south capitol street

supplemental draft environmental impact statement/section 4(f) evaluation

december 2014

District Department of Transportation

FHWA-DC-EIS-09-01-FS

South Capitol Street
Martin Luther King, Jr. Avenue SE to Independence Avenue
Washington, District of Columbia

Supplemental Draft Environmental Impact Statement/
Section 4(f) Evaluation

Submitted pursuant to 42 U.S.C. 4332 (2)(c) and, where applicable, 49 U.S.C. 303 by the
U.S. Department of Transportation Federal Highway Administration
and
District of Columbia Department of Transportation

Cooperating Agencies
District of Columbia Department of the Environment
National Capital Planning Commission
National Park Service
U.S. Army Corps of Engineers
U.S. Coast Guard
U.S. Navy

12/8/2014
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General Information

The District Department of Transportation (DDOT), in cooperation with the Federal Highway Administration (FHWA), propose the South Capitol Street Project to increase pedestrian and vehicular safety, improve multi-modal transportation options, increase community accessibility, and support economic development on both sides of the Anacostia River. The two agencies are the local and lead agencies, respectively, that are responsible for project compliance with the National Environmental Policy Act (NEPA). Cooperating agencies are the District Department of the Environment, the National Capitol Planning Commission, the National Park Service, the U.S. Army Corps of Engineers, the U.S. Coast Guard, and the U.S. Navy. Participating Agencies are the Architect of the Capitol, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, and the U.S. Department of the Interior, Fish and Wildlife Service. This document updates and augments the Final Environmental Impact Statement (FEIS) that was released for public comment in March 2011.

What is this document?

This document is a Supplemental Draft Environmental Impact Statement (SDEIS) for the South Capitol Street Project, and is a supplement to the FEIS. It describes the role of the SDEIS in the NEPA process, and presents changes in the Preferred Alternative, environmental conditions and potential impacts since the FEIS. This SDEIS contains all necessary supplemental information regarding design changes made to the Preferred Alternative in the FEIS and along with the FEIS and the upcoming Supplemental Final Evironmental Impact Statement (SFEIS), will provide the basis for decision making by the FHWA.

What has already happened?

On April 26, 2005, the FHWA issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement for the project. On February 15, 2008, the FHWA issued a Notice of Availability (NOA) for the *South Capitol Street Draft Environmental Impact Statement (DEIS)/Section 4(f) Evaluation*. The DEIS examined the environmental consequences of a no build alternative and two build alternatives (Build Alternative 1 and Build Alternative 2). DDOT held public hearings on March 4 and 5, 2008 to obtain public comments on the DEIS.

The FHWA released the FEIS for public comment on March 22, 2011. The FEIS documented the analysis of a modified version of Build Alternative 2, named the FEIS Preferred Alternative, that was defined in response to public and agency comments on the DEIS. DDOT conducted public hearings on April 26 and 28, 2011 to obtain public comments on the DEIS.

After the publication of the FEIS, there were two major changes in the design of the FEIS Preferred Alternative. First, DDOT determined that the navigational needs on the Anacostia River could be met with a much less expensive fixed-span bridge rather than a moveable span bridge. Second, DDOT reconsidered the need to obtain right-of-way within the northernmost portion of the Joint Base Anacostia Bolling (JBAB) property. This decision resulted in changing

the alignment of the proposed new Frederick Douglass Memorial Bridge to a location immediately south of, and parallel to, the existing bridge.

Due to these design changes, a new alternative was developed. This new alternative was named the Revised Preferred Alternative since the FEIS identified a Preferred Alternative, and the design changes noted above are modifications to the FEIS Preferred Alternative. The Revised Preferred Alternative was not previously considered in the FEIS. The changes noted above are not considered minor revisions to the project, which is why a SDEIS and public circulation are required. This SDEIS was prepared to document the proposed changes to the FEIS Preferred Alternative which led to the development of the new alternative (i.e., Revised Preferred Alternative), and to evaluate the environmental impacts of the Revised Preferred Alternative in comparison to the Preferred Alternative that was described in the FEIS.

What is in this document?

The SDEIS includes 13 chapters.

Chapter 1 – Purpose and Need presents a summary of the purpose and need for the project.

Chapter 2 – Alternatives provides a description of the FEIS Preferred Alternative, and presents information on the Revised Preferred Alternative. It does not reexamine the earlier alternatives that were rejected from further consideration.

Chapter 3 – Affected Environment examines the same environmental issues that are in the FEIS and looks in depth at issues that experienced a substantive change in the affected environment since the FEIS. Section 3.1 includes details on which resources did or did not experience a substantive change in the affected environment.

Chapter 4 – Environmental Consequences examines the impacts of the Revised Preferred Alternative compared with those of the FEIS Preferred Alternative.

AFFECTED ENVIRONMENT

No Change for:

Air Quality
Economy and Employment
Geology, Topography, and Soils
Noise
Water Quality
Wildlife and Habitat
Visual Quality

Change for:

Community Cohesion and Facilities
Cultural Resources
Environmental Justice
Floodplains
Hazardous Materials
Land Use
Pedestrian and Bicycle Facilities
Threatened and Endangered Species
Traffic and Transportation
Wetlands

ENVIRONMENTAL CONSEQUENCES

No Change for:

Air Quality
Community Cohesion and Facilities
Economy and Employment
Energy
Floodplains
Hazardous Materials
Land Use
Traffic and Transportation-Traffic Safety

Change for

Cultural Resources
Environmental Justice
Geology, Topography and Soils
Noise
Pedestrian and Bicycle Facilities
Section 4(f)
Traffic and Transportation
Visual Quality
Water Quality
Wetlands
Wildlife and Habitats

While the SDEIS reviews all environmental resources included in the FEIS, only new information or circumstances relevant to environmental concerns of the changes made to the Preferred Alternative are examined in detail. Impacts that would occur regardless of either the FEIS Preferred Alternative or the Revised Preferred alternative are not examined in depth.

Chapter 5 – Section 4(f) Evaluation shows that the Revised Preferred Alternative would result in a Section 4(f) use of three historic properties. There would be a Section 4(f) Net Benefit to the L'Enfant Plan, a Section 4(f) *de minimis* use of Anacostia Park, and a Section 4(f) *de minimis* use of Suitland Parkway.

Chapters 6 through 12 update the list of preparers, the distribution list, comments and coordination, glossary, acronyms, index, and references.

Chapter 13 – Index of Technical Reports includes a synopsis of nine technical reports prepared to support the SDEIS (which differ from the 21 technical reports prepared for the FEIS).

What should I do with this document?

- Read the document. The electronic SDEIS is available at http://southcapitoleis.com/ and http://www.anacostiawaterfront.org/awi-transportation-projects/south-capitol-street-corridor/. Paper copies are available for review at a number of locations including the Anacostia Library, the Francis A. Gregory Neighborhood Library, the Martin Luther King, Jr. Memorial Library, the Parklands-Turner Community Library, the Southeast Neighborhood Library, the Southwest Neighborhood Library and the Business Opportunity and Workforce Development Center.
- Attend the public meeting and ask questions. The data and location of the public hearing will be announced on the website and through local media.
- Send comments to:

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What happens after the public comment period?

In the instance that there are no controversial comments raised, the FHWA may prepare errata sheets to this document as the SFEIS and complete and sign a ROD concurrently. The Administration will complete and sign a ROD no sooner than 30 days after publication of the SFEIS notice in the Federal Register or 90 days after publication of a notice for the SDEIS, whichever is later. The ROD will present the basis for the decision as specified in 40 CFR 1505.2, summarize any mitigation measures that will be incorporated in the project, and document any required Section 4(f) approval in accordance with part 774 of this title.

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executive summary

S.1 Introduction

In March 2011, the Federal Highway Administration (FHWA) and the District Department of Transportation (DDOT) approved release of the Final Environmental Impact Statement (FEIS) prepared in accordance with the National Environmental Policy Act (NEPA), as amended, for the South Capitol Street Project (the Project). The Project proposes to make major changes to the South Capitol Street area from Independence Avenue on the north end to Suitland Parkway at Martin Luther King, Jr. Avenue SE on the southeast end. The Project Area also includes New Jersey Avenue SE between M Street SE and Independence Avenue and the existing Frederick Douglass Memorial Bridge over the Anacostia River (see Figure S-1).The availability of the FEIS was formally announced in the April 8, 2011 *Federal Register*. However, a NEPA Record of Decision (ROD) was not issued by FHWA.

Since publication of the FEIS, FHWA and DDOT approved major changes to the design of the Project's Preferred Alternative as described in the FEIS. Most notably, DDOT reconsidered the need to obtain right-of-way within the northernmost portion of the Joint Base Anacostia-Bolling (JBAB). This decision resulted in changing the alignment of the proposed new Frederick Douglass Memorial Bridge to a location immediately south of and parallel to the existing bridge. In addition, new information about current and planned navigation along the Anacostia River, including the navigation requirements of the U.S. Navy (USN), led to the decision to make the new bridge a fixed span structure. The existing bridge is movable, allowing vessels with heights greater than the allowable vertical clearance underneath the bridge to pass through. Other notable design revisions made to the FEIS Preferred Alternative include the conversion of the east side traffic circle to a traffic oval similar in size to the proposed west traffic oval, and changes to the proposed ramps or ramp modifications between South Capitol Street and I-695, Suitland Parkway and I-295, and Martin Luther King, Jr. Avenue SE and Suitland Parkway.

Due to these design changes, a new alternative was developed. This new alternative was named the Revised Preferred Alternative since the FEIS identified a Preferred Alternative, and the design changes noted above are modifications to the FEIS Preferred Alternative. The Revised Preferred Alternative was not previously considered in the FEIS. The changes noted above are not considered minor revisions to the project, which is why a Supplemental Draft Environmental Impact Statement (SDEIS) was prepared, as well as public circulation of the SDEIS. This SDEIS was prepared to document the proposed changes to the FEIS Preferred Alternative which led to the development of the new alternative (i.e., Revised Preferred Alternative), and to evaluate the environmental impacts of the Revised Preferred Alternative.

DDOT and FHWA serve respectively as the Applicant and Lead Federal Agency regarding compliance with FHWA's implementing regulations of NEPA. The USN, U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), National Capital Planning Commission (NCPC), National Park Service (NPS) and District of Columbia Department of the Environment (DDOE) are all continuing to serve as Cooperating Agencies for the Project.

Figure S-1: Project Area

District Department of Transportation

S.2 Purpose and Need

The Purpose and Need of the Project include the following and remain the same as described in the FEIS (see Section 1.4 of the FEIS). In summary, the purpose of the South Capitol Street Project is to improve safety, multimodal mobility and accessibility, and support economic development. The Project would transform the existing corridor into an urban gateway to the U.S. Capitol and District of Columbia's Monumental Core. Transportation improvements were identified to incorporate long-term environmental sustainability and context sensitive design. Specifically, the project addresses the following needs:

- Safety: The design and deteriorating condition of the transportation infrastructure in the corridor results in poor safety conditions for motorists, bicyclists, pedestrians, and transit riders. For instance, because of the age of the bridge it has been posted to restrict truck traffic to the center lane of the westbound roadway and to the left lane of the eastbound roadway. As an interim solution, repairs have been made to the bridge to address the immediate structural deficiencies; however, replacement of the bridge is necessary to address long term structural needs and safety issues.
- Mobility: The lack of critical regional roadway connections and facilities for bicyclists and pedestrians support the need to improve mobility in the South Capitol Street Corridor.
- Accessibility: Several key destinations in or adjacent to the corridor are difficult to reach using the existing transportation infrastructure. Grade separations, median barriers, and ramp and intersection configurations limit access to activity centers for motorists, bicyclists, pedestrians, and transit riders.
- Economic Development: The density of employment and residential development forecasted for the area highlights the need to support economic growth. Public investments have increased employment and will stimulate additional private investment in new residential, office, and retail developments. As economic development continues to occur within the Project Area, additional demand will continue to be placed on transportation infrastructure to meet future transportation needs.

S.3 Proposed Action

The major elements of the Project include the following and remain the same as described in the FEIS (see Section 2.2 of the FEIS):

- New Frederick Douglass Memorial Bridge across the Anacostia River and removal of existing bridge (see Figure S-2)
- Two traffic ovals or circles located immediately west and east from the ends of the new bridge
- East traffic oval will include a connection with a new road and shared-use paths providing public access to the Poplar Point are of Anacostia Park
- Conversion of South Capitol Street to an urban gateway that accommodates multimodal transportation, which includes converting the grade-separated intersection with M Street into an at-grade intersection

Figure S-2: Revised Alignment for the New Frederick Douglass Memorial Bridge (Revised Preferred Alternative)

District Department of Transportation

LEGEND

- Proposed Pavement
- Proposed Green Space
- Proposed Sidewalk / Median
- Existing Elements to be Removed / Demolished
- Existing Traffic Signal
- Proposed Traffic Signal

1. Add pedestrian amenities and enhance streetscape along South Capitol Street north of I Street and along New Jersey Avenue SE north of SE/SW Freeway.
2. Restripe SE/SW Freeway westbound and close the outer most thru lane between exit and entrance ramps (to/from South Capitol Street). Restripe the existing exit ramp from single-lane to two-lane ramp without pavement widening.
3. Replace existing suspended ramp (north bound South Capitol Street to SE/SW Freeway) with at-grade intersection and new ramp.
4. Realign two existing ramps as compact diamond configuration (from SE/SW Freeway to southbound South Capitol Street, right turn only). Reconstruct sidewalk along South Capitol Street and replace pedestrian underpass with at-grade crossing.
5. Restore full 160' right-of-way and enhance streetscape along New Jersey Avenue SE south of SE/SW Freeway.
6. Reconstruct South Capitol Street as urban boulevard between SE/SW Freeway and just south of N Street. Open intersections of South Capitol Street with K Street and I Street to cross traffic and signalize.
7. Construct at-grade intersection at South Capitol Street and M Street and reconstruct M Street from Half Street SW to just east of Half Street SE.
8. Urban boulevard at South Capitol Street and at-grade intersections at O Street and P Street were constructed as part of South Capitol Street near-term improvement project. Resurface pavement, improve pedestrian amenities and enhance streetscape.
9. Construct (west) traffic oval at South Capitol Street, Potomac Avenue, Q Street SW, R Street SW, and new Frederick Douglass Memorial Bridge (FDMB).
10. Replace existing FDMB with new six-lane bridge including multi-use trails, and demolish existing bridge.
11. Construct (east) traffic oval at South Capitol Street, Suitland Parkway, new Anacostia Drive and new FDMB. Remove existing ramps leading to/from existing FDMB. Reconstruct South Capitol Street from east oval to Firth Sterling Avenue SE. Provide access to DC Water new poplar point pump station. Preserve existing pump station house.
12. Replace existing Suitland Parkway and I-295 interchange with modified diamond interchange, including reconstruction of I-295 bridges over Suitland Parkway, Firth Sterling Avenue, and Howard Road SE. Remove existing ramps to/from I-295. Reconstruct Suitland Parkway from Firth Sterling Avenue SE to east oval. Reconstruct Firth Sterling Avenue SE from Suitland Parkway to Howard Road SE.
13. Construct new and improved pedestrian/bike connections throughout the project area including a new pedestrian/bike path along Suitland Parkway connecting Firth Sterling Avenue and the east oval
14. Construct compact diamond interchange at Suitland Parkway and Martin Luther King (MLK) Jr. Avenue SE. Preserve existing MLK bridge over Suitland Parkway. Reconstruct Suitland Parkway from south of Stanton Road SE to Firth Sterling Avenue SE and remove existing ramps from Stanton Road SE to Sheridan Road SE.
15. Reconstruct pedestrian bridge over Suitland Parkway.
16. Restore and enhance landscape at U.S. Reservations 243, 244 and 245.

South Capitol Street Project Area - LEGEND

- Streetscape design features along South Capitol Street and New Jersey Avenue SE, such as widened sidewalks and curbside lanes, and the provision of street trees, benches, and decorative streetlights
- Improved connections between I-695 and South Capitol Street and between I-295 and Suitland Parkway
- New interchange at the Suitland Parkway and Martin Luther King, Jr. Avenue SE bridge overpass

Following approval of the FEIS, design changes were made to the FEIS Preferred Alternative, resulting in the development of a Revised Preferred Alternative. The major elements of these design changes include:

- The alignment for the new Frederick Douglass Memorial Bridge was shifted parallel to and approximately 30 feet from the south side or downstream from of the existing bridge superstructure. This bridge alignment would avoid the need to obtain right-of-way from the Joint Base Anacostia-Bolling (JBAB). In addition, the bridge would have a fixed span, not a moveable span as proposed in FEIS Preferred Alternative.
- The size of the traffic oval on the western approach to the new bridge was slightly reduced.
- At the eastern approach to the new bridge, a traffic oval, similar in size and shape to the west traffic oval, replaced the traffic circle. The east traffic oval will be located entirely within the existing DDOT right-of-way. Similar to the previously proposed traffic circle, the oval will still provide connections to the realigned South Capitol Street and Suitland Parkway. The east traffic oval will not provide a direct connection with Howard Road SE, but will provide a direct connection with the Poplar Point section of Anacostia Park.
- At the I-695/Suitland Parkway interchange, the grade of Ramp B (southbound I-295 to westbound Howard Road SE) was adjusted to be 6.5 percent from 9 percent, which would have been substandard for an interstate highway ramp.
- Replaced a portion of the I-295 Bridge over Firth Sterling Avenue SE and an inactive railroad right-of-way. The railroad would be replaced with earthen fill.
- At the Martin Luther King Jr. Avenue SE overpass at Suitland Parkway, the proposed ramps would be configured into an urban diamond interchange, instead of an interchange with center ramps.
- The eastbound I-695 ramp to southbound South Capitol Street was changed to an urban interchange ramp with South Capitol Street.

S.4 Alternatives

As stated in the FEIS (see Section 2.4 of the FEIS), a wide range of alternatives were considered and evaluated, including a Transportation System Management (TSM) Alternative, a Mass Transit Alternative, Improvements to Bicycle and Pedestrian Facilities, and Improvements of Existing Roadway Facilities. None of these alternatives were found to meet the Project's

Purpose and Need and were dismissed from further consideration as stand-alone alternatives before publication of the Project's Draft Environmental Impact Statement (DEIS).

The alternatives examined in detail in both the DEIS and FEIS included a No Build Alternative and Build Alternatives 1 and 2. The No Build Alternative would not contain new major construction resulting from the Project, although other planned and committed projects in the area would move forward. Improvements implemented under the No Build would be limited to short-term restoration and maintenance of existing infrastructure. Build Alternatives 1 and 2 were considered in the FEIS but neither was identified as the Preferred Alternative, and therefore, they are not being considered in the SDEIS (see Section 2.2 of the FEIS).

The FEIS introduced a Preferred Alternative, which was a modification or refinement of Build Alternative 2 in response to agency and public comments. A bridge type was selected (arched bascule), and the alignment of the new bridge shifted slightly to reduce the amount of right-of-way needed from JBAB. As noted Section S.3, the proposed action is the FEIS Preferred Alternative with design changes that resulted in the development of the Revised Preferred Alternative. This SDEIS was prepared due to the design changes made to the FEIS Preferred Alternative.

S.5 Other Governmental Projects

The following major governmental projects are underway or are proposed within or near the Project Area:

- DC Streetcar – Anacostia Initial Line
- Martin Luther King, Jr. Avenue Great Streets
- 11th Street Bridges Project (Phase I and II)
- Anacostia Riverwalk Trail
- Water Coach/Taxi
- DC United Soccer Stadium
- Anacostia Waterfront Initiative: Transportation Master Plan – 2014 Update
- Firth Sterling Trail

S.6 Areas of Controversy

Throughout the development of the Project, numerous public meetings and outreach activities were held with various agencies, groups, and organizations. These activities have focused on a variety of issues primarily concerning design development and the coordination of projects that are in the planning and/or construction phase within the Project Area or adjacent to the Project Area. Although no one specific issue has been identified as a source of controversy, the proposed design of the new Frederick Douglass Memorial Bridge (FDMB) and traffic ovals, in particular their future visual appearance to both those who use (e.g., motorists) and can view these elements (e.g., those walking along the riverfront), generated discussion among agencies and the public.

In response to concerns from CFA and NCPC about the visual quality of the FDMB and traffic ovals, DDOT instituted a visual quality management process for the Project. This included developing a *Visual Quality Manual* (DDOT et. al., 2014), which led to the identification of visual quality design goals, and a framework for approaching the visual quality and aesthetic design of the Project. At the conclusion of the NEPA process and dependent on the FHWA decision as provided in the Record of Decision, a coherent and integrated design process would result, one that displays exemplary civic architecture and urban design. The visual design goals developed for the Project are based on multiple planning initiatives conducted by both DC and federal agencies and extensive stakeholder engagement and input over the past several years. These goals, which apply to the entire Project, reflect the vision to provide a grand urban boulevard, a gateway into the nation's capital, an iconic symbol of the District's aspirations in the 21st century, and to support the revitalization of local neighborhoods and the rebirth of the Anacostia Waterfront.

S.7 Summary of Environmental Impacts

An EIS shall be supplemented whenever FHWA determines that: changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or new information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS. The Project's most recent NEPA document was dated March 2011. As noted in Section S.4, this SDEIS was prepared due to the design changes made to the FEIS Preferred Alternative. The changes were not due to any new significant environmental impacts that had not been evaluated in the FEIS nor because the design changes would result in significant environmental impacts not evaluated in the FEIS. The Revised Preferred Alternative will result in different environmental and social impacts than those documented in the FEIS. Therefore, this SDEIS presents these changes. If a newly identified impact of the Revised Preferred Alternatives is determined to be an adverse impact, mitigation measures are required and will be provided. Otherwise, those mitigation measures proposed in the FEIS for the FEIS Preferred Alternative remain applicable.

Table S-1 provides a summary of the environmental impacts of the Revised Preferred Alternative, organized by topic as provided in the FEIS. As a point of comparison, a summary of the environmental impacts of the FEIS Preferred Alternative is also provided. Any differences in the environmental impacts between the FEIS Preferred Alternative and the Revised Preferred Alternative are noted.

Table S-1: Environmental Impacts of the FEIS Preferred Alternative and Revised Preferred Alternative

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Land Use		
Acres of Additional Right-of-Way Needed	12.4	3.1
Business Displacements	5	2
Residential Displacements	0	0
Community Cohesion and Facilities		
Social Conditions	Beneficial to overall social activities and connections	Beneficial to overall social activities and connections
Physical Conditions	Minor changes, except for the need to acquire land from the JBAB	Fewer changes because right-of-way not required from the JBAB
Visual Environment	Beneficial to visual environment	More beneficial visual effects because right-of-way from the JBAB is not needed
Economic Conditions	Supports ongoing economic development activities	Supports ongoing economic development activities
Public Services and Facilities	No adverse impact to emergency response services, and improves access to public facilities; District commercial drivers training lot reduced in size and may be used for construction staging	No adverse impact to emergency response services, and improves access to public facilities
Safety	Project components designed to improve traffic safety and the safety of pedestrians and cyclists	Project components designed to improve traffic safety and the safety of pedestrians and cyclists
Environmental Justice		
Disproportionately High and Adverse Impacts to Minority or Low-Income Populations	No	No
Public Involvement Conducted to Reach and Solicit Input from Minority or Low-Income Populations	Yes	Yes

Table S-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Economy and Employment		
Long-Term Economic Conditions	Positive economic influence to nearby residential, office and institutional developments	Positive economic influence to nearby residential, office and institutional developments
Air Quality		
Conformity with State Implementation Plan	Yes	Yes
Impact to Regional Pollutant Burdens	Slight increase, but immeasurable on a regional scale	Slight increase, but immeasurable on a regional scale
Greenhouse Gas Levels	No measurable change to greenhouse gas levels	No measurable change to greenhouse gas levels
Air Quality Concern for Particulate Matter	None; no requirement for hot-spot analysis	None; no requirement for hot-spot analysis
Number of Intersections Predicted to Exceed the National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide	0	0
Noise		
Number of Noise Sensitive Receptors Predicted to Approach or Exceed FHWA Noise Abatement Criteria	12 of 14 sites analyzed	6 of 12 sites analyzed (not directly comparable to FEIS results See Section 4.4)
Number of Noise Barriers Recommended for Further Study	0	0
Water Quality		
Foundation Area in Contact with the Riverbed	11,884 sq ft	20,368 sq ft
Acres of Impervious Surfaces	Existing is 76.0 acres and proposed is 74.5 acres	Existing is 67.3 acres and proposed is 68.0 acres. (Existing differs from FEIS due to different project limits and area of calculation)
Quality of Surface and Groundwater Resources	Improved due to the provision of better stormwater management systems.	Improved due to the provision of better stormwater management systems.
Wetlands		
Total Acres of Permanent Wetland Impacts	0	0.04

Table S-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Wildlife and Habitats		
Acreage Impacts to Wooded Areas	0.1-acre (between Howard Road and Suitland Parkway)	2.1 acres (along the south and west side of Anacostia Park)
Number of Specimen Trees Displaced	3 trees (along South Capitol Street)	42 trees (potential displacements based on new limits of disturbance for this alternative)
Section 7 Determination	"Not likely to adversely affect" determination for the shortnose sturgeon	"Not likely to adversely affect" determination for the Atlantic sturgeon and the shortnose sturgeon
Floodplains		
Total Number of Bridge Piers	4	6
Number of Bridge Piers in the Water	3	4
Number of Bridge Piers in the Floodplain	1	2
Predicted Effect of New Bridge on Flood Levels on the Anacostia River Compared with Existing Bridge During Storm Event	Little to no variation (at most a 0.02-foot increase for selected storm events) in flood water levels	No increase in water surface elevation and a maximum decrease of 0.02 feet for the 100-year water surface elevations upstream of the proposed bridge crossing
Geology, Topography and Soils		
Notable Changes to Site Topography	Northern edge of east traffic circle would be 15 feet higher than existing ground level; southern edge of traffic oval at western approach to the new bridge would be 22 feet higher than existing ground level	East traffic oval has grades with slightly higher elevations to enhance gateway views from the perspective of motorists. Revised Suitland Parkway/Martin Luther King, Jr. Avenue SE interchange better maintains existing topography of the parkway
Erosion Potential	Minimal	Minimal
Cultural Resources		
Number of Adverse Effect Determinations in Accordance with Section 106 of the National Historic Preservation Act (NHPA) (Historic Architectural Resources)	2 (the L'Enfant Plan and Suitland Parkway)	1 (the L'Enfant Plan)
Number of Adverse Effect determinations in accordance with NHPA Section 106 (Archaeological Resources)	0	0

Table S-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Hazardous Materials		
Number of Hazardous Materials Sites of Potential Concern near the Construction Area	19	10
Visual Quality		
Landscape Unit #1, Subarea 1: South Capitol Street Bridge to M Street	A Visual Quality Difference (VQD) of 5 from existing conditions	A Visual Quality Difference (VQD) of 5 from existing conditions
Landscape Unit #1, Subarea 2: South Capitol Street, M Street	5 VQD from existing conditions	5 VQD from existing conditions
Landscape Unit #1, Subarea 3: South Capitol Street, North of M Street	4.3 VQD from existing conditions	4.7 VQD from existing conditions
Landscape Unit #2: Frederick Douglass Memorial Bridge	6.17 VQD from existing conditions	Same as FEIS Preferred Alternative
Landscape Unit #3, South Capitol Street SE	5.7 VQD from existing conditions	6.3 VQD from existing conditions
Landscape Unit #4, Suitland Parkway	3.3 VQD from existing conditions	4.0 VQD from existing conditions
Landscape Unit #5, Howard Road SE	No VQD from existing conditions	No VQD from existing conditions
Landscape Unit #6, Martin Luther King, Jr. Avenue SE	Minus 0.7 VQD from existing conditions	No VQD from existing conditions
Landscape Unit #7, Anacostia Park	3.7 VQD from existing conditions	3.7 VQD from existing conditions
Landscape Unit #8, New Jersey Avenue SE	0.3 VQD from existing conditions	0.3 VQD from existing conditions
Pedestrian and Bicycle Facilities		
Pedestrian and Bicycle Facilities	New bridge and streetscape features would improve pedestrian and bicycle facilities, enhancing connectivity for these transportation modes	New bridge and streetscape features would improve pedestrian and bicycle facilities, enhancing connectivity for these transportation modes. Improved connection to Suitland Parkway from Frederick Douglass Memorial Bridge
Traffic and Transportation		
Predicted Percent Increase (or Decrease) in Traffic Volumes on South Capitol Street at the Anacostia River compared with the No Build Alternative	13 percent	13 percent
Number of Intersections Predicted to Operate at Level-of-Service (LOS) E or F During the Morning Peak Hour in 2040	5 (based on updated analysis)	3
Number of Intersections Predicted to Operate at Level-of-Service (LOS) E or F During the Evening Peak Hour in 2040	10 (based on updated analysis)	7

Table S-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Other Transportation Facilities and Services		
Public Transit Service (Metrorail, Metrobus, DC Circulator, Commuter Bus)	None	None
Parking Conditions	None	None
Other Types of Transportation (Water, Helicopter, Freight and Passenger Rail)	None, except that helicopter flight operations would need to be altered at the heliport adjacent to South Capitol Street	Flight operations at the heliport would not be altered.
Energy		
Predicted Direct Energy Consumption Increase (or Decrease) in 2040 Compared with the No Build Alternative	0.5% decrease	0.5% decrease
Cumulative Impacts		
Land Use	Beneficial	Beneficial
Socioeconomic Conditions	Low level of adverse effects	Low level of adverse effects
Park and Recreational Resources	Beneficial	Beneficial
Air Quality	Beneficial	Beneficial
Noise Conditions	No Effect	No Effect
Water Resources	Beneficial	Beneficial
Wildlife and Habitats	No Effect	No Effect
Cultural Resources	No Effect	No Effect
Visual Characteristics	No Effect	No Effect
Transportation and Infrastructure	Beneficial	Beneficial
Indirect Impacts		
Development Inducing Potential of the Project	Supports development, but not the crucial factor	Supports development, but not the crucial factor
Construction Impacts		
Community Cohesion and Facilities	Temporary change in access to certain community facilities; temporary utility disruptions may be required	Temporary change in access to certain community facilities; temporary utility disruptions may be required
Economy and Employment	New construction jobs created; purchase of equipment, supplies and materials from local and regional sources	New construction jobs created; purchase of equipment, supplies and materials from local and regional sources
Air Quality	Short-term fugitive dust and mobile source emissions	Short-term fugitive dust and mobile source emissions
Noise and Vibration Conditions	Construction activities, equipment and vehicles emitting noise ranging from high 70s to up to 100 decibels (dB) and causing vibration	Construction activities, equipment and vehicles emitting noise ranging from high 70s to up to 100 decibels (dB) and causing vibration

Table S-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

	Impact Summary	
Environmental Topic/Measure	FEIS Preferred Alternative	Revised Preferred Alternative
Construction Impacts (cont'd)		
Water Quality	Construction of bridge has the potential to affect water quality	Construction of bridge has the potential to affect water quality
Wildlife and Habitats	Some vegetation cleared to support construction	Some vegetation cleared to support construction
Geography, Topography and Soils	Disturbance of soil could cause erosion and sedimentation	Disturbance of soil could cause erosion and sedimentation
Cultural Resources	Proximity of construction activities could temporarily diminish the integrity of certain historic properties	Proximity of construction activities could temporarily diminish the integrity of certain historic properties
Hazardous Materials	Health and safety of construction workers could be affected through exposure to hazardous materials sites	Health and safety of construction workers could be affected through exposure to hazardous materials sites
Pedestrian and Bicycle Facilities	Mobility for pedestrians and cyclists would be maintained though detours may be required	Mobility for pedestrians and cyclists would be maintained though detours may be required
Traffic and Transportation	Traffic circulation and mobility would be maintained although street closures and detours may be required; access to Metrorail stations maintained at all times, but rerouting of bus routes and moving of bus stops may be required; marine traffic on the river would be maintained except for short term closures from certain construction activities	Traffic circulation and mobility would be maintained although street closures and detours may be required; access to Metrorail stations maintained at all times, but rerouting of bus routes and moving of bus stops may be required; marine traffic on the river would be maintained except for short term closures from certain construction activities
Section 4(f)		
Number of Section 4(f) Uses	2 (the L'Enfant Plan of the City of Washington, DC and Suitland Parkway)	3 (the L'Enfant Plan of the City of Washington, DC, Anacostia Park and Suitland Parkway, but the latter two would be *de minimis* impacts

S.8 Environmental Permits and Approvals

The following text includes a summary of the permits and approvals required for the proposed Project (Revised Preferred Alternative). Additional environmental commitments (mitigation measures) are listed in Table 4-20.

- Wetlands: A final wetland delineation and USACE jurisdictional determination will be completed during final design for the three wetlands identified during the 2014 survey. During construction, the two wetlands located along Suitland Parkway will be protected by a fenced 25-foot buffer.
- Wildlife and Habitats: Coordination will be conducted with U.S. Fish and Wildlife Service per Migratory Bird Treaty Act permit for relocation of multiple osprey and peregrine falcon nests and periodic removal of new nest materials to prevent nesting during construction. A biological assessment completed for the Revised Preferred Alternative resulted in a determination by the National Oceanic and Atmospheric Administration (NOAA) that no direct or indirect effects to the Atlantic sturgeon are expected.
- Cultural Resources: *The Memorandum of Agreement Among the Federal Highway Administration, the District of Columbia State Historic Preservation Office, the National Capital Planning Commission, the Advisory Council on Historic Preservation, and the District Department of Transportation, Regarding the South Capitol Street Project within the District of Columbia* (MOA) (ACHP et al., 2011) completed during the FEIS phase and executed in 2011 will be revised to consider changes introduced by the Revised Preferred Alternative. The DC SHPO and consulting parties will be consulted to resolve effects and revise the MOA. The MOA design review milestones will be revised to incorporate the design-build process.
- Hazardous Materials: Conduct Phase 2 Environmental Site Assessment (ESA); develop waste management plan based on results of the Phase 2 ESA; Coordinate with DDOE concerning handling and disposal of contaminated materials; and dewatering activities near contaminated zones in compliance with procedures and requirements specified in DDOE permits.
- Visual Quality: Interim or preliminary designs prepared by designer/contractors will undergo visual quality reviews in accordance with the design-build process prior to awarding the design-build contract.
- Parklands: To construct a new access road to Anacostia Park on Anacostia Drive, which would start from the northeast leg of the east traffic oval, will include signage, in accordance with NPS standards, and landscaping and lighting to create a welcoming entrance into Anacostia Park from the east oval. Use of land by DDOT under the jurisdiction of NPS, such as the riverbed and Anacostia Park, would be authorized by Special Use Permits.

S.9 Unresolved Issues

There are no unresolved NEPA issues related to the Project.

chapter 1.0
purpose and need

1.1 Introduction

This Supplemental Draft Environmental Impact Statement (SDEIS) documents changes proposed to the South Capitol Street Project (the Project) subsequent to the Final Environmental Impact Statement (FEIS) that was approved by the Federal Highway Administration (FHWA) on March 22, 2011. The District of Columbia Department of Transportation (DDOT) proposed the Project in conjunction with the FHWA. DDOT and FHWA serve respectively as the Applicant and Lead Federal Agency regarding compliance with FHWA's implementing regulations of the National Environmental Policy Act (NEPA), as amended. The U.S. Navy (USN), U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), National Capital Planning Commission (NCPC), National Park Service (NPS) and District of Columbia Department of the Environment (DDOE)) are continuing to serve as cooperating agencies for the Project. The Project Area encompasses South Capitol Street between Suitland Parkway at Martin Luther King, Jr. Avenue SE on the southeast end and Independence Avenue on the north end (see Figure 1-1). The Project Area includes the existing Frederick Douglass Memorial Bridge, which is proposed to be replaced with a new bridge, and the street network immediately on both sides of the river from the new bridge, including Interstate 295 (I-295) and Suitland Parkway. Finally, the Project Area includes New Jersey Avenue SE between M Street SE and Independence Avenue.

DDOT proposed major design changes to the FEIS subsequent to its approval by FHWA. Those changes were the result of the decision to reconsider obtaining right-of-way within the northernmost portion of the Joint Base Anacostia-Bolling (JBAB) for the Project which resulted in additional engineering that set the proposed new Frederick Douglass Memorial Bridge on an alignment immediately south of and parallel to the existing bridge. New information about current and planned navigation, including the navigation requirements of the USN along the Anacostia River influenced the decision to include a fixed bridge among the Project alternatives. In addition, revisions to exit ramps throughout the Project Area were made for enhanced safety. These include changes to the new ramps at Martin Luther King, Jr. Avenue SE and Suitland Parkway, and the ramps at I-695 and South Capitol Street.

Figure 1-1: Project Area

District Department of Transportation

As shown in Figure 1-2, the existing Frederick Douglass Memorial Bridge is a swing-span type of bridge, where a section of the bridge opens to accommodate taller marine vessels. The FEIS considered alternatives that contained bridge types with movable spans which would continue to allow passage of marine vessels with clearance requirements higher than the proposed navigation opening for the bridge in the closed position (see Section 2.2 of the FEIS). The SDEIS documents the results of the Anacostia River Navigation Evaluation Final Report (DDOT, 2014) (Appendix A) that determined the extent to which a fixed bridge would accommodate various types and sizes of marine vessels.

Figure 1-2: Frederick Douglass Memorial Bridge Center Swing Spans

Due to these design changes, a new alternative was developed. This new alternative was named the 'Revised Preferred Alternative' since the FEIS identified a Preferred Alternative, and the design changes noted above represent significant changes to the FEIS Preferred Alternative. This newly proposed Revised Preferred Alternative was not previously evaluated in the FEIS which is why the FEIS is being supplemented regarding this new information and public circulation of the supplemented FEIS is required.

This SDEIS provides explanation for the design changes to the Project, and describes the changes in the affected environment since the FEIS. In addition, this SDEIS discloses the environmental impacts of the Revised Preferred Alternative. For reader convenience,

environmental impacts attributable to the FEIS Preferred Alternative are provided for comparison. Where applicable, this SDEIS notes the adjustments in mitigation measures and environmental commitments as a result of differing environmental impacts due to the Revised Preferred Alternative.

This SDEIS does not repeat information from the FEIS that is still current or still applicable to the Project under the Revised Preferred Alternative. Therefore, it does not contain detailed descriptions of the affected environment (i.e., existing conditions) or environmental consequences as a result of the construction and operation of the Project if unchanged from the FEIS. However, this SDEIS summarizes information from the FEIS for contextual purposes.

1.2 Background

1.2.1 South Capitol Street Corridor

Major Pierre-Charles L'Enfant's *1791 Plan of the City of Washington* (the L'Enfant Plan) identified South Capitol Street as one of the symbolic gateways into the District's Monumental Core. The L'Enfant Plan envisioned South, East, and North Capitol Streets as the cardinal street extensions of the U.S. Capitol. These streets are critically important within the transportation hierarchy and they are considered to be "prominent gateways" to the District's Monumental Core.

Today, the South Capitol Street Corridor continues to connect downtown Washington with southeast and southwest neighborhoods and communities within Prince George's County, Maryland. Up to 80,000 daily commuters travel through the South Capitol Street Corridor. The South Capitol Street Corridor, including the Frederick Douglass Memorial Bridge and its connection with Suitland Parkway, is part of the National Highway System. Prior to completion of construction of the Frederick Douglass Memorial Bridge in 1950, South Capitol Street terminated at the Anacostia River's western bank with an intersection at T Street SW. Section 1.2.2 summarizes the history of the bridge and the rationale for its design as a movable bridge.

In 2007, with the *Frederick Douglass Memorial Bridge Rehabilitation* project, DDOT lowered a viaduct portion of the bridge on the west side of the river and reconstructed South Capitol Street as an at-grade, divided roadway, with landscaping, from Potomac Avenue to N Street. The bridge on the west side of the river now begins at Potomac Avenue rather than at N Street.

In 2008, DDOT completed the *South Capitol Street Near-Term Improvements*, which included reconstruction and other improvements, such as landscaping, streetlights, and pedestrian and traffic signal improvements along several roadways surrounding South Capitol Street. These roadways included:

- 1st Street SE from I Street SE to Potomac Avenue SE
- Potomac Avenue from 1st Street SE to Half Street SE
- N Street SE from 1st Street SE to South Capitol Street
- I Street SE from New Jersey Avenue SE to South Capitol Street

Despite the recent improvements made to the corridor, it still lacks the characteristics of a gateway as envisioned by L'Enfant. For instance, the existing bridge and its approaches have a freeway type configuration, and lack adequate pedestrian and cycling facilities. In addition, the street network on both sides of the river fails to provide necessary connections to community destinations for pedestrians, cyclists, transit riders, or motorists. Chapter 2.0 of the FEIS described the critical long-term needs for improvements.

1.2.2 Frederick Douglass Memorial Bridge

The Frederick Douglass Memorial Bridge was planned as an extension of South Capitol Street across the Anacostia River and an integral design element of Suitland Parkway. Prior to the construction of the bridge, there was no means to cross the Anacostia River in the vicinity of South Capitol Street. Suitland Parkway was constructed as a rapid, unimpeded thoroughfare for government officials and workers, and foreign dignitaries, to travel between downtown Washington and Andrews Air Force Base, in Camp Springs, Maryland. The Frederick Douglass Memorial Bridge was constructed following the completion of construction of Suitland Parkway.

The National Capital Park and Planning Commission (NCPPC) began initial planning for the bridge and Suitland Parkway in 1937. Due to limited monetary resources available during World War II, Suitland Parkway was constructed beginning in 1943. The bridge design was completed in early 1942 but the funding was not procured until 1949. Figure 1-3 shows the Washington Navy Yard and vicinity with the initial phase of construction for the South Capitol Street Bridge in the upper left of the photograph.

When the bridge opened, it was 3,250 feet long with two lanes in either direction separated by a 4-foot-wide median. It was designed with a gently arching profile, to allow smaller boats to cross beneath its central spans, which provide a maximum vertical clearance of 45 feet. Since the Washington Navy Yard is located immediately upstream, the bridge accommodated larger ships, such as military vessels, that frequented the area at the time.

To comply with navigation requirements needed for the Navy Yard, the bridge designers were required to utilize a moveable central span, either a drawbridge or a swing span. According to the U.S. Commission of Fine Arts publication on Bridges and the City of Washington, the chosen design featured what was, at the time of its construction, one of the world's longest pivoting swing spans, stretching 386 linear feet.

Throughout its early history, the new bridge was simply referred to as the South Capitol Street Bridge. It was not dedicated to the memory of Frederick Douglass until 16 years after its construction, in October 1965.

Figure 1-3: Historic Photograph of Washington Navy Yard and Vicinity

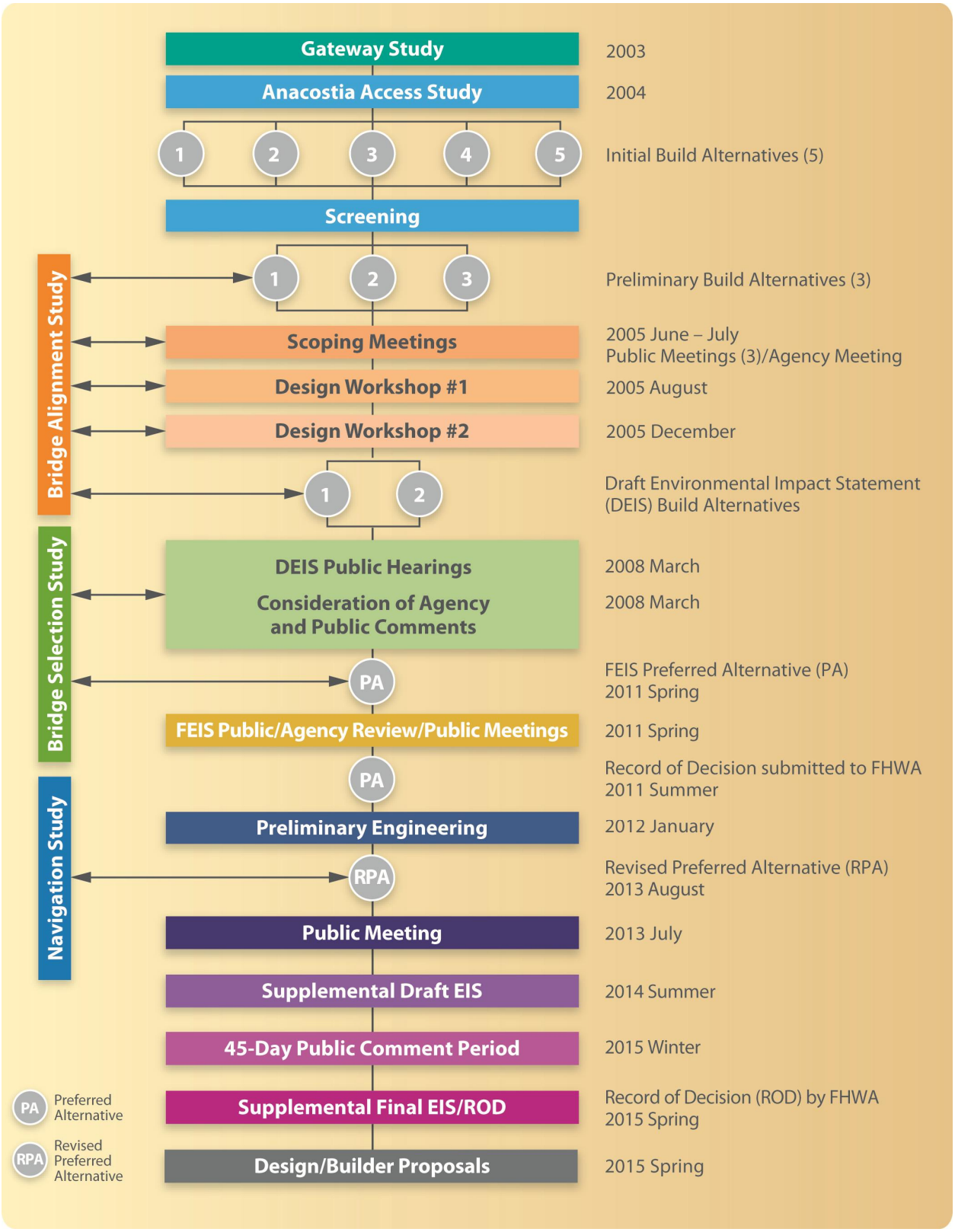
Source: Naval History and Heritage Command, 1950
Note: The initial phase of construction for the South Capitol Street Bridge is shown in the upper left of the photograph

1.2.3 Recent Planning History

As growth in the District migrated outward from the highly developed downtown and Monumental Core, the area surrounding the Anacostia River has been the focus of a sustained planning and development effort. The South Capitol Street Corridor has been a key part of that effort and the critical milestones in the planning for the corridor are discussed below and illustrated in Figure 1-4.

Recognizing the need for a clear vision for the Anacostia Waterfront, in March 2000, Mayor Anthony Williams brought together the 20 federal and District agencies that own or control land along the Anacostia River. It was this partnership that signed the Anacostia Waterfront Initiative (AWI) Memorandum of Understanding (District Office of Planning, 2000) and began to define the vision for the Anacostia Waterfront in the future.

Figure 1-4: South Capitol Street Corridor Planning Timeline



Acting with the cooperation and oversight of this partnership, the District Office of Planning (OP) created the AWI (OP, 2003), identifying major themes to guide development and revitalization efforts along the Anacostia Waterfront. The plan considered the proposed redevelopment of South Capitol Street according to the National Capital Planning Commission's (NCPC) 1997 plan, *Extending the Legacy, Planning America's Capital for the 21st Century* (NCPC, 1997). The plan identified South Capitol Street as a civic gateway to central Washington providing a mix of shopping, housing, and offices. It also proposed replacing the Frederick Douglass Memorial Bridge with a new six-lane span that would also accommodate pedestrians and bicycles. DDOT and FHWA proposed to improve South Capitol Street and prepared the *South Capitol Street Draft Environmental Impact Statement (DEIS) and Section 4(f) Evaluation* (DDOT, 2007) to address these changes.

The DEIS included alternatives for improving safety, multimodal mobility and accessibility, and supporting economic development throughout the Project Area. DDOT actively sought and received public input on the process and design decisions. Based on feedback on the DEIS, a FEIS was prepared and submitted to FHWA. FHWA signed the FEIS in 2011 but did not issue a Record of Decision (ROD).

In December 2011, the FHWA, District of Columbia State Historic Preservation Office (DC SHPO), NPS, NCPC, Advisory Council on Historic Preservation (ACHP), and DDOT signed the *Section 106* Memorandum of Agreement (MOA) (ACHP et al., 2011), which was meant to resolve the "adverse effect" to two affected historic properties: The L'Enfant Plan of the City of Washington, DC and Suitland Parkway. The Section 106 MOA will be amended to reflect the updated Section 106 consultation as a result of the development of the Revised Preferred Alternative.

Following the release of the FEIS, the alignment of the Frederick Douglass Memorial Bridge was reevaluated in terms of design efficacy, constructability, cost, right-of-way requirements, environmental considerations, and other factors. From this reevaluation, several potential risks to the Project schedule were identified with constructing the FEIS Preferred Alternative and the proposed new Frederick Douglass Memorial Bridge.

The identified risks led DDOT to consider revising the alignment of the Frederick Douglass Memorial Bridge for the FEIS Preferred Alternative. The alignment was relocated to approximately 30 feet downstream of, and parallel to, the existing bridge, which is upstream from the proposed alignment for the FEIS Preferred Alternative. The bridge realignment would avoid the need to acquire JBAB property and minimize, or eliminate, the remaining risks of the FEIS Preferred Alternative, including potential impacts to utilities and hazardous materials. Section 2.1.2 contains a detailed discussion of these risks.

Since completing the FEIS, DDOT investigated the types of marine vessels and navigation requirements for bridge openings using existing historical, current and forecast data. Records indicated that the bridge occasionally opened for marine vessels. Replacing the movable bridge with a fixed bridge would result in substantial cost savings. The change in the bridge alignment

would preclude operating the swing span during the approximately three years needed to construct the new bridge.

1.2.4 DEIS and FEIS NEPA Compliance

The Notice of Intent (NOI) to prepare the *South Capitol Street DEIS and Section 4(f) Evaluation* (DDOT, 2007) for the Project was published in the *Federal Register* on April 26, 2005. Following the publication of the NOI, DDOT held agency coordination meetings, public scoping meetings, and other public involvement activities. Chapter 8.0 of the FEIS describes the public involvement activities.

The Notice of Availability for the DEIS was published in the *Federal Register* on February 15, 2008, which initiated a 45-day comment period that ended on March 31, 2008. Paper copies of the DEIS were made available to the public at a number of accessible locations. An electronic version of the DEIS was available for download on the South Capitol Street project website (www.southcapitoleis.com). Public hearings for the DEIS were held on March 4, 2008 at Birney Elementary School and on March 5, 2008 at Amidon Elementary School. Information about the distribution of the DEIS, the public hearings and comments received during the 45-day comment period is provided in Chapter 8.0 of the FEIS.

FHWA approved the FEIS on March 22, 2011 and filed it with the U.S. Environmental Protection Agency (USEPA) for publication in the Federal Register. Subsequently a Notice of Availability was issued in the Federal Register and local media outlets on April 8, 2011. The public review of the FEIS included public meetings held on April 26 and 28, 2011. The review period ended on May 12, 2011. DDOT received comments from agencies, organizations, residents, and other individuals interested in the Project.

1.2.5 SDEIS NEPA Process and Status

The National Environmental Policy Act (NEPA) requires "….all agencies of the Federal Government shall include…a detailed statement by the responsible official on (i) the environmental impact of the proposed action; (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented; (iii) alternatives to the proposed action; (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available…to the public…through the existing agency review processes." An EIS shall be supplemented whenever FHWA determines that: (1) Changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or (2) New information or circumstances relevant to environmental concerns and bearing on the proposed action or its

impacts would result in significant environmental impacts not evaluated in the EIS. The proposed design changes to the Project were not evaluated in the FEIS. As a result of the design changes proposed by DDOT, inclusive of bridge type, FHWA is preparing this supplemental FEIS. This SDEIS describes design changes to the Project, assesses the potential impacts associated with those changes, and compares them with impacts previously documented in the FEIS. This SDEIS:

- Updates the description of the Project
- Identifies a Revised Preferred Alternative
- Updates the assessment of construction and long-term environmental and social impacts as a result of changes in the design of the Project
- Proposes adjustments to previously-adopted mitigation measures as a result of changes in the design of the Project
- Summarizes additional agency coordination and public involvement
- Updates Project compliance with other federal laws, in particular, Section 106 of the National Historic Preservation Act (16 USC 470 et seq. and 36 CFR 800)
- Updates Project compliance with Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended (23 CFR 774)

A Notice of Intent (NOI) to prepare a Supplemental Final Environmetnal Impact Statement and Section 4(f) Evaluation (SFEIS) for the Project was published in the *Federal Register* on July 28, 2014 (Appendix B). However, the FHWA later decided to prepare a SDEIS and a revised NOI was published in the *Federal Register*. The SFEIS will be issued after the public comment period for the SDEIS (see Section 1.4).

1.3 Purpose and Need

The Purpose and Need for the South Capitol Street Project remains the same as described in the FEIS (see Section 1.4 of the FEIS). The purpose of the Project is to improve safety, multimodal mobility and accessibility, and support economic development. The Project would transform the existing corridor into an urban gateway to the U.S. Capitol and District of Columbia's Monumental Core. Transportation improvements were identified to incorporate long-term environmental sustainability and context sensitive design. Specifically, the project addresses the following needs:

- Safety – The design and deteriorating condition of the transportation infrastructure in the corridor results in poor safety conditions for motorists, cyclists, pedestrians, and transit riders.
- Mobility – The lack of critical regional roadway connections and the absence of facilities for bicyclists and pedestrians support the need to improve mobility in the South Capitol Street Corridor.

- Accessibility – Several key destinations in or adjacent to the corridor are difficult to reach using the existing transportation infrastructure. Grade separations, median barriers, and ramp and intersection configurations limit access to activity centers for motorists, bicyclists, pedestrians, and transit riders.
- Economic Development – The density of employment and residential development forecasted for the area highlight the need to support economic growth. Public investments have increased employment and will stimulate additional private investment in new residential, office and retail developments. As economic development continues to occur within the Project Area, additional demand will continue to be placed on transportation infrastructure to meet future transportation needs.

1.4 Next Steps

Concurrent with its publication in the *Federal Register*, the SDEIS will be subject to a 45-day comment period (see Chapter 8.0) through distribution of paper copies and posting of an electronic version on the Project's website (www.southcapitoleis.com). Paper copies will be available for review at the offices of DDOT and FHWA in Washington, D.C. (see cover page for addresses) and at various public libraries (see Section 8.1.5).

DDOT will hold a public hearing on the SDEIS to provide citizens and agencies opportunity to obtain information about the Revised Preferred Alternative, its potential impacts compared with the FEIS Preferred Alternative, proposed mitigation measures, and the findings of the updated Section 106 of the National Historic Preservation Act (16 USC 470 et seq. and 36 CFR 800) consultation. Information on the time and location of this public meeting will be posted on the Project's website, and published in local newspapers.

In the instance that there are no controversial comments raised, the FHWA may prepare errata sheets to this document as the SFEIS and complete and sign a ROD concurrently. The SFEIS/ROD will summarize mitigation measures that will be incorporated into the Project and document any required Section 4(f) approval in accordance with 23 CFR 774. The cooperating agencies (USN, USACE, USCG, NCPC, NPS, and DDOE) may prepare their own decision document or adopt or concur in FHWA's NEPA document and/or decision document dependent on their implementing NEPA regulatory requirements.

chapter 2.0
alternatives

This chapter provides a description of the No Build Alternative (Section 2.1), the alternatives development process (Sections 2.2), the Proposed Action - Revised Preferred Alternative (Section 2.3), and a summary of the Visual Quality Manual Process (Section 2.4) which will assist in guiding the development of the final design for the Project and an update of other projects in the vicinity of the Project (Section 2.5).

As noted in Section 1.1, this SDEIS was prepared because design changes were made to the Preferred Alternative as described in the FEIS. These proposed changes for the Project were previously not evaluated. The new alternative considered as the proposed action for the Project and analyzed in this document is the Revised Preferred Alternative.

2.1 No Build Alternative

The No Build Alternative would contain no new construction resulting from the proposed Project action, although other planned and committed projects in the area would move forward. In addition, planned maintenance activities would be conducted to the existing infrastructure as necessary.

2.2 Alternatives Development Process

Prior to this SDEIS, three iterations of alternatives were developed:

- Initial Build Alternatives Eliminated from Consideration (Section 2.1.1)
- Alternatives Evaluated in the DEIS and FEIS (Section 2.1.2)
- FEIS Preferred Alternative (Section 2.1.3)

Each iteration of alternatives development included consideration of planning, engineering, and environmental input with public and agency comments.

2.2.1 Initial Alternatives Eliminated from Consideration

The *South Capitol Street Gateway and Corridor Improvement Study* (DDOT 2003) (Gateway Study) developed corridor-wide concepts for infrastructure improvements in the South Capitol Street area. Building on the concepts from the Gateway Study, the *South Capitol Gateway Corridor and Anacostia Access Studies* (DDOT 2004) further refined and developed these concepts, focusing on individual options in specific locations. These individual concepts were

combined to form a series of end-to-end corridor alternatives for South Capitol Street. Five Initial Build Alternatives were created from reasonable combinations of these individual options.

The No Build Alternative does not meet the project purpose and need; however, it was retained through the analysis as the baseline condition against which the potential impacts of the Build Alternatives are measured. The No Build Alternative would maintain existing problematic intersection and ramp geometrics, as well as the obsolete Frederick Douglass Memorial Bridge Existing pedestrian and bicycle system deficiencies along South Capitol Street would remain, particularly those on the Frederick Douglass Memorial Bridge. The No Build Alternative does not provide additional roadway access; the Suitland Parkway and I-295 interchange would continue to be missing connections. The existing network of roadway ramps at the eastern approach to the Frederick Douglass Memorial Bridge would remain.

Among the alternatives that were found not to meet the project purpose and need were the Transportation System Management (TSM) and Mass Transit alternatives. Because mass transit alone would not satisfy the purpose and need of the project, transit considerations were incorporated into each Build Alternative. The TSM Alternative included modifications that maximize the efficiency of the existing transportation system. The possible components of the TSM Alternative included minor infrastructure improvements, fringe parking, ridesharing, high occupancy vehicle (HOV) lanes on existing roadways, and traffic signal timing optimization.

The five Initial Build Alternatives were evaluated using a comparative analysis screening process that led to three alternatives being carried forward as Preliminary Build Alternatives. These Preliminary Build Alternatives were presented to the public, agencies, and stakeholders at a number of public meetings and design workshops in 2005. The public and agency input resulted in the elimination of one of the preliminary alternatives. This particular alternative would have provided a high-capacity freeway scenario, which did not fit well with the urban design objectives of the project. The remaining preliminary alternatives were developed into the DEIS build alternatives, which are described in the Section 2.1.2 below.

Further information about the alternatives development process and the early project alternatives that were eliminated from consideration can be found in Sections 2.3 and 2.4 of the FEIS.

2.2.2 Alternatives Considered in the DEIS and FEIS

The DEIS evaluated two build alternatives, which were identified as Build Alternatives 1 and 2. Figures 2-1 and 2-2 display Build Alternatives 1 and 2, respectively. The FEIS evaluated an additional build alternative, which was a modification of Build Alternative 2 and was identified in the FEIS as the Preferred Alternative (hereinafter referred to as the FEIS Preferred Alternative). However, all three build alternatives were evaluated in detail in the FEIS. For comparative purposes, a No Build Alternative was also evaluated. Each of the Build Alternatives met the purpose and need for the project and was the result of extensive public and agency coordination.

Figure 2-1: Build Alternative

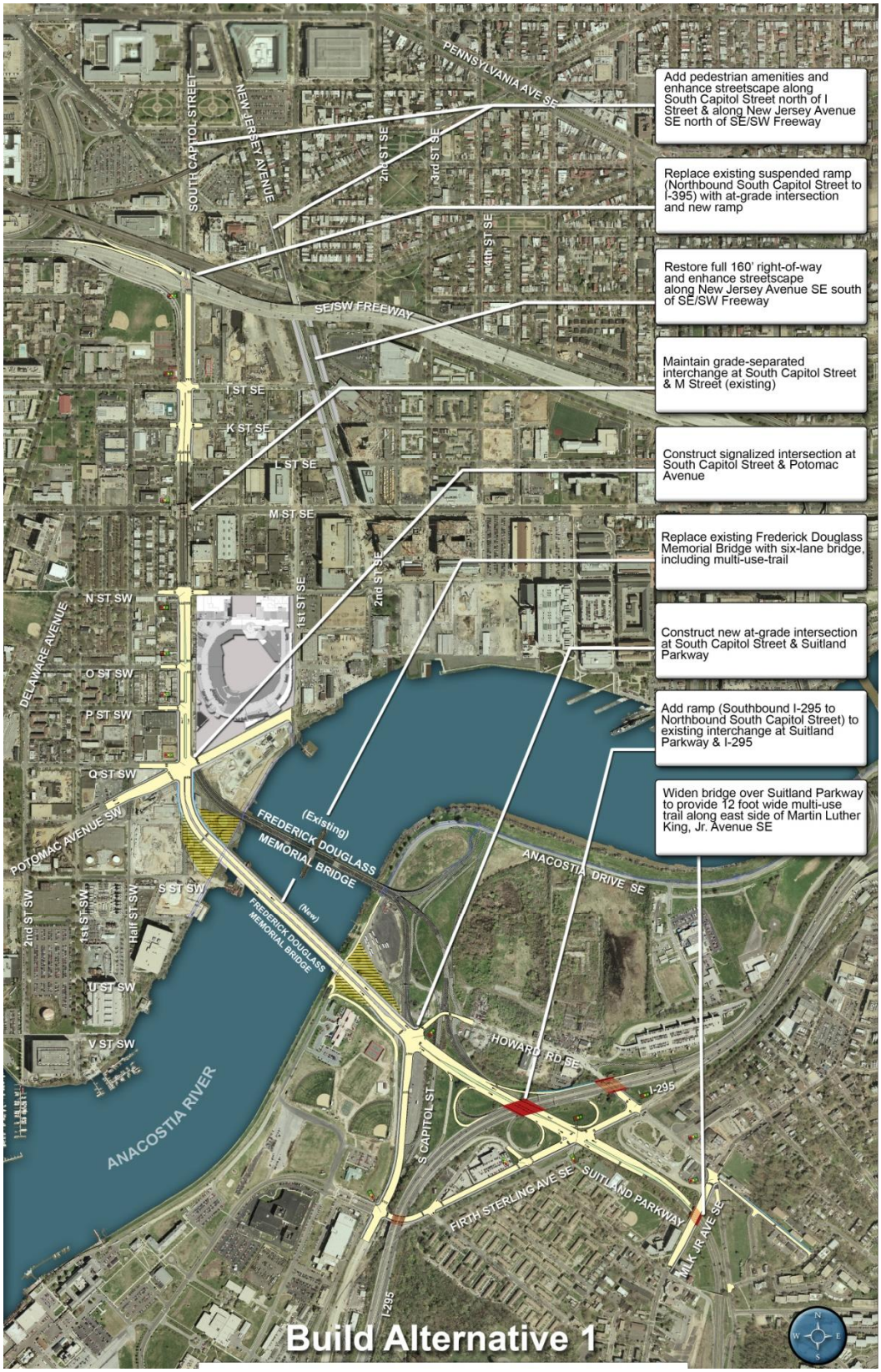
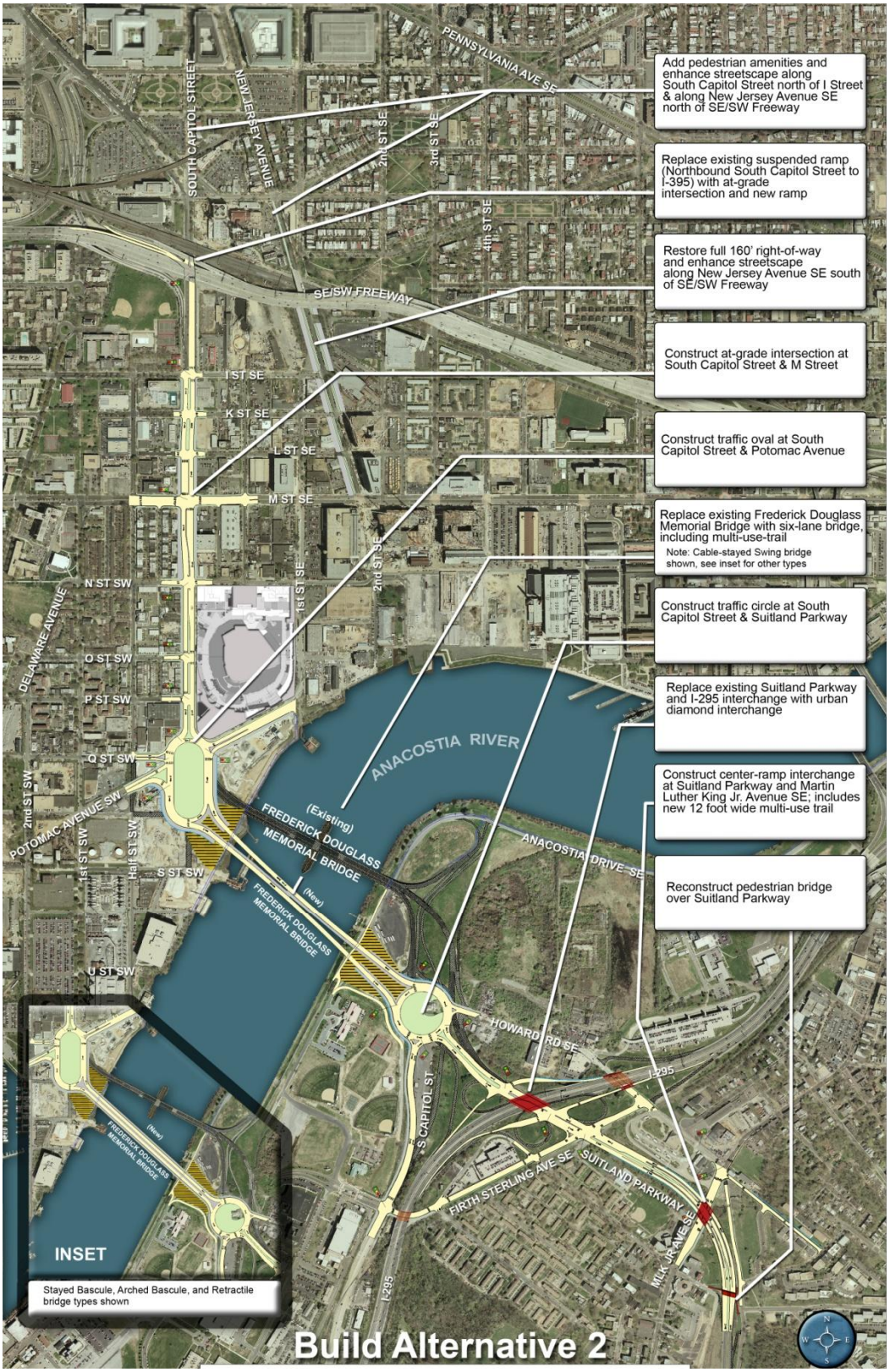


Figure 2-2: Build Alternative 2



District Department of Transportation

All three Build Alternatives would transform South Capitol Street into a grand, urban boulevard—as envisioned in the Plan of the City of Washington—by providing new, consistent streetscape features and pedestrian and bicycle facilities from Firth Sterling Avenue SE to Independence Avenue. In addition, the alternatives would replace the Frederick Douglass Memorial Bridge, provide streetscape features along Suitland Parkway and New Jersey Avenue SE, and include new or modified connections between major roadways.

Four bridge types for the replacement of Frederick Douglass Memorial Bridge were considered in the development of the three build alternatives in the FEIS.

- Cable-Stayed Swing Bridge
- Stayed Bascule Bridge
- Arched Bascule Bridge
- Retractile Bridge

The new bridge alignment would have been designed at an angle for all three build alternatives. The rationale for this angled bridge alignment was to provide adequate clearance for operating the swing span on the existing bridge during the new bridge construction. The FEIS build alternatives only considered movable bridges to replace the existing bridge.

Streetscape improvements under each build alternative aimed to transform the existing corridor into an urban gateway. The streetscape features were designed to improve multimodal mobility and support economic development, two elements of the project's purpose and need. They did not vary between the alternatives, except for minor differences, because the Build Alternatives and the FEIS Preferred Alternative had similar alignments and characteristics.

Linear landscaping and streetscape features were proposed along South Capitol Street, New Jersey Avenue SE, and Suitland Parkway; however, they were employed differently on each street. Streetscape features in spot locations, as needed, were also proposed along Washington Avenue SW. The overall project streetscape concept included prominent landscape features at the intersections of South Capitol Street and Potomac Avenue SE, and South Capitol Street and Suitland Parkway. These two locations would have visually anchored each end of the new Frederick Douglass Memorial Bridge.

Build Alternative 1 had the following features that distinguished it from Build Alternative 2:

- A modified, at-grade, and signalized intersection at South Capitol Street, Potomac Avenue, and Q Street SW
- Not having a cable stayed swing bridge as an option for the replaced Frederick Douglass Memorial Bridge
- An at-grade signalized intersection at South Capitol Street, Howard Road SE, and Suitland Parkway, replacing the existing series of ramps that connect the three roadways

- Replacement of the southbound I-295 to Howard Road SE ramp with a southbound I-295 to northbound Suitland/South Capitol Street ramp, which would eliminate the need for Howard Road SE to serve as a ramp and
- A widened Martin Luther King, Jr. Avenue bridge over Suitland Parkway

Elements that distinguished Build Alternative 2 from Build Alternative 1 included the following:

- An at-grade intersection at South Capitol Street and M Street, eliminating the current grade separation
- A four-lane signalized traffic oval at South Capitol Street, Potomac Avenue, and Q Street SW
- A three-lane signalized traffic circle at South Capitol Street, Howard Road SE, and Suitland Parkway, replacing the existing series of ramps that connect the three roadways
- Conversion to an urban diamond interchange at I-295 and Suitland Parkway, replacing the existing partial cloverleaf interchange and
- An interchange at Martin Luther King, Jr. Avenue SE and Suitland Parkway

Further information about Build Alternatives 1 and 2 can be found in Section 2.2 of the FEIS. The FEIS Preferred Alternative is described in Section 2.1.3 below.

2.2.3 FEIS Preferred Alternative

The FEIS Preferred Alternative would transform the existing South Capitol Street Corridor into a grand urban boulevard, as envisioned in the L'Enfant Plan. The transformed corridor would support other major public and private actions within the vicinity of South Capitol Street.

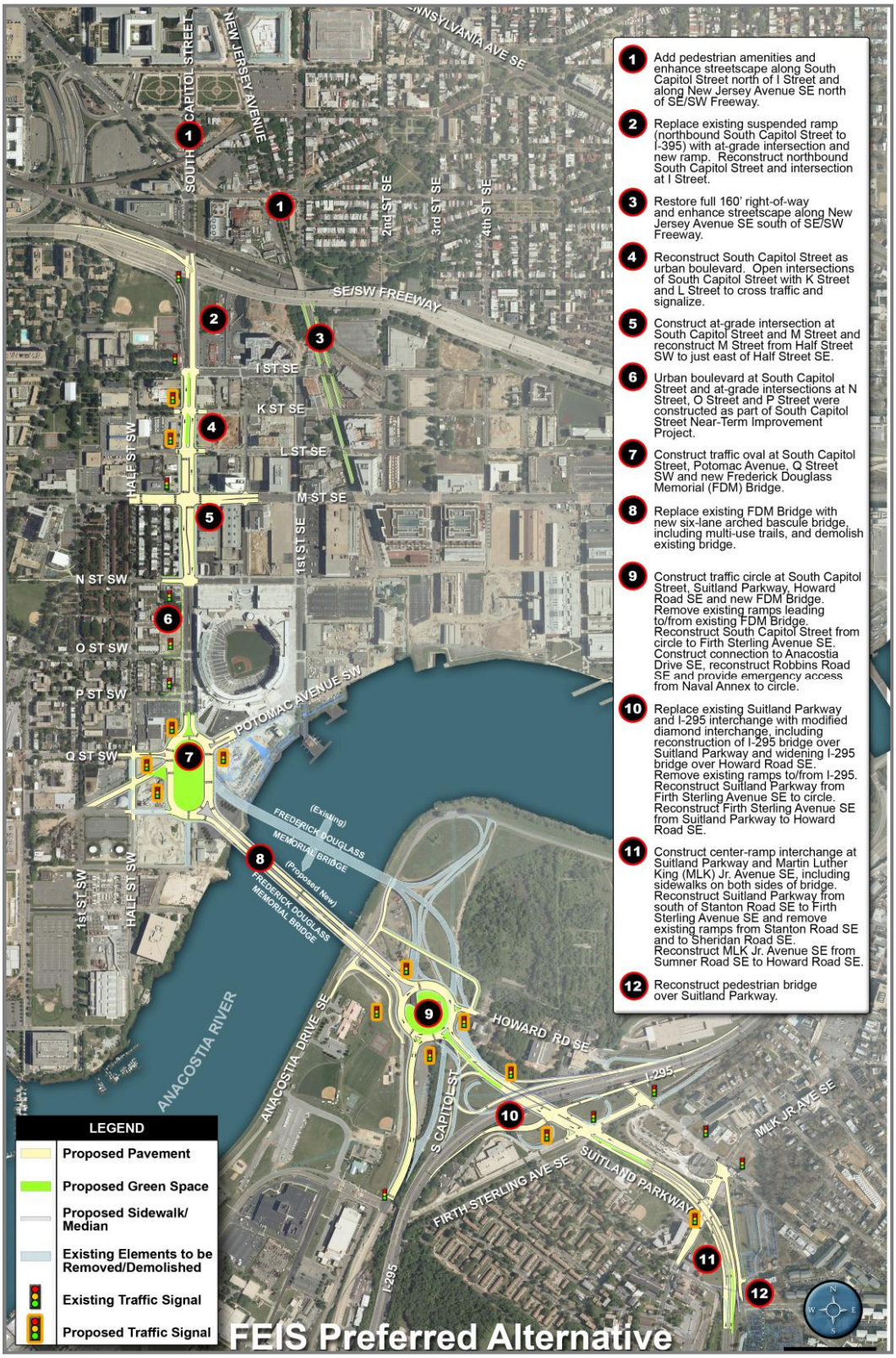
The FEIS Preferred Alternative would create an urban gateway that physically and aesthetically links the U.S. Capitol and the District's Monumental Core, improves safety, accessibility, and multimodal mobility, and supports economic development. The FEIS Preferred Alternative would achieve the Purpose and Need for the Project. The FEIS Preferred Alternative, which is illustrated in Figure 2-3, would:

- Rebuild South Capitol Street as a six-lane boulevard with landscaped median west of the Anacostia River
- Reconstruct at-grade intersections along South Capitol Street at I, N, O, P, K, L, and M Streets
- Reconstruct the existing ramp from northbound South Capitol Street to I-395 as an at-grade intersection
- Construct a four-lane signalized traffic oval connecting South Capitol Street, Potomac Avenue and Q Street SW
- Replace the existing Frederick Douglass Memorial Bridge with an arched bascule bridge (Figure 2-4) that includes bicycle and pedestrian access and remove the existing bridge

- Construct a traffic circle at the eastern approach to the new Frederick Douglass Memorial Bridge to connect South Capitol Street, Suitland Parkway and Howard Road SE
- Extend Anacostia Drive to the north gate entrance of the U.S. Naval Support Facility Anacostia
- Construct an access road from Anacostia Drive to Howard Road and the traffic circle
- Replace the existing Suitland Parkway/I-295 interchange with a modified diamond with a two-lane loop ramp for I-295 southbound at Suitland Parkway, and a new traffic signal at the merge point with Suitland Parkway
- Reconstruct the I-295 bridge over Suitland Parkway
- Widen the I-295 bridge over Howard Road
- Construct streetscape improvements along New Jersey Avenue
- Widen the Martin Luther King, Jr. Avenue overpass at Suitland Parkway to accommodate a new multi-use trail
- Construct a single-point center ramp interchange to create new access between Suitland Parkway and Martin Luther King, Jr. Avenue and eliminate existing ramps between Suitland Parkway, Sheridan Road and Stanton Road
- Reconstruct the pedestrian over-pass over Suitland Parkway between Sheridan Road and Barry Farms
- Implement signed bicycle routes along New Jersey Avenue and throughout the Project Area to provide connections and improved access to the Anacostia Riverwalk Trail, the riverfront, and Historic Anacostia
- Install unifying landscape features at the intersections of South Capitol Street and Potomac Avenue and South Capitol Street and Suitland Parkway to visually anchor the two ends of the new Frederick Douglass Memorial Bridge

See Section 2.2 of the FEIS for further information.

