DC Circulator
2017 Transit Development Plan Update
December 2017
DC Circulator 2017 TDP

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1.0 Introduction

1.1. Purpose

The DC Circulator Transit Development Plan (TDP), first created in 2011, guides the future growth of the DC Circulator bus system. The District Department of Transportation (DDOT) commissioned the plan in conjunction with DC Surface Transit, Inc., now DC Sustainable Transportation (DCST); the Washington Sports and Convention Authority, now Events DC; the National Capital Planning Commission (NCPC); and Destination DC to help market and plan the DC Circulator service. The 2011 TDP recommended that the TDP be updated every three years. In 2014, the District Department of Transportation released the first TDP Update, and the 2017 TDP Update follows.

The DC Circulator was originally conceived by DDOT as “a simple, inexpensive, and easily navigable surface transit system that complements Metrobus and Metrorail.”¹ The goal was to promote economic activity by facilitating visitor access to neighborhoods in Washington, DC and to improve mobility for downtown workers during the workday.

Since beginning service in 2005, the DC Circulator has grown from an initial two routes to a more extensive network of six routes. The DC Circulator is known for its strong brand, identified by:

- Distinctive, comfortable buses;
- High-frequency service (all day, 10-minute headways);
- Easy to understand routes; and
- Simple, affordable fare structure.

¹District of Columbia Downtown DC Circulator Implementation Plan, July 2003.

DC Circulator 2017 TDP Update

December 2017
The 2017 TDP Update focuses on the most efficient use of resources to enhance existing service and long-term possibilities for expanding routes. This focus is due to the constrained size of the fleet and the existing limitations of growth due to the lack of an adequate maintenance and storage bus facility. In 2016, the DC Circulator provided more than 5.4 million trips and will operate a fleet of 72 vehicles in 2018.

The purpose of the plan is to:

- Provide a transparent planning and decision-making process through a broad outreach and participation process;
- Review citywide land use, demographic, and development data, in addition to data and plans for other transit services, to identify corridors that support DC Circulator service and warrant all-day 10-minute headways;
- Apply previously defined measures and criteria to updated data to plan new service; and
- Develop a usable, living plan for near- and long-term growth.

The 2017 TDP Update uses data to update some of the recommendations from the 2011 and 2014 TDPs. The 2017 Update also includes new recommendations that align with current demand and development in Washington, DC.

1.2. **TDP Planning Process**

The DC Circulator 2017 TDP Update is the result of a planning process focused on improving existing service. The process involved a variety of stakeholders and members of the public. **Figure 1** illustrates the planning process. Although the different steps of the process are described discretely, planning was not strictly linear and each input continually informed the development of the TDP Update. Each step is described in the following sections. Section 2.7: Strategic Goals and Objectives defines the goals and objectives that provided the framework for this planning process. Throughout the process potential new routes, route extensions, and other route modifications were evaluated against these elements.

**DC Circulator 2017 TDP Update**
1.2.1. Stakeholder Input

DDOT developed an outreach approach that included consultation with the public, and key organizations and partners such as the National Park Service (NPS), Washington Metropolitan Area Transit Authority (WMATA), and Business Improvement Districts (BIDs). Specific alignments, operational difficulties such as turns; the impact and timelines of planned and existing development; introduction of new or improved Metrobus routes service; and riders’ feedback were all discussed with the partners prior to presenting proposed changes to the public. Through this process, the feasibility of potential route restructuring and extensions were examined and narrowed to the two or three proposals for each route in the first public outreach survey.

1.2.2. Public Outreach

DDOT collected input from a variety of sources to define priorities and inform the future growth of the DC Circulator. Information from the 2014 TDP, data analysis, and technical reviews of the most current service demand data, coupled with the results of the online survey, input from elected officials, and stakeholder feedback helped DDOT prioritize proposed route recommendations and capital improvements.
DDOT hosted three phases of public outreach. Phase I evaluated the public’s feedback from the 2014 TDP and involved meetings with key organizations and partners to assess their opinions on proposed route recommendations and capital improvements (see Section 1.2.1). In Phase II, to obtain feedback on the proposed route changes, DDOT hosted an online survey and held five public meet-the-rider events where surveys were conducted on-site. DDOT and project consultant staff were available to answer questions at meet-the-rider events. In Phase III, DDOT hosted an online and on-board paper survey, as well as a meet the rider event at the H Street Festival. Section 5: Public Engagement describes in further detail the results of the public engagement efforts.

1.2.3. System-Level Approach

Instead of only analyzing individual DC Circulator routes, DDOT used a system-level approach to evaluate the District’s bus network of both WMATA and DC Circulator in the areas that the DC Circulator serves. The goal was to identify gaps and opportunities where the network and service levels of both services could be improved to reduce unnecessary overlaps. For example, in an area where Metrobus routes were overcrowded, the DC Circulator could provide a limited-stop, overlapping service to provide additional capacity. However, in other situations where ridership is not as high or Metrobus provides limited stop service, DC Circulator routes may be competing with Metrobus for riders. Here inefficiencies in service provisions resulted in recommendations of route restructuring. Evaluating options through a system-level approach also included a review of the existing and planned DC Circulator fleet replacement and expansion plans to determine to what degree the system could grow over time.

1.2.4. Updated Operations Analysis

To analyze how routes are operating, DDOT used performance measures and targets to determine the strengths and weaknesses of each route. A similar operations analysis was used in the 2011 and 2014 TDPs. More information on this part of the analysis is in Section 3: DC Circulator Evaluation.
2.0 System Overview

2.1 History

In 2003, DDOT, in partnership with the Downtown BID, National Capital Planning Commission (NCPC), and WMATA, explored the potential for a new bus circulation system in the downtown Washington, DC core. The following bullets describe the history of the DC Circulator:

- In July 2005, the system began with the introduction of the Georgetown – Union Station and Convention Center-SW Waterfront routes.
- In March 2006, the Smithsonian-National Gallery of Art route was added to the system.
- In March 2009, two routes were added: Woodley Park – Adams Morgan – McPherson Square and Union Station – Navy Yard.
- In September 2010, the system expanded beyond the borders of Washington, DC with the Dupont Circle – Georgetown – Rosslyn route.
- In September 2011, DDOT suspended operation of both the Smithsonian-National Gallery of Art and Convention Center – SW Waterfront routes due to low ridership and a need to reduce operating expenditures. In September 2011, WMATA’s Metrobus Route 74 replaced the DC Circulator Convention Center – SW Waterfront route with seven-day service at a reduced frequency of 12 to 15 minutes on weekdays, 24 minutes at night, and 20 minutes on weekends.
- In October 2011, the Potomac Avenue Metro – Skyland via Barracks Row route was introduced.
- In June 2015, the National Mall route began operating in partnership with the National Parks Service (NPS). The route provides service around the Smithsonian Museums and Galleries, and the National Mall and Memorial Parks. This route is more extensive than the previous version that was eliminated in 2011, operating on the National Mall and Memorial Parks internal streets and providing longer hours and more consistent service during the week. Route operating costs are shared by DDOT and NPS.
2.2. **Organizational Structure**

The DC Circulator currently has a complex management structure. DDOT has an agreement with WMATA to manage the service through a private contractor which operates daily service and maintains the vehicles. DDOT manages system-level planning, policy development, financial planning, fleet procurement, marketing, and customer relations for the existing system. DDOT also works with DCST, which advises on DC Circulator planning efforts.

This organizational structure is in transition. Over the past several years, DDOT has worked to take on additional service and maintenance oversight functions. In 2017, DDOT completed its first bus purchasing process. In 2018, DDOT plans to assume the private contractor oversight and management role currently provided by WMATA. DDOT is currently soliciting proposals for the DC Circulator operations and maintenance contract. The solicitation was released on September 26, 2017. DDOT intends to award the contract in spring 2018, pending approval by the DC Council.

2.3. **Hours of Operations**

Each DC Circulator route has its own hours of operation. To date, DDOT has set the hours of operation for the routes based on ridership demand and adjusted accordingly. The six DC Circulator routes are listed in Table 1 with their days and hours of operation. It is important to consider these variations in service characteristics when analyzing the operating performance of each route.

<table>
<thead>
<tr>
<th>DC Circulator Route</th>
<th>Weekdays</th>
<th>Saturday</th>
<th>Sunday</th>
<th>Hours</th>
<th>Total Daily Service Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgetown – Union Station</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>6 am-12 pm (Mon-Thu) 6 am-3 am (Fri) 7 am-3 am (Sat) 7 am-12 am (Sun)</td>
<td>18 21 20 17</td>
</tr>
<tr>
<td>Dupont Circle – Georgetown – Rosslyn</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>6 am-12 am (Mon-Thu) 6 am-3 am (Fri) 7 am-3 am (Sat) 7 am-12 am (Sun)</td>
<td>18 21 20 17</td>
</tr>
<tr>
<td>Woodley Park – Adams Morgan – McPherson Square</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>6 am-12 am (Mon-Thu) 6 am-3:30 am (Fri) 7 am-3:30 am (Sat) 7 am-12 am (Sun)</td>
<td>18 21.5 20.5 17</td>
</tr>
</tbody>
</table>

**Table 1 | Current DC Circulator Routes Days and Hours of Operation**

**DC Circulator 2017 TDP Update**

December 2017
<table>
<thead>
<tr>
<th>DC Circulator Route</th>
<th>Weekdays</th>
<th>Saturday</th>
<th>Sunday</th>
<th>Hours</th>
<th>Total Daily Service Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Station – Navy Yard*</td>
<td>✓</td>
<td>Summer Only</td>
<td>None</td>
<td>6 am-7 pm (Winter M-F)</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 am-9 pm (Summer M-F)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 am-9 pm (Summer Sat)</td>
<td>14</td>
</tr>
<tr>
<td>Potomac Ave Metro – Skyland via Barracks Row*</td>
<td>✓</td>
<td>Summer Only</td>
<td>None</td>
<td>6 am-7 pm (Winter M-F)</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6 am-9 pm (Summer M-F)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 am-9 pm (Summer Sat)</td>
<td>14</td>
</tr>
<tr>
<td>National Mall*</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>7 am-8 pm (Summer M-F)</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 am-8 pm (Summer S-S)</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7 am-7 pm (Winter M-F)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9 am-7 pm (Winter S-S)</td>
<td>10</td>
</tr>
</tbody>
</table>

*Hours vary by winter (October 1-March 31) and summer (April 1-September 30) seasons.

Source: DC Circulator Website, July 2017.

2.4. Fare Structure

The fare structure for the DC Circulator system is built around a regular fare of $1.00 per trip. The four forms of payment options are cash (exact change required), DC Circulator passes, SmarTrip cards, and 7-day WMATA regional bus passes (via SmarTrip cards). The DC Circulator has been using SmarTrip technology since the beginning of transit operations in 2005. Approximately 82 percent of DC Circulator riders used SmarTrip cards to pay their fares in 2016. In 2014, approximately 25 percent of DC Circulator SmarTrip users transferred to a DC Circulator from a Metrobus or another DC Circulator bus, and 14 percent transferred from Metrorail.²

² Discounted fares for transfers are applied to riders using a SmarTrip Card. Free transfers are provided to riders transferring to the DC Circulator from DC Circulator, Metrobus, or Arlington Transit (within 2 hours). Riders transferring to DC Circulator from Metrorail are charged $0.50; however, senior and disabled persons receive a free transfer.
The DC Circulator’s fare of $1.00 has remained unchanged since the system began in 2005. A simple, affordable fare is part of the DC Circulator brand. The fare is $1.00 for DC Circulator regardless of whether riders pay by cash or SmarTrip card. Discounted fares are available for senior citizens and persons with disabilities ($0.50) and free trips are available for DC students and select groups.³

### 2.5. Fleet

The current DC Circulator fleet is in transition and consists of a variety of vehicle types, as older vehicles are phased out and new vehicles are commissioned (see Table 2). The original fleet totaled 49 vehicles manufactured by Van Hool of Belgium. These vehicles are low-floor, diesel buses, 29 of which were built in 2003/2004, and 20 of which were built in 2009.⁴

In 2015, 18 new 40-foot hybrid diesel-electric buses joined the fleet. These Xcelsior model buses, manufactured by New Flyer, feature two doors and capacity for 27 seated and 54 standing passengers. In August 2017, 26 new 40-foot New Flyer Xcelsior clean diesel buses began service. In early 2018, 14 Proterra Catalyst E2 buses will also enter service as part of the first route-scale electric bus technology pilot in the DC region. As these new buses are added to service, the oldest Van Hool buses are also being retired. By 2018, the fleet size will stand at 72 vehicles (see Table 3). Of these 72 buses, 58 buses, or 81 percent, will be model year 2014 or later.

#### Table 2 | DC Circulator Current Fleet Breakdown

<table>
<thead>
<tr>
<th>Size</th>
<th>Make</th>
<th>Model</th>
<th>Model Year</th>
<th>Quantity</th>
<th>Fuel Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-foot</td>
<td>Van Hool</td>
<td>A 300 L</td>
<td>2009</td>
<td>6†</td>
<td>Diesel</td>
</tr>
<tr>
<td>30-foot</td>
<td>Van Hool</td>
<td>A 300 K</td>
<td>2009</td>
<td>14</td>
<td>Diesel</td>
</tr>
<tr>
<td>40-foot</td>
<td>New Flyer</td>
<td>Xcelsior</td>
<td>2014</td>
<td>18</td>
<td>Hybrid Diesel-Electric</td>
</tr>
<tr>
<td>40-foot</td>
<td>New Flyer</td>
<td>Xcelsior</td>
<td>2016</td>
<td>26</td>
<td>Clean Diesel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total: 64</td>
</tr>
</tbody>
</table>

†Owned by First Transit, current contract operator

³ E.g. Children under the age of 5 ride for free with a paying adult, MetroAccess customers, etc.
⁴ Six buses from the 2009 purchase are leased by First Transit.

**DC Circulator 2017 TDP Update**
Table 3 | DC Circulator Fleet Breakdown by End of 2018

<table>
<thead>
<tr>
<th>Size</th>
<th>Make</th>
<th>Model</th>
<th>Model Year</th>
<th>Quantity</th>
<th>Fuel Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-foot</td>
<td>Van Hool</td>
<td>A 300 K</td>
<td>2009</td>
<td>14</td>
<td>Diesel</td>
</tr>
<tr>
<td>40-foot</td>
<td>New Flyer</td>
<td>Xcelsior</td>
<td>2014</td>
<td>18</td>
<td>Hybrid Diesel-Electric</td>
</tr>
<tr>
<td>40-foot</td>
<td>New Flyer</td>
<td>Xcelsior</td>
<td>2016</td>
<td>26</td>
<td>Clean Diesel</td>
</tr>
<tr>
<td>40-foot</td>
<td>Proterra</td>
<td>Catalyst E2</td>
<td>2017</td>
<td>14</td>
<td>Electric</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total: 72</td>
</tr>
</tbody>
</table>

2.6. Facilities

The District does not own a DC Circulator maintenance facility. Currently, 46 buses are stored at an operator-leased maintenance facility, and 18 buses are operated off-site using an NPS-owned facility near Hains Point in East Potomac Park, introduced with the implementation of the National Mall route. The contractor operates out of a leased facility located near the Mount Olivet Cemetery. The current facility consists of two acres and approximately 30,000 square feet of administrative and maintenance space with three maintenance bays and a small power washing station. The facility is undersized for accessing, dispatching, and storing a bus fleet of nearly 50 vehicles.

The NPS Hains Point facility alleviates crowding at the contractor’s facility by providing storage for 18 buses and limited space for technicians to perform light maintenance activities.

In order to bring DC Circulator’s first fully electric buses into the system, DDOT had to identify a new facility to serve this system need. DDOT is in the process of reconfiguring the DC Streetcar South Capitol Street facility for charging Proterra electric buses. The facility will accommodate the transit needs of both the DC Circulator and any future streetcar needs as the testing and commissioning site for the DC Streetcar. DDOT is making needed upgrades during fall 2017 and winter 2018 to bring electric buses into the system.

There is an immediate demand for a facility owned or leased by the District government for additional parking, maintenance bays, and a wash bay to support the DC Circulator fleet. APTA Recommended Practice #APTA-BTS-BMF-RP-001-11, APTA Architectural and Engineering Design for Transit Operating and Maintenance Facilities, and professional judgement indicates that a fleet of 72 buses requires access to a minimum of seven maintenance bays. The system currently has access to three and a half maintenance bays. The Department of General Services (DGS), in coordination with DDOT, is actively seeking properties that may be candidates to serve as a new DC Circulator storage and maintenance facility. In September 2016, DGS released a request for space and is currently reviewing proposals. Additional information about facility needs is provided in Section 7: Fleet and Facilities.

DC Circulator 2017 TDP Update
2.7. **Strategic Goals and Objectives**

The DC Circulator’s original strategies were: to improve the quality of the surface transit experience; to stimulate non-bus riders to use a bus for short trips; to demonstrate to other transit operators that a focus on improving the rider’s transit experience builds ridership and popularity of bus service; and to help reduce congestion and air pollution. In the 2011 DC Circulator TDP, DDOT developed a clear set of strategic goals and objectives to guide the growth of the DC Circulator system. The first three goals and associated objectives remain in effect for the 2017 DC Circulator TDP Update, and the fourth goal was changed from a focus on the monumental core to the entire District. Each strategic goal is a long-term outcome that the DC Circulator aims to achieve. A series of short-term objectives support and dictate measurable actions for each goal. DDOT used the goals, objectives, and measures to analyze existing operations, recommend service changes, and identify and evaluate corridors for expanded DC Circulator routes.

The strategic goals and objectives provide a framework for the planning process. They also help to define the role of the DC Circulator within the greater transit network that includes Metrobus, Metrorail, and the DC Streetcar.

