



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

MCPB  
Item # \_\_\_\_\_  
April 26, 2007

TO: Montgomery County Planning Board

VIA: Richard Hawthorne, Chief  
Transportation Planning  
Countywide Planning Division

RCH

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Community-Based Planning Division

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Transportation Planning  
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SUBJECT: Seven Locks Road Sidewalk and Bikeway: Phase I Facility Planning Study  
Project Prospectus Recommendations, Potomac Policy Area

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Staff concurs that the DPWT Recommended Alternative achieves the master plan transportation objectives. We find, however, that the impacts of the DPWT Recommended Alternative could be minimized by reducing the roadway shoulder widths by approximately three feet through most of the project length, while maintaining transportation safety and service. This is reflected in the comments below.

**RECOMMENDATION: Transmit the following comments to the Montgomery County Department of Public Works and Transportation (DPWT):**

1. The Seven Locks Road Sidewalk and Bikeway Facility Planning Study should proceed to Phase II of the Facility Planning process to develop a detailed design for the completion of the Recommended Alternative for the facility, with modifications as listed below.

2. The Phase II design should revise the typical section to include two 11-foot wide travel lanes plus 5-foot wide bike lanes for a total roadway width of 32 feet, with no additional roadway shoulder width. On-street parking bays and bus stop pull-outs should be considered on an as-needed, site-specific basis.
3. To further reduce impacts without reducing transportation service, DPWT should consider using the typical section C for Station 108+00 to Station 109+00 and Station 126+00 to Station 155+00.
4. During the Phase II Facility Planning Study, DPWT must submit a Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) for approval. The NRI/FSD will determine whether a full forest conservation plan will be required.
5. During the Phase II Facility Planning Study, DPWT should confirm the need to obtain a park construction permit for any work resulting in park impacts.

## **PURPOSE OF THIS BRIEFING**

The purpose of this briefing is to **present findings** of the Draft Project Prospectus of the Seven Locks Road Sidewalk and Bikeway (SLRSB) Facility Planning Study to the Montgomery County Planning Board **and solicit comments**. These comments will be considered by DPWT in preparation of the Final Project Prospectus.

## **SUMMARY OF THE PROJECT**

The underlying principle of bicycle and pedestrian planning is to provide a system that allows a choice in modes and a reasonable balance in accommodations.<sup>1</sup> Seven Locks Road currently lacks continuous, dedicated facilities for cyclists and pedestrians. The Seven Locks study area is shown in Figure 1. The Recommended Alternative proposes the following continuous facilities between Montrose Road and Bradley Boulevard:

- An 8-foot wide shared-use path on the west side of the road,
- A 5-foot wide sidewalk on the east side of the road, and
- 5-foot bike lanes in both directions

The Recommended Alternative for a dual bikeway and pedestrian facility along Seven Locks Road was developed based on the *Potomac Subregion Master Plan* (2002) and *Countywide Bikeways Functional Master Plan* (2005) vision and objectives, public comment, and study team review. The recommendation takes into consideration existing and planned development in the study area.

Typical sections for the Recommended Alternative are shown in Figures 2 and 3. Figure 2 shows the typical sections for the project where the roadway is intended for open section drainage (Section A), and closed section with curb and gutter (Section B).

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<sup>1</sup> *The Transportation Planning Handbook, 2<sup>nd</sup> Edition*. Institute of Transportation Engineers, 1999.

Figure 3 shows a reduced typical section (Sections C1 and C2), where retaining walls are proposed to reduce adjacent resource impacts. In Sections A and B, the shared-use path or sidewalk is located approximately 10 feet (for the shared-use path on the west side) or 13 feet (for the sidewalk on the east side) from the edge of the pavement. This panel provides a buffer from the edge of the travel lanes and is wide enough to support street trees. All sections share a roadway width of 40 feet consisting of two 12-foot wide travel lanes and two 8-foot wide shoulders. The 8-foot wide shoulders include striped 5-foot wide bike lanes; together with the shared-use path this forms the master-planned dual bikeway.

