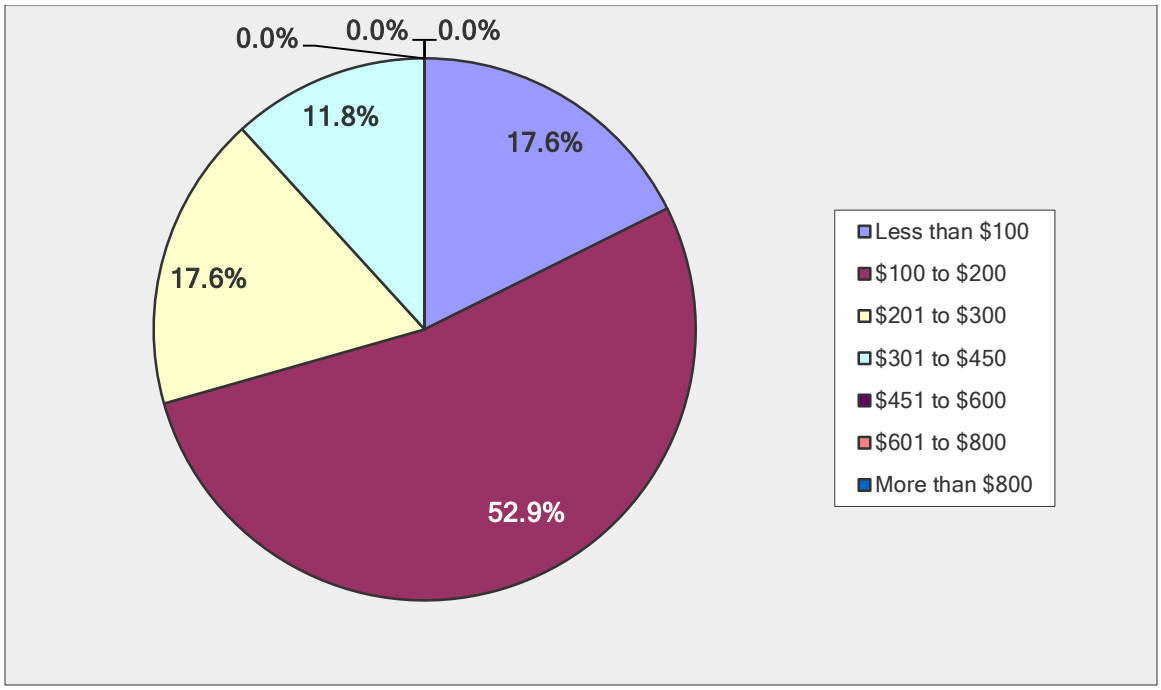


Figure 25: Monthly Cost of travel for Other Transit Users

6 SINGLE OCCUPIED VEHICLES (DRIVE ALONE)

Approximately 60% of those who took the survey drive alone to the Central Campus. Of these, about 56% indicated that fuel cost is the biggest barrier of this mode of transportation. In addition, about 47% cited costs of parking on campus as an issue. This is presented in Table 15.

Table 15: Concerns of those who Driving Alone

Options	Response Percent
Direct vehicle costs (purchase/ lease, maintenance, insurance, etc.)	22.4%
Fuel cost	55.9%
Cost of parking at place of residence	3.5%
Cost of parking on campus	47.2%
Lack of parking near campus destination	41.0%
Lack of parking at place of residence	1.4%

While on Campus, approximately 58% of those who drive alone also use their private vehicles when traveling between Central Campus locations (See Table 16).

Approximately 23% of those who drive alone indicated that their monthly travel cost is between $200 and $300 (see Table 17). As presented in Table 18, the majority (~80%) of those who drive alone park on a Howard University parking lot with about 15% using on-street parking.

Table 16: Travel within Central Campus

Options	Response Percent
Private Vehicle	58.5%
HU Shuttle Bus	20.3%
Bicycle	0.0%
Motorcycle/ Scooter	0.0%
Others	

Table 17: Monthly Cost of Travel for those who drive alone

Options	Response Percent
Less than $100	6.8%
$100 to $200	21.8%
$201 to $300	23.3%
$301 to $450	17.5%
$451 to $600	13.6%
$601 to $800	9.5
More than $800	7.6%

Table 18: Parking Options for those who drive alone

Options	Response Percent
A Howard University parking lot	79.5%
A non-Howard University parking lot or garage	1.2%
On-Street (metered)	15.0%
On-Street (non-metered, residential permit area)	2.7%
On-Street (non-metered, non-permit-area)	1.6%

When asked about if the price of gas were to rise to $10 per gallon, Table 19 presents their average rating of the preferences listed on a scale of 1 to 9 with 9 being

the highest. Drivers ranked 'moving within cycling distance of campus and other ride sharing options" the highest.

Table 19: Preferences for those who drive alone if Gas Prices Increase

Options	Rating
Moving within cycling distance of campus	8.30
Other ride sharing options	8.30
Walking	7.81
E-courses	7.38
Cycling	7.23
Moving within walking distance of campus	7.23
Motorcycle/ Scooter	6.93
Park and ride at home end with a connecting shuttle bus	7.07
Metrorail/Metrobus/DC Circulator + Cycling (personal or bikeshare)	5.00
Work from home/remote location	5.21
Metrorail/Metrobus/DC Circulator + HU Shuttle Carpooling/Vanpooling	4.38
Metrorail/Metrobus/DC Circulator	3.15

7 PRIVATE VEHICLES WITH PASSENGERS

The survey indicated that only 5.0% of those surveyed drive with passengers to the Central Campus. From Table 20, they indicated that lack of parking near the Central Campus is their biggest issue followed by the cost of parking on campus. Table 21 presents the average percentage of mode of transportation to get around central campus for those who carpool to campus. It showed that approximately 56% used their private vehicle to move around campus. Finally, Table 22 showed that their monthly travel cost is not more than $300. Majority of the survey takers who drive with passengers spend less than $100 per month on travel cost.

Table 20: Issue for those who drive with Passengers

Options	Response Percent
Finding suitable carpool/ rideshare partner/s	7.1%
Varying schedules/ workloads or other commitments	14.3%

Cost of parking on campus	26.2%
Lack of parking near campus destination	52.4%

Table 21: Travel around Central Campus for those who drive with Passengers

Options	Response Percent
Private Vehicle	58.5%
HU Shuttle Bus	20.3%
Bicycle	0.0%
Motorcycle/Scooter	0.0%
Other (please specify)	21.2%

Table 22: Monthly Cost of Travel for those who drive with Passengers

Options	Response Percent
Less than $100	66.7%
$100 to $200	0.0%
$201 to $300	33.3%
$301 to $450	0.0%
$451 to $600	0.0%
$601 to $800	0.0%
More than $800	0.0%

8 BICYCLE USERS AND OTHER MODES

The sample of responses for bicycle users and other modes were too low for meaningful descriptive statistics to be reported.

APPENDIX

A. Other reasons for the patronage of HU Shuttle

- To reach the metro to go to work
- To reach the metro or median from central campus during the semester
- To get to 16th street
- I would use them more often if they were more consistent or the tracking app worked
- Central campus events – charter day convocation honors and oaths
- Very useful during hot summer days
- To travel from Shaw/metro station to campus
- To ride from a class to another class when I am tired of walking

B. Main issue with the shuttle bus

- The Divinity School has no shuttle service during the summer, which is inconvenient for a person with a disability. Please consider offering 'some' shuttle service to the School of Divinity during the summer, and on weekends. The school is isolated from main campus, so travel can be cumbersome at times
- Overcrowding
- Not available during the summer
- Drivers choose when they go to the metro
- Over capacity
- Route does not operate in early afternoon or when classes are not in session, but the university operations are still active.
- Limited Space
- Tardiness
- The north shuttles never come
- No barriers shuttle service is excellent both drivers are awesome

2016 HOWARD UNIVERSITY PARKING AND TRAVEL DEMAND CONDITIONS ASSESSMENT

Submitted to:

District Department of Transportation
55 M Street SE, Washington, DC 20003

Prepared by:

HOWARD UNIVERSITY
1867

Howard University Transportation Research Center
2300 Sixth Street NW, Washington, DC 20059

TABLE OF CONTENTS

1 SUMMARY

Howard University's Main Campus, which is located in Washington DC's Ward 1, has been the focus of its 2011 Campus Master Plan (HUCMP). Located within five miles of the Nation's Capitol, the historic Main campus is on a 118-acre property (see Figure 1) which forms the setting for most of the University's academic and administrative buildings and activities.

The HUCMP was submitted to the District Department of Transportation (DDOT) for approval in 2011 and has been since utilized as a strategic tool and guide for the physical development of the campus over the next ten years. The plan presented details of enhancing some of the physical conditions of the campus' infrastructure as well as the contruction of new facilities with the aim of creating new opportunities for future excellence. The plan also provided the physical framework within which the University can achieve its academic mission.

A Travel Demand Model (TDM) was presented that provided a detailed assessment of opportunities that could be used to mitigate adverse transportation impacts, primarily by enhancing multi-modal Main Campus access and mobility for the extended Howard University community.

Figure 1: Howard University Campus Map

This report presents the results of the following studies conducted by Howard University (Transportation Research Center):

- Parking studies – involved a review of existing on-street parking conditions within the DDOT approved boundaries on the campus and the surrounding community. This was achieved through parking field data collection and analysis.
- Review of Campus Travel Patterns – provides an assessment of the travel patterns of faculty/staff and students travel to, from and around the Main CampusThis was achieved through an online survey.

Summary of Results

The summary of results of the parking studies showed that, the average occupancy rate for on-street parking was 90% for streets on the Main Campus while that for the neighborhood parking, which also included metered parking, was 67%. Average occupancy by non-residents (vehicles without a displayed Zone 1 Permit) was determined to be 16% for street segments in the surrounding residential neighborhoods.

Table 1 presents the results of the survey indicating the prefered transportation modes used by faculty, staff and students to travel to the Main Campus in 2016. This was compared to the responses in 2014 and 2013. From the table, the majority of respondents drive alone. A survey was not conducted in 2015.

Table 1: Breakdown of Travel mode to Main Campus

Travel Modes	2016 (797 Respondents)	2014 (995 Respondents)	2013 (1,124 Respondents)
Private Vehicle (alone)	57.7%	59.8%	34.5%
Walking	12.4%	10.6%	21.0%
Metrorail	8.4%	7.2%	9.3%
Private Vehicle (with passenger/s)	7.9%	5.4%	3.0%
HU Shuttle Bus	4.5%	11.0%	26.3%
Other Transit Bus (Metrorail, DC Circulator, etc.)	4.4%	1.8%	3.2%
Private Vehicle (as passenger)	3.4%	3.7%	2.2%
Bike	0.3%	0.3%	0.3%
Motorcycle/ Scooter	0.0%	0.2%	0.2%

Conclusions

In 2014, the average parking occupancy rates were 87% and 60% respectively for streets on the Main Campus and adjacent residential neighborhoods. The 2016 parking analysis indicates a reduction of parking availability to faculty, staff and students by 3% for streets on the Main Campus, and 7% in the adjacent residential neighborhoods (average of 5% reduction).

2 ON-STREET PARKING SURVEY

Parking is provided by the University throughout the Main Campus and the Hospital by use of surface lots. About 40% of the nearly 2,300 parking spaces are reserved for student parking while the remaining is reserved for faculty/staff. The HU Main Campus does not affiliate with any commercial public providers to offer parking to the Howard University community.

As part of this assessment, on street parking occupancy surveys were conducted in order to determine on-street parking usage or occupancy within the Main Campus and the surrounding residential community. With the exception of a few locations, the management of on-street parking within and surrounding the Main Campus is not intended to accommodate standard commuter parking demand patterns. On street parking is typically not a viable option for students since the time restrictions create a barrier while attending classes. On the contrary, some of the spaces offer 4-hour parking restrictions, providing accommodation for students attending two or more consecutive classes.

To assess the capacity and availability of these resources for Main Campus commuters, a series of occupancy surveys of on-street parking spaces within the Main Campus were conducted during peak-demand times in Spring 2016. The parking spaces were pre-selcted by DDOT.

Figures 2, 3 and 4 respectively, provide summaries of the average weekday occupancy rates (%) for metered campus streets, for the surveys conducted at 11:00 AM, 1:00 PM, and 3:00 PM. These are the hours when parking demand tends to be at its highest.

The survey also provided an opportunity to assess any campus-based impacts on parking availability within surrounding neighborhoods. Most of the blocks in these areas are managed through the District's residential parking permit program, which provides permits to local residents and restricts parking by non-permit-holders to one or two hours (two, in the case of Howard-area neighborhoods). Most of the residential neighborhood streets provide parking to Zone 1 parking permit holders between 7:00 AM and 8:30 PM. To assess the impact of campus parking demand on these streets, occupancy surveys within the adjacent residential neighborhoods were conducted on pre-selected street segments by DDOT. These surveys distinguished overall occupancy from those by non-residents (vehicles without a displayed Zone 1 Permit).

Figures 5, 6 and 7 provide summaries of the average weekday occupancy rates on residential streets adjacent to the Main Campus observed at 11:00 AM, 1:00 PM, and 3:00 PM respectively.

