

Appendix

# Glenmont Sector Plan

January 2013

## **Appendix C: Georgia Avenue Busway Study**

For more information, call the Area 2 Division at (301) 495-4500



Montgomery County Planning Department

**M-NCPPC**

MontgomeryPlanning.org

# THE GEORGIA AVENUE BUSWAY STUDY

## SUMMARY REPORT



The Maryland-National Capital Park and Planning Commission

assisted by  
Parsons Brinckerhoff Quade & Douglas  
Loiderman Associates  
The AE Group  
Rhodeside and Harwell

August 1998

## Abstract

**Title** Georgia Avenue Busway Study: Summary Report

**Author** The Maryland-National Capital Park and Planning Commission  
Montgomery County Department of Park and Planning  
Countywide Planning Division --Transportation Planning

**Subject** Feasibility study of a potential busway on Georgia Avenue in  
Montgomery County

**Planning Agency** The Maryland-National Capital Park and Planning Commission

**Source of Copies** The Maryland-National Capital Park and Planning Commission  
8787 Georgia Avenue, Silver Spring, Maryland 20910-3760  
(301) 495-4525

**Date** August 1998

**Number of Pages** 11

**Abstract** This report contains a summary of the results of the Georgia Avenue Busway Study, which evaluates the feasibility of providing a busway on Georgia Avenue between the Glenmont and Olney areas of Montgomery County. A separately bound Technical Report is also available.

# GEORGIA AVENUE BUSWAY STUDY SUMMARY REPORT

## TABLE OF CONTENTS

<b>Introduction</b> .....	<b>1</b>
<b>Study Purpose</b> .....	<b>1</b>
<b>Planning Board Action and Next Steps</b> .....	<b>1</b>
<b>Overall Findings</b> .....	<b>3</b>
<b>Preferred Busway Concept</b> .....	<b>3</b>
<b>Study Process</b> .....	<b>9</b>
<b>Previous Studies and Plans</b> .....	<b>10</b>

## LIST OF FIGURES

<b>Figure 1: Georgia Avenue Study Area</b> .....	<b>2</b>
<b>Figure 2: Preferred Cross Sections</b> .....	<b>5</b>
<b>Figure 3: Landscaping Enhancements</b> .....	<b>9</b>

# SUMMARY REPORT

## Introduction

The Georgia Avenue Busway Study evaluates the feasibility of providing a busway on Georgia Avenue between Glenmont and Olney. **Figure 1** shows the study area. The study builds on previous work performed by staff of the Maryland-National Capital Park and Planning Commission (M-NCPPC) in the Transitway & High-Occupancy Vehicle Network Master Plan, which was completed in 1995. The plan identifies a major need for improved transit facilities and services in this segment of Georgia Avenue.

The Transitway & High-Occupancy Vehicle Network Master Plan included several potential projects that warranted more detailed study. After reviewing the plan, the Planning Board decided that a busway on Georgia Avenue had considerable potential and deserved to be further evaluated by staff. In evaluating the feasibility of a busway, the study was to investigate possible alignments, cross sections, and right-of-way needs as well as the anticipated impacts of such a busway on Georgia Avenue. Special emphasis was to be placed on sensitivity to adjacent land uses and on good urban design principles in order to create a project that would enhance livability for people residing and working in the area.

A Georgia Avenue busway would serve a dual transportation objective. It would help satisfy the growing need for high quality suburb-to-suburb transit service as well as for a vital link to the radial Metrorail service connecting to Silver Spring, the District of Columbia, and northern Virginia. The Planning Board has recognized that a busway on Georgia Avenue is only one component of a possible inter-connected system of transit-favored facilities. While the Georgia Avenue Busway Study is meant to focus primarily on north-south mobility needs, seamless connections to lateral branches would allow the busway to function as a backbone for other unmet suburb-to-suburb transit needs. It is conceivable that certain buses could use the Georgia Avenue busway portion of the system and then diverge to other transit-favored facilities in an east-west direction. This study provides input to The Transportation Policy Report, which will examine potential transit-favored facilities branching off Georgia Avenue.

A detailed technical report on the study will be available in the Fall of 1998. The report can be obtained from the Transportation Planning Unit by calling 301-495-4525.

## Study Purpose

The primary purpose of this study is to:

1. Perform a comprehensive evaluation of the feasibility of providing and operating a busway on Georgia Avenue.
2. Identify ways to enhance the appearance, safety, and livability of the study area.
3. Examine aspects of a proposed busway in sufficient detail to determine whether additional right-of-way needs protection in area master plans.

## Planning Board Action and Next Steps

At its meeting on June 4, 1998, the Planning Board accepted this Summary Report and endorsed inclusion of a preferred busway concept (described later in this report) as a potential transit project in staff's ongoing Transportation Policy Report.

The next steps in the planning process for the busway are as follows:

1. When staff completes the Transportation Policy Report, the Planning Board will assess the level of priority of a Georgia Avenue busway relative to all the other potential transitway and HOV facilities that may be desirable in the County.
2. If the Planning Board determines that the Georgia Avenue busway is a high priority project and deserves to advance further, the Board may take actions such as recommending that the County Council, County Executive, State Delegation, and Maryland Department of Transportation support an MDOT-sponsored project planning study for the busway.



