METROPOLITAN BRANCH TRAIL

DRAFT

Concept Plan

District Department of Transportation

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Concept Plan

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CHAPTER ONE

THE PROPOSED TRAIL

MBT SCOPE, PURPOSE AND NEED

The Metropolitan Branch Trail (MBT) is an emerging 11-mile multi-use trail system. As shown in the figure on the following page, the MBT runs from Silver Spring in Maryland to the National Mall in the District of Columbia. It includes a segment that will connect the MBT at Fort Totten to the Anacostia Tributaries Trail System in West Hyattsville, Maryland, and two branches at the southern end of the trail—one to the National Mall and one to the Capitol Hill neighborhood.

The MBT will be an important non-motorized transportation route providing direct access from Northeast DC neighborhoods to the heart of Washington and seven of Metro's Red Line stations. It will also be an important recreational facility in a part of DC that is underserved by parks and trails. It will provide residents and workers in neighborhoods such as Takoma, Michigan Park, Brookland, Eckington, NOMA (North of Massachusetts) and Stanton Park a place to exercise and recreate outdoors as well as a connection to the broader regional trail network. The MBT will also contribute to economic development and tourism. It will provide access to many cultural and historic sites and serve as the route of the East Coast Greenway (an emerging multi-use trail route from Maine to Florida) between Prince George's County and the National Mall.

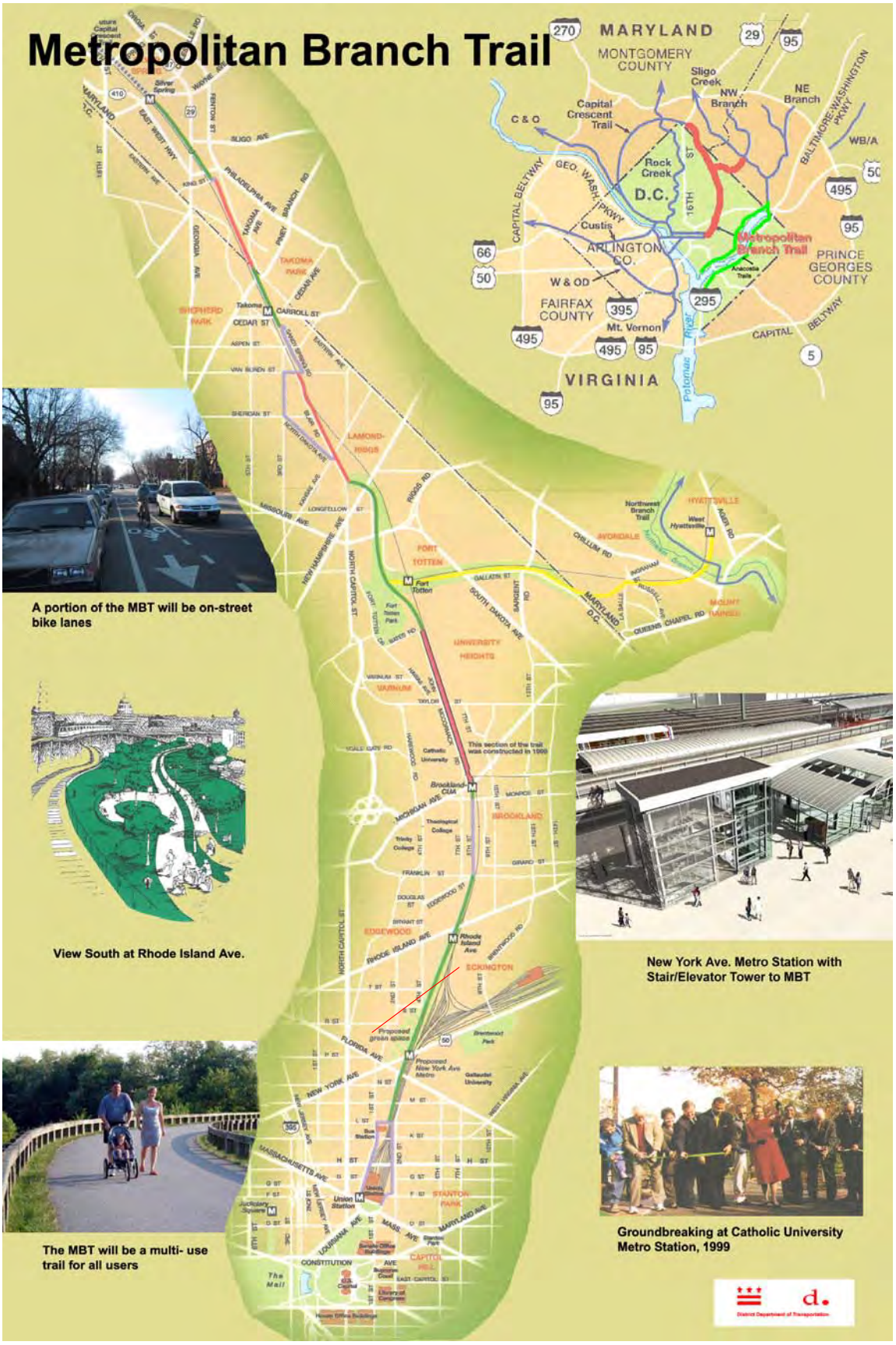
Portions of the MBT have already been constructed by the District of Columbia Department of Transportation (DDOT) and Washington Metropolitan Area Transit Authority (WMATA), such as along John McCormack Road in Brookland, and at the new Red Line Metro station at New York and Florida Avenues. Other segments are in design, or soon to be under construction. DDOT has prepared this concept plan to guide current and future development of the 10 miles of the MBT that is within the District.

BACKGROUND

The opportunity for the Metropolitan Branch Trail was first identified in 1988, by Patrick Hare, a resident of Brookland and planner who was looking for a good bicycle route into the city and to his job in Silver Spring, MD. Working with the Washington Area Bicyclist Association (WABA) and Rails-to-Trails Conservancy, in 1989, Hare organized a group of eleven area cyclists to conduct an exploratory walk/ride. Soon after the Coalition for the Metropolitan Branch Trail was formed to explore and promote the potential for a multi-use trail.

At this time, the idea of converting unused or abandoned railroad rights-of-way to multi-use trails was relatively new, however a number of rail-trails had been created around the country and in the Washington area. An early focus of MBT supporters was the area of abandoned rail sidings that once was the Baltimore and Ohio Railroad yard in Eckington. This area stretched from Franklin Street in Brookland to New York Avenue in the Truxton Circle neighborhood.

Metropolitan Branch Trail



A portion of the MBT will be on-street bike lanes

View South at Rhode Island Ave.

New York Ave. Metro Station with Stair/Elevator Tower to MBT

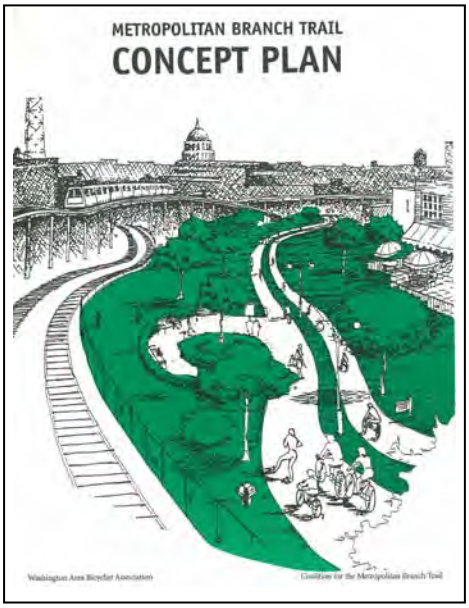
The MBT will be a multi- use trail for all users

Groundbreaking at Catholic University Metro Station, 1999

Continuing field investigations by interested residents and area bicyclists revealed a possible route over the entire distance between the National Mall and Silver Spring, Maryland, as well as a connector trail along National Park Service land to an emerging trail system in Prince George's County at West Hyattsville. Much of it could be off-street, using public lands, with a number of on-street segments using low volume neighborhood streets.

In the early 1990's, the concept of the Metropolitan Branch trail was identified in the DC Long Range Transportation Plan, as well as the DC Comprehensive Plan. The Bicycle Coordinator at the DC Department of Public Works (DCDPW) began working with the Coalition to refine and develop the proposed trail. In the mid 1990's, at the request of WABA and the Coalition, DCDPW prepared an Engineering Feasibility Study for the section between Union Station and Takoma Park, Maryland. This study was completed in 1997 and concluded that it would be possible, from an engineering standpoint, to construct such a trail.

In 1998, TEA-21, the six-year federal transportation funding bill allocated $8.5 million in Demonstration Project funding to the District for the MBT. Congresswoman Eleanor Holmes Norton (D-DC) was instrumental in orchestrating this funding. In 1999, WABA published a Concept Plan for the Trail that envisioned creation of a large urban park and greenway along the abandoned, and as yet undeveloped, CSX railroad property. The DCDPW established an MBT project advisory committee and began facilitating regular planning meetings. A portion of the trail was built along McCormack Road as a part of routine street reconstruction and additional portions were planned for 1st Street, NE, 2nd Street, NE and 8th Street, NE.



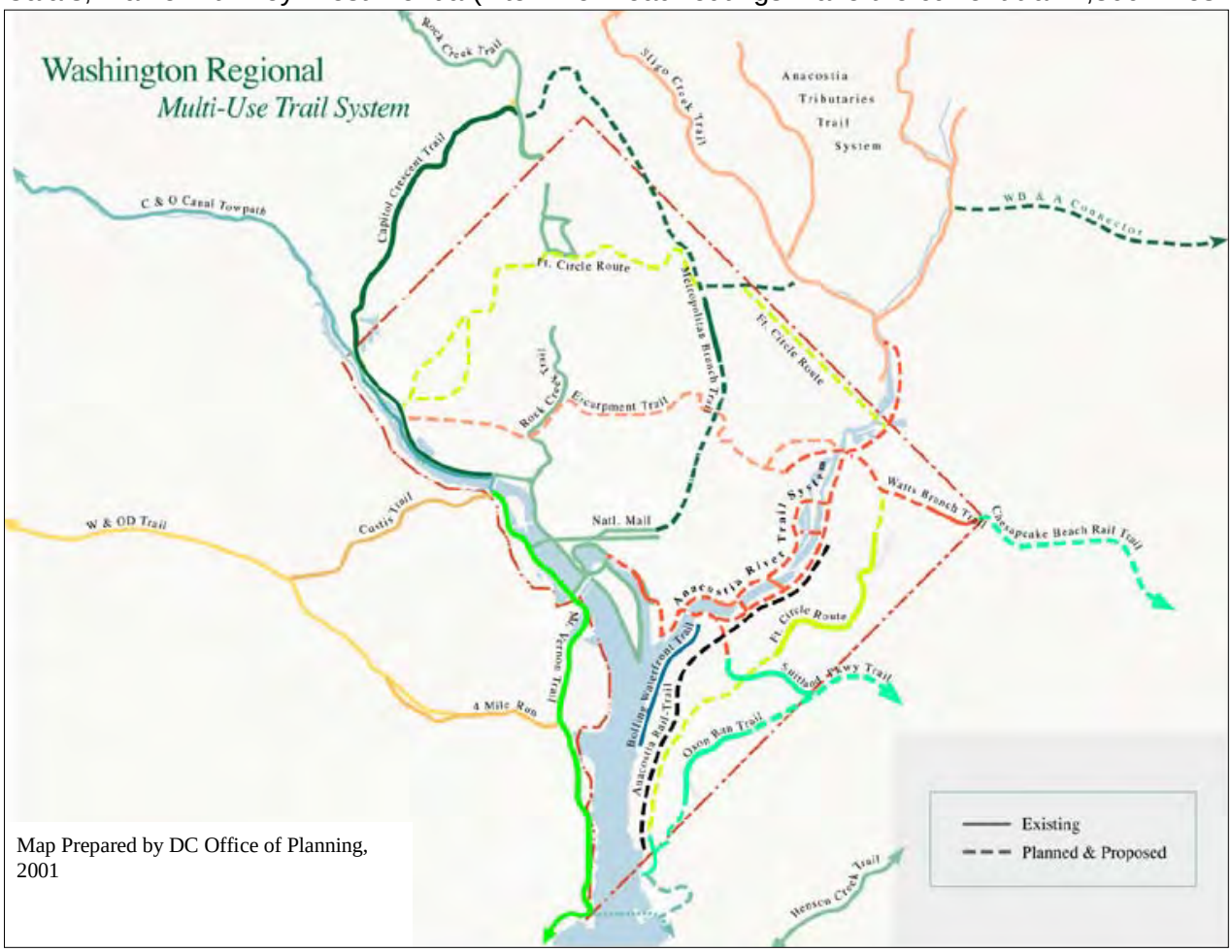
After the year 2000, trail development activities intensified further. WABA published a study describing the necessary acquisition actions in April 2001. When the City and WMATA agreed to construct a new Metro Station at New York and Florida Avenues, trail advocates and city staff negotiated for WMATA to construct a portion of the trail as a part of the station construction project. DDOT provided necessary funding. During city-sponsored planning and private development actions began to increase along the corridor, the MBT was considered and alignments were refined, such as in the Takoma, North Capital, and NOMA neighborhoods. Montgomery County (M-NCPPC) completed a Feasibility Study and Concept Plan for one mile of the MBT between DC and Silver Spring. In 2003, DDOT hired a special project manager for the trail, prepared a Takoma Alignment Study and initiated development of this comprehensive concept plan.

MBT: MISSING LINK IN THE REGIONAL TRAIL SYSTEM

Today, the trails on the west side of the region are well connected to each other, as are many of the trails on the east side. However, there are no trail links between the west and east side systems. Moreover, there are no trails or greenways in Northeast DC, between Rock Creek Park and Prince George's County. The MBT fills both of these gaps, in Northeast DC and the Regional Trail System as a whole.

Additionally, in conjunction with the Capital Crescent Trail, the MBT completes the loop through and around the north side of the city, a key recreational and transportation circuit identified in the 1990 National Park Service Report, *Paved Recreational Trails of the National Capital Region.*

The MBT will provide one of two routes of the East Coast Greenway into the District of Columbia. The East Coast Greenway is a 2,650-mile multi-use trail being developed to connect Calais, Maine with Key West Florida (interim off-road routings make the current trail 2,800 miles



Map Prepared by DC Office of Planning, 2001

in length). It's projected 80 percent off-road route will link all of the major cities along the eastern seaboard. The designated ECG route in the District includes the Prince George's County Spur from Maryland to Ft. Totten, the MBT to the National Mall, the Mall trails to the Memorial Bridge and the Mt. Vernon Trail into Virginia.

The regional trail system is composed of a variety of trail types including towpath trails, rail-trails, trails in freeway and parkway corridors, trails along rivers, trails along streams and creeks and trails along ridgelines. While settings, surfaces, width and prior use of the rights-of-way may vary among these trails, what is common is that they are all shared use facilities, i.e. they serve bicyclists, pedestrians and runners, and sometimes a variety of other user groups.

Following is a brief summary of some of the regions trails and description of how the MBT compares and contrasts:

- The W&OD and Capital Crescent trails are good examples of traditional rail-trails that were created on abandoned railroad lines that serve as both recreational greenways and non-motorized transportation routes.

- The C&O Canal Towpath is a premier example of a historic canal that has been converted to a multi-use trail.

- This region has many examples of greenway trails that have been woven into linear park lands centered on our tributary streams and creeks, including the Rock Creek Trail in DC and Maryland, Sligo Creek Trail in Montgomery County, Anacostia Tributaries Trail System in Prince George's County, and Four Mile Run Trail Arlington County, Virginia.

- The Mt. Vernon Trail and Rock Creek & Potomac Parkway Trail illustrate how trails can be feature components of urban river waterfronts and monumental landscapes.

- The Custis Trail is an example of a path built along, and in conjunction with, a metropolitan interstate corridor (I-66).

Compared to these regional trail examples, the MBT is fairly unique. It is part rail-trail, part rail-with-trail, part sidepath, part on-street bicycle route, and partly built in conjunction with a new station along the Metrorail system. It does not follow an existing stream or river corridor, but does parallel part of the historic Tiber Creek drainage. The MBT is very urban in nature; however, it also passes through forest, meadows and historic properties managed by the National Park Service. A tremendous advantage of the MBT is that, like all rail-trails, it follows a gentle grade and generally avoids steep inclines. However, parts of the MBT will be adjacent to still active freight rail lines, as well as Metrorail tracks. In many locations the available right-of-way is barely enough to provide for a shared use trail. Its treadway will vary from 8 to 12 feet wide and will provide separate paths for bicycles and pedestrians infrequently. Given these urban and environmental constraints, planning and design of the MBT has been likened to "threading a needle."

A QUICK TOUR OF THE MBT

The two maps on the following pages provide an overview of the MBT, its preferred alignment through Northeast DC, the neighborhoods and destinations that it serves, and the preferred facility types that will facilitate non-motorized travel and safety. In a variety of locations, this plan identifies alternative alignments (not shown on the following maps) and/or facility type options in particular locations. These are shown in detail on the layout sheets provided in Chapters 3-7.

Based on the preferred alignment, the MBT in the District will include 10 miles of specially designed bicycle and pedestrians facilities, including:

- 6.8 miles of shared use path,
- 0.5 miles of bike lanes and sidewalks
- 2.2 miles of shared use streets and sidewalks
- 0.5 miles of separated use pathways (bicyclists/skaters separated from pedestrians/runners)

Chapter 2 provides a detailed list of each trail segment by facility type, including its location and length.

Connecting Diverse Communities and Neighborhoods

The Metropolitan Branch Trail will connect a number of diverse communities and neighborhoods, many of which are not particularly well connected by streets and roads today. While making these connections the MBT passes through a wide variety of urban settings, residential, commercial, natural, and industrial.

The MBT parallels the rail corridor of the Metropolitan Branch of the Baltimore and Ohio Railroad, which now contains the CSX freight and Metro Red Line trains. Because of its history as a freight rail corridor, much of the trail's immediate context is industrial; however, industrial land use are typically only a half to one block wide on either side of the corridor. Beyond these areas is a well-developed, active and diverse residential and commercial cityscape. Moreover, many of the former industrial areas have already been redeveloped as commercial office or residential use, and many more properties are making this transition. Following is a quick tour of the MBT corridor.

Monumental Core: The MBT begins in the monumental core of Washington, DC on the east end of the National Mall, with a spectacular view of the Capitol. It moves up Louisiana Avenue, which is the northern edge of Capitol Hill and passes by Union Station and into the North Capital commercial/office district.

North Capital Area: This area has undergone major redevelopment over the past fifteen years and continues to grow as an eastern extension of Downtown. The rail line is the eastern edge of what is now called the NOMA district (North of Massachusetts Avenue), which is planned as a high density, mixed-use area with an arts and entertainment focus, and includes a new Red Line Metro station at New York and Florida Avenues.


Preferred alignment and facility types
November 2004
N
Met Branch South
Shared Use Path
Bike Lanes
Shared Use Street
Structures
(bridges, ramps, tunnels)
Connecting Paths
Special Facilities
(Separated bike and pedestrian ways, woonerfs)
Existing and planned bike routes
Rail Lines
Neighborhood Retail
Development Sites
Parkland-Cemeteries
NPS Lands
Takoma Historic District
Institution
Historic Sites
Rec-Facilities
Schools
Metro Stations
0 mi
0.25
.5
Turkey Thicket
PERRY ST
Fort Bunker Hill
OTIS ST
Brookland -CUA Stn
NEWTON ST
Brooks Mansion
MONROE ST
Tunnel
Moore Academy HS
LAWRENCE ST
St. Anthony HS
KEARNY ST
JACKSON ST
Slowe ES
IRVING ST
HAMLIN ST
GIRARD ST
FRANKLIN ST
Noyes ES
EVARTS ST
RHODE ISLAND AVE
BRYANT ST
13TH ST
14TH ST
JOHN MCCORMACK RD
Catholic University of America
National Shrine of Immaculate Conception
HAREWOOD RD
MICHIGAN AVE
Soldier's & Airman's Home
Theological Colleges
Trinity College
Washington Hospital Center
Children's Hospital
Veterans Hospital
PARK RD
WARDER ST
PARK PL
GEORGIA AVE
KENYON ST
COLUMBIA RD
HARVARD ST
McMillan Reservoir
MCMILLAN DR
HOWARD PL
Howard University
COLLEGE ST
BARRY PL
Glenwood Cemetery
Edgewood Recreation Center
Shaed ES
DOUGLAS ST
EDGEWOOD ST
DC Prepartory Academy
Edgewood Terrace
CHANNING ST
Shopping Center
Rhode Island Ave Stn
Brentwood P.O.
BRENTWOOD RD
Amtrak Yard
Metro Yard
McKinley School Center
Harry Thomas Sr. Recreation Center & Pool
Emery ES
LINCOLN RD
SEATON PL
RANDOLPH ST
Penn Center DCPS
QUINCY PL
THOMAS WAY
HARRY
ECKINGTON PL
NEW YORK AVE
NPS Maintenance Yard
BRENTWOOD PKY
MOUNT OLIVET RD
Hamilton Center
Gallaudet University
WEST VIRGINIA AVE
MONTELLO AVE
Capital City Market
FLORIDA AVE
New York Ave Stn
PATTERSON ST
Dunbar HS
Dunbar Recreation Center (Indoor Pool)
New York Avenue Center
Cook, J.F. ES
Woodies Warehouse
Washington Coliseum
PIERCE ST
Walker-Jones ES
Terrell JH
JO Wilson Recreation Center & Pool
Wilson, J.O. ES
Mt. Vernon Square
K ST NW
K ST NE
PARKER ST
Gonzaga HS
MASSACHUSETTS AVE
NEW JERSEY AVE
H ST NW
H ST NE
N CAPITOL ST
NORTH CAPITOL ST
G PL
G ST NW
G ST NE
ML King Public Library
Ludlow Taylor Recreation Center
Postal Museum
Union Station
F ST NW
F ST NE
Judiciary Square
Columbus Circle
Stuart-Hobson MS
E ST NW
E ST NE
Japanese American Memorial
LOUISIANA AVE
DELAWARE AVE
D ST NW
D ST NE
Taft Memorial
Senate Office Buildings
Stanton Park
Peabody ES
PENNSYLVANIA AVE
CONSTITUTION AVE
MARYLAND AVE
US Capitol
Supreme Court
A ST NE
MADISON DR NW
The National Mall
JEFFERSON DR SW
EAST CAPITOL ST
Library of Congress
A ST SE
2ND ST SE
INDEPENDENCE AVE SE

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Preferred alignment and facility types
November 2004
N
Met Branch North
Shared Use Path
Bike Lanes
Shared Use Street
Structures
(bridges, ramps, tunnels)
Connecting Paths
Special Facilities
(Separated bike and pedestrian ways, woonerfs)
Existing and planned bike routes
Rail Lines
Neighborhood Retail
Development Sites
Parkland-Cemeteries
NPS Lands
Takoma Historic District
Institution
Historic Sites
Rec-Facilities
Schools
Metro Stations
O mi
0.25
.5
TAKOMA
BALTIMORE
PINEY BRANCH
HOLLY
CEDAR
MAPLE ST
WILLOW ST
TULIP
CARROLL AVE
ETHAN ALLEN
ELM
NEW HAMPSHIRE
POPLAR
RAY RD
Cady Lee Mansion
Takoma Historic District
SPRING ST
Takoma Stn
CEDAR ST
Public Library
BUTTERNUT ST
Old Town Takoma Park
LAUREL ST
WALNUT
ASPEN ST
WHITTIER ST
SANDY SPRING RD
BLAIR RD
2ND ST
Tacoma Rec Center
VAN BUREN ST
Takoma Aquatic Center
3RD ST
Interim Route
4TH ST
5TH ST
Coolidge HS
EASTERN AVE
UNDERWOOD ST
Lamond Rec Center
TUCKERMAN ST
SHERIDAN ST
Whittier ES
RITTENHOUSE ST
CHILLUM PL
KANSAS AVE
SLIGO MILL RD
NEW HAMPSHIRE
NORTH DAKOTA AVE
QUACKENBOS ST
PEABODY ST
Rabaut Campus (Charter Schs)
OGLETHORPE ST
Fort Circle Park
Fort Slocum Park
NICHOLSON ST
McDONALD PL
MILMARSON PL
MADISON ST
LONGFELLOW ST
1ST ST
MISSOURI AVE
KENNEDY ST
JEFFERSON ST
INGRAHAM ST
HAMILTON ST
GALLATIN ST
Charter Sch
Mamie Lee Special Ed. School
RIGGS RD
La Salle ES
6TH ST
CHILLUM RD
Public Library
1ST PL
3RD ST
4TH ST
7TH ST
Backus MS
HAMILTON ST
GALLOWAY ST
11TH ST
12TH ST
JEFFERSON
Archdiocese of Washington
Stairs
Fort Totten Stn
Fort Circle Park
GALLATIN ST
SOUTH DAKOTA AVE
10TH ST
St. Ann's Home
13TH ST
North Michigan Park Rec Center
EASTERN AVE
6TH PL
EMERSON ST
Concrete Plant
Trash Transfer Stn
Fort Totten Park
FORT TOTTEN DR
N. CAPITOL ST
NEW HAMPSHIRE AVE
SARGENT RD
8TH ST
DECATUR ST
16TH ST
CRITTENDEN ST
7TH ST
BUCHANAN ST
St. Anselm's School
Rock Creek Cemetery
John Adams Memorial
ALLISON ST
BATES RD
HAWAII AVE
CUA Athletic Complex
PUERTO RICO AVE
Providence Hospital
WEBSTER ST
ROCK CREEK CHURCH RD
US National Cemetery
Grant Circle
VARNUM ST
FORT DR
I ST
2ND ST
TAYLOR ST
UPSHUR ST
Bunker Hill ES
Carroll HS
President Lincoln National Monument
NORTH CAPITOL ST
JOHN MCCORMACK RD
Howard Univ. Divinity School
Brookland ES
MICHIGAN AVE
Turkey Thicket
RANDOLPH ST
14TH ST
QUINCY ST
Franciscian Monastery
Anderson House
Catholic University of America (CUA)
PERRY ST
Fort Bunker Hill
OTIS ST
Soldier's & Airman's Home
HAREWOOD RD
NEWTON ST
Brookland-CUA Stn
Brooks Mansion
PARK PL

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East Stanton Park: The eastern leg of the MBT runs along Second Street, NE, which acts as the edge of another neighborhood in transition. East Stanton Park is primarily residential, however the industrial and residential properties adjacent to the railroad tracks are changing to office use and the H Street retail district is being revitalized.

Eckington/Edgewood: From New York Avenue north to the Rhode Island Avenue Metro station similar transitions are taking place in Eckington and Edgewood, and many new developments are complete or underway. The Stanton Park, Edgewood and Eckington neighborhoods include a mix of both healthy and stressed residential areas.

Brookland/CUA: At Franklin Street the trail transitions to a semi-industrial, semi-residential, semi-institutional neighborhood south of Catholic University (CUA), with a strong arts presence. Brookland proper is on the west side of the railroad tracks. North of the Brookland/CUA Metro station, the trail runs along the edge of the university campus. Residential Brookland is linked to the trail at Monroe Street, at the Brookland/CUA Metro station and at Taylor Street. Brookland is the central Northeast neighborhood in Ward 5 with a diverse population and housing stock and unique neighborhood retail areas.

Ft. Totten: North of the CUA campus, the MBT again enters an industrial area, which is bordered by National Park lands, Fort Totten Park. The MBT will traverse park lands and an adjacent residential neighborhood, Manor Park. The residential neighborhoods around Ft. Totten and Ft. Slocum are dominated by Wardman era brick row houses. These neighborhoods are typical of the first suburban/bedroom communities developed within the city limits as it expanded in the early twentieth century.

Takoma, DC: North of Manor Park is Takoma, a Victorian era trolley suburb that was split by the new, elevated railroad configuration when the Metro Red Line was built in the 1970's. The MBT is also recommended to split so that the communities on each side of the tracks will each be served. Takoma is a diverse residential neighborhood with two small commercial shopping areas. It has a rich history that stems from its origins as an early DC street car suburb.

Trail Users and Trip Types

Given the population densities of surrounding neighborhoods and the lack of trails and greenways in Northeast DC, it is expected that the MBT will be used by a wide range of people and for a variety of trip purposes. Users will include:

- Bicyclists of various skill levels: children, novices, and experienced, and various types of equipment including tandems, recumbents, bicycle trailers and "trail-a-bikes."
- Pedestrians including children, the elderly, disabled persons in wheelchairs or electric scooters, people pushing strollers, dog walkers and others
- Runners and joggers
- In-line skaters, push scooters, skateboards, etc.

Common trip purposes will include transportation to work and school and transportation for non-work activities such as running errands, shopping, visiting friends, attending events, and gaining access to entertainment venues. Intermodal trips will be generated by the trail's excellent

access to metro rail stations and metro bus transfer points, including Union Station which also serves two regional commuter rail systems, Amtrak and a variety of other bus services. Recreational trips, including use by children and youth, fitness and exercise routines, trips to parks and recreation centers, access to the regional trail system, and trips to cultural and historic sites will likely generate the largest levels of trail use.

SUMMARY OF PLANNING PROCESS

From the onset of the Concept Plan, gathering input from a diverse population has been incorporated in all stages of developing the proposed alignments presented in this plan. The Metropolitan Branch Trail is unique in that it crosses through many diverse communities each with special characteristics that could potentially be highlighted through art, signage, structures or alignments. Outreach efforts have included the following: monthly meetings with an Advisory Committee whose members represent various local and federal agencies (Federal Highway Administration and National Park Service) and cycling groups; public meetings in four different communities along the trail; and the creation of a website with detailed information regarding the planning process and all relevant materials from the public meetings. In addition, people were able to comment on the trail and proposed alignments through the website.

Public meetings were held in Takoma, Brookland, Rhode Island Avenue Area and the Fort Totten area. All meetings were advertised in local newspapers and on the website. Also, people who chose to be on the notification list were sent emails inviting them to participate in meetings. The format for all meetings was similar. A brief presentation followed by either small break out groups or question and answer sessions. All material presented at the meetings was posted on the website for further review by people unable to attend the meetings.

An Environmental Assessment (EA) under the provisions of the National Environmental Policy Act (NEPA) has been prepared (FHWA, 2004), focused on portions of the trail that will traverse National Park Service (NPS) land. Other sections of the MBT meet the requirements for a categorical exclusion under NEPA. The EA includes consultation as required by Section 106 of the National Historic Preservation Act (NHPA) for all sections of the MBT being planned by the Concept Plan, including sections not on NPS lands.

As part of the EA process, agency scoping and coordination was conducted with both the National Park Service (NPS) as well as the Federal Highway Administration (FHWA) as a separate process. A half-day scoping meeting was held with the NPS and FHWA in April 2004 to ensure that a thorough and open process would fully address all related issues and impacts stemming from development of the trail on NPS land. The Fort Totten area public meeting was conducted to serve the dual purpose of scoping for purposes of the EA process, as well as to support the MBT planning process. The EA is being produced in parallel with the concept plan and decisions made for one will be reflected in the other.

A Civic Design Workshop to address Public Art was held in September 2004. Attendees at this workshop included representatives from the DC Fine Arts Commission, WMATA, Dance Place and other local arts related organizations with an interest in the development of public art along the MBT. A formal presentation was made and then discussion followed. Supporting locations along the trail for both active and stationary art presentations were identified.

THE MBT CONCEPT PLAN: AN OVERVIEW

Chapter One has provided an overview of the trail. The central component of the MBT will be an 8-12 foot wide hard surface shared use path. In most locations the path surface will be asphalt. Creating a high quality trail, however, requires inclusion of many other components, such as signage, bridges, intersections improvements and more. Following is a brief summary of the components of the MBT including references to where in this plan they are discussed.

Recommended Trail Design Components

Chapter Two provides a summary of the recommended design components for the Metropolitan Branch Trail, including a list of trail design objectives that should be used to guide design of each segment. Chapter Two begins with an introduction to the various facility types that will be used to construct the MBT and provides an introduction to special terms and trail design concepts that will be referred to throughout the remainder of the plan. The heart of the chapter includes a summary description of and design guidance for each of the physical elements and design concepts that make up the MBT. A summary of these components follows:

Design Components of the Metropolitan Branch Trail

- **Trail Design Objectives**
- **Trail Facility Types—**shared use path, shared use street and sidewalk, bicycle lanes, etc.
- **Structures--**bridges, tunnels, ramps, stairways, drainage structures, etc.
- **Intersections/Roadway Crossings--**signals, crosswalks, curb ramps, curb extensions, etc.
- **Signs and Pavement Treatments--**logos, trail identity signs, wayfinding signs, user etiquette and information, traffic safety, regulatory, etc.
- **Connections--**key destinations, trail access points, connecting paths and trails, connecting DC bicycle routes, etc.
- **Gateways and Waysides--**locations for special signage, information and map kiosks, landscape and hardscape treatments, artistic elements, interpretive signage, benches, bicycle racks, shade structures, water, etc.
- **Landscaping--**selection of trees and other plant materials, environmental and aesthetic qualities of a greenway, etc.
- **Public Art and Civic Design--**description of artistic elements recommended for integration into the trail infrastructure and landscape as a part of phased design and construction, as well as locations, themes, and types of public art and art experiences that can be installed (or programmed) along the trail after construction.
- **Lighting & Security--**recommendations for lighting levels and design, and application of Crime Prevention through Environmental Design--CPTED techniques.
- **Low Maintenance Design—**design recommendations that will reduce long term maintenance costs.

Trail Details by Segment

Chapters Three through Seven illustrate with text, maps, photos and graphics how the design components and recommendations should be applied in each of the five major geographic segments of the trail:

- Chapter 3: National Mall to New York Avenue
- Chapter 4: Rhode Island Avenue Area: New York Avenue to Franklin Street
- Chapter 5: Brookland: Franklin Street to Bates Road.
- Chapter 6: Ft. Totten: Bates Road to Oglethorpe Street, including the Prince George's County Spur
- Chapter 7: Takoma: Oglethorpe Street to the DC/MD Boundary

Each of these chapters begins with a customized statement of trail objectives and an area map. Within each chapter, the trail is divided into logical segments for discussion. Each segment discussion begins with a description of existing conditions, recommended alignments and alternatives, and recommended trail facility types and alternatives. Following that discussion is a customized description of how each of the trail elements listed in the box above should be applied throughout the segment. Additionally, each of these chapters includes customized recommendations for policing and implementation.

Signage, Landscaping, and Lighting

Chapter Eight provides more detailed descriptions and recommendations for the signage system, landscaping and lighting. Definitions provided in Chapter Eight, as well as the discussion of Trail Design Components in Chapter Two, serve the purpose of a ***glossary*** for the Concept Plan and should be consulted if unfamiliar terms are encountered in other chapters.

Implementation

In **Chapter Nine**, the plan addresses other topics that are also essential for a successful trail, including recommended phasing of construction, estimated construction costs, policing and public safety, trail management, and trail maintenance. **Appendix B** supports Chapter Nine with greater detail about segment phasing and interim trail measures.

Public Art

A special **Appendix A** includes the Public Art Plan with Civic Design Sketchbook, including a listing of potential projects.

CHAPTER TWO
TRAIL COMPONENTS

MBT DESIGN OBJECTIVES

The route of the MBT takes it through a variety of environments, including the monumental core of Washington, high-rise office districts, abandoned and active industrial zones, National Park Service lands and residential streets. Given the diversity of the trail types that will be needed, and the variety of users to be served, establishing clear design objectives is critical to ensure trail continuity, and a consistently high quality trail experience along the entire route. Recommended design objectives for the MBT include the following:

- Develop a trail logo, and in-surface application of it, as a distinctive "trail signature" that can be used throughout the corridor to communicate continuity and the unique character of the MBT.
- Provide off-street path wherever possible.
- Provide on-street accommodations where off-street path does not meet needs of Class A bicyclists.
- To increase user safety and security, provide grade separations at major arterial roads (bridges or tunnels); as well as at-grade crossings.

Existing Segment of Metropolitan Branch Trail in Takoma Park, MD

- Use special striping for shared use streets and traffic calming measures, to make the trail route distinctive and increase user safety in motor vehicle traffic.
- Design safe and seamless transitions between trail facility types and settings.
- Maximize access to the trail from adjacent neighborhoods by providing effective signage, enhanced gateway treatments, path connectors, curb ramps and other linkage facilities.
- Keep the trail in visible public settings to increase security and safety, include lighting and employ Crime Prevention Through Environmental Design (CPTED) treatments.
- Integrate art and landscaping into the trail infrastructure and materials, and into public spaces that the trail passes through.
- Interpret neighborhood and city history and culture along the trail.

- Provide accessibility for persons with disabilities by following *The Americans with Disabilities Act Accessibility Guidelines* (*ADAAG*), where possible.

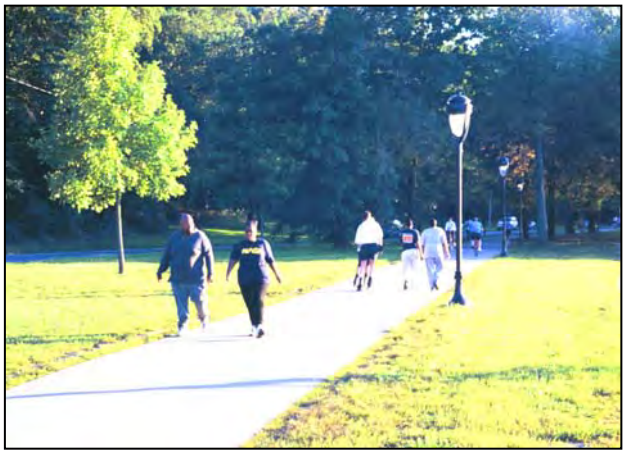
TRAIL DESIGN COMPONENTS

To create a continuous pathway through the diverse environments of the MBT corridor, a variety of bicycle and pedestrian facility types will be woven together in a seamless fashion.

Trail Types

Shared Use Path

Shared Use Path: a two-way, paved path separate from the vehicle roadway for use by pedestrians, bicyclists, runners, disabled persons, and other non-motorized travelers. A shared use path is sometimes referred to as a trail, path, pathway, off-street path, or off-road path. When a shared use path is located adjacent to a street or roadway, where a sidewalk would typically be located, it is often called a *sidepath*.



Shared Use Path—Greenway Trail

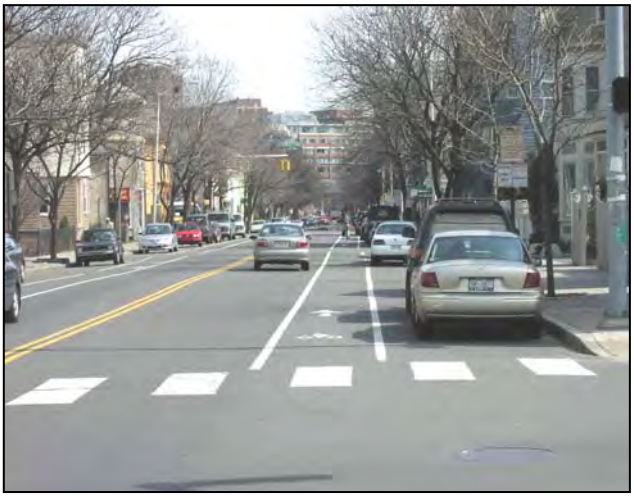
Shared Use Path--Rail with Trail

Shared Use Path--Rail Trail

Sidepath

Bicycle Lanes

Bicycle Lanes: typically one-way facilities designated to exclusively carry bicycle traffic in the same direction as adjacent motor vehicles. Generally, a two-way street is striped with two bicycle lanes, one for travel in each direction. In DC some one-way streets have one bicycle lane for bicycle travel in the same direction as motor vehicle travel. Sometimes bicycle lanes are used to accommodate bicycle traffic that is contra-flow to motor vehicle traffic on a one-way street. Bike lanes are typically five feet wide and are identified by signs as well as pavement markings.



Bike Lanes

Shared Use Street

Shared Use Street: a street shared by both motor vehicle and bicycle traffic that does not have designated bike lanes; the street may be too narrow, or traffic volumes and speeds may be such that they are not warranted. Low-volume, residential streets, especially in an urban grid, are often ideal as shared use streets. They can be used as on-street segments that link off-street sections of a trail system. When shared use streets are part of a larger trail system 1) they should be marked with special pavement markings, such as "sharrows," and share the road signs, and 2) sidewalks or other special pedestrian accommodations should be provided for trail users that are on-foot..

Shared Use Street – with and without "Sharrow"

Sidewalk

Sidewalk: concrete walkway adjacent to a city street or road. Typically 5-6 feet wide, wider in areas with higher pedestrian volumes. In some cases constructed with brick, asphalt or other hard paving materials.

Sidewalk

Woonerf

Woonerf: a small, short street to be shared equally by pedestrians, bicyclists and motor vehicles traveling under 10 mph. A woonerf may be narrow or wide, but typically has generous landscaping and no curbs. It may be a cul-de-sac or dead end street. A speed table (raised crosswalk) is typically installed at the entrance. It is a Dutch concept that is finding increased use throughout Europe and in the U.S.

Woonerf

Staircases with Bicycle Rolling Trays

Staircases with Bicycle Rolling Trays: these include specially designed stairways that provide a concrete groove or metal tray on one or both sides of the stairway. The tray allows a bicyclist to roll their bicycle up or down the stairs. Some designs also include powered chair lifts so that wheelchair bound or other disabled persons can go up or down the stairs.

Staircase with Concrete Bicycle Rolling Tray on the Side

Staircase with Concrete Bicycle Rolling Grooves in the Center

The maps in Chapter One illustrate where each trail facility type is recommended along the corridor. The table below lists each trail segment by facility type, location, and length.

Preferred Alignments and Facility Types

Chapter/Segment	Initial Facility Type	Ultimate Facility Type	Distance
National Mall to New York Avenue			
National Mall to Union Station	Shared Use Path	Shared Use Path	0.28
Union Station Area	Separated Bike and Pedestrian Ways	Separated Bike and Pedestrian Ways	0.56
First Street, NE (G St. to M St.)	Bike Lanes & Sidewalks	Shared Use Path	0.48
L Street to New York Ave.	Shared Use Path	Shared Use Path	0.50
East Leg			
Second St. (F St. to L St.)	Shared Use Path	Shared Use Path	0.50
Rhode Island Area			
New York Ave. to Franklin St.	Shared Use Path	Shared Use Path	1.20
Brookland Area			
8th Street, NE (Franklin to Monroe)	Shared Use Street & Sidewalks	Shared Use Path	0.47
CUA/Brookland Metro Area	Shared Use Path	Shared Use Path	0.21
McCormack Road (Michigan Ave. to Bates Rd.)	Shared Use Path	Shared Use Path	0.91
Fort Totten Area			
Bates Road to Ft. Totten Metro	Shared Use Path	Shared Use Path	0.40
Ft. Totten Metro to Kennedy St.	Shared Use Path	Shared Use Path	0.45
First St., NE	Shared Use Street & Sidewalks	Shared Use Street & Sidewalks	0.23
McDonald Place	Shared Use Street & Sidewalks	Shared Use Path	0.10
Prince George's Spur			
Ft. Totten Metro to S. Dakota	Shared Use Path	Shared Use Path	0.40
S. Dakota to P.G. County	Shared Use Street & Sidewalks	Shared Use Path	0.80
Takoma Area			
Blair Road (McDonald Place to Van Buren St.)	Shared Use Path	Shared Use Path	0.78
East Leg			
Blair Road to Eastern Ave.	Shared Use Path	Shared Use Path	0.60
Eastern Ave. (Cedar to Piney Branch Rd.)	Shared Use Street & Sidewalks	Shared Use Path	0.20
West Leg			
Van Buren St.	Shared Use Street & Sidewalks	Shared Use Street & Sidewalks	0.08
Takoma Recreation Center	Shared Use Path	Shared Use Path	0.16
Fourth St. (Whittier to Butternut)	Shared Use Street & Sidewalks	Shared Use Street & Sidewalks	0.16
Butternut St. to Spring Pl.	Shared Use Path	Shared Use Path	0.18
Spring Pl. and Chestnut	Shared Use Street & Sidewalks	Woonerf	0.13
Chestnut to Eastern Ave.	Shared Use Path	Shared Use Path	0.16
Joint Leg			
Eastern Ave. Piney Branch to Takoma Park, Maryalnd	Shared Use Path	Shared Use Path	0.10

Structures

The MBT will include a variety of structures, such as bridges over roadways, ramps to provide bridge access, underpasses under roadway bridges, tunnels through roadway bridge abutments and retaining walls and fences. Construction of the MBT will also include creation and modification of drainage structures such as pipes, small culverts, inlets, ditches and swales.

Some structures identified in the plan will be required to facilitate the trail; others are optional components that will increase safety and user convenience. Some provide additional or improved points of access and may be constructed in later phases. Following is a list of the recommended major new structures and their contribution to the MBT system:

Location	Structure Type	Contribution to Trail System
L Street Transition for West Leg	Ramping	May be added when NOMA Station property is developed.
L Street Transition for East Leg	Ramping	Would eliminate use of stairs
Elevated Trail at New York Avenue Station.	Bridge, M St. ramp, L Street stair, and station elevator and stair	Built by WMATA as a part of the new Metro station.
Rhode Island Avenue Metro Station Access	Bridge and ramps	Recommended for construction in conjunction with associated trail segment.
Franklin Street Transition	Ramping	Recommended for construction in conjunction with associated trail segment.
Monroe Street Underpass	Tunnel through existing abutment	Recommended as a future phase.
Bates Road to Ft. Totten Trail segment	Trail built over replacement drainage facility.	Essential component of recommended trail alignment
Ft. Totten Metro Station	Retaining walls and drainage structures	Essential component of recommended trail alignment
Blair Road Segment	Raised trail in existing roadway and barrier wall	Essential component of Eastern Leg in Takoma; will serve Western Leg as well.
Piney Branch Road Crossing, Takoma West Leg	Bridge and associated ramps; optional staircase	Recommended as a future phase.

Roadway Crossings and Transition Intersections

The MBT will include approximately 32 at-grade street and roadway crossings, and seven transition intersections where bicyclists will shift between on-street and off-street facilities. Some of the crossings are at minor neighborhood streets and dead ends; however, 27 trail/roadway intersections involve major (13) and minor (14) arterials. A variety of

improvements are recommended to ensure trail user and traffic safety at these crossings, including new and modified signalization, special crosswalk striping, properly aligned and full trail width curb ramps, curb extensions, relocation of signal and utility poles, use of raised crosswalks, and other measures.

A variety of special treatments are provided to improve wayfinding and safety at the seven transition intersections, which often include a change in direction as well as facility type. These include colored bicycle lanes (blue), dashed bicycle lane striping, special pavement markings, arrows, crosswalks, mid-block crossing treatments, signs, bollards and various other gateway treatments.

Major Arterial Crossings	**Minor Arterial Crossings**	**Small Street Crossings**	**Transition Intersections**	**At-Grade Crossings Eliminated**
3rd Street, NW	Pennsylvania Ave., NE	F and 1st Streets NE,	G Street, NE	M St., NE
Constitution Ave., NW	1st Street, NW	1st Place, NE	L and 1st St., NE	Florida Ave., NE
New Jersey Ave./C St., NW	Louisiana Ave., NE	Oglethorpe St., NE	Franklin St., NE	New York Ave., NE
N. Capitol/D St.	E Street, NE	South Dakota Ave. at New Hampshire, NE	8th and Lawrence St., NE	H Street, NE
Massachusetts Ave., NE	F and 2nd Streets, NE	Whittier St., NW	1st St. and Kennedy St., NE	Rhode Island Avenue, NE
K Street & 2nd St., NE	L and 2nd Streets, NE		1st and Madison St., NE	Monroe Street, NE (w/ tunnel option)
Monroe St, NE	South Dakota Avenue, NE		McDonald Place and Blair Rd., NE	Pine Branch Road, NW (w/ Bridge option)
Riggs Rd., NE	Sargent Road, NE			Michigan Ave., NE
New Hampshire Ave., NE	Van Buren St., NW			Taylor St., NE
Kansas Ave. & Peabody St., NE	Aspen St., NW at Sandy Spring Rd.			
Blair Rd. & Van Buren, NE	Carroll Ave., NW at Cedar			
Piney Branch Road, NW	3rd St., NW			
Blair Rd. and Cedar St., NW	Aspen St., NW at 4th St.			
	Butternut St., NW			

Trail Signage and Pavement Treatments

Providing a consistent, attractive and unique sign and pavement marking system is critical for the success of the Metropolitan Branch Trail. Three issues stand out:

- **Wayfinding:** The MBT makes frequent transitions from on-street to off-street facilities and uses many back streets and previously undeveloped areas, making wayfinding extremely important. Every effort should be made to prevent users from getting lost and maintain a high level of user trust and sense of security.

- **Identity:** The trail is named for the historic rail corridor that it follows, the Metropolitan Branch of the B&O Railroad; however, this reference for the corridor is not in current usage and is not widely known in the community; moreover the trail is not always in visual proximity to the rail corridor. As a result, the trail will need greater than typical levels of on-site identification and "marketing."

- **Continuity and Coordination:** The MBT passes through properties and parts of the city that are under the jurisdiction of, or are of interest to, a variety of government agencies such as the National Park Service, WMATA, the Architect of the Capital, National Capital Planning Commission and Fine Arts Commission. These agencies typically have existing signage and aesthetic standards for public facilities. Meeting these standards and coordinating with existing agency protocols are important.

- The recommended MBT signage program consists of five primary components:

  1. Identity Logo,
  2. Wayfinding Sign System,
  3. Regulatory and Traffic Safety Signs
  4. Trail/Street Crossings: Signs and Pavement Treatments, and
  5. General Pavement Markings

For details, see the recommended Signage System Plan in Chapter Eight.

Connections: Maximizing Trail Access

A review of the maps in Chapter One illustrates the tremendous potential for the MBT to provide improved bicycle and pedestrian access to many destinations in Northeast DC and the broader city/region, including major employment centers, dense residential neighborhoods, multiple colleges and universities, metro stations, shopping districts, parks and recreation centers. The MBT will also serve city residents and visitors who want to travel to public schools and libraries, hospitals, museums, monuments, and historic sites.

This plan recommends a variety of ways to maximize community access and linkage—both in the recommendations for preferred alignments as well as through particular trail design features.

Trail Spurs: Access and linkage will be expanded by providing multiple trail spurs in a variety of locations:

1. Two spurs at the southern end of the MBT to provide direct access to Capitol Hill via the Eastern Leg and the National Mall and Downtown via the Western Leg.

2. A spur to Prince George's County that will connect the MBT to the Anacostia Tributaries Trail System in Maryland.

3. Two developed trail routes through Takoma will ensure premier access for Takoma, DC west of the railroad tracks and Takoma, DC and Takoma Park, MD east of the tracks.

Metro Station Access: Six Red Line metro stations will have direct and seamless access to and from the trail. Additionally, the Ft. Totten Station also serves the Metrorail Green Line, the Silver Spring Red Line station will be served by the MBT as it continues into Montgomery County, and the Green Line station at West Hyattsville is served by the Prince George's Connector trail that extends into Prince George's County. Bicycle parking is already provided at all of these stations, however this plan makes recommendations for additional bicycle parking accommodations. Station access will be enhanced by the provision of elevators, stairs and a ramp to the trail at the New York Avenue station, all stairs will include bicycle rolling trays, and Takoma will be served by the trail on each side of the station.

At Union Station a "Bicycle Station" is planned by the District of Columbia Department of Transportation and design of this full service bicycle rental, parking, repair and commuting center will be integrated with the design of the trail which will pass by its front door.

Access Paths and Curb Ramps: Full trail access will also be achieved by providing frequent access points, which will include short connecting pavements, curb ramps, and wayfinding signs.

Signs to DC Bike Routes: Every existing and newly designated DC Bike Route will be signed at the point where the route crosses or diverges from the MBT.

Regional Trail Connections: As previously discussed, the MBT will connect Northeast DC with a variety of existing and future trails in the regional trail system:

- National Mall trails, which in turn link to the Mt. Vernon Trail, Rock Creek Trail, C & O Canal, and entire regional trail system to the south and west.

- Anacostia Riverwalk Trail (DC), via two bicycle routes with bicycle lanes across Capital Hill.

- Capital Crescent Trail in Northwest DC and Montgomery County.

- Washington Ridge Line Trail (Proposed Escarpment Trail) in Brookland.

- Fort Circle Route, an NPS proposed trail connecting the Civil War Forts of Washington, DC. A portion of the MBT from Ft. Slocum to Ft. Totten, and the Prince George's Spur will actually be the first component of that trail to be built in many years.

- Anacostia Tributaries Trails (Sligo, Northwest Branch trails, etc.) in Prince George's County, MD, via the P.G. Spur.

- Upper Rock Creek Park and weekend car-free sections of Beach Drive and the Rock Creek Trail in DC, via on-street bike routes.

- Sligo Creek Trail, via the planned Wayne Avenue Green Trail from Silver Spring.

- Rock Creek Trail in Montgomery County, via the Capital Crescent Trail.

Gateways

Primary gateways are defined as the locations at each of the four ends of the trail where it continues into a neighboring jurisdiction, on to city streets or other trails. Primary gateways also include locations along the trail where large numbers of trail users will gain access, such as at Metro Stations. Primary gateways should receive special treatment to highlight the trail's presence and location in the landscape and neighborhood. Gateways should be made prominent and highly visible in a way that is in keeping with the aesthetic and cultural character of the location. Gateway design also needs to consider user safety because they are frequently at intersections and require users to make street crossings or re-enter city traffic. Gateways should be designed using signage, landscaping, hardscape, public art, and possibly traffic calming measures or traditional traffic controls. Representatives from the local community should be included in design review.

The map on the following page provides a list of recommended primary gateways. Secondary gateways and other access points are noted in Chapters 3-7. Special treatments should be considered for secondary gateways as well, however at a lesser scale, or as a lesser priority. However, at a minimum, secondary gateways and other access points should be signed for appropriate wayfinding, including the MBT logo.

Waysides and Interpretive Signage

Waysides

Pausing places and waysides are special locations along the trail where people might stop. These could include resting places or oases; viewing places or vantage points; bicycle stations, welcome centers, transitions or gateways; or gathering/meeting places like parks, plazas and gardens. Waysides can be developed at various scales depending on space available and user need and interest in wayside service. At a minimum, wayside design should include benches or seating areas, shade and bicycle parking. Optional elements can include landscaping, a drinking fountain, an information kiosk, or other amenities such compressed air for bicycle tires. Waysides are also good locations for memorials, such as commemorations of those that donated funds for the trail or provided community or political leadership.

Piney Branch and Eastern Avenue / DC / Maryland

Takoma Metro Station West Leg (Cedar/Blair/4th St.)

Takoma Metro Station East Leg (Cedar/Carroll)

Blair Road / Van Buren Intersection Transition

Ft. Totten Station

Spur to PG County, MD—Eastern Avenue and 16th St., NE (DC/MD Boundary)

Brookland/CUA Metro Station

Monroe Street Crossing

RI Avenue Metro Station

Capital Commerce Center

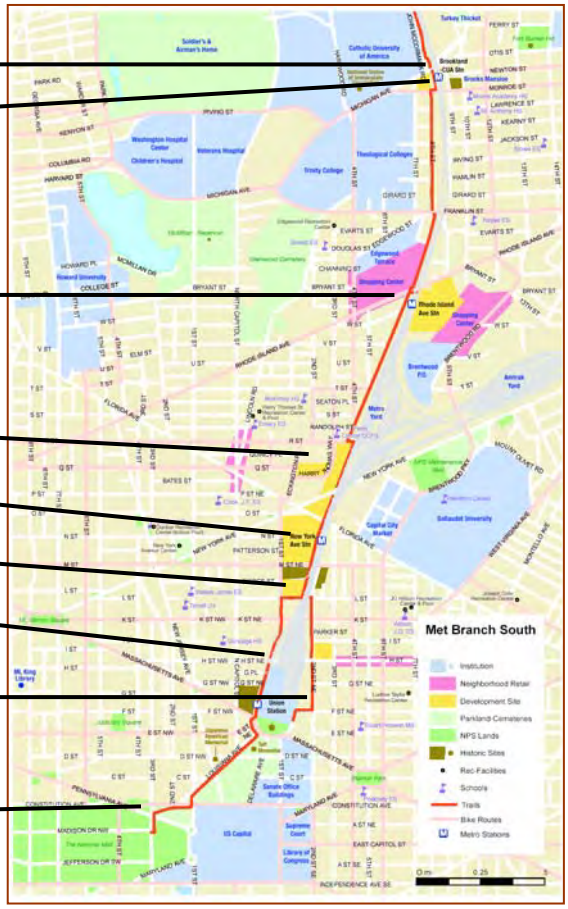
New York Avenue Metro Station

L Street Transition

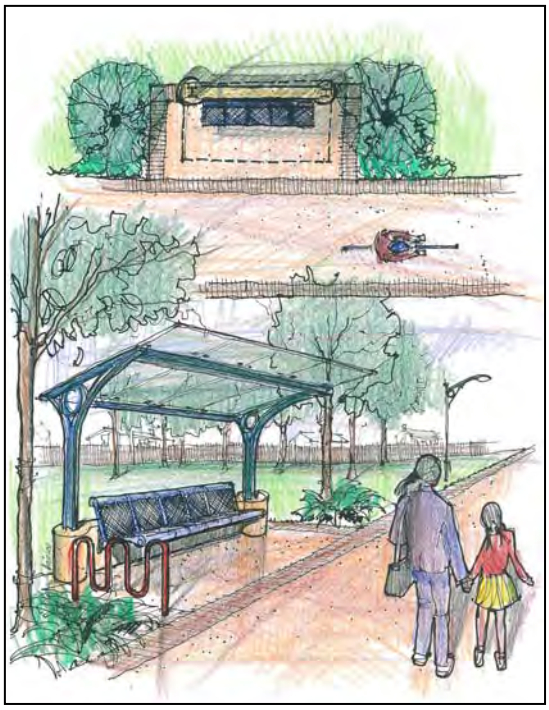
Union Station Metro Station (G St. - Louisiana Ave. (West Leg)

Second and F Streets (East Leg)

National Mall (West Leg)



Much the MBT traverses areas where space is limited. Taking this into account, this Concept Plan has developed a standard wayside for purposes of cost estimates and planning, shwon to the right. It provides shade, seating, a place to park bicycles, and attractive landscaping. Actual waysides would be site-adapted from this protype, however, and might have more or fewer elements. A wayside is also an excellent location for interpretive signage.



Interpretive Signage

Cultural Tourism DC (CTDC) and DDOT have partnered to provide DC neighborhoods a planning framework and physical signage system for development of neighborhood heritage trails. These trails typically use city streets and sidewalks and are developed at a pedestrian scale for self-guided or professionally led historic walking tours. Initial discussions suggest that this program is well suited for the Metropolitan Branch Trail with some modifications. Because the MBT traverses a number of neighborhoods, a special DDOT/CTDC partnership, another organization or consultants will need to take the lead in doing historic research and developing the content for the signs. CTDC will provide guidance, review and content approval. Funding and installation can be accomplished under the existing program.

The Public Art / Civic Design Sketchbook suggests two potential heritage themes that can be considered, separately or combined: *Place History* and *Transportation Heritage*. The sketchbook also provides a list of interpretive sign locations and stories. Because of the MBT includes two trail legs in Takoma and at Union Station, local loops can easily be created. These loops are of a walkable scale and could provide an opportunity for local Heritage Trails in these neighborhoods.

Landscape Design

Incorporating landscape design into plans for the MBT is essential for creating aesthetically pleasing and healthful environments along the trail. Basic concepts are summarized here, with a more detailed and illustrated discussion in Chapter 8.

Concepts Applied Throughout. In general, where the MBT crosses a street, a street crossing treatment, which would be a similar treatment throughout the trail, would mark the crossing. In nearly all segments of the MBT, street trees would be placed in the buffer areas between the sidewalk and the MBT when the MBT would be located on-street. An alternate treatment for the buffer area, the planting of a curbside garden, would be considered in residential areas along the MBT to encourage community involvement in beautifying the MBT corridor.