DDOT assesses progress on the stated goals and objectives using two types of measures. For Goals 1 and 2, operational performance measures (OPM) are used to track the success of operations and guide service changes to achieve improved performance. For Goals 3 and 4, service planning measures (SPM) serve as criteria to guide the expansion of the DC Circulator network. While most measures have specific targets, the performance of each route must be analyzed within its context. OPMs and SPMs are provided in Section 3: DC Circulator Evaluation and Section 6: Final Recommendations, respectively.
GOAL 1: Provide a high-quality transit network.

Objectives:
1A Provide efficient, reliable, limited-stop, and high frequency service.
1B Ensure clean, safe, and courteous operations.
1C Design and maintain the system so that it is easy to use and understand.
1D Maintain an affordable and simple fare structure.

GOAL 2: Maximize financial and operational return on investment.

Objectives:
2A Provide transit priority measures along DC Circulator routes.
2B Maximize the level of service that can be provided with the financial resources available.
2C Establish DC Circulator performance criteria and provide public evaluation reports.
2D Identify sustainable financial partnerships.

GOAL 3: Promote economic activity in existing and developing activity centers and support a transit-oriented lifestyle.

Objectives:
3A Connect multi-use activity centers that demonstrate significant demand for transit throughout the day.
3B Complement existing transit options and link to other non-auto transportation modes.
3C Provide connections to ease Metrorail core capacity constraints.
3D Ensure widespread awareness and understanding of the DC Circulator system.
3E Maximize the provision of real-time information to customers.
3F Provide service that addresses multiple trip purposes (work, school, shopping, entertainment, etc.).

GOAL 4: Strengthen the surface transit network in the District for all users.

Objectives:
4A Reduce transit gaps between existing and future activity centers throughout the District.
4B Improve mobility to and from the monumental core.
4C Increase utilization of the DC Circulator system by residents, employees, and visitors.

DC Circulator 2017 TDP Update
3.0 DC Circulator Evaluation

3.1 System Changes since 2014 TDP Update

DDOT implemented the National Mall route in 2015. DDOT, DCST, and NPS partnered on the development and implementation of the route. The route operates on a seasonal schedule (see National Mall in Section 3.2.9). The route serves the city’s major transportation hub, Union Station, the National Mall and Memorial Parks, as well as major tourist destinations including the Smithsonian Museums, the U.S. Capitol, the U.S. Holocaust Museum, the Bureau of Engraving, and the Tidal Basin. The route also provides connections to two existing DC Circulator routes: Union Station – Navy Yard and Georgetown – Union Station.

DDOT also increased service hours along some of the highest-capacity DC Circulator routes in response to Metrorail’s SafeTrack program, which reduced Metrorail service throughout the city. A proposal to make these changes permanent will begin with a public hearing process in winter 2017.

- Woodley Park – Adams Morgan – McPherson Square and Georgetown – Union Station routes begin service at 6:00 am Monday through Friday.
- Late night weekend service extended on the Georgetown – Union Station and Dupont Circle – Georgetown – Rosslyn routes until 3:00 am.
- Late night service on the Georgetown – Union Station route extended to run the full length of the route, rather than stop at McPherson Square after 9:00pm.
3.2. Operations Analysis

3.2.1. Route Performance Evaluation

DDOT conducted an in-depth analysis of the DC Circulator system using available data from calendar years 2014, 2015, and 2016. Each operational performance measure (OPM) was evaluated based on change over time, between 2014 and 2016, and against the target value that has been selected for each measure.

3.2.2. Existing Evaluation Framework

DDOT monitors the following OPMs on an on-going basis to track progress toward reaching the system’s overarching goals and objectives. The 2011 DC Circulator TDP established targets for each performance measure as seen in Table 4. All established targets remain, with the exception of operating cost per revenue hour.

Table 4 | DC Circulator Operational Performance Measures and Targets

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance</td>
<td>80% of arrivals with headways under 15 minutes*</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>20 boardings per revenue hour</td>
</tr>
<tr>
<td>Operating cost per revenue hour*</td>
<td>No specific target set</td>
</tr>
<tr>
<td>Subsidy per rider</td>
<td>$2.75 or less cost per rider</td>
</tr>
<tr>
<td>Farebox recovery</td>
<td>25% farebox recovery</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>Providing limited-stop service with &lt;4 stops per mile</td>
</tr>
<tr>
<td>Customer complaints per 10,000 passengers</td>
<td>0.2 complaints per 10,000 riders</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 revenue miles</td>
<td>0 preventable crashes per 10,000 revenue miles</td>
</tr>
</tbody>
</table>

*This measure was eliminated because no specific target was set.

The following segment profiles depict the operational analyses of each of the six routes and of the overall system. Each segment profile includes annualized data for 2014, 2015, and 2016 for each OPM and a comparison of OPMs over time and against the system-wide targets. As part of the 2017 TDP update, the performance measures have been updated. These new measures are noted in Section

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5While the target for on-time performance is 80 percent of arrivals with headways under 15 minutes, the operational objective of the DC Circulator service remains to provide 10-minute headways.

DC Circulator 2017 TDP Update

December 2017
3.2.10: Future Evaluation Framework and will be used to evaluate the system’s performance moving forward.

3.2.3. DC Circulator System Profile

The system’s six routes have improved in some measures and declined in others since the 2014 TDP (see Table 5). System-wide on-time performance (OTP) has dropped four percentage points from 80 percent to 76 percent. The system-wide average is now below the performance standard of 80 percent. This is largely due to maintenance issues affecting vehicle availability, an increase in the use of private vehicles due to lower gas prices, development and construction activities in the District, Metro’s SafeTrack program, and other factors affecting congestion in central Washington, DC. Boardings per hour have also declined from 27 in 2014 to 25 in 2016; however, this is still above the performance standard of 20 boardings per hour. Additionally, overall transit ridership in the region has declined during the same period. The system-wide farebox recovery ratio has remained stable at 16 percent, which is still 9 percent lower than the performance standard of 25 percent. Complaints per 10,000 passengers spiked in 2015 at 0.47 but returned to the 2014 level of 0.37 in 2016. The largest change since the 2014 TDP Update is in preventable crashes per 10,000 revenue miles. Performance in this metric has declined from 0.49 in 2014 to 0.71 in 2016, and is largely attributable to the contractor’s weak training program and management protocols. To address this and other service shortcomings, the recent DDOT operations and maintenance contract solicitation is focused on improving safety, training, and performance, and will include strong incentive and disincentive provisions.
Key Characteristics

- Total Routes: 6
- Total System Length: 43.1 miles
- FY2016 Total Ridership: 5.4 million

What works well?

- System meets the targets for boardings per revenue hour and bus stops per mile

What does not work well?

- System does not meet target for on time performance, farebox recovery ratio, complaints per 10,000 passengers, and preventable crashes per 10,000 revenue miles
- Union Station – Navy Yard and Georgetown – Union Station have too many stops per mile
- Only one route, Union Station – Navy Yard, met the target of zero preventable crashes per 10,000 miles
- Very low ridership on Potomac Avenue – Skyland via Barracks Row and Union Station – Navy Yard

### Table 5 | DC Circulator System-wide Operational Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>80%</td>
<td>76%</td>
<td>76%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>27</td>
<td>25</td>
<td>25</td>
<td>↓</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>$2.98</td>
<td>$3.05</td>
<td>$3.32</td>
<td>↑</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>=</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>2.98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>0.37</td>
<td>0.47</td>
<td>0.37</td>
<td>=</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>0.49</td>
<td>0.55</td>
<td>0.71</td>
<td>↑</td>
</tr>
</tbody>
</table>

DC Circulator 2017 TDP Update

December 2017
3.2.4. Dupont Circle – Georgetown – Rosslyn (RS-DP)

The Dupont Circle – Georgetown – Rosslyn route provides a unique connection between Dupont Circle and Rosslyn via Georgetown (see Figure 2). The route connects three major employment and activity centers, and is the only direct bus connection between Dupont Circle and Rosslyn in Arlington, Virginia. Service along M Street NW in Georgetown provides high-frequency off-peak access to shopping and entertainment destinations. To avoid congestion near the Dupont Circle and Rosslyn Metrorail Stations and to maintain the route’s on-time performance goals, the Dupont Circle – Georgetown – Rosslyn route terminates one block short of the Metrorail stations at each end.

Table 6 | Dupont Circle – Georgetown – Rosslyn Operational Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>84%</td>
<td>77%</td>
<td>78%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>34</td>
<td>30</td>
<td>27</td>
<td>↓</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>$2.57</td>
<td>$2.79</td>
<td>$3.07</td>
<td>↑</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>22%</td>
<td>19%</td>
<td>18%</td>
<td>↓</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>4.0 EB(^6)</td>
<td>4.1 EB</td>
<td>4.50 WB</td>
<td>4.2 WB</td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>0.29</td>
<td>0.42</td>
<td>0.31</td>
<td>↑</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>0.33</td>
<td>0.61</td>
<td>0.49</td>
<td>↑</td>
</tr>
</tbody>
</table>

\(^6\) EB - eastbound; WB - westbound

**DC Circulator 2017 TDP Update**
Figure 2 | Dupont Circle – Georgetown – Rosslyn Route Map
Key Characteristics

- Opened for Service: September 2010
- Round Trip Route Length: 4.3 miles
- Activity Centers Served: Dupont Circle, GWU/Foggy Bottom/West End, Georgetown/Lower Wisconsin
- Days of Service: Daily
- Span of Service
  - Monday-Thursday: 6:00 am – 12:00 am
  - Friday: 6:00 am – 3:00 am
  - Saturday: 7:00 am – 3:00 am
  - Sunday: 7:00 am – 12:00 am
- 2016 Total Ridership: 1.07 million

What works well?

- Route serves employment centers, restaurants, and medical centers, among other destinations, in Georgetown, Dupont Circle, and Rosslyn
- Connects to Metrorail Red Line and Orange/Blue/Silver Lines
- Only one-seat ride between Rosslyn and Dupont Circle
- Third highest ridership route in the system with 27 boardings per hour
- Strong Saturday ridership, total of 3,360 compared to 2,700 on a weekday

What does not work well?

- Shortest route in the system, 4.3 miles, reaches fewer activity centers than other routes
- Vehicles park illegally on M Street during the peak period and interfere with operations
- Difficult turning movements in Rosslyn and Dupont Circle
- 49% of riders are District residents, lower than the system-wide average of 67% (2015 DC Circulator Customer Survey)
3.2.5. Georgetown – Union Station (GT-US)

The Georgetown – Union Station route has 43 stops and is the longest DC Circulator route at 9.9 miles. It is the only bus route on K Street that connects the downtown Central Business District and Union Station, thereby serving the densest concentration of employment in Washington, DC (see Figure 3). The alignment continues north on Wisconsin Avenue NW from Georgetown serving commercial and residential development. The route provides frequent late-night bus service connecting the entertainment destinations in Georgetown with the Metrorail system.

Table 7 | Georgetown – Union Station Operational Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>84%</td>
<td>81%</td>
<td>79%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>26</td>
<td>24</td>
<td>25</td>
<td>↓</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>$2.87</td>
<td>$2.81</td>
<td>$2.51</td>
<td>↓</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>19%</td>
<td>18%</td>
<td>20%</td>
<td>↑</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>5.1 EB</td>
<td>4.8 WB</td>
<td>5.2 EB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.8 WB</td>
<td></td>
<td>4.5 WB</td>
<td></td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>0.52</td>
<td>0.58</td>
<td>0.43</td>
<td>↓</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>0.43</td>
<td>0.46</td>
<td>0.91</td>
<td>↑</td>
</tr>
</tbody>
</table>
Figure 3 | Georgetown – Union Station Route Map
Key Characteristics

- Opened for Service: July 2005
- Round Trip Route Length: 9.9 miles
- Activity Centers Served: Central Business District, Georgetown/Lower Wisconsin, Foggy Bottom/West End, Mt. Vernon Square
- Days of Service: Daily
- Span of Service
  - Monday-Thursday: 6:00 am – 12:00 am
  - Friday: 6:00 am – 3:00 am
  - Saturday: 7:00 am – 3:00 am
  - Sunday: 7:00 am – 12:00 am
- 2016 Total Ridership: 1.94 million

What works well?

- Route serves employment and nightlife centers
- Very high ridership, especially along K Street
- Performs well on cost metrics
- Connects to Metrorail Red Line (Union Station, Farragut North), Orange/Blue/Silver Lines (McPherson Square, Farragut West, Foggy Bottom), Amtrak, commuter rail, intercity bus, the Convention Center and Downtown CBD
- Connects Georgetown to Metrorail system
- 75% of riders are District residents, higher than the system-wide average of 67% (2015 DC Circulator Customer Survey).

What does not work well?

- Vehicles illegally park, obstructing bus access to stops
- Delays on K Street during peak periods
- Overcrowding in the peak
- Low ridership and overlap with frequent Metrobus along Wisconsin Avenue
- Preventable crashes are high (system average 0.52 preventable crashes per 10,000 miles)
3.2.6. Potomac Avenue Metro – Skyland via Barracks Row (PS)

The Potomac Avenue Metro – Skyland via Barracks Row route is the second longest route in the DC Circulator system at 9.7 miles (see Figure 4). The alignment functions as a circulator service within Anacostia along with Metrobus 92, providing frequent service on Good Hope Road SE between Skyland and the Anacostia Metrorail station. In addition, the route connects the Anacostia Metrorail station (Green Line) with the Blue/Orange/Silver Metrorail lines at Eastern Market and Potomac Avenue Metrorail stations.

Table 8 | Potomac Avenue Metro – Skyland via Barracks Row Operational Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>72%</td>
<td>65%</td>
<td>65%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>20</td>
<td>19</td>
<td>17</td>
<td>↓</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>$4.86</td>
<td>$4.64</td>
<td>$4.92</td>
<td>↑</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>8%</td>
<td>8%</td>
<td>9%</td>
<td>↑</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>2.5 WB</td>
<td>2.6 WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.0 EB</td>
<td>2.7 EB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>0.52</td>
<td>0.58</td>
<td>0.40</td>
<td>↓</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>0.43</td>
<td>0.46</td>
<td>0.74</td>
<td>↑</td>
</tr>
</tbody>
</table>
Figure 4 | Potomac Avenue Metro – Skyland via Barracks Row Route Map

PS, Current

DC Circulator 2017 TDP Update

December 2017
Key Characteristics

- Opened for Service: October 2011
- Round Trip Route Length: 9.7 miles
- Activity Centers Served: Penn Ave SE/Eastern Market, Anacostia, Skyland/Good Hope Rd, Alabama Ave SE
- Days of Service: Summer: Monday - Saturday (Summer); Weekdays Only (Winter)
- Span of Service
  - Summer (Monday-Friday: 6:00 am – 9:00 pm; Saturday: 7:00 am – 9:00 pm)
  - Winter (Monday-Friday: 6:00 am – 7:00 pm)
- 2016 Total Ridership: 0.57 million

What works well?

- Connects to Metrorail Green Line (Anacostia) and Blue/Orange/Silver Lines (Eastern Market, Potomac Ave)
- High ridership at select stops: Anacostia Metrorail Station, Eastern Market, Naylor Road at Good Hope Road, and Good Hope Road at 16th Street
- Access to a grocery store at Skyland
- Provides a frequent, low-cost connection between east and west of the Anacostia River
- 85% of riders are District residents, higher than the system-wide average of 67% (2015 DC Circulator Customer Survey)

What does not work well?

- One of the longest routes in the system
- Low ridership
- Poor on-time performance
- Eastern Market to Potomac Avenue segment duplicates Metrorail service
- Limited employment and entertainment trip generators along the route
- Lacks trip generators that demand all-day, high-frequency service
- Gridlock on MLK Avenue and Good Hope Road in peak periods
- Operational issues, particularly vehicles parked illegally along Good Hope Road and vehicles dropping off passengers at the Anacostia Metrorail station
- Route overlaps with Metrobus routes, and for many trips, Metrobus routes are more convenient and/or more frequent
3.2.7. Union Station – Navy Yard (US-NY)

The Union Station – Navy Yard route operates between Union Station and the employment and activity centers in Navy Yard/Capitol Riverfront, including Nationals Park and Yards Park (see Figure 5). Union Station is a major transfer hub between Metrorail, Metrobus, intercity buses, MARC and VRE commuter rail, and Amtrak, as well as a major employment center. The route serves tourist destinations near the U.S. Capitol and residential areas near Capitol Hill, Eastern Market, and Navy Yard. The Union Station – Navy Yard route has low ridership.

Table 9 | Union Station – Navy Yard Operational Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>84%</td>
<td>80%</td>
<td>80%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>=</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>$5.34</td>
<td>$4.79</td>
<td>$4.45</td>
<td>↓</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>9%</td>
<td>10%</td>
<td>10%</td>
<td>↑</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>4.3 NB</td>
<td>4.95 NB</td>
<td>4.15 NB</td>
<td>↑</td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>0.55</td>
<td>0.98</td>
<td>0.57</td>
<td>↑</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>0.27</td>
<td>0.36</td>
<td>0.00</td>
<td>↓</td>
</tr>
</tbody>
</table>

7 NB - northbound; SB - southbound.

DC Circulator 2017 TDP Update
Figure 5 | Union Station – Navy Yard Route Map

US-NY, Current

DC Circulator 2017 TDP Update
Key Characteristics

- Opened for Service: March 2009
- Round Trip Route Length: 5.5 miles
- Activity Centers Served: Union Station, Penn Ave SE/Eastern Market/Potomac Ave, Capital Riverfront/South Capitol Corridor/Near SE/Buzzard Point
- Days of Service: Summer: Monday - Saturday; Sunday (when Nationals have home games); Winter: Weekdays
- Span of Service
  - Summer (Monday-Friday: 6:00 am – 9:00 pm; Saturday: 7:00 am – 9:00 pm; Sunday: 10:00am – 10:00pm, when Nationals play home games)
  - Winter (Monday-Friday: 6:00 am – 7:00 pm)
- 2016 Total Ridership: 0.48 million

What works well?

