

Southwest Federal Center

Historic Character

The Southwest Federal Center reflects the ambitions of post World War II. Although some federal buildings were constructed in the late 1930s, the area retained its local industrial character until the federal government and private developers transformed the area in the 1960s with new buildings that espoused the architectural and planning tenets of Modernism. Office buildings by architects including Marcel Breuer now dominate the area.

The Southwest Federal Center has not realized the integrity and coherence that was envisioned for it, although components of large-scale public and private sector development, such as L'Enfant Plaza and the 10th Street promenade, were completed. As is typical of that era and style, many of the modern buildings are set back from the street by plazas on structure. Because of the setbacks, raised roadways, plazas on structure, and the ramps for underground parking, the nature of the pedestrian experience is, for the most part, less than optimal.

The Department of Agriculture South Building is one of the most significant examples of federal government expansion during the 1930s (and was once considered the world's largest office building). In addition, the area's earlier industrial character is still evident in rehabilitated warehouses and in the elevated railroad tracks that bisect the precinct. Some of the federal buildings serve industrial purposes, including the Bureau of Printing and Engraving and Paul Cret's 1934 Heating Plant.

Maryland Avenue, one of L'Enfant's original avenues, is not clearly discernable today because of the grade separation for the railroad tracks along the Maryland and Virginia Avenue rights-of-way and the 1970s modernist design approach of sitting buildings in large plazas with a poor relationship between building and street. The avenue is not enhanced by

distinguished buildings or embellished by streetscape treatments in the manner of other avenues in Washington. The views along the right-of-way are not focused or shaped due to a lack of attention to good urban planning principles that would reinforce the edges.

Existing Context

Large federal headquarters, often with associated large plazas, characterize the Southwest Federal Center area. Although the initial development of this area reflects the McMillan Plan and the stripped classicism of the Federal Triangle, the majority of the buildings are characterized as mid-to-late 20th-century modern architecture. Maryland Avenue was intended to run diagonally through the center of the area but was truncated after two blocks by the B&O Railroad.

Streetscape designs should be developed and evaluated in relation to the 10th Street promenade design study and to existing urban design projects under study, such as the Southwest Waterfront redevelopment. Designs should repair the isolated and disconnected condition of this area by emphasizing pedestrian and vehicular connections and improving pedestrian circulation patterns. Streetscape design has the potential to unify the appearance of this area more than any other within the Monumental Core.











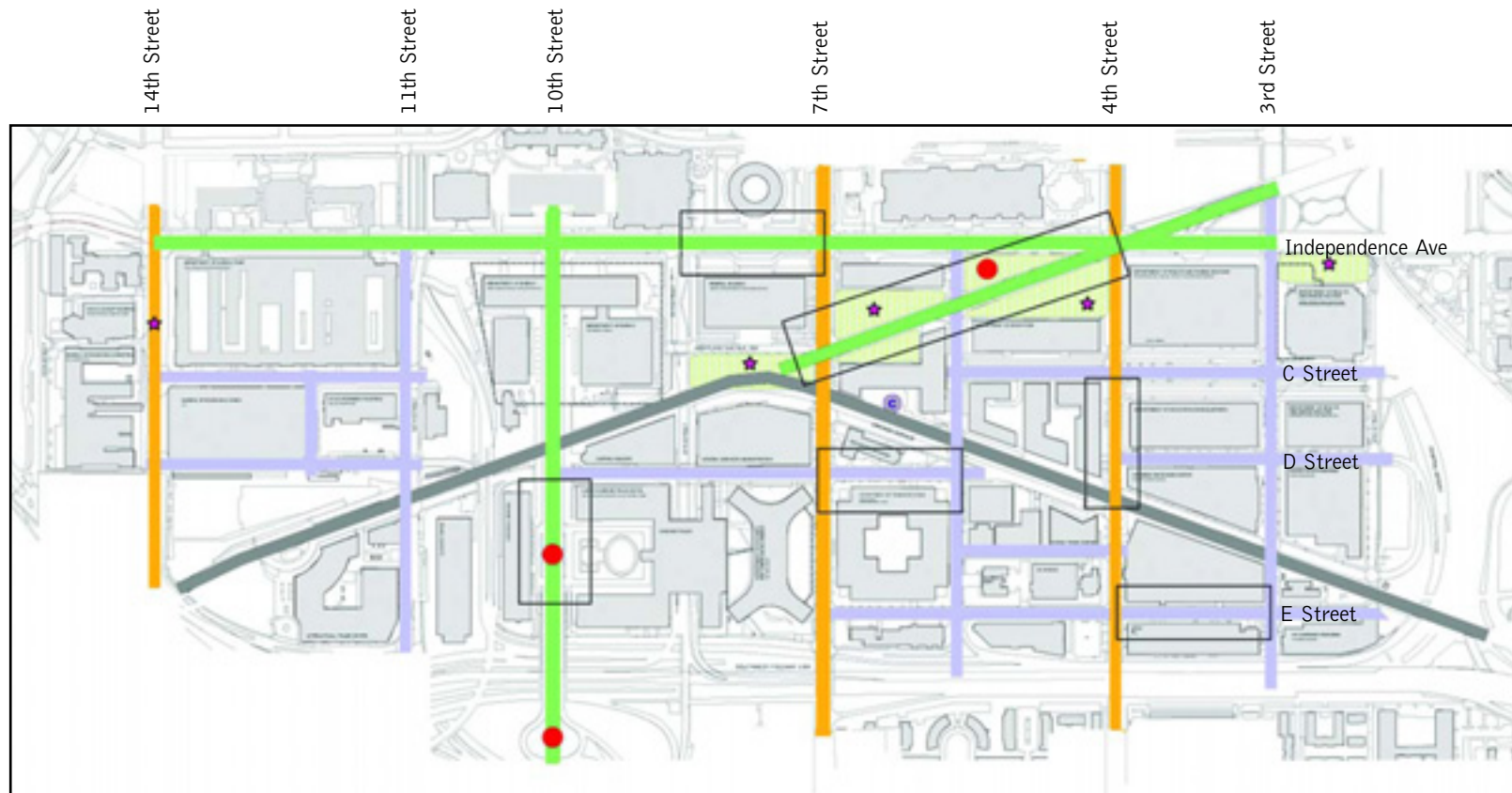
Maryland Avenue looking toward the U.S. Capitol



E Street looking toward the U.S. Capitol

STREET TYPOLOGY LEGEND

-  Memorial Site
-  Special Project
-  Custom Design
-  Monumental Avenue
-  Through Street
-  Grid Street
-  Railroad
-  Sample Application Area



SOUTHWEST FEDERAL STREET TYPOLOGY PLAN

The provision of perimeter security measures in the Southwest Federal Center area is complicated by several different street and building typologies. Many of the buildings with a high-level security requirement have minimum setbacks and may require curb or parking lane removal to provide a minimum acceptable standoff distance. Given that several of the north-south streets are major connector streets, a detailed traffic analysis and parking assessment is required prior to the removal of curb or parking lanes in this area. These studies must identify appropriate mitigation strategies.

The Southwest Federal Center area is characterized by the following:

- 70,000 people work in the area daily.
- Most of the buildings are either owned or leased by the federal government.
- Architecture is not uniform in scale, style, or quality.
- Building setbacks are limited and varied.
- The area suffers from a lack of streetscape design, landscaping, and pedestrian amenities.
- The quality of the environment is perceived negatively.
- There are few through streets and most are only a few blocks in length.
- Parking is extremely limited.
- Circulation is difficult and uncoordinated.
- Many tourists form their first impression of Washington when arriving by metro in this area.

Given these characteristics, particularly the conflicting combination of minimum setbacks and existing traffic and parking limitations, creative design solutions and strategies to improve safety, mobility, parking, and aesthetics must be developed and implemented.

INDEPENDENCE AVENUE

Independence Avenue frames the southern edge of the Mall and is one of the Capital's major ceremonial avenues. Although it shares some of the grand character of Constitution Avenue, Independence Avenue has been neglected and weakened as a ceremonial street. Streetscape design and application of streetscape elements can strengthen the character of this avenue as a ceremonial street and gateway.

MARYLAND AVENUE

Maryland Avenue is currently in a state of neglect. New streetscape design has the potential to enhance, strengthen, and improve the prominence of this important L'Enfant street.

THE 10TH STREET PROMENADE

In L'Enfant's Plan, 10th Street was intended to link the Mall with the waterfront and to be a significant axis. L'Enfant Plaza and the 10th Street promenade were the centerpiece of Washington's Southwest redevelopment. The National Capital Planning Commission's recent *Memorials and Museums Master Plan* identifies a commemorative opportunity on this promenade with a major memorial site at the overlook. The District of Columbia is undertaking a transportation and urban design study of 10th Street. Streetscape design can re-establish the pedestrian character of this street while also anticipating a future connection to the Southwest Waterfront.

4TH, 7TH AND 14TH STREETS, SW

These north-south streets serve as both vehicular and pedestrian corridors. The design and application of streetscape elements, including security components, can improve both driver and pedestrian experiences on these streets and enable important connections to the city beyond.

THE BALTIMORE AND OHIO (B&O) RAILROAD

The B&O Railroad currently runs on the rights-of-way of both Maryland and Virginia Avenues, bifurcating the area, disrupting the continuity of streets and ultimately impeding mobility within and throughout the Southwest Federal Center. Ceremonial axes that should provide orientation and hierarchy are blocked, and the perception of the area is diminished. In the Legacy Plan, In NCPC's framework plan for Washington's Monumental Core, *Extending the Legacy: Planning America's Capital for the 21st Century*, the Commission recommends relocation of the railroad from this area. Such relocation could re-establish both avenues.

Design Framework

The streetscape designs proposed for the Southwest Federal Center are intended to establish a coherent design identity for this area, while at the same time improving pedestrian and traffic circulation and providing required perimeter security.

Design principles applicable to streetscape designs for the Southwest Federal Center include:

■ IDENTITY

- Introducing streetscape elements unique to the area.
- Reversing the current negative perception of the area.
- Reinforcing the unique character of the predominantly modern buildings.
- Establishing streetscapes that enhance wayfinding.

■ AMENITY

- Mitigating the scale of existing architecture.
- Providing seating and other amenities to enhance the pedestrian experience.
- Increasing the overall aesthetic quality of the area through the addition of street trees and the design and placement of plantings, street furniture, and lighting.

■ TRANSPORTATION

- Establishing a sense of hierarchy among existing streets.
- Re-establishing north-south connections.
- Developing solutions for the provision of additional parking in the area.
- Improving circulation for pedestrians.
- Developing a Circulator vehicle service.

■ SECURITY

- Improving circulation and escape routes.
- Providing the maximum possible security standoff distances.
- Identifying appropriate security components for application in this area.

Streetscape design concepts in the Southwest Federal Center include a green streetscape design concept proposed for Maryland and Virginia Avenues, and variations of planter and hardened bench concepts, applied to the grid streets in this area.

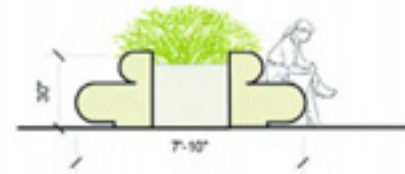
Where security is proposed to be located at the curb, existing trees will almost certainly be impacted. Given that many trees are currently missing, or of questionable health, a new street tree planting effort is integral to all of the streetscape design concepts proposed. This will also help soften the area and provide consistency and identity to these streets.

■ UNIVERSAL APPLICATION

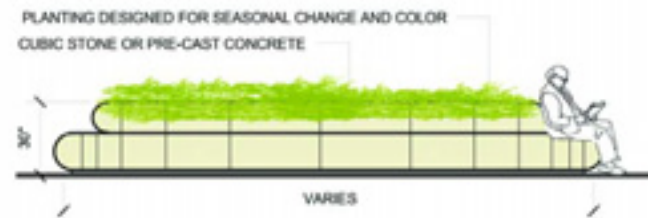
The following security components are recommended to be applied throughout the Southwest Federal Center area:

- Bollards at entries and corners (to maintain the free movement of pedestrians).
- Removable bollards, as required, for emergency vehicle and service access.
- Retractable bollards and/or gate arms at vehicle/service or parking garage entrances. (Gate arms are used where volumes preclude the use of retractable bollards.)
- Guardhouses at vehicular entrances (custom designed to be compatible with the building architecture).
- Curb or parking lane removal (where required standoff cannot be achieved due to limited setback).
- Traffic calming devices (to reduce the speed of vehicles).

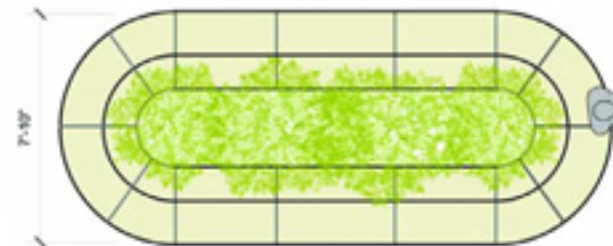
Elevation



Section



Plan



SIMILAR PLANTER



PLANTER STREETScape ELEMENT

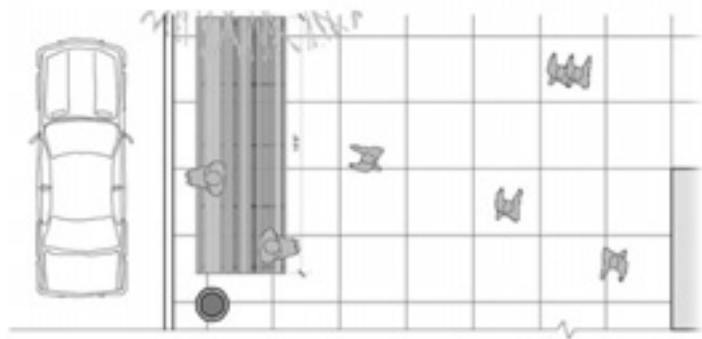
Elevation



Section



Plan



BENCH STREETScape ELEMENT

■ MARYLAND AVENUE

Maryland Avenue, and those blocks of Virginia Avenue that parallel the B&O Railroad tracks, are proposed to incorporate a green streetscape design. The green design solution consists of a line of bollards between the street trees. New plantings are introduced in the tree planting beds to soften the introduction of these security elements. Bollards are also incorporated on the sidewalk between the planting beds, at building entrances, and at intersection corners. Hardened benches are used at the ends of the planting beds to emphasize the entrance plazas.

■ THE 10TH STREET PROMENADE

The proposed streetscape design for the 10th Street promenade uses seat planters to create an improved pedestrian scale and to formalize and beautify the street. The planter streetscape design concept incorporates large round and linear pre-cast concrete or stone seat planters on the sidewalk on both sides of the street. Existing drop-off or pull-out lanes are removed and replaced with sidewalk so that these planters maintain a consistent line at the edge of the street. Stainless steel bollards are used in front of the major entrances to buildings and on the street corners.

Because 10th Street is built on structure, large trees cannot be introduced into this streetscape, but large shrubs such as crepe myrtle are recommended to provide scale and elegance. The green median strip also provides an opportunity for the location and design of future memorials.

Special conditions exist in association with the Department of Energy that will require custom design solutions in this area.

■ GRID STREETS

Variations of the planter streetscape design concept are applicable to all of the grid streets within the Southwest Federal Center area. Specially designed seat planters and benches are recommended as the primary security components. Streetscape designs may vary in the design and application of these elements. For most streets, these components are proposed to be located in the removed curb or parking lane. If curb lanes are retained, then the alternative streetscape design concept should be applied.

As illustrated on 4th and D Streets, SW, an alternative streetscape is proposed that does not require the removal of a parking lane. Security elements are located at the curb and, due to the likely damage to existing street trees in this area, new street trees are recommended throughout. A rhythm of new bollards, street lights, seat bollards, benches, and trash cans provide security infill between the trees.

