APPENDIX A: PUBLIC SCOPING COMMENTS
This page left intentionally blank.
Organizations: Kim Hoagland
Email: hoagland@mit.edu
Address: 350 9th St SE Apt 12
DC 20003

☐ check to be added to project mailing list

Comment: Landscaping of the whole block should be considered. It's a great opportunity to rethink public use of the space - parks, plantings, public restrooms.

Access is critical, especially from the south, which is how most people encounter the building. How about a crosswalk directly in front of the building, as a continuation of 8th St.? Give pedestrians priority over 12th St. traffic!
Comment: I would love to see this historical building fulfill its original purpose as a library or avenue for the public to learn.

Thank you!

Danielle
Organization: DC Public Library
Email: laurenmartino@dc.gov
Address: 801 K St. NW

☑ check to be added to project mailing list

Comment: Please keep me updated
Comment Card

Please submit your comments tonight or fold in half and mail by May 23, 2017
Comments may be emailed to: Lee.Webb@NCPC.gov
Subject: Carnegie Library Redevelopment Scoping Comment

Organization: DC Public Library - Washington, D.C.
Email: Michele.Castro@dc.gov
Address: 801 K St. NW

☑ check to be added to project mailing list

Comment: Hoping Public Access to HSW+WASH corrections isn't interrupted. Please keep me updated.

Thank you.
APPENDIX B: AGENCY COORDINATION
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IN REPLY REFER TO:
NCPC FILE No. 7532

April 21, 2017

Mr. David Maloney
State Historic Preservation Officer
Historic Preservation Office
District of Columbia Office of Planning
1100 4th Street SW Suite E650
Washington, DC 20024

Re: Initiation of Section 106 Consultation, Carnegie Library (Central Public Library) Rehabilitation

Dear Mr. Maloney:

Events DC is proposing to rehabilitate the Carnegie Library located at 801 K Street, NW, on Mount Vernon Square in Washington, DC. The National Capital Planning Commission (NCPC) is writing to initiate consultation with the District of Columbia State Historic Preservation Officer (DC SHPO) in compliance with Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. § 470f) and its implementing regulations (36 CFR § 800). The proposed project is an undertaking and subject to the review and approval of NCPC under the National Capital Planning Act.

Project Description and Background

The Carnegie Library building is owned by the District of Columbia Government and is administered by Events DC, the convention and sports authority for the District of Columbia. In 1999, the District granted a ninety-nine-year lease of the library building to the Historical Society of Washington, DC (HSW). Events DC and HSW later amended the lease to reduce the original leased premises of HSW to only portions of the building interior. Mount Vernon Square (Reservation 8) is owned by the United States Government. In 2006, the Secretary of the Interior transferred jurisdiction of Mount Vernon Square from the National Park Service to the District of Columbia Government. Under the proposed project, Events DC will retain administrative jurisdiction over the building and Mount Vernon Square.

The purpose of the project is to rehabilitate and modernize the Carnegie Library building to become a retail and education facility. The building will be leased jointly by HSW (which will continue to operate its research library, exhibit galleries, and administrative offices there) and a retail tenant (which will operate a retail, events, and educational facility in the building). The project is comprised of the following components: a restoration of the building exterior, including repair and cleaning of the exterior stone, repair or replacement of the windows and skylights, and repair of the copper roof cladding; a rehabilitation of the building interior, including removal of non-original infill construction throughout the building, insertion of a central atrium space, upgrade or replacement of the MEP systems, and restoration of certain original finishes and features; and a reconfiguration of the north entrance, stairs, and landing. Although the project is generally limited to the building itself, minor alterations may be made to site hardscape elements to comply with accessibility and other code requirements.
Section 106 and Historic Properties

To prepare for the Section 106 consultation process, Events DC and NCPC have developed the enclosed list of consulting parties and a graphic illustration of the proposed Area of Potential Effects (APE). These items are intended as a basis of discussion and are subject to modification through the consultation process. The proposed APE for this project includes the area from which the project site is readily visible and is generally bound by Sixth Street, NW on the east, L Street, NW on the north, Tenth Street, NW on the west, and H Street, NW on the south. A preliminary list of historic resources within the draft APE includes portions of the Plan of the City of Washington (L’Enfant Plan; L’Enfant-McMillan Plan), Downtown Historic District, and the Mount Vernon Square Historic District. It also includes the following historic resources individually listed in the National Register and/or the District of Columbia Inventory of Historic Sites: Carnegie Library (Central Public Library); American Federation of Labor; Seventh Street, NW, East Site of 1000 Block; Mount Vernon Place United Methodist Church; Tudor Hall (Henley Park Hotel); and Washington Hebrew Congregation (Greater New Hope Baptist Church). The American Federal of Labor property has also been designated as a National Historic Landmark. Additionally, the draft APE encompasses a portion of the Downtown Historic District Amendment and Boundary Expansion, which is currently under consideration for status as a District of Columbia Historic District. The area in the vicinity of the Carnegie Library building has been extensively documented; therefore, it is not anticipated that additional survey to identify potentially affected resources will be required.

At this time, NCPC has determined that the project has the potential to have an adverse effect on the Carnegie Library building. Constructed in 1899-1902, Carnegie Library was listed in the District of Columbia Inventory of Historic Sites in 1964 and the National Register of Historic Places in 1969 as the Central Public Library. The nomination recognized the building’s significance as one of many buildings given to American cities by industrialist and philanthropist Andrew Carnegie to promote free library systems. It also reflects the growth of the DC Public Library system from humble beginnings in rented quarters to a Beaux-Arts edifice on Mount Vernon Square.

NCPC is prepared to work with the DC SHPO, the Advisory Council on Historic Preservation, and other consulting parties to finalize a formal determination of effect through the Section 106 consultation process. We welcome the opportunity to identify and evaluate modifications to the proposed project that will avoid, minimize, or mitigate potential adverse effects on historic properties within the APE.

Section 106 and NEPA Coordination

In accordance with the National Environmental Policy Act (NEPA) and in cooperation with Events DC, NCPC is preparing an Environmental Assessment (EA) to analyze potential impacts associated with the project. NCPC plans to coordinate the Section 106 and NEPA processes per the implementing regulations (36 CFR § 800.8) of the NHPA. A public NEPA scoping meeting will be held on May 9, 2017, at 4:00pm at the Carnegie Library located at 801 K Street, NW, Washington, DC. The purpose of this scoping meeting will be to introduce the project and invite public comment on the range of issues to be addressed in the EA.
Next Steps

NCPC and Events DC invite you to attend the first Section 106 consulting parties meeting for the Carnegie Library project scheduled for **May 11, 2017, at 4:00pm**, in the Commission Hearing Room at NCPC’s offices, 401 9th Street, NW, Suite 500, Washington, DC. The agenda for this meeting will include an overview of the project purpose and background, a preliminary identification of historic properties, and a detailed presentation of the proposed design and alternatives for the treatment of interior spaces.

We look forward to beginning the Section 106 consultation process for this project. If you have any questions, please contact Lee Webb, Federal Preservation Officer, at (202) 482-7240 or at lee.webb@ncpc.gov.

Sincerely,

[Signature]

Marcel Acosta
Executive Director

Enclosures: Draft Area of Potential Effects Map
List of Potential Consulting Parties

cc: Steven Calcott, DC State Historic Preservation Office
    Andrew Lewis, DC State Historic Preservation Office
Carnegie Library Rehabilitation
Draft Area of Potential Effect

Key
- APE Boundary
- DC Inventory and/or National Register
- Reservation (#)
- Pennsylvania Ave NHS
- Plan of the City of Washington/L'Enfant Plan (not shown)

Downtown Historic District
- Proposed boundary expansion
- Mount Vernon Square Historic District
- Shaw Historic District
- Mount Vernon Triangle Historic District

Individual Landmarks
1. Central Public Library (Carnegie Library) Mount Vernon Square, NW
2. American Federation of Labor 901 Massachusetts Ave, NW
3. Seventh Street, NW, East Side of 1000 Block 1005-1035 Seventh Street and 549-651 New York Ave, NW
4. Mount Vernon Place United Methodist Church 900 Massachusetts Ave, NW
5. Tudor Hall (Henley Park Hotel) 926 Massachusetts Ave, NW
6. Washington Hebrew Congregation (Greater New Hope Baptist Church) 816 Eighth Street, NW
### Carnegie Library Rehabilitation

**Section 106 Initiation – Potential Consulting Parties List**

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<tr>
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<th>Events DC</th>
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<tbody>
<tr>
<td>SHPO</td>
<td>DC State Historic Preservation Officer</td>
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<tr>
<td><strong>Representatives of Local Governments</strong></td>
<td>Advisory Neighborhood Commission 2C</td>
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<td>Advisory Neighborhood Commission 2F</td>
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<td>Advisory Neighborhood Commission 6E</td>
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<td>District of Columbia Office of the Mayor</td>
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<td></td>
<td>District of Columbia City Council</td>
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<th>Additional Consulting Parties/Neighboring Property Owners</th>
<th>635 Mass Ave LLC</th>
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<tr>
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<td>800 K ST Associates LLC</td>
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<td>American Association of Medical Colleges</td>
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<td>Boston Properties</td>
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<td>Committee of 100 on the Federal City</td>
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<td>DC Preservation League</td>
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<td>District of Columbia Department of Transportation</td>
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<td>District of Columbia Office of Planning</td>
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<td>Douglas Development</td>
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<td>Downtown Business Improvement District</td>
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<td>Gould Property</td>
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<td>Historical Society of Washington, DC</td>
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<td>Kim Hoagland</td>
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<td>Matthew Gilmore</td>
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<td>Mount Vernon Triangle CID</td>
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<td>Mt. Vernon Place United Methodist Church</td>
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<td>Muriel Watkins</td>
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<td>National Park Service</td>
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<td>US Commission of Fine Arts</td>
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<td></td>
<td>Washington Convention Center Advisory Committee</td>
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May 18, 2017

Mr. Marcel Acosta  
Executive Director, National Capital Planning Commission  
401 9th Street, NW  
North Lobby, Suite 500  
Washington, DC  20004

RE:  Initiation of Section 106 Consultation; Rehabilitation of the Carnegie Library (aka Central Public Library) for Use as an Apple Corporation Retail Store; 801 K Street, NW

Dear Mr. Acosta:

Thank you for initiating consultation with the DC State Historic Preservation Office (SHPO) regarding the above-referenced undertaking which involves review and approval of the project by the National Capital Planning Commission (NCPC) pursuant to the National Capital Planning Act. This letter provides our initial comments regarding effects on historic properties in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800.

Based upon our review of the project submittal and our participation in the first consulting parties meeting which was held at NCPC yesterday, we understand that the project involves rehabilitating and adapting the interior and exterior of the Carnegie Library for use as an Apple Corporation retail store. We are pleased that the majority of the proposed work will be restorative and will benefit the historic building which was gifted to the city by Andrew Carnegie in 1899, designed by the architectural firm of Ackerman & Ross, constructed between 1901 and 1902, listed in the DC Inventory of Historic Sites and the National Register of Historic Places on November 8, 1964 and December 3, 1969, respectively.