Concepts for Specific Locations. Unusual focal points, consisting of artwork with accent plantings, would occur at designated locations along the MBT to mark an entrance to the trail. An example would be designated portals or gateway locations at side streets that enter the MBT within the CSX right-of-way. Another example of a focal point would be one that highlights a particular place of interest along the MBT, such as the historic Cady Lee Mansion.

Locations Presenting Special Opportunities. Several areas along the trail present special opportunities. One is the CSX right-of-way between New York Avenue and Franklin Street, which has relatively more open space, but also a need for fencing and screening at some locations. Another is the Fort Totten area on sensitive National Park Service lands, where the trail must minimize environmental impacts, but has great opportunities for interpretive features. These areas have tailored proposals for a variety of landscape elements to enhance the trail from aesthetic and environmental standpoints.

The design concepts listed below are considered at various locations along the MBT:

1. **Berms** or earthen mounds are used to change topography, screen unsightly views or create barriers to access. They could be employed in tight or wide areas along the trail to achieve any of the aforementioned effects. Berms could be planted as well. This element could be found in the CSX Right of way and in the Fort Totten area.

2. **Bioswales**, defined as vegetated drainage channels that accept, absorb and treat runoff water, graywater or effluent water using natural biological systems and processes, can be designed into areas that receive run-off from paved areas where run-off may be laden with oil and other waste washed from roadways. Retention grading is employed to catch this type of runoff. This element could be found in the CSX Right of Way and on NPS lands along the MBT.

3. **Boardwalk** or raised walkways, usually made of wood or possibly structural recycled materials, are designed to ford low-lying areas that may become inundated or cross the root zones of mature and valuable trees. Use of boardwalks may be appropriate in hilly areas instead of grading where extensive grading would be traditionally employed to bridge areas with significant grade changes. This element could be found in the CSX right of way, on NPS lands, and along Blair Road.

4. **Curbside Gardens**, in former grassy areas alongside roadways, are common in many Washington D.C. neighborhoods within the MBT corridor. Curbside gardens commonly are tended by adjacent landowners; on-street trail segments through these neighborhoods may offer opportunities to increase curbside gardens along the MBT. This element could be found where the MBT is on-street.

5. **Demarcation of Street Crossings** at selected street intersections would be accomplished by distinctive artwork and/or landscaping. This element could be found throughout the MBT.

6. **Dry Streambed**, an unlined continuous swale running along a natural or artificial flow line, is often filled with rounded stones of various sizes and gravel and slows runoff, allowing it to percolate into the soil. Dry streambeds can aesthetically conceal percolation under rocks while providing water infiltration and biofiltration functions. This element could be found in the CSX right of way.

7. **Indigenous Vegetation** or plants that are native to a geographic location could be planted throughout the MBT corridor. The advantage of planting native vegetation is lower plant maintenance overall and higher rates of survival than non-natives in extreme weather conditions while providing aesthetic interest. This element could be found in the CSX Right of way, on NPS lands and in curbside gardens and terraces.

8. **Ornamental Vegetation** or plant varieties that are grown for their beauty (its end use) rather than commercial or other value would be valuable focal points throughout the MBT corridor. This element could be found in any formalized garden area along the MBT, such in planters along the CSX right of way or curbside gardens.

9. **Photovoltaic Lighting** uses solar cells, which are powered by converting sunlight into electricity, and which could be installed in areas along the MBT that currently without infrastructure conduit, thus reducing installation costs and ground disturbance, especially important in protected park areas. This element could be found in the CSX right of way and on NPS lands along the MBT.

10. **Permeable Paving**, a traffic-bearing surface that allows water to penetrate through it directly to the subsoil by using specialized paving materials (paving blocks, pervious concrete or asphalt, turf block, decomposed granite, crushed rock, gravel or soil pavement), could be employed as a trail surface the length of the MBT and in other hard-surfaced areas that may be used for pedestrian staging, events, etc. This element could be found in the CSX right of way and on NPS lands along the MBT.

11. **Planters,** structures used for growing plants for decorative purposes, could be used along the trail also as seating walls, incorporate art displays or create shady areas. This element could be found in the CSX right of way as a seating wall adjacent to the pedestrian bridge at the Rhode Island Metrorail Station.

12. **Portals** or gateways at specified locations along the trail would mark trail access, serve as trailheads or landmarks and could create aesthetic interest by incorporating art or landscape elements with use of color, movement, form or sound. This element could be found in the CSX right of way at the end of streets that enter the MBT at NY Avenue, Harry Thomas Way, and R, Randolph, S, T, and V Streets.

13. **Shelter Structures**, using tensile structures or soft canopies, would provide needed shade and create visual interest along the MBT. The structures are sculptural in appearance and could be installed in proximity to “pausing places” along the trail. This element could be found in the CSX right of way at the end of streets that enter the MBT at NY Avenue, Harry Thomas Way, and R, S, T, and V Streets and in the area of the pedestrian bridge to the Rhode Island Metro station.

14. **Street Tree Plantings** is a common streetscape feature throughout Washington D.C. Additional plantings could be appropriate where trees have died and not been replaced or in new planting areas. This element could be found throughout the MBT.

15. **Terracing**, built into steep slopes to reduce erosion and water loss, could be useful in areas where slopes have been degraded. These platforms could also serve as stages for art and landscaping. This element could be found in the CSX right of way in the hillsides areas and at the proposed tunnel under Franklin Street adjacent to CUA.

16. **Unusual Focal Points** that would employ artistic use of planting material and structures could be sprinkled throughout the trail corridor. This element could be found throughout the MBT.

17. **Screening by Fencing,** using ornamental fencing or art added to traditional fencing, can provide an aesthetic appearance.

Public Art Plan

The public art plan provides a framework for art projects that would fall into five project themes along the MBT: 1) art that relates to user experience on the trail, 2) art to strengthen trail identity, 3) art incorporated into the trail's functional elements, 4) art that emphasizes the special character of some segments, and 5) art that emphasizes history – either of a particular location or of the transportation corridor being followed by the MBT. These are summarized below and discussed in greater depth in Appendix A.

Art that Relates to User Experience on the Trail would involve projects that relate to the way people experience the trail, particularly projects that create special places that are value to both trail users and the community. This theme includes several categories of projects.

- **Thresholds and gateways,** places of passage onto the trail or where there is a transition, could be marked by art that might also provide guidance to trail users.

- **Flows and channels** are places of motion, where the primary activity is moving along the trail or passing through a place. In places like these, art can celebrate trail users' sense of movement and motion.

- **Pausing places and waysides** are special locations along the trail where people might stop. These could include resting places or oases; viewing places or vantage points; welcome centers, transitions or gateways; or gathering places like parks, plazas and gardens. Art projects would focus on creating places that have civic stature, serving trail users and the community alike.

- **Points of reference** are places that are visually prominent and serve as landmarks along the route—elements that people might use as meeting places, or to make a mental note of the distance they have traveled along the trail. More than other art projects, these should be unique, one-of-a-kind efforts.

Trail Identity involves projects that strengthen the corridor's identity as a continuous place, and its identity as a place that is part of a larger regional network.

- **Infrastructure elements,** such as retaining walls, underpasses, fences and transportation-related structures, can be turned into a canvas for civic design and public art.

- **Industrial elements**, particularly those related to warehousing, transportation, construction and the processing and storage of raw materials, could encourage related projects.

- **Color** can be a powerful tool for creating a unified visual identity for the trail, such as through an easily recognizable trail blaze.

- **Shapes** can also provide a visual language for the trail; dynamic shapes could be incorporated into infrastructure, landscape or trail contours, and surface materials; or echoed in the language of sculpture.

Functional Elements, a third art theme for the MBT, would involve artists in the design of trail elements to create an artistic presence along the length of the trail. These elements include:

- Signage, pavement, lighting, bollards, fencing and other landscape treatments

- New bridges, underpasses, ramps, railings and retaining walls

- Seating, mileage markers, drinking fountains, bike racks and informational signage

- Trail blazes – recurring markers that identify the path of a trail through the landscape.

Segment Character, a fourth art theme, takes advantage of several segments that have a distinct identity. As a counterpoint to the overall trail design, these segments could be regarded as "linear galleries" for art projects that respond to the special nature of the communities, urban fabric or landscapes they are passing through.

- **In Takoma**, the trail will not only be a path for commuters, but also an important community resource—a loop that connects civic places, provides a route for casual riding, and serves as a starting point for longer trips.

- **In Brookland**, the trail passes near a number of community, civic and cultural resources, including the Brooks Mansion, 8th Street arts cluster, Catholic University of America, and nearby schools and recreation centers.

- **Fort Totten**, including the Community Gardens is important historically and an excellent location for interpretive signage.

- **The CSX Corridor**, once a branch of Tiber Creek and more recently a CSX rail yard, is now a flat meadow that offers long vistas and dramatic juxtapositions of scale and movement.

- **Union Station**, the hub of a rapidly transforming area of the city. Also marks MBT's passage into the Monumental Core and National Mall.

Interpretive Strands provide opportunities that can be organized into two main categories: place history and transportation history. One interpretive strand would consider the cultural, social and developmental history of the places that the trail intersects. Art projects could include a trail-length system of interpretive markers (such as panels, pylons or medallions) or special monuments associated with aspects of the corridor's history. Another strand would consider the role the corridor plays in regional transportation. A system of interpretive markers or individual commemorative art projects could explore different layers of transportation history—early trails and roads; passenger and freight railroad history; Metrorail, Amtrak and commuter rail; and the new bike trail.

Lighting and Security

Lighting elements of the trail serve a decorative function, accenting landscaping concepts, landmarks, artwork, etc, as well as providing for functional illumination and security of the trail during the evening hours. Through the use of appropriate lighting concepts, the trail can be a focal point that is integrated into the existing streetscape, providing an inviting transition for users from the surrounding streetscape onto the trail. By maximizing use of energy efficient and self-sufficient lighting systems, lighting elements become an integral part of the landscape concept, adding to the users overall trail experience. Aside from the decorative functions served by the lighting systems, this system also serves as a critical security element of the trial. Lighting fixtures can serve as a visual barrier to site access, and the illumination of the trail during evening hours will add to the sense of security for trial users.

In the last two decades, Crime Prevention though Environmental Design (CPTED) has gained in popularity as a simple, efficient and cost effective method to increase security in public spaces. Several of the key principles of CPTED are a natural fit for the Metropolitan Branch Trail. Principles include:

- **Natural Surveillance** – use features that promote maximum visibility including pedestrian friendly sidewalks and nighttime lighting.

- **Territorial Reinforcement** - use physical design to create or extend a sphere of influence includes features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs and gateway treatments.

- **Natural Access Control** – design streets, sidewalks, and neighborhood gateways to clearly indicate public routes and discouraging access to private areas with structural elements.

Low Maintenance Design

An explicit design objective will be to select rugged, low-maintenance materials for trail surfaces, structures, wayside seating, lighting, signage, and fencing. At each step of design, maintainability will be evaluated, focused on producing a finished trail that will not only start in a functional and quality condition, but which will remain that way as time passes, to the maximum practical extent, irrespective of future maintenance budgets.

Some trail elements can be more easily maintained by selecting rugged materials, such as concrete, synthetic materials, and steel for seating and fencing, following designs that will wear well through the seasons and despite heavy public use that may not always be as careful about trail elements as wished. Landscaping elements can be selected that require minimum attention. Moving parts on structures would be avoided. Signage would take advantage of new materials that do not deteriorate in bad weather.

The number and placement of litter containers will also be carefully considered. Although they require emptying, the ease with which the public can clean up after themselves and their pets can have a great effect on the overall trail aesthetics. Self-maintenance by trail users will be a goal.

Trail surfacing must be rugged, involving solid foundations and an adequate surface thickness. Environmentally-friendly soft or permeable surfaces may be the preferred choice in some locations, but such selections will always consider good maintainability as a prerequisite.

The key is to make maintainability a key point of evaluation at each step of the design, with a life-cycle view of costs that can properly credit savings for operations and maintenance when evaluating initial costs for construction. For the trail user, the reward is a trail that continues to provide a functional and attractive environment, regardless of future maintenance budget levels.

CHAPTER THREE

NATIONAL MALL TO NEW YORK AVENUE

OVERVIEW

Section I of the MBT extends from the east end of the National Mall, at the corner of 3rd Street, NE and Madison Street, to the underpass of New York Avenue, NE. This section of the trail is approximately 1.7 miles in length and includes two branches, one on each side of Union Station. Section I will be addressed under the following four segments:

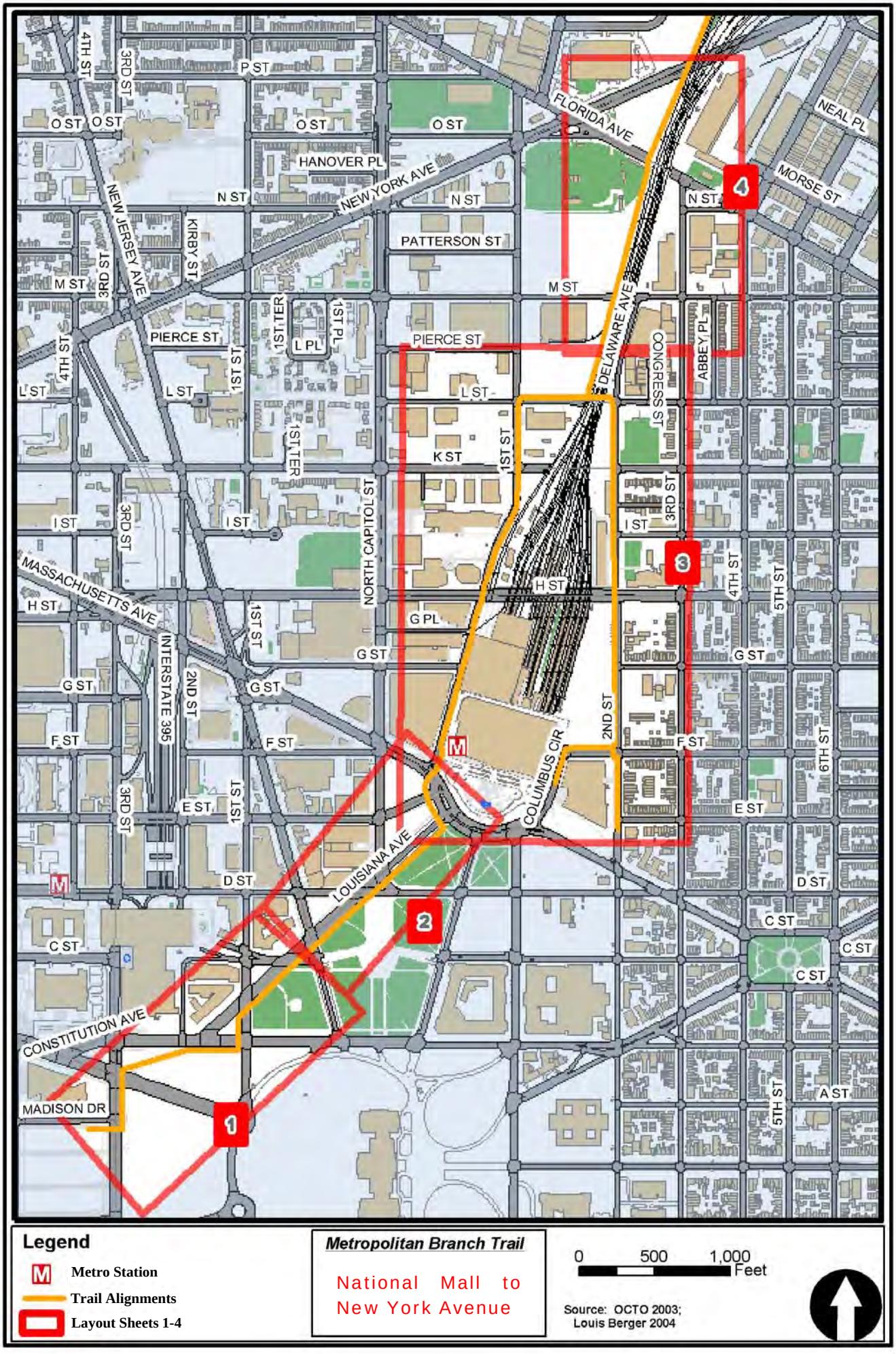
- National Mall to Columbus Circle: Layout Sheets I and 2
- W. Branch, Union Station to L Street Transition: Layout Sheet 3
- E. Branch, Union Station to L Street Transition: Layout Sheet 3
- New York Avenue Metro Station: Layout Sheet 4

Layout Sheet numbers appear in the upper right hand corner of each sheet. The map on page 3-2 provides a key to Layout Sheets.

The MBT connects to the National Mall near the Capitol Reflecting Pool

SECTION I TRAIL OBJECTIVES

- Provide a safe, continuous and visually coherent route through this congested area to link the core trail with the National Mall.
- Provide a supplementary route that links the core trail with the residential neighborhoods and places of employment on Capitol Hill.
- Improve access to and from the Union Station and New York Avenue Metrorail stations.
- Provide a high quality route linking a DDOT proposed Bicycle Station at Union Station with the core trail and National Mall. The synergy of the Bicycle Station and trail located at a major intermodal rail hub will make bicycle, skate and scooter egress from the station feasible and attractive.
- Section 1 is expected to serve high volumes of pedestrians and runners in this dense office corridor, in addition to bicycle commuters, recreational users from inner city neighborhoods, visiting tourists and regional recreational users.



Legend

- Metro Station
- Trail Alignments
- Layout Sheets 1-4

Metropolitan Branch Trail

National Mall to New York Avenue

0 500 1,000 Feet

Source: OCTO 2003; Louis Berger 2004

NATIONAL MALL TO COLUMBUS CIRCLE

Proposed Alignment

In this segment, the MBT will use existing sidewalk rights-of way for approximately 9 blocks between 3rd St., NW, and Massachusetts Avenue, NE, primarily along Louisiana Ave. It begins at the end of the existing hard-surface path on the National Mall at 3rd and Madison Streets, NW, and will have eight at-grade street crossings. (Refer to Layout Sheets I and 2)

MBT begins at 3rd and Madison, NW

Existing Conditions

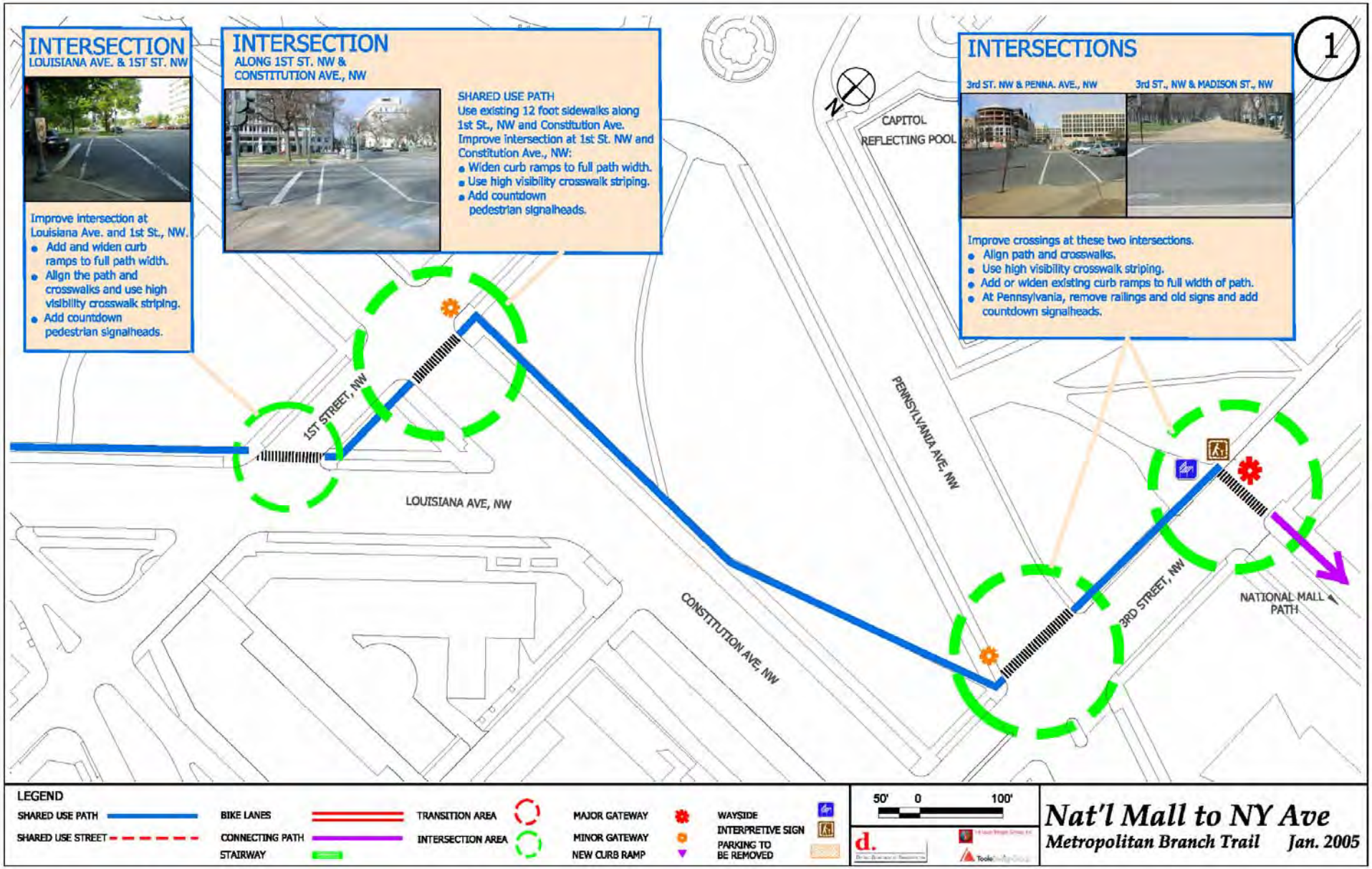
The existing concrete path on the Mall has a surface of exposed aggregate; it is 12 feet wide. It is paralleled by an 18-foot wide loose aggregate path. Other existing sidewalk widths are as follows:

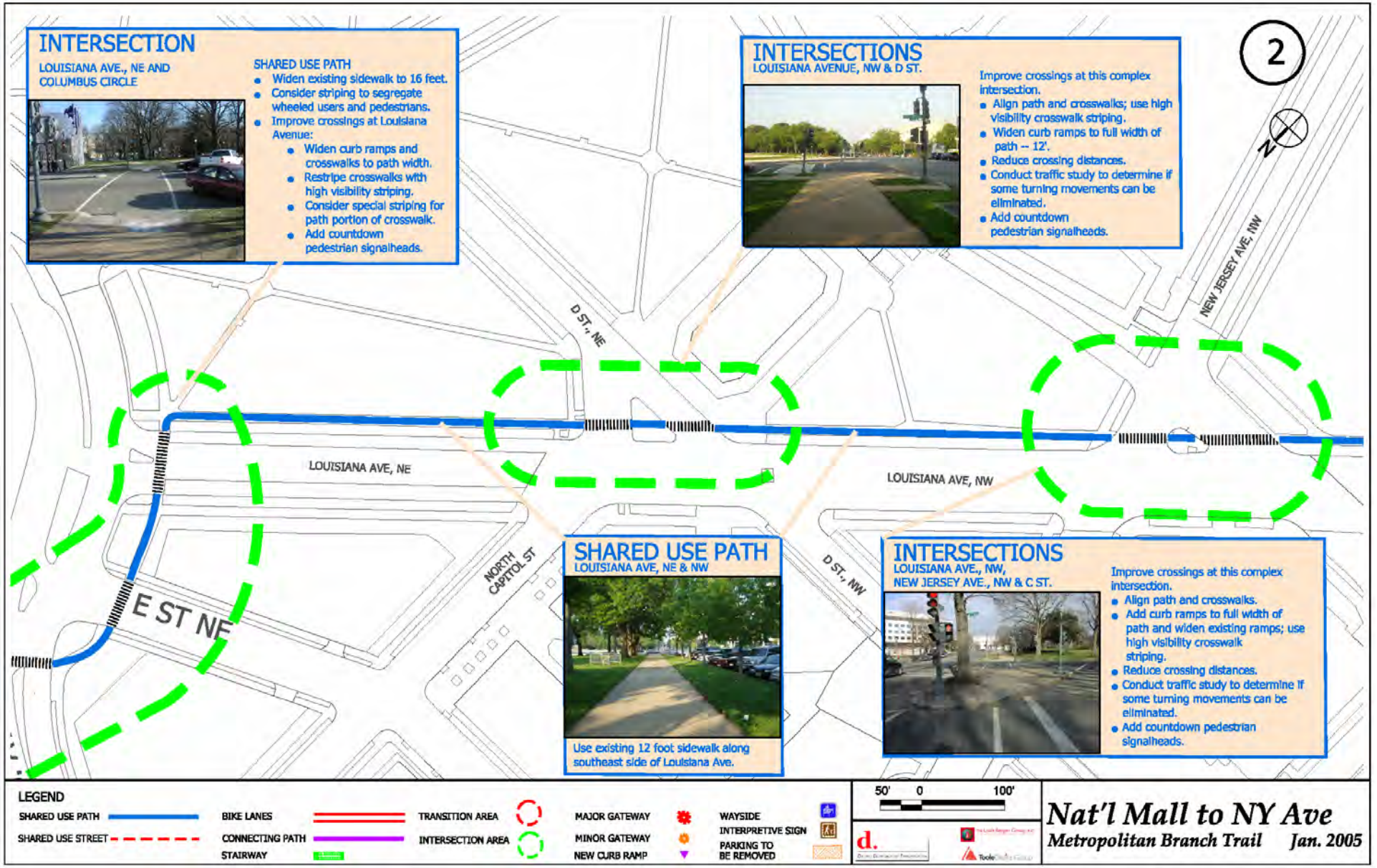
- East side of 3rd St., NW—11 feet
- South side of Constitution Ave., NW—10 feet
- 1st St., NW and south side of Louisiana—12 feet.

Sidewalk surfaces in this section include both exposed aggregate and traditional concrete. Along Louisiana, curb ramps are missing at the intersections with 1st St., C St, and D St. Crosswalks and curb ramps are not always aligned. In other locations the curb ramps are poorly aligned with the sidewalk and frequently signal pole locations create barriers on the sidewalk. Most crosswalks are striped with the standard 6-inch parallel white lines. The pedestrian refuge islands at C Street/New Jersey and D Street/North Capitol are poorly designed and difficult to cross.

Poor pedestrian conditions at 1st Street, NE and Louisiana Avenue

Buffer widths are 12 feet along Louisiana; 20 feet along Constitution; and 3 feet along 3rd St. Louisiana is lined with mature shade trees.


INTERSECTION
LOUISIANA AVE. & 1ST ST. NW
Improve intersection at Louisiana Ave. and 1st St., NW.
• Add and widen curb ramps to full path width.
• Align the path and crosswalks and use high visibility crosswalk striping.
• Add countdown pedestrian signalheads.
INTERSECTION
ALONG 1ST ST. NW & CONSTITUTION AVE., NW
SHARED USE PATH
Use existing 12 foot sidewalks along 1st St., NW and Constitution Ave.
Improve intersection at 1st St. NW and Constitution Ave., NW:
• Widen curb ramps to full path width.
• Use high visibility crosswalk striping.
• Add countdown pedestrian signalheads.
INTERSECTIONS
3rd ST. NW & PENNA. AVE., NW
3rd ST., NW & MADISON ST., NW
Improve crossings at these two intersections.
• Align path and crosswalks.
• Use high visibility crosswalk striping.
• Add or widen existing curb ramps to full width of path.
• At Pennsylvania, remove railings and old signs and add countdown signalheads.
1
N
CAPITOL
REFLECTING POOL
1ST STREET, NW
LOUISIANA AVE, NW
PENNSYLVANIA AVE, NW
CONSTITUTION AVE, NW
3RD STREET, NW
NATIONAL MALL PATH
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Nat'l Mall to NY Ave
Metropolitan Branch Trail
Jan. 2005


INTERSECTION
LOUISIANA AVE., NE AND COLUMBUS CIRCLE
SHARED USE PATH
Widen existing sidewalk to 16 feet.
Consider striping to segregate wheeled users and pedestrians.
Improve crossings at Louisiana Avenue:
Widen curb ramps and crosswalks to path width.
Restripe crosswalks with high visibility striping.
Consider special striping for path portion of crosswalk.
Add countdown pedestrian signalheads.
INTERSECTIONS
LOUISIANA AVENUE, NW & D ST.
Improve crossings at this complex intersection.
Align path and crosswalks; use high visibility crosswalk striping.
Widen curb ramps to full width of path -- 12'.
Reduce crossing distances.
Conduct traffic study to determine if some turning movements can be eliminated.
Add countdown pedestrian signalheads.
2
N
NEW JERSEY AVE, NW
D ST., NE
LOUISIANA AVE, NE
LOUISIANA AVE, NW
NORTH CAPITOL ST
D ST., NW
E ST NE
SHARED USE PATH
LOUISIANA AVE, NE & NW
Use existing 12 foot sidewalk along southeast side of Louisiana Ave.
INTERSECTIONS
LOUISIANA AVE., NW, NEW JERSEY AVE., NW & C ST.
Improve crossings at this complex intersection.
Align path and crosswalks.
Add curb ramps to full width of path and widen existing ramps; use high visibility crosswalk striping.
Reduce crossing distances.
Conduct traffic study to determine if some turning movements can be eliminated.
Add countdown pedestrian signalheads.
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Nat'l Mall to NY Ave
Metropolitan Branch Trail Jan. 2005

Implementation of the MBT will improve pedestrian and bicycling conditions along Louisiana Avenue, where curb ramps are missing and crossing distances are long. (C and New Jersey on left; D and North Capitol on right.)

Trail Type—Shared Use Path

The preferred facility type in this section is a shared use path adjacent to the street. Because of their generous width, the existing sidewalks can provide this multi-use bicycle and pedestrian facility. Existing surface conditions are good, so treadway repair or reconstruction is generally not needed.

Trail centerline striping is not recommended, as it would be out of character with the aesthetic guidelines for the Capitol area landscape. The existing exposed aggregate or concrete surfaces will serve most trail users (not in-line skaters, however, this is true of all of the National Mall Trails, where experienced skaters use adjacent streets.) Currently, bicycling is not permitted on sidewalks under the jurisdiction of the Architect of the Capitol. Approval of the Architect of the Capitol, including a formal exception to this regulation, may be needed to facilitate trail designation in this section.

Proposed Structures and Roadway Crossings

There are no proposed structures, however there are eight at-grade street crossings, all of which are recommended for improvements to better accommodate existing pedestrian traffic as well as future trail traffic:

- 3rd Street, NW,
- Pennsylvania Avenue, NW,
- Constitution Avenue, NW,
- 1st Street, NW
- C Street, NW,

- New Jersey Ave., NW,
- D Street, NW,
- North Capitol (stub end)

The complex intersections at C Street/New Jersey and D Street/North Capitol are most in need of crossing safety improvements, including curb extensions and reconstruction of the pedestrian refuge islands. In general, these intersections should be improved using the new trail/roadway crossing detail in the DC Bicycle Design Guide. Additional improvements are provided for each intersection on layout sheets I and 2 and in the figure to the right. These improvements are conceptual at this point and may be modified during the design phase.

Signage

Generally, the sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for trail/roadway intersections. However, because of the unique landscape guidelines followed by the Architect of the Capitol, signage should be kept to a minimum. Trail identity and continuity may be best served by installing brass medallions with MBT logo, directly into the sidewalk. Cues for trail users to make turns may also be best accomplished with pavement inlay design, using granite or other appropriate stone materials.

Connections

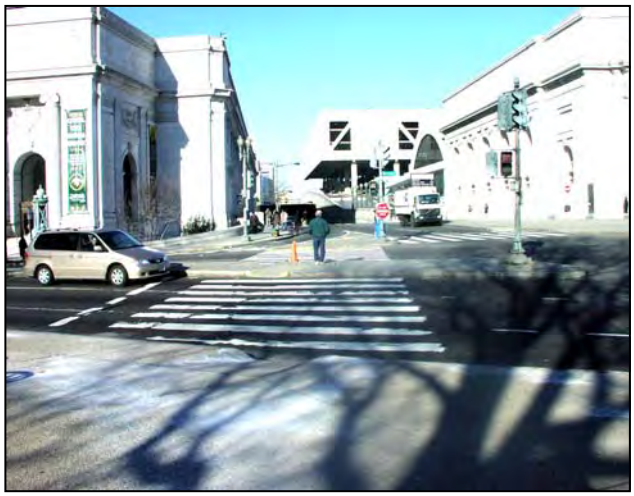
As noted above, this segment of trail connects to the pathways that traverse the National Mall, linking future MBT travelers to all of the monuments, museums and offices located along it. The two East Coast Greenway routes (MBT and Anacostia) join in front of the Reflecting Pool, making this segment of the MBT a gateway to the Anacostia Riverwalk Trail and ECG route along it. The closest destinations along this route include, Garfield Park, the soon to be redeveloped Washington Canal Park, the new U.S. Department of Transportation building, the Navy Yard and the Southeast Waterfront along the Anacostia.

The Anacostia waterfront and Near Southeast neighborhoods are undergoing major redevelopment and will soon emerge as a major destination with residential, commercial, park and employment activities.

Louisiana Avenue is an existing signed DC bike route; the "U" route to Catholic University begins at 1st Street and Louisiana, NW. The DC Bike Plan proposes preserving this route, which will serve as an on-street complement to the off-street MBT. There is also an existing signed route, a block from this segment, beginning at 4th and Pennsylvania, NW, which leads to Southwest, Southeast and neighborhoods east of the Anacostia River.

Additionally, the DC Bicycle Master Plan proposes a bike route on Constitution Avenue, providing bikeway connections west into the heart of downtown, and east to Capitol Hill. At the north end of this segment Columbus Circle is the terminus of the proposed E Street bike route (with bike lanes), which provides another route west to downtown. A DC bike route is also proposed for the entire length of Massachusetts Avenue.

Finally, the Louisiana segment provides most of the connection needed to link the National Mall and Union Station, which is a hub for Metrorail, Metrobus, MARC, VRE Amtrak, and local tour bus services.



Planned changes for Columbus Circle will create an opportunity for separate bicycle and pedestrian ways along 1st Street, NE and Columbus Circle.

Gateways and Waysides

One major gateway/wayside should be considered for this section on the east side of 3rd St., NW opposite Madison Street. This area already tends to function as a pedestrian gateway to the Capitol. Dirt pathways mark the transition from the shaded National Mall pathways to the open Capitol grounds and reflecting pool.

With approval of the National Park Service and Architect of the Capitol, a trail information kiosk should be located in this area. It could include maps and information about the Metropolitan Branch Trail, the Anacostia Riverwalk Trail and the East Coast Greenway which will be routed on both of these facilities in the District of Columbia through this area. The National Mall and Mt. Vernon Trail have already been

At the MBT's southern gateway, a trail information kiosk, improved treadway and wayside would serve Mall visitors and interpret the East Coast Greenway in the Nation's Capital.

formally designated as part of the East Coast Greenway.

Benches and appropriate landscaping, or re-vegetation of this area, should be considered to enhance the setting of an information kiosk.

Landscaping

In this segment of the MBT, eight street crossings would occur. These crossings could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

Landscape Treatments for the Area of Louisiana Ave between 3rd St., NW, and Massachusetts Ave., NE

Included	Treatment
X	Curbside Gardens
X	Street Crossings
	Dry Streambed
	Indigenous Vegetation
	Ornamental Vegetation
	Planter
	Portals
	Shelters
X	Street Trees
	Unusual Focal Point

Generally, no additional landscaping is recommended for this section; however, appropriate landscaping or tree planting may be considered as a part of reconstruction of the two pedestrian islands, shown as curbside gardens in the above table, and for the information kiosk discussed in the previous section. Additional street trees could be included in this segment as replacements to fill gaps in the existing street tree pattern, if needed. Future landscaping adjacent to the trail will be planned and implemented by the Architect of the Capitol in keeping with their overall landscape plans and maintenance practices.

Art

No special public art features are recommended for this section.

Lighting & Security

This area has been provided with existing high pressure sodium (HPS) street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail.

As the policing of this portion of the trail is extensive (see below), it is not recommended that any additional security features be added to this segment of the MBT.

Policing

This area is primarily in Metropolitan Police Department (MPD) Police Service Area (PSA) 101 (Louisiana Ave. is the border between PSA 101 and PSA 104). This may be one of the most heavily policed areas of the United States. In this section four police agencies have jurisdiction and maintain regular patrols: the D.C. Metropolitan Police, the U. S. Capitol Police, the U.S. Park Police (NPS) and Amtrak police. Because the trail is in the public street right-of-way, it will

be policed as a part of routine patrols in this area. Additionally, the first three forces maintain and use bicycle-mounted patrols, which could be used in this section.

Implementation

Implementation of improvements in this section will be initiated and funded by DCDOT and coordinated with the Architect of the Capitol and the National Park Service--Central Unit. Major construction tasks include intersection improvements. Minor construction tasks include sign and kiosk installation and possibly some landscaping improvements.

1ST STREET, NE

Proposed Alignment

In this segment, the MBT will use existing sidewalk and street rights-of way for approximately 8 blocks between Louisiana Avenue, NE, and L Street, NE, primarily along 1st Street, NE. This segment runs along the west side of Union Station linking the Capitol Area with the newly constructed New York Avenue Metro Station. See Layout Sheet 3.

Existing Conditions

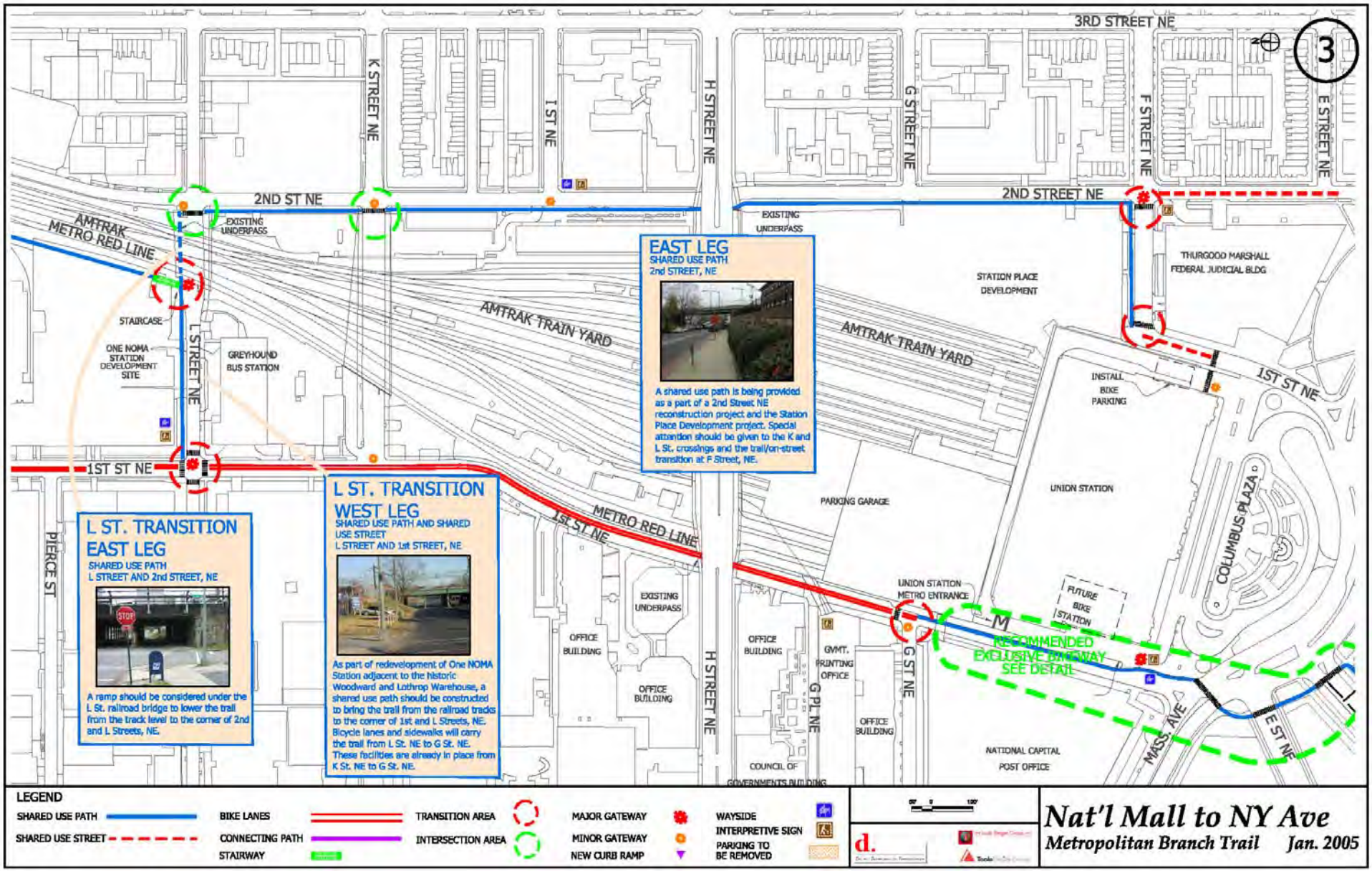
A portion of the trail has been completed in this segment. It consists of bike lanes and new sidewalk on 1st St., NE from G Street to K Street. This section also includes street trees on the east side of 1st St. However, gaps remain north and south of this area, where no improvements have been made.

Beginning at Louisiana Ave., the sidewalk on the south side of Columbus Circle is about 11 feet wide, and the buffer is more than 30 feet wide. Sidewalk surfaces include both exposed aggregate and traditional concrete. Curb ramps are narrow. The cobblestone used in the median of Columbus Circle and elsewhere is difficult for pedestrians to traverse, especially for those who may be disabled.

There are remains of a contra-flow bicycle facility at the intersection of 1st St. NE and Columbus Circle and extending north on 1st St. to the Union Station delivery entrance. The pavement markings have worn off and it primarily functions as additional pedestrian space.

Along 1st St., between Massachusetts and G St, and between K and L streets, sidewalks are continuous on both sides and range from 6 to 12 feet wide. 1st Street is one-way southbound from the Union Station delivery entrance to Massachusetts. The street width varies from 30 feet at the south end to 40 feet between K and L. The Union Station Metrorail station has an entrance/exit on 1st St., NE near G St.

In general, this segment traverses a high density and dynamic cityscape with large volumes of traffic, many trucks and busses, and high volumes of pedestrians.


3
3RD STREET NE
K STREET NE
I ST NE
H STREET NE
G STREET NE
F STREET NE
E STREET NE
2ND ST NE
2ND STREET NE
EXISTING UNDERPASS
AMTRAK METRO RED LINE
AMTRAK TRAIN YARD
STAIRCASE
ONE NOMA STATION DEVELOPMENT SITE
GREYHOUND BUS STATION
L STREET NE
1ST ST NE
STATION PLACE DEVELOPMENT
THURGOOD MARSHALL FEDERAL JUDICIAL BLDG
INSTALL BIKE PARKING
UNION STATION
PARKING GARAGE
METRO RED LINE
COLUMBUS PLAZA
PIERCE ST
EXISTING UNDERPASS
OFFICE BUILDING
GVMT. PRINTING OFFICE
G PL NE
UNION STATION METRO ENTRANCE
FUTURE BIKE STATION
RECOMMENDED EXCLUSIVE BIKEWAY SEE DETAIL
MASS. AVE
E ST NE
NATIONAL CAPITAL POST OFFICE
COUNCIL OF GOVERNMENTS BUILDING
EAST LEG
SHARED USE PATH
2nd STREET, NE
A shared use path is being provided as a part of a 2nd Street NE reconstruction project and the Station Place Development project. Special attention should be given to the K and L St. crossings and the trail/on-street transition at F Street, NE.
L ST. TRANSITION EAST LEG
SHARED USE PATH
L STREET AND 2nd STREET, NE
A ramp should be considered under the L St. railroad bridge to lower the trail from the track level to the corner of 2nd and L Streets, NE.
L ST. TRANSITION WEST LEG
SHARED USE PATH AND SHARED USE STREET
L STREET AND 1st STREET, NE
As part of redevelopment of One NOMA Station adjacent to the historic Woodward and Lothrop Warehouse, a shared use path should be constructed to bring the trail from the railroad tracks to the corner of 1st and L Streets, NE. Bicycle lanes and sidewalks will carry the trail from L St. NE to G St. NE. These facilities are already in place from K St. NE to G St. NE.
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
Nat'l Mall to NY Ave
Metropolitan Branch Trail
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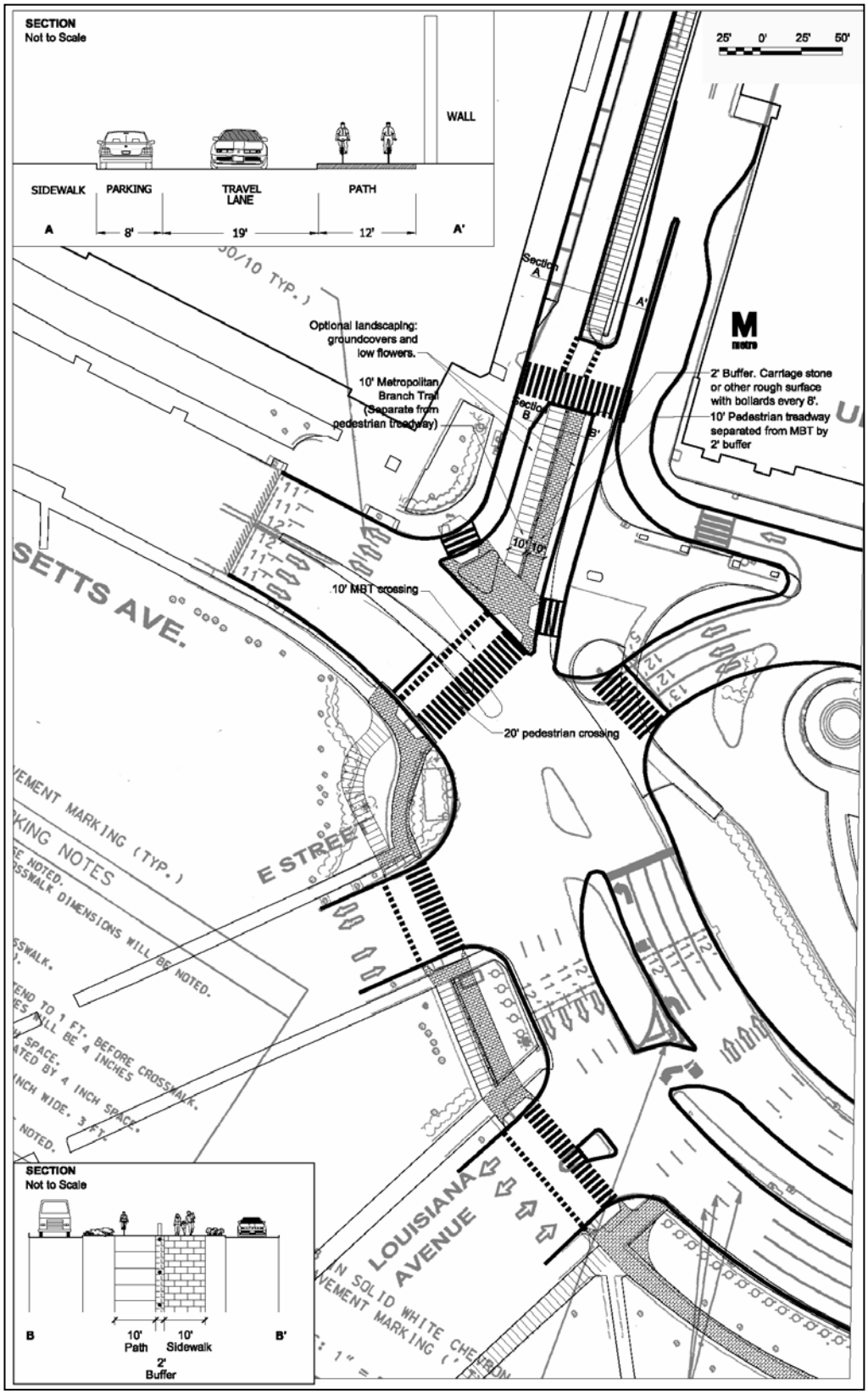


Detail – Map Sheet 3: Recommended exclusive bikeway for Columbus Circle

Trail Type—Shared Use Path, Exclusive Bikeway and Bike Lanes/Sidewalks

From Louisiana Ave. to G Street, the recommended facility is an exclusive 10-foot, two-way, off-street bikeway, adjacent to an 8-10 foot sidewalk. This facility should be modeled after urban bikeways used in high-density northern European cities. The rationale for this type of facility is to reduce potential conflicts by separating bicyclists from both pedestrians and motor vehicles in this high traffic area.

Trail centerline striping is recommended beginning at the intersection of Louisiana Avenue and Columbus Circle. Architect of the Capitol jurisdiction extends along Columbus Circle to the south side of Massachusetts Avenue. Currently, bicycling is not permitted on sidewalks under the jurisdiction of the Architect of the Capitol. Approval of the Architect of the Capitol, including a formal exception to this regulation, may be needed to facilitate trail designation in this section.

From K St, NE to L St NE, extension of the bike lanes is recommended. Once the trail is completed, there may be an interest in extending the exclusive, grade-separated bikeway from G St to L Street, and eliminating the on-street bike lanes.

Along the north side of L St. to the railroad tracks, a shared use path is recommended (12-16 feet wide). It should be provided by the developer of *One NOMA Station* when this property is developed.

Proposed Structures and Roadway Crossings

There are no proposed structures, however there are six at-grade street crossings, all of which are recommended for improvements to better accommodate existing bicycle and pedestrian traffic as well as future trail traffic:

- Louisiana Avenue, NE
- E Street, NE,
- Massachusetts Avenue, NE,
- Union Station Parking Garage Exit Ramp (buses only in the future)
- K Street, NE
- L Street, NE

Louisiana Avenue and E Street should be improved using the new trail/roadway crossing detail in the DC Bicycle Design Guide. Because of the high pedestrian volumes, and complex pedestrian and vehicular crossing movements, the intersections at Massachusetts Avenue and the garage exit ramp are unique situations that will need special treatments. (See detail: Layout Sheet 3).

Typical bike lane design at intersections should be used at K and L streets; however, L Street will require some special attention to address the need to accommodate an on-street/off-street transition at this intersection.

Signage

Generally, the sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for trail/roadway intersections. Trail identity and continuity may be best served by installing brass medallions with MBT logo, directly into the sidewalks and bike lanes, or by using overhead banners mounted on poles. Cues for trail users to make turns may also be best accomplished with colored pavement or pavement inlay design.

Connections

This segment of trail facilitates travel through the Union Station/North Capital neighborhood. It will be designated as part of the East Coast Greenway route through DC. This segment is part of an existing signed DC bike route; the "U" route to Catholic University.

The DC Bicycle Master Plan proposes a bike route (with bike lanes) on E Street, west to downtown; a route on K Street linking to Gallaudet University and Trinidad to the east and NOMA and Convention Center to the west, and a route along the entire length of Massachusetts Avenue.

Most importantly, this segment provides bicycle and pedestrian access to Union Station, which is a hub for Metrorail, Metrobus, MARC, VRE, Amtrak, and local tour bus services. As an intermodal hub, it has been selected as the first site for development of a DC Bicycle Station, which will provide valet bicycle parking, overnight bicycle storage, bicycle rental, accessories, information, snacks and other services for commuters and tourists.

Gateways and Waysides

A gateway/wayside should be considered for this section outside the west end of Union Station on a large island that will be created by the Columbus Plaza Circulation Improvement project. Given the proposed changes for vehicular and pedestrian circulation, this area is likely to become a natural transition and wayfinding area for people going in and out of Union Station.

A trail information kiosk should be located in this area. It could include maps and information about the Metropolitan Branch Trail, the East Coast Greenway, the Union Station Bicycle Station, biking in DC, bike on rail services, bike rental and tourism information, etc. It is expected that circulation improvement project will include benches and appropriate landscaping in this area.

A second gateway/wayside should be considered for the L Street Transition area as a part of the One NOMA Station development. An outdoor public space (shaded plaza) could be created on the south side of this property adjacent to L Street, on the east side adjacent to the railroad tracks, or on the northeast corner near the trail ramp to M Street. Good urban design can be used to create a pausing place designed around the trail transition infrastructure in this area. It could serve as a lunch spot and meeting place for the neighborhood. Trail level retail or space for a food vendor's cart would help activate the space. And there are opportunities to include art, landscaping, and heritage interpretation.

Landscaping

Six at-grade street crossings at Louisiana Avenue, NE; E Street, NE; Massachusetts Avenue, NE; Union Station Parking Garage Exit Ramp; K Street, NE; and L Street, NE are planned for this segment of the MBT. The crossings could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

Landscape Treatments for the area of 1st Street, NE Between Louisiana Avenue, NE, and L Street, NE

Included	Treatment
	Curbside Gardens
X	Street Crossings
	Dry Streambank
	Indigenous Vegetation
X	Ornamental Vegetation
X	Planter
	Portals
X	Shelters
X	Street Trees
X	Unusual Focal Point

Additional landscaping or tree planting will be included in the public and private capital projects that facilitate completion of the MBT in this area. These treatments could include additional street tree plantings where needed, an unusual focal point on the proposed large island or shade shelter in the Columbus Plaza Circulation Improvement area or at the development site of a DC Bicycle Station at Union Station. In the L Street Transition area, which is part of the One NOMA Station development, shade structures, seating walls (or planters), plantings or decorative pavement treatment could be created on the south side of this property adjacent to L Street.

Art

General Issues, 1st and 2nd Streets

Both east and west legs of this segment of the trail could be considered as a loop; the routes along 1st and 2nd Streets NE parallel each other and join at Massachusetts Avenue and L St.

Entries and Exits: There are several key access points to the trail: at L St., where the trail drops down from the New York Avenue overpass and splits into parallel paths; at 2nd and F Sts., which is the most convenient access point for people connecting to and from Capitol Hill; and at the southwest corner of Union Station, where there is Metro access and convenient street access to the Federal Triangle and Mall areas; and where the bike station is being planned. The F St. and L St. locations are key points for significant trail markers; the Union Station location is replete with historic architecture, sculpture and lighting, so no new sculpture is recommended here; the bike station could serve as the iconic element for this gateway to the trail.

There are numerous secondary access points at cross streets. At these points, elements from a family of functional components (such as orientation, directional, and seating elements) could be located.

Trail facilities: The proposed bike station near Union Station provides a significant opportunity for involving an artist on the design team. Bike racks and seating, which could also be designed by artists, would also be useful throughout the area.

Light and lighting fixtures: A theme or focus appropriate to this area is pedestrian-scaled lighting. Many buildings have developed their own unique approaches to this type of street infrastructure. Artists could be encouraged to design special lighting to fill in the gaps, along retaining walls, beneath underpasses, in public spaces, etc. Over time, a walk or ride around the

Union Station loop would allow trail users to enjoy a range of classical, whimsical, and cutting-edge pedestrian lighting.

1st St., NE

For this segment, public art should focus on issues of strengthening the sense of continuity of the trail, and linking the trail to existing and proposed public spaces.

Visual Continuity. The trail itself will be difficult to recognize in the cityscape, since it will be configured mostly as bike lanes and sidewalks, and because it will be surrounded by architecture that is large-scale and, in many cases, visually and historically significant. Elements could include special materials that run as strips along the route; or special panels or banners affixed to poles and walls/abutments that create a "ribbon of color" along the trail.

Linking to Public Spaces. The trail will reinforce the importance of 1st St. as a pedestrian corridor. It will help link area workers and residents to public spaces, amenities, shopping and transportation. Several public places already exist at recently developed projects between H and K streets, and one is proposed for the NOMA development site on L Street. For existing spaces, art projects could include functional elements, such as bike racks and seating, retrofit into the spaces. For new spaces, artist-integrated designs can be considered.

Interpretive Opportunities. In this segment, artists could address interpretive opportunities at Union Station (transportation, the McMillan Plan), the U.S. Postal Museum, and two Government Printing Office buildings. Artists could design emblematic sculptures, murals, or an overall signage system.

Lighting & Security

The 1st Street NE area has been provided with existing high pressure sodium (HPS) street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at three locations on this portion of the trail yielded values of 0.2, .04 and .055 foot candles respectively. Although these readings are lower then the recommended Illuminating Engineering Society (IES) requirements for a bikeway (See Chapter 8), lighting for this portion of the MBT is driven by requirements for the associated roadway and it appears that lighting levels could be improved through the replacement of burn out lamps in the existing fixtures.

As the policing of this portion of the trail is extensive (see below), it is not recommended that any additional security features be added to this segment of the MBT.

Policing

This area is in MPD PSA 101. This is a heavily policed area. At least five police agencies have jurisdiction and maintain regular patrols: the D.C. Metropolitan Police, the U. S. Capitol Police, the U.S. Park Police (NPS), Amtrak police, and WMATA (Metro) Police. Because the trail is in the public street right-of-way, it will be policed as a part of routine patrols in this area. Additionally, four of these forces maintain and use bicycle-mounted patrols, which could be used in this section.

Implementation

Implementation of improvements in this section will be facilitated in a variety of ways:

1. Union Station area—Proposed improvements will be undertaken as a part of the Columbus Plaza Circulation Improvements project; a joint effort by DCDOT and the Union Station Redevelopment Corporation (USRC).

2. Completion of Bike Lanes on 1st Street, NE and future implementation of off-street trail along 1st Street, NE—Initiated and funded by DCDOT.

3. West Leg of the L Street Transition—Coordinated with the design and development of the One NOMA Station property at 1st Street, NE and L Street. Funding by developer or DCDOT, or jointly.

2ND STREET, NE

Proposed Alignment

In this segment, the MBT will use the existing sidewalk right-of way for approximately 8 blocks between the East end of Union Station and L Street, NE, primarily along 2nd Street, NE. This segment runs along the east side of Union Station linking the Capitol Area with the newly constructed New York Avenue Metro Station. Refer back to Layout Sheet 3.

Existing Conditions

Second Street, NE is currently in poor condition and is slated for complete reconstruction from F Street to L Street. The MBT will be constructed as a part of the street reconstruction project. Two blocks of the trail north of F Street is being constructed by the Station Place development.

This neighborhood continues to be in transition as more properties are redeveloped. Recently the Thurgood Marshall Federal Judiciary Building was constructed at 2nd and F Streets, NE. Currently, Station Place is being built on the north side of F Street, adjacent to Union Station; it will house the Securities and Exchange Commission. The Children's Museum is slated to leave its 3rd and H Street, NE location, and be redeveloped as residential condominiums. The H Street, NE commercial corridor, east of the trail, is the focus of revitalization efforts geared to strengthen neighborhood retail shopping and develop a "Main Street" atmosphere.

This segment traverses a medium density and changing part of the city with increasing volumes of traffic and more pedestrian activity.

Trail Type—Shared Use Path

From Union Station to the L Street Transition, the planned facility is a shared use path. On F Street it will be 12 feet wide; on 2nd Street from F to H it will be 10 feet wide; from H to L it will be 8 feet wide with 2-foot brick shoulders on each side. Around Station Place the trail will have a 4-foot buffer to the curb with periodic street trees.

Trail centerline striping and use of the bicycle pavement marking symbol is recommended throughout this section. The following trail design concepts could be implemented to enhance the aesthetic quality and safety of the trail in this section:

Reconstruction of 2nd Street NE will include a 9-foot shared use path along the west side from F Street to L Street.

