



# WELLS + ASSOCIATES

Transportation Demand Management Consultants



## MedStar Georgetown University Hospital Transportation Demand Management (TDM) Plan

October 2016

# Table of Contents

- Section 1..... 4**
  - 1.1 Background Information ..... 4
  - 1.2 Anticipated Hospital Growth ..... 4
  - 1.3 Trip Generation ..... 5
- Section 2..... 7**
- Market Research..... 7**
  - 2.1 Stakeholder Involvement..... 7
  - 2.2 Commute Survey..... 8
  - 2.3 Peer Review ..... 10
- Section 3..... 11**
- Assessment of Existing Campus Transportation Choices..... 11**
  - 3.1 Existing Connections to Campus ..... 11
    - 3.1.1 Transit Access and Support Strategies..... 11
      - On-Campus Bus Stops ..... 11
      - Publicly Funded Transit Service ..... 12
      - GUTS/ International Limo ..... 18
      - Transit Support Strategies ..... 21
      - Free GUTS Fare ..... 21
      - SmartBenefits Program..... 21
    - 3.1.2 Bicycle Amenities and Support Strategies ..... 21
      - Publicly Funded Bicycle Amenities..... 21
      - University and Hospital Funded Bicycle Amenities ..... 22
    - 3.1.3 Carshare Amenities and Incentives ..... 22
    - 3.1.4 Parking Supply Management and Pricing ..... 23
  - 3.2 Existing Regional Programs ..... 25
    - 3.2.1 Commute Assistance..... 25
    - 3.2.2 Commute Incentives/Benefits ..... 26
      - SelectPass..... 26
      - Live Near Your Work Program ..... 26
    - 3.2.3 Events/Campaigns ..... 26
      - Walk to Work Day ..... 26
      - Earth Day..... 26



National Bike to Work Day.....	27
Dump the Pump.....	27
Try Transit Week.....	27
International Car Free Day.....	27
<b>Section 4.....</b>	<b>28</b>
<b>TDM Performance Targets .....</b>	<b>28</b>
<b>Section 5.....</b>	<b>31</b>
<b>Supplemental Strategies .....</b>	<b>31</b>
5.1 Base Supplemental Strategies .....	31
5.1.1 Communications, Education and Support.....	32
Carpool/Vanpool Ridematching.....	32
Support Flexible Work Operations .....	33
Internal TDM Communications.....	33
External TDM Advocacy .....	36
5.1.2 Transportation Infrastructure.....	36
Install Additional Bikeshare Station.....	36
Improve Bicycle Infrastructure .....	37
Enhance the GUTS Bus Service .....	37
Electronic Transportation Information Display .....	38
5.1.3 Parking Management.....	38
Monthly Parking Pass Alternatives and Garage Equipment Upgrade .....	39
Preferred and Free Carpool Parking Spaces .....	39
5.2 Additional Supplemental TDM Strategies.....	40
Transit Subsidies .....	40
Relocate Parking Off-Campus .....	40
<b>Section 6.....</b>	<b>42</b>
<b>TDM Monitoring and Evaluation .....</b>	<b>42</b>
<b>Section 7.....</b>	<b>45</b>
<b>Enforcement.....</b>	<b>45</b>
<b>Section 8.....</b>	<b>46</b>
<b>TDM Cost Estimates and Staffing Needs.....</b>	<b>46</b>
<b>Attachments .....</b>	<b>47</b>
<b>Attachment I: 2015 Commute Survey Results .....</b>	<b>48</b>

## Section 1

# MedStar Georgetown University Hospital TDM Overview

### 1.1 Background Information

Georgetown University is home to the MedStar Georgetown University Hospital (hereinafter referred to as the Hospital or MGUH). The Hospital is a not-for-profit, acute-care teaching and research hospital with 609 licensed beds located in the northern district of the University's main campus along Reservoir Road. MGUH's Centers of Excellence include cancer, neurosciences, gastroenterology, transplant, and vascular diseases.

MGUH offers many services for complex diseases not offered at other hospitals in the region. Among many accolades, MGUH is the only hospital in Washington, DC to earn designation as a Center of Excellence by the National Parkinson Foundation and is the only comprehensive transplant center in DC and Southern Maryland to earn accreditation from the Foundation for the Accreditation of Cellular Therapy. In addition, the Transplant Center for Children is the only facility of its type in the DC area and the Lombardi Comprehensive Cancer Center is the region's only accredited NCI designated Comprehensive Cancer Center.

MGUH is engaged in a comprehensive master planning process to ensure that the Hospital has the physical infrastructure to support future healthcare demands. Since 2014, the Hospital has worked closely with the University and the community through the Georgetown Community Partnership (GCP) on a wide range of issues, including how to effectively manage transportation-related impacts associated with potential growth at the Hospital. The 2017 Georgetown University Campus Plan reflects a 20-year campus plan developed in close collaboration with the University, the GCP, and the Hospital. Although the Main Georgetown Campus includes both Georgetown University and MedStar Georgetown University Hospital, each institution will have a separate TDM Plan to reflect the differing needs of their respective populations and business models. It is with that background in mind that the Hospital has committed to implementing Transportation Demand Management (TDM) strategies to mitigate the projected traffic impacts generated by planned Hospital growth. This document identifies the TDM strategies that help the Hospital ensure they are successful in traffic mitigation efforts.

The goals, strategies and recommendations for the Hospital presented herein, were developed with construction of a new medical pavilion in mind.

### 1.2 Anticipated Hospital Growth

MGUH has 609 beds and employs 4,434<sup>1</sup> employees. The planned growth for the Hospital addresses two issues:

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<sup>1</sup> Reflects an additional 20 employees beyond what is included in the campus plan.

- 1) Modernization of its current facilities (e.g. conversion of shared rooms to single-occupant rooms and adequately sized facilities to accommodate the latest medical equipment) and
- 2) Accommodation of future medical needs of the aging District population.

In order to address these issues, MGUH proposes to construct a new medical/surgical pavilion of up to 450,000 SF on campus. The new pavilion will contain 122 new beds. MedStar anticipates 655 new additional employees will occupy the new pavilion. An additional 50 employees could be realized by the end of the 20-year term of the Campus Plan, for a total of 705 new employees over the term of the Campus Plan. The vast majority of these employees, 694, would be hospital-based employees. The remaining 11 new employees would be office employees. The Pavilion will house a new and modernized Emergency Department with the latest high-tech treatment bays, new operating rooms, surgical and critical care services, new intensive care beds with the latest IT capability, a rooftop helipad and the most advanced imaging services dedicated for emergency and critical care patients.

### **1.3 Trip Generation**

Trip generation forecasts for the above scenarios for the Hospital were determined by comparing existing trip counts from January/February 2015 to Institute of Transportation Engineers (ITE) Trip Generation Manual rates/equations based on square footage, beds, and employees. Further, the Hospital complex on campus comprises both hospital and medical office uses. Of the inputs used in the ITE Trip Generation model, the number of employees for both the hospital and medical offices most closely predicted the trip generation for existing conditions and, therefore, was used to estimate the number of new trips that would be generated by each future scenario.

The number of trips that would be generated by an additional 705 employees for a future scenario with the pavilion is summarized in Table 1.1. Appendix A contains the calculations used to determine the number of trips contained in Table 1.1. More details of the trip generation analysis can be found in the Georgetown University 2017 Campus Plan Comprehensive Transportation Review.

The forecasted growth assumes that existing travel behaviors are maintained in the future.

**Table 1.1**  
Trip Generation with New Pavilion

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Existing Vehicle Trips	903	407	1,310	193	795	988
<b>New Medical/Surgical Pavilion (705 employees)</b>						
Additional Trips	94	37	131	16	42	58
<b>Total # of Trips</b>	<b>997</b>	<b>444</b>	<b>1,441</b>	<b>209</b>	<b>837</b>	<b>1,046</b>

## Section 2

# Market Research

Hospital stakeholders were engaged in several market research efforts to understand their wants and needs. The information from this market research was used to ensure that outreach, marketing, and operational efforts recommended for the TDM Program are strategic and effective at getting desired results. To ensure that the TDM Plan proposes the latest and most effective behavior change strategies, a review of several peer hospitals was also conducted.

### 2.1 Stakeholder Involvement

In May of 2015, W+A conducted interviews with key Hospital stakeholders to understand the existing transportation conditions and potential opportunities for TDM at MGUH. This approach centered on the strengths, opportunities, aspirations, results (SOAR) analysis which serves as a strategic planning tool that focuses an organization on its current strengths and vision for developing its strategic goals. The following key Hospital internal stakeholder groups participated in the effort and provided their feedback about transportation at MGUH:

- Design and Construction
- Safety and Support Services
- Human Resources
- Public Affairs
- Marketing
- Community Engagement

Additionally, key external stakeholders from neighboring residential communities (including members of the GCP and Advisory Neighborhood Commissions 2E and 3D) as well as businesses (including Georgetown Business Improvement District) also participated in the effort and provided their feedback about transportation at MGUH. Results of the Stakeholder Interviews were aggregated to identify emerging trends amongst all stakeholder groups. Recurring themes were prioritized within each category of the SOAR analysis. Results of the SOAR analysis are contained in Table 2.1.



**Table 2.1**  
Results of Stakeholder Interviews

SOAR	Question Applied to Stakeholder Interview	Responses from Stakeholders
Strengths	The greatest strengths of current transportation system at MGUH's Main Campus	Public Transit and GUTS Connections between Campus and Metro
		Maximize Existing On Campus Parking Supply
		Relocating High Traffic Services
Opportunities	The best opportunities to improve transportation system on MGUH's Main Campus	Alternative Work Schedules
		Communications
		Parking Supply for On-Campus Users
Aspirations	The preferred future for transportation at MGUH's Main Campus	Agreement between the campus and community
		Easy Access to Campus
Results	The measurable results that will tell us we have achieved that vision of	Customer Satisfaction
		Employee Productivity

## 2.2 Commute Survey

The current 2010 Campus Plan is subject to a number of conditions of approval, including the requirement to conduct an annual transportation performance monitoring study. This annual study includes a transportation survey (the “Commute Survey”), which is issued to all MGUH employees. The survey has been conducted since 2012 and collects pertinent information on the travel behavior of employees at the Hospital as well as the effects particular TDM strategies may have on MGUH employee travel behavior.<sup>2</sup> Data from the 2015 Commute Survey were used to inform many of the strategies within Section 5 of this TDM Plan.

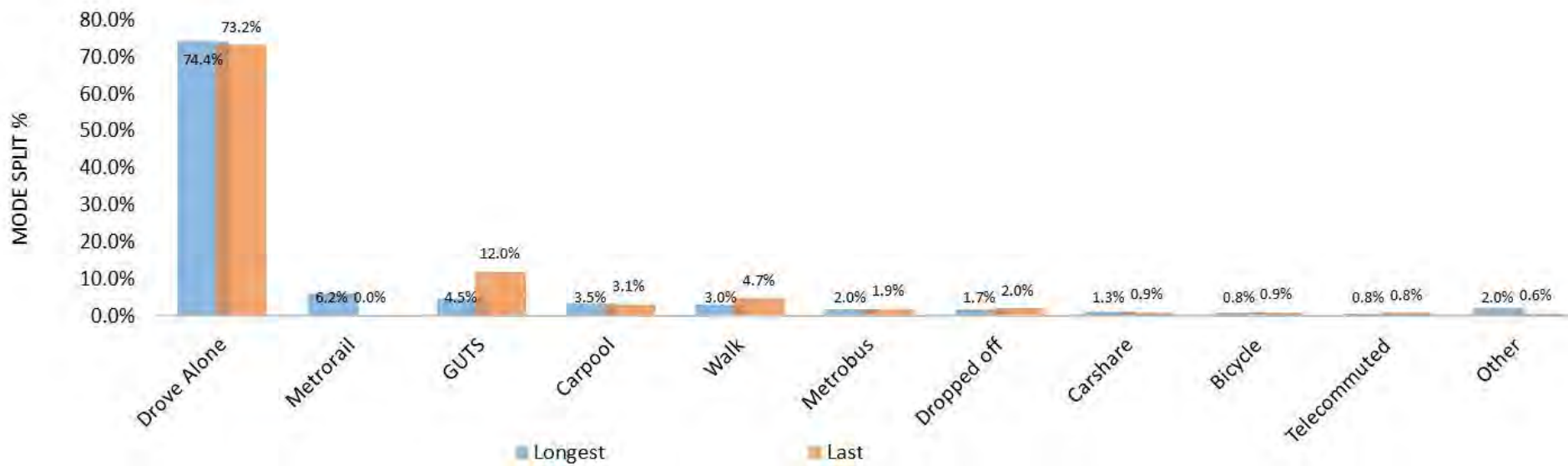
The 2015 Commute Survey identified mode splits for two segments of an employee’s commute. The first segment was for the longest part of their commute to provide insights about their impact on regional traffic congestion and carbon emissions. The second segment was for the last leg of their commute to provide insights about their impact on traffic and parking on and surrounding the Georgetown Campus.

The 2015 Commute Survey found that nearly 19 percent of MGUH employees travel via non-auto modes of transportation for the **longest** portion of their commute, while 81 percent travel via auto modes. Of the 81 percent who travel via auto modes, 74 percent do so in single-occupancy-vehicles (SOVs). A detailed breakdown by specific mode for the longest portion of the commute is provided in Figure 2.1. The 2015 Commute Survey also found that 20 percent of employees travel via non-auto modes of transportation for the **last** portion of their commute, while 80 percent travel via auto modes. Seventy-three of the 80 percent that travel via auto modes do so in SOVs. A detailed breakdown by specific mode for the last portion of the commute also is provided in Figure 2.1.

<sup>2</sup> Wells + Associates was first hired to perform surveys for the Hospital in 2015.



**Figure 2.1**  
 2015 MGUH Employee Mode Split:  
 Longest vs. Last Segment of Trip to Campus



### **2.3 Peer Review**

Hospitals have a rich history of providing successful TDM Programs as a means to reduce parking demand and traffic congestion on and around their institution. In order to identify best practices that could be applied to this TDM Plan, peer reviews were done of Seattle Children's Hospital, Partners Healthcare - Assembly Square, Emory University Hospital, and UCLA Medical Center. These Hospitals were specifically chosen since, like MGUH, they are in large metropolitan areas, but are not adjacent or immediately proximate to their region's high speed transit network. The best practices from these peer reviews both affirmed MGUH's existing TDM and parking strategies as well as identified opportunities to enhance them. Additionally, they provided best practices for the measurements of a successful TDM program.

## Section 3

# Assessment of Existing Campus Transportation Choices

This section takes a full inventory of the transportation infrastructure connecting the campus to the region, identifies existing regional programs that the Hospital can utilize to encourage non-SOV travel, and itemizes the Hospital's current efforts to reduce vehicle trips to the Georgetown campus.

### 3.1 Existing Connections to Campus

Within its location on Georgetown University's main campus, the Hospital is accessible by several forms of transportation made possible in large part by GUTS (Georgetown University Transportation System), which provides critical links to the Metro system and other key off-campus locations. The campus also is served by the DC Circulator; and Metrobus. Bicyclists can make use of multitude of bike racks on campus that provide over 1,100 spaces or a Capital Bikeshare station located at 37th and O Streets, NW. Various carsharing options (including ZipCar and Car2Go) are also available on or near campus. An on-campus inventory of 4,080 parking spaces (1,380 designated for University use and 2,700 designated for Hospital use) is distributed across 15 parking facilities to support travelers that need to drive to campus.

In order to disseminate information about the various travel alternatives to the Hospital, MGUH hosts two transportation websites: one site for prospective employees and another site for visitors/patients. These websites include information about GUTS, public transportation, and driving/parking.

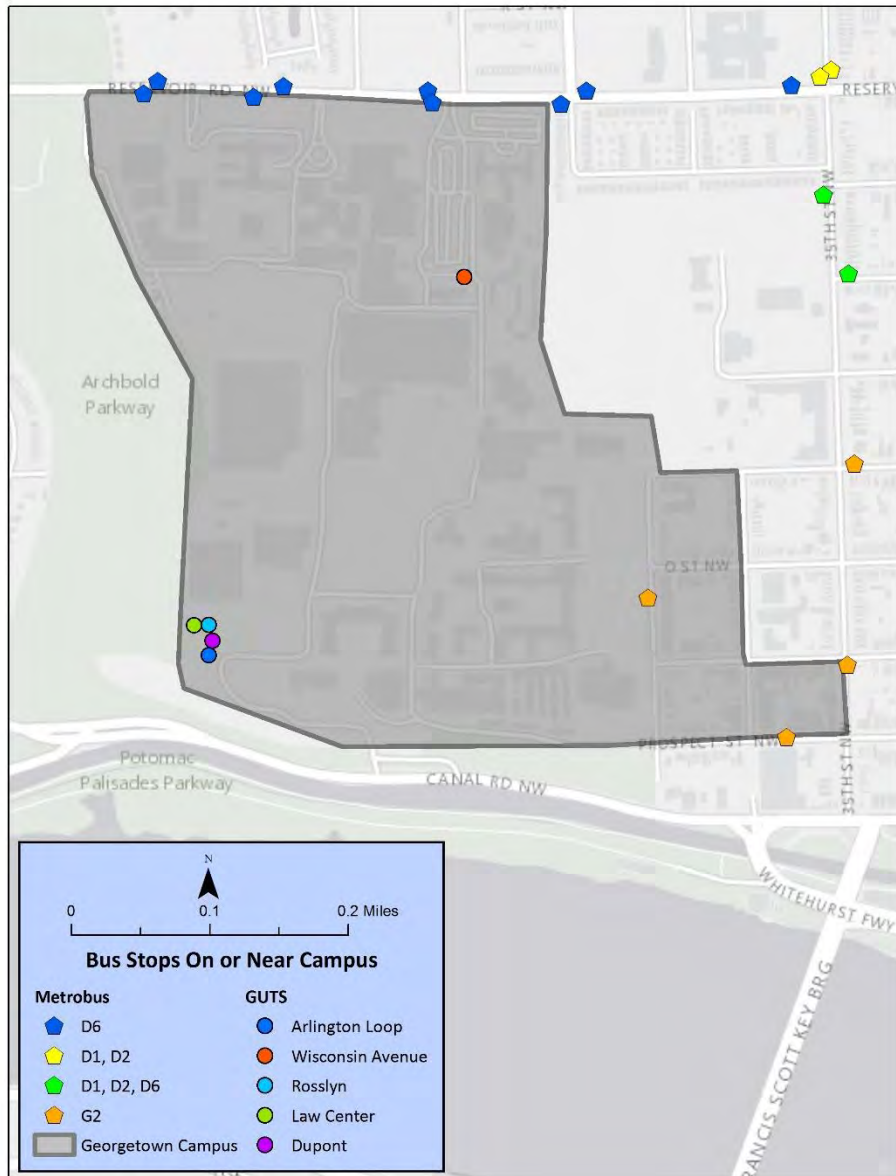
#### 3.1.1 Transit Access and Support Strategies

The 2015 Commute Survey found that 14 percent of all MGUH campus commute trips arrived on campus via some form of transit on the last leg of their commute. Viewed alternatively, 52 percent of the 27 percent total non-SOV trips arrived to campus via transit services including Metrobus, Circulator and the Hospital/University funded GUTS system.

##### *On-Campus Bus Stops*

In 2015, the McDonough Turnaround was constructed by the University on the southwest corner of campus to maximize the use of the University's Canal Road entrance and effectively divert shuttles away from neighborhood streets and enhance the pedestrian experience throughout the core of campus. The McDonough Turnaround provides sheltered bus stops for four of the five GUTS routes (Dupont, Rosslyn, Arlington, and Law Center). The Wisconsin Avenue shuttle stops on the north side of campus next to Darnall Hall. Two ADA compliant 10-seat mini shuttle buses which travel along West Road between the bus turnaround and the Hospital are provided to assist people getting from the McDonough Turnaround to the Hospital. Metrobus Routes D2 and D6 serve the campus along Reservoir Road with a covered bus shelter located near Gate 1. Metrobus Route G2 stops at the covered bus shelter along 37<sup>th</sup> Street at O Street. All transit stops serving campus directly and the internal minibus can be seen in Figure 3.1. These stops are serviced by GUTS and Metrobus.

**Figure 3.1**  
**Bus Stops Serving the Georgetown Campus**



*Publicly Funded Transit Service*

According to the 2015 Commute Survey, two percent of commuters arrived on campus to the Hospital on the last leg of their commute via some form of public transportation whether it was Circulator or Metrobus. Viewed alternatively, seven percent of the 27 percent total non-SOV trips arrived to campus via public transit. Services adjacent to campus, their operating schedule, and geographic extent are discussed in more detail within this section.

Circulator

The DC Circulator provides public transportation to several of the District of Columbia’s most popular neighborhoods at a cost of \$1.00 per trip. Although the Hospital is not directly served

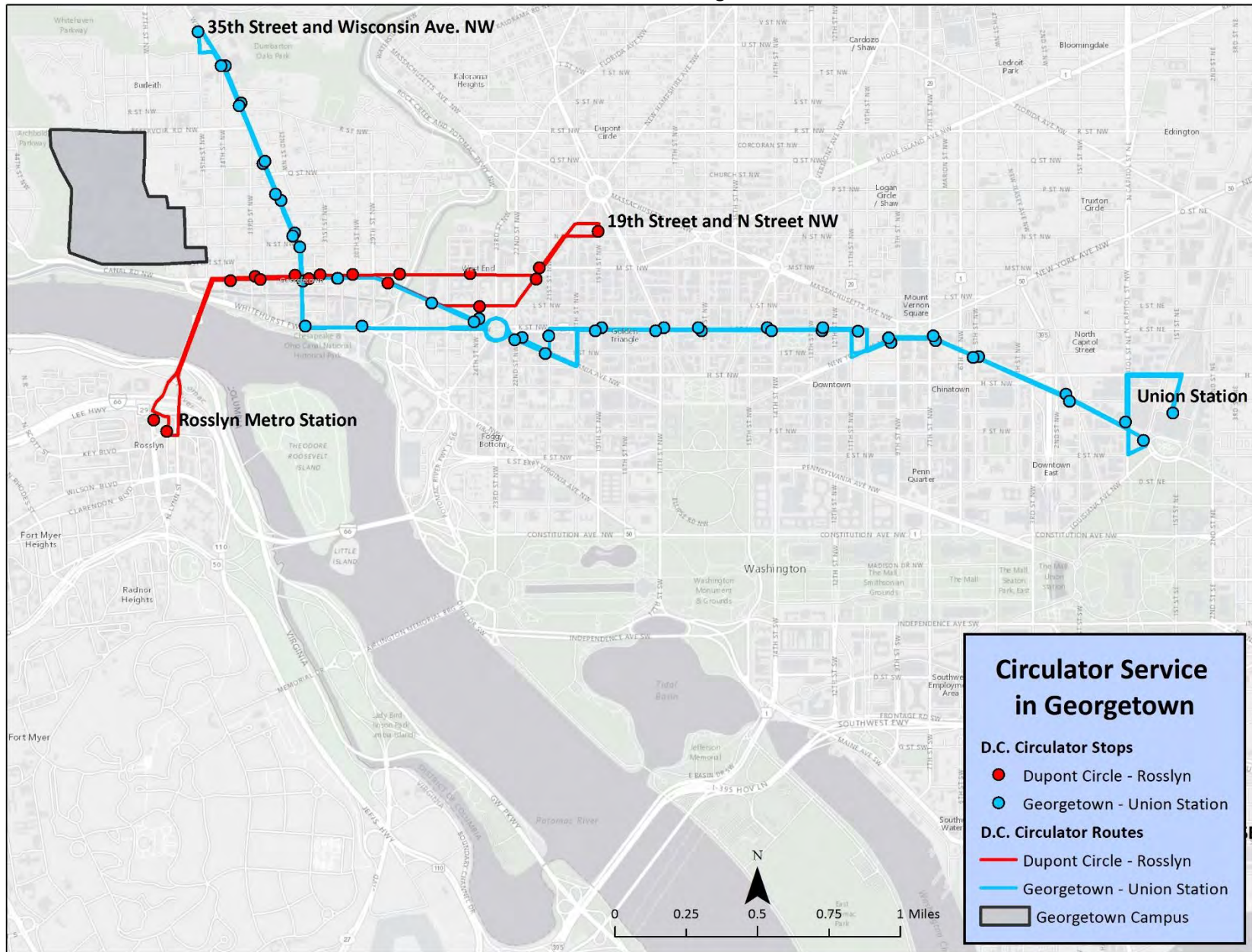
by the Circulator, two routes stop within a half mile of the Georgetown Campus. Table 3.1 below provides an overview of current route operations. Figure 3.2 shows a map of each of the routes.

