

## ATTACHMENT D

**PROJECT:** Connecticut Avenue (MD185)/Jones Bridge Road/Kensington Parkway Intersection  
SHA Contract No. MO5935570  
Mandatory Referral No. MR2010808

### PROJECT DESCRIPTION

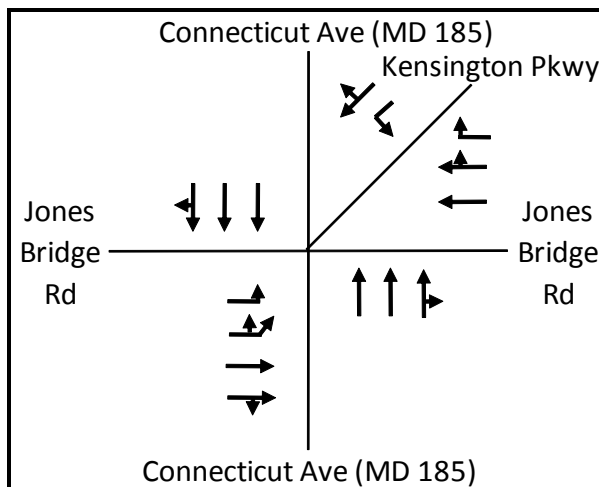
The current project would construct Phases 1 and 2 of the ultimate intersection project, extending along Connecticut Avenue (MD185) from just north of Manor Road to just south of the Capital Beltway (I-495). The current project would:

- Construct a continuous southbound right turn lane on MD185 from the ramp from the Inner Loop to Jones Bridge Road
- Remove the free-right-turn island in the northwest corner of the MD185/Jones Bridge Road intersection
- Construct an additional northbound through lane on MD185 from 300 feet north of Manor Road to the Capital Beltway
- Construct a new sidewalk along the east side of MD185 from Montrose Driveway to Inverness Drive at the northbound ramp to the Inner Loop
- Reconstruct the majority of the sidewalks within the limits of work to be offset from the curb
- Make the intersections within the limits of work ADA-compliant
- Construct a stormwater management facility at the end of the Inner Loop ramp to southbound MD185.

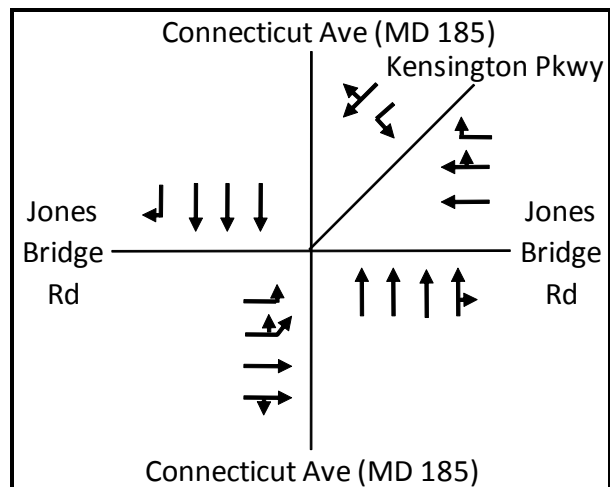
Plans for this project may be found on our website at:

<http://www.montgomeryplanning.org/transportation/brac/brac6.shtm>

**Existing Configuration**



**Proposed Configuration**



## PROJECT PHASING

SHA proposes to construct improvements to this intersection in three phases. The July 2010 Mandatory Referral review is for Phases 1 and 2, which would construct improvements along MD 185 in the southbound (Phase 1) and northbound (Phase 2) directions, respectively. No changes would be made to the Jones Bridge Road approaches in Phases 1 and 2.

Phase 3 of the proposed project includes improvements along Jones Bridge Road, including an additional left turn lane on eastbound Jones Bridge Road and replacing the westbound through-right lane with separate through and right lanes. The Mandatory Referral review originally covered all three phases, but SHA removed Phase 3 from the project as of June 30. Phase 3 includes significant construction on Jones Bridge Road, impacting the significant boundary walls of both the Chevy Chase Park community in the southeast quadrant of the intersection and Howard Hughes Medical Institute (HHMI) in the southwest quadrant. Once the exact impacts to the Forest Conservation easement on HHMI property, as well as the mitigation for these impacts, have been resolved, we anticipate the Phase 3 will be submitted as a Mandatory Referral for review in fall 2010.



## **FINDINGS**

### **Master Plan**

**Connecticut Avenue (MD185):** The project is **not consistent** with the Master Plan in regard to the number of northbound through lanes and the provision of landscaping.