- Use of pedestrian scale lighting rather than typical cobra-head street lighting.
- Location of lighting poles, parking meters, signal poles and parking/traffic signs in the 2-4 foot brick shoulder on the street-side edge of the trail.
- Driveway design, markings, and warning features (see below).
- Intersection design (see below)

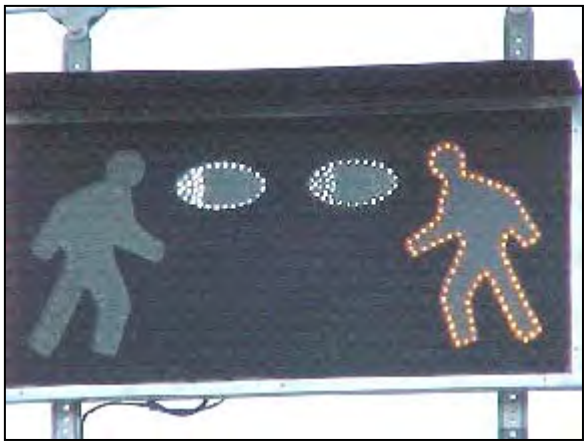
Proposed Structures and Roadway Crossings

The only structures in this section are at the L Street Transition area: Along the north side of L St., under the railroad tracks, a ramp is recommended to enable a smooth transition from street level to railroad level. It should be constructed in conjunction with the development of *One NOMA Station* (on the west side of the tracks). In the interim period, the NY Ave. Metro Station project will provide a staircase with a bicycle rolling tray.

There are two at-grade street crossings, and six driveway crossings; all of which are recommended for improvements to maximize trail safety traffic:

- K Street, NE,
- L Street, NE
- Station Place Loading Zone and Parking Lot Entrances/Exits (5)
- 900 2nd Street, NE Parking Lot Entrance/Exit (1)

The intersections at K and L should be designed using the new trail/roadway crossing detail in the DC Bicycle Design Guide. Providing adequate curb ramp width (8-10 feet) is critical, and signal poles should be located out of the trail right of way. Additionally, special lighting, signs and/or the "roving eyes" (see photo) could be used to alert drivers at trail crossings with poor sight distances and other visibility issues. The roving eyes treatment was designed for locations where parking garage exit driveways cross a sidewalk, such as at the new Station Place development. They may be effective at the K and L Street crossings as well. At these crossings, the trail is immediately at the edge of the RR overpasses, at the exact location where drivers experience a dramatic change in lighting levels. Sight distances are also poor at these locations because of the bridge abutments. The roving eyes would be installed inside the tunnel and accompanied with a sign that says "Caution Trail Crossing Ahead."



Illuminated eyes look back and forth at 1 cycle/second; the illuminated pedestrian icon (right, left or both) indicates the direction(s) from which pedestrians are approaching.]

Driveway design is critical in this section. Granite curb returns should be reduced to ensure that they do not cross the trail treadway. Three strips of brick inlay should be placed across the trail treadway prior to the driveway crossing, and special signs and pavement markings should be

used to alert motorists exiting and entering the driveways (see DC Bicycle Design Guide for details).

Signage

Generally, the sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for trail/roadway intersections. Trail identity and continuity may be best served by installing brass medallions with MBT logo, directly into the shared use path treadway, or by using overhead banners mounted on poles. Cues for trail users to make turns may also be best accomplished with colored pavement or pavement inlay design.

Connections

This segment of trail facilitates trail connectivity to the neighborhoods on the east side of the railroad tracks. The DC Bicycle Master Plan proposes a number of bike routes connecting to this section of the MBT.

- A proposed bike route on F Street provides linkage to existing north-south bike lanes on 4th and 6th Streets, NE (one-way pairs).
- A proposed route on 2nd Street, NE provides linkage to Senate and House Office Buildings, the Supreme Court, Library of Congress and other Capitol Hill destinations.
- The proposed route on Massachusetts Ave. provides linkage to Stanton Park and Lincoln Park neighborhoods.
- The bike lanes on 4th, 6th, Mass. Ave. and East Capitol Streets provide high quality bicycle access to all Capitol Hill neighborhoods and to the Anacostia Riverwalk Trail System.
- A proposed bike route on K Street provides good east-west connections to Gallaudet University and Trinidad to the east.

This east leg of the MBT will enhance trail access for inner city residents in the Capitol Hill area, as well as those who are employed on the Hill. Direct trail access to the regional/suburban trail system provided by the MBT will provide increased recreational opportunities for inner city residents of the District.

This segment also provides bicycle and pedestrian access to Union Station; however, the east side of Union Station is not the central entrance for making intermodal connections. A modest amount of bicycle parking should be provided under the cover of, or near, the east portico, and signs should direct trail users to the Bicycle Station at the west end of the building.

Gateways and Waysides

Two gateways and one wayside should be considered for this section.

- A gateway at 2nd and F Streets, NE should be created to highlight this access point. It is expected that the majority of users along this section will be moving to and from Capitol Hill and the greater Capitol Hill neighborhood. 2nd and F Streets will serve as on-street bike route connectors to these neighborhoods.
- A second gateway/wayside should be considered for the L Street Transition area as a part of the One NOMA Station development (See previous section for details).

Landscaping

Two at-grade street crossings at K Street, NE and L Street, NE, and six driveway crossings – five at Station Place Loading Zone and Parking Lot and one at the 900 2nd Street, NE Parking Lot Entrance/Exit, are planned for this segment of the MBT. The trail/roadway crossing detail in the DC Bicycle Design Guide should be used at the K and L Street crossings. Opportunities exist for various landscape treatments in this segment as a part of the One NOMA Station development, as described in the previous sub-section, including shade structures, seating walls (or planter), plantings or decorative pavement treatment. Also, in the vicinity of Station Place, where the trail will have a 4-foot buffer to the curb, opportunities exist for various landscape treatments, including curbside gardens and/or street trees.

Landscape Treatments for the area of 2nd Street, NE from Union Station to L Street

Included	Treatment
X	Curbside Gardens
X	Street Crossings
	Dry Streambank
	Indigenous Vegetation
	Ornamental Vegetation
X	Planter
	Portals
X	Shelters
X	Street Trees
	Unusual Focal Point

Art

General Issues, 1st and 2nd Streets

Refer to the preceding 1st Street section for a discussion of the issues common to this leg and the west leg of the trail.

2nd St., NE

For this segment, public art should focus on elements that define the course of the path and strategies for addressing the industrial infrastructure in the area.

Path Marking. The course of the path is emerging as new development occurs along the street. Linear elements, lighting and lighting elements (as described above),

Industrial Infrastructure. Along this segment, there are several visually significant infrastructure elements, namely a stone retaining wall, some visible railroad infrastructure above the retaining wall, and an electrical substation that sits on a platform above track level. These elements could be turned into visual amenities. The wall provides an opportunity for interventions in color, greening and lighting. The transformer could be painted and lit as well.

Interpretive Opportunities. In this segment, artists could address interpretive opportunities at Union Station (transportation, the McMillan Plan), the U.S. courts building, the Securities and Exchange Commission, and historic structures such as the former school and REA Express building.

Lighting & Security

The Second Street NE area has been provided with existing high pressure sodium (HPS) street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at two locations on this portion of the trail yielded values of 1.8 and 2.5 foot candles respectively. Lighting for this portion of the MBT is driven by requirements for the associated roadway, and appears adequate for the proposed bikeway.

As the policing of this portion of the trail is extensive (see below), it is not recommended that any additional security features be added to this segment of the MBT.

Policing

This area is in MPD PSA 102. At least three police agencies have jurisdiction and maintain regular patrols in this area: the D.C. Metropolitan Police, the U. S. Capitol Police, and Amtrak police. Because the trail is in the public street right-of-way, it will be policed as a part of routine patrols in this area. Additionally, two of these forces maintain and use bicycle-mounted patrols, which could be used in this section.

Implementation

Implementation of the trail in this section will be a part of DCDOT planned improvements for 2nd Street, NE and public amenities provided by the Station Place development project. Design drawings have already been prepared, but need review and revision before being put out to bid. In a separate project, DCDOT is providing funding and management of railroad underpass improvements for K and L Streets.

NEW YORK AVENUE METRORAIL STATION

Proposed Alignment

In this segment, the MBT will be elevated above street level and located adjacent to the Red Line Metrorail tracks for approximately 5 blocks between L Street, NE and New York Avenue, NE. See Layout Sheet 4.

Existing Conditions

This entire section is currently under construction as a part of the Metro project to construct a new metrorail station along the Red Line: *New York Avenue-Florida Avenue-Gallaudet University* station.

Trail Type—Shared Use Path

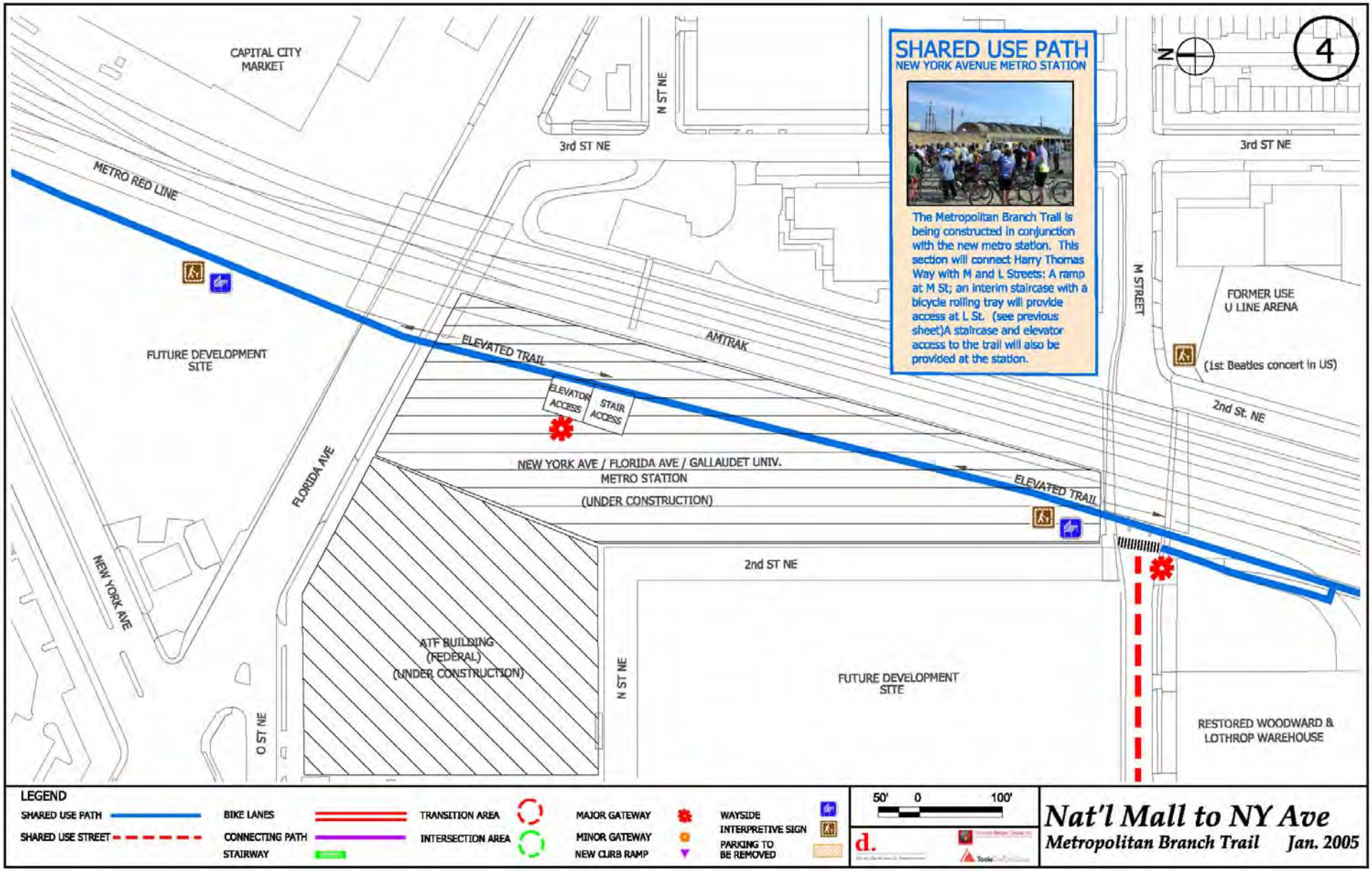
The facility type for this area is a 14-foot wide, concrete, shared use path built on an elevated structure independent of the rail structure. Railings are provided on both sides of the facility. Trail centerline striping is recommended throughout this section.

Proposed Structures and Roadway Crossings

The main trail structure runs from the south side of M Street to the north side of Florida. The trail sections north and south of the elevated structure are built at grade. A staircase with a bicycle rolling tray will facilitate access to L Street, a concrete ramp will provide access to M Street, NE, and an elevator tower and separate stair will provide direct access to the street-level station entrance at N and 2nd Streets, NE.

There are no at grade roadway crossings; the elevated structure takes the trail over M Street, NE, and Florida Avenue, NE. The trail will pass under the existing New York Avenue, NE Bridge, adjacent to the metrorail and other railroad tracks. The elevated trail eliminates one of the major crossing obstacles previously faced by bicyclists headed downtown.

Construction of the New York Avenue Metro Station includes an elevated section of the MBT.


SHARED USE PATH
NEW YORK AVENUE METRO STATION
The Metropolitan Branch Trail is being constructed in conjunction with the new metro station. This section will connect Harry Thomas Way with M and L Streets: A ramp at M St; an interim staircase with a bicycle rolling tray will provide access at L St. (see previous sheet)A staircase and elevator access to the trail will also be provided at the station.
4
CAPITAL CITY MARKET
METRO RED LINE
3rd ST NE
N ST NE
AMTRAK
ELEVATED TRAIL
ELEVATOR ACCESS
STAIR ACCESS
FUTURE DEVELOPMENT SITE
FLORIDA AVE
NEW YORK AVE / FLORIDA AVE / GALLAUDET UNIV.
METRO STATION
(UNDER CONSTRUCTION)
2nd ST NE
NEW YORK AVE
ATF BUILDING
(FEDERAL)
(UNDER CONSTRUCTION)
O ST NE
M STREET
FORMER USE
U LINE ARENA
(1st Beatles concert in US)
2nd St. NE
RESTORED WOODWARD & LOTHROP WAREHOUSE
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Nat'l Mall to NY Ave
Metropolitan Branch Trail Jan. 2005

Signage

Generally, the sign system recommendations should be implemented throughout this section. Trail identity and continuity may be best served by installing brass medallions with MBT logo, directly into the shared use path treadway.

Connections

This segment of trail facilitates traffic free connectivity between the new metrorail station and the Eckington neighborhood north of New York Ave. Eckington includes the developing Capital Commerce Center, XM Satellite Radio, the rehabilitated McKinley Technology Campus and High School, and a resurging residential community.

To the south, the trail will provide a direct connection between the new station and the existing Greyhound and Peter Pan bus terminals.

Residential and office development in this area is expected to surge after the new metrorail station opens in early 2005. Trail access facilities at the new station will provide excellent trail access for the neighborhoods on both sides of the tracks. The elevator and stair at the station entrance will provide ADA accessible trail access during metro operating hours, and the ramp at M Street will facilitate trail access 24/7. Moreover, DCDOT plans to address aesthetic, personal security and access issues at both the Florida Ave. and M Street underpasses.

The DC Bicycle Master Plan proposes a bike route on M Street, NE providing linkage to the NOMA neighborhood to the west and Gallaudet University to the east.

Gateways and Waysides

The new metrorail station will serve as the primary gateway and wayside in this segment. Any further enhancement of the trail support facilities at the station should be coordinated with WMATA.

Three locations are identified as possible sites for cultural and heritage interpretation: 1) at the Washington Coliseum site where the Beatles played their first concert in America; 2) at the Metro Station near the M St. entrance; or 3) adjacent to the trail between the Florida Avenue overpass and the New York Avenue underpass. Potential interpretive themes include railroad history, the historic Woodward and Lothrop warehouse, or neighborhood history, such as the Capital City Market or Gallaudet University.

Landscaping

Generally, no additional landscaping is recommended for this elevated trail section.

Art

Art has already been planned by WMATA; however, additional projects could be considered in coordination with WMATA.

Lighting & Security

No existing lighting system appeared to be present in this area of the trail at the time of the survey, due to the fact that the metrorail station is currently under construction. However, the proposed portion of the MBT has been included in the metrorail station design, and lighting is being provided with the on-going construction. Upon completion of the metrorail station construction, no additional lighting systems should be required for this portion of the trail.

As this portion of the trail is elevated and directly adjacent to the metrorail station, security will be provided through existing WMATA security guidelines in conjunction with station security. It is not recommended that any additional security features be added to this segment of the MBT.

Policing

This area is in MPD PSA 101. Two police agencies have jurisdiction and maintain regular patrols in this area: the D.C. Metropolitan Police and the WMATA transit police. Because the trail is separated from the street in this segment, special patrols will be necessary. This and all of the metrorail stations along the MBT are in WMATA's Transit Police District One. WMATA and MPD coordinated foot and bicycle patrols are recommended for this trail segment, especially in the evening hours. If this neighborhood were to create a Business Improvement District (BID), day-time trail maintenance and supervision should be included among the responsibilities of any BID staff ambassadors that may be deployed in the neighborhood.

Implementation

Implementation of the trail in this section is underway. Design and construction is being undertaken by WMATA as a part of the new metrorail station construction. DCDOT has provided funding and design coordination. DCDOT will provide funding and management of railroad underpass improvements at M and Florida.

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CHAPTER FOUR

RHODE ISLAND AVENUE AREA: NEW YORK AVENUE–FRANKLIN STREET

OVERVIEW

Section 2 of the MBT extends from the underpass of New York Avenue, NE to Franklin Street. This section of the trail is 1.2 miles in length. Section 2 will be addressed under the following two segments:

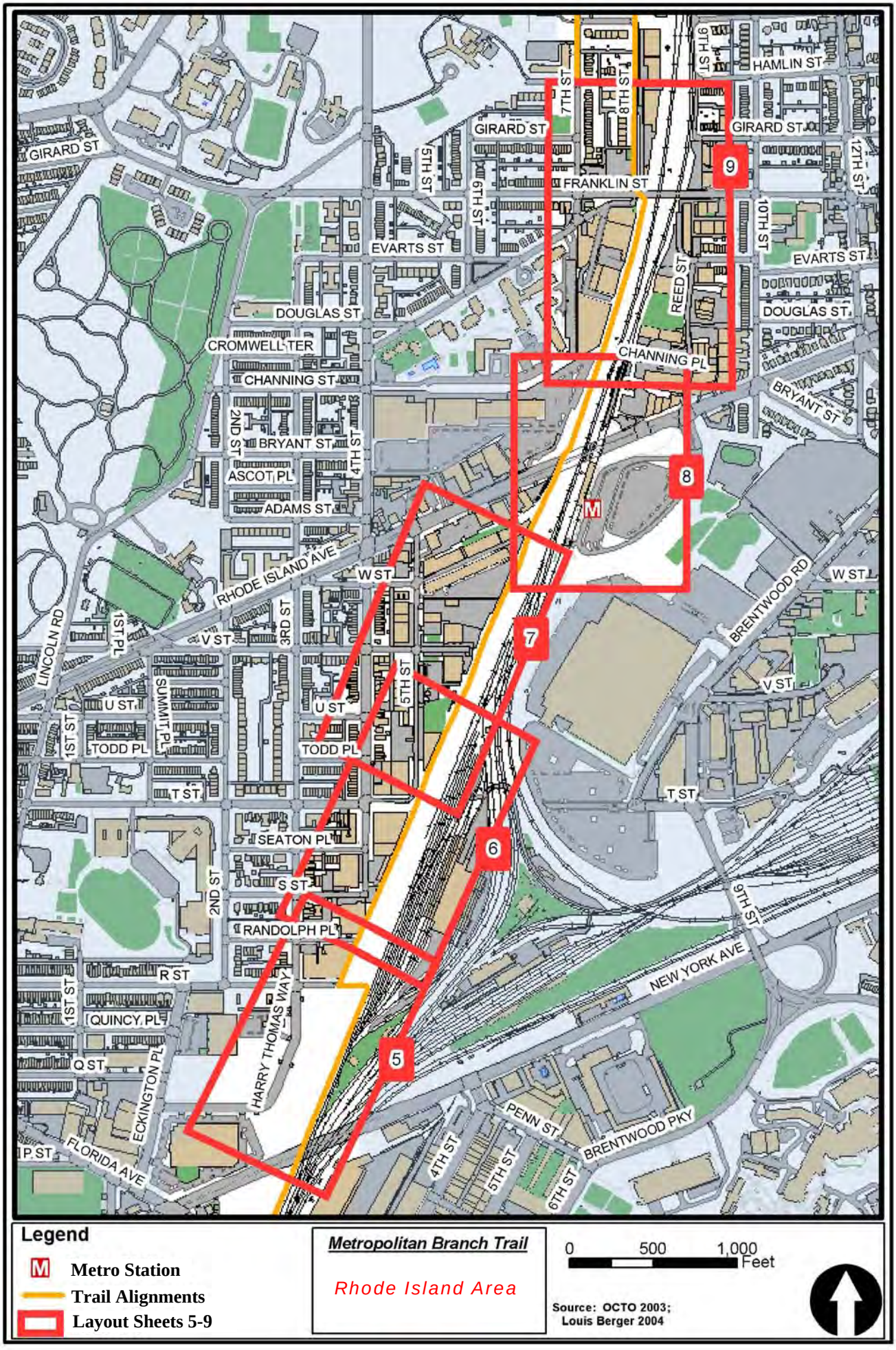
- New York Avenue to Rhode Island Avenue : Layouts Sheets 5, 6, and 7.
- Rhode Island Avenue to Franklin Street: Layouts Sheets 8 and 9.

See map on page 4-2 for a key to the Layout Sheets.

TRAIL OBJECTIVES

The section of trail between the underpass of New York Avenue, NE and Franklin Street has the following objectives:

- Provide an off-street commuting and recreational route connecting the North Capitol neighborhood with Brookland.
- Provide access to neighborhoods between Rhode Island Avenue and New York Avenue.
- Improve access to and from the Rhode Island Avenue Metrorail station.
- Provide a visually attractive setting for the trail in the open space between CSX tracks and current development.
- Provide an attractive transition between the trail within the CSX right-of-way and 8th Street.
- As compared to the adjacent street route, provide a safer and more direct route by eliminating at grade crossings at major arterials including New York Avenue, Rhode Island Avenue, and Franklin Street, as well as at all of the minor streets in between.


GIRARD ST
HAMLIN ST
7TH ST
8TH ST
9TH ST
5TH ST
6TH ST
FRANKLIN ST
10TH ST
12TH ST
EVARTS ST
REED ST
DOUGLAS ST
CROMWELL TER
CHANNING PL
CHANNING ST
BRYANT ST
2ND ST
4TH ST
ASCOT PL
ADAMS ST
RHODE ISLAND AVE
W ST
LINCOLN RD
1ST PL
V ST
3RD ST
BRENTWOOD RD
U ST
SUMMIT PL
1ST ST
TODD PL
T ST
SEATON PL
S ST
2ND ST
RANDOLPH PL
R ST
HARRY THOMAS WAY
QUINCY PL
Q ST
ECKINGTON PL
P ST
FLORIDA AVE
NEW YORK AVE
9TH ST
PENN ST
BRENTWOOD PKY
4TH ST
5TH ST
6TH ST
9
8
7
6
5
M
Legend
Metro Station
Trail Alignments
Layout Sheets 5-9
Metropolitan Branch Trail
Rhode Island Area
0
500
1,000
Feet
Source: OCTO 2003;
Louis Berger 2004

NEW YORK AVENUE TO RHODE ISLAND AVENUE

Proposed Alignment

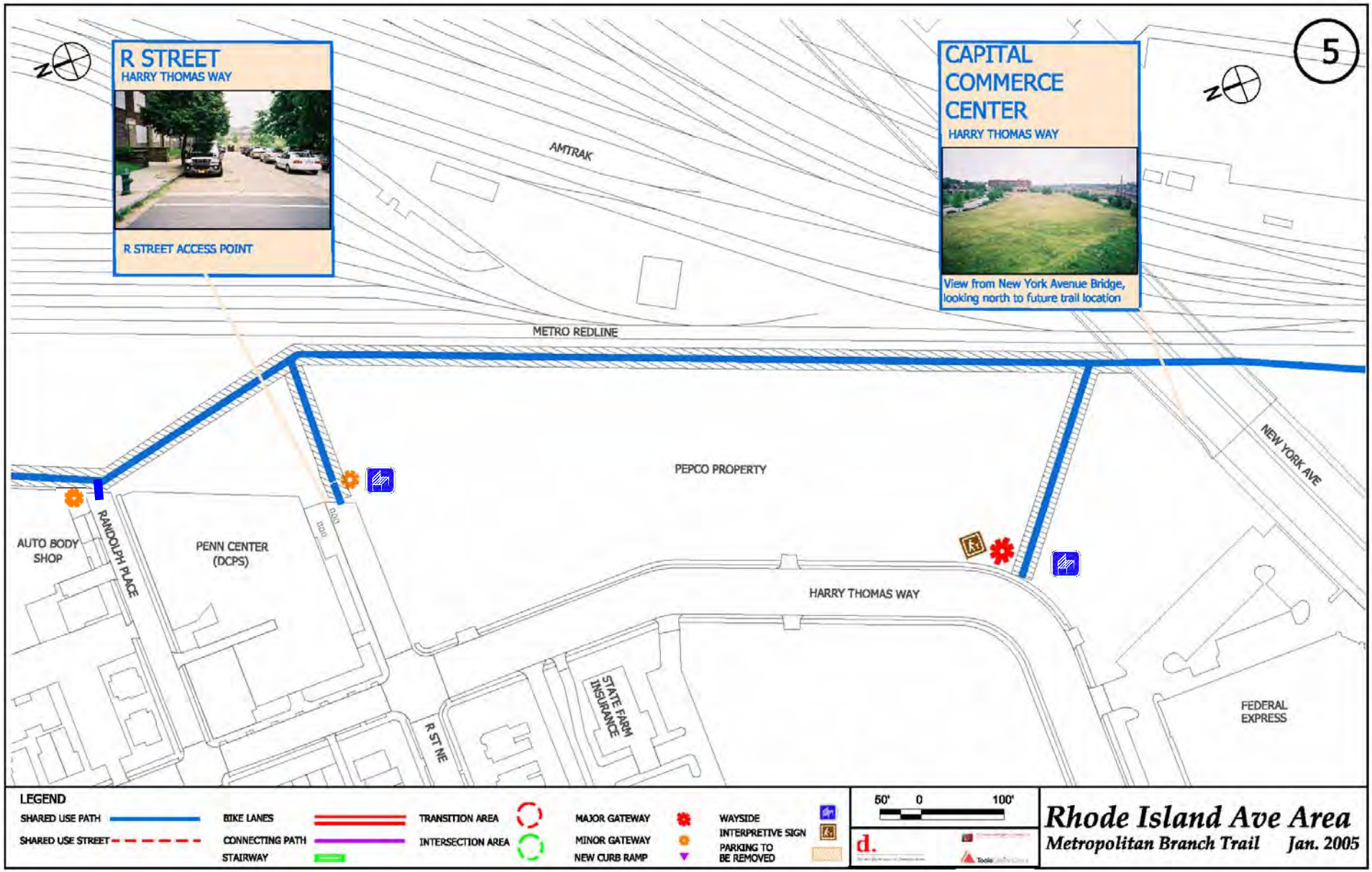
In this segment, from the New York Avenue overpass to Rhode Island Avenue, the trail will be a shared use path. It will align within a 25-foot right-of-way between the CSX tracks on the east and development on the west. The right-of way will extend along the western boundary of open space between the CSX tracks and development, with a fence on the eastern edge to prevent access to the CSX tracks. Side access will be provided for Harry Thomas Way, R Street, S Street, T Street, and V Street. See Layout Sheets 5, 6, and 7.

Existing Conditions

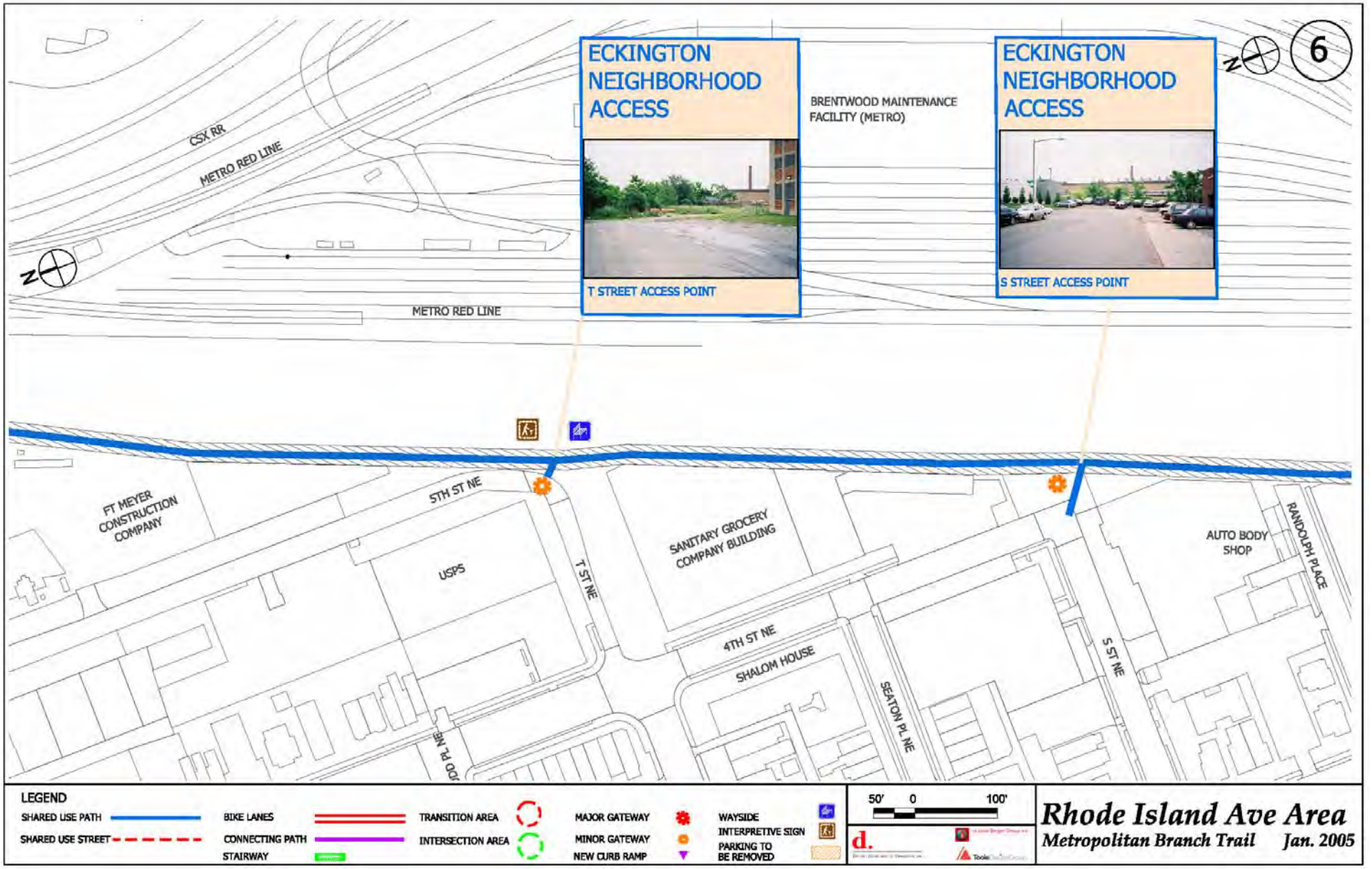
Throughout this segment between New York Avenue and Rhode Island Avenue, the trail will be within a strip of open space between development and rail tracks for CSX and the Metro Red Line. It is relatively flat and consists of grass with some scrub vegetation along the western border. The discussion of existing conditions will also discuss potential access points at Harry Thomas Way; R Street; Randolph Place; and S, T, and V Streets; as well as one side street not currently considered for access (W Street).

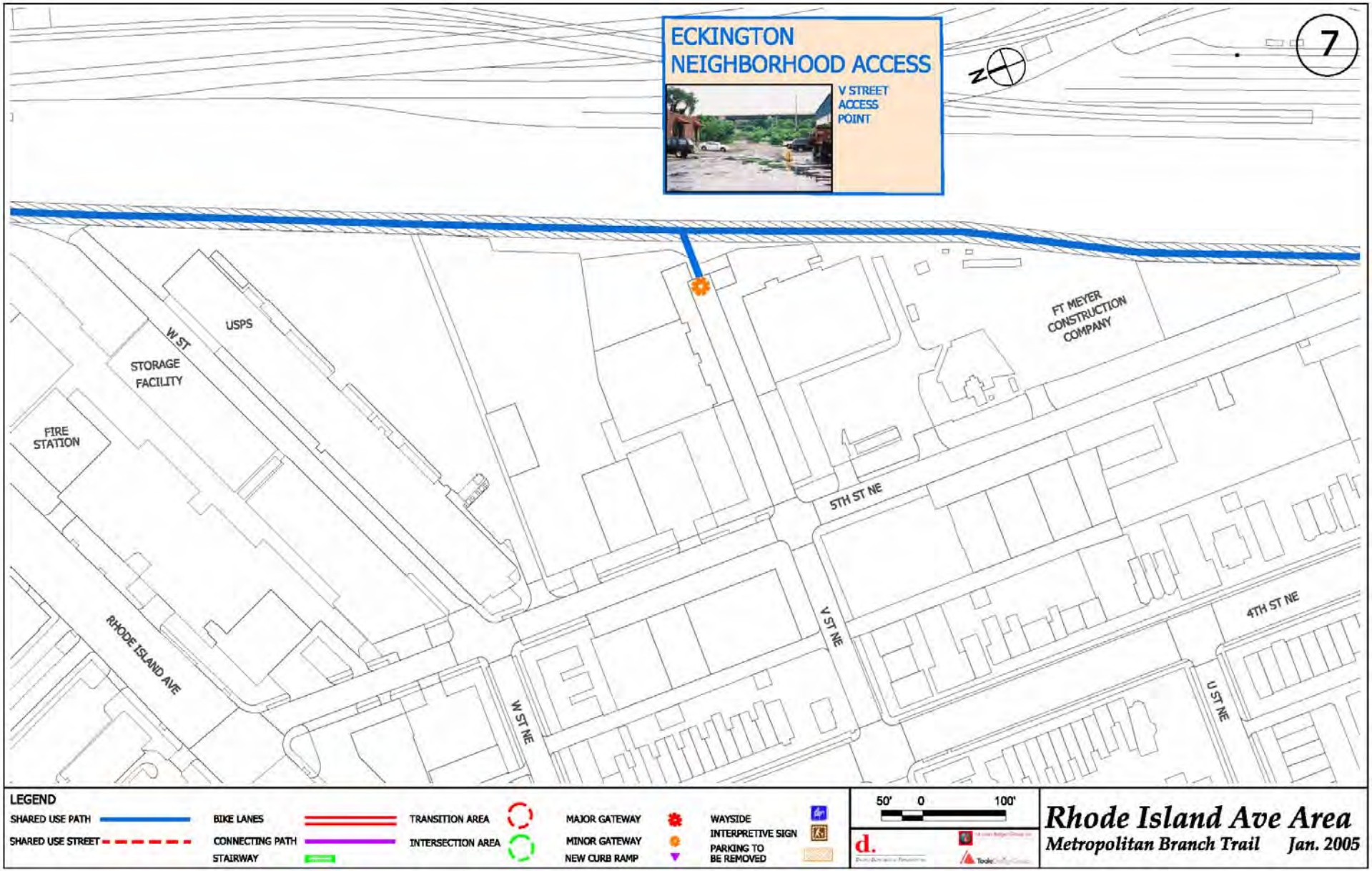
Looking north along train tracks

As shown on the picture following Layout Sheet 5, a wide expanse of open ground owned by the Potomac Electric Power Company (PEPCO) lies between New York Avenue and R Street. The general area, also referred to as the Capital Commerce Center, is bounded on the west by Harry Thomas Way and on the east by metro tracks. The tracks are elevated behind a retaining wall that extends from New York Avenue to U Street. To the north of this open space, within the New York to Rhode Island segment, the CSX tracks come under the metro tracks to form a barrier between the strip of open space and the elevated metro line. Harry Thomas Way, a proposed access gateway, is a wide 2-lane road with parking along both sides. The trail as proposed would have one leg making a direct connection between Harry Thomas Way and the egress from the New York Avenue elevated trail.


5
R STREET
HARRY THOMAS WAY
R STREET ACCESS POINT
CAPITAL COMMERCE CENTER
HARRY THOMAS WAY
View from New York Avenue Bridge, looking north to future trail location
AMTRAK
METRO REDLINE
PEPCO PROPERTY
NEW YORK AVE
AUTO BODY SHOP
RANDOLPH PLACE
PENN CENTER (DCPS)
HARRY THOMAS WAY
STATE FARM INSURANCE
R ST NE
FEDERAL EXPRESS
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Rhode Island Ave Area
Metropolitan Branch Trail Jan. 2005

Looking north from the New York Avenue overpass at the two proposed alignments connecting the trail to Harry Thomas Way, R Street, and the trail to the North.


6
ECKINGTON NEIGHBORHOOD ACCESS
T STREET ACCESS POINT
BRENTWOOD MAINTENANCE FACILITY (METRO)
ECKINGTON NEIGHBORHOOD ACCESS
S STREET ACCESS POINT
CSX RR
METRO RED LINE
METRO RED LINE
N
FT MEYER CONSTRUCTION COMPANY
5TH ST NE
USPS
T ST NE
SANITARY GROCERY COMPANY BUILDING
4TH ST NE
SHALOM HOUSE
SEATON PL NE
S ST NE
AUTO BODY SHOP
RANDOLPH PLACE
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Rhode Island Ave Area
Metropolitan Branch Trail Jan. 2005


ECKINGTON
NEIGHBORHOOD ACCESS
V STREET
ACCESS
POINT
7
N
USPS
W ST
STORAGE
FACILITY
FIRE
STATION
FT MEYER
CONSTRUCTION
COMPANY
5TH ST NE
4TH ST NE
V ST NE
U ST NE
W ST NE
RHODE ISLAND AVE
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO
BE REMOVED
50' 0 100'
Rhode Island Ave Area
Metropolitan Branch Trail Jan. 2005

R Street NE @ 3rd Street NE

The large open space necks down to a much narrower strip of land at R street that forms the CSX/Metro right-of-way, as shown on Layout sheet 5. R Street NE, a proposed trail access point, dead ends at the open space and is separated from the space and tracks by a chain link fence and concrete road barriers. R Street is bounded on the north by a large building and has parking on both sides of the street. There are no sidewalks or buffers along the roadway.

Randolph Place, NE @ 3rd Street NE

Randolph Place NE, immediately north of R Street and adjacent on the north to the large building that lies along R Street, dead ends at the right-of way for the CSX and Metro rail tracks, and is separated from the right-of-way by a 7-foot tall chain link fence. There are buildings located on both sides of Randolph Place with parking on both sides with various daily parking restrictions. There are no sidewalks or buffers between the roadway and parking/businesses.

Looking east toward R Street dead end

Looking east toward Randolph Place dead end

S Street NE & 4th Street NE; T Street NE @ 5th St. NE

A short section of S Street proceeds beyond its intersection with 4th Street NE to a dead end at an embankment along the edge of the right-of-way for the CSX and Metrorail tracks. Businesses are located on both sides of the street with available parking in front. There are no sidewalks or buffers between roadway and parking /businesses. T Street also dead ends at the right-of-way for the CSX and Metrorail tracks and is separated from the right-of-way by an open chain link fence. Businesses are located on both sides of the street with available parking in front. There are no sidewalks or buffers between roadway and parking.

S Street Access Point

T Street Access Point

V St. NE at 5th Street NE

V Street dead ends at the right-of-way for the CSX and Metrorail tracks. Street and right-of-way are separated by a wooded area. On V Street, there is business parking on both sides of the street. There are no buffers or sidewalk between street and parking or businesses.

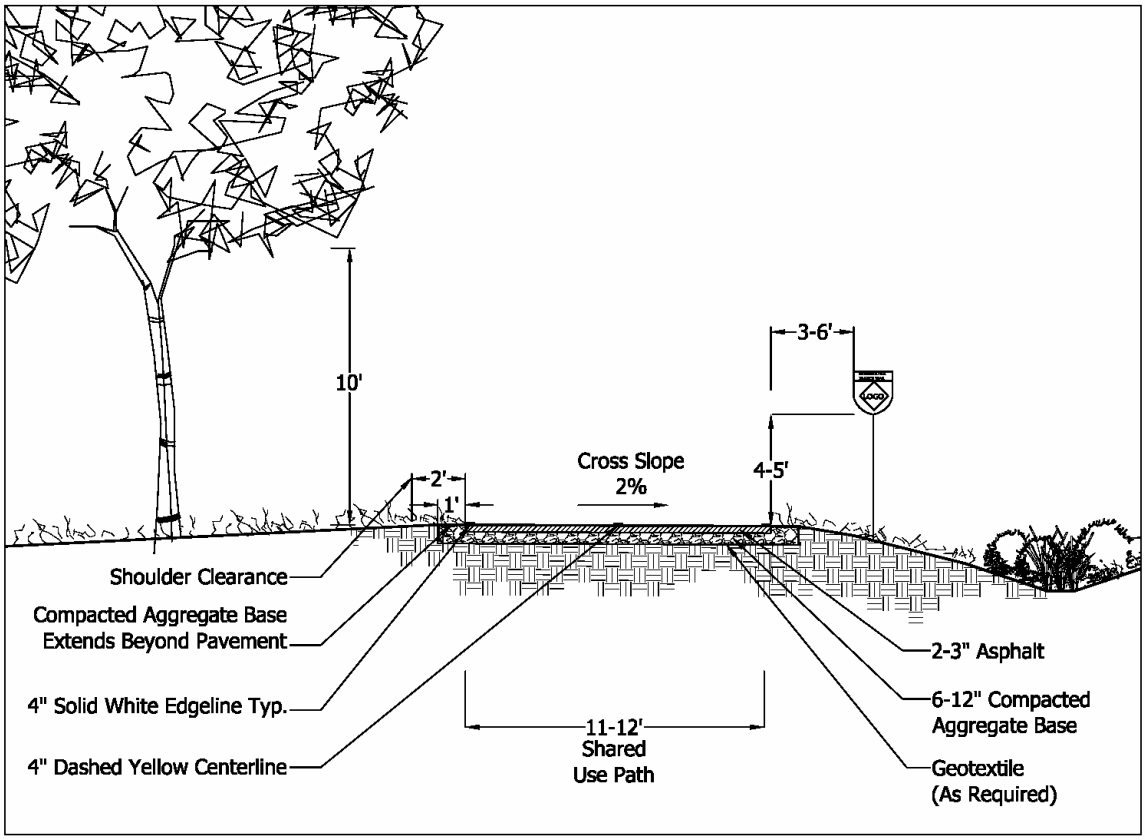
V Street Access Point

W St. NE @ CSX tracks

W St. dead ends at the right-of-way for CSX and Metrorail. There is a lengthy narrow access road between the buildings on W Street. There is parking on the north side of the street, with a postal service building on the south side of the street. The industrial/commercial nature of the narrow street, hemmed in by buildings, leads to a feeling of isolation and results in W Street being less suitable for trail access

Trail Type—Shared Use Path

The preferred facility type in this section is a shared use path with a paved width of 11–12 feet with 2-foot shoulders. A typical cross section is shown in the figure below.



Proposed Structures and Roadway Crossings

None

Signage

The sign system recommendations should be implemented throughout this section, with special attention paid to gateway signage and share the trail signs. Trail identity and continuity may be addressed by installing brass medallions in the treadway, and/or use of the banner/gateway sign. Cross streets should be labeled where the trail passes over or under them, such as at the Franklin Street. Bridge, Rhode Island Avenue, New York Avenue Bridge and Florida Avenue.

Connections

As noted above, this segment of trail connects to Harry Thomas Way; R Street, Randolph Place; and S, T, and V Streets. Access points at these locations, will provide a link between the trail and the surrounding neighborhoods of Eckington and Edgewood. This portion of the trail is in close proximity to several schools including the recently opened McKinley Technology High School located three blocks from the trail.

- The connection to Harry Thomas Way would require a new asphalt pathway from the vicinity of the New York Avenue underpass.
- The connection at R Street would require a gate or portal and path through the existing chain link fence and concrete barriers.
- The connection at Randolph Place would require removal of some parking and a gate or portal and path through the existing chain link fence.
- The connection at S Street requires some earthwork and path to provide access though the existing embankment.
- The connection at T Street would require removal of some parking and a gate or portal and path through the existing chain link fence.
- The connection at V Street would require some earthwork and removal of vegetation and path over a slightly elevated area of vegetation. A social path exists on the alignment.
- W Street is not currently considered for an access point because of its isolation, but could be considered as conditions change.

Gateways and Waysides

This area has several gateways to access the trail from the surrounding communities. Gateways include the access points of Harry Thomas Way; R Street; Randolph Place; and S, T, and V Streets directly onto the trail. Waysides are also proposed at the Harry Thomas Way, R Street, and T Street access points.

Landscaping

Opportunities exist for various landscape treatments in this segment:

Landscape Treatments for the Area from New York to Rhode Island Avenue

Included	Treatment
X	Berm
	Bioswale
	Boardwalk
	Curbside Gardens
	Street Crossings
	Dry Streambank
X	Indigenous Vegetation
X	Ornamental Vegetation
X	Photovoltaic Lighting
X	Permeable Paving
	Planter
X	Portals
X	Shelters
	Street Trees
	Terracing
X	Unusual Focal Point

Two Design Options for Trail Alignments

Two trail alignments could be employed in this segment, as described below: Either or both concepts can be used in various areas. Use of permeable or porous pavement for the trail should be considered. Either concept would provide space for lighting and plantings.

- **Trail Curvature with More Space for Plantings:** The maximum area for plantings within a 25-foot corridor would be 11 feet, if the trail is allowed to curve from one side of the right of way to the other. The curvilinear trail improves the experience along the trail by allowing for variation in views and a larger area for planting. This amount of space would allow for at least two rows of planting. A curvilinear approach adds interest for trail users and makes the trail more aesthetically pleasing, while providing for better, healthier, more substantial landscaping. This approach would also provide room for overhead and pedestrian-level lighting, which could be photovoltaic, and benches for seating,

- **Straight Trail with Minimum Space for Plantings:** The minimum area for plantings within a 25 foot corridor is 5.5 feet, if designing a trail that does not curve. This provides a trail that connects between points in the shortest and most efficient manner for least cost. It would still provide enough space to allow for one row of planting, and there would also be room for overhead or pedestrian-level lighting.

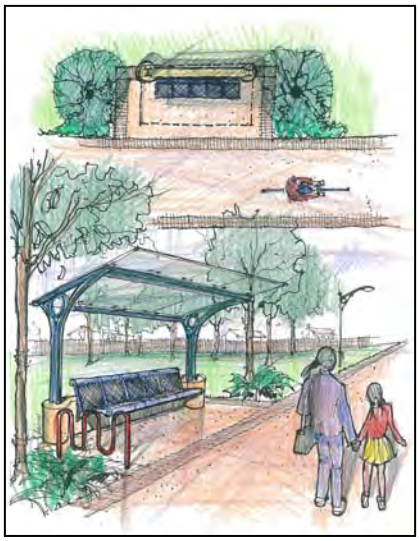
Portals

Portals are potential landmarks at trail entrances: NY Avenue; Harry Thomas Way; R Street; Randolph Place; and S, T, and V Streets. At specific points along the MBT, where the trail connects with dead end streets, there are unique opportunities to create structural or vegetative landmarks that would serve as a visual aid to help orient trail users to the site. Currently, as shown in the photographs above, each dead end area is overgrown and unsightly, in need of visual improvements.

- Each portal could have the similar elements to carry out the orientation function of the spot and to create a set of cohesive trail design elements. These places could be used as potential gathering areas for individuals who want to meet at a place along the trail. Design elements could be used to channel and direct users.

- At a portal, for example, decorative metal fencing with a vertical element, such as an arched gate, could create a gateway statement that would accentuate the trail entrance. Alternatively, a tall element such as a banner or a specific tree species that could be spotted from a distance could mark the connection point. Attractive bollards would be placed in the portal to deny entry to vehicular traffic. Interpretive signage could start to

tell the story or the theme of that specific trail segment or help to direct activities within the site. Seating walls and shade structures could be provided for user comfort, and ornamental plantings in conjunction with art could provide unusual focal points. Sight lines between portals would draw users from one place to another along the trail. From outside the trail corridor, these portal design elements would draw people to the MBT.



Enhancing/Screening Views

Many views in this segment reflect the heritage of this corridor. In some cases the views can be better celebrated by enhancing techniques using landscaping and art. In other cases, appropriate landscaping can screen elements that do not add to the visual experience – at least at this time. Areas could be planted with a variety of indigenous and ornamental vegetation to perform these functions. Plantings would be arranged so as not to obscure sight lines, which are important to maintain high level on-site safety and to maintain the view of the Capitol.

Safety/Surveillance Lighting

Overhead and pedestrian-level lighting could be used along the trail to provide sufficient illumination so that surveillance of the entire area is facilitated. Photovoltaic lighting is one approach, which does not require trenching for conduit; and can be cost-effective.

Planting in Meander Areas along the Trail

Meanders along the MBT would create pockets of space that could be used for planting of ornamental and/or indigenous vegetation. Providing a trail area in this area large enough to allow the trail to meander and to create planting areas along the trail where openings for meadows and wildflower displays could provide visual variation for the trail use. Low plantings could cover open space and provide flower displays all through the season and allow for easy surveillance of the area from the trail. Clusters of trees with understory vegetation could provide interest and shade.

Benches for Rest and Viewing

In addition to the benches at waysides, benches in the shade along the MBT in various locations would offer opportunities for rest and viewing of some spectacular views of the Capitol. Shade could be cast from shade trees.

Fencing

Fencing will be required between the trail and the tracks. The most likely style of fencing for the extended distance of this segment is chain link, potentially with a vinyl coating to soften the image (Refer to Chapter 8 for a discussion of fence types). More attractive decorative styles, such as wrought-iron picket fencing, could at least be interspersed for short distances, however, at viewing locations. Landscaping would endeavor to soften the fencing image, and art – such as decorative cast iron panels 18” x 72” – could be inserted into the fencing to enhance the aesthetic quality of the trail.

Art

General Themes for New York Avenue to Franklin Street (CSX Corridor)

Public art in this segment of the trail should recognize that the role the Metropolitan Branch Trail plays will evolve considerably over time.

In the short term, this segment will remain an isolated industrial corridor with few connections to adjacent neighborhoods and large-scale buildings, space and infrastructure along it. Art projects should consider the grand visual scale, working with the landscape, the sun and wind, the expanses of concrete infrastructure, and the industrial remnants scattered throughout the area to create a large-scale art garden.

In the long term, the parcels along this segment will experience commercial and residential redevelopment; the trail will serve as a linear connective park, and crossings between the communities on either side will become much more frequent. Art projects should focus on creating smaller-scaled, intimate places that serve the emerging population.

Alignments/Waysides. Two design options for trail alignments are proposed. The option of "curvature with more space for plantings" will provide more opportunities for public art and the type of place-making that will support, in the long run, the emergence of this corridor as a linear park connecting historic neighborhoods with newly developing places. Planting areas, seating areas and meanders could be designed collaboratively with an artist; the shifting contours of the trail will create sight-lines that would create suitable locations for permanent or temporary sculpture. In future years, some waysides might evolve into gathering places like playgrounds or gardens.

***Portals/Gateways*.** There are two general categories of portals/gateways in this segment: major gateways, primarily those that provide access to Metro, and minor gateways, primarily those that make connections to adjacent streets. Major gateways should be marked by iconic "trail blazes" that are designed individually but conform to each other in terms of scale, material and visual language. Minor gateways should be marked by elements chosen from a family of artist-designed or collaboratively designed functional elements, such as seating, planting, lighting, barriers or gates, informational signage and bike racks.

Interpretive Opportunities. In this segment, there are major interpretive opportunities, primarily in regard to transportation infrastructure and history. In particular, the B&O Railroad (convergence of routes to the northeast and to Point of Rocks), Metrorail (Rhode Island Avenue was the first station opened; New York Avenue the newest), and the Eckington Yards could be marked. In terms of urban history, this area marks the edge of the L'Enfant/Banneker Grid, and follows the course of Tiber Creek. These opportunities could be pursued through interpretive signage programs or through emblematic artworks exploring these historic themes.

New York Avenue to Rhode Island Avenue

Visually, this sub-area is dominated by Metrorail and other railroad infrastructure. The wall along the eastern side of the right-of-way provides an opportunity for a large-scale project in a media such as paint, tile, masonry, metal panels or light. The silos on the west side of the right-of-way could be painted or lit, and used as the backdrop for a garden or performance space.

The bridge that provides trail access to the Rhode Island Avenue Metrorail station is a major infrastructure investment that could incorporate art in numerous ways. An artist should be included on the design team for future phases of design. Railings, support columns and lighting are key elements to consider.

Lighting & Security

No existing lighting systems are present in this segment of the proposed MBT. There are, however, existing lighting systems which must be transitioned to the proposed lighting scheme for the trail. Existing "Washington Globe" luminaries are present on Harry Thomas Way, which will interface in the same line of sight with the trail across the existing landscape. Additionally, existing streets with proposed "portals" to the MBT are provided with roadway type area luminaries. These systems will have to be extended toward, and transitioned into the different fixture styles and conduit of a proposed trail lighting system.

Harry Thomas Way

Looking west on R Street

It is recommended that lighting for the New York Avenue – Rhode Island Avenue segment be provided via pole mounted, architectural type area luminaries, such as the Washington Globe. Utilizing pole mounted fixtures will maximize coverage area (increasing energy efficiency of the system); while using smaller pole mounted lighting fixtures (below 14') will reduce the glare on the trail, thereby maximizing the quality of light for users. Vandal resistant type luminaries, containing poly-carbonate lenses and/or globes, will be utilized to maximize fixture life. Specialty lighting will be provided for proposed art-work and landscape features, to enhance the intended design intent.

In order to incorporate sustainable design into the lighting system, the added benefits and limitations in utilizing self powered lighting fixtures will be discussed with the appropriate jurisdiction, and this type of system will be utilized to the maximum extent possible where feasible and cost effective.

For the purposes of security, it is proposed to provide emergency call boxes at regular intervals along this section of trail, due to the relative distance of this segment of the trail from normally policed roadways, residential districts, etc.

Policing

This area is in Metropolitan Police Department (MPD) Police Service Area (PSA) 501. MPD will likely be the lead police agency along this segment of the trail. The WMATA transit police (District 1) will have an interest in providing support especially in the area around the Rhode Island Avenue Metro Station. WMATA police expressed an interest in the trail because it would

allow bicycle-mounted transit police officers to quickly travel between Red Line stations along the MBT in the event that train service was disrupted, which is often when additional officers are needed.

Because the trail is separated from the street in this segment, special patrols will be necessary. WMATA and MPD coordinated foot and bicycle patrols are recommended for this trail segment, especially in the evening hours. Close coordination with CSX railroad police or their contracted security staff is also recommended. If this neighborhood were to be included in a Business Improvement District (BID) created for the North Capital/ Eckington area, day-time/evening trail maintenance and supervision should be included among the responsibilities of any BID staff ambassadors that may be deployed in the neighborhood.

Portions of this segment of the MBT are visible from passing Metrorail trains, especially southbound trains. Ways to take advantage of the high frequency of Red Line trains in this corridor should be considered for their potential as a crime deterrent. The hundreds of rail passengers traveling on Metro add even more public eyes watching the trail, which adds an element of security during time periods when trail users may be few and far apart.

Implementation

This segment, from New York Avenue to a point south of Rhode Island Avenue and not including the Rhode Island Metrorail station, should be designed as a unit. This stretch of trail would not encompass major structures and could therefore be developed fairly rapidly. A first step is to lock in the right-of-way for the trail. Following that, boundary and topographic surveys, and some geotechnical investigations, would be performed. Utility locations would be identified and mapped. These provide the data for designs that properly consider foundation conditions and drainage requirements, as well as any special provisions for utilities. The initial design is provided in a conceptual form to allow a review of assumptions that could involve public as well as agency input, such as the gateways, waysides, landscaping, fencing, and lighting being considered. When all issues with the concept design are resolved, the project can be placed on a fast track for final design documents, followed by construction.

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RHODE ISLAND AVENUE TO FRANKLIN STREET

Proposed Alignment

In this segment, from Rhode Island Avenue to Franklin Street, the trail will continue through open space as a shared use path. The right-of-way between the CSX tracks on the east and development on the west will be greater than 25 feet wide, governed by a requirement to be at least 50 feet from the CSX tracks. As to the south, the right-of way will extend along the western boundary of open space between the CSX tracks and development, with a fence on the eastern edge to prevent access to the CSX tracks. It is expected that CSX personnel will need access to their tracks for maintenance and there would be side access from the Rhode Island commuter lot and the Rhode Island Metrorail station. A pedestrian/bicycle bridge over the CSX Tracks is proposed to connect the trail to the Metrorail station. See Layout Sheets 8 and 9.

Existing Conditions

Throughout this segment between Rhode Island Avenue and Franklin Street, the trail continues within a strip of open space between development and the CSX tracks. The open space consists of grass with some scrub vegetation along the western boundary. Dumping has been a problem in this area in the past. Runoff from the development to the west, beginning at a point halfway between Franklin Street and the Rhode Island Avenue, drains into this open area and then southward, at times creating standing water. This drainage will require attention in the pathway design.

Looking north along CSX right of way

Rhode Island Avenue Shopping Center / Commuter Lot Access

The trail runs adjacent to a site that provides commuter parking within a shopping center parking lot. Access to the trail alignment is currently via a 10-foot wide path entrance from the shopping center parking lot. On the north side of the path there is a 7-foot high chain link fence; on the south side of the path there is an open wooded lot.

Looking west at foot trail into commuter parking lot

The Rhode Island Avenue Metrorail station from the commuter parking lot

Looking down and south at the Rhode Island Metrorail Station

Franklin Street Overpass @ 8th Street NE

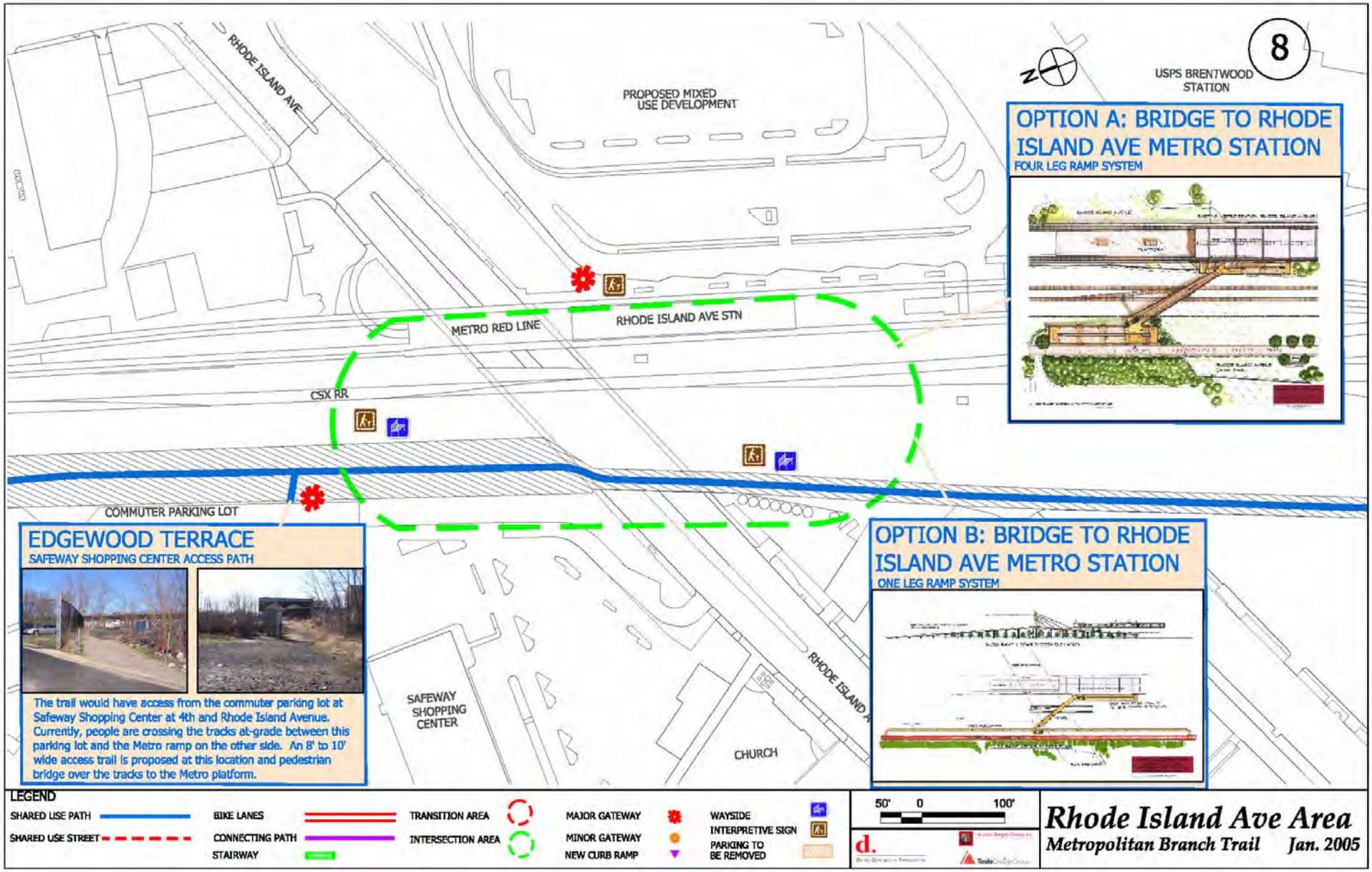
At Franklin Street, the trail transitions from open space to a 26-foot wide street without sidewalks, with adjacent businesses on each side of the street. The difference in elevation between the open space and 8th Street is approximately 10 feet.