# GEORGIA AVENUE STUDY AREA

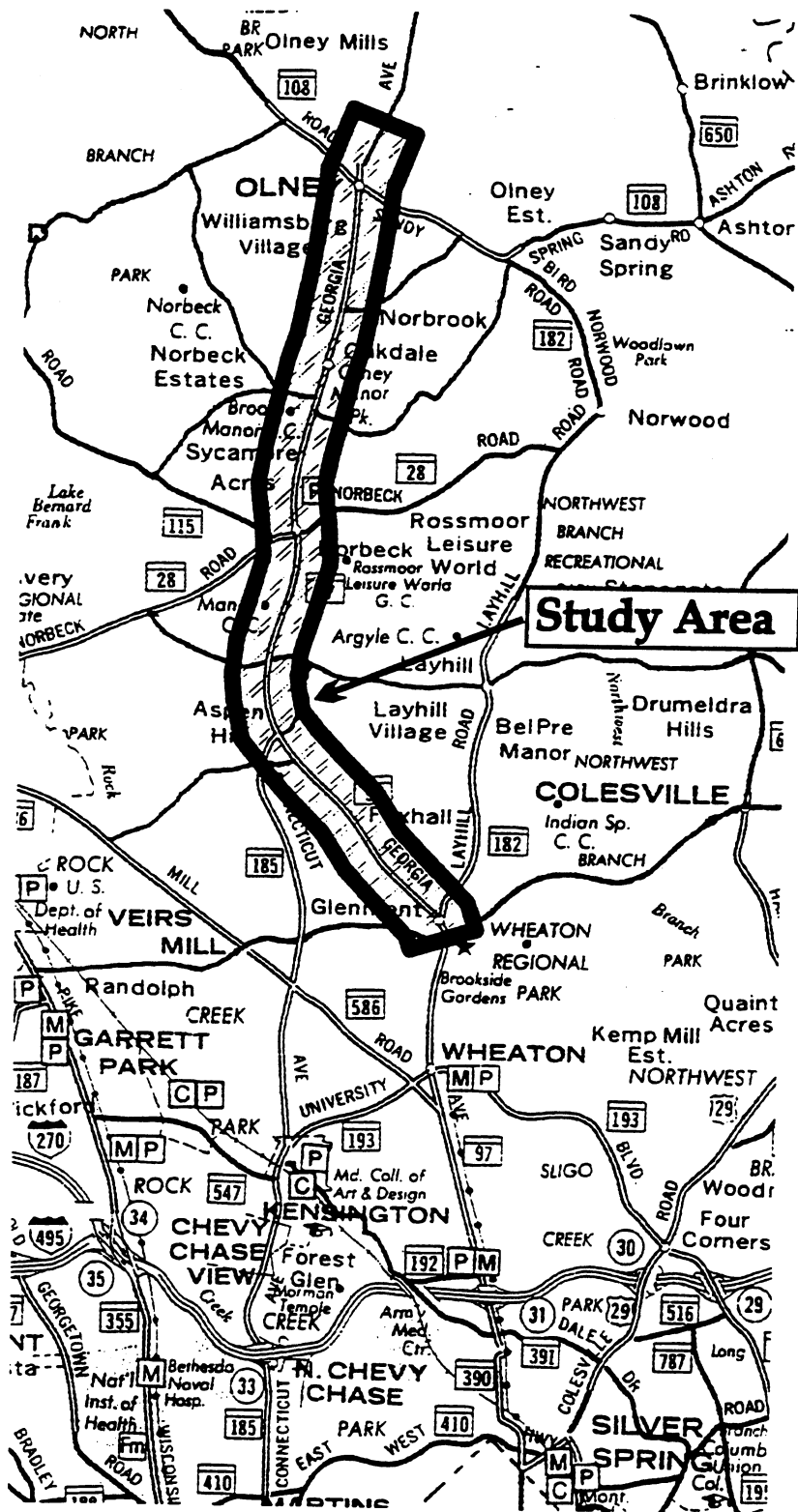


FIGURE 1



3. Proposals for the busway and the ancillary facilities should be included in future revisions to the relevant area master plans, as appropriate.

## Overall Findings

**Consistent with the results of previous studies and plans, this study confirms that a busway between Glenmont and Olney is needed and finds that a busway in this study area is feasible.** From a technical standpoint, no fatal flaws are found that would prevent a busway from succeeding in this area. The major findings are as follows:

1. Projected transit demand justifies a two-lane bi-directional busway in the median, accommodating both express and local bus service.
2. The market area is sufficient to warrant a supporting network of approximately six express bus routes, with buses operating at intervals of no more than 20 minutes on each route.
3. Extensive landscaping and amenities, including trees, grass strips, sidewalks, hiker/biker trails, bus shelters, and improved park-and-ride facilities, are considered essential for this type of facility in order to significantly enhance the appearance, safety and livability of the study area.
4. Improved landscaping, which is sensitive to the need to enhance the quality of the communities that the busway would serve, would result in using more of the existing or protected right-of-way than would otherwise occur.
5. There does not appear to be a pressing need to protect additional right-of-way along Georgia Avenue for the busway at this time; much of the necessary right-of-way either already exists or is protected in area master plans. However, any intersection improvements proposed for the roadway must be made so as not to preclude the future busway and the associated landscaping and amenities.