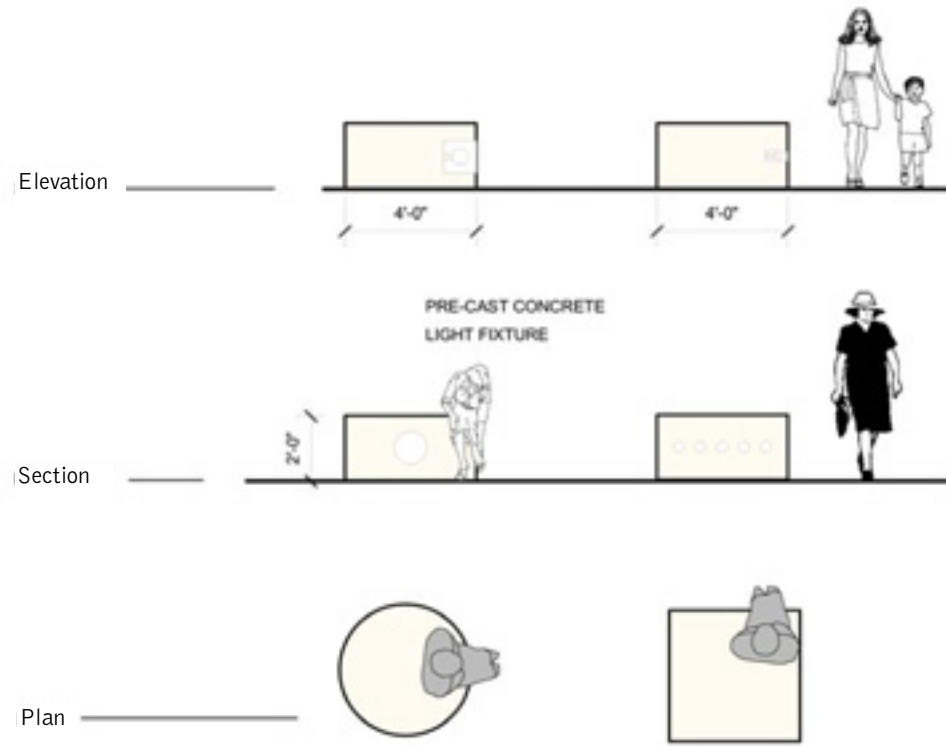
The Bureau of Engraving and Printing and the Holocaust Museum have designed and implemented permanent security measures on 14th and 15th Streets. Future permanent security improvements on these streets should reflect the design of these existing solutions.

Sample Applications

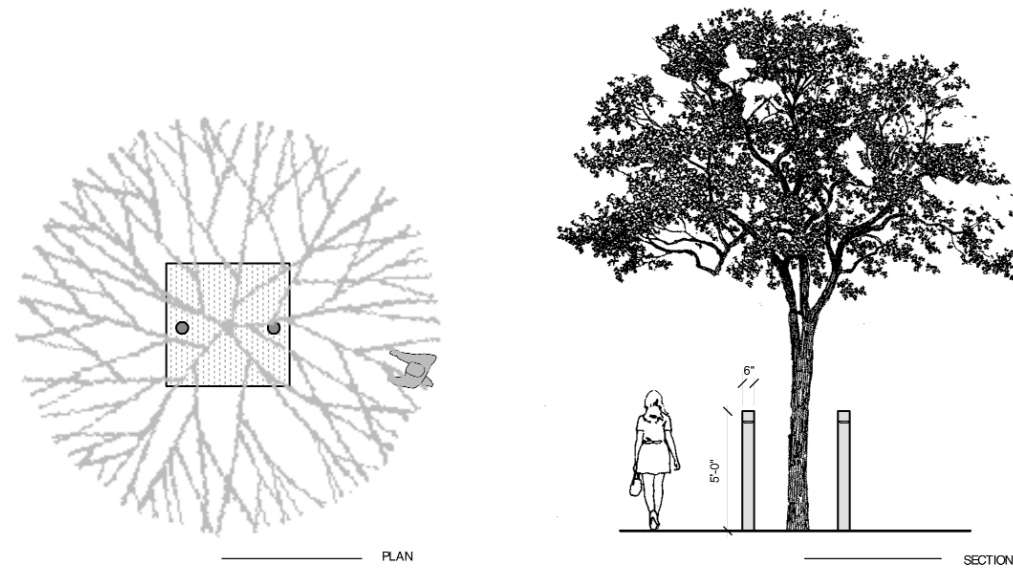
Illustrated streetscape security design solutions in the Southwest Federal Center include various applications of the planter and bench design concepts as illustrated: on the 10th Street promenade (adjacent to L'Enfant Plaza); on 4th Street, between D Street and the B&O Railroad overpass; on D Street, between 7th and 9th Streets; and on E Street, between 3rd and 4th Streets. The green design is illustrated on Maryland Avenue.

INDEPENDENCE AVENUE

Reference Constitution and Independence Avenue Section of the Plan.



BOLLARD STREETScape ELEMENTS

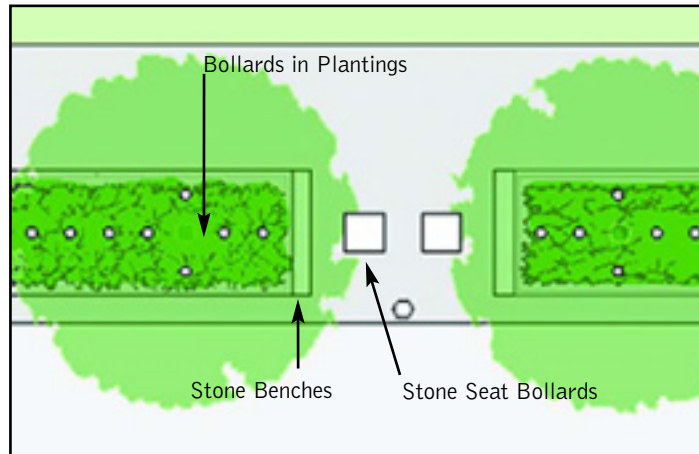


TREE AND BOLLARD STREETScape ELEMENT

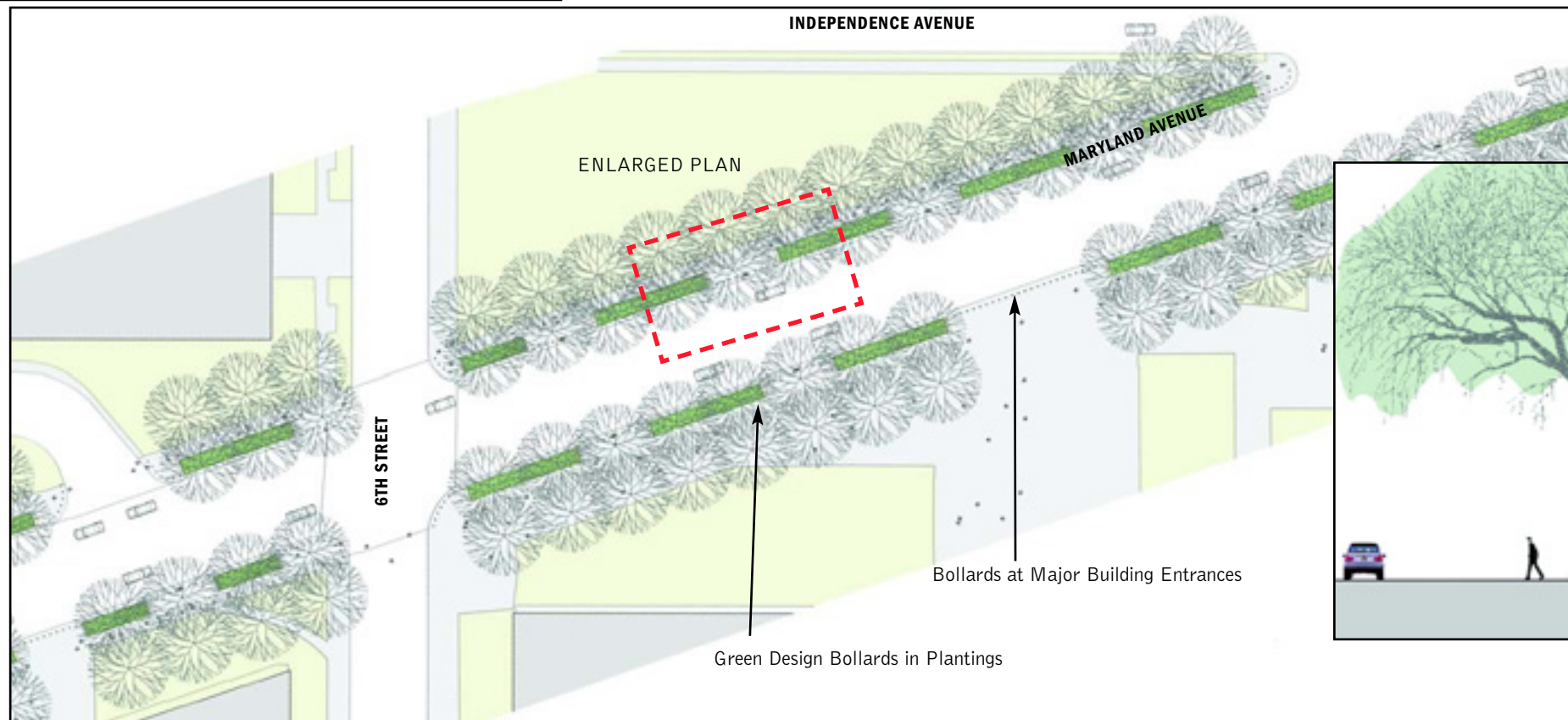
Maryland Avenue Streetscape Design

MARYLAND AVENUE

The application of the green streetscape design illustrated for Maryland Avenue includes tree-planting beds with a double allee of trees and a line of bollards. New plantings are introduced to soften the introduction of these security elements. Bollards are also incorporated on the sidewalk between the planting beds, at building entrances, and at intersection corners. Benches are used at the ends of the planting beds to emphasize entrance plazas.



**ENLARGED PLAN - GREEN DESIGN
(BOLLARDS IN PLANTINGS)**



MARYLAND AVENUE SAMPLE APPLICATION - GREEN STREETScape DESIGN



Proposed Maryland Avenue streetscape design looking toward the U.S. Capitol

10th Street, SW – Sample Application – Planter Design

10TH STREET, SW

The streetscape design illustrated on 10th Street is one variation of the planter design concept that incorporates a continuous row of seat planters at the curb on both sides of the street. The predominant planter is a 9' 6"-wide by approximately 24'-long seat planter with 9' 6" round seat planters used to create a rhythm interrupted only by bollards at the major public entrance to the U.S. Postal Headquarters and on the corners of the entrance and exit drives to L'Enfant Plaza. Existing street lights will remain.

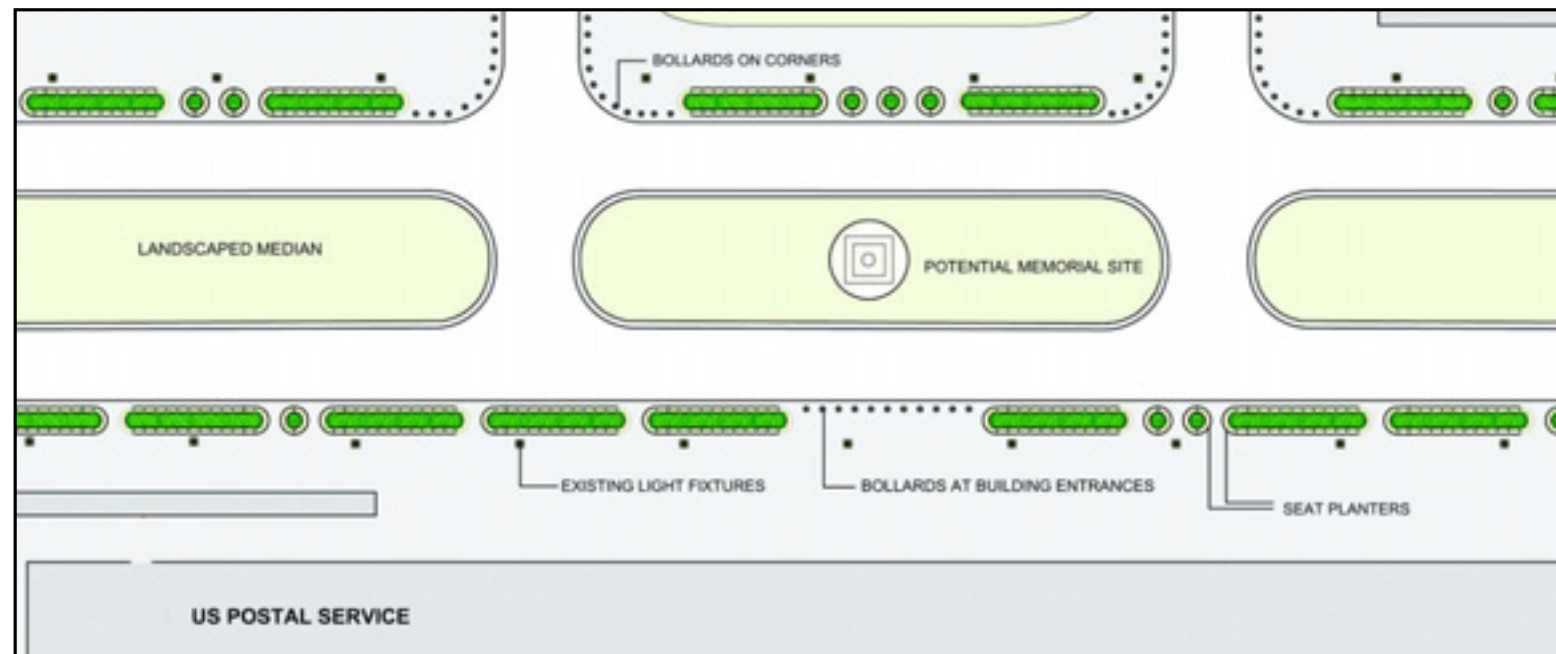
In addition, a median is introduced into the existing roadway. This median is illustrated as a landscaped park and may include the location of a future memorial. The median is not required for security, and the design of the median may vary in width and location. Coordination is required with the District's urban design study of this street. A study of the condition and capacity of the existing structure is also required prior to the design and construction of any improvements.

Streetscape elements illustrated for 10th Street include:

- Pre-cast concrete or stone seat planter (2' 6" high, 9' 6" diameter), 42" between planters
- Pre-cast concrete or stone seat planter (2' 6" high, 9' 6" wide, 24' 0" long), 42" between planters
- Stainless steel cylindrical bollard (2' 6" high, 8" diameter, 4' 0" on center)
- Median, landscape treatment may vary



TYPICAL ELEVATION



10TH STREET, SW - SAMPLE APPLICATION PLAN - PLANTER STREETScape DESIGN



Existing conditions

Proposed 10th Street, SW
streetscape design looking south



E Street, SW

E STREET, SW

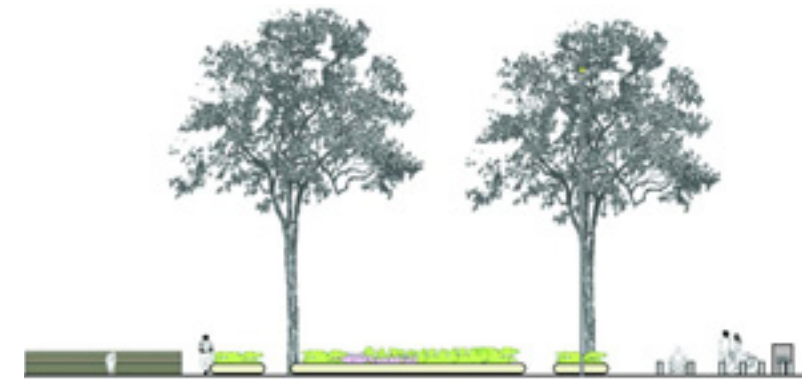
The streetscape design for E Street, between 3rd and 4th Streets, illustrates a security barrier on only one side of the street (adjacent to NASA). Although most streets in the Southwest Federal Center will require security on both sides, there is no need to install perimeter security where it is not required.

The illustrated streetscape security design incorporates a combination of both round and long seat planters and hardened benches at the curb of the expanded sidewalk (over the removed parking lane). Existing street trees are maintained. Lane removal and location of the security perimeter at the relocated curb achieve the best possible security standoff on this street. This streetscape design also helps reduce the scale of the street, slows traffic, and improves the pedestrian environment. Plant materials also help develop character and provide beauty.