### **SHA's Bicycle and Pedestrian Design Guidelines (MD185 only)**

**Intersection:** No crosswalk would be provided on the north leg of the MD185/Jones Bridge Road/Kensington Parkway intersection.

No handicap ramps are shown to cross MD185 at Parsons Road, Montrose Driveway, or Woodlawn Avenue.

**Sidewalk:** Continuous sidewalks would be provided within the project limits.

**On-road bike accommodation:** The recommended bike lanes would not be provided but the curb lanes would be slightly wider.

**Landscape buffers:** The landscape buffers proposed are generally substandard.

### **American Association of State Highway and Transportation Officials (AASHTO)**

Several segments of the proposed sidewalk do not meet the AASHTO recommendation to be two feet wider where immediately adjacent to the roadway curb.

AASHTO recommends that a pedestrian refuge island be considered where the crossing distance is greater than 60 feet. The crossing distance of the west and east legs of Jones Bridge Road would be 90 feet and 75 feet respectively.

### **American with Disabilities Act (ADA)**

The project meets the minimum accommodation required by ADA, but does not meet ADA Best Practices in the following respects:

- Sidewalks and paths are located too close to the curb at intersection corners, requiring users to negotiate multiple ramps to travel along the sidewalk around the corner.
- Sidewalks are located adjacent to the curb at driveways, requiring users to negotiate multiple ramps to travel along the sidewalk.

No ADA-accessible crossings of MD185 are proposed at Parsons Road, Montrose Driveway, or Woodlawn Avenue.

## STAFF ANALYSIS

### Roadway

The proposed roadway widening would accommodate the addition of two lanes, a continuous southbound right turn lane from the Beltway Inner Loop ramp to Jones Bridge Road and an additional northbound through lane from just north of Manor Road to the Inner Loop. The impacts of the proposed improvements on traffic operations are summarized below:

Location	Without Improvements			With Improvements <sup>1</sup>		
	CLV AM/(PM)	Delay per vehicle AM/(PM) in seconds	Weekday Peak Hour Delay (hours)	CLV AM/(PM)	Delay per vehicle AM/(PM) in seconds	Weekday Peak Hour Delay (hours)
185/Jones Bridge	1860 / (1955)	146 / (194)	677	1503 / (1755)	85 / (148)	467

### Master Plan Consistency Regarding Functional Classification and Number of Lanes

Auxiliary lanes are normally not considered when assessing whether a project is consistent with the Master Plan. The proposed southbound continuous right turn lane is a very long auxiliary lane at 1,400 feet, but we believe that it is consistent with the Master Plan.

The proposed additional northbound through lane is almost a half-mile long. We believe that this is too long to be considered an auxiliary lane and that it is inconsistent with what the Master Plan recommends. In addition, the construction of this lane would prompt the removal of the existing median with street trees that *is* recommended in the Master Plan.

If the northbound lane is not built however, most of the traffic benefit in the evening rush hour would not be gained. The existing 194 second PM delay per vehicle shown in the table above would be reduced only to 190 seconds rather than 148 seconds. In essence, the improvements along MD 185 (Phases 1 and 2) save all travelers about one minute of delay and the improvements along Jones Bridge Road (Phase 3) save all travelers another minute of delay.

We recommend therefore that the Board approve the widening of Connecticut Avenue but with an eye toward our programmed functional master plan amendment work program element in FY 12 that incorporates future transit and carpool priority treatments, and with reservations about the visual impact to the community, which is addressed further in the following paragraphs.

<sup>1</sup> For Phases 1, 2, and 3 combined, the “With Improvements” CLV during the AM peak hour would be 1452 and during the PM peak hour would be 1508. The PM peak period delay per vehicle would be reduced to 89 seconds and the weekday peak hour delay would be reduced to 327 hours.

The 1990 Bethesda / Chevy Chase Master Plan recommends Connecticut Avenue as a six-lane major highway. Whereas the Master Plan contemplates the potential for future widening for HOV-priority treatments on Rockville Pike, no such similar language exists for Connecticut Avenue.

The recommendation for a given number of lanes applies to through lanes, not turning lanes or other auxiliary lanes at intersections. In fact, all master plans adopted during the past eight years have had a footnote in the street and highway classification table stating that “these are the number of planned through lanes for each segment, not including lanes for turning, parking, acceleration, or other purposes auxiliary to through travel”.

In some cases, lanes that carry traffic through an intersection are appropriately considered as auxiliary lanes when they exist solely to move people and goods past a given choke point, as opposed to through a community. This situation is most common near freeway interchanges; examples where a six-lane major highway has had a fourth through lane added at an intersection include Colesville Road (US 29) through Four Corners, Old Georgetown Road at the I-270 spurs, and MD 355 at Shady Grove Road near I-370.