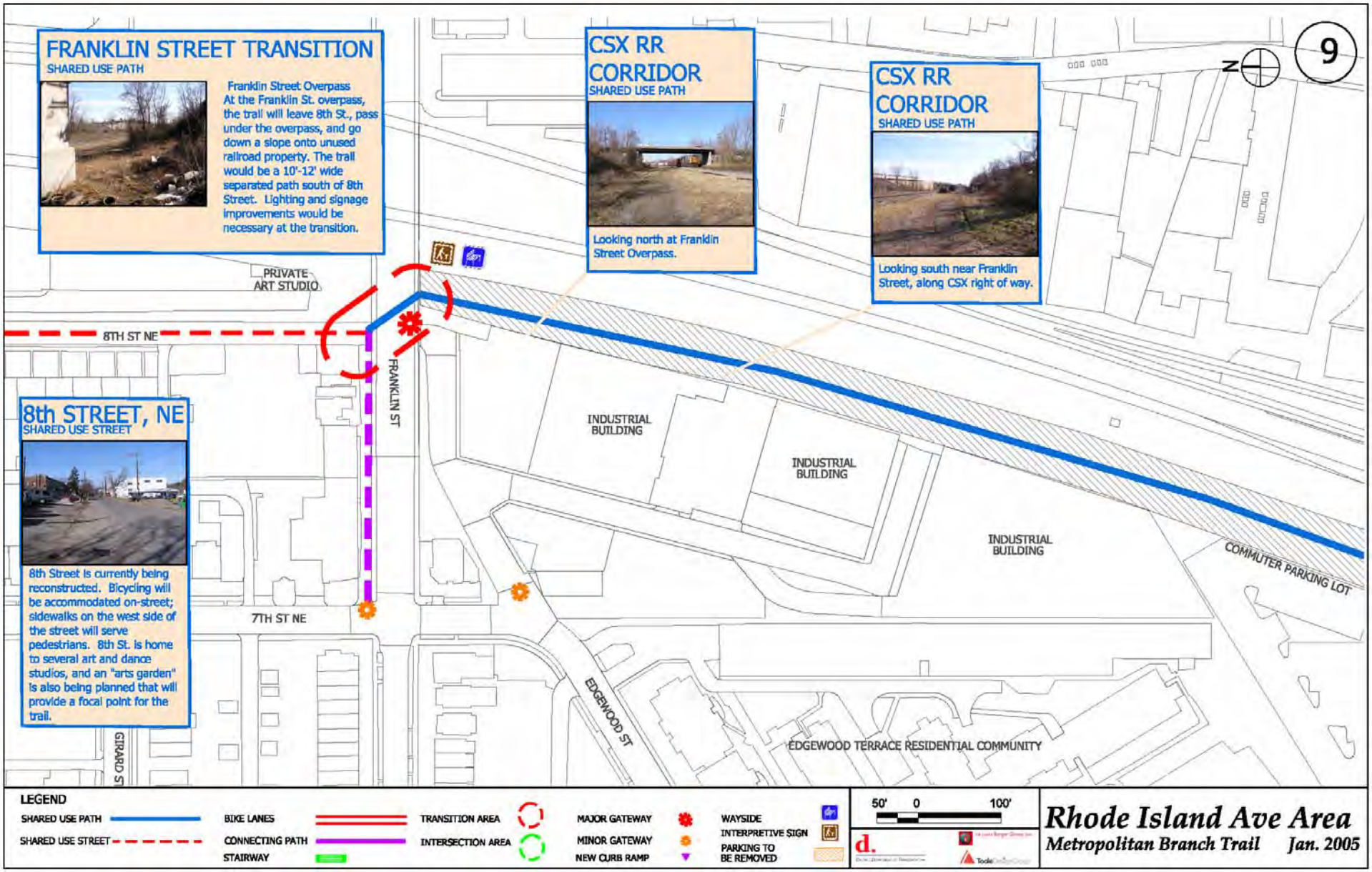
This transition requires a ramp of 150-200 feet in length to meet the maximum slopes prescribed in *The Americans with Disabilities Act Accessibility Guidelines* (*ADAAG*). Such a structure, discussed in the *Proposed Structures and Roadway Crossings* section beginning on Page 4-21, also provides an opportunity to enhance the attractiveness of this area.

Looking north toward 8th Street at the Franklin Street overpass

Trail Type—Shared Use Path

The preferred facility type in this section is a shared use path with a paved width of 11-12 feet with 2-foot shoulders. The cross section would be the same as shown in the previous New York to Rhode Island Avenue segment. At Franklin Street, the trail would rise approximately ten feet to transition to a shared use street on 8th Street. The transition point could use a simple stabilized pathway, or could use this location for a more monumental concrete ramp, tied into a wayside, as shown on Page 4-26.

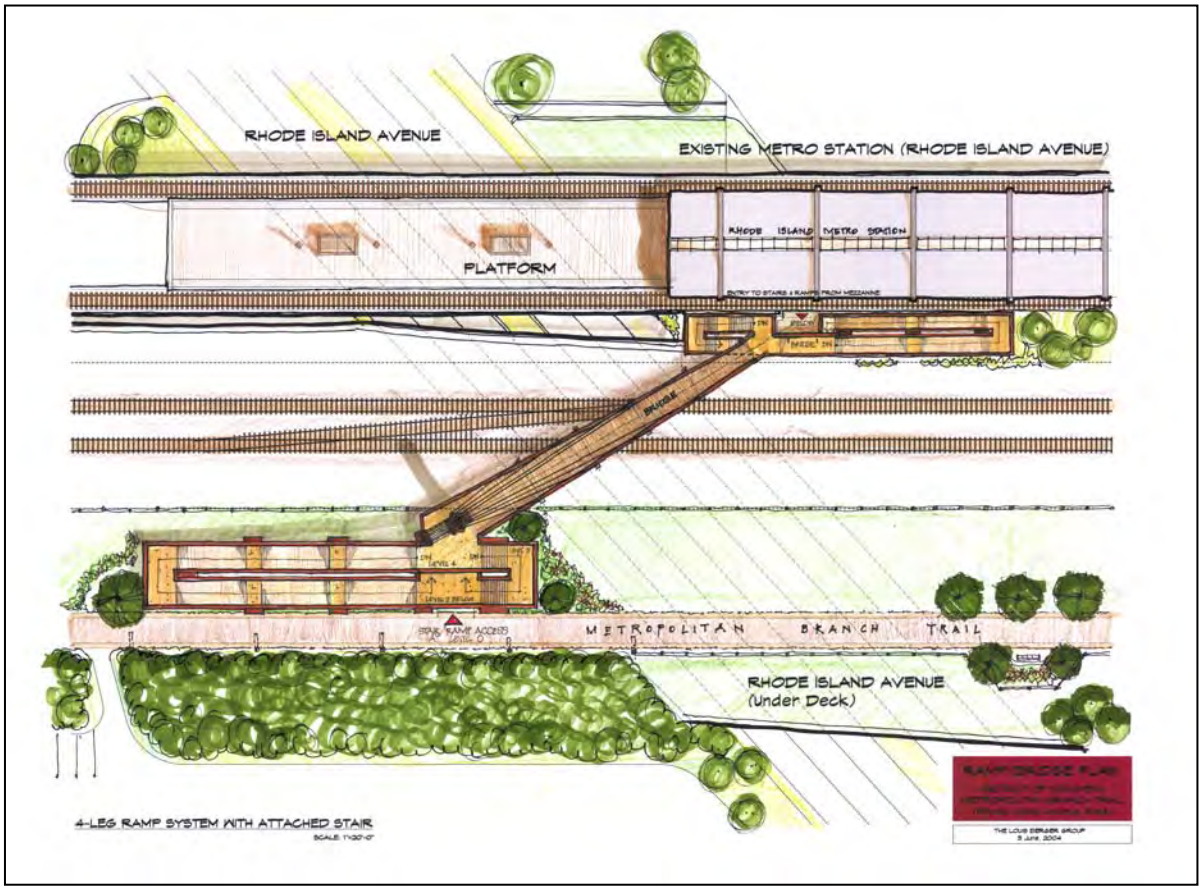

8
USPS BRENTWOOD STATION
RHODE ISLAND AVE
PROPOSED MIXED USE DEVELOPMENT
METRO RED LINE
RHODE ISLAND AVE STN
CSX RR
COMMUTER PARKING LOT
OPTION A: BRIDGE TO RHODE ISLAND AVE METRO STATION
FOUR LEG RAMP SYSTEM
EDGEWOOD TERRACE
SAFEWAY SHOPPING CENTER ACCESS PATH
The trail would have access from the commuter parking lot at Safeway Shopping Center at 4th and Rhode Island Avenue. Currently, people are crossing the tracks at-grade between this parking lot and the Metro ramp on the other side. An 8' to 10' wide access trail is proposed at this location and pedestrian bridge over the tracks to the Metro platform.
OPTION B: BRIDGE TO RHODE ISLAND AVE METRO STATION
ONE LEG RAMP SYSTEM
SAFEWAY SHOPPING CENTER
CHURCH
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Rhode Island Ave Area
Metropolitan Branch Trail Jan. 2005


FRANKLIN STREET TRANSITION
SHARED USE PATH
Franklin Street Overpass
At the Franklin St. overpass, the trail will leave 8th St., pass under the overpass, and go down a slope onto unused railroad property. The trail would be a 10'-12' wide separated path south of 8th Street. Lighting and signage improvements would be necessary at the transition.
CSX RR CORRIDOR
SHARED USE PATH
Looking north at Franklin Street Overpass.
CSX RR CORRIDOR
SHARED USE PATH
Looking south near Franklin Street, along CSX right of way.
9
N
PRIVATE ART STUDIO
8TH ST NE
FRANKLIN ST
8th STREET, NE
SHARED USE STREET
8th Street is currently being reconstructed. Bicycling will be accommodated on-street; sidewalks on the west side of the street will serve pedestrians. 8th St. is home to several art and dance studios, and an "arts garden" is also being planned that will provide a focal point for the trail.
7TH ST NE
GIRARD ST
INDUSTRIAL BUILDING
INDUSTRIAL BUILDING
INDUSTRIAL BUILDING
COMMUTER PARKING LOT
EDGEWOOD ST
EDGEWOOD TERRACE RESIDENTIAL COMMUNITY
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Rhode Island Ave Area
Metropolitan Branch Trail Jan. 2005

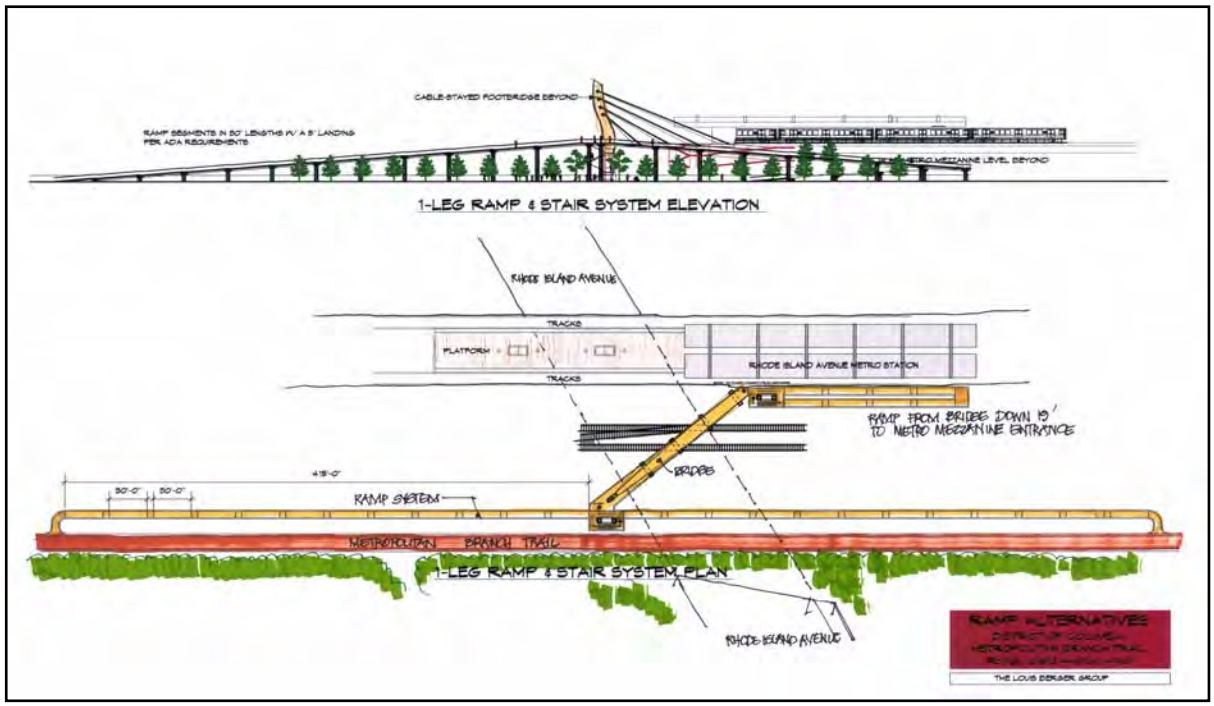
Proposed Structures and Roadway Crossings

A pedestrian/bicycle bridge over the CSX tracks is proposed. It would connect the trail and commuter lot to the Rhode Island Metrorail station. A 24-foot clearance over the tracks is required, which could place the bridge deck at a height of 30 feet above the trail and 19 feet above its egress to the station platform, assuming a superstructure depth of six feet. To avoid placing bridge abutments on the overpass structure, the crossing of Rhode Island Avenue would require a span of approximately 150 feet. Fencing would be installed to prevent direct crossing of the CSX tracks, insuring a safer crossing between the commuter lot and the Metrorail station.

The proposed bridge would be composed of two separate “systems” of access: a ramp system and a stair system. A ramp would be proposed that would meet all ADA requirements. Plan and profile views of a proposed bridge with two different ramp options are shown below.



The first option above shows a bridge with a western ramp composed of four legs and an eastern ramp into the station with two legs.



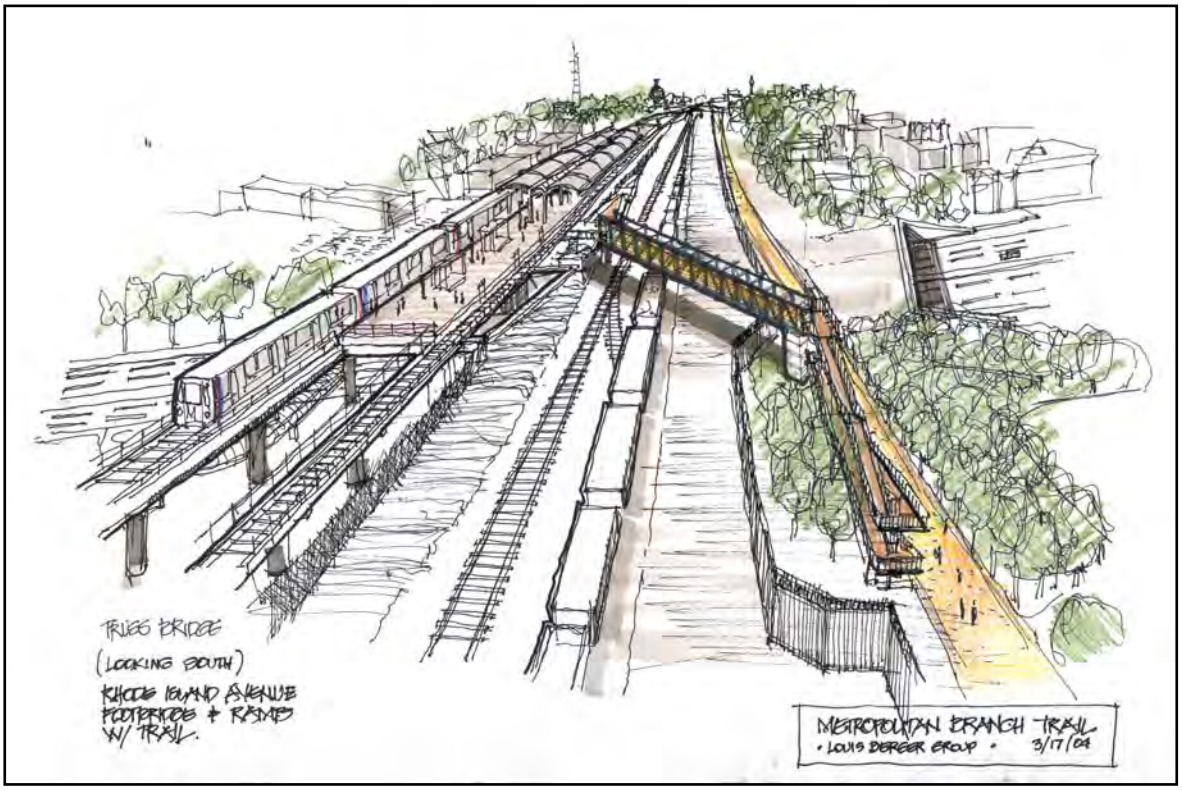
The second option, shown above, changes the western ramp to a single leg in each direction. All ramps are configured to meet the maximum slopes prescribed in the ADAAG, which would require a distance of more than 400 feet for a bridge deck 30 feet above the ground. This would double the ramp costs and require design solutions for supporting the ramp over Rhode Island Avenue. In both options, the eastern ramp is configured to enter the Metrorail station below the platform at the point where a ramp from the level of Rhode Island Avenue also comes into the station. This connection would facilitate movement of bridge traffic to the development east of the station as well as to the station itself.

There are many potential bridge options. Shown below are views of three such options: 1) a truss bridge, 2) an arch bridge, and 3) a cable-stayed bridge. The truss and arch bridge types could have either prefabricated or custom superstructures, and would be likely to have similar abutments and ramps. The cable-stayed bridge would require a tower and a footing and would need a custom design. The prefabricated options would be least expensive and could add architectural features for a custom look. Depending on favorable geotechnical conditions, the cable-stayed bridge would be likely to be less expensive than the custom truss or arch.

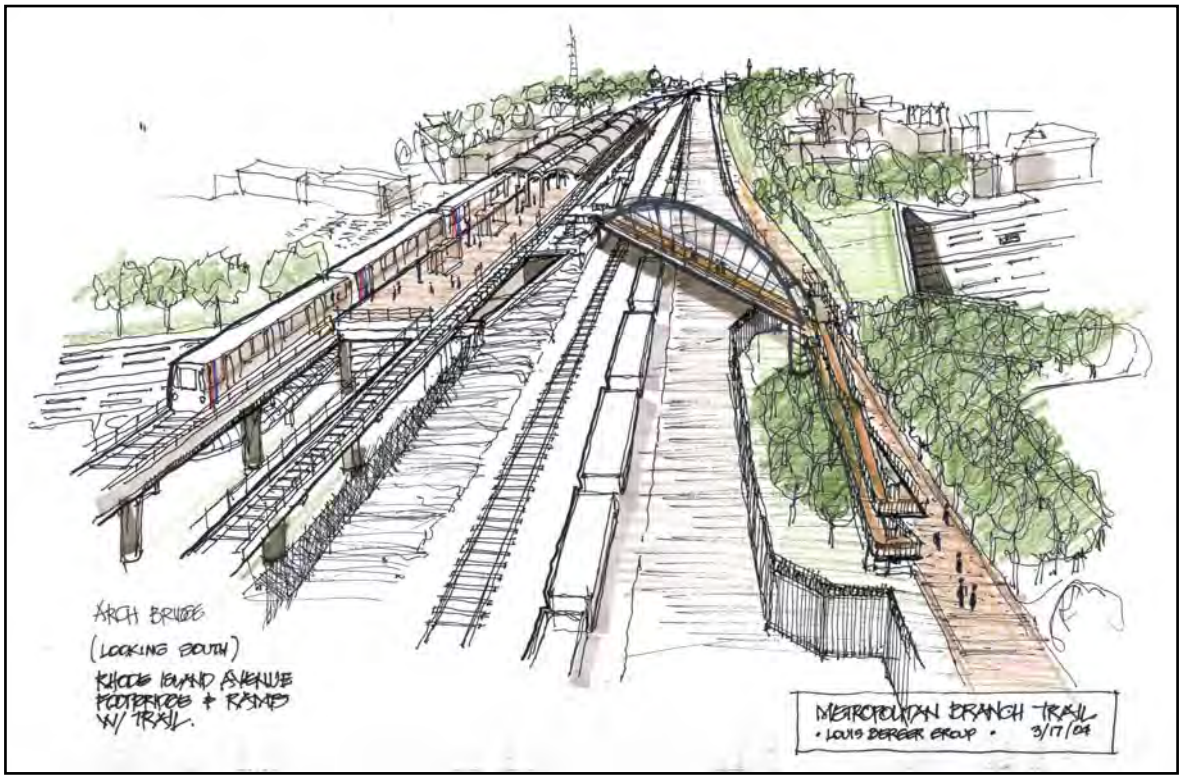
A fourth option, not shown, could be a girder bridge of concrete or steel, similar to the functional bridge designs used to span most highways. This option, designed to match the existing structural system of the ramps at the Rhode Island Avenue Station, could make the proposed bridge look like part of the station, tying the structures together in a more coherent and consistent way. All options would incorporate stairs with rolling trays at each end.

In addition to aesthetic appeal, a final choice of bridge type will consider design and construction costs, ease of installation – especially as it affects the on-going operation of the railroad, and life-cycle maintenance costs. Additional information on geotechnical conditions will be gathered and further analysis of bridge concepts will occur during the next design phase for this segment of the trail. These will provide a basis for an informed final choice of bridge type.

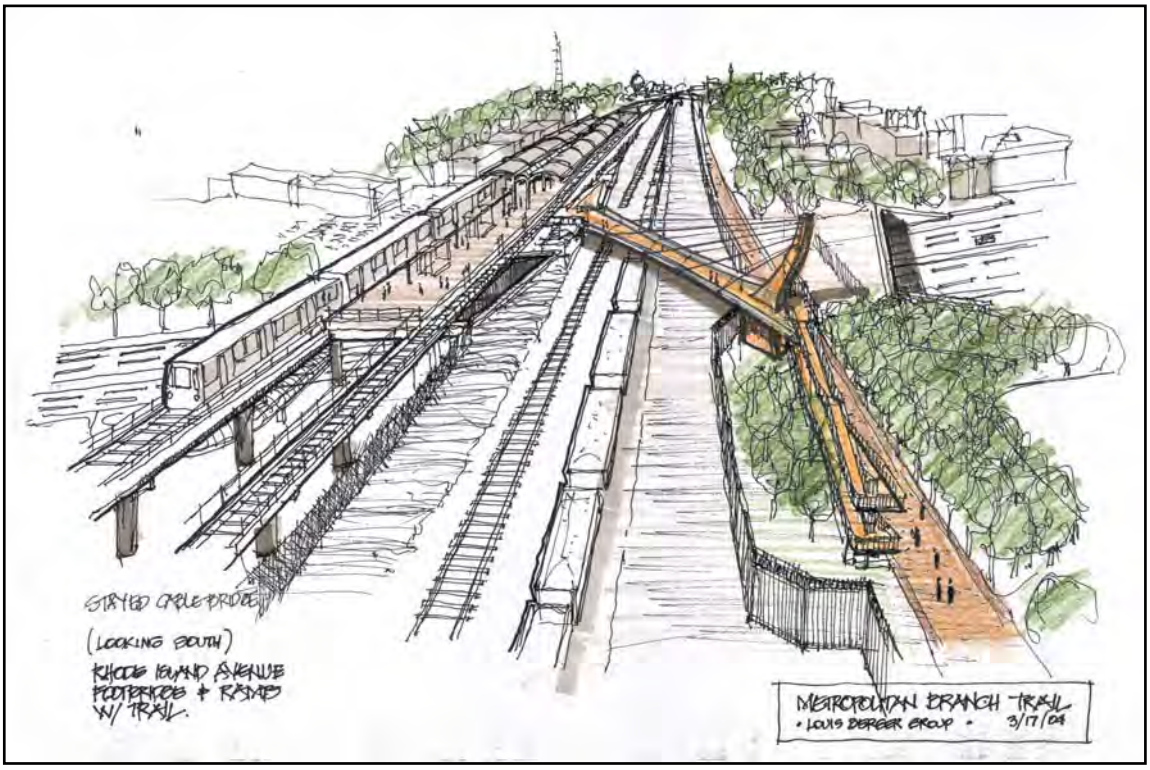
The truss bridge is composed of steel structural members arranged in a truss configuration. This type of bridge, often used to support heavy loads, is commonly used for railroad bridges.

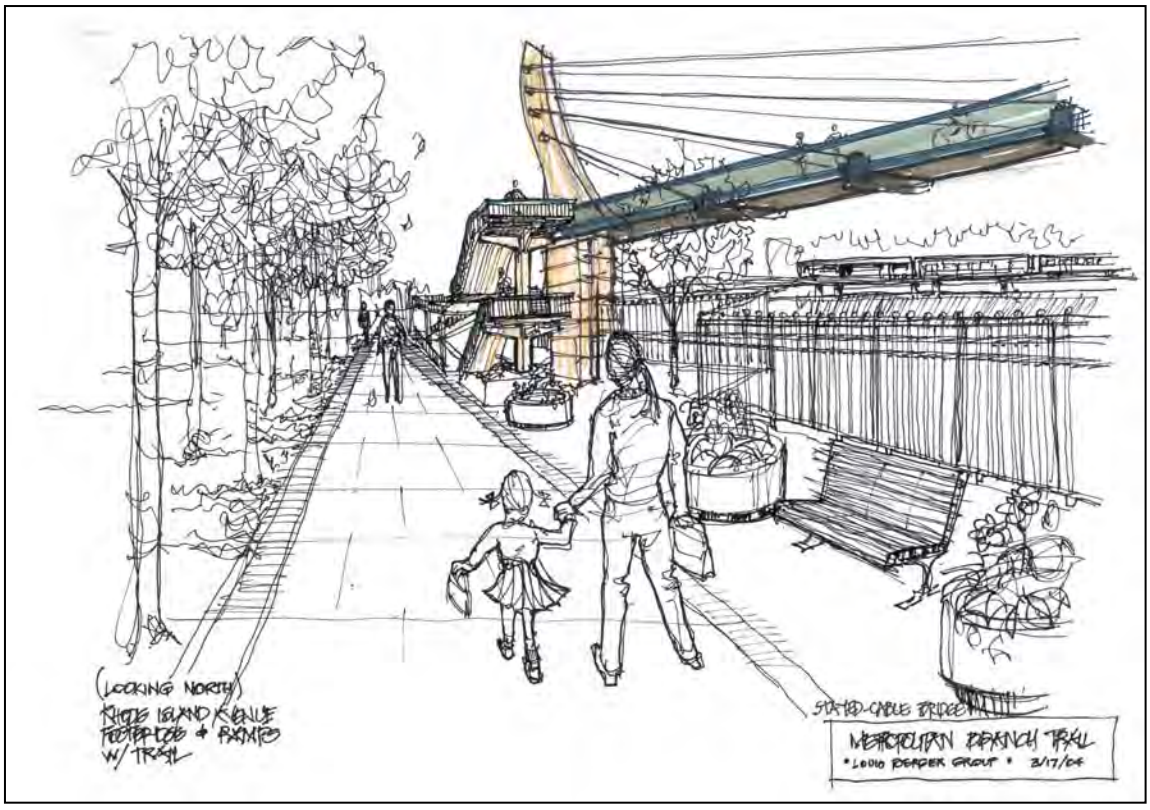


The arch bridge has many variations, but all incorporate an arch as the primary means of supporting loads.

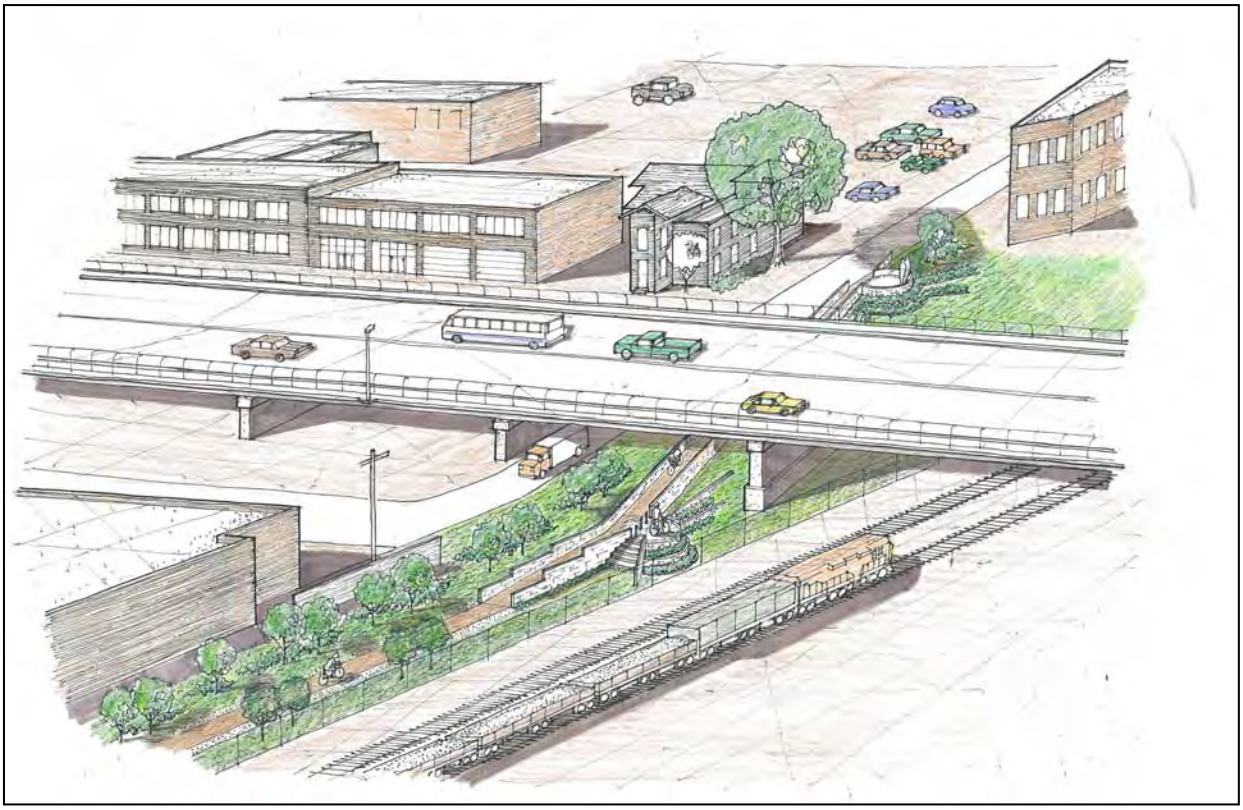


The stayed-cable bridge could potentially be designed with only one main abutment, although the eastern ramp could be designed to provide some support.





In addition to the bridge proposed at Rhode Island Avenue, a ramp is proposed for the transition to 8th Street as the trail passes under Franklin Street. This transition could also provide an attractive setting for a wayside pause. Shown below is such a ramp, also scaled to meet the slopes prescribed under the ADAAG.



Signage

The sign system recommendations should be implemented throughout this section, with special attention paid to gateway signage and share the trail signs. Trail identity and continuity may be addressed by installing brass medallions in the treadway, and/or use of the banner/gateway sign. Cross streets should be labeled where the trail passes over or under them, such as at Franklin Street Bridge, Rhode Island Avenue, New York Avenue Bridge and Florida Avenue.

Connections

Rhode Island Avenue

As noted above, this segment of trail connects to the Rhode Island Avenue commuter lot and the Rhode Island Avenue Metrorail station. This segment of the trail is a key area of connection between the trail and surrounding community amenities and neighborhoods. Adjacent to the commuter lot access point is a shopping center and grocery store where a trail user could potentially stop for water or to eat. This segment of the trail also provides a much needed and safe access point from the west side of the CSX tracks to the Metro station. Future residential and commercial development is also being planned adjacent to the Rhode Island Avenue Metro station, which would also be a valuable connection to the trail.

Franklin Street

At Franklin Street, the trail connects to 8th Street as well as roadways leading to Franklin Street. This location provides an excellent opportunity for a monumental concrete ramp structure, tied to a wayside, as shown on the previous page. With proper walls, bollards, and fencing, the structure could also be used to control access to the track side of the open space, and act to transform an area frequently used for dumping into a major gateway. A less expensive option, a stabilized pathway from 8th Street to the level of the CSX right-of way, would also add a wayside and fencing to control access to the area between the trail and the tracks.

Gateways and Waysides

This section of the trail provides a major gateway and wayside locations for trail users. The access point to the trail from the commuter parking lot is a major gateway because of the already existing high traffic of pedestrian traffic going in and out at that point. This area could potentially become a wayside location as well. The proposed pedestrian bridge and surrounding landscaping create an interesting and aesthetically pleasing wayside point for users. In addition, the pedestrian bridge delineates a clear and easily definable location along the trail as well as providing a linkage between trail users and surround community residents and the Rhode Island Avenue Metro Station. A wayside would be provided to enjoy the vistas offered south toward the capitol, by the proposed bridge, and by the Rhode Island corridor.

As noted, above, the ramp to 8th Street is a major gateway to the trail, providing access to Edgewood Street, 7th Street, and Franklin Street, as well as the continuing trail on 8th Street. A wayside would mark the junction of natural trail with art corridor along 8th Street, and transition elements would be used, including signs, pavement markings, rumble strips, and bollards.

Landscaping

Two Design Options for Trail Alignments

The two trail alignments options described in the segment from New York Avenue to Rhode Island Avenue – curvilinear or straight – also apply for this segment. However, the right-of way for the trail will be wider, as shown in Layout Sheets 8 and 9, allowing more space for landscaping. As noted earlier, the curvilinear trail improves the experience along the trail by allowing for variation in views and a larger area for planting.

Landscape Treatments for the Area from Rhode Island Avenue to Franklin Street

Included	Treatment
	Berm
X	Bioswale
	Boardwalk
	Curbside Gardens
	Street Crossings
X	Dry Streambank
X	Indigenous Vegetation
X	Ornamental Vegetation
X	Photovoltaic Lighting
X	Permeable Paving
X	Planter
X	Portals
X	Shelters
	Street Trees
X	Terracing
X	Unusual Focal Point

Enhancing/Screening Views

This segment offers the potential for some of the best views on the MBT. Views of the Capitol are spectacular and will not be blocked by any landscape treatments. The design for the new pedestrian bridge to the Rhode Island Metro station will be of high quality and should be a showcase element. Meanders in the trail at selected locations would enhance views of these two structures by creating a sense of arrival; vegetation, correctly-

placed, would increase the area's visual interest.

There is also great view of Rhode Island Avenue west from the bridge over the street. There is an even more dramatic view of the Rhode Island Avenue Bridge and the Metro station, from Rhode Avenue eastbound, especially as viewers come down the hill. These should be considered in placement of art on the bridge and wayside design, as further noted below.

Rhode Island Avenue Overpass

The overpass area over Rhode Island Avenue, adjacent to the Metrorail station, would serve as an excellent platform for viewing the Capitol, bridge and rest of the site. Currently, there is no safety railing at the edge of the overpass, a potential safety hazard for users and the cars that pass below it. The addition of a planter with low plantings on the overpass could serve as a seating wall for travelers to view the bridge or Capitol; a resting place for MBT or Metro users; an area for fragrant and colorful flowering displays and an area where art could be showcased. Vegetation in the planter would be carefully placed so that, from Rhode Island below, views of the new pedestrian bridge to Metro would remain open. The planter itself would be a barrier to access to the edge of the overpass area; also barrier plantings would prevent access to the overpass edge.

Safety/Surveillance Lighting

Overhead and pedestrian-level lighting could be used along the trail to provide sufficient illumination so that surveillance of the entire area is facilitated. Photovoltaic lighting is one approach, which does not require trenching for conduit; and can be cost-effective.

Planting in Meander Areas along the Trail

As noted for the segment connecting south, meanders along the MBT would create pockets of space that could be used for planting of ornamental and/or indigenous vegetation. However, the wider trail corridor presents an even greater opportunity for the trail to meander and to create planting areas along the trail where wildflower displays could provide visual variation for the trail use. Low plantings could cover the hillside to the west and provide flower displays all through the season. Clusters of trees with understory vegetation could provide interest and shade.

Correcting Drainage Challenges to Improve Filtration

In areas along the MBT midway to the Franklin Street Bridge, low-lying areas with poor drainage create standing water. Trail design, addressing the drainage issue, will consider bioswales with plants. The use of dry streambeds could also be used in conjunction, where intermittent flows need to be redirected to keep areas dry. During the dry season, these streambeds could add an attractive landscape element.

Low Hillside Plantings

The rise in elevation to the west of the trail, along Edgewood Terrace, has low-value scrub vegetation. Removal of the low habitat value vegetation from the hillsides and replacement of the scrub with low growing productive vegetation would attract birds and would add to a safer environment for trail users.

Ramp with Handicap Accessibility at Franklin Street Bridge

The existing grade to 8th Street, N.E. is too steep to comply with ADA standards. A ramp up the slope to meet ADA standards could also serve as an attractive design element. The railing associated with the ramp could be designed to incorporate decorative forms.

Physical Barriers to Restrict Off-site Access

Currently, there is almost unrestricted access to the site from the adjacent shopping center parking lot and from the CSX right of way. A barrier to control access to the CSX/Metro tracks right of way is required along the entire length of the MBT. Along the CSX right of way, a metal security fence would be installed. It is proposed that decorative wrought iron fencing be used selectively around the bridge area, and potentially the ramp at Franklin Street, to enhance aesthetic values, while less expensive chain link fencing would be employed in other areas.

To enhance the chain link fencing, and potentially the decorative fencing, vegetation would be planted in front of the metal security fence to enhance views of the tracks. Along the local streets and the existing shopping center parking lot, a natural thicket barrier could be a cost-effective solution that would ensure that access to the trail would be controlled, while providing potential habitat for birds, and color and fragrance along the trail.

Benches for Rest and Viewing

In addition to the benches at waysides, benches in the shade along the MBT in various locations would offer opportunities for rest and viewing of some spectacular views of the Capitol. Shade could be cast from shade trees.

Formalizing Shopping Center Parking Lot Access

Currently, one accesses the MBT site from the adjacent shopping center parking lot by using an existing gravel maintenance road. This access needs to be improved using the portal techniques discussed for the previous segment of trail. Hard-surfacing the existing gravel drive would also control erosion, as well as formalize the entrance to the trail.

Art

General Themes for New York Avenue to Franklin Street (CSX Corridor)

See discussion for previous New York to Rhode Island Avenue segment.

Rhode Island Avenue to Franklin Street

The two major gateways at Rhode Island Avenue and Franklin Street overpass should be marked by iconic “trail blazes” that are designed individually but conform to each others in terms of scale, material and visual language. These locations also have waysides and structural elements – the bridge and the ramp – that offer opportunities for art integrated into the design.

The fencing along the eastern edge of the trail and potentially at some other entry locations offers an opportunity for artist-designed or collaboratively designed elements. The buildings and retaining structures on the hill to the west also offer an opportunity for art, such as murals, that might offer spectacular visual enhancement for the trail.

As noted above, the potential for environmental art projects in this segment of natural trail is great. Where landscaping receives emphasis, it will be important that an artist be involved as

well to integrate such elements as sculpture, linear features in pavements and fencing, interpretive signage, and other elements to celebrate this strip of open space.

Lighting & Security

No existing lighting systems are present in this segment of the proposed MBT. There are, however, existing lighting systems which must be transitioned to the proposed lighting scheme for the trail at the Franklin Street location. These systems will have to be extended toward, and transitioned into the proposed trail lighting system.

Looking north on 8th Street, NE

It is recommended that lighting for Rhode Island Avenue – Franklin Street be provided via pole mounted, architectural type area luminaries. Utilizing pole mounted fixtures will maximize coverage area (increasing energy efficiency of the system); while using smaller pole mounted lighting fixtures (below 14') will reduce the glare on the trail, thereby maximizing the quality of light for users. Vandal resistant type luminaries, containing poly-carbonate lenses and/or globes, will be utilized to maximum fixture life. Specialty lighting will be provided for proposed art-work and landscape features, to enhance the intended design intent.

In order to incorporate sustainable design into the lighting system, the added benefits and limitations in utilizing self powered lighting fixtures will be discussed with the appropriate jurisdiction, and this type of system will be utilized to the maximum extent possible where feasible and cost effective.

Two features located in this segment are the walkway to the Rhode Island Metrorail station and the transition ramp at Franklin Street. It is recommended that high intensity discharge fixtures such as step lights and surface mounted fixtures be utilized in these design locations. This type of fixture will allow for easy maintenance of the system for re-lamping, replacement of ballasts, etc, while still complimenting the architectural intent of these design elements.

For the purposes of security, it is proposed to provide emergency call boxes at regular intervals along this section of trail, due to the relative distance of this segment of the trail from normally policed roadways, residential districts, etc.

Policing

This area is in Metropolitan Police Department (MPD) Police Service Area (PSA) 501. MPD will likely be the lead police agency along this segment of the trail. The WMATA transit police (District 1) will have an interest in providing support especially in the area around the Rhode Island Avenue Metro Station. WMATA police expressed an interest in the trail because it would allow bicycle-mounted transit police officers to quickly travel between Red Line stations along

the MBT in the event that train service was disrupted, which is often when additional officers are needed.

Because the trail is separated from the street in this segment, special patrols will be necessary. WMATA and MPD coordinated foot and bicycle patrols are recommended for this trail segment, especially in the evening hours. Special emergency call boxes are recommended for this trail segment. Close coordination with CSX railroad police or their contracted security staff is also recommended.

This segment of the MBT is highly visible from passing Metrorail trains, especially southbound trains. Ways to take advantage of the high frequency of Redline trains in this corridor should be considered for their potential as a crime deterrent. The hundreds of rail passengers traveling on Metro add even more public eyes watching the trail, which adds an element of security during time periods when trail users may be few and far apart.

Implementation

This segment between Rhode Island Avenue and Franklin Street, including access to the Rhode Island Metrorail station, would ideally be designed as a unit. This stretch of trail encompasses a major structure – the proposed pedestrian/bicycle bridge across CSX tracks to the Metrorail station, and a less complex design for a ramp up to Franklin Street. If significant delays are anticipated for the bridge, however, a recommended alternative would be to finish concept development for the bridge, as discussed below, and coordinate trail design with the approved bridge concept. This could allow the entire trail between New York Avenue and Franklin Street to proceed together.

A first step is to determine the right-of-way for the trail. Following that, boundary and topographic surveys, including detailed surveys of key Metrorail station features, would be performed. Detailed geotechnical investigations of the area planned for bridge abutments would also be conducted, and all utility locations in the area would be identified. This concept plan noted the requirement for a 24-foot clearance over the CSX tracks; any additional restrictions associated with the CSX tracks would also be identified.

A bridge design would be likely to involve further concept development, using the detailed data from above. The preliminary layout and options for access and type of structure, displayed in this concept plan, would be refined as necessary by survey data and geotechnical considerations. Refined estimates of costs would be developed, and recommendations would be presented for agency and public review. Following a decision on the basic bridge concept, design would proceed through the 30%, 65% and final design levels, including both structural details and details for other included features such as lighting. With construction plans, the bridge could be placed into construction.

The initial trail alignment and profile in this concept plan would also be refined with survey, geotechnical data, and utility data and provided in a conceptual form to allow a review of assumptions that could involve public as well as agency input, such as the gateways, waysides, landscaping, fencing, and lighting being considered. At this time, the ramp to Franklin Street and drainage details to handle observed water issues in this segment would also be provided for review. When all issues with the concept design are resolved, the trail design could be finalized and placed into construction.

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CHAPTER FIVE

BROOKLAND AREA: FRANKLIN STREET—CUA COMPLEX

OVERVIEW

Section 3 of the MBT extends from Franklin Street to the intersection of Bates Road and John McCormack Road at the Trash Transfer Point. This section of the trail is 1.6 miles in length. Section 3 will be addressed under the following three segments:

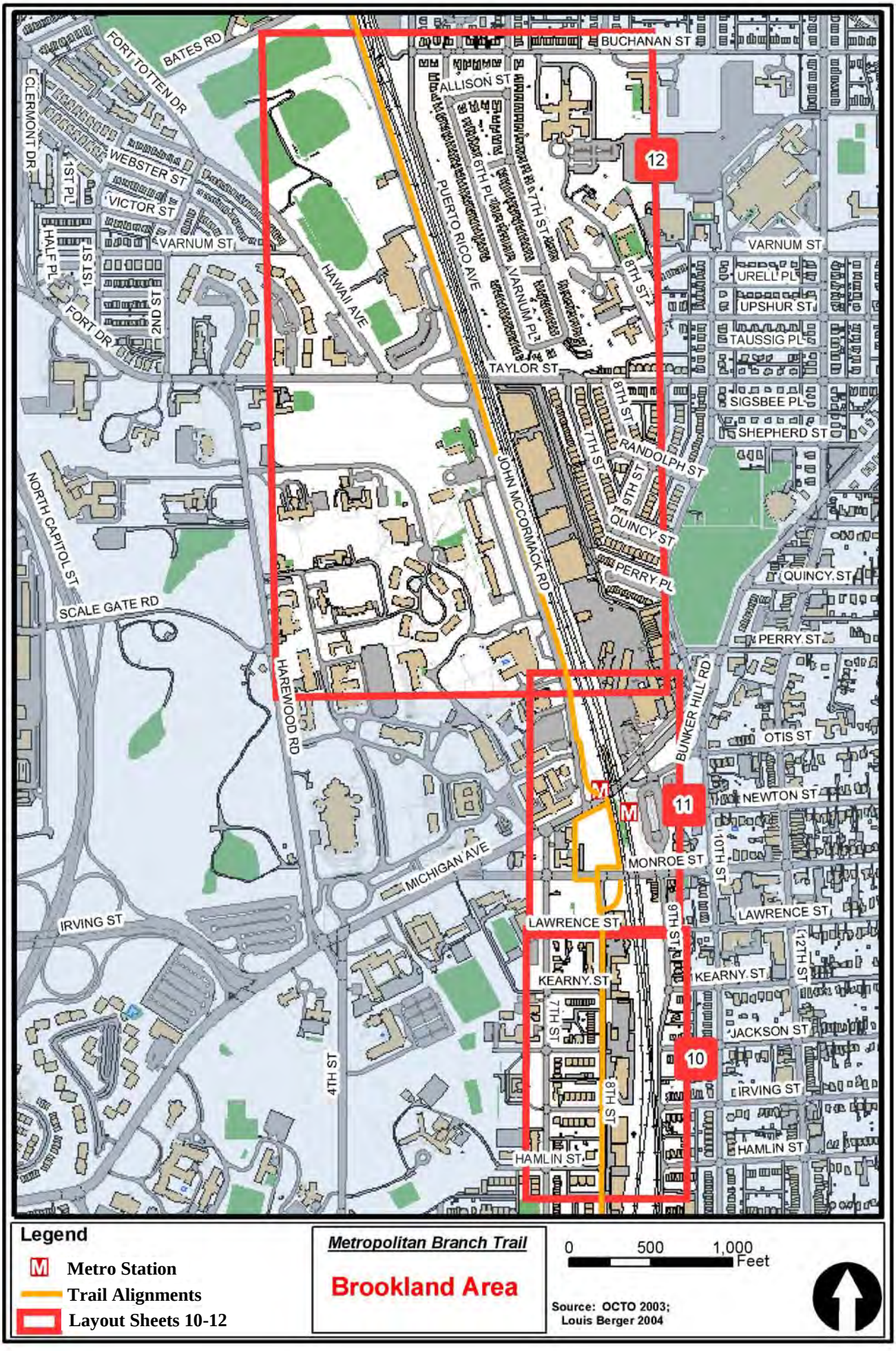
- 8th Street, NE: Layout Sheet 10.
- Monroe Street Crossing/CUA Metrorail Station: Lawrence Street, NE to CUA Law School on John McCormack Road: Layout Sheet 11.
- John McCormack Road: CUA Law School to Bates Road: Layout Sheet 12.

See map on page 5-2 for the key to Layout Sheets

TRAIL OBJECTIVES

The section of trail between Franklin Street and Bates Road has the following objectives:

- Provide a safe, continuous and visually coherent route through the semi-industrial neighborhood on 8th St., NE and adjacent to the CUA campus along John McCormack Road.
- Provide strong connections to the Brookland neighborhood at Monroe Street and via the pedestrian underpass at the Brookland/CUA Metro Station.
- Improve access to and from the Brookland/CUA Metrorail stations.
- Increase bicycle and pedestrian safety at arterial crossings by using existing (Michigan Ave. underpass) and new (Monroe Street Tunnel) grade separated facilities; and improved at-grade crossings (8th St., NE and Monroe St.)
- Section 3 is expected to serve medium volumes of bicycle commuters in this corridor, large volumes of pedestrians near the CUA Metro station entrance, and many recreational users from the Brookland and Edgewood neighborhoods, and CUA campus. The portion of trail between the CUA Law School and the Dance Place is expected to serve increasing numbers of local bicyclists and pedestrians as vacant and unused properties are redeveloped and the Brookland-8th Street arts corridor matures.


BUCHANAN ST
ALLISON ST
FORT TOTTEN DR
BATES RD
CLERMONT DR
WEBSTER ST
VICTOR ST
VARNUM ST
1ST PL
HALF PL
1ST ST
2ND ST
FORT DR
HAWAII AVE
PUERTO RICO AVE
6TH PL
7TH ST
VARNUM PL
8TH ST
TAYLOR ST
12
VARNUM ST
URELL PL
UPSHUR ST
TAUSSIG PL
SIGSBEE PL
SHEPHERD ST
RANDOLPH ST
QUINCY ST
PERRY PL
QUINCY ST
PERRY ST
JOHN MCCORMACK RD
NORTH CAPITOL ST
SCALE GATE RD
HAREWOOD RD
BUNKER HILL RD
OTIS ST
NEWTON ST
11
MONROE ST
10TH ST
MICHIGAN AVE
IRVING ST
LAWRENCE ST
9TH ST
12TH ST
KEARNY ST
JACKSON ST
7TH ST
10
4TH ST
8TH ST
IRVING ST
HAMLIN ST
HAMLIN ST
Legend
Metro Station
Trail Alignments
Layout Sheets 10-12
Metropolitan Branch Trail
Brookland Area
0
500
1,000
Feet
Source: OCTO 2003;
Louis Berger 2004

8TH STREET, NE

Proposed Alignment

In this segment, the MBT will use newly constructed street and sidewalk right-of way for 6 blocks along 8th St., NE from Franklin to Lawrence. This segment begins under the Franklin Street Bridge where the trail will transition from a shared use path facility on unused railroad right-of-way to an on-street bikeway on 8th St. It ends at Lawrence Street where there are three possible options for continuing north across Monroe Street, NE.

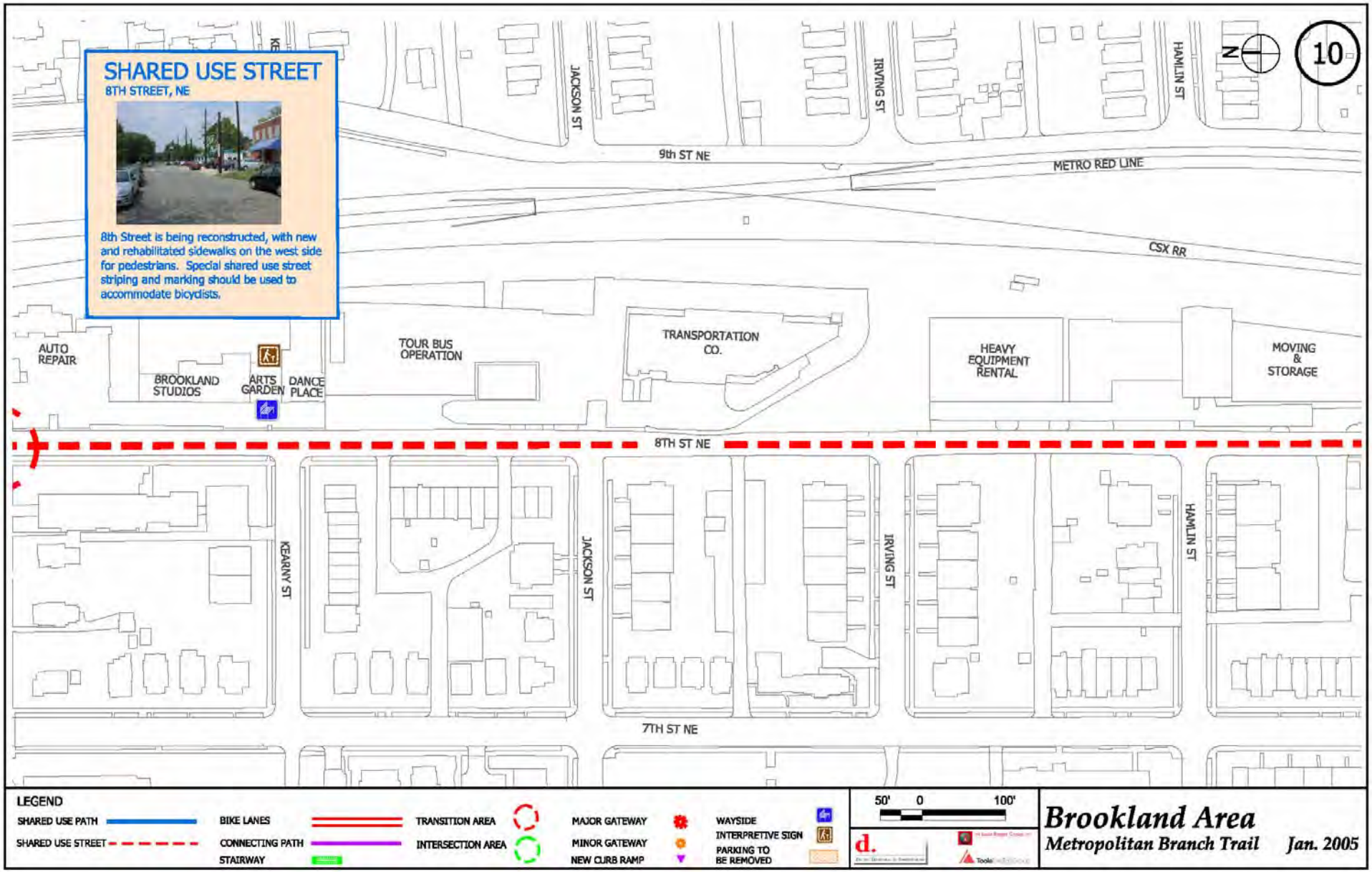
Reconstruction of 8th Street will include completion of a continuous sidewalk on the west side and a shared use street for bicyclists.

Option A includes a mid-block transition between Lawrence and Monroe Streets and a path across a wooded lot to a proposed tunnel through the Monroe Street bridge abutment. Option B includes an on-road/off-road transition at the corner of Lawrence and 8th Street, and a path on the west side of 8th St. to an improved at-grade crossing of Monroe St. Option C also uses a transition at Lawrence and 8th Street, but crosses Monroe at a proposed mid-block crossing between 7th Street and 8th Street. See Layout Sheet 11 for details.

Existing Conditions

Eighth Street, NE is in poor condition and is currently being reconstructed from Franklin to Monroe. A shared use on-street bikeway will be facilitated through street reconstruction. Missing sidewalk segments on the west side of the street are being added for pedestrian continuity. On-street parking in the block between Lawrence and Monroe is going to be prohibited, to eliminate free metro commuter parking.

The neighborhood on 8th Street includes active light industrial activities on the east side of the street and residential properties on the west. Two community arts facilities, Brookland Studios and The Dance Place, the Newman Bookstore, and a private metal sculptor's shop add diversity to the mix. The heavy equipment rental and tour bus businesses generate small but significant volumes of large vehicle traffic. The equipment rental trucks frequently block portions of the street when loading and unloading. This segment of the MBT traverses a fairly low density part of the city that is evolving slowly toward a more trail-friendly environment.


SHARED USE STREET
8TH STREET, NE
8th Street is being reconstructed, with new and rehabilitated sidewalks on the west side for pedestrians. Special shared use street striping and marking should be used to accommodate bicyclists.
10
N
JACKSON ST
IRVING ST
HAMLIN ST
9th ST NE
METRO RED LINE
CSX RR
AUTO REPAIR
BROOKLAND STUDIOS
ARTS GARDEN
DANCE PLACE
TOUR BUS OPERATION
TRANSPORTATION CO.
HEAVY EQUIPMENT RENTAL
MOVING & STORAGE
8TH ST NE
KEARNY ST
JACKSON ST
IRVING ST
HAMLIN ST
7TH ST NE
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Brookland Area
Metropolitan Branch Trail
Jan. 2005

Trail Type—Shared Use Path

Currently, the facility type selected for 8th Street is a 34-foot wide shared use street with parking on both sides and a continuous 6-foot sidewalk on the west side. The block from Lawrence to Monroe will be 28 feet with no parking. In the future, as trail or land uses change, it may be desirable to establish a continuous shared use path on the east side of the street or on the back side of the light industrial properties, between them and the railroad tracks.

Proposed Structures and Roadway Crossings

There are no proposed structures in this segment. Two transition crossings need to be designed at either end of this section. See the previous chapter for details about the proposed design of the Franklin Street Bridge Transition area. See the next section for details about the potential transition areas at the north end of 8th Street.

Signage

Generally, the sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for shared use street bikeways. MBT bike route signs and special on-street bikeway markings are recommended; and the transition areas at either end of this segment should be signed and marked with special pavement markings. Special landscaping may help highlight and traffic calm the transition areas where pedestrians and one direction of bicyclists will be required to cross on-coming traffic. Trail identity and continuity may be best served by installing brass medallions with MBT logo, directly into the sidewalk.

Connections

This segment of the trail is easily accessible all along 8th Street and from the neighborhoods to the west via eight cross streets from Edgewood Terrace to Monroe Street. Destinations served by this segment include the Edgewood Terrace community, various theological colleges as well as the arts institutions, and other activities on 8th Street. Access for the more densely populated Brookland neighborhood to the east is limited (by the railroad) to Monroe and Franklin streets. DDOT owns a right of way that connects 8th Street and 7th Street adjacent to the Franklin Street Bridge on the north side. This area should be opened up, repaved and landscaped as a connection between the bridge and the trail. Monroe Street, the access noted above and Edgewood Street, should all receive special treatments to identify them as MBT gateways.