- On-time performance of 80%, meets system target
- Zero preventable crashes, which makes US-NY the safest route in the system
- Serves special event crowds at Nationals games and at Yards Park in the summer and fall
- Connects to five Metrorail Lines: Green Line (Navy Yard), Blue/Orange/Silver Lines (Eastern Market), and Red Line (Union Station)
- Little overlap with existing Metrobus connections
- Provides a one-seat ride between employment center in Navy Yard and transfer hub at Union Station
- 65% of riders are District residents, which aligns with the system-wide average of 67% (2015 DC Circulator Customer Survey)

What does not work well?

- Low ridership midday and weekends
- Currently serves trip generators that do not demand high-frequency, all-day service
- Bus stops per mile is higher than the target bus stop spacing for the system
- End-to-end trip is 28 minutes on the DC Circulator, while the same trip can be made on Metrorail with a transfer in less than 20 minutes
3.2.8. Woodley Park – Adams Morgan – McPherson Square (WP-AM)

The Woodley Park – Adams Morgan – McPherson Square route provides a convenient connection between three Metrorail stations, connecting all five Metrorail lines (see Figure 6). The route connects residential neighborhoods in Woodley Park, Adams Morgan, Mount Pleasant, Columbia Heights, U Street, and Logan Circle with McPherson Square in the Central Business District and employment destinations along K Street NW. In addition to important residential-to-employment connections, the route also offers transfer opportunities to the Georgetown – Union Station route at 14th Street NW, and provides late night service until 3:30 am to entertainment destinations in U Street, Logan Circle, and Adams Morgan.

Table 10 | Woodley Park – Adams Morgan – McPherson Square Operational Performance Measures

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>79%</td>
<td>74%</td>
<td>77%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>38</td>
<td>35</td>
<td>33</td>
<td>↓</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>$2.02</td>
<td>$2.00</td>
<td>$1.94</td>
<td>↓</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>23%</td>
<td>22%</td>
<td>23%</td>
<td>=</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>2.8 NB</td>
<td>2.6 SB</td>
<td>2.5 NB</td>
<td></td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>0.24</td>
<td>0.32</td>
<td>0.31</td>
<td>↑</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>0.47</td>
<td>0.59</td>
<td>0.84</td>
<td>↑</td>
</tr>
</tbody>
</table>
Figure 6 | Woodley Park – Adams Morgan – McPherson Square Route Map
Key Characteristics

- Opened for Service: March 2009
- Round Trip Route Length: 6.8 miles
- Activity Centers Served: Adams Morgan, Mount Pleasant, Columbia Heights, Shaw/Howard University/14th & U, Logan Circle, Downtown CBD
- Days of Service: Daily
- Span of Service
  - Monday-Thursday: 6:00 am – 12:00 am
  - Friday: 6:00 am – 3:30 am
  - Saturday: 7:00 am – 3:30 am
  - Sunday: 7:00 am – 12:00 am
- 2016 Total Ridership: 0.48 million

What works well?

- Highest boardings per revenue hour in DC Circulator System
- One-seat connection between 14th Street NW corridor and Woodley Park/Adams Morgan
- Riders mostly traveling between Columbia Heights and McPherson Square, route offers convenient express service on 14th Street
- Connects to Metrorail Red Line (Woodley Park), Yellow/Green Line (Columbia Heights, U Street), and Orange/Blue/Silver Lines (McPherson Square)
- Serves commuting market as well as late-night entertainment/shopping market
- 91% of riders are District residents, the highest in the system (2015 DC Circulator Customer Survey)

What does not work well?

- Crowding in the peak periods
- Multiple locations where severe congestion impacts on-time performance
- Vehicles and delivery trucks block bus stops
- Overlaps with Metrobus 50s including MetroExtra 59 service beginning in late 20187
3.2.9. National Mall (NM)

The National Mall Route is the newest DC Circulator route, added in 2015. The route circulates around the National Mall, linking Union Station to major tourist destinations including monuments, memorials, museums, and the U.S. Capitol building (see Figure 7). This route primarily serves the tourist market along the National Mall, originating at Union Station, where Amtrak, MARC, VRE, Metrorail, Metrobus, and intercity bus services originate. The route also serves popular community recreational facilities in East Potomac Park.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Change from 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance (headways &lt;15 min)</td>
<td>-</td>
<td>80%</td>
<td>77%</td>
<td>↓</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>-</td>
<td>14</td>
<td>15</td>
<td>↑</td>
</tr>
<tr>
<td>Subsidy per passenger</td>
<td>-</td>
<td>$4.94</td>
<td>$4.77</td>
<td>↓</td>
</tr>
<tr>
<td>Farebox recovery ratio</td>
<td>-</td>
<td>15%</td>
<td>16%</td>
<td>↑</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>-</td>
<td></td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>Complaints per 10,000 passengers</td>
<td>-</td>
<td>0.15</td>
<td>0.27</td>
<td>↑</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 miles</td>
<td>-</td>
<td>0.19</td>
<td>0.15</td>
<td>↓</td>
</tr>
</tbody>
</table>
Figure 7 | National Mall Route Map

National Mall

Current Routing

Metrorail Stations

Metrorail Lines

DC Circulator 2017 TDP Update

December 2017
Key Characteristics

- Opened for Service: June 2015
- Round Trip Route Length: 6.9 miles
- Activity Centers Served: Union Station, National Mall
- Days of Service: Daily
- Span of Service
  - Summer: Weekday: 7:00 am – 8:00 pm; Weekend: 9:00 am – 8:00 pm
  - Winter: Weekday: 7:00 am – 7:00 pm; Weekend: 9:00 am – 7:00 pm
- 2016 Total Ridership: 0.49 million

What works well?

- Only high frequency bus service along National Mall
- No significant Metrobus overlap
- Connects to Metrorail Red Line (Union Station) and Blue/Orange/Silver Lines (Smithsonian, Federal Triangle)

What does not work well?

- Low ridership overall, especially in winter (January/February)
- Operational conflicts with tour buses and parked cars
- Frequent route detours due to events on the National Mall
- Lack of stop amenities and limited awareness among potential users
3.2.10. **Future Evaluation Framework**

DDOT monitors the following OPMs on an on-going basis to track progress toward reaching the system's overarching goals and objectives. The 2017 DC Circulator TDP Update establishes updated targets for each performance measure as seen in Table 12. These measures have been updated from the 2014 TDP to better reflect the current system’s goals and objectives. DDOT will use these measures moving forward, and the next TDP will reflect these updated measures.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-time performance</td>
<td>80% of headways between 5-15 minutes</td>
</tr>
<tr>
<td>Boardings per revenue hour</td>
<td>25 boardings per revenue hour</td>
</tr>
<tr>
<td>Cost per rider</td>
<td>$4.00 or less cost per rider</td>
</tr>
<tr>
<td>Farebox Recovery*</td>
<td>Providing limited-stop service with no more than 4 stops per mile</td>
</tr>
<tr>
<td>Bus stops per mile</td>
<td>Providing limited-stop service with no more than 4 stops per mile</td>
</tr>
<tr>
<td>Customer complaints per 10,000 passengers</td>
<td>0.5 complaints per 10,000 riders</td>
</tr>
<tr>
<td>Preventable crashes per 10,000 revenue miles</td>
<td>0 preventable crashes per 10,000 revenue miles</td>
</tr>
</tbody>
</table>

*This measure will be eliminated to reflect DDOT’s prioritization of the accessibility of the DC Circulator service.
3.3. Infrastructure and Safety Analysis

The project team collected data by riding each route to examine operational constraints. This data included, but was not limited to, parking, traffic, and infrastructure conflicts. Routes were observed in both peak and off-peak periods to obtain the best understanding of which conflicts should be prioritized. The DC Circulator team is working to implement the proposed changes, which include removing parking where it obstructs the bus stop, enforcing parking restrictions, installing left turn signals to improve traffic flow for the buses, and implementing Transit Signal Priority (TSP) technology at busy intersections. These efforts will improve the system’s on-time performance, enhance the rider experience, and increase the safety of riders on the buses as well as the safety of pedestrians, cyclists, and drivers on the road.

3.4. Other DC Circulator Related Studies

DDOT has conducted studies aimed at enhancing the DC Circulator system since the 2014 TDP Update. DDOT examined the current system’s overlap with WMATA Metrobus service and conducted stop consolidation studies on two routes.

3.4.1. Overlap with WMATA Metrobus Routes

DDOT conducted a system-wide study to assess the existing system’s overlap with Metrobus routes. Both systems provide service throughout the District. WMATA operates a more extensive system of regional and local service than the DC Circulator with more than 300 routes throughout Washington, DC, Maryland, and Virginia. Unlike the DC Circulator, which operates all routes at a 10-minute headway, each Metrobus route operates on its own schedule.

While these services are intended to complement and supplement one another, both systems have continued to expand since the DC Circulator’s original conception. In January 2016, DDOT studied the DC Circulator 2017 TDP Update
existing overlap between the two systems to determine if any DC Circulator routes are competing with rather than complementing Metrobus routes. Overall, of the 43 miles that the DC Circulator travels, 76 percent are shared with a Metrobus route. However, most of this overlap occurs for short block segments. DDOT determined, with a few exceptions, that the services complement each other. DDOT noted exceptions on select segments such as Wisconsin Avenue NW and Good Hope Road SE, where the overlap is too long, resulting in weak ridership for those segments of Georgetown – Union Station and Potomac Avenue Metro – Skyland, respectively.

3.4.2. Stop Consolidation Studies

Stop consolidation on routes can improve productivity, running time, and reliability, particularly for routes with low boarding/alighting stops in close proximity. DDOT conducted stop consolidation studies on two routes: Union Station – Navy Yard and Georgetown – Union Station. These two routes were selected for the studies because they have high stop per mile ratios and consistently experience issues with on-time performance.

3.4.2.1. Union Station – Navy Yard

The Union Station – Navy Yard (US-NY) stop consolidation study provided potential solutions to alleviate the route’s poor on-time performance. The study found that the US-NY route typically operates between an 11 and 13-minute headway during peak periods in both directions. While the DC Circulator standard for stop spacing is no more than four stops per mile, US-NY’s average stop spacing is 4.95 per mile in the northbound direction and 4.15 per mile in the southbound direction. The study analyzed each stop by ridership, transfers to other DC Circulator and Metrobus routes, proximity to key activity centers, and level of amenities. The study team conducted field observations to determine other potential problems affecting the route’s on-time performance (i.e. parking, traffic, and infrastructure conflicts). The study team presented its findings and preliminary recommendations in a public workshop on

DC Circulator 2017 TDP Update

DC Circulator 2017 TDP Update
September 30, 2015. After receiving public comments, DDOT developed a final list of recommendations. However, pending the proposed alignment change for US-NY that is included in this TDP, DDOT is not advancing the stop consolidation recommendations.

### 3.4.2.2. Georgetown – Union Station

The Georgetown – Union Station (GT-US) stop consolidation provided potential solutions to improve headway adherence and improve the route’s ridership. The study found that the GT-US route typically operates between a nine and 12-minute headway during peak periods in both directions, with midday headways shorter than nine minutes. While the DC Circulator standard for stop spacing is no more than four stops per mile, GT-US’s average stop spacing is 5.2 per mile in the eastbound direction and 4.5 per mile in the westbound direction. The study analyzed each stop by ridership, transfers to other DC Circulator and Metrobus routes, proximity to key activity centers, population and employment density, and level of amenities. The DDOT team conducted field observations to determine other potential problems that could be affecting the route’s on-time performance. Recommendations for stop consolidations will be presented during the public hearing process. The recommendations include:

- **Stop consolidation**
  - Remove eastbound and westbound New York Avenue at 9th Street NW
  - Remove eastbound K Street at 11th Street NW
  - Remove eastbound Pennsylvania Avenue at 21st Street NW
  - Remove westbound 21st Street at K Street NW
  - Remove eastbound Pennsylvania Avenue at 28th Street NW
  - Remove eastbound M Street at Thomas Jefferson Street NW
  - Remove eastbound and westbound Wisconsin Avenue at P Street NW
  - Remove eastbound and westbound Wisconsin Avenue at R Street NW

- **Additional Recommendations**
Implement Transit Signal Priority (TSP) at the following intersections:

- Pennsylvania Avenue at 20th Street NW (eastbound) and 22nd Street NW (eastbound/westbound)
- K Street at 14th Street NW, 16th Street NW, and 11th Street NW (eastbound/westbound)
- Massachusetts Avenue at 7th Street NW and 5th Street NW (eastbound/westbound)
- New York Avenue at 9th Street NW (eastbound/westbound)

Install left turn signal at Pennsylvania Avenue at 20th Street NW and at North Capitol Street at H Street NE

Add buses (trippers) to reduce crowding at peak times

Eliminate two parking spaces at Pennsylvania Avenue at 22nd Street NW to meet bus stop length requirements.

3.4.3. NoMa

From 2015 to 2016, DDOT conducted a preliminary study to examine alternatives for a DC Circulator route in the NoMa area. DDOT conducted outreach within the community via meet-the-rider events and focus groups to ascertain which preliminary route connections the NoMa community would prefer if the DC Circulator were to serve the area. Feedback was strongest in favor of connections to both Logan Circle and H Street NE. Overall, the analysis found that the NoMa area is served by the NoMa-Gallaudet U Metrorail station, and two Metrobus Priority Corridor Network bus routes, the Metrobus 90s Line on Florida Avenue and the Metrobus 80 Line on North Capitol Street. Both these lines provide high-frequency reliable service to and from the area. The findings noted that one way to provide additional connectivity to the area would be to utilize M Street and 4th Street; however, residents oppose the use of these streets. In addition to resident opposition, the speed bumps on M Street can damage buses and cause rider discomfort, so routing options are severely constrained and generally duplicate existing Metrobus services. DDOT will reconsider this area of the District in future TDP updates as it monitors continued growth in the northeast quadrant of the District, and evaluate whether additional transit service capacity is warranted.
4.0 Recommendations for Improving Existing System

DDOT used the results of the operations analysis and the three phases of public outreach to evaluate potential changes to DC Circulator service. An initial list of potential expansion and truncation of routes was developed based on:

- Review of the 2014 TDP;
- Inputs from existing DDOT and WMATA transit service studies;
- Operational deficiencies in the existing system;
- Planned future transit investment, such as MetroExtra limited stop bus service; and
- Suggestions from elected officials, DC Circulator riders, and the general public.

The recommendations were screened based on service planning measures that reflect the DC Circulator’s goals and objectives described in Section 2.7: Strategic Goals and Objectives. After this screening process, DDOT finalized the recommended route modifications based on stakeholder and public feedback.

4.1. Relation to 2014 TDP

The plans recommended in the 2014 TDP Update were all reviewed based on the DC Circulator’s goals and objectives. The recommendations from the 2014 TDP Update were prioritized based on how well they still align with the system’s immediate needs. The system’s current needs include: increasing ridership, improving headway adherence and on-time performance, and enhancing fleet and facility maintenance. Overall, the 2014 TDP Update was aimed at expanding the system, while the 2017 TDP Update recommendations scale back and are aimed at improving the existing system due to fleet and facility needs.

4.2. Relation to Other Transit Plans and Programs

DDOT and WMATA have developed several transit recommendations that affect the DC Circulator service area. The recommendations reflected in this TDP account for ongoing efforts to improve transit and access to transit around the city. WMATA line studies and Priority Bus Corridor Studies were analyzed as well as DDOT’s DC Future Transit Plan, K Street Bus Plan, and moveDC plan (See Appendix A).
4.3. Proposed Service Alternatives

The following section provides an overview of the recommendations for each route in the DC Circulator system. These recommendations will be carried forward to phasing, as noted in Section 6: Final Recommendations.
4.3.1. Georgetown – Union Station

The Georgetown – Union Station route currently terminates in the Union Station parking garage. However, the DC Circulator stop within the garage is difficult for customers and potential customers to locate. To simplify the route alignment and increase brand visibility, the 2017 TDP Update recommends terminating the route in front of Union Station at the same stop as the DC Circulator National Mall route. This new location will allow customers to easily transfer to the National Mall route, as well as access the other transit options provided at Union Station including Metrobus, Metrorail, Amtrak, commuter rail, commuter bus, Capital Bikeshare, and intercity bus (see Figure 8). During Phase II of public outreach, 66 percent of respondents ranked the current route higher than the proposed alignment change to remove service on Wisconsin Avenue NW, north of M Street NW. In Phase III of public outreach, 65 percent of respondents were satisfied with the removal of the Union Station garage and preservation of Wisconsin Avenue. At this time, DDOT does not recommend reducing service on Wisconsin Avenue NW due to the community support for the existing alignment.

**Impact**

- Current stop location inside Union Station parking garage is difficult to locate
- More streamlined route alignment requiring one less vehicle on the route
- New stop location provides quicker Metrorail connection
- Stop and layover space adjacent to National Mall route providing seamless transfers
Figure 8 | Georgetown – Union Station Modified Route
4.3.2. Potomac Avenue Metro – Skyland via Barracks Row

The Potomac Avenue Metro – Skyland via Barracks Row route is recommended for a realignment to attract more and new ridership (see Figure 9). In partnership with WMATA, DC Circulator would take over the existing Metrobus 94 route, slightly modify its alignment, reduce the numbers of stops in keeping with the DC Circulator standard of no more than 4 stops per mile, and extend the route to reach Union Station. The route would continue to serve the Capitol Hill, Downtown, Anacostia, and Eastern Market areas, and provide riders new connections to Union Station and Congress Heights, two major transit hubs at each end of the route. The portion of the route that would be modified is still served by a variety of WMATA Metrobus routes, providing riders frequent alternative transportation options.

