

Grant Applicant: Washington Metropolitan Area Transit Authority (WMATA)
Proposed Project: Northern Bus Garage
Date: April 1, 2022

**INFORMATION REQUIRED FOR PROBABLE
CATEGORICAL EXCLUSION
(SECTION 771.118(d))**

- A. DETAILED PROJECT DESCRIPTION AND BACKGROUND: See Attachment Part A and Appendix 1.
- B. LOCATION (INCLUDING ADDRESS): See Attachment Part B.
- C. METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY: Project will not affect air quality conformity, see Part C and Appendix 3.
- D. ZONING: No change to zoning will occur, see Part D.
- E. TRAFFIC IMPACTS: Project will not affect traffic, see Attachment Part E.
- F. HOT SPOTS: Project will not affect carbon monoxide or particulate matter hot spots, see Part F and Appendix 4.
- G. CULTURAL RESOURCES: Project will affect cultural resources, see Attachment Part G and Appendices 5, 6 , 7, and 8.
- H. SECTION 4(F) RESOURCES: Project will affect Section 4(f) resources, see Attachment Part H and Appendix 9.
- I. NOISE: No moderate or severe noise impacts are expected to occur due to the proposed Project, see Attachment Part I and Appendix 10.
- J. VIBRATION: No change to operating vibration will occur, see Attachment Part J and Appendix 10.
- K. ACQUISITIONS & RELOCATIONS REQUIRED: No acquisitions or relocations are required, see Attachment Part K.
- L. HAZARDOUS MATERIALS: Project will affect hazardous materials. See Attachment Part L and Appendix 11.
- M. COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE: Project will not have significant effects, see Attachment Part M and Appendix 12.

- N. PUBLIC PARKLAND AND RECREATION AREAS: Project will not impact parks or recreation areas, see Attachment Part N.
- O. IMPACTS ON WETLANDS: Project will not impact wetlands, see Attachment Part O.
- P. FLOODPLAIN IMPACTS: Project will not impact floodplains, see Attachment Part R.
- Q. IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, & COASTAL ZONES: Project will not impact water quality, navigable waterways, or coastal zones. See Attachment Part Q.
- R. IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES: Project will not impact ecologically-sensitive areas or endangered species, see Attachment Part R and Appendix 13.
- S. IMPACTS ON SAFETY AND SECURITY: No change to safety or security will occur, see Attachment Part S.
- T. IMPACTS CAUSED BY CONSTRUCTION: See Attachment Part T.

APPENDIX 1: Figures

APPENDIX 2: Community Engagement Meeting Minutes

APPENDIX 3: TIP Amendment

APPENDIX 4: Air Quality Management

APPENDIX 5: Cultural Resources Correspondence

APPENDIX 6: DC Historic Preservation Review Board Staff Reports

APPENDIX 7: Consulting Parties Report and Meeting Minutes

APPENDIX 8: Section 106 Memorandum of Agreement

APPENDIX 9: Section 4(f) Evaluation

APPENDIX 10: Noise and Vibration Analysis

APPENDIX 11: Hazardous Materials Surveys

APPENDIX 12: Environmental Justice Analysis

APPENDIX 13: U.S. Fish and Wildlife Inventory and Correspondence

**Northern Bus Garage Facility
Documented Categorical Exclusion
Attachment**

A. Detailed Project Description and Background:

Project Description

WMATA plans to replace the existing Northern Bus Garage at 4615 14th Street, NW Washington, DC. Replacement of the existing bus garage is necessary as the existing facility has met its useful life and structural improvements are needed in order to maintain efficient storage/maintenance, replace deteriorating concrete conditions, better accommodate articulated buses, and reduce deadheading (non-revenue service). The existing facility is currently closed. The project is expected to begin in 2022 and be completed by 2026.

WMATA's Board has adopted a goal of transitioning to a fully zero-emission bus fleet by 2045. The project is being designed to be WMATA's first all-electric bus garage, with infrastructure and equipment needed to run 100 percent electric vehicles (EV) at the Northern Bus Garage. However, this document does not assume the implementation of EV buses within the timeframes associated with the demolition, reconstruction, and opening of the bus garage.

The current facility is located on an approximately 5.25-acre site in northwest Washington, DC, and WMATA will rebuild the new facility on the existing, WMATA-owned site. The garage is bounded by 14th Street NW, Buchanan Street NW, Arkansas Avenue NW, and Iowa Avenue NW. The location of the existing facility is shown in **Figure 4** (see **Appendix 1**).

WMATA plans to demolish the existing garage but maintain the building façade (constructed in 1906) along 14th Street NW. The replacement garage would be located entirely within the existing footprint of the current garage. The layout of the existing facility is shown in **Figure 5** (see **Appendix 1**). The storage and maintenance capacity of the replacement garage would be 150 buses which is 25 fewer buses than the current capacity of 175 buses.

The improvements at Northern Bus Garage include the following:

- Reorganize the design and number of maintenance bays and bus storage parking to meet current and future needs;
- Design bus service bays to better accommodate articulated buses serving downtown Washington, DC;
- Construct column spacing to support 14-foot minimum stall width, to allow for more efficient use of garage space;
- Construct service lanes on level surfaces to minimize the risk of rolling buses during refueling and cleaning operations;
- Minimize the number of access points along the perimeter to allow for proper access control to address safety and security concerns;
- Re-design the facility to include counter-clockwise circulation to improve operators' visibility while turning;

- Minimize the number of level changes within bus circulation and parking areas, to support safe and efficient operations; and
- Accommodate the additional equipment that will be needed to support the zero-emission bus fleet including charging stations, overhead layouts for the charging pantographs, and the rooms needed for the additional electric switchgear.

The proposed design would also result in:

- Adequate height clearance for newer diesel buses and future overhead charging for electric buses;
- Modernization of existing garage with natural light and updated equipment;
- Reduction of operating costs through sustainable strategies including a green roof, electric vehicle charging equipment at 10 parking spaces, and a solar array;
- Incorporation of retail element for community integration along 14th Street NW; and
- 100 percent filtered exhaust air, which requires an extensive area of indoor mechanical space.

The upgraded facility would relocate a portion of current employee parking from on-street parking in the surrounding neighborhood to on-site parking. Currently, there are 212 on-site parking spaces for employees and non-revenue vehicles. The proposed project includes 306 onsite parking spaces for employees and non-revenue vehicles—more than is required by DC code—as well as 20 parking spaces for retail employees.

The new facility will continue to provide service such as cleaning (interior and exterior), inspections, fueling and wash, running repairs, parts storage, crew reporting and dispatching, and employee service and welfare areas. However, previous heavy repairs and paint booth services will no longer be conducted at this facility as mitigation stemming from community feedback. The previous project concept is shown in **Figure 6** (see **Appendix 1**) followed by the current detailed project concept in **Figure 7** (see **Appendix 1**). The new facility will accommodate clean diesel, hybrid electric diesel, and zero emission bus technologies.

