



Final Summary Report

February 2008



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1.0 Introduction to the 30s Line Study

Between June and December 2007, the Washington Metropolitan Transit Authority (WMATA), in partnership with the District Department of Transportation (DDOT), studied ways of improving transit service along Metrobus routes 30, 32, 34, 35, 36, and M6—collectively called the 30s Line. These existing routes are shown in Figure 3.1 on the following page.

The current 30s Line service runs from Friendship Heights Metro Station in Northwest along Wisconsin Avenue to Georgetown, and along Pennsylvania Avenue through Foggy Bottom and Downtown. Some buses terminate at the National Archives, while most continue along Pennsylvania Avenue (and Independence Avenue) to Potomac Avenue Metro Station. The 30 route terminates here, while the others continue over the Sousa Bridge. The line splits east of the Anacostia River, with the 32 route terminating at Southern Avenue Metro Station and the 34, 35, and 36 routes terminating at Naylor Road Metro Station. The M6 route was added to the study because its alignment is—along with the 30s routes—primarily on Pennsylvania Avenue. The M6 route is essentially a feeder service from Fairfax Village and other points east of the Anacostia River to Potomac Avenue Metro Station. Combined, the 30s Line has 277 bus stops.

The DC Circulator currently operates three routes in the central part of the city including a north-south route generally along 7th and 9th Streets NW from the Washington Convention Center area to the Southwest Waterfront; an east-west loop along Constitution and Independence Avenues serving the Smithsonian Museums, monuments, and other attractions near the National Mall; and a third route that connects Union Station and Georgetown along portions of Massachusetts Avenue, K Street NW, Pennsylvania Avenue, and Wisconsin Avenue as far north as Whitehaven Street NW. The DC Circulator connection between Union Station to Georgetown parallels a portion of the 30s Line Bus Routes between 15th Street NW in the downtown area and Whitehaven Street NW in the Glover Park area. The 30s Line Study was completed concurrently and in coordination with a route restructuring study for the DC Circulator that considered potential changes to the circulator route in the Georgetown and Glover Park area.

The 30s line has long suffered from continuing performance-related issues including schedule adherence, bus separation, detours, incident response, traffic congestion, and passenger crowding. In 2006, a proposed reconfiguration of the long line into two component parts was presented to the public at two public meetings. Significant push back was received from riders who did not believe that a route change would solve the performance issues and were concerned that required transfers would be disadvantageous. In response, WMATA partnered with DDOT to conduct a more comprehensive study of the 30s Line that included opportunities for public participation throughout the planning process to develop recommendations that would be widely supported by bus riders and the general public.

1.1 Project Purpose

The primary purpose of the study was to conduct a comprehensive review of methods for improving the performance of transit service along the Metrobus 30s Line, and developing an improvement strategy that includes service, operations, and customer information enhancements. The line was chosen for study by WMATA and DDOT for several reasons. Its average weekday ridership of 20,000 and average monthly ridership of nearly half a million make it the most heavily used line in the Metrobus system. The transit corridor is an important link to Downtown for residents in Southeast and along Wisconsin Avenue in Northwest; but because of the popularity of the system and heavy traffic along the alignments, the 30s Line often suffers from overcrowding, bus bunching, and delays.

Among the greatest challenges facing the 30s Line were:

- Improving the customer experience
- Updating services and operating plans to sustain good performance

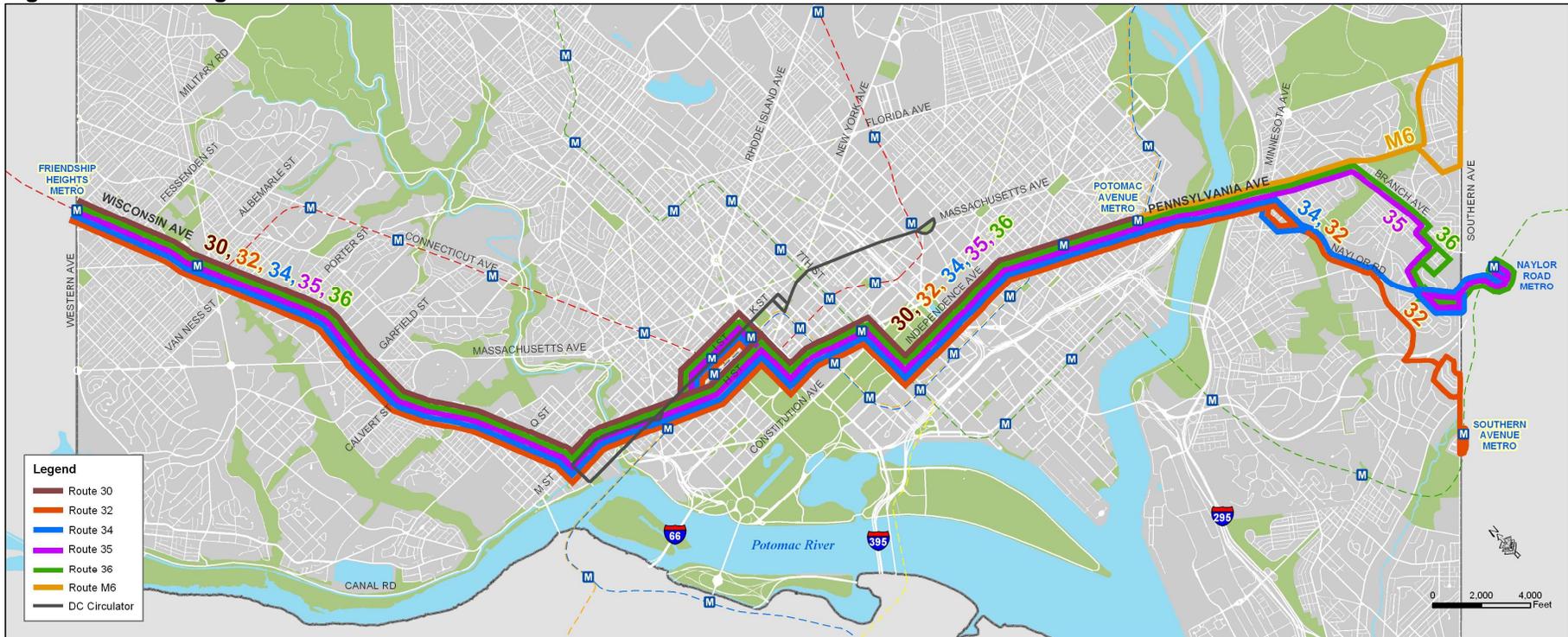
- Improving reliability and travel times
- Establishing a strategy for implementing recommendations
- Planning for future demand and new services to accommodate District initiatives

1.2 Planning Purpose

The project included conducting a coordinated planning effort to link implementation of the proposed service options and develop community support. This work consisted of:

- 1) Reviewing the existing 30s Line services, operations, and customer information and conducting a rider survey to identify deficiencies to be addressed by the study.
- 2) Conducting a community-based design charrette process to develop public and agency support for enhancing 30s Line services.
- 3) Recommending an integrated set of service, operations, and customer information strategies to respond to consumer needs, minimize costs, and enhance effectiveness and performance of the 30s Line.
- 4) Identifying related enhancements, budgets, and funding needs for:
 - Service plan
 - Vehicle types and uses
 - Bus stop/stations design
 - Service monitoring and management
 - Customer information
 - Fare payment strategies
 - Traffic management strategies
 - Runningway improvements
- 5) Developing a coordinated implementation timetable and strategy with DDOT.
- 6) Requesting funding and Compact-required approvals.
- 7) Implementing the service and enhancements in coordinated phases to meet project and District transportation deadlines and requirements.

Figure 1.1 – Existing 30s Line Routes



2.0 Public Outreach and Input

Public outreach was a significant part of the 30s Line study process. Opportunities for public participation included a rider survey, three sets of public meetings, a project website, and a project hotline.

2.1 Rider Survey

The study began with an 18-question rider survey, which was administered on Wednesday, June 27, 2007. Approximately 6,000 surveys (a portion of them in Spanish) were distributed on that day, and over the course of the next eight weeks, 1,595 were returned. In addition, an on-line version of the survey was available on the project website for three weeks in June and July.

The following are the most significant things the project team learned from the public about the 30s Line via the rider survey:

- The biggest problem facing the 30s Line is the frequency with which buses arrive, and more specifically the bunching of buses. The most common complaint among survey respondents by far was that buses come three or four at a time, and then not at all for a long period.
- Tied into the frequency/bunching issue is schedule adherence. Most respondents—even those who generally have a favorable view of the line overall—do not trust the accuracy of schedules.
- Bus crowding is another issue of concern for riders. Although most riders were able to find a seat on the day of the survey, many noted that because it was summer—when many Washingtonians are out of town and local schools are not in session—crowding was not as much a problem as it normally is during other seasons.
- Most respondents were not concerned with safety or security on the bus or at the stop where they boarded. However, more than a third said that they were somewhat or very concerned. In many cases, the threat level revealed by riders was high, but sometimes the threats to safety related in rider comments were, in fact, minor annoyances.
- Although a few respondents had issues with their driver, most riders rated bus operators highly in general.
- Likewise, the majority of riders were pleased with the condition, comfort, and cleanliness of buses and bus stops. An exception to this was with the issue of shelters and benches at bus stops; most felt that stops should feature better amenities. In general, however, riders expressed satisfaction with the buses and bus stops.
- Most riders did not transfer to or from the 30s Line. The minority who said they did tended to transfer to and from Metrorail lines rather than from other bus lines.
- Although the 30s Line received a fair amount of criticism from riders, when asked about the factors that impacted their trip on the day of the survey, the most popular answer was “no problems encountered.” Only three negative impacts—“congestion/long traffic lights”, “waited too long for bus to arrive”, and “bus was too crowded” were in double digits. All other impacts were cited by less than 10 percent of riders.

For complete details about the rider survey, please see *Metrobus 30s Line Study: Draft Final Results of Rider Survey, August 2007*.

2.2 First Set of Public Meetings: Problem Identification

Three sets of public meetings were conducted for the 30s Line study in 2007. The first two were in July, the second two in October, and the final two in December. The locations were selected to be convenient for residents of Northwest along Wisconsin Avenue and of Southeast along Pennsylvania Avenue—two areas along the 30s Line with significant residential populations. Approximately 25 people attended each of the Northwest meetings and approximately 35 people attended each of the Southeast meetings for a total of just under 200 participants.

The first two public meetings for this project were held on:

- Thursday, July 19, at Pennsylvania Avenue Baptist Church, at 3000 Pennsylvania Avenue SE, and
- Tuesday, July 24, at St. Columba's Episcopal Church at 4201 Albemarle Street NW.

Both meetings were from 6:00 pm to 8:30 pm. The meetings began with an hour-long open house in which participants could review display materials and speak individually with project staff. Following the open house was a 20-minute presentation, then an hour-long breakout session in which participants talked about their concerns and problems with the 30s Line. In the final portion of the meetings, breakout group members reported their results to the other groups.

The purpose of the first public meetings was three-fold:

- 1) To engage 30s Line riders in dialogue about challenges facing the line,
- 2) To hear rider concerns, identify issues, and set priorities for the study, and
- 3) To reveal the preliminary results of the rider survey conducted on June 27, 2007.