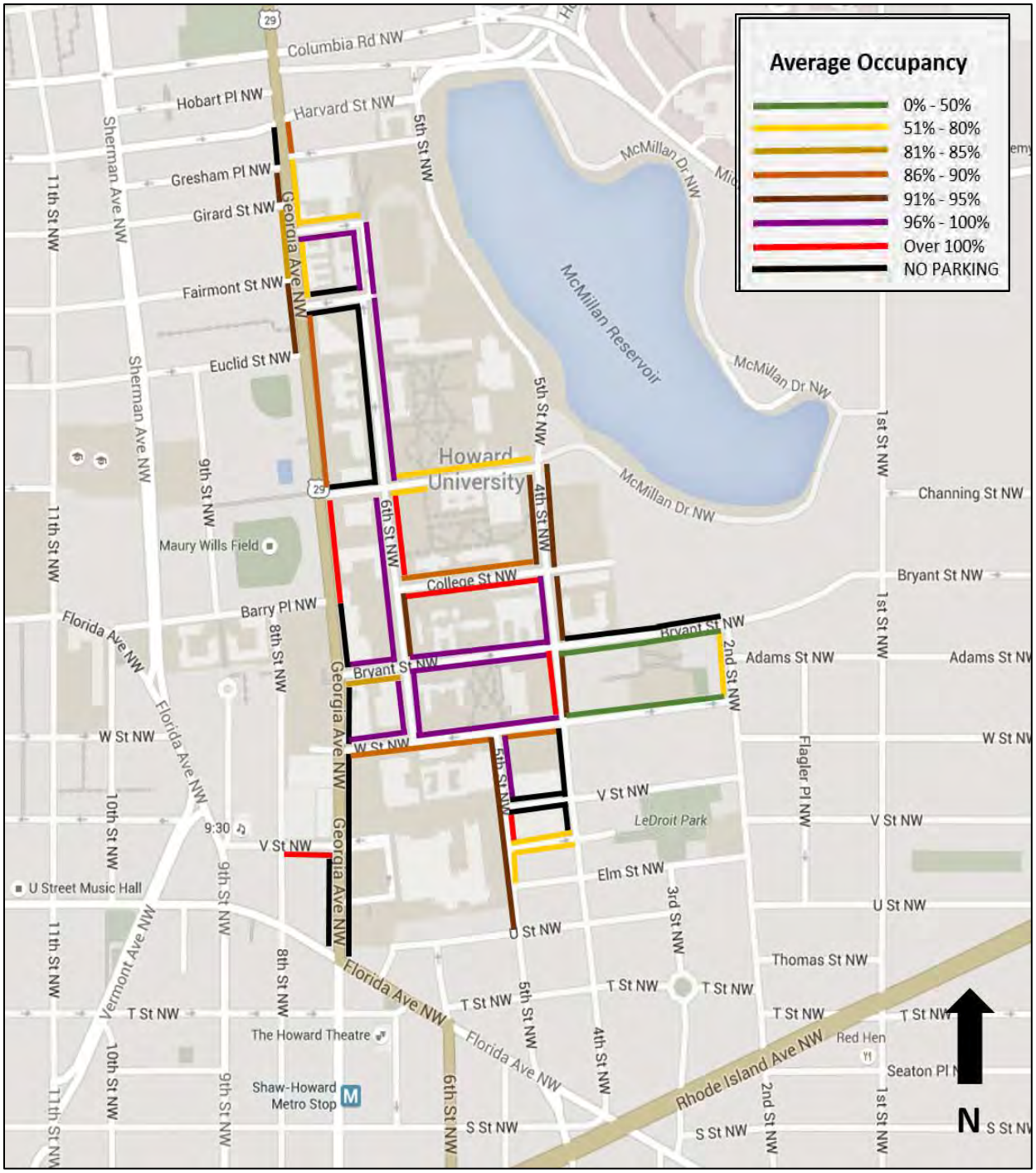


Figure 2: Average Parking Occupancy on a Typical Weekday at 11:00 AM on Campus

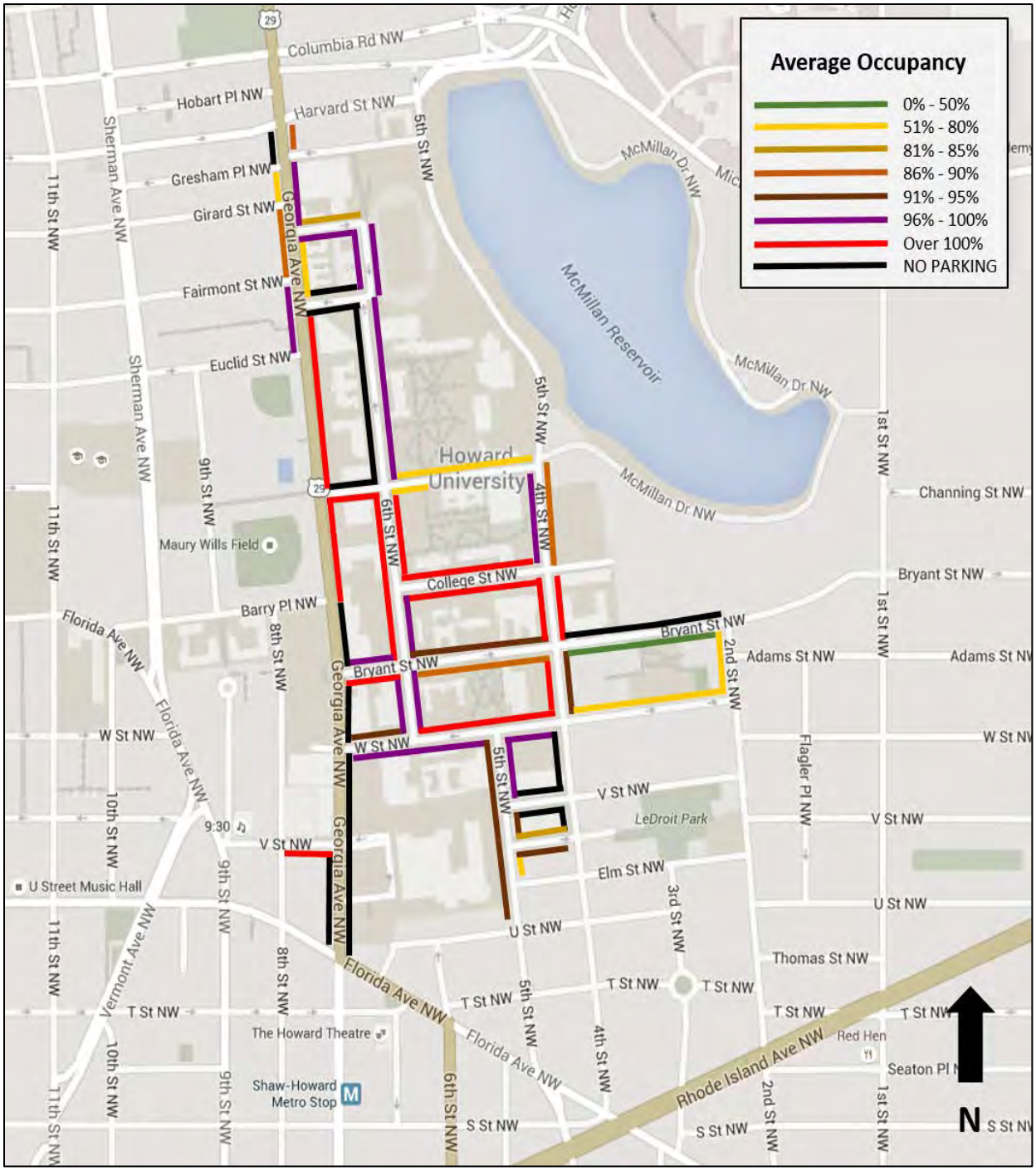


Figure 3: Average Parking Occupancy on a Typical Weekday at 1:00 PM on Campus

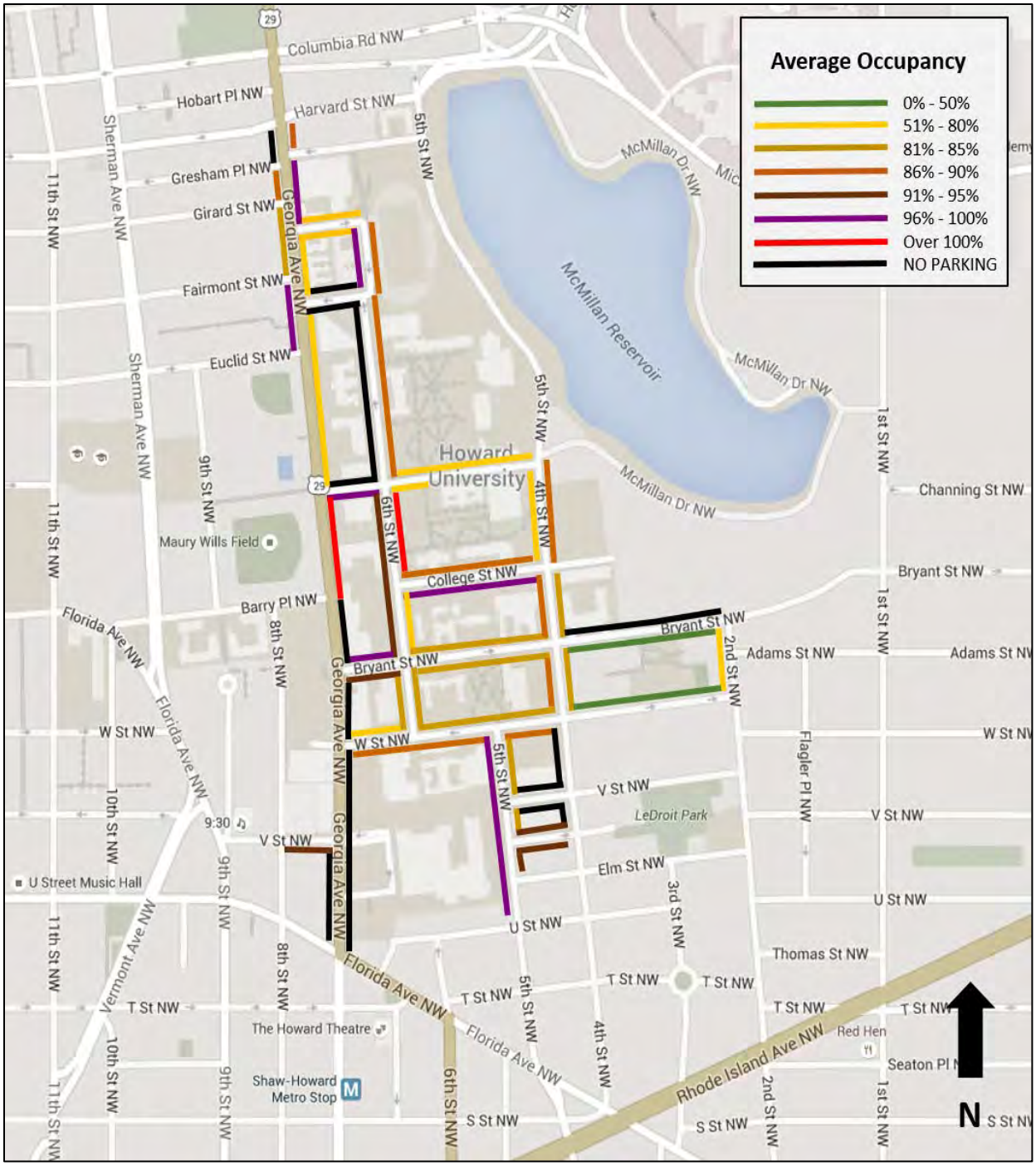


Figure 4: Average Parking Occupancy on a Typical Weekday at 3:00 PM on Campus

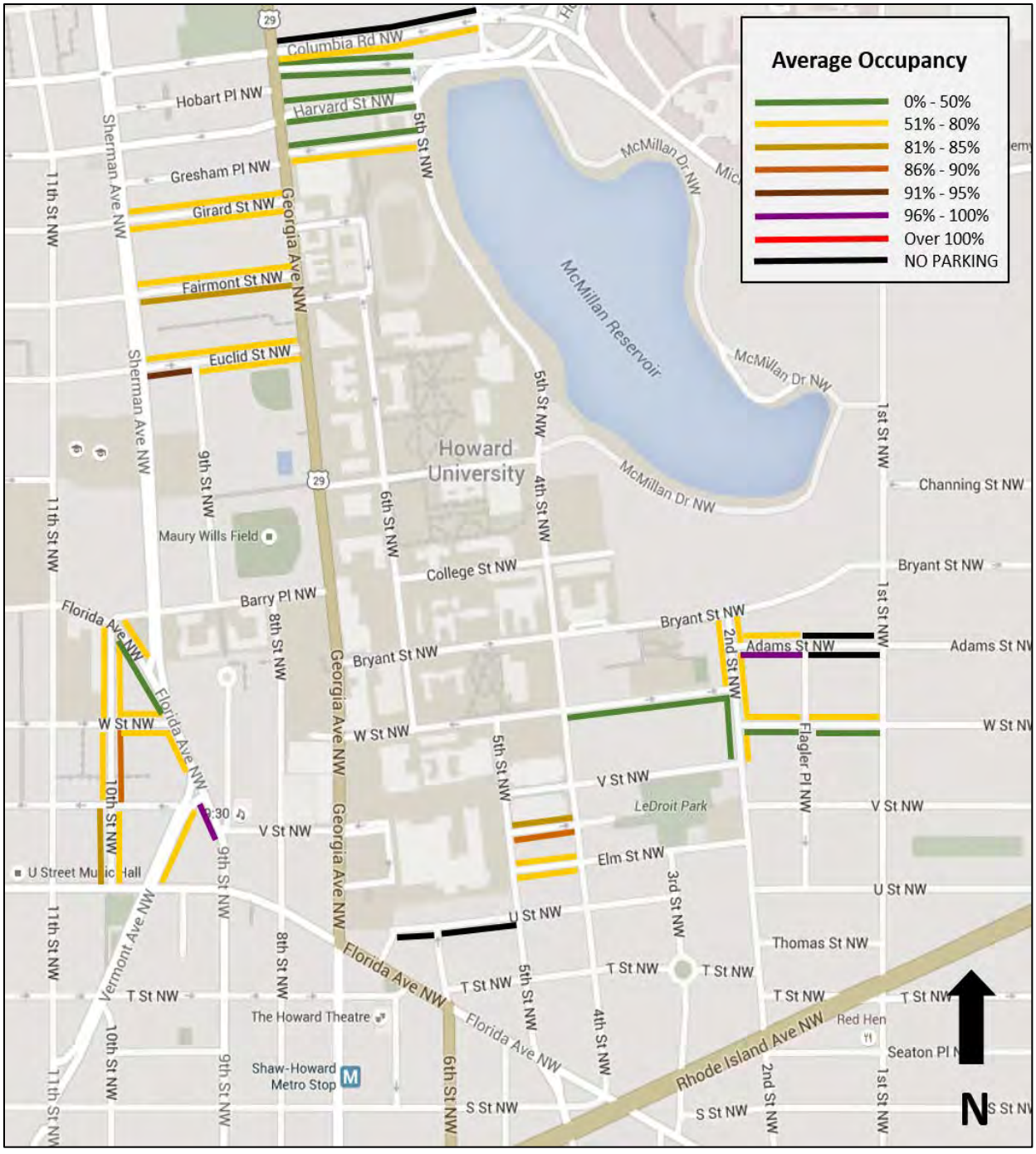


Figure 5: Average Parking Occupancy on a Typical Weekday at 11:00 AM in surrounding neighborhood

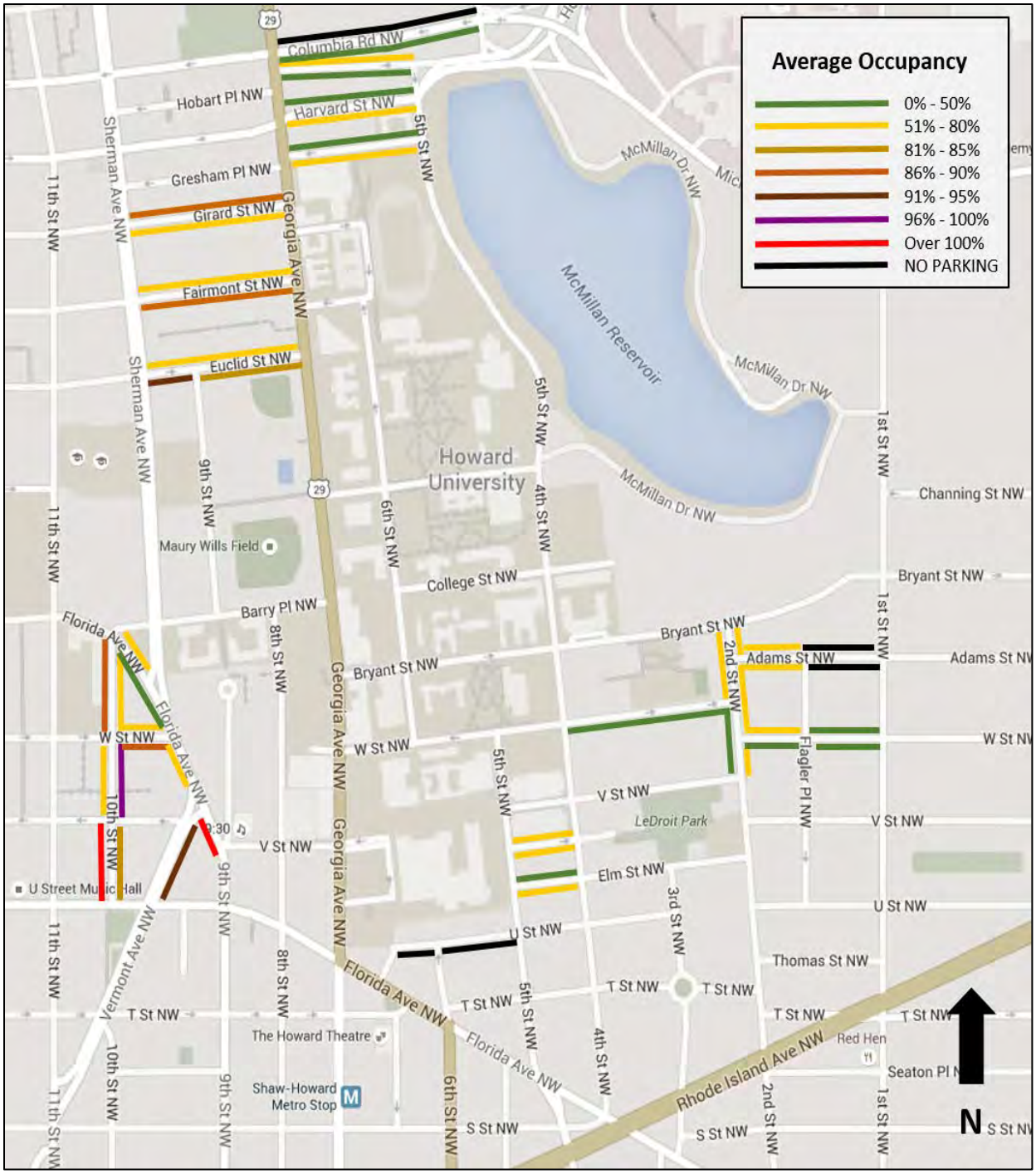


Figure 6: Average Parking Occupancy on a Typical Weekday at 1:00 PM in surrounding neighborhood

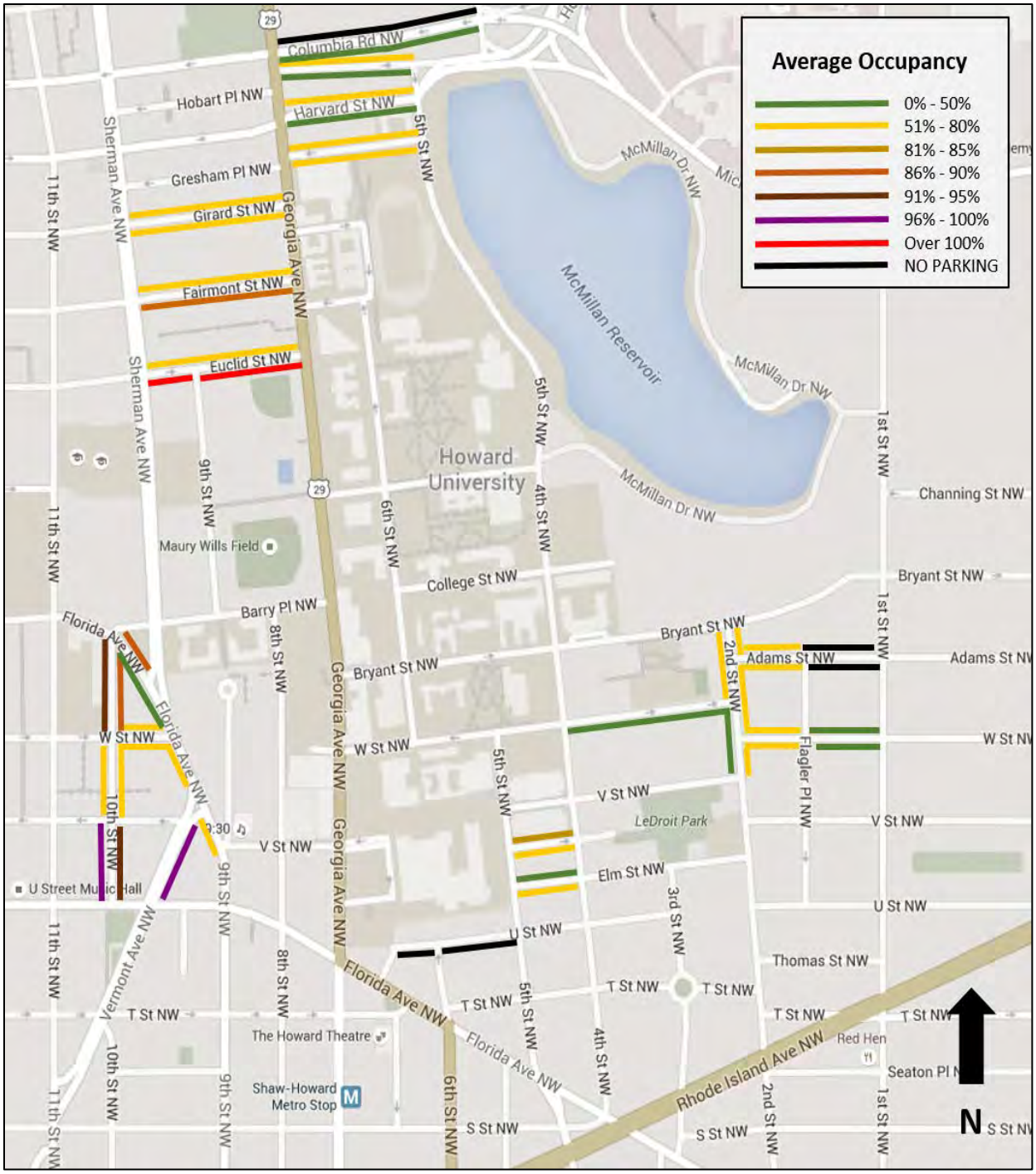


Figure 7: Average Parking Occupancy on a Typical Weekday at 3:00 PM in the surrounding neighborhood

3 SUMMARY OF SURVEY RESULTS

An online survey was conducted for the purpose of assessing the current mode choices and travel patterns of faculty, students, and staff members on the Main Campus. This survey included questions designed to gain a comprehensive understanding of the current modal choices, together with the preferences and perspectives underlying those choices.

3.1 Survey Respondents

A total of 797 students, faculty and staff responded to the survey. Figure 8 provides a breakdown of the number of surveys completed by members of each of these groups. From the figure, the majority of respondents were undergraduate and graduate full-time students.

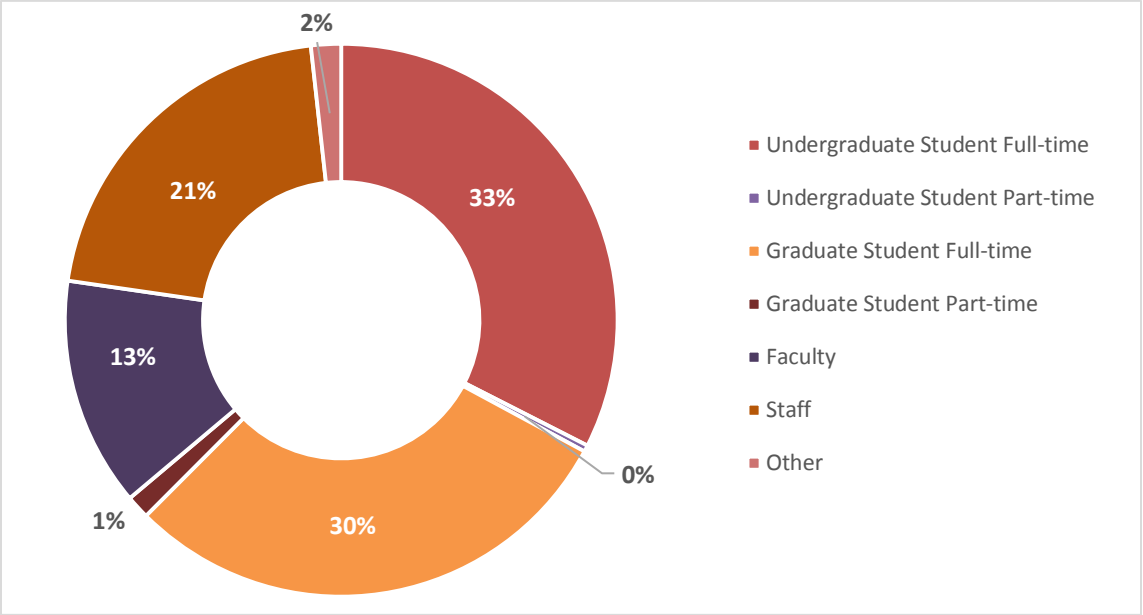


Figure 8: Breakdown of those who participated in the Survey

The following provides a summary of the responses to the questions posed to the members of the Howard University Community.

3.2 General: Number of Trips to Main Campus

The respondents were asked to provide the approximate number of trips they take to the Main Campus in a typical week. A trip is defined as transportation from home or any other origin to the Main Campus, including the travel from an on-campus dormitory to another on-campus building. This trip excludes trips made once the person has arrived on campus. The summary of the results is presented in Figure 9. From the results, approximately 47% of the respondents travel to campus more than 5 times a week. Further, only 14% of the respondents travel to campus 3 or less times a week.

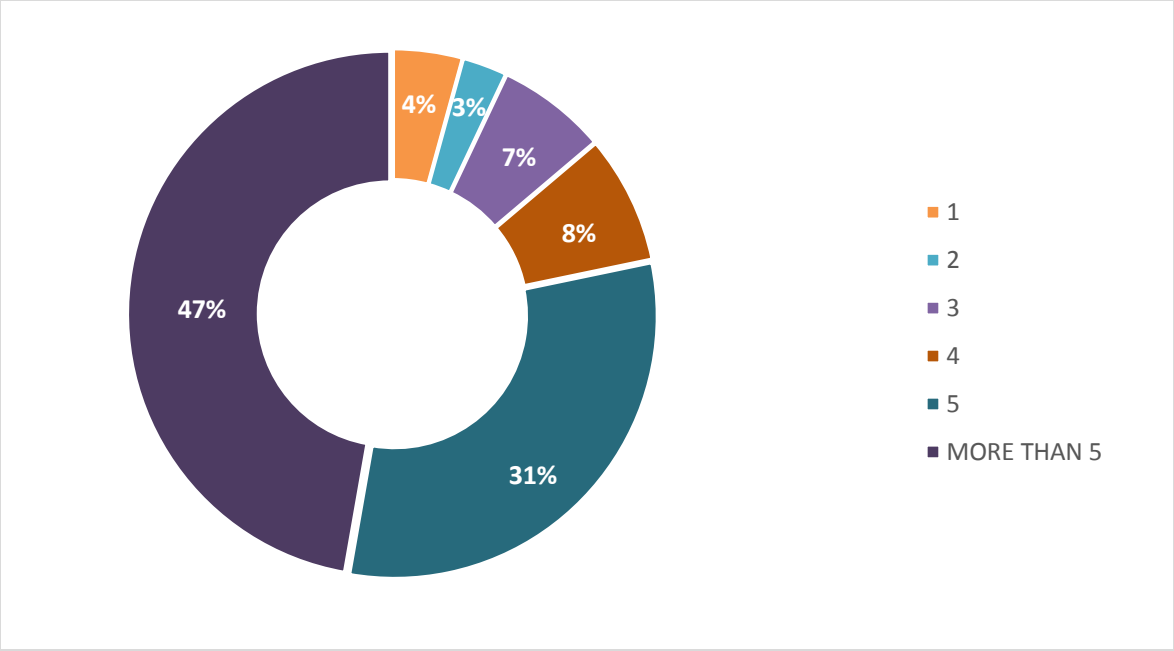


Figure 9: Number of Trips Made to the Main Campus per Week

3.3 Mode of Travel to Main Campus

The summary of the responses obtained for mode of travel to the Main Campus are summarized in Figure 10. From the results, approximately 58% of the Howard University community travels to Campus alone in their private vehicles while 5% use the HU Shuttle Bus. Approximately 13% of the respondents travel to Campus using a combination of Metrorail with the MARC, UTC shuttle and VRE.