Project Background

Northern Bus Garage was built in 1906 as a streetcar storage and maintenance facility for the Capital Traction Company. The facility was formerly known as the Capital Traction Company Car Barn or the Decatur Streetcar Barn. In 1926, the basement portion of the barn was leased to the Washington Rapid Transit Company for bus maintenance and storage.

In 1959, the former streetcar storage facility was converted into a bus garage to serve the District's rapidly growing network of bus routes. By 1966, the fully converted bus garage came under ownership of Metro and became known as Northern Bus Garage. After meeting the city's bus storage, maintenance, and transportation needs for over 20 years, the garage underwent major renovations from 1987 to 1992.

The phased renovation included demolition of the original roof, replacement of original wood windows with aluminum windows, addition of rooftop parking, and insertion of a bus entry at the

southern end of the west façade. Additionally, there were many alterations to the administrative offices and the original 1906 building elevations.

The historic 14th Street façade has retained much of its original design despite several renovations over the building's 114-year history. The Northern Bus Garage was listed in the D.C. Inventory of Historic Sites in 2012 and the National Register of Historic Places in 2013.

The planning process for facility upgrades to the Northern Bus Garage began with the 2018 Metrobus Facility Plan. The study reviewed the needs and current capacity constraints of existing bus operating and maintenance facilities, assessed the physical conditions of garages, identified shortcomings, and addressed recommendations for capital improvements. Recommendations addressed short, medium, and long-term investment needs based on projected changes to fleet size, technology, composition, service growth, and plans for structural and/or locational changes to operating divisions. The facility was temporarily closed in 2019 after WMATA determined that existing building conditions posed safety risks to employees.

The proposed project was reviewed by DC Historic Preservation Review Board (HPRB) per the DC Historic Landmark and Historic District Preservation Act of 1978 on May 28, 2020. On September 24, 2020, the project underwent HPRB demolition permit review. This permit was denied and the project was formally referred to the Mayor's Agent. The project team's application for a Limited to Raze Permit was reviewed at the March 26, 2021 Mayor's Agent hearing.

The Mayor's Agent rules on the basis of specific criteria stated in the DC historic preservation law. To approve an application for permit or subdivision, the Mayor's Agent must find that approval was necessary in the public interest or that failure to approve the application would result in unreasonable economic hardship to the owner. The phrase "necessary in the public interest" means consistent with the purposes of the preservation law or necessary to allow the construction of a project of special merit. Special merit means that a project provides significant benefits to the District or to the community by virtue of exemplary architecture, specific features of land planning, or social or other benefits having a high priority for community services. The Mayor's Agent has the final authority to determine what is in the public interest under the DC historic preservation law. On September 17, 2021, the Mayor's Agent determined that WMATA's permit for demolition will be cleared.

Before submitting to the Mayor's Agent, the project team undertook robust community engagement from October to November 2020. Because of the COVID-19 pandemic, community engagement meetings were held virtually. The focus of each meeting is described below:

- Meeting 1 - October 13, 2020: facility redesign, floor plans, and exterior design options;
- Meeting 2 - November 2, 2020: Section 106 Consulting Parties, interim exterior design survey results, and Art in Transit;
- Meeting 3 - November 10, 2020: environmental topics including pollution minimization, site remediation, environmental design, and the agency's overall bus electrification efforts; and
- Meeting 4 - November 17, 2020: final results of the exterior design survey and final design concept presentation.

Community feedback was gathered during each of these meetings and through the exterior design survey which garnered 305 responses. The survey solicited responses to questions including graphics and allowed for open-ended responses. Responses indicated a clear preference for Option Three (of three concepts presented at Community Meeting 1) primarily because of how well that design integrated with the historic façade.

The final updated design for the facility reduced the total size of the facility by approximately 15 percent from original designs by eliminating some building massing (**Figure 1**). It also resulted in an 80 percent reduction in excavation, which eliminated the need for blasting; this will result in less vibration and noise for surrounding residents (**Figure 2**). Further information about excavation is discussed in Section T below.

Figure 1. Reduced Massing (looking northeast along 14th Street)

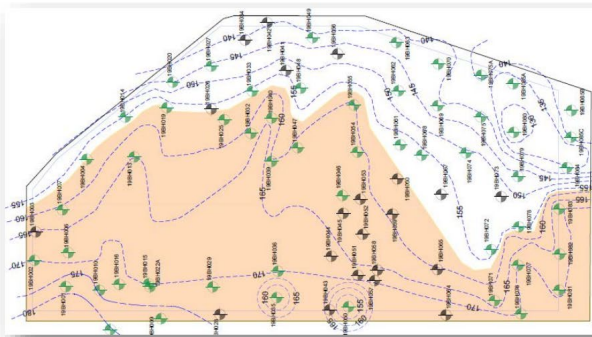


Previous Design

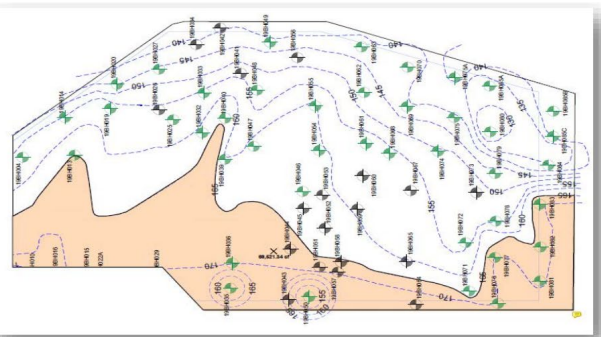


Current Design

Figure 2. Reduced Excavation Requirements



BEFORE:
~161,000 sf



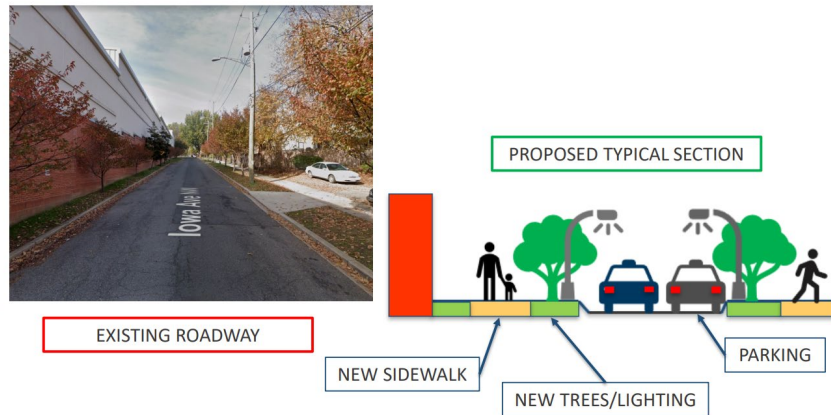
TODAY:
~70,000 sf

Other changes made as a result of community, HPRB, and Mayor's Agent feedback include the following items.