The project team gauged the issues that were of greatest importance to riders and used this information for setting standards for quantifiable service improvements, which were presented as options in the second set of meetings. For a summary of activities and outreach for the first two meetings, see *Metrobus 30s Line Study: Draft Summary of Public Meetings, July 2007*.

Visual materials available to meeting participants included:

- Meeting agenda
- 30s Line fact sheet
- Two-page newsletter
- Display boards
- Maps
- Preliminary survey results

Problems with the 30s Line most frequently identified by participants included:

- Bus bunching and schedule adherence. These were the most pressing issues by far at both meetings. Almost all participants, even those who otherwise had few issues with 30s Line service, reported problems with schedule adherence and having to wait a long time only to have several buses arrive at once.
- Bus crowding was reported as an important issue at both meetings.
- Many participants—primarily in Northwest DC, but also in Southeast—noted their desire for express service, saying that the routes have too many stops and that travel times need to be decreased. Having bus-only lanes was cited several times as something 30s Line riders would like to see as a means of defeating traffic congestion; they were adept at pointing out specific chokepoints and other locations of double parking, detours, etc.

- Security and safety were important issues at the Southeast meeting, and to a lesser degree at the Northwest meeting.
- Participants at the Northwest meeting were less concerned about safety and more so about information at stops, shelters and benches, fare collection, and other amenities.
- Bus operators generally were not a target of criticism among participants, though participants did say that drivers need more customer service training, better knowledge of major destinations and landmarks along 30s Line routes, greater awareness of what's happening on their buses, and attentiveness to elderly and disabled riders.
- Participants offered several ideas they would like to see implemented for speeding up service, such as better fare collection methods, signal priority and queue jumping, multiple doors for exiting, and stand-by buses for times when the line is busiest.
- A controversial issue at public meetings in 2006 was the potential splitting up of routes, forcing some riders to transfer downtown. This subject was revisited several times, with some saying that the idea will cause a drop in ridership and others saying that splitting the lines is crucial for improving efficiency and travel times.

2.3 Second Set of Public Meetings: Potential Solutions

The second two public meetings were on:

- Thursday, October 18, at St. Columba's Episcopal Church, at 4201 Albemarle Street NW, and
- Wednesday, October 24, at St. Francis Xavier Catholic School at 2700 O Street SE.

Like the July meetings, the structure of the second two meetings was the same, except that the October meetings featured a half-hour open house instead of an hour. The 20-minute presentation offered an overview of the project, a review of what the project team learned from participants at the July meetings, and an introduction to the improvement concepts that were developed based in part on those meetings.

In the hour-long breakout session, participants discussed the merits of the improvement concepts and evaluated which of the options were most important or agreeable to them. This was done primarily by participants rating the concept elements on a scale of 1 (not important) to 5 (very important). The results of this evaluation are included in *Metrobus 30s Line Study: Draft Summary of Public Meetings, October 2007*.

Visual materials available to meeting participants included:

- Meeting agenda
- Two-page newsletter
- Display boards
- Maps
- Evaluation and comment sheets
- Diagrams of bulb-outs, queue jumpers, and reserved transit lanes
- Matrix delineating which improvement concepts addressed specific issues identified by participants at the previous set of public meetings

The following are the most frequently heard comments from participants about the improvement concepts:

- The ability of supervisors to add buses will help reduce delays and bunching.

- Holding up buses for several minutes would be acceptable to many riders if it will improve reliability; however, most are vehemently against turning around buses, requiring riders to alight and board another bus.
- Increasing the enforcement of parking restrictions would be welcome.
- Communication between bus operators and supervisors is important; added customer service training and better knowledge of routes for operators would help as well.
- Reserved bus lanes and signal priority would be effective in improving travel speeds.
- Bring Georgia Avenue-type service (Metro Extra) to the 30s Line. Limited-stop service may be a hardship for the elderly and disabled, however, so some local service must stay in place.
- Some participants felt that splitting the 30s Line would help, but overlap downtown is essential, transfers must be coordinated, and one all-the-way route must be maintained. Although splitting the line would benefit many riders, the move would inconvenience some riders who live in Southeast. As a result, some Southeast participants remain adamantly opposed to splitting the line.
- Headway-based buses may be an improvement over schedules.

2.4 Third Set of Public Meetings: Recommended Improvements

The third and final set of public meetings for this phase of the 30s Line study were on:

- Thursday, December 6, at St. Columba's Episcopal Church, 4201 Albemarle Street NW, and
- Monday, December 10, at St. Francis Xavier Catholic Church, at 2800 Pennsylvania Avenue SE.

The format for these two meetings was the same as the October meetings. The purpose of the December meetings was to present the study's recommendations and listen to participant feedback about them.

Visual materials available to meeting participants included:

- Meeting agenda
- Two-page newsletter
- Display boards
- Maps
- Guiding principles of the study and frequently asked questions

The following are the most frequently heard comments from participants about the improvement concepts:

- Participants at both meetings appreciated the main idea of the recommendations, which is to preserve two end-to-end, local routes while adding extra services such as limited-stop routes. Residents of Southeast were particularly happy with the preservation of the 32 and 36, and residents of Northwest were enthusiastic about the limited-stop 37 bypass around Georgetown.
- Several participants suggested that the study focused too much on weekday commuters and not enough on off-peak riders. Some preferred that the 37 run in off-peak and weekend hours as well as during peak weekday hours.

- Some preferred that the M6 have the same western terminus as the proposed M5—Eastern Market—rather than Potomac Avenue.
- Participants stressed the importance of coordinating operational improvements with DDOT, and coordinating safety/security improvements with Metro police.
- Several riders asked that the pace of shelter improvements and other stop amenities be increased. There was some discontent about the slow rate of adding NextBus information to stops.
- It was recommended that future development (e.g., at Friendship Heights) be a factor when determining 30s Line service changes.
- A few of the Southeast participants requested that the limited-stop services stop at every stop location east of the Anacostia River to pick up and drop off residents of Southeast.

For a full account of the final two meetings, see *Metrobus 30s Line Study: Draft Summary of Public Meetings, December 2007*.

2.5 Project Website and Hotline

To maintain contact with those interested in the progress of the 30s Line study, the project team created a website, www.metrobus-30s-dc.com. The website, which remains active, features an overview of the project, maps, links, contacts, and publications and reports related to the 30s Line study. The site has also listed upcoming public meetings and featured an on-line version of the rider survey. A Spanish page is included on the site.

In addition, a hotline was established for those wishing to speak with project staff about the study. During the last half of 2007, nine persons called the hotline to speak about subjects such as service improvements, crowding on buses, bus operator courtesy, fare payment methods, and the project mailing list and website. The number, which remains active, is 703-682-5060.

3.0 Recommendations

This chapter describes the recommended improvements for the 30s Line.

3.1 Guiding Principles

The 30 Line is part of a caring community of residential and commercial neighborhoods valuing: diversity; inclusiveness; and, connectivity with each other; that are important to the daily lives of many residents of the District of Columbia and the region. The 30s Line serves a community that:

- Is economically vibrant with expectations for continuing growth.
- Includes destinations of national, regional and local importance.
- Has a long tradition of transit service alignment, stops, and connections.
- Represents multiple travel markets inclusive of major activity centers, mixed use corridors and residential neighborhoods.
- Incorporates major District initiatives to accommodate future growth and enhance quality of life.
- Relies on bus and rail transit as a major component of day-to-day life style.

Based on the results of the review of the existing services, bus rider survey, and public comments, the following overarching principles were identified to guide the development of recommended improvements.

Overarching Principles

- First, do no harm. Disfranchisement of existing rider access or mobility is not an acceptable trade-off to achieve other project objectives.
- Serve market purposes; ensure that the plan meets the diversity of travel needs in the Wisconsin and Pennsylvania corridors.
- Avoid inequity; all areas along the 30s Line merit quality services.
- Consider the needs of seniors, the disabled and those who do not drive in recommending service and operations strategies.
- Recommendations must be sustainable and take into account funding constraints.
- New services, facilities and staffing will take time to implement; changes/enhancements can be phased in gradually.
- Do something!

More specific principles were identified to guide the development of improvements to 30s Line service and operations.

Principles of Service

- There should be a basic level of service to anywhere in the corridor that transit service is provided.
- Preserve connectivity between the SE and NW quadrants of the District.
- Retain a high frequency “trunk” service along the 30s Line.
- New service types should be in addition to retaining some all-stops local service.
- Avoid transfers; but where necessary, provide coordination and accommodation to minimize inconvenience and travel time.
- Match service type, frequency and capacity to demand based on route segment, trip purposes, travel markets time of day, direction of travel, day of week and origins and destinations to preserve effectiveness and efficiency.

Principles of Operations

- Active service management and supervision is essential to success of service and technology should be used to improve ability to monitor and direct buses.
- Increased enforcement of parking regulations is essential to improving running times and bus stop access.
- Optimize route and schedule performance of “trunk” portion of 30s Line.
- Commit lanes of traffic and street operations to sustained transit-first principles to serve needs of buses in congested areas.
- Communication is important among bus drivers, supervisors and passengers, especially when there are detours or buses are being held to avoid bunching.
- Consider access needs of seniors and disabled in determining locations and number of bus stops.
- Improve communication to passengers and drivers of service adjustments relating to detours and events.

3.2 Service

Service improvements to the 30s Line include several significant changes from the existing services. The existing 34 and 35 routes will be replaced by new services. These include the addition of two limited-stop services—Route 37 and 39—and two new Shuttle Services—the 31 and M5. The existing 32, 36, and M6 routes would be kept intact. Figure 3.1 shows the recommended route structure for the 30s Line. The peak and off-peak headways by segment for the recommended system are also shown in the figure.

The following summarizes the proposed changes in 30s Line service.

Routes 32 and 36: Maintain Local Bus Routes

- **Purpose:** These routes maintain regular local bus service along the existing Routes 32 and 36 with the capability of providing a one-seat ride from Southern Avenue and Naylor Road Metro Stations to Friendship Heights.
- **Route Description:** As shown in Figure 3.2, Route 32 continues to provide service from Southern Avenue Metro Station to Friendship Heights along portions of Southern Avenue SE, 22nd Street SE, 23rd Street SE, 25th Street SE, Savannah Street SE, Alabama Avenue SE, Naylor Road SE, Pennsylvania Avenue SE and NW, Independence Avenue SE and SW, 7th Street NW, 15th Street NW, H Street NW, I Street NW, M Street NW, and Wisconsin Avenue NW. Route 36 shares the same routing as Route 32 west of L'Enfant Square. East of L'Enfant Square, Route 36 extends along portions of Pennsylvania Avenue SE, Branch Avenue SE, 33rd Street SE, Erie Street SE, 30th Street SE, and Naylor Road SE.