## Preferred Busway Concept

**Busway options.** The Georgia Avenue Busway Study evaluates various options for reserving lanes exclusively for buses: adding one reversible-direction lane in the median, adding two bi-directional lanes in the median, taking an existing lane or adding a lane next to curbs, taking an existing lane or adding a lane on each side of the median, and taking an existing lane from the off-peak direction to create a contraflow lane. The study also examines the option of a light-rail line on Georgia Avenue .

The focus group participants as well as members of the study's Technical Advisory Committee have examined and provided comments on each option. They have observed that creating an arterial bus lane by taking an existing general purpose lane next to the curb or the median would result in the least cost. However, they noted that it would be difficult to keep motorists out of the lane. It would also reduce the number of general purpose lanes available for motorists and increase delay of vehicles in those lanes by up to 60%. The majority considered the enforcement problems and degradation of traffic flow to be unacceptable.

They have also considered the option of creating a bus lane by adding a lane in each direction, but found it to be unacceptable because of the need for more right-of-way. Since Georgia Avenue currently has three lanes in each direction south of Norbeck Road and two lanes in each direction north of Norbeck Road, they saw some advantages with a combination of taking a lane in each direction south of Norbeck Road and adding a lane in each direction north of Norbeck Road to create a uniform cross section along the entire length of the study area. However, the negative consequences on motorists in the fewer remaining general purpose lanes south of Norbeck Road remained a serious problem.

With regard to a contra-flow bus lane, the majority felt that it posed unacceptable safety and logistical problems. A light-rail or heavy-rail option was appealing to a few, but ultimately the majority felt that the projected transit ridership figures for the next 20 years do not justify the expense of rail service in the study area, and that a busway is the most feasible first step in improving transit in the study area.



**Preferred busway option.** After weighing all the advantages and disadvantages of each option, the Planning Board's preferred option is adding a two-lane bi-directional busway in the center of the median. This busway would accommodate both express and local bus service.

A center busway option received by far the most favorable comments from the technical staffs and community participants as well. Both the technical staffs and citizens indicated that a major advantage of the center busway option is that it does not negatively affect the general purpose lanes. In fact, more capacity would become available in the general purpose lanes since local buses would travel in the busway lanes rather than in the existing curbside lanes. The lanes would be used by the small buses recommended for the new express routes that would reach into adjacent neighborhoods. They would also accommodate full-size buses currently providing service on Georgia Avenue.

**Cross sections.** The Planning Board's preferred cross sections, as shown in Figure 2, fit within a 150 foot right-of-way. In Figure 2, the upper cross section shows the four-lane segment of Georgia Avenue north of Norbeck Road. It specifies a range of possible right-of-way widths that are well within 150 feet. The lower cross section, meanwhile, shows the six-lane segment south of Norbeck Road. For this segment, a width of 150 feet, which is the lowest value in the range of possible right-of-way widths, is what this study recommends.

It is very fortunate that for much of the distance on Georgia Avenue between Glenmont and Olney, a 150-foot right-of-way width either already exists or is protected in area master plans. The Olney Master Plan and Aspen Hill Master Plan already specify protection of 150 feet of right-of-way on Georgia Avenue. Although the Kensington-Wheaton Master Plan calls for a minimum of 135-145 feet, approximately 150 feet already exists for nearly all of the distance in question. A few right-of-way constraints occur primarily at the southern and northern ends of the busway alignment. At those locations, the choices are either to maintain the preferred 150-foot right-of-way and encroach upon some properties or to compromise on one or more elements of the suggested cross section to make it fit within the available right-of-way. These trade-offs and

associated engineering details are best examined and resolved in the subsequent project planning phase of this project.

While sufficient right-of-way either already exists or is protected, substantial reconstruction of existing Georgia Avenue would be needed to fit the suggested cross section elements within the bounds of the available right-of-way. With careful design, it appears that the taking of adjacent property could be minimized or avoided altogether for much of the busway alignment.