During Phase II of public outreach, 58 percent of respondents ranked the proposed route change higher than the existing route. In Phase III of public outreach, 51 percent of respondents were satisfied with the proposed route change. This proposed alternative would be implemented in tandem with the recommended alignment change to Union Station – Navy Yard (see Figure 11) and WMATA’s proposal and public hearing process to end service on the 94 route. DDOT recommends operating the route year-round from 6:00 am to 9:00 pm on weekdays and from 7:00 am to 9:00 pm on weekends, both on a 10-minute headway. Through the public hearing process, DDOT will work with the public to ensure that impacts to any change in span of service are minimal.

**Impact**

- More service than the Metrobus 94’s average headway with 10 minute headways
- Increase ridership on route by connecting two major activity centers
- Provide new one-seat ride from east of the river to the Central Business District
- Faster connection between Union Station and Navy Yard for commuters
- Reduce overlap with competing Metrobus service
- Discontinued portion of route is supplemented by existing Metrobus service
- Daily service throughout the year

DC Circulator 2017 TDP Update
Figure 9 | Congress Heights to Union Station via Anacostia Route Map

PS, Modified Route

DC Circulator 2017 TDP Update

December 2017
4.3.3. Union Station – Navy Yard

The Union Station – Navy Yard route is recommended for realignment to increase ridership and improve on-time performance (see Figure 10). The new realignment will include a modification of the proposed route extension to the Waterfront Metrorail station from the 2014 TDP Update. The proposed route would extend to Maine Avenue SW, serving the new development at The Wharf and extend northbound to L’Enfant Plaza, which will be home to the International Spy Museum and Museum of the Bible. L’Enfant Plaza also has access to Metrorail and VRE, and this stop will only be two blocks from the National Mall. The route would terminate at Eastern Market instead of Union Station and the bus will turn around in the direction of D Street SE along Eastern Market Metro Plaza to facilitate this terminus and improve overall traffic safety. DDOT is working on a minor one-block reconfiguration to facilitate this movement. Additional weekend service, 7:00 am to 9:00 pm year-round, would be provided on the new route. Riders who previously used the route to travel from Union Station to the Washington Navy Yard will be able to use the realigned Potomac Avenue Metro – Skyland via Barracks Row route (see Figure 11). A special standalone service plan will be developed to provide DC Circulator service to the new DC United Soccer Stadium before, during, and after games. During Phase II of public outreach, 80 percent of respondents ranked this proposed route change higher than the existing route. In Phase III, 37 percent of respondents were satisfied by the proposed route change. The change in sentiment is likely due to increased responses from residents and visitors to Capitol Hill, as well as commuters that travel to the U.S. Capitol complex.

Impact

- Create transit connection to new development and destinations to the Wharf
- Connection to L’Enfant Plaza provides access to Yellow/Blue/Orange/Silver Metrorail Lines and VRE Commuter Rail
- Provides new one-seat connection between Navy Yard and L’Enfant Plaza
- Provides new DC Circulator service to the Waterfront Metrorail Station and neighborhood
- Increased weekend service
Figure 10 | Eastern Market to L'Enfant Plaza via Navy Yard Route Map

US-NY, Modified Route

DC Circulator 2017 TDP Update

December 2017
Figure 11 | PS and US-NY Modified Routes

PS and US-NY, Modified Routes
4.3.4. Dupont Circle – Georgetown – Rosslyn

The Dupont Circle – Georgetown – Rosslyn extension to U Street NW, as recommended in the 2014 TDP Update, is being recommended again with a slight modification to the eastern terminus (see Figure 12). This modification is due to new development in the area and analysis of the existing traffic patterns. During Phase II of public outreach, 82 percent of respondents ranked high interest for this extension. In Phase III of public outreach, 78 percent of respondents were satisfied with the proposed extension. The extension of this route will increase ridership and provide a new bus connection which does not currently exist.

Impact

• Increase ridership by extending route to another major activity center
• Adds a connection to the Green/Yellow Metrorail Lines
• Provides transfer to Woodley Park – Adams Morgan – McPherson Square Circulator route at 14th Street
• Requires six additional vehicles

DC Circulator 2017 TDP Update
Figure 12 | Dupont Circle – Georgetown – Rosslyn – U Street Extension
### 4.3.5. Woodley Park – Adams Morgan – McPherson Square

The Woodley Park – Adams Morgan – McPherson Square route is the best-performing route in the DC Circulator system. The route currently does not experience any major operational issues and has consistently high ridership. This route’s performance should continue to be monitored to determine if any changes should be made in the future, particularly given the planned 2018 implementation of the WMATA 59 MetroExtra Service and the new bike lanes on 14th Street NW.

### 4.3.6. National Mall

The National Mall route was implemented in June 2015. DDOT, in cooperation with DCST and NPS, recently completed an analysis of the first year of service. Based on the results, DDOT developed recommendations to improve service. NPS is currently working to improve the infrastructure along the route, including installing additional bus amenities, enforcing “no parking” near bus zones with the assistance of the District Department of Public Works, and spreading awareness about the bus route. Parking meters were recently installed along the route to provide a funding source for this route, per the original agreement. This route will be assessed throughout this upcoming year to determine if any changes need to be made in regards to its operating hours in the winter months, which experience very low ridership.

**DC Circulator 2017 TDP Update**
5.0 Public Engagement

Public engagement is a fundamental element of successful transit planning and implementation. Building on the wide-ranging and extensive public outreach performed as part of the 2014 TDP Update, DDOT sought broad public participation in order to ensure a transparent planning and decision-making process. The development of this TDP employed a variety of public involvement activities, including two rounds of surveys, five meet-the-rider events, and stakeholder meetings. For the 2017 update of the TDP, the public outreach goal was to target existing and potential DC Circulator riders to get feedback on the current system, expansion plans and opportunities, and proposed policies. The outreach process was divided into three phases. Phase I consisted of a review of comments and feedback received from the public and other stakeholders on needs to improve the system since the 2014 TDP. Phase II used an online survey to obtain feedback on route restructuring and recommendations based on the proposed improvement from DDOT as a result of data collection. Finally, Phase III was the final review of the draft document, which included a 30-day public comment period.

To meet the goals of Phase II, DDOT held five meet-the-rider events at targeted locations along routes being considered for expansion or alteration, and areas being considered for DC Circulator service. Where possible, the meet-the-rider events were located in proximity to DC Circulator routes and at Metrorail stations, providing easy access for those wanting to share their feedback with DDOT and project staff face-to-face.

For Phase III, DDOT used a survey that was accessible either online or via paper on all DC Circulator buses. Riders could leave completed paper surveys in bags on DC Circulator buses or mail them to DDOT. The public comment period was open for 30 days.

Section 5 summarizes the public engagement efforts of the 2017 TDP Update process.
5.1. Phase II Survey Summary

DDOT developed a survey to gauge riders’ and non-riders’ use of the existing system, opinions of specific route recommendations, and interest in proposed capital improvements. Survey takers who answered that they did not currently ride the DC Circulator were asked the reason why not.

This survey was available online during the public outreach period from June 1 to June 22, 2017. The survey was advertised on the DC Circulator and DDOT websites, through social media (Facebook, Twitter, and Instagram), to Advisory Neighborhood Commissions (ANCs), and through listservs, blogs, and local news. Comments were also collected via email, social media, and letters to the DDOT project manager directly from residents and neighborhood or business organizations. These comments were compiled between June 2, when DDOT hosted the first meet-the-rider event, and July 31, the end of the TDP update public comment period. The results are available in Appendix B.

At the meet-the-rider events, DDOT outreach staff surveyed participants using tablets or distributed postcards with the URL for the survey. A total of 2,674 surveys were collected in Phase II. The distribution of survey responses by location is in Table 13.

<table>
<thead>
<tr>
<th>Location</th>
<th>Count of Surveys</th>
<th>Percentage of Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>2,347</td>
<td>88%</td>
</tr>
<tr>
<td>Events</td>
<td>327</td>
<td>12%</td>
</tr>
</tbody>
</table>
5.2. Phase II Results and Key Findings

5.2.1. Rider Status

The majority of respondents (1,872, or 71 percent) marked that they currently ride the DC Circulator (Figure 13). The remaining 748 respondents marked that they are not current riders of the DC Circulator.

Figure 13 | Do you currently ride the DC Circulator? (n=2,620)

When respondents marked that they do not currently ride the DC Circulator, they were asked “What is the main reason you do not ride the DC Circulator?” Most respondents, 610, marked the DC Circulator does not provide service where they need it (Figure 14), and another 126 respondents said they use other modes of transportation instead.

Figure 14 | You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator? (n=744)
Respondents who chose “doesn’t provide service where I need it” were asked what destinations the DC Circulator should serve in the future. Respondents were provided an open comment box with a 1000-character maximum. Of the 570 respondents who answered this question, 476, or 84 percent, mentioned Southwest or the Waterfront (Figure 15). Another 35 respondents requested a route that is a proposed route in the TDP Update; 13 respondents mentioned the Shaw, Howard University, or U Street Neighborhood; and 11 mentioned a destination that is already served by the DC Circulator.

**Figure 15** You answered that the DC Circulator doesn’t provide service where you need it. What destinations would you like DC Circulator to serve in the future? (n=570)

![Graph showing responses to destinations](image)

### 5.2.2. Route Options

Regardless whether they marked that they do or do not currently ride the DC Circulator, all survey takers were asked if they wanted to comment on any existing routes and their proposed changes. A total of 2,033 survey respondents marked that they wanted to comment on the routes. They were then asked which routes they would like to comment on, and were directed to respond to only the routes they chose. This allowed for a faster survey for the survey respondents.

#### 5.2.2.1. Dupont Circle – Georgetown – Rosslyn

DDOT proposed changing the existing Dupont Circle to Rosslyn route by adding an extension from Rosslyn to U Street. A total of 316 respondents, or 84 percent, selected they preferred the Modified Route from Rosslyn to U Street (Table 14). The Modified Route was preferred by both current riders and non-riders: 81 percent of current riders preferred the modified route, and 96 percent of non-riders preferred the modified route. Sixteen respondents chose “other,” which required them to write a
comment. Eight respondents gave comments about re-aligning the Modified Route to avoid either passenger car or pedestrian traffic.

**Table 14** | RS-DP Results by Rider Status and Preferred Route Option (n=375)

<table>
<thead>
<tr>
<th>Do you currently ride this route?</th>
<th>Which route option do you prefer?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Route</td>
</tr>
<tr>
<td>Yes</td>
<td>36</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>

**5.2.2.2. Georgetown – Union Station**

DDOT proposed changing the existing Georgetown – Union Station route by removing a segment on Wisconsin Avenue NW and the stop at the Union Station garage. Two-thirds of respondents, or 479, answered that they preferred the current route from 35th Street NW to the Union Station garage (Table 15). Twenty-four percent selected the Modified Route from M Street NW to Columbus Circle. There was a significant difference in preference by rider status: 68 percent of current riders preferred the current route, while only 28 percent of non-riders preferred the current route.

Seventy respondents chose “other,” which required them to write a comment. Of those, 40 respondents suggested extending the current route, with 39 requesting the route extend further up Wisconsin Avenue NW toward the National Cathedral.

**Table 15** | GT-US Results by Rider Status and Preferred Route Option (n=727)

<table>
<thead>
<tr>
<th>Do you currently ride this route?</th>
<th>Which route option do you prefer?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Route</td>
</tr>
<tr>
<td>Yes</td>
<td>466</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>479</td>
</tr>
</tbody>
</table>

**5.2.2.3. Potomac Avenue Metro – Skyland via Barracks Row**

DDOT proposed two route modifications for the Potomac Avenue Metro – Skyland via Barracks Row route. Modified Route A would remove service to the Potomac Avenue Metrorail station and instead connect to Union Station. Modified Route B would connect Union Station and Congress Heights, removing both Potomac Avenue and Skyland. Eighty-nine respondents, or 58 percent, preferred the
Union Station to Congress Heights route. By rider status, 61 percent of current riders preferred Modified Route B, while 50 percent of non-riders preferred Modified Route B (Table 16).

Thirteen respondents chose “other,” which required them to write a comment. Five respondents wrote that they wanted a combination of proposed routes, four respondents suggested a re-alignment to a proposed route, and three wrote comments that were unrelated to the Potomac Avenue Metro – Skyland via Barracks Row route.

**Table 16 |** PS Results by Rider Status and Preferred Route Option (n=154)

<table>
<thead>
<tr>
<th>Do you currently ride this route?</th>
<th>Which route option do you prefer?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Route</td>
<td>Modified Route A</td>
</tr>
<tr>
<td>Yes</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>38</td>
</tr>
</tbody>
</table>

**5.2.2.4. Union Station – Navy Yard**

DDOT proposed two route modifications for the Union Station – Navy Yard Metro route. Modified Route A would re-align the route to travel on 4th and 6th Streets NE instead of 1st Street NE to avoid traffic near the Capitol building. Modified Route B would connect Eastern Market and L’Enfant Plaza Metrorail stations via M Street, removing Union Station from the route. The majority of respondents (710 respondents, or 80 percent) preferred the Eastern Market to L’Enfant Plaza route. Additionally, there was a significant difference in preference based on rider status: 66 percent of the 365 current riders preferred Modified Route B while 90 percent of the 492 non-riders preferred Modified Route B (Table 17).

Another 62 respondents chose “other,” which required them to write a comment. Of those, 25 respondents suggested a combination of proposed routes, with most comments asking for a connection between Union Station and L’Enfant Plaza Metrorail stations. Another 11 respondents asked for an extension to a proposed route, and 8 respondents described a route that aligned with Modified Route B.

**Table 17 |** US-NY Results by Rider Status and Preferred Route Option (n=886)

<table>
<thead>
<tr>
<th>Do you currently ride this route?</th>
<th>Which route option do you prefer?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Route</td>
<td>Modified Route A</td>
</tr>
<tr>
<td>Yes</td>
<td>35</td>
<td>61</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>75</td>
</tr>
</tbody>
</table>
5.3. Phase III Survey Summary

DDOT developed another survey to gauge riders’ and non-riders’ opinions toward specific route recommendations, which had been narrowed down to one proposed change based on the Phase II survey results. Survey takers who answered that they did not currently ride the DC Circulator were asked the reason why not.

This second survey was available online and on paper during the public outreach period from September 14 to October 13, 2017. Paper surveys were available on the buses, and respondents could leave completed surveys in bags on the buses or could mail them directly to DDOT.

The survey was advertised on the DC Circulator and DDOT websites, through social media (Facebook, Twitter, and Instagram), to Advisory Neighborhood Commissions (ANCs), and through listservs, blogs, and local news. Comments were also collected via email, social media, and letters to the DDOT project manager directly from residents and neighborhood or business organizations. These comments were compiled between September 14 and October 13, 2017, the end of the TDP update public comment period. The results are available in Appendix B.

There were 824 surveys collected in Phase III. The following summary compares responses from Phase II and Phase III.

5.3.1. Rider Status

Phase III had 70 percent fewer responses than Phase II. Out of the 824 responses in Phase III, over half of the responses came from paper surveys (Figure 16).

Figure 16 | Number of Respondents by Phase and Survey Type
In Phase III, 795 respondents, or 98 percent, marked they ride the DC Circulator (Figure 17). This is a 27 percentage point change from Phase II, which had 71 percent of respondents marked that they were DC Circulator riders. Respondents who responded via a paper survey were designated as current DC Circulator riders.

**Figure 17 | Do you ride the DC Circulator?**

<table>
<thead>
<tr>
<th></th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>29%, 748</td>
<td>71%, 1,872</td>
</tr>
<tr>
<td>No</td>
<td>2%, 19</td>
<td>29%, 748</td>
</tr>
</tbody>
</table>

**5.3.2. Route Options**

In this survey, respondents were asked how satisfied they were with each of the four proposed route changes. This section analyzes the results of these questions.

The survey also had space for open ended comments. Of the comments received, 15 were unrelated to the DC Circulator system, and 170 comments were unrelated to the 2017 TDP Update. There was a total of 345 open comments related to the 2017 TDP Update. As shown in **Figure 18**, 169 comments, or almost 50 percent, mentioned dissatisfaction with the changes to the US-NY route. Another 55 comments, or 16 percent, mentioned dissatisfaction with the changes to the GT-US route. The content of comments for each route are discussed below.
5.3.2.1. Georgetown – Union Station

In Phase III, DDOT proposed changing the existing Georgetown – Union Station route by removing the stop at the Union Station parking garage and consolidating several stops along the route. The majority of respondents (204 respondents, or 65 percent) either marked they were “very satisfied” or “satisfied” with this route change, which is 37 percentage points over respondents who marked “very dissatisfied” or “dissatisfied” (Figure 19).

Figure 19 | How satisfied are you with the proposed route change? (GT-US) (n = 318)
As seen in Figure 18, 80 respondents left a comment related to GT-US. Out of the 55 comments not in favor of changes to GT-US, 29 comments, or 78 percent, mentioned dissatisfaction with stop consolidation (Figure 20). Additional information about these comments is available in Appendix B.

**Figure 20** | Negative Comments by Category about GT-US (n = 37)

5.3.2.2. **Potomac Avenue Metro – Skyland via Barracks Row**

In Phase III, DDOT proposed removing the existing Potomac Avenue Metro – Skyland via Barracks Row route and replacing it with a route connecting Union Station and Congress Heights Metro via Anacostia. As shown in Figure 21, 119 respondents, or 51 percent, either marked they were “very satisfied” or “satisfied” with this route change, which is 17 percentage points over respondents who marked “very dissatisfied” or “dissatisfied.”
Figure 21 | How satisfied are you with the proposed route change? (PS) (n = 232)

As seen in Figure 18, 45 respondents left a comment related to PS. Out of the 37 comments not-in-favor of changes to PS, 13 comments, or 48 percent, mentioned dissatisfaction with their transit alternatives should the route change (Figure 22). Seven commenters, or 26 percent, thought the route change would negatively affect commuters, and five commenters, or 19 percent, thought the route change would negatively affect older adults and people with disabilities.