Figure 3.1 – Recommended Route Structure and Headways by Segment

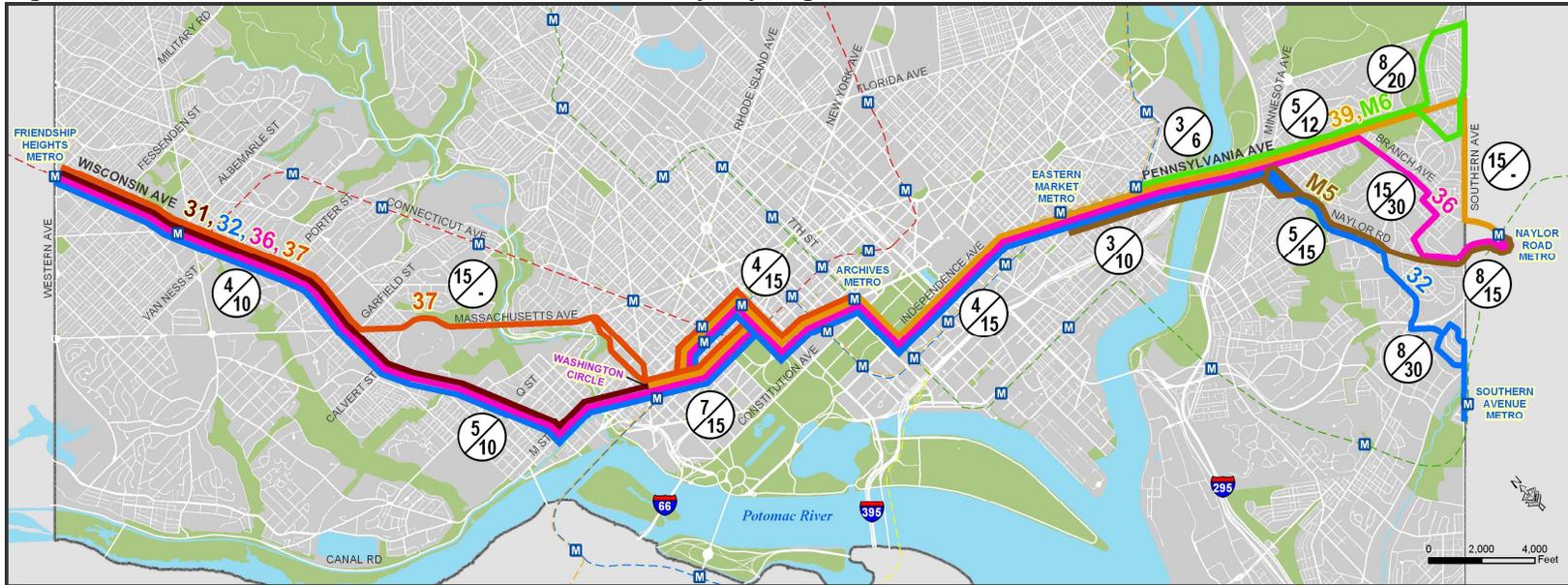
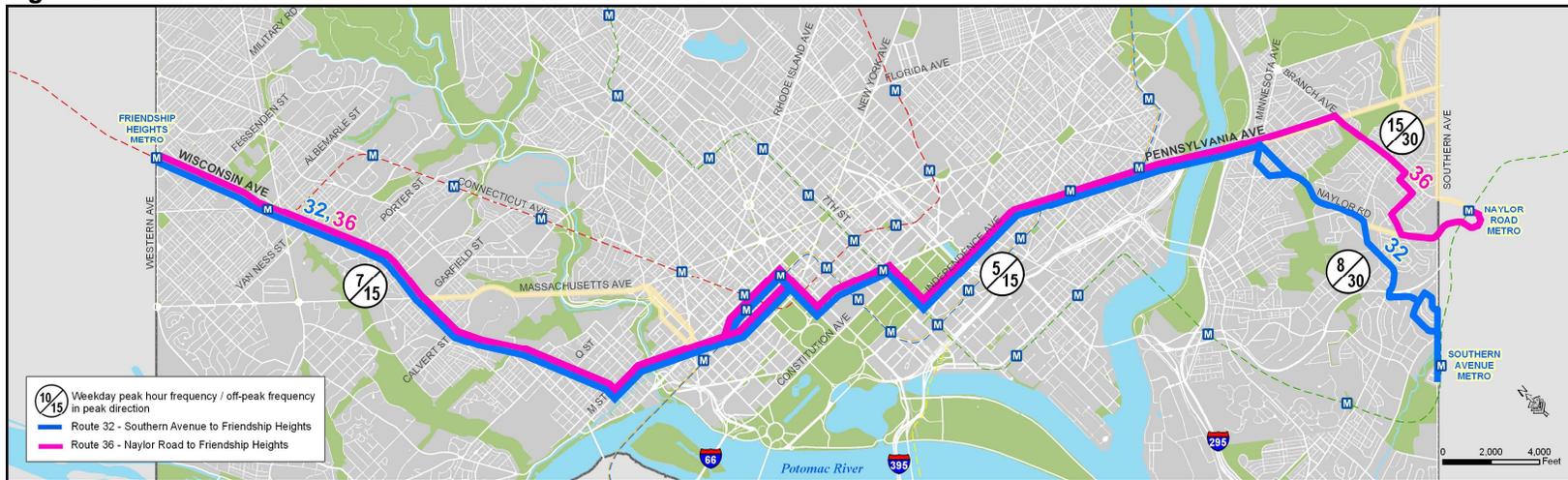


Figure 3.2 – Routes 32 and 36: Maintain Local Bus Routes



- **Stops:** The 32 and 36 routes will continue to stop at all of the existing bus stops on each of these routes. However, boardings at these stops will be evaluated, when all services changes are assessed, to consider the possibility of bus stop reductions. There may be some potential to consolidate some of the very closely based stops along the route. Stop consolidation will need to be sensitive to walk distances to major trip destinations, terrain, and possible impacts to elderly and disabled passengers.
- **Frequency:** Route 32 will provide 8-minute service during the weekday peak hours and 30-minute service during the weekday off peak and weekend service. Route 36 will provide 15-minute service during weekday peak hours and 30-minute service during the weekday off-peak and weekend time periods. To maintain these frequencies of service and improve on-time performance, route supervisors will have the ability to add strategic buses into the system at key points along the alignment and occasionally turnback buses mid-route. Turnbacks require that remaining passengers on the bus transfer to another vehicle directly behind their bus that serves their trip destination. Turnbacks are also described in Section 3.3 of this report.
- **Benefits:** These routes respond to public and rider requests that some continuous local bus service from SE to NW remain in place. The 32 and 36 Routes provide this connection without requiring passengers to transfer to complete the trip. The 32 and 36 routes maintain existing service from Naylor Road and Southern Avenue to Friendship Heights and serve all stops along the route.

New Routes 37 and 39: New Limited-Stop Services

- **Purpose:** The purpose of these new routes is to provide a faster bus service for inbound bus riders in the a.m. peak and outbound riders in the p.m. peak.
- **Route Description:** As shown in Figure 3.3:
 - **Route 37** extends from Friendship Heights along Wisconsin Avenue NW to Garfield Street NW, along Garfield Street NW to Massachusetts Avenue NW, along Massachusetts Avenue NW to 23rd Street/22nd Street, along the 23rd Street/22nd Street one-way pair and a small segment of New Hampshire Avenue to Washington Circle, along Pennsylvania Avenue NW to H and I Street NW, along the H and I Street NW one-way pair to 15th Street NW, along 15th Street NW to Pennsylvania Avenue NW, and along Pennsylvania Avenue NW to 7th Street near the Archives Metro station.
 - **Route 39** overlaps the portion of Route 37 from Washington Circle to the Archives Metro Station. From the Archives Metro Station, Route 39 extends along 7th Street NW to Independence Avenue SW, along Independence Avenue SW/SE to Pennsylvania Avenue SE, along Pennsylvania Avenue SE to Southern Avenue SE, along Southern Avenue SE to Branch Avenue SE, and along Branch Avenue SE to the Naylor Road Metro Station.
- **Stops:** Routes 37 and 39 will only serve certain widely spaced stops along the route. Although the distance between stops will vary along the route, on average they should be around a half-mile to 2/3-mile apart. Stops should be specially signed for Routes 37 and 39. The selection of stops for these routes will be based on a number of key factors including number of boardings and alightings, transfers to other bus routes and the Metro, and key trip origin and destination points. Specific stops for each of these routes will be determined during the implementation planning phase of this project.
- **Frequency:** Routes 37 and 39 will each provide 15-minute service during the weekday peak hours. These routes only operate during the weekday AM and PM peak hours.

Benefits: These routes provide additional peak hour service. The limited number of stops will result in up to 25 percent faster service than regular local bus services. Route 37 bypasses congestion in Georgetown, reducing the potential for delay and bus bunching. Route 39 provides service that extends all along Pennsylvania Avenue SE to the District Line as called for in the conceptual planning

Figure 3.3 – New Routes 37 and 39: Limited-Stop Services

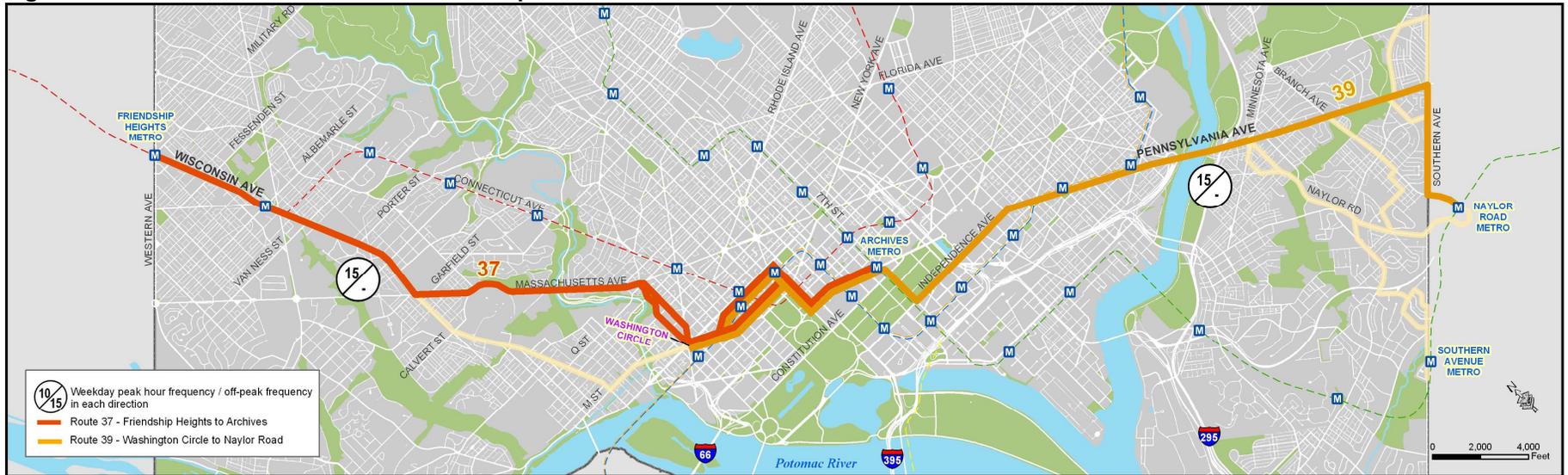
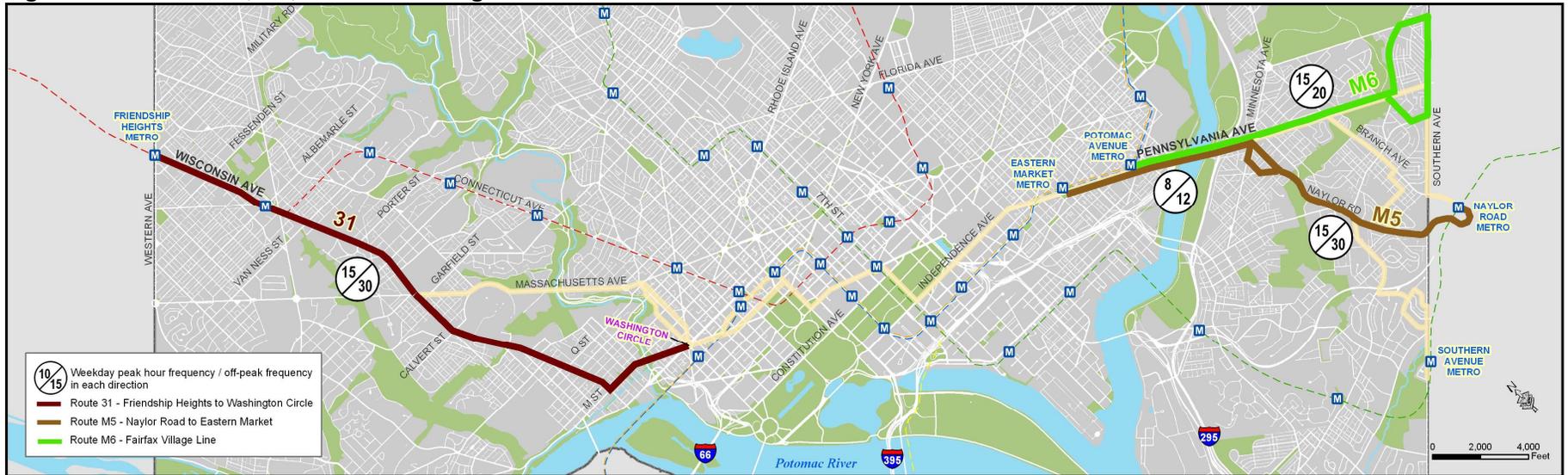