**Table 3.1**  
Circulator Service in Georgetown

Route	Weekday Service Hours	Weekday Peak Hour Headway	Weekday Off-Peak Hour Headway	Saturday Service Hours	Saturday Service Headway	Sunday Service Hours	Sunday Service Headway
Georgetown - Union Station	7:00 AM - 12:00 AM	10 Min	10 Min	7:00 AM – 2:00 AM	10 Min	7:00 AM – 12:00 AM	10 Min
Dupont Circle - Georgetown - Rosslyn	7:00 AM – 12:00 AM	10 Min	10 Min	7:00 AM – 2:00 AM	10 Min	7:00 AM – 12:00 AM	10 Min



**Figure 3.2**  
Circulator Service to Georgetown



Metrobus

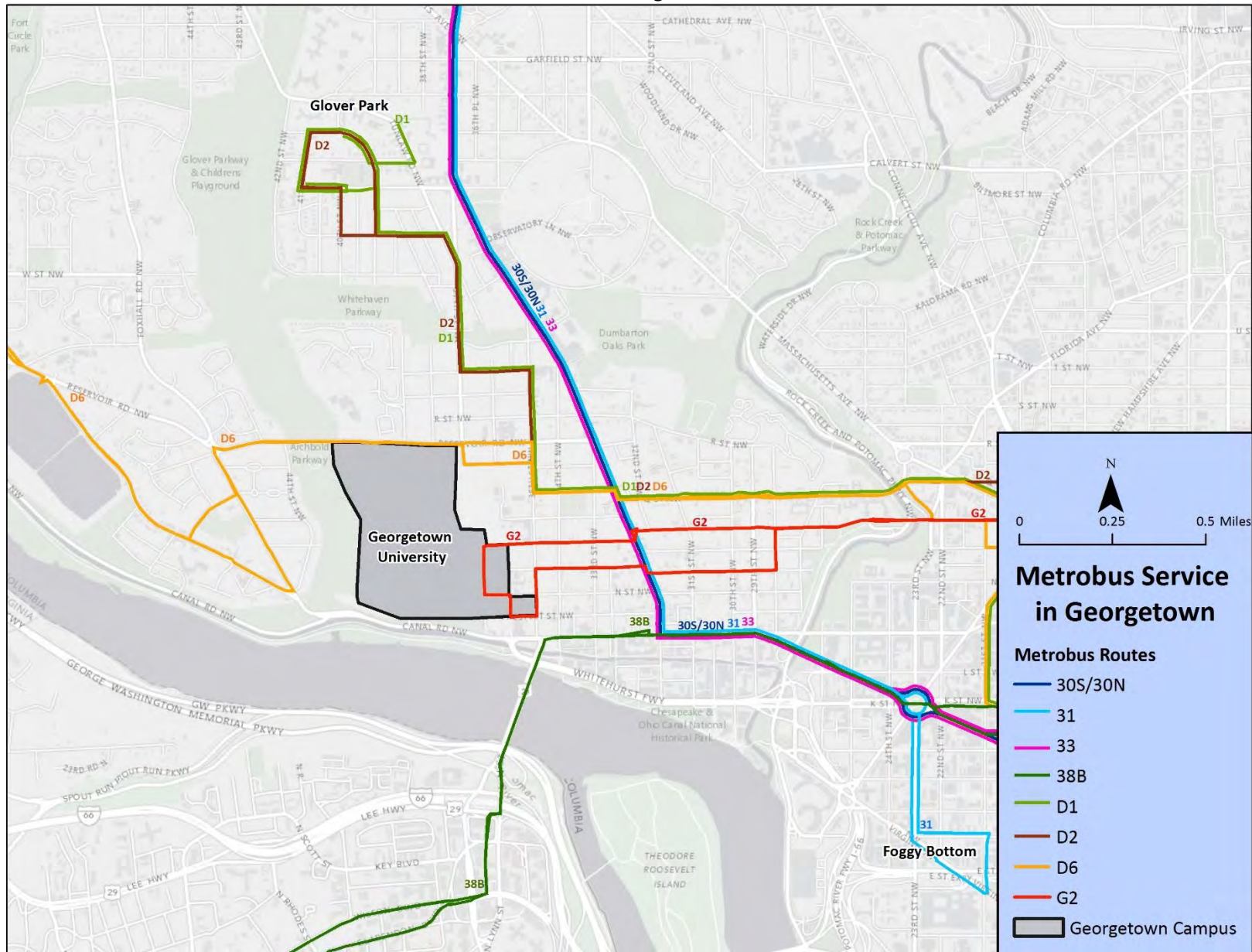
Metrobus, which is operated by WMATA, has four routes that serve campus directly and four additional routes that operate within a half mile of campus. All route schedules are posted on WMATA’s website. Real time travel information for these routes is publicly available through mobile phone applications as well as on the WMATA website. Table 3.2 below provides an overview of current route operations. Figure 3.3 and 3.4 shows a map of each of the routes.

**Table 3.2**  
Metrobus Service in Georgetown

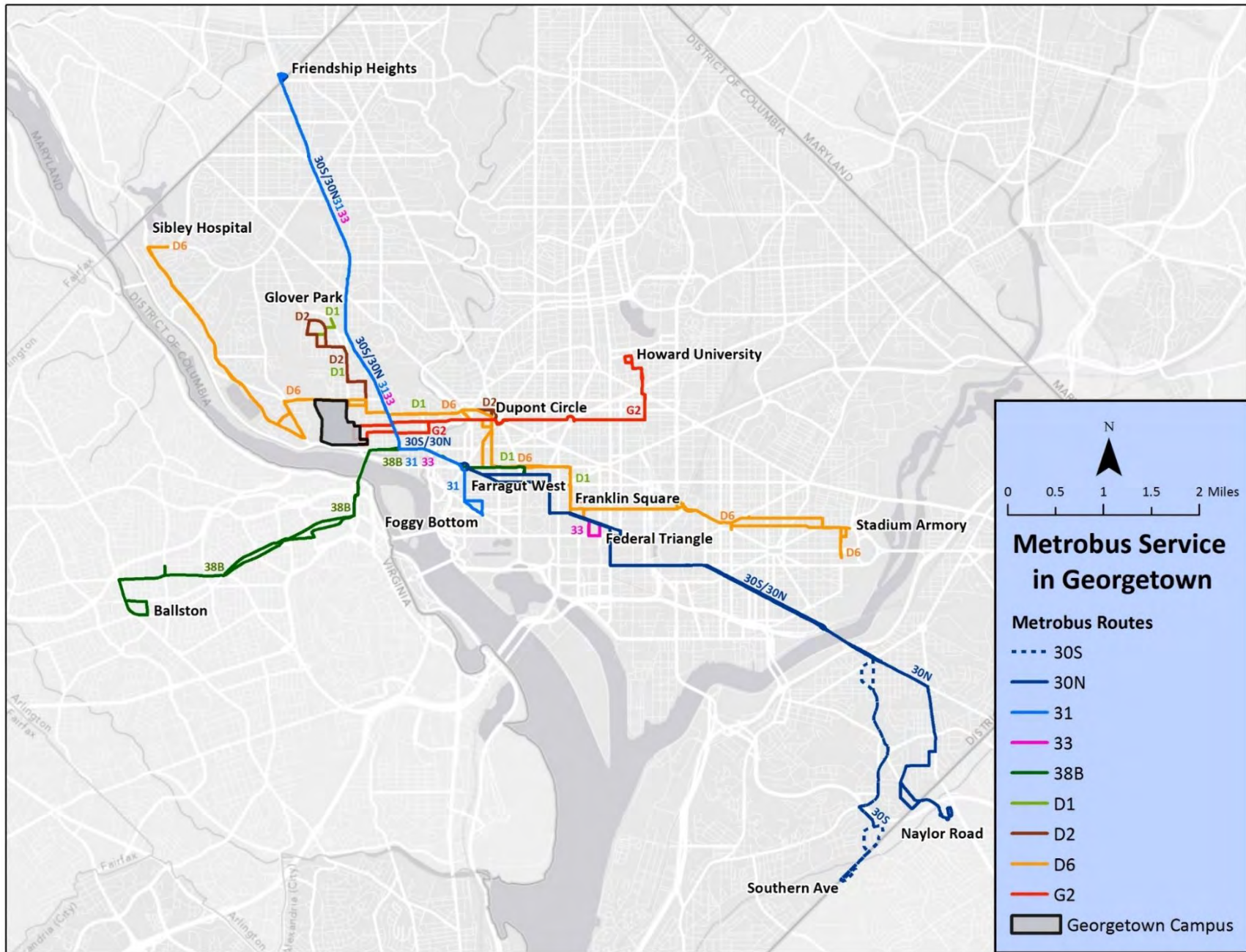
Route	Weekday Service Hours	Weekday Service End	Weekday Off-Peak Hour Headway	Saturday Service Hours	Saturday Service Headway	Sunday Service Hours	Sunday Service Headway
<b>Routes Serving Campus</b>							
D1	7:10 AM – 7:43 PM	15 Min	No Service	7:14 AM – 7:25 PM	20 Min	No Service	No Service
D2	5:34 AM – 2:21 AM	10 Min	20 Min	6:33 AM – 2:32 AM	22 Min	6:47 AM – 12:59 AM	20 Min
D6	4:10 AM – 1:43 AM	10 Min	30 Min	4:45 AM – 1:18 AM	30 Min	5:15 AM – 1:19 AM	35 Min
G2	5:10 AM – 1:24 AM	12 Min	30 Min	6:05 AM – 1:25 AM	30 Min	6:30 AM – 12:49 AM	30 Min
<b>Routes Within Half a Mile of Campus</b>							
30N/S	4:02 AM – 2:47 AM	30 Min	30 Min	4:29 AM – 3:09 AM	30 Min	4:10 AM – 2:37 AM	30 Min
31	4:21 AM – 11:30 PM	20 Min	30 Min	6:26 AM – 12:09 AM	30 Min	6:36 AM – 7:42 PM	30 Min
33	5:05 AM – 9:37 PM	25 Min	30 Min	6:05 AM – 9:49 AM	30 Min	6:44 AM – 9:16 PM	30 Min
38B	5:20 AM – 1:52 AM	15 Min	30 Min	5:50 AM – 1:54 AM	30 Min	5:50 AM – 12:20 AM	30 Min



**Figure 3.3**  
**Metrobus Service in Georgetown – Zoomed In**



**Figure 3.4**  
 Metrobus Service in Georgetown – Zoomed Out





### *GUTS/ International Limo*

The University's transportation system (GUTS) provides a fleet of buses and shuttles that provide connections from campus to the Metrorail system and other key off-site locations. Five routes currently are in operation. Table 3.3 provides an overview of current GUTS bus operations and Figure 3.5 shows a map of the current shuttle routing. GUTS service is available to all Hospital employees, visitors and patients for free. MGUH makes a contribution to the University for GUTS service on any holidays that GUTS may not otherwise run. MGUH also supplements the GUTS system with additional service for the Dupont Circle and Rosslyn routes using International Limo. The supplemental shuttles follow the same routes and use the same stops both on and off-campus as the University shuttles. As such, the riders do not perceive any difference between the University and Hospital funded shuttle services. Schedule information is readily available on the MedStar Georgetown Website. Two routes are actively promoted on the website: The Dupont Circle Route and the Rosslyn Route.

These shuttle operations capture the largest share of non-SOV commute trips to the Hospital. According to the 2015 Commute Survey, approximately 12 percent of all commute trips used GUTS on the last leg of the trip to campus. This represents 45 percent of the 27 percent total non-SOV trips arriving to campus.

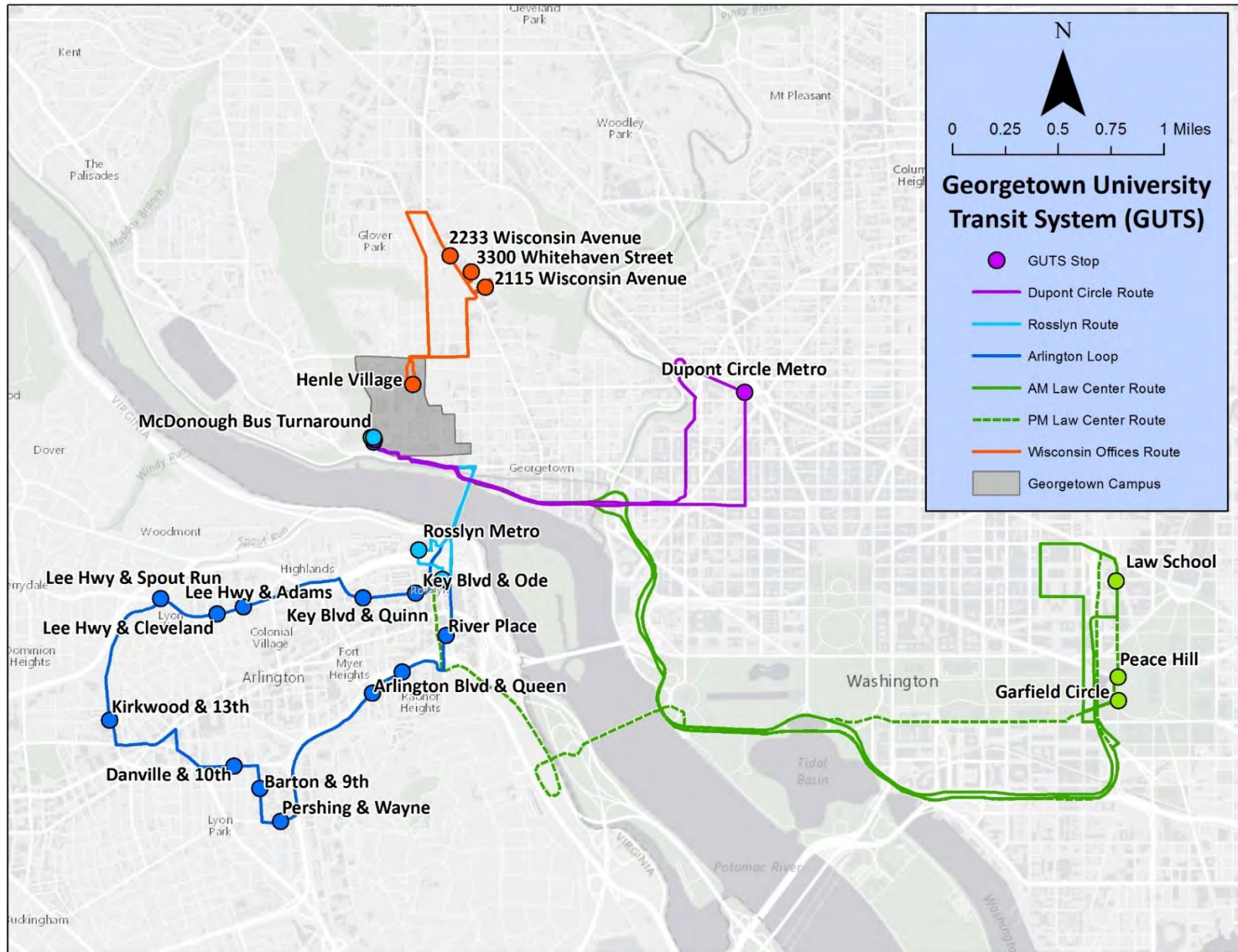
### Metrorail

With 91 stations and over 100 miles of rail, the WMATA Metrorail system is one of the largest in the United States, providing intra-regional connections between Virginia, Maryland, and Washington DC. The Redline Metrorail Station closest to the Hospital is the Dupont Circle Metrorail Station, and the Orange/Blue/Silver Line closest to the Hospital is the Rosslyn Metrorail Station, both of which are located within two miles of campus. Access to these Metrorail stations from the Hospital is conveniently provided by GUTS. Employees of the Hospital also can access the Metrorail stations via the D6 Metrobus route, which stops on Reservoir Road immediately outside of the main hospital campus. The Metro stations also are close enough that one may choose to connect from Metrorail to Campus via Capital Bikeshare or walking.

**Table 3.3**  
GUTS Operations

Route	Operation Description	Weekday Service Hours	Weekday Peak Hour Headway	Weekday Off-Peak Hour Headway	Saturday Service Hours	Saturday Headway	Sunday Service Hours	Sunday Headway
<b>Co-Operated (Hospital &amp; University)</b>								
Rosslyn	Route connects main campus to the Rosslyn Metrorail station which serves the Blue, Orange, and Silver Line.	4:45 AM – 12:00 AM	10 Min	20 Min	11:30 AM – 5:35 PM	80 Min	No Service	No Service
Dupont Circle	Route connects main campus to the Dupont Circle Metrorail station which serves the Red Line.	6:00 AM – 12:00 AM	10 Min	20 Min	12:15 PM – 6:15 PM	80 Min	12:10 PM – 3:45 PM	30 Min
<b>University Operated</b>								
Wisconsin Offices	Route connects main campus to off-campus offices located at 3300 Whitehaven and 2115 & 2233 Wisconsin Avenue.	7:00 AM – 7:09 PM	10 Min	20 Min	No Service	No Service	No Service	No Service
Law Center	Route connects main campus to the Georgetown University Law Center on Capitol Hill.	7:55 AM – 10:10 PM	70 Min	70 Min	No Service	No Service	No Service	No Service
Arlington Loop	Route connects main campus to North Arlington, VA.	7:10 AM – 10:20 PM	60 Min	60 Min	No Service	No Service	No Service	No Service

**Figure 3.5**  
GUTS Service



### *Transit Support Strategies*

MGUH provides the following transit benefits to its affiliates:

#### *Free GUTS Fare*

The Hospital supplements and contributes to the University-funded GUTS system, and access to all GUTS routes is provided free of charge for Hospital staff, patients and visitors.

#### *SmartBenefits Program*

As a benefit to employees, the Hospital offers SmartBenefits, a pre-tax transportation program that can be used towards travel costs for Metrorail, buses, vanpools and other forms of mass transit. The Hospital's free shuttle bus service coupled with the University's free GUTS bus service and its participation in SmartBenefits predates the DC Commuter Benefits Law which was included in the Sustainable DC Omnibus Amendment Act of 2014 and went into effect January 1, 2016. The Act requires employers with 20 or more employees located in Washington, D.C. to offer commuter transit benefits to their employees in at least one of the following manners:

- Pre-tax transportation fringe benefit
- Employer-paid benefit
- Employer provided transit service

Of note, MGUH employees are offered two of these benefits (pre-tax transportation benefit and employer provided transit service).

### **3.1.2 Bicycle Amenities and Support Strategies**

Bicycling is an important regional travel mode for a growing number of commuters. According to the MGUH 2015 Commuter Survey, one percent of all commuters arrived at the Hospital via bicycle.

#### *Publicly Funded Bicycle Amenities*

The following amenities are maintained by public agencies and are available for use by both Hospital affiliates and the general public.

#### *Bicycle Connections*

The Georgetown University Campus is not directly connected to any bicycle lanes on public streets; however, the adjacent neighborhood features many low volume roads that are comfortable for biking. Within a half mile of campus, bicyclists can access major regional bike paths such as the Capital Crescent Trail and Rock Creek Park.

#### *Capital Bikeshare*

Capital Bikeshare is a successful program that makes bicycles available for shared use to individuals on a very short term basis. By allowing individuals to borrow a bike from point "A" and return it at point "B," each bike serves several users per day. A Capital Bikeshare station with capacity for 23 bikes is located at the O Street entrance to the Campus. The District

Department of Transportation's (DDOT's) September 2015 Capital Bikeshare Development Plan includes a recommendation for an additional Bikeshare station near the campus by 2018.

#### *University and Hospital Funded Bicycle Amenities*

The following amenities are maintained by Hospital/University and are available for use by Hospital employees, visitors, and patients.

#### Bike Racks

The University and Hospital continually evaluate the supply of bike racks on the campus to meet the demand of their users. Over 100 racks (including 27 racks recently installed by the University on Prospect Street and 35<sup>th</sup> Street) designed to store 1,167 bicycles are located across campus. A map showing the location of these bicycle racks is located in Appendix A. Several of these racks are adjacent to the Hospital and have a capacity for 90 bicycles. In September 2015, 86 percent of the rack storage near the Hospital was utilized during peak usage.<sup>3</sup>

#### Bicycle Repair Station

A University-sponsored bicycle repair station located near the Intercultural Center (ICC) Building is available for use by MGUH employees and is within ¼ mile of the Hospital.

#### Showers and Lockers

The Hospital offers shower access to commuters who bike or walk to campus. Showers are located throughout the Hospital at various department locations.

### **3.1.3 Carshare Amenities and Incentives**

Carsharing refers to a short-term automobile rental service available to the general public for a limited timeframe, typically only a few hours. Two carshare companies provide service near the Hospital: ZipCar and Car2Go.

#### ZipCar

Seven Zipcars are located on the Georgetown University campus. Four Zipcars are located on Tondorf Road in front of Village C and three Zipcars are located at the north end of campus by the corner of Darnall Hall. Additional Zipcars are located nearby at the following locations in the District:

- Wisconsin Avenue and O Street – three cars,
- 3237 N Street – one car,
- 3053 M Street (Colonial Parking Lot) – one van and three cars.

#### Car2Go

Car2Go requires a one-time, \$35 application fee. Once registered, a member card is issued, which enables members to access any available car. No reservation is required and car usage is charged by the minute, with hourly and daily maximum fees. Unlike Zipcar, a Car2Go vehicle does not have to be returned to its original location. A Car2Go vehicle can be returned to any

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<sup>3</sup> Percent occupancy includes bicycles parked in the vicinity of a rack, but not necessarily chained to a rack.

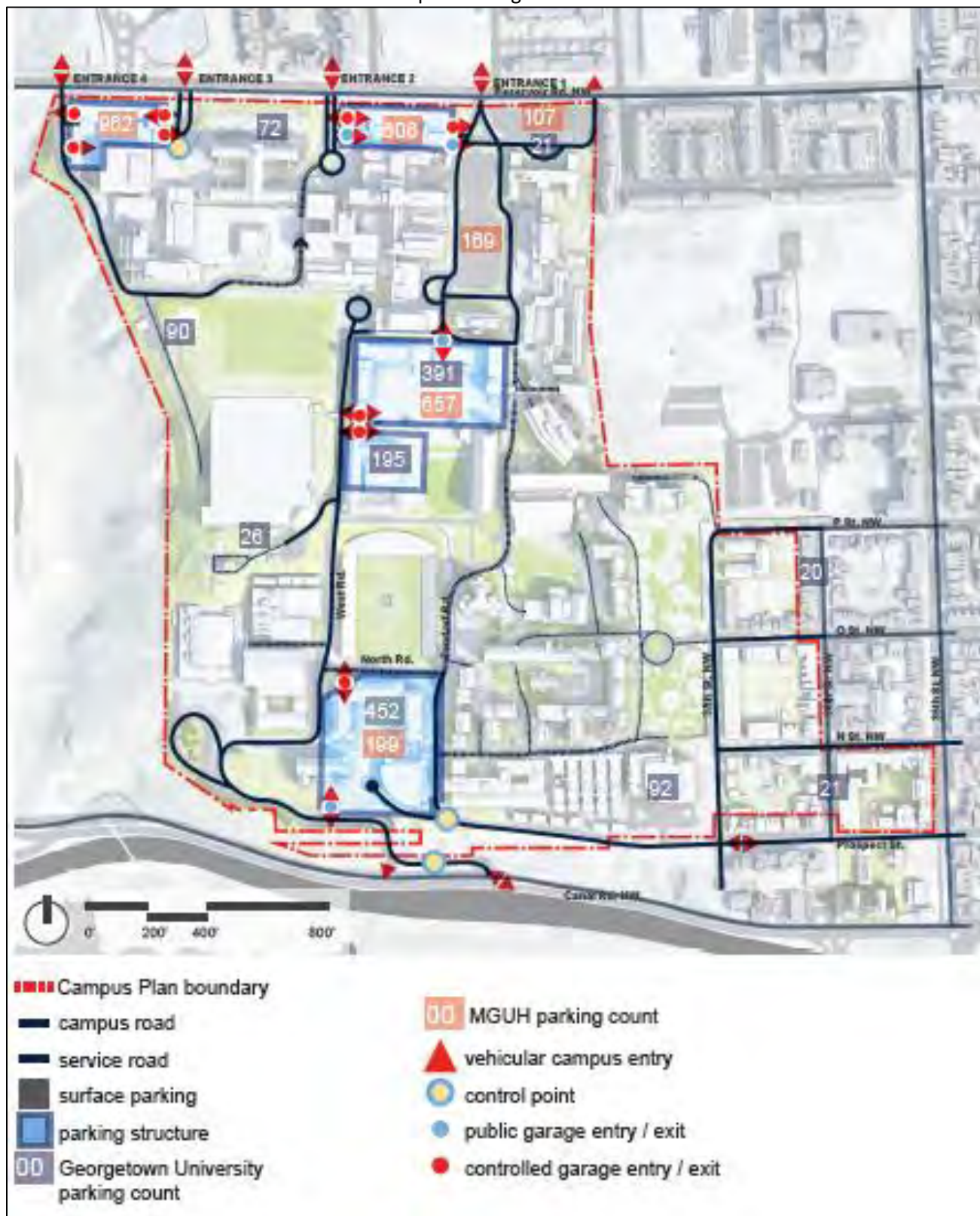


unrestricted curbside parking space, in any metered/pay station curbside parking space (without paying meter/pay station fees), or in any residential permit parking space. Car2Go currently has 500 vehicles in the District.

#### **3.1.4 Parking Supply Management and Pricing**

The campus is currently capped at 4,080 parking spaces on campus. Of the 4,080 spaces on campus, 1,380 parking spaces (or 33.8 percent) are designated for University use and 2,700 parking spaces (or 66.2 percent) are designated for Hospital use. Marked spaces account for 3,497 (or 85.7 percent) of the total, while the remaining 583 spaces are unmarked/stacked spaces that fluctuate in location due to displaced parking caused by construction activities and valet parking available at some garages. The on-campus parking facilities are shown on Figure 3.6.

**Figure 3.6**  
On-Campus Parking Location



Source: University Campus Plan 2017 – 2036

Most affiliates of the Hospital including staff, patients, and visitors must pay to park. Table 3.4 provides the different parking rates that users may be required to pay in order to park on campus.