The distribution of traffic using the Capital Beltway headed to the federal NIH and NNMC campuses, the Bethesda Central Business District, and other destinations in Montgomery County and Washington DC means that the section of Connecticut Avenue north of Jones Bridge Road will, for the foreseeable future, carry much higher traffic volumes than the portion south of Jones Bridge Road. As described below, many alternatives to an eight-lane portion of Connecticut Avenue were considered by the BRAC Implementation Committee during the past two years.

Staff finds that while the eight-lane concept is undesirable from a placemaking perspective, there is a need to improve access and mobility at this location and that the SHA concept is the best option available that balances access, mobility and safety needs with design and community compatibility needs. It is tempting to either recommend deletion of the eight-lane section or deferral for further study of additional alternatives. However, staff finds it is unlikely that subsequent study would match either the two-year effort of design and outreach undertaken as part of the BRAC effort, or find a better solution.

As is the case with the additional lanes on MD 355, staff finds that further operational analysis would be valuable to determine whether and how the additional capacity on Connecticut Avenue could ultimately facilitate bus and carpool priority treatments. Appendix J-2 describes analysis staff undertook along MD 355 indicating person-throughput could be enhanced by HOV-2 lane designation. Similar information is not yet available for MD 185; staff will pursue this effort analysis in conjunction with the Countywide BRT study and analysis during the next year to be developed for the Chevy Chase Lake Sector Plan technical efforts. The provision of additional capacity along MD 185 between Jones Bridge Road and the Capital Beltway will help facilitate access to the Chevy Chase Lake area, but the need for improvements exists today, regardless of what development may be contemplated in the future Chevy Chase Lake Sector Plan.

Staff recommends that this eight lane connection between the Beltway ramps and Jones Bridge Road should not be considered just an auxiliary lane, but rather that:

- Continued investigation of the potential for diamond-lane (HOV and/or BRT) priority treatments be examined as part of the Countywide BRT study and in conjunction with the long-range forecasting being prepared for the Chevy Chase Lake Sector Plan, and that
- The eight-lane section, with appropriate HOV or BRT priority treatments, be incorporated into the Department's Master Plan of Highways amendment scheduled for preparation during FY 12.

### Alternative concepts to improve access and mobility

**Inner Loop ramp:** During our coordination with SHA on the design of this project over the past year, we suggested that they consider signaling the ramp from the Inner Loop to southbound MD185, similar to what they did several years ago at Georgia Avenue (MD97). The MD97 operation stops southbound traffic so that the ramp traffic can exit the Beltway and eliminates the conflicts between ramp traffic that wants to move left to continue on southbound MD97 and traffic on southbound MD97 that wants to turn right to the shopping center in Montgomery Hills, to Seminary Lane, or to Sixteenth Street. SHA has some concerns with potential stacking on the Beltway, but the MD97 change has proved very beneficial, as has the same treatment at ramp from the Inner Loop to southbound MD355.

Our goal in recommending this change was to reduce the need for the continuous southbound right-turn lane so that impacts to adjacent properties would be reduced. SHA found that installing a signal would not provide a comparable traffic benefit, but would be beneficial if the number of lanes on the ramp were increased to two or three. We believe that we should take advantage of the opportunity to provide a traffic benefit that does not adversely impact the community and recommend that this signal be installed.

**Reversible Lane:** The need for four through lanes is only present during the peak period and in the peak direction. One engineering solution would be to consider the type of reversible lane system currently employed along Georgia Avenue and Colesville Road serving the Silver Spring CBD. A reversible lane solution would improve efficiency in reducing the amount of impervious pavement and direct impacts to adjacent properties. However, a reversible lane solution would create adverse effects on design and community compatibility, particularly considering the amount of signing and turning restrictions needed to ensure safe operations.

**Kensington Parkway Partial Closure:** This road is the fifth leg of a very busy intersection. While the traffic volumes on Kensington Parkway are relatively low, the inclusion of a separate signal phase to accommodate southbound traffic decreases the efficiency of the intersection as a whole. We suggested to SHA that they consider eliminating this phase by prohibiting southbound Kensington Parkway traffic entering the intersection. Traffic would instead turn right onto Montrose Driveway then turn onto MD 185 at a new signal. A preliminary look at this alternative has shown that it would provide a benefit at the Jones Bridge Road intersection, although there are concerns about cut-through traffic entering the Chevy Chase Valley neighborhood and the reconstruction of the east leg of Montrose Driveway that would be required. We recommend continuing consideration of this alternative if it is shown to be feasible, at least during the peak periods.

