

**Multimodal Transportation Assessment**

# **APS- Career Center**

**Arlington, Virginia**

**June 17, 2022**

**GOROVE SLADE**  
Transportation Planners and Engineers

Prepared by:



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## A. Finalized Scoping Document



# PRE-SCOPE OF WORK MEETING FORM

## Information on the Project Traffic Impact Analysis Base Assumptions

The applicant is responsible for entering the relevant information and submitting the form to VDOT and the locality no less than three (3) business days prior to the meeting. If a form is not received by this deadline, the scope of work meeting may be postponed.

### Contact Information

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<b>Consultant Name:</b>	Benjamin Burgin, Assistant Director of Design and Construction, Arlington Public Schools
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### Project Information

<b>Project Name:</b>	Arlington Career Center	<b>Locality/County:</b>	Arlington County
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<b>Project Location:</b> (Attach regional and site-specific location map)	The proposed project is located at 816 S Walter Reed Drive in Arlington County, Virginia, on the northwest corner of S Walter Reed Drive and 9th Street S. Figure 1 shows the regional context of the site, and Figure 2 shows the local context of the site. Figure 3 shows an aerial of the site.
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<b>Submission Type:</b>	Comp Plan <input type="checkbox"/>	Rezoning <input type="checkbox"/>	Site Plan <input checked="" type="checkbox"/>	Subd. Plat <input type="checkbox"/>
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<b>Project Description:</b> (Including details on the land use, acreage, phasing, access location, etc. Attach additional sheet if necessary)	<p>The project consists of the redevelopment of the Arlington Career Center (ACC) campus. The campus is currently occupied by the two-story, 165,000-sf ACC building (including two temporary classroom buildings on the existing surface parking lot) which houses full-day Arlington Public Schools (APS) programs. The campus also includes the Columbia Pike Branch Library, Montessori Public School of Arlington (MPSA), and Arlington Community High School (ACHS). With the temporary classroom buildings currently occupying part of the surface parking lot, existing uses on the campus are served by 151 on-site parking spaces in the main lot in addition to 100 leased parking spaces in the nearby Ethiopian Community Development Council (ECDC) parking garage.</p> <p>As of February 2022, preliminary site plans include, at a minimum:</p> <ul style="list-style-type: none"> <li>• The relocation of ACHS;</li> <li>• The demolition of the Fenwick Center (currently ACHS) and surface parking lot;</li> <li>• The construction of a new building along Walter Reed Drive between the library and 7<sup>th</sup> Street as well as a new athletic field along Highland Street between the existing ACC and MPSA buildings; and</li> <li>• The partial demolition and renovation of the existing ACC building to accommodate the construction of a new parking garage.</li> </ul> <p>Additionally, two campus population scenarios are being considered: one constituting ideal student populations (Base Ed. Specs) and one constituting the maximum feasible student populations across the campus (Max Site) as shown on the next page.</p> <p>Access plans are currently being developed in the conceptual design process, and parking and loading access to the site may be provided from driveways along one or more of the streets adjacent to the campus (e.g., Walter Reed Drive, 9<sup>th</sup> Street, Highland Street, 7<sup>th</sup> Street). The new building is expected to be delivered in December 2025 with all construction phases completed by April 2027.</p>
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	<table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th colspan="2">Base Ed. Specs</th> <th colspan="2">Max Site</th> </tr> <tr> <th>Students</th> <th>Staff</th> <th>Students</th> <th>Staff</th> </tr> </thead> <tbody> <tr> <td><b>Career Center</b></td> <td><b>1,795</b></td> <td><b>239</b></td> <td><b>1,795</b></td> <td><b>239</b></td> </tr> <tr> <td><i>Arlington Tech</i></td> <td>1,050</td> <td></td> <td>1,050</td> <td></td> </tr> <tr> <td>Academic Academy</td> <td>60</td> <td></td> <td>60</td> <td></td> </tr> <tr> <td>EL</td> <td>70</td> <td></td> <td>70</td> <td></td> </tr> <tr> <td>PEP</td> <td>70</td> <td></td> <td>70</td> <td></td> </tr> <tr> <td>CTE (per period)</td> <td>300</td> <td></td> <td>300</td> <td></td> </tr> <tr> <td>Uncategorized</td> <td>245</td> <td></td> <td>245</td> <td></td> </tr> <tr> <td><b>MPSA</b></td> <td><b>488</b></td> <td><b>91</b></td> <td></td> <td></td> </tr> <tr> <td><b>School/Program TBD</b></td> <td></td> <td></td> <td><b>775</b></td> <td><b>145</b></td> </tr> <tr> <td><b>Site Total</b></td> <td><b>2,283</b></td> <td><b>330</b></td> <td><b>2,570</b></td> <td><b>384</b></td> </tr> </tbody> </table>				Location	Base Ed. Specs		Max Site		Students	Staff	Students	Staff	<b>Career Center</b>	<b>1,795</b>	<b>239</b>	<b>1,795</b>	<b>239</b>	<i>Arlington Tech</i>	1,050		1,050		Academic Academy	60		60		EL	70		70		PEP	70		70		CTE (per period)	300		300		Uncategorized	245		245		<b>MPSA</b>	<b>488</b>	<b>91</b>			<b>School/Program TBD</b>			<b>775</b>	<b>145</b>	<b>Site Total</b>	<b>2,283</b>	<b>330</b>	<b>2,570</b>	<b>384</b>
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<b>Proposed Use(s):</b> (Check all that apply; attach additional pages as needed)	Residential <input type="checkbox"/>	Commercial <input type="checkbox"/>	Mixed Use <input type="checkbox"/>	Other <input checked="" type="checkbox"/>																																																											
	<b>Residential Use(s)</b> ITE LU Code(s): Number of Units:		<b>Other Use(s)</b> ITE LU Code(s): Independent Variable(s): Net Increase:																																																												
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<b>Total Peak Hour Trip Projection:</b> (Based on net trip generation calculations; see Table 2)	Less than 100 <input type="checkbox"/>	100 – 499 <input type="checkbox"/>	500 – 999 <input checked="" type="checkbox"/>	1,000 or more <input type="checkbox"/>																																																											
<b>Traffic Impact Analysis Assumptions</b>																																																															
<b>Study Period:</b>	Existing Year: 2022	Build-Out Year: 2027	Design Year: N/A																																																												
<b>Study Area Boundaries:</b> (Attach map)	North: 2 <sup>nd</sup> Street S	South: Columbia Pike																																																													
	East: S Walter Reed Drive	West: S Glebe Road																																																													
<b>External Factors That Could Affect Project:</b> (Planned road improvements, other nearby developments)	Three (3) background traffic studies will be considered: <ul style="list-style-type: none"> <li>• Gilliam Place</li> <li>• Westmont Shopping Center</li> <li>• 2400 Columbia Pike</li> </ul>																																																														
<b>Consistency With Comprehensive Plan:</b> (Land use, transportation plan)	Yes																																																														
<b>Available Traffic Data:</b> (Historical, forecasts)	VDOT Historical AADT Data; see Table 3																																																														

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<b>Trip Distribution:</b> (Please refer to attached Figure 8)	Road Name: Columbia Pike – 15% in / 10% out from West, 5% from East	Road Name: S Glebe Road – 15% from North, 5% from South	
	Road Name: S Walter Reed Drive – 15% from North, 5% from South	Road Name: S Highland Street – 5% from North, 5% from South	
	Road Name: 8 <sup>th</sup> Street S – 5% from East	Road Name: 9 <sup>th</sup> Street S – 25% from East	
<b>Annual Vehicle Trip Growth Rate:</b> (See Table 3)	0.8%	<b>Peak Period for Study:</b> (Check all that apply)	<input checked="" type="checkbox"/> AM <input checked="" type="checkbox"/> PM <input type="checkbox"/> SAT
		<b>Peak Hour of the Generator:</b>	See Table 2
<b>Study Intersections and/or Road Segments:</b> (Please refer to attached Figure 4 and Figure 5)	<b>Study Intersections:</b> <ol style="list-style-type: none"> <li>1. S Walter Reed Drive &amp; 7<sup>th</sup> Street S</li> <li>2. S Walter Reed Drive &amp; 8<sup>th</sup> Street S</li> <li>3. S Walter Reed Drive &amp; Driveway</li> <li>4. S Walter Reed Drive &amp; 9<sup>th</sup> Street S</li> <li>5. S Walter Reed Drive &amp; Columbia Pike</li> <li>6. S Highland Street &amp; Columbia Pike</li> <li>7. S Highland Street &amp; 9<sup>th</sup> Street S</li> <li>8. S Highland Street &amp; Driveway</li> <li>9. S Highland Street &amp; 8<sup>th</sup> Street S</li> <li>10. S Highland Street &amp; 7<sup>th</sup> Street S</li> <li>11. S Glebe Road &amp; 7<sup>th</sup> Street S</li> <li>12. S Glebe Road &amp; Columbia Pike</li> <li>13. S Fillmore Street &amp; 2<sup>nd</sup> Street S</li> </ol>		<b>Road Segments for ATR Counts:</b> <ol style="list-style-type: none"> <li>1. 2<sup>nd</sup> Street S</li> <li>2. 6<sup>th</sup> Street S</li> <li>3. 7<sup>th</sup> Street S</li> <li>4. 8<sup>th</sup> Street S</li> <li>5. 9<sup>th</sup> Street S (East and west of S Walter Reed Drive)</li> <li>6. S Walter Reed Drive</li> <li>7. S Highland Street</li> <li>8. S Glebe Road</li> </ol>
	<b>Trip Adjustment Factors:</b> (See Table 1)	Internal allowance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No TDM/Mode Split Reduction: N/A	Pass-by allowance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Reduction: N/A
<b>Software Methodology:</b>	<input checked="" type="checkbox"/> Synchro <input type="checkbox"/> HCS (v. 2000/+) <input type="checkbox"/> aaSIDRA <input type="checkbox"/> CORSIM <input type="checkbox"/> Other: _____		
<b>Traffic Signal Proposed or Affected:</b> (Analysis software to be used, progression speed, cycle length)	<ul style="list-style-type: none"> <li>• S Walter Reed Drive &amp; 7<sup>th</sup> Street S</li> <li>• S Walter Reed Drive &amp; Columbia Pike</li> <li>• S Highland Drive &amp; Columbia Pike</li> <li>• S Glebe Road &amp; 7<sup>th</sup> Street S</li> <li>• S Glebe Road &amp; Columbia Pike</li> </ul> Analysis Software: Synchro version 10.0                      Results: HCM 2000 methodology		
<b>Improvement(s) Assumed or to be Considered:</b>	<ul style="list-style-type: none"> <li>• South Walter Reed Drive Complete Street</li> <li>• Columbia Pike Bike Boulevards</li> <li>• Columbia Pike Multimodal Street Improvements</li> <li>• Columbia Pike Premium Transit Network</li> </ul>		
<b>Background Traffic Studies Considered:</b>	Three (3) background traffic studies will be considered: <ul style="list-style-type: none"> <li>• Gilliam Place</li> <li>• Westmont Shopping Center</li> <li>• 2400 Columbia Pike</li> </ul>		
<b>Plan Submission:</b>	<input type="checkbox"/> Master Development Plan (MDP) <input type="checkbox"/> Generalized Development Plan (GDP) <input type="checkbox"/> Preliminary/Sketch Plan <input checked="" type="checkbox"/> Other Plan type (Final Site, Subd. Plan)		

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<b>Additional Issues to be Addressed:</b>	<input checked="" type="checkbox"/> Queuing analysis	<input type="checkbox"/> Actuation/Coordination	<input type="checkbox"/> Weaving analysis
	<input type="checkbox"/> Merge analysis	<input checked="" type="checkbox"/> Bike/Ped Accommodations	<input checked="" type="checkbox"/> Intersection(s)
	<input checked="" type="checkbox"/> TDM Measures	<input type="checkbox"/> Other _____	

**NOTES ON ASSUMPTIONS:**

1. Synchro files/signal timings will be obtained from Arlington County.
2. The scenarios to be included in the study are Existing (2022), Future without Development (2027), and Future with Maximum Development (2027). The Future with Maximum Development scenario will include the Max Site student and staff populations noted in the Project Description section of this document. If that scenario triggers traffic mitigations and those mitigations are determined to necessitate multiple implementation phases, a future scenario reflecting the Base Ed. Specs student and staff populations will be studied.
3. Existing peak hour factors in the range of 0.85 to 1.00 will be used for existing scenarios. The default peak hour factor of 0.92 to 1.00 will be used for all future scenarios.
4. Default heavy vehicle percentage of 2% will be used for all movements, unless the traffic data collected shows a high percentage for the studied street.
5. For any movement, LOS E or better would be considered as desirable/acceptable traffic operation condition. Mitigations will be recommended if any intersection or movement experiences a degradation to LOS F in the future scenario where one does not exist in the background scenario, or if any intersection or movement operating at LOS F in the background scenario experiences an increase in delay greater than 10 percent.
6. All locations where the 95<sup>th</sup> percentile queues exceed the length of storage will be highlighted. Locations will be noted where the proposed project causes the 95<sup>th</sup> percentile queue length to exceed the available capacity of an approach or turn lane when it does not in the background scenario. Mitigations will be recommended when the proposed project causes any 95<sup>th</sup> percentile queue lengths that exceed the available capacity to experience an increase in queue of 150 feet or more due to the proposed development.
7. Signal timing adjustments would be considered as an acceptable mitigation measure.
8. Both 95<sup>th</sup> and 50<sup>th</sup> percentile queues will be provided.
9. HCM 2000 will be utilized for signalized intersections and unsignalized intersections.
10. Level of service calculations for existing and future conditions without and with development shall be in accordance with the Highway Capacity Manual (HCM) 2000 methodologies, as computed by Synchro 10.0 software. Typical Synchro parameters to be utilized in this analysis will be consistent with those values provided in VDOT’s TOSAM and Arlington County standards.
11. A multimodal analysis will be provided in the study which will include the following information:
  - a. Multimodal trip generation
  - b. Curbside management information
  - c. Transit Facilities
  - d. Transit Ridership (As available, to be provided by Arlington County)
  - e. Bike/pedestrian facilities (As shown in Figure 6 and Figure 7)
  - f. Multimodal Initiatives
  - g. Bus services within the study area
  - h. Crash data (As available, to be provided by Arlington County)
12. Data Collection:  
 Weekday Turning Movement Counts (TMCs), including bicycles and pedestrians, were collected from 6:30 AM to 9:30 AM and 2:00 PM to 7:00 PM on November 18, 2021, for the intersections noted above. Automatic Traffic Recorder (ATRs) counts were collected at nine (9) locations, including daily traffic by direction, classification, and speed on November 17, 2021, or November 18, 2021. These locations are shown in Figure 5. Counts were

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conducted on a “typical weekday” when Arlington Public Schools were in session and the Columbia Pike Branch Library was open. Efforts were made to avoid conducting counts during inclement weather.

- 13. Trip generation was developed using estimated student and staff numbers provided by APS, bell times, and mode split information based on APS Go! 2016 data. The distribution of inbound and outbound trips before and after each program’s bell time were assumed from the existing conditions analysis completed in 2020 prior to COVID and maintained for both existing and proposed conditions. The provided net trip generation is based on a comparison of existing and proposed trip generation and is provided as a placeholder until final development scenarios are compiled. A morning peak hour, afternoon school peak hour, and an evening commuter peak hour were determined and are shown in Table 2. Figure 9 and Figure 10 show existing and proposed trip generation per 15-minute interval, respectively.
- 14. For all future scenarios, an all-way stop control analysis will be performed at one (1) two-way stop-controlled intersection near the ACC campus, in accordance with MUTCD guidance criteria for multi-way stop applications:
  - a. S Highland Street and 9<sup>th</sup> Street S: Currently, S Highland Street is free-flowing, and 9<sup>th</sup> Street S is stop-controlled.
- 15. Parking Inventory and Occupancy:
  - a. On-street parking counts were conducted between 6:00 AM and 10:00 PM on November 18, 2021, in 30-minute sweeps as shown in Figure 5. The parking data collection was performed to match parking data collected previously in the existing conditions analysis completed in 2020 prior to COVID.
  - b. Off-street parking facility counts were conducted at two (2) on-site surface lots from 6:00 AM to 10:00 PM on November 18, 2021, in 30-minute sweeps as shown in Figure 5. The one (1) off-site parking garage (the ECDC Garage) was not counted due to access issues, and occupancy numbers were assumed based on the main on-site parking lot and the number of parking passes issued to staff.

SIGNED:   
Applicant or Consultant

DATE: 3/04/2022

PRINT NAME: Rob Schiesel, Gorove/Slade Associates, Inc.  
Applicant or Consultant

SIGNED: \_\_\_\_\_  
Local Government Representative

DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_  
Local Government Representative

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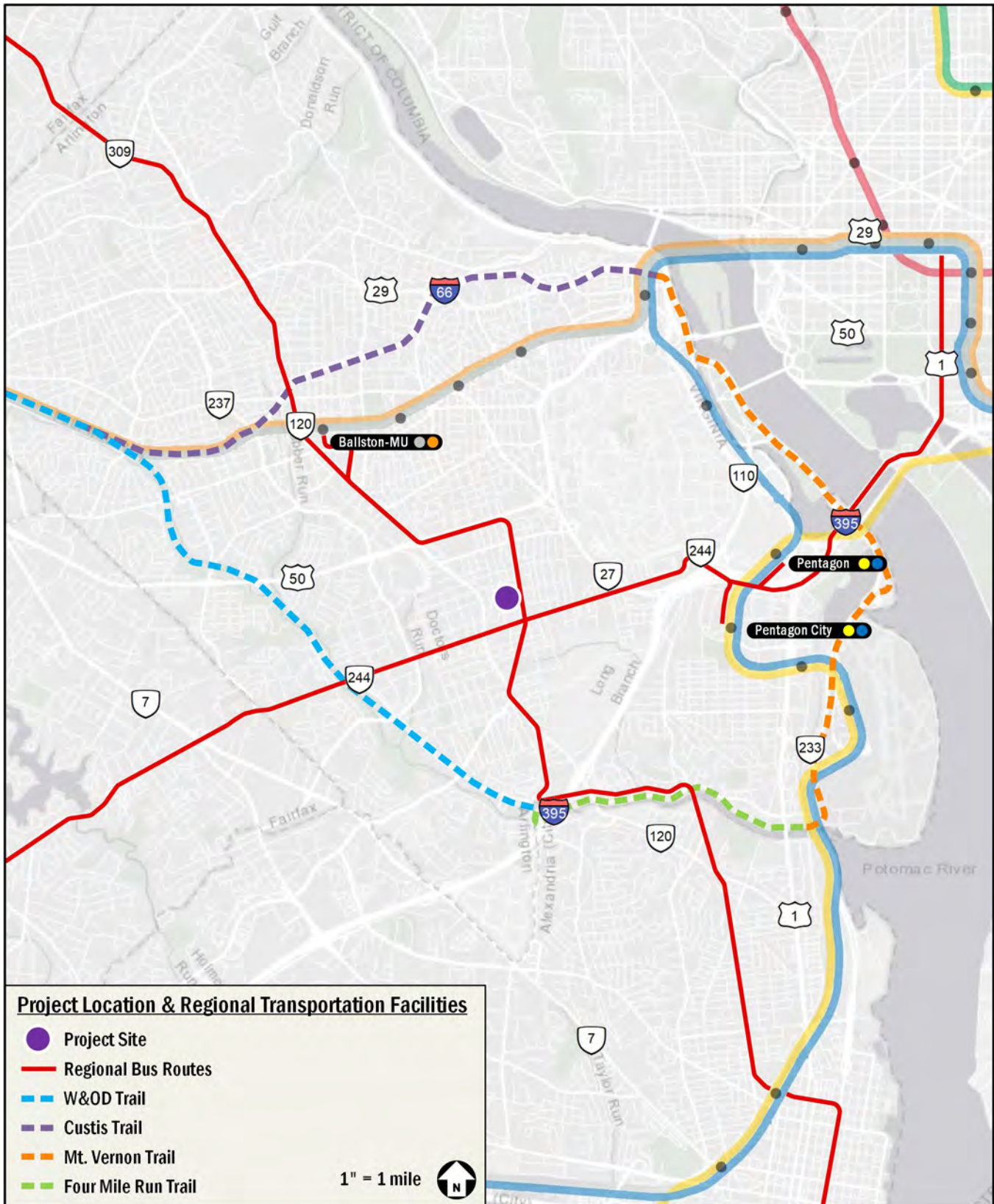


Figure 1: Regional Location

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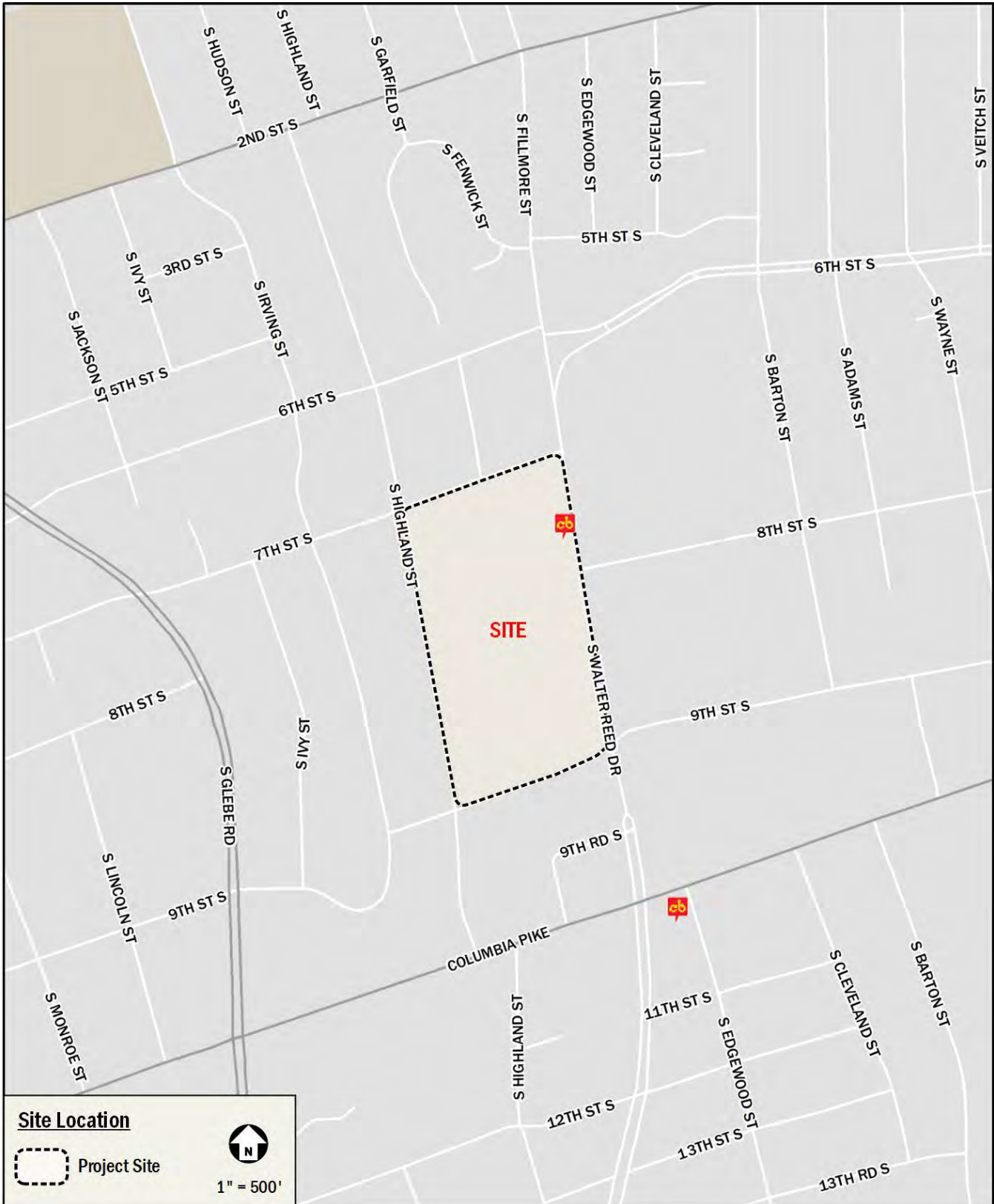


Figure 2: Site Location

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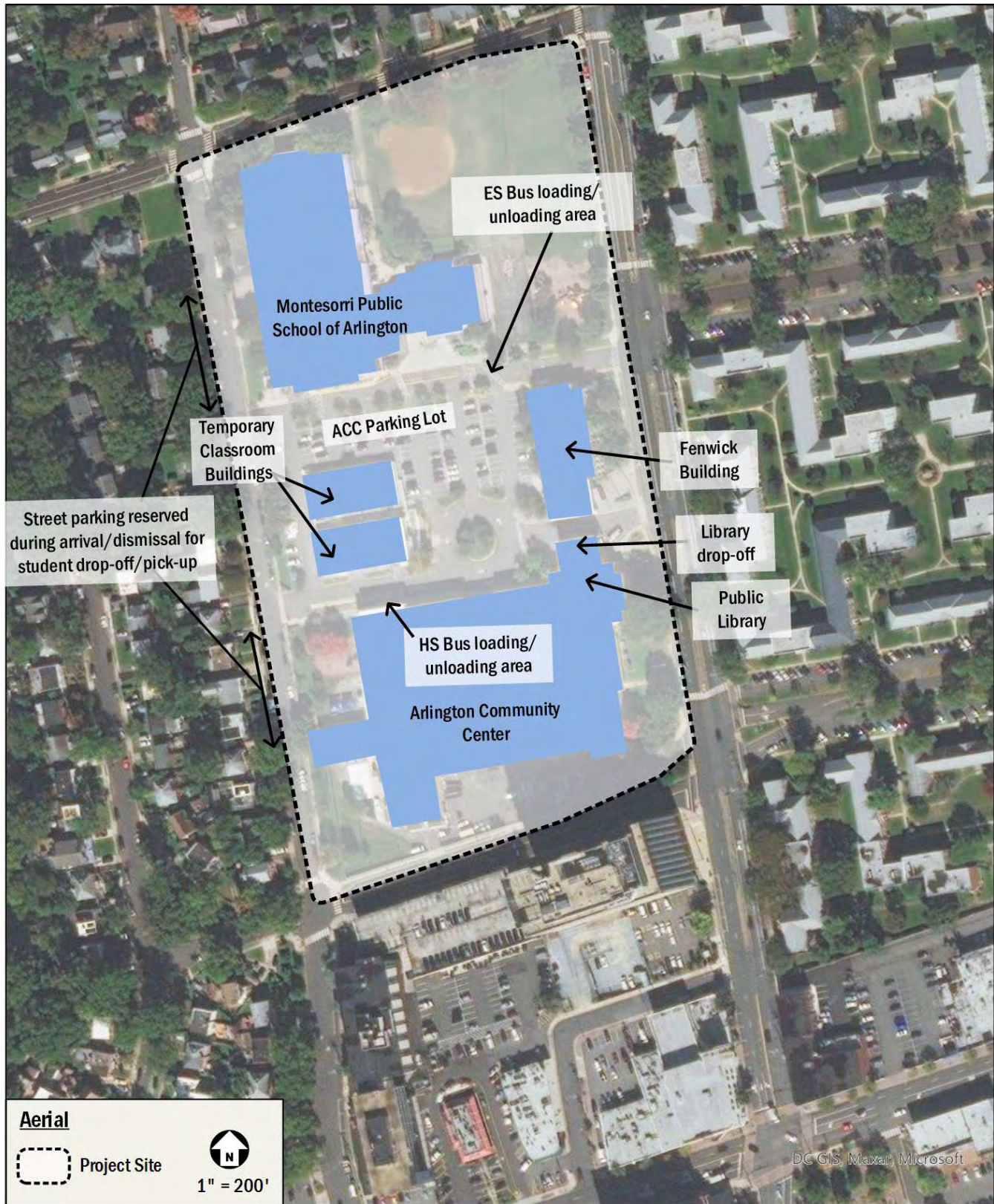
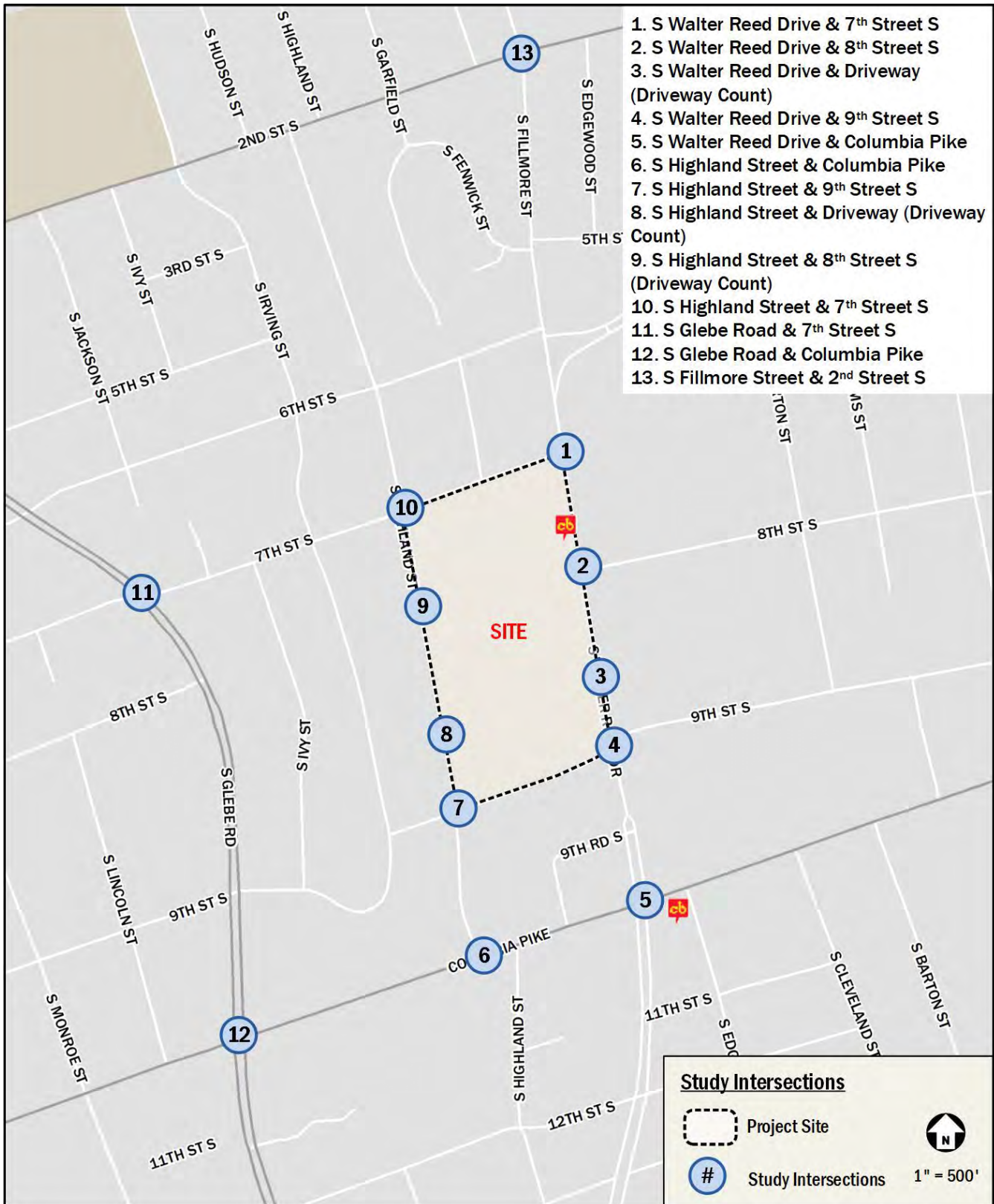


Figure 3: Aerial

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**Figure 4: Study Intersections**

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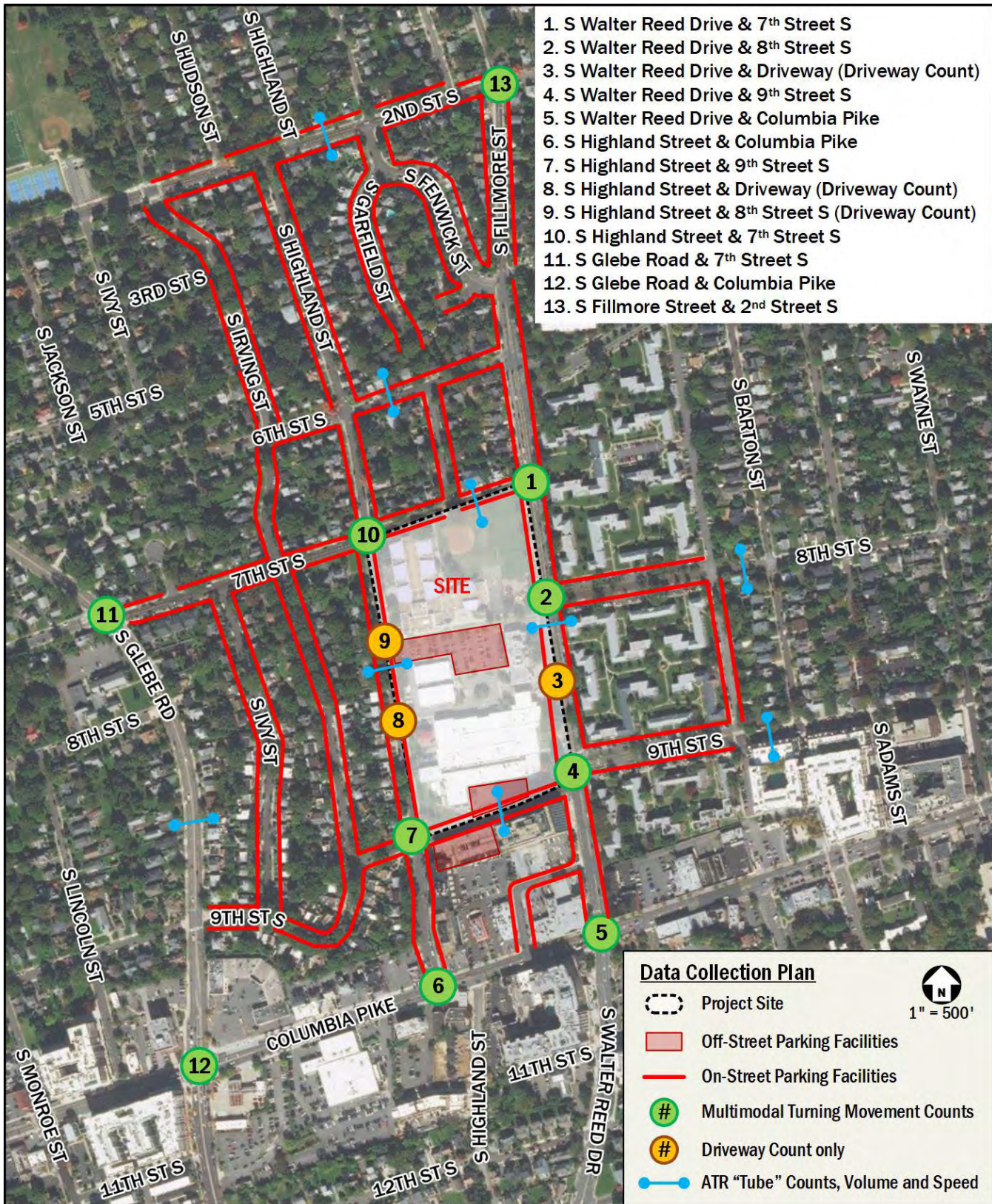


Figure 5: Data Collection Plan

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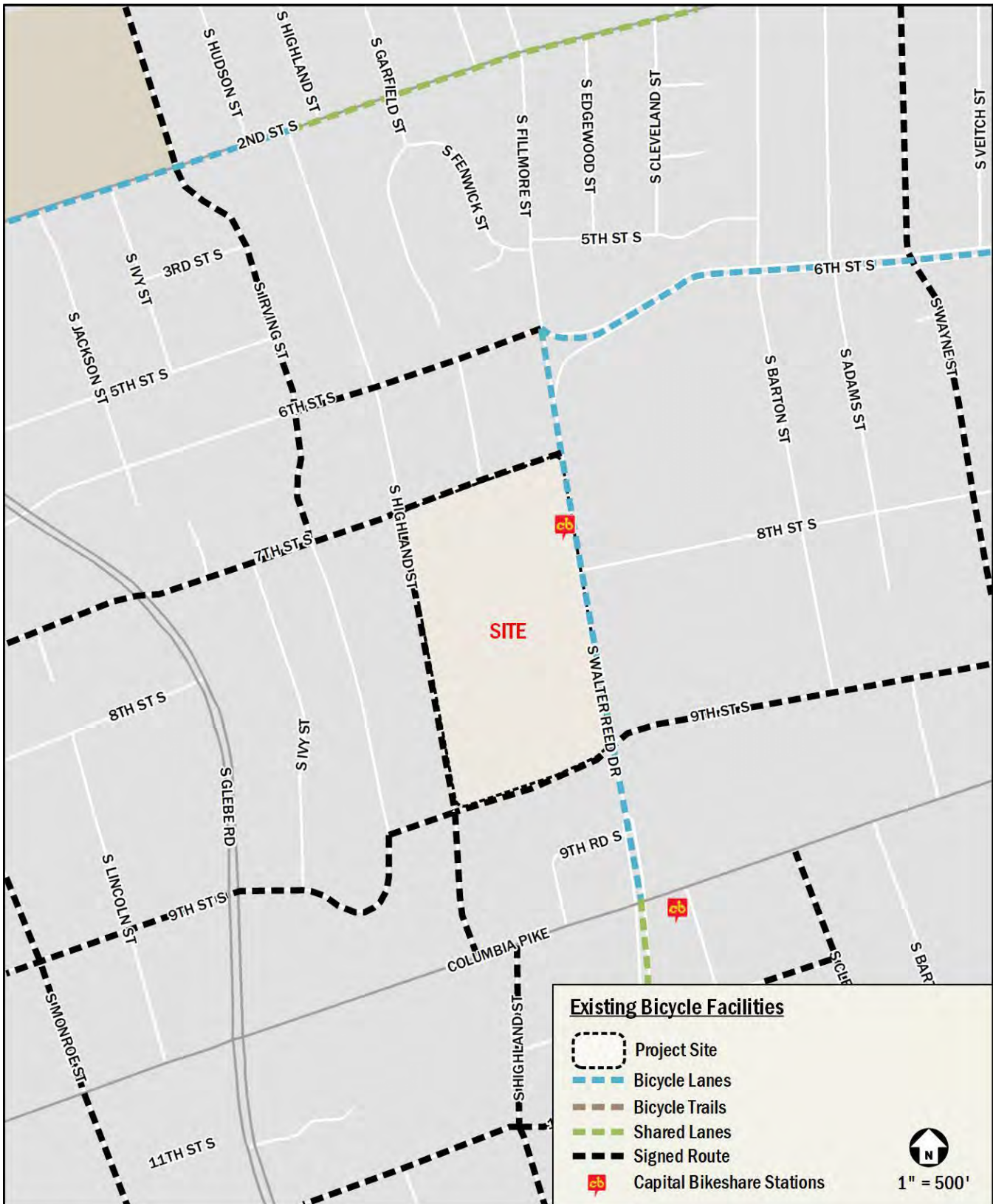


Figure 6: Bicycle Facilities Study Area

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Figure 7: Pedestrian Facilities Study Area

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**Table 1: Mode Split Assumptions**

High School – Pertinent Mode Split data from other sources:

Information Source	Mode						
	SOV	Pick-Up/Drop-Off	Carpool	School Bus	Walk	Bike	Transit
All APS Grades 9 & 10 APS GO! Student Tally Results (2016) (AM)	---	28%	4%	42%	20%	4%	1%
All APS Grades 9 & 10 APS GO! Student Tally Results (2016) (PM)	---	22%	3%	43%	26%	4%	2%
Career Center and Community HS Grades 9 & 10 APS GO! Student Tally Results (2016) (AM)	---	16%	4%	43%	11%	7%	19%
Career Center and Community HS Grades 9 & 10 APS GO! Student Tally Results (2016) (PM)	---	15%	3%	47%	10%	7%	18%
All APS Grades 11 & 12 APS GO! Student Survey Results (2016) (AM)	17%	21%	11%	15%	33%	2%	1%
All APS Grades 11 & 12 APS GO! Student Survey Results (2016) (PM)	19%	14%	9%	20%	35%	2%	1%
Career Center and Community HS Grades 11 & 12 APS GO! Student Survey Results (2016) (AM)	13%	39%	17%	17%	9%	0%	4%
Career Center and Community HS Grades 11 & 12 APS GO! Student Survey Results (2016) (PM)	22%	26%	0%	13%	39%	0%	0%

**Table 2: Peak Hour Trip Generation**

User Group	Size	Vehicular Trip Generation								
		AM Peak Hour			PM School Peak Hour			PM Commuter Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
<b>Existing Arlington Career Center Campus</b>										
Students	1,185 students									
	<i>Drive &amp; Park</i>	26 v/hr	0 v/hr	26 v/hr	3 v/hr	29 v/hr	32 v/hr	5 v/hr	15 v/hr	20 v/hr
	<i>Pick-up/Drop-off</i>	130 v/hr	130 v/hr	260 v/hr	144 v/hr	145 v/hr	289 v/hr	48 v/hr	74 v/hr	122 v/hr
	<b>Total Student Trips</b>	<b>156 v/hr</b>	<b>130 v/hr</b>	<b>286 v/hr</b>	<b>147 v/hr</b>	<b>174 v/hr</b>	<b>321 v/hr</b>	<b>53 v/hr</b>	<b>89 v/hr</b>	<b>142 v/hr</b>
Staff	305 staff	119 v/hr	2 v/hr	121 v/hr	2 v/hr	82 v/hr	84 v/hr	11 v/hr	68 v/hr	79 v/hr
Visitors <sup>1</sup>	44 visitors	2 v/hr	0 v/hr	2 v/hr	3 v/hr	6 v/hr	9 v/hr	0 v/hr	7 v/hr	7 v/hr
Library <sup>2</sup>	14,559-sf	8 v/hr	3 v/hr	11 v/hr	57 v/hr	62 v/hr	119 v/hr	57 v/hr	62 v/hr	119 v/hr
<b>Subtotal (Existing ACC Trips)</b>		<b>287 v/hr</b>	<b>136 v/hr</b>	<b>423 v/hr</b>	<b>206 v/hr</b>	<b>322 v/hr</b>	<b>528 v/hr</b>	<b>118 v/hr</b>	<b>224 v/hr</b>	<b>342 v/hr</b>
<b>Proposed Arlington Career Center Campus</b>										
Students <sup>3</sup>	2,270 students									
	<i>Drive &amp; Park</i>	81 v/hr	0 v/hr	81 v/hr	3 v/hr	115 v/hr	118 v/hr	5 v/hr	43 v/hr	48 v/hr
	<i>Pick-up/Drop-off</i>	349 v/hr	349 v/hr	698 v/hr	321 v/hr	262 v/hr	583 v/hr	102 v/hr	144 v/hr	246 v/hr
	<b>Total Student Trips</b>	<b>430 v/hr</b>	<b>349 v/hr</b>	<b>779 v/hr</b>	<b>324 v/hr</b>	<b>377 v/hr</b>	<b>701 v/hr</b>	<b>107 v/hr</b>	<b>187 v/hr</b>	<b>294 v/hr</b>
Staff	384 staff	164 v/hr	2 v/hr	166 v/hr	0 v/hr	99 v/hr	99 v/hr	11 v/hr	96 v/hr	107 v/hr
Visitors <sup>1</sup>	50 visitors	6 v/hr	0 v/hr	6 v/hr	3 v/hr	9 v/hr	12 v/hr	0 v/hr	6 v/hr	6 v/hr
Library <sup>2</sup>	14,559-sf	8 v/hr	3 v/hr	11 v/hr	57 v/hr	62 v/hr	119 v/hr	57 v/hr	62 v/hr	119 v/hr
<b>Subtotal (Proposed ACC Trips)</b>		<b>610 v/hr</b>	<b>355 v/hr</b>	<b>965 v/hr</b>	<b>381 v/hr</b>	<b>545 v/hr</b>	<b>926 v/hr</b>	<b>172 v/hr</b>	<b>349 v/hr</b>	<b>521 v/hr</b>
<b>Net New Trips (Proposed ACC Trips minus Existing ACC Trips)</b>		<b>323 v/hr</b>	<b>219 v/hr</b>	<b>542 v/hr</b>	<b>175 v/hr</b>	<b>223 v/hr</b>	<b>398 v/hr</b>	<b>54 v/hr</b>	<b>125 v/hr</b>	<b>179 v/hr</b>

<sup>1</sup> Visitor numbers preliminarily assumed from existing conditions analysis completed prior to COVID

<sup>2</sup> Library numbers calculated using ITE *Trip Generation*, 11<sup>th</sup> Edition

<sup>3</sup> Does not include CTE students who are transported by school bus throughout the day

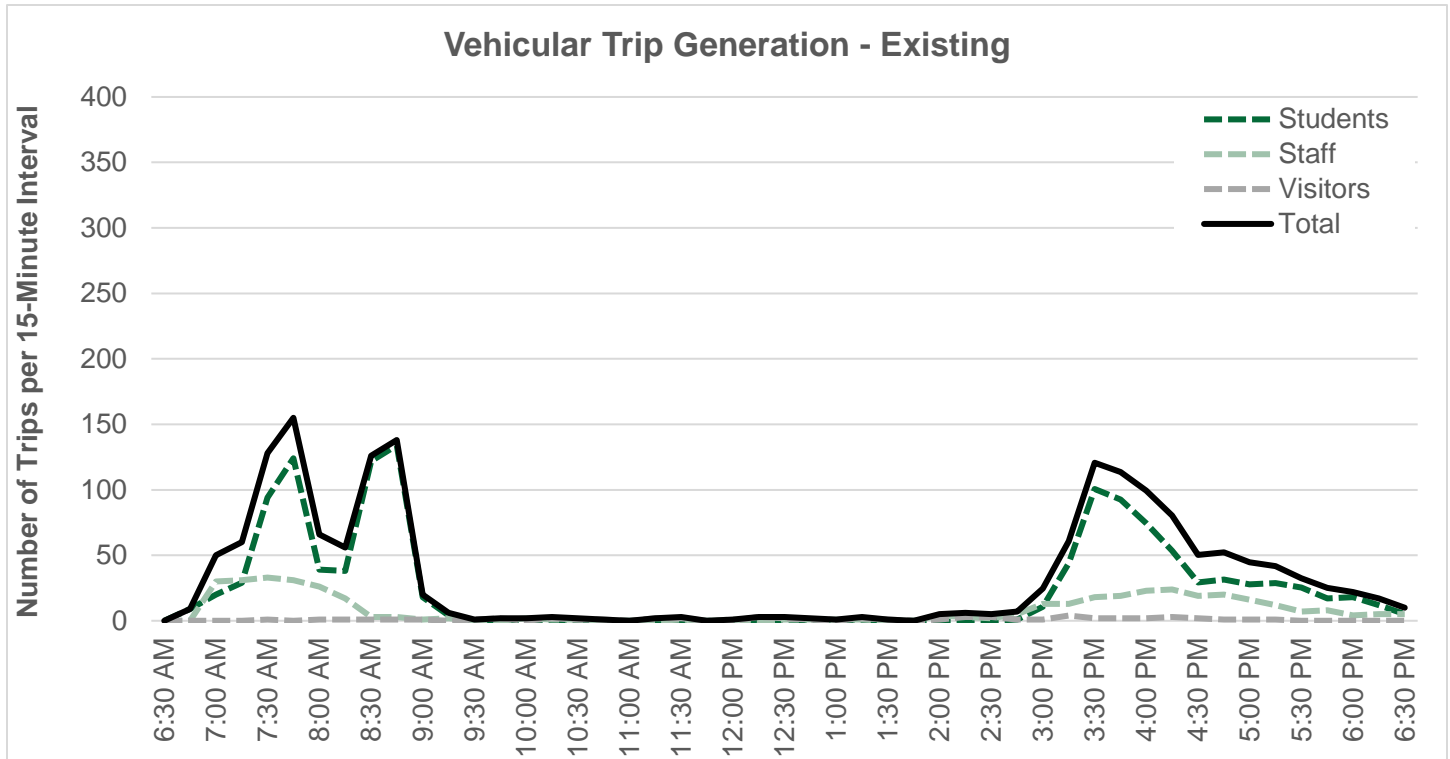


Figure 9: Existing Trip Generation per 15-Minute Interval

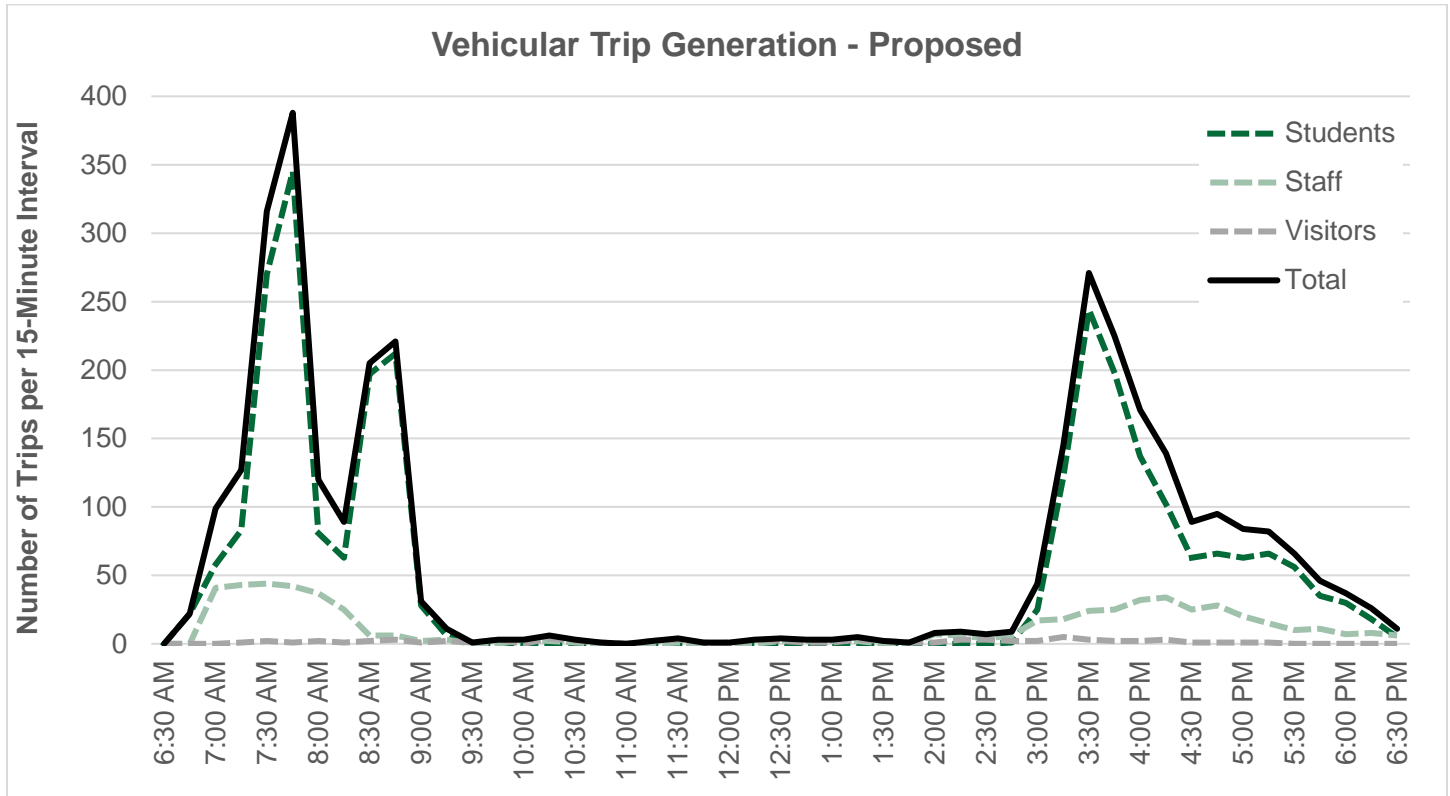


Figure 10: Proposed Trip Generation per 15-Minute Interval

It is important for the applicant to provide sufficient information to county and VDOT staff so that questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

**Table 3: Historical AADT Volumes**

Route	From	To					Annual % Change (2016 - 2019)
			2016	2017	2018	2019	
Walter Reed Drive	Columbia Pike	6th Street S	13,000	13,000	13,000	13,000	0.0%
Columbia Pike	SR 120 Glebe Road	SR 27 W, Washington Boulevard	24,000	25,000	24,000	26,000	2.7%
Glebe Road	US 50	SR 244 Columbia Pike	31,000	31,000	31,000	32,000	1.1%
2nd Street	Irving Street S	SR 27 Washington Boulevard	7,200	7,300	7,200	7,100	-0.5%
							0.8%

\*To avoid discrepancies in traffic caused by COVID-19 pandemic, 2020 data was not included in the analysis  
 Source: VDOT Traffic Data 2016 to 2019 (<http://www.virginiadog.org/info/ct-trafficcounts.asp>)

Based on a review of historical AADT data available from VDOT, volumes along certain roadways within the study area have slightly increased when comparing 2016 to 2019. As such, an annual background growth rate of 0.8% per year is proposed for future scenarios.

It is important for the applicant to provide sufficient information to county and VDOT staff so that questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.



## B. Existing Turning Movement Counts

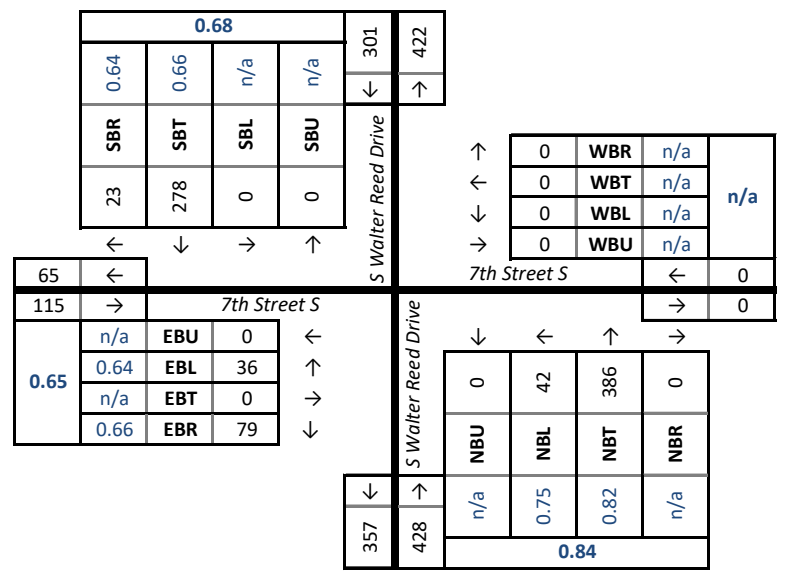
**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

Project Name : Arlington Career Center Transportatio Analysis Period: STUDY\_PERIOD 06:30 AM to 09:30 AM  
 Project # : 2379-006 Date of Counts: Thursday, November 18, 2021  
 Location Arlington, VA Weather: Partly Cloudy  
 Data Source: Gorove/Slade Associates, Inc.

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

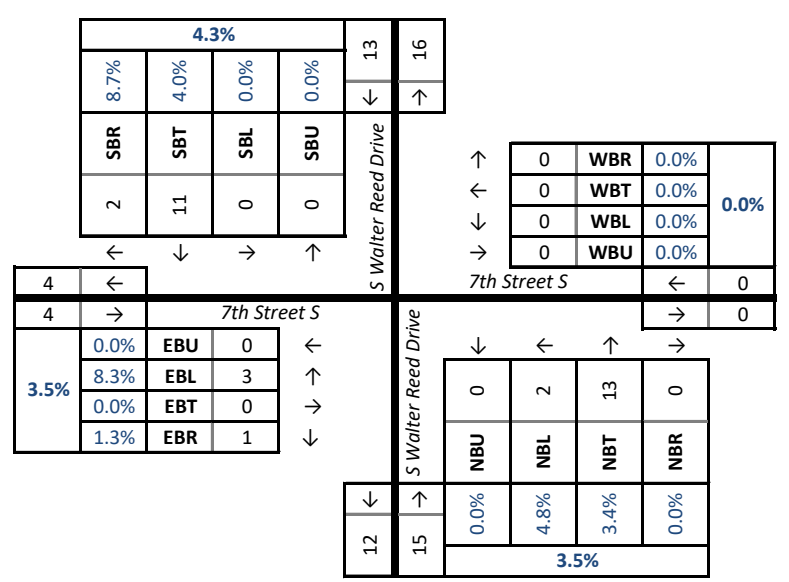
Intersection:		1. S Walter Reed Drive & 7th Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					7th Street S					S Walter Reed Drive					7th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM	to 06:45 AM	1	0	21	2	1	0	0	0	0	0	0	5	47	0	0	0	2	0	0	0
06:45 AM	to 07:00 AM	1	0	18	1	0	0	0	0	0	0	0	10	59	0	0	0	3	0	5	0
07:00 AM	to 07:15 AM	0	0	37	5	0	0	0	0	0	0	0	3	63	0	1	0	6	0	3	5
07:15 AM	to 07:30 AM	0	0	57	3	2	0	0	0	0	0	0	5	78	0	1	0	2	0	5	5
07:30 AM	to 07:45 AM	0	0	66	9	9	0	0	0	0	0	0	14	102	0	4	0	5	0	25	1
07:45 AM	to 08:00 AM	0	0	105	5	4	0	0	0	0	0	0	11	117	0	0	0	14	0	30	7
08:00 AM	to 08:15 AM	0	0	49	2	1	0	0	0	0	0	0	7	87	0	3	0	11	0	10	3
08:15 AM	to 08:30 AM	0	0	58	7	1	0	0	0	0	0	0	10	80	0	3	0	6	0	14	2
08:30 AM	to 08:45 AM	0	0	60	8	5	0	0	0	0	0	0	12	84	0	3	0	11	0	28	2
08:45 AM	to 09:00 AM	0	0	68	8	4	0	0	0	0	0	0	16	78	0	8	0	18	0	48	2
09:00 AM	to 09:15 AM	0	0	62	5	1	0	0	0	0	0	0	3	77	0	1	0	5	0	17	2
09:15 AM	to 09:30 AM	0	0	50	4	0	0	0	0	0	0	0	3	82	0	0	0	4	0	7	1
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		301					0					428					115				
07:30 AM to 08:30 AM		0	0	278	23	15	0	0	0	0	0	0	42	386	0	10	0	36	0	79	13
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	n/a	0.66	0.64	<b>0.68</b>	n/a	n/a	n/a	n/a	n/a	n/a	0.75	0.82	n/a	<b>0.84</b>	n/a	0.64	n/a	0.66	<b>0.65</b>

**VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)**



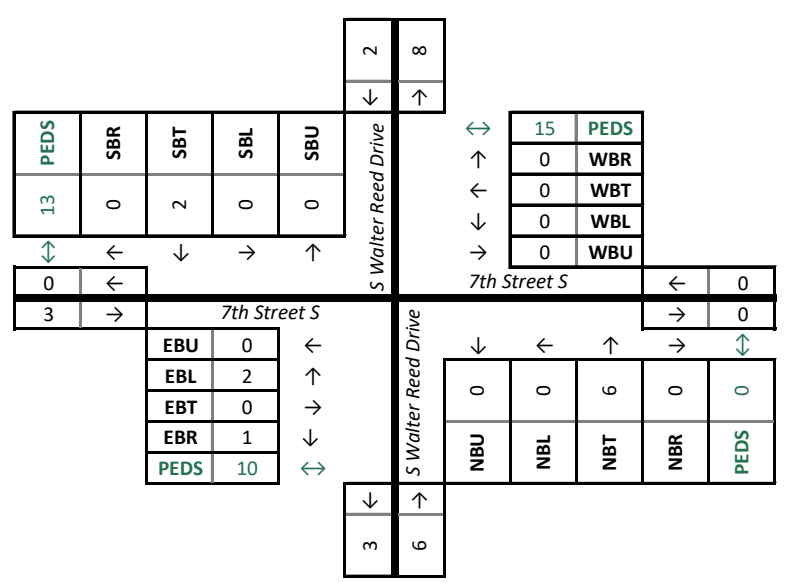
Intersection:		1. S Walter Reed Drive & 7th Street S																			
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					7th Street S					S Walter Reed Drive					7th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM	to 06:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
06:45 AM	to 07:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
07:00 AM	to 07:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	9	0	0	0	0	0	2	0
07:15 AM	to 07:30 AM	0	0	3	1	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0
07:30 AM	to 07:45 AM	0	0	2	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
07:45 AM	to 08:00 AM	0	0	3	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	1	0
08:00 AM	to 08:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0
08:15 AM	to 08:30 AM	0	0	2	1	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	0
08:30 AM	to 08:45 AM	0	0	4	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
08:45 AM	to 09:00 AM	0	0	3	0	0	0	0	0	0	0	0	1	6	0	0	0	2	0	5	0
09:00 AM	to 09:15 AM	0	0	7	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0
09:15 AM	to 09:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		13					0					15					4				
07:30 AM to 08:30 AM		0	0	11	2		0	0	0	0	0	0	2	13	0		0	3	0	1	
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	4.0%	8.7%	<b>4.3%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	4.8%	3.4%	0.0%	<b>3.5%</b>	0.0%	8.3%	0.0%	1.3%	<b>3.5%</b>
<b>INT. PEAK HR (HV ONLY)</b>		18					0					18					9				
08:15 AM to 09:15 AM		0	0	16	2		0	0	0	0	0	0	1	17	0		0	3	0	6	
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	6.5%	7.1%	<b>6.5%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	2.4%	5.3%	0.0%	<b>5.0%</b>	0.0%	7.5%	0.0%	5.6%	<b>6.1%</b>

**HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)**



Intersection:		1. S Walter Reed Drive & 7th Street S																			
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					7th Street S					S Walter Reed Drive					7th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM	to 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
07:00 AM	to 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	to 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
07:30 AM	to 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
07:45 AM	to 08:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
08:00 AM	to 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0
08:15 AM	to 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
08:30 AM	to 08:45 AM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
08:45 AM	to 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
09:00 AM	to 09:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
09:15 AM	to 09:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		2					0					6					3				
07:30 AM to 08:30 AM		0	0	2	0		0	0	0	0	0	0	0	6	0		0	2	0	1	
<b>INT. PEAK HR (BIKES)</b>		3					0					6					3				
07:45 AM to 08:45 AM		0	0	2	1		0	0	0	0	0	0	1	5	0		0	2	0	1	

**PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)**



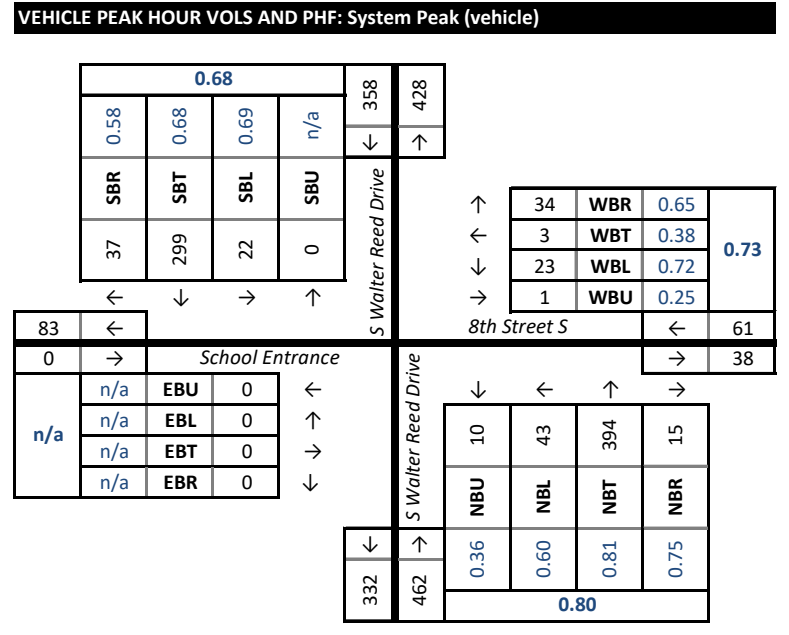
**DATA COLLECTION NOTES:**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

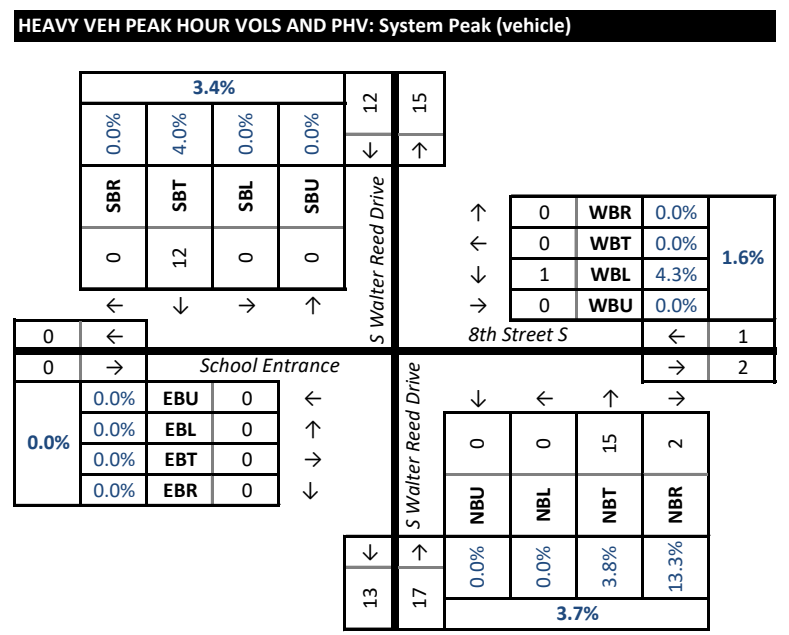
Project Name : Arlington Career Center Transportatio Analysis Period: STUDY\_PERIOD 06:30 AM to 09:30 AM  
 Project # : 2379-006 Date of Counts: Thursday, November 18, 2021  
 Location Arlington, VA Weather: Partly Cloudy  
 Data Source: Gorove/Slade Associates, Inc.