We agree that NCPC’s proposed Area of Potential Effects (APE) should be sufficient to take the project’s effects on historic properties into account, but we recommend that the potential for effects on views associated with the Plan of the City of Washington (L’Enfant Plan) be acknowledged by incorporating ellipses onto the map to indicate that the views along Massachusetts and New York Avenues, NW and 8th and K Streets, NW will be considered. Since some ground disturbance is proposed, we also recommend that a Phase IA survey be conducted in consultation with our office to address the potential for archaeological resources that may need to be considered during consultation.

Despite the many noteworthy improvements that are proposed, we also concur with NCPC’s determination that this project has the potential for adverse effects on the historic building – especially on the interior. For example, the removal of the historic lay light, alteration of the original spaces, and removal of historic fabric on second floor are all likely to meet the criteria of adverse effect. Similarly, window modifications and the removal of original elements from the northern façade have the potential to adversely affect character-defining features of the building’s exterior. Other exterior aspects of the project, such as the proposal for in-kind replacement rather than repair of the window pediments, will require additional analysis before determinations of effect can be made.
Mr. Marcel Acosta
Initiation of Section 106 Consultation; Rehabilitation of the Carnegie Library for an Apple Corporation Retail Store; 801 K Street, NW
May 18, 2017
Page 2

We look forward to consulting with NCPC and all other parties to continue the Section 106 review of this project. In the meantime, please contact me at andrew.lewis@dc.gov or 202-442-8841 if you should have any questions or comments regarding this matter. Questions or comments relating to archaeology should be directed to Ruth Troccoli at ruth.troccoli@dc.gov or 202-442-8836. Thank you for providing this initial opportunity to review and comment.

Sincerely,

[Signature]
C. Andrew Lewis
Senior Historic Preservation Specialist
DC State Historic Preservation Office

17-0596
April 28, 2017

Mr. Marcel Acosta  
Executive Director  
National Capital Planning Commission  
401 Ninth Street NW, Suite 500  
Washington, D.C. 20004

RE: Request for Schematic Review of the Carnegie Library Rehabilitation

Dear Mr. Acosta:

Events DC is proposing to rehabilitate the Carnegie Library located at 801 K Street, NW, on Mount Vernon Square in Washington, DC. We request review of schematic development plans by the Commission at its June 1, 2017 meeting.

Administrative jurisdiction over the Carnegie Library building is held by Events DC, an independent instrumentality of the District of Columbia. Mount Vernon Square (Reservation 8), upon which the Carnegie Library is located, is owned by the United States Government. In 2006, the United States Congress transferred administrative jurisdiction over Mount Vernon Square the United States to the District of Columbia Government. In November 2011, the Authority entered into an Amended and Restated Lease with the Historical Society of Washington, DC (HSW) for a portion of the building interior for a term of eighty-seven (87) years.

The purpose of the project is to rehabilitate and modernize the Carnegie Library building to accommodate retail and education uses. The building will be leased jointly by HSW (which will continue to operate its research library, exhibit galleries, and administrative offices there) and a retail tenant (which will operate a retail, events, and educational facility in the building). The project is comprised of the following components: a restoration of the building exterior, including repair and cleaning of the exterior stone, repair or replacement of the windows and skylights, and repair of the copper roof cladding; a rehabilitation of the building interior, including removal of non-original infill construction throughout the building, insertion of a central atrium space, upgrade or replacement of the MEP systems, and restoration of certain original finishes and features; and a reconfiguration of the north entrance, stairs, and landing. Although the project is generally limited to the building itself, minor alterations may be made to site hardscape elements to comply with accessibility and other code requirements.
We have consulted on the schematic development plans with your staff as well as with the other stakeholders in accordance with Section 106 of the National Historic Preservation Act (NHPA). The Section 106 and National Environmental Policy Act (NEPA) review processes are being coordinated per the implementing regulations (36 CFR § 800.8) of the NHPA. An Environment Assessment (EA) is currently being prepared by NCPC in cooperation with Events DC to analyze potential impacts associated with the project.

In accordance with your submission requirements, we are enclosing three copies of the submission documents. If you have any questions, please contact Jennifer Iwu at jiwu@eventsdc.gov or at 202.249.3259.

Sincerely,

[Signature]

Gregory A. O'Dell
President and Chief Executive Officer
Events DC
Consultation Code: 05E2CB00-2017-SLI-0952
Event Code: 05E2CB00-2017-E-01753
Project Name: Apple at Carnegie Library, DC

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.
A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm;
http://www.towerkill.com; and

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment
Official Species List

Provided by:
Chesapeake Bay Ecological Services Field Office
177 ADMIRAL COCHRANE DRIVE
ANNAPOLIS, MD 21401
(410) 573-4599
http://www.fws.gov/chesapeakebay/
http://www.fws.gov/chesapeakebay/endsppweb/ProjectReview/Index.html

Consultation Code: 05E2CB00-2017-SLI-0952
Event Code: 05E2CB00-2017-E-01753

Project Type: ** OTHER **

Project Name: Apple at Carnegie Library, DC
Project Description: Renovation of the interior of Carnegie Library to accommodate a retail store. No ground disturbance or external renovations anticipated.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
Project Location Map:

Project Coordinates: MULTIPOLYGON (((-77.02397167682648 38.90291487499239, -77.02393412590028 38.90212168702489, -77.0219385623932 38.90214256050599, -77.02193319797517 38.90291070034209, -77.02397167682648 38.90291487499239), (-77.02193319797517 38.90291070034209, -77.02193319797517 38.90291070034209, -77.02193319797517 38.90291070034209, -77.02193319797517 38.90291070034209, -77.02193319797517 38.90291070034209)))

Project Counties: District of Columbia, DC
Endangered Species Act Species List

There are a total of 0 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

There are no listed species identified for the vicinity of your project.
Critical habitats that lie within your project area

There are no critical habitats within your project area.
Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.
Appendix B: NWI Wetlands

There are no wetlands within your project area.
May 18, 2017

Mr. Bryan King
Associate Director, Fish and Wildlife Division
DC Department of Energy and Environment
1200 First Street NE
Washington, DC 20002
doee@dc.gov

Reference: Request for threatened and endangered species information for the rehabilitation and modernization of the Carnegie Library building, 801 K Street, NW, Washington, D.C., 20001

Dear Mr. King,

Events DC, in coordination with the National Capital Planning Commission (NCPC), is planning to rehabilitate and modernize the Carnegie Library building to become a retail and education facility. The project will include a full restoration of the building exterior, and the non-original stair and awning will be removed and replaced with a new stair. Although the project is generally limited to the building itself, minor alterations may be made to landscaping and hardscape elements to comply with accessibility and other code requirements. The project area is located at 801 K Street, NW, Washington, D.C., 20001 in Mount Vernon Square. Please find attached an aerial photo of the project area.

NCPC is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) for the Carnegie Library project.

We would like to request a review of the District of Columbia’s natural resource database to determine the potential presence of any District-listed protected species on or within the vicinity of the project site, in accordance with NEPA and Section 7 of the Endangered Species Act.

If you require any additional information, please do not hesitate to contact me at (301) 220-1892 or via email at laura.cooper@stantec.com.

Regards,

Laura Cooper

Environmental Scientist
Phone: 301-220-1892
Laura.Cooper@Stantec.com

c. Liz Estes, Stantec

Design with community in mind
Reference: Request for threatened and endangered species information for the rehabilitation and modernization of the Carnegie Library building, 801 K Street, NW, Washington, D.C., 20001

Figure 1. Carnegie Library Project Area

Design with community in mind
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July 5, 2017

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Executive Summary

The Carnegie Library, located in Mt. Vernon Square (801 K Street NW) in Washington, DC served as the central public library for almost 70 years and currently houses the Historical Society of Washington, DC (HSW) and Events DC. Events DC, the official convention and sports authority for the District of Columbia, is proposing to rehabilitate and modernize the Carnegie Library building to accommodate retail and education uses. The building will be leased jointly by HSW, which will continue to operate its research library, exhibit galleries, and administrative offices in the library, and a new retail tenant, which will operate a 12,614 square-foot retail facility in the building capable of holding small to moderate-sized events and educational classes.

The project is comprised of the following components: a restoration of the building exterior, including repair and cleaning of the exterior stone, repair or replacement of the windows and skylights, and repair of the copper roof cladding; a rehabilitation of the building interior, including removal of nonoriginal infill construction throughout the building, restoration of a central atrium space, upgrade or replacement of the MEP systems, and restoration of certain original finishes and features; and a reconfiguration of the north entrance, stairs, and landing. Although the project is generally limited to the building itself, minor alterations will be made to site hardscape elements to comply with accessibility and other code requirements.

PURPOSE AND METHODOLOGY

This Comprehensive Transportation Review (CTR) has been developed for use in compiling a revised Draft and Final Environmental Assessment (EA) that will reflect the proposed modifications to the facility. Specifically, the CTR analyzes the potential transportation system impacts of the conversion of space to retail use, and identifies, assesses, and recommends strategies to reduce the impact of the site on the transportation system. This document analyzes the potential transportation system impacts of the conversion to retail in 2020, the future horizon analysis year of the EA. As such, the following items were assessed:

- **Review of Existing Plans and Studies:** The proposed project would not have a negative impact on any of the existing plans and studies.
- **Assessment of Existing Roadway Network Capacity and Operations:** The proposed project would result in minimal impacts to the already congested roadway network. Several modifications could be made to K Street NW to provide turn lanes, which would address existing and future anticipated deficiencies.
- **Bicycle and Pedestrian Facilities:** The site is well-connected to existing pedestrian and bicycle facilities in the area. On-site enhancements, such as bicycle parking and ADA accessible connections, should be made.
- **Transit Service:** The site lies within walking distance of several bus stops and two Metrorail stations. In addition, it lies along a potential future streetcar route. No additional transit enhancements are required.
- **Parking:** No on-site parking will be provided. Existing on-street and off-street (surface and garage) parking will be utilized. However, as the retail site peaks in activity weekday evenings and weekends, parking utilization of these facilities are also decreasing. Thus, it is
anticipated that ample parking will be available for the limited number of customers that
choose to arrive by vehicle.

- **Transportation Demand Management:** The retail tenant should encourage employees to
  arrive by modes of transportation other than driving alone.
- **Performance Monitoring and Measuring:** While the site would not trigger the need for
  performance monitoring, it is recommended that a post-development customer survey be
  conducted to compare the anticipated mode split with the actual mode split. Conducting
  this analysis may help to determine if the mitigation measures recommended for K Street are
  warranted.

