



Washington Metropolitan
Area Transit Authority

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METROBUS RESTROOM PLANNING GUIDE 2018

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Prepared by



1.0 INTRODUCTION

The Washington Metropolitan Area Transit Authority (WMATA) has an extensive bus system with different service types spanning the region, including the District of Columbia (the District), Prince George's and Montgomery Counties in Maryland, and Northern Virginia. The system is comprised of more than 260 routes, and nearly 11,000 bus stops. Each route has a number of layover locations, or terminal nodes, which provide opportunities for schedule adjustments and for bus operators to take a short break to use the restroom.

In many instances throughout the Metrobus system, these terminal nodes are not equipped with adequate restroom facilities. For restrooms on WMATA property, which includes Metrorail stations, there may be hours of operation conflicts for routes that have late night service. For restrooms on non-WMATA property, there may be proximity issues (more than a 3-minute walk) or lack of any suitable restroom locations. Lastly, in some cases, for terminals located in predominately residential areas, there may not be a publicly available restroom at all.

Many other transit agencies are similarly challenged with providing adequate restroom facilities for their operators. Major bus systems in Houston, Chicago, Milwaukee, and Connecticut have experienced public scrutiny and work stoppages in recent years over the lack of adequate restroom facilities.¹ To help ensure a healthy and safe work environment for employees, and to maintain customer satisfaction, WMATA's objective is to plan for adequate restroom facilities at all terminals. Potential solutions may include establishing new use agreements and leases, developing shared facilities with other regional transit operators, accommodating restrooms as part of joint development, providing special access at Metrorail stations, rerouting bus terminals to nearby locations with restroom facilities, or building employee-only restroom facilities (i.e., prototypes).

¹ **Milwaukee** - <http://archive.jsonline.com/news/milwaukee/as-drivers-vote-transit-officials-prepare-for-possible-tuesday-strike-b99528732z1-310712861.html/>

Houston - <https://www.houstonchronicle.com/news/transportation/article/Metro-drivers-find-comfort-where-they-can-for-a-6722847.php#photo-9168294>

Chicago - <https://chicago.suntimes.com/chicago-politics/cta-bus-drivers-demand-better-facilities-for-bathroom-breaks/>

Connecticut - <https://www.nbcconnecticut.com/news/local/Restroom-Nightmare-CT-Transit-Drivers-to-Rally-For-Better-Access-486737341.html>

The purpose of the WMATA Metrobus Restroom Planning Guide is to provide an overview of current conditions at terminals; potential solutions for providing adequate restroom facilities at terminals; considerations for implementing adequate restrooms facilities in the future; and next steps for managing restroom facility improvements.

Appendix A includes an overview of WMATA’s Metrobus Operator Restroom/Break Room Facilities Study (2018), which documented Metrobus terminals and their restroom status; determined needs based on the number of layover trips when a restroom is not available; and recommended potential solutions for adequate restrooms. **Appendix B** contains an overview of restroom prototypes identified as part of WMATA’s Metrobus Operator Restroom/Break Room Facilities Study (2018). It includes information on example restroom facility components and how they might fit together depending on site conditions and requirements.

Background

In spring 2016, a WMATA Restroom and Break Room Committee (the Committee) was commissioned by the Assistant General Manager of Bus Services to coordinate and resolve issues for bus operators, including providing adequate access to restroom facilities. Since its establishment, the Committee and WMATA staff have accomplished the following:

- ▶ Fourteen portable restrooms were placed at high-volume terminals for operators to use when restrooms are not available. Thirteen of them were placed at Metrorail station terminals, and one was placed at the South Laurel Park & Ride terminal where there is a Memorandum of Understanding (MOU) between WMATA and Prince George’s County to allow for the Portable Restroom to be located on County property.
- ▶ Restrooms that are available mid-route were added to operator manifests. In January 2016, WMATA authorized operators to stop the bus mid-route and take a restroom break at any time.
- ▶ Use agreements for operators to use restrooms that are not on WMATA property were established at three locations including Catholic Charities on New York Avenue NE in the District, George Washington University Hospital in the District, and Mt. Rainier City Hall in Prince George’s County. WMATA pays a nominal fee of \$90 twice per year for restroom use at Catholic Charities and Mt. Rainier City Hall.

In December 2017, WMATA initiated the Metrobus Operator Restroom/Break Room Facilities Study to document Metrobus terminals and their restroom status; determine high-priority terminals based on the number of layover trips when a restroom is not available; and recommend potential solutions for adequate restrooms at high-priority terminals. While the study only represents a snapshot in time, it provides a framework for advancing potential restroom facility improvements, such as establishing new use agreements or exploring the feasibility of implementing restroom prototypes.

2.0 OVERVIEW OF TERMINALS

There are currently 282 terminals in the Metrobus system—102 with restrooms on WMATA Property, 107 with restrooms on non-WMATA property, and 73 without restrooms. The following sections include overviews of these terminal types.

2.1 Terminals with Restrooms on WMATA Property

These locations include Metrorail stations, Metrorail parking garages, and bus facilities where there are restrooms available for WMATA employees to use. Bus facilities are always open during bus operating hours and are accessible to operators. Some Metrorail facilities have 24-hour key access for operators to use the restroom at any time; however, many of these facilities are not available for operators to use outside of Metrorail hours of operation, which were reduced in 2017. Portable restrooms have been placed at 13 of these terminals as a temporary solution.

2.2 Terminals with Restrooms on Non-WMATA Property

These locations include restrooms in commercial buildings, hotels, residential buildings, schools, hospitals, or government buildings where operators are permitted to use the restroom. Many of these locations are also open to the public. Available restrooms have unique hours of operation that are subject to the entity that owns the facility and often do not align with bus operating hours. As a result, several of these locations are not always available for operators to use. In addition, some are not within walking distance of the terminal, which is defined as a 3-minute walk from the bus stop.

2.3 Terminals without Restrooms

These terminals currently do not have a known restroom for operators to use. Bus operators that drive routes with these terminals usually stop elsewhere along the route to take a short break and use the restroom. Several of these terminals are in non-commercial areas with limited options for proximate and accessible restrooms.

3.0 TERMINAL SOLUTIONS

Depending on the terminal type and characteristics of the terminal's location, different solutions may be appropriate to provide an adequate restroom for operators to use. Solutions for providing restroom facilities may include the following site-specific approaches, each with varying associated costs.

3.1 Use Agreements and Leases

The most practical solution may be to arrange restroom use agreements or lease agreements with nearby establishments. If there are existing restroom facilities near a bus terminal, WMATA can attempt to establish a MOU or lease agreement with the facility owner to permit Metrobus operators to use the facility.

Restroom use agreements can be of no cost or inexpensive—less than \$250 per year—and do not require ongoing WMATA facilities maintenance. However, because the facility is not owned by WMATA, there is no guarantee of an available restroom when needed, which could delay route performance. In addition, not all nearby restrooms may be available during all Metrobus hours of operation. Lease agreements ensure that a restroom is always available for operators to use but may be costlier and can include maintenance stipulations.

Whether access is secured through a written MOU or a lease agreement, the restroom facility should have as many of the following characteristics as possible:

- ▶ ADA compliant
- ▶ Within a 3-minute walk of the bus stop
- ▶ Accessible within Metrobus hours of operation
- ▶ Multiple fixtures (i.e. restroom stalls)

In addition, MOUs or lease agreements may include the following:

- ▶ Date of agreement and duration
- ▶ Parties/entities involved
- ▶ Restroom location and description
- ▶ Restroom hours of operation
- ▶ Amount paid by WMATA for restroom use and frequency of payment
- ▶ Use etiquette
- ▶ Maintenance expectations (if any)
- ▶ Termination clause
- ▶ Signatures

Restroom use agreements should be documented, whether written or informal, to track available facilities and to maintain partnerships with establishments. Written agreements may need to be renewed to avoid lapses or gaps in availability. Informal agreements may need to be revisited with establishments on an annual basis to ensure that restrooms are and will continue to be available to operators.

3.2 Shared Facilities

The region has multiple independent public transportation agencies, such as MCDOT Ride On and the Fairfax Connector, that often overlap to create a more connected transit network. It is not uncommon for bus routes from neighboring agencies to share a terminal. Developing shared restroom facilities at these locations can be mutually beneficial for both agencies. This arrangement allows for cost sharing between agencies and limits redundancy in facilities. However, shared facilities may require multiple fixtures or additional cleaning/maintenance needs.

WMATA currently shares restrooms at several transit hubs including in Shirlington, Virginia, Mark Center, Virginia, and Takoma Langley Transit Center in Maryland. Possibilities exist for future shared restrooms at other terminals, such as the Briggs Chaney Park & Ride in Maryland. Considerations for shared facilities may include coordinating shared badge access/technology or cleaning/maintenance costs. MOUs should also be considered to define terms of use.

3.3 Joint Development

Planning new development around transit can minimize private-vehicle dependency and promote healthier lifestyles. As joint development sites are initiated throughout the region, WMATA should determine if there is a need for a restroom facility for bus operators and how

it can be accommodated as part of a private development package. These restrooms can be designed to be within a 3-minute walk of the bus stop, and can provide 24-hour, employee-only access (WMATA's Station Area Planning Guide, October 2017). This option will require MOUs with private developers to define access and cleaning/maintenance terms.

3.4 Extended Hours of Access

Bus routes with terminals at Metrorail stations often have service spans that extend past the Metrorail station hours of operation, leaving operators without a restroom in the early and late hours of the day. WMATA may consider keeping these Metrorail stations open during all Metrobus hours of operation with station managers on site, or providing Metrobus operators with secure after-hours access to the station through badge access/technology.

The advantage of this solution is that these facilities are WMATA owned and maintained, and can provide exclusive access for WMATA staff. The disadvantages are that Metrorail station restrooms are not always within a 3-minute walk from the bus stop, and keeping station managers on site for operator use can incur significant additional costs.

3.5 Route Modifications

If a restroom facility is available for Metrobus operators near the current terminal but outside the 3-minute walking distance, a possible solution is to modify a bus route to run closer to the restroom facility. If the proximity of the restroom only requires a slight route shift, there may not be significant additional operational costs for WMATA or impacts to existing riders. However, if route changes significantly impact the bus schedule or service area, there are both financial and socioeconomic impacts to consider.

Route modifications should cause as little disruption to existing route time or service as possible. A detailed route modification analysis will be needed. The scope of this analysis should consider the following:

- ▶ **Ridership Impact:** Stop-level boarding/alighting automatic passenger counter (APC) data should be used to determine potential impacts to the existing customer base. Any route modifications should seek to minimize these impacts. Furthermore, route modifications that impact transfer opportunities for passengers should be avoided or designed to facilitate transfers en route to the new terminal.
- ▶ **Operating Cost Impact:** Depending on route running time, modifications to a route to accommodate a new terminal location may increase the route cycle time. This modification would require an extra vehicle to maintain established headways, increasing the route operating cost. Alternative terminal sites should be identified to compare impacts to the route cycle time.

-
- **Identification of Alternative Restroom Facilities En Route:** WMATA could identify authorized restroom facilities en route and allow operators to use these facilities in accordance with established operating procedures. For example, Metro Transit in Minneapolis-St. Paul issues an authorized bus operator restroom location chart that provides the business/location name, hours of availability, and specific protocol for using the location. WMATA could adopt a similar policy during specific hours when terminal restroom facilities are unavailable.

3.6 New Structures

In many cases, it may be difficult or infeasible to use existing restroom facilities or coordinate development of new facilities with other entities. Some locations may not have any restrooms within a reasonable walking distance from the terminal that are available during all Metrobus hours of service.

At these locations, the most viable solution could be to build a new restroom structure. These solutions may vary greatly depending on the needs of a specific terminal and the amount of space available to build a structure. Depending on space constraints and site characteristics, a facility retrofit to an existing structure might be adequate. Some terminals may only have the need for a single unisex restroom, while other terminals might call for additional units, a break room, or storage space depending on the volume of operators who have layovers at a terminal. The range of potential prototype solutions is explained in more detail in **Appendix B**.

This option is most feasible on WMATA property, but other non-WMATA property terminals may be good candidates, depending on ownership.

3.7 Portable Restrooms

WMATA has implemented temporary portable restrooms in some locations as an interim solution while determining a more permanent solution. If a more permanent solution cannot be implemented in the near term at a high-priority location, portable restrooms can provide a temporary alternative until the permanent solution is implemented. Portable restrooms are quick and easy to install, and they provide an exclusive restroom for operators that can be placed close to the terminal. However, there are installation and maintenance costs associated with using portable restrooms. Portable toilets cost approximately \$100 to 600 per month to maintain. Cost variation depends upon the presence or absence of a sink. Additionally, many portable restrooms are neither ADA compliant nor climate controlled, and could be vandalized or misused.

3.8 Planning for Restrooms

While there are multiple potential solutions for providing adequate restrooms at terminal locations, not all solutions are feasible depending on location characteristics. **Table 3.0** is an overview of key considerations for implementing adequate restrooms. **Appendix A** provides a more detailed overview of priority terminals and potential solutions based on site-specific considerations.

Restroom solutions should be coordinated with a variety of divisions within WMATA. Groups that should be involved in the process include bus planning, bus operations, asset management, and architecture, among others.

Table 3.0: Potential Solutions and Key Considerations

**USE & LEASE
AGREEMENTS**



Use agreements are the most cost-effective solution for terminals that have an available restroom on non-WMATA property within a 3-minute walk of a bus stop and within bus hours of operation. This approach requires documentation and regular coordination with establishments to ensure that restrooms remain available. Lease agreements are costlier but ensure restroom availability.

**SHARED
FACILITIES**



A list of potential shared facilities should be established with partner transit agencies to determine mutual restroom needs. This option could include existing restroom facilities or the development of a new structure. Considerations for shared facilities include coordinating access with partner agencies and maintenance costs.

**JOINT
DEVELOPMENT**



A list of upcoming joint development sites and the status of development plans should be generated to determine if there is an opportunity to incorporate a restroom as part of a private development within a 3-minute walk of a bus stop. Considerations include dedicated operator access and maintenance costs.