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

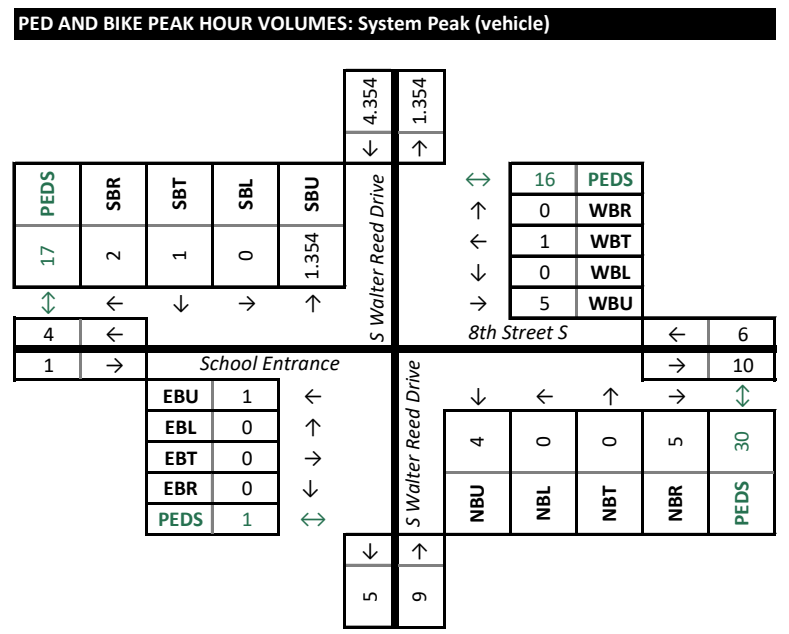
Intersection:		1. S Walter Reed Drive & 8th Street S/School Entrance																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					8th Street S					S Walter Reed Drive					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	2	21	0	0	0	2	0	2	4	0	0	49	4	1	0	0	0	0	0
06:45 AM to 07:00 AM		0	3	19	1	0	0	3	0	3	4	1	2	69	3	0	0	0	0	0	2
07:00 AM to 07:15 AM		0	0	37	3	0	0	2	0	5	3	0	9	60	2	0	0	0	0	1	6
07:15 AM to 07:30 AM		0	6	47	7	1	0	3	0	10	2	3	7	80	4	0	0	0	1	0	5
07:30 AM to 07:45 AM		0	7	71	16	8	0	8	0	13	13	2	18	107	5	1	0	0	0	0	3
07:45 AM to 08:00 AM		0	8	110	13	3	1	3	1	4	4	7	11	122	4	0	0	0	0	0	5
08:00 AM to 08:15 AM		0	2	57	1	4	0	8	0	11	9	1	6	84	5	0	0	0	0	0	6
08:15 AM to 08:30 AM		0	5	61	7	1	0	4	2	6	4	0	8	81	1	0	0	0	0	0	3
08:30 AM to 08:45 AM		1	5	76	5	2	0	3	1	8	2	2	7	86	5	1	0	0	0	0	1
08:45 AM to 09:00 AM		0	11	93	9	7	3	5	0	11	4	0	8	82	3	1	0	0	0	1	7
09:00 AM to 09:15 AM		0	8	70	4	1	0	4	0	8	2	1	1	76	6	0	0	0	0	0	1
09:15 AM to 09:30 AM		1	2	51	2	1	0	3	0	5	3	0	0	84	8	0	0	0	0	0	2
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		358					61					462					0				
07:30 AM to 08:30 AM		0	22	299	37	16	1	23	3	34	30	10	43	394	15	1	0	0	0	0	17
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>	<b>0.78</b>	n/a	0.69	0.68	0.58	<b>0.68</b>	0.25	0.72	0.38	0.65	<b>0.73</b>	0.36	0.60	0.81	0.75	<b>0.80</b>	n/a	n/a	n/a	n/a	n/a



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Walter Reed Drive				8th Street S				S Walter Reed Drive				School Entrance							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	3	0	0	0	0	1	0	0	8	1	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	4	0	0	0	0	1	0	0	3	2	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	2	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	4	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	2	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	1	2	1	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	2	6	0	0	0	1	0	2	6	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	6	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		12				1				17				0							
07:30 AM to 08:30 AM		0	0	12	0	3.4%	0	1	0	0	1.6%	0	0	15	2	3.7%	0	0	0	0	0.0%
<b>Heavy Vehicle % (PHV):</b>		0.0%	0.0%	4.0%	0.0%	<b>3.4%</b>	0.0%	4.3%	0.0%	0.0%	<b>1.6%</b>	0.0%	0.0%	3.8%	13.3%	<b>3.7%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
<b>INT. PEAK HR (HV ONLY)</b>		22				1				22				0							
08:15 AM to 09:15 AM		0	1	12	9	6.2%	0	0	0	1	1.8%	0	3	18	1	6.0%	0	0	0	0	0.0%
<b>Heavy Vehicle % (PHV):</b>		0.0%	3.4%	4.0%	36.0%	<b>6.2%</b>	0.0%	0.0%	0.0%	3.0%	<b>1.8%</b>	0.0%	12.5%	5.5%	6.7%	<b>6.0%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	S Walter Reed Drive				8th Street S				S Walter Reed Drive				School Entrance						
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right			
06:30 AM to 06:45 AM		0.281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0.292	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0.302	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0.313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0.323	0	0	0	2	0	1	0	0	0	0	2	1	0	0	0	0	0	0
07:45 AM to 08:00 AM		0.333	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0.344	0	1	2	1	0	0	0	4	0	0	1	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0.354	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0.365	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0.375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0.385	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0.396	0	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																				
09:45 AM to 10:00 AM																				
10:00 AM to 10:15 AM																				
10:15 AM to 10:30 AM																				
10:30 AM to 10:45 AM																				
10:45 AM to 11:00 AM																				
11:00 AM to 11:15 AM																				
11:15 AM to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		4.354166667				6				9				1						
07:30 AM to 08:30 AM		1.354	0	1	2	5	0	1	0	4	0	0	5	1	0	0	0			
<b>INT. PEAK HR (BIKES)</b>		4.354166667				6				9				1						
07:30 AM to 08:30 AM		1.354	0	1	2	5	0	1	0	4	0	0	5	1	0	0	0			



**DATA COLLECTION NOTES:**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

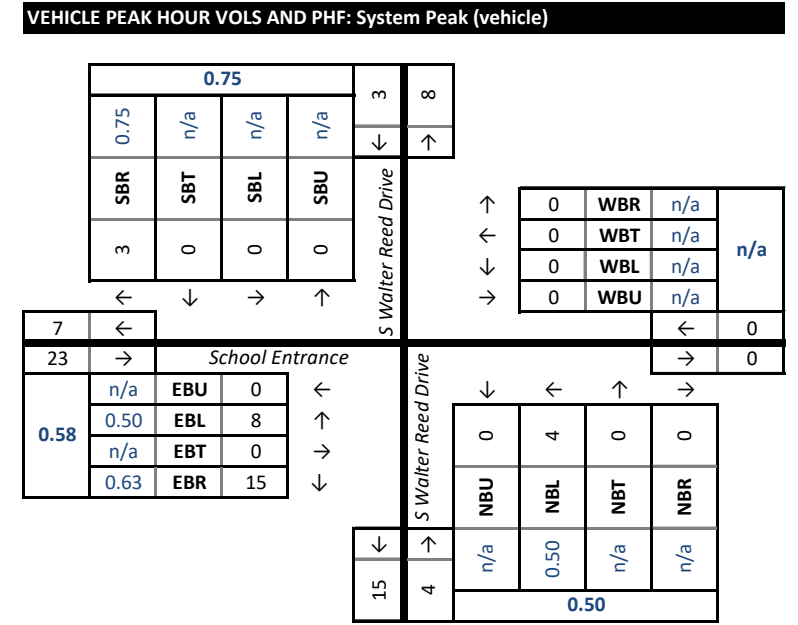
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

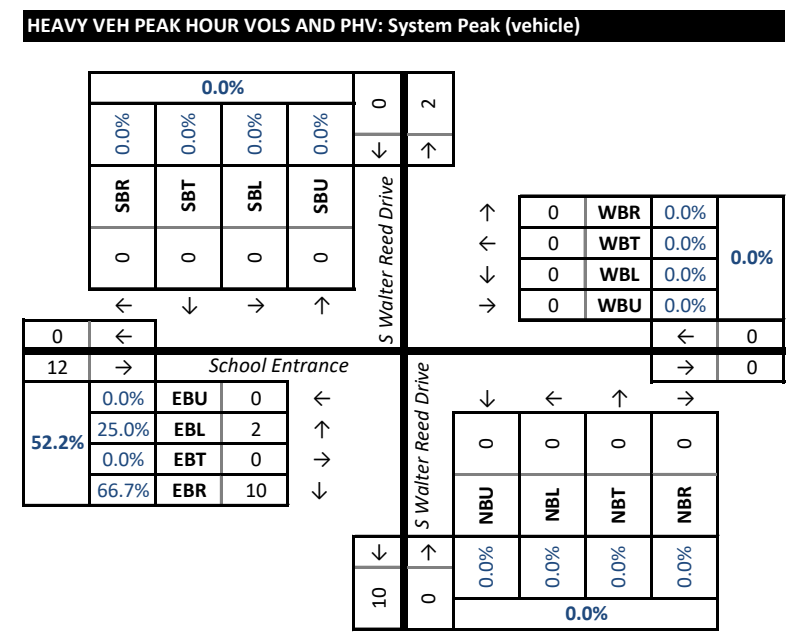
06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 08:15 AM to 09:15 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

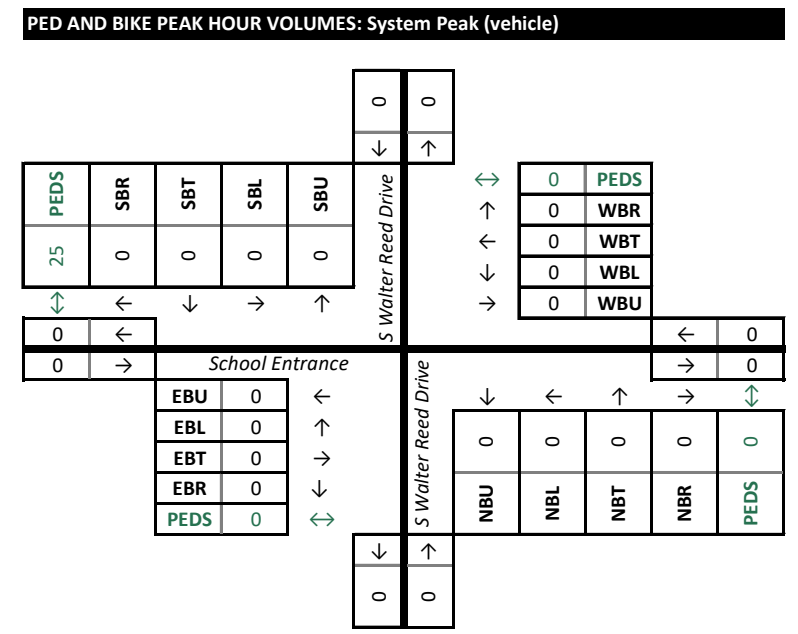
Intersection:		1. S Walter Reed Drive & /School Entrance																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					S Walter Reed Drive					School Entrance					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
07:15 AM to 07:30 AM		0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	2
07:30 AM to 07:45 AM		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	5
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	6	7
08:00 AM to 08:15 AM		0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	8
08:15 AM to 08:30 AM		0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	3	0	4	5
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	4
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	12	3
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	4	3
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		3					0					4					23				
07:30 AM to 08:30 AM		0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	8	0	15	25
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>	<b>0.68</b>	n/a	n/a	n/a	0.75	0.75	n/a	n/a	n/a	n/a	n/a	n/a	0.50	n/a	n/a	0.50	n/a	0.50	n/a	0.63	0.58



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					S Walter Reed Drive					School Entrance					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		0					0					0					12				
07:30 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	10	12
<b>Heavy Vehicle % (PHV):</b>		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	66.7%	52.2%
<b>INT. PEAK HR (HV ONLY)</b>		0					0					0					12				
07:30 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	10	12
<b>Heavy Vehicle % (PHV):</b>		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	66.7%	52.2%



BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound					
	Roadway:	S Walter Reed Drive					S Walter Reed Drive					School Entrance					School Entrance					
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																						
09:45 AM to 10:00 AM																						
10:00 AM to 10:15 AM																						
10:15 AM to 10:30 AM																						
10:30 AM to 10:45 AM																						
10:45 AM to 11:00 AM																						
11:00 AM to 11:15 AM																						
11:15 AM to 11:30 AM																						
<b>SYSTEM PEAK HR (VEH.)</b>		0					0					0					0					
07:30 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>INT. PEAK HR (BIKES)</b>		0					0					0					0					
06:30 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**DATA COLLECTION NOTES:**





**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

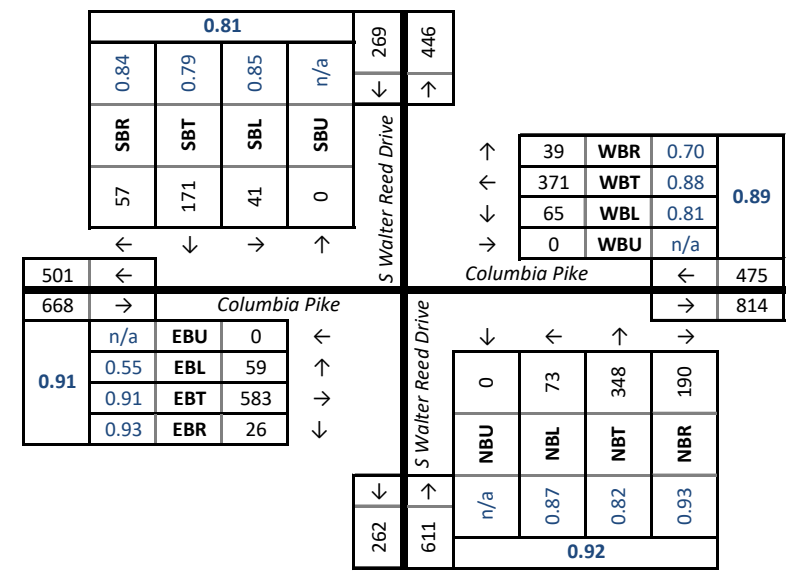
Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

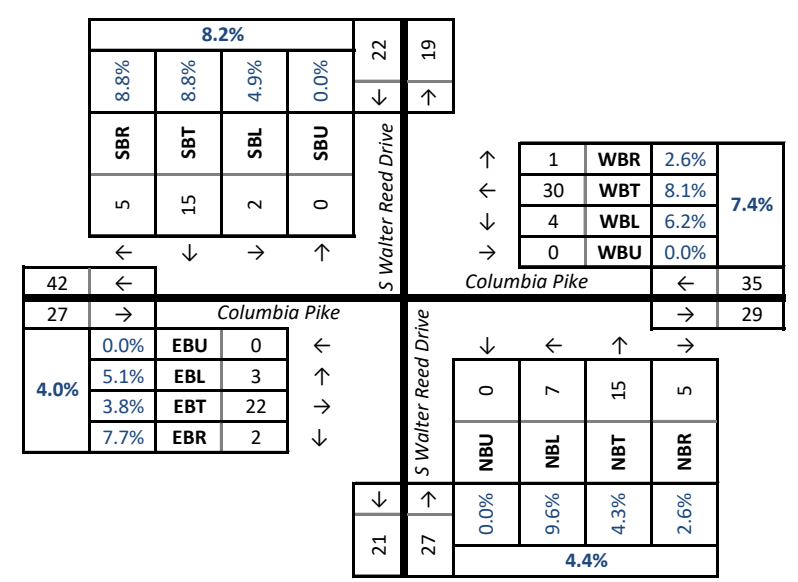
Intersection:		1. S Walter Reed Drive & Columbia Pike																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					Columbia Pike					S Walter Reed Drive					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	2	17	4	0	0	7	43	5	4	0	11	31	17	4	0	11	82	1	3
06:45 AM to 07:00 AM		0	5	14	8	2	0	10	59	3	3	0	18	58	23	2	0	11	107	3	0
07:00 AM to 07:15 AM		0	5	27	7	2	0	5	63	6	3	0	14	51	26	4	0	16	110	8	4
07:15 AM to 07:30 AM		0	5	20	13	6	0	13	85	6	5	0	19	68	42	2	0	17	121	4	4
07:30 AM to 07:45 AM		0	11	34	15	8	0	13	91	14	6	0	18	95	51	8	0	11	145	7	4
07:45 AM to 08:00 AM		0	12	54	17	11	0	19	106	8	16	0	16	106	44	1	0	27	150	7	5
08:00 AM to 08:15 AM		0	6	46	15	11	0	20	80	8	8	0	21	71	48	8	0	13	128	7	4
08:15 AM to 08:30 AM		0	12	37	10	11	0	13	94	9	4	0	18	76	47	3	0	8	160	5	1
08:30 AM to 08:45 AM		0	15	47	13	10	0	19	88	22	4	0	19	70	44	4	0	18	168	6	6
08:45 AM to 09:00 AM		0	20	58	17	12	0	21	91	14	11	0	21	74	39	2	0	13	116	9	5
09:00 AM to 09:15 AM		0	14	47	12	10	0	15	83	10	7	0	14	61	41	6	0	10	103	7	5
09:15 AM to 09:30 AM		0	6	39	9	4	0	20	61	7	8	0	17	60	34	6	0	13	97	13	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		269					475					611					668				
07:30 AM to 08:30 AM		0	41	171	57	41	0	65	371	39	34	0	73	348	190	20	0	59	583	26	14
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.85	0.79	0.84	<b>0.81</b>	n/a	0.81	0.88	0.70	<b>0.89</b>	n/a	0.87	0.82	0.93	<b>0.92</b>	n/a	0.55	0.91	0.93	<b>0.91</b>

**VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)**



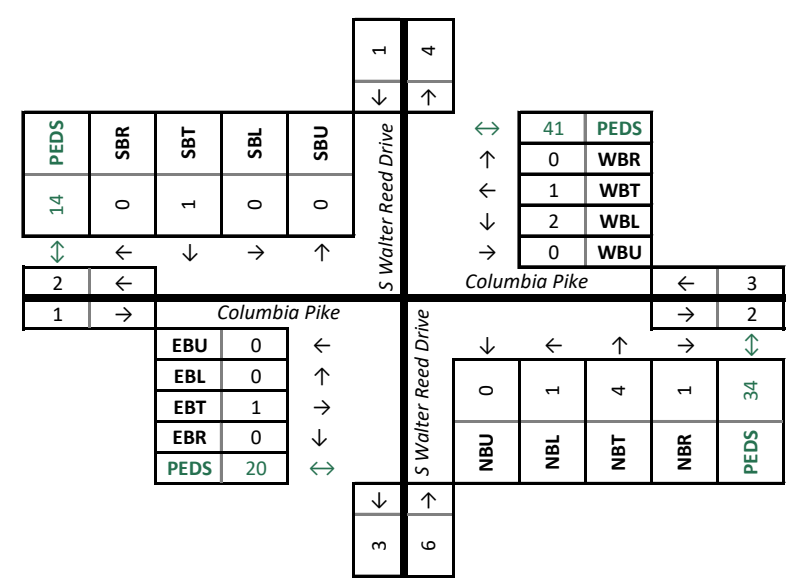
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Walter Reed Drive				Columbia Pike				S Walter Reed Drive				Columbia Pike							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	2	0	0	2	5	1	0	0	0	7	2	0	0	0	2	0		
06:45 AM to 07:00 AM		0	0	1	0	0	2	4	0	0	1	6	0	0	0	5	0	0	0		
07:00 AM to 07:15 AM		0	1	3	0	0	1	8	2	0	0	9	3	0	1	7	0	0	0		
07:15 AM to 07:30 AM		0	0	1	1	0	1	5	0	0	0	6	0	0	1	4	0	0	0		
07:30 AM to 07:45 AM		0	1	3	2	0	1	6	0	0	3	1	2	0	0	6	1	0	0		
07:45 AM to 08:00 AM		0	0	6	1	0	2	9	1	0	1	6	0	0	1	9	0	0	0		
08:00 AM to 08:15 AM		0	0	3	0	0	0	6	0	0	1	2	1	0	1	4	0	0	0		
08:15 AM to 08:30 AM		0	1	3	2	0	1	9	0	0	2	6	2	0	1	3	1	0	0		
08:30 AM to 08:45 AM		0	1	2	0	0	1	4	2	0	0	4	1	0	0	6	0	0	0		
08:45 AM to 09:00 AM		0	2	7	0	0	1	6	0	0	0	2	0	0	3	4	1	0	0		
09:00 AM to 09:15 AM		0	0	6	0	0	1	9	1	0	0	6	1	0	0	3	0	0	0		
09:15 AM to 09:30 AM		0	1	1	0	0	1	4	0	0	0	2	2	0	0	6	2	0	0		
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		22				35				27				27							
07:30 AM to 08:30 AM		0	2	15	5	0	4	30	1	0	7	15	5	0	3	22	2				
<b>Heavy Vehicle % (PHV):</b>		0.0%	4.9%	8.8%	8.8%	<b>8.2%</b>	0.0%	6.2%	8.1%	2.6%	<b>7.4%</b>	0.0%	9.6%	4.3%	2.6%	<b>4.4%</b>	0.0%	5.1%	3.8%	7.7%	<b>4.0%</b>
<b>INT. PEAK HR (HV ONLY)</b>		19				36				31				30							
07:00 AM to 08:00 AM		0	2	13	4	0	5	28	3	0	4	22	5	0	3	26	1				
<b>Heavy Vehicle % (PHV):</b>		0.0%	6.1%	9.6%	7.7%	<b>8.6%</b>	0.0%	10.0%	8.1%	8.8%	<b>8.4%</b>	0.0%	6.0%	6.9%	3.1%	<b>5.6%</b>	0.0%	4.2%	4.9%	3.8%	<b>4.8%</b>

**HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)**



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	S Walter Reed Drive				Columbia Pike				S Walter Reed Drive				Columbia Pike						
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right			
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	
07:30 AM to 07:45 AM		0	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																				
09:45 AM to 10:00 AM																				
10:00 AM to 10:15 AM																				
10:15 AM to 10:30 AM																				
10:30 AM to 10:45 AM																				
10:45 AM to 11:00 AM																				
11:00 AM to 11:15 AM																				
11:15 AM to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		1				3				6				1						
07:30 AM to 08:30 AM		0	0	1	0	0	2	1	0	0	1	4	1	0	0	1	0			
<b>INT. PEAK HR (BIKES)</b>		1				2				7				2						
07:00 AM to 08:00 AM		0	0	1	0	0	1	1	0	0	1	5	1	0	0	2	0			

**PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)**



**DATA COLLECTION NOTES:**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

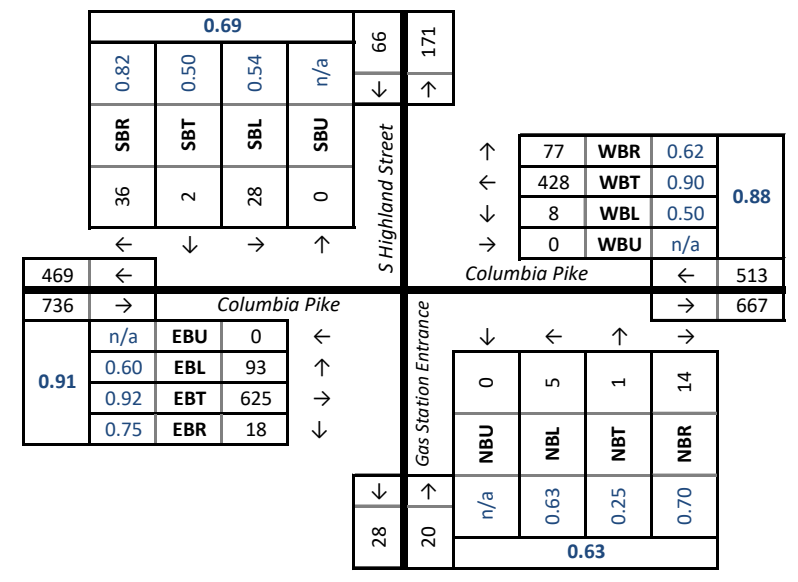
Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

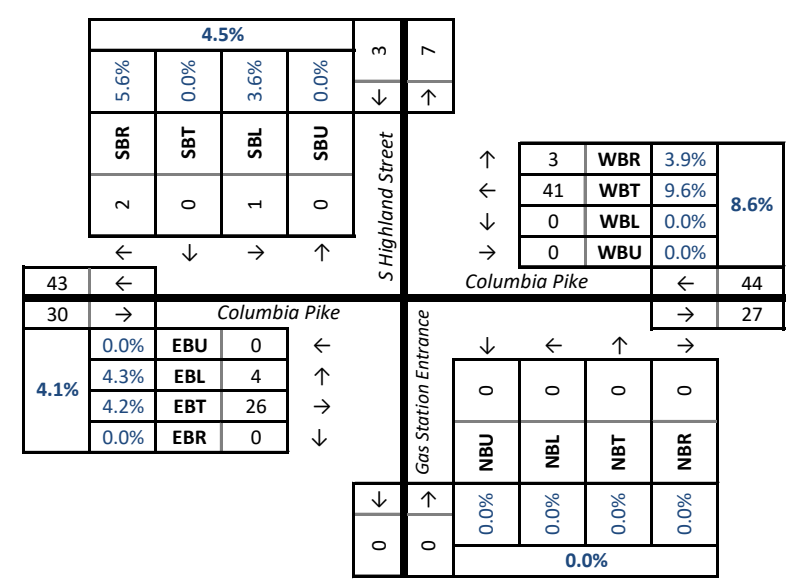
Intersection:		1. S Highland Street/Gas Station Entrance & Columbia Pike																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					Columbia Pike					Gas Station Entrance					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	1	0	6	3	0	4	46	6	0	0	0	0	3	4	0	3	90	3	0
06:45 AM to 07:00 AM		0	1	1	5	0	0	0	62	10	4	0	1	0	3	1	0	3	114	4	0
07:00 AM to 07:15 AM		0	3	2	7	1	0	5	71	11	5	0	0	0	3	3	0	6	115	6	2
07:15 AM to 07:30 AM		0	5	1	9	3	0	6	101	19	2	0	0	0	4	6	0	12	132	3	2
07:30 AM to 07:45 AM		0	7	1	11	5	0	1	97	21	6	0	1	0	1	4	0	21	147	6	3
07:45 AM to 08:00 AM		0	13	1	10	5	0	2	113	31	5	0	2	1	5	9	0	39	161	3	5
08:00 AM to 08:15 AM		0	6	0	9	3	0	1	99	8	5	0	1	0	5	3	0	20	148	3	0
08:15 AM to 08:30 AM		0	2	0	6	4	0	4	119	17	2	0	1	0	3	1	0	13	169	6	1
08:30 AM to 08:45 AM		0	7	0	3	2	0	0	98	22	6	0	0	3	3	2	0	22	169	6	0
08:45 AM to 09:00 AM		0	4	0	5	5	0	0	112	34	7	0	2	0	1	4	0	18	137	2	0
09:00 AM to 09:15 AM		0	2	1	6	10	0	0	101	11	4	0	0	0	2	2	1	3	127	3	2
09:15 AM to 09:30 AM		0	3	0	3	5	0	0	70	10	4	0	1	0	2	4	0	6	126	2	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		66					513					20					736				
07:30 AM to 08:30 AM		0	28	2	36	17	0	8	428	77	18	0	5	1	14	17	0	93	625	18	9
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>	<b>0.88</b>	n/a	0.54	0.50	0.82	<b>0.69</b>	n/a	0.50	0.90	0.62	<b>0.88</b>	n/a	0.63	0.25	0.70	<b>0.63</b>	n/a	0.60	0.92	0.75	<b>0.91</b>

**VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)**



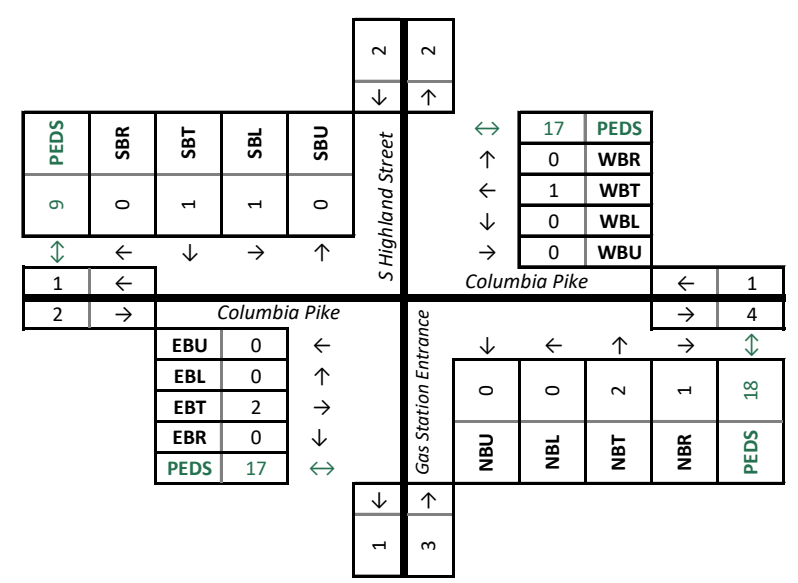
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				Columbia Pike				Gas Station Entrance				Columbia Pike							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	3	0		
06:45 AM to 07:00 AM		0	0	0	2	0	0	5	1	0	0	0	0	0	0	0	0	5	0		
07:00 AM to 07:15 AM		0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	8	0		
07:15 AM to 07:30 AM		0	0	0	2	0	0	5	1	0	0	0	0	0	0	0	0	6	0		
07:30 AM to 07:45 AM		0	1	0	1	0	0	10	1	0	0	0	0	0	0	0	2	7	0		
07:45 AM to 08:00 AM		0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	2	8	0		
08:00 AM to 08:15 AM		0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	7	0		
08:15 AM to 08:30 AM		0	0	0	1	0	0	12	1	0	0	0	0	0	0	0	0	4	0		
08:30 AM to 08:45 AM		0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	0		
08:45 AM to 09:00 AM		0	1	0	1	0	0	6	1	0	0	0	0	0	0	0	1	9	0		
09:00 AM to 09:15 AM		0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	1	5	0		
09:15 AM to 09:30 AM		0	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	9	0		
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		3				44				0				30							
07:30 AM to 08:30 AM		0	1	0	2	0	0	41	3	0	0	0	0	0	4	26	0				
<b>Heavy Vehicle % (PHV)</b>		0.0%	3.6%	0.0%	5.6%	<b>4.5%</b>	0.0%	0.0%	9.6%	3.9%	<b>8.6%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	4.3%	4.2%	0.0%	<b>4.1%</b>
<b>INT. PEAK HR (HV ONLY)</b>		3				44				0				30							
07:30 AM to 08:30 AM		0	1	0	2	0	0	41	3	0	0	0	0	0	4	26	0				
<b>Heavy Vehicle % (PHV)</b>		0.0%	3.6%	0.0%	5.6%	<b>4.5%</b>	0.0%	0.0%	9.6%	3.9%	<b>8.6%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	4.3%	4.2%	0.0%	<b>4.1%</b>

**HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)**



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				Columbia Pike				Gas Station Entrance				Columbia Pike							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15 AM to 07:30 AM		0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0		
07:30 AM to 07:45 AM		0	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0		
07:45 AM to 08:00 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:30 AM to 08:45 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:45 AM to 09:00 AM		0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0		
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
09:15 AM to 09:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0		
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		2				1				3				2							
07:30 AM to 08:30 AM		0	1	1	0	0	0	1	0	0	0	2	1	0	0	2	0				
<b>INT. PEAK HR (BIKES)</b>		3				1				4				3							
07:15 AM to 08:15 AM		0	2	1	0	0	0	1	0	0	0	3	1	0	0	3	0				

**PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)**



**DATA COLLECTION NOTES:**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

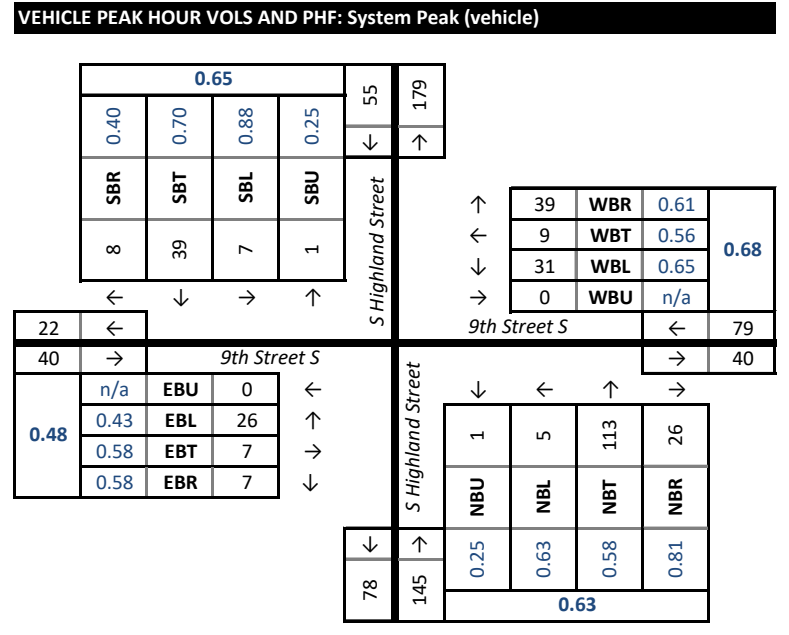
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

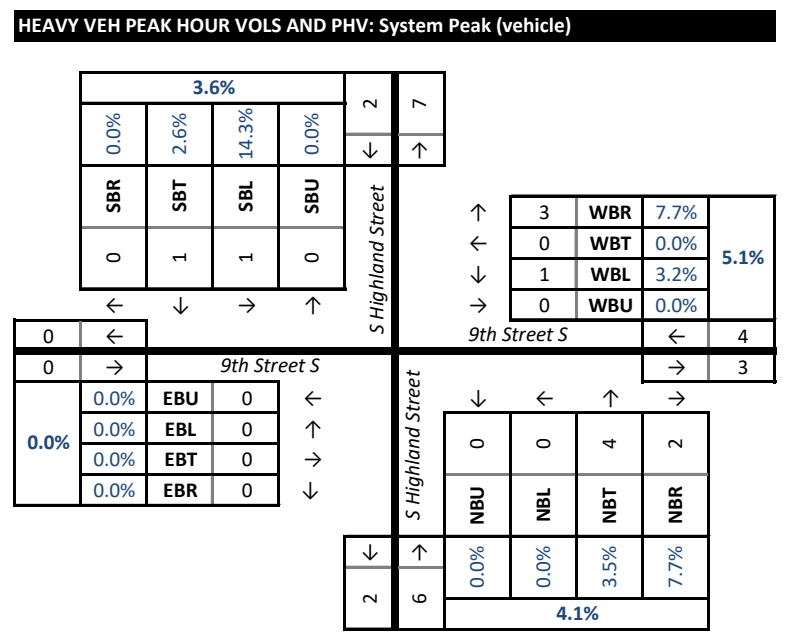
06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:15 AM to 08:15 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

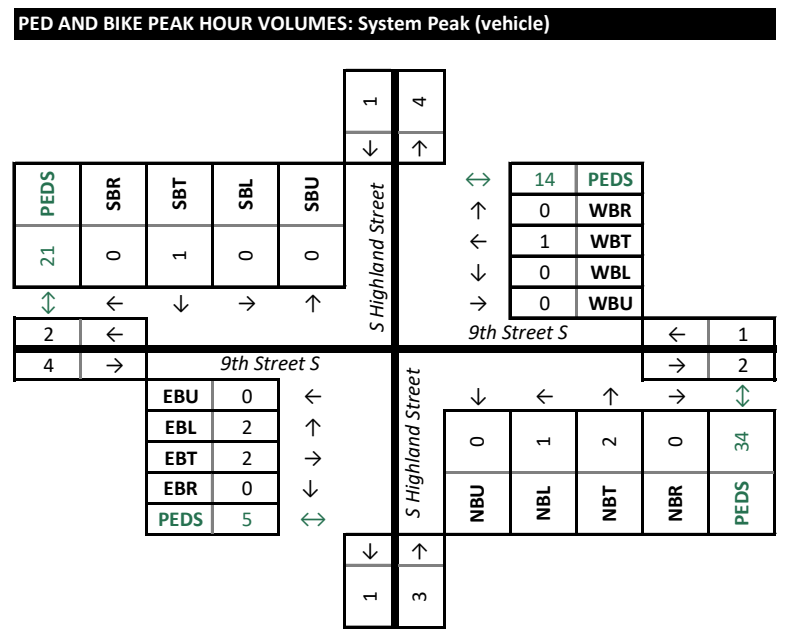
Intersection:		1. S Highland Street & 9th Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					9th Street S					S Highland Street					9th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	1	2	0	0	0	3	2	0	0	1	1	2	4	1	0	0	4	0	0
06:45 AM to 07:00 AM		0	2	3	0	0	1	9	1	1	1	0	0	9	0	0	0	0	1	0	1
07:00 AM to 07:15 AM		0	6	6	0	3	0	7	0	1	1	0	2	10	0	0	0	1	2	2	1
07:15 AM to 07:30 AM		0	1	7	0	1	1	7	6	7	3	0	3	18	3	1	0	0	1	5	5
07:30 AM to 07:45 AM		0	2	11	3	5	0	12	4	8	19	0	2	29	5	1	0	4	2	1	6
07:45 AM to 08:00 AM		0	2	14	5	4	0	9	4	16	7	0	1	49	8	1	0	15	3	3	7
08:00 AM to 08:15 AM		1	1	9	0	4	0	3	0	6	5	0	1	17	8	0	0	5	1	3	2
08:15 AM to 08:30 AM		0	2	5	0	1	0	7	1	9	3	1	1	18	5	3	0	2	1	0	6
08:30 AM to 08:45 AM		0	3	8	1	0	0	1	6	11	7	0	4	32	3	0	0	6	3	2	0
08:45 AM to 09:00 AM		1	4	5	2	0	0	6	3	27	5	0	1	43	7	1	0	11	7	4	4
09:00 AM to 09:15 AM		0	1	5	0	7	0	0	1	6	6	0	5	4	2	4	0	0	2	6	5
09:15 AM to 09:30 AM		0	3	4	1	1	0	2	2	0	1	0	1	9	3	0	0	2	3	1	1
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		55					79					145					40				
07:30 AM to 08:30 AM		1	7	39	8	14	0	31	9	39	34	1	5	113	26	5	0	26	7	7	21
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		0.25	0.88	0.70	0.40	0.65	n/a	0.65	0.56	0.61	0.68	0.25	0.63	0.58	0.81	0.63	n/a	0.43	0.58	0.58	0.48



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				9th Street S				S Highland Street				9th Street S							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	1	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	2	0	0	0	1	0	0	0	0	0	2	0	0	1	1	1	1	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		2				4				6				0							
07:30 AM to 08:30 AM		0	1	1	0	0	1	0	3	0	0	0	4	2	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV):</b>		0.0%	14.3%	2.6%	0.0%	3.6%	0.0%	3.2%	0.0%	7.7%	5.1%	0.0%	0.0%	3.5%	7.7%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>INT. PEAK HR (HV ONLY)</b>		3				5				6				0							
07:00 AM to 08:00 AM		0	1	2	0	0	0	1	4	0	0	0	5	1	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV):</b>		0.0%	9.1%	5.3%	0.0%	5.3%	0.0%	0.0%	7.1%	12.5%	6.1%	0.0%	0.0%	4.7%	6.3%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				9th Street S				S Highland Street				9th Street S							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	
08:45 AM to 09:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
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10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		1				1				3				4							
07:30 AM to 08:30 AM		0	0	1	0	0	0	1	0	0	1	2	0	0	2	2	0	0	2	0	0
<b>INT. PEAK HR (BIKES)</b>		1				1				4				5							
07:15 AM to 08:15 AM		0	0	1	0	0	0	1	0	0	1	3	0	0	2	2	1	0	2	1	0



**DATA COLLECTION NOTES:**



**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

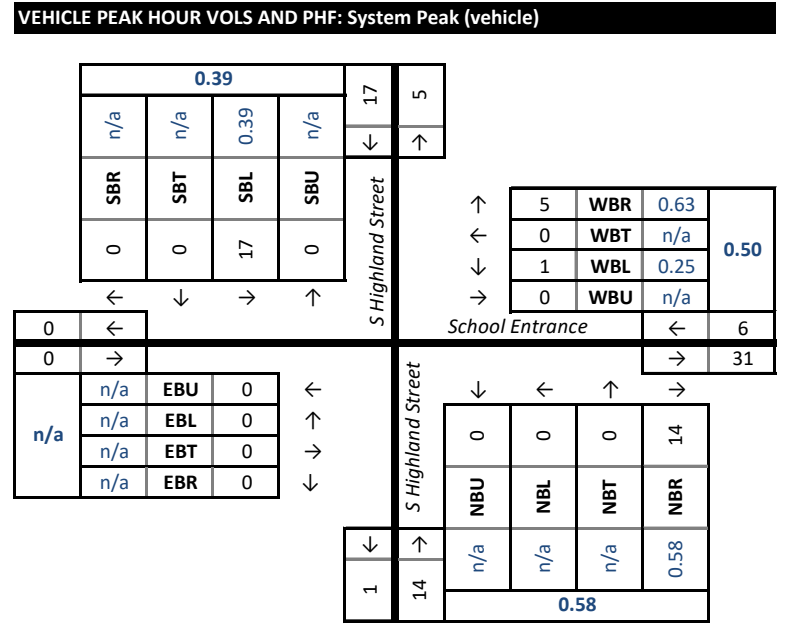
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

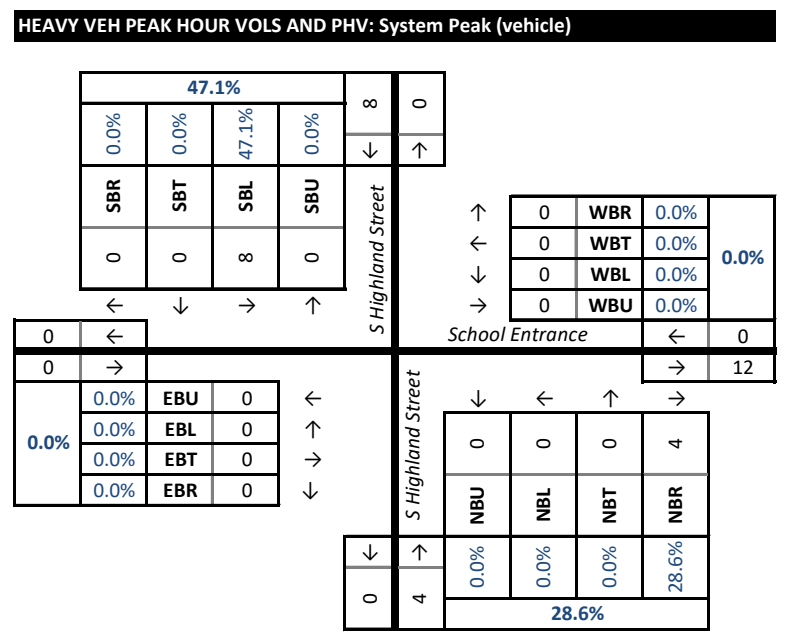
06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 06:45 AM to 07:45 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

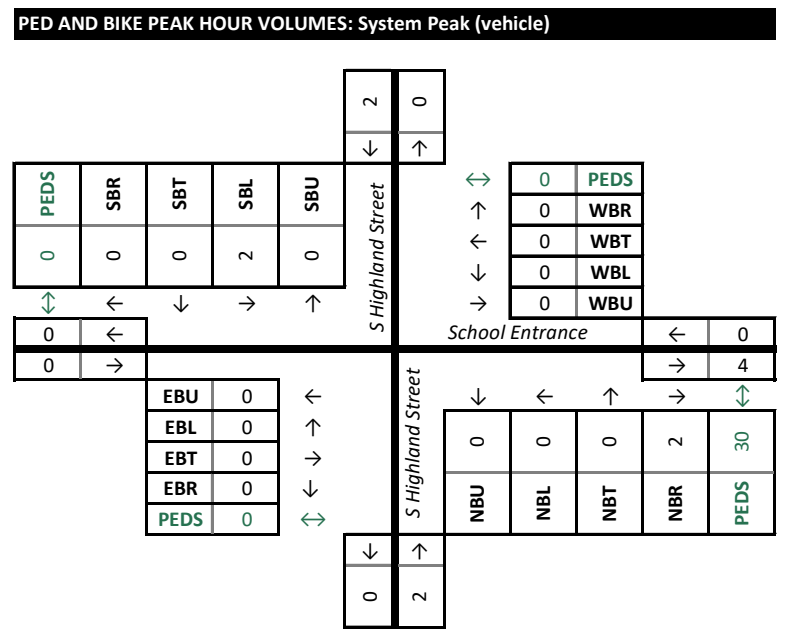
Intersection:		1. S Highland Street & School Entrance/																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					School Entrance					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	2	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	2	0	0	0	0	1	0	0	2	0	0	0	5	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	2	0	0	0	0	0	0	2	4	0	0	0	8	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	11	0	0	0	0	0	0	1	13	0	0	0	6	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	1	0	0	0	0	0	0	2	14	0	0	0	2	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	2	0	0	0	0	0	0	2	2	0	0	0	2	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	3	0	0	0	0	1	0	2	1	0	0	0	4	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	1	0	0	0	0	1	0	2	5	0	0	0	3	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	5	0	0	0	0	0	0	1	10	0	0	0	3	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	4	0	0	0	0	0	0	0	4	0	0	0	2	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		17					6					14					0				
07:30 AM to 08:30 AM		0	17	0	0	0	0	1	0	5	30	0	0	0	14	0	0	0	0	0	0
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>	<b>0.51</b>	n/a	0.39	n/a	n/a	<b>0.39</b>	n/a	0.25	n/a	0.63	<b>0.50</b>	n/a	n/a	n/a	0.58	<b>0.58</b>	n/a	n/a	n/a	n/a	n/a



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				School Entrance				S Highland Street											
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	6	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		8				0				4				0							
07:30 AM to 08:30 AM		0	8	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	47.1%	0.0%	0.0%	<b>47.1%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	0.0%	0.0%	28.6%	<b>28.6%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>
<b>INT. PEAK HR (HV ONLY)</b>		9				0				5				0							
07:00 AM to 08:00 AM		0	9	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	56.3%	0.0%	0.0%	<b>56.3%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	0.0%	0.0%	23.8%	<b>23.8%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				School Entrance				S Highland Street											
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM to 07:30 AM		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM to 07:45 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	
08:00 AM to 08:15 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		2				0				2				0							
07:30 AM to 08:30 AM		0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
<b>INT. PEAK HR (BIKES)</b>		4				0				2				0							
07:15 AM to 08:15 AM		0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0



**DATA COLLECTION NOTES:**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

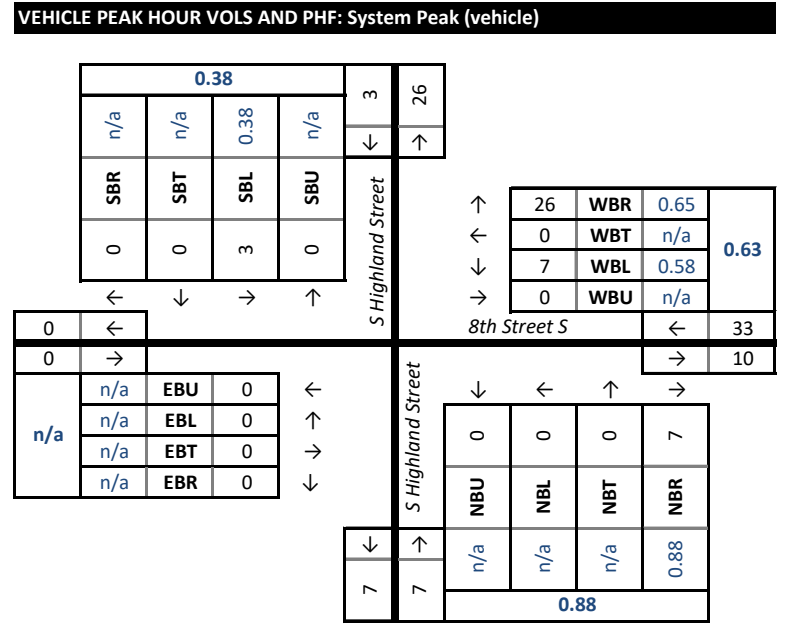
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

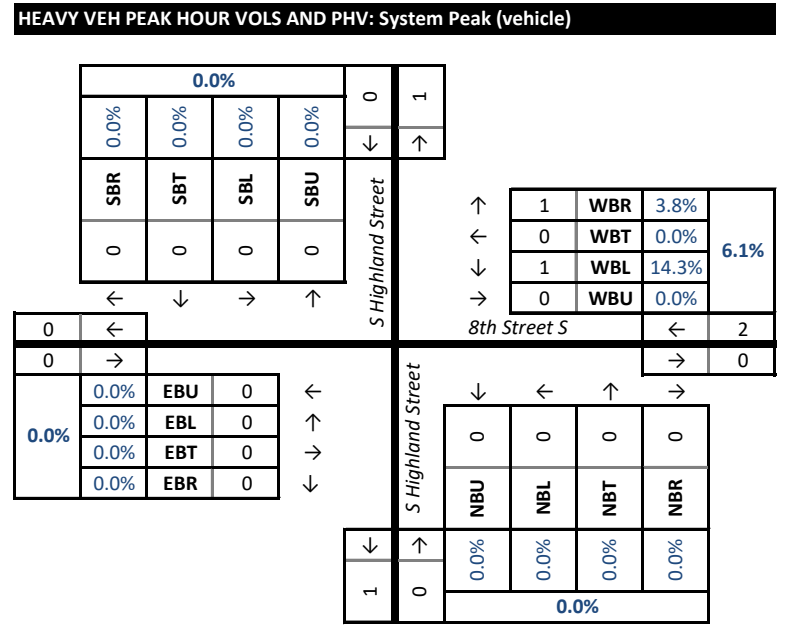
06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

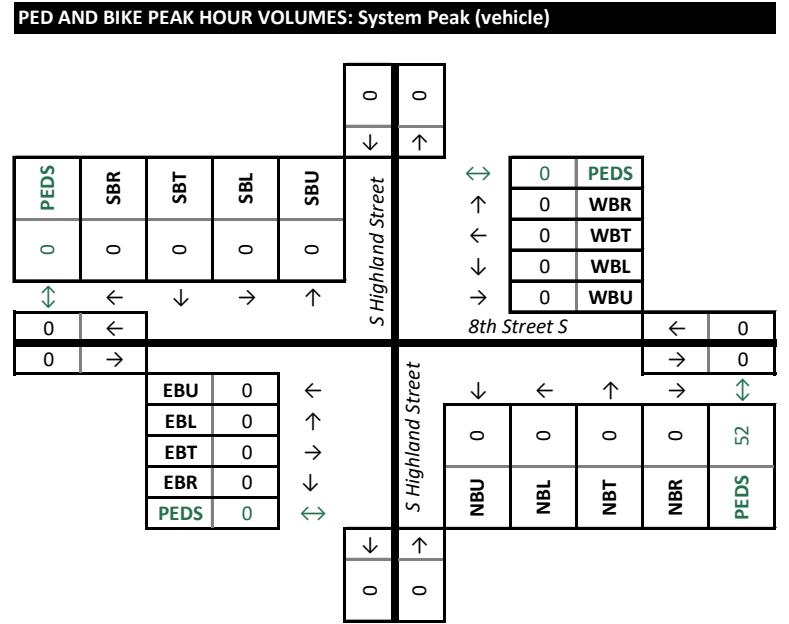
Intersection:		1. S Highland Street & 8th Street S/																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					8th Street S					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	1	0	0	0	0	1	0	2	2	0	0	0	2	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	1	0	8	14	0	0	0	2	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	3	0	10	29	0	0	0	2	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	1	0	0	0	0	1	0	4	8	0	0	0	1	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	2	0	0	0	0	2	0	4	1	0	0	0	2	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	1	0	3	7	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	1	0	0	0	0	3	0	1	18	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	2	0	2	1	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	2	0	3	3	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		3					33					7					0				
07:30 AM to 08:30 AM		0	3	0	0	0	0	7	0	26	52	0	0	0	7	0	0	0	0	0	0
<b>Peak Hour Factor (PHF)</b>	<b>Overall</b>	U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
		n/a	0.38	n/a	n/a	0.38	n/a	0.58	n/a	0.65	0.63	n/a	n/a	n/a	0.88	0.88	n/a	n/a	n/a	n/a	n/a



Direction:		1. S Highland Street & 8th Street S/																			
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					8th Street S					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
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10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		0					2					0					0				
07:30 AM to 08:30 AM		0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	3.8%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>INT. PEAK HR (HV ONLY)</b>		0					2					0					0				
06:45 AM to 07:45 AM		0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	10.0%	15.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



Direction:		1. S Highland Street & 8th Street S/																			
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					8th Street S					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		0					0					0					0				
07:30 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>INT. PEAK HR (BIKES)</b>		0					0					1					0				
08:00 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0



**DATA COLLECTION NOTES:**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

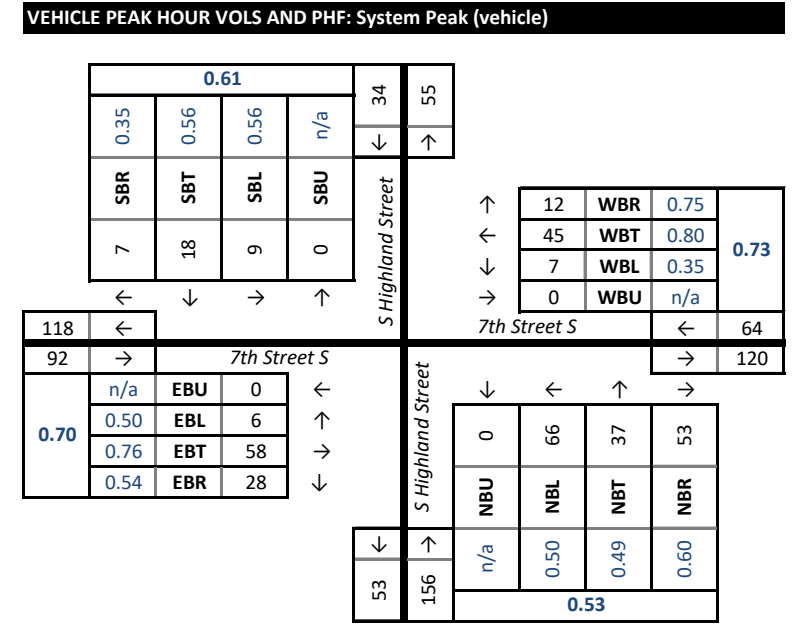
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

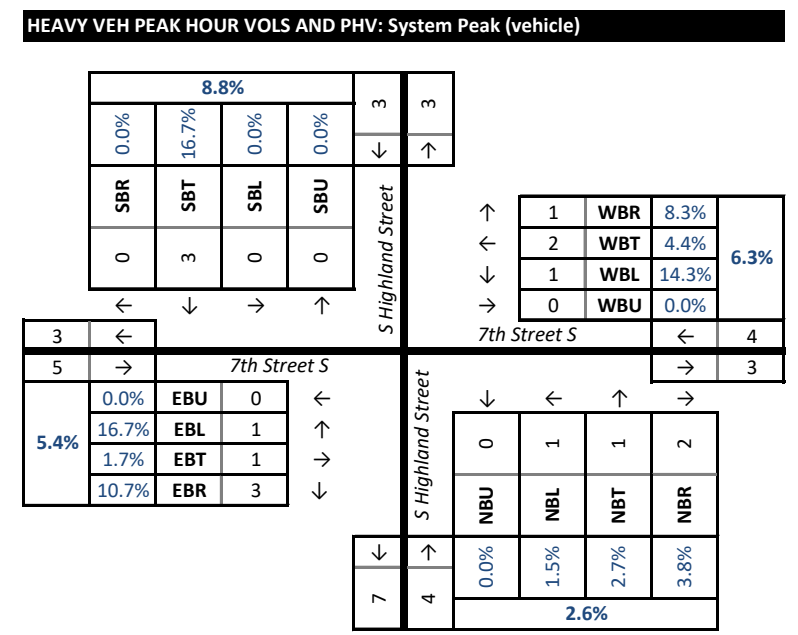
06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

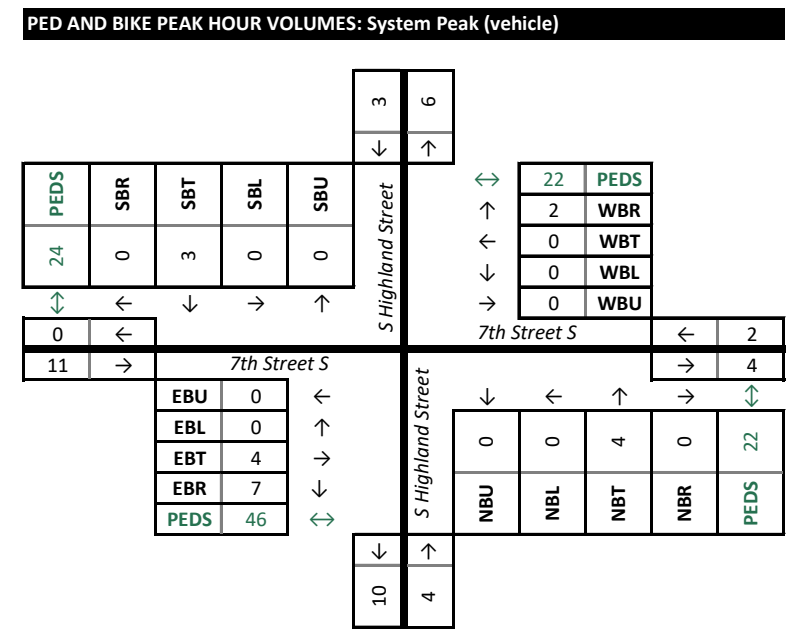
Intersection:		1. S Highland Street & 7th Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					7th Street S					S Highland Street					7th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM	to 06:45 AM	0	0	2	0	1	0	0	4	0	1	0	0	1	0	0	0	0	2	2	0
06:45 AM	to 07:00 AM	0	0	4	1	1	0	2	11	0	1	0	1	1	1	2	0	1	8	4	1
07:00 AM	to 07:15 AM	0	0	2	3	0	0	2	6	0	3	0	0	2	5	0	0	0	5	5	0
07:15 AM	to 07:30 AM	0	0	4	0	3	0	1	9	0	1	0	6	4	1	0	0	1	7	11	1
07:30 AM	to 07:45 AM	0	2	8	2	4	0	5	13	4	3	0	12	10	10	11	0	0	19	9	2
07:45 AM	to 08:00 AM	0	4	5	5	13	0	1	14	4	13	0	33	19	22	18	0	3	17	13	8
08:00 AM	to 08:15 AM	0	1	3	0	4	0	1	6	2	1	0	14	3	11	1	0	2	11	4	1
08:15 AM	to 08:30 AM	0	2	2	0	1	0	0	12	2	5	0	7	5	10	16	0	1	11	2	13
08:30 AM	to 08:45 AM	0	1	3	3	8	0	2	12	4	22	0	18	8	25	5	0	2	10	4	3
08:45 AM	to 09:00 AM	0	0	6	0	17	0	3	13	2	34	0	20	9	42	28	0	4	24	5	9
09:00 AM	to 09:15 AM	0	2	2	1	3	0	1	7	0	2	0	7	4	12	4	1	0	4	2	2
09:15 AM	to 09:30 AM	0	1	1	1	1	0	1	7	2	1	0	2	5	3	2	0	0	8	5	1
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		34					64					156					92				
07:30 AM to 08:30 AM		0	9	18	7	22	0	7	45	12	22	0	66	37	53	46	0	6	58	28	24
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.56	0.56	0.35	0.61	n/a	0.35	0.80	0.75	0.73	n/a	0.50	0.49	0.60	0.53	n/a	0.50	0.76	0.54	0.70



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				7th Street S				S Highland Street				7th Street S							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM	to 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:00 AM	to 07:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0	
07:15 AM	to 07:30 AM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	3	0	
07:30 AM	to 07:45 AM	0	0	2	0	0	1	0	0	0	1	0	1	0	1	0	0	0	2	0	
07:45 AM	to 08:00 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	1	0	1	0	1	0	
08:00 AM	to 08:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	to 08:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	
08:30 AM	to 08:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	
08:45 AM	to 09:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	1	0	0	
09:00 AM	to 09:15 AM	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
09:15 AM	to 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		3				4				4				5							
07:30 AM to 08:30 AM		0	0	3	0	0	1	2	1	0	1	1	2	0	1	1	3	0	1	1	3
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	16.7%	0.0%	8.8%	0.0%	14.3%	4.4%	8.3%	6.3%	0.0%	1.5%	2.7%	3.8%	2.6%	0.0%	16.7%	1.7%	10.7%	5.4%
<b>INT. PEAK HR (HV ONLY)</b>		2				5				5				11							
07:00 AM to 08:00 AM		0	0	2	0	0	2	2	1	0	1	2	2	0	1	3	7	0	1	3	7
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	10.5%	0.0%	5.7%	0.0%	22.2%	4.8%	12.5%	8.5%	0.0%	2.0%	5.7%	5.3%	4.0%	0.0%	25.0%	6.3%	18.4%	12.2%



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Highland Street				7th Street S				S Highland Street				7th Street S							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM	to 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 AM	to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:00 AM	to 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	to 07:30 AM	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	
07:30 AM	to 07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	
07:45 AM	to 08:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	
08:00 AM	to 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	1	0	
08:15 AM	to 08:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	
08:30 AM	to 08:45 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM	to 09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	
09:00 AM	to 09:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	
09:15 AM	to 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
09:30 AM	to 09:45 AM																				
09:45 AM	to 10:00 AM																				
10:00 AM	to 10:15 AM																				
10:15 AM	to 10:30 AM																				
10:30 AM	to 10:45 AM																				
10:45 AM	to 11:00 AM																				
11:00 AM	to 11:15 AM																				
11:15 AM	to 11:30 AM																				
<b>SYSTEM PEAK HR (VEH.)</b>		3				2				4				11							
07:30 AM to 08:30 AM		0	0	3	0	0	0	0	2	0	0	4	0	0	0	4	7	0	0	4	7
<b>INT. PEAK HR (BIKES)</b>		3				2				4				11							
07:30 AM to 08:30 AM		0	0	3	0	0	0	0	2	0	0	4	0	0	0	4	7	0	0	4	7



**DATA COLLECTION NOTES:**





**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

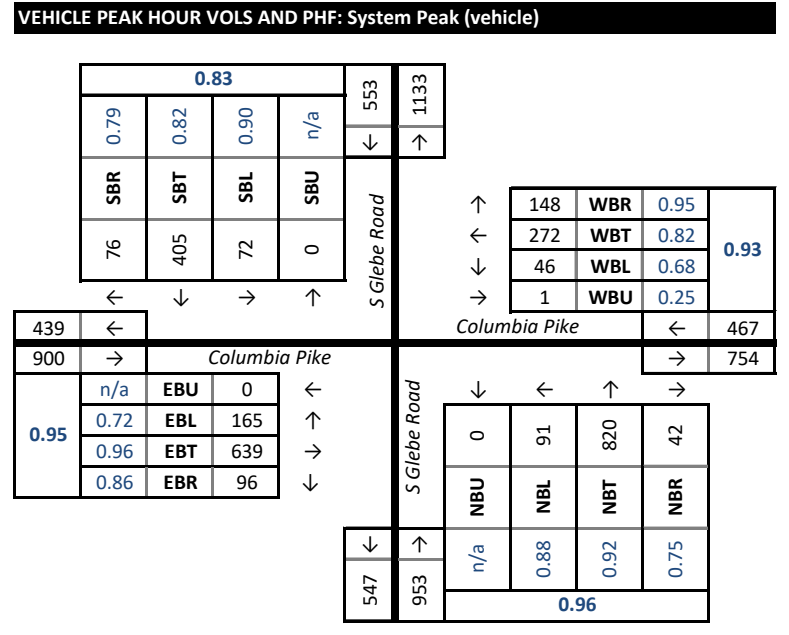
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

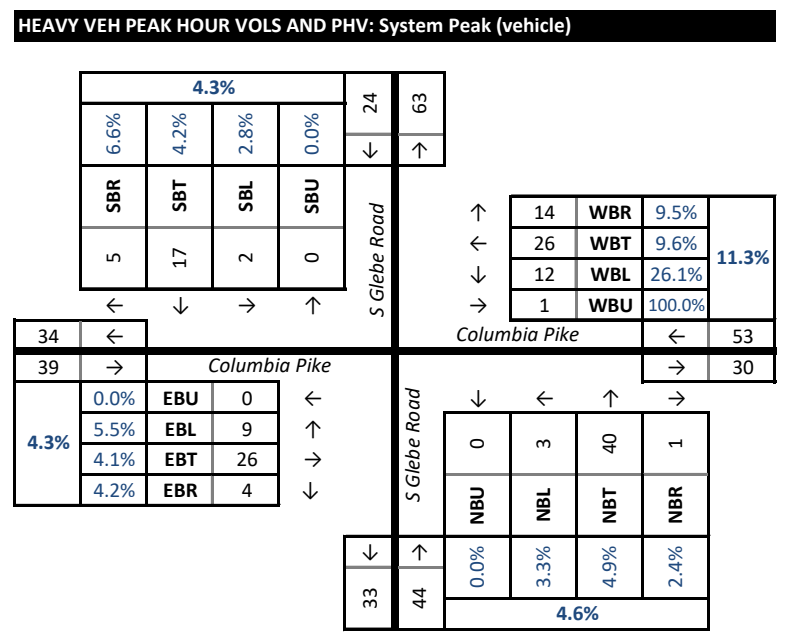
06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

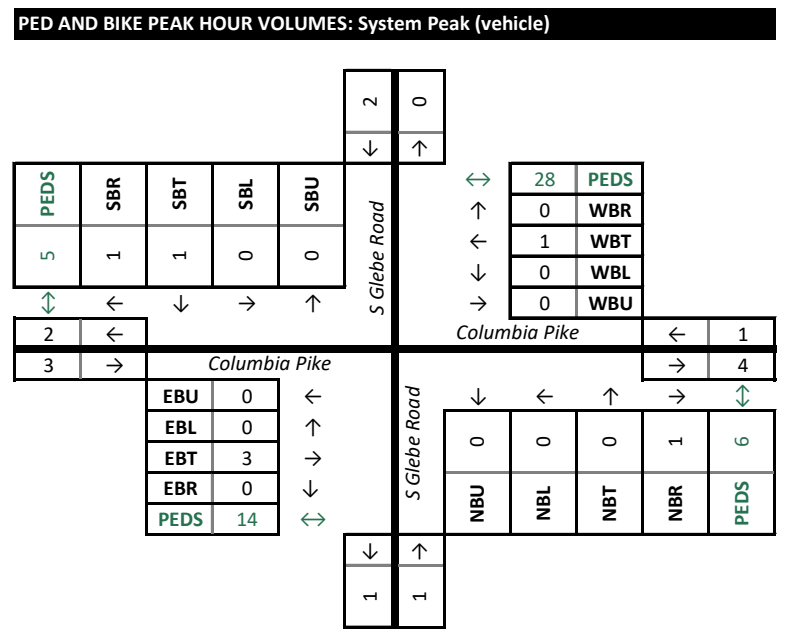
Intersection:		1. S Glebe Road & Columbia Pike																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Glebe Road					Columbia Pike					S Glebe Road					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	8	34	8	4	0	5	31	9	3	0	14	109	3	2	0	17	79	16	1
06:45 AM to 07:00 AM		0	6	41	7	0	0	5	40	11	2	0	24	160	4	2	0	29	114	14	1
07:00 AM to 07:15 AM		0	11	63	15	3	5	15	56	22	1	0	20	144	9	2	0	28	115	21	1
07:15 AM to 07:30 AM		0	20	65	18	7	4	14	59	37	6	0	15	210	3	6	0	29	122	15	0
07:30 AM to 07:45 AM		0	17	104	23	6	1	7	64	37	2	0	18	223	7	6	0	57	157	22	2
07:45 AM to 08:00 AM		0	20	123	24	9	0	14	63	39	0	0	26	208	14	0	0	42	166	23	1
08:00 AM to 08:15 AM		0	15	99	15	1	0	17	62	38	1	0	24	190	9	5	0	42	151	23	2
08:15 AM to 08:30 AM		0	20	79	14	12	0	8	83	34	3	0	23	199	12	3	0	24	165	28	0
08:30 AM to 08:45 AM		0	18	90	15	6	0	7	64	32	3	0	28	217	5	4	0	33	158	26	2
08:45 AM to 09:00 AM		0	19	82	20	4	0	11	75	30	3	0	37	207	6	2	0	39	151	17	0
09:00 AM to 09:15 AM		0	15	101	19	12	1	15	71	21	8	1	32	168	16	3	0	21	92	25	0
09:15 AM to 09:30 AM		0	17	60	12	4	0	5	51	20	0	0	29	176	10	4	0	27	100	10	0
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		553					467					953					900				
07:30 AM to 08:30 AM		0	72	405	76	28	1	46	272	148	6	0	91	820	42	14	0	165	639	96	5
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.90	0.82	0.79	<b>0.83</b>	0.25	0.68	0.82	0.95	<b>0.93</b>	n/a	0.88	0.92	0.75	<b>0.96</b>	n/a	0.72	0.96	0.86	<b>0.95</b>



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Glebe Road				Columbia Pike				S Glebe Road				Columbia Pike							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
06:30 AM to 06:45 AM		0	0	4	2	0	0	6	1	0	1	13	0	0	1	2	0				
06:45 AM to 07:00 AM		0	0	3	1	0	0	5	2	0	0	18	0	0	1	5	0				
07:00 AM to 07:15 AM		0	0	4	0	5	7	6	2	0	1	15	1	0	1	8	0				
07:15 AM to 07:30 AM		0	1	5	2	4	6	2	8	0	0	10	0	0	3	4	0				
07:30 AM to 07:45 AM		0	1	1	1	1	4	7	3	0	1	8	0	0	1	8	2				
07:45 AM to 08:00 AM		0	0	5	1	0	1	7	2	0	0	3	1	0	2	8	0				
08:00 AM to 08:15 AM		0	1	4	1	0	4	4	4	0	0	12	0	0	3	6	0				
08:15 AM to 08:30 AM		0	0	7	2	0	3	8	5	0	2	17	0	0	3	4	2				
08:30 AM to 08:45 AM		0	0	7	1	0	2	4	2	0	1	8	0	0	3	4	1				
08:45 AM to 09:00 AM		0	2	10	1	0	5	6	1	0	1	19	0	0	1	10	0				
09:00 AM to 09:15 AM		0	1	12	1	0	4	6	1	0	0	19	0	0	2	1	0				
09:15 AM to 09:30 AM		0	0	5	1	0	0	3	0	0	0	12	0	0	3	8	0				
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		24				53				44				39							
07:30 AM to 08:30 AM		0	2	17	5	1	12	26	14	0	3	40	1	0	9	26	4				
<b>Heavy Vehicle % (PHV):</b>		0.0%	2.8%	4.2%	6.6%	<b>4.3%</b>	100.0%	26.1%	9.6%	9.5%	<b>11.3%</b>	0.0%	3.3%	4.9%	2.4%	<b>4.6%</b>	0.0%	5.5%	4.1%	4.2%	<b>4.3%</b>
<b>INT. PEAK HR (HV ONLY)</b>		44				47				67				31							
08:15 AM to 09:15 AM		0	3	36	5	0	14	24	9	0	4	63	0	0	9	19	3				
<b>Heavy Vehicle % (PHV):</b>		0.0%	4.2%	10.2%	7.4%	<b>8.9%</b>	0.0%	34.1%	8.2%	7.7%	<b>10.4%</b>	0.0%	3.3%	8.0%	0.0%	<b>7.0%</b>	0.0%	7.7%	3.4%	3.1%	<b>4.0%</b>



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	S Glebe Road				Columbia Pike				S Glebe Road				Columbia Pike			
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:45 AM to 07:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:30 AM to 07:45 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
07:45 AM to 08:00 AM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
08:00 AM to 08:15 AM		0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
08:15 AM to 08:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
08:30 AM to 08:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM		0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
09:30 AM to 09:45 AM																	
09:45 AM to 10:00 AM																	
10:00 AM to 10:15 AM																	
10:15 AM to 10:30 AM																	
10:30 AM to 10:45 AM																	
10:45 AM to 11:00 AM																	
11:00 AM to 11:15 AM																	
11:15 AM to 11:30 AM																	
<b>SYSTEM PEAK HR (VEH.)</b>		2				1				1				3			
07:30 AM to 08:30 AM		0	0	1	1	0	0	1	0	0	0	0	1	0	0	3	0
<b>INT. PEAK HR (BIKES)</b>		2				1				1				3			
07:15 AM to 08:15 AM		0	0	1	1	0	0	1	0	0	0	0	1	0	0	3	0



**DATA COLLECTION NOTES:**

# Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Arlington Career Center Transportati  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

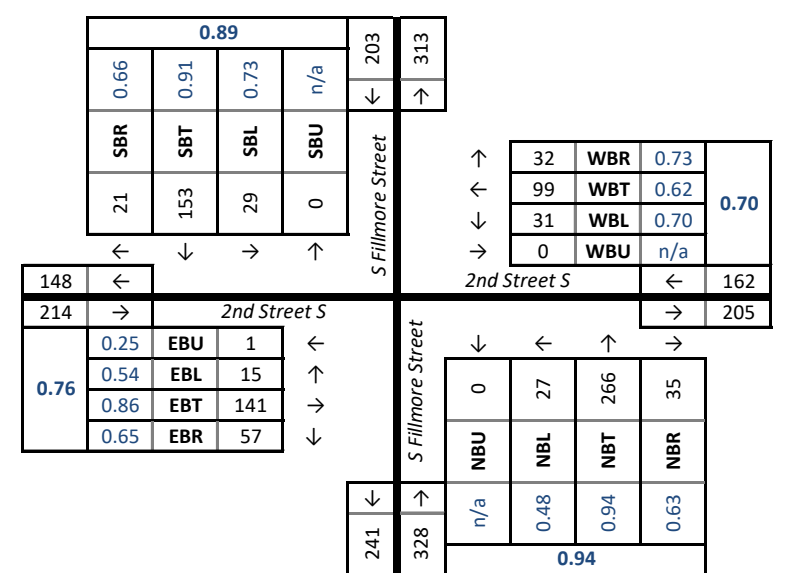
Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

06:30 AM to 09:30 AM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 System Peak Hour (all vehicles): 07:30 AM to 08:30 AM  
 User-Defined Peak Hour: 07:30 AM to 08:30 AM

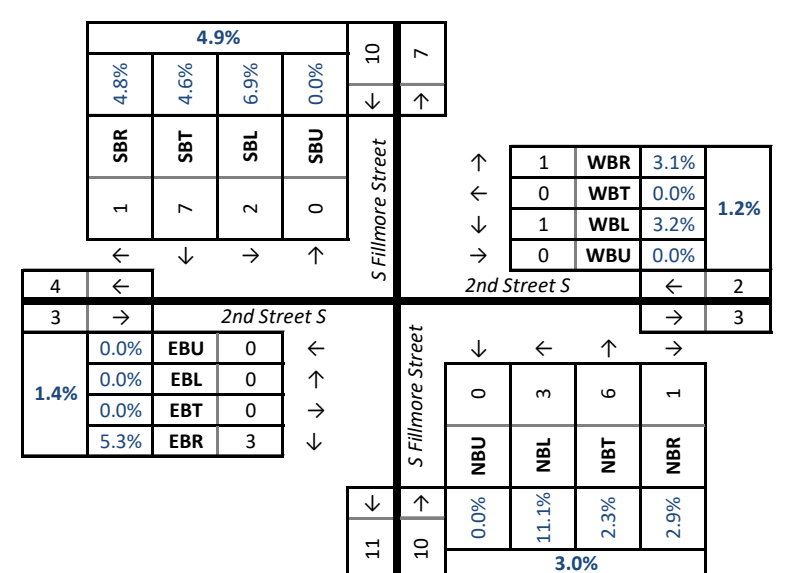
Intersection:		1. S Fillmore Street & 2nd Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Fillmore Street					2nd Street S					S Fillmore Street					2nd Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	5	12	0	1	0	2	10	3	1	0	3	33	6	2	0	0	10	2	0
06:45 AM to 07:00 AM		0	1	11	1	1	0	2	24	2	3	0	2	53	5	1	0	0	9	2	0
07:00 AM to 07:15 AM		0	4	26	3	1	0	6	17	1	2	0	2	47	6	3	0	2	12	6	4
07:15 AM to 07:30 AM		0	5	38	2	5	0	7	34	8	2	0	9	45	4	3	0	0	30	4	2
07:30 AM to 07:45 AM		0	7	42	8	4	0	8	40	10	3	0	14	67	6	2	0	3	35	18	2
07:45 AM to 08:00 AM		0	7	42	5	3	0	11	26	7	0	0	5	66	14	2	0	7	41	22	3
08:00 AM to 08:15 AM		0	10	31	3	2	0	6	16	4	0	0	3	71	10	0	1	2	34	11	0
08:15 AM to 08:30 AM		0	5	38	5	6	0	6	17	11	0	0	5	62	5	5	0	3	31	6	0
08:30 AM to 08:45 AM		0	9	39	5	7	0	6	42	8	3	0	7	63	9	6	0	3	26	6	0
08:45 AM to 09:00 AM		0	12	39	4	7	0	6	25	7	3	0	6	51	6	2	0	3	37	19	2
09:00 AM to 09:15 AM		0	10	30	4	3	0	6	19	7	0	0	4	49	10	6	0	3	29	15	2
09:15 AM to 09:30 AM		0	6	41	3	2	0	6	10	3	1	0	1	66	10	0	0	2	23	4	1
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		203					162					328					214				
07:30 AM to 08:30 AM		0	29	153	21	15	0	31	99	32	3	0	27	266	35	9	1	15	141	57	5
<b>Peak Hour Overall Factor (PHF)</b>		n/a	0.73	0.91	0.66	<b>0.89</b>	n/a	0.70	0.62	0.73	<b>0.70</b>	n/a	0.48	0.94	0.63	<b>0.94</b>	0.25	0.54	0.86	0.65	<b>0.76</b>

## VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)



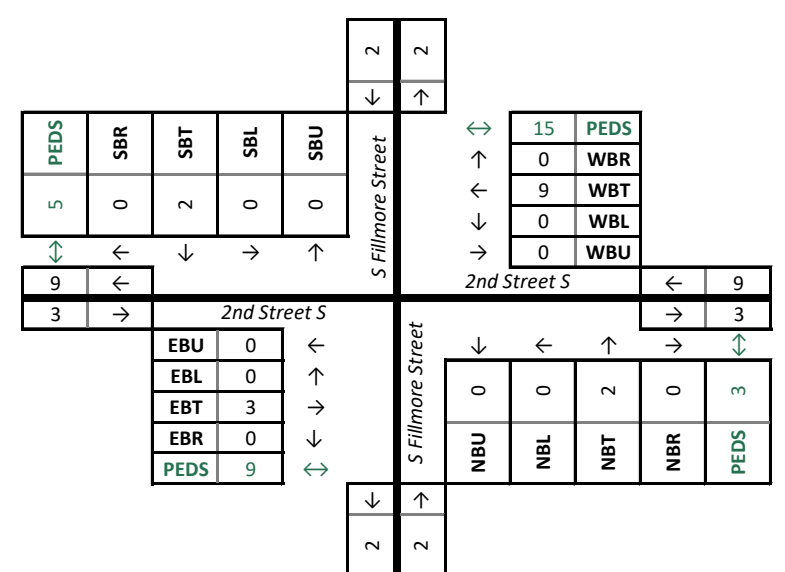
HEAVY VEHICLES (FHWA 4+)		1. S Fillmore Street & 2nd Street S																			
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Fillmore Street					2nd Street S					S Fillmore Street					2nd Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0		0	0	0	0		0	0	4	0		0	0	2	2	
06:45 AM to 07:00 AM		0	0	0	0		0	0	1	0		0	0	2	0		0	0	0	0	
07:00 AM to 07:15 AM		0	0	0	0		0	0	1	0		0	1	5	0		0	0	2	1	
07:15 AM to 07:30 AM		0	0	2	0		0	0	3	1		0	0	2	0		0	0	0	0	
07:30 AM to 07:45 AM		0	1	3	0		0	0	0	0		0	1	1	0		0	0	0	1	
07:45 AM to 08:00 AM		0	1	1	0		0	1	0	1		0	1	0	1		0	0	0	0	
08:00 AM to 08:15 AM		0	0	1	1		0	0	0	0		0	1	1	0		0	0	0	2	
08:15 AM to 08:30 AM		0	0	2	0		0	0	0	0		0	0	4	0		0	0	0	0	
08:30 AM to 08:45 AM		0	1	1	0		0	0	2	0		0	1	1	0		0	2	1	1	
08:45 AM to 09:00 AM		0	0	3	0		0	0	1	0		0	2	3	0		0	0	0	0	
09:00 AM to 09:15 AM		0	0	4	0		0	0	0	0		0	1	0	0		0	0	0	2	
09:15 AM to 09:30 AM		0	0	1	0		0	0	0	0		0	0	0	0		0	0	0	0	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		10					2					10					3				
07:30 AM to 08:30 AM		0	2	7	1		0	1	0	1		0	3	6	1		0	0	0	3	
Heavy Vehicle % (PHV):		0.0%	6.9%	4.6%	4.8%	<b>4.9%</b>	0.0%	3.2%	0.0%	3.1%	<b>1.2%</b>	0.0%	11.1%	2.3%	2.9%	<b>3.0%</b>	0.0%	0.0%	0.0%	5.3%	<b>1.4%</b>
<b>INT. PEAK HR (HV ONLY)</b>		11					3					12					6				
08:15 AM to 09:15 AM		0	1	10	0		0	0	3	0		0	4	8	0		0	2	1	3	
Heavy Vehicle % (PHV):		0.0%	2.8%	6.8%	0.0%	<b>5.5%</b>	0.0%	0.0%	2.9%	0.0%	<b>1.9%</b>	0.0%	18.2%	3.6%	0.0%	<b>4.3%</b>	0.0%	16.7%	0.8%	6.5%	<b>3.3%</b>

## HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)



BICYCLES		1. S Fillmore Street & 2nd Street S																			
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Fillmore Street					2nd Street S					S Fillmore Street					2nd Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
06:30 AM to 06:45 AM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
06:45 AM to 07:00 AM		0	0	0	0		0	0	0	0		0	0	1	0		0	0	0	0	
07:00 AM to 07:15 AM		0	1	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
07:15 AM to 07:30 AM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	0	0	
07:30 AM to 07:45 AM		0	0	0	0		0	0	4	0		0	0	1	0		0	0	0	0	
07:45 AM to 08:00 AM		0	0	2	0		0	0	0	0		0	0	0	0		0	0	1	0	
08:00 AM to 08:15 AM		0	0	0	0		0	0	1	0		0	0	1	0		0	0	1	0	
08:15 AM to 08:30 AM		0	0	0	0		0	0	4	0		0	0	0	0		0	0	1	0	
08:30 AM to 08:45 AM		0	0	0	0		0	0	0	0		0	0	0	0		0	0	2	0	
08:45 AM to 09:00 AM		0	0	0	1		0	0	0	0		0	0	1	0		0	0	0	0	
09:00 AM to 09:15 AM		0	0	0	0		0	0	2	0		0	0	0	0		0	0	0	0	
09:15 AM to 09:30 AM		0	0	0	0		0	0	1	0		0	0	0	0		0	0	0	1	
09:30 AM to 09:45 AM																					
09:45 AM to 10:00 AM																					
10:00 AM to 10:15 AM																					
10:15 AM to 10:30 AM																					
10:30 AM to 10:45 AM																					
10:45 AM to 11:00 AM																					
11:00 AM to 11:15 AM																					
11:15 AM to 11:30 AM																					
<b>SYSTEM PEAK HR (VEH.)</b>		2					9					2					3				
07:30 AM to 08:30 AM		0	0	2	0		0	0	9	0		0	0	2	0		0	0	3	0	
<b>INT. PEAK HR (BIKES)</b>		2					9					2					3				
07:30 AM to 08:30 AM		0	0	2	0		0	0	9	0		0	0	2	0		0	0	3	0	

## PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)



DATA COLLECTION NOTES :

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

Project Name : Arlington Career Center Transportatio Analysis Period: STUDY\_PERIOD 02:00 PM to 07:00 PM  
 Project # : 2379-006 Date of Counts: Thursday, November 18, 2021  
 Location Arlington, VA Weather: Partly Cloudy  
 Data Source: Gorove/Slade Associates, Inc.