**CONCLUSION**

The results of the capacity analysis show a relatively limited impact on the study area’s
transportation network due to the anticipated non-auto mode split of 60%. The additional vehicle
trips generated by the site would be added to an already-congested roadway network, resulting
in an increase in delay on several intersection approaches that warrant mitigation, primarily during
the PM peak hour. Mitigation measures include:

**Vehicular**

- Signal timing and phasing revisions;
- Restripping sections of K Street NW between 9th Street NW and 7th Street NW to accommodate
  left-turn lanes;
- Providing a protected-permissive left-turn from westbound K Street NW to southbound 9th St
  NW;
- Provide a designated rideshare (taxi/Uber/Lyft) pick-up/drop-off area on K Street NW
  between 9th Street NW and 7th Street NW; and,
- Advanced coordination with DDOT and MPD prior to large events or product releases.

**Pedestrian/Bicycle**

- Provision of an ADA-accessible route from all four corners of Mt. Vernon square
- Provision of bicycle parking
- Installation of a Capital BikeShare station
- In addition, the applicant should evaluate the need for addition pedestrian
  accommodations, i.e. mid-block crosswalk on K Street NW, upon site opening.

The above mitigation measures would address these increases in delay, and would improve most
approaches to operate better than the No Build Condition. However, it should be noted that the
proposed mitigation measures represent potential options to mitigate the anticipated increase in
delay at the study area intersections. If the proposed DC Streetcar is routed along K Street NW,
these recommendations may need to be modified. Furthermore, it is our recommendation that
these mitigation measures be evaluated after the retail site opens to determine if they are
warranted, as existing and projected No Build traffic volumes and congestion may discourage
travel to and from the retail location during the PM peak period.
1.0 INTRODUCTION

The Carnegie Library, located in Mt. Vernon Square (801 K Street NW) in Washington, DC (shown in Exhibit 1 in Appendix A), served as the central public library for almost 70 years, and currently houses the Historical Society of Washington, DC (HSW), and Events DC. Events DC, the official convention and sports authority for the District of Columbia, is proposing to rehabilitate and modernize the Carnegie Library building to accommodate retail and educational uses. The building will be leased jointly by HSW, which will continue to operate its research library, exhibit galleries, and administrative offices in the library, and a new retail tenant, which will operate a 12,614 square-foot retail facility, capable of holding small to moderate-sized events and educational classes.

The project is comprised of the following components: a restoration of the building exterior, including repair and cleaning of the exterior stone, repair or replacement of the windows and skylights, and repair of the copper roof cladding; a rehabilitation of the building interior, including removal of nonoriginal infill construction throughout the building, restoration of a central atrium space, upgrade or replacement of the MEP systems, and restoration of certain original finishes and features, and a reconfiguration of the north entrance, stairs, and landing. Although the project is generally limited to the building itself, minor alterations will be made to site hardscape elements to comply with accessibility and other code requirements.

1.1 PURPOSE AND METHODOLOGY

This Comprehensive Transportation Review (CTR) has been developed for use in compiling a revised Draft and Environmental Assessment (EA) that will reflect proposed site adjustments renovations and adjustments to accommodate the retail tenant. The CTR analyzes the potential transportation system impacts of the proposed retail use, and identifies, assesses, and recommends strategies to reduce the impact of the site on the transportation system. This document analyzes the potential transportation system impacts of the proposed action in the 2020 horizon analysis year of the EA.
2.0 STRATEGIC PLANNING ELEMENTS

Stantec reviewed several city-wide planning documents as well as city regulations and guidelines to determine how the proposed redevelopment considers District growth goals and objectives within the study area. Brief summaries of the plans, as well as the impact of the proposed Carnegie development on the plans, are provided in the sections below.

2.1 PLANS/STUDIES REVIEWED

DC Streetcar: Union Station to Georgetown Study (ongoing)

The District Department of Transportation (DDOT), in partnership with the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), is in the process of completing an Environmental Assessment (EA) for the proposed construction of an approximately three-mile DC Streetcar line between Union Station and Georgetown. This new transit line is intended to provide better east-west connectivity and improve overall transit service in the corridor. An Alternatives Analysis study was completed in September 2013.

In this report, DDOT identified one recommended alternative that passes through the study area, directly adjacent to Mount Vernon Square on both K Street NW and Mt Vernon Place. However, based on the more recent EA public involvement meeting materials, the alternatives currently under consideration only pass to the south of Mount Vernon Square on K Street NW, with a station platform on both the north side of the street (for the westbound line) and in the median (for the eastbound line). It is anticipated that the final NEPA decision for approval of a final alternative will be made Fall 2018.

Downtown West Transportation Planning Study (ongoing)

The Downtown West Transportation Planning Study is an ongoing study to develop alternatives for improved east-west travel for pedestrians and cyclists on Pennsylvania Avenue NW and for public transit riders along H Street NW and I Street NW. The recommended alternative will be selected between June and July 2017. Any of the alternatives would likely improve the multimodal travel experience to the study area.

Through an analysis of the existing conditions, completed August 2016, the study identifies high pedestrian volumes and key transit corridors throughout the study area. Furthermore, it identifies existing dedicated bicycle lanes within the study area along 7th and 9th Streets NW, as well as along New York Avenue NW. The study also identifies a proposed cycle track along Massachusetts Avenue NW.
accessDC Study (ongoing)

The accessDC Study is an ongoing study focusing on the mobility and access needs of the District’s older and disabled residents. Ultimately, the study will identify ways in which older residents and people with disabilities can have access to multiple transportation services. The final report for this study will be completed Summer 2017.


The Sustainable DC Plan report, published in 2012, encourages environmentally, economically, and socially sustainable city investments by setting “ambitious goals” for the District. One proposed solution for the built environment is to retrofit existing commercial buildings, such as the Carnegie Library, to achieve net-zero energy standards. The proposed solutions to improve the sustainability of the District’s transportation network include: increase use of public transit, increase biking and walking, reduce commuter trips, and eliminate “unhealthy” air quality index days.

Smart DC Study (2016)

This study was completed in February 2016 as a part of DDOT’s application for the “Beyond Traffic: The Smart City Challenge”, a transportation system innovation competition for mid-sized cities sponsored by the USDOT that encouraged cities to envision how smart technology can help them meet future transportation challenges. In addition to other corridors, the segment of New York Avenue NW within the study area was identified as a pilot project corridor to test urban automation, connected vehicles, and intelligent, sensor-based infrastructure technology.

Curbside Management Study (2014)

The Curbside Management Study, completed in August 2014, identifies policies and strategies that support a more holistic approach to curbside management across the District. The three overarching goals for these policies is to “preserve access to residential areas for use of residents,” “promote and facilitate commerce by prioritizing customer and commercial vehicle access in commercial areas,” and “ensure the safety of all transportation users including pedestrians, cyclists, transit users, and motorists.” The four identified strategies to complete these goals are as follows: promotion of walkable neighborhoods and local businesses, provision of equitable access to unequally geographically distributed resources, prioritization of existing local resident access over new developments or outsiders, and nimble management of parking supply/availability. This report identifies managed, predictable, and reliable curbside access as the most important approach for higher intensity districts, like the study area.

moveDC Multimodal Long-Range Transportation Plan (2014)

Published in October 2014, moveDC was a collaborative effort led by DDOT to present a vision and improvement course for the District’s transportation system over the next 25 years. moveDC focuses on more travel options, reliability of transportation systems, safety for all, and efficiency of investments. The plan proposes more than 200 new miles of bicycle facilities, a 22-mile streetcar
moveDC recognizes that it is essential to maintain a balance between pedestrian, bicycle, transit, and vehicular modal activity on the City’s transportation network to turn its vision into a reality. The study proposes various improvements to create this balance within the study area, including:

- A multi-use trail along New York Avenue to the northeast of the study area,
- Cycle tracks on Massachusetts Avenue NW to improve bicycle connections,
- High-capacity and high-frequency transit network (including a 22-mile streetcar system that will have a line surrounding Mount Vernon Square) to improve transit connections, and
- Lane reductions and other priority modal improvements to discourage excessive vehicular traffic.

**DC Office of Planning Comprehensive Plan (2011)**

The District’s Comprehensive Plan is a general policy document that provides overall guidance for future planning and development of the city and its ten geographic areas. The most recent plan was approved in 2006 and amended in 2011. The study area falls within the boundaries of the Central Washington Area plan and the Near Northwest Area plan. Both plans indicate that any continuing redevelopment should also coordinate with other documents and update master plans as necessary.

The Central Washington Area plan recommends the preservation of historical buildings, listing the restoration of the Carnegie Library Building as a main example. The plan also supports additional retail development to promote Central Washington as a regional retail destination, specifically encouraging ground floor retail space to create street life that will complement the proposed high-density housing. The plan encourages development that promotes Mount Vernon Square as the heart of the urban neighborhood. It stresses that any improvements should consider the area’s context, density, and urban character. The Near Northwest Area plan recommends the development of continuous ground floor retail uses along 7th and 9th Streets NW and encourages improved pedestrian infrastructure along these corridors.

**Pedestrian Master Plan (2009)**

The 2009 Pedestrian Master Plan serves as the foundation for DDOT’s pedestrian programs and represents the first comprehensive city-wide effort to address pedestrian safety challenges and related issues. The goals of the plan are to reduce the number of pedestrian fatalities and injuries associated with motor vehicle crashes and to increase pedestrian activity by creating a comfortable and accessible environment for walking throughout all parts of the District. It should be noted that the moveDC plan supersedes this plan as of 2015.

Through an analysis of existing conditions, the plan identifies the study area to have medium pedestrian activity with medium, low, or not-evaluated pedestrian facility deficiencies. It also
identifies New York Avenue NW as a priority corridor for curb ramp repair, curb extension, median construction/extension, crosswalk restriping/pavement repair, right turn on red restrictions, and bus stop improvements, among others.

**Bicycle Master Plan (2005)**

The 2005 Bicycle Master Plan is a guide to establishing high-quality bicycle facilities and programs from 2005 to 2015 through facility improvements, policy changes, and education, promotion, and enforcement. The plan shows that, while no existing facilities were present on the roadway network within the study area in 2005, Massachusetts Avenue NW, Mount Vernon Place NW, and K Street NW within the study area were signed bicycle routes. As such, the bicycle level of service in the study area was shown to be between C and E.

The plan shows New York Avenue NW to the east of the study area as a proposed multi-use trail connection to trails in the eastern part of the District. Furthermore, dedicated bicycle lanes were proposed within the study area on K Street NW. Since the study was completed, bike lanes were added on New York Avenue NW, west of the 9th Street NW intersection. It should be noted that the moveDC plan also supersedes this plan as of 2015.

### 2.2 GUIDELINES/REGULATIONS REVIEWED

**DDOT Guidelines for Tour Bus Parking**

The DDOT Motorcoach Operators Guide provides parking and operations guidelines for tour buses within the District. For example, motorcoaches can only park or drop-off/pick-up at designated curbside locations (subject to time limits) or at off-street parking facilities. It also specifically states that motorcoaches are not allowed to park adjacent to any parks. The guide also provides a list of designated parking and drop-off/pick-up locations, none of which are located within the study area.