- Incorporated high-performance masonry panels on exterior;
- Additional windows on 14th Street;
- Additional windows on Iowa/Arkansas Avenues;
- Additional brick detailing;

- Reduced height along Iowa Avenue ;
- Incorporated Art in Transit;
- Wider walkway on northern side of facility with enhanced lighting; and
- New walkway on west side of Iowa Avenue (**Figure 3**).

Figure 3. Iowa Avenue Improvements



With community preferences known, the team finalized the updated design and resubmitted to HPRB on November 13, 2020. This final design incorporates both community feedback and HRPB recommendations from the review on May 28, 2020. HPRB reviewed the submission on December 17, 2020 and unanimously approved the updated concept designs. HPRB also made recommendations to improve the design related to the color scheme at building entrances and over garage doors and related to additional elements to help break down the scale of the Arkansas Avenue wall.

Subsequent to the Mayor’s Agent permit application, community engagement continued with two additional meetings, the focus of which are listed below:

- Meeting 5 - March 16, 2021: communication of HPRB feedback on exterior design, the environmental remediation process, and the zero-emission bus program; and
- Meeting 6 - June 15, 2021: changes to the exterior design following the Mayor’s Agent meeting, ongoing environmental work at the site to assess remediation needs, and communication of the construction monitoring process.

Minutes of the six community engagement meetings are provided in **Appendix 2**. A comprehensive list of minimization and mitigation measures as a result of the revisions and community outreach described above is provided in **Table 1** by category.

Table 1. Commitments, Mitigation and Minimization Measures

Category	Commitments, Minimization and Mitigation Measures
Traffic Impacts (Part E)	<ul style="list-style-type: none"> • Number of buses stored and maintained at the garage will be reduced from 175 buses to 150.

	<ul style="list-style-type: none"> On-site parking will be occupied over multiple shifts thus generating a limited amount of traffic at any one time.
Hot Spot Analysis (Part F)	<ul style="list-style-type: none"> Bus entrance/exits equipped with two sets of doors: outer doors are standard garage doors while inner doors are high-speed to prevent air escape. Building will also be negatively-pressured to contain emissions. All interior air treated prior to release via MERV 16 air filtration for particulate matter and chemical bonding scrubbers for gaseous vapors.
Cultural Resources (Part G)	<ul style="list-style-type: none"> Preservation of the administration building and tower in their entirety as well as all frontage along 14th Street NE. Full preservation/restoration conducted on all retained elements including the administration building, tower, arches, arched windows, gable entry, and chimney. Full restoration of the 14th Street NE façade with historically accurate, matching windows but with modern materials. Installation of a new slate roof on the administration building and tower. Repairs to limestone and brick. Use of complementary features in new construction including similar proportions in scale and repetition of elements like windows as well as cantilever rooflines referencing the historic large arch treatments on the administration building and the tower. Reduction in building size (15 percent reduction in total gross square footage). Reduction in massing and height of street-facing facades: <ul style="list-style-type: none"> Design heights lower than historic building. Rear portion of designed building at the same height or lower than existing structure except for mid-block area along Arkansas Avenue NE where car ramp goes to the roof. Use of high-performance masonry panels instead of metal panels. Ensured strong Art in Transit components, with exact form dependent on further development with an artist and the community. Installation of replica streetcar tracks in the area where streetcars used to enter and/or exit the building along 14th Street NW. Development and installation of one to three exterior interpretive signage exhibits and up to five interior interpretive signage exhibits for the building's community room.
Noise (Part I)	<ul style="list-style-type: none"> Rooftop mechanical units completely enclosed by building walls on the west side to reduce noise pollution. On the east side, units will not be internal, but will be located behind a brick screen to reduce noise. Number of buses operated at the garage will be reduced from 175 buses to 150.
Vibration (Part J)	<ul style="list-style-type: none"> Number of buses operated at the garage will be reduced from 175 buses to 150.
Acquisitions and Relocations	<ul style="list-style-type: none"> Designs modified to eliminate the need for temporary easements for installing 'support of excavation' tiebacks under two adjacent residential properties.

Required (Part K)	
Hazardous Materials (Part L)	<ul style="list-style-type: none"> • Elimination of paint and body shop components of garage operations.
Community Disruption and Environmental Justice (Part M)	<ul style="list-style-type: none"> • Elimination of heavy repairs and paint booth facilities and services. • Employee parking provided to eliminate issue of employees parking in the neighborhood. • Bus entrance/exits equipped with high-speed doors and building negatively-pressured to contain emissions. • Maintained same level of shadowing for neighborhood properties as existing building. • Office space for Uptown Main Street. • 27,500 square feet of retail space with preference for neighborhood grocer. • Community room with capacity of up to 150 seating and up to 200 standing with at-grade ADA accessible entrance (no ramp required). • Develop a plan that will ensure continued community involvement and information sharing as the project advances to the demolition and construction phases.
Impacts on Water Quality, Navigable Waterways, and Coastal Zones (Part Q)	<ul style="list-style-type: none"> • Green roof features including both tray boxes and soil-based planting.
Safety and Security (Part S)	<ul style="list-style-type: none"> • MTPD office located at corner of 14th Street NE and Buchanan Street NE for greater community presence. • Addition of more windows on 14th Street NE and Iowa/Arkansas Avenues NE. • Sidewalk added along Iowa Avenue NE. • Sidewalk along northern side of garage building widened and equipped with increased lighting. • Sidewalk along 14th Street NE widened. • Signal at 14th and Decatur Streets reconstructed to improve pedestrian safety.
Construction Impacts (Part T)	<ul style="list-style-type: none"> • Reduction in bedrock removal needs by 80 percent, eliminating the need for bedrock blasting. This avoids both noise and vibration impacts. • Vibration will be monitored via seismographs placed at the perimeter of the project at least 30 days prior to the start of construction to establish a baseline for comparison to construction-related vibration. All properties within 200 feet of the bus facility's property boundary will be offered the opportunity to receive a pre-existing condition survey prior to the start of construction. This survey will cover both the interior and exterior of the property being surveyed. Invitations to property owners will be sent 90 days prior to the start of construction.

B. Location Including Address: The Northern Bus Garage Facility is located at 4615 14th Street NW, Washington DC 20011; as shown in **Figure 4** (see **Appendix 1**).

C. Metropolitan Planning and Air Quality Conformity: Under Title 40, Code of Federal Regulations (CFR), Part 93.126, the project is exempt from the requirements to determine conformity. However, the project is included in the conforming Regional Transportation Improvement Program (TIP) Amendment No. 5857, as shown in **Appendix 3**. Inclusion in the TIP demonstrates conformity with the region's air quality management program and a project cannot be approved to be in the TIP, nor can a project receive federal funds, if it causes the region's air quality to be degraded below existing standards. Because the District of Columbia is not currently a non-attainment area for Carbon Monoxide or Particular Matter 2.5 and 10, project-level air quality conformity requirements do not apply.