Gateways and Waysides

As noted above, this segment has two key gateways at either end. For further details regarding recommended treatments see the previous and following sections, respectively. One wayside, the 8th Street Arts Garden, is already planned for the open space between The Dance Place and Brookland Studios. The design calls for an information/interpretive kiosk and low

maintenance landscape design with artistic features. Seating, bicycle parking and other wayside amenities will be provided.

Landscaping

In this segment of the MBT, two street crossings would occur at either end of 8th Street, NE, where the crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

Special landscaping recommended for this section, will be located at the transition areas at either end and at the Arts Garden described above. Additionally, curbside gardens should be considered in the buffer areas, in addition to grass and tree plantings, as part of reconstruction of 8th Street.

Landscape Treatments for the area of 8th Street from Franklin Street to Monroe Street

Included	Treatment
X	Curbside Gardens
X	Street Crossings
	Dry Streambed
X	Indigenous Vegetation
X	Ornamental Vegetation
X	Photovoltaic Lighting
	Portals
	Shelters
X	Street Trees
	Terracing
X	Unusual Focal Point

Art

Transitions: The transitions into this segment (Franklin Street, Lawrence/Monroe Street) have the potential to be dramatic, combining both changes in alignment and changes in topography. Here, the experience of the *flow* of the trail and the idea of a *threshold* can be combined through landscape, the contour of the trail and specific art elements. Collaborative engineering, landscape and art approaches are recommended.

Segment identity: This is a straight, six-block stretch along Eighth Street and its sidewalks. Art can be used to strengthen the identity of the trail, and to relate to the presence of arts groups. The flow of the trail can be emphasized by linear or repeated elements, such as trail markings in the trail, or elements affixed to the utility poles, such as banners or colored panels.

Wayside: The art garden at the Dance Place studio is being developed as a wayside. There is funding to build a small garden on the public right-of-way next to the Dance Place building, and Dance Place is raising funds to replace the mural on one of the walls that faces the garden. This project should be encouraged.

Art on the Street: To the extent possible, artists with studios along this street should be encouraged to make their art visible to passersby, by placing it in front of their workshops or making it visible from windows.

Thresholds/gateways/trail blazes: In this section there are significant thresholds and gateways at approximately half-mile intervals—approximately at Franklin Street and Monroe Street in this segment. These places could be marked by a series of trail blazes that are commissioned as a series—either by one artist, asked to create a family, or by a number of artists working simultaneously within basic parameters, such as scale or material.

Lighting & Security

The 8th Street segment has been provided with existing high pressure sodium (HPS) "cobra head" street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at three locations on 8th Street yielded values of 0.6, 2.7 and 3.1 foot candles respectively. Lighting for this portion of the MBT is driven by requirements for the associated roadway, and appears adequate for the proposed bikeway.

Existing Lighting on 8th Street, NE

This portion of the MBT is routed through a residential/light commercial neighborhood. Although the addition of emergency call boxes at regular intervals along this section of trail would increase security, these call boxes could be prone to false alarms due to the close proximity to the residential neighborhood.

Policing

This segment is in MPD Police Service Area (PSA) 501. The primary police agency with jurisdiction is the D.C. MPD. Traditional vehicular patrols or bike-mounted patrols will be effective in this section.

Implementation

DCDOT implementation of improvements on 8th Street is underway, as of summer 2004. These improvements do not include special features for the transition areas at either end of 8th Street. These special features include a ramp that would descend to the Rhode Island area right-of-way, discussed in the previous chapter, and a crossing of Monroe Street, discussed in the next section of this chapter.

MONROE STREET CROSSING/CUA METRO STATION

Proposed Alignment

This segment runs from the corner of Lawrence and 8th Street to the Columbus School of Law on the CUA campus. It includes passage through the Brookland/CUA Metro Station entrance area under the Michigan Avenue Bridge. The primary challenge is to provide a safe and direct crossing of Monroe Street and circumnavigate the vacant CUA-owned property between Monroe and Michigan Avenue. There are three possible alignment options that will address these challenges (see Layout Sheet 11 for details):

- Option A: Tunnel under Monroe and pass by the east edge of the CUA property.
- Option B: Cross Monroe Street, NE at the T-intersection with 8th and pass by the east or west edge of the CUA property (use Bunker Hill Road to Metro entrance).
- Option C: Cross Monroe Street, NE at a mid-block location and pass by the west edge of the CUA property; use Bunker Hill Rd. to CUA Metro station entrance.
- Each option will pass on the west side of the Metro station entrance and connect directly to the existing trail at the sitting park. To avoid unnecessary conflicts with Metro users, the existing sidewalk from the top of the Metro station escalator to the crosswalk at McCormack will not be used for the trail.

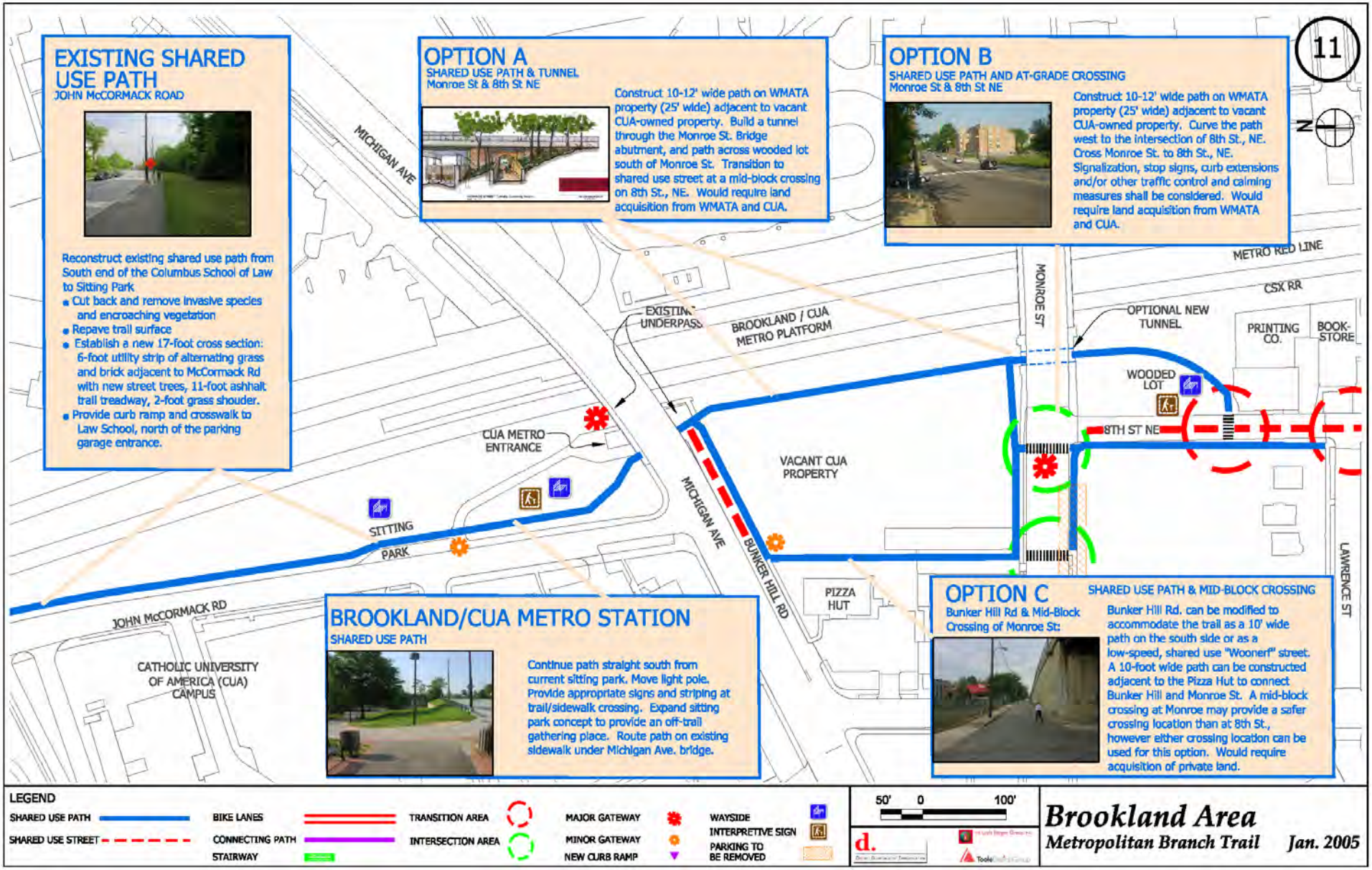
Existing Conditions

An assessment of existing conditions can be organized around five topics:

Crossing Monroe Street

Existing traffic volumes, speeds, and sight distance problems created by the curvature of the Monroe Street Bridge, make crossing Monroe at 8th difficult. Difficulties are compounded by the 50-foot width of Monroe Street, a lack of lane striping, and left turning vehicles entering 8th Street. There are also a large number of Metro busses on Monroe Street because the Brookland station is a bus transfer hub. Sight distances are much better at a mid-block location between 8th and 7th Streets, NE.

The MBT will cross Monroe at the top of 8th Street, where a refuge median can be added.


11
EXISTING SHARED USE PATH
JOHN McCORMACK ROAD
Reconstruct existing shared use path from South end of the Columbus School of Law to Sitting Park
Cut back and remove invasive species and encroaching vegetation
Repave trail surface
Establish a new 17-foot cross section: 6-foot utility strip of alternating grass and brick adjacent to McCormack Rd with new street trees, 11-foot ashhalt trail treadway, 2-foot grass shouder.
Provide curb ramp and crosswalk to Law School, north of the parking garage entrance.
OPTION A
SHARED USE PATH & TUNNEL
Monroe St & 8th St NE
Construct 10-12' wide path on WMATA property (25' wide) adjacent to vacant CUA-owned property. Build a tunnel through the Monroe St. Bridge abutment, and path across wooded lot south of Monroe St. Transition to shared use street at a mid-block crossing on 8th St., NE. Would require land acquisition from WMATA and CUA.
OPTION B
SHARED USE PATH AND AT-GRADE CROSSING
Monroe St & 8th St NE
Construct 10-12' wide path on WMATA property (25' wide) adjacent to vacant CUA-owned property. Curve the path west to the intersection of 8th St., NE. Cross Monroe St. to 8th St., NE. Signalization, stop signs, curb extensions and/or other traffic control and calming measures shall be considered. Would require land acquisition from WMATA and CUA.
N
MICHIGAN AVE
METRO RED LINE
CSX RR
MONROE ST
EXISTING UNDERPASS
BROOKLAND / CUA METRO PLATFORM
OPTIONAL NEW TUNNEL
PRINTING CO.
BOOK-STORE
WOODED LOT
8TH ST NE
CUA METRO ENTRANCE
VACANT CUA PROPERTY
MICHIGAN AVE
BUNKER HILL RD
SITTING PARK
JOHN McCORMACK RD
CATHOLIC UNIVERSITY OF AMERICA (CUA) CAMPUS
PIZZA HUT
LAWRENCE ST
BROOKLAND/CUA METRO STATION
SHARED USE PATH
Continue path straight south from current sitting park. Move light pole. Provide appropriate signs and striping at trail/sidewalk crossing. Expand sitting park concept to provide an off-trail gathering place. Route path on existing sidewalk under Michigan Ave. bridge.
OPTION C
SHARED USE PATH & MID-BLOCK CROSSING
Bunker Hill Rd & Mid-Block Crossing of Monroe St:
Bunker Hill Rd. can be modified to accommodate the trail as a 10' wide path on the south side or as a low-speed, shared use "Woonerf" street. A 10-foot wide path can be constructed adjacent to the Pizza Hut to connect Bunker Hill and Monroe St. A mid-block crossing at Monroe may provide a safer crossing location than at 8th St., however either crossing location can be used for this option. Would require acquisition of private land.
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Brookland Area
Metropolitan Branch Trail
Jan. 2005

Monroe Street Bridge Abutment

The original drawings for this abutment are not available; however, based upon reasonable assumptions about the type of construction employed, there appears to be sufficient width between the wingwall "buttresses" and enough height that a 10-foot wide opening meeting required heights for the trail would be feasible.

Looking south toward abutment of Monroe Street overpass

Looking North toward bridge abutment of Monroe Street overpass

Property Ownership

CUA, the Newman Bookstore, and WMATA all own portions of the wooded lot south of the Monroe Street bridge abutment, which would be needed to route the trail to a tunnel under Monroe.

WMATA owns 25 feet of ROW between the wall that is adjacent to the CSX railroad tracks and the large vacant CUA-owned lot north of Monroe Street. The vacant CUA property abuts other private property to the west, including a Pizza Hut and a future hairdresser's college. Currently CUA has no specific plans for this vacant lot. In the current campus master plan, it is not identified for use as a campus facility. It is zoned commercial and could be developed as a revenue generator for the University.

North of Monroe Street, the MBT would use WMATA right-of-way adjacent to a CUA-owned property.

DCDOT owns Bunker Hill Road and the open area under the Michigan Avenue Bridge. WMATA also owns property under the Michigan Avenue Bridge adjacent to the newly covered Metro station escalator.

Bunker Hill Road

Bunker Hill Road is a little used street. It provides access to the CUA property and one of two Pizza Hut parking lot driveways. It also provides maintenance/emergency access to the Michigan Ave. bridge structure and CUA Metro station. It has unusual intersection geometry at the entry near the Pizza Hut.

Area under the Michigan Avenue Bridge

This area is fully paved and fairly open due to the high elevation of Michigan Avenue. However, the area is often deserted at night and is somewhat isolated from nearby activity areas, such as the CUA campus, the Brookland Metrorail station on the other side of the tracks, the Pizza Hut and residential neighborhoods.

CUA Metro Station/MBT Sitting Park

The area around the newly covered station entrance is primarily lawn with a few shade trees and shrubs. Metro has provided a twelve-foot sidewalk connecting the top of the escalator with McCormack Road with lighting. There are some drainage problems during heavy rains. The sitting park includes benches, landscaping, and places for engraved bricks to be installed commemorating trail supporters. The existing trail through the sitting park is 12 feet wide, and narrows to 10 feet just to the north.

Trail Type—Shared Use Path and Shared Use Street

Option A and B are preferred and can be implemented using a 10-12 foot shared use path in this segment. Surface material may vary, including asphalt or concrete.

- Option A (tunnel) requires a creation of a mid-block crossing on 8th Street, NE between Monroe and Lawrence to facilitate on-road/off-road transitions for bicyclists.

- Option B could be designed to provide an on-road/off-road transition for bicyclists at any of three locations on 8th Street, NE (see layout sheet); however, the mid-block or Lawrence Street locations are preferred.

- Option C could be designed with a shared use path or shared use street on Bunker Hill Road. It could be routed across a mid-block crossing of Monroe, or a crossing at 8th Street. It would also require provision of a transition point on 8th Street (see B above).

- Key factors for selecting and developing an alignment in this segment include cost, community involvement and negotiations with Catholic University and other landowners. The nature and design of any new development on the vacant CUA site is key to determining whether it is best to pass the trail along the east or west side of this property. CUA is encouraged to pursue land uses and building design that will be compatible with and complementary to the trail. Either mixed-use (residential/commercial) or office development with ground floor retail could be designed

to facilitate the trail's passage, enhance personal security and take advantage of the trail as a public thoroughfare.

North of the sitting park, the trail is built; however, it should be reconstructed to provide a higher quality facility. From the sitting park to the Columbus School of Law (about 460 feet) the trail should be widened and moved away from McCormack Road (see Sheet 11 for details).

Proposed Structures and Roadway Crossings

Monroe Street includes both at-grade and tunnel options for crossing.

Tunnel

A tunnel through the existing Monroe Street bridge abutment is recommended to provide a grade separated trail crossing. This structure will offer safety and convenience to trail users; and minimize stops. There is enough width between the wingwall "buttresses" and enough height for a 10-foot wide opening meeting required heights for the trail. Culvert material could be either steel or aluminum for an elliptical shape or concrete for a rectangular opening. The tunnel could be constructed in two phases, thereby maintaining one lane of traffic in each direction. During each phase of construction, temporary shoring would be required to support the roadway. The tunnel option provides the most direct route and avoids an at-grade crossing on Monroe Road. Lighting would be developed for the tunnel to improve safety.

Development of the tunnel alignment will require creation of a mid-block crossing on 8th Street, NE between Monroe and Lawrence to facilitate on-road/off-road transitions for bicyclists. To increase personal security, especially during hours after dark, an at-grade trail crossing should be provided in addition to the underpass.

Monroe and 8th Street

An enhanced trail crossing at this location should be included in Option A or B and could be used in Option C (See figure below). Study of this intersection suggests that crossing safety can be increased by using curb extensions and a median to reduce crossing distances and high visibility crosswalks. Vehicular travel lanes should be striped; bicycle lanes should be added to Monroe Street, as well as a left turn lane. A traffic signal with pedestrian/bike/left turn actuated signal should be considered. Design of this intersection should also give strong consideration to

the movements cyclists need to make at this location to enter and exit the trail for both north and south bound travel.

Mid-Block Monroe St. Crossing

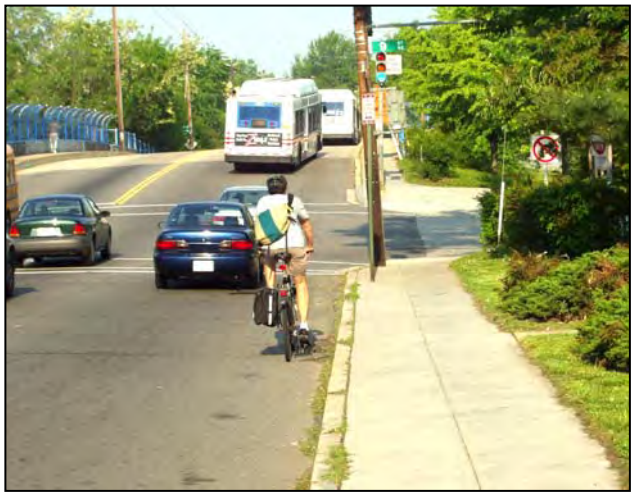
Use of a mid-block crossing of Monroe Street as part of Option C may provide added crossing safety due to better sight distances at this location. Curb extensions and a median refuge should be considered as a part of the crossing design. Some parking will need to be eliminated on the south side of Monroe.

Signage

Sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for shared use street bikeways and at-grade crossings. MBT bike route signs and special on-street bikeway markings are recommended. The transition areas on 8th Street or Bunker Hill should be signed and marked with special pavement markings. Special landscaping may help highlight and traffic calm the transition areas where pedestrians and one direction of bicyclists will be required to cross on-coming traffic. Trail identity and continuity may be best served through use of Main Street-style banners or by installing brass medallions with MBT logo, directly into the sidewalk and trail.

Connections

The intersection at 8th and Monroe Street is the most convenient access point connecting Brookland east of the tracks with the trail. Significant numbers of trail users are expected to come from and exit to the Brookland neighborhood, including bicyclists, pedestrians and skaters. This connection point will also serve people in Woodridge and Mt. Rainier, Maryland. This trail segment also provides access to the Brookland/CUA Metrorail station and Metrobus transfer hub. Covered and secure bicycle parking on the CUA side of the station should be added at the time of trail construction.



Monroe Street, which can accommodate bicycle lanes, will provide the primary trail connection for the Brookland Neighborhood.

Access to points west, such as the CUA campus, Trinity College, theological colleges and Washington Hospital Center is provided along Monroe Street and Michigan Avenue. CUA campus access is also provided all along John McCormack Road.

Key cross-town bicycle routes on Michigan Avenue, Irving Street, and Newton Street can be accessed via Monroe Street, which is slated for bike lanes between Michigan and 12th Street, NE.

Additional attractions and destinations in this area include the historic Brooks Mansion, numerous restaurants, the 12th Street retail shopping district, and many schools.

Gateways and Waysides

The intersection of Monroe and 8th Street will serve as a major trail gateway and should be enhanced with landscaping, signage and possibly art. Another gateway is at the sitting park and CUA Metrorail station entrance area. This area is also a logical place for a trail wayside. Enhancement of the entire space around the sitting park and top of the Metro escalator should be strongly considered. Presence of Metro and the trail make it a natural gathering place. Increased activity would enhance security, especially at night.

At CUA Metro, the trail will be continued south from the existing "sitting park/trail" section along John McCormack Road.

Landscaping

The major at-grade street crossing within this segment would occur on Monroe Street, either at the corner at 8th Street or mid-block. In any event, the trail could be marked with a symbol or feature designating the MBT alignment at the crossing. This treatment would be consistent with other street crossings throughout the trail corridor. The general area would benefit visually from the addition of street trees and other possible amenities. If Option A is chosen, the areas at either end of the proposed tunnel should be kept open and well-lit to provide maximum sight distances from the tunnel for safety and security. Terracing with low-growing plantings at either end of the tunnel would provide visual variation along the trail while providing a wide viewshed upon exiting the tunnel. A portal treatment, including an unusual focal point (art display), and trees with understory plantings could be added in the sitting park at the entrance to the CUA Metro station.

Landscape Treatments for Monroe Street – CUA Station

Included	Treatment
	Curbside Gardens
X	Street Crossings
	Dry Streambank
X	Indigenous Vegetation
X	Ornamental Vegetation
X	Photovoltaic Lighting
	Permeable Paving
	Planter
	Portals
	Shelters
X	Street Trees
X	Terracing
X	Unusual Focal Point

Art

Connections: This short segment of the trail includes some of the most important connections to the surrounding community, primarily along Monroe Street and Michigan Avenue, and to the Brookland/CUA Metrorail station. Many of the most important places in Brookland are not located directly on the trail. Signage from the trail to these places, and vice versa, will be important. Over time, as the arts community in Brookland grows, 7th and 8th Streets might emerge as an “arts loop” or “arts spur” from the trail.

Infrastructure: There is an underpass at Michigan Avenue and a potential underpass at Monroe Street. The Michigan Avenue underpass is also a circulation area for the Metrorail entrance. The abutment of the bridge is a key location for refacing with an art project, but because of the contour of the wall, a mural would not be appropriate. If an underpass is built at Monroe Street, an artist should be assigned to the design team and asked to consider color, light and materials.

Interpretive signage: The main opportunity for interpretive signage along the trail between Franklin Street and Bates Road is at the Metrorail station, where signage could refer to Brookland’s role in defeating a freeway proposal for this corridor. In addition, the Brookland neighborhood is rich in historical resources, and is a strong candidate for the Cultural Tourism D.C. neighborhood historic wayfinding program. It would be appropriate to pursue local historic signage through this program, and to make certain the neighborhood history trail links with the MBT.

Thresholds/gateways/trail blazes: In this section there are significant thresholds and gateways at approximately half-mile intervals—approximately at Monroe Street and Michigan Avenue in this segment. These places could be marked by a series of trail blazes that are commissioned as a series—either by one artist, asked to create a family, or by a number of artists working simultaneously within basic parameters, such as scale or material.

Involve the arts community: Brookland has an established and growing local arts community, including Dance Space, galleries on 7th Street, and the art programs at CUA. This arts

community should be drawn into projects in this section of the corridor. In particular, the local arts community might be engaged to organize temporary projects, from sculpture exhibitions to performances and special events that mark significant milestones in the development of the trail.

Sitting Park: The "sitting park" along John McCormack Road is the first wayside built along MBT. It could be enhanced with a major piece of "placemaking" art that engages people passing through the space, or at least a trail blaze and informational and interpretive signage. The grassy area around the park and along the walkway to the Metro entrance might serve as an outdoor gallery for temporary sculpture. As time goes on, the lighting, seating or landscape might be upgraded with artist-designed features.

Lighting & Security

This segment has been provided with existing high pressure sodium (HPS) "cobra head" street lighting fixtures for illumination of the existing roadway at 8th Street. No illumination has been provided in the proposed area of the trail between Monroe Street and Michigan Avenue. Existing Metrorail station lighting fixtures are used to illuminate the transition portion of the trail between Michigan Avenue and John McCormack Road.

Existing Lighting at the Brookland /CUA Metrorail Station

It is recommended that lighting to match the existing roadway lighting be provided in the unlit area of the trail between Monroe Street and Michigan Avenue. Minimal fixtures would be required to make this transition, and matching the existing roadway fixtures will work well for this transitional area. Existing Metrorail station lighting fixtures will remain and be re-used for the remainder of this segment.

This portion of the MBT is routed through a residential/light commercial neighborhood. Although the addition of emergency call boxes at regular intervals along this section of trail would increase security, these call boxes could be prone to false alarms due to the close proximity to the residential neighborhood.

Policing

This segment is in MPD Police Service Area (PSA) 501. The primary police agency with jurisdiction is the D.C. MPD. Catholic University also has a campus police department (CUA Public Safety Department). CUA, MPD and Metro Police are already cooperating extensively in the Metro Station area and along McCormack Road. CUA has a fixed police post near the CUA Metro station that is staffed year round from 4 pm to the closing of the Metro system. During the school year they maintain a fixed post at Taylor Street as well. CUA police use bicycles in their patrols. Contact with the PSA 501 Captain and Chief of CUA police found both to be

enthusiastic about the presence of the trail in the area, and very open to ongoing coordination to ensure public safety.

Implementation

Implementation of this segment can be accomplished a piece at a time. It is likely that an unpaved, but improved interim trail can be created in the near term on the Option C alignment from Bunker Hill Road to Monroe Street. Initially, this route can use the Monroe Street sidewalk for half a block and the existing crossing at 8th Street. With one curb ramp under the Michigan Avenue Bridge, another on Bunker Hill near the Pizza Hut, and wayfinding and safety signs, the near-term interim route can be completed through this segment.

In Phase Two, the Monroe Street Crossing can be upgraded, and if coordination (and possibly property acquisition) with Catholic University and WMATA can be completed, the trail on the preferred alignment can be developed from Monroe Street to the Columbus School of Law. If issues arise regarding coordination with the other parties, or timing of activities, any of these pieces could be delayed to a later phase.

The tunnel option is suggested for Phase 5 because, while it is very desirable, it is not essential to open the trail, and its costs and benefits can be more fully evaluated at a later date.

JOHN MCCORMACK ROAD

Proposed Alignment

This segment proceeds on the east side of John McCormack Road from the Columbus School of Law to Bates Road (the entrance to the DC Trash Transfer Station). See Layout Sheet 12 for details.

Existing Conditions

The trail is built in this section. It was completed as a part of reconstruction of John McCormack Road in the late 1990's.

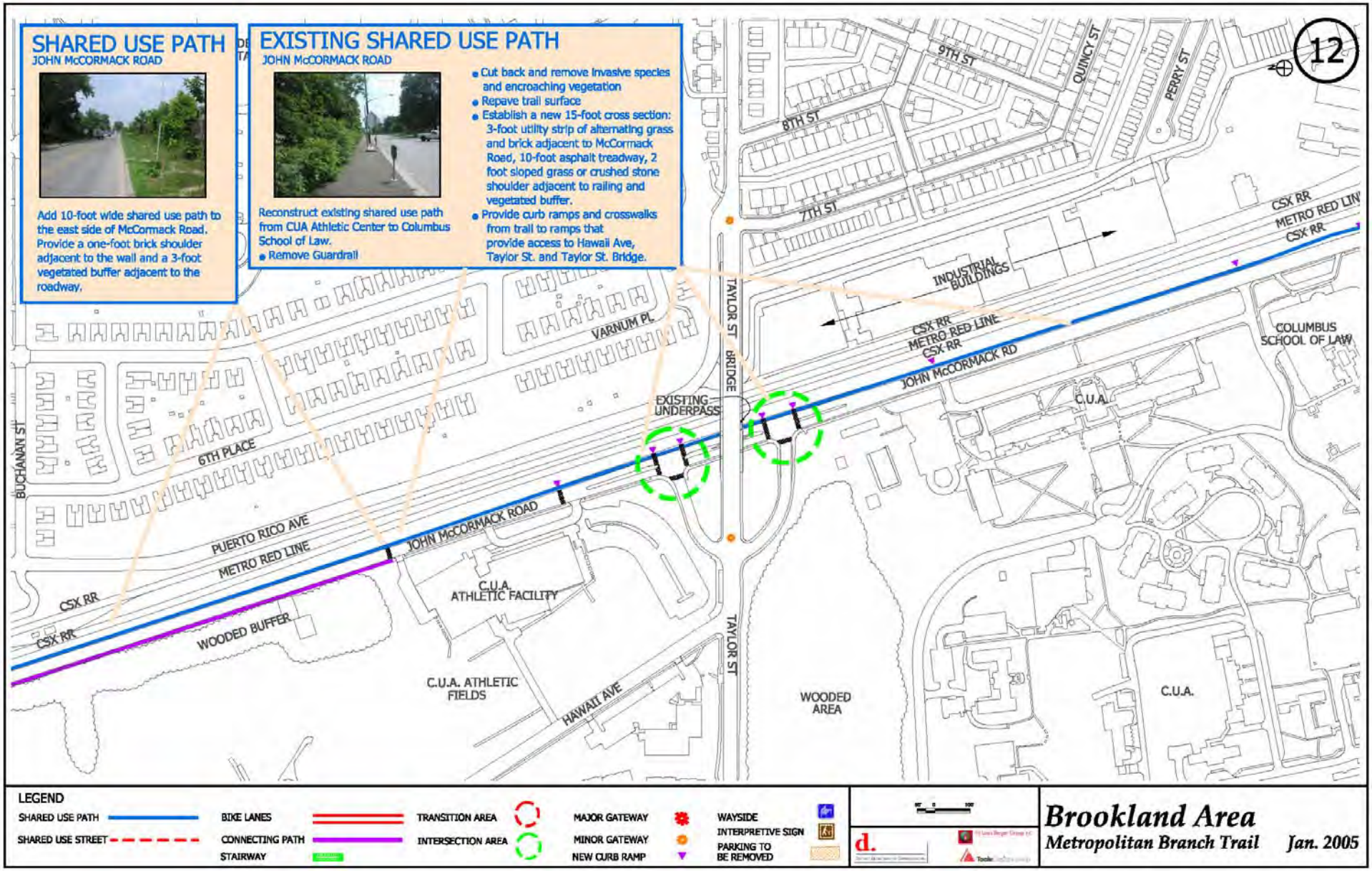
This section of trail is in poor condition. Due to the placement of utility poles, traffic signs, and parking meters, the functional width of the trail is 6-7 feet. Use of a highway guardrail creates an inhospitable trail edge on the east side. Vegetation overgrowth and encroachment further reduces trail width and creates safety problems. The pavement surface is uneven. There are no curb ramps to provide trail access. The trail currently shifts to the west side of the road near the CUA Athletic Center, and goes up Bates Road to Fort Totten Drive.

The quality of the existing MBT along John McCormack Road is diminished by poor utility pole location.

Trail Type—Shared Use Path

A shared use path similar to that which exists today is proposed, however a number of design improvements are recommended, including the following:

- A 3-foot utility strip of alternating grass and brick.
- A widened base and treadway, fully 10 feet wide (will require fill and some retaining walls).
- Replacement of the guardrail with a trail appropriate railing
- Strategic thinning of existing vegetation and planting of appropriate species to decrease maintenance needs, and increase aesthetic and environmental quality.
- Provision of curb ramps and crosswalks at Taylor Street access ramps and other locations across from CUA buildings.


SHARED USE PATH
JOHN McCORMACK ROAD
Add 10-foot wide shared use path to the east side of McCormack Road. Provide a one-foot brick shoulder adjacent to the wall and a 3-foot vegetated buffer adjacent to the roadway.
EXISTING SHARED USE PATH
JOHN McCORMACK ROAD
Reconstruct existing shared use path from CUA Athletic Center to Columbus School of Law.
Remove Guardrail
Cut back and remove invasive species and encroaching vegetation
Repave trail surface
Establish a new 15-foot cross section: 3-foot utility strip of alternating grass and brick adjacent to McCormack Road, 10-foot asphalt treadway, 2 foot sloped grass or crushed stone shoulder adjacent to railing and vegetated buffer.
Provide curb ramps and crosswalks from trail to ramps that provide access to Hawaii Ave, Taylor St. and Taylor St. Bridge.
12
9TH ST
QUINCY ST
PERRY ST
8TH ST
7TH ST
INDUSTRIAL BUILDINGS
CSX RR
METRO RED LINE
CSX RR
JOHN McCORMACK RD
COLUMBUS SCHOOL OF LAW
C.U.A.
TAYLOR ST BRIDGE
EXISTING UNDERPASS
VARNUM PL
BUCHANAN ST
6TH PLACE
PUERTO RICO AVE
METRO RED LINE
JOHN McCORMACK ROAD
CSX RR
CSX RR
WOODED BUFFER
C.U.A. ATHLETIC FACILITY
TAYLOR ST
C.U.A. ATHLETIC FIELDS
HAWAII AVE
WOODED AREA
C.U.A.
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
Brookland Area
Metropolitan Branch Trail
Jan. 2005

Construction of new trail on the east side of McCormack will be required from the CUA Athletic Center to Bates Road. See Layout Sheet 12 for cross section details.

Along the existing MBT section adjacent to John McCormack Road, curb ramps are needed at crosswalks, vegetation needs to be cut back and the trail should be widened.

North of the CUA Athletic Center, the trail should be continued on the east side of John McCormack Road.

Proposed Structures and Roadway Crossings

None

Signage

Sign system recommendations should be implemented throughout this section. Trail identity and access signs are critical to provide wayfinding from various locations on the CUA campus and from Taylor Street. Trail identity and continuity may be best served through use of Main Street-style banners or by installing brass medallions with MBT logo, directly into the trail.

Connections

The primary connection along this segment is to Taylor Street. The bridge is currently being reconstructed and improved bicycle and pedestrian access will be provided on the new structure. Curb ramps, crosswalks and directional signs are critical to facilitate access to the MBT. They are needed on each end of the bridge and at the bottom of the access ramps.

Gateways and Waysides

No special gateways or waysides are recommended for this segment.

Landscaping

Besides the treatments already mentioned, there are no additional proposed landscape treatments for this segment of the MBT.

Art

John McCormack Road, between the "sitting park" and Bates Road, was one of the first segments of the trail to be constructed. As trail construction proceeds, the segment might be upgraded by replacement of the existing trail.

Infrastructure: There is an underpass beneath Taylor Road, and the potential for ramps that connect up to Taylor Road. If such a connection is made, an artist designed trail-blaze would be appropriate. Also, the underpass is an opportunity for an artistic surface treatment, and the ramp infrastructure (surface, railings) also hold potential for artist design involvement—though this connection should not have as high priority as the ramps that lead to Metro stations, or which carry the main trail (such as at Piney Branch Road).

Segment identity: This segment is lengthy, nearly a mile long, and rather homogenous in its appearance. Along this segment, repeated markers such as banners or flags, colored poles, or landscape treatments could create visual interest and identity. If the segment is rebuilt, an artist could work with engineers to design the trail surface, trail contours, and screening or protective barriers between the trail and the railroad right-of-way.

Thresholds/gateways/trail blazes: In this section there are significant thresholds and gateways at approximately half-mile intervals—approximately at Taylor Street and Bates Road. These places could be marked by a series of trail blazes that are commissioned as a series—either by one artist, asked to create a family, or by a number of artists working simultaneously within basic parameters, such as scale or material. At Bates Road, the MBT shifts to an off street alignment. This area is somewhat remote, between the CUA campus and an industrial zone. An artist could be involved in the design of this passage; the trail blaze, along with trail materials and landscaping, could highlight the sense of transition here.

Lighting & Security

This segment has been provided with existing high pressure sodium (HPS) street lighting fixtures for illumination of the existing roadways, as well as lower, architectural type area lights to illuminate the sidewalk on the CUA side of the roadway.

It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken multiple locations on this segment yielded results ranging from 0.2 to 2.3 foot candles, Although these readings are lower then the recommended IES requirements for a bikeway, lighting for this portion of the MBT is driven by requirements for the associated roadway and it is recommended that they remain as originally designed.

As this segment of the MBT is located directly adjacent to CUA, and is patrolled by campus police and has been provided with university call boxes, it is not recommended that any additional security features be added to this segment of the MBT.

Existing Lighting on John McCormack Road

Existing Lighting on John McCormack Road

Policing

The trail north of Taylor Street is in MPD PSA 405. Because this area is adjacent to the CUA campus, PSA 405 coordination with the efforts that are underway for the CUA-Metro station area is critical (see discussion in the previous segment). The primary police agency for this segment is the D.C. MPD, however CUA Campus Police and U.S. Park Police also have jurisdiction. Bike-mounted patrols will be effective in this section.

Implementation

Basic trail features are in place on John McCormack Road, but upgrades are recommended in this plan. The first of the recommended features would improve access at Taylor Street by providing curb ramps and high visibility crosswalks and trail signs in conjunction with the Taylor Street Bridge Project.

As MBT construction moves to the Fort Totten area with construction of the drainage ditch encasement by the trash transfer point, it is recommended that the trail be moved to the eastern side of John McCormack Road from a point 1,400 feet south of Bates Road to the intersection with Bates Road. This segment of trail would lie between the roadway and the tracks and would consist of a 10-foot wide paved pathway with 3-foot vegetated buffer and 1-foot brick shoulder. It would avoid the telephone poles that are in the middle of the current trail.

The final upgrades could wait for the final construction phase of the MBT, and would consist of widening the trail between the Catholic University sitting park and athletic facility (approximately 3,450 feet) by adding five feet to the existing 10-foot trail to create a 15-foot cross-section. The widened cross-section would have a 3-foot grass & brick buffer with poles next to John McCormack Road, a 10-foot asphalt pavement, and a 2-foot crushed stone buffer next to fencing on the tracks side. This project would require replacing the guardrail, moving the fence, and adding fill, potentially with retaining structures, in some locations. Landscaping and art would also be added, as discussed in earlier sections.

CHAPTER SIX

FORT TOTTEN AREA: JOHN MCCORMACK ROAD—BLAIR ROAD; PRINCE GEORGE'S COUNTY SPUR

OVERVIEW

Section 4 of the MBT extends from intersection of John McCormack Road with Bates Road to the intersection of Oglethorpe Street and Blair Road in the south to north direction. This section of the trail is approximately 1.3 miles in length.

This area also includes the Prince George's County Spur, which provides an east-west alignment between Fort Totten Metrorail Station and the Prince George's County border. This section of the trail is approximately 1.1 miles in length.

This portion of the trail will be addressed under the following four segments:

- John McCormack Road to Riggs Road via the Drainage East of the Trash Transfer Point: Layout Sheets 13 and 14.
- Riggs Road to New Hampshire Avenue: Layout Sheet 17
- New Hampshire Avenue to the Intersection of Oglethorpe Street and Blair Road: Layout Sheet 18.
- Prince George's County Spur from Fort Totten Metrorail Station to Prince George's County Border: Layout Sheets 15 and 16.

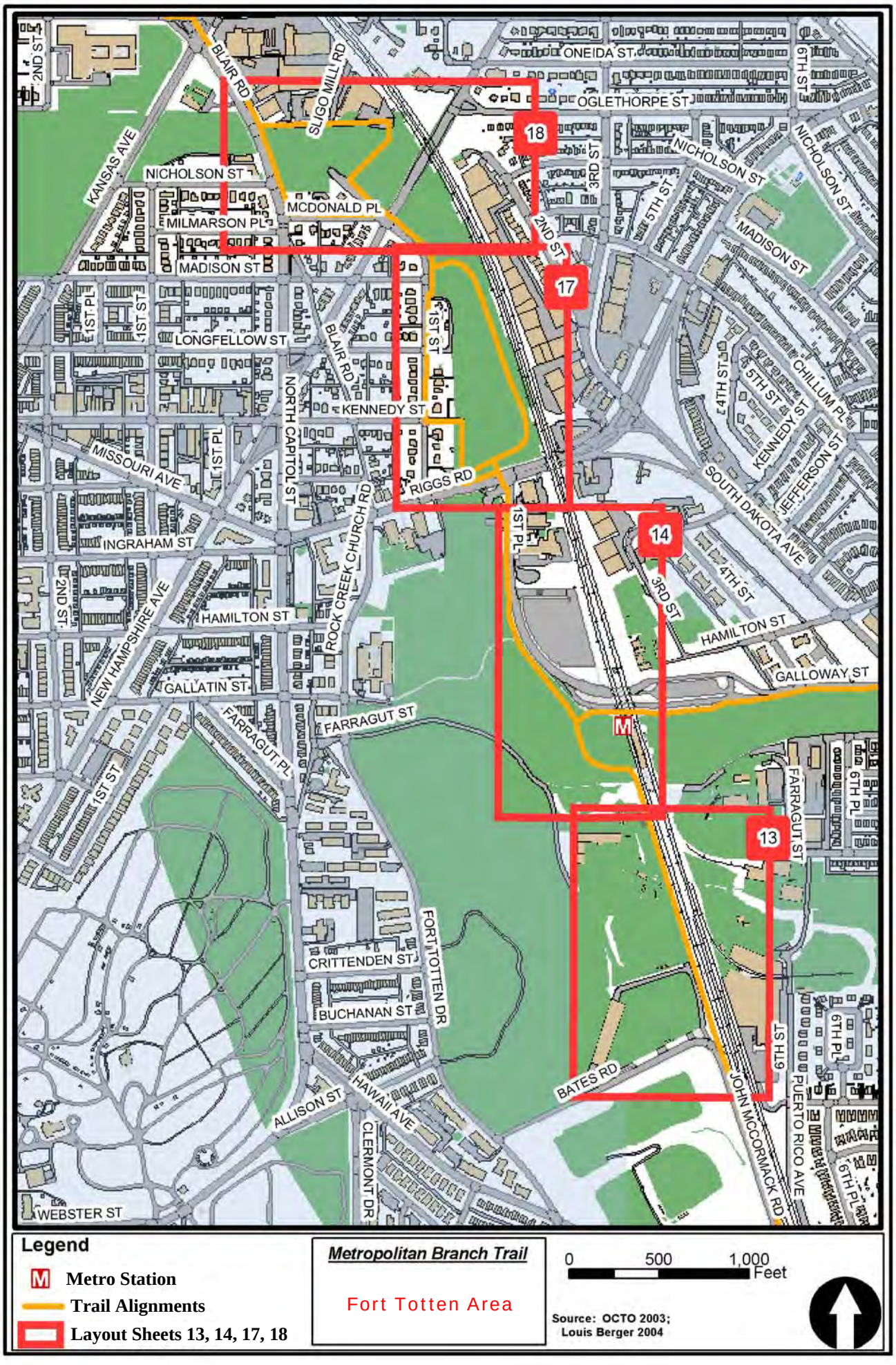
See maps on pages 6-2 and 6-3 for the key to Layout Sheets.

TRAIL OBJECTIVES

Overall

This section of MBT traverses National Park Service lands and would meet the following needs:

- Improve bicycle and pedestrian Metro access to Fort Totten and Fort Slocum Parks.
- Provide additional opportunities for cultural and historic and natural interpretation allowing additional visitor access.



Legend

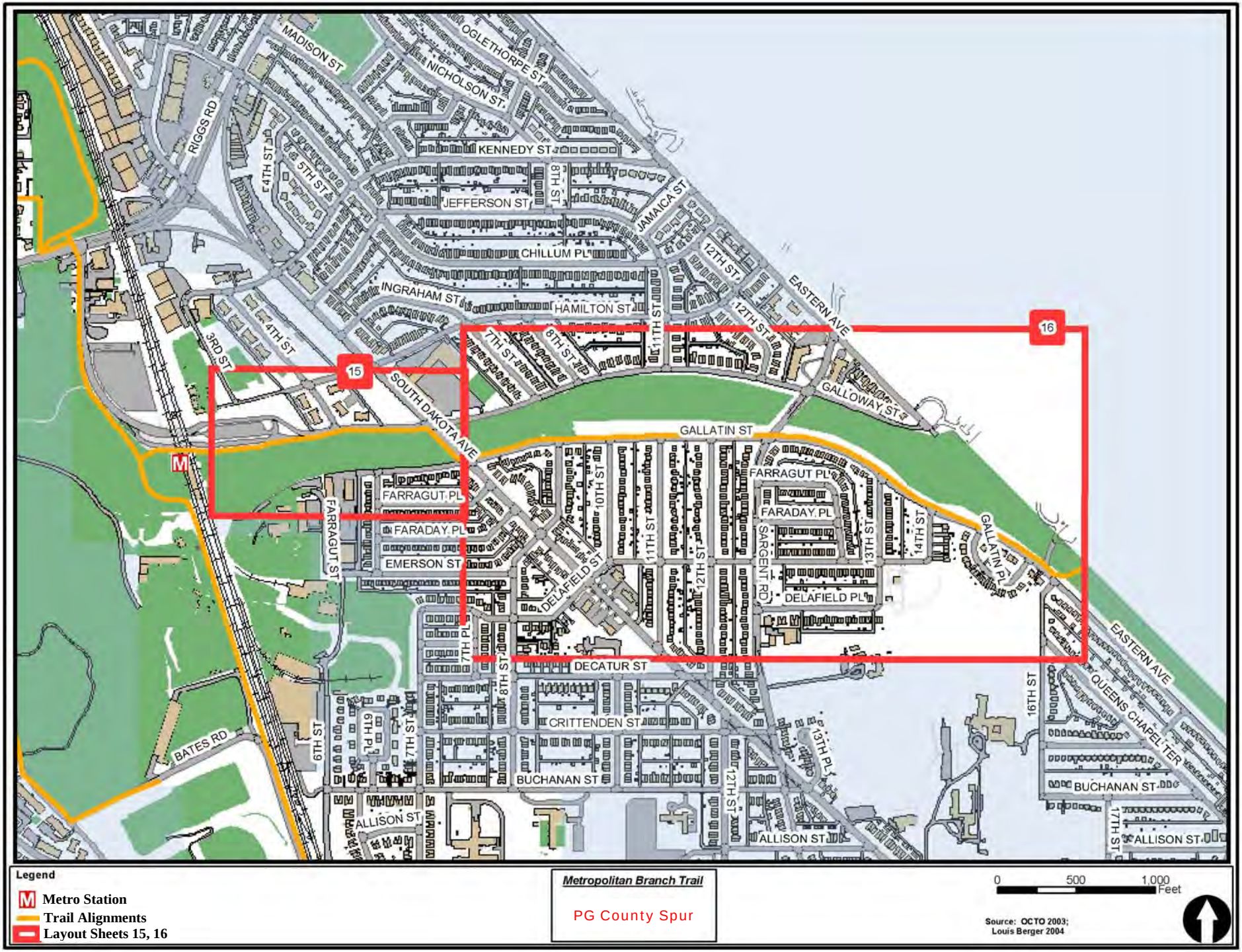
- Metro Station
- Trail Alignments
- Layout Sheets 13, 14, 17, 18

Metropolitan Branch Trail

Fort Totten Area

0 500 1,000 Feet

Source: OCTO 2003;
Louis Berger 2004



Legend

- M — Metro Station
- Trail Alignments
- Layout Sheets 15, 16

Metropolitan Branch Trail

PG County Spur

0 500 1,000 Feet

Source: OCTO 2003; Louis Berger 2004

- Provide a portion of the East Coast Greenway from Prince George's County, Maryland to the National Mall (the segment occurring on National Park Service lands is that which connects the Ft. Totten Metrorail station to the Prince George's County Border).

- Provide educational and interpretation opportunities for Ft. Circle Park system.

- Provide opportunities for broader recreational user access to the Ft. Circle Park system.

National Park Service Lands

Objectives for the MBT trail segments occurring on National Park Service lands must be grounded in the park's enabling legislation, purpose, significance, and mission goals and be compatible with direction and guidance provided by the general management plan and/or other management guidance. While connecting the MBT system, these segments of MBT also provide a trail segment of the "Ft. Circle Parks Trail System" proposed in the Ft. Circle Parks Management Plan, and would be designed to ensure the protection of natural and cultural resources. Objectives include:

Flora and Fauna

- Ensure that actions related to the construction, operation, and management of a multi-use trail system through NPS lands does not impact park wildlife or wildlife habitat directly or indirectly.

- Protect native vegetation and avoid introduction or increase in any non native/invasive species from activities related to the construction and management of a multi-use trail system through park units.

- Avoid habitat fragmentation as a result of the construction, operation, or maintenance of a multi-use trail system through park units.

- Protect and sustain federal and District-listed threatened or endangered species and their habitats as well as potential habitats, including identified sensitive species in the park from activities related to the construction, operation, and maintenance of a multi-use trail system through NPS lands.

Cultural Resources

- Ensure qualities of historic properties, such as the earth works in Ft. Totten and the integrity of the Community Gardens, are protected during the construction, operation, and maintenance of a multi-use trail system.

- Ensure that actions related to the permitting, construction, operation, and maintenance of a multi-use trail system can be classified as having no adverse effect on the cultural resources of the park units as defined in the National Historic Preservation Act.

- Ensure that a multi-use trail is permitted in a manner that protects archeological sites in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable

Viewsheds

- Retain significant cultural and natural characteristics in viewsheds through landscaping and careful design of MBT features.

- Ensure the integrity of cultural and natural viewsheds within and around all Rock Creek Park units by avoiding the introduction of intrusive elements that might otherwise result from the permitting, construction, operation, or maintenance of the MBT.

Visitor Use and Experience

- Protect existing and future recreational opportunities at Ft. Totten.

- Provide visitors the opportunity to interact with the Ft. Circle Parks' cultural resources in ways that do not damage or derogate those resources.

- Provide safe, satisfying experiences to park visitors.

Park Management and Operations

- Ensure that individually or cumulatively the construction, operation, or maintenance of a multi-use trail system does not intrude on management's ability to protect park resources or disrupt park operations. It is planned that DC DDOT will maintain portions of the trail that pass through park lands, and will administer them in coordination with the NPS.

Public Art

Park lands. Much of this section of the trail passes through National Park Service land. The design elements of the trail segments through NPS land, including signs, will need to be consistent with NPS approaches and the standards developed for the Fort Circle Parks. For these segments, simple, informal, rustic style landscape architecture is the norm, rather than the exception, and is more in keeping with the profession of landscape architecture than that of public art. Freestanding public art projects are not recommended for segments that pass through parkland; and art projects on property adjacent to NPS lands must be undertaken with a careful understanding of their potential visual impact on such resources.

Trail Infrastructure: A general strategy should be to involve artists on design teams working the infrastructure of the trail itself—such as the design of the contour of the trail; the design of trail surfaces, edgings, railings or places where the trail affords views; or the design of markers or blazes that indicate entrances to the trail, or places where the trail transitions to urban streets. Trail blazes and markers will be especially important at the following locations: 1) at locations where trail users will leave/enter the trail to go to the Ft. Totten metrorail station; 2) at the junction of the MBT and the P.G. County Spur trail; 3) at the junction with the existing connector trail to Gallatin St. and the portion of Ft. Totten park that is open to the public; 4) at the trail intersection with Riggs Road, and 5) on First St., NE where the trail shifts from on-street to off-street facilities.

Interpretive Signage: The primary opportunities for interpretation in this section involve the history of Fort Totten, the character of the landscape/greenway, and the community garden site between Blair Road and South Dakota Avenue. On NPS lands, such signage should reflect the objectives of the NPS Fort Circle Defenses Management Plan.

JOHN MCCORMACK ROAD TO RIGGS ROAD

Proposed Alignment

- This segment begins on the eastern side of John McCormack Road. It must first encase and follow the concrete drainage ditch east of the trash transfer station and concrete plant to the southeastern edge of NPS lands at Fort Totten. It then passes around Ft. Totten Metrorail Station outside the WMATA fence above the metro tunnel. Just north of the tunnel opening, it descends the hill – at a slope meeting ADA standards, to a point west of and level with the sidewalk along First Place. A more direct stair system to the metro station with rolling grooves is also proposed. The trail then proceeds parallel to the sidewalk on a separated path toward Riggs Road, moving to the sidewalk to bypass one building that abuts the sidewalk just before Riggs Road.

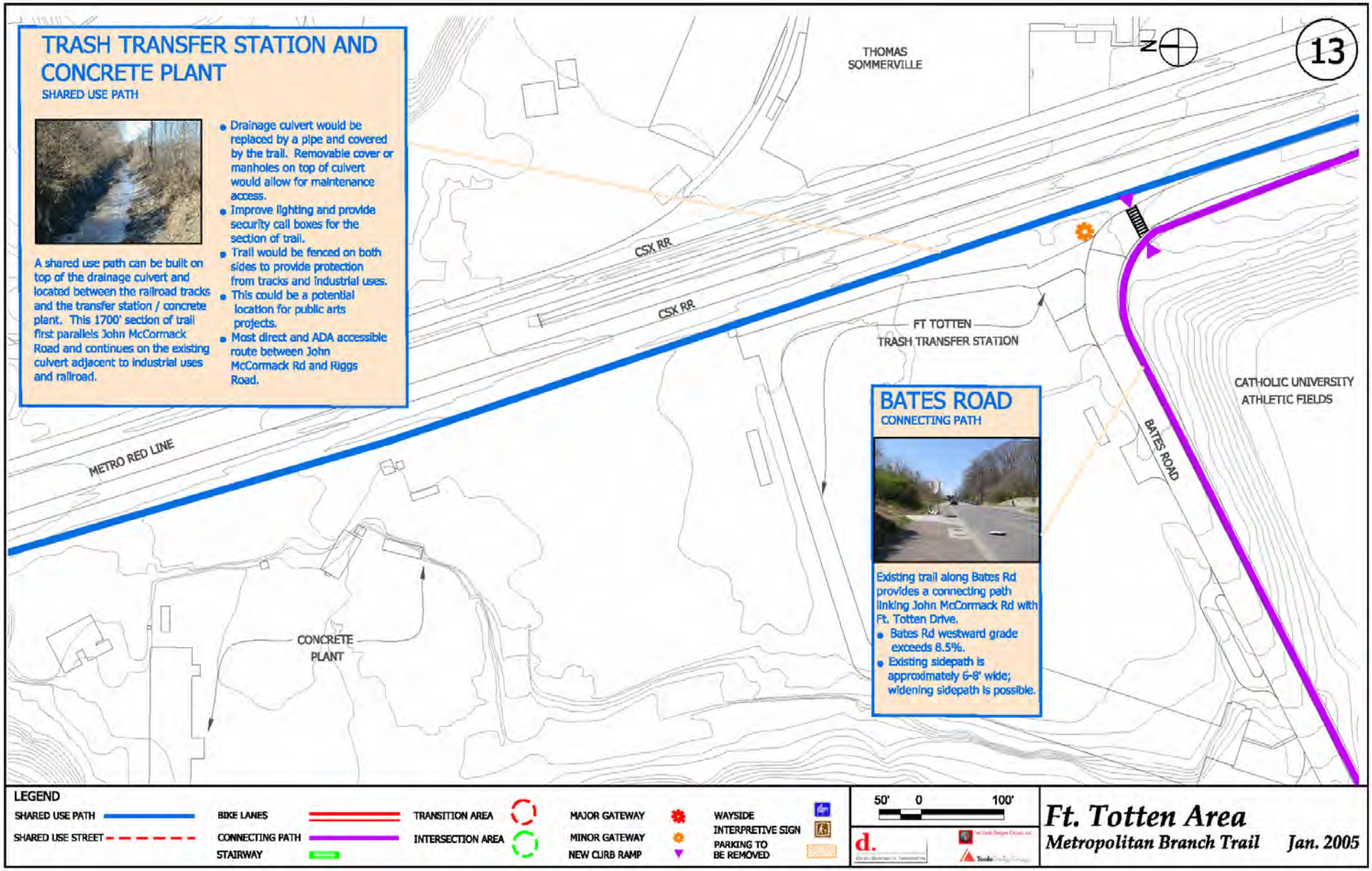
- This route is the most direct and only ADA accessible route between John McCormack Road and Riggs Road and is shown on layout sheets 13 and 14. The use of Fort Totten Drive would involve a gradient in excess of 11% and was not considered for this reason.

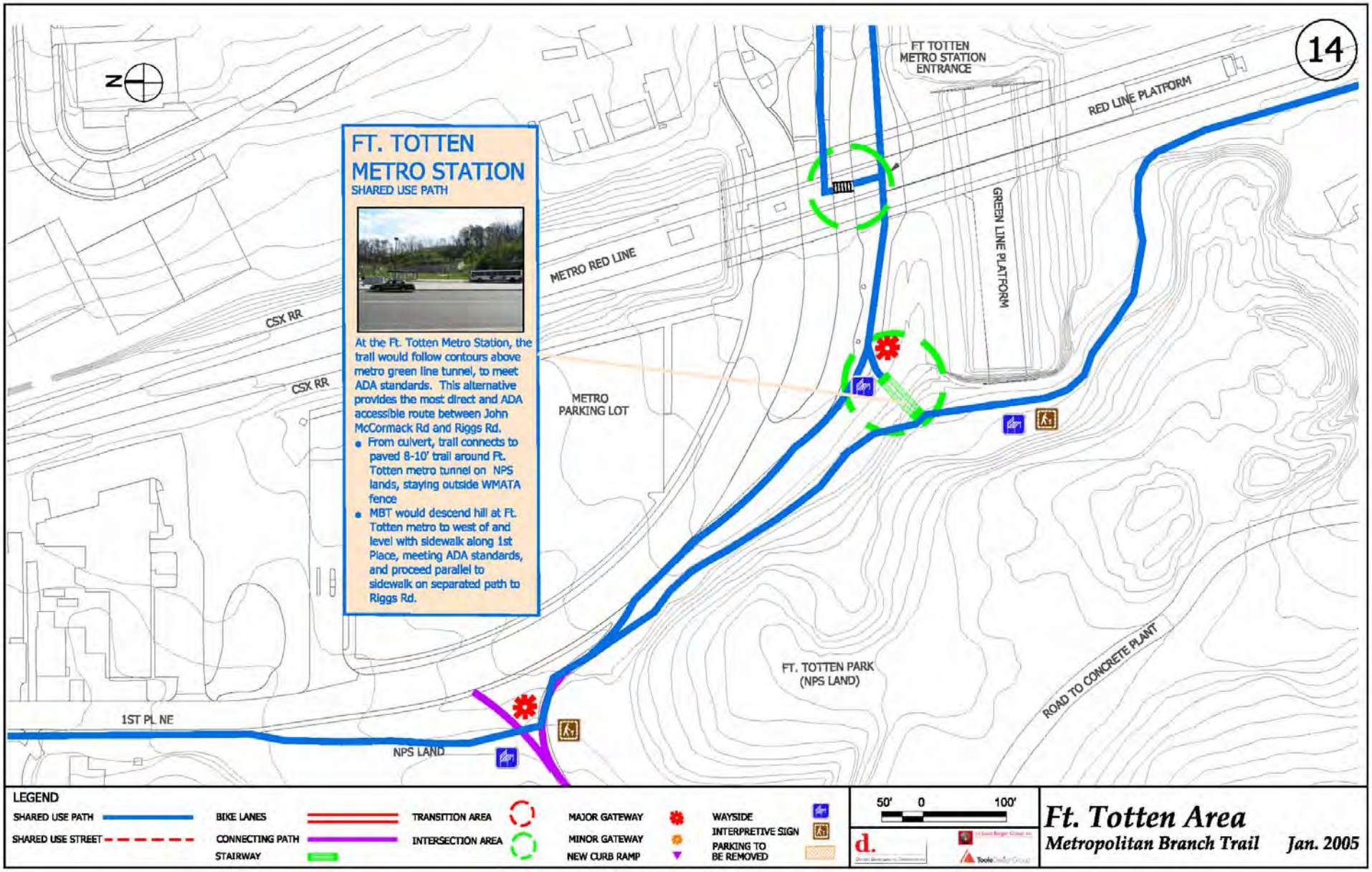
Existing Conditions

A ditch parallels the CSX tracks to the east of the trash transfer point and concrete plant. The concrete part of the ditch is 9 feet across and 18 inches deep at center; the interior 4 feet are somewhat flat, then the concrete curves ups 2.5 feet on each side to reach 18 inches total depth. A culvert at the southern end measures 42 inches in diameter, providing an estimate of ditch capacity. A chain link track side fence is set as close as possible to the concrete (@ 30 inches). This fence is along the entire section of ditch. A low several-foot high concrete wall is next to and west of the drainage culvert for the portion of the ditch next to the concrete plant. It has one lower stretch – then steps up a bit higher toward the south part of concrete plant property. The wall then is topped by a 6-foot to 8-foot chain link fence on top of wall for the portion of the ditch next to the Trash Transfer Station.