**DDOT Bicycle Parking Regulations**

Title 18, Chapter 21:2119 of the District of Columbia Municipal Regulations details the rules relating to the required provision of bicycle parking. The regulations state that bicycle parking shall be provided for retail spaces, except in C-3-C (Medium Density Office, Retail, Housing), C-4 (Central Business District), and C-5 (Pennsylvania Avenue). The regulations also list the required dimensions, amount, and placement of bicycle parking. The project site is located in Zone D-5 and is not exempt from these requirements.

**DDOT Guidelines for On-Street Carsharing**

The DDOT On-Street Carsharing Program requires that all carsharing companies operating within the District must obtain a public space permit from DDOT’s Public Space Regulations Administration. Reserved on-street carsharing spaces are selected in consultation with Advisory
Neighborhood Commissions, businesses, and community leaders. However, some carsharing companies obtain Zone 9 permits, which allow them to park in both residential and metered parking spaces free of charge and longer than the posted time limit. There are currently no designated carsharing spaces within the study area.

2.3 POTENTIAL IMPACT OF PROPOSED DEVELOPMENT ON PLANS

The redevelopment of the Carnegie Library property aligns with the recommendations and findings of many of these planning documents and studies. The proposed development considers the character and history of the site, supports the desired increase in ground-floor retail use, provides on-site bicycle parking, and will contribute to increasing activity and walkability within the area. The proposed plan would not preclude any of the infrastructure improvements recommended in the above studies (roadway, transit, and bicycle and pedestrian infrastructure).
3.0 ROADWAY NETWORK, CAPACITY, & OPERATIONS

3.1 VEHICLE STUDY AREA

While Mt. Vernon Square and the Carnegie Library are located within Ward 2, a portion of the project study area lies on the boundary with Ward 6. The transportation study area includes the following intersections:

- 9th Street NW and K Street NW/New York Avenue NW
- 7th Street NW and K Street NW/Massachusetts Avenue NW
- 7th Street NW and K Street NW
- 7th Street NW and Mt. Vernon Pl NW/New York Avenue NW
- 9th Street NW and Mt. Vernon Pl NW/Massachusetts Avenue NW
- 9th Street NW and K Street NW

In addition to the above-listed intersections, this CTR will also evaluate pedestrian and bicycle facilities within a ¼ and ½ mile, respectively, including connections to and from nearby bus stops and Metrorail stations.

Characteristics of the major corridors within the study area were obtained from maps on the DDOT and MWCOG websites denoting functional classification, 2015 AADT, number of lanes, speed limits, and truck routes/loading zones. This information is summarized in Table 1. It should be noted that there is a mix of on-street parking regulations throughout the study area.
Table 1: Study Area Major Corridor Characteristics

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Functional Class</th>
<th>2015 AADT (thousands)*</th>
<th>Number of Lanes, Median</th>
<th>Speed Limit (mph)</th>
<th>Primary Truck Route/Designated Loading Zones?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts Ave NW, west of 9th St NW</td>
<td>Principal Arterial</td>
<td>35.7</td>
<td>5, None</td>
<td>25 mph</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Massachusetts Ave NW, east of 7th St NW</td>
<td>Principal Arterial</td>
<td>23.6</td>
<td>4, None</td>
<td>25 mph</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Mt Vernon Pl NW</td>
<td>Principal Arterial</td>
<td>25.4</td>
<td>4, None</td>
<td>25 mph</td>
<td>Yes/No</td>
</tr>
<tr>
<td>New York Ave NW, west of 9th St NW</td>
<td>Principal Arterial</td>
<td>18.9</td>
<td>4, landscaped</td>
<td>25 mph</td>
<td>Yes/Yes</td>
</tr>
<tr>
<td>New York Ave NW, east of 7th St NW</td>
<td>Principal Arterial</td>
<td>24.0</td>
<td>6, striped with flexible delineators</td>
<td>25 mph</td>
<td>Yes/Yes</td>
</tr>
<tr>
<td>K St NW between 7th and 9th Sts NW</td>
<td>Principal Arterial</td>
<td>19.9</td>
<td>4, None</td>
<td>25 mph</td>
<td>Yes/No</td>
</tr>
<tr>
<td>9th St NW between Mt Vernon Pl NW and K St NW</td>
<td>Principal Arterial</td>
<td>18.3</td>
<td>5, None</td>
<td>25 mph</td>
<td>Yes/No</td>
</tr>
<tr>
<td>7th St NW between Mt Vernon Pl NW and K St NW</td>
<td>Principal Arterial</td>
<td>11.4</td>
<td>3, None</td>
<td>25 mph</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

* Traffic data obtained from the Regional Transportation Data Clearinghouse (RTDC) Data Viewer, Traffic Counts – Annual Average GIS layer, provided by the National Capital region Transportation Planning Board (TPB) as part of the Metropolitan Council of Governments (MWCOG), located here: http://gis.mwcofg.org/webmaps/rtdc/

3.2 DATA COLLECTION AND HOURS OF ANALYSIS

Stantec conducted a comprehensive data collection program to establish “average day” baseline conditions for vehicular, transit, pedestrian, and cyclist traffic within the study area. The program consisted of manual turning movement counts, queuing observations, and parking inventory. All data were collected on typical weekdays when District schools and Congress were in session.

3.2.1 Turning Movement Counts

Manual turning movement counts were collected during the PM peak period (4:00PM – 7:00PM) on Tuesday, May 23, 2017 and June 6, 2017, as well as on Saturday, May 20, 2017 between 11:00AM and 2:00PM at the following six intersections:

1. 9th Street NW & Massachusetts Avenue NW/Mt. Vernon Place NW
2. 9th Street NW & K Street NW
3. 9th Street NW & New York Avenue NW/K Street NW
Appendix B contains the raw count data. An analysis of this data revealed that the individual intersection PM peak period hours varied throughout the study area, but the Saturday peak hour was 1:00PM – 2:00PM at five of the six intersections. Due to the proximity of each intersection to one another (less than 1500 feet), one overall peak hour for each peak period was determined:

- PM Peak Hour: 4:45PM – 5:45PM
- Saturday Peak Hour: 1:00PM – 2:00PM

3.2.2 Queuing

Queuing observations were conducted on Thursday, June 15, 2017 to determine if additional unmet demand would need to be considered in the traffic analysis. Field observations indicated no residual queuing during the Saturday peak hour that required field measurements.

According to moveDC, queuing is prevalent within the study area, especially during the PM peak period along New York Avenue NW. Table 2 summarizes where queuing issues were observed during the PM peak period and reflects the approaches for which additional unmet demand volume was added based on unresolved queue lengths for the last 15-minute period during the hour. The final 2017 Existing Condition AM and PM peak hour volume diagrams are contained in Exhibits 2 and 3 in Appendix A. Appendix B contains the queue observation data.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Approach</th>
<th>Additional Unmet Volume Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Street NW &amp; Massachusetts Avenue NW/Mt Vernon Place NW</td>
<td>Eastbound</td>
<td>320 vehicles</td>
</tr>
<tr>
<td>9th Street NW &amp; K Street NW</td>
<td>None</td>
<td>0 vehicles</td>
</tr>
<tr>
<td>9th Street NW &amp; New York Avenue NW/K Street NW</td>
<td>Eastbound</td>
<td>51 vehicles</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW/Massachusetts Avenue NW</td>
<td>Northbound</td>
<td>128 vehicles</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW</td>
<td>Northbound</td>
<td>128 vehicles</td>
</tr>
<tr>
<td>7th Avenue NW &amp; Mt Vernon Place NW/New York Avenue NW</td>
<td>Eastbound</td>
<td>320 vehicles</td>
</tr>
<tr>
<td></td>
<td>Northbound left turn</td>
<td>128 vehicles</td>
</tr>
</tbody>
</table>

3.3 ANALYSIS METHODOLOGY

Capacity analyses were performed for the signalized and unsignalized intersections in the study area utilizing Synchro 9 traffic analysis software. This software package provides average control delay, queues, and level of service (LOS) for each lane group and for the overall intersection. LOS
is an evaluation of the quality of operation of an intersection and is a measure of the average delay a driver experiences while traveling through the intersection. LOS is dependent upon a range of defined operating conditions such as traffic demand, lane geometry, and traffic signal timing and phasing.

Utilizing Synchro instead of the more basic Highway Capacity Software (HCS) is preferable for transportation networks with a series of closely-spaced signalized intersections, as well as for networks with complex signal phasing, such as those within the study area. Under these conditions, Synchro is able to more accurately model the effects that the traffic operations (such as poor LOS or extensive queuing) at one intersection have on operations at an adjacent intersection.

LOS can range from A to F and is based on the average control delay per vehicle. For a signalized intersection, LOS A indicates operations with an average control delay less than 10 seconds per vehicle, while LOS F describes operations with an average control delay in excess of 80 seconds per vehicle at signalized intersections and 50 seconds per vehicle at unsignalized intersections, or a v/c ratio greater than 1.0. Table 4 summarizes the 2010 HCM delay criteria for signalized and unsignalized intersections.

Table 3: LOS Criteria for Signalized Intersections

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Signalized</th>
<th>Unsignalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤ 10.0</td>
<td>≤ 10.0</td>
</tr>
<tr>
<td>B</td>
<td>&gt; 10.0 and ≤ 20.0</td>
<td>&gt; 10.0 and ≤ 15.0</td>
</tr>
<tr>
<td>C</td>
<td>&gt; 20.0 and ≤ 35.0</td>
<td>&gt; 15.0 and ≤ 25.0</td>
</tr>
<tr>
<td>D</td>
<td>&gt; 35.0 and ≤ 55.0</td>
<td>&gt; 25.0 and ≤ 35.0</td>
</tr>
<tr>
<td>E</td>
<td>&gt; 55.0 and ≤ 80.0</td>
<td>&gt; 35.0 and ≤ 50.0</td>
</tr>
<tr>
<td>F</td>
<td>&gt; 80.0 or v/c &gt; 1.0</td>
<td>&gt;50.0 or v/c&gt;1.00</td>
</tr>
</tbody>
</table>

Source: 2010 Highway Capacity Manual

While LOS D or better operations are generally deemed satisfactory from a traffic operations perspective, LOS E or F operations are often indicative of queuing and congestion. Improvements as recommended in this study seek to maintain or improve traffic operations to LOS D or better, with minimal queuing, as reported by Synchro.