**Table 3.4**  
Drive Alone Parking Pricing On Campus

User	Parking Rates
Outpatients	\$3/hour or \$7/day
	For continuing treatment (more than 2 visits per week). A \$3 per day parking sticker can be purchased.
Inpatients	\$3/hour or \$7/day
	After 4 days - A \$3 per day discounted parking sticker can be purchased
	After 30-day consecutive stay - Two free parking passes per patient are available.
Visitors	\$3/hour or \$7/day
Staff	\$34 per pay period (\$68 per month)
	Value Pass (for associates who work 1-2 times per week) - \$6.00 per day
	Free parking for associates who work from 7:00pm to 7:00am or 11:00pm to 7:00am.
	Free Parking for Essential Employees
	Discounted Parking for Tenured Employees (Greater than 20 Years)

### 3.2 Existing Regional Programs

In addition to transportation services and benefits at the Hospital, several regional programs, benefits, and events, are already in place that MedStar can leverage to educate and encourage employees to select non-SOV commute options. As part of the MGUH TDM program, there is an opportunity to make staff, patients, and visitors aware of the many existing programs at their disposal through the transportation planning coordinator.

#### 3.2.1 Commute Assistance

Commuter Connections Rideshare Program

Commuter Connections Rideshare Program is a service that matches commuters with others who live and work in the same area.

<http://www.mwcog.org/commuter2/commuter/ridesharing/index.html>

GoDCgo

GoDCgo is an initiative of DDOT, which was created to provide employees, residents and visitors with the education and assistance they need to make more informed choices about traveling in the District.

<http://www.godcgo.com/>

### 3.2.2 Commute Incentives/Benefits

#### NuRide Rewards Program

NuRide is a national rewards program for commuter using sustainable and green travel modes. Commuters accrue points with each green trip that may be redeemed for prizes.

<https://www.nuride.com/>

#### Commuter Connections Guaranteed Ride Home

Guaranteed Ride Home (GRH) provides commuters who regularly (twice a week) carpool, vanpool, bike, walk or take transit to work with a **FREE** and reliable ride home when, due to unforeseen circumstances, they are unable to travel using their non-SOV commute choice.

<http://www.mwcog.org/commuter2/commuter/grh/index.html>

#### Commuter Connections Pools Program

Commuter Connections Pools Program offers financial rewards to SOV drivers who start or join a new carpool in the Metropolitan Washington Statistical Area.

<http://www.mwcog.org/commuter2/commuter/ridesharing/PoolRewardsProgram.html>

#### *SelectPass*

SelectPass is a WMATA Program which can save riders money on short and mid-range trips within the Metro System. SelectPass users pay a flat rate for unlimited service on trips that are equal to or less than the amount of the paid segment. <http://wmata.com/fares/selectpass.cfm>

#### *Live Near Your Work Program*

Live Near Your Work (LNYW) is a homeownership assistance program offered by the DC Office of Planning which is designed to encourage employees to live close to their jobs. The LNYW program offers a \$16,000 grant if the home is within 2.4 miles of homeowner's place of employment or an \$8,000 grant if the home is within ½ mile of a designated DC Metro Station or a ¼ mile from a designated DC Bus Route. The program is still in the pilot state; continued funding for the program is uncertain.

### 3.2.3 Events/Campaigns

#### *Walk to Work Day*

Walk to Work Day, hosted each year in April, encourages commuters to commute to work on foot. The event is best suited for densely populated cities and people that live close to their work.

#### *Earth Day*

Earth Day, hosted each year in April, encourages individuals to curb their personal impact on the planet by cutting pollution and waste for the day. Started as a day of observance, Earth Day has evolved into a global action-driven event.

*National Bike to Work Day*

Bike to Work Day, hosted in May of each year, is an event that encourages commuters to bike to work and raises awareness of alternative modes for transportation. Local organizations like the Washington Area Bicycle Association (WABA) offer bike safety workshops.

*Dump the Pump*

Dump the pump, hosted in June of each year, is an event that encourages people to pledge to “Dump the Pump” and take an alternative means to driving.

*Try Transit Week*

Try Transit Week, hosted September of each year, encourages commuters to try transit and other alternative forms of transportation for their commutes. Participants are asked to take the pledge not to drive during that week in exchange for winning prizes.

*International Car Free Day*

Car Free Day is an international event celebrated every September 22. Commuters are encouraged to travel without cars and instead to ride a train, bus, bicycle, carpool, subway, vanpool, walk or telework.

## Section 4

### TDM Performance Targets

As part of its further processing application for the proposed medical/surgical pavilion, as described in the 2017 Campus Plan, the Hospital has established two performance targets: (1) a trip generation commitment and (2) an aspirational goal with respect to its impact on campus traffic volumes. The proposed reduction in peak hour trips was extensively analyzed, reviewed, and discussed with the members of the surrounding community through the GCP, and represents one of the key commitments associated with the medical/surgical pavilion project. The proposed reduction represents a decrease in projected AM peak hour trips of 15 percentage points and was developed based on the community's desire for the Hospital to not only offset the projected increase in vehicle trips associated with the new medical/surgical pavilion but to also reduce trips to a level below existing volumes.

Due to the nature of Hospital operations, including the types of patients its serves, the shift work of its staff, and on-going staffing challenges, the Hospital developed a two-pronged approach to reducing its vehicle trips, specifically through 1) decanting certain departments or services off-site and 2) through traditional TDM measures. For purposes of discussing the performance targets for the Hospital, targets associated with both decanting and traditional TDM measures are provided below. In order to evaluate the effectiveness of the TDM Plan, targets are provided separately for decanting and for TDM. To achieve the proposed TDM reduction the Hospital would increase its non-auto plus carpool percentage from 22.3 to 31.7 percent. The performance targets are summarized below:

- Trip Generation Performance Target:
  - Commitment
    - Peak hour vehicle trips shall be reduced by 101 trips during the AM peak hour and 76 trips during the PM peak hour based on traditional TDM strategies as outlined in the TDM Plan. The peak hour vehicle trip reductions associated with traditional TDM strategies shall be calculated as follows:
      - Calculate the expected vehicle trip generation in accordance with the trip generation methodology outlined in the Comprehensive Transportation Review for the Georgetown University Campus Plan dated October 2016 prepared by Wells + Associates based on the number of Hospital employees on campus at the time the trip counts are taken as described.
      - Determine the actual vehicle trip generation, as described in Section 6, based on vehicle trip counts.
      - The reduction achieved is equal to the expected vehicle trip generation minus the actual vehicle trip generation.



- Taking into account the combined effect of reductions associated with both decanting and traditional TDM strategies, peak hour vehicle trips shall be reduced by 196 AM peak hour vehicle trips and 107 PM peak hour vehicle trips. The peak hour vehicle trip reductions associated with both decanting and traditional TDM strategies shall be calculated as follows:
  - Use the expected vehicle trip generation at full build out (i.e. 5,119 total employees), which is equal to 1,441 AM peak hour vehicle trips and 1,046 PM peak hour vehicle trips as identified in the Comprehensive Transportation Review for the Georgetown University Campus Plan dated October 2016 prepared by Wells + Associates.
  - Determine the actual trip generation, as described in Section 6, based on vehicle trip counts.
  - The reduction achieved is equal to the expected vehicle trip generation at full build out minus the actual vehicle trip

**Table 4.1**  
Hospital Performance Target Commitment

	AM Peak <sup>1</sup>	PM Peak <sup>1</sup>
Existing Vehicle Volume <sup>2</sup>	1,310	988
Projected Site Trips <sup>3</sup>	+131	+58
Projected Future Trips with Campus Plan	1,441	1,046
Proposed TDM Reduction <sup>4,5</sup>	-101	-76
Proposed Decanting Reduction <sup>4,5</sup>	-95	-31
Projected Future Trips with Campus Plan and Reduction	1,245	939
<sup>1</sup> For simplicity, the combined inbound + outbound trips are presented <sup>2</sup> From Table 17 of the CTR <sup>3</sup> From Table 21 of the CTR <sup>4</sup> TDM Reduction was derived as follows based on the AM peak hour (since the projected number of site trips is higher during the AM peak hour): The Hospital is projected to increase AM peak hour trips by 10% (131/1,310=0.10) The proposed overall reduction represents a reduction of 15 percentage points overall (and five percent below existing volumes), resulting in a reduction of 196 AM peak hour trips (10-15=-5% decrease from existing volumes; 1,310*(1-0.05) = 1,245 trips or an overall reduction of 196 trips (1,441-1,245=196) <sup>5</sup> The PM peak hour reduction was calculated as follows: 988*(1-0.05) = 939 or a reduction of 107 trips (1,046-939 = 107)		

- Aspirational Goal
  - As an aspirational goal, the Hospital will strive to achieve an overall reduction of 288 AM peak hour vehicle trips and 176 PM peak hour vehicle trips.
  - Reductions will be calculated as described above.



- Notwithstanding the aspirational goal, for purposes of the monitoring and evaluation, compliance shall be determined based on the reductions outlined under "Commitment."
- Parking Cap
  - The current Hospital parking cap of 2,700 spaces will remain unchanged. To ensure that the parking cap will not be exceeded with the addition of approximately 644 parking spaces under the proposed medical/surgical pavilion, a significant number of stacked parking spaces will be eliminated in other, existing parking facilities.

## Section 5

### Supplemental Strategies

As noted previously, the Hospital's existing investment in and commitment to fund shuttle connections to nearby Metro stations as well as offer a SmartBenefits Program has resulted in a relatively competitive SOV mode split for a hospital that is not proximate to a transit station. Given the nature of the critical functions and shift work at MGUH, substantially improving upon current mode split conditions will be challenging and require significant resources. Nonetheless, the Hospital is, as reflected in the TDM commitment and goal set forth in Section 4, focused on enhancing its efforts by building upon its existing transportation services and incentives as well as other transportation infrastructure available to the Hospital.

This section introduces additional strategies aimed at effectively mitigating Hospital traffic volumes over the 20-year term of the Campus Plan. Given this long-term planning horizon, the TDM Plan must be flexible in order to respond to changes in demographics, technology, transportation services and various mitigation options available. Accordingly, it is envisioned that over time new approaches in addition to those listed below will be identified and programs developed to respond to these changes. When combined, the existing and future TDM strategies represent a "toolkit" of various options that the Hospital can implement, as necessary, in order to meet the performance-based TDM commitment and strive to achieve the aspirational TDM goal that were both established through extensive consultation and review with the GCP. Of note, through the consultation with the GCP, the Hospital agreed that shifting employees' work hours would not be a significant part of the "toolkit."

Recommendations included in this Section are informed by the expressed desires and preferences of Hospital employees captured through the survey and stakeholder comments; best practices in TDM gathered from institutional peer reviews; and recommendations from Wells + Associates staff based on their professional experience in implementing effective TDM programs.

Section 5.1 presents a core set of strategies that may be implemented to achieve the goals outlined in Section 4. Section 5.2 presents a set of additional and more costly strategies which may be implemented should the strategies in Section 5.1 be insufficient to achieve the goals outlined in Section 4.

#### 5.1 Base Supplemental Strategies

Proposed strategies are based on four key categories that synergize to achieve the performance standards established for MGUH in Section 4. Each category is summarized below:

- **Communications, Education, and Support** – Inform Hospital staff, visitors, and patients of their travel options available to the Hospital.
- **Transportation Infrastructure** – Build upon and improve existing transportation services at the Hospital.

- **Parking Management** – Discourage the use of driving through effective parking management.
- **Relocate Departments Off Campus** – Decant certain key clinical and/or ancillary departments that have the potential to be moved off campus.

### 5.1.1 Communications, Education and Support

In order to effectively communicate with commuters to improve the utilization of existing travel options, there needs to be dedicated full-time staff responsible for the implementation of this TDM Plan. It is with this in mind that the Hospital will designate an individual to act as the Hospital's Transportation Planning Coordinator (TPC). The TPC will position themselves as a liaison between the various departments which are affected by transportation. Their contact information will be hosted within the prospective employee page and the transportation intranet page discussed later in this section.

The TPC will be responsible for reaching out to and assisting Hospital employees with their travel to the Hospital. Some of the general activities that fall under the purview of the TPC regarding TDM Communications, Education and Support include:

- Facilitating Carpool/Vanpool Matching,
- Support Flexible Work Operations,
- Internal TDM Communications, and
- External TDM Advocacy.

#### *Carpool/Vanpool Ridematching*

##### FACILITATE CARPOOLS WITH HOSPITAL STAFF.

Carpooling and vanpooling are important vehicle trip reduction strategies given that not all employees are able to live near the Hospital or transit. Commute data captured from the travel sentiment questions in the 2015 Commute Survey indicate that carpool has the greatest potential to reduce trips. Fifty percent (50%) of MGUH survey respondents strongly agreed or agreed that they would consider carpooling if they knew of a coworker with a similar schedule to their own. Integral to achieving this reduction through carpooling is providing partners to those who want to carpool as well as those who would not proactively seek a carpool match on their own, but might be open to it if someone did it for them. It is with this background in mind that the TPC will implement the following two approaches for carpool matching at the Hospital:

- **Commuter Database** – The TPC will establish a database of current home locations of employees to identify potential carpool matches and proactively reach out with targeted communications to those who have given permission to contact them. It is envisioned that this database will allow the TPC to quickly identify and communicate potential carpool options upon request. It will also provide the TPC with the opportunity to communicate transportation changes and issues, such as a shift in transit route, as they occur to affected portions of the population. This database will integrate with current employee databases used by the Human Resources to run reports identifying those who are new to the Hospital or have recently moved (based on an updated

address). The TPC will promote this service, serve as a facilitator between parties, and assist with registering the carpools.

- **Dynamic Ridematching** – Some Hospital employees’ schedules may change from day to day, making it difficult to form traditional carpools. On-demand carpool matching apps allow drivers to schedule their drive home and offer others to “book” their seat on that drive. The greater the participation, the more potential rides available. The TPC will evaluate real-time carpool matching apps and determine whether one is appropriate for MGUH. If so, The TPC will promote this service to Hospital employees.

*Support Flexible Work Operations*

WORK WITH DEPARTMENTS TO INCREASE THE UTILIZATION OF TELEWORK AND FLEXIBLE SCHEDULES AT THE HOSPITAL.

The 2015 Commute Survey found that 22 percent of employees feel that their job can be done remotely (at least one day a week), despite this same survey finding that only 1 percent of employees actually do telework. The same survey also found that 22 percent of employees feel that they have flexible work hours.

In order to reduce the number of trips generated by Hospital employees, MedStar will explore establishing formalized telework and flexible work hour policies. The TPC will work with relevant departments at the Hospital to assist them with implementing telework/flexible work hours for their employees.

*Internal TDM Communications*

CONDUCT TDM COMMUNICATIONS WITH HOSPITAL AFFILIATES.

The communication of transportation amenities, benefits, and incentives is critical to the success of this TDM Plan. Strategy recommendations can only be effective at achieving the program’s goal if Hospital staff are properly informed and educated about their transportation choices. Based on the background research from Section 2, the TPC will employ communication strategies on an ongoing basis with Hospital employees, which may include the following:

Communications Opportunities	Action Step	Description
TDM Communications Plan	<p><u>CREATE AN ANNUAL COMMUNICATIONS PLAN TO ENSURE THAT TDM CAMPAIGNS ARE STRATEGICALLY COORDINATED.</u></p>	<p>The communication of transportation amenities, benefits, and incentives, is a pivotal piece to the success of this TDM Plan. Strategy recommendations can only be effective at achieving the program’s goal if Hospital staff, visitors, patients are properly informed and educated about their transportation choices. To that end, each calendar year, the TPC will be responsible for establishing a communications plan, which will outline the campaigns that will be executed to promote the strategies which will most effectively achieve the established goals.</p>

		The plans, which will be submitted in coordination with the annual report, will include the communications messaging, channels and tools that will be used to most effectively execute the campaigns.
Transportation Intranet Page	<u>CREATE A TRANSPORTATION INTRANET PAGE TO SERVE AS AN INTERNAL TRANSPORTATION RESOURCE FOR EMPLOYEES.</u>	The Transportation Intranet page will serve as a key communication channel for the TPC to communicate with employees regarding transportation information at MGUH. This page will be a resource for employees to learn about the various transportation amenities and programs available at MGUH. This page will also promote the TPC’s availability as a transportation advisor as well as host the access guide.
Access Guide	<u>DISTRIBUTE AN ACCESS GUIDE TO ALL NEW HIRES AND EMPLOYEES.</u>	The TPC will prepare a transportation access guide which will provide an overview of transportation amenities and benefits available to new hires, employees, visitors and patients. The Access Guide will be made available on the patient/visitor transportation website, the prospective employee’s transportation website, and the commuting intranet page. Furthermore, the TPC will work with the appropriate departments to ensure that the information is distributed to all incoming employees. The Guide will be updated on a regular based (most likely annually).
Transportation Advising for New Hires	<u>INVITE NEW HIRES AND POTENTIAL NEW HIRES TO SPEAK WITH THE TPC AS PART OF THE HIRING PROCESS.</u>	Getting a new job can be an overwhelming experience, but figuring out one’s commute does not have to be. It is with that background in mind that all new hires and potential new hires be invited as part of orientation to meet with the TPC to discuss transportation logistics for their new commute to campus and receive an up-to-date Access Guide. This will allow the introduction of alternative transportation commute options and establish desired commute habits at the beginning of their tenure with the Hospital.
Lifestyle Change Targeted Communications	<u>INVITE HOSPITAL EMPLOYEES WHO HAVE CHANGED THEIR ADDRESS TO SPEAK WITH THE TPC.</u>	Behavioral science studies show that habits are best changed when significant life impacts occur. Changing one’s home location is a significant change to one’s life and an opportunity to



		<p>reinforce the desired commute behavior of not driving alone to campus. For this reason, individuals who have changed their address (as noted by the Human Resources department) will receive an email from the TPC inviting them to schedule a meeting to discuss their new transportation options and receive an up-to-date Access Guide.</p>
<p>Transportation Advising - Transportation 511</p>	<p><u>PROVIDE ONGOING TRANSPORTATION ADVISING TO CURRENT EMPLOYEES.</u></p>	<p>The TPC will serve as a commute information center (or 511 service) for the Hospital which assists employees with any transportation-related customer service issues they may have. The TPC will work with individuals one-on-one to provide personalized transportation assistance customized to their unique circumstances.</p>
<p>Guaranteed Ride Home Enrollment for New Hires</p>	<p><u>OFFER AUTOMATIC GUARANTEED RIDE HOME PROGRAM REGISTRATION TO NEW HIRES.</u></p>	<p>Peer institutions and best practices in TDM find that the biggest obstacle for commuters to switching from driving alone to another transportation choice is their fear of needing their car in case of an emergency. The 2015 Commute Survey supports this claim by finding that 59 percent of employees need to have a car available during the workday in case of emergencies. As described in Section 3.3.2 Commute Incentives/Benefits, the Metropolitan Washington Council of Governments (MWCOC) sponsors the Commuter Connections Guaranteed Ride Home (GRH) which provides commuters who regularly (twice a week) commute by non-SOV modes a free ride home in an emergency. As part of new hire paperwork, the Hospital will explain the MWCOC Guaranteed Ride Home (GRH) program and offer them the opportunity to enroll. The TPC will also encourage existing employees to register for GRH with special emphasis placed on staff who are renewing their parking permits.</p>



### *External TDM Advocacy*

#### ACTIVELY ENGAGE AND ADVOCATE FOR IMPROVED TRANSPORTATION CONNECTIONS TO THE GEORGETOWN CAMPUS.

MedStar enjoys a close working relationship with municipal agencies and authorities throughout the DC and metro region. Maintaining these relationships, as demonstrated by not only the Hospital's success but those of other peer hospitals, allows institutions to advocate for effective transportation policies and infrastructure improvements, and to stay current with local jurisdiction plans and understand how they may impact transportation for employees, patients and visitors. In coordination with other Hospital departments as well as the GCP and the University, the TPC will participate in these discussions and actively engage and advocate for improved transportation connections to the Georgetown Campus (which may include initiatives such as connections to Georgetown via gondola, street car and enhanced Metrorail programs).

#### **5.1.2 Transportation Infrastructure**

Building upon the Hospital's current strength of high multimodal access, TDM Plan recommendations within this section seek to augment alternative mode access to campus. The following strategies are recommended to be included in the Hospital's TDM "toolkit":

- Install Additional Bikeshare Station
- Improve Bicycle Infrastructure
- Enhance the GUTS Bus service
- Install Electronic Transportation Information Displays

#### *Install Additional Bikeshare Station*

#### PROVIDE ADDITIONAL BIKESHARE STATION(S) ON OR ADJACENT CAMPUS.

Currently, the campus is served by one Bikeshare station. The MGUH 2015 Commute Survey found that out of over 2,000 responses, only six trips were made on any given weekday by Hospital employees (who responded to the survey) using bikeshare. With a very high concentration of individuals living within proximate distance to the Hospital, increased use of Capital Bikeshare could effectively serve greater numbers of Hospital employees.

The current bikeshare location at the 37<sup>th</sup> Street and O Street intersection effectively serves the south and east sides of the Georgetown campus with access to bikeshare within less than ½ mile walking. The north side of campus, however, does not have convenient access to bikeshare. In order to effectively serve the full campus, and consistent with the recommendations of the Capital Bikeshare Development Plan developed by the DDOT in September 2015, it is envisioned that a second Bikeshare station will be located on or near campus. The number of docks and the exact location for the station will be determined in consultation with Capital Bikeshare, members of the University community, the GCP, and other key stakeholders including the Georgetown BID.



### *Improve Bicycle Infrastructure*

#### IMPROVE BICYCLE INFRASTRUCTURE BY REPLACING AND PROVIDING ADDITIONAL BIKE RACKS.

According to 2015 Commute Survey results, approximately 41.3 percent of Hospital staff live within a reasonable bike ride from campus (less than five miles), yet less than one percent commute by bike. In order to eliminate barriers related to bike commuting, the TPC will work with relevant parties at the Hospital and University to enhance its existing bicycle infrastructure. In 2015, the University increased bicycle parking on campus increased by seven percent. Additionally, throughout campus, older bicycle racks are being replaced with more secure, inverted-U racks consistent with DDOT's preferred standard. The Hospital will continue to work conjunction with the University to provide additional bicycle parking particularly near areas where current racks are at capacity as well as replace grid bicycle racks with DDOT preferred bike rack designs.

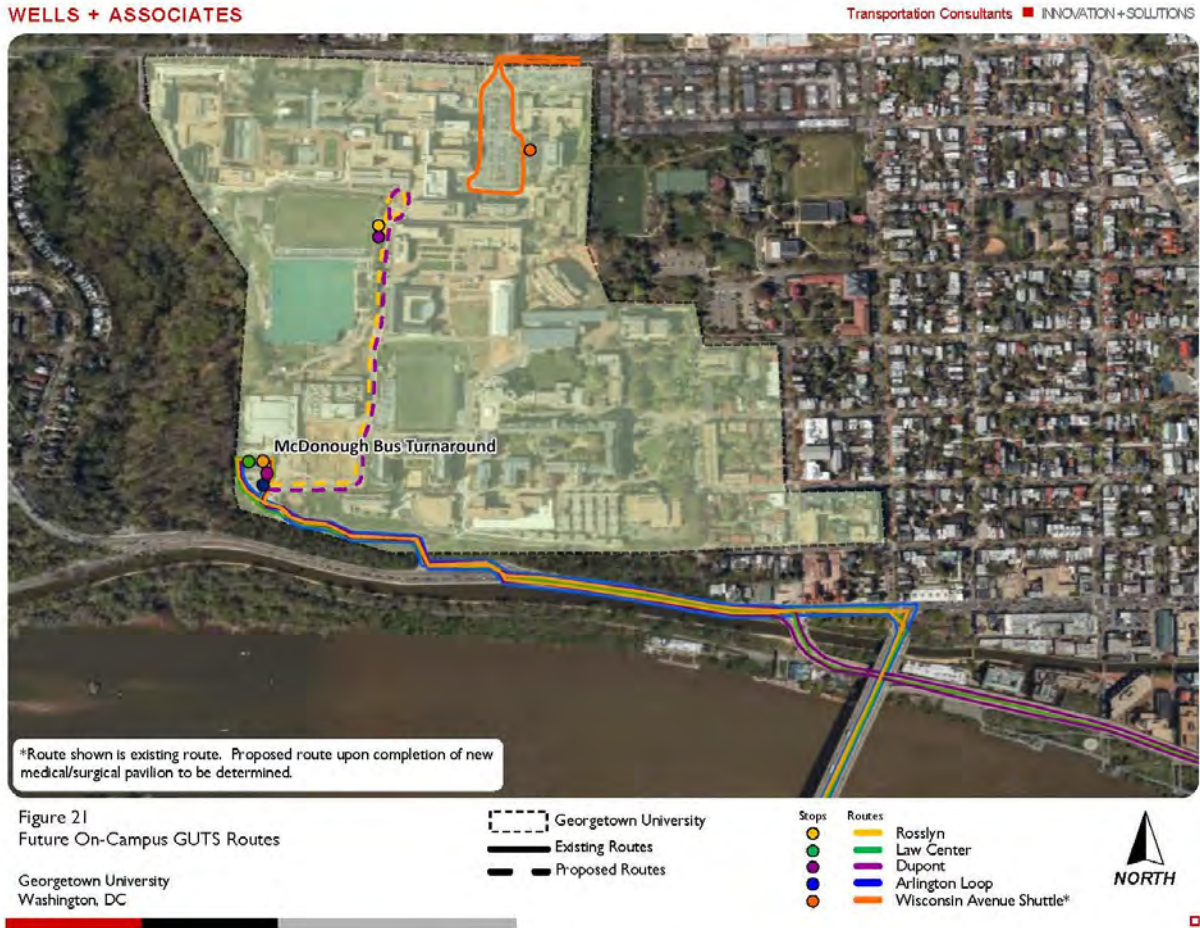
### *Enhance the GUTS Bus Service*

#### EVALUATE IMPROVEMENTS TO THE CURRENT GUTS BUS SYSTEM.

Based on extensive feedback received after implementation of the GUTS rerouting to Canal Road, the 2017 Campus Plan includes a provision to add an additional bus stop on the north side of campus on the east side of Shaw Field near the Lombardi Cancer Center (or potentially another suitable location) to serve the Dupont Circle and Rosslyn routes as shown on Figure 5.1. The stop will allow riders a choice of boarding and alighting buses on the south side of campus at the McDonough Bus Plaza or on the north side of campus at the new bus stop. Like the McDonough Bus Plaza, the new bus stop will include shelters. Importantly, buses originating from or destined to the new bus stop on the north side of campus will use Canal Road.