John McCormack Road, looking north

Looking north along drainage ditch

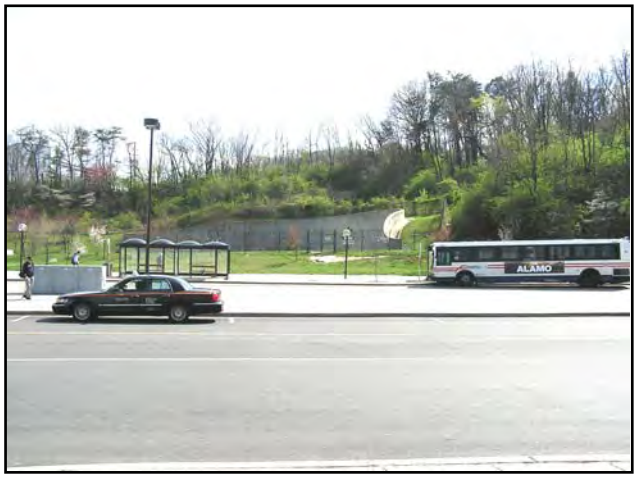

TRASH TRANSFER STATION AND CONCRETE PLANT
SHARED USE PATH
A shared use path can be built on top of the drainage culvert and located between the railroad tracks and the transfer station / concrete plant. This 1700' section of trail first parallels John McCormack Road and continues on the existing culvert adjacent to industrial uses and railroad.
Drainage culvert would be replaced by a pipe and covered by the trail. Removable cover or manholes on top of culvert would allow for maintenance access.
Improve lighting and provide security call boxes for the section of trail.
Trail would be fenced on both sides to provide protection from tracks and industrial uses.
This could be a potential location for public arts projects.
Most direct and ADA accessible route between John McCormack Rd and Riggs Road.
THOMAS SOMMERVILLE
13
N
CSX RR
CSX RR
METRO RED LINE
FT TOTTEN
TRASH TRANSFER STATION
CATHOLIC UNIVERSITY ATHLETIC FIELDS
BATES ROAD
CONNECTING PATH
BATES ROAD
Existing trail along Bates Rd provides a connecting path linking John McCormack Rd with Ft. Totten Drive.
Bates Rd westward grade exceeds 8.5%.
Existing sidepath is approximately 6-8' wide; widening sidepath is possible.
CONCRETE PLANT
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Ft. Totten Area
Metropolitan Branch Trail
Jan. 2005


14
N
FT. TOTTEN METRO STATION
SHARED USE PATH
At the Ft. Totten Metro Station, the trail would follow contours above metro green line tunnel, to meet ADA standards. This alternative provides the most direct and ADA accessible route between John McCormack Rd and Riggs Rd.
• From culvert, trail connects to paved 8-10' trail around Ft. Totten metro tunnel on NPS lands, staying outside WMATA fence
• MBT would descend hill at Ft. Totten metro to west of and level with sidewalk along 1st Place, meeting ADA standards, and proceed parallel to sidewalk on separated path to Riggs Rd.
FT TOTTEN METRO STATION ENTRANCE
RED LINE PLATFORM
GREEN LINE PLATFORM
METRO RED LINE
CSX RR
CSX RR
METRO PARKING LOT
FT. TOTTEN PARK (NPS LAND)
ROAD TO CONCRETE PLANT
1ST PL NE
NPS LAND
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Ft. Totten Area
Metropolitan Branch Trail
Jan. 2005

The concrete plant is required to monitor discharges from their property under an on-going National Pollution Discharge Elimination System (NPDES) permit, which is issued by EPA and monitored by the D.C. Department of Health (DCDOH). Permanent access to at least two points along the ditch would need to remain available after trail construction; periodic inspections and access by WASA will be needed to monitor flows and to occasionally clear the conduit of any debris or trash which may clog the system.

Upon entering National Park Service lands, the alignment traverses natural terrain that has been previously disturbed by the construction of the Fort Totten Metrorail station. A chain link fence extends around the entrance of a tunnel, providing safety. The trail must stay outside this fence.

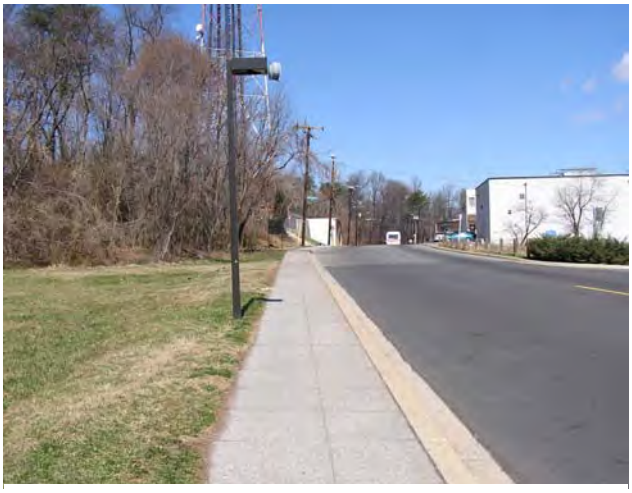
Beyond the fence, proceeding north, the area is natural with scrub vegetation and some trees. This gives way to grass at the point that the trail reaches a point level with the Metrorail station sidewalk along First Place. The sidewalk is six feet wide, bordered by a swale, and extends to Riggs Road.



Trail would follow contours above Metro security fencing, meeting ADA standards.

Looking down on Metro Station

Trail comes down to sidewalk level.



Looking north on First Place

Trail Type—Shared Use Path

During the length of this segment, the trail is a shared use pathway. At Bates Road, the trail encases the culvert that runs parallel to the CSX tracks past the trash transfer point and concrete plant. The material would most likely be concrete. Entering NPS lands, the trail would likely be paved, ascending the hill while staying outside the WMATA fence on a revetted pathway. It would descend at a gentle gradient to level with the First Place sidewalk and remain a separated path all the way to Riggs Road, with one exception. The pathway would need to join the sidewalk at one point where buildings restrict clearance to the sidewalk. A staircase with a bicycle rolling groove would provide direct access between the MBT main trail and the Metrorail station entrance and the Prince George's spur trail.

Proposed Structures and Roadway Crossings

The trail would encase the existing drainage ditch east of the trash transfer station and concrete plant to the southeastern edge of NPS lands. The encasement would require access for inspection and periodic flushing or removal of debris, perhaps by providing gates through the wall along the western side. An option could be buried piping with frequent manholes. Another option could be a prefabricated box or custom formed culvert as shown, with removable top slab at various locations. Any option will require coordination with and concurrence by the parties involved in maintenance and inspection.

As the trail enters National Park Service lands, south of the Fort Totten Station, it must pass above the WMATA tunnel opening, staying beyond the safety fencing. The hillside is steep and the trail will require benching and possibly retaining structures as it makes its way around the WMATA tunnel. It may also require some ramping to meet ADA slopes.

At a point just north of and above the tunnel, the trail would continue with an acceptable slope down a ridge to the level of First Place, but a stair system with bicycle rolling tray is recommended to provide a more direct access to the Fort Totten station.

Signage

Sign system recommendations should be implemented along the encased culvert. Upon entering National Park Service lands, signage will be designed to coordinate with NPS standards. In general, the National Park Service follows the guidance of the most recent edition

of the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration and the most current NPS Sign Manual for road and trail signage. All NPS guide and informational signs, with the exception of U.S. Park Police signs, are retroreflectorized brown with lettering in white Modified Clarendon typeface. Sometimes, stained wooden routed signs are used along trails.

Although National Park Service wayside exhibits are offered in a variety of styles and sizes, most are of two types: low profile and upright.

Low profile exhibits are low, angled panels that provide an interpretive message related to a specific place or feature. Low-profile bases are the preferred style for NPS interpretive wayside exhibits.

Upright waysides typically provide orientation information, rather than site-specific interpretation. Upright waysides, which are designed to stand vertically so that they attract attention, typically provide practical information—such as orientation or safety messages.

Connections

This portion of the trail is within three to four blocks of schools, the Metro, residential housing, and an elderly housing development. It will provide connections much like a crossroads.

The trail offers the primary connection to the Fort Totten Metrorail Station at the northern end and to the Brookland/CUA Metrorail station at the southern end. In addition, this section of trail, as it continues on John McCormack Road, provides access to Catholic University by proceeding adjacent to the campus.

The connection to the west toward the Fort Totten Metrorail station also provides access to the P.G. County Spur and the mixed used development being proposed to the west of the Fort Totten Metrorail station.

As the trail proceeds north along First Place, it intersects an existing trail that comes from Gallatin street and Fort Totten Drive to the north, linking the residential neighborhoods and the entrance to the Fort Totten site along Fort Totten Drive. As it intersects Riggs Road, it connects a major artery and the continuing main trail to the north.

Gateways and Waysides

Trail access at the Fort Totten Metro is a gateway into the surrounding communities of the Fort Totten neighborhoods as well as the Fort Circle Parks of the National Park Service. An existing trail connects First Place with Fort Totten Drive and the communities beyond.

A wayside could be planned to take advantage of the view as the trail passes around the Metro tunnel and proceeds to the level of First Place. Such a wayside could provide interpretive signage and directions to Fort Totten via the existing trail, while also providing a more general discussion of the Fort Circle Parks.

At both the Fort Totten Metrorail station and the junction of the trail leading west toward the Fort Totten earthworks, interpretive signage as a minimum and other pausing elements, such as benches, should be considered. Signage would encourage visitation and education into the historic elements of this part of our National Park system.

Landscaping

The constricted width along the drainage ditch segment suggests a design emphasizing a safe, well-lighted, and quick passage, leaving landscaping more to the portions of trail on NPS lands.

Vegetative treatment on NPS lands would include revegetation in areas of construction disturbance by planting native species appropriate for the area.

Trail surfacing on parkland could use permeable or porous materials to aid in drainage and to provide green design.

Surface drainage in areas along the MBT on NPS land should be conveyed to bioswales, where any contaminates found in urban run-off would be absorbed by plants. Construction of a boardwalk, if appropriate, may be required to ford areas that are frequently wet and not easily drained.

Landscape Treatments for John McCormack Road – Riggs Road

Included	Treatment
	Berm
X	Bioswale
X	Boardwalk
	Curbside Gardens
	Street Crossings
	Dry Streambed
X	Indigenous Vegetation
	Ornamental Vegetation
X	Photovoltaic Lighting
X	Permeable Paving
	Planter
	Street Trees
	Terracing
	Unusual Focal Point

Retaining walls built on parklands would reflect rustic materials in muted colors so that the man-made structures would be as visually unobtrusive as possible. Vegetative treatment on NPS lands would include revegetation in areas of construction disturbance by planting the types of native species appropriate for the area.

Fencing will be needed along both sides of the drainage ditch for a distance of approximately 1,700 feet. Decorative panels could be inserted into the fencing in this area to provide visual relief, and screening where the adjacent industrial operations warrant. Given the likelihood of dust from the industrial operations to the west and noise from the nearby railroad tracks to the east, even more substantial fencing measures to screen these conditions may be warranted. Natural vegetation along the fencing may be an option.

Art

Segment identity: This segment, which connects through an industrial corridor from the Fort Totten Metro to John McCormack Road and the northern edge of the CUA campus, is relatively isolated. Here, art could be integrated into trail infrastructure such as fencing or trail surface.

Artists and landscape architects could assist in designing the infrastructure, or design elements that use light, color and motion to enhance the experience of traveling through this long, narrow corridor, while avoiding structures that might increase a feeling of isolation.

Industrial character: The industrial enterprises along the trail could be backdrops for art projects, although care will need to be taken to avoid affecting the Fort Totten viewshed. At these sites, the investment in art must be measured carefully against the expected longevity of the facility; cleaning and maintenance (such as rinsing off concrete dust) are a key consideration as well.

***Wayside*:** There is potential for a wayside related to the Metrorail entrance. Should it be possible to build a pausing place here, artist-designed elements (such as seating, lighting or bike racks) or artist collaboration on the design of the general site (surface materials, landscaping) would be appropriate. This project could be undertaken in collaboration with Metro's art program.

Lighting & Security

There are existing lighting systems along John McCormack Road; these systems will have to be extended toward, and transitioned into the proposed trail lighting system. It is recommended that lighting for the John McCormack Road/drainage ditch segment be provided via pole mounted, architectural type area luminaries. Utilizing pole mounted fixtures will maximize coverage area (increasing energy efficiency of the system); while using smaller pole mounted lighting fixtures (below 14') will reduce the glare on the trail, thereby maximizing the quality of light for users. Vandal resistant type luminaries, containing poly-carbonate lenses and/or globes, will be utilized to maximum fixture life. Specialty lighting could be provided for proposed art-work and landscape features, to enhance the intended design intent. Low level pedestrian lighting along walls should also be considered.

Lighting on National Park Service lands will be coordinated with the NPS. To avoid impacts to wildlife on NPS property, it is NPS policy that lighting in or around natural areas should be avoided or minimized and directed downward. Requests to increase lighting on NPS land will need to be individually considered (area by area, trail segment by segment) for the overall impacts on park lands, in consideration of the general NPS policy to not light parks.

Sustainable design is an option, using self-powered lighting fixtures. Photovoltaic lighting can reduce ground disturbance and be used to demonstrate green infrastructure usage on parklands. Low level, pedestrian-level photovoltaic lighting could be used along the trail to provide sufficient illumination so that surveillance of the area is facilitated. Photovoltaic lighting does not require trenching for conduit; is cost-effective, since it generates its own energy and does not affect air quality levels.

This section of trail is relatively isolated as it is bordered by fencing and the CSX tracks to the east and fencing and industrial uses to the west. For security, emergency call boxes would be needed at regular intervals along this section of trail, because of its relative distance from normally policed roadways and residential districts.

Policing

This segment of the trail is in MPD PSA 405, which will provide the primary patrol force. This segment also includes Ft. Totten Park, National Park Service land, and the Ft. Totten Metro station. Support should be provided by U.S. Park Police and WMATA transit police, especially in the areas near the Metro Station, along 1st Place to Riggs Road and along the connecting path to Gallatin Street.

Because the trail is separated from the street along much of this segment, special patrols will be necessary. WMATA and MPD coordinated foot, bicycle, or scooter patrols are recommended for this trail segment, especially in the evening hours. Special emergency call boxes are also recommended for this trail segment.

Implementation

The segment from the CUA Athletic Center to Riggs Road should be designed and constructed as a unit. The portion to be enclosed along the drainage ditch requires coordination and approvals for a design that both serves the trail and provides adequate drainage and access for maintenance. The portion on NPS lands requires both NPS and WMATA concurrence for an alignment that avoids sensitive WMATA features, meets NPS objectives to minimize impacts to parklands, and achieves gradients within or as close as possible to ADA standards. And the two sections need to meet. Therefore a coordinated design is desirable.

The first step is to get concurrence for the trail alignment. Following that, topographic surveys and geotechnical investigations would be performed. Drainage flow parameters for the drainage ditch would be determined to size the encasement. Any utility locations would be identified and mapped. These provide the data for designs that properly consider foundation conditions along the steep hillside and drainage requirements, as well as any special provisions for utilities. The initial design is provided in a conceptual form to allow a review of assumptions that could involve public as well as agency review, such as the slopes, stair system, landscaping, fencing, and lighting being considered.

As a trail on NPS lands, design provisions to meet NPS objectives, as detailed at the beginning of this chapter, will receive special attention.

When all issues with the concept design are resolved, the project can move to final design, followed by construction.

RIGGS ROAD TO NEW HAMPSHIRE AVENUE

Proposed Alignments

Two alignments are under considerations for the trail between Riggs Road and New Hampshire Avenue. Both include an at-grade crossing of Riggs Road from First Place to the sidewalk along Riggs Road, but diverge upon leaving the sidewalk along Riggs Road (see layout sheet 17). These are discussed below.

Alignment One

- The first option would cross Riggs Road at-grade from First Place, then proceed west on an improved sidewalk along Riggs Road. Upon reaching the end of the retaining wall along the sidewalk, the trail would turn north and proceed behind houses on a social path that is also NPS property. Upon reaching Kennedy Street, the trail would proceed to 1st Street, then northwest on 1st Street as a shared use street to Madison Street, where it either remains on the roadway, or transitions to a shared use path on NPS land. It then proceeds to an at-grade crossing of New Hampshire Avenue. Refer to layout sheet 17.

Alignment Two

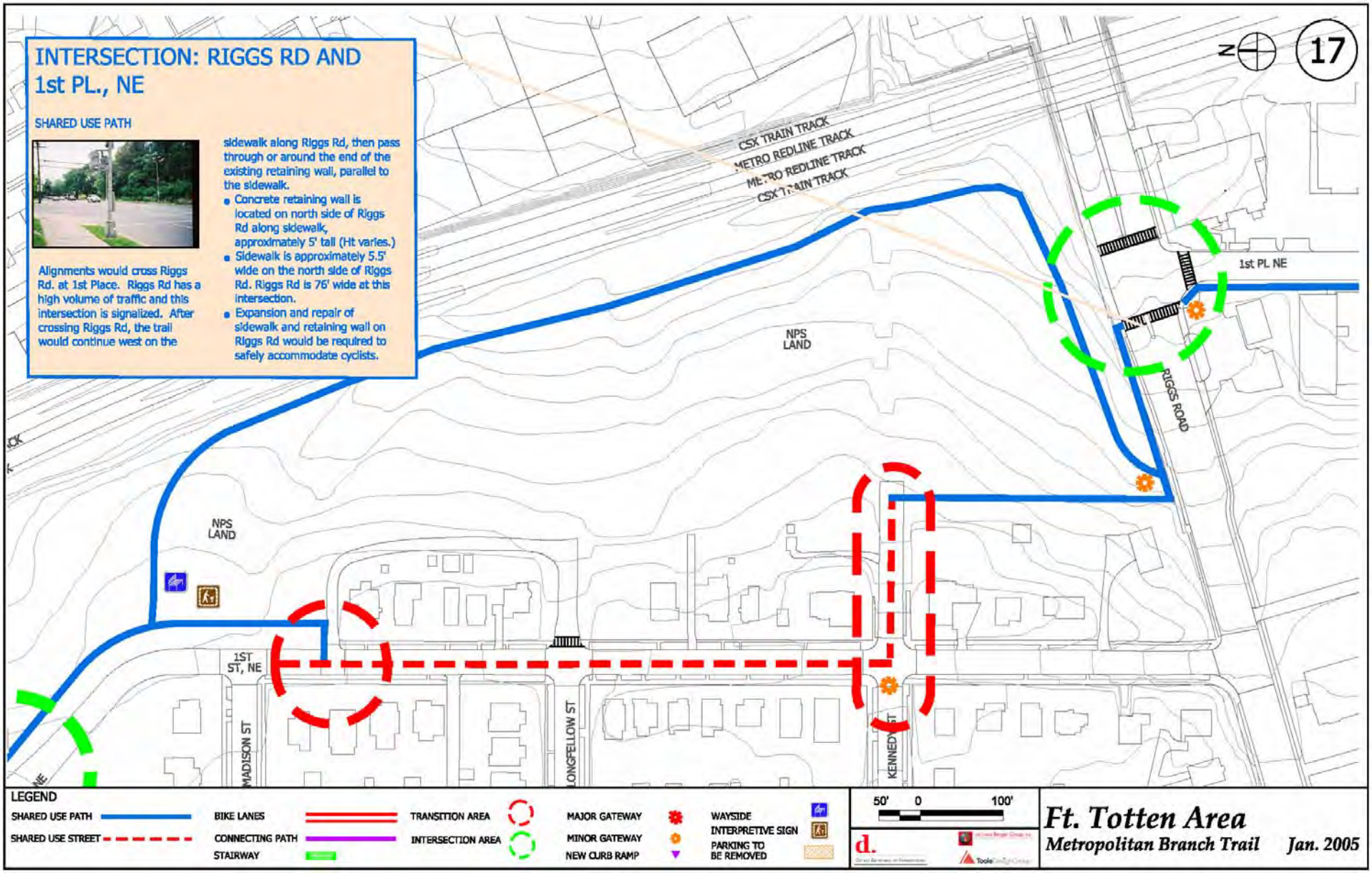
- Like the first option, the second option would also cross Riggs Road at-grade from First Place, then proceed west on an improved sidewalk along Riggs Road (layout sheet 17). Upon reaching the end of the retaining wall along the sidewalk, however, the trail would proceed directly as a separated pathway to the vicinity of the CSX right-of-way/tracks, then parallel the CSX tracks through wooded parkland to a point where woods end, becoming grass. The trail would then proceed directly toward 1st Street, either entering the street or remaining a separated path (either side of 1st Street is an option – depending on the next segment's endpoint), to an at-grade crossing of New Hampshire Avenue.

Preferred Alignment

Alignment One is preferred by both the DDOT and NPS. Alignment One utilizes existing circulation. New trail construction along Alignment Two would cause more vegetation impacts and result in greater wildlife habitat fragmentation compared with Alignment One. Alignment Two is also in a more isolated area and would present more security and safety risks compared to Alignment One. Alignment One is the preferred route based on these concerns.

Alignment Considered and Not Recommended

A bridge over Riggs Road was considered, to include alignments from 1st Place to Riggs Road, that would provide a more direct connection to the bridge. To obtain necessary roadway clearances, the bridge approaches or ramps and any connecting alignment would use more park land and disturb more vegetation, would require archeological studies, and would add to the visual clutter of this neighborhood compared to the direct at-grade crossing available at the intersection of 1st Place with Riggs Road. Consequently, in consultation with park officials, the bridge option was not carried forward in the Concept Plan.


INTERSECTION: RIGGS RD AND 1st PL., NE
SHARED USE PATH
Alignments would cross Riggs Rd. at 1st Place. Riggs Rd has a high volume of traffic and this intersection is signalized. After crossing Riggs Rd, the trail would continue west on the sidewalk along Riggs Rd, then pass through or around the end of the existing retaining wall, parallel to the sidewalk.
• Concrete retaining wall is located on north side of Riggs Rd along sidewalk, approximately 5' tall (Ht varies.)
• Sidewalk is approximately 5.5' wide on the north side of Riggs Rd. Riggs Rd is 76' wide at this intersection.
• Expansion and repair of sidewalk and retaining wall on Riggs Rd would be required to safely accommodate cyclists.
17
CSX TRAIN TRACK
METRO REDLINE TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
NPS LAND
NPS LAND
1st PL NE
RIGGS ROAD
1ST ST, NE
MADISON ST
LONGFELLOW ST
KENNEDY ST
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Ft. Totten Area
Metropolitan Branch Trail
Jan. 2005

Existing Conditions

At-grade crossing at Riggs Road/First Place intersection, looking west

1st Street is a direct route to New Hampshire Avenue with little traffic. Riggs Road at its intersection with First Place is composed of five lanes and a striped 10-foot island coming from the west, and six lanes coming from the east – approximately 76 feet wide total. A signal with crosswalk is in place on the western side of the intersection. The sidewalk on the north side of Riggs Road at this intersection is between 5 and 6 feet wide. Immediately adjacent to the sidewalk on the north side is a retaining wall approximately 5 feet high (height varies), and a grass buffer on the road side. This sidewalk can be widened to adequate path width by using the buffer. It is constrained by existing housing beyond the end of the retaining wall and a narrowing Riggs Road (only 44 feet wide at its intersection with 1st Street) and adequate widening for a trail all the way to the intersection of Riggs Road with 1st Street is not considered feasible.

At-grade crossing at Riggs Road/First Place intersection, looking east

Gap in Riggs Road retaining wall – west of First Place intersection

1st Street is residential street between 30 and 36 feet wide. Sidewalks are located on both sides of the street, varying between 5.5 and 6 feet in width, until Madison Street on the western side and before Madison Street on the east. To the north of Madison Street, there are no sidewalks.

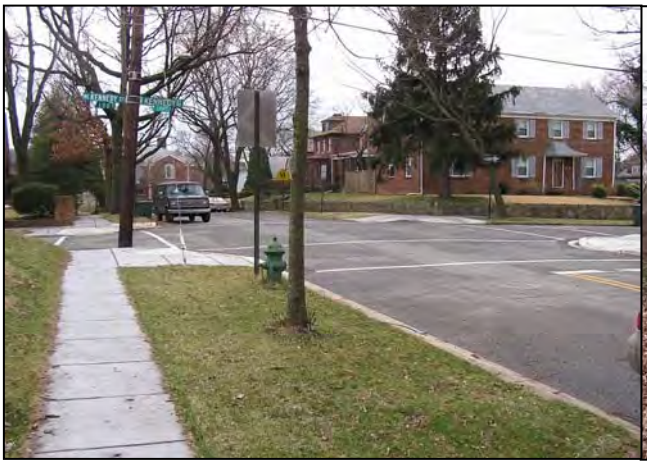
A well-used social path behind the houses on 1st Street provides a short cut between Riggs Road and Kennedy Street. Kennedy Street dead ends at the social path and is 36 feet wide at its intersection with 1st Street.

Dumping at the Kennedy Street dead end has been noted to be a problem in the past.

Woods predominate in the parkland bounded by the houses along 1st Street on the west, the CSX tracks to the east, Riggs Road on the south, and a line extended from Madison Street to the tracks on the north. The area between Madison Street and New Hampshire Avenue is open.

Normal street lighting is present along Riggs Road and on First Street between Riggs Road and Madison Street.

Kennedy Street Dead End



1st Street at Kennedy Street

Path behind Houses: Riggs Road/1st Street

Looking east at 1st Street from New Hampshire Avenue

Looking east at woods between Riggs Road and New Hampshire Avenue

Trail Type

Alignment One (Preferred by DDOT and NPS)

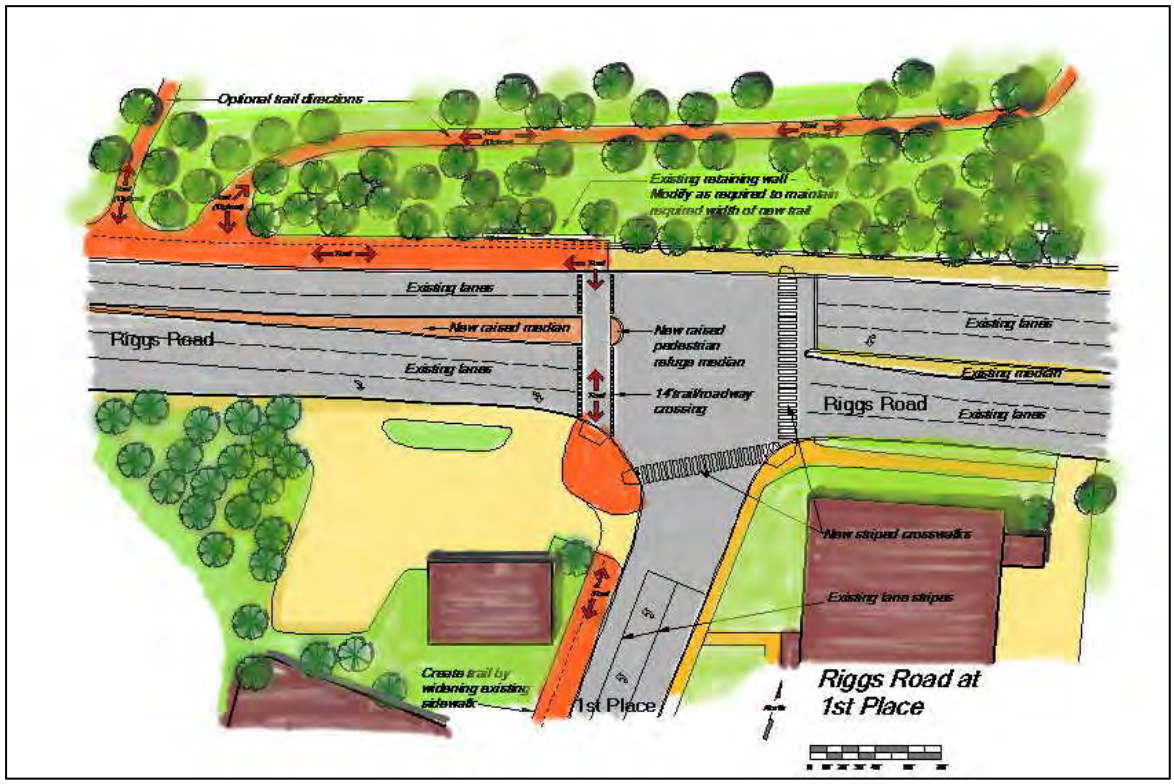
- Alignment One, after an at-grade crossing of Riggs Road, would expand the existing sidewalk to become a shared use path, requiring modification of the retaining wall to acquire sufficient space. Construction of a twelve-foot path along the existing social path on parkland behind houses would extend the shared use path to Kennedy Street. At the dead end of Kennedy Street, the trail will be a shared use street on Kennedy and First Street, NE, north to Madison Street. At Madison, the trail would either transition to a twelve-foot wide shared use path on NPS land or remain on street and proceed to an at-grade crossing of New Hampshire Avenue

Alignment Two

- Alignment Two is the same as Alignment One until reaching the social path, where it turns toward the CSX right-of-way, then parallels the tracks as a twelve-foot wide shared use path. Upon reaching the cleared area beyond the 1st Street houses, Alignment Two would proceed directly to 1st Street and continue as a shared use path to New Hampshire Avenue.

Proposed Structures and Roadway Crossings

The existing crossing at Riggs Road, consisting of a crosswalk and striped 10-foot wide median, would be improved by raising the median to an island. The crosswalk would be positioned so that its entire width would traverse the island. Signal adjustments might be required to provide a more efficient timing for crossing pedestrians and cyclists and vehicles making turns.



Signage

Sign system recommendations should be implemented along portions of trail that are not on National Park Service lands, including the appropriate warning and regulatory signs recommended for at-grade street crossings for the crossing at Riggs Road and New Hampshire Avenue. For portions of the trail on National Park Service lands, signage will be designed to coordinate with NPS standards. In general, the National Park Service follows the guidance of the most recent edition of the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration and the 1988 NPS Sign Manual for road and trail signage. All NPS guide and informational signs, with the exception of U.S. Park Police signs, are retroreflectorized brown with lettering in white Modified Clarendon typeface. Sometimes, stained wooden routed signs are used along trails.

Connections

This portion of the trail provides a connection to the many houses located in the vicinity of Riggs Road and 1st Street. Improvements to the Riggs Road intersection could facilitate easier pedestrian and bicycle crossings from the neighborhoods north of Riggs Road to the Fort Totten Metro Station.

Gateways and Waysides

Riggs Road and 1st Place provide a minor gateway from the neighborhoods to the trail to access the Fort Totten Metro Station. The National parklands surrounding the metro station are a natural way station for trail users.

Landscaping

There are two alternatives proposed along this segment. Both alternatives would have similar landscape treatments along the on-street locations of trails. Both alternatives cross Riggs Road at grade. Along Riggs Road at 1st Place, the street crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor. In the buffer area along 1st Street, placement of street trees or development of curbside gardens by residents would be appropriate.

In addition to routing the trail on Kennedy, improvements could include installation of barriers, curbing and landscaping treatments that would discourage or eliminate the dumping problems, yet still make the street accessible for residents and guests to park cars.

Landscape Treatments for the Area of Riggs Road to New Hampshire Avenue (two proposed alignments)

Included	Treatment
	Berm
X	Bioswale
X	Boardwalk
X	Curbside Gardens
X	Street Crossings
	Dry Streambed
X	Indigenous Vegetation
	Ornamental Vegetation
X	Photovoltaic Lighting
X	Permeable Paving
	Planter
X	Street Trees
	Terracing
	Unusual Focal Point

Both alternatives cross NPS lands; Alignment Two encompasses a trail alignment that uses a much larger area of parkland than Alignment One. In both cases, the landscape treatment would be the same for vegetative, lighting and trail treatments.

As a Federal agency, the National Park Service is governed by Executive Order 13112 (issued in 1999) on the prevention and control of invasive species and the 1994 Executive Memorandum on beneficial landscaping, which recommends the use of native plants on Federal facilities. Vegetative treatment on NPS lands would include revegetation in areas of construction disturbance by planting the types of native species appropriate for the area.

Trail surfacing on parkland could use permeable or porous materials to aid in drainage and to provide green design.

Surface drainage in areas along the MBT on NPS land should be conveyed to bioswales, where grease, oil or other contaminates in urban run-off would be absorbed by plants. Construction of a boardwalk, if appropriate, may be required to ford areas that are frequently wet and not easily drained.

Art

Entries, exits and thresholds: Depending on the final alignment of this segment, the trail will follow various on-street and off-street routes. Basic trail infrastructure will mark these transitions. These elements could be designed by artists or collaborative teams that include artists. Major transitions occur at Riggs Road, Kennedy and First, Madison and First, and New Hampshire; these might be marked with a series of special blazes or transition treatments.

The design elements of the trail segments through NPS land will need to be consistent with NPS approaches and the standards developed for the Fort Circle Parks. For these segments, simple, informal, rustic style landscape architecture is the norm, rather than the exception, and is likely to be accomplished by the profession of landscape architecture.

Lighting & Security

With the exception of 1st Street, there are no existing lighting systems in this segment of the proposed MBT. It is recommended that if Alignment One is selected, the portion of the trail along 1st Street between Kennedy and Madison Streets be considered for lighting augmentation that is consistent with existing lighting. Neighborhood input would be solicited. It is recommended that lighting for currently unlighted portions of these proposed alignments be provided via pole mounted, architectural type area luminaries. Utilizing pole mounted fixtures will maximize coverage area (increasing energy efficiency of the system); while using smaller pole mounted lighting fixtures (below 14') will reduce the glare on the trail, thereby maximizing the quality of light for users. Vandal resistant type luminaries, containing poly-carbonate lenses and/or globes, will be utilized to maximum fixture life. Specialty lighting will be provided for proposed art-work and landscape features, to enhance the intended design intent. Although Alignment Two traverses a considerable distance on parkland, that portion of the trail is isolated and needs the recommended lighting for proper security.

Alignment One is routed through a residential neighborhood. Although the addition of emergency call boxes at regular intervals along this section of trail would increase security,

these call boxes could be prone to false alarms due to the close proximity to the residential neighborhood.

Alignment Two, closer to the tracks on park lands behind the neighborhood, poses more lighting and security related issues. The thick wooded area between the houses and the tracks is a natural barrier that could potentially create a feeling of isolation for trail users. Design would need to address security issues in providing elements such as lighting and call boxes. However, as noted earlier, lighting on National Park Service lands must be coordinated with the NPS. To avoid impacts to wildlife on NPS property, it is NPS policy that lighting in or around natural areas should be avoided or minimized and directed downward. Requests to increase lighting on NPS land will need to be individually considered (area by area, trail segment by segment) for the overall impacts on park lands, in consideration of the general NPS policy to not light parks.

Policing

This segment of the trail is in MPD PSA 402, which will provide the primary patrol force. This segment also includes portions of Fort Totten and Fort Slocum Parks (NPS). Support should be provided by U.S. Park Police, as well as Park maintenance staff and DDOT street maintenance crews. Illegal dumping has been a particular problem at Kennedy St near 1st Street, NE.

The 1st Street, NE alignment option keeps the trail along or close to existing public streets. This option will provide trail users a more secure environment and will be easier for police agencies and maintenance crews to monitor and patrol. During daylight hours trail users on this segment will generally be in plain view and accessible to a strong residential community. Special MPD and/or NPS patrols (bike or scooter mounted) are recommended for evening time periods, especially at dusk. Currently, U.S. Park Police based in Rock Creek Park have only one patrol unit (motor vehicle) for all of their Ft. Circle parklands east of Rock Creek.

The alignment of Alternative Two, adjacent to the railroad tracks, is isolated from community view. The only visual surveillance along this alignment will be from passing Metro trains. Trail users will be isolated between a large, dense wooded area and the railroad tracks. Special MPD and NPS patrols (bike or scooter mounted) would be necessary throughout the day along this alignment option, with special emphasis provided at dusk. Special emergency call boxes are also recommended for this alignment, as noted previously.

Implementation

This segment should be designed as a unit, following selection of one alignment. The decision on the alignment would follow detailed presentation of the two alignments to affected agencies and the public. Each has advantages and disadvantages.

Following a decision, geotechnical and survey data would be gathered, especially if Alignment Two is the choice. Additional traffic data would also be required to determine final configuration and potential signal timing adjustments for the Riggs Road crossing. Design could then proceed, coordinated with affected agencies, followed by construction.

NEW HAMPSHIRE AVENUE TO OGLETHORPE STREET—BLAIR ROAD INTERSECTION

Proposed Alignments

While two alignments are under consideration south of New Hampshire Avenue, both would use an at-grade crossing on the northeast leg of the intersection at First Street, NE. North of New Hampshire, two alignment options are again under consideration. One would proceed down McDonald Place on public right-of-ways, while the other would proceed toward a service road through the eastern edge of the Community Gardens on NPS lands (see Layout Sheet 18). These are discussed below.

Alignment One

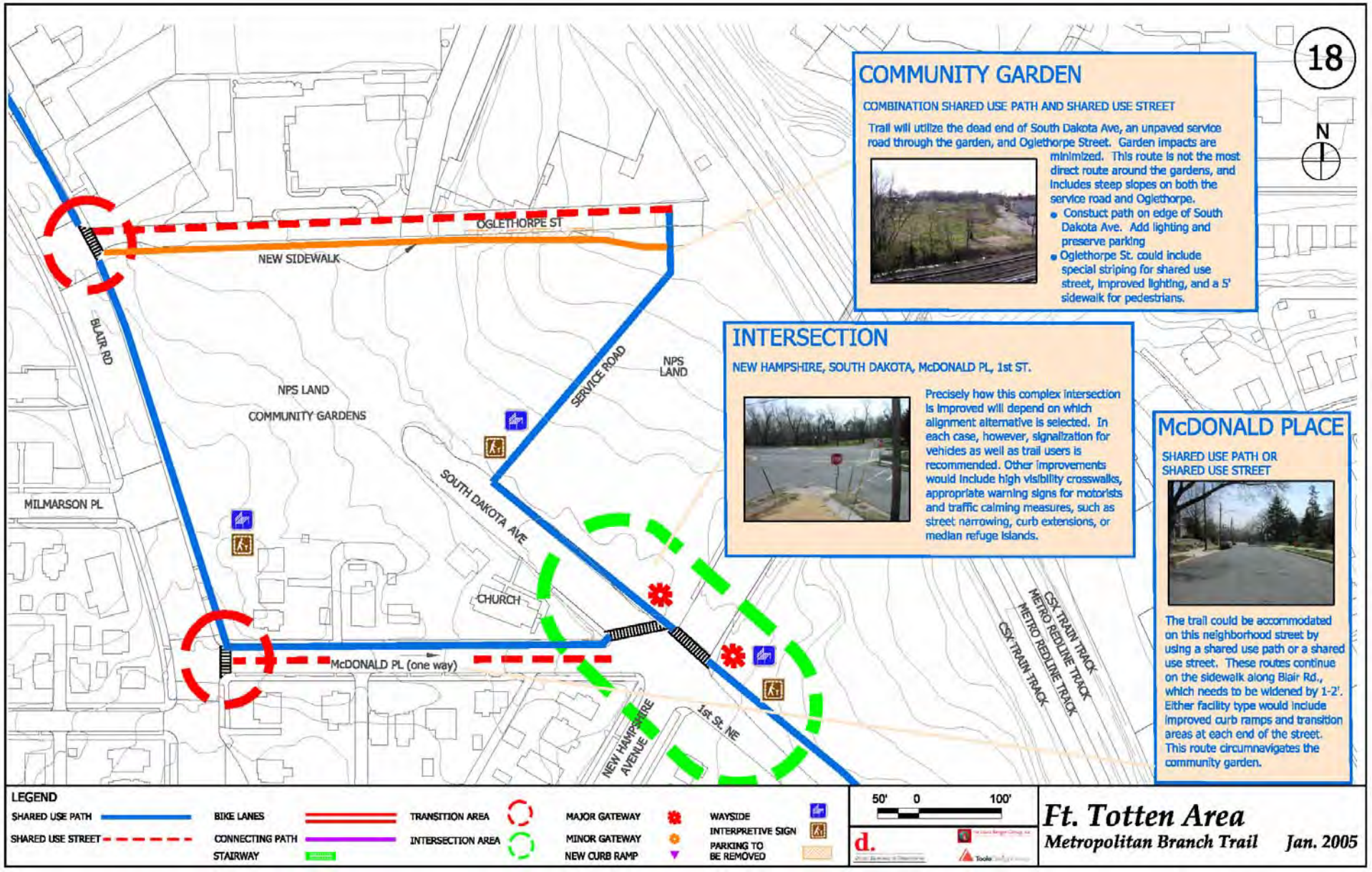
The first option would cross New Hampshire Avenue at-grade and proceed down McDonald Place to Blair Road. McDonald Place is one-way for vehicular traffic in the eastern direction. The trail would then proceed along Blair Road by a newly constructed path past Oglethorpe Street.

Alignment Two

The second option would cross New Hampshire Avenue at-grade and proceed down South Dakota Avenue (which dead ends into Community Gardens). The trail would then turn onto a service road that diagonals back and down to Oglethorpe Street. The trail would then follow Oglethorpe Street to Blair Road.

Alignments Considered

Two south-to-north alternatives that included bisecting the Community Gardens with a new path (instead of using the existing service path) were considered but not carried forward. Discussion of these alternatives with park officials during the Environmental Assessment Internal Scoping meeting resulted in a decision that they be dropped from further consideration. The Community Gardens were determined to have both historical and ethnographic value as well as strong community support for keeping current plots intact.


18
N
COMMUNITY GARDEN
COMBINATION SHARED USE PATH AND SHARED USE STREET
Trail will utilize the dead end of South Dakota Ave, an unpaved service road through the garden, and Oglethorpe Street. Garden impacts are minimized. This route is not the most direct route around the gardens, and includes steep slopes on both the service road and Oglethorpe.
• Constuct path on edge of South Dakota Ave. Add lighting and preserve parking
• Oglethorpe St. could include special striping for shared use street, improved lighting, and a 5' sidewalk for pedestrians.
INTERSECTION
NEW HAMPSHIRE, SOUTH DAKOTA, McDONALD PL, 1st ST.
Precisely how this complex intersection is improved will depend on which alignment alternative is selected. In each case, however, signalization for vehicles as well as trail users is recommended. Other improvements would include high visibility crosswalks, appropriate warning signs for motorists and traffic calming measures, such as street narrowing, curb extensions, or median refuge islands.
McDONALD PLACE
SHARED USE PATH OR
SHARED USE STREET
The trail could be accommodated on this neighborhood street by using a shared use path or a shared use street. These routes continue on the sidewalk along Blair Rd., which needs to be widened by 1-2'. Either facility type would include improved curb ramps and transition areas at each end of the street. This route circumnavigates the community garden.
OGLETHORPE ST
NEW SIDEWALK
BLAIR RD
NPS LAND
COMMUNITY GARDENS
SERVICE ROAD
NPS LAND
SOUTH DAKOTA AVE
MILMARSON PL
CHURCH
McDONALD PL (one way)
1st St. NE
NEW HAMPSHIRE AVENUE
CSX TRAIN TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Ft. Totten Area
Metropolitan Branch Trail
Jan. 2005

Existing Conditions

McDonald Place joins South Dakota Avenue at a five-way intersection with New Hampshire Ave and 1st Street. McDonald Place is a one-way (in the southeast direction) residential street that also has a church on the corner. This street is 28 feet wide with a 6-foot sidewalk and 4-foot grass buffers on each side of the street.

Looking southwest on New Hampshire Avenue

Looking north toward McDonald Place from across New Hampshire Avenue

South Dakota Avenue is 42 feet wide at McDonald Place. There is no sidewalk on either side of the road. The combined roadways are 58 feet wide at the intersection with New Hampshire, 125 feet to the east. Traffic entering New Hampshire Avenue is currently controlled by stop sign.

New Hampshire Avenue currently has four lanes and is 52 feet wide at the intersection with 1st Street, widening to a width of 72 feet at the overpass over the metro tracks just north of the intersection. DDOT plans to upgrade the overpass; the discussion of potential crossing improvements for the trail at this location, later in this chapter, utilize the planned configuration.

Looking northwest across New Hampshire Avenue at South Dakota Avenue dead end

Under Alignment One, the trail proceeds along McDonald Place to Blair Road, then along Blair Road on an off-road pathway – to be constructed – past Oglethorpe Street. With the exception of two residences, which have a six-foot sidewalk, there is no sidewalk along Blair Road.

However, a social path and informal garden access road (dirt) provide 12-18 feet between gardens and mature trees. Significant compacted dirt exists in tree root zones and both erosion and slopes along Blair Road are an issue as well.

If Alignment Two is selected, the trail will proceed down the north side of South Dakota Avenue. South Dakota is in poor condition. Because it dead ends at the Community Gardens, it is used primarily for parking (for gardeners and those attending the church on the corner). Illegal dumping has also been noted as a frequent occurrence in the past.

Blair Road, looking south past Community Gardens

Alignment Two would avoid disturbing the Community Gardens at this location. Currently the Blair Road Community Gardens contain 200 plots with an average of 200 members. The majority of these members are elderly citizens and there is very little turnover of the garden plots, with many people who have moved out of the area, including into Maryland, returning to D.C. to tend to their plots. Gardening occurs year round when there is a mild winter.

Garden Service Road

Alignment Two would turn from South Dakota Avenue onto an existing dirt service road and follow it to Oglethorpe Street. The service road is wide enough for an 8-10 foot trail, but its indirect alignment and steep grades will make it inconvenient for both bicyclists and pedestrians, especially those who would benefit from ADA compliant gradients.

Oglethorpe Street is a one-way cul-de-sac, without sidewalks, in very poor condition. This street is approximately 24 feet wide with parking designated for one side only. Parkland adjacent to the railroad tracks is vegetated with small trees and shrubs.

Oglethorpe Street/Community Gardens

Trail Type

Alignment One

Alignment One would proceed along McDonald Place, a one-way street eastbound, and having least potential impact on cultural resources, is preferred by the NPS. Two facility types are feasible along this street, and should be offered to local residents to determine their preference:

1. An on-street bikeway, with special pavement markings; signs and markings would be used to permit contra-flow bicycling in the western direction on this one-way street. The existing sidewalk provides adequate accommodations for pedestrians and child bicyclists.

2. A shared use path on the north side of the street is feasible if parking is eliminated from this side of the street. On-street parking needs are minimal due to the presence of driveways at some properties and overall small number of homes; and likely could be met by reducing parking to only the south side of the street. The 30-foot street could be narrowed to the following cross-section (from south to north):

   - 8-foot parking lane (eastbound)
   - 12-foot one-way travel lane (eastbound)
   - 10-foot curb separated shared use path (two-way)
   - 4-foot grass/tree buffer (same as existing)
   - 5-foot sidewalk (same as existing)

Along Blair Road, a 10-12 foot shared use path would be constructed to the existing sidewalk along Blair Road. The existing sidewalk would be widened by 1-2 feet in front of homes along Blair Rd.

Alignment Two

Alignment Two would proceed along the north side of South Dakota Avenue as a 10-12 foot wide shared use path. The path could be constructed on DDOT street ROW or NPS park ROW, or a combination of both. The trail could be designed in conjunction with any paving or reconstruction of this block of S. Dakota Avenue to include a curb separation and landscaping. The trail could be designed in such a way as to reduce or eliminate the illegal dumping issues and enhance the gateway to the Community Gardens.

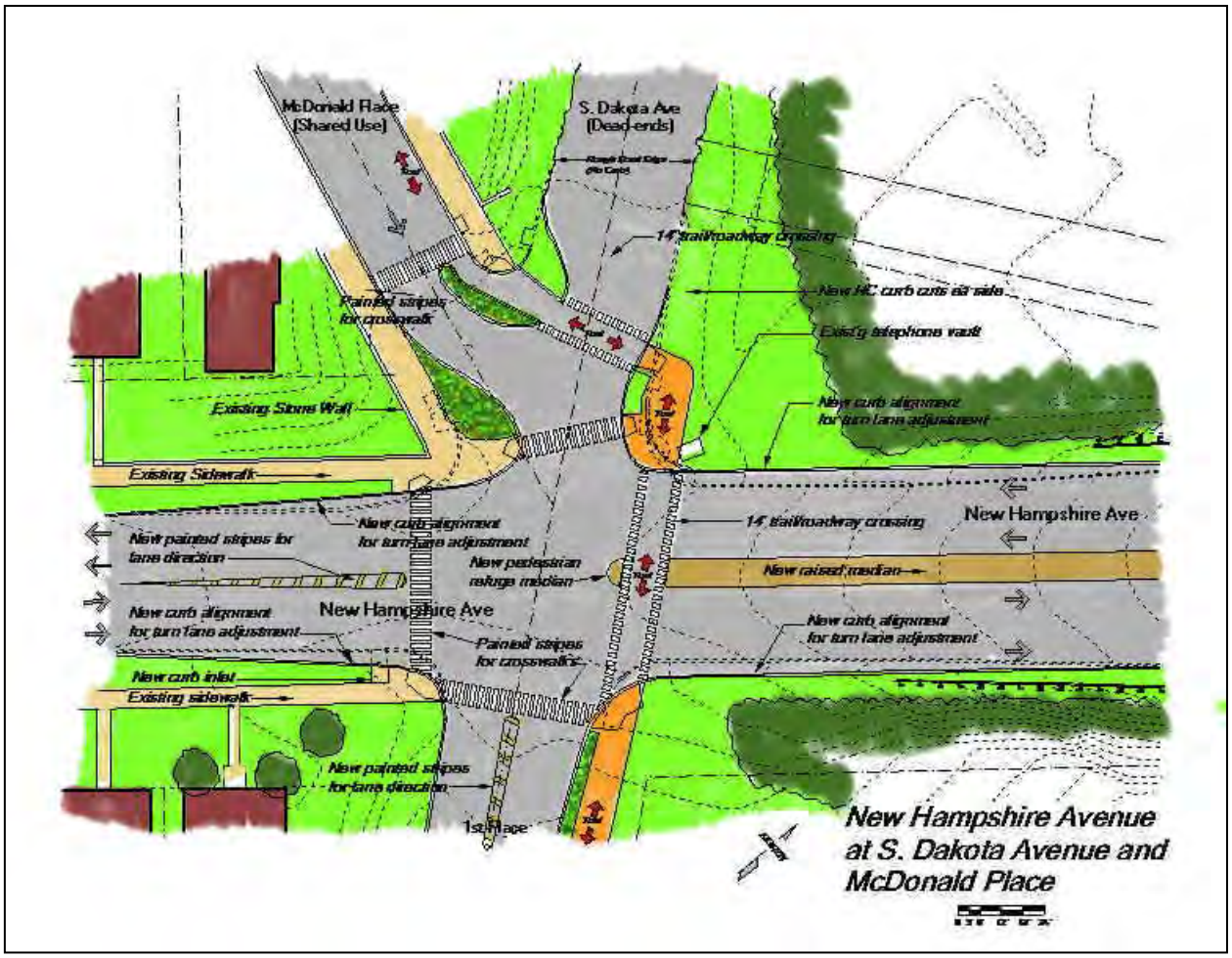
Looking south on Oglethorpe Street toward the CSX underpass

This route would continue through the garden by constructing a 10-foot shared use path on the DDOT paper street (garden service road) to the east end of Oglethorpe Street. Oglethorpe would be striped for shared use bicycling, and a five-foot wide sidewalk would be installed for pedestrians by narrowing the

street on the south side with a newly installed curb. Some parking on Oglethorpe would likely be eliminated.

Proposed Structures and Roadway Crossings

Proposed crossing improvements are depicted below. Regardless of the selection of trail alignment options north of New Hampshire Avenue, the crossing should be located across the northeast leg of the intersection. The width of New Hampshire Avenue at this location allows for an 8-foot raised median to be installed, which will improve crossing safety and convenience for trail users. A signal for both vehicles and trail users would be required; it can be configured to be actuated either by trail users needing to cross, or vehicles preparing to cross or enter New Hampshire Avenue from the side streets.



Recommendations for this intersection also include other features that will enhance both trail user and overall safety at this large and untypical intersection.

- Curb extensions on both sides of the outlet of McDonald Place/S. Dakota Avenue

- Merging of McDonald Place and South Dakota Avenue traffic prior to cueing at the intersection

- Curb ramp on west side of New Hampshire Avenue prior to the intersection to allow southwest bound cyclists on New Hampshire to access the northwest corner in order to cue for a left turn across New Hampshire and proceed southbound on the trail.

- If Option One is selected, a trail crosswalk and curb extension on the corner of McDonald Place and South Dakota Avenue is recommended. Note: this intersection plan can easily be tailored to work with either facility type option previously described for McDonald Place.

- Optional Median in First Street.

- Optional new crosswalks for each leg of the intersection.

Signage

Typical sign system recommendations should be implemented in this segment in consultation with the National Park Service. Crossing safety and wayfinding signs are critical in this segment, and the options provided in the proposed sign system should provide approaches that will meet the needs of the NPS as well as DDOT and trail users. For portions of the trail in the vicinity of the Community Gardens, on National Park Service lands, signage may require designs that coordinate with NPS standards, as noted in previous sections of this chapter. As the trail passes the Community gardens, there is an opportunity for interpretive signage noting this historic area, provided in coordination with the NPS and Community Garden representatives.

Connections

Alignment One provides the best connections and trail access for Manor Park residents. The route of Alignment One would improve bicycle and pedestrian access along Blair Road where currently no sidewalk exists, as well as to the metrobus stop located adjacent to the gardens across from Milmarson Place.

Either alignment option will improve crossing safety at New Hampshire Avenue, access to the Community Gardens themselves and to the Fort Circle Parks system, with the adjacent Fort Slocum; these public NPS lands are enjoyable natural areas as well as historically significant.

Gateways and Waysides

There is one wayside opportunity along each alignment option (see Layout Sheet 18). Each location could easily provide space for a bench and interpretive signage highlighting the historic significance of the Ft. Circle Parks and the cultural heritage of the community gardens which were started as post WWII “victory gardens.

Landscaping

There are two alternatives proposed along this segment. Both alternatives would have similar landscape treatments along the on-street locations of trails. Along New Hampshire at 1st Street, the street crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor. In the buffer areas along either McDonald Place or South Dakota Avenue, placement of street trees or development of curbside gardens by residents would be appropriate. In the vicinity of the Community Gardens at South Dakota Avenue, placement of plantings could create an unusual focal point for the Gardens.

Trail surfacing on parkland could use permeable or porous materials to aid drainage and provide green design. Surface drainage along the Service Road and between Blair Road and the Community Gardens could be conveyed to a bioswale, where any contaminates in the runoff would be absorbed by plants. A boardwalk would be appropriate along Blair Road to cross exposed tree roots.

Landscape Treatments for the Area of New Hampshire to Oglethorpe Street – Blair Road (Two Proposed Alignments)

Included	Treatment
	Berm
X	Bioswale
X	Boardwalk
X	Curbside Gardens
X	Street Crossings
	Dry Streambed
X	Indigenous Vegetation
	Ornamental Vegetation
X	Photovoltaic Lighting
X	Permeable Paving
	Planter
X	Street Trees
	Terracing
X	Unusual Focal Point

Art

The design elements of the trail segments through NPS land, including signs, will need to be consistent with NPS approaches and the standards developed for the Fort Circle Parks.

For Alignment One, there is potential for a wayside on the knoll along Blair Road overlooking the Community Gardens, on non-NPS lands. For example, artist-designed elements (such as seating, lighting or bike racks) could be considered. However, artwork on non-NPS land that can be perceived to be part of the Community Gardens should be reviewed for its consistency with NPS policies on the "structures" that are permitted in the community gardens. For example, garden arbors are not permitted, because the gardens are intended to be for vegetable production and not for ornamental garden plots.

Similarly, Alignment Two could provide a wayside in the vicinity of South Dakota Avenue that would serve as a gateway to the Gardens, serving gardeners as well as trail users. It also should be coordinated with the NPS.

Lighting & Security

Alignment One has been provided with existing high pressure sodium (HPS) street lighting fixtures for illumination of the existing roadways along McDonald Place and Blair Road. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at multiple locations along this proposed route yielded values between 0.09 and .79 foot candles respectively. Although these readings are lower then the recommended IES requirements for a bikeway, lighting for this portion of the

MBT is driven by requirements for the associated roadway and it appears that lighting levels could be improved through the replacement of burn out lamps in the existing fixtures.

Alignment Two along South Dakota Avenue also has existing lighting that should be utilized. However, as it follows the service road through the Gardens and proceeds up Oglethorpe Street, new lighting is required.

For the service road, lighting is on National Park Service lands and will be coordinated with the NPS. Sustainable design is an option, using self-powered lighting fixtures such as photovoltaic lighting that do not require conduit trenching. The result should consider the lighting of Oglethorpe Street, however, and might be better coordinated by matching designs. For Oglethorpe Street, it is recommended that lighting be provided via pole mounted, architectural type area luminaries. Utilizing pole mounted fixtures will maximize coverage area (increasing energy efficiency of the system); while using smaller pole mounted lighting fixtures (below 14') will reduce the glare on the trail, thereby maximizing the quality of light for users. Vandal resistant type luminaries, containing poly-carbonate lenses and/or globes, will be utilized to maximum fixture life. Should specialty lighting be considered for proposed art-work and landscape features, it would need to adhere to NPS policies. As noted in earlier sections, it is NPS policy that lighting in or around natural areas is avoided or minimized and directed downward. Requests to increase lighting on NPS land will need to be individually considered (area by area, trail segment by segment) for the overall impacts on park lands, in consideration of the general NPS policy to not light parks.

For the portion of the MBT routed through McDonald Place – a residential neighborhood – it is recommended that no additional call boxes be added. For the portion traversing the Gardens, call boxes are optional.

Policing

This segment of the trail is in MPD PSA 402, which will provide the primary patrol force. This segment also includes portions of Ft. Totten and Ft. Slocum Parks (NPS). Support should be provided by U.S. Park Police, as well as Park maintenance staff and DDOT street maintenance crews.

Of the two potential alignments – McDonald Place and the service road to Oglethorpe Street, the McDonald Place alignment option keeps the trail along or closer to existing public streets. This option would provide trail users a secure environment, accessible to a strong residential community, and would be easiest for police agencies and maintenance crews to monitor and patrol. During daylight hours, trail users on either alignment would generally be in plain view. Bicycle, scooter or motor vehicle patrols will be effective in this segment.

Implementation

Development of the one-block section of Alignment One along Blair Road is recommended for immediate action. The lack of a hard surface passageway in this area is creating erosion problems on NPS land and adding to the stress experienced by these mature street trees in such an urban setting. Additionally, elimination of this sidewalk gap on Blair Road will dramatically improve neighborhood pedestrian conditions and access and to the bus stop, as

well as complete a critical segment of the MBT, which is needed in the short term as part of a primarily on-road interim route, as well as in the long term for Alignment Option One.

Beyond this short piece, the rest of the segment should be designed and constructed as a unit, following selection of one alignment. The decision on the alignment would follow detailed presentation of the two alignments to affected agencies and the public. Each has advantages and disadvantages. Following a decision, some survey data could be needed, especially for the new construction along Blair Road, the service road, and Oglethorpe Street. Additional traffic data could assist in determining final configuration and signal design for the New Hampshire Avenue crossing. Design could then proceed, coordinated with affected agencies, followed by construction.