Signal plans and timing directives were provided by DDOT and were field-verified to accurately model signal operation type, phasing, detection, and cycle length.
3.4 DEVELOPMENT SCENARIOS

3.4.1 2017 Existing Condition

2017 Existing Condition volumes for the PM and Saturday peak hours, shown in Exhibits 2 and 3 in Appendix A, were modeled in Synchro 9 to produce capacity analysis results, summarized in Exhibit 4 in Appendix A. All Synchro capacity analysis outputs are in Appendix C. The results show that two intersections during the PM peak hour and all intersections during Saturday peak hour currently operate at an overall LOS D or better. Table 4 below indicates the intersections that operate at an overall LOS of E or F (failing condition) during the PM peak hour.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>PM Peak Hour Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th Street NW &amp; Mt Vernon Pl NW/New York Avenue NW</td>
<td>E</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW</td>
<td>E</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW/Massachusetts Avenue NW</td>
<td>E</td>
</tr>
</tbody>
</table>

3.4.1.1 V/C Evaluation

In addition to LOS, volume-to-capacity (v/c) ratios are used to evaluate mobility and quality of travel on a roadway or segment of roadway. They compare demand (volume) with supply (capacity) and are expressed as a decimal, usually less than 1.00. A v/c ratio at or above 1.00 indicates that the roadway is operating at or above capacity.

The table presented in Chapter 45, Section 45.4(3) of the DDOT Design and Engineering Manual (DEM) shows the threshold capacity for different arterial designations, from local residential roadway to major arterial. Stantec used this table, the 2015 traffic data obtained from the RTDC Data Viewer provided by MWCOG, and the official DDOT Functional Classification Map 2016 provided on the DDOT website to estimate the current volume/capacity ratio for all roadways within the study area. Table 5 lists these ratios and highlights those that are above 1.00.
Table 5: v/c Ratio for Study Area Roadways

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Functional Class</th>
<th>2015 AADT</th>
<th>Threshold Capacity</th>
<th>v/c Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts Avenue NW (west of 9th Street NW)</td>
<td>Principal Arterial</td>
<td>35,700</td>
<td>30,000</td>
<td>1.19</td>
</tr>
<tr>
<td>Massachusetts Avenue NW (east of 7th Street NW)</td>
<td>Principal Arterial</td>
<td>23,600</td>
<td>30,000</td>
<td>0.79</td>
</tr>
<tr>
<td>Mount Vernon Place NW</td>
<td>Principal Arterial</td>
<td>25,400</td>
<td>30,000</td>
<td>0.85</td>
</tr>
<tr>
<td>New York Avenue NW (west of 9th Street NW)</td>
<td>Principal Arterial</td>
<td>18,900</td>
<td>30,000</td>
<td>0.63</td>
</tr>
<tr>
<td>New York Avenue NW (east of 7th Street NW)</td>
<td>Principal Arterial</td>
<td>24,000</td>
<td>45,000</td>
<td>0.53</td>
</tr>
<tr>
<td>K Street NW (between 9th Street NW and 7th Street NW)</td>
<td>Principal Arterial</td>
<td>19,900</td>
<td>30,000</td>
<td>0.66</td>
</tr>
<tr>
<td>9th Street NW (between Mount Vernon Place NW and K Street NW)</td>
<td>Principal Arterial</td>
<td>18,300</td>
<td>30,000</td>
<td>0.61</td>
</tr>
<tr>
<td>7th Street NW (between Mount Vernon Place NW and K Street NW)</td>
<td>Principal Arterial</td>
<td>11,400</td>
<td>30,000</td>
<td>0.38</td>
</tr>
</tbody>
</table>

3.4.2 2020 No Build Condition

The selected analysis year of 2020 corresponds to the horizon year identified for the EA. Stantec obtained forecast data from the Metropolitan Washington Council of Governments (MWCOG) model to determine the background growth factor. This model uses future population and employment projections that reflect a regional perspective on growth and development. Based on information contained in the model, an annual growth rate of 1.5% was applied to the Existing Condition volumes to generate background growth volumes.

In addition to background growth, the impact of nearby site developments is also typically included in the No Build condition. A review of active cases for ANC 2C, 2F, and 6E as shown in the Interactive Zoning Information System (IZIS) and the interactive online zoning map, both maintained by the DC Office of Zoning, yielded three nearby developments that are currently being constructed and are anticipated to open before 2020:

- 1126 9th Street NW, a mixed-use building with 3,723 SF of office space and 33 condominiums/townhouses
- 655 New York Avenue NW, a 678,000 SF trophy office building with 79,000 SF of street-level and subterranean retail with parking
- 950 New York Avenue NW, a 360-room luxury hotel with 30,000 SF of street-level retail with subterranean parking

These three developments are expected to have an impact on traffic volumes in the study area. It should be noted that at the time of this study, only trip generation, trip distribution, and corresponding mode splits were available for 1126 9th Street NW from DDOT. Trip generation for
655 New York Avenue NW and 950 New York Avenue NW was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th ed.* Mode splits for these two developments was assumed to be the same as that shown in a memorandum previously submitted to DDOT entitled “801 K Street Trip Generation and Mode Split Estimates” (Appendix D). Exhibits 5 through 11 in Appendix A show how all anticipated development trips were distributed through the existing roadway network, based on existing travel patterns.

Projected background growth volumes and site-specific development volumes were summed to obtain 2020 No Build Condition volumes for the PM and Saturday peak hours (Exhibits 12 and 13 in Appendix A). These volumes were modeled in Synchro 9 to produce capacity analysis results, summarized in Exhibit 14 in Appendix A. The results show that all study area intersections would operate at an overall LOS E or F during the PM peak hour (Table 6). However, the study area intersections would operate at an overall LOS D or better during the Saturday peak hour, with the exception of 7th Street NW & K Street NW/Massachusetts Avenue NW, which would operate at an overall LOS F.

### Table 6: 2020 No Build Intersections Operating at Overall LOS E or F

<table>
<thead>
<tr>
<th>Intersection</th>
<th>PM Peak Hour Level of Service</th>
<th>Saturday Peak Hour Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Street NW and Massachusetts Avenue NW/ Mt Vernon Pl NW</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>9th Street NW and New York Avenue NW/K Street NW</td>
<td>E</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; Mt Vernon Pl NW/New York Avenue NW</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW/Massachusetts Avenue NW</td>
<td>F</td>
<td>F</td>
</tr>
</tbody>
</table>

### 3.4.3 2020 Build Condition

#### 3.4.3.1 Site Access

There will be no public vehicular access provided to the site. Any vehicles wishing to access the site will park either on-street or in nearby surface lots and garages. However, it was assumed that a designated rideshare pickup/drop off location would be located at the front of the library along westbound K Street NW. Deliveries will be made in box trucks via the existing loading driveway located on Mount Vernon Place (see Section 6.0).

#### 3.4.3.2 Trip Generation, Distribution, and Assignment

##### 3.4.3.2.1 Trip Generation

The project is expected to be completed by 2020. A memorandum previously submitted to DDOT entitled “801 K Street Trip Generation and Mode Split Estimates” (Appendix D) documents the trip generation and mode split analysis that was conducted for the proposed redevelopment. Based
on a pre-scoping meeting with DDOT held on February 7, 2017, it was determined that the ITE Trip Generation Manual, would not provide an adequate estimate of the number of trips generated. Therefore, site-specific trip generation and mode split data was collected at five existing retail brand stores that have locational and/or operational features that are similar to those of the proposed location. The results of the trip generation and mode split calculations are shown in Tables 7 and 8.

**Table 7: Weekday PM Peak Hour Trips for 801 K Street**

<table>
<thead>
<tr>
<th>Units</th>
<th>Total Trips</th>
<th>Entering (54%)</th>
<th>Exiting (46%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Person Trips</td>
<td>12,614 SF</td>
<td>512</td>
<td>277</td>
</tr>
<tr>
<td>Additional Pass-By Trips</td>
<td>15%</td>
<td>76</td>
<td>38</td>
</tr>
<tr>
<td>Event Trips</td>
<td></td>
<td>200</td>
<td>180</td>
</tr>
<tr>
<td>Total Trips</td>
<td></td>
<td>788</td>
<td>495</td>
</tr>
<tr>
<td>Drive Alone</td>
<td></td>
<td>114</td>
<td>73</td>
</tr>
<tr>
<td>Carpool</td>
<td></td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>Carshare</td>
<td></td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total New Vehicle Trips to Parking*</td>
<td>125</td>
<td>80</td>
<td>45</td>
</tr>
<tr>
<td>Total Vehicle Person Trips Reflect as Pedestrians Entering Site</td>
<td>147</td>
<td>93</td>
<td>54</td>
</tr>
<tr>
<td>Taxi/Uber/Lyft</td>
<td></td>
<td>121</td>
<td>78</td>
</tr>
<tr>
<td>Delivery</td>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total New Pass-Through Vehicle Trips</td>
<td>124</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>Bus</td>
<td></td>
<td>36</td>
<td>23</td>
</tr>
<tr>
<td>Rail/Subway</td>
<td></td>
<td>206</td>
<td>132</td>
</tr>
<tr>
<td>Walk**</td>
<td></td>
<td>247</td>
<td>148</td>
</tr>
<tr>
<td>Bike</td>
<td></td>
<td>28</td>
<td>18</td>
</tr>
<tr>
<td>Total Multi-Modal Trips</td>
<td></td>
<td>517</td>
<td>321</td>
</tr>
</tbody>
</table>

*Total New Vehicle Trips to Parking = Drive Alone + Carpool/3

**Walk = 22% Mode Split + Pass-By Trips
Table 8: Saturday Peak Hour Trips for 801 K Street

<table>
<thead>
<tr>
<th>Units</th>
<th>Total Trips</th>
<th>Entering (50%)</th>
<th>Exiting (50%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Person Trips</td>
<td>12,614 SF</td>
<td>669</td>
<td>335</td>
</tr>
<tr>
<td>Additional Pass-By Trips</td>
<td>10%</td>
<td>67</td>
<td>33</td>
</tr>
<tr>
<td>Event Trips</td>
<td>200</td>
<td>180</td>
<td>20</td>
</tr>
<tr>
<td>Total Trips</td>
<td>936</td>
<td>548</td>
<td>388</td>
</tr>
<tr>
<td>Drive Alone</td>
<td>14%</td>
<td>122</td>
<td>72</td>
</tr>
<tr>
<td>Carpool</td>
<td>11%</td>
<td>96</td>
<td>57</td>
</tr>
<tr>
<td>Carshare</td>
<td>0.5%</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total New Vehicle Trips to Parking*</td>
<td>158</td>
<td>94</td>
<td>64</td>
</tr>
<tr>
<td>Total Vehicle Person Trips Reflect as Pedestrians Entering Site</td>
<td>222</td>
<td>131</td>
<td>91</td>
</tr>
<tr>
<td>Taxi/Uber/Lyft</td>
<td>16%</td>
<td>139</td>
<td>82</td>
</tr>
<tr>
<td>Delivery</td>
<td>0.5%</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total New Pass-Through Vehicle Trips</td>
<td>144</td>
<td>85</td>
<td>59</td>
</tr>
<tr>
<td>Bus</td>
<td>5%</td>
<td>44</td>
<td>26</td>
</tr>
<tr>
<td>Rail/Subway</td>
<td>23%</td>
<td>200</td>
<td>118</td>
</tr>
<tr>
<td>Walk**</td>
<td>25%</td>
<td>284</td>
<td>162</td>
</tr>
<tr>
<td>Bike</td>
<td>5%</td>
<td>44</td>
<td>26</td>
</tr>
<tr>
<td>Total Multi-Modal Trips</td>
<td>572</td>
<td>332</td>
<td>240</td>
</tr>
</tbody>
</table>

*Total New Vehicle Trips to Parking = Drive Alone + Carpool/3
**Walk = 26% Mode Split + Pass-By Trips

3.4.3.2.2 Trip Distribution
The distribution of vehicle, pedestrian, bicycle and transit trips was based on existing travel patterns, location of on-street and off-street parking, and transit stops/stations.

