	1510	1400	Rock Creek	1.08	7.9%	

Attachment 5

Data Sources: M-NCPPC Intersection Analysis Database; November 2006
SHA - 2005 Candidate Safety Improvement Intersections

Congested Intersections - Critical Lane Volumes (CLVs)
Ranked by Percentage CLV Exceeds LATR Standard

Georgia Ave (MD 97) at Connecticut Ave (MD 185)	2/19/2004	1611	1500	Aspen Hill	1.07	7.4%	0.71
First St (MD 28) at Baltimore Rd	1/13/2005	1602	1500	Rockville City	1.07	6.8%	0.58
Piney Branch Rd (MD 320) at Philadelphia Ave (MD 410)	4/20/2005	1704	1600	Silver Spring/Takoma Park	1.07	6.5%	
Hungerford Dr (MD 355) at Edmondston Ln	10/13/2004	1590	1500	Rockville City	1.06	6.0%	
Montrose Rd at Tildenwood Ln	3/9/2005	1643	1550	North Bethesda	1.06	6.0%	
Cherry Hill Rd at Broadbirch/Calverton Blvd	5/18/2004	1589	1500	Fairland/White Oak	1.06	5.9%	
Olney-Laytons Rd (MD 108) at Queen Elizabeth Dr	12/15/2005	1555	1475	Olney	1.05	5.4%	
Connecticut Ave (MD 185) at Veirs Mill Rd (MD 586)	3/3/2004	1680	1600	Kensington/Wheaton	1.05	5.0%	
University Blvd (MD 193) at Piney Branch Rd (MD 320)	5/3/2005	1676	1600	Silver Spring/Takoma Park	1.05	4.8%	
Colesville Rd (US 29) at University Blvd E (MD 193)	9/13/2006	1672	1600	Kensington/Wheaton	1.05	4.5%	0.63
Colesville Rd (US 29) at Franklin Ave	4/13/2005	1670	1600	Silver Spring/Takoma Park	1.04	4.4%	
Montrose Rd at E Jefferson St	3/9/2005	1617	1550	North Bethesda	1.04	4.3%	
Georgia Ave (MD 97) at New Hampshire Ave	2/14/2006	1457	1400	Patuxent	1.04	4.1%	
Georgia Ave (MD 97) at Arcola Ave*	5/3/2005	1661	1600	Kensington/Wheaton	1.04	3.8%	0.8
E Gude Dr at Southlawn Ln	9/28/2004	1545	1500	Rockville City	1.03	3.0%	
Shady Grove Rd at Epsilon/Tupelo	4/6/2005	1518	1475	Derwood	1.03	2.9%	
Rockville Pike (MD 355) at Congressional Ln	6/3/2004	1538	1500	Rockville City	1.03	2.5%	
Old Georgetown Rd (MD 187) at W Cedar Ln	4/30/2003	1639	1600	Bethesda/Chevy Chase	1.02	2.4%	
Midcounty Hwy at Washington Grove Ln	3/22/2005	1508	1475	Derwood	1.02	2.2%	
Connecticut Ave (MD 185) at Randolph Rd	3/3/2004	1631	1600	Kensington/Wheaton	1.02	1.9%	
Georgia Ave (MD 97) at Columbia Blvd/Seminary Ln	5/10/2005	1631	1600	Silver Spring/Takoma Park	1.02	1.9%	0.89
Georgia Ave (MD 97) at Plyers Mill Rd	11/18/2003	1626	1600	Kensington/Wheaton	1.02	1.6%	0.56
Georgia Ave (MD 97) at Old Baltimore Rd	4/7/2005	1498	1475	Olney	1.02	1.6%	
Great Seneca Hwy (MD 119) at Kentlands Blvd	5/11/2005	1454	1450	Gaithersburg City	1.00	0.3%	
Hungerford Dr (MD 355) at Manakee St	10/27/2004	1504	1500	Rockville City	1.00	0.3%	
Sandy Spring Rd (MD 198) at Mcknew Rd	9/10/2003	1401	1400	Patuxent	1.00	0.1%	
New Hampshire Ave (MD 650) at Bonifant/Good Hope	5/25/2004	1476	1475	Cloverly	1.00	0.1%	0.73

Key:
An asterik (*) indentifies locations where improvements are master-planned
E_CLV = Existing (current) CLV
CLV/LATR = CLV/LATR ratio
% EXCEED = Percentage that CLV exceeds its respective standard
ACC_RATE = SHA 2005 accident rate at high accident locations
(**) Locations where CLVs should decrease b/c of a recent improvement (but will still exceed LATR standard)
★ Locations where improvements are currently being constructed

Data Sources: M-NCPPC Intersection Analysis Database; November 2006
SHA - 2005 Candidate Safety Improvement Intersections

2005 State Highway

High Accident Locations

ROUTE	INTERSECTING ROUTE	TOT_ACC	SEV_RATE	ACC_RATE	CSII	REPEAT
MD 118	Wisteria Drive	19	3.68	1.84	P	1
MD 355	Shady Grove Road	55	3.56	1.78	P	3
US 29	Briggs Chaney Road	33	2.98	1.61	P	0
MD 117	First Field Road	13	2.98	1.55	P	0
MD 97	Randolph Road	24	2.48	1.39	P	0
MD 115	Shady Grove Road / Airpark Road	12	3.55	1.37	P	1
MD 124	Goshen Road	13	1.85	1.34	P	2
MD 115	Muncaster Road / Redland Road	11	1.89	1.29	P	0
MD 355	Grosvenor Lane / No Name	18	2.44	1.25	P	0
MD 193	MD 320 (Piney Branch Road)	27	1.87	1.17	P	1
MD 355	Shakespeare Blvd	16	1.9	1.05	P	1
MD 115	MD 124 / Snouffers School Road	12	1.91	1.04	P	0
MD 117	MD 118 (Germantown Road)	16	1.92	1.03	P	1
MD 118	Middlebrook Road	16	1.7	0.97	S	0
MD 187	Executive Blvd	17	1.94	0.97	S	0
MD 586	Atlantic Avenue	13	1.71	0.93	S	0
MD 185	MD 185 E (Chevy Chase Circle)	21	1.02	0.9	S	0
MD 97	Columbia Blvd / Seminary Road	16	1.12	0.89	S	0
MD 384	Wayne Avenue / Second Avenue	12	1.39	0.88	S	0
MD 193	MD 586 (Veirs Mill Road)	19	1.8	0.86	S	0
MD 97	Rossmoor Blvd	16	1.71	0.86	S	0
MD 118	MD 355 / Germantown Road	20	1.76	0.84	S	0
MD 97	Blueridge Avenue	13	1.86	0.83	S	0
MD 187	Tuckerman Lane	14	1.09	0.81	S	0
US 29	MD 97 (Georgia Ave) / MD 384 (Colesville Rd)	21	1.24	0.81	S	0
MD 355	Lake Forest Blvd / Perry Parkway	12	1.27	0.8	S	0
MD 97	Arcola Avenue	16	1.49	0.8	S	0
US 29	Fairland Road	20	1.82	0.76	S	0
MD 384	MD 390 (16th Street)	13	0.93	0.75	S	0
MD 586	Newport Mill Road	12	1.66	0.74	S	0
US 29	Stewart Lane	17	1.64	0.74	S	0
MD 650	Bonifant Road / Good Hope Road	12	1.77	0.73	S	2
MD 650	Norwood Road / Briggs Chaney Road	12	1.64	0.73	S	0
US 29	Greencastle Road	15	1.74	0.73	S	0
MD 193	Arcola Avenue	12	1.15	0.72	S	0
MD 118	Crystal Rock Drive	12	1.78	0.71	S	2
MD 97	MD 185 / Connecticut Avenue	23	1.5	0.71	S	0
MD 650	Oakview Drive	20	1.44	0.7	S	0
MD 28	E Gude Drive	14	0.89	0.69	S	3
MD 355	E Deer Park Drive / W Deer Park Drive	12	1.07	0.68	S	0
MD 28	MD 355 (Rockville Pike)	19	1.44	0.65	S	0
MD 650	Dilston Road / Adelphi Road	19	1.1	0.65	S	0
MD 650	Lockwood Drive	15	0.95	0.65	S	0
MD 390	MD 410 (East West Highway)	13	0.98	0.64	S	0
US 29	MD 193 (University Blvd)	23	1.32	0.63	S	0
MD 28	MD 97 (Georgia Avenue)	15	0.79	0.62	S	0
MD 355	Redland Road / Redland Blvd	12	1.09	0.62	S	1
MD 124	Lost Knife Road / Christopher Avenue	14	1.24	0.6	S	0
MD 124	MD 355 (Frederick Road)	20	0.91	0.59	S	1
MD 586	Aspen Hill Road	12	0.98	0.59	S	1
MD 117	MD 124 (Quince Orchand Road)	15	0.93	0.58	S	0
MD 28	Baltimore Road	12	1.02	0.58	S	1
MD 355	Cedar Lane	13	1.14	0.57	S	0