Figure 3.4 – Routes 31, M5, and M6: Existing and New Shuttle Services



for Pennsylvania Avenue improvements as part of DC's Great Streets Initiative. Route 39 also provides a shorter and more direct route to the terminal point at Naylor Road Metro.

Routes 31, M5, and M6: Existing and New Shuttle Services

- **Purpose:** The purpose of these new routes is to provide frequent and direct services that connect residential areas to nearby commercial centers and other regional transit services.
- **Route Description:** As shown in Figure 3.4:
 - **Route 31** extends from Friendship Heights along Wisconsin Avenue NW to M Street NW, along M Street NW to Pennsylvania Avenue NW at Washington Circle.
 - **Route M5** extends along the same route as the existing Route 34 from Naylor Road Metro to Eastern Market Metro Stations. From Naylor Road, the route extends along Naylor Road to 25th Street and 23rd Street SE/Minnesota Avenue SE one-way pair connecting to Pennsylvania Avenue SE at L'Enfant Square, and along Pennsylvania Avenue SE to Eastern Market Metro Station.
 - **Route M6** remains the same.
- **Stops:** Route 31 serves the same stops as Routes 32 and 36 that are located between Friendship Heights and Washington Circle. Route M5 will serve all of the same bus stops as the existing Route 34 located between Naylor Road Metro and Eastern Market Metro Stations. Route M6 stops will remain the same.
- **Frequency:** Routes 31, M5, and M6 will each provide 15-minute service during the weekday peak hours. The 31 and M5 will provide 30-minute service all other times, and the M6 will provide 20-minute service all other times.
- **Benefits:** These routes provide additional peak hour and off-peak service along portions of the 30s Line in both SE and NW DC. The relatively short length of the routes also makes them easier to manage and reduces the potential for bus bunching.
 - **Route 31** will provide frequent and more reliable services between residential neighborhoods in the Upper Wisconsin Avenue, Cathedral area, and Glover Park with retail shopping destinations in Georgetown and Friendship Heights area. The service will also provide connections from these neighborhood areas to employment, medical facilities, and educational institutions in the Washington Circle/Foggy Bottom area. The Route 31 will also connect neighborhoods to the Metro Rail Orange and Blue Lines at Foggy Bottom Station and the Red Line at Tenleytown and Friendship Heights providing access to major destinations throughout the region.
 - **Route M5** will provide frequent and more reliable connections between residential areas along Naylor Road in Southeast DC with retail businesses located in the Skyland area, L'Enfant Square, and Barracks Row/Eastern Market. The route also provides frequent connections from residential areas to Metro Rail Orange and Blue Lines at Potomac Avenue and Eastern Market Stations and the Green Line at Branch Avenue. The route will also provide connections to the new Route 39 Limited Stop service along Pennsylvania Avenue SE for quicker service to employment centers in Downtown Washington.
 - **Route M6** will continue to provide frequent and reliable service between residences in the Fairfax Village area with commercial businesses in the L'Enfant Square area and the Metro Rail Orange and Blue Lines at Potomac Avenue. The route will also provide connections to the new Route 39 Limited Stop service along Pennsylvania Avenue SE for quicker service to employment centers in Downtown Washington.

Table 3.1 summarizes some key information for the recommended route structure for the 30s, including terminal points, peak and off-peak headways, days of service, and span of service for each route.

3.3 Operations

Operations recommendations to the 30s Line include: providing enhanced service supervision at key points along the routes, increased enforcement of parking restrictions and no parking zones near stops, adjustments to signal timing and providing queue jump lanes at key intersections, and working with DDOT to provide future transit only lanes along portions of the routes.

Enhanced Service Supervision

- **Purpose:** Enhanced service supervision is focused on improving bus operations to reduce the bunching of buses, improve the on-time performance of the service, and reduce bus crowding.
- **Description:** This includes establishing a Line Manager that leads a team of stationary and scout car supervisors dedicated to the 30s line routes. This also includes establishing a Line Operations control terminal at Western Bus Garage with direct wireless voice and data communications capabilities with supervisors located in the field. The supervisors will have:
 - Ability to directly communicate with bus drivers along the route, central dispatch, line manager, line operations center, and each other.
 - Ability to track vehicles operating along the route via a laptop computer or other device.
 - A “play book” that describes actions to take when certain situations arise that impact on-time performance, vehicle spacing along the route, and vehicle crowding.
 - Access to a “strategic” bus and driver to add to the system when needed to maintain schedule, proper spacing of vehicles, and acceptable vehicle loads.
 - Ability to hold back and turn back buses when necessary to maintain schedule and vehicle spacing.
 - A supervisor vehicle to monitor operations in the portion of the 30s Line that has been assigned to them.

Table 3.1 – 30s Line Service Improvements (continued next page)

Route	Terminals	Weekday Peak Headways	Off-Peak Headways	Span of Service		
				Weekdays	Saturdays	Sundays
Local Routes, All Stops						
32	Southern Avenue Metro and Friendship Heights Metro	8 minutes	30 minutes	4:15 am to 2:45 am	4:30 am to 2:45 am	4:30 am to 2:30 am
36	Naylor Road Metro and Friendship Heights Metro	15 minutes	30 minutes	4:45 am to 3:00 am	4:45 am to 3:00 am	5:00 am to 3:00 am
Limited-Stop Routes						
37	Friendship Heights Metro and Archives via Massachusetts Avenue & 22nd/23rd Streets NW	15 minutes	n/a	6:00 am to 10:00 am (inbound); 3:00 pm to 7:15 pm (outbound)	n/a	n/a

Route	Terminals	Weekday Peak Headways	Off-Peak Headways	Span of Service		
				Weekdays	Saturdays	Sundays
39	Naylor Road Metro and Washington Circle	15 minutes	n/a	6:00 am to 10:00 am (inbound); 3:00 pm to 7:15 pm (outbound)	n/a	n/a
Shuttle Services						
31	Friendship Heights Metro and Washington Circle	15 minutes	30 minutes	5:00 am to 1:15 am	5:30 am to 1:30 am	6:30 am to 1:00 am
M5	Naylor Road Metro and Eastern Market Metro	15 minutes	30 minutes	5:00 am to 1:15 am	5:30 am to 1:30 am	6:30 am to 1:00 am
M6	Potomac Avenue Metro and Fairfax Village	15 minutes	20 minutes	5:00 am to 1:15 am	5:30 am to 1:30 am	6:30 am to 1:00 am

Supervisors will be stationed along the route at key locations and be responsible for monitoring and responding to service issues in their portion of the 30s Line. Key locations for supervisors are highlighted below:

- Friendship Heights Metro
- Washington Circle
- Eastern Market Metro Station
- Naylor Road Metro Station
- Southern Avenue Metro Station

A program to monitor and measure the performance of the system will be established to assess the impact of the recommended improvements. This will include the preparation of monthly reports that address on-time performance, travel times, bus bunching, crowding on buses, and ridership.

- **Benefits:** Enhanced supervision will provide improved on-time performance and a reduction in bus bunching, thereby reducing vehicle crowding.

Enhanced 30s Line Specific Training for Drivers

- **Purpose:** The 30s Line tends to include a greater number of bus drivers who are new to WMATA and are often not as familiar with the bus system as drivers on other routes. The purpose of additional 30s Line training is to better familiarize drivers with typical transit destinations along the route as well as connecting bus services and major destinations served by those routes. 30s Line training would also address the recommended changes to the route so that bus drivers can better respond to questions from riders about the changes.
- **Description:** This includes a special training session for drivers of the 30s line that would include the following key information:
 - Major transit trip destinations along the route
 - Attractions and tourist destinations along the route
 - Transfer points for connecting bus routes and major destinations served by those routes

- Recommended route structure for the 30s line including route terminal points, headways, days of service, and span of service
- Improvement of customer service.
- **Benefits:** Better informed bus drivers will be better able to respond to questions from bus riders about how best to reach their destination and any changes that will or have occurred with the restructuring of the 30s Line. They may also help to promote destinations and attractions located along the 30s Line routes. Increased training will also result in a more consistent performance.

3.4 Stops and Facilities

Improvements to stops and facilities include new, improved shelters with benches and lighting. In the future, WMATA will resume the installation and activation of next-bus arrival displays. New shelters will be installed at most stops that currently have a shelter.

Provide New Shelters

- **Purpose:** The purpose of improved stops and facilities is to enhance the customer experience while waiting for buses and to provide weather protection and improved comfort and convenience.
- **Description:** Continuation of the DC shelter replacement program, which will ultimately replace all of the existing bus shelters along the 30s Line with the new standard DC shelter. The new shelters will include weather protection, lighting, and advertising space. As a result of the 30s Line study, it is recommended that the shelters also include an updated system map and route information, and eventually a dynamic next-vehicle arrival display. The new shelters are to be cleaned and maintained as part of the DC government contract with the firm that will provide the shelters and collect the advertising revenues for the shelters. Shelters located at high volume stops (greater than 500 daily boardings), major bus-to-bus transfer points, and rail-to-bus transfer points should also include additional maps and information regarding 30s Line services, information on connecting transit services, and should be sized appropriately for customer comfort and convenience. The transit center at Friendship Height is scheduled to be modified to raise the ceiling of the station so that all buses can fully access the station. This is expected to be complete by June 2008 when the short term improvements to the 30s Line service are to be implemented.
- **Benefits:** Greater level of customer comfort and convenience and improved cleanliness and maintenance of shelters on the 30s Line.