Vehicular Trip Distribution

There are two types of vehicle trips generated by the proposed facility: vehicles destined for on-street or off-street parking (drive alone, carpool, and carshare), and vehicles destined for the site frontage (taxi/Uber/Lyft and deliveries). All vehicle trips were distributed to the regional roadway network based on existing travel patterns as reflected in the overall AADT for each roadway (Exhibit 15 in Appendix A). A centralized drop-off location on westbound K Street NW, along Mt. Vernon Square was assumed for all taxi, Uber, Lyft vehicles, and delivery activity was assigned to the existing loading area on Mt. Vernon Place. Therefore, all rideshare and delivery vehicle trips were distributed from the regional roadway network to the assumed drop-off area based on the most direct path.
Vehicles destined for on-street or off-street parking facilities were distributed on the study area roadway network based on the location and availability of parking spaces within one block of the site, relative to their point of origin in the regional roadway network. Field observations conducted during the PM peak period, revealed high utilization of on-street parking, while surface and structured parking was becoming increasingly available as area employees departed. Therefore, it was assumed that, in general, approximately 15% of vehicles destined for the site would park on-street, reflecting the limited amount of parking available, as well as the reluctance of retail-patrons to circulate looking for on-street parking. Twenty-five percent of vehicles were assumed to be destined for the two nearby surface parking facilities, and the remaining 60% of vehicles were assumed to be destined to the seven garage parking facilities within one block of the site. Slight adjustments were made to these percentages based on the operating hours of the structured and surface parking, as well as on-street parking restrictions (see Section 7).

Vehicles were then distributed from the regional roadway network to the parking based on the most direct route from the roadway entering the study area to or from the parking facility. Therefore, some vehicles traveling to or from a particular parking facility may not enter the study area intersections because the most direct path lies outside of the study area intersections. Exhibits 16 through 62 in Appendix A show the distributions to and from each facility as well as the total number of trips distributed on the network for this mode. It should be noted that the vehicle trips were then reflected as pedestrian trips from the parking area to the site.

Exhibits 63 through 71 show distributed taxi/Uber/Lyft and delivery trucks on the network.

Non-Vehicular Trip Distribution

Transit trips were distributed on the study area roadway network as pedestrian trips. Pedestrian-bus trips were assigned to the nearest bus stops on Massachusetts Avenue NW, New York Avenue NW, 9th Street NW, and 7th Street NW based on June 2016 bus ridership data obtained from WMATA. Pedestrian-Metrorail trips were distributed on the network based on the proximity of the Gallery Place/Chinatown and Mt. Vernon Square/Convention Center stations. According to data compiled by WMATA via the Plan It Metro website, the Gallery Place/Chinatown station experiences high ridership volume by link when compared to the Mt. Vernon/Convention Center station. The link volumes obtained from this website indicate that 95% of trips in the PM peak hour and 70% of trips in the Saturday peak hour) would travel to/from this station. Exhibits 72 through 80 in Appendix A show the calculated trip distributions as well as the distributions on the network for each mode.

Pedestrian and bicycle trips were distributed on the study area roadway network based on existing pedestrian and bicycle volumes collected as part of the TMCs. These volumes are shown in Exhibits 81 through 84 in Appendix A.
3.4.3.2.3 Trip Assignment
Stantec assigned the generated trips to the study area network based on the trip distribution discussed in Section 3.4.3.2.2. Exhibits 85 and 86 (in Appendix A) show the total site trip assignment for all modes.

3.4.3.3 Mitigation Scenarios
The total site trips were added to the 2020 No Build Condition traffic volumes to generate 2020 Build Condition traffic volumes (Exhibits 87 and 88 in Appendix A). Two mitigation scenarios were examined to determine the extent of improvements needed on the transportation network to accommodate the proposed traffic: 2020 Build Condition without and with Mitigation. It should be noted that at the time of this report, the details for the proposed DC Streetcar line that is expected to run through the study area was not available. Therefore, the 2020 Build Condition without and with Mitigation scenarios do not consist of proposed roadway network improvements as needed for the proposed DC Streetcar. Only the existing roadway network was modeled.

3.4.3.3.1 Without Mitigation
Stantec modeled this scenario in Synchro 9 to obtain capacity analysis results (Exhibit 89 in Appendix A). The Synchro capacity analysis outputs are located in Appendix C. The results show that all study area intersections would continue to operate at an overall LOS E or F during the PM peak hour. However, the study area intersections would operate at an overall LOS D or better during the Saturday peak hour, with the exception of 7th Street NW & K Street NW, which would operate at LOS E and 7th Street NW & K Street NW/Massachusetts Avenue NW, which would operate at an overall LOS F (Table 9).

<table>
<thead>
<tr>
<th>Intersection</th>
<th>PM Peak Hour Level of Service</th>
<th>Saturday Peak Hour Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Street NW and Massachusetts Avenue NW/ Mt Vernon Pl NW</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>9th Street NW and New York Avenue NW/K Street NW</td>
<td>E</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; Mt Vernon Pl NW/New York Avenue NW</td>
<td>F</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW</td>
<td>F</td>
<td>E</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW/Massachusetts Avenue NW</td>
<td>F</td>
<td>F</td>
</tr>
</tbody>
</table>

While the study area intersections continue to operate at an overall LOS that is consistent with the No Build Condition, DDOT requires mitigation for any movement that experiences an increase in delay of greater than 5 seconds per vehicle. Table 10 shows the movements that experience an increase in delay of more than five seconds per vehicle in one or both peak hours. However, it is important to note that most of the study area roadways are at or over capacity. Therefore, even small additions to vehicular volume result in significant, exponential increases in delay. For example, the capacity analysis results show that the EB approach to the intersection of 7th Street...
NW and K Street NW/Massachusetts Avenue NW would experience an increase in vehicle delay of approximately 106 seconds per vehicle during the PM peak hour. However, the site is only adding 34 vehicles to that approach, or 2.5% of the total approach volume.

Due to the existing capacity deficiency only a small increase in overall vehicles results in a high increase in delay, based on capacity analysis formats, that would likely not be realized in the field. However, the results, while likely not realistic indicate an overall need for additional capacity, and this mitigation measures should still be explored to the extent possible.

**Table 10: 2020 Build Movements with Delay Increase of More than 5 Seconds**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>PM Peak Hour</th>
<th>Saturday Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Street NW and Massachusetts Avenue NW/ Mt Vernon Pl NW</td>
<td>EB-LT (+21)</td>
<td>EB-LT (+6)</td>
</tr>
<tr>
<td></td>
<td>EB-R (+17)</td>
<td>EB-R (+8)</td>
</tr>
<tr>
<td></td>
<td>WB-LTR (+20)</td>
<td></td>
</tr>
<tr>
<td>9th Street NW and New York Avenue NW/K Street NW</td>
<td>WB-LT (+86)</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; Mt Vernon Pl NW/New York Avenue NW</td>
<td>NB-L (+8)</td>
<td>WB-LT (+9)</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW</td>
<td>SB-LT (+19)</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW/Massachusetts Avenue NW</td>
<td>EB-LTR (+106)</td>
<td>EB-LTR (+47)</td>
</tr>
<tr>
<td></td>
<td>NB-LTR (+18)</td>
<td>SB-LTR (+30)</td>
</tr>
</tbody>
</table>

3.4.3.3.2 With Mitigation
Stantec developed and evaluated mitigation measures that would address the additional intersection delay while considering multi-modal transportation needs and potential ROW impacts. It should be noted that this section identifies vehicle mitigation measures. Pedestrian/bicycle improvements are discussed in Section 4, and transit improvements are discussed in Section 5.

The mitigation options shown in Table 11 should be considered preliminary as improvements may be made to the study area transportation network as part of other DDOT projects, including the DC Streetcar expansion on K Street NW and 7th Street NW.
Table 11: Potential Mitigation Measures

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Upgrade all study area signalized intersection to be fully actuated and optimize phasing and offsets.</td>
</tr>
</tbody>
</table>

B. Remove on street parking on one side of K Street to provide an exclusive left turn lane on WB K Street at the intersection of 9th Street with New York Avenue NW. Revise the phasing to include a protected/permitted WB left turn. It may be possible provide a shift in the through lanes to avoid a complete removal of on-street parking.

C. Remove on-street parking on one side of K Street to provide an exclusive left turn lane on EB K Street at the intersection of 9th Street with New York Avenue. It may be possible provide a shift in the through lanes to avoid a complete removal of on-street parking.

It should be noted that measures B and C would need to be coordinated with the future DC Streetcar project. Furthermore, it is our recommendation that these mitigation measures be evaluated after the retail site opens to determine if they are warranted. The anticipated additional vehicle trips analyzed in this report were estimated utilizing data obtained at similar retail sites. However, given the existing and projected background congestion in the study area during the PM peak period, and the ample number of retail locations elsewhere in the DC metropolitan area, it is unlikely that PM peak hour trips would be generated from suburban communities outside of DC. Therefore, non-auto mode share may be higher than anticipated. A post-development survey may help to evaluate actual customer travel patterns, and determine if the more significant enhancements, such as the removal of on-street parking to accommodate left-turn bays are needed.

Capacity analysis results for the Build with Mitigation condition are contained in Exhibit 90 in Appendix A and show delay, v/c ratio, LOS and queuing by lane group. Based on the analysis results all study area intersections would experience a significant improvement in operation due to the signal timing adjustments and striping modifications. All intersections would operate at an overall LOS D or better, except for the intersections shown in Table 12.
Table 12: 2020 Build with Mitigation Intersections Operating at Overall LOS E or F

<table>
<thead>
<tr>
<th>Intersection</th>
<th>PM</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th Street NW &amp; Mt Vernon Place NW/New York Avenue NW</td>
<td>E</td>
<td>-</td>
</tr>
<tr>
<td>7th Street NW &amp; K Street NW</td>
<td>F</td>
<td>E</td>
</tr>
</tbody>
</table>
4.0 BICYCLE AND PEDESTRIAN FACILITIES

The Carnegie Library site is in an area with existing pedestrian and bicycle facilities. This section will evaluate existing pedestrian and bicycle facilities within the area of the site, identify planned improvements, and recommend any additional improvements to enhance the connectivity.