MD 97	MD 193 (University Blvd)	15	1.19	0.57	S	0
MD 97	Plyers Mill Road	13	0.94	0.56	S	0
US 29	Dale Road	12	0.98	0.56	S	0
MD 650	Powder Mill Road	13	1.14	0.55	S	0
MD 124	Russell Avenue	12	1.02	0.51	S	0
US 29	MD 198 (Sandy Spring Rd/Old Columbia Pike)	13	0.59	0.45	S	0
MD 187	MD 355 / Old Georgetown Road	15	0.75	0.42	S	0

MONTGOMERY COUNTY DEPARTMENT OF POLICE

Pedestrian Collisions

~ 2005 Overview ~

Felicia Hobbs
Traffic Analyst, Crime Analysis Section

November 2006

CAS # 06-306

Attachment 7

OVERVIEW

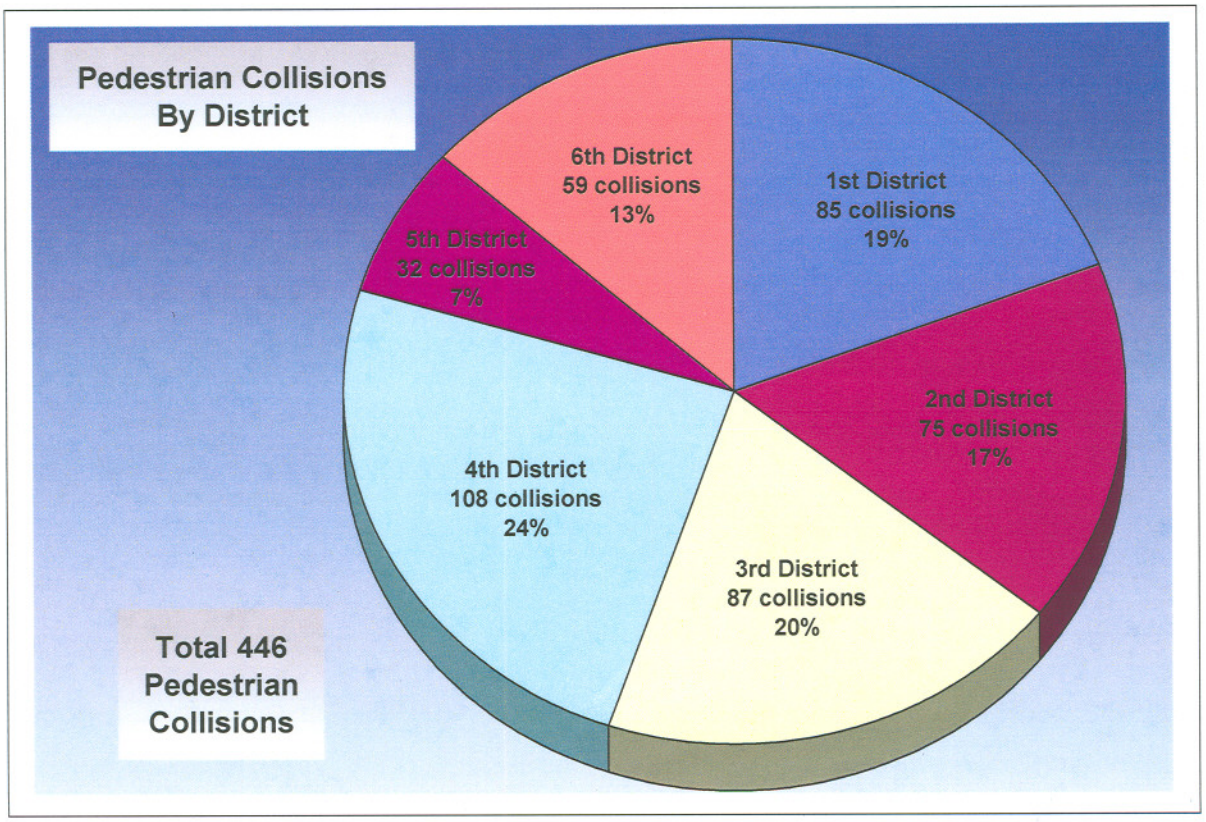
During calendar year 2005, there were 446 collisions that involved pedestrians in Montgomery County. This is an increase of 6.2%, compared to the 420 collisions in 2004; and consistent with the 447 pedestrian collisions reported in 2003.

The data for this report was generated from the Maryland Automated Accident Reporting System (MAARS) reports and is based solely on pedestrian collisions where a MAARS report was written. [Maryland law does not require a written police report for all collisions. A report is written if there are injuries; if the vehicles are rendered inoperable and require towing; and in a hit & run incident.] Any non-fatal pedestrian collision occurring in the City of Takoma Park or handled by Maryland State Police (MSP) was not included in this data. As well, while the MAARS report considers a cyclist to be a pedestrian, the laws vary; therefore, bicycle-vehicle collisions were not included in this analysis.

Four districts had increases in pedestrian collisions during 2005, when compared to the previous year. The largest total increase was seen in the 4th District, +25.6% with 22 more pedestrian collisions. While the 1st District showed a larger percentage increase (+34.9%), but this equates to an increase of nine collisions.

