

THE PARKS AT WALTER REED

THE LEGACY OF TOMORROW



PROJECT SYNOPSIS

Walter Reed has played a significant role in our Nation's history and has impacted the lives of millions. The vision for the redevelopment balances the preservation of a historic legacy, significant historic buildings, and a historic landscape with the transformation from a closed campus into a vibrant mixed-use village that is an integral part of the surrounding neighborhood's daily life.

The District completed the Base Reuse Plan and Small Area Plan that established a broad and engaging vision for the Walter Reed Campus. Building on the strength of this Plan, we have developed the Urban Design that creates a vibrant, viable, and implementable vision by addressing

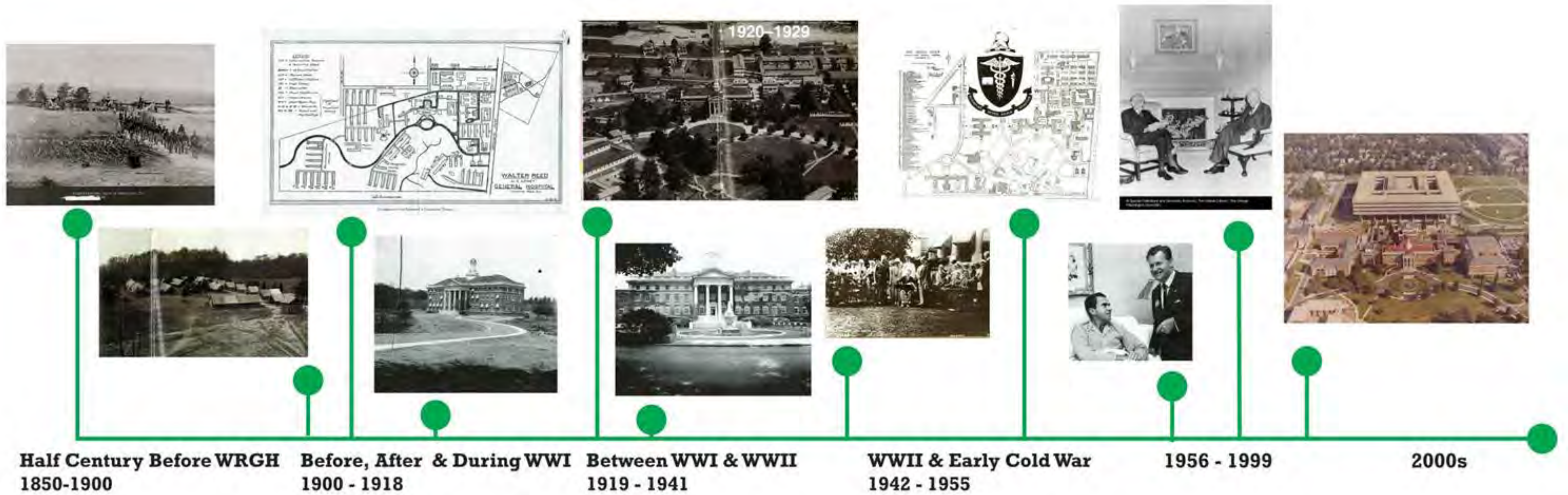
7 Key Factors:

- 1. Historic Strategy**
- 2. Urban Form Strategy**
- 3. Programming Strategy**
- 4. Open Space Strategy**
- 5. Sustainability Strategy**
- 6. Parking Strategy**
- 7. Transportation Strategy**

Highlights of this Urban Design include the following:

- **Addresses a full sustainability spectrum**
- **Net zero energy usage by 2030**
- **Net positive energy contribution and carbon neutrality by 2040**
- **Urban form based on historic design principles that knits together an interconnected park system with a walkable neighborhood**
- **A mix of local, national, and international destination uses**
- **Integrates the site with the community through parks, arts and culture, retail, hospitality, education, employment, and housing through both interim and ongoing uses**
- **Stabilizes local businesses and ensures that local tenants and owners have opportunities within the development**
- **Implements workforce development and apprenticeship programs**

TIMELINE



http://www.nytimes.com/2011/07/28/us/28reed.html?_r=0



<http://ghostsofdc.org/2012/03/28/1918-spanish-flu-pandemic-creates-orphans-across-d-c/>

Walter Reed Army Medical Center (WRAMC) was the U.S. Army's flagship medical center from 1909 to 2011. Located on 113 acres in Washington, DC, it served active and retired personnel from all branches of the military. The center was named after Major Walter Reed (1851–1902), an army physician who led the team that confirmed that yellow fever is transmitted by mosquitoes rather than direct contact.- Wikipedia

HISTORY - WALTER REED SITE



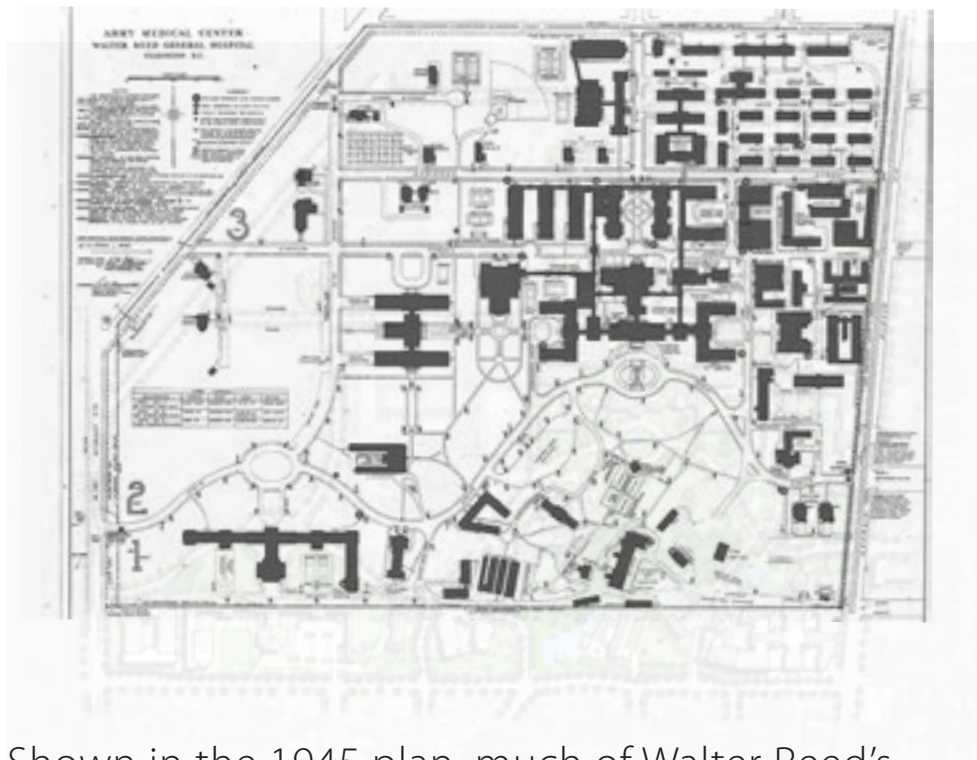
1945



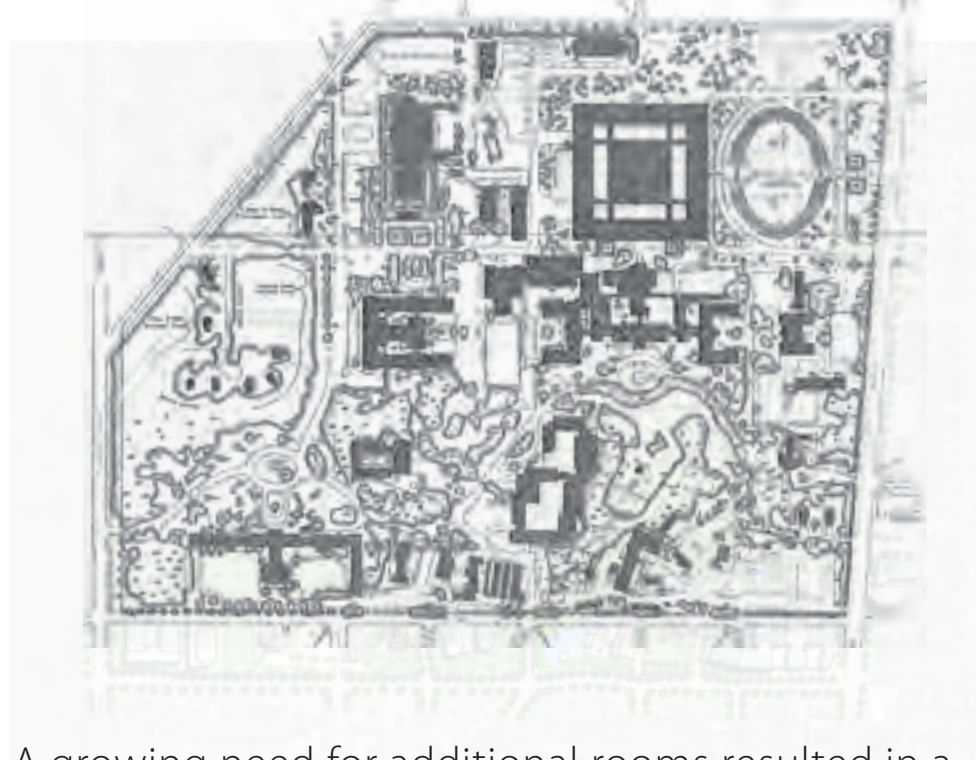
1987



PROPOSED



Shown in the 1945 plan, much of Walter Reed's traditional site fabric existed as support buildings organized by an axial relationship with historic Building 1.



A growing need for additional rooms resulted in a new hospital building on the northern side of the campus which consolidated rooms, but its size and location dominated the campus and severed the key connection and vista of Building 1 from the north.



The Parks at Walter Reed will re-establish the historic Building 1 axis and connection to the north and extend the city grid through the site while preserving a formal urban grid to the north and a bucolic landscape character to the south.