Figure 22 | Negative Comments by Category about PS (n = 27)
5.3.2.3. Union Station – Navy Yard

In Phase III, DDOT proposed removing the existing Union Station – Navy Yard route and replacing it with a route connecting Eastern Market and L’Enfant Plaza via M Street. As seen in Figure 23, 198 respondents, or 51 percent, either marked they were “very dissatisfied” or “dissatisfied” with this route change, which is 14 percentage points over the number of respondents who marked “very satisfied” or “satisfied.”

Figure 23 | How satisfied are you with the proposed route change? (US-NY) (n = 392)

The results of this survey are the opposite of the results of the first survey; based on open-ended comments, the study team believes the change appears to be due to an increased number of comments from employees who work on Capitol Hill.

As seen in Figure 18, 190 respondents left a comment related to US-NY. Out of the 169 comments not in favor of changes to US-NY, 63 comments, or 33 percent, mentioned dissatisfaction that the route would affect commuters (Figure 24). Sixty-two commenters, or 33 percent, did not like their transit alternatives. Thirty comments, or 16 percent, thought the change would affect older adults or people with disabilities. Twenty commenters, or 11 percent, thought the change would negatively affect the operation of the route.
5.3.2.4. Dupont Circle – Georgetown – Rosslyn

In Phase III, DDOT proposed extending the existing RS-DP to U Street NW. As seen in Figure 25, 202 respondents, or 78 percent, either marked they were “very satisfied” or “satisfied” with this route change, which is 66 percentage points over respondents who marked “very dissatisfied” or “dissatisfied.”

Figure 25 | How satisfied are you with the proposed route change? (RS-DP) (n = 260)
6.0 Final Recommendations
DDOT has developed an implementation timeline to carry out the recommendations of this TDP. The timing of these recommendations reflects additional mitigating factors including equity considerations, policy considerations, and matters related to overall funding and fleet availability.

6.1 Phasing

6.1.1 Short-Term
In the near term, DDOT plans to propose through a formal public hearing process:

- Stop consolidation on Georgetown – Union Station;
- Modification of the Georgetown – Union Station eastern terminus; and
- Realignment the Potomac Avenue – Skyland via Barracks Row and Union Station – Navy Yard routes.

These recommendations will allow the DC Circulator system to continue to improve its service reliability and will not require more fleet vehicles. Once these recommendations are presented through a formal public hearing process in early 2018 and are approved, they will be implemented in 2018.

Concurrently, DDOT will conduct a traffic analysis on Wisconsin Avenue NW to better understand the delays on the Georgetown – Union Station route and work with WMATA to investigate ways to improve the Metrobus 30s-line service with a focus on reducing bus bunching to improve reliability.
6.1.2. Long-Term

In the long term, DDOT hopes to extend the Dupont Circle – Georgetown – Rosslyn route to U Street NW. While this route received positive feedback and is projected to perform well, the system does not currently have enough vehicles to operate the route extension, a maintenance facility that can accommodate a fleet expansion, nor a sufficient operating budget. DDOT will continue to work with stakeholders and the community to evaluate potential route options for the extension as development continues to rapidly change this part of the District. DDOT will also continue to evaluate future connections based on activity center growth around Washington, DC to meet future mobility needs.

6.2. Operating Cost of Implementation

Table 18 shows the annual operating cost for each route recommendation using FY16 costs and the change from the existing route. Operating cost is determined by the revenue hours needed to provide 10-minute frequency during the scheduled service span. Revenue hours by season were then multiplied by the FY16 cost per revenue hour. For FY16, the summer cost per revenue hour was $87.50 and the winter cost per revenue hour was $89.65. For planning purposes, DDOT uses $100.00 per revenue hour as the estimated cost for both seasons in 2018.

<table>
<thead>
<tr>
<th>Route</th>
<th>Annual Operating Cost ($ in millions)</th>
<th>Change from Existing Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT-US: 35th Street to Columbus Circle</td>
<td>$6.5</td>
<td>-$0.7</td>
</tr>
<tr>
<td>US-NY: Eastern Market to Waterfront</td>
<td>$3.4</td>
<td>+$0.8</td>
</tr>
<tr>
<td>PS: Union Station to Congress Heights</td>
<td>$3.3</td>
<td>+$1.4</td>
</tr>
<tr>
<td>RS-DP: Extend to U Street</td>
<td>$6.6</td>
<td>+$3.2</td>
</tr>
</tbody>
</table>
Table 19 shows the current and projected costs of each route. The projections are based on a three percent cost increase each year. The costs during the approximate years that route changes would be implemented are bolded.

### Table 19 | Projected Costs

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT-US</td>
<td>$7.2</td>
<td>$6.7</td>
<td>$6.9</td>
<td>$7.1</td>
<td>$7.3</td>
<td>$7.5</td>
</tr>
<tr>
<td>NM</td>
<td>$3.6</td>
<td>$3.7</td>
<td>$3.8</td>
<td>$3.9</td>
<td>$4.0</td>
<td>$4.2</td>
</tr>
<tr>
<td>PS</td>
<td>$3.0</td>
<td>$3.4</td>
<td>$3.6</td>
<td>$3.7</td>
<td>$3.8</td>
<td>$3.0</td>
</tr>
<tr>
<td>RS-DP</td>
<td>$3.5</td>
<td>$3.6</td>
<td>$3.7</td>
<td>$3.8</td>
<td>$3.9</td>
<td>$7.6</td>
</tr>
<tr>
<td>US-NY</td>
<td>$2.6</td>
<td>$3.4</td>
<td>$3.5</td>
<td>$3.6</td>
<td>$3.7</td>
<td>$3.8</td>
</tr>
<tr>
<td>WP-AM</td>
<td>$4.4</td>
<td>$4.5</td>
<td>$4.6</td>
<td>$4.8</td>
<td>$4.9</td>
<td>$5.1</td>
</tr>
<tr>
<td>Total</td>
<td>$24.3</td>
<td>$25.3</td>
<td>$26.1</td>
<td>$26.9</td>
<td>$27.6</td>
<td>$31.2</td>
</tr>
</tbody>
</table>

7.0 Fleet and Facilities

7.1 Fleet Inventory

A detailed description and inventory of the fleet was provided in Section 2.5: Fleet.

7.2 Replacement, Expansion, and Stability

7.2.1 Fleet Replacement and Repair

Based on the fleet maintenance audits, DDOT has created a replacement plan which addresses the need to update the oldest vehicles in its fleet (see Table 20).

### Table 20 | Current Fleet Profile August 2017

<table>
<thead>
<tr>
<th>Size</th>
<th>Make</th>
<th>Model</th>
<th>Year</th>
<th>Service Age in Years</th>
<th>Quantity of Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-foot</td>
<td>Van Hool</td>
<td>A 300 L</td>
<td>2010</td>
<td>7</td>
<td>6*</td>
</tr>
<tr>
<td>30-foot</td>
<td>Van Hool</td>
<td>A 300 K</td>
<td>2009</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>40-foot</td>
<td>New Flyer</td>
<td>Xcelsior</td>
<td>2014</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>40-foot</td>
<td>New Flyer</td>
<td>Xcelsior</td>
<td>2016</td>
<td>0</td>
<td>26</td>
</tr>
</tbody>
</table>

*Owned by First Transit

Note: The typical useful life for a transit bus is 12 years, or 15 years with a mid-life overhaul.

DC Circulator 2017 TDP Update

The remaining 14 Van Hool buses that entered service in 2009 will not receive a mid-life overhaul given the cost relative to their remaining value. They will be replaced through a future procurement, planned for 2020.

Table 21 details the cost and timing of vehicle replacement. Table 22 details the cost and timing of vehicle mid-life overhauls.

### Table 21 | DC Circulator Fleet Replacement Plan

<table>
<thead>
<tr>
<th>Model Year</th>
<th>Replacement Manufacturer</th>
<th>Number of Vehicles</th>
<th>Cost ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>TBD³</td>
<td>14</td>
<td>$9.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>14</td>
<td>$9.1</td>
</tr>
</tbody>
</table>

*Only includes the cost of the vehicles themselves. Other costs related to warranties, chargers, etc. are not included here.

### Table 22 | DC Circulator Fleet Mid-Life Overhaul Plan

<table>
<thead>
<tr>
<th>Year</th>
<th>Mid-Life Overhaul Manufacturer</th>
<th>Number of Vehicles</th>
<th>Estimated Cost of Fleet Overhaul by Type ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>New Flyer (2014 Model)</td>
<td>18</td>
<td>$6.3</td>
</tr>
<tr>
<td>2023</td>
<td>New Flyer (2016 Model)</td>
<td>26</td>
<td>$6.5</td>
</tr>
<tr>
<td>2024</td>
<td>Proterra (2017 Model)</td>
<td>14</td>
<td>$4.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>$17.7</td>
</tr>
</tbody>
</table>

³ DDOT is still evaluating propulsion options for the replacement of the 14 2009 Van Hool buses. The cost shown is the estimated cost of 14 clean diesel buses in 2020, including inflation.
Based on the plan in Table 21, a total of 14 buses will be replaced at a total cost of more than $9.1 million, an investment to upgrade and sustain DC Circulator transit service. This investment will result in a fleet with 81 percent of the vehicles being model year 2014 or newer, and 56 percent of the vehicles being model year 2016 or newer. The purchase and replacement of the fleet has been exclusively funded through the District’s Capital Improvement Program. DDOT will continue to work through the capital budget process to align funding with the fleet replacement plan needs stated above.

7.2.2. System Growth Recommendations

DDOT plans to strategically expand DC Circulator service, while considering the overall efficiency of the system. This expansion will primarily consist of extending or realigning existing routes into fast-growing neighborhoods, some of which lack adequate connectivity to the surrounding city.

Short term changes will be accomplished using existing vehicles (see Table 23). The alteration of the eastern endpoint of the Georgetown – Union Station route will require one fewer vehicle. The realignment of Union Station – Navy Yard to Eastern Market and L’Enfant Plaza will not change the number of required vehicles. The realignment of Potomac Avenue Metro – Skyland via Barracks Row to Union Station and Congress Heights will require two additional vehicles. Overall, this will require 60 buses. With a spare ratio of 20 percent of peak requirements, the DC Circulator fleet must number 72 vehicles. By the end of 2018, the DC Circulator fleet will total 72 vehicles, covering the required buses plus a spare ratio of 20 percent.

The long-term extension of the Dupont Circle – Georgetown – Rosslyn route will require five additional buses, making the required fleet for daily service 65 buses. With a spare ratio of 20 percent, the DC Circulator fleet would need 78 vehicles to serve this expansion. This would require a purchase of six additional vehicles to expand the fleet and, most importantly, additional maintenance and storage capacity.
### Table 23 | 2017 TDP Recommendations Peak Vehicle Requirement

<table>
<thead>
<tr>
<th>Route</th>
<th>Current Peak Vehicle Requirement</th>
<th>Requirement After Route Modification</th>
<th>Change (+/-)</th>
<th>Modification Route Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT-US</td>
<td>14</td>
<td>13</td>
<td>-1</td>
<td>Short Term</td>
</tr>
<tr>
<td>US-NY</td>
<td>8</td>
<td>8</td>
<td>-</td>
<td>Short Term</td>
</tr>
<tr>
<td>PS</td>
<td>9</td>
<td>11</td>
<td>+2</td>
<td>Short Term</td>
</tr>
<tr>
<td>RS-DP</td>
<td>7</td>
<td>12</td>
<td>+5</td>
<td>Long Term</td>
</tr>
<tr>
<td>WP-AM</td>
<td>10</td>
<td>10</td>
<td>-</td>
<td>No Changes</td>
</tr>
<tr>
<td>NM</td>
<td>11</td>
<td>11</td>
<td>-</td>
<td>No Changes</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59</strong></td>
<td><strong>65</strong></td>
<td><strong>+6</strong></td>
<td></td>
</tr>
</tbody>
</table>

If the six new vehicles are electric buses, the estimated costs would be $6.7 million for the buses, chargers, and other associated costs. If they are clean diesel, the estimated cost would be approximately $3.9 million. Depending on the status of the maintenance and storage facilities, a purchase of six new buses would also require additional space regardless of bus type.

### 7.3. Facility Needs and Costs

As the DC Circulator bus fleet grows, the system’s physical storage and maintenance space must expand. Space will be required not only to park additional vehicles, but also to adequately support administrative and maintenance functions (see Table 24).

#### Table 24 | Existing Facility Needs

<table>
<thead>
<tr>
<th>Parking Spaces</th>
<th>Maintenance Bays</th>
<th>Bus Wash Bays</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Fleet, required</td>
<td>64</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Current Fleet, actual</td>
<td>64</td>
<td>3.5</td>
<td>0</td>
</tr>
<tr>
<td><strong>Gap</strong></td>
<td><strong>0</strong></td>
<td><strong>2.5</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

The current District capital budget includes funding for improvements to the existing South Capitol Street facility and the purchase of a site for a new maintenance facility. Potential DC Circulator facilities should be evaluated based on the following criteria:

- The site should be centrally located along or close to DC Circulator routes to minimize deadhead costs;
• The facility should accommodate sufficient maintenance bays and bus washing capacity to support current and future growth needs of the system in an efficient operating arrangement; and

• The facility should be accessible to Washington, DC residents for employment opportunities.

The facility at any selected site should be designed in a manner that is environmentally sound and integrated into the surrounding community environment, with access designed to minimize effects on surrounding residential communities.

The South Capitol Street facility will be used for charging electric buses, as the facility has the requisite electric grid capacity needed. Due to space constraints, this facility is not suitable for diesel fueling, significant maintenance or administrative functions, and can house only the 14 battery electric vehicles.

The District’s Department of General Services (DGS) is actively seeking properties that could be developed or redeveloped to serve as a new DC Circulator fleet facility. The future property would need adequate space to fully maintain buses and house the operator’s administrative functions.
8.0 Issues for Further Consideration and Study

The 2017 TDP Update process identified issues that should be carried forward for additional consideration and study. Some of these issues relate to policies or require detailed operational studies that go beyond the scope of this TDP Update. Additional planning studies that require continued dialogue among stakeholders are recommended. These studies would more fully assess needs that were identified by stakeholders or as a result of transportation deficiencies identified during the TDP update. New policies, changes to existing policies, and results of these studies, if not implemented in the short-term, will be incorporated into the next TDP update.

8.1. Operational Issues

All the DC Circulator routes face operational challenges on a daily basis. Typically, these occur during the peak periods when vehicular traffic is greatest and delays on the roadway network are most pronounced. As a result, many of the routes suffer from poor headway adherence (inability to provide service that arrives at least every 10-minutes) and buses are unable to complete the route in the designated amount of time resulting in missed trips. There are several measures that DDOT can consider to improve the operating environment in which the buses operate including:

- Bus Priority Treatments: Transit signal priority, bus only lanes (both permanent and peak only), and queue jump lanes at key congestion hotspot locations to improve citywide transit system performance.
- Intersection Evaluation: Modify intersection signal timing based on the potential to give more green time to the traffic movements that serve the highest number of persons (using vehicle, pedestrian, bicycle and bus passenger load data), regardless of resulting intersection Level of Service (LOS).
- Parking and Enforcement: Work with DDOT’s traffic control officers (TCOs), NPS, and the Department of Public Works (DPW) Parking Enforcement team to identify enforcement...
hotspots where illegal parking results in bus delay, that prevent buses from making specific
turning movements or serve stops when other vehicles are illegally parked.

- Bus Stop Consolidation: Consolidate bus stops to meet the system’s limited-stop guidelines.
  Doing so will improve productivity, running time, and reliability, particularly for low
  boarding/alighting stops within close proximity of adjacent stops. Bus stop consolidation,
  however, will only provide small improvements along routes that face high traffic
  congestion.

- Enhanced events management in partnership with other agencies to reduce impacts to
  service.

### 8.2. Additional Studies

DDOT’s mission is to enhance the quality of life for District residents and visitors by
ensuring that people, goods, and information move efficiently and safely with minimal adverse impact on residents
and the environment. DDOT understands that infrastructure and the needs of the public are constantly changing. To that
end, DDOT will continue to identify ways to improve the existing DC Circulator service. DDOT will conduct a Wisconsin Avenue traffic analysis to determine potential on-time performance solutions along the Georgetown – Union Station route. DDOT will also examine the 14th Street NW portion of the Woodley Park – Adams Morgan – McPherson Square route once the MetroExtra 59 Limited Stop service is implemented in late 2017 to determine the continued transit need in that corridor.

### 8.3. Policy Considerations

The following policy considerations have been identified for continued dialogue within DDOT and with key stakeholders. These are continued considerations from the 2014 TDP.
8.3.1. Markets that Support 10-Minute Headways

Although a significant portion of Washington, DC presents a dense land use profile and the District’s population is expanding at a robust pace, there is a limited number of markets that can support the policy headway of 10 minutes, which is at the core of the DC Circulator brand. This lack of markets is due to several factors, including:

- The wide range of trip purposes in Washington, DC;
- The limited number of activity centers outside of the dense central core of Washington, DC that represent truly large higher-density, multi-purpose activity centers;
- The extensive nature of the existing WMATA bus and rail service that connects many of these activity centers; and
- Heavy congestion during peak hours.

When reviewing the performance of the existing DC Circulator system, only a few of the existing six routes clearly meet the requirements to justify DC Circulator service at 10-minute headways. The successful routes connect multiple activity centers and are useful for many trip purposes like tourism, shopping, entertainment, and commuting, among others. They also serve markets that are not directly served by Metrorail, or provide a connection that Metrorail does not. However, not all the routes in the system are this successful in large part because they serve activity centers that do not warrant all-day trips. As noted in the 2014 TDP Update, there are no standards for decision-making regarding DC Circulator routes operating in markets that do not support all-day 10-minute service.