## **PUBLIC OUTREACH**

Three public meetings were held for the project at the Heights School on Wednesday June 7, 2006, Wednesday, October 25, 2006 and Tuesday March 6, 2007. The purpose of these meetings was to introduce the project alternatives, process, schedule, background, to receive community input, answer questions, and later to present the recommended alternative and follow-up. Staff characterizes the majority of responses at the meeting as supportive of the Recommended Alternative presented, but with concerns expressed about the lack of detail in the available plans, the extent of the impacts to property, and the on-street parking, slopes, and views of the road from the adjacent property. These concerns will be addressed in Phase II of the study.

## **MASTER PLAN CONSISTENCY**

The Seven Locks Road Sidewalk and Bikeway Facility Plan proposed by DPWT is consistent with the recommendations in the approved and adopted *Potomac Subregion Master Plan* (2002) and *Countywide Bikeways Functional Master Plan* (2005). Seven Locks Road is designated as an arterial road, with an 80-foot wide minimum right-of-way, a maximum of two travel lanes and a dual bikeway (on-street bike lanes and shared-use path) from Montrose Road to Bradley Boulevard. The concept of the dual bikeway along Seven Locks Road is outlined as an element of the *Countywide Bikeways Functional Master Plan*, approved and adopted in 2005.

**We find that the Recommended Alternative for the Seven Locks Road Sidewalk and Bikeway project is consistent with the intent of the *Potomac Subregion Master Plan* and *Countywide Bikeways Functional Master Plan*.**

## **SUMMARY OF PROJECT PROSPECTUS STUDY FINDINGS**

### **Benefits**

The Recommended Alternative addresses the immediate need for continuous pedestrian accommodation on Seven Locks Road by providing off-road pedestrian/bicycle facilities that are separated from travel lanes, bike lanes and a landscape panel with streetscape fitting for the suburban residential and community uses found along this segment.

These infrastructure improvements will support pedestrian, non-motorized transportation, and transit activity. The roadway improvements will greatly increase cyclist and pedestrian comfort and accommodation, serving transit and local destinations including 18 residential communities, 9 houses of worship, 4 schools, 4 parks, Cabin John Mall, and other commercial destinations.

The dual bikeway serves cyclists and pedestrians of all skill levels. More experienced cyclists travel along dedicated space on the roadway, and novice cyclists, pedestrians and other users are accommodated on the shared-use path. Construction of a bicycle route or re-striping a roadway with bicycle lanes has been shown to encourage an increased use of bicycles.

### **Impacts**

The Project Prospectus identifies environmental impacts of the Recommended Alternative. Impacts identified in the Prospectus are based on field reviews and readily available information from resource agencies. These preliminary assessments will be refined in Phase II when an NRI/FSD is required and more facility design details are developed. The environmental impacts identified in the Prospectus include: 160 linear feet (LF) of waters of the US, 0.9 acres of wetlands, 5.4 acres of forest, 7 specimen trees, and 10.2 acres of additional impervious area added.

The Project Prospectus states that approximately five acres of right-of-way (ROW) would need to be acquired for the Recommended Alternative. Additionally, significant earthwork will be required to provide an ADA-compliant grade in the hilly terrain. Accordingly, some 7.7 acres of additional property may be affected by grading or easement impacts. No buildings will be directly impacted.

No rare, threatened or endangered species are located within the study area. DPWT will need to document these impacts through submission of a Natural Resource Inventory and Forest Stand Delineation (NRI/FSD) and a Forest Conservation Plan (FCP) during Phase II activities. Additionally, the Prospectus states that two acres of forest impact and additional grading easement impacts could be expected in M-NCPPC park areas, including the Cabin John Regional Park, Cabin John Stream Valley Park, and Inverness Forest Neighborhood Conservation Area. **During Phase II, DPWT should confirm the need to obtain a park construction permit for any work resulting in impacts to parkland.**

### **Coordination Regarding Historic Resources**

The Scotland AME Zion Church is registered with the County Historic Preservation Commission as historic. The entire parcel is listed as the historic setting, contributing to the historic character. Given the available level of topographic information, the Recommended Alternative could impact the historic resource up to eight feet. Impact would result from the construction of a retaining wall and fill to construct the shared-use path in the typical section proposed.

This segment of the project, in the vicinity of Station 145+00 to Station 155+00, is also abutted to the east by wetlands, restricting the option to widen the roadway to the opposite side. Together, the historic property on the west and wetland to the east form a pinch point for the project.