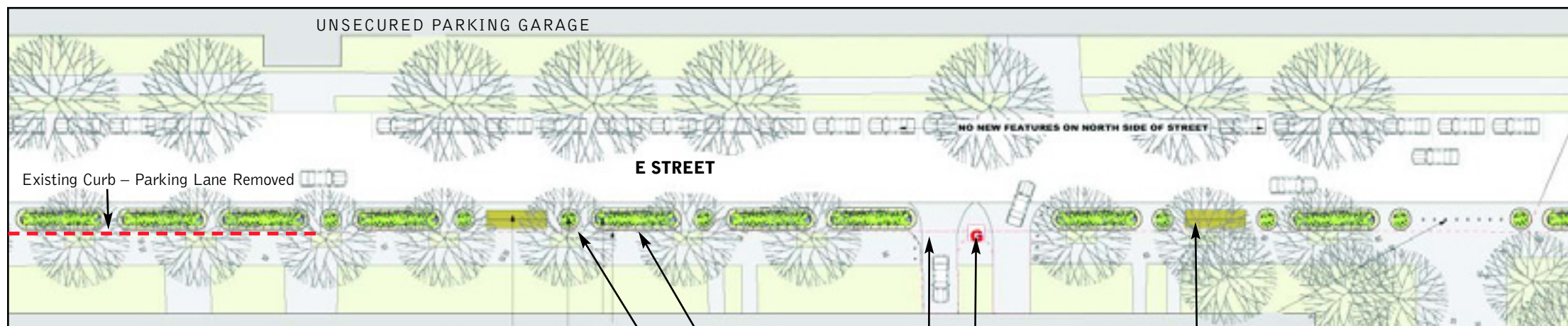
ADDITIONAL DESIGN CONSIDERATIONS

- Given the limited standoff distance that exists throughout the majority of the Southwest Federal Center, proposed security solutions are either at the existing curb or along a new curb within an extended sidewalk to replace the curb (parking) lanes.
- Although curb lane removal and expansion of the sidewalk may provide additional standoff, they should be limited to only those streets where absolutely required.
- All curb lane removals must be undertaken in tandem with a comprehensive program to expand short-term parking opportunities through the development of secure, central parking facilities, and to enhance mobility through implementing the Circulator vehicle.
- Streetscape design and implementation for the 10th Street promenade will require analysis of the structural capacity and condition of this elevated roadway.
- The Department of Energy is unique in its security requirements and will require custom-designed security solutions.
- With its narrow sidewalks on Independence Avenue and 14th Street, the Department of Agriculture will require custom-designed security solutions.

- Future security improvements on 14th Street should reflect the permanent security installed by the Bureau of Printing and Engraving and the Holocaust Museum.
- Proposed custom-designed security components require engineering and testing to ensure that they satisfy security requirements.
- Underground utility locations are yet to be determined.



E STREET, SW - ELEVATION



E STREET, SW - SAMPLE APPLICATION PLAN - PLANTER STREETScape DESIGN

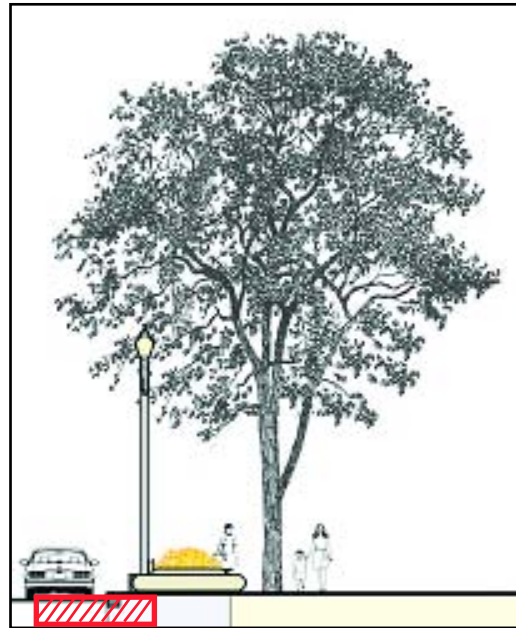


Existing conditions



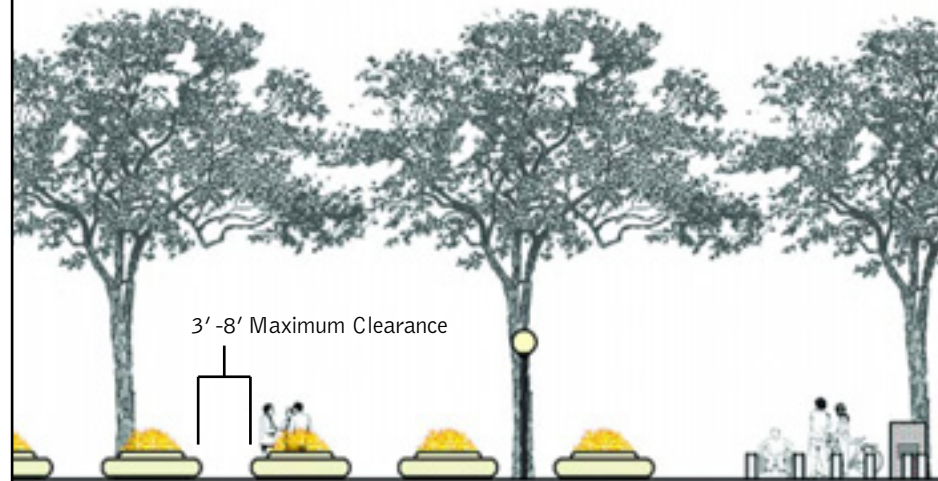
Proposed E Street, SW
streetscape design looking east
(with parking lane removed)

4TH STREET, SW - TYPICAL SECTION



Existing Curb and Parking Lane Removed

4th Street, SW – Proposed Approach



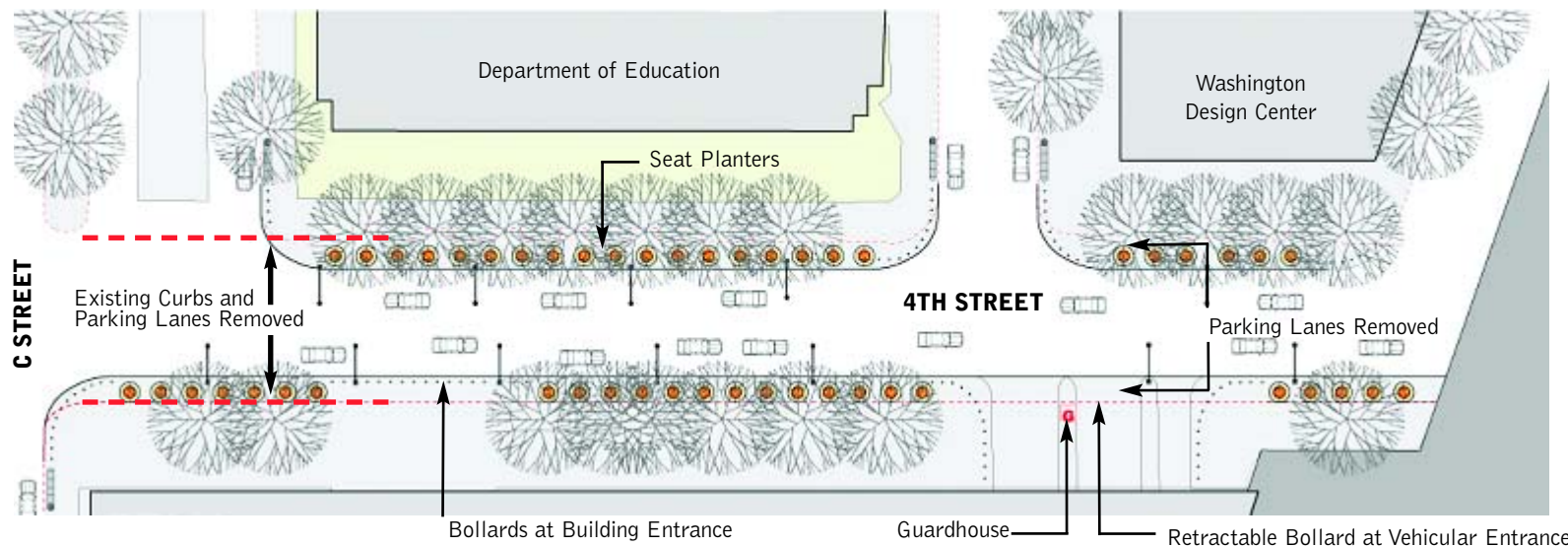
TYPICAL ELEVATION

4TH STREET, SW

The streetscape design illustrated for 4th Street (between C Street and the B&O Railroad overpass) is a variation of the planter design concept. This streetscape incorporates a row of 9' 6" round seat planters located on the extended sidewalk (over the removed curb lane) on both sides of the street. This repetition of planters is intended to provide both identity and consistency to the street. Plant materials are used to develop street character and provide beauty. Stainless steel bollards are located in front of the major entrance to the FEMA building; on the street corners, and at the vehicle service entrances to parking. A guardhouse is also proposed in this location. The existing streetlights are relocated to the new curbs. Existing street trees are retained.

Streetscape elements illustrated for 4th Street include:

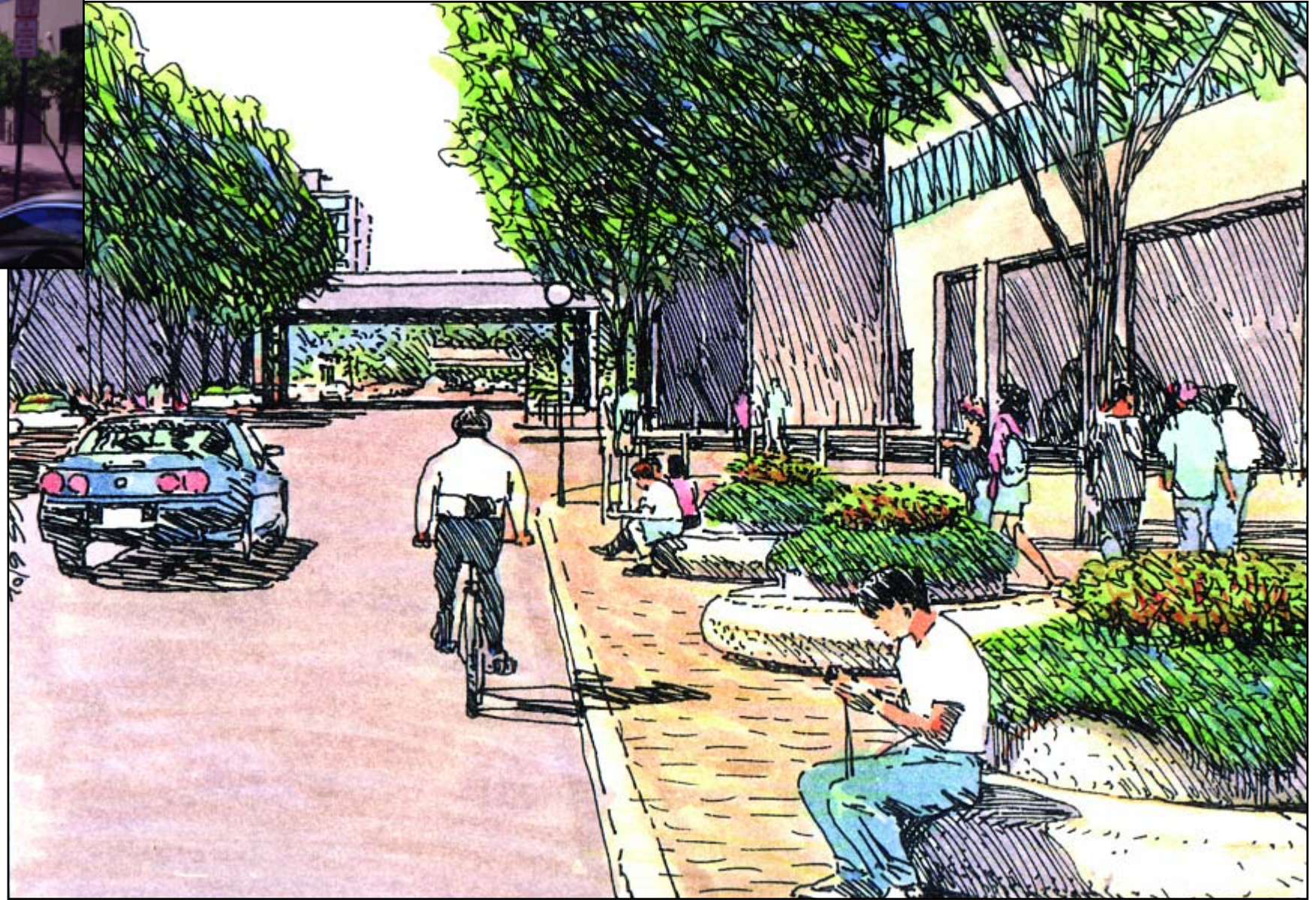
- Curb (parking) lane removal
- Extension of sidewalk (over removed curb lane)
- Pre-cast concrete or stone seat planter (2' 6" high, 9' 6" diameter), 42" between planters
- Stainless steel cylindrical bollard (2' 6" high, 9' 6" diameter, 4' 0" on center)
- Stainless steel cylindrical retractable bollard (2' 6" high, 8" diameter, 4' 0" on center)
- Gate arm, as per manufacturer's specifications
- Guardhouse, custom designed to relate to the building architecture
- Street trees, infill with the existing species, as required



4TH STREET, SW - SAMPLE APPLICATION PLAN - PLANTER STREETScape

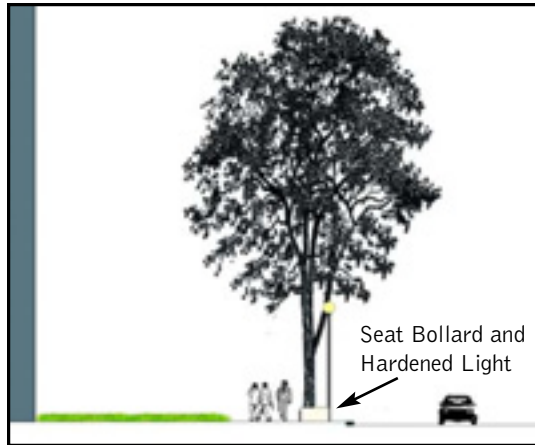


Existing conditions

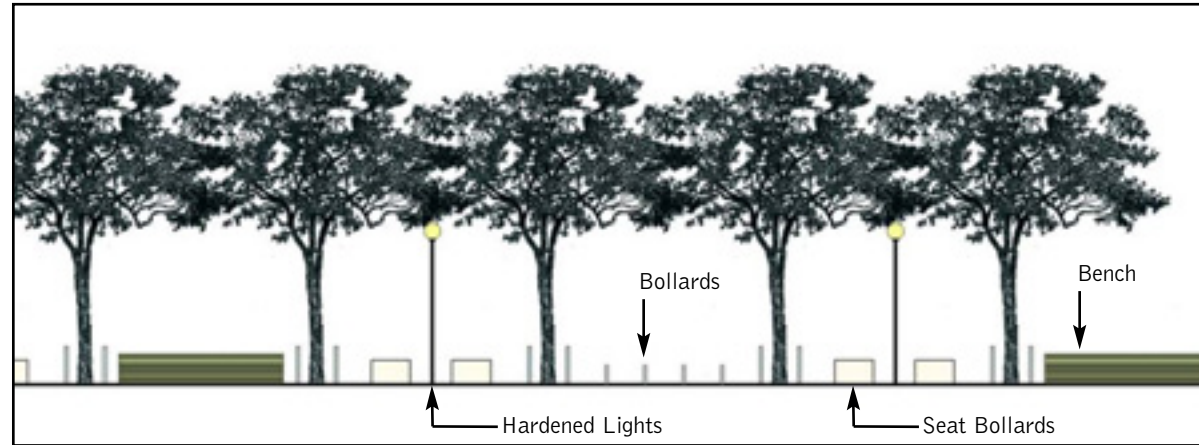


Proposed 4th Street,
SW streetscape design
looking south (parking
lane removed)