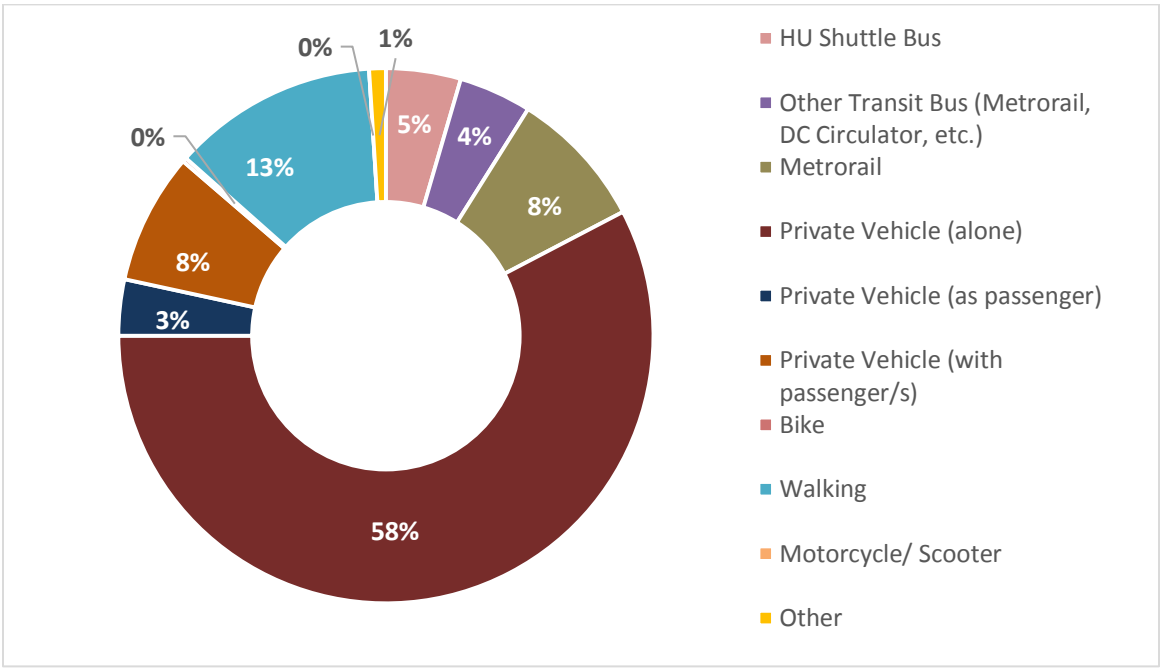


Figure 10: Modal Splits for travel to Main Campus

3.4 Travel Cost to Main Campus

A question regarding incurred monthly travel cost to the Main Campus for all modes of transportation was included in this survey. A summary of the responses is presented on Figure 11. Approximately 17% of the respondents indicated that they spend less than $100 on a monthly basis. On the other hand, 39% of the respondents spend more than $300 per month traveling to main campus.

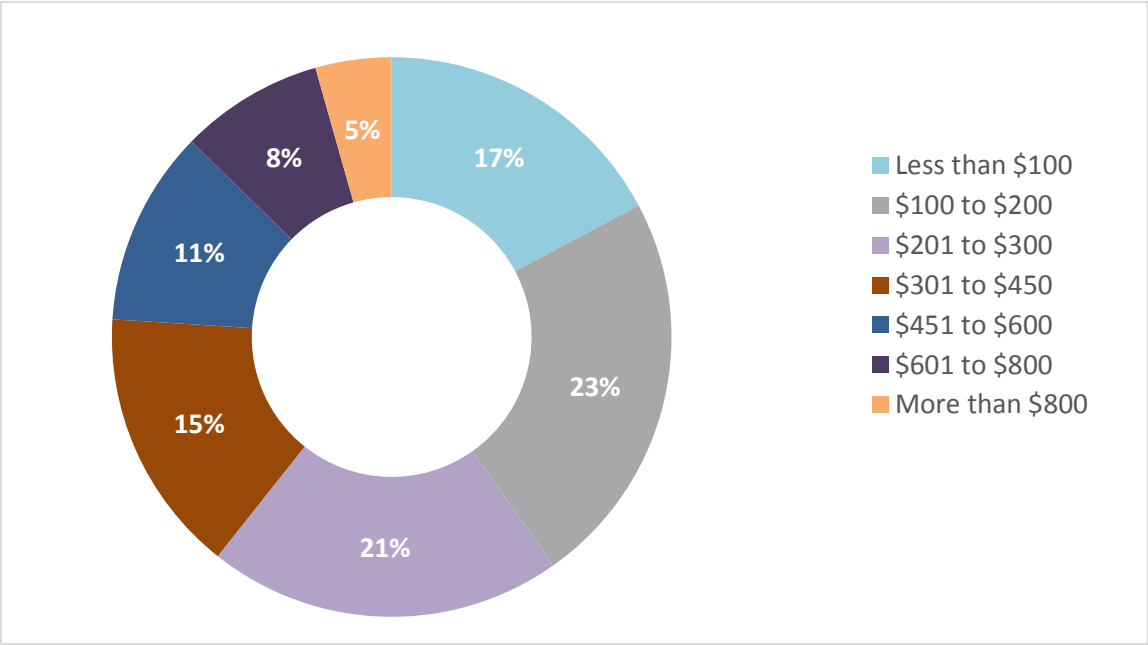


Figure 11: Monthly Cost of Travel to the Main Campus for all Modes

3.5 Issues for those who walk to Main Campus

For those who walk to campus, the survey sought to identify any problems associated with their mode of travel. The summary of the results is presented in Figure 12. From the figure, the respondents indicated the distance to Campus is the main issue (21%) followed by cost of housing within walking distance from Campus (14%).

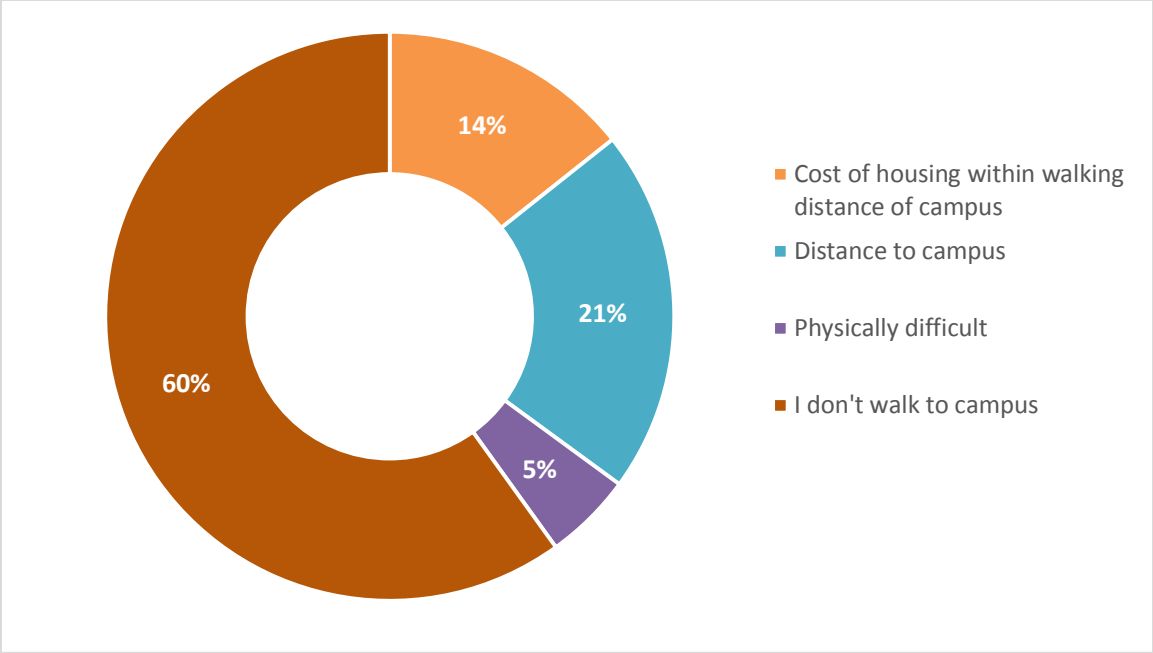


Figure 12: Problems with Walking to the Main Campus

3.6 Motorcycles/Scooters

The survey sought to identify any problems associated with those who use motorcycles or scooters as their preferred mode of travel to campus. The summary of the results are presented in Table 2 and Figure 13. Only 14.3% of the respondents use this mode of transportation. The majority of those who use this mode of transportation indicated that there the main barrier is the lack of suitable parking near or on campus.

Table 2: Barriers for Riding Motorcycles/Scooter to Main Campus

Options	Response Percentage
Lack of suitable parking near campus destination	32.8%
Vehicle cost	22.1%
Lack of suitable parking at place of residence	21.3%
Fuel cost	17.2%
Other (please specify)	6.6%

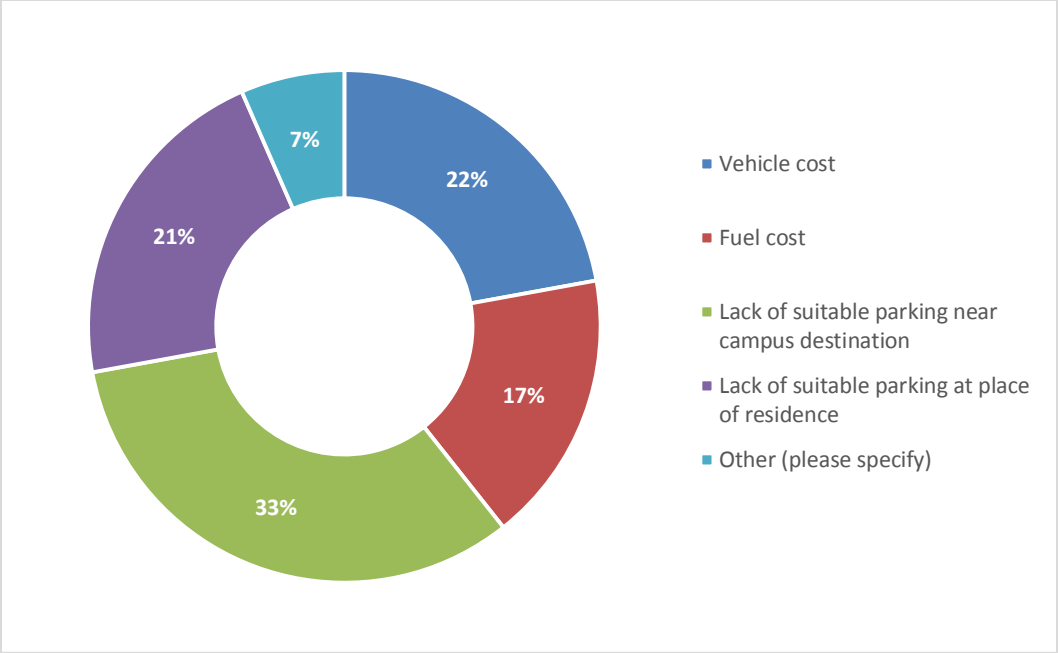


Figure 13: Barriers for Riding Motorcycles/Scooter to the Main Campus

3.7 Travel mode between Main Campus Locations

The survey also included a question to determine which travel mode was used by the respondents between Campus locations (besides walking). The results, presented in Figure 14, indicate that an equal number of respondents use private vehicles and the HU shuttle bus. Also, approximately 1% use bicycles to travel between Main Campus locations.

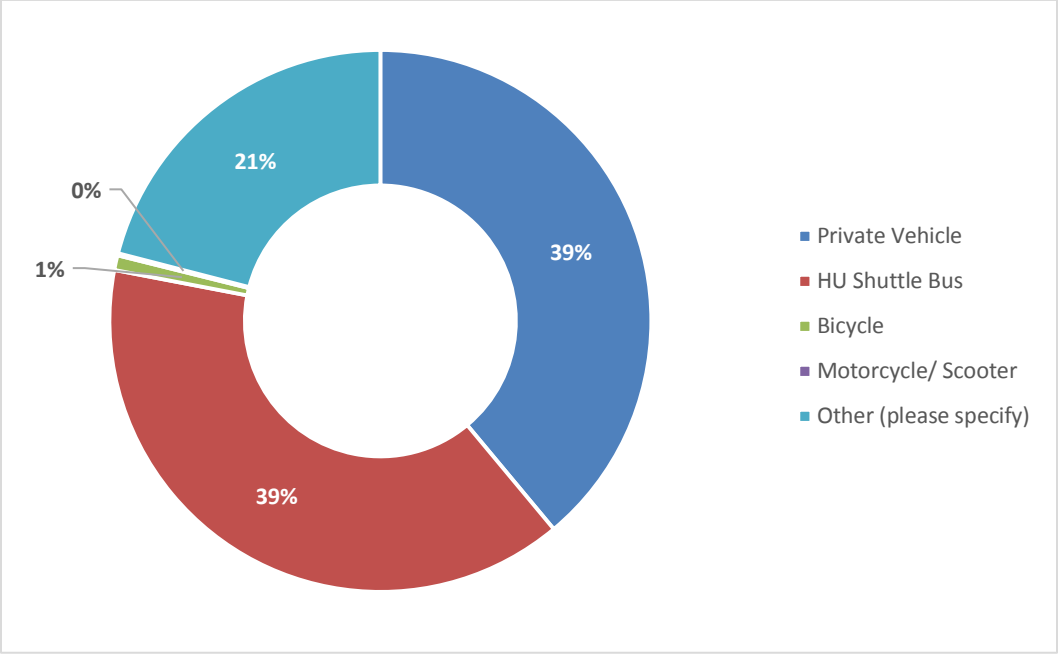


Figure 14: Travel mode within Campus locations

3.8 Howard University (HU) Shuttle Bus Users

3.8.1 Travel frequency to campus using the HU Shuttle Bus

The summary of the patronage of the Howard University Shuttle Bus service is presented in Figure 15. About 12.6% of the respondents indicated that they use the shuttle bus a few times on a weekly basis while approximately 48% of them do not use the shuttle at all.

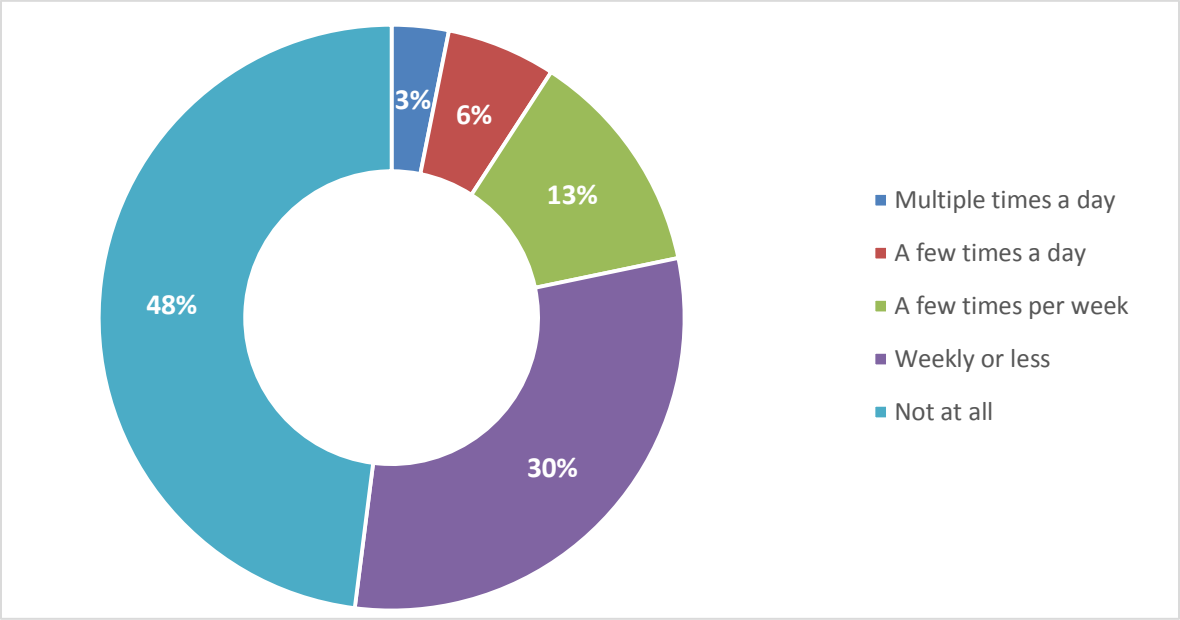


Figure 15: Patronage of HU Shuttle Bus per Week

3.8.2 Reasons for using the HU Shuttle Bus

Majority of the survey respondents indicated that they use the HU Shuttle to avoid walking/cycling in bad weather (see Table 6 and Figure 16). Other reasons for patronage of the HU shuttle bus are provided in the Appendix.

Table 6: Reasons for using the HU Shuttle

Options	Response Percent
To avoid walking/ cycling in bad weather	28.9%
To reach Main Campus destinations that are too far to walk to and offer limited or no parking nearby.	17.6%
To reach Main Campus destinations which are too far to walk to when I don't want to move my car.	17.3%
To reach Main Campus destinations that are too far to walk to when I don't have a car or bicycle on campus.	12.7%
They are many primary means of accessing Main Campus destinations	10.2%
To travel between the Main Campus and the Divinity or Law School campuses	7.8%
Other	5.6%

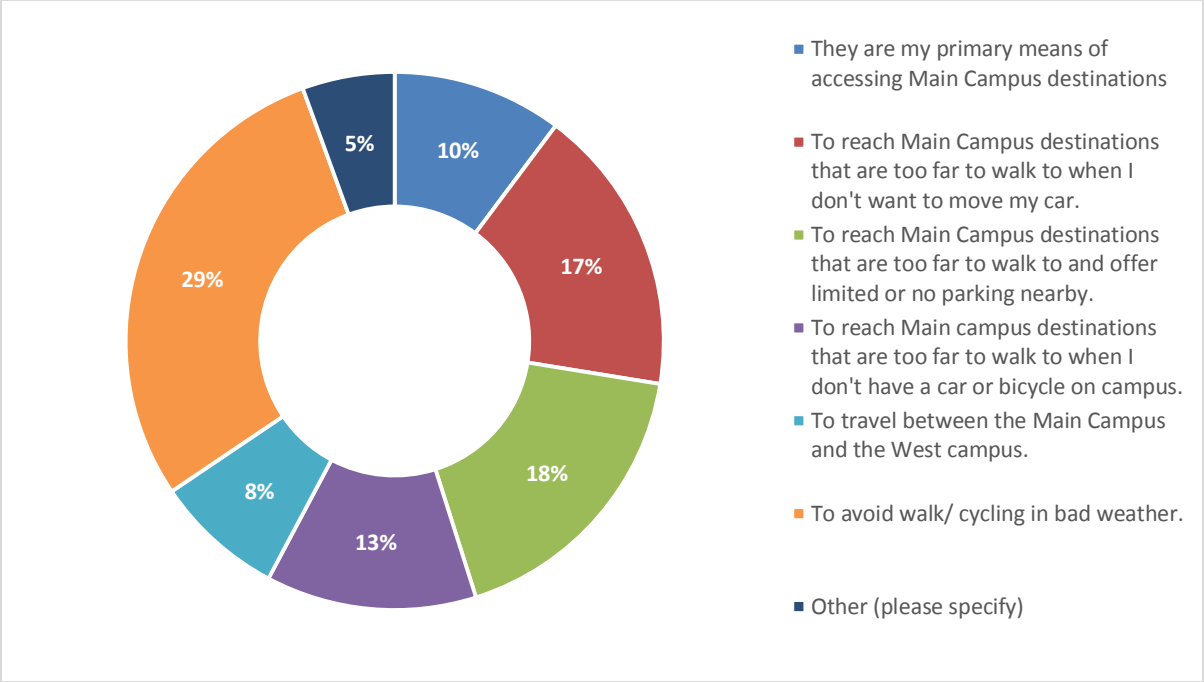


Figure 16: Reasons for using of HU Shuttle Bus

3.8.3 HU Shuttle Bus Routes preference

From the survey responses, about 56% percent of those who use the HU Shuttle Bus use the South Route shuttle. Approximately 24% of the respondents use the North Route. The summary of the results of their responses are presented in Figure 17. It was also determined from the survey that about 94% of the patrons of the HU Shuttle transfer between shuttle routes (see Figure 18).

