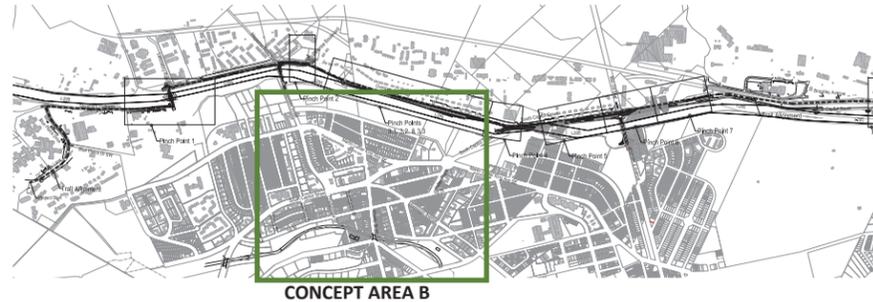


CONCEPT PLAN AREA B

OVERVIEW

Concept Plan Area B includes trail segments along Overlook Avenue from south of Defense Boulevard to north of Overlook Avenue / South Capitol Street split.



Along the South Capitol Street and Overlook Avenue segment, I-295 runs parallel along the eastern boundary and Bolling Air Force Base, and Anacostia Naval Station are situated along the western boundary. Overlook Avenue extends north, where the roadway merges with South Capitol Street, which is a major thoroughfare extending through the southeast quadrant of the District of Columbia from the U.S. Capitol to the District/ Maryland State line. This route connects the eastern shore of the Anacostia River to the rest of the city. Along the Overlook Avenue/ South Capitol Street corridor, the trail is proposed along the western side of the roadway corridor beyond the Laboratory Road intersection, and eventually continues north to the Malcolm X Ave. intersection. Along the trail corridor, the trail is bordered by the roadway section, and several security walls along the military base property which creates a series of “pinch-points” for the trail. Additional constraints at each location may include utilities, drainage structures, traffic control devices and signage, environmental constraints and right-of-way/property limits.

As previously mentioned, the minimum desirable width for the proposed trail is 10-feet, with a 2-foot buffer and 5-foot separation from an adjacent roadway. In constrained areas throughout the trail corridor, 8-feet is recommended for the trail, with a 1-foot buffer and 1-foot separation. An absolute minimum width for limited trail segments is a 6-foot width with no buffer or separation. Where feasible, additional separation and buffer distances are highly recommended.

Concept Area B is illustrated in the following pages.

Also provided are excerpts from the traffic study. Traffic comparisons are based on existing volumes. Analysis with future volumes are provided in Appendices A & B, and show no appreciable difference to existing results.

Pinch points 2, 3 and 4 are included within Concept Plan Area B.

Pinch Point 2 – Approximately 200 feet North of Magazine Road/Chesapeake St. intersection and south of Overlook Ave/Defense Boulevard (S) intersection. This 200-foot stretch of 9-foot wide pinch point area is created as a result of the minimal space between the military base walls and the roadway. The proposed measures to extend the trail through this pinch point is to reduce the Overlook Ave travelway to two 11-foot travel lanes with a 10-foot trail, 8-foot separation, and 3-foot buffer. (Traffic study alternative ‘A’ is recommended). These improvements would provide an approximately 21-foot wide area for the trail segment. An alternative and absolute minimum consideration at this location would be to retain the three 11-foot lanes with a 6-foot trail, 4-foot separation, and a 2-foot buffer.

(A graphic of pinch point 2 is provided in the following pages)



Pinch point 2 - View South along Overlook Ave

Source: TDG Library

Pinch Point 3 – From Overlook Ave/ Defense Boulevard (S) intersection, north to Overlook Ave/South Capitol Street diverge gore. This pinch point is separated into three segments, pinch points 3.1 through 3.3.



Pinch point 3 - View North along Overlook Ave

Source: TDG Library

Pinch Point 3.1 extends for 800 feet from the Overlook Ave/ Defense Boulevard (S) intersection north 300 feet where the military base walls and roadway pinch to 12 feet. Within this pinch-point it is proposed that Overlook Avenue be reduced to two 11-foot lanes with a 10-foot trail, 10-foot separation, and a 3-foot buffer. (Traffic study alternative ‘A’ is recommended). The



Pinch point 3.1 - View South along Overlook Ave
Source: TDG Library

improvements would provide 23 feet for the trail, separation and potential stormwater management measures.

(A graphic of pinch point 3.1 is provided in the following pages).