EXISTING BASE REUSE PLAN AND SMALL AREA PLAN



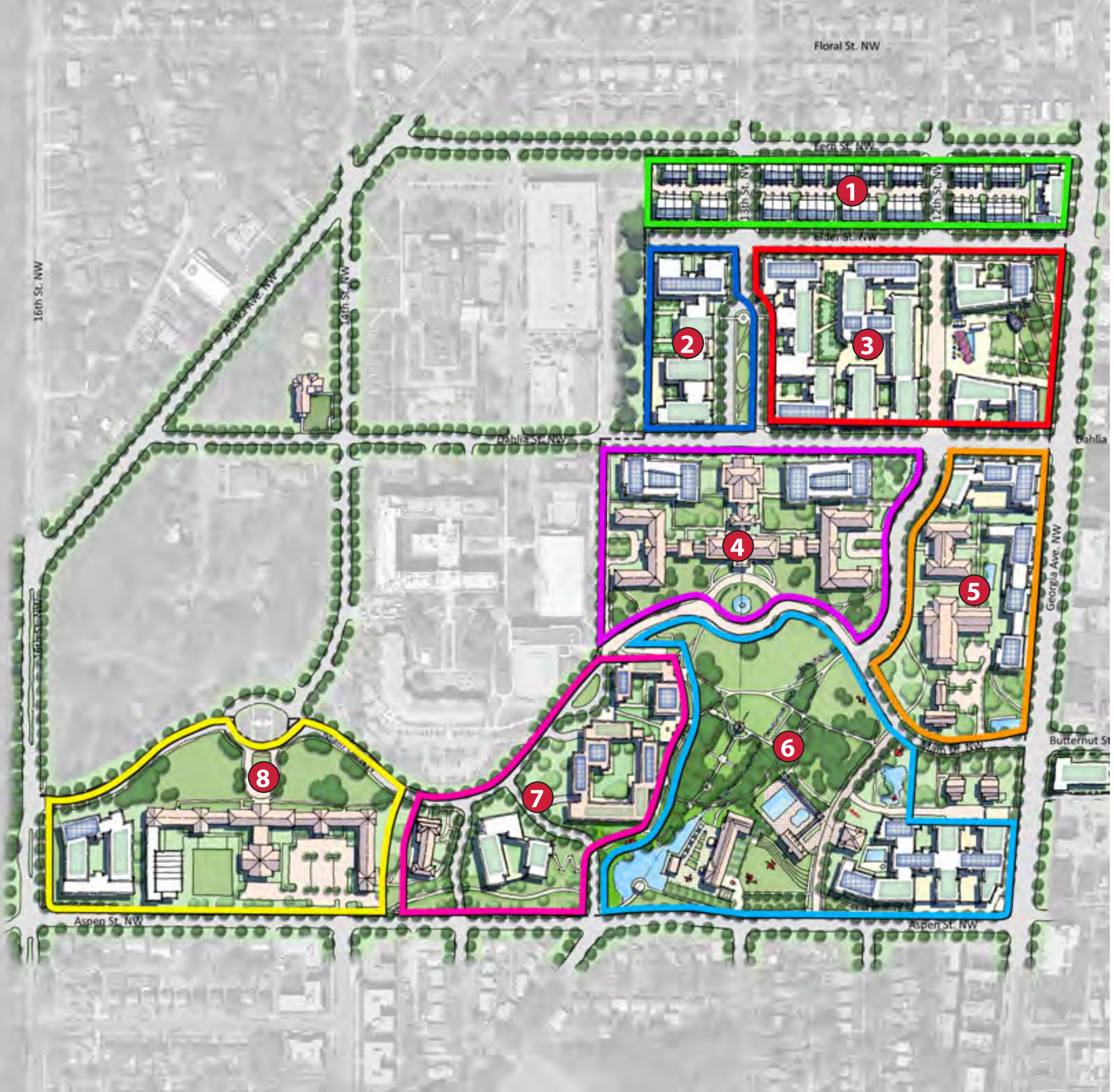
The Walter Reed Local Redevelopment Authority (LRA), through an extensive public and stakeholder outreach process, created the Base Reuse Plan establishing a vision and framework for a mixed-use destination that will serve the surrounding community and the District “by providing economic growth, jobs and a range of public benefits via development of residential, retail, office and public green space on a previously self-contained, insulated military hospice installation.” In parallel, the District established the Small Area Plan (SAP) to establish general land use designations and characteristics such as setbacks, heights, and guidelines. These plans established the following key principles:

1. **Maintain the Existing Site Character**
2. **Retain Building 1 as “The Core”:** Extending 13th Street and opening the north façade of the building.
3. **Enhance the Open Space:** Preserve the historic open space and mature trees, while revitalizing other green areas by integrating naturalized storm water management systems, urban agriculture and recreation.
4. **Preserve Historic Elements:** Acknowledge the Walter Reed Legacy by reusing historic buildings and integrating cultural exhibits with the landscape.
5. **Extend the Street Network:** Provide north-south and east-west connectivity through the Site that is multi-modal and integrate the Site into the city fabric.
6. **Create Vibrant, Multi-Modal Corridors:** Improve connectivity throughout the Site and the surrounding area.
7. **Integrate Sustainable Strategies:** Create a regenerative project through sustainable strategies of preservation and adaptive reuse; community integration; and environmental regeneration.



URBAN DESIGN

Using the Small Area Plan as a starting point, we have developed the Urban Design that will create a vibrant, viable, and implementable vision for Walter Reed



Illustrative Site Plan

1. **Fern Park:** Townhomes act as a transition to the single family homes to the north.
2. **Pershing Park:** Reminiscent of the historic garden that once existed along Building 1's northern axis, an extended 13th Street creates a new linear park.
3. **Eisenhower Village:** This mixed-use Town Center includes a grocery, retail, and multi-family residential organized around a new festival green.
4. **Walter Reed Commerce and Science Park:** Includes the Hyatt Hotel and Conference Center, and the Bio-Science and Health Research Employment Center in historic Building 1 and new office bldgs.
5. **Lincoln's Landing:** Mixed-uses line and activate Georgia Avenue, along with the Visitor Center, the History Museum, and new park.
6. **Aspen Arts Park:** A creative Arts District is organized around the power plant, smokestack, new pond, and a new outdoor sculpture park.
7. **Benjamin O. Davis Legacy Park:** Western edge of the Aspen Arts Park provides adaptive reuse of Building 14 to provide housing for seniors, veterans and artists.
8. **Rock Creek Woods:** This area includes the DCI International Charter School and new multi-family residential.



FERN PARK



PERSHING PARK



W Neighborhood Grocer

EISENHOWER VILLAGE



ASPEN ARTS PARK

7 URBAN DESIGN STRATEGIES

7 STRATEGIES

The comprehensive nature of Urban Design means that any viable solution must be wide-ranging, yet result in a cohesive plan. The Urban Design for Walter Reed is circumscribed in the adjacent 7 strategies. Each of these are described in the following pages.

SUSTAINABILITY SPECTRUM

A strong commitment to sustainability means that it is woven into every aspect of The Parks at Walter Reed. At the far right a Sustainability Spectrum is represented by a series of icons - Specific strategies within those categories are listed on each of the following pages.

1. Historic Strategy



2. Urban Form Strategy



3. Programming Strategy



4. Open Space Strategy



5. Sustainability Strategy



6. Parking Strategy



7. Transportation Strategy



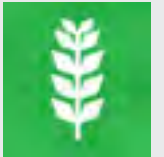
ECOLOGY



WATER



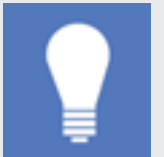
FOOD



SHELTER AND FORM



ENERGY AND RESOURCES



MOBILITY



ECONOMY



EDUCATION AND AWARENESS



TRADITIONS



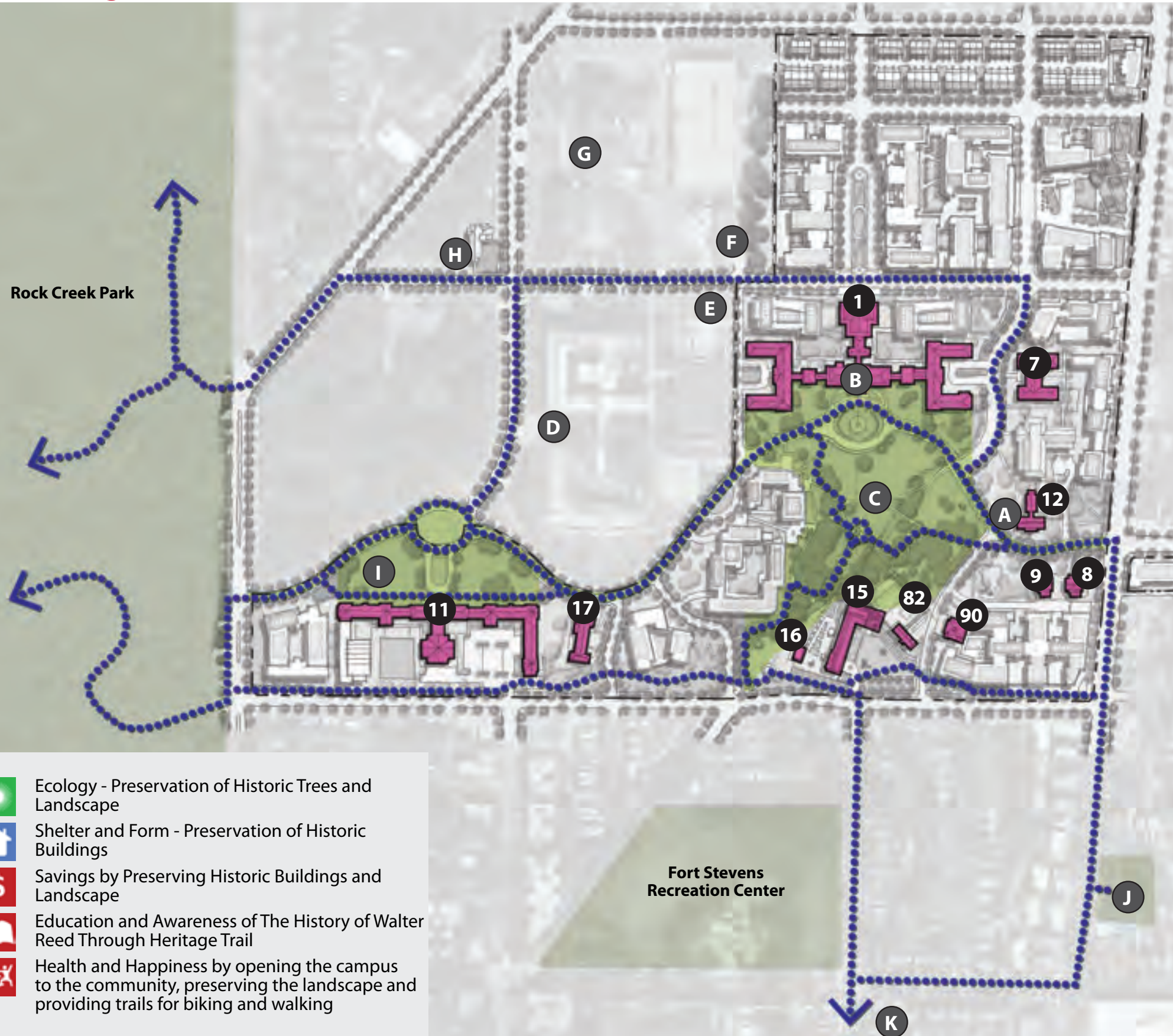
HEALTH AND HAPPINESS








1. HISTORIC STRATEGIES

a. Conservation of Historic Buildings and Landscape

b. Heritage Trail



-  Ecology - Preservation of Historic Trees and Landscape
-  Shelter and Form - Preservation of Historic Buildings
-  Savings by Preserving Historic Buildings and Landscape
-  Education and Awareness of The History of Walter Reed Through Heritage Trail
-  Health and Happiness by opening the campus to the community, preserving the landscape and providing trails for biking and walking

The vision for The Parks at Walter Reed leverages the historic legacy of the campus, bringing a sense of honor and stewardship to the redevelopment by:

- a. Conserving Historic Buildings and Landscape*
- b. Creating an Interpretive Heritage Trail*
- c. Re-using and Adapting Historic Buildings*
- d. For the first time in history the historic buildings and landscape will be open to the public*

Residents and visitors will be able to conduct walking and driving tours of the numerous historic sites and connect to the adjoining sites, including Fort Stevens and the trails in Rock Creek Park.