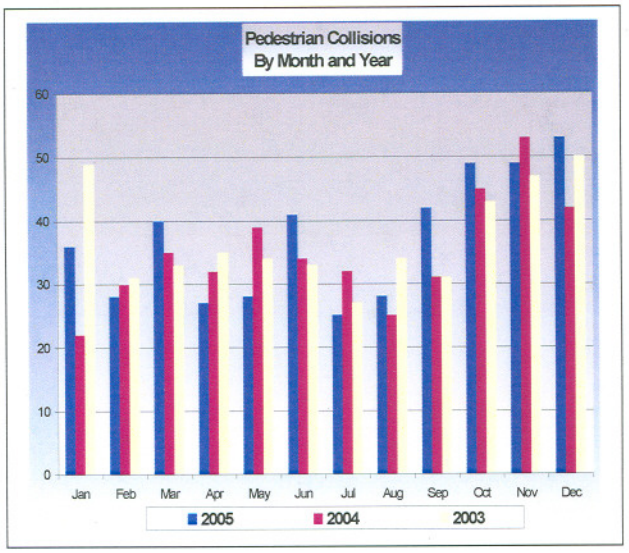
Pedestrian Collisions				
District	2005	2004	+/-	2003
1D	85	63	+34.9%	80
2D	75	84	-10.7%	97
3D	87	110	-20.9%	96
4D	108	86	+25.6%	91
5D	32	27	+18.5%	27
6D	59	50	+18.0%	56
Total	446	420	+6.2%	447

The 3rd District showed a significant decrease of 23 collisions, -20.9%. The 2nd District was down nine incidents (-10.7%), and is down 22.7% when compared with 97 pedestrian-related collisions in 2003. Pedestrian education and enforcement efforts were conducted throughout 2005 in both of these districts.

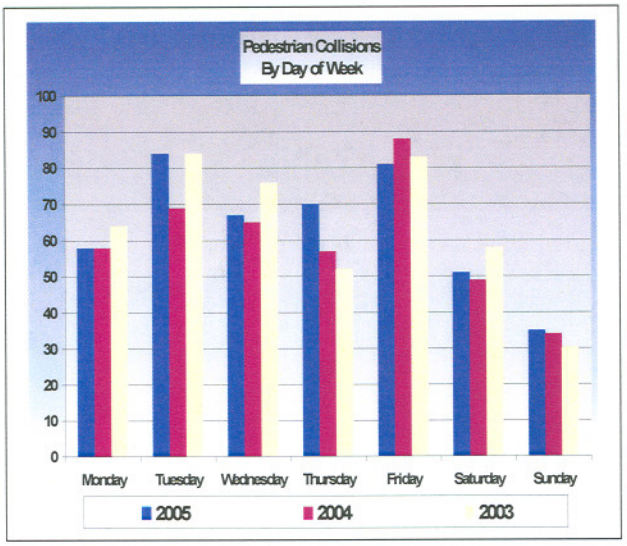


TEMPORAL INFORMATION

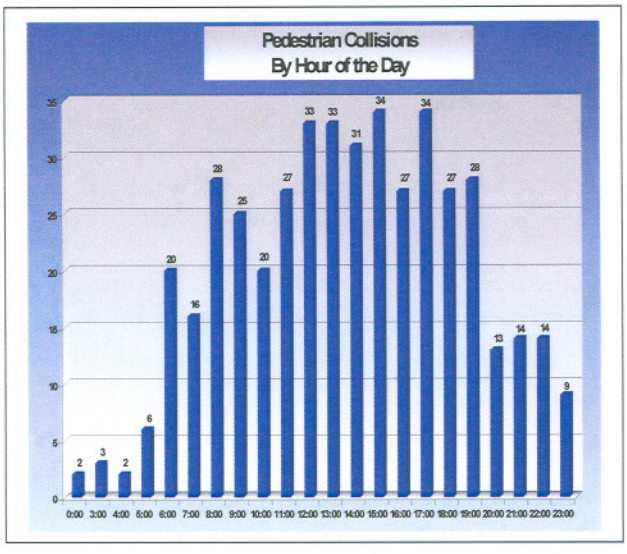
Monthly pedestrian collision totals for 2005 were fairly consistent with the highs and lows of the prior years. For 2003, 2004, and 2005, the numbers of pedestrian collisions were high during the months of October, November, and December. Even with increased hours of darkness and Daylight Savings, 49.6%, just under half, of all collisions from October through December 2005 occurred during dusk or dark hours (65 of 131 collisions). During these months in 2005 there were more collisions occurring in the rain 18.5% (28 of 151 incidents) than overall collisions throughout the year 12.3% (55 of 446 incidents).



Countywide, pedestrian-related collisions occur primarily on weekdays, with 80.7% on Monday through Friday. In 2005, Tuesdays had the most collisions with 84 incidents (18.8%), followed closely by Fridays with 81 incidents (18.2%). Collectively, Saturdays and Sundays had 86 collisions (19.3%).

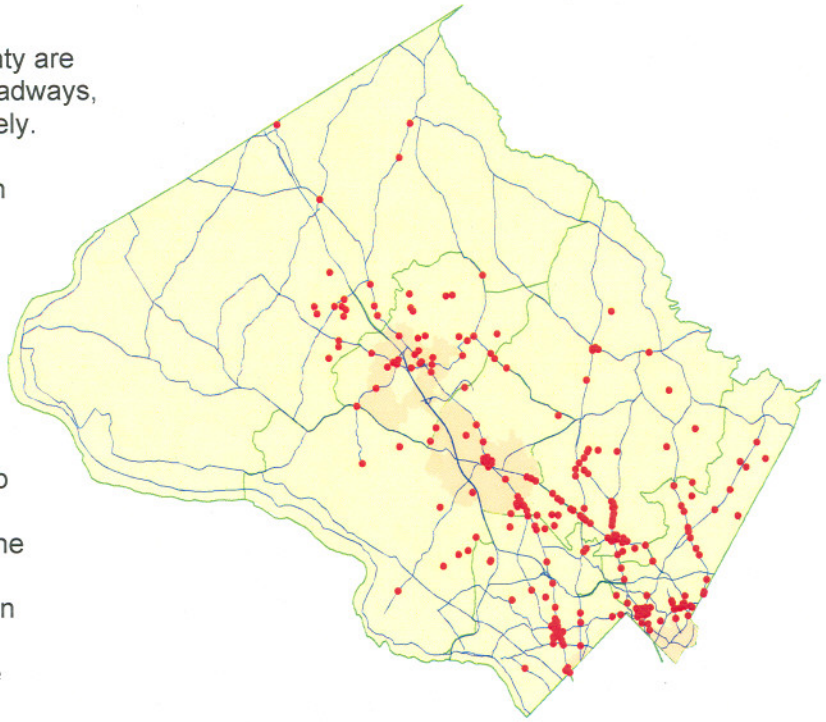


Overall, afternoons and evenings are the peak times of day for pedestrian-related collisions. In 2005, 55.4% of all pedestrian collisions occurred between noon and 19:59 (247 collisions). This is consistent for all collisions in 2005, in that 54.4% of all collisions occurred during this same time frame (196 collisions). Over seventy percent of 2005's pedestrian collisions occurred during daylight hours (315 collisions, 70.6%), with 70.2% occurring Monday through Friday (192 collisions). In comparison with 2004, 67.1% of collisions occurred during daylight hours.