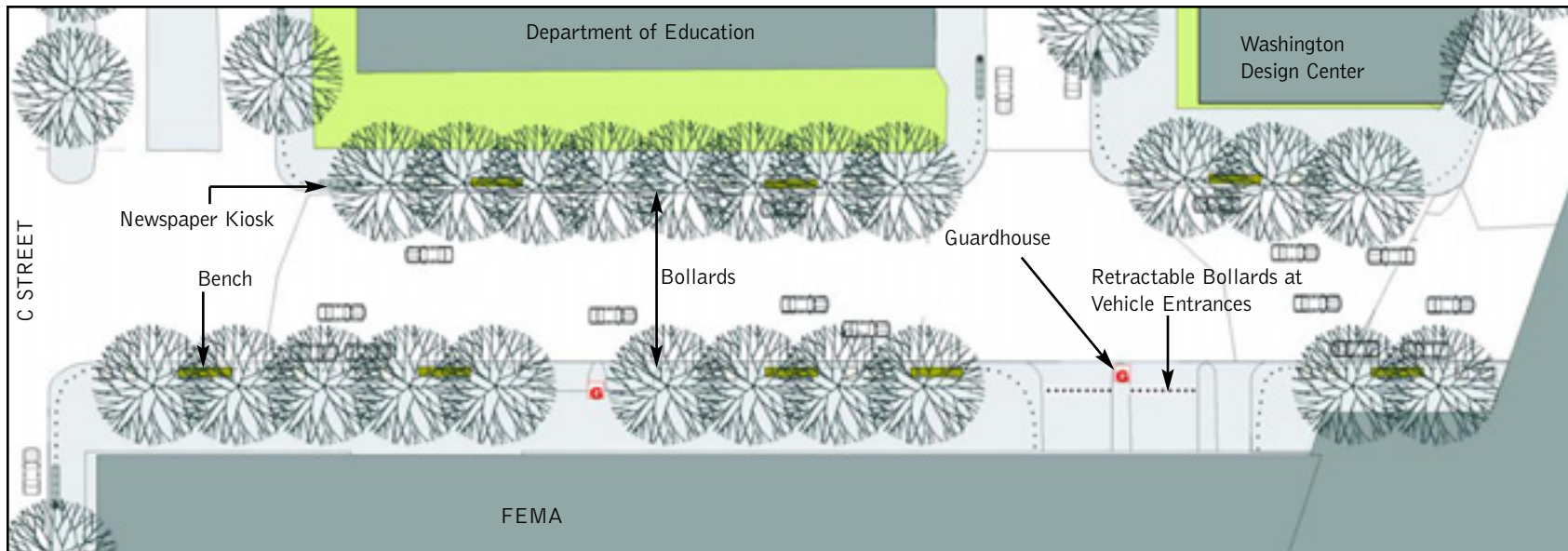
4th Street Alternative Approach



**TYPICAL SECTION - D STREET
BOLLARD AND BENCH DESIGN**



TYPICAL BOLLARD AND BENCH ELEVATION - 4TH STREET, SW



4TH STREET, SW - ALTERNATIVE SAMPLE APPLICATION BOLLARD AND BENCH DESIGN (NO PARKING LANE REMOVED)

D Street, SW – Proposed Approach

D STREET, SW

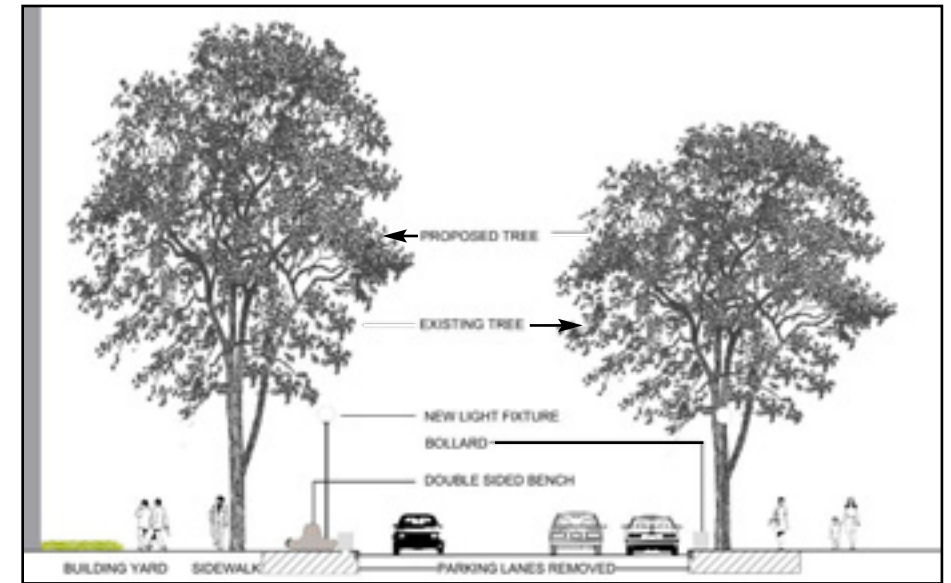
The block of D Street between 7th and 9th Streets, adjacent to GSA's regional headquarters and the Department of Housing and Urban Development (HUD), is illustrated as an example of the application of the Southwest Federal Center area's streetscape elements. The curb/parking lane is removed on both sides of the street. The security barrier on the GSA side incorporates a row of custom-designed hardened benches with bollards placed between the benches and in front of the main public entrance to the building. The HUD-side security barrier incorporates a row of four-foot diameter pre-cast concrete or stone seat bollards. The typical use of stainless steel bollards on street corners and at vehicle/service entrances is also included. In that few trees currently exist in the narrow sidewalk on this side of the street, new street trees are shown in the widened sidewalk. These trees will help unify the street.

This streetscape illustration is representative of the application of these streetscape elements to some of the varying conditions that exist within the Southwest Federal Center, e.g., the narrow sidewalk and block-long building wall of the GSA building and the contrasting building setback and large ground level plaza of the HUD building.

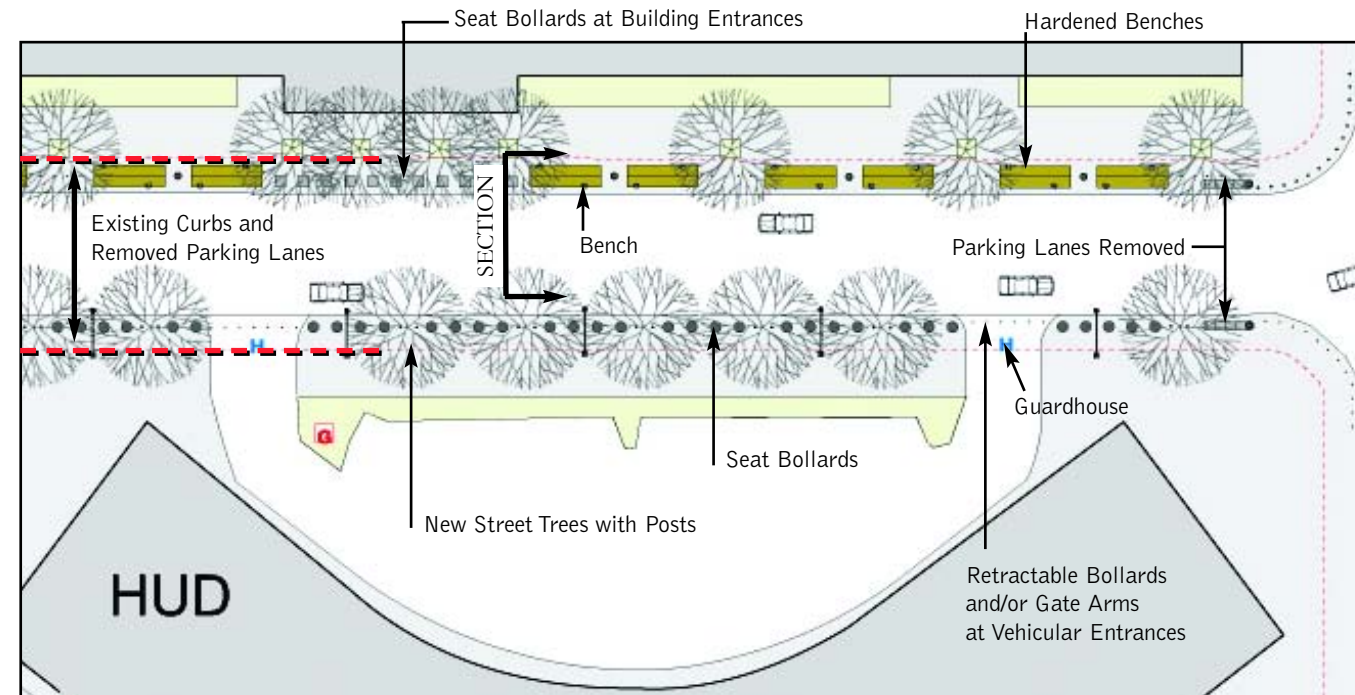
Streetscape elements illustrated for D Street include:

- Curb (parking) lane removal
- Extension of sidewalk (over removed curb lane)
- Metal bench (3' 2" high, 15' 6" long), wood or metal slats; one sided 3' 0" wide; two sided 6' 0" wide

- Pre-cast concrete or stone seat bollard (2' 6" high, 4' 0" diameter), 42" between bollards
- Pre-cast concrete or stone seat bollard (2' 6" high, 4' 0" square), 42" between bollards
- Stainless steel cylindrical bollard (3' 0" high, 8" diameter, 4' 0" on center)
- Stainless steel cylindrical retractable bollard (3' 0" high, 8" diameter, 4' 0" on center)
- Gate arm, as per manufacturer's specifications
- Guardhouse, custom designed to relate to the building architecture
- Street trees (8" caliper oak), new and infill as required



TYPICAL BENCH AND BOLLARD SECTION



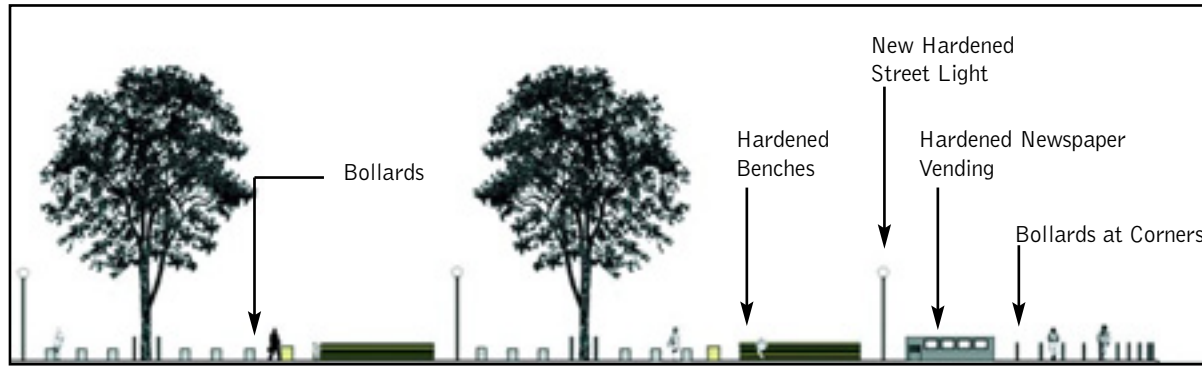
D STREET, SW - SAMPLE PLAN APPLICATION - BENCH AND BOLLARD DESIGN



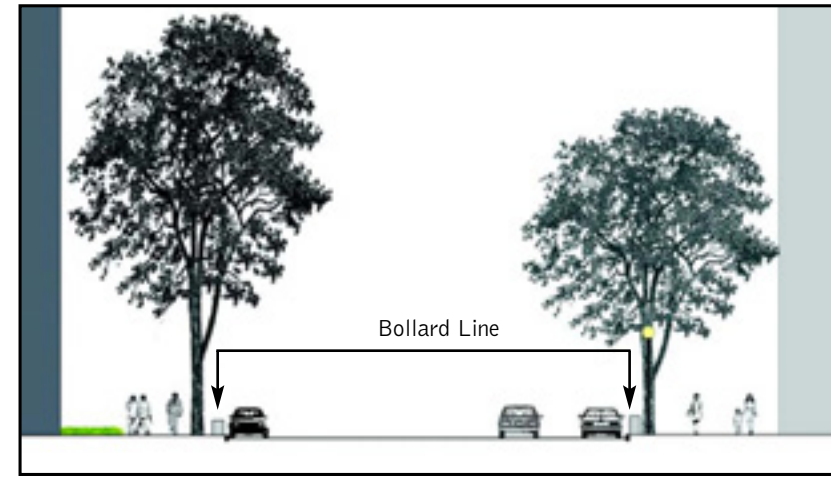
Illustration: Christopher Grubbs

Proposed D Street, SW streetscape design looking west toward Department of Housing and Urban Development (with parking lane removed)

D Street Alternate Approach (without curb lane removal)



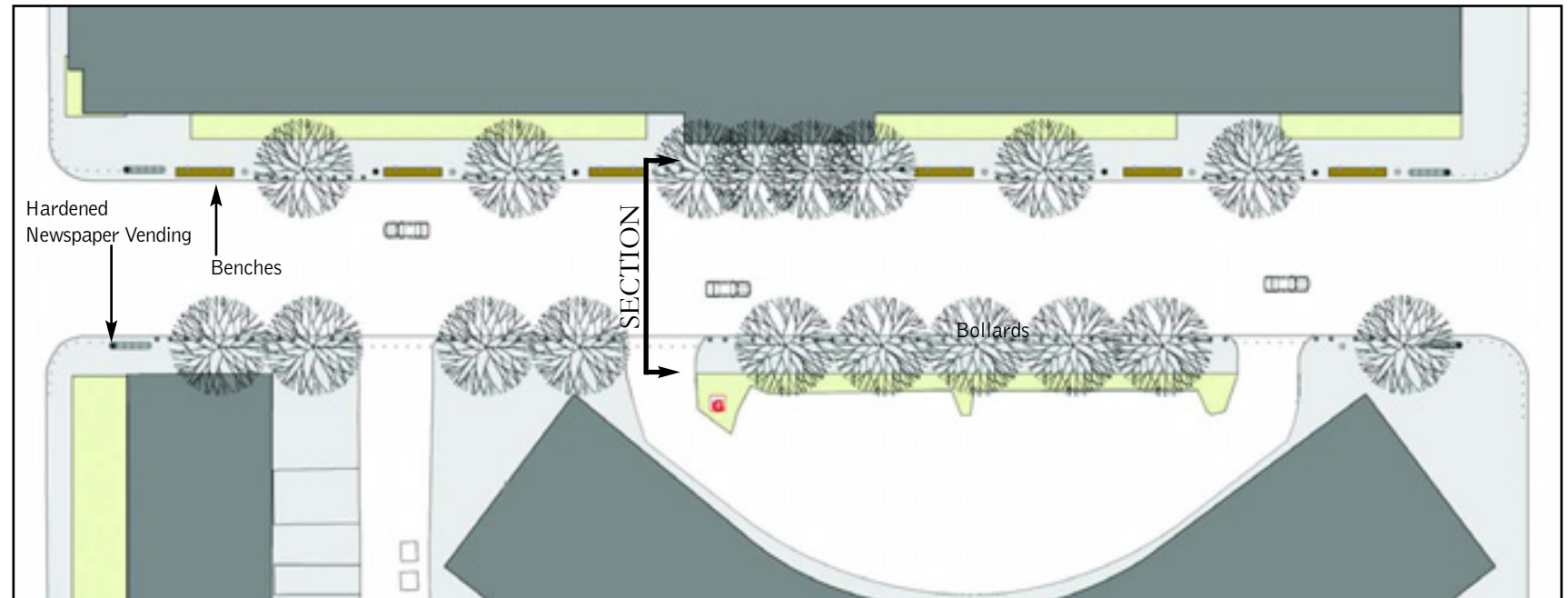
D STREET, SW - TYPICAL BOLLARD AND BENCH DESIGN - ELEVATION



TYPICAL SECTION

INDEPENDENCE AVENUE

The Independence Avenue streetscape design concept incorporates a combination of plinth wall and custom-designed components. Stainless steel bollards are located on the street corners. Pre-cast or stone benches and seat bollards are located at building entrances. (See the Constitution and Independence Avenue Section of the Plan for additional information.)