DDOT will continue to evaluate existing and future routes that would operate on 15 or 20-minute headways. This type of service would potentially be deployed on routes or corridors that do not support all day 10-minute service in terms of land use and ridership.

8.3.2. Fiscal Stewardship

When the DC Circulator was first established, the base boarding charge (fare) was set at $1.00 and the transfer charge from Metrorail at $0.50. While various adjustments have been made relating to transfers on SmarTrip cards versus paper transfers, no changes to the fare have otherwise been enacted.
in the past eight years. Meanwhile, WMATA Metrobus fares have steadily increased from $1.20 in 2004 to $2.00 in 2017. As it stands, the fare on Metrobus is currently 100 percent higher than that of the DC Circulator.

Many bus transit operators realize a fare recovery ratio of 25 to 35 percent, meaning that fare revenues cover between 25 and 35 percent of operating costs. Fare increases are one method by which to increase revenue. However, several decades of research have shown that raising fares results in a decrease in ridership. Thus, any policy changes related to fares must be carefully considered.

Furthermore, fare policy and the fiscal needs of the system must be considered in the broader discussion of the DC Circulator’s original core goals: improving the quality of the surface transit experience in order to stimulate non-bus riders to use the bus for short trips; demonstrating to other transit operators that a focus on improving the rider’s transit experience builds ridership and popularity of bus service; and, contributing to reducing congestion and pollution. Currently, DDOT recommends maintaining a low fare and accepting a lower fare recovery ratio as an acceptable tradeoff in the pursuit of the DC Circulator’s core goals. This requires a greater financial commitment in providing the service. This issue will continue to be discussed in the District budget process. In the summer of 2017, NPS installed parking meters on the National Mall and will use the revenue from the meters to help fund the National Mall route. This is a good example of a partnership funding agreement that in part made the implementation of this route possible.

**8.3.3. Increase Transparency with Stakeholders and Riders**

DDOT proposes to modify the process for recommending and implementing service adjustments. The changes will modernize the public participation process by ensuring that all stakeholders and riders are aware of and involved in the service change process. To reach the public, DDOT is proposing that all major service adjustments must be advertised directly on buses, via social media, and on the DC Circulator website. Additionally, DDOT is proposing streamlining the process for fare and major service adjustments. DDOT will be required to develop a plan justifying the proposed service adjustment, including an equity analysis, that is made available to the public, and hold at least one public hearing regarding the changes. If the changes are approved after receiving public input, DDOT will prepare an implementation plan that will also be made available to the public.
9.0 Appendix A

DDOT reviewed the following studies as part of the development of the 2017 TDP Update.

9.1. WMATA Metrobus Priority Corridor Network Plan (2008)

As part of the Regional Bus Study, WMATA evaluated corridors throughout the region and identified those with sufficient current or future potential to warrant running way improvements to support faster and more reliable bus services. Corridors with daily transit ridership of more than 5,000 trips per day were considered as candidates. In 2008, 24 corridors were selected based on the following considerations:

- Corridors with high ridership, productivity, frequency, mode share and bus use;
- Corridors with ridership sufficient to support a family of service choices;
- Corridors with existing high priority Metrobus routes;
- Corridors with long spans of service provided seven days per week; and,
- Major arterial TOD corridors with mixed-use development where continuing growth is anticipated.

Of the 24 corridors recommended to be the priority corridor network, 10 corridors are primarily located in the District. These corridors have been identified for operational enhancements such as transit signal priority, exclusive lanes, increased frequency, and span of service. The following bullets list the 10 corridors identified in the District:

- Georgia Avenue/7th Street NW Line (Route 70/79)
- Wisconsin Ave/Pennsylvania Avenue Line (Routes 31/32/34/36/37/39)
- 16th Street Line (S1/S2/S4/S9)
- H Street/Benning Road Line (X1/X2/X3/X9)
- U Street/Garfield Line (90/92/93/99)
- Anacostia Line (A2/A4/A5/A6/A8/A7/A9)
- Rhode Island Avenue Metro to Laurel (81/83/82/86/87/88/89/89M)
- Rhode Island Avenue Line (G8, G9)
- 14th Street Line (S2/S3/S4)
- North Capitol Line (80)
9.2. DC Transit Future Plan (2010)

The DC Transit Future Plan presents a vision for a high-quality surface transit network that supports community and economic initiatives and connects residents and neighborhoods to employment centers, commercial areas, recreational facilities, and multimodal transportation hubs. The recommended plan included a network of new streetcar lines operating in eight corridors, a transitway with reserved lanes for transit along K Street NW, as well as new MetroExtra limited-stop bus service operating in 13 corridors across the city.

9.3. WMATA Line Studies

9.3.1. 90-92-93 Metrobus U Street-Garfield Line Study (2011)

DDOT and WMATA conducted a study on the Metrobus 90s Line in 2010 and 2011. The routes have high ridership, with roughly 14,700 weekday passengers on average, and reliability problems. The study recommends a new route, Route 99, which would run with limited stops between the Anacostia and Dupont Circle Metro stations. The route would begin at Anacostia Metro station (which allows for more transfer opportunities), would connect to U Street and then proceed to Dupont Circle, using 8th Street NE/SE and Florida Avenue NE/NW. Initially, the route would operate bi-directionally with 15-minute headways during peak periods only. During the second phase, the route would operate every 10-minutes during the peak periods only. The route would eventually provide midday, evening, and weekend service.

9.3.2. 14th Street Line Study (2012)

In partnership with DDOT, WMATA conducted a study to evaluate Metrobus Routes 52, 53, and 54, which run along 14th Street NW. The three routes run north/south in the District between the Takoma Metro station, Franklin Square (53) and L’Enfant Plaza (52 and 54). Combined, these Metrobus routes have one of the highest ridership levels in the Metrobus system. Released in 2012, the study recommends the following in the first phase:

- Extending Route 53 to the south;
- Creating a new MetroExtra service, Route 59, which would initially run every 15 minutes in each direction in the AM and PM peak. This service will eventually be increased to 10 minute headways and include midday service; and
- Extending Route 52 to the Waterfront Metrorail Station.


9.4. **MoveDC Transit Element (2014)**

MoveDC is the District’s multimodal long-range transportation plan intended to guide transportation investments through the year 2040. The following bullets summarize recommendations from moveDC’s Transit Element:

- Studying exclusive bus lanes on Georgia Avenue NW, 16th Street NW, H and I Streets NW;
- Improve Metrobus reliability; and
- Maximize transit coverage and efficiency by reducing the overlap between MetroExtra and the DC Circulator System.

Recommendations include:

- More and better coordinated transit facilities;
- Integrate transit services to efficiently support existing demand and connect future nodes, creating a family of services;
- Establish a surface high-capacity transit network and high-frequency bus system;
- Invest in operational enhancements along significant bus corridors; and
- Increase transit speeds and reliability system-wide.

More information about moveDC can be found online at: www.wemovedc.org.

9.5. **Transit Signal Priority (2016)**

Through federal funding and in partnership with WMATA, DDOT installed Transit Signal Priority (TSP) technology throughout Washington, DC. Installation of TSP receivers at 195 intersections took place in two phases, with installation completed throughout the District by April 2016. To support complete functionality of the wayside equipment, on-board software was installed on 116 Metrobuses. Final System Acceptance Testing was completed in December 2016. While no DC Circulator buses are currently equipped to take advantage of TSP, they may be in the future, and as a result, discussions within DDOT will continue to determine at what time the DC Circulator may be in a position to take advantage of this technology.

9.6. **Crosstown Multimodal Transportation Study (2016)**

DDOT developed a strategic plan to identify and address improvements along east-west corridors between Brookland and Columbia Heights. The study was identified as a key component of moveDC’s 2-Year Action Plan. The study developed physical and operational improvements to enhance connectivity,
mobility, and safety in the study area. In the 2011 and 2014 DC Circulator TDPs, east-west corridors were evaluated for potential DC Circulator service. DDOT will continue to monitor development in this area of the District and reexamine this potential in the future as warranted. The study recommends the following improvements that could have an impact on future DC Circulator service:

- Install a two-way cycletrack on Kenyon Street NW;
- Install transit priority treatment on Columbia Road and Harvard Street NW. Transit lanes are dependent upon an increased frequency of buses and would initially start with peak period bus lanes only in 2020;
- Reconfigure the street grid east of Warder Street NW. Remove excess infrastructure, simplify intersections, and improve accommodations for all modes of travel;
- Conduct an intersection improvement study at 16th Street NW, Mount Pleasant Street, Columbia Road, and Harvard Street NW to determine a constructible design solution that meets demand for all modes of travel;
- Around the Washington Hospital Center neighborhood area, the following network elements are recommended:
  - Irving Street NW/NE – bicycle improvements (multiuse trail/center running cycle track)
  - Michigan Avenue NW/NE – transit priority treatment and sidewalk widening
  - North Capitol Street/Irving Street – cloverleaf interchange modification
  - Michigan Avenue NE/Irving Street NE – intersection improvement
- Within the Brookland neighborhood, the following elements are recommended:
  - Michigan Avenue NE – bicycle improvements (multiuse trail, bicycle lanes, and neighborhood bikeway)
  - Michigan Avenue NE – transit priority treatment between Irving Street and Monroe Street
  - Michigan Avenue NE – multiple intersection improvements
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1.0 About the Surveys

1.1 Phase II Survey

The survey for the 2017 DC Circulator Transit Development Plan (TDP) Update was only available online. The survey was available in both English and Spanish, and both were linked on the DC Circulator website with additional information about the TDP process. Respondents could either take the survey independently, or if they attended one of five outreach events, they could respond via tablet with assistance from outreach staff. At the outreach events, postcards in English and Spanish gave the URL to the TDP page on the DC Circulator website so attendees could respond to the survey after the event.

The goal of the survey was to collect feedback on proposed route changes to four out of six DC Circulator routes. The survey also collected information on why respondents did not ride the DC Circulator, suggestions for the two routes that have no proposed changes, and respondents’ preferences on possible capital improvements. To comply with DDOT’s Title VI plan, the survey asked demographic questions regarding primary language, race, and household income.

Most questions in the survey were optional. The only required questions were:

- Do you currently ride the DC Circulator?
- (If the respondent answered No to the above) You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?
- Do you want to comment on any of the existing DC Circulator routes and their proposed changes?
- (If the respondent answered Yes to the above) On which route(s) do you want to give feedback?

Text responses were also required if the respondent picked “other” on the list of proposed route options.

The results are presented in Sections 2.0 through 6.0. Discussion of the results is in Section 7.0. The full text of the survey form is attached in Section 8.0.

1.2 Phase III Survey

DDOT developed another survey to gauge riders’ and non-riders’ opinions toward specific route recommendations. Survey takers who answered that they did not currently ride the DC Circulator were asked the reason why not.
This second survey was available online and on paper during the public outreach period from September 14 to October 13, 2017. Paper surveys were available on the buses, and respondents could leave completed surveys in bags on the buses or could mail them directly to DDOT.

The survey was advertised on the DC Circulator and DDOT websites, through social media (Facebook, Twitter, and Instagram), to Advisory Neighborhood Commissions (ANCs), and through listservs, blogs, and local news. Comments were also collected via email, social media, and letters to the DDOT project manager directly from residents and neighborhood or business organizations. These comments were compiled between September 14 and October 13, the end of the TDP update public comment period.
2.0 Phase II Surveys by Language and Completion

In total, 2,674 survey respondents began a survey. The majority used the English survey (Figure 1), with only 29 survey respondents selecting the Spanish-language version.

Figure 1 | Count of Surveys by Language (n=2,674)

A survey is “completed” when the survey taker reaches the end of the survey. “Completed” does not mean all questions were answered, as most survey questions were not required. A total of 83 percent of survey takers reached the end of the survey (Figure 2), which is below the goal of 90 percent.

Figure 2 | Percentages of Surveys Completed (n=2,674)
3.0 Rider Status in Phase II

Of all the respondents, 1,872 respondents, or 71 percent, said they currently ride the DC Circulator (Figure 3). The remaining 748 respondents marked that they are not current riders of the DC Circulator.

Figure 3 | Do you currently ride the DC Circulator? (n=2,620)

3.1 Reasons for Not Riding Circulator

When respondents marked that they do not currently ride the DC Circulator, they were asked “What is the main reason you do not ride the DC Circulator?” Most respondents, 610, marked the DC Circulator does not provide service where they need it (Figure 4), and another 126 respondents said they use other modes of transportation instead.

Figure 4 | You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator? (n=744)
3.1.1. Doesn’t Provide Service Where Needed

Respondents that chose “doesn’t provide service where I need it” were asked what destinations DC Circulator should serve in the future. Respondents were provided an open comment box with a 1000-character maximum. Of the 570 respondents that answered this question, 476, or 84 percent, mentioned Southwest or the Waterfront (Figure 5). Another 35 respondents requested a route that is a proposed route in the TDP; 13 respondents mentioned the Shaw, Howard University, or U Street neighborhoods; and 11 mentioned a destination that is already served by the DC Circulator.

Figure 5 | You answered that the DC Circulator doesn't provide service where you need it. What destinations would you like DC Circulator to serve in the future? (n=570)
3.1.2. Use Other Modes

Respondents that chose “I use other forms of transportation” were asked what forms of transportation they use instead. Respondents could choose multiple options. Of the 297 respondents, 64 marked walk, 61 marked Metrorail or commuter rail, and 53 marked taxi or rideshare (Figure 6).

Figure 6 | You answered that you use other forms of transportation instead of the DC Circulator. Please select all forms of transportation you use instead. (n=297)
3.1.3. Late or Doesn’t Come at All

Respondents that chose “I’ve experienced buses coming late or not at all” were asked what forms of transportation they use instead. Respondents could choose multiple options. Three respondents marked Metrorail or commuter rail, and two marked taxi or rideshare (Figure 7).

Figure 7 | When the bus is late or does not come at all, what other mode of transportation do you use instead? Please select all that apply. (n=8)
4.0 Phase II Route Options

Regardless whether they marked that they do or do not currently ride the DC Circulator, all survey takers were asked if they wanted to comment on any existing routes and their proposed changes. A total of 2,033 survey respondents marked that they wanted to comment on the routes. They were then asked which routes they would like to comment on, and were directed to respond to only the routes they chose. This allowed for a faster survey for the survey respondents.

4.1. Dupont Circle – Georgetown – Rosslyn (RS-DP)

DDOT proposed changing the existing Dupont Circle to Rosslyn route by adding an extension from Rosslyn to U Street. A total of 316 respondents, or 84 percent, selected they preferred the Modified Route from Rosslyn to U Street (Table 1). The Modified Route was preferred by both current riders and non-riders. 16 respondents chose “other,” which required them to write a comment (Figure 8). Eight respondents gave comments about re-aligning the Modified Route to avoid either passenger car or pedestrian traffic.

Table 1 | RS-DP Results by Rider Status and Preferred Route Option (n=375)

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<td>Current Route</td>
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<tr>
<td>Yes</td>
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</tr>
<tr>
<td>No Response</td>
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<tr>
<td>Total</td>
<td>39</td>
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</table>

Figure 8 | Text Responses to Other Preferred Route for RS-DP (n=17)
4.2. Georgetown – Union Station (GT-US)

DDOT proposed changing the existing Georgetown - Union Station route by removing a segment on Wisconsin Avenue NW and the stop at the Union Station garage. Two-thirds of respondents, or 479, answered that they preferred the current route from 35th Street NW to the Union Station garage (Table 2). Another 24 percent selected the Modified Route from M Street NW to Columbus Circle.

As seen in Figure 9, 70 respondents chose “other,” which required them to write a comment. Of those, 40 respondents suggested extending the Current Route, with 39 requesting the route extend farther up Wisconsin Avenue NW toward the National Cathedral. These comments are likely influenced by the 2014 TDP Update, which included this as a possible future extension.

Table 2 | GT-US Results by Rider Status and Preferred Route Option (n=727)

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<tr>
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<td>Current Route</td>
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<tr>
<td>No Response</td>
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<tr>
<td>Total</td>
<td>479</td>
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Figure 9 | Text Responses to Other Preferred Route for GT-US (n=70)
4.3. National Mall (NM)

DDOT did not propose any changes to the National Mall route in the TDP survey, but supplied a comment box with a 1000-character maximum for any suggestions to change the route in the future. As seen in Figure 10, 81 respondents commented on the National Mall route, with 29 commenting on operational aspects of the route, like extending the hours of service, and 28 suggesting an extension to the existing route, such as extending it to the Southwest Waterfront. Another 13 comments were unrelated to the National Mall route or were general complements about the route or system.

Figure 10 | Text Responses in NM Comment Box (n=81)
4.4. Potomac Avenue Metro – Skyland via Barracks Row (PS)

DDOT proposed two route modifications for the Potomac Avenue – Skyland line. Modified Route A would remove the Potomac Avenue Metrorail station and instead connect to Union Station. Modified Route B would connect Union Station and Congress Heights, removing both Potomac Avenue and Skyland. As seen in Table 3, 89 respondents, or 58 percent, preferred the Union Station to Congress Heights route.

Thirteen respondents chose “other,” which required them to write a comment. Five respondents wrote they wanted a combination of proposed routes, four respondents suggested a re-alignment to a proposed route, and three wrote comments that were unrelated to the Potomac Avenue Metro – Skyland via Barracks Row route (Figure 11).