D. Zoning: The site is zoned as PDR-1 – Production, Distribution, and Repair, which permits moderate-density commercial and PDR activities employing a large workforce and requiring some heavy machinery under controls that minimize any adverse impacts on adjacent, more restrictive zones. This project will maintain the current zoning designation.

E. Traffic Impacts: This project is not anticipated to create unacceptable conditions on the regional roadway network. The number of buses stored and maintained at the garage will be reduced from 175 buses to 150 buses, thus reducing bus travel on the surrounding road network. Employee arrivals and departures are broadly dispersed throughout the day and evening. As a result, traffic from the proposed employee parking would have a negligible impact on nearby intersections.

Traffic volumes on the adjoining street network are relatively low and can readily accommodate the bus and employee traffic associated with the facility without creating unacceptable conditions. In 2018, the Average Annual Daily Volume on 14th Street NE adjacent to Northern Bus Garage was approximately 11,000 vehicles per day.¹ The volume on Buchanan Street NE was approximately 1,000 vehicles per day.

Currently, there are 212 on-site parking spaces for employees and non-revenue vehicles. The proposed project includes 306 onsite parking spaces for employees and non-revenue vehicles as well as 20 parking spaces for retail employees. The 326 parking spaces would be occupied over multiple shifts. This would result in only a limited amount of traffic being generated by the parking at any time.

Generally, the maximum acceptable conditions capacity for urban streets is based on intersection capacity. Based on DDOT Signal Optimization Synchro files using 2019 traffic counts, the Highway Capacity Manual Existing Conditions Level of Service (LOS) for the 14th Street NE and Buchanan Street NE intersection is shown in **Table 2**. The existing conditions are LOS A in the AM Peak Period and LOS B in the PM Peak. Since bus and employee traffic is distributed throughout the day rather than during peak periods, conditions are not anticipated to degrade to an unacceptable LOS E or F.

¹https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/TrafficVolumes_2018.pdf

Table 2 – Existing LOS at 14th Street and Buchanan Street NE

Period	Average Delay (seconds)	Level of Service
AM Peak	6.4	A
PM Peak	11.4	B

F. Hot Spot Analyses: The District of Columbia is in attainment for the National Ambient Air Quality Standards (NAAQS) for SO₂, NO₂, Lead, Carbon Monoxide (CO) and Particulate Matter (PM) 2.5 and PM₁₀. A hot-spot analysis estimates how the proposed project might influence local pollutant concentrations of CO, PM_{2.5}, and PM₁₀, as well as how the estimated condition compares to NAAQS. EPA’s conformity regulations only require hot-spot analyses for certain projects located in nonattainment or maintenance areas for PM_{2.5}, PM₁₀, and CO. See 40 CFR Part 93.116. Because this project is entirely located in areas that are in attainment for CO, PM_{2.5}, or PM₁₀, hot-spot analysis is not required. See **Appendix 4** for additional information on air quality management measures at the proposed facility.

Original facility designs included full interior air filtration prior to release; however, to mitigate community concerns, the air filtration system was upgraded from minimum efficiency reporting value (MERV) 14 to MERV 16 filtration. MERV 16 is the highest level residential/commercial filter available. MERV is an industry standard rating that indicates the worst-case performance of the filter in terms of preventing pollutants from passing through. Performance must meet this minimum and can be better in usage. MERV 16 filtration will prevent the release of 95 percent of all pollutants, including 95 percent of the smallest/most harmful particle sizes of 0.3 – 1.0 micrometers. These particles include dust, pollen, mold spores, bacteria, auto fumes, pet dander, coal dust, and more. This change from MERV 14 to MERV 16 filtration will increase the effectiveness of filtration at the facility as shown in the last row of **Table 3**.

Table 3. MERV 14 and 16 Effectiveness Comparison

MERV	Percent efficiency per micrometer particle size		
	0.3-1.0	1.0-3.0	3.0-10.0
14	75%	90%	95%
16	95%	95%	95%
Increase	20%	5%	0%

In addition, bus entrance and exits will be equipped with two sets of doors: outer doors will be standard garage doors while inner doors will be high-speed to prevent air escape. Building will also be negatively-pressured to contain emissions.

G. Cultural Resources: The Northern Bus Garage was constructed by the Capital Traction Company in 1906 as a car barn for storage and maintenance of street cars. The streetcar facility was commonly referred to as the Capital Traction Company Car Barn or the Decatur Street Car Barn. The car barn is listed in the National Register of Historic Places (NRHP; NR#13000290, listed May 22, 2013). The period of significance for the NRHP listing is 1906 – 1959, the end date marking the conversion of the building from a streetcar facility to a bus garage. It is also a landmark listed in the DC Inventory of Historic Places.

Since 1959, the facility has undergone significant modifications and additions to function as a bus garage. Only the two-story office building, three-story tower and front façade of the original building along 14th Street NW have not undergone significant changes. The proposed demolition and new construction would not significantly alter the original façade of the car barn and would be compatible with the historic nature of the structure. However, the designated boundary for the NRHP-listed property extends beyond these components.

WMATA's proposed replacement of the Northern Bus Garage is funded with federal money from the Federal Transit Administration (FTA), requiring compliance with Section 106 of the National Historic Preservation Act in accordance with the procedures found in 36 CFR Part 800, as amended. FTA initiated a Section 106 consultation with the District of Columbia State Historic Preservation Office (DC SHPO) on April 16, 2019 (see **Appendix 5**).

An analysis to identify cultural resources within the project's Area of Potential Effects (APE) was undertaken in consultation with the DC SHPO. The APE for historic resources includes all areas directly or indirectly affected by the proposed project. Direct impacts include physical, visual or auditory changes to the historic property or its setting directly resulting from the project, while indirect impacts may occur at a later time or farther removed in distance.

The APE for archaeology includes all areas of anticipated project-related ground disturbance (e.g., excavation, grading, cutting and filling, and utility installation activities as well as activities undertaken during construction that may result in unintentional soil compaction, erosion, or other disturbance). The Archaeological APE is confined to the footprint of any sub-grade disturbance. According to the WMATA's Section 106 consultation report, locations of planned sub-grade activities have been previously disturbed, and therefore, no archaeological resources are present within the APE.

The DC SHPO responded with preliminary concurrence with the APE and noted that the entire building, not just the 14th Street NW façade, is listed in the NRHP and is a designated DC Historic Landmark. The remainder of the historic APE, built as an early twentieth century streetcar suburb, does not demonstrate the level of historical or architectural significance requisite to meet the NRHP Criteria for eligibility.

A site visit consultation and inspection of the facility to assess remaining historic fabric resulted in the FTA and the DC SHPO informally agreeing that the undertaking would result in an adverse effect. The DC SHPO formally noted the project will have an adverse effect on historic properties due to the demolition of portions of the historic building in May 2019 (see **Appendix 5**).