4.1 EXISTING FACILITIES

4.1.1 Bicycle

According to the 2005 DC Bicycle Master Plan, no existing bicycle facilities were present on the roadway network within the study area in 2005. Massachusetts Avenue NW, Mount Vernon Place NW, and K Street NW within the study area were signed bicycle routes. As such, the bicycle level of service in the study area was shown to be between C and E. However, since the study was conducted bicycle lanes were added to New York Avenue NW, west of the study area. The Downtown West Transportation Planning Study Existing Conditions report also identifies a proposed cycle track along Massachusetts Avenue NW that has yet to be constructed. It should be noted that bicycles are permitted to ride on the sidewalk north of Massachusetts Avenue.

Exhibit 91 in Appendix A shows existing bicycle facilities including bike lanes, bike routes, bike racks, and Capital BikeShare locations. It also shows that there is one Capital BikeShare location with the ¼-mile walkshed and eight locations within the ½-mile bikeshed.

4.1.2 Pedestrians

The site is served by a robust network of sidewalks that are provided on both sides of each study area roadway. According to the Downtown West Transportation Planning Study Existing Conditions report, completed August 2016, high pedestrian volumes and key transit corridors/connections are prevalent throughout the study area. Sidewalks vary in width from six to eighteen feet, and were observed to be in good to fair condition. Furthermore, signalized crosswalks are provided on all legs of the surrounding signalized intersections. Unsignalized crossings are provided across K Street NW at 9th Street NW and at 7th Street NW. Based on field observations, many of the crossings adjacent to the site appear to have ADA compliant curb ramps. Exhibit 92 in Appendix A shows existing pedestrian facilities.

It should also be noted that a pedestrian-only mall, referred to as Techworld Plaza is provided on the south side of K Street NW, between 7th Street NW and 9th Street NW.

4.1.3 Barriers to Walking and Biking

There are no transportation system features within the study area that act as barriers to the use of the existing facilities.
4.2 PROPOSED PLANS

Stantec reviewed the following plans to assess existing and proposed pedestrian and bicycle facilities in the study area.

**DDOT Bicycle Master Plan (2005)**

The 2005 Bicycle Master Plan is a guide to establishing high-quality bicycle facilities and programs from 2005 to 2015 through facility improvements, policy changes, and education, promotion, and enforcement.

The DC Bicycle Master Plan includes recommendations such as:

- Expand the bicycle route network;
- Provide bicycle facilities on roadways;
- Complete ongoing trail development and improvement projects;
- Provide bicycle parking in public and private spaces;
- Eliminate gaps in the existing system;
- Improve areas with a high number of bicycle crashes;
- Provide bicycle access through barrier areas (including the Washington Hospital Center);
- Improve bicycle access to public transportation;
- Provide more bicycle-friendly policies; and,
- Educate motorists, bicyclists, and youth regarding safe operating behaviors, among others.

The plan shows that while no existing facilities were present on the roadway network within the study area in 2005, Massachusetts Avenue NW, Mount Vernon Place NW, and K Street NW within the study area were signed bicycle routes. As such, the bicycle level of service in the study area was shown to be between C and E.

The plan shows New York Avenue NW to the east of the study area as a proposed multi-use trail connection to trails in the eastern part of the District. Furthermore, a dedicated bicycle lane was proposed within the study area on K Street NW. It should be noted that the moveDC plan supersedes this plan as of 2015.

**DDOT Pedestrian Master Plan (2009)**

The 2009 DC Pedestrian Master Plan identifies deficiencies in the existing pedestrian network, recommends pedestrian treatments and identifies New York Avenue study area roadway as a priority corridors for curb ramp repair, curb extension, median construction/extension, crosswalk restriping/pavement repair, right turn on red restrictions, and bus stop improvements, among others. It should be noted that the moveDC plan supersedes this plan as of 2015.

**moveDC Multimodal Long-Range Transportation Plan (2014)**

moveDC is a long-range multimodal transportation plan that addresses ways to improve the transportation system so that it operates more safely and efficiently. The plan addresses a variety
of modes including pedestrians, bicyclists, transit, vehicle, and freight, as well as transportation demand management, parking, and sustainability/livability. The plan recommends a variety of policy and practices as it relates to the various modes. The plan also calls for several new facilities within the study area and establishes a priority system for implementation that ranges from Tier 1 (Highest Priority) to Tier 4 (Lowest Priority):

- A multi-use trail along New York Avenue to the northeast of the study area (Tier 1).
- Cycle track along Massachusetts Avenue (Tier 3).

**DDOT Guidelines for Bike Parking**

The DDOT Bicycle Parking Regulations detail the rules relating to the required provision of bicycle parking. The regulations list that bicycle parking shall be provided for retail spaces, except in C-3-C (Medium Density Office, Retail, Housing), C-4 (Central Business District), and C-5 (Pennsylvania Avenue). The regulations also list the required dimensions, amount, and placement of bicycle parking.

### 4.3 IMPACT OF PROPOSED REDEVELOPMENT ON EXISTING AND PROPOSED PLANS/FACILITIES

The Carnegie Library site would not have a negative impact on existing or proposed pedestrian and bicycle facilities. In fact, many of the recommendations presented in the plans summarized in the previous section would ensure adequate connections between the Carnegie Library site, nearby transit options, and surrounding community. These enhancements would be needed particularly for improving bicycle access to the site.

### 4.4 RECOMMENDATIONS

It is recommended that the following on-site pedestrian and bicycle enhancements be included in the redevelopment of the site:

- Provision of an ADA-accessible route from all four corners of Mt. Vernon square
- Provision of bicycle parking
- Installation of a Capital BikeShare station

In addition, the applicant should evaluate the need for addition pedestrian accommodations, i.e. mid-block crosswalk on K Street NW, upon site opening.
The proposed retail redevelopment is located in an area with ample transit service that includes Metrorail and Metrobus. A transit analysis was conducted that includes all transit stops within a ¼-mile walkshed and ½-mile bikeshed of Carnegie Library, including existing Metrorail, Metrobus, DC Circulator, Loudoun Commuter Bus and proposed DC Streetcar routes and stops. Because the site is anticipated to generate fewer than 25 peak hour bus trips, an assessment of existing bus system capacity was not conducted.

5.1 EXISTING TRANSIT SERVICES

Table 13 below lists and Exhibit 93 in Appendix A shows the existing transit services that serve the study area within one half mile. The table includes the name of the type of transit, route, terminal stations/stops, operating hours, and headways during the PM and Saturday peak periods. It should be noted that although service changes came into effect June 25, 2017 that eliminated some Metrobus routes from the study area, these routes are included in this analysis to account for riders seeking and using alternative routes to travel to/from the study area.

<table>
<thead>
<tr>
<th>Transit</th>
<th>Terminals From</th>
<th>Terminals To</th>
<th>Line</th>
<th>Service Headways PM Peak</th>
<th>Sat. Peak</th>
<th>Operating Hours Open</th>
<th>Close</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus 42</td>
<td>Mt. Pleasant</td>
<td>Gallery Place</td>
<td>Mt. Pleasant</td>
<td>9 min</td>
<td>12-13 min</td>
<td>4:15 AM</td>
<td>3:15 AM</td>
</tr>
<tr>
<td>Bus 53</td>
<td>Takoma</td>
<td>McPherson Square</td>
<td>14th Street</td>
<td>20 min</td>
<td>24 min</td>
<td>4:00 AM</td>
<td>2:00 AM</td>
</tr>
<tr>
<td>Bus 63</td>
<td>Takoma</td>
<td>Federal Triangle</td>
<td>Takoma-Petworth</td>
<td>10 min</td>
<td>24 min</td>
<td>4:30 AM</td>
<td>2:00 AM</td>
</tr>
<tr>
<td>Bus 64</td>
<td>Fort Totten</td>
<td>Federal Triangle</td>
<td>Fort Totten-Petworth</td>
<td>15 min</td>
<td>22 min</td>
<td>5:00 AM</td>
<td>2:00 AM</td>
</tr>
<tr>
<td>Bus 70</td>
<td>Silver Spring</td>
<td>Archives</td>
<td>Georgia Ave – 7th Street</td>
<td>12 min</td>
<td>14 min</td>
<td>24 hours</td>
<td></td>
</tr>
<tr>
<td>Bus 74</td>
<td>Mt. Vernon Square</td>
<td>SW Waterfront</td>
<td>Southwest Waterfront</td>
<td>15 min</td>
<td>24 min</td>
<td>4:45 AM</td>
<td>12:00 AM</td>
</tr>
<tr>
<td>Bus 79</td>
<td>Silver Spring</td>
<td>Archives</td>
<td>Georgia Ave – 7th St MetroExtra</td>
<td>10 min</td>
<td>15 min</td>
<td>6:00 AM</td>
<td>8:00 PM</td>
</tr>
<tr>
<td>Bus 80</td>
<td>Fort Totten</td>
<td>Kennedy Center</td>
<td>North Capitol Street</td>
<td>12 min</td>
<td>30 min</td>
<td>4:30 AM</td>
<td>2:00 AM</td>
</tr>
<tr>
<td>Bus D1</td>
<td>Glover Park</td>
<td>Franklin Square</td>
<td>Glover Park-Federal Triangle</td>
<td>30 min</td>
<td>-</td>
<td>5:30 AM</td>
<td>1:00 AM</td>
</tr>
<tr>
<td>Bus D4</td>
<td>Ivy City</td>
<td>Franklin Square</td>
<td>Ivy City-Franklin Square</td>
<td>18 min</td>
<td>30 min</td>
<td>4:00 AM</td>
<td>12:30 AM</td>
</tr>
</tbody>
</table>
Transit Service
July 5, 2017

### 5.2 PROPOSED TRANSIT SERVICES

#### 5.2.1 Union Station to Georgetown Streetcar

DDOT, in partnership with FHWA and FTA, is in the process of completing an Environmental Assessment (EA) for the proposed construction of an approximately three-mile DC Streetcar line.
between Union Station and Georgetown. This new transit line is intended to provide better east-west connectivity and improve overall transit service in the corridor. An Alternatives Analysis study was completed in September 2013.

In this report, DDOT identified one recommended alternative that passes through the study area, directly adjacent to Mount Vernon Square on both K Street NW and Mt Vernon Place. However, based on the more recent EA public involvement meeting materials – the alternatives currently under consideration only pass to the south of Mount Vernon Square on K Street NW, with a station platform on both the north side of the street (for the westbound line) and in the median (for the eastbound line). It is anticipated that the final NEPA decision for approval of a final alternative will be made Fall 2018.
6.0 SITE ACCESS AND LOADING

The current Truck and Bus Through Routes and Restrictions map, published by DDOT in 2014, shows that all roads within the study area, with the exception of K Street NW east of 7th Street NW, are designated truck routes with no restrictions. Therefore, it is anticipated that freight/delivery vehicles will utilize the existing driveway and loading dock on Mt. Vernon Place NW for access and loading activities. This driveway, located in a historic district, conforms to DEM Section 31.2.3.2 DDOT Requirements: Commercial Driveway, with the exception of vehicle entry. Due to the relatively small size of the existing loading driveway, trucks will have to back into the driveway. The historic nature of the building and grounds cannot accommodate a larger driveway that is capable of supporting vehicle turn-arounds. Accommodations for pedestrians and bicyclists are provided at the access point.