Over 118 survey respondents (approximately 10 percent), of individuals who completed the 2015 Commute survey expressed a desire for improvements to the GUTS Service. In order to maintain high customer satisfaction with this critical campus transportation service and expand the system's ridership, the Hospital will work in conjunction with the University to continue to evaluate GUTS services to determine potential opportunities for improvement. Potential improvements may include increasing frequency as well as expanding service operations either through provision of new routes and/or rerouting of existing routes.

**Figure 5.1**  
Proposed Location for Additional Bus Stop on the North Side of Campus



*Electronic Transportation Information Display*

PROVIDE ELECTRONIC INFORMATION DISPLAYS TO SHOW REAL-TIME INFORMATION OF TRANSPORTATION SERVICES LOCATED NEAR THE HOSPITAL.

Electronic Information Displays allow users to check real-time on the status of local transportation options “on-the-go” without requiring a smart phone or an internet connection. The availability of real-time travel information has been shown to make alternative transportation more attractive. Studies have also shown that providing real-time travel information can decrease perceived wait times and increase rider satisfaction with travel systems. These information displays will be installed in high-traffic areas or near available transportation amenities such as bus stops. Typically these screens can be set-up to show the following information in real-time:

- Traffic conditions, road hazards, construction work zones, and road detours;
- Arrival times and delays on GUTS, Metrobus, Circulator Bus and Metrorail; and
- Bikeshare/carshare/ride-hailing availability.

**5.1.3 Parking Management**

Parking policy can have significant impacts on the use of alternative transportation. If parking is not available, or costs too much, the traveler is likely to consider using another means of transportation or eliminate their trip altogether. Alternatively, too aggressive parking pricing may cause some drivers to seek lower cost alternatives, such as parking on-street. For these reasons, effective parking management is critical to meeting desired trip reduction outcomes. Recommendations within this section include:

- Explore Alternatives to Monthly Pass and Upgrade Garage Equipment
- Allocate Preferred Carpool Parking Spaces
- Provide Free Parking for Carpools

#### *Monthly Parking Pass Alternatives and Garage Equipment Upgrade*

##### PROVIDE ALTERNATIVES TO MONTHLY PARKING PASSES FOR STAFF AND UPGRADE GARAGE EQUIPMENT TO BE ABLE TO RELAY THE TRUE COST OF PARKING.

Providing monthly parking passes to staff is convenient to administer. However, this approach may encourage monthly parkers to utilize their parking pass as much as possible in order to maximize the return on their investment and, therefore, drive to campus at times when other travel options would be available. Implementation of a system that offers MGUH employees options other than a monthly pass would likely impact travel behavior change because it allows travelers to decide to make a choice other than driving at any time during the month.

The Hospital will explore utilization of its new Radio-frequency identification (RFID) system to implement a transaction based approach to parking where the parker must pay upon entry to the parking garage by way of the GoCard or other payment method. Ideally, parking equipment will display the actual cost of the transaction each time a user enters the parking facility. By implementing these types of changes to parking operations, users will have a better understanding of how much parking costs for them on a per-parking-session basis. By allowing them to see and pay parking fees on a daily basis, commuters are consistently and clearly reminded of how much they are spending to drive which will encourage them to compare their daily commute costs across different modes of transportation.

#### *Preferred and Free Carpool Parking Spaces*

##### PROVIDE FREE DEDICATED CARPOOL PARKING SPACES IN CONVENIENT LOCATIONS NEAR BUILDING ENTRANCES AND GARAGE ELEVATORS.

As mentioned in the Carpool/Vanpool Ridematching strategy in section 5.1.1, carpooling is a mode of transportation to the Hospital that has potential for growth. The Hospital will guarantee parking spaces for all carpools, to encourage this behavior. Furthermore, the Hospital will allocate convenient parking spaces near building entrances and garage elevators for carpool use only, and adjust their numbers as demand necessitates. Lastly, the Hospital will make parking free for carpools of all sizes.

## 5.2 Additional Supplemental TDM Strategies

A more intense set of TDM measures may be required in order for the Hospital to achieve the reduction in trips required to achieve the goal outlined in Section 4. These may include one or more of the following TDM Strategies:

- Transit Subsidies
- Relocate Parking Off Campus

### *Transit Subsidies*

#### PROVIDE TRANSIT SUBSIDIES TO EMPLOYEES.

Providing transit subsidies has a direct impact on employees travel behavior toward using transit. In September of 2015, W+A modeled the travel behavior change of transit subsidies on MedStar employees using the Trimms (Trip Reduction Impacts of Mobility Management Strategies) Model which is a nationally recognized TDM Model developed by the National Center for Transit Research. Results from this model identified that by providing monthly transit subsidies between \$42 and \$126 a month, trips can be reduced by up to 8 percent. MedStar is prepared to consider transit subsidies for their employees as necessary to achieve the trip reduction goals required with the construction of the Pavilion.

### *Relocate Parking Off-Campus*

#### RELOCATE MGUH STAFF PARKING OFF CAMPUS

The amount of parking provided has a direct relationship on vehicle trips entering/exiting the campus. If MGUH employees do not have a space to park their cars, then they won't be able to drive to the Hospital. However, it is the Hospital's responsibility to provide employees with alternative travel options otherwise it could become difficult for employees to complete their commute and may ultimately affect employee morale, recruitment, and/or retention. To that end, MedStar will maintain its current parking supply, however, may consider relocating some of its on-campus spaces off-campus. These off campus spaces will be connected by shuttles provided that these spaces are greater than a half mile from campus.

### 5.3 Year 1 Action Plan

Table 5.1 identifies the key action steps required to effectively execute the Hospital’s TDM Plan in year 1, as well as the targeted timing for implementation.

**Table 5.1: TDM Implementation Plan**

Strategy Category	Action	Start Date	End Date
Communications, Education and Support	Hire full-time Transportation Planning Coordinator.	3/1/2017	6/30/2017
	Create the MGUH Transportation 511 communications channels (email, phone, social media, etc.) through which the TPC can be contacted to provide transportation advising.	7/1/2017	12/31/2017
	Create a transportation access guide for new employee hires.	7/1/2017	12/31/2017
	Create a transportation intranet page to serve as an internal transportation resource for employees.	7/1/2017	12/31/2017
	Create an annual communications plan to ensure that TDM campaigns are strategically coordinated.	7/1/2017	12/31/2017
	Work with the appropriate departments to ensure that information included in the access guide is distributed to all incoming employees.	7/1/2017	12/31/2017
	Work with human resources to formally incorporate the TPC into new hire orientation process.	7/1/2017	12/31/2017
	Work with human resources to create a system that notifies the TPC when Hospital employees change their home address.	7/1/2017	5/31/2018
	Create an internal ridematching system to facilitate carpool/vanpool formation.	7/1/2017	12/31/2017
	Actively communicate with and encourage employees that are renewing their parking permits to register for GRH.	1/1/2018	5/31/2018
	Execute TDM Communications Plan in coordination with MGUH communications team.	1/1/2018	6/30/2018
Transportation Infrastructure	Identify locations for and install electronic information displays to show real-time information of transportation services locations on or near the campus.	9/1/2017	5/31/2018
	Work with stakeholders to determine proposed location for a Capital Bikeshare station on the north side of the campus.	7/1/2017	12/31/2017
	Establish carpool parking spaces and corresponding system to manage their allocation.	7/1/2017	12/31/2017
Parking Management	Develop plan/schedule for implementation on new parking equipment.	1/1/2018	12/31/2018
TDM Monitoring and Evaluation	Oversee completion of Annual Transportation Performance Monitoring Study.	9/1/2017	11/30/2017



## Section 6

### TDM Monitoring and Evaluation

To fully assess the Hospital's effort towards achieving the performance commitment and aspirational goal, as described in Section 4, the Hospital shall conduct an Annual Performance Monitoring Study. The Study shall include: (1) measurement of Hospital vehicle trip generation, (2) a hospital transportation survey (including determination of a mode split), and (3) a summary report on TDM activities.

- Elements of the Performance Monitoring Study:
  - Vehicle Trip Counts
    - The number of vehicle trips generated by the Hospital during the-AM and PM peak hours will be determined through vehicular traffic counts.
    - Traffic counts shall be conducted when Georgetown University, DC Public Schools and Congress are in session.
    - Counts shall be conducted during Georgetown University's Fall Semester on three typical weekdays (i.e. a Tuesday, Wednesday, and/or Thursday) from 6:00 AM to 10:00 AM and from 4:00 PM to 8:00 PM.
    - Counts shall be conducted on days when no adverse weather impacts travel conditions.
    - Counts shall be conducted at the following campus driveways:
      - Canal Road,
      - Prospect Street,
      - Gate 1,
      - Gate 2,
      - Gate 3,
      - Gate 4,
      - Lot B Driveway, and
      - 37<sup>th</sup>/P Driveway.
    - In order to separate Hospital trips from University trips, counts shall also be conducted at the internal campus parking facilities that are open and operational at the time the monitoring study is performed. In parking facilities that house both University and Hospital designated spaces (e.g. Southwest Garage and Leavey Garage) the number of Hospital trips will be estimated based on the proportion of Hospital spaces versus the number of University spaces.
    - If counts conducted the first year reveal that the count windows can be shortened from four hours to three hours and still capture the AM and

PM peak hours of both the University and Hospital, then the count window shall be shortened to three hours for each peak in the subsequent years of the Campus Plan.

- The number of AM peak hour trips generated by the Hospital shall be determined by averaging the data over the three days and then selecting the single highest hourly inbound volume entering campus plus outbound volume exiting campus (for all driveways combined) between 6:00 AM to 10:00 AM.
  - The number of PM peak hour trips generated by the Hospital shall be determined by selecting the single highest hourly inbound volume entering campus plus outbound volume exiting campus (for all driveways combined) between 4:00 PM and 8:00 PM based on the averaged data.
  - The trip generation information will be used to determine whether the goals established in Section 4 are met.
  -
- Hospital Transportation Survey
    - A mode split survey will be conducted (in coordination with the traffic counts) to identify the mode of transportation for employees.
    - The mode split results will be provided for information purposes and will be used by the Hospital to inform decisions regarding implementation of various TDM strategies to achieve the established performance targets.
    - Mode split results will be presented along with results from previous years to reveal any trends.
    - Questions regarding various travel options and incentives to ascertain respondents' sentiments regarding specific TDM strategies will be included in the survey to garner additional information beyond mode choice to better inform the Hospital's decision making.
  - GUTS Daily Ridership Counts
    - Daily ridership will be provided for each of the active GUTS routes for a minimum of one week. The ridership numbers will be collected for the same week in which traffic counts are conducted.
    - Year-to-year trends in ridership also will be reported.
  - Annual TDM Performance Report
    - A list of TDM strategies in effect at the time the performance monitoring study was conducted will be provided along with the number of staff employed at the time the study was conducted.
    - In the event that the trip generation commitment is not met, a remediation plan (including a list of additional TDM strategies to be

implemented and the timeframe for their implementation) also will be provided.

- An itemized summary of TDM-related expenditures, demonstrating the level of financial investment made toward achieving the performance targets outlined above will be included in the report.
- Parking Occupancy Counts
  - A count of the number of occupied parking spaces in each of the on-campus parking facilities will be conducted on a typical weekday (i.e. a Tuesday, Wednesday, or Thursday) from 8:00 AM to 5:00 PM. Counts shall be conducted on days when no adverse weather impacts travel conditions.
  - Data will be provided in tabular or graphic format comparing the number of occupied spaces to the University's parking cap to ensure the parking cap is not exceeded.
- Sequencing of Annual Performance Monitoring Studies
  - Monitoring studies shall be conducted during the Fall Semester each year beginning the year following the approval of the Campus Plan.
  - If the vehicle trip counts reveal that the trip generation commitment is not met, the Hospital shall identify and begin to implement additional TDM measures, as noted above and discussed more fully below, and shall repeat vehicle trip counts by the end of Georgetown University's following Spring Semester and submit the results to both the GCP and DDOT.
  - Annual Performance Monitoring Studies shall be conducted throughout the 20-year term of the Campus Plan.

## Section 7

### Enforcement

The Hospital will submit its Annual Performance Monitoring Study to DDOT and the GCP. If the Annual Performance Monitoring Study reveals that the Performance Commitment is not met, the Hospital will work with the GCP's Transportation and Parking Working Group, the GCP Steering Committee, and DDOT to review the then-current TDM strategies and associated expenditures and to develop a plan to augment existing and/or implement new TDM strategies to enhance performance. Strategies may include but are not limited to the toolkit components discussed more fully in Section 5, including:

- Carpool/vanpool ride matching and/or incentives
- Flexible work operations
- Enhanced internal TDM communications
- Additional bicycle infrastructure
- Enhanced or expanded GUTS service
- Installation of electronic information displays
- Increased on-campus parking fees for Hospital employees
- Targeted marketing/outreach to employees based on their home location

Compliance with the provisions of this TDM Plan will be specifically enforceable pursuant to the Zoning Commission Order approving the Medical/Surgical Pavilion Project.

## Section 8

# TDM Cost Estimates and Staffing Needs

	TDM Strategy	Description	Cost Assumptions	FY 2016 One-Time Costs	Estimated Ongoing Annual Cost							
Current TDM Initiatives	Shuttle Bus	Connect Campus to Metro Stations	Includes annual contribution of \$66,000 to supplement GUTS system service on days when University is closed. Also includes \$1,048,055 to provide supplemental service to MGUH.	n/a	\$1,200,000.00							
	Bike racks	Existing Bikeracks on Campus	Ongoing financial cost captured in "Improve Bicycle Infrastructure."	n/a	\$0							
	Showers and Lockers	Shower access offered to commuters who bike or walk to campus.	Assumes .25 FTE at \$80,000 for ongoing promotion and administration.	\$0	\$0							
	Transportation Website	Two transportation websites exist. One for visitors/patients, and a second for potential employees.		\$20,000								
	SmartBenefits Program	The Hospital offers SmartBenefits, a pre-tax transportation program that can be used towards travel costs for transit or vanpooling.		\$1,000								
CURRENT TDM INITIATIVES: ESTIMATED TOTAL COSTS*				\$21,000.00	\$1,200,000							
	TDM Strategy	Description	Start Up Cost Assumptions	Estimated Start Up or One-Time Costs	Estimated Ongoing Annual Cost							
Base Supplemental TDM Strategies	Transportation Infrastructure	Increased Bikeshare Access	Includes cost of an additional bikeshare station**	\$75,000	\$0							
		Improve Bicycle Infrastructure	Includes cost of additional/replacement bike racks andsheltered storage/bike lockers.	\$2,000	\$100							
		Electronic Transportation Information Display	Assumes 5 screens at \$7,000 per	\$35,000	\$6,000							
		Enhance GUTS	Assumes \$75,000 to complete route and service upgrades.	\$75,000	\$120,000							
	TDM Communications, Education, and Support	Establish TDM Program Manager TDM Communications Plan Transportation Intranet Page Access Guide New Hire Commute Assistance Lifestyle Change Targeted Communicatoins Transportation Advising/Transportation 511 Carpool/Vanpool Matching Local Transit Agency Engagement & Advocacy GRH Promotion and Education Hospital-wide Telework and Flex Hours	TPC Staffing Cost	\$0		\$250,000						
							Parking Management	Provide Free Parking for Carpools	Includes cost to stripe and sign dedicated carpool spaces.	\$1,000	\$21,400	
							Relocate Departments Off-Campus	Relocate certain key clinical and/or ancillary departments off campus.	Capital Investment Costs. Rent costs resulting from relocating 257 employees Off-Campus.	\$14,400,000	\$2,530,000	
							POTENTIAL BASE SUPPLEMENTAL TDM "TOOLKIT" INITIATIVES: ESTIMATED TOTAL COSTS				\$14,588,000	\$2,927,500
							Advanced Supplemental TDM Strategies	Transit Subsidies	Provide transit subsidies to employees in order to encourage transit use.	\$11.00 Transit Subsidy per day.	\$0	\$3,750,000
								Relocate Parking Off Campus	Relocate 320 Staff Parking to remote locations.	Relocating 100 Parking Spaces	\$0	\$400,000
POTENTIAL ADVANCED SUPPLEMENTAL TDM "TOOLKIT" INITIATIVES: ESTIMATED TOTAL COSTS							\$0	\$4,150,000				
CURRENT TDM AND POTENTIAL SUPPLEMENTAL TDM "TOOLKIT" INITIATIVES: ESTIMATED GRAND							\$14,609,000	\$8,277,500				

\*Total Current TDM Initiative Budget Start-Up Cost has already been incurred.

\*\*Potential Cost Sharing with University and other stakeholders.



## Attachments

## Attachment I: 2015 Commute Survey Results



# WELLS + ASSOCIATES

Transportation, Traffic and Parking Consultants



## Medstar Georgetown University Hospital (MGUH) 2015 Commuter Survey Report

August 2015



## Table of Contents

Section 1 - Introduction.....	4
Section 2 - Survey Approach.....	5
Section 3 - Survey Results and Statistical Significance.....	6
Section 4 - Survey Summary and Analysis .....	6
4.1 Work Schedule .....	7
4.1.1 Hospital Affiliation .....	7
4.1.2 Full-Time vs. Part-Time Employee .....	8
4.1.3 Compressed Schedule.....	9
4.1.4 Days Worked .....	10
4.1.5 Work Location .....	11
4.2 Travel Behavior .....	13
4.2.1 Home Location of Respondents.....	13
4.2.2. Mode split travel to MGUH – Longest Commute Mode .....	15
4.2.3. Mode Split Travel to Georgetown – Last Commute Mode .....	16
4.2.4. Time Distribution of Daily Commute Trips.....	17
4.2.5. Travel Time Length of Commute Trips.....	21
4.3 Transit .....	22
4.3.1. Access to Campus by Public Transportation Route .....	22
4.3.2. GUTS Route Utilization.....	23
4.4 Parking .....	25
4.4.1. Parking Location.....	25
4.4.2. Campus Parking Access.....	26
4.4.3. Residential On-Street Parking Patterns .....	26
4.5 Transportation Demand Management (TDM).....	27
4.5.1. Secondary Mode Consideration.....	27
4.5.2. Parking Pricing Sensitivity .....	28
4.5.3. Alternative Transportation Commute Sentiment.....	31
4.5.4. Job Flexibility for TDM .....	33
Section 5 - Conclusions .....	34

Section 6 - Appendix.....	35
Appendix A – MGUH Survey Summary Infographic.....	35
Appendix B – Online Survey.....	36
Appendix C – Respondents by Zip Code Full List .....	47

## List of Figures

Figure 1: Primary Role with MGUH is: .....	8
Figure 2: Full-Time vs. Part-Time Employee.....	9
Figure 3: Compressed Work Week .....	10
Figure 4: Day's Worked During the Week.....	11
Figure 5: Percentage of Work Days by Location .....	12
Figure 6: MGUH Employee Geographic Distribution .....	14
Figure 7: Mode Split Longest Commute Mode .....	15
Figure 8: Mode Split Last Commute Mode .....	16
Figure 9: Longest Commute Mode vs. Last Commute Mode .....	17
Figure 10: Arrival/Departure from MGUH – 24 Hours.....	18
Figure 11: Arrive to MGUH – Peak Hour (6AM to 10AM) .....	19
Figure 12: Depart MGUH – Peak Hour (3PM to 7PM) .....	20
Figure 13: Duration of Commute for Medstar .....	21
Figure 14: Public Transportation Route to MGUH.....	22
Figure 15: GUTS Route Utilization.....	24
Figure 16: Parking Location When Driving to Campus .....	25
Figure 17: Campus Parking Access.....	26
Figure 18: Secondary Mode Consideration.....	28
Figure 19: Transit vs. Driving Parking Cost Analysis.....	29
Figure 20: Carpool vs. Driving Parking Cost Analysis .....	30
Figure 21: Peak Hour Parking vs. Non-Peak Hour Parking Cost Analysis .....	31
Figure 22: Alternative Transportation Sentiments .....	32
Figure 23: Job Flexibility for TDM Strategies .....	33

## List of Tables

Table 1: Suvey Results Summary .....	6
Table 2: Top 10 Zip Codes With the Most Survey Respondents.....	13
Table 3: Current Commute Sentiment Ranking Values .....	31



## Section 1 - Introduction

Between March 16 and March 31, 2015, Wells + Associates conducted the second annual Medstar Georgetown University Hospital (MGUH) Commuter Survey to understand the travel habits and sentiments of staff at MGUH. Included within the survey were questions which inquired on work schedules, travel behavior, parking, transit usage, and alternative transportation perception questions. The commuter survey was conducted specifically to satisfy the 27<sup>th</sup> condition of the zoning commission order below which requires an annual transportation survey be conducted:

*Zoning Commission Order No. 10-32, #27*

*"During the Campus Plan period, the University shall conduct an annual transportation performance monitoring study as described on page 36 of Exhibit 339, Tab A of the Record, which shall be to DDOT by November 15 of each year (unless DDOT otherwise requests a later date)."*

The survey identified the daily travel patterns by employees at MGUH and their preferences towards using alternative travel options. Input from this survey will be applied towards future transportation policies, specifically, those within the master campus planning process. Strategies will generally seek to decrease the demand for parking at the hospital and reduce the number of vehicle trips to the hospital.

Survey results found that:

- Twenty-six percent (26%) of Medstar employees surveyed work a compressed work schedule.
- Thirty three percent (33%) of MGUH employees surveyed live within five miles of MGUH in Washington D.C. and Northern Virginia. Sixty one percent (61%) of employees live within 10 miles of MGUH and 39% of employees live beyond 10 miles of MGUH.
- Sixteen percent (16%) of commuters take over an hour to commute to work. Thirty eight percent (38%) of commuters take less than 30 minutes to commute to work/school.
- Seventy three percent (73%) of MGUH employees drove alone for the last portion of their trip, 14% took transit (GUTS, Metrorail, Metrobus, and Circulator), 6% traveled by non-motorized means of transportation (walk, bike, and bikeshare), and 3% traveled by ridesharing (carpool and vanpooling).

- The morning peak at MGUH was between 6:30 AM and 6:59 AM and the afternoon peak was between 5:00 PM and 5:29 PM. A total of 83.7% of employees at MGUH arrived at the hospital during the morning peak window (6AM to 10AM) whereas a lower, 70.2% of employees departed the hospital during the afternoon peak window (3PM to 7PM).
- Twenty eight percent (28%) of MGUH affiliates used the GUTS system on a typical basis.
- A majority, 54%, of respondents who currently drove alone would take transit (public transit or GUTS) to work if driving were no longer available to them. Ten percent (10%) of respondents mentioned they would rideshare (carpool or vanpool) to work and 7% would take non-motorized transportation (walk or bike).

An informational graphic was created to summarize survey results. This graphical piece is included in Appendix A of the survey. A complete summary of survey findings and the survey distribution process are contained within the following sections of this report.

## **Section 2 - Survey Approach**

The survey was opened to all employees of the hospital including faculty and medical students. It is worth noting that visitors and patients were not included within this survey effort. Questions from the survey inquired on work schedule, daily commute behavior, transit use, parking, and Transportation Demand Management (TDM).

The survey questions were developed by Wells + Associates in consultation with MGUH and the Georgetown Community Partnership (GCP). The survey is similar to that of Georgetown University in order to perform combined analysis for the Georgetown campus as a whole. An electronic, online version of the survey was developed by Wells + Associates on SurveyGizmo, a professional online survey management tool. The survey was available in both English and Spanish. A copy the online survey is included in Appendix B of this report. The survey was promoted and distributed through multiple Medstar channels including:

- Monday Memo (weekly e-newsletter)
- Broadcast Email
- Doc Talk (biweekly e-newsletter)
- Clinical Leadership Form (monthly managers meeting)
- Tuesday Talk (biweekly talking points for managers to use in staff meetings)

As an incentive, all individuals that completed the survey were entered into a prize drawing for one of eight prizes, including one (1) iPad Air, two (2) Pebble Steel Watches, and five (5) FitBits.

### Section 3 - Survey Results and Statistical Significance

The survey effort rendered 2,058 responses out of 4,452, representing a response rate of 46%. Due to skip logic within the survey device, error intervals for most questions are around  $\pm 2\%$ , however, questions asked to certain only groups within the survey can have an error interval as high as  $\pm 30\%$ . Any questions with an error interval of  $\pm 15\%$  or higher have been disregarded from this report. These response rates were calculated based on a 99% confidence level using a two-tailed test and assuming a normal distribution. It is worth noting that Osborne George & Associates whom conducted the survey in 2014 used a different methodology for data collection which involved physically counting the number of people by mode within the morning peak. That being the case, their survey assumes a mode split for only those that work within day shifts. The data collected by Osborne George & Associates lacks information regarding individual's affiliation to Medstar, their work trip characteristics, or their sentiments towards alternative transportation.