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 04:30 PM to 05:30 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

Intersection:		1. S Walter Reed Drive & 7th Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					7th Street S					S Walter Reed Drive					7th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	62	5	1	0	0	0	0	0	0	4	58	0	4	0	4	0	3	1
02:15 PM	to 02:30 PM	0	0	67	3	0	0	0	0	0	0	0	11	75	0	0	0	4	0	10	1
02:30 PM	to 02:45 PM	0	0	81	2	4	0	0	0	0	0	0	14	89	0	2	0	6	0	10	2
02:45 PM	to 03:00 PM	0	0	77	3	0	0	0	0	0	0	0	5	78	0	1	0	5	0	13	2
03:00 PM	to 03:15 PM	0	0	66	9	0	0	0	0	0	0	0	12	73	0	3	0	16	0	18	2
03:15 PM	to 03:30 PM	0	0	87	7	0	0	0	0	0	0	0	18	88	0	8	0	15	0	24	3
03:30 PM	to 03:45 PM	0	0	106	9	6	0	0	0	0	0	0	17	83	0	8	0	14	0	31	0
03:45 PM	to 04:00 PM	0	0	123	4	0	0	0	0	0	0	0	18	87	0	11	0	9	0	21	9
04:00 PM	to 04:15 PM	0	0	112	5	6	0	0	0	0	0	0	12	93	0	1	0	9	0	14	6
04:15 PM	to 04:30 PM	0	0	144	5	11	0	0	0	0	0	0	11	73	0	1	0	7	0	17	3
04:30 PM	to 04:45 PM	0	0	127	12	7	0	0	0	0	0	0	15	65	0	4	0	7	0	20	4
04:45 PM	to 05:00 PM	0	0	154	8	8	0	0	0	0	0	0	8	72	0	5	0	9	0	20	5
05:00 PM	to 05:15 PM	0	0	141	8	4	0	0	0	0	0	0	17	77	0	2	0	8	0	16	7
05:15 PM	to 05:30 PM	1	0	139	10	3	0	0	0	0	0	0	13	96	0	3	0	10	0	22	4
05:30 PM	to 05:45 PM	0	0	107	7	1	0	0	0	0	0	0	13	65	0	6	0	6	0	23	4
05:45 PM	to 06:00 PM	0	0	115	7	0	0	0	0	0	0	0	15	94	0	3	0	3	0	14	2
06:00 PM	to 06:15 PM	0	0	132	5	0	0	0	0	0	0	0	14	73	0	1	0	11	0	13	5
06:15 PM	to 06:30 PM	0	0	108	8	0	0	0	0	0	0	0	7	92	0	1	0	4	0	6	0
06:30 PM	to 06:45 PM	0	0	102	11	0	0	0	0	0	0	0	14	91	0	2	0	6	0	16	0
06:45 PM	to 07:00 PM	0	0	56	6	5	0	0	0	0	0	0	6	73	0	0	0	3	0	12	0

<b>SYSTEM PEAK HR (VEH.)</b>		575					0					361					114				
04:45 PM to 05:45 PM		1	0	541	33	16	0	0	0	0	0	0	51	310	0	16	0	33	0	81	20
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>	<b>0.90</b>	0.25	n/a	0.88	0.83	<b>0.89</b>	n/a	n/a	n/a	n/a	n/a	n/a	0.75	0.81	n/a	<b>0.83</b>	n/a	0.83	n/a	0.88	<b>0.89</b>

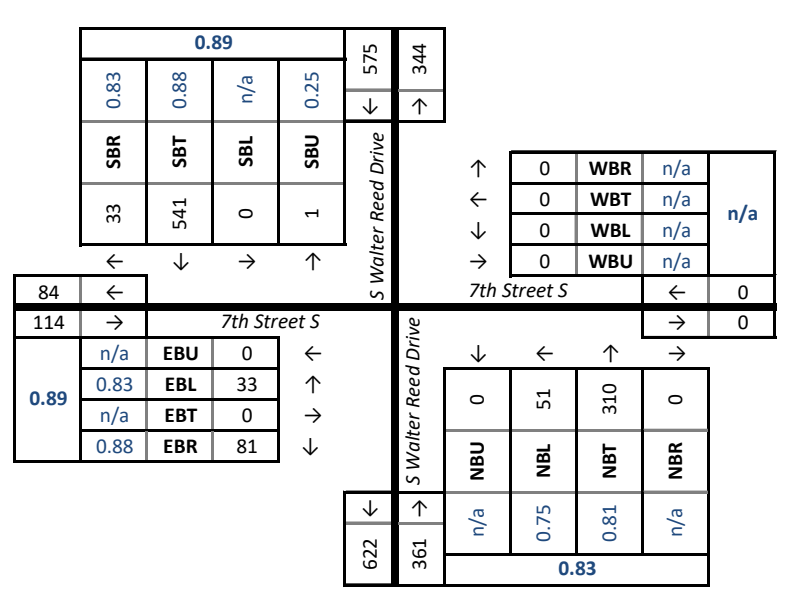
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	S Walter Reed Drive				7th Street S				S Walter Reed Drive				7th Street S						
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right			
02:00 PM	to 02:15 PM	0	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	4	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	2	0	0	0
03:15 PM	to 03:30 PM	0	0	5	0	0	0	0	0	0	1	6	0	0	0	0	2	0	0	0
03:30 PM	to 03:45 PM	0	0	7	0	0	0	0	0	0	1	5	0	0	0	0	3	0	0	0
03:45 PM	to 04:00 PM	0	0	3	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0
04:00 PM	to 04:15 PM	0	0	0	2	0	0	0	0	0	1	4	0	0	0	0	1	0	0	0
04:15 PM	to 04:30 PM	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0

<b>SYSTEM PEAK HR (VEH.)</b>		11				0				8				0							
04:45 PM to 05:45 PM		0	0	10	1	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV):</b>		0.0%	0.0%	1.8%	3.0%	<b>1.9%</b>	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	0.0%	2.6%	0.0%	<b>2.2%</b>	0.0%	0.0%	0.0%	0.0%	<b>0.0%</b>	
<b>INT. PEAK HR (HV ONLY)</b>		15				0				20				11							
03:00 PM to 04:00 PM		0	0	15	0	0	0	0	0	0	2	18	0	0	3	0	8	0	0	0	0
<b>Heavy Vehicle % (PHV):</b>		0.0%	0.0%	3.9%	0.0%	<b>3.6%</b>	0.0%	0.0%	0.0%	<b>0.0%</b>	0.0%	3.1%	5.4%	0.0%	<b>5.1%</b>	0.0%	5.6%	0.0%	8.5%	<b>7.4%</b>	

BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound						
	Roadway:	S Walter Reed Drive				7th Street S				S Walter Reed Drive				7th Street S						
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right			
02:00 PM	to 02:15 PM	0	0	2	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
02:30 PM	to 02:45 PM	0	0	2	0	0	0	0	0	0	1	3	0	0	1	0	1	0	1	0
02:45 PM	to 03:00 PM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	2	0	0
03:00 PM	to 03:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
03:30 PM	to 03:45 PM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0
03:45 PM	to 04:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
04:00 PM	to 04:15 PM	0	0	0	1	0	0	0	0	0	0	2	0	0	1	0	1	0	1	0
04:15 PM	to 04:30 PM	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0
04:45 PM	to 05:00 PM	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:30 PM	to 06:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

<b>SYSTEM PEAK HR (VEH.)</b>		1				0				4				2							
04:45 PM to 05:45 PM		0	0	0	1	0	0	0	0	0	2	2	0	0	1	0	1	0	0	0	0
<b>INT. PEAK HR (BIKES)</b>		8				0				9				7							
02:00 PM to 03:00 PM		0	0	6	2	0	0	0	0	0	1	8	0	0	3	0	4	0	0	0	0

**VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)**





# Gorove/Slade Associates - Multimodal Turning Movement Count Report

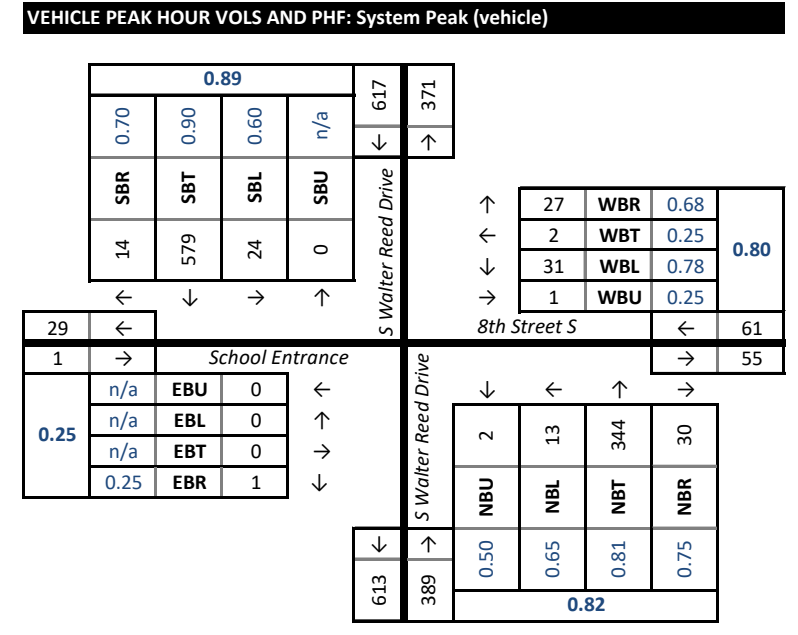
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

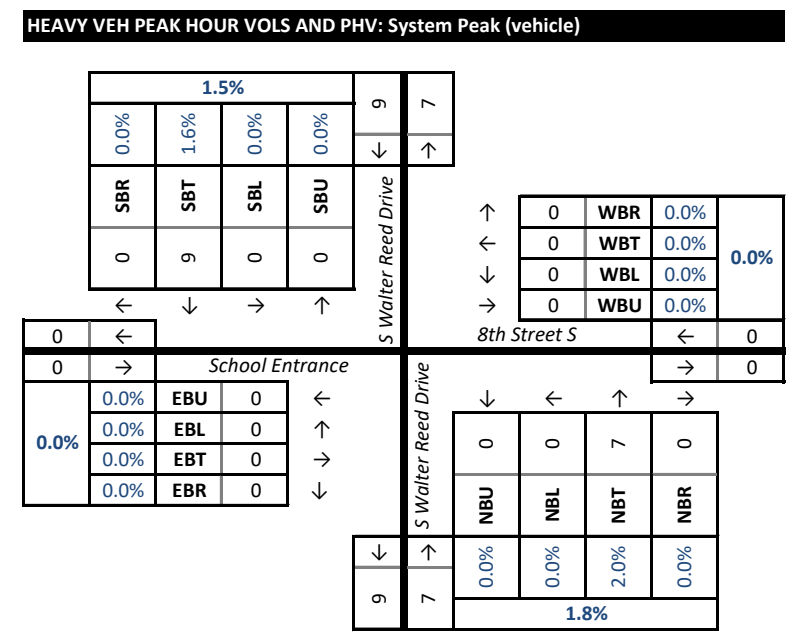
02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 04:30 PM to 05:30 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

Intersection:		1. S Walter Reed Drive & 8th Street S/School Entrance																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					8th Street S					S Walter Reed Drive					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	4	58	3	0	1	2	1	2	7	0	0	57	7	0	0	0	0	1	0
02:15 PM	to 02:30 PM	0	2	73	3	1	0	4	2	2	6	1	3	89	5	0	0	0	0	0	2
02:30 PM	to 02:45 PM	0	7	81	4	0	0	7	2	9	1	1	2	94	5	1	0	1	0	0	4
02:45 PM	to 03:00 PM	0	3	79	6	2	0	5	0	5	8	0	4	79	5	1	0	0	0	0	9
03:00 PM	to 03:15 PM	0	1	79	9	0	0	4	1	8	4	2	3	84	7	0	0	1	0	2	8
03:15 PM	to 03:30 PM	0	8	99	6	5	1	7	0	6	12	2	9	105	8	1	0	0	0	0	3
03:30 PM	to 03:45 PM	0	8	122	6	2	1	5	0	6	10	1	6	83	2	0	0	0	0	0	2
03:45 PM	to 04:00 PM	0	14	135	1	4	0	6	0	9	10	0	8	99	7	0	0	0	0	0	4
04:00 PM	to 04:15 PM	0	4	122	2	0	0	8	0	5	3	1	4	96	4	0	0	0	0	0	6
04:15 PM	to 04:30 PM	0	8	138	6	11	1	5	0	6	6	0	2	76	6	0	0	0	0	0	2
04:30 PM	to 04:45 PM	0	8	140	3	1	0	6	1	4	7	1	0	79	6	0	0	0	0	0	6
04:45 PM	to 05:00 PM	0	10	160	4	9	0	8	0	5	5	0	4	75	6	1	0	0	0	0	4
05:00 PM	to 05:15 PM	0	4	148	2	1	0	7	0	3	8	0	5	93	10	0	0	0	0	0	7
05:15 PM	to 05:30 PM	0	6	155	5	0	1	6	2	10	6	1	4	106	7	0	0	0	0	1	3
05:30 PM	to 05:45 PM	0	4	116	3	6	0	10	0	9	2	1	0	70	7	4	0	0	0	0	1
05:45 PM	to 06:00 PM	0	9	120	3	0	1	4	1	7	1	0	6	98	13	0	0	0	0	0	4
06:00 PM	to 06:15 PM	0	10	131	4	3	1	7	1	5	8	0	3	83	7	0	0	0	0	0	6
06:15 PM	to 06:30 PM	2	3	108	2	2	3	5	0	10	3	2	4	93	9	0	0	0	0	0	1
06:30 PM	to 06:45 PM	0	5	112	1	1	1	7	0	6	6	1	2	103	7	0	0	0	0	0	3
06:45 PM	to 07:00 PM	0	8	59	0	0	0	3	1	1	2	0	2	68	8	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		617					61					389					1				
04:45 PM to 05:45 PM		0	24	579	14	16	1	31	2	27	21	2	13	344	30	5	0	0	0	1	15
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.60	0.90	0.70	0.89	0.25	0.78	0.25	0.68	0.80	0.50	0.65	0.81	0.75	0.82	n/a	n/a	n/a	0.25	0.25



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					8th Street S					S Walter Reed Drive					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	2	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	4	0	0	0	0	0	1	0	0	0	3	1	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
03:00 PM	to 03:15 PM	0	0	0	2	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0	0	5	2	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0
03:30 PM	to 03:45 PM	0	1	5	4	0	0	0	0	1	0	0	1	5	1	0	0	0	0	0	0
03:45 PM	to 04:00 PM	0	0	4	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0
04:00 PM	to 04:15 PM	0	0	2	0	0	0	1	0	0	0	0	1	4	0	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	5	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	0	5	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		9					0					7					0				
04:45 PM to 05:45 PM		0	0	9	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	1.6%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>INT. PEAK HR (HV ONLY)</b>		23					3					23					0				
03:00 PM to 04:00 PM		0	1	14	8	0	0	0	0	3	0	0	3	19	1	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	3.2%	3.2%	36.4%	4.7%	0.0%	0.0%	0.0%	10.3%	5.6%	0.0%	11.5%	5.1%	4.2%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%



BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					8th Street S					S Walter Reed Drive					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0.594	0	0	2	0	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0.604	0	0	3	0	1	0	0	0	0	3	0	0	1	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0.615	0	0	2	0	3	0	0	0	0	2	0	0	3	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0.625	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
03:00 PM	to 03:15 PM	0.635	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0.646	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
03:30 PM	to 03:45 PM	0.656	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
03:45 PM	to 04:00 PM	0.667	0	1	2	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0
04:00 PM	to 04:15 PM	0.677	0	1	0	0	2	0	0	0	0	1	0	0	2	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0.688	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0.698	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0.708	0	0	1	0	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0.719	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0.729	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0.74	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0
05:45 PM	to 06:00 PM	0.75	0	0	2	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0
06:00 PM	to 06:15 PM	0.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0.771	0	0	3	0	1	0	0	0	0	3	0	0	1	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0.781	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0.792	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		3.895833333					5					3					2				
04:45 PM to 05:45 PM		2.896	0	0	1	0	3	0	1	1	0	1	0	0	2	0	2	0	0	0	0
<b>INT. PEAK HR (BIKES)</b>																					



**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

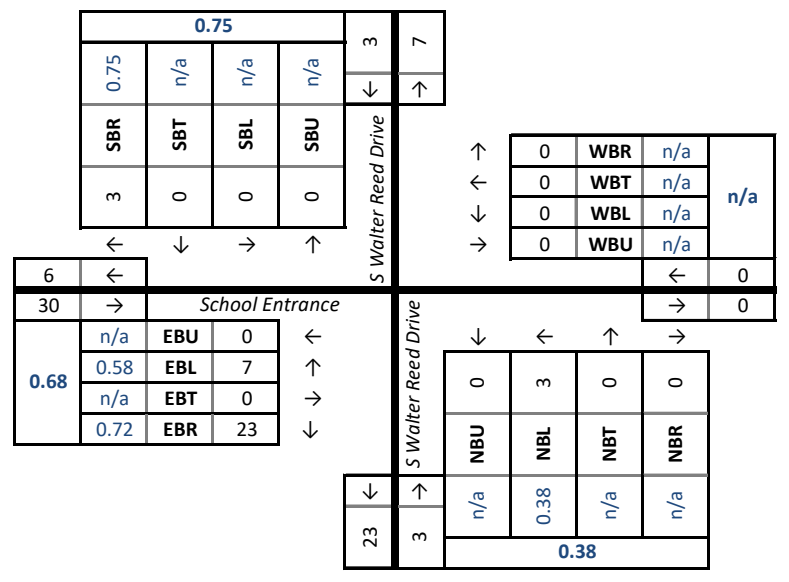
Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 03:15 PM to 04:15 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

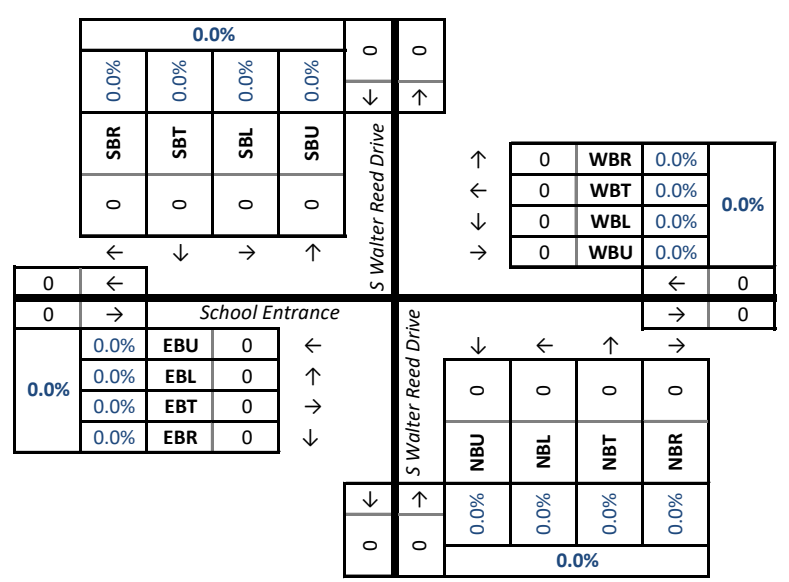
Intersection:		1. S Walter Reed Drive & /School Entrance																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					S Walter Reed Drive					School Entrance					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	1
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	5
02:45 PM	to 03:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	18
03:00 PM	to 03:15 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	15
03:15 PM	to 03:30 PM	0	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0	7	0	5
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	8	0	2
03:45 PM	to 04:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	6
04:00 PM	to 04:15 PM	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	9
04:15 PM	to 04:30 PM	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	3
04:30 PM	to 04:45 PM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	5
05:00 PM	to 05:15 PM	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	7
05:15 PM	to 05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5
05:30 PM	to 05:45 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	5
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5	4
06:00 PM	to 06:15 PM	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	10
06:15 PM	to 06:30 PM	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	2	0	6
06:30 PM	to 06:45 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	4
06:45 PM	to 07:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3
<b>SYSTEM PEAK HR (VEH.)</b>		3					0					3					30				
04:45 PM to 05:45 PM		0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	7	0	23	22
<b>Peak Hour Factor (PHF)</b>		0.69					n/a					0.38					0.68				

**VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)**



Direction:		Southbound					Westbound					Northbound					Eastbound				
HEAVY VEHICLES (FHWA 4+)	Roadway:	S Walter Reed Drive					S Walter Reed Drive					School Entrance					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
03:45 PM	to 04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 PM	to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>SYSTEM PEAK HR (VEH.)</b>		0					0					0					0				
04:45 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%					0.0%					0.0%					0.0%				
<b>INT. PEAK HR (HV ONLY)</b>		0					0					0					10				
02:45 PM to 03:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	6
<b>Heavy Vehicle % (PHV)</b>		0.0%					0.0%					0.0%					14.5%				

**HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)**



Direction:		Southbound					Westbound					Northbound					Eastbound				
BICYCLES	Roadway:	S Walter Reed Drive					S Walter Reed Drive					School Entrance					School Entrance				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	to 04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		0					0					0					0				
04:45 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>INT. PEAK HR (BIKES)</b>		0					0					0					1				
02:30 PM to 03:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

**PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)**

**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

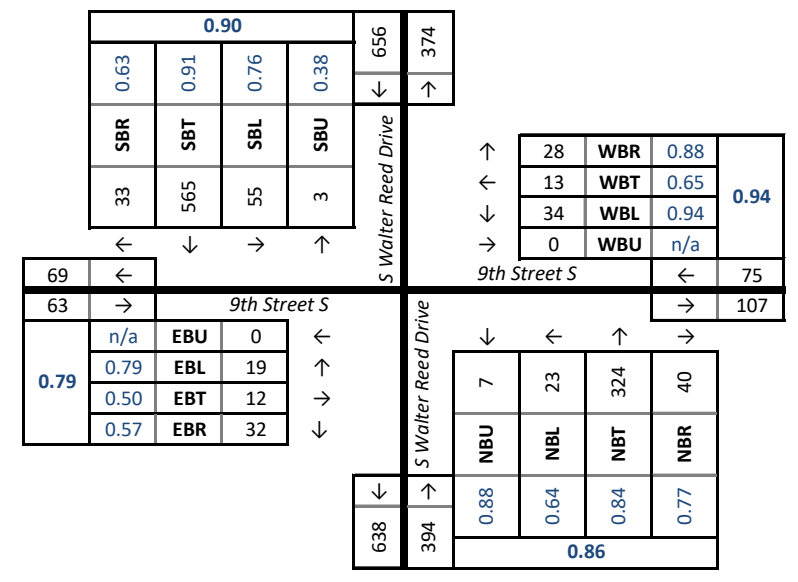
Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

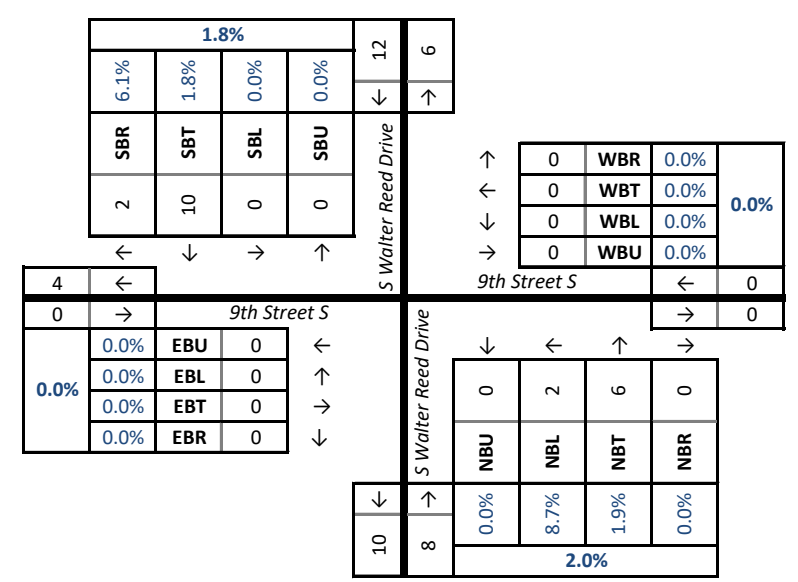
Intersection:		1. S Walter Reed Drive & 9th Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					9th Street S					S Walter Reed Drive					9th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM to 02:15 PM		0	4	54	4	0	0	6	3	5	5	0	2	58	8	0	0	1	1	8	7
02:15 PM to 02:30 PM		0	5	72	2	1	0	5	4	4	5	0	4	79	12	0	0	5	2	5	4
02:30 PM to 02:45 PM		0	14	80	4	4	0	1	1	5	6	1	4	92	8	0	0	5	3	6	2
02:45 PM to 03:00 PM		0	5	78	5	5	0	11	0	4	11	1	7	74	13	0	0	4	3	5	10
03:00 PM to 03:15 PM		0	13	73	6	11	0	7	1	5	10	0	11	76	7	0	1	3	3	8	25
03:15 PM to 03:30 PM		0	11	101	10	4	0	8	5	10	9	1	11	92	9	0	0	13	0	9	18
03:30 PM to 03:45 PM		0	8	122	17	5	0	8	3	9	8	0	13	65	11	0	0	7	3	16	8
03:45 PM to 04:00 PM		1	12	125	8	6	1	3	5	11	7	0	5	81	15	0	0	8	3	5	11
04:00 PM to 04:15 PM		1	16	127	7	3	0	15	2	4	6	0	4	97	15	0	1	4	2	13	10
04:15 PM to 04:30 PM		0	14	127	5	1	0	8	3	10	13	1	6	68	11	0	0	3	1	15	12
04:30 PM to 04:45 PM		0	20	120	4	8	0	9	4	8	5	1	3	75	10	0	0	1	2	9	5
04:45 PM to 05:00 PM		2	12	155	13	2	0	8	5	7	7	1	1	71	9	0	0	3	1	8	10
05:00 PM to 05:15 PM		0	18	141	5	1	0	9	2	7	1	2	9	89	11	0	0	6	0	14	18
05:15 PM to 05:30 PM		1	10	144	7	3	0	9	2	6	5	2	8	97	7	0	0	5	5	7	2
05:30 PM to 05:45 PM		0	15	125	8	3	0	8	4	8	7	2	5	67	13	0	0	5	6	3	8
05:45 PM to 06:00 PM		1	16	108	2	4	2	7	2	4	6	1	8	109	9	0	0	6	6	13	4
06:00 PM to 06:15 PM		1	15	123	4	2	0	2	2	6	10	0	7	85	13	0	0	1	1	3	4
06:15 PM to 06:30 PM		1	12	101	5	3	1	7	4	11	3	3	4	88	9	1	0	5	3	2	3
06:30 PM to 06:45 PM		0	11	106	6	2	0	7	6	7	8	2	5	100	15	0	0	5	4	3	10
06:45 PM to 07:00 PM		0	5	59	3	1	1	6	3	2	2	2	3	80	11	0	0	1	0	9	1
<b>SYSTEM PEAK HR (VEH.)</b>		656					75					394					63				
04:45 PM to 05:45 PM		3	55	565	33	9	0	34	13	28	20	7	23	324	40	0	0	19	12	32	38
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		0.38	0.76	0.91	0.63	0.90	n/a	0.94	0.65	0.88	0.94	0.88	0.64	0.84	0.77	0.86	n/a	0.79	0.50	0.57	0.79

**VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)**



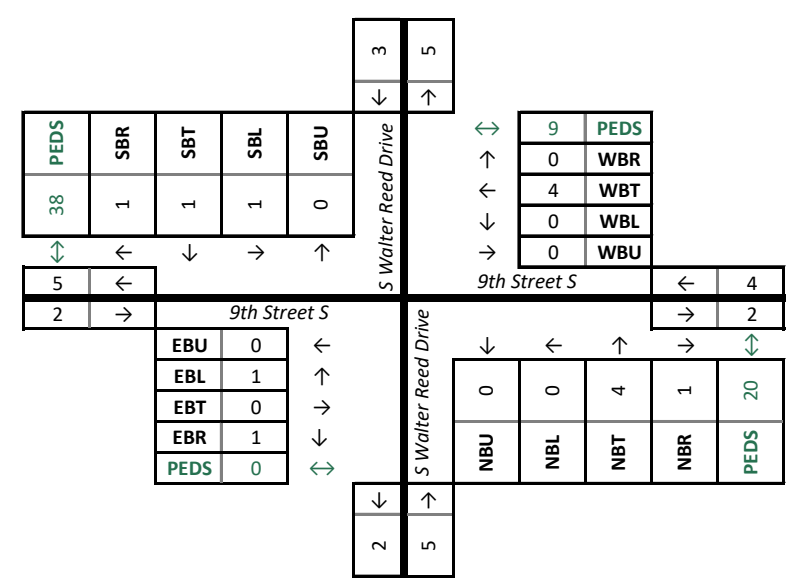
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Walter Reed Drive				9th Street S				S Walter Reed Drive				9th Street S							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
02:00 PM to 02:15 PM		0	0	2	0	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0	
02:15 PM to 02:30 PM		0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
02:30 PM to 02:45 PM		0	1	3	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	
02:45 PM to 03:00 PM		0	0	3	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	0	
03:00 PM to 03:15 PM		0	0	2	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	
03:15 PM to 03:30 PM		0	1	7	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	
03:30 PM to 03:45 PM		0	0	2	3	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	
03:45 PM to 04:00 PM		0	0	5	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	
04:00 PM to 04:15 PM		0	0	2	1	0	0	0	0	0	1	5	1	0	0	1	0	0	0	0	
04:15 PM to 04:30 PM		0	1	4	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	
04:30 PM to 04:45 PM		0	0	6	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	
04:45 PM to 05:00 PM		0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
05:00 PM to 05:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
05:15 PM to 05:30 PM		0	0	5	1	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	
05:30 PM to 05:45 PM		0	0	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	
05:45 PM to 06:00 PM		0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
06:00 PM to 06:15 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
06:15 PM to 06:30 PM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
06:30 PM to 06:45 PM		0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
06:45 PM to 07:00 PM		0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
<b>SYSTEM PEAK HR (VEH.)</b>		12				0				8				0							
04:45 PM to 05:45 PM		0	0	10	2	0	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	0.0%	1.8%	6.1%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	1.9%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>INT. PEAK HR (HV ONLY)</b>		21				1				21				1							
03:15 PM to 04:15 PM		0	1	16	4	0	0	0	1	0	3	17	1	0	0	1	0	0	0	0	0
<b>Heavy Vehicle % (PHV)</b>		0.0%	2.1%	3.4%	9.5%	3.7%	0.0%	0.0%	0.0%	2.9%	1.2%	9.1%	5.1%	2.0%	5.0%	0.0%	0.0%	12.5%	0.0%	1.2%	0.0%

**HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)**



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound							
	Roadway:	S Walter Reed Drive				9th Street S				S Walter Reed Drive				9th Street S							
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
02:00 PM to 02:15 PM		0	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	
02:15 PM to 02:30 PM		0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
02:30 PM to 02:45 PM		0	0	2	0	0	1	0	0	0	0	4	1	0	0	1	0	0	0	0	
02:45 PM to 03:00 PM		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
03:00 PM to 03:15 PM		0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15 PM to 03:30 PM		0	1	1	0	0	1	3	0	0	0	2	0	0	0	0	0	0	0	0	
03:30 PM to 03:45 PM		0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
03:45 PM to 04:00 PM		0	0	1	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	
04:00 PM to 04:15 PM		0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
04:15 PM to 04:30 PM		0	2	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
04:30 PM to 04:45 PM		0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
04:45 PM to 05:00 PM		0	1	1	1	0	0	2	0	0	0	3	0	0	1	0	1	0	1	0	
05:00 PM to 05:15 PM		0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	
05:15 PM to 05:30 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM to 05:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45 PM to 06:00 PM		0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM to 06:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM to 06:30 PM		0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
06:30 PM to 06:45 PM		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM to 07:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>SYSTEM PEAK HR (VEH.)</b>		3				4				5				2							
04:45 PM to 05:45 PM		0	1	1	1	0	0	4	0	0	0	4	1	0	1	0	1	0	1	0	0
<b>INT. PEAK HR (BIKES)</b>		8				5				7				2							
02:30 PM to 03:30 PM		0	1	7	0	0	2	3	0	0	0	6	1	0	0	2	0	0	0	0	0

**PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)**



# Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

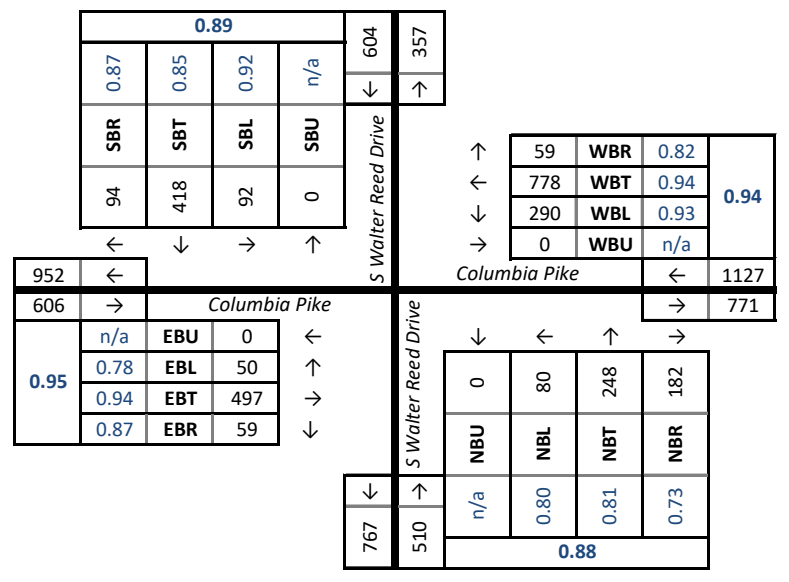
Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

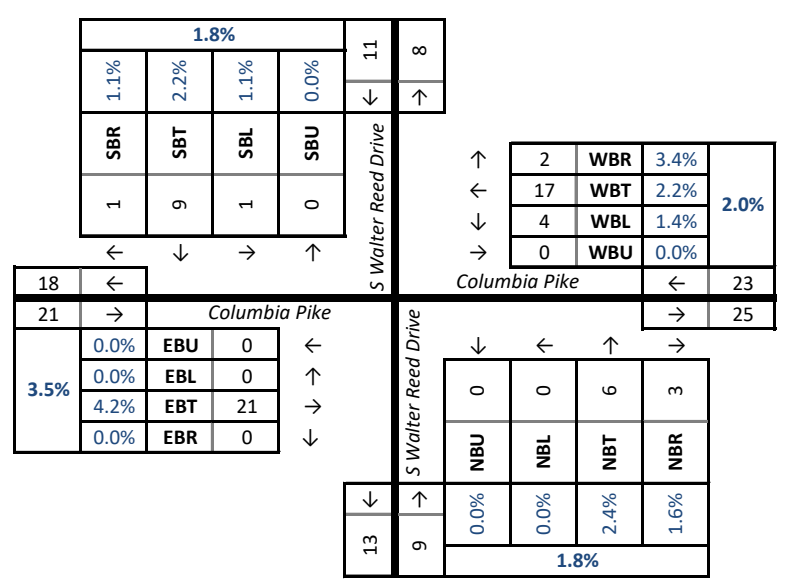
Intersection:		1. S Walter Reed Drive & Columbia Pike																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					Columbia Pike					S Walter Reed Drive					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	15	34	22	6	0	23	108	11	9	0	15	43	28	2	0	10	89	15	13
02:15 PM	to 02:30 PM	0	16	51	13	10	0	31	112	17	8	0	12	59	19	5	0	7	113	16	2
02:30 PM	to 02:45 PM	0	16	52	12	7	0	26	104	18	9	0	17	58	30	9	0	20	109	6	6
02:45 PM	to 03:00 PM	0	18	57	20	2	0	24	114	18	11	0	35	61	24	4	0	12	107	10	3
03:00 PM	to 03:15 PM	0	16	48	19	30	0	24	125	21	19	0	28	50	41	12	0	10	121	10	11
03:15 PM	to 03:30 PM	0	12	96	15	26	0	27	104	28	26	0	16	63	52	9	0	19	123	18	15
03:30 PM	to 03:45 PM	0	25	86	15	14	0	36	121	12	12	0	15	56	29	5	0	22	136	12	3
03:45 PM	to 04:00 PM	0	18	106	18	11	0	45	151	23	9	0	28	59	28	10	0	15	114	16	5
04:00 PM	to 04:15 PM	0	23	101	24	7	0	69	173	22	7	0	25	67	33	11	0	14	122	15	0
04:15 PM	to 04:30 PM	0	25	117	14	11	0	73	149	15	23	0	11	63	49	13	0	8	116	19	8
04:30 PM	to 04:45 PM	0	19	87	12	13	0	74	191	23	15	0	27	67	40	13	0	9	129	13	5
04:45 PM	to 05:00 PM	0	25	120	20	5	0	59	190	14	16	0	19	52	34	16	0	9	122	14	9
05:00 PM	to 05:15 PM	0	20	123	27	8	0	78	186	14	25	0	18	65	62	12	0	16	112	15	9
05:15 PM	to 05:30 PM	0	22	78	20	12	0	76	196	13	14	0	18	77	42	5	0	11	132	17	2
05:30 PM	to 05:45 PM	0	25	97	27	7	0	77	206	18	6	0	25	54	44	13	0	14	131	13	8
05:45 PM	to 06:00 PM	0	19	90	20	22	0	54	151	22	13	0	27	69	36	23	0	21	140	20	12
06:00 PM	to 06:15 PM	0	22	85	25	7	0	54	123	18	10	0	26	71	57	7	0	8	119	11	11
06:15 PM	to 06:30 PM	0	19	87	14	19	0	46	140	19	12	0	24	74	51	15	0	16	160	12	16
06:30 PM	to 06:45 PM	0	19	72	12	7	0	52	142	24	7	0	24	77	41	24	0	14	129	15	31
06:45 PM	to 07:00 PM	0	16	48	14	16	0	30	144	20	10	0	25	51	52	13	0	9	136	15	10
<b>SYSTEM PEAK HR (VEH.)</b>		604					1127					510					606				
04:45 PM to 05:45 PM		0	92	418	94	32	0	290	778	59	61	0	80	248	182	46	0	50	497	59	28
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.92	0.85	0.87	<b>0.89</b>	n/a	0.93	0.94	0.82	<b>0.94</b>	n/a	0.80	0.81	0.73	<b>0.88</b>	n/a	0.78	0.94	0.87	<b>0.95</b>

## VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)



HEAVY VEHICLES (FHWA 4+)		1. S Walter Reed Drive & Columbia Pike																			
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					Columbia Pike					S Walter Reed Drive					Columbia Pike				
	Movement:	U	Left	Thru	Right		U	Left	Thru	Right		U	Left	Thru	Right		U	Left	Thru	Right	
02:00 PM	to 02:15 PM	0	0	2	0		0	0	5	0		0	2	4	0		0	0	4	2	
02:15 PM	to 02:30 PM	0	0	2	0		0	0	4	0		0	0	4	0		0	0	3	1	
02:30 PM	to 02:45 PM	0	1	3	0		0	0	3	0		0	1	4	1		0	1	6	1	
02:45 PM	to 03:00 PM	0	3	2	0		0	0	3	0		0	1	2	0		0	1	5	0	
03:00 PM	to 03:15 PM	0	1	1	1		0	1	2	0		0	0	4	1		0	1	5	0	
03:15 PM	to 03:30 PM	0	0	6	0		0	1	3	2		0	1	5	3		0	1	3	0	
03:30 PM	to 03:45 PM	0	0	1	0		0	2	2	0		0	0	4	0		0	3	5	1	
03:45 PM	to 04:00 PM	0	1	4	1		0	0	4	0		0	0	1	2		0	0	6	0	
04:00 PM	to 04:15 PM	0	0	1	0		0	4	4	4		0	0	3	0		0	0	0	1	
04:15 PM	to 04:30 PM	0	0	4	0		0	1	6	0		0	0	2	1		0	0	6	1	
04:30 PM	to 04:45 PM	0	0	6	0		0	0	6	0		0	0	2	0		0	1	4	0	
04:45 PM	to 05:00 PM	0	0	2	0		0	1	5	0		0	0	2	0		0	0	5	0	
05:00 PM	to 05:15 PM	0	0	1	0		0	1	2	0		0	0	1	1		0	0	4	0	
05:15 PM	to 05:30 PM	0	0	4	1		0	0	4	1		0	0	2	1		0	0	7	0	
05:30 PM	to 05:45 PM	0	1	2	0		0	2	6	1		0	0	1	1		0	0	5	0	
05:45 PM	to 06:00 PM	0	0	1	0		0	0	4	1		0	0	2	0		0	0	5	0	
06:00 PM	to 06:15 PM	0	1	2	0		0	0	4	0		0	0	1	1		0	0	3	0	
06:15 PM	to 06:30 PM	0	0	0	0		0	0	5	0		0	0	1	1		0	0	6	0	
06:30 PM	to 06:45 PM	0	0	1	0		0	0	3	0		0	1	2	1		0	0	3	0	
06:45 PM	to 07:00 PM	0	0	2	0		0	2	5	0		0	0	0	2		0	1	4	0	
<b>SYSTEM PEAK HR (VEH.)</b>		11					23					9					21				
04:45 PM to 05:45 PM		0	1	9	1		0	4	17	2		0	0	6	3		0	0	21	0	
<b>Heavy Vehicle % (PHV)</b>		0.0%	1.1%	2.2%	1.1%	<b>1.8%</b>	0.0%	1.4%	2.2%	3.4%	<b>2.0%</b>	0.0%	0.0%	2.4%	1.6%	<b>1.8%</b>	0.0%	0.0%	4.2%	0.0%	<b>3.5%</b>
<b>INT. PEAK HR (HV ONLY)</b>		18					15					23					24				
02:30 PM to 03:30 PM		0	5	12	1		0	2	11	2		0	3	15	5		0	4	19	1	
<b>Heavy Vehicle % (PHV)</b>		0.0%	8.1%	4.7%	1.5%	<b>4.7%</b>	0.0%	2.0%	2.5%	2.4%	<b>2.4%</b>	0.0%	3.1%	6.5%	3.4%	<b>4.8%</b>	0.0%	6.6%	4.1%	2.3%	<b>4.2%</b>

## HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)



BICYCLES		1. S Walter Reed Drive & Columbia Pike																			
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Walter Reed Drive					Columbia Pike					S Walter Reed Drive					Columbia Pike				
	Movement:	U	Left	Thru	Right		U	Left	Thru	Right		U	Left	Thru	Right		U	Left	Thru	Right	
02:00 PM	to 02:15 PM	0	0	3	0		0	0	1	0		0	0	2	0		0	0	0	0	
02:15 PM	to 02:30 PM	0	0	2	0		0	0	1	0		0	0	1	0		0	0	0	0	
02:30 PM	to 02:45 PM	0	0	2	0		0	1	0	1		0	0	1	0		0	0	0	0	
02:45 PM	to 03:00 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
03:00 PM	to 03:15 PM	0	0	2	0		0	0	0	0		0	0	0	0		0	0	2	0	
03:15 PM	to 03:30 PM	0	0	3	0		0	0	0	0		0	0	0	0		0	0	1	0	
03:30 PM	to 03:45 PM	0	0	2	0		0	0	1	1		0	0	0	0		0	0	0	0	
03:45 PM	to 04:00 PM	0	0	2	0		0	0	0	0		0	0	1	0		0	0	0	0	
04:00 PM	to 04:15 PM	0	0	0	0		0	0	0	0		0	0	1	0		0	0	0	0	
04:15 PM	to 04:30 PM	0	0	1	0		0	0	0	0		0	0	1	1		0	0	0	0	
04:30 PM	to 04:45 PM	0	0	8	0		0	0	1	0		0	0	2	0		0	0	0	0	
04:45 PM	to 05:00 PM	0	0	0	0		0	0	0	0		0	0	4	0		0	0	0	0	
05:00 PM	to 05:15 PM	0	0	0	0		0	0	0	2		0	0	0	0		0	0	0	0	
05:15 PM	to 05:30 PM	0	0	0	0		0	0	1	0		0	0	0	0		0	0	1	0	
05:30 PM	to 05:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
05:45 PM	to 06:00 PM	0	0	2	0		0	0	0	0		0	0	0	0		0	0	0	0	
06:00 PM	to 06:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
06:15 PM	to 06:30 PM	0	0	1	0		0	0	1	0		0	0	0	0		0	0	0	0	
06:30 PM	to 06:45 PM	0	0	1	0		0	0													

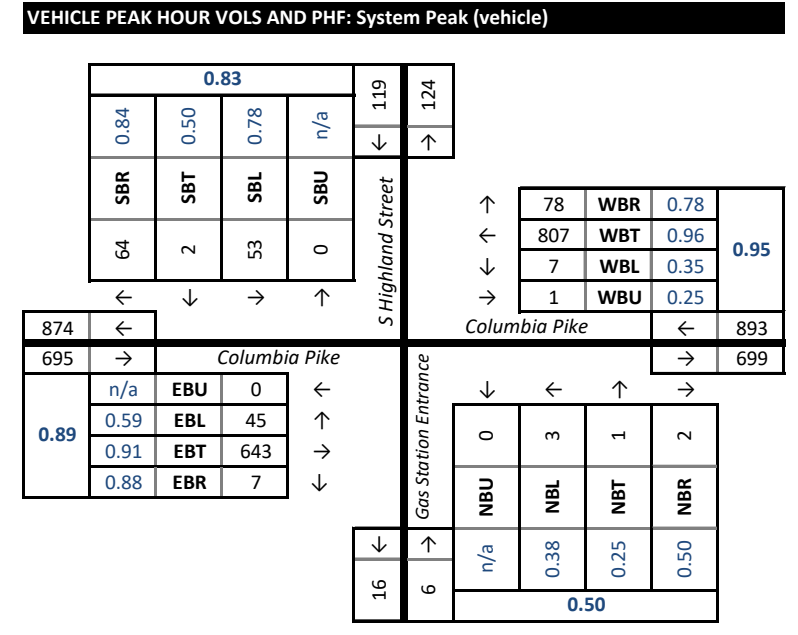


**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

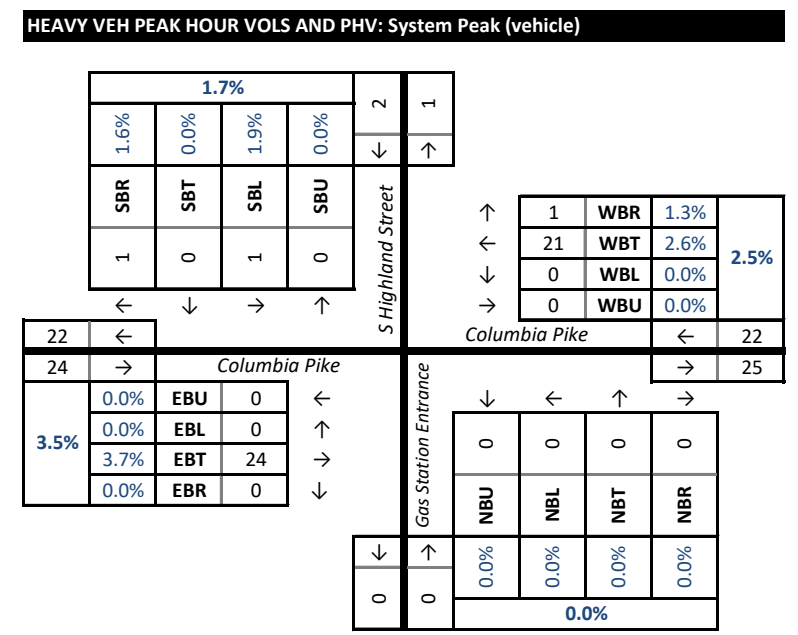
Project Name : Arlington Career Center Transportatio Analysis Period: STUDY\_PERIOD 02:00 PM to 07:00 PM  
 Project # : 2379-006 Date of Counts: Thursday, November 18, 2021  
 Location Arlington, VA Weather: Partly Cloudy  
 Data Source: Gorove/Slade Associates, Inc.

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

Intersection:		1. S Highland Street/Gas Station Entrance & Columbia Pike																				
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound					
	Roadway:	S Highland Street					Columbia Pike					Gas Station Entrance					Columbia Pike					
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	
02:00 PM	to 02:15 PM	0	7	0	9	5	0	3	115	18	5	0	0	0	2	9	1	9	117	3	1	
02:15 PM	to 02:30 PM	0	3	0	2	4	0	2	105	13	4	0	0	0	1	1	0	10	121	4	1	
02:30 PM	to 02:45 PM	0	4	0	5	4	0	1	122	12	1	0	0	0	2	2	0	11	128	1	3	
02:45 PM	to 03:00 PM	0	6	0	5	4	2	1	124	15	1	0	0	0	1	2	0	13	132	1	3	
03:00 PM	to 03:15 PM	0	6	2	10	16	0	5	133	24	5	0	1	0	0	8	0	16	133	3	4	
03:15 PM	to 03:30 PM	0	17	1	22	14	0	1	134	30	2	0	0	0	4	5	0	10	153	5	2	
03:30 PM	to 03:45 PM	0	18	2	23	13	0	1	137	23	8	0	1	0	1	7	0	20	161	4	6	
03:45 PM	to 04:00 PM	0	9	0	19	6	0	1	169	12	5	0	1	0	3	5	0	11	142	0	2	
04:00 PM	to 04:15 PM	0	11	0	15	10	0	2	178	21	7	0	1	0	0	6	0	5	140	2	3	
04:15 PM	to 04:30 PM	0	9	1	10	7	0	2	173	16	2	0	0	0	3	3	1	9	146	7	2	
04:30 PM	to 04:45 PM	0	5	0	11	5	0	1	210	15	3	0	0	0	1	8	1	5	163	5	4	
04:45 PM	to 05:00 PM	0	11	0	17	14	1	0	196	16	5	0	1	0	1	4	0	10	138	2	1	
05:00 PM	to 05:15 PM	0	11	1	12	5	0	2	198	18	2	0	0	0	1	4	0	5	161	2	2	
05:15 PM	to 05:30 PM	0	14	1	16	8	0	5	203	19	3	0	0	0	0	4	0	19	176	1	3	
05:30 PM	to 05:45 PM	0	17	0	19	8	0	0	210	25	0	0	2	1	0	4	0	11	168	2	5	
05:45 PM	to 06:00 PM	0	11	0	10	8	0	0	198	17	3	0	0	0	2	3	0	12	184	0	1	
06:00 PM	to 06:15 PM	0	9	1	15	7	0	3	185	10	5	0	0	0	1	10	0	7	171	1	1	
06:15 PM	to 06:30 PM	0	5	0	12	7	1	1	158	17	0	0	0	0	1	6	0	14	215	2	1	
06:30 PM	to 06:45 PM	0	5	0	17	9	0	2	170	13	4	0	1	0	3	4	0	12	154	2	2	
06:45 PM	to 07:00 PM	0	11	0	7	2	0	2	158	15	3	0	1	0	0	4	0	9	166	1	0	
<b>SYSTEM PEAK HR (VEH.)</b>		119					893					6					695					
04:45 PM to 05:45 PM		0	53	2	64	35	1	7	807	78	10	0	3	1	2	16	0	45	643	7	11	
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB	
<b>Factor (PHF)</b>		0.94	n/a	0.78	0.50	0.84	0.83	0.25	0.35	0.96	0.78	0.95	n/a	0.38	0.25	0.50	0.50	n/a	0.59	0.91	0.88	0.89



Direction:		Southbound					Westbound					Northbound					Eastbound				
HEAVY VEHICLES (FHWA 4+)	Roadway:	S Highland Street					Columbia Pike					Gas Station Entrance					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
	02:00 PM	to 02:15 PM	0	0	0	1	0	0	0	4	2	0	0	0	0	0	0	0	1	5	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2	9	0	0
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	0	0
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	3	0	0
03:30 PM	to 03:45 PM	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	7	0	0
03:45 PM	to 04:00 PM	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	3	0	0
04:00 PM	to 04:15 PM	0	0	0	2	0	0	0	3	2	0	0	0	0	0	0	0	1	1	0	0
04:15 PM	to 04:30 PM	0	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	6	0	0
04:30 PM	to 04:45 PM	0	1	0	1	0	0	0	7	0	0	0	0	0	0	0	0	0	5	0	0
04:45 PM	to 05:00 PM	0	0	0	1	0	0	0	5	1	0	0	0	0	0	0	0	0	7	0	0
05:00 PM	to 05:15 PM	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	5	0	0
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	8	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	4	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	4	0	0
06:00 PM	to 06:15 PM	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	5	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	6	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	2	3	0	0
06:45 PM	to 07:00 PM	0	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		2					22					0					24				
04:45 PM to 05:45 PM		0	1	0	1	0	0	0	21	1	0	0	0	0	0	0	0	0	24	0	0
<b>Heavy Vehicle % (PHV):</b>		0.0%	1.9%	0.0%	1.6%	1.7%	0.0%	0.0%	2.6%	1.3%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	3.5%
<b>INT. PEAK HR (HV ONLY)</b>		5					25					0					23				
04:15 PM to 05:15 PM		0	3	0	2	0	0	0	24	1	0	0	0	0	0	0	0	0	23	0	0
<b>Heavy Vehicle % (PHV):</b>		0.0%	8.3%	0.0%	4.0%	5.7%	0.0%	0.0%	3.1%	1.5%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	3.5%



Direction:		Southbound					Westbound					Northbound					Eastbound				
BICYCLES	Roadway:	S Highland Street					Columbia Pike					Gas Station Entrance					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
	02:00 PM	to 02:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
03:00 PM	to 03:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
03:15 PM	to 03:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
03:45 PM	to 04:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
04:00 PM	to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
04:15 PM	to 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
04:30 PM	to 04:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
05:30 PM	to 05:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			





**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

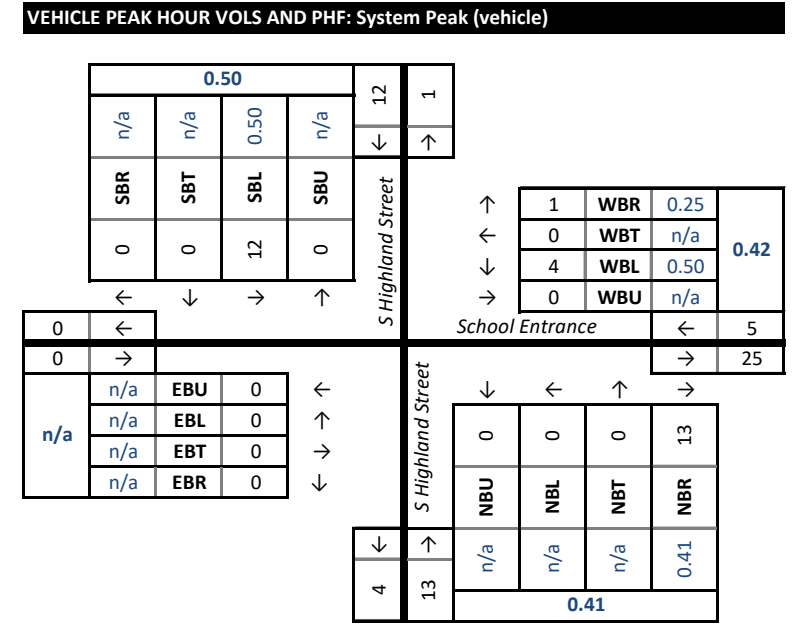
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

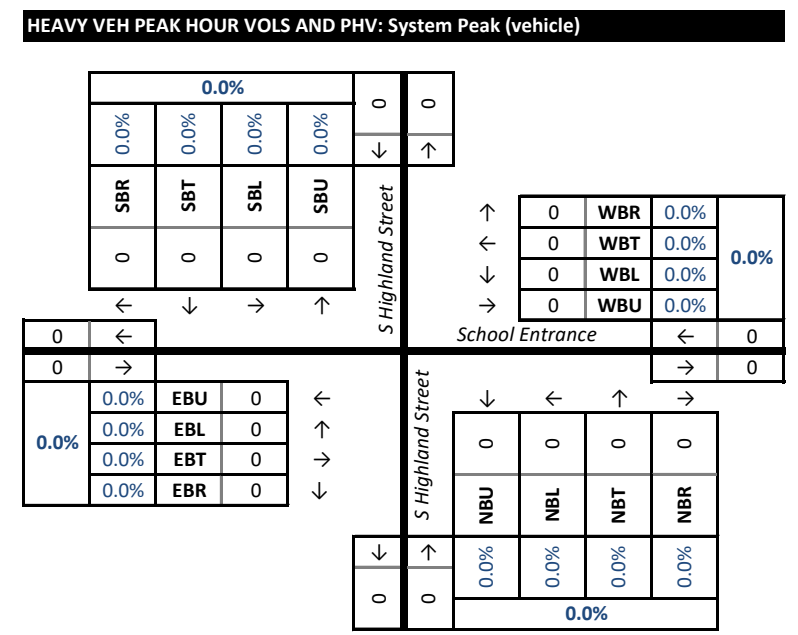
02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 02:45 PM to 03:45 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

Intersection:		1. S Highland Street & School Entrance/																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					School Entrance					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	2	0	0	0	0	1	0	1	2	0	0	0	4	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	1	0	0	5	0	0	0	6	0	0	0	0	0	0
03:00 PM	to 03:15 PM	0	5	0	0	0	0	0	0	1	16	0	0	0	3	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0	6	0	0	0	0	4	0	1	21	0	0	0	9	0	0	0	0	0	0
03:30 PM	to 03:45 PM	0	2	0	0	0	0	5	0	0	29	0	0	0	7	0	0	0	0	0	0
03:45 PM	to 04:00 PM	0	1	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0
04:00 PM	to 04:15 PM	0	4	0	0	0	0	2	0	0	8	0	0	0	4	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0	2	0	0	0	0	2	0	0	1	0	0	0	2	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	2	0	0	0	0	1	0	1	8	0	0	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	1	0	0	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	1	0	0	0	0	1	0	0	2	0	0	0	3	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	4	0	0	0	0	1	0	0	7	0	0	0	1	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	6	0	0	0	0	2	0	1	4	0	0	0	8	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	2	0	0	0	0	0	0	1	5	0	0	0	1	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	1	0	0	0	0	3	0	0	4	0	0	0	2	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	1	0	0	0	0	2	0	0	5	0	0	0	2	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	4	0	1	2	0	0	0	4	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	1	0	0	0	0	2	0	0	3	0	0	0	1	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		12					5					13					0				
04:45 PM	to 05:45 PM	0	12	0	0	0	0	4	0	1	17	0	0	0	13	0	0	0	0	0	0
Peak Hour	Overall	U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
Factor (PHF)	0.44	n/a	0.50	n/a	n/a	0.50	n/a	0.50	n/a	0.25	0.42	n/a	n/a	n/a	0.41	0.41	n/a	n/a	n/a	n/a	n/a



Direction:		1. S Highland Street & School Entrance/																			
HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					School Entrance					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
03:00 PM	to 03:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
03:45 PM	to 04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	to 04:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		0					0					0					0				
04:45 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>INT. PEAK HR (HV ONLY)</b>		2					0					9					0				
02:30 PM	to 03:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	15.4%	0.0%	0.0%	15.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40.9%	40.9%	0.0%	0.0%	0.0%	0.0%	0.0%	



Direction:		1. S Highland Street & School Entrance/																			
BICYCLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					School Entrance					S Highland Street									
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	to 03:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	to 04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	to 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	to 04:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	to 04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>																					



**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

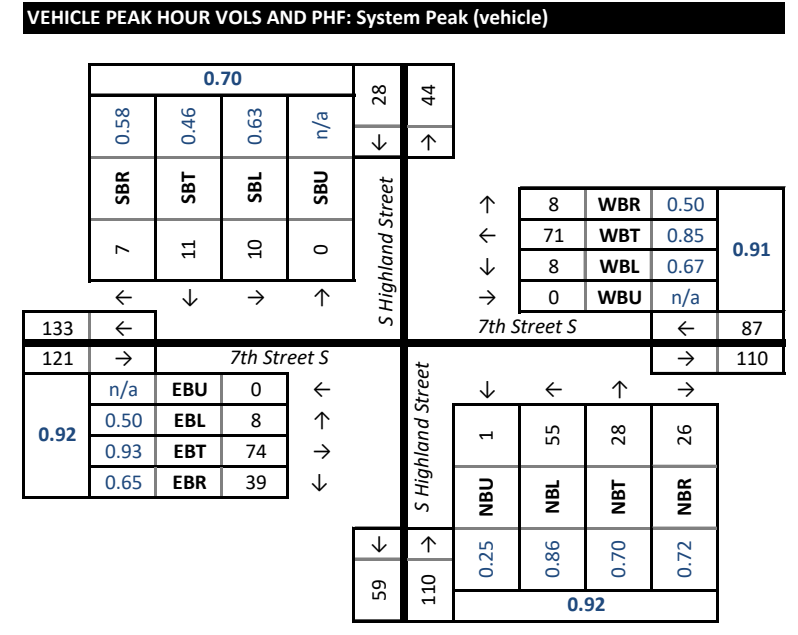
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

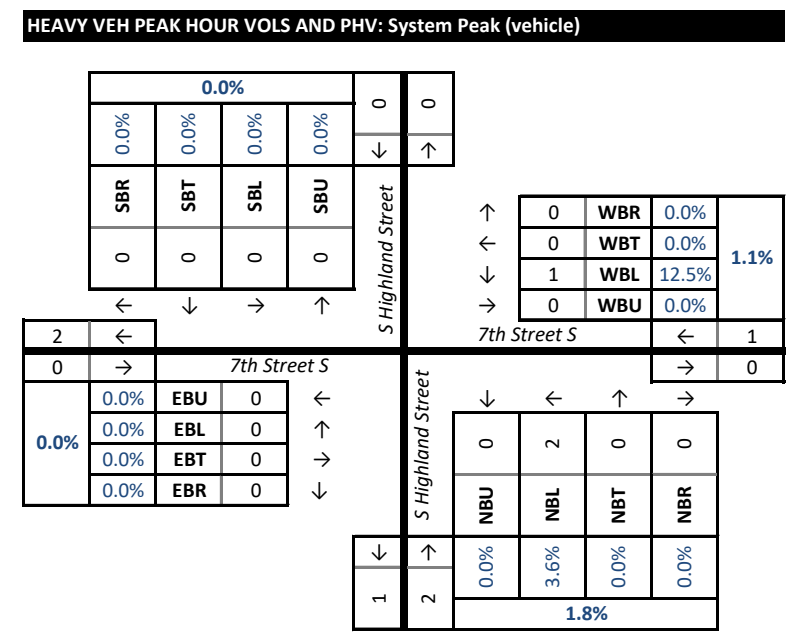
02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 03:00 PM to 04:00 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

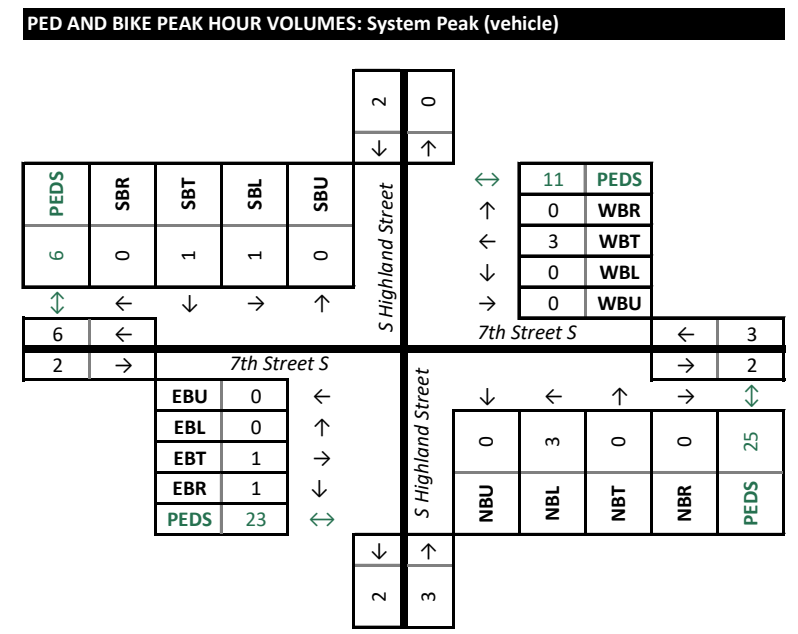
Intersection:		1. S Highland Street & 7th Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Highland Street					7th Street S					S Highland Street					7th Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	1	2	2	1	0	0	11	0	0	0	8	1	1	6	0	1	6	6	1
02:15 PM	to 02:30 PM	0	1	5	2	1	0	0	11	1	0	0	13	5	1	1	0	0	13	10	0
02:30 PM	to 02:45 PM	0	0	3	0	2	0	1	16	0	2	0	4	4	4	2	0	1	12	6	5
02:45 PM	to 03:00 PM	0	2	5	0	1	0	0	10	0	2	0	8	4	4	4	0	2	13	7	3
03:00 PM	to 03:15 PM	0	3	3	1	2	0	4	18	1	5	0	21	7	12	8	0	0	23	12	1
03:15 PM	to 03:30 PM	0	3	9	4	8	0	1	25	1	10	0	21	12	9	50	0	6	29	18	7
03:30 PM	to 03:45 PM	0	3	8	1	12	0	4	17	3	51	0	24	11	22	39	0	3	19	6	6
03:45 PM	to 04:00 PM	0	1	2	0	5	0	1	22	4	8	0	19	7	10	1	0	3	12	2	1
04:00 PM	to 04:15 PM	0	0	5	2	7	0	3	13	2	18	0	12	5	4	4	0	1	19	6	4
04:15 PM	to 04:30 PM	0	2	6	0	2	0	1	17	0	15	0	10	14	2	4	0	1	21	3	8
04:30 PM	to 04:45 PM	0	1	5	0	3	0	3	19	3	6	0	6	12	6	3	0	2	25	5	5
04:45 PM	to 05:00 PM	0	2	2	1	3	0	1	15	1	9	0	13	10	3	1	0	1	20	10	2
05:00 PM	to 05:15 PM	0	1	2	2	2	0	3	17	4	3	0	16	6	8	6	0	2	19	6	4
05:15 PM	to 05:30 PM	0	3	6	1	2	0	2	21	1	8	1	14	3	9	4	0	1	17	15	0
05:30 PM	to 05:45 PM	0	4	1	3	4	0	2	18	2	5	0	12	9	6	12	0	4	18	8	0
05:45 PM	to 06:00 PM	0	0	7	1	1	0	5	15	1	0	0	10	4	6	1	0	1	13	20	2
06:00 PM	to 06:15 PM	0	1	5	0	1	0	0	14	2	1	0	6	4	6	2	0	0	18	5	1
06:15 PM	to 06:30 PM	0	0	6	1	0	0	3	11	1	0	0	6	6	1	2	0	2	10	9	2
06:30 PM	to 06:45 PM	0	1	6	2	0	0	1	21	0	2	0	5	3	3	0	0	2	18	7	0
06:45 PM	to 07:00 PM	0	0	3	2	2	0	0	13	0	0	0	5	9	1	0	0	2	14	8	0
<b>SYSTEM PEAK HR (VEH.)</b>		28					87					110					121				
04:45 PM to 05:45 PM		0	10	11	7	11	0	8	71	8	25	1	55	28	26	23	0	8	74	39	6
<b>Peak Hour Factor (PHF)</b>		0.92					0.91					0.92					0.92				



HEAVY VEHICLES (FHWA 4+)	Direction:	Southbound				Westbound				Northbound				Eastbound				
	Roadway:	S Highland Street				7th Street S				S Highland Street				7th Street S				
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	
02:00 PM	to 02:15 PM	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	1
02:15 PM	to 02:30 PM	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	1
02:30 PM	to 02:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	3	2	
03:15 PM	to 03:30 PM	0	0	0	0	0	0	1	0	0	1	2	0	0	0	3	1	
03:30 PM	to 03:45 PM	0	0	0	0	0	0	1	0	0	1	0	2	0	1	1	0	
03:45 PM	to 04:00 PM	0	0	0	0	0	0	0	1	0	0	5	1	2	0	0	0	
04:00 PM	to 04:15 PM	0	0	0	0	0	0	4	0	0	1	0	0	0	1	1	1	
04:15 PM	to 04:30 PM	0	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	
04:30 PM	to 04:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
05:00 PM	to 05:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
05:15 PM	to 05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
<b>SYSTEM PEAK HR (VEH.)</b>		0				1				2				0				
04:45 PM to 05:45 PM		0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	
<b>Heavy Vehicle % (PHV)</b>		0.0%				1.1%				1.8%				0.0%				
<b>INT. PEAK HR (HV ONLY)</b>		0				7				15				9				
03:15 PM to 04:15 PM		0	0	0	0	0	0	6	1	0	8	3	4	0	2	5	2	
<b>Heavy Vehicle % (PHV)</b>		0.0%				7.3%				9.6%				7.3%				



BICYCLES	Direction:	Southbound				Westbound				Northbound				Eastbound			
	Roadway:	S Highland Street				7th Street S				S Highland Street				7th Street S			
	Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
02:00 PM	to 02:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0
02:15 PM	to 02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	to 02:45 PM	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0
02:45 PM	to 03:00 PM	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
03:15 PM	to 03:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
03:30 PM	to 03:45 PM	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	1
03:45 PM	to 04:00 PM	0	2	1	0	0	0	0	0	0	2	0	0	0	0	1	0
04:00 PM	to 04:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0
04:15 PM	to 04:30 PM	0	0	0	0	0	1	1	0	0	2	2	0	0	0	0	1
04:30 PM	to 04:45 PM	0	0	3	1	0	0	0	1	0	0	3	2	0	0	2	0
04:45 PM	to 05:00 PM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
05:00 PM	to 05:15 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	1	1
05:15 PM	to 05:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
05:30 PM	to 05:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05:45 PM	to 06:00 PM	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	to 07:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
<b>SYSTEM PEAK HR (VEH.)</b>		2				3				3				2			
04:45 PM to 05:45 PM		0	1	1	0	0	0	3	0	0	3	0	0	0	0	1	1
<b>INT. PEAK HR (BIKES)</b>		7				4				12				5			
03:45 PM to 04:45 PM		0	2	4	1	0	1	2	1	0	5	5	2	0	0	4	1



**DATA COLLECTION NOTES:**





**Gorove/Slade Associates - Multimodal Turning Movement Count Report**

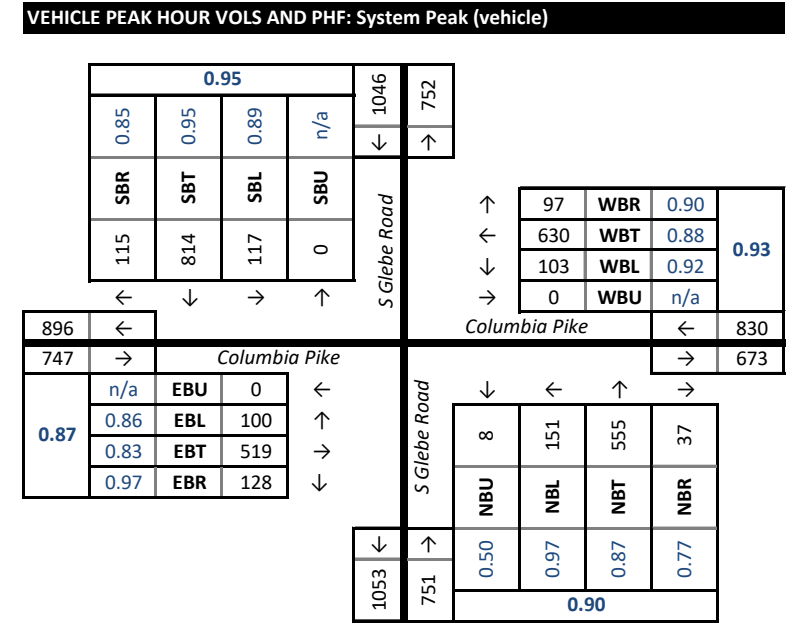
Project Name : Arlington Career Center Transportatio  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