**Spring Valley Road Connection:** The Master Plan recommends that special attention be paid to the intersection of Jones Bridge Road and Spring Valley Road to improve access to Chevy Chase Valley neighborhood in the northwest quadrant of the MD185/ Jones Bridge Road intersection. Residents here say that access to their neighborhood is already very difficult from both roads and many fear that it will become more difficult after the BRAC actions, regardless of the proposed improvements.

The continuous southbound right-turn lane on MD185 will facilitate traffic flow onto Jones Bridge Road, which may reduce available gaps for residents exiting the Chevy Chase Valley community.

In response to this concern, MCDOT offered to conduct a neighborhood traffic study to look at four options for alleviating this problem. The alternatives, developed with input from the community and our staff, were:

1. Installation of a new traffic signal at MD185/Montrose Driveway, as noted above.
2. Installation of a new traffic signal at Jones Bridge Road/Spring Valley Road.
3. Construction of a new road extending through North Chevy Chase Local Park from the western terminus of Montrose Driveway or Woodlawn Road to Jones Bridge Road at Platt Ridge Drive, a signalized intersection.
4. Construction of a new road from the western terminus of Montrose Driveway or Woodlawn Road to the existing park road in North Chevy Chase Local Park.

DOT received copies of the final report on Friday, July 9, and we received a copy MCDOT's report on July 13, 2010. We have not had sufficient time to review the study thoroughly before the due date of this memo, but their consultant's recommendation is to build Alternative 3 as a permanent solution, but to construct Alternative 2 as a timely interim solution. MCDOT has indicated that they will be installing the signal prior to SHA's construction and they would like to meet with our staff and the Planning Board to discuss the proposed new road on parkland sometime this fall. We believe that the new signal will address the problem for the time being, but DOT concurs with the Consultant's finding that the signal at this location, is not a permanent solution. These proposals are designed to improve local residential access for a small community, not to disperse traffic already on Jones Bridge Road or MD 185. Staff therefore finds that none of the Spring Valley Road connections would have a substantial effect on the need for, or performance of, the proposed improvements at the MD 185/Jones Bridge intersection.

### **Pedestrian Accommodation**

The proposed changes to the Connecticut Avenue (MD185)/Jones Bridge Road/Kensington Parkway intersection would affect pedestrians in two major ways. First, there would be an additional northbound travel lane to cross on the south leg of MD185 and the median would be narrowed by about nine feet, although the remaining six-foot-wide pedestrian refuge would be adequate. Second, the free-right-turn in the northwest quadrant of the intersection would be eliminated. This would increase the crossing distance by about sixteen feet and about five

seconds at the normal walking speed, although it would also decrease the speed at which vehicles turn the corner.

The crossing distance of the west and east legs of Jones Bridge Road would be 90 feet and 75 feet respectively, both of which exceed the point at which AASHTO recommends that a median pedestrian refuge be considered. We recommend that the median ends be widened to six feet so that refuges can be provided.

The sidewalk and ramp at the southeast corner of the intersection are proposed to be rebuilt immediately adjacent to the curb with a single ramp at the apex. We recommend that directional ramps be built for each of the two crosswalks and that the proposed sidewalk be built behind the ramps, in conformance with ADA Best Practices.

The existing sidewalks along MD185 are generally immediately adjacent to the roadway curb within the 2500-foot project length. Most of the sidewalk would be reconstructed to be offset from the curb as part of this project, but about 800 feet on the east side of the road would remain attached to the curb. It appears that some additional areas could be offset from the curb within the scope of the project, but SHA's design goes a long way toward correcting this problem. We recommend that where curb-attached sidewalk are unavoidable, they should be constructed two feet wider to provide a greater measure of pedestrian safety and comfort per AASHTO recommendations.

The Master Plan recommends that the safety of the pedestrian crossing at Montrose Driveway be improved and that signalization be considered. If such a signal was installed, it would provide a great improvement in the safety of transit riders and other pedestrians, including the communities on either side of Connecticut Avenue. Currently, there is no signalized crossing in the 0.7-mile distance between Beach Drive and Jones Bridge Road. No crosswalk exists or is proposed on the north leg of MD185 at the Jones Bridge Road intersection. To cross between North Chevy Chase and the Chevy Chase Recreation Association swim and tennis club on Spring Valley Road, one has to cross the other four legs of the intersection (Kensington Pkwy, the east leg of Jones Bridge Road, the south leg of Connecticut Avenue, and Jones Bridge again.)