3.5 Customer Information

Enhanced customer information includes updated and improved schedules at stops; greater use of on-board annunciators to communicate service delays and related information to the consumer; and, eventually, real-time next-bus arrival information at stops.

Updated Schedules and Future Next-Bus Information at Stops

- **Purpose:** The purpose of these improvements is to communicate information about each of the bus services and routes as clearly and concisely as possible so that transit riders can make informed choices regarding how they can best reach their destination, likely travel times, and when to expect vehicles to arrive at their stop.
- **Description:** The recommended improvements include the following:
 - Replacement of damaged or missing information cases at stops
 - Update of all the schedules posted at stops to reflect new services, highlight the key information used by riders in an easy to read and visible format
 - Provide system maps that highlight 30s Line and connecting routes at new shelter locations

- Provide real-time next bus displays that indicate when the next vehicle will arrive and what route the vehicle is serving.
- Provide capabilities to access real time next bus information via telephone and internet.
- **Benefits:** Bus riders will be able to easily read the schedule, determine when the vehicle will arrive, and make informed decisions regarding what services and routes they should take to reach their destination in the quickest and easiest way possible.

Establish Standard Detour Routes and Greater Use of On-Board Annunciators/Announcements

- **Purpose:** The purpose of these improvements is to better communicate directly with bus riders when there are unexpected changes in the route that will affect their trip.
- **Description:** The recommended improvements include the following:
 - Establish standard detour routes when services are disrupted by parades, demonstrations, and snow emergencies.
 - Establish a standard announcement (via automated annunciators) that communicates the standard detours to be activated when the route is disrupted or if it is known that it will be disrupted at a future date and/or time.
 - Standard detour routes could also be printed on cards and stocked in the “take one” racks on the buses for individuals that are interested in getting more information about common detours.
 - Explore options to warn regular riders of unexpected detours and delays on the 30s Line route via e-mail and mobile text messaging.
 - Establish a standard announcement (via automated annunciators or via the bus driver) to warn passengers when a bus needs to be detoured, held back, or turned back to maintain schedule. Messages regarding buses held back should indicate how many minutes the bus will be delayed. Messages regarding turn backs should indicate that through passengers will need to transfer to the next bus behind the vehicle that they are riding.
 - Establish on-board announcements for transfer points to rail transit and other major bus routes.
- **Benefits:** Bus riders will be warned when a route needs to be detoured, so they will know what stop get off at to reach their destination or where to board the bus on a future trip that may include a bus route detour. Also, knowing how long their trip may be delayed when a bus is being held back or turned back can greatly reduce the stress levels for bus passengers.

Marketing Campaign for 30s Line Services

- **Purpose:** Make the public aware of the new services planned for the 30s Line and the benefits of these changes for the bus rider and encourage transit use in the corridor.
- **Description:** The marketing campaign will include a multimedia effort to inform the public about:
 - Changes to existing 30s Line Services
 - Describe new services
 - Advertise potential benefits to the typical rider
 - Schedule for improvements
 - How to get more information

The campaign will need to coordinate with potential project partners such as the various DC Business Improvement Districts (BIDs) located along the route. The secondary map frames (the frames on the left side of the new shelters) could potentially be used to market the service changes.

- **Benefits:** Regular bus riders will be fully informed about upcoming changes to their bus services including new routes, changes in service hours and schedules and how these changes will

potentially improve the customer experience. The campaign will also encourage those who do not regularly use transit services or have stopped using the 30s Line in the past to try the new and improved system.

3.6 Safety and Security

The safety and security of riders will be improved with enhanced police presence at stops and stops designed with security in mind.

Enhanced Police Presence and Stop Design for Safety

- **Purpose:** The recommended improvements focus on providing a greater sense of safety and security for passengers waiting at stops.
- **Description:** This includes working with both Metro Police and DC Police to provide a more visible police presence in areas around 30s bus stops located near crime hotspots, especially after dark. The improved lighting and visibility that comes with the bus shelter replacement program will also help create a more secure environment. Future bus stop consolidation should consider maximizing the visibility of stops and focus on areas with higher levels of pedestrian activity. Special security features may also be needed at stops located near key buildings such as the US Capitol and the White House.
- **Benefits:** A more secure environment at stops will contribute to a more positive customer experience for 30s line riders.

3.7 Traffic Operations and Management

Improvements will be effected through better enforcement of parking restrictions, adjustments to signal timing, the presence of traffic control officers during peak hours at key intersections, signal timing adjustments to benefit transit, and future reserved lanes for transit.

Better Enforcement of Parking Restrictions

- **Purpose:** The purpose of better enforcing parking restrictions is to reduce the potential for illegally parked vehicles to block or constrain access to bus stops, which increases delay and travel times for 30s Line buses.
- **Description:** This includes enhanced enforcement of parking restrictions in the areas around stops and the possible elimination of additional spaces adjacent to bus stops to make it easier for buses to get into and out of stops. This also includes restrictions on tour bus parking near stops along the 30s line. Figure 3.5 shows areas of where illegal parking and tour bus parking has been a particular problem and needs special attention.
- **Benefits:** Better enforcement of parking restrictions and restrictions on tour bus parking will help to reduce travel times for passengers and improve on-time performance for transit vehicles.

Improve Intersection Operations

- **Purpose:** Improving intersection operations has the potential for improving travel times and reducing the potential for bus bunching along the 30s Line.
- **Description:** As shown in Figure 3.6 and described in Table 3.2 below, the recommended intersection improvements include additional through or turn lanes, more green time for specific bus movements, and the addition of DDOT traffic control officers during peak hours to facilitate bus movements for the 30s Line. In the future, planned roadway improvements such as the

development of a true traffic circle at Potomac Avenue and Pennsylvania Avenue SE and changes in ramp access between the Southeast Freeway and Barney Circle, may enhance traffic flow and bus operations in these highly congested segments of the 30s Line routes.

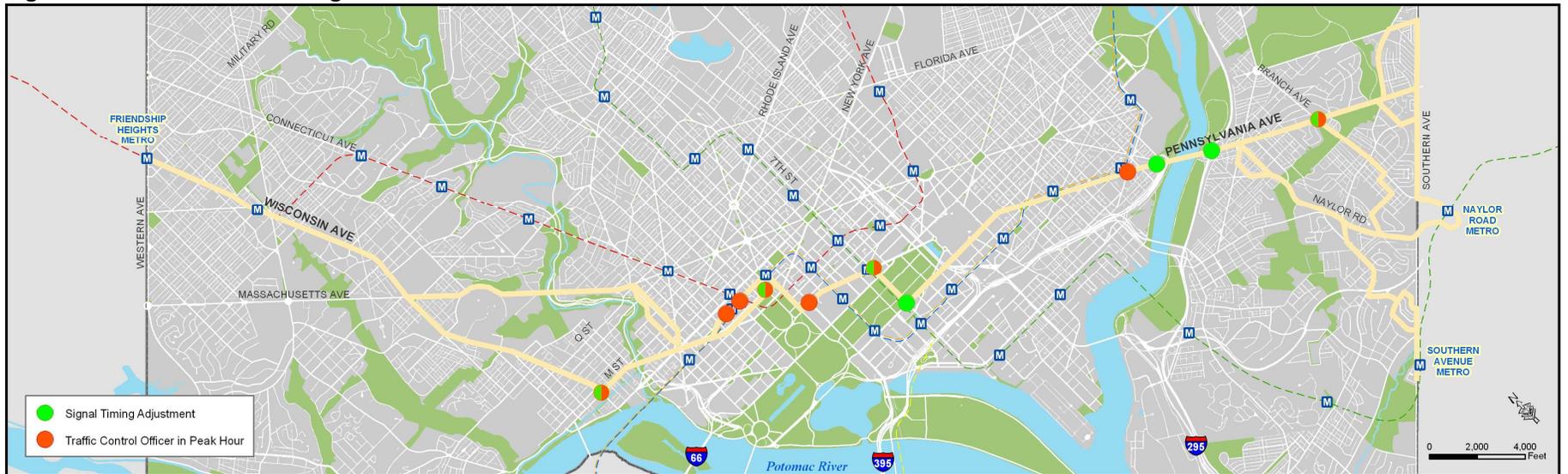
Table 3.2 Recommended Intersection Improvements

Location	Problem	Improvement
Alabama and Branch Avenues	Traffic backs up on Branch Avenue; can take four signal cycles to get through. Further coordination with DDOT is needed to evaluate options and improve capacity and traffic flow.	Additional through lane and/or green time on Branch Avenue
Pennsylvania and Branch Avenues	Left turn from NB Branch Avenue backs up during AM peak hours. Further coordination with DDOT is needed to evaluate traffic signal timing and consider changes in signal timing.	More green time for NB left turn during AM peak hour
Pennsylvania Ave and Anacostia Freeway	Left turn from EB Pennsylvania Avenue backs up and blocks through traffic. This will require further coordination with DDOT to evaluate signal timing and possible changes to facilitate bus movements.	More green time for left turns in PM peak hours
Pennsylvania and Potomac Avenues	Slow travel speeds on through movement on Pennsylvania Avenue	Traffic control officers in peak hours
7th Street NW and Pennsylvania Avenue	NB left turn on 7th Street backs up to two or more signal cycles	Traffic control officers in peak hours
Pennsylvania Avenue and 14th Street NW	Slow travel speeds on through movement on Pennsylvania Avenue	Traffic control officers in peak hours
I St NW and 17th St (E and W of park)	Slow travel speeds on through movement on I Street	Traffic control officers in peak hours
I St NW and 18th St	Slow travel speeds on through movement on I Street	Traffic control officers in peak hours
Wisconsin Avenue and M Street NW	Intersection over capacity, on-street parking impacts access to stops	Traffic control officers in peak hours

Figure 3.5 – Areas for Enhanced Enforcement of Parking Restrictions



Figure 3.6 – Traffic Flow Management



- **Benefits:** These intersection improvements have the potential for substantial reductions in travel times and bus bunching for 30s Line bus routes.

Future Transit/HOV-Only Lanes

- **Purpose:** Transit/HOV lanes provide a means for buses to travel more quickly on congested roadway segments and improve transit travel times and schedule adherence.
- **Description:** As shown in Figure 3.7, it is recommended that WMATA and DDOT explore the provision of reserved transit/HOV-only lanes along:
 - Barney Circle eastbound slip ramp
 - Pennsylvania Avenue SE between Branch Avenue SE and Minnesota Avenue SE and between Barney Circle and 2nd Street SE
 - H Street NW and I Street NW between 15th Street NW and 19th Street NW (temporary lanes until the K Street Transitway is constructed)
 - Wisconsin Avenue NW between Calvert Street NW and Western Avenue NW.