Historic Buildings to be Retained

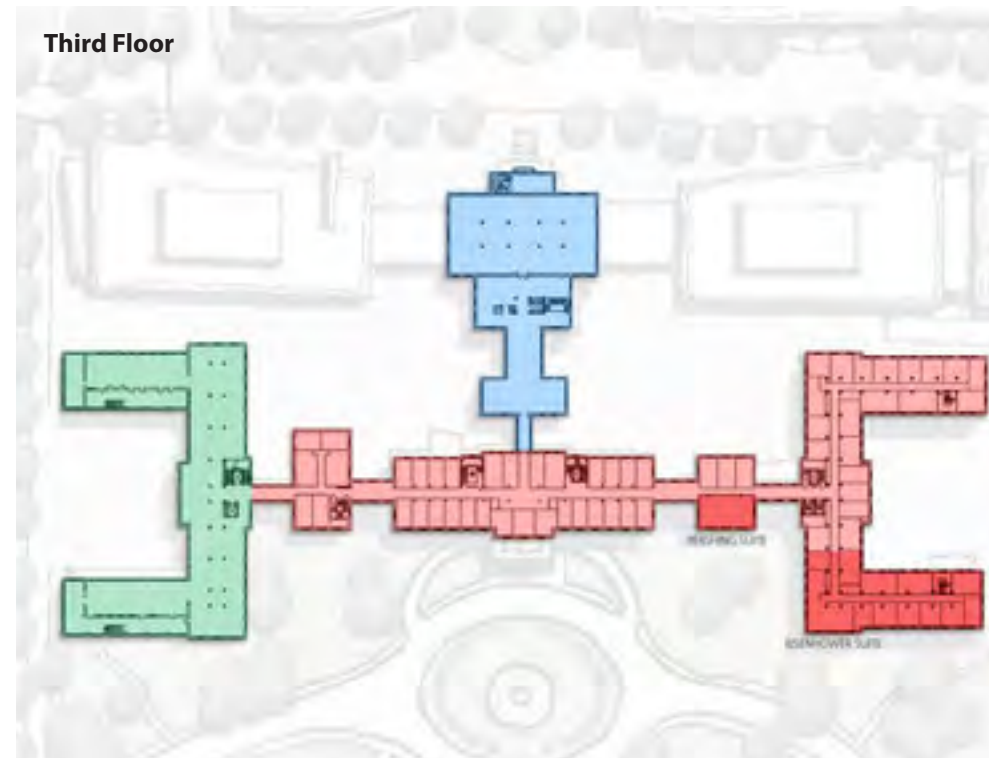
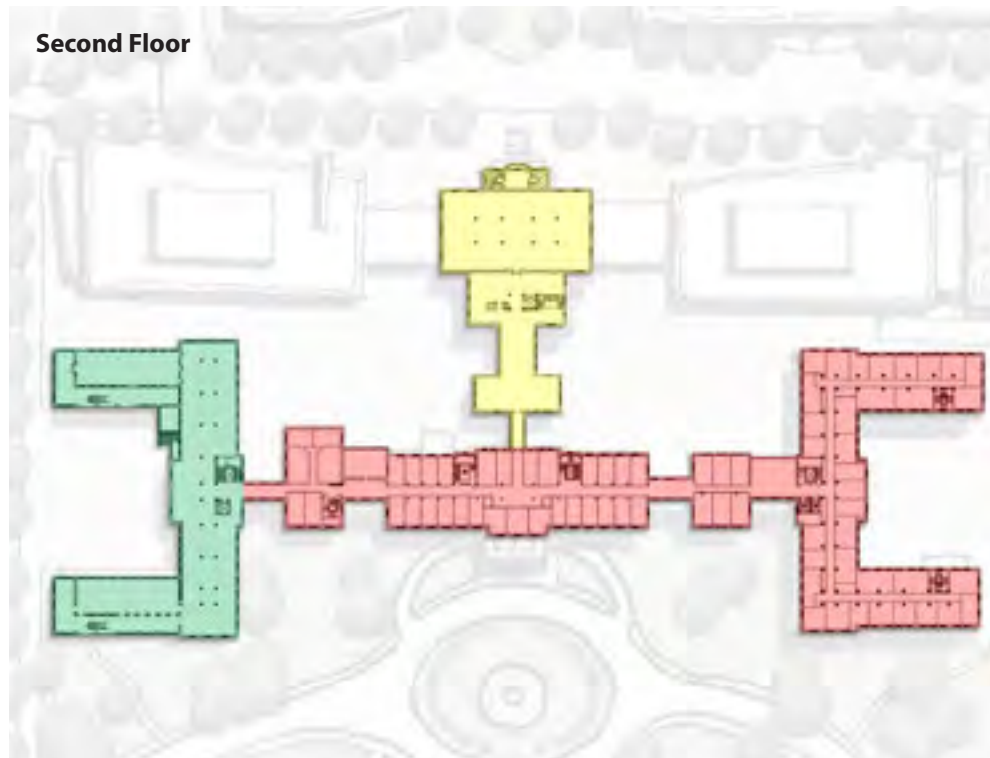
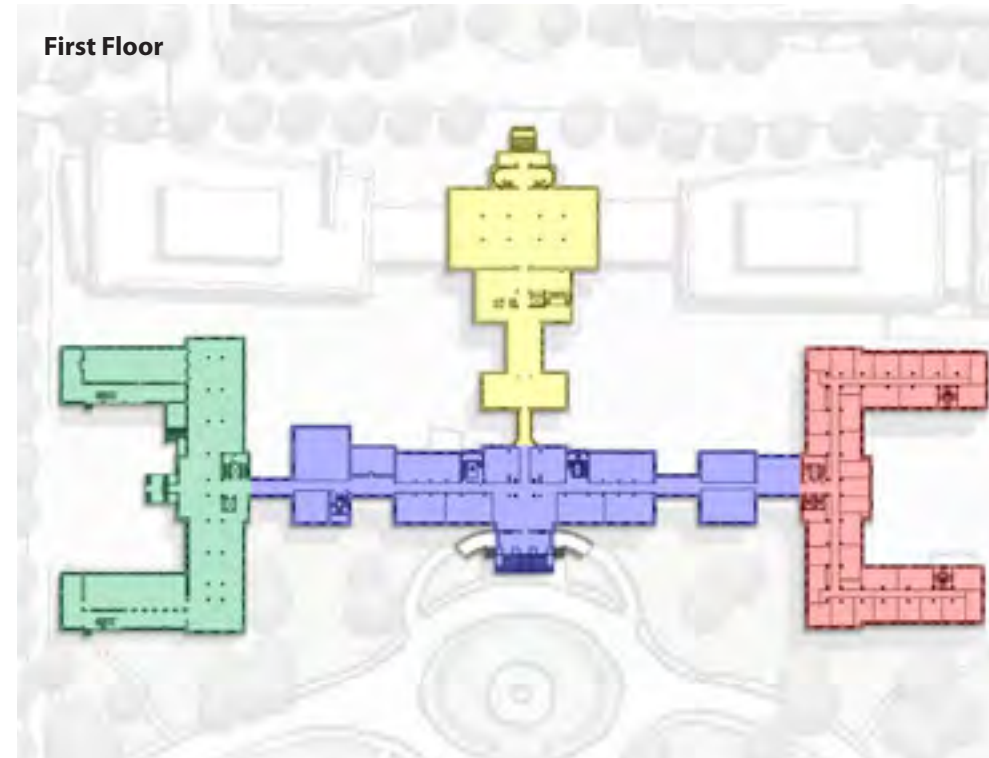
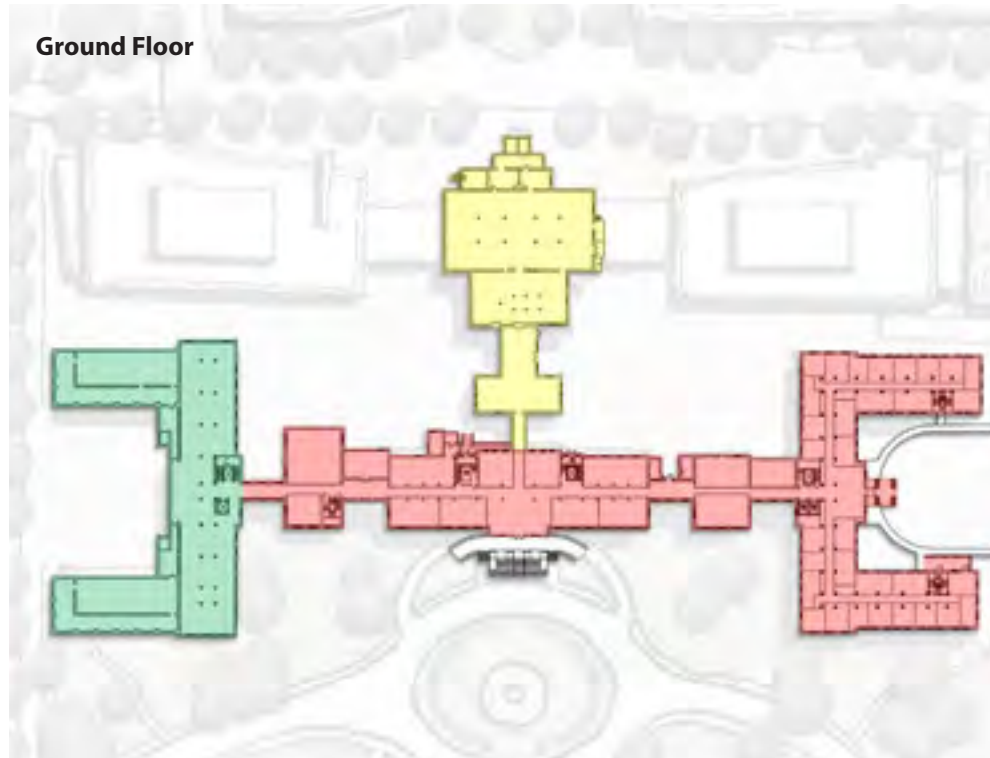
- 1. Old Hospital
- 7. Medical Administration
- 8. Officer Housing
- 9. Officer Housing
- 11. Delano Hall
- 12. Provost Marshal Administration
- 15. Central Heating Plant
- 16. Incinerator
- 17. Doss Memorial Hall
- 82. Auto Skills Center
- 90. Fire Station

Heritage Trail

- A. Civil War Tulip Tree Memorial
- B. Walter Reed General Hospital
- C. Great Lawn and Rose Garden
- D. Army Medical School
- E. Red Cross Building
- F. Hospital Ward
- G. Former Armed Forces Institute of Pathology
- H. Memorial Chapel
- I. Delano Hall
- J. Battleground National Cemetery
- K. Fort Stevens and Fort Circle Trail

1. HISTORIC STRATEGIES

c. Re-using and Adapting Historic Buildings



- Hyatt Hotel
- Millennial Lodging
- Living Science Center
- Conference Center
- Historic Suites
- GW Hospital CTSI



1 Old Hospital

The complementary uses in Building 1 will support and add vibrancy to Walter Reed. Proposed uses include:

- A Hyatt Hotel and Conference Center
- The Millennial Lodging Center will provide a convenient and collaborative place to stay.
- The Living Science Center will be an interactive center of education for children and adults fostering the adoption of healthy lifestyles.
- This center also houses training and educational opportunities for culinary careers.
- Historic Eisenhower and Pershing suites will be restored.