Table 3 | PS Results by Rider Status and Preferred Route Option (n=154)

<table>
<thead>
<tr>
<th>Do you currently ride this route?</th>
<th>Which route option do you prefer?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Route</td>
</tr>
<tr>
<td>Yes</td>
<td>10</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>No Response</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
</tr>
</tbody>
</table>

Figure 11 | Text Responses to Other Preferred Route for PS (n=13)
4.5. Union Station – Navy Yard Metro (US-NY)

DDOT proposed two route modifications for the Union Station – Navy Yard Metro route. Modified Route A would re-align the route to travel on 4th and 6th Streets NE instead of 1st Street NE to avoid traffic near the Capitol building. Modified Route B would connect Eastern Market and L’Enfant Plaza Metrorail stations via M Street, removing both Union Station from the route. As seen in Table 4, 710 respondents, or 80 percent, preferred the Eastern Market to L’Enfant Plaza route.

Another 62 respondents chose “other,” which required them to write a comment. Of those, 25 respondents suggested a combination of proposed routes, with most comments asking to connection Union Station and L’Enfant Plaza (Figure 12). Another 11 respondents asked for an extension to a proposed route, and 8 respondents described a route that aligned with Modified Route B.

Table 4 | US-NY Results by Rider Status and Preferred Route Option (n=886)

<table>
<thead>
<tr>
<th>Do you currently ride this route?</th>
<th>Which route option do you prefer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Route</td>
<td>Modified Route A</td>
</tr>
<tr>
<td>Yes</td>
<td>35</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
</tr>
</tbody>
</table>

Figure 12 | Text Responses to Other Preferred Route for US-NY (n=62)
4.6. **Woodley Park – Adams Morgan – McPherson Square Metro (WP-AM)**

DDOT did not propose any changes to the Woodley Park – Adams Morgan – McPherson Square Metro route in the TDP survey, but supplied a comment box with a 1000-character maximum for any suggestions to change the route in the future. As seen in Figure 13, 71 respondents commented on the Woodley Park – Adams Morgan – McPherson Square Metro route, with 28 commenting on operational aspects of the route, such as adding stops or improving the 10-minute headway, and 14 suggesting an extension to the existing route. Another 12 comments asked for the route to stay as is.

**Figure 13 | Text Responses in WP-AM Comment Box (n=71)**

![Figure 13: Text Responses in WP-AM Comment Box](image-url)
5.0 Phase II Questions about Capital Improvements

5.1 Ranking of Possible Capital Improvements

The survey asked respondents to rank four possible capital improvements. 6,552 votes were cast (Table 5). Points were assigned to each category based on the ranking (Table 6). Next-generation fare payment received the highest score with 5,005 points. The three other options were within 400 points of each other (Figure 14).

Table 5 | Raw Votes for Capital Improvements (n=6,552)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Off-board payment</th>
<th>Next-generation fare payment</th>
<th>Rear door boarding</th>
<th>On-board Wi-Fi</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>347</td>
<td>690</td>
<td>381</td>
<td>453</td>
</tr>
<tr>
<td>2</td>
<td>393</td>
<td>465</td>
<td>413</td>
<td>383</td>
</tr>
<tr>
<td>3</td>
<td>407</td>
<td>324</td>
<td>450</td>
<td>331</td>
</tr>
<tr>
<td>4</td>
<td>384</td>
<td>202</td>
<td>387</td>
<td>542</td>
</tr>
</tbody>
</table>

Table 6 | Points System for Ranked Capital Improvements

<table>
<thead>
<tr>
<th>Rank</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 14 | Weighted Votes for Capital Improvements
5.2. Open-Ended Capital Improvements Question

The survey also provided a 500-character maximum comment box for other suggestions for “physical or capital improvements.” The word “physical” was added to the question to prompt the respondent to provide comments related to capital improvements instead of operations. Despite this phrasing, 57 percent of comments were related to operations (Figure 15).

Figure 15 | Type of Responses to Capital Question (n=583)
5.2.1. Comments Regarding Capital Improvements

Out of the 249 responses about capital improvements, 96 respondents mentioned buses (Figure 16). Comments in this section varied from generally buying new buses to choosing buses with more forward-facing and comfortable seats. 69 respondents had no opinion on new capital improvements. Another 20 respondents mentioned improvements to bus stops, including shelters, and 20 respondents requested more real-time passenger information at bus stops.

Figure 16 | Capital Responses in Capital Comment Box (n=249)
5.2.2. Comments Regarding Operations

Out of 334 responses about operations, 154 comments mentioned other routes (Figure 17). Many comments mentioned bringing service to Southwest DC or preserving service on Wisconsin Avenue NW. These comments have been reflected in other areas of the survey analysis. Of the comments, 39 respondents asked for improvements to on-time performance or changing the schedule and 29 respondents mentioned improving a technological aspect of the service, such as improving the location feed for buses, fixing the Next Ride real-time arrival plug-in on the DC Circulator website, or developing an app to show the estimated arrival times.

Figure 17 | Operations Responses in Capital Comment Box (n=334)
6.0 Phase II Demographics

To comply with DDOT’s Title VI plan, survey respondents were asked three demographic questions:

1. What is your primary language used at home?
2. What is your race/ethnicity?
3. About what is the total monthly income for yourself and all members of your immediate family living in your house?

The survey stated that all questions were optional.

6.1 Primary Language Used at Home

When asked their primary language used at home, respondents could choose from English, Spanish, American Sign Language, Amharic, French, Chinese, Tagalog, Vietnamese, or Other. The majority, 2,018 out of 2,097 respondents, or 96 percent, chose English as their primary language used at home. Out of the remaining 4 percent, 35 respondents marked Spanish, and 15 respondents marked Other (Figure 18). While not required, 14 respondents wrote their other primary language (Table 7). Compared to the 2016 Customer Survey (Table 8), this is a significant increase in the number of respondents who marked their primary language as English, and a decrease in the number of respondents who marked Spanish.

Figure 18 | Count of Primary Languages excluding English (n=65)
Table 7 | Count of “Other” Primary Languages Used at Home (n=14)

<table>
<thead>
<tr>
<th>Language</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindi</td>
<td>2</td>
</tr>
<tr>
<td>Multiple</td>
<td>2</td>
</tr>
<tr>
<td>Russian</td>
<td>2</td>
</tr>
<tr>
<td>Arabic</td>
<td>1</td>
</tr>
<tr>
<td>Bosnian</td>
<td>1</td>
</tr>
<tr>
<td>Italian</td>
<td>1</td>
</tr>
<tr>
<td>Kannada</td>
<td>1</td>
</tr>
<tr>
<td>Korean</td>
<td>1</td>
</tr>
<tr>
<td>Serbian</td>
<td>1</td>
</tr>
<tr>
<td>Thai</td>
<td>1</td>
</tr>
<tr>
<td>Urdu</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 8 | Comparison of Primary Language Responses between DC Circulator Surveys

<table>
<thead>
<tr>
<th>Language</th>
<th>2016 Customer Survey (n=1,234)</th>
<th>2017 TDP Update Survey (n=1,762)</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>84%</td>
<td>96%</td>
</tr>
<tr>
<td>Spanish</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td>Amharic</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>French</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Chinese</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Tagalog</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>N/A</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>
6.2. Race or Ethnicity

When asked their race or ethnicity, 1,025 respondents, or 68 percent, marked their race as White. Another 275 respondents, or 16 percent, marked their race as Black or African-American (Figure 19). Compared to the 2016 Customer Survey (Table 9), this is a significant increase in the number of respondents who identify as White.

Figure 19 | Count of Race/Ethnicity (n=1,762)

Table 9 | Comparison of Race/Ethnicity Responses between DC Circulator Surveys

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2016 Customer Survey (n=1,198)</th>
<th>2017 TDP Update Survey (n=1,762)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>31%</td>
<td>68%</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>44%</td>
<td>16%</td>
</tr>
<tr>
<td>Asian</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Native Hawaiian or other Pacific Islander</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

DC Circulator 2017 TDP Update

Appendix B: Survey Results          December 2017
6.3. Monthly Household Income

A total of 566 respondents, or 35 percent, marked their monthly household income as over $8,000. The remaining 65 percent was distributed between the other seven income definitions. Compared to the 2016 Customer Survey (Table 10), this is a significant increase in the number of respondents who report a monthly household income over $8,000, which is equivalent to over $96,000 annually.

Figure 20 | Count of Monthly Household Income (n=1,627)

<table>
<thead>
<tr>
<th>Monthly Household Income</th>
<th>2016 Customer Survey (n=1,109)</th>
<th>2017 TDP Update Survey (n=1,627)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $2,000</td>
<td>19%</td>
<td>5%</td>
</tr>
<tr>
<td>Between $2,000-$2,999</td>
<td>17%</td>
<td>8%</td>
</tr>
<tr>
<td>Between $3,000-$3,999</td>
<td>17%</td>
<td>11%</td>
</tr>
<tr>
<td>Between $4,000-$4,999</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Between $5,000-$5,999</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Between $6,000-$6,999</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>Between $7,000-$7,999</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Over $8,000</td>
<td>13%</td>
<td>35%</td>
</tr>
</tbody>
</table>
7.0 Discussion of Results from Phase II Survey

As noted in Section 6.0 (Phase II Demographics), the results of the demographic questions are significantly different than the results of the DC Circulator 2016 Customer Survey. Respondents to these questions in the TDP survey were more likely to speak English, be white, and earn more than $8,000 a month than the respondents in the DC Circulator 2016 Customer Survey. This may be due to respondents taking the survey to support the US-NY realignment to the Southwest Waterfront,¹ support the RS-DP extension to U Street, or to support keeping the existing Wisconsin Avenue segment of the GT-US route. The strong response to these three proposals is seen in answers to a question about where the route does not run (3.1.1 Doesn’t Provide Service Where Needed) and in responses to proposed route changes for RS-DP (4.1), GT-US (4.2), and US-NY (4.5). Neighborhood newspaper articles, listserv discussions, and ANC meetings were likely the impetus for these strong responses.

The differing demographics of respondents were acknowledged and taken into account when considering these proposals developing draft recommendations. Prior to changes in service of this magnitude, DDOT will need to undertake an analysis of potential impact on populations protected under Title VI of the Civil Rights Act of 1964.

¹ The area around the Southwest Waterfront section of the proposed US-NY route is 60 percent white and 45 percent of residents have an income above $100,000.
8.0 2017 DC Circulator TDP Phase II Survey Text

Questions marked with an asterisk (*) were required.

1) Do you currently ride the DC Circulator?*

( ) Yes
( ) No

Page entry logic: This page will show when: Question “Do you currently ride the DC Circulator?” #1 is one of the following answers (“No”)

2) You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?*

( ) Doesn’t provide service where I need it
( ) I’ve experienced issues with buses coming late or not at all
( ) Poor condition of buses and/or no air conditioning
( ) I use other forms of transportation

Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“Doesn’t provide service where I need it”)

3) You answered that the DC Circulator doesn’t provide service where you need it. What destinations would you like DC Circulator to serve in the future?

Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“I’ve experienced issues with buses coming late or not at all”)

4) You answered that you experienced issues with buses coming late or not at all. On which route have you experienced this and how often has this happened?
Appendix B: Survey Results

5) When the bus is late or does not come at all, what other mode of transportation do you use instead? Please select all that apply.

[ ] Local bus/commuter bus
[ ] Metrorail/commuter rail
[ ] Bikeshare
[ ] Personal bicycle
[ ] Walk
[ ] Personal car
[ ] Carshare (Enterprise, Car2Go, Zipcar, etc.)
[ ] Carpool or Vanpool
[ ] Taxi/Rideshare (Taxi, Uber, Lyft, etc.)

Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“Poor condition of buses and/or no air conditioning”)

6) You answered that you do not ride because of the poor condition of buses or no air conditioning is available. Could you please provide more details about the issues you have encountered?

Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“I use other forms of transportation”)

7) You answered that you use other forms of transportation instead of the DC Circulator. Please select all forms of transportation you use instead:

[ ] Local bus/commuter bus
[ ] Metrorail/commuter rail
[ ] Bikeshare
[ ] Personal bicycle
[ ] Walk
[ ] Personal car
[ ] Carshare (Enterprise, Car2Go, Zipcar, etc.)
[ ] Carpool or Vanpool
[ ] Taxi/Rideshare (Taxi, Uber, Lyft, etc.)

DC Circulator 2017 TDP Update

Appendix B: Survey Results

December 2017
8) Do you want to comment on any of the existing DC Circulator routes and their proposed changes?*

( ) Yes
( ) No

**Page entry logic:** This page will show when: Question “Do you want to comment on any of the existing DC Circulator routes and their proposed changes?” #8 is one of the following answers (“Yes”)

9) On which route(s) do you want to give feedback?*

[ ] Dupont Circle – Georgetown – Rosslyn
[ ] Georgetown – Union Station
[ ] National Mall
[ ] Potomac Ave – Skyland via Barracks Row
[ ] Union Station – Navy Yard
[ ] Woodley Park – Adams Morgan – McPherson Square

**Page entry logic:** This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers (“Dupont Circle – Georgetown – Rosslyn”)

Dupont Circle – Georgetown – Rosslyn

10) Do you currently ride the Dupont Circle – Georgetown – Rosslyn route?

( ) Yes
( ) No

11) Which route option do you prefer?

( ) Current Route: Dupont Circle to Rosslyn
( ) Modified Route: U Street to Rosslyn
( ) Other (required text box): ____________________________________________________ *

**Page entry logic:** This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers (“Georgetown – Union Station”)

Georgetown – Union Station

12) Do you currently ride the Georgetown – Union Station route?

( ) Yes

**DC Circulator 2017 TDP Update**
13) Which route option do you prefer?

( ) Current Route: Wisconsin Avenue to Union Station Parking Garage
( ) Modified Route: M Street NW to Columbus Circle (in front of Union Station)
( ) Other (required text box): ____________________________________________ *

Page entry logic: This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers (“National Mall”)

National Mall

14) We are currently not proposing any changes to the National Mall route, but we would love to hear any suggestions for us to consider in the future.

Page entry logic: This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers (“Potomac Ave – Skyland via Barracks Row”)

Potomac Ave – Skyland via Barracks Row

15) Do you currently ride the Potomac Ave – Skyland via Barracks Row route?

( ) Yes
( ) No

16) Which route option do you prefer?

( ) Current Route: Potomac Avenue Metro to Skyland
( ) Modified Route A: Union Station to Skyland
( ) Modified Route B: Union Station to Congress Heights Metro
( ) Other: ____________________________________________________________ *

Page entry logic: This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers (“Union Station – Navy Yard”)

Union Station – Navy Yard

17) Do you currently ride the Union Station – Navy Yard route?
Which route option do you prefer?

( ) Yes
( ) No

Which route option do you prefer?

( ) Current Route: Union Station to Navy Yard via First Street NE
( ) Modified Route A: Union Station to Navy Yard via 4th and 6th Streets NE
( ) Modified Route B: L’Enfant Plaza to Eastern Market
( ) Other: ________________________________________________.*

Page entry logic: This page will show when: Question “On which route(s) do you want to give
feedback?” #9 is one of the following answers (“Woodley Park – Adams Morgan – McPherson Square”)

Woodley Park – Adams Morgan – McPherson Square

18) We are currently not proposing any changes to the Woodley Park – Adams Morgan – McPherson
Square route, but we would love to hear any suggestions for us to consider in the future.

Feedback on Capital Improvements

19) DC Circulator is investing in new buses, on-board technology like passenger information screens,
and new maintenance facilities. What other improvements should DDOT consider? Please rank the
most important as 1 and the least important as 4.

_______ Off-board payment

_______ Next-generation fare payment (using a credit card or phone)

_______ Rear-door boarding

_______ Onboard Wi-Fi

20) Do you have other suggestions for physical or capital improvements?
Demographics Questions and Raffle Entry

These questions are optional.

21) What is your primary language used at home?

( ) English
( ) American Sign Language
( ) Spanish
( ) French
( ) Amharic
( ) Chinese
( ) Vietnamese
( ) Tagalog
( ) Other: _________________________________________________

22) What is your race/ethnicity?

( ) American Indian or Alaska Native
( ) Asian
( ) Black or African-American
( ) Hispanic or Latino
( ) Native Hawaiian or other Pacific Islander
( ) White
( ) Other: _________________________________________________

23) About what is the total monthly income for yourself and all members of your immediate family living in your house?

( ) Less than $2,000
( ) Between $2,000-$2,999
( ) Between $3,000-$3,999
( ) Between $4,000-$4,999
( ) Between $5,000-$5,999
( ) Between $6,000-$6,999
( ) Between $7,000-$7,999
( ) Over $8,000

24) If you’d like to be entered to win a SmarTrip card worth $50, please provide your information below. This is optional.

First Name: _________________________________________________
Email Address: _________________________________________________
Phone Number: _________________________________________________

DC Circulator 2017 TDP Update
9.0 Phase III Surveys by Survey Type and Completion

Phase III had 70 percent fewer responses than Phase II. Out of the 824 responses in Phase III, over half of responses came from paper surveys (Figure 21). While a Spanish version of the online survey was available, no respondents used the Spanish version.

**Figure 21** | Number of Respondents by Phase and Survey Type

![Number of Respondents by Phase and Survey Type](image)

Out of the 384 online surveys, 325 surveys, or 85 percent, were “completed” (Figure 22). A survey is “completed” when the survey taker reaches the end of the survey. “Completed” does not mean all questions were answered, as most survey questions were not required.

**Figure 22** | Completion of Online Surveys (n = 384)

![Completion of Online Surveys](image)
10.0 Phase III Rider Status

In Phase III, 795 respondents, or 98 percent, marked they ride the DC Circulator (Figure 23). This is a 27 percentage point change from Phase II, in which 71 percent of respondents marked that they were DC Circulator riders. Respondents who responded via a paper survey were designated as current DC Circulator riders.

Figure 23 | Do you ride the DC Circulator?