Figure 2-3: Design Features of the FEIS Preferred Alternative



District Department of Transportation

Figure 2-4: FEIS Arched Bascule, Moveable Bridge Concept

2.2.4 Risks to the FEIS Preferred Alternative

Following the release of the FEIS for public review, the bridge alignment of the Frederick Douglass Memorial Bridge was evaluated in terms of design efficacy, constructability, cost, right-of-way requirements, environmental considerations, and other factors. The evaluation identified the following potential risks to project construction and schedule:

- Acquisition of 5.2 acres of United States Navy (USN) property at the JBAB would require an Act of Congress. The acquisition process could extend two to five years.
- Relocation of an existing USN fuel pier, located approximately 300 feet downstream from the existing bridge. The FEIS did not identify a new location for the pier.
- Realignment of a privately-operated helipad, located on the west side of the Anacostia River near the new proposed bridge approach, could cause flight surface conflicts (per Federal Aviation Administration criteria).
- Reconstruction of a 65-year-old levee, used to protect the east side of the river from storm surges would conflict with USACE's recommendation to avoid reconstructing the levee.
- Relocation of two fiber optic cables and a 69-kilovolt PEPCO power cable, located under the Anacostia River.
- Remediation of contaminated soils, located near the proposed west abutment and traffic oval.

The identified risks led DDOT to consider revising the alignment of the Frederick Douglass Memorial Bridge in the FEIS Preferred Alternative. The alignment was relocated to

approximately 30 feet downstream of, and parallel to, the existing bridge. This alignment would preclude operating the swing span during the estimated three years needed to construct the new bridge. The relocated bridge alignment would avoid impacting the JBAB property, and minimize or eliminate the impacts associated with the remaining risks. The potential realignment presented opportunities to revisit the design of the east traffic circle in keeping with the goal of developing a gateway to the District's Monumental Core. Other design elements of the FEIS Preferred Alternative were evaluated for risks. For example, a change to the FEIS Preferred Alternative design for the interchange at Suitland Parkway and Martin Luther King, Jr. Avenue SE was made to address:

- The single point urban interchange from Suitland Parkway to Martin Luther King, Jr. Avenue SE which would impact a contributing resource to Suitland Parkway, a historic property
- Left-side entrances merging onto Suitland Parkway from Martin Luther King, Jr. Avenue SE creating potential safety issues
- Right-of-way issues at the intersection of the South Capitol and M Streets requiring revisions to the lane configuration
- In addition, the existing ramps, which allow traffic movements to and from South Capitol Street to I-395 and I-695, would create safety and operational issues. The FEIS did not identify the need for reconfiguration at these ramp locations.

Since completing the FEIS, DDOT investigated the types of marine vessels and navigation requirements for bridge openings using existing historical, current, and forecast data. This information is included in the *Anacostia River Navigation Evaluation Report* (DDOT, 2014) (Appendix A). Records indicated that the bridge occasionally opened for marine vessels. According to bridge records, the swing span was opened 21 times from September 2002 to November 2012, excluding maintenance openings, and only four times since 2007. Replacing the movable bridge with a fixed bridge would result in substantial cost savings.

The *Anacostia River Navigation Evaluation Report* (DDOT, 2014) (Appendix A) concluded that the proposed 42-foot vertical clearance and the 150-foot horizontal clearance for the fixed span replacement bridge would be expected to accommodate 99.9 percent of the existing and projected marine vessels on the river. In addition, the report indicated that the cost difference between constructing a fixed span bridge and an arched bascule moveable span bridge (as proposed by the FEIS Preferred Alternative) would be approximately $140 million (DDOT, 2014). Because of this additional study, a moveable span bridge was eliminated from further study. A fixed span bridge was proposed for the Project. Based on the information above, the FEIS Preferred Alternative was eliminated from further study and a new build alternative, the Revised Preferred Alternative, was proposed for the Project.

2.3 SDEIS Proposed Action – Revised Preferred Alternative

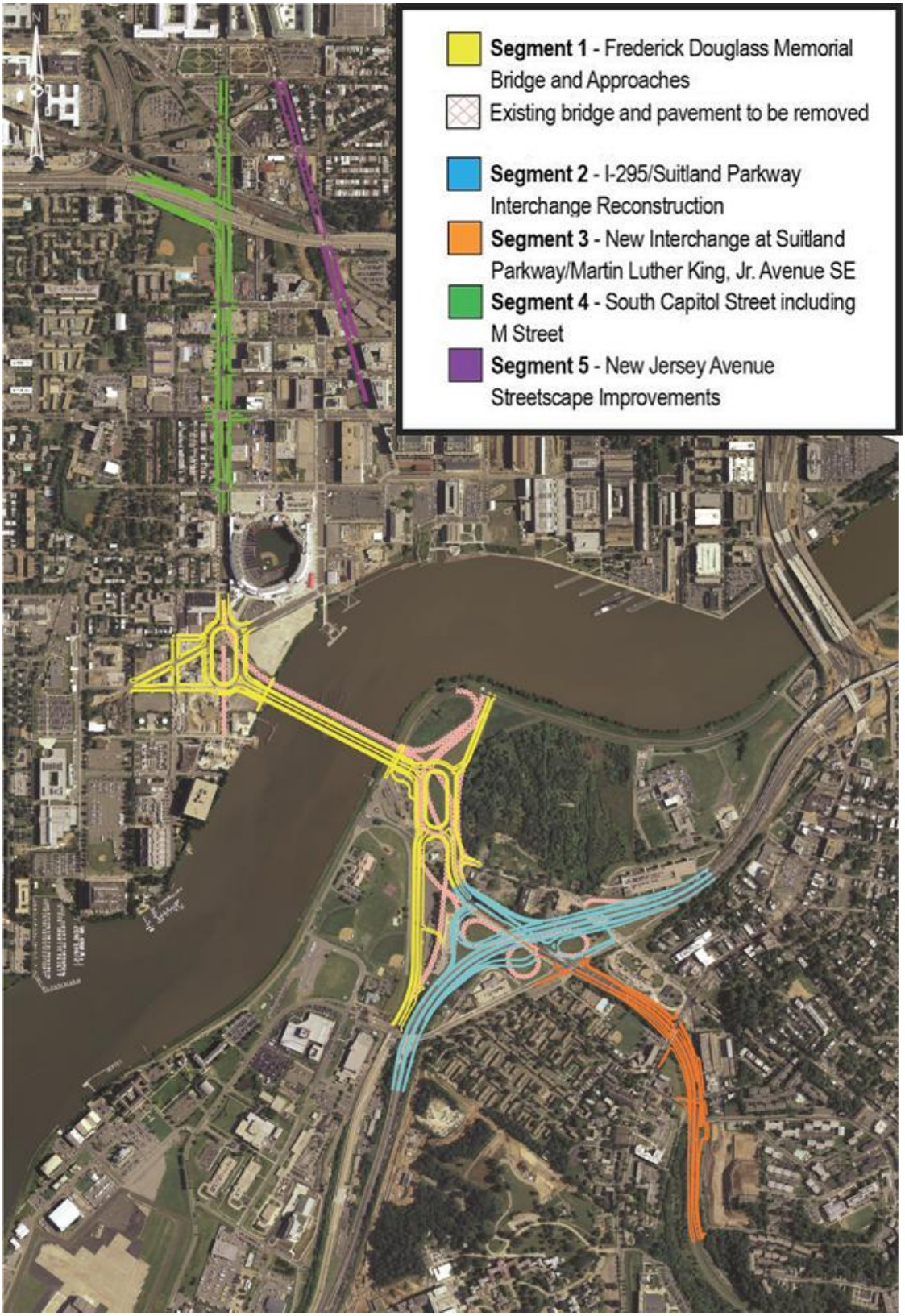
The South Capitol Street Corridor was organized by segments (numbered 1 through 5) for construction planning purposes. Figure 2-5 illustrates the following segments:

- Segment 1 – Areas immediately west and east of the Anacostia River (includes a new bridge and traffic ovals on both sides of the river)
- Segment 2 – I-295 and the area where Suitland Parkway connects with South Capitol Street
- Segment 3 – Suitland Parkway east of Firth Sterling Avenue
- Segment 4 – South Capitol Street from M Street to I-695
- Segment 5 – Areas north of I-695 to Independence Avenue, and New Jersey Avenue SE between M Street SE and D Street SE. (The FEIS limits extended north beyond D Street to C Street)

The South Capitol Street Project is estimated to cost $1.033 billion. Specifically, Segment 1 is estimated to cost approximately $480 million, Segment 2 approximately $223 million, Segment 3 approximately $135 million, Segment 4 approximately $153 million, and Segment 5 approximately $42 million. While the five segments are evaluated as one project, construction will be staged or programmed for discrete construction elements as funding permits.

The following text summarizes each segment of the Revised Preferred Alternative. The logical termini and independent utility is described in Section 2.5 of the FEIS and did not change as a result of development of the Revised Preferred Alternative. The Project Area encompasses South Capitol Street between Suitland Parkway at Martin Luther King, Jr. Avenue SE on the southeast end of the corridor and Independence Avenue on the north end of the corridor. The western and eastern boundaries north of the Frederick Douglass Memorial Bridge are located at 2nd Street SW and 2nd Street SE. Figure 2-6 illustrates the design features of the Revised Preferred Alternative.

Figure 2-5: Project Segments along the South Capitol Street Corridor



2.3.1 Segment 1

Segment 1 encompasses the Anacostia River and the land areas immediately adjacent on the west (near the Nationals Park and Buzzard Point) and east (near Anacostia and Poplar Point) ends of the river. The river flows in a north-south direction within the Project Area. The following sections describe the Revised Preferred Alternative regarding the bridge, motorized access on the surrounding road network, the bicycle and pedestrian network and streetscape improvements.

Frederick Douglass Memorial Bridge

The Revised Preferred Alternative's new bridge would be located approximately 30 feet from the south side, or downstream, of the existing Frederick Douglass Memorial Bridge (see Figure 2-7). The new bridge would be a fixed span accommodating a minimum vertical clearance of 42 feet below the structure and a horizontal clearance of 150 feet. The architecture for the new bridge would be determined as part of the design-build process for the Project as described in Section 2.4.

The new bridge in the Revised Preferred Alternative would support six travel lanes (three lanes in each direction), and bicycle/pedestrian paths. Bicycle and pedestrian paths are provided on both sides of the bridge. This includes an 8-foot pedestrian lane and a 10-foot bidirectional bicycle path, for a total width of 18 feet. Figure 2-8 illustrates the conceptual elevation for the Revised Preferred Alternative's new bridge.

Figure 2-6: Design Features of the Revised Preferred Alternative

LEGEND

- Proposed Pavement
- Proposed Green Space
- Proposed Sidewalk / Median
- Existing Elements to be Removed / Demolished
- Existing Traffic Signal
- Proposed Traffic Signal

1. Add pedestrian amenities and enhance streetscape along South Capitol Street north of I Street and along New Jersey Avenue SE north of SE/SW Freeway.
2. Restripe SE/SW Freeway westbound and close the outer most thru lane between exit and entrance ramps (to/from South Capitol Street). Restripe the existing exit ramp from single-lane to two-lane ramp without pavement widening.
3. Replace existing suspended ramp (north bound South Capitol Street to SE/SW Freeway) with at-grade intersection and new ramp.
4. Realign two existing ramps as compact diamond configuration (from SE/SW Freeway to southbound South Capitol Street, right turn only). Reconstruct sidewalk along South Capitol Street and replace pedestrian underpass with at-grade crossing.
5. Restore full 160' right-of-way and enhance streetscape along New Jersey Avenue SE south of SE/SW Freeway.
6. Reconstruct South Capitol Street as urban boulevard between SE/SW Freeway and just south of N Street. Open intersections of South Capitol Street with K Street and I Street to cross traffic and signalize.
7. Construct at-grade intersection at South Capitol Street and M Street and reconstruct M Street from Half Street SW to just east of Half Street SE.
8. Urban boulevard at South Capitol Street and at-grade intersections at O Street and P Street were constructed as part of South Capitol Street near-term improvement project. Resurface pavement, improve pedestrian amenities and enhance streetscape.
9. Construct (west) traffic oval at South Capitol Street, Potomac Avenue, Q Street SW, R Street SW, and new Frederick Douglass Memorial Bridge (FDMB).
10. Replace existing FDMB with new six-lane bridge including multi-use trails, and demolish existing bridge.
11. Construct (east) traffic oval at South Capitol Street, Suitland Parkway, new Anacostia Drive and new FDMB. Remove existing ramps leading to/from existing FDMB. Reconstruct South Capitol Street from east oval to Firth Sterling Avenue SE. Provide access to DC Water new poplar point pump station. Preserve existing pump station house.
12. Replace existing Suitland Parkway and I-295 interchange with modified diamond interchange, including reconstruction of I-295 bridges over Suitland Parkway, Firth Sterling Avenue, and Howard Road SE. Remove existing ramps to/from I-295. Reconstruct Suitland Parkway from Firth Sterling Avenue SE to east oval. Reconstruct Firth Sterling Avenue SE from Suitland Parkway to Howard Road SE.
13. Construct new and improved pedestrian/bike connections throughout the project area including a new pedestrian/bike path along Suitland Parkway connecting Firth Sterling Avenue and the east oval
14. Construct compact diamond interchange at Suitland Parkway and Martin Luther King (MLK) Jr. Avenue SE. Preserve existing MLK bridge over Suitland Parkway. Reconstruct Suitland Parkway from south of Stanton Road SE to Firth Sterling Avenue SE and remove existing ramps from Stanton Road SE to Sheridan Road SE.
15. Reconstruct pedestrian bridge over Suitland Parkway.
16. Restore and enhance landscape at U.S. Reservations 243, 244 and 245.

South Capitol Street Project Area - LEGEND

Figure 2-7: Revised Alignment for the New Frederick Douglass Memorial Bridge (Revised Preferred Alternative)

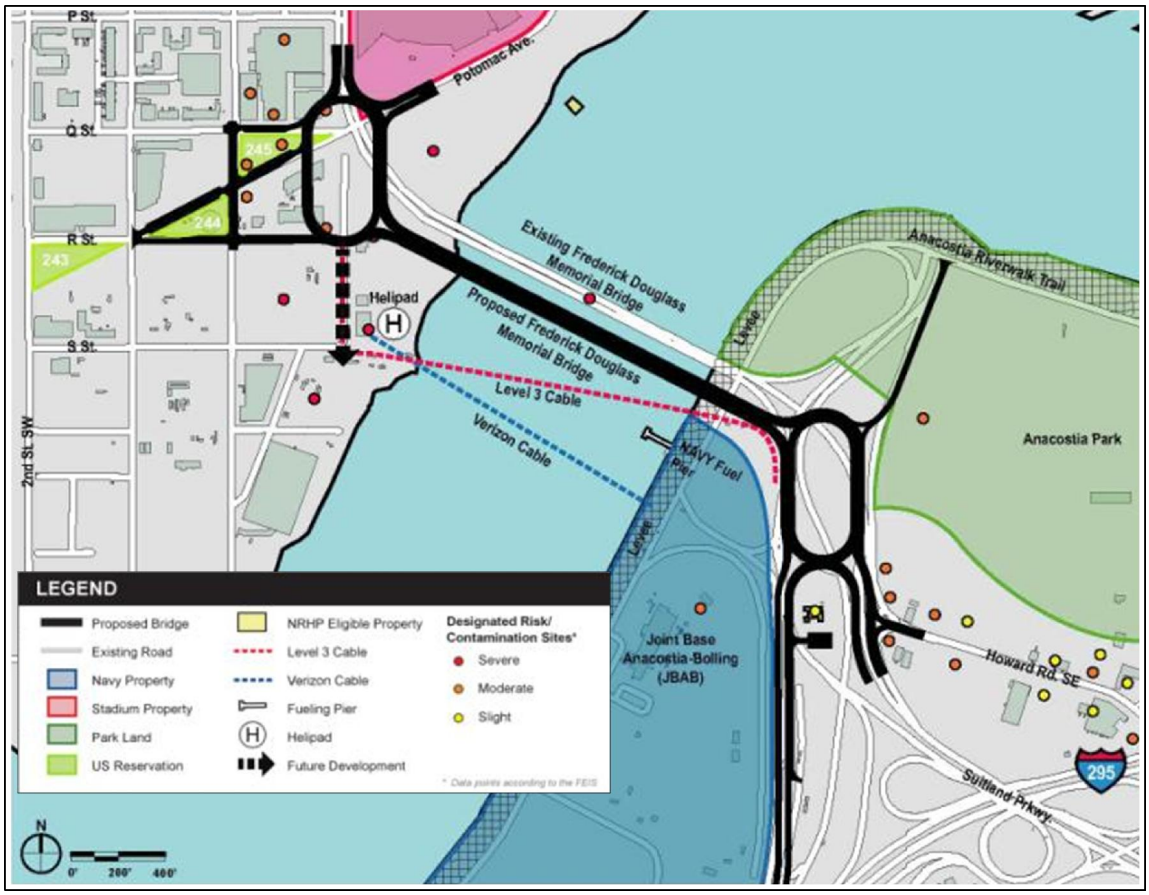
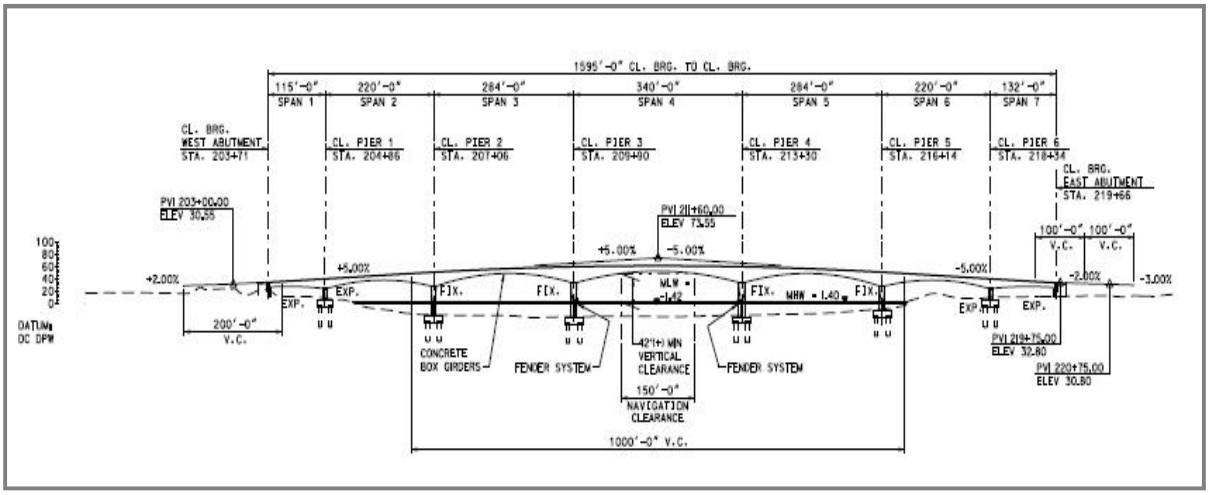


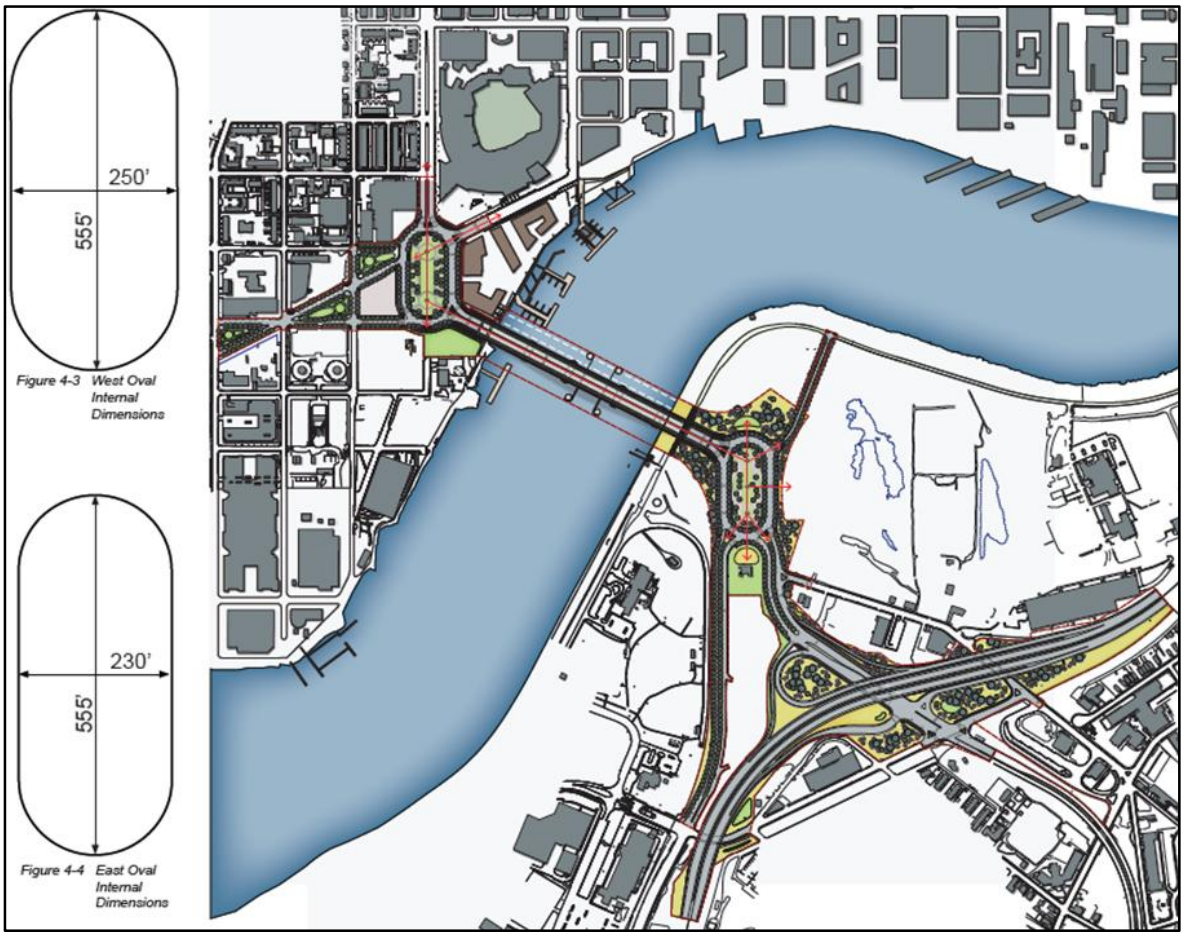
Figure 2-8: Conceptual Elevation of New Frederick Douglass Memorial Bridge (Revised Preferred Alternative)



Access

The Revised Preferred Alternative includes a west traffic oval that connects South Capitol Street, Potomac Avenue, O Street SW, R Street SW, and the new bridge. As shown in Figure 2-9~~Figure 2-9~~, the traffic oval would be 250 feet by 555 feet. On the west side of the bridge near the traffic oval, the design would allow staircases and Americans with Disabilities Act (ADA) ramps to connect with the riverfront on both the north and south sides of the bridge. The lane configuration within the traffic oval would have no fewer lanes as proposed in the FEIS Preferred Alternative.

Figure 2-9: Revised Configuration for West and East Traffic Ovals



Source: Visual Quality Manual (2014)

The Revised Preferred Alternative would include a traffic oval similar in size and scale to the traffic oval on the west side of the river (see Figure 2-9~~Figure 2-9~~).

The design for the east traffic oval was closely coordinated with staff from the DC State Historic Preservation Office (DC SHPO), the U.S. Commission of Fine Arts (CFA), and the National Capital Planning Commission (NCPC), resulting in an aesthetic match of both the west and east traffic ovals. The east traffic oval would be located completely within DDOT right-of-way. It would

connect the new Frederick Douglass Memorial Bridge, the realigned South Capitol Street and Suitland Parkway. It would include fewer lanes than the traffic circle proposed in the FEIS Preferred Alternative.

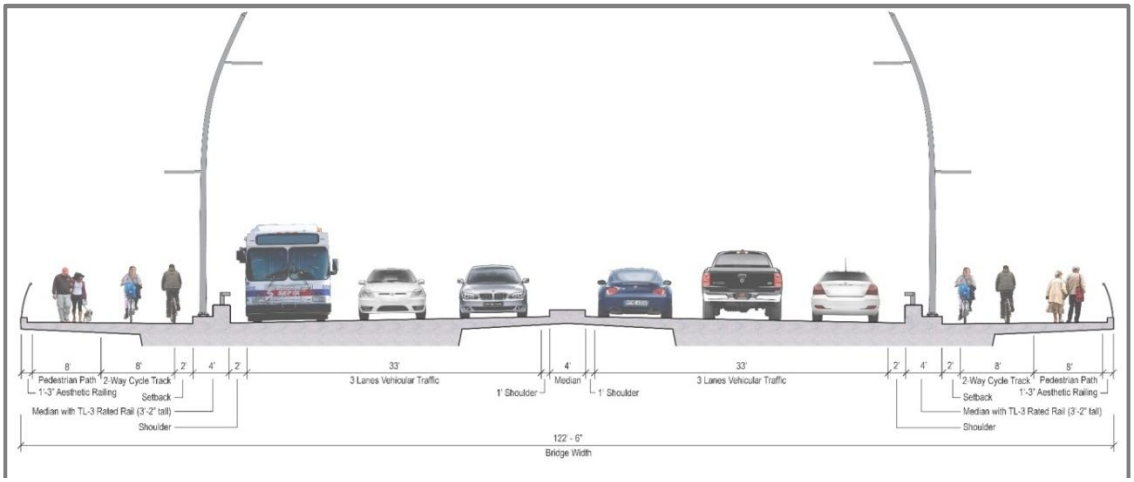
The east traffic oval will necessitate the closure of the existing roads providing public access to the Poplar Point section of Anacostia Park. To mitigate the loss of access and in coordination with the NPS, the agency with jurisdiction over the park, the Revised Preferred Alternative will reconstruct an existing single-lane one-way access road that links Suitland Parkway and I-295 (via Howard Road) to Anacostia Drive SE, which provides roadway circulation within the park. The new access road will provide one lane in each direction. It will connect the northeast leg of the east traffic oval with Anacostia Drive, thereby maintaining access to the park for motorists traveling on South Capitol Street, Suitland Parkway, and I-295.

Other existing ramps linking Anacostia Drive SE to South Capitol Street within both park property and DDOT right-of-way will be removed as they will no longer be needed, resulting in a net loss of road pavement, and a large contiguous green space at the gateway to the park. In addition, a 12-foot-wide shared use path (suitable for pedestrians and cyclists) constructed of pervious materials will be provided on each side of the new access road. This will connect the Riverwalk Trail in the park with the South Capitol Street shared use paths. The NPS will maintain jurisdiction over the reconstructed access road and the shared use paths within the park boundary.

The east traffic oval in the Revised Preferred Alternative would not directly connect with Howard Road in the near term. Instead, the initial configuration of Howard Road would connect directly with Suitland Parkway

<u>Pedestrian and Bicycle Facilities</u>
The bicycle and pedestrian paths would be located on opposite sides of the Frederick Douglass Memorial Bridge, However, as shown in Figure 2-10, each path would be approximately 18 feet wide. Each path would provide separate travelways for cyclists and pedestrians. For cyclists, both paths would accommodate two-way traffic.

Figure 2-10: Revised Cross-Section



Streetscape

The interior of the east traffic oval would accommodate a future monument or memorial, either in the northern or southern half of the traffic oval. The specific design of sidewalks, including materials, would be determined during the design-build process. The *Visual Quality Manual* contains guidelines for streetscaping.

Figure 2-11 illustrates the conceptual landscaping plan for the east traffic oval. The DC Water and Sewer Authority (DC Water) Poplar Point Pump Station would be located beyond the east traffic oval, a change from the FEIS Preferred Alternative, in which the building was to be located within the east traffic circle.

Figure 2-11: Conceptual Landscaping Plan for the East Traffic Oval

Source: Visual Quality Manual (2014)

2.3.2 Segment 2

Segment 2 encompasses I-295 and the area between South Capitol Street SE and Firth Sterling Avenue SE, including Suitland Parkway.

As described below, the most notable design features are derived from new information regarding the condition of interstate highway bridge structures within the Project Area.

Structures

Following publication of the FEIS, the I-295 bridge over Firth Sterling Avenue SE was identified as needing to be widened to improve safety for vehicles traveling on the ramps to and from I-295 south of Suitland Parkway. Due to the complex geometric configuration of the existing bridge, together with its age, a revised alternative involving complete replacement with a single span bridge was developed. The bridge over Firth Sterling Avenue SE spans an inactive railroad right-of-way owned by CSX Transportation, Inc. (CSXT). Rather than extending over the CSXT right-of-way, the bridge would be replaced with earthen fill. Therefore, the new I-295 bridge over Firth Sterling Avenue SE would be shorter than the existing bridge.

Geometry

Suitland Parkway would be widened to accommodate three lanes in each direction. The roadway would be striped for two lanes in each direction, east of I-295 only. Loop ramps were realigned to minimize impacts to the DC Water Poplar Point Pump Station during deep tunnel shaft construction.

The Revised Preferred Alternative for Segment 2 is consistent with the current alignment of Suitland Parkway under I-295. The Revised Preferred Alternative maintains the alignment of Suitland Parkway. The Revised Preferred Alternative shifts Ramp F to the west, from Suitland Parkway to northbound I-295.

Changes in Access

FHWA requested an extension of Ramp B, which accommodates vehicle movements from southbound I-295 to westbound Suitland Parkway. This would reduce the grade of Ramp B from 9 percent (substandard for an interstate highway ramp) to 6.5 percent. This change would require partial acquisitions of five properties, including two used by schools located along Howard Road SE. The FEIS Preferred Alternative included these acquisitions; however, the Revised Preferred Alternative requires less property from the schools. The Revised Preferred Alternative would not impact school buildings.

Pedestrian and Bicycle Facilities

The Revised Preferred Alternative provides sidewalks along Suitland Parkway. The sidewalks improve connections between the east traffic oval and local roads. A new pedestrian tunnel will be provided under Ramp B to eliminate the at-grade crossing.

Streetscape

The Revised Preferred Alternative focuses landscaping in the green space of the interchange of I-295 and Suitland Parkway. The plants would be native species and provide adequate sight distances for vehicles exiting the highway. The selected designer/contractor would determine the specific design for sidewalks, including materials. The *Visual Quality Manual* contains streetscaping guidelines (see Figure 2-12). Where applicable, DDOE's Maximum Extent Practicable Process should be used in the streetscape design to incorporate best management practices for stormwater management.

Figure 2-12: Conceptual Landscaping Plan at Interchange of I-295 and Suitland Parkway

2.3.3 Segment 3

Segment 3 includes Suitland Parkway from Firth Sterling Avenue SE east to just south of Stanton Road SE (see Figure 2-13).

Figure 2-13: Existing Suitland Parkway Intersection at Firth Sterling Avenue SE

The modifications to the Revised Preferred Alternative in Segment 3 focus on improving access to Martin Luther King, Jr. Avenue SE, safety on Suitland Parkway, and preserving the existing bridge, a contributing resource to Suitland Parkway. Suitland Parkway is a historic property listed in the National Register of Historic Places (NRHP).

<u>Access</u>
The Revised Preferred Alternative would convert the overpass at Martin Luther King, Jr. Avenue SE to an urban diamond interchange, instead of an interchange with center ramps. The new ramps on both sides of Suitland Parkway would accommodate all vehicle movements between Suitland Parkway and Martin Luther King, Jr. Avenue SE. The elimination of the center ramp would avoid altering the Martin Luther King, Jr. Avenue SE bridge over Suitland Parkway; however, the cross-section of Martin Luther King, Jr. Avenue SE would be narrower than the FEIS Preferred Alternative. The bridge is a contributing resource to Suitland Parkway, which is a historic property listed in the NRHP. The Revised Preferred Alternative would not impact or require reconstruction of Sheridan Road at Martin Luther King, Jr. Avenue SE and Howard Road.

<u>Pedestrian and Bicycle Amenities</u>
A sidewalk/bicycle path would be provided or upgraded along the north side of the reconstructed Suitland Parkway.

2.3.4 Segment 4

Segment 4 includes South Capitol Street from N Street to D Street (see Figure 2-14).

Figure 2-14: Existing South Capitol Street Intersection at I Street

Geometry

The Revised Preferred Alternative would create a grand urban boulevard along South Capitol Street with at-grade intersections. The Revised Preferred Alternative would provide left turn access along South Capitol Street at three locations in addition to those provided by the FEIS Preferred Alternative. The locations are:

- Southbound South Capitol Street to I Street SE
- Southbound South Capitol Street to L Street SE
- Northbound South Capitol Street to I Street SW

These changes would increase connectivity and reduce queues at the intersection of South Capitol Street and M Street. In addition, M Street would accommodate a left turn lane northbound and southbound and two eastbound through lanes.

South Capitol Street would have a wider landscaped median between the west traffic oval and the Southeast-Southwest Freeway to emphasize its character as a grand urban boulevard. The Revised Preferred Alternative extends north of the Southeast-Southwest Freeway to D Street, continuing the character of the grand urban boulevard further along South Capitol Street.

Access

I-695 begins at 4th Street SW where I-395 turns to the north towards the 3rd Street/I-395 North Tunnel. Ramps from South Capitol Street connect to northbound I-395 and westbound I-

695/westbound I-395. Three of the ramps to and from I-695 and I-395 would be reconfigured to improve safety and operations. Proposed activities include:

- Modifying Ramp H and I-695 southbound using pavement restriping to improve safety at the Ramp G merge area by providing two lanes to exit with minimal cost and impacts
- Providing a new access point from southbound South Capitol Street to Ramp G/GD (towards I-395 North Tunnel and westbound I-695/southbound I-395)
- Reconfiguring the existing Ramp E and Ramp EF and reconfiguring the South Capitol Street and I Street intersection as an urban interchange ramp

These activities would improve aesthetic and visual quality, safety, and traffic operations. The ramp for northbound South Capitol Street to westbound freeway vehicle movements would be reconfigured. The reconfigured ramps would require a signalized intersection with South Capitol Street, which eliminates the need for the existing pedestrian tunnel.

Pedestrian Amenities

The Revised Preferred Alternative contains wide landscaped areas that would increase the separation of pedestrian and bicycle traffic from vehicular traffic. The Revised Preferred Alternative also provides a wide pedestrian refuge area to reduce pedestrian crossing distances across roadways.

Streetscape

The streetscape design specifically developed for South Segment 4 includes several features that help provide a multimodal gateway to the U.S. Capitol and the Monumental Core. Because it is part of the urban street grid, the design provides pedestrian-oriented amenities. Streetscape improvements would reflect the guidelines in the *Visual Quality Manual*.

2.3.5 Segment 5

Segment 5 encompasses the areas north of I-695 to Independence Avenue, including New Jersey Avenue SE between M Street SE and Independence Avenue SE (see Figure 2-15).

Figure 2-15: New Jersey Avenue SE Looking North at E Street, SE

Geometry

The Plan of the City of Washington included New Jersey Avenue SE among the principal diagonal avenues with an established right-of-way of 160 feet. However, the existing right-of-way of New Jersey Avenue SE ranges between 50 and 180 feet wide within the project area. The geometry and streetscape concept would restore a consistent design to the avenue and reestablish the 160-foot-wide right-of-way between the SE-SW Freeway and M Street SE. The Revised Preferred Alternative reduces the limits of improvement from Independence Avenue SE to south of the U.S. Capitol complex to D Street SE.

Streetscape

Streetscape improvements will reflect the guidelines in the *Visual Quality Manual*.

2.4 Visual Quality Management Process

In July 2013, DDOT initiated a design-build process for the Project. The design-build process will select a designer/contractor from among four short-listed teams. The selected designer/contractor will be responsible for finalizing the design for the initial portion of the Project proposed for construction. The Frederick Douglass Memorial Bridge is prominently located along the Anacostia River and is an important gateway into Anacostia and areas west of the river. Therefore, the visual quality of the proposed design of the new bridge, traffic ovals and other elements of the Project will be a very important consideration when selecting a designer/contractor.

As part of the Request for Proposal, the prospective designer/contractors are required to follow the *Visual Quality Manual, South Capitol Street Corridor, Phase 1 – Segments 1 and 2 (Visual Quality Manual*) (DDOT et. al., 2014). The *Visual Quality Manual* provides information regarding visual design elements and goals for the Project. The prospective designer/contractors will submit design concepts for evaluation by an Aesthetic Review Committee. Section 2.4 describes the framework and notable elements in the *Visual Quality Manual*. It identifies the visual considerations contained within the design-build process for the Project. Section 4.9 describes the visual impacts of the Revised Preferred Alternative, with regard to the visual framework provided in the *Visual Quality Manual*.

The South Capitol Street Corridor is centrally located in an area of public and private urban investment between the District's Monumental Core and the Anacostia River. The proposed replacement of the Frederick Douglass Memorial Bridge and streetscape elements of the Project present a unique opportunity to accelerate this trend and encourage new investments in the District's neighborhoods. In addition, the improvements to the South Capitol Street Corridor are designed to enhance the gateway between Anacostia and the District's Monumental Core as envisioned by the L'Enfant Plan. These factors provided a critically important context for the Project, and influenced the approach for determining the Project's visual and aesthetic elements.

At the conclusion of the NEPA process and dependent on the FHWA decision as provided in the ROD, the design-build process will consider, and heavily weigh, the visual quality assessments contained within the technical proposals that the designer/contractors will submit for review. This section summarizes the visual quality framework contained in the *Visual Quality Manual*, which led to the identification of visual quality design goals. The design-build process will include a series of reviews to determine if a designer/contractor's technical proposal meets the visual design goals for the Project. The following section identifies the elements of the technical proposals that designer/contractors will submit during the design-build process.

2.4.1 Visual Quality Framework

As noted in Section 2.2, the *Visual Quality Manual* provides the prospective designer/contractors a framework for approaching the visual quality and aesthetic design for the Project. This framework preserves the autonomy and flexibility among the prospective designer/contractors so each can create a coherent and integrated technical proposal that displays exemplary civic architecture and urban design.

Visual design goals were developed for the Project based on multiple planning initiatives conducted by District and federal agencies, supplemented with extensive stakeholder coordination and input over the past several years. The visual design goals, which apply to the entire Project, reflect the vision of providing a grand urban boulevard, which will be a gateway into the nation's capital, an iconic symbol of the District's aspirations in the 21st century, and a catalyst to revitalize local neighborhoods and the Anacostia Waterfront. The Project's visual design goals include:

- Transform South Capitol Street into grand urban boulevard and gateway to the District's Monumental Core
- Create an elegant and iconic new Frederick Douglass Memorial Bridge that reflects the classical sentiment of Washington's monumental bridges and is grounded in the traditions of great civic design in the District
- Enhance the Project Area by emphasizing:
  - Historic views along primary and crucial street corridors, such as the South Capitol Street viewshed
  - Views of the new bridge from various locations around the project site, especially from the existing and future riverfront parks and esplanades
  - Views along and across the Anacostia River to accentuate broad urban vistas
  - New views of the District and surrounding public spaces for users of the bridge
- Respect and celebrate the cultural and architectural history of the District
- Design project elements to complement contextual urban elements and properties determined to have historic significance

- Harmonize the proposed scale and height of the new bridge with the long-term projected growth of surrounding neighborhoods
- Showcase the Anacostia River as a valuable natural resource by providing enhanced pedestrian and bicycle access to waterfront areas on both shorelines
- Connect adjacent neighborhoods by improving bicycle and pedestrian facilities and better managing motor vehicle traffic throughout the corridor
- Integrate a network of open spaces that provide high-quality, people-oriented urban parks and destinations
- Use materials that are timeless in their appearance, exceptionally durable, and inspired by the great civic architecture of the District
- Pursue state-of-the-art landscape design that attracts and supports intensive pedestrian activity, while integrating sustainable management and restoration strategies
- Interpret the cultural legacy of Frederick Douglass into the design of the bridge and streetscape
- Design all aspects of the Project to encourage subsequent public and private investments that further expand the public realm
- Anticipate future nationally-significant commemorative works in, and adjacent to, the Project Area
- Establish an interim use program and design for the traffic ovals each end of the bridge to complement the adjacent land uses, and reinforce the views to and from the L'Enfant Plan

The prospective designer/contractors must include the following elements in their technical proposals:

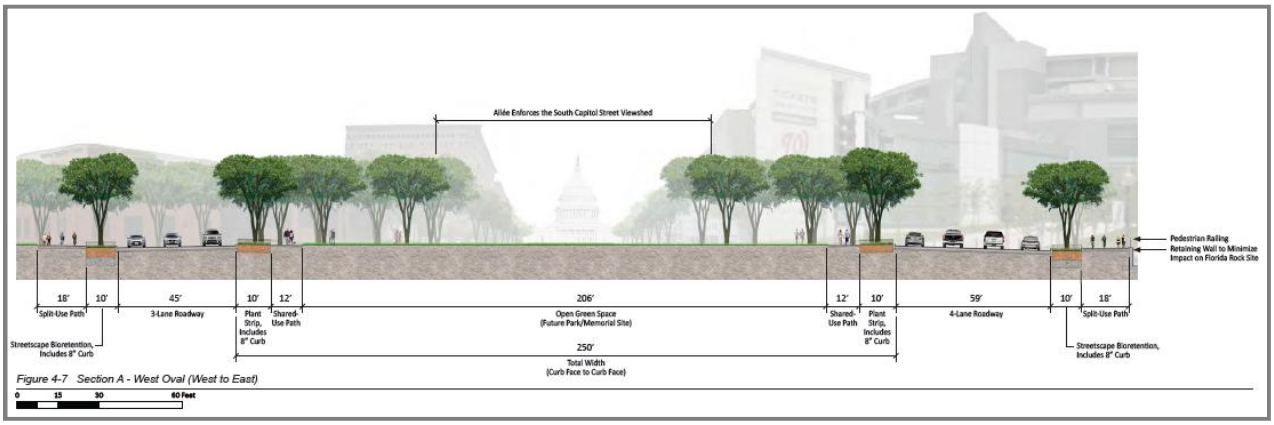
- Roadway alignment and geometry
- Streetscape designs of pedestrian/bicycle paths, retaining walls, landscaping, types of pavements and other streetscape elements
- The new Frederick Douglass Memorial Bridge

The *Visual Quality Manual* identified design requirements (mandatory) and design recommendations (voluntary) for each element of the Project. The following section describes the visual design framework.

The roadway alignment and geometry must be a simple, logical and symmetrical framework consistent with the L'Enfant Plan where diagonal intersecting avenues are superimposed on a standard urban grid to create expansive viewsheds. For example, one of the requirements is to develop South Capitol Street as one of the most prominent viewsheds in the District. The preservation of the southern axis, stemming from the U.S. Capitol, must be free of obstructions, such as signs or trees. The proposed traffic ovals are also an important element of Project's

alignment and geometry. Both traffic ovals must be oriented in the center of South Capitol Street (see Figure 2-16) and share similar dimensions.

Figure 2-16: Northern View from Terminus of South Capitol Street on West Traffic Oval



Source: Visual Quality Manual (DDOT et al., 2014)

According the *Visual Quality Manual*, the new Frederick Douglass Memorial Bridge should make its primary aesthetic impact through its position (alignment), and the shape and sizes of its structural elements. While the bridge will be a discrete visual entity, it should aesthetically appear to be part of a continuous urban corridor. All of the visible elements of the bridge, including secondary elements such as pier details and railings, should achieve a consistent family of shapes and be placed according to a recognizable geometric order so that the whole bridge appears as a single integrated design. Requirements for the new bridge include:

- Maintain the classical appearance of previous bridges in the District within a contemporary design
- Express structural elements by their position, size, shape, and their roles in the support of the bridge
- Avoid using elements, solely for aesthetic effect, which do not contribute to the support of the bridge
- Visually relate the bridge to the overall South Capitol Street Corridor. In particular, emphasize the visual importance of the traffic ovals at the each end of the bridge
- Provide a contemporary design for all details on the bridge including sidewalk pavement, lighting, railings, and belvederes (Belvederes are overlooks built into the superstructure that function as places for cyclists and pedestrians to pause and rest while crossing the bridge)
- Use a consistent shape for the structural elements of the bridge
- Coordinate the positions of all elements on the bridge surface to create a recognizable geometric order

2.4.2 Visual Quality Considerations: Design-Build Process

The Request for Proposal during the design-build process focused on achieving the Project's visual design goals. DDOT will continue to coordinate with the prospective designer/contractors during the procurement period to achieve these goals.

Prospective designer/contractors will be required to formally submit two rounds of visual quality concepts prior to formally submitting their final technical and financial proposals. The visual quality concepts (VQC) represent the designer/contractors' approach for achieving the visual design goals for the Project. Within two weeks of each visual quality concept submission, the designer/contractors will be required to present their visual quality concepts to DDOT. This presentation will give DDOT an opportunity to discuss and comment on the visual quality concepts before providing a formal written response. The visual quality concept submissions will give the prospective designer/contractors an opportunity to provide confidential design ideas to DDOT without compromising the integrity of the design-build process.

DDOT will lead an Aesthetic Review Committee (ARC) in evaluating the visual quality aspects of the technical proposals. DDOT will invite staff from DC SHPO, NCPC, and CFA to participate. These agencies will supplement the ARC review by assessing how well the visual quality concepts address the Project's visual design goals. Staff from the agencies participating in the ARC will be required to sign confidentiality statements and will be subject to DDOT's conflict of interest requirements.

The first visual quality concept submissions will require the following elements:

- Narrative description of how the visual quality concept meets the Project's visual design goals
- Preliminary layout drawings of the design quality concept, including:
  - Project alignment
  - New bridge's deck plan, structure elevation, superstructure cross-section, pier elevations and section
  - Detailed section of proposed bridge railing with pedestrian and bicycle facilities
  - Detailed section of the bridge underpass with pedestrian and bicycle facilities at the waterfront (east and west)
- Three-dimensional visualizations including:
  - East and west aerials of the bridge and traffic ovals
  - South of the bridge taken from the viewpoint at the elevation of the river
  - East and west approaches to the bridge taken from the viewpoint of an automobile driver
  - North of the bridge taken from the viewpoint at the Yards Park
  - Details of bridge piers
- Illustrations or sketches of key components of the design concept

For the second visual quality concept submission, the prospective designer/contractors will have an opportunity to explain how they will have modified the visual quality concepts to address DDOT's comments on their initial submissions. The second visual quality concept submission will include the same materials as the first submission and require two additional elements: three-dimensional renderings to depict the evolution of design details, and three-dimensional visualizations on base photographs provided by DDOT.

The DDOT Evaluation Committee and the ARC will review each visual quality concept submission prior to the confidential presentations by each team. DDOT will provide comments on the acceptability of each visual quality concept submission. However, each team will be responsible for ensuring that its final visual quality concept submission complies with the requirements of the Request for Proposal.

DDOT will select a designer/contractor based on a determination of "best-value" using a 100-point scale. Up to 50 points will be awarded based on price and up to 50 points will be awarded based on technical merit. For technical merit, up to 20 points of the available 50 points will be awarded based solely on the visual quality of the proposed design.

2.5 Update of Other Projects in Project Vicinity

The FEIS documented several major transportation projects that were recently completed, underway, or proposed within or near the Project Area (see Section 2.6 of the FEIS). The following section updates the status of these projects and discusses new projects since the FEIS.

Frederick Douglass Memorial Bridge Rehabilitation

This project was completed in 2007 to address near-term needs for the existing Frederick Douglass Memorial Bridge. Additional structural repairs were made to the existing structure in 2010, but no major activities have occurred since 2010.

South Capitol Street Near-Term Improvements

The South Capitol Street Near-Term Improvements Project reconstructed 1st Street SE (from I Street SE to Potomac Avenue SE), Potomac Avenue (from 1st Street SE to Half Street SE), N Street SE (from 1st Street SE to South Capitol Street), and I Street SE (from New Jersey Avenue SE to South Capitol Street). The reconstruction and street widening, which occurred throughout Wards 6 and 8, included streetscape, streetlight, and traffic signal improvements. In addition, this project constructed several minor pedestrian improvements, such as crosswalk striping and ramp installations, in compliance with the Americans with Disabilities Act. This project was completed in 2008.

DC Streetcar

<u>Anacostia Initial Line</u>

Phase 1 of this project, as described in the FEIS, would include the segment between Suitland Parkway and the Car Barn/Maintenance Area. Construction was completed in the summer of 2013 for the proposed Testing and Commissioning Site. The rest of Phase 1, the section

between Suitland Parkway and the Anacostia Station, and Phase 2 of the project are currently under study by DDOT The South Capitol Street Project would not preclude the Anacostia Initial Line as planned.

Anacostia SE/SW DC Line

The Anacostia SE/SW DC Streetcar line (also referred to as the Anacostia Initial Line-M Street-Buzzard Point line) would connect the Anacostia Initial Line with Buzzard Point via M Street. The streetcar line has been studied as part of the M Street SE/SW Transportation Study Final Report completed in December 2012 (DDOT). The study analyzed how to integrate transit, bicycling and walking with motor vehicle traffic in the area along M Street SE/SW, and the Southwest waterfront from 12th Street SE to 14th Street SW and from the Southwest/Southeast Freeway south to the Anacostia River/Washington Channel.

M Street Southeast-Southwest Special Events Study Final Report

A study to analyze the area during special events was completed in May 2014 (DDOT). If implemented, this project could potentially affect the configuration and operation of the M Street / South Capitol Street intersection.

Martin Luther King, Jr. Avenue Great Streets

As part of the Great Streets Program, streetscape improvements have been implemented along Martin Luther King, Jr. Avenue. Additional improvements were considered and evaluated as part of the Anacostia Extension Streetcar Project. DDOT is currently completing an Environmental Assessment for this project.

11th Street Bridges Project (Phases 1 and 2)

The construction of Phase 1 of this project was completed in 2013. Phase 1 included the completion of three new bridges that provide direct connections between the Southeast-Southwest Freeway and both directions of I-295, fixing a long-standing deficiency that forced motorists to use local streets to connect between both freeways. The new link between Southeast-Southeast Freeway and I-295 has been designated as I-695.

Phase 2 of the project will further improve connections between the Southeast-Southwest Freeway and Virginia Avenue SE with the new outbound 11th Street Freeway Bridge. It will create boulevard connections between 11th Street and Pennsylvania Avenue SE. Phase 2 is ongoing and is expected to be completed in late 2015.

Anacostia Riverwalk Trail

Currently, 12 of the total 20 miles of the Anacostia Riverwalk Trail are open and heavily used. Most recently, the trail along Maine Avenue and the two fiberglass bridges over railroad tracks just north of the John Philip Sousa Bridge were opened. The remaining sections of the Anacostia Riverwalk Trail that still need to be completed include sections at Kenilworth Gardens, Buzzards Point and Oxon Run which are beyond the South Capitol Street Project Area. The remaining sections are either in design or under construction.

Tunnel between I-295 and I-395

The FEIS noted this tunnel project. However, since the current *2013 Update to the Financially Constrained Long-Range Transportation Plan* (CLRP) (Metropolitan Washington Council of Governments (MWCOG), 2013) does not include the project, it is no longer considered active.

Water Coach/Taxi

The District has been unable to establish a water taxi service operating on regular schedules and routes along the Anacostia River. A few private operators, such as the Potomac River Boat Company and the American River Taxi, have provided service during special events, such as during game days for the Washington Nationals. The American River Taxi website noted that the company has suspended the operation of regularly scheduled services for visitors and commuters until it can incorporate a new fleet that support expanded services for commuter trips.

In June 2014, the US Department of Transportation (USDOT) awarded $123.5 million for passenger ferry projects and ferry operators throughout the United States and selected territories. One of the projects receiving funding is for two ferry vessels for a new commuter passenger ferry service connecting Jones Point Park in Alexandria, Virginia to the JBAB military installation in Southeast Washington, D.C. The Virginia Department of Transportation (VDOT), in partnership with the Northern Virginia Regional Commission (NVRC), will receive $3.38 million to provide a new transit option for military and federal employees traveling to JBAB and the U.S. Department of Homeland Security's future headquarters at St. Elizabeths campus.

DC United Soccer Stadium

Preliminary plans have been presented for a new soccer stadium for DC United at Buzzard's Point in Southwest Washington, DC. The stadium would be located within the South Capitol Street Project Area, southwest of the west side traffic oval. The two projects would overlap specifically at Reservation 243 and 244, and along R Street SW. Because a new use has been proposed for these properties by the current owner, the executed Section 106 Memorandum of Agreement for the proposed Project is in the process of being amended to remove the restoration of Reservations 243, 244, and 245 as a Project commitment.

Anacostia Waterfront Initiative: Transportation Master Plan – 2014 Update

The Anacostia Waterfront Initiative (AWI) was launched in March 2000 and documented in the *AWI Framework Plan* (OP, 2003). DDOT and FHWA created the *AWI Transportation Master Plan* (DDOT, 2005) to implement the transportation element of the *AWI Framework Plan*. DDOT initiated the *AWI Transportation Master Plan* to organize the studies and projects underway in the AWI study area into a comprehensive program. It describes DDOT's project development process for implementing the AWI vision. It also provides details of each project's current progress, as well as a snapshot of the status of DDOT's AWI transportation program as a whole.

The *AWI Transportation Master Plan* was updated in 2007 and 2008. The updated *AWI Transportation Master Plan* (DDOT, 2014) presents the current status of AWI transportation projects, and presents the current implementation schedule for the following projects:

- South Capitol Street Corridor
- Frederick Douglass Memorial Bridge Rehabilitation
- 11th Street Bridges (both phases)
- DC United Soccer Stadium
- Anacostia Riverwalk Trail
- DC Street Car
- Water Coach/Taxi
- I-295/I-395 Tunnel (no longer active)

Firth Sterling Trail

This project would be a multi-use trail connecting the South Capitol Street Trail (at Firth Sterling and South Capitol Street intersection) with the Anacostia Metrorail Station (just northeast of the Suitland Parkway and Firth Sterling intersection). The length of the trail, including intersection crossings, will be approximately 2,400 linear feet.

The majority of the trail will be located within the CSXT Railroad Shepherds Branch right-of-way that is being acquired in Fiscal Year (FY) 2015 by DDOT from CSXT. Due diligence on the right-of-way is presently underway by DDOT/AWI staff. The trail location is within the APE for the Revised Preferred Alternative.

The other option for the Firth Sterling Trail project would be to add it to the present South Capitol Street Trail. This project is nearing completion of the preliminary (30 percent) plans within a few weeks. Currently, it has no final design or construction funds obligated to the project. Based on the NEPA process required for acquisition of six easements from the JBAB, the South Capitol Street Trail design will not be finalized until next year at the earliest. Construction would probably not begin before fiscal year 2017.

chapter 3.0
affected environment

This chapter presents environmental conditions within, and immediately surrounding, the Project Area.

3.1 Summary of Affected Environment

This section summarizes the environmental conditions documented in the FEIS. It updates the descriptions of existing environmental conditions, if current conditions differ from those in the FEIS.

3.1.1 No Substantive Changes in the Affected Environment from FEIS

The following categories of environmental resources did not exhibit substantive changes since the publication of the FEIS in March 2011.

Economy and Employment
The FEIS documented that the majority of the jobs within the Project Area are office-related (see Section 3.2 of the FEIS). This has generally remained the same as the majority of the land use has not substantially changed since 2011. However, the development of Nationals Park, and the associated restaurant and retail developments has increased the levels of retail employment in the Project Area.

Air Quality
The National Capital Interstate Air Quality Control Region, which is where the project area is located, is classified as a maintenance area for carbon monoxide (CO), a nonattainment area for particulate matter of less than 2.5 microns ($PM_{2.5}$) (for the 1997 standard), a marginal nonattainment area for ozone (O_3), and an attainment area for all other criteria pollutants. At the time of the FEIS, the project area was classified as a moderate nonattainment area for O_3 (see Section 3.5 of the FEIS). All other designations remain the same as reported in the FEIS. The Clean Air Act (CAA) requires that a *State Implementation Plan* (SIP) be prepared for each nonattainment area and a maintenance plan be prepared for each former nonattainment area that subsequently demonstrated compliance with the standards. A SIP is a compilation of a state's air quality control plans and rules that are approved by USEPA.

The Transportation Planning Board (TPB), housed within the MWCOG, produces two basic documents that serve as the basis for the regional mobile source air quality analysis. The first is the *Financially Constrained Long-Range Transportation Plan* (CLRP), which includes all major

transportation projects and programs that are planned in the Washington region over the next 25 years. The second document, the *Transportation Improvement Plan* (TIP), lists projects and programs that will be funded in the next six years. The CLRP and the TIP utilize vehicle miles traveled (VMT) and emissions factors to determine emissions estimates for the entire transportation system. The analytical results, presented under the Transportation Conformity Rule, demonstrate that the CLRP and the TIP are consistent with the goals of the SIP.

The South Capitol Street Project is listed in the 2013 CLRP, which was approved by TPB on July 17, 2013 and by the USDOT on January 22, 2014 and the FY 2013-2018 TIP, which was approved by TPB on July 18, 2012 and by the USDOT on May 30, 2013. The project is identified as TIP ID # 3423. The design concept and scope of the project have not changed substantively since inclusion in these documents. As such, the Project comes from a conforming transportation plan and a TIP that conforms to the SIP's purpose. The Metropolitan Washington Air Quality Committee (MWAQC) and TPB developed an Air Quality Conformity Report, which contains emissions ceilings (called "mobile emissions budgets") to which the TIP must conform. The analysis in the Air Quality Conformity Report demonstrates that mobile source emissions, estimated for the TIP and for each analysis year of the long range plan, adhere to all CO, O_3 season volatile organic compound and nitrogen oxide, and PM 2.5 pollutants (including direct 2.5 and precursor nitrogen oxide) emissions budgets established by the MWAQC, which are either approved or under review by the USEPA. Additionally, the "action scenario" (forecast year) emissions for fine particles are not greater than the base year 2002 emissions, thus satisfying the requirement for pollutants without an established budget. These results provide a basis for a determination of conformity of the 2013 CLRP and the FY2013-2018 TIP.

An Air Quality Technical Report (Appendix C) was prepared in 2014 for the Revised Preferred Alternative. The FEIS included the results of air quality monitoring conducted between 2006 and 2008 by the U.S. Environmental Protection Agency (USEPA) at stations near the Project Area. Updated monitoring data is available for the years 2009 to 2011. Compared with the FEIS, the updated analysis (Appendix C) showed fewer instances where ozone levels were above the *National Ambient Air Quality Standards* (NAAQS) (42 USC 7401 et seq.). Neither the updated analysis nor the FEIS analysis recorded any other air pollutants with levels above the NAAQS. Therefore, the air quality conditions within the Project Area appear to have slightly improved since the FEIS.

Noise

The *Noise Technical Report* (Appendix D) for the Revised Preferred Alternative, prepared in February 2014, used the July 2011 *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (23 CFR 772) and the DDOT *Noise Policy* (DDOT, 2011).

The FEIS used the results of the *South Capitol Street Noise Technical Report* (DDOT, 2007) to identify 13 noise receptors based on the June 1995 FHWA *Highway Traffic Noise Analysis Abatement Policy and Guidance* (FHWA, 1995) and the DDOT *Noise Policy Guidelines* (DDOT, 1997) (see Section 3.6 of the FEIS). Although the analyses used different guidance documents, both monitored ambient noise conditions at the same locations within the Project Area.

Despite relatively rapid development in the Project Area, the types of land uses have not changed since publication of the FEIS.

In both studies, the primary sources of ambient noise in the Project Area continued to be from motor vehicles traveling on the major highways within the Project Area, such as Suitland Parkway SE, I-295, South Capitol Street (including the Frederick Douglass Memorial Bridge), and I-395. The primary source of ambient noise conditions, in both studies, was traffic using local connecting roadways, such as Martin Luther King, Jr. Avenue SE, Firth Sterling Avenue SE and M Street.

Water Quality

A *Supplemental Natural Resources Technical Report* (Appendix E), including an assessment of current water quality, was prepared in 2014 for the Revised Preferred Alternative. The Project Area is located entirely within the Anacostia River basin and includes the Anacostia River, which the USACE classifies as a navigable waterway, and a perennial tributary known as Stickfoot Branch. The FEIS documented that the water quality of the Anacostia River was poor for both ecological and human health, and that the USEPA designated the portion of the river between John Phillip Sousa Bridge (Pennsylvania Avenue SE) and at the Potomac River as "impaired waters" (see Section 3.7 of the FEIS). The sources of the contamination included high particulate loading that contributes to high turbidity and sedimentation, and fecal coliform pollution originating from combined sewer (sanitary and stormwater) overflow (CSO) discharges into the river during major rainfall events. The FEIS also noted that the Anacostia River contained elevated levels of many toxic contaminants, such as trace metals, PAHs (polycyclic aromatic hydrocarbons), PCBs (polychlorinated biphenyls), pesticides and herbicides.

The lower Anacostia River, from below the John Phillip Sousa Bridge to the mouth of the Potomac River, was listed as an "Impaired Water" by USEPA in 2010 for Use Classes B (secondary contact recreation and aesthetic enjoyment) and D (protection of human health related to consumption of fish and shellfish). It was also considered a high priority for total maximum daily loads (TMDL) development for oil and grease and trash. A TMDL is an estimate of the maximum amount of a pollutant that a given water body can absorb without violating applicable water quality standards. The Anacostia River, as a whole, has three approved TMDLs for organics and metals, biological oxygen demand, and total suspended solids.

As discussed in the *Supplemental Natural Resources Technical Report* (Appendix E), despite the establishment of the TMDLs, recent water quality monitoring does not indicate appreciable improvements and has varied from year to year. However, updated regulations, construction technologies, and best management practices (BMPs) provide encouragement that the water quality of the Anacostia River will improve in the future. New developments in the District require stormwater management as part of the development, many of which are occurring close to the Project Area. Additionally, the DC Water and Sewer Authority (DC Water, formerly known as WASA) is currently constructing "Clean Rivers" (CSO Long Term Control Plan) projects that are meant to address the problem of discharges of raw sewage into the river during major

rainfall events, according to *WASA's Recommended Combined Sewer Overflow Long-Term Control Plan (CSO Long-Term Control Plan)* (DC Water, 2012).

Submerged aquatic vegetation is defined as vascular plants that remain below the water surface during the growing season. The distribution, abundance, and species composition of submerged aquatic vegetation depends on several variables including salinity, water quality, water temperature, and water depth. Submerged aquatic vegetation provides important ecological functions, including generating food and habitat for waterfowl, fish, shellfish, and invertebrates, by adding oxygen to the water column during photosynthesis, filtering and sediment retention, and absorbing excess nutrients (which they require for growth) such as nitrogen and phosphorus that may cause the growth of unwanted algae in surrounding waters.

Activities affecting the removal or eradication of submerged aquatic vegetation are regulated by the US Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act of 1977, as amended, and Section 10 of the Rivers and Harbors Act of 1899. These areas are also regulated by the District of Columbia as promulgated under the Water Pollution Control Act of 1984 (D.C. Law 5-188, D.C. Code §6-923).

In past years (i.e., 1999 to 2002), submerged aquatic vegetation beds were located in the Anacostia River to the north and south of the Frederick Douglass Memorial Bridge. Recent surveys conducted in 2004 by the Virginia Institute of Marine Science (VIMS) and the District of Columbia Fisheries and Wildlife Division using aerial photography and field efforts did not find evidence of submerged aquatic vegetation beds within the South Capitol Street project area.

Wildlife and Habitats

The *Supplemental Natural Resources Technical Report* (Appendix E) prepared in 2014 for the Revised Preferred Alternative provides current information regarding wildlife and habitats.

The FEIS documented that the Anacostia River supports both benthic macroinvertebrates and fish communities (see Section 3.9 of the FEIS). Benthic macroinvertebrates are small organisms that lack backbones that live on or in the bottom sediments of streams and rivers. They include crustaceans, such as crayfish, mollusks, aquatic worms, and the immature forms of aquatic insects, such as stonefly and mayfly nymphs. Macroinvertebrate communities are often used as indicators of localized water quality conditions. Using secondary sources of information, the FEIS noted that benthic life in the Anacostia River is severely diminished and communities are rated as severely degraded. The clams and mussels found within the nearby Potomac River are missing in the Anacostia River due to sediment toxicity and contaminants.

Similarly, fish diversity in the Anacostia River is lower than in the Potomac River. Several fish species that were historically abundant in the Anacostia River now rarely occur. The numbers of alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*) are very low compared to the one million pounds per year caught before 1975 (DCRA 1996). However, the FEIS noted that fish resources in the Anacostia River are improving for several game fish species, including largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), striped bass (*Morone saxatilis*) , and yellow perch (*Perca flavescens*).

The District and the State of Maryland have active programs to reduce non-point source pollution entering the Anacostia River watershed, such as the *CSO Long Term Control Plan* (DC Water, 2012), but the biological community data shows that conditions since the FEIS have not improved. The *Supplemental Natural Resources Technical Report* (DDOT, 2014) (Appendix E) contains more detailed information on biological community trends in the Anacostia River.

The FEIS documented that terrestrial biological conditions in the Project Area are typical of a largely urban environment (see Section 3.9 of the FEIS). Conditions include limited diversity in vegetation and wildlife, with clusters of vegetation typically limited to parks and other urban open spaces. Large areas of more naturalized vegetation in the Project Area do occur in the Poplar Point portion of Anacostia Park. These terrestrial biological conditions have not changed since the FEIS, as land use relative to natural habitats has remained unchanged in the Project Area.

As noted in the FEIS, osprey (*Pandion haliaetus*) nesting occurs within the Project Area. According to the National Park Service (NPS), four nesting pairs on or near the Frederick Douglass Memorial Bridge were observed in 2013 (Mikaila Milton pers. comm., November 6, 2013). Several other ospreys nested on light boxes along Anacostia Drive in 2013 (Mikaila Milton pers. comm., November 6, 2013). In 2014, the DDOE documented nesting of a pair of peregrine falcons on the Frederick Douglass Memorial Bridge (Daniel Rauch pers. comm., September 9, 2014). According to DDOE, the pair presumably fledged two chicks.

Geology, Topography and Soils

The Project Area is located entirely within the Coastal Plain Physiographic Province. The topography in the Project Area is relatively flat with elevations ranging from 0 to 25 feet above sea level. The Project Area primarily contains Urban Land Complex soils. These types of geological, topographic and soil conditions change very gradually over time and, therefore, the conditions as described in the FEIS are still valid (see Section 3.11 of the FEIS).

Visual Quality

A visual quality assessment was conducted for the existing conditions for purposes of the Revised Preferred Alternative using the same methodology as in the FEIS. The FEIS identified the following eight landscape units for the purposes of describing the visual and aesthetic conditions of the Project Area (see Section 3.14 of the FEIS):

- South Capitol Street (west side of the Anacostia River)
- Frederick Douglass Memorial Bridge
- South Capitol Street SE (east side of the Anacostia River)
- Suitland Parkway
- Howard Road SE
- Marine Luther King, Jr. Avenue SE
- Anacostia Park
- New Jersey Avenue SE

The FEIS described each landscape unit, the visual character, visual quality, visually-sensitive resources, and viewers (those who would experience aesthetic and visual conditions of the unit). Based on these descriptors, none of the landscape units have changed to any notable degree because those elements, identified in the FEIS, still exist to enhance or disrupt visual quality.

3.1.2 Substantive Changes in the Affected Environment from the FEIS

The following categories of environmental resources exhibited substantive changes since the publication of the FEIS.

Land Use

The development trends described in the FEIS are still occurring (see Section 3.1 of the FEIS). Parcels along South Capitol Street are continuing to change from industrial to mixed uses, including the ongoing redevelopment of the Yards project. The large amount of development in the Project Area has changed land use conditions from those described in the FEIS. Section 3.2 describes the current land use conditions.

Community Cohesion and Facilities

The FEIS identified Southwest and Southeast neighborhoods and communities in the Project Area (see Section 3.2 of the FEIS). Over the past several years, the Project Area has experienced new development and redevelopment of property, particularly west of the Anacostia River. Most of this change has focused on the development of Nationals Park. Due to the rapid change in the area, the 2008-2012 American Community Survey documented an influx of new residents (in renter and owner-occupied units) from 2000 to 2009.

At the time of the FEIS, year 2010 U.S. Census and updated American Community Survey information was not yet available; therefore, the FEIS did not accurately account for the population growth and rapid change within the communities. However, the Project Area and the surrounding neighborhoods continue to provide many local activities for those within the community. Community facilities have remained the same since the FEIS. Section 3.3 updates the U.S. Census data and describes changes to community cohesion in the Project Area.

Environmental Justice (EJ)

Several changes related to Environmental Justice have occurred since the FEIS (see Section 3.3 of the FEIS). These changes include the availability of new 2010 Census data, an update of the EJ methodology to account for a change in the reporting of poverty data, and an update of the Census areas analyzed for the Project.

Revised EJ guidance from the U.S. Department of Transportation (USDOT), USDOT Order 5610.2(a) - *Final DOT Environmental Justice Order* (USDOT, 2012) was released since the FEIS was published. This new guidance was reviewed to ensure that the methodology was consistent with the revised USDOT Order and references to the USDOT Order have been updated, as appropriate.

The FEIS used year 2000 Census data at the block group (BG) level to assist in identifying the locations of minority and low-income populations (EJ populations) within the Project Area. The updated assessment of EJ populations used year 2010 Census data at the census tract level to quantify minority populations and poverty data from the 2010 American Community Survey (ACS) 5-Year Estimates. The change in scale of the data from block group to census tract was necessary because the census tract is the smallest unit available for poverty data in the 2010 ACS 5-Year Estimates, which is the only currently available source of income data. However, a census tract can meet the EJ threshold criteria for the presence of minority populations, low-income populations, or both.

In addition to this change, census tracts 010400 and 007503, located east of the river, were analyzed in the FEIS. Census 2000 block groups, 007502, 007503 and 0098091 (now referenced as block group 0104002 in the 2010 Census), were not included in the SDEIS analysis because the Revised Preferred Alternative does not impact these areas. The remaining neighborhoods within the Project Area, previously identified as being located in EJ areas, continue to have the same classification. As a result of the changes between Census 2000 and Census 2010, the overall EJ population within the Project Area has decreased. Section 3.4 contains detailed EJ population data and mapping.

Wetlands

A total of six wetlands were identified within the Project Area during the 2005 wetland delineation for the FEIS (see Section 3.8 of the FEIS). The U.S. Army Corps of Engineers' 2005 Jurisdictional Determination (JD) letter approved the wetland delineation for five years. The wetlands included the following classifications: four wetlands were classified as palustrine emergent; one as palustrine forested, and one as a combination of forested, emergent, and scrub shrub. All of the wetlands were located within Anacostia Park on Poplar Point. Four of the wetlands were isolated and determined to be non-jurisdictional due to their lack of hydrologic connectivity to other streams and wetlands. Two wetlands were considered jurisdictional, as they drained through pipes to the Anacostia River.

A new wetland assessment was conducted because it had been longer than five years since the previous JD approval. The 2014 wetland delineation identified one new forested wetland and two new emergent wetlands. A 0.04-acre forested wetland was originally identified as an intermittent stream channel during the 2005 delineation. However, stream channel characteristics are no longer present. Instead, wetland conditions are now predominant. Two emergent wetlands (0.07 acre and 0.08 acre, respectively) were also delineated between Suitland Parkway and Dunbar Road. Section 3.5 presents the results of the updated wetland delineation in the Project Area. The *Supplemental Natural Resources Technical Report* (DDOT, 2014) (Appendix E) contains more detailed information on wetland conditions with the Project Area. A revised JD was conducted on August 20, 2014.

Threatened and Endangered Species

In accordance with Section 7 of the *Endangered Species Act of 1973* (16 USC 1531 et seq.) and the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the

Sustainable Fisheries Act of 1996, coordination was conducted with both the U.S. Fish and Wildlife Service (FWS) and National Marines Fisheries Service (NMFS). The FEIS documented that the FWS did not identify any federal trust species (listed threatened, endangered or candidate animal and plant species) in the Project Area. When contacted again for this SDEIS, the FWS again did not identify federal trust species.

The FEIS documented that the NMFS identified the shortnose sturgeon (*Acipenser brevirostrum*) as a species that may exist in the upper tidal Potomac River (see Section 3.9 of the FEIS). When contacted again, the NMFS identified the Atlantic sturgeon (*Acipenser oxyrhynchus oxyrinchus*) as a newly listed, federally endangered species potentially occurring in the Anacostia River. A *Biological Assessment of the Atlantic Sturgeon* (DDOT, 2014) (Appendix F) was conducted to evaluate the likelihood that Atlantic sturgeon use the portion of the Anacostia River within the Project Area. Section 3.6 provides the updated Section 7 coordination and the Atlantic sturgeon assessment.

Floodplains

The FEIS identified floodplains within the Project Area using the 2002 *Flood Insurance Rate Map (FIRM) for the District of Columbia* (FEMA, 2002) (see Section 3.10 of the FEIS). The Federal Emergency Management Agency (FEMA) updated the FIRM (FEMA, 2010). Section 3.7 describes the changes to floodplains.

Cultural Resources

The FEIS documented project compliance with Section 106 of the National Historic Preservation Act (NHPA) (16 USC 470 et seq. and 36 CFR 800) (see Sections 3.12 and 4.12 of the FEIS). Section 106 requires that a federal undertaking (e.g., a project that requires federal funding or permit) consider effects to historic properties within the Area of Potential Effects (APE), which is determined through consultation with the DC SHPO. The Revised Preferred Alternative changed the boundaries of the APE and required a reassessment of historic properties within the APE. Section 3.8 describes the Section 106 consultation process, which was reopened due to the introduction of the Revised Preferred Alternative. The Section 106 consultation process, which is ongoing, includes developing the revised APE, reassessing effects to historic properties, and amending the MOA in consultation with the DC SHPO, consulting parties, and signatories. Additional details are provided in the *Section 106 Assessment of Effects to Historic Properties Report* (DDOT, 2014) (Appendix G).

Hazardous Materials

The FEIS documented the locations of potential hazardous materials sites within the Project Area based on the results of the following studies (see Section 3.13 of the FEIS):

- *Preliminary Environmental Screening Assessment Report* (DDOT, 2006) – focused on the entire Project Area
- *Phase 1 Site Assessment and Contaminated Materials Management Report* (DDOT, 2005) – focused on the area of the bridge and its approaches
- *Phase 2 Environmental Site Assessment for South Capitol Street Protective Buying* (DDOT, 2008) – focused on the area near the proposed west traffic oval

The following updated environmental screening assessment (ESA) reports were completed in the area of the proposed west traffic oval:

- Phase 2 ESA Parcel #72 (DDOT, 2012)
- Phase 2 ESA Parcel #74 (DDOT, 2012)
- Phase 2 ESA Parcel #77 (DDOT, 2012)
- Phase 2 ESA Parcel #37 (DDOT, 2012)
- Phase 2 ESA Parcel #75 (DDOT, 2012)
- Phase 2 ESA Parcel #42 (DDOT, 2012)
- *Phase 2 ESA Parcel #41* (DDOT, 2012)

Section 3.9 presents the results of the updated ESAs and highlights any changes from the FEIS. Additional detail is provided in Appendix H, the *Modified Phase I Environmental Site Assessment (ESA)* (DDOT, 2014).

Pedestrian and Bicycle Facilities

Although the conditions of pedestrian and bicycle networks within the Project Area remain largely the same since the FEIS (see Section 3.15 of the FEIS), a few facilities have been constructed, which are described in Section 3.10.

Traffic and Transportation – South Capitol Street and Other Roadway Characteristics

The classifications and characteristics of roadways in and around the Project Area remain the same as documented in the FEIS (see Section 3.16 of the FEIS), although the section of South Capitol Street from Potomac Avenue to Firth Sterling Avenue SE was reclassified from a freeway to a principal arterial. In addition, Washington Avenue SW, which connects Independence Avenue SW and South Capitol Street, was designated an emergency evacuation route, joining four other roadways (South Capitol Street, the Southeast-Southwest Freeway, I-295, and Suitland Parkway) in the Project Area. The FEIS used traffic data collected in 2008. Additional traffic data was collected in 2009 and 2010. Based on this newer traffic data, the affected environment with respect to traffic conditions was updated, and is summarized in Section 3.11. Additional details are available in Appendix I, the *South Capitol Street Transportation Technical Report* (DDOT, 2014).

Traffic and Transportation – Traffic Safety

Since the FEIS, DDOT has released the 2009-2011 *Traffic Safety Report Statistics* (DDOT, 2013), which provides a list of top 100 hazardous intersections in the District of Columbia based on crash frequency, rate, severity, cost, and composite index values during that time period. Compared with the 2007-2009 *Traffic Safety Report Statistics* used for the FEIS, the top 100 hazardous intersections in the Project Area are essentially the same as those in the 2009-2011 *Traffic Safety Report Statistics*. The intersections include:

- Firth Sterling Avenue and Suitland Parkway SE
- Firth Sterling and Howard Road SE
- Martin Luther King, Jr. Avenue and Howard Road SE
- I Street and South Capitol Street

Additional traffic safety information was collected for the freeways at, and near, the Project Area, which includes:

- I-695 from the 11th Street Bridge SE to I-395
- DC 295 (Anacostia Freeway) from the 11th Street Bridge SE to two miles north of the Pennsylvania Avenue SE interchange
- I-295 from two miles of Malcolm X Avenue SE interchange and the 11th Street Bridge SE
- I-395 from the Potomac River to the 3rd Street SW tunnel entrance

The predominant types of vehicle crashes on these freeway segments were rear-end collisions (45 percent) and sideswipe collisions (26.4 percent). Appendix J presents updated information about existing crash statistics.