- Energy Conservation and Use of Existing Resources Through Adaptive Reuse of Historic Buildings
- Preservation of Historic Buildings
- Savings due to the Preservation of Historic Buildings
- Education and Awareness - Building 12 will become a Museum and Visitor Center

1. HISTORIC STRATEGIES

c. Re-using and Adapting Historic Buildings



- **Building 7** - Medical Administration, will be used by Howard University as an ambulatory care facility
- **Building 12** - Provost Marshal Administration, will become a visitor's center and museum with information about the history of Walter Reed Medical Center
- **Building 90** - Fire Station will be remodeled to accommodate artist's studios, Washington Glass School, and Flux Studios
- **Building 82** - Auto Skills Center will become a Poolhouse and the Joy of Motion Dance Center

1. HISTORIC STRATEGIES

c. Re-using and Adapting Historic Buildings



- **Building 15** - Central Heating Plant, will be the place for a local distillery or brewery with restaurants and gallery space.
- **Building 16** - Incinerator, will be adapted for events and seasonal food tastings.
- **Building 17** - Doss Memorial Hall, Offices for SOME (So Others Might Eat) and THC (Transitional Housing Corporation) will be located in this building.
- **Building 11** - Delano Hall, LAMB (Latin American Montessori Bilingual) and Yu Ying public charter schools will be located in Building 11.

2. URBAN FORM STRATEGIES

a. Building Siting and Orientation Based on Historic Character Zones



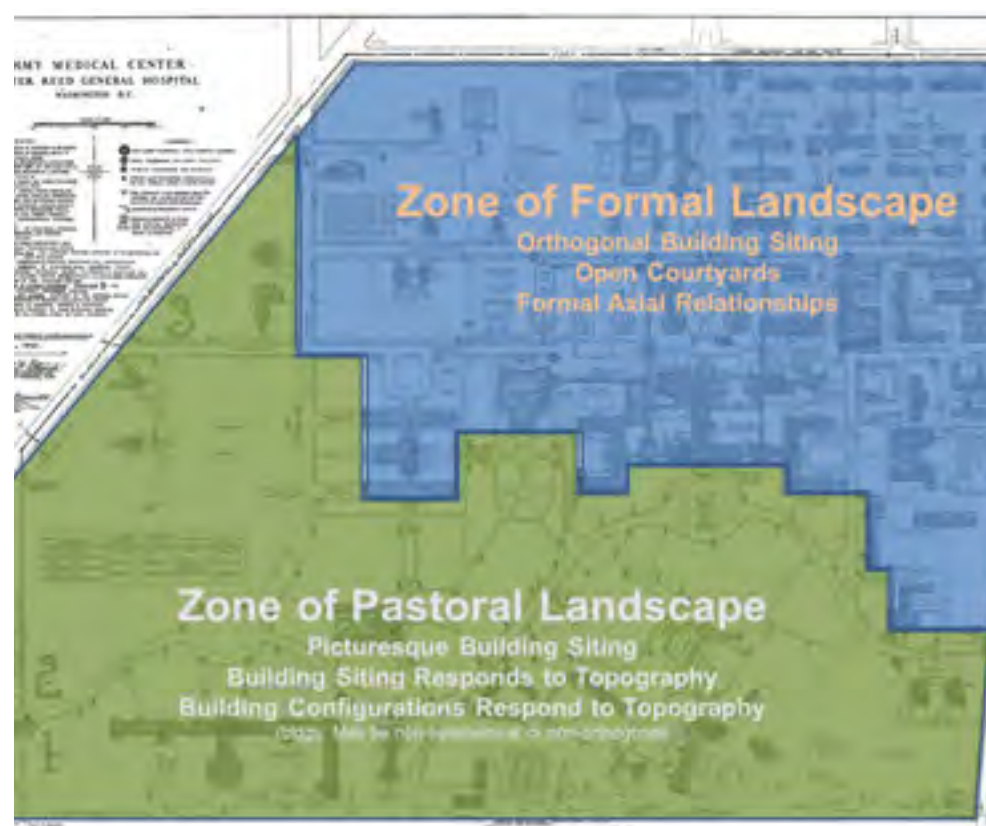
1927



1945






Proposed Plan



Character Zones

The urban form strategy for The Parks at Walter Reed builds on two key historic principles - Zones of Formal and Pastoral Landscape and Primary and Secondary Axial Relationships. Strategies include the following:

- Siting and Orientation of Proposed Buildings Based on the Character Zone*
- Restoring and Enhancing Historic Views*
- Creating Key Urban Form Design Principles*

-
-  Building configurations respond to topography
 -  The proposed buildings will be sited following historic principles
 -  The campus elements are preserved and enhanced and are opened to the surrounding neighborhoods and District

2. URBAN FORM STRATEGIES

b. Views



Historic View of 13th Street from Building 1



Existing View of 13th Street Towards Building 1

New views are crafted:

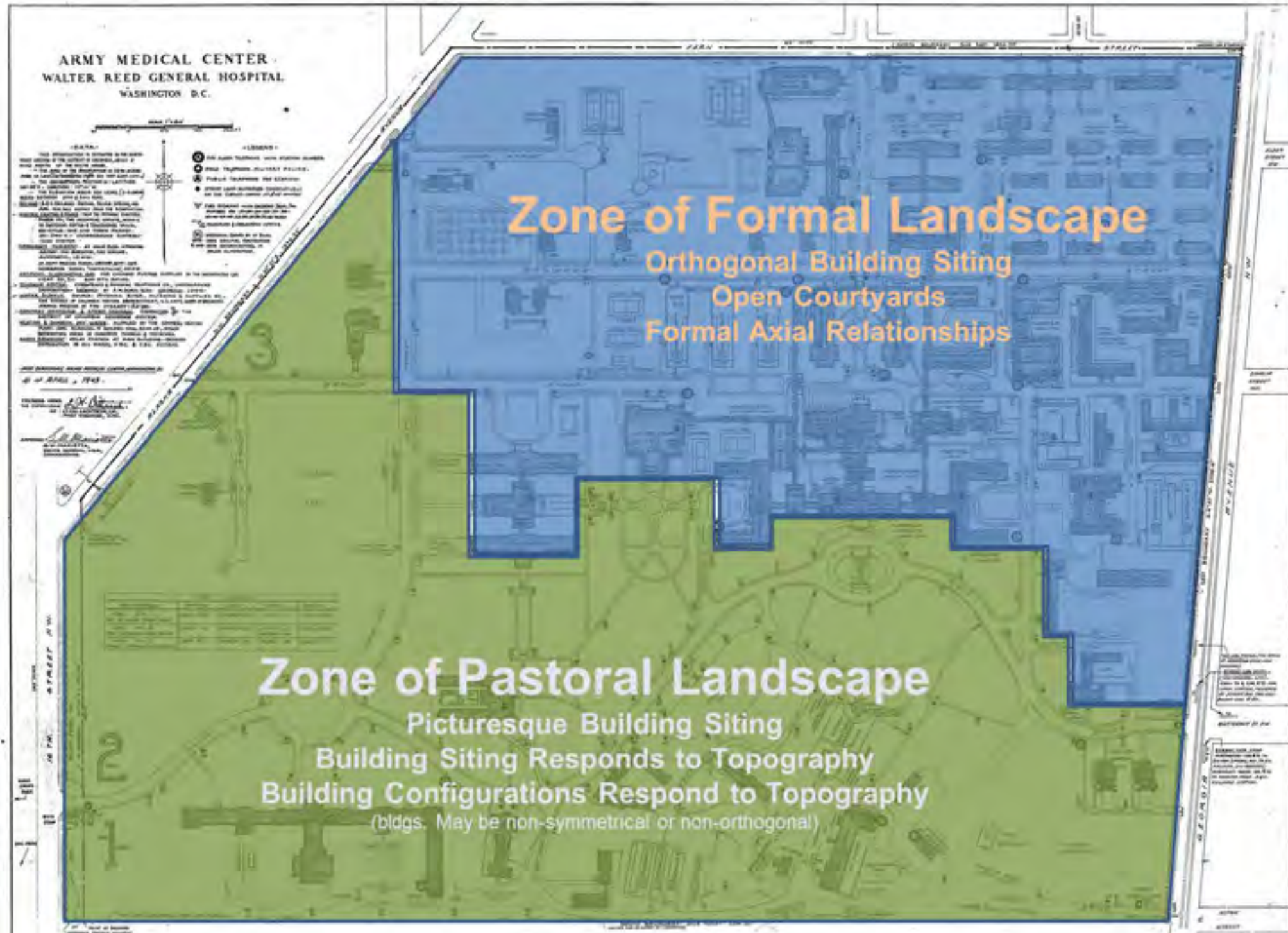
1. Facades of new office buildings on north side of Building 1 are angled to direct views to the historic facade - building corners are positioned behind the historic facade line.
2. New buildings at perimeter are angled to direct views and respond to historic principle of picturesque configuration on principal open spaces.



Historic character is preserved and is respectful of the significant role Walter Reed has played in our history and the lives of our soldiers and their families.

2. URBAN FORM STRATEGIES

c. Urban Form Principles



Historically, the north part of the campus was laid out using a formal and axial approach; the buildings were sited orthogonally and created primarily open courtyards with a series of major and minor axes. The south is characterized by steep slopes and the buildings were laid out in a picturesque manner responding to topography. The landscape was dominant and building placement allowed for open views creating a pastoral character.

The following Urban Form Principles have been created:

- 1. Building Siting, Orientation, and Configuration Should Respond to the Principles of Each Character Zone**
- 2. Building Placement and Configuration should Maintain and Create Key Vistas**
- 3. Buildings Adjacent to Historic Buildings Should Respond to Key Architectural Proportions and Elements**
- 4. Historic Landscape Should be Preserved**
- 5. New Landscape Should Respond to the Principles in Each Character Zone**