The Recommended Alternative includes the reduced typical sections (Sections C1 and C2 shown in Figure 3) at this location to reduce impacts, but does not avoid either resource. During Phase II, additional evaluation will be conducted to avoid or minimize impacts to the historic resource. **If impacts to the historic setting are confirmed during Phase II, then DPWT will need to seek a Historic Area Work Permit (HAWP) from the Historic Preservation Commission.**

## **ALTERNATIVES CONSIDERED**

The Phase I study evaluated several conceptual alternatives. The DPWT study team presented three alternatives to the public:

- Alternative I is a No-Build alternative wherein no sidewalk or bike facilities would be built. This alignment minimizes property impacts but precludes facilities for inexperienced cyclists and only accommodates pedestrians in the roadway shoulder, where available, or on existing disconnected sidewalk.
- Alternative II proposes a shared-use path on the west side, bike lanes on both sides, and a sidewalk on the east side with a 20-foot wide sidewalk panel. This alternative is based on the county design standard for an arterial and would result in some segments of significant residential property encroachment (5 acres, 14 acres of grading easements, and possibly 11 buildings impacted) and impacts to slopes, trees and wetlands. To maintain a level roadway section, taller retaining walls would be required in some locations.
- Alternative III proposes a shared-use path on the west side, bike lanes on both sides, and a sidewalk on the east side, also within a 20-foot sidewalk panel. However, several segments are proposed for the reduction of the landscape panel and the addition of retaining walls at the back of the shared-use path or sidewalk. This alternative still accommodates bike lanes and sidewalk, but lessens residential property impacts (+/- 5 acres, 7.7 acres of grading easements, 0 buildings impacted) through expanded use of retaining walls (compared with Alternative II).

Ultimately, the review team chose Alternative III, which provides the master-planned dual bikeway and sidewalk with some site-specific treatments to avoid or minimize environmental impacts. The Recommended Alternative of the Draft Prospectus is derived from DPWT roadway standards, but uses retaining walls and reduced landscape panels to lessen property, slope and tree impacts. Yet, due to the assumed constant roadway width of 40 feet, this is the narrowest the sidewalk/bike path panel can be made while still providing some separation for pedestrians from the travel lane.

## Further Reduced Typical Section

The Recommended Alternative includes 8-foot wide shoulders throughout the project, such that the typical sections include a 40-foot pavement width, nearly as wide as a 4-lane roadway. The purpose of the shoulders for this project, as stated by DPWT, is to accommodate on-street parking and bus pull-outs. The design would also allow vehicles to pass a stopped car waiting to make a left turn by using the shoulder space. While this maneuver would reduce delay, and is technically allowed by state law when cyclists are not present, it should not be encouraged. The wider shoulders may also encourage higher speeds. Seven Locks Road has a posted speed limit of 35 MPH.

We find that the Recommended Alternative typical roadway section is too wide, with the shoulders contributing six to eight feet of width that appear unnecessary. Eliminating three feet of shoulder space beyond the bike lanes would reduce the typical section for the project by six feet, without a similar reduction in transportation safety and service. If one foot of each travel lane is also eliminated, the resulting geometry – 5’/11’/11’/5’, would match the geometry currently being considered by the County Council’s Transportation and Environment Committee as part of Council Bill 48-06 and ZTA 06-04. Reducing the needed ROW width by up to 8 feet would have a number of benefits, including reduced property impacts, grading, forest impact and wetland encroachment along the two-mile segment of road. Staff estimates that the reduced section would also reduce the amount of impervious roadway surface by approximately two acres. Capital costs of the project would also be reduced, though estimates are not available at the time of writing. Therefore, we recommend that **Phase II should include design for a typical section with two 11-foot travel lanes plus 5-foot bike lanes for a total roadway width of 32 feet, with no additional roadway shoulder needed.**

In addition to the overall economy of reducing the ROW by eliminating the shoulders, **to further reduce impacts in Phase II, DPWT Facility Planning should investigate a reduced cross-section between Station 108+00 to 109+00 and Station 126+00 to 155+00**, segments not currently recommended for the reduced sections (Sections C1 and C2). These are sections predominantly lacking land uses directly fronting the road.