Traffic and Transportation: Other Transportation Facilities and Service

The FEIS documented information about public transportation, parking, and other forms of non-roadway transportation (public and private) occurring in and around the Project Area (see Section 3.16 of the FEIS). In terms of parking, the locations and availability of on-street and off-street parking facilities are largely the same as presented in the FEIS.

The FEIS also documented helicopter and passenger and freight rail service. These services have remained basically the same as in the FEIS. The FEIS presented Metrorail ridership for the year 2007. This SDEIS updated the information to the year 2013, which showed notable changes particularly at the Navy Yard Metrorail Station.

The Washington Metropolitan Area Transit Authority (WMATA) and DDOT added or modified several Metrobus and DC Circulator routes in and around the Project Area (see Section 3.11). Section 3.11 also discusses the assessment of navigation activities along the Anacostia River, which was prepared to assist with the determination of whether the new Frederick Douglass Memorial Bridge could be a fixed span structure or not.

3.2 Land Use

3.2.1 Existing Land Uses

Anchored by the completion of Nationals Park and the establishment of the USDOT headquarters at M Street SE and New Jersey Avenue SE, continuous land use development on the west side of the Anacostia River has occurred along the South Capitol Street Corridor since the FEIS. As illustrated in Figure 3-1, and noted in Table 3-1, several developments have been completed since 2009 including projects associated with the Yards redevelopment in the riverside area adjacent to the Washington Navy Yard and M Street SE. The recent projects are predominately residential and office developments, with some commercial and mixed-use developments, and public parks.

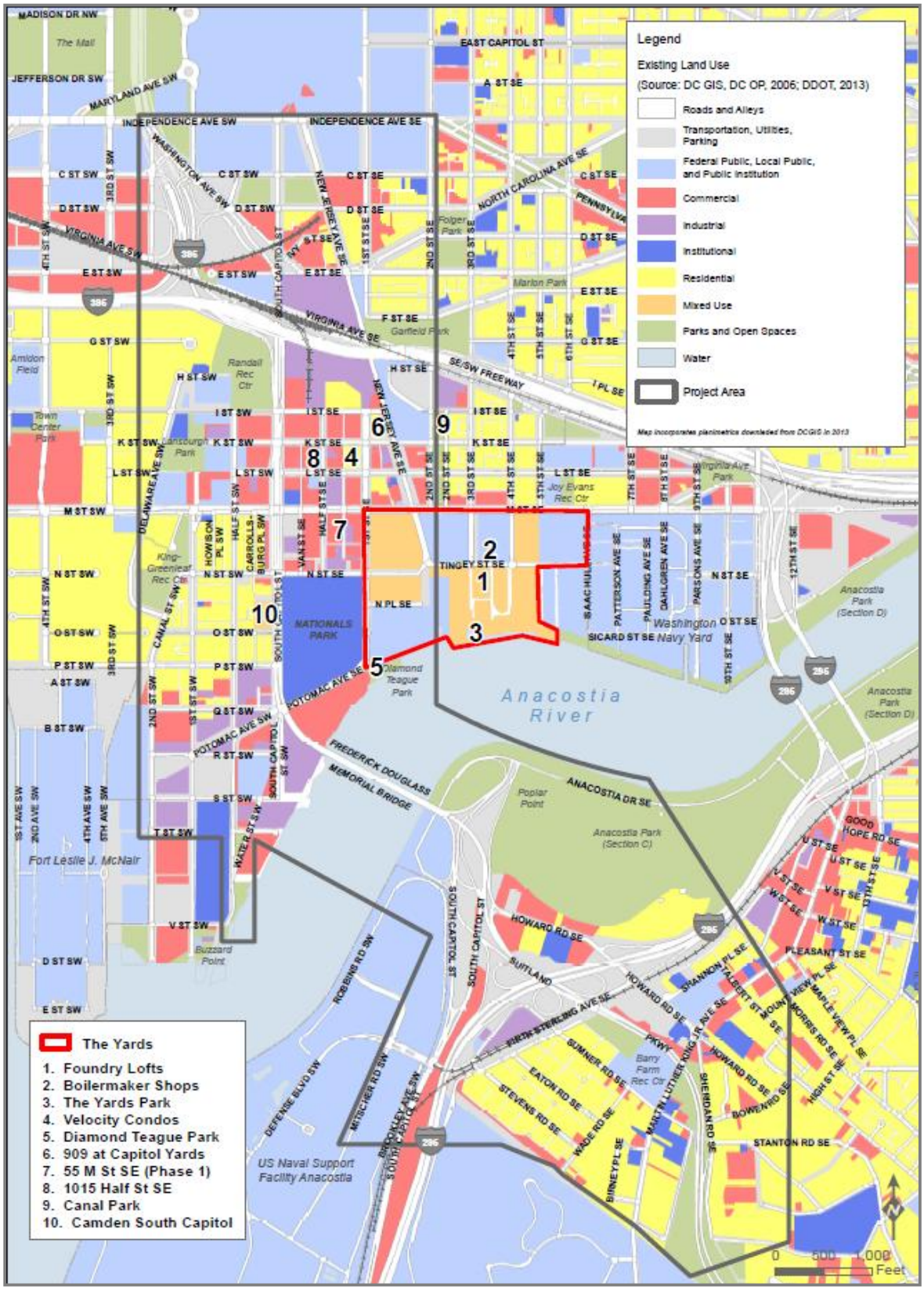
As a result, the existing land uses within the Project Area have changed slightly compared, those described in the FEIS. Figure 3-2 illustrates the current land uses and the following section describes the changes in land uses since the FEIS.

Figure 3-1: Example of Recent Development along South Capitol Street Corridor

Table 3-1: Developments Completed in Project Area since 2009 - West of Anacostia River

Project	Location	Major Use	Completion Year
Velocity Condos	1025 1st Street, SE	Residential	2009
Diamond Teague Park	First Street and Potomac Avenue SE	Park	2009
909 at Capitol Yards	909 New Jersey Avenue SE	Residential	2009
55 M Street SE (Phase 1)	Half Street between M and N Streets SE	Mixed-use	2009
1015 Half Street	1015 Half Street SE	Office	2011
Camden South Capitol	1345 South Capitol Street SW	Residential	2013

Figure 3-2: Existing Land Use



The FEIS documented that the pace of redevelopment on the east side of the Anacostia River was not as fast as on the west side since much of the Project Area east of the Anacostia River still consists of parks, open space, and government facilities. Development has mostly focused on housing, such as the recently completed Sheridan Terrace and Matthews Memorial Terrace (see Table 3-2). These, and other residential projects, are focused in the area around Barry Farm. The approximately 350-acre St. Elizabeths Campus is being redeveloped south of the Project Area. The current phase of construction for the West Campus of St. Elizabeths is underway. The redevelopment of the East Campus is currently in the planning and design stages.

Table 3-2: Developments Completed in Project Area since 2009 - East of Anacostia River

Project	Location	Major Use	Completion Year
Grandview Estates	1264-1308 Talbert Street SE	Residential	2009
Matthews Memorial Terrace	2632 Martin Luther King, Jr. Avenue SE	Residential	2012
Sheridan Station (Phase 1)	2516 Sheridan Road SE	Residential	2010-2012

3.2.2 Governmental Plans, Policies, and Controls

Federal, regional and local government plans, policies, and controls relevant to the project and Project Area have largely remained the same as those described in the FEIS. This section describes the exceptions.

Regional

The MWCOG has updated the following plans since the FEIS:

- The *2013 Update to the Financially Constrained Long-Range Transportation Plan (CLRP) for the National Capital Region* (MWCOG, 2013)
- *Transportation Improvement Program (TIP) for the Metropolitan Region FY 2013-2018* (MWCOG, 2013)

The National Capital Region Transportation Planning Board (TPB) updated and adopted the CLRP in July 2013, for years 2013 to 2040. On July 18, 2012, the TPB adopted the TIP for fiscal years 2013 to 2018. Both the CLRP and TIP updates included the South Capitol Street Project. The CLRP and the TIP stated that the District would implement "improvements based on recommendations from the South Capitol Street Gateway and Anacostia Access studies including right-of-way acquisition and replacement of the Fredrick Douglass Memorial Bridge on a new southern alignment."

Local

In 2009, the OP launched the first Amendment Cycle for the 2006 *Comprehensive Plan of the National Capitol* (OP, 2006). The purpose of the Amendment Cycle was to correct technical errors or address major changes in policy or new initiatives that have occurred since 2006. The amendments were developed in 2010, but adopted in April as part of the *Comprehensive Plan* (OP, 2010). Table 3-3 summarizes the amendments related to the South Capitol Street Corridor and the Project. These amendments continue to encourage mixed-use redevelopment, and focus on improving accessibility to the multi-modal transportation network and neighborhoods in the South Capitol Street Corridor. In general, the amendments reinforce the future role of the South Capitol Street Corridor as a gateway to the city.

Table 3-3: 2010 Amendments to the Comprehensive Plan Relevant to the Project Area

Section	Amendment
304.11 – Policy LU-1.1.5: Urban Mixed Use Neighborhoods	"Encourage new central city mixed-use neighborhoods combining high-density residential, office, retail, cultural, and open space uses in the following areas: 1. Mt. Vernon Triangle 2. North of Massachusetts Avenue (NoMA) 3. Downtown East 4. South Capitol Street Corridor/Stadium area 5. Near Southeast/Navy Yard 6. Center Leg Freeway air rights 7. Union Station air rights"
306.16	"While transit-oriented development is most commonly thought of as a strategy for Metrorail station areas, it also applies to premium transit corridors and the city's "Great Streets." Seven corridors are designated Great Streets as part of an integrated economic development, transportation, and urban design strategy. The location of these streets is shown in Map 3.5 [of the Amendment]. While not officially designated, four other corridors — Rhode Island Avenue, North/South Capitol Streets, Lower 14th Street, and Bladensburg Road — are also shown on the map to recognize their potential for enhancement."

Table 3-3: 2010 Amendments to the Comprehensive Plan Relevant to the Project Area (continued)

Section	Amendment
411.9	"As the District is a densely developed city with an historic built environment, the city does not foresee making significant investments in road widening to accommodate more autos. Instead, the District will continue to manage existing roadway resources and provide for viable transportation choices throughout the city. Some of the roadway and bridge investments the city is planning to make within the next five to eight years include: Rehabilitating the existing Frederick Douglass Memorial Bridge through structural steel repairs, lighting improvements, and preventive maintenance Creating a traffic circle at the intersection of Potomac Avenue and South Capitol Street Extending Potomac Avenue to 2nd Street SE on the east and to Fort McNair on the west Reconfiguring the underpass arrangement at the intersection of M and South Capitol Streets Redesigning South Capitol Street for a continuous, at-grade, 130-foot street section as originally specified in the L'Enfant Plan, with a narrow median"
1808.2 – Policy FSS-1.1.1": Directing Growth	"Opportunities for future housing development and employment growth in the Far Southeast/Southwest should be directed to the area around the Congress Heights Metrorail Stations and along the Great Streets corridors of South Capitol Street. Provide improved transit and automobile access to these areas and improve their visual and urban design qualities."
1808.7 – Policy FSS-1.1.6: Anacostia Streetcar Project	"Coordinate land use and transportation decisions along the proposed route of the Anacostia Streetcar. Future development along the streetcar line should be clustered around proposed transit stops. In addition, the streetcar route should be designed and planned to minimize impacts on traffic flow and to avoid negative impacts on the historic character of the Anacostia community."
1908.3 – Policy AW-1.1.2: New Waterfront Neighborhoods	"Create new mixed use neighborhoods on vacant or underutilized waterfront lands, particularly on large contiguous publicly-owned waterfront sites. Within the Lower Anacostia Waterfront/ Near Southwest Planning Area, new neighborhoods should be developed at the Southwest Waterfront, Buzzard Point, Poplar Point, Southeast Federal Center and Carrollsburg areas. These neighborhoods should be linked to new neighborhoods upriver at Reservation 13, and Kenilworth-Parkside. A substantial amount of new housing and commercial space should be developed in these areas, reaching households of all incomes, types, sizes, and needs."

Table 3-3: 2010 Amendments to the Comprehensive Plan Relevant to the Project Area (continued)

Section	Amendment
1914.9 – Policy AW-2.4.3: Poplar Point Mixed Use Neighborhood	"Create a new transit-oriented mixed-use neighborhood oriented around the Poplar Point Park, linked to the Anacostia Metrorail Station and new Anacostia streetcar line. The neighborhood should include a large amount of affordable housing and should also include retail and civic uses that benefit the adjacent communities east of I-295. Within the overall mix of uses, allow segments of the future development to be devoted entirely to office use to encourage location of Federal office space and other office space supportive of Federal government agencies to occupy new buildings at Poplar Point. This should be particularly targeted to office space related to the Department of Homeland Security consolidation at the St. Elizabeths Campus. To minimize the loss of useable open space, development should utilize the land recovered after the realignment and reconstruction of the Frederick Douglass Bridge."

3.2.3 Zoning

Although the District of Columbia Office of Zoning (DCOZ) updated the zoning maps and ordinances since the FEIS, the changes within the Project Area were relatively minor as shown on Table 3-4. The DCOZ also updated the overlay zone districts, but no changes were made to the overlay zones within the Project Area since the FEIS. Overall, the existing Project Area remains zoned to facilitate large areas of commercial, residential, and mixed-use developments, with some light industrial uses along the waterfront. Combined with the design standards established by the overlay districts, this zoning encourages the development of the South Capitol Street Corridor into a symbolic gateway to the District.

Table 3-4: Updates in Zoning in Project Area since the FEIS

Area	Location	Updated Zone District (2013)	FEIS Zone District (2008)
West of Anacostia River	Current U.S. DOT headquarters (M Street SE between 4th Street SE and New Jersey Avenue SE)	CR (mixed-use)	Unzoned
West of Anacostia River	Block south of U.S. DOT headquarter occupied by DC Water (just south of intersection between New Jersey Avenue SE and Tingey Street SE)	M (industrial)	W-2 (waterfront mixed-use)
East of Anacostia River	Residential blocks around intersection of Shannon Place SE and Talbert Street SE (just southeast of I-295)	R-5-A (residential)	R-4 and R-5-A (residential)

3.3 Community Cohesion and Facilities

3.3.1 Community and Neighborhood Description

As described in the FEIS, a portion of the Near Southeast neighborhood, located south of I-395/I-695 along the southeast waterfront, has continued to experience changes. Originally anchored by Nationals Park and the U.S. DOT headquarters, the steady completion of the Yards redevelopment projects and the construction of numerous other commercial and residential developments over the past few years have changed the urban landscape of this neighborhood.

Since the FEIS, the neighborhoods east of the Anacostia River have not changed nearly to the extent as the Near Southeast neighborhood. The redevelopment plans described in the FEIS in and around the neighborhoods of Barry Farm, Hillsdale, and Historic Anacostia are progressing, but have not advanced to such an extent that substantial changes to neighborhood characteristics are evident.

Beyond the Project Area, the completion of the Waterfront Station redevelopment and the planned Southwest Waterfront ("The Wharf") projects are leading the revitalization and infusion of mixed-use developments in the Southwest/Waterfront neighborhood. On the east side of the Anacostia River, the redevelopment of the St. Elizabeths Campus is creating opportunities for mixed-use redevelopment in the neighborhoods of Congress Heights, Washington Highlands, and Anacostia. The Yards Park development, completed in 2010, provides an additional recreational area with space for outdoor performances.

Table 3-5 highlights the large number of new residents who moved into the Project Area between 2000 and 2010. Since 2000, population has more than tripled in all census tracts in the Project Area. This shows that the population is new to the area and the community is growing.[1] Figure 3-3 illusrates the census tracts for Table 3-5.

There are various neighborhood organizations within the Project Area with the goal of fostering community cohesion. For example, the Southwest Neighborhood Assembly publishes a local newspaper, *The Southwester*, and maintains a website with community information and upcoming events. Events include afterschool activities and tutoring for school-age children, storytime for infants and preschoolers, activities for seniors, and fitness classes for all age groups. Although the group currently focuses on the Southwest neighborhood, the goal is to expand community information to other areas.

The Area Neighborhood Councils (ANCs) also provide opportunities to involve residents in the community and desiminate information to the public. The Project Area is located predominately in ANCs 6D and 8C, and partially includes ANC 6B. The neighborhood organizations expand communication, encourage relationships among residents, and help foster a sense of community.

[1] ACS data from 2008 to 2012 was used as the population has continued to grow since the time 2010 Census data was collected.

Table 3-5: Tenure of Total Population in Occupied Housing Units by Census Tract

	Census Tract 64		Census Tract 65		Census Tract 72		Census Tract 73.01		Census Tract 74.01		Census Tract 105	
Total population in occupied housing units:	1,821		2,535		2,701		2,377		2,309		4,132	
Moved in 2010 or later	535	29.4%	1,876	74.0%	1,753	64.9%	990	41.6%	689	29.8%	1,476	35.7%
Moved in 2000–2009	1,017	55.8%	649	25.6%	993	36.8%	1,265	53.2%	880	38.1%	2,241	54.2%
Moved in 1990–1999	434	23.8%	677	26.7%	612	22.7%	122	5.1%	651	28.2%	842	20.4%
Moved in 1980–1989	127	7.0%	506	20.0%	55	2.0%	0	0.0%	135	5.8%	191	4.6%
Moved in 1970–1979	37	2.0%	205	8.1%	0	0.0%	0	0.0%	0	0.0%	90	2.2%
Moved in 1969 or earlier	10	0.5%	110	4.3%	0	0.0%	0	0.0%	148	6.4%	143	3.5%

Source: 2008–2012 American Community Survey 5-Year Estimates
Note: Census tract data is the smallest geographic area for occupied housing data available from the American Community Survey and for the 2010 Census

Figure 3-3: Census Tracts in the Project Area

3.3.2 Housing

The FEIS documented that most housing units in the project were located west of South Capitol Street on the west side of Anacostia River. The completion of residential developments in the Near Southeast neighborhood has increased the number of housing units available east of South Capitol Street within the Project Area. These new residential housing units are mostly high-density condominiums and apartment rentals. East of the Anacostia River, the number of housing units is largely the same as that documented in the FEIS.

The FEIS reported 10,143 housing units in the project area in 2000 (U.S. Census, 2000) with an additional 900 units completed or under construction. The 2010 Census data identified approximately 13,300 units in the area (U.S. Census, 2010), a growth of more than 30 percent in a decade.

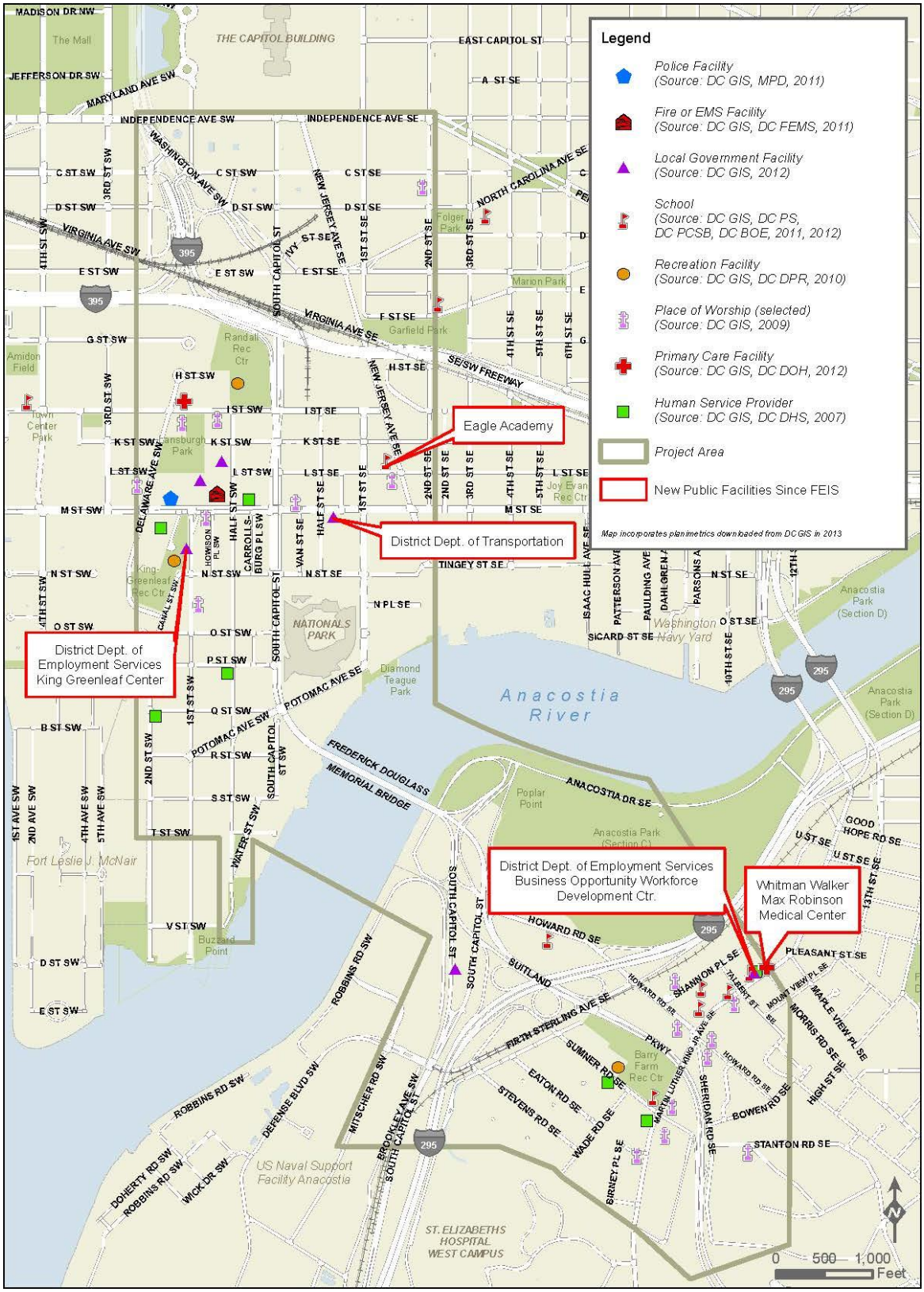
3.3.3 Places of Worship, Public Facilities, and Schools

Since the FEIS, the number of places of worship in and around the Project Area did not change, but the following new public facilities and schools were established:

- Eagle Academy (school) – 1017 New Jersey Avenue SE
- Whitman Walker – Max Robinson Medical Center (primary care facility) – 2301 Martin Luther King, Jr. Avenue SE
- DDOT Headquarters (local government facility) – 55 M Street SE
- District of Columbia Department of Employment Services – King Greenleaf Center (local government facility), 201 N Street SW
- District of Columbia Department of Employment Services – Business Opportunity Workforce Development Center (local government facility), 2301 Martin Luther King, Jr. Avenue SE

Figure 3-4 shows the updated community facilities.

Figure 3-4: Community Facilities



3.3.4 Utilities

Utility infrastructure remains similar as described in the FEIS. One exception, the PEPCO power plant at Buzzard Point, was decommissioned in June 2012.

Although work has not been completed, sections of both the Blue Plains and Anacostia River Tunnels (part of the DC Clean Rivers Project) will be within the Project Area. Construction for the Blue Plains Tunnel began in May 2013. The Anacostia Tunnel is expected to begin construction in 2014 (see Figure 3-5).

Figure 3-5: Blue Plains and Anacostia Tunnels

3.3.5 Demographics

The FEIS used year 2000 Census data, *Selected Social Characteristics: Demographics and Income* (U.S. Census, 2000), to describe the demographic and income characteristics of residents living in and near the Project Area because year 2010 U.S. Census data was not yet available. The 2010 Census data has been used to provide an update to demographics information for this document. Data is available for overall population and minority populations at the block group level. Data on income level is only available at the census tract level for the 2010 Census. Therefore, different levels of data are presented below based on the topic of discussion. In addition, three block groups that were included in the FEIS analysis are not analyzed in the SDEIS as they were determined to be outside of the current Project Area. Those block groups are 0098091, 0075033, and 0075032 from the 2000 Census. One additional block group from 2010 Census has been included in the analysis for this document which is block group 0065001.

Based on the most recent 2010 Census data, the District's population increased by about five percent between the year 2000 and 2010. In 2010, the District's total population was almost 602,000 persons.

The 2010 Census block group data were used to determine a total population of approximately 22,000 residents in the Project Area using the 14 block groups shown on Figure 3-6. This population is 7.6 percent less than in the year 2000 (see Table 3-6). Population changes within the Project Area were extremely uneven, with several block groups experiencing substantial drops in population while others had extremely high growth rates.

Block groups 0072001 and 0072002, representing the portion of the Near Southeast neighborhood within the Project Area, grew by over 50 percent. This is consistent with the level of redevelopment that has occurred in this area over the past several years. Conversely, block group 0064002 located on the west side of South Capitol Street near Buzzard Point, experienced an almost 15 percent drop in population. The area between D Street and Independence Avenue includes only four residents as the majority of the area is comprised of Congressional offices.

On the east side of the Anacostia River, two block groups comprise the majority of the Project Area. Block groups 0074011 (Barry Farm) and 0074012 (Hillsdale) experienced population decreases of 16 and 24 percent, respectively, between 2000 and 2010. Barry Farm is planned for redevelopment from public housing to mixed income housing. Block group 0074072 is the only block group east of the river to experience population growth. This reflects the residential redevelopment projects of Grandview Estates and Sheridan Station that were completed in 2009 and 2010, respectively.

The 2010 Census data indicated a population decrease of 2,222 people (42.5 percent) in block group 0073011 from 2000. However, this block group represents JBAB, and the majority of this military installation is located beyond the Project Area.

Figure 3-6: 2010 Census Block Groups in Project Area with Population Change

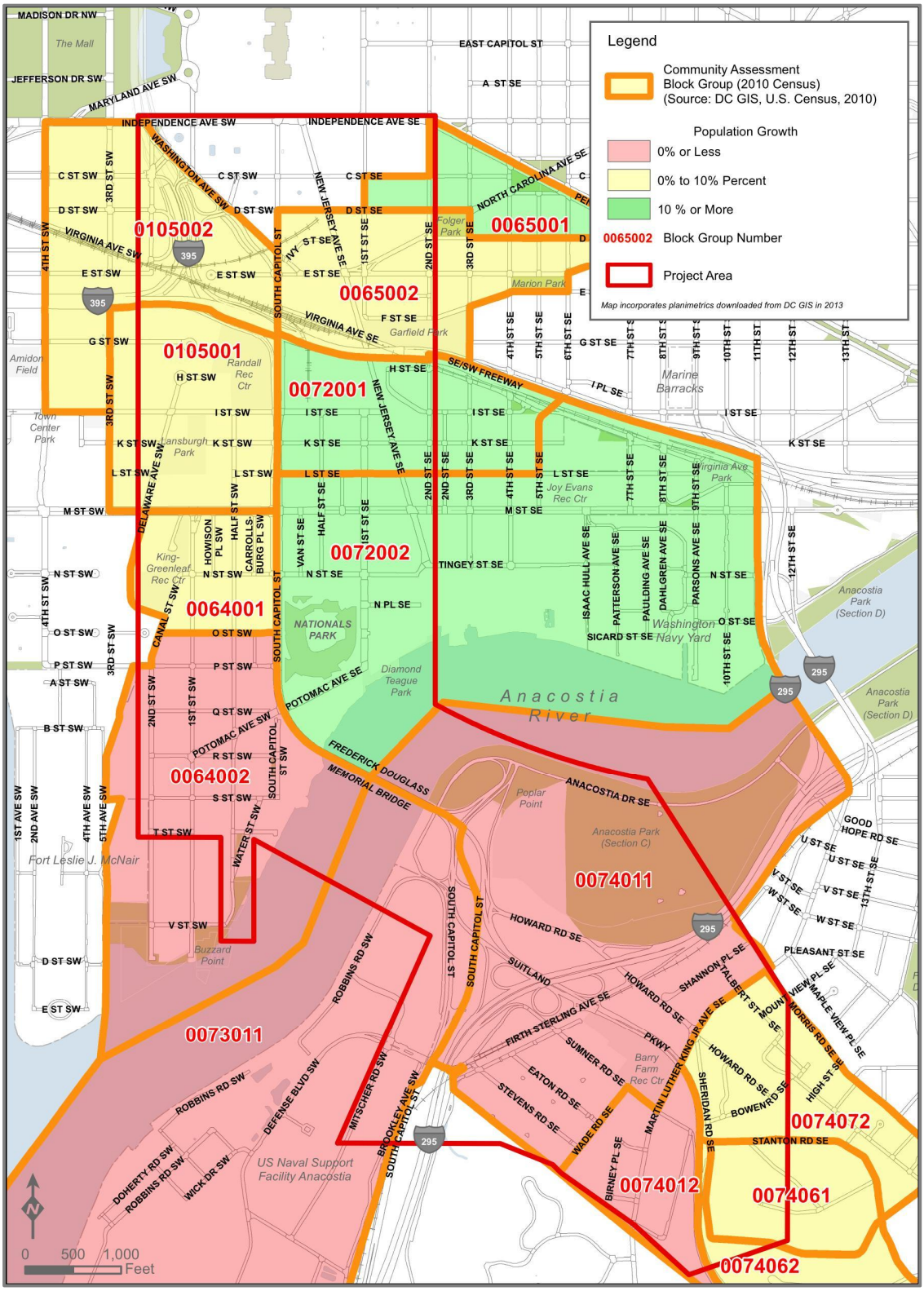


Table 3-6: Comparison of Year 2000 and 2010 Populations by Block Group

2000 Block Group (or Equivalent)	2000 Population	2010 Block Group	2010 Population	Population Change 2000-2010
0064001	1,187	0064001	1,242	4.6%
0064002	1,053	0064002	897	-14.8%
0065001	895	0065001	997	11.4%
0065002	1,527	0065002	1,534	0.5%
0072001	1,825	0072001	1,964	53.1%
		0072002	830	
0073011	5,234	0073011	3,012	-42.5%
0074011	1,764	0074011	1,484	-15.9%
0074012	1,232	0074012	930	-24.5%
0074064	3,227	0074061	1,439	5.1%
		0074062	1,624	
0074075	1,634	0074072	1,771	8.4%
0060021	608	0105001	1,967	*3.7%
0060011	2,680	0105002	1,443	
Total	22,866	Total	21,134	-7.6%

Sources: U.S. Census 2000 Summary File 1 and U.S. Census Bureau 2010 Summary File 1, Block Group Data
* Block groups 0105001 and 0105002 cover the same area as block groups 0060021 and 0060011. However, the areas are not equal and the population change has been combined to accurately reflect the growth.

Overall, racial and age profiles of the population within the Project Area are similar to those documented in the FEIS. The following section uses U.S. Census terminology in describing the racial characteristics of the residents living in the Project Area.

In 2010, Black or African-Americans (not of Hispanic origin) composed the largest racial group (59 percent) of the population within the Project Area. This is 14 percent lower than that documented in the FEIS for the year 2000 (see Table 3-7). The total percentage of Black or African-Americans (not of Hispanic origin) residents in the District was 50 percent in 2010. White (not of Hispanic origin) residents comprised the second largest racial group in the Project Area at about 30 percent, which is 10 percent higher than that documented in the FEIS for the year 2000 (see Table 3-6). The total percentage of white residents in the District was almost 35 percent in 2010.

Table 3-8 shows that 69 percent of the population in the Project Area was between the ages of 18-64 in 2010, which was slightly lower than the 72 percent in the District as a whole. However, this was nine percent higher than in 2000 when those 18-64 years old comprised about 60 percent of the total population. The percent of population younger than 17 years old decreased from about 34 percent to 24 percent between the years 2000 and 2010. This was higher than the 17 percent for the District as a whole.

Table 3-7: U.S. Census 2010 Population by Race and Hispanic Origins

Category	Population in the Project Area		Total Population in the District of Columbia	
	Number	Percentage	Number	Percentage
White*	6,359	30.1%	209,464	34.8%
Black or African-American*	12,460	59.0%	301,053	50.0%
Hispanic (all races)	1,072	5.1%	54,749	9.1%
Asian*	641	3.0%	20,818	3.5%
American Indian*	82	0.4%	1,322	0.2%
Other or Multiple Races*	520	2.5%	14,317	2.4%
Total Minority	14,775	69.9%	392,259	65.2%
Total Population	21,134	100.0%	601,723	100.0%

Source: U.S. Census 2010 Summary File 1
Note: *Not of Hispanic Origin

Table 3-8: U.S. Census 2010 Population by Age

Age	Population in the Project Area		Total Population in the District of Columbia	
	Number	Percentage	Number	Percentage
0 to 17	5,020	23.8%	100,815	16.8%
18 to 64	14,751	69.8%	432,099	71.8%
65 or Above	1,363	6.4%	68,809	11.4%
Total	21,134	100.0%	601,723	100.0%

Source: U.S. Census 2010 Summary File 1, Block Group Data

Although overall income levels of residents in the Project Area were below those of the District in 2010, they improved over the past several years at a greater pace. The median household income in 2010 was about $47,000, well below the District-wide median income of about $58,500 (see Table 3-9). However, in 2000, the median household income among residents in the Project Area was only about $23,800. Therefore, household median income in the Project Area rose by almost 100 percent, compared with 26 percent for the District as a whole.

The percentage of persons living below the poverty level[2] in the Project Area decreased from 33 percent to 25.7 percent from 2000 to 2010, a much larger improvement than the 1.7 percent in the District as a whole. The increase in median income and decrease in those living below the poverty level is likely due to the extensive development in the area over the past decade. Section 3.4 contains detailed information on minority and low income populations.

[2] Poverty Thresholds for 2010 by Size of Family and Number of Related Children Under 18 Years: Weighted average threshold for a family of four people: $22,314 (Source: U.S. Census 2010 Summary File 1)

Table 3-9: U.S. Census 2010 Income and Poverty Levels

Category	Project Area	District of Columbia
Median Household Income	$47,064	$58,526
Per Capita Income	$25,024	$42,078
Persons Below Poverty Level – Total	5,231	101,767
Percentage of Persons Below Poverty Level	25.7%	18.5%

Source:2006-2010 ACS 5-Year Estimate

Home values and ownership rates in the Project Area increased between 2000 and 2010 (Table 3-10). Although home values and ownership rates are below those in the District, they improved at a faster pace between 2000 and 2010. Home ownership improved by more than five percent in the Project Area compared with less than three percent in the District.

Table 3-10: U.S. Census 2010 Housing Value/Homeownership Rate

Category	Project Area	District of Columbia
Housing Units	12,738	296,719
Median Home Value	$349,533	$443,300
Homeownership Rate	21.4%	43.5%
Median Rent	$871	$1,063

Source: U.S. Census 2010 Summary File 1, 2006-2010 ACS 5-Year Estimates

3.4 Environmental Justice

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (EO 1994), directs federal agencies to "promote nondiscrimination in federal programs substantially affecting human health and the environment, and provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment." The EO directs agencies to use existing laws to ensure that when they act:

- They do not discriminate on the basis of race, color, or national origin
- They identify and address disproportionately high and adverse human health or environmental effects of their actions on minority and low-income communities, and
- They provide opportunities for community input during the National Environmental Policy Act (NEPA) process, including input on potential effects and mitigation measures

Section 3.3.5 summarizes the demographic composition of populations in the Project Area. However, additional population data were collected to establish a detailed demographic profile and baseline for the Environmental Justice (EJ) impact analysis.

3.4.1 Methodology

Definitions of "Minority" and "Low-Income"

Executive Order 12898 does not define the terms "minority" or "low-income." However, the revised EJ guidance from the U.S. Department of Transportation (USDOT), USDOT Order 5610.2(a) *Final DOT Environmental Justice Order* (USDOT, 2012) provides the following definitions, which have been used in this analysis:

- Minority Individual – The U.S. Census Bureau classifies a minority individual as belonging to one of the following groups: American Indian or Alaskan Native, Asian American, Native Hawaiian or Other Pacific Islander, Black (not of Hispanic Origin) and Hispanic or Latino.
- Minority Populations – Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed USDOT program, policy, or activity.
- Low-Income – A person whose household income is at or below the US Department of Health and Human Services poverty guidelines.
- Low-income Population – Any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed USDOT program, policy, or activity.

Identifying Minority and Low-Income Populations in the Project Area

As a tool for evaluating the proportionality of impacts and benefits, this analysis identified "EJ areas" and "non-EJ areas" in the Project Area. As used in this chapter, the term "non-EJ area" does not imply the absence of EJ populations living in that area. This analysis distinguishes between EJ areas and non-EJ areas as a tool for assessing the potential for disproportionate impacts on EJ populations. An "EJ area" was defined to include any census tract in which the minority or low-income population meets either of the following thresholds:

(a) The minority or low-income population in the census tract exceeds 50 percent, or

(b) The percentage of a minority or low-income population in the affected area is "meaningfully greater" than the percentage of minority population in the general population

For this analysis, "meaningfully greater" was defined to mean a census tract in which the percentage of minority or low-income residents was 10 percentage points or more than the corresponding percentage in the surrounding jurisdiction (the District). The 2010 Census determined that 65.2 percent of residents in the District were classified as minority populations and 18.5 percent of the total population lived below the poverty line.

The use of thresholds for identifying EJ areas was based on the Council on Environmental Quality (CEQ) guidance document, *Environmental Justice Guidance under the National Environmental Policy Act* (CEQ 1997). The FEIS followed the same methodology; however, block group data for minority and low-income populations was extracted from the 2000 decennial Census. In 2010, the U.S. Census Bureau did not collect income data. Therefore, the 2006–2010 ACS 5-Year Estimates were used to determine the presence of low-income populations. The census tract is the smallest level of data available in the ACS 5-Year Estimates. As a result, the updated EJ analysis used data at the census tract level to compare both minority and low-income populations.

3.4.2 Census Tracts Meeting EJ Threshold Criteria

The Project Area for the Revised Preferred Alternative includes all, or parts of, eight census tracts. Figure 3-7 presents the EJ areas and non-EJ areas within the Project Area, and also illustrates the 1,000-foot potential impact area beyond the Project's limit of disturbance. The impact area was used in the analysis to estimate potential impacts on EJ populations.

The total population in the Project Area is 21,950. Table 3-11 and Table 3-12 present a summary of population data including the percentages for minority and low-income persons. The census data revealed that the Project Area census tracts contained a percentage of minority persons (71 percent) which is slightly higher than the District average of 65.2 percent.

The Project Area census tracts contained a percentage of low-income persons (25.7 percent) that is substantially higher than the District average of 18.5 percent. For the Project Area census tracts, the low-income percentage ranged from 1.3 percent to 57.3 percent.

Figure 3-7: EJ and Non-EJ Areas within the Project Area

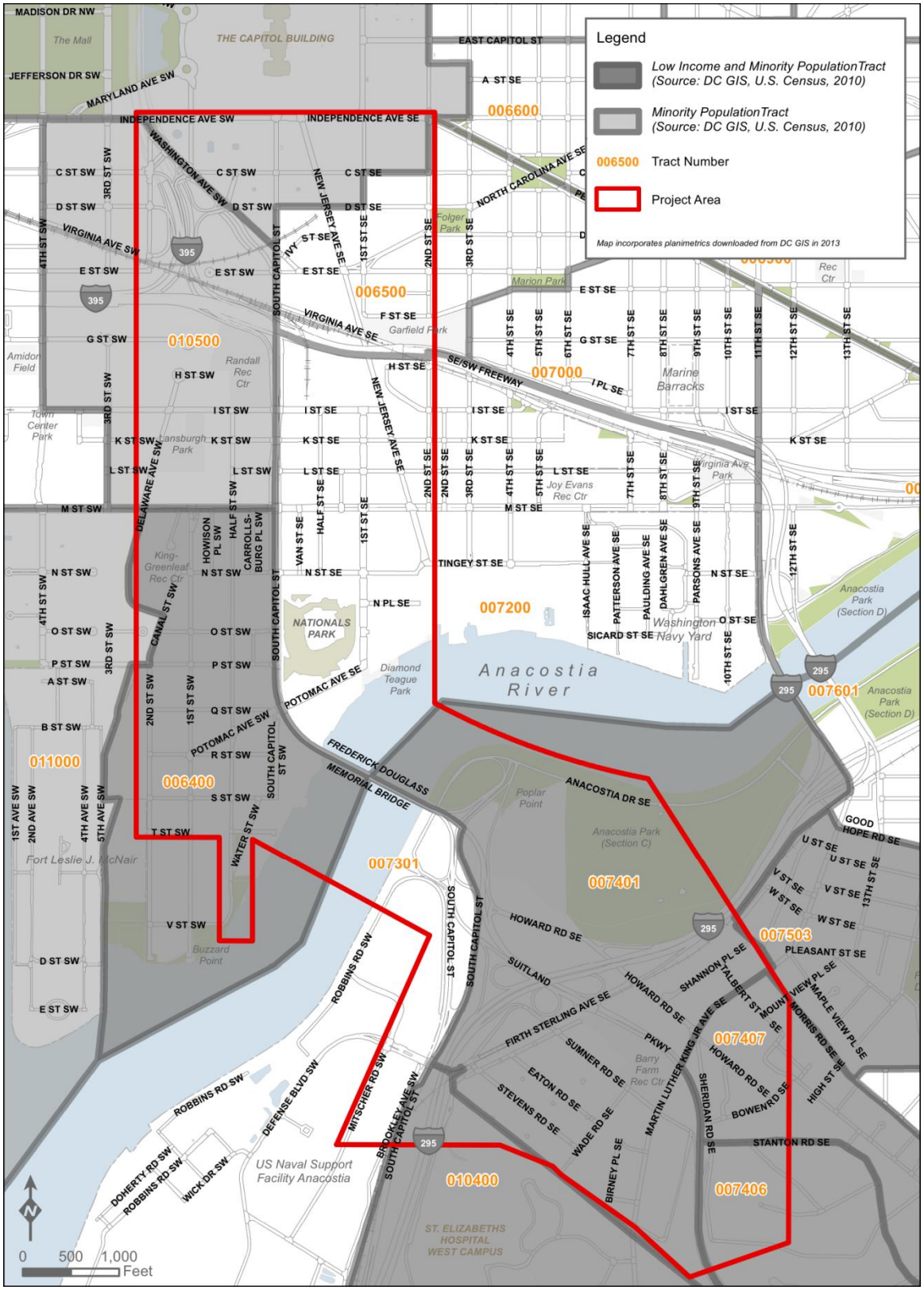


Table 3-11: Environmental Justice Populations

Project Area Census Tracts	Total Census Tract Population	Total Minority Population*	Percentage Minority Population*	Persons Below Poverty Level	Percentage of Persons Below Poverty Level
006400	2,139	2,006	93.8%	598	31.1%
006500	2,531	532	21.0%	33	1.3%
007200	2,794	1,225	43.8%	141	11.7%
007301	3,012	1,407	46.7%	35	1.4%
007401	2,414	2,399	99.4%	1255	57.3%
007406	3,063	3,052	99.6%	1495	47.2%
007407	2,587	2,555	98.8%	942	31.7%
010500	3,410	2,410	70.7%	822	19.4%
Project Area Totals	21,950	15,586	71.0%	5,321	25.7%
DC Totals	601,723	392,259	65.2%	101,767	18.5%

Source: U.S. Census Bureau 2010 Summary File 1, ACS 5-Year Estimates (income data)

* Includes Black Not of Hispanic Origin, Hispanic, American Indian or Alaskan Native, Asian or Pacific Islander, "Other Race," and "Two or More Races"

Table 3-12: Minority Population

Project Area Census Tracts	Percentage Black Population*	Percentage Hispanic Population	Percentage Other Minority Population**	Percentage Minority Population
006400	86.0%	3.0%	4.8%	93.8%
006500	8.8%	4.9%	7.4%	21.0%
007200	30.5%	5.5%	7.8%	43.8%
007301	23.8%	13.0%	9.9%	46.7%
007401	97.0%	1.3%	1.1%	99.4%
007406	96.3%	2.3%	1.0%	99.6%
007407	95.4%	1.4%	1.9%	98.8%
010500	54.5%	6.2%	10.0%	70.7%
District of Columbia	50.0%	9.1%	6.1%	65.2%

Source: U.S. Census Bureau 2010 Summary File 1

* Not of Hispanic Origin
** American Indian or Alaskan Native, Asian or Pacific Islander, "Other Race," and "Two or More Races"

Of the eight census tracts in the Project Area, five census tracts contain minority populations of 50 percent or more (census tracts 006400, 007401, 007406, 007407 and 010500) and one census tract contains low-income populations of 50 percent or more (census tract 007401). All of these census tracts met the EJ thresholds for minority and low-income populations, except census tract 010500, which had a total minority average at 70.7 percent. Three additional census tracts did not meet the 50 percent threshold but met the "meaningfully greater" test for the presence of low-income populations (census tracts 006400, 007406, 007407). Table 3-13 and Figure 3-7 present the census tracts that meet or exceed the EJ thresholds.

Table 3-13: Census Tracts Meeting Environmental Justice Thresholds

Census Tract	Minority		Poverty	
	Meets First Threshold*	Meets Second Threshold**	Meets First Threshold*	Meets Second Threshold**
006400	Yes	Yes	No	Yes
006500	No	No	No	No
007200	No	No	No	No
007301	No	No	No	No
007401	Yes	Yes	Yes	Yes
007406	Yes	Yes	No	Yes
007407	Yes	Yes	No	Yes
010500	Yes	Yes	No	No

*Percentage more than 50 percent of census tract total population
** Percentage more than 10 percent of the District average

In summary, five of eight census tracts in the Project Area (census tracts 006400, 007401, 007406, 007407 and 010500) were identified as minority and/or low-income areas using the 50 percent threshold or the "meaningfully greater" threshold criteria for presence of a minority population or a low-income population. These locations were considered EJ areas for the purposes of the impact analysis.

The remaining three census tracts did not meet the criteria for an "EJ area". These three are census tracts 006500 and 007200, located along M Street (east of South Capitol Street) and census tract 007301, located on JBAB property (east of the river). Analysis of the 2010 Census data revealed that the areas on the east side of South Capitol Street along the M Street corridor (census tracts 06500 and 007200) are no longer EJ areas as reported in the FEIS and are now identified as non-EJ areas although some minority populations are still present. This is due, in part, to the extensive redevelopment in the Project Area and surrounding Southeast and Southwest neighborhoods. These non-EJ areas were reviewed for the presence of minority and low-income populations as defined by USDOT to determine the approximate location of EJ populations within these census tracts and to consider potential effects.

In addition to this change, two census tracts 010400 and 007503, located east of the river, that were analyzed in the FEIS (year 2000 block groups 0075032, 0075033, and 0098091 now referenced as census tract 0104002 in the 2010 Census) were not included in the SDEIS analysis because the Project does not impact these areas. The remaining neighborhoods within the Project Area, previously identified as being located in an EJ area, continue to have the same classification as reported in the FEIS.

3.5 Wetlands

A total of six wetlands were identified in the Project Area during the 2005 wetland delineation for the FEIS. All of the wetlands were located within Anacostia Park on Poplar Point. In April 2005, representatives from the USACE, NPS, DDOE, and DDOT conducted a field verification of the wetlands. An approved JD was issued by the USACE on July 1, 2005, valid for five years.

A new wetland delineation was conducted for the Project in the spring and summer of 2014, as the original JD had expired. Wetlands previously identified within the interior of Anacostia Park were not reevaluated, since they lie well outside the construction limits of the Project. Wetlands along the west side of Anacostia Park were reassessed, but were found to be the same as when originally delineated in 2005, and thus required no additional delineation.

Three new wetlands were discovered within the Project Area. A palustrine forested (PFO) wetland was delineated between I-295 and Golden Raintree Drive (see Figure 3-8~~Figure 3-8~~). This small, linear wetland was identified as an unnamed tributary stream during the original delineation. However, conditions have changed, and the system no longer has stream features, but is instead functioning as a forested wetland. Two palustrine emergent (PEM) wetlands were also delineated between Suitland Parkway and Dunbar Road.

A revised JD was conducted with the USACE and DDOE on August 20, 2014. The *Supplemental Natural Resources Technical Report* (DDOT, 2014) (Appendix E) contains more detailed information on wetland conditions with the Project Area.

Figure 3-8: Delineated Wetlands (2014)

3.6 Threatened and Endangered Species

Through coordination with the USFWS and NMFS, the federally-listed endangered shortnose sturgeon was identified as being present in the upper tidal Potomac River, and could potentially be present in the lower Anacostia River where the existing Frederick Douglass Memorial Bridge crosses the river. In December 2006, the DDOT requested consultation with the NMFS pursuant to Section 7 of the *Endangered Species Act of 1973*, as amended (16 USC 1531 et seq.), for the shortnose sturgeon. A *Biological Assessment for the Shortnose Sturgeon* (DDOT, 2006) was prepared in the fall of 2006 to evaluate the likelihood that the shortnose sturgeon is present within the Project Area (i.e., the Anacostia River at and near the bridge). The assessment concluded that the shortnose sturgeon is not likely present in the Project Area. With this information, the FHWA determined that the Project is "not likely to adversely affect" the shortnose sturgeon. In February 2007, the NMFS concurred with this determination, thus, completing the Section 7 consultation process for the FEIS.

With the reopening of the NEPA process starting with the preparation of this SDEIS, Section 7 consultation also was reopened. Consultation with the NMFS occurred in August 2013, which resulted in the identification of the Atlantic sturgeon, which was formally listed by the USFWS as an endangered species on April 6, 2012, as possibly being present within the Project Area. Another *Biological Assessment for the Atlantic Sturgeon* (DDOT, 2014) (Appendix F) was prepared to address the likelihood of occurrence of the Atlantic sturgeon within the Anacostia River and what, if any, impacts to the species could occur from construction of the Project (*Biological Assessment of Impacts to the Atlantic Sturgeon (Acipenser oxyrinchus),* May 2014).

Based on available scientific data about sturgeon captures and the general lack of suitable spawning and foraging habitat for Atlantic sturgeon in the Anacostia River, the assessment determined an extremely low likelihood that Atlantic sturgeon are present within the Project Area.

There are no known records of the Atlantic sturgeon within the Anacostia River or within the Potomac River at or near the District. Of the 1,590 wild and 463 hatchery-reared juvenile Atlantic sturgeon captures in the Chesapeake Bay watershed, only 11 wild and one hatchery-reared sturgeon were captured in the Potomac River upstream from the U.S. Route 301 crossing (USFWS 2013), which is more than 50 miles downstream from the District. None of these captures occurred within tidal freshwater areas.

The Anacostia River and its tributaries lack suitable spawning areas for sturgeon, reducing the likelihood that Atlantic sturgeon would enter the Anacostia River to spawn. Lack of spawning Atlantic sturgeon would eliminate the possibility of young-of-year sturgeon moving back downstream through the Project Area. Therefore, the only likely scenario for Atlantic sturgeon to be present within the Anacostia River would be juvenile fish seeking suitable foraging habitat. However, the river contains low quantities of macroinvertebrates, limiting the available food supply for the juvenile fish. Therefore, Atlantic sturgeon may occur as transients in low numbers in the Project Area.

With the information provided in the biological assessment of the Atlantic sturgeon, the FHWA determined that the Project is "not likely to adversely affect" the Atlantic sturgeon, communicating this assessment to the NMFS on August 1, 2014. In a letter dated, September 16, 2014, the NMFS concurred with the FHWA determination, thus completing the updated Section 7 consultation process (see Appendix K).

3.7 Floodplains

The FEIS relied on the 2002 FIRM (FEMA, 2002) to identify floodplains in and around the Project Area. The FIRM was updated in 2010, which included modifications to the 100-year and 500-year floodplains. Figure 3-9~~Figure 3-9~~ presents information from the 2010 FIRM. The 2010 FIRM (FEMA, 2010) showed substantial changes to the 100-year floodplain on both east and west of the Anacostia River.

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On the east side of the river, the 100-year floodplain expanded and now covers most of Anacostia Park and Poplar Point, and more areas within the JBAB, reaching the southbound sections of South Capitol Street.

On the west side of the river, two areas were added to the 100-year floodplain on the 2010 FIRM. The first is a large area that extends from Independence Avenue south to about P Street, roughly incorporating the northwest quadrant of the Project Area. The second area is an expansion of the floodplain along the west bank of the Anacostia River, south of Tingey Street.

Figure 3-9: Existing Floodplains

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3.8 Cultural Resources

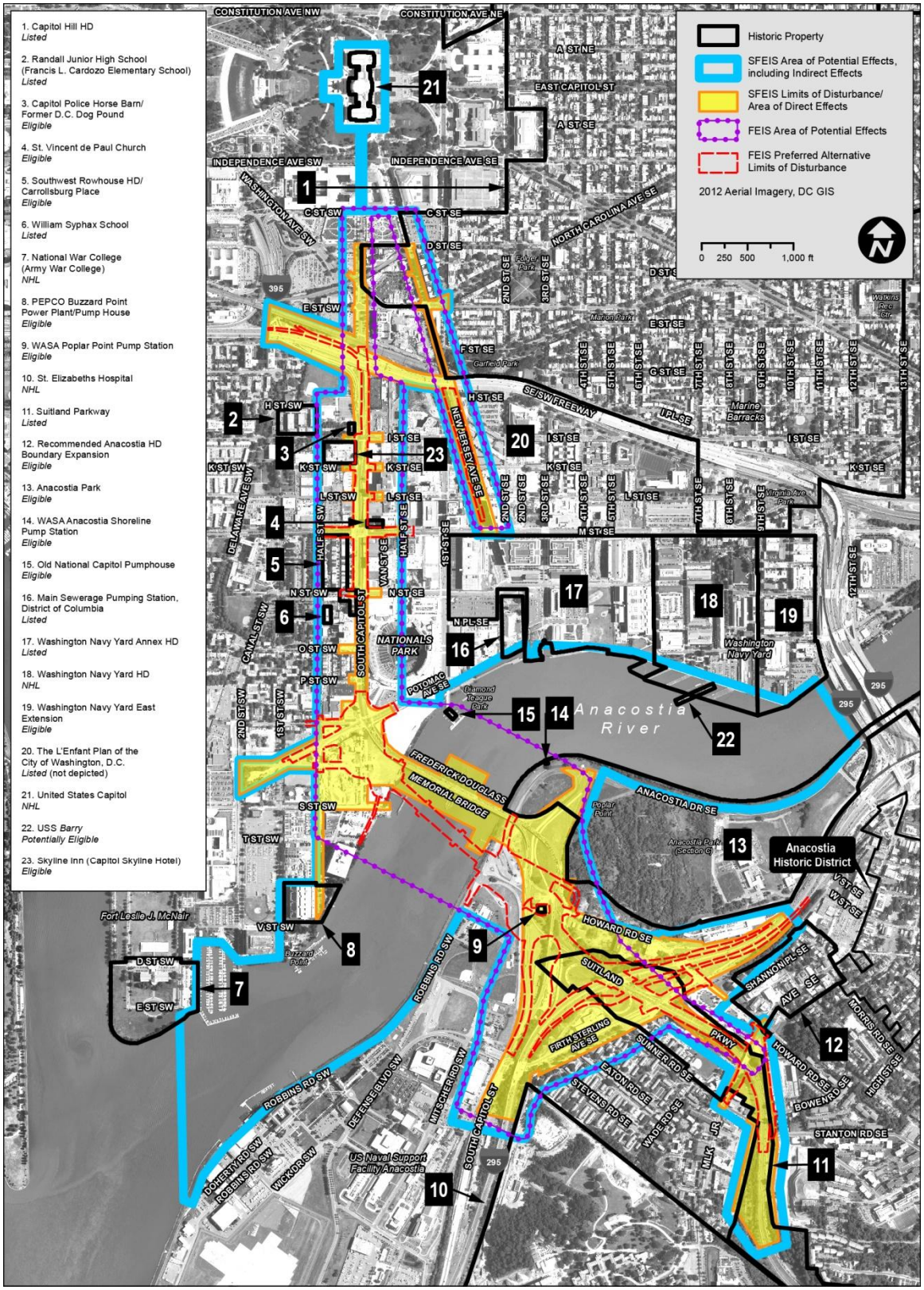
3.8.1 Section 106 Legal and Regulatory Context

The Project is subject to compliance with the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470 et seq.) and its' implementing regulations (36 CFR 800). Specifically, Section 106 of the NHPA requires that the responsible Federal agency consider the effects of its actions on historic properties, which are properties listed in or determined eligible for listing in the NRHP. The Federal Advisory Council on Historic Preservation (ACHP) must have an opportunity to comment on the undertaking.

Section 106 requires that the lead Federal agency, in consultation with the State Historic Preservation Office (SHPO), develop the APE, identify historic properties (i.e., properties listed on or eligible for the NRHP) in the APE, and determine the proposed project's effect on historic properties in the APE. Section 106 regulations require that the lead Federal agency consult with the SHPO and identified parties with an interest in historic properties during planning and development of the proposed project. The ACHP may participate in the consultation or may leave such involvement to the SHPO and other consulting parties. The ACHP, if participating, and SHPO are provided an opportunity to comment on the proposed project and its effects on historic properties. They participate in developing a Memorandum of Agreement (MOA) or Programmatic Agreement (PA) to avoid, minimize, or mitigate adverse effects, as applicable. Stipulations in a MOA or a PA must be implemented.

If a project adversely affects a National Historic Landmark (NHL), then the Federal agency must also comply with Section 110(f) of the NHPA. Section 110(f) of the NHPA requires that the agency undertake, to the maximum extent possible, planning and actions to minimize harm to any adversely affected NHL and give the ACHP an opportunity to comment. In cases of an adverse effect to an NHL, 36 CFR 800.10(c) requires that the lead Federal agency notify the U.S. Secretary of the Interior and consult with the ACHP. Staff members who meet the U.S. Secretary of the Interior's Professional Qualification Standards in history and architectural history performed the Section 106 investigations for the Project. For the South Capitol Street Project, the Section 106 process was reinitiated to address changes introduced by the Revised Preferred Alternative. The APE was revised and expanded to accommodate changes in the Project design and comments from consulting parties. The design changes resulted in changes to the Limits of Disturbance (LOD), which is the physical area that the selected designer/contractor would have the option to use to construct the Project, as well as other required activities such as parcel access, material storage or staging if it is not specifically prohibited (e.g., such as for non-permitted wetland impacts). The changes to the APE and LOD are shown on Figure 3-10.

Figure 3-10: Area of Potential Effects for the Revised Preferred Alternative



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As a result, additional historic properties are being considered. Project effects to historic properties within the revised APE were evaluated and initial comments from consulting parties and the DC SHPO, received at a meeting on July 10, 2014 were considered and included. *The South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) (Appendix G), will be submitted to the DC SHPO and consulting parties for review in early August 2014. The Project's MOA will be amended in consultation with consulting parties and signatories to reflect changes in effects assessments.

3.8.2 Identification of Historic Properties

Historic properties are listed in or determined eligible for listing in the NRHP by applying the NRHP Criteria for Evaluation to assess a property's historic significance. As stated in the NRHP Bulletin, *How to Apply the National Register Criteria for Evaluation* (NPS, 1997), the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

A. Are associated with events that have made a significant contribution to the broad patterns of our history, or

B. Are associated with the lives of persons significant in our past, or

C. Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction, or

D. Have yielded, or may be likely to yield, information important in prehistory or history

If a property is determined to possess historic significance, its integrity is evaluated using the following seven Aspects of Integrity to determine if it conveys historic significance: location, design, setting, materials, workmanship, feeling, and association. If a property is determined to possess historic significance under one or more Criteria and retains integrity to convey its significance, then the property is determined eligible for the NRHP during the Section 106 (16 USC 470 et seq. and 36 CFR 800) review.

Within the South Capitol Street Project's revised APE, there are 27 previously identified historic properties (23 are built properties and four are archaeological sites). Of the 23 built historic properties, four are National Historic Landmarks (NHL): the Washington Navy Yard Historic District, St. Elizabeths Hospital, the United States Capitol, and the National War College.

3.8.3 Built Historic Properties

Generally, buildings more than 50 years of age within the APE have been surveyed, documented, and evaluated for NRHP eligibility. Files at the NRHP and the DC SHPO were used to identify built historic properties in the revised APE. Reports completed for prior phases of the South Capitol Street Project and other projects completed in the APE were also reviewed. The revised APE for the Revised Preferred Alternative includes the area previously identified as

the APE, and an expanded area to accommodate both direct and indirect effects. Additional historic properties were identified based on the larger APE for the Revised Preferred Alternative, compared with the APE in the FEIS. Figure 3-10 identifies the built historic properties within the revised APE.

One additional property, the Skyline Inn, was evaluated during a prior phase of the Project. At that time, the hotel was less than 50 years of age and it was determined to be not eligible for the NRHP. However, since the Skyline Inn has now reached 50 years of age, it was reevaluated on a DC State Historic Preservation Office Determination of Eligibility Form using standard criteria for the NRHP. A draft version of the form was submitted in early August 2014 to the DC SHPO and other consulting parties for review and comment at the same time as the *Draft South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014). The draft version of the form supported the initial not eligible determination. In correspondence from September 18, 2014, the DC SHPO requested revisions to the form, stating that the agency assumed the Skyline Inn would be "determined eligible as we suspect it should be." The form was revised and the determination was changed to eligible. The revised form and revised *South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) has been submitted to the DC SHPO for review and concurrence and to other consulting parties for review. Both are included in Appendix G of this document.

During a meeting on September 4, 2014, the NPS inquired about the status of the Barry Farm Recreation Center, which is within the general project vicinity. According to NPS staff, this property is eligible for listing in the NRHP. The Barry Farm Recreation Center, located at 1230 Sumner Road SE, is important for its association with providing recreational opportunities to African-American residents in segregated Ward Eight. It is the site of the first city playground for African-American children, and is also associated with the debut of GoGo music. The Barry Farm Recreation Center is located outside of the APE for the South Capitol Street Project. Therefore, it is not a historic property that is considered as part of the Section 106 process for the Project, although it has important historic associations within the city. The Project's APE was established in consultation with the DC SHPO and amended in response to additional DC SHPO and consulting parties' comments.

3.8.4 Archaeological Resources

The *South Capitol Street Draft Environmental Impact Statement (DEIS) and Section 4(f) Evaluation* (DDOT, 2007) included a Phase 1(a) assessment of eight archaeological sub-areas within the South Capitol Street APE based on existing maps, photographs and archival data. This assessment concluded that seven of the eight areas investigated within the APE had low potential to contain significant or intact subsurface archaeological remains.

Additional Phase 1(b) assessments of these seven areas were not recommended. However, the assessments noted the potential for previously unidentified archaeological resources in one area, Poplar Point, on the south side of the Anacostia River. The original area of Poplar Point, comprised of Anacostia River and Stickfoot Branch alluvium, included open and undeveloped areas where archaeological resources may have been preserved, so a Phase 1(b) assessment

was recommended. The *Phase 1(a) Archaeological Assessment of Proposed Improvements to the South Capitol Street Corridor, Washington, D.C.* (DDOT, 2006) presented the results. The DC SHPO concurred with the findings and recommendations of the Phase 1(a) report in June 2006.

The Phase 1(b) assessment area included the area bounded by Howard Road SE, Firth Sterling Avenue SE, and South Capitol Street. Shovel test pit (STP) excavation in Poplar Point failed to uncover any significant or intact archaeological remains. Most of the APE is located in previously disturbed areas or in areas that have been covered by deep fill. The Phase 1(b) assessment concluded that no significant archaeological resources are likely to exist within the Poplar Point portion of the APE, and that no further investigations are warranted. The *Phase 1(b) Archaeological Survey of Proposed Improvements to the South Capitol Street Corridor, Washington, D.C.* (DDOT, 2007) presented the results. The DC SHPO concurred with the findings and recommendations of the Phase 1(b) report in June 2009.

There are four previously identified archaeological sites that fall within the South Capitol Street Project's revised APE: Sites 51SE012, 51SE024, 51SE034 (Howard Road Historic District), and 51SE071. However, none of these sites are located in areas where construction-related soil disturbance will occur. Site 51SE024 is located outside of the LOD. Sites 51SE012 and 51SE071 are deeply buried in historic fill and will not be affected by the Project-related construction activities. Site 51SE034 is within the LOD and has been disturbed by prior construction from other projects. The Revised Preferred Alternative has no effect to previously identified archaeological resources.

The revised APE for the Revised Preferred Alternative included areas of potential soil disturbances that were not evaluated during the FEIS. These new areas were evaluated for potential new effects on archaeological resources. A detailed evaluation of archaeological resources was conducted within the LOD and the potential to affect previously unidentified archaeological resources is minimal. Therefore, additional archaeological investigation of the LOD is not recommended. The results, contained in the *Draft South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) were submitted to the DC SHPO and other consulting parties for review and comment in August 2014. In correspondence dated September 18, 2014, the DC SHPO concurred with the archaeological assessment for the South Capitol Street Project.

3.9 Hazardous Materials

Industrial and hazardous waste materials and their management are federally-regulated under three laws: the 1980 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the 1986 Superfund Amendment and Reauthorization Act (SARA) which amended CERCLA, and the Resource Conservation and Recovery Act (RCRA) (42 USC 6901 and 42 USC 103). CERCLA and SARA focus on liability for cleanup of contaminated sites and establish an innocent landowner defense. RCRA addresses the management of hazardous materials, including the manufacture, storage, transportation, use, treatment, and disposal of waste materials (USEPA, 1976).

FHWA and DDOT policies emphasize the early identification of sites with potential environmental concerns such as contamination; the assessment of the type and extent of contamination and estimated cleanup costs; and avoidance of substantially contaminated properties. The current policies of the agencies recognize minor sources of contamination that can be remediated easily and do not generally result in excessive project delays, cleanup costs, or liability. Examples include limited contamination from leaking underground storage tanks [USTs], and asbestos and lead associated with structures to be demolished.

The FEIS summarized the findings of several hazardous materials assessments including a Preliminary Environmental Screening Assessment (PESA) and Phase 1 and Phase 2 Environmental Site Assessments (ESA). Those reports include:

- *Preliminary Environmental Screening Assessment Report* (DDOT, 2006)
- *Phase 1 Site Assessment and Contaminated Materials Management Report* (DDOT, 2005)
- *Phase 2 Environmental Site Assessment for South Capitol Street Protective Buying: Jemal's Buzzard Point, LLC and Florida Rock Properties, Inc.* (DDOT, 2008)

The PESA identified several areas where subsurface contamination may be encountered in the Project Area. A total of 53 sites were determined to be sites of concern that presented a contamination risk to the Project. Sites were prioritized as presenting a "slight" (26 sites), "moderate" (18 sites), or "severe" (nine sites) risk of contamination within the Project Area. Severe sites were identified as properties or clusters of properties with widespread contamination or previous or on-going remediation efforts, or as contaminated soil and/or groundwater likely to extend beyond property boundaries. These properties may be within or near the Project rights-of-way and most likely to be impacted by Project construction. The identified severe sites were recommended for further investigation in a Phase 2 ESA.

A *Modified Phase I Environmental Site Assessment (ESA)* (DDOT, 2014) (Appendix H) was completed to provide an updated analysis of hazardous materials in the Project Area. Similar to the FEIS, the ESA identified recognized environmental conditions (REC) including fill soil, asbestos containing materials, lead paint, and properties of concern.

The 2014 Phase 1 ESA identified many of the same properties of concern as the 2006 PESA. The ESA revealed the presence of 56 properties of concern in or near the Project Area, 14 of which were newly identified. The change in the number of properties of concern may be due to changes in ownership or land use, resulting in different site names. Some of these facilities were identified through multiple sources; others were identified from a single source. The facilities include former gasoline stations, bulk petroleum storage facilities, vehicle repair facilities, dry cleaners, properties with underground storage tanks, former coal yards, and a Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) facility with a consent order.

Table 3-14~~Table 3-14~~ lists the properties of concern. This SDEIS categorizes the risk level for each property of concern as "low, medium or high," compared with the "slight, moderate or severe" categories used in the FEIS.

Table 3-14: Properties of Concern

ID	Site	Address	Risk Level
1.	Matthew Memorial Baptist Church, Leaking Underground Storage Tank (LUST) facility	2616 Martin Luther King, Jr. Avenue	Medium
2.	Vacant Property, former gas station, former dry cleaners	2500-2504 Martin Luther King Jr. Ave/2503-2509 Sheridan Road SE	High
3.	Church Parking Lot, former gas station	2501 Martin Luther King, Jr. Avenue	Medium
4.	Wooded Property, Brownfield property	2458 Martin Luther King, Jr. Avenue	Medium
5.	Wooded Property, former automobile repair facility	831 Howard Road SE	Medium
6.	District Department of Mental Health, LUST facility	819-821 Howard Road SE	Medium
7.	Vacant Commercial Property, former automobile repair facility	822 Howard Road SE	Low
8.	Poplar Point Nursery, CERCLIS/LUST facility	600 Howard Road SE	High
9.	Unknown Facility, prior listing in FEIS, but no new information	2750 South Capitol Street SW	Low
10.	Verizon – Barry Road Facility, LUST facility	2600 Barry Road SE	Medium
11.	Vacant Commercial Property, former gas station, LUST facility	631-637 Howard Road SE	High
12.	Joint Base Anacostia - Bolling, Anacostia naval station, multiple LUST incidents	2701 South Capitol Street SW	Medium
13.	Anacostia River, multiple ERNS incidents, probable contaminated sediment	Anacostia River	High
14.	Frederick Douglass Memorial Bridge over Anacostia River, PA Manifest	Frederick Douglass Memorial Bridge	Medium
15.	South Capitol Street Heliport, contaminated property	1724 South Capitol Street SE	High
16.	Recycled Aggregates, former bulk petroleum terminal	1721 South Capitol Street SW	High
17.	Bulk Oil Terminal, two large ASTs	1st Street SW	Medium
18.	Super Salvage Facility, scrap yard	1711 1st Street SW	Medium
19.	Jemal's Buzzard Point, former bulk petroleum terminal property	1620 South Capitol Street SE	High
20.	Superior Concrete – Southeast Building, LUST facility	1625 South Capitol Street SW	High
21.	Superior Concrete Materials, LUST facility	1601 South Capitol Street SW	High
22.	Maintenance Yard, salt storage	Northwest corner of Half Street SW and R Street SW	Low
23.	Metro Building Supply, former automobile repair, LUST facility	50 Q Street SW	High
24.	Vacant Property – Florida Rock Properties, contaminated property, LUST facility	1 and 25 Potomac Avenue SE	High
25.	Singh Transmission, former dry cleaners and gas station	1505-1515 South Capitol Street SW	High
26.	Gold Star Services, automobile repair facility	39 Q Street SW	Low
27.	USA Motors, automobile repair facility	45 Q Street SW	Medium
28.	U-Haul Self Storage, LUST facility	1501 South Capitol Street SW	Medium
29.	National's Ball Park, former automobile repair, contaminated property	1500 South Capitol Street SE (and multiple other addresses)	Medium
30.	Camden South Apartments, former cleaners, gas station, automobile repair, and drum storage yard	1321-1345 South Capitol Street SW	High

Table 3-14: Properties of Concern~~Table 3-14: Properties of Concern~~ (continued)

ID	Site	Address	Risk Level
31.	Closed Gas Station, former gas station	1244-1256 South Capitol Street SE	High
32.	Parking Lot, Brownfield property	1236 South Capitol Street SE	Medium
33.	55 M Street Building, LUST facility	Half and M Streets SE	Medium
34.	Public Storage Rental Center, former cleaners	1226-1230 South Capitol Street SE	High
35.	DC Superior Court, RCRA generator	1215 South Capitol Street SW	Medium
36.	Undeveloped Property, former dry cleaners	12-18 M Street SW,	High
37.	Parking Lot, former gas station	1200 South Capitol Street SE	High
38.	Storage Yard, LUST facility	17 M Street SE	High
39.	BAE Systems Building, LUST facility	80 M Street SE	Medium
40.	Parking Lot J, former gas station	50 M Street SE	Medium
41.	Booz Allen Hamilton Building, former gas station	20 M Street SE	Medium
42.	7-Eleven, former gas station	1119 South Capitol Street SW	High
43.	Parking Lot, LUST facility	1112 Half Street SW	Medium
44.	Vacant Property, former gas station	1001-1015 South Capitol Street SW	High
45.	1015 Half Street SE Building, former metal plating facility	12 L Street SE	Medium
46.	Vacant Commercial/Industrial Property, former bulk petroleum facility and gas station	900-950 South Capitol Street SE	High
47.	Capitol Skyline Hotel, former coal yard, Underground Storage Tank (UST) facility	901-911 South Capitol Street SW	Low
48.	Multi-Use Property, former coal yards	2-32 I Street SE	Medium
49.	Capitol Power Plant, UST facility and former coal yard	Southwest corner of New Jersey Avenue SE and E Street SE	Medium
50.	Verizon Parking Lot, former junk warehouse and former gas station	499-501 South Capitol Street SW/ 3 Virginia Avenue SW/4 E Street SW	High
51.	Verizon E Street Facility, UST facility	30 E Street SW	Medium
52.	Vacant Industrial Building, former UST facility	1201 New Jersey Avenue SE	Medium
53.	Alion Building, LUST facility	1100 New Jersey Avenue SE	Medium
54.	Capitol Hill Tower – Courtyard Marriott, former cleaners, LUST facility	1000 New Jersey Avenue SE	Medium
55.	909 At Capitol Yards Apartment Building, LUST facility	909 New Jersey Avenue SE	Medium
56.	Site Under Construction, LUST facility	900 New Jersey Avenue SE	Low

Unexploded Ordinances

A preliminary assessment summarized the history of munitions use at the Former Experimental Battery (Malcolm Pirnie Inc., 2006). The battery was operational approximately 1847 to 1872 and its firing fan encompassed portions of the Project Area (e.g., Anacostia River, Anacostia Park and Poplar Point).

The preliminary assessment concluded that the presence of munitions and explosives of concern (MEC) at the site is unlikely, based on extensive regrading and redevelopment activities that have occurred at the Washington Navy Yard. However, the report further noted that MEC and munitions constituents (MC) could exist in subsurface soil and groundwater of the site, and that an exposure pathway to these items is potentially complete depending on activities that would disturb the subsurface soils.

Based on these concerns, a site investigation was conducted for the Former Experimental Battery on behalf of the USN to augment the data collected in the Project Area and to determine if further investigation was necessary (CH2M Hill, 2011). The site investigation consisted of a technical review and interpretation of the 2006 preliminary assessment (Malcolm Pirnie Inc., 2006); reviews of additional files, documents, and photographs, site visits, interviews; and a spatial analysis of available information (i.e., presence and location of cannon balls and firing fans, Washington Navy Yard fill history, Anacostia River dredge and fill history). Environmental sampling was not conducted, and other field data were not collected, due to extensive regrading, redevelopment, dredging, and land reclamation activities in the Project Area.

The 2011 site investigation (SI) concluded that the probability of encountering shells or solid shot in the Anacostia River near the Washington Navy Yard is “seldom to unlikely.” There has been extensive dredging of the channel and filling of the mudflats where shot and shells would have fallen. In addition, the majority, if not all of the fired ordnance, was inert.

Some portions of Poplar Point and Anacostia Park are located within the historical firing fan for the Former Experimental Battery at Washington Navy Yard. As a result, it is possible that related shot and shells may remain at depths of 10 feet (i.e., the estimated minimum depth of the fill material) or greater in those areas of reclaimed land within the firing fan.

Other areas of Anacostia Park, while not falling within the firing fan, were created from dredge spoils from the Anacostia River after the operation of the Experimental Battery had ceased. It is possible, though somewhat remote, that the dredge spoils used to create Anacostia Park may have originated from within the firing fan and may contain undiscovered shots or shells.

3.10 Pedestrian and Bicycle Facilities

3.10.1 Pedestrian Access

The pedestrian access conditions presented in the FEIS remains largely the same. However, the following pedestrian facilities were added to the transportation network within the Project Area:

- On South Capitol Street, at the intersection of I Street, pedestrian crossing facilities were added on the south side of I Street with ADA accessible curb cuts and a median to facilitate pedestrian crossing, especially for those who are wheelchair dependent.
- On South Capitol Street under the Southeast-Southwest Freeway, a pedestrian path and sidewalk with streetlights were provided along the east side of the street.
- On Martin Luther King, Jr. Avenue SE between Howard Road SE and the Suitland Parkway Bridge, pedestrian obstructions on the center of the roadway were removed and ADA curb cuts were installed at the intersections.