Building configurations respond to topography



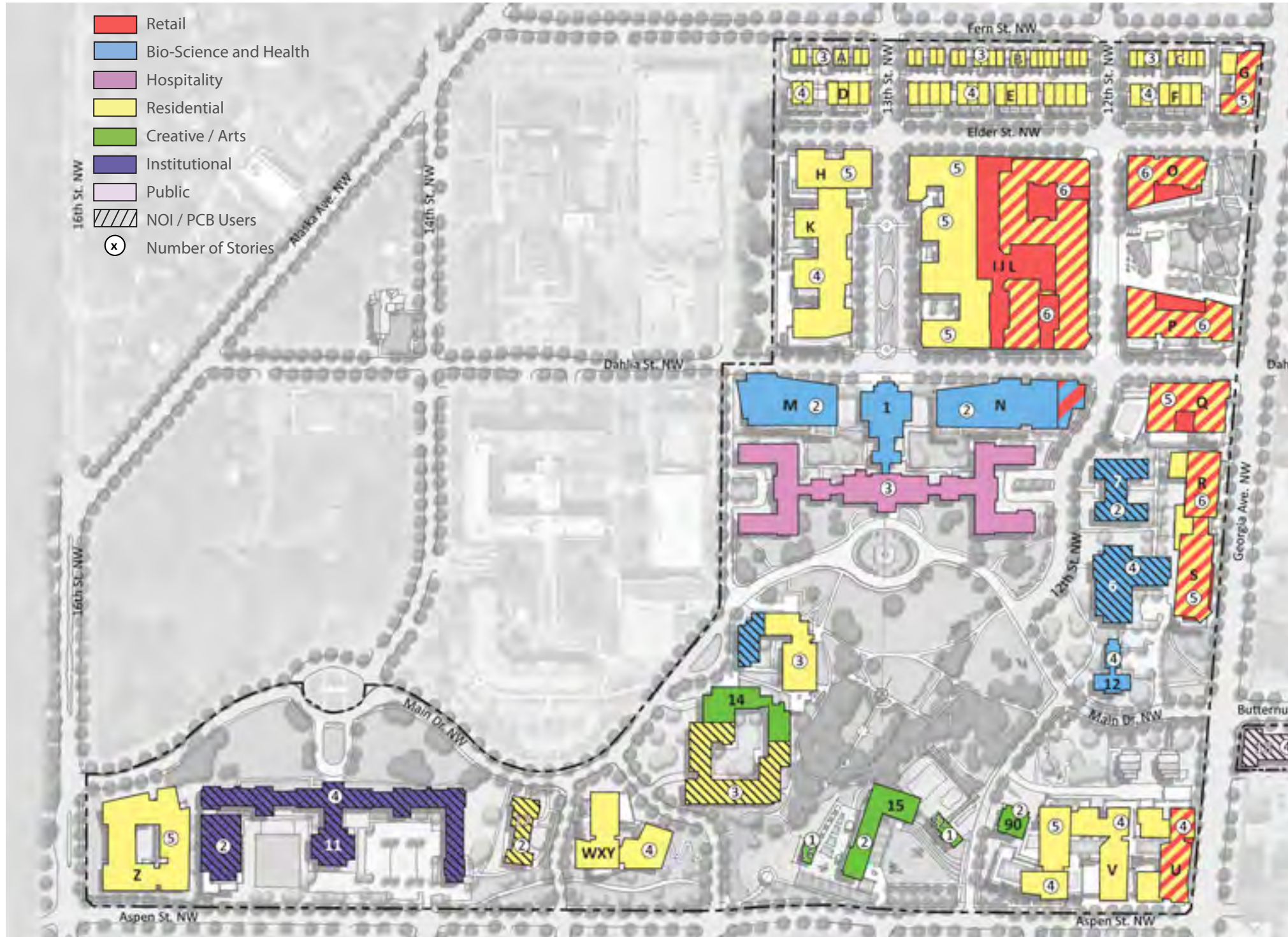
The proposed buildings are sited following historic urban form principles



Historic character is preserved and is respectful of the significant role Walter Reed has played in our history and the lives of our soldiers and their families

3. PROGRAMMING STRATEGIES

a. Balanced Distribution and Mix of Uses







Land Uses are primarily residential along the northern and southern edges adjacent to the surrounding neighborhoods. The town center is located north of Building 1 while the social and cultural institutions are located in the central area to

activate the historic lawn. The Arts District includes Arts and Entertainment uses at the former boiler plant and park area in the Aspen Arts Park. An open space and trail system links all of the land uses and to Rock Creek Park.

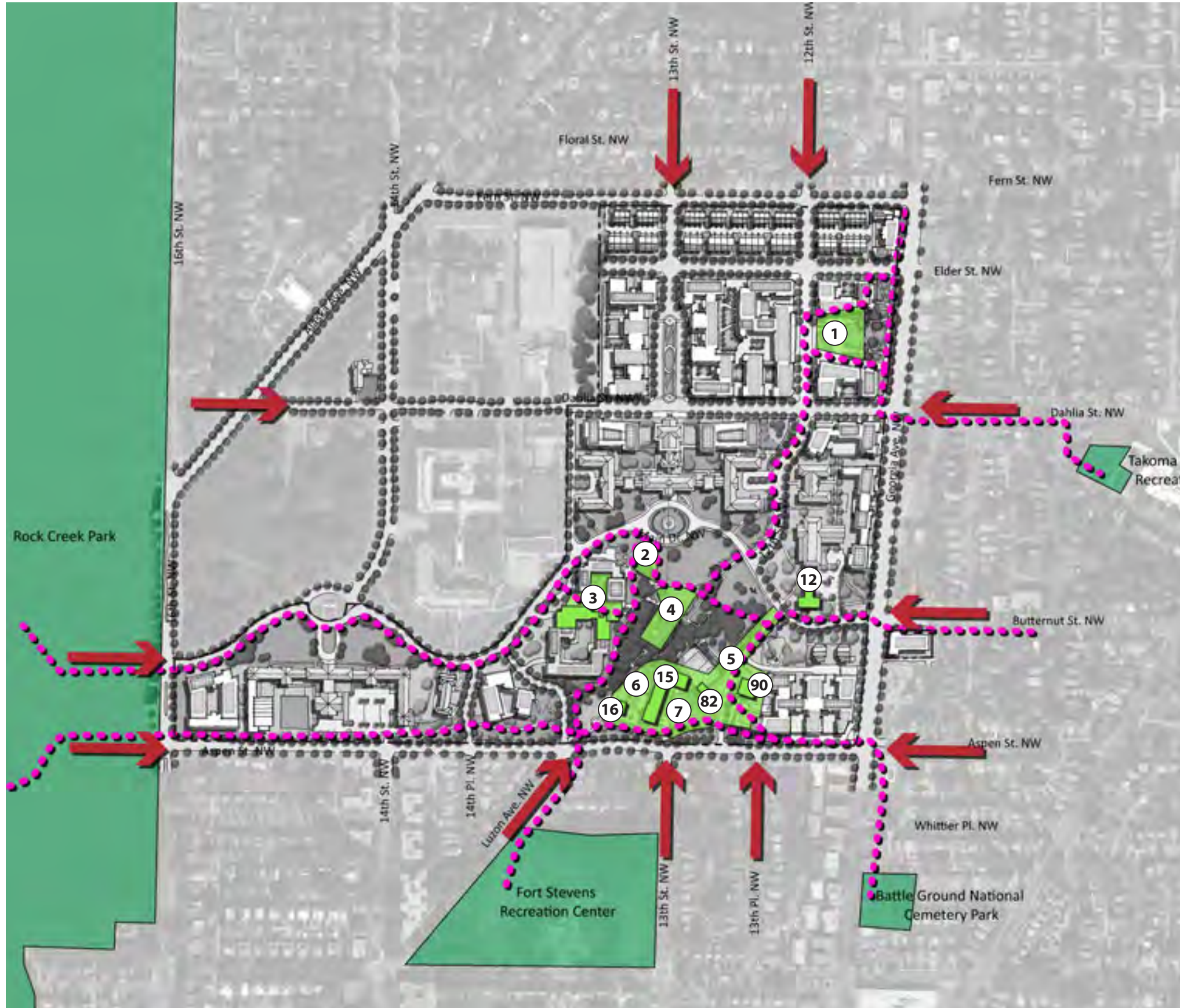
Programming is an essential component of moving the plan from vision to reality. Uses have been carefully crafted to balance economic demands with city and community goals to create the synergy necessary for a vibrant place by:

- Creating a Balanced Distribution and Mix of Uses*
- Programming Buildings and Defining Building Form*
- Programming Open Spaces and Creative Uses*
- Creating a Detailed Merchandising and Leasing Plan that will generate a vibrant "Town Center"*
- Integrating Social and Cultural Institutions*

-  Farmer's Market and Restaurants with local produce will be located in the Aspen Arts Park and the Town Center.
-  Car trips will be reduced due to the variety and mix of uses.
-  The mix of uses provide a vibrant economic environment for businesses to succeed. The institutional uses will generate new jobs to the area.
-  The variety of proposed uses, including arts and entertainment in concert with the programming of open spaces will provide a happy and healthy environment for residents and visitors.




3. PROGRAMMING STRATEGIES

c. Open Space and Creative Uses



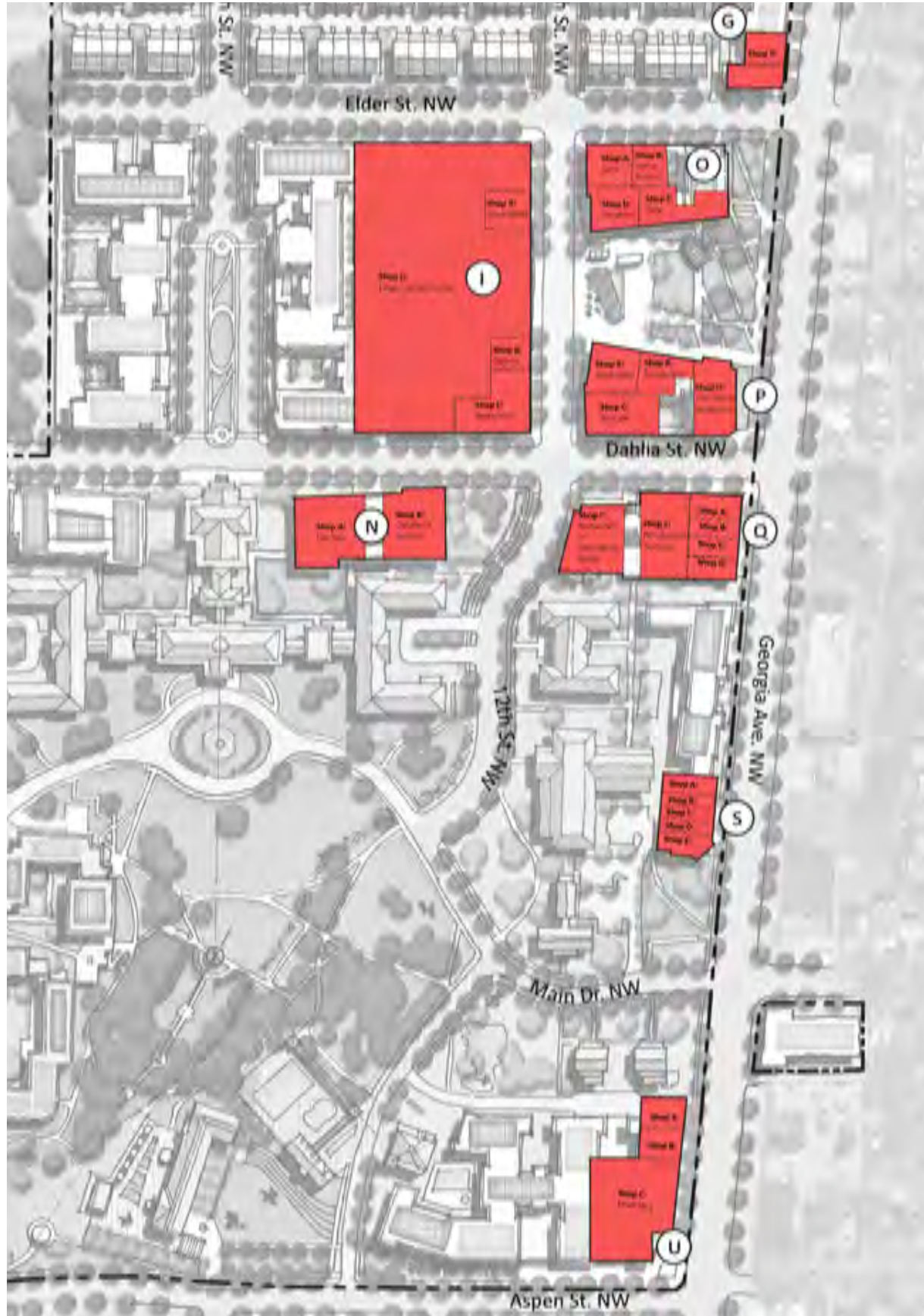
Creative uses are integrated into the plan and linked to the surrounding neighborhood and region through: pedestrian connections, hiker/biker trails, Street Car, and through the Arts Walk. Additional connections will be made to Rock Creek Park and Takoma Elementary Recreation Center.