The DC SHPO requested development of future plans to include the identification of all fabric dating from the period of significance (1906-1959) and an analysis of the potential to include and preserve historic fabric in the design that is in addition to the façade. They further suggested that opportunities to restore historic fabric be identified.

In its Section 106 Consultation Report (**Appendix 5**) FTA formally made a preliminary adverse effect determination since the project will preserve the 14th Street façade of the building but will

demolish much of the property and construct a new bus barn, which is not consistent with the Secretary's Standards for the Treatment of Historic Properties (SOI Standards) 36 CFR part 68 (NPS). The FTA notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect in July of 2019 and invited them to participate in continuing consultation. ACHP declined to participate.

The project consultant's Secretary of the Interior-qualified professionals completed site visits and research on the history and development of the Northern Bus Garage and identified the extant historic fabric of the building. The resulting report also discusses options for preservation of historic materials in addition to the 14th Street NW façade, and identified areas that have been altered and could be restored. The *Historic Fabric Analysis* report, which was used to inform the project design and minimization of effects, is included in the *Consulting Parties Report* provided in **Appendix 7**.

As part of the initiation of consultation, notification letters (dated April 19, 2019) were sent to organizations that were considered potential consulting parties due to their interest in the preservation of historic properties. Notification of the project and basic project description was provided, along with the concept site plan with draft APE determination. Recipients included the National Capital Planning Commission, the DC Preservation League and the Advisory Neighborhood Commission, ANC-4C. These parties were asked to comment on the undertaking's potential to effect historic properties. No responses or comments were received.

As part of the Section 106 process, WMATA conducted public outreach and received two requests from community groups (i.e., 16th Street Neighborhood Association and the Uptown Main Street organization) for consulting party status, which were granted. The consulting parties and the public were invited to provide comment at the Advisory Neighborhood Commission (ANC 4C) meetings and at a meeting of the DC Historic Preservation Review Board (DC HRPB) (see May 28, 2020 HPRB Staff Report in **Appendix 6**).

Consulting parties were provided the opportunity to review and comment on the property's significance and the undertaking's effects on the historic Northern Bus Garage and consider what may be commensurate mitigation for the adverse effects (see July 29, 2021 Consulting Party Meeting Minutes in **Appendix 7**).

Through consultation with the consulting parties, design minimized effects to the historic property but was not able to avoid adverse effects, as the majority of the property will be demolished and a new facility constructed within the NRHP boundary. Therefore, additional measures were identified in consultation with the consulting parties to mitigate the adverse effects to the NRHP-listed Capital Traction Company Car Barn. FTA executed a Memorandum of Agreement (MOA) with DC SHPO and WMATA, including the following measures (see **Appendix 8**):

- Analysis and documentation of historic fabric;
- Restoration of the primary Fourteenth Street elevation;
- Replacement of the non-historic roofing materials for the Car Barn with historically appropriate materials;

- Replacement of non-historic windows of the Car Barn with historically more appropriate windows and materials;
- Design of the newly constructed wings to be compatible with the historic building by echoing the horizontal belt courses and rhythm of its windows, and by employing materials that are similar in color and texture to the stone details of the streetcar barn;
- Setbacks for newly constructed wings to accent the historic building;
- Installation of replica streetcar tracks in the area where streetcars used to enter and/or exit the building along 14th Street NW; and
- Development and installation of one to three exterior interpretive signage exhibits and up to five interior interpretive signage exhibits for the building's community room.

In addition, as a result of the design review process the following measures were incorporated into the project:

- Repairs to limestone and brick;
- Use of complementary features in new construction including similar proportions in scale and repetition of elements like windows as well as cantilever rooflines referencing the historic large arch treatments on the administration building and the tower;
- Reduction in building size (15 percent reduction in total gross square footage);
- Reduction in massing and height of street-facing facades:
 - Design heights lower than historic building and
 - Rear portion of designed building at the same height or lower than existing structure except for mid-block area along Arkansas Avenue NE where car ramp goes to the roof;
- Use of high-performance masonry panels instead of metal panels; and
- Ensured strong Art in Transit components, with exact form dependent on further development with an artist and the community.

H. Section 4(f) Resources

As noted in **Appendix 9**, the Preferred Alternative for the WMATA Northern Bus Garage Renovation Project would result in the use of the following Section 4(f) property:

- The Capital Traction Company Car Barn

The project will not result in the use (including constructive or de minimis) of any other Section 4(f) properties.

WMATA considered alternatives that completely avoid a “use” of Section 4(f) properties. WMATA has conducted analysis to identify potential feasible and prudent avoidance alternatives. Three such potential alternatives were identified:

1. No Action Alternative (the no-build alternative);
2. Relocating Northern Bus Garage to the grounds of Walter Reed Army Medical Center; and
3. Relocating Northern Bus Garage to the grounds of the Armed Forces Retirement Home.

The No Action Alternative, which would involve the continuation of re-routing of bus service to other bus facilities, would not result in a use of any Section 4(f) properties, including the Capital Traction Company Car Barn, which would be retained in its current state. The No Action Alternative would not provide any necessary changes to the Northern Bus Garage needed to accommodate bus capacity improvements nor improve the physical and environmental conditions of the building. Thus, the No Action Alternative will not meet any aspect of the project's needs. Continuing to re-distribute bus service previously housed at Northern Bus Garage to other WMATA bus divisions rather than rehabilitating and reopening Northern Bus Garage at its current location would require the continued extended travel distance for approximately two dozen bus routes each day (entailing hundreds of bus trips throughout the day) through dense, residential neighborhoods, leading to potentially severe noise, traffic congestion, and vibration. Moreover, this location would severely limit the ability of WMATA to implement electric bus service, given the need for a location for battery recharging near the destinations being served. Thus, because the No Action Alternative would cause severe social, economic, environmental impacts; would result in unacceptable operational problems; and would not meet any aspect of the project's needs, it cannot be identified as a feasible and prudent avoidance alternative.

Relocating Northern Bus Garage to the Walter Reed Army Medical Center site rather than rehabilitating and reopening it would also require the continued extended travel distance for approximately two dozen bus routes each day (entailing hundreds of bus trips throughout the day) through dense, residential neighborhoods, leading to potentially severe noise, traffic congestion, and vibration. Moreover, this location would severely limit the ability of WMATA to implement electric bus service, given the need for a location for battery recharging near the destinations being served. The 2018 Metrobus Facilities Plan confirmed that the location and capacity of the Northern Bus Garage relate directly to the operation of major bus lines that serve high-capacity downtown bus routes, particularly the 50s line, which operates along Fourteenth Street. Relocating these operations away at a great distance would result in exactly the type of "unacceptable . . . operational problems" envisioned by the Section 4(f) regulation, given the buses it serves from high demand routes in central DC. The 2015 Metrobus Facilities Plan Study estimated that relocating facility operations to this site would also increase annual operating costs by 47%, proving too expensive to operate, especially when multiplied over decades of anticipated service.