According to the mode split discussed in Section 3.4.3.2.1 and shown in Tables 6 and 7, there are expected to be up to three delivery vehicle trips (two entering, one exiting) during the PM peak hour and up to five delivery vehicles trips (three entering, two exiting) during the Saturday peak hour. Although Mt Vernon Place NW is a two-way roadway, it was assumed that all such vehicles would perform back-in and right-out maneuvers. Furthermore, the retail tenant has stipulated that deliveries will occur outside of the AM (7:00 AM – 10:00 AM) and PM (3:00 PM – 7:00 PM) peak periods, thus reducing the impact of the back-in operation.

DDOT requires AutoTURN diagrams as verification that no turning maneuvers will interfere with roadway operations or on-street parking lanes. According to the retail tenant, all deliveries will be made by 30-foot, single-unit truck. Exhibit 94 in Appendix A shows that the right-out turning maneuvers for this type of truck do not interfere with roadway operations.

Stantec
7.0 PARKING

No onsite parking will be provided. Patrons wishing to access the site via a vehicle will park on-street or at nearby surface and garage parking facilities.

7.1 ON-STREET PARKING

The area surrounding the Carnegie Library site restricts on-street parking by type and time of day. As such, the available on-street parking for cars during both PM and Saturday peak hours was identified within a two-block walking distance of the site and is shown in Exhibits 95 and 96 in Appendix A.

7.2 SURFACE AND GARAGE PARKING FACILITIES

7.2.1 Surface Parking

There are six (6) off-street surface parking lots within walking distance of the Carnegie Library. The operating hours of the lots are noted below in Table 14 and shown in Exhibits 95 and 96 in Appendix A. The two sites highlighted in the table are those that lie within one block of the site and were included in the vehicle distribution analysis.

<table>
<thead>
<tr>
<th>Lot</th>
<th>Operating Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>900 New York Avenue NW, PMI Parking Lot</td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td>1001 6th Street NW</td>
<td>Monday – Friday 6:00 AM – 7:00 PM</td>
</tr>
<tr>
<td></td>
<td>Saturday – Sunday 8:00AM – 5:00 PM</td>
</tr>
<tr>
<td>1016 6th Street NW</td>
<td>Seven days a week, hours unknown</td>
</tr>
<tr>
<td>915 5th Street NW</td>
<td>Monday – Saturday, 5:30 AM – 8:00 PM</td>
</tr>
<tr>
<td>622 I Street NW</td>
<td>Monday through Saturday, hours unknown</td>
</tr>
<tr>
<td>615 H Street NW</td>
<td>Monday through Saturday, hours unknown</td>
</tr>
</tbody>
</table>

7.2.2 Garage Parking

There are seventeen (17) off-street subterranean parking garages within walking distance of the Carnegie Library. The operating hours of the lots are noted below in Table 15 and shown in Exhibits 95 and 96 in Appendix A. The sites highlighted in the table are those that lie within one block of the site and were included in the vehicle distribution analysis.
Table 15: Study Area Garage Parking

<table>
<thead>
<tr>
<th>Lot</th>
<th>Operating Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marriott Marquis</strong></td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td><strong>901 K Street NW</strong></td>
<td>Seven days a week, 7:00 AM – 7:00 PM</td>
</tr>
<tr>
<td><strong>1100 L Street NW</strong></td>
<td>Seven days a week, 7:00 AM – 7:00 PM</td>
</tr>
<tr>
<td><strong>1101 New York Ave NW</strong></td>
<td>Monday – Friday 6:00 AM – 7:00 PM</td>
</tr>
<tr>
<td></td>
<td>Saturday 6:00 AM – 4:00 PM</td>
</tr>
<tr>
<td></td>
<td>Sunday 8:00 AM – 4:00 PM</td>
</tr>
<tr>
<td><strong>1050 K Street NW</strong></td>
<td>Monday – Friday 7:00 AM – 7:00 PM</td>
</tr>
<tr>
<td><strong>1099 New York Ave NW</strong></td>
<td>Monday – Friday 7:00 AM – 11:00 PM</td>
</tr>
<tr>
<td></td>
<td>Saturday 10:00 AM – 11:00 PM</td>
</tr>
<tr>
<td><strong>Embassy Suites</strong></td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td><strong>901 New York Avenue NW</strong></td>
<td>Monday – Friday 7:00 AM – 7:00 PM</td>
</tr>
<tr>
<td><strong>845 11th Street NW</strong></td>
<td>Monday – Friday 6:00 AM – 12:00 AM</td>
</tr>
<tr>
<td></td>
<td>Saturday 9:00 AM – 7:00 PM</td>
</tr>
<tr>
<td><strong>870 9th Street NW (City Center DC)</strong></td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td><strong>The Victor Building</strong></td>
<td>Monday – Friday 6:00 AM – 7:00 PM</td>
</tr>
<tr>
<td><strong>999 9th Street NW</strong></td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td><strong>650 Massachusetts Avenue NW</strong></td>
<td>Monday – Friday 6:30 AM – 6:30 PM</td>
</tr>
<tr>
<td><strong>600 Massachusetts Avenue NW</strong></td>
<td>Seven days a week, 6:00 AM – 1:00 AM</td>
</tr>
<tr>
<td><strong>500 H Street NW</strong></td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td><strong>Hampton Inn</strong></td>
<td>Seven days a week, 24 hours a day</td>
</tr>
<tr>
<td><strong>601 Massachusetts Avenue NW</strong></td>
<td>Monday – Friday 7:00 AM – 8:00 PM</td>
</tr>
</tbody>
</table>

7.3 PARKING UTILIZATION

Parking utilization counts were not conducted for the garage or surface parking facilities because the surrounding land uses consist primarily of office space, thus the parking demand for the proposed retail facility (evening and weekends) would correspond with times of lower utilization at the nearby surface and structured parking facilities. Furthermore, the site generates a relatively low maximum parking demand of 125 vehicles in the PM peak hour and 158 vehicles on a Saturday peak hour. Furthermore, the nearby site-specific developments included in this CTR include sub-surface parking, thus reducing the potential demand on the existing nearby parking facilities. Therefore, it can be assumed that these vehicles would be easily accommodated with in the 21 nearby off-street parking facilities, as well as on-street parking.
8.0 TRANSPORTATION DEMAND MANAGEMENT (TDM)

Transportation demand management (TDM) is the application of policies and strategies to reduce travel demand (typically single-occupancy private vehicles) or to redistribute that demand over other non-peak times. TDM strategies are typically more challenging to apply to retail facilities as the majority of trips are generated by customers, and the retail tenant has little control over how and when people arrive to the site. Furthermore, staffing is more limited than office development, and employees have a variety of shift schedules, thus making it more difficult to coordinate employee-wide programs. However, this section will discuss potential TDM strategies that could be employed by the retail tenant to encourage employees to commute via non-auto modes, as well as support customers’ use of non-auto modes.

8.1 POTENTIAL TDM STRATEGIES

Potential TDM strategies that would be appropriate and effective for retail sites, such as the one being proposed, include:

- Designate an employee to serve as a TDM coordinator to organize and promote the TDM plan and the use of alternative transportation modes. This person will also act as the point of contact with DDOT.
- Provide a real-time transit station within the lobby of the facility that includes alternative mode information using electronic message boards.
- Encourage employees to join carpool and vanpool programs, as well as the guaranteed ride home service, provided by MWCOG’s Commuter Connections.
- Provide SmartBenefits (transit subsidies) for employees.
- Schedule shift changes to occur outside traditional AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods.
- Provide sheltered bicycle parking and shower accommodations for employees that wish to commute via bicycle.
- Provide a Capital Bikeshare station on Mount Vernon Square.
9.0 PERFORMANCE MONITORING AND MEASUREMENT

The proposed retail development is not anticipated to generate over 200 drive alone vehicle trips during worst-case peak periods. As such, this CTR does not prescribe performance monitoring and measurement. However, as noted in the discussion of mitigation measures in Section 3.4, it is recommended that a post-development customer survey be conducted to compare the anticipated mode split with the actual mode split. Conducting this analysis may help to determine if the mitigation measures that require additional turn lanes and removal of on-street parking are warranted. The methodology described in “801 K Street Trip Generation and Mode Split Estimates” (Appendix D) should be used.
10.0 CONCLUSION

This Comprehensive Transportation Review (CTR) Report documents the results of an analysis of the potential impact of modifications to the Carnegie Library to include a retail tenant that would occupy approximately 12,614 square feet of the facility. The results of the capacity analysis show a relatively limited impact on the study areas transportation network due to the anticipated non-auto mode split of 60%. The additional vehicle trips generated by the site would be added to an already-congested roadway network, resulting in an increase in delay on several intersection approaches that warrant mitigation, primarily in the PM peak hour. Mitigation measure include:

- Signal timing and phasing revisions;
- Restriping sections of K Street NW between 9th Street NW and 7th Street NW to accommodate left-turn lanes;
- Providing a protected-permissive left-turn from westbound K Street NW to southbound 9th St NW;
- Provide a designated rideshare (taxi/Uber/Lyft) pick-up/drop-off area on K Street NW between 9th Street NW and 7th Street NW; and,
- Advanced coordination with DDOT and MPD prior to large events or product releases.

These recommended mitigation measures would address these increases in delay, and would improve most approaches to operate better than the No Build Condition.

It should be noted that the proposed mitigation measures represent potential options to mitigate the anticipated increase in delay at the study area intersections. If the proposed DC Streetcar is routed along K Street NW, these recommendations may need to be modified. Furthermore, it is our recommendation that these mitigation measures be evaluated after the retail site opens to determine if they are warranted. The anticipated additional vehicle trips analyzed in this report were estimated utilizing data obtained at similar retail sites. However, given the existing and projected background congestion in the study area during the PM peak period, and the ample number of retail locations elsewhere in the DC metropolitan area, it is unlikely that PM peak hour trips would be generated from suburban communities outside of DC. Therefore, non-auto mode share may be higher than anticipated. A post-development survey may help to evaluate actual customer travel patterns, and determine if the more significant enhancements, such as the removal of on-street parking to accommodate left-turn bays are needed.
11.0 REFERENCES


APPENDIX A
REPORT EXHIBITS
APPENDIX B
RAW TRAFFIC DATA
APPENDIX D
TRIP GENERATION MEMO
APPENDIX E

CRASH ANALYSIS SUMMARIES