ROAD TYPE

Pedestrian collisions in Montgomery County are primarily occurring on state and county roadways, representing 33.9% and 30.9%, respectively. In addition, 25.6% of all pedestrians were struck in parking lots, 5.8% were struck on municipal roadways. US and other public roadways accounted for 2.4%, and the remaining 1.4% of collisions had missing information.



Top roadways in the county and for each district are state roadways. Randolph Road, ranking number 9, was the only county stretch of roadway on the list of top 10 locations with the most pedestrian-related collisions (6 collisions). Many of the top state roads form main corridors within the county and have substantial portions in densely populated areas. The top 5 stretches of roadway combined, comprise 65.83 linear miles through and across the County.

As can be expected, Maryland Route 355 has had the most pedestrian-related collisions with 33 incidents. This stretch runs from one end of the county to the other and crosses 26.83 miles of roadway, which change from multiple lanes to a two-lane road. Clustering is found along other main arteries and within the concentrated business districts of the 2nd, 3rd and 4th districts, as well as Rockville City.

Top Roadways for Pedestrian Collisions

Route Number	Main Road Name	Total # of collisions
Rte. 355	Rkvl. Pike/Fred. Rd.	33
Rte. 97	Georgia Avenue	18
Rte. 586	Veirs Mill Road	17
Rte. 193	University Blvd.	16
Rte. 185	Connecticut Ave.	11

ALCOHOL/DRUG COLLISIONS

For the purpose of this evaluation, alcohol-related collisions include any individual, driver or pedestrian, who was under the influence of alcohol or drugs as noted on the MAARS report under condition, substance detected, or contributing circumstances. This includes any individual who may be under the influence as per the law *or* simply by admission consumed an alcoholic beverage. In 2005, 6.5% of pedestrian collisions (29 incidents) were alcohol-related, down from 9% in 2004 (38 incidents). These alcohol-related collisions occur throughout the week with the most collisions on Thursdays with 6 incidents; Tuesdays, Wednesdays, and Saturdays with 5 incidents each; and Mondays and Sundays with 3 incidents each. Interestingly, Friday had the least number of collisions than any given day with 2 incidents. In addition, these collisions occur during dark hours 58.6% of the time (17 incidents). The 'at fault' unit was a pedestrian in just over half of these incidents, 54.5% of the time; a driver 36.4% of the time, and fault was shared 9.1% of the time.

FAULT

Fault was determined in pedestrian collisions to be similar from 2005 to 2004. In 2005, drivers were 'at fault' in 50.4% of pedestrian collisions compared to 50.2% in 2004; pedestrians were 'at fault' in 37.7% of collisions in 2005 and 40.2% in 2004, and both partiers were held 'at fault' in 8.7% of collisions in 2005 and 7.4% in 2004. Due to inconsistent stories or conflicting information, fault was 'not determined' in 2.9% of collisions in 2005 and 2.1% in 2004.

'At Fault' Units By Year

At Fault	2005	2004
Driver	225	211
Pedestrian	168	169
Both	39	31
Not Determined	13	9
Parked	1	0

Driver 'At Fault'

Multiple drivers may be 'at fault' and involved in the same collision; in 2005, there were 264 'at fault' drivers involved in 225 collisions. These drivers ranged in age from 16 to 89, with no data on 38 drivers (14.4% of records). Drivers ranging from 40 to 49 years of age were among the highest represented age group, causing 18.2% of collisions (48 drivers); close behind were those individuals 20 – 29 years of age with 17.8% of collisions (47 drivers); and individuals 50 – 59 years of age with 15.9% of collisions (42 drivers).

Another group of individuals that continues to be of interest are young drivers under the age of 21; these drivers are a small percentage of drivers (10.8%) involved in all documented collisions, however they are 'at fault' 66.5% of the time. As for pedestrian-related collisions, these young drivers represented just 6% of 'at fault' drivers.

At the time of the collision, the 'at fault' drivers were making a left turn 22.3% of the time; traveling at a constant speed 19.7% of the time; making a right turn 14.4% of the time; and backing 14% of the time. Cause can be attributed to pedestrian collisions where the 'at fault' drive was exhibiting the following behavior:

- failure to pay time and attention
- fail: yield right of way
- improper backing
- too fast for conditions
- improper turns

The number of 'at fault' drivers who were under the influence of alcohol or drugs went down in 2005 to 2.2% (5 drivers), from 4.3% (9 drivers) in 2004. In addition to 'at fault' drivers' under the influence, there was an additional incident where the driver was not held 'at fault' but was coded as having alcohol present - based on the parameters set forth by MSP, the mere fact that alcohol was present makes the collision alcohol-related.

Pedestrian 'At Fault'

As with drivers, more than one pedestrian may be involved in the same collision. Of the 168 collisions involving a pedestrian 'at fault', there were 211 pedestrians ranging from 1 year to 92 years of age. Pedestrians under the age of 18 represent 28% of collisions (59 pedestrians), while adults between 18 and 30 years of age represent 26.5% of collisions (56 pedestrians). Overall, individuals between the ages 15 and 25 account for nearly one-fourth of pedestrians involved in collisions, 24.6% (52 individuals).

'At fault' pedestrians were on a roadway not at a crosswalk in 73.6% of the collisions (155); on a roadway at a crosswalk in 15.2% of collisions (32); and outside of the right of way in 1.9% of collisions (4). For the collisions where the pedestrian was not at a crosswalk:

- there was no pedestrian signal in 79.4% of these collisions (123)
- the pedestrian disobeyed the signal in 13.5% of these collisions (21)

Of the 123 collisions where there was no pedestrian signal and the pedestrians were held 'at fault', one-fifth of reports had no cause coded. For the remainder, the contributing circumstances include:

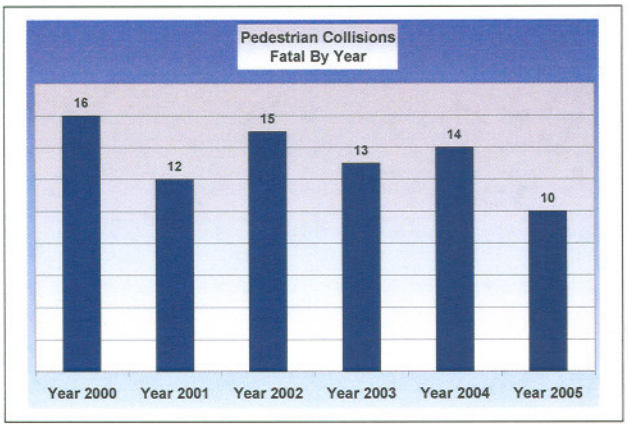
- pedestrian illegally in the roadway
- fail to pay time and attention
- clothing not visible
- fail: yield right of way

'At fault' pedestrians that were traveling on the roadway at a crosswalk disobeyed the pedestrian signal 53.1% of the time and there was no pedestrian signal 21.9% of the time.

In addition, 19 of the 'at fault' pedestrians were coded for alcohol or drugs at the time of the collision representing 9% of collisions, which is a higher percentage than for 'at fault' drivers that were coded for alcohol or drugs (2.2% of 'at fault' drivers). As with drivers, there were four pedestrians who were not held 'at fault' in the collision, three were coded as having alcohol present and one was coded as alcohol contributed.