Pinch Point 3.2 extends for 1,400 feet from 300 feet north of the Overlook Ave/ Defense Boulevard (S) intersection to the Overlook Ave/I-295 gore point. Within this pinch point Overlook Ave is proposed to be reduced to a single 18-foot wide travel lane with a 10-foot trail, 5-foot separation, and 2-foot buffer. (Traffic study alternative ‘A’ is recommended). These improvements would provide a 17-foot wide segment for the trail and buffers.



Pinch point 3.2 - View North along Overlook Ave
Source: TDG Library

(A graphic of pinch point 3.2 is provided in the following pages).

Pinch Point 3.3 extends for 1,300 feet from the Overlook Ave/I-295 gore point to the Overlook Ave/South Capitol Street gore point. Currently a 12-foot wide pinch point is created by the military base wall, signs, utilities, and light poles adjacent to the travelway. This pinch point is proposed for Overlook Ave to be reduced by to a single 18-foot wide travel lane with a 10-foot trail, 5-foot separation, and 2-foot buffer. (Traffic study alternative ‘A’ is recommended). These improvements would ultimately provide a 17-foot wide segment for the trail and buffers.

(A graphic of pinch point 3.3 is provided in the following pages).

Pinch Point 4 – From Overlook Ave/South Capitol Street gore point to approximately 400-feet North of South Capitol Street diverge gore a 250-foot long 6-foot wide pinch point is created by the military base wall, several utilities, signage and light poles. Proposed measures at this pinch point are to create 17 feet of available space through the reduction of South Capitol Street to two travel lanes with a 10-foot trail, 5-foot separation and 2-foot buffer. (Traffic study alternative 'A' is recommended).



Pinch point 4 - View South along South Capitol Street
Source: TDG Library

(A graphic of pinch point 4 is provided in the following pages).

PINCH POINTS 2 TO 4 TRAFFIC ANALYSIS

(For full report, refer to Appendix B)

Pinch Point #2 (Overlook Avenue & Defense Boulevard)

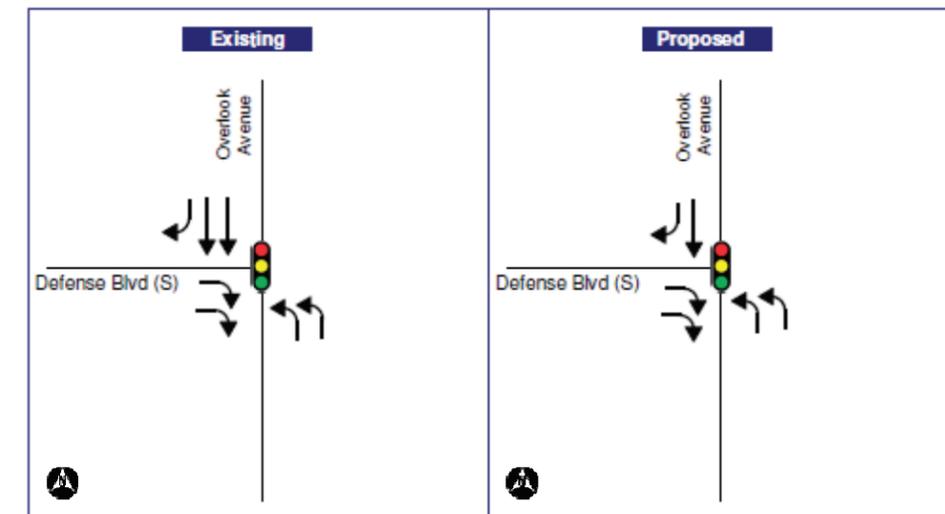
The next identified pinch point is the intersection of Overlook Avenue and Defense Boulevard. Proposed measures for Alternative A at this intersection includes eliminating one (1) southbound through lane, and reducing the storage length for southbound right-turn lane at the intersection of Overlook Avenue and Magazine Road. The lane configuration for the proposed alternative is illustrated in **Figure 5**. Intersection capacity analysis was performed for the proposed alternative, using the HCM methodology. The results of the capacity analysis for this alternative indicate that the intersection of Overlook Avenue and Defense Boulevard will continue to operate at a Level of Service B for both AM and PM peak hours with a slightly increased delay of 15.4 sec/veh and 17.1 sec/veh during AM and PM peak hours, respectively. Alternative B consists of retaining the existing configuration, thus no further traffic analysis was performed for this alternative. The results of the

Table 13. Comparison of Existing and Alternative Capacity Analysis at Pinch Point #2 [Overlook Avenue and Defense Boulevard (S)] AM (PM)

Condition	Control	Delay (sec/veh)	v/c Ratio	Level of Service
Existing	Signal	13.6 (15.8)	0.36 (0.42)	B (B)
Alternative A – Eliminating one southbound through lane	Signal ¹	15.4 (17.1)	0.49 (0.60)	B (B)
Alternative B – retain existing configuration	Same as existing configuration			

¹ – Level of Service and Delay values reflect most accurate values based on optimizing the signal timing splits while maintaining same cycle lengths as under the existing conditions.