In addition to the above facilities, sections of the Anacostia Riverwalk Trail were completed. On the west side of the Anacostia River, much of what was designated as the Interim Anacostia Riverwalk Trail in the FEIS has since been replaced by permanent facilities. The trail is now aligned along the Anacostia River through the Washington Navy Yard and the Yards development properties, and connected to Diamond Teague Park. The trail will ultimately extend to Buzzard Point upon completion of future development in the area. The path along 2nd Street SW is the only remaining section of the interim trail. The FEIS described the Interim Anacostia Riverwalk Trail, which remains on the east side of the river. However, the trail now contains additional routes through Anacostia Park and access to the Frederick Douglass Memorial Bridge.

3.10.2 Bicycle Access

The bicycle access conditions documented in the FEIS remain largely the same. However, some changes were made to bicycle network in and around the Project Area as noted below (see Figure 3-11):

- I Street SW, between 3rd and 6th Streets SW – installed bicycle lanes
- 4th Street SW, between I and M Streets SW – installed bicycle lanes
- O Street SW between 1st Street SW and South Capitol Street – eliminated signed bicycle route
- Anacostia Drive SE, the signed bicycle route – re-designated as part of the Anacostia Riverwalk Trail
- P Street SW, Half Street SW, L Street SE, and I Street -- designated as signed bicycle routes
- 4th Street SW between I Street SW and P Street SW – designated as a signed bicycle route
- Good Hope Road SE, 13th Street SE, and Pleasant Street SE – eliminated the signed bicycle routes

The Capital Bikeshare was launched in 2010 and has expanded to include over 1,800 bicycles located at more than 200 stations in the Washington, D.C. region. The FEIS did not include the locations of Capital Bikeshare stations in and around the Project Area. Currently, there are four Capital Bikeshare stations located in the Project Area:

- 1st and N Streets SE near the Nationals Park
- M Street SE and New Jersey Avenue SE in front of the U.S. DOT Headquarters
- 1st and K Streets SE
- Howard Road SE and Shannon Place SE, near the Anacostia Metrorail Station

Figure 3-11: Existing Bicycle Facilities

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3.11 Traffic and Transportation

This section summarizes existing traffic conditions in the Project Area. The *South Capitol Street Transportation Technical Report* (DDOT, 2014) contains an updated, detailed description of existing traffic conditions (see Appendix I). The technical report used traffic information collected in 2009 and 2010.

3.11.1 Travel Patterns

The classifications and characteristics of existing roadways throughout the Project Area are similar to those reported in the FEIS. However, as shown in Figure 3-12, South Capitol Street from Potomac Avenue to Firth Sterling Avenue SE was reclassified from a freeway to a principal arterial. In addition, Washington Avenue SW, which connects Independence Avenue SW and South Capitol Street, was designated an emergency evacuation route. Washington Avenue SW joins four other roadways in the Project Area with this designation (South Capitol Street, the Southeast-Southwest Freeway, I-295, and Suitland Parkway).

Travel patterns in the Project Area are essentially the same as described in the FEIS. Minor changes since the FEIS included new traffic calming measures on Sumner Road, comprising a series of speed bumps to increase safety. As described in the FEIS, the majority of traffic in the Project Area is commuter travel through the Project Area, to and from the District's Monumental Core. Traffic patterns are likely to change as planned developments, such as the Southeast Federal Center and the U.S. Department of Homeland Security (DHS) headquarters, at the St. Elizabeths Campus, occur in the Project Area.

3.11.2 Traffic Volumes

The FEIS reported traffic volumes from 2008. This SDEIS updates average daily traffic (ADT) and intersection turning movements based on information collected between November 2009 and February 2010. Traffic data collected in November 2010 indicate a typical weekday ADT volume of approximately 65,000 vehicles crossing the Frederick Douglass Memorial Bridge. Table 3-15~~Table 3-15~~ provides the updated ADT volumes at key locations in the Project Area.

The traffic analysis considered data collected during the morning and evening peak periods at several roadways within the Project Area. Morning peak periods are 6:00 to 9:00 a.m. and evening peak periods are 3:00 to 6:00 p.m. Table 3-16 presents the peak-hour traffic volumes along these roadways.

The updated evaluation of existing traffic conditions assumed that the percentage of trucks traveling through the Project Area remained the same as described in the FEIS. For purposes of assessing roadway and intersection operations, the evaluation assumed that trucks would comprise an average of five percent of total traffic in the Project Area. Overall, daily and peak hour traffic volumes in 2010 were slightly higher than reported in the FEIS, which used traffic information from 2008.

Figure 3-12: Roadway Network Functional Classification

Table 3-15: Existing Daily Traffic Volumes in the Project Area (2010)

Roadways	2010 Existing Forecast
South Capitol Street Southbound	
I-395 southbound ramp to southbound South Capitol St	10,935
I-395 northbound (eastbound SE-SW Freeway) ramp to southbound South Capitol St	6,705
Southbound South Capitol St south of I St	22,300
Southbound South Capitol St south of N St	16,220
Suitland Pkwy south of Martin Luther King, Jr. Ave SE	25,020
Southbound South Capitol St south of Suitland Pkwy	10,615
Southbound South Capitol St ramp to southbound Suitland Pkwy	18,125
South Capitol Street Northbound	
Suitland Pkwy south of Martin Luther King, Jr. Ave SE	26,500
Northbound South Capitol St south of Suitland Pkwy	13,735
Howard Rd SE ramp to northbound South Capitol St	5,065
Northbound South Capitol St south of N St	22,260
Northbound South Capitol St south of I St	28,890
Northbound South Capitol St to northbound I-395	14,175
Northbound South Capitol St to southbound I-395 (westbound SE-SW Freeway)	8,135
Frederick Douglass Memorial Bridge (South Capitol Street)	
Northbound	34,730
Southbound	27,970
I-295 at Suitland Parkway	
Northbound	64,530
Southbound	67,070
Southeast-Southwest Freeway East of South Capitol Street	
Northbound	67,740
Southbound	69,680
11th Street Bridge (Local)	
Northbound	Under Construction
Southbound	Under Construction
11th Street Bridge (Freeway I-695)	
Northbound	47,030
Southbound	42,730

Source: O.R. George & Associates, MCV Associates, KCI Technologies, 2009/2010; Version 2.2 of MWCOG traffic model with Round 8.0 land use forecasts

Table 3-16: Existing Peak Hour Traffic Volumes in the Project Area (2010)

Roadways	Morning Peak Hour	Evening Peak Hour
South Capitol Street Southbound		
I-395 southbound ramp to southbound South Capitol St	610	450
I-395 northbound (eastbound SE-SW Freeway) ramp to southbound South Capitol St	900	510
Southbound South Capitol St South of I St	1,875	2,325
Southbound South Capitol St South of N St	1,650	2,640
Suitland Pkwy south of Martin Luther King, Jr. Ave	1,085	2,795
Southbound South Capitol St south of Suitland Pkwy	630	1,105
Southbound South Capitol St ramp to southbound Suitland Pkwy	1,090	2,825
South Capitol Street Northbound		
Suitland Parkway south of Martin Luther King, Jr. Ave	2,755	1,210
Northbound South Capitol St south of Suitland Pkwy	740	380
Howard Rd to northbound South Capitol St	1,080	540
Northbound South Capitol St south of N St	3,785	1,505
Northbound South Capitol St of I St	2,845	1,260
Northbound South Capitol St to northbound I-395	1,430	600
Northbound South Capitol St to southbound I-395 (westbound SE-SW Freeway)	840	695
Frederick Douglass Memorial Bridge (South Capitol Street)		
Northbound	4,345	1,330
Southbound	1,085	2,795
I-295 at Suitland Parkway		
Northbound	6,220	4,685
Southbound	4,550	5,910
Southeast-Southwest Freeway East of South Capitol Street		
Northbound	7,235	4,495
Southbound	4,005	5,180
11th Street Bridge (Local)		
Northbound	Under Construction	
Southbound	Under Construction	
11th Street Bridge (Freeway I-695)		
Northbound	5,230	2,650
Southbound	1,920	3,505

Source: O.R. George & Associates, MCV Associates, KCI Technologies, 2009/2010; Version 2.2 of MWCOG traffic model with Round 8.0 land use forecasts

Note: Volumes are for the highest one-hour peak within the peak periods: 6:00 to 9:00 a.m. and 4:00 to 6:00 p.m.

3.11.3 Intersection Level of Service Analysis

The FEIS and the SDEIS used a VISSIM traffic micro-simulation model to analyze existing traffic operations throughout the Project Area. The results are presented in level-of-service (LOS). LOS is a qualitative measure describing the operational conditions along a roadway or at an intersection. The LOS of a roadway or intersection falls into one of six categories identified as "A" through "F". LOS A represents free-flowing traffic operations and LOS F represents stop-and-go traffic conditions. In an urban area, such as the District of Columbia, a roadway or intersection operating at or better than LOS D is typically considered acceptable. Accordingly, a roadway or intersection operating at LOS E and F reflect unacceptable levels of congestion.

Figure 3-13~~Figure 3-13~~ shows the locations of 27 intersections. However, two of the 27 intersections (intersections 15 and 24) are proposed for future implementation and, therefore, do not currently exist in the Project Area. The FEIS Preferred Alternative and the Revised Preferred Alternative include intersections 15 and 24 in their project definitions. Table 3-17 presents estimated average traffic delay (in seconds per vehicle) and the corresponding existing LOS for the remaining 25 intersections.

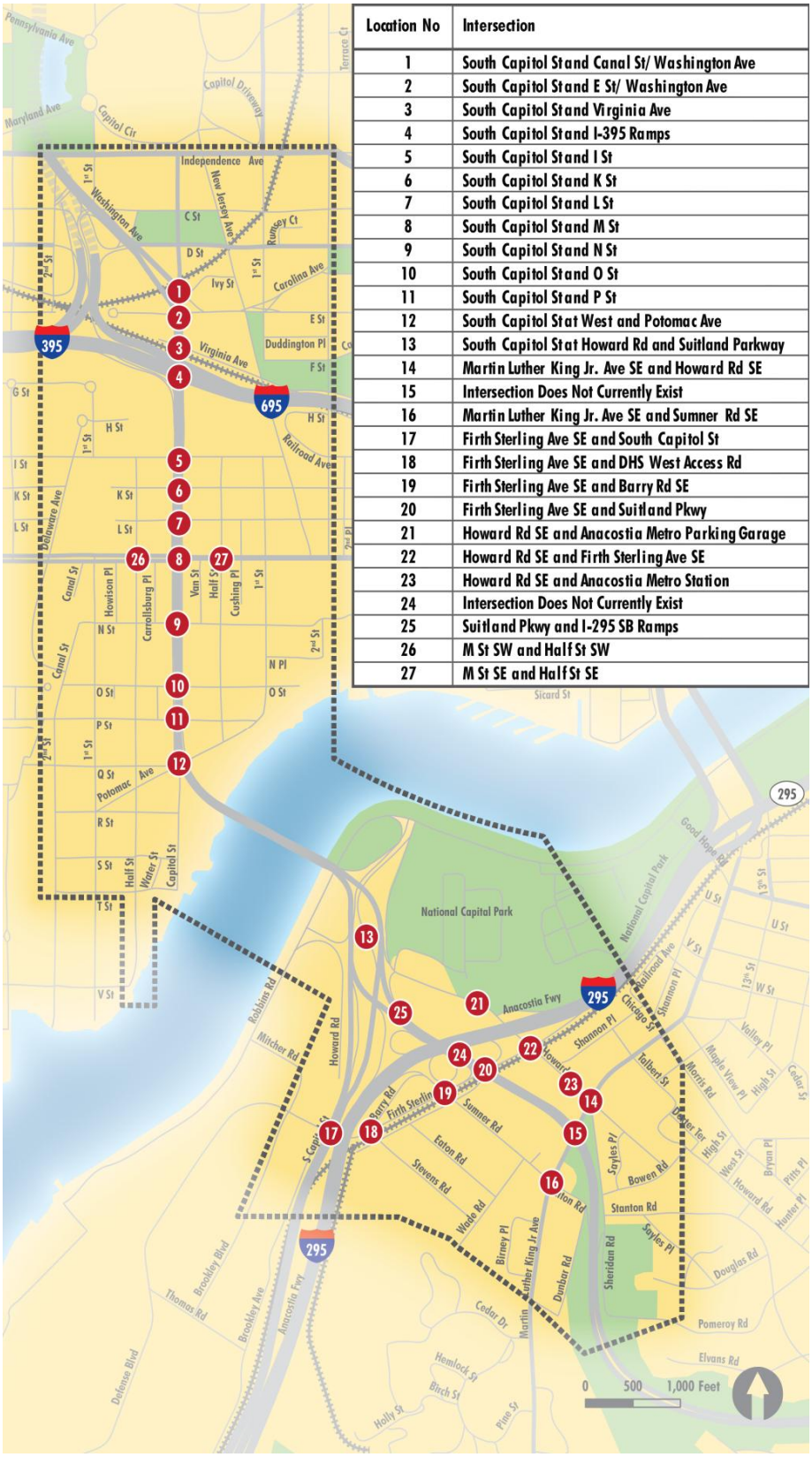
During the morning peak hour, the following five intersections currently operate at unacceptable levels of service:

- South Capitol Street at Potomac Avenue (LOS E)
- South Capitol Street at Suitland Parkway and Howard Road (LOS F)
- Firth Sterling Avenue SE at Barry Road SE (LOS F)
- Firth Sterling Avenue SE at Suitland Parkway (LOS E)
- Howard Road SE and I-295 southbound ramp (LOS F)

During the evening peak hour, the following nine intersections operate at unacceptable levels of service:

- South Capitol Street at E Street/Washington Avenue SW (LOS E)
- South Capitol Street at Virginia Avenue SE (LOS E)
- South Capitol Street at I-395 off-ramps (LOS F)
- South Capitol Street at K Street (LOS E)
- South Capitol Street at M Street (LOS F)
- South Capitol Street at N Street (LOS F)
- South Capitol Street at Potomac Avenue (LOS E)
- Martin Luther King, Jr. Avenue SE and Howard Road SE (LOS E)
- M Street at Half Street SW (LOS F)

Figure 3-13: Project Area Existing Intersections for Traffic Analysis



Location No	Intersection
1	South Capitol Stand Canal St/ Washington Ave
2	South Capitol Stand E St/ Washington Ave
3	South Capitol Stand Virginia Ave
4	South Capitol Stand I-395 Ramps
5	South Capitol Stand I St
6	South Capitol Stand K St
7	South Capitol Stand L St
8	South Capitol Stand M St
9	South Capitol Stand N St
10	South Capitol Stand O St
11	South Capitol Stand P St
12	South Capitol Stat West and Potomac Ave
13	South Capitol Stat Howard Rd and Suitland Parkway
14	Martin Luther King Jr. Ave SE and Howard Rd SE
15	Intersection Does Not Currently Exist
16	Martin Luther King Jr. Ave SE and Sumner Rd SE
17	Firth Sterling Ave SE and South Capitol St
18	Firth Sterling Ave SE and DHS West Access Rd
19	Firth Sterling Ave SE and Barry Rd SE
20	Firth Sterling Ave SE and Suitland Pkwy
21	Howard Rd SE and Anacostia Metro Parking Garage
22	Howard Rd SE and Firth Sterling Ave SE
23	Howard Rd SE and Anacostia Metro Station
24	Intersection Does Not Currently Exist
25	Suitland Pkwy and I-295 SB Ramps
26	M St SW and Half St SW
27	M St SE and Half St SE

Table 3-17: Traffic Operations at Existing Intersections (2010)

Location No.*	Intersection	Morning Peak Hour		Evening Peak Hour	
		Delay**	LOS	Delay**	LOS
1	South Capitol St and Canal St/Washington Ave	10	B	25	C
2	South Capitol St and E St/Washington Ave	19	B	65	E
3	South Capitol St and Virginia Ave	7	A	62	E
4	South Capitol St and I-395 ramp	13	B	272	F
5	South Capitol St and I St	13	B	48	D
6	South Capitol St and K St	7	A	39	E
7	South Capitol St and L St	7	A	11	B
8	South Capitol St and M St	41	D	87	F
9	South Capitol St and N St	10	A	83	F
10	South Capitol St and O St	1	A	34	C
11	South Capitol St and P St	10	B	36	D
12	South Capitol St and Potomac Ave	76	E	58	E
13	South Capitol St and Howard Rd and Suitland Parkway	205	F	11	B
14	Martin Luther King, Jr. Ave SE and Howard Rd SE	36	D	62	E
15	*Intersection does not currently exist in the Project Area*	N/A	N/A	N/A	N/A
16	Martin Luther King, Jr. Ave SE and Sumner Rd SE	10	B	8	A
17	South Capitol St and Firth Sterling Ave SE	25	C	35	C
18	Firth Sterling Ave SE and West Access Rd	2	A	35	D
19	Firth Sterling Ave SE and Barry Rd SE	94	F	14	B
20	Suitland Pkwy	72	E	25	C
21	Howard Rd SE and Anacostia Metrorail Parking Garage	12	B	14	B
22	Howard Rd SE and Firth Sterling Ave SE	27	C	20	C
23	Howard Rd SE and Anacostia Metrorail Station	23	C	25	C
24	*Intersection does not currently exist in the Project Area*	N/A	N/A	N/A	N/A
25	Howard Rd SE and I-295 southbound ramp	86	F	42	D
26	M St SW and Half St SW	9	A	103	F
27	M St SE and Half St SE	13	B	11	B

* See Figure 3-13

** Seconds per vehicle

Notes: Highlighted cells represent those intersections with an unacceptable LOS
Intersections 12, 13 and 25 comprise a comparable intersection for a future design element in the Revised Preferred Alternative

Vehicle queues often form on certain intersection approaches because of delays at the intersections. The vehicle queues are a consequence of greater demand on the system than available capacity. The FEIS also reported this finding. Queues of longer than 300 feet (at least 12 vehicles) generally occur during the morning peak period in the northbound direction along Suitland Parkway and South Capitol Street at nearly every intersection from Firth Sterling Avenue (worst location in the morning) to I Street and the I-395 ramps. Other roads where major queues are observed during the morning peak period include Potomac Avenue SE, the I-395 ramps, and along Howard Road SE.

During the evening peak period, southbound queues typically occur along South Capitol Street from the I-395 ramps to Potomac Avenue; on Suitland Parkway at Firth Sterling Avenue SE; and

on Howard Road SE at Firth Sterling Avenue SE and at Martin Luther King, Jr. Avenue SE. This queuing is consistent with the heavy commuter flows along Suitland Parkway and South Capitol Street and the heavy traffic demand on Howard Road SE accessing the I-295 ramps.

3.11.4 Other Transportation Facilities and Services

Figure 3-14~~Figure 3-14~~ shows the existing transit facilities (Metrorail, Metrobus, and DC Circulator) that are discussed in the following sections.

Metrorail

The FEIS documented Metrorail ridership in 2007 at the three Metrorail stations within the Project: Anacostia, Navy Yard-Ballpark, and Capitol South. Table 3-18 presents updated Metrorail data to year 2013.

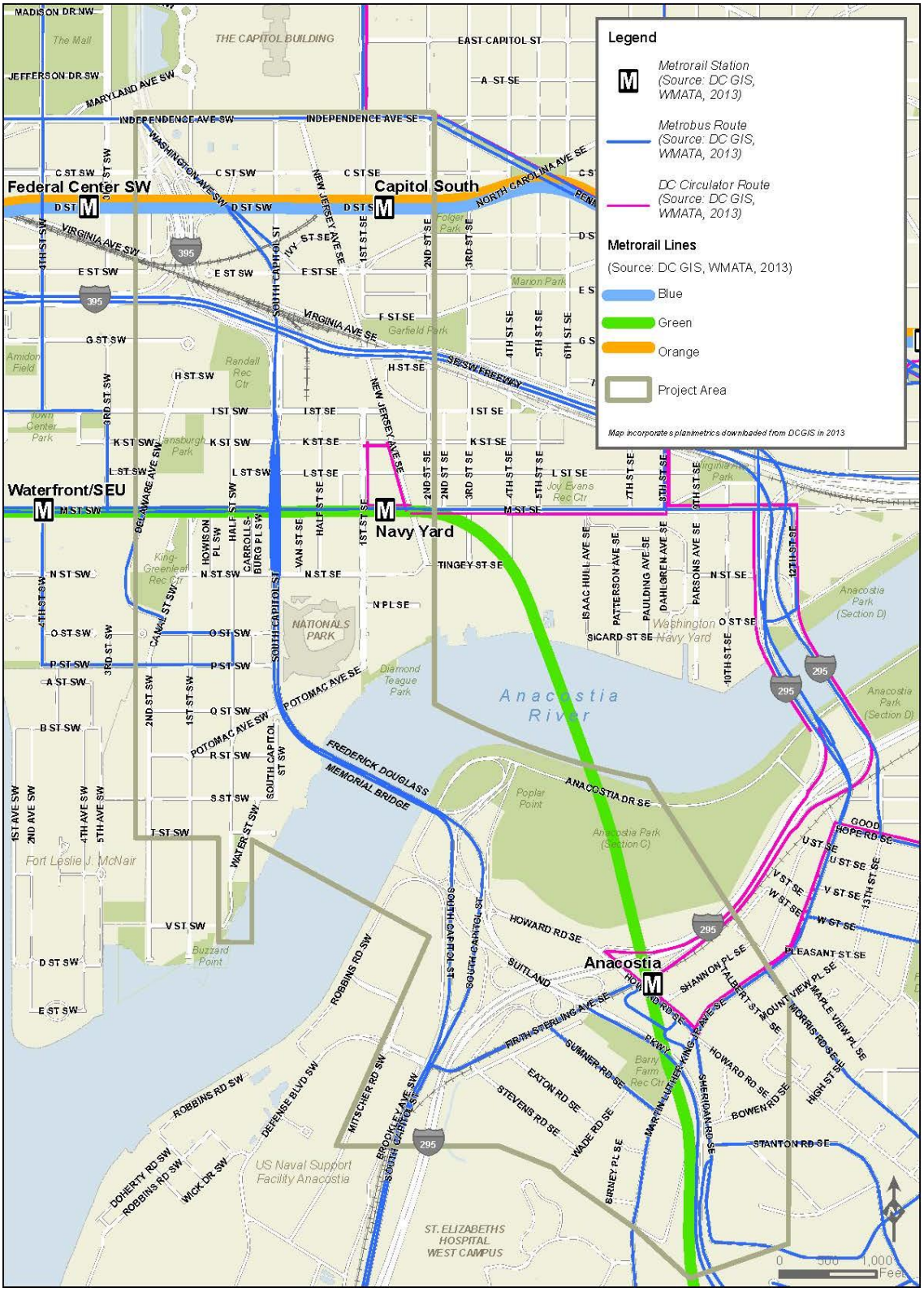
Table 3-18: Metrorail Ridership of Stations in the Project Area

Station	Entry/ Exit	Average Weekday Statistics									
		Morning Peak		Morning Off-Peak		Evening Peak		Evening Off-Peak		Average Daily	
		2007	2013	2007	2013	2007	2013	2007	2013	2007	2013
Anacostia	Entry	3,572	2,740	1,679	935	1,363	1,432	503	1,500	7,118	6,607
	Exit	1,061	1,172	1,314	593	3,513	2,653	1,434	2,333	7,323	6,751
Navy Yard	Entry	343	986	775	541	1,693	3,937	235	4,829	3,048	10,293
	Exit	1,830	3,640	487	715	387	4,283	235	2,320	2,942	10,958
Capitol South	Entry	711	902	2,045	673	4,459	5,078	1,086	2,794	8,303	9,447
	Exit	4,459	4,834	2,693	1,977	1,257	1,464	524	1,875	8,935	10,151

Source: DDOT, 2007 and WMATA, 2013

Ridership at the Anacostia Station has decreased since 2007, for all travel periods, except the evening off-peak period. Conversely, the ridership at Navy Yard-Ballpark Station has increased, for all travel periods since 2007. The growth in ridership, especially during the peak period, is most likely caused by the increase in residential, government office and business developments surrounding this station. In addition, the substantial growth in ridership during the evening off-peak period more than likely reflects proximity of the Nationals Park to the station. Nationals Park was not yet built in 2007.

Figure 3-14: Existing Transit Facilities (Metrorail, Metrobus, and DC Circulator Routes)



Metrobus

Figure 3-14~~Figure 3-14~~ shows the existing Metrobus service routes. Numerous changes and updates were made to Metrobus routes serving the Project Area since the FEIS. These updates include:

- Route A9 (formerly South Capitol Street line) was converted into the MetroExtra (limited stop service) Martin Luther King Jr., Avenue line.
- Route A4 trips were shortened during the morning and evening peak periods to operate between Anacostia Station and Fort Drum more frequently.
- Route A5 was replaced by the new Route W5, which operates between Anacostia Station and D.C. Village via Firth Sterling Avenue and South Capitol Street.
- Route 70 (routes 70 and 71 in the FEIS) no longer serves the Project Area.
- Route 74 now serves the Project Area using some elements of routes 70 and 71.
- Routes P1, P2 and P6 were restructured with the discontinuation of the P1 and P2 lines and P6 was rerouted via M Street SE and SW instead of Virginia Avenue SE, and via Martin Luther King, Jr. Avenue SE instead of 13th Street SE in order to align with the new 11th Street Bridge.
- Route 90 (part of the 90, 92, 93 line) now serves the Anacostia Station.
- Routes B2, U2, 94, and W6-W8 were added and serves Anacostia Station.

Table 3-19 provides ridership information for the Metrobus routes serving the Project Area.

Other Transit

DDOT operates a bus circulator called DC Circulator. The FEIS documented a route running between Union Station and the Navy Yard Metrorail Station. Since the FEIS, DDOT has added a route running between the Potomac Avenue Metrorail Station and Skyland via Barracks Row route, with stops at Anacostia Station and along Martin Luther King, Jr. Avenue SE.

The FEIS documented that the Maryland Transit Administration (MTA) operated a bus service designed for Maryland commuters who work in the District with routes operating on South Capitol Street, the Frederick Douglass Memorial Bridge and Suitland Parkway. The routes serving the Project Area included the Route 903 linking the District and Charlotte Hall, Maryland.

Since the FEIS, the Omniride's Dale City-Washington Navy Yard-Bolling Air Force Base route discontinued service east of the Anacostia River to Bolling Air Force Base. The current Dale City-Washington Navy Yard route terminates at 12th and M Streets SE.

The "Nats Express" shuttle service mentioned in the FEIS was discontinued.

Table 3-19: Metrobus Service in the Project Area

Line	Route	Metrorail Stations in Project Area	Service	Service Type	FY 2012 Weekday Average Ridership
Anacostia-Congress Heights	A2, A6, A7, A8, A42, A46, A48	Anacostia, Navy Yard-Ballpark	Monday to Sunday	Full	11,440
Anacostia-Fort Drum**	A4, W5	Anacostia	Monday to Sunday	Full	2,987
Martin Luther King, Jr. Ave. Limited Line*	A9	Anacostia, Navy Yard-Ballpark Station	Monday to Friday	Morning and Evening Peak Periods only	-
Bladensburg Road-Anacostia	B2	Anacostia	Monday to Sunday	Full	7,071
Duke Ellington School of Arts	D51	—	Monday to Friday	6:53 a.m. to 7:45 a.m. only	N/A
Anacostia-Eckington***	P6	Anacostia, Navy Yard-Ballpark	Monday to Sunday	Full	2,672
Oxon Hill-Ft. Washington	P17, P18, P19	Anacostia	Monday to Friday	Morning and Evening Peak Periods only	1,330
Minnesota Avenue-Anacostia	U2	Anacostia	Monday to Saturday	6:00 a.m. to 10:00 p.m.	2,388
Fairfax Village - L'Enfant Plaza	V5	—	Monday to Friday	Morning and Evening Peak Periods only	587
Minnesota Avenue - M Street	V7, V8, V9	Navy Yard-Ballpark	Monday to Sunday	Full	4,130
United Medical Center-Anacostia	W2, W3	Anacostia	Monday to Sunday	Full	2,529
Garfield-Anacostia Loop	W6, W8	Anacostia	Monday to Sunday	Full	2,170
Bock Road	W13, W14	Anacostia	Monday to Friday	Daytime only	809
Pennsylvania Avenue	32, 36	Capitol South	Monday to Sunday	Full	13,283
Pennsylvania Avenue Limited	39	Capitol South	Monday to Friday	Morning and Evening Peak Periods only	676

Table 3-19: Metrobus Service in the Project Area~~Table 3-19: Metrobus Service in the Project Area~~ (continued)

Line	Route	Metrorail Stations in Project Area	Service	Service Type	FY 2012 Weekday Average Ridership
Convention Center-Southwest Waterfront	74	—	Monday to Sunday	Full	1,393
U Street-Garfield	90, 92, 93	Anacostia	Monday to Sunday	Full	12,320
Stanton Road	94	Anacostia	Monday to Sunday	Full	1,558

Source: WMATA 2013

*Route A9 has been changed from the South Capitol Street line to MetroExtra Martin Luther King Jr., Avenue line (limited stop service) in March 2013

**Route A4 was modified and route A5 replaced by W5 in March 2013

***Routes P1, 2, and 6 were combined and renamed as Route P6 in fall of 2012

Water Transportation

The Anacostia River is a navigable waterway that is currently limited in its recreational use due to its non-fishable or swimmable designation. The river includes the Anacostia Channel (part of the Washington Harbor project), which provides 6 to 14 feet of channel depth to just upstream of the 11th Street Bridge. The USACE authorizes channel depth at approximately 24 feet. In addition, the Anacostia Basin Channel starts just north of the upstream limit of the Anacostia Channel, with a much shallower channel depth of approximately 4 to 6 feet (with an authorized depth of 8 feet). In both cases, it is assumed that the full depth of the channel is not available for river users as available records indicate that the channel has not been dredged to maintain the designated depths since 1985.

In general, the existing conditions of the water transportation activities and facilities in the Project Area and along the Anacostia River remains as described in the FEIS. In addition to the marinas and other river facilities documented in the FEIS, the Diamond Teague Park Piers provides a docking facility for water taxis and few additional boat clubs have been identified upstream including the Washington Yacht Club and the Eastern Power Boat Club.

Bridge Transits

The existing Frederick Douglass Memorial Bridge is still an operable swing bridge with a 40-foot vertical clearance in the closed position and a 149-foot horizontal clearance on either side of the center pier. As discussed below, since most of the marine traffic using the river consists of recreational vessels, the opening the Frederick Douglass Memorial Bridge is rarely required.

The *Anacostia River Navigation Evaluation Final Report* (DDOT, 2014) (Appendix A) determined the future demand for a movable bridge. The report was submitted to the USCG to support a USCG Section 9 Bridge Permit Application following FHWA's approval of a ROD.

The navigation evaluation was conducted in two phases. In Phase 1 of the evaluation, the existing marine traffic was derived from a combination of bridge opening logs provided by DDOT, and a survey of potential waterway users. Phase 2 of the evaluation consisted of a collection of video footage, which was used to monitor and document marine vessels traveling under the bridge and provided a more detailed account of the marine traffic.

Phase 1 summarized the existing marine traffic, clearances of other bridge structures on the Anacostia and Potomac Rivers, environmental and land use considerations affecting future vessel traffic, projected future vessel populations, impacts of the proposed replacement bridge on future vessel traffic and existing infrastructure, and recommended provisions to include in the design-build contract to limit impacts on marine vessels.

Phase 1 also derived the existing vessel population using a combination of bridge opening logs provided by DDOT, and a survey of potential waterway users. The survey on annual bridge transits and vessel dimensions was conducted in April 2013. Fifty-six participants including various local marinas, recreational teams, clubs, and associations, yacht clubs, and independent operators were selected to contribute. To supplement survey responses, an in-person meeting was arranged for key stakeholders, including the USN and USCG, to gather additional information.

Data from survey forms and bridge opening logs were assembled into a single database. Additional vessel characteristics required for the development of vessel impact protection requirements were calculated or estimated from the available data and similar vessels were grouped by vessel type and size. Each vessel group or class typically consists of multiple vessels with multiple owners and points of origin/destination.

Phase 2 of the evaluation consisted of the collection of video footage, which was used to monitor and document vessel transit under the Frederick Douglass Memorial Bridge. Archived, time-lapsed video recordings were captured from a live stream of the vessels travelling along the Anacostia River and under the Frederick Douglass Memorial Bridge for approximately three months from July 7, 2013 until October 6, 2013. The resulting marine traffic overwhelmingly consists of recreational vessels, comprising approximately 90 percent of the transits under the bridge documented during the Phase 2 data collection period.

Approximately 5,238 vessels were observed transiting the bridge during this data collection period. No openings of the bridge were observed during review of the three months of archived video footage. However, bridge opening logs for the past 12 years indicate some openings.

Table 3-20 shows the resulting vessel population by vessel group presented in the *Anacostia River Navigation Evaluation Final Report* (DDOT, 2014). The "Average Annual Trips" column represents the number of recorded transits divided by the time period of the source data set (one year for the survey, three months for the video monitoring, and 11 years for the bridge logs). The "Max Air Gap" column indicates the largest required air gap for vessels within the vessel group. Generally, there are vessels within each group requiring smaller clearances than the maximum vessel for the group. Therefore, not all vessels with a Max Air Gap greater than the existing closed bridge clearance necessarily required an opening.

Table 3-20: Existing Vessel Population Transiting the Frederick Douglass Memorial Bridge

ID	Vessel Type	Max Air Gap (in feet)	Average Annual Trips
1	U.S. Coast Guard Buoy Tender	70	2
2	U.S. Coast Guard Patrol Craft	60	1
3.a	Tug Boat	>40	0.8
3.b	Tug Boat	<40	734
4	Naval Vessel	140	0.2
5	Fire/Police Boats	26	548
6	Small Recreational (Power Boats)	22	10,692
7	Passenger Vessel (Non-Sail)	18	694
8.a	Recreational Sail	>40	0.2
8.b	Recreational Sail	28	201
9	Tall Ships/Large Sail	107	0.4
10	Barge	<40	167
11	Human-Powered Craft	<5	7,745

Source: *Anacostia River Navigation Evaluation Final Report*. DDOT, 2014

DS Barry

Three of the marine trips that required openings are attributable to USCG patrol craft and the buoy tender *James Rankin*, none of which have been recorded traveling under the bridge since 2005.

The USN moored the United States Ship (USS) Barry (Figure 3-15), a Forrest Sherman class destroyer commissioned in 1956, at the Washington Navy Yard since 1983 at a location approximately one-half mile upstream from the existing Frederick Douglass Memorial Bridge. When active militarily, the USS Barry participated in training missions, goodwill tours, and the Cuban Missile Crisis, and is considered to be potentially eligible for the NRHP. Officially decommissioned in 1982, the Barry is now a display ship (DS) and carries the designation of DS Barry. DS Barry served as a museum open for public visitation. However, the ship is currently closed to the public indefinitely. The condition of the vessel (described below) may not be the reason the vessel was closed for public visitation. However, the ship cannot move or navigate on its own.

Figure 3-15: DS Barry Berthed at Washington Navy Yard

According to a report prepared for the USN, *Display Ship Barry Removal Options (Donjon Report)* (Donjon Marine Company Inc., 2014), the DS Barry currently does not have a programmatic plan or resources for its continued maintenance, overhaul or repair (Donjon Marine Company, Inc., January 31, 2014). Since 1983, or upon its arrival to the Washington Navy Yard, the USN has not assigned a responsible party for the disposition of the DS Barry. Although the Naval District Washington is the "custodian" of the ship, there is no clear understanding of who would be responsible for the ship's ultimate disposition. The *Donjon Report* was prepared to examine the impacts of the construction of a fixed bridge with 42-foot clearance on the disposition of the DS Barry. The study was primarily a risk assessment of various alternatives for the ultimate disposition of the vessel and did not consider the value or benefits of maintaining the DS Barry as a museum.

The *Donjon Report* noted that the exterior hull plate of the DS Barry has extensive corrosion, but the extent is not known because the last testing was done in 2002. However, a cursory inspection of the hull interior revealed that it is relatively sound. In 2000, fuel from the vessel leaked into the river through a corroded section of hull plate. Hull thickness of about 40 percent was found at some locations when testing done at that time. Since then, the USN has reduced the rate of hull corrosion through a cathodic protection system, general cleaning and minor repairs.

In addition to the deteriorating condition of the hull, hazardous materials issues associated with the vessel were documented, including PCB (polychlorinated biphenyl) found in the river sediment below where the vessel is moored, and the vessel still contains PCB, asbestos and lead paint. The *Donjon Report* noted that an ongoing study of the Washington Navy Yard with regards to PCB and other heavy metal contamination may require that the DS Barry not remain at her current berth. The *Donjon Report* also noted if the DS Barry remains a display or museum ship, a concerted effort to remove the hazardous materials onboard, especially asbestos, would need to be undertaken.

The *Donjon Report* noted that the DS Barry, whether maintained as a display ship/museum or scrapped, would probably have to be moved from its current location. With no substantial maintenance budget or plan for repairs, the DS Barry would eventually flood as the shell plating fails and the ship becomes structurally unsound as corrosion advances. If the USN chooses to keep the vessel as a display ship for public visitation, the vessel would need extensive repairs, which would be done at a dry dock. However, the *Donjon Report* noted repairs could be conducted in place through the use of coffer dams to create a dry work area. If repaired off-site, the vessel does not necessarily have to return to the Navy Yard. If the USN chooses to scrap the vessel (and reuse its materials), or alternatively sink it to create an artificial reef, the vessel would have to be moved from its current location to a location where scrapping is allowed or to an offshore location for sinking.

chapter 4.0
environmental consequences

This chapter presents the environmental consequences of the Revised Preferred Alternative. The design changes made to the FEIS Preferred Alternative that resulted in the development of the Revised Preferred Alternative would result in changes to some of the environmental consequences described in the FEIS. This chapter discusses the new environmental consequences. Chapter 4.0 of the FEIS disclosed the environmental and social impacts of the FEIS Preferred Alternative. The mitigation measures proposed in the FEIS for the FEIS Preferred Alternative remain valid, unless otherwise specified. If the Revised Preferred Alternative results in an adverse impact not previously identified for the FEIS Preferred Alternative, additional mitigation measures are then proposed. As a result, only new mitigation measures are discussed in the following sections and the cumulative mitigation measures (FEIS and SDEIS mitigation measures) are presented in Table 4-20.

4.1 Summary of Impacts

Table 4-1 summarizes the environmental impacts for the Revised Preferred Alternative. It also summarizes the environmental impacts of the FEIS Preferred Alternative to allow comparison.

For the Revised Preferred Alternative, the Project impact area ("Project footprint") includes the physical area that the selected designer/contractor will have the option to use to construct the Project, as well as other required activities such as parcel access or staging if it is not specifically prohibited (e.g., such as for non-permitted wetland impacts). In this document, this area is also referred to as the Limit of Disturbance (LOD) for purposes of the Section 106 cultural resources assessment.

Many of the impacts of the Revised Preferred Alternative would be the same or similar to the impacts documented in the FEIS. In addition, a concept design for the proposed new Frederick Douglass Memorial Bridge under the Revised Preferred Alternative was developed to conduct certain impact analyses, in particular the visual assessment.

Table 4-1: Environmental Impacts of the FEIS Preferred Alternative and Revised Preferred Alternative

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Land Use		
Acres of Additional Right-of-Way Needed	12.4	3.1
Business Displacements	5	2
Residential Displacements	0	0
Community Cohesion and Facilities		
Social Conditions	Beneficial to overall social activities and connections	Beneficial to overall social activities and connections
Physical Conditions	Minor changes, except for the need to acquire land from the JBAB	Fewer changes because right-of-way not required from the JBAB
Visual Environment	Beneficial to visual environment	More beneficial visual effects because right-of-way from the JBAB is not needed
Economic Conditions	Supports ongoing economic development activities	Supports ongoing economic development activities
Public Services and Facilities	No adverse impact to emergency response services, and improves access to public facilities; District commercial drivers training lot reduced in size and may be used for construction staging	No adverse impact to emergency response services, and improves access to public facilities
Safety	Project components designed to improve traffic safety and the safety of pedestrians and cyclists	Project components designed to improve traffic safety and the safety of pedestrians and cyclists
Environmental Justice		
Disproportionately High and Adverse Impacts to Minority or Low-Income Populations	No	No
Public Involvement Conducted to Reach and Solicit Input from Minority or Low-Income Populations	Yes	Yes

Table 4-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Economy and Employment		
Long-Term Economic Conditions	Positive economic influence to nearby residential, office and institutional developments	Positive economic influence to nearby residential, office and institutional developments
Air Quality		
Conformity with State Implementation Plan	Yes	Yes
Impact to Regional Pollutant Burdens	Slight increase, but immeasurable on a regional scale	Slight increase, but immeasurable on a regional scale
Greenhouse Gas Levels	No measurable change to greenhouse gas levels	No measurable change to greenhouse gas levels
Air Quality Concern for Particulate Matter	None; no requirement for hot-spot analysis	None; no requirement for hot-spot analysis
Number of Intersections Predicted to Exceed the National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide	0	0
Noise		
Number of Noise Sensitive Receptors Predicted to Approach or Exceed FHWA Noise Abatement Criteria	12 of 14 sites analyzed	6 of 12 sites analyzed (not directly comparable to FEIS results See Section 4.4)
Number of Noise Barriers Recommended for Further Study	0	0
Water Quality		
Foundation Area in Contact with the Riverbed	11,884 sq ft	20,368 sq ft
Acres of Impervious Surfaces	Existing is 76.0 acres and proposed is 74.5 acres	Existing is 67.3 acres and proposed is 68.0 acres. (Existing differs from FEIS due to different project limits and area of calculation)
Quality of Surface and Groundwater Resources	Improved due to the provision of better stormwater management systems.	Improved due to the provision of better stormwater management systems.
Wetlands		
Total Acres of Permanent Wetland Impacts	0	0.04

Table 4-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Wildlife and Habitats		
Acreage Impacts to Wooded Areas	0.1-acre (between Howard Road and Suitland Parkway)	2.1 acres (along the south and west side of Anacostia Park)
Number of Specimen Trees Displaced	3 trees (along South Capitol Street)	42 trees (potential displacements based on new limits of disturbance for this alternative)
Section 7 Determination	"Not likely to adversely affect" determination for the shortnose sturgeon	"Not likely to adversely affect" determination for the Atlantic sturgeon and the shortnose sturgeon
Floodplains		
Total Number of Bridge Piers	4	6
Number of Bridge Piers in the Water	3	4
Number of Bridge Piers in the Floodplain	1	2
Predicted Effect of New Bridge on Flood Levels on the Anacostia River Compared with Existing Bridge During Storm Event	Little to no variation (at most a 0.02-foot increase for selected storm events) in flood water levels	No increase in water surface elevation and a maximum decrease of 0.02 feet for the 100-year water surface elevations upstream of the proposed bridge crossing
Geology, Topography and Soils		
Notable Changes to Site Topography	Northern edge of east traffic circle would be 15 feet higher than existing ground level; southern edge of traffic oval at western approach to the new bridge would be 22 feet higher than existing ground level	East traffic oval has grades with slightly higher elevations to enhance gateway views from the perspective of motorists. Revised Suitland Parkway/Martin Luther King, Jr. Avenue SE interchange better maintains existing topography of the parkway
Erosion Potential	Minimal	Minimal
Cultural Resources		
Number of Adverse Effect Determinations in Accordance with Section 106 of the National Historic Preservation Act (NHPA) (Historic Architectural Resources)	2 (the L'Enfant Plan and Suitland Parkway)	1 (the L'Enfant Plan)
Number of Adverse Effect determinations in accordance with NHPA Section 106 (Archaeological Resources)	0	0

Table 4-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Hazardous Materials		
Number of Hazardous Materials Sites of Potential Concern near the Construction Area	19	10
Visual Quality		
Landscape Unit #1, Subarea 1: South Capitol Street Bridge to M Street	A Visual Quality Difference (VQD) of 5 from existing conditions	A Visual Quality Difference (VQD) of 5 from existing conditions
Landscape Unit #1, Subarea 2: South Capitol Street, M Street	5 VQD from existing conditions	5 VQD from existing conditions
Landscape Unit #1, Subarea 3: South Capitol Street, North of M Street	4.3 VQD from existing conditions	4.7 VQD from existing conditions
Landscape Unit #2: Frederick Douglass Memorial Bridge	6.17 VQD from existing conditions	Same as FEIS Preferred Alternative
Landscape Unit #3, South Capitol Street SE	5.7 VQD from existing conditions	6.3 VQD from existing conditions
Landscape Unit #4, Suitland Parkway	3.3 VQD from existing conditions	4.0 VQD from existing conditions
Landscape Unit #5, Howard Road SE	No VQD from existing conditions	No VQD from existing conditions
Landscape Unit #6, Martin Luther King, Jr. Avenue SE	Minus 0.7 VQD from existing conditions	No VQD from existing conditions
Landscape Unit #7, Anacostia Park	3.7 VQD from existing conditions	3.7 VQD from existing conditions
Landscape Unit #8, New Jersey Avenue SE	0.3 VQD from existing conditions	0.3 VQD from existing conditions
Pedestrian and Bicycle Facilities		
Pedestrian and Bicycle Facilities	New bridge and streetscape features would improve pedestrian and bicycle facilities, enhancing connectivity for these transportation modes	New bridge and streetscape features would improve pedestrian and bicycle facilities, enhancing connectivity for these transportation modes. Improved connection to Suitland Parkway from Frederick Douglass Memorial Bridge
Traffic and Transportation		
Predicted Percent Increase (or Decrease) in Traffic Volumes on South Capitol Street at the Anacostia River compared with the No Build Alternative	13 percent	13 percent
Number of Intersections Predicted to Operate at Level-of-Service (LOS) E or F During the Morning Peak Hour in 2040	5 (based on updated analysis)	3
Number of Intersections Predicted to Operate at Level-of-Service (LOS) E or F During the Evening Peak Hour in 2040	10 (based on updated analysis)	7

Table 4-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

Environmental Topic/Measure	Impact Summary	
	FEIS Preferred Alternative	Revised Preferred Alternative
Other Transportation Facilities and Services		
Public Transit Service (Metrorail, Metrobus, DC Circulator, Commuter Bus)	None	None
Parking Conditions	None	None
Other Types of Transportation (Water, Helicopter, Freight and Passenger Rail)	None, except that helicopter flight operations would need to be altered at the heliport adjacent to South Capitol Street	Flight operations at the heliport would not be altered.
Energy		
Predicted Direct Energy Consumption Increase (or Decrease) in 2040 Compared with the No Build Alternative	0.5% decrease	0.5% decrease
Cumulative Impacts		
Land Use	Beneficial	Beneficial
Socioeconomic Conditions	Low level of adverse effects	Low level of adverse effects
Park and Recreational Resources	Beneficial	Beneficial
Air Quality	Beneficial	Beneficial
Noise Conditions	No Effect	No Effect
Water Resources	Beneficial	Beneficial
Wildlife and Habitats	No Effect	No Effect
Cultural Resources	No Effect	No Effect
Visual Characteristics	No Effect	No Effect
Transportation and Infrastructure	Beneficial	Beneficial
Indirect Impacts		
Development Inducing Potential of the Project	Supports development, but not the crucial factor	Supports development, but not the crucial factor
Construction Impacts		
Community Cohesion and Facilities	Temporary change in access to certain community facilities; temporary utility disruptions may be required	Temporary change in access to certain community facilities; temporary utility disruptions may be required
Economy and Employment	New construction jobs created; purchase of equipment, supplies and materials from local and regional sources	New construction jobs created; purchase of equipment, supplies and materials from local and regional sources
Air Quality	Short-term fugitive dust and mobile source emissions	Short-term fugitive dust and mobile source emissions
Noise and Vibration Conditions	Construction activities, equipment and vehicles emitting noise ranging from high 70s to up to 100 decibels (dB) and causing vibration	Construction activities, equipment and vehicles emitting noise ranging from high 70s to up to 100 decibels (dB) and causing vibration

Table 4-1: Environmental Impacts of the FEIS Preferred Alternative and the Revised Preferred Alternative (continued)

	Impact Summary	
Environmental Topic/Measure	FEIS Preferred Alternative	Revised Preferred Alternative
Construction Impacts (cont'd)		
Water Quality	Construction of bridge has the potential to affect water quality	Construction of bridge has the potential to affect water quality
Wildlife and Habitats	Some vegetation cleared to support construction	Some vegetation cleared to support construction
Geography, Topography and Soils	Disturbance of soil could cause erosion and sedimentation	Disturbance of soil could cause erosion and sedimentation
Cultural Resources	Proximity of construction activities could temporarily diminish the integrity of certain historic properties	Proximity of construction activities could temporarily diminish the integrity of certain historic properties
Hazardous Materials	Health and safety of construction workers could be affected through exposure to hazardous materials sites	Health and safety of construction workers could be affected through exposure to hazardous materials sites
Pedestrian and Bicycle Facilities	Mobility for pedestrians and cyclists would be maintained though detours may be required	Mobility for pedestrians and cyclists would be maintained though detours may be required
Traffic and Transportation	Traffic circulation and mobility would be maintained although street closures and detours may be required; access to Metrorail stations maintained at all times, but rerouting of bus routes and moving of bus stops may be required; marine traffic on the river would be maintained except for short term closures from certain construction activities	Traffic circulation and mobility would be maintained although street closures and detours may be required; access to Metrorail stations maintained at all times, but rerouting of bus routes and moving of bus stops may be required; marine traffic on the river would be maintained except for short term closures from certain construction activities
Section 4(f)		
Number of Section 4(f) Uses	2 (the L'Enfant Plan of the City of Washington, DC and Suitland Parkway)	3 (the L'Enfant Plan of the City of Washington, DC, Anacostia Park and Suitland Parkway, but the latter two would be *de minimis* impacts

4.1.1 No Change in Impacts from FEIS

The Revised Preferred Alternative does not require changing the impacts as documented in the FEIS for the following environmental resources; therefore, this chapter does not present a detailed analysis of impacts under these resources.

Land Use

Impact

- The Revised Preferred Alternative will require acquisition of property at the east base of the new Frederick Douglass Memorial Bridge (see Section 4.1 of the FEIS). The action to acquire this and other needed properties for the Project underwent NEPA review through a categorical exclusion for the protective buying of real estate, which was signed in February 2007. Obtaining the property at the west base of the new bridge is required before DDOT can obtain a U.S. Coast Guard permit to construct the bridge.
- The Revised Preferred Alternative would require 3.1 acres of additional right-of-way. The Revised Preferred Alternative would displace two businesses, one billboard sign, and relocate personal property that belongs to the District (i.e., salt dome).
- The FEIS Preferred Alternative would require 12.39 acres of additional right-of-way, the displacement of two businesses, and relocation of two personal properties due to the west traffic oval for the new bridge. The reduction in the number of acres with the Revised Preferred Alternative is because 7.0 acres of right-of-way from JBAB and 2.2 acres from three other parcels will not be required.

Mitigation

- No new mitigation measures are required to address this impact. The mitigation for the Revised Proposed Alternative is the same as proposed in the FEIS. These measures can be reviewed in Table 4-20.

Community Cohesion and Facilities

Impact

- The FEIS Preferred Alternative would benefit social activities and connections and economic developments occurring in and around the Project Area (see Section 4.2 of the FEIS). The physical changes proposed in the corridor would enhance the overall visual environment. In addition, once completed, the FEIS Preferred Alternative would have no impact on the level of emergency response by police, ambulance and fire services, and would improve overall traffic safety, in particular for pedestrians and cyclists.
- The Revised Preferred Alternative would have a larger positive influence on community cohesion since it requires less land from public property. Like the FEIS Preferred Alternative, the Revised Preferred Alternative would benefit social interactions and economic development by improving local connectivity, and would have no effect on emergency response services. The Commercial Driving Training Lot was identified as a potential staging area for construction of the FEIS Preferred Alternative. The lot may be used, if desired by the designer/contractors, as a construction staging area. However, individual staging locations will be determined as part of the design-build process consistent with permits and approvals.
- The Revised Preferred Alternative will require construction within the Poplar Point area of Anacostia Park, which is operated by the NPS, because construction of the east traffic oval

will necessitate the closure of the existing park access. The new access will result in a net loss of road pavement because ramps from Anacostia Drive to South Capitol Street will no longer be needed and will be removed by the Project. Within the park, green space will increase by approximately 0.5 acres, and additional green space will be created within the adjacent DDOT right-of-way from the removal of the ramps. Additional information about construction of the new access driveway and its impacts to Anacostia Park is provided in Chapter 5, Section 4(f) Evaluation.

- Other studies conducted for this SDEIS that evaluated potential effects to NPS properties and interests include the following:
  - NPS has jurisdiction of the riverbed of the Anacostia River, and therefore, must approve the construction of the piers necessary to support the new Frederick Douglass Memorial Bridge. The bridge's pile caps may affect approximately 20,400 square feet of riverbed, and based on the conceptual design solution using drilled shaft piles of about 8 to 9 feet in diameter, the pile tip elevations for the in-water piers are likely to be of the order of minus100 feet, which would translate to be approximately 80 feet below the riverbed level. See Section 4.5 for further information.
  - A 2005 wetland delineation within Anacostia Park identified six wetlands in the park. Updated wetlands delineations were conducted, including a reassessment of the wetlands along the west side of Anacostia Park. These wetlands did not require additional delineation because they were found to be the same as when originally delineated in 2005, and therefore, will not be affected by the Revised Preferred Alternative. See Section 3.5 for further information.
  - In accordance with Section 106, Anacostia Park was identified as an historic property. Both the Revised Preferred Alternative and FEIS Preferred Alternative were evaluated to have a "no adverse effect" on the park as an historic property. See Sections 3.8 and 4.8 for further information.
  - Visual effects of the new Frederick Douglas Memorial Bridge from the perspective of Anacostia Park, as Landscape Unit #7, were re-evaluated. The visual quality difference (3.7) in comparison to existing conditions for this unit did not change with the development of the Revised Preferred Alternative. See Section 4.9 for further information.
  - The shared-use paths constructed as part of the new driveway between the east traffic oval and Anacostia Drive and other Project pedestrian and bicycle elements will improve pedestrian and cycling access into Anacostia Park in comparison to existing conditions. For example, because the shared-use paths will be aligned along the new driveway connecting with Anacostia Drive, it will be constructed to integrate with the Anacostia Riverwalk Trail located along Anacostia Drive. See Section 4.10 and Chapter 5, Section 4(f) Evaluation, for further information.
  - In accordance with Section 4(f), the Revised Preferred Alternative will require the "use" of Anacostia Park. However, this use will likely be a de minimis impact. See Chapter 5, Section 4(f) Evaluation, for further information.

- The Revised Preferred Alternative proposes to make modifications to Suitland Parkway, which includes converting the existing Martin Luther King, Jr. Avenue SE overpass to an interchange with the parkway and ramp modifications at the Suitland Parkway / I-295 interchange. The affected sections of Suitland Parkway are not under the jurisdiction of NPS.

Mitigation

- To restore the loss of access to Anacostia Park, the Revised Preferred Alternative will provide a new access driveway into the park between the northeast leg of the east oval and Anacostia Drive. In addition, shared-use paths on both sides of the driveway will be provided. The Revised Preferred Alternative will include other commitments to improve public access into Anacostia Park from the east oval, such as signage. See Section 4.14 and Chapter 5, Section 4(f) Evaluation, for further information.

Economy and Employment

Impact

- The FEIS Preferred Alternative would have a positive influence on the expected future growth in residential, office, and institutional developments (see Section 4.4 of the FEIS). This is due to improved regional and local connectivity. The Revised Preferred Alternative would maintain the same level of improved regional and local connectivity. Therefore, it would have a positive influence on the economic conditions in and around the Project Area.

Mitigation

- No mitigation measures are required.

Air Quality

Impact

- Transportation infrastructure will change over the next several years because of the improvements made to South Capitol Street, the Frederick Douglass Memorial Bridge, I-295, Suitland Parkway, and other roadways. However, the air quality analysis presented in the FEIS concluded that the FEIS Preferred Alternative was included in the TIP and CLRP and, as such, would conform to the *State Implementation Plan (SIP) to Improve Air Quality in the Washington, DC-MD-VA Region* (MWCOG, 2007) (see Section 4.5 of the FEIS). The Project is currently included in the FY 2013-2018 TIP which was approved by the TPB on July 18, 2012 and the USDOT on May 30, 2013. The project is also included in the 2013 CLRP, which was approved by the TPB on July 17, 2013 and the USDOT on January 22, 2014. As such, the Project comes from a conforming transportation plan and TIP that still conforms to the SIP's purpose.

- The Project would not noticeably contribute to regional pollutant levels. At the microscale (i.e., intersection) level, no analyzed intersection was predicted to have carbon monoxide (CO) levels exceeding the *National Ambient Air Quality Standards (NAAQS)* (42 USC 2000d et seq.) under the FEIS Preferred Alternative. The Project is still also not considered a project

of air quality concern with regards to $PM_{2.5}$, because it will not cause a notable increase in the number of diesel vehicles.

- The air quality analysis was prepared (Appendix C) for this SDEIS using the U.S. Environmental Protection Agency (USEPA) latest emission factor program, MOVES2010b for transportation projects. The results for both the regional and microscale analyses for the Revised Preferred Alternative are similar to the results documented in the FEIS. The Revised Preferred Alternative will conform to the SIP, and will not cause any intersection to exceed the NAAQS for CO.

Mitigation

- No mitigation measures are required.

Floodplains

Impact

- The Revised Preferred Alternative bridge design would include two pier supports in the floodplain, one on either side of the Anacostia River. An updated hydrology study (DDOT, 2013) was conducted for the new bridge alignment of the Revised Preferred Alternative. The same categories of storm events were analyzed. A comparison of the water surface elevations of the existing and Revised Preferred Alternative conditions revealed either no increase in upstream water surface elevation or a maximum increase in elevation of 0.02 feet for the 100-year storm event upstream. These results are similar to those in the FEIS Preferred Alternative (see Section 4.10 of the FEIS). In addition, the piers are expected to be aligned with the flow of the Anacostia River to allow for maximum conveyance, minimizing the potential for scour. Based on the results of the updated hydrology study, the conclusions documented in the FEIS regarding upstream flood levels remain valid for the Revised Preferred Alternative. This conclusion takes into account the new Frederick Douglass Memorial Bridge and the addition of one pier support within the floodplain. The *Supplemental Natural Resources Technical Report* (DDOT, 2014) (Appendix E) contains more detailed discussion on floodplains in the Project Area.

- The FEIS Preferred Alternative bridge design included one pier support within the floodplain on the east side of the Anacostia River. The FEIS included the results of a hydrology study, entitled *South Capitol Street Project Hydrology/Hydraulics Technical Report* (DDOT, 2007) to determine the effect of a new Frederick Douglass Memorial Bridge on flood levels upstream from the bridge during various categories of storm events (10-, 50-, 100- and 500-year). The study concluded that a new bridge would cause very little variation (at most a 0.02 foot increase) at various cross sections upstream from the existing bridge. Tidal fluctuations and backwater influence predominately control the hydraulic capacity of the Anacostia River.

Mitigation

- No mitigation measures are required.

Hazardous Materials

Impact

- To support the preparation of this SDEIS, a Phase 1 environmental site assessment (ESA) (see Appendix H) was prepared for the purpose of updating the FEIS information regarding potential hazardous materials sites (see Section 4.13 of the FEIS). Even with the updated information for hazardous materials sites (see Section 3.9), the evaluation of potential impacts and the provision of mitigation measures to address these impacts, as documented in the FEIS, remain valid for the Revised Preferred Alternative. The FEIS identified 10 hazardous materials sites that may cause contamination of soils and groundwater, which may affect construction.

Mitigation

- Such media would require proper handling in accordance with District and federal regulations because they could pose health and safety risks to construction workers and even the general public.

Traffic and Transportation – Traffic Safety

Impact

- Although the Revised Preferred Alternative will provide an east traffic oval instead of a traffic circle, the Project will result in higher traffic volumes in potentially conflicting movements than under the No Build Alternative. The Revised Preferred Alternative will provide lower speeds and regular spacing of traffic signals which, as noted in the FEIS, should improve overall traffic safety. Specifically, at the I-295/Suitland Parkway Interchange, the Revised Preferred Alternative will improve traffic safety when compared to the FEIS Preferred Alternative by having Ramp B (southbound I-295 to westbound Suitland Parkway) comply with current design standards for an interstate ramp, and lengthening the acceleration and deceleration lanes. Appendix I provides more detailed information about traffic safety impacts.
- As described in the FEIS, some elements of the FEIS Preferred Alternative would help decrease the number of vehicle crashes by reducing conflicting vehicle movements (see Section 4.16 of the FEIS). However, the FEIS Preferred Alternative would also increase the number of at-grade intersections, including the intersections at the west traffic oval and east traffic circle, which would result in higher traffic volumes in potentially conflicting movements than under the No Build Alternative. The FEIS noted that the effects to traffic safety may be offset, to some extent, by the lower speeds and more regular spacing of traffic signals through the corridor under the FEIS Preferred Alternative.

Mitigation

- No mitigation measures are required.

Energy

Impact

- According to the updated traffic analysis, the Revised Preferred Alternative will reduce regional daily VMT by 0.33 percent in 2040, which would result in a decrease in direct energy consumption compared with the No Build Alternative. The FEIS documented that the Project would result in a 0.5 percent decrease in direct energy consumption in 2030, compared with the No Build Alternative (see Section 4.18 of the FEIS). This assessment was primarily based on overall vehicle miles traveled (VMT) and fuel consumption. Although the Revised Preferred Alternative used a different design year, both sets of projections predicted a reduction in VMT over the No Build Alternative. Therefore, the anticipated energy savings documented in the FEIS remain valid for the Revised Preferred Alternative.

Mitigation

- No mitigation measures are required.

Cumulative Impacts

Impact

- The Revised Preferred Alternative would have either beneficial or no changes in the areas of land use, parks, air quality, noise, water resources, wildlife and habitats, cultural resources, visual characteristics, and transportation (see Section 4. 19 of the FEIS). This conclusion remains the same as for the FEIS Preferred Alternative.

Mitigation

- No mitigation measures are required.

Indirect Impacts

Impact

- The FEIS disclosed that that the FEIS Preferred Alternative would have no indirect impacts (see Section 4.20). Although the FEIS Preferred Alternative would improve access and support development, market forces were found to be the primary influences on private development. This conclusion remains valid for the Revised Preferred Alternative.

Mitigation

- No mitigation measures are required.

The Relationship between Local Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

Impact

- The FEIS documented that the fulfillment of a transportation improvement identified through comprehensive planning is consistent with the short-term impacts and uses of resources needed by the Project (see Section 4.21 of the FEIS). This conclusion remains valid for the Revised Preferred Alternative.

Mitigation

- No mitigation measures are required.

Permits and Consultations

- The FEIS listed the permits and compliance requirements for the FEIS Preferred Alternative (see Section 4.22 of the FEIS). Some compliance requirements, such as the Section 106 consultation, were re-activated for the Revised Preferred Alternative. Other compliance requirements and permits will be relevant during final design and construction. The list of permits and compliance requirements remain valid for the Revised Preferred Alternative, with the exception of special use permits for the use of the riverbed and Anacostia Park, both requiring authorization from the NPS (see Community Cohesion and Facilities above).

Construction Impacts

Impact

- The FEIS documented the following construction impacts for the FEIS Preferred Alternative:
  - Access impacts to selected community facilities
  - Creation of new jobs that require the purchase of materials and supplies, which would benefit the local economy
  - High noise levels associated with construction activities, equipment and vehicles
  - Fugitive dust emissions
  - Potential water quality effects associated with construction of the bridge
  - Soil disturbances causing potential erosion and sedimentation
  - Detours (although mobility would be maintained for pedestrians, cyclists and motorists around the construction area)

This list of construction impacts remain the same for the Revised Preferred Alternative. Section 4.13 discusses these potential construction impacts in more detail.

Mitigation

- No new mitigation measures are required to address this impact. The mitigation for the Revised Proposed Alternative is the same as proposed in the FEIS. These measures can be reviewed in Table 4-20.

Irreversible and Irretrievable Commitment of Resources

Impact

- The Revised Preferred Alternative would consume natural, physical, human and fiscal resources during construction but the benefits of the Project (enhanced safety, mobility, accessibility, and economic development) would outweigh the commitment of these resources. This conclusion remains the same as for the FEIS Preferred Alternative (see Section 4.25 of the FEIS).

Mitigation

- No new mitigation measures are required.

4.1.2 Change in Impacts from the FEIS

Several notable features distinguish the Revised Preferred Alternative from the FEIS Preferred Alternative including:

- Different alignment for the new bridge
- Reduced size of west traffic oval
- Traffic oval instead of a traffic circle on the eastern approach to the new bridge
- Different access into the Poplar Point section of Anacostia Park
- Reconstructing a portion of I-295 over Firth Sterling Avenue SE and an inactive railroad line
- Urban diamond interchange at the Suitland Parkway/Martin Luther King, Jr. Avenue SE overpass
- Additional interchange modifications at South Capitol Street and I-695
- Revised Project Area

Compared with the FEIS Preferred Alternative, the Revised Preferred Alternative would have the following change in impacts to the following environmental resources. The new impacts are discussed later in this chapter.

Environmental Justice

- The Revised Preferred Alternative will not cause disproportionately high and adverse human health or environmental effects on EJ populations. This is because the limited number of potential impacts due to operation of the proposed design changes included in the Revised Preferred Alternative will not result in direct impacts for most of the technical discipline areas reviewed as part of the SDEIS. The effects are not disproportionately high when comparing the adverse impacts to EJ populations and non-EJ populations.
- The Project will result in potential adverse noise impacts at 59 noise receptor locations in EJ areas (Appendix L). Based on the DDOT Noise Policy, noise barriers are not reasonable and feasible at these receptors. The Project is not expected to result in substantial noise impacts overall and would not result in disproportionate impacts to minority or low-income communities.
- The FEIS concluded that the FEIS Preferred Alternative would not result in disproportionately high and adverse human health or environmental effects on minority or low-income populations (EJ populations) residing in and around the Project Area (see Section 4.3 of the FEIS). This analysis was in accordance with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (1994).

- The FEIS documented efforts to solicit input from the EJ communities in and around the Project Area. This outreach, presented in Section 4.2, was re-initiated upon development of the Revised Preferred Alternative.

Wetlands

- The FEIS Preferred Alternative did not require the filling or dredging of wetlands (see Section 4.8 of the FEIS)
- . The wetlands within the Project Area are located within the Poplar Point portion of Anacostia Park. These wetlands were reassessed as part of the SDEIS to determine if any element of the Revised Preferred Alternative would encroach into wetlands (Appendix E). Based on this re-delineation, which the USACE has yet to confirm through an official Jurisdictional Determination, these wetlands will not be directly affected (filled or dredged) by the Revised Preferred Alternative.
- The Revised Preferred Alternative will affect a 0.04-acre palustrine forested (PFO) wetland due to the proposed replacement of the I-295 bridge over Firth Sterling Avenue, which includes an earthen fill over the adjacent CSX right-of-way. This earthen fill could result in at least a partial filling of this wetland. Efforts to avoid and minimize impacts to the PFO wetland will be explored during the design of the I-295 earthen fill If part of this wetland were to be filled, this work would be addressed under the same U.S. Army Corps of Engineers (USACE) permitting that will be used for replacing the Frederick Douglas Memorial Bridge, and would likely qualify under a USACE Nationwide Permit 14 for linear projects. A final wetland impact assessment will be conducted at that time, and appropriate mitigation will be determined in coordination with the USACE.
- The two palustrine emergent (PEM) wetlands located between Suitland Parkway and Dunbar Road (see Section 3.5) would not be affected by the Project. There is sufficient space within this area to construct the Project without affecting these wetlands. However, as required by DDOE, these wetlands will be protected by a fenced 25-foot buffer zone.

Noise

- A noise analysis was conducted for the Revised Preferred Alternative to reflect revisions in the noise source locations (i.e., vehicles traveling on roadways). Also, the FHWA released the *Final Rule Amending the Federal Regulations on the Procedures for Abatement of Highway Traffic Noise and Construction Noise (2010 Final Rule)* (FHWA, 2010), which differs substantially from the previous rule in terms of land use types to be evaluated, noise analysis process, noise abatement measures, and public involvement requirements. Section 4.4 presents the results of the updated noise analysis for the Revised Preferred Alternative. The *Noise Technical Report* (DDOT, 2014) (Appendix D), provides a detailed noise analysis of the Project Area.
- The FEIS documented that most of the sensitive noise receptors identified along various locations within the Project Area would approach or exceed the FHWA Noise Abatement Criteria (NAC) with the FEIS Preferred Alternative (see Section 4.6 of the FEIS). Sensitive receptors include places where people sleep, certain types of land uses where people

congregate and where high noise levels could interfere with activities. The most common sensitive receptors are residences, but can also include certain types of parks or even commercial uses, such as outdoor cafes. The FEIS noted that 12 of the 14 noise receptors analyzed would approach or exceed the NAC during the morning peak period and 11 of these 14 noise receptors would approach or exceed the NAC during the evening peak period. The noise analysis for the FEIS Preferred Alternative occurred before FHWA implemented the *2010 Final Rule*.

Water Quality

- The Revised Preferred Alternative will slightly increase the amount of impervious surfaces in the Project Area from 67.3 existing acres to 68.0 acres. Measures to treat post-construction stormwater will be similar to those suggested in the FEIS, including up-to-date BMPs (see Section 4.7 of the FEIS). These stormwater controls or BMPs will be designed to reduce non-point source pollutants into surface and ground water. Stormwater control systems for the Project are required to use Low Impact Development (LID) technologies as stipulated in the *Anacostia Waterfront Transportation Architecture Design Guidelines* (DDOT, 2008), or other measures approved by the DDOE and DDOT. Adherence to the CWAs TMDL provisions will be fully coordinated through compliance with the NPDES permit process for Project-related stormwater. Therefore, the Revised Preferred Alternative bridge design should somewhat improve water quality of surface and groundwater resources. These impacts are similar to those estimated for the FEIS Preferred Alternative.
- The FEIS Preferred Alternative would slightly reduce the amount of impervious surfaces in the Project Area from 76.0 existing acres to 74.5 acres and the Project would include improved stormwater management systems. The existing impervious area for the SDEIS differs from the FEIS due to changes in the project limits and area of calculation.
- Impacts of the Revised Preferred Alternative are similar to the FEIS Preferred Alternative regarding surface waters associated with the construction of the new Frederick Douglass Memorial Bridge and the demolition of the existing bridge (see Section 4.7 of the FEIS). Based on a preliminary bridge design for the SDEIS, surface water impacts to the Anacostia River would increase over those estimated for the FEIS Preferred Alternative bridge design. However, final impacts will not be determined until the design-build process for the Project as described in Section 2.4. Section 4.4 describes the differences in surface water impacts between the FEIS Preferred Alternative and the Revised Preferred Alternative. Additional information can be found in Appendix E, the *Supplemental Natural Resources Technical Report* (DDOT, 2014).

Wildlife and Habitats

- Due to the existing level of human disturbance and urbanized conditions of the Project Area, the FEIS Preferred Alternative had relatively minor impacts to flora and fauna (see Section 4.9 of the FEIS).
- Because of a larger area of potential impact was considered for the Revised Preferred Alternative, specimen/special tree and woodland habitat impacts would increase to 47 and

2.1 acres, respectively. These larger impacts will likely be reduced to numbers comparable to that of the FEIS Preferred Alternative through the design-build process (Appendix E).

- The FEIS documented that impacts to migratory birds were expected to be negligible, with the exception of one species, the osprey (see Section 4.9 of the FEIS). Measures to avoid impacts to migratory birds, specifically ospreys during the nesting season when eggs and young are present would be taken prior to initiation of construction at the Frederick Douglass Memorial Bridge. Multiple osprey nests are now located within the Project Area and would need to be relocated prior to construction due to the Revised Preferred Alternative. Under the *Migratory Bird Treaty Act of 1918 (*16 USC 703-712), osprey nests may be removed as long as there are no eggs or young in the nest. The removal of osprey nests with eggs or young will require a permit from the U.S. Fish and Wildlife Service (USFWS). (USFWS online resource: http://www.fws.gov/chesapeakebay/FAQs.html).
- The FEIS documented consultation with the USFWS regarding potential impacts to federally-listed threatened or endangered species in accordance with *Endangered Species Act of 1973* (16 USC 1531 et seq.). FHWA rendered a "not likely to adversely affect" determination for the shortnose sturgeon. The NMFS concurred with the determination.
- The Revised Preferred Alternative required re-initiation of the Section 7 consultation. The NMFS identified the Atlantic sturgeon as an endangered species that may be affected by the project (see Section 3.5). Section 4.5 presents the results of the updated Section 7 consultation and information about the USFWS permit to remove active osprey nests (Appendix F).

Geology, Topography and Soils

- The FEIS Preferred Alternative would pose minimal risk for erosion (see Section 4.11 of the FEIS). The FEIS documented that the FEIS Preferred Alternative generally followed the topography of the Project Area, except for the traffic oval and circle that would be located at the western and eastern approaches to the new bridge, respectively. The northern edge of the west traffic oval would be 15 feet higher than existing ground level, and the southern edge of the east traffic circle would be 22 feet higher than existing ground level.
- The Revised Preferred Alternative changed the east traffic circle to a traffic oval at a slightly different location due to the realignment of the new bridge. This change and the different interchange design at the Suitland Parkway/Martin Luther King, Jr. Avenue SE overpass resulted in different topographic impacts than what was disclosed in the FEIS. Section 4.6 describes these differences in impacts.

Cultural Resources

- The Revised Preferred Alternative re-initiated the Section 106 process because the LOD was changed, which required a revised APE. The revised APE resulted in additional historic properties being considered as part of the Project's effects assessment (see Section 3.7). Twenty-three built historic properties and four archaeological sites are within the revised APE. The existing Section 106 "adverse effect" determination for the FEIS Preferred Alternative will remain in place as there will still be adverse effects to the L'Enfant Plan of the City of Washington, DC. However, there are no longer adverse effects to Suitland

Parkway and no additional properties will be adversely affected. The MOA will be amended for the Revised Preferred Alternative and the design-build process for Phase 1 of the Project (see Section 2.2). Section 4.8 discusses the effects to historic properties with additional information provided in Appendix G, the *Section 106 Effects Assessment Report* (DDOT, 2014).

- The FEIS documented information regarding compliance with Section 106 of the National Historic Preservation Act (NHPA) (16 USC 470 et seq. and 36 CFR 800) (see Section 4.12 of the FEIS). Among the fourteen historic architectural properties that are listed in or eligible for the NRHP identified within the APE, two properties (the L'Enfant Plan of the City of Washington, DC and Suitland Parkway) would be adversely affected by the FEIS Preferred Alternative. No archaeological resources on or eligible for the NRHP were identified in the LOD. FHWA rendered an "adverse effect" determination in accordance with NHPA Section 106 (16 USC 470 et seq. and 36 CFR 800), and a MOA was signed to resolve the adverse effect.

Visual Quality

- The FEIS included a visual quality evaluation to determine how the physical changes to the South Capitol Street Corridor, including New Jersey Avenue SE, the bridge and Suitland Parkway, would affect the visual and aesthetic conditions of the Project Area (see Section 4.14 of the FEIS). Using eight landscape units, visual quality differences (VQD) were identified for the FEIS Preferred Alternative, compared with existing visual conditions.
- The FEIS documented that the replacement of the existing I-395 on-ramp; the new bridge; the west traffic oval and east traffic circle; new I-295 diamond interchange ramps, and the conversion of the Suitland Parkway/Martin Luther King, Jr. Avenue SE overpass into an interchange with center ramps would provide major VQD (both positive and negative), compared with existing conditions (see Section 4.14 of the FEIS). In addition, the bridge type may change as a result of the decision to construct a fixed bridge. Section 4.8 discusses measures to maintain visual quality of the bridge. The section also provides an updated visual quality evaluation based on the physical or visual differences between the Revised Preferred Alternative and the existing conditions.

Pedestrian and Bicycle Facilities

- The FEIS Preferred Alternative included a number of design elements for improving the safety of pedestrians and cyclists, as well as improving their overall mobility (see Section 4.15 of the FEIS). The Revised Preferred Alternative would maintain the level of pedestrian and bicycle safety and mobility offered by the FEIS Preferred Alternative, but includes design changes. Section 4.10 identifies these changes.

Traffic and Transportation

- For the FEIS Preferred Alternative, the traffic impact analysis provided in the FEIS forecasted a 13 percent increase in traffic volume through the South Capitol Street Corridor in the year 2030, compared with the No Build Alternative (see Section 4.16 of the FEIS). The FEIS predicted traffic conditions for horizon year 2030 because this was the year with the latest

available forecast data from MWCOG's travel demand forecast model. Among the 40 intersections analyzed, five of them were predicted to operate at level-of-service (LOS) F during the morning peak hour. During the evening peak hour, four intersections were forecasted to operate at LOS F conditions.

- Following the FEIS, MWCOG updated the regional travel demand models to reflect more recent land use forecasts and future transportation projects. New traffic horizon years were established reflecting MWCOG Transportation Planning Board (TPB) updates: (1) year 2020, the projected year of opening after completion of construction; and (2) year 2040, the design year of the Project. As a result, a revised traffic impact analysis, reflecting these updates, was prepared for the FEIS Preferred Alternative and the Revised Preferred Alternative. The objective of the updated traffic analysis was to evaluate whether the Revised Preferred Alternative would deteriorate traffic operations, compared with the FEIS Preferred Alternative. Section 4.10 and Appendix I provide the results of the updated traffic impact analysis.