**EXTENDED
HOURS OF
ACCESS**



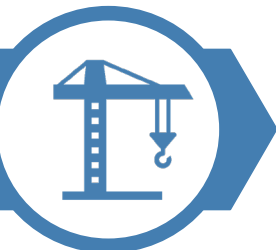
For terminals at Metrorail stations, special operator badge access should be explored, if compatible, and if restrooms are easily accessible. A much costlier solution could include keeping the station open and staffed by a station manager during all bus hours of operation.

**ROUTE
MODIFICATIONS**



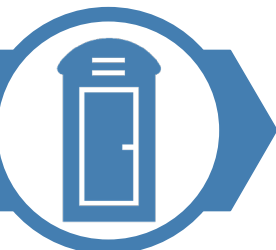
Modifying routes to locate terminals within a 3-minute walk of establishments with restroom facilities requires additional cost and schedule analysis. This may be the most feasible option for terminals in non-commercial areas.

**NEW
STRUCTURES**



New structures are a viable solution for terminals at Metrorail stations or at shared facilities. Terminals with portable restrooms are good candidates for new structures, as well as terminals where there are many bus trips during hours when the Metrorail station is closed. Considerations for future site planning include space constraints, site conditions, constructability, and maintenance costs.

**PORTABLE
RESTROOMS**



While portable restrooms should not be a permanent solution, they may be a good interim option on WMATA property while a long-term solution is explored, as they are easy to install. Challenges with portable restrooms are potential for misuse and lack of accessibility and comfort with using portable restrooms among some operators.

4.0 NEXT STEPS

WMATA is currently exploring potential new structures, or prototypes, at multiple Metrorail stations where there is frequent operator usage when the station is not open. The stations include:

- ▶ Brookland Metrorail station
- ▶ Addison Road Metrorail station
- ▶ Mount Ranier terminal
- ▶ Capitol Heights Metrorail station
- ▶ Congress Heights Metrorail station
- ▶ Deanwood Metrorail station

These six Metrorail stations have been identified as good candidates for a variety of reasons, including:

- ▶ Frequent concerns regarding restroom availability from WMATA Metrobus operators;
- ▶ Stations were affected by reduced Metrorail service hours;
- ▶ Space availability at each station could expedite the planning, design, and construction of a new facility; and
- ▶ WMATA has determined that a new structure is likely the most feasible solution, according to recent assessments

WMATA's upcoming efforts for these locations will include site analysis, prototype development, capital costs analysis, and maintenance cost analysis.

While this effort is underway, WMATA will continue to work with the Committee and WMATA staff to establish and vet restroom solutions at priority locations identified in **Appendix A**. Terminal locations should be prioritized by the number of trips that layover there when a restroom is not available. By providing a restroom at the terminals with the largest number of trips, WMATA can improve workplace conditions for the greatest number of operators.



APPENDIX A

TERMINAL CONDITIONS, NEEDS, AND RECOMMENDATIONS

1.0 OVERVIEW

As part of WMATA's Metrobus Operator Restroom/Break Room Facilities Study (2018), WMATA staff worked with a consultant team to document the status of restrooms at terminals, and identify potential solutions for adequate restroom facilities at high priority terminals. Terminal nodes are general locations in the Metrobus system where there is a short layover opportunity at a bus stop or cluster of bus stops for drivers to take a quick break and use the restroom. There are 282 terminal nodes in the WMATA Metrobus system, with 478 associated bus stops (i.e. stop IDs).

Existing conditions information was collected for terminal nodes from the nine Metrobus divisions via a survey between January and March of 2018. Terminal nodes were grouped into three categories based on the results of the survey.

- ▶ Terminals with restrooms on WMATA property
- ▶ Terminals with restrooms on non-WMATA property
- ▶ Terminals without restrooms

Survey results were vetted by WMATA staff, and a GIS database was developed that documented information about the availability of restrooms at terminals. For terminals with restrooms on WMATA property and non-WMATA property, the database included the restroom address, if the restroom has 24-hour key access, if there is a portable restroom available, the hours of operation of the restroom, and the number of weekly trips when the restroom is not available.

Trips were calculated by querying General Transit Feed Specification (GTFS) data between a Monday and Sunday timeframe in June 2018. The calculation used stop IDs at terminals to count the number of buses that use a stop as a layover when a restroom is closed or not available. Terminals were ranked from the highest number of bus trips to the lowest number of bus trips. Terminals with the highest number of bus trips were identified as having the greatest need for an available restroom, and potential restroom options were recommended. This method provides a snapshot in time and does not reflect service modifications or changes past June 2018.

To aid in locating future potential proximate or walkable restroom solutions, 3 and 5 minute walksheds were generated from the terminal node centroids using ArcGIS's Network Analyst tool, which measures distances along the street network rather than as the crow flies. The terminal node centroids represent the geographic center of the associated StopIDs, and thus the theoretical best location for a restroom location. The walksheds generated from the terminal node centroids, represent a geographic area that is within a 3 or 5 minute walk of all the associated StopIDs. A distance of 825 feet was used to develop 3-minute walksheds and a distance of 1,375 feet was used to develop a 5-minute walkshed based on an average walk speed of 3.1 miles per hour (mph).

The following is an overview of existing conditions within each of the three categories, as well as high priority terminals and potential restroom options.

2.0 TERMINAL NEEDS AND RECOMMENDATIONS

2.1 Terminals with Restrooms on WMATA Property

There are 102 terminals that have a restroom available on WMATA property, which includes Metrorail stations and bus facilities. Fourteen of these terminals at Metrorail stations have 24-hour key access, 10 are located at bus facilities which are available during bus hours of operation, and 34 do not have any layover trips passing through when a restroom is not available.

There are 13 terminals on WMATA property that have a portable restroom, as an interim restroom solution. These locations are:

- | | |
|--------------------------------------|---|
| ▶ Takoma Metrorail Station | ▶ Huntington Metrorail Station |
| ▶ Fort Totten Metrorail Station | ▶ King St-Old Town Metrorail Station |
| ▶ Naylor Road Metrorail Station | ▶ New Carrollton Metrorail Station |
| ▶ Congress Heights Metrorail Station | ▶ Addison Road Metrorail Station |
| ▶ Capitol Heights Metrorail Station | ▶ Shady Grove Metrorail Station |
| ▶ Brookland-CUA Metrorail Station | ▶ Prince George's Plaza Metrorail Station |
| ▶ Deanwood Metrorail Station | |

WMATA also has four break rooms on their property that operators can use. These are located at Brookland, Anacostia, Minnesota Avenue, and Silver Spring Metrorail Stations. In addition, WMATA is looking to add a break room at four potential sites: Dunn Loring, Shady Grove, Pentagon, and Addison Road Metrorail Stations. There is an ongoing Metrorail break room study that is analyzing how to provide a break room at alternating stations, for example, at Vienna, West Falls Church, Ballston, etc.

Below is a list of the top 10 terminals that have a restroom on WMATA property ranked by the number of buses that use the location as a terminal when a restroom is not available. This features bus trips before or after Metrorail hours of operation throughout the week.

TERMINAL NODE	TERMINAL NAME	ROUTES	RESTROOM LOCATION	BUS TRIP COUNTS*	PORTABLE RESTROOM
FTTO	FORT TOTTEN STA	60, 64, 80, E2, E4, F6, K2, K6, K9, R1, R2	FORT TOTTEN METRORAIL STATION	282	YES
9CON	ARCHIVES (9TH & CONS NW)	70, 79	ARCHIVES METRORAIL STATION	221	
CAPH	CAPITOL HEIGHTS STA	96, 97, V2, V4, X9	CAPITOL HEIGHTS METRORAIL STATION	215	YES
BALL	BALLSTON STA	10B, 1A, 1B, 22A, 22B, 22C, 23B, 25B, 2A, 38B	BALLSTON METRORAIL STATION	171	
17&I	FARRAGUT SQ (17TH(E) & I NW)	38B, D5, D6, G8, L2	FARRAGUT WEST METRORAIL STATION	165	
TAKO	TAKOMA STA	52, 54, 59, 62, 63, F1, F2, K2	TAKOMA METRORAIL STATION	164	YES
9THF	9TH ST & F ST	42	GALLERY PLACE METRORAIL STATION	161	
D&7	L'ENFANT PLAZA STA (D&7 SW)	52, 5A, V5	L'ENFANT PLAZA METRORAIL STATION	160	
DEAN	DEANWOOD STA	R12, U7, V14, W4	DEANWOOD METRORAIL STATION	156	YES
BROK	BROOKLAND STA	80, G8, H1, H2, H3, H4, H6, R4	BROOKLAND METRORAIL STATION	150	YES

* Total weekly bus trip counts (not passenger counts) when restroom is not available (June 2018).

**Terminal Nodes in gray are not depicted in the subsequent graphics.

Terminal Node:	:	Terminal Name:	:	Routes:
FTTO	:	FORT TOTTEN STA	:	60, 64, 80, E2, E4, F6, K2, K6, K9, R1, R2
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
Fort Totten	:	Mo-Th: 5:00 am - 11:30 pm	:	
Metrorail Station	:	Fri: 5:00 am - 1:00 am	:	282
		Sat: 7:00 am - 1:00 am		
		Sun: 8:00 am - 11:00 pm		



* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider providing special access to existing WMATA restroom for Metrobus operators to use after Metrorail station is closed.
- Option 2** There is a 7-Eleven that is open 24 hours near the bus loop. There are also nearby apartments buildings that may have a lobby restroom available, for a use agreement.
- Option 3** There is a planned joint development at Fort Totten Metrorail Station which could include a dedicated restroom for WMATA employees.
- Option 4** Analyze space constraints to determine if it is feasible to build a new restroom structure near the bus loop.

Terminal Node:	⋮	Terminal Name:	⋮	Routes:
9CON		ARCHIVES (9th & CONS NW)		70, 79
Current Restroom:	⋮	Hours:	⋮	Bus trips when restroom is not available:
Archives Metrorail Station		Mo-Th: 5:00 am - 11:30 pm		
		Fri: 5:00 am - 1:00 am		221
		Sat: 7:00 am - 1:00 am		
		Sun: 8:00 am - 11:00 pm		

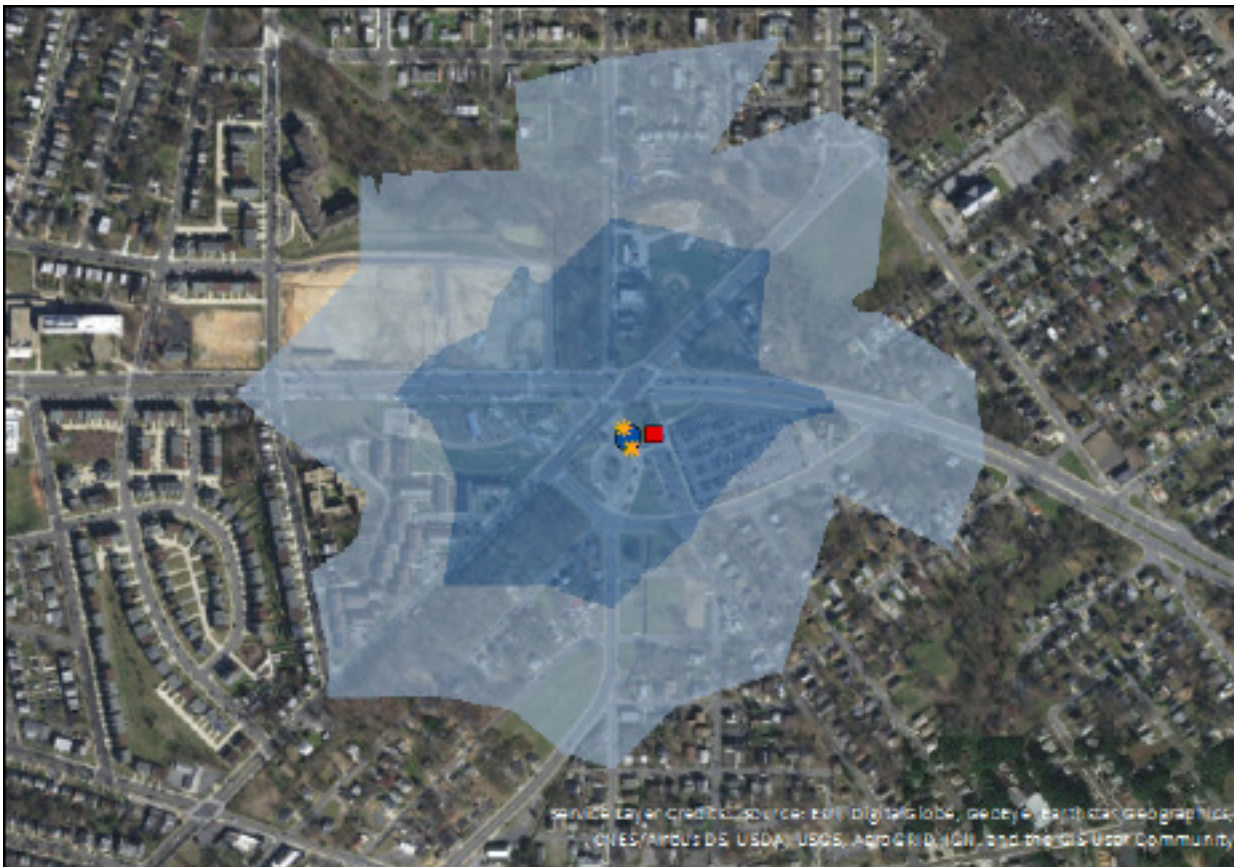


* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider providing special access to existing WMATA restroom for Metrobus operators to use after Metrorail station is closed.
- Option 2** There are some businesses near this terminal which may be available beyond Metrorail hours. A use agreement could be established at one of these locations.
- Option 3** The bus routes that terminate at this location could be assigned a new terminal at WMATA's JGB Building (also serving as a solution for other nearby terminals in the area). Additional operational analysis is needed as modifying bus routes could be costly and impact the route schedule.