Thus, because the Walter Reed Army Medical Center alternative would cause severe social, economic, environmental impacts; would cause severe disruption to established communities; would create severe disproportionate impacts to a low-income population; would result in unacceptable operational problems; and would result in additional maintenance and operational costs of an extraordinary magnitude, this alternative would not be a feasible and prudent avoidance alternative.

Although the Armed Forces Retirement Home site is listed as a historic district on the NRHP, there are a number of non-contributing structures along the western edge of the site. Demolition of several of those structures would provide sufficient space for a new bus facility.

As with the Walter Reed Army Medical Center Avoidance Alternative, however, relocating Northern Bus Garage to the Armed Forces Retirement Home site rather than rehabilitating and reopening it at its current location would also require the continued extended travel distance for approximately two dozen bus routes each day (entailing hundreds of bus trips throughout the day) through dense, residential neighborhoods, leading to potentially severe noise, traffic congestion, and vibration. Moreover, this location would severely limit the ability of WMATA to

implement electric bus service, given the need for a location for battery recharging near the destinations being served. The 2018 Metrobus Facilities Plan confirmed that the location and capacity of the Northern Bus Garage relate directly to the operation of major bus lines that serve high-capacity downtown bus routes, particularly the 50s line, which operates along Fourteenth Street. Relocating these operations away at a great distance would result in exactly the type of “unacceptable . . . operational problems” envisioned by the Section 4(f) regulation, given the buses it serves from high demand routes in central DC. The 2015 Metrobus Facilities Plan Study estimated that relocating facility operations to this site would also increase annual operating costs by 30%, proving too expensive to operate, especially when multiplied over decades of anticipated service.

Thus, because the Armed Forces Retirement Home site alternative would cause severe social, economic, environmental impacts; would result in unacceptable operational problems; and would result in additional maintenance and operational costs of an extraordinary magnitude, this alternative would not be a feasible and prudent avoidance alternative.

As described in **Appendix 9**, there is no prudent or feasible avoidance alternative to the use of the Capital Traction Company Car Barn. WMATA will minimize and mitigate the harm to the Section 4(f) property through implementing the measures of the Section 106 MOA included in **Appendix 8**. The U.S. Department of the Interior reviewed the Northern Bus Garage Draft Section 4(f) Evaluation and concurred that there is no prudent or feasible avoidance alternative to the use of the Capital Traction Company Car Barn site (see **Appendix 9**).

I. Noise: As shown in **Appendix 10**, no moderate or severe noise impacts are expected to occur due to the proposed Project. The noise assessment compared the noise conditions from 2018, when the facility last operated at peak capacity, to predicted noise conditions upon reopening in 2026. As the facility is currently non-operational, existing noise conditions are assumed to be the ambient noise conditions as measured in the field (December 2021) combined with the noise contributions from busses and automobiles traveling to and from the bus facility when the facility was last at peak operational status (June 2018). This approach was utilized in order to best represent the ambient conditions during the peak operational period, prior to the facility being closed, and to improve the accuracy of the noise and vibration impact determination.

The proposed project would slightly decrease the bus capacity of the facility compared to the 2018 operational conditions. In addition, rooftop mechanical units will be completely enclosed by building walls on the west side to reduce noise pollution. On the east side, the units will not be internal, but will be located behind a brick screen to reduce noise.

A general assessment was conducted in accordance with the FTA Noise and Vibration Manual, finding that noise levels are not expected to increase at nearby receptors. Due to the decreased bus capacity and facility usage, noise levels would decrease by up to 0.3 dBA at some of the closest receptors. Maximum existing and future noise levels would remain at 67.3 dBA (Ldn).

J. Vibration: The number of buses operating from the facility will be reduced by 14 percent from 175 buses to 150 buses. The project involves only rubber-tired vehicles with suspension systems; it is unusual for buses to cause significant vibration. Typically, if perceptible vibration is generated from buses it is due to airborne sound from the bus exhaust causing windows to rattle or due to unusual discontinuities in the road surface such as potholes, bumps, or expansion joints. Therefore, there will not be operational vibration impact and no further analysis is warranted.

K. Acquisitions and Relocations Required: The project would not require acquisition of property or relocation of any existing, adjacent land use. Original designs would have required temporary easements for installing 'support of excavation' tiebacks under two residential structures and properties located at 4801 14th Street NW and 4800 Iowa Avenue NW, Washington, DC. However, updated designs avoided this need and the temporary easements are no longer required.

The project received approval on July 26, 2021 by the District of Columbia Public Space Committee for construction in public space for project-related street fixtures (e.g., driveways and curb cuts, sidewalks, street trees, streetlights, traffic signals, and other improvements).

L. Hazardous Materials: Based on recent sampling and prior investigations, hazardous materials exist at the Northern Bus Garage Facility. WMATA's design build contractor has conducted 53 soil borings and installed 10 temporary monitoring wells. Twenty-seven soil samples were collected. Nine of the wells were sampled as one well was found to contain Light Non-Aqueous Phase Liquid (free product). This finding was reported to the District Office of Energy and Environment (DOEE). The sampling identified the presence of the following contaminants:

- Benzene, toluene, ethylbenzene and xylene (BTEX)
- Total Petroleum Hydrocarbons
- Lead
- Arsenic
- Chlorinated Solvents (TCE/PCE/VC)
- Polychlorinated biphenyls (PCBs)

On February 18, 2021, WMATA submitted a work plan to the DOEE. Upon review and further coordination, four monitoring wells and 18 well points were drilled to support sampling and assessment of remediation needs at the site. Two water samples and one to two soil samples were taken from each well point.

The purpose of these monitoring wells and well points is to identify the extent of soil and water contamination on the site. Findings from samples taken will inform the remediation efforts required to remove the contaminated material as part of construction activities. If contamination is found, remediation would be undertaken in different ways based on contaminated item:

- Soil would be excavated and taken offsite to a treatment and disposal facility;
- Groundwater would be pumped through a treatment system; and/or
- Soil vapors would be extracted and treated.

Coordination with DOEE is continuing to complete investigations and to provide a final report with findings. Note, the soil and water analyses and remediation are proceeding independently of the Northern Bus Garage project and should be considered a separate project.

Asbestos-containing materials, such as floor tiles, roofing materials and fire doors are present in the building. In addition, the former underground storage tank system has been closed and

remediated through DOEE Leaking Underground Storage Tanks closure requirements. No further corrective action is required. In addition, sampling and analyses indicate that lead paint is not present. Documentation of the above is included in **Appendix 11**.

The contaminants discussed above will be disturbed during demolition and construction activities, potentially exposing workers to contamination. WMATA will treat, handle, and dispose of these materials in accordance with the label instructions and regulatory requirements established by WMATA, the Occupational Safety and Health Administration (OSHA), the US Environmental Protection Agency (EPA), and other applicable regulatory authorities.