![Chart showing ridership comparison between Phase II and Phase III](chart)

10.1. Reasons for Not Riding Circulator

Only 19 respondents, or 2 percent, marked that they do not ride the DC Circulator. These respondents were asked why they do not ride the DC Circulator and were given the following options:\(^2\)

- Doesn’t provide service where I need it
- I’ve experienced issues with buses coming late or not at all
- Poor condition of buses and/or no air conditioning
- I use other forms of transportation
- Other (write-in required)

As seen in Figure 24, 15 respondents said they do not ride the DC Circulator because the system does not provide service where they need it. One respondent marked they use other forms of transportation, and two respondents chose “other.” No respondents chose poor bus conditions or late buses.

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\(^2\) This question was only asked on the online survey.

DC Circulator 2017 TDP Update

Appendix B: Survey Results

December 2017
Figure 24 | You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator? (n = 18)

10.1.1. Doesn’t Provide Service Where Needed

When asked to provide destinations they would like DC Circulator to serve in the future, 10 respondents, or 53 percent, wrote in that they would like service to Southwest Waterfront (Figure 25). Three respondents either selected or wrote in locations that the DC Circulator already serves. The remaining destinations are mostly in Ward 5, with some destinations in Wards 6 and 7.

Figure 25 | You answered that the DC Circulator doesn’t provide service where you need it. What destinations would you like DC Circulator to serve in the future? (n = 19)

10.1.2. Use Other Modes

When asked what other modes of transportation they used instead, one respondent marked that they use rail, a personal car, rideshare, or walk instead of the DC Circulator.

DC Circulator 2017 TDP Update
11.0 Phase III Route Options

In this survey, respondents were asked how satisfied they were for each of the four proposed route changes. This section will analyze the results of these questions.

The survey also had space for open ended comments. Of the comments received, 15 were unrelated to the DC Circulator system, and 170 comments were unrelated to the 2017 TDP Update. There was a total of 345 open comments related to the 2017 TDP Update. As shown in Figure 26, 169 comments, or almost 50 percent, mentioned dissatisfaction with the changes to the US-NY route. Another 55 comments, or 16 percent, mentioned dissatisfaction with the changes to the GT-US route. The content of comments for each route are discussed below.

Figure 26 | Count of Open Comments by Sentiment (n = 345)
11.1.1. Georgetown – Union Station

In Phase III, DDOT proposed changing the existing Georgetown – Union Station route by removing the stop at the Union Station garage and consolidating several stops through the route. As shown in Figure 27, 204 respondents, or 65 percent, either marked they were “very satisfied” or “satisfied” with this route change, which is 37 percentage points over respondents who marked “very dissatisfied” or “dissatisfied.”

Figure 27 | How satisfied are you with the proposed route change? (GT-US) (n = 318)

As seen in Figure 26, 80 respondents left a comment related to GT-US. Out of the 55 comments not-in-favor of changes to GT-US, 29 comments, or 78 percent, mentioned dissatisfaction with stop consolidation (Figure 28).
Out of the comments that mentioned dissatisfaction with stop consolidation, the Wisconsin Avenue and R Street stop was mentioned the most, followed by Wisconsin Avenue and P Street (Table 11).

Table 11  |  Count of GT-US Consolidated Stops Mentioned (n = 38)

<table>
<thead>
<tr>
<th>Stop Mentioned</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin Avenue and R Street</td>
<td>9</td>
</tr>
<tr>
<td>Wisconsin Avenue and P Street</td>
<td>6</td>
</tr>
<tr>
<td>M Street and Thomas Jefferson Street</td>
<td>5</td>
</tr>
<tr>
<td>K Street and 11th Street</td>
<td>5</td>
</tr>
<tr>
<td>General – M Street</td>
<td>3</td>
</tr>
<tr>
<td>General – Wisconsin Avenue</td>
<td>3</td>
</tr>
<tr>
<td>General</td>
<td>2</td>
</tr>
<tr>
<td>K Street and 9th Street</td>
<td>2</td>
</tr>
<tr>
<td>Pennsylvania Avenue and 28th Street</td>
<td>1</td>
</tr>
<tr>
<td>New York Avenue and 9th Street</td>
<td>1</td>
</tr>
<tr>
<td>General – K Street</td>
<td>1</td>
</tr>
</tbody>
</table>
11.1.2. Potomac Avenue Metro – Skyland via Barracks Row

In Phase III, DDOT proposed removing the existing Potomac Avenue Metro – Skyland via Barracks Row route and replacing it with a route connecting Union Station and Congress Heights Metro. As shown in Figure 29, 119 respondents, or 51 percent, either marked they were “very satisfied” or “satisfied” with this route change, which is 17 percentage points over respondents who marked “very dissatisfied” or “dissatisfied.”

Figure 29 | How satisfied are you with the proposed route change? (PS) (n = 232)

As seen in Figure 26, 45 respondents left a comment related to PS. Out of the 37 comments not in favor of changes to PS, 13 comments, or 48 percent, mentioned dissatisfaction with their transit alternatives should the route change (Figure 30). Another 7 respondents, or 26 percent, commented that the route change would negatively affect commuters, and 5, or 19 percent, commented that the route change would negatively affect older adults and people with disabilities.
Figure 30 | Negative Comments by Category about PS (n = 27)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Transit Alternatives/Do Not Like Alternatives</td>
<td>48, 13</td>
</tr>
<tr>
<td>Will Affect Commuters</td>
<td>26, 7</td>
</tr>
<tr>
<td>Will Affect Older Adults or People with Disabilities</td>
<td>19, 5</td>
</tr>
<tr>
<td>Will Negatively Affect Operations</td>
<td>7, 2</td>
</tr>
</tbody>
</table>
11.1.3. Union Station – Navy Yard Metro

In Phase III, DDOT proposed removing the existing Union Station – Navy Yard Metro route and replacing it with a route connecting Eastern Market and L’Enfant Plaza via M Street. As seen in Figure 31, 198 respondents, or 51 percent, either marked they were “very dissatisfied” or “dissatisfied” with this route change, which is 14 percentage points over the number of respondents who marked “very satisfied” or “satisfied.”

Figure 31 | How satisfied are you with the proposed route change? (US-NY) (n = 392)

The results of this survey are the opposite of the results of the first survey. The change in sentiment is likely due to increased responses from residents and visitors to Capitol Hill, as well as commuters that travel to the U.S. Capitol complex.

As seen in Figure 32, 190 respondents left a comment related to US-NY. Out of the 169 comments not in favor of changes to US-NY, 63 comments, or 33 percent, mentioned dissatisfaction that the route would affect commuters. Another 62 respondents, or 33 percent, commented that they did not like their transit alternatives. There were 30 respondents, or 16 percent, who commented that the change would affect older adults or people with disabilities and 20 respondents, or 11 percent, who commented that the change would negatively affect the operation of the route.
Figure 32 | Negative Comments by Category about US-NY (n = 189)
11.1.4. Dupont Circle – Georgetown – Rosslyn

In Phase III, DDOT proposed extending the existing RS-DP to U Street NW. As seen in Figure 33, 202 respondents, or 78 percent, either marked they were “very satisfied” or “satisfied” with this route change, which is 66 percentage points over respondents who marked “very dissatisfied” or “dissatisfied.”

Figure 33 | How satisfied are you with the proposed route change? (RS-DP) (n = 260)
Appendix B: Survey Results

12.0 Phase III Demographics

As with the survey in Phase II, respondents were asked questions about their primary language, their race or ethnicity, and their household income, as required by DDOT’s Title VI policy. Overall, the respondents in Phase III were more likely to not speak English as their primary language, to be non-white, and to be low-income. It is likely that the increased diversity is due to distribution of paper surveys, reflecting the diversity of DC Circulator ridership.

12.1.1. Language

When asked their primary language used at home, respondents could choose from English, Spanish, American Sign Language, Amharic, French, Chinese, Tagalog, Vietnamese, or Other. In the Phase II survey, 96 percent of respondents marked they spoke English as their primary language. (Figure 34). In the Phase III survey, 90 percent of respondents marked they spoke English as their primary language, a decrease of 6 percentage points from the Phase II survey.

Figure 34 | What is your primary language used at home?

Respondents who marked their primary language was not English gave diverse responses (Figure 35). In both surveys, Spanish was the most likely language (44 percent in Phase II and 33 percent in Phase III), with Other following as the second option (19 percent in Phase II and 30 percent in Phase II).
12.1.2. Race or Ethnicity

Respondents in Phase III were more likely to be non-white (Figure 36). In Phase II, 68 percent marked their race in white, while in Phase III, only 48 percent marked their race as white. The percentage of respondents who marked they were Black/African American increased (16 percent in Phase II versus 31 percent in Phase III) and the distribution of other options was consistent between the two surveys.
12.1.3. Household Income

When asked about their total monthly income, respondents had a wide range of answers, with the most popular in both surveys being “Over $8,000” (Figure 37). In Phase III, respondents who chose “Less than $2,000” or “Between $2,000 and $2,999” increased from 5 to 14 percent and 8 to 15 percent, respectively. To make an easier comparison, annual income was determined, which is shown in Figure 38.

Figure 37 | About what is your total monthly income for yourself and all members of your immediate family living in your house?

Figure 38 shows the annual income of survey respondents, either below or above $50,000. An annual household income of $50,000 for a family of four is considered low income based on the average median income in the Washington, DC metropolitan area of $104,000. In Phase II, 75 percent of respondents made over $50,000, while in Phase III, only 60 percent of respondents made under $50,000.
12.1.1. Zip Code

Online respondents were asked for their home zip code at the end of the survey. This is not a question required by Title VI, and was instead asked to determine how many respondents were DC residents. This question was only included on the online version of the survey.

The majority of respondents were DC residents, with 65 percent providing a District zip code. Maryland residents made up 28 percent, and Virginia residents made up 13 percent. West Virginia, California, and Pennsylvania made up four percent of the respondents.

Figure 39 | Home Zip Code by State (n = 224)
Breaking down the District of Columbia zip codes into neighborhoods, the most frequent zip code given was 20003, associated with southern Capitol Hill and Navy Yard, with 23 mentions, or 16 percent (Table 12). Other neighborhoods with more than 10 percent of responses were H Street/northern Capitol Hill/Trinidad (20002), Adams Morgan/U Street (20009), Georgetown/Glover Park (20007), and Southwest Waterfront (20024).

Table 12 | Count of Responses by Home Zip Code (n = 145)

<table>
<thead>
<tr>
<th>Neighborhood (Home Zip Code)</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Capitol Hill/Navy Yard (20003)</td>
<td>23</td>
<td>16%</td>
</tr>
<tr>
<td>H Street/North Capitol Hill/Trinidad (20002)</td>
<td>20</td>
<td>14%</td>
</tr>
<tr>
<td>Adams Morgan/U Street (20009)</td>
<td>16</td>
<td>11%</td>
</tr>
<tr>
<td>Georgetown/Glover Park (20007)</td>
<td>15</td>
<td>10%</td>
</tr>
<tr>
<td>Southwest Waterfront (20024)</td>
<td>15</td>
<td>10%</td>
</tr>
<tr>
<td>Downtown/Mt. Vernon/Shaw (20001)</td>
<td>13</td>
<td>9%</td>
</tr>
<tr>
<td>Logan Circle (20005)</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Anacostia/Penn Branch/Hillcrest/Fairlawn (20020)</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Cleveland Park/Van Ness/Tenleytown (20008)</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Columbia Heights/Park View/Mt. Pleasant (20010)</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Foggy Bottom/West End (20037)</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>16th Street Heights/Petworth/Fort Totten (20011)</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Takoma/Shepard Park (20012)</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Tenleytown/Cathedral Heights/Palisades (20016)</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>US Department of Education (20202)³</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Dupont Circle/K Street (20036)</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Brookland/Michigan Park (20017)</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Brentwood/Langdon/Woodridge (20018)</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Congress Heights (20032)</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Catholic University (20064)</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>World Bank (20433)⁴</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

³ Not a home zip code.
⁴ Not a home zip code.

**DC Circulator 2017 TDP Update**
13.0 2017 DC Circulator TDP Phase III Survey Text

Questions marked with an asterisk (*) were required. Questions marked with a dagger (†) were only asked on the online version of the survey.

1) Do you currently ride the DC Circulator?* †

( ) Yes
( ) No

Page entry logic: This page will show when: Question “Do you currently ride the DC Circulator?” #1 is one of the following answers (“No”)

2) You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator? †

( ) Doesn’t provide service where I need it
( ) I’ve experienced issues with buses coming late or not at all
( ) Poor condition of buses and/or no air conditioning
( ) I use other forms of transportation
( ) Other – Write In (Required)*

Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“Doesn’t provide service where I need it”)

3) You answered that the DC Circulator doesn’t provide service where you need it. What destinations would you like DC Circulator to serve in the future?* †

[ ] 16th Street Heights
[ ] Arboretum
[ ] Anacostia
[ ] Benning
[ ] Bloomingdale
[ ] Brentwood
[ ] Brightwood
[ ] Brookland
[ ] Cardozo/Shaw
[ ] Cleveland Park
[ ] Deanwood

DC Circulator 2017 TDP Update

Appendix B: Survey Results

December 2017
Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“I’ve experienced issues with buses coming late or not at all”)

4) You answered that you experienced issues with buses coming late or not at all. On which route have you experienced this and how often has this happened?†

<table>
<thead>
<tr>
<th>Destination</th>
<th>1-2 Times</th>
<th>3-4 Times</th>
<th>5 or More Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgetown – Union Station</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Rosslyn – Georgetown – Dupont Circle</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Union Station – Navy Yard Metro</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Potomac Avenue – Skyland via Barracks Row</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>National Mall</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Woodley Park – Adams Morgan – McPherson Square</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>
5) When the bus is late or does not come at all, what other mode of transportation do you use instead? Please select all that apply. *†

[ ] Local bus/commuter bus
[ ] Metrorail/commuter rail
[ ] Bikeshare
[ ] Personal bicycle
[ ] Walk
[ ] Personal car
[ ] Carshare (Enterprise, Car2Go, Zipcar, etc.)
[ ] Carpool or Vanpool
[ ] Taxi/Rideshare (Taxi, Uber, Lyft, etc.)

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**Page entry logic:** This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“Poor condition of buses and/or no air conditioning”)

6) You answered that you do not ride because of the poor condition of buses or no air conditioning is available. How often and on which routes has this occurred?†

<table>
<thead>
<tr>
<th>Route</th>
<th>1-2 Times</th>
<th>3-4 Times</th>
<th>5 or More Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgetown – Union Station</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Rosslyn – Georgetown – Dupont Circle</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Union Station – Navy Yard Metro</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Potomac Avenue – Skyland via Barracks Row</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>National Mall</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
<tr>
<td>Woodley Park – Adams Morgan – McPherson Square</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

---

DC Circulator 2017 TDP Update

Appendix B: Survey Results

December 2017
Page entry logic: This page will show when: Question “You answered you do not currently ride the DC Circulator. What is the main reason you do not ride the DC Circulator?” #2 is one of the following answers (“I use other forms of transportation”)

7) You answered that you use other forms of transportation instead of the DC Circulator. Please select all forms of transportation you use instead:*†

- [ ] Local bus/commuter bus
- [ ] Metrorail/commuter rail
- [ ] Bikeshare
- [ ] Personal bicycle
- [ ] Walk
- [ ] Personal car
- [ ] Carshare (Enterprise, Car2Go, Zipcar, etc.)
- [ ] Carpool or Vanpool
- [ ] Taxi/Rideshare (Taxi, Uber, Lyft, etc.)

8) Do you want to comment on any of the existing DC Circulator routes and their proposed changes in the 2017 TDP?* †

( ) Yes
( ) No

Page entry logic: This page will show when: Question “Do you want to comment on any of the existing DC Circulator routes and their proposed changes?” #8 is one of the following answers (“Yes”)

9) On which route(s) do you want to give feedback?†

- [ ] Dupont Circle – Georgetown – Rosslyn
- [ ] Georgetown – Union Station
- [ ] Potomac Ave – Skyland via Barracks Row
- [ ] Union Station – Navy Yard

Page entry logic: This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers (“Georgetown – Union Station”)

Georgetown – Union Station Route Change

10) How satisfied are you with the proposed change to the Georgetown – Union Station route?
Appendix B: Survey Results

Potomac Avenue Metro – Skyland via Barracks Row Route Change

11) How satisfied are you with the proposed change to the Potomac Avenue Metro – Skyland via Barracks Row route?

Page entry logic: This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers ("Potomac Ave – Skyland via Barracks Row “)

Union Station – Navy Yard Metro Route Change

12) How satisfied are you with the proposed change to Union Station – Navy Yard Metro route?

Page entry logic: This page will show when: Question “On which route(s) do you want to give feedback?” #9 is one of the following answers ("Union Station – Navy Yard “)

Dupont Circle – Georgetown – Rosslyn Route Change

13) How satisfied are you with the proposed change to Dupont Circle – Georgetown – Rosslyn route?

General TDP Comments

14) Please provide any general comments about the Transit Development Plan Update below.

Optional Demographic Questions

15) What is your primary language used at home?

( ) English
( ) American Sign Language
( ) Spanish
( ) French
( ) Amharic
( ) Chinese
( ) Vietnamese
( ) Tagalog
( ) Other – Write In (Required)*

DC Circulator 2017 TDP Update
16) What is your race/ethnicity?
( ) American Indian or Alaska Native
( ) Asian
( ) Black or African American
( ) Hispanic or Latino
( ) Native Hawaiian or other Pacific Islander
( ) White
( ) Other – Write In (Required)*

17) About what is your total monthly income for yourself and all members of your immediate family living in your house?
( ) Less than $2,000
( ) Between $2,000-$2,999
( ) Between $3,000-$3,999
( ) Between $4,000-$4,999
( ) Between $5,000-$5,999
( ) Between $6,000-$6,999
( ) Between $7,000-$7,999
( ) Over $8,000

18) What is your home zip code?†