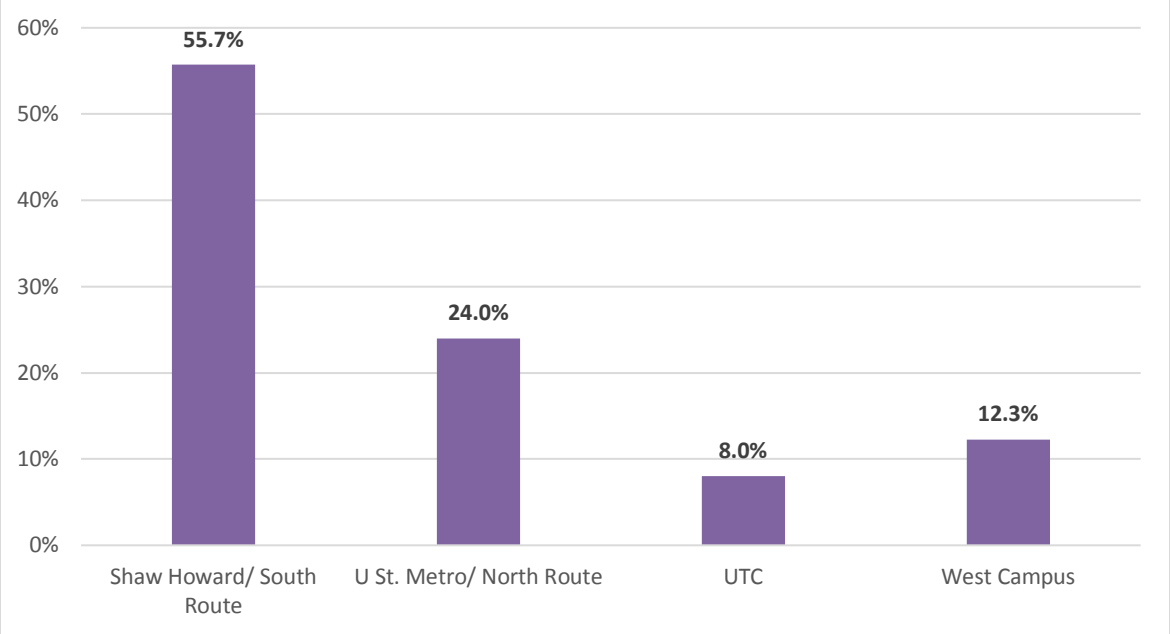


Figure 17: Breakdown of HU Shuttle Patronage by Route

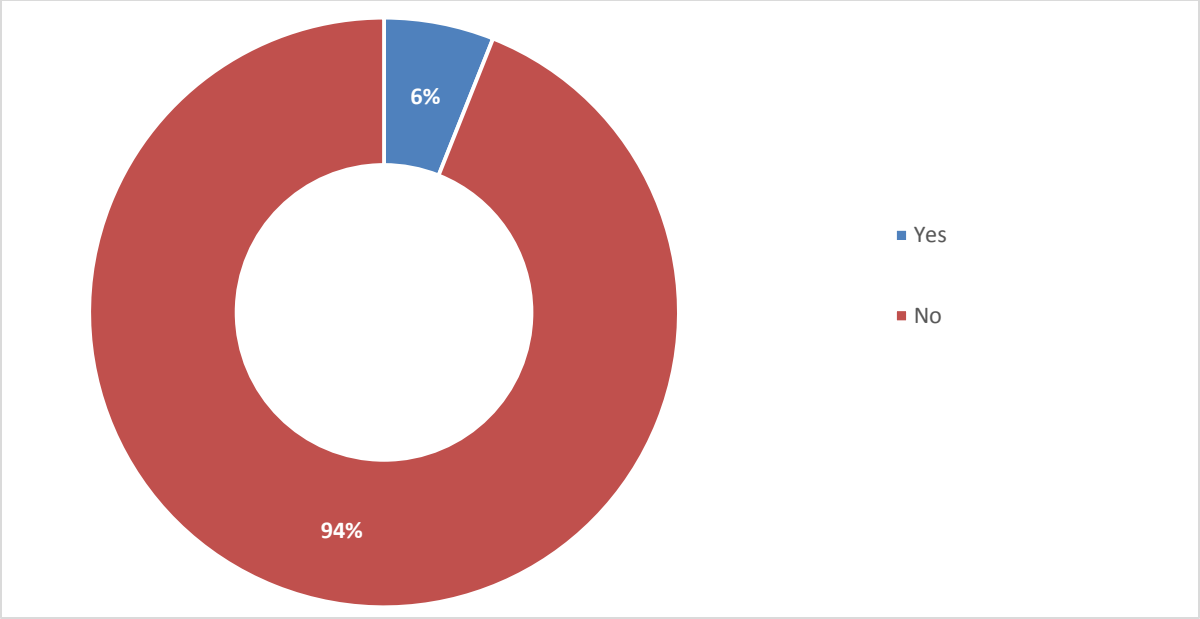


Figure 18: Percentages of those who transfer between HU Shuttle Routes

3.8.4 Reasons for not using the HU Shuttle Bus

The summary of the results regarding reasons preventing respondents from using the HU Shuttle Bus is presented in Table 8. From the results, respondents' main reason for not using the HU Shuttle Bus is the limited service it provides. Other reasons regarding patronage of the HU shuttle bus are provided in the Appendix.

Table 8: Reasons for Not Using the HU Shuttle Bus

Options	Response Percent
Limited Service (no route close to home, service hours don't fit with campus schedule etc.)	40.8%
Service Frequency	36.6%
Other*	20.7%
Physically difficult	1.9%

*The reasons specified under "Other" are included in Appendix A.

4 SINGLE OCCUPIED VEHICLES (DRIVE ALONE)

Approximately 58% of those who responded to the survey drive alone to the Main Campus. Of these, about 39% indicated that the cost of HU Parking permits is the most critical for users of this transportation mode. In addition, about 24% cited the inability of obtaining an HU parking permit. The concerns are presented in Table 9.

Table 9: Concerns of those who Drive Alone

Options	Response Percent
HU Parking permits are too expensive	38.8%
I was unable to get a HU Parking Permit	23.6%
Driving in the District is too frustrating	8.5%
Parking on local streets is too expensive	8.3%
I do not own a car	7.3%
Time limits for on-street parking conflicts with my campus schedule	4.8%
I prefer more active modes of transportation	2.0%
I prefer taking transit because I can do other things like read, listen to music, play video games, watch videos, etc.	2.0%
I prefer a more social mode of commuting (transit, carpooling, etc.)	2.0%
I prefer more environmentally-sustainable modes of transportation	1.8%
Gas is too expensive	1.0%

Approximately 49% of those who drive alone park their vehicles in a Howard University parking lot (See Table 10). Meanwhile, approximately 30% stated that they use on-street metered parking spaces in and around the Main Campus.

Table 10: Parking Options for those who drive alone

Options	Response Percent
A Howard University parking lot	48.7%
On-Street (metered)	29.5%
On-Street (non-metered, non-permit-area)	8.0%
On-Street (non-metered, residential permit area)	3.5%
A non-Howard University parking lot or garage	2.0%

The summary of the average rated preferences if gas prices increase to the range of $10/gallon for motorists who drive alone are presented in Table 11. The ratings were on a scale of 1 to 8, with 1 being the most appealing and 8 the least appealing. Drivers ranked “Working from home/ remote location or taking E-courses” as the most appealing option. On the other hand, “Moving within cycling/ walking distance from campus” was the least appealing option for the respondents.

Table 11: Preferences for those who drive alone if Gas Prices Increase

Options	Rating
Work from home/ remote location or take E-courses	1
Park and ride at home end with connecting shuttle bus	2
Metrorail/ Metrobus/DC Circulator	3
Metrorail/ Metrobus/DC Circulator + Cycling/ Carpooling/ Vanpooling	4
Motorcycle/ Scooter	5
Cycling	6
Walking	7
Moving within cycling/walking distance from campus	8

5 BICYCLE USERS AND OTHER MODES

The sample of responses for bicycle users and other modes were too low for meaningful descriptive statistics to be reported.

APPENDIX

A. Other reasons for the patronage of HU Shuttle

- To reach the metro to go to work
- If unable to use my car
- To reach the metro or median from Main campus during the semester
- To get to 16th street
- I would use them more often if they were more consistent or the tracking app worked
- If I feel unsafe walking alone on the evening
- Main campus events – charter day convocation honors and oaths
- Very useful during hot summer and rainy days
- To travel from Shaw/metro station to campus
- To ride from a class to another class when I am tired of walking

B. Main reasons for not using the HU shuttle bus

- The Divinity School has no shuttle service during the summer, which is inconvenient for a person with a disability.
- No way of tracking the bus' arrival time.
- Lack of information on the stop locations and schedule
- Overcrowding
- Not available during the summer
- Drivers choose when they go to the metro
- Over capacity
- Route does not operate in early afternoon or when classes are not in session, but the university operations are still active.
- Limited Space
- Tardiness
- The north shuttles never come

2019 HOWARD UNIVERSITY PARKING AND TRAVEL DEMAND CONDITIONS ASSESSMENT

Submitted to:

District Department of Transportation
55 M Street SE, Washington, DC 20003

Prepared by:

Howard University Transportation Research Center
2300 Sixth Street NW, Washington, DC 20059

July 2019

TABLE OF CONTENTS

1 SUMMARY

Howard University's Main Campus, which is located in Washington DC's Ward 1, has been the focus of its 2011 Campus Master Plan (HUCMP). Located within five miles of the Nation's Capitol, the historic Main campus is on a 118-acre property (see Figure 1) and is the setting for most of the University's academic and administrative buildings and activities.

The HUCMP was submitted to the District Department of Transportation (DDOT) for approval in 2011 and has been since utilized as a strategic tool and guide for the physical development of the campus together with improvements in transportation systems 10 years thereafter. The plan presented details of enhancing some of the physical conditions of the campus' infrastructure as well as the construction of new facilities with the aim of creating new opportunities for future excellence. The plan also provided the physical framework within which the University can achieve its academic mission.

A Travel Demand Model (TDM) was presented that provided a detailed assessment of opportunities that could be used to mitigate adverse transportation impacts, primarily by enhancing multi-modal Main Campus access and mobility for the extended Howard University community.

This report presents the results of the following studies conducted by the Howard University Transportation Research Center:

- Parking studies – involved an inventory of existing on-street parking facilities/ conditions within the DDOT approved boundaries on the campus and the surrounding community. This was achieved through parking field data collection and analyses.
- Review of Campus Travel Patterns – provides an assessment of the travel patterns of faculty/staff and students travel to, from and around the Main Campus. This was achieved through an online survey.

Figure 1: Howard University Campus Map

Summary of Results

The summary of results of the parking studies showed that, the average occupancy rate for on-street parking was 82% for streets on the Main Campus while that for the neighborhood parking, which also included metered parking, was 76%. The average occupancy by non-residents

vehicles (without a displayed Zone 1 Permit) was determined to be 21% for street segments in the surrounding residential neighborhoods.

Table 1 presents the results of the survey indicating the preferred transportation modes used by faculty, staff and students to travel to and from the Main Campus in 2019. From the table, the majority of respondents drive alone.

Table 1: Breakdown of Travel Mode Choices to Main Campus

Travel Modes	2019 *(610 Respondents)*
Private Vehicle (alone)	41.8%
Walking	16.2%
Metrorail	12.5%
HU Shuttle Bus	10.8%
Other Transit Bus (Metrorail, DC Circulator, etc.)	6.1%
Private Vehicle (with passenger/s)	4.9%
Private Vehicle (as passenger)	3.1%
Bike	1.2%
Motorcycle/ Scooter	0.3%

Conclusions

In 2019, the average parking occupancy rates were 82% and 76% respectively for streets on the Main Campus and adjacent residential neighborhoods. The 2019 parking analyses shows a 5% increase in parking availability for faculty, staff and students for streets on the Main Campus, and a 16% reduction for the adjacent residential neighborhoods.

2 ON-STREET PARKING SURVEY

Parking is provided by the University throughout the Main Campus and the Hospital by use of surface lots. About 40% of the nearly 2,300 parking spaces are reserved for student parking while the remaining are for faculty/staff. The HU Main Campus is not affiliated with any commercial parking providers for the Howard University community.

As part of this assessment, on street parking occupancy surveys were conducted in order to determine on-street parking usage or occupancy within the Main Campus and the surrounding residential community. With the exception of a few locations, on-street parking within and surroundings of the Main Campus is not intended to accommodate standard commuter parking demand patterns. On-street parking is not typically a viable option for students since the time restrictions potentially create problems while attending classes. On the contrary, some of the spaces offer 4-hour parking restrictions, providing accommodation for students attending two or more consecutive classes.

Parking Occupancy for Main Campus

To assess the capacity and availability of these resources for Main Campus commuters, a series of occupancy surveys of on-street parking spaces within the Main Campus were conducted during peak-demand times in spring 2019. The parking spaces were pre-selected and approved by DDOT in 2011.

Figures 2, 3 and 4 respectively provide summaries of the average weekday occupancy rates (%) for metered campus streets, for the surveys conducted at 11:00 AM, 1:00 PM, and 3:00 PM. These are the hours when parking demand tends to be at its highest.

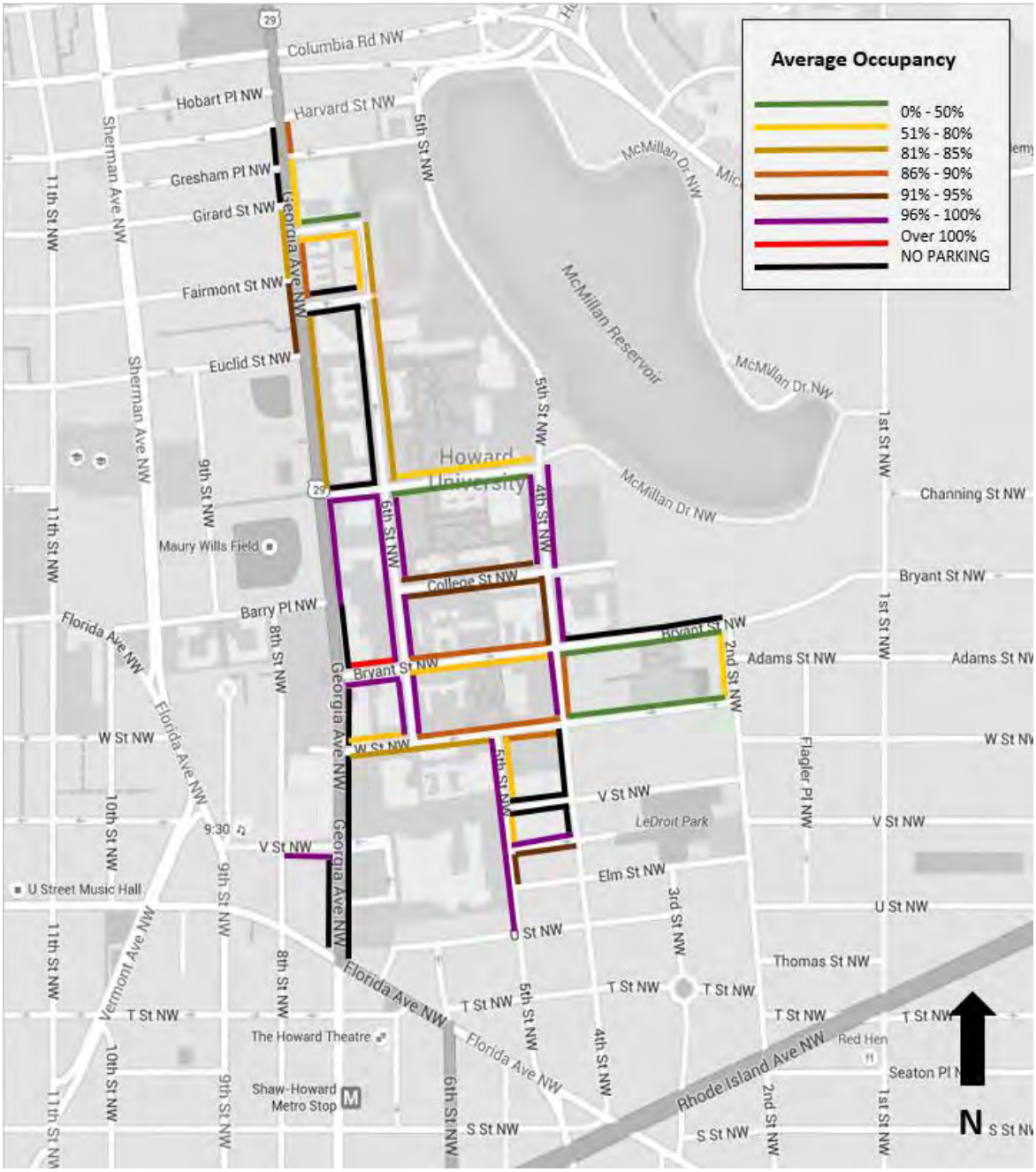


Figure 2: Average Parking Occupancy on a Typical Weekday at 11:00 AM on Campus

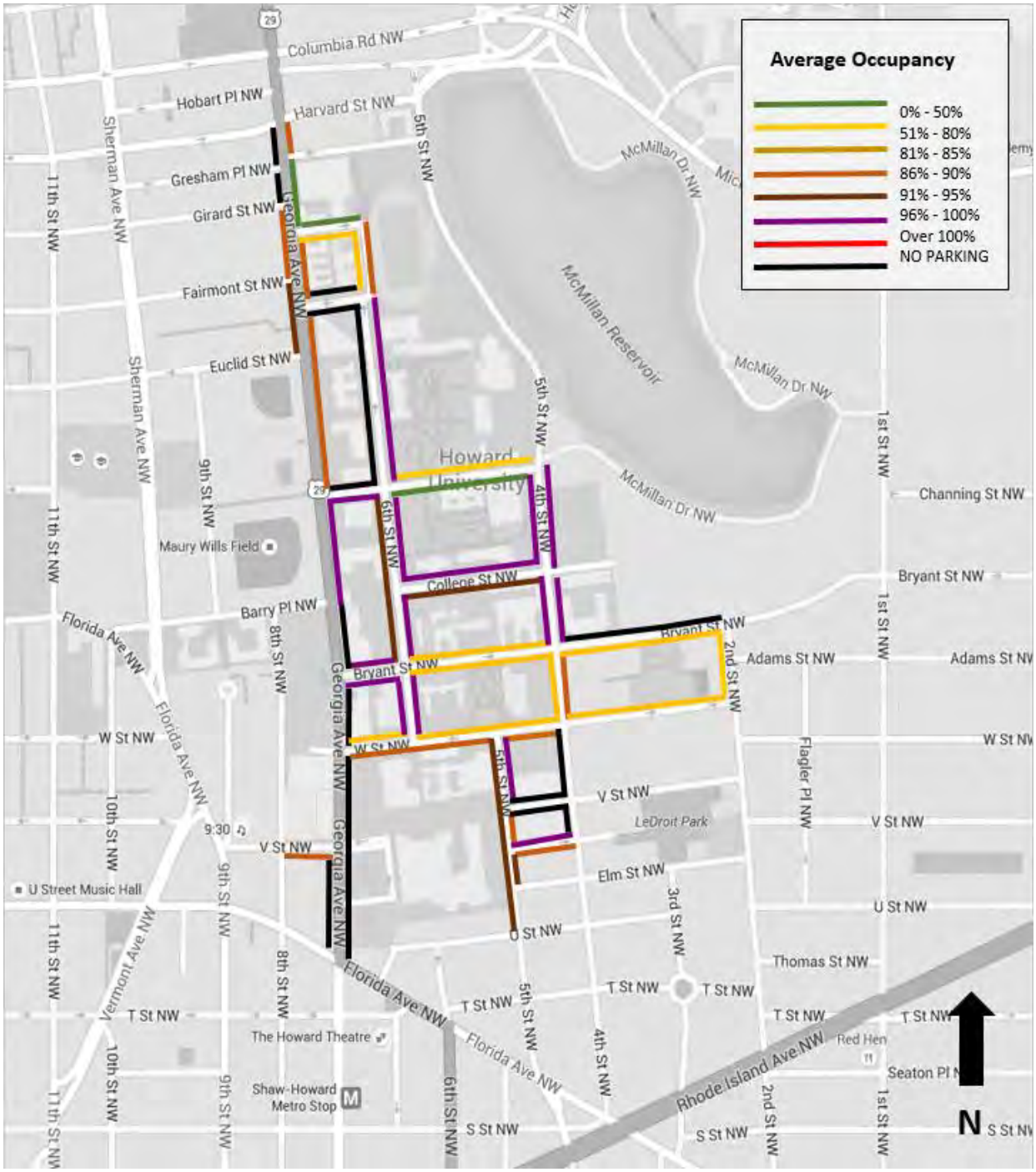


Figure 3: Average Parking Occupancy on a Typical Weekday at 1:00 PM on Campus

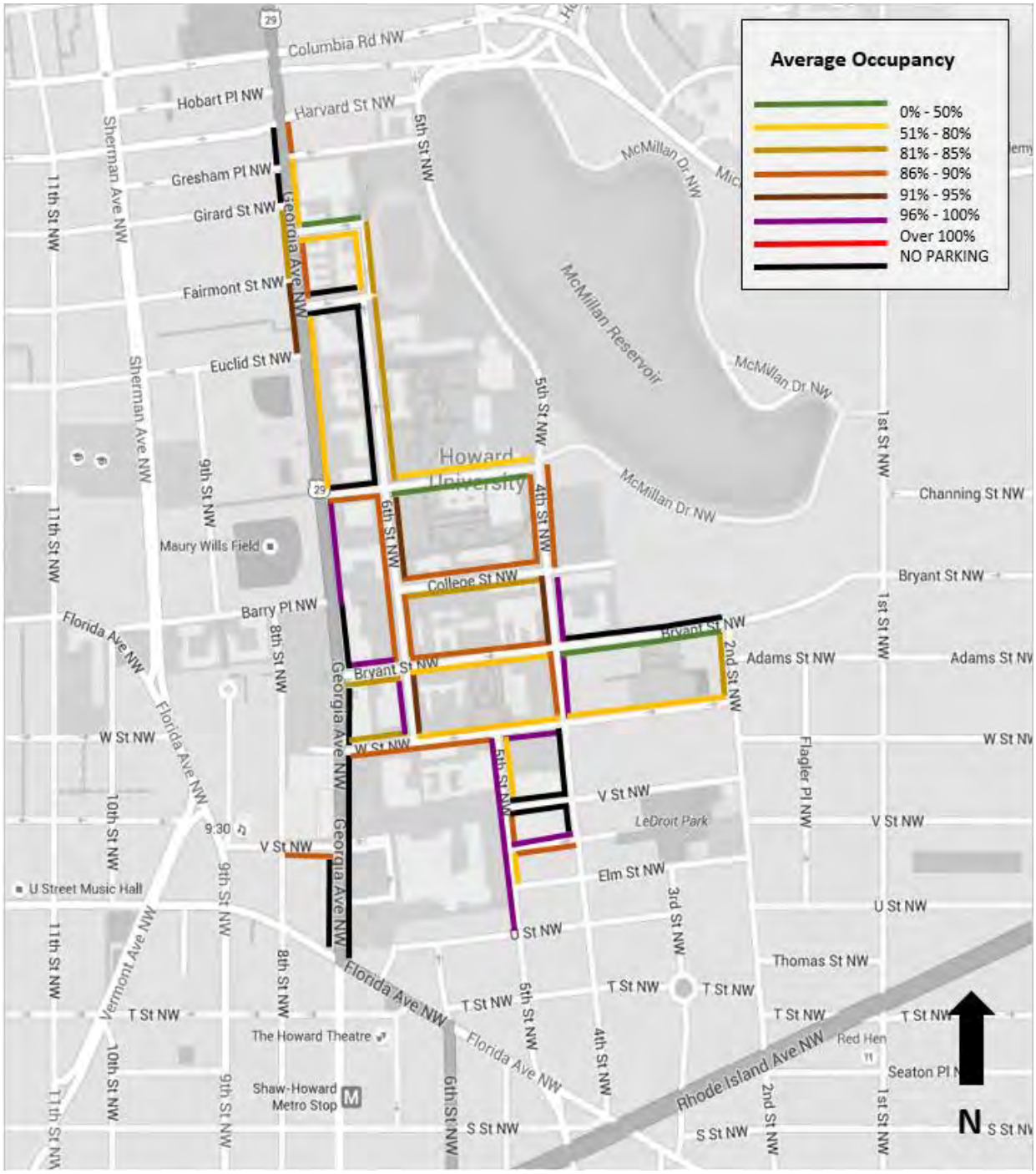


Figure 4: Average Parking Occupancy on a Typical Weekday at 3:00 PM on Campus

Parking Occupancy for Surrounding Neighborhood

The survey also provided an opportunity to assess any campus-based impacts on parking availability within surrounding neighborhoods. Most of the blocks in these areas are managed through the District's Residential Parking Permit Program (RPPP), which provides permits to local residents and restricts parking by non-permit-holders to one or two hours (two, in the case of Howard-area neighborhoods). Most of the residential neighborhood streets provide parking to Zone 1 parking permit holders between 7:00 AM and 8:30 PM. To assess the impact of campus parking demand on these streets, occupancy surveys within the adjacent residential neighborhoods were conducted on pre-selected and approved street segments by DDOT. These surveys distinguished overall occupancy from those by non-residents (vehicles without a displayed Zone 1 Permit).