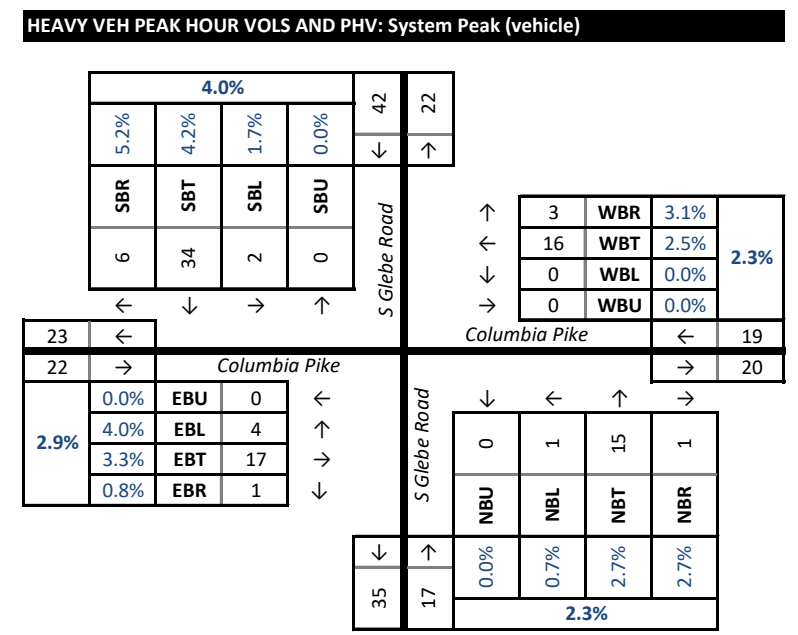
02:00 PM to 07:00 PM

Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 05:00 PM to 06:00 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

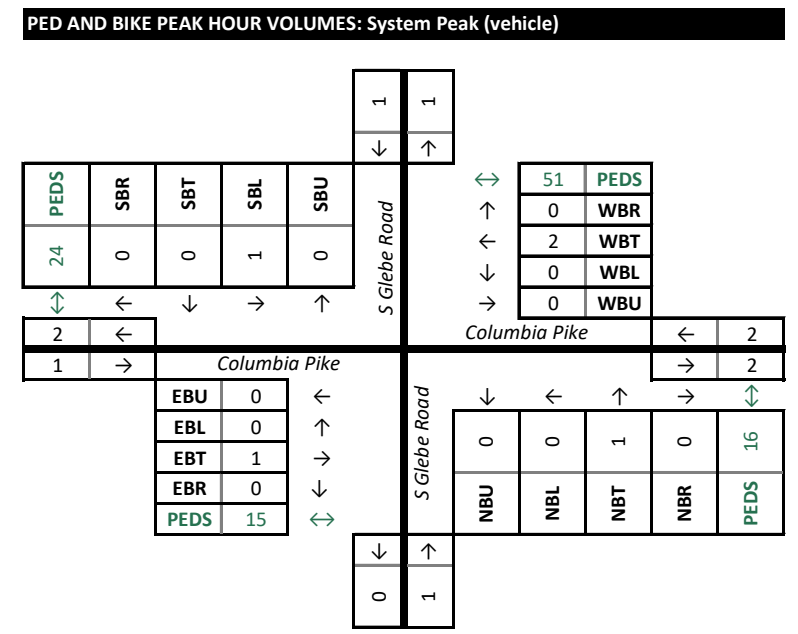
Intersection:		1. S Glebe Road & Columbia Pike																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Glebe Road					Columbia Pike					S Glebe Road					Columbia Pike				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM	to 02:15 PM	0	20	114	38	6	0	7	90	7	8	4	27	95	13	1	1	26	107	27	5
02:15 PM	to 02:30 PM	0	27	121	27	8	0	9	94	15	2	3	30	103	10	3	0	27	112	26	0
02:30 PM	to 02:45 PM	0	28	140	40	8	0	11	97	15	5	2	33	135	8	9	0	26	103	20	5
02:45 PM	to 03:00 PM	0	33	122	26	22	0	12	94	15	11	2	37	119	16	6	0	22	107	23	0
03:00 PM	to 03:15 PM	0	28	148	28	14	1	11	91	17	6	2	34	107	9	3	0	24	107	31	9
03:15 PM	to 03:30 PM	1	34	161	32	20	0	16	92	14	3	1	35	110	11	3	0	35	127	33	9
03:30 PM	to 03:45 PM	0	37	190	38	9	0	21	147	22	14	3	27	128	12	8	0	24	133	26	3
03:45 PM	to 04:00 PM	0	29	165	34	19	0	20	138	22	4	0	30	106	15	4	0	26	115	34	4
04:00 PM	to 04:15 PM	1	20	159	35	4	0	16	144	32	4	1	34	101	7	15	0	22	97	28	8
04:15 PM	to 04:30 PM	0	29	204	28	18	0	17	144	25	4	2	28	126	14	11	0	18	109	20	9
04:30 PM	to 04:45 PM	0	29	190	24	11	0	20	170	23	3	0	40	133	12	3	0	22	123	34	10
04:45 PM	to 05:00 PM	0	30	183	34	10	0	28	151	23	3	4	37	136	9	4	0	27	123	33	5
05:00 PM	to 05:15 PM	0	23	213	23	13	0	22	178	21	3	1	39	134	7	3	0	18	126	31	8
05:15 PM	to 05:30 PM	0	31	215	30	17	0	26	170	26	7	1	36	126	12	1	0	26	156	33	5
05:30 PM	to 05:45 PM	0	33	203	28	11	0	27	131	27	3	2	39	159	9	7	0	29	114	31	6
05:45 PM	to 06:00 PM	0	33	212	22	14	0	25	191	24	1	0	27	133	6	8	0	29	141	24	4
06:00 PM	to 06:15 PM	0	32	178	29	13	0	15	135	24	2	0	42	109	16	7	0	28	138	33	5
06:15 PM	to 06:30 PM	0	45	164	30	8	2	18	142	30	2	1	36	115	9	7	0	34	164	40	0
06:30 PM	to 06:45 PM	0	39	168	23	11	0	22	141	26	1	3	29	127	9	2	0	27	113	28	2
06:45 PM	to 07:00 PM	0	27	138	21	6	1	23	126	29	0	1	29	105	12	0	0	30	116	19	0
<b>SYSTEM PEAK HR (VEH.)</b>		1046					830					751					747				
04:45 PM to 05:45 PM		0	117	814	115	51	0	103	630	97	16	8	151	555	37	15	0	100	519	128	24
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.89	0.95	0.85	0.95	n/a	0.92	0.88	0.90	0.93	0.50	0.97	0.87	0.77	0.90	n/a	0.86	0.83	0.97	0.87



HEAVY VEHICLES (FHWA 4+)		Southbound					Westbound					Northbound					Eastbound				
Direction:		S Glebe Road					Columbia Pike					S Glebe Road					Columbia Pike				
Roadway:		S Glebe Road					Columbia Pike					S Glebe Road					Columbia Pike				
Movement:		U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
02:00 PM	to 02:15 PM	0	1	4	1	0	0	3	0	0	0	15	0	0	1	4	1				
02:15 PM	to 02:30 PM	0	2	6	1	0	0	2	1	0	3	10	0	0	2	4	0				
02:30 PM	to 02:45 PM	0	2	6	5	0	1	4	0	0	0	9	0	0	3	1					
02:45 PM	to 03:00 PM	0	0	8	1	0	0	3	0	0	2	11	1	0	4	8	1				
03:00 PM	to 03:15 PM	0	1	7	2	0	0	3	0	0	0	7	0	0	1	6	0				
03:15 PM	to 03:30 PM	0	0	8	1	0	0	2	0	0	0	6	0	0	1	4	0				
03:30 PM	to 03:45 PM	0	1	4	1	0	0	4	1	0	1	7	0	0	1	6	1				
03:45 PM	to 04:00 PM	0	0	8	1	0	0	5	0	0	0	4	0	0	1	4	0				
04:00 PM	to 04:15 PM	0	1	7	3	0	1	2	1	0	0	5	0	0	1	2	1				
04:15 PM	to 04:30 PM	0	0	7	1	0	0	6	0	0	0	4	0	0	2	5	0				
04:30 PM	to 04:45 PM	0	0	11	0	0	0	5	1	0	0	4	0	0	1	4	2				
04:45 PM	to 05:00 PM	0	0	11	1	0	0	4	2	0	1	6	0	0	1	5	0				
05:00 PM	to 05:15 PM	0	0	9	2	0	0	3	0	0	0	3	0	0	1	4	1				
05:15 PM	to 05:30 PM	0	1	8	2	0	0	4	1	0	0	5	1	0	1	5	0				
05:30 PM	to 05:45 PM	0	1	6	1	0	0	5	0	0	0	1	0	0	1	3	0				
05:45 PM	to 06:00 PM	0	0	4	1	0	1	4	0	0	0	3	0	0	1	4	0				
06:00 PM	to 06:15 PM	0	1	4	2	0	0	6	0	0	0	2	0	0	1	4	0				
06:15 PM	to 06:30 PM	0	0	4	0	0	0	5	1	0	0	3	0	0	1	6	2				
06:30 PM	to 06:45 PM	0	1	5	2	0	0	4	0	0	0	1	0	0	1	3	0				
06:45 PM	to 07:00 PM	0	0	4	1	0	1	5	0	0	1	1	0	0	1	3	0				
<b>SYSTEM PEAK HR (VEH.)</b>		42					19					17					22				
04:45 PM to 05:45 PM		0	2	34	6	0	0	16	3	0	1	15	1	0	4	17	1				
<b>Heavy Vehicle % (PHV)</b>		0.0%	1.7%	4.2%	5.2%	4.0%	0.0%	0.0%	2.5%	3.1%	2.3%	0.0%	0.7%	2.7%	2.7%	2.3%	0.0%	4.0%	3.3%	0.8%	2.9%
<b>INT. PEAK HR (HV ONLY)</b>		37					14					51					32				
02:00 PM to 03:00 PM		0	5	24	8	0	1	12	1	0	5	45	1	0	10	19	3				
<b>Heavy Vehicle % (PHV)</b>		0.0%	4.6%	4.8%	6.1%	5.0%	0.0%	2.6%	3.2%	1.9%	3.0%	0.0%	3.9%	10.0%	2.1%	8.0%	0.0%	9.9%	4.4%	3.1%	5.1%



BICYCLES		Southbound					Westbound					Northbound					Eastbound				
Direction:		S Glebe Road					Columbia Pike					S Glebe Road					Columbia Pike				
Roadway:		S Glebe Road					Columbia Pike					S Glebe Road					Columbia Pike				
Movement:		U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right				
02:00 PM	to 02:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0				
02:15 PM	to 02:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0				
02:30 PM	to 02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
02:45 PM	to 03:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0				
03:00 PM	to 03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
03:15 PM	to 03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
03:30 PM	to 03:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0				
03:45 PM	to 04:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0				
04:00 PM	to 04:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0				
04:15 PM	to 04:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0				
04:30 PM	to 04:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0				
04:45 PM	to 05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
05:00 PM	to 05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
05:15 PM	to 05:30 PM	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0				
05:30 PM	to 05:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0				
05:45 PM	to 06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0				
06:00 PM	to 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:15 PM	to 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:30 PM	to 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
06:45 PM	to 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
<b>SYSTEM PEAK HR (VEH.)</b>		1					2					1					1				
04:45 PM to 05:45 PM		0	1	0	0	0	0	2	0	0	0	1	0	0	0	1	0				
<b>INT. PEAK HR (BIKES)</b>		0					5					0					2				
03:30 PM to 04:30 PM		0	0	0	0	0	1	4	0	0	0	0	0	0	0	2	0				



# Gorove/Slade Associates - Multimodal Turning Movement Count Report

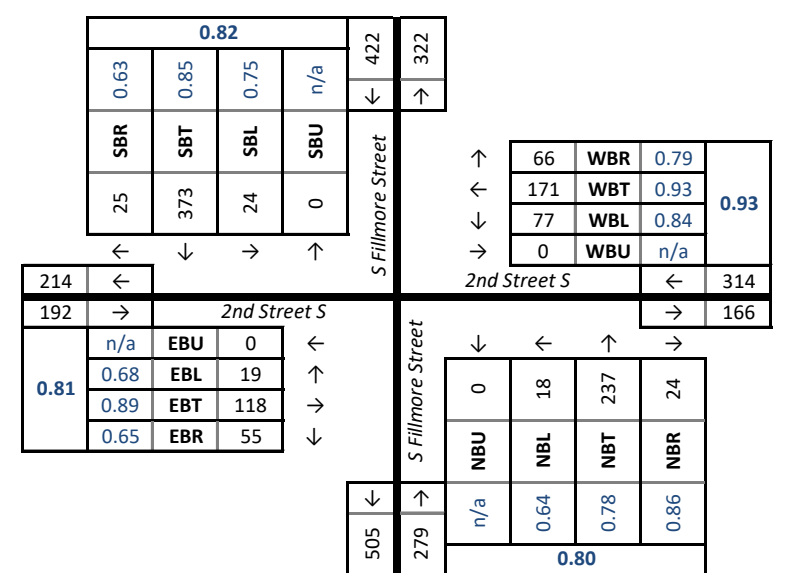
Project Name : Arlington Career Center Transportati  
 Project # : 2379-006  
 Location : Arlington, VA  
 Data Source : Gorove/Slade Associates, Inc.

Analysis Period: STUDY\_PERIOD 02:00 PM to 07:00 PM  
 Date of Counts: Thursday, November 18, 2021  
 Weather: Partly Cloudy

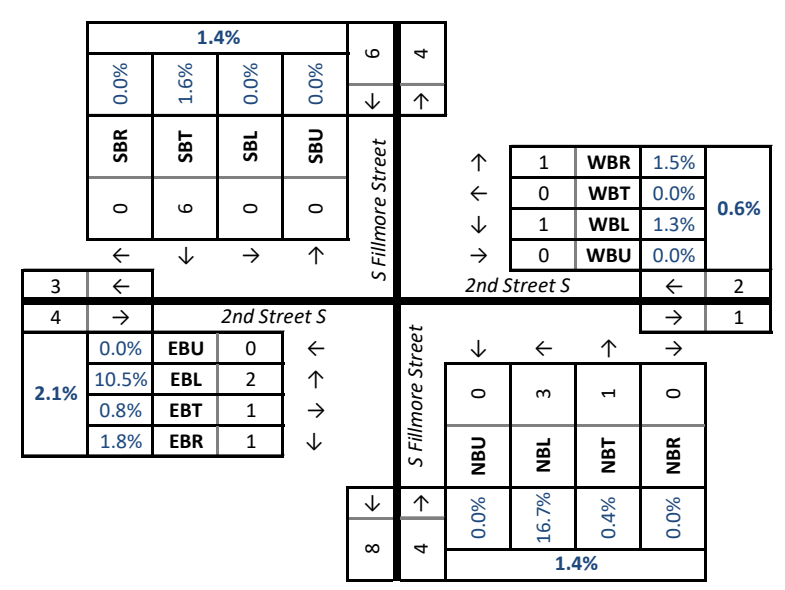
Volumes Displayed as: 2. System Peak (vehicle)  
 Intersection Peak Hour (all vehicles): 04:30 PM to 05:30 PM  
 System Peak Hour (all vehicles): 04:45 PM to 05:45 PM  
 User-Defined Peak Hour: 03:00 PM to 04:00 PM

Intersection:		1. S Fillmore Street & 2nd Street S																			
ALL VEHICLES	Direction:	Southbound					Westbound					Northbound					Eastbound				
	Roadway:	S Fillmore Street					2nd Street S					S Fillmore Street					2nd Street S				
	Movement:	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds	U	Left	Thru	Right	Peds
02:00 PM to 02:15 PM		0	8	49	6	0	0	9	35	19	0	0	3	53	4	3	0	6	15	2	0
02:15 PM to 02:30 PM		0	7	51	6	1	0	7	21	15	0	0	5	53	2	2	0	0	12	8	1
02:30 PM to 02:45 PM		0	4	48	5	2	0	9	25	10	3	0	2	60	12	1	0	3	28	20	0
02:45 PM to 03:00 PM		0	7	46	3	1	0	13	21	12	1	0	1	56	15	7	0	3	28	8	3
03:00 PM to 03:15 PM		0	1	61	4	4	0	7	25	20	2	0	3	70	8	0	0	1	22	6	1
03:15 PM to 03:30 PM		0	8	52	9	3	0	13	32	11	1	0	9	75	8	3	0	1	22	10	2
03:30 PM to 03:45 PM		0	7	75	5	4	0	18	36	21	0	0	7	63	6	8	0	4	28	11	2
03:45 PM to 04:00 PM		0	7	89	9	16	0	16	27	18	2	0	7	74	10	9	0	3	35	17	0
04:00 PM to 04:15 PM		0	4	73	4	9	0	16	42	18	1	0	7	64	10	4	0	1	23	16	3
04:15 PM to 04:30 PM		0	4	94	5	1	0	29	34	10	2	0	2	53	9	9	0	1	24	11	1
04:30 PM to 04:45 PM		0	9	91	6	3	0	22	44	15	2	0	7	52	5	5	0	0	33	20	4
04:45 PM to 05:00 PM		0	8	110	10	7	0	19	46	19	5	0	7	50	5	5	0	5	33	21	3
05:00 PM to 05:15 PM		0	3	84	4	5	0	17	39	21	0	0	3	60	7	5	0	7	25	14	3
05:15 PM to 05:30 PM		0	6	98	8	2	0	23	40	12	2	0	5	76	6	7	0	4	30	12	3
05:30 PM to 05:45 PM		0	7	81	3	3	0	18	46	14	0	0	3	51	6	4	0	3	30	8	4
05:45 PM to 06:00 PM		0	5	87	13	1	0	9	32	10	4	0	7	76	5	7	0	3	29	17	3
06:00 PM to 06:15 PM		0	12	88	2	2	0	14	38	10	1	0	5	65	4	3	0	2	41	16	3
06:15 PM to 06:30 PM		0	2	84	5	2	0	8	23	7	0	0	4	72	10	0	0	1	19	13	0
06:30 PM to 06:45 PM		0	6	71	4	0	0	19	19	12	3	0	2	73	7	1	0	3	16	8	0
06:45 PM to 07:00 PM		0	7	42	10	5	0	5	26	8	0	0	3	60	2	1	0	2	23	7	0
<b>SYSTEM PEAK HR (VEH.)</b>		422					314					279					192				
04:45 PM to 05:45 PM		0	24	373	25	17	0	77	171	66	7	0	18	237	24	21	0	19	118	55	13
<b>Peak Hour Overall</b>		U	Left	Thru	Right	SB	U	Left	Thru	Right	WB	U	Left	Thru	Right	NB	U	Left	Thru	Right	EB
<b>Factor (PHF)</b>		n/a	0.75	0.85	0.63	<b>0.82</b>	n/a	0.84	0.93	0.79	<b>0.93</b>	n/a	0.64	0.78	0.86	<b>0.80</b>	n/a	0.68	0.89	0.65	<b>0.81</b>

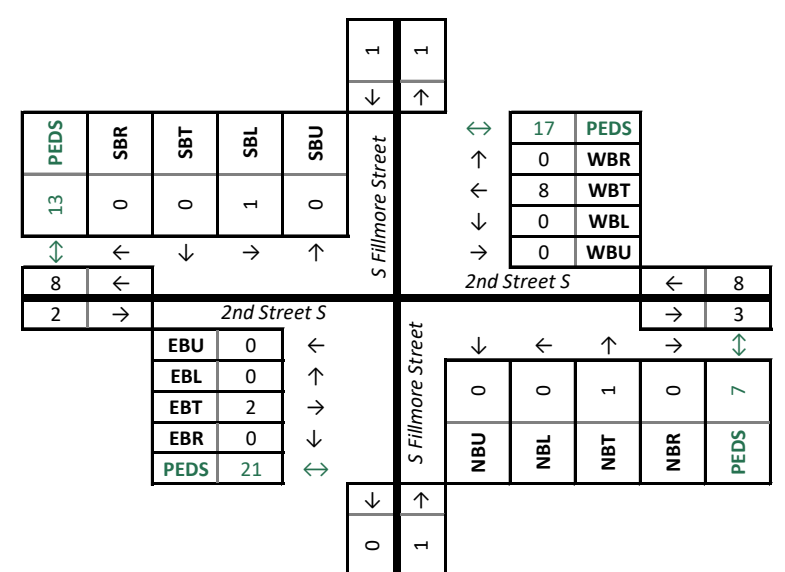
## VEHICLE PEAK HOUR VOLS AND PHF: System Peak (vehicle)



## HEAVY VEH PEAK HOUR VOLS AND PHV: System Peak (vehicle)



## PED AND BIKE PEAK HOUR VOLUMES: System Peak (vehicle)



DATA COLLECTION NOTES :

## C. Existing (2022) Capacity Analysis Worksheets

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	135	49	454	354
v/c Ratio	0.31	0.09	0.47	0.38
Control Delay	7.4	7.1	13.2	13.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.4	7.1	13.2	13.5
Queue Length 50th (ft)	10	9	256	101
Queue Length 95th (ft)	37	m16	270	161
Internal Link Dist (ft)	525		418	1320
Turn Bay Length (ft)		85		
Base Capacity (vph)	606	565	965	943
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.09	0.47	0.38

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		T	T	T	T
Traffic Volume (vph)	36	79	42	386	278	23
Future Volume (vph)	36	79	42	386	278	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.98		1.00	1.00	1.00	
Flpb, ped/bikes	0.99		0.99	1.00	1.00	
Frt	0.91		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1428		1697	1660	1616	
Flt Permitted	0.98		0.54	1.00	1.00	
Satd. Flow (perm)	1428		971	1660	1616	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	42	93	49	454	327	27
RTOR Reduction (vph)	70	0	0	0	4	0
Lane Group Flow (vph)	65	0	49	454	350	0
Confl. Peds. (#/hr)	15	10	13			13
Heavy Vehicles (%)	8%	2%	5%	3%	4%	9%
Parking (#/hr)	0	0		0	0	0
Turn Type	Perm		Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4		2			
Actuated Green, G (s)	16.0		35.0	35.0	35.0	
Effective Green, g (s)	16.0		35.0	35.0	35.0	
Actuated g/C Ratio	0.25		0.54	0.54	0.54	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	351		522	893	870	
v/s Ratio Prot				c0.27	0.22	
v/s Ratio Perm	c0.05		0.05			
v/c Ratio	0.18		0.09	0.51	0.40	
Uniform Delay, d1	19.3		7.3	9.5	8.8	
Progression Factor	1.00		0.60	0.93	1.00	
Incremental Delay, d2	0.1		0.3	2.0	1.4	
Delay (s)	19.4		4.7	10.8	10.2	
Level of Service	B		A	B	B	
Approach Delay (s)	19.4			10.2	10.2	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			11.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.41			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			49.7%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	↔
Traffic Volume (veh/h)	0	0	0	24	3	34	53	394	15	22	299	37
Future Volume (Veh/h)	0	0	0	24	3	34	53	394	15	22	299	37
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	28	4	40	62	464	18	26	352	44
Pedestrians		17			30			1			16	
Lane Width (ft)		0.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			3			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1137			498	
pX, platoon unblocked	0.88	0.88	0.95	0.88	0.88	0.86	0.95			0.86		
vC, conflicting volume	1076	1057	370	1032	1092	519	413			512		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	895	873	311	845	913	358	357			350		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	87	98	93	95			97		
cM capacity (veh/h)	192	228	692	221	216	564	1143			1009		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>	<b>SB 2</b>								
Volume Total	72	544	378	44								
Volume Left	28	62	26	0								
Volume Right	40	18	0	44								
cSH	333	1143	1009	1700								
Volume to Capacity	0.22	0.05	0.03	0.03								
Queue Length 95th (ft)	20	4	2	0								
Control Delay (s)	18.8	1.5	0.9	0.0								
Lane LOS	C	A	A									
Approach Delay (s)	18.8	1.5	0.8									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			2.4									
Intersection Capacity Utilization			63.7%		ICU Level of Service				B			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	15	4	436	320	3
Future Volume (Veh/h)	8	15	4	436	320	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	18	5	513	376	4
Pedestrians	25					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				904	731	
pX, platoon unblocked	0.85					
vC, conflicting volume	926	403	405			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	822	403	405			
tC, single (s)	6.6	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.9	2.2			
p0 queue free %	97	97	100			
cM capacity (veh/h)	259	515	1126			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	27	518	380			
Volume Left	9	5	0			
Volume Right	18	0	4			
cSH	387	1126	1700			
Volume to Capacity	0.07	0.00	0.22			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	15.0	0.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	15.0	0.1	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay	0.5					
Intersection Capacity Utilization	36.1%			ICU Level of Service	A	
Analysis Period (min)	15					

# HCM Unsignalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Volume (veh/h)	17	5	14	20	9	33	42	390	23	56	253	40
Future Volume (Veh/h)	17	5	14	20	9	33	42	390	23	56	253	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	20	6	16	24	11	39	49	459	27	66	298	47
Pedestrians		24			34						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		2			3						3	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								492			1143	
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1120	1096	346	1077	1106	534	369			520		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1036	1006	346	983	1018	320	369			302		
tC, single (s)	7.2	6.5	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	96	98	84	93	93	96			93		
cM capacity (veh/h)	125	167	656	151	164	555	1162			997		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>WB 2</b>	<b>NB 1</b>	<b>SB 1</b>							
Volume Total	42	35	39	535	411							
Volume Left	20	24	0	49	66							
Volume Right	16	0	39	27	47							
cSH	190	155	555	1162	997							
Volume to Capacity	0.22	0.23	0.07	0.04	0.07							
Queue Length 95th (ft)	20	21	6	3	5							
Control Delay (s)	29.2	34.9	12.0	1.2	2.0							
Lane LOS	D	D	B	A	A							
Approach Delay (s)	29.2	22.8		1.2	2.0							
Approach LOS	D	C										
<b>Intersection Summary</b>												
Average Delay			4.1									
Intersection Capacity Utilization			47.6%		ICU Level of Service				A			
Analysis Period (min)			15									



# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	65	670	73	461	79	378	207	48	268
v/c Ratio	0.16	0.39	0.20	0.24	0.28	0.69	0.41	0.29	0.41
Control Delay	7.7	9.7	13.7	13.3	34.5	47.1	29.5	50.1	47.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	9.7	13.7	13.3	34.5	47.1	29.5	50.1	47.2
Queue Length 50th (ft)	14	146	27	97	47	271	114	32	96
Queue Length 95th (ft)	28	145	49	127	87	382	177	70	137
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			50	
Base Capacity (vph)	417	1716	373	1902	285	688	512	212	826
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.39	0.20	0.24	0.28	0.55	0.40	0.23	0.32

### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (vph)	59	583	26	65	371	39	73	348	190	41	171	57
Future Volume (vph)	59	583	26	65	371	39	73	348	190	41	171	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		1.00	1.00	1.00	0.97	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1633	3437		1699	3182		1633	1827	1486	1673	3162	
Flt Permitted	0.49	1.00		0.30	1.00		0.44	1.00	1.00	0.46	1.00	
Satd. Flow (perm)	837	3437		542	3182		760	1827	1486	813	3162	
Peak-hour factor, PHF	0.91	0.91	0.91	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	65	641	29	73	417	44	79	378	207	48	201	67
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	65	670	0	73	461	0	79	378	207	48	268	0
Confl. Peds. (#/hr)	41		20	20		41	14		34	34		14
Heavy Vehicles (%)	5%	4%	8%	6%	8%	3%	10%	4%	3%	5%	9%	9%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	63.6	63.6		76.4	76.4		40.1	40.1	45.9	27.0	27.0	
Effective Green, g (s)	63.6	63.6		76.4	76.4		40.1	40.1	45.9	27.0	27.0	
Actuated g/C Ratio	0.49	0.49		0.59	0.59		0.31	0.31	0.35	0.21	0.21	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	409	1681		370	1870		278	563	604	168	656	
v/s Ratio Prot		c0.19		0.01	0.14		0.01	c0.21	c0.02		0.08	
v/s Ratio Perm	0.08			0.11			0.07		0.12	0.06		
v/c Ratio	0.16	0.40		0.20	0.25		0.28	0.67	0.34	0.29	0.41	
Uniform Delay, d1	18.4	21.1		12.7	12.9		32.9	39.2	30.9	43.4	44.6	
Progression Factor	0.35	0.43		1.00	1.00		1.00	1.00	1.00	1.03	1.01	
Incremental Delay, d2	0.8	0.7		0.1	0.3		0.2	2.5	0.1	1.3	0.6	
Delay (s)	7.2	9.7		12.8	13.2		33.2	41.7	31.1	45.9	45.6	
Level of Service	A	A		B	B		C	D	C	D	D	
Approach Delay (s)		9.5			13.2			37.4			45.6	
Approach LOS		A			B			D			D	

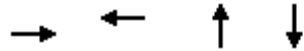
### Intersection Summary

HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

# Queues

## 6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	809	583	23	77
v/c Ratio	0.41	0.26	0.09	0.32
Control Delay	3.4	3.9	25.5	29.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.4	3.9	25.5	29.7
Queue Length 50th (ft)	28	57	5	27
Queue Length 95th (ft)	34	33	29	70
Internal Link Dist (ft)	823	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1956	2236	264	242
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.26	0.09	0.32
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	93	625	18	8	428	77	5	1	14	28	2	36	
Future Volume (vph)	93	625	18	8	428	77	5	1	14	28	2	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.99			0.97			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			0.99		
Frt		1.00			0.98			0.91			0.93		
Flt Protected		0.99			1.00			0.99			0.98		
Satd. Flow (prot)		3423			3202			1608			1433		
Flt Permitted		0.77			0.94			0.93			0.86		
Satd. Flow (perm)		2648			3014			1520			1262		
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.85	0.85	0.85	0.85	0.85	0.85	
Adj. Flow (vph)	102	687	20	9	486	88	6	1	16	33	2	42	
RTOR Reduction (vph)	0	1	0	0	11	0	0	13	0	0	34	0	
Lane Group Flow (vph)	0	808	0	0	572	0	0	10	0	0	43	0	
Confl. Peds. (#/hr)	17		17	17		17	9		18	18		9	
Heavy Vehicles (%)	4%	4%	2%	2%	10%	4%	2%	2%	2%	4%	2%	6%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		96.0			96.0			21.0			21.0		
Effective Green, g (s)		96.0			96.0			21.0			21.0		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1955			2225			245			203		
v/s Ratio Prot													
v/s Ratio Perm		c0.31			0.19			0.01			c0.03		
v/c Ratio		0.41			0.26			0.04			0.21		
Uniform Delay, d1		6.4			5.5			46.0			47.3		
Progression Factor		0.44			0.72			1.00			1.00		
Incremental Delay, d2		0.5			0.3			0.0			0.2		
Delay (s)		3.4			4.2			46.0			47.5		
Level of Service		A			A			D			D		
Approach Delay (s)		3.4			4.2			46.0			47.5		
Approach LOS		A			A			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			6.6									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.38										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			73.5%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													



# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	7	7	31	9	39	6	113	26	8	39	8
Future Volume (Veh/h)	26	7	7	31	9	39	6	113	26	8	39	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	31	8	8	36	11	46	7	133	31	9	46	9
Pedestrians		21			34			5			14	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	318	302	76	282	290	196	76			198		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	318	302	76	282	290	196	76			198		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	94	99	99	94	98	94	100			99		
cM capacity (veh/h)	543	573	960	601	581	792	1493			1264		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	47	93	171	64								
Volume Left	31	36	7	9								
Volume Right	8	46	31	9								
cSH	592	679	1493	1264								
Volume to Capacity	0.08	0.14	0.00	0.01								
Queue Length 95th (ft)	6	12	0	1								
Control Delay (s)	11.6	11.1	0.3	1.2								
Lane LOS	B	B	A	A								
Approach Delay (s)	11.6	11.1	0.3	1.2								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			4.6									
Intersection Capacity Utilization			27.6%		ICU Level of Service				A			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022












Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	5	164	14	17	40
Future Volume (Veh/h)	1	5	164	14	17	40
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	6	193	16	20	47
Pedestrians	30					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	3					
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			962			
pX, platoon unblocked						
vC, conflicting volume	318	231			239	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318	231			239	
tC, single (s)	6.4	6.2			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.6	
p0 queue free %	100	99			98	
cM capacity (veh/h)	644	785			1073	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	7	209	67			
Volume Left	1	0	20			
Volume Right	6	16	0			
cSH	761	1700	1073			
Volume to Capacity	0.01	0.12	0.02			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	9.8	0.0	2.6			
Lane LOS	A		A			
Approach Delay (s)	9.8	0.0	2.6			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.9			
Intersection Capacity Utilization			27.1%	ICU Level of Service		A
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

















## 9: S Highland Street & 8th Street S

06/06/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	26	162	7	3	50
Future Volume (Veh/h)	7	26	162	7	3	50
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.85	0.85
Hourly flow rate (vph)	8	31	184	8	4	59
Pedestrians	52					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	5					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	1225					
pX, platoon unblocked						
vC, conflicting volume	307	240			244	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	307	240			244	
tC, single (s)	6.5	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.3	
p0 queue free %	99	96			100	
cM capacity (veh/h)	626	755			1193	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	39	192	63			
Volume Left	8	0	4			
Volume Right	31	8	0			
cSH	724	1700	1193			
Volume to Capacity	0.05	0.11	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	10.3	0.0	0.5			
Lane LOS	B		A			
Approach Delay (s)	10.3	0.0	0.5			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.5			
Intersection Capacity Utilization			22.6%	ICU Level of Service		A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

06/06/2022

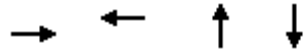
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	58	28	7	45	12	66	37	53	9	18	7
Future Volume (vph)	6	58	28	7	45	12	66	37	53	9	18	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	68	33	8	53	14	78	44	62	11	21	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	108	75	184	40								
Volume Left (vph)	7	8	78	11								
Volume Right (vph)	33	14	62	8								
Hadj (s)	-0.07	0.01	-0.07	0.10								
Departure Headway (s)	4.4	4.6	4.3	4.6								
Degree Utilization, x	0.13	0.09	0.22	0.05								
Capacity (veh/h)	770	739	799	726								
Control Delay (s)	8.1	8.0	8.5	7.9								
Approach Delay (s)	8.1	8.0	8.5	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			33.9%	ICU Level of Service	A							
Analysis Period (min)			15									



# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	123	145	1428	755
v/c Ratio	0.72	0.58	0.60	0.47
Control Delay	76.6	61.5	10.8	9.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	76.6	61.5	10.8	9.4
Queue Length 50th (ft)	103	119	321	145
Queue Length 95th (ft)	160	172	386	192
Internal Link Dist (ft)	223	873	1586	285
Turn Bay Length (ft)				
Base Capacity (vph)	271	396	2396	1601
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.37	0.60	0.47
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↕			↕			↕			↕			
Traffic Volume (vph)	69	32	3	16	26	81	2	1201	11	57	566	19		
Future Volume (vph)	69	32	3	16	26	81	2	1201	11	57	566	19		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		6.5			6.5			6.0			6.0			
Lane Util. Factor		1.00			1.00			0.95			0.95			
Frbp, ped/bikes		1.00			0.99			1.00			1.00			
Flpb, ped/bikes		1.00			1.00			1.00			1.00			
Frt		1.00			0.91			1.00			1.00			
Flt Protected		0.97			0.99			1.00			1.00			
Satd. Flow (prot)		1603			1505			3403			3337			
Flt Permitted		0.60			0.95			0.95			0.65			
Satd. Flow (perm)		988			1442			3248			2170			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85		
Adj. Flow (vph)	81	38	4	19	31	95	2	1413	13	67	666	22		
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	1	0		
Lane Group Flow (vph)	0	123	0	0	145	0	0	1428	0	0	754	0		
Confl. Peds. (#/hr)	6		10	10		6	3		7	7		3		
Confl. Bikes (#/hr)									4			4		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	1%	2%	4%	2%	5%	5%	5%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10		
Parking (#/hr)	0	0	0	0	0									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA			
Protected Phases		4			4			2			2			
Permitted Phases	4			4			2			2				
Actuated Green, G (s)		24.2			24.2			103.3			103.3			
Effective Green, g (s)		24.2			24.2			103.3			103.3			
Actuated g/C Ratio		0.17			0.17			0.74			0.74			
Clearance Time (s)		6.5			6.5			6.0			6.0			
Vehicle Extension (s)		5.0			5.0			0.2			0.2			
Lane Grp Cap (vph)		170			249			2396			1601			
v/s Ratio Prot														
v/s Ratio Perm		c0.12			0.10			c0.44			0.35			
v/c Ratio		0.72			0.58			0.60			0.47			
Uniform Delay, d1		54.7			53.3			8.6			7.4			
Progression Factor		1.00			1.00			1.00			1.00			
Incremental Delay, d2		17.1			5.3			1.1			1.0			
Delay (s)		71.8			58.5			9.7			8.4			
Level of Service		E			E			A			A			
Approach Delay (s)		71.8			58.5			9.7			8.4			
Approach LOS		E			E			A			A			
<b>Intersection Summary</b>														
HCM 2000 Control Delay			15.3									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.62											
Actuated Cycle Length (s)			140.0								12.5			
Intersection Capacity Utilization			82.4%										ICU Level of Service	E
Analysis Period (min)			15											
c Critical Lane Group														

Queues

12: S Glebe Road & Columbia Pike

06/06/2022




























Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	174	774	51	451	95	898	85	476	89
v/c Ratio	0.40	0.55	0.21	0.39	0.27	0.83	0.45	0.45	0.16
Control Delay	21.7	31.9	26.4	32.1	24.2	48.3	29.8	37.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	31.9	26.4	32.1	24.2	48.3	29.8	37.9	0.6
Queue Length 50th (ft)	81	270	27	109	47	360	42	167	0
Queue Length 95th (ft)	131	344	54	154	81	436	70	204	0
Internal Link Dist (ft)		353		823		288		1586	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	433	1407	245	1158	370	1158	194	1095	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.21	0.39	0.26	0.78	0.44	0.43	0.16

Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

06/06/2022

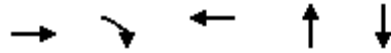
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	165	639	96	47	272	148	91	820	42	72	405	76
Future Volume (vph)	165	639	96	47	272	148	91	820	42	72	405	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.6		5.7	5.6		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1694	3390		1431	3046		1751	3414		1752	3471	1433
Flt Permitted	0.38	1.00		0.26	1.00		0.34	1.00		0.11	1.00	1.00
Satd. Flow (perm)	677	3390		397	3046		618	3414		200	3471	1433
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.96	0.96	0.96	0.85	0.85	0.85
Adj. Flow (vph)	174	673	101	51	292	159	95	854	44	85	476	89
RTOR Reduction (vph)	0	8	0	0	55	0	0	3	0	0	0	62
Lane Group Flow (vph)	174	766	0	51	396	0	95	895	0	85	476	27
Confl. Peds. (#/hr)	28		14	14		28	5		6	6		5
Heavy Vehicles (%)	6%	4%	4%	26%	10%	10%	3%	5%	2%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	58.7	48.9		49.1	44.1		46.5	38.1		43.1	36.4	36.4
Effective Green, g (s)	64.7	51.9		55.1	47.1		52.5	41.1		49.1	39.4	39.4
Actuated g/C Ratio	0.50	0.40		0.42	0.36		0.40	0.32		0.38	0.30	0.30
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	437	1353		231	1103		348	1079		191	1051	434
v/s Ratio Prot	c0.04	c0.23		0.01	0.13		c0.02	c0.26		c0.03	0.14	
v/s Ratio Perm	0.16			0.08			0.09			0.13		0.02
v/c Ratio	0.40	0.57		0.22	0.36		0.27	0.83		0.45	0.45	0.06
Uniform Delay, d1	18.9	30.3		23.0	30.4		25.1	41.2		29.5	36.6	32.2
Progression Factor	1.00	1.00		1.32	1.23		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	1.7		0.2	0.9		0.2	5.1		0.6	0.1	0.0
Delay (s)	19.5	32.0		30.7	38.2		25.2	46.4		30.1	36.7	32.2
Level of Service	B	C		C	D		C	D		C	D	C
Approach Delay (s)		29.7			37.4			44.3			35.2	
Approach LOS		C			D			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			36.8				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			19.3		
Intersection Capacity Utilization			80.1%				ICU Level of Service			D		
Analysis Period (min)			15									
c	Critical Lane Group											



# Queues

## 13: Walter Reed Drive/S Fillmore Street

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	185	67	190	349	229
v/c Ratio	0.48	0.18	0.51	0.32	0.23
Control Delay	25.5	6.4	23.6	8.6	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	6.4	23.6	8.6	7.8
Queue Length 50th (ft)	61	0	55	76	46
Queue Length 95th (ft)	105	22	101	127	81
Internal Link Dist (ft)	212		223	1320	194
Turn Bay Length (ft)		55			
Base Capacity (vph)	681	606	640	1082	1013
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.11	0.30	0.32	0.23

### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	16	141	57	31	99	32	27	266	35	29	153	21
Future Volume (vph)	16	141	57	31	99	32	27	266	35	29	153	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.97		0.99			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			0.99	
Satd. Flow (prot)		1652	1326		1593			1808			1760	
Flt Permitted		0.96	1.00		0.91			0.97			0.93	
Satd. Flow (perm)		1588	1326		1464			1755			1643	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	19	166	67	36	116	38	29	283	37	33	172	24
RTOR Reduction (vph)	0	0	51	0	17	0	0	4	0	0	4	0
Lane Group Flow (vph)	0	185	16	0	173	0	0	345	0	0	225	0
Confl. Peds. (#/hr)	15		9	9		15	5		3	3		5
Heavy Vehicles (%)	2%	2%	5%	3%	2%	3%	11%	2%	3%	7%	5%	5%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		17.0	17.0		17.0			43.0			43.0	
Effective Green, g (s)		17.0	17.0		17.0			43.0			43.0	
Actuated g/C Ratio		0.24	0.24		0.24			0.61			0.61	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		385	322		355			1078			1009	
v/s Ratio Prot												
v/s Ratio Perm		0.12	0.01		c0.12			c0.20			0.14	
v/c Ratio		0.48	0.05		0.49			0.32			0.22	
Uniform Delay, d1		22.7	20.3		22.8			6.5			6.0	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.9	0.1		1.1			0.8			0.5	
Delay (s)		23.7	20.4		23.8			7.3			6.5	
Level of Service		C	C		C			A			A	
Approach Delay (s)		22.8			23.8			7.3			6.5	
Approach LOS		C			C			A			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			14.0									B
HCM 2000 Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			70.0								10.0	
Intersection Capacity Utilization			56.9%									B
Analysis Period (min)			15									

c Critical Lane Group

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	175	70	356	483
v/c Ratio	0.37	0.17	0.40	0.54
Control Delay	7.6	14.7	15.2	18.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.6	14.7	15.2	18.8
Queue Length 50th (ft)	14	18	104	155
Queue Length 95th (ft)	42	46	183	#282
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	636	422	890	891
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.17	0.40	0.54

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	54	94	65	331	382	29
Future Volume (vph)	54	94	65	331	382	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.96		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.91		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1373		1735	1629	1626	
Flt Permitted	0.98		0.42	1.00	1.00	
Satd. Flow (perm)	1373		772	1629	1626	
Peak-hour factor, PHF	0.85	0.85	0.93	0.93	0.85	0.85
Adj. Flow (vph)	64	111	70	356	449	34
RTOR Reduction (vph)	81	0	0	0	4	0
Lane Group Flow (vph)	94	0	70	356	480	0
Confl. Peds. (#/hr)	6	30	14			14
Heavy Vehicles (%)	6%	9%	3%	5%	4%	2%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	16.0		30.0	30.0	30.0	
Effective Green, g (s)	16.0		30.0	30.0	30.0	
Actuated g/C Ratio	0.27		0.50	0.50	0.50	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	366		386	814	813	
v/s Ratio Prot	c0.07			0.22	c0.29	
v/s Ratio Perm			0.09			
v/c Ratio	0.26		0.18	0.44	0.59	
Uniform Delay, d1	17.3		8.2	9.6	10.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		1.0	1.7	3.1	
Delay (s)	17.4		9.3	11.3	13.8	
Level of Service	B		A	B	B	
Approach Delay (s)	17.4			11.0	13.8	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			13.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.47			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			60.7%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						



# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	↔
Traffic Volume (veh/h)	1	0	2	24	1	29	31	371	24	31	435	22
Future Volume (Veh/h)	1	0	2	24	1	29	31	371	24	31	435	22
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.86	0.86	0.86	0.85	0.85	0.85
Hourly flow rate (vph)	1	0	2	27	1	32	36	431	28	36	512	26
Pedestrians		17			36			1			11	
Lane Width (ft)		0.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			3			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1137			495	
pX, platoon unblocked	0.84	0.84	0.84	0.84	0.84		0.84					
vC, conflicting volume	1162	1168	530	1140	1180	492	555			495		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1096	1104	343	1071	1118	492	373			495		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.3			2.2		
p0 queue free %	99	100	100	82	99	94	96			96		
cM capacity (veh/h)	136	159	586	147	156	536	950			1027		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>	<b>SB 2</b>								
Volume Total	60	495	548	26								
Volume Left	27	36	36	0								
Volume Right	32	28	0	26								
cSH	241	950	1027	1700								
Volume to Capacity	0.25	0.04	0.04	0.02								
Queue Length 95th (ft)	24	3	3	0								
Control Delay (s)	24.9	1.1	1.0	0.0								
Lane LOS	C	A	A									
Approach Delay (s)	24.9	1.1	0.9									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			Err									
Intersection Capacity Utilization			Err%	ICU Level of Service						H		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	58	8	373	453	8
Future Volume (Veh/h)	22	58	8	373	453	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	26	68	9	439	533	9
Pedestrians	28					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				904	728	
pX, platoon unblocked	0.91	0.90	0.90			
vC, conflicting volume	1022	566	570			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	938	463	468			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.4	2.2			
p0 queue free %	89	87	99			
cM capacity (veh/h)	241	511	959			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	94	448	542			
Volume Left	26	9	0			
Volume Right	68	0	9			
cSH	390	959	1700			
Volume to Capacity	0.24	0.01	0.32			
Queue Length 95th (ft)	23	1	0			
Control Delay (s)	17.1	0.3	0.0			
Lane LOS	C	A				
Approach Delay (s)	17.1	0.3	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay			1.6			
Intersection Capacity Utilization			37.5%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (veh/h)	32	9	38	27	14	35	41	314	42	45	421	41
Future Volume (Veh/h)	32	9	38	27	14	35	41	314	42	45	421	41
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.88	0.88	0.88	0.86	0.86	0.86
Hourly flow rate (vph)	38	11	45	32	16	41	47	357	48	52	490	48
Pedestrians		62			34						26	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		3.5			3.5						3.5	
Percent Blockage		6			3						2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								492			1140	
pX, platoon unblocked	0.91	0.91		0.91	0.91	0.91				0.91		
vC, conflicting volume	1230	1213	576	1178	1213	441	600			439		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1202	1183	576	1144	1183	332	600			330		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	62	92	91	72	89	93	95			95		
cM capacity (veh/h)	99	141	486	114	141	605	892			1079		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>WB 2</b>	<b>NB 1</b>	<b>SB 1</b>							
Volume Total	94	48	41	452	590							
Volume Left	38	32	0	47	52							
Volume Right	45	0	41	48	48							
cSH	169	122	605	892	1079							
Volume to Capacity	0.56	0.39	0.07	0.05	0.05							
Queue Length 95th (ft)	72	41	5	4	4							
Control Delay (s)	50.0	52.4	11.4	1.5	1.3							
Lane LOS	E	F	B	A	A							
Approach Delay (s)	50.0	33.5		1.5	1.3							
Approach LOS	E	D										
<b>Intersection Summary</b>												
Average Delay			7.5									
Intersection Capacity Utilization			52.8%		ICU Level of Service				A			
Analysis Period (min)			15									

# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	605	155	688	98	256	169	84	474
v/c Ratio	0.32	0.50	0.48	0.43	0.33	0.38	0.27	0.30	0.52
Control Delay	29.7	27.5	20.9	18.1	22.4	24.0	14.2	32.5	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	27.5	20.9	18.1	22.4	24.0	14.2	32.5	33.5
Queue Length 50th (ft)	38	171	57	151	39	112	53	43	135
Queue Length 95th (ft)	81	230	91	185	72	174	89	80	174
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			50	
Base Capacity (vph)	228	1203	329	1613	298	716	640	284	907
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.50	0.47	0.43	0.33	0.36	0.26	0.30	0.52

### Intersection Summary



# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (vph)	66	494	56	132	501	84	87	228	150	71	336	67
Future Volume (vph)	66	494	56	132	501	84	87	228	150	71	336	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes	0.94	1.00		1.00	1.00		1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1578	3407		1747	3288		1762	1792	1442	1662	3362	
Flt Permitted	0.39	1.00		0.27	1.00		0.32	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	648	3407		499	3288		592	1792	1442	1051	3362	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.89	0.89	0.89	0.85	0.85	0.85
Adj. Flow (vph)	73	543	62	155	589	99	98	256	169	84	395	79
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	73	605	0	155	688	0	98	256	169	84	474	0
Confl. Peds. (#/hr)	81		36	36		81	34		66	66		34
Heavy Vehicles (%)	8%	4%	2%	3%	2%	2%	2%	6%	4%	3%	4%	3%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	34.0	34.0		47.8	47.8		38.7	38.7	45.5	27.0	27.0	
Effective Green, g (s)	34.0	34.0		47.8	47.8		38.7	38.7	45.5	27.0	27.0	
Actuated g/C Ratio	0.34	0.34		0.48	0.48		0.39	0.39	0.46	0.27	0.27	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	220	1158		323	1571		289	693	757	283	907	
v/s Ratio Prot		c0.18		0.03	c0.21		0.02	c0.14	0.02		c0.14	
v/s Ratio Perm	0.11			0.20			0.11		0.10	0.08		
v/c Ratio	0.33	0.52		0.48	0.44		0.34	0.37	0.22	0.30	0.52	
Uniform Delay, d1	24.5	26.5		16.3	17.2		20.6	21.9	16.5	29.0	31.0	
Progression Factor	0.97	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.8	1.6		0.4	0.9		0.3	0.1	0.1	0.8	0.7	
Delay (s)	27.7	27.5		16.7	18.1		20.9	22.0	16.6	29.8	31.7	
Level of Service	C	C		B	B		C	C	B	C	C	
Approach Delay (s)		27.5			17.9			20.1			31.4	
Approach LOS		C			B			C			C	

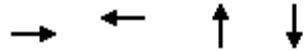
### Intersection Summary

HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Queues

6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	739	729	13	152
v/c Ratio	0.39	0.34	0.04	0.47
Control Delay	4.5	9.6	1.4	26.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.5	9.6	1.4	26.2
Queue Length 50th (ft)	55	158	0	50
Queue Length 95th (ft)	54	210	2	103
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1872	2121	353	326
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.34	0.04	0.47
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	57	589	12	8	573	89	3	0	8	50	5	74	
Future Volume (vph)	57	589	12	8	573	89	3	0	8	50	5	74	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.98			0.97			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			0.99		
Frt		1.00			0.98			0.91			0.92		
Flt Protected		1.00			1.00			0.98			0.98		
Satd. Flow (prot)		3469			3380			1610			1466		
Flt Permitted		0.81			0.95			0.92			0.87		
Satd. Flow (perm)		2836			3196			1504			1296		
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85	
Adj. Flow (vph)	64	662	13	9	623	97	4	0	9	59	6	87	
RTOR Reduction (vph)	0	1	0	0	12	0	0	10	0	0	48	0	
Lane Group Flow (vph)	0	738	0	0	717	0	0	3	0	0	104	0	
Confl. Peds. (#/hr)	49		25	25		49	14		20	20		14	
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		66.0			66.0			21.0			21.0		
Effective Green, g (s)		66.0			66.0			21.0			21.0		
Actuated g/C Ratio		0.66			0.66			0.21			0.21		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1871			2109			315			272		
v/s Ratio Prot													
v/s Ratio Perm		c0.26			0.22			0.00			c0.08		
v/c Ratio		0.39			0.34			0.01			0.38		
Uniform Delay, d1		7.8			7.5			31.3			33.9		
Progression Factor		0.51			1.29			1.00			1.00		
Incremental Delay, d2		0.5			0.4			0.0			0.3		
Delay (s)		4.5			10.0			31.3			34.3		
Level of Service		A			A			C			C		
Approach Delay (s)		4.5			10.0			31.3			34.3		
Approach LOS		A			A			C			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			9.9									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.39										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			72.3%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	8	8	9	36	34	52	36	78	31	17	63	19
Future Volume (Veh/h)	8	8	9	36	34	52	36	78	31	17	63	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.92
Hourly flow rate (vph)	9	9	11	42	40	61	42	92	36	20	74	21
Pedestrians		40			49			16			18	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			5			2			2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	458	426	140	399	418	177	135			177		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	458	426	140	399	418	177	135			177		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	98	98	99	91	91	92	97			99		
cM capacity (veh/h)	379	456	860	462	461	788	1388			1334		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	29	143	170	115								
Volume Left	9	42	42	20								
Volume Right	11	61	36	21								
cSH	515	561	1388	1334								
Volume to Capacity	0.06	0.26	0.03	0.01								
Queue Length 95th (ft)	4	25	2	1								
Control Delay (s)	12.4	13.6	2.1	1.4								
Lane LOS	B	B	A	A								
Approach Delay (s)	12.4	13.6	2.1	1.4								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			6.2									
Intersection Capacity Utilization			33.1%		ICU Level of Service				A			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	2	114	24	14	69
Future Volume (Veh/h)	9	2	114	24	14	69
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	11	2	134	28	16	81
Pedestrians	71					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	7					
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			962			
pX, platoon unblocked						
vC, conflicting volume	332	219			233	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332	219			233	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	98	100			99	
cM capacity (veh/h)	610	765			1181	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	13	162	97			
Volume Left	11	0	16			
Volume Right	2	28	0			
cSH	629	1700	1181			
Volume to Capacity	0.02	0.10	0.01			
Queue Length 95th (ft)	2	0	1			
Control Delay (s)	10.8	0.0	1.4			
Lane LOS	B		A			
Approach Delay (s)	10.8	0.0	1.4			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.0			
Intersection Capacity Utilization			25.6%		ICU Level of Service	A
Analysis Period (min)			15			



# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

06/06/2022



















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑			↑
Traffic Volume (veh/h)	14	56	116	0	1	69
Future Volume (Veh/h)	14	56	116	0	1	69
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	16	66	136	0	1	81
Pedestrians	92					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	1225					
pX, platoon unblocked						
vC, conflicting volume	311	228			228	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	311	228			228	
tC, single (s)	6.5	6.5			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.5			2.2	
p0 queue free %	97	90			100	
cM capacity (veh/h)	612	691			1223	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	82	136	82			
Volume Left	16	0	1			
Volume Right	66	0	0			
cSH	674	1700	1223			
Volume to Capacity	0.12	0.08	0.00			
Queue Length 95th (ft)	10	0	0			
Control Delay (s)	11.1	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	11.1	0.0	0.1			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			3.1			
Intersection Capacity Utilization			23.9%	ICU Level of Service	A	
Analysis Period (min)	15					

# HCM Unsignalized Intersection Capacity Analysis

## 10: S Highland Street & 7th Street S

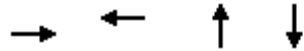
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	83	38	10	82	9	85	37	53	10	22	6
Future Volume (vph)	12	83	38	10	82	9	85	37	53	10	22	6
Peak Hour Factor	0.85	0.85	0.85	0.94	0.94	0.94	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	14	98	45	11	87	10	100	44	62	12	26	7
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	157	108	206	45								
Volume Left (vph)	14	11	100	12								
Volume Right (vph)	45	10	62	7								
Hadj (s)	-0.02	0.01	0.07	-0.01								
Departure Headway (s)	4.6	4.7	4.7	4.8								
Degree Utilization, x	0.20	0.14	0.27	0.06								
Capacity (veh/h)	725	709	731	689								
Control Delay (s)	8.8	8.5	9.4	8.1								
Approach Delay (s)	8.8	8.5	9.4	8.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.9									
Level of Service			A									
Intersection Capacity Utilization			38.0%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	86	232	728	1013
v/c Ratio	0.31	0.72	0.36	0.57
Control Delay	32.7	47.5	7.4	13.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.7	47.5	7.4	13.0
Queue Length 50th (ft)	43	129	174	199
Queue Length 95th (ft)	79	196	228	265
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	322	377	2015	1777
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.62	0.36	0.57
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	38	27	8	50	50	103	4	642	32	67	892	13
Future Volume (vph)	38	27	8	50	50	103	4	642	32	67	892	13
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.93			0.99			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1548			1468			3345			3369	
Flt Permitted		0.71			0.89			0.95			0.83	
Satd. Flow (perm)		1133			1324			3180			2809	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.90	0.93	0.93	0.93	0.96	0.96	0.96
Adj. Flow (vph)	45	32	9	59	59	114	4	690	34	70	929	14
RTOR Reduction (vph)	0	0	0	0	0	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	86	0	0	232	0	0	725	0	0	1012	0
Confl. Peds. (#/hr)	3		2	2		3	9		19	19		9
Heavy Vehicles (%)	3%	11%	2%	6%	8%	6%	2%	5%	3%	8%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		24.3			24.3			63.2			63.2	
Effective Green, g (s)		24.3			24.3			63.2			63.2	
Actuated g/C Ratio		0.24			0.24			0.63			0.63	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		275			321			2009			1775	
v/s Ratio Prot												
v/s Ratio Perm		0.08			0.18			0.23			0.36	
v/c Ratio		0.31			0.72			0.36			0.57	
Uniform Delay, d1		31.0			34.8			8.8			10.6	
Progression Factor		1.00			1.00			0.74			1.00	
Incremental Delay, d2		1.4			9.5			0.4			1.3	
Delay (s)		32.4			44.3			6.9			11.9	
Level of Service		C			D			A			B	
Approach Delay (s)		32.4			44.3			6.9			11.9	
Approach LOS		C			D			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			14.7									B
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			100.0							12.5		
Intersection Capacity Utilization			74.9%									D
Analysis Period (min)			15									

c Critical Lane Group

# Queues

## 12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	118	659	81	639	142	536	148	763	152
v/c Ratio	0.45	0.61	0.30	0.65	0.64	0.58	0.51	0.86	0.28
Control Delay	24.0	31.5	12.0	19.8	33.2	33.9	19.3	36.5	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	31.5	12.0	19.8	33.2	33.9	19.3	36.5	2.3
Queue Length 50th (ft)	45	186	17	72	57	152	27	248	10
Queue Length 95th (ft)	81	249	27	107	99	208	43	#330	17
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	262	1080	272	979	234	922	293	889	542
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.61	0.30	0.65	0.61	0.58	0.51	0.86	0.28

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕↗		↗	↕↗		↗	↕↗		↗	↕↗	↗
Traffic Volume (vph)	109	482	124	69	468	75	132	451	47	129	664	132
Future Volume (vph)	109	482	124	69	468	75	132	451	47	129	664	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1727	3358		1767	3391		1768	3385		1762	3471	1443
Flt Permitted	0.28	1.00		0.30	1.00		0.15	1.00		0.36	1.00	1.00
Satd. Flow (perm)	516	3358		567	3391		281	3385		670	3471	1443
Peak-hour factor, PHF	0.92	0.92	0.92	0.85	0.85	0.85	0.93	0.93	0.93	0.87	0.87	0.87
Adj. Flow (vph)	118	524	135	81	551	88	142	485	51	148	763	152
RTOR Reduction (vph)	0	22	0	0	13	0	0	8	0	0	0	113
Lane Group Flow (vph)	118	637	0	81	626	0	142	528	0	148	763	39
Confl. Peds. (#/hr)	62		18	18		62	25		27	27		25
Heavy Vehicles (%)	4%	4%	2%	2%	3%	2%	2%	5%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	36.1	29.8		33.5	28.5		35.3	27.0		32.5	25.6	25.6
Effective Green, g (s)	36.1	29.8		33.5	28.5		35.3	27.0		32.5	25.6	25.6
Actuated g/C Ratio	0.36	0.30		0.34	0.28		0.35	0.27		0.32	0.26	0.26
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	262	1000		249	966		222	913		293	888	369
v/s Ratio Prot	c0.03	c0.19		0.02	0.18		c0.05	0.16		0.03	c0.22	
v/s Ratio Perm	0.13			0.09			0.17			0.13		0.03
v/c Ratio	0.45	0.64		0.33	0.65		0.64	0.58		0.51	0.86	0.11
Uniform Delay, d1	22.4	30.4		23.4	31.4		24.3	31.6		25.0	35.5	28.4
Progression Factor	1.00	1.00		0.52	0.54		1.00	1.00		0.68	0.74	2.21
Incremental Delay, d2	1.2	3.1		0.3	3.2		4.4	0.6		0.4	7.0	0.0
Delay (s)	23.6	33.5		12.5	20.0		28.7	32.1		17.3	33.2	62.8
Level of Service	C	C		B	C		C	C		B	C	E
Approach Delay (s)		32.0			19.2			31.4			35.2	
Approach LOS		C			B			C			D	

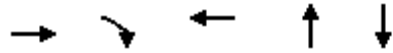
### Intersection Summary

HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.3
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	137	52	287	370	385
v/c Ratio	0.22	0.10	0.48	0.52	0.53
Control Delay	12.1	4.2	13.5	14.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	4.2	13.5	14.6	14.9
Queue Length 50th (ft)	28	0	55	82	87
Queue Length 95th (ft)	56	15	103	148	142
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	622	546	599	717	728
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.10	0.48	0.52	0.53

Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕	↕		↕			↕			↕		
Traffic Volume (vph)	9	107	44	54	120	70	26	282	32	23	277	27	
Future Volume (vph)	9	107	44	54	120	70	26	282	32	23	277	27	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0		
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00		
Frbp, ped/bikes		1.00	0.96		0.98			1.00			1.00		
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00		
Frt		1.00	0.85		0.96			0.99			0.99		
Flt Protected		1.00	1.00		0.99			1.00			1.00		
Satd. Flow (prot)		1599	1288		1563			1774			1793		
Flt Permitted		0.97	1.00		0.91			0.95			0.96		
Satd. Flow (perm)		1557	1288		1433			1700			1726		
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92	0.85	0.85	0.85	
Adj. Flow (vph)	11	126	52	64	141	82	28	307	35	27	326	32	
RTOR Reduction (vph)	0	0	31	0	26	0	0	7	0	0	6	0	
Lane Group Flow (vph)	0	137	21	0	261	0	0	363	0	0	379	0	
Confl. Peds. (#/hr)	27		20	20		27	5		5	5		5	
Heavy Vehicles (%)	11%	5%	7%	2%	2%	2%	19%	4%	3%	9%	4%	2%	
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0	
Parking (#/hr)	0	0	0	0	0	0							
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA		
Protected Phases		4			4			2			2		
Permitted Phases	4		4	4			2			2			
Actuated Green, G (s)		22.0	22.0		22.0			23.0			23.0		
Effective Green, g (s)		22.0	22.0		22.0			23.0			23.0		
Actuated g/C Ratio		0.40	0.40		0.40			0.42			0.42		
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0		
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)		622	515		573			710			721		
v/s Ratio Prot													
v/s Ratio Perm		0.09	0.02		c0.18			0.21			c0.22		
v/c Ratio		0.22	0.04		0.45			0.51			0.53		
Uniform Delay, d1		10.9	10.1		12.1			11.8			11.9		
Progression Factor		1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2		0.8	0.1		2.6			2.6			2.7		
Delay (s)		11.7	10.2		14.7			14.5			14.7		
Level of Service		B	B		B			B			B		
Approach Delay (s)		11.3			14.7			14.5			14.7		
Approach LOS		B			B			B			B		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			14.1									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.49										
Actuated Cycle Length (s)			55.0									Sum of lost time (s)	10.0
Intersection Capacity Utilization			67.5%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	128	60	365	645
v/c Ratio	0.29	0.18	0.38	0.67
Control Delay	7.1	19.1	18.5	21.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.1	19.1	18.5	21.7
Queue Length 50th (ft)	9	30	197	240
Queue Length 95th (ft)	39	56	248	#443
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	614	326	965	966
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.18	0.38	0.67

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	33	81	51	310	541	33
Future Volume (vph)	33	81	51	310	541	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.90		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1451		1752	1660	1658	
Flt Permitted	0.99		0.30	1.00	1.00	
Satd. Flow (perm)	1451		558	1660	1658	
Peak-hour factor, PHF	0.89	0.89	0.85	0.85	0.89	0.89
Adj. Flow (vph)	37	91	60	365	608	37
RTOR Reduction (vph)	69	0	0	0	3	0
Lane Group Flow (vph)	59	0	60	365	642	0
Confl. Peds. (#/hr)	16	16	20			20
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	16.0		35.0	35.0	35.0	
Effective Green, g (s)	16.0		35.0	35.0	35.0	
Actuated g/C Ratio	0.25		0.54	0.54	0.54	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	357		300	893	892	
v/s Ratio Prot	c0.04			0.22	c0.39	
v/s Ratio Perm			0.11			
v/c Ratio	0.17		0.20	0.41	0.72	
Uniform Delay, d1	19.3		7.8	8.9	11.3	
Progression Factor	1.00		1.47	1.49	1.00	
Incremental Delay, d2	0.1		1.5	1.4	5.0	
Delay (s)	19.3		12.9	14.6	16.3	
Level of Service	B		B	B	B	
Approach Delay (s)	19.3			14.4	16.3	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			15.9		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.55			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			65.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						



# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	↔
Traffic Volume (veh/h)	0	0	1	32	2	27	15	344	30	24	579	14
Future Volume (Veh/h)	0	0	1	32	2	27	15	344	30	24	579	14
Sign Control	Stop			Stop			Free			Free		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	1	38	2	32	18	405	35	27	651	16
Pedestrians	15			21			5			16		
Lane Width (ft)	0.0			12.0			12.0			12.0		
Walking Speed (ft/s)	3.5			3.5			3.5			3.5		
Percent Blockage	0			2			0			2		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)							1137			495		
pX, platoon unblocked	0.75	0.75	0.72	0.75	0.75	0.94	0.72				0.94	
vC, conflicting volume	1228	1217	671	1190	1216	460	682				461	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	960	946	356	911	944	393	372				395	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2	
p0 queue free %	100	100	100	79	99	95	98				97	
cM capacity (veh/h)	157	185	496	178	185	595	860				1072	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>	<b>SB 2</b>								
Volume Total	72	458	678	16								
Volume Left	38	18	27	0								
Volume Right	32	35	0	16								
cSH	259	860	1072	1700								
Volume to Capacity	0.28	0.02	0.03	0.01								
Queue Length 95th (ft)	28	2	2	0								
Control Delay (s)	24.2	0.6	0.7	0.0								
Lane LOS	C	A	A									
Approach Delay (s)	24.2	0.6	0.7									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			Err									
Intersection Capacity Utilization			Err%	ICU Level of Service								H
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	23	3	368	609	3
Future Volume (Veh/h)	7	23	3	368	609	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	8	27	4	433	716	4
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				904	728	
pX, platoon unblocked	0.79	0.76	0.76			
vC, conflicting volume	1181	740	742			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	876	494	497			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	99			
cM capacity (veh/h)	247	425	789			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	35	437	720			
Volume Left	8	4	0			
Volume Right	27	0	4			
cSH	365	789	1700			
Volume to Capacity	0.10	0.01	0.42			
Queue Length 95th (ft)	8	0	0			
Control Delay (s)	15.9	0.2	0.0			
Lane LOS	C	A				
Approach Delay (s)	15.9	0.2	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay	0.5					
Intersection Capacity Utilization	42.2%			ICU Level of Service	A	
Analysis Period (min)	15					

# HCM Unsignalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗		↕			↕	
Traffic Volume (veh/h)	19	12	32	34	13	28	30	324	40	58	565	33
Future Volume (Veh/h)	19	12	32	34	13	28	30	324	40	58	565	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86	0.90	0.90	0.90
Hourly flow rate (vph)	22	14	38	36	14	30	35	377	47	64	628	37
Pedestrians		38			20							9
Lane Width (ft)		12.0			12.0							12.0
Walking Speed (ft/s)		3.5			3.5							3.5
Percent Blockage		4			2							1
Right turn flare (veh)												
Median type								None				None
Median storage (veh)												
Upstream signal (ft)								492				1140
pX, platoon unblocked	0.88	0.88	0.82	0.88	0.88	0.88	0.82			0.88		
vC, conflicting volume	1329	1326	684	1310	1322	430	703			444		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1003	1000	507	981	994	286	529			302		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			2.2		
p0 queue free %	85	92	92	76	92	95	96			94		
cM capacity (veh/h)	148	182	448	151	183	646	794			1089		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>WB 2</b>	<b>NB 1</b>	<b>SB 1</b>							
Volume Total	74	50	30	459	729							
Volume Left	22	36	0	35	64							
Volume Right	38	0	30	47	37							
cSH	238	159	646	794	1089							
Volume to Capacity	0.31	0.32	0.05	0.04	0.06							
Queue Length 95th (ft)	32	32	4	3	5							
Control Delay (s)	26.8	37.8	10.8	1.3	1.5							
Lane LOS	D	E	B	A	A							
Approach Delay (s)	26.8	27.7		1.3	1.5							
Approach LOS	D	D										
<b>Intersection Summary</b>												
Average Delay			4.4									
Intersection Capacity Utilization			64.6%		ICU Level of Service					C		
Analysis Period (min)			15									

# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	585	309	891	91	282	207	103	576
v/c Ratio	0.24	0.45	0.67	0.47	0.47	0.46	0.31	0.43	0.72
Control Delay	21.8	18.9	23.6	18.3	37.6	36.3	18.6	50.8	54.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	18.9	23.6	18.3	37.6	36.3	18.6	50.8	54.7
Queue Length 50th (ft)	13	100	134	225	53	186	94	86	262
Queue Length 95th (ft)	m42	154	207	296	89	252	122	m133	320
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			50	
Base Capacity (vph)	223	1302	505	1903	195	673	730	268	891
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.45	0.61	0.47	0.47	0.42	0.28	0.38	0.65

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (vph)	50	497	59	290	778	59	80	248	182	92	418	94
Future Volume (vph)	50	497	59	290	778	59	80	248	182	92	418	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		1.00	1.00	1.00	0.94	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1731	3396		1760	3379		1766	1863	1470	1664	3409	
Flt Permitted	0.32	1.00		0.30	1.00		0.20	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	582	3396		559	3379		378	1863	1470	1028	3409	
Peak-hour factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94	0.88	0.88	0.88	0.89	0.89	0.89
Adj. Flow (vph)	53	523	62	309	828	63	91	282	207	103	470	106
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	53	585	0	309	891	0	91	282	207	103	576	0
Confl. Peds. (#/hr)	32		46	46		32	28		61	61		28
Heavy Vehicles (%)	2%	4%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	49.8	49.8		73.2	73.2		43.3	43.3	59.7	30.4	30.4	
Effective Green, g (s)	49.8	49.8		73.2	73.2		43.3	43.3	59.7	30.4	30.4	
Actuated g/C Ratio	0.38	0.38		0.56	0.56		0.33	0.33	0.46	0.23	0.23	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	222	1300		466	1902		194	620	754	240	797	
v/s Ratio Prot		0.17		c0.08	0.26		0.02	c0.15	0.03		c0.17	
v/s Ratio Perm	0.09			c0.29			0.13		0.11	0.10		
v/c Ratio	0.24	0.45		0.66	0.47		0.47	0.45	0.27	0.43	0.72	
Uniform Delay, d1	27.2	29.9		16.9	16.9		32.2	34.1	21.8	42.4	45.9	
Progression Factor	0.61	0.57		1.00	1.00		1.00	1.00	1.00	1.08	1.08	
Incremental Delay, d2	2.4	1.1		2.7	0.8		0.7	0.2	0.1	1.5	3.1	
Delay (s)	19.1	18.0		19.6	17.7		32.8	34.3	21.8	47.5	52.8	
Level of Service	B	B		B	B		C	C	C	D	D	
Approach Delay (s)		18.1			18.2			29.6			52.0	
Approach LOS		B			B			C			D	

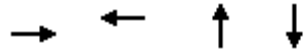
### Intersection Summary

HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	781	942	7	139
v/c Ratio	0.38	0.39	0.03	0.57
Control Delay	2.4	3.7	40.2	46.2
Queue Delay	0.0	0.1	0.0	0.0
Total Delay	2.4	3.9	40.2	46.2
Queue Length 50th (ft)	35	53	4	78
Queue Length 95th (ft)	39	65	17	139
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	2064	2402	253	246
Starvation Cap Reductn	0	526	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.50	0.03	0.57

Intersection Summary



# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	45	643	7	8	809	78	3	1	2	53	2	64	
Future Volume (vph)	45	643	7	8	809	78	3	1	2	53	2	64	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.99			0.99			0.98		
Flpb, ped/bikes		1.00			1.00			0.99			0.99		
Frt		1.00			0.99			0.96			0.93		
Flt Protected		1.00			1.00			0.97			0.98		
Satd. Flow (prot)		3452			3425			1712			1482		
Flt Permitted		0.81			0.95			0.86			0.85		
Satd. Flow (perm)		2798			3247			1524			1293		
Peak-hour factor, PHF	0.89	0.89	0.89	0.95	0.95	0.95	0.85	0.85	0.85	0.85	0.85	0.85	
Adj. Flow (vph)	51	722	8	8	852	82	4	1	2	62	2	75	
RTOR Reduction (vph)	0	1	0	0	6	0	0	2	0	0	33	0	
Lane Group Flow (vph)	0	780	0	0	936	0	0	5	0	0	106	0	
Confl. Peds. (#/hr)	35		16	16		35	11		10	10		11	
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		95.9			95.9			21.1			21.1		
Effective Green, g (s)		95.9			95.9			21.1			21.1		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		2064			2395			247			209		
v/s Ratio Prot													
v/s Ratio Perm		0.28			c0.29			0.00			c0.08		
v/c Ratio		0.38			0.39			0.02			0.51		
Uniform Delay, d1		6.2			6.3			45.8			49.7		
Progression Factor		0.32			0.53			1.00			1.00		
Incremental Delay, d2		0.4			0.4			0.0			0.7		
Delay (s)		2.4			3.8			45.8			50.4		
Level of Service		A			A			D			D		
Approach Delay (s)		2.4			3.8			45.8			50.4		
Approach LOS		A			A			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			6.8									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.41										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			78.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	7	9	14	38	23	18	14	60	30	11	39	9
Future Volume (Veh/h)	7	9	14	38	23	18	14	60	30	11	39	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.94	0.94	0.94	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	8	11	16	40	24	19	16	71	35	12	42	10
Pedestrians		14			15			9			15	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	252	238	70	237	226	118	66			121		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	252	238	70	237	226	118	66			121		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	99	98	98	94	96	98	99			99		
cM capacity (veh/h)	627	633	971	655	643	896	1515			1446		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	35	83	122	64								
Volume Left	8	40	16	12								
Volume Right	16	19	35	10								
cSH	751	694	1515	1446								
Volume to Capacity	0.05	0.12	0.01	0.01								
Queue Length 95th (ft)	4	10	1	1								
Control Delay (s)	10.0	10.9	1.0	1.5								
Lane LOS	B	B	A	A								
Approach Delay (s)	10.0	10.9	1.0	1.5								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			4.9									
Intersection Capacity Utilization			28.1%		ICU Level of Service					A		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	1	72	13	12	48
Future Volume (Veh/h)	4	1	72	13	12	48
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	5	1	85	15	14	56
Pedestrians	17					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	194	110			117	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	194	110			117	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			99	
cM capacity (veh/h)	775	929			1448	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	6	100	70			
Volume Left	5	0	14			
Volume Right	1	15	0			
cSH	797	1700	1448			
Volume to Capacity	0.01	0.06	0.01			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	9.6	0.0	1.6			
Lane LOS	A		A			
Approach Delay (s)	9.6	0.0	1.6			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.9			
Intersection Capacity Utilization			19.9%	ICU Level of Service		A
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

















