

## **IMPORTANT NOTE**

The material in this subcommittee report represents the opinions and recommendation of the subcommittee members. While all such information will be considered by Fairfax County and the consultants contracted to work on this study, Fairfax County does not necessarily endorse nor agree with these opinions and recommendations.

# Traffic and Roadway Issues - May 17, 2007

Many of the roadways in and around the Reston Avenue and Wiehle Avenue station areas are currently experiencing congestion problems, not only during weekday commuting periods, but also during mid-day and weekend periods. Natural traffic growth due to increasing population and employment in the region, as well as in the study area, can be expected to exacerbate this situation in the future.

The large planned parking garage at the Wiehle Station will attract transit related park and ride users, which while an inducement to use the Metrorail system, will create an added peak surge of traffic in the Wiehle station area.

Bus service in and around the station areas is currently subject to the same congestion as automobiles, which can discourage bus usage and inhibit transit mode share.

Apart from these traffic challenges, our profile of existing conditions reveals an inadequate network of facilities for non-motorized modes – both pedestrian and bicycle.

The overall transportation infrastructure environment is constrained by available right-of-way and existing development patterns. In effect, users of all modes are competing for limited space. There is not enough capacity for autos, buses, pedestrians and bicyclists to all operate under “free flow” conditions in the station areas.

Finally, modal operations are interrelated and improvements to one mode, e.g., additional travel lanes, can have a negative effect on pedestrian and bicycle travel.

As redevelopment takes place, opportunities may arise to modify and enhance the roadway networks around the **Three stations (Herndon Monroe Street Station will serve a great deal of Reston)**. This could include new roadways to provide connections that do not now exist and enhancements to existing roadways. Potential roadway design elements could include:

- Pedestrian facilities
- Bicycle lanes
- Landscaped medians
- On-street parking
- Grade-separation of major intersections
- Dedicated bus lanes
- Additional auto travel lanes
- Wide streetscaped sidewalks

## **Traffic and Roadway Issues**

**ROADWAY VISION** - As the study team moves forward with development and evaluation of improvement alternatives, it is critical that an overall vision for the station areas be agreed upon. For example, it may be argued that the vision for the station areas is one that provides ready and safe access for bus and non-motorized modes, even at the expense of auto traffic.

### **Issue 1: Trade-offs between modes in station influence areas**

*Which modes should have priority?*

- Auto - **Priority #4**
- Pedestrian/bicycle - **Priority #2**
- Bus - **Priority #1** - • **Bus priority and/or dedicated bus lanes**
- Kiss and ride - **Priority #3**

### **Comment** -

**In addition to transit station-bound feeder buses, and inter-county buses, I believe that we absolutely must plan for an extensive internal shuttle system within this urban core of Reston (Reston Town Center from Sunrise Valley Drive through Baron Cameron Avenue, and from Fairfax Parkway to Hunter Mill Road between Sunset Hills and Sunrise Valley). Thus the dedicated bus / HOV-3 lanes are going to be absolutely essential, even though difficult to implement in some cases.**

Along most of the length of Sunset Hills Road it will be possible to provide dedicated bus and possibly including HOV-3 and bicycle lanes utilizing the existing strips of land that now have very limited usage. Utilizing the land on the north side between the current Sunset Hills roadway and the Virginia Power transmission towers, considerable additional right-of-way can be obtained. The limited value of the present surface parking there can be easily replaced by structured parking in the neighborhood or by relocated but limited surface parking elsewhere nearby. Obviously, negotiation with both Virginia Power and Northern Virginia Regional Park Authority (NVRPA) will be required. Nevertheless, this right-of-way will in the future traverse an urban setting with high-rise buildings fronting on it. This is no longer a rural corridor with a bucolic trail and rural power lines running through it.

Utilizing the additional land area (north side of Sunset Hills east of Reston Parkway, and south side of the road west of Reston Parkway to Fairfax Parkway), it should be possible to add bus/HOV-3 lanes on both sides. Bicycle lanes are probably not necessary due to the proximity of the W&OD Trail. Obviously, these dedicated lanes would also be ideal for the emergency vehicles that now get bottle up by stopped traffic. Strict police enforcement is absolutely essential. Not too many people will pay a \$250 fine + points more than once without getting the message to stay out if you don't qualify. Dedicated lanes must be clearly differentiated from the general traffic lanes, both physically and visually. Some form of raised barrier, or speed bump, might be used. Paint the dedicated lanes green if necessary.

