

Text that has been substantively added or modified based on comments received since the release of the September 2021 Environmental Assessment for the H Street Bridge NE Replacement is denoted in bold and italic font.

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Executive Summary

ES.1 Preface

The District Department of Transportation (DDOT), in conjunction with the Federal Highway Administration (FHWA), has prepared this Environmental Assessment (EA) for their proposal to replace the H Street Bridge NE (DDOT Bridge #0529, also known as the Hopscotch Bridge) (Project, Undertaking) over the Amtrak railyard just north of Washington Union Station, between North Capitol Street and 3rd Street NE in the District of Columbia (DC or District) (Figure 1-1, located at the end of Section 1). DDOT has requested to use federal funds from the FHWA for this Project. The commitment of federal funds by FHWA is an action (Title 23 *Code of Federal Regulations* [CFR] § 771.107, 40 CFR § 1508.18) subject to the National Environmental Policy Act (NEPA) (42 U.S. Code [U.S.C.] 4321) that requires FHWA to assess the environmental effects of the Project prior to making decisions.

This EA evaluates the potential impacts of the Project on the human, built, and natural environments within and surrounding the Project area. This EA has been prepared in accordance with NEPA and implementing regulations, the Council on Environmental Quality regulations (40 CFR Parts 1500-1508), FHWA's Environmental Impact and Related Procedures (23 CFR 771), FHWA Technical Advisory T 6640.8A, and DDOT's Environmental Policy Manual (Second Edition). FHWA participation in this Project also constitutes an "Undertaking" (36 CFR § 800.16(y)) and requires compliance with Section 106 of the National Historic Preservation Act (54 U.S.C. 306108) and its implementing regulations (36 CFR § 800) because of the potential to affect historic properties. The existing H Street Bridge NE is located over a historic property eligible for listing in the National Register of Historic Places (NRHP) (Washington Union Station Historic Site) and adjacent to two historic properties (REA Building and former St. Joseph's Home).

The effects of the Project historic resources in the Project area were discussed with the consulting parties (District of Columbia State Historic Preservation Office [DC SHPO], Amtrak, Union Station Redevelopment Corporation [USRC], and Advisory Neighborhood Commission 6C [ANC 6c]) (Appendixes D and H). Following consultation, FHWA consulted with the DC SHPO and does not concur with DC SHPO's determination of an adverse effect on the Washington Union Station Historic Site as a result of the proposed DDOT action. This is because it is reasonably foreseeable that the contributing resources in question will be destroyed at an indeterminate later date as the result of a subsequent, unrelated federal action by the Federal Railroad Administration that will render the adverse effect determination attributable to this DDOT action moot.

FHWA acknowledges that there will be an effect on the contributing resource as defined in 36 CFR § 800.16(i) due to the proposed DDOT action. FHWA also acknowledges the effects of the DDOT action, although temporary in nature, require a resolution. To determine the scope of FHWA's responsibility to resolve the temporary effect of DDOT's action, FHWA agreed to a Memorandum of Agreement (MOA) (Appendix D). Given the foreseeable outcome and the preservation intent of the statute, the effect should not be determined to be adverse solely within and only in consideration of the Proposed Action.

The construction effects of the project were discussed with the public and stakeholders as documented in the public meeting report and as noted in the Construction Noise and Vibration Analysis Technical Memorandums.

The Project is programmed in the DC Statewide Transportation Improvement Program for fiscal years (FYs) 2021 to 2024 (Transportation Improvement Program ID 6039). Procurement will begin in FY 2021 with an anticipated construction contract award in FY 2023, with onsite construction anticipated from FY 2023 through FY 2028. Total project cost is listed as \$240,734,000.

This EA was approved for public and agency review on September 15, 2021 by the FHWA and comments were received for a 30 calendar day period that ended on October 15, 2021, during which virtual public outreach was conducted. After a thorough review and consideration of all the comments received, DDOT has amended the EA based on comments received, and concurrently issued a Finding of No Significant Impact (FONSI) and Final EA for the project.

ES.2 Notice of Expedited Decision Making

In accordance with 49 U.S. Code 304a: Accelerated Decision-Making in Environmental Reviews, FHWA has developed and released concurrently a Final EA and the FHWA FONSI that summarizes the findings of the EA and provides a concise explanation regarding how the Final Decision was made for the H Street Bridge NE Replacement Project in compliance with the National Environmental Policy Act (NEPA).