Figure 5. Lane Configuration Diagram for Proposed Alternative for Pinch Point #2



Pinch Point #3 (Overlook Avenue/South Capitol Street gore point)

The next identified pinch point is the section between Overlook Avenue/ South Capitol Street diverge ramp to intersection of South Capitol Street and Defense Boulevard. This section was analyzed under the following three (3) locations for their distinct characteristics and constraints.

- 3.1 - between Defense Blvd/Overlook Ave and 300 ft south of the intersection
 - Alternative A: reduce three (3) southbound lanes on Overlook Avenue to two (2) lanes to a point of approximately 300 ft south of Overlook Avenue and Defense Boulevard intersection.
 - Alternative B: retain existing configuration
- 3.2 - between Overlook Ave/ I-295 gore point to 300 ft north of Defense Blvd/Overlook Ave intersection
 - Alternative A: reduce two (2) southbound lanes on Overlook Avenue to one (1) lane, starting approximately 300 ft north of Overlook Avenue and Defense Boulevard intersection.
 - Alternative B: retain existing configuration
- 3.3 - between South Capitol St/Overlook Ave gore point and Overlook Ave/ I-295 gore point
 - Alternative A: reduce ramp lane width from 23 ft to 18 ft

Using the HCM methodology, intersection and ramp diverge capacity analysis was performed for the aforementioned three sub-segments. The results of the capacity analysis results indicate that the ramp diverge is expected to operate at a Level of Service B or better during both AM and PM peak hours under the existing and proposed conditions. Both of the analyzed intersections are expected to operate at a Level of Service C or better during both AM and PM peak hours under the existing and proposed conditions. The results of the alternatives analyses for both the AM and PM peak hours are summarized in **Table 14**.

Table 14. Summary of Alternatives Analysis for Pinch Point #3 [AM (PM)]

Condition	Control/ Segment	Delay (sec/veh) or Speed (mph)	v/c Ratio or Density (pc/mi/ln)	Level of Service
Pinch Point 3.1				
Existing	Signal	10.6 (21.8)	0.45 (0.68)	B (C)
Alternative A - reduced southbound lanes on Overlook Avenue, 300 ft south of Overlook Avenue and Defense Blvd intersection	Signal ¹	10.5 (18.1)	0.45 (0.68)	B (B)
Alternative B – retain existing configuration	Same as existing conditions			
Pinch Point 3.2				
Existing	Signal	13.6 (15.8)	0.36 (0.42)	B (B)
Alternative A - reduced southbound lanes on Overlook Avenue, 300 ft north of Overlook Avenue and Defense Blvd intersection	Signal ¹	15.4 (17.1)	0.49 (0.60)	B (B)
Alternative B – retain existing configuration	Same as existing conditions			
Pinch Point 3.3				
Existing	Ramp Diverge	47.6 (46.8)	7.9 (11.9)	A (B)
Alternative A - reduced ramp lane width	Same as existing conditions			
Alternative B – retain existing configuration	Same as existing conditions			

¹ – Level of Service and Delay values reflect most accurate values based on optimizing the signal timing splits while maintaining same cycle lengths as under the existing conditions.