- Station 108+00 to 109+00 - To reduce wetlands impact south of Ivymount Terrace.
- Station 126+00 to Station 155+00 - To reduce impacts to the historic resource of the Scotland AME Zion Church; waterway/creek alignment of Snakeden Branch; and wetlands, slope and floodplain impacts between Tuckerman Lane and Bells Mill Road.

The resulting cross section may make it possible to reuse an existing large culvert structure south of Democracy Boulevard at Station 192+50. Reusing the existing culvert would save considerable public funds in addition to reducing the disturbance to Cabin John Creek.

DPWT should also investigate maintaining the 20-foot high retaining wall on the east side of the road at Station 130+00. We suggest investigating the possibility of routing the sidewalk planned along the back of the wall with an ADA-compliant slope.

### **Parking and Transit**

The segment of Seven Locks Road between Montrose Road and Gainsborough Road has a documented parking concern, primarily on weekends when community and religious institutions are in service. Additionally, there are homes in this section that front Seven Locks Road with their parking along their frontage observed. The tradeoffs between parking demand and traffic safety on an arterial are important considerations. Parking along an arterial not designed for such use is unsafe for moving vehicles, parked vehicles, pedestrians (who cross between parked cars, unseen and unexpected by motorists) and cyclists (in danger of being "doored").

On-street parking concerns for Seven Locks Road should be further examined during Phase II. If it is decided that parking on this segment of road is a desirable goal, then parking could be provided on a nearly parcel-by-parcel basis, at the request of the homeowner fronting the road, perhaps in exchange for a public improvement easement across the property. Any parking bay should be limited in length to the extent possible and provided outside of the bike lane. If parking for the religious institutions is considered necessary, then sections of their frontage should also be considered for parking bays outside of the striped bike lanes. Similarly, transit pull-outs should be considered in Phase II, but the locations for a full or partial pull-out should be linked to boarding/alighting data from Ride-On.