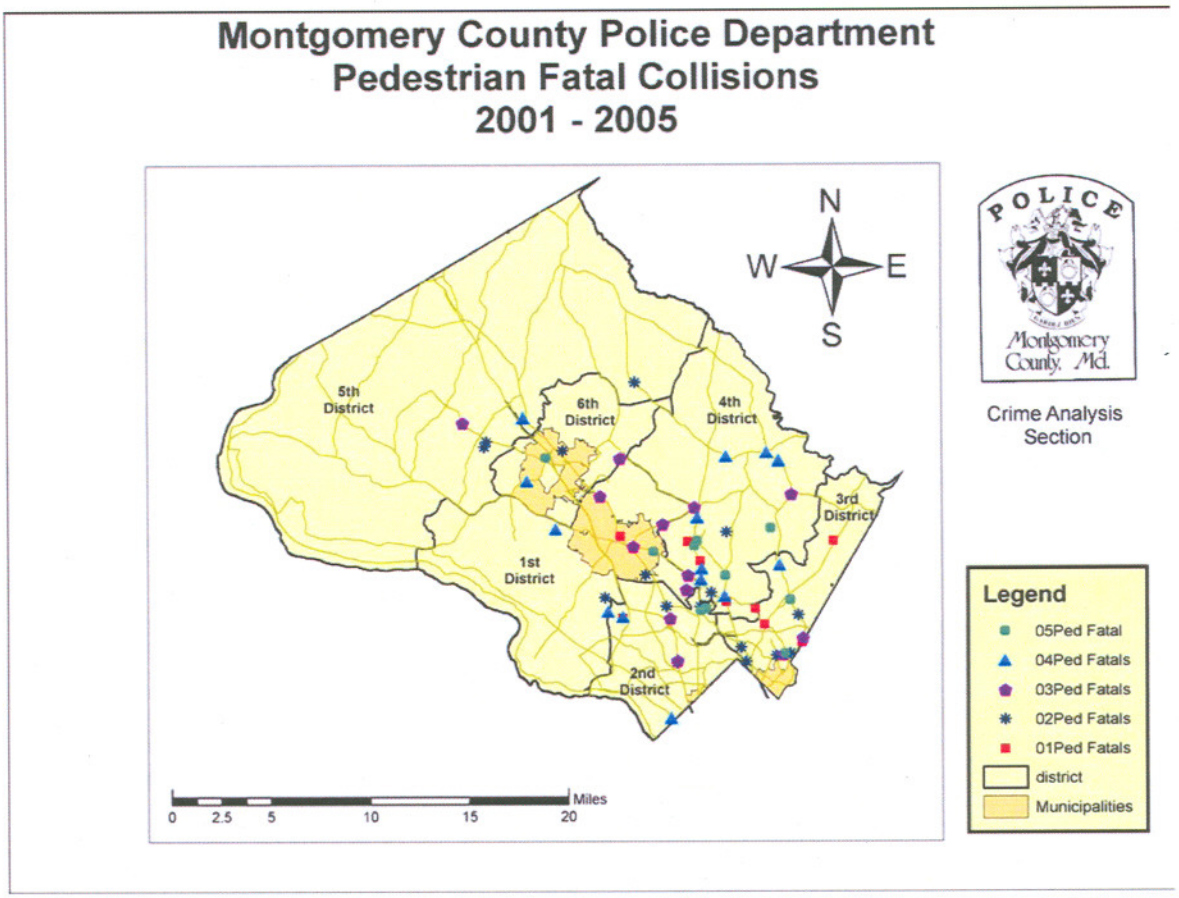
FATAL COLLISIONS

All fatal collisions in the County are significantly lower than in previous years, down 36.7%, while pedestrian-related fatal collisions are down 28.6% from 2005 to 2004. By their nature, pedestrian-vehicle collisions typically result in injury or even death. While one fatal collision is too many, the number of fatal pedestrian collisions continues to be a small percentage of serious collisions. In 2005, fatal pedestrian collisions comprised 2.2% of pedestrian-related collisions (10 pedestrians); and in 2004 they comprised 3.3% of pedestrian-related collisions (14 pedestrians).



In 2005, the fatal collisions all occurred at a different location in the county and all on different dates. Half of these collisions occurred during hours of light and half during hours of darkness. As well, three occurred when it was raining and seven occurred while it was clear or cloudy. The fatal collisions undergo an extensive investigation, upon completion fault and cause are often identified. In these incidents fault was determined to be:

- the pedestrians' in 6 incidents
- the drivers' in 4 incidents
- a result of alcohol or drugs in 2 incidents (both pedestrians)



CONCLUSION AND RECOMMENDATIONS

While the number of pedestrian collisions increased slightly by 6.2%, the overall reported collisions in the county declined 6.4% from 2004. The analysis indicates pedestrian collisions are mostly occurring on weekdays and during the afternoon-early evening hours, as well, the majority of pedestrian collisions are occurring during daylight hours throughout the year. In addition, the later part of the year consistently has shown peaks in the number of pedestrian-related collisions. Most collisions are on state and county roadways. Clustering of incidents was noted in more densely populated parts of the county and along major thoroughfares. Campaigns should consider targeting these areas during midweek throughout the year and in particular the later part of the year.

In 2005 many efforts and initiatives were made to improve pedestrian safety through enforcement, education and engineering, including but not limited to the following:

- All districts conducted campaigns during the Pedestrian Safety Week handing out literature and working with pedestrian advisory committee members to educate both the pedestrians and drivers. Officers also enforced the right-of-way laws.
- The Alcohol Initiatives Unit (AIU) targeted drunken pedestrians in highly concentrated urban areas in the 3rd and 4th districts, these efforts should continue throughout the county to enforce and educate the public on pedestrian safety.

- Collectively, the traffic units conducted repeated pedestrian efforts in the urban areas of the 2nd and 3rd districts, and both showed a reduction in pedestrian-related collisions in 2005.
- The Department of Public Works and Transportation (DPWT) put count down pedestrian signals in downtown Silver Spring, at this time it is unknown what their future plans are.
- State Highway Administration (SHA) has changed over some signals to count down signals on state roadways, and will look to change existing signals throughout the county; however no timeline is available at this point.
- The Pedestrian Advisory Committee for the past three years has worked with the Council of Government (COG) on the annual Street Smart Campaign, a week long awareness campaign with heightened enforcement and education utilizing PSA's on the television and radio; they will continue their efforts and target their education campaigns accordingly.

Continuous enforcement and education would be beneficial. Districts may also want to consider targeting secondary areas of concentration, such as along University Boulevard in the 2nd district, Rockville Pike, US Route 29, and Veirs Mill Road for pedestrians. With the combination of education, enforcement and improved traffic devices, it is expected that pedestrian collisions will decline making the streets of Montgomery County a safer place.

All data for this project was generated from the tactical database managed by SOD.

Additional analysis is available upon request.