1. Band Shell for Concerts and Performances
2. Remembrance Wall
3. Artists Housing and Veteran's Memorial Garden and Overlook
4. Cameron Glen; Amphitheater and Historic Rose Garden
5. Parks Market; Artist's and Farmer's Market
6. Outdoor Dining
7. Interactive Sculpture Park
12. Visitor Center and History Museum
15. Local Distillery or Brewery with Restaurant and Gallery Space
16. Seasonal Food
82. Joy of Motion Dance Center
90. Artist Studios, Washington Glass School and Flux Studios

-  Farmer's Market and Restaurants with local produce will be located in the Aspen Arts Park and the Town Center.
-  Pedestrian and bike networks will give residents an alternative to car trips.
-  The variety of proposed uses, including arts, entertainment, and the programming of open spaces will provide a happy and healthy environment for residents and visitors.

3. PROGRAMMING STRATEGIES

d. Merchandising and Leasing Plan



ANCHOR BLOCK RETAIL

Section I

| | | |
|---------------|------------------|---------------------|
| Shop A: | 3,000sf | Chocolatier |
| Shop B: | 3,000sf | Gallery |
| Shop C: | 8,000sf | Restaurant |
| Shop D: | 130,000sf | Large Format Anchor |
| Total: | 144,000sf | |

**Anchor Block Retail Total
144,000sf**

TOWNHOME RETAIL

Section G

| | | |
|---------|---------|-----------------------|
| Shop A: | 5,000sf | Financial Institution |
|---------|---------|-----------------------|

Townhome Retail Total 5,000sf

VILLAGE GREEN RETAIL

Section O

| | | |
|---------|---------|---------------------------|
| Shop A: | 2,800sf | Salon |
| Shop B: | 2,500sf | Home Furnishings Retailer |
| Shop C: | 5,300sf | Restaurants / Cafe |
| Shop D: | 3,000sf | Desserts / Cafe |

Total: 13,600sf

Section P

| | | |
|---------|---------|---------------------------|
| Shop A: | 4,600sf | Restaurant |
| Shop B: | 3,500sf | Restaurant |
| Shop C: | 3,200sf | Local Coffee and Art Cafe |
| Shop D: | 6,000sf | Full-service Restaurant |

Total: 17,900

Village Green Retail Total 31,500sf

GEORGIA / DAHLIA RETAIL

Section Q

| | | |
|---------|----------|-----------------------|
| Shop A: | 1,300sf | Small Shop |
| Shop B: | 1,300sf | Small Shop |
| Shop C: | 1,300sf | Small Shop |
| Shop D: | 2,250sf | Small Shop |
| Shop E: | 8,800sf | Restaurant |
| Shop F: | 11,000sf | Pets (can be divided) |

Total: 25,950sf

Section N

| | | |
|---------|---------|--------------------|
| Shop A: | 6,000sf | Day Spa |
| Shop B: | 6,000sf | Children's Fashion |

Total: 12,000sf

Georgia / Dahlia Retail Total 37,950sf

GEORGIA AVE RETAIL (SMALL SHOPS. FOCUS ON LOCAL)

Section S

| | | |
|---------|---------|------------|
| Shop A: | 1,800sf | Small Shop |
| Shop B: | 1,300sf | Small Shop |
| Shop C: | 1,300sf | Small Shop |
| Shop D: | 1,300sf | Small Shop |
| Shop E: | 1,800sf | Small Shop |

Total: 7,500sf

Section U


| | | |
|---------|----------|------------|
| Shop A: | 3,250sf | Small Shop |
| Shop B: | 3,250sf | Small Shop |
| Shop C: | 10,000sf | Pharmacy |

Total: 16,500sf

Georgia Ave. Retail Total 24,000sf

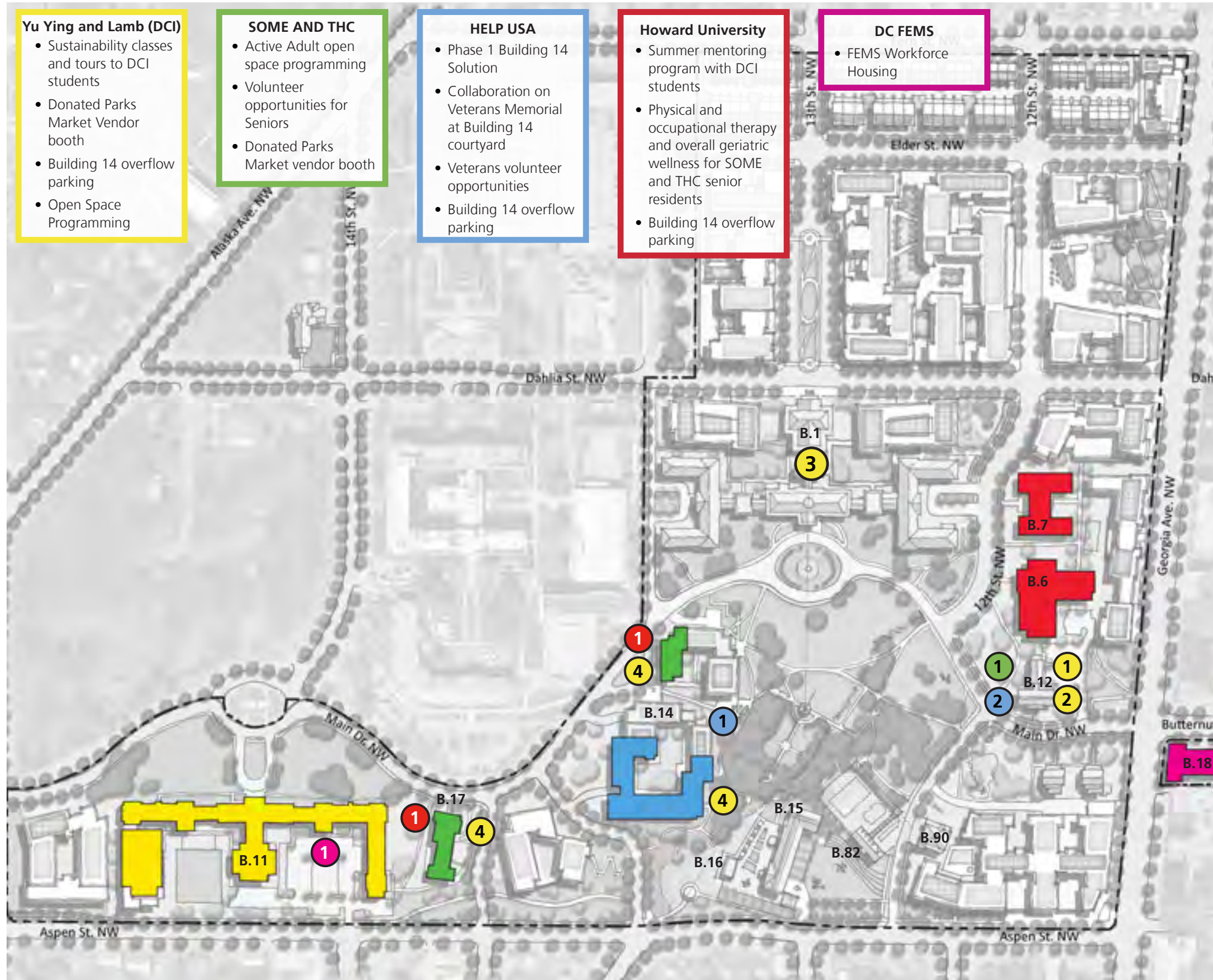
The comprehensive merchandising and leasing plan developed for the site includes a sustainable mix of local, regional and national brand retailers to create a regional retail destination as well as a neighborhood serving destination.

 Farmer's Market and Restaurants with local produce will be located in the Aspen Arts Park and the Town Center.

 Local, regional, and national retailers create a symbiotic relationship that will generate a vibrant and authentic place for the City.

3. PROGRAMMING STRATEGIES

e. Integrating Social and Cultural Institutions



Yu Ying and Lamb (DCI)

- Sustainability classes and tours to DCI students
- Donated Parks Market Vendor booth
- Building 14 overflow parking
- Open Space Programming

SOME AND THC

- Active Adult open space programming
- Volunteer opportunities for Seniors
- Donated Parks Market vendor booth

HELP USA

- Phase 1 Building 14 Solution
- Collaboration on Veterans Memorial at Building 14 courtyard
- Veterans volunteer opportunities
- Building 14 overflow parking

Howard University

- Summer mentoring program with DCI students
- Physical and occupational therapy and overall geriatric wellness for SOME and THC senior residents
- Building 14 overflow parking

DC FEMS

- FEMS Workforce Housing

The coordination and integration of social institutions is vital to the overall success of the project. Infrastructure needs will be provided by the master developer who is also supporting their development programs.

Cross Collaboration

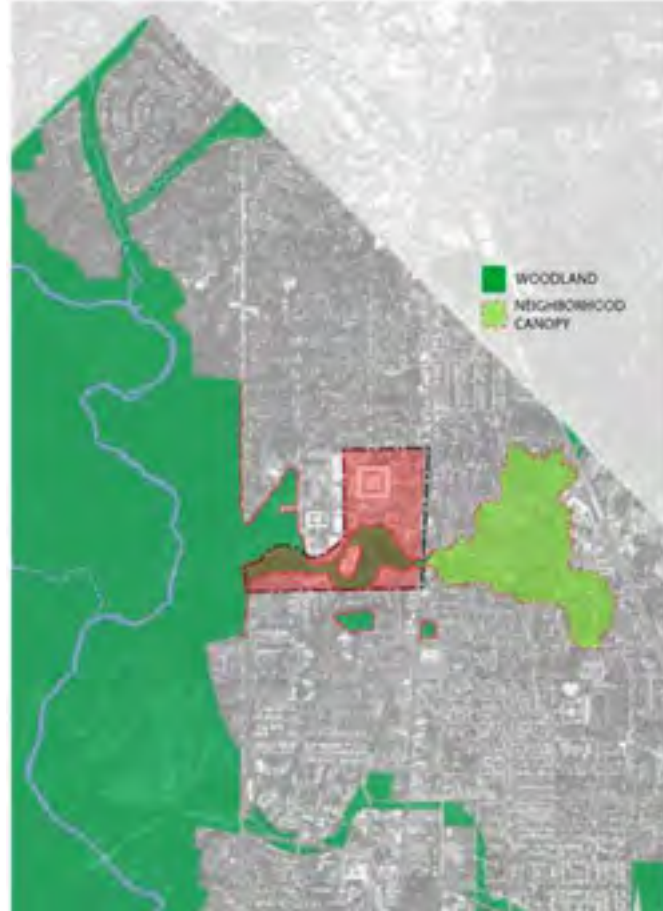
| | |
|------------------------|---|
| Yu Ying and Lamb (DCI) | <p>DC HISTORICAL SOCIETY & CRITICAL EXPOSURE</p> <ul style="list-style-type: none"> ① Student art for Visitor's Center ② Critical Exposure Photo Documentation <p>ARTOMATIC & CULTURAL DC</p> <ul style="list-style-type: none"> ③ Student Art for International Artomatic and Public Art Displays <p>SOME, THC, HELP USA</p> <ul style="list-style-type: none"> ④ Volunteer and Community Service Opportunities |
| SOME and THC | <ul style="list-style-type: none"> ① Volunteer Opportunities for Seniors |
| HELP USA | <ul style="list-style-type: none"> ① Collaboration on Veterans Memorial at Building14 Courtyard ② Veterans Volunteer Opportunities |
| Howard U. | <ul style="list-style-type: none"> ① Physical and Occupational Therapy and overall geriatric wellness service for SOME and THC senior residents |
| DC FEMS | <ul style="list-style-type: none"> ① Fire Station tours for DCI Students |

- Users such as SOME will provide meals for those in need.
- Users will provide shelter and transitional homes for the homeless and veterans in need.
- Education. LAMB and Yu Ying charter schools will be located in Building 11.
- Collaboration and support of social institutions will provide a healthy and happy environment for the greater District of Columbia.