Other Transportation Facilities and Services

- The level of public transit service, which includes Metrorail, Metrobus, the DC Circulator and commuter bus, will remain independent from the Revised Preferred Alternative. The FEIS documented that the level of public transit service would also be independent from the elements of the FEIS Preferred Alternative (see Section 4.16 of the FEIS).
- The FEIS documented that the FEIS Preferred Alternative would not affect the overall supply of parking (see Section 4.16 of the FEIS). This conclusion remains the same for the Revised Preferred Alternative.
- The FEIS Preferred Alternative would not affect other forms of transportation occurring in and around the Project Area, including water transportation, and freight and passenger rail services that travel through the north end of the Project Area (see Section 4.16 of the FEIS). The new bridge of the FEIS Preferred Alternative would alter flight operations (approach and departure) from the heliport located adjacent to South Capitol Street near the river. The realignment of the new bridge under the Revised Preferred Alternative would alter the potential impacts to water transportation and helicopter service that were provided in the FEIS. Section 4.11 discusses changes to the transportation network.

Environmental Commitments

- Many of the environmental commitments provided in the FEIS remain valid for the Revised Preferred Alternative (see Section 4.25 of the FEIS). However, the Revised Preferred Alternative contains several changes in environmental commitments (see Section 4.13).

Section 4(f)

- The FEIS included a Section 4(f) Evaluation of the L'Enfant Plan and Suitland Parkway (see Chapter 5 of the FEIS). A Net Benefit Programmatic Agreement was used to determine that there is no feasible and prudent avoidance alternative to the use of these two Section 4(f) resources, and that all possible planning was conducted to minimize impacts to these resources.

- The Section 4(f) Evaluation was updated to reflect the Revised Preferred Alternative. The updated Section 4(f) Evaluation is provided as Chapter 5.0 of this SDEIS.

4.2 Environmental Justice

4.2.1 Environmental Consequences

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (1994), requires all Federal agencies to "develop an agency-wide environmental justice strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." USDOT Order 5610.2(a) incorporates the intent and spirit of EO 12898 (1994) and provides the framework for an EJ analysis as part of a NEPA effort.

Two additional Executive Orders that are applicable to EJ populations were also considered as appropriate for the identification of tools to reach EJ populations and to determine potential adverse effects. These include EO 13166 – *Improving Access to Services for Persons with Limited English Proficiency* (2000); and EO 13045 – *Protection of Children from Environmental Health Risks* (1997). Executive Order 13166 (2000) assists with the identification of EJ populations and EO 13045 (1997) is important when conducting the evaluation of impacts to EJ populations.

The EJ analysis focused on key technical issues that required new assessments due to the design changes in the Revised Preferred Alternative. The EJ analysis included the review of the noise, hazardous materials, and traffic and transportation studies for the Project, and a determination of the potential for disproportionate and adverse effects on EJ populations.

Noise

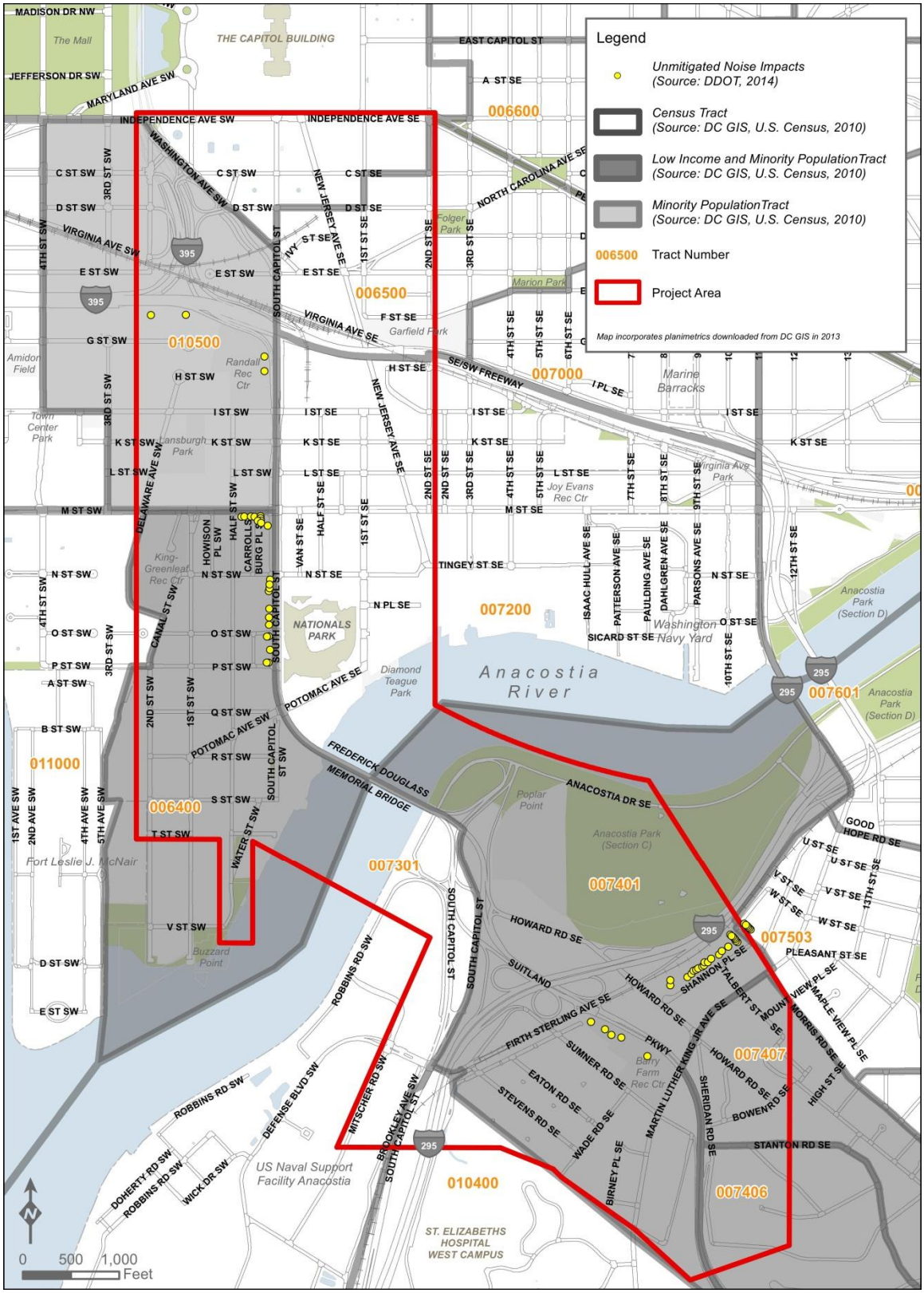
Impacts on EJ Populations

The *South Capitol Street Noise Technical Report* (NTR) (DDOT, 2014) analyzed the Revised Preferred Alternative. This analysis identified highway traffic noise impacts and determined appropriate feasible and reasonable noise mitigation measures. Key findings are summarized in Section 4.3 Noise.

The updated noise analysis evaluated 415 noise receptors (see Appendix E of the NTR). A total of 314 noise receptors are located in EJ areas (see Appendix L). A total of 101 noise receptors are not located in EJ areas.

Figure 4-1 shows noise receptors within EJ areas and the 2013 Existing, 2040 No Build, and 2040 predicted noise level for the Revised Preferred Alternative. Of the 314 noise receptors in EJ areas, 59 are predicted to approach or exceed the Noise Abatement Criteria (NAC) for the 2040 Revised Preferred Alternative. This figure also shows the noise receptors that would exceed the NAC (with or without the Project), and the noise receptors that will not exceed the NAC (with or without the Project).

Figure 4-1: Noise Receptors in Relation to Environmental Justice Communities



Mitigation

FHWA and DDOT require that noise abatement measures be considered at all locations where traffic-related noise impacts would exceed the NAC. As discussed in Section 4.4, noise barriers, including those that could benefit the 59 receptors representing EJ areas, were determined not to be feasible and reasonable and are will not be incorporated in the project..

The project is not expected to result in substantial noise impacts overall and would not result in disproportionate impacts to minority or low-income communities. As a result, no mitigation measures are proposed.

Hazardous Materials

Impacts on EJ Populations

A Modified Phase I ESA was completed within the Project Area. Fifty-six properties of concern were identified in the project corridor including 15 properties not previously identified or included in the FEIS. Each of the identified properties are either known to be contaminated, or were likely to have used, stored, or handled hazardous substances or petroleum products as part of their operations. Therefore these properties were considered to be recognized environmental conditions (RECs). Detailed information on hazardous materials can be found in the *South Capitol Street Modified Phase I ESA Report* (DDOT, 2014) (Appendix D).

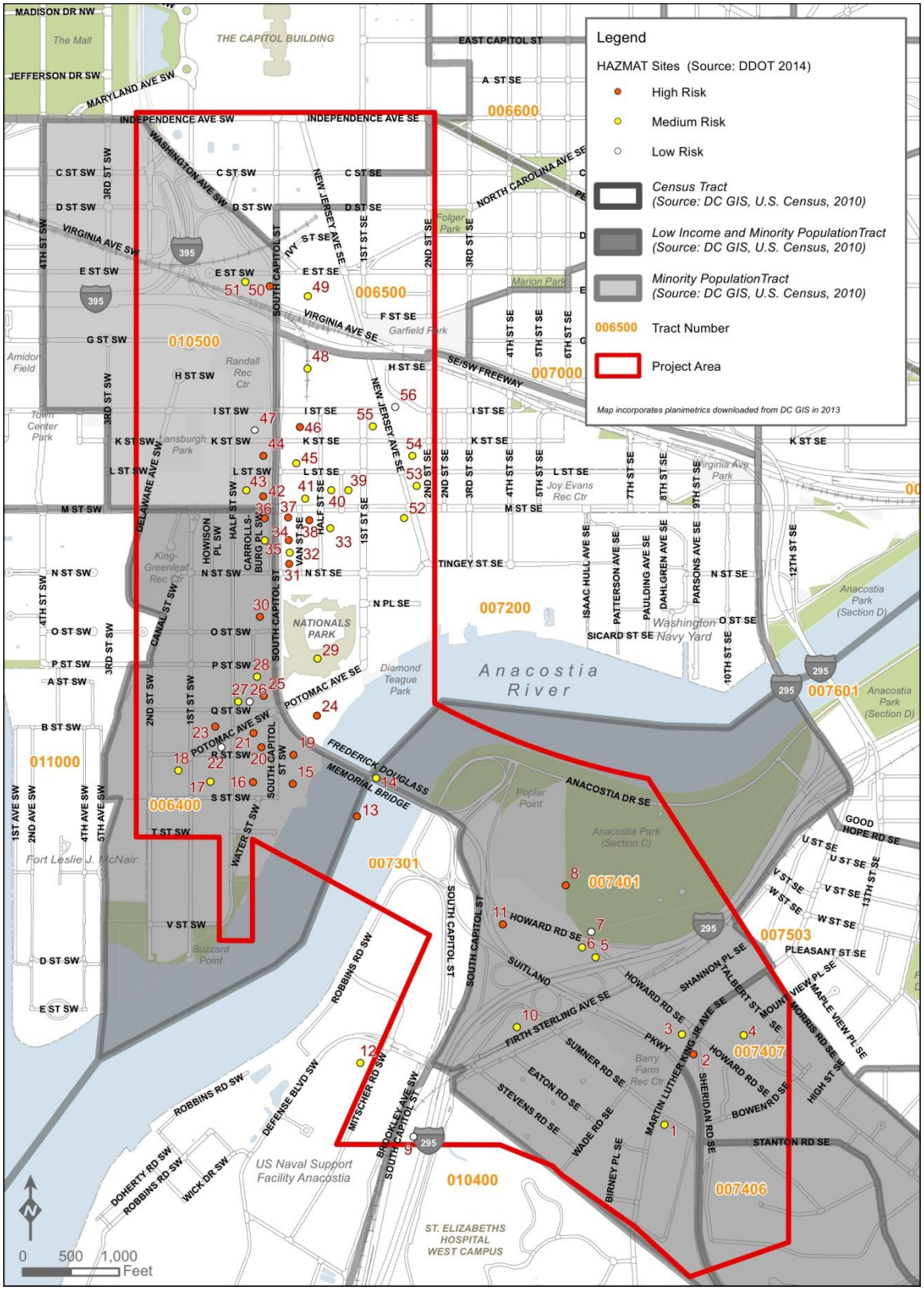
Of the 56 sites identified 36 RECs are located in EJ areas (Figure 4-2). Thirteen of the 36 identified RECs are located in Buzzard Point census tract 006400. Ten additional RECs were identified in census tracts 006400 and 010500. These REC locations are dispersed along the west side of South Capitol Street between South Capitol Street and Half Street, SW just north of Buzzard Point industrial area.

The project would not result in impacts to the general population, including EJ populations.

Mitigation

No mitigation measures are required. While the REC locations could be a source for contamination as a result of excavation or disturbance in the construction area of the Revised Preferred Alternative, adherence to DDOE regulations and the implementation of construction and excavation protocols would limit exposure. Additional investigations, including Phase II assessments will be completed during the design and construction phases to further define the type and extent of contamination as remediation necessary to protect public health and worker safety.

Figure 4-2: HAZMAT Sites in Relation to Environmental Justice Populations



Traffic and Transportation

Impacts on EJ Populations

Travel demand forecasts were developed for roadways in the Project Area. In general, traffic volumes on roadways are projected to be similar under the Revised Preferred Alternative and the Preferred Alternative presented in the FEIS (see Table 4-1). The Revised Preferred Alternative and the FEIS Preferred Alternative would have the same average daily traffic volumes in 2040 for the locations analyzed in the Project Area. Morning and evening peak hour traffic volume would be reduced by approximately 10 to 12 percent under the Revised Preferred Alternative compared with the FEIS Preferred Alternative along the entire roadway network in the Project Area (see Table 4-16).

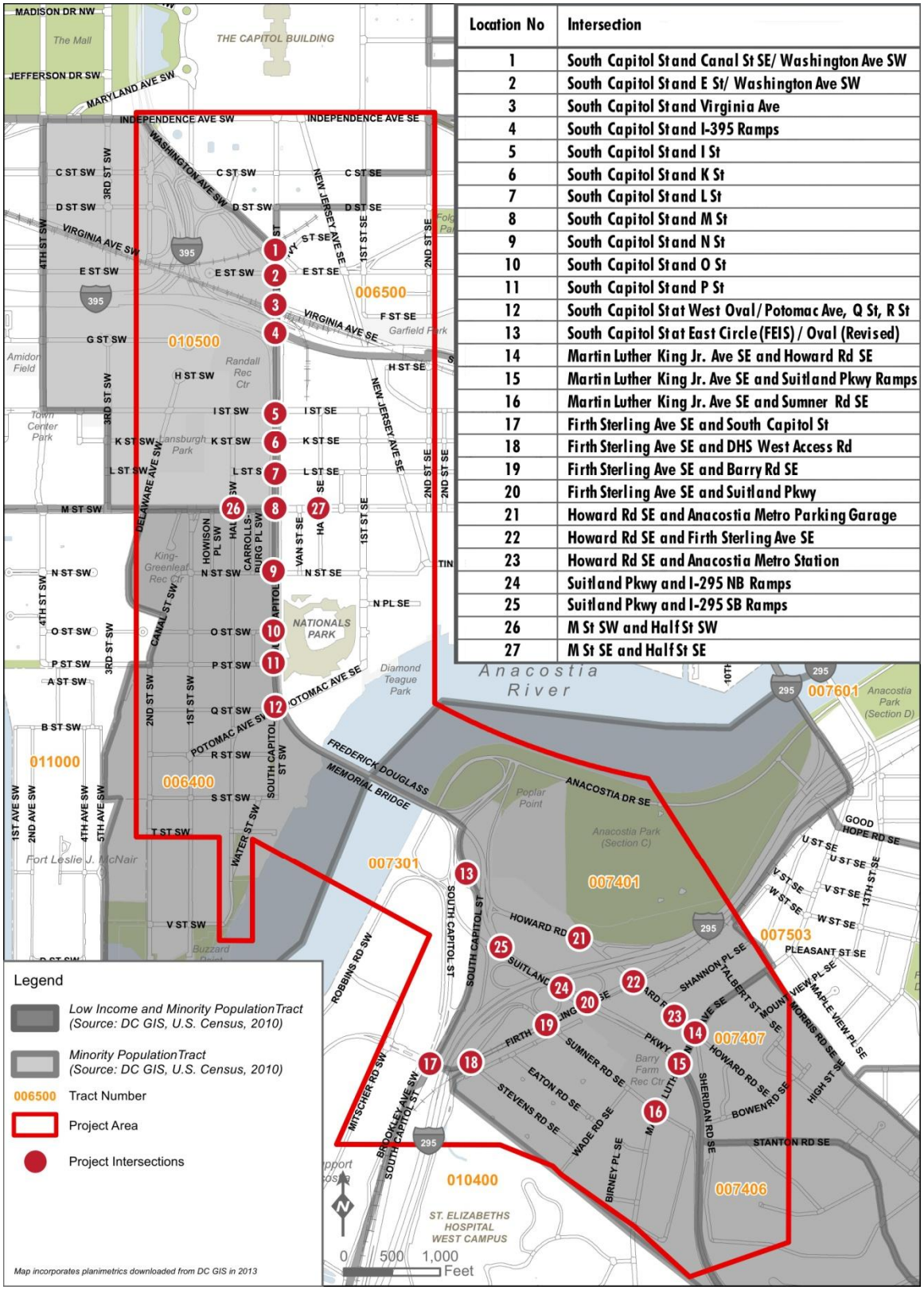
As shown in Figure 4-3, Level of Service was analyzed for 27 intersections in the Project Area (see Table 4-2). Thirteen of these locations are wholly in EJ areas. Nine additional intersections are partially located in EJ areas. Five intersections are in non-EJ areas. Under the Revised Preferred Alternative three intersections in low-income and minority population areas would operate at a LOS of E or F during the morning peak hour versus five intersections operating at LOS E or F under the FEIS Preferred Alternative. In the evening peak period, LOS under the Revised Preferred Alternative would be LOS E or F at six locations as compared to 10 intersections under the FEIS Preferred Alternative.

The Project would not result in adverse traffic or transport impacts to the general population, including low-income or minority populations.

Mitigation

No mitigation measures are required.

Figure 4-3: Intersections Analyzed in Relation to Environmental Justice Communities



Location No	Intersection
1	South Capitol St and Canal St SE/ Washington Ave SW
2	South Capitol St and E St/ Washington Ave SW
3	South Capitol St and Virginia Ave
4	South Capitol St and I-395 Ramps
5	South Capitol St and I St
6	South Capitol St and K St
7	South Capitol St and L St
8	South Capitol St and M St
9	South Capitol St and N St
10	South Capitol St and O St
11	South Capitol St and P St
12	South Capitol St at West Oval/ Potomac Ave, Q St, R St
13	South Capitol St at East Circle (FEIS) / Oval (Revised)
14	Martin Luther King Jr. Ave SE and Howard Rd SE
15	Martin Luther King Jr. Ave SE and Suitland Pkwy Ramps
16	Martin Luther King Jr. Ave SE and Sumner Rd SE
17	Firth Sterling Ave SE and South Capitol St
18	Firth Sterling Ave SE and DHS West Access Rd
19	Firth Sterling Ave SE and Barry Rd SE
20	Firth Sterling Ave SE and Suitland Pkwy
21	Howard Rd SE and Anacostia Metro Parking Garage
22	Howard Rd SE and Firth Sterling Ave SE
23	Howard Rd SE and Anacostia Metro Station
24	Suitland Pkwy and I-295 NB Ramps
25	Suitland Pkwy and I-295 SB Ramps
26	M St SW and Half St SW
27	M St SE and Half St SE

Table 4-2: Morning and Evening Level of Service (LOS) at Project Area Intersections in Low Income and Minority Population Areas

Intersection	Area Population		Morning LOS		Evening LOS	
	Low Income	Minority	FEIS Preferred Alternative	Revised Preferred Alternative	FEIS Preferred Alternative	Revised Preferred Alternative
South Capitol St and Canal St SE/Washington Ave SW	No	Part	C	D	B	C
South Capitol St and E St/Washington Ave SW	No	Part	C	C	F	E
South Capitol St and Virginia Ave	No	Part	A	B	E	C
South Capitol St and I-395 Ramps	No	Part	C	B	F	D
South Capitol St and I St	No	Part	D	B	D	D
South Capitol St and K St	No	Part	C	B	B	B
South Capitol St and L St	No	Part	C	B	C	C
South Capitol St and M St	Part	Part	D	D	D	D
South Capitol St and N St	Part	Part	D	C	B	C
South Capitol St and O St	Part	Part	B	B	A	B
South Capitol St and P St	Part	Part	B	B	A	B
South Capitol St at West Oval/ Potomac Ave, Q St, R St	Part	Part	F	C	E	D
South Capitol St at East Circle (FEIS)/Oval (Revised)	Part	Part	F	D	E	E
Martin Luther King Jr. Ave SE and Howard Rd SE	Yes	Yes	D	D	E	D
Martin Luther King Jr. Ave SE and Suitland Pkwy Ramps	Yes	Yes	D	D	C	D
Martin Luther King Jr. Ave SE and Sumner Rd SE	Yes	Yes	F	E	D	D
Firth Sterling Ave SE and South Capitol St	Part	Part	F	F	E	E
Firth Sterling Ave SE and DHS West Access Rd	Yes	Yes	D	E	E	E
Firth Sterling Ave SE and Barry Rd SE	Yes	Yes	A	C	D	D
Firth Sterling Ave SE and Suitland Pkwy	Yes	Yes	D	D	D	D

Table 4-2: Morning and Evening Level of Service (LOS) at Project Area Intersections in Low Income and Minority Population Areas~~Table 4-2: Morning and Evening Level of Service (LOS) at Project Area Intersections in Low Income and Minority Population Areas~~ (continued)

Intersection	Area Population		Morning LOS		Evening LOS	
	Low Income	Minority	FEIS Preferred Alternative	Revised Preferred Alternative	FEIS Preferred Alternative	Revised Preferred Alternative
Howard Rd SE and Anacostia Metrorail Parking Garage	Yes	Yes	A	A	C	B
Howard Rd SE and Firth Sterling Ave SE	Yes	Yes	D	C	E	F
Howard Rd SE and Anacostia Metro Station	Yes	Yes	B	B	F	D
Suitland Pkwy and I-295 NB Ramps	Yes	Yes	C	C	C	D
Suitland Pkwy and I-295 SB Ramps	Yes	Yes	E	B	C	E
M St SW and Half St SW	Part	Yes	B	C	B	F
M St SE and Half St SE	No	No	B	C	C	A

Source: VISSIM modeling by CH2M HILL, 2014

Note: Yellow shaded areas identify intersections predicted to have unacceptable (E) or failing (F) levels-of-service

4.2.2 Assessment of Potential for "Disproportionately High and Adverse Effects" on Minority and Low-Income Populations

Standards for Evaluating Effects

The U.S. Department of Transportation has defined a "disproportionately high and adverse effect" on minority and low-income populations as an adverse effect that:

- "Is predominantly borne by a minority population and/or a low-income population; or
- "Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non low-income population."

The identification of a disproportionately high and adverse effect on EJ populations does not preclude a project from moving forward. USDOT Order 5610.2(a) Sub-section 8 (2012) states that a project with disproportionately high and adverse effects on EJ populations may be carried out under the following conditions:

- Programs, policies, and activities that will have a disproportionately high and adverse effect on minority populations or low-income populations will only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effects are not practicable. In determining whether a mitigation measure or an alternative is "practicable," the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects would be taken into account.
- Programs, policies or activities that would have a disproportionately high and adverse effect on populations protected by *Title VI* (42 USC 2000d et seq.) "protected populations" would only be carried out if:

  (1) A substantial need for the program, policy or activity exists, based on the overall public interest

  (2) Alternatives that would have less adverse effects on protected populations (and still satisfy the need identified in subparagraph (1) above) have either

    (a) Adverse social, economic, environmental, or human health impacts that are more severe, or

    (b) Would involve increased costs of an extraordinary magnitude

Determinations of whether a project will have disproportionately high and adverse effects must take into consideration "mitigation and enhancements measures that will be implemented and all offsetting benefits to the affected minority and low-income populations…" (USDOT Order, Section 8.b).

Evaluation of Effects

Based on the preceding analysis, which included the evaluation of potential noise, hazardous material and traffic and transportation effects on EJ populations, DDOT and FHWA have concluded that the Revised Preferred Alternative would not have disproportionately high and adverse effects on low-income or minority populations. Nonetheless, DDOT and FHWA recognize that some of the impacts of the Revised Preferred Alternative may adversely affect individuals in these population categories.

Mitigation

Where possible, mitigation measures have been proposed. If the Revised Preferred Alternative is approved, mitigation and minimization efforts would continue in the future design and construction phases to reduce impacts

4.2.3 Environmental Justice and the Public Involvement Process

Public Involvement and engagement is a key tenet of EO 12898. As such, USDOT and FHWA adopted guideline to provide full and fair access to meaningful involvement by low-income and minority populations in project planning and development. A range of tools and techniques have been utilized to engage minority and low-income populations in the development of the South Capitol Street project, including:

- Door to Door and Grocery Store Outreach
- Small Group Meetings and Presentations

Other outreach activities, many of which have taken place in low income and minority neighborhoods include:

- Public Meetings – scoping meetings, open houses, and community workshops
- Community Working Group Meetings
- Project information distribution at public facilities
- Coordination with Elected Officials
- South Capitol Street EIS and Anacostia Waterfront Initiative Websites www.southcapitoleis.com and www.anacostiawaterfront.org
- Publications – Including print advertisements, newsletters, fact sheets, fliers, and door hangers/postcards

Public Outreach Activities Following the FEIS

After the release of the FEIS, two public meetings held, one on each side of the Anacostia River, on April 26 and 28, 2011. The open house meetings were held to present the findings of the FEIS and to provide the public with the opportunity to comment on the Preferred Alternative and findings of the FEIS. Many of the public comments expressed support of DDOT's revision of the design to reopen Sheridan Road. Other comments included thoughts on expanding bicycle and pedestrian connections. One comment regarding environmental justice urged the Project

team to keep the community involved in the design process. However, most of the comments received pertained to the following topics:

- Concern about construction impacts such as noise, pollution, and traffic on residents of the area
- Concern about construction impacts on Anacostia River traffic
- Concern about future regional traffic conditions resulting from the South Capitol Street project, 11th Street Bridge project, and planned residential, commercial, and mixed use developments

On July 30, 2013 DDOT held an Informational Update Meeting for the South Capitol Street Corridor Project at the Capitol Skyline Hotel. DDOT held the meeting to share the latest design, phasing and schedule information for the Project. An overview of the design-build process was also provided to attendees.

In addition to public involvement activities that were part of the process leading to the FEIS, on May 15, 2014, DDOT hosted a public open house meeting at Matthews Memorial Baptist Church that is located in a predominately low-income and minority neighborhood close to the Project Area. The meeting was held to provide the community with an update of the project in light of the preparation of the SDEIS for the Revised Preferred Alternative and to provide an update on the design-build process. More than 25 stakeholders attended the meeting. A range of comments were provided and included requests for continued updates for residents as public spaces are included in the final design, a request to expand the mailing boundary to include neighborhoods outside of the project area east of the river to include Morris Ave and a question about the operation of the traffic oval.

Tools and techniques used to promote the May 15, 2014 meeting included advertisements in *East of the River*, *Hill Rag*, the *Washington Post Express*, and the *Southwester*. Postcards, fliers and posters were also distributed throughout the Project Area via a variety of methods. More than 2,400 fliers were distributed at the 4th Street, SW Safeway, Navy Yard/National's Park, Anacostia and Congress Heights Metro Stations, Southwest Neighborhood Library, churches and apartment complexes within the study area. In addition, the 2014 newsletter was delivered via door-to-door outreach in EJ areas along South Capitol Street and east of the river in the Barry Farm complex.

4.3 Wetlands

4.3.1 Impacts

The elements of the project along Suitland Parkway would not require use of the two newly delineated wetlands in that vicinity. To ensure that these wetlands will not disturbed during construction, they will be fenced off for protection using a 25-foot buffer as required by DDOE.

In addition, the newly identified forested (PFO) wetland adjacent to I-295 currently falls within the footprint of the Revised Preferred Alternative. The total size of this wetland within the footprint of the Project is 0.04 acre. The current design includes replacement of the I-295 Bridge over Firth Sterling Avenue SE and the adjacent abandoned railroad right-of-way, which will be replaced by earthen fill. This work could result in at least a partial filling of this wetland. If the impact were to occur, it would be addressed in the same permit with the bridge, likely qualifying under USACE Nationwide Permit 14 for linear projects. Impact avoidance and minimization efforts will be explored during the further design of the project, and a final wetland impact assessment will be conducted at that time.

4.3.2 Mitigation

If impact avoidance is not possible, mitigation may be required. Forested wetlands are typically mitigated at a 2:1 ratio, which would result in a worst-case requirement for creation of 0.08 acre of forested wetlands. Compensation in the form of wetland creation may be possible along Suitland Parkway where newly identified wetlands were delineated (see above). If necessary, a detailed mitigation plan will be prepared during the permit process after final design has provided a more refined assessment of the potential wetland impact.

4.4 Noise

4.4.1 Impacts

The *South Capitol Street Noise Technical Report* (DDOT, 2014) prepared for the SDEIS documented the results of updated noise analysis for the Project, specifically for the Revised Preferred Alternative (Appendix D).

The updated noise analysis evaluated 415 noise receptors based on FHWA traffic noise regulations, as prescribed in 23 CFR 772 (July 2011) and *Highway Traffic Noise Analysis and Abatement Policy and Guidance* (January 2011), and in conformance with the DDOT *Noise Policy* (April 11, 2011). Table 4-3 provides the FEIS Preferred Alternative and the Revised Preferred Alternative noise analysis results.

Table 4-3: SDEIS and FEIS Noise Analysis Results

Noise Analysis Area	Predicted Noise Levels for FEIS Preferred Alternative/ Receptor Number (dBA)*	Predicted Noise Levels for Revised Preferred Alternative/ Receptor Number (dBA)	Land Use	Noise Receptor Impacts? (Yes/No)	Proposed Noise Abatement Measure
Suitland Parkway between west of Stanton Road SE and Martin Luther King, Jr. Avenue SE	73 (R-10)	63 (1774)	Church	Yes for FEIS, No for SDEIS	None
Suitland Parkway between Martin Luther King, Jr. Avenue SE and I-295	No receptor	69 (1762)	Recreation	Yes for SDEIS	None
Suitland Parkway between I-295 and South Capitol Street	65 (R-7)	61 (1850)	School	No	None
I-295 between south of Defense Boulevard and 11th Street Bridge exit	63 (R-9) 65 (R-8)	62 (1705) 68 (1904)	Residential	No for FEIS, Yes for SDEIS	None
South Capitol Street between south of Defense Boulevard and Potomac Avenue	59 (R-11) 59 (R-13)	58 (1672) 57 (1669)	Child Develop. Center/park	No	None
South Capitol Street between Potomac Avenue and N Street	72 (R-5) 61 (R-6)	69 (1484) 56 (1663)	Residential	Yes	None
South Capitol Street between N Street and M Street	71 (R-3)	69 (1412)	Residential	Yes	None
South Capitol Street between M Street and I Street	72 (R-2) 71 (R-4)	70 (1185) 70 (1400)	School/ church	Yes	None
South Capitol Street between I Street and I-395	No receptor	68 (1171)	Recreation	Yes for SDEIS	None
South Capitol Street between I-395 and Independence Avenue	No receptor	62 (1111)	Residential	No for SDEIS	None
New Jersey Avenue between M Street and I-395	No receptor	60 (1195)	Residential	No for SDEIS	None
New Jersey Avenue between I-395 and Independence Avenue	66 (R-1) 72 (R-12)	63 (1141) 61 (1155)	Residential/ park	Yes for FEIS, No for SDEIS	None

Note: *Predicted exterior noise levels were obtained for receptors R-2 to R-12 from Table C of the *Noise Technical Report* (DDOT, 2007) for Alternative 2, which used morning peak traffic volumes in TNM® 2.5; and from Table D for receptor R-1, which used evening peak traffic volumes. These results represent the loudest noise.

4.4.2 Mitigation

Noise receptors with design year noise levels that approach or exceed the NAC for Activity Category B and C (church and recreation areas) based on the Revised Preferred Alternative were evaluated for appropriate noise abatement measures and traffic noise mitigation

feasibility and reasonableness. Noise abatement measures were considered at all location where traffic-related noise impacts are identified. The following list identifies possible noise abatement measures that were considered:

- Constructing noise barriers within the proposed right-of-way
- Modifying the proposed horizontal and/or vertical alignment of the roadway
- Acquiring property to serve as a buffer zone
- Modifying speed limits and/or restricting truck traffic
- Providing noise insulation

For a noise abatement measure to be incorporated into a project, the measure must be determined to be both feasible and reasonable. For this project, noise barriers were determined to be the feasible, most practical and effective noise abatement measure, and are thus the only measure evaluated in detail to determine reasonableness. The other four abatement measures were evaluated and considered not to be feasible and reasonable. The determination of feasibility and reasonableness for each common noise environments (CNEs) warranting the consideration of noise abatement measures, and reasons why other noise abatement measures were not deemed feasible/reasonable are explained in Section 3.0 of the updated *South Capitol Street Noise Technical Report* (see in Appendix D).

Three noise barriers were evaluated:

- A 1,223-foot-long noise barrier at heights of 12, 14, 18, and 20 feet on the west side of Suitland Parkway between Martin Luther King, Jr. Avenue SE and I-295.
- A 1,603-foot-long noise barrier at heights from 10 to 22 feet on the south side of I-295 between south of Defense Boulevard and 11th Street Bridge exit.
- A 947-foot-long noise barrier at heights of 10, 12, 14, and 22 feet on the west side of South Capitol Street between I Street and I-395.

The initial noise barrier evaluation of feasibility and reasonableness was performed in accordance with the 2011 DDOT Noise Policy, using an estimated cost of construction of $25 per square foot. The FHWA allows DDOT to consider the actual construction cost of noise abatement, which may include any other costs associated with the barrier. The analysis was subsequently performed using a noise barrier construction cost of $100 per square foot to realistically reflect typical local costs to construct noise barriers. At $100 per square foot, all 3 noise barriers, at all heights, exceeded the threshold cost of $40,000 per benefited receptor and therefore, are not cost reasonable.

4.5 Water Quality

4.5.1 Impacts

The current preliminary fixed bridge design includes four bridge piers within the Anacostia River impacting 20,368 square feet of riverbed. Based on the conceptual design solution using drilled shaft piles of about 8 to 9 feet in diameter, the pile tip elevations for the in-water piers are likely to be of the order of minus 100 feet, which would translate to be approximately 80 feet below the riverbed level.

4.5.2 Mitigation

Section 4.12 provides information regarding BMPs for mitigation. Additional information can be found in Appendix E, the *Supplemental Natural Resources Technical Report* (DDOT, 2014).

The riverbed impacts qualify for a USACE Nationwide Permit 15 for USCG approved bridge construction. As mentioned in Section 4.12.6, a Clean Water Act Section 401 Water Quality Certification would also be required for any construction related discharge to the Anacostia River. In addition, NPS has jurisdiction of the riverbed and therefore, the Project would need to obtain authorization from the NPS in order to construct the piers necessary to support the new bridge.

4.6 Wildlife and Habitats

4.6.1 Impacts

Up to 42 specimen/special trees and larger forested areas would be impacted by the Revised Preferred Alternative.

In April of 2012, the Atlantic sturgeon became listed as an endangered species under the Endangered Species Act. A preliminary *Biological Assessment (BA) for the Atlantic Sturgeon* (DDOT, 2014) for the Atlantic sturgeon was prepared in 2014 to evaluate potential impacts to the species from the Revised Preferred Alternative. The biological assessment (Appendix F) determined that the likelihood of occurrence of Atlantic sturgeon within the Anacostia River is extremely low and that conservation measures agreed to during consultation for the shortnose sturgeon would also apply for the Atlantic sturgeon. The biological assessment resulted in a determination by the National Oceanic and Atmospheric Admininstration that no direct or indirect effects to the Atlantic sturgeon are expected.

Under the *Migratory Bird Treaty Act of 1918* (16 USC 703-712), removal of an active osprey or peregrine falcon nest from the Frederick Douglass Memorial Bridge before demolition would require a permit from the USFWS. However, removal of nests without eggs or young does not require a permit. Ospreys begin nesting in late March or early April and leave the area in late August or early September. Peregrine falcons begin laying eggs in late February and early March and young typically leave the nest by August.

4.6.2 Mitigation

Impacts on up to 42 specimen/special trees and larger forested areas may be reduced during the avoidance and minimization efforts undertaken during the design-build process. Any remaining specimen/special tree impacts will be offset through designed landscape tree plantings within the Project Area. Many of these newly planted trees will have the opportunity to become specimen/special trees over time. Little opportunity exists to create forested habitat within the urbanized Project Area. However, some small, open woodland habitat will be created through the landscape design process of the Project.

Therefore, the Project should remove all inactive osprey and peregrine falcon nests on structures to be demolished, and keep any new nests from being constructed by continuously removing any new nesting material that is added. For occupied nests needing to be relocated, coordination must occur with USFWS to secure a Migratory Bird Treaty Act permit. The permit will likely include the placement of an alternative nest platform for the osprey and installation of a nest box on the new bridge structure for the peregrine falcon. Relocation has been successfully demonstrated with ospreys in Maryland, where a new nest platform was constructed on the Chesapeake Bay Bridge to relocate a nest away from a traffic camera (Wheeler 2014). Peregrine falcon nest relocation is planned for the Tappan Zee Bridge over the Hudson River in New York, where a pair currently is using a nest box on the existing bridge (Tappan Zee Hudson River Crossing Project Environmental Impact Statement 2012).

4.7 Geology, Topography and Soils

4.7.1 Impacts

Construction of the Revised Preferred Alternative would require grading of existing land surfaces for placement of new roadway components, primarily near the new Frederick Douglass Memorial Bridge approaches. Both the west traffic oval and the east traffic oval would require some grading, predominantly using fill material. Topography is relatively flat in these areas and soil erosion during construction is expected to be minimal. In addition, the majority of the construction would occur in areas with an already high level of urban ground disturbance.

The geometry of the east traffic oval will replicate the west traffic oval. However, the open space outside of the formal streetscape will have an informal, park-like character that blends with the neighboring Anacostia Park and Suitland Parkway. The vertical profile and landscaping of the traffic oval will be designed to enhance gateway views and sense of arrival for vehicles transitioning from South Capitol Street and Suitland Parkway through the east traffic oval and onto the bridge. Therefore, the east traffic oval will have grades in which the east and north ends of the traffic oval will have slightly higher elevations to enhance gateway views from the perspective of motorists.

The Revised Preferred Alternative changed the proposed interchange at the Suitland Parkway/Martin Luther King, Jr. Avenue SE overpass. Under the FEIS Preferred Alternative, the new interchange would have introduced a center ramp that would have substantially altered

the topographic conditions on the parkway at the Martin Luther King, Jr. Avenue SE overpass. The change to an urban diamond interchange would better maintain the existing topography of the parkway at the overpass.

4.7.2 Mitigation

No mitigation measures are required.

4.8 Cultural Resources

Effects assessments are based on the criteria of adverse effect as defined in 36 CFR 800.5 "Assessment of Adverse Effects." According to this portion of the regulations, the criteria of adverse effect are defined as follows:

> "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative."

Examples of adverse effects are identified in 36 CFR 800.5 and include, but are not limited to, the following:

- Physical destruction of or damage to all or part of the property
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (36 CFR 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or Native Hawaiian organization and
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

4.8.1 Built Historic Properties

Twenty-three built historic properties are located within the revised Area of Potential Effects (APE) for the Revised Preferred Alternative. These properties are either listed in or eligible for listing in the NRHP; or designated as NHLs; or potentially eligible for listing in the NRHP. The Project has no effect on two historic properties; no adverse effect on twenty historic properties; and an adverse effect on one historic property, the L'Enfant Plan of the City of Washington, DC. The Revised Preferred Alternative will alter the historic L'Enfant Plan in the vicinity of South Capitol Street and Potomac Avenue SW, in the location of the proposed traffic oval, changing the street grid in the vicinity of Q and R Streets SW and the axial alignment of Potomac Avenue SW.

Figure 3-10 shows the historic properties on the revised APE map and Table 4-4~~Table 4-4~~ includes each property's effect assessment. The FEIS Preferred Alternative would have an adverse effect on the Suitland Parkway because of proposed changes to the parkway and Martin Luther King, Jr. Avenue overpass. The Revised Preferred Alternative avoids these impacts and there no longer will be an adverse effect to the Suitland Parkway. The *South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) contains detailed assessments of effects. A draft version of this report was be submitted in early August 2014 to the DC SHPO and consulting parties for review and comment. A final version will be submitted to the DC SHPO and consulting parties in October 2014 and is included as Appendix G to this document.

4.8.2 Archaeological Resources

There are four previously identified archaeological sites within the South Capitol Street Project's Revised APE: Sites 51SE012, 51SE024, 51SE034 (Howard Road Historic District) and 51SE071. However, none are located in areas where construction-related soil disturbance are anticipated. These sites are either located outside the LOD; are deeply buried in historic fill and will not be affected by the Project-related construction activities; or the portion of the site within the LOD has been disturbed by construction from other projects. The Proposed Preferred Alternative will have no effect on previously identified archaeological resources.

Although design changes included in the SDEIS will result in modifications to the FEIS project LOD, there are no additional archaeological sites within the LOD. As a result, there are no effects to previously recorded archaeological sites. The archaeological resources within the LOD were evaluated and the potential to affect previously unidentified archaeological resources is minimal. Therefore, additional archaeological investigation of the LOD is not recommended. The results, contained in the *Draft South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) was submitted to the DC SHPO for review and comment in August 2014. In correspondence dated September 18, 2014, the DC SHPO concurred with the project's archaeological assessments.

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
1		*Capitol Hill Historic District* Roughly bounded by the United States Capitol and related buildings to west, F Street NE and Constitutional Avenue to the north, 14th, 13th, and 11th Streets SW to the east, and the Washington Navy Yard and Southeast-Southwest Freeway to the south	Primarily a residential area with 2- to 3-story row houses and small frame houses in a variety of architectural styles including Federal, Italianate, Greek Revival, Queen Anne, Romanesque Revival, and vernacular interpretations; began as boarding house community for members of Congress; one of the city's oldest and its largest residential community; includes contributing religious, commercial, institutional, and military buildings as well as several parks.	Listed	No Adverse Effect
2		*Randall Junior High School (Francis L. Cardozo Elementary School)* 61 I Street SW	1906 main block building is a 2-story 7-bay-wide building clad in red brick laid in Flemish bond with limestone trim and detailing accessed by a Colonial Revival entrance; a similar style freestanding building (1912) in red brick was later attached to the main building via the west wing (1927); 1-story red brick east wing (1927) houses the auditorium; later additions do not contribute to the property's significance.	Listed	No Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
3		*Capitol Police Horse Barn/Former D.C. Dog Pound* Intersection of I Street SW and South Capitol Street	1-story I-plan utilitarian building clad in brick with a wide entry (infilled) and five stall openings along the west elevation; 1943 map labels building as "DC Pound," but originally built as Capitol Police Horse Barn.	Eligible	No Adverse Effect
4		*St. Vincent de Paul Church* 14 M Street SE	1903 1½-story Romanesque Revival-style building with ashlar-cut granite block walls and limestone trim; a 1-story rectory (1921) is located east of building; the rectory was renovated and connected to the building ca. 1965 and does not contribute to the property's significance.	Eligible	No Adverse Effect
5		*Southwest Rowhouse Historic District/Carrollsburg Place* 1200 Block of Carrollsburg Place SW, 1200 Block of Half Street SW, east side, 4-10 N Street SW, 1301-1317 South Capitol Street	Residential historic district with a collection of modest 2-story brick rowhouses constructed for working-class residents; includes an early public housing prototype (Carrollsburg Place) constructed by the Sanitary Housing Commission; includes one non-contributing commercial building; survived mid-20th century urban renewal efforts that razed the majority of the southwest quadrant.	Eligible	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
6		*William Syphax School* 1360 Half Street SW	1902 2-story Colonial Revival-style public school building; 3-bay-wide building has red brick walls and terra-cotta, wood, and wrought iron trim; 2-story additions (1941; 1953) built to the north were also executed in the Colonial Revival style.	Listed	No Effect
7		*National War College (Army War College)* Fort Leslie J. McNair, P Street, between 3rd and 4th Streets SW; bounded by D Street SW to the north, the Anacostia River to the east, the Anacostia River to the south, and the Potomac River's Washington Channel to the west.	3-story Neoclassical style building constructed following a Beaux-Arts plan with red brick walls and limestone trim; features a domed central pavilion and two lateral 12-bay-wide wings; faces north onto a quarter-mile greensward.	National Historic Landmark	No Adverse Effect
8		*PEPCO Buzzard Point Power Plant/Pump House* The PEPCO Buzzard Point Power Plant is located at 1930 1st Street SW; the PEPCO Buzzard Point Power Plant's Pump Station is located at 2000 Half Street SW	3-story "stripped" Art Deco-style power plant with buff-colored brick walls and a 1-story cast stone office (facade); expanded twice to increase the number of generators (1940; 1943); associated 2-story brick pump station is a contributing resource and the pump station's setback second story is an addition.	Eligible	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
9		*WASA Poplar Point Pump Station* Located in a narrow strip of land in the middle of the Suitland Parkway's inbound and outbound lanes as it approaches the Frederick Douglass Memorial Bridge	2-story stripped Art Deco-style pump station with concrete and pebbled stucco walls; first-story windows are infilled with concrete blocks and the second-story windows have been replaced.	Eligible	No Adverse Effect
10		*St. Elizabeths Hospital* 2700 Martin Luther King, Jr. Avenue SE	The hospital's 182-acre campus is a historic district that includes 80 contributing buildings, one contributing site, one contributing structure, and 15 noncontributing buildings; the Gothic Revival-style Center Building (1853-1895) was the first building erected on the hospital's grounds and other contributing buildings were designed in period revival styles; one of the nation's earliest institutions for the treatment of mental illness.	National Historic Landmark	No Adverse Effect
11		*Suitland Parkway* Extends from the Anacostia River at South Capitol Street to the Marlboro Pike, Maryland	Parkway linking Andrews Air Force Base with the District of Columbia; 9.18 miles of roadway (2.8 in the District of Columbia and 6.38 in Maryland); authorized in 1937; a new type of road that combined parkway principles with freeway efficiency.	Listed	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
12		*Recommended Anacostia Historic District Boundary Expansion* Roughly bounded by Shannon Place SE, Chicago Street SE, Martin Luther King, Jr. Avenue SE, Howard Road, CSX Railroad tracks	The Anacostia Historic District (NRHP 1978) includes buildings constructed between 1870 and 1930, and includes residential, religious, and commercial buildings; the boundary expansion includes 99 contributing building and the majority of these resources date to the 1910s and '20s; resources include wood frame and brick residential, educational, religious, and commercial buildings and reflect Anacostia's continued development through the mid 20th century; contributing resources were built within the Anacostia District's period of significance (1854-1940). The proposed boundary expansion increases the district boundaries.	Eligible	No Adverse Effect

13		*Anacostia Park* Along the Anacostia River from the Douglass Bridge to the District of Columbia boundary	1,200-acre park that is one of the district's largest recreational areas; created from mud flats during the early 20th century as an integral part of the 1902 McMillan Plan the District of Columbia; became the Bonus Army's base of operation for petitioning the government (1932) and a shantytown was established; site of golf course constructed by the government (1930s) for African Americans to forestall desegregation of public facilities.	Eligible	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
14		*WASA Anacostia Shoreline Pump Station* Located on the Anacostia River's south bank at an elbow in the river known as Poplar Point	Small 1-story pavilion built in a split-level fashion with red brick walls and decorative stone trim; provides shelter for control wheels and valves; associated with the Main Sewerage Pumping Station and is the closest landfall for sewer pipes crossing beneath the Anacostia River from the main pumping station.	Eligible	No Adverse Effect
15		*Old National Capitol Pumphouse* Sits on piers adjacent the Anacostia River's west bank, south of the intersection of Potomac Avenue SE and 1st Street SE	1-story rectangular-plan pumphouse with red brick walls; Mediterranean-influenced design.	Eligible	No Adverse Effect
16		*Main Sewerage Pumping Station, District of Columbia* 125 O Street SE	Beaux Arts sewage pumping station reflecting late Renaissance Revival-style features; steel-frame building with red brick walls, featuring stone quoins, beltcourses, cornice brackets, pediment dormers, and capitals.	Listed	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
17		*Washington Navy Yard Annex Historic District* Bounded by M Street SE to the north, Isaac Hull Avenue to the east, the Anacostia River to the south, and 2nd Street SE to the west	Westward development of the Washington Navy Yard that includes one of the city's largest concentrations of industrial architecture; 60-acre complex; major site of U.S. naval gun manufacture since ca. 1850 and served as the center of naval weapons production during World Wars I and II; renamed the Naval Gun Factory in 1945 and production stopped in 1962.	Listed	No Adverse Effect
18		*Washington Navy Yard Historic District* 8th and M Streets SE (Main Entrance), bounded by the Anacostia River to the south	Late Victorian-era, 42-acre district includes approximately 45 major historic buildings and structures as well as numerous support buildings; design initiated by Benjamin Latrobe — selected by Thomas Jefferson. Served as a site for naval shipbuilding and later for naval gun manufacture.	National Historic Landmark	No Adverse Effect
19		*Washington Navy Yard East Extension* Bounded by M Street SE to the north, the Anacostia River to the south, and 2nd Street SE to the west	Eastward development of the existing Washington Navy Yard beginning in 1902 with the most comprehensive building campaign dating from circa 1918-1944. Work conducted in this portion of the Washington Navy Yard was critical to naval weapons development and testing during World Wars I and II.	Eligible	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
20		*The L'Enfant Plan of the City Washington, DC* Roughly bounded by Florida Avenue from Rock Circle NW to 15 Street NE, south to C Street, and east to the Anacostia River	Baroque city plan with Beaux Arts modifications; designed by Pierre L'Enfant; regular orthogonal grid with numerically and alphabetically designated streets, intersected by diagonal avenues; historic and contemporary system of parks and medians; 1901-02 McMillan Commission recommendations resulted in physical changes for urban development; contributing features include but are not limited to avenues, parks, and reservations.	Listed	Adverse Effect
21		*United States Capitol* Capitol Hill	English Neoclassical/Federal design that represents the work of architects William Thornton, Benjamin Henry Latrobe, Charles Bulfinch, and Thomas U. Walter. Characterized by horizontal massing topped by a dome and adorned with attenuated elements and lavish Corinthian motifs.	NHL	No Adverse Effect

Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~Table 4-4: Eligible/Listed/NHL Historic Properties in the Revised Area of Potential Effects with Effects Assessments~~ (continued)

Historic Property Identifier	Photograph	Name/Location (District of Columbia)	Description	NRHP Status	Effect Assessment
22		USS *Barry* (DS *Barry*; note that the historic name is being used for the Section 106 assessment) Anacostia River, Washington Navy Yard	Commissioned in 1956 by the US Navy and constructed in Bath, Maine, the USS *Barry* (DD-933) is a 2,780-ton Forrest Sherman class destroyer named in honor of Commodore John Barry (1745-1803). After that second tour, the USS *Barry* was decommissioned in November 1982. The ship has been moored at the Washington Navy Yard since 1983.	Potentially Eligible (The Navy and the DC SHPO are currently resolving eligibility; ship is being treated as eligible for Project purposes only.)	No Adverse Effect
23		*Skyline Inn* 10 I Street SW	Seven-story hotel building completed in 1963. Designed by architect Morris Lapidus, while he led the firm Lapidus, Harle & Liebman. Although restrained and originally designed with a Colonial Revival interior in response to Washington's more conservative architectural milieu, the building responds to architectural tenets of the modern era. The Skyline Inn was the Southwest's first hotel, constructed as a result of the urban renewal project carried out in Southwest Washington between 1945 and 1973.	Eligible per comments from the DC SHPO on September 18, 2014	No Adverse Effect

Note: NRHP = National Register of Historic Places

4.8.3 Effects Summary

The Project will have an adverse effect to historic properties due to an adverse effect to the L'Enfant Plan of the City of Washington, DC. The plan's axial grid will be interrupted by the introduction of the west oval. However, the Revised Preferred Alternative will no longer directly impact the Martin Luther King, Jr. Bridge over the Suitland Parkway as was proposed in the FEIS; therefore, the Project will have no adverse effect to the Suitland Parkway.

For other historic properties, construction activities will have minor effects, but will not constitute adverse effects to character-defining features. These effects potentially include the short-term presence of construction equipment and vehicles, and associated noise, rerouted traffic, odors from construction materials, dust, and mud in areas near some historic properties. A detailed assessment of effects to historic properties is presented in the *Draft South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) that was submitted in early August 2014 to the DC SHPO and consulting parties for review and comment. The revised *South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) will be submitted to the DC SHPO and other consulting parties in October 2014 and is included as Appendix G of this document. The Project's MOA will be amended to address the adverse effect to the L'Enfant Plan of the City of Washington, DC, and any other measures developed during consultation with the DC SHPO, consulting parties, and other signatories.

There are no archaeological sites within the LOD that are listed in or eligible for listing in the NRHP. Therefore, the Revised Preferred Alternative would have no adverse effects on previously identified archaeological sites. The potential for archaeological impacts within the LOD are minimal and no additional investigations are recommended.

4.8.4 Mitigation

The Memorandum of Agreement Among the Federal Highway Administration, the District of Columbia State Historic Preservation Office, the National Capital Planning Commission, the Advisory Council on Historic Preservation, and the District Department of Transportation, Regarding the South Capitol Street Project within the District of Columbia (MOA) (ACHP et al., 2011) completed during the FEIS phase and executed in 2011 will be revised to consider changes introduced by the Revised Preferred Alternative. The DC SHPO and consulting parties will be consulted to resolve effects and revise the MOA. The MOA design review milestones will be revised to incorporate the design-build process.

The Section 106 revised MOA would contain provisions to address the continued evaluation of potential impacts on archaeological sites during the design phases of the Project. The MOA would address potential treatment of unanticipated archaeological sites discovered during construction.

4.9 Visual Quality

4.9.1 Methodology

The FEIS Preferred Alternative and the Revised Preferred Alternative used the same methodology to evaluate visual impacts, based on the FHWA publication V*isual Impact Assessment for Highway Projects* (FHWA, 1981). The methodology calculated a Visual Quality Rating (VQR) based on an average of scoring for the following criteria:

- Vividness – The visual power (or memorability) of the landscape components as they combine in a striking and distinctive visual pattern. Vividness focuses on the features of the landscape.
- Intactness – The visual integrity of the landscape (natural and man-made) and its freedom from encroaching elements. If all the various elements of a landscape seem to "fit" together, there would be a high level of intactness.
- Unity – The visual harmony of the landscape considered as a whole. Unity represents the degree to which the visual elements maintain a coherent visual pattern.

A rating from 1 (very low visual quality) to 7 (very high visual quality) points was assigned to each criterion when evaluating the quality of the visual environment under existing conditions and the build alternatives. A high rating for a single criterion would not, by itself necessarily lead to high visual quality if the other two criteria had low ratings because an average is calculated of all three criteria.

Visual Quality Differences (VQDs) are determined by comparing the VQRs between the existing conditions, and both the FEIS Preferred Alternative and the Revised Preferred Alternative. If the Revised Preferred Alternative has a higher positive VQD than the FEIS Preferred Alternative, this indicates that the design changes made to the Project will improve or enhance the visual quality of the identified landscape unit above what was documented in the FEIS. If the Revised Preferred Alternative has a lower VQD than the FEIS Preferred Alternative, this indicates that the Revised Preferred Alternative will not improve or enhance the visual quality of the identified landscape unit to the degree documented in the FEIS for the FEIS Preferred Alternative.

Some of the visual elements or characteristics of the Revised Preferred Alternative were determined based on elements in the *Visual Quality Manual, South Capitol Street Corridor, Phase 1 - Segments 1 and 2* (DDOT et al., 2014), which is summarized in Section 2.4. Prospective designer/contractors for Segments 1 and 2 of the Project will be required to follow the *Visual Quality Manual* in preparing their technical proposals since the selection process will consider the visual aspects of the proposals (see Section 2.4 for further information). Compliance with the *Visual Quality Manual* promotes a level of consistency for visual impacts of the Project.

4.9.2 Potential Impacts

The visual impacts of the Revised Preferred Alternative are described within the context of the applicable landscape units identified in the FEIS, which include:

- Landscape Unit #1: South Capitol Street
  - Subarea #1: Western end of Frederick Douglass Memorial Bridge to M Street
  - Subarea #2: At M Street
  - Subarea #3: North of M Street
- Landscape Unit #2: Frederick Douglass Memorial Bridge
- Landscape Unit #3: South Capitol Street Southeast
- Landscape Unit #4: Suitland Parkway
- Landscape Unit #5: Howard Road SE
- Landscape Unit #6: Martin Luther King, Jr. Avenue SE
- Landscape Unit #7: Anacostia Park
- Landscape Unit #8: New Jersey Avenue SE

The first phase of the Project (Segments 1 and 2) will be located partially within Landscape Unit #1, Subarea #1 and Landscape Unit #4, and fully within Landscape Units #2, #3 and #7. The second phase of the Project (Segments 3 through 5) will be located fully within Subareas #2 and #3 of Landscape Unit #1, and Landscape Units #6 and #8, and partially located within Landscape Unit #4. No elements of the Revised Preferred Alternative are within Landscape Unit #5.

Table 4-5 summarizes the VQDs comparing existing conditions with the FEIS Preferred Alternative and the Revised Preferred Alternative. The VQRs under existing conditions are the same as that documented in the FEIS. As noted in Section 3.1.1, the overall visual environment of the Project Area, as described by using the landscaped units identified above, were essentially the same since publication of the FEIS. However, some changes in the visual environment did occur since the FEIS, particularly within Landscape Unit #4 due to ongoing development.

Table 4-5: Summary of Visual Quality Evaluation

Landscape Unit/ Subarea	Visual Quality Rating			Visual Quality Difference	
	Existing Conditions	FEIS Preferred Alternative	Revised Preferred Alternative	FEIS Preferred Alternative	Revised Preferred Alternative
#1, Sub 1: South Capitol Street, Bridge to M Street	1	6	6	5	5
#1, Sub 2: South Capitol Street, M Street	1.7	6.7	6.7	5	5
#1, Sub 3: South Capitol Street, North of M Street	2	6.3	6.7	4.3	4.7
#2: Frederick Douglass Bridge	0.83	7	7	6.17	6.17
#3: South Capitol Street SE	0.67	6.3	7	5.7	6.3
#4: Suitland Parkway	2.7	6	6.7	3.3	4
#5: Howard Road SE	4	4	4	0	0
#6: Martin Luther King, Jr. Avenue SE	4.7	4	4.7	-0.7	0
#7: Anacostia Park	3.3	6	6	3.7	3.7
#8: New Jersey Avenue SE	6	6.3	6.3	0.3	0.3

The development of the Revised Preferred Alternative did not change the VQR and VQD scores of the FEIS Preferred Alternative for Landscape Units #1 (Subareas #1 and #2), #2, #5, #7 and #8. The table shows that the Revised Preferred Alternative did not change the conclusions documented in the FEIS that the Project would result in substantially improved visual quality. The specific visual evaluations by landscape unit are provided below.

Landscape Unit #1, Subarea #1: South Capitol Street from the Western End of Frederick Douglass Memorial Bridge to M Street

The existing conditions of Landscape Unit #1, Subarea #1 lacks vividness, intactness, and unity and, therefore, was given a very low VQR (see Table 4-6). The visual environment is dominated by the new Nationals Park on the east side of the street, some commercial and residential developments on the west side of the street, and industrial activities beyond the west side of the corridor. Redevelopment activities create disjointed visual scenes between new and old buildings, which should persist for a number of years.

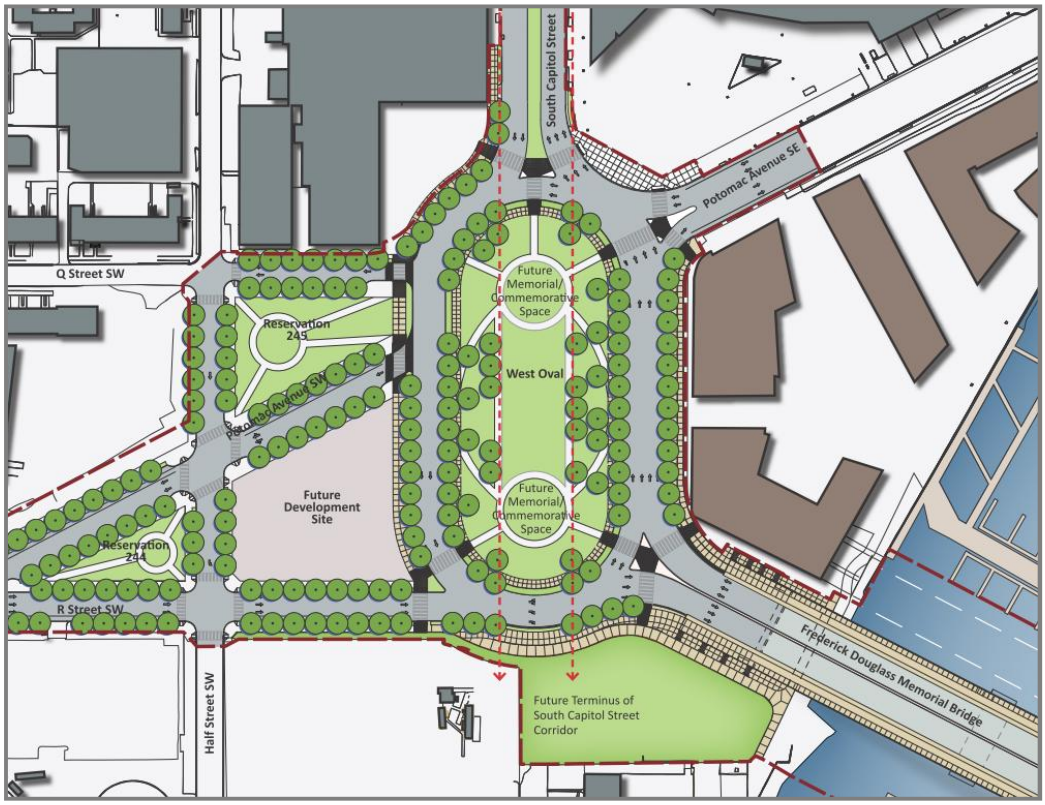
Table 4-6: Visual Quality Evaluation, Landscape Unit #1, Subarea #1

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	1	1	1	1	NA
FEIS Preferred Alternative	6	6	6	6	5
Revised Preferred Alternative	6	6	6	6	5

The FEIS Preferred Alternative included construction of a west traffic oval that would connect South Capitol Street, Potomac Avenue and Q Street. The west traffic oval was the major difference in visual quality between the FEIS Preferred Alternative and the existing conditions within this subarea of Landscape Unit #1. The west traffic oval would create a substantial change to the existing character of the area from industrial land uses to large sections of green space, which resulted in a high VQR. Hard (traffic signals/street lamps) and soft (landscaping) elements were planned for the traffic oval. When coupled with the riverfront park and Nationals Park, the west traffic oval would create spatial relationships between the built and natural environments conducive to non-motorized transportation.

The Revised Preferred Alternative maintained the proposal to create the west traffic oval, but within a slightly smaller area. The form of the west traffic oval will be consistent with L'Enfant's overarching geometric strategy where diagonal intersecting avenues are superimposed on standard urban street grids to create grand viewsheds. The viewsheds will be physically defined as the space between the outermost curbs of streets. As one of the most prominent viewsheds in the District, the preservation of views along the South Capitol Street and Potomac Avenue axes will be paramount in the design of the west traffic oval (see Figure 4-4). Therefore, no trees, signs, or other visual obstructions will be placed within these viewsheds. Keeping the west traffic oval within Landscape Unit #1, Subarea #1 and the incorporation of the visual elements that were developed for this Project kept the high VQR for the Revised Preferred Alternative.

Figure 4-4: Conceptual Plan for the West Traffic Oval



Landscape Unit #1, Subarea #2: South Capitol Street, M Street

Under existing conditions, the VQR of Landscape Unit #1, Subarea #2 is very low (see Table 4-7). The intactness was found to be lacking, and the vividness and unity were only helped by having a view of the U.S. Capitol on the north side of the intersection. In general, the visual character is dominated by the M Street overpass, with the depressed portion of South Capitol Street leading to a disconnect with the surrounding street grid and land uses. The grade-separation of the intersection serves as a visual and psychological barrier for pedestrians and motorists, which discourages interaction and connectivity along South Capitol Street.

Table 4-7: Visual Quality Evaluation, Landscape Unit #1, Subarea #2

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	2	1	2	1.7	NA
FEIS Preferred Alternative	7	6	7	6.7	5
Revised Preferred Alternative	7	6	7	6.7	5

The physical changes to the South Capitol Street and M Street intersection under the FEIS Preferred Alternative were evaluated as providing a substantial improvement to the VQR. With an at-grade intersection, along with textures, colors and shapes associated with new street lamps, crosswalks and raised medians, the spatial relationship between South Capitol Street and M Street would be improved, and the street would be substantially more pedestrian friendly. In addition, removal of the bridge and retaining walls would provide clear uninterrupted views of the U.S. Capitol Dome, the Frederick Douglass Memorial Bridge (existing and new), and brief glimpses of the Anacostia River for motorist and pedestrians. These viewshed improvements would provide a high degree of contrast from existing views within this landscape unit, substantially increasing the visual characteristics of vividness, intactness, and unity.

Although the precise lane configuration of the rebuilt South Capitol Street/M Street intersection was changed in the Revised Preferred Alternative, the conversion to an at-grade intersection with accompanying street lamps, crosswalk and raised median will be maintained. It will maintain the visual benefits of providing clear uninterrupted views of important viewsheds. Therefore, the VQR did not change with the development of the Revised Preferred Alternative.

Landscape Unit #1, Subarea #3: South Capitol Street, North of M Street

Under existing conditions, landscape Unit #1, Subarea #3 was evaluated as having a low VQR because of its limited vividness, intactness, and unity along the section of South Capitol Street north of M Street (see Table 4-8). Although the visual environment is dominated by views of the U.S. Capitol Dome, the quality of this view is adversely affected by the presence of the I-695 interchange and the railroad bridge that crosses South Capitol Street. Other visual aspects of the Project Area are its high level of automobile-oriented with large expanses of asphalt,

commercial land uses, and limited vegetation. A continuous concrete barrier separates the northbound and southbound travel lanes from M Street north to I Street.

Table 4-8: Visual Quality Evaluation, Landscape Unit #1, Subarea #3

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	2	2	2	2	NA
FEIS Preferred Alternative	7	6	6	6.3	4.3
Revised Preferred Alternative	7	7	6	6.7	4.7

The FEIS Preferred Alternative was evaluated as having a positive visual influence in Landscape Unit #1, Subarea #3 mainly for removing and replacing the existing ramp to I-695 and for making streetscape modifications to make South Capitol Street into an urban boulevard, including the addition of a landscaped median. These changes would create more efficient sightlines that allow motorists and pedestrians a less encumbered view of the U.S. Capitol Dome. In addition, the streetscape modifications would improve spatial relationship among the road, various businesses, and the Randal Recreation Center, which are now affected by the I-695 ramps.

The Revised Preferred Alternative would maintain the elements of the FEIS Preferred Alternative on South Capitol Street north of M Street. In keeping with the objective of making South Capitol Street into an urban boulevard, the Revised Preferred Alternative would modify the eastbound I-695 off-ramp into an urban interchange ramp with South Capitol Street, and would add streetscape improvements extending from the I-695 interchange to D Street. It would incorporate the same type of ramp proposed under the FEIS Preferred Alternative for northbound South Capitol Street to westbound Southeast-Southwest Freeway movements. The urban interchange ramp would present a less intrusive element in Landscape Unit #1, Subarea #3 and would improve the positive visual influence, in particular the intactness of the environment by being more conducive to an urban boulevard. Therefore, Revised Preferred Alternative was evaluated has having a VQR slightly higher than the FEIS Preferred Alternative for Landscape Unit #1, Subarea #3.

Landscape Unit #2: Frederick Douglass Memorial Bridge

The visual elements of the existing Frederick Douglass Memorial Bridge landscape unit was found to sporadic and disjointed, which resulted in very low VQR (see Table 4-9). Pedestrians and cyclists traveling on the bridge have a higher visual experience than motorists based on their slower speed of travel and visual access from the edges of the bridge. For pedestrians and cyclists, Anacostia River and Park, the Washington Navy Yard, the U.S. Capitol Dome, and the Washington Monument can be seen from the bridge structure. However, these resources are geographically separate and do not combine for one visual experience.

Table 4-9: Visual Quality Evaluation, Landscape Unit #2

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	1.5	1	0	0.83	NA
FEIS Preferred Alternative	7	7	7	7	6.17
Revised Preferred Alternative	7	7	7	7	6.17

The new bridge of the FEIS Preferred Alternative was envisioned to be a distinctive and architecturally notable structure that enhances the visual setting of the Anacostia River waterfront and the South Capitol Street Corridor. The FEIS Preferred Alternative included an arched bascule design for the bridge, a classical architectural form inherent in other notable bridges in the District, such as the Arlington Memorial Bridge. The bridge would have consisted of a series of long-span, variable-depth box girders.

From an elevated view, these girders would have provided the appearance of a series of graceful, long span arch structures springing from the water surface. The long spans would minimize the number of pier elements in the viewshed of the Anacostia River. To lessen the perception of mass, the eastbound and westbound roadways would be designed as an independent structure, separated by a gap that would provide an avenue of natural light. The double-leaf bascule span would provide an aesthetic continuity, and the curved architectural cladding would be fastened to the bascule to maintain elevation continuity. For these reasons, the new bridge under the FEIS Preferred Alternative was evaluated as greatly improving the visual quality along the Anacostia River (see Table 4-9).

According to the *Visual Quality Manual* developed for the Project: "The design of the Frederick Douglass [Memorial] Bridge will create the new benchmark for civic design along the entire Anacostia River. It needs to set the standard for the investments that will follow." To meet this goal, the design requirements for the new bridge must:

- Create an elegant and iconic new bridge that respects the classical repose of the District's monumental bridges and grounded in the traditions of great civic design in the District
- Create an urban gateway to the city's Monumental Core that celebrates the passage across the river and into the historic street pattern of the District
- Enhance the view and urban vistas throughout the Project Area with emphasis on historic views, views of the new bridge from various locations, views along and across the Anacostia River to enhance broad urban vistas, and new views of the District and public places
- Harmonize the proposed scale and height of the new bridge with planned growth in the surrounding neighborhoods
- Showcase the Anacostia River as a valuable natural resource, including providing enhanced bicycle and pedestrian access on both shorelines

- Create a network of great urban open spaces to introduce high-quality, people-oriented urban parks
- Utilize materials that are timeless in the appearance, exceptionally durable and inspired by the great civic architecture of the District
- Pursue state-of-the-art landscape design that attracts and supports intensive pedestrian activity, as well as integrating best management practices to support sustainable river restoration strategies
- Interpret the cultural legacy of Frederick Douglass into the design of the bridge

For purposes of evaluating the environmental impacts of the Revised Preferred Alternative, a conceptual design plan for the new bridge was developed to illustrate the above design requirements, including having a horizontal alignment parallel to the existing bridge (see Figure 4-5), and reflecting the District of Columbia's tradition of carefully proportioning arched forms in a contemporary structure. As shown on Figure 4-6, the conceptual design illustrates a haunched form with a minimum of 42 feet vertical clearance for navigation. With a bridge that meets these design criteria, the evaulation in the FEIS that the Project will greatly improve the VQR in Landscape Unit #2 will remain valid for the Revised Preferred Alternative.

The process that DDOT is using to solicit design-build proposals for the construction of Segments 1 and 2 of the Project includes criteria that could potentially lead to the selection of a design for the new Frederick Douglass Memorial Bridge that better addresses the design requirments noted above. A review process of visual quality concepts submitted by each short-listed team for the design-build process involves staff from the NCPC, DC SHPO, OP, and the U.S. Commission of Fine Arts will confirm that the selected designer/contractor's proposal meets the visual design requirements of the Project. Therefore, for Landscape Unit #2, the VQR for the Revised Preferred Alternative will remain the same as the VQR for the FEIS Preferred Alternative.

Figure 4-5: Conceptual Design Plan of the New Frederick Douglass Memorial Bridge

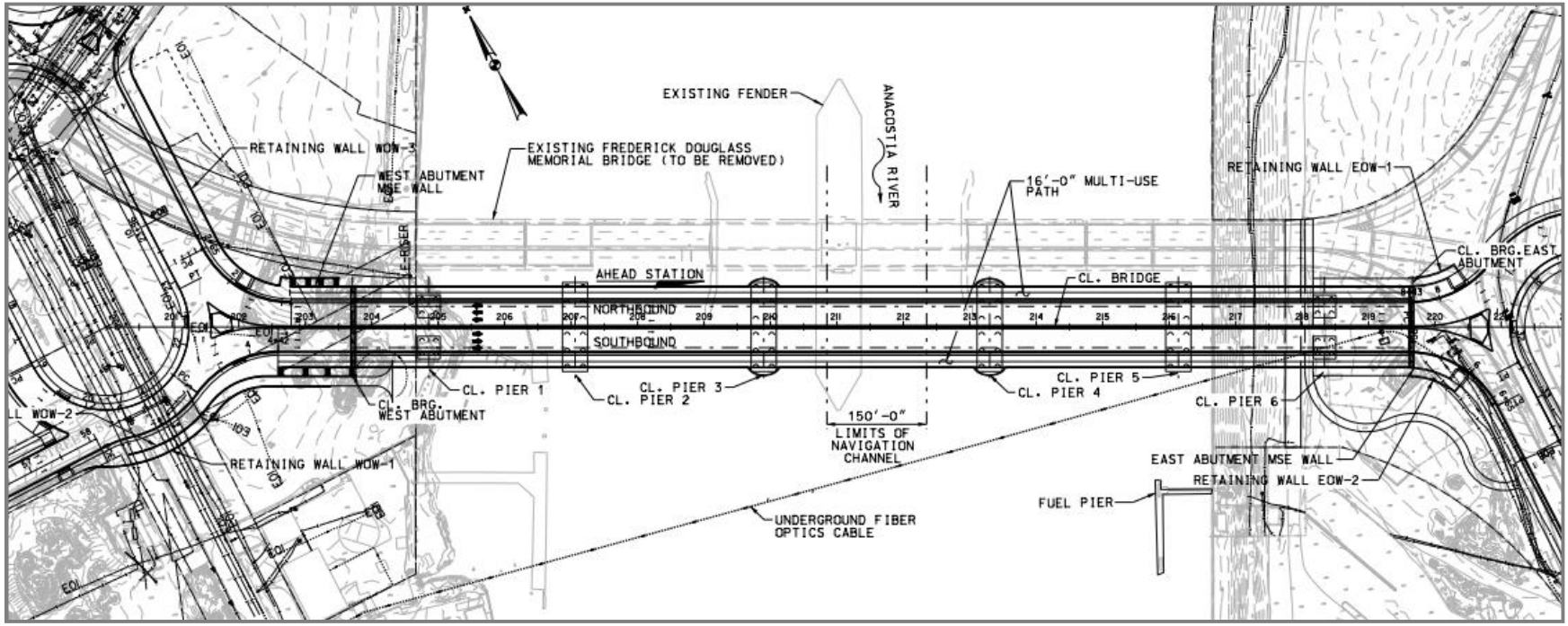


Figure 4-6: Visualization of Haunched Conceptual Design of the the New Frederick Douglass Memorial Bridge

Landscape Unit #3: South Capitol Street Southeast

Landscape Unit #3 encompasses the area of South Capitol Street between the east end of the Frederick Douglass Memorial Bridge to the new South Capitol Street SE/Suitland Parkway intersection. In general, Landscape Unit #3 lacks visual quality, with the exception of brief sweeping views of the Anacostia River, and fleeting views of the U.S. Capitol and Washington Monument. Visual quality is disrupted by a confusing array of ramps associated with connecting South Capitol Street, Suitland Parkway, and Howard Road SE with the Frederick Douglass Memorial Bridge. Essentially, the visual quality of Landscape Unit #3 is diminished in favor of transportation efficiency (see Table 4-10).