Original Distribution:

Chief Manger
A/C King
A/C Walker
A/C Tracy
All District Commanders
All Traffic Sergeants
Fred Lees, DPWT
William Cordor, Traffic Management Center
Pedestrian Safety Advisory Committee

Georgia Avenue (MD97)/University Boulevard (MD193)

Attachment 8

Map Compiled On 12-11-2006 at 01:09 PM
Map Scale: 1 inch = 50 feet or 1:600

0 50 Feet

The Maryland-National Capital Park and Planning Commission
Montgomery County Department of Park and Planning
Transportation Planning Unit
8787 Georgia Avenue | Silver Spring, Maryland 20910
301.495.4525 voice | 301.495.1302 fax | http://www.mc-mncppc.org

Property
Municipalities
Montgomery County

N

Rockville Pike (MD355)/Shady Grove Road

Attachment 9

Map Compiled On 12-11-2006 at 01:12 PM
Map Scale: 1 inch = 50 feet or 1:600

0 50 Feet

The Maryland-National Capital Park and Planning Commission
Montgomery County Department of Park and Planning
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8787 Georgia Avenue | Silver Spring, Maryland 20910
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N

THE 2007 PEDESTRIAN SAFETY AGENDA

20 Steps in 12 Months of the New Administration

During the average year, more people are killed simply trying to cross the street than in homicides in Montgomery County. Nearly five years ago, the final report of the Montgomery County Blue Ribbon Panel on Pedestrian and Traffic Safety called on the county to take a series of inter-related education, enforcement, engineering and legislative steps to dramatically reduce pedestrian injuries and to encourage more people to walk.

It is the consensus of the Montgomery County Pedestrian Safety Advisory Committee (PSAC) that a wholesale commitment to pedestrian safety is essential. The Blue Ribbon Panel on Pedestrian and Traffic Safety and the PSAC have worked tirelessly on these issues for years, but far too few identifiable changes have been made that would enable Montgomery County to claim to be the kind of pedestrian-friendly community desired by the increasing number of people who live and work here..

Rising public concerns about automobile-oriented overdevelopment and about the health of our environment in general have crystallized the need to focus more resources on creating livable and sustainable communities. Pedestrian safety and walkability is a cornerstone measure of the health and vibrancy of a truly All-American environmentally-sensitive community. It is not only a matter of life and death – it is a about the quality of our lives.

We believe that a series of definite, concrete steps must be taken expeditiously, and that time deadlines to achieve these steps must be set and adhered to. To that end, we have developed this series of action items to improve pedestrian safety by December 31, 2007. Each of these recommendations is derived from the Blue Ribbon Panel's original recommendations, many of which remain unfulfilled five years after they were proposed.

Management

1. Establish the Montgomery County Office of Pedestrian Safety, with no less than two full-time employees, reporting directly to the Chief Administrative Officer. The primary purpose is to oversee the daily progress of implementing the final recommendations of the Blue Ribbon Panel on Pedestrian and Traffic Safety and to resolve other related issues that arise. This action should be taken by March 31, 2007.

2. Remove the sunset provision of the Pedestrian Safety Advisory Committee so that this broadly based panel of independent experts and concerned citizens can continue to help the county oversee the implementation of the Blue Ribbon Panel's final report recommendations. This action should be taken before June 1, 2007.

3. Assign at least one high-level employee within the Department of Public Works and Transportation to work full-time on pedestrian safety issues. This action should be taken by March 31, 2007.

4. Provide one additional full-time position within the Department of Police to analyze crash data which will be used by the county and state to identify and implement specific education, enforcement and engineering strategies to prevent pedestrian injuries at those locations in the future. This action should be taken by March 31, 2007

5. Hire additional inspectors within the Department of Permitting Services dedicated to pedestrian safety and accessibility. This action should be taken by March 31, 2007.

Enforcement

6. Fund, plan and implement a law enforcement program to stop both jaywalking and drivers not yielding to pedestrians. The program must have a substantial and well-funded public education component and should be repeated monthly. A regular program of pedestrian enforcement should be in place by April, 2007.

7. Fund, plan and implement an expanded ongoing enforcement program to curb aggressive driving, including red-light running and excessive speeding. This program also must be supported by well-funded public education efforts. A regular program should be implemented by April, 2007.

Education

8. Fully fund a comprehensive, ongoing and highly-visible public education / social marketing campaign that is conducted in coordination with law enforcement activities in order to change attitudes and behaviors of both motorists and pedestrians. Target date for launching campaign: June 2007.

9. Implement a pedestrian safety curriculum as a mandatory unit in school health classes in grades K through 8. To be implemented at the initiation of the 2007-2008 school year.

10. Work with the state of Maryland to expand a pedestrian safety segment in all driver education and improvement classes. To be completed by July, 2007.

11. Incorporate pedestrian safety segments in *all* ESOL classes. Guidance should be provided to ESOL providers on the integration of the materials by September, 2007.

12. All elementary schools in the Montgomery County Public School system should participate in the annual Walk to School Day program to teach children skills to walk safely, to promote the health benefits of walking, to raise awareness of how walkable a community is and where improvements can be made, to raise concern for the environment, and to reduce traffic congestion, pollution, and speed near schools. The next Walk to School Day is scheduled for October 3, 2007.

Engineering

13. The Montgomery County Park and Planning Commission, in cooperation with the Executive Branch, will conduct a thorough analysis of the county's transportation network in order to identify pedestrian safety and mobility problems and to develop a comprehensive action plan to use innovative engineering design to transform the county into a pedestrian-friendly community. The final report of this analysis should be issued by December 31, 2007, with periodic preliminary reports issued during 2007 on a quarterly basis.

14. Invest more resources into pedestrian facilities until the pedestrian infrastructure catches up with the current automobile-oriented growth across the county, beginning with the next budget to be approved in early 2007.

15. Update and revamp the Community Road Code, the Annual Growth Policy, the Adequate Public Facilities Ordinance, the Local Area Transportation Review, and the Policy Area Transportation Review, by institutionalizing the principles of pedestrian-friendly and walkable communities and by embracing the engineering recommendations issued in the Blue Ribbon Panel's final report in order to maximize pedestrian safety and accessibility.

16. Conduct and complete a thorough review of pedestrian crossing times in all high-traffic areas of the county, not just those that request one. Respond to these findings with appropriate changes. To be completed by October, 2007.

17. Conduct an audit of street and sidewalk lighting on all major roads, highways, and arterials, regardless of whether DPWT is itself responsible for the lighting. Respond to these findings with appropriate action. Empower DPWT to immediately resolve disputes with SHA or PEPCO that lead to lighting-related safety problems. To be completed by October 31, 2007.

18. Fulfill the mandate of the Safe Routes to Schools program by ensuring that every student in Montgomery County has a safe – and practical – walkway to and from school. Ongoing activities should be stepped up and a plan for improving conditions countywide should be in place by December, 2007.

19. Update the county roadway design manuals to stress the requirement for providing pedestrian and bicycle accommodation and provide design guidance for varying conditions typical of Montgomery County. To be completed by December, 2007.

20. Complete the improvements recommended in the county's Bus Stop Safety Study to ensure the safety of transit patrons walking to and from bus stops and to maximize the benefits of our investment in transit. These improvements should be completed by December, 2007.

The PHILADELPHIA Story

'Every Light. . . Every Night.' Philadelphia's Street Lighting Maintenance Plan Really Is That Simple – And That Challenging

By Joseph M. Doyle

There have been several well-known versions of "The Philadelphia Story" over the past 250 years. In 1776, the city hosted the signing of the Declaration of Independence. This was followed in 1940 by the legendary Katharine Hepburn movie about a wealthy socialite living on Philadelphia's Main Line. The 2004 version of The Philadelphia Story involves the city's efforts at providing a street lighting system that approaches 100 percent reliability.