Original design of the bus garage included a paint and body shop. As a result of community input, the paint and body shop components of the garage operations were eliminated.

M. Environmental Justice: As described in **Appendix 12**, the study area is majority-minority and includes low-income populations. The minority percentage of the census block groups in the study area ranges from 64.1 percent to 88.0 percent, and the proportion of low-income households ranges from 3.7 percent to 51.6 percent. In addition, the study area is home to over 17 places of worship, including predominantly minority- and immigrant-based congregations; two specialty health centers catering specifically to minority, underserved, and immigrant populations; two specialty schools, both serving minority populations; and two social services organizations, with one providing affordable daycare for youth minority populations and the other providing housing for the homeless.

In order to determine whether the project would result in disproportionately high and adverse human health or environmental effects on low-income or minority populations, the analysis reviewed the potential for adverse effects. For impact areas with no potential adverse effects, no further analysis was conducted because there would be no potential for disproportionately high and adverse effects to minority or low-income populations. For impact areas with potential for an adverse effect, proposed avoidance, minimization, and mitigation measures were then considered to determine whether adverse effects would remain after implementation of those measures. See **Table 1** for a comprehensive list of these measures. The analysis determined that adverse effects to cultural resources and due to construction would remain following application of avoidance, minimization, and mitigation measures. These impacts were further examined to determine if adverse effects would be concentrated upon minority or low-income populations or resources of importance to those populations.

The project will demolish the 1906 car barn, except for the façade along 14th Street NW, and it would alter the visual appearance of the character-defining facade. While the adverse effect to the historic property cannot be avoided, the measures WMATA committed to will benefit the community through educational components and by creating a building that is compatible with the historic façade and is sensitive to the context of the surrounding neighborhood. Minimization, developed in consultation with the community, includes restoration of the primary 14th Street NW elevation, replacement of non-historic roofing and window materials with historically-appropriate materials, and design of the new structure to be compatible in scale, design elements, and materials with the historic façade. Additional mitigation to resolve the adverse effects to the building and provide a public benefit include installation of replica streetcar tracks where streetcars used to enter the building and development and installation of

interpretive signage exhibits on the history of the property and the role it played in the local community.

Following the implementation of avoidance, minimization, and mitigation measures, construction activities will continue to produce noise, dust, and emissions from construction vehicles as it is not possible to eliminate these impacts. In addition, it is anticipated that lane closures will be required that will result in traffic impacts even with the implementation of maintenance of traffic measures. These construction-related impacts are anticipated to last for the duration of construction which is 3-4 years. The intensity of these impacts could vary depending on the proximity of populations to the project location itself and roadway users in the vicinity of the project study area.

Many of the impacts would be felt by both EJ and non-EJ populations in the project area; however, as the majority of the project study area includes EJ populations, the project has the potential for adverse impacts to be predominately borne by EJ populations. In evaluating the potential adverse effects from the project that remain after all minimization and mitigation measures, it's expected that construction related noise, vibration, traffic, and air quality impacts would be well below the thresholds at which they would be expected to adversely affect human health or cause community disruption (i.e. creating barriers between communities or negatively affecting existing travel patterns). The associated construction related impacts would be mitigated and minimized to the maximum extent practicable and relative nuisance related impacts will not persist after construction is complete.

Mitigation and minimization measures for the project have been applied equally to all affected populations in the study area. Additional community benefits due to the project include amenities within the building such as office space for Uptown Main Street; 27,500 square feet of retail space with a preference for neighborhood grocer; and a community room with capacity of up to 150 seating and up to 200 standing with an at-grade ADA accessible entrance (no ramp required). The new building will also include employee parking to eliminate issues with employees parking in the neighborhood and will maintain the same level of shadowing for neighboring properties as the existing building. The design commitments will benefit those most affected by alterations to the historic structure, specifically those who live, work, worship, or recreate in places where they can see the building. The other community benefits will be equally accessible to EJ and non-EJ populations. After the consideration of all avoidance, minimization, and mitigation measures and a balancing of off-setting benefits of the project, no disproportionately high and adverse effects are expected to occur on minority and low-income populations. Furthermore, WMATA is developing a plan that will ensure continued community involvement and information sharing as the project advances to the demolition and construction phases.

N. Public Parkland and Recreation Areas: No impact to public parkland or any recreational area has been identified. No park or recreational area will be used for the project.

O. Wetland Impacts: No naturally occurring water features, including wetlands or waters of the United States are present.

P. Floodplain Impacts: No impact to floodplains will occur and the facility is not located within a floodplain (Flood Insurance Rate Map, Community Panel Number 1100010008C, effective September 27, 2010; this flood insurance rate map was reviewed and confirmed on May 10, 2021).²

Q. Impacts to Water Quality, Navigable Waterways, and Coastal Zones: No impact to water quality is anticipated as a result of the project. Surface water runoff from impervious surface cover will be managed in accordance with the Clean Water Act, as well as other federal and local regulations. Water quality practices currently in place at the bus garage will be used for this project, and new stormwater best management practices (BMPs) will be constructed to accommodate the proposed improvements. Green roof features, including both tray boxes and soil-based planting, will be incorporated into the facility design. Green roofs include a number of benefits including, but not limited to, the following:

- Enhanced stormwater management;
- Improved air quality;
- Reduced urban heat island effect;
- Improved building insulation;
- Improved mechanical equipment efficiency; and
- Longer roof life.

There is no navigable waterway in the bus garage facility property. Therefore, no impact to navigable waterways will occur.

As the District is not part of the Federal Coastal Zone Management Program, no Federal Coastal Zone Management Program Consistency Determination request was made for this project.

R. Impacts on Ecologically-Sensitive Areas and Endangered Species: No effect to federally-protected species or habitat is expected as a result of this project. The U.S. Fish and Wildlife Service (USFWS) lists one threatened and one endangered species requiring consideration in an effects analysis for the proposed project, including the Northern Long-eared Bat (*Myotis septentrionali*) and Hay's Spring Amphipod (*Stygobromus hayi*), respectively (see **Appendix 13**).

The project does not meet the USFWS' tree clearing threshold of being greater or equal to 15 acres (see **Appendix 13**). Therefore, no Biological Assessment or further Section 7 consultation with the USFWS is required for the Northern Long-eared Bat.

Similarly, the USFWS indicated there are no critical habitats for the Hay's Spring Amphipod within the project area (see **Appendix 13**). The Hay's spring amphipod is a subterranean crustacean occurring in shallow ground water habitat located in the Piedmont physiographic region in the District of Columbia (DC). This habitat is not present in the project area. Therefore,

²<https://msc.fema.gov/portal/search?AddressQuery=4615%2014th%20Street%2C%20NW%20Washington%2C%20DC#searchresultsanchor>

no Biological Assessment or further Section 7 consultation with the USFWS is required for this species.