Table 4-10: Visual Quality Evaluation, Landscape Unit #3

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	2	0	0	0.67	NA
FEIS Preferred Alternative	6	7	6	6.3	5.7
Revised Preferred Alternative	7	7	7	7	6.3

Within Landscape Unit #3, the FEIS Preferred Alternative would have provided a high VQD over current conditions. The FEIS Preferred Alternative would have introduced a traffic circle that would connect South Capitol Street, Suitland Parkway, and Howard Road SE. The existing historic DC Water Poplar Point Pumping Station would have been located near the center of the circle. The proposed traffic circle would have included distinct landscape features and serve as an anchor for the new bridge on the east bank of the Anacostia River. The traffic circle would have also eliminated the existing visual encroachments caused by numerous roadways and would have created an intact, ordered visual environment allowing motorists and non-motorists opportunities for unhurried views of natural and manmade features. Therefore, the FEIS Preferred Alternative was evaluated as greatly improving the VQR of Landscape Unit #3 (see Table 4-10).

The Revised Preferred Alternative includes an east traffic oval similar in size, scale and orientation to the traffic oval proposed on the west side of the river (see Figure 4-7). According to the *Visual Quality Manual*, the geometric relationship between both traffic ovals must convey a grand formal streetscape character that blends seamlessly into the urban fabric (see Figure 4-8). The Revised Preferred Alternative and the *Visual Quality Manual* intend to establish consistent aesthetic qualities at the traffic ovals, and provide ample viewing opportunities for motorists.

Figure 4-7: Conceptual Plan of the East Traffic Oval

Figure 4-8: Visualization of East Traffic Oval and Approaches from South Capitol Street and Suitland Parkway

Unlike the west traffic oval, the east traffic oval will have open space outside the formal streetscape. This open space will provide an informal, park-like character that blends with the neighboring Anacostia Park and Suitland Parkway. In addition, the east traffic oval will reduce

visual impacts to the historic Poplar Point Pump Station and avoid right-of-way impacts to the JBAB. The east traffic oval's vertical profile and landscaping will be designed to enhance gateway views and sense of arrival for vehicles transitioning from South Capitol Street and Suitland Parkway through the east traffic oval and onto the bridge, and vice versa towards Anacostia. Due to the visual improvements provided by the east traffic oval, compared with the traffic circle under the FEIS Preferred Alternative, the VQD will increase more in Landscape Unit #3 under the Revised Preferred Alternative.

Landscape Unit #4: Suitland Parkway

Landscape Unit #4 extends along Suitland Parkway south from South Capitol Street SE to Stanton Road SE. The visual quality of the Suitland Parkway landscape unit within the segment north of Firth Sterling Avenue SE is severely affected by the presence of the I-295 interchange and numerous ramps for South Capitol Street. This creates a confusing array of choices for motorists, with no real visual integration with the built and natural environments. In contrast, the landscape segment of Suitland Parkway south of Firth Sterling Avenue SE provides a combination of natural forms and man-made elements, such as recent developments that included substantial excavation visible from the parkway. The excavation is a major intrusion that disrupts the visual coherence and compositional harmony of views from Suitland Parkway. This visual disruption was not identified in the FEIS, and therefore, the VQR identified in Table 4-11 for existing conditions is not reflective of this condition. However, the excavation is temporary and the expectation is that the VQR would return to the FEIS level without the Project. Despite interesting visual patterns, the confusing visual environment in the north segment led to a moderately low VRQ as shown on Table 4-11.

Table 4-11: Visual Quality Evaluation, Landscape Unit #4

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	3	3	2	2.7	NA
FEIS Preferred Alternative	6	6	6	6	3.3
Revised Preferred Alternative	6	7	7	6.7	4

The FEIS Preferred Alternative introduced a traffic circle with a recognizable terminus for Suitland Parkway and an effective transition from the parkway to the L'Enfant-inspired city street plan. Other elements of the FEIS Preferred Alternative augmented this transition, and included a new ramp from southbound I-295 to northbound Suitland Parkway and the replacement of the south end cloverleaf ramps with urban diamond ramps. The existing Martin Luther King, Jr. SE overpass would have been reconstructed with a center ramp interchange that would have provided vehicular access to Martin Luther King, Jr. Avenue from the median lanes of Suitland Parkway.

With these design changes, the scale, shape, lines, and texture of views would change with the wider pavement surface and the loss of tree cover. Features introduced in this landscape unit,

such as a wider pavement surface and vegetation clearing, would change the scale of existing views. New visual lines would be created by the wider roadway and the addition of an at-grade traffic circle. Clearing existing vegetation, exposing subsurface material, and clearing mature vegetation with younger trees would create new texture. Because of these design elements, the FEIS Preferred Alternative was evaluated as moderately improving the VQR in Landscape Unit #4 as compared to existing conditions.

The primary change to the northern segment of Landscape Unit #4 under the Revised Preferred Alternative, compared with the FEIS Preferred Alternative, is the provision of the east traffic oval. The *Visual Quality Manual* noted that the I-295 interchange with Suitland Parkway should mark the beginning of the Washington Greenway System, such as Suitland Parkway. To create the character of a greenway, open spaces within the interchange will be landscaped with trees and native meadow plants.

In the southern segment of Landscape Unit #4, the Martin Luther King, Jr. Avenue SE overpass will be converted to an urban diamond interchange instead of an interchange with median ramps (i.e., single-point urban interchange). The elimination of the center ramp avoids altering the Martin Luther King, Jr. Avenue SE Bridge over Suitland Parkway, and the intactness and unity of the views along the parkway will remain unchanged. In addition, the provision and upgrade of a pedestrian/bicycle path along the north side of the reconstructed Suitland Parkway will provide new viewing opportunities for pedestrians and cyclists. These design changes led to a slight improvement in the VQR in landscape Unit #4 for the Revised Preferred Alternative, compared with the FEIS Preferred Alternative.

The provision of a sidewalk/bicycle path along the north side of the reconstructed Suitland Parkway will provide new viewing opportunities for pedestrians and cyclists. These design changes led to a slight improvement in the VQR in landscape Unit #4 for the Revised Preferred Alternative compared with the FEIS Preferred Alternative.

Landscape Unit #5: Howard Road SE

Although the Howard Road SE landscape unit was included in the FEIS, the FEIS Preferred Alternative did not propose any changes to the street. The Revised Preferred Alternative also does not propose changes. This landscape unit extends northwest from Bowen Road SE to just northwest of Martin Luther King, Jr. Avenue. There is a connection among the existing mature vegetation, residential development, and the narrow roads and older hillside multi-family residences that permeate the southeast section of Howard Road SE. The homes are sited to take full advantage of surrounding views, including a view of the Washington Monument.

Landscape Unit #6: Martin Luther King, Jr. Avenue SE

Landscape Unit #6 extends between Howard Road SE and Suitland Parkway on Martin Luther King, Jr. Avenue. This landscape unit has a good VQR of 4.7 (see Table 4-12). Currently, natural and built elements are designed and addressed in an integrated manner. The relationship of the landscape is a combination of natural forms, subdued man-made elements, and a lack of intrusive elements that do not contribute to the overall composition.

Table 4-12: Visual Quality Evaluation, Landscape Unit #6

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	4	5	5	4.7	NA
FEIS Preferred Alternative	4	4	4	4	-0.7
Revised Preferred Alternative	4	5	5	4.7	0

The FEIS Preferred Alternative would have added a center-ramp interchange at Suitland Parkway and Martin Luther King, Jr. Avenue SE. The interchange would introduce a new structure leading to a slight decrease in visual intactness and unity in the Project Area. The primary viewers of these changes would include pedestrians, cyclists, and motorists on Martin Luther King, Jr. Avenue and Suitland Parkway; parishioners and visitors at Campbell AME Church and Matthews Memorial Baptist Church; staff, students, and visitors to Birney Elementary School; and residents of the area, especially those residing on the bluff along Bowen Road SE and adjacent streets.

As noted above, the Revised Preferred Alternative will convert the Martin Luther King, Jr. Avenue SE overpass to an urban diamond interchange instead of an interchange with median ramps. The Martin Luther King Jr. overpass will not have to be altered, and the intactness and unity of the views along the parkway will remain unchanged. Therefore, the VQR for the Revised Preferred Alternative remained the same when compared to existing conditions.

Landscape Unit #7: Anacostia Park

As a landscape unit, Anacostia Park can be viewed from Landscape Units #1 and #2. The characteristics of vividness, intactness, and unity are evident in the park. The views of both Anacostia Drive and the landscape surrounding Anacostia Park are memorable. However, construction activities associated with redevelopment across the river are intruding upon unique views. Currently, numerous cranes are visible on the horizon above the shoreline vegetation, which negatively affects the sweeping views of the Anacostia River. Nevertheless, these features are temporary and would be less frequent from the views when the redevelopment is completed. Additionally, the existing Frederick Douglass Memorial Bridge creates a disruptive visual influence, substantially decreasing the intactness and unity of the views. The hard vertical lines of the substructure and the fading green paint of the superstructure detract from views of the shoreline. A moderate VQR value of 3.3 was assigned to Landscape Unit #7 (see Table 4-13).

Table 4-13: Visual Quality Evaluation, Landscape Unit #7

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	4	1	2	3.3	NA
FEIS Preferred Alternative	6	6	6	6	3.7
Revised Preferred Alternative	6	6	6	6	3.7

Under the FEIS Preferred Alternative, views from Landscape Unit #7 would consist of uninterrupted and coordinated views of Nationals Park, Anacostia Park, and the new Frederick Douglass Memorial Bridge (see Landscape Unit #2 description), and brief glimpses of the Washington Monument, the U.S. Capitol Dome, and the Anacostia waterfront. The primary viewers of these changes would include park visitors and riverfront trail users.

Construction of the new Frederick Douglass Memorial Bridge, elimination of an encroachment, and removal of the pavement surface of the numerous ramps and access points associated with South Capitol Street SE and Suitland Parkway (see Landscape Unit #3 description) would increase open space along the river and provide a positive visual impact for this landscape unit. Therefore, the VQR was raised under the FEIS Preferred Alternative (see Table 4-13). Views of the redesigned Frederick Douglass Memorial Bridge and the Anacostia River and waterfront would introduce new lines and textures, which would integrate the natural and built environments.

With the Revised Preferred Alternative, the new Frederick Douglass Memorial Bridge (see Landscape Unit #2 discussion), along with the other visual improvements noted in the description of Landscape Unit #3, a positive visual impact for Landscape Unit #7 is expected. The VQR did not change with development of the Revised Preferred Atlernative from what was evaluated under FEIS Preferred Alternative (see Table 4-13).

Landscape Unit #8: New Jersey Avenue SE

Along New Jersey Avenue SE, Landscape Unit #8 extends from Independence Avenue SE to M Street SE. Landscape Unit #8 was evaluated as having a high VQR due to a neighborhood feel, intimate dimensions, and an overarching canopy of mature oaks (see Table 4-14). Views northwest on New Jersey Avenue provides a striking view of the U.S. Capitol Dome framed by the natural tree canopy and built forms north of the I-695 Freeway. However, the I-695 and adjacent railroad bridges disrupt the visual continuity along the south side of the freeway, reducing the overall quality of the view. The relationship of the characteristics of vividness, intactness, and unity is high, as the landscape is a combination of striking natural forms, subdued man-made elements, and a lack of intrusive elements that do not contribute to the overall composition.

Table 4-14: Visual Quality Evaluation, Landscape Unit #8

Alternative	Criteria			VQR	VQD
	Vividness	Intactness	Unity		
Existing Conditions	6	6	6	6	NA
FEIS Preferred Alternative	7	6	6	6.3	0.3
Revised Preferred Alternative	7	6	6	6.3	0.3

The FEIS Preferred Alternative would provide additional street trees, sidewalk pavement, and hard and soft landscape features. Improvements associated with increasing pedestrian safety

would provide new textures and colors promoting the continued integration of the built and natural environments, which were evaluated to slightly increase the VQR (see Table 4-14). No changes were made to the Project for New Jersey Avenue SE as a result of the development of the Revised Preferred Alternative. Therefore, the VQR will remain the same as what was evaluated for the FEIS Preferred Alternative.

Findings

The Revised Preferred Alternative, and the framework for approaching the urban design and visual quality and aesthetic design of the Project, did not substantially alter the visual assessment provided in the FEIS. Therefore, the conclusion documented in the FEIS, that the Project will result in substantially improved visual quality of the Project Area, remains valid for the Revised Preferred Alternative.

4.9.3 Mitigation

DDOT is using a visual quality management process in the solicitation of design-build proposals for the construction of Segments 1 and 2 of the Project. The solicitation would lead to the selection of a designer/contractor for the new Frederick Douglass Memorial Bridge and other elements of the Project on both sides of the Anacostia River from the intersection of South Capitol Street and Potomac Avenue to the Suitland Parkway/I-695 interchange that follows the principles outlined in the *Visual Quality Manual* developed for the Project. Visual quality concepts will be submitted by the prospective designer/contractors that will undergo a review by DDOT, assisted by staff from the NCPC, CFA, DC SHPO and the OP. This visual quality management process, described in Section 2.4, will confirm that the technical proposals by the prospective designer/contractors meet the visual design requirements for the Project.

In addition to the visual quality management process, regulatory reviews specifically addressing visual quality would be completed on the Project as it progresses through design and construction.

NCPC is the federal government's central planning agency for federal land and buildings in the National Capitol Region. NCPC's jurisdiction covers 2,500 square miles, including the District and surrounding counties in Maryland and Virginia. NCPC develops planning policies and makes decisions that protect and enhance the extraordinary historical, cultural, and natural resources of the nation's capital. Through four principal activities (urban design and plan review, comprehensive planning, signature planning, and federal project planning review and prioritization of federal development projects), NCPC helps preserve the visual integrity of the District. Federal and District agencies are required to obtain NCPC urban design and plan review approval and/or comments prior to proceeding with development projects in the National Capital Region. Coordination with NCPC has been undertaken throughout the Project, such as in the development of the visual quality management process, and would continue through the design of Phase 2 of the Project. Plans would be submitted to NCPC for staff and commission review a at various percent completion stages.

CFA is charged with providing expert advice to the President, Congress, and the heads of departments of agencies of the Federal and District of Columbia governments on matters of

design and aesthetics as they affect the Federal interest and preserve the dignity of the nation's capital. In addition to CFA's participation in visual review committee, plans for the other elements of the Project, such as the Phase 2 segments, would be presented to CFA in accordance with its requirements.

Under the proposed terms of the Section 106 MOA (ACHP et al., 2011) to be amended for the Revised Preferred Alternative, design plans would be subject to review by DC SHPO and the NPS. The visual impacts on important visual resources, and minimization/mitigation measures would be addressed through these reviews.

4.10 Pedestrian and Bicycle Facilities

4.10.1 Impacts

Table 4-15 lists the effects of the Revised Preferred Alternative and the FEIS Preferred Alternative on pedestrian and bicycle facilities.

4.10.2 Mitigation

No mitigation measures are required.

Table 4-15: Pedestrian and Bicycle Facilities Design Differences between the FEIS Preferred Alternative and the Revised Preferred Alternative

Roadway	Limits	FEIS Preferred Alternative	Revised Preferred Alternative
South Capitol Street	Frederick Douglass Memorial Bridge	Accommodates 20-foot-wide bicycle/pedestrian paths on both sides of the vehicular travels lanes on the bridge.	Accommodates 18-foot-wide bicycle/pedestrian paths on both sides of the vehicular travels lanes on the bridge.
South Capitol Street	I-695	The ramp carrying northbound South Capitol Street traffic to westbound I-695 would be removed and replaced with an urban interchange ramp from South Capitol Street, while the ramp configuration from eastbound I-695 to southbound South Capitol Street will remain.	Both existing ramp configurations between I-695 and South Capitol Street will be replaced with an urban interchange, creating a safer interchange configuration for cyclists and pedestrians.
Suitland Parkway	I-295	An urban diamond interchange would be implemented that would allow all movements between Suitland Parkway and I-295.	On the southern side of Suitland Parkway, the configuration would accommodate a sidewalk and bicycle path. A grade separated pedestrian/bicycle path would be provided at Ramp B.
South Capitol Street	Suitland Parkway	The existing ramps would be replaced with a traffic circle, allowing pedestrian and bicycle travel between South Capitol Street and Howard Road. A sidewalk would be installed along the outside of the circle where none exists today. The pedestrian travel distance around the circle would be greater than traveling through the traditional at-grade intersection.	The proposed traffic circle would be replaced by a traffic oval, providing a sidewalk around the oval, and a connection with a section of the Anacostia Riverwalk Trail. The pedestrian travel distance around the oval would still be greater than traveling through the traditional at-grade intersection.
Suitland Parkway	Martin Luther King, Jr. Avenue	The proposed interchange at Suitland Parkway would require pedestrians and cyclists to cross the ramps between the two roadways. These crossings would be controlled by a traffic signal.	The elimination of the center ramp interchange will provide two urban diamond interchanges that will be controlled by traffic signal. In addition, a sidewalk/bicycle path would be provided or upgraded along the north side of the reconstructed Suitland Parkway.
South Capitol Street Trail	Anacostia Metrorail Station	The Firth Sterling Trail was not included as part of the FEIS.	The proposed multi-use Firth Sterling Trail will use primarily existing CSX right-of-way and connect the South Capitol Street Trail (at Firth Sterling and South Capitol Street intersection) with the Anacostia Metrorail Station.

4.11 Traffic and Transportation

This section summarizes the updated assessment of future travel patterns, traffic volumes, and operational performance for the Revised Preferred Alternative and the FEIS Preferred Alternative. The traffic analysis used 2010 as the base year for assessing the alternatives. The traffic analysis assumed 2020 as the projected year of opening after full project completion, and 2040 as the design year, for both the Revised Preferred Alternative and the FEIS Preferred Alternative. The objective of the updated traffic analysis was to evaluate whether the Revised Preferred Alternative would deteriorate traffic operations along the roadway network within the Project Area, compared with existing conditions. The *South Capitol Street Transportation Technical Report* (DDOT, 2014) provides detailed information regarding traffic and transportation assessments (see Appendix H).

4.11.1 Traffic Forecast Methodology

MWCOG updated the regional travel demand models to establish new traffic horizon years. The FEIS presented traffic impact predictions for the year 2030, consistent with MWCOG regional travel demand models available at that time. The current MWCOG travel demand model contains a 2040 horizon year. A revised traffic analysis was prepared for both the Revised Preferred Alternative and the FEIS Preferred Alternative using MWCOG's updated travel demand models. The *South Capitol Street Transportation Technical Report* (DDOT, 2014) contains detailed descriptions of the methodologies used to evaluate the impacts on traffic operations for the Revised Preferred Alternative and the FEIS Preferred Alternative. The following section summarizes the methodology used for travel demand forecasts.

The analysis used Version 2.2 of the MWCOG regional travel demand model to update the travel demand forecasts. The model generated traffic volumes for existing conditions and the analysis compared them with recently observed traffic counts. The result highlighted the need for adjustments in the methodology. The MWCOG regional land use forecasts were used to project traffic conditions in 2020 and 2040 for both the FEIS Preferred Alternative and the Revised Preferred Alternative. The model's roadway network included the transportation improvements in MWCOG's updated *Constrained Long Range Plan* (2013), which included the DC Streetcar system in the Anacostia area, the Martin Luther King, Jr. Avenue Great Streets Improvements, and the 11th Street Bridges.

The future year forecasts considered the amount of traffic associated with projects planned in the general vicinity of the Project Area. These projects included:

- The Barry Farm/Park Chester/Wade Road redevelopment
- The consolidation of military operations in JBAB
- The Poplar Point redevelopment
- The Sheridan Station residential development
- The establishment of DHS headquarters at the St. Elizabeths Campus

The travel demand forecasting for both the Revised Preferred Alternative and the FEIS Preferred Alternative used data from traffic modeling conducted for the St. Elizabeths Campus FEIS. A number of localized project-level refinements were made to the base MWCOG network model to improve model performance and to accurately reflect the network configuration.

Synchro and VISSIM traffic operational models supported the analysis of traffic impacts for the FEIS Preferred Alternative and the Revised Preferred Alternative. Synchro is a macroscopic analysis and optimization software application that supports the *2010 Highway Capacity Manual* methodology for signalized intersections and roundabouts. The Synchro model included all of the roadways and intersections analyzed for the FEIS. The analysis used the Synchro model to optimize the arterial traffic signals in the Project Area. After completing signal-timing optimization, the analysis exported the resulting traffic signal data and network configurations to the VISSIM traffic simulation model.

A VISSIM traffic micro-simulation model evaluated the impacts of the Revised Preferred Alternative and the FEIS Preferred Alternative on arterial and intersection operations, along with freeway mainline, weaving, and merging operations along I-295, I-395, and I-695. VISSIM allows for detailed network coding and routing decisions, which are critical when calibrating a transportation network to congested conditions such as those that exist within the Project Area. The FEIS used two overlapping VISSIM models: one focused on roadways east of the Anacostia River and the other focused on roadways west of the Anacostia River. This SDEIS summarizes the updated traffic analysis, which combined these two models into one large micro-simulation model of the Project Area.

4.11.2 Impacts on Travel Patterns and Volumes

The updated traffic analysis for the 2020 and 2040 horizon years for both the Revised Preferred Alternative and the FEIS Preferred Alternative forecasts substantial changes in travel patterns. The changes reflect new roadway connections associated with other projects, land use redevelopments, and modal shifts away from personal vehicles. The roadway configurations for the Revised Preferred Alternative and the FEIS Preferred Alternative are similar to the extent that the configurations will not affect overall traffic volumes. Both will have the same 2020 and 2040 average daily traffic (ADT) volumes.

The new Frederick Douglass Memorial Bridge under both the Revised Preferred Alternative and the FEIS Preferred Alternative will cause greater ADT volumes, compared with the No Build. Under the No Build, the southbound ADT volumes on the existing bridge are predicted to increase by approximately 16 percent between 2010 and the 2040. The additional capacity provided by the new southbound lane (three total lanes) on the bridge with the Revised Preferred Alternative and the FEIS Preferred Alternative will increase southbound ADT volumes by 44 percent between 2010 and 2040. This is 24 percent greater than the 2040 No Build.

Because the Revised Preferred Alternative and the FEIS Preferred Alternative will not increase northbound capacity, the predicted northbound ADT volumes in 2040 will be about 4.5 percent greater than the 2040 No Build. Both alternatives will increase ADT volumes between 2010 and

2040 along roadways in the Project Area where higher density development will occur. These areas include South Capitol Street between the Southeast-Southwest Freeway and N Street, and the roads serving the St. Elizabeths Campus and JBAB.

The analysis estimated the network-wide average for truck volumes to be approximately 6 percent of ADT in 2030 in 2040 for both the Revised Preferred Alternative and the FEIS Preferred Alternative.

Some locations within the roadway network will have higher morning and evening peak hour volumes. The lower morning and evening peak hour volumes under the Revised Preferred Alternative, compared with the FEIS Preferred Alternative, reflect the different turning lane configurations for the largest intersection in the network, South Capitol Street at M Street. This affected the amount of traffic that will pass through the intersection within an hour. As a result, some traffic will divert to parallel routes or disperse more evenly throughout the morning and evening peak periods.

4.11.3 Intersection Level of Service

Predicted morning and evening peak hour volumes in 2020 and 2040 for both the Revised Preferred Alternative and the FEIS Preferred Alternative highlighted LOS and queuing at individual intersections. LOS is a qualitative measure describing the operational conditions along a roadway or at an intersection. The LOS of a roadway or intersection falls into one of six categories identified as “A” through “F”. LOS A represents free-flowing traffic operations and LOS F represents stop-and-go traffic conditions. In an urban area, such as the District of Columbia, a roadway or intersection operating at or better than LOS D typically is considered acceptable. Accordingly, a roadway or intersection operating at LOS E and F reflect unacceptable levels of congestion.

To characterize the local street system and highlight potential differences between the Revised Preferred Alternative and the FEIS Preferred Alternative, key locations throughout the Project Area were selected for evaluation (see Figure 4-9).

Revised Preferred Alternative

Table 4-17 and Table 4-18 summarize predicted average delay (in seconds per vehicle) and the corresponding LOS in 2020 and 2040 at these key locations for both the Revised Preferred Alternative. The following intersections will operate at LOS E or F during the morning peak hour in 2020 under the Revised Preferred Alternative:

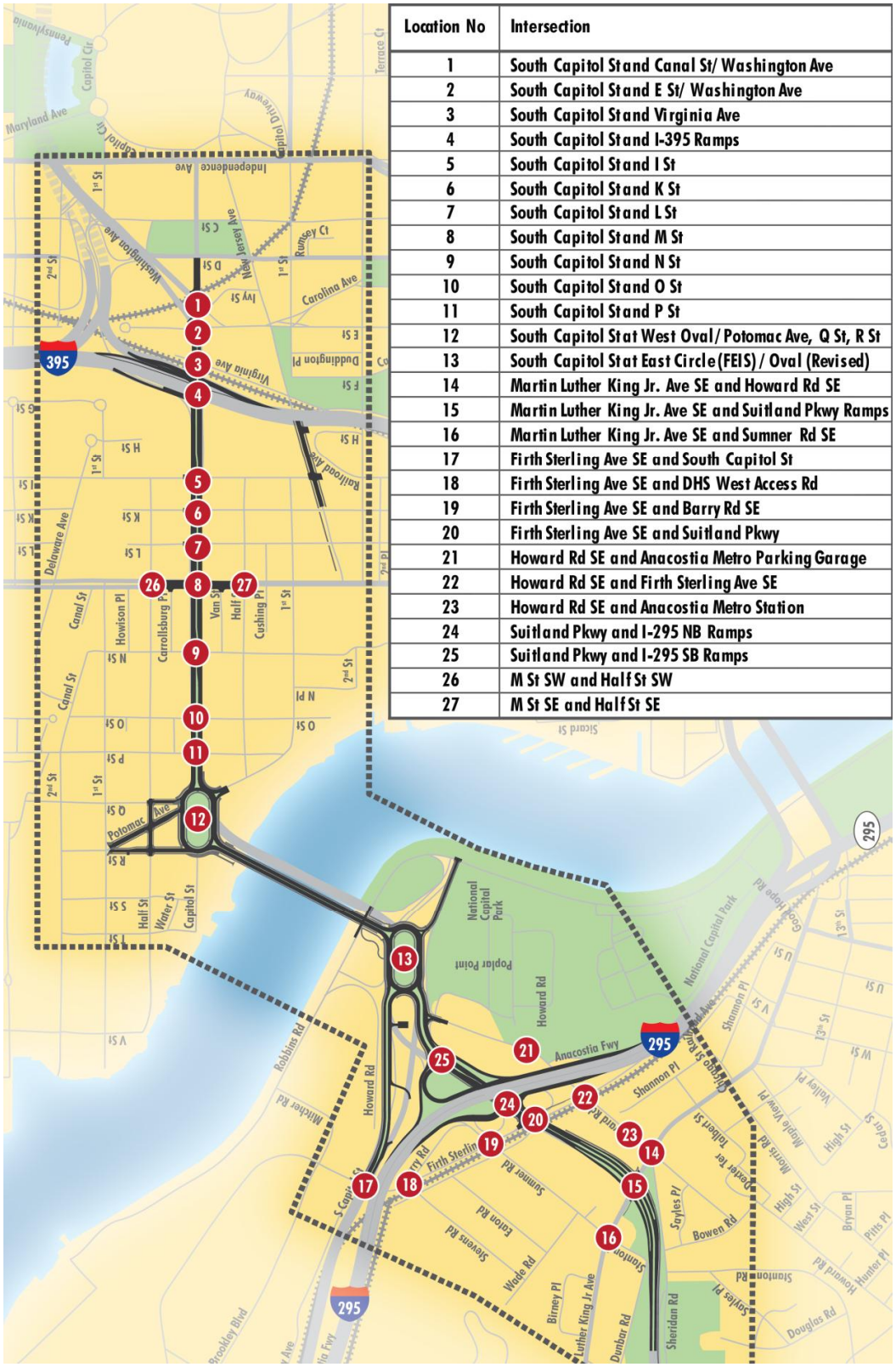
- Firth Sterling Avenue SE at South Capitol Street (LOS E)
- Firth Sterling Avenue SE at DHS West Access Road (LOS E)
- M Street SE at Half Street SE (LOS F)

Table 4-16: Comparison of 2040 Average Peak Hour Traffic Volumes

Segments in the Project Area	Existing (2010)		FEIS Preferred Alternative		Revised Preferred Alternative	
	Morning Peak Hour	Evening Peak Hour	Morning Peak Hour	Evening Peak Hour	Morning Peak Hour	Evening Peak Hour
South Capitol Street Southbound						
I-395 SB ramp to SB South Capitol Street	610	450	705	605	700	600
I-395 EB (NB) ramp to SB South Capitol Street	900	510	1,155	510	975	520
SB South Capitol Street South of I Street	1,875	2,325	2,290	3,040	2,065	2,475
SB South Capitol Street South of N Street	1,650	2,640	2,205	2,835	2,205	2,675
SB Frederick Douglass Memorial Bridge	1,720	3,930	2,345	4,820	2,320	4,300
Suitland Parkway South of Martin Luther King, Jr. Avenue	1,085	2,795	850	3,155	800	2,970
SB South Capitol Street South of Suitland Parkway	630	1,105	940	1,765	895	1,595
SB South Capitol Street ramp to SB Suitland Parkway	1,090	2,825	1,315	2,960	1,385	2,715
South Capitol Street Northbound						
Suitland Parkway south of Martin Luther King, Jr. Avenue	2,755	1,210	3,120	1,065	3,000	1,110
NB South Capitol Street South of Suitland Parkway	740	380	1,650	810	1,500	815
Howard Road Ramp to NB South Capitol Street	1,080	540	510	480	465	390
NB Frederick Douglass Bridge	4,345	1,330	4,755	2,375	4,200	2,425
NB South Capitol Street South of N Street	3,785	1,505	3,730	1,925	3,125	1,900
NB South Capitol Street South of I Street	2,845	1,260	2,880	1,550	2,950	1,775
NB South Capitol Street to NB I-395	1,430	600	1,490	565	1,140	600
NB South Capitol Street to WB Southeast-Southwest Freeway	840	695	720	720	1,180	715
I-295 at Suitland Parkway						
Northbound	6,220	4,685	6,515	5,915	6,145	4,255
Southbound	4,550	5,910	4,030	6,305	3,275	6,440
Southeast-Southwest Freeway East of South Capitol Street						
Northbound (Westbound)	7,235	4,495	7,655	6,885	7,050	5,605
Southbound (Eastbound)	4,005	5,180	5,790	8,590	4,475	7,640
11th Street Bridge (Local)						
Northbound	-	-	1,950	685	2,200	1,190
Southbound	-	-	245	2,855	320	2,320
11th Street Bridge I-695						
Northbound	5,230	2,650	7,950	5,835	4,700	4,280
Southbound	1,920	3,505	4,100	7,395	3,520	5,550

Notes: NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

Figure 4-9: Project Area Intersections for Traffic Analysis



Location No	Intersection
1	South Capitol St and Canal St/ Washington Ave
2	South Capitol St and E St/ Washington Ave
3	South Capitol St and Virginia Ave
4	South Capitol St and I-395 Ramps
5	South Capitol St and I St
6	South Capitol St and K St
7	South Capitol St and L St
8	South Capitol St and M St
9	South Capitol St and N St
10	South Capitol St and O St
11	South Capitol St and P St
12	South Capitol St at West Oval/ Potomac Ave, Q St, R St
13	South Capitol St at East Circle (FEIS) / Oval (Revised)
14	Martin Luther King Jr. Ave SE and Howard Rd SE
15	Martin Luther King Jr. Ave SE and Suitland Pkwy Ramps
16	Martin Luther King Jr. Ave SE and Sumner Rd SE
17	Firth Sterling Ave SE and South Capitol St
18	Firth Sterling Ave SE and DHS West Access Rd
19	Firth Sterling Ave SE and Barry Rd SE
20	Firth Sterling Ave SE and Suitland Pkwy
21	Howard Rd SE and Anacostia Metro Parking Garage
22	Howard Rd SE and Firth Sterling Ave SE
23	Howard Rd SE and Anacostia Metro Station
24	Suitland Pkwy and I-295 NB Ramps
25	Suitland Pkwy and I-295 SB Ramps
26	M St SW and Half St SW
27	M St SE and Half St SE

District Department of Transportation

Table 4-17: 2020 Average Delay per Vehicle and Level of Service (LOS) at Project Area Intersections

Intersection	Location No.[1]	FEIS Preferred Alternative				Revised Preferred Alternative			
		2020 Morning Peak Hour		2020 Evening Peak Hour		2020 Morning Peak Hour		2020 Evening Peak Hour	
		Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS
South Capitol St and Canal St/Washington Ave	1	23	C	19	B	23	C	28	C
South Capitol St and E St/Washington Ave	2	21	C	153	F	26	C	46	D
South Capitol St and Virginia Ave	3	8	A	84	F	11	B	20	C
South Capitol St and I-395 ramps	4	23	C	87	F	21	C	26	C
South Capitol St and I St	5	33	C	37	D	26	C	24	C
South Capitol St and K St	6	17	B	17	B	20	C	12	B
South Capitol St and L St	7	18	B	32	C	26	C	16	B
South Capitol St and M St	8	43	D	41	D	53	D	45	D
South Capitol St and N St	9	33	C	8	A	31	C	41	D
South Capitol St and O St	10	12	B	6	A	9	A	30	C
South Capitol St and P St	11	9	A	7	A	10	B	27	C
South Capitol St at West Traffic Oval/Potomac Ave, Q St, R St	12	104	F	56	E	32	C	60	E
South Capitol St at East Circle (FEIS)/Oval (Revised)	13	118	F	64	E	35	D	68	E
Martin Luther King, Jr. Ave SE and Howard Rd SE	14	24	C	58	E	35	D	36	D
Martin Luther King, Jr. Ave SE and Suitland Pkwy ramps	15	59	E	23	C	47	D	38	D
Martin Luther King, Jr. Ave SE and Sumner Rd SE	16	114	F	28	C	34	C	27	C
Firth Sterling Ave SE and South Capitol St	17	223	F	62	E	65	E	58	E
Firth Sterling Ave SE and DHS West Access Rd	18	44	D	51	D	62	E	44	D
Firth Sterling Ave SE and Barry Rd SE	19	3	A	36	D	18	B	92	F
Firth Sterling Ave SE and Suitland Pkwy	20	50	D	30	C	53	D	30	C
Howard Rd SE and Anacostia Metrorail Parking Garage	21	6	A	9	A	6	A	12	B
Howard Rd SE and Firth Sterling Ave SE	22	34	C	30	C	29	C	57	E
Howard Rd SE and Anacostia Metrorail Station	23	8	A	14	B	13	B	42	D
Suitland Pkwy and I-295 northbound ramps	24	51	D	28	C	21	C	38	D
Suitland Pkwy and I-295 southbound ramps	25	78	E	23	C	14	B	56	E
M St SW and Half St SW	26	13	B	12	B	32	C	37	D
M St SE and Half St SE	27	18	B	11	B	122	F	5	A

Source: VISSIM modeling by CH2M HILL, 2014
Notes: [1] See Figure 4-6
[2] Seconds per vehicle
Yellow shaded areas identify intersections predicted to have unacceptable (E) or failing (F) levels-of-service

Table 4-18: 2040 Average Delay per Vehicle and Level of Service (LOS) at Project Area Intersections

Intersection	Location No.[1]	FEIS Preferred Alternative				Revised Preferred Alternative			
		2040 Morning Peak Hour		2040 Evening Peak Hour		2040 Morning Peak Hour		2040 Evening Peak Hour	
		Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS	Delay[2]	LOS
South Capitol St and Canal St/Washington Ave	1	25	C	20	B	50	D	29	C
South Capitol St and E St/Washington Ave	2	20	C	143	F	24	C	73	E
South Capitol St and Virginia Ave	3	9	A	78	E	14	B	24	C
South Capitol St and I-395 ramps	4	34	C	84	F	14	B	38	D
South Capitol St and I St	5	36	D	36	D	19	B	48	D
South Capitol St and K St	6	20	C	19	B	12	B	17	B
South Capitol St and L St	7	20	C	29	C	16	B	24	C
South Capitol St and M St	8	46	D	48	D	38	D	49	D
South Capitol St and N St	9	37	D	10	B	23	C	22	C
South Capitol St and O St	10	14	B	9	A	10	B	18	B
South Capitol St and P St	11	18	B	9	A	13	B	18	B
South Capitol St at West Traffic Oval/Potomac Ave, Q St, R St	12	106	F	70	E	33	C	35	D
South Capitol St at East Circle (FEIS)/Oval (Revised)	13	142	F	71	E	40	D	65	E
Martin Luther King, Jr. Ave SE and Howard Rd SE	14	36	D	64	E	40	D	39	D
Martin Luther King, Jr. Ave SE and Suitland Pkwy Ramps	15	52	D	27	C	49	D	38	D
Martin Luther King, Jr. Ave SE and Sumner Rd SE	16	129	F	41	D	58	E	37	D
Firth Sterling Ave SE and South Capitol St	17	248	F	61	E	101	F	62	E
Firth Sterling Ave SE and DHS West Access Rd	18	46	D	65	E	64	E	58	E
Firth Sterling Ave SE and Barry Rd SE	19	6	A	41	D	26	C	38	D
Firth Sterling Ave SE and Suitland Pkwy	20	42	D	40	D	52	D	36	D
Howard Rd SE and Anacostia Metrorail Parking Garage	21	6	A	25	C	6	A	19	B
Howard Rd SE and Firth Sterling Ave SE	22	38	D	77	E	30	C	83	F
Howard Rd SE and Anacostia Metrorail Station	23	13	B	90	F	14	B	46	D
Suitland Pkwy and I-295 northbound ramps	24	30	C	28	C	24	C	44	D
Suitland Pkwy and I-295 southbound ramps	25	60	E	22	C	18	B	69	E
M St SW and Half St SW	26	15	B	12	B	29	C	91	F
M St SE and Half St SE	27	18	B	28	C	33	C	6	A

Source: VISSIM modeling by CH2M HILL, 2014
Notes: [1] See Figure 4-6
[2] Seconds per vehicle
Yellow shaded areas identify intersections predicted to have unacceptable (E) or failing (F) levels-of-service

Compared to the FEIS Preferred Alternative, four fewer intersections will operate at LOS E or F during the morning peak hour in 2020 within the Project Area. Although the Firth Sterling Avenue SE/South Capitol Street intersection is still predicted to operate poorly (LOS E), average delay is predicted to be substantially less under the Revised Preferred Alternative than under the FEIS Preferred Alternative.

The highest average delay among the three intersections will occur at the intersection of M Street SE and Half Street SE. At 122 seconds per vehicle during the morning peak hour, this predicted delay is nearly seven times the predicted delay under the FEIS Preferred Alternative. The poor operating condition at this intersection under the Revised Preferred Alternative, compared with the FEIS Preferred Alternative, reflects adjustments to lane configurations at the intersection of South Capitol Street and M Street. The Revised Preferred Alternative eliminated one of the left turn lanes in each direction of South Capitol Street and a through lane on M Street SE east of the intersection.

Compared with the FEIS Preferred Alternative, the adjustments proposed at the intersection of South Capitol Street and M Street under the Revised Preferred Alternative are not expected to change the overall LOS of the intersection. Like the FEIS Preferred Alternative, vehicles approaching this intersection will regularly queue beyond the nearest intersections due to their relatively close spacing. Intersections, such as M Street SE and Half Street SE, will experience the spillback effects from the South Capitol Street/M Street intersection.

By 2040, traffic conditions in the morning peak hour under the Revised Preferred Alternative will be similar to those in 2020. Due to changing local travel patterns and land use projections in future years, the analysis predicted the intersection at M Street SE and Half Street SE would improve to LOS C. In 2040, the intersection of Firth Sterling Avenue SE and South Capitol Street will have the highest average delay in the Project Area during the morning peak hour, similar to the FEIS Preferred Alternative, but with a much lower average delay.

In addition to the two poorly performing intersections in 2020, which will continue to operate poorly in 2040 during the morning peak hour, the analysis predicted only one more intersection will operate at LOS E or F during the morning peak hour. The additional traffic generated by major developments surrounding the Anacostia Metrorail Station, including DHS headquarters at the St. Elizabeths Campus, will adversely affect the operation of the intersection of Martin Luther King, Jr. Avenue SE and Sumner Road SE. The average delay per vehicle is predicted to increase by 24 seconds above the average delay predicted in 2020, which will lower LOS C in 2020 to LOS E in 2040.

The analysis predicted that the following intersections would operate at LOS E or F during the evening peak hour in 2020 under the Revised Preferred Alternative:

- South Capitol Street at west traffic oval/Potomac Avenue/Q Street/R Street (LOS E)
- Suitland Parkway/South Capitol Street at east traffic oval (LOS E)
- Firth Sterling Avenue SE at South Capitol Street (LOS E)
- Firth Sterling Avenue SE at Barry Road SE (LOS F)
- Howard Road SE at Firth Sterling Avenue SE (LOS E)
- Suitland Parkway, I-295 southbound ramps (LOS E)

The predicted operations of the intersections in the Project Area under the Revised Preferred Alternative are consistent with results for the FEIS Preferred Alternative except at the intersections at Howard Road SE and Firth Sterling SE and at I-295 southbound ramps on Suitland Parkway. Both intersections will operate at LOS C under the FEIS Preferred Alternative, but LOS E under the Revised Preferred Alternative. One of the reasons for the decrease in intersection performance is due to adjustments in the signal timings to allow maximum walk times for pedestrians using the crosswalks. This adjustment will increase the delay time for vehicles.

As noted above, the three South Capitol Street intersections at the very north end of the Project Area will operate poorly under the FEIS Preferred Alternative in 2020. Under the Revised Preferred Alternative, these intersections will operate at LOS C or D. Modifications to the I-395 ramp terminus and on-ramp configuration provided under the Revised Preferred Alternative led to this improved traffic condition at these intersections.

The highest average delay in 2020 among these six intersections will occur at the intersection of Firth Sterling Avenue SE and Barry Road SE (92 seconds per vehicle). Delays at this intersection are a result of expected queuing from the intersection of Firth Sterling Avenue SE and Suitland Parkway. This is an increase from the 38-second average vehicle delay predicted under the FEIS Preferred Alternative.

Evening peak hour traffic operations under the Revised Preferred Alternative would be similar in 2020 and 2040. Compared with the FEIS Preferred Alternative, the Revised Preferred Alternative will have better LOS at the following intersections:

- South Capitol Street at Virginia Avenue (LOS C)
- South Capitol Street at I-395 ramps (LOS C)
- South Capitol Street at the west traffic oval/Potomac Avenue/Q Street/R Street (LOS D)
- Howard Road SE at Anacostia Metrorail Station (LOS D)
- Martin Luther King, Jr. Avenue SE at Howard Road SE (LOS D)

These five intersections will operate at LOS E or F under the FEIS Preferred Alternative. Under the Revised Preferred Alternative, these intersections will operate at LOS D or higher. The reasons for the higher LOS include modifications to the use of the travel lane and revisions to signal operations.

Four intersections will operate at LOS E or F in 2020 and 2040 during the evening peak hour (east traffic oval, Firth Sterling Avenue SE/South Capitol Street, Howard Road SE/Firth Sterling Avenue SE, and Suitland Parkway/southbound ramps). The following intersections are would operate at LOS E or F during the evening peak hour in 2040 under the Revised Preferred Alternative. However, the analysis predicted that these intersections would operate at LOS D or higher in 2020:

- South Capitol Street at E Street/Washington Avenue SW (LOS E)
- Firth Sterling Avenue SE at DHS West Access Road (LOS E)
- M Street SW at Half Street SW (LOS F)

The Firth Sterling Avenue SE and Barry Road SE intersection is predicted to improve from LOS F in 2020 to LOS D in 2040.

The highest average delay among the seven intersections is predicted to occur at the intersection of M Street SW and Half Street SW. At 91 seconds per vehicle during the evening peak hour, this predicted delay is 7.5 times greater than the average delay predicted under FEIS Preferred Alternative. This predicted condition reflects adjustments to the lane configuration at the intersection of South Capitol Street and M Street under the Revised Preferred Alternative. During the evening peak period, a high percentage of eastbound vehicles turn right to travel south towards the bridge. Therefore, the Revised Preferred Alternative modified the lane configuration provided under the FEIS Preferred Alternative.

Eastbound traffic will have one left turn lane, two through lanes, and one exclusive right turn lane. The FEIS Preferred Alternative will have provided one left turn lane and three through lanes, with a curbside through lane operating as a shared lane for right turns. Although beneficial to vehicles traveling east on M Street SW and then south on South Capitol Street, this modification would cause queuing that will spillback to the intersection of M Street SW and Half Street SW. This will lead to higher delays at this intersection than predicted under the FEIS Preferred Alternative.

In summary, the Revised Preferred Alternative will have similar traffic operations in 2020 and 2040 as the FEIS Preferred Alternative, except at a few locations. The modification of the alternative at the South Capitol Street and I-395 ramps will result in better traffic operations at the north end of the Project Area along South Capitol Street. Changes to the lane configurations at the intersection of South Capitol Street and M Street will not change the predicted overall LOS at this intersection, but it will affect the traffic operation of nearby intersections, in particular on M Street at the Half Street SW and Half Street SE intersections.

FEIS Preferred Alternative

Tables 4-17 and 4-18 identify locations of intersection delays that changed in the Revised Preferred Alternative, compared with the FEIS Preferred Alternative. This is due to different forecast years, and updated traffic modeling and land use assumptions. For example, the updated analysis grouped the intersections within the west traffic oval and the east traffic circle into one coordinated intersection at each location. In contrast, the FEIS analyzed multiple intersections at each location. The following intersections will operate at LOS E or F during the morning peak hour in 2020 under the FEIS Preferred Alternative:

- South Capitol Street at west traffic oval/Potomac Avenue/Q Street/R Street (LOS F)
- South Capitol Street at east traffic circle/Suitland Parkway (LOS F)
- Firth Sterling Avenue SE at South Capitol Street (LOS F)
- Martin Luther King, Jr. Avenue SE at Sumner Road SE (LOS F)
- Martin Luther King, Jr. Avenue SE at Suitland Parkway ramps (LOS E)
- Suitland Parkway at I-295 southbound ramps (LOS E)

Among these six intersections, Firth Sterling Avenue SE at South Capitol Street will have the highest average delay (223 seconds per vehicle). Compared with existing conditions, the capacity of this intersection will not change under the FEIS Preferred Alternative, although travel demand is projected to increase substantially due to additional employment at the St. Elizabeths Campus and JBAB. Corresponding queues from this intersection are projected to extend over one mile from the intersection on South Capitol Street in the northbound direction and one-third of a mile in the southbound direction.

The updated analysis of 2020 morning peak hours for the FEIS Preferred Alternative are consistent with the results of the analysis performed for the FEIS Preferred Alternative, except at the intersection of South Capitol Street and M Street. The updated analysis resulted in an overall LOS D for this intersection during the morning peak hour. This change was the result of updated travel patterns and land uses, and revisions to signal timing assumptions. Nevertheless, vehicles approaching this intersection will regularly queue beyond the nearest intersections due to their relatively close spacing.

By 2040, traffic conditions in the morning peak hour under the FEIS Preferred Alternative will slightly worsen compared with the 2020 predictions. Five of the six intersections predicted to operate at LOS E or F in 2020 are predicted to operate at these levels in 2040. The exception will be the proposed Suitland Parkway ramps at Martin Luther King, Jr. Avenue, which will operate at LOS D. The highest average delay during the morning peak hour will continue to be at the intersection of Firth Sterling Avenue SE and South Capitol Street. The average delay, predicted to be 25 seconds longer than in 2020, will maintain the extremely long queue lengths. Average delays at the other four intersections will increase as well, but by lesser amounts.

The following intersections will operate at LOS E or F during the evening peak hour in 2020 under the FEIS Preferred Alternative:

- South Capitol Street at E Street/Washington Avenue (LOS F)
- South Capitol Street at Virginia Avenue (LOS F)
- South Capitol Street at I-395 ramps (LOS F)
- South Capitol Street at west traffic oval/Potomac Avenue/Q Street/R Street (LOS E)
- South Capitol Street at east traffic circle/Suitland Parkway/Howard Road (LOS E)
- Martin Luther King, Jr. Avenue SE at Howard Road SE (LOS E)
- Firth Sterling Avenue SE at South Capitol Street (LOS E)

The highest average delay among these seven intersections will occur at the intersection of South Capitol Street and E Street/Washington Avenue (153 seconds per vehicle). This intersection has five legs with four in-bound approaches. Traffic from E Street competes with southeast-bound traffic on Washington Avenue resulting in longer delays for both approaches than at other intersections. The FEIS did not report this intersection as operating poorly. However, recent changes in traffic patterns due to updated roadway network connections along Washington Avenue and revisions in land use from the previous analysis resulted in heavier southbound volumes along South Capitol Street. These higher volumes will adversely affect the operations of downstream intersections at Virginia Avenue and the I-395 ramps.

These intersections will operate at LOS F in 2020. The FEIS reported that these intersections would operate at LOS C in 2030.

Similar to the morning peak hour results, the evening peak hour results of the updated analysis for 2020 under the FEIS Preferred Alternative are consistent with the results of the analysis performed for the FEIS with the exception of the intersection of South Capitol Street and M Street. Because of updated travel patterns and land uses, and revisions to signal timing assumptions, this intersection is predicted to operate at LOS D under the FEIS Preferred Alternative. The FEIS reported LOS F at this intersection. Similar to the morning peak hour, the analysis predicted queuing of vehicles beyond the nearest intersections because of the close spacing.

By 2040, the following three intersections, in addition to the six intersections noted above, will operate at LOS E or F during the evening peak hour under the FEIS Preferred Alternative:

- Firth Sterling Avenue SE at DHS West Access Road (LOS E)
- Howard Road SE at Firth Sterling Avenue SE (LOS E)
- Howard Road SE at Anacostia Metrorail Station (LOS F)

The analysis predicted that these three intersections would operate worse during the evening peak hour in 2040 than in 2020 because of higher traffic volumes along major arterials and the effects of changes in land use both in the Project Area and along commuter routes in the vicinity.

The highest average delay during the evening peak hour will continue to be at the intersection of South Capitol Street and E Street/Washington Avenue, with the same effects to downstream intersections. Other intersections, such as those along the west traffic oval, at the I-395 ramps, and at the intersection of Firth Sterling Avenue SE and South Capitol Street, are predicted to operate similarly in 2020 and 2040.

The evening peak hour LOS at the intersection of South Capitol Street and M Street is predicted to be the same as 2020, with total average delay increasing from 41 to 48 seconds per vehicle. While the operation of this intersection will be better than reported in the FEIS for 2030, evening peak hour queuing beyond adjacent intersections at all approaches is still predicted.

4.11.4 Mitigation Measures

South Capitol Street at M Street

The intersection of M Street and South Capitol Street will undergo the most substantial difference in configuration within the Project Area under the Revised Preferred Alternative. This intersection is of notable importance for the southern half of the District because M Street is the only continuous east-west arterial south of the Southeast-Southwest Freeway that connects the Anacostia and Southwest Waterfronts, and South Capitol Street is the longest north-south arterial south of the National Mall. In addition, DDOT is considering placing a DC Streetcar line on M Street SE/SW, which may affect the operation of the intersection (see Section 2.5).

DDOT, FHWA, and a number of stakeholders recognize that the proposed configuration of the M Street and South Capitol Street intersection under the Revised Preferred Alternative represents a compromise that balances the following competing needs and limitations in addition to just traffic operations:

- Purpose and need of the Project, including creation of a grand urban boulevard that serves as a gateway of national significance to the District of Columbia Monumental Core
- Right-of-way constraints
- Impacts to historic structures (Saint Vincent De Paul Catholic Church)
- Potential utility conflicts
- Uniformity of cross-section width and landscape elements (including a green center median)
- Visual/aesthetic quality
- Accessibility for east-west cross streets, including left turns to and from South Capitol Street and east-west through movements
- Pedestrian cross-walk lengths and walk times

The conversion of the current urban diamond interchange to an at-grade intersection (see Figure 4-10~~Figure 4-10~~) will introduce a new signal along the main through lanes of South Capitol Street. While this change will provide better connectivity between the existing discontinuous segments of L Street SE and SW, and K Street SE and SW, the proposed conversion will reduce the operational performance along the both South Capitol Street corridor and M Street.

Figure 4-10: Revised Preferred Alternative South Capitol Street / M Street Intersection

By 2040, longer delays and queues along the South Capitol Street corridor are predicted to occur compared to the No Build condition. Depending on future traffic patterns and volumes, queues in each direction may spill back past adjacent signalized intersections. North-south and east-west travel times are projected to be longer under the Revised Preferred Alternative as a result of slower overall speeds associated with the intersection delays. In particular, operations on the northbound approach may degrade due to high volumes of left turn movements.

Because of this potential, DDOT will monitor and evaluate traffic conditions at and surrounding this intersection once every two years up to the year 2040 following complete construction of the Project. If DDOT finds the following traffic conditions, it will consider additional capital improvements:

- Substantial degradation in operational performance of the intersection, specifically in the northbound direction during morning and afternoon peak periods, such as spill-back queuing from the northbound left turn lane at M Street through the intersection of N Street/ South Capitol Street.
- Substantially higher rates, severity, and / or frequency of crashes at the intersection, benchmarked against crash patterns under existing conditions.

Capital improvement options were identified that could address the operational and safety concerns noted above. However, these options would not comprehensively address all the operational issues inherent in the proposed South Capitol Street/M Street intersection, nor would they better balance the competing needs and limitations noted above. The following capital improvement options are not mutually exclusive. The options may be combined if

desired. Additional options may be developed and considered if DDOT decides to make additional capital improvements.

Option 1 (South Capitol Street / M Street Intersection)

Option 1 is intended to improve operations and safety by creating a northbound left turn lane without increasing the proposed footprint of the intersection. A portion of the median on the south leg of the intersection between M and N Streets would be eliminated, and replaced by a 250-foot left-turn bay (see Figure 4-11).

Figure 4-11: South Capitol Street / M Street Intersection Option 1

Option 2 (South Capitol Street / M Street Intersection)

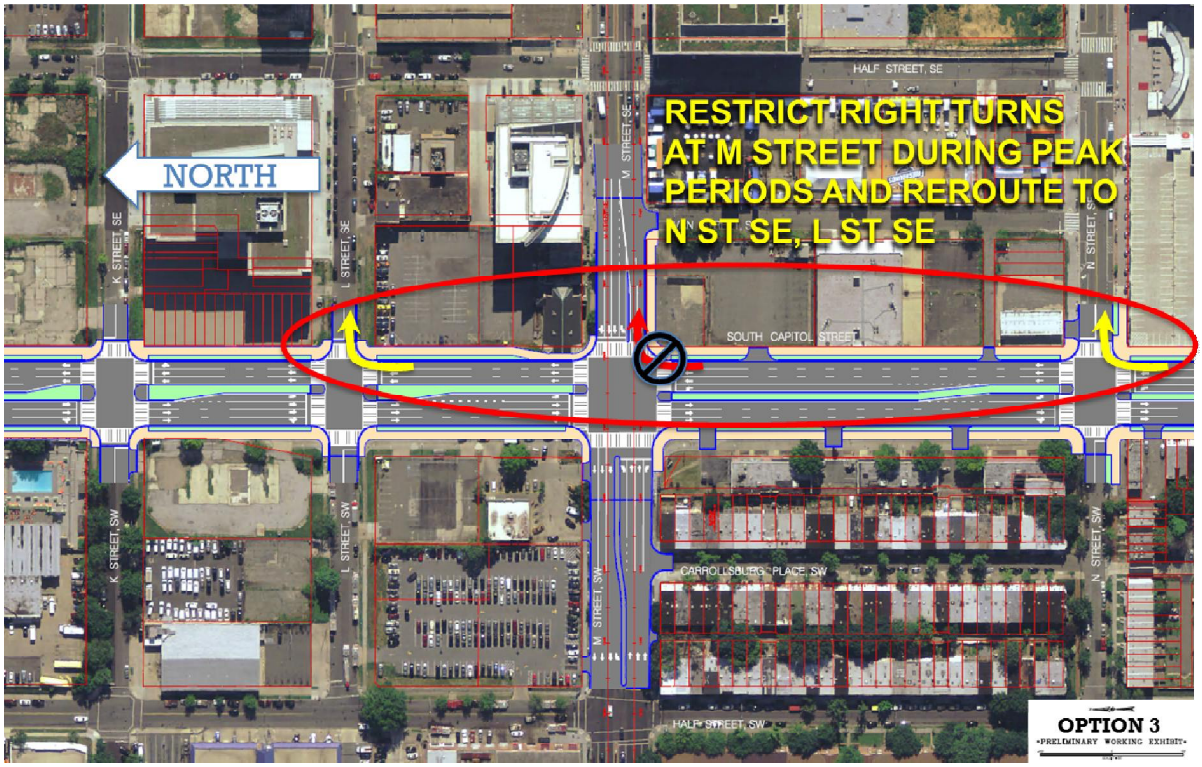
Option 2 would reduce the volume of northbound left turns at M Street by providing left turn lanes at the two intersections (L and K Streets) immediately north of the South Capitol Street/M Street intersection (see Figure 4-12). By providing additional left turn lanes along South Capitol Street, the signal time allocated for northbound left turns at M Street may be reduced, which would benefit other movements at the intersection. However, this option would only be available if a series of long-term improvements aimed at reconnecting the Anacostia and Southwest Waterfronts through a combination of multiple local streets, including K and L Streets, are implemented as identified in the *M Street SE/SW Transportation Planning Study* (DDOT, 2012). The District owns the land that currently impedes the continuity of L and K Streets, and DDOT is planning to connect K and L Streets SW to 3rd and 6th Streets SW, respectively.

Figure 4-12: South Capitol Street / M Street Intersection Option 2

Option 3 (South Capitol Street / M Street Intersection)

Option 3 was developed to address potential conflicts between northbound right-turning vehicles and pedestrians crossing M Street SE. Northbound right turns from South Capitol Street to M Street SE would be prohibited during peak periods and/or special events (see Figure 4-13). Right turns would allowed at N and L Streets SE. Variable message signing would be provided informing motorists about the right turn restriction. The elimination of right turn/pedestrian conflict during peak periods would increase the capacity of the through lanes through the intersection. While Figure 4-13 shows this improvement specifically for the northbound direction, a similar strategy could be employed other problematic approaches depending on the time of day.

Figure 4-13: South Capitol Street/M Street Intersection Option 3



Other Options (South Capitol Street / M Street Intersection)
Other options that require more research to determine effectiveness and safety implications may be considered, such as variable time-of-day lane use on the northbound approach, similar to what is utilized in other areas of the District (e.g., Chain Bridge Road, Canal Road, and Arizona Avenue NW). For the northbound direction, the configuration would be shown with variable message signs and signal controls to provide two through lanes and two left-turn lanes at times when left turn volume demand exceed capacity of a single lane. At all other times, the signing and signal controls would indicate one left turn lane and three through lanes for the northbound direction.

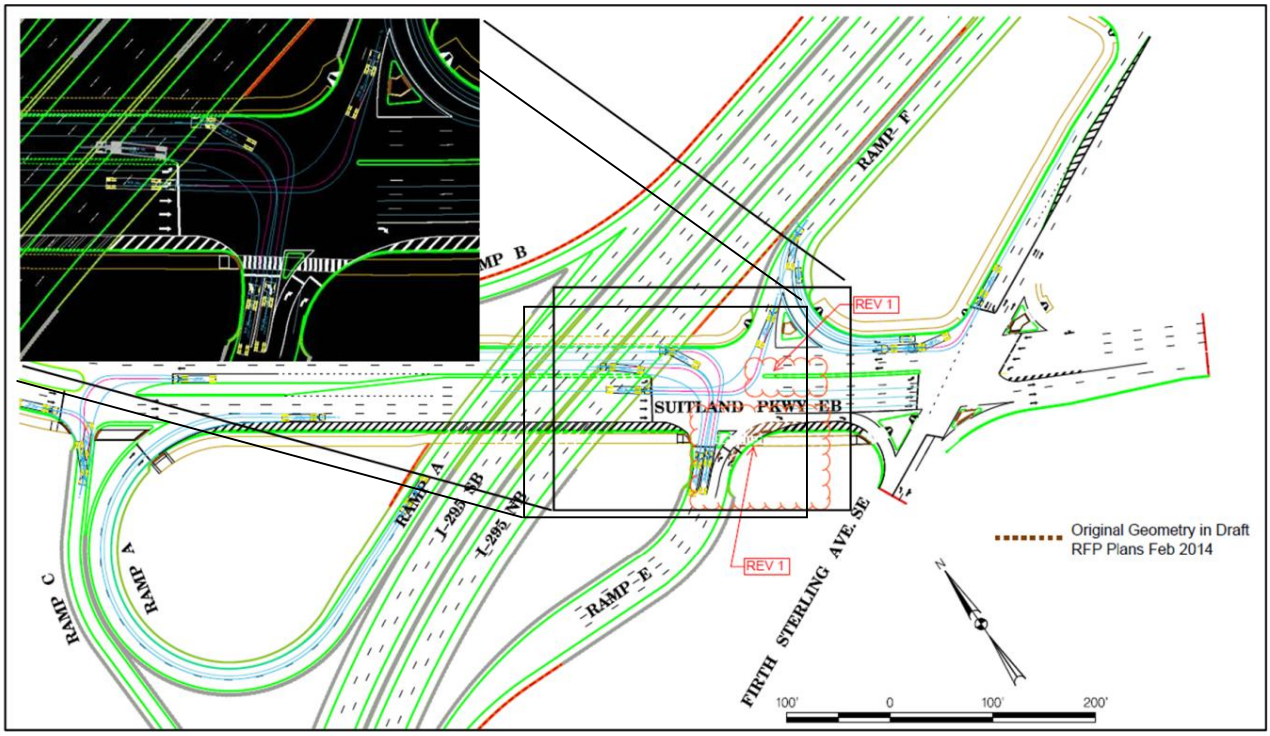
In addition, supplemental traffic control could be considered during peak periods. As with a number of other intersections throughout the District where two major corridors intersect, the intersection signal control could be augmented by traffic control officers. Traffic control officers are able to make real time determinations in adjusting the priority of any given turn movement, intersection approach or mode based on changing operational conditions to best serve all of the modes and movements.

Other Locations

I-295 Northbound Ramps at Suitland Parkway
A potential safety concern was identified with regards to the proposed of I-295 and Suitland Parkway interchange. The new interchange configuration would allow northbound vehicles exiting I-295 to continue straight through the signalized off-ramp intersection at Suitland Parkway and reenter I-295 via the corresponding on-ramp as a way to “queue-jump” (i.e. bypass stopped or slow moving traffic) during times of heavy congestion on the interstate. This is phenomenon that occurs at other locations throughout the metropolitan area, and often degrades safety and operations of the interstate and the adjacent ramp terminals.

The proposed interchange could be revised to deter queue-jumping by including a channelizing island at the off-ramp intersection, as well extending the center median on Suitland Parkway between the off-ramp intersection and Firth Sterling Avenue (see Figure 4-14). The revised configuration of the off-ramp intersection would force vehicles to either turn left or right on Suitland Parkway, and prevent vehicles from proceeding straight into the northbound on-ramp. Although not part of the proposed Revised Preferred Alternative, this revised interchange will be studied further during final design.

Figure 4-14: I-295 NB Ramps at Suitland Parkway

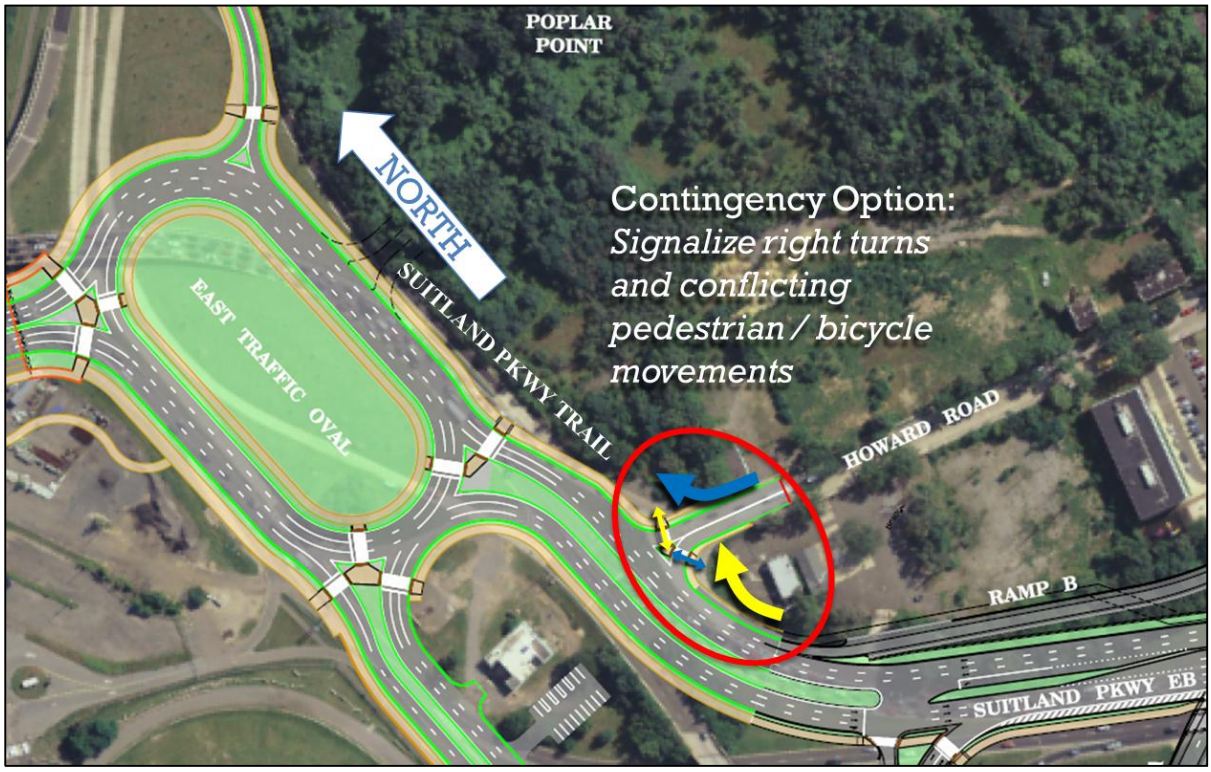


<u>Howard Road at Suitland Parkway</u>

The proposed Suitland Parkway Trail along the north side of the roadway will pass through the intersection of Howard Road at Suitland Parkway, which is proposed by the Revised Preferred Alternative as an un-signalized, right-in/right-out intersection. The projected traffic volumes turning right at this location are not high enough to warrant a traffic signal. However, potential pedestrian/vehicle conflicts could become problematic at this location if right turning movements were to increase substantially. Adequate gaps in vehicular traffic to facilitate a safe pedestrian crossing of Howard Road could become infrequent and cause delays for Suitland Parkway Trail users.

The proposed intersection could include installation of a traffic signal to control the flow of vehicles and provide alternating rights-of-way for pedestrians/cyclists and right-turning traffic. As shown in Figure 4-15, movements shown in similar colors could proceed together and then alternately stop to reduce conflicts and ensure sufficient crossing times for Suitland Parkway Trail users. This configuration would provide a two-phase crossing of Howard Road, so the triangular pedestrian refuge island between the inbound and outbound lanes of the roadway would need to be of sufficient size to accommodate the expected numbers pedestrians and cyclists waiting for changes in signals. Although not part of the proposed Revised Preferred Alternative, this revised intersection will be studied further during final design.

Figure 4-15: Suitland Parkway/Suitland Parkway Trail at Howard Road SE



4.12 Other Transportation Facilities and Services

4.12.1 Water Transportation

Impacts

The *Anacostia River Navigation Evaluation Report* (DDOT, 2014) concludes that the 42 feet vertical and 150 feet horizontal clearances provided by the proposed fixed bridge design will accommodate approximately 99.9 percent of the current and projected future vessel traffic traveling the Anacosita River. Based on information documented in the *Anacostia River Navigation Evaluation*, the vessels and river operations listed in Table 4-19 may be affected by the proposed bridge design. Many of the vessels documented have not traversed beneath the Frederick Douglass Memorial Bridge in over eight years, if not longer. A total of 4.1 average annual vessels transits are potential impacted by the construction of a fixed span. Of the 4.1 trips, three of these are associated with U.S. Coast Guard vessels that have not passed through the area since 2005. The impacts to projected future vessel traffic are to be minimal.

The USN has stated in a meeting held on May 23, 2013 there would be no issues with their fleet beyond the relocation of the DS Barry. The USN needs a maximum of 47 feet horizontal clearance and 35 feet of vertical clearance for critical military traffic. In addition, a fixed bridge

would limit or eliminate the possibility of the occasional visits from tall ships to the Washington Navy Yard.

Table 4-19: Existing Vessels Impacted by the Proposed Clearance

Name of Vessel	Vessel Type	Owner	Air Gap (feet)	Last Recorded Transit	Average Annual Transit
James Rankin	Buoy Tender	U.S. Coast Guard	70	2003	2
YP-684; YP-676; YP-682; YP-688; YP 679	Patrol Craft	U.S. Coast Guard	60	2005	1
Triton	Recreational Sail	Shawn P. Callaghan	>40	2001	0.2
Captain Nelson	Tug	Smith Brothers, Inc.	>40	2004	0.2
Kings Pointer	Training Vessel	US Merchant Marine Academy	140	2003	0.2
American Spirit	Sail Boat/Tall Ship	DC Sail National Maritime Heritage Foundation (NMHF)	78	2006	0.1
Minnie V	Passenger Vessel (Sail)	Living Classrooms Foundation, Inc.	65	2012	0.2
Pride of Baltimore II	Passenger Vessel (Sail)	Pride of Baltimore, Inc.	107	2012	0.2
				Total Average Transits	4.1

Aware that the Project (specifically the construction of the new fixed span Frederick Douglass Memorial Bridge) would affect decision making regarding the future of the DS Barry, the USN commissioned a study (Donjon Marine Company, Inc., 2014) to examine options for either moving or keeping the vessel at its current location docked at the Washington Navy Yard. The *Donjon Report* was primarily a risk assessment of various alternatives for the ultimate disposition of the vessel and did not consider the value or benefits of maintaining the DS Barry as a museum open to the public.

The *Donjon Report* stated that the DS Barry may have to be moved from its current location regardless of whether the USN decides the future of the ship is to operate as a museum open to the public. The USN has closed access to the ship by the public indefinitely. The ship requires extensive repairs and possible hazardous materials cleanup in order for it to operate as a museum in the long-term. Eventually, the hull plating would fail and the ship would become structurally unsound as corrosion advances. The *Donjon Report* also noted that an ongoing USN study with regards to PCB and other heavy metal contamination in and around the Washington Navy Yard may dictate that the DS Barry not remain at her current berth.

If the USN decides not to move the ship from its current location, the *Donjon Report* stated that a detailed maintenance plan would be required to ensure the ship is kept in good shape in terms of hull integrity and long-term survivability. Eventually the hull would require extensive

repairs or maintenance to prevent a catastrophic event, which would have to be made in-water through the use of coffer dams or underwater repair techniques. Alternatively, the *Donjon Report* provided the option of building a dry dock like structure underneath the vessel. The ship would appear to be floating, but would instead be sitting on the structure, which eliminates the risk of flooding or the effects of corrosion. If the decision is made to keep the DS Barry moored at the Washington Navy Yard (with or with a supporting structure), the new Frederick Douglass Memorial Bridge would have no effect on future USN activities to keep the DS Barry in good shape.

Other options for the future of the DS Barry mentioned in the *Donjon Report* included (1) moving the vessel intact before the construction of the new bridge prevents navigation of vessels that need greater than 42 feet vertical clearance (such as the current condition of the DS Barry); or (2) moving the vessel after removing some of the superstructure to reduce its vertical clearance to below 42 feet. The *Donjon Report* noted that completely dismantling the ship in place would probably be prohibited by permitting authorities, notwithstanding its high cost. Under the first move option, the ship can be established as a museum elsewhere (assuming repair are made), taken to a scrap yard for dismantling, or taken to an offshore location to be sunk and possibly made into an artificial reef. Under the second move option, the ship would either be scrapped or sunk. Which option is employed (assuming the USN decides to move the ship) would depend on the schedule for completing the new bridge, and the ability of the USN to secure funding and the necessary approvals/permits to move ship.

If the USN decides to move the ship, the first move option would be used if this action can be done before construction of the new the new bridge prevents navigation of vessels that need greater than 42 feet vertical clearance. The *Donjon Report* stated that the DS Barry can be towed intact safely from the Anacostia River, and would be a simpler action than the second relocation option from the standpoint of vessel preparation. Dredging below the ship may be required to allow the ship to reach water deep enough to allow towing. However, the *Donjon Report* noted that dredging may not be necessary if the draft of the ship is reduced through de-ballasting and weight removal.

The second relocation option would be used if the USN is unable to secure funding and the necessary approvals/permits to move ship before the point in which construction of the new bridge prevents navigation for vessels with greater than 42 feet vertical clearance. Under this option, the superstructure would be reduced in height to allow the entire vessel to pass under the new bridge. Although removing part of the superstructure would lighten the ship, this would not be enough to reduce its draft. Therefore, dredging may still be required as noted under move option 1. Reducing the height of the superstructure would effectively eliminate keeping the ship as a museum at another location. Move option 2 would cost about $1.1 million more than move option 1 according to the *Donjon Report*.

A new fixed span Frederick Douglass Memorial Bridge will prevent U.S. Naval vessels with vertical clearance requirements greater than 42 feet from navigating to and from the USN Yard.

The *Anacostia River Navigation Evaluation Report* (DDOT, 2014) (Appendix A) indicated no plans by the USN to dock a vessel similar in size to the DS Barry at the Navy Yard.

The *Anacostia River Navigation Evaluation Report* indicated potential installation of a replica of the schooner the Pearl by the Earth Conservation Corps. As presented in the report, the intended use and the time frame of the installation of the replica of the Pearl are not clear. But if the vessel is intended to be installed as a display ship, it would need to be transported to site without the masts and be assembled on site. The transportation of the replica as a working sailing vessel will not clear the 42 feet space provided by the proposed fixed bridge.

Mitigation

No mitigation measures are required.

4.12.2 Fueling Pier

Impacts

A fuel transfer pier 165 feet downstream of the proposed new bridge configuration may be impacted. This pier is used to transfer fuel from barges for storage and use at Andrews Air force Base via a fuel pipeline along Suitland Parkway. Given that the tug and barge typically extend 130 to 165 feet upstream of the fuel pier in the current mooring configuration, it is likely that changes to the barge approach path and mooring arrangement will be required for safe operation, particularly on approach to the fueling pier.

Two additional piers and associated mooring and breasting structures, located on the west bank of the Anacostia River to the south of the existing Frederick Douglass Memorial Bridge may be impacted. These are remnants of an earlier fuel storage facility previously located south of the bridge and removed circa 2007 and are no longer in use. Therefore, demolition of the northern pier structure and associated mooring structures are not expected to have any significant impact.

Mitigation

No mitigation measures are required.

4.12.3 Helicopter Service

Impacts

The FEIS Preferred Alternative did not allow the construction of the large staircases connecting to the Ancostia Rivefront to avoid impact on the existing heliport (at 1724 South Capitol Street SE). Conversely, the Revised Preferred Alternative would accommodate these staircases while not requiring the relocation of the heliport. In addition, the Revised Preferred Alternative would not require modification of the existing flight approach and departure path for the heliport, which was the case under the FEIS Preferred Alternative.

Mitigation

No mitigation measures are required.

4.12.4 Freight and Passenger Rail Service

Impacts

The Project is independent from the changes that occur with the freight and passenger rail services that operate in the Project Area. As a result, the conclusions in the FEIS remain valid for the Revised Preferred Alternative.

Mitigation

No mitigation measures are required.

4.13 Construction Impacts

4.13.1 Construction Phasing of the Revised Preferred Alternative

The construction of each of the five segments for the Revised Preferred Alternative will be scheduled in stages, and would be determined at a later time and may be under separate contracts. The construction of Segment 1 is scheduled to begin in spring of 2015 and completed by the winter of 2018/2019. The selected designer/contractor for each contract would determine the exact sequencing and methodology for the construction of the Revised Preferred Alternative, with approval from DDOT and FHWA. The overall cost of the Project for all five segments is estimated at $1.033 billion. Specifically, Segment 1 is forecast to cost approximately $480 million, Segment 2 approximately $223 million, Segment 3 approximately $135 million, Segment 4 approximately $153 million, and Segment 5 approximately $42 million.

4.13.2 Community Cohesion and Facilities

Impacts

During the construction of the Revised Preferred Alternative, access to all community facilities would be maintained to the extent practical through controlled construction scheduling and/or provisions of alternate routes of entry. This is the same as documented in the FEIS for the FEIS Preferred Alternative. In addition to the community facilities listed in FEIS as possibly requiring temporary change of access due to the construction activities, two school properties along Howard Road SE may be impacted during construction. These are Septima Clark Public Charter School and Howard Road Academy. Portions of these schools may be required for construction.