Table 1 summarizes participation and data accuracy for this years and last year's survey.

**Table 1: Survey Results Summary**

Survey Summary		
Survey Effort	2015	2014
Gross Population	4,552	2,338 <sup>1</sup>
Responses Received	2,058	1,392 <sup>2</sup>
Response Rate	46%	60%
Confidence Level	99.0%	99.0%
Confidence Interval	$\pm 2$	$\pm 2.2\%$

<sup>1</sup>Theoretical number of day-time commuters (Between 7 AM and 7 PM)

<sup>2</sup>Number of people observed

### Section 4 - Survey Summary and Analysis

The following section is comprised of five smaller subsections related to the assigned work schedule of individuals, their travel behavior, their use of transit, their parking behavior, and their views towards alternative commuting options (TDM).

## 4.1 Work Schedule

Questions in this section seek to understand the weekly work schedule of survey takers.

Questions include:

- Their affiliation to the hospital,
- Whether the survey taker is employed part-time or full-time,
- Whether the individual works under a compressed schedule,
- What days the individual reported for work, and
- The location to which *they* reported for work.

If the respondent was a contractor, they were also asked about the duration of their contract at MGUH, however, given the insignificant sample size for contractors (10 responses), this result was not included within the report.

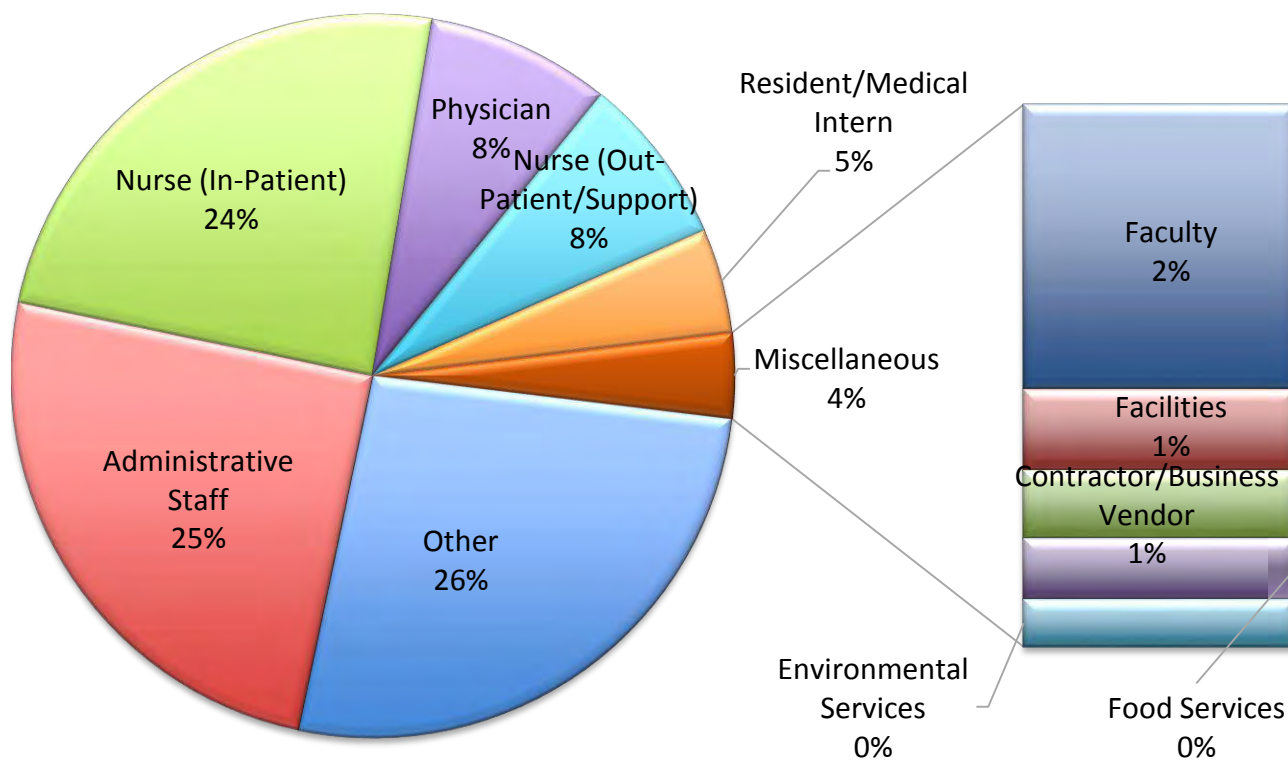
### 4.1.1 Hospital Affiliation

Different relationships to the hospital foster distinct work schedules. For example, a nurse may work three variable 12-hour shifts a week whereas an administrative employee may have a fixed schedule working normal business hours. Understanding one's role at the hospital helps to better understand the variability and flexibility of an individual's work schedule and how that relates to their commute choice. Information from this question will help to identify the typical travel trends of different hospital affiliations.

A total of 2,106 respondents answered their affiliation to the hospital. The breakdown of each demographic is represented in Figure 1.

**Figure 1: Primary Role with MGUH is:**

Question: My primary role with MGUH is:



**Responses: 2106; Margin of Error  $\pm 2.04\%$ :**

Results identified that 32% of survey respondents were Nurses either In-Patient or Out-Patient, 26% of survey respondents were Other, and 25% of survey respondents were Administrative Staff. Less than 4% of survey takers were either Faculty, Facilities, Vendors, Food Services, or Environmental Services.

If the respondent was a contractor, a follow-up question asked: *How much longer does your work contract require you to report for work at MGUH?* Since the sample size of contractors asked this question was so small, data for this question was excluded within the survey report due to statistical insignificance. The margin of error for the question was calculated at  $\pm 30\%$ .

#### **4.1.2 Full-Time vs. Part-Time Employee**

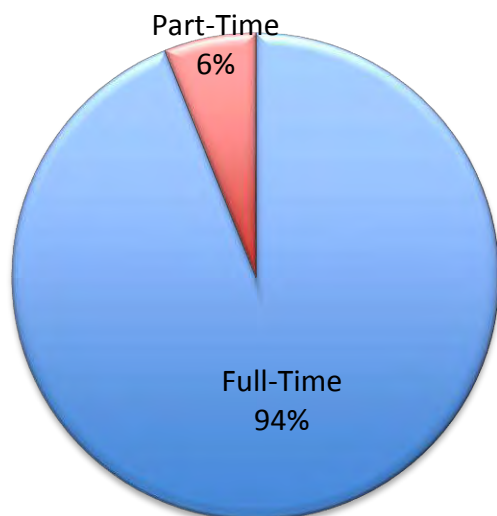
A part-time employee is generally defined as one who works less than 30 hours a week. Part-time workers generally make less commute trips in a week, may have varied schedules from week to week, and typically do not participate in compressed work schedules. For these reasons,



these individuals are less ideal candidates for TDM strategies. As the pie chart in Figure 2 identifies, 94% of all survey takers were full-time employees and only 6% of survey takers work part-time.

**Figure 2: Full-Time vs. Part-Time Employee**

Question: Are you employed full-time or part-time at your job?



**Responses: 2079; Margin of Error  $\pm 2.07\%$ :**

#### 4.1.3 Compressed Schedule

Many companies offer their employees compressed work schedules as an employee retention and recruitment tool. Compressed schedules help employees free up valuable time for family and life demands while minimizing workplace disruptions. The employee typically works the same amount of time in a week, however, in less days. The most typical compressed work week schedules include:

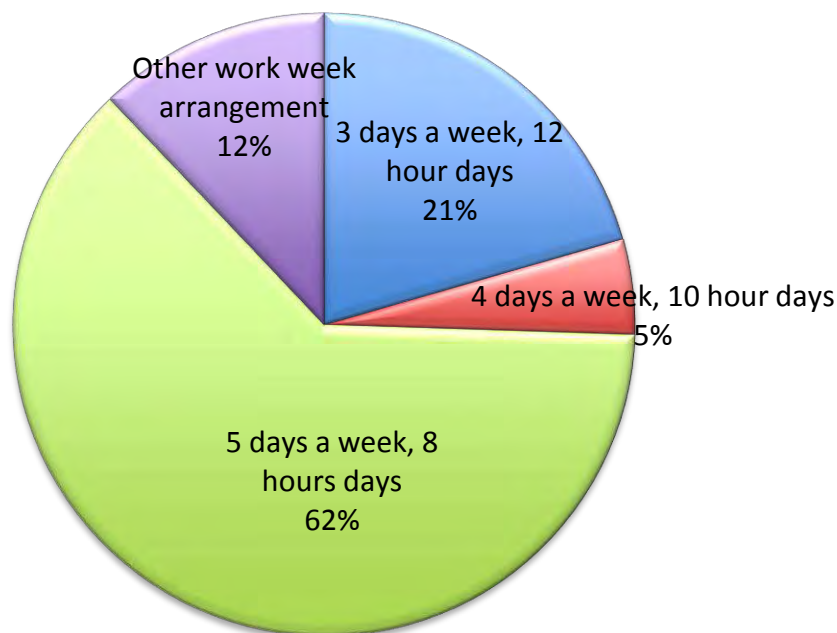
- 9/80 – The employee works 9 hours a day and gets one day off every other week.
- 10/40 – The employee works 10 hours a day and gets one day off a week.
- 3/36 – The employee works 12 hours a day and gets two days off a week.

From a commute perspective this information is important for two reasons: (1) A compressed work week reduces the number of total trips to the work site on any given day, (2) Longer work hours may push an individual's commute to outside the peak hour.

Survey respondents who answered that they were full-time employees were asked if they had a compressed work schedule. Figure 3 identifies the percent of full-time employees who work a compressed work week.

**Figure 3: Compressed Work Week**

Question: How is your regular work week structured?



**Responses: 1952; Margin of Error  $\pm 2.13\%$ :**

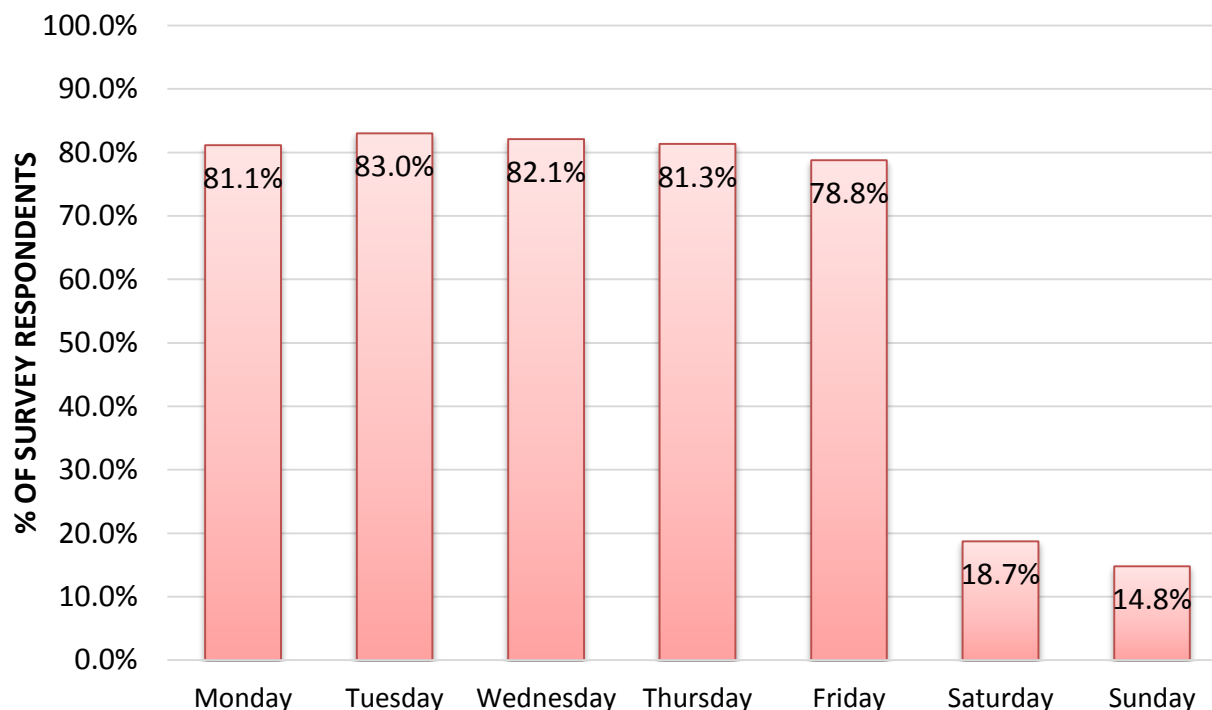
Results from the survey identified that 62% of employees had a normal five (5) day work week working eight (8) hours a day. Twenty six (26%) of employees worked a compressed schedule of either four (4) days a week, 10 hour days, or three (3) days a week, 12 hour days. Twelve percent of employees noted having a different work week arrangement.

#### **4.1.4 Days Worked**

Medstar Georgetown Hospital operates 24 hours a day 7 days a week. Given these operations, employees at the hospital may be subject to irregular shifts which require them to work either nights and/or weekends. In order to know the days the employee was assigned to work, the survey asked what days the individual worked in the week prior. Figure 4 identifies the percent of employees who were required to report for work on any given day of the week.

**Figure 4: Day's Worked During the Week**

Question: What days did you work last week?



**Responses: 2077; Work Days Recorded: 9135; Margin of Error  $\pm 2.07\%$**

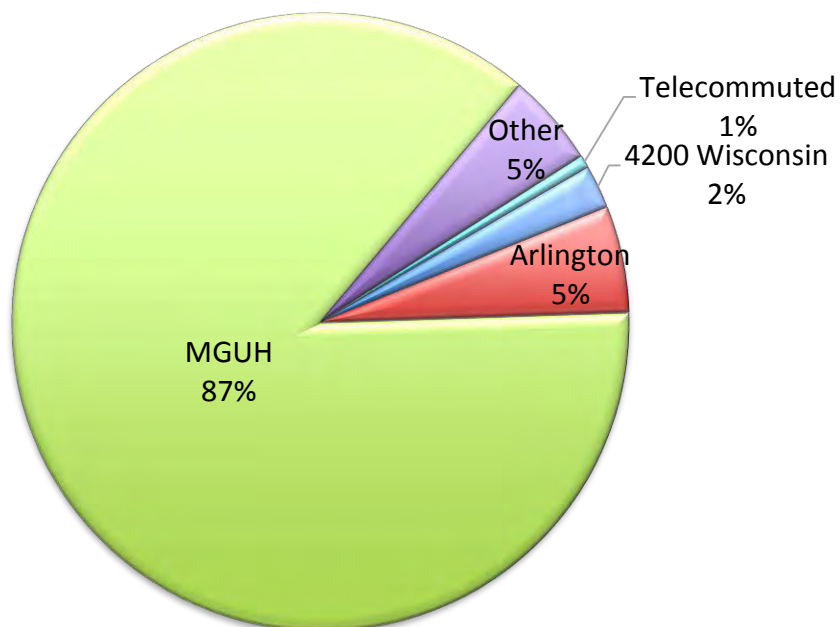
Survey results identified that approximately 81.5% of all employees reported to work during the weekday and approximately 17% of employees reported to work on weekends. Tuesday was the day of the week that had the most employees report to work with 83%, whereas Sunday had the least number of employees report to work with around 14.8%. Friday, was the day of the work week with the least number of employees reporting to work at 78.8%. The variation between the busiest and least busy day of the work week was only 4.2%.

#### 4.1.5 Work Location

For each day that an individual noted working, they were asked to identify where they primarily worked on that day. This question was asked to easily identify on-campus work days. Figure 5, identifies the overall percent of work days to each location.

**Figure 5: Percentage of Work Days by Location**

Question: Please indicate where you primarily worked last week.



**Responses: 2076; Trips Recorded: 9131; Margin of Error  $\pm 2.07\%$**

The survey identified that 87% of all work days were to MGUH, 5% of work days were to the Arlington Medstar location, 5% of work days were to another, undisclosed, location, and 2% of work days were at the 4200 Wisconsin Ave. Medstar location. Only 1% of all work trips were noted as telecommute work days meaning that the survey respondent worked virtually.

## 4.2 Travel Behavior

Questions in this section seek to understand the basic travel patterns of MGUH by commuters of MGUH. They include questions on how, where, and when people commute to MGUH.

### 4.2.1 Home Location of Respondents

For transportation planning purposes, it is important to understand where people are coming from when making transportation policy recommendations. For example, it may make little sense to implement transportation policies that promote transit if most employees do not live near a convenient transit route to work. On the flip side, transportation policies advocating for vanpool formations can make perfect sense if there are far-flung clusters of employees who live relatively near each other.

The 2015 survey inquired on employee's home address and zip code. Table 2 shows the top 10 zip codes where survey respondents reside. A full list of the zip codes where survey respondents reside can be found in Appendix C. Figure 6 displays the geographic distribution of respondents' home location by zip code. In the future, respondents will be geocoded to an exact point on the map using the home address in order to geographically guide specific transportation strategies.

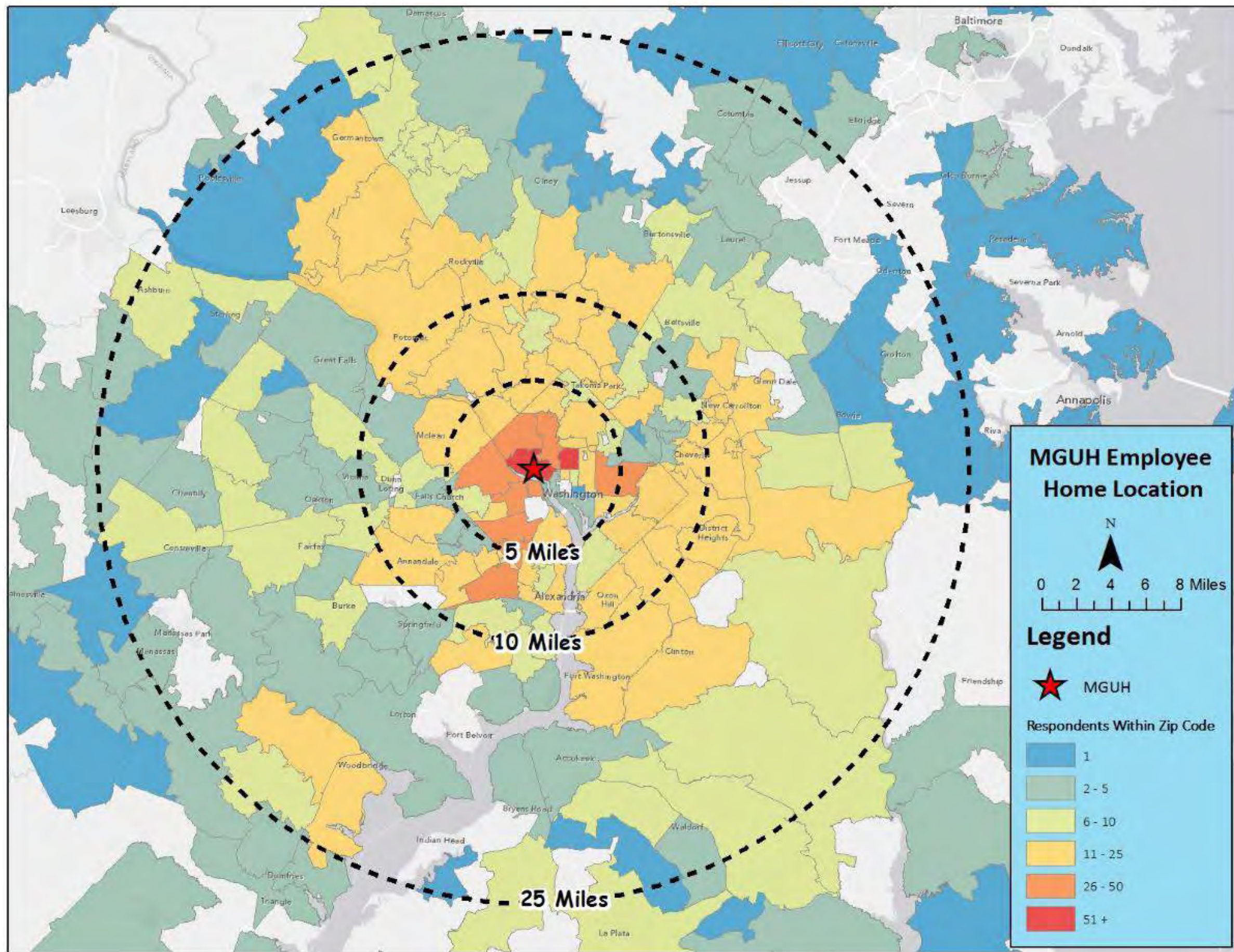
**Table 2: Top 10 Zip Codes With the Most Survey Respondents**

Ranking	Zip Code	Respondents In Zip Code
1	20007	95
2	20009	56
3	22201	40
4	22204	39
5	20002	33
6	20008	32
7	20016	32
8	22209	30
9	22206	28
10	22304	28



Figure 6: MGUH Employee Geographic Distribution

Question: What is your Home Address and Zip Code?





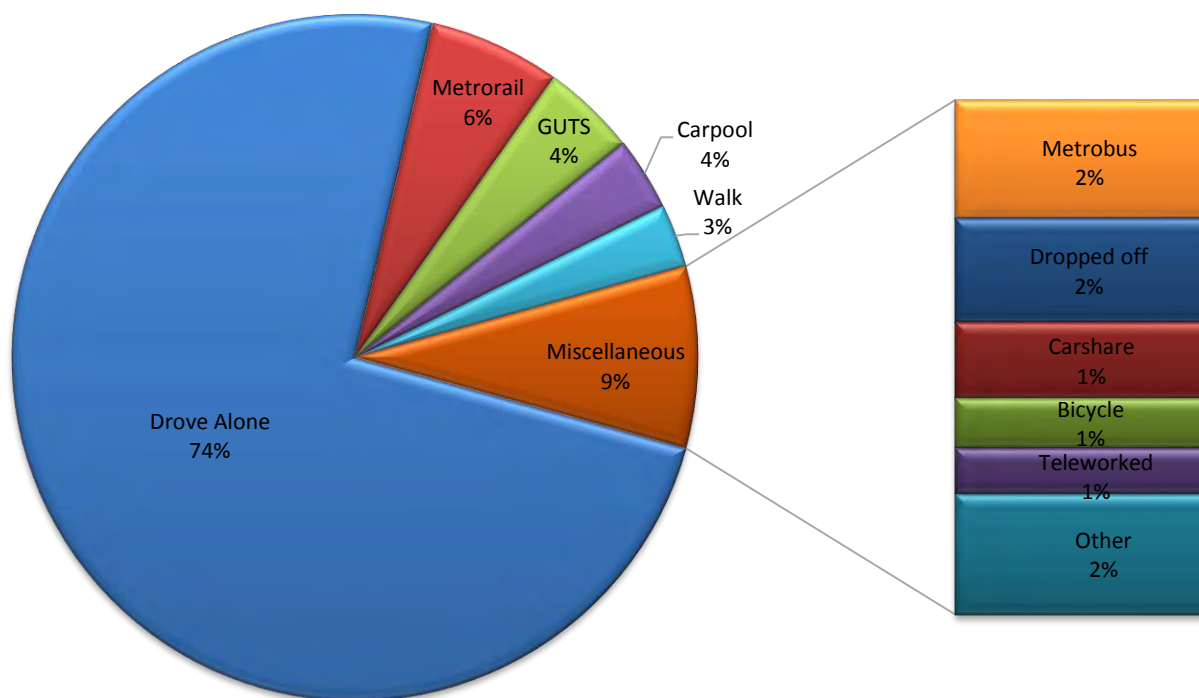
Geographic distribution of survey respondents revealed that 33.4% of MGUH employees are located within five miles of MGUH in Washington D.C. and Northern Virginia. Sixty one percent (61%) of employees live within 10 miles of MGUH and 39% of employees live more than 10 miles from MGUH.

#### 4.2.2. Mode split travel to MGUH – Longest Commute Mode

Survey respondents were asked to recall how they traveled to work the days they indicated working last week. If they took more than one mode of travel to work, they were asked to provide the mode they took for the longest portion of their commute. This question is required by District of Columbia Zoning Commission Order. This question helps to discern current transportation trends by employees at MGUH and the effectiveness of existing transportation policies towards influencing travel behavior. Figure 7 indicates the mode split for the longest mode of travel for work trips to MGUH.