Figures 5, 6 and 7 provide summaries of the average weekday occupancy rates on residential streets adjacent to the Main Campus observed at 11:00 AM, 1:00 PM, and 3:00 PM respectively.

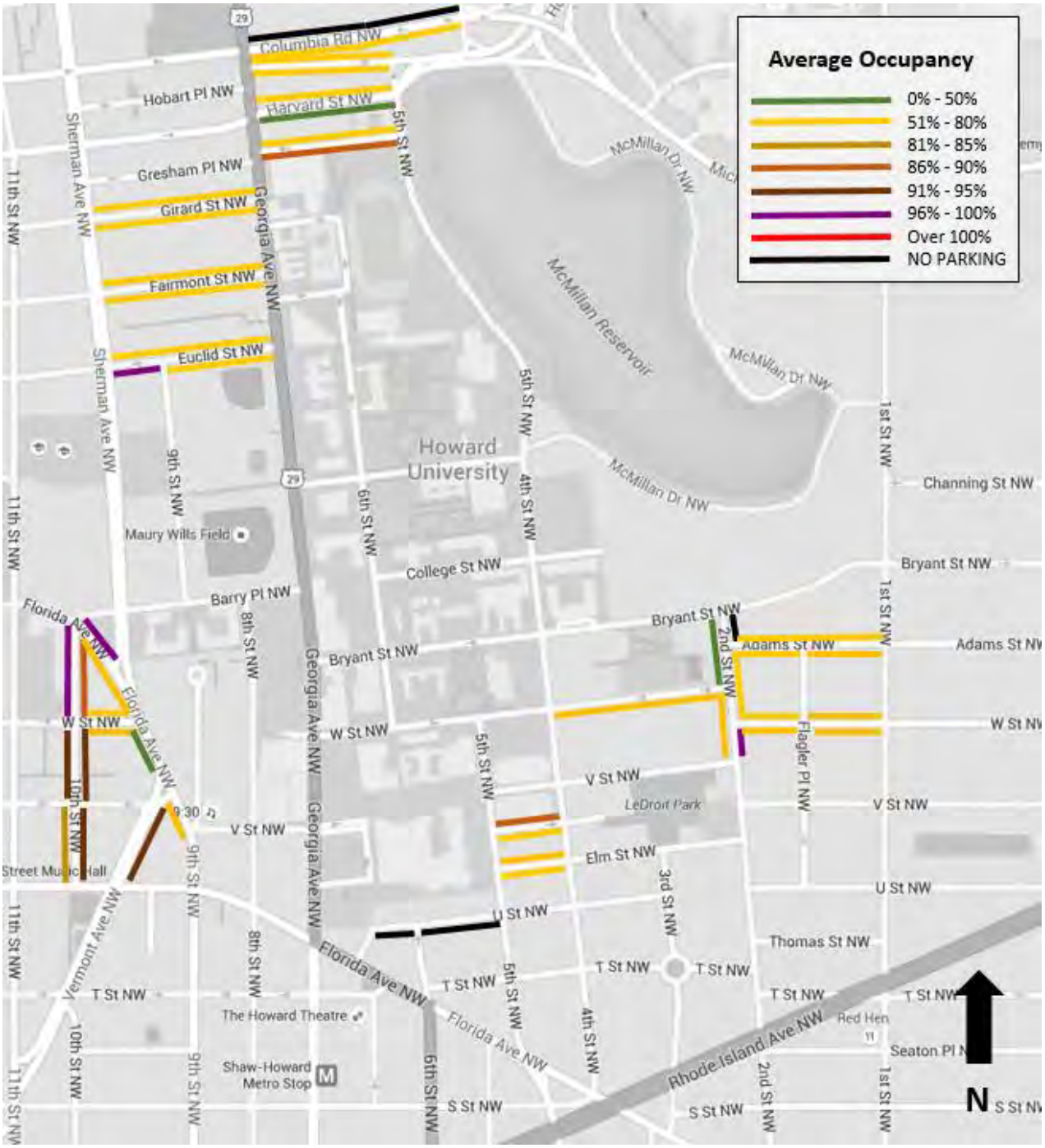


Figure 5: Average Parking Occupancy on a Typical Weekday at 11:00 AM in surrounding neighborhood

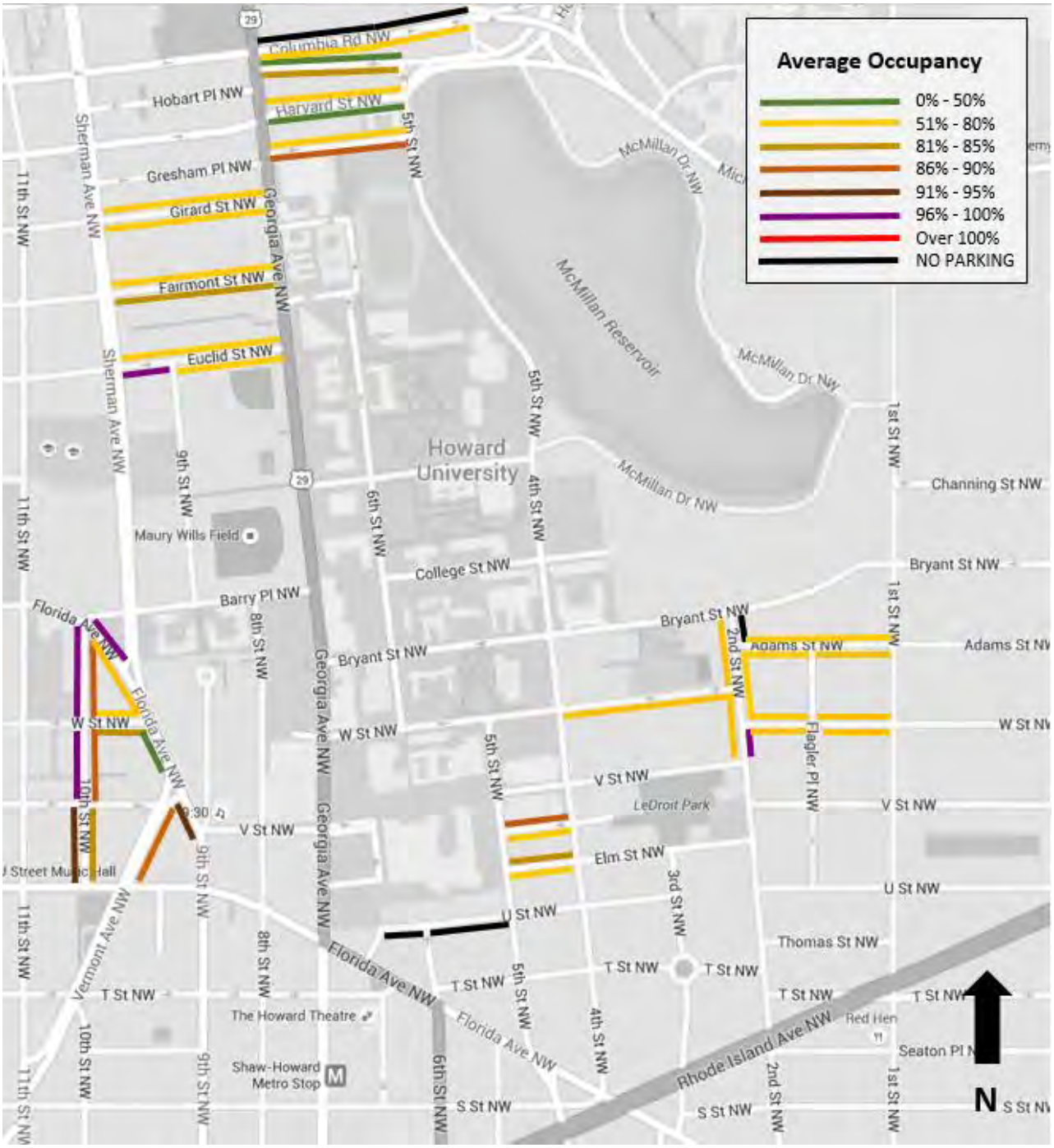


Figure 6: Average Parking Occupancy on a Typical Weekday at 1:00 PM in surrounding neighborhood

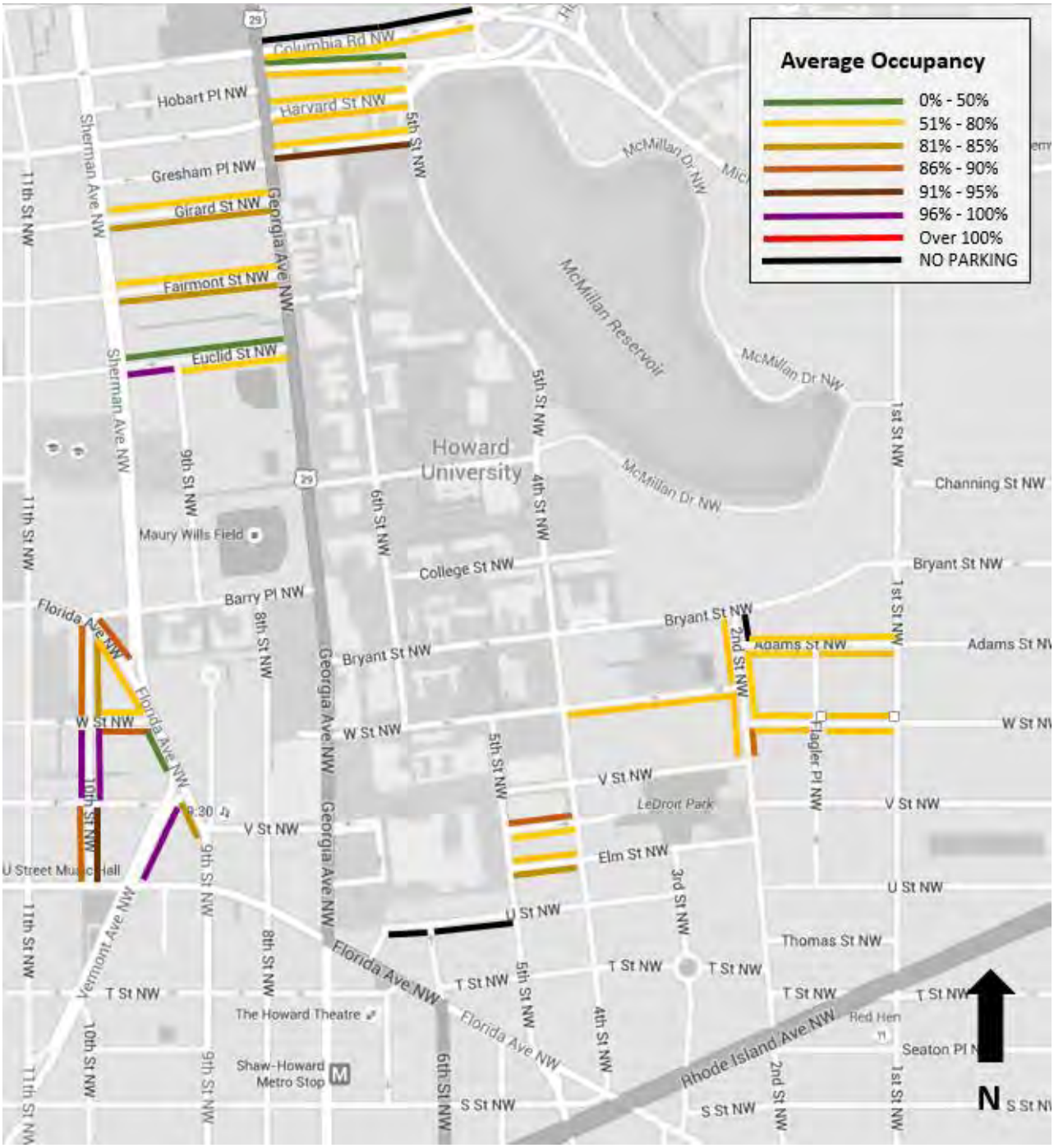


Figure 7: Average Parking Occupancy on a Typical Weekday at 3:00 PM in the surrounding neighborhood

3 SUMMARY OF SURVEY RESULTS

An online survey was conducted for the purpose of assessing the current mode choices and travel patterns of faculty, students, and staff members on the Main Campus. This survey included questions designed to gain a comprehensive understanding of the current modal choices, together with the preferences and perspectives underlying those choices.

3.1 Survey Respondents

A total of 610 students, faculty and staff responded to the survey. Figure 8 provides a breakdown of the number of surveys completed by members of each of these groups. From the figure, the majority of respondents were undergraduate and graduate full-time students.

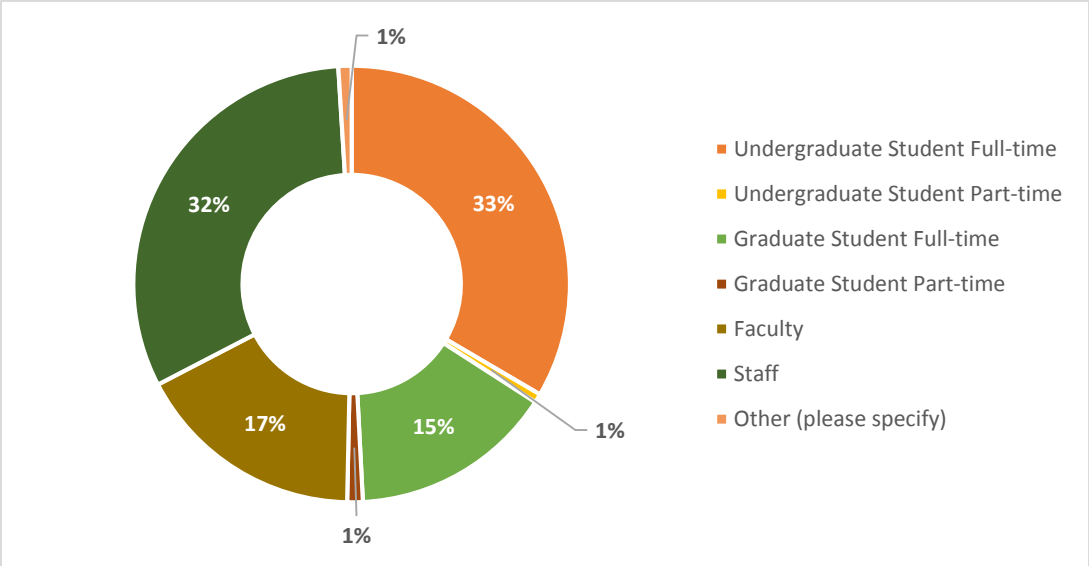


Figure 8: Breakdown of those who participated in the Survey

The following provides a summary of the responses to the questions posed to the members of the Howard University Community.

3.2 General: Number of Trips to Main Campus

The respondents were asked to provide the approximate number of trips they take to the Main Campus in a typical week. A trip is defined as transportation from home or any other origin to the Main Campus, including travel from an on-campus dormitory to another on-campus building. This trip excludes trips made after the individual has arrived on campus. The summary

of the results is presented in Figure 9. From the results, approximately 36% of the respondents travel to campus more than 5 times a week. Further, only 18% of the respondents travel to campus 3 or less times a week.

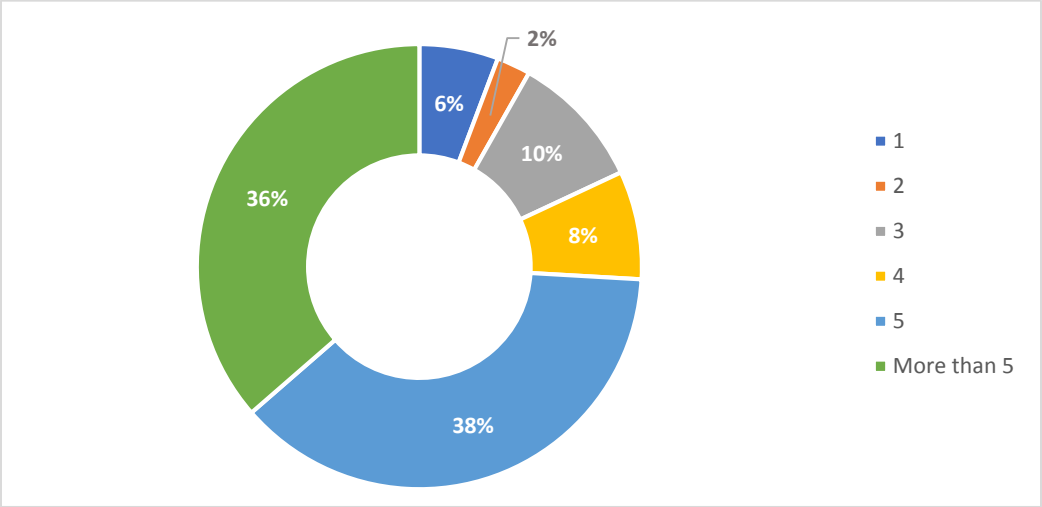


Figure 9: Number of Trips Made to the Main Campus per Week

3.3 Mode of Travel to Main Campus

The summary of the responses obtained for mode of travel to the Main Campus are summarized in Figure 10. From the results, approximately 42% of the Howard University community travels to Campus alone in their private vehicles while ~11% use the HU Shuttle Bus, while about 12% of the respondents travel to Campus using a transit buses.

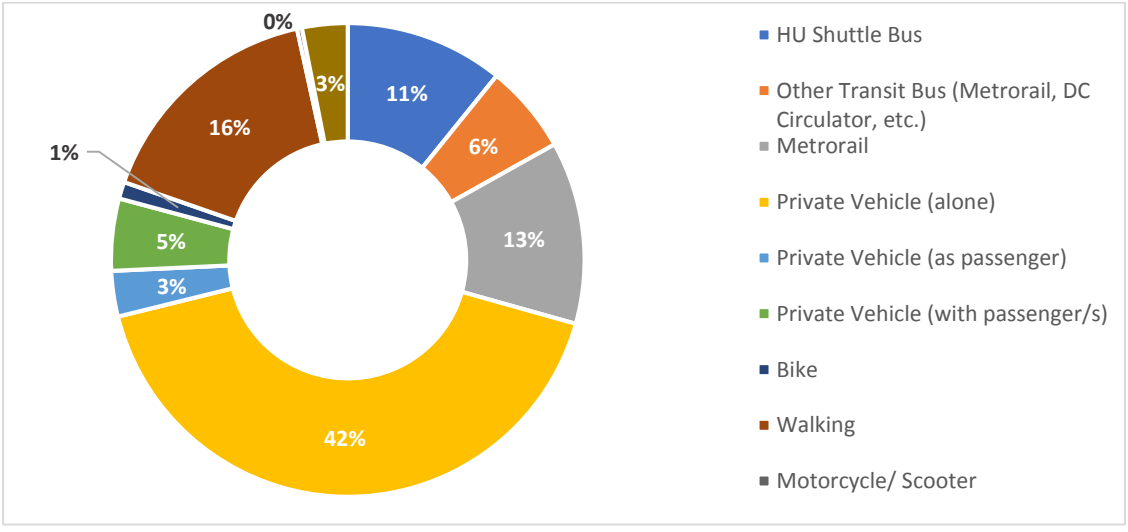


Figure 10: Modal Splits for travel to Main Campus

3.4 Travel Cost to Main Campus

A question regarding incurred monthly travel costs to the Main Campus for all modes of transportation was included in this survey. A summary of the responses is presented in Figure 11. Approximately 28% of the respondents indicated that they spend less than $100 on a monthly basis. On the other hand, 34% of the respondents spend more than $300 per month traveling to main campus.