Terminal Node:	:	Terminal Name:	:	Routes:
CAPH	:	CAPITOL HEIGHTS STA	:	96, 97, V2, V4, X9
Current Restroom:	:	Hours:	:	Bus trips when
Capitol Heights	:	Mo-Th: 5:00 am - 11:30 pm	:	restroom is not
Metrorail Station	:	Fri: 5:00 am - 1:00 am	:	available:
		Sat: 7:00 am - 1:00 am		215
		Sun: 8:00 am - 11:00 pm		

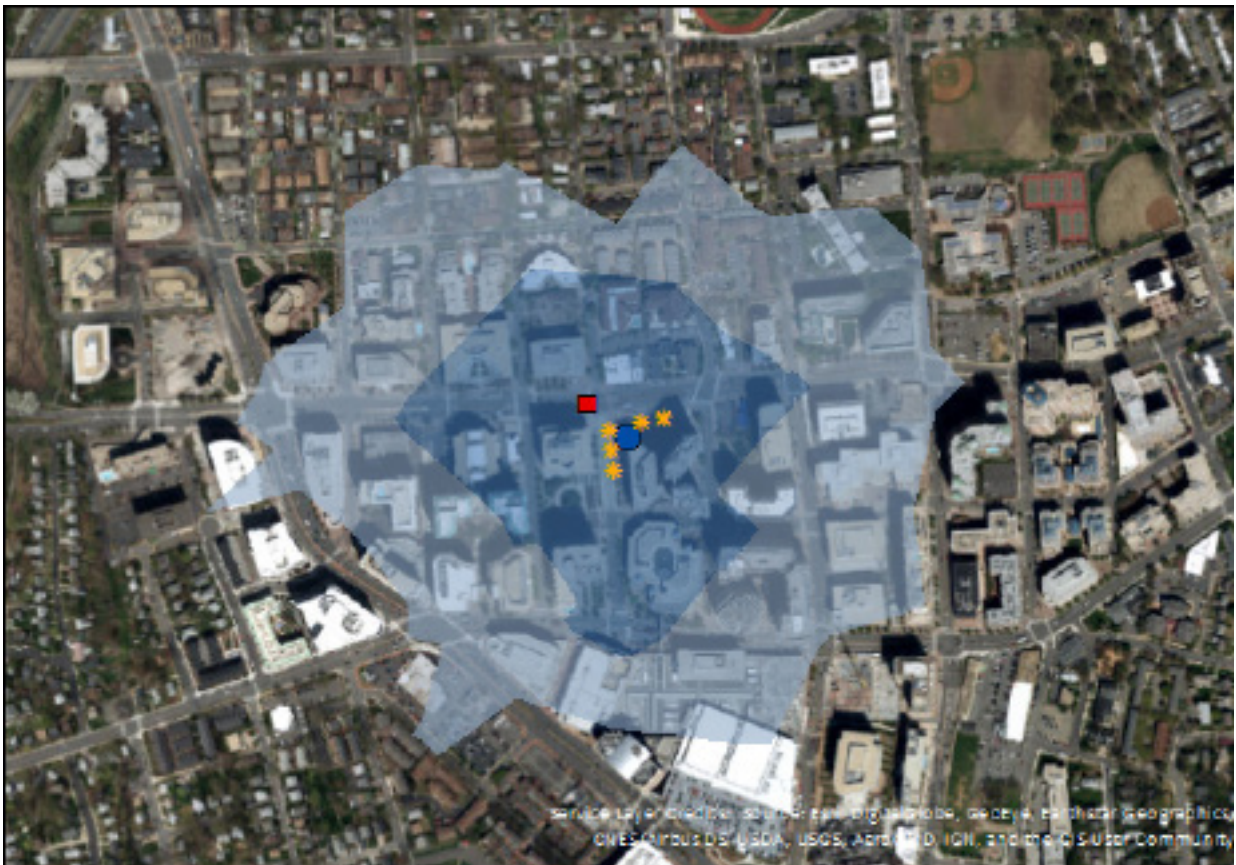


* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider providing special access to existing WMATA restroom for Metrobus operators to use after Metrorail station is closed.
- Option 2** There is a planned joint development at Capitol Heights Metrorail Station which could include a dedicated restroom for WMATA employees.
- Option 3** Analyze space constraints to determine if it is feasible to build a new restroom structure near the bus loop.

Terminal Node:	:	Terminal Name:	:	Routes:
BALL	:	BALLSTON STA	:	10B, 1A, 1B, 22A, 22B, 22C, 23B, 25B, 2A, 38B
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
Ballston Metrorail Station	:	Mo-Th: 5:00 am - 11:30 pm	:	171
		Fri: 5:00 am - 1:00 am		
		Sat: 7:00 am - 1:00 am		
		Sun: 8:00 am - 11:00 pm		

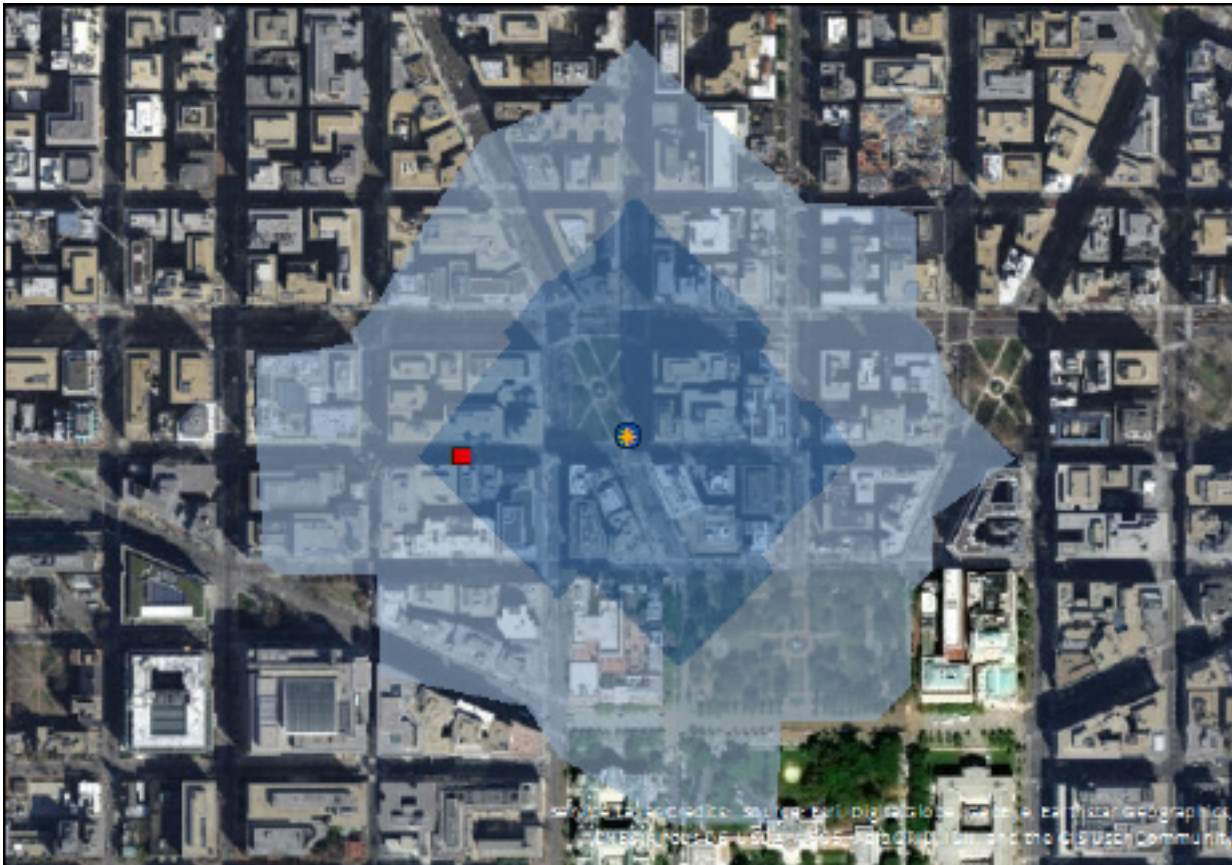


* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider providing special access to existing WMATA restroom for Metrobus operators to use after Metrorail station is closed.
- Option 2** There are several businesses near this terminal which may be available beyond Metrorail hours. A use agreement could be established at one of these locations.
- Option 3** Analyze space constraints to determine if it is feasible to build a new restroom structure near the bus drop-off area. Note that there are plans to reconfigure the current bus drop-off area at Ballston, and build a new plaza.

Terminal Node: 17&I	⋮	Terminal Name: FARRAGUT SQ (17TH(E) & I NW)	⋮	Routes: 38B, D5, D6, G8, L2
Current Restroom: Farragut West Metrorail Station	⋮	Hours: Mo-Th: 5:00 am - 11:30 pm Fri: 5:00 am - 1:00 am Sat: 7:00 am - 1:00 am Sun: 8:00 am - 11:00 pm	⋮	Bus trips when restroom is not available: 165



* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider providing special access to existing WMATA restroom for Metrobus operators to use after Metrorail station is closed.
- Option 2** There are several businesses near this terminal which may be available beyond Metrorail hours, including a 7-Eleven that is open 24 hours. A use agreement could be established at one of these businesses.

2.2 Terminals with Restrooms on Non-WMATA Property

There are 107 terminals that were reported to have a restroom available to drivers on non-WMATA property. As each establishment has their own unique hours of operation, each terminal had to be calculated individually for routes outside the hours of availability for the restroom. Of the 107, 56 terminal locations have a restroom available to them during all current bus operating hours. Informal use agreements for operators to use restrooms that are not on WMATA property were established at three locations including Catholic Charities on New York Avenue NE in the District, George Washington Hospital in the District, and Mt. Rainier City Hall in Maryland. In addition, WMATA has placed a portable restroom at the South Laurel Park & Ride in Maryland as an interim solution.

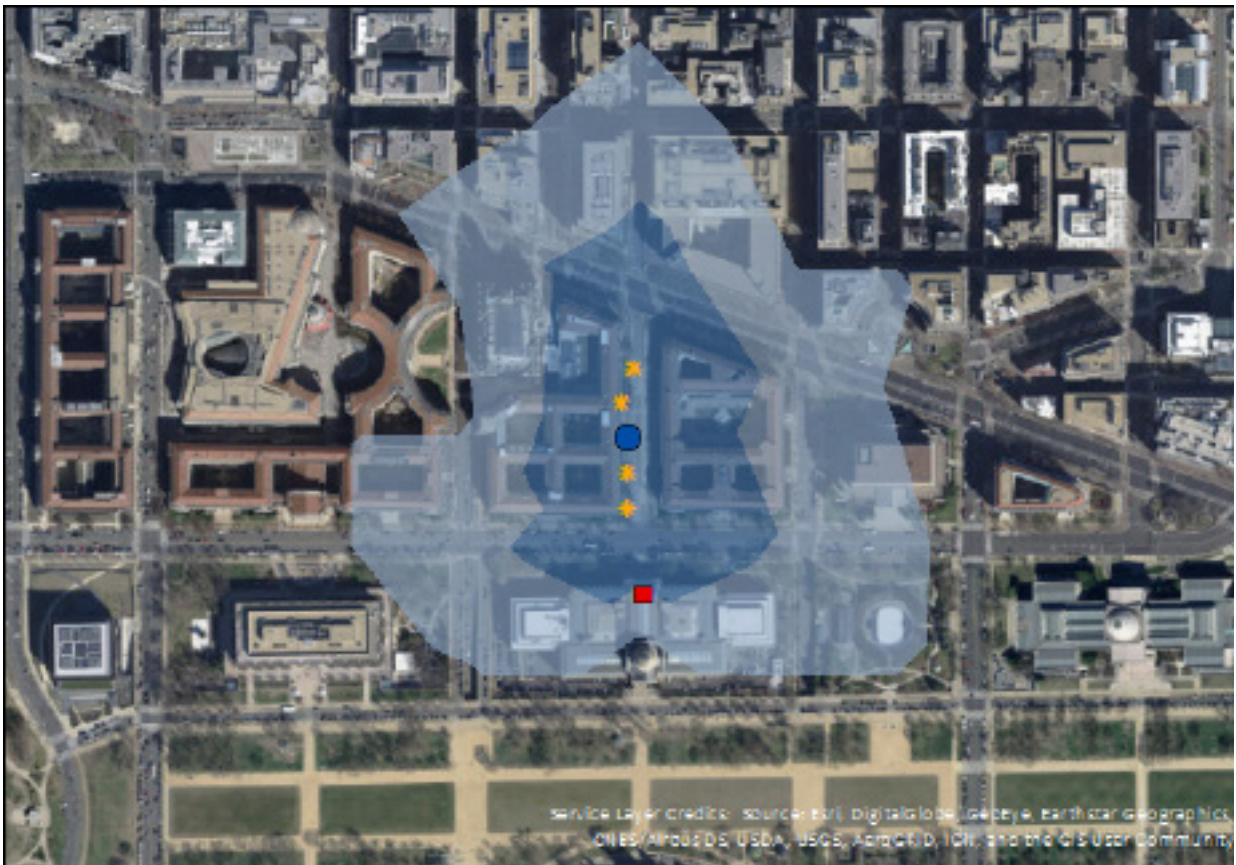
Below is a list of the top 10 terminals that have a restroom on non-WMATA property, ranked by the number of buses that use the location as a terminal when a restroom is not available. This features bus trips before or after the open hours throughout the week.