Some bottlenecks within this section of road will have to be worked around, such as the vicinity of the Sunset Hills / Reston Parkway intersection. However, creative minds will prevail here.

On other roadways, such as Reston Avenue and parts of Wiehle Avenue., it may be possible to use wide (12 foot) paved and reinforced shoulders as bus / HOV lanes during extended rush hours. Possibly even bicycles can be worked into the mix. Again, these can be color coded to differentiate them from conventional travel lanes. These designated bus/ HOV lanes must be used to the extent possible on all major Reston arterial streets (as they function, regardless of current VDOT designation) within the study area. Some of this treatment may need to be extended beyond the study area.

*Considerations:*

- Expanded intersections can be detrimental to non-motorized mobility
- Bus priority and/or dedicated bus lanes
- Access to the Wiehle parking garage
- Kiss and ride access

**Issue 2: Roadway design vision for influence areas - What should the local road system look like?**

• Wiehle Avenue - Due to the very limiting roadway geometrics of Wiehle Avenue north of Sunset Hills Road, very little can be done to make it handle the heavy traffic loads that are apt to result as it is considered as a short cut to the Wiehle Station from areas to the north and west. Some form of traffic calming will be necessary to keep some drivers from pressing the capacity of this roadway beyond its reasonable limits. General widening or straightening of Wiehle seems unlikely. Improving pedestrian and bicycle safety will be essential. Possibly some additional, wider, shared pedestrian and bicycle path can be added on the east side of Wiehle in this area.

Essential to expediting auto movements and safety in the vicinity of the Wiehle station will be grade separated pedestrian ways over Wiehle Avenue, Sunset Hills and Sunrise Valley. Number One priority must be given to the grade separation the W&OD Trail over Wiehle Avenue. By whatever means, this grade separation must be completed by the start of transit operations at this station. Funding and the difficulty of negotiating with NVRPA and Virginia Power cannot be successfully used as excuses to avoid implementing this vital improvement.

To avoid the long delays that would be associated with extended pedestrian / bicycle crossing cycles of major arterials near the transit stations, grade separated pedestrian crossings are essential at the first possible opportunity at the following locations: across Wiehle Avenue mid-block between Sunset Hills and the Dulles Highway, and mid-block between the Dulles Highway and Sunrise Valley Drive. Bicyclists must be require to dismount and walk their bikes across these links when pedestrians are present.

Across Sunset Hills Road, grade-separated pedestrian / bicycle ways are needed on the west side of Wiehle Avenue, and again, in association with a grade separated roadway at Isaac Newton West at the point it accesses the transit station area. Well marked, at-grade crossings of Sunset Hills should be provided between Isaac Newton West and Old Reston Avenue. Grade-separated pedestrian overpasses of Sunset Hills Road should be required at Old Reston Avenue, on both sides of Reston Parkway, 660 feet to the west of Reston Parkway (near the intersection of the Fountain Street pedestrian way from the Town Center), and at Town Center Parkway. At-grade crossings must be placed at strategic locations west of Town Center Parkway, and east of Wiehle Avenue.

Greatly improved pedestrian crossings must be provided across Reston Parkway both north and south of the Dulles Highway. , and greatly improved lighting, physical access, and visual access must be provided to the two existing pedestrian underpasses across Reston Parkway if they are to be used effectively. They should feel safe to users. A grade separation of Reston Parkway is needed for pedestrians and bicycles possibly as an element of the extended trails along (parallel to) the Dulles Highway on both the north and south sides.

Crossing Sunrise Valley Drive provides a number of pedestrian / bicycle challenges on both sides of Reston Parkway and on both sides of Wiehle Avenue.

To expedite vehicular trips, strong conflicts with pedestrian and bicycle traffic must be avoided throughout the Reston urban core area to the great benefit of each of the modes. See the section below on "Funding" for some ideas as to how to pay for these terribly expensive improvements.