The program is known as "Every Light...Every Night." The goal, quite simply, is to operate every one of the city's 100,000 streetlights properly every night of the year. To date, the results have been impressive. The city scored a 99.4 percent "on" rate in 2003, bringing the three-year average for the program to 99.5 percent (**Table 6**). Reaching this goal, however, is not so simple. It requires the constant efforts of scores of people and the continuous allocation of resources by the city and its contractors. The full participation of the local electric utility is also essential, since it must provide dependable electrical service to the street lighting system on a daily basis.

There is much more to street lighting maintenance than the traditional view of simply replacing burned-out lamps. We must move toward developing a more comprehensive program based on customer service. By striving toward this higher level of service, lighting maintenance will improve, and the public will ultimately be better served.

The long-term ability of the street lighting system to meet these higher levels of performance is totally dependent on the successful development of a truly comprehensive maintenance program. Besides the normal day-to-day repairs, implementation of such an expanded maintenance program must include the long-term planning and investment necessary for the continuous upgrading of the entire lighting system.

Table 1 - The Philadelphia Partnership

PARTNERS	RESPONSIBILITIES	ANNUAL COST
Philadelphia Street Lighting Division	100,000 streetlight system Repair knockdown poles Replace defective luminaires Contract Management Engineering Services Modernization Program Daily system management	$2 million
Street Lighting Maintenance Contractor	4-year Contract period Maintains lamps and photocontrols Night patrolling and repairs Work order system Computer database Customer services	$1 million
PECO Energy	Electrical power distribution 20,000 underground tap connections 80,000 wooden utility poles Emergency Services	$12 million
	Total Maintenance Cost	$15 million

Philadelphia Partnership

While the City of Philadelphia directly owns the street lighting system, two other business partners play significant roles in its daily maintenance and operation. Both the city-paid street lighting maintenance contractor and PECO Energy share responsibility for the nightly performance of the street lighting system. Routine maintenance is performed by a combination of city personnel and private contractors. While a private contractor performs most maintenance services on a nightly basis, city employees are responsible for all major repairs including knockdown poles and luminaire replacements. Electrical service repairs are referred to the local utility.

PECO Energy supplies electrical power to the entire street lighting system through their combined aerial and underground distribution systems. Of the total 100,000 streetlights, 80,000 are attached to PECO wooden utility poles, and the remaining 20,000 city-owned streetlight poles are fed from PECO underground circuits. These business partners have

Continued on page 27

The Philadelphia Story . . . *Continued from page 26*

formed an alliance that we call the Philadelphia Partnership **(Table 1).**

Each partner has a well-defined area of responsibility; shares a common service goal; and tracks their respective performance on a daily basis. By closely monitoring the operation of the lighting system and then measuring the number of lights out of service, the partners are able to determine overall system performance. This data is then used to identify areas of improvement where each partner can upgrade the quality of their maintenance services.

The Partnership "ABCs" are as follows:
Accountability is achieved through regularly scheduled monthly management meetings, clearly defined responsibilities of each of the partners, and the establishment of priorities by each of the partners. Each partner accepts their responsibilities toward the public and to each other when questions arise from the media or elected officials on ownership and delivery of maintenance services.

Brainstorming is a solutions-based approach to problem solving that encourages out-of-the box thinking by members of the operations team and field-tests the latest available lighting technologies. This approach has led to the installation of longer life non-cycling HPS (high-pressure sodium) lamps as a system-wide standard. The ability to test new ideas has always been encouraged by the city as our way of keeping pace with changing business methods and advancements in technology.

Communication is always essential to any partnership and is achieved on a daily basis with a continuous exchange of information at the field supervisory level. This kind of discussion can often lead to the solution of common maintenance problems by field personnel. The sharing of common goals by each partner also allows the communication process to reach its full potential. For example, severe weather conditions can have an immediate impact on field operations by the electric utility. High winds often require an immediate change of assignments from routine lighting repairs to emergency storm damage work. We are always cooperative when the priorities change to accommodate public safety.

The combined efforts of this partnership have challenged each one of us to continuously improve our levels of performance. Recent budget cutbacks and personnel reductions have actually strengthened our resolve to work together and achieve our shared goals.

What follows is a detailed look at the role each entity plays in the process.

City Street Lighting Division. Daily management responsibility for the entire street lighting system falls on the City Street Lighting Division staff of engineers and managers. City personnel provide engineering design and review services of major projects, and perform daily contract management of the street lighting maintenance contract. Their work includes preparation of the annual operating budget for street lighting maintenance and operations, and the capital budget for modernization projects. In addition, City Street Lighting Shop personnel provide repair services for all knockdown streetlight poles and the repair or replacement of obsolete equipment.

Table 2 - Maintenance Contractor Summary

	2001	2002	2003
Monthly Repairs	1318	1450	1460
Daily Repairs	44	48	49
Streetlights OFF	44	48	49

Table 2-Represents the number of streetlight repairs completed by the maintenance contractor. There were an average of 1318 repairs per month (44 per day) in 2001, 1450 per month (48 per day) in 2002 and 1460 per month (49 per day) in 2003. Since each one of these repairs reflects a streetlight out of service on a daily basis, it is used in the final calculation of the number of streetlights out of service citywide each night.

System modernization is a major consideration of city capital improvements. The goals of our capital program are to improve public safety, increase lighting efficiency, and upgrade system reliability. This long-term modernization plan has three major components: the removal of all aluminum streetlight poles, the replacement of all mercury fixtures, and the eventual upgrade of the entire electrical distribution system.

Continued on page 28

The Philadelphia Story . . .

Continued from page 27

A 10-year program of replacing over 2000 aluminum poles with fiberglass poles will be continued with the eventual replacement of the remaining 16,000 aluminum poles in the system. Over 75,000 obsolete mercury fixtures have been replaced with HPS and the remaining 15,000 mercury fixtures should be completed over the next five years. Major upgrades to the underground electrical distribution system by the installation of new cable and conduit have already had an impact on that system's reliability and performance.

The continuous re-engineering of system components has improved operations and provided a complementary and cost-effective alternative to our limited capital funds. Standardizing materials can often extend the service life of equipment and reduce future maintenance requirements. This standardization has led to the development of published standards for various types of equipment and the selection of a single manufacturer for simplicity of purchase and delivery.

Maintenance Contractor. The city has employed a private contractor for many years to perform all routine maintenance services and to provide weekly inspection of the entire street lighting system. The benefits of utilizing private contractors have long been recognized as a highly effective method of providing this type of service. This contract is bid every four years with the next four-year cycle starting in July 2004. The city has adopted a proactive approach to street lighting maintenance by requiring the contractor to work five nights per week from 8 PM until 4 AM the next morning. These nighttime working hours have proven very effective for both the night inspection services and streetlight repairs and have always offered the best opportunity to accurately identify streetlight outages. This certainty of the exact location also minimizes the need for repeated and costly re-visits caused by inaccurate complaint information. In addition to nighttime repairs, the contractor also confirms the completion of all daytime repairs made by PECO and city forces when performing the nightly inspection patrols.