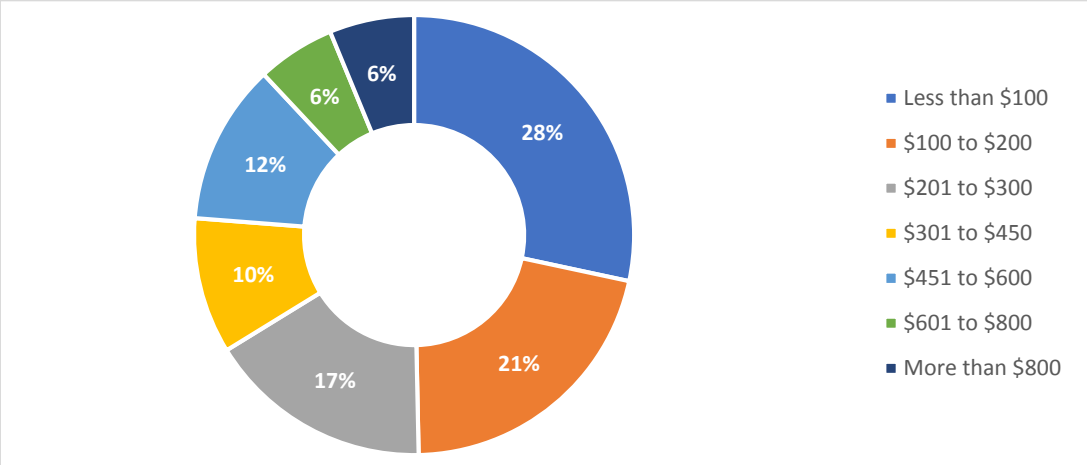


Figure 11: Monthly Cost of Travel to the Main Campus for all Modes

3.5 Issues for those who walk to Main Campus

For those who walk to campus, the survey sought to identify any problems associated with their mode of travel. The summary of the results is presented in Figure 12. From the figure, the respondents indicated that the distance to Campus is the main issue (17%) followed by cost of housing within walking distance from Campus (14%).

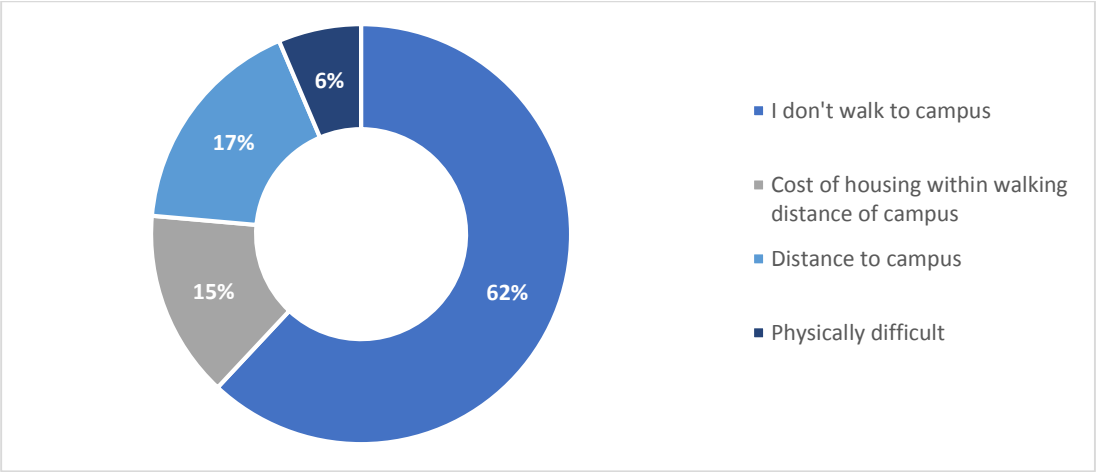


Figure 12: Problems with Walking to the Main Campus

3.6 Motorcycles/Scooters

The survey sought to identify any problems associated with those who use motorcycles or scooters as their preferred mode of travel to campus. The summary of the results are presented in Table 2 and Figure 13. Only 12% of the respondents use this mode of transportation. The majority of those who use this mode of transportation indicated their main barrier is vehicle cost.

Table 2: Barriers for Riding Motorcycles/Scooter to Main Campus

Options	Response Percentage
Vehicle cost	31%
Lack of suitable parking near campus destination	26%
Fuel cost	20%
Other (please specify)	17%
Lack of suitable parking at place of residence	6%

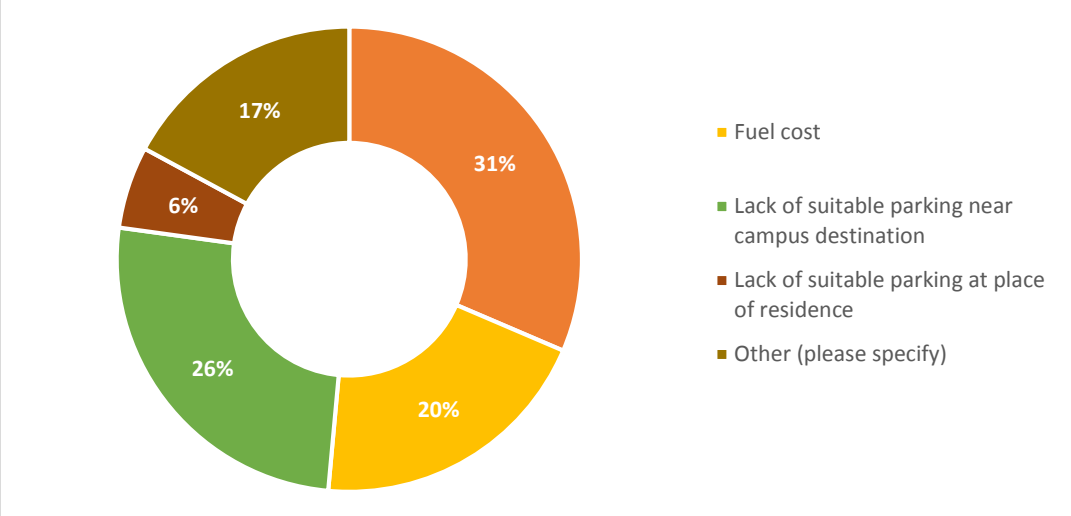


Figure 13: Barriers for Riding Motorcycles/Scooter to the Main Campus

3.7 Travel mode within Main Campus

The survey also included a question to determine which travel mode was used by the respondents between Campus locations (besides walking). The results, presented in Figure 14, indicate that most people use the HU shuttle bus while in campus. Also, approximately 2% use bicycles to travel between Main Campus locations.

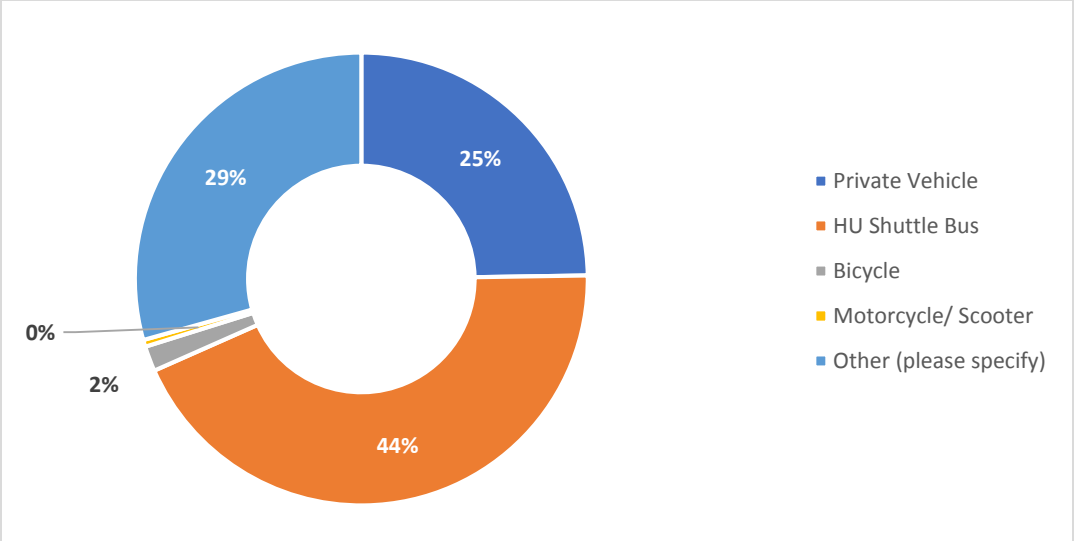


Figure 14: Travel mode within Campus locations

3.8 Howard University (HU) Shuttle Bus Users

3.8.1 Travel frequency to campus using the HU Shuttle Bus

The summary of the patronage of the Howard University Shuttle Bus service is presented in Figure 15. About 15.7% of the respondents indicated that they use the shuttle bus a few times on a weekly basis while approximately 43% of them do not use the shuttle at all.

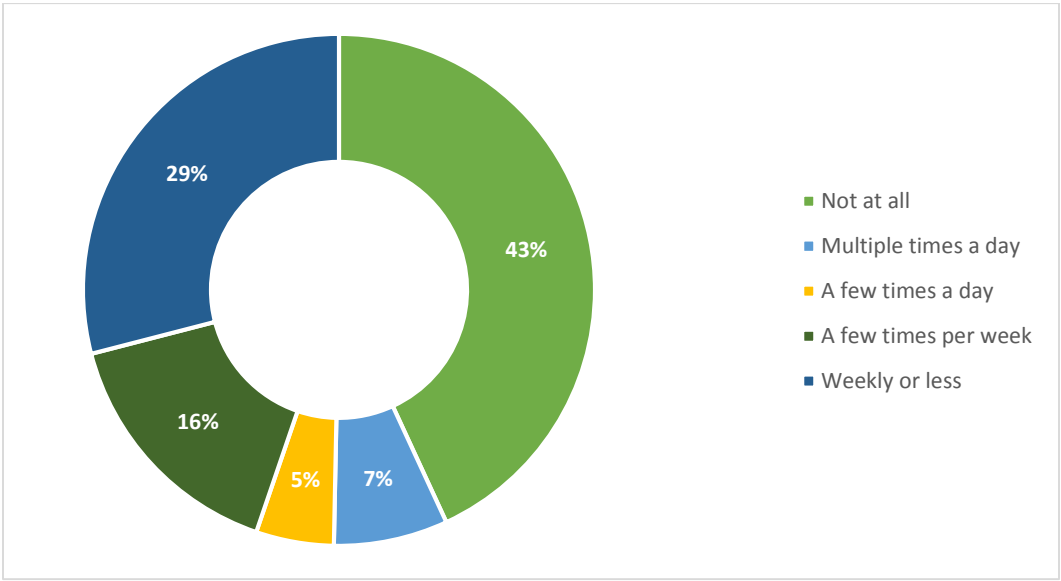


Figure 15: Patronage of HU Shuttle Bus per Week

3.8.2 Reasons for using the HU Shuttle Bus

Majority of the survey respondents indicated that they use the HU Shuttle to avoid walking/cycling in bad weather (see Table 6 and Figure 16). Other reasons for patronage of the HU shuttle bus are provided in the Appendix.

Table 6: Reasons for using the HU Shuttle

Options	Response Percent
To avoid walking/ cycling in bad weather	25.1%
They are many primary means of accessing Main Campus destinations	21.1%
To reach Main Campus destinations that are too far to walk to when I don't have a car or bicycle on campus.	17.3%
To travel between the Main Campus and the West Campus	12%
To reach Main Campus destinations which are too far to walk to when I don't want to move my car.	9.4%
To reach Main Campus destinations that are too far to walk to and offer limited or no parking nearby.	7.6%
Other	7.6%

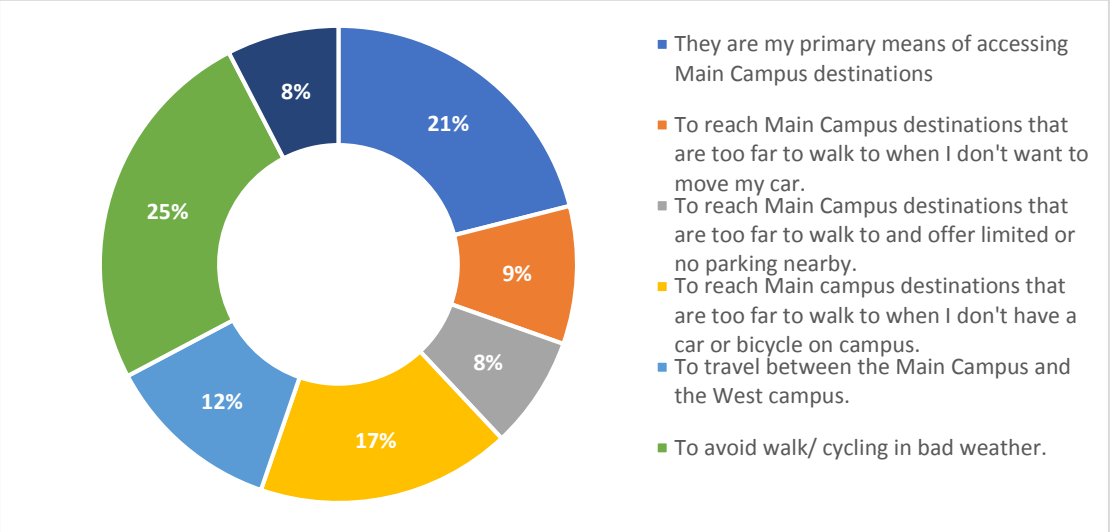


Figure 16: Reasons for using of HU Shuttle Bus

3.8.3 HU Shuttle Bus Routes preference

From the survey responses, about 50% percent of those who use the HU Shuttle Bus use the South Route shuttle while 25% of the respondents use the North Route. The summary of the

results of their responses are presented in Figure 17. It was also determined from the survey that about 92% of the patrons of the HU Shuttle transfer between shuttle routes (see Figure 18).

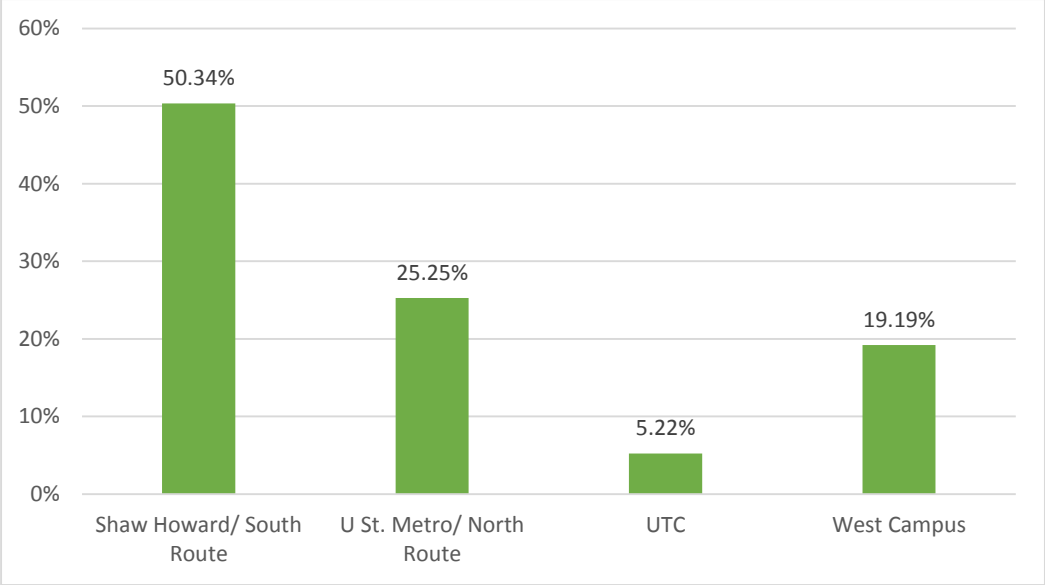


Figure 17: Breakdown of HU Shuttle Patronage by Route

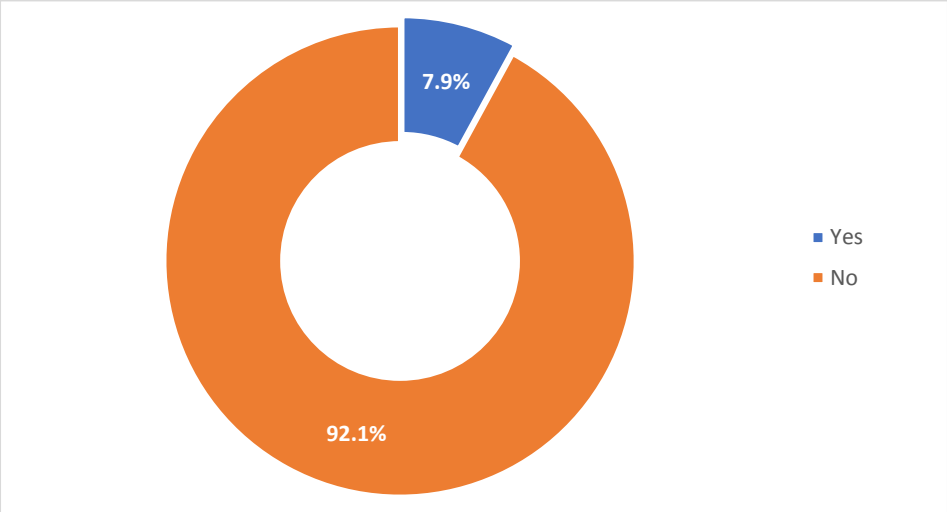


Figure 18: Percentages of those who transfer between HU Shuttle Routes

3.8.4 Reasons for not using the HU Shuttle Bus

The summary of the results regarding reasons preventing respondents from using the HU Shuttle Bus is presented in Table 8. From the results, respondents' main reason for not using the HU Shuttle Bus is due to the frequency of service. Other reasons given for non- patronage are provided in the Appendix.

Table 8: Reasons for Using the HU Shuttle Bus

Options	Response Percent
Service Frequency	38.42%
Limited Service (no route close to home, service hours don't fit with campus schedule etc.)	35.7%
Other*	20.7%
Physically difficult	1.9%

*The reasons specified under "Other" are included in Appendix A.

4 SINGLE OCCUPIED VEHICLES (DRIVE ALONE)

Approximately 42% of those who responded to the survey drive alone to the Main Campus. Of these, the majority (~51%) indicated that the cost of HU Parking permits is the most critical for users of this transportation mode. In addition, about 38% cited the inability to obtain a HU parking permit. The concerns are presented in Table 9.

Table 9: Concerns of Those Who Drive Alone

#	Options	Strongly Agree/ Somewhat Agree	Neutral	Strongly Disagree/ Somewhat Disagree
1	The cost of owning, maintaining, driving, and parking an automobile is at or approaching the point where I'm interested in carpooling.	30.7%	29.2%	**40.2%**
2	The cost of owning, maintaining, driving, and parking an automobile is at or approaching the point where I'm interested in public transportation.	**42.9%**	20.5%	36.7%
3	Traffic congestion is at or approaching the point where I'm interested in carpooling.	31.9%	27.4%	**40.7%**
4	Traffic congestion is at or approaching the point where I'm interested in public transportation.	**42.3%**	20.9%	36.9%
5	Parking shortage on campus is at or approaching the point where I'm interested in carpooling.	31.5%	29.5%	**39.0%**
6	Parking shortage on campus is at or approaching the point where I'm interested in public transportation.	**38.2%**	24.7%	37.1%
7	The cost to park at campus is at or approaching the point where I'm interested in carpooling.	**41.7%**	23.8%	34.6%
8	The cost to park at campus is at or approaching the point where I'm interested in public transportation.	**50.6%**	18.3%	31.1%

Approximately 38% of those who drive alone park their vehicles at a Howard University parking lot (See Table 10). Meanwhile, approximately 21% stated that they use on-street metered parking spaces in and around the Main Campus.

Table 10: Parking Options for those who drive alone

Options	Response Percent
A Howard University parking lot	38%
Other	27.6%
On-Street (metered)	21%
On-Street (non-metered, non-permit-area)	6.4%
On-Street (non-metered, residential permit area)	3.5%
A non-Howard University parking lot or garage	3.5%

The summary of the average rated preferences if gas prices increase to the range of $10/gallon for motorists who drive alone are presented in Table 11. The ratings were on a scale of 1 to 8, with 1 being the most appealing and 8 the least appealing. Drivers ranked "Working from home/ remote location or taking E-courses" as the most appealing option. On the other hand, using "Motorcycles/Scooters" was the least appealing option for the respondents.

Table 11: Preferences for those who drive alone if Gas Prices Increase

Options	Rating
Work from home/ remote location or take E-courses	1
Moving within cycling/walking distance from campus	2
Metrorail/ Metrobus/DC Circulator	3
Walking	4
Metrorail/ Metrobus/DC Circulator + Cycling/ Carpooling/ Vanpooling	5
Park and ride at home end with connecting shuttle bus	6
Cycling	7
Motorcycle/ Scooter	8

5 BICYCLE USERS AND OTHER MODES

The sample of responses for bicycle users and other modes were too low for meaningful descriptive statistics to be reported.