ES.3 Purpose and Need

The purpose of the Project is to replace the H Street Bridge NE and accommodate the modernization of Washington Union Station proposed by FRA, Amtrak and USRC and the separate Burnham Place commercial and residential development proposed by Akridge. The H Street Bridge NE needs to be replaced to address structural deficiencies, maintain modal relationships, and support the economic development within and adjacent to the Washington Union Station.

ES.4 Alternatives

No Build Alternative

Under the No Build Alternative, there would be no changes to the H Street Bridge NE. The existing fracture critical bridge would remain, requiring continual, frequent inspections, maintenance, and extensive deck repairs by DDOT. *In addition, in September 2021 DDOT posted a 20-ton weight limit for the bridge due to the poor condition of its deck.*

Build Alternative—Proposed Action

The Build Alternative (the Proposed Action) includes reconstruction of the H Street Bridge NE from North Capitol Street to 3rd Street NE. This alternative includes replacing or rehabilitating the existing bridge piers, abutments, and foundations east of 2nd Street NE and west of First Street NE and replacing existing bridge piers over the railyard between First Street NE and 2nd Street NE. The replacement bridge's design is intended to match the cross section of the existing bridge deck. Existing bridge piers would be replaced in current or new locations. The two bus stops and the streetcar station would be replaced, and operations would resume on top of the bridge after construction.

ES.5 Construction

Construction dates are based upon an anticipated construction contract award in 2023, the duration of Project construction is programmed for a 5-year period. Construction is expected to be completed in 2028.

Construction impacts will occur within and adjacent to the Project's construction limits. Construction activities include heavy vehicle movement, removal of existing roadway and structures, excavation, materials processing and placement, compaction, and installation of the new bridge structures and roadway. Construction equipment for this Project may include piling equipment, excavators and haul equipment, concrete cutters and jackhammers, cranes, asphalt milling machines, asphalt pavers, and asphalt rollers.

Expected construction impacts on the surrounding areas include emissions from equipment exhaust, dust, noise, stormwater runoff contamination, restricted access to residential and commercial buildings, traffic congestion and delays, and public safety impacts on the roads and in areas adjacent to the construction site.

Construction staging areas for storage of materials and construction equipment will be within the Project construction limits, meaning the existing DDOT right-of-way or other areas approved for work and granted by the property owner.

ES.6 Cumulative Impacts

The proposed Project, when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions, does not result in a cumulative impact on the environment. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

ES.7 Summary of Impacts

A summary of the Project impacts is provided by resource for both the No Build and Build Alternatives in Table ES-1.

Table ES-1 | Summary of Impacts

Resource	No Build Alternative	Build Alternative
	Impact	Impact
Land Use and Zoning	No impact.	No relocations would occur. The Project would not create new travel or visual barriers or change travel patterns or accessibility to businesses, residences, or services that could lead to changes in land use or zoning. <i>The Project has a beneficial impact to both the Washington Union Station Expansion Project (WUSEP) and Burnham Place, a planned development to be constructed over the Union Station railyard, immediately to the north and south of the H Street Bridge NE.</i>
Social	No impact.	The Metrobus stops and the streetcar terminal station on the bridge would be temporarily closed. Rodent and vermin migration may occur during construction activities in the Project area.
Economic	No impact.	<i>The Build Alternative has a beneficial impact to both the WUSEP and Burnham Place, a planned development to be constructed over the Union Station railyard, immediately to the north and south of the H Street Bridge NE.</i>
Traffic and Transportation	No Impact.	Bridge lanes would be reduced to a single lane over part of the bridge during construction. Short-term full closures of the bridge may be required for critical construction activities. Left turns from H Street at 3rd Street NE would be restricted. Through-traffic would be maintained on First Street NE and 2nd Street NE throughout construction. Short-term closures or reduction to a single lane may be needed during some overhead activities for safety. Parking for contractor vehicles within the residential areas near the bridge would be prohibited. Two on-street parking spaces on First Street NE under the bridge would be displaced. <i>Intercity bus operations and other transit services operating from the intercity bus station will follow different routes into and out of the garage, but service is not anticipated to be delayed due to construction of the Project.</i> The existing WMATA eastbound Metrobus stop before 3rd Street NE would be relocated. The terminal streetcar station on the bridge would close for the duration of construction, and the DC Streetcar operations will be modified to end and begin passenger service at 3rd Street NE. The taxi stand on the bridge would be closed for the duration of construction, and any signage in Union Station directing users to this traffic stand would be covered. Vehicles would continue to access the Union Station parking garage during construction using the existing ramp, except for when the section of bridge deck adjacent to that ramp is being reconstructed. A beneficial impact is that DC Streetcar service will be restored to Union Station with a design that provides for improved streetcar operations.
Pedestrian and Bicycle	No impact.	Construction impacts to the sidewalks in the vicinity of the Project would require intermittent closure of sidewalks and detouring of pedestrians and bicycles.