06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	24	73	0	0	58
Future Volume (Veh/h)	2	24	73	0	0	58
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	2	28	86	0	0	68
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None		None	
Median storage veh						
Upstream signal (ft)	1225					
pX, platoon unblocked						
vC, conflicting volume	176	108			108	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	176	108			108	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	797	926			1452	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	30	86	68			
Volume Left	2	0	0			
Volume Right	28	0	0			
cSH	916	1700	1700			
Volume to Capacity	0.03	0.05	0.04			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	9.1	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.1	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			1.5			
Intersection Capacity Utilization			18.8%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

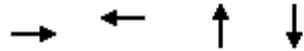
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	8	74	39	8	71	8	56	28	26	10	11	7
Future Volume (vph)	8	74	39	8	71	8	56	28	26	10	11	7
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.85	0.85	0.85
Hourly flow rate (vph)	9	80	42	9	78	9	61	30	28	12	13	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	131	96	119	33								
Volume Left (vph)	9	9	61	12								
Volume Right (vph)	42	9	28	8								
Hadj (s)	-0.14	0.01	0.01	-0.04								
Departure Headway (s)	4.2	4.4	4.5	4.5								
Degree Utilization, x	0.15	0.12	0.15	0.04								
Capacity (veh/h)	818	772	764	741								
Control Delay (s)	8.0	8.0	8.2	7.7								
Approach Delay (s)	8.0	8.0	8.2	7.7								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.0									
Level of Service			A									
Intersection Capacity Utilization			29.8%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	75	160	840	1211
v/c Ratio	0.31	0.62	0.36	0.57
Control Delay	47.6	58.3	4.2	10.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	47.6	58.3	4.2	10.6
Queue Length 50th (ft)	53	120	71	258
Queue Length 95th (ft)	99	191	89	333
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	342	370	2336	2129
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.43	0.36	0.57

### Intersection Summary



# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	27	38	7	26	56	70	5	728	32	46	1100	29
Future Volume (vph)	27	38	7	26	56	70	5	728	32	46	1100	29
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.94			0.99			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1618			1526			3408			3381	
Flt Permitted		0.81			0.94			0.95			0.87	
Satd. Flow (perm)		1331			1439			3231			2947	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91	0.97	0.97	0.97
Adj. Flow (vph)	28	40	7	27	59	74	5	800	35	47	1134	30
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	75	0	0	160	0	0	838	0	0	1210	0
Confl. Peds. (#/hr)	6		7	7		6	10		15	15		10
Heavy Vehicles (%)	2%	2%	2%	4%	4%	2%	20%	3%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		23.6			23.6			93.9			93.9	
Effective Green, g (s)		23.6			23.6			93.9			93.9	
Actuated g/C Ratio		0.18			0.18			0.72			0.72	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		241			261			2333			2128	
v/s Ratio Prot												
v/s Ratio Perm		0.06			0.11			0.26			0.41	
v/c Ratio		0.31			0.61			0.36			0.57	
Uniform Delay, d1		46.1			49.0			6.8			8.5	
Progression Factor		1.00			1.00			0.52			1.00	
Incremental Delay, d2		1.5			6.0			0.3			1.1	
Delay (s)		47.7			55.0			3.9			9.6	
Level of Service		D			E			A			A	
Approach Delay (s)		47.7			55.0			3.9			9.6	
Approach LOS		D			E			A			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			11.9									B
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			130.0								12.5	
Intersection Capacity Utilization			81.7%									D
ICU Level of Service												
Analysis Period (min)			15									

c Critical Lane Group

Queues

12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	744	111	781	177	658	123	857	121
v/c Ratio	0.49	0.63	0.46	0.69	0.89	0.65	0.47	0.86	0.23
Control Delay	29.3	38.0	28.1	33.8	69.5	43.3	35.1	54.3	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	38.0	28.1	33.8	69.5	43.3	35.1	54.3	6.6
Queue Length 50th (ft)	56	270	39	166	93	251	75	285	5
Queue Length 95th (ft)	96	337	88	258	#221	312	124	343	35
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	239	1186	242	1135	200	1069	293	1121	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.63	0.46	0.69	0.89	0.62	0.42	0.76	0.21






















Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

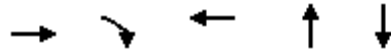
06/06/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	100	519	128	103	630	97	159	555	37	117	814	115	
Future Volume (vph)	100	519	128	103	630	97	159	555	37	117	814	115	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1731	3387		1768	3388		1769	3465		1767	3471	1418	
Flt Permitted	0.21	1.00		0.25	1.00		0.12	1.00		0.24	1.00	1.00	
Satd. Flow (perm)	377	3387		474	3388		224	3465		451	3471	1418	
Peak-hour factor, PHF	0.87	0.87	0.87	0.93	0.93	0.93	0.90	0.90	0.90	0.95	0.95	0.95	
Adj. Flow (vph)	115	597	147	111	677	104	177	617	41	123	857	121	
RTOR Reduction (vph)	0	16	0	0	9	0	0	4	0	0	0	86	
Lane Group Flow (vph)	115	728	0	111	772	0	177	654	0	123	857	35	
Confl. Peds. (#/hr)	51		15	15		51	24		16	16		24	
Heavy Vehicles (%)	4%	3%	2%	2%	3%	3%	2%	3%	3%	2%	4%	5%	
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	
Protected Phases	5	2		1	6		3	8		7	4		
Permitted Phases	2			6			8			4		4	
Actuated Green, G (s)	52.9	44.9		49.5	43.2		47.6	37.7		47.4	37.6	37.6	
Effective Green, g (s)	52.9	44.9		49.5	43.2		47.6	37.7		47.4	37.6	37.6	
Actuated g/C Ratio	0.41	0.35		0.38	0.33		0.37	0.29		0.36	0.29	0.29	
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	236	1169		243	1125		199	1004		263	1003	410	
v/s Ratio Prot	c0.03	0.22		0.02	c0.23		c0.07	0.19		0.04	0.25		
v/s Ratio Perm	0.17			0.15			c0.26			0.13		0.02	
v/c Ratio	0.49	0.62		0.46	0.69		0.89	0.65		0.47	0.85	0.09	
Uniform Delay, d1	26.1	35.5		27.4	37.5		32.1	40.4		29.2	43.6	33.7	
Progression Factor	1.00	1.00		0.96	0.80		1.00	1.00		1.31	1.07	7.20	
Incremental Delay, d2	1.6	2.5		5.7	3.2		33.9	1.2		0.4	5.9	0.0	
Delay (s)	27.7	38.0		31.9	33.2		66.1	41.6		38.6	52.4	242.6	
Level of Service	C	D		C	C		E	D		D	D	F	
Approach Delay (s)		36.6			33.1			46.8			71.8		
Approach LOS		D			C			D			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			48.5									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.77										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	31.3
Intersection Capacity Utilization			89.8%									ICU Level of Service	E
Analysis Period (min)			15										
c	Critical Lane Group												

## Queues

### 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	161	65	338	328	496
v/c Ratio	0.37	0.15	0.82	0.32	0.47
Control Delay	23.0	6.1	40.6	9.7	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	6.1	40.6	9.7	11.7
Queue Length 50th (ft)	57	0	133	73	128
Queue Length 95th (ft)	96	22	#244	120	198
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	511	488	479	1022	1045
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.13	0.71	0.32	0.47

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	↗
Traffic Volume (vph)	19	118	55	77	171	66	18	237	24	24	373	25
Future Volume (vph)	19	118	55	77	171	66	18	237	24	24	373	25
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.94		0.99			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		0.99			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			1.00	
Satd. Flow (prot)		1629	1336		1582			1812			1838	
Flt Permitted		0.94	1.00		0.87			0.96			0.97	
Satd. Flow (perm)		1534	1336		1400			1747			1790	
Peak-hour factor, PHF	0.85	0.85	0.85	0.93	0.93	0.93	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	22	139	65	83	184	71	21	279	28	28	439	29
RTOR Reduction (vph)	0	0	47	0	14	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	161	18	0	324	0	0	324	0	0	493	0
Confl. Peds. (#/hr)	17		21	21		17	13		7	7		13
Heavy Vehicles (%)	11%	2%	2%	2%	2%	2%	17%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		21.3	21.3		21.3			43.7			43.7	
Effective Green, g (s)		21.3	21.3		21.3			43.7			43.7	
Actuated g/C Ratio		0.28	0.28		0.28			0.58			0.58	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		435	379		397			1017			1042	
v/s Ratio Prot												
v/s Ratio Perm		0.10	0.01		c0.23			0.19			c0.28	
v/c Ratio		0.37	0.05		0.82			0.32			0.47	
Uniform Delay, d1		21.5	19.5		25.0			8.0			9.0	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.5	0.1		12.3			0.8			1.5	
Delay (s)		22.0	19.5		37.3			8.8			10.6	
Level of Service		C	B		D			A			B	
Approach Delay (s)		21.3			37.3			8.8			10.6	
Approach LOS		C			D			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			18.4									B
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			75.0							10.0		
Intersection Capacity Utilization			64.9%									C
Analysis Period (min)			15									

c Critical Lane Group

## D. Future (2027) Conditions without Development Capacity Analysis Worksheets



# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	129	48	437	342
v/c Ratio	0.29	0.08	0.45	0.36
Control Delay	7.4	17.8	20.3	13.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.4	17.8	20.3	13.3
Queue Length 50th (ft)	10	24	241	97
Queue Length 95th (ft)	40	m37	239	168
Internal Link Dist (ft)	525		418	1320
Turn Bay Length (ft)		85		
Base Capacity (vph)	604	576	965	943
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.08	0.45	0.36

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	82	44	402	291	24
Future Volume (vph)	37	82	44	402	291	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.98		1.00	1.00	1.00	
Flpb, ped/bikes	0.99		0.99	1.00	1.00	
Frt	0.91		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1428		1696	1660	1616	
Flt Permitted	0.98		0.55	1.00	1.00	
Satd. Flow (perm)	1428		991	1660	1616	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	89	48	437	316	26
RTOR Reduction (vph)	67	0	0	0	4	0
Lane Group Flow (vph)	62	0	48	437	338	0
Confl. Peds. (#/hr)	15	10	13			13
Heavy Vehicles (%)	8%	2%	5%	3%	4%	9%
Parking (#/hr)	0	0		0	0	0
Turn Type	Perm		Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4		2			
Actuated Green, G (s)	16.0		35.0	35.0	35.0	
Effective Green, g (s)	16.0		35.0	35.0	35.0	
Actuated g/C Ratio	0.25		0.54	0.54	0.54	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	351		533	893	870	
v/s Ratio Prot				c0.26	0.21	
v/s Ratio Perm	c0.04		0.05			
v/c Ratio	0.18		0.09	0.49	0.39	
Uniform Delay, d1	19.3		7.3	9.4	8.8	
Progression Factor	1.00		1.54	1.53	1.00	
Incremental Delay, d2	0.1		0.3	1.8	1.3	
Delay (s)	19.4		11.5	16.2	10.1	
Level of Service	B		B	B	B	
Approach Delay (s)	19.4			15.7	10.1	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			14.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.39			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			50.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Volume (veh/h)	0	0	0	25	3	35	55	410	16	23	313	39
Future Volume (Veh/h)	0	0	0	25	3	35	55	410	16	23	313	39
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	29	4	41	65	482	19	27	368	46
Pedestrians		17			30			1			16	
Lane Width (ft)		0.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			3			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								645			498	
pX, platoon unblocked	0.90	0.90	0.93	0.90	0.90	0.86	0.93			0.86		
vC, conflicting volume	1142	1123	409	1098	1136	538	431			531		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	925	903	326	875	918	385	349			378		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	86	98	93	94			97		
cM capacity (veh/h)	185	222	664	214	217	547	1124			990		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>									
Volume Total	74	566	441									
Volume Left	29	65	27									
Volume Right	41	19	46									
cSH	323	1124	990									
Volume to Capacity	0.23	0.06	0.03									
Queue Length 95th (ft)	22	5	2									
Control Delay (s)	19.4	1.6	0.8									
Lane LOS	C	A	A									
Approach Delay (s)	19.4	1.6	0.8									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			2.5									
Intersection Capacity Utilization			59.0%	ICU Level of Service						B		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	16	4	454	335	3
Future Volume (Veh/h)	8	16	4	454	335	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	19	5	534	394	4
Pedestrians	25					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	731	
pX, platoon unblocked	0.84					
vC, conflicting volume	965	421	423			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	861	421	423			
tC, single (s)	6.6	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.9	2.2			
p0 queue free %	96	96	100			
cM capacity (veh/h)	242	502	1109			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	28	539	398			
Volume Left	9	5	0			
Volume Right	19	0	4			
cSH	373	1109	1700			
Volume to Capacity	0.08	0.00	0.23			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	15.4	0.1	0.0			
Lane LOS	C	A				
Approach Delay (s)	15.4	0.1	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay	0.5					
Intersection Capacity Utilization	37.1%			ICU Level of Service	A	
Analysis Period (min)	15					

# Queues

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	21	33	37	48	467	63	334
v/c Ratio	0.07	0.06	0.08	0.08	0.09	0.50	0.15	0.38
Control Delay	14.3	6.8	14.2	2.1	20.5	32.4	21.6	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	6.8	14.2	2.1	20.5	32.4	21.6	21.0
Queue Length 50th (ft)	6	2	8	0	30	338	24	130
Queue Length 95th (ft)	m15	m11	23	8	m56	452	58	207
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	440	534	585	616	526	933	418	887
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.04	0.06	0.06	0.09	0.50	0.15	0.38

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	18	5	15	21	9	34	44	406	24	58	265	42
Future Volume (vph)	18	5	15	21	9	34	44	406	24	58	265	42
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00			1.00	0.94	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.97	1.00			1.00	1.00	0.98	1.00		0.98	1.00	
Frt	1.00	0.89			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1479	1363			1800	1495	1536	1600		1533	1515	
Flt Permitted	0.74	1.00			0.82	1.00	0.56	1.00		0.45	1.00	
Satd. Flow (perm)	1145	1363			1522	1495	905	1600		719	1515	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	5	16	23	10	37	48	441	26	63	288	46
RTOR Reduction (vph)	0	12	0	0	0	28	0	2	0	0	7	0
Lane Group Flow (vph)	20	9	0	0	33	9	48	465	0	63	327	0
Confl. Peds. (#/hr)	28					28	24		34	34		24
Heavy Vehicles (%)	6%	2%	14%	2%	2%	2%	2%	4%	2%	2%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	16.0	16.0			16.0	16.0	35.0	35.0		35.0	35.0	
Effective Green, g (s)	16.0	16.0			16.0	16.0	35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.54	0.54		0.54	0.54	
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	281	335			374	368	487	861		387	815	
v/s Ratio Prot		0.01						c0.29			0.22	
v/s Ratio Perm	0.02				c0.02	0.01	0.05			0.09		
v/c Ratio	0.07	0.03			0.09	0.02	0.10	0.54		0.16	0.40	
Uniform Delay, d1	18.8	18.6			18.9	18.6	7.3	9.8		7.6	8.8	
Progression Factor	1.01	1.01			1.00	1.00	1.76	2.42		1.64	1.63	
Incremental Delay, d2	0.0	0.0			0.0	0.0	0.4	2.2		0.9	1.4	
Delay (s)	18.9	18.7			18.9	18.6	13.2	25.8		13.3	15.8	
Level of Service	B	B			B	B	B	C		B	B	
Approach Delay (s)		18.8			18.7			24.6			15.4	
Approach LOS		B			B			C			B	

Intersection Summary		
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.40	C
Actuated Cycle Length (s)	65.0	Sum of lost time (s)
Intersection Capacity Utilization	60.6%	14.0
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group



# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	66	721	78	488	83	393	221	52	259
v/c Ratio	0.17	0.44	0.23	0.27	0.28	0.68	0.41	0.31	0.39
Control Delay	8.0	11.2	14.3	14.2	33.9	45.3	28.8	46.3	44.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	11.2	14.3	14.2	33.9	45.3	28.8	46.3	44.0
Queue Length 50th (ft)	12	142	28	104	50	285	123	44	115
Queue Length 95th (ft)	28	164	53	136	91	402	189	89	155
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	392	1651	339	1839	304	688	540	212	826
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.44	0.23	0.27	0.27	0.57	0.41	0.25	0.31

### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022

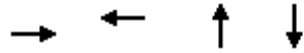


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	61	637	27	72	404	45	76	362	203	48	178	61	
Future Volume (vph)	61	637	27	72	404	45	76	362	203	48	178	61	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0		
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95		
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.95	1.00	0.99		
Flpb, ped/bikes	0.95	1.00		1.00	1.00		0.99	1.00	1.00	0.97	1.00		
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.96		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1636	3439		1700	3178		1633	1827	1485	1673	3160		
Flt Permitted	0.47	1.00		0.28	1.00		0.45	1.00	1.00	0.46	1.00		
Satd. Flow (perm)	817	3439		495	3178		776	1827	1485	813	3160		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	66	692	29	78	439	49	83	393	221	52	193	66	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	66	721	0	78	488	0	83	393	221	52	259	0	
Confl. Peds. (#/hr)	41		20	20		41	14		34	34		14	
Heavy Vehicles (%)	5%	4%	8%	6%	8%	3%	10%	4%	3%	5%	9%	9%	
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA		
Protected Phases		2		1	6		3	8	1		4		
Permitted Phases	2			6			8		8	4			
Actuated Green, G (s)	62.4	62.4		75.2	75.2		41.3	41.3	47.1	27.0	27.0		
Effective Green, g (s)	62.4	62.4		75.2	75.2		41.3	41.3	47.1	27.0	27.0		
Actuated g/C Ratio	0.48	0.48		0.58	0.58		0.32	0.32	0.36	0.21	0.21		
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0		
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0		
Lane Grp Cap (vph)	392	1650		340	1838		297	580	617	168	656		
v/s Ratio Prot		c0.21		0.01	0.15		0.02	c0.22	c0.02		0.08		
v/s Ratio Perm	0.08			0.12			0.07		0.13	0.06			
v/c Ratio	0.17	0.44		0.23	0.27		0.28	0.68	0.36	0.31	0.39		
Uniform Delay, d1	19.1	22.2		13.6	13.6		32.1	38.6	30.4	43.6	44.4		
Progression Factor	0.35	0.46		1.00	1.00		1.00	1.00	1.00	0.93	0.95		
Incremental Delay, d2	0.9	0.8		0.1	0.4		0.2	2.5	0.1	1.4	0.5		
Delay (s)	7.6	11.0		13.7	14.0		32.3	41.0	30.5	41.9	42.5		
Level of Service	A	B		B	B		C	D	C	D	D		
Approach Delay (s)		10.7			14.0			36.7			42.4		
Approach LOS		B			B			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			23.3									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.56										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	27.0
Intersection Capacity Utilization			77.1%									ICU Level of Service	D
Analysis Period (min)			15										
c	Critical Lane Group												

Queues

6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	850	591	22	74
v/c Ratio	0.44	0.26	0.08	0.31
Control Delay	3.5	3.8	25.1	29.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.5	3.8	25.1	29.3
Queue Length 50th (ft)	30	58	4	26
Queue Length 95th (ft)	35	35	30	73
Internal Link Dist (ft)	823	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1954	2236	266	241
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.44	0.26	0.08	0.31
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	97	666	19	8	455	80	5	1	15	29	2	37	
Future Volume (vph)	97	666	19	8	455	80	5	1	15	29	2	37	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.99			0.97			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			0.99		
Frt		1.00			0.98			0.90			0.93		
Flt Protected		0.99			1.00			0.99			0.98		
Satd. Flow (prot)		3424			3204			1602			1434		
Flt Permitted		0.77			0.94			0.94			0.86		
Satd. Flow (perm)		2644			3014			1529			1263		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	105	724	21	9	495	87	5	1	16	32	2	40	
RTOR Reduction (vph)	0	1	0	0	11	0	0	13	0	0	33	0	
Lane Group Flow (vph)	0	849	0	0	580	0	0	9	0	0	41	0	
Confl. Peds. (#/hr)	17		17	17		17	9		18	18		9	
Heavy Vehicles (%)	4%	4%	2%	2%	10%	4%	2%	2%	2%	4%	2%	6%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		96.0			96.0			21.0			21.0		
Effective Green, g (s)		96.0			96.0			21.0			21.0		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1952			2225			246			204		
v/s Ratio Prot													
v/s Ratio Perm		c0.32			0.19			0.01			c0.03		
v/c Ratio		0.43			0.26			0.03			0.20		
Uniform Delay, d1		6.5			5.5			46.0			47.2		
Progression Factor		0.45			0.69			1.00			1.00		
Incremental Delay, d2		0.6			0.3			0.0			0.2		
Delay (s)		3.5			4.1			46.0			47.4		
Level of Service		A			A			D			D		
Approach Delay (s)		3.5			4.1			46.0			47.4		
Approach LOS		A			A			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			6.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.39										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			74.8%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	27	7	7	32	9	41	6	118	27	8	43	8
Future Volume (Veh/h)	27	7	7	32	9	41	6	118	27	8	43	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	32	8	8	38	11	48	7	139	32	9	51	9
Pedestrians		21			34			5			14	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	331	314	82	294	302	203	81			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	331	314	82	294	302	203	81			205		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	94	99	99	94	98	94	100			99		
cM capacity (veh/h)	530	564	954	591	572	785	1486			1256		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	48	97	178	69								
Volume Left	32	38	7	9								
Volume Right	8	48	32	9								
cSH	579	670	1486	1256								
Volume to Capacity	0.08	0.14	0.00	0.01								
Queue Length 95th (ft)	7	13	0	1								
Control Delay (s)	11.8	11.3	0.3	1.1								
Lane LOS	B	B	A	A								
Approach Delay (s)	11.8	11.3	0.3	1.1								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			4.6									
Intersection Capacity Utilization			27.9%		ICU Level of Service				A			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	5	171	15	18	44
Future Volume (Veh/h)	1	5	171	15	18	44
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	6	201	18	21	52
Pedestrians	30					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	3					
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			962			
pX, platoon unblocked						
vC, conflicting volume	334	240			249	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	334	240			249	
tC, single (s)	6.4	6.2			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.6	
p0 queue free %	100	99			98	
cM capacity (veh/h)	630	776			1063	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	7	219	73			
Volume Left	1	0	21			
Volume Right	6	18	0			
cSH	751	1700	1063			
Volume to Capacity	0.01	0.13	0.02			
Queue Length 95th (ft)	1	0	2			
Control Delay (s)	9.8	0.0	2.6			
Lane LOS	A		A			
Approach Delay (s)	9.8	0.0	2.6			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.9			
Intersection Capacity Utilization			28.2%	ICU Level of Service		A
Analysis Period (min)			15			



# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

















06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	27	169	7	3	54
Future Volume (Veh/h)	7	27	169	7	3	54
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.88	0.88	0.85	0.85
Hourly flow rate (vph)	8	32	192	8	4	64
Pedestrians	52					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	5					
Right turn flare (veh)						
Median type			None		None	
Median storage veh						
Upstream signal (ft)	1225					
pX, platoon unblocked						
vC, conflicting volume	320	248			252	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	320	248			252	
tC, single (s)	6.5	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.3			2.3	
p0 queue free %	99	96			100	
cM capacity (veh/h)	615	747			1185	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	40	200	68			
Volume Left	8	0	4			
Volume Right	32	8	0			
cSH	716	1700	1185			
Volume to Capacity	0.06	0.12	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	10.3	0.0	0.5			
Lane LOS	B		A			
Approach Delay (s)	10.3	0.0	0.5			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.5			
Intersection Capacity Utilization			22.7%	ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

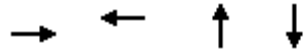
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	60	29	7	47	12	69	39	55	9	21	7
Future Volume (vph)	6	60	29	7	47	12	69	39	55	9	21	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	71	34	8	55	14	81	46	65	11	25	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	112	77	192	44								
Volume Left (vph)	7	8	81	11								
Volume Right (vph)	34	14	65	8								
Hadj (s)	-0.07	0.01	-0.07	0.12								
Departure Headway (s)	4.5	4.6	4.3	4.7								
Degree Utilization, x	0.14	0.10	0.23	0.06								
Capacity (veh/h)	762	732	795	719								
Control Delay (s)	8.2	8.1	8.6	8.0								
Approach Delay (s)	8.2	8.1	8.6	8.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			35.3%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	117	138	1393	728
v/c Ratio	0.69	0.57	0.58	0.44
Control Delay	74.4	61.4	10.2	8.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	74.4	61.4	10.2	8.7
Queue Length 50th (ft)	98	112	307	135
Queue Length 95th (ft)	164	178	395	189
Internal Link Dist (ft)	223	873	1586	285
Turn Bay Length (ft)				
Base Capacity (vph)	275	396	2409	1650
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.35	0.58	0.44
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↕			↕			↕			↕			
Traffic Volume (vph)	72	33	3	17	27	84	2	1269	11	59	591	20		
Future Volume (vph)	72	33	3	17	27	84	2	1269	11	59	591	20		
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		6.5			6.5			6.0			6.0			
Lane Util. Factor		1.00			1.00			0.95			0.95			
Frbp, ped/bikes		1.00			0.99			1.00			1.00			
Flpb, ped/bikes		1.00			1.00			1.00			1.00			
Frt		1.00			0.91			1.00			1.00			
Flt Protected		0.97			0.99			1.00			1.00			
Satd. Flow (prot)		1604			1504			3403			3336			
Flt Permitted		0.61			0.95			0.95			0.66			
Satd. Flow (perm)		1003			1442			3248			2226			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	78	36	3	18	29	91	2	1379	12	64	642	22		
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	1	0		
Lane Group Flow (vph)	0	117	0	0	138	0	0	1393	0	0	727	0		
Confl. Peds. (#/hr)	6		10	10		6	3		7	7		3		
Confl. Bikes (#/hr)									4			4		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	1%	2%	4%	2%	5%	5%	5%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10		
Parking (#/hr)	0	0	0	0	0									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA			
Protected Phases		4			4			2			2			
Permitted Phases	4			4			2			2				
Actuated Green, G (s)		23.6			23.6			103.9			103.9			
Effective Green, g (s)		23.6			23.6			103.9			103.9			
Actuated g/C Ratio		0.17			0.17			0.74			0.74			
Clearance Time (s)		6.5			6.5			6.0			6.0			
Vehicle Extension (s)		5.0			5.0			0.2			0.2			
Lane Grp Cap (vph)		169			243			2410			1652			
v/s Ratio Prot														
v/s Ratio Perm		c0.12			0.10			c0.43			0.33			
v/c Ratio		0.69			0.57			0.58			0.44			
Uniform Delay, d1		54.8			53.5			8.1			6.9			
Progression Factor		1.00			1.00			1.00			1.00			
Incremental Delay, d2		14.5			4.9			1.0			0.9			
Delay (s)		69.3			58.4			9.2			7.8			
Level of Service		E			E			A			A			
Approach Delay (s)		69.3			58.4			9.2			7.8			
Approach LOS		E			E			A			A			
<b>Intersection Summary</b>														
HCM 2000 Control Delay			14.6									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.60											
Actuated Cycle Length (s)			140.0								12.5			
Intersection Capacity Utilization			85.2%										ICU Level of Service	E
Analysis Period (min)			15											
c Critical Lane Group														

Queues

12: S Glebe Road & Columbia Pike

06/06/2022




























Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	187	805	73	494	99	941	82	459	86
v/c Ratio	0.46	0.58	0.32	0.43	0.27	0.85	0.44	0.43	0.15
Control Delay	23.3	33.1	28.2	34.6	23.9	49.4	29.5	37.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	33.1	28.2	34.6	23.9	49.4	29.5	37.1	0.6
Queue Length 50th (ft)	90	290	39	132	48	377	39	157	0
Queue Length 95th (ft)	141	361	70	172	85	463	72	211	0
Internal Link Dist (ft)		353		823		288		1586	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	405	1384	232	1138	382	1158	191	1100	576
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.58	0.31	0.43	0.26	0.81	0.43	0.42	0.15

Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

06/06/2022

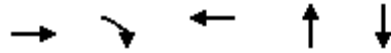
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	178	665	100	68	305	154	95	859	44	75	422	79
Future Volume (vph)	178	665	100	68	305	154	95	859	44	75	422	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.6		5.7	5.6		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1696	3390		1431	3057		1751	3414		1752	3471	1433
Flt Permitted	0.35	1.00		0.24	1.00		0.35	1.00		0.10	1.00	1.00
Satd. Flow (perm)	624	3390		366	3057		647	3414		184	3471	1433
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	187	700	105	73	328	166	99	895	46	82	459	86
RTOR Reduction (vph)	0	8	0	0	48	0	0	3	0	0	0	59
Lane Group Flow (vph)	187	797	0	73	446	0	99	938	0	82	459	27
Confl. Peds. (#/hr)	28		14	14		28	5		6	6		5
Heavy Vehicles (%)	6%	4%	4%	26%	10%	10%	3%	5%	2%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	57.8	48.1		48.4	43.4		47.4	38.9		43.8	37.1	37.1
Effective Green, g (s)	63.8	51.1		54.4	46.4		53.4	41.9		49.8	40.1	40.1
Actuated g/C Ratio	0.49	0.39		0.42	0.36		0.41	0.32		0.38	0.31	0.31
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	410	1332		218	1091		363	1100		187	1070	442
v/s Ratio Prot	c0.04	c0.23		0.02	0.15		c0.02	c0.27		c0.03	0.13	
v/s Ratio Perm	0.18			0.12			0.09			0.13		0.02
v/c Ratio	0.46	0.60		0.33	0.41		0.27	0.85		0.44	0.43	0.06
Uniform Delay, d1	19.8	31.3		24.0	31.5		24.5	41.2		29.4	35.8	31.7
Progression Factor	1.00	1.00		1.30	1.22		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.0		0.3	1.1		0.1	6.3		0.6	0.1	0.0
Delay (s)	20.6	33.3		31.6	39.5		24.7	47.5		30.0	35.9	31.7
Level of Service	C	C		C	D		C	D		C	D	C
Approach Delay (s)		30.9			38.5			45.3			34.6	
Approach LOS		C			D			D			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			37.6				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			19.3		
Intersection Capacity Utilization			82.0%				ICU Level of Service			D		
Analysis Period (min)			15									
c	Critical Lane Group											



# Queues

## 13: Walter Reed Drive/S Fillmore Street

06/06/2022





















Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	178	64	183	363	232
v/c Ratio	0.46	0.17	0.49	0.34	0.23
Control Delay	25.1	6.5	23.1	8.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	6.5	23.1	8.7	7.9
Queue Length 50th (ft)	59	0	53	80	46
Queue Length 95th (ft)	109	24	105	133	84
Internal Link Dist (ft)	212		223	1320	194
Turn Bay Length (ft)		55			
Base Capacity (vph)	682	604	640	1083	1013
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.11	0.29	0.34	0.23

### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street

06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	147	59	32	103	33	28	277	36	30	161	22
Future Volume (vph)	17	147	59	32	103	33	28	277	36	30	161	22
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.97		0.99			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			0.99	
Satd. Flow (prot)		1652	1326		1593			1808			1761	
Flt Permitted		0.96	1.00		0.91			0.97			0.93	
Satd. Flow (perm)		1591	1326		1467			1754			1642	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	18	160	64	35	112	36	30	295	38	33	175	24
RTOR Reduction (vph)	0	0	49	0	17	0	0	4	0	0	4	0
Lane Group Flow (vph)	0	178	15	0	166	0	0	359	0	0	228	0
Confl. Peds. (#/hr)	15		9	9		15	5		3	3		5
Heavy Vehicles (%)	2%	2%	5%	3%	2%	3%	11%	2%	3%	7%	5%	5%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		16.9	16.9		16.9			43.1			43.1	
Effective Green, g (s)		16.9	16.9		16.9			43.1			43.1	
Actuated g/C Ratio		0.24	0.24		0.24			0.62			0.62	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		384	320		354			1079			1011	
v/s Ratio Prot												
v/s Ratio Perm		0.11	0.01		c0.11			c0.20			0.14	
v/c Ratio		0.46	0.05		0.47			0.33			0.23	
Uniform Delay, d1		22.7	20.4		22.7			6.5			6.0	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.9	0.1		1.0			0.8			0.5	
Delay (s)		23.6	20.4		23.7			7.3			6.5	
Level of Service		C	C		C			A			A	
Approach Delay (s)		22.7			23.7			7.3			6.5	
Approach LOS		C			C			A			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			13.7									B
HCM 2000 Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			70.0								10.0	
Intersection Capacity Utilization			58.3%									B
Analysis Period (min)			15									
c	Critical Lane Group											

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	168	73	371	479
v/c Ratio	0.36	0.17	0.42	0.54
Control Delay	7.4	14.5	16.0	18.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.4	14.5	16.0	18.7
Queue Length 50th (ft)	13	24	135	153
Queue Length 95th (ft)	45	m59	221	#309
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	634	425	890	893
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.17	0.42	0.54

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	98	68	345	410	30
Future Volume (vph)	56	98	68	345	410	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.96		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.91		1.00	1.00	0.99	
Flt Protected	0.98		0.95	1.00	1.00	
Satd. Flow (prot)	1372		1735	1629	1627	
Flt Permitted	0.98		0.43	1.00	1.00	
Satd. Flow (perm)	1372		779	1629	1627	
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.92	0.92
Adj. Flow (vph)	61	107	73	371	446	33
RTOR Reduction (vph)	78	0	0	0	4	0
Lane Group Flow (vph)	90	0	73	371	476	0
Confl. Peds. (#/hr)	6	30	14			14
Heavy Vehicles (%)	6%	9%	3%	5%	4%	2%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	16.0		30.0	30.0	30.0	
Effective Green, g (s)	16.0		30.0	30.0	30.0	
Actuated g/C Ratio	0.27		0.50	0.50	0.50	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	365		389	814	813	
v/s Ratio Prot	c0.07			0.23	c0.29	
v/s Ratio Perm			0.09			
v/c Ratio	0.25		0.19	0.46	0.58	
Uniform Delay, d1	17.3		8.3	9.7	10.6	
Progression Factor	1.00		0.98	1.05	1.00	
Incremental Delay, d2	0.1		1.0	1.8	3.1	
Delay (s)	17.4		9.2	12.0	13.7	
Level of Service	B		A	B	B	
Approach Delay (s)	17.4			11.5	13.7	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			13.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.47			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			62.3%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Volume (veh/h)	1	0	2	25	1	30	32	387	25	32	472	23
Future Volume (Veh/h)	1	0	2	25	1	30	32	387	25	32	472	23
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	2	27	1	33	35	421	27	35	513	25
Pedestrians		17			36			1			11	
Lane Width (ft)		0.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			3			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								645			495	
pX, platoon unblocked	0.86	0.86	0.83	0.86	0.86	0.94	0.83			0.94		
vC, conflicting volume	1162	1166	544	1139	1166	482	555			484		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	956	962	345	930	961	421	358			423		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.3			2.2		
p0 queue free %	99	100	100	86	99	94	96			97		
cM capacity (veh/h)	174	197	577	188	197	555	949			1030		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>									
Volume Total	61	483	573									
Volume Left	27	35	35									
Volume Right	33	27	25									
cSH	293	949	1030									
Volume to Capacity	0.21	0.04	0.03									
Queue Length 95th (ft)	19	3	3									
Control Delay (s)	20.5	1.1	0.9									
Lane LOS	C	A	A									
Approach Delay (s)	20.5	1.1	0.9									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			Err									
Intersection Capacity Utilization			Err%	ICU Level of Service						H		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	23	60	8	389	491	8
Future Volume (Veh/h)	23	60	8	389	491	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	65	9	423	534	9
Pedestrians	28					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	728	
pX, platoon unblocked	0.94	0.90	0.90			
vC, conflicting volume	1008	566	571			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	743	465	470			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.4	2.2			
p0 queue free %	92	87	99			
cM capacity (veh/h)	327	510	958			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	90	432	543			
Volume Left	25	9	0			
Volume Right	65	0	9			
cSH	441	958	1700			
Volume to Capacity	0.20	0.01	0.32			
Queue Length 95th (ft)	19	1	0			
Control Delay (s)	15.2	0.3	0.0			
Lane LOS	C	A				
Approach Delay (s)	15.2	0.3	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay			1.4			
Intersection Capacity Utilization			38.5%	ICU Level of Service	A	
Analysis Period (min)			15			

# Queues

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	53	46	39	47	405	51	544
v/c Ratio	0.12	0.13	0.12	0.09	0.14	0.45	0.11	0.60
Control Delay	14.4	6.5	14.4	2.0	12.9	13.7	21.1	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	6.5	14.4	2.0	12.9	13.7	21.1	25.7
Queue Length 50th (ft)	8	2	11	0	11	109	17	203
Queue Length 95th (ft)	25	21	29	8	32	195	m38	#349
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	431	566	539	589	335	908	469	914
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.09	0.09	0.07	0.14	0.45	0.11	0.60

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	33	9	40	28	15	36	43	328	44	47	457	43
Future Volume (vph)	33	9	40	28	15	36	43	328	44	47	457	43
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00			1.00	0.95	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.97	1.00			1.00	1.00	0.97	1.00		0.98	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1540	1472			1804	1482	1432	1568		1530	1580	
Flt Permitted	0.73	1.00			0.79	1.00	0.39	1.00		0.50	1.00	
Satd. Flow (perm)	1178	1472			1471	1482	581	1568		813	1580	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	10	43	30	16	39	47	357	48	51	497	47
RTOR Reduction (vph)	0	33	0	0	0	30	0	6	0	0	4	0
Lane Group Flow (vph)	36	20	0	0	46	9	47	399	0	51	540	0
Confl. Peds. (#/hr)	26					26	62		34	34		62
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	8%	5%	2%	2%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	14.2	14.2			14.2	14.2	31.8	31.8		31.8	31.8	
Effective Green, g (s)	14.2	14.2			14.2	14.2	31.8	31.8		31.8	31.8	
Actuated g/C Ratio	0.24	0.24			0.24	0.24	0.53	0.53		0.53	0.53	
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	278	348			348	350	307	831		430	837	
v/s Ratio Prot		0.01						0.25			c0.34	
v/s Ratio Perm	0.03				c0.03	0.01	0.08			0.06		
v/c Ratio	0.13	0.06			0.13	0.03	0.15	0.48		0.12	0.64	
Uniform Delay, d1	18.0	17.7			18.0	17.6	7.2	8.9		7.1	10.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.80	1.63	
Incremental Delay, d2	0.1	0.0			0.1	0.0	1.1	2.0		0.5	3.6	
Delay (s)	18.1	17.7			18.1	17.6	8.3	10.9		13.3	20.0	
Level of Service	B	B			B	B	A	B		B	B	
Approach Delay (s)		17.9			17.9			10.6			19.4	
Approach LOS		B			B			B			B	

Intersection Summary		
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.49	B
Actuated Cycle Length (s)	60.0	Sum of lost time (s)
Intersection Capacity Utilization	63.1%	14.0
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group

# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	76	663	154	696	101	258	170	87	477
v/c Ratio	0.34	0.55	0.51	0.43	0.34	0.39	0.27	0.31	0.53
Control Delay	30.2	28.6	22.1	18.2	22.7	24.1	14.3	32.8	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	28.6	22.1	18.2	22.7	24.1	14.3	32.8	33.6
Queue Length 50th (ft)	41	191	56	153	40	113	53	44	136
Queue Length 95th (ft)	85	252	96	202	75	178	90	89	187
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	226	1204	304	1613	297	716	640	283	900
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.55	0.51	0.43	0.34	0.36	0.27	0.31	0.53

### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	551	59	142	548	92	93	237	156	80	350	89
Future Volume (vph)	70	551	59	142	548	92	93	237	156	80	350	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes	0.94	1.00		1.00	1.00		1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1579	3411		1749	3288		1762	1792	1442	1663	3338	
Flt Permitted	0.39	1.00		0.24	1.00		0.32	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	643	3411		442	3288		588	1792	1442	1049	3338	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	599	64	154	596	100	101	258	170	87	380	97
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	76	663	0	154	696	0	101	258	170	87	477	0
Confl. Peds. (#/hr)	81		36	36		81	34		66	66		34
Heavy Vehicles (%)	8%	4%	2%	3%	2%	2%	2%	6%	4%	3%	4%	3%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	34.0	34.0		47.8	47.8		38.7	38.7	45.5	27.0	27.0	
Effective Green, g (s)	34.0	34.0		47.8	47.8		38.7	38.7	45.5	27.0	27.0	
Actuated g/C Ratio	0.34	0.34		0.48	0.48		0.39	0.39	0.46	0.27	0.27	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	218	1159		300	1571		288	693	757	283	901	
v/s Ratio Prot		c0.19		0.03	c0.21		0.02	c0.14	0.02		c0.14	
v/s Ratio Perm	0.12			0.21			0.12		0.10	0.08		
v/c Ratio	0.35	0.57		0.51	0.44		0.35	0.37	0.22	0.31	0.53	
Uniform Delay, d1	24.7	27.0		16.6	17.3		20.7	22.0	16.5	29.1	31.1	
Progression Factor	0.98	0.99		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	1.9		0.6	0.9		0.3	0.1	0.1	0.8	0.7	
Delay (s)	28.3	28.6		17.3	18.2		20.9	22.1	16.6	29.9	31.8	
Level of Service	C	C		B	B		C	C	B	C	C	
Approach Delay (s)		28.6			18.0			20.1			31.5	
Approach LOS		C			B			C			C	

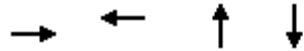
### Intersection Summary

HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Queues

6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	769	813	12	148
v/c Ratio	0.42	0.38	0.03	0.46
Control Delay	4.4	10.0	0.6	24.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.4	10.0	0.6	24.9
Queue Length 50th (ft)	51	175	0	46
Queue Length 95th (ft)	57	232	2	107
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1840	2126	355	329
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.38	0.03	0.45
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	60	636	12	8	647	93	3	0	8	52	5	79	
Future Volume (vph)	60	636	12	8	647	93	3	0	8	52	5	79	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.98			0.97			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			0.99		
Frt		1.00			0.98			0.90			0.92		
Flt Protected		1.00			1.00			0.99			0.98		
Satd. Flow (prot)		3471			3388			1598			1463		
Flt Permitted		0.80			0.95			0.94			0.87		
Satd. Flow (perm)		2790			3206			1517			1297		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	65	691	13	9	703	101	3	0	9	57	5	86	
RTOR Reduction (vph)	0	1	0	0	11	0	0	9	0	0	51	0	
Lane Group Flow (vph)	0	768	0	0	802	0	0	3	0	0	97	0	
Confl. Peds. (#/hr)	49		25	25		49	14		20	20		14	
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		66.0			66.0			21.0			21.0		
Effective Green, g (s)		66.0			66.0			21.0			21.0		
Actuated g/C Ratio		0.66			0.66			0.21			0.21		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1841			2115			318			272		
v/s Ratio Prot													
v/s Ratio Perm		c0.28			0.25			0.00			c0.08		
v/c Ratio		0.42			0.38			0.01			0.36		
Uniform Delay, d1		8.0			7.7			31.3			33.7		
Progression Factor		0.48			1.28			1.00			1.00		
Incremental Delay, d2		0.5			0.5			0.0			0.3		
Delay (s)		4.3			10.3			31.3			34.0		
Level of Service		A			B			C			C		
Approach Delay (s)		4.3			10.3			31.3			34.0		
Approach LOS		A			B			C			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			9.8									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.40										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			75.1%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	8	8	9	37	35	54	37	83	32	18	77	20
Future Volume (Veh/h)	8	8	9	37	35	54	37	83	32	18	77	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	9	10	40	38	59	40	90	35	20	84	22
Pedestrians		40			49			16			18	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			5			2			2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	458	429	151	402	422	174	146			174		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	458	429	151	402	422	174	146			174		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	98	98	99	91	92	93	97			99		
cM capacity (veh/h)	381	455	848	461	459	790	1375			1337		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	28	137	165	126								
Volume Left	9	40	40	20								
Volume Right	10	59	35	22								
cSH	507	561	1375	1337								
Volume to Capacity	0.06	0.24	0.03	0.01								
Queue Length 95th (ft)	4	24	2	1								
Control Delay (s)	12.5	13.5	2.0	1.3								
Lane LOS	B	B	A	A								
Approach Delay (s)	12.5	13.5	2.0	1.3								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			5.9									
Intersection Capacity Utilization			34.3%		ICU Level of Service					A		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	2	121	25	15	83
Future Volume (Veh/h)	9	2	121	25	15	83
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	2	132	27	16	90
Pedestrians	71					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	7					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	338	216			230	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338	216			230	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	98	100			99	
cM capacity (veh/h)	604	768			1184	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	12	159	106			
Volume Left	10	0	16			
Volume Right	2	27	0			
cSH	627	1700	1184			
Volume to Capacity	0.02	0.09	0.01			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	10.9	0.0	1.3			
Lane LOS	B		A			
Approach Delay (s)	10.9	0.0	1.3			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.0			
Intersection Capacity Utilization			27.1%	ICU Level of Service		A
Analysis Period (min)	15					



# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

















06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	58	122	0	1	81
Future Volume (Veh/h)	15	58	122	0	1	81
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	63	133	0	1	88
Pedestrians	92					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	1225					
pX, platoon unblocked						
vC, conflicting volume	315	225			225	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315	225			225	
tC, single (s)	6.5	6.5			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.5			2.2	
p0 queue free %	97	91			100	
cM capacity (veh/h)	609	694			1226	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	79	133	89			
Volume Left	16	0	1			
Volume Right	63	0	0			
cSH	675	1700	1226			
Volume to Capacity	0.12	0.08	0.00			
Queue Length 95th (ft)	10	0	0			
Control Delay (s)	11.0	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	11.0	0.0	0.1			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			2.9			
Intersection Capacity Utilization			24.1%	ICU Level of Service		A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

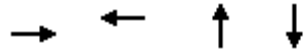
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	86	40	10	85	9	88	41	55	10	34	6
Future Volume (vph)	12	86	40	10	85	9	88	41	55	10	34	6
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	93	43	11	90	10	96	45	60	11	37	7
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	149	111	201	55								
Volume Left (vph)	13	11	96	11								
Volume Right (vph)	43	10	60	7								
Hadj (s)	-0.02	0.01	0.07	0.00								
Departure Headway (s)	4.7	4.7	4.7	4.8								
Degree Utilization, x	0.19	0.15	0.26	0.07								
Capacity (veh/h)	722	708	730	693								
Control Delay (s)	8.8	8.5	9.3	8.2								
Approach Delay (s)	8.8	8.5	9.3	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.9									
Level of Service			A									
Intersection Capacity Utilization			38.5%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	82	230	786	1065
v/c Ratio	0.30	0.72	0.39	0.61
Control Delay	32.3	47.1	7.3	13.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.3	47.1	7.3	13.6
Queue Length 50th (ft)	41	128	188	217
Queue Length 95th (ft)	81	209	248	290
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	325	378	2018	1755
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.61	0.39	0.61
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	40	28	8	52	52	107	4	693	34	70	938	14
Future Volume (vph)	40	28	8	52	52	107	4	693	34	70	938	14
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.93			0.99			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1547			1466			3344			3370	
Flt Permitted		0.72			0.89			0.95			0.82	
Satd. Flow (perm)		1143			1328			3180			2770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.96	0.96	0.96
Adj. Flow (vph)	43	30	9	57	57	116	4	745	37	73	977	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	82		0	0	230	0	783		0	0	1064
Confl. Peds. (#/hr)	3		2	2		3	9		19	19		9
Heavy Vehicles (%)	3%	11%	2%	6%	8%	6%	2%	5%	3%	8%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		24.2			24.2			63.3			63.3	
Effective Green, g (s)		24.2			24.2			63.3			63.3	
Actuated g/C Ratio		0.24			0.24			0.63			0.63	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		276			321			2012			1753	
v/s Ratio Prot												
v/s Ratio Perm		0.07			c0.17			0.25			c0.38	
v/c Ratio		0.30			0.72			0.39			0.61	
Uniform Delay, d1		31.0			34.8			8.9			10.9	
Progression Factor		1.00			1.00			0.71			1.00	
Incremental Delay, d2		1.3			9.1			0.4			1.6	
Delay (s)		32.2			43.9			6.8			12.5	
Level of Service		C			D			A			B	
Approach Delay (s)		32.2			43.9			6.8			12.5	
Approach LOS		C			D			A			B	

### Intersection Summary

HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Queues

12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	158	706	93	651	158	581	146	751	152
v/c Ratio	0.61	0.65	0.37	0.66	0.69	0.63	0.54	0.86	0.28
Control Delay	31.3	32.6	13.6	20.1	37.0	35.2	20.3	34.9	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	32.6	13.6	20.1	37.0	35.2	20.3	34.9	2.3
Queue Length 50th (ft)	61	203	20	76	64	168	25	244	9
Queue Length 95th (ft)	#109	270	33	126	#128	227	44	#336	18
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	257	1081	254	981	235	921	275	877	537
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.65	0.37	0.66	0.67	0.63	0.53	0.86	0.28






















Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

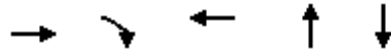
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	513	136	86	521	78	147	491	49	134	691	140
Future Volume (vph)	145	513	136	86	521	78	147	491	49	134	691	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1727	3355		1767	3396		1768	3387		1764	3471	1443
Flt Permitted	0.28	1.00		0.27	1.00		0.15	1.00		0.33	1.00	1.00
Satd. Flow (perm)	501	3355		504	3396		285	3387		606	3471	1443
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	158	558	148	93	566	85	158	528	53	146	751	152
RTOR Reduction (vph)	0	23	0	0	12	0	0	7	0	0	0	114
Lane Group Flow (vph)	158	683	0	93	639	0	158	574	0	146	751	38
Confl. Peds. (#/hr)	62		18	18		62	25		27	27		25
Heavy Vehicles (%)	4%	4%	2%	2%	3%	2%	2%	5%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	36.1	29.8		33.5	28.5		35.6	27.0		32.2	25.3	25.3
Effective Green, g (s)	36.1	29.8		33.5	28.5		35.6	27.0		32.2	25.3	25.3
Actuated g/C Ratio	0.36	0.30		0.34	0.28		0.36	0.27		0.32	0.25	0.25
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	258	999		231	967		228	914		275	878	365
v/s Ratio Prot	c0.04	c0.20		0.02	0.19		c0.06	0.17		0.04	c0.22	
v/s Ratio Perm	0.18			0.11			0.19			0.13		0.03
v/c Ratio	0.61	0.68		0.40	0.66		0.69	0.63		0.53	0.86	0.11
Uniform Delay, d1	23.2	30.9		23.7	31.5		24.4	32.1		25.3	35.6	28.7
Progression Factor	1.00	1.00		0.54	0.54		1.00	1.00		0.69	0.71	2.13
Incremental Delay, d2	4.3	3.8		0.4	3.3		7.1	1.0		0.8	6.5	0.0
Delay (s)	27.5	34.7		13.3	20.3		31.5	33.1		18.2	31.7	61.0
Level of Service	C	C		B	C		C	C		B	C	E
Approach Delay (s)		33.4			19.4			32.7			34.1	
Approach LOS		C			B			C			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			30.4				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			31.3		
Intersection Capacity Utilization			91.5%				ICU Level of Service			F		
Analysis Period (min)			15									
c	Critical Lane Group											

# Queues

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	131	50	276	386	390
v/c Ratio	0.21	0.09	0.46	0.54	0.53
Control Delay	12.0	4.3	13.1	15.1	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	4.3	13.1	15.1	15.1
Queue Length 50th (ft)	27	0	52	87	88
Queue Length 95th (ft)	57	16	107	156	158
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	624	545	601	717	729
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.09	0.46	0.54	0.53

### Intersection Summary



# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↕	↗		↕			↕			↕	↗		
Traffic Volume (vph)	9	111	46	56	125	73	27	295	33	24	307	28		
Future Volume (vph)	9	111	46	56	125	73	27	295	33	24	307	28		
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0			
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00			
Frbp, ped/bikes		1.00	0.96		0.98			1.00			1.00			
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00			
Frt		1.00	0.85		0.96			0.99			0.99			
Flt Protected		1.00	1.00		0.99			1.00			1.00			
Satd. Flow (prot)		1600	1288		1563			1775			1795			
Flt Permitted		0.97	1.00		0.91			0.95			0.96			
Satd. Flow (perm)		1562	1288		1438			1700			1730			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	10	121	50	61	136	79	29	321	36	26	334	30		
RTOR Reduction (vph)	0	0	30	0	26	0	0	7	0	0	5	0		
Lane Group Flow (vph)	0	131	20	0	250	0	0	379	0	0	385	0		
Confl. Peds. (#/hr)	27		20	20		27	5		5	5		5		
Heavy Vehicles (%)	11%	5%	7%	2%	2%	2%	19%	4%	3%	9%	4%	2%		
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0		
Parking (#/hr)	0	0	0	0	0	0								
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA			
Protected Phases		4			4			2			2			
Permitted Phases	4		4	4			2			2				
Actuated Green, G (s)		22.0	22.0		22.0			23.0			23.0			
Effective Green, g (s)		22.0	22.0		22.0			23.0			23.0			
Actuated g/C Ratio		0.40	0.40		0.40			0.42			0.42			
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0			
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0			
Lane Grp Cap (vph)		624	515		575			710			723			
v/s Ratio Prot														
v/s Ratio Perm		0.08	0.02		c0.17			c0.22			0.22			
v/c Ratio		0.21	0.04		0.43			0.53			0.53			
Uniform Delay, d1		10.8	10.1		12.0			12.0			12.0			
Progression Factor		1.00	1.00		1.00			1.00			1.00			
Incremental Delay, d2		0.8	0.1		2.4			2.9			2.8			
Delay (s)		11.6	10.2		14.4			14.8			14.8			
Level of Service		B	B		B			B			B			
Approach Delay (s)		11.2			14.4			14.8			14.8			
Approach LOS		B			B			B			B			
<b>Intersection Summary</b>														
HCM 2000 Control Delay			14.2									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.48											
Actuated Cycle Length (s)			55.0								10.0			
Intersection Capacity Utilization			68.4%										ICU Level of Service	C
Analysis Period (min)			15											

c Critical Lane Group

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	128	58	351	662
v/c Ratio	0.29	0.19	0.36	0.69
Control Delay	7.1	10.4	11.1	22.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.1	10.4	11.1	22.4
Queue Length 50th (ft)	9	21	197	251
Queue Length 95th (ft)	39	37	202	#468
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	614	311	965	965
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.19	0.36	0.69

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	84	53	323	575	34
Future Volume (vph)	34	84	53	323	575	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.90		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1451		1753	1660	1658	
Flt Permitted	0.99		0.29	1.00	1.00	
Satd. Flow (perm)	1451		535	1660	1658	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	91	58	351	625	37
RTOR Reduction (vph)	69	0	0	0	2	0
Lane Group Flow (vph)	59	0	58	351	660	0
Confl. Peds. (#/hr)	16	16	20			20
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	16.0		35.0	35.0	35.0	
Effective Green, g (s)	16.0		35.0	35.0	35.0	
Actuated g/C Ratio	0.25		0.54	0.54	0.54	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	357		288	893	892	
v/s Ratio Prot	c0.04			0.21	c0.40	
v/s Ratio Perm			0.11			
v/c Ratio	0.17		0.20	0.39	0.74	
Uniform Delay, d1	19.3		7.8	8.8	11.5	
Progression Factor	1.00		0.74	0.87	1.00	
Incremental Delay, d2	0.1		1.5	1.2	5.5	
Delay (s)	19.3		7.3	8.9	17.0	
Level of Service	B		A	A	B	
Approach Delay (s)	19.3			8.6	17.0	
Approach LOS	B			A	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			14.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.56			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			67.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Volume (veh/h)	0	0	1	33	2	28	16	359	31	25	622	15
Future Volume (Veh/h)	0	0	1	33	2	28	16	359	31	25	622	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	1	36	2	30	17	390	34	27	676	16
Pedestrians		15			21			5			16	
Lane Width (ft)		0.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			2			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								645			495	
pX, platoon unblocked	0.74	0.74	0.70	0.74	0.74	0.92	0.70			0.92		
vC, conflicting volume	1241	1232	704	1206	1223	444	707			445		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	907	895	364	859	882	352	368			353		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	81	99	95	98			98		
cM capacity (veh/h)	168	194	475	190	198	614	834			1087		
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>									
Volume Total	68	441	719									
Volume Left	36	17	27									
Volume Right	30	34	16									
cSH	273	834	1087									
Volume to Capacity	0.25	0.02	0.02									
Queue Length 95th (ft)	24	2	2									
Control Delay (s)	22.5	0.6	0.7									
Lane LOS	C	A	A									
Approach Delay (s)	22.5	0.6	0.7									
Approach LOS	C											
<b>Intersection Summary</b>												
Average Delay			Err									
Intersection Capacity Utilization			Err%	ICU Level of Service						H		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	24	3	384	653	3
Future Volume (Veh/h)	7	24	3	384	653	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	26	3	417	710	3
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	728	
pX, platoon unblocked	0.79	0.74	0.74			
vC, conflicting volume	1156	734	735			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	737	457	460			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	100			
cM capacity (veh/h)	299	434	793			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	34	420	713			
Volume Left	8	3	0			
Volume Right	26	0	3			
cSH	392	793	1700			
Volume to Capacity	0.09	0.00	0.42			
Queue Length 95th (ft)	7	0	0			
Control Delay (s)	15.0	0.1	0.0			
Lane LOS	C	A				
Approach Delay (s)	15.0	0.1	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay			0.5			
Intersection Capacity Utilization			44.6%	ICU Level of Service	A	
Analysis Period (min)			15			

# Queues

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	49	52	31	34	413	65	697
v/c Ratio	0.07	0.12	0.14	0.07	0.15	0.44	0.14	0.74
Control Delay	15.9	8.0	15.2	1.5	13.8	16.6	15.1	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	8.0	15.2	1.5	13.8	16.6	15.1	23.8
Queue Length 50th (ft)	8	10	13	0	18	244	14	~189
Queue Length 95th (ft)	m21	28	33	5	m42	334	m25	#481
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	461	596	556	631	232	940	463	945
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.08	0.09	0.05	0.15	0.44	0.14	0.74

### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	12	33	35	14	29	31	338	42	60	607	34
Future Volume (vph)	20	12	33	35	14	29	31	338	42	60	607	34
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00	1.00	0.99	1.00		0.99	1.00	
Frt	1.00	0.89			1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1575	1492			1799	1534	1446	1614		1545	1627	
Flt Permitted	0.72	1.00			0.78	1.00	0.26	1.00		0.49	1.00	
Satd. Flow (perm)	1199	1492			1447	1534	399	1614		799	1627	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	13	36	37	15	31	34	367	46	65	660	37
RTOR Reduction (vph)	0	27	0	0	0	23	0	6	0	0	2	0
Lane Group Flow (vph)	22	22	0	0	52	8	34	407	0	65	695	0
Confl. Peds. (#/hr)	9					9	38		20	20		38
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	2%	2%	2%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	16.1	16.1			16.1	16.1	34.9	34.9		34.9	34.9	
Effective Green, g (s)	16.1	16.1			16.1	16.1	34.9	34.9		34.9	34.9	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.54	0.54		0.54	0.54	
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	296	369			358	379	214	866		429	873	
v/s Ratio Prot		0.01						0.25			c0.43	
v/s Ratio Perm	0.02				c0.04	0.01	0.09			0.08		
v/c Ratio	0.07	0.06			0.15	0.02	0.16	0.47		0.15	0.80	
Uniform Delay, d1	18.7	18.7			19.1	18.5	7.6	9.3		7.6	12.2	
Progression Factor	1.12	1.36			1.00	1.00	1.00	1.28		1.16	0.95	
Incremental Delay, d2	0.0	0.0			0.1	0.0	1.5	1.7		0.6	6.3	
Delay (s)	21.1	25.4			19.1	18.5	9.1	13.6		9.5	17.9	
Level of Service	C	C			B	B	A	B		A	B	
Approach Delay (s)		24.0			18.9			13.3			17.2	
Approach LOS		C			B			B			B	

Intersection Summary		
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.59	B
Actuated Cycle Length (s)	65.0	Sum of lost time (s)
Intersection Capacity Utilization	68.2%	14.0
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group



# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	56	648	327	979	92	280	212	111	600
v/c Ratio	0.28	0.52	0.75	0.52	0.48	0.44	0.31	0.45	0.74
Control Delay	24.2	20.8	27.9	19.6	37.6	35.5	17.7	58.8	61.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	20.8	27.9	19.6	37.6	35.5	17.7	58.8	61.2
Queue Length 50th (ft)	18	116	148	265	53	180	91	98	282
Queue Length 95th (ft)	m45	174	221	336	92	258	128	m137	346
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	197	1257	473	1881	193	673	739	269	886
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.52	0.69	0.52	0.48	0.42	0.29	0.41	0.68

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022

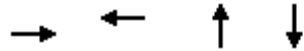


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗		
Traffic Volume (vph)	53	554	62	307	854	66	85	258	195	102	435	117	
Future Volume (vph)	53	554	62	307	854	66	85	258	195	102	435	117	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0		
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95		
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.93	1.00	0.99		
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	0.94	1.00		
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.97		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1736	3400		1763	3378		1767	1863	1471	1664	3389		
Flt Permitted	0.29	1.00		0.26	1.00		0.19	1.00	1.00	0.59	1.00		
Satd. Flow (perm)	535	3400		484	3378		360	1863	1471	1029	3389		
Peak-hour factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	56	583	65	327	909	70	92	280	212	111	473	127	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	56	648	0	327	979	0	92	280	212	111	600	0	
Confl. Peds. (#/hr)	32		46	46		32	28		61	61		28	
Heavy Vehicles (%)	2%	4%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA		
Protected Phases		2		1	6		3	8	1		4		
Permitted Phases	2			6			8		8	4			
Actuated Green, G (s)	48.1	48.1		72.4	72.4		44.1	44.1	61.4	31.2	31.2		
Effective Green, g (s)	48.1	48.1		72.4	72.4		44.1	44.1	61.4	31.2	31.2		
Actuated g/C Ratio	0.37	0.37		0.56	0.56		0.34	0.34	0.47	0.24	0.24		
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0		
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0		
Lane Grp Cap (vph)	197	1258		439	1881		191	631	773	246	813		
v/s Ratio Prot		0.19		c0.10	0.29		0.02	c0.15	0.04		c0.18		
v/s Ratio Perm	0.10			c0.31			0.14		0.11	0.11			
v/c Ratio	0.28	0.52		0.74	0.52		0.48	0.44	0.27	0.45	0.74		
Uniform Delay, d1	28.8	31.9		18.3	18.0		31.8	33.4	20.8	42.1	45.6		
Progression Factor	0.63	0.58		1.00	1.00		1.00	1.00	1.00	1.30	1.25		
Incremental Delay, d2	3.3	1.4		5.9	1.0		0.7	0.2	0.1	1.3	2.8		
Delay (s)	21.4	19.8		24.2	19.0		32.5	33.6	20.9	55.9	59.8		
Level of Service	C	B		C	B		C	C	C	E	E		
Approach Delay (s)		20.0			20.3			28.8			59.2		
Approach LOS		B			C			C			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			30.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.77										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	27.0
Intersection Capacity Utilization			91.4%									ICU Level of Service	F
Analysis Period (min)			15										
c	Critical Lane Group												

Queues

6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	812	1033	6	137
v/c Ratio	0.40	0.43	0.02	0.56
Control Delay	2.6	3.9	39.5	45.1
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	2.6	4.1	39.5	45.1
Queue Length 50th (ft)	38	62	3	76
Queue Length 95th (ft)	43	75	16	146
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	2030	2394	257	247
Starvation Cap Reductn	0	488	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.54	0.02	0.55
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	48	692	7	8	873	101	3	1	2	55	2	69	
Future Volume (vph)	48	692	7	8	873	101	3	1	2	55	2	69	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.99			0.99			0.98		
Flpb, ped/bikes		1.00			1.00			0.99			0.99		
Frt		1.00			0.98			0.95			0.93		
Flt Protected		1.00			1.00			0.98			0.98		
Satd. Flow (prot)		3453			3411			1706			1481		
Flt Permitted		0.79			0.95			0.89			0.86		
Satd. Flow (perm)		2749			3235			1550			1295		
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	52	752	8	8	919	106	3	1	2	60	2	75	
RTOR Reduction (vph)	0	1	0	0	7	0	0	2	0	0	34	0	
Lane Group Flow (vph)	0	811	0	0	1026	0	0	4	0	0	103	0	
Confl. Peds. (#/hr)	35		16	16		35	11		10	10		11	
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		95.9			95.9			21.1			21.1		
Effective Green, g (s)		95.9			95.9			21.1			21.1		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		2027			2386			251			210		
v/s Ratio Prot													
v/s Ratio Perm		0.30			0.32			0.00			0.08		
v/c Ratio		0.40			0.43			0.02			0.49		
Uniform Delay, d1		6.3			6.6			45.7			49.6		
Progression Factor		0.33			0.53			1.00			1.00		
Incremental Delay, d2		0.5			0.5			0.0			0.7		
Delay (s)		2.6			3.9			45.8			50.2		
Level of Service		A			A			D			D		
Approach Delay (s)		2.6			3.9			45.8			50.2		
Approach LOS		A			A			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			6.7									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.44										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			82.4%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	7	9	15	40	24	19	15	64	31	11	52	9
Future Volume (Veh/h)	7	9	15	40	24	19	15	64	31	11	52	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	10	16	43	26	20	16	70	34	12	57	10
Pedestrians		14			15			9			15	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	267	251	85	250	239	117	81			119		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	267	251	85	250	239	117	81			119		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	99	98	98	93	96	98	99			99		
cM capacity (veh/h)	610	622	953	642	632	898	1496			1448		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	34	89	120	79								
Volume Left	8	43	16	12								
Volume Right	16	20	34	10								
cSH	739	683	1496	1448								
Volume to Capacity	0.05	0.13	0.01	0.01								
Queue Length 95th (ft)	4	11	1	1								
Control Delay (s)	10.1	11.1	1.1	1.2								
Lane LOS	B	B	A	A								
Approach Delay (s)	10.1	11.1	1.1	1.2								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			4.8									
Intersection Capacity Utilization			29.0%		ICU Level of Service				A			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	1	78	14	12	61
Future Volume (Veh/h)	4	1	78	14	12	61
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	85	15	13	66
Pedestrians	17					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None		None	
Median storage veh						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	202	110			117	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	202	110			117	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			99	
cM capacity (veh/h)	767	929			1448	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	5	100	79			
Volume Left	4	0	13			
Volume Right	1	15	0			
cSH	795	1700	1448			
Volume to Capacity	0.01	0.06	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	9.6	0.0	1.3			
Lane LOS	A		A			
Approach Delay (s)	9.6	0.0	1.3			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.8			
Intersection Capacity Utilization			20.5%	ICU Level of Service		A
Analysis Period (min)	15					

# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

06/06/2022



















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	25	77	0	0	69
Future Volume (Veh/h)	2	25	77	0	0	69
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	27	84	0	0	75
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			1225			
pX, platoon unblocked						
vC, conflicting volume	181	106			106	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	181	106			106	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	792	928			1454	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	29	84	75			
Volume Left	2	0	0			
Volume Right	27	0	0			
cSH	917	1700	1700			
Volume to Capacity	0.03	0.05	0.04			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	9.1	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.1	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			1.4			
Intersection Capacity Utilization			18.9%		ICU Level of Service	A
Analysis Period (min)			15			



HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

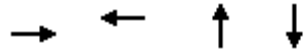
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	8	77	41	8	86	8	58	31	27	10	22	7
Future Volume (vph)	8	77	41	8	86	8	58	31	27	10	22	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	84	45	9	93	9	63	34	29	11	24	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	138	111	126	43								
Volume Left (vph)	9	9	63	11								
Volume Right (vph)	45	9	29	8								
Hadj (s)	-0.15	0.02	0.01	-0.03								
Departure Headway (s)	4.3	4.5	4.5	4.6								
Degree Utilization, x	0.16	0.14	0.16	0.05								
Capacity (veh/h)	803	760	749	725								
Control Delay (s)	8.1	8.2	8.4	7.9								
Approach Delay (s)	8.1	8.2	8.4	7.9								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.2									
Level of Service			A									
Intersection Capacity Utilization			31.2%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	78	166	893	1270
v/c Ratio	0.32	0.63	0.38	0.60
Control Delay	47.7	58.8	4.6	11.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	47.7	58.8	4.6	11.4
Queue Length 50th (ft)	55	125	85	282
Queue Length 95th (ft)	101	197	99	371
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	338	370	2329	2103
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.45	0.38	0.60
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	28	40	7	27	58	73	5	783	34	48	1154	30
Future Volume (vph)	28	40	7	27	58	73	5	783	34	48	1154	30
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.94			0.99			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1619			1526			3408			3381	
Flt Permitted		0.80			0.93			0.95			0.86	
Satd. Flow (perm)		1315			1438			3231			2920	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	29	42	7	28	61	77	5	851	37	49	1190	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	78	0	0	166	0	0	891	0	0	1269	0
Confl. Peds. (#/hr)	6		7	7		6	10		15	15		10
Heavy Vehicles (%)	2%	2%	2%	4%	4%	2%	20%	3%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		23.9			23.9			93.6			93.6	
Effective Green, g (s)		23.9			23.9			93.6			93.6	
Actuated g/C Ratio		0.18			0.18			0.72			0.72	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		241			264			2326			2102	
v/s Ratio Prot												
v/s Ratio Perm		0.06			0.12			0.28			0.43	
v/c Ratio		0.32			0.63			0.38			0.60	
Uniform Delay, d1		46.0			49.0			7.0			9.0	
Progression Factor		1.00			1.00			0.55			1.00	
Incremental Delay, d2		1.6			6.5			0.4			1.3	
Delay (s)		47.7			55.4			4.2			10.3	
Level of Service		D			E			A			B	
Approach Delay (s)		47.7			55.4			4.2			10.3	
Approach LOS		D			E			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			12.4									B
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			130.0							12.5		
Intersection Capacity Utilization			85.1%									E
Analysis Period (min)			15									

c Critical Lane Group

Queues

12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	751	130	851	189	694	128	892	129
v/c Ratio	0.71	0.65	0.56	0.77	0.97	0.68	0.50	0.87	0.24
Control Delay	43.4	38.9	33.7	39.1	89.3	43.5	35.8	55.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	38.9	33.7	39.1	89.3	43.5	35.8	55.2	8.1
Queue Length 50th (ft)	75	277	55	209	105	265	78	295	6
Queue Length 95th (ft)	#141	357	102	339	#259	332	132	368	46
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	209	1164	234	1106	195	1072	285	1121	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.65	0.56	0.77	0.97	0.65	0.45	0.80	0.22






















Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

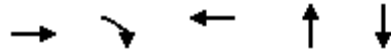
06/06/2022

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	136	551	140	121	690	101	174	600	39	122	847	123	
Future Volume (vph)	136	551	140	121	690	101	174	600	39	122	847	123	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1733	3385		1768	3392		1769	3466		1768	3471	1418	
Flt Permitted	0.16	1.00		0.25	1.00		0.11	1.00		0.22	1.00	1.00	
Satd. Flow (perm)	295	3385		461	3392		202	3466		417	3471	1418	
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95	
Adj. Flow (vph)	148	599	152	130	742	109	189	652	42	128	892	129	
RTOR Reduction (vph)	0	17	0	0	9	0	0	4	0	0	0	91	
Lane Group Flow (vph)	148	734	0	130	842	0	189	690	0	128	892	38	
Confl. Peds. (#/hr)	51		15	15		51	24		16	16		24	
Heavy Vehicles (%)	4%	3%	2%	2%	3%	3%	2%	3%	3%	2%	4%	5%	
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	
Protected Phases	5	2		1	6		3	8		7	4		
Permitted Phases	2			6			8			4		4	
Actuated Green, G (s)	52.3	44.0		48.3	42.0		48.5	38.5		48.3	38.4	38.4	
Effective Green, g (s)	52.3	44.0		48.3	42.0		48.5	38.5		48.3	38.4	38.4	
Actuated g/C Ratio	0.40	0.34		0.37	0.32		0.37	0.30		0.37	0.30	0.30	
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	210	1145		234	1095		195	1026		257	1025	418	
v/s Ratio Prot	c0.04	0.22		0.03	c0.25		c0.07	0.20		0.04	0.26		
v/s Ratio Perm	0.24			0.18			c0.29			0.15		0.03	
v/c Ratio	0.70	0.64		0.56	0.77		0.97	0.67		0.50	0.87	0.09	
Uniform Delay, d1	28.0	36.3		28.9	39.6		32.2	40.2		28.9	43.4	33.2	
Progression Factor	1.00	1.00		1.00	0.85		1.00	1.00		1.33	1.08	5.68	
Incremental Delay, d2	10.3	2.8		8.4	4.8		54.6	1.4		0.4	6.5	0.0	
Delay (s)	38.2	39.1		37.3	38.6		86.8	41.6		39.0	53.4	188.5	
Level of Service	D	D		D	D		F	D		D	D	F	
Approach Delay (s)		39.0			38.4			51.3			67.0		
Approach LOS		D			D			D			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			49.8									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.86										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	31.3
Intersection Capacity Utilization			93.3%									ICU Level of Service	F
Analysis Period (min)			15										
c	Critical Lane Group												

# Queues

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	156	62	351	318	497
v/c Ratio	0.35	0.14	0.84	0.31	0.48
Control Delay	22.4	6.1	41.8	9.8	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.4	6.1	41.8	9.8	12.0
Queue Length 50th (ft)	54	0	137	73	132
Queue Length 95th (ft)	99	24	#260	126	216
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	509	486	479	1010	1037
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.13	0.73	0.31	0.48