**Figure 7: Mode Split Longest Commute Mode**

What transportation mode did you use for the longest portion of your trip to arrive at your primary work location? (MGUH Data ONLY)



*Other\* Includes: Commuter Bus, Commuter Rail, Taxi, Vanpool, Ride-hailing, Circulator, and Bikeshare*

**Responses: 1887; Trips Recorded: 7900; Margin of Error:  $\pm 2.17\%$**

Survey results identified that 74% of MGUH employees drove alone for the longest portion of their trip, 12% took transit (GUTS, Metrorail, Metrobus, and Circulator), 4% traveled by non-

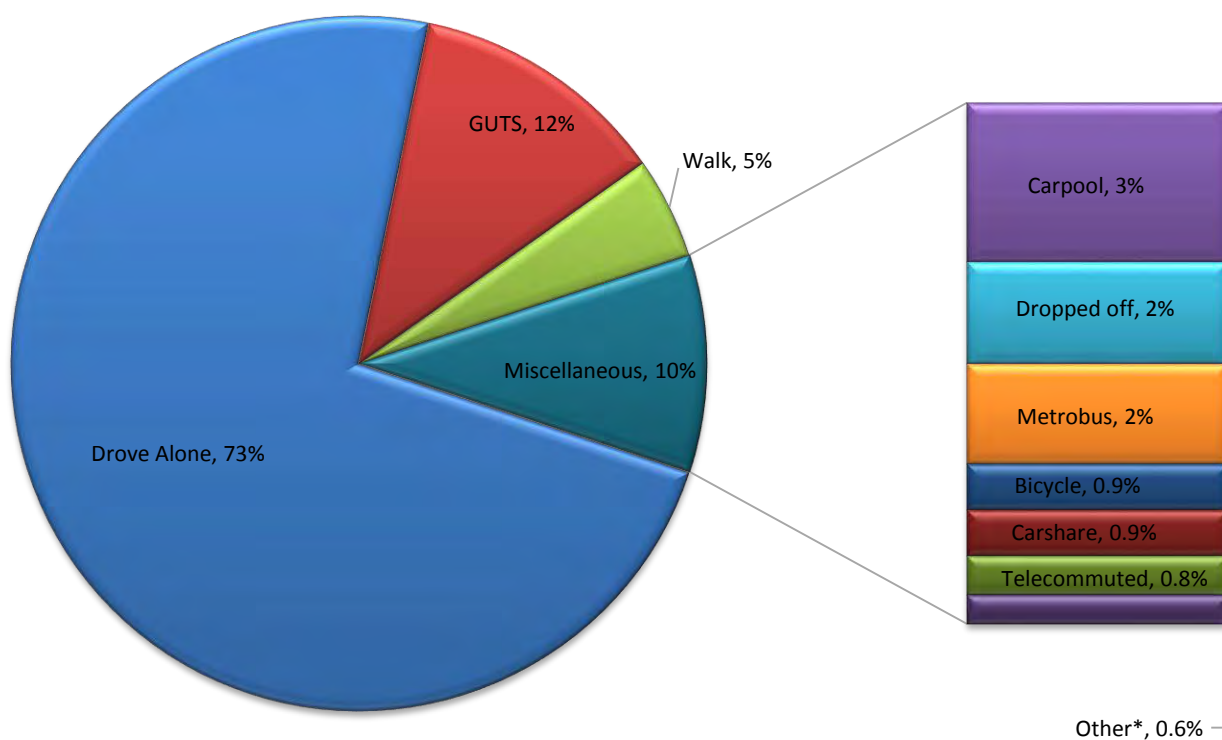
motorized means of transportation (walk, bike, and bikeshare), and 4% of traveled by ridesharing (carpool and vanpooling).

#### 4.2.3. Mode Split Travel to Georgetown – Last Commute Mode

In addition to the longest mode, survey respondents were asked to recall their last mode when accessing MGUH for the days they indicated working at MGUH. Whereas the longest mode can help reveal the number of people using regional transit networks not connected to MGUH, the last mode question can help identify how these commuters access MGUH from those unconnected regional transit networks. Figure 8 identifies the mode used to access MGUH.

**Figure 8: Mode Split Last Commute Mode**

Question: What transportation mode did you use for the last portion of your trip to work?



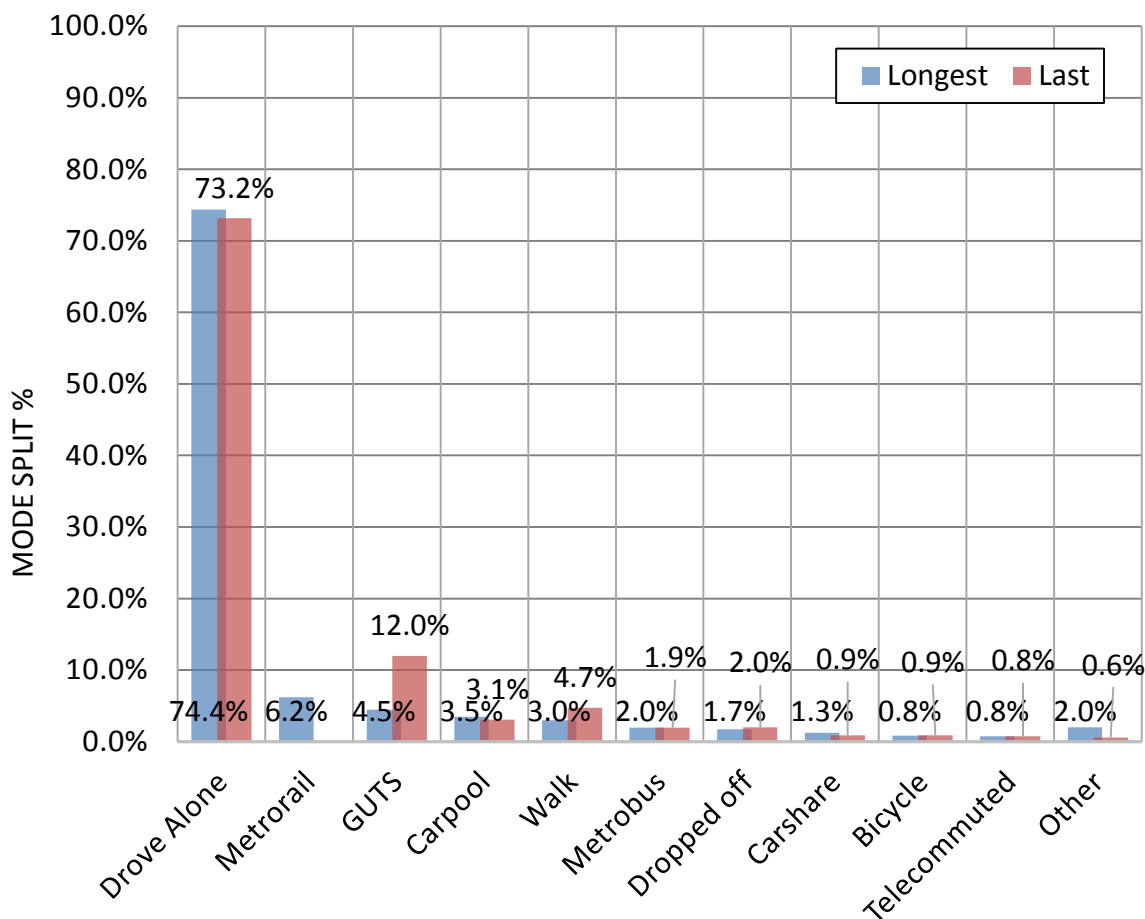
*Other\* Includes: Taxi, Vanpool, Ride-hailing, Circulator, and Bikeshare*

**Responses: 1874; Trips Recorded: 7884; Margin of Error  $\pm 2.18\%$**

Survey results identified that 73% of MGUH employees drove alone for the last portion of their trip, 14% took transit (GUTS, Metrorail, Metrobus, and Circulator), 6% traveled by non-motorized

means of transportation (walk, bike, and bikeshare), and 3% traveled by ridesharing (carpool and vanpooling). As can be seen in Figure 9, a comparison of the longest mode split and last mode split identified that most commuters ride Metrorail arrive at MGUH riding GUTS.

**Figure 9: Longest Commute Mode vs. Last Commute Mode**

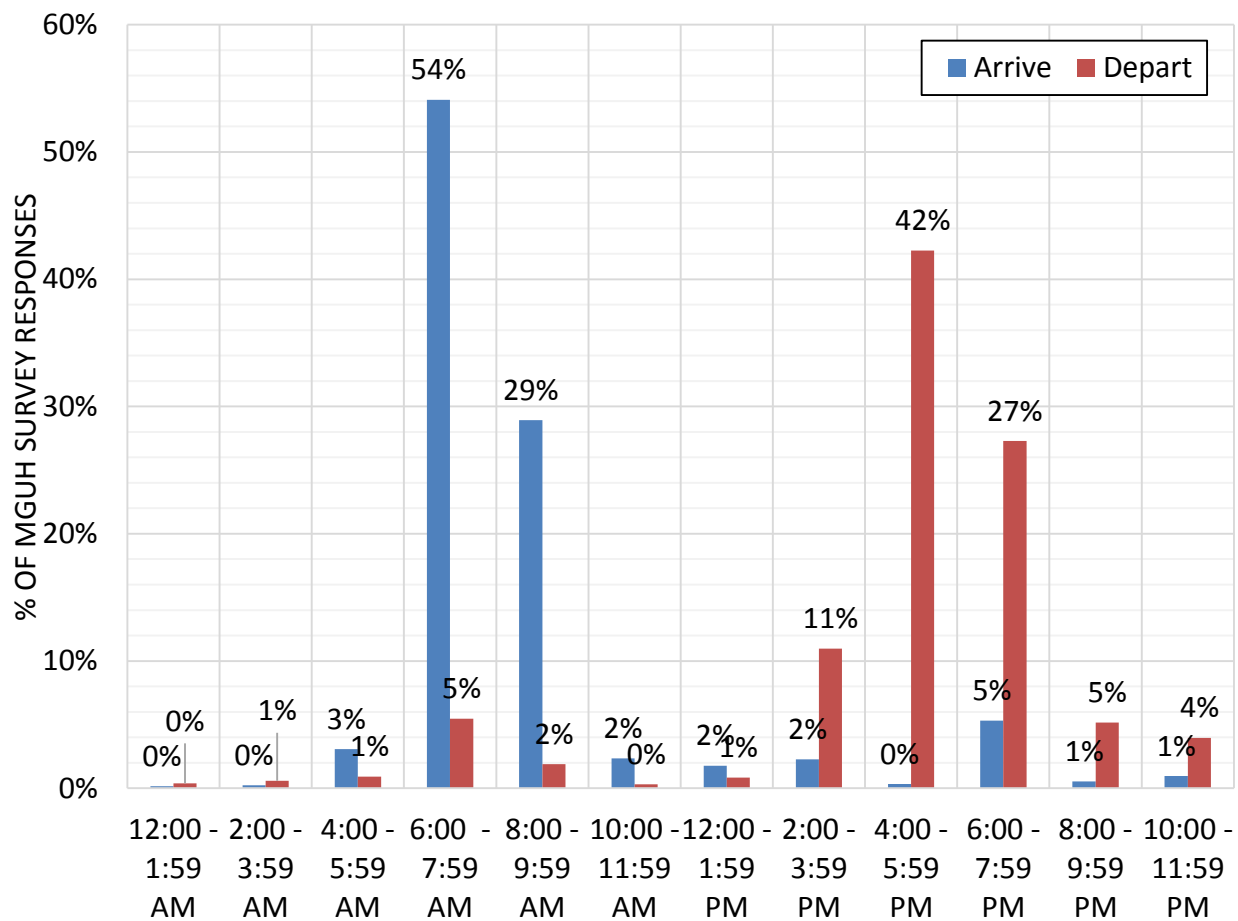


**4.2.4. Time Distribution of Daily Commute Trips**

In order to understand the time at which MGUH employees travel to and from the hospital, questions on arrival and departure time were included in the survey. Ultimately, travel time patterns can encourage transportation planning policies. For example, if a vast majority of respondents indicated arriving at the hospital within the same timeframe, a transportation policy response may be to encourage hospital leadership to stagger work shifts in order to reduce demand on the adjacent road network. Figure 10, Figure 11, and Figure 12, identify the arrival and departure times of MGUH affiliates.

**Figure 10: Arrival/Departure from MGUH – 24 Hours**

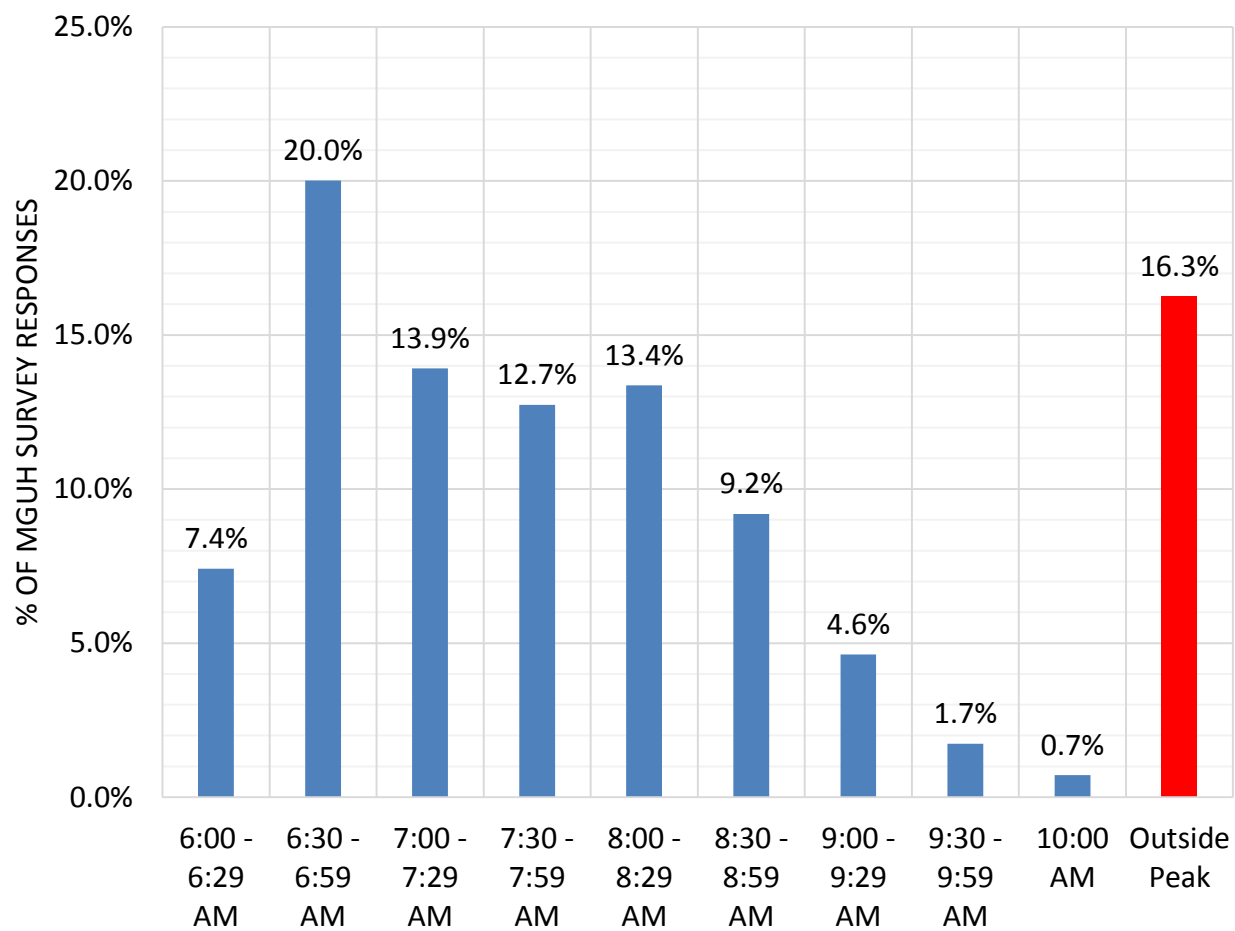
Question: At what time do you typically arrive/depart from work - 24 Hours? (MGUH Trip Data Only)



**Responses: 1851; Margin of Error ± 2.21%**

**Figure 11: Arrive to MGUH – Peak Hour (6AM to 10AM)**

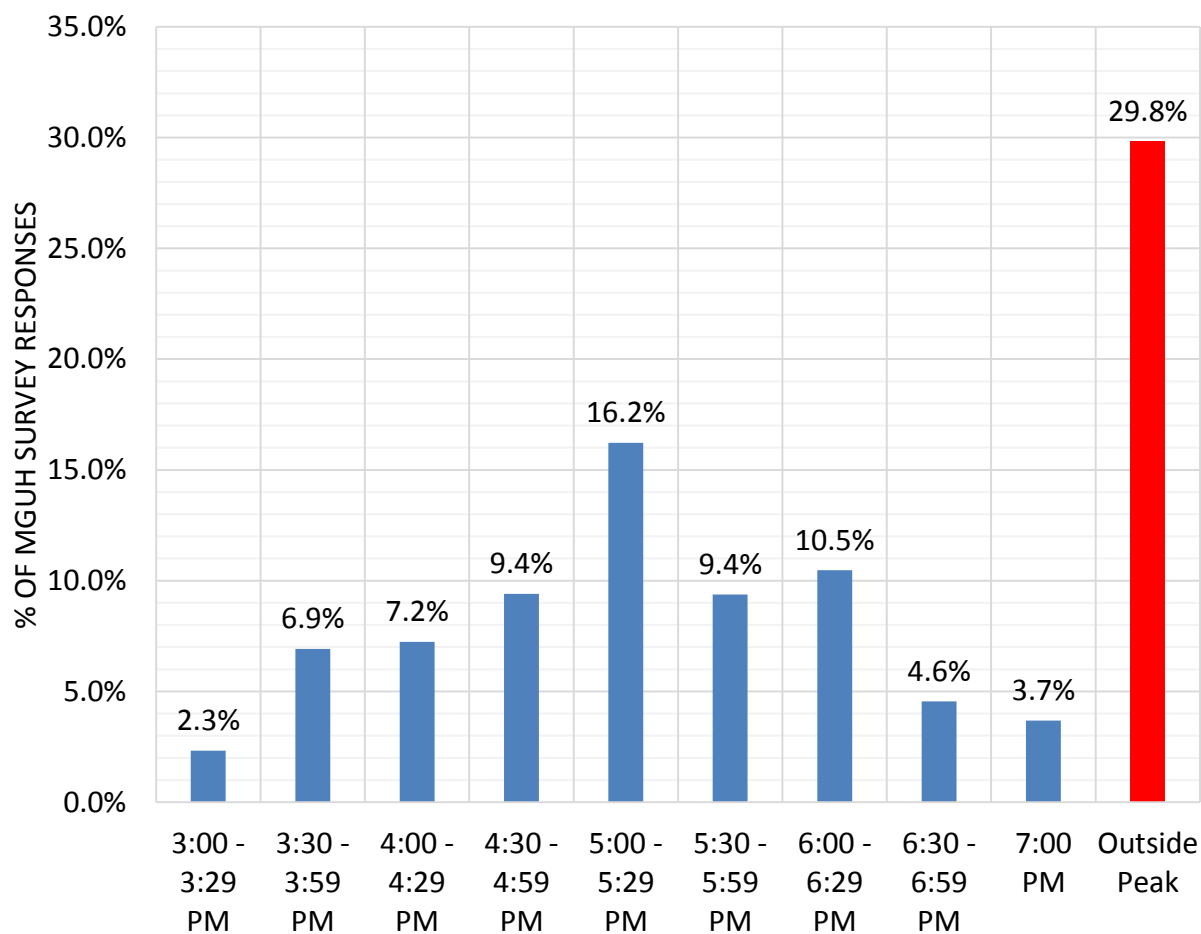
Question: At what time do you typically arrive at work?



**Responses: 1851; Margin of Error  $\pm 2.21\%$**

**Figure 12: Depart MGUH – Peak Hour (3PM to 7PM)**

Question: At what time do you typically depart from work?



**Responses: 1851; Margin of Error  $\pm 2.21\%$**

Survey results identified an arrival peak between 6:30 AM and 6:59 AM with 20% of all commuters arriving at work within that time. The afternoon peak was found to be between 5:00 PM and 5:29 PM with 16.2% of all MGUH employees departing the site at that time. A total of 83.7% of employees at MGUH arrived at the hospital during the morning peak window (6AM to 10AM) whereas a lower, 70.2% of employees departed the hospital during the afternoon peak window (3PM to 7PM).

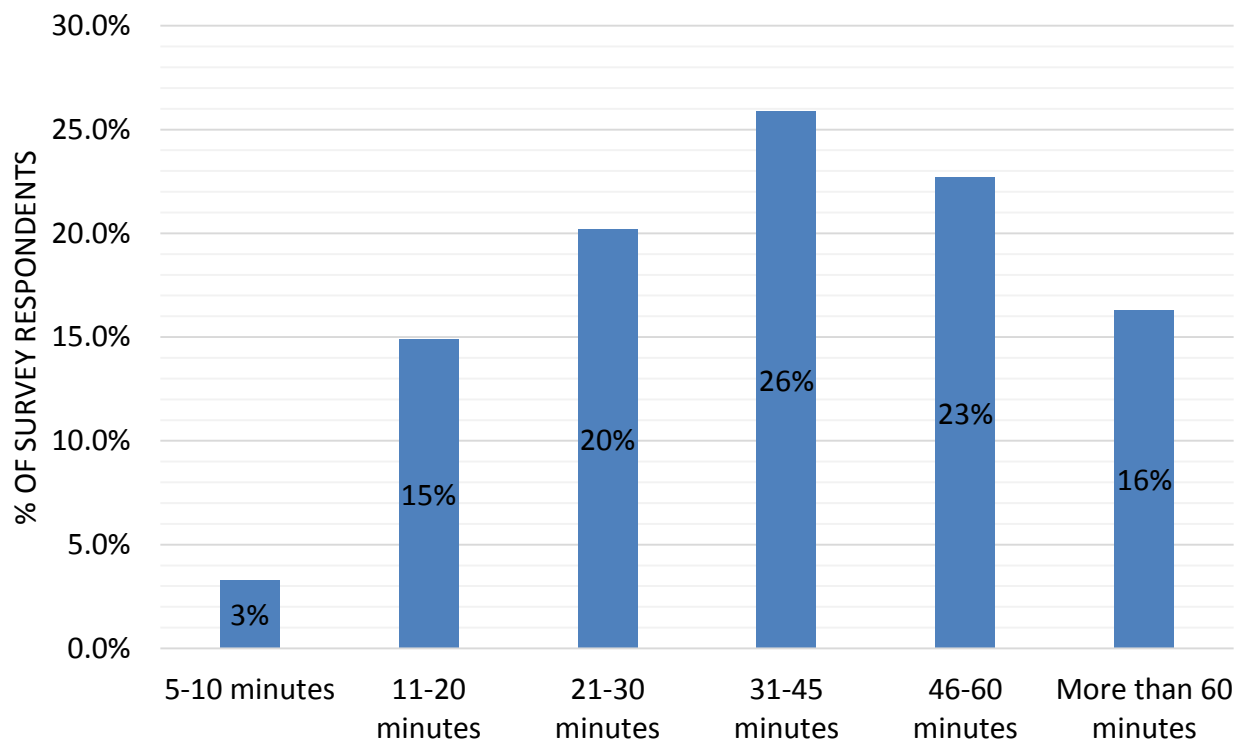


#### 4.2.5. Travel Time Length of Commute Trips

In order to evaluate the commute experience of MGUH employees, a question on commute time was added to the survey. The distribution of commute responses can be seen in Figure 13.

**Figure 13: Duration of Commute for Medstar**

Question: How many minutes does it take you to get from your home to work location?



**Responses: 2034; Margin of Error  $\pm 2.11\%$**

Survey responses revealed 26%, the largest number of survey respondents in one interval, took between 31 and 45 minutes to travel from home to work. Sixteen percent of survey respondents took over an hour to commute to work, whereas 38% of survey takers took less than 30 minutes to commute to work.

## 4.3 Transit

Part of the survey's goal was to gauge transit ridership and utilization in order to understand how transit service modifications affect the general commuting population. Ridership and utilization questions inquired on the usage of public transportation and GUTS to MGUH.

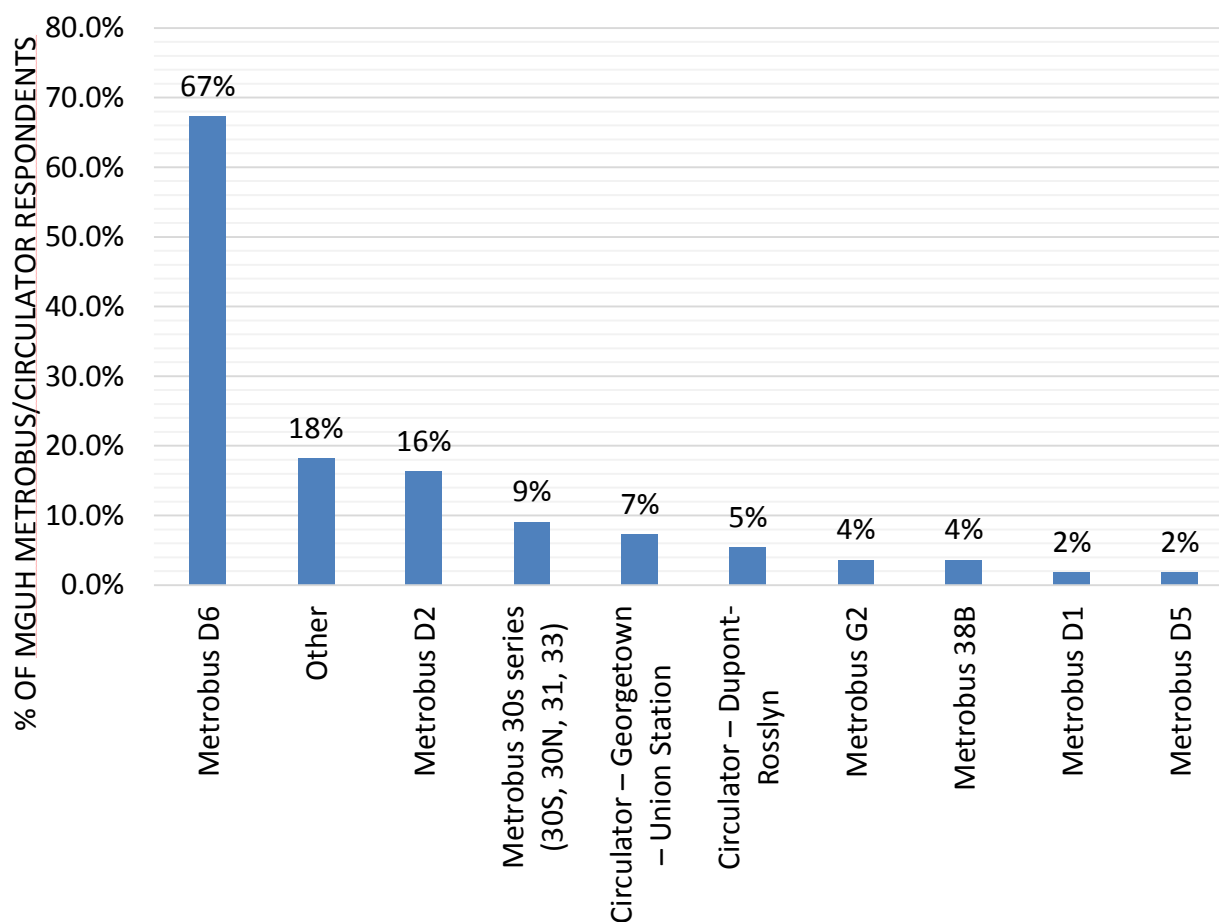
### 4.3.1. Access to Campus by Public Transportation Route

Respondents who commute to MGUH and answered that their last mode of transportation was either Metrobus or Circulator were asked to identify their typical transit route to MGUH.