A major component of the night repair service is the responsibility to identify the location and nature of the streetlight complaint. Each fixture is tested to determine the exact cause of the outage and a work order is issued to the appropriate owner for repair, e.g. power failure to PECO.

Repairs completed by the contractor are documented in a maintenance database and submitted to the city for review on a monthly basis. Major repairs are referred to either the city or to PECO on a daily basis for assignment to field crews for quick action. Upon completion, the contractor re-checks the field location for proper operation and confirms that the repair order has been completed and the streetlight is working properly.

The contractor has also been designated by the city to provide customer service to the public by processing all telephone requests for service. This service is provided 24 hours per day for seven days per week as a public convenience when reporting streetlight outages. A city telephone line is linked to the contractor's call center to facilitate the receipt of telephone requests from the public. After normal working hours a professional answering service provides this service to the public without the need for answering machines or other impersonal devices. A computer database of all maintenance activities is updated on a daily basis for storage of all completed

Table 3 - City Street Lighting Shop Summary

	2001	2002	2003
Monthly Repairs	144	147	167
Daily Repairs	4.8	4.8	5.6
@ 10 Days	48	48	56
Streetlights OFF	48	48	56

Table 3-Represents the number of streetlight repairs completed by City Street Lighting Shop personnel. There were an average of 144 repairs per month (4.8 per day) in 2001, 147 per month (4.8 per day) in 2002 and 167 per month (5.6 per day)in 2003. Since the City Shop averages 10 days to complete each repair, the duration of each streetlight out of service is calculated by multiplying the daily number of repairs by 10 days per repair. This calculated value is 48 streetlights in 2001, 48 streetlights in 2002 and 56 streetlights in 2003. Since each one of these values reflects the number of streetlights out of service on a daily basis, it is used in the final calculation of the number of streetlights out of service citywide each night.

Table 4 - PECO Energy Summary

	2001	2002	2003
Monthly Repairs	616	476	655
Daily Repairs	20.5	15.9	21.8
@ 20Days	410	318	436
Streetlights OFF	410	318	436

Table 4 -Represents the number of streetlight repairs completed by PECO Energy. There were an average of 616 repairs per month (20.5 per day) in 2001, 476 per month (15.9 per day) in 2002 and 655 per month (21.8 per day) in 2003. Since PECO Energy averages 20 days to complete each repair, the duration of each streetlight out of service is calculated by multiplying the daily number of repairs by 20 days per repair. This calculated value is 410 streetlights in 2001, 318 streetlights in 2002 and 436 streetlights in 2003.Since each one of these values reflects the number of streetlights out of service on a daily basis, it is used in the final calculation of the number of streetlights out of service citywide each night.

Table 5 - Daily Streetlights OFF

	2001	2002	2003
Contractor	44	48	49
City Shop	48	48	56
PECO	410	318	436
Total OFF	502	414	541

Table 5 represents the total number of streetlights out of service on an average day. By combining the average number of outages for the City, Maintenance Contractor, and PECO Energy, there are an average of 502 streetlights out of service each night in 2001, 414 streetlights in 2002 and 541 streetlights in 2003.

Continued on page 43

Renewed Interest in Induction Lamp Technology . . . *Continued from page 42*

By the same token, visibility is improved when background glare from the lighting source is reduced by changing from dropped lens luminaries to that of low-glare flat lens or from metal halide to induction lamp.

For post-top type pedestrian street lights or any street light which is about 20 feet high, the best choice nowadays is induction lamps which are virtually maintenance-free, energy-saving, provide quality white light, good CRI, enough wattage and less glaring effect. Since the wattage of the induction lamp is still not high enough and it is not a point source, for a street light that is higher than 20 feet, the choice of lighting is still metal halide or HPS, depending on the application.

	LPW	Rated Hour	CRI	Ignition Time	Color Temp.	Major Drawback
Incandescence	11 - 15	1.5K - 5K	40	instant		Very Inefficient – Short Life
MercuryVapor	13 - 48	12 - 24K		2 - 15 min	4000	Inefficiency
HPS	45 - 110	12 - 24K	25	2 - 15 min	2000	Low CRI
LPS	80 - 180	10 - 18K	0	2 - 15 min.	1800	Low CRI
Metal Halide	60 - 100	10 - 15K	75	2 - 15 min.	3000-4300	High Maintenance
Induction Lamp	61 - 76	100 – 120K	82	.05 sec.	2600-6500	Relatively High Initial Cost.

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The Philadelphia Story . . . *Continued from page 28*

Table 6 - Percentage Streetlights ON

	2001	2002	2003
System	100,000	100,000	100,000
Streetlights OFF	502	414	541
Streetlights ON	99,498	99,586	99,439
Percent ON	99.5%	99.6%	99.4%

Table 6-Represents the actual percentage of streetlights operating on an average night. The number of streetlights ON is calculated by subtracting the number of streetlights OFF from the total 100,000 streetlights in the system. The number of streetlights ON is then converted to the percentage ON of the total system of 100,000 streetlights.

work. This detailed information is the basis for all reporting of performance measures established to track the daily progress of all types of maintenance activities.

PECO Energy. PECO Energy presently provides and maintains electrical power to the entire street lighting system of aerially fed wooden utility poles and city-owned streetlight poles that are connected to the underground distribution system. Maintenance of this extensive electrical distribution system by PECO requires the continuous assignment of manpower and resources sufficient to perform this task without delay. Several specific field crews are permanently assigned to troubleshooting defective streetlight circuits and making all aerial and underground repairs.

Because PECO management shares the same customer service goals as the city, each partner establishes their own monthly work priorities and discusses their implementation with the other partner at our scheduled coordination meetings. This allows each partner to adjust their own resources in response to and support of the others.

A Bright Future

The partnership has yielded impressive results. The information presented for the period 2001-2003 documents that an average of 99.5 percent of streetlights were working each night in 2001, 99.6 percent in 2002, and 99.4 percent in 2003, for a three-year average of 99.5 percent. This extremely high number of streetlights working properly each night of the year certainly supports the claim that the City of Philadelphia street lighting system has been meeting our stated goal of "Every Light...Every Night."

The Author: Joseph M. Doyle P.E., Member IESNA (2000), has been an engineer in the Streets Department of the City of Philadelphia for over 32 years, first serving in the Traffic Engineering Division and later in the Street Lighting Division. For the past 15 years, he has been the city's chief street lighting engineer. He is a registered professional engineer in the Commonwealth of Pennsylvania and a graduate of Villanova University. He received his Bachelor's Degree in Civil Engineering in 1971, followed by a Master's Degree in Transportation from Villanova in 1977. Mr. Doyle has been a member of the IESNA Roadway Lighting Committee since 2000 and is currently Section President of the Philadelphia Section and Chair of the Section's Education Committee He has been active in many local and regional lighting activities and educational seminars over the past 15 years including serving as the Chief Lamplighter of the Lamplighters of Delaware Valley. They are a regional group dedicated to outdoor and roadway lighting who presented their joint IES/Lamplighters Ralph Enghouser Award for "Distinguished Service To The Lighting Industry" to Mr. Doyle in 2002.

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