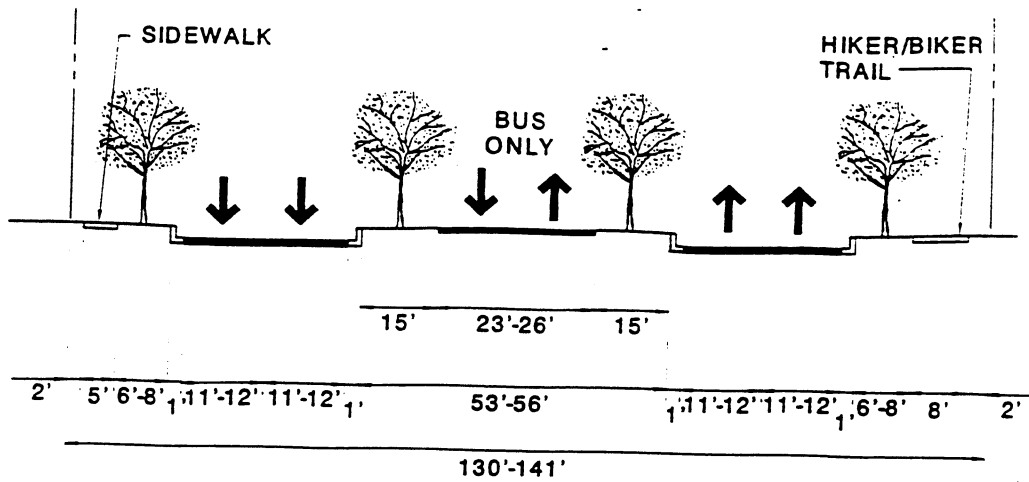
**Bus network and transit demand.** The length of the busway would be approximately seven miles, extending from Glenallan Avenue at the southern end to Spartan Road at the northern end of the busway. The Planning Board's preferred busway concept includes accommodating existing local bus service as well as a new express bus network that would use the busway. Local Metrobus and Ride-One bus routes would no longer operate in the curbside, general purpose lanes. They would operate in the center busway, stopping at bus shelters in the landscaped areas of the median. The express buses, meanwhile, would operate in the busway as part of a possible network of six routes, using small 21-passenger buses operating at intervals of 15 minutes on each route. In the mornings, for example, a small bus would circulate on local streets in neighborhoods to pick up passengers at bus stops near their homes and then enter the busway and continue southbound for an express trip toward Glenmont. Passengers would stay on the same bus for the entire trip. Once the bus enters the busway, the only stop for the express service between Olney and Glenmont would be off-line at an improved Norbeck Road Park-and-Ride Lot.

This study confirms the results of the Transitway & High-Occupancy Vehicle Network Master Plan that reserved lanes for buses would offer significant benefits by way of time savings for transit commuters. For example, by 2010, using a combination of Metrorail from Silver Spring to Glenmont and then an express bus on a busway from Glenmont to Olney would take about 26% less time for the overall trip than driving a car the entire distance. A large improvement in convenience through such travel time savings can help tip the balance toward making transit a much more appealing choice for people than it is today.





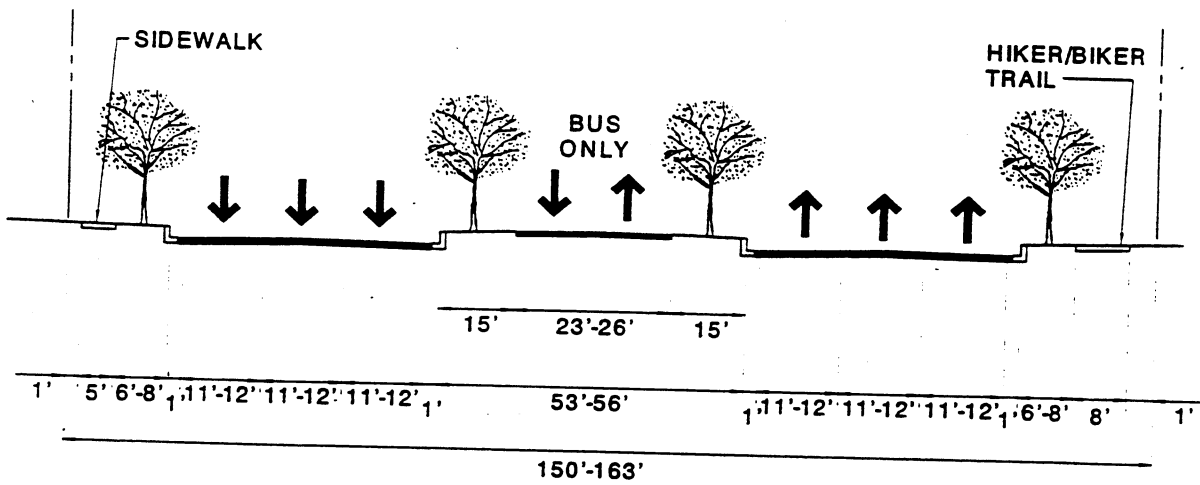
# PREFERRED CROSS-SECTIONS



## CENTER BUSWAY

(NORTH OF NORBECK ROAD)

NOTE: SELECTED PORTIONS OF THE 15' LANDSCAPED AREAS IN THE MEDIAN WOULD NARROW TO 5' TO ALLOW FOR LEFT-TURN LANES AT INTERSECTIONS.



## CENTER BUSWAY

(SOUTH OF NORBECK ROAD)

**FIGURE 2**

In conjunction with the busway, a network of six express bus routes, four serving the Olney area and two serving the Aspen Hill area, has been tested to gauge potential bus ridership and to produce order-of-magnitude estimates of bus capital and operating costs for the new express buses. The routes have been designed to serve a combination of multi-family and single-family housing and commercial areas. A large proportion of homes in the Olney and Aspen Hill areas would be within 2-3 blocks of a bus route.