D STREET, SW ALTERNATIVE SAMPLE APPLICATION - BENCH AND BOLLARD DESIGN (NO PARKING LANE REMOVAL)

Downtown

Historic Character



Typical downtown sidewalks with tree planting beds and other streetscape elements, including temporary security elements

The Downtown, a contextual area in the Northwest quadrant of the city, is roughly bounded by Pennsylvania Avenue on the south, Massachusetts Avenue on the north, and 3rd Street on the east to 25th Street on the west. As is typical in an area that has developed over time, the variety of styles, scales, and materials presents lively and differentiated street frontages. The many historic buildings in the Downtown, varying in the quality and interest of their architecture, are associated with a range of historical events and persons and the development of the local city.

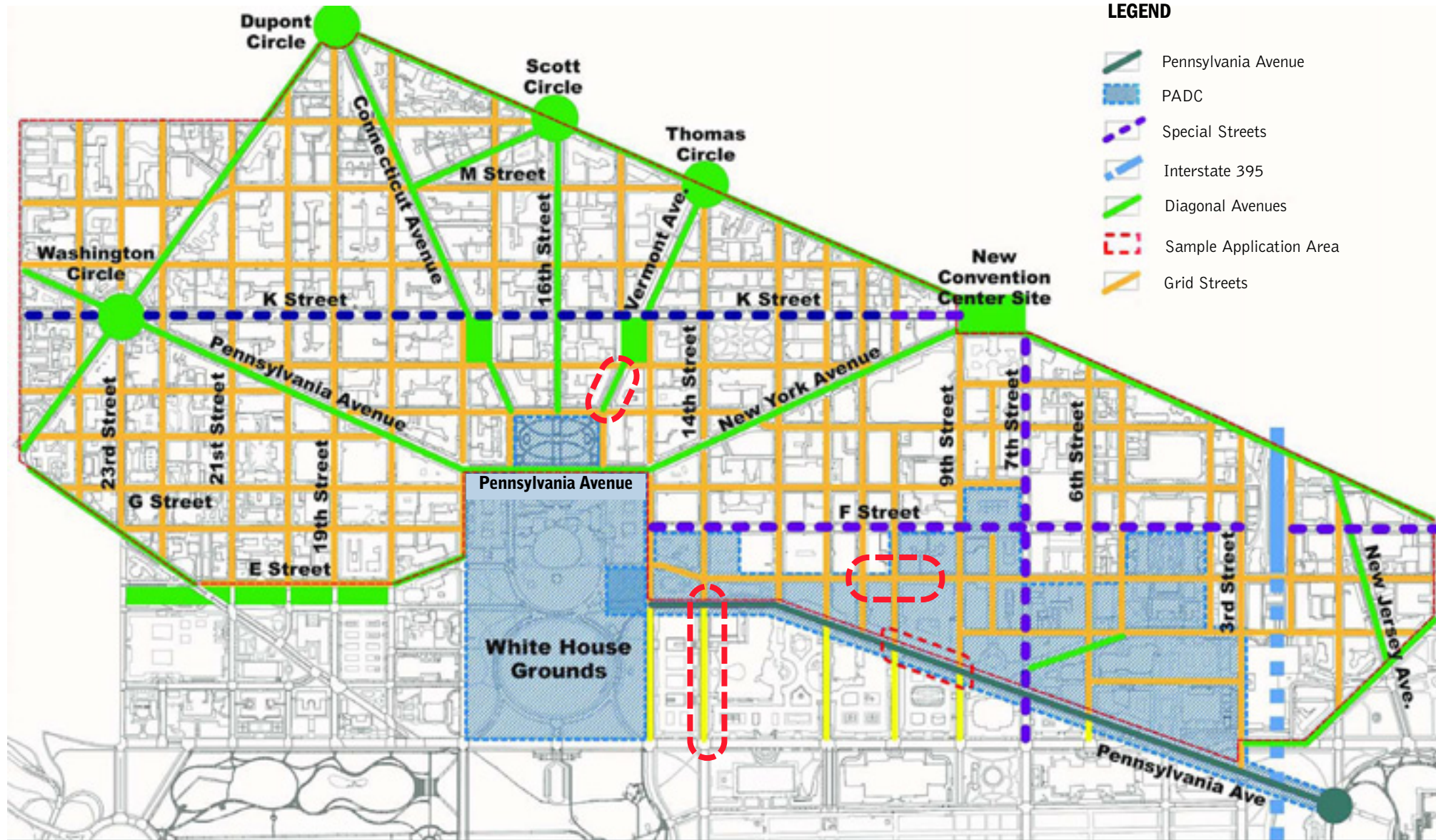
The area began to develop, if slowly, as soon as the seat of government was established. Some of the oldest surviving structures in the city are included in the Downtown Historic District, in the 800 block of F Street, and as individually designated buildings. The Foggy Bottom Historic District reflects the modest neighborhood that developed near the Potomac River. The earliest surviving tall buildings, the historic department stores, and historic sites such as Ford's Theater are located in the Downtown. The federal government established an early presence with the Old City Hall, the Patent Office, and the General Post Office.

The western portion of the Downtown, especially along K Street, was redeveloped in the mid-20th century as residential buildings were demolished to make way for large commercial buildings. Although many churches moved out of the Downtown in the early decades of the last century, some prominent examples remain. Many of the elegant row houses around Dupont Circle have been preserved, but rapid growth throughout the 20th century has brought great change to the Circle itself. To the east, the residential scale of Logan Circle and its surrounding streets has been preserved.

Existing Conditions

Although a number of streetscape components, such as street lighting, tree species, and curb materials are standardized throughout the Downtown, other streetscape standards for variations in the elements of street furniture create character definition throughout the area. For example, the Downtown Business Improvement District includes neighborhood streetscape overlays with their own character and context for: Judiciary Square, Chinatown, and the 15th Street Financial and Downtown Historic areas. The Business Improvement District has also designated special streetscapes for the K, F and 7th Special Streets.

DOWNTOWN STREET TYPOLOGY AND KEY PLAN



DOWNTOWN STREET TYPOLOGY AND KEY PLAN



Design Framework

The Downtown is unique in that there are a number of federal buildings located in close proximity to private buildings; however only a few of these federal facilities will likely require perimeter security. The Task Force recognizes the distinction between federally owned and federally leased space. Where security has been determined as necessary for federally owned facilities, agencies are in the process of installing perimeter measures on an interim basis. For leased space, the focus has been on operational procedures. It is important, given the transitional nature of lease agreements, that the federal government not require perimeter security around all federally leased space.

Streetscape designs proposed for the Downtown are intended to reinforce the existing streetscape. Although the addition of security components may only be needed on a few blocks, or a portion of a block, it is the intent that the look of the streetscape will not vary significantly among public and private properties. Streetscape elements of the DCDOT, Business Improvement District, and/or other applicable streetscape standards will be maintained throughout the area and hardened only where security needs demand. The Federal Bureau of Investigation could be used as a Downtown demonstration project to guide future implementation in this area.

A hierarchy of streetscape security design solutions is established by the combination of varying setbacks and security requirements of the buildings located on the avenues and grid streets in the Downtown.

■ Grid and Special Streets

The Downtown city grid streets and their sidewalks tend to be narrower than those of the avenues. Proposed streetscape designs applicable to these grid streets incorporate hardened components of the Business Improvement District's streetscape design elements that include street lighting, tree fence enclosures, benches, bicycle racks, trash and newspaper vending containers, and the introduction of bollards. Special Street streetscape designs may also incorporate hardened designs for special signage, kiosks, and a specially designed café enclosure (fence wall). Security requirements typically require that the security barrier be at the curb.

■ Diagonal Avenues

Diagonal Avenues typically have broad rights-of-way that can accommodate landscape-oriented streetscapes with widened street tree panels and sidewalks. The proposed Diagonal Avenue streetscape design incorporates a tree enclosure fence wall at the back of the planting strip, next to the sidewalk. Where necessary to ensure the required security spacing, bollards will connect between fence segments. Hardened benches are also employed.

Sample Applications

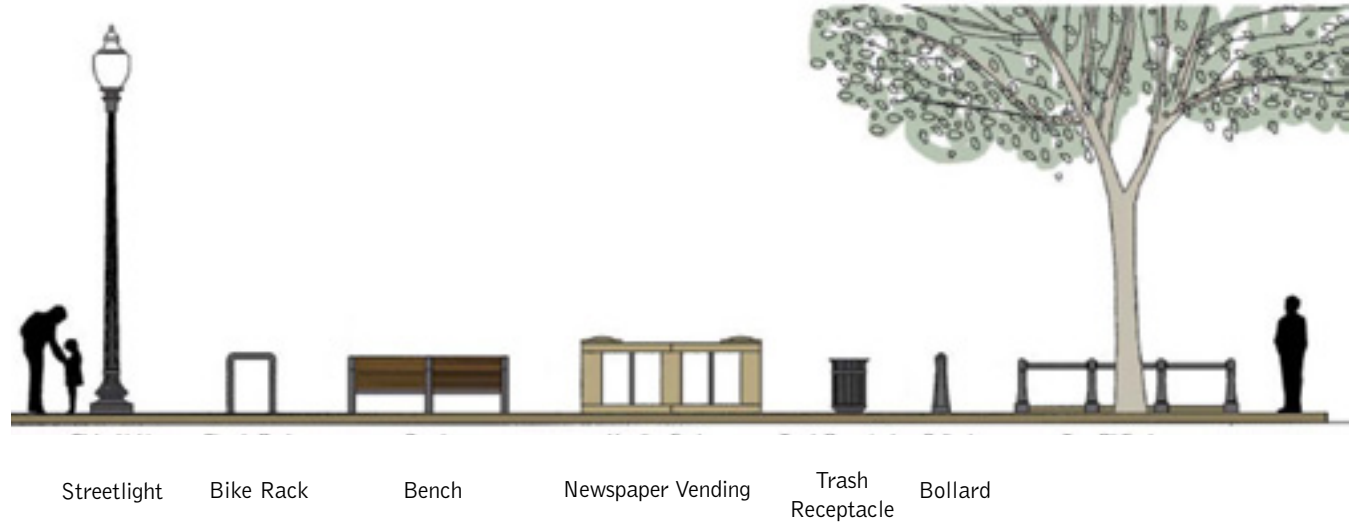
Typical streetscape security design solutions have been illustrated for each of the street typologies. A typical Grid Street streetscape design is illustrated on E Street, between 9th and 10th Streets, NW. A block of F Street, NW is illustrated as the typical Special Street, and a typical Diagonal Avenue streetscape design is illustrated on the block of Vermont Avenue north of K Street, NW.

Grid and Special Streets

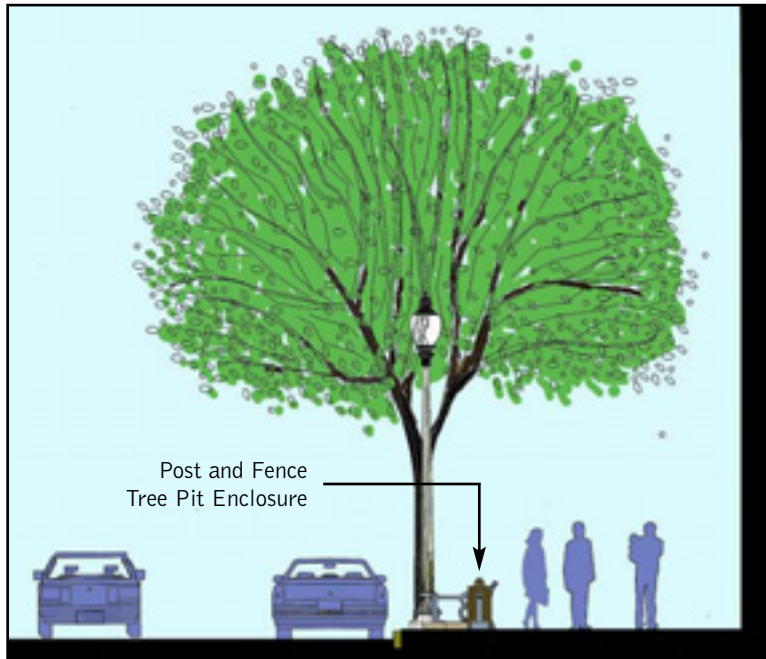
The Grid Street streetscape design concept, as previously described, utilizes hardened components of the Downtown Business Improvement District's (BID) streetscape elements, including: street light standards, tree fence enclosures, benches, bicycle racks, trash and newspaper vending containers, and the introduction of bollards. The Special Street streetscape design includes the above elements and also may incorporate hardened special signage, kiosks, and a café enclosure (fence/wall). These are described below:

TYPICAL GRID STREET STREETSCAPE

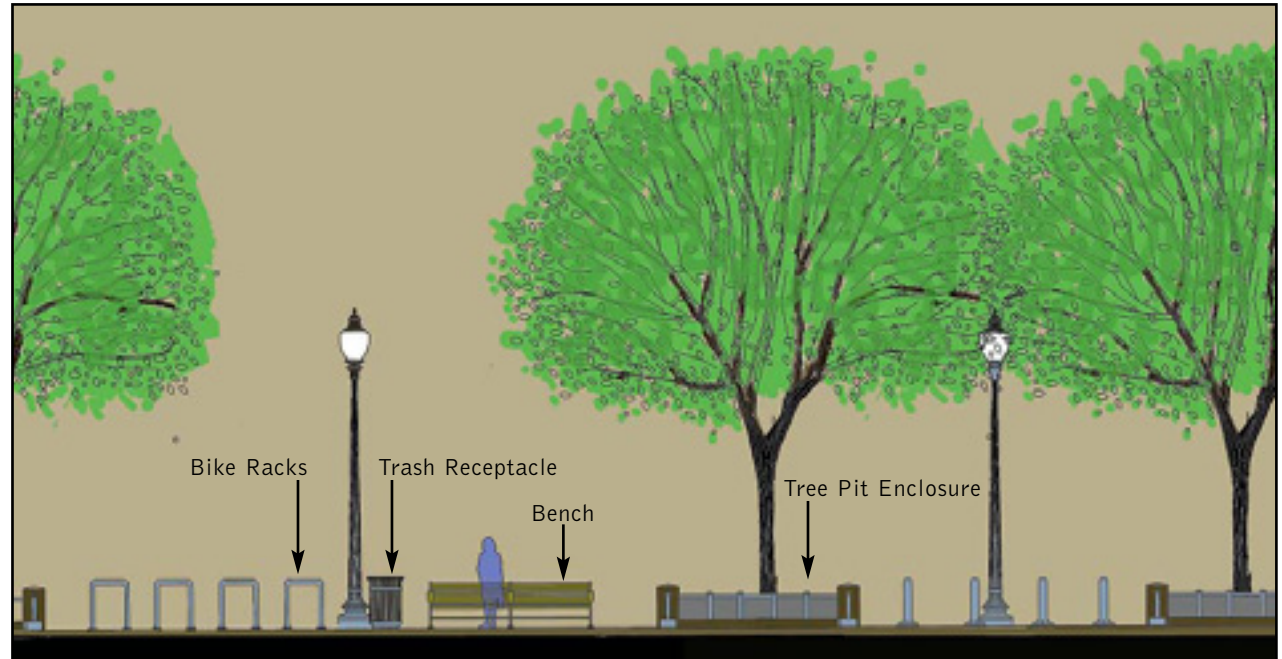
- Washington Globe light at approximately 40 feet on-center
- Street trees at approximately 30 feet on-center
- Tree enclosure fence/wall (on the outside of the tree planting bed)
- Bench (Downtown BID)
- Bike rack (Downtown BID)
- Trash container (Downtown BID)
- Newspaper condo (Downtown BID)