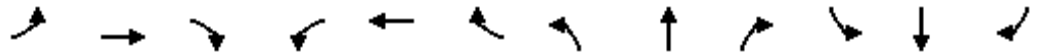
### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	20	123	57	80	178	69	19	248	25	25	407	26
Future Volume (vph)	20	123	57	80	178	69	19	248	25	25	407	26
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.94		0.99			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		0.99			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			1.00	
Satd. Flow (prot)		1628	1336		1581			1812			1839	
Flt Permitted		0.93	1.00		0.88			0.96			0.97	
Satd. Flow (perm)		1528	1336		1401			1744			1794	
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	134	62	86	191	74	21	270	27	27	442	28
RTOR Reduction (vph)	0	0	44	0	14	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	156	18	0	337	0	0	314	0	0	494	0
Confl. Peds. (#/hr)	17		21	21		17	13		7	7		13
Heavy Vehicles (%)	11%	2%	2%	2%	2%	2%	17%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		21.7	21.7		21.7			43.3			43.3	
Effective Green, g (s)		21.7	21.7		21.7			43.3			43.3	
Actuated g/C Ratio		0.29	0.29		0.29			0.58			0.58	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		442	386		405			1006			1035	
v/s Ratio Prot												
v/s Ratio Perm		0.10	0.01		c0.24			0.18			c0.28	
v/c Ratio		0.35	0.05		0.83			0.31			0.48	
Uniform Delay, d1		21.1	19.2		25.0			8.2			9.3	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.5	0.0		13.7			0.8			1.6	
Delay (s)		21.6	19.2		38.6			9.0			10.8	
Level of Service		C	B		D			A			B	
Approach Delay (s)		20.9			38.6			9.0			10.8	
Approach LOS		C			D			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			19.0									B
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			75.0								10.0	
Intersection Capacity Utilization			74.2%									D
Analysis Period (min)			15									

c Critical Lane Group



## E. Future (2027) Conditions with Development Capacity Analysis

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	405	46	430	421
v/c Ratio	0.69	0.10	0.50	0.50
Control Delay	11.8	18.6	21.6	15.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.8	18.6	21.6	15.6
Queue Length 50th (ft)	30	26	265	127
Queue Length 95th (ft)	100	39	248	218
Internal Link Dist (ft)	525		418	1320
Turn Bay Length (ft)		85		
Base Capacity (vph)	720	442	860	839
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.10	0.50	0.50
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	335	42	396	352	35
Future Volume (vph)	38	335	42	396	352	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frbp, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.88		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1411		1700	1660	1611	
Flt Permitted	0.99		0.48	1.00	1.00	
Satd. Flow (perm)	1411		854	1660	1611	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	364	46	430	383	38
RTOR Reduction (vph)	211	0	0	0	4	0
Lane Group Flow (vph)	194	0	46	430	417	0
Confl. Peds. (#/hr)	15	10	13			13
Heavy Vehicles (%)	8%	2%	5%	3%	4%	9%
Parking (#/hr)	0	0		0	0	0
Turn Type	Perm		Perm	NA	NA	
Protected Phases				2	6	
Permitted Phases	4		2			
Actuated Green, G (s)	17.3		33.7	33.7	33.7	
Effective Green, g (s)	17.3		33.7	33.7	33.7	
Actuated g/C Ratio	0.27		0.52	0.52	0.52	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	375		442	860	835	
v/s Ratio Prot				c0.26	0.26	
v/s Ratio Perm	c0.14		0.05			
v/c Ratio	0.52		0.10	0.50	0.50	
Uniform Delay, d1	20.3		8.0	10.2	10.2	
Progression Factor	1.00		1.55	1.53	1.00	
Incremental Delay, d2	0.5		0.5	2.0	2.1	
Delay (s)	20.8		12.8	17.6	12.3	
Level of Service	C		B	B	B	
Approach Delay (s)	20.8			17.1	12.3	
Approach LOS	C			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			16.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			66.2%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	37	35	402	16	89	602
Future Volume (Veh/h)	37	35	402	16	89	602
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	44	41	473	19	105	708
Pedestrians	30		1		16	
Lane Width (ft)	12.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	3		0		2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	645			498		
pX, platoon unblocked	0.93	0.90			0.90	
vC, conflicting volume	1432	528			522	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1184	421			414	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	92			90	
cM capacity (veh/h)	167	545			1002	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	85	492	813			
Volume Left	44	0	105			
Volume Right	41	19	0			
cSH	251	1700	1002			
Volume to Capacity	0.34	0.29	0.10			
Queue Length 95th (ft)	36	0	9			
Control Delay (s)	26.6	0.0	2.6			
Lane LOS	D		A			
Approach Delay (s)	26.6	0.0	2.6			
Approach LOS	D					
<b>Intersection Summary</b>						
Average Delay			3.1			
Intersection Capacity Utilization			77.3%	ICU Level of Service		D
Analysis Period (min)	15					

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			T	T	
Traffic Volume (veh/h)	0	0	0	399	641	0
Future Volume (Veh/h)	0	0	0	399	641	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	469	754	0
Pedestrians	25					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	731	
pX, platoon unblocked	0.89	0.97	0.97			
vC, conflicting volume	1248	779	779			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1133	754	754			
tC, single (s)	6.6	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.9	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	176	302	808			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	0	469	754			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.28	0.44			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay	0.0					
Intersection Capacity Utilization	37.1%			ICU Level of Service	A	
Analysis Period (min)	15					

# Queues

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	23	110	32	75	411	154	558
v/c Ratio	0.06	0.06	0.26	0.07	0.22	0.45	0.34	0.66
Control Delay	14.3	7.1	17.1	1.6	23.2	28.2	19.6	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	7.1	17.1	1.6	23.2	28.2	19.6	23.0
Queue Length 50th (ft)	5	2	28	0	47	274	57	210
Queue Length 95th (ft)	m12	m11	58	6	90	388	m113	#384
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	412	543	618	616	345	922	455	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.18	0.05	0.22	0.45	0.34	0.66

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	17	6	15	41	60	29	69	354	24	142	288	225
Future Volume (vph)	17	6	15	41	60	29	69	354	24	142	288	225
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00			1.00	0.94	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.97	1.00			1.00	1.00	0.99	1.00		0.98	1.00	
Frt	1.00	0.90			1.00	0.85	1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1485	1388			1825	1495	1548	1598		1530	1423	
Flt Permitted	0.69	1.00			0.86	1.00	0.37	1.00		0.49	1.00	
Satd. Flow (perm)	1072	1388			1607	1495	599	1598		791	1423	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	7	16	45	65	32	75	385	26	154	313	245
RTOR Reduction (vph)	0	12	0	0	0	24	0	3	0	0	34	0
Lane Group Flow (vph)	18	11	0	0	110	8	75	408	0	154	524	0
Confl. Peds. (#/hr)	28					28	24		34	34		24
Heavy Vehicles (%)	6%	2%	14%	2%	2%	2%	2%	4%	2%	2%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	16.4	16.4			16.4	16.4	34.6	34.6		34.6	34.6	
Effective Green, g (s)	16.4	16.4			16.4	16.4	34.6	34.6		34.6	34.6	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.53	0.53		0.53	0.53	
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	270	350			405	377	318	850		421	757	
v/s Ratio Prot		0.01						0.26			c0.37	
v/s Ratio Perm	0.02				c0.07	0.01	0.13			0.19		
v/c Ratio	0.07	0.03			0.27	0.02	0.24	0.48		0.37	0.69	
Uniform Delay, d1	18.5	18.3			19.5	18.3	8.1	9.6		8.8	11.3	
Progression Factor	1.02	1.02			1.00	1.00	1.79	2.19		1.28	1.30	
Incremental Delay, d2	0.0	0.0			0.1	0.0	1.6	1.8		2.2	4.7	
Delay (s)	18.9	18.6			19.6	18.3	16.2	22.7		13.5	19.4	
Level of Service	B	B			B	B	B	C		B	B	
Approach Delay (s)		18.7			19.3			21.7			18.1	
Approach LOS		B			B			C			B	

Intersection Summary		
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.56	B
Actuated Cycle Length (s)	65.0	Sum of lost time (s)
Intersection Capacity Utilization	69.0%	14.0
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group



# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	59	718	78	507	104	367	221	70	289
v/c Ratio	0.15	0.44	0.23	0.28	0.36	0.63	0.41	0.37	0.45
Control Delay	7.6	9.6	14.4	14.5	35.5	43.2	28.7	44.5	42.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	9.6	14.4	14.5	35.5	43.2	28.7	44.5	42.1
Queue Length 50th (ft)	10	119	28	109	63	262	123	48	110
Queue Length 95th (ft)	m23	139	53	142	110	371	189	m81	156
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	383	1643	338	1829	292	688	543	239	818
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.44	0.23	0.28	0.36	0.53	0.41	0.29	0.35

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022

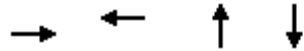


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↵	↕↗		↵	↕↗		↵	↕	↗	↵	↕↗		
Traffic Volume (vph)	54	634	27	72	418	49	96	338	203	64	184	82	
Future Volume (vph)	54	634	27	72	418	49	96	338	203	64	184	82	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0		
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95		
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.95	1.00	0.99		
Flpb, ped/bikes	0.95	1.00		1.00	1.00		1.00	1.00	1.00	0.97	1.00		
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1638	3439		1700	3176		1634	1827	1485	1669	3128		
Flt Permitted	0.47	1.00		0.28	1.00		0.42	1.00	1.00	0.52	1.00		
Satd. Flow (perm)	803	3439		496	3176		723	1827	1485	917	3128		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	59	689	29	78	454	53	104	367	221	70	200	89	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	59	718	0	78	507	0	104	367	221	70	289	0	
Confl. Peds. (#/hr)	41		20	20		41	14		34	34		14	
Heavy Vehicles (%)	5%	4%	8%	6%	8%	3%	10%	4%	3%	5%	9%	9%	
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA		
Protected Phases		2		1	6		3	8	1		4		
Permitted Phases	2			6			8		8	4			
Actuated Green, G (s)	62.1	62.1		74.9	74.9		41.6	41.6	47.4	27.0	27.0		
Effective Green, g (s)	62.1	62.1		74.9	74.9		41.6	41.6	47.4	27.0	27.0		
Actuated g/C Ratio	0.48	0.48		0.58	0.58		0.32	0.32	0.36	0.21	0.21		
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0		
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0		
Lane Grp Cap (vph)	383	1642		339	1829		288	584	621	190	649		
v/s Ratio Prot		c0.21		0.01	0.16		0.02	c0.20	c0.02		0.09		
v/s Ratio Perm	0.07			0.12			0.09		0.13	0.08			
v/c Ratio	0.15	0.44		0.23	0.28		0.36	0.63	0.36	0.37	0.45		
Uniform Delay, d1	19.1	22.4		13.7	13.9		32.4	37.6	30.2	44.2	45.0		
Progression Factor	0.34	0.39		1.00	1.00		1.00	1.00	1.00	0.88	0.89		
Incremental Delay, d2	0.8	0.7		0.1	0.4		0.3	1.5	0.1	1.4	0.5		
Delay (s)	7.3	9.5		13.9	14.3		32.7	39.2	30.3	40.3	40.6		
Level of Service	A	A		B	B		C	D	C	D	D		
Approach Delay (s)		9.3			14.2			35.4			40.5		
Approach LOS		A			B			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			22.6									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	27.0
Intersection Capacity Utilization			77.8%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# Queues

## 6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	898	650	46	156
v/c Ratio	0.51	0.29	0.16	0.56
Control Delay	5.3	3.4	35.3	34.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.3	3.4	35.3	34.3
Queue Length 50th (ft)	62	25	22	62
Queue Length 95th (ft)	58	33	59	138
Internal Link Dist (ft)	823	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1755	2212	291	284
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.29	0.16	0.55
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	148	659	19	9	452	137	5	23	15	26	18	99	
Future Volume (vph)	148	659	19	9	452	137	5	23	15	26	18	99	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.98			0.98			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			0.99		
Frt		1.00			0.97			0.95			0.91		
Flt Protected		0.99			1.00			0.99			0.99		
Satd. Flow (prot)		3413			3160			1736			1425		
Flt Permitted		0.69			0.94			0.96			0.93		
Satd. Flow (perm)		2375			2966			1683			1343		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	161	716	21	10	491	149	5	25	16	28	20	108	
RTOR Reduction (vph)	0	1	0	0	21	0	0	13	0	0	63	0	
Lane Group Flow (vph)	0	897	0	0	629	0	0	33	0	0	93	0	
Confl. Peds. (#/hr)	17		17	17		17	9		18	18		9	
Heavy Vehicles (%)	4%	4%	2%	2%	10%	4%	2%	2%	2%	4%	2%	6%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		96.0			96.0			21.0			21.0		
Effective Green, g (s)		96.0			96.0			21.0			21.0		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1753			2190			271			216		
v/s Ratio Prot													
v/s Ratio Perm		c0.38			0.21			0.02			c0.07		
v/c Ratio		0.51			0.29			0.12			0.43		
Uniform Delay, d1		7.1			5.6			46.6			49.1		
Progression Factor		0.61			0.63			1.00			1.00		
Incremental Delay, d2		0.8			0.3			0.1			0.5		
Delay (s)		5.2			3.9			46.7			49.6		
Level of Service		A			A			D			D		
Approach Delay (s)		5.2			3.9			46.7			49.6		
Approach LOS		A			A			D			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			9.8									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.50										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			76.1%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	24	7	114	8	195	6	162	114	53	37	7
Future Volume (Veh/h)	23	24	7	114	8	195	6	162	114	53	37	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	27	28	8	134	9	229	7	191	134	62	44	8
Pedestrians		21			34			5			14	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	712	566	74	505	503	306	73			359		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	712	566	74	505	503	306	73			359		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.3		
p0 queue free %	87	93	99	66	98	67	100			94		
cM capacity (veh/h)	202	386	963	394	419	687	1496			1099		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	63	372	332	114								
Volume Left	27	134	7	62								
Volume Right	8	229	134	8								
cSH	294	535	1496	1099								
Volume to Capacity	0.21	0.69	0.00	0.06								
Queue Length 95th (ft)	20	135	0	4								
Control Delay (s)	20.6	25.6	0.2	4.8								
Lane LOS	C	D	A	A								
Approach Delay (s)	20.6	25.6	0.2	4.8								
Approach LOS	C	D										
<b>Intersection Summary</b>												
Average Delay			13.0									
Intersection Capacity Utilization			64.6%		ICU Level of Service				C			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↩			↩
Traffic Volume (veh/h)	0	0	379	1	1	83
Future Volume (Veh/h)	0	0	379	1	1	83
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	446	1	1	98
Pedestrians	30					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	576	476			477	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	576	476			477	
tC, single (s)	6.4	6.2			4.6	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.6	
p0 queue free %	100	100			100	
cM capacity (veh/h)	478	589			887	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	447	99				
Volume Left	0	1				
Volume Right	1	0				
cSH	1700	887				
Volume to Capacity	0.26	0.00				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.1				
Lane LOS	A					
Approach Delay (s)	0.0	0.1				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			23.3%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street

















06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑			↔
Traffic Volume (veh/h)	0	1	380	0	0	84
Future Volume (Veh/h)	0	1	380	0	0	84
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	413	0	0	91
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	1225					
<b>pX, platoon unblocked</b>						
vC, conflicting volume	504	413			413	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	504	413			413	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	528	639			1146	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	1	413	91			
Volume Left	0	0	0			
Volume Right	1	0	0			
cSH	639	1700	1700			
Volume to Capacity	0.00	0.24	0.05			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	10.6	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	10.6	0.0	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			30.0%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

06/06/2022

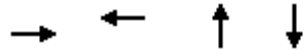
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	6	168	38	17	46	12	113	49	185	25	28	7
Future Volume (vph)	6	168	38	17	46	12	113	49	185	25	28	7
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	7	198	45	20	54	14	133	58	218	29	33	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	250	88	409	70								
Volume Left (vph)	7	20	133	29								
Volume Right (vph)	45	14	218	8								
Hadj (s)	-0.03	0.07	-0.20	0.17								
Departure Headway (s)	5.2	5.6	4.7	5.6								
Degree Utilization, x	0.36	0.14	0.54	0.11								
Capacity (veh/h)	637	572	720	580								
Control Delay (s)	11.2	9.5	13.2	9.3								
Approach Delay (s)	11.2	9.5	13.2	9.3								
Approach LOS	B	A	B	A								
Intersection Summary												
Delay			11.8									
Level of Service			B									
Intersection Capacity Utilization			44.9%	ICU Level of Service	A							
Analysis Period (min)			15									



# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	120	191	1458	663
v/c Ratio	0.75	0.69	0.62	0.50
Control Delay	80.8	65.5	12.0	10.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	80.8	65.5	12.0	10.5
Queue Length 50th (ft)	103	161	333	126
Queue Length 95th (ft)	168	233	475	204
Internal Link Dist (ft)	223	873	1586	285
Turn Bay Length (ft)				
Base Capacity (vph)	235	409	2340	1315
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.47	0.62	0.50
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations		↕			↕			↕			↕			
Traffic Volume (vph)	72	36	3	20	72	84	2	1267	73	89	438	83		
Future Volume (vph)	72	36	3	20	72	84	2	1267	73	89	438	83		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		6.5			6.5			6.0			6.0			
Lane Util. Factor		1.00			1.00			0.95			0.95			
Frbp, ped/bikes		1.00			0.99			1.00			1.00			
Flpb, ped/bikes		1.00			1.00			1.00			1.00			
Frt		1.00			0.94			0.99			0.98			
Flt Protected		0.97			0.99			1.00			0.99			
Satd. Flow (prot)		1606			1549			3376			3262			
Flt Permitted		0.52			0.96			0.95			0.55			
Satd. Flow (perm)		858			1489			3223			1803			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Adj. Flow (vph)	78	39	3	22	78	91	2	1377	79	97	476	90		
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	7	0		
Lane Group Flow (vph)	0	120	0	0	191	0	0	1456	0	0	656	0		
Confl. Peds. (#/hr)	6		10	10		6	3		7	7		3		
Confl. Bikes (#/hr)									4			4		
Heavy Vehicles (%)	2%	3%	2%	2%	2%	1%	2%	4%	2%	5%	5%	5%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10		
Parking (#/hr)	0	0	0	0	0									
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA			
Protected Phases		4			4			2			2			
Permitted Phases	4			4			2			2				
Actuated Green, G (s)		26.0			26.0			101.5			101.5			
Effective Green, g (s)		26.0			26.0			101.5			101.5			
Actuated g/C Ratio		0.19			0.19			0.72			0.72			
Clearance Time (s)		6.5			6.5			6.0			6.0			
Vehicle Extension (s)		5.0			5.0			0.2			0.2			
Lane Grp Cap (vph)		159			276			2336			1307			
v/s Ratio Prot														
v/s Ratio Perm		c0.14			0.13			c0.45			0.36			
v/c Ratio		0.75			0.69			0.62			0.50			
Uniform Delay, d1		54.0			53.3			9.7			8.3			
Progression Factor		1.00			1.00			1.00			1.00			
Incremental Delay, d2		21.3			9.2			1.3			1.4			
Delay (s)		75.3			62.4			10.9			9.7			
Level of Service		E			E			B			A			
Approach Delay (s)		75.3			62.4			10.9			9.7			
Approach LOS		E			E			B			A			
<b>Intersection Summary</b>														
HCM 2000 Control Delay			17.8									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.65											
Actuated Cycle Length (s)			140.0								12.5			
Intersection Capacity Utilization			93.3%										ICU Level of Service	F
Analysis Period (min)			15											
c Critical Lane Group														

# Queues

## 12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	238	837	89	540	99	967	97	476	90
v/c Ratio	0.62	0.64	0.42	0.48	0.28	0.87	0.51	0.44	0.16
Control Delay	28.3	35.8	28.1	34.0	23.8	50.3	32.7	37.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	35.8	28.1	34.0	23.8	50.3	32.7	37.0	0.6
Queue Length 50th (ft)	118	305	43	154	48	392	47	165	0
Queue Length 95th (ft)	179	378	72	198	85	480	86	219	0
Internal Link Dist (ft)		353		823		288		1586	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	386	1299	214	1119	380	1157	191	1104	578
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.64	0.42	0.48	0.26	0.84	0.51	0.43	0.16

### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Traffic Volume (vph)	226	695	100	83	351	152	95	873	56	89	438	83
Future Volume (vph)	226	695	100	83	351	152	95	873	56	89	438	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.6		5.7	5.6		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1697	3394		1432	3078		1751	3409		1752	3471	1433
Flt Permitted	0.32	1.00		0.21	1.00		0.34	1.00		0.10	1.00	1.00
Satd. Flow (perm)	577	3394		322	3078		630	3409		182	3471	1433
Peak-hour factor, PHF	0.95	0.95	0.95	0.93	0.93	0.93	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	238	732	105	89	377	163	99	909	58	97	476	90
RTOR Reduction (vph)	0	9	0	0	37	0	0	3	0	0	0	62
Lane Group Flow (vph)	238	828	0	89	503	0	99	964	0	97	476	28
Confl. Peds. (#/hr)	28		14	14		28	5		6	6		5
Heavy Vehicles (%)	6%	4%	4%	26%	10%	10%	3%	5%	2%	3%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	56.4	46.5		48.8	42.7		47.8	39.3		44.4	37.6	37.6
Effective Green, g (s)	62.4	49.5		54.8	45.7		53.8	42.3		50.4	40.6	40.6
Actuated g/C Ratio	0.48	0.38		0.42	0.35		0.41	0.33		0.39	0.31	0.31
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	388	1292		213	1082		359	1109		188	1084	447
v/s Ratio Prot	c0.06	c0.24		0.03	0.16		c0.02	c0.28		c0.04	0.14	
v/s Ratio Perm	0.23			0.15			0.09			0.16		0.02
v/c Ratio	0.61	0.64		0.42	0.46		0.28	0.87		0.52	0.44	0.06
Uniform Delay, d1	21.5	33.0		24.5	32.7		24.3	41.2		29.6	35.6	31.4
Progression Factor	1.00	1.00		1.16	1.09		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	2.5		0.5	1.4		0.2	7.2		1.0	0.1	0.0
Delay (s)	24.4	35.4		28.9	37.1		24.5	48.4		30.6	35.7	31.4
Level of Service	C	D		C	D		C	D		C	D	C
Approach Delay (s)		33.0			36.0			46.2			34.4	
Approach LOS		C			D			D			C	

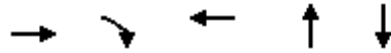
### Intersection Summary

HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.3
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

13: Walter Reed Drive/S Fillmore Street

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	178	54	247	357	307
v/c Ratio	0.44	0.14	0.62	0.34	0.30
Control Delay	23.6	6.1	23.9	9.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	6.1	23.9	9.4	9.2
Queue Length 50th (ft)	59	0	67	78	66
Queue Length 95th (ft)	102	21	124	146	125
Internal Link Dist (ft)	212		223	1320	194
Turn Bay Length (ft)		55			
Base Capacity (vph)	681	599	635	1055	1013
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.09	0.39	0.34	0.30

Intersection Summary

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street

06/06/2022



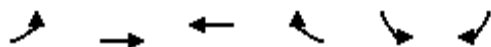
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	17	147	50	43	103	81	27	274	35	30	230	22
Future Volume (vph)	17	147	50	43	103	81	27	274	35	30	230	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.97		0.98			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.95			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			0.99	
Satd. Flow (prot)		1652	1326		1545			1809			1773	
Flt Permitted		0.96	1.00		0.91			0.96			0.94	
Satd. Flow (perm)		1590	1326		1414			1746			1680	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	18	160	54	47	112	88	29	291	37	33	250	24
RTOR Reduction (vph)	0	0	40	0	37	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	178	14	0	210	0	0	353	0	0	304	0
Confl. Peds. (#/hr)	15		9	9		15	5		3	3		5
Heavy Vehicles (%)	2%	2%	5%	3%	2%	3%	11%	2%	3%	7%	5%	5%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		17.9	17.9		17.9			42.1			42.1	
Effective Green, g (s)		17.9	17.9		17.9			42.1			42.1	
Actuated g/C Ratio		0.26	0.26		0.26			0.60			0.60	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		406	339		361			1050			1010	
v/s Ratio Prot												
v/s Ratio Perm		0.11	0.01		0.15			0.20			0.18	
v/c Ratio		0.44	0.04		0.58			0.34			0.30	
Uniform Delay, d1		21.8	19.6		22.8			7.0			6.8	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.8	0.0		2.4			0.9			0.8	
Delay (s)		22.6	19.6		25.2			7.8			7.6	
Level of Service		C	B		C			A			A	
Approach Delay (s)		21.9			25.2			7.8			7.6	
Approach LOS		C			C			A			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			14.4									B
HCM 2000 Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			70.0								10.0	
Intersection Capacity Utilization			61.3%									B
Analysis Period (min)			15									

c Critical Lane Group

# HCM Unsignalized Intersection Capacity Analysis

## 29: Site Driveway

06/06/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↗				
Traffic Volume (veh/h)	2	0	0	0	0	0
Future Volume (Veh/h)	2	0	0	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				4	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				4	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1623				1017	1085
<b>Direction, Lane #</b>	<b>EB 1</b>					
Volume Total	2					
Volume Left	2					
Volume Right	0					
cSH	1623					
Volume to Capacity	0.00					
Queue Length 95th (ft)	0					
Control Delay (s)	7.2					
Lane LOS	A					
Approach Delay (s)	7.2					
Approach LOS						
<b>Intersection Summary</b>						
Average Delay		7.2				
Intersection Capacity Utilization		6.7%		ICU Level of Service		A
Analysis Period (min)		15				

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	347	92	397	518
v/c Ratio	0.68	0.29	0.52	0.68
Control Delay	15.3	15.8	17.1	23.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.3	15.8	17.1	23.3
Queue Length 50th (ft)	44	28	127	172
Queue Length 95th (ft)	112	62	#216	#345
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	645	317	759	762
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.29	0.52	0.68

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	257	86	369	447	29
Future Volume (vph)	63	257	86	369	447	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.96		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.89		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1331		1737	1629	1628	
Flt Permitted	0.99		0.37	1.00	1.00	
Satd. Flow (perm)	1331		681	1629	1628	
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.92	0.92
Adj. Flow (vph)	68	279	92	397	486	32
RTOR Reduction (vph)	111	0	0	0	3	0
Lane Group Flow (vph)	236	0	92	397	515	0
Confl. Peds. (#/hr)	6	30	14			14
Heavy Vehicles (%)	6%	9%	3%	5%	4%	2%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	18.0		28.0	28.0	28.0	
Effective Green, g (s)	18.0		28.0	28.0	28.0	
Actuated g/C Ratio	0.30		0.47	0.47	0.47	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	399		317	760	759	
v/s Ratio Prot	c0.18			0.24	c0.32	
v/s Ratio Perm			0.14			
v/c Ratio	0.59		0.29	0.52	0.68	
Uniform Delay, d1	17.9		9.9	11.3	12.5	
Progression Factor	1.00		0.90	0.95	1.00	
Incremental Delay, d2	1.6		2.2	2.4	4.8	
Delay (s)	19.5		11.1	13.2	17.3	
Level of Service	B		B	B	B	
Approach Delay (s)	19.5			12.8	17.3	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			16.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			69.1%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (veh/h)	27	30	428	38	62	593
Future Volume (Veh/h)	27	30	428	38	62	593
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	33	465	41	67	645
Pedestrians	36		1		11	
Lane Width (ft)	0.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	0		0		1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	645			495		
pX, platoon unblocked	0.82	0.96			0.96	
vC, conflicting volume	1302	532			542	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1139	488			498	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	83	94			93	
cM capacity (veh/h)	171	533			1014	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	506	712				
Volume Left	0	67				
Volume Right	41	0				
cSH	1700	1014				
Volume to Capacity	0.30	0.07				
Queue Length 95th (ft)	0	5				
Control Delay (s)	0.0	1.7				
Lane LOS	A					
Approach Delay (s)	0.0	1.7				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			Err			
Intersection Capacity Utilization			Err%	ICU Level of Service	H	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	23	2	0	433	658	0
Future Volume (Veh/h)	23	2	0	433	658	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	2	0	471	715	0
Pedestrians	28					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	3					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	728	
pX, platoon unblocked	0.92	0.88	0.88			
vC, conflicting volume	1214	743	743			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	968	639	639			
tC, single (s)	6.6	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.7	3.4	2.2			
p0 queue free %	89	99	100			
cM capacity (veh/h)	237	395	809			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	27	471	715			
Volume Left	25	0	0			
Volume Right	2	0	0			
cSH	244	1700	1700			
Volume to Capacity	0.11	0.28	0.42			
Queue Length 95th (ft)	9	0	0			
Control Delay (s)	21.5	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	21.5	0.0	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay	0.5					
Intersection Capacity Utilization	44.6%			ICU Level of Service	A	
Analysis Period (min)	15					

Queues

4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	117	190	107	35	52	375	95	589
v/c Ratio	0.40	0.39	0.26	0.08	0.21	0.47	0.23	0.76
Control Delay	19.7	9.8	16.2	1.6	14.5	14.2	20.2	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	9.8	16.2	1.6	14.5	14.2	20.2	28.5
Queue Length 50th (ft)	29	21	26	0	12	98	33	221
Queue Length 95th (ft)	64	59	55	6	37	176	m54	#393
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	409	629	581	589	252	793	422	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.30	0.18	0.06	0.21	0.47	0.23	0.76

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	81	94	29	69	32	48	301	44	87	415	127
Future Volume (vph)	108	81	94	29	69	32	48	301	44	87	415	127
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00			1.00	0.95	1.00	0.99		1.00	0.98	
Flpb, ped/bikes	0.97	1.00			1.00	1.00	0.97	1.00		0.98	1.00	
Frt	1.00	0.92			1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1544	1541			1835	1482	1437	1565		1528	1516	
Flt Permitted	0.69	1.00			0.85	1.00	0.33	1.00		0.52	1.00	
Satd. Flow (perm)	1118	1541			1586	1482	501	1565		842	1516	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	117	88	102	32	75	35	52	327	48	95	451	138
RTOR Reduction (vph)	0	75	0	0	0	26	0	7	0	0	15	0
Lane Group Flow (vph)	117	115	0	0	107	9	52	368	0	95	574	0
Confl. Peds. (#/hr)	26					26	62		34	34		62
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	8%	5%	2%	2%	4%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4
Parking (#/hr)	0	0	0				0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	15.9	15.9			15.9	15.9	30.1	30.1		30.1	30.1	
Effective Green, g (s)	15.9	15.9			15.9	15.9	30.1	30.1		30.1	30.1	
Actuated g/C Ratio	0.27	0.27			0.27	0.27	0.50	0.50		0.50	0.50	
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	296	408			420	392	251	785		422	760	
v/s Ratio Prot		0.07						0.23			c0.38	
v/s Ratio Perm	c0.10				0.07	0.01	0.10			0.11		
v/c Ratio	0.40	0.28			0.25	0.02	0.21	0.47		0.23	0.75	
Uniform Delay, d1	18.1	17.5			17.4	16.3	8.3	9.7		8.4	12.0	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.57	1.46	
Incremental Delay, d2	0.3	0.1			0.1	0.0	1.9	2.0		1.0	5.8	
Delay (s)	18.4	17.7			17.5	16.3	10.2	11.7		14.2	23.2	
Level of Service	B	B			B	B	B	B		B	C	
Approach Delay (s)		17.9			17.2			11.5			22.0	
Approach LOS		B			B			B			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			17.9									B
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			60.0							14.0		
Intersection Capacity Utilization			81.0%									D
Analysis Period (min)			15									

c Critical Lane Group

# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	67	646	154	686	116	239	170	101	478
v/c Ratio	0.32	0.58	0.53	0.45	0.38	0.34	0.25	0.35	0.54
Control Delay	34.7	33.7	23.1	19.2	22.8	22.5	13.6	33.7	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	33.7	23.1	19.2	22.8	22.5	13.6	33.7	33.8
Queue Length 50th (ft)	38	197	56	150	46	104	53	52	136
Queue Length 95th (ft)	m72	257	96	199	84	165	90	101	188
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	212	1119	295	1530	311	716	675	287	893
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.58	0.52	0.45	0.37	0.33	0.25	0.35	0.54

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↷	↶	↷	
Traffic Volume (vph)	62	537	57	142	536	95	107	220	156	93	332	108
Future Volume (vph)	62	537	57	142	536	95	107	220	156	93	332	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	1.00		1.00	0.98		1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes	0.94	1.00		1.00	1.00		1.00	1.00	1.00	0.95	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1578	3411		1748	3281		1762	1792	1442	1660	3311	
Flt Permitted	0.39	1.00		0.24	1.00		0.32	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	649	3411		444	3281		587	1792	1442	1066	3311	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	584	62	154	583	103	116	239	170	101	361	117
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	67	646	0	154	686	0	116	239	170	101	478	0
Confl. Peds. (#/hr)	81		36	36		81	34		66	66		34
Heavy Vehicles (%)	8%	4%	2%	3%	2%	2%	2%	6%	4%	3%	4%	3%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	32.8	32.8		46.7	46.7		39.8	39.8	46.7	27.0	27.0	
Effective Green, g (s)	32.8	32.8		46.7	46.7		39.8	39.8	46.7	27.0	27.0	
Actuated g/C Ratio	0.33	0.33		0.47	0.47		0.40	0.40	0.47	0.27	0.27	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	212	1118		297	1532		307	713	774	287	893	
v/s Ratio Prot		c0.19		0.04	c0.21		0.02	c0.13	0.02		c0.14	
v/s Ratio Perm	0.10			0.21			0.13		0.10	0.09		
v/c Ratio	0.32	0.58		0.52	0.45		0.38	0.34	0.22	0.35	0.54	
Uniform Delay, d1	25.2	27.9		17.2	18.0		20.1	20.9	15.8	29.4	31.1	
Progression Factor	1.17	1.13		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.3	1.8		0.6	0.9		0.3	0.1	0.1	1.0	0.8	
Delay (s)	32.9	33.3		17.9	18.9		20.4	21.0	15.9	30.5	31.9	
Level of Service	C	C		B	B		C	C	B	C	C	
Approach Delay (s)		33.2			18.7			19.2			31.7	
Approach LOS		C			B			B			C	

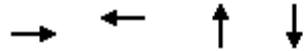
### Intersection Summary

HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Queues

6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	817	839	29	249
v/c Ratio	0.55	0.41	0.08	0.67
Control Delay	8.4	9.6	25.0	29.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.4	9.6	25.0	29.4
Queue Length 50th (ft)	62	175	10	80
Queue Length 95th (ft)	130	234	34	169
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1490	2046	371	379
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.55	0.41	0.08	0.66
<b>Intersection Summary</b>				



# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	121	618	12	22	643	107	3	16	8	45	22	162	
Future Volume (vph)	121	618	12	22	643	107	3	16	8	45	22	162	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.98			0.99			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			0.99		
Frt		1.00			0.98			0.96			0.90		
Flt Protected		0.99			1.00			0.99			0.99		
Satd. Flow (prot)		3454			3372			1752			1450		
Flt Permitted		0.65			0.91			0.96			0.93		
Satd. Flow (perm)		2258			3088			1698			1358		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	132	672	13	24	699	116	3	17	9	49	24	176	
RTOR Reduction (vph)	0	1	0	0	13	0	0	7	0	0	88	0	
Lane Group Flow (vph)	0	816	0	0	826	0	0	22	0	0	161	0	
Confl. Peds. (#/hr)	49		25	25		49	14		20	20		14	
Heavy Vehicles (%)	2%	3%	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		65.9			65.9			21.1			21.1		
Effective Green, g (s)		65.9			65.9			21.1			21.1		
Actuated g/C Ratio		0.66			0.66			0.21			0.21		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1488			2034			358			286		
v/s Ratio Prot													
v/s Ratio Perm		c0.36			0.27			0.01			c0.12		
v/c Ratio		0.55			0.41			0.06			0.56		
Uniform Delay, d1		9.1			7.9			31.5			35.3		
Progression Factor		0.79			1.18			1.00			1.00		
Incremental Delay, d2		1.1			0.6			0.0			1.5		
Delay (s)		8.2			9.9			31.6			36.9		
Level of Service		A			A			C			D		
Approach Delay (s)		8.2			9.9			31.6			36.9		
Approach LOS		A			A			C			D		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			13.0									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			80.9%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	14	9	148	33	213	37	162	44	20	60	16
Future Volume (Veh/h)	6	14	9	148	33	213	37	162	44	20	60	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	15	10	161	36	232	40	176	48	22	65	17
Pedestrians		40			49			16			18	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			5			2			2	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	706	510	130	480	495	267	122			273		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	706	510	130	480	495	267	122			273		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	96	96	99	60	91	67	97			98		
cM capacity (veh/h)	188	408	872	404	416	701	1404			1230		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	32	429	264	104								
Volume Left	7	161	40	22								
Volume Right	10	232	48	17								
cSH	374	525	1404	1230								
Volume to Capacity	0.09	0.82	0.03	0.02								
Queue Length 95th (ft)	7	200	2	1								
Control Delay (s)	15.5	35.5	1.4	1.8								
Lane LOS	C	E	A	A								
Approach Delay (s)	15.5	35.5	1.4	1.8								
Approach LOS	C	E										
<b>Intersection Summary</b>												
Average Delay			19.7									
Intersection Capacity Utilization			58.6%		ICU Level of Service				B			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↩			↩
Traffic Volume (veh/h)	0	0	381	1	1	74
Future Volume (Veh/h)	0	0	381	1	1	74
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	414	1	1	80
Pedestrians	71					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	568	486			486	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	568	486			486	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	100			100	
cM capacity (veh/h)	484	582			1017	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	415	81				
Volume Left	0	1				
Volume Right	1	0				
cSH	1700	1017				
Volume to Capacity	0.24	0.00				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.1				
Lane LOS	A					
Approach Delay (s)	0.0	0.1				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			23.5%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

















06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	2	384	0	0	74
Future Volume (Veh/h)	1	2	384	0	0	74
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	2	417	0	0	80
Pedestrians	92					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	1225					
pX, platoon unblocked						
vC, conflicting volume	589	509			509	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	589	509			509	
tC, single (s)	6.5	6.5			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.5			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	422	475			963	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	3	417	80			
Volume Left	1	0	0			
Volume Right	2	0	0			
cSH	456	1700	1700			
Volume to Capacity	0.01	0.25	0.05			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	12.9	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	12.9	0.0	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			0.1			
Intersection Capacity Utilization			30.2%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

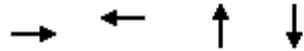
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	12	138	36	8	98	15	118	50	153	26	30	6
Future Volume (vph)	12	138	36	8	98	15	118	50	153	26	30	6
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	150	39	9	104	16	128	54	166	28	33	7
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	202	129	348	68								
Volume Left (vph)	13	9	128	28								
Volume Right (vph)	39	16	166	7								
Hadj (s)	0.03	-0.01	-0.06	0.05								
Departure Headway (s)	5.2	5.3	4.8	5.4								
Degree Utilization, x	0.29	0.19	0.47	0.10								
Capacity (veh/h)	637	619	711	606								
Control Delay (s)	10.4	9.5	12.0	9.0								
Approach Delay (s)	10.4	9.5	12.0	9.0								
Approach LOS	B	A	B	A								
Intersection Summary												
Delay			10.9									
Level of Service			B									
Intersection Capacity Utilization			46.0%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	82	295	833	1110
v/c Ratio	0.29	0.84	0.43	0.70
Control Delay	31.6	56.7	8.2	16.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	31.6	56.7	8.2	16.8
Queue Length 50th (ft)	40	172	192	248
Queue Length 95th (ft)	82	#305	253	332
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	306	380	1941	1580
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.78	0.43	0.70

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	40	28	8	62	70	140	4	708	63	89	962	14
Future Volume (vph)	40	28	8	62	70	140	4	708	63	89	962	14
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.93			0.99			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1548			1465			3322			3365	
Flt Permitted		0.68			0.90			0.95			0.76	
Satd. Flow (perm)		1077			1335			3158			2578	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.96	0.96	0.96
Adj. Flow (vph)	43	30	9	67	76	152	4	761	68	93	1002	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	82	0	0	295	0	0	827	0	0	1109	0
Confl. Peds. (#/hr)	3		2	2		3	9		19	19		9
Heavy Vehicles (%)	3%	11%	2%	6%	8%	6%	2%	5%	3%	8%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		26.2			26.2			61.3			61.3	
Effective Green, g (s)		26.2			26.2			61.3			61.3	
Actuated g/C Ratio		0.26			0.26			0.61			0.61	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		282			349			1935			1580	
v/s Ratio Prot												
v/s Ratio Perm		0.08			0.22			0.26			0.43	
v/c Ratio		0.29			0.85			0.43			0.70	
Uniform Delay, d1		29.5			35.0			10.1			13.1	
Progression Factor		1.00			1.00			0.73			1.00	
Incremental Delay, d2		1.2			18.4			0.5			2.6	
Delay (s)		30.7			53.4			8.0			15.8	
Level of Service		C			D			A			B	
Approach Delay (s)		30.7			53.4			8.0			15.8	
Approach LOS		C			D			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			18.3									B
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			100.0							12.5		
Intersection Capacity Utilization			84.0%									E
Analysis Period (min)			15									

c Critical Lane Group

Queues

12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	174	712	116	718	147	597	167	757	163
v/c Ratio	0.75	0.73	0.49	0.74	0.65	0.65	0.62	0.85	0.30
Control Delay	42.8	35.8	17.1	24.1	33.9	35.5	23.5	33.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	35.8	17.1	24.1	33.9	35.5	23.5	33.0	2.3
Queue Length 50th (ft)	68	206	29	154	59	173	30	226	8
Queue Length 95th (ft)	#147	274	m43	199	#104	233	m51	#336	m11
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	231	982	241	975	236	921	269	889	542
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.73	0.48	0.74	0.62	0.65	0.62	0.85	0.30

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	526	129	107	559	101	137	497	59	154	696	150
Future Volume (vph)	160	526	129	107	559	101	137	497	59	154	696	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1729	3363		1768	3380		1768	3379		1764	3471	1443
Flt Permitted	0.24	1.00		0.25	1.00		0.15	1.00		0.31	1.00	1.00
Satd. Flow (perm)	433	3363		460	3380		288	3379		574	3471	1443
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	174	572	140	116	608	110	147	534	63	167	757	163
RTOR Reduction (vph)	0	21	0	0	15	0	0	9	0	0	0	121
Lane Group Flow (vph)	174	691	0	116	703	0	147	588	0	167	757	42
Confl. Peds. (#/hr)	62		18	18		62	25		27	27		25
Heavy Vehicles (%)	4%	4%	2%	2%	3%	2%	2%	5%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	34.9	28.6		34.5	28.4		35.4	27.0		32.6	25.6	25.6
Effective Green, g (s)	34.9	28.6		34.5	28.4		35.4	27.0		32.6	25.6	25.6
Actuated g/C Ratio	0.35	0.29		0.34	0.28		0.35	0.27		0.33	0.26	0.26
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	232	961		238	959		226	912		270	888	369
v/s Ratio Prot	c0.05	0.21		0.03	0.21		c0.05	0.17		0.04	c0.22	
v/s Ratio Perm	c0.21			0.14			0.18			0.16		0.03
v/c Ratio	0.75	0.72		0.49	0.73		0.65	0.65		0.62	0.85	0.11
Uniform Delay, d1	25.7	32.1		23.6	32.4		24.3	32.3		25.4	35.4	28.5
Progression Factor	1.00	1.00		0.58	0.62		1.00	1.00		0.73	0.69	1.24
Incremental Delay, d2	12.8	4.6		0.5	4.5		5.0	1.2		2.1	5.6	0.0
Delay (s)	38.4	36.7		14.2	24.5		29.3	33.4		20.8	30.1	35.4
Level of Service	D	D		B	C		C	C		C	C	D
Approach Delay (s)		37.0			23.1			32.6			29.5	
Approach LOS		D			C			C			C	

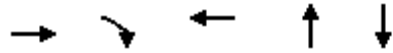
### Intersection Summary

HCM 2000 Control Delay	30.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.3
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Queues

13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	131	47	309	419	421
v/c Ratio	0.21	0.09	0.51	0.58	0.58
Control Delay	12.0	4.3	13.5	16.0	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.0	4.3	13.5	16.0	15.9
Queue Length 50th (ft)	27	0	57	97	98
Queue Length 95th (ft)	57	15	119	173	174
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	624	543	605	722	729
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.09	0.51	0.58	0.58
Intersection Summary					

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022

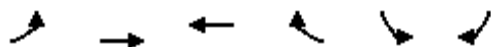


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	↗
Traffic Volume (vph)	9	111	43	60	125	99	25	329	31	24	336	28
Future Volume (vph)	9	111	43	60	125	99	25	329	31	24	336	28
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.96		0.98			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		1.00			1.00			1.00	
Frt		1.00	0.85		0.95			0.99			0.99	
Flt Protected		1.00	1.00		0.99			1.00			1.00	
Satd. Flow (prot)		1600	1288		1545			1782			1797	
Flt Permitted		0.97	1.00		0.91			0.96			0.96	
Satd. Flow (perm)		1559	1288		1425			1714			1733	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	121	47	65	136	108	27	358	34	26	365	30
RTOR Reduction (vph)	0	0	28	0	35	0	0	6	0	0	5	0
Lane Group Flow (vph)	0	131	19	0	274	0	0	413	0	0	416	0
Confl. Peds. (#/hr)	27		20	20		27	5		5	5		5
Heavy Vehicles (%)	11%	5%	7%	2%	2%	2%	19%	4%	3%	9%	4%	2%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		22.0	22.0		22.0			23.0			23.0	
Effective Green, g (s)		22.0	22.0		22.0			23.0			23.0	
Actuated g/C Ratio		0.40	0.40		0.40			0.42			0.42	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		623	515		570			716			724	
v/s Ratio Prot												
v/s Ratio Perm		0.08	0.01		c0.19			c0.24			0.24	
v/c Ratio		0.21	0.04		0.48			0.58			0.57	
Uniform Delay, d1		10.8	10.0		12.3			12.3			12.3	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.8	0.1		2.9			3.4			3.3	
Delay (s)		11.6	10.2		15.1			15.6			15.5	
Level of Service		B	B		B			B			B	
Approach Delay (s)		11.2			15.1			15.6			15.5	
Approach LOS		B			B			B			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			14.9								HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			55.0							10.0		
Intersection Capacity Utilization			69.9%								ICU Level of Service	C
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Unsignalized Intersection Capacity Analysis

## 29: Site Driveway

06/06/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4				
Traffic Volume (veh/h)	2	0	0	0	0	0
Future Volume (Veh/h)	2	0	0	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0				4	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0				4	0
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1623				1017	1085
Direction, Lane #						
	EB 1					
Volume Total	2					
Volume Left	2					
Volume Right	0					
cSH	1623					
Volume to Capacity	0.00					
Queue Length 95th (ft)	0					
Control Delay (s)	7.2					
Lane LOS	A					
Approach Delay (s)	7.2					
Approach LOS						
Intersection Summary						
Average Delay	7.2					
Intersection Capacity Utilization	6.7%		ICU Level of Service		A	
Analysis Period (min)	15					

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	237	65	377	673
v/c Ratio	0.50	0.26	0.44	0.79
Control Delay	12.2	12.1	12.5	26.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.2	12.1	12.5	26.6
Queue Length 50th (ft)	31	26	196	~263
Queue Length 95th (ft)	79	43	205	#479
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	623	252	856	857
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.26	0.44	0.79

### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	172	60	347	585	34
Future Volume (vph)	46	172	60	347	585	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frpb, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.89		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1435		1754	1660	1658	
Flt Permitted	0.99		0.26	1.00	1.00	
Satd. Flow (perm)	1435		489	1660	1658	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	187	65	377	636	37
RTOR Reduction (vph)	86	0	0	0	2	0
Lane Group Flow (vph)	152	0	65	377	671	0
Confl. Peds. (#/hr)	16	16	20			20
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	17.5		33.5	33.5	33.5	
Effective Green, g (s)	17.5		33.5	33.5	33.5	
Actuated g/C Ratio	0.27		0.52	0.52	0.52	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	386		252	855	854	
v/s Ratio Prot	c0.11			0.23	c0.40	
v/s Ratio Perm			0.13			
v/c Ratio	0.39		0.26	0.44	0.79	
Uniform Delay, d1	19.4		8.8	9.9	12.8	
Progression Factor	1.00		0.77	0.88	1.00	
Incremental Delay, d2	0.2		2.4	1.6	7.2	
Delay (s)	19.6		9.1	10.3	20.0	
Level of Service	B		A	B	B	
Approach Delay (s)	19.6			10.1	20.0	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			16.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			71.7%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (veh/h)	37	28	389	41	51	739
Future Volume (Veh/h)	37	28	389	41	51	739
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	30	423	45	55	803
Pedestrians	21		5		16	
Lane Width (ft)	0.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	0		0		2	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	645			495		
pX, platoon unblocked	0.71	0.93			0.93	
vC, conflicting volume	1384	482			489	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1118	407			414	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	95			95	
cM capacity (veh/h)	153	590			1066	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	468	858				
Volume Left	0	55				
Volume Right	45	0				
cSH	1700	1066				
Volume to Capacity	0.28	0.05				
Queue Length 95th (ft)	0	4				
Control Delay (s)	0.0	1.3				
Lane LOS	A					
Approach Delay (s)	0.0	1.3				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			Err			
Intersection Capacity Utilization			Err%	ICU Level of Service	H	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Volume (veh/h)	7	1	0	415	758	0
Future Volume (Veh/h)	7	1	0	415	758	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	1	0	451	824	0
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	728	
pX, platoon unblocked	0.77	0.72	0.72			
vC, conflicting volume	1297	846	846			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	930	592	592			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	100	100			
cM capacity (veh/h)	224	357	694			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	9	451	824			
Volume Left	8	0	0			
Volume Right	1	0	0			
cSH	234	1700	1700			
Volume to Capacity	0.04	0.27	0.48			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	21.0	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	21.0	0.0	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay	0.1					
Intersection Capacity Utilization	49.9%			ICU Level of Service	A	
Analysis Period (min)	15					



# Queues

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	74	139	83	29	45	396	115	759
v/c Ratio	0.24	0.30	0.21	0.06	0.24	0.42	0.24	0.82
Control Delay	18.6	10.0	16.2	1.2	17.5	15.7	15.4	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	10.0	16.2	1.2	17.5	15.7	15.4	28.3
Queue Length 50th (ft)	23	25	21	0	24	232	28	~352
Queue Length 95th (ft)	43	51	47	5	m56	315	m44	m#535
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	448	639	571	631	188	935	473	923
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.22	0.15	0.05	0.24	0.42	0.24	0.82

### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	68	65	63	37	41	27	41	322	42	106	599	99	
Future Volume (vph)	68	65	63	37	41	27	41	322	42	106	599	99	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0		
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00		
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	0.99		1.00	0.99		
Flpb, ped/bikes	0.99	1.00			1.00	1.00	0.99	1.00		0.99	1.00		
Frt	1.00	0.93			1.00	0.85	1.00	0.98		1.00	0.98		
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1576	1553			1820	1534	1449	1612		1544	1590		
Flt Permitted	0.70	1.00			0.80	1.00	0.21	1.00		0.50	1.00		
Satd. Flow (perm)	1166	1553			1486	1534	325	1612		821	1590		
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	74	71	68	39	44	29	45	350	46	115	651	108	
RTOR Reduction (vph)	0	51	0	0	0	22	0	6	0	0	7	0	
Lane Group Flow (vph)	74	88	0	0	83	7	45	390	0	115	752	0	
Confl. Peds. (#/hr)	9					9	38		20	20		38	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	2%	2%	2%	2%	6%	
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4	
Parking (#/hr)	0	0	0				0	0	0	0	0	0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8		8	2			6			
Actuated Green, G (s)	16.3	16.3			16.3	16.3	34.7	34.7		34.7	34.7		
Effective Green, g (s)	16.3	16.3			16.3	16.3	34.7	34.7		34.7	34.7		
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.53	0.53		0.53	0.53		
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0		
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2		
Lane Grp Cap (vph)	292	389			372	384	173	860		438	848		
v/s Ratio Prot		0.06						0.24			c0.47		
v/s Ratio Perm	c0.06				0.06	0.00	0.14			0.14			
v/c Ratio	0.25	0.23			0.22	0.02	0.26	0.45		0.26	0.89		
Uniform Delay, d1	19.5	19.3			19.3	18.3	8.2	9.3		8.2	13.4		
Progression Factor	1.04	1.08			1.00	1.00	1.07	1.22		1.10	0.97		
Incremental Delay, d2	0.2	0.1			0.1	0.0	3.4	1.6		1.2	11.0		
Delay (s)	20.5	21.1			19.4	18.3	12.2	13.0		10.2	24.0		
Level of Service	C	C			B	B	B	B		B	C		
Approach Delay (s)		20.9			19.2			12.9			22.2		
Approach LOS		C			B			B			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			19.3		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			65.0		Sum of lost time (s)						14.0		
Intersection Capacity Utilization			81.3%		ICU Level of Service						D		
Analysis Period (min)			15										

c Critical Lane Group

# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	637	327	968	96	275	212	127	610
v/c Ratio	0.26	0.51	0.74	0.52	0.51	0.43	0.30	0.51	0.75
Control Delay	27.3	23.3	27.7	19.6	38.7	35.2	17.6	59.9	61.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	23.3	27.7	19.6	38.7	35.2	17.6	59.9	61.5
Queue Length 50th (ft)	16	116	149	263	55	176	91	112	285
Queue Length 95th (ft)	m47	191	221	331	95	253	128	m143	350
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	199	1253	475	1875	191	673	741	270	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.51	0.69	0.52	0.50	0.41	0.29	0.47	0.69

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



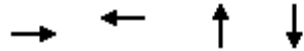
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Traffic Volume (vph)	49	544	61	307	841	69	88	253	195	117	438	123
Future Volume (vph)	49	544	61	307	841	69	88	253	195	117	438	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	0.94	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1735	3400		1763	3375		1767	1863	1471	1663	3384	
Flt Permitted	0.30	1.00		0.27	1.00		0.19	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	540	3400		493	3375		351	1863	1471	1034	3384	
Peak-hour factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	573	64	327	895	73	96	275	212	127	476	134
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	637	0	327	968	0	96	275	212	127	610	0
Confl. Peds. (#/hr)	32		46	46		32	28		61	61		28
Heavy Vehicles (%)	2%	4%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	47.9	47.9		72.2	72.2		44.3	44.3	61.6	31.4	31.4	
Effective Green, g (s)	47.9	47.9		72.2	72.2		44.3	44.3	61.6	31.4	31.4	
Actuated g/C Ratio	0.37	0.37		0.56	0.56		0.34	0.34	0.47	0.24	0.24	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	198	1252		442	1874		189	634	776	249	817	
v/s Ratio Prot		0.19		c0.10	0.29		0.02	c0.15	0.04		c0.18	
v/s Ratio Perm	0.10			c0.31			0.15		0.11	0.12		
v/c Ratio	0.26	0.51		0.74	0.52		0.51	0.43	0.27	0.51	0.75	
Uniform Delay, d1	28.7	31.9		18.3	18.0		31.8	33.1	20.7	42.6	45.6	
Progression Factor	0.73	0.66		1.00	1.00		1.00	1.00	1.00	1.29	1.26	
Incremental Delay, d2	2.9	1.3		5.5	1.0		0.8	0.2	0.1	1.6	2.7	
Delay (s)	24.0	22.3		23.8	19.0		32.6	33.3	20.7	56.4	60.1	
Level of Service	C	C		C	B		C	C	C	E	E	
Approach Delay (s)		22.4			20.2			28.6			59.4	
Approach LOS		C			C			C			E	

Intersection Summary		
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.77	C
Actuated Cycle Length (s)	130.0	Sum of lost time (s)
Intersection Capacity Utilization	92.2%	ICU Level of Service
Analysis Period (min)	15	F
c Critical Lane Group		

# Queues

## 6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	824	1026	12	216
v/c Ratio	0.45	0.43	0.04	0.79
Control Delay	3.7	4.1	41.1	55.9
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	3.7	4.3	41.1	55.9
Queue Length 50th (ft)	43	66	7	123
Queue Length 95th (ft)	44	80	26	#246
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1834	2379	281	278
Starvation Cap Reductn	0	484	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.54	0.04	0.78

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	72	679	7	12	878	85	3	6	2	53	12	133	
Future Volume (vph)	72	679	7	12	878	85	3	6	2	53	12	133	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.99			0.99			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		1.00			0.99			0.98			0.91		
Flt Protected		1.00			1.00			0.99			0.99		
Satd. Flow (prot)		3448			3425			1785			1465		
Flt Permitted		0.72			0.94			0.94			0.90		
Satd. Flow (perm)		2488			3221			1692			1343		
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	78	738	8	13	924	89	3	7	2	58	13	145	
RTOR Reduction (vph)	0	1	0	0	6	0	0	2	0	0	57	0	
Lane Group Flow (vph)	0	823	0	0	1020	0	0	10	0	0	159	0	
Confl. Peds. (#/hr)	35		16	16		35	11		10	10		11	
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		95.8			95.8			21.2			21.2		
Effective Green, g (s)		95.8			95.8			21.2			21.2		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1833			2373			275			219		
v/s Ratio Prot													
v/s Ratio Perm		c0.33			0.32			0.01			c0.12		
v/c Ratio		0.45			0.43			0.04			0.73		
Uniform Delay, d1		6.7			6.6			45.8			51.6		
Progression Factor		0.45			0.56			1.00			1.00		
Incremental Delay, d2		0.7			0.5			0.0			9.7		
Delay (s)		3.7			4.2			45.8			61.4		
Level of Service		A			A			D			E		
Approach Delay (s)		3.7			4.2			45.8			61.4		
Approach LOS		A			A			D			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			10.2									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.50										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			82.4%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	6	16	15	118	23	73	15	82	46	19	46	8
Future Volume (Veh/h)	6	16	15	118	23	73	15	82	46	19	46	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	17	16	126	24	78	16	89	50	21	50	9
Pedestrians		14			15			9			15	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	362	296	78	291	276	144	73			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	362	296	78	291	276	144	73			154		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	99	97	98	79	96	91	99			99		
cM capacity (veh/h)	490	583	962	595	599	868	1506			1406		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	40	228	155	80								
Volume Left	7	126	16	21								
Volume Right	16	78	50	9								
cSH	666	667	1506	1406								
Volume to Capacity	0.06	0.34	0.01	0.01								
Queue Length 95th (ft)	5	38	1	1								
Control Delay (s)	10.8	13.2	0.8	2.1								
Lane LOS	B	B	A	A								
Approach Delay (s)	10.8	13.2	0.8	2.1								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			7.4									
Intersection Capacity Utilization			38.8%		ICU Level of Service				A			
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (veh/h)	0	0	215	1	0	66
Future Volume (Veh/h)	0	0	215	1	0	66
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	234	1	0	72
Pedestrians	17					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	324	252			252	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	324	252			252	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	670	787			1313	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	235	72				
Volume Left	0	0				
Volume Right	1	0				
cSH	1700	1313				
Volume to Capacity	0.14	0.00				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			22.3%	ICU Level of Service	A	
Analysis Period (min)			15			



# HCM Unsignalized Intersection Capacity Analysis

## 9: S Highland Street & 8th Street S

06/06/2022



















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	1	213	0	0	66
Future Volume (Veh/h)	0	1	213	0	0	66
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	232	0	0	72
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			1225			
pX, platoon unblocked						
vC, conflicting volume	326	254			254	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326	254			254	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	654	768			1284	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	1	232	72			
Volume Left	0	0	0			
Volume Right	1	0	0			
cSH	768	1700	1700			
Volume to Capacity	0.00	0.14	0.04			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.7	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			22.3%		ICU Level of Service	A
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 10: S Highland Street & 7th Street S

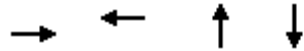
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	8	94	38	7	80	10	86	39	102	15	21	7
Future Volume (vph)	8	94	38	7	80	10	86	39	102	15	21	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	102	41	8	87	11	93	42	111	16	23	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	152	106	246	47								
Volume Left (vph)	9	8	93	16								
Volume Right (vph)	41	11	111	8								
Hadj (s)	-0.12	0.00	-0.15	0.00								
Departure Headway (s)	4.6	4.8	4.4	4.8								
Degree Utilization, x	0.19	0.14	0.30	0.06								
Capacity (veh/h)	724	696	771	685								
Control Delay (s)	8.7	8.6	9.4	8.2								
Approach Delay (s)	8.7	8.6	9.4	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.9									
Level of Service			A									
Intersection Capacity Utilization			37.2%	ICU Level of Service	A							
Analysis Period (min)			15									

Queues

11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	78	222	919	1285
v/c Ratio	0.30	0.77	0.41	0.65
Control Delay	44.6	65.0	5.4	13.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	44.6	65.0	5.4	13.7
Queue Length 50th (ft)	55	176	91	293
Queue Length 95th (ft)	98	257	118	421
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	326	359	2244	1988
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.24	0.62	0.41	0.65
<b>Intersection Summary</b>				

# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	28	40	7	44	60	107	5	798	43	53	1163	30
Future Volume (vph)	28	40	7	44	60	107	5	798	43	53	1163	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.93			0.99			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1620			1512			3401			3381	
Flt Permitted		0.77			0.92			0.95			0.84	
Satd. Flow (perm)		1267			1399			3225			2861	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	29	42	7	46	63	113	5	867	47	55	1199	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	78	0	0	222	0	0	917	0	0	1284	0
Confl. Peds. (#/hr)	6		7	7		6	10		15	15		10
Heavy Vehicles (%)	2%	2%	2%	4%	4%	2%	20%	3%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		27.1			27.1			90.4			90.4	
Effective Green, g (s)		27.1			27.1			90.4			90.4	
Actuated g/C Ratio		0.21			0.21			0.70			0.70	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		264			291			2242			1989	
v/s Ratio Prot												
v/s Ratio Perm		0.06			0.16			0.28			0.45	
v/c Ratio		0.30			0.76			0.41			0.65	
Uniform Delay, d1		43.4			48.4			8.4			10.9	
Progression Factor		1.00			1.00			0.55			1.00	
Incremental Delay, d2		1.3			13.1			0.4			1.6	
Delay (s)		44.7			61.5			5.0			12.6	
Level of Service		D			E			A			B	
Approach Delay (s)		44.7			61.5			5.0			12.6	
Approach LOS		D			E			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			15.1									B
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			130.0							12.5		
Intersection Capacity Utilization			89.4%									E
Analysis Period (min)			15									

c Critical Lane Group

Queues

12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	149	743	142	892	178	701	135	902	141
v/c Ratio	0.76	0.64	0.60	0.81	0.92	0.68	0.53	0.88	0.26
Control Delay	49.3	38.9	33.9	39.4	78.8	43.8	38.2	58.3	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	38.9	33.9	39.4	78.8	43.8	38.2	58.3	11.1
Queue Length 50th (ft)	76	274	57	228	97	268	81	302	8
Queue Length 95th (ft)	#164	353	m101	#424	#239	336	m144	399	m64
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	196	1160	235	1098	193	1070	282	1121	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.64	0.60	0.81	0.92	0.66	0.48	0.80	0.24

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

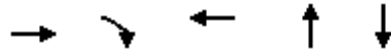
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	550	133	132	706	124	164	600	45	128	857	134
Future Volume (vph)	137	550	133	132	706	124	164	600	45	128	857	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1734	3389		1768	3376		1769	3460		1768	3471	1418
Flt Permitted	0.14	1.00		0.25	1.00		0.10	1.00		0.22	1.00	1.00
Satd. Flow (perm)	257	3389		469	3376		195	3460		405	3471	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	149	598	145	142	759	133	178	652	49	135	902	141
RTOR Reduction (vph)	0	16	0	0	11	0	0	4	0	0	0	99
Lane Group Flow (vph)	149	727	0	142	881	0	178	697	0	135	902	42
Confl. Peds. (#/hr)	51		15	15		51	24		16	16		24
Heavy Vehicles (%)	4%	3%	2%	2%	3%	3%	2%	3%	3%	2%	4%	5%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	52.2	43.9		48.2	41.9		48.4	38.4		48.6	38.5	38.5
Effective Green, g (s)	52.2	43.9		48.2	41.9		48.4	38.4		48.6	38.5	38.5
Actuated g/C Ratio	0.40	0.34		0.37	0.32		0.37	0.30		0.37	0.30	0.30
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	197	1144		236	1088		193	1022		257	1027	419
v/s Ratio Prot	c0.05	0.21		0.03	c0.26		c0.07	0.20		0.04	0.26	
v/s Ratio Perm	0.25			0.19			c0.27			0.16		0.03
v/c Ratio	0.76	0.64		0.60	0.81		0.92	0.68		0.53	0.88	0.10
Uniform Delay, d1	28.6	36.3		30.2	40.4		32.1	40.4		28.9	43.5	33.2
Progression Factor	1.00	1.00		0.92	0.82		1.00	1.00		1.43	1.15	5.55
Incremental Delay, d2	15.2	2.7		9.8	5.9		42.7	1.5		0.7	6.6	0.0
Delay (s)	43.8	39.0		37.4	38.9		74.8	41.9		41.9	56.8	184.3
Level of Service	D	D		D	D		E	D		D	E	F
Approach Delay (s)		39.8			38.7			48.6			70.3	
Approach LOS		D			D			D			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			50.5				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			31.3		
Intersection Capacity Utilization			93.1%				ICU Level of Service			F		
Analysis Period (min)			15									
c	Critical Lane Group											

# Queues

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	156	60	359	356	503
v/c Ratio	0.35	0.14	0.84	0.35	0.49
Control Delay	22.3	6.1	42.2	10.4	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	6.1	42.2	10.4	12.2
Queue Length 50th (ft)	54	0	140	86	136
Queue Length 95th (ft)	99	24	#268	144	220
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	508	485	481	1013	1029
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.12	0.75	0.35	0.49

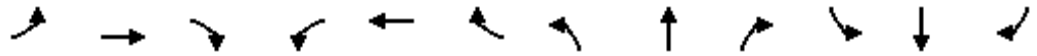
### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	20	123	55	80	178	76	18	285	24	25	412	26
Future Volume (vph)	20	123	55	80	178	76	18	285	24	25	412	26
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.94		0.99			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		0.99			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			1.00	
Satd. Flow (prot)		1628	1336		1577			1819			1839	
Flt Permitted		0.93	1.00		0.88			0.97			0.97	
Satd. Flow (perm)		1527	1336		1401			1761			1791	
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	134	60	86	191	82	20	310	26	27	448	28
RTOR Reduction (vph)	0	0	42	0	15	0	0	3	0	0	3	0
Lane Group Flow (vph)	0	156	18	0	344	0	0	353	0	0	500	0
Confl. Peds. (#/hr)	17		21	21		17	13		7	7		13
Heavy Vehicles (%)	11%	2%	2%	2%	2%	2%	17%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		22.0	22.0		22.0			43.0			43.0	
Effective Green, g (s)		22.0	22.0		22.0			43.0			43.0	
Actuated g/C Ratio		0.29	0.29		0.29			0.57			0.57	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		447	391		410			1009			1026	
v/s Ratio Prot												
v/s Ratio Perm		0.10	0.01		c0.25			0.20			c0.28	
v/c Ratio		0.35	0.05		0.84			0.35			0.49	
Uniform Delay, d1		20.9	19.0		24.8			8.5			9.5	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.5	0.0		14.0			1.0			1.7	
Delay (s)		21.3	19.0		38.8			9.5			11.1	
Level of Service		C	B		D			A			B	
Approach Delay (s)		20.7			38.8			9.5			11.1	
Approach LOS		C			D			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			19.1									B
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			75.0							10.0		
Intersection Capacity Utilization			75.7%									D
Analysis Period (min)			15									

c Critical Lane Group



## F. Future (2027) Conditions with Mitigation Capacity Analysis Worksheets

# Queues

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Lane Group	EBL	NBL	NBT	SBT
Lane Group Flow (vph)	237	65	377	673
v/c Ratio	0.50	0.26	0.44	0.79
Control Delay	12.2	12.1	12.5	26.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.2	12.1	12.5	26.6
Queue Length 50th (ft)	31	26	196	~263
Queue Length 95th (ft)	79	43	205	#479
Internal Link Dist (ft)	516		415	1330
Turn Bay Length (ft)		85		
Base Capacity (vph)	623	252	856	857
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.26	0.44	0.79

### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 1: Walter Reed Drive & 7th Street S

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	172	60	347	585	34
Future Volume (vph)	46	172	60	347	585	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0		7.0	7.0	7.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frbp, ped/bikes	0.97		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		0.99	1.00	1.00	
Frt	0.89		1.00	1.00	0.99	
Flt Protected	0.99		0.95	1.00	1.00	
Satd. Flow (prot)	1435		1754	1660	1658	
Flt Permitted	0.99		0.26	1.00	1.00	
Satd. Flow (perm)	1435		489	1660	1658	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	187	65	377	636	37
RTOR Reduction (vph)	86	0	0	0	2	0
Lane Group Flow (vph)	152	0	65	377	671	0
Confl. Peds. (#/hr)	16	16	20			20
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%
Parking (#/hr)	0	0		0	0	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	17.5		33.5	33.5	33.5	
Effective Green, g (s)	17.5		33.5	33.5	33.5	
Actuated g/C Ratio	0.27		0.52	0.52	0.52	
Clearance Time (s)	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	2.0		0.2	0.2	0.2	
Lane Grp Cap (vph)	386		252	855	854	
v/s Ratio Prot	c0.11			0.23	c0.40	
v/s Ratio Perm			0.13			
v/c Ratio	0.39		0.26	0.44	0.79	
Uniform Delay, d1	19.4		8.8	9.9	12.8	
Progression Factor	1.00		0.77	0.88	1.00	
Incremental Delay, d2	0.2		2.4	1.6	7.2	
Delay (s)	19.6		9.1	10.3	20.0	
Level of Service	B		A	B	B	
Approach Delay (s)	19.6			10.1	20.0	
Approach LOS	B			B	B	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			16.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			65.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			71.7%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

# HCM Unsignalized Intersection Capacity Analysis

## 2: Walter Reed Drive & 8th Street S

06/06/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔
Traffic Volume (veh/h)	37	28	389	41	51	739
Future Volume (Veh/h)	37	28	389	41	51	739
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	30	423	45	55	803
Pedestrians	21		5		16	
Lane Width (ft)	0.0		12.0		12.0	
Walking Speed (ft/s)	3.5		3.5		3.5	
Percent Blockage	0		0		2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	645			495		
pX, platoon unblocked	0.71	0.93			0.93	
vC, conflicting volume	1384	482			489	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1118	407			414	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	95			95	
cM capacity (veh/h)	153	590			1066	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	468	858				
Volume Left	0	55				
Volume Right	45	0				
cSH	1700	1066				
Volume to Capacity	0.28	0.05				
Queue Length 95th (ft)	0	4				
Control Delay (s)	0.0	1.3				
Lane LOS	A					
Approach Delay (s)	0.0	1.3				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			Err			
Intersection Capacity Utilization			Err%	ICU Level of Service	H	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

## 3: Walter Reed Drive & Site Driveway

06/06/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Traffic Volume (veh/h)	7	1	0	415	758	0
Future Volume (Veh/h)	7	1	0	415	758	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	1	0	451	824	0
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				412	728	
pX, platoon unblocked	0.77	0.72	0.72			
vC, conflicting volume	1297	846	846			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	930	592	592			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	100	100			
cM capacity (veh/h)	224	357	694			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	9	451	824			
Volume Left	8	0	0			
Volume Right	1	0	0			
cSH	234	1700	1700			
Volume to Capacity	0.04	0.27	0.48			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	21.0	0.0	0.0			
Lane LOS	C					
Approach Delay (s)	21.0	0.0	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay	0.1					
Intersection Capacity Utilization	49.9%			ICU Level of Service	A	
Analysis Period (min)	15					

# Queues

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	74	139	83	29	45	396	115	759
v/c Ratio	0.24	0.30	0.21	0.06	0.24	0.42	0.24	0.82
Control Delay	18.5	10.0	16.2	1.2	17.5	15.7	15.4	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	10.0	16.2	1.2	17.5	15.7	15.4	28.3
Queue Length 50th (ft)	23	25	21	0	24	232	28	~352
Queue Length 95th (ft)	43	51	47	5	m56	315	m44	m#535
Internal Link Dist (ft)		495	836			412		332
Turn Bay Length (ft)	75				85		75	
Base Capacity (vph)	448	639	571	631	188	935	473	923
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.22	0.15	0.05	0.24	0.42	0.24	0.82

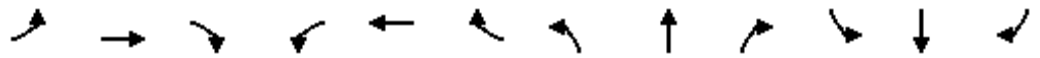
### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 4: Walter Reed Drive & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	68	65	63	37	41	27	41	322	42	106	599	99	
Future Volume (vph)	68	65	63	37	41	27	41	322	42	106	599	99	
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0		
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00		
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	0.99		1.00	0.99		
Flpb, ped/bikes	0.99	1.00			1.00	1.00	0.99	1.00		0.99	1.00		
Frt	1.00	0.93			1.00	0.85	1.00	0.98		1.00	0.98		
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1576	1553			1820	1534	1449	1612		1544	1590		
Flt Permitted	0.70	1.00			0.80	1.00	0.21	1.00		0.50	1.00		
Satd. Flow (perm)	1166	1553			1486	1534	325	1612		821	1590		
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	74	71	68	39	44	29	45	350	46	115	651	108	
RTOR Reduction (vph)	0	51	0	0	0	22	0	6	0	0	7	0	
Lane Group Flow (vph)	74	88	0	0	83	7	45	390	0	115	752	0	
Confl. Peds. (#/hr)	9					9	38		20	20		38	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	2%	2%	2%	2%	6%	
Bus Blockages (#/hr)	0	0	0	0	0	0	4	4	4	4	4	4	
Parking (#/hr)	0	0	0				0	0	0	0	0	0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8		8	2			6			
Actuated Green, G (s)	16.3	16.3			16.3	16.3	34.7	34.7		34.7	34.7		
Effective Green, g (s)	16.3	16.3			16.3	16.3	34.7	34.7		34.7	34.7		
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.53	0.53		0.53	0.53		
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0		
Vehicle Extension (s)	2.0	2.0			2.0	2.0	0.2	0.2		0.2	0.2		
Lane Grp Cap (vph)	292	389			372	384	173	860		438	848		
v/s Ratio Prot		0.06						0.24			c0.47		
v/s Ratio Perm	c0.06				0.06	0.00	0.14			0.14			
v/c Ratio	0.25	0.23			0.22	0.02	0.26	0.45		0.26	0.89		
Uniform Delay, d1	19.5	19.3			19.3	18.3	8.2	9.3		8.2	13.4		
Progression Factor	1.04	1.08			1.00	1.00	1.07	1.22		1.10	0.97		
Incremental Delay, d2	0.2	0.1			0.1	0.0	3.4	1.6		1.2	11.0		
Delay (s)	20.5	21.0			19.4	18.3	12.2	13.0		10.2	24.0		
Level of Service	C	C			B	B	B	B		B	C		
Approach Delay (s)		20.8			19.2			12.9			22.2		
Approach LOS		C			B			B			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			19.3		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			65.0		Sum of lost time (s)						14.0		
Intersection Capacity Utilization			81.3%		ICU Level of Service						D		
Analysis Period (min)			15										

c Critical Lane Group

# Queues

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	637	327	968	96	275	212	127	610
v/c Ratio	0.26	0.51	0.74	0.52	0.51	0.43	0.30	0.51	0.75
Control Delay	27.5	23.5	27.7	19.6	38.7	35.2	17.6	59.9	61.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	23.5	27.7	19.6	38.7	35.2	17.6	59.9	61.5
Queue Length 50th (ft)	16	117	149	263	55	176	91	112	285
Queue Length 95th (ft)	m47	191	221	331	95	253	128	m143	350
Internal Link Dist (ft)		497		856		286			412
Turn Bay Length (ft)	300		460		160			100	
Base Capacity (vph)	199	1253	475	1875	191	673	741	270	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.51	0.69	0.52	0.50	0.41	0.29	0.47	0.69