PRINCE GEORGE'S COUNTY SPUR FROM FORT TOTTEN METRORAIL STATION TO PRINCE GEORGE'S COUNTY BORDER

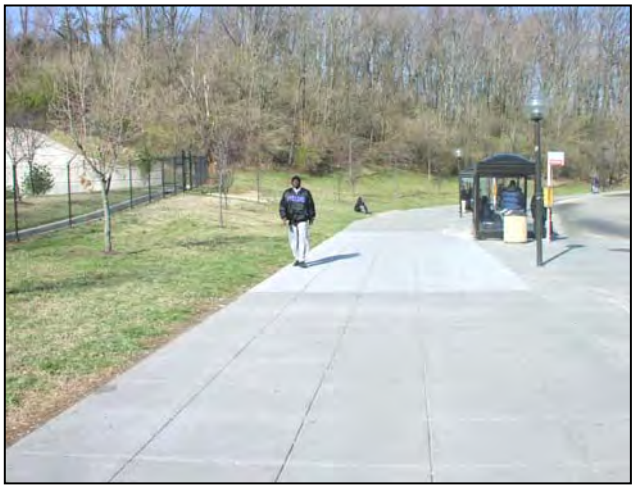
Proposed Alignment

The MBT would first proceed from Fort Totten Metro Station to South Dakota Avenue along an alignment that will be determined at a future date. One option is shown in layout sheet 15. It would cross South Dakota Avenue at-grade, then proceed to Gallatin Street and follow Gallatin Street approximately 1.1 miles to the Prince George's County Border. The alignment would either be on-street or on a path immediately adjacent to the roadway. At the Prince George's County Border it would connect to the Prince George's County Trail by crossing NPS lands for a short distance along an existing cut through vegetation just east of Saint Ann's driveway (See layout sheet 16).

Existing Conditions

Along Galloway Street between the Metrorail station and 4th Street, there is an existing concrete sidewalk that varies in width from 10 to 13 feet, then 13 to 16 feet, to even wider at the station entrance.

Galloway Street at 4th Street, looking west



Sidewalk along Galloway Street on the west side of the station, looking west, away from the station entrance

There is no sidewalk along Galloway Street from 4th St., NE. to South Dakota Avenue. The south side of Galloway Street is NPS parkland. It has an existing social path with exposed tree roots and compacted ground, providing a continuation of the metro sidewalk to connect with South Dakota Avenue's sidewalk. It also experiences a large height change between South Dakota Avenue and 4th Street. Six foot sidewalks exist along South Dakota Avenue from Galloway Street to Gallatin Street, with 4-foot grass buffers.

Social Path on parkland, parallel to Galloway Street, looking west

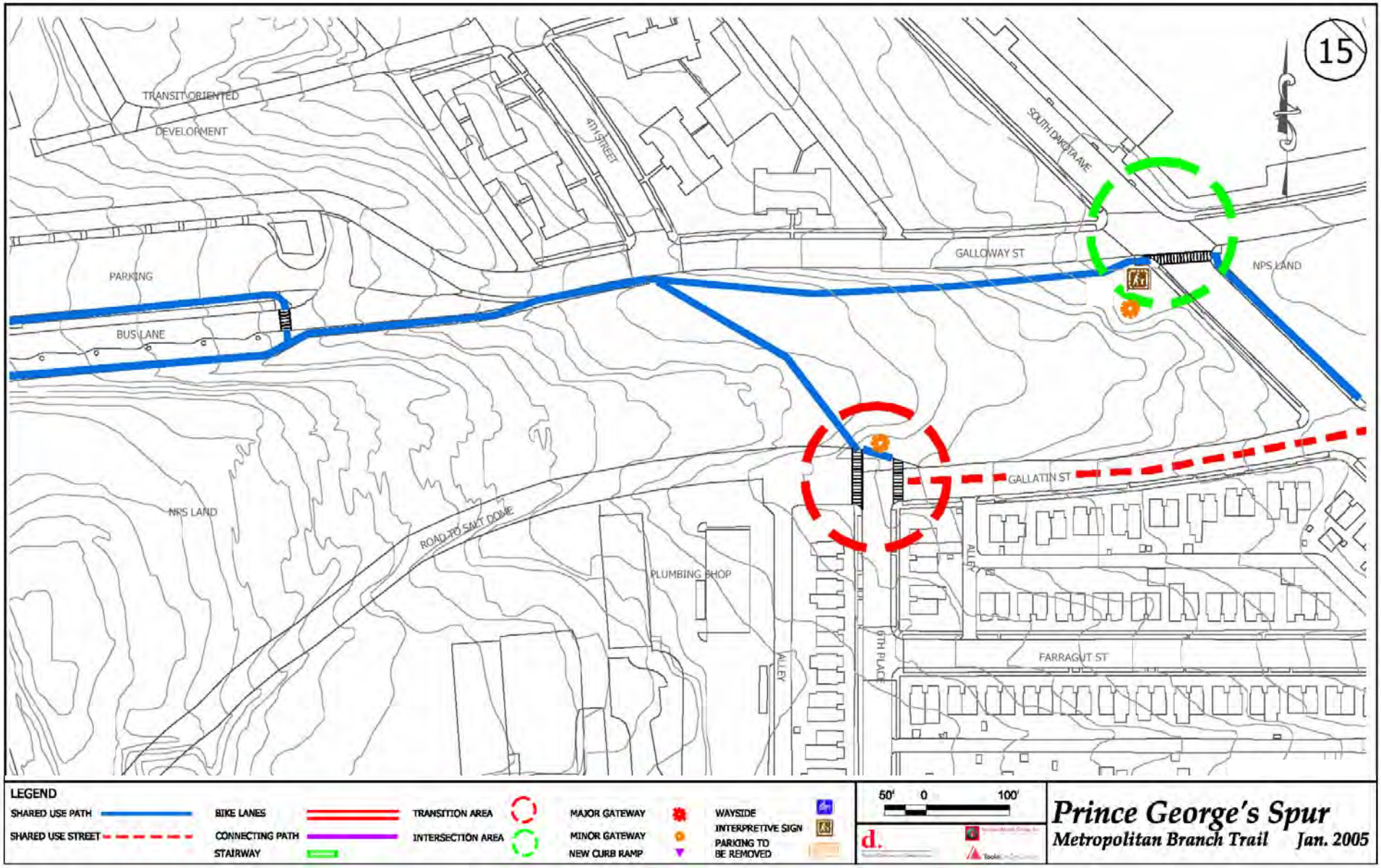
South Dakota Avenue, looking toward Galloway Street

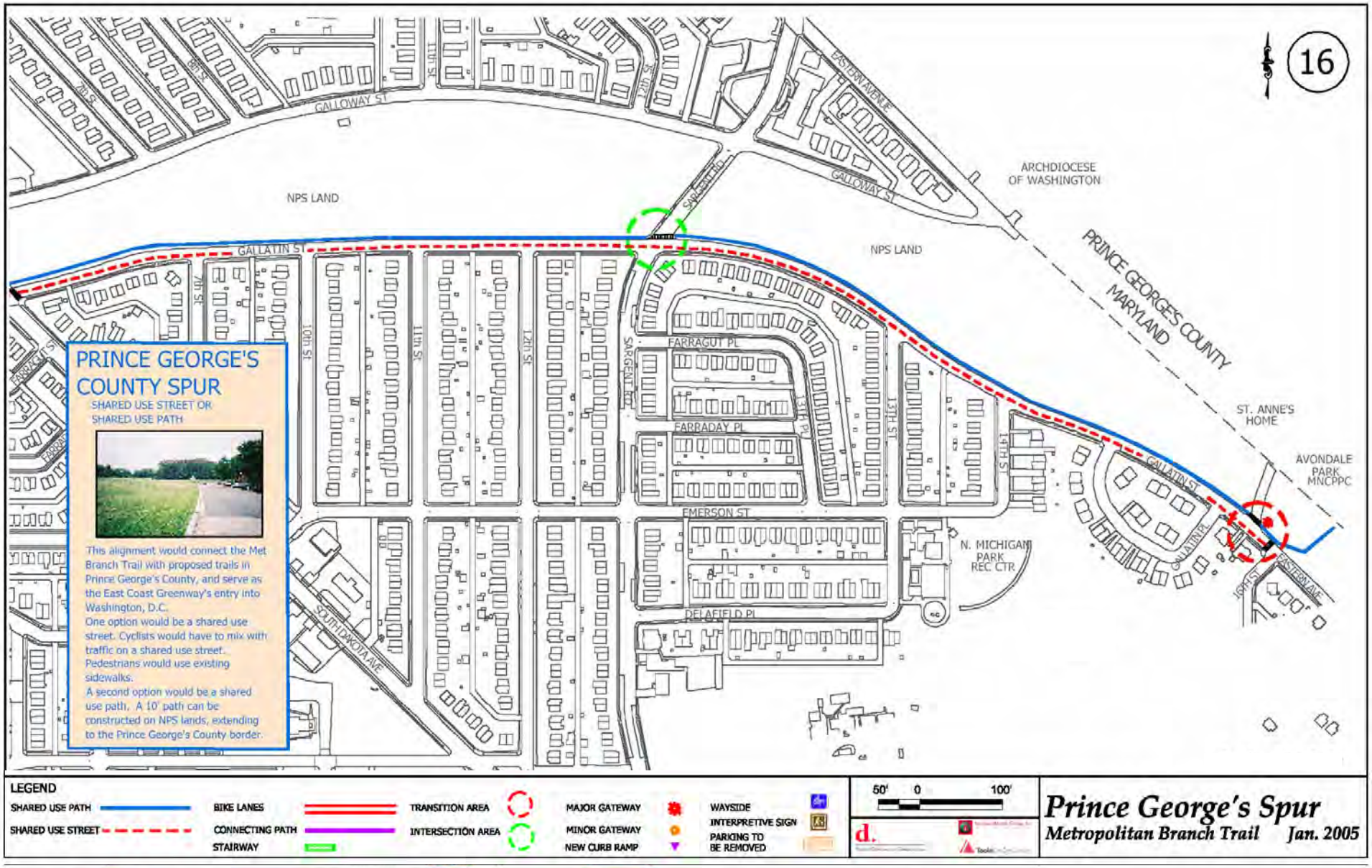
The spur proceeds along Gallatin Street, which is approximately 42 feet wide. Parking is allowed only on the south side of the street for neighborhood residents only. There are several smaller neighborhood streets that intersect Gallatin Streets and most are "all way" stops. A six-foot sidewalk exists on the south side of Gallatin Street.

A strip of NPS parkland runs adjacent to Gallatin Street for the entire length of the proposed spur. The majority of the parkland in the vicinity of the trail alignment is grass open space, but as the spur approaches its eastern extent, a drainage way with undergrowth and wooded vegetation parallels Gallatin Street. Woods exist at the point where the trail would turn to connect to the Prince George's County Trail.

Spur along Gallatin Street, midway to PG County border, looking east

Spur along Gallatin Street, midway to PG County border, looking east


15
TRANSIT ORIENTED
DEVELOPMENT
4TH STREET
SOUTH DAKOTA AVE
GALLOWAY ST
NPS LAND
PARKING
BUS LANE
NPS LAND
ROAD TO SALT DOME
GALLATIN ST
PLUMBING SHOP
ALLEY
6TH PLACE
ALLEY
FARRAGUT ST
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Prince George's Spur
Metropolitan Branch Trail
Jan. 2005


16
PRINCE GEORGE'S COUNTY SPUR
SHARED USE STREET OR SHARED USE PATH
This alignment would connect the Met Branch Trail with proposed trails in Prince George's County, and serve as the East Coast Greenway's entry into Washington, D.C.
One option would be a shared use street. Cyclists would have to mix with traffic on a shared use street. Pedestrians would use existing sidewalks.
A second option would be a shared use path. A 10' path can be constructed on NPS lands, extending to the Prince George's County border.
NPS LAND
GALLOWAY ST
EASTERN AVENUE
ARCHDIOCESE OF WASHINGTON
SARGENT RD
GALLATIN ST
FARRAGUT PL
FARRADAY PL
EMERSON ST
DELAFIELD PL
SOUTH DAKOTA AVE
N. MICHIGAN PARK REC CTR
PRINCE GEORGE'S COUNTY MARYLAND
ST. ANNE'S HOME
AVONDALE PARK MNCPPC
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Prince George's Spur
Metropolitan Branch Trail
Jan. 2005

Trail Type

The options are to either construct a new 12-foot hard surface path on NPS land adjacent to Gallatin Street for the approximately 1.1 miles to Prince George's County Border, or construct/stripe an on-road bike lane along Gallatin Street to Prince George's County Border.

Generally, this road has a relatively low volume of traffic and could potentially support a shared use street. However, this portion of the Fort Circle Parks could also support the development of a shared-use path within the parklands on the south side of the Fort Circle Park. This alignment would take the trail off the street and into a green open space parkland setting. On Gallatin Street, closer to the intersection of South Dakota Avenue, the parkland is open with few if any trees or utility poles to impede a contiguous trail. As you progress east, the parkland area becomes more wooded and the utility poles are sighted closer to the curb. These would not pose serious impediments, however.

For either facility type option, the portion of the trail connecting to the Prince George's County Trail east of Saint Ann's driveway, would need to be a shared use pathway. Any part of the alignment on NPS lands would be maintained by DDOT and administered by DDOT in coordination with the NPS.

Proposed Structures and Roadway Crossings

A crosswalk and countdown signalization would be recommended at the intersections of Gallatin Street and Galloway Street with South Dakota Avenue.

Signage

The recommended sign system can be employed for segments using public streets, such as Gallatin and Galloway streets. Portions on NPS lands, however, need to consider NPS design guidelines, as noted in earlier sections of this chapter.

Connections

The spur provides a key linkage for residents of northeast DC and for the regional trail system, by linking the MBT with the Anacostia Tributaries Trail System in Prince George's County. The M-NCPPC in the County has designed a shared use path from the West Hyattsville station, to meet the spur at the DC/PG boundary near the St. Ann's Home (see Layout Sheet 16). There are many residential communities that will be served by a pathway in this part of the Ft. Circle Parks, including Lamond-Riggs, North Michigan Park and Michigan Park. The spur will provide local youth wholesome and close to home recreation, as well as bicycle and pedestrian access to trails in P.G. County and to the MBT. P.G. County residents will use the spur to access the trail system in the city.

In addition, the spur will carry the route of the East Coast Greenway (ECG) from the County to the main line of the MBT, where it will be routed to the National Mall. The ECG is an emerging

trail system that will eventually link Maine to Florida, connecting each of the major metropolitan areas along the eastern seaboard.

Gateways and Waysides

The connection of the spur to the Prince George's County trail is a major gateway onto the Metropolitan Branch Trail and into the District of Columbia. Users of Prince George's County trails would now have an easily accessible and delineated trail to enter into DC and to points north (Takoma) and South (Rhode Island Avenue all the way to the National Mall). In addition, this portion of trail could serve as a gateway to the Fort Circle Parks. This portion of parkland is open and could serve as a resting point with interpretive signage along the trail.

A pausing point with interpretive signage is also proposed at the corner of South Dakota Avenue and Galloway Street. Interpretation about the Ft. Circle parks would be extremely effective at this location because many local and other city residents would be exposed to it at this site.

Landscaping

There are two trail alignments proposed along this segment; one alignment would be on-street and the other would be largely on NPS land. At least two street crossings are proposed – one at Galloway and South Dakota and another one at Galloway and 4th Streets. At the street crossing, a symbol or feature designating the MBT alignment could be marked. This treatment would be consistent with other street crossings throughout the trail corridor.

In terms of landscape treatments on NPS lands, as a Federal agency, the National Park Service is governed by Executive Order 13112 (issued in 1999) on the prevention and control of invasive species and the 1994 Executive Memorandum on beneficial landscaping, which recommends the use of native plants on Federal facilities. Vegetative treatment on NPS lands would include revegetation in areas of construction disturbance by planting appropriate types of native species.

Trail surfacing on parkland could use permeable or porous materials to aid in drainage and to provide green design.

Landscape Treatments for the Area of P.G. County Spur from Fort Totten Metro Station to P.G. County Border (two proposed alignments)

Included	Treatment
	Berm
	Bioswale
	Boardwalk
	Curbside Gardens
X	Street Crossings
	Dry Streambed
X	Indigenous Vegetation
	Ornamental Vegetation
X	Photovoltaic Lighting
X	Permeable Paving
	Planter
X	Portals
X	Street Trees
	Terracing
X	Unusual Focal Point

There is an opportunity to mark the place where the MBT connects to the Prince George's County Spur with a portal treatment. An art statement with limited plantings, serving as an unusual focal point and pavement treatment, would be appropriate.

Art

Along NPS lands, public art is only recommended for consideration as a part of a wayside or interpretive location. The design elements of the trail segments through NPS land, including signs, will need to be consistent with NPS approaches and the standards developed for the Fort Circle Parks. For these segments, simple, informal, rustic style landscape architecture is the norm, rather than the exception, and is likely to be accomplished by the profession of landscape architecture. In conjunction with WMATA, additional public art may be considered for sections of the trail traversing the Ft. Totten station property. (See page 6-5 for further discussion).

Lighting & Security

The Spur roadways have been provided with existing high pressure sodium (HPS), "cobra head" type street lighting fixtures for illumination. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at multiple locations along this proposed route yielded values between 0.08 and .15 foot candles respectively. Although these readings are significantly lower then the recommended IES requirements for a bikeway, lighting for this portion of the MBT is driven by requirements for the associated roadway, and its location relative to the adjacent residential neighborhood. If it is necessary to provide for additional illumination in this segment, it is recommended that the existing roadway lighting be supplemented or upgraded in order to meet the illumination requirements.

For the off-road trail option, lighting is on National Park Service lands and will be coordinated with the NPS. Sustainable design is an option, as discussed in previous sections, using self-powered lighting fixtures such as photovoltaic lighting that do not require conduit trenching.

This portion of the MBT is routed through a residential neighborhood. Due to the close proximity to the residential neighborhood, as well as potential alignments on major roadways, it is recommended that no additional security measures be added to this segment of the trail.

Policing

This segment of the trail is in MPD PSA 405, which will provide the primary patrol force. This segment runs along portions of the Ft. Circle Park route (NPS). Support should be provided by U.S. Park Police, as well as Park maintenance staff, as well as WMATA transit police, especially in the area near the Metro Station, bus transfer areas and along Galloway Street, NE.

Whether this segment is on or off-street, the trail will remain close to existing public streets, which decreases security risk and will be easier for police agencies and maintenance crews to monitor and patrol. During daylight hours trail users on this segment will generally be in plain view and accessible to a strong residential community. Bicycle, scooter or motor vehicle patrol should all be effective along this segment. Currently, U.S. Park Police based in Rock Creek Park have only one patrol unit (motor vehicle) for all of their Ft. Circle parklands east of Rock Creek. Special emergency call boxes are also recommended for this trail segment.

Because this segment of trail connects to Prince George's County, police coordination should be established with the Maryland-National Capital Planning Commission (M-NCPPC) who will

be responsible for policing the remainder of the connector path between the DC/MD boundary and the West Hyattsville Metro Station.

Implementation

Except for the small path segment connecting the trail from Prince George's County with Gallatin St. (which should be implemented in conjunction with M-NCPPC implementation of their trail section), this segment should be designed as a unit, following selection of an alignment connecting the Fort Totten Metrorail station with South Dakota Avenue, and a decision on whether to proceed along Gallatin street on- or off-road.. The decision on the alignments and trail type would follow detailed presentation of the two alignments to affected agencies, principally the National Park Service, and the public.

Following a decision, geotechnical and survey data would be gathered. Design could then proceed, coordinated with affected agencies, followed by construction.

CHAPTER SEVEN

TAKOMA AREA

OVERVIEW

This section of the MBT extends from Blair Road at Oglethorpe Street to the DC/MD boundary just north of Piney Branch Road. It is approximately 1.7 miles in length and uses on-street and off-street facilities. The discussion will be organized around the following five segments:

- Blair Road: Oglethorpe to Tuckerman; including an Alternate On-Street Route using North Dakota Avenue and 3rd Street, NW: Layout Sheet 19.
- Blair Road Trail Split (Tuckerman to Van Buren): Layout Sheet 20.
- Takoma East Leg (Van Buren to Piney Branch Road): Layout sheets 20, 21, and 22.
- Takoma West Leg (Van Buren to Eastern Avenue): Layout sheets 23, 24, and 25.
- Maryland Connection (Piney Branch Road to DC/MD Boundary): Layout Sheets 22 and 25.

See map on page 7-4 for a key to Layout Sheets

TRAIL OBJECTIVES

Objectives for the portion of MBT passing through Takoma include:

- Provide as much off-street shared use path as possible despite the lack of a continuous off-street right-of-way.
- Provide two routes through Takoma DC to 1) provide direct trail access to the communities on each side of the railroad tracks, 2) give trail users a variety of facility types, street crossing options and elevation changes from which to choose, and 3) provide sufficient future trail capacity by developing facilities on both routes. Space constraints on each route require that a shared use path be at a minimum width; thus two minimum width trails will provide more overall capacity than one standard width trail.

Existing MBT along Takoma Avenue, Takoma Park, Maryland

- Ensure that each route is safe, continuous and visually coherent as it uses various neighborhood streets and crosses existing intersections.

- Further develop the two routes into a Takoma neighborhood loop and consider use of public art and heritage interpretation on this loop to build community pride and support community revitalization and economic development goals.

- Provide access to and from key parts of the community, including, the 4th Street and Carroll Avenue shopping areas, Old Town Takoma Park, MD, and the Takoma Recreation Center and new Aquatic Center.

- Improve access to the Metrorail station from select destinations:

  - North Takoma, Maryland

  - Takoma Park Campus of Montgomery College

  - Takoma DC southeast of the Metro Station.

- Increase bicycle and pedestrian safety at arterial crossings by considering a grade separated crossing of Piney Branch Road and enhancing a number of at-grade arterial crossings.

- The Takoma section is expected to serve high volumes of bicycle commuters and large volumes of pedestrians near the Metro station. Recreational users will also be numerous, coming from Takoma DC, Brightwood, Shepherd Park Takoma Park Maryland, Silver Spring, Maryland, and elsewhere. Institutions such as Walter Reed Hospital and Montgomery College are expected to generate trail users as well.

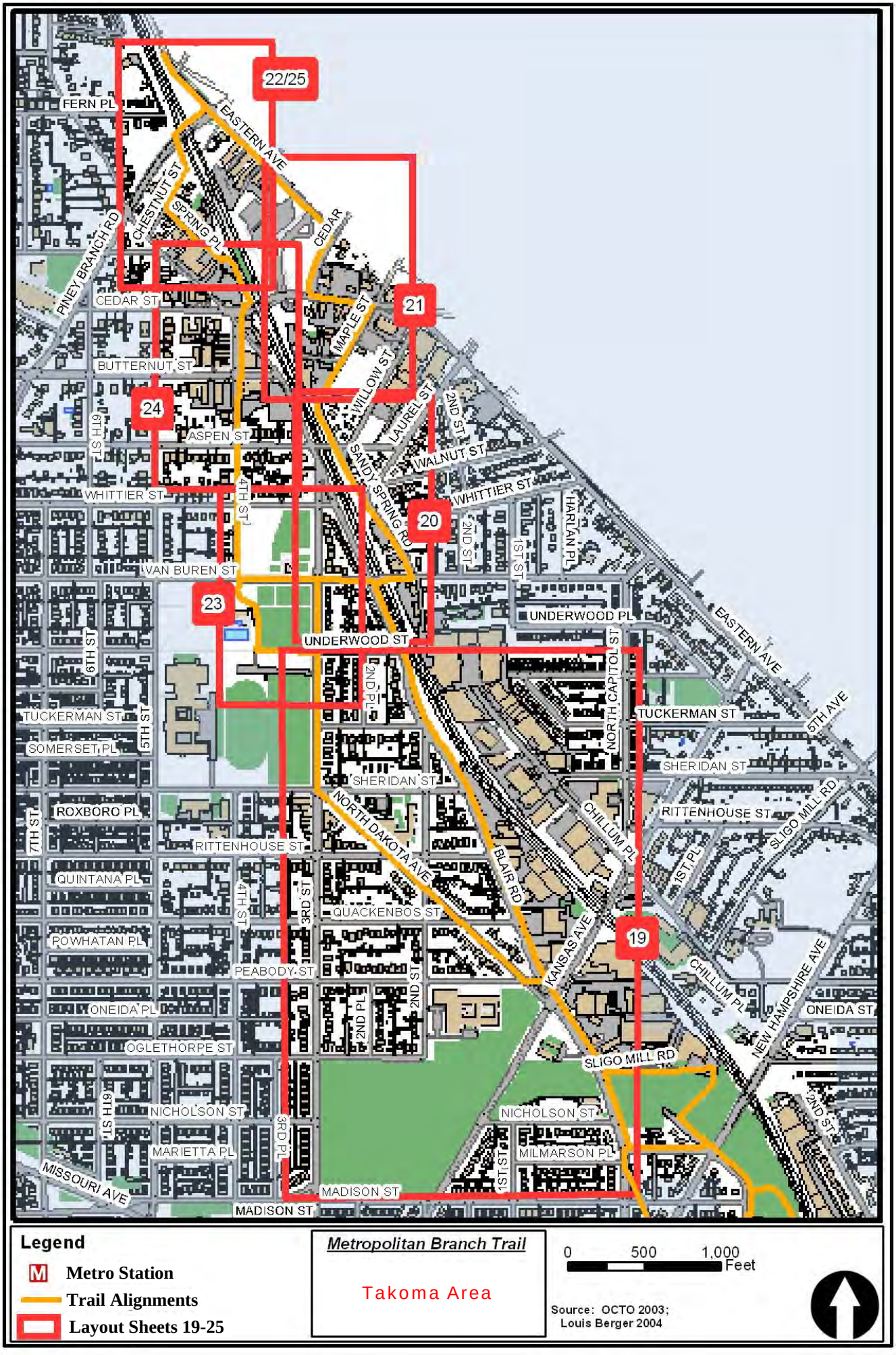
- Public Art objectives take special notice of the opportunities created by two alignments through Takoma.

  - ***The Takoma Loop.*** The two spurs of the trail could be viewed not only as through-routes but also as a loop that emerges as an important community resource—used by neighborhood residents for exercise or a casual stroll, or by neighborhood children who want a safe way to ride from place to place. “The Takoma Loop” therefore could incorporate community-related and human-scaled art that makes walking and biking around the neighborhood fun and interesting. Strategies could include involving local artists; generating collaborative, participatory projects and events; researching and interpreting community themes; and integrating art into usable community places along the trail.

  - ***Community Places:*** The trail could be designed with the goal of creating a range of community places along the way. Some of these places might relate to new waysides, others may relate to community facilities that already exist, such as the swimming pool, park and recreation center along Van Buren St. These places might be quiet sitting areas, active play areas, viewing areas, picnic groves, etc. All of them are potential places for artist-designed elements, or artist involvement in multidisciplinary design teams.

- ***Interpretive projects:*** There are several opportunities for interpretive projects in this section. These relate to the history of Takoma as a railroad suburb along the "metropolitan corridor," the history of specific places, such as the Cady Lee Mansion, and the passage from the District of Columbia into Maryland.

- ***Marking the Path:*** This section of the trail will be configured, in different places, as on-street, on-street with a dedicated right-of-way, and off street. It will be important to mark the trail clearly so that users can follow the path safely. Artists can be engaged to work on trail identification elements, such as trail blazes and entry markers, as well as non-standard signage and elements in the trail surface (materials, colors, medallions) itself.



Legend

- Metro Station
- Trail Alignments
- Layout Sheets 19-25

Metropolitan Branch Trail

Takoma Area

0 500 1,000 Feet

Source: OCTO 2003; Louis Berger 2004

BLAIR ROAD (OGLETHORPE TO TUCKERMAN)

Proposed Alignment

From Oglethorpe Street to Tuckerman, the preferred alignment is along Blair Road, NW. Field observation confirms that there is sufficient space to locate a shared use path in the existing sidewalk right-of-way on the east side of Blair Road. North of Tuckerman, this alignment would require the trail to occupy the northbound lane of Blair Road from Underwood to Van Buren Street (for further details about this segment see discussion in the next section entitled "Blair Road Trail Split"). An alternative alignment using on-street bicycle facilities and sidewalks is feasible following North Dakota Avenue and 3rd Street, NW from Peabody to Van Buren Street. For details, see Layout Sheets 19 and 23.

Existing Conditions

Currently, the east side of Blair Road, NW is constructed with intermittent sidewalks. A total of 1280 feet of sidewalk is missing from this six-block segment:

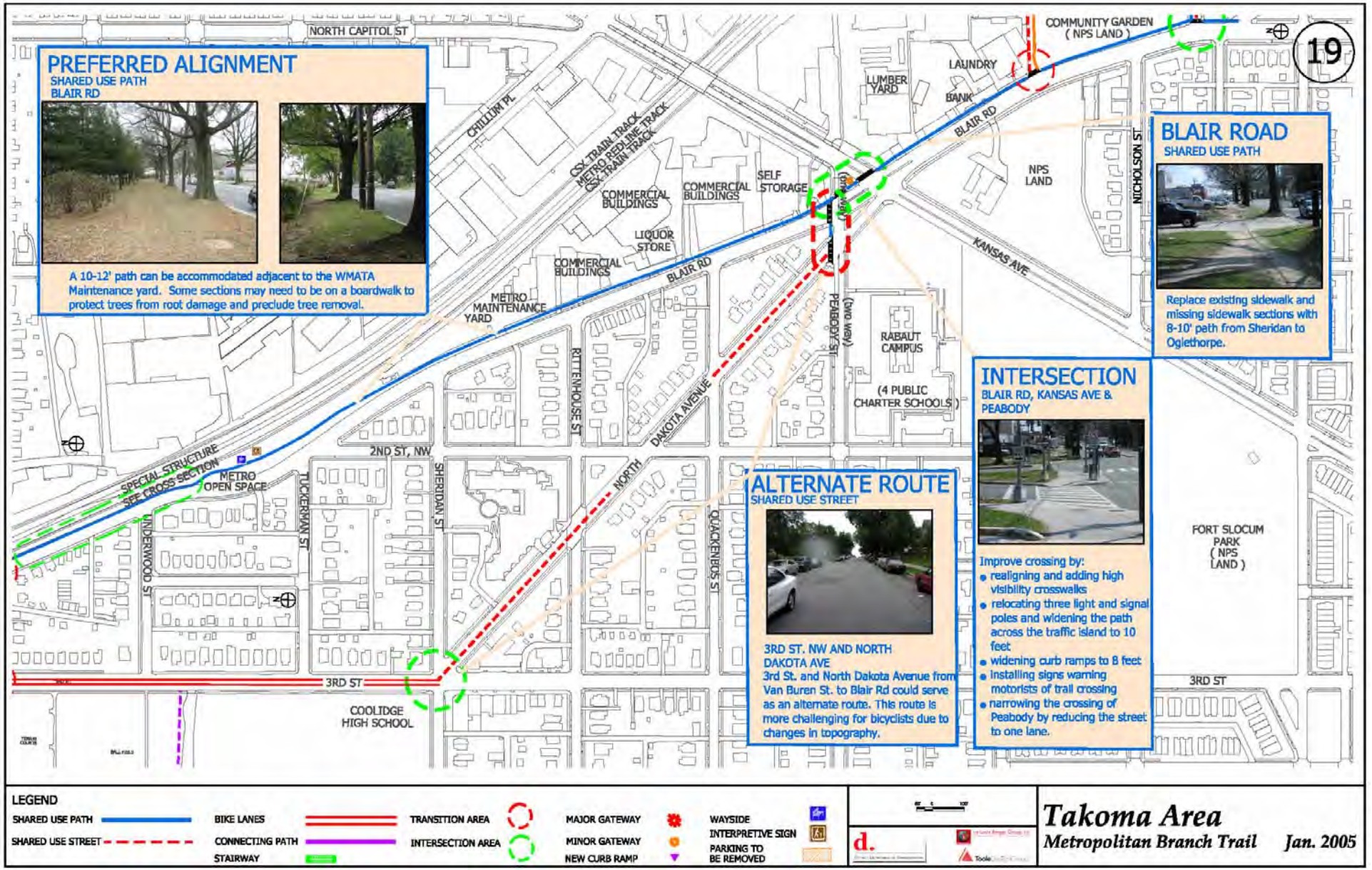
- 160 feet in front of the lumber yard at Kansas Ave.
- Approximately 1000 feet between the Metro Maintenance Yard driveway and Tuckerman St.

Existing sidewalk is typically 6-feet wide and sometimes wider in areas where the entire space between the sidewalk and building fronts has been paved.

From Oglethorpe to Sheridan Street, the tree buffer is six feet wide and planted with mature oaks that provide shade and aesthetic qualities to the street. Many have root systems that have outgrown the buffer; and the sidewalk often narrows adjacent to the tree base. Throughout this segment, there is 10-12 feet of clear space adjacent to the sidewalk on the east side to allow for expansion of the existing sidewalk into a 9- to 12- foot wide shared use path. It appears that the public right-of-way along Blair Road is sufficient to accommodate this expansion; however, it should be confirmed.

MBT will provide long needed sidewalk improvements on Blair Road.

In some areas (near Rittenhouse and a used car lot adjacent to the bank), existing businesses frequently park vehicles across the sidewalk and in the space between the existing sidewalk and private property lines or building fronts.


19
PREFERRED ALIGNMENT
SHARED USE PATH
BLAIR RD
A 10-12' path can be accommodated adjacent to the WMATA Maintenance yard. Some sections may need to be on a boardwalk to protect trees from root damage and preclude tree removal.
BLAIR ROAD
SHARED USE PATH
Replace existing sidewalk and missing sidewalk sections with 8-10' path from Sheridan to Oglethorpe.
INTERSECTION
BLAIR RD, KANSAS AVE & PEABODY
Improve crossing by:
realigning and adding high visibility crosswalks
relocating three light and signal poles and widening the path across the traffic island to 10 feet
widening curb ramps to 8 feet
installing signs warning motorists of trail crossing
narrowing the crossing of Peabody by reducing the street to one lane.
ALTERNATE ROUTE
SHARED USE STREET
3RD ST. NW AND NORTH DAKOTA AVE
3rd St. and North Dakota Avenue from Van Buren St. to Blair Rd could serve as an alternate route. This route is more challenging for bicyclists due to changes in topography.
NORTH CAPITOL ST
COMMUNITY GARDEN (NPS LAND)
LAUNDRY
LUMBER YARD
BANK
BLAIR RD
NPS LAND
NICHOLSON ST
CHILLUM PL
CSX TRAIN TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
COMMERCIAL BUILDINGS
COMMERCIAL BUILDINGS
SELF STORAGE
LIQUOR STORE
COMMERCIAL BUILDINGS
KANSAS AVE
METRO MAINTENANCE YARD
PEABODY ST (two way)
RABAUT CAMPUS
(4 PUBLIC CHARTER SCHOOLS)
RITTENHOUSE ST
DAKOTA AVENUE
2ND ST, NW
SPECIAL STRUCTURE SEE CROSS SECTION
METRO OPEN SPACE
TUCKERMAN ST
SHERIDAN ST
NORTH
QUACKENBOS ST
UNDERWOOD ST
FORT SLOCUM PARK (NPS LAND)
3RD ST
3RD ST
COOLIDGE HIGH SCHOOL
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
Takoma Area
Metropolitan Branch Trail
Jan. 2005

The trail must cross 16 active driveways in this segment.

Existing conditions along the alternate route are as follows:

- North Dakota Avenue: 40-foot wide residential street; parallel parking on both sides; grass buffers and sidewalks on both sides.
- 3rd Street: 50-foot wide residential street; park and school fields on west side; parallel parking on both sides; grass buffers and sidewalks on both sides.

Trail Type—Shared Use Path or Shared Use Street

Preferred Alignment and Facility Type

A 9- to 12-foot shared use path is the preferred facility along Blair Road. North of the entrance to the WMATA Maintenance Yard, sufficient space is available outside the fence line to provide a 12-foot path. The following special considerations should guide trail design and implementation in this segment.

- To protect the extensive tree roots exposed in the proposed trail ROW near the WMATA Maintenance Yard, the trail should be constructed on sections of raised boardwalk similar in design to that which was recently planned for the MBT in Takoma Park, Maryland.
- Replacements for the already cut or diseased mature oaks should be planted to ensure the continued presence of a healthy tree buffer along the trail and Blair Road.
- Trail/Driveway crossing details developed for the DC bicycle design guide should be used to guide design and signing of the numerous driveway crossings.

Open space for trail is available on WMATA property along Blair Road.

- Land owners and business operators should be consulted to ensure their support for the trail and stop the current practice of parking vehicles on the sidewalk at driveway locations.

Alternate Alignment

North Dakota Avenue and 3rd Street provides an alternate alignment in this area; however, existing conditions do not allow for construction of an off-street shared use path. 3rd Street is wide enough to allow addition of two 5-foot bike lanes without removal of existing parking. North Dakota could operate as a shared use street using special pavement markings to highlight the use of the street on the MBT trail route. If parking were eliminated on one side, bike lanes could

be installed. If this alternative route is used, crossing improvements and the transition from on- to off-street bicycling will need to be made at the intersection of North Dakota Avenue, Peabody Street and Blair Road. Additionally, an on/off street transition will be needed at the intersection of 3rd Street and Van Buren Street, NW.

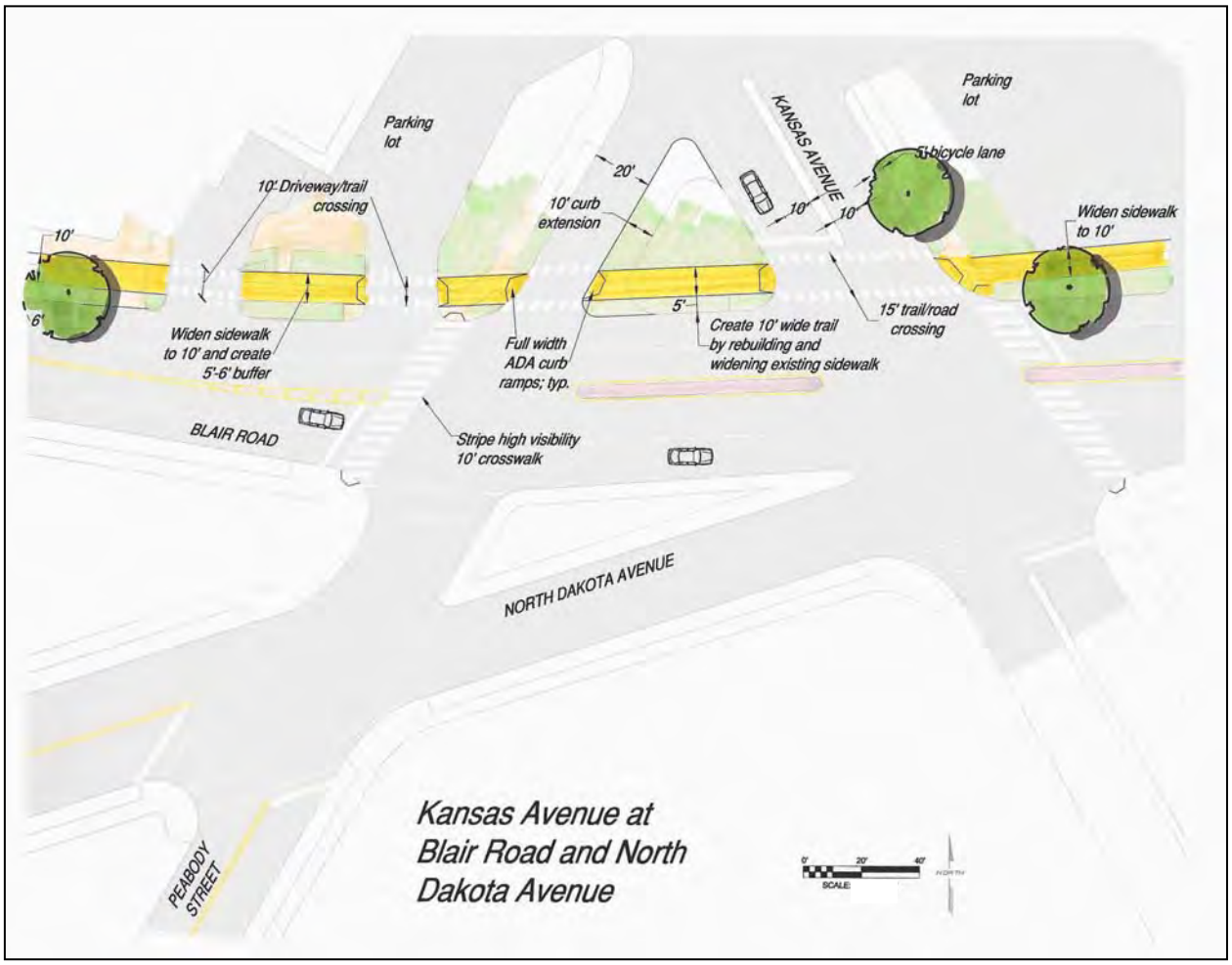
Proposed Structures and Roadway Crossings

Boardwalk

Approximately 325 feet of boardwalk may be needed between Tuckerman and Sheridan to minimize damage to existing mature trees.

Roadway Crossing--Blair Road and Kansas Avenue and Peabody Street

Improvements should be made to the intersections of Blair Road and Kansas Avenue and Blair Road and Peabody Street. Details are provided on Layout Sheet 19 and in the figure below.



Looking south along Blair Road; Peabody Street in foreground; Kansas Avenue beyond.

Looking across North Dakota Avenue; Blair Road in background.

Blair Road, Kansas Avenue, and Peabody Street:

- Realign and add high-visibility crosswalks.
- Relocate 3 light/signal poles and widen path across traffic island to 10 feet.
- Widen curb ramps to 8 feet.
- Install signs warning motorists of trail crossing.
- Fix incorrectly installed pedestrian signal head.
- Consider narrowing the crossing of Peabody St. by extending one or both curbs into the street and reducing the street to one lane.

North Dakota Avenue

At North Dakota Avenue and Peabody Street and North Dakota Avenue and Blair Road, improve these two crossing locations to accommodate bicycle transition movements between shared use street facilities on North Dakota Avenue to shared use path on east side of Blair Road.

- Add high visibility crosswalks and new curb ramps where necessary.
- Relocate light and signal poles where necessary.
- Install signs warning motorists of trail crossing locations.
- Consider narrowing Peabody Street by extending one or both curbs into the street and reducing the street to one lane.
- Consider using a left turn bicycle lane on North Dakota Avenue for southbound bicyclists.

Signage

Sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for at-grade street and driveway crossings. If the alternate alignment is used, MBT bike route signs and special on-street bikeway markings are recommended, and the transition areas at either end of the route should be signed and marked with special pavement markings. Special landscaping may help highlight and traffic calm the transition areas where pedestrians and one direction of bicyclists will be required to cross on-coming traffic. Trail identity and continuity may be best served by installing brass medallions with MBT logo directly into the sidewalk/trail and use of periodic identity signs.

Connections

The primary connection along this segment is to the established DC Bike Route on Kansas Avenue. Kansas Avenue also provides access to the Lamond neighborhood and recreation center and the Pinecrest neighborhood of Takoma Park, Maryland. This section of trail passes by the Rabaut Campus on Peabody Street where four public charter schools are located, and provides access to Coolidge High School, the Takoma Recreation Center and new Takoma Aquatic Center. Regular cross streets provide good access to the adjacent residential neighborhoods along Blair Road; however, it is important that curb ramps be placed opposite each “T” intersection at Quackenbos, Rittenhouse, Sheridan and Tuckerman streets to allow easy and full access to the trail treadway. Crosswalks across Blair Road should be considered at Tuckerman/2nd Street, NW and Rittenhouse Street, NW.

Gateways and Waysides

The intersection at Kansas Avenue provides an opportunity for a minor trail gateway treatment. Open space in front of the lumber yard and the traffic island between Kansas and Peabody provide opportunities for simple landscaping and/or art treatments to highlight the trail’s presence in the streetscape and guide users to the appropriate access points.

One wayside, historic interpretation optional, is suggested for consideration in this segment, in the open space near the “T” intersection of Tuckerman and Blair Rd. This is a good location to view passing trains, and may be an appropriate location to tell the history of bicycling in Takoma.

Landscaping

In this segment of the MBT, three street crossings would occur at Blair Road, Kansas Avenue, and Peabody Street; North Dakota Avenue and Peabody Street; and Blair Road and Peabody Street where the crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

Construction of boardwalks may be needed in raised trail areas.

Landscaping may be used in areas to assist with traffic calming. Additional street trees along on-street trail sections could be included in this segment as replacements to fill gaps in the existing street tree pattern, if needed.

Landscape Treatments for the Area on Blair Road: Oglethorpe to Tuckerman

Included	Treatment
	Berm
	Bioswale
X	Boardwalk
X	Curbside Gardens
X	Street Crossings
	Dry Streambed
X	Indigenous Vegetation
X	Ornamental Vegetation
	Photovoltaic Lighting
	Permeable Paving
	Planter
	Portals
	Shelters
X	Street Trees
	Terracing
X	Unusual Focal Point

Curbside gardens could occur within tree buffer areas where the MBT is on-street; other open space areas, such as in front of the lumber yard and the traffic island between Kansas and Peabody may provide opportunities for curbside gardens and other simple landscaping and/or art treatments to highlight the trail's presence and guide users to the appropriate access points.

Unusual focal point features, where plantings could be combined with artwork, could be located at street crossings, where appropriate.

Art

Industrial character: Along Blair Rd., between Kansas Avenue and Tuckerman St., the trail passes by several light industrial facilities like warehouses and storage yards. Currently, most of these facilities are screened from street view. It is possible that during trail construction these screens might be replaced; these are elements that could be designed by artists working on their own or in conjunction with other designers. The screens might include supergraphics, color, or trellises for planting; the visual character should respect the residential neighborhood across the street.

Along this segment, the trail crosses sixteen active driveways. Artists might assist trail planners in designing treatments for sidewalk color or texture on driveways, or special signage, that would help warn trail users and drivers of potential conflict areas.

Wayside: Along Blair Rd., across from Tuckerman St., there is a knoll that overlooks the Metrorail and railroad right of way. This could be a pausing place for trail users who want to rest after climbing the grade between Tuckerman and Van Buren, to take a break before the enter the downhill slope. An artist could create elements like benches or a seating area, or work collaboratively with a landscape designer on the trail alignment, plantings and wayside features.

Lighting & Security

The segment along Blair Road has been provided with existing high pressure sodium (HPS) "cobra head" street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at locations along this segment showed that the illumination for this roadway was in excess of 3 foot candles respectively. Lighting for this portion of the MBT is driven by requirements for the associated roadway, and appears adequate for the proposed bikeway. Pedestrian scale lighting is an option.

The alternate route along North Dakota and 3rd Street has also been provided with existing high pressure sodium (HPS) "cobra head" street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Illumination measurements taken at multiple locations along this segment yielded illumination values between 0.07 and 0.38 respectively. Although these readings are significantly lower then the recommended IES requirements for a bikeway, lighting for this portion of the MBT is driven by requirements for the associated roadway, and its location relative to the adjacent residential neighborhood. It also appeared during the survey that there were multiple burnt lamps and/or ballasts which could be affecting the illumination values in this segment. If it is necessary to provide for additional illumination in this segment, it is recommended that the existing roadway lighting be supplemented or upgraded in order to meet the illumination requirements.

This portion of the MBT is routed through a residential neighborhood. Due to the close proximity to the residential neighborhood, as well as potential alignments on existing roadways, it is recommended that no additional security measures be added to this segment of the trail.

Policing

This segment of the trail is policed by MPD PSA 402, which will provide the primary patrol force. Because of the area's close proximity to NPS parkland, U.S. Park Police can provide some support. Traditional motor vehicle or bike-mounted patrols will be effective in this section.

Implementation

This segment should be implemented in two phases. The missing sidewalk section near Kansas Avenue should be constructed immediately, possibly in conjunction with widening the entire sidewalk from Oglethorpe to Kansas.

The remainder of this segment can be undertaken in Phase 4, including intersection improvements at Kansas and Peabody, and new trail to Tuckerman. It is recommended that this section be designed and constructed in conjunction with the next segment to the north (Tuckerman to Van Buren), however if that were not possible this segment could be done independently with an interim endpoint at Tuckerman, where a crosswalk should be provided across Blair Road.

During the design phase, additional coordination with the local residents and businesses is recommended.

BLAIR ROAD TRAIL SPLIT: TUCKERMAN STREET TO VAN BUREN STREET

Proposed Alignment

From Tuckerman Street to Van Buren Street, the only way to continue the preferred alignment along Blair Road is to restrict motor vehicle use to one northbound lane and construct a two-way shared use path in the right hand, northbound lane of Blair Road. This path will be immediately adjacent to the retaining wall that supports the elevated railroad corridor.

At Van Buren, currently a signalized intersection, the trail can split, offering trail users two routes to and through the Takoma DC / Takoma Park, MD community. The Eastern Leg will turn east at Van Buren and then north again at Sandy Spring Road. The Western Leg will turn west at Van Buren and then north again at 4th Street, NW. For details of the split, see Layout Map 20.

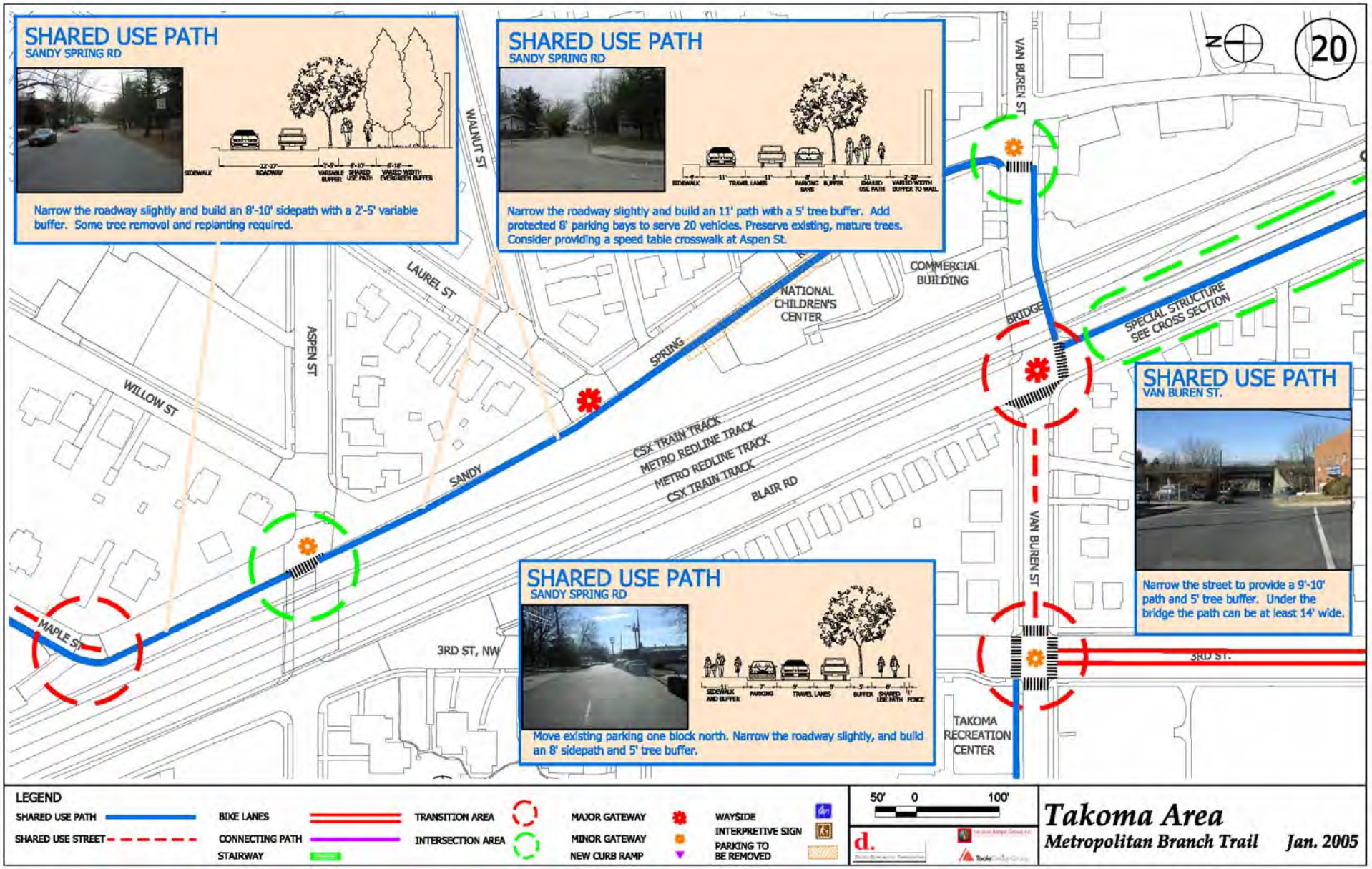
MBT can continue off-road by reducing Blair Road northbound to one-travel lane. Blair Road southbound is currently one lane.

Existing Conditions

Blair Road has a consistent cross section from Kansas to Van Buren Street. The roadway is 40 feet wide. Two 10-foot travel lanes are provided for northbound traffic, and one 12-foot travel lane is provided for southbound traffic. An 8-foot striped parking lanes is provided on the west side in front of the residential dwellings. One block north, at Aspen Street, the northbound direction is permanently reduced to one 10-foot travel lane. The average daily traffic volume will be determined during the design phase.

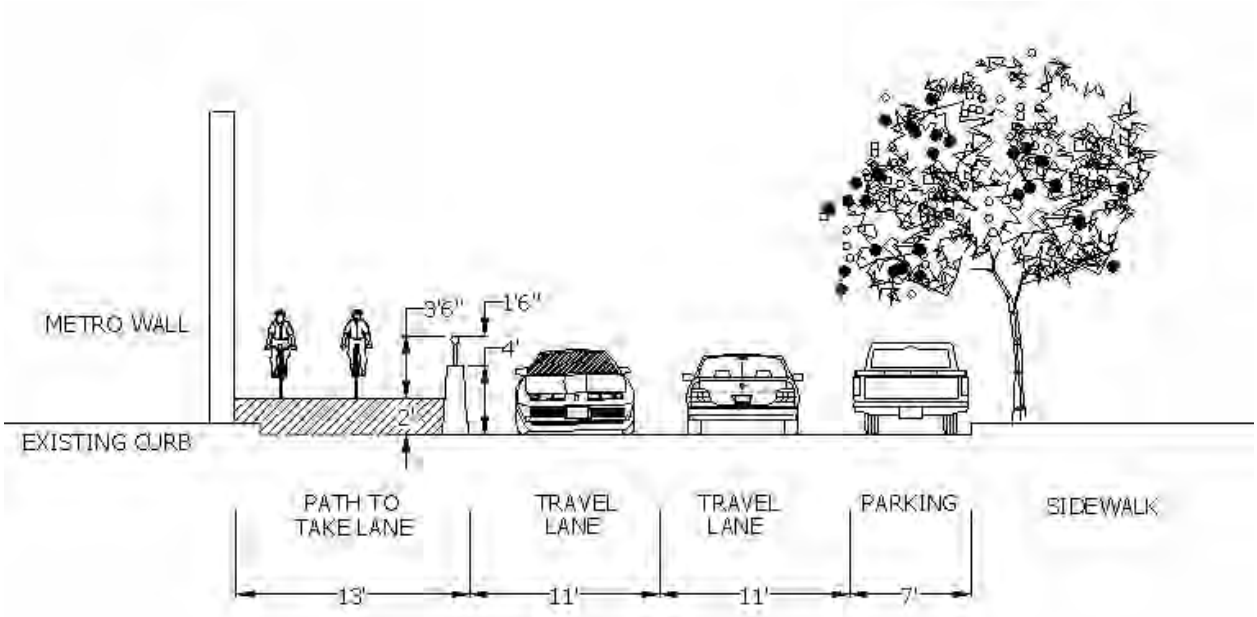
In this section, Blair Road curves and then runs immediately adjacent to a concrete wall that grows from one to over twenty feet in height. There is a 1.5 foot wide curb at the base of the wall. Blair Road is sloped on a 3% downgrade from Underwood to Van Buren.

WMATA owns the property adjacent to Blair Road on the east, which is landscaped with turf grass and a variety of tree species. A fence separates the landscaped area from the CSX and Metrorail tracks.


SHARED USE PATH
SANDY SPRING RD
Narrow the roadway slightly and build an 8'-10' sidepath with a 2'-5' variable buffer. Some tree removal and replanting required.
SHARED USE PATH
SANDY SPRING RD
Narrow the roadway slightly and build an 11' path with a 5' tree buffer. Add protected 8' parking bays to serve 20 vehicles. Preserve existing, mature trees. Consider providing a speed table crosswalk at Aspen St.
SHARED USE PATH
SANDY SPRING RD
Move existing parking one block north. Narrow the roadway slightly, and build an 8' sidepath and 5' tree buffer.
SHARED USE PATH
VAN BUREN ST.
Narrow the street to provide a 9'-10' path and 5' tree buffer. Under the bridge the path can be at least 14' wide.
20
N
WALNUT ST
LAUREL ST
ASPEN ST
WILLOW ST
MAPLE ST
SPRING
SANDY
CSX TRAIN TRACK
METRO REDLINE TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
BLAIR RD
3RD ST, NW
NATIONAL CHILDREN'S CENTER
COMMERCIAL BUILDING
VAN BUREN ST
BRIDGE
SPECIAL STRUCTURE SEE CROSS SECTION
3RD ST.
TAKOMA RECREATION CENTER
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005

Trail Type—Shared Use Path

Sufficient roadway space is available to provide an 8- to 9-foot shared use trail in this segment (see figure below for details).



Proposed Structures

To ensure the safety of trail users in this unique situation, construction of a special structure that separates trail traffic from the remaining northbound travel lane with a concrete barrier and railing. Sufficient space should be available to provide 1-1.5 foot shoulders (or shy-space from the walls) on each side of the trail treadway. To increase the sense of separation, consideration should be given to raising the treadway two or three feet above the roadway in the middle portion of the structure.

To accommodate the trail, northbound lane reduction is recommended only for the stretch of Blair Road between Sheridan Street and Van Buren, a distance of three blocks, or 1400 feet. Because of the curvature of the road between Tuckerman and Underwood it is recommended that the northbound lane be gradually phased out beginning near Sheridan St. This will provide sufficient advanced warning for drivers to make the merge left movement safely. Both existing northbound lanes will be retained between Van Buren and Aspen--providing a dedicated right turn at Aspen, and two lanes of northbound vehicle storage capacity at this busy Takoma intersection.

Proposed Roadway Crossings

The intersection of Blair and Van Buren will also need to be modified. This intersection should be designed to facilitate trail users' transition to both the east and west legs of the MBT through the Takoma community (see drawing below for details).

Signage

Sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for at-grade street crossings. Trail identity and continuity may be best served by using "Main Street" style banners with the MBT logo and/or installing brass medallions with MBT logo directly into the trail treadway.

Connections

Access to the trail in this segment will be provided only at the north end of the structure, at Van Buren, and at Tuckerman via a curb ramp and crosswalk. The railroad underpass at Van Buren provides access to residential neighborhoods and destinations on both sides of the tracks, including the Takoma Recreation and Aquatic Center.

Gateways and Waysides

No waysides will be provided in this segment.

As the southern junction where the East and West legs of the MBT in Takoma split/come together, the intersection of Van Buren and Blair Road should be treated as a major trail gateway. Due to limited space for natural landscaping, treatments should be more oriented to modifications that can be made to the hardscape, including walls, bridge structures, lighting and signal poles, pavement, and railings. The new structure and existing railroad retaining wall present good opportunities for art installations.

Landscaping

In this segment of the MBT, one street crossing would occur at Blair and Van Buren, where the crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

Landscape Treatments for the Blair Road Trail Split (Tuckerman to Van Buren)

Included	Treatment
X	Curbside Gardens
X	Street Crossings
X	Ornamental Vegetation
X	Street Trees
X	Unusual Focal Point

Since space for planting of vegetation is limited, treatments should focus on hardscape modifications, such as walls, bridge structures, lighting and signal poles, pavement, and railings. Curbside gardens could occur within tree buffer areas where the MBT is on-street and additional street trees along on-street trail sections could be included in this segment as replacements to fill gaps in the existing street tree pattern, if needed.