DP:mj

Cc: Aruna Miller

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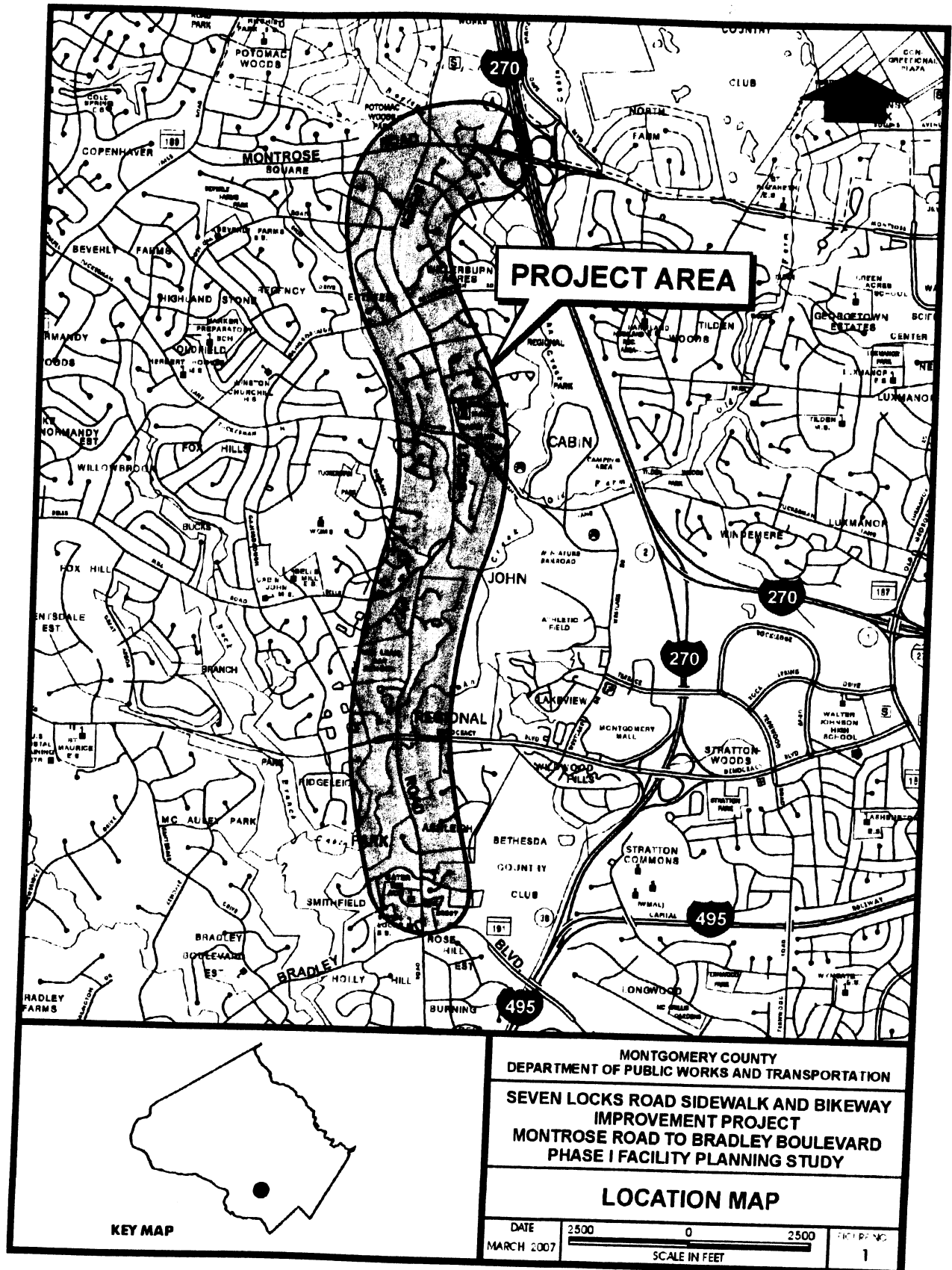
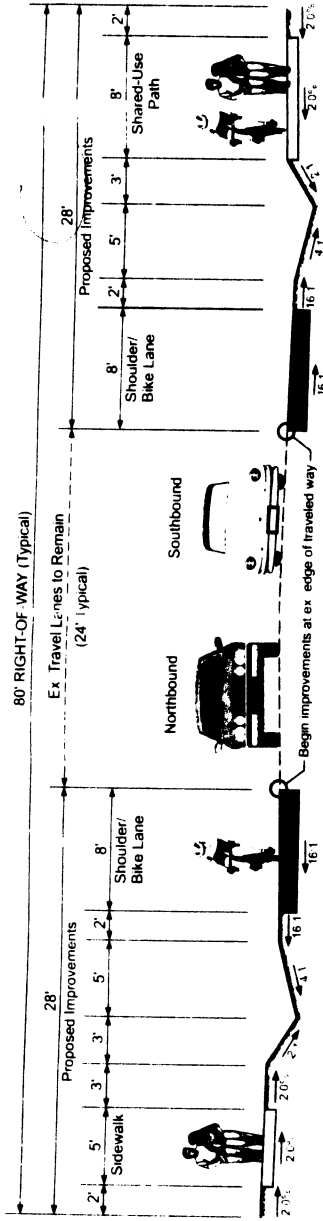


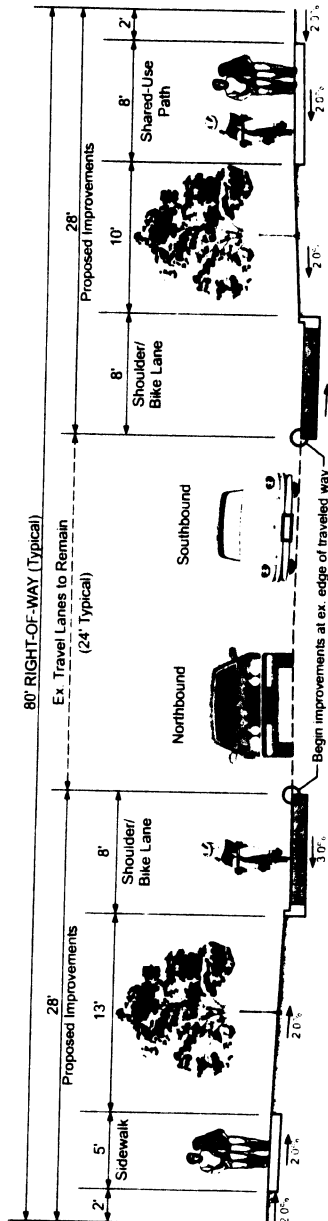
Figure 1. Seven Locks Road Sidewalk and Bikeway Improvement Project Location Map.