- Reston Parkway - Widening of Reston Parkway seems inappropriate. However, greater use of an internal Reston shuttle and improved pedestrian / bicycle crossings should reduce some of growing conflicts along this road that will get considerably greater with the advent of transit service and continuing redevelopment. Constant review of the effectiveness of traffic signal timing is essential between Baron Cameron Avenue and South Lakes Drive. The traffic situation does change over time.

The greatest improvements serving north-south traffic in this Urban Core area will have to be the extension Town Center Parkway under the Dulles Highway to Edmund Haley Drive, and the extension of a restricted-use Soapstone Drive probably over the Dulles Highway to Sunset Hills Road. It may be possible to limit this connection during rush hours to buses, HOV-3, bicycles and pedestrians (all properly separated). While terribly expensive, these two road extensions could greatly reduce the pressure on Reston Parkway and Wiehle Avenue.

- Sunset Hills - has already been discussed extensively above. Sunset Hills has the greatest potential for multi-modal improvements due to the strips of available land along most of its length.

- Sunrise Valley - Functions fairly well, but its crunch points would greatly benefit from new north-south extensions at Town Center Parkway and Soapstone Drive. Preferential treatment of the Urban Core shuttle bus, other transit feeder buses, bicyclist and pedestrians would greatly assist east-west traffic along Sunrise Valley that is seeking a link with a north-south connection.

One of the most dangerous traffic bottlenecks is located at the eastern periphery of the study area. The Hunter Mill Road interchange with the Dulles Highway is a travesty and a death trap. It bottlenecks traffic between Sunset Hills Road and Sunrise Valley Drive on the east side of Reston. Through political clumsiness and bad timing, available funds and plans for improving this situation were lost. Hopefully MWAA, VDOT and Fairfax County can work cooperatively together next time, before the transit station opens, to complete this essential improvement. We must consider the inevitable extreme pressure placed by Reston employees and transit riders this time, and ignore the whimpers of some Hunter Mill Road residents who insist this should really be kept as a bucolic scenic byway for the use of horses. An available Dulles Highway interchange will be sought out and utilized by commuters.

- New connector roads across DIAAH (e.g., Soapstone Connector, Town Center Parkway – Edmund Halley connection)

As noted above, the greatest improvements serving north-south traffic in this Urban Core area will have to be the extension Town Center Parkway under the Dulles Highway to Edmund Haley Drive, and the extension of a restricted-use Soapstone Drive probably over the Dulles Highway to Sunset Hills Road. It may be possible to limit this Soapstone connection during rush hours to buses, HOV-3, bicycles and pedestrians (all properly separated). While terribly expensive, these two road extensions could greatly reduce the pressure on Reston Parkway and Wiehle Avenue.

- **Local streets** - All local streets within the immediate transit impact area (1/2 mile radius) need to be scrutinized for special bottlenecks that may develop in the context of transit that are not evident today. Particularly, all of these streets should be configured to expedite pedestrian and bicycle traffic. Where permitted by topography and adjacent structures, a grid of streets in the urban core helps to spread vehicular traffic among a variety of options rather than focusing it all upon a few congested roadways and intersections.

A grade separated roadway across Sunset Hills Road at Isaac Newton Square West will be essential because this street accesses the transit station area. Topography in the area makes an overpass feasible here. Because extensive new housing, as well as employment, is planned on both sides of Sunset Hills in this area, pedestrian and bicycle pathways must be provided with this overpass bridge. This roadway also provides for alternative access to relieve congestion around the immediate station area.

- **Multiple driveways/access locations** -

- *Driveways Considerations:*
- *Expanded local grid system can improve access*

- **Desirable cross-sections by roadway type** - Where widening existing arterials is (1) possible, and (2) not detrimental to bus / HOV, pedestrian and bicycle safety, these roadways, or specific bottleneck sections of them, should be widened. In general, however, we must try to facilitate bus, shuttle, HOV, pedestrian and bicycle usage, while discouraging dependence upon the single passenger automobile that will require operating and parking space in the urban core. To the extent we can design roadways to better accommodate these non-auto modes, we should do so, even at the expense of the private, one-passenger auto and increased congestion.