Project Area utilities may be impacted temporarily by construction of the Revised Preferred Alternative but, as stated in the FEIS, there would be no service interruptions.

Mitigation

The potential impacts to community facilities created by changes in access would be mitigated by providing adequate signage for the access changes and by providing advanced notification to the community regarding Project changes throughout the construction period.

Temporary utility impacts would be mitigated with active and frequent coordination between DDOT and the utility owners in the Project Area throughout the design and construction phases

of the Project. Utility lines under the Anacostia River will not be impacted during construction. The only utility currently crossing the existing Frederick Douglass Memorial Bridge is an electrical service that operates the swing span.

4.13.3 Economy and Employment

Impacts

The construction of the Revised Preferred Alternative would create new jobs and increase the sale of construction related energy, equipment, and materials. The Revised Preferred Alternative would be subject to the contracting procedures and requirements defined in Title IV of the *National Capital Revitalization Corporation and the Anacostia Waterfront Corporation Reorganization Clarification Emergency Act of 2007* (54 DCR 7390).

Mitigation

No mitigation measures are required.

4.13.4 Air Quality

Impacts

Construction-related air quality effects, applicable regulations, and required mitigations documented in the FEIS would apply to the Revised Preferred Alternative. Construction-related effects of the Project would be limited to short-term, increased fugitive dust and mobile-source emissions during construction. State and local regulations regarding dust control and other air quality emission reduction controls would apply to the Project.

Fugitive dust is airborne particulate matter, generally of a relatively large particulate size. Construction-related fugitive dust would be generated by haul trucks, concrete trucks, delivery trucks, and earth-moving vehicles operating around the construction sites. Fugitive dust is particulate matter re-suspended ("kicked up") by vehicle movement over paved and unpaved roads, dirt tracked onto paved surfaces from unpaved areas at access points, and material blown from uncovered haul trucks.

Generally, the distance that particles drift from their source depends on their size, the emission height, and the wind speed. Small particles (30 to 100 micron range) can travel several hundred feet before settling to the ground. Most fugitive dust, however, is comprised of relatively large particles (that is, particles greater than 100 microns in diameter). These particles are responsible for the reduced visibility often associated with this type of construction. Given their relatively large size, these particles tend to settle within 20 to 30 feet of their source.

Mitigation

The appropriate prevention and mitigation measures, consistent with the *DDOT Division 100 General Requirements*, will minimize potential particulate pollution. The selected designer/contractor will be required to use the following guidelines to minimize the amount of construction dust generated.

Site Preparation

The selected contractor will be required to use the following measures when preparing any site within the Project Area for construction:

- Minimize land disturbance
- Use watering trucks to minimize dust
- Cover trucks when hauling dirt
- Stabilize the surface of dirt piles if they are not removed immediately
- Use windbreaks to prevent accidental dust pollution
- Limit vehicular paths and stabilize these temporary roads
- Pave all unpaved construction roads and parking areas to road grade for a length no less than 50 feet from the construction site access road

The above measures prevent dirt from washing onto paved roadways.

Construction

The selected contractor will be required to use the following measures to minimize and prevent air quality impacts during construction:

- Cover trucks when transferring materials
- Use dust suppressants on unpaved traveled paths
- Minimize unnecessary vehicular and machinery activities
- Minimize dirt track-out by washing or cleaning trucks before leaving the construction site (An alternative to this strategy is to pave a few hundred feet of the construction site access road just before entering the public road)

Post-Construction

The selected contractor will be required to use the following measures to prevent future air quality issues after construction:

- Re-vegetate any disturbed land not used
- Remove unused material
- Remove dirt piles
- Re-vegetate all vehicular paths created during construction to avoid future off-road vehicular activities

Carbon monoxide (CO) emissions from motor vehicles generally increase with decreasing vehicle speed. Disruption of traffic during construction (such as the temporary reduction of roadway capacity and the increased queue lengths) could result in short-term, elevated concentrations of CO.

The selected contractor will be required to use the following additional measures during construction of the Revised Preferred Alternative:

- Minimize the amount of emissions generated by limiting disruptions to traffic, especially during peak travel hours
- Develop an air quality emission control plan for the construction phase
- Cover all trucks during transport of fill materials or soil, wetting materials in trucks, or providing adequate freeboard to minimize dust emissions during transportation
- Cover loads of hot asphalt to minimize odors
- Provide, and require use of, wheel washers to remove dirt that vehicles will otherwise carry offsite
- Remove dirt deposited on any public road, sidewalk, bicycle path, or pedestrian path
- Use gravel or pave haul roads to reduce windblown dust and dirt deposited on local roads
- Remove gravel or paving at the completion of construction and restore area
- Require the use of low or ultra-low sulfur fuels in construction equipment to reduce sulfur emissions
- Locate construction equipment and truck staging areas as far away from sensitive receptors as practical and in consideration of potential impacts to other resources
- Plant vegetative cover on graded areas that will be left vacant for more than one season
- Clean spills of transported material on public roads by frequently using a street-sweeper machine
- Coordinate construction activities with other projects in proximity to the Project to reduce the cumulative effects of concurrent construction projects
- Minimize emissions by assuring proper equipment operation:
  - Turn off the engine of construction vehicles if they are left idling for more than 15 minutes
  - Require appropriate emission-control devices (catalytic converters or particulate traps) on all construction equipment powered by gasoline or diesel fuel to reduce CO, NO_X, and particulate emissions in vehicular exhaust
  - Use relatively new, well-maintained equipment to reduce CO and NO_X emissions

4.13.5 Noise and Vibration

Impacts

The Revised Preferred Alternative will have short-term noise and vibration effects similar to the FEIS Preferred Alternative, specifically on receptors in the immediate vicinity of the construction site. The FEIS documented measures to minimize construction noise. These minimization measures also apply to the Revised Preferred Alternative.

The FEIS documented that construction equipment, construction activities, and delivery vehicles traveling to and from the site cause noise impacts in communities. The level of effect would depend on the type of equipment, duration of activity, and distance from a noise receptor. Activities such as pile driving associated with the construction of new ramps would create an annoyance to nearby properties. These construction activities would be limited to daytime hours and to a short duration.

Mitigation

Identification and specification of noise abatement measures would be developed during final design of the Project. Regulations at 20 DCMR, Chapter 31, outline District Municipal Regulations (DCMR), which regulate construction noise. The DCMR regulations mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards; that, except under very special circumstances, construction activities be limited to weekdays between the hours of 7:00 a.m. and 7:00 p.m.; and that construction material be handled and transported in such a manner as not to create unnecessary noise. Other applicable measures include:

- Limit noise from construction sites to 80 dBA at 25 feet from the edge of the Project (pile driving and explosives are subject to separate rules) between 7:00 a.m. and 7:00 p.m.
- Limit noise from construction sites to 55 dBA at 25 feet from the edge of the project in residential or waterfront areas at night
- Develop a noise control plan per DDOT and FHWA requirements prior to the start of construction

To abate or minimize expected construction noise impacts, mitigation measures could be specified in contract plans and specifications subject to the provisions in 20 DCMR, Chapter 31. Project-specific construction noise abatement can be used to minimize, as much as possible, the noise impact zone in areas outside the construction site boundary. Noise abatement measures include:

- Incorporate the needed abatement measures in the project plans and specifications
- Keep the public informed when work is going to be done
- Limit the number and duration of idling equipment on site
- Provide mufflers or silencers to construction equipment operated by internal combustion engines and maintain all construction equipment in good repair
- Where possible, reduce noise from all stationary site equipment and facilities by using a suitable enclosure
- When possible, minimize the use of back-up alarms during nighttime hours
- When possible, schedule truck loading, unloading, and handling operations so as to minimize on-site construction noise

Vibration mitigation measures include limiting construction activities to weekdays between the hours of 7:00 a.m. to 7:00 p.m. This requires the selected contractor to have an advance outreach program to notify residents and business of schedules for any pile driving or other activity that may result in vibratory impacts. It also requires the selected contractor to monitor for damage to buildings resulting from vibrations caused by construction activity.

4.13.6 Water Quality and Floodplains

Impacts

The Revised Preferred Alternative would impact the water quality and floodplain of the Anacostia River during construction, similar to the FEIS Preferred Alternative. The majority of this impact would come from construction of the Frederick Douglass Memorial Bridge. Throughout the Project Area, sediment and erosion control, and stormwater management would be required during construction through the National Pollutant Discharge Elimination System (NPDES) permitting program to reduce the amount of sediment and erosion to the river during construction. Best Management Practices (BMPs) and currently acceptable design and construction procedures would be used to reduce or eliminate undesirable effects resulting from construction.

Mitigation

Dredging, or excavation of riverbed materials, would only occur in association with the construction of the piers. If dredging is necessary, it will be limited to the area within a cofferdam to prevent the contaminated sediments to be re-suspended into the water column. The method of construction will be decided by the designer/contractor.

As the new Frederick Douglass Memorial Bridge would be constructed as part of the design-build process for the Project, the selected designer/contractor would specify the preferred method of construction and construction sequencing. The FEIS identified a potential method of construction that uses barges for the construction of the piers which may also be used for the construction of the Revised Preferred Alternative. Based on the conceptual design solution of drilled shaft piles of the order 8–9 feet in diameter, pile tip elevations for the in-water piers are likely to be of the order of EL -100 feet, which is approximately 80 feet below river bed level. Two types of bridge pilings could be used and are dependent on specific geotechnical test results:

- Concrete Pilings in Drilled Shafts – The shafts would be temporarily lined with a hollow steel casing and a steel rebar “cage” inserted. Tremi concrete (which cures under water) would then be poured into the shaft. The force of the concrete filling the shaft forces the water out the top of the shaft, and dewatering occurs. The casing would be extracted as the concrete is poured in, up to a point just below the riverbed. A form would be used above the stream bottom to complete the piling to the necessary height. This option would require the capture and disposal of potentially contaminated sediment excavated from the shaft. The contaminated sediment would be removed to an appropriate upland disposal site, depending on the level of contamination.

- Driven Pilings – Steel "H" or pipe pilings would be driven into the riverbed and extend upwards to the ordinary high water elevation. A concrete foundation would then be formed on top of them. This construction method would cause temporary impacts and potential vibration or shock wave impacts to nearby fish during construction. No dredging or removal of river sediments would be required.

Neither of the piling techniques requires the use of a cofferdam; however, depending on the construction technique, cofferdams may be used to reduce potential impacts to fish from vibration during pile driving. The use of cofferdams would aid in keeping impacts to the riverbed sediment localized, and any addition of sediment to the water column would be minimal and temporary in nature.

The selected designer/contractor would determine the appropriate technique for removing and method of disposal the existing bridge; however, the demolition could be completed as documented in the FEIS. The decks of the existing bridge would be demolished in the reverse order of how the bridge was originally constructed. This would require that the pavement and deck be removed and then the superstructure be removed in pieces. Barges would be used to remove large spans over the Anacostia River to avoid impacting the river and aquatic resources. Bridge material would be off-loaded nearby and disposed of in accordance with DDOT standards and District hazardous waste management regulations. Explosives would not be used to demolish existing structures.

The existing west side bulkhead would be modified during construction. The west bulkhead would be taken as an extension along the same line of the existing sheet pile bulkhead north of the existing bridge. The east side bulkhead would not be modified.

The designer/contractor will be required to coordinate with the USACE in regards to the demolition of an existing pier in the levee. The designer/contractor will also submit plans to USACE as part of a "No Harm" review for the protection of the existing levee during demolition of the existing pier and construction of the new Frederick Douglass Memorial Bridge.

Any proposed affect to flood storage areas or alterations in flooding characteristic within the 100-year floodplain would be reviewed and approved by FEMA for compliance with federal regulations. Permits would be obtained from the following agencies prior to construction activities:

- USACE – Permits under Section 404 of the Clean Water Act for discharge of dredged or fill material and *Section 10 of the Rivers and Harbors Appropriation Act of 1899* (33 USC 403) for alterations in or over navigable waters.
- DDOE – A permit under Section 401 of the Clean Water Act for any impacts to the Anacostia River. (A Section 401 permit under this act acknowledges that USACE issues the Section 404 permit and allows the District to add specific conditions to ensure all the District's water quality standards are met).

- USCG – A permit under *Section 9 of the Rivers and Harbors Appropriation Act of 1899* (33 USC 401) for construction of a new bridge over a navigable waterway.
- NPS – A Special Use Permit for use of the Anacostia River Bed.

4.13.7 Wildlife and Habitats

Impacts

Construction of the Revised Preferred Alternative will cause disturbance to wildlife and habitats. However, the area of potential construction activity contains relatively few vegetated areas and those areas with vegetation are disturbed. Individual street trees may also be affected by roadway construction.

The Revised Preferred Alternative may require the removal of multiple osprey nests and a single peregrine falcon from the Frederick Douglass Memorial Bridge, rather than one osprey nest as documented in the FEIS. If construction occurs during the nesting period and active nests contain eggs or young, DDOT would request a permit from USFWS to relocate the osprey or peregrine falcon nest. Nest relocation has been successfully used for ospreys and other raptors, and would likely be successful for the peregrine falcon. Prior to demolition of the existing bridge, nesting towers could be erected away from the bridge construction for ospreys and a nest box could be installed on the new Frederick Douglass Memorial Bridge for the peregrine falcon.

Mitigation

Tree and vegetation impacts will be offset through designed landscape tree plantings within the Project Area. Many of these newly planted trees will have the opportunity to become specimen/special trees over time. Little opportunity exists to create forested habitat within the urbanized Project Area. However, some small, open woodland habitat will be created through the landscape design process of the Project.

Once Phase 1 of the construction schedule is determined, new nest materials must be periodically removed to prevent the osprey or peregrine falcon from nesting on the bridge during construction.

4.13.8 Geology, Topography and Soils

Impacts

The construction of the Revised Preferred Alternative will have similar disturbances to soils as the FEIS Preferred Alternative.

Mitigation

A Stormwater Management Plan would be required and proper sediment and erosion control methods would be implemented during construction.

4.13.9 Cultural Resources

Impacts

The Revised Preferred Alternative will have similar impacts to cultural resources as the FEIS Preferred Alternative. Construction activities will impact the surrounding neighborhoods and historic properties, but those effects would be temporary and of limited duration. Impacts will include the presence of construction equipment and vehicles, and associated noise, rerouted traffic, odors from construction materials, dust, and mud. None of these temporary conditions will diminish the integrity or adversely affect the significant features of historic properties in the APE. Impacts from construction to historic properties are discussed in more detail in Appendix G.

There are no archaeological sites within the APE that are listed in or eligible for listing in the National Register of Historic Places. Therefore, the Revised Preferred Alternative would have no adverse effects on archaeological sites.

See Section 4.8 regarding Project compliance with Section 106 of the National Historic Preservation Act.

Mitigation

Minimization or mitigation measures do not apply to archaeological sites for this undertaking. However, the *Section 106 MOA* (ACHP et al., 2011) would contain provisions to address the continued evaluation of potential impacts on archaeological sites during the design phases of the Project. The MOA would address potential treatment of unanticipated archaeological sites discovered during construction.

4.13.10 Hazardous Materials

Impacts

As with the FEIS Preferred Alternative, construction of the Revised Preferred Alternative is expected to encounter contamination of soil and groundwater.

As noted in Section 3.9, assessments made by other parties concluded that it is unlikely that the construction contractor would uncover munitions or explosives of concern (MEC) during ground disturbing activities related to the Project.

Mitigation

The selected contractor would be required to prepare and implement a Health and Safety Plan that addresses the potential contamination, including identifying the equipment and procedures to protect the workers and the general public, monitoring of contaminant exposures, and identifying the selected contractor's contact for health and safety. The methodology for handling contaminated materials as detailed in the FEIS would apply for the Revised Preferred Alternative and would be subject to regulatory requirements of DDOE.

Despite the low risk of uncovering MECs during construction, the contractor shall be provided with or provided references to the MEC information developed by the other parties. They will also be instructed to contact 911 should any MECs be uncovered during construction.

4.13.11 Pedestrian and Bicycle Facilities

Impacts

The construction of the Revised Preferred Alternative would minimally impact pedestrian and bicycle facilities within the Project Area.

Mitigation

The Project would maintain pedestrian and bicycle access by providing pathways for non-motorized traffic through construction areas. There would be a path on at least one side of each roadway during construction. Any pedestrian and bicycle detours required would be signed in accordance with DDOT's maintenance of traffic standards.

4.13.12 Traffic and Transportation

Impacts

Traffic

Traffic would be impacted due to construction of the Revised Preferred Alternative as documented in the FEIS. Traffic delays and modified traffic patterns would be typical of large construction projects. Detours and speed reductions through the site would likely be required. Bus routes may need to be rerouted and bus stops relocated. Access to the Washington Navy Yard and Anacostia Metrorail stations would be maintained.

River Navigation

During construction of the new bridge, only the west side channel opening of the existing bridge would be maintained. Construction of the new bridge and demolition of the existing bridge would cause short-term closures of the navigation and secondary channels but only when working in, or adjacent to, either channel. Although not anticipated, any debris or other potential navigational hazards temporarily left in either channel upon reopening would be clearly demarcated until removed. Dredging activities and waterway closures would be permitted, mitigated, and coordinated with the USCG and other water users, as appropriate. Every effort will be made to minimize delays to marine traffic. Construction of the Project would comply with state and federal regulations.

Along with the mitigation measures noted below, substantial impacts to marine traffic would not occur due to the minimal disturbance to the navigation and secondary channels, and infrequent and short duration of waterway closure required for construction of the new bridge and demolition of the existing bridge. The new bridge would link major recreational redevelopment such as the Anacostia Waterfront and the South Capitol Street Corridor on the west side of the river and Poplar Point on the east side of the river by providing multimodal

access for pedestrian, bicycle, transit, automobile, and marine traffic while facilitating pedestrian activity at the water's edge.

Mitigation

The selected contractor would be required to create a Maintenance of Traffic (MOT) plan, including providing for the safe and efficient movement of people, goods, and services through and around the Project work zone, while minimizing negative impacts to residents, commuters, and businesses. The MOT would specify a set of coordinated transportation management strategies and describes how they will be used to manage the work zone traffic conditions. The strategies would be multi-faceted, and include operational, communications, and demand-management programs to maintain acceptable levels of vehicular and pedestrian/bicycle traffic flow during the periods of construction activities. The MOT would include roles and responsibilities, traffic control plans (TCP) with staging/phasing, traffic incident management plans, monitoring provisions, and contingency plans. Public outreach would be used to notify of any changes to traffic patterns including detours as outlined in the FEIS.

Coordination with USCG would occur to coordinate with water users prior to and during construction regarding potential navigation impacts. The large variety of marine vessels on the river requires establishing construction procedures and coordination efforts to maintain safe operations during bridge construction. Specific procedures would be determined during subsequent phases of the Project; however, they could include the following activities to promote safe marine operations:

- Properly securing all unmanned construction vessels to prevent drifting
- Clearly demarcating all access channels and sensitive areas (i.e., prohibited areas) using secured, floating visual devices (such as buoys)
- Providing lighting on construction vehicles, cranes, barges, or other equipment stationed or operating in the Anacostia River
- Establishing separate marine travel lanes in the upstream and downstream directions
- Coordinating with water users regarding waterway closures and construction equipment activities

4.14 Environmental Commitments

Table 4-20 details the environmental commitments for the Revised Preferred Alternative. The majority of the measures identified in this table were also identified in the FEIS. References to the FEIS measures are provided in the table.

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative

Category	General Mitigation Measures	Construction Mitigation Measures
Land Use (see Section 4.1 of the FEIS)	▪ Conduct right-of-way acquisition and business relocations in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 61)*, as amended, and DDOT right-of-way policies	▪ Use temporary construction easements in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 61), as amended, and DDOT right-of-way policies
Community Cohesion and Facilities (see Section 4.2 of the FEIS)	▪ No mitigation proposed	▪ Maintain access to community facilities to the extent practical through controlled construction scheduling and/or provisions of alternate entries ▪ Install signage for temporary changes in access during construction ▪ Coordinate with residents, businesses, and service providers to provide advanced notification regarding temporary changes in access ▪ Maintain close coordination with affected utility owners to minimize temporary service interruptions
Environmental Justice (see Section 4.3 of the FEIS)	▪ Establish contracting procedures for the Project in accordance with *Title IV of the National Capital Revitalization Act and Anacostia Waterfront Reorganization Clarification Act of 2007* (54 DCR 7390)	▪ Minimize temporary impacts from construction activities on traffic and transportation, air, noise, vibration, and access ▪ Establish contracting procedures for the Project in accordance with Title IV of the National Capital Revitalization Act and Anacostia Waterfront Reorganization Clarification Act of 2007
Economy and Employment (see Section 4.4 of the FEIS)	▪ Compensate displaced businesses in accordance with the rules and regulations of the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (42 USC 61), as amended ▪ Establish contracting procedures for the Project in accordance with Title IV of the *National Capital Revitalization Act and Anacostia Waterfront Reorganization Clarification Act of 2007* (54 DCR 7390)	▪ Maintain access to businesses at all times ▪ Phase construction activities to minimize impacts to on-street parking ▪ Schedule construction activities near Potomac Avenue and M Street ▪ Install signage for temporary changes in access during construction ▪ Coordinate with residents, businesses, and service providers to provide advanced notification on temporary changes in access ▪ Establish contracting procedures for the Project in accordance with Title IV of the *National Capital Revitalization Act and Anacostia Waterfront Reorganization Clarification Act of 2007* (54 DCR 7390)

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Air Quality (see Section 4.5 of the FEIS)	▪ No mitigation proposed	▪ Comply with local and federal regulations for fugitive dust control and mobile-source emissions during construction, specifically 20 DCMR 605, Control of Fugitive Dust ▪ Comply with 20 DCMR 800, Control of Asbestos during demolition or renovation of existing structures within the Project Area, where applicable ▪ Comply with 20 DCMR 717, Soil and Groundwater Remediation, if any soil vapor extraction or groundwater remediation is required in the Project Area ▪ Implement best management practices to control airborne particulate matter pollutants during construction ▪ Minimize traffic disruptions, particularly during peak traffic hours, to control mobile-source emissions during construction ▪ Follow appropriate air quality permitting process for any installation of fuel burning equipment with heat input ratings greater than 5 MMBTU/hr, stationary generators, or other stationary air pollutant emitting equipment, including equipment to be used for construction for a period in excess of 12 months
Noise (see Section 4.6 of the FEIS)	▪ No mitigation proposed	▪ Consider potential temporary noise abatement measures during final design ▪ Identify noise mitigation measures noted in contract plans and specifications ▪ Develop construction phasing plans ▪ Adhere to DDOT construction noise specifications ▪ Limit various activities that generate high construction noise levels to daylight hours ▪ Provide mufflers or silencers to construction equipment with internal combustion engines ▪ Maintain equipment in good repair ▪ Provide advanced notification of construction-related activities, expected increases in noise levels, and minimization/abatement measures to be implemented

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Water Quality (see Section 4.7 of the FEIS)	▪ Coordinate with District and appropriate federal agencies on evaluation of impacts and development/refinement of avoidance/ minimization/mitigation measures ▪ Implement requirements and conditions specified in federal and local permits ▪ Implement Best Management Practices and currently acceptable design and construction procedures ▪ Implement permanent erosion control measures and stormwater management systems in accordance with DDOT construction specifications and the National Pollutant Discharge Elimination System permitting program ▪ Develop techniques during final design to reduce potential impacts to the shortnose sturgeon ▪ Add Atlantic sturgeon measures, if applicable	▪ Construct the new Frederick Douglass Memorial Bridge and demolish the existing bridge primarily by barge and in accordance with District and federal laws ▪ Implement measures specified in the *Biological Assessment for the Shortnose Sturgeon* (DDOT, 2006) ▪ Implement time restrictions for in-stream work to avoid impacts to the shortnose sturgeon ▪ Develop techniques during final design to reduce potential impacts to the shortnose sturgeon and other fishes from shock waves associated with pile driving, cofferdam installation, dredging, and bridge demolition ▪ Monitor compliance with the Biological Assessment and federal and local permits ▪ Perform dewatering activities near contaminated zones in accordance with requirements specified in DDOE permits ▪ Coordinate with affected utility owners to minimize temporary service interruptions ▪ Add Atlantic sturgeon measures, if applicable ▪ Continue to coordinate with DDOE to ensure that SAV are not impacted during the life of the project ▪ Conduct pre- and post-construction surveys to determine changes to the benthic macro invertebrate community during construction ▪ Use impervious turbidity curtains to minimize the migration of sediments ▪ Conduct pre- and post-construction sampling to determine any changes to the uppermost sediment layer and address any impacts as appropriate
Wetlands (see Section 4.8 of the FEIS)	▪ A final wetland delineation and USACE jurisdictional determination will be completed during final design for the three wetlands identified during the 2014 survey.	▪ Wetland buffer fencing will be used to protect any wetland within the vicinity of construction activities, specifically the two wetlands located along Suitland Parkway during construction ▪ A 25-foot buffer is required by DDOE for all wetlands

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Wildlife and Habitats (see Section 4.9 of the FEIS)	▪ Implement restoration plans for natural areas disturbed during construction ▪ Continue coordination with DDOT's Urban Forestry Administration regarding removal and planting of trees ▪ Implement time restrictions for in-stream work to avoid impacts to the shortnose sturgeon ▪ Coordinate with U.S. Fish and Wildlife Service regarding a *Migratory Bird Treaty Act of 1918* (16 USC 703-712) permit for relocation of an osprey nest ▪ Coordinate with U.S. Fish and Wildlife Service regarding Migratory Bird Treaty Act permit for relocation of multiple osprey nests ▪ Erect a peregrine falcon nest box on the new Frederick Douglass Memorial Bridge prior to demolition of the old bridge to provide an alternative nest site location once the old bridge is removed. ▪ Add additional mitigation measures for the Atlantic sturgeon, if applicable	▪ Develop techniques during final design to reduce potential impacts to the sturgeon and other fishes from shock waves associated with pile driving, cofferdam installation, dredging, and bridge demolition ▪ Implement time restrictions for in-stream work to avoid impacts to the shortnose sturgeon ▪ Implement measures specified in the *Biological Assessment for the Shortnose Sturgeon* (DDOT, 2006) ▪ Monitor for compliance with the Biological Assessment and federal and local permits ▪ New nest materials must be removed periodically to prevent the ospreys from nesting ▪ Add additional mitigation measures for the Atlantic sturgeon if applicable
Floodplains	▪ Comply with DC's floodplain regulations: DC MR 20, Chapter 31 – Flood Hazard Rules and flood provisions of DCMR 12 – DC Construction Codes Supplement of 2008 (or latest amendment) for development within Special Flood Hazard Areas (SFHA) ▪ Have DDOE review and approve any development in SFHA in compliance with floodplain regulations	▪ No mitigation proposed

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Geology, Topography and Soils (see Section 4.11 of the FEIS)	▪ Implement permanent erosion control measures and stormwater management systems in accordance with the DDOT construction specifications and the National Pollutant Discharge Elimination System permitting program ▪ Implement a site-specific revegetation plan in accordance with DDOT specifications	▪ Implement temporary erosion control measures and stormwater management systems in accordance with the DDOT construction specifications and the National Pollutant Discharge Elimination System permitting program ▪ Monitor erosion control measures and maintain or revise, as necessary during construction

Parklands	The following measures are proposed to mitigate impacts to Anacostia Park:
	▪ Reconstruct the existing driveway to be two-way with the following cross section. The remaining portion of the driveway in both NPS and DDOT ROW would be removed and restored as green space.
	▪ Design of new entrance cross section would consist of:
	  ▪ 8 foot shared use path
	  ▪ 4 foot green space
	  ▪ 22 foot driveway (2 lanes, 1 in each direction)
	  ▪ 4 foot green space
	  ▪ 8 foot shared use path
	  ▪ A total cross section would be 46 feet, while the roadway would be 22 feet.
	▪ Remove the two on and off ramps from the old Frederick Douglass Memorial Bridge and restore land to match the surrounding landscape including planting new trees.
	▪ Install a new park entrance sign.
	▪ Add signage coming off the new bridge, directing visitors to Anacostia Park.
	▪ Keep riverwalk trail open across the existing Frederick Douglass Memorial Bridge until the new bridge is complete. Provide new trails connections to the new Frederick Douglass Memorial Bridge.
		▪ No mitigation proposed

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Cultural Resources (see Section 4.12 of the FEIS)	These measures are proposed at this time; Section 106 consultation to amend and revise the MOA is ongoing and amended MOA content is subject to change. ▪ Develop new milestones in the amended MOA for project review ▪ Keep the existing Martin Luther King, Jr. Avenue overpass intact (no need to be salvaged or reused) ▪ Visually maintain the L'Enfant Plan's original historic right-of-way of South Capitol Street and Potomac Avenue within the proposed traffic oval ▪ Develop and implement an interpretive signing program within the Project Area focusing on the L'Enfant Plan. The plan would be developed through coordination with DC SHPO and the NPS ▪ Prepare a monitoring plan with periodic reporting requirements and a Mitigation Summary Report that would be submitted to DC SHPO, NPS, and NCPC summarizing the incorporation of the stipulations included in the Section 106 MOA into the final design plans for the Project ▪ Context-sensitive design for newly constructed or altered project components proximate to historic properties, as appropriate. ▪ Restore Reservations 243, 244, and 245 in accordance with design standards established through further coordination with DC SHPO and NCPC, if prudent and feasible. ▪ Consultation on other potential mitigation measures is ongoing with MOA signatories.	▪ Avoid property associated with NRHP-listed and eligible resources for construction-related activities (construction staging) ▪ Meet with consulting parties to discuss avoidance of indirect effects associated with construction vibrations, haul routes, and temporary traffic re-routing

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Hazardous Materials (see Section 4.13 of the FEIS)	▪ Completion of further studies (Phase 2 Environmental Site Assessments) to define type and extent of contamination at specific properties ▪ Develop waste management plans based on results of additional studies ▪ Coordinate with DDOE concerning handling and disposal of contaminated materials ▪ Perform dewatering activities near contaminated zones in compliance with procedures and requirements specified in DDOE permits ▪ Complete further studies (Phase 2 Environmental Site Assessments) to define type and extent of contamination at specific properties is ongoing ▪ Develop waste management plans based on results of additional studies ▪ Coordinate with DDOE concerning handling and disposal of contaminated materials ▪ Perform dewatering activities near contaminated zones in compliance with procedures and requirements specified in DDOE permits	▪ Implement a Health and Safety Plan and Waste Management Plan addressing worker and public safety, on-site management of contaminated materials, and disposal procedures for identified contaminated materials ▪ Perform dewatering activities near contaminated zones in accordance with requirements specified in DDOE permits ▪ Implement DDOE requirements for appropriate management and disposal of contaminated materials ▪ Notify DDOE when construction begins and when areas of contamination are identified so that DDOE can work with the responsible party/parties regarding potential work plans for delineation and/or remediation ▪ Provide construction contractor with copies or references to the MEC information developed by the other parties and instruction to contact 911 if MECs are uncovered.
Visual Quality (see Section 4.14 of the FEIS)	▪ No mitigation proposed ▪ Review the design for the new Frederick Douglass Memorial Bridge by a Visual Quality Committee prior to awarding the design-build contract	▪ No mitigation proposed
Pedestrian and Bicycle Facilities (see Section 4.15 of the FEIS)	▪ No mitigation proposed	▪ Maintain pedestrian and bicycle facilities during construction

Table 4-20: Environmental Commitments for Mitigation of the Revised Preferred Alternative (continued)

Category	General Mitigation Measures	Construction Mitigation Measures
Traffic and Transportation (see Section 4.16 of the FEIS)	▪ Develop Maintenance of Traffic Plans during final design to minimize construction impacts on traffic ▪ Complete separate Interstate Modification Reports for FHWA approval of changes at the I-295/Suitland Parkway interchange and the I-395/South Capitol Street interchange ▪ Reclassify South Capitol Street as an urban boulevard ▪ Perform additional analysis of long-term traffic operations during final design and development of mitigation measures as necessary.	▪ Implement Maintenance of Traffic Plans during construction ▪ Develop a regional outreach program to inform the public, local officials, and media about the construction schedule, major traffic delays, and alternate routes ▪ Maintain access to Metrorail stations for all modes ▪ Use signs and Intelligent Transportation Systems to inform the traveling public about detours and road closures
Energy (see Section 4.18 of the FEIS)	▪ No mitigation proposed	▪ No mitigation proposed

chapter 5.0

section 4(f) evaluation

This chapter provides documentation necessary to support determinations required to comply with the provisions of the United States Code (USC) at 49 USC 303 and 23 USC 138 (hereinafter referred to as "Section 4(f)"), and its implementing regulations in the Code of Federal Regulations (CFR) at 23 CFR 774.

The FEIS contained a Section 4(f) Evaluation of the FEIS Preferred Alternative that covered two Section 4(f) resources, which are also historic properties: Suitland Parkway and the L'Enfant Plan of the City of Washington, DC. The FEIS Preferred Alternative would not affect any other Section 4(f) property. The evaluation concluded that there was no feasible and prudent avoidance alternative to the Section 4(f) use of the two Section 4(f) properties and that the FEIS Preferred Alternative included all possible planning to minimize harm to them resulting from such use. This conclusion was a result of a Programmatic Evaluation that was signed by DDOT and the DC SHPO, with concurrence from FHWA, based on meeting the requirements set forth in FHWA's *Final Nationwide Programmatic Section 4(f) Evaluation and Approval for Transportation Projects That Have a Net Benefit to a Section 4(f) Property* (2005). Therefore, an individual Section 4(f) Evaluation was not prepared.

The updated Section 4(f) Evaluation of the Revised Preferred Alternative addresses three Section 4(f) properties. The Revised Preferred Alternative will continue to require land from the L'Enfant Plan of the City of Washington, DC and Suitland Parkway. In addition, the Revised Preferred Alternative will include construction within Anacostia Park in order the maintain public access to the Poplar Point section of the park. The existing access to the park will be affected by the proposed east oval. This chapter documents Section 4(f) compliance with regards to these three properties.

5.1 Proposed Action

The Revised Preferred Alternative is the proposed action and the major elements include:

- A new Frederick Douglass Memorial Bridge across the Anacostia River
- Two traffic ovals located immediately west and east from the ends of the new bridge
- Conversion of South Capitol Street to an grand urban boulevard that accommodates multimodal transportation, which includes converting the grade-separated intersection with M Street into an at-grade intersection

- Streetscape design features along South Capitol Street and New Jersey Avenue SE, such as widened sidewalks and curbside lanes, and the provision of street trees, benches, and decorative streetlights
- Improved connections between I-295 and Suitland Parkway
- Conversion of the Suitland Parkway and Martin Luther King, Jr. Avenue SE bridge overpass into an urban diamond interchange

5.2 Administrative Background

Section 4(f) of the Department of Transportation Act of 1966 is codified at 49 USC 303, and FHWA policies and guidance. A Section 4(f) property is any publicly-owned land of a public park, recreational area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance. For purposes of Section 4(f), historic sites are protected if they are listed in or determined eligible for inclusion in the National Register of Historic Places.

5.2.1 Section 4(f) Use

As noted in 23 CFR 774.3, Section 4(f) Approvals, a transportation project approved by a U.S. Department of Transportation (U.S. DOT) modal agency (for this Project, FHWA) may not use a Section 4(f) property unless it is determined that:

- There is no feasible and prudent avoidance alternative, as defined in 23 CFR 774.17, to the use of land from the property, and
- The action includes all possible planning, as defined in 23 CFR 774.17, to minimize harm to the property resulting from such use, or
- The use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation or enhancement measures) committed to, will have a *de minimis* impact, as defined in 23 CFR 774.17, on the property

As defined in 23 CFR 774.17, the use of a protected Section 4(f) property occurs when any of the conditions below are met:

- When land [of the Section 4(f) property] is permanently incorporated into a transportation facility
- When there is a temporary occupancy of land [of the Section 4(f) property] that is adverse in terms of the [Section 4(f)] statute's preservation purpose as determined by the criteria in 23 CFR 774.13(d), or
- When there is constructive use of a Section 4(f) property as determined by the criteria in 23 CFR 774.15

FHWA may determine that the use of Section 4(f) property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures)

committed to by the applicant, will have a *de minimis* impact, as defined in 23 CFR 774.17, on the property. The *de minimis* impact criteria and associated determination requirements vary by type of Section 4(f) property involved. For example, the use of a historic site may be *de minimis* if the Administration renders a "no adverse effect" in accordance with Section 106 of the National Historic Preservation Act (NHPA). For a public park or recreational resource, a *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

5.2.2 Avoidance Alternatives and Minimization of Harm

A feasible and prudent avoidance alternative prevents using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. The feasible and prudent standard applies only to an alternative that fully avoids any use of a Section 4(f) property. It would not apply when choosing among alternatives that require the use of at least one Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.

An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.

An alternative is not prudent if:

- It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need
- It results in unacceptable safety or operational problems
- After reasonable mitigation, it still causes:
  - Severe social, economic, or environmental impacts
  - Severe disruption to established communities
  - Severe disproportionate impacts to minority or low income populations, or
  - Severe impacts to environmental resources protected under other Federal statutes
- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude
- It causes other unique problems or unusual factors, or
- It involves multiple factors that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude

All possible planning to minimize harm means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project. For parks or recreational resources, reasonable mitigation measures may involve a replacement of land and/or facilities of comparable value and function, or monetary compensation to enhance the remaining land. For historic sites, reasonable measures normally serve to preserve the historic activities, features, or attributes of the site as agreed by

FHWA and the official(s) with jurisdiction over the Section 4(f) property in accordance with the Section 106 consultation process outlined 36 CFR 800, Protection of Historic Properties.

If there is no feasible and prudent avoidance alternative and the use is not *de minimis*, then FHWA may approve only the alternative that causes the least overall harm in light of the statute's preservation purpose. The least overall harm is determined by balancing the following factors, which are identified in 23 CFR 774.3(c)(1):

- The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)
- The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection
- The relative significance of each Section 4(f) property
- The views of the official(s) with jurisdiction over each Section 4(f) property
- The degree to which each alternative meets the Purpose and Need for the project
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)
- Substantial differences in costs among the alternatives

If two or more alternatives are "substantially equal" in terms of the least overall harm to the 4(f) property, then FHWA may select any one of the alternatives being considered. Regardless, the alternative selected must include all possible planning to minimize harm to Section 4(f) property, such as compliance with Section 106, as applicable.

5.2.3 Individual and Programmatic Section 4(f) Evaluations

FHWA policy recommends the preparation of a written Section 4(f) evaluation, which can consist of an Individual Section 4(f) Evaluation or a Programmatic Section 4(f) Evaluation.

FHWA's *Section 4(f) Policy Paper* (USDOT, 2012) indicates that an "individual Section 4(f) Evaluation must be completed when approving a project that requires the use of Section 4(f) property if the use . . . results in a greater than *de minimis* impact and a programmatic Section 4(f) evaluation cannot be applied to the situation."

A Programmatic Section 4(f) Evaluation applies to a project that meets pre-established conditions that satisfy the requirements of Section 4(f) for no feasible and prudent avoidance alternatives and includes all possible planning to minimize harm. These conditions generally relate to the type of project; the severity of impacts to Section 4(f) properties; the evaluation of alternatives; the establishment of a procedure to minimize harm and to mitigate impacts; coordination with appropriate entities; and the appropriate class of NEPA action.

A Programmatic Section 4(f) Evaluation is a time-saving procedural option for certain minor uses of Section 4(f) property. They apply a specific set of criteria to standardize the evaluation of avoidance alternatives, which simplifies the evaluation. A Programmatic Section 4(f)

Evaluation may apply to a particular project only if the evaluation meets specific conditions. FHWA has issued five Nationwide Programmatic Section 4(f) Evaluations:

- Section 4(f) Statement and Determination for Independent Bikeway or Walkway Construction Projects
- Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges
- Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvements with Historic Sites
- Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvements with Public Parks, Recreation Lands, Wildlife and Waterfowl Refuges,
- Nationwide Programmatic Section 4(f) Evaluation and Approval for Transportation Projects That Have a Net Benefit to a Section 4(f) Property

The Nationwide Programmatic Section 4(f) Evaluation and Approval for Transportation Projects That Have a Net Benefit to a Section 4(f) Property (Net Benefit Evaluation) is applicable to federally-assisted transportation improvement projects on existing or new alignments that will use a Section 4(f) property which, in the view of FHWA and agencies with jurisdiction over the property, will result in a "net benefit" to the property. The Programmatic Section 4(f) Evaluation can be applied to any project regardless of the class of action under NEPA.

A net benefit is achieved when the transportation use, the measures to minimize harm, and the mitigation measures incorporated into the project have an overall result of enhancing the Section 4(f) property when compared to the No Build and the avoidance alternatives. Net benefit also considers the present condition of the Section 4(f) property, and the activities, features, and attributes that qualify the property for Section 4(f) protection. Conversely, a project does not achieve a net benefit if it will result in the substantial diminishment of the function or the value that makes the property eligible for Section 4(f) protection.

The applicability criteria for a Net Benefit Evaluation include the following, as specified in FHWA's guidance on Net Benefits to a Section 4(f) Resource:

- The proposed project uses a Section 4(f) park, recreation area, wildlife or waterfowl refuge, or historic site.
- The proposed project includes all appropriate measures to minimize harm and subsequent mitigation necessary to preserve and enhance those features and value of the property that originally qualified the property for Section 4(f) protection.
- For historic properties, the project does not require the major alteration of the characteristics that qualify the property for the NHRP such that the property would no longer retain sufficient integrity to be considered eligible for listing. For archaeological sites, the Project does not disturb or remove archaeological resources that have been determined important for preservation in place rather than for the information that can be obtained

through data recovery. The determination of a major alteration or importance to preserve in place will be based on consultation consistent with 36 CFR Part 800.

- For historic properties, consistent with 36 CFR Part 800, there must be an agreement among the State Historic Preservation Officer and/or Tribal Historic Preservation Officer, as appropriate, FHWA, and the Applicant (in this case, DDOT) on measures to minimize harm when there is a use of Section 4(f) property; and that such measures will result in a net benefit to the Section 4(f) property.
- The officials with jurisdiction over the Section 4(f) property agree in writing with the assessment of impacts; the proposed measures to minimize harm; and the mitigation measures necessary to preserve, rehabilitate, and enhance those features and values of the Section 4(f) property; and that such measures will result in a net benefit to the Section 4(f) property.
- FHWA determines that the project facts match those set forth in the Applicability, Alternatives, Findings, Mitigation and Measures to Minimize Harm, and Coordination and Public Involvement sections of this Programmatic Section 4(f) Evaluation.

Any project that satisfies these criteria may use the Net Benefit Evaluation and will not require the preparation of an individual Section 4(f) evaluation.

5.3 Purpose and Need

The Purpose and Need of the Project remains the same as was described in the FEIS. In summary, the purpose of the South Capitol Street Project is to improve safety, multimodal mobility and accessibility, and support economic development. The Project will transform the existing corridor into an urban gateway to the U.S. Capitol and District of Columbia's Monumental Core. Transportation improvements (i.e., the Preferred Alternative) were identified to incorporate long-term environmental sustainability and context sensitive design. Specifically, the project addresses the following needs.

- Safety: The design and deteriorating condition of the transportation infrastructure in the corridor results in poor safety conditions for motorists, bicyclists, pedestrians, and transit riders.
- Mobility: The lack of critical regional roadway connections and facilities for bicyclists and pedestrians support the need to improve mobility in the South Capitol Street Corridor.
- Accessibility: Several key destinations in or adjacent to the corridor are difficult to reach using the existing transportation infrastructure. Grade separations, median barriers, and ramp and intersection configurations limit access to activity centers for motorists, bicyclists, pedestrians, and transit riders.
- Economic Development: The density of employment and residential development forecasted for the area highlights the need to support economic growth. Public investments have increased employment and will stimulate additional private investment in new residential, office and retail developments. As economic development continues to occur

within the Project Area, additional demand will continue to be placed on transportation infrastructure to meet future transportation needs.

5.4 Section 4(f) Resources

The Project Area contains a number of Section 4(f) properties, including parklands and historic properties that are both owned by and accessible to the public (see Figure 5-1). The Revised Preferred Alternative will result in the Section 4(f) "use" of three Section 4(f) resources: the L'Enfant Plan, Suitland Parkway and Anacostia Park. Due to design changes, the uses differ from the FEIS Preferred Alternative. The Revised Preferred Alternative will not have an adverse effect on Suitland Parkway, which was listed in the NRHP in 1995 as part of the *Parkways of the National Capital Region Multiple Property Submission (1913–1965)* (NPS, 2009), under Section 106 of the National Historic Preservation Act. The Revised Preferred Alternative will require construction within Anacostia Park to mitigate the impacts to public access into the park's Poplar Point section from the proposed east oval. The park qualifies as a Section 4(f) resource as a publicly owned, public park or recreational resource, and as a historic property. The park is eligible for inclusion in the National Register of Historic Places.

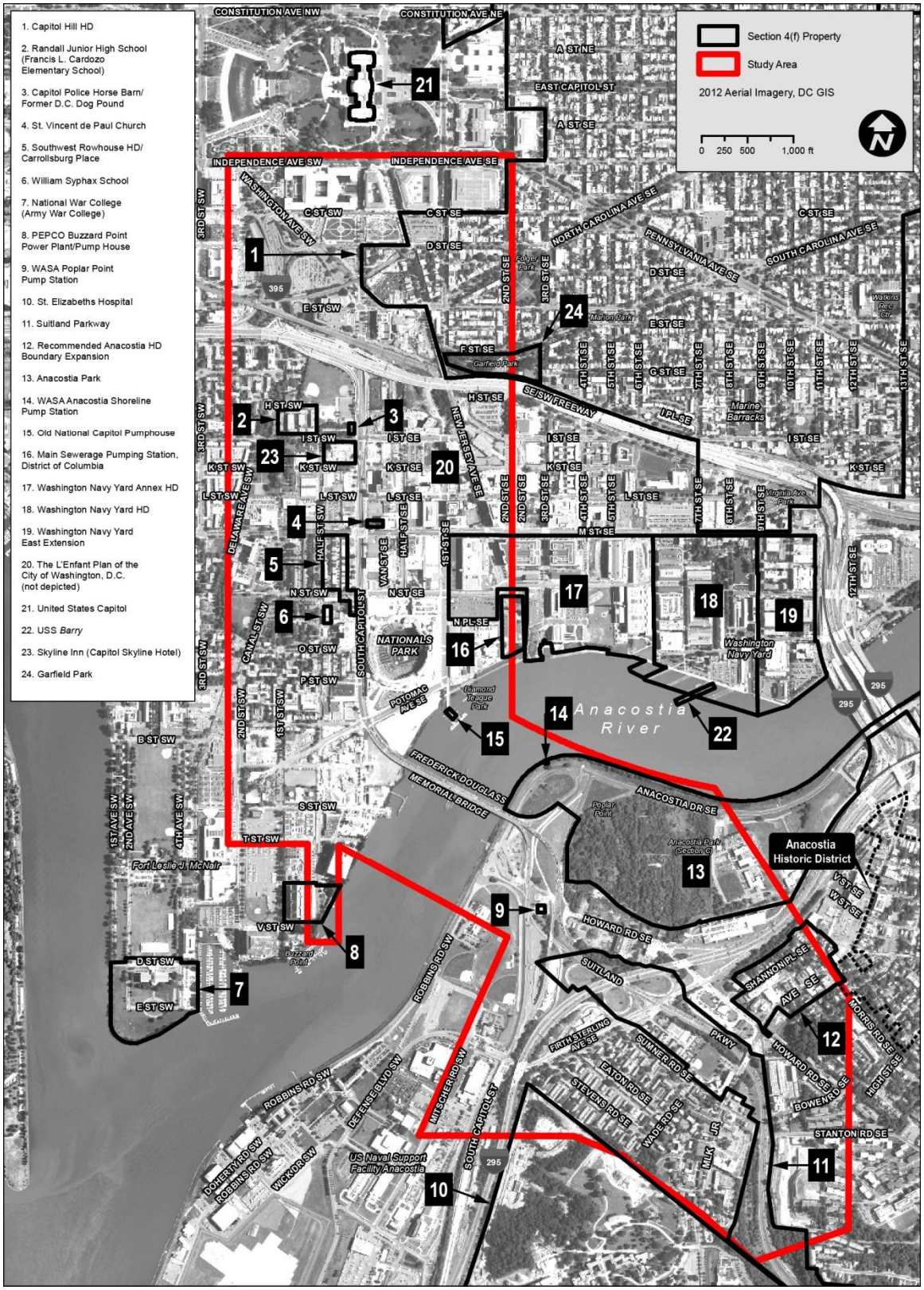
5.4.1 The L'Enfant Plan of the City of Washington, DC

The L'Enfant Plan of the City of Washington, which was listed in the National Register of Historic Places in 1997, is a Baroque city plan with Beaux Arts modifications designed by Major Pierre-Charles L'Enfant in 1791. Roughly bounded by Florida Avenue from Rock Creek NW to 15 Street NE, south to C Street, and east to the Anacostia River, the plan consists of regular orthogonal street grids with numerically and alphabetically designated streets, intersected by diagonal avenues. It also consists of historic and contemporary system of parks and medians. The 1901–02 McMillan Commission recommendations resulted in physical changes to the L'Enfant Plan necessary for urban development.

The Revised Preferred Alternative will affect areas located within the boundaries of the street system along South Capitol Street, which is one of the plan's principal axes leading directly to the U.S. Capitol. Four diagonally oriented roadways are located within the South Capitol Street Corridor: Delaware Avenue SW, New Jersey Avenue SE, Potomac Avenue, and Water Street SW.

South Capitol Street, from Independence Avenue in the north to S Street at the edge of the Anacostia River, is a contributing element to the L'Enfant Plan. It retains its original alignment and still functions as a primary axial thoroughfare. Potomac Avenue extends from 1st Street SW to 1st Street SE and is then interrupted by the Washington Navy Yard and the DC Water Poplar Point Pump Station for several blocks before it begins again at M Street SE and 8th Street SE, which is well beyond the South Capitol Street Corridor.

Figure 5-1: Section 4(f) Properties In and Around the Project Area



District Department of Transportation

In addition to South Capitol Street, two other north-south alignments are considered to be contributing elements to the L'Enfant Plan of the City of Washington, DC: Half Street SW and Half Street SE. However, only the sections of these streets south of the Southeast-Southwest Freeway are considered to be contributing elements to the L'Enfant Plan of the City of Washington, DC. For Section 4(f) purposes, the DC SHPO is the official with jurisdiction over the L'Enfant Plan of the City of Washington, DC (23 CFR 774.17).

Compared with the FEIS Preferred Alternative, the Revised Preferred Alternative has a slightly smaller traffic oval at the intersection of South Capitol Street and Potomac Avenue, as proposed by the FEIS Preferred Alternative. The physical change to this intersection will constitute an adverse effect under Section 106 and a use under Section 4(f) of the L'Enfant Plan. The Net Benefit Evaluation for this Section 4(f) resource is expected to be updated (see Sections 5.6 and 5.7).

5.4.2 Suitland Parkway

Suitland Parkway extends eastward roughly from the approaches to the Frederick Douglass Memorial Bridge to the northern entrance of Andrews Air Force Base (AFB), in Maryland. It links the airfield at AFB, the primary arrival point for the President, U.S. government officials, and visiting foreign dignitaries, directly with South Capitol Street, the U.S. Capitol, the White House, and other federal office buildings. Suitland Parkway is 9.18 miles in length, with 2.8 miles located within the District and the other 6.38 miles within the State of Maryland.

Suitland Parkway was listed in the NRHP in 1995 as part of the *Parkways of the National Capital Region Multiple Property Submission (1913–1965*) (NPS, 2009). Right-of-way was acquired from 1942 to 1944 to construct the parkway. NRHP nomination form identifies Suitland Parkway as a historic district with 85 contributing and two noncontributing structures, including bridges, culverts, and drop inlets. The original bridges in Suitland Parkway are concrete arch bridges with spandrels and wing walls faced with Maryland stone and trimmed in dimensioned North Carolina granite. Most of the 39 culverts have stone-faced headwalls. The Martin Luther King, Jr. Avenue overpass or bridge is one of the contributing bridges and is located in the Project Area. For most of its length, and along the section located within the District, Suitland Parkway retains the original concept as a grade-separated parkway of high design standards with separate eastbound and westbound travel lanes centered about a grassy median and double-frame arched structures.

Suitland Parkway was determined to be eligible for the NRHP due its significance in the areas of Transportation and Landscape Architecture under National Register Criterion A (for its association with the national parkway system and as a major entryway to the federal city compatible with the L'Enfant Plan). It is also significant under Criterion C as "a utilitarian roadway with design features intended to move traffic expeditiously, but with elements of design intended to convey a scenic driving experience characteristic of earlier parkways".

The NRHP boundary for Suitland Parkway begins approximately 1,300 feet east of the Anacostia River or just west of its interchange with I-295. The Frederick Douglass Memorial Bridge and its approaches are not part of this historic property. The width of the boundary is approximately

1,200 feet centered generally along the parkway alignment. In December 1972, the National Park Service (NPS) transferred jurisdiction of the Suitland Parkway "for parkway purposes" to the District.

The Revised Preferred Alternative proposes to realign the parkway near its approach to the proposed east traffic oval and will convert the Martin Luther King, Jr. Avenue SE overpass into a diamond urban interchange. Although a small portion of the parkway will be altered, no contributing built or landscape features within the historic property boundary will be affected. Therefore, the historic property's integrity of location, design, materials, and workmanship will remain unaffected. For these reasons, the proposed transportation infrastructure changes to the parkway were determined to have "no adverse effect" on the historic property in accordance with NHPA Section 106 (16 USC 470 and 36 CFR 800). The DC SHPO concurred with this determination. Therefore, a finding that the Section 4(f) use of the parkway is a *de minimis* impact will be made.

5.4.3 Anacostia Park

Anacostia Park was created through the Anacostia River Flats Act of 1924 (see Figure 5-3). A seawall was constructed along the riverbanks, and adjacent tidal mudflats were backfilled to create much of the park that exists today. The NPS obtained jurisdiction of the park in 1933. Recreational and park features within Section C, commonly known as Poplar Point, include open space with public access along the river's edge and athletic fields on the northeast corner. Non-park or non–recreational uses in Poplar Point include the NPS complex, which includes U.S. Park Police facilities, and restricted areas containing contaminated materials from past uses. Roadway access into Poplar Point is provided from Good Hope Road, Howard Road, Anacostia Drive, and Suitland Parkway. The park is also near the Anacostia Metrorail Station.

In addition to its recreational resources, Anacostia Park is considered to be historically significant because it provides the opportunity to observe the history of the nation's policies on rivers from pre-Columbian times to present. Created from mud flats during the early 20th century, it was an integral part of the 1902 McMillan Plan (formally known as the 'The Improvement of the Park System of the District of Columbia', Senate Report No. 166, 57th Congress, 1st Session). In 1932 it became the Bonus Army's base of operation and a shantytown was established. Later, a golf course was constructed on the site for African Americans to forestall desegregation of public facilities. The park also serves as a model for the use of floodplains as natural park features to maintain water quality and reduce the risks of flooding. Anacostia Park is eligible for the National Register of Historic Places, and therefore, the property is also a Section 4(f) resource as an historic property.

From legislation passed by Congress in 2006 (*Federal and District of Columbia Government Real Property Act of 2006*), Poplar Point may be transferred to the District for redevelopment as a mixed-use development. The District's Deputy Mayor's Office for Planning and Economic Development has envisioned the development to include a world-class 70-acre waterfront park that would serve as a green gateway to the Anacostia River and a series of river parks. Poplar

Point will remain under federal ownership and NPS jurisdiction until further details about the development are resolved.

The Revised Preferred Alternative will require a permanent incorporation of park property in a transportation project due to the construction of an access road and two shared use paths within the Poplar Point area of Anacostia Park (see Figure 5-2). The Revised Preferred Alternative's east oval will necessitate the closure of the existing park access roads. To mitigate the loss of access, the Revised Preferred Alternative will reconstruct an existing single-lane one-way access road that links Suitland Parkway and I-295 (via Howard Road) to Anacostia Drive SE, which provides roadway circulation within the park. The new access road will provide one lane in each direction. It will connect the northeast leg of the east traffic oval with Anacostia Drive, thereby maintaining access to the park for motorists traveling on South Capitol Street, Suitland Parkway, and I-295 (see Figure 5-3).

Other existing ramps linking Anacostia Drive SE to South Capitol Street will be removed as they will no longer be needed, resulting in a net loss of road pavement. These ramps provide vehicular access to and from the park. The proposed roadway access will introduce approximately 0.52 acres of impervious surfaces within Anacostia Park. Approximately half of this area is already an impervious surface. The Project will remove approximately 0.75 acres of impervious surfaces within Anacostia Park. Therefore, within the park the Revised Preferred Alternative will increase green space by approximately 0.5 acres. The connecting ramps within the adjacent DDOT right-of-way will also be removed and converted to green space. The net effect will be a larger contiguous green space at the gateway to the park.

A 12-foot-wide shared use path (suitable for pedestrians and cyclists) constructed of pervious materials will be provided on each side of the new access road. This will connect the River Walk Trail in the park with the South Capitol Street shared use paths. The NPS will maintain ownership of the reconstructed access road and the shared use paths within the park boundary. No other section of Anacostia Park property will be converted to a transportation use by the Project either owned by NPS or other entity.

The NPS will have the opportunity to review design plans for elements of the Project on park property, including landscaping plans along the new access roadway and where existing ramps will be removed. The Project elements on park property will require a Special Use Permit. Therefore, construction cannot be initiated until NPS has granted this permit. To expedite the NPS review of design plans and the processing of the Special Use Permit, DDOT will include any engineering specifications provided by NPS in the Project's Phase 1 Request for Proposal to the short-list design-build contractors. (The elements of the Project within park property will be part of construction Segment 1.) In addition DDOT has also agreed to erect Anacostia Park signage on public right-of-way, such as within the east oval, and to create a welcoming entrance into the park from the east oval through the use of signage and landscaping. All signage intended to alert motorists about Anacostia Park and its entrance located at the northeast leg of the east traffic oval shall be made in accordance with NPS standards.

Figure 5-2: Plan View of East Oval and New Anacostia Drive Connector

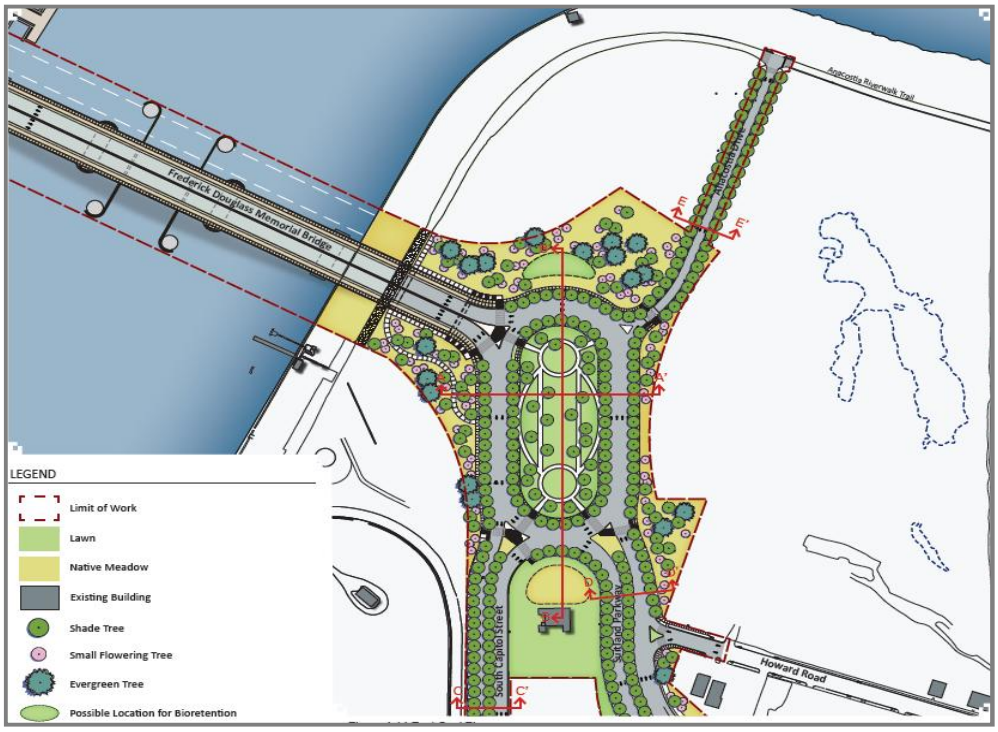
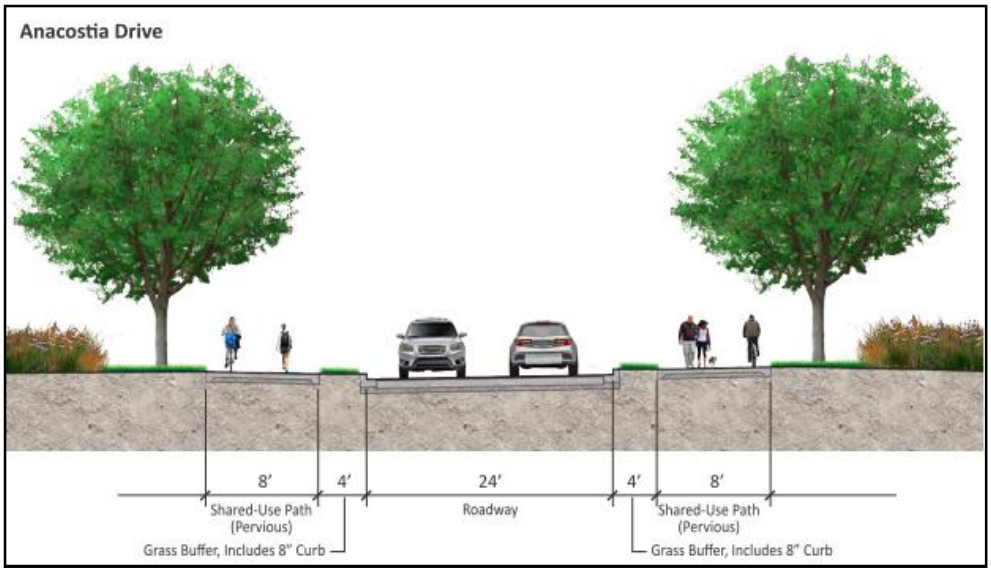


Figure 5-3: Proposed Typical Section of New Anacostia Drive Connector and Shared-Use Paths



A determination that the proposed construction within Anacostia Park is a *de miminis* impact as defined in 23 CFR 774.17 will likely be made. This determination is anticipated because the

nature and the magnitude of the Project's elements (reconstructed access road and shared-use paths) within the park will not adversely affect the features, attributes, or activities qualifying the park as a Section 4(f) resource. The Poplar Point section of the park, including the Project elements within the park, will remain under NPS jurisdiction. The Project's elements are meant to maintain public access between the park and South Capitol Street, Suitland Park and I-295. The improvements will consolidate access onto a single access road resulting in a more prominent gateway. It will use less roadway pavement than the existing access roads and ramps and create a larger contiguous green space at the park entry.

Anacostia Park is also a Section 4(f) resource as an historic property. A "no adverse effect" determination regarding Anacostia Park in accordance with NHPA Section 106 was made, and the DC SHPO concurred. Therefore, a finding that the Section 4(f) use of Anacostia Park is a *de minimis* impact will be made, provided NPS concurs in writing.

5.4.4 Other Section 4(f) Resources

The Project Area encompasses other Section 4(f) properties, including parklands and historic properties that are both owned by and accessible to the public (see Figure 5-1). The Revised Preferred Alternative will not require a Section 4(f) use or constructive use of these properties. The reasons for this finding are provided below.

Garfield Park

Garfield Park is located near the portion of the Project Area along New Jersey Avenue SE. Originally called Town House Square, the park is one of the 17 original land appropriations by Congress in 1791 when it was more than 23 acres in size. Today the park is currently 9.23 acres in size, and is bounded by the Southeast-Southwest Freeway, Virginia Avenue SE, New Jersey Avenue SE, F Street SE, South Carolina Avenue SE, and 3rd Street SE. Its recreational uses include tennis, basketball, horseshoes, volleyball and bocce. The park also includes a state-of-the art playground, provides for passive recreation, and has one of the few sloped areas within the neighborhood that can be used for sledding. Garfield Park is also a contributing element to the Capitol Hill Historic District.

The park was originally owned and managed by the federal government, but in 1972, ownership was transferred from the NPS to the District, and now the park is now under the jurisdiction of the District's Department of Parks and Recreation (DPR). The Friends of Garfield Park, a non-profit organization founded in 1998, is also active in the management and maintenance of Garfield Park. Recently, the group led the development of park improvements, such as installing benches and upgraded trash cans, repairing the stone wall along Virginia Avenue SE, and maintaining and replacing the trees in the park. The park contains a wide variety of trees, many of which are of substantial size and age.

The Revised Preferred Alternative will not require land from Garfield Park; therefore, there will be no direct Section 4(f) use of the property. In addition, proposed improvements adjacent to the park will be on New Jersey Avenue SE and consist of enhanced streetscape and pedestrian amenities. These improvements will not result in the constructive use of the park.

Capitol Hill Historic District

The Project Area is located within in a small portion in the westernmost part of the Capitol Hill Historic District (CHHD). CHHD, which is listed in the National Register of Historic Places, is primarily a residential area with two-to-four-story row houses and small frame houses in a variety of architectural styles including Federal, Italianate, Greek revival, Queen Anne, Romanesque revival, and vernacular interpretations. It also includes religious, commercial, institutional and military buildings, as well as parks. The neighborhood began as a boarding house community for members of Congress, and is one of the District's oldest and largest residential communities. CHHD is roughly bounded by the U.S. Capitol; F Street NE and Constitutional Avenue to the north; 14th, 13th, and 11th Streets SE to the east, and including some areas south of I-695 extending to the Washington Navy Yard.

Although the CHHD contains a high number of contributing resources, the Revised Preferred Alternative would not affect any of the properties. The Revised Preferred Alternative proposes relatively minor streetscape improvements in locations where the Project crosses into the CHHD. Therefore, there would be no Section 4(f) use of the CHHD.

Other Historic Properties

The APE contains the following additional historic properties from which the Revised Preferred Alternative will not require a Section 4(f) use:

- United States Capitol
- Randall Junior High School
- Capitol Police Horse Barn/Former DC Dog Pound
- Southwest Rowhouse Historic District
- St. Vincent de Paul Church
- Southwest Rowhouse Historic District/Carrollsburg Place
- William Syphax School
- National War College
- PEPCO Buzzard Point Power Plant/Pump House
- WASA Poplar Point Pump Station
- Anacostia Historic District Boundary Expansion
- St. Elizabeths Hospital
- WASA Anacostia Shoreline Pump Station
- Old National Capitol Pumphouse
- Main Sewerage Pumping Station, District of Columbia
- Washington Navy Yard Annex Historic District
- Washington Navy Yard Historic District
- Washington Navy Yard East Extension
- Display Ship *Barry*
- Skyline Inn

5.5 Alternatives Considered

The Project considered and evaluated a wide range of alternatives, including:

- A transportation system management alternative
- A mass transit alternative
- Improvements to bicycle and pedestrian facilities
- Improvements of existing roadway facilities

Since none of these alternatives met the Project's Purpose and Need, they were subsequently dismissed from further consideration as stand-alone alternatives.

Chapter 2.0 of the FEIS summarized the alternative development process used for the South Capitol Street Project, and described the alternatives examined in the FEIS: the No Build Alternative, Build Alternatives 1 and 2, and the FEIS Preferred Alternative, which was a modification of Build Alternative 2.

Chapter 2.0 of this SDEIS describes the design changes to the FEIS Preferred Alternative since publication of the FEIS, resulting in the Revised Preferred Alternative. The following sections briefly describe the alternatives contained in the FEIS and summarize the design changes associated with the Revised Preferred Alternative.

5.5.1 No Build Alternative

The No Build Alternative would not include new major construction resulting from the proposed action, although other planned and committed projects in the Project Area would move forward. Improvements implemented under this alternative would be limited to short-term restoration and maintenance of existing infrastructure.

The FEIS concluded that the No Build Alternative would not address the Project's Purpose and Need of improving safety, multimodal mobility, and accessibility, and it would not support economic development within the South Capitol Street Corridor. However, the No Build Alternative would not change the physical conditions of the Section 4(f) properties identified in Section 5.4.

5.5.2 Build Alternatives 1 and 2

The FEIS proposed two build alternatives, Alternatives 1 and 2, for the reconstruction of South Capitol Street, Independence Avenue and Martin Luther King, Jr. Avenue SE. These build alternatives included replacing the Frederick Douglass Memorial Bridge with a new bridge designed at an angle (compared with the existing bridge). The new bridge would be an architecturally distinctive structure on the Anacostia Waterfront while still providing a moveable span to preserve the existing navigation channel. The alternatives completed missing connections and turning movements at major roadways; formed a landscaped boulevard along

South Capitol Street; and improved pedestrian and bicycle facilities. The differences between Build Alternatives 1 and 2 are as follows:

- Alternative 1 reconstructed the South Capitol Street intersections at I, N, O, and P Streets, whereas Alternative 2 reconstructed the South Capitol Street intersections at K, L, and M Streets.
- Alternative 1 provided an at-grade signalized intersection at the intersection of South Capitol Street and Potomac Avenue, whereas Alternative 2 provided an at-grade traffic oval at this location.
- At the eastern approach to the new Frederick Douglass Memorial Bridge, Alternative 1 provided an at-grade signalized intersection connecting South Capitol Street, Suitland Parkway, and Howard Road SE, whereas Alternative 2 provided an at-grade traffic circle to connect these roadways.
- At the I-295/Suitland Parkway interchange, Alternative 1 provided a ramp connecting southbound I-295 with northbound Suitland Parkway only; whereas Alternative 2 converted this interchange into an urban diamond interchange allowing all movements between the two highways.
- Alternative 1 widened the Martin Luther King, Jr. Avenue SE Bridge over Suitland Parkway to provide for a new 12-foot-wide multi-use trail, whereas Alternative 2 provided an interchange between the two roadways.

Four bridge types were considered for the new Frederick Douglass Memorial Bridge: cable-stayed swing, stayed bascule, arched bascule, and retractile. Of these four, Alternative 1 did not accommodate a cable-stayed bridge, whereas Alternative 2 accommodated all four bridges.

Both build alternatives would meet the Project's purpose and need, and their impacts to the natural and built environments would be very similar. Both build alternatives would require a Section 4(f) use of Suitland Parkway and the L'Enfant Plan.

5.5.3 FEIS Preferred Alternative

The FEIS Preferred Alternative was a modification or refinement of Build Alternative 2 in response to agency and public comments. A bridge type was selected (arched bascule), and the alignment of the new bridge shifted slightly to reduce the amount of right-of-way needed from Joint Base Anacostia Bolling (JBAB). Other major elements that distinguished the FEIS Preferred Alternative from Build Alternative 2 included:

- Eliminated work already completed to South Capitol Street under the Near-Term Improvements Project
- Reduced the total size of the traffic oval at the intersection of South Capitol Street and Potomac Avenue, from approximately 6.1 acres total to 5.7 acres, and included a connection to R Street SW

- Removed the stairs from the new bridge to the Anacostia Riverwalk on both sides of the river
- Reduce impacts to the heliport and JBAB on the west and east sides of the river, respectively
- Shifted the location of the traffic circle on the east side of the river slightly to the northeast
- Added a connection between Anacostia Drive and Howard Road
- Eliminated certain improvements to Firth Sterling Avenue, the southern section of Howard Road, South Capitol Street south of Firth Sterling Avenue, and the east section of Potomac Avenue
- Designed the Suitland Parkway/I-295 as a modified diamond interchange instead of an urban diamond interchange
- Adjusted the Sheridan Road alignment near the widened Suitland Parkway to minimize impacts to the Sheridan Terrace housing development
- Maintained the general configuration of the existing intersection and avoided closure of Sheridan Road at the intersection of Martin Luther King, Jr. Avenue and Howard Road
- Maintained Howard Road SE in its existing configuration

The FEIS Preferred Alternative resulted in fewer and less severe impacts to the natural and built environments, compared with Build Alternative 2. The FEIS Preferred Alternative had fewer piers in the Anacostia River, reduced the potential impacts to the heliport and the JBAB, and avoided closing Sheridan Road at the intersection of Martin Luther King, Jr. Avenue SE and Howard Road. However, the FEIS Preferred Alternative still required a Section 4(f) use of Suitland Parkway and the L'Enfant Plan.

5.5.4 The Revised Preferred Alternative

Following completion of the FEIS, design changes were made to the FEIS Preferred Alternative, resulting in the Revised Preferred Alternative. The Revised Preferred Alternative is the proposed action and includes the following:

- Aligned the new Frederick Douglass Memorial Bridge parallel to and approximately 30 feet from the south side or downstream from of the existing bridge superstructure. This bridge alignment would avoid the need to obtain right-of-way from JBAB. In addition, the bridge would have a fixed span, not a moveable span as proposed in FEIS Preferred Alternative.
- Provided a west traffic oval.
- Provided a traffic oval at the eastern end of the new bridge similar in size and shape to the west traffic oval. The east traffic oval would be located entirely within the existing DDOT right-of-way and connect with the realigned South Capitol Street and Suitland Parkway.
- At the I-695/Suitland Parkway interchange, adjusted the grade of Ramp B (southbound I-295 to westbound Howard Road SE) from 9 percent (substandard for an interstate highway ramp) to 6.5 percent.

- Replaced a portion of the I-295 Bridge over Firth Sterling Avenue SE and an inactive railroad right-of-way. The railroad would be replaced with earthen fill.
- At the Martin Luther King, Jr. Avenue SE overpass at Suitland Parkway, configured the proposed ramps into an urban diamond interchange, instead of an interchange with center ramps.
- Changed the eastbound I-695 ramp to southbound South Capitol Street to an urban interchange ramp with South Capitol Street.

Chapter 2.0 of this SDEIS contains a more detailed description of the Revised Preferred Alternative.

5.5.5 Avoidance Alternatives

The No Build Alternative would not be a feasible and prudent avoidance alternative because it would not meet the Purpose and Need of the Project. Additional avoidance alternatives were identified. They include:

- Limiting the transportation improvements to the existing alignment, including replacing the Frederick Douglass Memorial Bridge with a new bridge precisely along its current location. This alternative is not considered to be prudent and feasible because of the community disruption that would result during construction and its marginal ability to meet the Purpose and Need for the project.
- Constructing along an entirely new alignment, including the new bridge. The two build avoidance alternatives were found not to be feasible and prudent in the Programmatic Section 4(f) Evaluation for the FEIS Preferred Alternative primarily because they would not meet the Purpose and Need for the Project (Section 5.5 of the FEIS).

5.6 Use of the L'Enfant Plan of the City of Washington, DC

The Revised Preferred Alternative will require a Section 4(f) use of the L'Enfant Plan of the City of Washington, DC.. This section describes the potential impacts to the L'Enfant Plan from the Revised Preferred Alternative.

The purpose of the Project is to transform the existing South Capitol Street Corridor into an urban gateway to the U.S. Capitol and the District's Monumental Core. As such, elements of the Project are designed to reestablish South Capitol Street as a major axial gateway into the Nation's Capitol, which is consistent with the original intent of the L'Enfant Plan.

The Revised Preferred Alternative is similar to the FEIS Alternative in adding traffic signals, reconfiguring travel lanes and intersections, introducing a new traffic oval on South Capitol Street at Potomac Avenue, and providing connections with P and S Streets. Other proposed changes to the streets in the L'Enfant Plan include:

- Planting of street trees at regular intervals along both sides of South Capitol Street and installation of raised, precast landscape planters with layered plantings tapering down from the center in the median, which is consistent with L'Enfant's desire that the radial avenues were to be "grand" and "wide and lined with trees" (NRHP form, 2004)
- Establishing a 160-foot-wide public right-of-way on New Jersey Avenue SE, between the Southeast-Southwest Freeway and M Street SE. Within this right-of-way, two travel lanes, two parking lanes, loading and planting zones, a walkway, and a spill-out zone would be provided. Because realignment is not required, these changes would not adversely affect New Jersey Avenue SE as a contributing element of the L'Enfant Plan of the City of Washington, DC..

While the new west traffic oval will be located at the intersection of a major axial (South Capitol Street) and major diagonal (Potomac Avenue) roadways, the L'Enfant Plan did not specify an island at that location. In addition, the approximately 555-foot by 230- to 250-foot elongated oval is larger and a different shape than the plan's existing round and rectangular islands. However, the geometric layout of South Capitol Street (as a north-south route) and Potomac Avenue (as a diagonal roadway) would remain intact. The use of the roadways for transportation (its historic use) would not change. Furthermore, the L'Enfant Plan included several circular intersections at key locations. Therefore, the proposed traffic oval at South Capitol Street and Potomac Avenue does not completely represent a departure from design features included in the original plan.