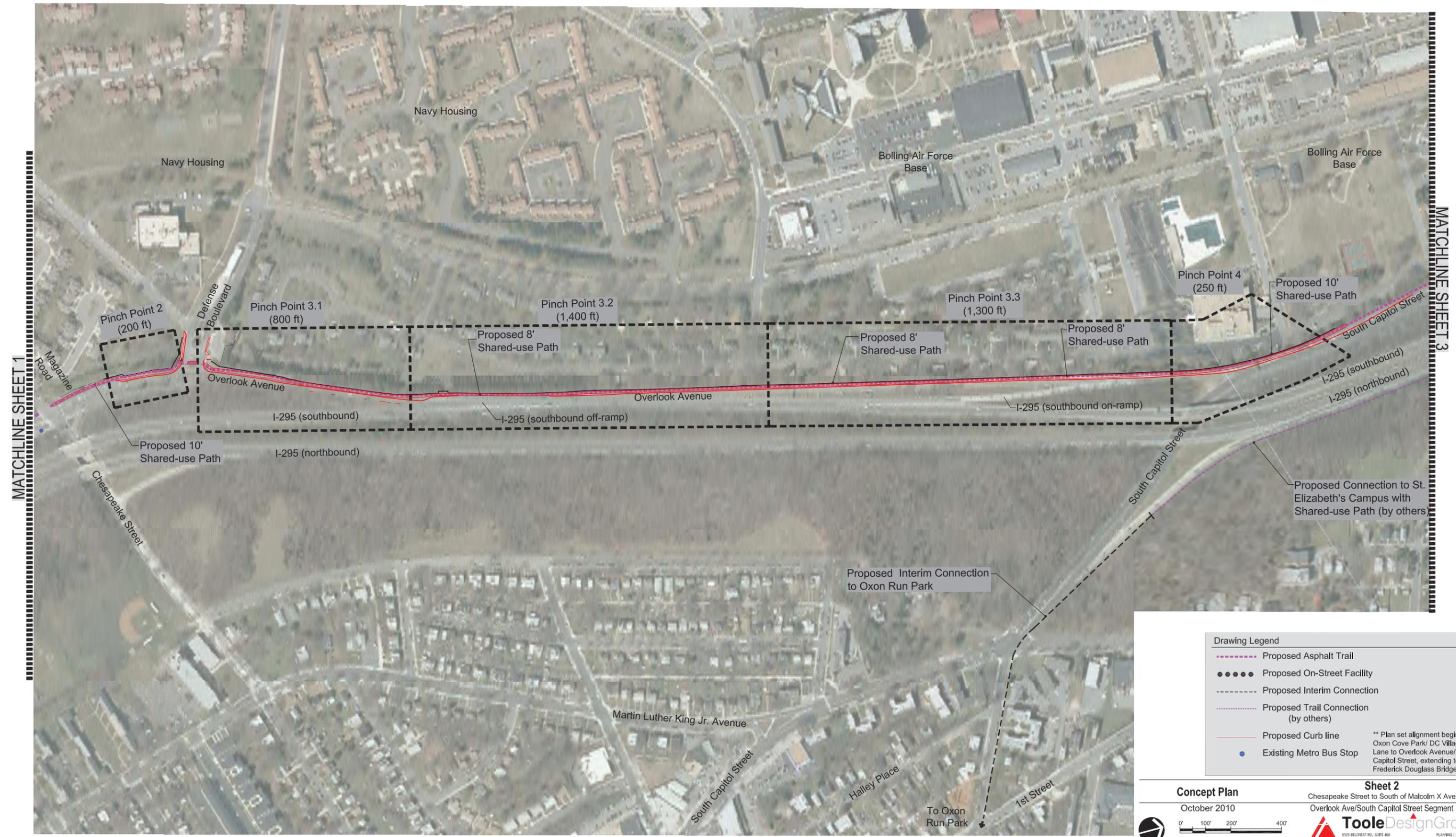
Pinch Point #4 (Overlook Avenue/ South Capitol Street gore point to 400’ north)

Pinch point 4 is the Overlook Ave/ South Capitol Street diverge to approximately 400 ft north of diverge. This location is constrained with utility poles, military base wall, signage, and limited right-of-way. Alternative A includes reducing the three (3) southbound lanes on South Capitol Street to two (2) lanes. This modification would accommodate a 10-ft trail, 5-ft separation area, and 2-ft buffer zone. The results of the capacity analysis for this alternative indicate that the diverge ramp at South Capitol Street to Overlook Avenue will continue to operate at a Level of Service A during both peak hours. Alternative B consists of retaining the existing configuration, thus no further traffic analysis was performed for this alternative. The results of the analysis is compared with existing conditions are summarized in **Table 15**.

Table 15. Comparison of Existing and Alternative Capacity Analysis Results for Pinch Point #4

Condition	Qty of Lanes	Speed [mph] AM (PM)	Density [pc/mi/ln] AM (PM)	LOS AM (PM)
Existing	3	47.1 (45.7)	6.2 (9.6)	A (A)
Alternative A – reduce to two lanes	2	47.1 (45.7)	6.2 (9.6)	A (A)
Alternative B – retain existing configuration	Same as existing conditions			

CONCEPT PLAN AREA B - OVERVIEW
PINCH POINTS 2 TO 4



Drawing Legend	
	Proposed Asphalt Trail
	Proposed On-Street Facility
	Proposed Interim Connection
	Proposed Trail Connection (by others)
	Proposed Curb line
	Existing Metro Bus Stop
** Plan set alignment begins at Oxon Cove Park/ DC Village Lane to Overlook Avenue/South Capitol Street, extending to Frederick Douglass Bridge.**	

Concept Plan
October 2010
Scale: 1" = 100'

Sheet 2
Chesapeake Street to South of Malcolm X Ave
Overlook Ave/South Capitol Street Segment
TooleDesignGroup
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HYATTSVILLE, MD 20782
PLANNING | ENGINEERING
301.267.1900



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