Since the express bus routes have been delineated for testing purposes only, this study does not recommend exact future locations for such routes. Additional bus operations studies and substantial community input will be needed to determine the final configuration of such routes.

Nevertheless, to gain an initial understanding of potential bus ridership on such an express bus network, a specific network of six routes, each having buses running at 15-minute intervals, was tested. The results of that test show that the express bus network alone would attract approximately 3,050 daily passenger miles of express travel per busway mile in 2010. This value exceeds by about 17% the minimum number (2,600) needed to warrant exclusive bus lanes on arterial roads such as Georgia Avenue. The minimum threshold of 2,600 daily passenger miles per busway mile is a nationally-accepted standard used by the transportation profession. It is derived from previous studies and most recently cited in the 1996 Delaware Regional Rail Study, prepared by Rummel Klepper & Kahl in conjunction Richard H. Pratt Consultant, Inc. and Parsons Brinckerhoff Quade & Douglas, Inc.

While a busway would make transit a significantly better travel choice in the study area than it is today and many commuters would be attracted to it, one cannot expect that this busway by itself will relieve the traffic congestion problems on Georgia Avenue. A busway is essential, but is only one of a series of strategies that will need to be implemented to provide relief for Georgia Avenue. An increase in transit-friendly development, significant reductions in the cost of using transit, and more convenient, comfortable, and dependable transit service will all be needed to make a positive impact on travel in the study area.

Although calculating the additional effects of these other strategies on transit usage is beyond

the scope of this study, one important strategy -- varying the frequency of bus service during the peak three-hour periods in the morning and afternoon -- has been tested. For example, when the interval between express buses is reduced to ten minutes, ridership increases to approximately 3,460 daily passenger miles per line mile, which exceeds the minimum ridership needed by 33%. When the interval is increased to 20 minutes, ridership decreases to 2,630, which barely meets the minimum ridership needed.

**Cost estimates.** A preliminary estimate of the construction cost of the Planning Board's preferred center busway option is approximately \$55 million. This preferred option consists of a two-lane bi-directional busway in the median. It requires extensive relocation of the existing curbs, utilities, and pavement on Georgia Avenue in order to fit the suggested cross section within a 150-foot right-of-way and eliminate the need for encroachments on adjacent properties. An alternative approach would entail constructing the suggested cross section in such a way as to preserve as much of the existing road infrastructure as possible. This alternative reduces the cost to approximately \$49 million. It would require, however, considerably more encroachment onto adjacent properties because a wider right-of-way would be needed to accommodate the additional landscaping features and amenities.

Assuming the preferred peak-period intervals of 15 minutes and off-peak intervals of 60 minutes between buses on each of the six express routes, the cost of purchasing the small buses necessary to run on such a schedule would be approximately \$5 million. Changing the peak-period interval to 20 minutes would reduce the purchasing cost by about \$1 million, whereas changing it to 10 minutes would increase the cost by about \$2.2 million.

The express bus operating and maintenance costs, assuming the peak-period interval of 15 minutes and off-peak interval of 60 minutes, would be approximately \$3.8 million per year. Changing the peak-period interval to 20 minutes would reduce the cost by about \$0.5 million, whereas changing it to 10 minutes would increase the cost by about \$1.7 million.

**Preferred bus network and ancillary facilities.** Based on the above tests, the study's Technical Advisory Committee concluded that a



**system of six routes, each operating small buses at 15-minute intervals during peak periods and 60-minute intervals during the off-peak periods, offers the optimum combination of service and expense.**

The bus network would be supported by the following ancillary facilities:

1. Longwood Recreation Center Park-and-Ride Lot. One of the suggested bus routes would begin in the vicinity of the Longwood Recreation Center at the northern edge of Olney. This location appears to be well-suited for a park-and-ride lot that would intercept southbound commuters who ordinarily pass through Olney. Transportation modeling indicates that a 140-space lot would satisfy expected park-and-ride demand at that location.

Based on meetings with staffs of the State Highway Administration, Montgomery County Recreation Department, Montgomery County Public Works and Transportation Department, and Montgomery County Department of Park and Planning, the most appropriate piece of property for the lot would be on a thin strip of publicly-owned land on the west side of Georgia Avenue, just north of Gold Mine Road. Part of the property is currently being used as a gravel surfaced overflow parking lot for youth sports activities. State and County representatives agree that a lot at this location is advantageous because of the opportunity to share its use for park-and-ride as well as youth sports purposes. They also agree that it is compatible with the various plans for a future Brookeville Bypass, which would have a southern tie-in to existing Georgia Avenue in the vicinity of the suggested lot.

2. Improved Norbeck Road Park-and-Ride Lot. It is suggested that the site of the existing Norbeck Road Park-and-Ride Lot be a major focal point for local bus service as well as the only intermediate stop for express bus service using the busway. This lot is a valuable resource, but is currently underutilized and in need of substantial improvement. The busway

would be a catalyst for upgrading the lot and attracting many new commuters.