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



# HCM Signalized Intersection Capacity Analysis

## 5: Walter Reed Drive & Columbia Pike

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (vph)	49	544	61	307	841	69	88	253	195	117	438	123
Future Volume (vph)	49	544	61	307	841	69	88	253	195	117	438	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes	0.98	1.00		1.00	1.00		1.00	1.00	1.00	0.94	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1735	3400		1763	3375		1767	1863	1471	1663	3384	
Flt Permitted	0.30	1.00		0.27	1.00		0.19	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	540	3400		493	3375		351	1863	1471	1034	3384	
Peak-hour factor, PHF	0.95	0.95	0.95	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	573	64	327	895	73	96	275	212	127	476	134
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	52	637	0	327	968	0	96	275	212	127	610	0
Confl. Peds. (#/hr)	32		46	46		32	28		61	61		28
Heavy Vehicles (%)	2%	4%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	14	14	0	0	0	0	0	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	Perm	NA	
Protected Phases		2		1	6		3	8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	47.9	47.9		72.2	72.2		44.3	44.3	61.6	31.4	31.4	
Effective Green, g (s)	47.9	47.9		72.2	72.2		44.3	44.3	61.6	31.4	31.4	
Actuated g/C Ratio	0.37	0.37		0.56	0.56		0.34	0.34	0.47	0.24	0.24	
Clearance Time (s)	6.5	6.5		7.0	6.5		6.5	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	0.2	0.2		2.0	0.2		2.0	2.0	2.0	4.0	4.0	
Lane Grp Cap (vph)	198	1252		442	1874		189	634	776	249	817	
v/s Ratio Prot		0.19		c0.10	0.29		0.02	c0.15	0.04		c0.18	
v/s Ratio Perm	0.10			c0.31			0.15		0.11	0.12		
v/c Ratio	0.26	0.51		0.74	0.52		0.51	0.43	0.27	0.51	0.75	
Uniform Delay, d1	28.7	31.9		18.3	18.0		31.8	33.1	20.7	42.6	45.6	
Progression Factor	0.74	0.66		1.00	1.00		1.00	1.00	1.00	1.29	1.26	
Incremental Delay, d2	2.9	1.3		5.5	1.0		0.8	0.2	0.1	1.6	2.7	
Delay (s)	24.1	22.5		23.8	19.0		32.6	33.3	20.7	56.4	60.1	
Level of Service	C	C		C	B		C	C	C	E	E	
Approach Delay (s)		22.6			20.2			28.6			59.4	
Approach LOS		C			C			C			E	

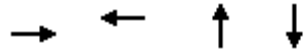
### Intersection Summary

HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

# Queues

## 6: Columbia Pike & S Highland Street

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	824	1026	12	216
v/c Ratio	0.45	0.43	0.04	0.79
Control Delay	3.6	4.1	41.1	55.9
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	3.6	4.3	41.1	55.9
Queue Length 50th (ft)	40	66	7	123
Queue Length 95th (ft)	44	80	26	#246
Internal Link Dist (ft)	819	497	19	417
Turn Bay Length (ft)				
Base Capacity (vph)	1834	2379	281	278
Starvation Cap Reductn	0	484	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.54	0.04	0.78

### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 6: Columbia Pike & S Highland Street

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕↕			↕↕			↕			↕		
Traffic Volume (vph)	72	679	7	12	878	85	3	6	2	53	12	133	
Future Volume (vph)	72	679	7	12	878	85	3	6	2	53	12	133	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.5			6.5			6.5			6.5		
Lane Util. Factor		0.95			0.95			1.00			1.00		
Frbp, ped/bikes		1.00			0.99			0.99			0.98		
Flpb, ped/bikes		1.00			1.00			1.00			1.00		
Frt		1.00			0.99			0.98			0.91		
Flt Protected		1.00			1.00			0.99			0.99		
Satd. Flow (prot)		3448			3425			1785			1465		
Flt Permitted		0.72			0.94			0.94			0.90		
Satd. Flow (perm)		2488			3221			1692			1343		
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	78	738	8	13	924	89	3	7	2	58	13	145	
RTOR Reduction (vph)	0	1	0	0	6	0	0	2	0	0	57	0	
Lane Group Flow (vph)	0	823	0	0	1020	0	0	10	0	0	159	0	
Confl. Peds. (#/hr)	35		16	16		35	11		10	10		11	
Heavy Vehicles (%)	2%	4%	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	
Parking (#/hr)										0	0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			6			4			4		
Permitted Phases	2			6			4			4			
Actuated Green, G (s)		95.8			95.8			21.2			21.2		
Effective Green, g (s)		95.8			95.8			21.2			21.2		
Actuated g/C Ratio		0.74			0.74			0.16			0.16		
Clearance Time (s)		6.5			6.5			6.5			6.5		
Vehicle Extension (s)		0.2			0.2			2.0			2.0		
Lane Grp Cap (vph)		1833			2373			275			219		
v/s Ratio Prot													
v/s Ratio Perm		c0.33			0.32			0.01			c0.12		
v/c Ratio		0.45			0.43			0.04			0.73		
Uniform Delay, d1		6.7			6.6			45.8			51.6		
Progression Factor		0.44			0.56			1.00			1.00		
Incremental Delay, d2		0.7			0.5			0.0			9.7		
Delay (s)		3.6			4.2			45.8			61.4		
Level of Service		A			A			D			E		
Approach Delay (s)		3.6			4.2			45.8			61.4		
Approach LOS		A			A			D			E		
<b>Intersection Summary</b>													
HCM 2000 Control Delay			10.1									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.50										
Actuated Cycle Length (s)			130.0									Sum of lost time (s)	13.0
Intersection Capacity Utilization			82.4%									ICU Level of Service	E
Analysis Period (min)			15										
c Critical Lane Group													

# HCM Unsignalized Intersection Capacity Analysis

## 7: S Highland Street & 9th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	6	16	15	118	23	73	15	82	46	19	46	8
Future Volume (Veh/h)	6	16	15	118	23	73	15	82	46	19	46	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	17	16	126	24	78	16	89	50	21	50	9
Pedestrians		14			15			9			15	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			1			1			1	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								497				
pX, platoon unblocked												
vC, conflicting volume	362	296	78	291	276	144	73			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	362	296	78	291	276	144	73			154		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	99	97	98	79	96	91	99			99		
cM capacity (veh/h)	490	583	962	595	599	868	1506			1406		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>								
Volume Total	40	228	155	80								
Volume Left	7	126	16	21								
Volume Right	16	78	50	9								
cSH	666	667	1506	1406								
Volume to Capacity	0.06	0.34	0.01	0.01								
Queue Length 95th (ft)	5	38	1	1								
Control Delay (s)	10.8	13.2	0.8	2.1								
Lane LOS	B	B	A	A								
Approach Delay (s)	10.8	13.2	0.8	2.1								
Approach LOS	B	B										
<b>Intersection Summary</b>												
Average Delay			7.4									
Intersection Capacity Utilization			38.8%		ICU Level of Service					A		
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 8: S Highland Street & Site Driveway

06/06/2022












Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↩			↩
Traffic Volume (veh/h)	0	0	215	1	0	66
Future Volume (Veh/h)	0	0	215	1	0	66
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	234	1	0	72
Pedestrians	17					
Lane Width (ft)	0.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	962					
pX, platoon unblocked						
vC, conflicting volume	324	252			252	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	324	252			252	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	670	787			1313	
<b>Direction, Lane #</b>	<b>NB 1</b>	<b>SB 1</b>				
Volume Total	235	72				
Volume Left	0	0				
Volume Right	1	0				
cSH	1700	1313				
Volume to Capacity	0.14	0.00				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			22.3%	ICU Level of Service	A	
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis

















## 9: S Highland Street & 8th Street S

06/06/2022

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	1	213	0	0	66
Future Volume (Veh/h)	0	1	213	0	0	66
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	232	0	0	72
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	2					
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			1225			
pX, platoon unblocked						
vC, conflicting volume	326	254			254	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326	254			254	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	654	768			1284	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	1	232	72			
Volume Left	0	0	0			
Volume Right	1	0	0			
cSH	768	1700	1700			
Volume to Capacity	0.00	0.14	0.04			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	9.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.7	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			22.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 10: S Highland Street & 7th Street S

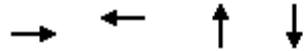
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	8	94	38	7	80	10	86	39	102	15	21	7
Future Volume (vph)	8	94	38	7	80	10	86	39	102	15	21	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	102	41	8	87	11	93	42	111	16	23	8
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	152	106	246	47								
Volume Left (vph)	9	8	93	16								
Volume Right (vph)	41	11	111	8								
Hadj (s)	-0.12	0.00	-0.15	0.00								
Departure Headway (s)	4.6	4.8	4.4	4.8								
Degree Utilization, x	0.19	0.14	0.30	0.06								
Capacity (veh/h)	724	696	771	685								
Control Delay (s)	8.7	8.6	9.4	8.2								
Approach Delay (s)	8.7	8.6	9.4	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.9									
Level of Service			A									
Intersection Capacity Utilization			37.2%	ICU Level of Service	A							
Analysis Period (min)			15									

# Queues

## 11: S Glebe Road & 7th Street S

06/06/2022



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	78	222	919	1285
v/c Ratio	0.30	0.77	0.41	0.64
Control Delay	45.5	66.6	5.3	13.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	45.5	66.6	5.3	13.3
Queue Length 50th (ft)	55	176	90	293
Queue Length 95th (ft)	100	262	111	398
Internal Link Dist (ft)	291	877	1584	297
Turn Bay Length (ft)				
Base Capacity (vph)	304	339	2255	2001
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.65	0.41	0.64
<b>Intersection Summary</b>				



# HCM Signalized Intersection Capacity Analysis

## 11: S Glebe Road & 7th Street S

06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	28	40	7	44	60	107	5	798	43	53	1163	30
Future Volume (vph)	28	40	7	44	60	107	5	798	43	53	1163	30
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5			6.5			6.0			6.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frbp, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.93			0.99			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1620			1512			3401			3381	
Flt Permitted		0.76			0.92			0.95			0.84	
Satd. Flow (perm)		1256			1401			3225			2861	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	29	42	7	46	63	113	5	867	47	55	1199	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	78	0	0	222	0	0	916	0	0	1284	0
Confl. Peds. (#/hr)	6		7	7		6	10		15	15		10
Heavy Vehicles (%)	2%	2%	2%	4%	4%	2%	20%	3%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	9	0	10	10
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		26.6			26.6			90.9			90.9	
Effective Green, g (s)		26.6			26.6			90.9			90.9	
Actuated g/C Ratio		0.20			0.20			0.70			0.70	
Clearance Time (s)		6.5			6.5			6.0			6.0	
Vehicle Extension (s)		5.0			5.0			0.2			0.2	
Lane Grp Cap (vph)		256			286			2255			2000	
v/s Ratio Prot												
v/s Ratio Perm		0.06			0.16			0.28			0.45	
v/c Ratio		0.30			0.78			0.41			0.64	
Uniform Delay, d1		43.9			48.9			8.2			10.7	
Progression Factor		1.00			1.00			0.56			1.00	
Incremental Delay, d2		1.4			14.3			0.4			1.6	
Delay (s)		45.3			63.2			4.9			12.3	
Level of Service		D			E			A			B	
Approach Delay (s)		45.3			63.2			4.9			12.3	
Approach LOS		D			E			A			B	

Intersection Summary		
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.67	B
Actuated Cycle Length (s)	130.0	Sum of lost time (s)
Intersection Capacity Utilization	89.4%	12.5
Analysis Period (min)	15	ICU Level of Service
		E

c Critical Lane Group

Queues

12: S Glebe Road & Columbia Pike

06/06/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	149	743	142	892	178	701	135	902	141
v/c Ratio	0.76	0.64	0.60	0.81	0.92	0.68	0.53	0.88	0.26
Control Delay	49.3	38.9	33.9	39.4	78.8	43.8	38.8	59.6	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	38.9	33.9	39.4	78.8	43.8	38.8	59.6	11.3
Queue Length 50th (ft)	76	274	57	228	97	268	85	316	10
Queue Length 95th (ft)	#164	353	m101	#424	#239	336	m145	399	m62
Internal Link Dist (ft)		367		819		326		1584	
Turn Bay Length (ft)	275		125		250		135		110
Base Capacity (vph)	196	1160	235	1098	193	1070	282	1121	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.64	0.60	0.81	0.92	0.66	0.48	0.80	0.24

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

# HCM Signalized Intersection Capacity Analysis

## 12: S Glebe Road & Columbia Pike

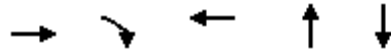
06/06/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	550	133	132	706	124	164	600	45	128	857	134
Future Volume (vph)	137	550	133	132	706	124	164	600	45	128	857	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1734	3389		1768	3376		1769	3460		1768	3471	1418
Flt Permitted	0.14	1.00		0.25	1.00		0.10	1.00		0.22	1.00	1.00
Satd. Flow (perm)	257	3389		469	3376		195	3460		405	3471	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	149	598	145	142	759	133	178	652	49	135	902	141
RTOR Reduction (vph)	0	16	0	0	11	0	0	4	0	0	0	99
Lane Group Flow (vph)	149	727	0	142	881	0	178	697	0	135	902	42
Confl. Peds. (#/hr)	51		15	15		51	24		16	16		24
Heavy Vehicles (%)	4%	3%	2%	2%	3%	3%	2%	3%	3%	2%	4%	5%
Bus Blockages (#/hr)	0	0	0	0	2	2	0	0	0	0	0	8
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	52.2	43.9		48.2	41.9		48.4	38.4		48.6	38.5	38.5
Effective Green, g (s)	52.2	43.9		48.2	41.9		48.4	38.4		48.6	38.5	38.5
Actuated g/C Ratio	0.40	0.34		0.37	0.32		0.37	0.30		0.37	0.30	0.30
Clearance Time (s)	8.7	8.6		8.7	8.6		7.0	7.0		7.0	7.0	7.0
Vehicle Extension (s)	3.0	0.2		2.0	0.2		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	197	1144		236	1088		193	1022		257	1027	419
v/s Ratio Prot	c0.05	0.21		0.03	c0.26		c0.07	0.20		0.04	0.26	
v/s Ratio Perm	0.25			0.19			c0.27			0.16		0.03
v/c Ratio	0.76	0.64		0.60	0.81		0.92	0.68		0.53	0.88	0.10
Uniform Delay, d1	28.6	36.3		30.2	40.4		32.1	40.4		28.9	43.5	33.2
Progression Factor	1.00	1.00		0.92	0.82		1.00	1.00		1.45	1.18	5.69
Incremental Delay, d2	15.2	2.7		9.8	5.9		42.7	1.5		0.7	6.6	0.0
Delay (s)	43.8	39.0		37.4	38.9		74.8	41.9		42.7	58.1	188.9
Level of Service	D	D		D	D		E	D		D	E	F
Approach Delay (s)		39.8			38.7			48.6			72.0	
Approach LOS		D			D			D			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			51.0				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)		31.3			
Intersection Capacity Utilization			93.1%				ICU Level of Service		F			
Analysis Period (min)			15									
c	Critical Lane Group											

## Queues

### 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

06/06/2022



Lane Group	EBT	EBR	WBT	NBT	SBT
Lane Group Flow (vph)	156	60	359	356	503
v/c Ratio	0.35	0.14	0.84	0.35	0.49
Control Delay	22.3	6.1	42.2	10.4	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.3	6.1	42.2	10.4	12.2
Queue Length 50th (ft)	54	0	140	86	136
Queue Length 95th (ft)	99	24	#268	144	220
Internal Link Dist (ft)	205		211	1330	189
Turn Bay Length (ft)		55			
Base Capacity (vph)	508	485	481	1013	1029
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.12	0.75	0.35	0.49

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

# HCM Signalized Intersection Capacity Analysis

## 13: Walter Reed Drive/S Fillmore Street & 2nd Street S

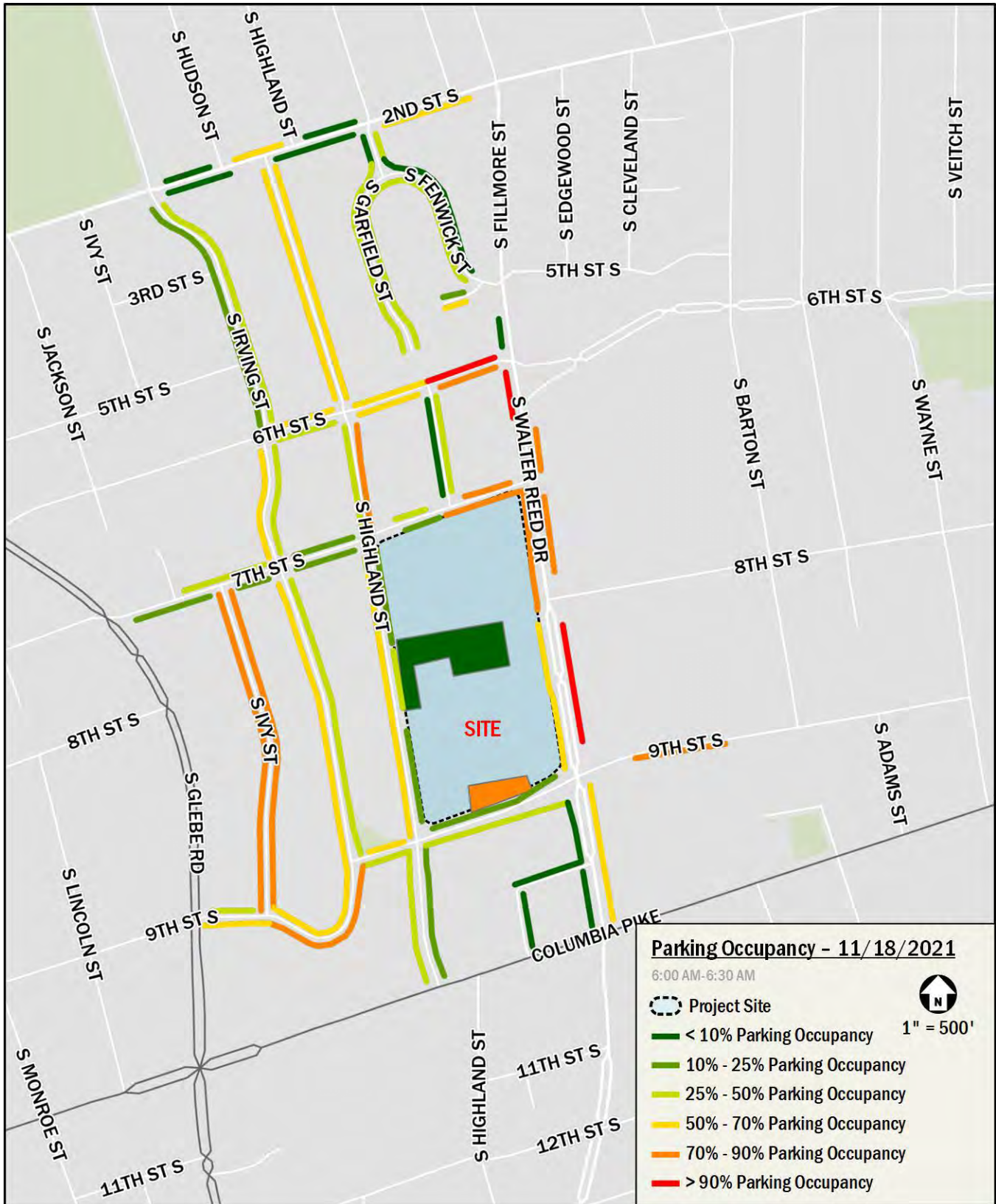
06/06/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Volume (vph)	20	123	55	80	178	76	18	285	24	25	412	26
Future Volume (vph)	20	123	55	80	178	76	18	285	24	25	412	26
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0			5.0			5.0	
Lane Util. Factor		1.00	1.00		1.00			1.00			1.00	
Frbp, ped/bikes		1.00	0.94		0.99			1.00			1.00	
Flpb, ped/bikes		1.00	1.00		0.99			1.00			1.00	
Frt		1.00	0.85		0.97			0.99			0.99	
Flt Protected		0.99	1.00		0.99			1.00			1.00	
Satd. Flow (prot)		1628	1336		1577			1819			1839	
Flt Permitted		0.93	1.00		0.88			0.97			0.97	
Satd. Flow (perm)		1527	1336		1401			1761			1791	
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	134	60	86	191	82	20	310	26	27	448	28
RTOR Reduction (vph)	0	0	42	0	15	0	0	3	0	0	3	0
Lane Group Flow (vph)	0	156	18	0	344	0	0	353	0	0	500	0
Confl. Peds. (#/hr)	17		21	21		17	13		7	7		13
Heavy Vehicles (%)	11%	2%	2%	2%	2%	2%	17%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	2	2	2	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0	0	0	0	0	0						
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		22.0	22.0		22.0			43.0			43.0	
Effective Green, g (s)		22.0	22.0		22.0			43.0			43.0	
Actuated g/C Ratio		0.29	0.29		0.29			0.57			0.57	
Clearance Time (s)		5.0	5.0		5.0			5.0			5.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		447	391		410			1009			1026	
v/s Ratio Prot												
v/s Ratio Perm		0.10	0.01		c0.25			0.20			c0.28	
v/c Ratio		0.35	0.05		0.84			0.35			0.49	
Uniform Delay, d1		20.9	19.0		24.8			8.5			9.5	
Progression Factor		1.00	1.00		1.00			1.00			1.00	
Incremental Delay, d2		0.5	0.0		14.0			1.0			1.7	
Delay (s)		21.3	19.0		38.8			9.5			11.1	
Level of Service		C	B		D			A			B	
Approach Delay (s)		20.7			38.8			9.5			11.1	
Approach LOS		C			D			A			B	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			19.1									B
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			75.0						10.0			
Intersection Capacity Utilization			75.7%									D
Analysis Period (min)			15									