In addition, the USFWS listed the Monarch Butterfly (*Danaus plexippus*) as a candidate species. However, no supporting site conditions, such as nectaring plants and milkweed, for the species are found in the project study area. In addition, there are generally no Section 7 requirements for candidate species.

S. Impacts on Safety and Security: The proposed improvements at the Northern Bus Garage are not anticipated to cause any negative impact to the safety or the security of the adjacent community, or at the bus garage facility itself. The proposed facility will be fully enclosed and will have controlled access points using gates and guards, restricting access to authorized personnel only. In addition, the following measures will be incorporated to improve safety and security at the project site:

- Metro Transit Police Department (MTPD) office located at corner of 14th Street NE and Buchanan Street NE for greater community presence;
- Windows added on 14th Street NE and Iowa/Arkansas Avenues NE to increase 'eyes on the street';
- Sidewalk added along Iowa Avenue NE where currently lacking (see Figure 3) to enhance pedestrian safety;
- Sidewalk along northern side of garage building widened and equipped with increased lighting;
- Sidewalk along 14th Street NE widened; and
- Signal at 14th and Decatur Streets reconstructed to improve pedestrian safety.

T. Impacts Caused by Construction: The project is anticipated to begin in 2022 with a total duration of three to four years. The project will be designed and constructed by a design-build contractor who will be responsible for developing more detailed information on the construction schedule and equipment. In addition, the contractor would be responsible for complying with all required environmental regulations and permit requirements. There are no projected impacts to adjacent retail business along 14th Street NE. WMATA is working with the District Department of Transportation (DDOT) to coordinate the Maintenance and Protection of Traffic (MPT), including for pedestrians in the vicinity of the project. The MPT plan will maintain pedestrian access to the nearby businesses.

Vibration:

Construction vibration is typically generated by earth-moving equipment such as loaded trucks and bulldozers, impact equipment such as hoe rams, and drilling rigs for setting foundations for the parking deck. As shown in **Appendix 10**, the distances away from this equipment where there is an increased risk of structural damage to nearby buildings is 20 feet or less depending on the sensitivity of the building to vibration. Since all the surrounding buildings are more than 40 feet from the project site, there is not a risk of structural damage from construction activities.

The original design for the Northern Bus Garage would have required rock excavation and drilling for installation of support of excavation tiebacks, which would have generated vibration.

These previous activities are summarized in the bullets below. However, the updated design incorporates a considerable avoidance by reducing rock excavation quantity by 80 percent and therefore eliminating the need for both blasting and tiebacks and associated drilling. The total footprint of bedrock to be removed has been reduced by 55 percent from around 161,000 to 70,000 square feet and the depth of rock cutting has been reduced from 15-20 feet to around 5 feet. Rock removal will only be necessary on the 14th Street side, reducing impacts to surrounding properties on other sides of the garage property. No blasting will be required for rock removal and will instead be removed via mechanical methods.

Vibration will be monitored via seismographs placed at the perimeter of the project at least 30 days prior to the start of construction to establish a baseline for comparison to construction-related vibration. All properties within 200 feet of the bus facility's property boundary will be offered the opportunity to receive a pre-existing condition survey prior to the start of construction. This survey will cover both the interior and exterior of the property being surveyed. Invitations to property owners will be sent 90 days prior to the start of construction.

Noise: **Appendix 10** presents the equipment, maximum sound level, utilization factor, and Leq sound level typically used for constructing new maintenance buildings and parking decks. Since construction noise is evaluated for typical conditions over a relatively long period of time, noise levels are predicted relative to the center of the construction area. Construction noise is assessed according to the District noise ordinance, which is a daytime limit of 80 dBA (Leq), at a distance of 25 feet from the outermost limits of the site which is approximately 250 feet or farther from the center of construction activities. Based on sound propagation of 6-decibel reduction per doubling of distance, construction noise levels at 25 feet from the boundary of the facility would typically be 75 dBA (Leq). These construction noise levels are below the District noise ordinance of 80 dBA during the daytime and therefore no construction noise mitigation is warranted.

Construction will be limited to the hours stipulated by the District Department of Consumer and Regulatory Affairs (DCRA) in DC Municipal Regulation (DCMR) 20, Sec. 2700.1; that is, Monday through Saturday from 7 am to 7 pm. Any work outside of these hours will be conducted only after receiving an after-hours permit from DCRA. Construction activities will follow the noise criteria specified in Section 16.7 of the *WMATA Manual of Design Criteria*. The construction noise levels at the project boundary for the equipment typically used for this type of construction project are substantially below the District noise ordinance of 80 dBA during the daytime.

Utilities: The design-build contractor will coordinate through utility survey to determine the location of utilities on-site. Construction operations are not anticipated to result in the disruption of any energy utility to commercial, industrial, or residential customers in the project area.

Disposal of Debris, Solid Waste, and Hazardous Materials: The Northern Bus Garage Facility will be designed and constructed under LEED "Platinum" design standards. This standard requires that debris from the construction process be minimized and that materials be reused wherever feasible. Any unusable construction debris will be disposed of in local construction-debris landfills. No waste will be disposed of or incinerated on site.

Water Quality: During construction, stormwater runoff will be managed in compliance with

federal and DC regulations. A stormwater management plan and erosion and sediment control plan will be prepared for use during construction activities. A stormwater pollution prevention plan will be developed, detailing the methods to manage construction waste, such as building materials, garbage, and debris, and to implement controls to minimize the exposure of these materials to stormwater. Temporary management facilities for the control of construction stormwater runoff will be erected and the design-build contractor will obtain all appropriate permits and approvals.

Access and Distribution of Traffic: The design-build contractor will prepare a management plan for construction-related traffic in accordance with DDOT's Temporary Traffic Control Manual (2006). The design-build contractor would also obtain all necessary permits and/or permission to perform work in the vehicular and/or pedestrian right-of-way from DDOT. A Traffic Control Plan would be developed in accordance with the DDOT Temporary Traffic Control Manual to manage traffic during roadway construction in the public right-of-way. This plan would be completed during the Public Space Permitting Process. This plan will show which travel lanes and sidewalks will be temporarily closed during construction and how all modes of travel will be accommodated, including the coordination with other nearby construction projects, and will identify responsible parties.

Air Quality: Construction activities at the facility may cause nuisance dust and construction equipment emissions. These increases are not expected to adversely impact air quality either locally or regionally. Control measures may include minimizing the length of exposure of disturbed lands, sprinkling water and/or wood chips on exposed earth, and using tarpaulins on loaded trucks.

WMATA will require the contractor to utilize the best available mitigation measures to prevent excessive emissions or particulates and carbon monoxide from the operation of machinery. Generally, such measures include the prohibition of unnecessary idling and operation of equipment, and appropriate pollution control equipment.

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APPENDICES