Figure 1





**TYPICAL SECTION A - OPEN SECTION**  
 (REFERENCE MCDPWT STANDARD NO. MC-213.02 MODIFIED)

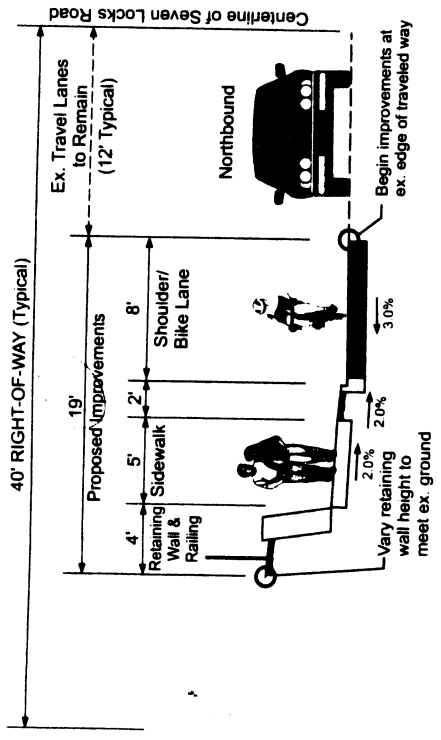


**TYPICAL SECTION B - CLOSED SECTION**  
 (REFERENCE MCDPWT STANDARD NO. MC-213.01 MODIFIED)

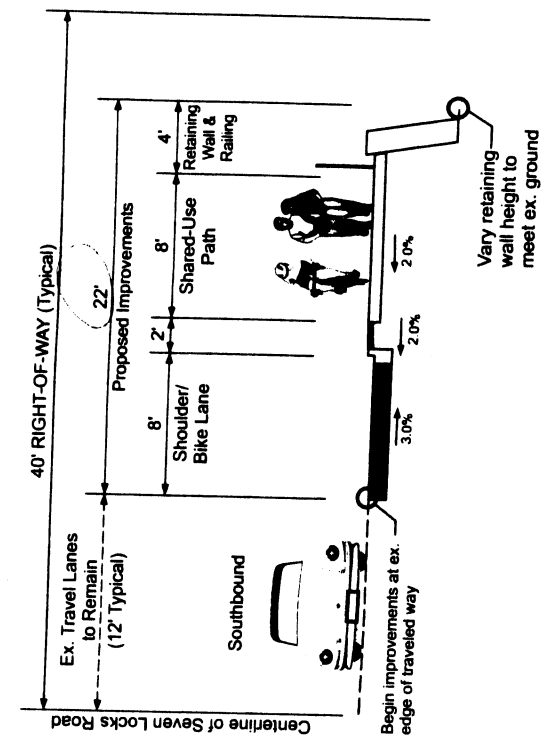
Note: Dimensions and landscaping are approximate and subject to change during Final Design and Construction

MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	
SEVEN LOCKS ROAD SIDEWALK AND BIKEWAY IMPROVEMENT PROJECT MONTROSE ROAD TO BRADLEY BOULEVARD PHASE I FACILITY PLANNING STUDY	
<b>TYPICAL SECTIONS A &amp; B</b>	
DATE MAR. 14, 2011	NOT TO SCALE
FIGURE D-1	

Figure 2



**TYPICAL SECTION C1 - RETAINING WALL SECTION (EAST SIDE)**



**TYPICAL SECTION C2 - RETAINING WALL SECTION (WEST SIDE)**

**Note: Dimensions and landscaping are approximate and subject to change during Final Design and Construction**

MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION		FIGURE
SEVEN LOCKS ROAD SIDEWALK AND BIKEWAY IMPROVEMENT PROJECT MONTROSE ROAD TO BRADLEY BOULEVARD PHASE I FACILITY PLANNING STUDY		D-2
<b>TYPICAL SECTIONS C1 &amp; C2</b>		
DATE	NOT TO SCALE	
MARCH 2017		

**Figure 3**