Table ES-1 | Summary of Impacts

Resource	No Build Alternative	Build Alternative
	Impact	Impact
Network		
Utilities	No impact.	Utilities would need to be relocated because of their proximity to existing bridge footings/columns that need to be demolished or to new footings/columns to be constructed. The Project would have a beneficial impact because it would provide space to accommodate new utilities between the bridge girders for which the existing bridge does not provide space.
Air Quality	No impact.	Short-term, minor increases of fugitive dust and equipment-related exhaust emissions during construction.
Noise	No impact.	No operational noise impacts. The Project will not alter the bridge horizontal or vertical location, capacity, or traffic mix. The Build Alternative will require the use of construction equipment that has the potential to result in adverse construction noise impacts.
Vibration	No impact.	The Build Alternative will require the use of construction equipment that has the potential to result in building damage and/or annoyance.
Water Quality and Wetlands	No impact.	There are no surface waters in the Project area. Runoff from the bridge deck will continue to be intercepted through bridge scuppers and conveyed to storm sewers. Construction of the Project may disturb more than 50 square feet.
Water Body Modification and Wildlife	No impact.	No impact. No water bodies are present. Only street trees and landscape plantings are present that provide minimal wildlife habitat.
Threatened and Endangered Species	No impact.	No impact. The U.S. Fish and Wildlife Service certified that except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the Project area.
Historic and Archaeological Resources	No impact.	FHWA acknowledges there will be an effect on the contributing resource as defined in 36 CFR § 800.16(i) because of the Project. FHWA also acknowledges that the effects of the Project, although temporary in nature, require a resolution. To determine the scope of FHWA's responsibility to resolve the temporary effect of the Project, FHWA agreed to a MOA (Appendix D). Given the foreseeable outcome and the preservation intent of the statute, the effect should not be determined as adverse solely within and only in consideration of the Proposed Action.
Hazardous Waste Sites	No impact.	No impact. Properties of concern are not located in the immediate construction area for the Project. During construction activities, solid waste, hazardous waste, and hazardous materials may be onsite.

Table ES-1 | Summary of Impacts

Resource	No Build Alternative	Build Alternative
	Impact	Impact
Visual	No impact.	Street lighting will be upgraded according to current standards. Views from the bridge will be improved by replacing existing aluminum barriers with transparent barriers. Removal of the aluminum panels and the Hopscotch Kids mosaics will occur. Construction equipment would be visible but would not substantially affect any notable views of landmarks or other vistas.
Energy	No impact.	No impact. The Project would involve the consumption of energy in the form of fuel and electricity used by construction equipment during construction. This energy would only be consumed during construction and would not be ongoing.
Section 4(f)	No use.	No use. While the Project constitutes an adverse effect on contributing elements to the Union Station historic site, it will not affect the features that qualify the Union Station railyard for listing in the NRHP, nor will it affect its current or historic landscape, transportation, and cultural functions, or use as listed in the NRHP registration form. The temporary occupancy of land associated with the Project does not constitute a use under Section 4(f).