TERMINAL NODE	TERMINAL NAME	ROUTES	RESTROOM LOCATION	BUS TRIP COUNTS*
10CO	FED. TRIANGLE (10TH-CONS NW)	59, 63, 54, S2, S4	NATURAL HISTORY MUSEUM	1929
GLOV	GLOVER PARK	D2	STODDERT ELEMENTARY SCHOOL	653
SEARS	WHITE OAK S/C & REAR OF SEARS BLDG	K6	SEARS	358
LIQU	LINCOLNIA & QUANTRELL	7A, 7F, 7W	LERNER EXCELSIOR TOWER	347
PONT	S WASHINGTON ST & ALFRED ST	10B, 10E, 11Y	THE THORNTON APARTMENTS	336
21MD	CARVER TERR (21 PL & MD AVE NE)	X8	CARVER TERRACE APARTMENTS LEASING OFFICE	317
MOPL	MT PLEASANT (LAMONT ST NW)	42, 43	ARGYLE CONVENIENT STORE	308
SOTW	SOUTHERN TOWERS	25B, 28A, 7A, 7Y	SOUTHERN TOWERS	305
7CTC	7 CORNERS TRANSIT CTR	3A, 4A, 4B	CHIPOTLE	257
FTLI	FORT LINCOLN DR & PETERSBURG APTS (T)	B8	APARTMENT COMPLEX	240

* Total weekly bus trip counts (not passenger counts) when restroom is not available (June 2018).

**Terminal Nodes in gray are not depicted in the subsequent graphics.

Terminal Node:	⋮	Terminal Name:	⋮	Routes:
10CO	⋮	FED. TRIANGLE (10TH-CONS NW)	⋮	59, 63, 54, S2, S4
Current Restroom:	⋮	Hours:	⋮	Bus trips when restroom is not available:
Natural History Museum	⋮	Mon-Sun: 10:00 am - 5:30 pm	⋮	1,929



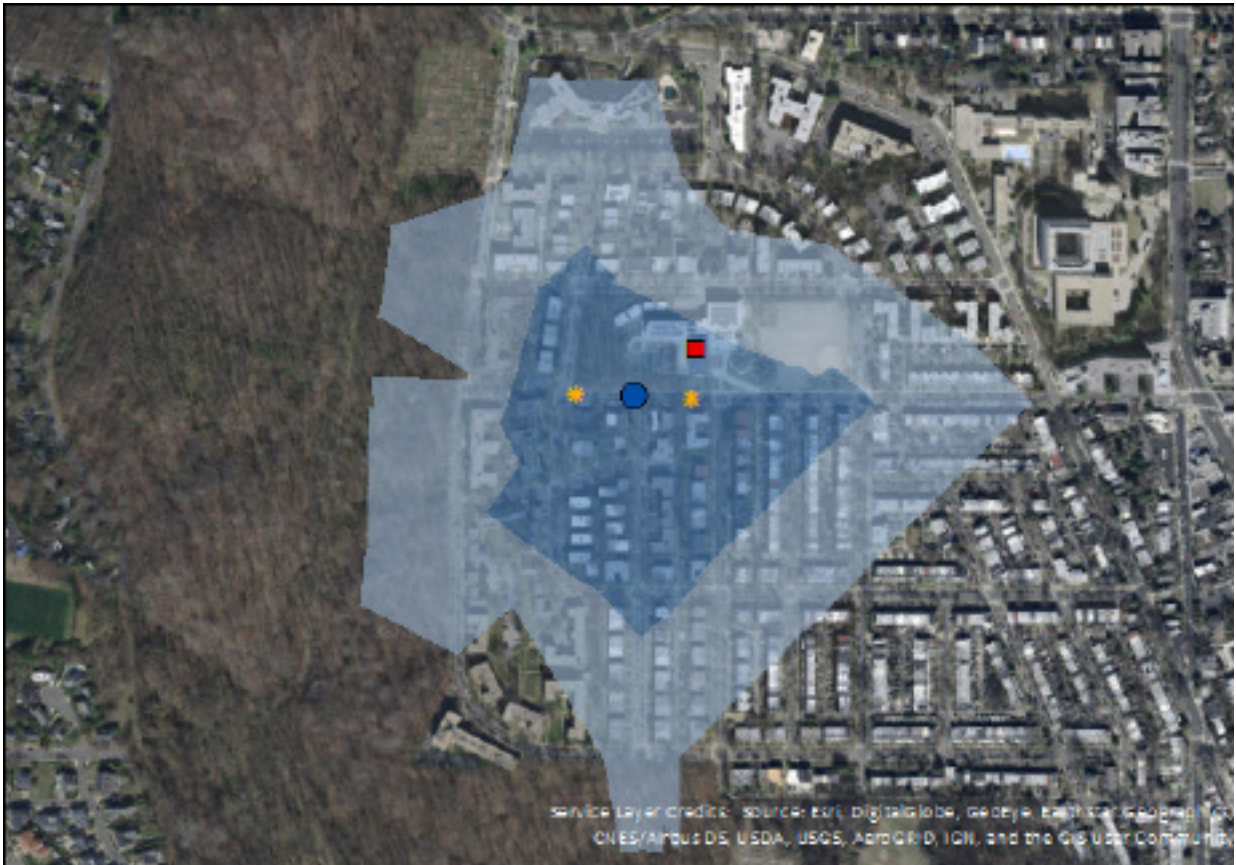
* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

Option 1 There are several businesses near this terminal which may be available in the evening, including the hotel at the Old Post Office building where a use agreement could be established.

Option 2 The bus routes that terminate at this location could be assigned a new terminal at WMATA's JGB Building (also serving as a solution for other nearby terminals in the area). Additional operational analysis is needed as modifying bus routes could be costly and impact the route schedule.

Terminal Node: GLOV	⋮	Terminal Name: GLOVER PARK	⋮	Routes: D2
Current Restroom: Stoddert Elementary School	⋮	Hours: Mo-Fri: 8:45 am - 3:15 pm	⋮	Bus trips when restroom is not available: 653



* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** There are nearby apartments buildings that may have a lobby restroom available for a use agreement.
- Option 2** There are several businesses on Wisconsin Avenue NW, including a Whole Foods, which may be available in the evening. The bus routes that terminate here could be rerouted closer to Wisconsin Avenue NW. Additional operational analysis would be needed as modifying bus routes could be costly and impact the route schedule.

Terminal Node:	:	Terminal Name:	:	Routes:
SEARS	:	WHITE OAK S/C & REAR OF SEARS BLDG	:	K6
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
Sears	:	Mo-Sat: 10:00 am - 9:00 pm Sun: 11:00 am - 7:00 pm	:	358



* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** There are several businesses at Lockwood Drive and New Hampshire Avenue, including a 7-Eleven that is open 24 hours. This would require rerouting. Additional operational analysis would be needed as modifying bus routes could be costly and impact the route schedule.
- Option 2** White Oak is part of a redevelopment plan (White Oak Science Gateway Master Plan) that could potentially include a restroom for WMATA employees.

Terminal Node:	:	Terminal Name:	:	Routes:
LIQU	:	LINCOLNIA & QUANTRELL	:	7A, 7F, 7W
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
Lerner Excelsior Tower	:	Mo-Fri: 9:00 am - 6:00 pm	:	347
		Sat: 9:00 am - 5:00 pm		
		Sun: 12:00 pm - 5:00 pm		



* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider reaching out to Lerner Excelsior Tower apartment complex (or other apartment buildings) for after-hours access to the lobby restroom.
- Option 2** Consider reaching out to nearby businesses to establish a restroom use agreement. There is a 7-Eleven on the edge of the 3-minute walkshed that is open 24 hours.

Terminal Node:	:	Terminal Name:	:	Routes:
PONT	:	S WASHINGTON & ALFRED ST	:	10B, 10E, 11Y
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
The Thornton Apartments	:	Mo, Fri: 9:00 am - 6:00 pm	:	336
		Tu-Th: 10:00 am - 8:00 pm		
		Sat: 10:00 am - 5:00 pm		
		Sun: 12:00 pm - 5:00 pm		



* StopIDs ■ Restroom ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider reaching out to The Thornton Apartments (or other apartment buildings) for after-hours access to the lobby restroom.
- Option 2** There are several businesses nearby that might have longer operating hours. The bus routes that terminate here could be rerouted closer to those businesses. Additional operational analysis would be needed as modifying bus routes could be costly and impact the route schedule

In addition to the priority terminals listed above, the nine terminals below were identified as having a restroom that is greater than a 5-minute walk from the bus stop. Restrooms at these locations are not ideal and may have negative impacts on the schedule. Other restroom alternatives should be explored at these locations.

TERMINAL NODE	TERMINAL NAME	ROUTES	RESTROOM LOCATION	BUS TRIP COUNTS*
GBEL	GRAND PRE & BEL PRE (ASPEN HILL)	L8	WENDY'S	145
GICC	GEORGIA AVE AND ICC P&R	Y7	GIANT	5
BURT	BURTONSVILLE PARK & RIDE	Z6, Z11	BURGER KING	10
ALOB	ALLENTOWN WAY@ OLD BRANCH AVE	D13, D14	ROYAL FARMS	0**
ANSC	16TH ST & R ST X (T)	A31, A32, A33	PREPARATORY SCHOOL FOR EARLY LEARNING	0**
CALV	CALVERTN (PLUM ORCH-BRDBRCH)	R2	MCDONALD'S	0**
COCS	COLUMBIA PK & CARLIN SPR	16G, 16K	SURF "N" SUDS LAUNDROMAT	0**
MCOL	MONTGOMERY COLLEGE	Q2	MONTGOMERY COLLEGE ROCKVILLE CAMPUS	45

* Total weekly bus trip counts (not passenger counts) when restroom is not available (June 2018).

**A zero trip count indicates that there are no trips outside the hours of operation for the restroom location (June 2018).

2.3 Terminals without Restrooms

There are 73 terminals that do not have an identified restroom available. While operators with routes along these terminals can stop mid-route to use the restroom, it is not ideal and can cause delays. Solutions at these terminals are often challenging due to the lack of available existing restrooms near them and might require more intensive solutions.

Below is a list of the top 10 terminals that do not have a restroom, ranked by the number of buses that use the location as a terminal.

TERMINAL NODE	TERMINAL NAME	ROUTES	BUS TRIP COUNTS*	NON-COMMERCIAL AREA
LIVI	LIVINGSTON (4501 3RD ST)	A6, A8, A9	1769	YES
46PL	BENNING HTS (H-46TH PL SE)	U8	1226	YES
USCG	ST ELIZABETHS RD & COAST GUARD HQ BUS BAY D	A4, W5, W9	1090	YES
SDBL	BLADENSBURG & S DAKOTA NE	B8, H6	862	
HALO	HALF & O STS SW	74	808	
ALPA	ALABAMA & PA SE (FFX VIL)	M6	796	
GLCA	CULMORE (GL CA & VISTA)	16B, 16E, 16J, 16P, 16X	758	YES
EACH	EASTERN AVE & CHAPELWOOD LA	U4	742	
33BL	33RD ST & BLAINE ST	U4	732	YES
PAAM	ANNANDALE (PATRIOT & AMER)	16A, 16B, 16E, 3A	704	YES

* Total weekly bus trip counts (not passenger counts) when restroom is not available (June 2018).

**Terminal Nodes in gray are not depicted in the subsequent graphics.

Terminal Node: LIVI	⋮	Terminal Name: LIVINGSTON (4501 3RD ST)	⋮	Routes: A6, A8, A9
Current Restroom: No Restroom	⋮	Hours: n/a	⋮	Bus trips when restroom is not available: 1,769

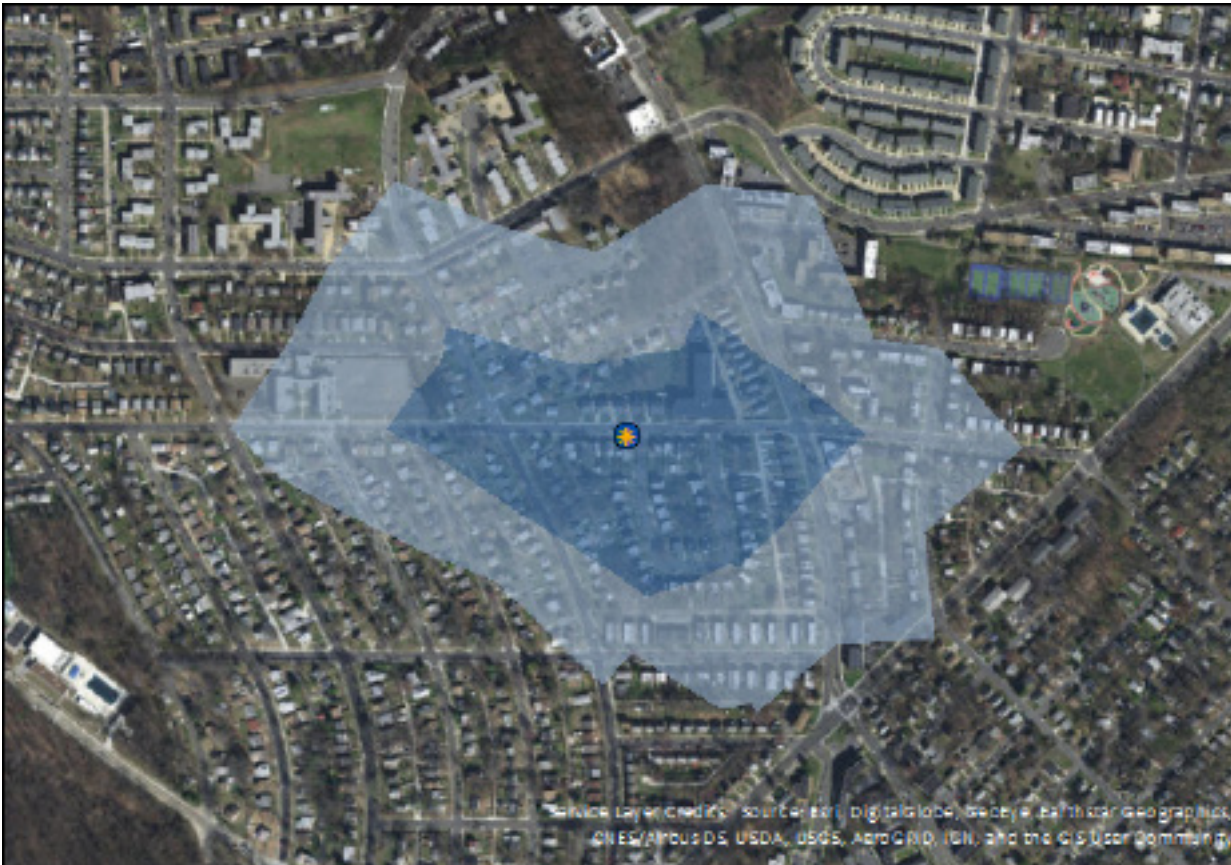


* StopIDs ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** A use agreement could be established with Ingenuity Prep Public Charter School.
- Option 2** There are several businesses at Southern Avenue SE and South Capitol Street, including a 7-Eleven that is open 24 hours. This would require rerouting. Additional operational analysis would be needed as modifying bus routes could be costly and impact the route schedule.