These would include restricting traffic from the use of the curb lane in the peak direction during the peak hours. The potential for bus-only lanes along Pennsylvania Avenue SE was identified in the Capitol Hill Transportation Study and the Great Streets Concept for Pennsylvania Avenue. Additional study, including the identification of potential traffic and parking impacts, will need to be completed by DDOT before these improvements can be advanced to implementation.

In the mid- to long-range timeframe (beyond Year 2012) the District of Columbia plans to implement the K Street Transitway Project which will include a Bus Rapid Transit (BRT) System along K Street NW. The transitway is to include exclusive transit-only lanes for buses between Washington Circle and Mt Vernon Square. During the construction of the K Street Transitway, the reserved peak hour bus lanes on H and I Streets could help accommodate the higher volume of buses that would be diverted from K Street. Once the K Street Transitway is complete, the transitway plan recommends moving some or all of the 30s Line routes from H and I Streets to the K Street alignment to make use of the transitway lanes and station stop amenities. The temporary peak-hour reserved lanes along H and I Streets could either be eliminated at that point or maintained to accommodate other bus routes that would be permanently removed from their existing K Street Route and reassigned to parallel routes such as H and I Streets NW. The K Street Transitway study recommends that some existing bus routes that currently use a short segment K Street be reassigned to other parallel streets, allowing the transitway on K Street to accommodate bus routes that use long portions of K Street.

The effectiveness of future transit/HOV-only lanes depends in large part on enhanced enforcement efforts by DC and Metro Police. Enforcement will help to ensure that general traffic does not utilize the lanes.

- **Benefits:** Reserved lanes have the potential for substantial improvements in travel times, schedule adherence, reliability, and reductions in bus bunching.

3.8 Vehicles and Vehicle Assignments

The recommended service and operational changes have been designed to be accommodated using the existing bus fleet for the 30s Line. It is not anticipated that additional vehicles will need to be acquired other than those that would normally be needed for vehicle replacement for the existing 30s Line service. It is assumed that the vehicles used for the recommended service structure would be standard 40 foot buses that accommodate about 37 seated passengers each. This would include both low and high floor vehicles. Schedules for 30s Line Routes should also be stocked on all of the 30s Line vehicles all of the time. The estimated number of peak vehicles for each of the routes is shown in Table 3.3.

Over time additional features should be introduced to 30s Line vehicles. These features include:

- Capabilities to remotely update automated announcements on the bus from a single location via the internet and WiFi equipped vehicles
- Video Screens on board to provide visual information to riders regarding next stops, detours, anticipated delays, connecting routes, attractions served by the route, and other items of interest.
- Traffic Signal Priority (TSP) Emitters that allow buses to automatically communicate with signal controllers to provide additional green time or special signal phasing to benefit buses approaching major intersections.

Table 3.3 Vehicle Requirements

Route	Number of Peak Vehicles Required
31	7
32	8
36	7
37	6
39	6
M5	4
M6	3
Subtotal	41
Trippers*	8
Strategic Buses**	2
TOTAL	51

* Buses added to the system during peak hours to maintain headways

** Strategic Buses stationed along route to be put into system as needed

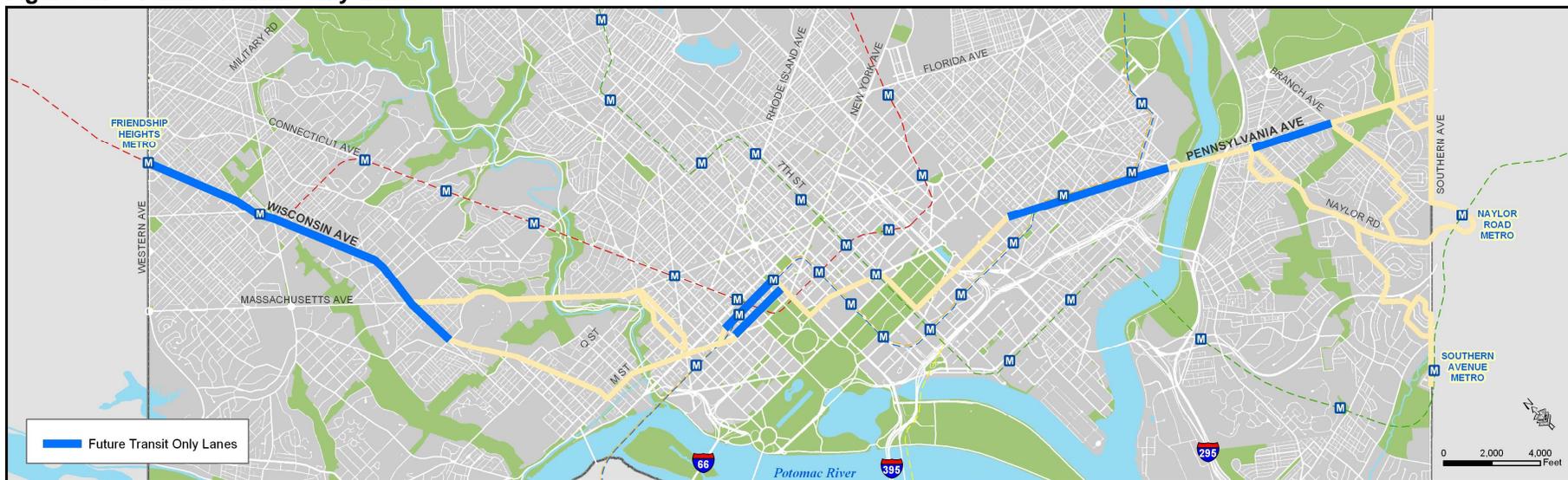
3.9 Fare Collection

Making the fare collection process more efficient has been identified as a factor that must be improved to speed boarding times and reduce overall travel times. The following improvements were suggested during the 30s Line study process to potentially speed up the fare collection process:

- Provide incentives for the use of SmarTrip cards for fare payment including waiving or reducing the initial fee for the cards.
- Make SmarTrip cards easier to obtain by allowing their purchase and replenishment at a wider variety of outlets that can be more easily accessed by 30s Line bus riders.
- Provide a SmarTrip reader at the rear door and allow boardings for card users via the back door. Encourage riders to exit from back door to decrease dwell times.
- Encourage the use of weekly flash passes for 30s Line bus routes. Strategies may include expanding the number of ways riders can easily obtain or renew flash passes.
- Inform riders of fare requirements; encourage riders to have money out and ready for payment.

These options should be further explored and developed as part of the implementation of 30s Line bus service and operations improvements.

Figure 3.7 – Future Transit-Only Lanes



4.0 Future Issues

There are a number of other planned and ongoing transportation infrastructure projects that have the potential to impact the 30s Line bus services in the future. The major initiatives and how they can impact the 30s Line services and recommendations are described as follows:

4.1 K Street Transitway

The District Department of Transportation, in partnership with WMATA, has completed initial conceptual planning for a Bus Rapid Transit line that would include exclusive transit only lanes along K Street NW generally from Washington Circle to Mt Vernon Square and along Massachusetts Avenue between H Street NW and Union Station. The project would replace the east-west component of the DC Circulator service that currently operates between Georgetown and Union Station. The project is also designed to accommodate the re-routing of existing bus routes to make use of the transitway's reserved lanes. Key transitway features include:

- Reserved lanes for transit- and emergency vehicle-only use 24 hours a day
- Enhanced passenger amenities including area and regional maps and real-time bus information
- Off-vehicle fare collection system
- Enhanced pedestrian access to stops
- Transit signal priority
- Widely spaced stops
- Unique, branded vehicles

To make the best use of the exclusive transitway facility, the initial plans for the project include shifting routes traversing short segments of K Street to parallel facilities (such as H and I Streets) to minimize frequent turns onto and from the K Street Transitway. Routes that are located on parallel streets that traverse long distances are to be moved to the transitway. The routes to be moved to the transitway include Metrobus Routes 30, 32, 34, 35, 36, 38B, D1, D3, D6, 16Y, and 80.

Currently the 30s Line routes operate along H and I Streets NW, which parallel K Street NW. The recommended 30s Line routes (Routes 32, 36, 37, and 39) will continue to operate on H and I Streets NW until the construction of the K Street Transitway is completed around 2015. Prior to the completion of the transitway, it is recommended that the addition of temporary peak-hour reserved transit lanes on H and I Streets NW accommodate the 30s Line routes and any bus routes diverted to H and I Streets while the transitway is under construction. When the K Street Transitway is complete, the 30s Line routes would move to the transitway to make use of the permanent reserved lanes and other BRT features along that route. The temporary peak hour reserved lanes along H and I Streets could either be eliminated at that point or maintained to better accommodate the bus routes that would be removed from their existing K Street route and permanently reassigned to parallel routes such as H and I Streets NW.

4.2 Great Streets Initiative

The Great Streets Initiative is a multidisciplinary corridor improvement program that includes public infrastructure investments, strategic land use plans, public safety strategies, and economic development assistance. The 30s Line bus routes are located along one of the six corridors designated for the Great Streets initiative: Pennsylvania Avenue SE from Sousa Bridge to Southern Avenue. Infrastructure improvements may include restored streets, sidewalks, transit services, lighting, and trees that support efforts to attract more residents, jobs, and economic activity as well as expanding the tax base and improving in quality of life for area residents. One of the guiding principles of the program is to change the existing corridor's function from major vehicular arterials into streets that sustain healthy pedestrian- and transit-based activities, and consequently supports the District's air quality and transportation agendas.

The development of bus service enhancements as part of the 30s Line study supports several recommended improvements as outlined in the Great Streets Initiative Concept Plan developed for Pennsylvania Avenue SE. These are summarized as follows:

- **New Route 39 Establishes a Continuous Bus Route along Pennsylvania Avenue SE-** The Great Streets concept plan indicates that there is a need to establish an individual continuous route along the entire length of Pennsylvania Avenue from west of the Anacostia River to the District Line to intercept commuter traffic before it reaches the District boundary. The proposed Route 39 would provide that connection.
- **Incorporate Plans to Relocate Bus Stops-** Plans to improve the 30s Line bus routes will consider the future relocation of bus stops as identified in the Great Streets Concept Plan for Pennsylvania Avenue SE. This will include the possibility of transitioning to more far-side stops at intersections, some mid-block stops at commercial nodes, and relocated bus stops associated with the reconfiguration of L'Enfant Square. Bus stop relocation should also take advantage of planned pervious amenity zones in the Pennsylvania/ Branch Avenue areas that will provide sheltered space for bus shelters, benches, and bus stops. DDOT is currently in the process of completing design plans for the Great Streets improvements and will be coordinating with WMATA on transit features.
- **Accommodate Planned Streetscape Improvements-** The principal improvement advanced in the preferred alternative is a ten-foot-wide multi-use trail parallel to Pennsylvania Avenue SE from Southern Avenue to Fairlawn Avenue. Other improvements may include a bicycle lane generally along the south side of the street, preservation of on-street parking at commercial nodes, widened sidewalks throughout the corridor, and a planted median along the route. Any stop relocation and shelter replacement for the 30s Line routes will need to accommodate these planned streetscape investments.