Some potential improvements include a new direct access road from Georgia Avenue to the lot, re-grading, new lighting, and re-landscaping to increase visibility and safety, adjustments to the area's local bus routes to focus more bus service at the lot, and possibly a small convenience retail establishment adjacent to the lot. Residents in the area as well as state and county representatives agree that such improvements are needed. There should be further analysis to determine whether implementation of such improvements can be justified in the near term, in advance of implementing the busway project.

3. Glenmont Bus and Taxi Lot. At the southern end of the busway, there would be a need for a bus passenger pick-up and drop-off area. Representatives from the Washington Metropolitan Area Transit Authority indicate that a good opportunity for such an area exists at the Glenmont Metrorail Station. One possibility is to re-designate WMATA's kiss-and-ride lot on the east side of Georgia Avenue for the busway's buses as well as for taxis, and at the same time adjust the size of the lot on the west side of Georgia Avenue and consolidate all kiss-and-ride spaces at that location. More detailed analyses during a state-sponsored project planning study may uncover other possibilities as well.

Since the southern end of the busway would be at the Glenallan Avenue/ Georgia Avenue intersection, southbound buses from the busway would turn onto Glenallan Avenue to gain access to a potential Glenmont Bus and Taxi Lot. At the lot, passengers would have convenient access to the Metrorail Station and to other connecting bus routes.

Although the costs of these ancillary facilities would be relatively small, they depend highly on engineering designs; therefore, calculations of their specific costs will be deferred to the MDOT-sponsored project planning phase.



**Urban design features.** An important part of the preferred busway concept is to create a more appealing and sustainable physical environment for residents and commercial properties along Georgia Avenue. The preferred cross section includes a major upgrade in landscaping for Georgia Avenue, consisting of an attractive tree-lined boulevard with linear pathways that enhance pedestrian and cyclist safety. **Figure 3** shows how the improvement of Georgia Avenue could look at three intersections – at Weller Road, at Connecticut Avenue, and at Hines Road.

A legitimate concern of some residents and business people on properties adjacent to Georgia Avenue is whether this additional landscaping will cause the Georgia Avenue pavement and right-of-way to encroach on their front yards or even require the purchase of their entire properties. It is fortunate that the impact of this project on adjacent properties is less than it would ordinarily be because much of the needed right-of-way on Georgia Avenue is either already owned by the state or is protected in the area master plans. Nevertheless, if the suggested 150-foot cross section were to be used along the entire length of the busway alignment, there would be some effect on properties, particularly near the southern and northern ends of the alignment where the least amount of right-of-way is available. A definitive answer on the potential number of properties involved and the types of effects would be obtained only after thorough engineering analyses and designs in a subsequent MDOT-sponsored project planning study.

Much of the 150-foot right-of-way, beyond the space needed for the existing pavement and the suggested busway lane, would be taken up by new landscaping elements, such as the grass strips, trees, bus shelters, sidewalks, and hiker/biker trails. Even if a future project planning study recommends that the new right-of-way line should come several feet closer to some buildings in a few areas, the net effect of a tree-lined boulevard would be much better aesthetically and more beneficial than what exists today. Rather than a barren uninviting area in front of properties, which exists along many sections of Georgia Avenue, the new landscaping and associated elements would enhance the appearance and potentially the value of the adjoining properties.

The capital costs of the enhanced landscaping and associated elements are included in the project's construction costs, as specified earlier.

This study looked into the possible effects of the preferred right-of-way and landscaping on adjacent properties, but found that there are so many engineering considerations and potential variations in designs, that detailed engineering designs would be necessary to ascertain the optimum alignment and right-of-way boundaries and the resulting effects on each property. Such detailed designs are typically performed during project planning studies.

## Study Process

Having commenced in the fall of 1996, the Georgia Avenue Busway Study has involved a work effort of approximately a year and a half. The Georgia Avenue Busway Study has been performed under the direction of the Transportation Planning unit of the Montgomery County Department of Park and Planning. A consultant team, headed by the firm of Parsons Brinckerhoff Quade & Douglas, Inc., has provided technical assistance during the course of the study. During this period, staff and the consultant team have performed extensive planning and design work as well as a major outreach effort to obtain input and feedback from other agencies and the surrounding community.

**Consultant assistance.** The consultant team, which was led by Parsons Brinckerhoff Quade & Douglas, Inc., has assisted staff in the following general tasks:

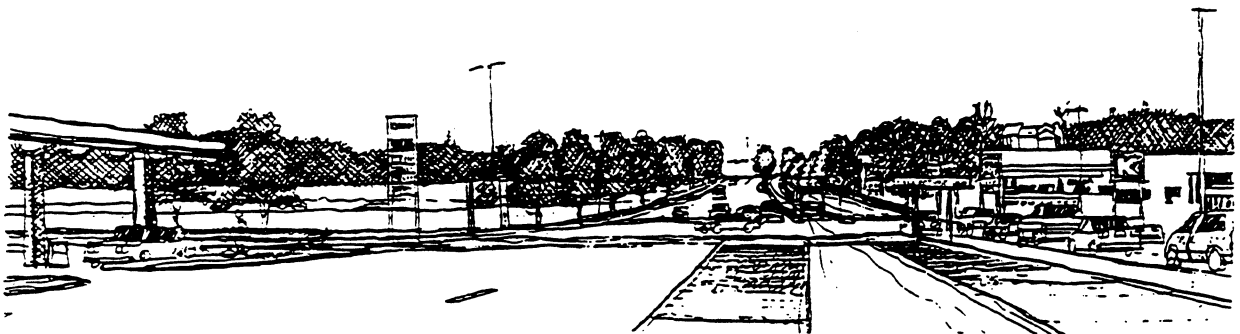
1. Evaluate the reasonableness of existing and future transportation network assumptions and travel demand figures for the Georgia Avenue area.
2. Prepare maps, designs, and cost estimates of some potential busway options.
3. Analyze the impacts of the various busway options on bus passengers, bus operations, traffic operations, and the surrounding communities and suggest ways to produce as many positive impacts as possible.
4. Involve the community and other agencies throughout the planning process by conducting focus group worksessions with residents and business people, holding a public workshop, preparing presentation materials for staff briefings with civic organizations and business groups,



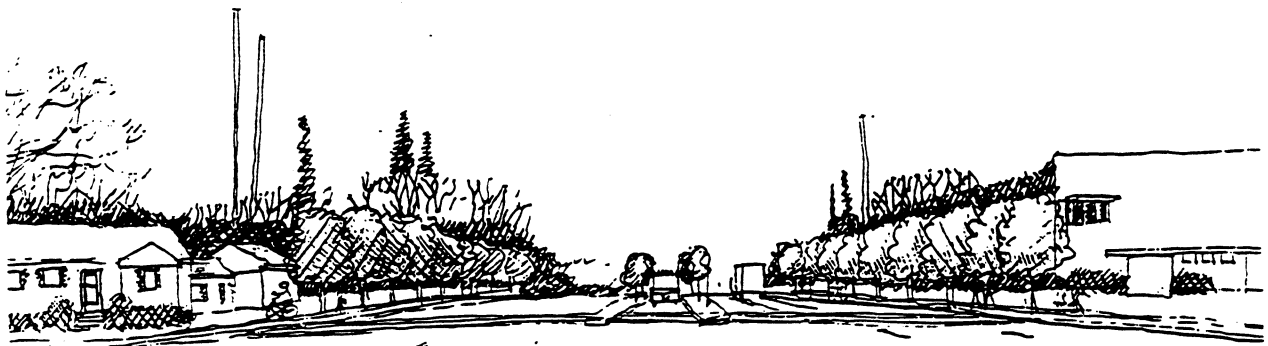
# LANDSCAPING ENHANCEMENTS



**at Hines Road in Olney**



**at Connecticut Avenue in Aspen Hill**



**at Weller Road in Glenmont**

**FIGURE 3**



and meeting monthly with members of the Study's Technical Advisory Committee.

**Citizen participation.** Public involvement was an especially important part of the study process. For example, the study's consultant team obtained many helpful comments and suggestions during two series of focus group work-sessions. The first one was held in November 1996 to obtain input on the study's objectives, views on transit-favored facilities, and their potential in the Georgia Avenue study area. The second one was held in May 1997 to obtain feedback on the various busway options that the consultant team had prepared. The participants were residents and business people from the Olney, Aspen Hill, and Glenmont areas.

In the first series of focus group work-sessions, the most frequent comment was that people would like safer, faster bus service that provides a convenient option to driving; they do not want the busway to be a "step down" in terms of service quality when compared with driving. Some other common themes included:

- A busway appears to be a good transportation solution in the foreseeable future, but do not preclude further upgrades and other transit options such as light rail or Metrorail, as demand increases.
- Make sure the busway provides benefits for people up and down the study area.
- Enhance Georgia Avenue by beautifying it with improved landscaping, street furniture, and pedestrian/cycling amenities.
- Focus on ways to give transit passengers an advantage in terms of convenience, travel time, and safety.

During the second series of focus group work-sessions, participants were asked to react to a number of possible busway options. Many of the people in these worksessions had also participated in the first series of worksessions. The most frequent comment was that the best busway option is the one that would provide the most convenient and efficient service; at the same time, minimize impacts to the adjacent residences and businesses, and maximize the use of existing

elements, such as the Norbeck Park-and-Ride Lot. Some other common themes included:

- The curb-side busway option is the easiest for the public to understand and use, but is the hardest to enforce.
- The median-side busway option is good for express bus service, but cannot accommodate local bus service.
- The contraflow busway option with movable concrete barriers makes more efficient use of the existing roadway, but has inherent problems with regard to logistics and cost of daily set-ups, safety, and appearance.
- The center busway has the most appeal, but leave room in the median to bypass stalled buses and accommodate local as well as express bus service, or establish a light-rail line.