4. OPEN SPACE STRATEGY

a. Regional Connections

WOODLAND



WALKS



WATER



Historic open space is a key element of the Campus. The proposed plan augments this by creating an interconnected open space and recreation system linking the new to the historic and to the region via Rock Creek Park.

The Urban Design:

- Creates Regional Connections*
- Links the Northern Part of the Site with the Southern and Creates a Water Feature that Evokes the Now Buried Cameron Creek*
- Conceptualizing and Programming Open Spaces to Create an Active Public Realm*

b. Link Between Town Center and Historic Landscape



- Gated-off from the City for many decades, the plan opens up and embraces the City. The adjacency to Rock Creek Park is leveraged to create regional connections and provides pedestrian and bicycle access making this a regional recreation destination.
- Cameron Creek was buried long ago, but the plan creates a water feature that improves water quality and recalls the natural history of the area. This serves as an educational element, but also serves as a compelling visual and interactive link between the north and south.

- The ecology of the site will be enhanced with the additional interconnected open spaces, connections to the region, and water quality improvement.
- Farmer's Market and community gardens will be an important element of the open space network.
- Pedestrian and bike trails will connect to the region, in particular to and through Rock Creek Park.
- The historic and arts trails will provide educational opportunities for residents and visitors.
- The proposed open space network integrated with the historic landscape will create a healthy and happy environment for residents and visitors.

4. OPEN SPACE STRATEGY

c. Conceptualizing and Programming Open Spaces



Vibrant open spaces require careful programming of both the adjacent buildings and the outdoor spaces themselves and this is a critical part of the proposed Urban Design, for both historic and new open spaces. The adjacent plan identifies the community wide open space programming, while the following page identifies the Aspen Arts park programming.



- 1. Village Green
- 2. Eisenhower Village
- 3. Splash Fountain and Ice Rink
- 4. Band Shell
- 5. Preserved Trees
- 6. Pershing Park
- 7. Entry Plaza
- 8. Cameron's Run / Bio-swale
- 9. Arts Walk
- 10. Lincoln's Landing Park and Water Feature
- 11. Community Gardens
- 12. Aspen Arts Park
- 13. Historic Rose Garden
- 14. Amphitheater
- 15. Remembrance Wall
- 16. Overlook, Passage, and Stairs Transit Stop
- 17. Arts Plaza and Market Space
- 18. Community Pool
- 19. Smokestack Arts Terrace
- 20. Interactive Sculpture Lawn
- 21. Seasonal Food Kiosk and Seating
- 22. Aspen Gateway and Sculpture Location
- 23. Aspen Linear Park
- 24. Cameron Pond
- 25. Pond Overlook and Folly
- 26. Access to Rock Creek Park
- 27. Preserved Historic Landscape

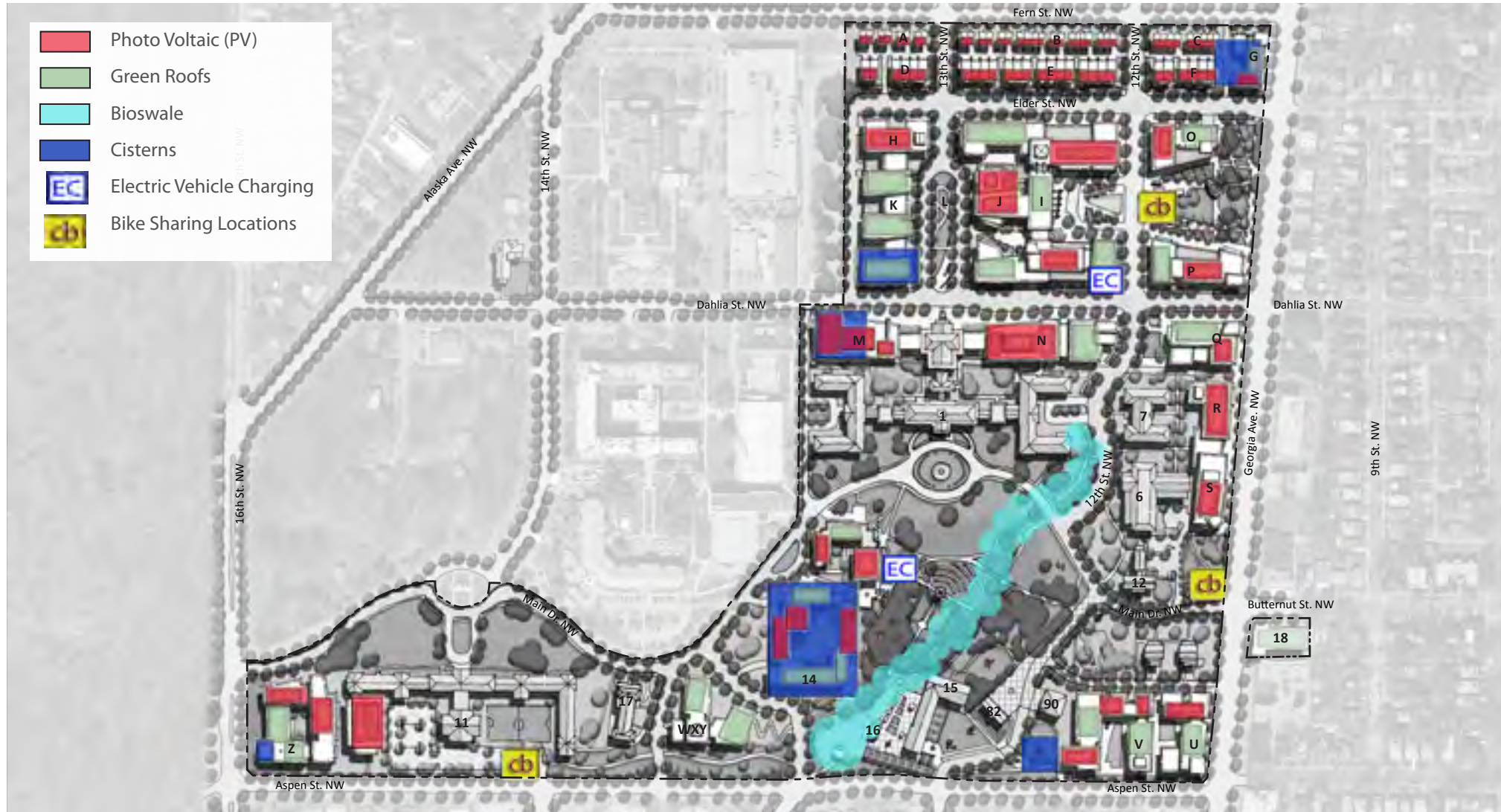
4. OPEN SPACE STRATEGY

c. Conceptualizing and Programming Open Spaces - Aspen Arts Park



5. SUSTAINABILITY STRATEGIES

c. Sustainability Implementation Plan









This sustainability implementation strategy is built around the District's "Sustainable DC Plan." Strategies include:

- a. Net Zero Energy by 2030*
- b. Net Positive Energy by 2040*
- c. Creating a Comprehensive Sustainability Implementation Plan*
- d. Committing to Silver LEED-ND*
- e. Utilizing Sustainable Practices During Construction*
- f. Creating a Modular Energy Centers Plan*
- g. Creating an Environmentally Sensitive Storm Water Management Plan*

5 key aspects:

1. **Energy:** Incorporates efficiency and renewable energy throughout.
2. **Transportation:** Encourage use of mass transit, electric vehicles, bikes, etc. to reduce vehicle miles traveled.
3. **Waste:** 20% reuse of construction and demolition waste and an 80% diversion rate for waste through recycling, composting and conversion.
4. **Water:** Green roofs, bio-swales, permeable pavement, rain water harvesting and low flow fixtures.
5. **Materials:** Maximize the use of recycled and sustainable building material.

-  The ecology of the site will be enhanced with the additional open spaces and connections to the region.
-  Sustainable strategies for water management and re-use will be incorporated in the sustainability implementation plan.
-  Strategies will be incorporated to achieve net-zero energy by 2030 and net-positive energy by 2040.
-  Multiple modes of transportation will be available for residents and visitors.
-  Sustainable economic benefits by promoting local and regional growth and a green economy.
-  Sustainable measures and goals, such as carbon neutrality, will result in a healthy environment.