Terminal Node:	:	Terminal Name:	:	Routes:
46PL	:	BENNING HTS (H-46TH PL SE)	:	U8
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
No Restroom	:	n/a	:	1,226



* StopIDs ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** A use agreement could be established with Joseph W. King Senior Center, if a restroom is available in the lobby.
- Option 2** There are several businesses on Benning Road SE, including the Night-Day 24 Hour Food Stop that is open 24 hours. This would require minor relocation of the bus stop.

Terminal Node:	:	Terminal Name:	:	Routes:
USCG	:	ST ELIZABETHS RD & COAST GUARD HQ BUS BAY D	:	A4, W5, W9
Current Restroom:	:	Hours:	:	Bus trips when restroom is not available:
No Restroom	:	n/a	:	1,090

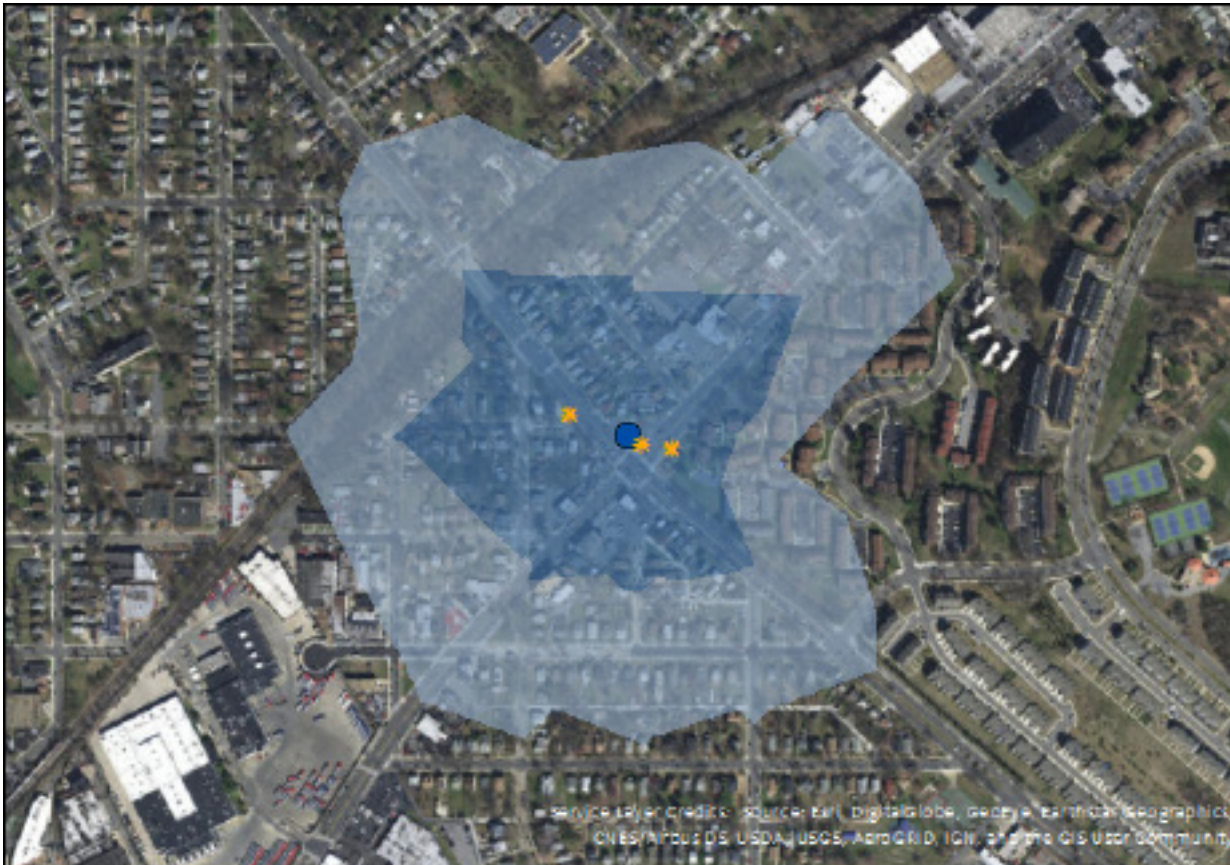


* StopIDs ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** A use agreement could be established with US Coast Guard Headquarters.
- Option 2** Analyze space and ownership constraints to determine if it is feasible to build a new restroom structure near the bus loop.
- Option 3** Bus operators can use the restroom at Anacostia Station, which is the next stop after the Coast Guard.

Terminal Node: SDBL	⋮	Terminal Name: BLADENSBURG & S DAKOTA NE	⋮	Routes: B8, H6
Current Restroom: No Restroom	⋮	Hours: n/a	⋮	Bus trips when restroom is not available: 862

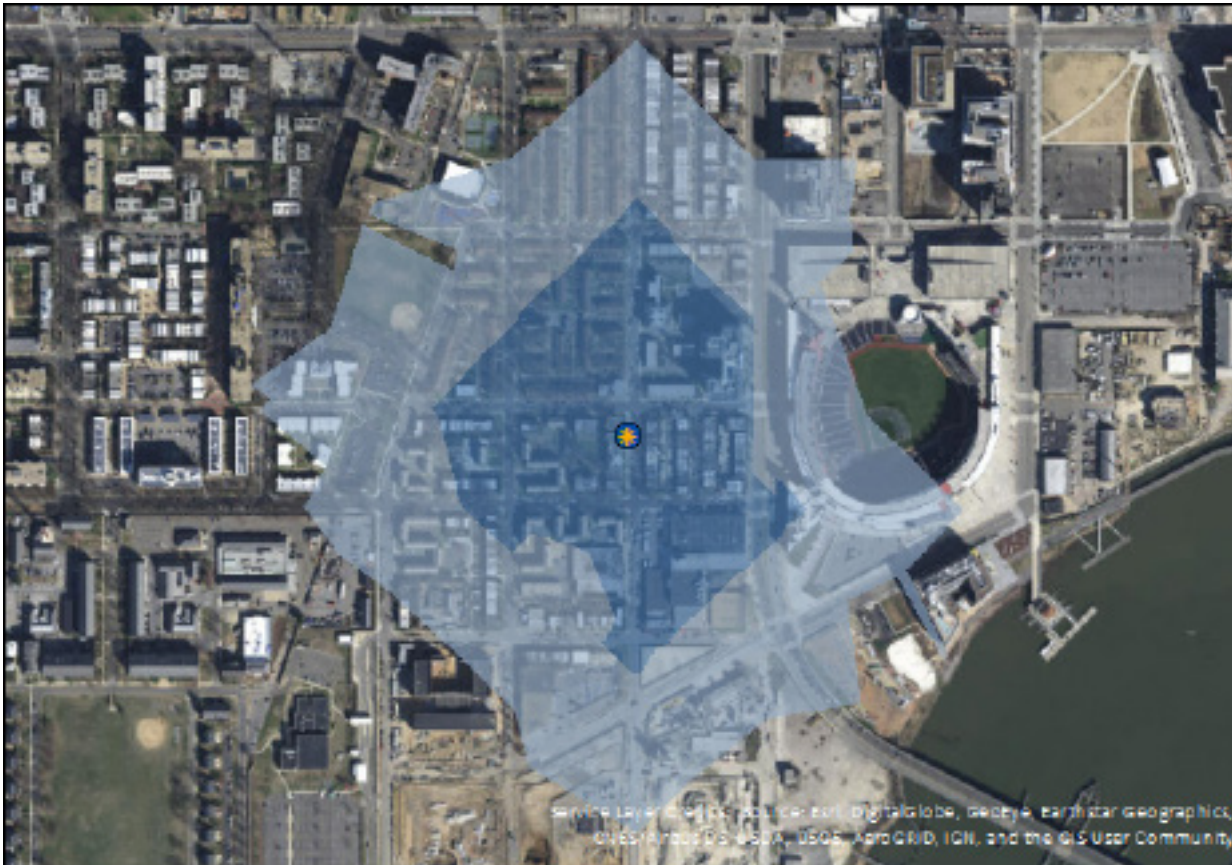


* StopIDs ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** Consider reaching out to nearby businesses to establish a restroom use agreement. There is a nearby 7-Eleven that is open 24 hours.

Terminal Node: HALO	⋮	Terminal Name: HALF & O STS SW	⋮	Routes: 74
Current Restroom: No Restroom	⋮	Hours: n/a	⋮	Bus trips when restroom is not available: 808



* StopIDs ● Terminal Node ■ Terminal Walkshed (3-min) ■ Terminal Walkshed (5-min)

Considerations for Implementation:

- Option 1** There are nearby apartments buildings that may have a lobby restroom available for a use agreement.
- Option 2** Consider new development south of this terminal to determine restroom availability if the route is extended.



APPENDIX B

PROTOTYPES

1.0 OVERVIEW

The WMATA Metrobus Operator Restroom/Break Room Facilities Study (2018) established a toolkit for the design and configuration of restroom facilities that can be adapted to various WMATA stations and sites. This appendix describes the minimum requirements that all restroom facilities must meet in terms of size, functionality, and accessibility. Additionally, this appendix describes several precedents for restroom facilities that have been used around the world, including modular and prefabricated structures that can be built on-site or off-site, facilities that utilize aesthetically appealing – and often bold – design, or eco-friendly structures that minimize water usage. Finally, the Component Library outlines prototypes, potential configurations, and materials that can be used to create an adaptable and affordable restroom/break room facility that fulfills the site-specific needs at any given terminal.

MINIMUM

2.0 REQUIREMENTS & PRECEDENTS

New WMATA-owned prototypes allow for restrooms to be available during Metrobus hours. The following is an overview of the minimum requirements for new restroom facilities and structures, and a variety of precedents for new structures.

2.1 Minimum Requirements and Considerations

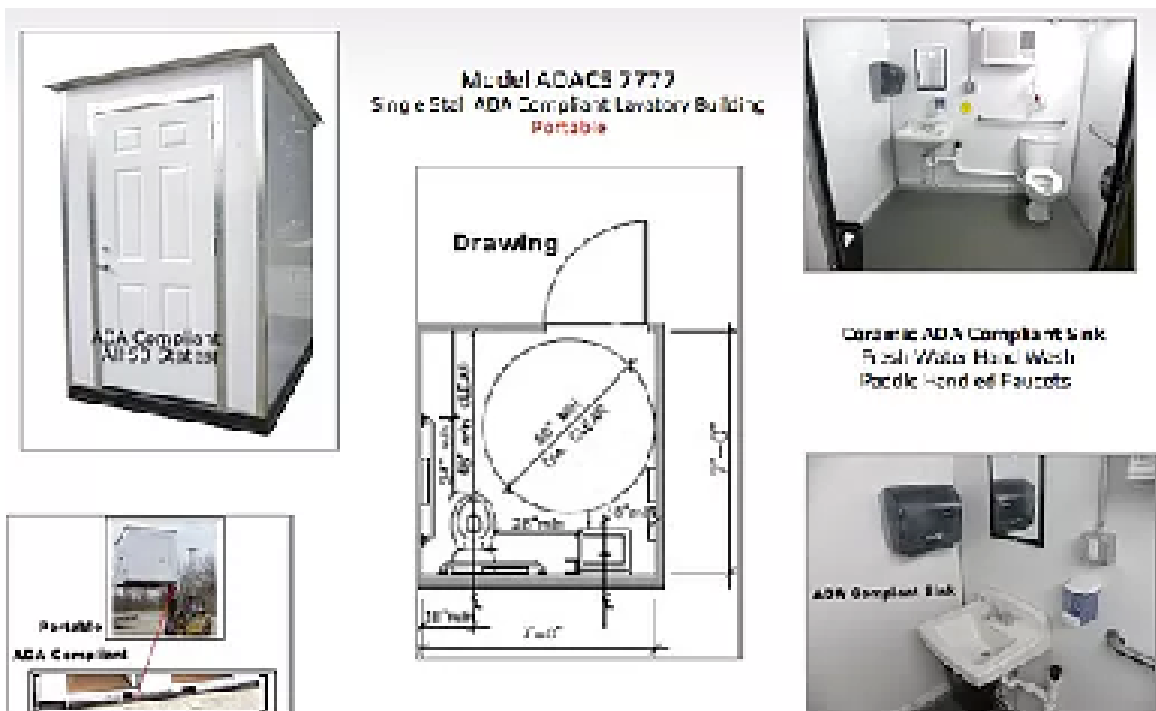
All existing and new restroom facilities must be ADA compliant, and comply with WMATA's facility standards. This metric includes but is not limited to: a 60" diameter free space inside the facility, adequate ramps leading to the facility, and 32-inch wide doors.

Sites for new structures will need to include a water source, a waste removal source, an electric power source, and communication lines for electronic badge access or security monitoring. The water source can range from tying into existing municipal water to installing a refillable water tank. Water disposal can either be a holding tank or a connection to a septic/sewer system. There are also waterless eco-friendly structures that use other methods to obtain and dispose of water.

There are additional considerations related to bus parking and proximity, consistent badge access/technology, safety, security/monitoring of the facility and surrounding area, aesthetics, site and interior lighting, visual privacy, adequate ventilation, and parking and access for maintenance.