In addition to the focus group worksessions, staff held a public work sessions and a public briefing, and met with various community groups during the course of the study to provide information on the progress of the study and to obtain feedback. The meetings with community groups included the Greater Olney Civic Association, Mid-County Citizens Advisory Board, Legislation & Taxation Committee of the Leisure World Community Council, Olney Chamber of Commerce, and Wheaton Chamber of Commerce.

The staff and consultant team also worked closely with the study's Technical Advisory Committee. The committee was composed of planners, engineers, and other staff from county, state, and regional agencies. Committee members provided many excellent suggestions and comments on the technical aspects of work products during monthly meetings throughout the course of the study. Committee members were especially helpful in evaluating the various busway options and forming sub-groups to focus on specific technical issues.



## Previous Studies and Plans

Georgia Avenue is a major road that many people depend on day-to-day in the Olney, Aspen Hill, and Wheaton areas. That is why the performance of this road and the level of mobility that it provides have been key topics in many previous studies and plans.

There have been major public investments in widening Georgia Avenue and expanding many of its intersections over the past several years; however, commuters at some locations continue to experience unacceptable levels of delay during peak traffic hours. Previous studies have highlighted the need for better solutions so that traffic conditions on Georgia Avenue do not get much worse.

The analyses performed by the Georgia Avenue Busway Study confirm previous forecasts of much greater traffic congestion on Georgia Avenue in the years ahead and the need to offer better alternatives to driving than currently exist. Georgia Avenue's major intersections at Connecticut Avenue, Bel Pre Road, and Norbeck Road are already experiencing Level of Service F conditions during peak traffic periods. Its intersections at Layhill Road and Route 108 are, in general, somewhat less congested, but growth in traffic will cause persistent Level of Service F conditions at these locations in the not too distant future. The upper portion of Level of Service F means highly congested traffic conditions, with frequent delays and waits through two or more signal cycles.

Even though there is frequent bus service along Georgia Avenue, a large proportion of people in the area rely on their automobiles to get to their destinations. It is no wonder that this occurs. Compared with automobiles, buses are less convenient, make many stops along the way, and get stuck in the same traffic as other motorists. The net result is that it takes a person about twice as long to ride a bus from Silver Spring to Olney as it does to drive a car during the evening peak hours.

As fewer and fewer opportunities become available to increase the car-carrying capacity of Georgia Avenue, previous studies make it clear that there needs to be more emphasis on increasing the people-carrying capacity of this major road. A key to improving the efficiency of Georgia

Avenue is to offer people in the area better transportation choices and to make public transportation a more appealing alternative.

Previous transportation studies of Georgia Avenue have highlighted the need to plan ahead for future travel demands and provide quality transportation choices for people in the area. These studies have concluded that improving transit facilities and services on Georgia Avenue is essential, and that express bus service on reserved lanes would be the most appropriate and beneficial form of transit for this area. These studies include:

- Study of the Appropriateness and Applicability of Light Rail Transit in Maryland. Maryland Department of Transportation, 1988
- Statewide Commuter Assistance Study. Maryland Department of Transportation, 1990
- Transitway & High-Occupancy Vehicle Network Master Plan. Maryland-National Capital Park and Planning Commission, 1995

In addition to the above studies, both the 1994 Aspen Hill Master Plan and the 1997 Sector Plan for the Glenmont Transit Impact Area and Vicinity propose a busway for Georgia Avenue.

The Georgia Avenue Busway Study has been performed, in large part, to respond to the concerns and address the needs that have been well documented in these previous studies and plans. The preferred busway concept resulting from this study would substantially improve transportation choices and mobility as well as enhance the appearance and vitality of the Georgia Avenue area. Implementing a busway and the accompanying landscaping features on Georgia Avenue has the potential to make the area one of the most desirable locations to live and work in the county.

# **Acknowledgments**

## **Montgomery County Department of Park and Planning**

Rodney H. Irwin, Director of the Department of Park and Planning  
Jeffrey Zyontz, Acting Chief, County-wide Planning Division  
Richard C. Hawthorne, P.E., Transportation Planning

### **Project Team**

Alex Hekimian, Study Manager, Transportation Planning

John Matthias, Transportation Planning  
Yuanlin Huang, Transportation Planning  
Ivy Leung, Transportation Planning  
Donald Downing, Community Based Planning -- Georgia Avenue Team  
Marilyn Clemens, Community Based Planning -- Georgia Avenue Team  
Joseph Anderson, Environmental Planning

### **Technical Staff**

Katherine Woodworth, Transportation Planning  
Charles Coleman, Management Services

## **Agencies Represented on the Technical Advisory Committee**

Montgomery County Council  
Montgomery County Department of Public Works & Transportation  
Mid-County Services Center  
State Highway Administration  
Mass Transit Administration  
Washington Metropolitan Area Transit Authority  
Metropolitan Washington Council of Governments





THE MONTGOMERY COUNTY PARK AND PLANNING DEPARTMENT OF  
THE MARYLAND-NATIONAL CAPITAL PARK & PLANNING COMMISSION  
*8787 Georgia Avenue, Silver Spring, Maryland 20910-3760*