APPENDIX

A. Other reasons for the patronage of HU Shuttle

- Whenever I catch it and its convenient, which is rare
- From Metro or Hospital to the Yard (Courtyard Shuttle)
- To reach classes in time when I have an injury
- Safety at night going to the Metro
- To go to the HU\Shaw Ave Metro Station
- To reach main campus from metro when I take metro
- To the metro
- To avoid walking when I don't feel like walking.
- To get to locations around the campus area when I don't have money for uber/via or don't feel like walking
- When the VIE Towers Shuttle Bus next pick-up time is too much of a wait
- To get to the Metro when I am using it
- When I'm too weak or sick to walk from Metro (1/semester)
- To get from metro to main campus but given the shuttles don't have frequent stops to prime locations such as the bookstore or b school I end up walking.
- To reach main campus from Howard or U Street station stops
- To reach Columbia heights and U street area
- mostly to the Service Center
- To get to and from the metro and to far campus locations
- From Shaw Howard station occasionally
- The hills are exhausting, for the many trip to the yard.
- From Service Center to Administration Building, no car
- Only when the weather is bad
- To get to the Howard/Shaw metro station without walking alone
- I rarely ride them
- Mainly to get home from campus
- Metro

B. Main reasons for not using the HU shuttle bus

- It does not goes directly to the destination e.g. leaving Service Center to go to 9th and T it goes up the road first
- No Need to use
- No need for HU Shuttles

- First time I wanted to use it, the bus did not stop.
- route maps unknown and thus no nearby stops to where i would be leaving from and going to
- Convenience
- Didn’t really know about them
- They don’t run on weekends, and don’t run early/late enough
- I prefer walking
- Don’t know much about shuttle and services
- I need to walk more
- The schedules always off
- Lack of knowledge
- Schedule unknown. looks infrequent
- Not knowing the route of the shuttles
- The shuttle times are unreliable/ the drivers often disregard shuttle times
- Slow, Inefficient routes
- No need once on campus just walk
- Slow, no actual time-table
- They aren't frequent enough more stops between metro stations and main campus should be provided. Most of the times the drivers drive pass students
- Limited service and frequency.
- Tracking system always down
- Unaware of shuttle schedule
- The timing of the shuttles
- Faster to walk
- Not always sure where to get the shuttles and times of service
- The app is not accurate half the time with the actual movements of the shuttle buses, shuttle buses don't show up half the time, and half the shuttle drivers pick up/drop of people at the wrong place, making those who were waiting in the right place, miss the shuttle. They also don't stop when you try to wave them down to get on the shuttle, they just drive on by. It's frustrating, and doesn't make you want to ride the shuttle, even though we pay to use it.
- Makes more sense to walk
- Only use shuttle when on campus after dark
- Some drivers drive faster than others and don’t follow the schedule
- Shuttles don’t go to places I need
- You can't choose more than one option, so it’s the first two and the actual stops it picks up and the live update is often off with the times, and time span in between the next shuttle is just too long to get to class and make it beneficial to use, especially from the Shaw and U street stations
- The shuttle schedule and routes changed and I'm not sure which routes to take
- Shuttles don't come on time, pass up stops, or don't come at all
- 12 midnight does not run

- No need. Electric Scooters are awesome
- They never come on time
- I use my car
- Lack of convenience
- Drivers are inconsistent
- Drivers are not always on schedule and often leave stops up to 5 minutes earlier than scheduled, causing me to miss the shuttle
- I need to be able to leave at anytime
- I don't know the schedule/routes
- Service routes not convenient
- Times tend to be unreliable
- I do not know much about the service.

F. Existing Turning Movement Counts

Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Howard University Campus Master P
Project # : 2357-005
Location Washington DC
Data Source: Gorove/Slade Associates, Inc.

Analysis Period: STUDY_PERIOD 06:30 AM to 09:30 AM
Date of Counts: Wednesday, October 23, 2019
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
System Peak Hour (all vehicles): 07:45 AM to 08:45 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. Georgia Ave/Georgria Ave & Harvard Street

ALL VEHICLES

Direction:	Southbound					Westbound					Northbound					Eastbound				
Roadway:	Georgia Ave					Harvard Street					Georgria Ave					Harvard 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	11	201	0	2	0	0	0	0	4	0	0	61	31	7	0	4	64	2	6
06:45 AM to 07:00 AM	0	12	210	0	0	0	0	0	0	1	0	0	65	25	2	0	6	92	3	3
07:00 AM to 07:15 AM	0	13	227	0	1	0	0	0	0	8	0	0	85	21	2	0	3	85	8	9
07:15 AM to 07:30 AM	0	16	241	0	1	0	0	0	0	6	0	0	105	25	1	0	5	112	3	4
07:30 AM to 07:45 AM	0	5	273	0	2	0	0	0	0	4	0	0	99	23	2	0	5	88	6	14
07:45 AM to 08:00 AM	0	17	283	0	0	0	0	0	0	12	0	0	127	36	7	0	7	97	3	6
08:00 AM to 08:15 AM	0	12	261	0	5	0	0	0	0	6	0	0	131	24	3	0	10	97	3	21
08:15 AM to 08:30 AM	0	21	259	0	3	0	0	0	0	7	0	0	123	41	7	0	6	80	3	9
08:30 AM to 08:45 AM	0	12	353	0	0	0	0	0	0	12	0	0	109	28	5	0	9	100	6	15
08:45 AM to 09:00 AM	0	18	284	0	4	0	0	0	0	8	0	0	103	22	3	0	6	98	12	7
09:00 AM to 09:15 AM	0	18	226	0	2	0	0	0	0	7	0	0	82	32	5	0	11	78	15	10
09:15 AM to 09:30 AM	0	20	253	0	2	0	0	0	0	6	0	0	73	30	1	0	7	76	6	10
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																				
INT. PEAK HR (ALL VEH)	1218				8	0				37	619				22	421				51
07:45 AM to 08:45 AM	0	62	1156	0		0	0	0	0		0	0	490	129		0	32	374	15	
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) 0.91	n/a	0.74	0.82	n/a	**0.83**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	0.94	0.79	**0.94**	n/a	0.80	0.94	0.63	**0.92**

HEAVY VEHICLES (FHWA 4+)

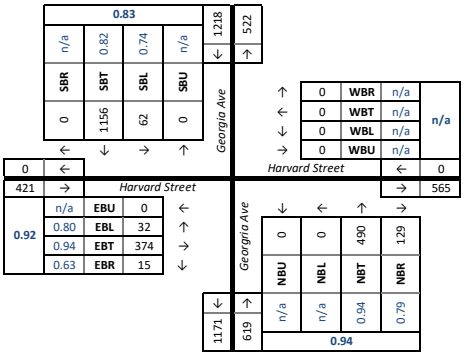
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Harvard Street				Georgria Ave				Harvard Street			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	5	0	0	0	0	0	0	0	4	3	0	0	0	0
06:45 AM to 07:00 AM	0	0	7	0	0	0	0	0	0	0	8	0	0	1	0	0
07:00 AM to 07:15 AM	0	0	7	0	0	0	0	0	0	0	9	1	0	1	2	0
07:15 AM to 07:30 AM	0	2	8	0	0	0	0	0	0	0	8	1	0	0	5	1
07:30 AM to 07:45 AM	0	0	9	0	0	0	0	0	0	0	5	3	0	0	2	0
07:45 AM to 08:00 AM	0	0	9	0	0	0	0	0	0	0	9	1	0	0	3	0
08:00 AM to 08:15 AM	0	1	5	0	0	0	0	0	0	0	11	1	0	2	3	0
08:15 AM to 08:30 AM	0	0	8	0	0	0	0	0	0	0	5	1	0	0	7	0
08:30 AM to 08:45 AM	0	0	6	0	0	0	0	0	0	0	8	1	0	0	4	1
08:45 AM to 09:00 AM	0	0	15	0	0	0	0	0	0	0	10	0	0	0	5	0
09:00 AM to 09:15 AM	0	0	11	0	0	0	0	0	0	0	11	3	0	0	3	0
09:15 AM to 09:30 AM	0	0	7	0	0	0	0	0	0	0	7	2	0	1	3	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																
INT. PEAK HR (ALL VEH)	29				0				37				20			
07:45 AM to 08:45 AM	0	1	28	0	0	0	0	0	0	0	33	4	0	2	17	1
Heavy Vehicle % (PHV):	0.0%	1.6%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	3.1%	0.0%	6.3%	4.5%	6.7%
INT. PEAK HR (HV ONLY)	40				0				39				20			
08:15 AM to 09:15 AM	0	0	40	0	0	0	0	0	0	0	34	5	0	0	19	1
Heavy Vehicle % (PHV):	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.2%	4.1%	0.0%	0.0%	5.3%	2.8%

BICYCLES

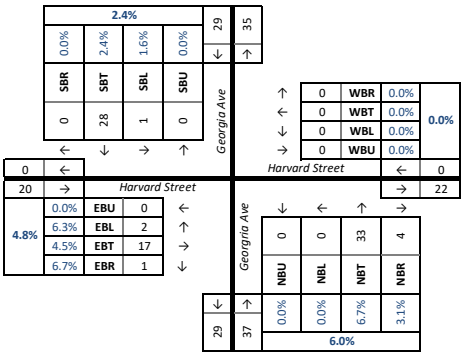
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Harvard Street				Georgria Ave				Harvard Street			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0
07:00 AM to 07:15 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0
07:15 AM to 07:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0
07:30 AM to 07:45 AM	0	0	4	0	0	0	0	0	0	0	2	0	0	0	1	0
07:45 AM to 08:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	2	1
08:00 AM to 08:15 AM	0	0	5	0	0	0	0	0	0	0	1	1	0	0	3	0
08:15 AM to 08:30 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0
08:30 AM to 08:45 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0
08:45 AM to 09:00 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0
09:00 AM to 09:15 AM	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	3	0	0	0	0	0	0	0	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																
INT. PEAK HR (ALL VEH)	20				0				2				8			
07:45 AM to 08:45 AM	0	0	20	0	0	0	0	0	0	0	1	1	0	0	7	1
INT. PEAK HR (BIKES)	18				0				4				9			
07:15 AM to 08:15 AM	0	0	18	0	0	0	0	0	0	0	3	1	0	0	8	1

DATA COLLECTION NOTES :

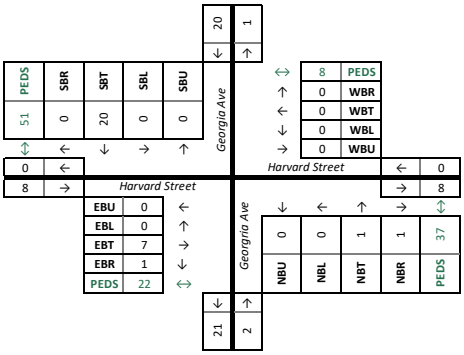
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



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



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Howard University Campus Master P
Project # : 2357-005
Location Washington DC
Data Source: Gorove/Slade Associates, Inc.

Analysis Period: STUDY_PERIOD 06:30 AM to 09:30 AM
Date of Counts: Thursday, October 24, 2019
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 07:30 AM to 08:30 AM
System Peak Hour (all vehicles): 07:45 AM to 08:45 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. 5th Street & Hobart Place/Harvard Street

ALL VEHICLES

Direction:	Southbound					Westbound					Northbound					Eastbound				
Roadway:	5th Street					Hobart Place					5th Street					Harvard 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	59	0	2	0	0	0	0	0	0	0	32	0	6	0	0	114	8	1
06:45 AM to 07:00 AM	0	2	77	0	2	0	0	0	0	0	0	0	48	0	10	0	0	104	13	2
07:00 AM to 07:15 AM	0	0	108	0	1	0	0	0	0	0	0	0	27	0	4	0	0	101	9	3
07:15 AM to 07:30 AM	0	1	132	0	0	0	0	0	0	0	0	0	31	0	15	0	0	127	13	0
07:30 AM to 07:45 AM	0	4	190	0	1	0	0	0	0	0	0	0	53	0	19	0	0	129	16	5
07:45 AM to 08:00 AM	0	1	219	0	0	0	0	0	0	0	0	0	54	0	6	0	0	141	18	3
08:00 AM to 08:15 AM	0	0	210	0	1	0	0	0	0	0	0	0	59	0	3	0	0	113	11	1
08:15 AM to 08:30 AM	0	1	187	0	1	0	0	0	0	0	0	0	44	0	4	0	0	119	14	1
08:30 AM to 08:45 AM	0	4	187	0	1	0	0	0	0	0	0	0	49	0	3	0	0	137	10	2
08:45 AM to 09:00 AM	0	2	200	0	1	0	0	0	0	0	0	0	32	0	4	0	0	117	23	2
09:00 AM to 09:15 AM	0	3	168	0	1	0	0	0	0	0	0	0	36	0	0	0	0	80	7	4
09:15 AM to 09:30 AM	0	2	124	0	1	0	0	0	0	0	0	0	34	0	3	0	0	94	12	3
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																				
INT. PEAK HR (ALL VEH)	812				3	0				0	210				32	561				10
07:30 AM to 08:30 AM	0	6	806	0		0	0	0	0		0	0	210	0		0	0	502	59	
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) 0.91	n/a	0.38	0.92	n/a	**0.92**	n/a	n/a	n/a	n/a	**n/a**	n/a	n/a	0.89	n/a	**0.89**	n/a	n/a	0.89	0.82	**0.88**

HEAVY VEHICLES (FHWA 4+)

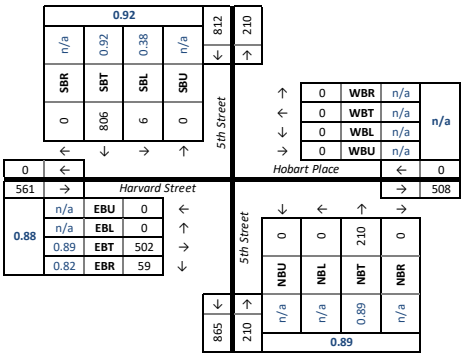
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	5th Street				Hobart Place				5th Street				Harvard Street			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0
06:45 AM to 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
07:00 AM to 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
07:15 AM to 07:30 AM	0	0	5	0	0	0	0	0	0	0	1	0	0	0	4	3
07:30 AM to 07:45 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	1
07:45 AM to 08:00 AM	0	0	7	0	0	0	0	0	0	0	1	0	0	0	1	1
08:00 AM to 08:15 AM	0	0	1	0	0	0	0	0	0	0	4	0	0	0	5	1
08:15 AM to 08:30 AM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	6	0
08:30 AM to 08:45 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	4	1
08:45 AM to 09:00 AM	0	0	6	0	0	0	0	0	0	0	1	0	0	0	2	1
09:00 AM to 09:15 AM	0	0	2	0	0	0	0	0	0	0	2	0	0	0	3	1
09:15 AM to 09:30 AM	0	0	4	0	0	0	0	0	0	0	2	0	0	0	3	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																
INT. PEAK HR (ALL VEH)	11				0				7				17			
07:30 AM to 08:30 AM	0	0	11	0	0	0	0	0	0	0	7	0	0	0	14	3
Heavy Vehicle % (PHV):	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	2.8%	5.1%
INT. PEAK HR (HV ONLY)	14				0				7				18			
07:15 AM to 08:15 AM	0	0	14	0	0	0	0	0	0	0	7	0	0	0	12	6
Heavy Vehicle % (PHV):	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	2.4%	10.3%

BICYCLES

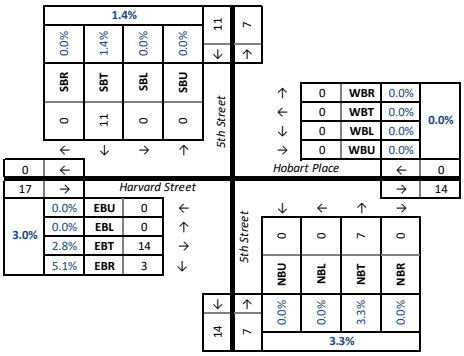
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	5th Street				Hobart Place				5th Street				Harvard Street			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
06:45 AM to 07:00 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
07:00 AM to 07:15 AM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	9	0	0	0	0	0	0	0	2	0	0	0	2	0
07:45 AM to 08:00 AM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	7	0	0	0	0	0	0	0	1	0	0	0	3	1
08:15 AM to 08:30 AM	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	12	0	0	0	0	0	0	0	1	0	0	0	3	0
08:45 AM to 09:00 AM	0	0	11	0	0	0	0	0	0	0	1	0	0	0	3	0
09:00 AM to 09:15 AM	0	0	15	0	0	0	0	0	0	0	0	0	0	0	1	0
09:15 AM to 09:30 AM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	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																
INT. PEAK HR (ALL VEH)	32				0				4				6			
07:30 AM to 08:30 AM	0	0	32	0	0	0	0	0	0	0	4	0	0	0	5	1
INT. PEAK HR (BIKES)	46				0				2				9			
08:30 AM to 09:30 AM	0	0	46	0	0	0	0	0	0	0	2	0	0	0	9	0

DATA COLLECTION NOTES :

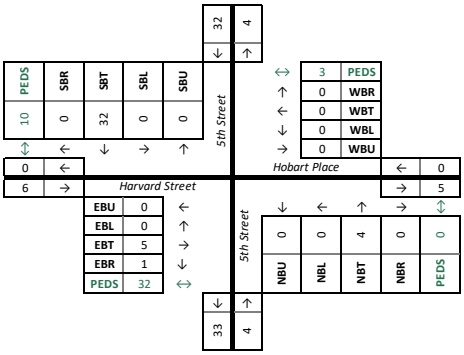
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



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



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Howard University Campus Master P
Project # : 2357-005
Location Washington DC
Data Source: Gorove/Slade Associates, Inc.

Analysis Period: STUDY_PERIOD 06:30 AM to 09:30 AM
Date of Counts: Wednesday, October 23, 2019
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
System Peak Hour (all vehicles): 07:45 AM to 08:45 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. Georgia Ave/Georgia Ave & Dumpster Entrance/Girard Street (north)

ALL VEHICLES

Direction:	Southbound					Westbound					Northbound					Eastbound				
Roadway:	Georgia Ave					Dumpster Entrance					Georgia Ave					Girard Street (north)				
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	214	3	1	0	0	0	0	3	0	0	83	0	0	0	2	0	3	4
06:45 AM to 07:00 AM	0	0	208	6	0	0	0	0	0	3	0	1	85	0	0	0	2	0	4	1
07:00 AM to 07:15 AM	0	0	243	14	1	0	0	0	0	4	0	2	95	0	0	0	1	0	2	8
07:15 AM to 07:30 AM	0	0	276	10	2	0	0	0	0	4	0	3	122	0	2	0	0	0	0	5
07:30 AM to 07:45 AM	0	0	283	13	6	0	0	0	0	9	0	6	113	0	0	0	1	0	1	18
07:45 AM to 08:00 AM	0	0	338	11	1	0	0	0	0	4	0	4	157	0	0	0	2	0	1	6
08:00 AM to 08:15 AM	0	0	287	22	8	0	0	0	0	2	0	2	147	0	0	0	2	0	2	19
08:15 AM to 08:30 AM	0	0	305	20	0	0	0	0	0	5	0	4	154	0	0	0	1	0	2	10
08:30 AM to 08:45 AM	0	0	350	23	1	0	0	0	0	0	1	7	141	0	0	0	0	0	2	13
08:45 AM to 09:00 AM	0	0	315	19	1	0	0	0	0	3	0	5	99	0	0	0	1	0	1	17
09:00 AM to 09:15 AM	0	0	259	11	5	0	0	0	0	1	0	6	119	0	0	1	0	0	2	9
09:15 AM to 09:30 AM	0	0	251	7	3	0	0	0	0	7	0	2	96	0	0	0	3	0	6	10
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																				
INT. PEAK HR (ALL VEH)	1356				10	0				11	617				0	12				48
07:45 AM to 08:45 AM	0	0	1280	76		0	0	0	0		1	17	599	0		0	5	0	7	
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) **0.95**	n/a	n/a	0.91	0.83	**0.91**	n/a	n/a	n/a	n/a	**n/a**	0.25	0.61	0.95	n/a	**0.96**	n/a	0.63	n/a	0.88	**0.75**

HEAVY VEHICLES (FHWA 4+)

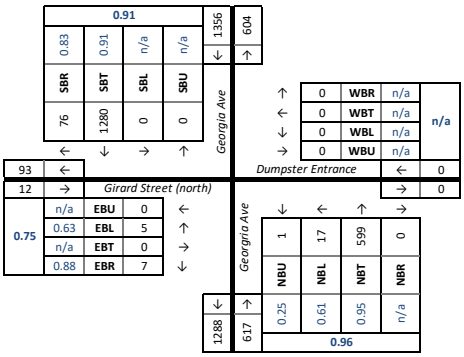
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Dumpster Entrance				Georgia Ave				Girard Street (north)			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	5	0	0	0	0	0	0	0	7	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	7	0	0	0	0	0	0	0	9	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	7	0	0	0	0	0	0	0	10	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	9	0	0	0	0	0	0	0	9	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	10	0	0	0	0	0	0	0	8	0	0	0	0	0
07:45 AM to 08:00 AM	0	0	9	0	0	0	0	0	0	0	10	0	0	1	0	0
08:00 AM to 08:15 AM	0	0	4	0	0	0	0	0	0	0	12	0	0	1	0	1
08:15 AM to 08:30 AM	0	0	7	0	0	0	0	0	0	0	6	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	8	1	0	0	0	0	0	0	8	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	14	1	0	0	0	0	0	0	10	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	11	0	0	0	0	0	0	0	13	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	8	1	0	0	0	0	0	0	9	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																
INT. PEAK HR (ALL VEH)	29				0				36				3			
07:45 AM to 08:45 AM	0	0	28	1	0	0	0	0	0	0	36	0	0	2	0	1
Heavy Vehicle % (PHV):	0.0%	0.0%	2.2%	1.3% **2.1%**	0.0%	0.0%	0.0%	0.0% **0.0%**	0.0%	0.0%	6.0%	0.0% **5.8%**	0.0%	40.0%	0.0%	14.3% **25.0%**
INT. PEAK HR (HV ONLY)	44				0				40				0			
08:30 AM to 09:30 AM	0	0	41	3	0	0	0	0	0	0	40	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	3.5%	5.0% **3.6%**	0.0%	0.0%	0.0%	0.0% **0.0%**	0.0%	0.0%	8.8%	0.0% **8.4%**	0.0%	0.0%	0.0%	0.0% **0.0%**

BICYCLES

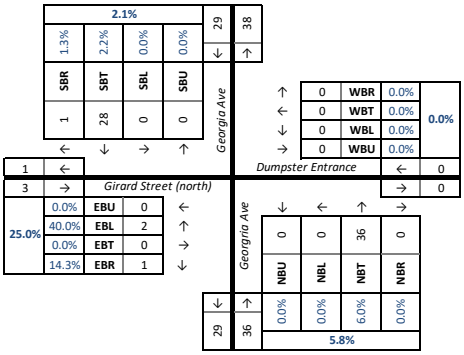
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Dumpster Entrance				Georgia Ave				Girard Street (north)			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	5	0	0	0	0	0	0	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	0	0	0	0
08:00 AM to 08:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	7	0	0	0	0	0	0	0	1	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	6	0	0	0	0	0	0	0	1	0	0	1	0	0
09:15 AM to 09:30 AM	0	0	0	1	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																
INT. PEAK HR (ALL VEH)	12				0				0				0			
07:45 AM to 08:45 AM	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
INT. PEAK HR (BIKES)	22				0				2				1			
08:15 AM to 09:15 AM	0	0	22	0	0	0	0	0	0	0	2	0	0	1	0	0

DATA COLLECTION NOTES :

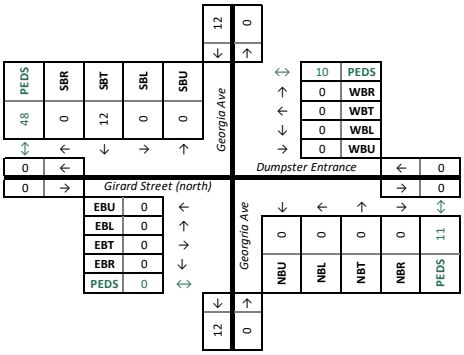
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



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



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Howard University Campus Master P
Project # : 2357-005
Location Washington DC
Data Source: Gorove/Slade Associates, Inc.