c Critical Lane Group

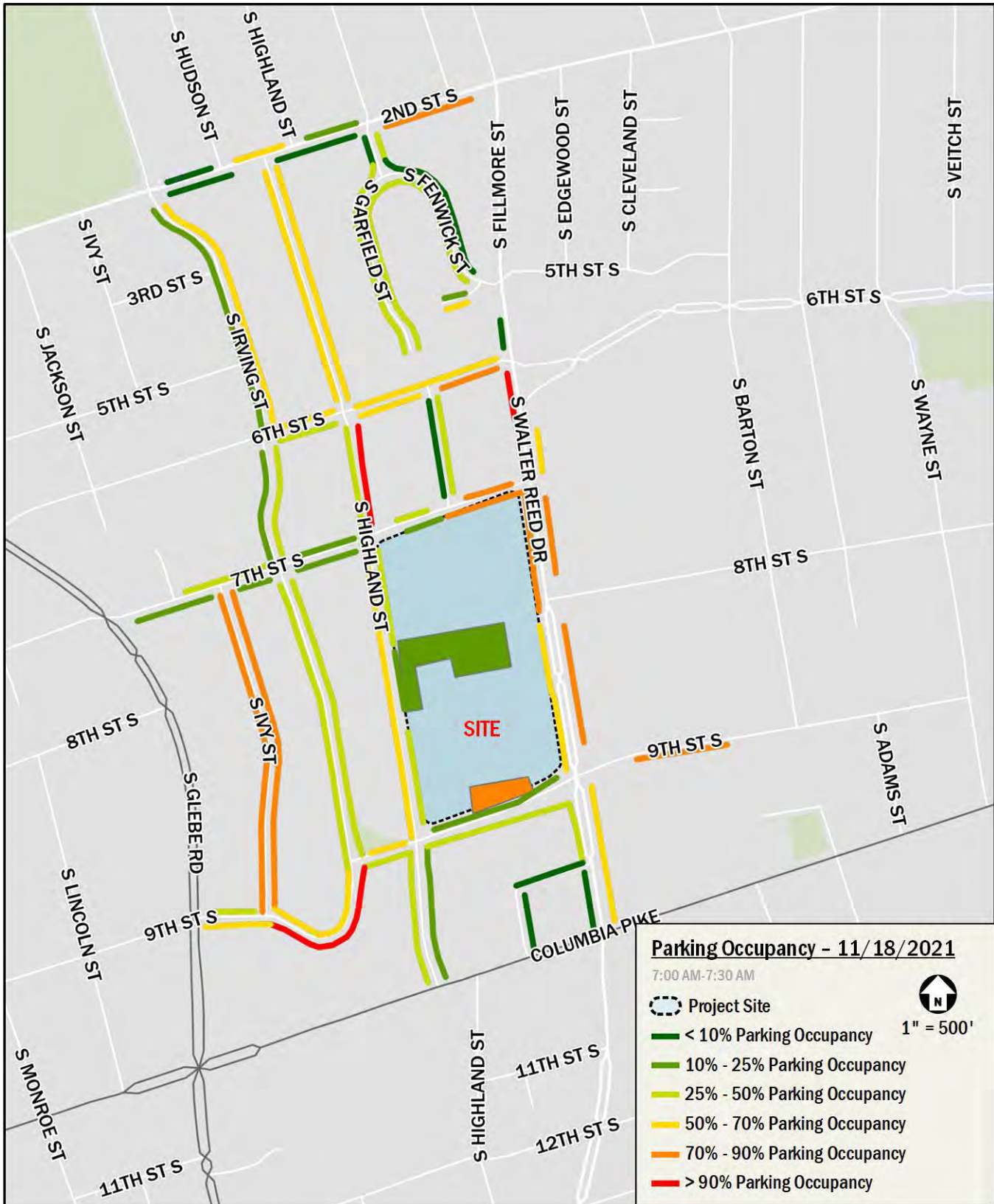
## G. Parking Occupancy by Half Hour

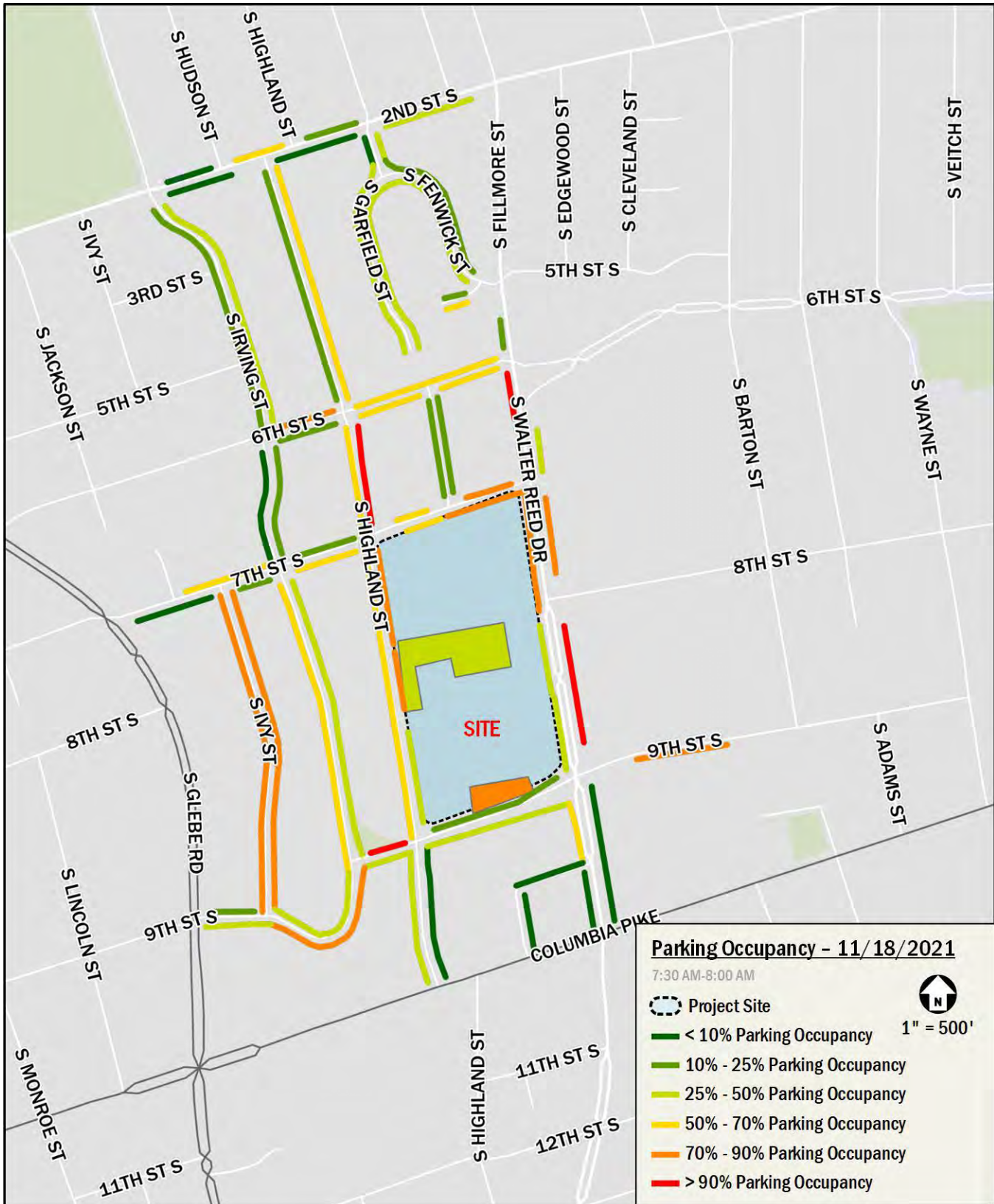






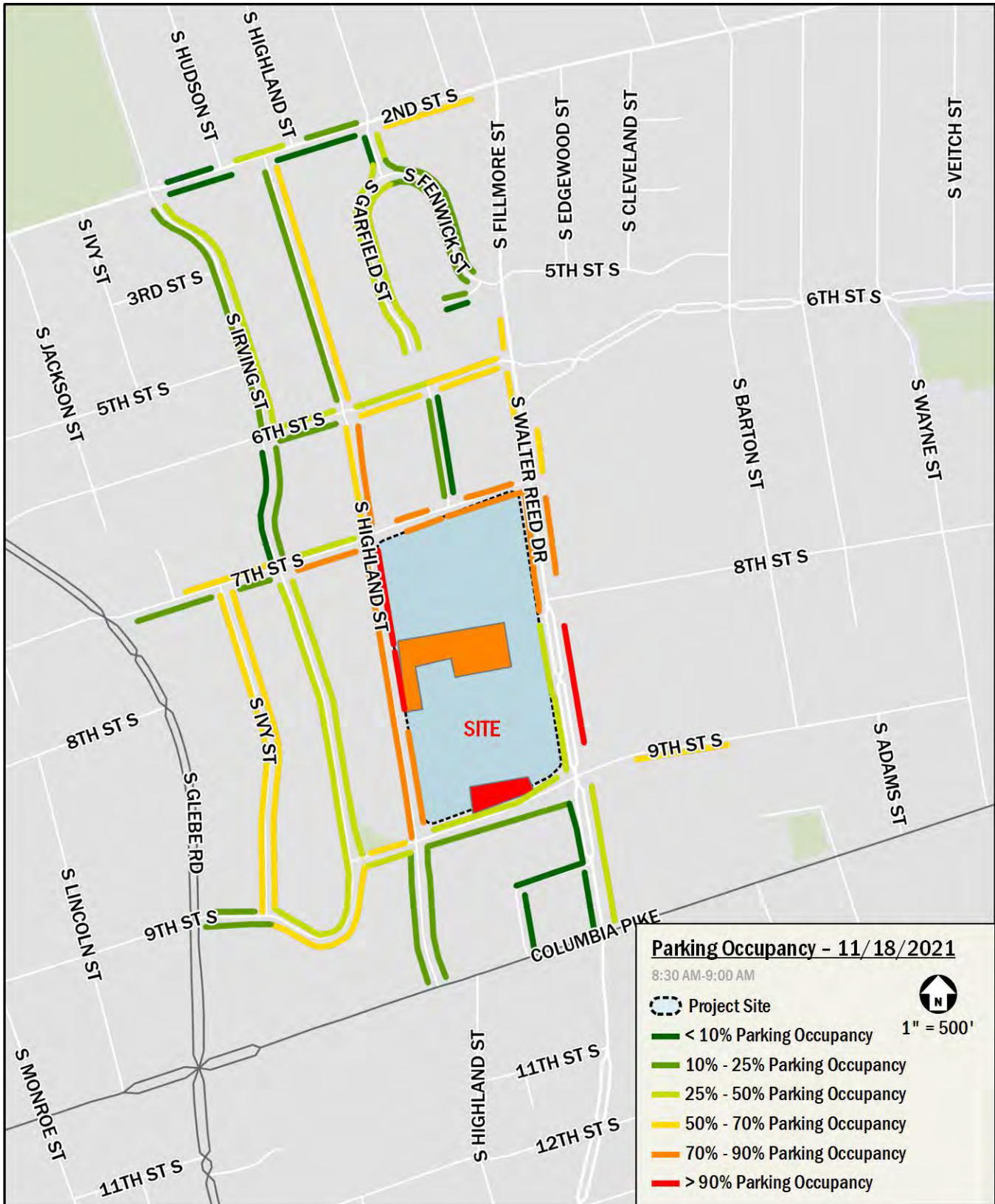






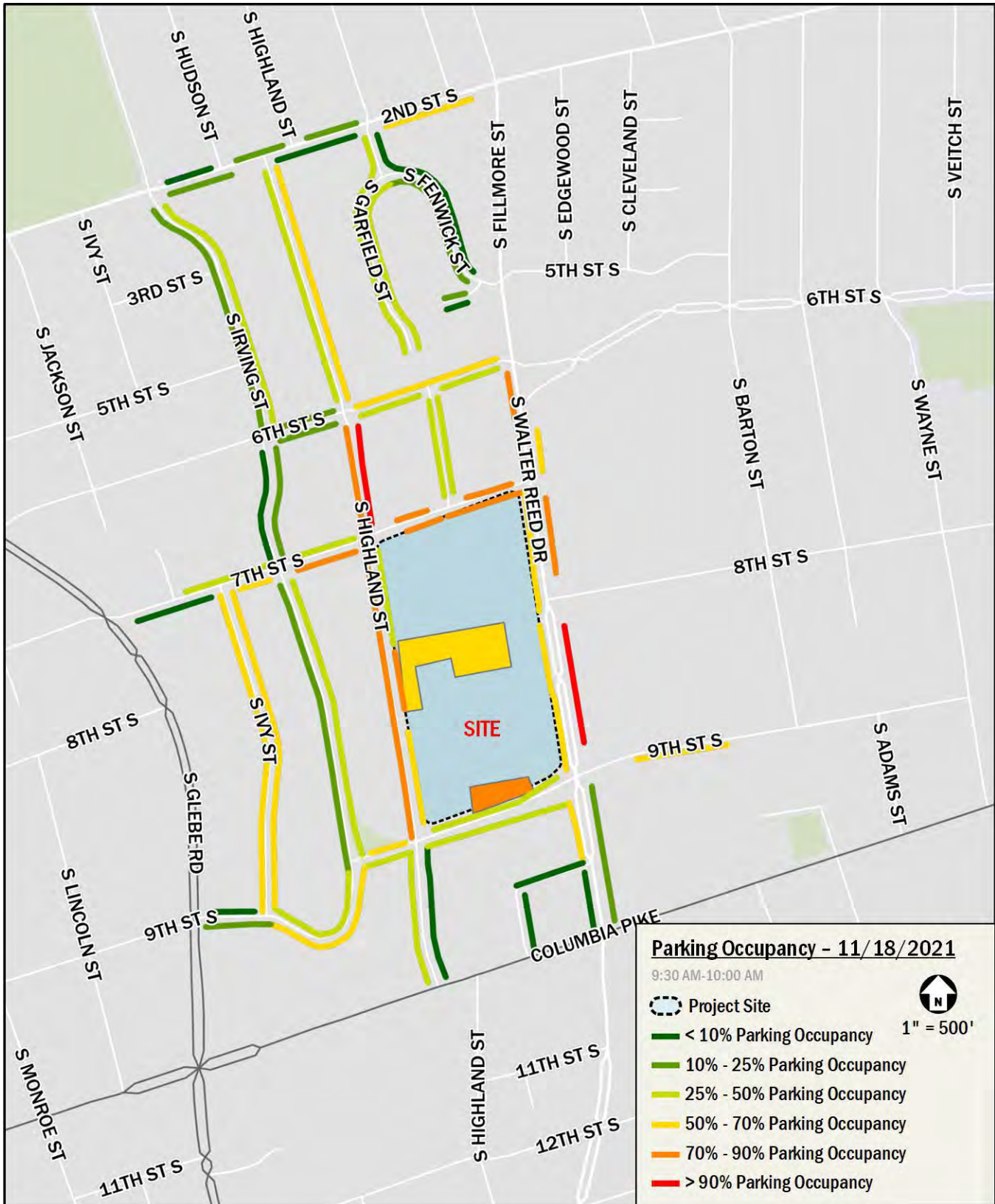




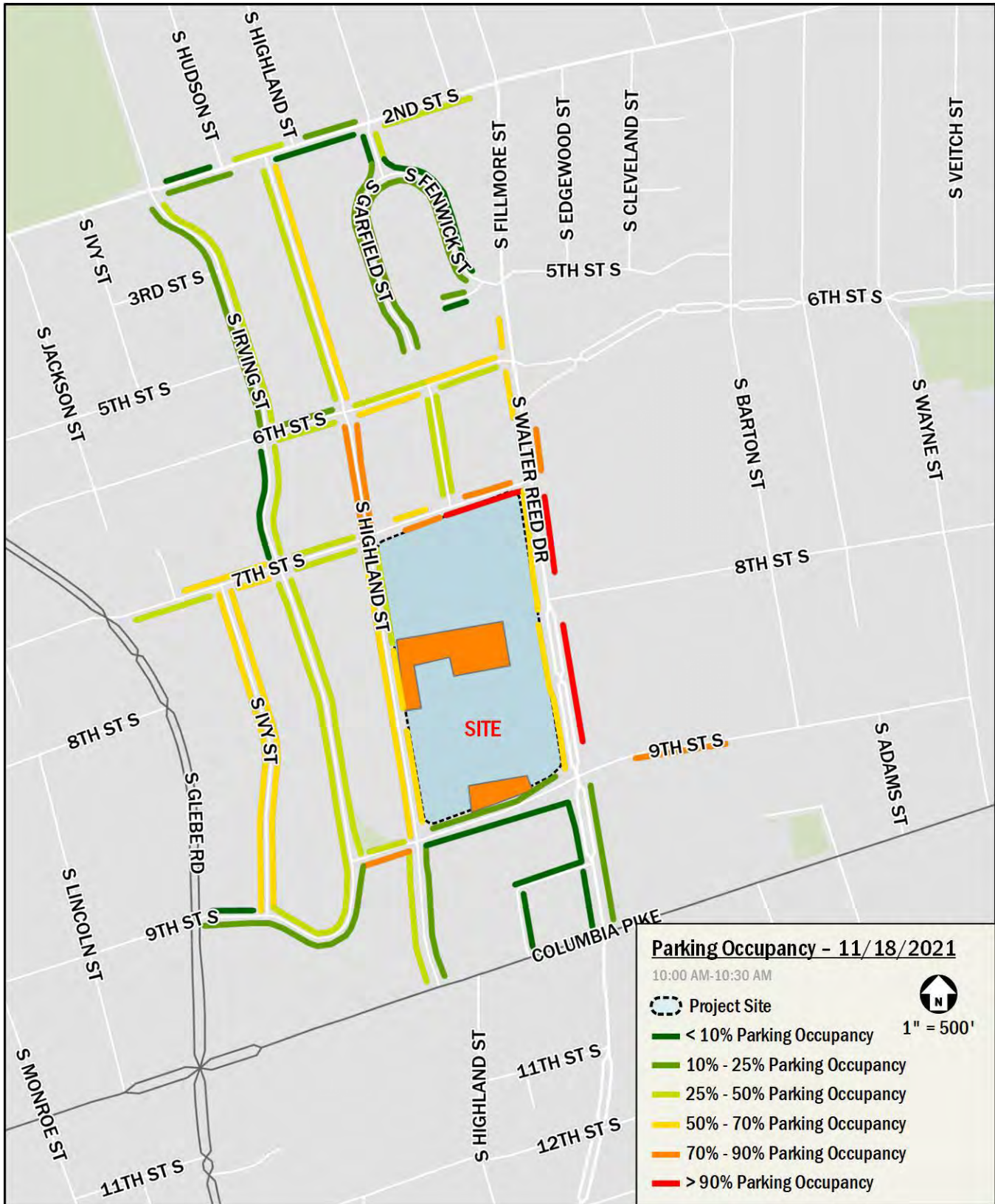


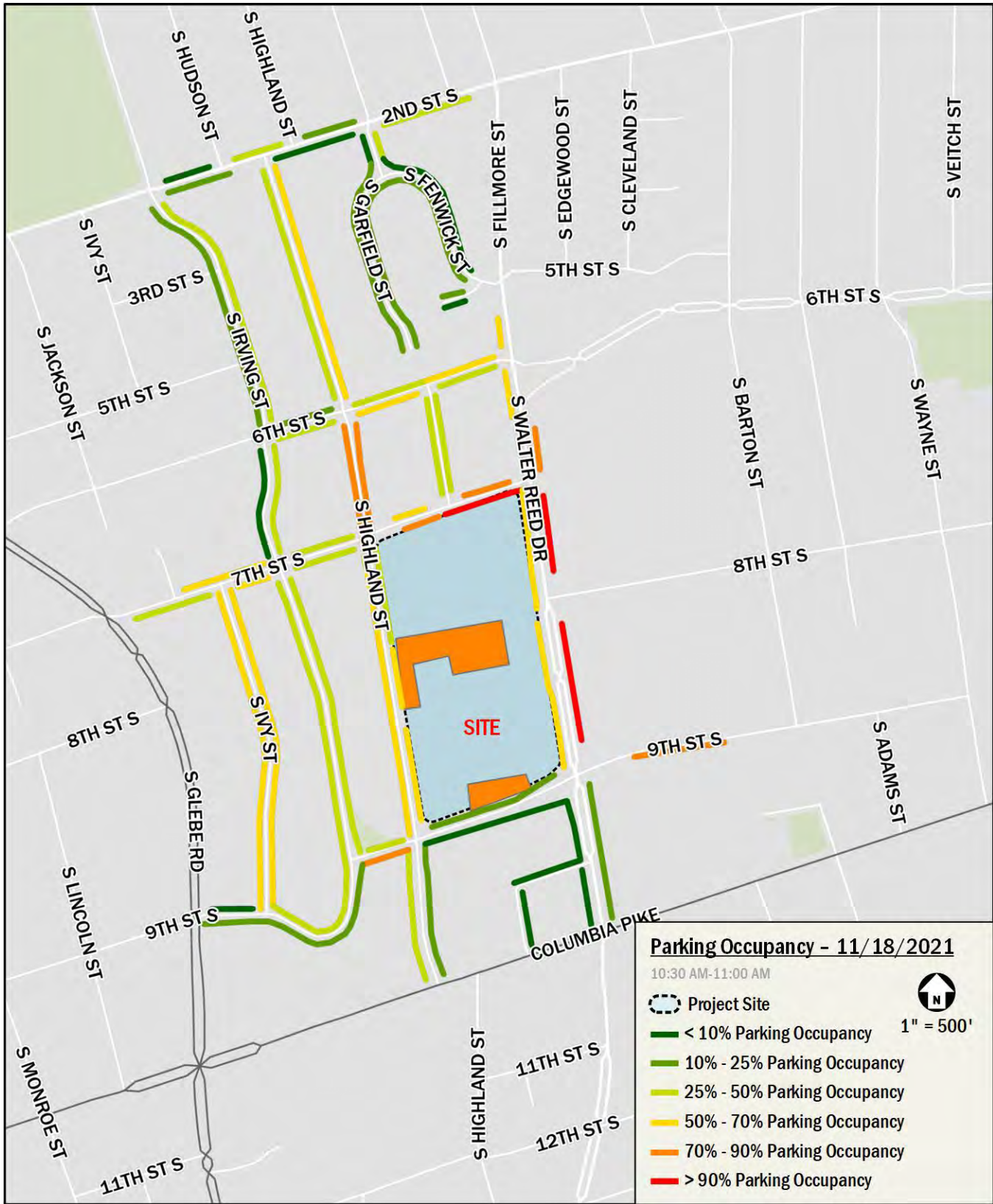




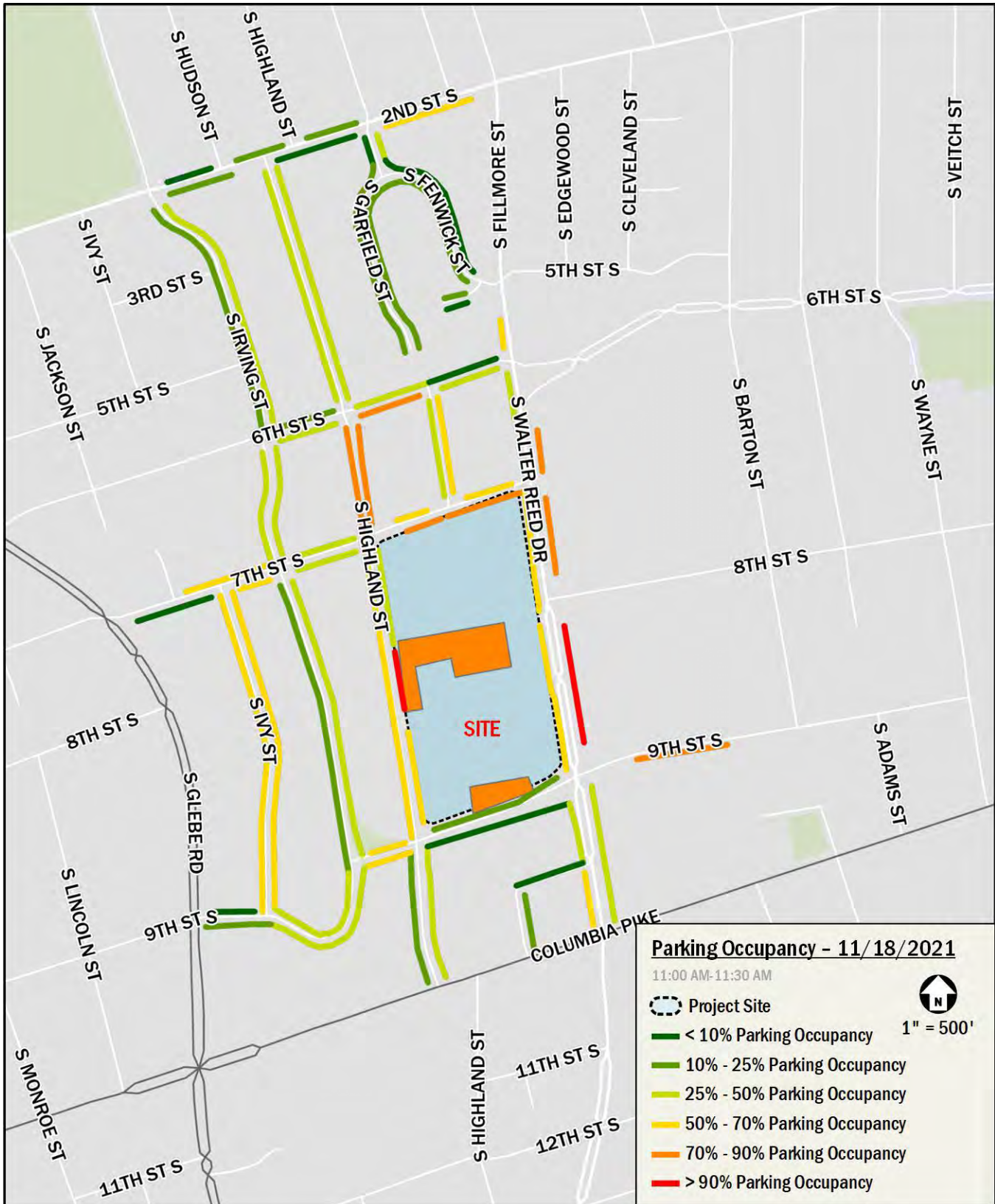






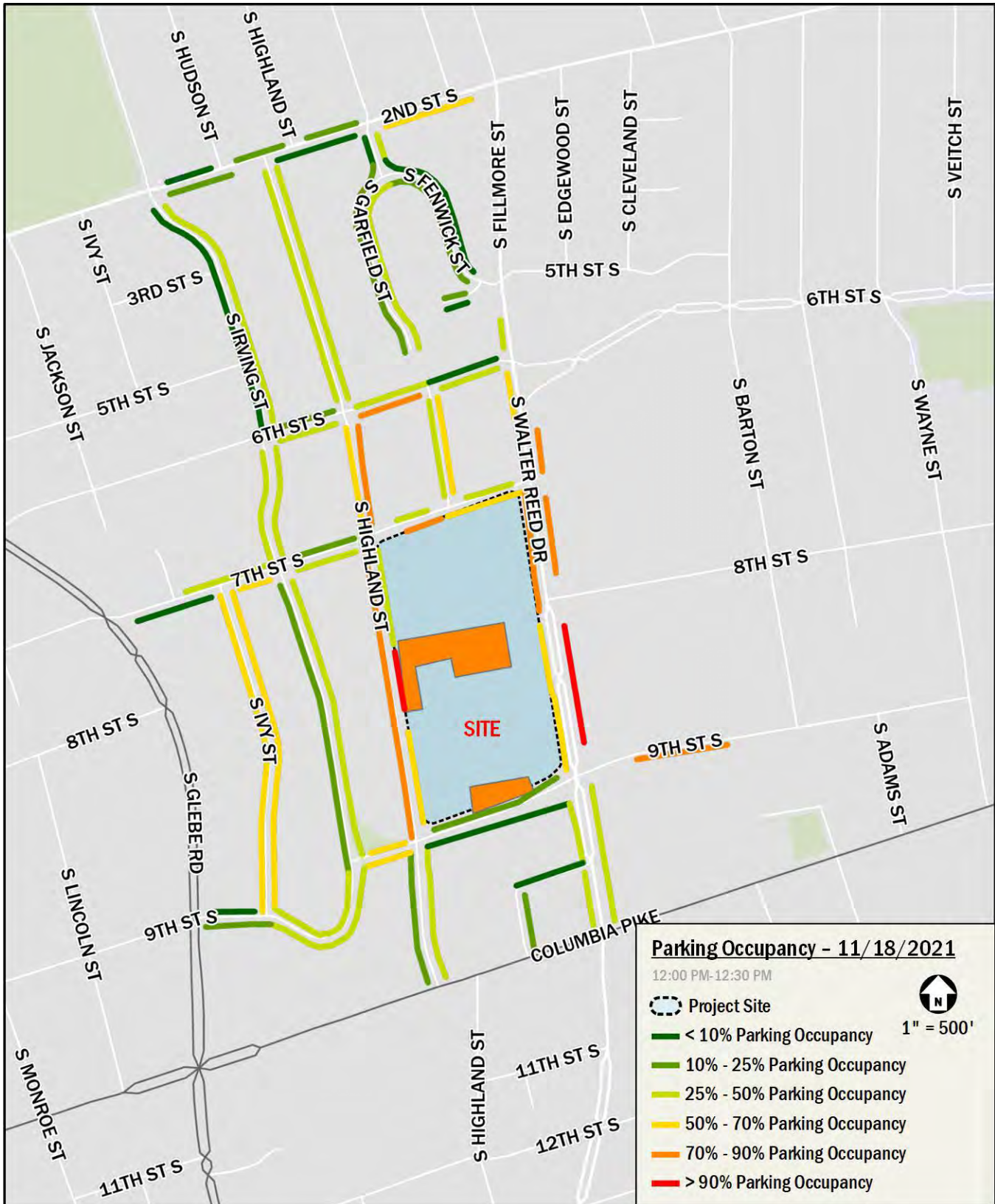


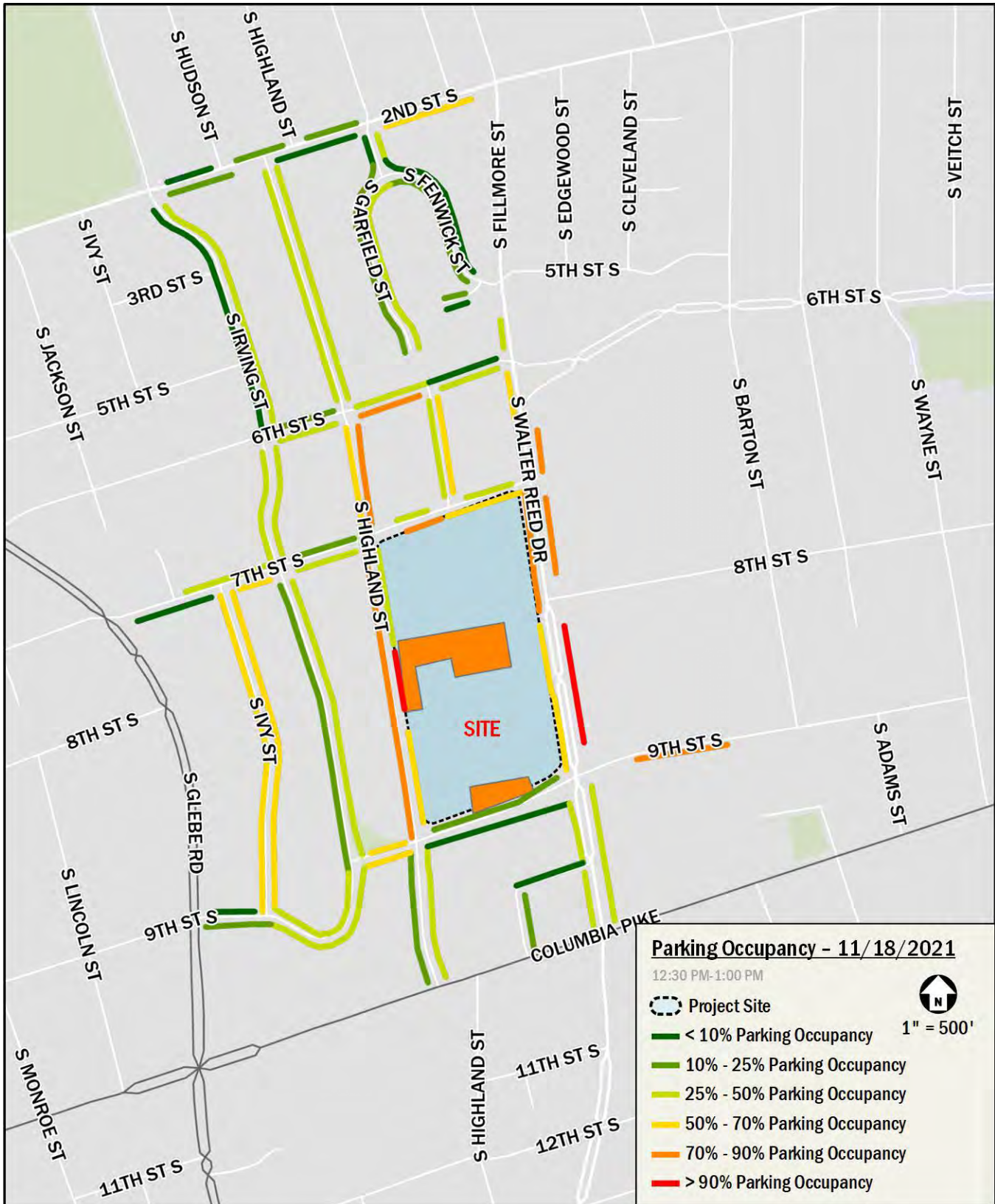












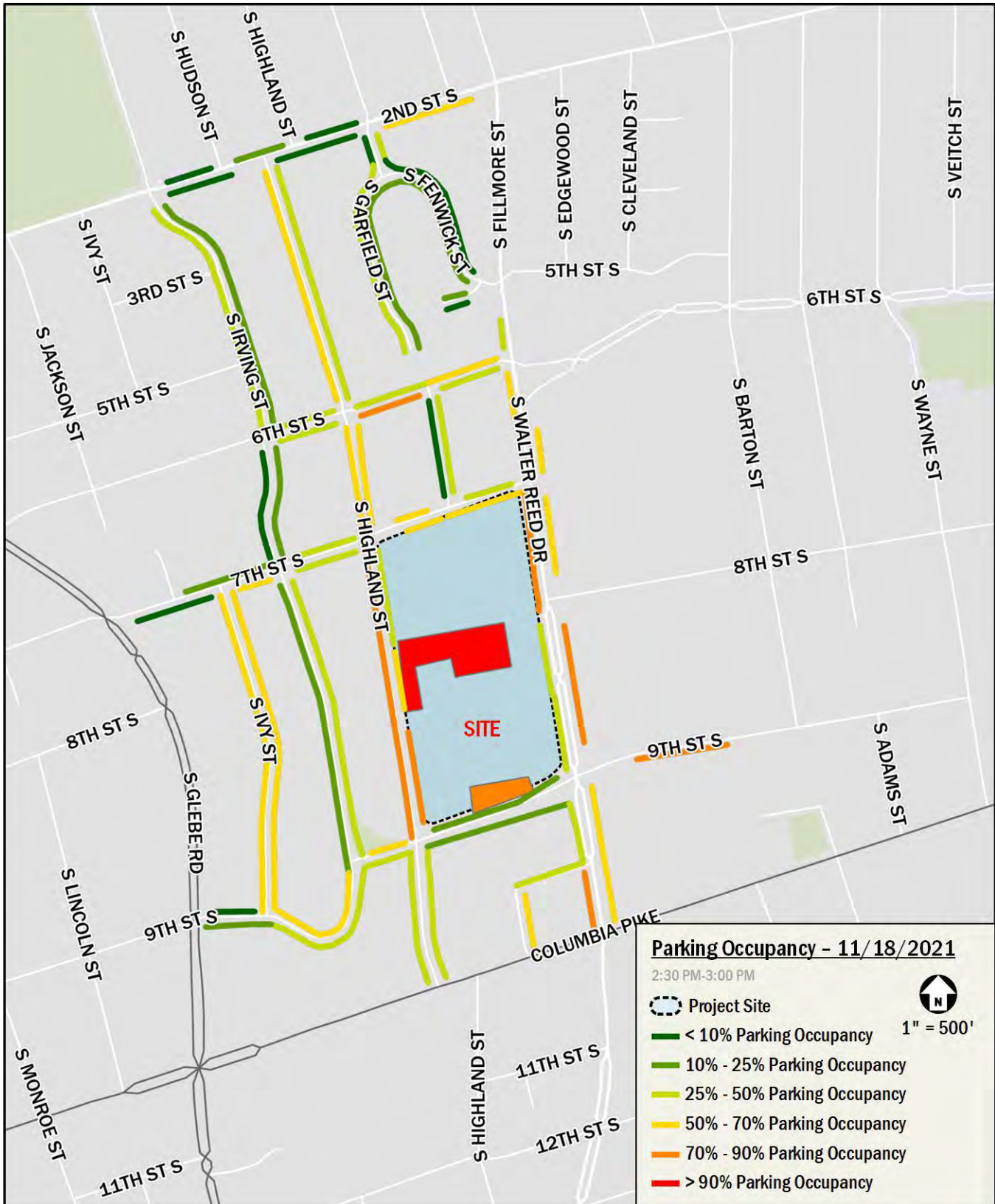




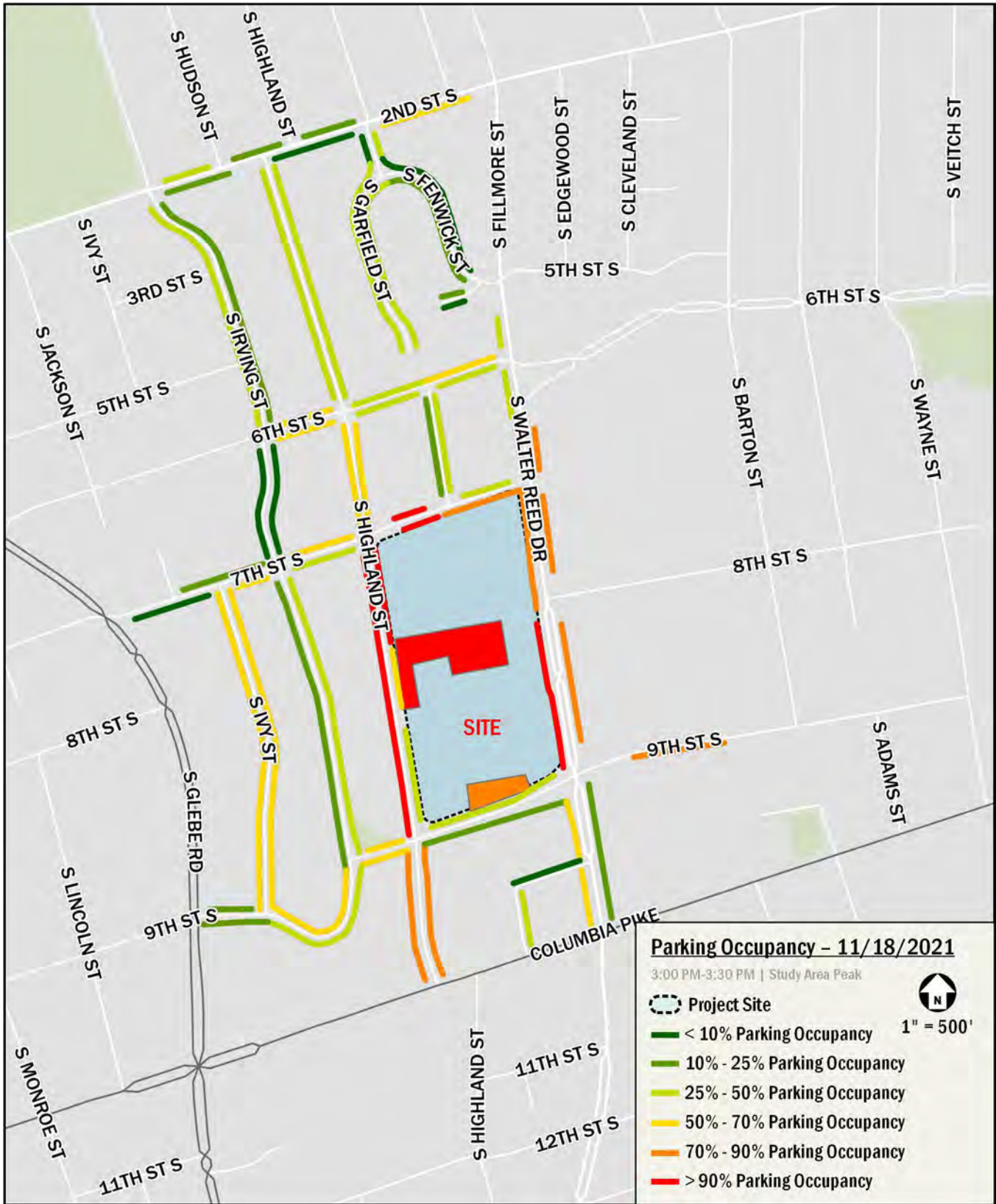








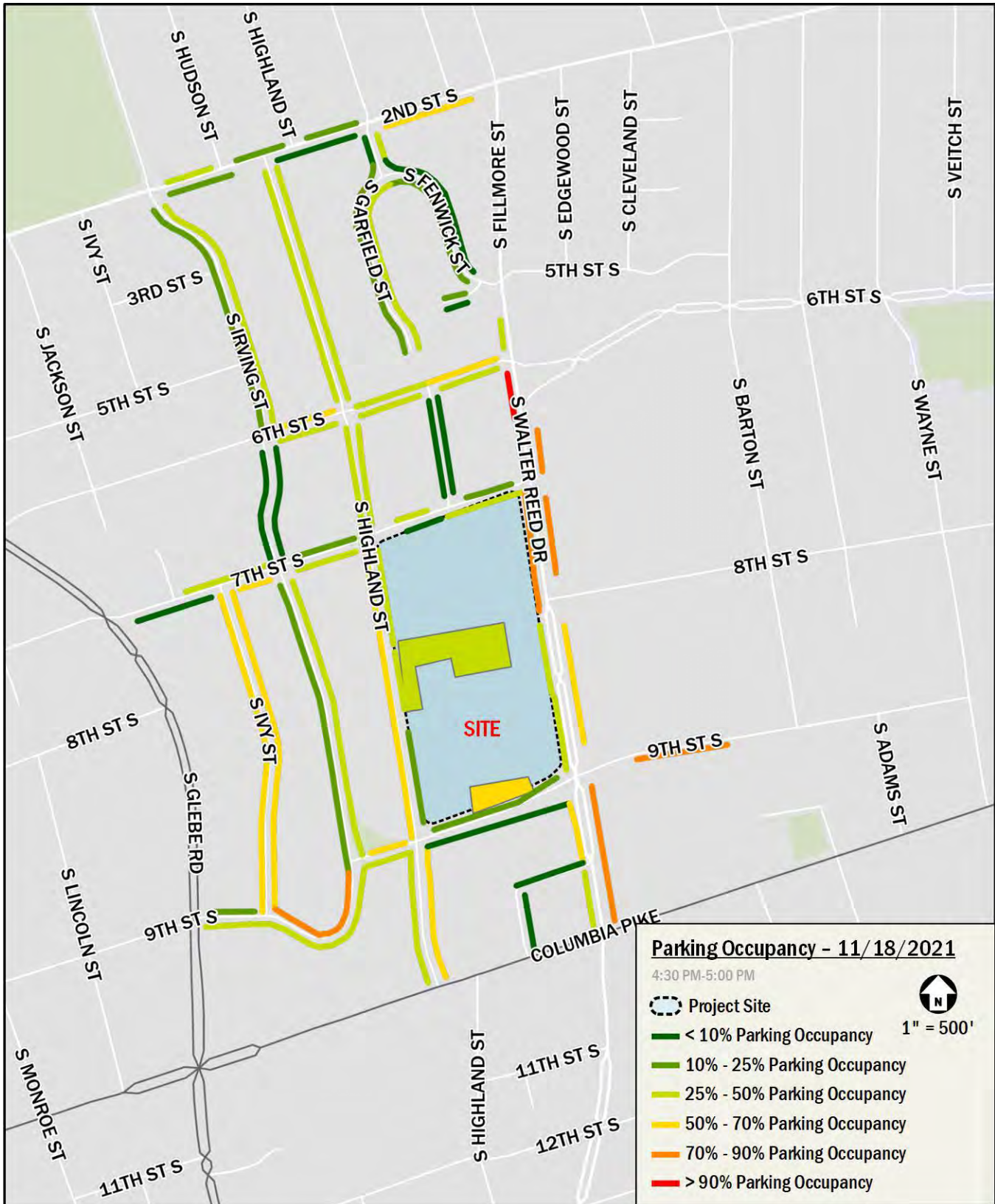




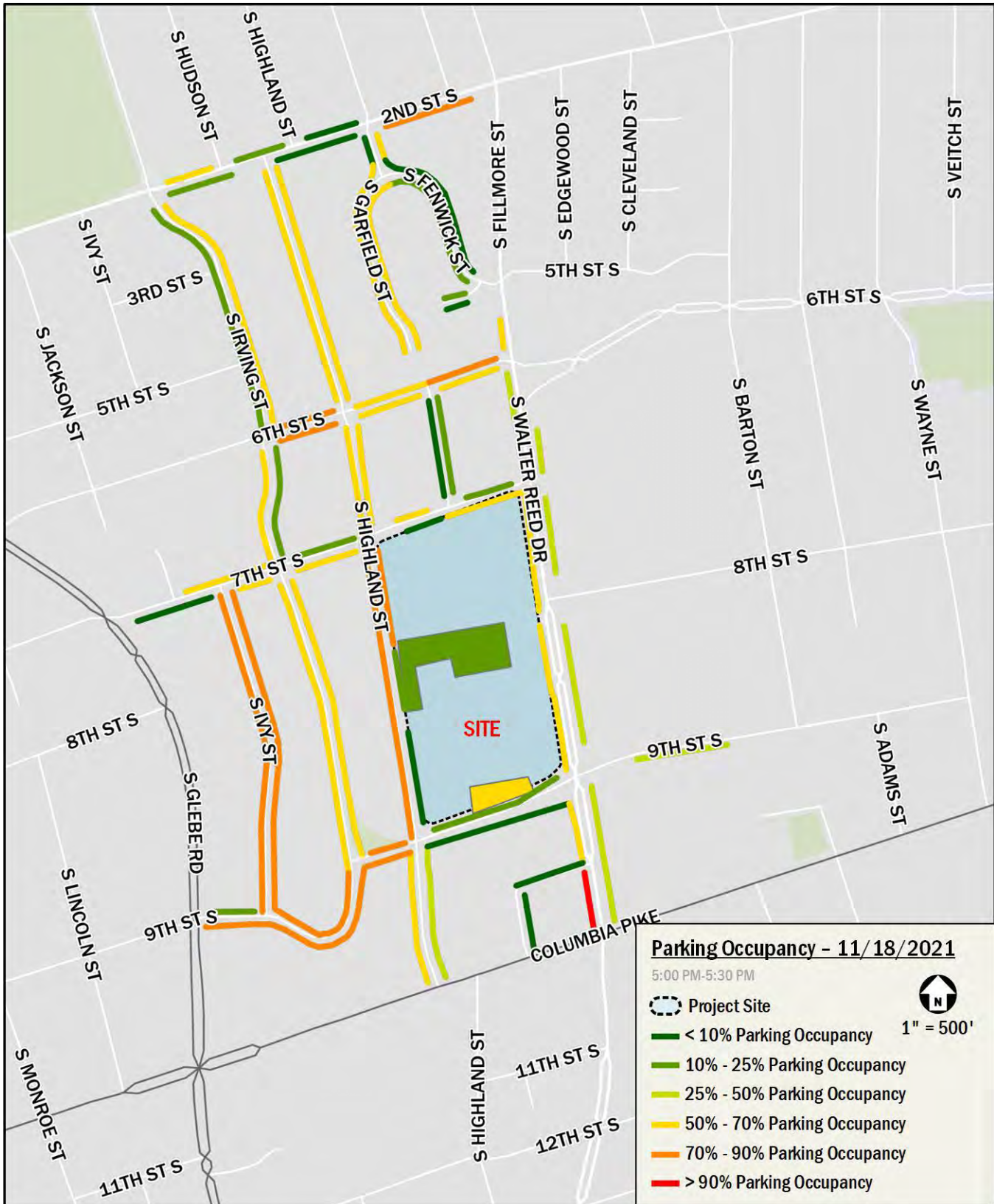


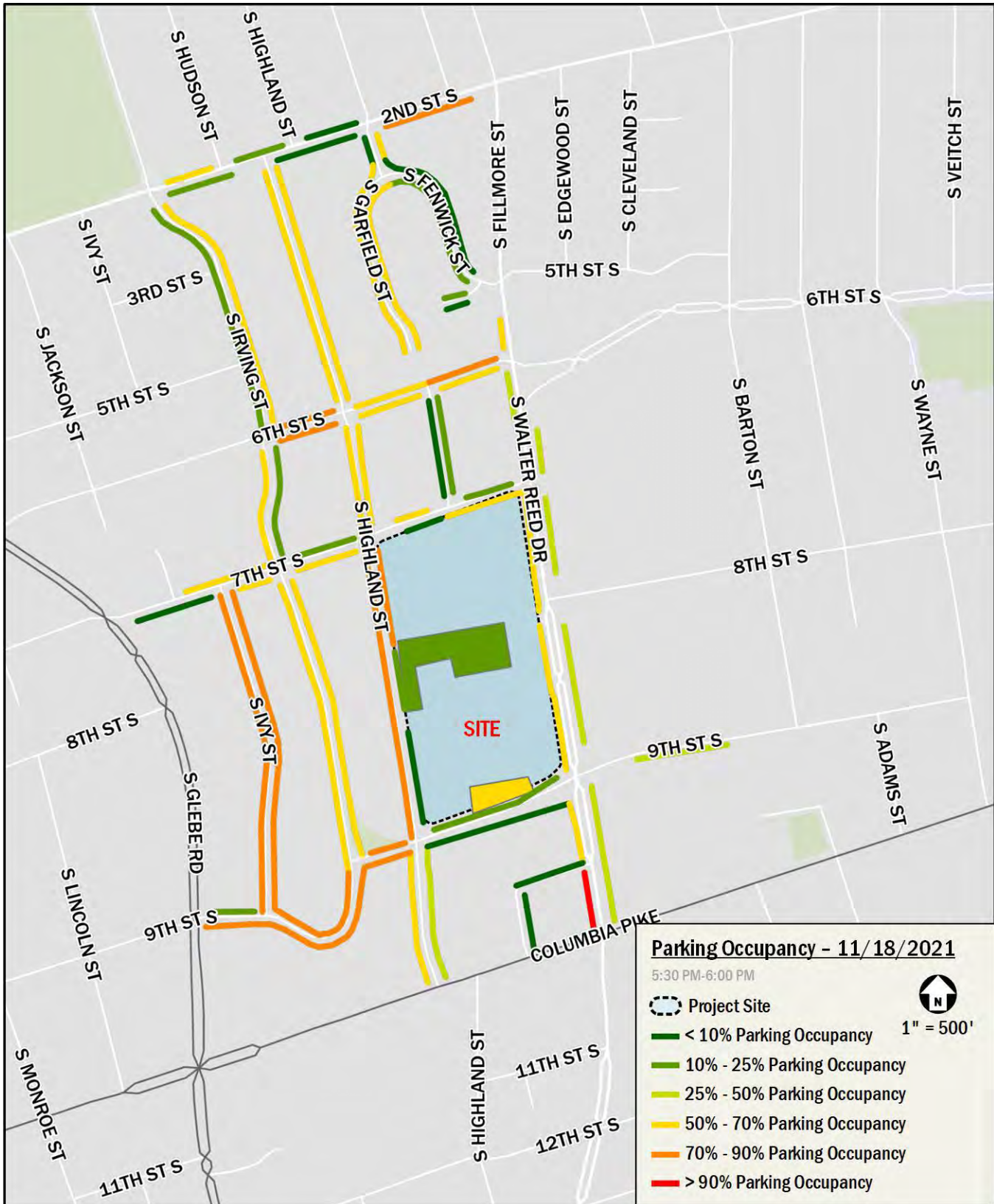




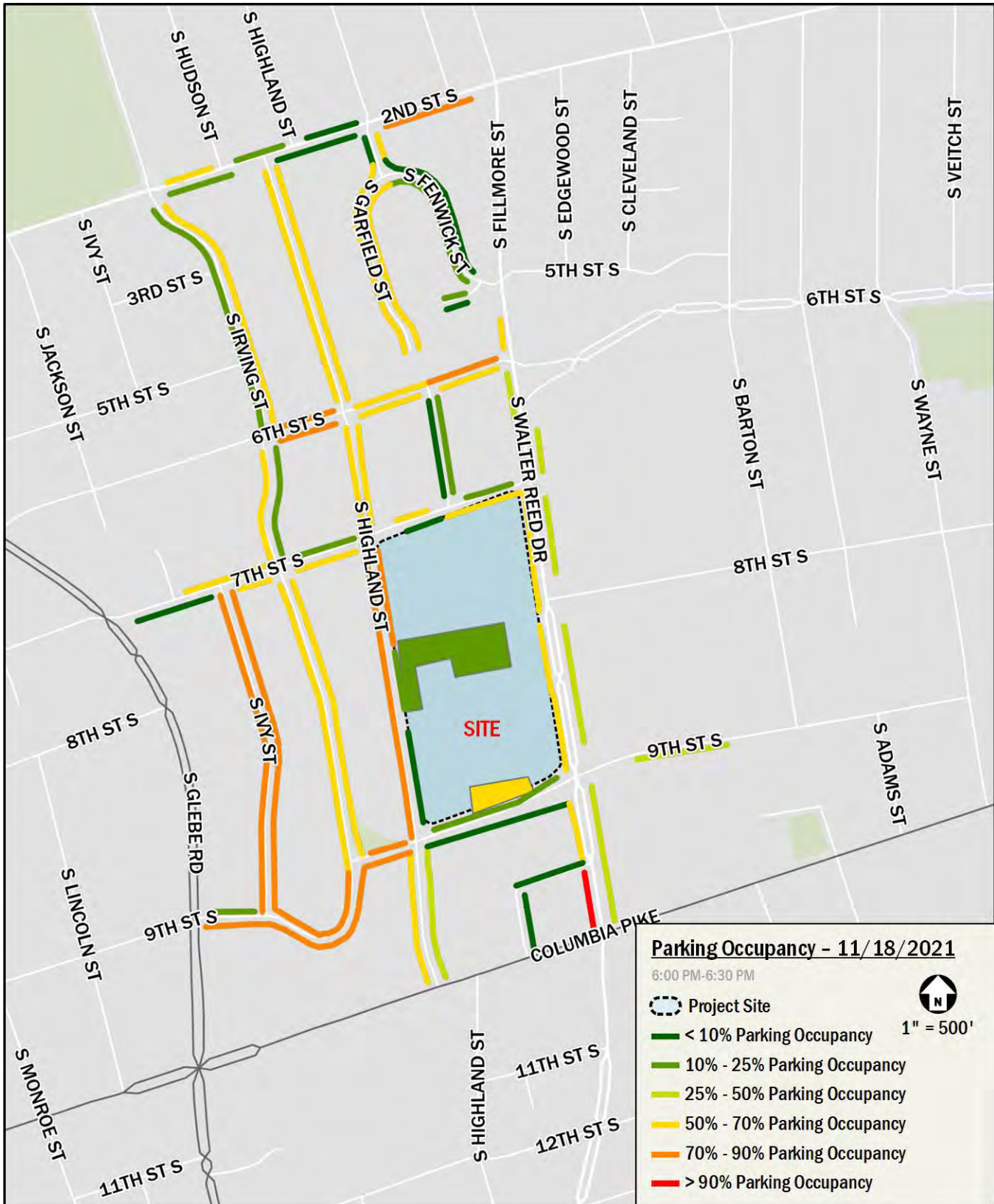




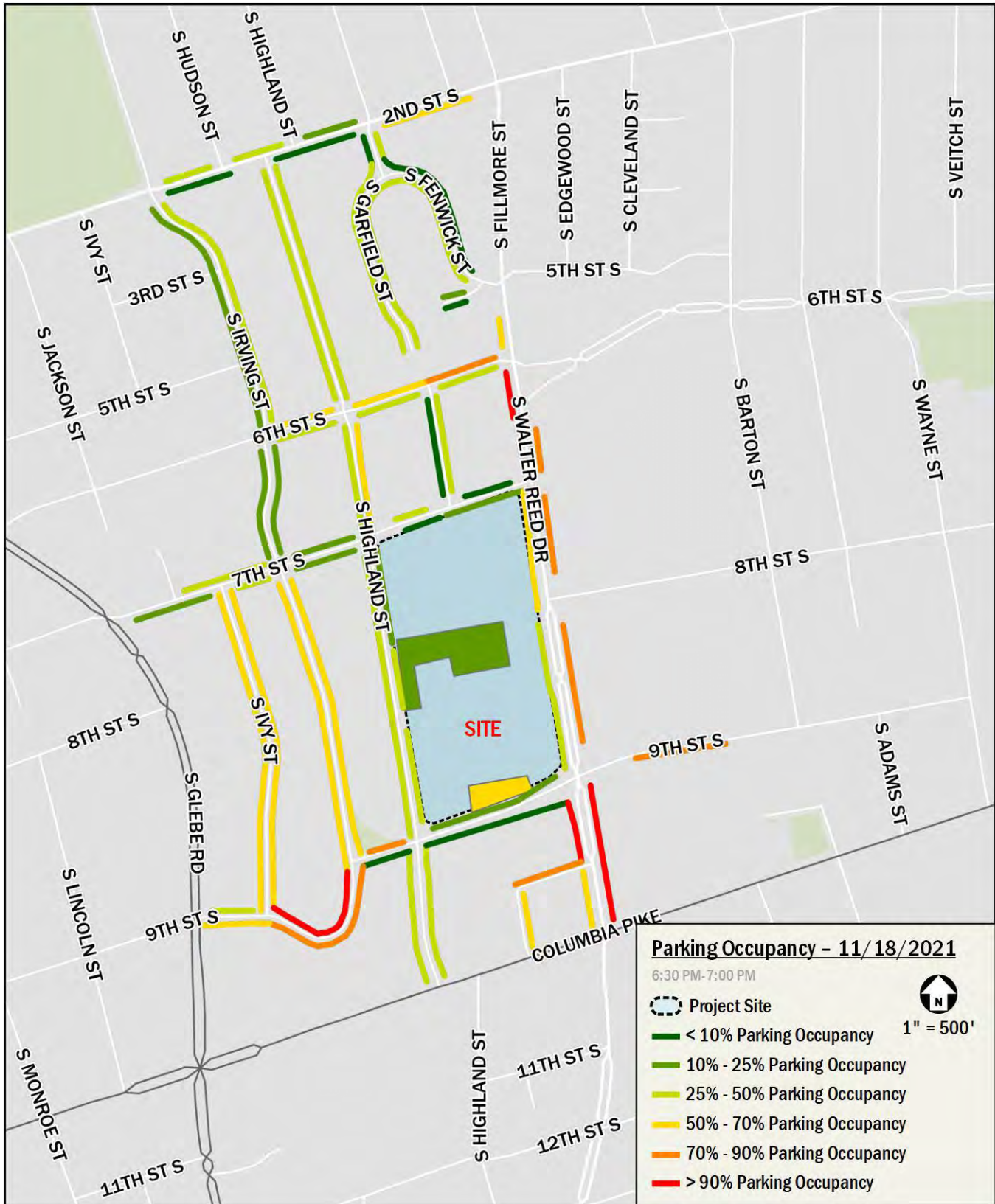


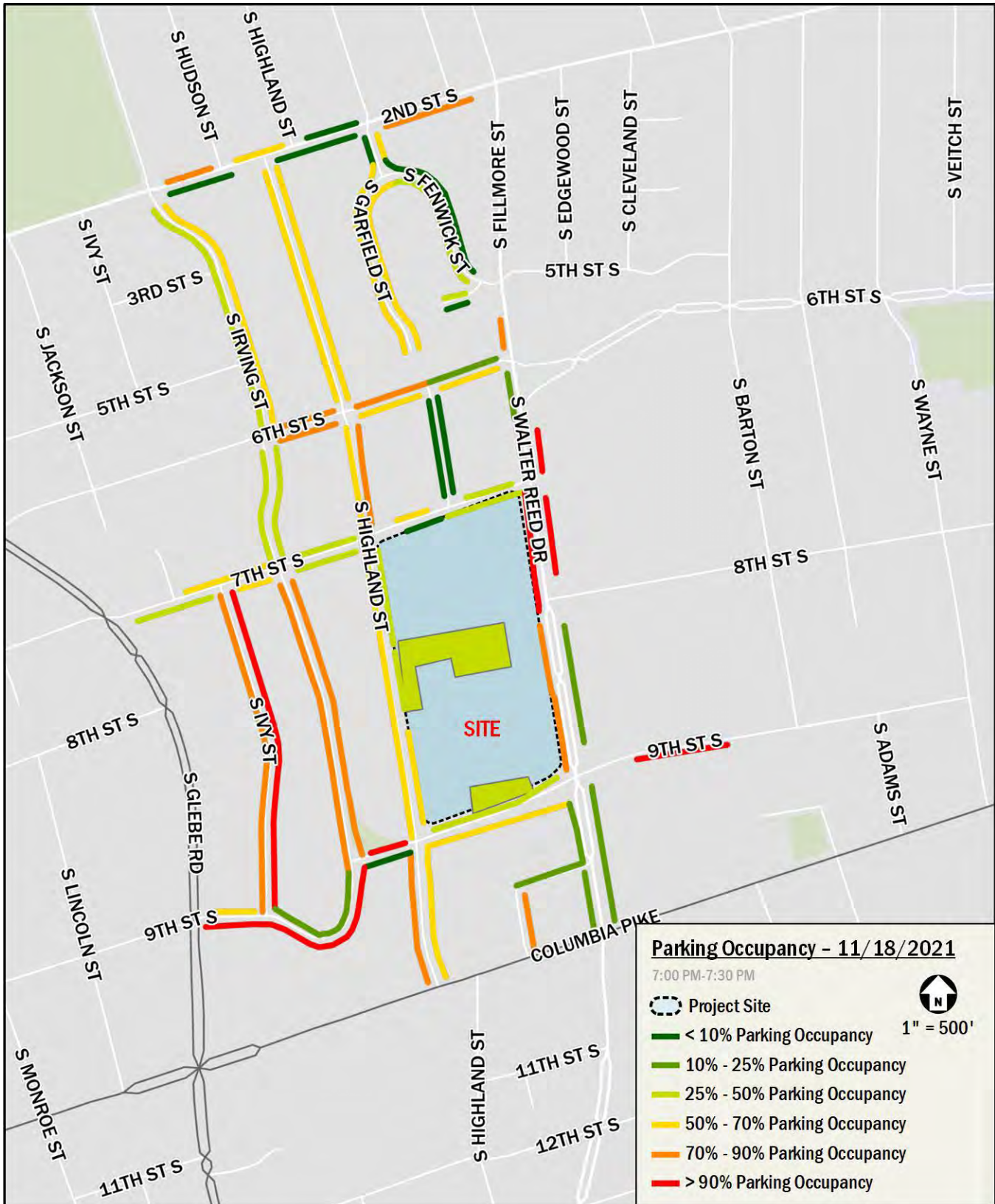




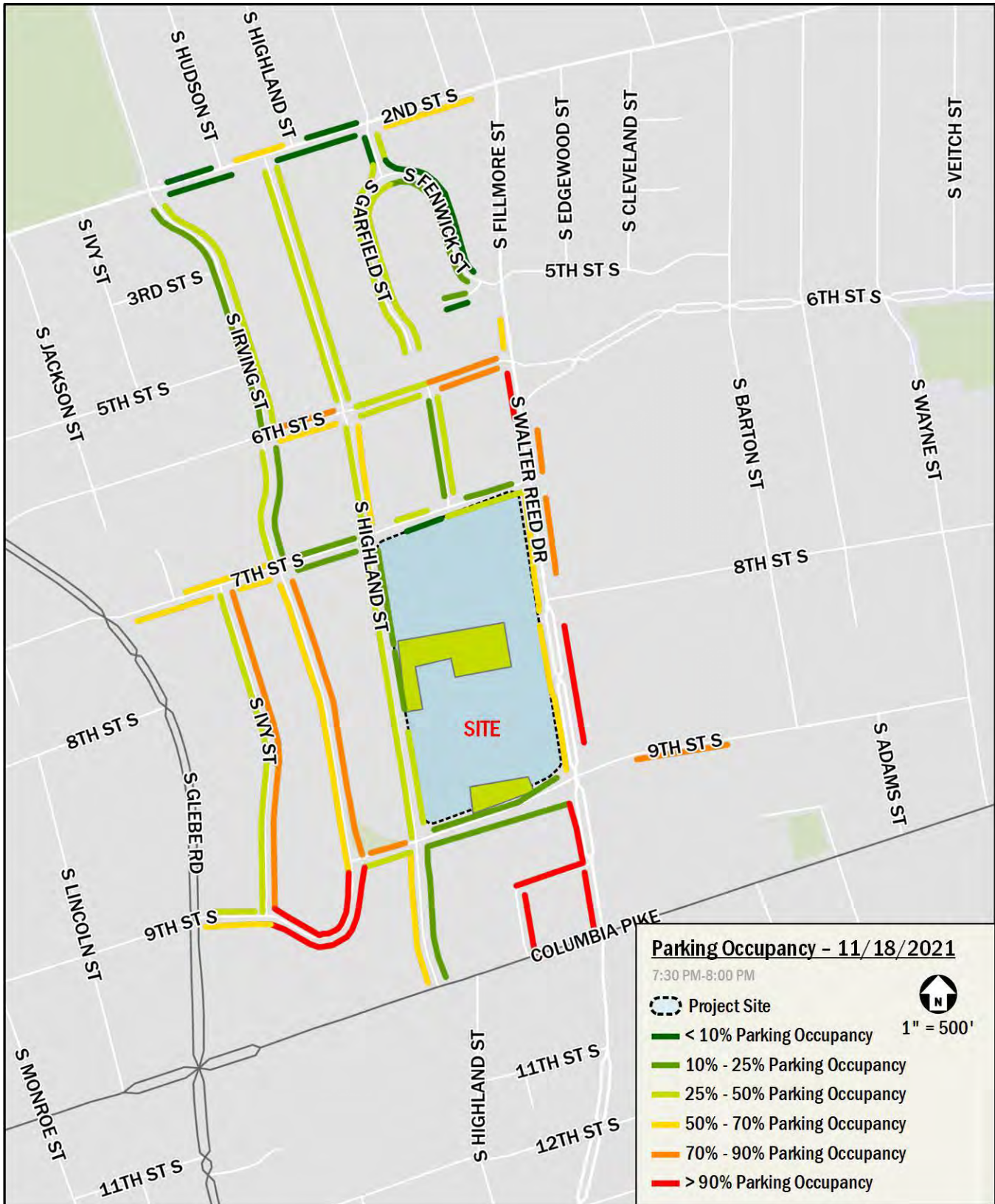


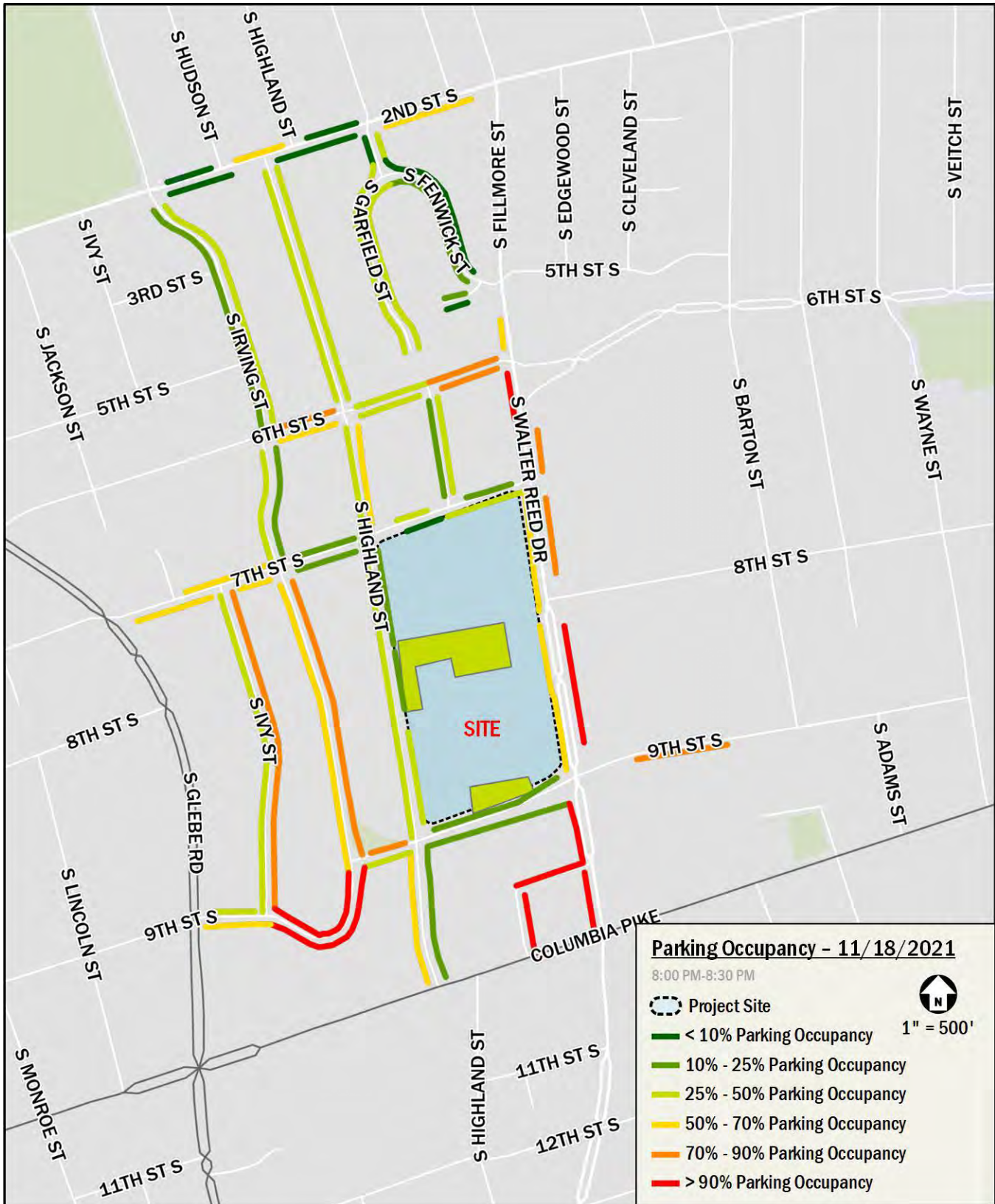






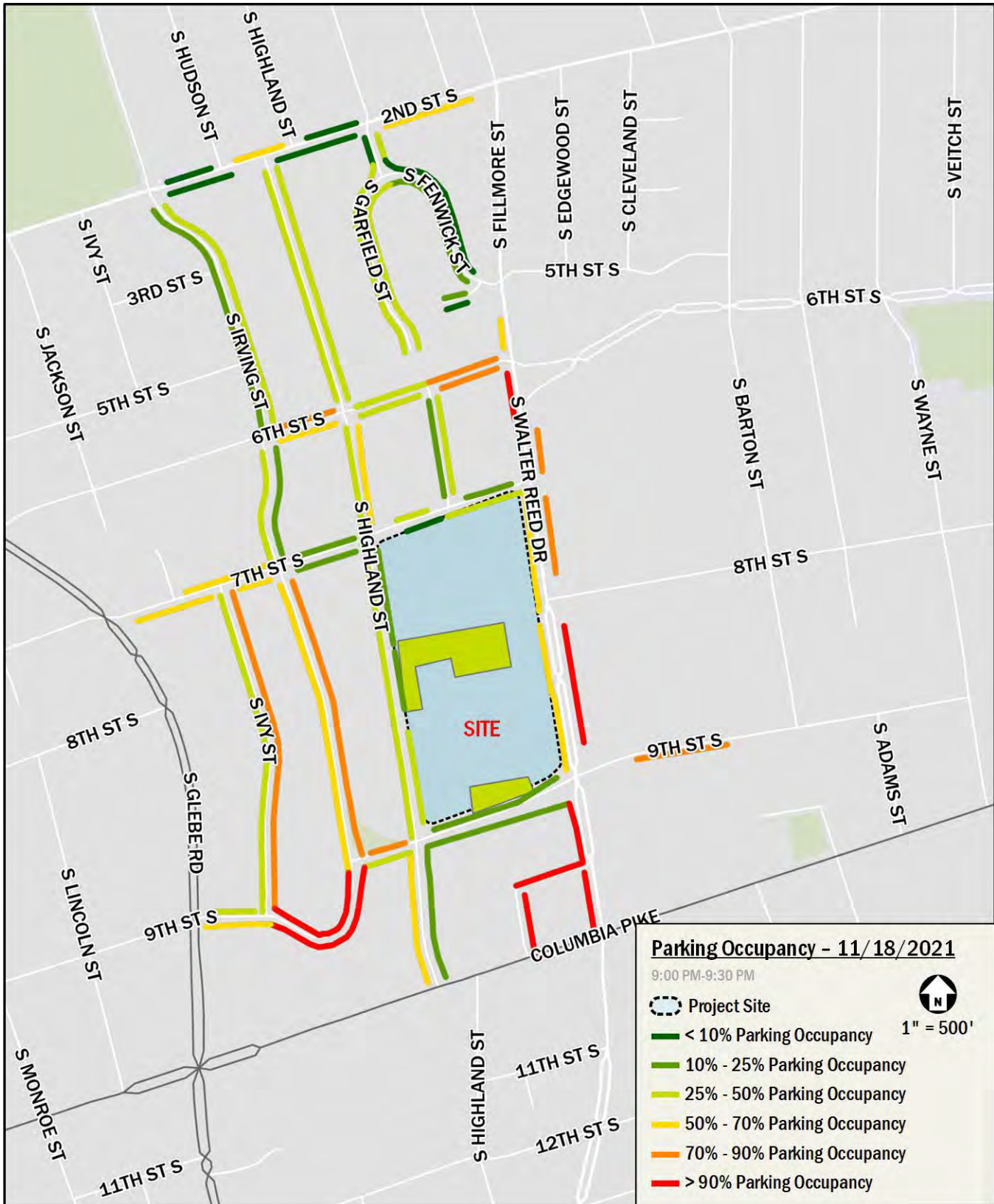




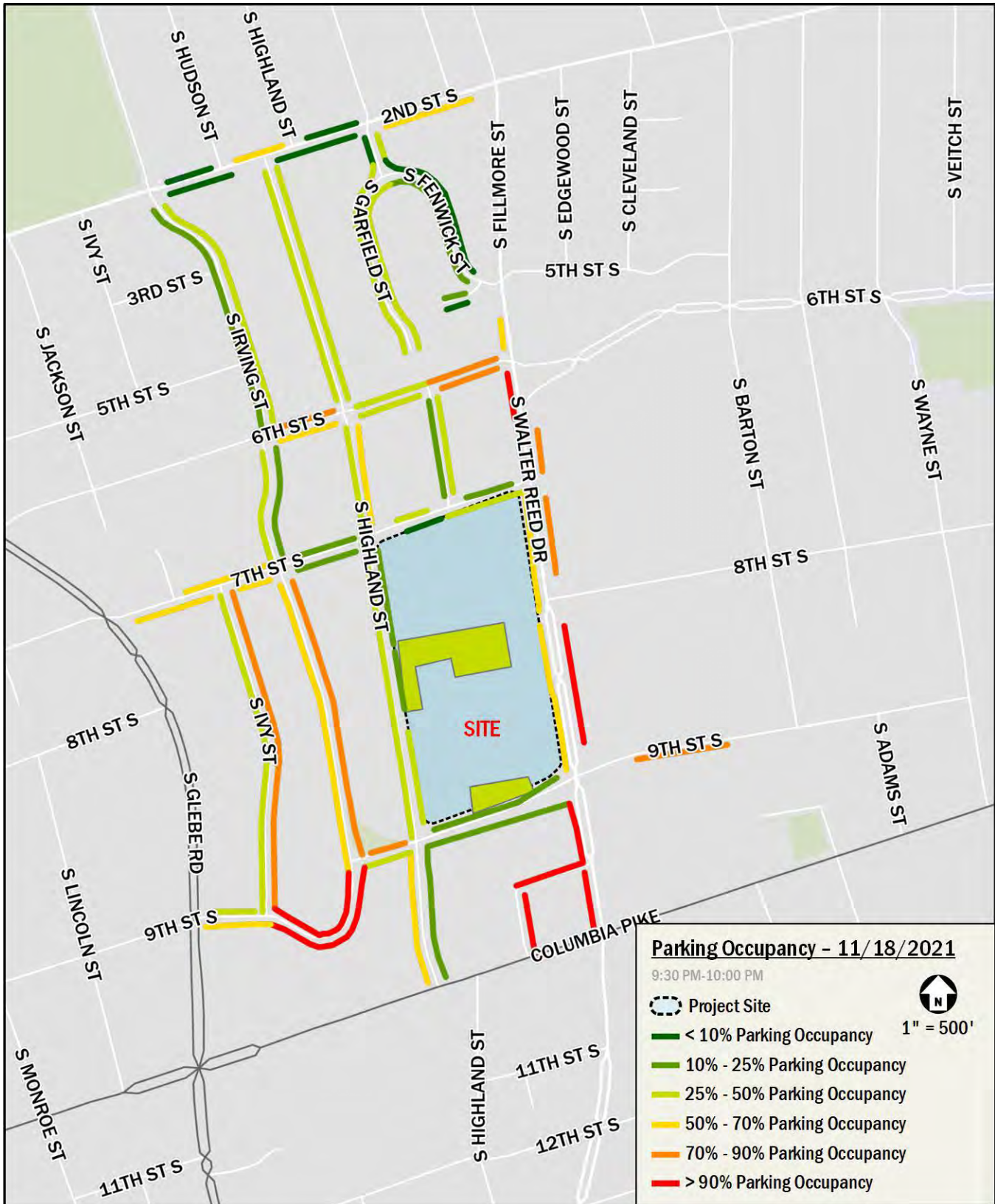














## H. Trip Generation Demand Assumptions

Metrics	Montessori ES					Community HS (9 & 10) - PUDO					Community HS (11 & 12 & Adult) - Park					Community HS (11 & 12 & Adult) - PUDO					Career Center (9 & 10) - PUDO					Career Center (11 & 12) - Park					Career Center (11 & 12) - PUDO					
<b>School Profile</b>	Arlington, VA					Arlington, VA					Arlington, VA					Arlington, VA					Arlington, VA					Arlington, VA					Arlington, VA					
<b>School Type</b>	Public School Elementary					Public School High					Public School High					Public School High					Public School High					Public School High					Public School High					
<b>Student Population</b>	488					8					170					170					259					260					260					
<b>Total</b>	488					8					170					170					259					260					260					
<b>4% Absenteeism</b>	468					8					163					163					249					250					250					
<b>Student Transportation Demand</b>	REF 11					REF 7					REF 7					REF 7					REF 7					REF 7										
<b>Before Care Start Time</b>	9:00 AM					8:00 AM					8:00 AM					8:00 AM					8:00 AM					8:00 AM					8:00 AM					
<b>School Start Time</b>	3:45 PM					3:00 PM					3:00 PM					3:00 PM					3:15 PM					3:15 PM					3:15 PM					
<b>School End Time</b>	38					35					35					35					36					36					36					
<b>After Care/Activities End Time</b>																																				
<b>AM Mode Split (based on Student Tally)</b>	% of Students		# of Students			% of Students		# of Students			% of Students		# of Students			% of Students		# of Students			% of Students		# of Students			% of Students		# of Students								
<b>Drive and Park</b>	0%		0			0%		0			13%		21			13%		21			0%		0			13%		33								
<b>Drive in Drop-Off</b>	44%		206			16%		1			39%		64			39%		64			16%		40			39%		98								
	44.0%		206			16.0%		1			52.0%		85			52.0%		85			16.0%		40			52.0%		130								
<b>Average number of students in drop-off vehicle</b>	1.2					1.2					1.2					1.2					1.2					1.2										
<b>Number of vehicles</b>	172					1					74					74					33					114					114					
	PU/DO Park					PU/DO Park					PU/DO Park					PU/DO Park					PU/DO Park					PU/DO Park										
	172 0					1 0					56 19					56 19					33 0					85 28					85 28					
<b>Arrival</b>	Time		IB		OB		REF		IB		OB		Time		IB		OB		REF		IB		OB		Time		IB		OB		REF		IB		OB	
<b>75 - 90 minutes before bell time</b>	7:30 AM		0%		0%		5		0		0		6:30 AM		1%		1%		1		0		0		6:30 AM		0%		0%		1		0		0	
<b>60 - 75 minutes before bell time</b>	7:45 AM		3%		3%		6		5		5		6:45 AM		1%		1%		2		0		0		6:45 AM		3%		3%		2		1		1	
<b>45 - 60 minutes before bell time</b>	8:00 AM		7%		7%		7		12		12		7:00 AM		2%		2%		3		0		0		7:00 AM		7%		7%		3		6		6	
<b>30 - 45 minutes before bell time</b>	8:15 AM		10%		10%		8		17		17		7:15 AM		1%		0%		4		0		0		7:15 AM		10%		10%		4		9		9	
<b>15 - 30 minutes before bell time</b>	8:30 AM		35%		35%		9		60		60		7:30 AM		10%		10%		5		0		0		7:30 AM		33%		33%		5		28		28	
<b>0 - 15 minutes before bell time</b>	8:45 AM		39%		39%		10		67		67		7:45 AM		12%		12%		6		0		0		7:45 AM		40%		40%		6		34		34	
<b>0 - 15 minutes after bell time</b>	9:00 AM		5%		5%		11		9		9		8:00 AM		2%		2%		7		0		0		8:00 AM		5%		5%		7		4		4	
<b>15 - 30 minutes after bell time</b>	9:15 AM		1%		1%		12		2		2		8:15 AM		2%		2%		8		0		0		8:15 AM		1%		1%		8		1		1	
<b>30 - 45 minutes after bell time</b>	9:30 AM		0%		0%		13		0		0		8:30 AM		1%		1%		9		0		0		8:30 AM		1%		1%		9		1		1	
			100%		100%		172		172				33%		33%		0		0						100%		100%		86		86		86			
<b>PM Mode Split (Based on Student Tally)</b>	% of Students		# of Students			% of Students		# of Students			% of Students		# of Students			% of Students		# of Students			% of Students		# of Students			% of Students		# of Students								
<b>Drive and Park</b>	0%		0			0%		0			22%		36			22%		36			0%		0			22%		55								
<b>Drive in Pick-Up</b>	39%		183			15%		1			26%		42			26%		42			15%		37			26%		65								
	39.0%		183			15.0%		1			48.0%		78			48.0%		78			15.0%		37			48.0%		120								
<b>Average number of students in pick-up vehicle</b>	1.2					1.2					1.2					1.2					1.2					1.2										
<b>Average number of students in carpool</b>	1.2					1.2					1.2					1.2					1.2					1.2										
<b>Number of vehicles</b>	152					1					71					71					31					109					109					
	PU/DO Park					PU/DO Park					PU/DO Park					PU/DO Park					PU/DO Park					PU/DO Park										
	152 0					1 0					39 33					39 33					31 0					59 50					59 50					
<b>Dismissal</b>	Time		IB		OB		REF		IB		OB		Time		IB		OB		REF		IB		OB		Time		IB		OB		REF		IB		OB	
<b>30 - 45 minutes before bell time</b>	3:00 PM		0%		0%		35		0		0		2:15 PM		0%		0%		32		0		0		2:30 PM		0%		0%		33		0		0	
<b>15 - 30 minutes before bell time</b>	3:15 PM		2%		2%		36		3		3		2:30 PM		0%		0%		33		0		0		2:45 PM		0%		0%		34		0		0	
<b>0 - 15 minutes before bell time</b>	3:30 PM		24%		24%		37		37		37		2:45 PM		0%		1%		34		0		0		3:00 PM		8%		8%		35		2		2	
<b>0 - 15 minutes after bell time</b>	3:45 PM		32%		32%		38		49		49		3:00 PM		1%		5%		35		0		0		3:15 PM		20%		20%		36		6		6	
<b>15 - 30 minutes after bell time</b>	4:00 PM		6%		6%		32		39		39		3:15 PM		2%		2%		36		1		1		3:30 PM		28%		28%		37		9		9	
<b>30 - 45 minutes after bell time</b>	4:15 PM		5%		5%		22		40		40		3:30 PM		3%		3%		37		0		0		3:45 PM		6%		6%		38		2		2	
<b>45 - 60 minutes after bell time</b>	4:30 PM		4%		4%		41		6		6		3:45 PM		1%		3%		38		0		0		4:00 PM		4%		4%		39		3		3	
<b>60 - 75 minutes after bell time</b>	4:45 PM		4%		4%		42		6		6		4:00 PM		2%		3%		39		1		1		4:15 PM		4%		4%		40		1		1	
<b>75 - 90 minutes after bell time</b>	5:00 PM		4%		4%		43		6		6		4:15 PM		7%		3%		40		0		0		4:30 PM		0%		0%		41		0		0	
<b>90 - 105 minutes after bell time</b>	5:15 PM		5%		5%		44		8		8		4:30 PM		8%		3%		41		2		2		4:45 PM		0%		0%		42		1		1	
<b>105 - 120 minutes after bell time</b>	5:30 PM		5%		5%		45		8		8		4:45 PM		6%		2%		42		2		2		5:00 PM		8%		8%		43		2		2	
<b>120 - 135 minutes after bell time</b>	5:45 PM		5%		5%		46		8		8		5:00 PM		0%		4%		43		0		0		5:15 PM		8%		8%		44		2		2	
<b>135 - 150 minutes after bell time</b>	6:00 PM		4%		4%		47		6		6		5:15 PM		2%		8%		44		0		0		5:30 PM		0%		0%		45		0		0	
<b>150 - 165 minutes after bell time</b>	6:15 PM		0%		0%		48		9		9		5:30 PM		1%		9%		45		0		0		5:45 PM		2%		2%		46		1		1	
<b>165 - 180 minutes after bell time</b>	6:30 PM		0%		0%		49		8		8		5:45 PM		3%		2%		46		0		0		6:00 PM		0%		0%		47		0		0	
<b>180 - 195 minutes after bell time</b>	6:45 PM		0%		0%		50		6		6		6:00 PM		1%		1%		47		0		0		6:15 PM		0%		0%		48		0		0	
<b>195 - 210 minutes after bell time</b>	7:00 PM		0%		0%		51		0		0		6:15 PM		2%		1%		48		1		1		6:30 PM		0%		0%		49		0		0	
<b>210 - 225 minutes after bell time</b>	7:15 PM		0%		0%		52		0		0		6:30 PM		4%		2%		49		1		1		6:45 PM		0%		0%		50		0		0	
<b>225 - 240 minutes after bell time</b>	7:30 PM		0%		0%		53		0		0		6:45 PM		8%		2%		50		3		3		7:00 PM		0%		0%		51		0		0	
<b>240 - 255 minutes after bell time</b>	7:45 PM		0%		0%		54		0		0		7:00 PM		2%		4%		51		1		1		7:15 PM		0%		0%		52		0		0	
<b>255 - 270 minutes after bell time</b>	8:00 PM		0%		0%		55		0		0		7:15 PM		1%		2%		52		0		0		7:30 PM		0%		0%		53		0		0	
			100%		100%		154		153				42%		44%		14		14						100%		100%		29		29		29			

Metrics	Montessori ES					Community HS					Career Center							
Employee Population																		
Population Breakdown																		
Teachers																		
Staff																		
Other																		
Total	93					35					179							
Employee Transportation Demand																		
School Day																		
Before Care Start Time																		
School Start time	9:00 AM 11					8:00 AM 7					8:00 AM 7							
School End time	3:45 PM 38					3:00 PM 35					3:15 PM 36							
After Care/Activities End Time																		
AM Mode Split																		
Drive and Park	79.0% 72					85.0% 30					85.0% 152							
	79.0% 72					85.0% 30					85.0% 152							
Average number of staff in carpool	1.2					1.2					1.2							
Number of vehicles	60 <--- Park					25 <--- Park					127 <--- Park							
Distribution of Arrivals/Departures																		
Arrival	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB
	7:00 AM	6%	0%	3	4	0	7:00 AM	6%	0%	3	1	0	7:00 AM	20%	0%	3	25	0
	7:15 AM	7%	0%	4	4	0	7:15 AM	7%	0%	4	2	0	7:15 AM	20%	0%	4	25	0
	7:30 AM	11%	1%	5	7	1	7:30 AM	7%	0%	5	2	0	7:30 AM	18%	0%	5	23	0
	7:45 AM	12%	0%	6	7	0	7:45 AM	7%	0%	6	2	0	7:45 AM	17%	0%	6	22	0
	8:00 AM	20%	1%	7	12	1	8:00 AM	0%	0%	7	0	0	8:00 AM	10%	0%	7	13	0
	8:15 AM	21%	0%	8	13	0	8:15 AM	0%	0%	8	0	0	8:15 AM	3%	0%	8	4	0
	8:30 AM	4%	0%	9	2	0	8:30 AM	0%	0%	9	0	0	8:30 AM	1%	0%	9	1	0
	8:45 AM	4%	0%	10	2	0	8:45 AM	0%	0%	10	0	0	8:45 AM	1%	0%	10	1	0
	9:00 AM	0%	0%	11	0	0	9:00 AM	2%	0%	11	0	0	9:00 AM	1%	0%	11	1	0
	9:15 AM	0%	0%	12	0	0	9:15 AM	3%	0%	12	1	0	9:15 AM	1%	0%	12	1	0
	9:30 AM	0%	0%	13	0	0	9:30 AM	0%	0%	13	0	0	9:30 AM	0%	0%	13	0	0
	9:45 AM	0%	0%	14	0	0	9:45 AM	0%	0%	14	0	0	9:45 AM	0%	0%	14	0	0
	10:00 AM	1%	0%	15	1	0	10:00 AM	0%	0%	15	0	0	10:00 AM	1%	0%	15	1	0
	10:15 AM	0%	0%	16	0	0	10:15 AM	0%	0%	16	0	0	10:15 AM	1%	0%	16	1	0
	10:30 AM	1%	0%	17	1	0	10:30 AM	0%	1%	17	0	0	10:30 AM	0%	0%	17	0	0
	10:45 AM	0%	0%	18	0	0	10:45 AM	0%	1%	18	0	0	10:45 AM	0%	0%	18	0	0
	11:00 AM	0%	0%	19	0	0	11:00 AM	0%	0%	19	0	0	11:00 AM	0%	0%	19	0	0
	11:15 AM	0%	0%	20	0	0	11:15 AM	0%	0%	20	0	0	11:15 AM	0%	0%	20	0	0
	11:30 AM	0%	1%	21	0	1	11:30 AM	0%	0%	21	0	0	11:30 AM	0%	0%	21	0	0
	11:45 AM	0%	0%	22	0	0	11:45 AM	0%	0%	22	0	0	11:45 AM	0%	0%	22	0	0
	12:00 PM	0%	1%	23	0	1	12:00 PM	0%	0%	23	0	0	12:00 PM	0%	0%	23	0	0
	12:15 PM	0%	0%	24	0	0	12:15 PM	0%	0%	24	0	0	12:15 PM	0%	0%	24	0	0
	12:30 PM	0%	0%	25	0	0	12:30 PM	0%	0%	25	0	0	12:30 PM	0%	1%	25	0	1
	12:45 PM	0%	0%	26	0	0	12:45 PM	0%	0%	26	0	0	12:45 PM	0%	1%	26	0	1
	1:00 PM	0%	0%	27	0	0	1:00 PM	0%	1%	27	0	0	1:00 PM	0%	1%	27	0	1
	1:15 PM	0%	0%	28	0	0	1:15 PM	0%	1%	28	0	0	1:15 PM	0%	1%	28	0	1
	1:30 PM	0%	0%	29	0	0	1:30 PM	0%	0%	29	0	0	1:30 PM	0%	0%	29	0	0
	1:45 PM	0%	0%	30	0	0	1:45 PM	0%	0%	30	0	0	1:45 PM	0%	0%	30	0	0
	2:00 PM	2%	1%	31	1	1	2:00 PM	0%	0%	31	0	0	2:00 PM	1%	1%	31	1	1
	2:15 PM	2%	0%	32	1	0	2:15 PM	0%	0%	32	0	0	2:15 PM	1%	1%	32	1	1
	2:30 PM	2%	0%	33	1	0	2:30 PM	0%	0%	33	0	0	2:30 PM	0%	1%	33	0	1
	2:45 PM	3%	0%	34	2	0	2:45 PM	0%	0%	34	0	0	2:45 PM	0%	2%	34	0	3
	3:00 PM	0%	1%	35	0	1	3:00 PM	0%	8%	35	0	2	3:00 PM	0%	8%	35	0	10
	3:15 PM	0%	2%	36	0	1	3:15 PM	0%	9%	36	0	2	3:15 PM	0%	8%	36	0	10
	3:30 PM	0%	1%	37	0	1	3:30 PM	0%	3%	37	0	1	3:30 PM	0%	13%	37	0	16
	3:45 PM	0%	0%	38	0	0	3:45 PM	0%	3%	38	0	1	3:45 PM	0%	14%	38	0	18
	4:00 PM	0%	15%	39	0	9	4:00 PM	0%	5%	39	0	1	4:00 PM	0%	10%	39	0	13
	4:15 PM	0%	21%	40	0	13	4:15 PM	7%	0%	40	2	0	4:15 PM	0%	7%	40	0	9
	4:30 PM	0%	13%	41	0	8	4:30 PM	13%	0%	41	3	0	4:30 PM	0%	6%	41	0	8
	4:45 PM	0%	11%	42	0	7	4:45 PM	9%	1%	42	2	0	4:45 PM	0%	9%	42	0	11
	5:00 PM	0%	6%	43	0	4	5:00 PM	5%	12%	43	1	3	5:00 PM	2%	4%	43	3	5
	5:15 PM	0%	5%	44	0	3	5:15 PM	0%	9%	44	0	2	5:15 PM	2%	3%	44	3	4
	5:30 PM	0%	5%	45	0	3	5:30 PM	0%	2%	45	0	0	5:30 PM	0%	3%	45	0	4
	5:45 PM	0%	5%	46	0	3	5:45 PM	0%	3%	46	0	1	5:45 PM	0%	3%	46	0	4
	6:00 PM	0%	5%	47	0	3	6:00 PM	0%	2%	47	0	0	6:00 PM	0%	1%	47	0	1
	6:15 PM	0%	4%	48	0	2	6:15 PM	7%	0%	48	2	0	6:15 PM	0%	1%	48	0	1
	6:30 PM	0%	1%	49	0	1	6:30 PM	13%	0%	49	3	0	6:30 PM	0%	1%	49	0	1
	6:45 PM	0%	0%	50	0	0	6:45 PM	9%	3%	50	2	1	6:45 PM	0%	0%	50	0	0
	7:00 PM	0%	0%	51	0	0	7:00 PM	3%	12%	51	1	3	7:00 PM	0%	0%	51	0	0
	7:15 PM	0%	0%	52	0	0	7:15 PM	2%	9%	52	0	2	7:15 PM	0%	0%	52	0	0
	7:30 PM	0%	0%	53	0	0	7:30 PM	0%	2%	53	0	0	7:30 PM	0%	0%	53	0	0
	7:45 PM	0%	0%	54	0	0	7:45 PM	0%	0%	54	0	0	7:45 PM	0%	0%	54	0	0
	8:00 PM	0%	0%	55	0	0	8:00 PM	0%	0%	55	0	0	8:00 PM	0%	0%	55	0	0
		96%	100%		58	64		100%	87%		24	19		100%	100%		126	125

Metrics	Montessori ES					Community HS					Career Center						
Visitor Transportation Demand																	
Visitor Population																	
Population Breakdown																	
Visitors	26					4					14						
Total	26					4					14						
School Day																	
School Start time	9:00 AM			11		8:00 AM			7		8:00 AM			7			
School End time	3:45 PM			38		3:00 PM			35		3:15 PM			36			
Visitor Mode Split																	
Drive and Park	70.0%			18		70.0%			3		70.0%			10			
	70.0%			18		70.0%			3		70.0%			10			
*Based on ACS 5-year data																	
Average number of people in car	1					1					1						
Number of vehicles	18					3					10						
Distribution of Arrivals/Departures																	
Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB
7:00 AM	0%	0%	3	0	0	7:00 AM	0%	0%	3	0	0	7:00 AM	0%	0%	3	0	0
7:15 AM	0%	0%	4	0	0	7:15 AM	4%	0%	4	0	0	7:15 AM	4%	0%	4	0	0
7:30 AM	4%	0%	5	1	0	7:30 AM	4%	0%	5	0	0	7:30 AM	4%	0%	5	0	0
7:45 AM	0%	0%	6	0	0	7:45 AM	4%	0%	6	0	0	7:45 AM	4%	0%	6	0	0
8:00 AM	0%	0%	7	0	0	8:00 AM	8%	0%	7	0	0	8:00 AM	8%	0%	7	1	0
8:15 AM	4%	0%	8	1	0	8:15 AM	0%	0%	8	0	0	8:15 AM	0%	0%	8	0	0
8:30 AM	4%	0%	9	1	0	8:30 AM	2%	3%	9	0	0	8:30 AM	2%	3%	9	0	0
8:45 AM	4%	0%	10	1	0	8:45 AM	5%	4%	10	0	0	8:45 AM	5%	4%	10	0	0
9:00 AM	8%	0%	11	1	0	9:00 AM	0%	0%	11	0	0	9:00 AM	0%	0%	11	0	0
9:15 AM	0%	0%	12	0	0	9:15 AM	4%	4%	12	0	0	9:15 AM	4%	4%	12	0	0
9:30 AM	2%	3%	13	0	1	9:30 AM	0%	4%	13	0	0	9:30 AM	0%	4%	13	0	0
9:45 AM	5%	4%	14	1	1	9:45 AM	4%	0%	14	0	0	9:45 AM	4%	0%	14	0	0
10:00 AM	0%	0%	15	0	0	10:00 AM	0%	0%	15	0	0	10:00 AM	0%	0%	15	0	0
10:15 AM	4%	4%	16	1	1	10:15 AM	4%	3%	16	0	0	10:15 AM	4%	3%	16	0	0
10:30 AM	0%	4%	17	0	1	10:30 AM	2%	4%	17	0	0	10:30 AM	2%	4%	17	0	0
10:45 AM	4%	0%	18	1	0	10:45 AM	2%	0%	18	0	0	10:45 AM	2%	0%	18	0	0
11:00 AM	0%	0%	19	0	0	11:00 AM	0%	0%	19	0	0	11:00 AM	0%	0%	19	0	0
11:15 AM	4%	3%	20	1	1	11:15 AM	5%	0%	20	0	0	11:15 AM	5%	0%	20	0	0
11:30 AM	2%	4%	21	0	1	11:30 AM	6%	3%	21	0	0	11:30 AM	6%	3%	21	1	0
11:45 AM	2%	0%	22	0	0	11:45 AM	5%	0%	22	0	0	11:45 AM	5%	0%	22	0	0
12:00 PM	0%	0%	23	0	0	12:00 PM	0%	0%	23	0	0	12:00 PM	0%	0%	23	0	0
12:15 PM	5%	0%	24	1	0	12:15 PM	6%	7%	24	0	0	12:15 PM	6%	7%	24	1	1
12:30 PM	6%	3%	25	1	1	12:30 PM	0%	3%	25	0	0	12:30 PM	0%	3%	25	0	0
12:45 PM	5%	0%	26	1	0	12:45 PM	0%	0%	26	0	0	12:45 PM	0%	0%	26	0	0
1:00 PM	0%	0%	27	0	0	1:00 PM	4%	0%	27	0	0	1:00 PM	4%	0%	27	0	0
1:15 PM	6%	7%	28	1	1	1:15 PM	4%	0%	28	0	0	1:15 PM	4%	0%	28	0	0
1:30 PM	0%	3%	29	0	1	1:30 PM	4%	4%	29	0	0	1:30 PM	4%	4%	29	0	0
1:45 PM	0%	0%	30	0	0	1:45 PM	0%	4%	30	0	0	1:45 PM	0%	4%	30	0	0
2:00 PM	4%	0%	31	1	0	2:00 PM	0%	0%	31	0	0	2:00 PM	0%	0%	31	0	0
2:15 PM	4%	0%	32	1	0	2:15 PM	6%	7%	32	0	0	2:15 PM	6%	7%	32	1	1
2:30 PM	4%	4%	33	1	1	2:30 PM	6%	0%	33	0	0	2:30 PM	6%	0%	33	1	0
2:45 PM	0%	4%	34	0	1	2:45 PM	4%	0%	34	0	0	2:45 PM	4%	0%	34	0	0
3:00 PM	0%	0%	35	0	0	3:00 PM	3%	7%	35	0	0	3:00 PM	3%	7%	35	0	1
3:15 PM	6%	7%	36	1	1	3:15 PM	0%	16%	36	0	0	3:15 PM	0%	16%	36	0	2
3:30 PM	6%	0%	37	1	0	3:30 PM	0%	10%	37	0	0	3:30 PM	0%	10%	37	0	1
3:45 PM	4%	0%	38	1	0	3:45 PM	0%	7%	38	0	0	3:45 PM	0%	7%	38	0	1
4:00 PM	3%	7%	39	1	1	4:00 PM	0%	5%	39	0	0	4:00 PM	0%	5%	39	0	0
4:15 PM	0%	16%	40	0	3	4:15 PM	0%	5%	40	0	0	4:15 PM	0%	5%	40	0	0
4:30 PM	0%	10%	41	0	2	4:30 PM	0%	0%	41	0	0	4:30 PM	0%	0%	41	0	0
4:45 PM	0%	7%	42	0	1	4:45 PM	0%	0%	42	0	0	4:45 PM	0%	0%	42	0	0
5:00 PM	0%	5%	43	0	1	5:00 PM	0%	0%	43	0	0	5:00 PM	0%	0%	43	0	0
5:15 PM	0%	5%	44	0	1	5:15 PM	0%	0%	44	0	0	5:15 PM	0%	0%	44	0	0
5:30 PM	0%	0%	45	0	0	5:30 PM	0%	0%	45	0	0	5:30 PM	0%	0%	45	0	0
5:45 PM	0%	0%	46	0	0	5:45 PM	0%	0%	46	0	0	5:45 PM	0%	0%	46	0	0
6:00 PM	0%	0%	47	0	0	6:00 PM	0%	0%	47	0	0	6:00 PM	0%	0%	47	0	0
6:15 PM	0%	0%	48	0	0	6:15 PM	0%	0%	48	0	0	6:15 PM	0%	0%	48	0	0
6:30 PM	0%	0%	49	0	0	6:30 PM	0%	0%	49	0	0	6:30 PM	0%	0%	49	0	0
6:45 PM	0%	0%	50	0	0	6:45 PM	0%	0%	50	0	0	6:45 PM	0%	0%	50	0	0
7:00 PM	0%	0%	51	0	0	7:00 PM	0%	0%	51	0	0	7:00 PM	0%	0%	51	0	0
7:15 PM	0%	0%	52	0	0	7:15 PM	0%	0%	52	0	0	7:15 PM	0%	0%	52	0	0
7:30 PM	0%	0%	53	0	0	7:30 PM	0%	0%	53	0	0	7:30 PM	0%	0%	53	0	0
7:45 PM	0%	0%	54	0	0	7:45 PM	0%	0%	54	0	0	7:45 PM	0%	0%	54	0	0
8:00 PM	0%	0%	55	0	0	8:00 PM	0%	0%	55	0	0	8:00 PM	0%	0%	55	0	0
	100%	100%				96%	100%				96%	100%					

Metrics	Elementary School - PUDO						Career Center (9 & 10) - PUDO						Career Center (11 & 12) - Park						Career Center (11 & 12) - PUDO						HS Option Seats (9 & 10) - PUDO						HS Option Seats (11 & 12) - Park						HS Option Seats (11 & 12) - PUDO																																																																																									
<b>School Profile</b>	Arlington, VA																		Arlington, VA																		Arlington, VA																		Arlington, VA																		Arlington, VA																																																					
<b>Jurisdiction</b>	Arlington, VA																		Arlington, VA																		Arlington, VA																		Arlington, VA																		Arlington, VA																																																					
<b>School Type</b>	Public School Elementary						Public School High						Public School High						Public School High						Public School High						Public School High						Public School High						Public School High																																																																																			
<b>Student Population</b>	775																		550																		700																		700																		122																		123																		123																	
<b>Total</b>	775																		550																		700																		700																		122																		123																		123																	
<b>4% Absenteeism</b>	744																		528																		672																		672																		117																		118																		118																	
<b>Student Transportation Demand</b>	REF 11																		REF 7																		REF 7																		REF 7																		REF 7																		REF 7																		REF 7																	
<b>Before Care Start Time</b>	9:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																	
<b>School Start Time</b>	9:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																		8:00 AM																	
<b>School End Time</b>	3:45 PM																		3:15 PM																		3:15 PM																		3:15 PM																		3:15 PM																		3:15 PM																		3:15 PM																	
<b>After Care/Activities End Time</b>	38																		36																		36																		36																		36																		36																		36																	
<b>AM Mode Split (based on Student Tally)</b>	% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students																																																																																															
<b>Drive and Park</b>	0%	0	0%	0	0%	0	0%	0	13%	87	13%	87	13%	87	13%	87	0%	0	13%	15	13%	15	13%	15	13%	15	13%	15	13%	15																																																																																																
<b>Drive in Drop-Off</b>	44%	327	16%	84	39%	262	52.0%	349	39%	262	52.0%	349	39%	262	52.0%	349	16%	19	39%	46	16%	19	39%	46	16%	19	39%	46	16%	19	39%	46																																																																																														
<b>Average number of students in drop-off vehicle</b>	1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2																																																																																															
<b>Number of vehicles</b>	273		70		306		306		16		54		54		16		40		13		40		13		40		13		40		13																																																																																															
	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park																																																																																														
	273	0	70	0	306	76	229	76	16	0	54	13	40	13	16	0	40	13	54	13	40	13	16	0	40	13	54	13	40	13	16	0																																																																																														
<b>Arrival</b>	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB																																																																																										
<b>75 - 90 minutes before bell time</b>	7:30 AM	0%	0%	5	0	0	6:30 AM	0%	0%	1	0	0	6:30 AM	0%	0%	1	0	0	6:30 AM	0%	0%	1	0	0	6:30 AM	0%	0%	1	0	0	6:30 AM	0%	0%	1	0	0																																																																																										
<b>60 - 75 minutes before bell time</b>	7:45 AM	3%	3%	6	8	8	6:45 AM	3%	3%	2	2	2	6:45 AM	3%	3%	2	2	2	6:45 AM	3%	3%	2	2	2	6:45 AM	3%	3%	2	2	2	6:45 AM	3%	3%	2	2	2																																																																																										
<b>45 - 60 minutes before bell time</b>	8:00 AM	7%	7%	7	19	19	7:00 AM	7%	7%	3	5	5	7:00 AM	7%	7%	3	5	5	7:00 AM	7%	7%	3	5	5	7:00 AM	7%	7%	3	5	5	7:00 AM	7%	7%	3	5	5																																																																																										
<b>30 - 45 minutes before bell time</b>	8:15 AM	10%	10%	8	27	27	7:15 AM	10%	10%	4	7	7	7:15 AM	10%	10%	4	7	7	7:15 AM	10%	10%	4	7	7	7:15 AM	10%	10%	4	7	7	7:15 AM	10%	10%	4	7	7																																																																																										
<b>15 - 30 minutes before bell time</b>	8:30 AM	35%	35%	9	95	95	7:30 AM	33%	33%	5	23	23	7:30 AM	33%	33%	5	23	23	7:30 AM	33%	33%	5	23	23	7:30 AM	33%	33%	5	23	23	7:30 AM	33%	33%	5	23	23																																																																																										
<b>0 - 15 minutes before bell time</b>	8:45 AM	39%	39%	10	106	106	7:45 AM	40%	40%	6	28	28	7:45 AM	40%	40%	6	28	28	7:45 AM	40%	40%	6	28	28	7:45 AM	40%	40%	6	28	28	7:45 AM	40%	40%	6	28	28																																																																																										
<b>0 - 15 minutes after bell time</b>	9:00 AM	5%	5%	11	14	14	8:00 AM	5%	5%	7	4	4	8:00 AM	5%	5%	7	4	4	8:00 AM	5%	5%	7	4	4	8:00 AM	5%	5%	7	4	4	8:00 AM	5%	5%	7	4	4																																																																																										
<b>15 - 30 minutes after bell time</b>	9:15 AM	1%	1%	12	3	3	8:15 AM	1%	1%	8	1	1	8:15 AM	1%	1%	8	1	1	8:15 AM	1%	1%	8	1	1	8:15 AM	1%	1%	8	1	1	8:15 AM	1%	1%	8	1	1																																																																																										
<b>30 - 45 minutes after bell time</b>	9:30 AM	0%	0%	13	0	0	8:30 AM	1%	1%	9	1	1	8:30 AM	1%	1%	9	1	1	8:30 AM	1%	1%	9	2	2	8:30 AM	1%	1%	9	2	2	8:30 AM	1%	1%	9	2	2																																																																																										
		100%	100%	272	272		100%	100%	71	71		100%	0%	0	77	0		100%	100%	229	229		100%	100%	15	15		100%	0%	12	0		100%	100%	39	39																																																																																										
<b>PM Mode Split (Based on Student Tally)</b>	% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students		% of Students		# of Students																																																																																															
<b>Drive and Park</b>	0%	0	22%	26	22%	26	22%	26	22%	26	22%	26	22%	26	22%	26	15%	18	26%	31	15%	18	26%	31	15%	18	26%	31	15%	18	26%	31	15%	18																																																																																												
<b>Drive in Pick-Up</b>	39%	302	26%	175	26%	175	26%	175	26%	175	26%	175	26%	175	26%	175	48.0%	323	48.0%	323	48.0%	323	48.0%	323	48.0%	323	48.0%	323	48.0%	323	48.0%	323	48.0%	323	48.0%	323																																																																																										
<b>Average number of students in pick-up vehicle</b>	1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2																																																																																															
<b>Average number of students in carpool</b>	1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2		1.2																																																																																															
<b>Number of vehicles</b>	252		66		293		293		15		52		52		15		28		24		28		24		28		24		28		24																																																																																															
	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park	PU/DO	Park																																																																																												
	252	0	66	0	293	134	159	134	15	0	52	24	28	24	15	0	28	24	52	24	28	24	15	0	28	24	52	24	28	24	15	0	28	24																																																																																												
<b>Dismissal</b>	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB																																																																																										
<b>30 - 45 minutes before bell time</b>	3:00 PM	0%	0%	35	0	0	2:30 PM	0%	0%	33	0	0	2:30 PM	0%	0%	33	0	0	2:30 PM	0%	0%	33	0	0	2:30 PM	0%	0%	33	0	0	2:30 PM	0%	0%	33	0	0																																																																																										
<b>15 - 30 minutes before bell time</b>	3:15 PM	2%	0%	36	5	0	2:45 PM	0%	0%	34	0	0	2:45 PM	0%	0%	34	0	0	2:45 PM	0%	0%	34	0	0	2:45 PM	0%	0%	34	0	0	2:45 PM	0%	0%	34	0	0																																																																																										
<b>0 - 15 minutes before bell time</b>	3:30 PM	24%	0%	37	60	0	3:00 PM	8%	0%	35	0	0	3:00 PM	8%	0%	35	0	0	3:00 PM	8%	0%	35	13	0	3:00 PM	8%	0%	35	1	0	3:00 PM	8%	0%	35	2	0																																																																																										
<b>0 - 15 minutes after bell time</b>	3:45 PM	32%	4%	38	81	10	3:15 PM	20%	8%	36	13	5	3:15 PM	20%	8%	36	13	5	3:15 PM	20%	8%	36	13	5	3:15 PM	20%	8%	36	13	5	3:15 PM	20%	8%	36	6	2																																																																																										
<b>15 - 30 minutes after bell time</b>	4:00 PM	6%	32%	39	15	81	3:30 PM	28%	20%	37	18	13	3:30 PM	28%	20%	37	18	13	3:30 PM	28%	20%	37	4	3	3:30 PM	28%	20%	37	4	3	3:30 PM	28%	20%	37	8	6																																																																																										
<b>30 - 45 minutes after bell time</b>	4:15 PM	5%	22%	40	13	55	3:45 PM	6%	28%	38	4	18	3:45 PM	6%	28%	38	4	18	3:45 PM	6%	28%	38	10	45	3:45 PM	6%	28%	38	1	4	3:45 PM	6%	28%	38	2	8																																																																																										
<b>45 - 60 minutes after bell time</b>	4:30 PM	4%	5%	41	10	13	4:00 PM	4%	6%	39	3	4	4:00 PM	4%	6%	39	3	4	4:00 PM	4%	6%	39	1	1	4:00 PM	4%	6%	39	1	1	4:00 PM	4%	6%	39	1	2																																																																																										
<b>60 - 75 minutes after bell time</b>	4:45 PM	4%	6%	42	10	15	4:15 PM	4%	4%	40	3	3	4:15 PM	4%	4%	40	3	3	4:15 PM	4%	4%	40	6	6	4:15 PM	4%	4%	40	1	1	4:15 PM	4%	4%	40	1	1																																																																																										
<b>75 - 90 minutes after bell time</b>	5:00 PM	4%	5%	43	10	13	4:30 PM	4%	4%	41	3	3	4:30 PM	4%	4%	41	3	3	4:30 PM	4%	4%	41	6	6	4:30 PM	4%	4%	41	1	1	4:30 PM	4%	4%	41	1	1																																																																																										
<b>90 - 105 minutes after bell time</b>	5:15 PM	5%	2%	44	13	5	4:45 PM	4%	4%	42	3	3	4:45 PM	4%	4%	42	3	3	4:45 PM	4%	4%	42	6	6	4:45 PM	4%	4%	42	1	1	4:45 PM	4%	4%	42	1	1																																																																																										
<b>105 - 120 minutes after bell time</b>	5:30 PM	5%	2%	45	13	5	5:00 PM	8%	4%	43	5	3	5:00 PM	8%	4%	43	5	3	5:00 PM	8%	4%	43	6	6	5:00 PM	8%	4%	43	1	1	5:00 PM	8%	4%	43	2	1																																																																																										
<b>120 - 135 minutes after bell time</b>	5:45 PM	5%	2%	46	13	5	5:15 PM	8%	8%	44	5	5	5:15																																																																																																																	

Metrics	Elementary School						Career Center					
Employee Population												
Population Breakdown												
Teachers												
Staff												
Other												
Total	145						239					
Employee Transportation Demand	*Adjusted based on ES student increase											
School Day												
Before Care Start Time												
School Start time	9:00 AM		11				8:00 AM		7			
School End time	3:45 PM		38				3:15 PM		36			
After Care/Activities End Time												
AM Mode Split												
Drive and Park	79.0%		115				85.0%		203			
	79.0%		115				85.0%		203			
Average number of staff in carpool	1.2						1.2					
Number of vehicles	95 <--- Park						169 <--- Park					
Distribution of Arrivals/Departures												
Arrival	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB
	7:00 AM	6%	0%	3	6	0	7:00 AM	20%	0%	3	34	0
	7:15 AM	7%	0%	4	7	0	7:15 AM	20%	0%	4	34	0
	7:30 AM	11%	1%	5	11	1	7:30 AM	18%	0%	5	30	0
	7:45 AM	12%	0%	6	11	0	7:45 AM	17%	0%	6	29	0
	8:00 AM	20%	1%	7	19	1	8:00 AM	10%	0%	7	17	0
	8:15 AM	21%	0%	8	20	0	8:15 AM	3%	0%	8	5	0
	8:30 AM	4%	0%	9	4	0	8:30 AM	1%	0%	9	2	0
	8:45 AM	4%	0%	10	4	0	8:45 AM	1%	0%	10	2	0
	9:00 AM	0%	0%	11	0	0	9:00 AM	1%	0%	11	2	0
	9:15 AM	0%	0%	12	0	0	9:15 AM	1%	0%	12	2	0
	9:30 AM	0%	0%	13	0	0	9:30 AM	0%	0%	13	0	0
	9:45 AM	0%	0%	14	0	0	9:45 AM	0%	0%	14	0	0
	10:00 AM	1%	0%	15	1	0	10:00 AM	1%	0%	15	2	0
	10:15 AM	0%	0%	16	0	0	10:15 AM	1%	0%	16	2	0
	10:30 AM	1%	0%	17	1	0	10:30 AM	0%	0%	17	0	0
	10:45 AM	0%	0%	18	0	0	10:45 AM	0%	0%	18	0	0
	11:00 AM	0%	0%	19	0	0	11:00 AM	0%	0%	19	0	0
	11:15 AM	0%	0%	20	0	0	11:15 AM	0%	0%	20	0	0
	11:30 AM	0%	1%	21	0	1	11:30 AM	0%	0%	21	0	0
	11:45 AM	0%	0%	22	0	0	11:45 AM	0%	0%	22	0	0
	12:00 PM	0%	1%	23	0	1	12:00 PM	0%	0%	23	0	0
	12:15 PM	0%	0%	24	0	0	12:15 PM	0%	0%	24	0	0
	12:30 PM	0%	0%	25	0	0	12:30 PM	0%	1%	25	0	2
	12:45 PM	0%	0%	26	0	0	12:45 PM	0%	1%	26	0	2
	1:00 PM	0%	0%	27	0	0	1:00 PM	0%	1%	27	0	2
	1:15 PM	0%	0%	28	0	0	1:15 PM	0%	1%	28	0	2
	1:30 PM	0%	0%	29	0	0	1:30 PM	0%	0%	29	0	0
	1:45 PM	0%	0%	30	0	0	1:45 PM	0%	0%	30	0	0
	2:00 PM	2%	1%	31	2	1	2:00 PM	1%	1%	31	2	2
	2:15 PM	2%	0%	32	2	0	2:15 PM	1%	1%	32	2	2
	2:30 PM	2%	0%	33	2	0	2:30 PM	0%	1%	33	0	2
	2:45 PM	3%	0%	34	3	0	2:45 PM	0%	2%	34	0	3
	3:00 PM	0%	1%	35	0	1	3:00 PM	0%	8%	35	0	14
	3:15 PM	0%	2%	36	0	2	3:15 PM	0%	8%	36	0	14
	3:30 PM	0%	1%	37	0	1	3:30 PM	0%	13%	37	0	22
	3:45 PM	0%	0%	38	0	0	3:45 PM	0%	14%	38	0	24
	4:00 PM	0%	15%	39	0	14	4:00 PM	0%	10%	39	0	17
	4:15 PM	0%	21%	40	0	20	4:15 PM	0%	7%	40	0	12
	4:30 PM	0%	13%	41	0	12	4:30 PM	0%	6%	41	0	10
	4:45 PM	0%	11%	42	0	11	4:45 PM	0%	9%	42	0	15
	5:00 PM	0%	6%	43	0	6	5:00 PM	2%	4%	43	3	7
	5:15 PM	0%	5%	44	0	5	5:15 PM	2%	3%	44	3	5
	5:30 PM	0%	5%	45	0	5	5:30 PM	0%	3%	45	0	5
	5:45 PM	0%	5%	46	0	5	5:45 PM	0%	3%	46	0	5
	6:00 PM	0%	5%	47	0	5	6:00 PM	0%	1%	47	0	2
	6:15 PM	0%	4%	48	0	4	6:15 PM	0%	1%	48	0	2
	6:30 PM	0%	1%	49	0	1	6:30 PM	0%	1%	49	0	2
	6:45 PM	0%	0%	50	0	0	6:45 PM	0%	0%	50	0	0
	7:00 PM	0%	0%	51	0	0	7:00 PM	0%	0%	51	0	0
	7:15 PM	0%	0%	52	0	0	7:15 PM	0%	0%	52	0	0
	7:30 PM	0%	0%	53	0	0	7:30 PM	0%	0%	53	0	0
	7:45 PM	0%	0%	54	0	0	7:45 PM	0%	0%	54	0	0
	8:00 PM	0%	0%	55	0	0	8:00 PM	0%	0%	55	0	0
		96%	100%		93	97		100%	100%		171	173



Metrics	Elementary School						Career Center					
Visitor Transportation Demand												
Visitor Population												
Population Breakdown												
Visitors	20						30					
Total	20						30					
School Day												
School Start time	9:00 AM			11			8:00 AM			7		
School End time	3:45 PM			38			3:15 PM			36		
Visitor Mode Split												
Drive and Park	70.0%			14			70.0%			21		
	70.0%			14			70.0%			21		
Average number of people in car	1						1					
Number of vehicles	14						21					
Distribution of Arrivals/Departures												
	Time	IB	OB	REF	IB	OB	Time	IB	OB	REF	IB	OB
	7:00 AM	0%	0%	3	0	0	7:00 AM	0%	0%	3	0	0
	7:15 AM	0%	0%	4	0	0	7:15 AM	4%	0%	4	1	0
	7:30 AM	4%	0%	5	1	0	7:30 AM	4%	0%	5	1	0
	7:45 AM	0%	0%	6	0	0	7:45 AM	4%	0%	6	1	0
	8:00 AM	0%	0%	7	0	0	8:00 AM	8%	0%	7	2	0
	8:15 AM	4%	0%	8	1	0	8:15 AM	0%	0%	8	0	0
	8:30 AM	4%	0%	9	1	0	8:30 AM	2%	3%	9	0	1
	8:45 AM	4%	0%	10	1	0	8:45 AM	5%	4%	10	1	1
	9:00 AM	8%	0%	11	1	0	9:00 AM	0%	0%	11	0	0
	9:15 AM	0%	0%	12	0	0	9:15 AM	4%	4%	12	1	1
	9:30 AM	2%	3%	13	0	0	9:30 AM	0%	4%	13	0	1
	9:45 AM	5%	4%	14	1	1	9:45 AM	4%	0%	14	1	0
	10:00 AM	0%	0%	15	0	0	10:00 AM	0%	0%	15	0	0
	10:15 AM	4%	4%	16	1	1	10:15 AM	4%	3%	16	1	1
	10:30 AM	0%	4%	17	0	1	10:30 AM	2%	4%	17	0	1
	10:45 AM	4%	0%	18	1	0	10:45 AM	2%	0%	18	0	0
	11:00 AM	0%	0%	19	0	0	11:00 AM	0%	0%	19	0	0
	11:15 AM	4%	3%	20	1	0	11:15 AM	5%	0%	20	1	0
	11:30 AM	2%	4%	21	0	1	11:30 AM	6%	3%	21	1	1
	11:45 AM	2%	0%	22	0	0	11:45 AM	5%	0%	22	1	0
	12:00 PM	0%	0%	23	0	0	12:00 PM	0%	0%	23	0	0
	12:15 PM	5%	0%	24	1	0	12:15 PM	6%	7%	24	1	1
	12:30 PM	6%	3%	25	1	0	12:30 PM	0%	3%	25	0	1
	12:45 PM	5%	0%	26	1	0	12:45 PM	0%	0%	26	0	0
	1:00 PM	0%	0%	27	0	0	1:00 PM	4%	0%	27	1	0
	1:15 PM	6%	7%	28	1	1	1:15 PM	4%	0%	28	1	0
	1:30 PM	0%	3%	29	0	0	1:30 PM	4%	4%	29	1	1
	1:45 PM	0%	0%	30	0	0	1:45 PM	0%	4%	30	0	1
	2:00 PM	4%	0%	31	1	0	2:00 PM	0%	0%	31	0	0
	2:15 PM	4%	0%	32	1	0	2:15 PM	6%	7%	32	1	1
	2:30 PM	4%	4%	33	1	1	2:30 PM	6%	0%	33	1	0
	2:45 PM	0%	4%	34	0	1	2:45 PM	4%	0%	34	1	0
	3:00 PM	0%	0%	35	0	0	3:00 PM	3%	7%	35	1	1
	3:15 PM	6%	7%	36	1	1	3:15 PM	0%	16%	36	0	3
	3:30 PM	6%	0%	37	1	0	3:30 PM	0%	10%	37	0	2
	3:45 PM	4%	0%	38	1	0	3:45 PM	0%	7%	38	0	1
	4:00 PM	3%	7%	39	0	1	4:00 PM	0%	5%	39	0	1
	4:15 PM	0%	16%	40	0	2	4:15 PM	0%	5%	40	0	1
	4:30 PM	0%	10%	41	0	1	4:30 PM	0%	0%	41	0	0
	4:45 PM	0%	7%	42	0	1	4:45 PM	0%	0%	42	0	0
	5:00 PM	0%	5%	43	0	1	5:00 PM	0%	0%	43	0	0
	5:15 PM	0%	5%	44	0	1	5:15 PM	0%	0%	44	0	0
	5:30 PM	0%	0%	45	0	0	5:30 PM	0%	0%	45	0	0
	5:45 PM	0%	0%	46	0	0	5:45 PM	0%	0%	46	0	0
	6:00 PM	0%	0%	47	0	0	6:00 PM	0%	0%	47	0	0
	6:15 PM	0%	0%	48	0	0	6:15 PM	0%	0%	48	0	0
	6:30 PM	0%	0%	49	0	0	6:30 PM	0%	0%	49	0	0
	6:45 PM	0%	0%	50	0	0	6:45 PM	0%	0%	50	0	0
	7:00 PM	0%	0%	51	0	0	7:00 PM	0%	0%	51	0	0
	7:15 PM	0%	0%	52	0	0	7:15 PM	0%	0%	52	0	0
	7:30 PM	0%	0%	53	0	0	7:30 PM	0%	0%	53	0	0
	7:45 PM	0%	0%	54	0	0	7:45 PM	0%	0%	54	0	0
	8:00 PM	0%	0%	55	0	0	8:00 PM	0%	0%	55	0	0
		100%	100%					96%	100%			