Notes:

ADA = Americans with Disabilities Act

DCMR = District of Columbia Municipal Regulations

DOEE = District Department of Energy and Environment

in/sec = inch(es) per second

MUTCD = *Manual of Uniform Traffic Control Devices*

PPV = peak particle velocity

WUSEP = Washington Union Station Expansion Project

Lv, VdB = vibration velocity level RMS velocity in decibels, VdB re 1 micro-in/sec

WMATA = Washington Metropolitan Area Transit Authority

ES.8 Environmental Commitments

The proposed mitigation measures for the Project, which serve as environmental commitments, are listed in Table ES-2. The Project sponsor (DDOT), in cooperation with FHWA, is responsible for implementing those mitigation measures stated as commitments in this environmental document prepared unless FHWA approves of their deletion or modification in writing. The FHWA will ensure that this is accomplished as a part of its stewardship and oversight responsibilities. DDOT standard practices developed to minimize impacts during construction will be incorporated into the Project design and construction documents.

Table ES-2 | Environmental Commitments

Resource	Environmental Commitment
Land Use and Zoning	Section 4.1 - No mitigation measures are proposed.
	Section 4.17.1 - No mitigation measures are proposed.
Social	Section 4.2 - No mitigation measures are proposed.
	<p>Section 4.17.2 - Refer to Section 4.17.4 and Section 4.17.5 for mitigation to address construction impacts to traffic and transportation, and pedestrians and bicycles.</p> <p>No social group will be disproportionately impacted by the construction of the Project and public safety will be maintained.</p> <p>Construction of the Project will not cause the relocation of, or direct or indirect impact on any schools, recreation areas, churches, businesses, police, fire, or medical services.</p> <p>The phased construction of the bridge will maintain through-access for emergency vehicles to adjacent properties throughout construction.</p> <p>The emergency access to the railyard from the Station Place loading ramp, to the Union Station parking garage, to other buildings, and to fire hose connections will remain open.</p> <p>Maintain access to fire hydrants and emergency standpipe connections on First Street NE and 2nd Street NE.</p> <p>A rodent and vermin control plan will be established and implemented in coordination with DC Health.</p>
Economic	Section 4.3 - No mitigation measures are proposed.
	Section 4.17.3 - Refer to Section 4.17.4 and Section 4.17.5 for mitigation to address construction impacts to traffic and transportation, and pedestrians and bicycles that will mitigate economic impacts resulting from the construction of the Project.
Traffic and Transportation	Section 4.4 - No mitigation measures are proposed.
	<p>Section 4.17.4 - The following mitigation measures will be implemented to minimize impacts to traffic and transportation within and around the Project corridor. All mitigation measures will be implemented in accordance with the MUTCD (FHWA, 2009) to ensure the safety of the traveling public. Prior to implementation, a construction communication plan will be developed in accordance with the DDOT Construction Management Manual (DDOT, 2010). This will include a Project website used to provide construction updates, post notification of upcoming construction activities, and advise the public of any upcoming changes to traffic management over the bridge. DDOT will also issue email updates and post information to social media to communicate construction updates. The Project communications manager will coordinate directly with representatives from adjacent properties to provide advance notice of construction activities and will provide a single point of contact for residents and businesses throughout construction.</p> <p>Mitigation measures are the following:</p> <ul style="list-style-type: none"> • The bridge will be reconstructed in phases, so that one lane of through-traffic in each direction, with turn lanes into the Union Station parking garage/bus station, is maintained during construction. • Short-term full closures of the bridge, or reduction to a single lane over part of the bridge, will be limited to off-peak hours only. Peak hour is the part of the day during which traffic volumes on the road are at their highest. Peak hours at the H Street Bridge NE were determined to be weekdays from 7:00 AM to 8:00 AM and 4:00 PM to 5:00 PM (see Section 3.5). Off-Peak hours are all other hours during the day.