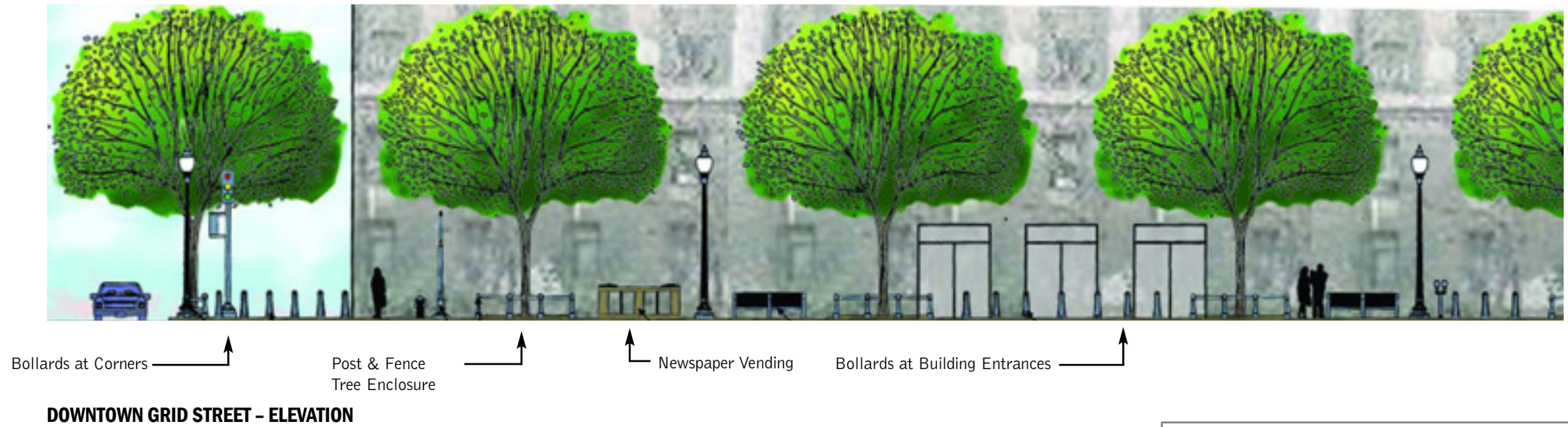
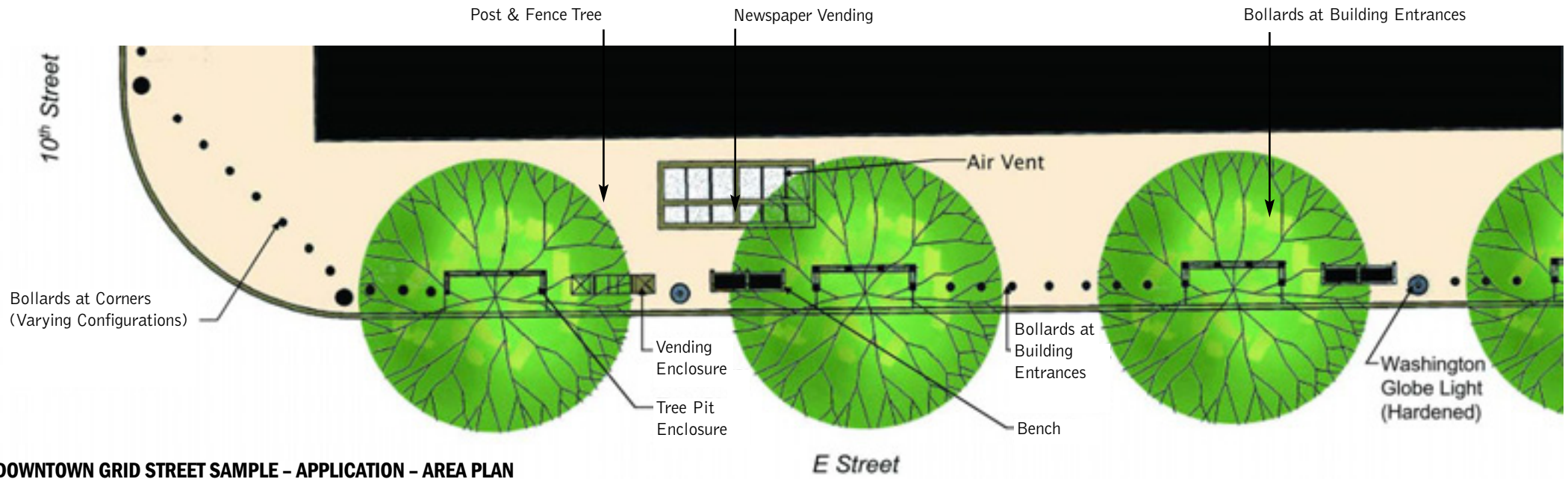
DOWNTOWN GRID STREET - HARDENED STREET FURNITURE



GRID STREET - TYPICAL SECTION

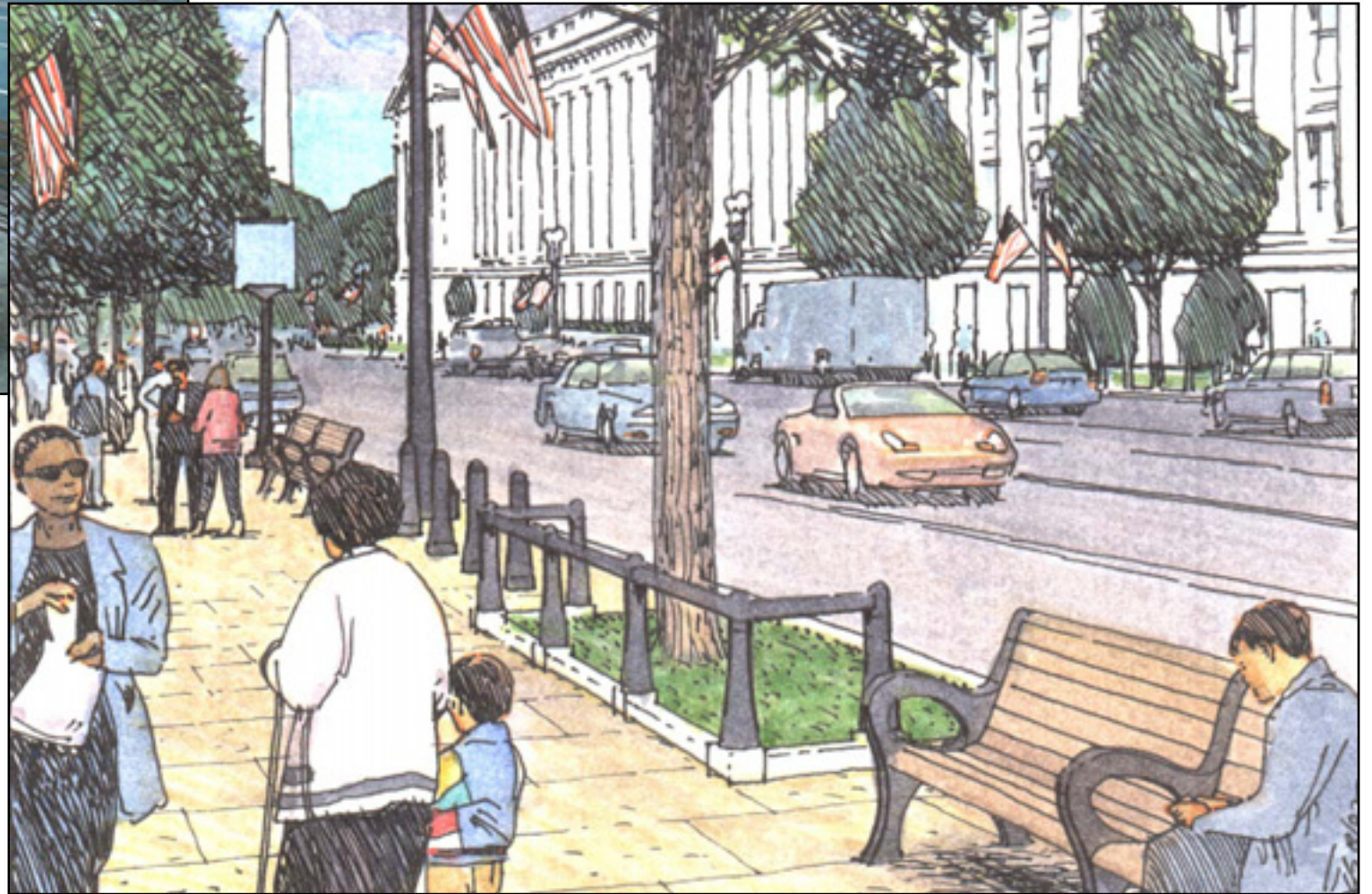


GRID STREET - TYPICAL ELEVATION





Existing conditions



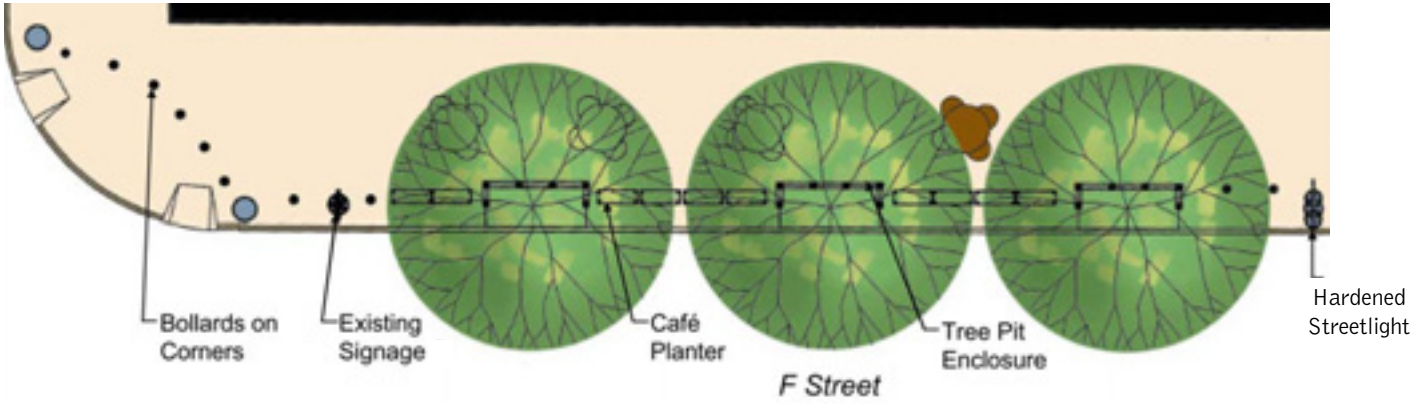
Proposed Downtown Grid Street depicting hardened street furniture streetscape design (15th Street looking south across from the Treasury Building)



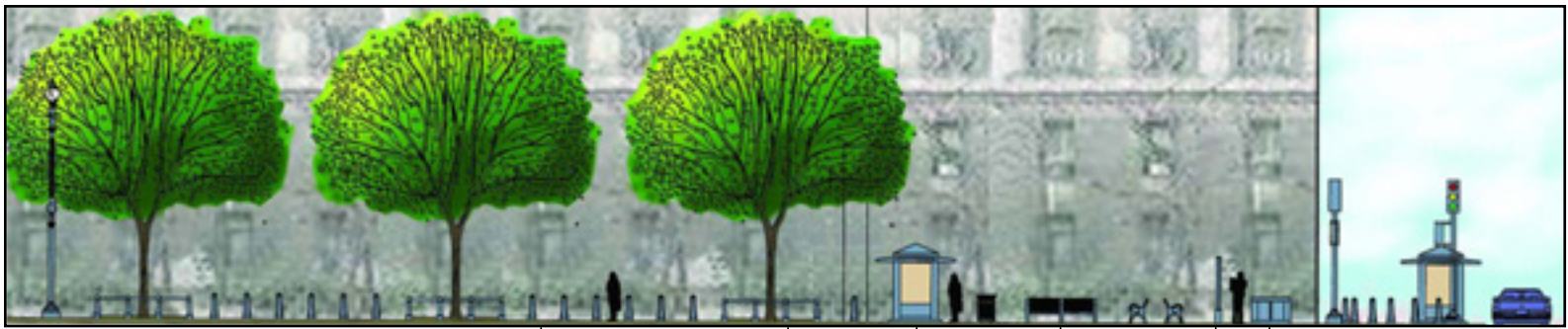
SPECIAL STREET - ADDITIONAL HARDENED STREETScape ELEMENTS

Typical Special Street Streetscape

- Washington Globe light (Twin 20 or Twin 25), at 40 feet on-center
- Street trees at 20 feet on-center (pairs at 50 feet on-center)
- Tree enclosure fence/wall (on the inside of the tree planting bed)
- Bench (Downtown BID)
- Bike rack (Downtown BID)
- Trash container (Downtown BID)
- Newspaper condo (Downtown BID)
- Special signage (Downtown BID)
- Kiosk (news, flower, etc.), (Downtown BID)
- Café enclosure/fence (to be determined)
- Bollard



DOWNTOWN - SPECIAL STREET - SAMPLE APPLICATION - AREA PLAN



DOWNTOWN SPECIAL STREET - ELEVATION

- ↑ Bollards
- ↑ Tree Pit Enclosure
- ↑ Kiosk
- ↑ Benches
- ↑ Sign
- ↑ Newspaper Vending



Existing conditions



Proposed Downtown Special
Street streetscape design

Diagonal Avenues

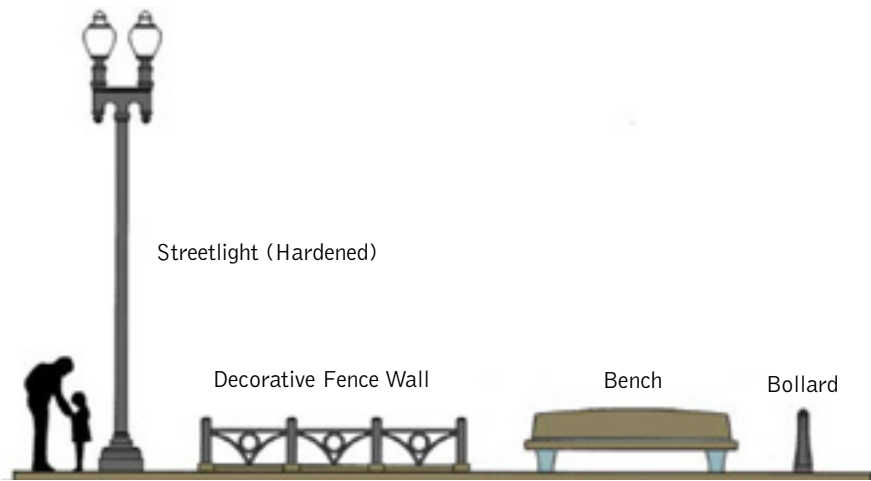
The proposed Diagonal Avenue streetscape design proposes to incorporate a tree enclosure fence wall at the back of the planting strip, next to the sidewalk. Bollards, benches, and other hardened street furniture are located between the fence wall segments to ensure the required security spacing. Characteristics of the hardened streetscape design are:

Typical Diagonal Avenue Streetscape

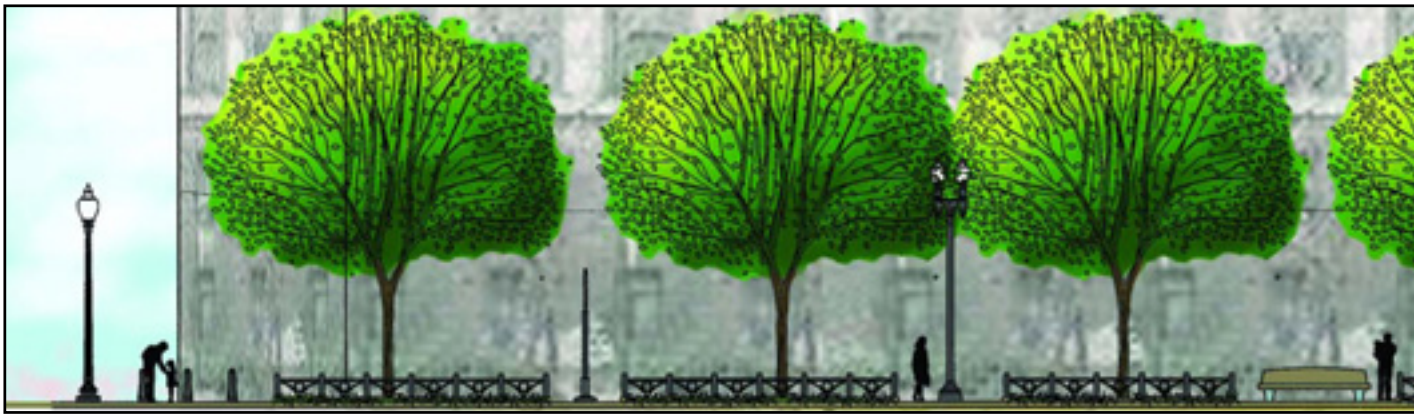
- Washington Globe light (Twin 20), at approximately 40 feet on-center
- Street trees (staggered double row), at approximately 40 feet on-center, or a single row of trees with additional landscape planting in the building yard
- Tree enclosure fence wall (on the inside of the tree planting bed)
- Bollard

Additional Design Considerations

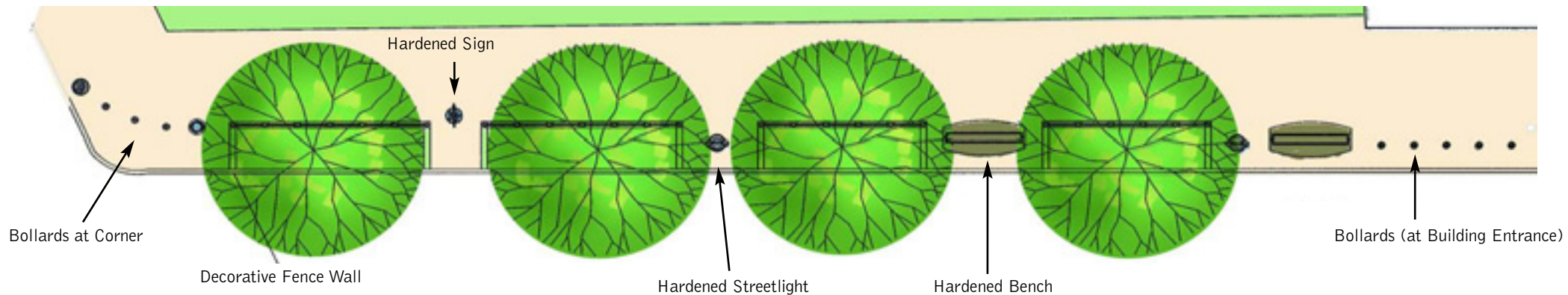
- The design of hardened streetscape components should be compatible with the design of the existing street furniture, as applicable, e.g., the DCDOT Streetscape Manual, Downtown BID, etc.
- Proposed hardened street furniture and other elements require engineering and testing to ensure that they satisfy security requirements.
- Underground utility locations are yet to be determined.