Realistically, while we should go to great lengths to make the alternative modes as attractive as possible for those who can readily use them, the long-established land use patterns of Northern Virginia are such that many residents and employees cannot readily utilize alternative modes of transportation. The automobile will remain the primary means of travel and access for thousands. The road system should accommodate additional auto traffic to the extent possible. However, priority must be given to the alternative modes, especially in Reston's future high density urban core.

Pay parking in the urban core and the preferential system design favoring the alternative modes should encourage typical auto commuters to become more creative in seeking congestion relief. Among the options available should be additional park and ride commuter lots on the periphery of the study area, such as the Reston South Park and Ride lot. More such lots must be built, and their use promoted effectively so that greater feeder bus / HOV usage coming from them is encouraged for trips continuing to the urban core.

- **Road diets** - It is difficult for me to visualize locations where this traffic calming technique would work effectively within the Reston Study Area. Because Wiehle Avenue, especially between Baron Cameron and Sunset Hill, will provide such a significant challenge in the future as potential transit riders seek to use this road to access the Wiehle Station, it might be considered for this and other traffic calming techniques.

- **Streetscaping elements** - Reston has always prided itself for the quality of its livability and design quality. Surely this principal must be continued and improved upon in the future. In the past, the primary Reston developer used attractive streetscapes as a marketing tool in promoting Reston as a place to live and do business. A single developer no longer dictates Reston design standards. Today, the Reston Association working cooperatively with the Reston Town Center Association, must set the quality of design standards and plan the long-term streetscape features of Reston.

To some extent these two on-going Reston institutions must be prepared to pay for many of the improvements. This means, in effect, that the Reston property owners will need to accept the burden of paying a fee, or tax, to implement the necessary improvements.

Nevertheless, it will be essential for Fairfax County government and VDOT to play a much greater role than either has in the past. To some extent also, WMATA and MWAA - as the owner and manager of the Toll Road and its access system - must be expected to contribute to this effort. Fairfax County government (i.e. Fairfax citizens at large), who benefit greatly from the economic strength of the Reston area, must see that investing in the environmental quality and attractiveness of Reston is,

**in fact, a means of assuring the economic viability of this very successful cash cow that in fact feeds the entire county. Development proffers associated with major building additions and redevelopments in Reston must always be a source of part of the necessary funding. Especially important will be the need to effectively coordinate this collective effort.**

**Funding: First of all, wherever there is structured parking within Reston's Dulles Corridor urban core, including the Reston Town Center, parking fees should be charged. A significant part of the parking fee revenues should be used to pay for the internal feeder / shuttle bus system and its support features. It is appropriate that residents and employees who do not live within the designated urban core area should pay a fairly substantial fee for the privilege of using and parking their cars within this urban core district.**

**All residents, retailers, and employers (through the property owners) within the Town Center and Dulles Corridor core areas should be assessed an on-going fee/ tax district tax to contribute to the cost of the internal bus / shuttle system.**

**Earmarked proffers from developers committed during the process of review of development project additions or redevelopment plans should contribute to the bus / shuttle fund.**

**VDOT, VDRPT and WMATA funding sources, and MWAA toll road revenues, should be tapped to the extent possible to fund the internal bus / shuttle system that will feed the transit system. To the extent that any other Virginia or Federal funding is possible it should be tapped.**

**Of particular significance, Fairfax County must be prepared to invest General Fund revenues to supplement the bus / shuttle fund. This Reston - Dulles Corridor employment and activity core is a major cash cow to the benefit of Fairfax County and its residents at large. A County investment in the effective internal circulation system here will manifest itself in significantly increased general tax revenues from businesses that expand in this area, to the benefit of the entire County. Failure to implement such a system can ultimately lead employers to move their operations to less congested areas, likely outside of Fairfax County with resulting tax revenue loss.**

**In addition, a small fare box revenue should be expected to off-set the cost of the shuttle / feeder bus system. Fares can be set at a level that is significant, but not so high as to significantly inhibit feeder bus / shuttle usage.**

**In short, all who benefit must equitably share the cost of this service.**

**If an equitable formula is established to share the capital and operating cost of the internal bus / shuttle system, and its associated support system, then the burden on any one funding entity would not be unreasonable or prohibitive.**

**Is there a need for internal circulators in the areas immediately - Covered in detail above.**