Table ES-2 | Environmental Commitments

Resource	Environmental Commitment
	<ul style="list-style-type: none"> • Left turns from H Street at 3rd Street NE will be restricted. • Parking for contractor vehicles within the residential areas near the bridge will be prohibited. Parking for construction workers will be leased by the contractor in a nearby garage or provided offsite with a shuttle bus to access the construction site. • Through-traffic will be maintained on First Street NE and 2nd Street NE throughout construction. Short-term closures or reduction to a single lane during off-peak hours (see Section 3.5) may be needed during some overhead activities for safety. • The timing of traffic signals within the study area identified by the H Street Bridge Replacement Project Transportation Analysis Technical Report (Appendix C) will be optimized to minimize delay, provide safe operation, and reflect traffic volumes observed in the field. • The existing eastbound bus stop before 3rd Street NE will be relocated to a temporary location between 3rd Street NE and 4th Street NE. • DDOT will implement a shuttle service that will operate during normal streetcar operating hours to connect the interim terminal station at 3rd Street NE with the Union Station parking garage. DDOT will also ensure that alternative transit is provided during any interruption to streetcar operations between 3rd Street NE and Oklahoma Avenue resulting from bridge construction. • The taxi stand on the bridge will be closed for the duration of construction, and any signage in Union Station directing users to this traffic stand will be covered. Additional enforcement will be provided to ensure that taxis do not queue on H Street while waiting to access Union Station. During the period when the section of bridge deck adjacent to the taxi ramp on the western side of the Union Station parking garage is being reconstructed, taxis will be routed to enter the station from the western end of Columbus Circle to queue around the perimeter road of the station building. <i>Any vehicle using the eastern ramp around Union Station must comply with weight limits.</i> • Vehicles will continue to access the Union Station parking garage using the existing ramp except when the section of bridge deck adjacent to that ramp is being reconstructed when vehicles will be detoured to enter via the station perimeter road from the eastern end of Columbus Circle, and leave via the western end of Columbus Circle. <i>Temporary traffic control will be required for vehicles entering/exiting the Union Station Parking Garage and Intercity Bus Station entry/exit ramps to facilitate modifications to traffic operations at Union Station. This will include removal of concrete curb to provide improved turn radii, additional signing and striping to accommodate new traffic patterns during construction and flexible plastic traffic delineator posts to separate traffic flows.</i>
<p>Considerations Relating to Pedestrian and Bicyclists</p>	<p>Section 4.5 - No mitigation measures are proposed.</p>
	<p>Section 4.17.5 - The following mitigation measures will be implemented to minimize impacts to pedestrians and bicycles within and around the Project corridor. All mitigation measures will be implemented in accordance with the MUTCD (FHWA, 2009) and comply with the requirements of DCMR Title 24, Chapter 3315, Safe Accommodation for Pedestrians and Bicyclists to ensure the safety of the traveling public. Prior to implementation, a construction communication plan will be developed in accordance with the DDOT Construction Management Manual (DDOT, 2010). This will include a Project website used to provide construction updates, post notification of upcoming</p>

Table ES-2 | Environmental Commitments

Resource	Environmental Commitment
	<p>construction activities, and advise the public of any upcoming changes to traffic management over the bridge. DDOT will also issue email updates and post information to social media to communicate construction updates. The Project communications manager will coordinate directly with representatives from adjacent properties to provide advance notice of construction activities and will provide a single point of contact for residents and businesses throughout construction. Mitigation measures are the following:</p> <ul style="list-style-type: none"> • One sidewalk will be provided across the bridge during all phases of construction. Depending on the construction phase, this may be provided on either the northern or southern side of the bridge. • At least one sidewalk will be provided on First Street NE and 2nd Street NE throughout construction. Where overhead work is being performed, appropriate overhead protection will be provided according to the DDOT Pedestrian Safety and Work Zone Standards—Covered and Open Walkways. • Pedestrian access to adjacent residential and business properties will be maintained with alternative access routes provided for planned closures. • Intermittent closures of safe accommodation for pedestrians and bicyclists during off-peak hours (see Section 3.5) will be in accordance with DCMR Title 24, Chapter 3315.7. • Detour signs will be placed within the Union Station parking garage to direct pedestrians to the eastern or western exits on to H Street. • The design and placement of pedestrian signs and pavement markings will comply with the MUTCD and ADA guidelines.
Utilities Impacts	Section 4.6 - No mitigation measures are proposed.
	<p>Section 4.17.6 –</p> <ul style="list-style-type: none"> • Identify a belowground corridor for the Pepco duct bank that will not be impacted during bridge construction, eliminating the need for a temporary relocation during construction of the Project and reducing the number of power outages. • Identify a new location for the enclosures that house the USRC fire pump systems. These will be located at the western end of the underpass, beneath the WMATA tracks. • Identify a location for a new belowground shared fiberoptic duct bank that will not be impacted during bridge construction and will accommodate all the existing fiberoptic lines that are suspended from the roof of the underpass. • The project will construct new catenary support poles to replace the existing cantilevered arms attached to the umbrella sheds that are to be removed. The supports will provide the Amtrak-required clearances to the messenger and contact wires for both the existing bridge and proposed bridge. The new poles will be installed prior to removal of the existing cantilevered arms and canopies to maintain power supply and uninterrupted train service.
Air Quality	Section 4.7 - No mitigation measures are proposed.
	Section 4.17.7 - All work would be conducted in compliance with Section 107 of DDOT Standard Specifications for Highways and Structures (DDOT, 2013). No additional mitigation will be required.
Noise	Section 4.8 - No mitigation measures are proposed.
	Section 4.17.8 – DDOT will require the construction contractor to prepare and implement a Construction Noise Control Plan. The following specific noise mitigation measures will be included in the Construction Noise Control Plan:

Table ES-2 | Environmental Commitments

Resource	Environmental Commitment
	<ul style="list-style-type: none"> • At CNN (820 First Street NE), coordinate construction activities proposed adjacent to the building to confirm filming times, anticipated to occur between 5:00 am and midnight. Any noise generating construction activities will be scheduled at night with District variance or temporary exemption to District standards. • At EWTN Global Catholic (750 First Street NE), coordinate construction activities proposed adjacent to the building to confirm filming times, anticipated to occur daily from 11:15 am to 12:00 pm and then again from 3:45 pm to 4:45 pm. In addition, there are also weekly tapings on Wednesday afternoons from 12:45 pm to 2:30 pm; Thursdays from 1:00 pm to 3:45 pm; and Fridays from 1:00 pm to 3:45 pm. Any noise generating construction activities will be scheduled at night with variance or temporary exemption to District standards. • At residences east of 2nd Street NE, (201 I Street NE, 215 I Street NE, and 701 2nd Street NE) coordinate traffic management of material delivery vehicles and construction equipment away from residences, especially at night, and alternative OSHA-compliant solutions to vehicle backup beepers. • The use of a concrete saw and jackhammer will require noise abatement through the use of a temporary noise barrier to shield a particular area, such as a heavy vinyl noise curtain or noise-reducing products that fully enclose the noise-generating activity to reduce the noise level. • The contractor will be required by contract to adhere to the DCMR for noise control (see Section 2.2). A variance or a temporary exemption (DCMR Title 20, Chapter 27, Construction, § 2705.1) from the maximum permissible noise levels or time limitations established in District of Columbia Noise Control Act of 1977, DC Law 2-53, and the DCMR Title 20, Chapter 28, Construction, § 2802.1, will need to be attained to meet District regulations and nighttime construction. Compliance with the variance will include any measures necessary to minimize noise impacts. <p>The Construction Noise Control Plan will define locations for noise monitoring based on the sensitive receptors identified in this analysis and a noise monitoring process to alert the contractor of any limit exceedances and implement corrective actions. It will also contain a public engagement plan specifying measures that would be implemented to inform neighbors and adjacent noise-sensitive receptors of anticipated noisy activities.</p>
Vibration	Section 4.9 - No mitigation measures are proposed.
	<p>Section 4.17.9–</p> <ol style="list-style-type: none"> 1. To avoid the potential for delivery vehicles and light construction equipment causing annoyance due to prolonged operation: <ul style="list-style-type: none"> • The roadways used for access to the site will be kept in a state of good repair. • Construction equipment will not be left with engines running while not in use. • Use of the eastern approaches to the bridge for access and delivery of construction equipment or materials will be avoided during nighttime construction within the railyard. 2. To avoid risk of damage to adjacent buildings, construction activities shall be managed such that vibration levels at each building that do not exceed the vibration damage criteria established by the FTA. Example measures include but are not limited to: <ul style="list-style-type: none"> • For work at the west abutment, construction equipment will be limited to a peak particle velocity (PPV) at 25 feet of less than 0.065 in/sec. • For work at Pier 1, Pier 2 and Pier 3, construction equipment will be limited to a PPV at 25 feet of less than 0.112 in/sec.