Respondents were allowed to select all routes which they typically ride. The purpose of this question was to gauge transit ridership by route for those who access campus via public transportation. The distribution of public transportation route ridership can be seen in Figure 14.

**Figure 14: Public Transportation Route to MGUH**

Question: Which bus route do you typically use for the last portion of your trip to the hospital?  
(Check all that apply)



*Responses: 55; Trips Recorded: 74; Margin of Error  $\pm 13.30\%$*

Results identified that 67% of Metrobus/Circulator riders accessed MGUH using the Metrobus D6, 16% of Metrobus/Circulator riders used the Metrobus D2, and 9% of Metrobus/Circulator riders used the Metrobus 30s series. Eighteen percent (18%) identified using another route, however, they were not required to disclose the route they used within the survey.

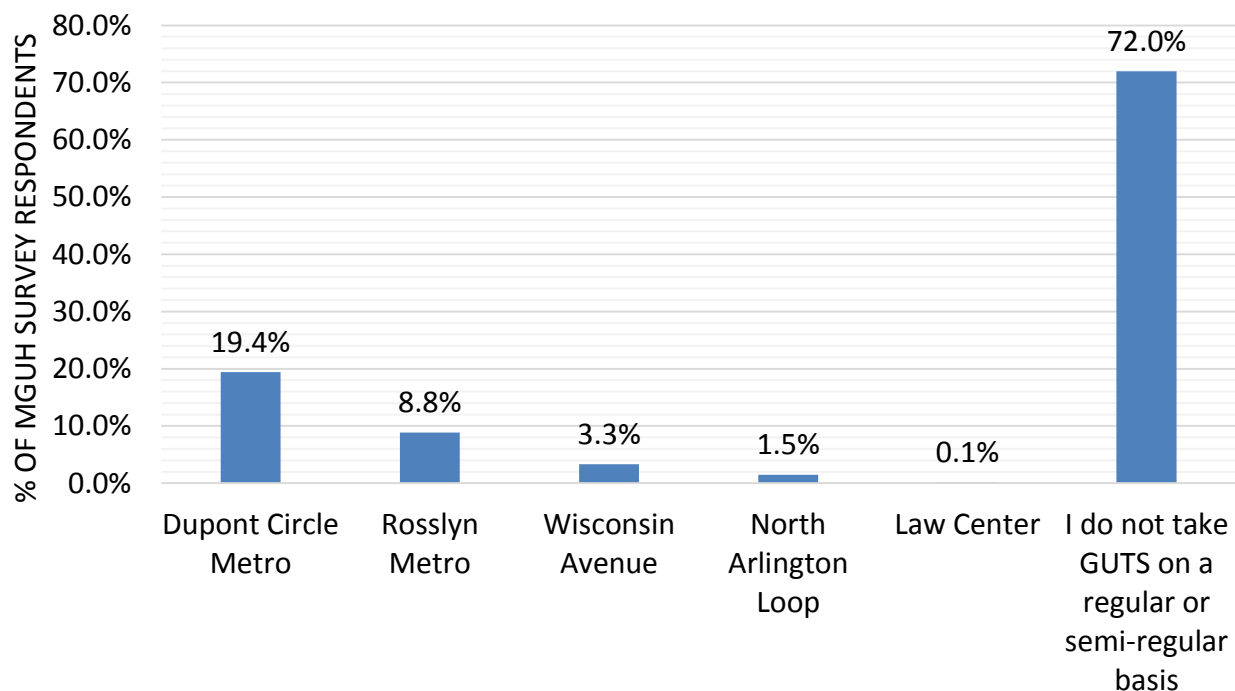
#### **4.3.2. GUTS Route Utilization**

GUTS is a free transit service offered by Georgetown University and Medstar to help students, faculty, staff and visitors commute travel the Georgetown University Campus areas in the Washington DC region. The routes are to and from: Dupont Circle Metro, Rosslyn Metro, Wisconsin Avenue University offices, Georgetown University Law Center, and a loop around Arlington, Virginia. The majority of trips are during morning and afternoon peak periods.

In order to understand GUTS usage, all survey respondents who worked at least one day at MGUH were asked to check-off all the GUTS routes they typically take during the day. The purpose of this question was to gauge overall ridership by GUTS routes, and not just commute ridership. Distribution of GUTS utilization by route can be seen in Figure 15.

**Figure 15: GUTS Route Utilization**

Question: Which GUTS routes do you typically take at any time during the day? (Check all that apply)



**Responses: 1854; Total Choices Selected: 1948; Margin of Error  $\pm 2.19\%$**

Results identified that 28% of those that worked at MGUH used the GUTS system on a normal basis. The Dupont Circle route followed by the Rosslyn route were the most taken on a typical basis with 19.4% and 8.8%, respectively, of survey respondents who worked at MGUH indicating their use on a typical basis. Law Center had the lowest amount of utilization amongst the GUTS routes with 0.1% of survey respondents who worked at MGUH indicating their use on a typical basis.

## 4.4 Parking

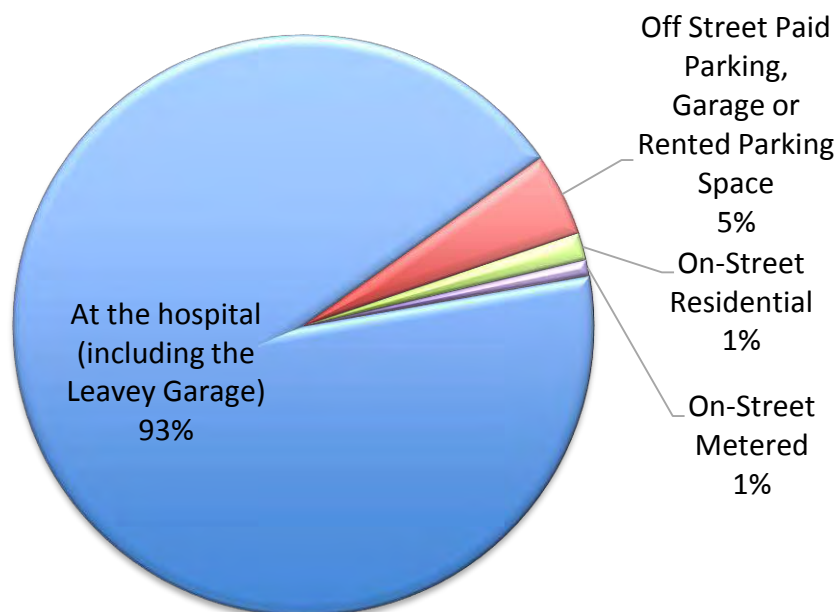
As with many urban centers in the United States, parking is a contentious subject in Georgetown, particularly with the adjacent community. For that reason, it is important for Medstar to understand where affiliates are parking their vehicles when traveling to MGUH. This section explicitly covers questions regarding parking including where people are parking and how they access that parking. There are also more specific questions regarding the parking behavior of those who parked on residential streets, the neighborhood they parked within, whether they had a parking permit to park in that area, and when they specifically park on-street within the residential neighborhood. All questions within this section were only available to those that indicated arriving at MGUH through a vehicle mode (Drive Alone, Carpool, Vanpool, and Carshare).

### 4.4.1. Parking Location

The first of the parking questions sought to understand where people are parking when they drove to MGUH. This question helps to identify whether people are parking where they have been designated to park, if not, this behavior can lead to unforeseen challenges in the operations of other adjoining institutions including the surrounding neighborhood, Georgetown University, or even the M Street Business Corridor. Figure 16 identifies where survey respondents are parking when traveling to MGUH.

**Figure 16: Parking Location When Driving to Campus**

Question: If you drove to MGUH, where did you park?



*Responses: 1522; Margin of Error  $\pm 2.68\%$*

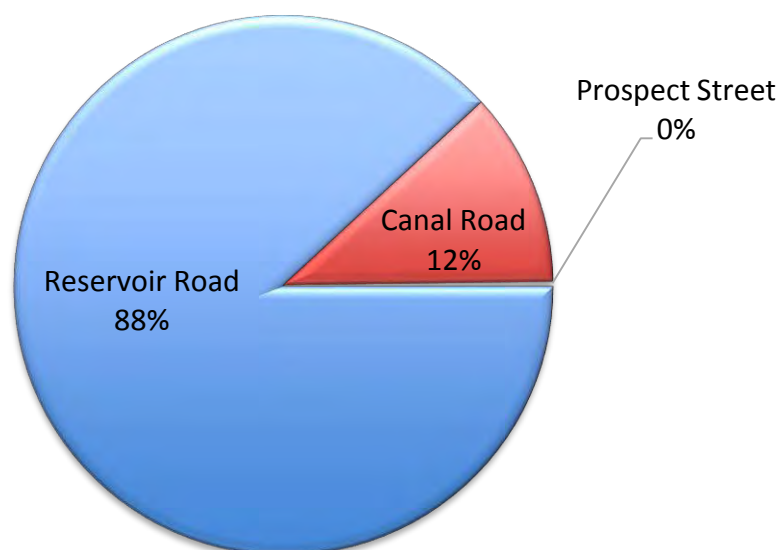
Survey results indicated that 93% of those who traveled by vehicle to main campus parked at the Hospital, 5% parked off-street at a paid parking garage, and 1% parked on-street at a metered parking location. Only 1% of those who traveled by vehicle to main campus parked within an on-street residential parking space.

#### 4.4.2. Campus Parking Access

Access to the Georgetown campus is available through the North from Reservoir Rd., from the South through Canal Rd, and from the East through Prospect St. This question was included in the survey in order to understand where additional traffic volume was being added to the road network by on campus parking trips. This question was only asked to survey respondents who answered that they parked at the Hospital. The distribution of campus access for parking at campus can be seen in Figure 17.

**Figure 17: Campus Parking Access**

Question: Which entry did you use to enter MGUH?



**Responses: 1415; Margin of Error  $\pm 2.43\%$**

Survey results indicated that 88% of people who parked on campus used the Canal Rd. entrance. Twelve percent (12%) of people who parked on campus used the Reservoir Rd. entrance. The Prospect St. entrance was not open at the time of the survey due to construction.

#### 4.4.3. Residential On-Street Parking Patterns

MGUH affiliates that parked on-street within residential neighborhoods were asked to provide more details about where, when, and how they parked. However, because there was an insignificant number of MGUH employees who parked on residential streets (only 23 respondents), statistically valid data could not be obtained for the following questions:



- If you parked on a residential street, do you have a valid Residential Parking Permit (RPP) for that area?
- Which neighborhood do you park in?
- Typically, what days do you park on-street? (Check all that apply).

Data accuracy for these questions was  $\pm 19.23\%$ .

## **4.5 Transportation Demand Management (TDM)**

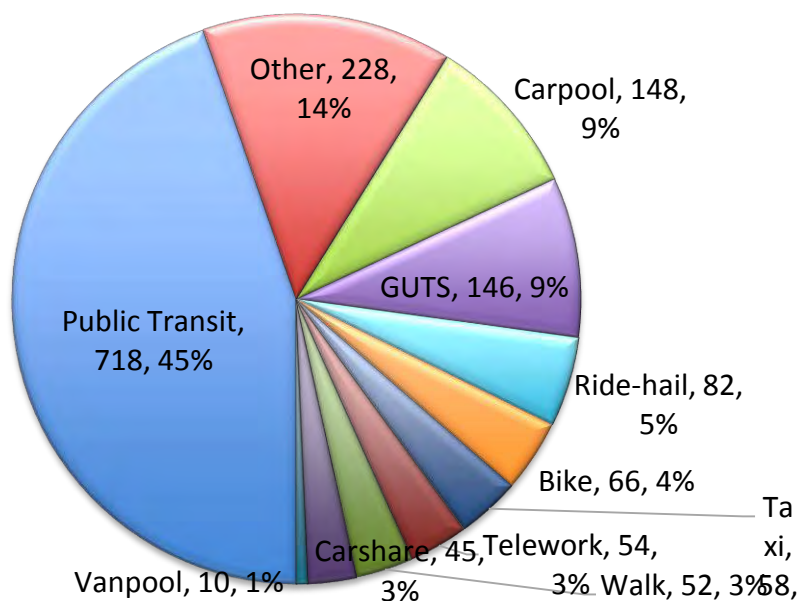
Transportation Demand Management (TDM) strategies attempt to shift the travel patterns of MGUH employees to allow the transportation system as a whole to function more efficiently given the current existing amount of transportation supply. As part of this survey effort, TDM questions were asked to help develop effective transportation policies that would have the greatest impact on the adjoining transportation network connecting MGUH. This section includes questions on the sentiments of travelers towards alternative transportation solutions and the sensitivity of parking pricing towards changing MGUH employee travel behavior. Additional questions were asked regarding the flexibility of one's job to use alternative transportation including questions on whether one's job can allow them to work remotely or whether their work hours are flexible.

### **4.5.1. Secondary Mode Consideration**

This question was designed to understand what individuals would consider to be their most likely alternative travel option to work if they did not have the ability to drive. This question helps to understand perceptions towards the feasibility of alternative commute options. Figure 18 identifies the most supported alternative travel option to work.

**Figure 18: Secondary Mode Consideration**

Question: If driving to work was suddenly not an option for you, what would be your second choice?



**Responses: 4836; Margin of Error  $\pm 1.2\%$ :**

Survey results identified that a majority, 54%, of respondents would take transit (public transit or GUTS) to work if driving were not available to them. Ten percent (10%) of respondents mentioned they would rideshare (carpool or vanpool) to work and 7% would take non-motorized transportation (walk or bike).

#### 4.5.2. Parking Pricing Sensitivity

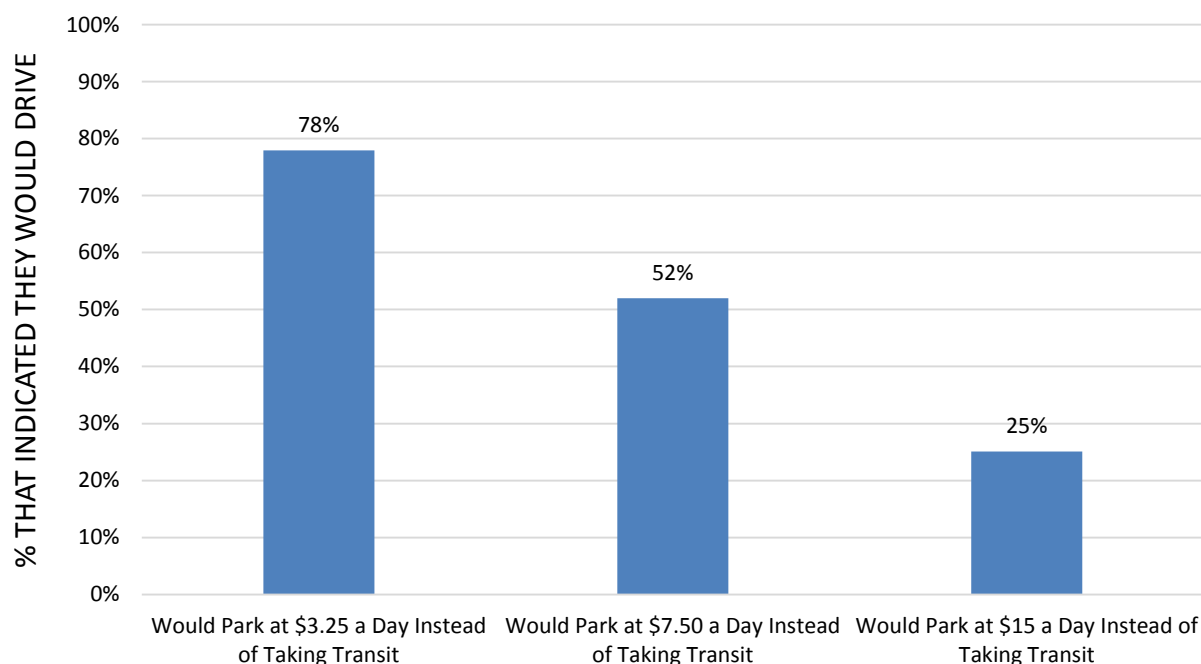
One of the most effective tools within the TDM toolkit for changing travel behavior is to increase parking cost. The higher parking costs increase, the more competitive alternative transportation options become versus driving. In order to understand the potential shift in travel behavior resulting from an increase in the cost of parking, a series of hypothetical pairing questions were included within the survey. Survey respondents were asked to make a minimum of at least three (3) comparisons: Transit vs. Driving, Carpool vs. Driving, and Driving during peak hour vs. Non-peak hour.

In the first comparison for transit, users had to determine whether they would drive to work paying at current parking cost levels of \$3.75 a day, or take transit subsidized up to \$6.75. If they expressed that they would prefer to drive, the survey respondent would then have to evaluate the same tradeoff, however, with an increased daily parking rate of \$7.50. If the survey respondent still preferred driving to taking transit, a final follow-up comparison would require them to decide between paying \$15 a day to park on campus or take transit. The \$6.75 transit

subsidy is the maximum daily amount that could be deducted from taxes by Medstar (\$130 for the entire month) and the \$15 parking maximum is comparative to what it would cost to park in Downtown Washington DC. Results from this series of comparative questions can be seen in Figure 19. Figure 19 identifies the percentage of respondents who would still consider driving at different parking pricing levels.

**Figure 19: Transit vs. Driving Parking Cost Analysis**

Question: Select from the pair below the travel option that you would choose for your commute.



**Responses: 1810; Margin of Error  $\pm 2.25\%$**

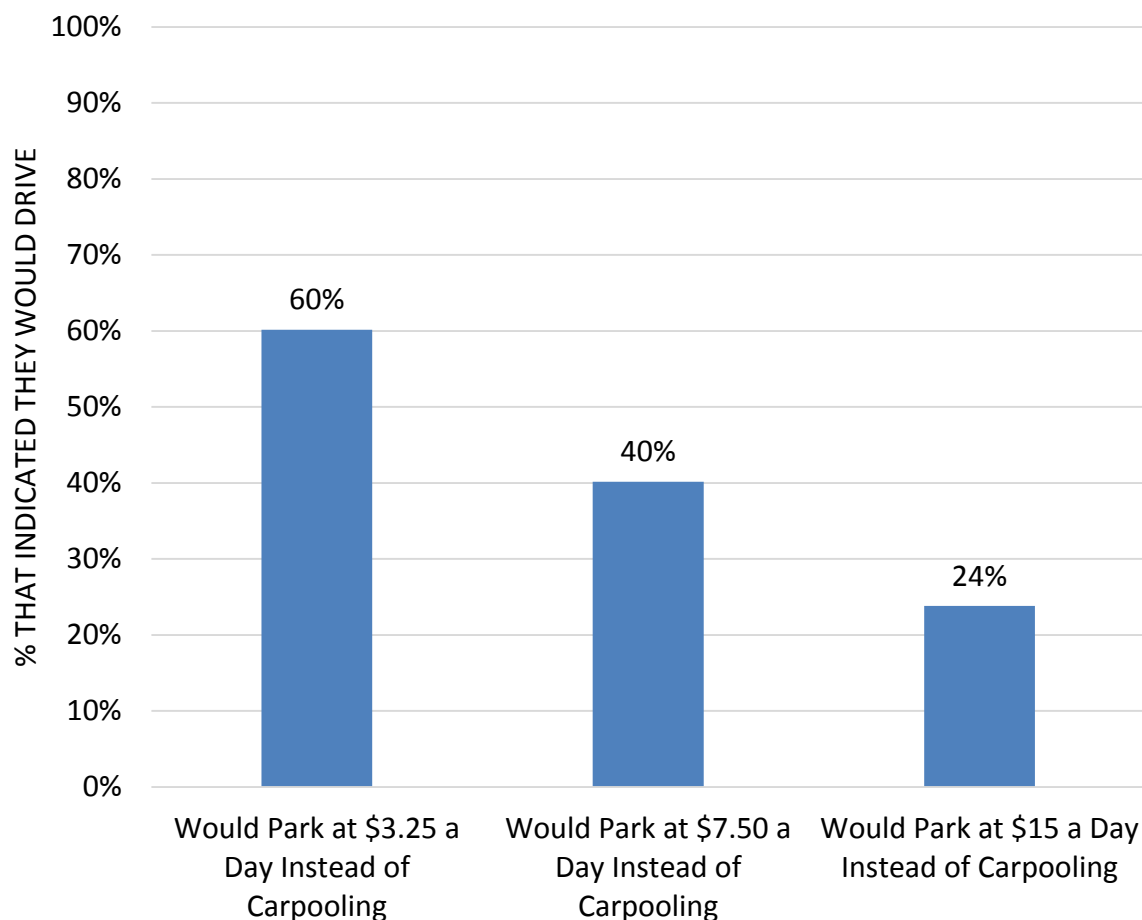
The paired question analysis between driving alone and transit revealed that at current parking levels, if Medstar offered subsidized transit at \$6.75, 78% of MGUH affiliates would still drive. The number of MGUH affiliates who would still drive would drop to 52% if parking was increased to \$7.50 and driving alone would decrease to 25% if parking cost increase to \$15 a day.

For the second comparison, survey respondents were asked to compare carpooling and parking for free versus driving alone and paying for parking at the existing rate of \$3.75 per day. Similar to the transit comparison outlined above, if the survey respondent noted that they would prefer driving, the respondent would be required to consider carpooling versus paying for parking at a rate of \$7.50 per day. If the respondent still noted that they would prefer to drive alone, the final comparison asked whether they would carpool and have free parking or pay \$15 a day for

parking. Results from this series of paired questions can be seen in Figure 20. Figure 20 identifies the percentage of respondents who would still consider driving at different parking pricing levels.

**Figure 20: Carpool vs. Driving Parking Cost Analysis**

Question: Select from the pair below the travel option that you would choose for your commute.



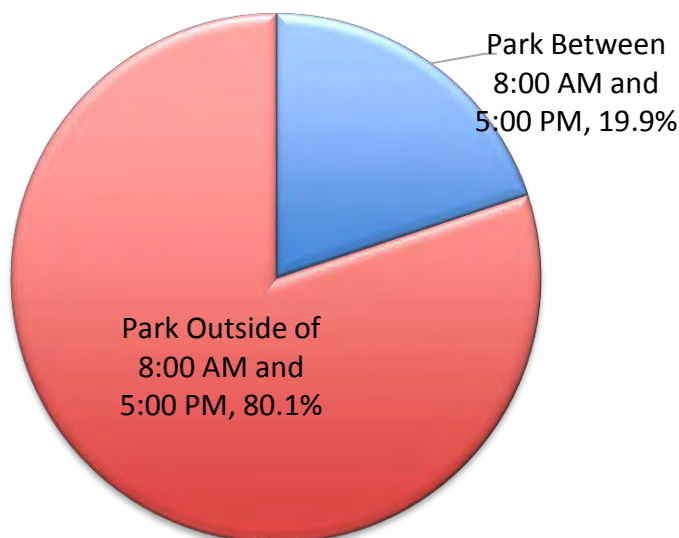
**Responses: 1803; Margin of Error  $\pm 2.26\%$**

The paired analysis between driving alone and carpooling revealed that at current parking levels, if Medstar offered free parking to carpools, 60% of MGUH affiliates would still drive. The number of MGUH affiliates who would still drive would drop to 40% if parking was increased to \$7.50 and driving alone would decrease to 24% if parking cost increase to \$15 a day.

The third comparison asked respondents to consider coming in during non-peak hour (outside 8 AM to 5 PM) at the current parking rate of \$3.75 a day versus parking during peak hour (Within 8 AM to 5 PM) at \$15 a day. Results from this paired question can be seen in Figure 21.

**Figure 21: Peak Hour Parking vs. Non-Peak Hour Parking Cost Analysis**

Question: Select from the pair below the travel option that you would choose for your commute.



**Responses: 1799; Margin of Error  $\pm 2.27\%$**

Eighty percent of respondents would consider parking outside of the peak hour for \$3.75 as opposed to paying \$15 a day to park during peak hour.