2.2 Modular and Prefabricated Structures

There are modular restroom structures that can be installed by crane or built on site. The main advantage of modular restrooms is that they do not require additional design. Prefabricated restrooms only need to be installed, and connected to a water source and waste disposal. In the examples below, DART (Delaware) provided space for a break room as well. The disadvantage of prefabricated structures is that one design may not work for every site. The availability of water and sewage may also be challenging. While costs may vary depending on location, a standard modular restroom structure in San Francisco costs approximately \$170,000 per station to install, plus ongoing maintenance costs.



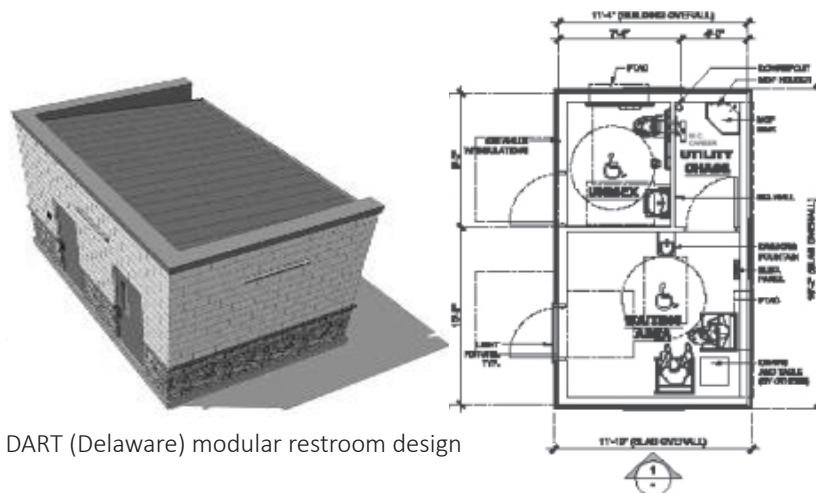
Minimum restroom requirements. Source: handicaptoilet.com



Buffalo, NY bus shelter and restroom



Prefabricated restroom crane installation



DART (Delaware) modular restroom design



Modular connections restroom

2.3 Automated Public Stalls

Some prefabricated structures are automated to require less maintenance. These are often public restrooms, but a badge access lock can be installed to provide access for WMATA staff only. One of the more successful structures of this type is called the Portland Loo. It was originally designed for Portland, OR, but it has been implemented in 11 other states and British Columbia, Canada. It requires water and sewage access, and can be cleaned with a hose installed on the facility itself. The facility is not fully enclosed to allow circulation and easier cleaning. If used in the Washington, D.C. region, it may require an HVAC system. Like with most facilities, there are site-specific challenges and costs that need to be considered. The Portland Loo has an initial cost of \$100,000 and costs approximately \$18,600 per year to clean and maintain.



Portland Loo, modular automated restroom



2.4 Aesthetic Design

Many prefabricated structures feature neutral designs and are not necessarily compatible with their surroundings or institutional branding/aesthetics. There are, however, restroom facilities that have been implemented in Europe with more of an emphasis on design. There is an opportunity for WMATA to design a facility that matches the system's aesthetic. The Daggenham Bus Facility Hub example below, provides space for a break room.



Garmisch-Partenkirchen, Germany



Kassel, Germany



Mehring, Germany



Villingen-Schwenningen, Germany



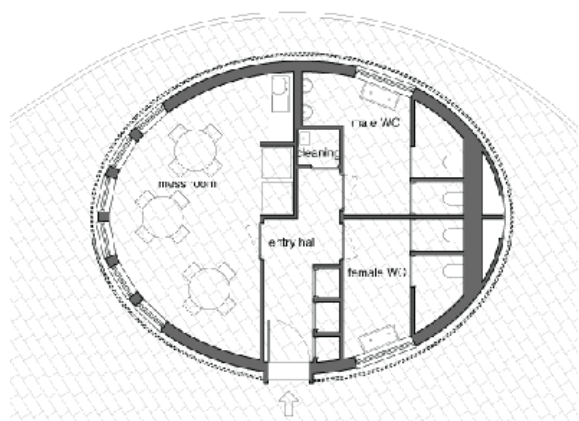
Zurich, Switzerland



Lisbon, Portugal



Daggenham Bus Facility Hub, East London, UK



Daggenham Bus Facility Hub Floor Plan

2.5 Waterless Eco-Friendly Structures

Terminals in locations where it is difficult to access water and sewage may benefit from waterless eco-friendly structures. Many of these facilities are also prefabricated and can be easily installed. These structures often have a holding tank for waste that needs to be emptied periodically and a rainwater collection system to provide running water for flushing and washing. These facilities may require more maintenance than other structures to ensure that the water tank always has an available supply and that the waste tank is emptied periodically.



Prefabricated waterless single restroom



Prefabricated waterless compact restroom



Waterless double restroom with rainwater tank, in Australia

2.6 Facility Retrofits

At sites where there is an existing structure near the terminal location – such as a WMATA parking garage, power station, or maintenance facility – a restroom retrofit might be feasible. In other words, an existing structure can be modified to include a restroom. Public restrooms have been added to existing facilities in several locations including Market Square in Knoxville, TN, and Union Station in Washington, D.C.

The advantage of a retrofit restroom is that it can be a solution for sites where it is challenging to build a new structure. However, there may be obstacles with finding connections to water and sewer. These restrooms will also need to be within a three-minute walk of the terminal location, and employee-only access may be required. MOU's or lease-agreements may need to be developed for retrofits that are not on WMATA owned property.



Market Square Garage, Knoxville, TN



Washington Union Station Bus Terminal

3.0 COMPONENT LIBRARY

WMATA Metrobus operator facilities have various demands for a potentially wide variety of sites. Each facility's capacity and program may differ depending on how busy the station is, and its size and architectural requirements may vary by the shape of the usable land and its surrounding urban context. Understanding this challenge, the following section describes a component system that allows maximum adaptability to each site and still allows for affordability.

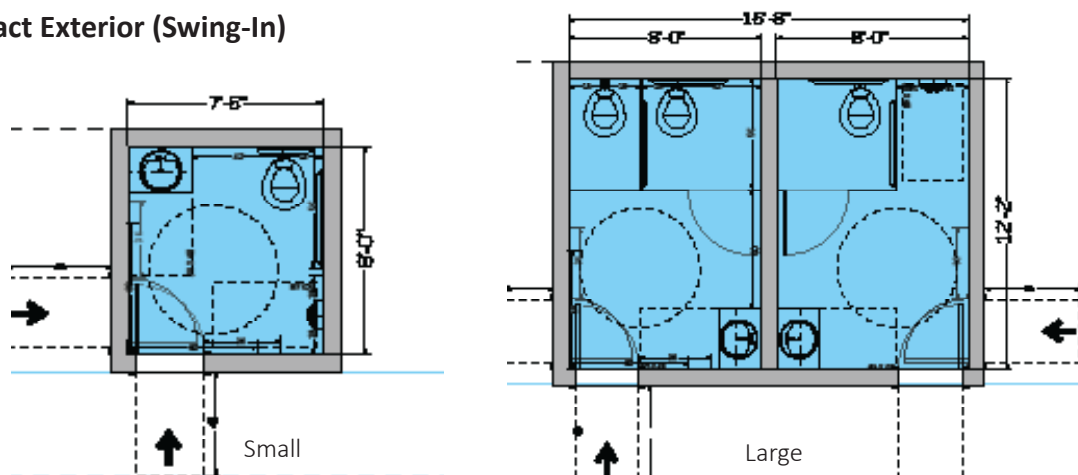
3.1 Overview of Prototypes

The component system is comprised of three parts: restroom, break room, and storage. Each part has two or three prototypes that respond to different capacity needs and have slight variations in size. Prototypes are specifically dimensioned to comply with ADA standards, and also to work well with other modules. The following shows the layouts of the prototypes.

► Restroom

There are two restroom prototypes that vary by size. A small restroom prototype should be unisex, and have a sink, toilet, and urinal. The small restroom prototype can be paired with another small restroom to increase capacity. In contrast, a large restroom prototype should be gendered and should always be paired to in

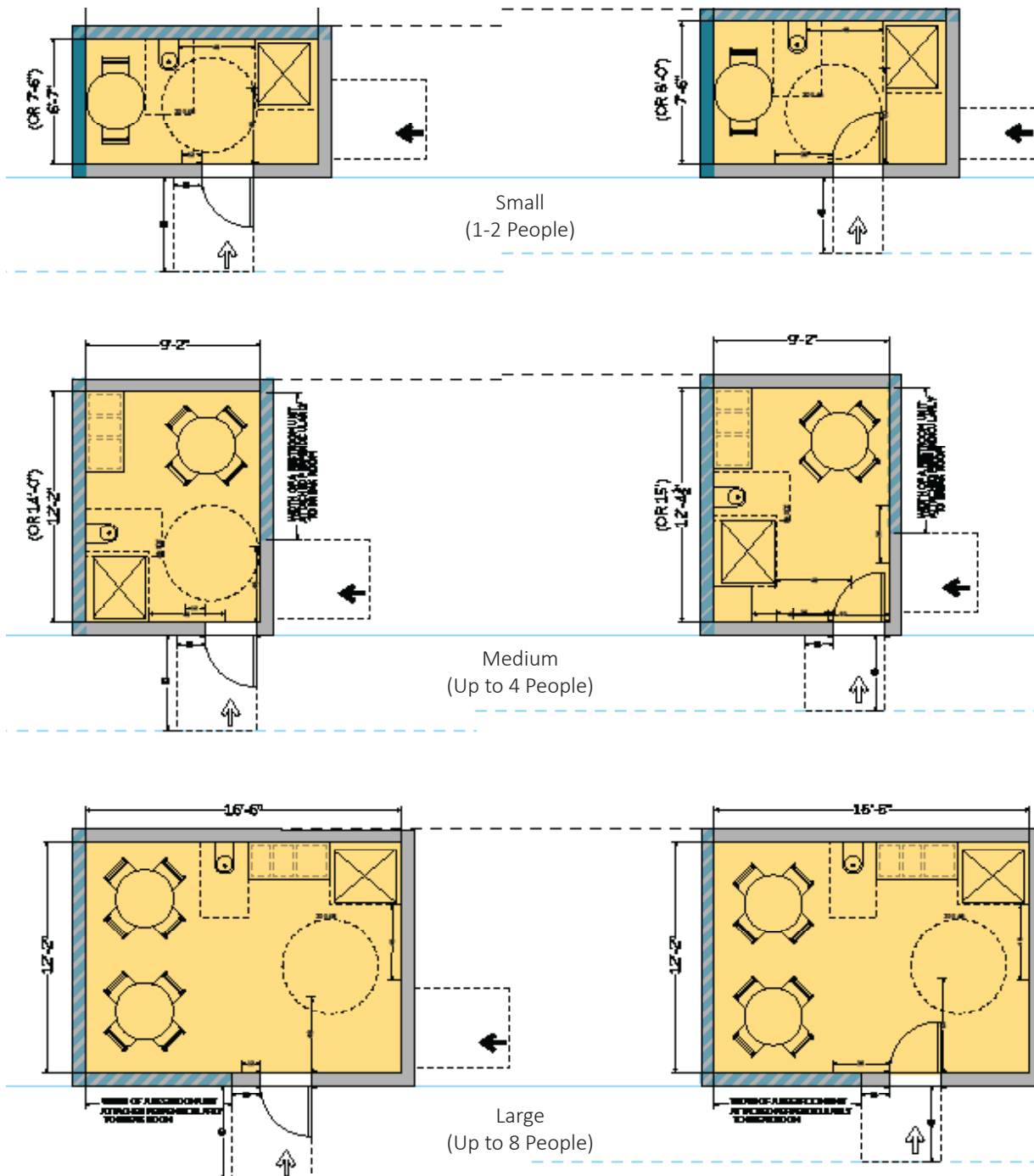
Compact Exterior (Swing-In)



► Break Room

There are three break room prototypes that can accommodate either 1-2 people, up to 4 people, or up to 8 people. Additionally, the entrances to the break rooms can accommodate either a compact interior in which the doors swing outward, or a compact exterior in which the doors swing inward. Each break room should contain tables and chairs, a water fountain, countertops with an optional microwave, and/or a vending machine.

Compact Interior (Swing-Out)

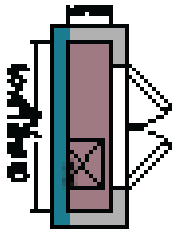


► Storage

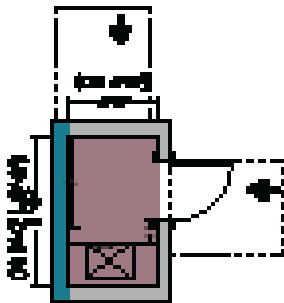
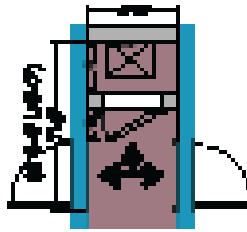
There are three storage prototypes that vary by size. A small storage room is a closet without space for entry, whereas a medium and a large storage room allows for individuals to walk in. While storage is not a primary component for WMATA restrooms, it could be added when there is extra available space or when there is high maintenance demand.