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Resource	Environmental Commitment
	<ul style="list-style-type: none"> • For work within the underpass at Pier 9, construction equipment will be limited to a PPV at 25 feet of less than 0.091 in/sec. • Construction work adjacent to 900 Second Street NE (Pier 10) will be limited to a PPV at 25 feet of less than 0.059 in/sec. • Construction work adjacent to 215 I Street NE (Pier 11) will be limited to a PPV at 25 feet of less than 0.035 in/sec. • Construction work adjacent to 701 2nd Street NE (east abutment) will be limited to a PPV at 25 feet of less than 0.100 in/sec. <p>3. To mitigate the potential to cause annoyance to the occupants or internal uses of the adjacent buildings, construction activities shall be managed such that vibration levels at each building do not exceed the vibration annoyance criteria established by the FTA. Example measures include but are not limited to:</p> <ul style="list-style-type: none"> • Work west of First Street (west abutment, Pier 1, Pier 2, and Pier 3) will use construction equipment that results in ground-borne vibration L_v at 25 feet of less than 56 VdB so as not to interfere with recording studio use or less than 69 VdB during office hours. Timing of the use of construction equipment that has the potential to cause ground-borne vibration will be coordinated with the occupants of the adjacent buildings to be outside of office hours or when vibration-sensitive activities (recording studio) are not being conducted, or as otherwise agreed to with the occupants • Work at Piers 9 and 10, adjacent to 700 2nd Street NE and 900 2nd Street NE, will use construction equipment that results in ground-borne vibration L_v at 25 feet of less than 79 VdB. Timing of the use of construction equipment that has the potential to cause ground-borne vibration that exceeds this limit will be coordinated with the occupants of the adjacent buildings to be outside of office hours, or when vibration-sensitive activities are not being conducted, or as otherwise agreed to with the occupants. • Work at Pier 11 and the east abutment, adjacent to 701 2nd Street NE, 201 I Street NE, and 215 I Street NE, will use construction equipment that results in ground-borne vibration L_v at 25 feet of less than 68 VdB. <p>4. Displacement piles will be installed with a sonic or resonant hammer, impact pile driving will not be used for Project construction.</p> <p>5. The construction contractor will be required to develop a vibration control plan to ensure that the damage and annoyance criteria are not exceeded. Key elements of the plan will include the following:</p> <ul style="list-style-type: none"> • Develop a communication plan that includes property contacts and methods and timing of communication. • Select construction equipment with source levels that do not exceed those described in Measures 2 and 3. • Implement pre-construction inspection and document the existing condition of each adjacent building. • Implement a construction vibration compliance monitoring plan to ensure that the vibration damage and annoyance criteria are not exceeded. The plan will identify the specific locations where continuous vibration measurements will be taken and automatically alert the construction management team where monitoring results are approaching threshold levels. • Coordinate with building owners throughout construction and perform interim inspections

Table ES-2 | Environmental Commitments

Resource	Environmental Commitment
	<p>and document the condition of adjacent buildings at key points during construction of the Project, such as completion of foundation work adjacent to a particular building.</p> <ul style="list-style-type: none"> • Perform post-construction inspection and document the condition of adjacent buildings at substantial completion of the Project.
Water Quality	Section 4.10 - No mitigation measures are proposed.
	Section 4.17.10 - DDOT will develop and implement a stormwater management plan in accordance with DOEE regulations if land disturbance exceeds 50 square feet.
Water Body Modification and Wildlife Impacts	Section 4.11 - No mitigation measures are proposed.
	Section 4.17.11 - No mitigation measures are proposed.
Threatened or Endangered Species	Section 4.12 - No mitigation measures are proposed.
	Section 4.17.12 - No mitigation measures are proposed.
Historic and Archaeological Preservation	Section 4.13 - All terms included in the MOA will be implemented (Appendix D).
	Section 4.17.13 - All terms included in the MOA will be implemented (Appendix D).
Hazardous Waste Sites	Section 4.14 - No mitigation measures are proposed.
	Section 4.17.14 - A Phase II Environmental Site Investigation and Limited Hazardous Materials Assessment will be completed prior to construction.
Visual	Section 4.15 - The Hopscotch Kids mosaic tiles will be removed from the bridge, transported, and relocated to a new location or disposed of.
	Section 4.17.15 - No mitigation measures are proposed.
Energy	Section 4.16 - No mitigation measures are proposed.
	Section 4.17.16 - No mitigation measures are proposed.
Section 4(f) of the U.S. Department of Transportation Act	Section 4.18 - All terms included in the MOA will be implemented (Appendix D).

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