#### 4.5.3. Alternative Transportation Commute Sentiment

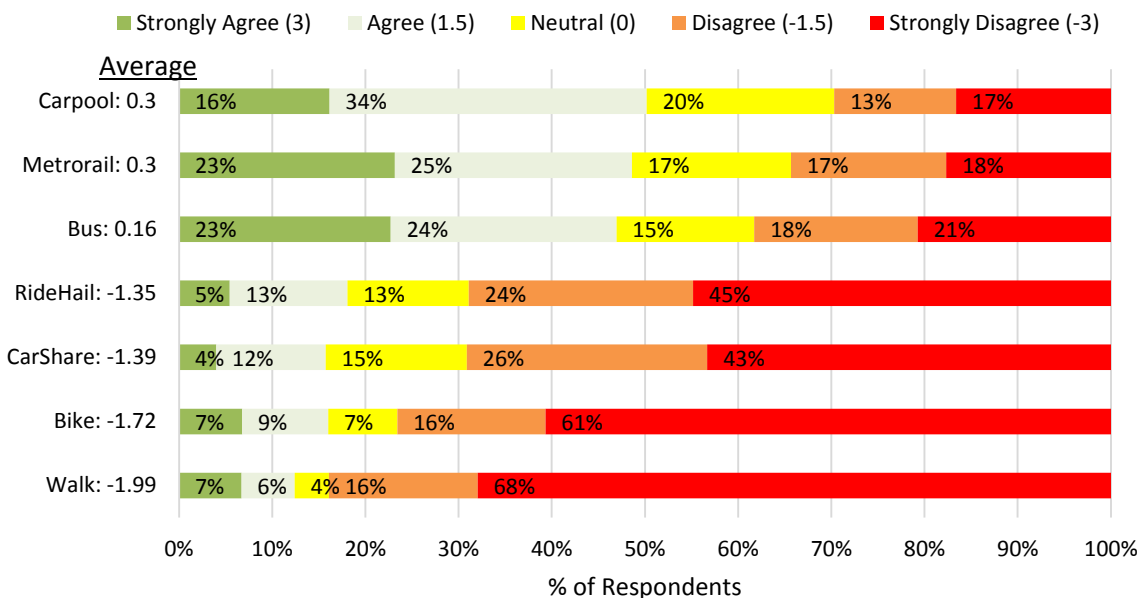
As another means for determining the general populations sentiment towards alternative transportation, respondents were asked a series of question regarding how realistic it would be for that individual to use alternative transportation modes for their trip to work. Respondents had to provide their level of agreement or disagreement with each mode and choose between either Strongly Agree, Agree, Neutral, Disagree, or Strongly Disagree. In order to compare results, each rating level was given a numerical value. The rating can be seen on Table 3. Figure 22 identifies which alternative travel options are most realistic to the MGUH affiliate population.

**Table 3: Current Commute Sentiment Ranking Values**

Rating	Numerical Value
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

**Figure 22: Alternative Transportation Sentiments**

**Question:** Using the scale provided, please indicate how much you agree or disagree with the following statement:



*Response: 1981; Margin of Error ± 2.16%*

<b>Abbreviation Code</b>	<b>Text Within Survey</b>
<b>Bus</b>	<i>I would consider taking a BUS to work if it were available.</i>
<b>Metrorail</b>	<i>I would consider taking METRORAIL to work (connecting by bus) if it were available.</i>
<b>Walk</b>	<i>I would consider WALKING to work from my current residence.</i>
<b>Bike</b>	<i>I would consider BIKING to work from my current residence.</i>
<b>Carpool</b>	<i>I would consider CARPOOLING/VANPOOLING to work if I knew others who have a commute similar to mine.</i>
<b>RideHail</b>	<i>I would consider TAXI/RIDEHAILING (Uber, Lyft, Etc.) to work at least once a week.</i>
<b>CarShare</b>	<i>I would consider using a CARSHARING service (Enterprise Carshare, Zipcar, Etc.) to work at least once a week.</i>



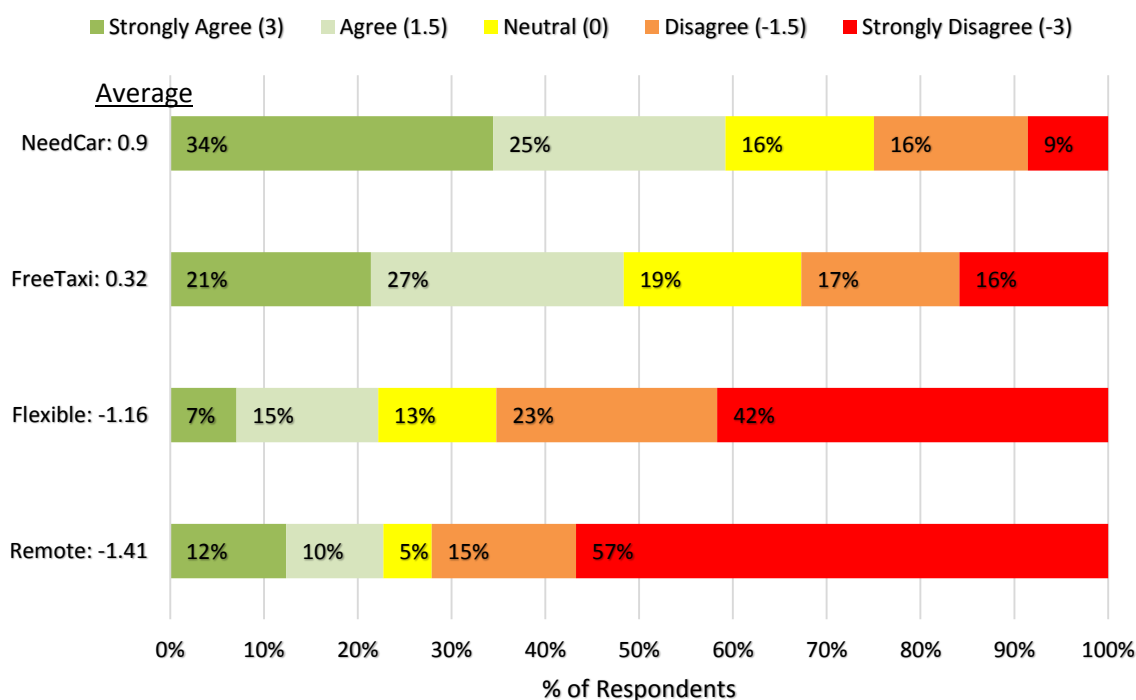
Results identified that travel by carpool/vanpool was seen as the most realistic alternative transportation mode for one's commute followed by Metrorail and then bus. Walking and Biking were considered the least realistic for affiliates of MGUH.

#### 4.5.4. Job Flexibility for TDM

Not covered within other sections of this survey are questions directly related to the amount of flexibility one's job offers an individual to use alternative travel options. For example, if the individual has flexible work hours, it may be easier for that individual to decide to carpool because the individual can shift their schedule to meet another person's timetable. This section specifically identifies the flexibility one has at their job to either work remotely, come-in at flexible times, or leave their vehicles at home. Figure 23 summarizes the results of job flexibility for implementing TDM measures. The weight and scale in Table 3 within section 4.5.3. Alternative Transportation Commute Sentiment was used for the comparison of strategies.

**Figure 23: Job Flexibility for TDM Strategies**

**Question:** Using the scale provided, please indicate how much you agree or disagree with the following statement:



*Response: 1975; Margin of Error  $\pm 2.17\%$*

<b>Abbreviation Code</b>	<b>Text Within Survey</b>
<b>Remote</b>	<b><i>My job can be done remotely (at least once a week).</i></b>
<b>Flexible</b>	<b><i>My work hours are flexible.</i></b>
<b>NeedCar</b>	<b><i>I need to have a car available during the workday in case of emergencies.</i></b>
<b>FreeTaxi</b>	<b><i>A free taxi ride home (up to 4 times a year) in case of an emergency or needing to work late would increase my likelihood of using alternative transportation to work.</i></b>

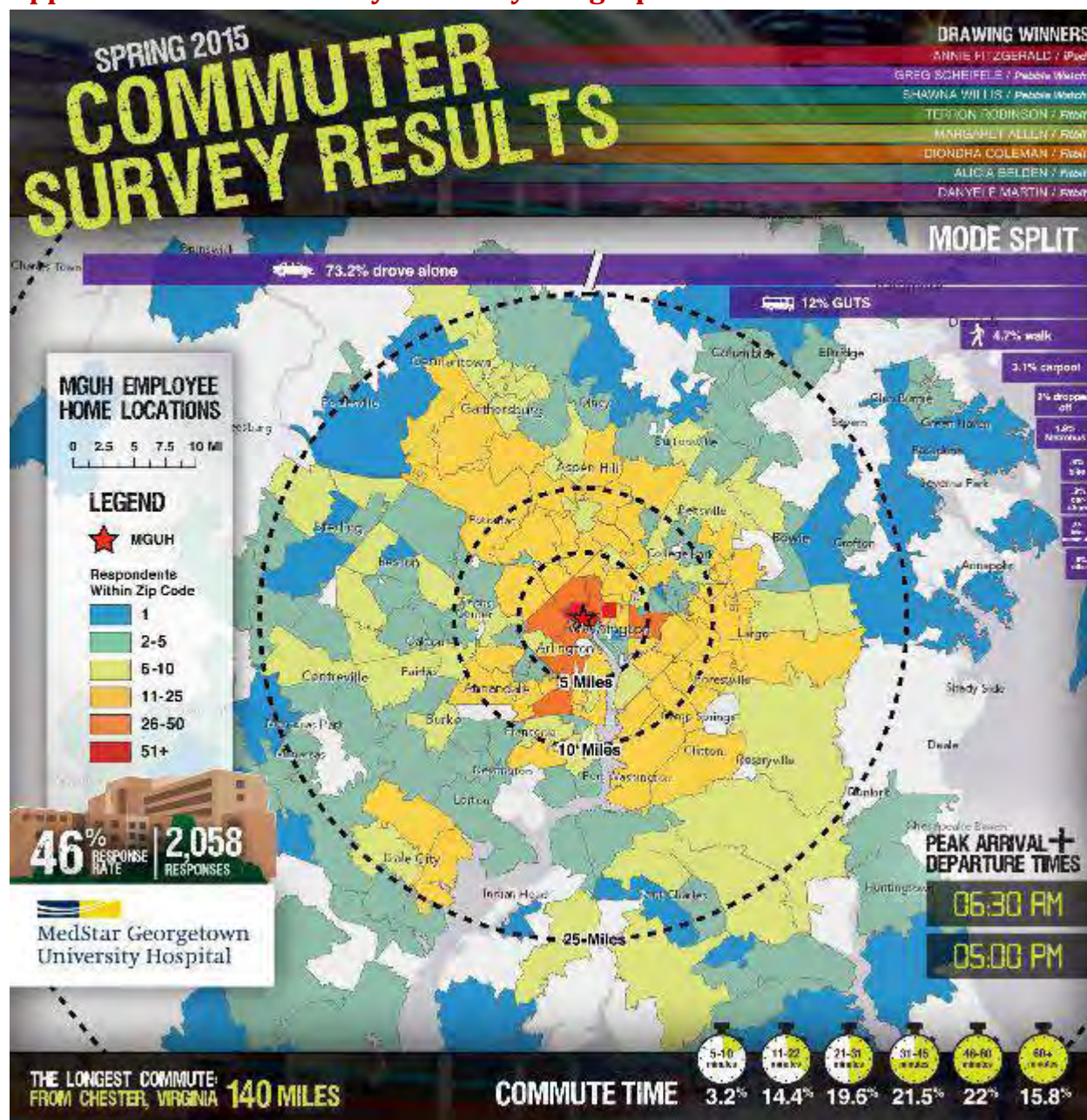
Survey results revealed that at least 61% of Medstar employees feel that they need their vehicles during the workday in case of emergencies. Twenty two percent of Medstar employees agree that they have flexible work hours and 22% of employees feel that they can work remotely at least once a week.

## **Section 5 - Conclusions**

With about 2,000 unique accounts of travel behavior and sentiment from this survey effort, MGUH has an accurate snap shot of MGUH affiliates travel behavior to the Hospital. Using this survey data, the hospital along with designated consultants will develop a Comprehensive Transportation Demand Management Plan with strategies to achieve hospital goals. Next steps in the comprehensive planning process will include a more in-depth review of the survey data to interpret particular commute patterns based on hospital affiliation, weekly work schedule, current job flexibility, home location, and alternative transportation mode preference. Results from these cross tabulations will feed directly into strategies within the plan to achieve desired transportation results for the hospital. The plan will help provide for the long-term prosperity of MGUH and strong cooperative relationships with neighboring Georgetown University and the surrounding community.

## Section 6 - Appendix

### Appendix A - MGUH Survey Summary Infographic






## Appendix B – Online Survey

Page 1 of Online Survey

Presione aquí para traducir la encuesta al español




# COMMUTER SURVEY

**Welcome to the 2015 MedStar Georgetown University Hospital Commuter Survey!**

Your answers to this five minute survey will help develop transportation strategies to improve transportation at MedStar Georgetown University Hospital (MGUH).

We respect your privacy. Personal information collected by the survey will only be used by MGUH for the purpose of prize drawings. We will not disclose personal information to third parties without your consent, except in response to legal requirements.

**WE ARE GIVING AWAY**




**1** IPAD AIR    **5** FITBITS    **2** PEBBLE STEEL WATCHES

**FILL OUT THE SURVEY NOW FOR A CHANCE TO WIN**

Enter

0%

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# COMMUTER SURVEY

**Provide the following information to be entered into our prize drawing:**

**First Name:\***  **Last Name:\***

**Department:\***  **Phone:\***

**MGUH Email:**

\*Contact information required for entry into prize drawings. Only associates of MGUH are eligible for prizes.


**Check the box if you want to receive transportation information from MGUH.**

Opt In


**My primary role with MGUH is: \***

<input type="radio"/> Physician	<input type="radio"/> Facilities
<input type="radio"/> Faculty	<input type="radio"/> Environmental Services
<input type="radio"/> Resident/Medical Intern	<input type="radio"/> Food Services
<input type="radio"/> Nurse (In-Patient)	<input type="radio"/> Contractor/Business Vendor
<input type="radio"/> Nurse (Out-Patient/Support)	<input type="radio"/> Other
<input type="radio"/> Administrative Staff	<input type="text"/>

9%



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**COMMUTER SURVEY**

**Are you employed full-time or part-time at your job? \***

Full-Time     Part-Time

**How is your regular work week structured? \***

5 days a week, 8 hours days  
 4 days a week, 10 hour days  
 3 days a week, 12 hour days  
 Other work week arrangement

**What days did you work last week? \***

Monday     Tuesday     Wednesday     Thursday     Friday     Saturday     Sunday


**Please indicate where you primarily worked last week. You may only select one location per day.**

<b>Monday *</b>	<b>Tuesday *</b>	<b>Wednesday *</b>	<b>Thursday *</b>	<b>Friday *</b>
<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>

Back    Next

18%





MedStar Georgetown University Hospital

# COMMUTER SURVEY

For the days that you worked last week, what transportation mode did you use to arrive at your primary work location? If you used more than one mode of transportation to work, choose the mode you used for the **longest portion** of your trip?

Monday *	Tuesday *	Wednesday *	Thursday *	Friday *
<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>

Only for the days that you worked at MGUH, what transportation mode did you use for the **last portion** of your trip to work?

Monday *	Tuesday *	Wednesday *	Thursday *	Friday *
<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>	<input type="text" value="-- Please Select --"/>

Back    Next

27%

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**MedStar Georgetown University Hospital**  
**COMMUTER SURVEY**

**Which bus route do you typically use for the last portion of your trip to the hospital? (Check all that apply) \***

<input type="checkbox"/> Circulator – Dupont-Rosslyn	<input type="checkbox"/> Metrobus D6
<input type="checkbox"/> Circulator – Georgetown – Union Station	<input type="checkbox"/> Metrobus G2
<input type="checkbox"/> Metrobus D1	<input type="checkbox"/> Metrobus 36B
<input type="checkbox"/> Metrobus D2	<input type="checkbox"/> Metrobus 30s series (30S, 30N, 31, 33)
<input type="checkbox"/> Metrobus D5	<input type="checkbox"/> Other

**Which GUTS routes do you typically take at any time during the day? (Check all that apply) \***

<input type="checkbox"/> Dupont Circle Metro	<input type="checkbox"/> North Arlington Loop
<input type="checkbox"/> Rosslyn Metro	<input type="checkbox"/> Wisconsin Avenue
<input type="checkbox"/> Law Center	<input type="checkbox"/> I do not take GUTS on a regular or semi-regular basis

**What is your Home Address and Zip Code?**

**Street Address:**  **Zip Code:**

*Ex. 123 Main St. Ex. 22222*

Back Next

36%

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MedStar Georgetown University Hospital

# COMMUTER SURVEY

**If you drove to MGUH, where did you park? \***

On-Street Residential
  At the hospital (Including the Leavey Garage)

On-Street Metered
  Off Street Paid Parking, Garage or Rented Parking Space

**If you parked on a residential street, do you have a valid Residential Parking Permit (RPP) for that area? \***

No
  Yes, Zone 2
  Yes, Zone 3

Use the map below to help locate the neighborhood you parked in.



**Which neighborhood do you park in? \***

Foxhall
  Berkeley
  West Georgetown

**Typically what days do you park on-street? (Check all that apply). \***


	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Park on-street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Back Next

45%



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# COMMUTER SURVEY

**Do you typically arrive/depart from work at the same time every day? \***

Yes     No

**At what time do you typically arrive/depart from work? \***

	Hour	Minute	AM/PM	
			AM	PM
Arrival	-- Please Select --	-- Please Select --	<input type="radio"/>	<input type="radio"/>
Departure	-- Please Select --	-- Please Select --	<input type="radio"/>	<input type="radio"/>

**How many minutes does it take you to get from your home to work location? \***

5-10 minutes                       31-45 minutes  
 11-20 minutes                     46-60 minutes  
 21-30 minutes                       More than 60 minutes

**If driving to work was suddenly not an option for you, what would be your second choice? \***

Bike                                               Taxi  
 Carpool                                         Telework  
 Carshare (Zipcar, Enterprise Carshare, Car2Go, Etc.)     Vanpool  
 GUTS GUTS/Abe's/International Limo                       Walk  
 Public Transit                                     Other  
 Ride-hail (Uber, Lyft, Etc.)                     

Back    Next

55%

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# COMMUTER SURVEY

Below are a number of travel options for getting to MGUH. The travel options are presented in pairs. Currently, most hospital employees pay approximately \$3.25 a day.

**Select from the pair below the travel option that you would choose for your commute. \***

Drive to MGUH and pay \$3.25 a day to park OR

Take transit to MGUH and have your fare subsidized up to \$6.75 a day

**Select from the pair below the travel option that you would choose for your commute. \***

Drive to MGUH and pay \$7.50 a day to park OR

Take transit to MGUH and have your fare subsidized up to \$6.75 a day

**Select from the pair below the travel option that you would choose for your commute. \***

Drive to MGUH and pay \$15 a day to park OR

Take transit to MGUH and have your fare subsidized up to \$6.75 a day

**Select from the pair below the travel option that you would choose for your commute. \***

Drive to MGUH and pay \$3.25 a day to park OR

Drive to MGUH in a carpool and park for free

**Select from the pair below the travel option that you would choose for your commute. \***

Drive to MGUH and pay \$7.50 a day to park OR

Drive to MGUH in a carpool and park for free

**Select from the pair below the travel option that you would choose for your commute. \***

Drive to MGUH and pay \$15 a day to park OR


Drive to MGUH in a carpool and park for free

**Select from the pair below the travel option that you would choose for your commute. \***

Drive alone to MGUH and pay \$15 a day to park at any time between 8:00 AM to 5:00 PM OR

Drive alone to MGUH and pay \$3.25 a day to park at any time outside 8:00 AM through 5:00 PM

Presioné aquí para traducir la encuesta al español



# COMMUTER SURVEY

**Using the scale provided, please indicate how much you agree or disagree with the following statement: \***

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would consider taking a bus to work if it were available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider taking Metrorail to work (connecting by bus) if it were available.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider walking to work from my current residence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider biking to work from my current residence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider carpooling/vanpooling to work if I knew others who have a commute similar to mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider taxi/ride-hailing (Uber, Lyft, Etc.) to work at least once a week.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider using a carsharing service (Enterprise Carshare, Zipcar, Etc.) to work at least once a week.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Back
Next

73%



Page 10 of Online Survey

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# COMMUTER SURVEY

Using the scale provided, please indicate how much you agree or disagree with the following statement: \*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My job can be done remotely (at least once a week).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My work hours are flexible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need to have a car available during the workday in case of emergencies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A free taxi ride home (up to 4 times a year) in case of an emergency or needing to work late would increase my likelihood of using alternative transportation to work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Back
Next

82%

Page 11 of Online Survey

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# COMMUTER SURVEY

Please include any comments or suggestions for reducing congestion and improving transportation at MGUH below:

Back
Submit

91%

MedStar Georgetown University Hospital

# COMMUTER SURVEY

Thank you for taking the MedStar Georgetown University Hospital Commuter Survey! The results from this survey will inform strategies to reduce congestion and improve transportation and parking at MGUH.

We will announce winners from the survey April 1st.

100%

## Appendix C – Respondents by Zip Code Full List

	Zip Code	Respondents In Zip Code
1	20007	95
2	20009	56
3	22201	40
4	22204	39
5	20002	33
6	20008	32
7	20016	32
8	22209	30
9	22206	28
10	22304	28
11	22207	26
12	20019	25
13	20747	25
14	20910	25
15	22003	25
16	20011	24
17	20743	24
18	20744	24
19	20817	24
20	22203	24
21	20774	23
22	22202	23
23	22314	23
24	20814	22
25	20001	21
26	20748	21
27	22042	21
28	20020	20
29	20745	20
30	20746	20
31	20850	20
32	22101	19
33	20815	18
34	20816	18
35	20852	18
36	20854	17
37	20003	16
38	20010	16
39	20904	16
40	20784	15

41	22302	15
42	20735	13
43	20785	13
44	20874	13
45	20878	13
46	20912	13
47	22192	13
48	22312	13
49	22315	13
50	20706	12
51	20770	12
52	20782	12
53	20901	12
54	20906	12
55	22311	12
56	20015	11
57	20036	11
58	20902	11
59	22191	11
60	20721	10
61	22205	10
62	22301	10
63	22306	10
64	20012	9
65	20170	9
66	20772	9
67	20877	9
68	22305	9
69	22310	9
70	20017	8
71	20601	8
72	20708	8
73	20876	8
74	22015	8
75	22031	8
76	22043	8
77	22193	8
78	20032	7
79	20705	7
80	20737	7
81	20783	7
82	20866	7

83	20879	7
84	20886	7
85	20895	7
86	22030	7
87	22307	7
88	20005	6
89	20120	6
90	20147	6
91	20165	6
92	20171	6
93	20603	6
94	20613	6
95	20646	6
96	20716	6
97	20851	6
98	20853	6
99	20871	6
100	22033	6
101	22182	6
102	20018	5
103	20191	5
104	20602	5
105	20607	5
106	20707	5
107	20723	5
108	20781	5
109	20905	5
110	22041	5
111	22044	5
112	22102	5
113	22153	5
114	22180	5
115	20037	4
116	20124	4
117	20136	4
118	20720	4
119	20724	4
120	20740	4
121	20832	4
122	20903	4
123	22039	4
124	22066	4

125	22124	4
126	22213	4
127	22303	4
128	20024	3
129	20110	3
130	20112	3
131	20121	3
132	20148	3
133	20155	3
134	20164	3
135	20190	3
136	20616	3
137	21044	3
138	21702	3
139	22079	3
140	22150	3
141	22152	3
142	22309	3
143	20057	2
144	20105	2
145	20151	2
146	20152	2
147	20187	2
148	20622	2
149	20637	2
150	20639	2
151	20710	2
152	20722	2
153	20736	2
154	20818	2
155	20839	2
156	20855	2
157	20872	2
158	20882	2
159	21045	2
160	21046	2
161	21060	2
162	21075	2
163	21114	2
164	21117	2
165	21133	2
166	21207	2
167	21230	2

168	21236	2
169	22012	2
170	22025	2
171	22026	2
172	22032	2
173	22046	2
174	22172	2
175	22181	2
176	22308	2
177	22407	2
178	22554	2
179	22556	2
180	17225	1
181	17320	1
182	19734	1
183	20004	1
184	20013	1
185	20109	1
186	20135	1
187	20141	1
188	20142	1
189	20166	1
190	20180	1
191	20181	1
192	20194	1
193	20474	1
194	20478	1
195	20606	1
196	20617	1
197	20658	1
198	20659	1
199	20662	1
200	20678	1
201	20695	1
202	20712	1
203	20715	1
204	20725	1
205	20759	1
206	20791	1
207	20833	1
208	20837	1
209	20841	1
210	20860	1

11	20861	1
212	20898	1
213	21032	1
214	21035	1
215	21037	1
216	21040	1
217	21042	1
218	21043	1
219	21061	1
220	21074	1
221	21085	1
222	21108	1
223	21113	1
224	21122	1
225	21204	1
226	21205	1
227	21210	1
228	21228	1
229	21403	1
230	21409	1
231	21601	1
232	21620	1
233	21666	1
234	21701	1
235	21703	1
236	21740	1
237	21755	1
238	21788	1
239	21869	1
240	22103	1
241	22401	1
242	22405	1
243	22406	1
244	22553	1
245	22560	1
246	22644	1
247	23831	1
248	29817	1
249	30007	1
250	30720	1
251	40743	1