SHA is considering whether to stripe a crosswalk at the Montrose Driveway location, which is also a bus stop. If they determine that it is unsafe to cross at this intersection, the bus stops should be moved or eliminated and the intersection should be posted to prohibit the crossing.

If a safe crosswalk cannot be provided at Montrose Driveway, there is another possibility to provide a safe crossing of Connecticut Avenue between Beach Drive and Jones Bridge Road. If the recommended traffic signal is installed at the Inner Loop ramp, it would be possible to provide a crosswalk between the Inner Loop ramp termini to northbound and southbound MD185. Such a crosswalk would be at the sidewalk connection to Inverness Drive and could provide this needed link between the Chevy Chase Valley and North Chevy Chase neighborhoods. The stop bar that now exists for northbound MD185 traffic would have to be moved south and control traffic now bound for the Inner Loop also.



## **Off-Road Bicyclist Accommodation**

A short segment of the shared use path proposed by MCDOT along the north side of Jones Bridge overlaps the Phase 3 work of this intersection project and we believe that it would best be done as part of SHA's work since the Phase 3 relocation of the Jones Bridge curb line to the south would result in more room to create a better facility.

Unlike the other major north-south State highways affected by the BRAC projects, no Master Plan bike facilities are planned on MD185, so the lack of bike lanes that are recommended in SHA's guidelines would result in very little accommodation for bicyclists on MD185. An on-road bike route along Kensington Parkway would accommodate north-south bike traffic north of Jones Bridge Road, but there is no provision south of Jones Bridge Road.

As part of the preliminary work on the Chevy Chase Lake Sector Plan, the east side of MD185 between Jones Bridge Road and Manor Road has been identified as a possible location of a shared use path to address this deficiency. While the slope here may make construction more difficult, there is the horizontal space even with SHA's proposed additional northbound through lane to accommodate such a path and we recommend that this path be considered.

## **Landscaping**

The 1990 B-CC Master Plan recommended that the then-existing concrete median be removed and replaced with a 14-foot-wide grass median; the language in the Plan supported purchasing four homes on the east side on MD185 in order to achieve the creation of the median and the construction of a sidewalk on the east side. As part of the Green Corridors Policy, the Plan also recommended that trees be planted in the median and on both sides of the road. A wider median was created with street trees but no trees were planted on the sides of the road.

This project was originally designed to accomplish the additional northbound lane by taking homes of the east side, which would have been consistent with the Plan. After receiving public comment, SHA decided against taking the homes reducing the 14- to 15-foot wide median with trees to a six-foot-wide grass median, which is too narrow to plant trees. Most sidewalks within the project limits would be offset from the roadway by a landscape panel, but in most cases it would be only three feet wide, too narrow to plant trees.

A total of ten trees would be planted in the median at the ends of the project that would be unaffected by the roadway widening, but more than two dozen median trees would be removed. The only other tree planting would be around the proposed stormwater management facility at the end of the Beltway ramp from the Inner Loop.

In summary, there would be a significant diminishment of the Connecticut Avenue streetscape with the proposed project, falling even further behind the Master Plan vision. SHA should maximize the opportunities to plant trees between the curb and sidewalk, utilizing appropriate species that can tolerate the pruning needed to accommodate overhead utilities. Where it is not possible to plant trees between the curb and sidewalk, shade trees should be planted behind the sidewalk and additional plant materials, such as shrubs, should be provided to achieve a well-

landscaped roadway. We support an amendment to the Master Plan number of lanes to address mobility needs, but Master Plan goals of community compatibility and attractive roadways still need to be addressed.

### **Environmental Guidelines**

The project is within the Lower Rock Creek watershed, a USE I-P designation. The Countywide Stream Protection Strategy (CSPS) rates this watershed as poor.

The project (Phase I and Phase II) has no grading or other land disturbing activities within streams, wetlands, or environmental buffers. However, Phase 3, which is not included in this Mandatory Referral, includes significant construction on Jones Bridge Road, and would impact the Forest Conservation easement on Howard Hughes Medical Institute property. Phase 3 will come back before the Planning Board as a separate Mandatory Referral with a proposal to address the Forest Conservation easement.

### **Forest Conservation**

The project is exempt from submission of a forest conservation plan. A forest conservation exemption (#42010205E) was granted under the provisions of Section 22A-5(f) as “a governmental project reviewed for forest conservation purposes by the State Department of Natural Resources under the Code of Maryland Regulations”. The exemption was confirmed on May 20, 2010.

### **Historic**

No County-listed historic properties are within the project limits.

### **Park Impacts**

This project has only a minimal impact on Park property, about 15 square feet of acquisition.