Extensions & Corners

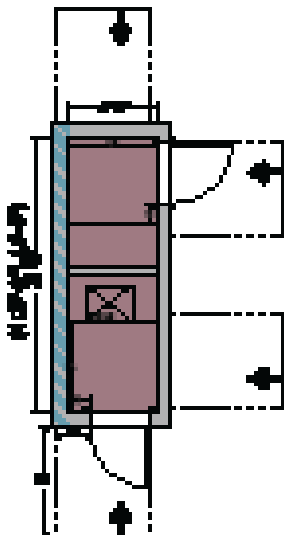
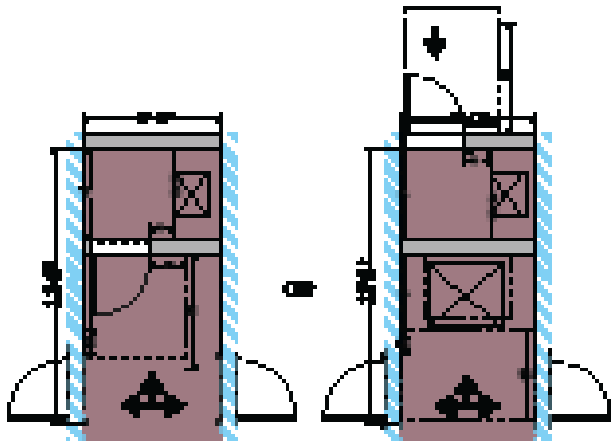
Connectors (with Swing-Out Modules)



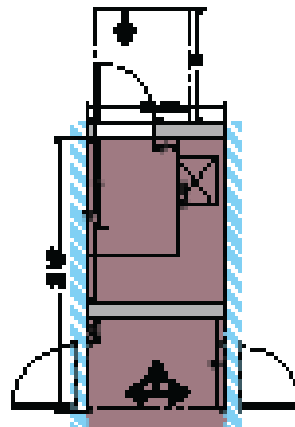
Small
(1-2 People)



Medium
(Up to 4 People)



Large
(Up to 8 People)



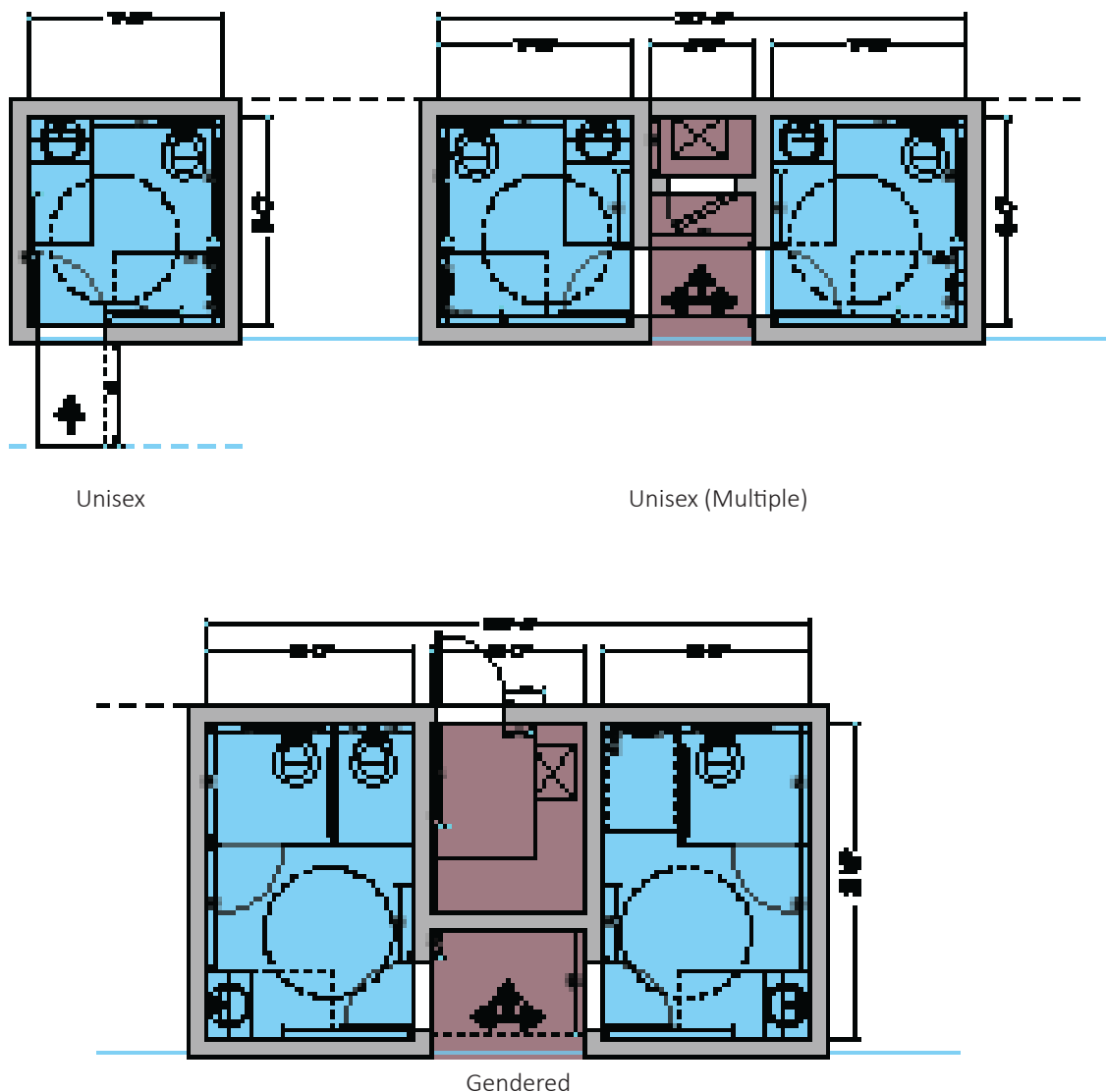
3.2 Overview of Potential Configurations

There are multiple potential configurations for each prototype, including restrooms, restrooms that are combined with break rooms, restrooms that are compatible with parking, and site-specific restroom adaptations.

► Restroom

The following shows the potential configurations for restrooms that are unisex, unisex and paired, and gendered and paired.

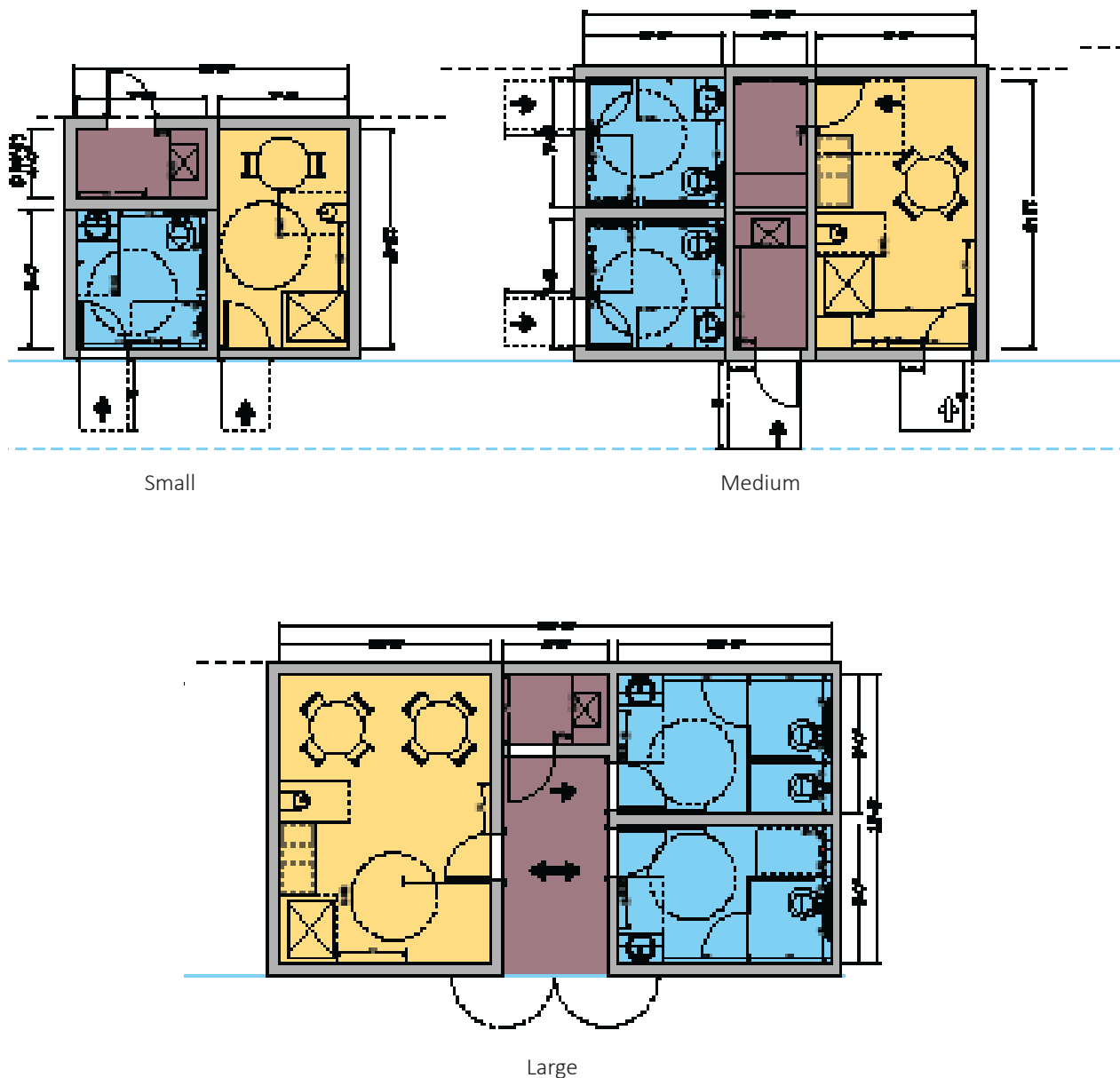
Concentrated Entrance



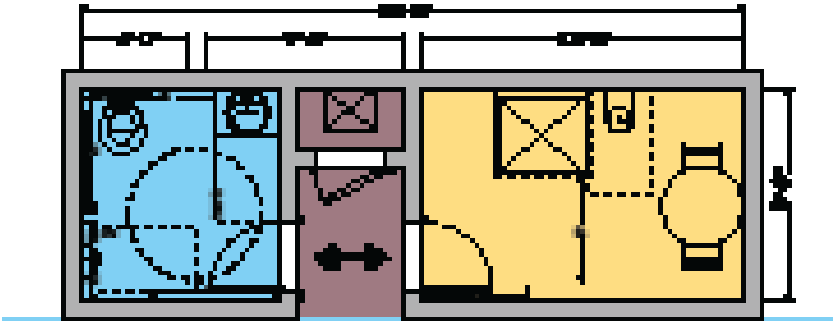
► Restroom/Break Room Combination

The following shows the potential configurations for restrooms that are combined with break rooms. These configurations can accommodate a rectangular site, a linear site, and/or sites that do not need to accommodate storage space.