The benefits of the traffic oval would include the opening of a viewshed of the District's Monumental Core, which was a primary goal of the L'Enfant Plan. In combination with the proposed streetscape and landscape improvements along South Capitol Street, the oval would substantially enhance the view toward the District's Monumental Core. Therefore, the changes would diminish the integrity of design and feeling of the historic corridors and would adversely affect the historic integrity of the L'Enfant Plan. As a result, the Revised Preferred Alternative would result in a Section 4(f) use of the L'Enfant Plan of the City of Washington, DC.

5.7 Net Benefit Applicability

This section provides information to support the finding that the Project will result in a net benefit to the affected Section 4(f) resource, the L'Enfant Plan of the City of Washington, DC.

The Net Benefit Evaluation, as described in Section 5.2.3, will be used to document that the Project will provide a net benefit to the affected Section 4(f) property described in Section 5.4.1 when compared to the No Build or the avoidance alternatives described in Section 5.5.5. The information needed to use the Net Benefit Evaluation for the Section 4(f) use of the L'Enfant Plan of the City of Washington, DC includes:

- Determination that the Project meets the applicability criteria set forth in applicability section of the Net Benefit Evaluation (see Section 5.2.3)

- Determination that all of the alternatives set forth in the findings section have been fully evaluated
- Determination that the findings in the Net Benefit Evaluation result in a clear net benefit to the affected Section 4(f) property(ies)
- Determination that the Project complies with the Mitigation and Measures to Minimize Harm section of the Net Benefit Evaluation
- Determination that the coordination and public involvement efforts required by the Net Benefit Evaluation have been successfully completed and necessary written agreements have been obtained
- Documentation that clearly identifies the basis for the above determinations and assurances
- The manner in which these criteria are met are summarized in Sections 5.7.1 through 5.7.4 below.

5.7.1 Net Benefit Finding

A finding that there is no feasible and prudent avoidance alternative is required in order to qualify for a Net Benefit Evaluation. As described in Section 5.5.5, the No Build Alternative is not feasible and prudent because it would not address the transportation needs defined in the Purpose and Need for the Project. Two other alternatives, Improvement on Existing Location and Improvement on New Location, would only marginally meet the Purpose and Need for the Project and would likely result in substantially greater community disruption than the Revised Preferred Alternative or any of the other build alternatives considered in the FEIS. Therefore, the Revised Preferred Alternative is eligible to use a Net Benefit Evaluation.

5.7.2 Measures to Minimize Harm

Based on comments on the DEIS, the traffic oval on the west side of the river, which was one of the elements of the FEIS Preferred Alternative, was reduced in size. The length of the oval was reduced from 720 feet to 555 feet, and the width was reduced from 387 feet to between 230 and 250 feet.

DDOT in conjunction with FHWA is committed to further minimizing impacts on Section 4(f) properties through additional reduction to the footprint of the Project. The impacts documented in the FEIS and SDEIS reflect estimates of worst-case impacts based on a conceptual level of engineering completed for the NEPA phase of the Project. As design studies progress through the design-build process, it may be possible to further reduce the footprint of the Project.

5.7.3 Mitigation Measures and Benefits

The Section 106 MOA for the FEIS Preferred Alternative, which was signed by FHWA, DC SHPO, NCPC, ACH, and DDOT, will be amended for the Revised Preferred Alternative, subject to

Section 106 consultation. The amended MOA will specify mitigation commitments to resolve the Section 106 adverse effect on the L'Enfant Plan.

Because the viewshed of the South Capitol Street Corridor is a contributing element to the historic L'Enfant Plan, a visual quality management process was implemented for the Project. This included developing a *Visual Quality Manual* (DDOT et al., 2014), and a design-build process that will consider, and heavily weigh, the visual quality of proposals to design and build Segment 1 of the Project. Segment 1 of the Project includes construction of the two ovals, the new Frederick Douglass Memorial Bridge and modification to the I-295/Suitland Parkway Interchange.

The selected designer/contractor will develop a process for agency review of subsequent design plans, and additional coordination requirements for Project completion that will include the stipulations in the amended MOA. The following sections discuss resource-specific mitigation measures to be included in the Project and the amended MOA.

The Project, the Revised Preferred Alternative, will be conducted in a manner that will enhance elements of the L'Enfant Plan of the City of Washington, DC. The following mitigation measures, some of which will be stipulated in the amended MOA, will be implemented so that the Revised Preferred Alternative enhances the historic characteristics of the L'Enfant Plan:

1. DDOT will continue to consult with the DC SHPO and the Section 106 consulting parties on roadway and intersection improvements to avoid, minimize and/or mitigate adverse effects on the L'Enfant Plan at the following key project milestones.

   DDOT will submit plans to the DC SHPO and the consulting parties for review and comment prior to construction.
   i. If DDOT elects to procure a design-bid-build construction contract, DDOT will submit plans to the DC SHPO and the Consulting Parties for review and comment during the design phase at the 30%, 65%, and 90% design development milestones.
   ii. If DDOT elects to procure a design-build contract, DDOT will provide the conceptual plans included in the draft request for proposal for the contract and also the 100% plans (or as otherwise determined by the designer/contractor) to the DC SHPO and the Consulting Parties for review and comment prior to construction.

   The DC SHPO and the consulting parties may submit written comments on the proposed plans within 30 calendar days. DDOT will consider and respond to timely written comments. If the DC SHPO or the Consulting Parties do not provide comments or objections within 30 calendar days of receipt, DDOT shall continue with project planning and development in accordance with the proposed plans.

2. DDOT will restore Reservations 243, 244 and 245 as green space concurrent with the construction of the west traffic oval in accordance with design practices established through coordination with the DC SHPO and the consulting parties and in accordance with design review procedures established in Item 1 above.

3. DDOT will develop a design for the area within the proposed west traffic oval and its environs that will visually maintain the original layout of the historic L'Enfant Plan right-of-way of South Capitol Street and Potomac Avenue and preserve open space for future development in accordance with NCPC planning and policy documents. The design will be developed through coordination with the DC SHPO and the consulting parties in accordance with design review procedures established in Item 1 above.

4. DDOT will develop and implement an interpretive signage program focusing on the L'Enfant Plan. The interpretive signage program, from scope and location to final design, will be developed through coordination with the DC SHPO and the consulting parties in accordance with design review procedures established in Item 1 above. The interpretive signage will be installed by DDOT by the end of the construction period.

5. The form of the west traffic oval will be consistent with L'Enfant's overarching geometric strategy where diagonal intersecting avenues are superimposed on standard urban street grids to create grand boulevards with expansive viewsheds, particularly toward the Capitol Building. As one of the most prominent viewsheds in the District, the preservation of views along the South Capitol Street and Potomac Avenue axes will be paramount in the design of the oval. Therefore, no trees, signs, or other visual obstructions will obstruct these viewsheds.

6. The open space within the proposed oval at the South Capitol Street and Potomac Avenue intersection will be used as park space and/or a monument, which is consistent with the treatment goals for roadways in the historic L'Enfant Plan as specified in NCPC's *Memorials and Museum Master Plan* (2000) and the goals established for South Capitol Street, as noted in the March 2005 recommendations by NCPC's South Capitol Street Task Force.

7. The streetscape will be subject to context-sensitive design elements to support a grand urban boulevard for the South Capitol Street Corridor, consistent with the original goals of the L'Enfant Plan.

8. Streetscape improvements to New Jersey Avenue SE will be consistent with the urban character of the surrounding development. The original 160-foot-wide right-of-way will be restored through proposed setback requirements for anticipated developments.

9. Views of the U.S. Capitol from vantage points on South Capitol Street will be improved by the removal of the grade-separated intersection at M Street and its reconstruction as an at-grade intersection as originally intended.

10. The original right-of-way of South Capitol Street and Potomac Avenue will be delineated and maintained within the west traffic oval.

11. DDOT will prepare a report summarizing the Project enhancements to the L'Enfant Plan and the incorporation of the stipulations contained in the Amended MOA into South Capitol Street Project.

5.7.4 Applicability

There is no feasible and prudent alternative to the use of land from the L'Enfant Plan. The Revised Preferred Alternative will include all possible planning to minimize harm to this Section 4(f) resource resulting from such use. Compared with the No Build Alternative, the Revised Preferred Alternative, with mitigation measures, will enhance the Section 4(f) property. This will result in a net benefit to the L'Enfant Plan.

The Revised Preferred Alternative's Section 4(f) use of the L'Enfant Plan meets the applicability criteria for a Net Benefit Evaluation for the following reasons:

- As noted in Sections 5.7.2 and 5.7.3, the Project will include all appropriate measures to minimize harm and subsequent mitigation necessary to preserve and enhance those features and values of the L'Enfant Plan that qualified this property for Section 4(f) protection.
- The Revised Preferred Alternative will not alter the characteristics that qualify the L'Enfant Plan of the City of Washington, DC for the NRHP.
- For the Revised Preferred Alternative, coordination with DC SHPO, the official with jurisdiction, will be required to finalize the Net Benefit Evaluation for the L'Enfant Plan. This coordination is ongoing and will be completed prior to the Record of Decision.

Based on this evaluation, the Revised Preferred Alternative would have a Net Benefit on the L'Enfant Plan. A determination would likely be made that the Project facts of the Revised Preferred Alternative match those contained in the Applicability, Alternatives, Findings, Mitigation and Measures to Minimize Harm, and Coordination and Public Involvement sections of the Net Benefit Evaluation. This determination, which will be part of the Record of Decision, will include following statements and information:

- The applicability criteria set forth in applicability section of the Net Benefit Evaluation were met
- All of the alternatives set forth in the findings section have been fully evaluated
- There is a clear net benefit to the L'Enfant Plan
- The Project will comply with the Mitigation and Measures to Minimize Harm section of the Net Benefit Evaluation
- Coordination and public involvement efforts required by the Net Benefit Evaluation were successfully completed and necessary written agreements were obtained
- The Evaluation clearly identifies the basis for the Net Benefit determination and assurances

5.8 Coordination

Chapter 8.0 of this SDEIS describes the agency coordination program implemented for the development and evaluation of alternatives for the South Capitol Street Corridor. Agency coordination began in 2002, when DDOT initiated the *South Capitol Gateway and Corridor*

Improvement Study (*Gateway Study*) (DDOT, 2003). Additional agency coordination was undertaken with subsequent planning studies, through which options for the South Capitol Street Corridor were developed and evaluated leading to the development of the alternatives analyzed in the DEIS and FEIS. Agency coordination efforts have continued as part of additional engineering efforts to refine the Revised Preferred Alternative. Those efforts related to the updated Section 4(f) compliance included:

- January 10, 2013 meeting with CFA, DC SHPO, NCPC, NPS and DDOT to discuss potential impacts on NPS properties from the Revised Preferred Alternative
- July 23, 2013 meeting with DC SHPO to provide an update of Section 106 process
- December 19, 2013 Section 106 consulting parties meeting to provide an overview of the NEPA and Section 106 process, proposed area of potential effects, historic properties, and the Section 106 next steps
- May 13, 2014 meeting with the NEPA cooperating and participating agencies to provide information on the design revisions to the FEIS Preferred Alternative, and the environmental review process to support these design revisions
- July 10, 2014 Section 106 consulting parties meeting to discuss the preliminary effects assessment and potential revisions to the current Section 106 MOA
- September 4, 2014 meeting with NPS to discuss the proposed mitigation to maintain access into the Poplar Point area of Anacostia Park

In addition to the specific coordination meetings listed above, DDOT coordinates AWI Interagency Coordination Meetings. The South Capitol Street Project is one of several projects for which regular updates are presented to attendees. Agencies that participate in these meetings in the AWI Interagency Meetings include DC SHPO, NPS, and NCPC.

Additional coordination with these agencies will occur during future design and construction phases in accordance with stipulations included in the Section 106 MOA.

5.9 Conclusion

The Revised Preferred Alternative will require use of land from three Section 4(f) resources or properties: L'Enfant Plan, Suitland Parkway and Anacostia Park. The revisions to the FEIS Preferred Alternative are not substantive enough to change conclusion made in the FEIS that there is no feasible and prudent avoidance alternative to the Section 4(f) use of these Section 4(f) resources. For the L'Enfant Plan, the *Nationwide Programmatic Section 4(f) Evaluation and Approval for Transportation Projects That Have a Net Benefit to a Section 4(f) Property* (2005) will again likely be used. For Suitland Parkway and Anacostia Park, *de minimis* impact determinations are expected. None of the Section 4(f) uses of the Revised Preferred Alternative requires an individual Section 4(f) Evaluation. The final Section 4(f) determinations will be documented in the Record of Decision.

chapter 6.0

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chapter 7.0
distribution list

As listed below, various federal and District agencies, and other organizations and groups representing project stakeholders, were provided with copies of the Supplemental Draft Environmental Impact Statement (SDEIS), which was also made available to the public at various locations.

Federal Agencies

Advisory Council on Historic Preservation

Architect of the Capitol

Council on Environmental Quality

General Services Administration

- NEPA Compliance Review
- Portfolio Management

National Capital Planning Commission

U.S. Army Corps of Engineers

U.S. Coast Guard

- Office of Bridge Administration

U.S. Commission of Fine Arts

U.S. Department of Commerce

- National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service
- Office of the Secretary

U.S. Department of Energy

Office of Environmental Compliance

U.S. Department of Homeland Security

Federal Emergency Management Agency

U.S. Department of Housing and Urban Development

District of Columbia Office

U.S. Department of the Interior

Fish and Wildlife Service

National Capital Parks – East

National Capital Region

Office of Environmental Policy and Compliance

U.S. Department of Transportation

Federal Highway Administration, District of Columbia Division

Federal Transit Administration

U.S. Environmental Protection Agency

Office of Federal Activities, NEPA Compliance Division

Office of Federal Activities (EIS Filing Office)

U.S. Navy, Naval District Washington

Washington Navy Yard

U.S. Naval Support Facility Anacostia

Joint Bolling Air Base

Local Agencies

District of Columbia Department of the Environment

Fisheries and Wildlife Division

Water Quality Division

District of Columbia Department of Housing and Community Development

District of Columbia Department of Parks and Recreation

District of Columbia Department of Transportation (DDOT)

- Infrastructure Project Management Administration
- Transportation Operations Administration
- Policy, Planning and Sustainability Administration
- Urban Forestry Administration

District of Columbia Housing Authority

District of Columbia Office of the Deputy Mayor for Planning and Economic Development

District of Columbia Office of Planning

District of Columbia Historic Preservation Office

- Events DC

District of Columbia Water and Sewer Authority (DC Water)

- Metropolitan Washington Council of Governments (MWCOG)
- Washington Metropolitan Area Transit Authority (WMATA)

Adjacent State Agencies

Maryland Department of Transportation (MDOT)

Maryland State Highway Administration

Virginia Department of Transportation (VDOT)

Public Officials

Congresswoman Eleanor Holmes Norton

Mayor Vincent C. Gray

Council of the District of Columbia

- Mr. Phil Mendelson, Chairperson
- Mr. Tommy Wells, Ward 6

Ms. Yvette Alexander, Ward 7

Mr. Marion Barry, Ward 8

District of Columbia Advisory Neighborhood Commissioners (ANC)

Mr. Brian Flahaven, Chairperson, ANC 6B

Mr. Roger Moffatt, Chairperson, ANC 6D

Ms. Barbara Clark Chairperson, ANC 8A

Ms. Mary Cuthbert, Chairperson, ANC 8C

Mr. Anthony Muhammad, Chairperson, ANC 8E

Business and Civic Organizations

Anacostia Community Boathouse Association

Anacostia Coordinating Council

Anacostia Economic Development Corporation

Anacostia Watershed Society

Capitol Hill Restoration Society

The Capitol Riverfront Business Improvement District

Casey Trees

Chesapeake Bay Foundation

The Committee of 100 on the Federal City

District of Columbia Preservation League

Earth Conservation Corps

Fairlawn Civic Association

Friends of Garfield Park

Georgetown University Law Center

Heritage Preservation

Sierra Club

Southwest Neighborhood Assembly

Washington Area Bicyclist Association

Public Places

Anacostia Library

Francis A. Gregory Neighborhood Library

Martin Luther King, Jr. Memorial Library

Parklands-Turner Community Library

Southeast Neighborhood Library

Southwest Neighborhood Library

Anacostia Waterfront Business Resource Center

West Side Waterfront Business Resource Center

chapter 8.0
comments and coordination

This chapter documents the early and continuing coordination with various government agencies, organizations, and the general public during the development of the South Capitol Street SDEIS. The following sections summarize the agency coordination meetings, and stakeholder and interest group meetings.

8.1 Public Coordination

Public coordination has continued since the publication of the FEIS in March 2011. Public Hearings were held in April 2011 to provide the public with an opportunity to comment on the FEIS and the project. Comments received during the hearings and submitted via the website and mail are documented in Appendix M of this SDEIS with responses.

Public coordination has continued since those hearings as the project design changed and the Revised Preferred Alternative was developed. These efforts are detailed in the following sections. A 45-day comment period will be provided and a public hearing will be held for the SDEIS.

8.1.1 Notice of Intent

In accordance with 23 CFR 771.130(d), a Notice of Intent (NOI) to prepare a South Capitol Street supplemental EIS appeared in the *Federal Register* dated July 28, 2014. The only comments received as a result of the NOI were from the NPS (Appendix K). Since the FHWA later decided to prepare a SDEIS, a revised NOI was published in the *Federal Register*.

8.1.2 Project Website

A project website (www.southcapitoleis.com) was established in June 2005 and was updated in May 2014 to reflect the current status of the project and the SDEIS. It also includes an overview of the Revised Preferred Alternative, links to project documents, and directions on how to become involved in the project. The site also provides an opportunity for the public to submit comments and the website use is monitored for such.

The original website was employed during the initial scoping and design development process as it had the potential to reach a wide spectrum of stakeholders. In addition, the AWI website for the project maintains the historic documents for the project. The AWI project website can

be found at www.anacostiawaterfront.org/awi-transportation-projects/south-capitol-street-corridor/ .

8.1.3 Project Newsletter

The Spring 2014 issue of the project newsletter was circulated in May 2014 in communities in the Project Area. A total of 600 newsletters were produced with 400 circulated in the communities and 200 reserved for the public meeting. The newsletters were distributed in the neighborhood of Barry Farm, west of the Anacostia River west of South Capitol Street between M and P Streets SW, and to Saint Vincent Catholic Church. The newsletter served as an invitation to the meeting and also provided project details including revisions to the project and project schedule.

8.1.4 Public Meetings following the FEIS

After the issuance of the FEIS, two public hearings were held, one on each side of the Anacostia River, on April 26 and 28, 2011. The findings of the FEIS were presented and the public was provided an opportunity to comment on the Preferred Alternative and findings of the FEIS. Many of the public comments expressed support of DDOT's revision of the design to reopen Sheridan Road. Other comments included thoughts on expanding bicycle and pedestrian connections. Most of the comments received pertained to the following concerns:

- Construction impacts such as noise, pollution, traffic on residents of the area and Anacostia River traffic
- Future regional traffic conditions resulting from the South Capitol Street project, 11th Street Bridge project, and planned residential, commercial, and mixed-use developments

On July 30, 2013 DDOT held an Informational Update Meeting for the South Capitol Street Corridor Project at the Capitol Skyline Hotel. The latest design, phasing and schedule information for the Project and an overview of the Design-Build process were presented.

On May 15, 2014, DDOT hosted a public open house meeting at Matthews Memorial Baptist Church. The community was provided an update of the project design, the NEPA process and the design-build process. Tools and techniques used to promote the May 15, 2014 meeting included advertisements in *East of the River*, *Hill Rag*, the *Washington Post Express*, and the *Southwester*. Postcards, fliers and posters were distributed throughout the Project Area. More than 2,400 fliers were distributed at the 4th Street, SW Safeway, Navy Yard/National's Park, Anacostia and Congress Heights Metro Stations, Southwest Neighborhood Library, churches and apartment complexes within the study area.

8.1.5 Library Distribution

As with the DEIS and FEIS, a paper copy of the SDEIS will be available for review at several facilities in the Project Area for public review and comment. The FEIS will also be made available for reference purposes. The locations are:

- Anacostia Library
- Francis A. Gregory Neighborhood Library
- Martin Luther King, Jr. Memorial Library
- Parklands-Turner Community Library
- Southeast Neighborhood Library
- Southwest Neighborhood Library
- Business Opportunity and Workforce Development Center

8.2 Agency Coordination

An important element of the environmental process is the integration of the National Environmental Policy Act (NEPA) with other planning and environmental review procedures required by law or agency practice. Effective interagency coordination is critical to project success. DDOT and FHWA are responsible for interagency coordination and they initiated meetings during the early planning stages of the South Capitol Street Project. This coordination will continue through the NEPA process and into final design and construction.

8.2.1 Aesthetic Review Committee

Table 8-1 lists the meetings of the Aesthetic Review Committee. The following sections document the agency coordination that has occurred during the Project.

Table 8-1: Aesthetic Review Committee Meetings

Date	Activity	Attendees
	2014	
January 15	Meeting to provide overview of proposed Aesthetic Review Committee for South Capitol Street Corridor Project Design-Build procurement.	CFA, DC SHPO NCPC DDOT
February 10	Meeting to review procurement process and schedule and agency comments/revised document.	CFA DC SHPO NCPC OP DDOT

8.2.2 Cooperating and Participating Agencies

Federal and non-federal agencies were invited by FHWA to participate in the project development process as cooperating agencies. Letters were sent in October 2013 to four agencies requesting their participation as cooperating agencies for the South Capitol Street project. The four agencies agreed to be cooperating agencies for the project. Appendix K contains copies of the acceptance letters from cooperating agencies. Federal agencies that declined to be cooperating agencies or did not respond to FHWA's invitation are considered

participating agencies (Section 6002 of the *Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU). Non-federal agencies that did not provide written acceptance are not considered participating agencies.

Table 8-2 lists the agencies that were invited to participate in the project development process and their current status as either cooperating or participating agencies. Table 8-3 lists the interagency coordination meetings held during the Project.

Table 8-2: Cooperating and Participating Agencies

Agency	Status
District of Columbia Department of the Environment	Cooperating
National Capital Planning Commission	Cooperating
National Park Service	Cooperating
U.S. Army Corps of Engineers	Cooperating
U.S. Coast Guard	Cooperating
U.S. Navy	Cooperating
Architect of the Capitol	Participating
National Oceanic and Atmospheric Administration, National Marine Fisheries Service	Participating
U.S. Department of the Interior, Fish and Wildlife Service	Participating

8.2.3 Stakeholder and Agency Coordination

Since the publication of the FEIS, coordination with stakeholders and cooperating and participating agencies has continued and resulted in the development of the Revised Preferred Alternative. Table 8-3 lists the interagency coordination conducted since completion of the FEIS.

Table 8-3: Interagency Coordination

Date	Activity	Agencies Present
	2012	
July 2	Meeting to discuss the new Frederick Douglass Memorial Bridge and the traffic oval and circle on either end. Navy impacts and next steps were also discussed.	US Navy DDOT
October 9	Meeting to discuss the South Capitol Street Corridor Project and discuss agency involvement.	USACE DDOE NPS USCG US Navy DDOT
November 7	Meeting to discuss the South Capitol Street (SCS) design team, update project design progress, review the path forward with design and construction, and to identify next steps.	CFA DC SHPO NCPC DDOT
November 28	Meeting to discuss the benefits of an alternative alignment for the new Frederick Douglass Memorial Bridge.	FHWA DDOT
December 6	Meeting to assess the status of permits necessary for geotechnical drilling with USACE and DDOE.	DDOE USCG DDOT
December 12	Meeting to discuss the progress of the planning and design including alternative bridge alignment with design options for east and ends of the bridge, constraints and risks associated with FEIS preferred alignment, and strategies to minimize impacts and risk.	CFA NCPC DC SHPO DDOT
December 18	Meeting to discuss the possible design alternative parallel alignment for the new Frederick Douglass Memorial Bridge.	FHWA DDOT
December 18	Meeting to discuss the benefits of an alternative alignment for the new Frederick Douglass Memorial Bridge and identify issues with the FEIS alignment and develop an alternative alignment in an effort to minimize costs and risks.	NPS DDOT

Table 8-3: Interagency Coordination~~Table 8-3: Interagency Coordination~~ (continued)

Date	Activity	Agencies Present
	2013	
January 10	Meeting to discuss the South Capitol Street Corridor Project and its impacts on NPS lands	CFA DC SHPO NCPC NPS DDOT
January 23	Meeting to discuss the planning and design activities of the corridor since the last meeting by AWI, the overall FDMB structure type and bridge selection process and the options that were considered including condition of the existing bridge by DDOT, the bridge span arrangements, haunch/arch depth including aesthetic design and options for consideration, and the evolution of the traffic oval designs on the east and west bridge approaches.	CFA NCPC DDOT
January 29	Meeting to introduce the project to District of Columbia Office of Planning (DCOP) and to review the design process to date.	DCOP DDOT
January 30	Meeting to present the status of the South Capitol Street Corridor Project, focusing on the proposed parallel alignment of the Frederick Douglass Memorial Bridge, traffic ovals, urban design, and overall project schedule.	Capitol Riverfront BID DDOT
February 5	Meeting to provide an overview and history of the South Capitol Street Corridor Project including the purpose and need, the Environmental Impact Statement (EIS) process, and environmental commitments outlined the Final Environmental Impact Statement (FEIS), phasing, cost, a list of involved stakeholders, and progress to date.	Bicycle Advisory Council (BAC) DC Council Pedestrian Advisory Council (PAC) WABA DDOT
February 7	Meeting to review project goals, design process, the parallel bridge alignment, and project delivery schedule.	USCG FHWA DDOE US Navy DC SHPO USACE DDOT
February 12	Meeting to review the issues discussed on January 23rd, activities since January 23rd, next steps, and previous set of concepts.	DC SHPO DDOT
February 12	Meeting to follow up from last South Capitol Street Interagency meeting, and to discussion of how the Design-Build (DB) process can advance in parallel with the NEPA proces, and how the NEPA process relates to the DB procurement process.	DCA DDOT

Table 8-3: Interagency Coordination~~Table 8-3: Interagency Coordination~~ (continued)

Date	Activity	Agencies Present
	2013 (continued)	
February 27	Meeting to provide an update of the South Capitol Street Advance Acquisition/Protective Buy parcels to FHWA Director and management team with a tour of the West Side Oval and individual parcels followed the meeting at DDOT.	FHWA DDOT
March 11	Meeting to review of project status, Supplemental Final EIS, Navigation Assessment (NA), and the necessary Coast Guard Bridge Permit.	Navy USCG DDOT
March 15	Correspondence to discuss the Coast Guard Bridge Permit process for the proposed replacement of the Frederick Douglass Memorial Bridge and the Navigation Assessment for the Anacostia River.	USCG DDOT
May 2	Correspondence to discuss the proposed replacement of the Frederick Douglass Memorial Bridge and the Navigation Assessment being completed for that bridge.	FHWA USCG DDOT
May 13	Correspondence from the US Navy to clarify the US Navy's vertical and horizontal clearance requirements for the proposed replacement bridge over the Anacostia River. US Navy commented that DDOT is exploring the feasibility of replacing the existing moveable Frederick Douglass Memorial Bridge with a fixed structure.	USCG US Navy DDOT
May 23	Meeting to discuss the survey being conducted as part of the Navigation Assessment. Discussed background of the South Capitol Street Corridor Project. Navy expressed concerns about fixed bridge alternative including: feasibility of future movement of the SS Barry and environmental impacts of dismantling SS Barry for it to fit under a fixed bridge.	DCA US Navy DDOT
June 5	Meeting to review project background, project progress, Navigation Assessment (NA), Removable Span Option, Supplemental Final EIS, Fixed vs. Movable Bridge alternatives.	FHWA USCG DDOT
June 6	Meeting to review and discuss project design and schedule, construction easement, and Request for Proposal (RFP) Design.	NCP NPS DDOT
June 19	Meeting to provide an overview of project background and Preferred Alignment from the Final Environmental Impact Statement (FEIS). Discussion included concerns about pedestrian traffic crossing South Capitol Street and street lighting.	Washington Nationals DDOT
June 20	Meeting to coordinate schedule and design updates with the US Navy.	US Navy DDOT

Table 8-3: Interagency Coordination~~Table 8-3: Interagency Coordination~~ (continued)

Date	Activity	Agencies Present
	2013 (continued)	
July 23	Meeting to update DC State Historic Preservation Office (DC SHPO) staff on the Section 106 consultation status related to the South Capitol Street Corridor Project changes since the FEIS was completed.	DC SHPO DDOT
July 26	Coordination discussion.	WMATA/JDAC DDOT
July 31	Meeting to discuss South Capitol Street Progress on the ovals, Frederick Douglass Memorial Bridge, bicycle and pedestrian features, stormwater management, the Supplemental EIS, and next steps.	DDOT
August 8	The USCG reiterated that all certifications are to be in place before the USCG will start their final permit process. PB presented the status of the Navigation Study.	USCG DDOT
September 5	Meeting to discuss South Capitol Street update, design features, Navigation Study and NEPA Process, and path forward.	DDOT
September 11	Meeting to coordinate and discuss the demolition requirements for the existing Frederick Douglass Memorial Bridge (FDMB) with USACE and USCG.	USCG DDOT
November 19	Correspondence from NCPC to approve the enclosed action on the comments on the concept design for the District of Columbia Department of Transportation – Reconstruction of South Capitol Street, P Street to I-295 project. Correspondence from NCPC to DDOT includes Executive Director's Recommendation.	NCPC DDOT
November 19	Meeting to review and discuss this updated process of the project and the Visual Quality Process.	CFA DDOT
November 19	Meeting to discuss and review with FHWA the acquisition and relocation assistance procedures to be used for the four total take parcels (SCS-037, 041, 042 and 074). Review of the plan and processes that will be used to acquire the properties and relocate the tenants.	FHWA DDOT
December 5	Meeting to update FHWA on the procurement and NEPA schedule for the South Capitol Street Corridor Project. This includes updates to the process resulting from the CFA presentation on September 17, 2013.	FHWA DDOT
December 17	Correspondence from the Fifth Coast Guard District to issue a preliminary public notice regarding the proposed replacement of the Frederick Douglass Memorial Bridge (South Capitol Street) over the Anacostia River. The purpose of this notice was to notify mariner, adjacent property owners, and government agencies that the District of Columbia Department of Transportation may propose to replace the current movable drawbridge with a fixed bridge.	USCG DDOT

Table 8-3: Interagency Coordination~~Table 8-3: Interagency Coordination~~ (continued)

Date	Activity	Agencies Present
	2013 (continued)	
December 17	Meeting to provide an overview of project updates such as RFP Bridge progress update, South Capitol Street Corridor update, M Street study – Task 3B – Special Event Study, Parkside Pedestrian Bridge, St. Elizabeth's East Campus roads and infrastructure systems, Malcolm X Interchange improvements, 11th Street Bridge update, 11th Street Urban Deck concept and status, Kenilworth Riverwalk Trail update, Barney Circle/Southeast Boulevard EA update, Pennsylvania Ave/Potomac Ave Intersection EA update, AWI Transportation Master Plan 2013 update, South Capitol Street Trail.	DMPED OP DDOT
December 17	Meeting to review the responses to the preliminary public notice, discuss comments on the Phase 1 Navigation Study, provide the preliminary results of the Phase 2 Navigation study and discuss the next steps for a draft bridge permit application.	USCG DDOT
December 18	Meeting to discuss the drilling means/methods, potential work plan updates, and the 401 Certification requirements (specifically the turbidity curtain, turbidity monitoring, and environmental sampling).	DDOE DDOT
December 19	Preliminary Public Notice regarding the proposed replacement of the Frederick Douglass Memorial Bridge (South Capitol Street) over the Anacostia River. The purpose of this notice was to notify mariners, adjacent property owners, and government agencies that the District of Columbia Department of Transportation may propose to replace the current movable drawbridge with a fixed bridge.	FHWA USCG DDOT
December 19	Meeting purpose to provide changes to the project since FEIS, overview of the NEPA and Section 106 process, review of proposed area of potential effects, identified historic properties, Section 106 next steps, and discussion.	CFA CHRS DC SHPO NCPC NPS DDOT

Table 8-3: Interagency Coordination~~Table 8-3: Interagency Coordination~~ (continued)

Date	Activity	Agencies Present
	2014	
January 2	Memorandum summarizing the December 18, 2013 meeting minutes. Includes information for the Free State Drilling Inc (FSD): drilling license, DCRA Business License, DDOE Well Application Schematic, Well Construction Application Form, Figure showing boring locations.	DDOE WDC DDOT
January 6	Correspondence summarizing the DC code dating from 1899 regarding ownership of the river bed, NPS lands current office position on DC authority regarding the borings as within a ROW for the existing bridge, drafting a letter stating that no Federal Action (permit) from NPS is required for DDOT to undertake the borings.	DDOE DDOT
January 8	Meeting to provide an update on project progress including: the NEPA process, ongoing coordination with stakeholders including CFA and NCPC, an update on the revisions to the Design-Build RFP including an enhanced aesthetic review process, the schedule for completing the NEPA process and the Design-Build RFP, and the US Navy's ongoing study for the DS Barry.	US Navy DDOT
January 15	Meeting to provide a briefing to the members of the representatives of the Commission of Fine Arts (CFA), National Capitol Planning Commission (NCPC), and District of Columbia State Historic Preservation Office (DC SHPO). These agencies were invited by DDOT to participate in the Aesthetic Review Committee for the South Capitol Street Corridor Project.	CFA DC SHPO NCPC DDOT
February 12	Correspondence from CH2M HILL to FAA requesting supplemental information for use in issuing a public notice for ASN 2013-AEA-4399-OE, replacement of the existing Frederick Douglass Memorial Bridge over the Anacostia River in Washington, DC.	DDOT FAA
March 13	Meeting to provide a status update on the supplemental EIS and status report on work that is on-going. DDOT provided a status update on the Navigation Study and advised that the final Navigation Study Report has been submitted. Discussed environmental updates, cost estimate review, finance plan, project management plan, project labor agreement, disadvantaged business enterprises, FHWA requirements, and the award process.	FHWA DDOT

Table 8-3: Interagency Coordination~~Table 8-3: Interagency Coordination~~ (continued)

Date	Activity	Agencies Present
	2014 (continued)	
May 13	Meeting purpose to inform the Cooperating and Participating Agencies of the design revisions to the FEIS Preferred Alternative and of the environmental review process for the Supplemental FEIS. The meeting also served as an opportunity for the agencies to raise issues or questions regarding the project.	ACOE AOC CFA DDOE FHWA FWS NCPC NPS USCG US Navy DDOT
May 28	Meeting to provide update on Results of Buzzard Point Planning Study, update on Soccer Stadium, update on South Capitol Street Corridor Project, review action items, and schedule follow up coordination.	DCA OP DGS DDOT
July 10	Meeting to present the consulting parties the proposed Effects Assessments for Historic Properties within the revised Area of Potential Effects (APE) and to receive their feedback. The APE had been revised based on comments received from the consulting parties at the first consulting parties meeting in December.	ACHP ANC 6D AOC CFA CHRS DC SHPO DDOT FHWA Friends of Garfield Park Louis Berger NCPC NPS-NCPC PEPCO US Navy
September 4	Meeting to review and discuss NPS comments on the South Capitol Street Corridor project.	DDOT FHWA NPS

8.3 Section 106 Coordination

As required by Section 106 of the National Historic Preservation Act, coordination with persons, organizations, and agencies with specific interests in the Project Area related to cultural resources is being undertaken for this project. Several agencies, organizations, or groups that meet the definition of potential consulting parties were invited to participate in the project as Section 106 consulting parties by FHWA in December 2013. These organizations include:

- NCPC
- CFA
- Architect of the Capitol (AOC)
- DC Historic Preservation Review Board
- NPS – National Capital Region
- Committee of 100 on the Federal City
- African American Heritage Preservation Foundation, Inc.
- Heritage Preservation
- Anacostia Museum and Center for African American History and Culture
- DC Preservation League
- Councilman Wells (Ward 6)
- Councilman Barry (Ward 8)
- ANC 6B
- ANC 6D
- ANC 8A
- ANC 8C
- Southwest Neighborhood Assembly
- WMATA
- DC Vote
- Capitol Hill Restoration Society (CHRS)
- Georgetown University Law Center
- Historical Society of Washington, D.C.
- Historic Preservation Review Board
- Advisory Council on Historic Preservation (ACHP)
- Anacostia Trails Heritage Area
- Delaware Nation

Of the organizations and persons invited to be consulting parties, five responded positively to the request:

- DC SHPO
- Capitol Hill Restoration Society (CHRS)
- NCPC
- NPS - NACE
- CFA

The consulting parties (CPs) were invited to a meeting on December 19, 2013 to inform the CPS how the improvements to the project changed the Area of Potential Effect (APE) that will be used for project compliance with Section 106. DDOT informed the CPs that the improvements to the Preferred Alternative would be covered in the Supplemental FEIS for compliance with NEPA. In addition to FHWA, DDOT, and DC SHPO, the following organizations were represented at the meeting:

- CHRS
- DC SHPO
- NCPC
- NPS
- CFA

Four issues at the meeting were clarified including:

- No elements have been eliminated from the design but they have been modified
- The ROD will cover all NEPA documents prepared for the project, such as the DEIS, FEIS and SDEIS
- The Purpose and Need remains the same from the FEIS
- The LOD includes staging areas

Meeting participants focused on the following topics:

- Concerns were raised regarding the APE boundary limits, particularly as relates to visual impacts.
- Discussions highlighted properties needing a Section 106 determination of eligibility, and which properties to include and exclude within the new APE boundary. It was determined that a permit would be required for archaeological investigations on NPS property.
- The Delaware Nation renewed its interest for activities in the Project Area, including projects that may disturb the Potomac and Anacostia Rivers. The USCOE has consulted with the Delaware Nation during the boring permit process. Consultation is expected to continue for the South Capitol Street Project.
- Decisions were made to send the 2011 Memorandum of Agreement (MOA) to Consulting Parties. Meeting participants requested submission of any comments on the APE by January 10, 2014.

Subsequently, a decision was made to expand the APE. As a result, additional agencies, organizations, or groups that meet the definition of potential consulting parties were invited to participate in the Project as Section 106 consulting parties by FHWA in May, 2014. These organizations include:

- US Navy
- Joint Base Ft Myer, McNair, and Henderson Hall

- Potomac Electric Power Company (PEPCO)

Of these invitees, the following agencies, organizations, or groups participated as Consulting Parties:

- US Navy
- PEPCO

The consulting parties were invited to a meeting on July 10, 2014 to review the draft Determination of Effects and to discuss the approach to revising the MOA. In addition to FHWA, DDOT, and DC SHPO, the following organizations were represented at the meeting:

- CHRS
- DC SHPO
- NCPC
- NPS
- CFA
- Friends of Garfield Park
- PEPCO
- ANC 6D
- ACHP
- AOC

Meeting participants focused on the following topics:

- Proposed effects determinations for historic properties adjacent to the LOD because noise and vibration from construction activities could have an indirect impact.
- Expansion of the APE to include the U.S. Capitol as there are potential indirect visual impacts.

Following the meeting, the APE was expanded to include the U.S. Capitol. Project effects to historic properties within the revised APE were evaluated and initial comments from consulting parties and the DC SHPO, received at a meeting on July 10, 2014, were considered and included. *The Draft South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) was submitted to the DC SHPO and consulting parties for review in early August 2014. The revised final version of the *South Capitol Street Project Section 106 Assessment of Effects for Historic Properties* (DDOT, 2014) is included as Appendix G of this document. The Project's MOA will be amended in consultation with consulting parties and signatories to reflect changes in effects assessments.

chapter 9.0

glossary

A

Access, Accessibility: The opportunity to easily reach a destination without being impeded by physical, social, or economic barriers. Typically, accessibility is the extent to which transportation improvements make connections between geographic areas or portions of the region that were not previously well connected.

Advisory Council for Historic Preservation (ACHP): An independent federal agency responsible for the federal review process to ensure that cultural resources are considered during federal project planning and implementation.

Affected Environment: The physical features, land, area or areas to be influenced, affected or created by a transportation improvement under consideration; also includes various social and environmental factors and conditions pertinent to an area.

Agency Coordination: Refers to the process whereby the Department of Transportation contacts, consults and maintains communication with various public and environmental resource agencies, affording such agencies an opportunity to review and comment upon specific transportation proposals.

Agreements (Programmatic): Agreement between agencies designed to accomplish all agency goals, including timely and efficient coordination. Establishment of a procedure that will reduce processing time for certain federal actions with minor impacts on the human and natural environment.

Alternative: One of a number of specific transportation improvement proposals, alignments, options, design choices, etc. in a study. Following detailed analysis, one improvement alternative is chosen for implementation.

Archaeological Investigations: Studies of prehistoric and historic locales that provide understanding of past human behavior, culture change, and related topics through scientific and scholarly techniques such as literature research, excavation, analysis and interpretation. Current U.S. archeological practice defines three phases of investigation: Phase I identification survey (this is sometimes divided into Phase I(a), which is primarily limited to background archival research, and Phase I(b), which includes actual field survey; Phase II evaluation

investigations, which include a more intensive excavation to determine if a site meets the eligibility criterion for the National Register of Historic Places (NRHP); and Phase III data recovery excavations to mitigate the loss of archeological data when a NRHP eligible site cannot be avoided.

Area of Potential Effect (APE): The geographical area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

Arterial: A class of street serving major through traffic movements emphasizing a high level of mobility. These streets serve moderate to long trips and major activity centers. Arterials include interstates, freeways/expressways, urban principal arterials, and minor arterials.

Average Daily Traffic (ADT): The average number of vehicles passing a fixed point in a 24-hour time frame. A measure of traffic volumes.

B

Bascule Bridge: A bascule bridge or drawbridge is the most often constructed type of movable bridge. The movable span opens vertically by rotating upwards about a horizontal axis. It is designed with a counterweight that balances the span throughout the entire upward swing.

Base Year: The lead off year of data used in a study, usually the current year or a year with the most recent comprehensive data.

Bicycle Lane: Bicycle lanes on a roadway are for the exclusive use of bicycles and are marked accordingly. They are typically one-way facilities designed to carry bike traffic in the same direction as adjacent motor vehicle traffic. A minimum bicycle lane width is generally four feet.

Build/No Build: Often called the base case, the No Build Alternative includes all routine maintenance safety improvements and projects listed in the most recent Constrained Long Range Transportation Plan for the Washington region adopted by the Metropolitan Washington Council of Governments Transportation Planning Board. The schedule of improvements covers a 25-year period. This alternative serves as the basis for comparison to all other Build Alternatives. Build Alternatives are alternatives that are developed at the concept level for analysis purposes that meet the project purpose and need and have the potential to be constructed.

C

Capacity: Usually the maximum number of vehicles and/or people that can be carried past a point on a transportation system in a specified time, at a specified level of service (LOS).

Center-ramp Interchange: A connection between two roadways provided by grade-separated, one-way ramps located in the center of the major roadway. The ramp's connection to the major roadway is free-flow and accessed from the leftmost lane. A signalized intersection controls access from the crossroad to the ramps leading to the major roadway. The design attempts to minimize construction costs and property impacts by building ramps within the roadway medians.

Clean Air Act Amendments (CAAAs): Federal legislation passed in 1990 to change both federal and state approaches to regulating air quality; mandating programs to curb acid rain, urban air pollution, and toxic air emissions. The CAAAs call for emission reduction measures in air quality nonattainment areas, including the consideration of transportation control measures (TCMs) as part of transportation improvement projects. Projects in nonattainment areas may not increase the number of vehicle miles traveled (VMTs); the number of cars on the roadways must be reduced by encouraging drivers to use mass transit, ridesharing, and carpooling.

Clean Water Act (CWA): Recognizing the potential for continued or accelerated degradation of the Nation's waters, the U.S. Congress enacted the Clean Water Act formerly known as the Federal Water Pollution Control Act (33 USC 1344). The objective of the Clean Water Act is to maintain and restore the chemical, physical, and biological integrity of the waters of the U.S. Section 404 of the Act authorizes the Secretary of the Army, acting through the U.S. Army Corps of Engineers, to issue permits for the discharge of dredged or fill material into waters of the U.S., including wetlands.

Collector: A road that collects and distributes traffic. Sometimes built next to an expressway to collect traffic from the area and then funnel it onto the expressway. Generally, a collector has fewer lanes than an arterial.

Common Noise Environment (CNE): A CNE is a group of noise receptors within the same land use activity category that are exposed to similar noise sources and levels, traffic volumes, traffic mix, speed, and topographic features. Generally, CNEs occur between two secondary noise sources, such as interchanges, intersections and cross roads.

Comprehensive Plan: The general, inclusive long-range statement of the future development of a community. The plan is typically a map accompanied by description and supplemented by policy statements that direct future capital improvements in an area.

Conceptual Mitigation: The early, generalized identification of design, operational or construction measures that would minimize or avoid adverse environmental consequences.

Conformity: The process to assess the compliance of any transportation plan, program, or project with air quality control plans. The conformity process, carried out at the regional level, is defined by the Clean Air Act and related amendments.

Constraints: More commonly described as "environmental features." Significant resources, facilities or other features of a project area located in or adjacent to an existing or proposed

transportation corridor that serve to restrain, restrict, or prevent the ready implementation of proposed transportation improvements in a given area; may include natural or physical resources, important structures, manner of payment, and various administrative requirements that must be met.

Consulting Party: The participants included in the consultation on historic properties during the Section 106 review process. For highway projects, consulting parties always include the Department of Transportation and the State Historic Preservation Office, local governments, representatives of Indian tribes, and may include others such as affected land-owners and other interested parties.

Cooperating Agency: As defined in the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA), "any organization other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in ... [a] major federal action significantly affecting the quality of the human environment." CEQ emphasizes that agency cooperation should begin early in the NEPA process.

Council of Environmental Quality Regulations (CEQ): Directives issued by the Federal Council on Environmental Quality (40 CFR 1500:1508) that govern the development and issuance of environmental policy and procedures for federal aid actions by public agencies. The regulations contain definitions, spell out applicability and responsibilities, and mandate certain processes and procedures to be followed by state agencies that administer federally funded programs.

Cultural/Architecture Investigations: Studies that result in identification of resources (buildings, structures and sites) constructed over 50 years ago or of recent construction and demonstrably significant based on National Register of Historic Places guidelines, via literature research, photo documentation, analysis, and interpretation.

Cumulative Impact: The impact on the environment that results from the incremental impact of a transportation project when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

D

Design Concept: In a major investment study, the type of facility (i.e. freeway, arterial, local road, etc.) being considered. Also see Scope.

Design Criteria: Established local, state, and national standards and procedures that guide the establishment of roadway layouts, alignments, geometry, and dimensions for specified types of roadways in certain defined conditions. The principal design criteria for roadways are traffic volume, design speed, functional classification, the physical characteristics of vehicles, the classification of vehicles, and the percentage of various vehicle classification types that use the roadway.

Design Exception: An approval issued by a state or federal agency to permit certain deviation from a specified, accepted design criteria granted on the basis of a report explaining the need for the exception and the consequences that will result from the action.

Determination of Effect: A finding made by Departments of Transportation for federal actions, in consultation with the State Historic Preservation Officer (and the Advisory Council for Historic Preservation), which determines whether a proposed project affects a property included on or eligible for the National Register of Historic Places.

Determination of Eligibility: The process of assembling documentation to render professional evaluation of the historical significance of a property. Departments of Transportation, in consultation with the State Historic Preservation Officer apply National Register of Historic Places criteria when deciding matters of historical significance.

Direct Effects: Influences or occurrences caused by a given action and occurring at the same time as the action. Changes in noise levels, traffic volumes, or visual conditions are some examples of direct effects generated by transportation improvements.

E

Environmental: In a scientific context, a combination of external or extrinsic conditions present in nature. In a planning context, a category of analytical studies of aesthetic values, ecological resources, cultural resources, sociological and economic conditions, etc.

Environmental Impact Statement (EIS)**:** Report that evaluates the economic, social, and environmental effects of a proposed major transportation project for which federal funding is being sought. Impacts could include air, water, or noise pollution; natural resources; employment effects; displacement of people or businesses; or community or regional growth impacts.

Environmental Justice: Efforts to avoid disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment.

Environmental Justice Area (EJ Area): An “EJ area” was defined to include any census tract in which the minority or low-income population meets either of the following thresholds:

(a) The minority or low-income population in the census tract exceeds 50 percent, or

(b) The percentage of a minority or low-income population in the affected area is “meaningfully greater” than the percentage of minority population in the general population.

Environmental Protection Agency (EPA): EPA is the federal source agency of air quality control regulations affecting transportation.

Environmental Site Assessment (ESA): An environmental study conducted to assess the potential for contamination of a property or parcel with hazardous substances. The process by which a person or entity seeks to determine if a particular parcel of real property (including improvements) has been impacted by hazardous substances and/or petroleum products.

Erosion and Sedimentation Control Plan: A detailed plan developed to minimize accelerated erosion and prevent sedimentation damage.

Expressway: A divided highway facility with partial control of access and two or more lanes for the exclusive use of through traffic in each direction; includes grade separations at most major intersections.

F

Federal Action: A highway or transit project proposed by the Federal Highway Administration or Federal Transit Administration, using federal funding. It also includes actions such as joint and multiple use permits, other federal permits and approvals, changes in access control, etc., which may or may not involve a commitment of federal funds.

Federal Highway Administration (FHWA): An agency of the U.S. Department of Transportation responsible for carrying out federal highway and transportation mandates through a network of several regional offices and Division Offices in each state.

Field Review: A site visit conducted to gather or verify data, define scopes of work, perform analyses, and make decisions for specific projects.

Final Design: The development of detailed working drawings, specifications, and estimates for transportation projects. Final Design follows the receipt of necessary design and/or environmental approval and it includes right-of-way acquisition, utility relocation, and contract advertisement and award.

Freeway: A divided highway facility with full control of access and two or more lanes for the exclusive use of through traffic in each direction. See Expressway.

Functional Classification**:** A method of cataloging a road's purpose and design. Roads are classified as Interstates, Freeways / Expressways, Arterials, Collectors, and local roads.

G

Geographical Information Systems (GIS): Technology designed to capture, store, manage, manipulate, analyze and display geographically referenced data.

Geometric Design: Pertains to those engineering activities involving standards and procedures for establishing the horizontal and vertical alignment and dimensions of slopes of a highway. It

includes engineering work involved with proportioning the visible elements of a facility, tailoring the highway to the terrain, the controls of environmental and land space usage, and the requirements of the highway user, individually and collectively.

Grade Separation: A geometric difference in elevation between two or more overlapping and/or intersecting roadways.

H

Highway: Term used to describe higher capacity roads; also includes rights of way, bridges, railroad crossings, tunnels, drainage structures, signs, guardrails, and protective structures in connection with highways.

Human Environment: Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

I

Identification of Alternatives: The U.S. Department of Transportation's engineering and environmental evaluations, in which the Department identifies and chooses an initial set of study alternatives that address the stated program objectives and the project need, and which are sensitive to the resources and land uses of a project area. The process involves a wide variety of possible options, assessing the merits and drawbacks, and choosing those that should be carried forward. Alternatives to be studied normally include the No Build or No Action alternative, an upgrading of the existing roadway alternative, new transportation routes and locations, transportation systems management strategies, multi-modal alternatives if warranted, and any combination of the above.

Impacts: Positive or negative effects upon the natural or human environment resulting from transportation projects.

Indirect Effects: Impacts that can be expected to result from a given action that occurs later in time or further removed in distance; for example, induced changes to land use patterns, population density or growth rate.

Independent Utility: Usable and reasonable expenditure public funding even if no additional transportation improvements in the area are made.

Infrastructure: A term connoting the physical underpinnings of society at large, including, but not limited to, roads, bridges, transit, water and waste systems, public housing, sidewalks, utility installations, parks, public buildings and communications networks.

Interested Community: A compilation of the names and addresses of persons or groups affected by or interested in a specific transportation project. This information is gathered and maintained by Department of Transportation officials or local planning agencies during the course of transportation project studies.

Interstate System: The system of highways that connects the principal metropolitan areas, cities, and industrial centers of the U.S. The Interstate System also connects the U.S. to internationally significant routes in Mexico and Canada. The routes of the Interstate System are selected jointly by the state department of transportation for each state and the adjoining states, subject to the approval of the U.S. Secretary of Transportation.

J

Jurisdictional Determination (JD): A site survey or document review performed by the U.S. Army Corps of Engineers to officially determine whether or not a given parcel of land is subject to regulation as waters of the U.S., and if so, the extent of the area. This is generally applied to wetlands, but may also be used to determine jurisdictional issues with respect to headwater streams, ditches, and similar areas.

L

Land Use: Refers to how land and the structures (development) on it are used, i.e., commercial, residential, retail, industrial, etc.

Lead Agency: A state or federal agency taking primary responsibility for preparing an engineering or environmental document.

Level of Service (LOS): A qualitative measure describing operational road (traffic) conditions and the perception of motorists of the existing conditions. Six levels of service are defined for each type of facility, ranging from A to F, with LOS A representing the best operating conditions and LOS F the worst.

Limits of Disturbance (LOD): The Project impact area ("Project footprint"), which includes the physical area that the selected designer/contractor will have the option to use to construct the Project, as well as other required activities such as parcel access, material storage or staging if it is not specifically prohibited (e.g., such as for non-permitted wetland impacts).

Local Street: A class of street intended solely for access to adjacent properties.

Logical Termini: Rational end points for a transportation improvement, or rational end points for a review of the environmental impacts.

Long Range: In transportation planning, refers to a time span of more than five years. A long-range plan typically covers a 20-year time span.

M

Mapping: A plan surface with graphic or photographic representation of land or water depicting the project area for a project. Existing alignments, alternatives, engineering design features, and environmental constraints are plotted on various types of mapping. Photogrammetric (aerial) mapping assists in resource identification and studies. Topographic (base) mapping provides a foundation in alignment layout. Property tax maps and traffic data maps also are consulted in the transportation development process. The type and scale of mapping are selected to fit the terrain and land use intensity of a project area as well as the level of detail in the proposed design.

Mitigation Measures: Specific design commitments made during the environmental evaluation and study process that serve to moderate or lessen impacts deriving from the proposed action.

Mobility: The ability to move or be moved from place to place. Typically, mobility is the ease with which movement can occur through a transportation system.

Mode and Multimodal: Form of transportation, such as automobile, transit, bicycle, and walking. Intermodal refers to the connections between modes and multimodal refers to the availability of transportation options within a system or corridor.

Model: A set of mathematical formulas that represent the activity and the interactions within a system so that the system may be evaluated according to various conditions: land use, population, households and employment (socio-economic), transportation, or others.

Multiple Use: The non-highway use of the airspace above or below the highway gradeline between the horizontal highway right-of-way limits acquired by the highway agency.

Multi-use Trail: Off-street paths for the exclusive use of non-vehicular modes such as walking, running, cycling, and rollerblading. Often designed for recreational use, they are intended to supplement the on-street bicycle network.

N

National Ambient Air Quality Standards (NAAQS): Federal standards that set allowable concentrations and exposure limits for various air pollutants.

National Environmental Policy Act (NEPA): Passed in 1969, the federal legislation requiring states to document the environmental impact of transportation projects. The NEPA process is enforced by regulations of the Council on Environmental Quality.

National Pollutant Discharge Elimination System (NPDES) Permit: Mandated by Section 401 of the Clean Water Act for the discharge of pollutants from a point source into surface waters (including wetlands) for disposal purposes; intended to regulate the amount of chemicals, heavy metals, and biological wastes discharged in wastewater.

National Register of Historic Places (NRHP): The national list of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, engineering, or culture. It is maintained by the Secretary of the Interior under authority of Section 101(a)(1)(A) of the National Historic Preservation Act, as amended.

National Register of Historic Places Criteria for Evaluation: The criteria used by the National Park Service to evaluate the eligibility of properties for listing on the National Register of Historic Places (NRHP).

Navigable Waterway: Those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events that impede or destroy navigable capacity (33 CFR 329.4).

Network: A graphic and/or mathematical representation of paths in a transportation system.

Non-Attainment Areas: Metropolitan areas that do not meet national ambient air quality standards for carbon monoxide and/or ozone pollution; ranked by the severity of their problem as marginal, moderate, serious, severe or extreme. In accordance with the Clean Air Act Amendments of 1990, these areas must take specific emission reduction measures.

Non-Environmental Justice Area (Non-EJ Area): (see Environmental Justice Area). The term “non-EJ area” does not imply the absence of EJ populations living in that area. The EJ analysis distinguished between EJ areas and non-EJ areas as a tool for assessing the potential for disproportionate impacts on EJ populations.

Notice of Intent: Announcement in the Federal Register advising interested parties that an Environmental Impact Statement will be prepared and circulated for a given project.

O

Open House: An informal, unstructured Public Meeting during which information stations with exhibits convey important project information and Department of Transportation and consultant personnel are available to answer the public’s questions.

Ordinary High Water (OHW): The ordinary high water mark is the elevation at which U.S. Army Corps of Engineers jurisdiction begins. The OHW mark is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as an impressed natural line, shelving, and a vegetation change or debris lines.

Ozone: A colorless gas with a sweet odor. Ozone is not a direct emission from transportation sources but rather a secondary pollutant formed when hydrocarbons (HC) and nitrogen oxides (NOx) combine in the presence of sunlight. Ozone is associated with smog or haze conditions. Although ozone in the upper atmosphere protects the earth from harmful ultraviolet rays, ground level ozone produces an unhealthy environment in which to live.

P

Particulate Matter (PM), (PM 10): Any material that exists as solid or liquid in the atmosphere. Particulate matter may be in the form of fly ash, soot, dust, fog, fumes, etc. Small particulate matter, or PM 10, is less than 10 microns in size and is too small to be filtered by the nose and lungs.

Peak Hour: The 60-minute period during which the largest volume of travel is experienced.

Planning Stage: The first stage of the transportation development process. Planning involves the development of a Statewide Multimodal Transportation Plan and Metropolitan Areas Plan. This phase involves inventories, data collection, problems/needs assessments, generating and comparing alternative plans, evaluating the social, economic, and environmental impacts of proposed transportation actions with a variety of public, agency, and citizen involvement groups, and selecting the preferred plan for the state and the Metropolitan Planning Organizations.

Plans: Technical drawings that show the location, character, and dimensions of prescribed project work, including layouts, profiles, cross-sections and other details.

Programming: A general term to refer to a series of activities carried out by the Department of Transportation, including data assessment, appraisal of identified planning needs and consideration of available or anticipated fiscal resources to result in the drawing up, scheduling and planning.

Programmatic Agreement (PA): see Agreements (Programmatic)

Project Area: A geographic area selected and defined at the outset of engineering and environmental evaluations that is sufficiently adequate in size to address all pertinent project matters occurring within it.

Public Authority: A federal, state, county, town, or township, Indian tribe, municipal or other local government or instrumentality with authority to finance, build, operate, or maintain toll or toll free transportation facilities.

Public Hearing: A meeting designed to afford the public the fullest opportunity to express support of, opposition to, or comment on a transportation project. Documentation is required and comment from the public go into the public record. Format for Public Hearings are not question-and-answer format and is governed by rules ordering who speaks when and for what duration. Public Hearings are overseen by a hearing official.

Public Involvement: Coordination events and informational materials geared toward public participation in the Transportation Development Process.

Public Meeting: An announced meeting conducted by transportation officials designed to facilitate public participation in the decision-making process and to assist the public in gaining an informed view of a proposed project during the Transportation Development Process. A Public Meeting is generally informal and a question-and-answer format and is a discussion between interested parties. Comments do not go into the public record. Public Meeting formats are open discussion with a moderator to keep comments focused and to ensure everyone has a change to ask his/her question.

Public Participation: The active and meaningful involvement of the public in the development of transportation plans and improvement programs. Federal transportation legislation and regulations require that state departments of transportation proactively seek the involvement of all interested parties, including those traditionally under-served by the current transportation system.

Public Road: Any road or street under the jurisdiction of and maintained by a public authority and open to public traffic.

R

Record of Decision (ROD): A document prepared by the Division office of the Federal Highway Administration that presents the basis for selecting and approving a specific transportation proposal that has been evaluated through the various environmental and engineering studies. Typically, the ROD identifies the alternative selected in the Final Environmental Impact Statement (FEIS), the alternatives considered, measures to minimize harm, monitoring or enforcement programs, and an itemized list of commitments and mitigation measures.

Region: An entire metropolitan area including designated urban and rural sub-regions.

Regulatory Agency: An agency empowered to issue permits or recommend approval or denial of a permit or action.

Retractile Bridge: Retractile bridges are probably the least common of all movable bridges and are generally used for shorter spans. Center spans of the bridge deck are rolled or pulled backwards to provide an opening for vessels in the navigation channel.

Right-of-Way (ROW): Usually that land owned by or under the direct control of a transportation system and on which its users operate. The ROW area typically includes travel lanes, shoulders, curb and gutter, sidewalks, landscaping, and space for utilities.

S

Scope: The range of actions, alternatives, and impacts to be considered in an environmental impact statement.

Secondary Impacts: A general term to define impacts caused by a specific action, and which take place later in time or further removed in distance, but are still reasonably foreseeable. Also see Indirect Effects.

Section 106 Procedures: Procedures based on Section 106 of the National Historic Preservation Act of 1966 that govern the identification, evaluation, and protection of historical and archaeological resources affected by state and federal transportation projects. Principal areas identified include required evaluations to determine the presence or absence of sites, the eligibility based on National Register of Historic Places criteria and the significance of the effect of a proposed project upon such a site.

Section 401 Water Quality Certification: Required by Section 401 of the federal Clean Water Act for projects involving the discharge of materials into surface waters, including wetlands. The applicant must demonstrate that activities will comply with water quality standards and other provisions of federal and state law and regulations regarding conventional and nonconventional pollutants, new source performance standards, and toxic pollutants.

Section 404 Permit: A permit issued by the U.S. Army Corps of Engineers to authorize the discharge of dredged or fill material into waters of the U.S. pursuant to Section 404 of the Clean Water Act.

Section 4(f) Determination: Administrative action by which the Federal Highway Administration confirms that, on the basis of extensive studies and analysis, there are no “prudent and feasible” alternatives to the taking of land from resources protected under Section 4(f) of the U.S. Department of Transportation Act, as amended.

Section 4(f) Resources: Publicly owned parks, recreation lands, wildlife/waterfowl refuges, and historic sites that are listed on or eligible for listing on the National Register of Historic Places (NRHP).

Section 6(f): A provision in the Federal Land and Water Conservation Fund Act that protects public recreational properties developed or enhanced using federal funding supplied to states or municipalities under the Act by requiring replacement of lands converted to non-recreational uses. Proposed transportation projects, which affect such lands, require a study and an analysis of alternatives to serve as the basis for a Section 6(f) finding by the U.S. Department of the Interior. Specific state legislation for any proposed land transfer is also required in order to implement a Section 6(f) action. Mitigation generally includes replacement of Section 6(f) land taken for a project.

Sensitive Receptor: An area of frequent human use (i.e. residential property, church, school, library, hospital, park, hotel, motel, etc.).

Sensitive Species: Plant or animal species that are (1) federally listed or proposed threatened or endangered species; (2) bird species protected under the Migratory Bird Treaty Act; (3) species protected under state endangered species laws and regulations, plant protection laws and regulations; fish and game codes, or species of special concern listings and policies; or (4) species recognized by national, state, or local environmental organizations (e.g., The Nature Conservancy).

Signed Bicycle Route: Preferred routes for cyclists along shared roadways, indicated by signage. The routes are typically selected to connect cyclists to major destinations and major bicycle facilities and direct cyclists to low traffic volume roads. In addition to bicycle route signage, these routes may also be characterized by wider curbside travel lanes and distinct pavement markings.

Significant Impacts: Any number of social, environmental, or economic effects or influences that may result from the implementation of a transportation improvement; classified as direct, secondary, or cumulative, which significantly affect the human and natural environments. The Federal Highway Administration mandates environmental clearance documents based upon the significance of impacts. In most cases, environmental impact statement projects involve significant impacts. Both context and intensity as described in 40 CFR 1508.27 are important when determining significance.

Sole Source Aquifer: As defined by the federal Safe Drinking Water Act, a groundwater source that represents the principle source of a water supply for a community or region that, if contaminated, would create a significant hazard to public health.

Special Aquatic Sites: Those sites identified in accordance with 40 CFR 230 Subpart E (i.e. sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes). They are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region.

State Historic Preservation Officer (SHPO): The official appointed or designated pursuant to Section 101(b)(1) of the National Historic Preservation Act to administer the State historic preservation program. The SHPO consults with state and federal agencies during the Section 106 process review. The SHPO administers the national historic preservation program at the State level, reviews National Register nominations, and maintains file data on historic properties that have been identified but not yet nominated. Agencies seek the view of the SHPO in the identification of historic properties and the assessment of the effects of a project on historic properties.

State Transportation Improvement Plan (STIP): A staged, multi-year statewide, intermodal program of transportation projects that is consistent with the statewide transportation plan and planning processes, metropolitan plans, Transportation Improvement Plans and processes.

Streetscape: The various hardscape and landscape elements that comprise the visual character of a street. These typically include street trees, streetlights, sidewalks, paving treatments, utilities, and street furniture. Within the roadway, these include curb, gutter, parking lanes, travel lanes, crosswalks, and medians.

Study Area: see Project Area.

Swing Span Bridge: The swing bridge is a movable bridge that opens by revolving about a vertical axis. It consists of two spans supported on a central pivot pier, similar to the existing Frederick Douglass Memorial Bridge.

T

Transcript: A typewritten record, usually prepared by a certified stenographer, providing a verbatim account of the official proceedings that take place at all Public Hearings and some Public Meetings.

Transit: Generally refers to passenger service provided to the general public along established routes with fixed or variable schedules at published fares. Related terms include public transit, mass transit, public transportation or paratransit. Transit modes include commuter rail, heavy or light transit, bus, or other vehicles designated for commercial transportation of non-related persons.

Transportation (or Travel) Demand Management (TDM): Strategies and collective efforts designed to achieve reductions in vehicular travel demand. In general, TDM does not require major capital improvements. It includes ridesharing, land use policies, employer-based measures, and pricing/subsidy policies.

Transportation Improvement Plan (TIP): A document prepared by metropolitan planning organizations listing projects to be funded with Federal Highway Administration and Federal Transit Administration funds for the next one to three-year period.

Transportation Management Area (TMA): Defined in federal transportation legislation as any urbanized area over 200,000 population. Within a TMA, all transportation plans and programs must be based on a continuing and comprehensive planning process carried out by the metropolitan planning organization (MPO) in cooperation with state(s) and transit operators.

Transportation System Management (TSM): That part of the urban transportation planning process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short-term, low-capital-cost transportation improvements that generally cost less and can be implemented more quickly than system development actions.

Travel Time: Customarily calculated as the time it takes to travel from "door to door." In transportation planning, the measures of travel time include time spent accessing, waiting, and transferring between vehicles as well as time spent traveling.

U

U.S. Department of Transportation (DOT): The principal direct federal funding and regulating agency for transportation facilities and programs. Federal Highway Administration and Federal Transit Administration are units of the U.S. Department of Transportation.

Urban Diamond Interchange: A connection between two roadways provided by one-way diagonal ramps in each quadrant. The connection to the major highway is free-flowing and the connection at the crossroad is typically signalized.

Urban Principal Arterial: A type of arterial that provides a high degree of mobility for a long trip length. These types of streets typically have at-grade intersections with no access control other than traffic signals.

Urbanized Area: An area that contains a city with 50,000 residents, plus surrounding incorporated areas, which meet certain size or density criteria.

W

Wetlands: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence or vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Z

Zone: The smallest geographically designated area for analysis of transportation activity. A zone typically ranges in size from one to 10 square miles. Average zone size depends on total size of a project area.

chapter 10.0

acronyms

ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AFB	Air Force Base
ANC	Advisory Neighborhood Commissioners
ANCs	Area Neighborhood Councils
APE	Area of Potential Effect
ARC	Aesthetic Review Committee
AWI	Anacostia Waterfront Initiative
BA	Biological Assessment
BG	Block Groups
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFA	U.S. Commission of Fine Arts
CFR	Code of Federal Regulations
CHHD	Capitol Hill Historic District
CHRS	Capitol Hill Restoration Society
CLRP	Constrained Long-Range Transportation Plan
CNEs	Common Noise Environments
CO	Carbon Monoxide
CPs	Consulting Parties
CSO	Combined Sewer Overflow
CSXT	CSX Transportation
DB	Design-Build
dBA	A-weighted Sound Level
dB	Decibels
DC	District of Columbia
DC Water	Water and Sewer Authority (District of Columbia)

DCMR	District of Columbia Municipal Regulations
DCOP	District of Columbia Office of Planning
DCOZ	District of Columbia Office of Zoning
DCSHPO	District of Columbia State Historic Preservation Office
DDOE	District of Columbia Department of Environment
DDOT	District of Columbia Department of Transportation
DEIS	Draft Environmental Impact Statement
DHS	Department of Homeland Security
DPR	District Department of Parks and Recreation
DS	Display Ship
EJ	Environmental Justice
EO	Executive Order
ESA	Environmental Site Assessment
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FY	Fiscal Year
IMR	Interchange Modification Report
JBAB	Joint Base Anacostia-Bolling
JD	Jurisdictional Determination
LID	Low Impact Development
LOD	Limits of Disturbance
LOS	Level of Service
LUST	Leaking Underground Storage Tank
MC	Munitions Constituents
MDOT	Maryland Department of Transportation
MEC	Munitions and Explosives of Concern
MLK	Martin Luther King, Jr.
MOA	Memorandum of Agreement
MSAT	Mobile Source Air Toxics
MTA	Maryland Transit Administration
MWCOG	Metropolitan Washington Council of Governments
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NCPC	National Capital Planning Commission
NCPCC	National Capital Park and Planning Commission
NE	Northeast
NEPA	National Environmental Policy Act

NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NMHF	National Maritime Heritage Foundation
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NoMA	North of Massachusetts Avenue
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NTR	Noise Technical Report
O3	Ozone
OP	District of Columbia Office of Planning
PA	Programmatic Agreement
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PDF	Portable Document Format
PEPCO	Potomac Electric Power Company
PESA	Preliminary Environmental Screening Assessment
PM2.5	Particulate Matter less than 2.5 Micrometers
PM10	Particulate Matter less than 10 Micrometers
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RFP	Request for Proposal
ROD	Record of Decision
RR	Railroad
SAFETEA-LU	Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SARA	Superfund Amendments and Reauthorization Act
SB	Southbound
SCS	South Capitol Street
SE	Southeast
SDEIS	Supplemental Draft Environmental Impact Statement
SFEIS	Supplemental Final Environmental Impact Statement
SHPO	State Historic Preservation Office
SI	Site Investigation
SIP	State Implementation Plan
STP	Shovel Test Pit

SW	Southwest
TIP	Transportation Improvement Program
TMDL	Total Maximum Daily Loads
TNM	Traffic Noise Model
TPB	Transportation Planning Board
TSM	Transportation System Management
TTR	Traffic and Transportation Report
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USN	United States Navy
USS	United States Ship
UST	Underground Storage Tank
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
VQC	Visual Quality Concept
VQD	Visual Quality Difference
VQR	Visual Quality Ratings
WASA	Washington Area Sewer Authority
WB	Westbound
WMATA	Washington Metropolitan Area Transit Authority
WNY	Washington Navy Yard

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index of technical reports

1. *Anacostia River Navigation Evaluation Final Report, February 2014.* This report evaluates the potential for constructing a fixed bridge in the Revised Preferred Alternative, rather than the previously proposed arch bascule moveable span bridge in the FEIS Preferred Alternative. This report determined that a fixed-span bridge reduced the cost of reconstruction and maintenance, and minimizes impacts to current and future vessel traffic and existing maritime operations.

2. *Final SCS Air Quality Tech Report, February 2014.* This report presents the results of the updated air quality impact assessment performed for the Revised Preferred Alternative to be addressed in the SDEIS. This report presents a description of existing air quality conditions within the Project Area, and the results of the air quality assessments conducted for the Revised Preferred Alternative. The assessment determined impacts to air quality based on the changes to the Project, as described in the SDEIS. The Project is not expected to measurably affect project level emission burdens, including greenhouse gasses, or to cause a violation of the NAAQs. Construction-related effects of the Project would be limited to short-term increased fugitive dust and mobile-source emissions during construction, for which the Project will follow district regulations regarding dust control and air quality emission reduction controls.

3. *Final Noise Technical Report, February 2014.* This report updates the noise analysis to determine changes between the FEIS Preferred Alternative and the Revised Preferred Alternative. This noise analysis predicted future noise levels (design year 2040) for the Revised Preferred Alternative and compared those levels with existing noise levels, predicted FEIS Preferred Alternative noise levels, and the DDOT noise abatement criteria (NAC). This report presents the results of the noise assessment for the Revised Preferred Alternative, including potential impacts expected to occur for this Project, for construction and traffic operation.

   For the Revised Preferred Alternative, the noise analysis determined that noise barriers were the only preliminarily feasible and reasonable noise abatement measures for this project for three areas containing noise-sensitive receptors with design year noise levels that approached or exceeded the NAC. Three areas were identified where noise impacts occurred, but for which no noise abatement measures would not be cost reasonable.

4. *Modified Phase I ESA Report, January 2014.* This report updates the 2011 Final Environmental Impact Statement (FEIS) and helps identify known or potential sources of contamination that exist within or in close proximity to the Project Area. This report identifies any previously unidentified properties, and lists properties of potential environmental concern. It identifies recognized environmental conditions (RECs) and determines the existence of additional RECs since the completion of the FEIS.

5. *South Capitol Street Natural Resources Technical Report, August 2014.* This report describes the updated natural resource analysis for the Revised Preferred Alternative. This report describes the methodology and results for geology and soils, groundwater and hydrogeology, surface water resources and water quality, wetlands, floodplains, vegetation, wildlife, and endangered species, and the affects of the Revised Preferred Alternative. In general, impacts to the Anacostia River from the Revised Preferred Alternative would be associated with construction of the new fixed bridge and demolition of the existing bridge. The Revised Preferred Alternative would decrease impervious surfaces to a greater extent that the FEIS Preferred Alternative, further reducing the amount of stormwater runoff entering the Anacostia River. This report also included a preliminary hydraulic analysis and bridge scour evaluation for the new fixed bridge, a new wetland delineation, results of specimen/special tree re-evaluations, and updates to the migratory bird reporting.

   Differences between the FEIS Preferred Alternative and the Revised Preferred Alternative are minimal with respect to potential impacts to terrestrial and aquatic habitat and wildlife. As noted for the FEIS Preferred Alternative, most impacts would be the result of widening or extending existing roadways, and these impacts would be mostly to disturbed forested or shrubby habitat or managed lawns. Impacts to aquatic biota, primarily fish, would be expected to be minimal, as the Project proposes to use specific conservation measures during construction of the new bridge. Protective measures will be used during bridge pier construction to minimize any disturbance to natural resources in the Project Area.

6. *Biological Assessment of Impacts to the Atlantic Sturgeon, July 2014*. This report includes information on the status of the Atlantic sturgeon within the Project Area. The assessment addresses potential impacts to Atlantic sturgeon, using a similar methodology as performed for the Shortnose sturgeon. This report determined that direct effects of the Project on Atlantic sturgeon are unlikely since the Atlantic sturgeon's presence in the area is extremely low. Nevertheless, conservation measures will be used in the bridge design and construction phase of the Revised Preferred Alternative to reduce the chance of impacts to the Atlantic sturgeon.

7. *Draft Section 106 Assessment of Effects for Historic Properties, July 2014 and Section 106 Assessment of Effects for Historic Properties, October 2014.* This report reassesses the FEIS documentation of effects of the South Capitol Street alternatives on historic resources based on a Revised Area of Potential Effects (APE). Due to the adverse effect

on the L'Enfant Plan, an overall finding of a Section 106 adverse effect by FHWA is anticipated for the South Capitol Street Corridor Project.

8. *South Capitol Street Traffic and Transportation Technical Report, July 2014.* This report provides supporting documentation for the decisions and conclusions made in the SDEIS and the South Capitol Street Interchange Modification Report (IMR). The primary purpose of this report is to summarize differences in impacts to transportation resources between the 2011 FEIS Preferred Alternative and the 2014 SDEIS Preferred Alternative. It also provides more detailed traffic operational results to support the justification for modifying interstate access at the interchange of I-295 and Suitland Parkway and the interchange of I-395, I-695, and South Capitol Street.

   The traffic operation analysis conducted for the Traffic and Transportation Report (TTR) compared opening year (2020) and design year (2040) for the No Build Alternative, the FEIS Preferred Alternative, and the Revised Preferred Alternative. The design refinements to the FEIS Preferred Alternative that resulted in the Revised Preferred Alternative do not substantially degrade traffic operations. In general, the Revised Preferred Alternative either improves traffic operations, when compared to the FEIS Preferred Alternative, or provides similar traffic operational results.

9. *2011-2013 Crash Summary Statistics for Selected Freeway Segments in the District of Columbia, April 2014.* This report summarizes crashes for the three-year period from 2011 to 2013 based on data obtained from MPD's PD-10s for four freeway segments in the southwestern and southeastern quadrants of the District.