5. SUSTAINABILITY STRATEGIES

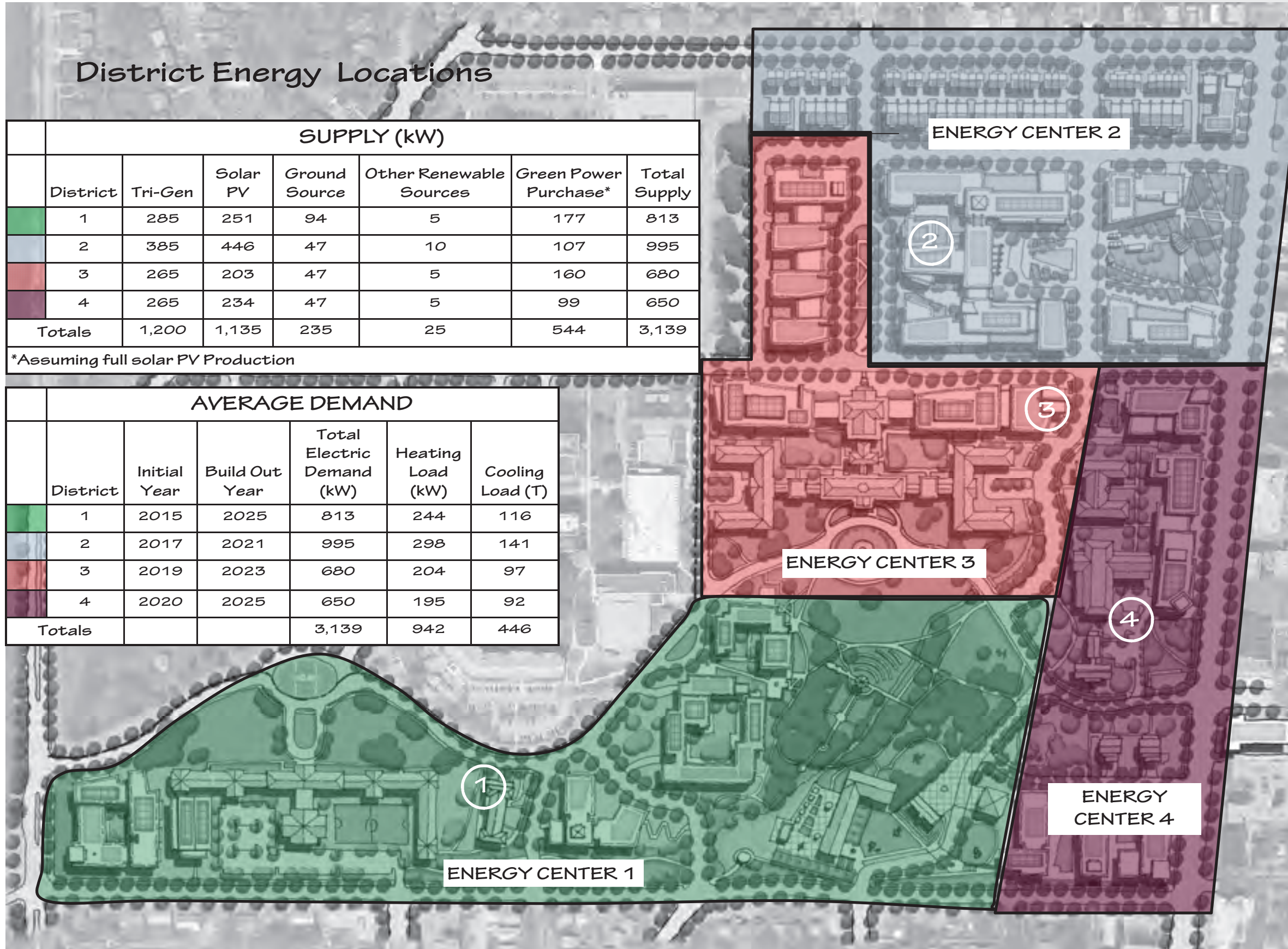
f. Modular Energy Centers Plan

District Energy Locations

| SUPPLY (kW) | | | | | | | |
|---------------|--------------|--------------|---------------|-------------------------|-----------------------|--------------|--|
| District | Tri-Gen | Solar PV | Ground Source | Other Renewable Sources | Green Power Purchase* | Total Supply | |
| 1 | 285 | 251 | 94 | 5 | 177 | 813 | |
| 2 | 385 | 446 | 47 | 10 | 107 | 995 | |
| 3 | 265 | 203 | 47 | 5 | 160 | 680 | |
| 4 | 265 | 234 | 47 | 5 | 99 | 650 | |
| Totals | 1,200 | 1,135 | 235 | 25 | 544 | 3,139 | |

*Assuming full solar PV Production

| AVERAGE DEMAND | | | | | | |
|----------------|--------------|----------------|----------------------------|-------------------|------------------|--|
| District | Initial Year | Build Out Year | Total Electric Demand (kW) | Heating Load (kW) | Cooling Load (T) | |
| 1 | 2015 | 2025 | 813 | 244 | 116 | |
| 2 | 2017 | 2021 | 995 | 298 | 141 | |
| 3 | 2019 | 2023 | 680 | 204 | 97 | |
| 4 | 2020 | 2025 | 650 | 195 | 92 | |
| Totals | | | 3,139 | 942 | 446 | |



Energy strategies include:

- Modular Energy Centers are designed to support site construction phasing.
- Each Energy Center supplies electrical, heating and cooling capacity for the areas they serve.
- Energy Centers will serve historic, existing and new buildings. Each Energy Center is anchored by a tri-gen unit scaled to serve that area. The tri-gen capacity will be augmented by green energy sources including solar, geothermal, and other renewable resources to help meet the loads.

5. SUSTAINABILITY STRATEGIES

g. Environmentally Sensitive Storm Water Management Plan



A well integrated and environmentally sensitive storm water management plan is a key component of the Urban Design.

Key sustainability elements include:

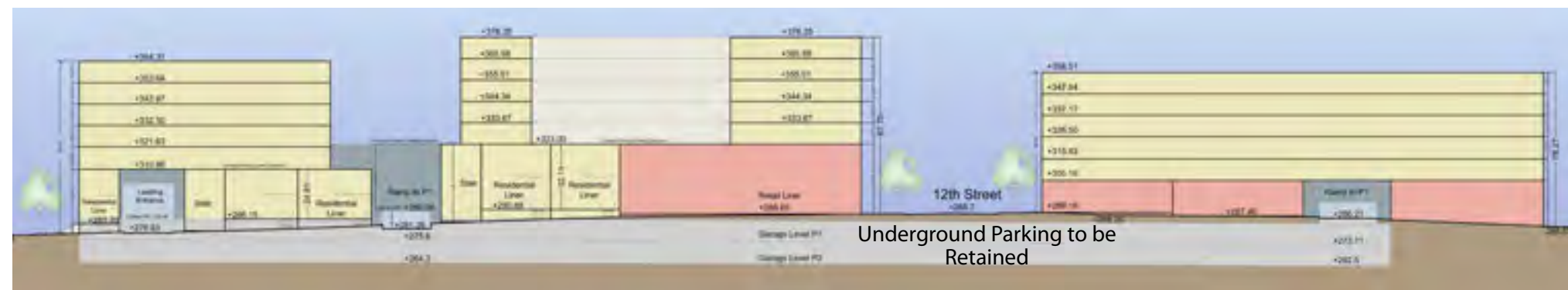
- A low impact design is proposed for the new system. It will meet the 15-year storm goals for the site.
- Bio-retention strategies across the site limit run-off.
- Pervious Pavement reduces runoff of storm water.
- Cisterns are used for storage which is then redistributed across the site through the gray water system for irrigation and other gray water needs.
- Green roofs further increase pervious areas and on-site storm water quality management.
- Ponds and water features increase capacity for on-site storm water retention and water quality improvement.

6. PARKING

a. Shared Parking Areas





b. Underground Parking Locations

| Parking Area | Parking Spaces Required | Parking Spaces Provided |
|--------------|-------------------------|--|
| 1 | 48 | 34 Spaces in Garage 14 Spaces On-street 48 SPACES TOTAL |
| 2 | 1,588 | 1,100 in Existing Garage 425 Spaces in new Garages 63 Spaces On-street 1,588 SPACES TOTAL |
| 3 | 401 | 450 in Existing Garage 450 Spaces Total |
| 4 | 267 | 200 Spaces in Garage 38 Spaces On-street 29 on Surface Parking Lot 267 spaces Total |
| 5 | 93 | 93 Spaces in Garage 93 Spaces Total |
| 6 | 55 | 55 Spaces in Garage 55 Spaces Total |
| 7 | 174 | 145 Spaces in Garage 29 Spaces On-street 174 Spaces Total |
| Total | 2,626 | 2,675 |



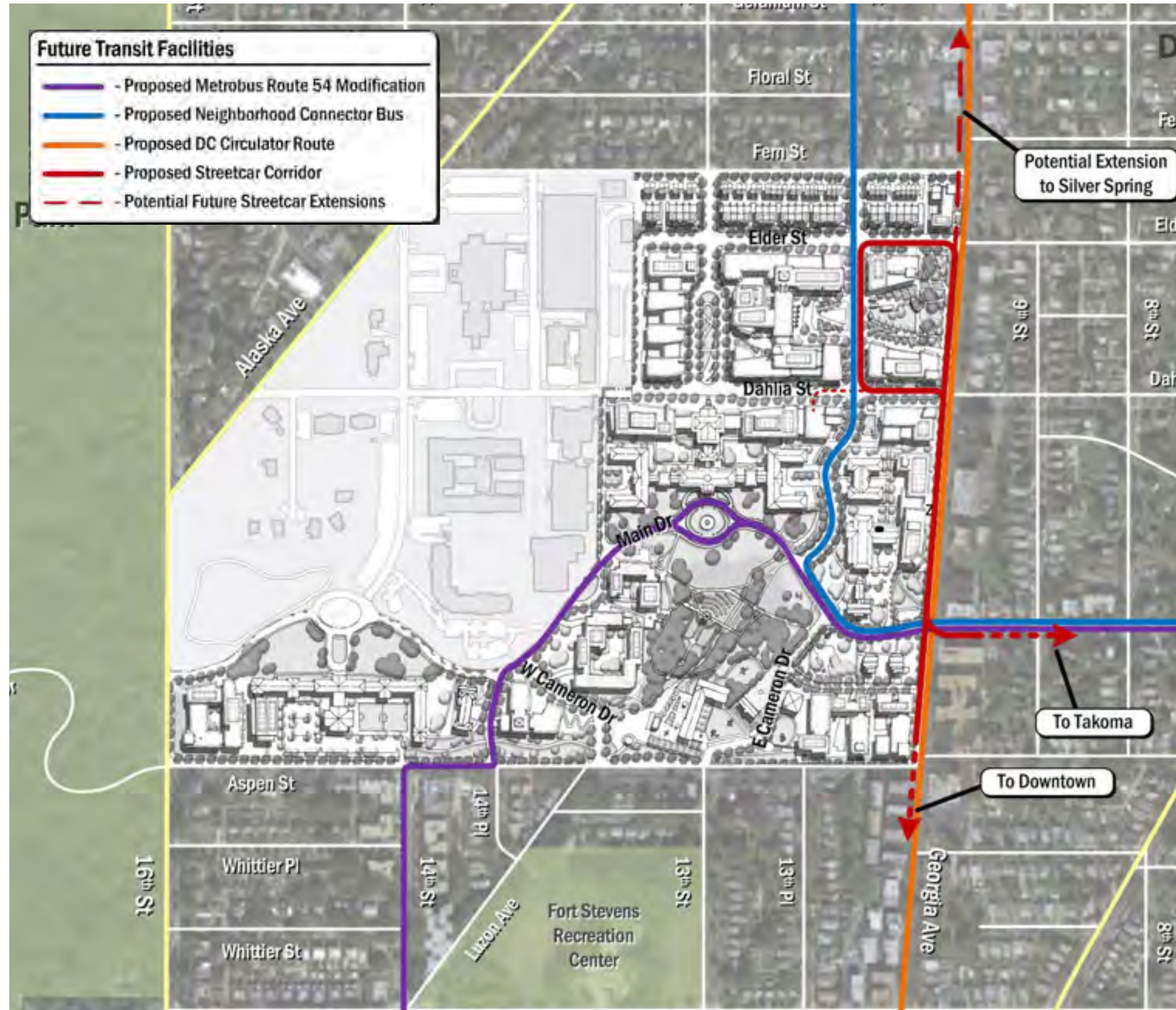
A convenient, cost effective, and environmentally sustainable parking strategy is integral to the successful realization of the vision. The strategy includes the following:

- Creating shared parking areas and a “park once” strategy to minimize waste and promote walking.*
- Providing strategically located underground parking to minimize walk distances.*
- Re-using the existing underground garages both as a sustainable strategy and to minimize costs.*

-  Retaining parking structures will save resources.
-  Car trips will be reduced by providing parking in strategic locations where people can park their car once and walk to different uses.
-  Retaining existing parking structures will be cost effective for the redevelopment of the campus.
-  The “park once” strategy promotes walkability and healthy habits.




7. TRANSPORTATION

b. Modified Bus Routes



An efficient and multi-modal transportation strategy ensures the availability of environmentally sustainable modes of transportation and promotes health. Strategies include:

- Promotion of highly efficient and electric vehicles, alternative fuels, and alternative modes of transportation.*
- Working with WMATA to modify bus route locations through the site.*
- Working with Capital Bikeshare to identify bike share station locations.*
- Ensuring pedestrian use by establishing vibrant and sustainable public spaces, complete streets, and a trail system.*
- Installing electric vehicle charging stations at various locations.*

-  Promotion of green energy consumption through the installation of electric vehicle charging stations.
-  Provision of multiple modes of transportation.
-  Promotion of healthy habits such as walking and biking.