DOWNTOWN DIAGONAL AVENUE - HARDENED STREETScape ELEMENTS



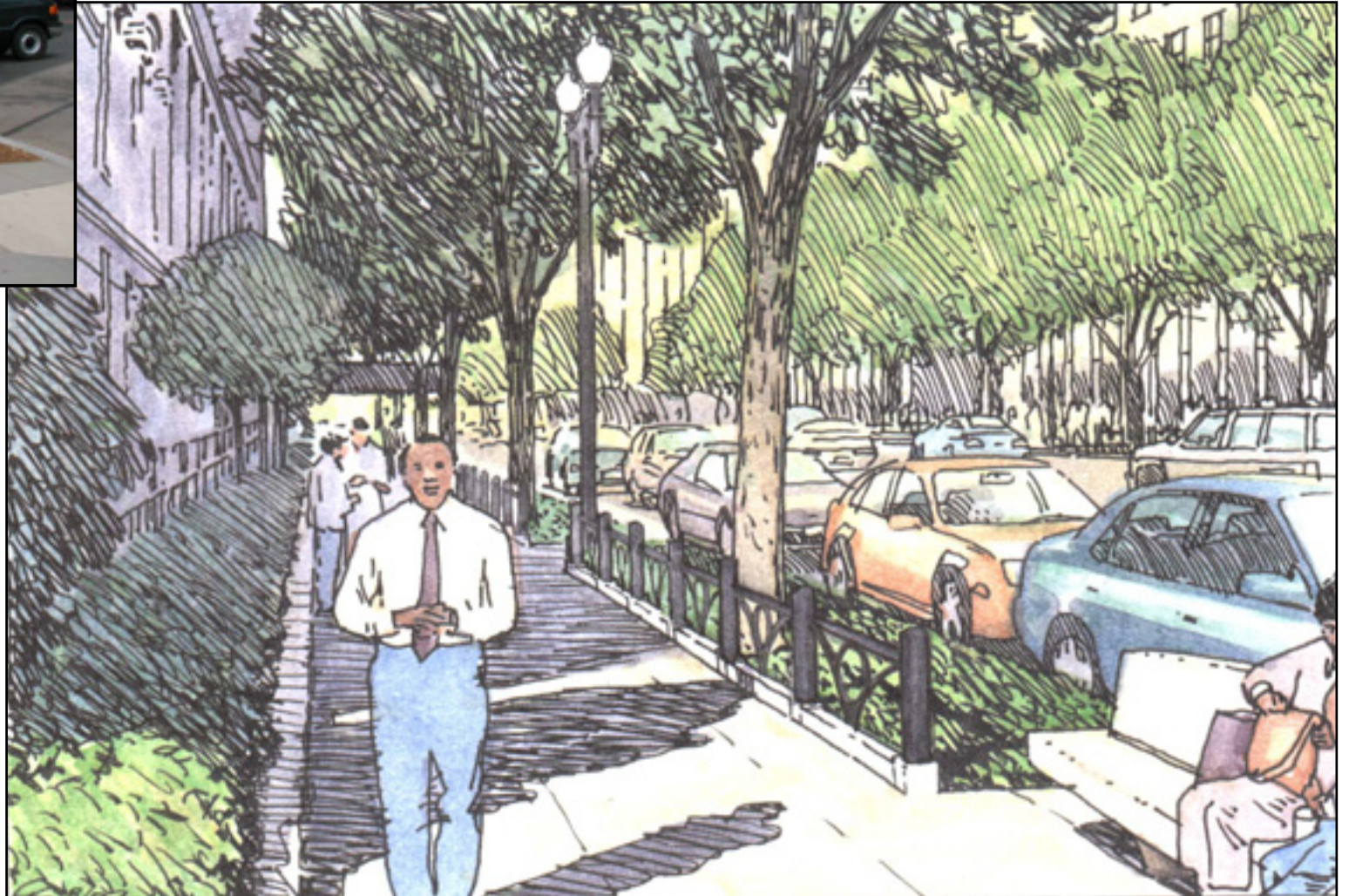
DOWNTOWN DIAGONAL AVENUE - ELEVATION



DOWNTOWN DIAGONAL AVENUE SAMPLE APPLICATION-AREA PLAN



Existing conditions



Proposed Downtown Diagonal Avenue streetscape design

IMPLEMENTATION PROGRAM

Implementation Strategy

The National Capital Urban Design and Security Plan illustrates principles and concept design solutions for design development of security measures and provides recommendations for the efficient and cost effective implementation of these improvements.

The implementation approach comprises several phases to ensure that security and streetscape improvements are appropriately planned, designed, installed, and maintained. A program and funding strategy will be forwarded to the Office of Management and Budget for consideration as an addendum in the Federal Capital Improvements Program (FCIP).

The program and funding strategy is organized by project, and will include preliminary cost estimates for design studies. The projects range in size from one block—affecting one agency that may be constructed in one phase—to numerous blocks, affecting multiple agencies that may be phased in over an extended period of time. The following tasks are required to prepare a reliable cost estimate:

1. Assessment of the threat risks to federal facilities.
2. Design of proposed security improvements that are specific to individual risk assessments.
3. Testing of the structural integrity of the various security elements proposed in the Plan, such as hardened benches, light poles, etc.
4. Parking and traffic studies to determine the effects on traffic and pedestrian circulation.

The Plan recommends that the following projects and studies be given priority. The projects are critical because of either their prominence and symbolic significance in the Monumental Core or their relationship to each other as cohesive streetscape projects. The studies are important because they will guide future design and implementation activities.

PROJECTS

Pennsylvania Avenue (White House)

Pennsylvania Avenue (3rd to 15th Streets)

Constitution Avenue

Federal Triangle (including the Department of Justice)

Federal Bureau of Investigation

Department of State

Circulator White House-Capitol Loop

STUDIES

Streetscape Component Structural Testing

Mobility and Parking Impact Studies for Recommended Curb Lane Removal

Pennsylvania Avenue and E Street Tunnel Feasibility Study

Implementation of the perimeter security projects will require a carefully planned construction schedule. Construction should be planned in conjunction with other scheduled public works projects and phased so that work does not impact scheduled national events. It will also be important to minimize disruption to pedestrian and vehicular traffic circulation during construction throughout the Plan's implementation.

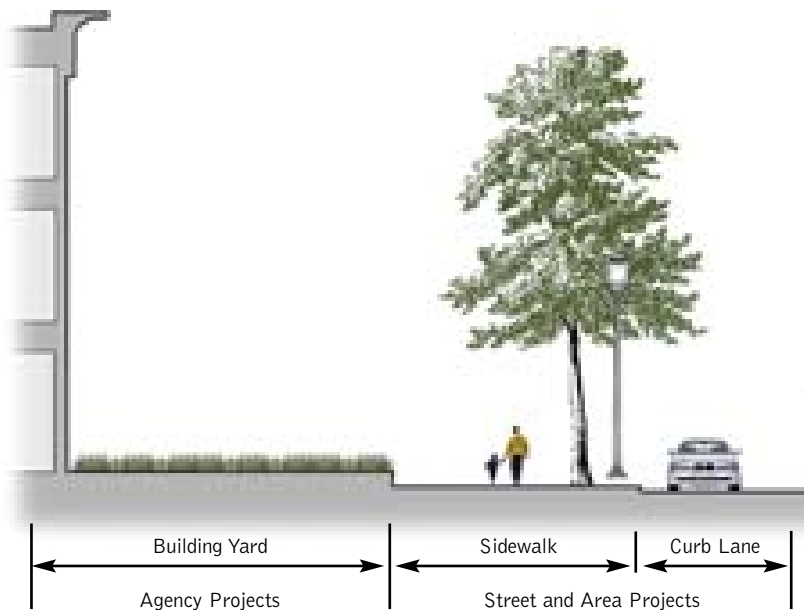
Additionally, improvements to federal properties Downtown must be closely coordinated with the District of Columbia to properly plan for the funding, planning, design and construction of these streetscape projects. Ideally, security improvements along a block or portion of a block should be planned in conjunction with the entire streetscape in accordance with the plans of the Downtown Business Improvement District and the District of Columbia.

Projects

The *National Capital Urban Design and Security Plan* identifies three types of projects to implement a unified vision, ensure cost efficiency, and minimize disruption due to construction. The three types include: Street, Area, and Agency Projects.

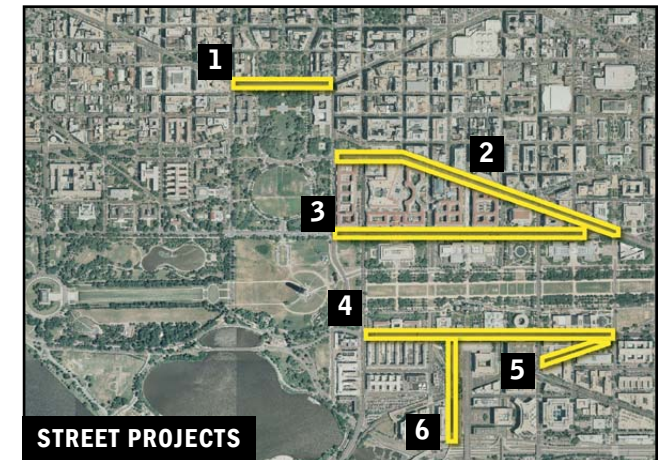
Street Projects and Area Projects. Street and Area Projects apply to those areas where building perimeter security is accomplished within the sidewalk or curb lane. A Street Project is one that affects a primary street, such as Constitution Avenue, and that runs along one side of multiple buildings. Since most buildings occupy an entire block, several Street Projects must be implemented to secure all sides of a building. Area Projects are made up of numerous smaller streetscape projects, and can be organized to secure the remaining perimeters of a building.

Agency Projects. Two situations warrant projects to be implemented by an individual agency. The first applies to agencies that perform functions central to national security and warrant immediate installation of security measures. The second type includes those buildings where perimeter security is accomplished in the area surrounding the building yard or memorial under the jurisdiction of the sponsoring agency. For example, securing pedestrian entries into the building often occurs in the building yard and often warrants a custom-design.



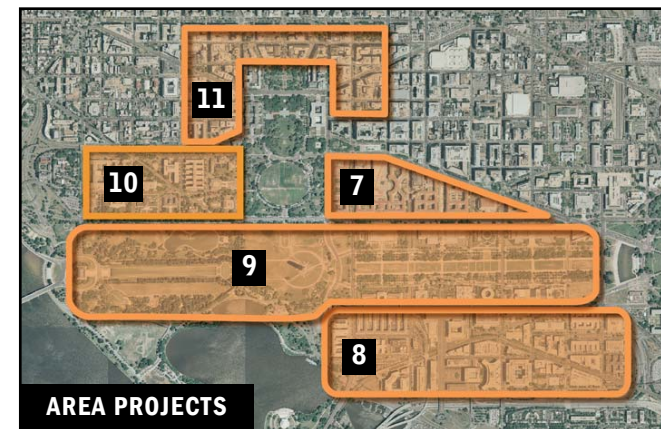
Street Projects (Primary Street Projects)

1. Pennsylvania Avenue (White House)
2. Pennsylvania Avenue (3rd to 15th St., NW)
3. Constitution Avenue (3rd to 15th St., NW)
4. Independence Avenue (3rd to 14th St., NW)
5. Maryland Avenue, SW
6. 10th Street, SW



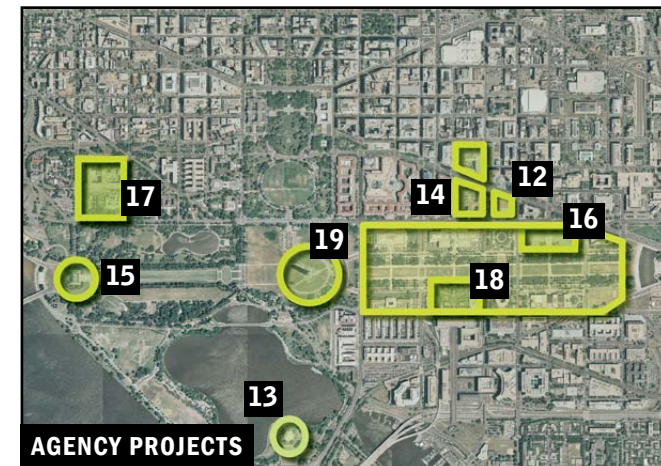
Area Projects (Secondary Street Projects)

7. Federal Triangle
8. Southwest Federal Center
9. The National Mall
10. West End
11. Downtown



Agency Projects

12. Federal Bureau of Investigation
13. Jefferson Memorial
14. Justice Department
15. Lincoln Memorial
16. National Gallery of Art
17. State Department
18. Smithsonian Institution
19. Washington Monument



Project Design

The National Capital Urban Design and Security Plan illustrates conceptual designs and applies them to typical blocks as sample applications. It is intended to illustrate continuity, proportion, composition, and materials that fit within the context of a contextual area or monumental street. Further design development will entail applying the sample application to site-specific conditions for each project. Depending on the scope and location of a project, there may be a wide range of site-specific conditions that require special treatments.

There are four key considerations that must be addressed when designing streetscape projects to integrate building perimeter security.

- **Risk Assessment and Level of Protection.** As agencies conduct risk assessments—considering such factors as agency function, number of employees and visitors, building design and construction, and relationship of the building to the street—the Federal Protective Service and/or others need to evaluate the recommended level of protection. It is not appropriate for the Commission to make recommendations or determinations of the level of protection.

The Commission is concerned that the agencies may have a natural tendency to elevate the required level of protection and thus over-design for security. Therefore, the Commission recommends that the federal government develop a protocol to determine the appropriate level of protection. This will determine the final design and construction standards of the security components to be incorporated into the streetscape design.

- **The Security Threat.** Many variables are considered when determining the standards of the security component, including the magnitude of threat (size and weight of vehicle), the potential speed and angle of the vehicle's approach, and the distance between the site perimeter and the building. After each agency determines the threat against which it needs to protect, the streetscape security components will be specifically designed for that site. Barriers will be selected or custom-designed to stop a vehicle of a given weight traveling at a given speed.