4.3 Integration with Other Projects

There are several other transportation infrastructure projects that could impact bus operations and implementation of recommended 30s Line improvements. These are summarized as follows.

Middle Anacostia River Crossings Study

The Middle Anacostia River Crossings Study was completed by the District Department of Transportation in June 2005 and evaluated the current and future needs for vehicular traffic, transit, pedestrian, bicycles, and safety, as well as access problems in a project area that includes the Pennsylvania Avenue/Souza Bridge and the I-295/11th Street Bridge crossings of the Anacostia River and adjacent areas along both sides of the river from northwest of Potomac Avenue to southeast of Minnesota Avenue.

The development of bus service enhancements as part of the 30s Line study will need to consider several recommended improvements as outlined in the Middle Anacostia River Crossings Transportation Study. These considerations are summarized as follows:

- **Potential Benefits of Signal Optimization at L'Enfant Square Area** – The plan includes optimizing the traffic signals along Pennsylvania Avenue SE at Fairlawn Avenue, L'Enfant Square, and Minnesota Avenue. This has the potential for some minor improvements in travel times for buses through this area. DDOT is planning to optimize the traffic signals along this corridor with the installation of a new lane configuration on Pennsylvania Avenue SE between 27th Street and Southern Avenue.
- **Needed Bus Stop Improvements** – Improvements to the 30s Line include recommended improvements to customer information and shelters at bus stops along Pennsylvania Avenue SE; 14th Street SE, 15th Street SE, and L'Enfant Square were identified as deficient in the study.

- **Need to Move Stops at Potomac Avenue in the Future** – The plan calls for reconstructing the intersection of Pennsylvania Avenue and Potomac Avenue SE as a more traditional “DC type” circle. This will require the relocation of existing stops that are directly along Pennsylvania Avenue to an appropriate location on or adjacent to the new traffic circle. Any future bus stop consolidation as part of the 30s Line improvements will need to consider these mid-range plans.
- **Potential Construction Impacts at Barney Circle and 295 Intersection in the Future** – Long-term plans call for reconstruction of connections between Southeast Freeway and Barney Circle and establishing a new traffic circle at the Pennsylvania Avenue SE intersection with the Anacostia Freeway (Route 295). This may include service disruption and delay when this construction activity takes place at some point in the 2010 through 2025 timeframe.
- **Potential for Some Traffic Congestion Relief from 11th Street Bridge Connections** – Long-term plans also call for providing a new connection from the Southeast Freeway to and from Anacostia Freeway (Route 295) North in the 2010-2025 timeframe. A reduction in traffic congestion on the Sousa Bridge may result in improved travel times in bus travel times for 30s routes along Pennsylvania Avenue SE.

Anacostia Waterfront Initiative

The development of bus service enhancements as part of the 30s Line study will need to consider several recommended improvements as outlined in the Anacostia Waterfront Initiative Framework Plan. These considerations are summarized as follows:

- **Future Reconstruction of Pennsylvania Avenue and Anacostia Freeway Interchange** – Similar to the improvements recommended in the Middle Anacostia River Crossings Study, the reconstruction of the interchange at the Anacostia Freeway to include a new traffic circle may include significant impacts and disruptions to the 30s Line routes during construction. Once complete, the improved facility and traffic flow in this area may provide for minor improvements in bus travel times through this area. Bus stops in this area may need to be relocated to respond to roadway changes. Pennsylvania Avenue through traffic will not be impacted or interrupted by the proposed circle.
- **Connections to a Streetcar Line** – Ultimate plans for the DC Streetcar system line from several DDOT studies indicate the potential for a connection between the streetcar line and the 30s Line Metrobus services. During the first phase of construction over the next several years, the first streetcar line will be built in Southeast DC, extending from Bolling Air Force Base to Anacostia Metro Station. DDOT is currently studying ways to expand this initial line and continue to build a streetcar network in the District. Future plans for the 30s Line services will provide and maintain opportunities to accommodate this intermodal connection. DDOT is also currently working on finalizing the design of the streetcar project and will consider enhancing connections to other transit routes.
- **Connections to Anacostia Riverwalk and Trails** – Plans for the Riverwalk and Trails show these facilities located along the both sides of the Anacostia River at the Sousa Bridge Crossing. Opportunities to connect bus riders on the 30s Line to these recreational facilities will be maintained as part of plans for restructuring the 30s Line bus services.

Pennsylvania Avenue SE Transportation Study

In response to citizen comments and concerns, the District Department of Transportation (DDOT) has investigated transportation improvements in the Pennsylvania Avenue SE area resulting in the development of recommended short-term and long-term improvements for the corridor from the Anacostia River east to the District Line. These may affect the 30s Line as follows:

- **Turn Lane Reconfigurations** – Recommendations for new services and intersection enhancements to facilitate bus movements from the 30s Line Study are generally consistent with the concept of reconfiguring turning lanes at Pennsylvania Avenue intersections with Branch and Southern Avenues from the Pennsylvania Avenue study, provided that they facilitate bus movements for the recommended Route 36 and 39 bus routes. DDOT is planning to evaluate the capacity of this intersection and reconfigure it as part of the Pennsylvania Avenue project.
- **Signal Timing Optimization** – The 30s Line recommendations to optimize signal phasing and timing to facilitate bus movements is consistent with Pennsylvania Avenue SE Transportation Study recommendations to further optimize traffic signals through the corridor, provided that bus service is considered as a priority in the optimization process. DDOT is planning to optimize the traffic signals along this corridor with the installation of a new lane configuration on Pennsylvania Avenue SE between 27th Street and Southern Avenue.
- **Bus Stop Enhancements** – Continuation of the DC shelter replacement program will help to address the recommended repair of the existing bus shelter on the south side of Pennsylvania Avenue between 25th and 27th Streets and the longer-term improvements for more passenger stop amenities like next-bus arrival displays at high-volume stops in the corridor.
- **Impacts of Future Construction Projects** – There is some potential for future disruption to the 30s Line routes in the mid- to long-range time frame due to construction activities associated with the recommended paving over of CSX tracks at Pennsylvania Avenue; combining the Minnesota and 25th Street SE intersection on Pennsylvania Avenue SE; the reconstruction of the interchange with the Anacostia Freeway; constructing textured crosswalks at 22 intersections; and street realignments and crosswalk improvements at a three intersections. DDOT will consider minimizing any impacts to the bus as part of the Maintenance of Traffic (MOT) plan.

Capitol Hill Transportation Study

The Capitol Hill Transportation Study documents the existing transportation characteristics; identifies deficiencies and issues of concern; and proposes short, medium, and long term improvements for the Capitol Hill area of the District of Columbia. These may affect the 30s Line as follows:

- **Implementation of DCAA Recommendations for Rapid Bus** – The 30s Line study recommendations include the addition of Route 39 which includes many of the features of the Rapid Bus service envisioned in the DC Alternatives Analysis (DCAA) and Capitol Hill Study.
- **Improving Pedestrian Facilities** – The Capitol Hill Study includes improvements aimed at providing more time for pedestrian crossings, which would increase accessibility to bus stops but could include minor negative travel time impacts for passengers once they are on the bus. These minor impacts to travel time would be more than offset by 30s Line recommendations to speed up service including consolidating stops, limited-stop services, and future transit-only lanes.
- **Frequent Detours Near the Capitol and Restricting Turns from Pennsylvania Avenue** – The 30s Line study results recognize that frequent detours and street restrictions near the Capitol can impact both bus operations and the customer experience. The 30s Line study recommends establishing standard detour routes and mechanisms to communicate with riders when these detours need to be used. The recommended route terminals and layover facilities consider turn restrictions on Pennsylvania Avenue and avoiding of high-security zones along the route.
- **Potomac Avenue Metro Area Improvements** – Future bus stop consolidation along the 30s Line near Potomac Avenue must consider the potential for changes in bus routing and stop locations in the mid- to long-term time frames resulting from the conversion of this area to a true traffic circle.

- **Barney Circle Improvements** – Similar to the Potomac Avenue improvements, major construction activities at Barney Circle in the future may also disrupt 30s Line bus operations, but bus service will likely benefit from improved traffic flow and bus stop accessibility once the improvements are complete.

Center City Action Agenda

The DC Office of Planning and the Downtown Business Improvement District are leading a planning process, begun in 2006, to develop an "action agenda" for Washington's center city, from Dupont Circle to the SE/SW Waterfront and from Foggy Bottom to Capitol Hill. The purpose of this land use planning effort is to develop a list of key strategic initiatives to reach a set of goals for the continued improvement of DC's Center City. As the Action Agenda area encompasses significant portions of the 30s Line routes, impacts to the line may result:

- **Emphasis on Residential and Retail Markets** – The Action Agenda seeks to build on the District's success in creating a "living Downtown," in which residential and retail uses define the center city as much as the commercial and institutional uses it is traditionally known for. The addition of new residential buildings and retail stores in a mixed-use, compact pattern of development may create opportunities to attract new transit riders to the 30s Line in the future.
- **Transportation Options** – The Action Agenda stresses the importance of having adequate resident street parking and available on-street parking. This objective will need to be balanced with the results of 30s Line study, in which riders expressed their desire for fewer on-street parking spaces and increased enforcement of parking regulations around Metrobus stops. The Action Agenda also calls for alternative transit and pedestrian options, including a "Surface Transit Corridor" on 7th Street and M Street NW. It is possible that enhancements to the 30s Line on the portion of 7th Street between Constitution and Independence Avenues may help to support this objective.

Upper Wisconsin Corridor Study

The Upper Wisconsin Corridor Study was initiated by the DC Office of Planning in response to citizen concerns about random development taking place in Friendship Heights and Tenleytown, coupled with a lack of neighborhood-serving retail. The study's focus is on managing growth, protecting neighborhoods, encouraging a greater retail mix, and creating an attractive streetscape. Though more a land use study than a transportation one, the Upper Wisconsin project may have ramifications for 30s Line operations. These potential effects include:

- **Focus on Transit-Oriented Development** – The study encourages higher-density development, particularly around major transit points. The added activity along Upper Wisconsin Avenue could help encourage additional transit use in the corridor. More retail development may also increase transit use during off-peak midday and evening time periods.
- **Streetscape Modifications** – The Upper Wisconsin Study also calls for the creation of an attractive streetscape, with an emphasis on historic preservation, green space, and coordination with local businesses. The more pedestrian-oriented streetscape will likely have positive long-term effects on transit use. Streetscape modifications may create short-term construction impacts on 30s Line operations if travel lanes and/or stops are affected.

Glover Park Transportation Study

The Glover Park Transportation Study is analyzing traffic patterns and conditions, pedestrian and bicycle facilities, access to transit and other key destinations, and parking for the purpose of developing a multimodal transportation plan. The plan may affect the 30s Line as follows:

- **Improving Pedestrian and Bicycle Facilities** – Creating a more pedestrian-friendly environment has the potential for positive effects on transit including a more pleasant experience for bus riders who walk to and from 30s Line bus stops and for passengers waiting at stops. Improved bicycle facilities can also facilitate bike-to-bus transfers and the Metro Bike-on-Bus program. Some potential for minor disruption of the 30s Line exists in terms of possible roadway reconfiguration and safety measures that could cause minor delays to buses.
- **Changes to Transportation Patterns Resulting from New Recreation Center** – The effects on traffic of a new recreation center in Glover Park are being studied. Recommendations may include changes to roadways, intersections, and signals used by 30s Line vehicles.
- **Traffic Circulation Issues and Transit Access** – The plan’s long-term recommendations will include measures to address speeding, cut-through traffic, congestion, and access to transit stops in the study area. These measures may include roadway designs and circulation modifications that could have impacts, positive or negative, on 30s Line operations.