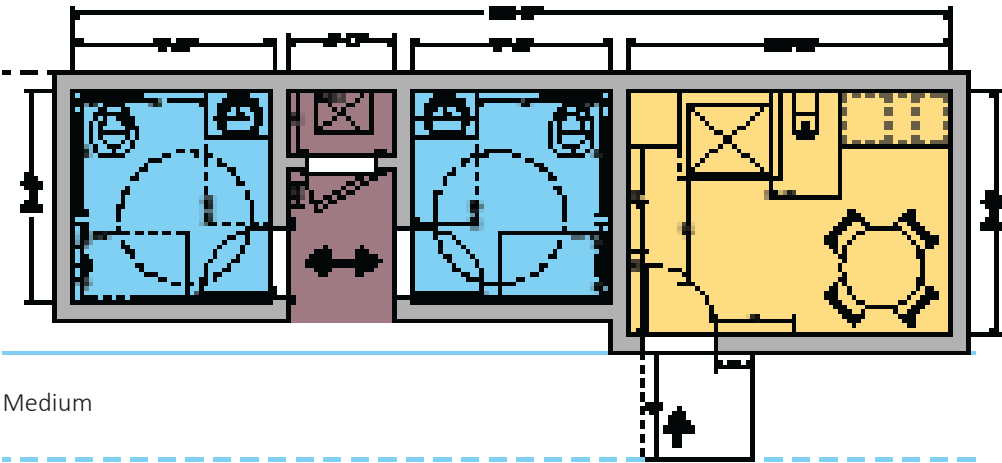
Rectangular Site



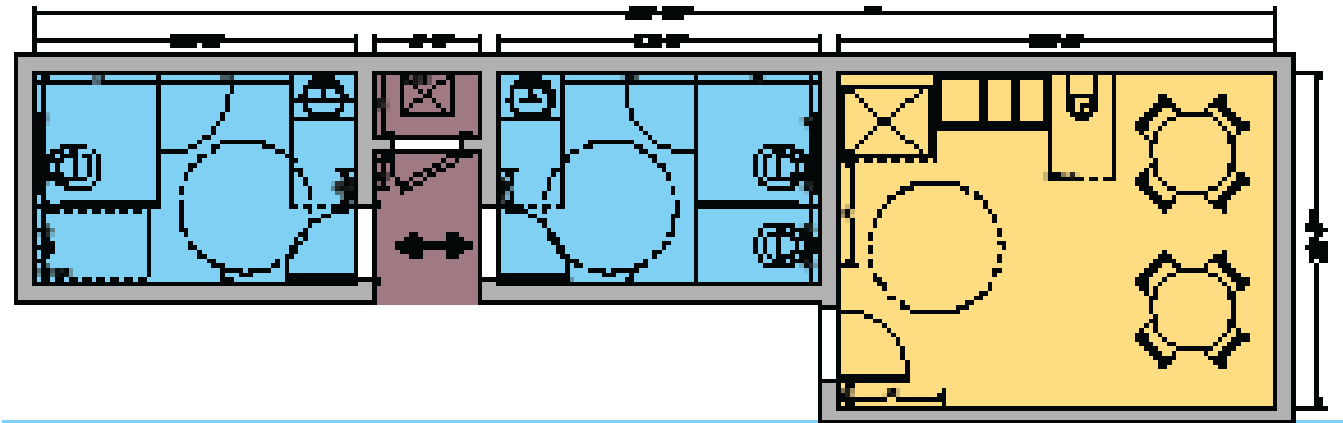
Concentrated Entrance



Small

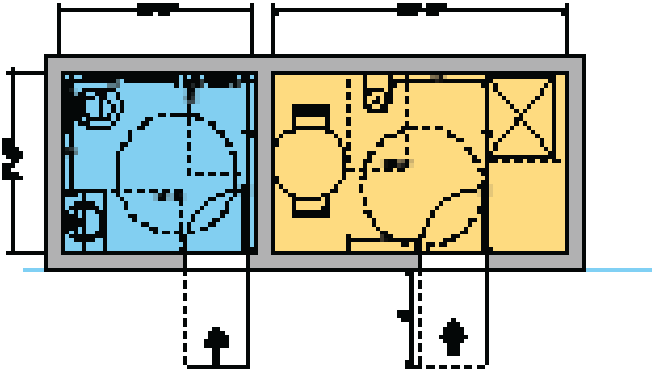


Medium

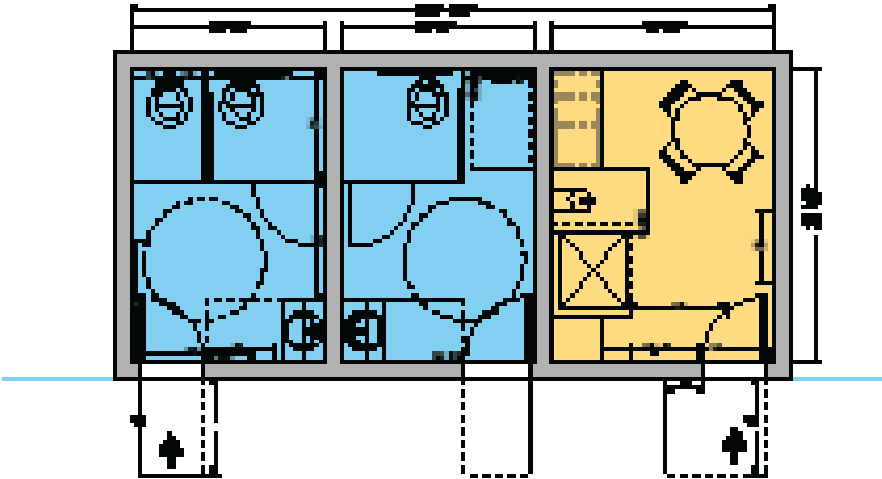


Large

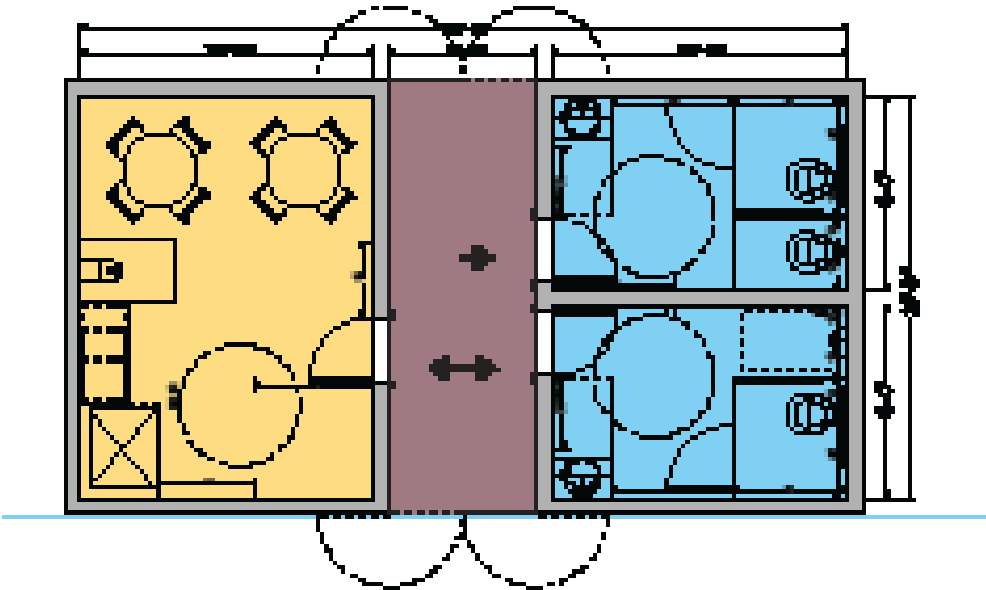
Storage Space in Nearby WMATA Station



Small



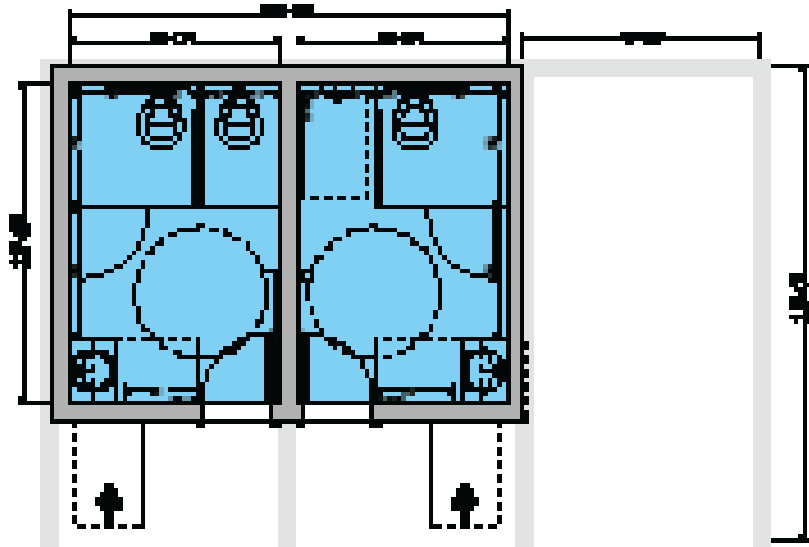
Medium



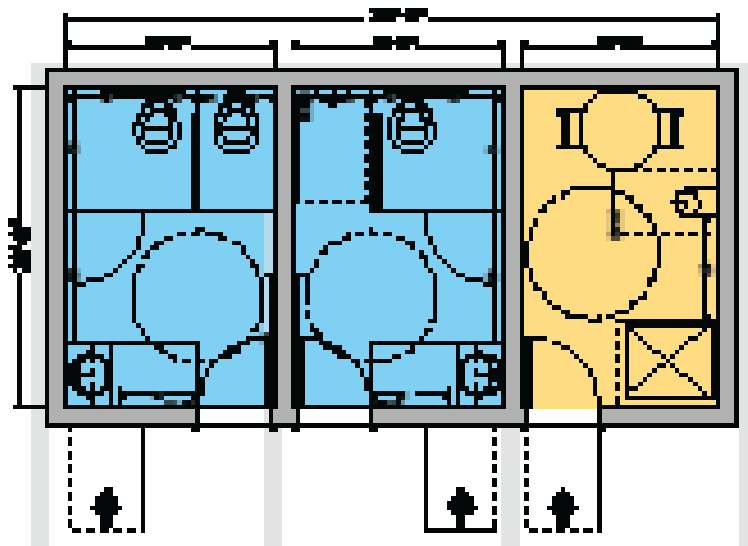
Large

► **Restroom Compatible with Parking**

The following shows the potential configurations for restrooms or restrooms combined with break rooms that are compatible with parking.



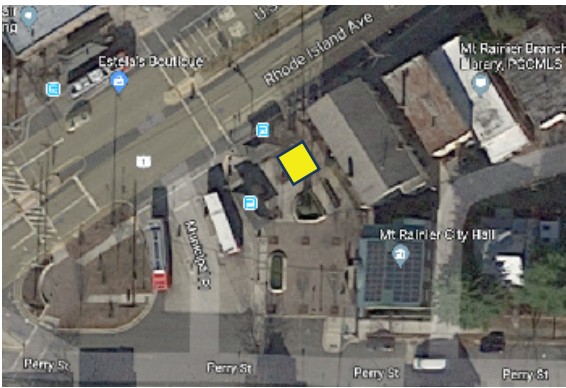
Restroom Only



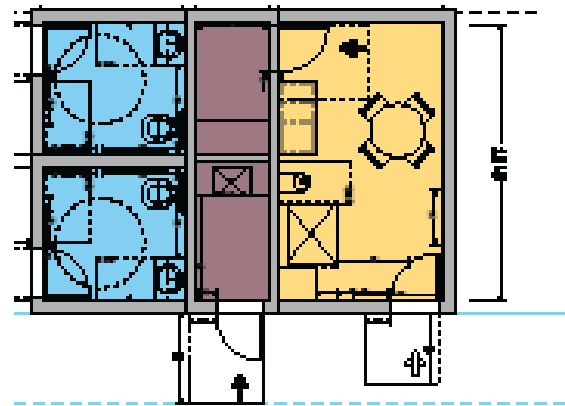
Restroom Break Room Combination

► Site-Specific Adaptation

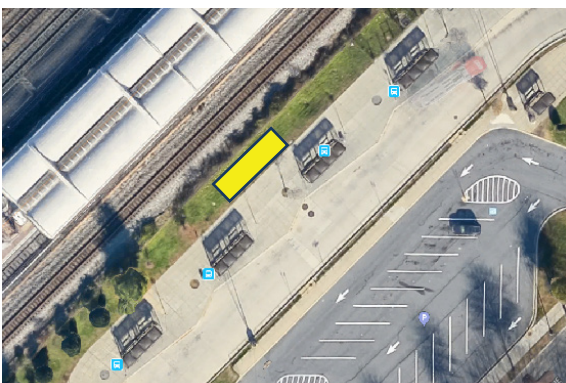
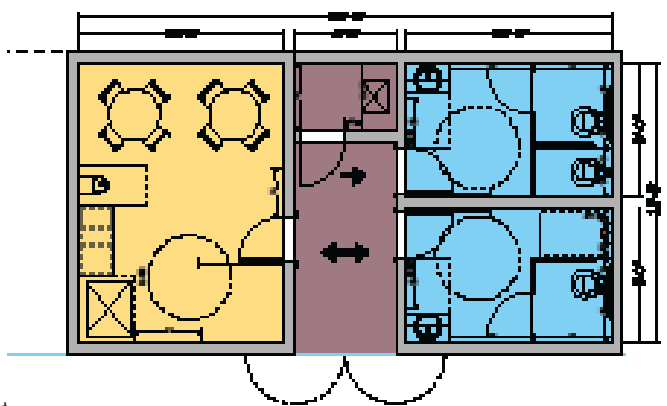
The following shows potential configurations at three WMATA stations that require different site-specific adaptations for restroom facilities. The first example is at the Mount Rainier terminal, which is a tight urban condition. This potential configuration would allow for two unisex restrooms, a medium breakroom, and small to medium storage. The second example is at the Congress Heights Metrorail Station, which is a suburban condition on a rectangular site. This potential configuration would allow for a restroom that is gendered and paired, a large break room, and medium storage. The third example is at the Deanwood Metrorail Station, which is a suburban condition on a linear site. This potential configuration would allow for two unisex restrooms that are paired, a medium break room, and small to medium storage. These three examples demonstrate the adaptability of the potential configurations to any WMATA station site.



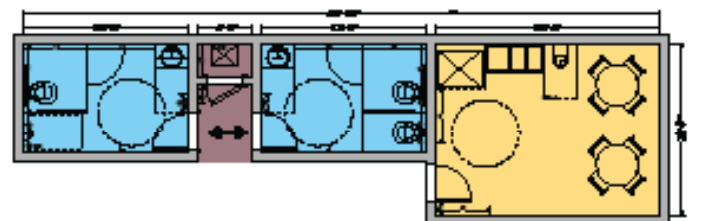
Mount Rainier Terminal- Tight Urban Condition



Congress Heights Metrorail Station- Suburban Condition (Rect

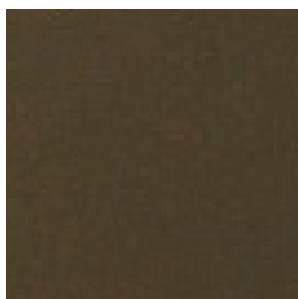
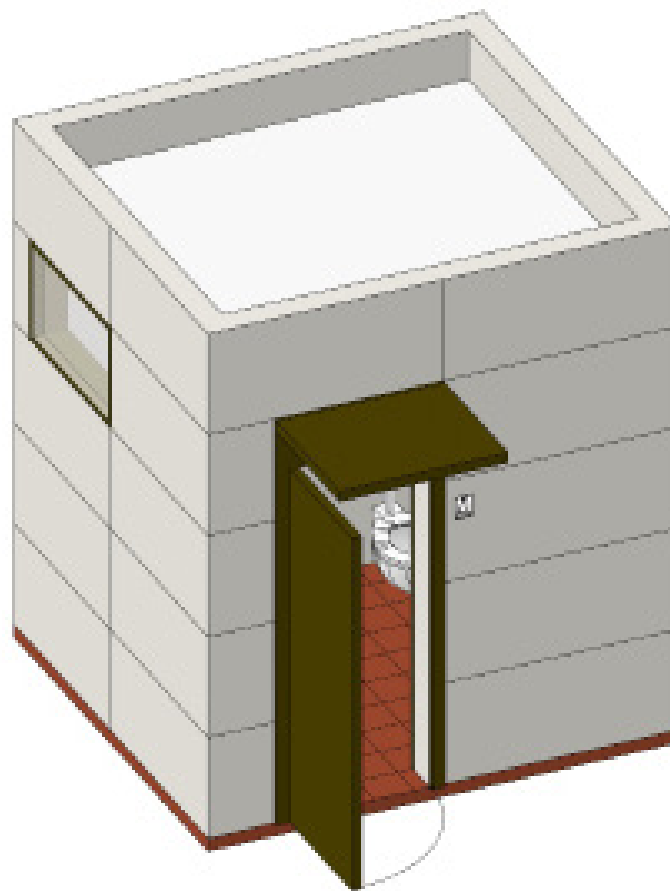


Deanwood Metrorail Station- Suburban Condition (Linear Site)



3.3 Overview of Materials and Finishes

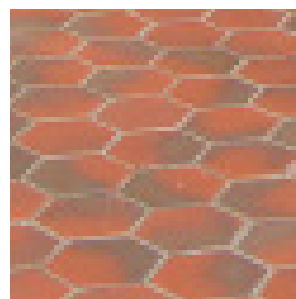
In terms of materials and finishes, the facilities should have a neutral expression, potentially utilizing WMATA's existing material palettes. The facilities should not be designed to grab public attention. The finishes should reflect WMATA's material palettes, and could include metal paneling, precast concrete paneling, and tile, as demonstrated below.



Metal Panel



Precast Concrete Panel



Tile