- **Location of Underground Systems.** While the above-grade elements can be aesthetically attractive, some may require substantial below-grade structural systems that will compete with the location of underground structures, utilities, and tree roots. Before a final design solution can be implemented, a survey will be required to determine the location of underground structures and utilities, and an evaluation will be conducted to determine the impact of nearby trees and root systems. The type of structural system must be carefully considered and alternative structural systems and installation techniques investigated, such as core drilling for pile footing, when determining the final design and location of the security components. Scrupulous care must be taken to protect existing trees for both aesthetic and security reasons. In some cases, the feasibility of installing streetscape components for security will be affected by these underground conditions and will significantly influence the location of the security elements, and the cost of installation.

- **Streetscape Component Design and Testing.** The magnitude of a potential threat influences the design of security components. While the proposed streetscape elements have been designed based on existing components, many will require testing to prove their effectiveness prior to final design of a streetscape plan. Assessment and engineering of the streetscape components should begin immediately to determine which components must be tested.

Additionally, there are a number of operational issues that may be considered and applied to site-specific conditions during design development, such as:

- **Vehicular Entries to Buildings.** Typically guardhouses are located at vehicular entries to buildings. The location of these guardhouses must accommodate adequate staging areas for vehicles and at the same time allow pedestrian and vehicular traffic flow to continue unimpeded. Generally, guardhouses are located within the building yard and should be custom-designed to reflect the architecture of the building they serve. If conditions warrant a guardhouse to be located at the curb, the design of the guardhouse should reflect the character of the streetscape. Additionally, secured vehicle entrances require removable or retractable bollards, gates, or plate barriers.

These elements must be able to accommodate highly repetitive usage.

- **Access to Sidewalks and Building Entries.** Typically, a family of bollards, planters, or bench furnishings secures intersections and building pedestrian entrances. Careful consideration must be given to allow free and easy pedestrian movement, including handicap and wheelchair access to the sidewalk and building entrances. The design of a secure perimeter must accommodate emergency vehicles and maintenance equipment such as utility trucks, motorized cleaners, and snow plows, and allow easy access to Metro stops.
- **Sidewalk and Street Activities.** Design solutions must be compatible with vital daily activities such as tourism, commerce, and pedestrian and vehicular movement. Security elements located at the curb or edge of the sidewalk should not unduly impede pedestrian access to various sidewalk and street activities, such as vendor stations, or parade viewing and demonstration areas, particularly along parade routes that travel the ceremonial streets, such as Pennsylvania, Constitution, and Independence Avenues. The designs must accommodate bleachers, tents, and review stands that are used during these significant events.

Special design features may be needed on some security elements to discourage improper use of the element, e.g., sloping the top surface of a plinth wall to prevent improper use, such as skateboarding or collection of debris.

All design solutions, particularly Downtown, must consider vendor activity, the location of parking meters, and directional signs. Adequate flexibility should be maintained in the placement and density of security elements to accommodate land use changes, mobile vendor kiosks, and sidewalk cafes.

Approval and Permitting

Implementation of building perimeter security will require constructing improvements in the building yard, sidewalk, and possibly the street. In many cases, the streetscape projects will lie within multiple jurisdictions, including some combination of the affected federal agency, the District of Columbia, the National Park Service, and/or the General Services Administration.

Consequently, perimeter security projects may require approvals from multiple agencies, including the National Capital Planning Commission and the Commission of Fine Arts. Projects must comply with applicable federal and local codes, regulations and acts, including the National Environmental Policy Act and the National Historic Preservation Act. Additionally, permits may be required from the District of Columbia since a majority of anticipated improvements are proposed for property under the District's jurisdiction.

As specific streetscape designs are finalized, site-specific conditions must be addressed. Although the Plan is a framework, it is expected that the final designs will strive to comply with the intent of the Plan and draw upon the vocabulary of elements in the Streetscape Element Catalogue. The location and arrangement of security elements must be designed in a manner that is appropriately consistent and compatible with solutions for other buildings and blocks along the street. Agencies submitting specific project proposals that do not comply with the design guidance of this Plan will need to provide adequate justification to the Commission in conjunction with any request for approval.

Traffic and Parking Studies

The National Capital Planning Commission will coordinate with the District of Columbia Department of Transportation to resolve outstanding transportation issues resulting from proposals for perimeter security projects. Studies may include:

- A traffic study of Independence Avenue to determine the feasibility of lane reconfiguration or removal to accommodate the widening of the sidewalk on the north side of Independence Avenue.
- A traffic study and parking analysis to evaluate the impact of permanent vehicle restrictions and/or parking lane removal adjacent to the State Department.
- A traffic study and parking analysis to evaluate the impact of parking lane removal in the Southwest Federal Center, and recommend parking loss mitigation measures, such as parking garages.

National Environmental Policy Act and National Historic Preservation Act (NEPA and NHPA)

The National Capital Urban Design and Security Plan is a concept framework that will guide the planning, design, and implementation of uniform or compatible streetscape treatments. The improvements proposed in the Plan may have various impacts on environmental and historic resources. However, the Plan's concept designs have not been sufficiently developed to permit appropriate environmental or historic preservation review in accordance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). As design development proceeds, these impacts may need to be further analyzed, evaluated, and potentially mitigated in accordance with NEPA and NHPA.

Some cultural and environmental resources may be affected in the application of site-specific design solutions. For example, much of the area covered by the Plan includes properties listed on the National Register of Historic Places, including the

Pennsylvania Avenue National Historic Site and the Lafayette Square Historic District. In addition, rights-of-way of the streets and avenues within the original L'Enfant Plan are listed as part of the historic plan of Washington, D.C. The reservations of the L'Enfant Plan, including the circles and squares, the National Mall, West Potomac Park, and President's Park, are part of the National Register designation. Additionally, environmental considerations may include impacts to existing trees and vegetation, parking and traffic circulation, short-term construction effects, surface water drainage and soil conditions.

Implementing agencies will be responsible for ensuring that such environmental and historic impacts are considered in accordance with appropriate public input, as may be required by the NEPA and NHPA 106 processes.

Relationship to Other Plans and Guidelines

The National Mall Streetscape Manual, the Downtown Streetscape Guidelines, and the Pennsylvania Avenue Development Corporation Plan guide design treatment in public space. Each of these manuals addresses a range of streetscape elements, including road surface treatment, curb design, trees, and street furniture. These manuals provide a basis for future design decisions, and should be amended to include the streetscape elements from the Urban Design and Security Plan once the elements have been tested and proven to be crash worthy, and preliminary design approval is obtained from the Commission of Fine Arts and the National Capital Planning Commission. All regulatory parties or signatories of the agreements affecting these special plans should be included to coordinate and amend the respective manuals accordingly.

Design Development and Construction Strategy

For the efficient and cost effective implementation of the recommendations in this Plan, the Commission recommends that one lead agency, the Federal Highway Administration, administer and coordinate design, permitting, and construction of street and area projects, including the engineering and testing of security components. This is crucial to minimize cost and disruption, and to improve the visual quality and image of the Nation's Capital.

The Commission also recommends using the Interagency National Mall Road Improvement Program and the Kennedy Center Access Study as implementation models. These initiatives, which are being led by the Federal Highway Administration Federal Lands Division, provide a mechanism for interagency coordination and implementation, and include a Memorandum of Agreement between appropriate parties to establish responsibilities and procedures.

The National Capital Urban Design and Security Plan participants and general responsibilities should include:

1. A coordinating committee responsible for project oversight and reporting to the Office of Management and Budget and Congress.
2. Federal Highway Administration Federal Lands Division responsible for:
 - Overall administration and coordination of Street and Area Projects.
 - Coordinating with area partners to prepare design concepts and final design (construction documents) for perimeter security projects.
 - Coordinating and administering streetscape component engineering and testing.
 - Coordinating work with the National Capital Planning Commission, the District of Columbia, the Commission of Fine Arts, and the Advisory Council on Historic Preservation; and obtaining all necessary approvals and permits.
 - Coordinating compliance with the National Environmental Policy Act and the National Historic Preservation Act.
 - Administering and monitoring construction of projects.
3. Area partners responsible for completing security risk assessments and assisting the designated lead agency with design development.

For each project, partnerships should be created through Memoranda of Agreement (MOA) with area partners for the purpose of establishing the scope and responsibilities of each party relevant to their expertise. The following serve as examples of potential partnerships:

Plan Participants

1. Urban Design Security Coordinating Committee

- National Capital Planning Commission
- General Services Administration
- National Park Service
- Architect of the Capitol
- D.C. Office of Planning
- D.C. Department of Public Works
- D.C. Department of Transportation
- D.C. City Council
- Security Agencies, such as Secret Service and Federal Protective Service

2. Federal Highway Administration, Federal Lands Division

3. Area Partners

- Pennsylvania Avenue (in front of the White House)
 - The White House
 - United States Secret Service
 - National Park Service
 - D.C. Department of Transportation

- Pennsylvania Avenue (Capitol to the White House)
 - National Park Service
 - General Services Administration
 - Affected Agencies
 - D.C. Department of Transportation
- National Mall
 - Smithsonian Institution
 - National Gallery of Art
 - Department of Agriculture
 - National Park Service
 - D.C. Department of Transportation
- Downtown
 - Affected Agencies
 - General Services Administration
 - D.C. Department of Transportation
 - D.C. Department of Public Works, Public Space Division
 - Downtown Business Improvement District
- Southwest Federal Center
 - Affected Agencies
 - General Services Administration
 - Architect of the Capitol
 - D.C. Department of Transportation
- Federal Triangle
 - Affected Agencies
 - General Services Administration
 - National Park Service
 - D.C. Department of Transportation
- West End
 - Affected Agencies
 - D.C. Department of Transportation
- Constitution Avenue and Independence Avenue
 - Affected Agencies
 - Smithsonian Institution and National Gallery of Art
 - General Services Administration
 - National Park Service
 - Architect of the Capitol
 - D.C. Department of Transportation

Maintenance

The Nation's Capital deserves to be well maintained, respecting the people it represents and visitors from abroad who come to learn about its ideals. Americans should be proud to call it their own. Any and all streetscape security improvements will require maintenance in a uniform and consistent manner to preserve the capital investment, ensure security measures are sustained, and maintain the quality of the public realm. Therefore, concurrent with funding appropriation for security improvements associated with *The National Capital Urban Design and Security Plan*, a commitment must be made for both an ongoing funding source and a maintenance program.

Maintenance of the improvements will require a routine program of inspection, cleaning, touch-up, repair, and replacement. Construction or replacement and repair of the components will not be typical, because of the structural reinforcement contained within all of the components. This will require some supervisory and field staff to have specialized training and knowledge. Management of the maintenance program will also require a readily available supply of streetscape fixtures and replacement elements. Maintenance tasks will include:

- General. Daily clean-up and litter removal, monthly washing of sidewalks, rodent control, and graffiti control.
- Lighting. Monthly inspection, bulb replacement, fixture repair, and painting touch-up.
- Furnishings. Routine inspection, repair and touch-up painting, and replacement.
- Landscape. Weeding, watering, fertilizing, pruning, grass cutting, plant removal and replacement, irrigation inspection and maintenance.
- Administrative. Inventory control for replacement of hardened components and coordination with building owners on maintenance activities.

Maintenance Responsibility and Funding

There are several options in which to house the maintenance function. Maintenance responsibility could be centralized into an existing agency, such as the General Services Administration, the National Park Service, the Federal Highway Administration, the District of Columbia, or the Downtown Business Improvement District. Maintenance responsibility could also be dispersed to several existing agencies based on jurisdiction. Other options could be explored, such as creating a new entity to administer maintenance operations, similar to a business improvement district.

Establishment of both an interim and perpetual funding source will be required to ensure that the assigned agency can adequately perform maintenance operations on a regular basis. This will provide the implementing agency with the funds necessary to enter into a maintenance contract during the transition period from the completion of construction to establishment of the designated maintenance agency. Additionally, an innovative mechanism must be implemented to establish a dedicated funding source.

The National Capital Planning Commission recommends that Congress and OMB assign maintenance responsibility to the appropriate agency or agencies and establish an ongoing funding commitment to maintain the streetscape security improvements. Maintenance responsibility and funding could be based on location of the improvements. For example, improvements in the building yard could be maintained by individual agencies, while improvements within the sidewalk or public right-of-way could be maintained by either one assigned entity, or several entities if assigned by contextual areas or precincts. The funding for the first three years of maintenance should be included in the construction fund appropriation, and a dedicated funding mechanism should be established by the Office of Management and Budget and Congress for ongoing maintenance and operations. To further address the long-term maintenance of the streetscapes and security solutions, the Commission recommends establishment of an interagency committee task force to develop recommendations for ongoing maintenance.

ACKNOWLEDGEMENTS

The National Capital Urban Design and Security Plan is the result of an intensive collaborative effort. The Commission is grateful for the cooperation of the federal and District of Columbia governments, the professional design and planning community, and members of the public in preparing this plan.

PARTICIPATING ORGANIZATIONS/MEMBERS

Congressional

Chairman, Committee on Government Reform,
U.S. House of Representatives
Chairman, Committee on Governmental Affairs,
U.S. Senate

Federal

Advisory Council on Historic Preservation
Architect of the Capitol
Central Intelligence Agency
Commission of Fine Arts
Federal Aviation Administration
Federal Bureau of Investigation
Federal Highway Administration
Federal Reserve Board
Federal Trade Commission
Homeland Security Council
Internal Revenue Service
National Archives and Records Administration
National Gallery of Art
National Park Service
National Security Agency
Office of Management and Budget
Small Business Administration
Smithsonian American Art Museum
Smithsonian National Museum of American History
Smithsonian National Museum of Natural History
Smithsonian National Portrait Gallery
Smithsonian Office of Engineering and Operations
Smithsonian Office of Facilities Planning and Resources
Smithsonian Office of Protection Services
U.S. Capitol Police
U.S. Department of Agriculture
U.S. Department of Defense
U.S. Department of Education
U.S. Department of Energy
U.S. Department of Justice
U.S. Department of State
U.S. Department of the Treasury
U.S. Federal Courts
U.S. General Services Administration
U.S. Secret Service

District of Columbia

D.C. Council
D.C. Courts
D.C. Department of Public Works
D.C. Department of Transportation
D.C. Metropolitan Police Department
D.C. Office of Planning

Other

American Pharmaceutical Association
Broadcasting Board of Governors
Committee of 100 on the Federal City
Design Coalition
 American Institute of Architects
 American Planning Association
 American Society of Landscape Architects
 Greater Washington Board of Trade
 Scenic America
D.C. Guild of Professional Tour Guides
Downtown Business Improvement District
Federal City Council
Holocaust Memorial and Museum
International Monetary Fund
Newseum
Organization of American States
Penn Quarter Association
The World Bank Group

NCPC Executive Staff

Patricia E. Gallagher, Executive Director
Marcel C. Acosta, Deputy Executive Director
Connie M. Harshaw, Chief Operating Officer

Lead Project Officers

Elizabeth Miller, Project Officer
George Toop, Urban Designer

Project Team

Wayne Costa, Legal Counsel
William Dowd, Director, Office of Plans Review
Jeffrey Hinkle, Community Planner
Ash Jain, General Counsel and Congressional Liaison
Paul Jutton, Graphic Designer
Eugene Keller, Environmental Officer
Denise Liebowitz, Public Affairs Specialist
Lisa MacSpadden, Director, Office of Public Affairs
Marybeth Murphy, Writer/Editor
Edel Perez, Community Planner
Angela Roach, Program and Management Analyst
Kenneth Walton, Community Planner (CAD)
Roszonna Whitsett, Management Assistant
Nancy Witherell, Historic Preservation Officer

Project Support

Marcella Brown, Receptionist
Tony Champ, Computer Specialist
Shane Dettman, Community Planner (GIS)
Nicole Green-Catten, Community Planner (CAD)
Dena McClurkin, Public Affairs Specialist
Charles Rieder, Computer Specialist
Jim Russell, Community Planner
Stacy Wood, Community Planner
Danita Woodley, Management Program Analyst
Joy Wren, Budget & Finance Specialist
Deborah Young, Secretariat