Analysis Period: STUDY_PERIOD 06:30 AM to 09:30 AM
Date of Counts: Wednesday, October 23, 2019
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
System Peak Hour (all vehicles): 07:45 AM to 08:45 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. Georgia Ave/Georgia Ave & Girard Street (South)/Entrerpise Entrance

ALL VEHICLES

Direction:	Southbound					Westbound					Northbound					Eastbound				
Roadway:	Georgia Ave					Girard Street (South)					Georgia Ave					Entrerpise 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	1	215	0	0	0	0	0	0	3	0	0	82	2	1	0	0	0	1	1
06:45 AM to 07:00 AM	0	2	207	0	0	0	0	0	0	2	0	1	84	3	1	0	0	0	0	1
07:00 AM to 07:15 AM	0	1	245	1	0	0	0	0	0	6	0	1	99	3	0	0	0	0	0	6
07:15 AM to 07:30 AM	0	0	272	1	0	0	0	0	0	2	0	0	121	1	1	0	1	0	0	7
07:30 AM to 07:45 AM	0	1	285	0	0	0	0	0	0	5	0	1	121	2	1	0	0	0	1	16
07:45 AM to 08:00 AM	0	2	332	0	0	0	0	0	0	8	0	1	155	1	1	0	1	0	0	5
08:00 AM to 08:15 AM	0	1	292	0	0	0	0	0	0	5	0	0	152	2	0	0	1	0	0	11
08:15 AM to 08:30 AM	0	2	301	0	0	0	0	0	0	2	0	0	154	2	0	0	0	0	0	6
08:30 AM to 08:45 AM	0	3	342	5	0	0	0	0	0	1	0	0	147	2	0	0	0	0	0	16
08:45 AM to 09:00 AM	0	2	311	2	0	0	0	0	0	2	0	0	103	17	4	0	0	0	1	9
09:00 AM to 09:15 AM	1	6	257	0	0	0	0	0	0	2	0	2	128	3	2	0	0	0	1	5
09:15 AM to 09:30 AM	1	6	252	0	0	0	0	0	0	8	0	0	100	2	1	0	0	0	0	5
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																				
INT. PEAK HR (ALL VEH)	1280				0	0				16	616				1	2				38
07:45 AM to 08:45 AM	0	8	1267	5		0	0	0	0		0	1	608	7		0	2	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) **0.95**	n/a	0.67	0.93	0.25	**0.91**	n/a	n/a	n/a	n/a	**n/a**	n/a	0.25	0.98	0.88	**0.98**	n/a	0.50	n/a	n/a	**0.50**

HEAVY VEHICLES (FHWA 4+)

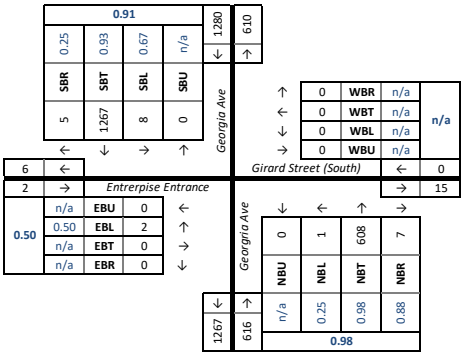
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Girard Street (South)				Georgia Ave				Entrerpise Entrance			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	5	0	0	0	0	0	0	0	7	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	7	0	0	0	0	0	0	0	9	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	7	0	0	0	0	0	0	0	10	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	9	0	0	0	0	0	0	0	9	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	10	0	0	0	0	0	0	0	8	0	0	0	0	0
07:45 AM to 08:00 AM	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	5	0	0	0	0	0	0	0	12	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	7	0	0	0	0	0	0	0	6	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	8	0	0	0	0	0	0	0	8	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	14	0	0	0	0	0	0	0	10	2	0	0	0	0
09:00 AM to 09:15 AM	0	0	11	0	0	0	0	0	0	0	13	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	8	0	0	0	0	0	0	0	9	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																
INT. PEAK HR (ALL VEH)	30				0				36				0			
07:45 AM to 08:45 AM	0	0	30	0	0	0	0	0	0	0	36	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%
INT. PEAK HR (HV ONLY)	41				0				42				0			
08:30 AM to 09:30 AM	0	0	41	0	0	0	0	0	0	0	40	2	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%	8.3%	0.0%	0.0%	0.0%	0.0%

BICYCLES

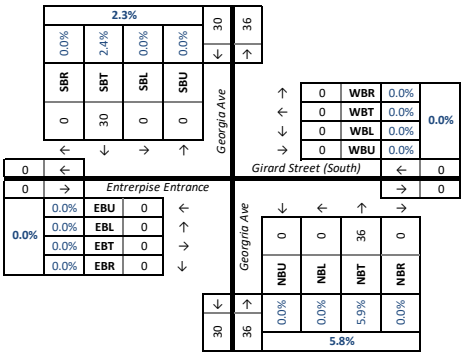
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Girard Street (South)				Georgia Ave				Entrerpise Entrance			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0
07:45 AM to 08:00 AM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0
08:15 AM to 08:30 AM	0	2	5	0	0	0	0	0	0	0	0	1	0	0	0	0
08:30 AM to 08:45 AM	0	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	8	0	0	0	0	0	0	0	2	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	3	0	0	0	0	0	0	0	2	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																
INT. PEAK HR (ALL VEH)	22				0				3				0			
07:45 AM to 08:45 AM	0	2	20	0	0	0	0	0	0	0	2	1	0	0	0	0
INT. PEAK HR (BIKES)	32				0				4				0			
08:15 AM to 09:15 AM	0	2	30	0	0	0	0	0	0	0	3	1	0	0	0	0

DATA COLLECTION NOTES :

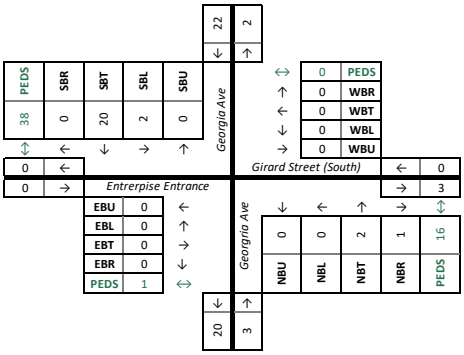
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



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



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Howard University Campus Master P
Project # : 2357-005
Location Washington DC
Data Source: Gorove/Slade Associates, Inc.

Analysis Period: STUDY_PERIOD 06:30 AM to 09:30 AM
Date of Counts: Wednesday, October 23, 2019
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
System Peak Hour (all vehicles): 07:45 AM to 08:45 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. Georgia Ave/Georgia Ave & /Fairmont Street (north)

ALL VEHICLES

Direction:	Southbound					Westbound					Northbound					Eastbound				
Roadway:	Georgia Ave										Georgia Ave					Fairmont Street (north)				
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	205	3	0	0	0	0	0	0	0	0	75	0	0	0	0	0	0	9
06:45 AM to 07:00 AM	0	0	211	4	0	0	0	0	0	0	0	0	102	0	0	0	0	0	0	2
07:00 AM to 07:15 AM	0	0	235	1	1	0	0	0	0	0	0	2	87	0	0	0	0	0	0	6
07:15 AM to 07:30 AM	0	0	265	7	0	0	0	0	0	0	0	3	132	0	0	0	0	0	0	6
07:30 AM to 07:45 AM	0	0	277	7	2	0	0	0	0	0	0	4	115	0	0	0	0	0	0	6
07:45 AM to 08:00 AM	0	0	325	22	0	0	0	0	0	0	0	4	161	0	0	0	0	0	0	13
08:00 AM to 08:15 AM	0	0	280	28	1	0	0	0	0	0	0	5	151	0	0	0	0	0	0	8
08:15 AM to 08:30 AM	0	0	292	22	3	0	0	0	0	0	0	7	152	0	0	0	0	0	0	8
08:30 AM to 08:45 AM	0	0	302	37	0	0	0	0	0	0	0	8	143	0	0	0	0	0	0	17
08:45 AM to 09:00 AM	0	0	310	29	3	0	0	0	0	0	0	7	120	0	0	0	0	0	0	7
09:00 AM to 09:15 AM	0	0	257	29	1	0	0	0	0	0	0	9	123	0	0	0	0	0	0	15
09:15 AM to 09:30 AM	0	0	251	11	0	0	0	0	0	1	0	6	109	0	1	0	0	0	0	9
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																				
INT. PEAK HR (ALL VEH)	1308				4	0				0	631				0	0				46
07:45 AM to 08:45 AM	0	0	1199	109		0	0	0	0		0	24	607	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) **0.95**	n/a	n/a	0.92	0.74	**0.94**	n/a	n/a	n/a	n/a	**n/a**	n/a	0.75	0.94	n/a	**0.96**	n/a	n/a	n/a	n/a	**n/a**

HEAVY VEHICLES (FHWA 4+)

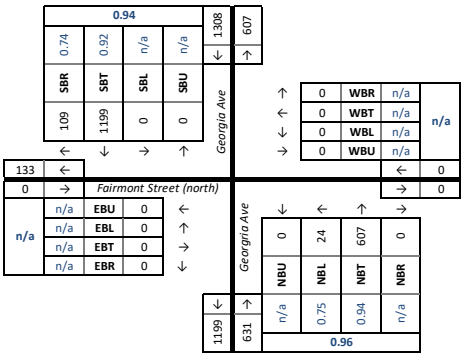
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave								Georgia Ave				Fairmont Street (north)			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	5	0	0	0	0	0	0	0	7	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	7	0	0	0	0	0	0	0	8	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	6	0	0	0	0	0	0	0	9	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	11	0	0	0	0	0	0	0	8	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	11	1	0	0	0	0	0	0	6	0	0	0	0	0
07:45 AM to 08:00 AM	0	0	11	0	0	0	0	0	0	1	9	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	6	0	0	0	0	0	0	0	12	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	10	0	0	0	0	0	0	0	5	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	8	1	0	0	0	0	0	0	6	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	15	0	0	0	0	0	0	0	10	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	13	0	0	0	0	0	0	0	12	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	9	0	0	0	0	0	0	0	9	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																
INT. PEAK HR (ALL VEH)	36				0				33				0			
07:45 AM to 08:45 AM	0	0	35	1	0	0	0	0	0	1	32	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	2.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%
2.8%					**0.0%**				**5.2%**				**0.0%**			
INT. PEAK HR (HV ONLY)	46				0				37				0			
08:30 AM to 09:30 AM	0	0	45	1	0	0	0	0	0	0	37	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	4.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.5%	0.0%	0.0%	0.0%	0.0%	0.0%
3.8%					**0.0%**				**7.0%**				**0.0%**			

BICYCLES

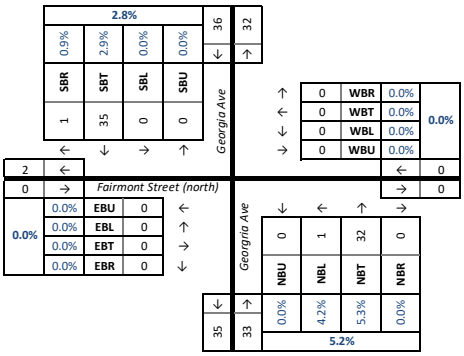
Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave								Georgia Ave				Fairmont Street (north)			
Movement:	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right
06:30 AM to 06:45 AM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	2	0	0	0	0	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	1	0	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	3	0	0	0	0	0	0	1	3	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	6	2	0	0	0	0	0	0	2	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	3	0	0	0	0	0	0	1	2	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																
INT. PEAK HR (ALL VEH)	10				0				7				0			
07:45 AM to 08:45 AM	0	0	7	3	0	0	0	0	0	2	5	0	0	0	0	0
INT. PEAK HR (BIKES)	19				0				8				0			
08:15 AM to 09:15 AM	0	0	16	3	0	0	0	0	0	1	7	0	0	0	0	0

DATA COLLECTION NOTES :

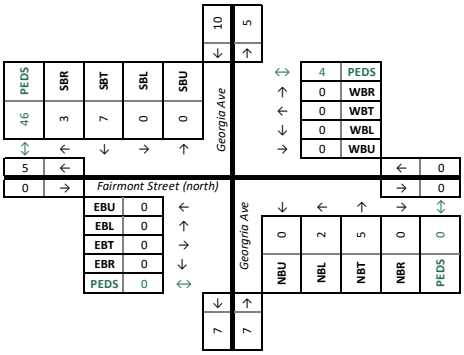
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



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



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



Gorove/Slade Associates - Multimodal Turning Movement Count Report

Project Name : Howard University Campus Master P
Project # : 2357-005
Location Washington DC
Data Source: Gorove/Slade Associates, Inc.

Analysis Period: STUDY_PERIOD 06:30 AM to 09:30 AM
Date of Counts: Wednesday, October 23, 2019
Weather: Partly Cloudy

Volumes Displayed as: 1. Intersection Peak (vehicle)
Intersection Peak Hour (all vehicles): 07:45 AM to 08:45 AM
System Peak Hour (all vehicles): 07:45 AM to 08:45 AM
User-Defined Peak Hour: 07:30 AM to 08:30 AM

Intersection: 1. Georgia Ave/Georgia Ave & Fairmont Street (south)/

ALL VEHICLES

Direction:	Southbound					Westbound					Northbound					Eastbound				
Roadway:	Georgia Ave					Fairmont Street (south)					Georgia Ave									
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	205	0	0	0	3	0	1	2	0	0	74	0	4	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	211	0	0	0	2	0	3	3	0	0	99	0	0	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	235	0	0	0	4	0	2	2	0	0	87	0	1	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	265	0	0	0	7	0	5	4	0	0	130	0	1	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	277	0	0	0	3	0	9	4	0	0	110	0	4	0	0	0	0	0
07:45 AM to 08:00 AM	0	1	324	0	1	0	6	0	11	3	0	0	154	0	3	0	0	0	0	0
08:00 AM to 08:15 AM	1	0	279	0	0	0	9	0	12	2	1	0	143	2	7	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	292	0	0	0	9	0	13	1	0	0	146	1	2	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	302	0	0	0	7	0	6	3	0	0	145	0	5	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	310	0	0	0	7	0	7	8	0	0	120	0	9	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	257	0	1	0	14	0	11	6	1	0	121	0	16	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	251	0	0	0	8	0	9	6	1	0	106	0	8	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																				
INT. PEAK HR (ALL VEH)	1199				1	73				9	592				17	0				0
07:45 AM to 08:45 AM	1	1	1197	0		0	31	0	42		1	0	588	3		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) **0.94**	0.25	0.25	0.92	n/a	**0.92**	n/a	0.86	n/a	0.81	**0.83**	0.25	n/a	0.95	0.38	**0.96**	n/a	n/a	n/a	n/a	**n/a**

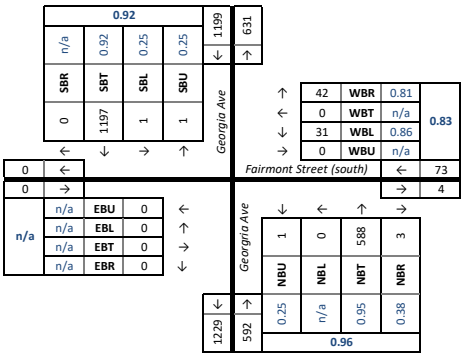
HEAVY VEHICLES (FHWA 4+)

Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Fairmont Street (south)				Georgia Ave							
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	5	0	0	0	0	0	0	0	7	0	0	0	0	0
06:45 AM to 07:00 AM	0	0	7	0	0	0	0	0	0	0	8	0	0	0	0	0
07:00 AM to 07:15 AM	0	0	6	0	0	1	0	1	0	0	8	0	0	0	0	0
07:15 AM to 07:30 AM	0	0	11	0	0	1	0	1	0	0	7	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	11	0	0	1	0	2	0	0	4	0	0	0	0	0
07:45 AM to 08:00 AM	0	1	10	0	0	1	0	1	0	0	9	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	6	0	0	1	0	1	0	0	11	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	10	0	0	3	0	1	0	0	4	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	8	0	0	1	0	0	0	0	6	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	15	0	0	1	0	1	0	0	9	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	13	0	0	2	0	1	0	0	11	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	9	0	0	1	0	1	0	0	8	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																
INT. PEAK HR (ALL VEH)	35				9				30				0			
07:45 AM to 08:45 AM	0	1	34	0	0	6	0	3	0	0	30	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	100.0%	2.8%	0.0%	0.0%	19.4%	0.0%	7.1%	0.0%	0.0%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%
2.9%				**2.9%**				**12.3%**				**5.1%**				**0.0%**
INT. PEAK HR (HV ONLY)	45				8				34				0			
08:30 AM to 09:30 AM	0	0	45	0	0	5	0	3	0	0	34	0	0	0	0	0
Heavy Vehicle % (PHV):	0.0%	0.0%	4.0%	0.0%	0.0%	13.9%	0.0%	9.1%	0.0%	0.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%
4.0%				**4.0%**				**11.6%**				**6.9%**				**0.0%**

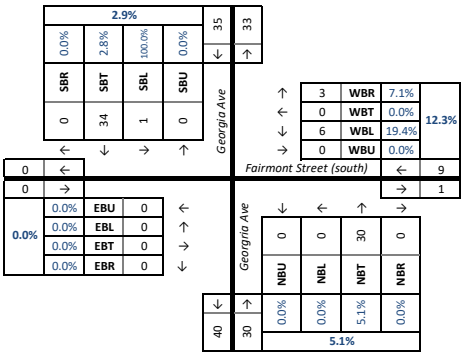
BICYCLES

Direction:	Southbound				Westbound				Northbound				Eastbound			
Roadway:	Georgia Ave				Fairmont Street (south)				Georgia Ave							
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
06:45 AM to 07:00 AM	0	0	2	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
07:15 AM to 07:30 AM	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0
07:30 AM to 07:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM to 08:00 AM	0	1	5	0	0	1	0	0	0	0	0	0	0	0	0	0
08:00 AM to 08:15 AM	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0
08:15 AM to 08:30 AM	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0
08:30 AM to 08:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM to 09:00 AM	0	0	7	0	0	1	0	0	0	0	0	0	0	0	0	0
09:00 AM to 09:15 AM	0	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0
09:15 AM to 09:30 AM	0	0	3	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																
INT. PEAK HR (ALL VEH)	16				1				2				0			
07:45 AM to 08:45 AM	0	1	15	0	0	1	0	0	0	0	2	0	0	0	0	0
INT. PEAK HR (BIKES)	18				3				1				0			
08:15 AM to 09:15 AM	0	0	18	0	0	2	0	1	0	0	1	0	0	0	0	0

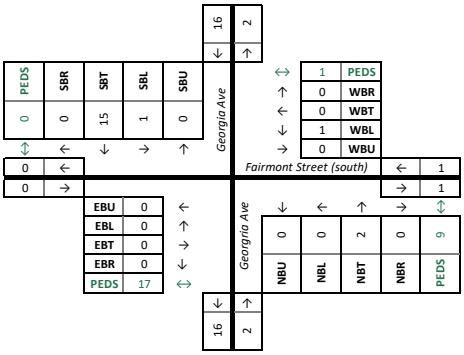
VEHICLE PEAK HOUR VOLS AND PHF: Intersection Peak (vehicle)



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



PED AND BIKE PEAK HOUR VOLUMES: Intersection Peak (vehicle)



DATA COLLECTION NOTES :