5.0 Funding Requirements

Annual operating costs for the recommended 30s Line system have been estimated based on the number of platform hours for each of the routes plus the peak-hour tripper routes necessary to maintain headways during peak hours. Operating cost estimates are in Year 2007 dollars and are based on a standard operating cost of \$92.65 per platform hour. The cost estimates include the costs for weekday and weekend services. Table 5.1 shows the estimated annual operating costs for the recommended system and compares the total cost to the estimated existing costs for the 30s line routes. These costs do not include the M6 route, which doesn't change under the recommended system. The comparison shows that the recommended system requires an additional \$525,000 per year to operate the recommended routes plus an additional \$500,000 per year for the enhanced supervision for total additional operating costs of \$1,025,000 per year for the overall recommended system. Note that these costs do not include the Metro Police and DC Police costs for increased police presence at stops, traffic control at intersections, increased enforcement of parking restriction, or transit-only lanes.

Table 5.1 Estimated Annual Operating Costs*

Route	Annual Operating Costs *
31	\$2,540,000
32	\$4,140,000
36	\$4,115,000
37	\$830,000
39	\$945,000
M5	\$1,730,000
Trippers	\$1,225,000
Subtotal Route Operations	\$15,525,000
Additional Supervisors **	\$500,000
Total Recommended System	\$16,025,000
Existing 30s Line Operating Cost***	\$15,000,000
Operating Cost Increase with Recommended Improvements	+ \$1,025,000

* Estimated in Year 2007 Dollars. Doesn't include costs for enhanced police presence at stops or traffic control officers at intersections.

** Assumes annual base salary \$45,000 with additional 50 percent for benefits.

*** Does not include M6 Route.

One-time capital cost requirements for Phase 1 improvements have also been estimated for the recommended system and are shown in Table 5.2 below. These include improvements that could be implemented as early as June 2008. As shown in the table, capital costs are estimated to be about \$880,000. These capital costs don't include Phase 2 improvements such as signing and striping future transit/HOV lanes, signal priority, and enhanced vehicle features.

Table 5.2 Estimated Capital Costs for Phase 1 Improvements*

Item	Units	Unit Cost	Capital Cost
Information Cases	80	\$189	\$15,120
Schedules	277	\$3	\$831
System maps for shelters	69	\$20	\$1,380
Next bus display screens for shelters	69	\$5,000	\$345,000
Supervisor laptops	5	\$3,500	\$17,500
Marketing campaign and materials	1	\$250,000	\$250,000
Total for Recommended System			\$629,731

* Estimated in Year 2007 Dollars – Does not include future Phase 2 improvements such as signal priority, reserved transit/HOV lanes, and additional vehicle features.

6.0 Implementation Strategy

This section presents a phased implementation of the improvements described in Chapter 3 of this document. The work activities necessary to implement the improvements, the entity responsible to complete each of the activities, and a completion date are also presented.

6.1 Phased Implementation

The implementation of the recommended 30s Line improvements has been divided into two phases. Phase 1 includes all of the improvements that could potentially be implemented in a six month time period. Phase 2 includes all of the improvements that would likely take longer than six months to complete. Phase 1 and Phase 2 improvements are as follows:

Phase 1 Improvements

- Maintain local bus Routes 32 and 36
- Initiate new Shuttle Services Routes 31 and M5
- Initiate new limited-stop, one-way services Routes 37 and 39
- Enhanced service supervision
- 30s Line-specific training for drivers
- Updated schedules at stops
- Replacement of damaged or missing information cases
- Establish detour routes and better use of annunciators/announcement to communicate to riders

Phase 2 Improvements

- Shelter replacement
- Next-bus arrival information and displays at shelters
- Transit/HOV-only lanes
- Improve intersection operations through traffic control officers and adjustments to signal phasing and timing
- Enhanced police presence at stops
- Better enforcement of parking restrictions

6.2 Work Activities, Responsibilities, and Schedule

For each of the 30s Line study recommendations, a series of work activities associated with each of the improvements has been identified. Table 6.1 highlights each of the work activities for the Phase 1 improvements, the entity responsible for leading each activity, and a completion date for the activity. Entities that are responsible for selected work tasks include various departments of the Washington Metropolitan Area Transit Authority (WMATA) and the District Department of Transportation (DDOT) as well as Metropolitan Police Department. *Table 6.1 continues on the following page.*

Table 6.1 Responsibilities and Schedule for Phase 1 Activities

Activity	Responsibility	Complete By
<i>Finalize Plans and Approvals</i>		
Finalize recommendations	WMATA/DDOT	1-31-08
WMATA Board authorization for public hearing	WMATA Board	2-28-08
Community leader outreach	DDOT MTA	3-1-08
Prepare for and hold public hearing	WMATA	3-1-08
WMATA Board approval	WMATA Board	4-24-08
<i>Service Changes</i>		
Identify terminal stands and layover facilities	WMATA OPAS	2-1-08
Identify consolidated stop locations for routes	WMATA OPAS/DDOT	2-15-08

Table 6.1 Responsibilities and Schedule for Phase 1 Activities (continued from previous page)

Activity	Responsibility	Complete By
Service Changes		
Identify stops served by each route	WMATA OPAS/DDOT	2-28-08
Define and redesign schedule	WMATA OPAS/Marketing	3-1-08
Define/implement SmarTrip and Pass Strategies	WMATA Planning	6-15-08
Bus driver assignments	WMATA Bus Operations	6-29-08
Initiate service	WMATA Bus Operations	6-29-08
Customer Communications and Marketing		
Develop approach/design to flag Route 37/39 stops	WMATA OPAS/Marketing	3-31-08
Develop marketing plan for new service	WMATA Marketing	4-15-08
Develop media plan for new services	WMATA Marketing	4-15-08
Initiate Marketing Campaign for New Service	WMATA Marketing	5-15-08
Develop updated maps for shelters	WMATA Marketing	5-31-08
Print and distribute printed materials for service change	WMATA Marketing	6-15-08
Announce/Advertise new routes to riders and public	WMATA Communications	6-15-08
Enhance Service Supervision		
Define supervisor responsibilities/job description	WMATA HR	2-28-08
Develop "supervisor playbook"	WMATA Bus Operations	3-15-08
Define supervisor equipment and information needs	WMATA Bus Operations	3-15-08
Obtain and install supervisor equipment	WMATA BMT	6-1-08
Develop 30s Line specific training for supervisors	WMATA Bus Operations	6-1-08
Fill additional supervisor positions	WMATA HR	6-1-08
Supervisor training	WMATA Bus Operations	6-8-08
30s Line Specific Training for Drivers		
Prepare 30s Line FAQ and responses	WMATA Planning	5-15-08
Develop 30s line specific training module	WMATA Bus Operations	6-1-08
30s Line driver training session	WMATA Bus Operations	6-15-08
Stop Improvements		
Move/consolidate stops	WMATA Bus Operations	6-1-08
Update signage (including designation of 37/39 stops)	WMATA Bus Operations	6-1-08
Replace damaged or missing information cases	WMATA Bus Operations	6-1-08
Place updated schedules at stops	WMATA Bus Operations	6-1-08
Place updated maps and information at shelters	DDOT	6-1-08
Standard Detour Routes and Greater Use of Annunciators/Announcements		
Develop standard detour routes and maps	WMATA OPAS	3-15-08
Prepare detour card/brochure for racks on bus	WMATA OPAS	5-15-08
Develop standard announcements and criteria for use	WMATA OPAS	5-15-08
Program announcements into automated system	WMATA IT	6-15-08

Table 6.2 highlights each of the work activities for the Phase 2 improvements, the entity responsible for leading each activity, and a completion date for the activity. This includes the completion of a service evaluation and review to be conducted in early 2009 to assess how well the Phase 1 improvements have addressed the deficiencies and transit needs identified as part of the 30s Line Study.

Table 6.2 Responsibilities and Schedule for Phase 2 Activities

Activity	Responsibility	Complete By
Stop Improvements		
Replace shelters with lighting on 30s Line	DDOT – TPPA	2009
Acquire next bus display screens for shelters	WMATA Bus Operations	Early 2009
Activate next bus displays and call in information	WMATA IT	Mid 2009
Vehicle Enhancements		
Equip buses for signal priority	WMATA Bus Operations	2009-2010
Establish WiFi communications capability	WMATA IT	2008-2009
Purchase/install video screens on buses	WMATA Bus Operations	2010+
Future Transit Only Lanes		
Finalize plans/schedule for K Street Transitway	DDOT MTA	4-1-08
Conduct traffic study for peak hour transit only lanes on H and I Streets NW, Wisconsin Avenue NW, and Pennsylvania Avenue SE	DDOT TOA	7-1-08
Finalize locations and schedule for transit only lanes	DDOT IPMA/TOA	9-1-08
Prepare an enforcement strategy for transit only lanes	MPD	11-1-08
Construct transit only lanes	DDOT/IPMA	In 2009
Service Review and Evaluation		
Develop review process and criteria	WMATA OPAS	3-31-08
Conduct a service review	WMATA OPAS	Early 2009
Enhanced Police Presence and Stop Design for Safety		
Identify stops that need enhanced police presence	WMATA OPAS	Early 2009
Develop/implement a strategy for increased police visibility	WMATA MTP/MPD	Early 2009
Better Enforcement of Parking Restrictions		
Develop/implement an improved parking enforcement strategy	DDOT/MPD/DPW	Early 2009
Improve Intersection Operations		
Study potential for recommended changes in signal phasing, protected movements, and timing to benefit bus movements	DDOT TOA	2009
Implement signal changes	DDOT TOA	2009
Provide traffic control officers at key intersections in peak hours	DDOT	2009

7.0 Contacts and Information Sources

Table 7.1 below lists the key staff contacts that have participated in the 30s Line Study and will serve as key contacts and sources of information for the implementation of the recommended improvements.

Table 7.1 Key Contacts for Implementation of 30s Line Improvements

Name	Phone	E-mail
<i>District Department of Transportation</i>		
Circe Torruellas	202-673-1739	circe.torruellas@dc.gov
<i>WMATA, Operations Planning and Administrative Support</i>		
Ramona Burns	202-962-2880	rmburns@wmata.com
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Girum Meseret	202-962-6486	gmесeret@wmata.com
<i>WMATA, Corporate Strategy and Communications</i>		
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Samantha Rapoza	202-962-2878	srapoza@wmata.com
Ronald Rydstrom	202-962-2767	rrydstrom@wmata.com
<i>WMATA, Bus Services</i>		
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<i>Metro Transit Police</i>		
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<i>Consultants</i>		
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