Art

Infrastructure: Along Blair Rd., between Tuckerman St. and Van Buren St., the trail will pass by a retaining wall that supports above-grade Metrorail and railroad tracks. The wall runs next to segment where the trail will be created out of an existing traffic lane. This is a narrow, sloped segment between a busy roadway and a solid wall. Art could be used to embellish the wall, primarily through the use of color. Representational projects, such as murals, should not be pursued here, since trail users should not be encouraged to stop in this area.

Lighting & Security

This segment has been provided with existing high pressure sodium (HPS) “cobra head” street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Lighting for this portion of the MBT is driven by requirements for the associated roadway and its location relative to the adjacent residential neighborhood. It appeared during the survey that there were multiple burnt lamps and/or ballasts in this segment, which could be affecting the illumination values. If it is necessary to provide for additional illumination in this portion of the trail, it is recommended that the existing roadway lighting be supplemented or upgraded in order to meet the illumination requirements.

This portion of the MBT is routed through a residential neighborhood. Due to the close proximity to the residential neighborhood, as well as potential alignments on existing roadways, it is recommended that no additional security measures be added to this segment of the trail.

Policing

This segment of the trail is policed by MPD PSA 402, which will provide the primary patrol force. Traditional motor vehicle or bike-mounted patrols will be effective in this section.

Implementation

Prior to implementing this segment in Phase 4, a detailed review of the traffic data developed for the Takoma Transportation Study (2004) should be conducted, coordinated with the DDOT Traffic Services Administration. If necessary, additional traffic counts should be collected, or a special study undertaken. During the design phase, additional coordination with the local residents and Takoma community will be necessary.

Implementation of this section will include intersection improvements at Blair Road and Van Buren, and signing and striping Van Buren from Blair to 3rd Street.

TAKOMA EAST LEG: VAN BUREN STREET TO PINEY BRANCH ROAD

Proposed Alignment

The alignment of the Eastern Leg of the MBT through Takoma will follow a series of neighborhood streets and minor arterial roads:

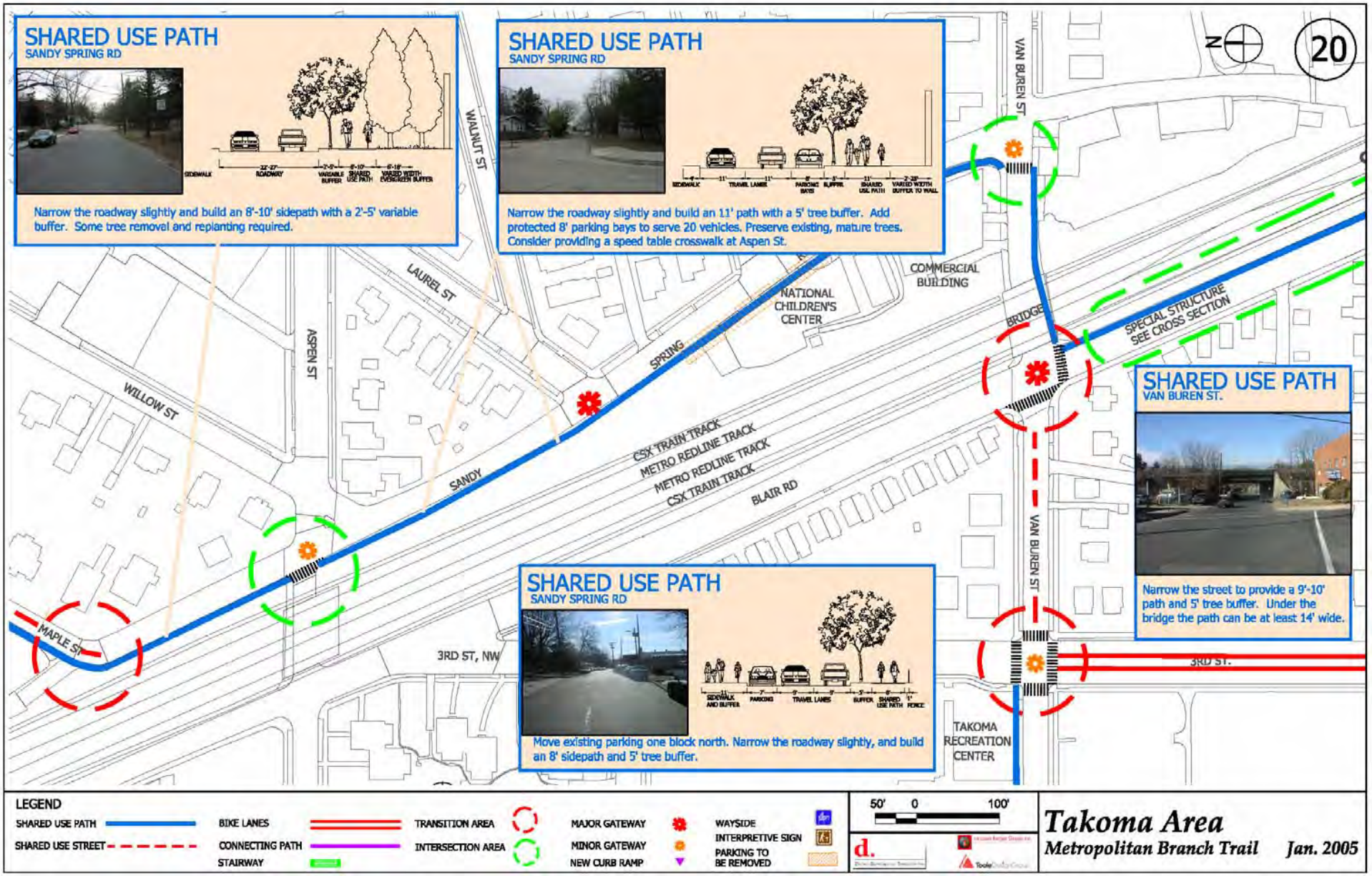
- Van Buren Street
- Sandy Spring Road
- Maple Street
- Carroll Avenue
- Cedar Street
- Eastern Avenue

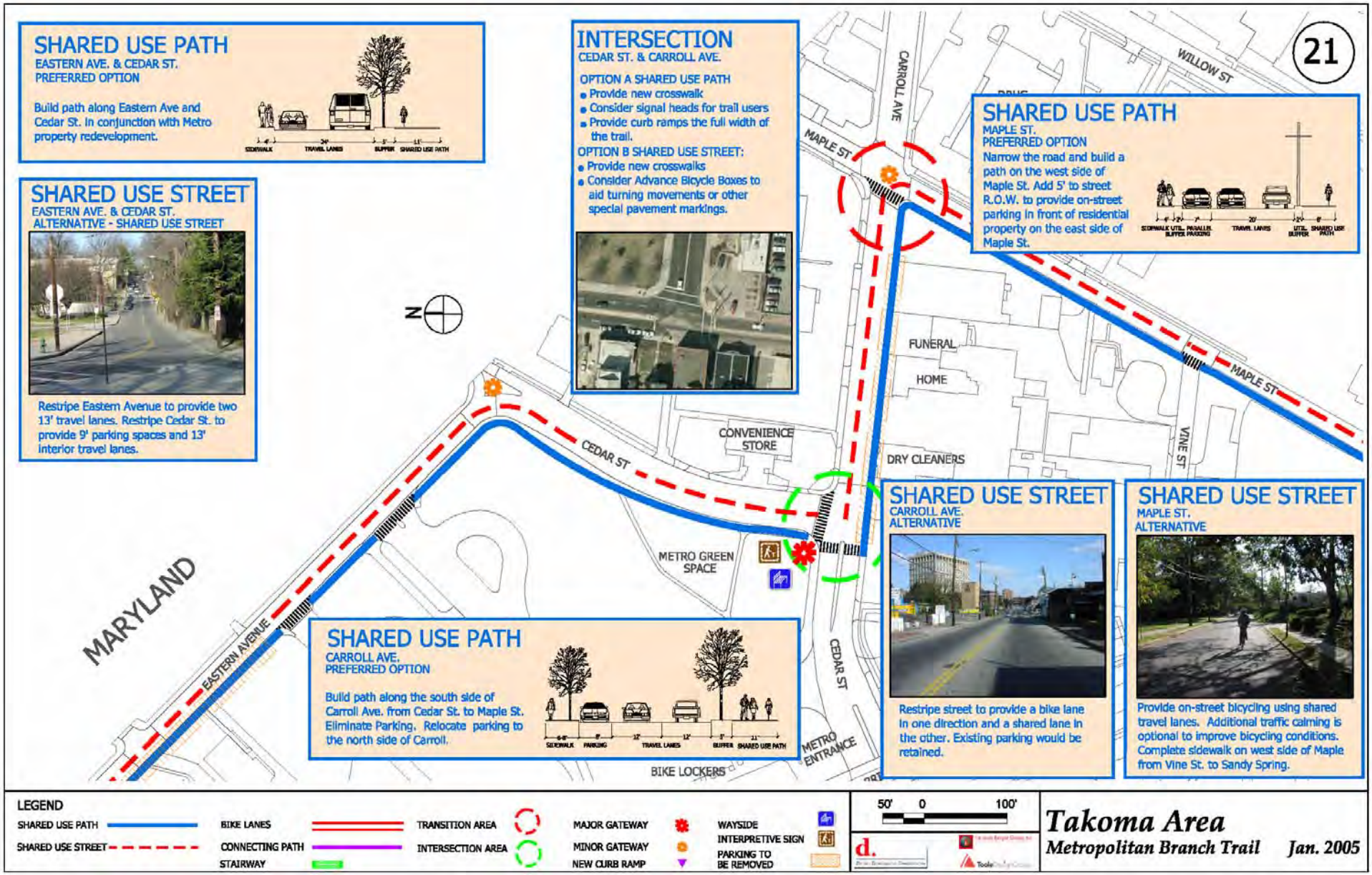
Details about this alignment are described on Layout Sheets 20, 21, and 22.

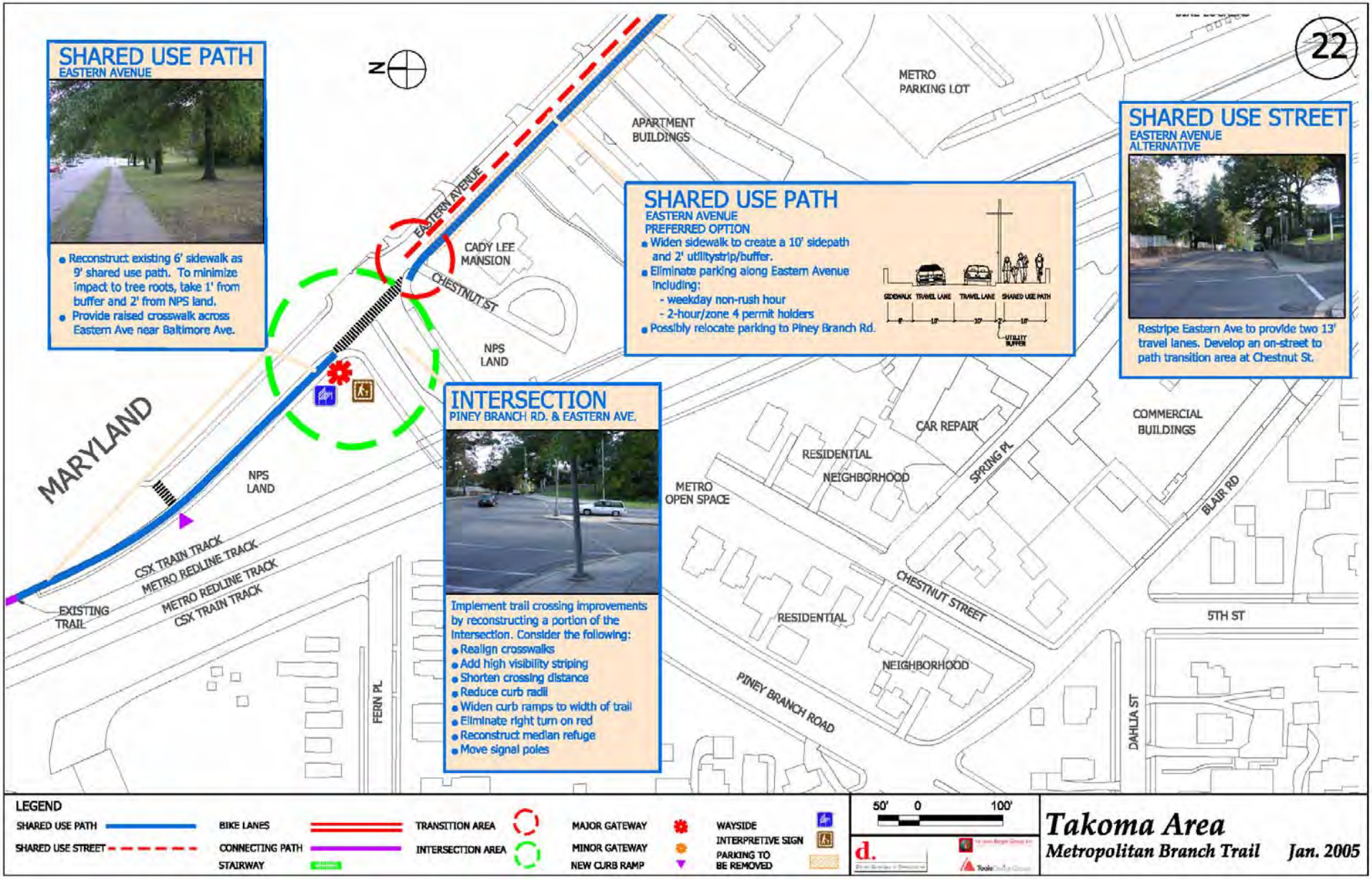
Alignment Considered

Consideration was given to an alignment that would follow a path on an elevated structure adjacent to the metro tracks (but not attached) running behind the cooperative apartments on Eastern Avenue and the Cady-Lee Mansion. It would then cross Piney Branch Road on a newly-constructed bridge spanning from NPS property adjacent to the Cady-Lee Mansion south of Piney Branch Road to NPS land on the north side of Piney Branch Road.

Although this alignment could provide a safe overhead crossing of Piney Branch Road, it would be considerably more costly than the proposed alignment along Eastern Avenue that is developed in this report, which includes an at-grade crossing of Piney Branch Road. It would also require acquisition of private property behind the apartment buildings to the south of Piney Branch Road, and could potentially have greater impacts to the adjacent historic Cady-Lee Mansion than the proposed alignment. These considerations resulted in this alignment not being developed in the Concept Plan.


SHARED USE PATH
SANDY SPRING RD
Narrow the roadway slightly and build an 8'-10' sidepath with a 2'-5' variable buffer. Some tree removal and replanting required.
SHARED USE PATH
SANDY SPRING RD
Narrow the roadway slightly and build an 11' path with a 5' tree buffer. Add protected 8' parking bays to serve 20 vehicles. Preserve existing, mature trees. Consider providing a speed table crosswalk at Aspen St.
SHARED USE PATH
VAN BUREN ST.
Narrow the street to provide a 9'-10' path and 5' tree buffer. Under the bridge the path can be at least 14' wide.
SHARED USE PATH
SANDY SPRING RD
Move existing parking one block north. Narrow the roadway slightly, and build an 8' sidepath and 5' tree buffer.
20
WALNUT ST
LAUREL ST
ASPEN ST
WILLOW ST
MAPLE ST
SANDY SPRING
SANDY
CSX TRAIN TRACK
METRO REDLINE TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
BLAIR RD
3RD ST, NW
NATIONAL CHILDREN'S CENTER
COMMERCIAL BUILDING
VAN BUREN ST
BRIDGE
SPECIAL STRUCTURE SEE CROSS SECTION
3RD ST.
TAKOMA RECREATION CENTER
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005


21
SHARED USE PATH
EASTERN AVE. & CEDAR ST.
PREFERRED OPTION
Build path along Eastern Ave and Cedar St. in conjunction with Metro property redevelopment.
SIDEWALK
TRAVEL LANES
BUFFER
SHARED USE PATH
SHARED USE STREET
EASTERN AVE. & CEDAR ST.
ALTERNATIVE - SHARED USE STREET
Restripe Eastern Avenue to provide two 13' travel lanes. Restripe Cedar St. to provide 9' parking spaces and 13' interior travel lanes.
INTERSECTION
CEDAR ST. & CARROLL AVE.
OPTION A SHARED USE PATH
Provide new crosswalk
Consider signal heads for trail users
Provide curb ramps the full width of the trail.
OPTION B SHARED USE STREET:
Provide new crosswalks
Consider Advance Bicycle Boxes to aid turning movements or other special pavement markings.
SHARED USE PATH
MAPLE ST.
PREFERRED OPTION
Narrow the road and build a path on the west side of Maple St. Add 5' to street R.O.W. to provide on-street parking in front of residential property on the east side of Maple St.
SIDEWALK
UTIL. BUFFER
PARALLEL PARKING
TRAVEL LANES
UTIL. BUFFER
SHARED USE PATH
SHARED USE PATH
CARROLL AVE.
PREFERRED OPTION
Build path along the south side of Carroll Ave. from Cedar St. to Maple St. Eliminate Parking. Relocate parking to the north side of Carroll.
SIDEWALK
PARKING
TRAVEL LANES
BUFFER
SHARED USE PATH
SHARED USE STREET
CARROLL AVE.
ALTERNATIVE
Restripe street to provide a bike lane in one direction and a shared lane in the other. Existing parking would be retained.
SHARED USE STREET
MAPLE ST.
ALTERNATIVE
Provide on-street bicycling using shared travel lanes. Additional traffic calming is optional to improve bicycling conditions. Complete sidewalk on west side of Maple from Vine St. to Sandy Spring.
N
MARYLAND
EASTERN AVENUE
CEDAR ST
CARROLL AVE
MAPLE ST
WILLOW ST
VINE ST
FUNERAL HOME
CONVENIENCE STORE
DRY CLEANERS
METRO GREEN SPACE
METRO ENTRANCE
BIKE LOCKERS
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005


22
SHARED USE PATH
EASTERN AVENUE
• Reconstruct existing 6' sidewalk as 9' shared use path. To minimize impact to tree roots, take 1' from buffer and 2' from NPS land.
• Provide raised crosswalk across Eastern Ave near Baltimore Ave.
SHARED USE PATH
EASTERN AVENUE
PREFERRED OPTION
• Widen sidewalk to create a 10' sidepath and 2' utilitystrip/buffer.
• Eliminate parking along Eastern Avenue including:
- weekday non-rush hour
- 2-hour/zone 4 permit holders
• Possibly relocate parking to Piney Branch Rd.
SIDEWALK
TRAVEL LANE
TRAVEL LANE
SHARED USE PATH
UTILITY BUFFER
SHARED USE STREET
EASTERN AVENUE
ALTERNATIVE
Restripe Eastern Ave to provide two 13' travel lanes. Develop an on-street to path transition area at Chestnut St.
INTERSECTION
PINEY BRANCH RD. & EASTERN AVE.
Implement trail crossing improvements by reconstructing a portion of the intersection. Consider the following:
• Realign crosswalks
• Add high visibility striping
• Shorten crossing distance
• Reduce curb radii
• Widen curb ramps to width of trail
• Eliminate right turn on red
• Reconstruct median refuge
• Move signal poles
N
METRO PARKING LOT
APARTMENT BUILDINGS
EASTERN AVENUE
CADY LEE MANSION
CHESTNUT ST
NPS LAND
MARYLAND
NPS LAND
CSX TRAIN TRACK
METRO REDLINE TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
EXISTING TRAIL
FERN PL
METRO OPEN SPACE
RESIDENTIAL NEIGHBORHOOD
CAR REPAIR
SPRING PL
COMMERCIAL BUILDINGS
BLAIR RD
CHESTNUT STREET
RESIDENTIAL NEIGHBORHOOD
5TH ST
PINEY BRANCH ROAD
DAHLIA ST
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005

Existing Conditions

Existing conditions along these streets vary tremendously street by street, and block by block. In some locations sidewalks are provided, in other places sidewalks, curbs and gutters are not present. Streets also vary in width, parking regulations, and adjacent land uses.

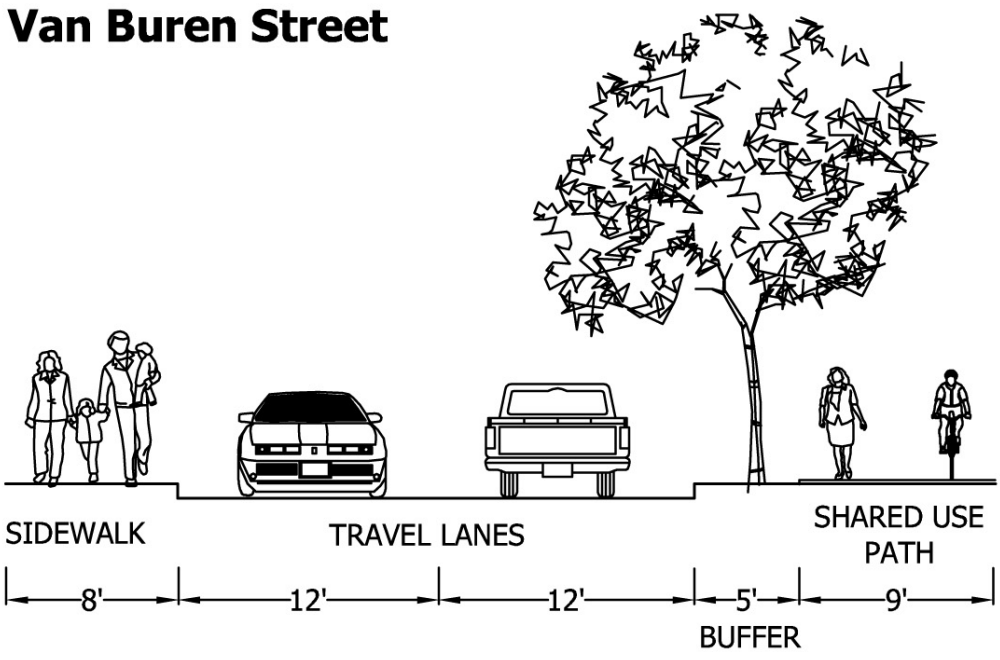
Along portions of the Eastern Leg, coordination with proposed developments will be critical to preserving adequate right-of-way for the trail and developing streetscape plans that work for both the trail and the community as a whole. Developments are immediately critical include the following:

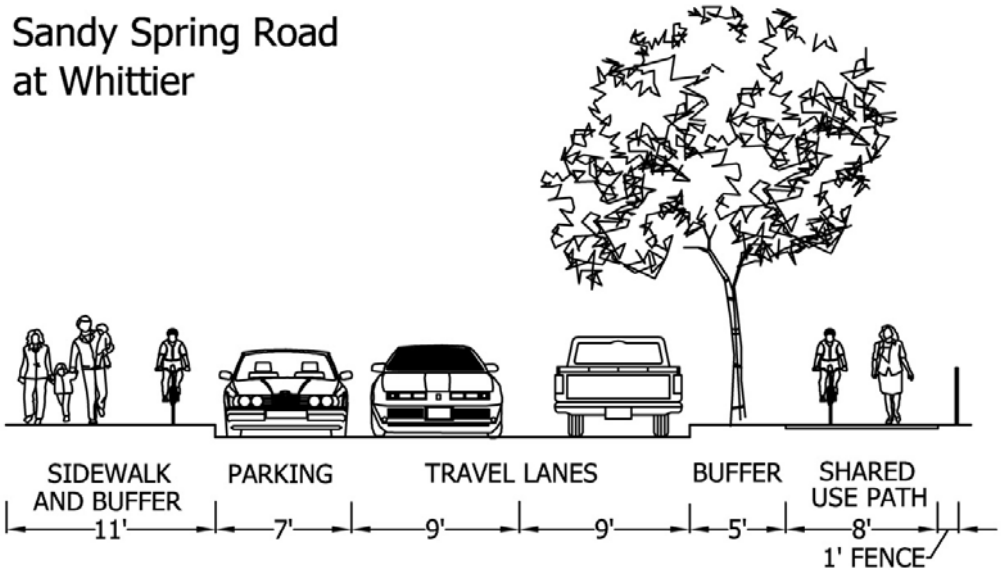
- Residential development on Maple Street
- Mixed use development on Carroll Ave.
- Mixed use development on WMATA Metro Station site.

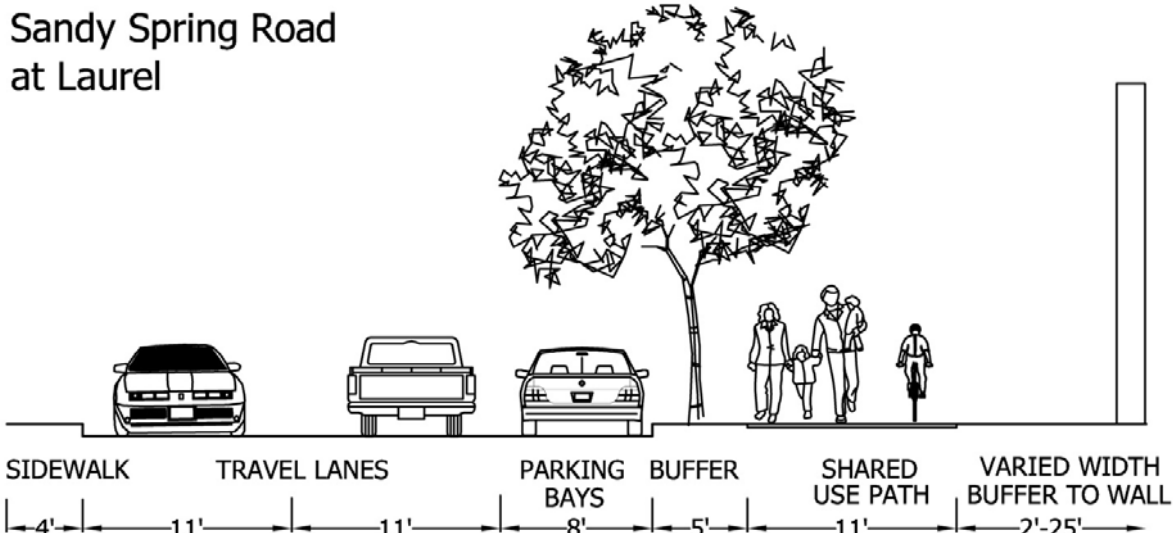
Trail Type—Shared Use Path

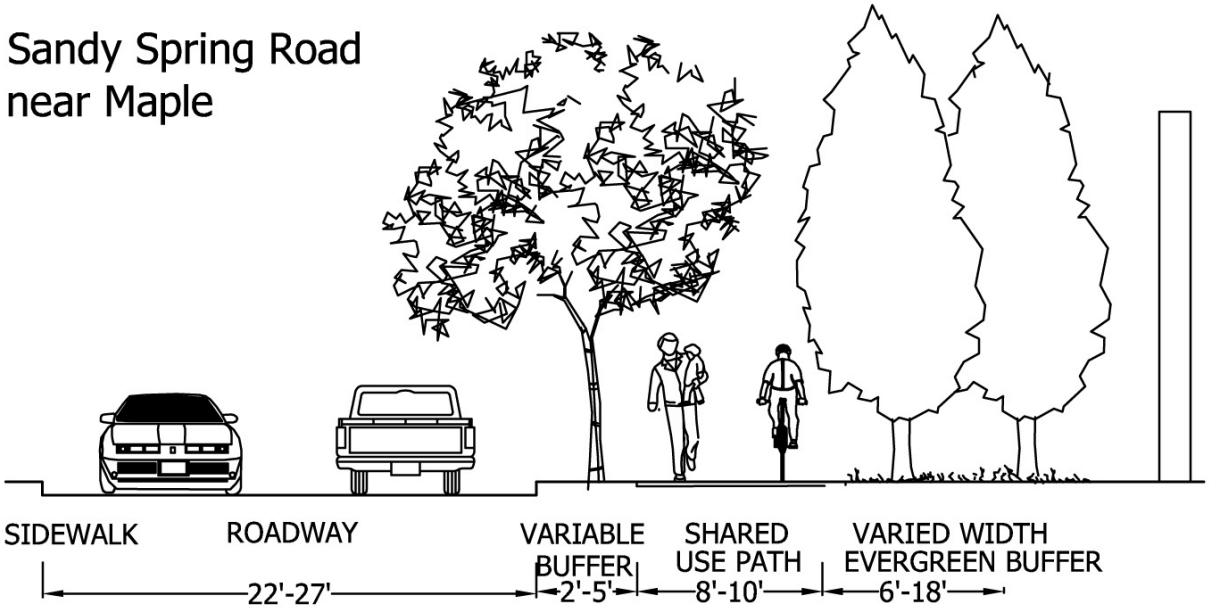
A unique feature of the Eastern Leg is that an off-road shared use path is feasible for the entire segment. In most blocks, providing a shared use path will be an upgrade of the existing streetscape. One block of parking would need to be removed or relocated to a nearby street; another block of parking can be relocated on the same street. Recommended path width varies from 8 to 11 feet, depending on available space.

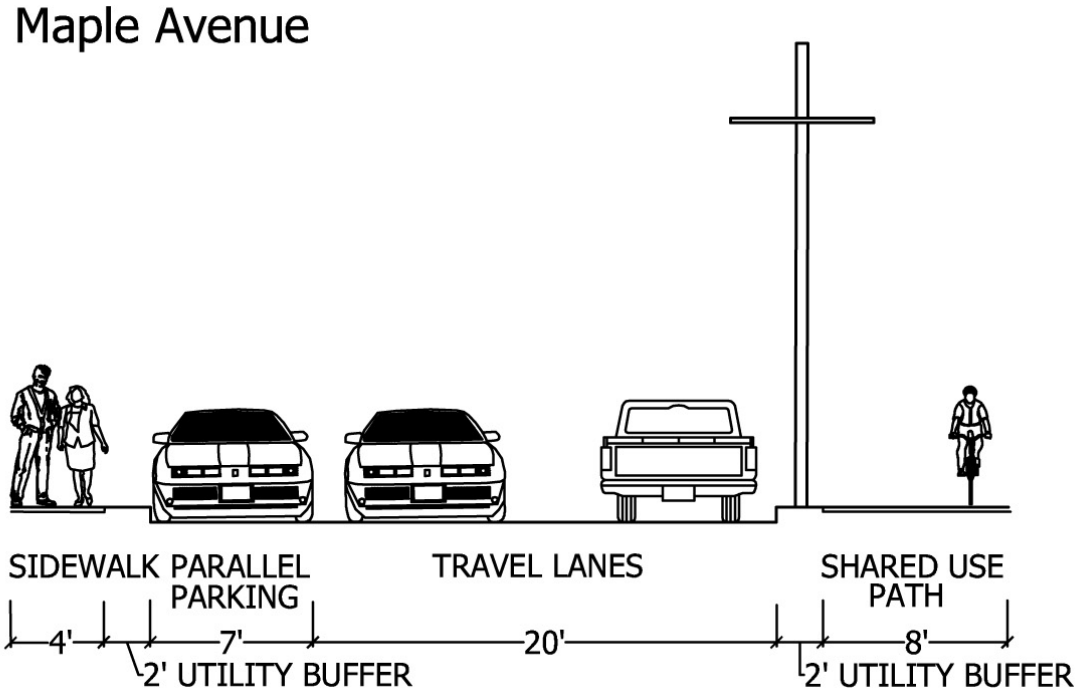
The trail cross sections below illustrate how the trail can be constructed on the west/south side of the streets on this alignment.



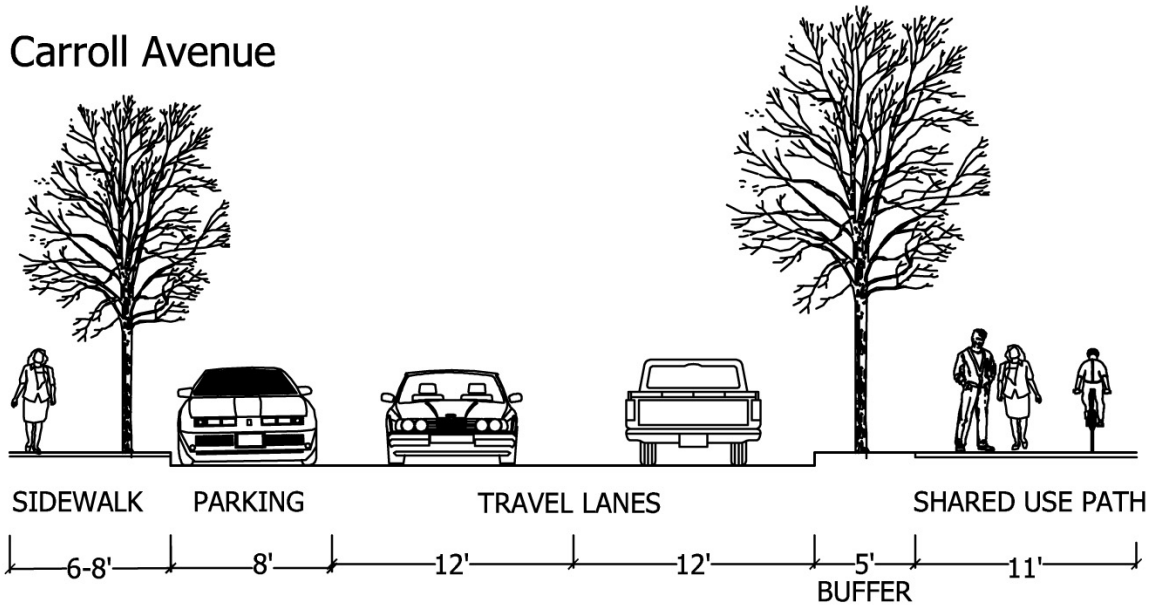

Sandy Spring Road
at Whittier
SIDEWALK AND BUFFER
11'
PARKING
7'
TRAVEL LANES
9'
9'
BUFFER
5'
SHARED USE PATH
8'
1' FENCE


Sandy Spring Road
at Laurel
SIDEWALK
4'
TRAVEL LANES
11'
11'
PARKING BAYS
8'
BUFFER
5'
SHARED USE PATH
11'
VARIED WIDTH BUFFER TO WALL
2'-25'

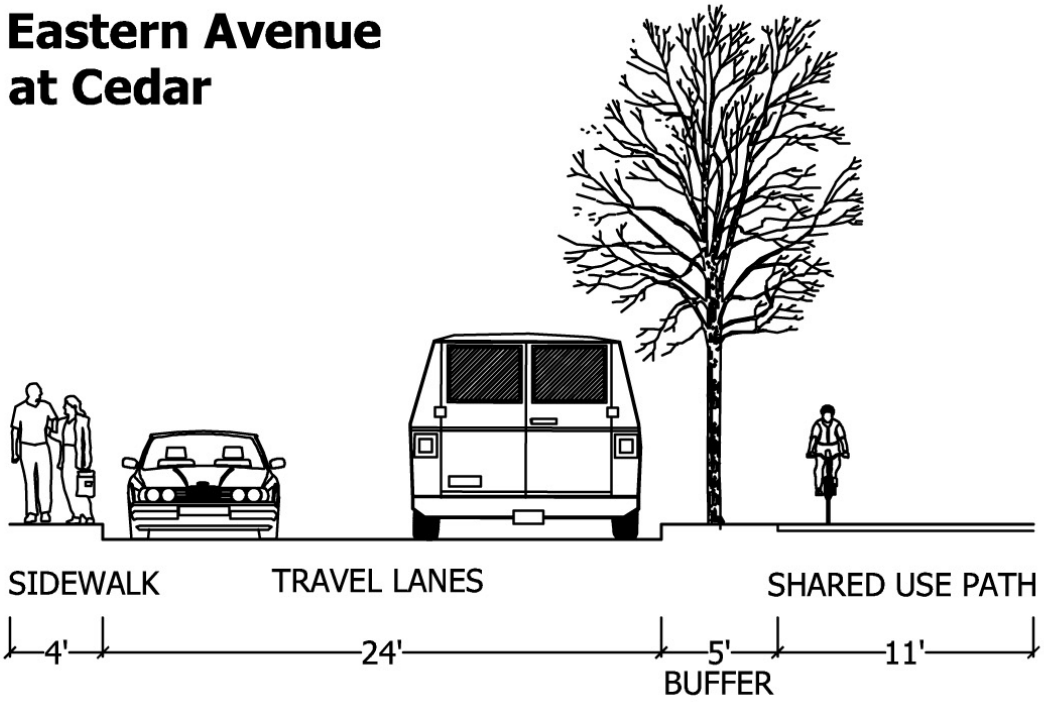

Sandy Spring Road
near Maple
SIDEWALK
ROADWAY
VARIABLE BUFFER
SHARED USE PATH
VARIED WIDTH EVERGREEN BUFFER
22'-27'
2'-5'
8'-10'
6'-18'

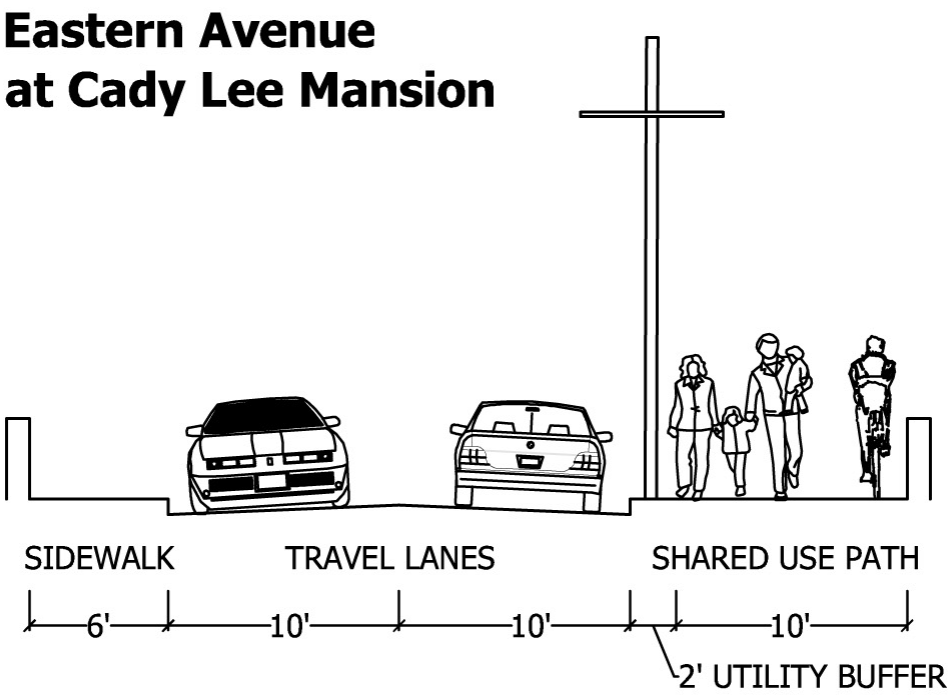

Maple Avenue
SIDEWALK
PARALLEL PARKING
TRAVEL LANES
SHARED USE PATH
4'
7'
20'
8'
2' UTILITY BUFFER
2' UTILITY BUFFER

Carroll Avenue



Eastern Avenue at Cedar





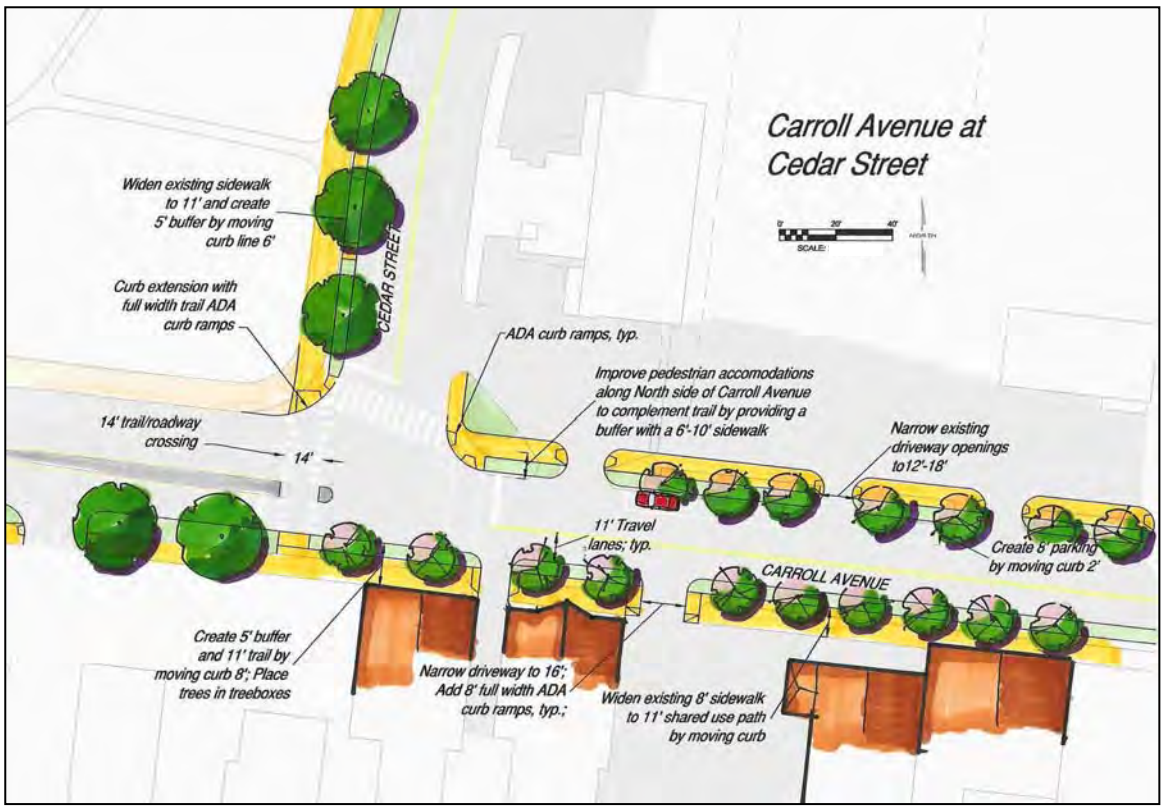
Proposed Structures and Roadway Crossings

No additional structures are required on the Eastern Leg.

Following is a list Eastern Leg at-grade street crossings and their recommended improvement:

- Van Buren Street, NW (speed table crosswalk)
- Aspen Street, NW (speed table crosswalk)
- Vine Street, NW (typical trail crossing)
- Carroll Avenue, NW and Cedar Street (see figure on following page for details)
- Piney Branch Road (see figure on following page for details)

It also includes a number of driveways providing access to private properties and parking lots, and a major Metro station driveway along Eastern Avenue.


Carroll Avenue at Cedar Street
SCALE:
Widen existing sidewalk to 11' and create 5' buffer by moving curb line 6'
Curb extension with full width trail ADA curb ramps
CEDAR STREET
ADA curb ramps, typ.
Improve pedestrian accomodations along North side of Carroll Avenue to complement trail by providing a buffer with a 6'-10' sidewalk
14' trail/roadway crossing
14'
Narrow existing driveway openings to12'-18'
11' Travel lanes; typ.
Create 8' parking by moving curb 2'
CARROLL AVENUE
Create 5' buffer and 11' trail by moving curb 8'; Place trees in treeboxes
Narrow driveway to 16'; Add 8' full width ADA curb ramps, typ.;
Widen existing 8' sidewalk to 11' shared use path by moving curb


Eastern Avenue at Piney Branch Road
SCALE:
Eastern Avenue
6'
Widen existing 6' trail to 9' by reducing green buffer space
Curb extension
14' trail/roadway crossing
Rebuild pedestrian refuge; Move nose
Re-align trail; Add curb extension
14'
8'
10' driveway/trail crossing
10'
Create 10' trail and 2' buffer by widening existing sidewalk and eliminating parking
26'
10'
Full width ADA curb ramps; typ.
Piney Branch Road

Signage

Sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for at-grade trail crossings. Trail identity and continuity is critical in this segment. Use of "Main Street" style banners or brass medallions with MBT logo installed in the trail treadway should be strongly considered. Signs using the MBT name and logo may also be considered.

Direction and destination signs at trail entrance and exit points are also important. Following are some example locations:

- Sandy Spring and Laurel: DC Bike Route to and from Takoma Park, Maryland and Sligo Creek Trail.
- Sandy Spring and Aspen: DC Bike Route to and from Rock Creek Park.
- Carroll Avenue: route to Takoma Park, Maryland, Takoma Metro Station, and Walter Reed Hospital
- Cedar and Eastern Avenue: route to Takoma Park, Maryland Community Center
- Eastern Avenue and Piney Branch Road: DC Bike Route to city center and route to suburban Montgomery County.

Connections

The Eastern Leg offers connections to the Takoma Metro Station and the commercial district in Takoma DC along Carroll Avenue. It will also serve much of the new development expected on the east side of the railroad tracks, including redevelopment of the Metro Station property, the properties on the north side of Carroll Ave., and a possible residential development on Maple Street adjacent to the CVS drugstore.

As noted above, the Eastern Leg will provide the most direct connections to Takoma Park, Maryland and surrounding parts of Montgomery County. Carroll Avenue and Laurel Street, which serve as Takoma Park's "Main Street", are slated for major improvements in 2004-05. These will improve bicycling and walking conditions tremendously along these streets, thus improving bicycle and pedestrian access to the Eastern Leg of the MBT.

Gateways and Waysides

The two-block trail section on Carroll Avenue and Cedar Street should be developed as a major gateway to the trail. A trail wayside should be integrated into the public park space that is created at the corner of Carroll and Cedar as a part of the mixed-use redevelopment of the Metro Station property. Treatments to be used in this gateway and wayside should include the following:

- For trail identity and continuity: "Main Street" style banners with MBT logo and/or brass medallions with MBT logo installed in the trail treadway.

- Distinctive treadway surface materials/design to differentiate the trail route from other sidewalks in the area.
- Street trees planted in buffer between the trail and the street.
- Bicycle parking and benches at various locations along this segment of the trail.
- A wayside with benches, drinking fountain, generous bicycle parking, interpretive signs highlighting neighborhood and transportation history, and public art.

A minor gateway/wayside could be created under the Aspen Street underpass. Aspen is a DC Bike Route and cross-town route frequently used by bicyclists, pedestrians and motorists. The concrete bridge abutment faces would make a good palette for a mural; a mural map of the entire Metropolitan Branch / Capital Crescent trail system has been suggested.

Trail crossing and gateway at Aspen St. presents an opportunity for a raised crosswalk and mural on abutment faces.

Landscaping

In this segment of the MBT, four street crossings would occur at Van Buren Street, NW, Aspen Street, NW, Vine Street, NW, and Carroll Avenue, NW, where the crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

Curbside gardens could be planned with community input in the residential development area on Maple Street; Curbside gardens could occur within tree buffer areas where the MBT is on-street and additional street trees along on-street trail sections could be included in this segment as replacements to fill gaps in the existing street tree pattern, if needed.

Landscape Treatments for the Takoma East Leg

Included	Treatment
X	Curbside Gardens
X	Street Crossings
	Dry Streambed
	Indigenous Vegetation
X	Ornamental Vegetation
	Photovoltaic Lighting
	Permeable Paving
	Planter
X	Portals
	Shelters
X	Street Trees
	Terracing
X	Unusual Focal Point

The Carroll Avenue and Cedar Street trail section should be developed as a major gateway to the trail, including curbside gardens and street trees planted in buffer between the trail and the street. Unusual focal points, composed of plantings in combination with artwork could be signature design elements within this two block section. Ornamental or native plant groupings could occur with the trail wayside proposed for the public park space that is created at the corner of Carroll and Cedar as a part of the mixed-use redevelopment of the Metro Station property.

Art

Greenway: Along Sandy Spring Rd., between Van Buren St. and Maple St., the trail will pass along and through a narrow, grassy strip of land next to the above-grade railway. An artist could be retained to work with landscape designers to turn these blocks of the trail into a greenway, using vegetation, screens, color and playful elements (such as seating or picnic furniture) to create pausing places.

Trail markers: This segment of the trail will make several turns on surface streets, at Van Buren/Sandy Spring, Maple/Carroll, and Carroll/Cedar. It will connect to the Metro system at Cedar St. These points are important to mark so trail users can continue along the trail, and because they are intersections where people can enter or exit the trail. These points could be marked by blazes or trail identification elements.

Underpasses: The trail will pass under the above-grade rail lines at Van Buren Street, and passes by underpasses at Aspen St. The Van Buren St. underpass is narrow, and is more suitable for art projects that involve color and light. The Aspen St. underpass is wide enough for trail users to be able to stop there safely, and is more suitable for art projects such as a mural or trail map.

Wayside: The Metro station entrance at Cedar St. and Carroll Avenue is a potential location for a wayside, and a major access point to the Metro system. The wayside could include lighting, seating, a water feature, bike storage, interpretive elements and informational elements.

Lighting & Security

This segment has been provided with existing high pressure sodium (HPS) “cobra head” street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Existing illumination for this portion of the MBT is driven by requirements for the associated roadway and its location relative to the adjacent residential neighborhood. It appeared during the survey that there were a few fixtures with burnt lamps and/or ballasts in this area, which could be affecting the illumination values. If it is necessary to provide for additional illumination in this segment, it is recommended that the existing roadway lighting be supplemented or upgraded in order to meet the illumination requirements.

This portion of the MBT is routed through a residential neighborhood. Due to the close proximity to the residential neighborhood, as well as potential alignments on existing roadways, it is recommended that no additional security measures be added to this segment of the trail.

Policing

This segment of the trail is policed by MPD PSA 401, which will provide the primary patrol force. Because of the area’s close proximity to Takoma Park, Maryland, Takoma Park municipal police can provide some support. Moreover, coordination with Metro police is also important, due to the trail’s close proximity to the Metro station. Traditional motor vehicle or bike-mounted patrols will be effective in this section.

Implementation

In general, implementation of this trail section is recommended for Phase 4, however the design and/or funding of many of the segments in this section are intimately related to redevelopment of the immediately adjacent properties. The timing of property development is highly variable. As a result, contact should be maintained with all prospective developers and the local community to ensure that an opportunity is not missed and that severe trail design compromises can be avoided.

- Earlier implementation of the segment from Van Buren to Carroll Avenue can be considered, as a part of street repaving or reconstruction of Sandy Spring Rd. Moreover, there are sections of Maple Street and Sandy Spring that do not have sidewalks, making this route less safe and accessible for pedestrians. The section along Maple needs to be coordinated with possible development of the vacant land across from Vine Street. For the trail to be added to the street, and parking to be retained, additional ROW is needed from the developer upon which to relocate the eastside sidewalk. A raised crosswalk at Aspen should be considered for inclusion in this project. It could also be added at a later date.
- The segment along Carroll Avenue (1 block) and Cedar St. crossing improvements, could be implemented anytime, however it may be best if implemented as a part of redesign of the entire streetscape of this block. That redesign is most likely to be stimulated by redevelopment of all or portions of the commercial properties on the north side of the street. Redevelopment planning and design of some of these properties is already underway.
- The trail segment along Cedar and Eastern, on the edge of the Metro property, was promised by the prospective developer as part of redevelopment of the Metro station area. Discussions with the developer, DCOP (who will be involved with a likely PUD), and WMATA will ensure that all parties remain coordinated. This is one of only a few opportunities to have a private developer fund and build a section of the trail.
- The trail segment from the Metro property to Piney Branch Road should be designed and built in conjunction with the trail segment to the south (see above).
- Improvements to the crossing of Piney Branch Road are scheduled for Phase 4, however they could be made earlier depending on the availability of funds. If a routine DDOT street or intersection improvement project was scheduled for this area before Phase 4, the necessary trail improvement elements could be included. Benefits to the traveling public resulting from this project are not dependent on implementing the trail improvements north and south of this intersection.

Continued coordination with the Takoma community, Metropolitan Branch Trail Coalition, ANC 3B, and the City of Takoma Park is essential as any of these projects move into design and construction. While the plan recommends a preferred alignment and facility type (shared use path on the west side of the streets) a shared use street remains an option for some of these sub-segments. Some of these segments are within the Takoma Historic District and should be built with design elements that reflect this fact.

TAKOMA WEST LEG: VAN BUREN STREET TO EASTERN AVENUE

Proposed Alignment

The alignment of the Western Leg of the MBT through Takoma will follow a series of neighborhood streets and cross small sections of private property, DC parkland, and WMATA owned property (See Layout Sheets 23, 24 and 25):

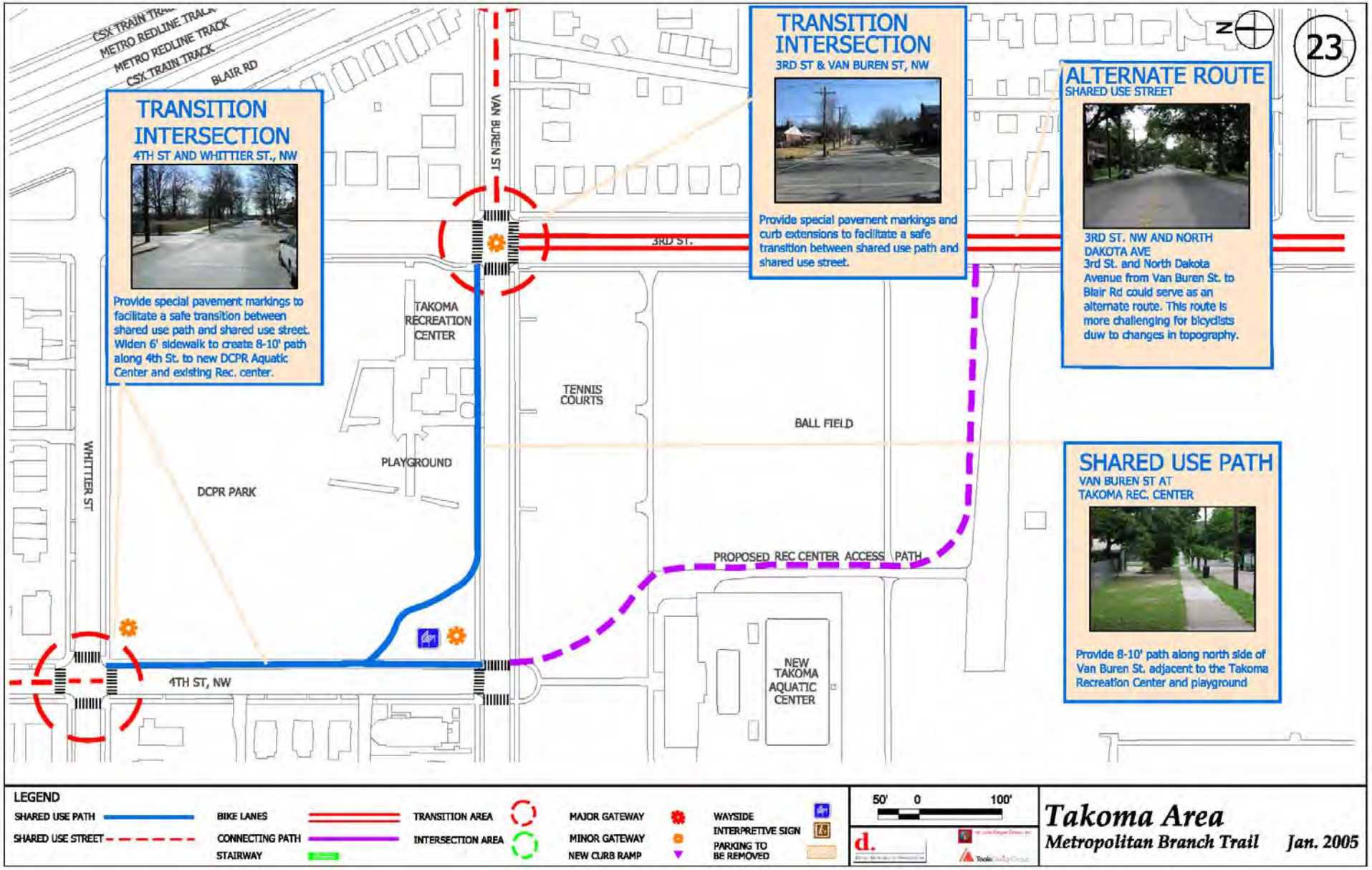
- Van Buren Street
- Takoma Recreation Center parkland
- 4th Street, NW
- Cedar Crossing Development
- WMATA ROW
- Spring Street
- Chestnut Street
- WMATA ROW
- Piney Branch Road

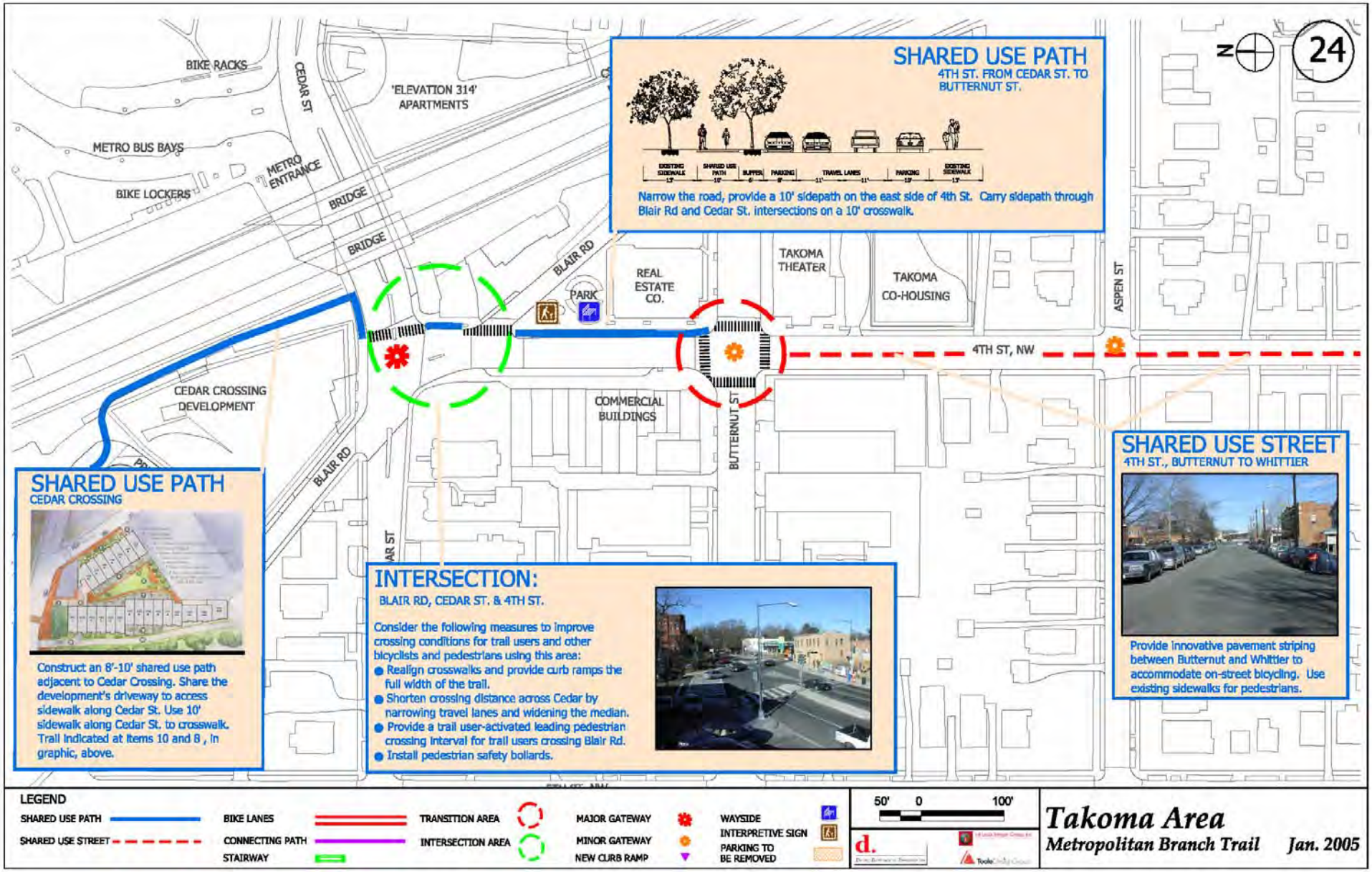
Existing Conditions

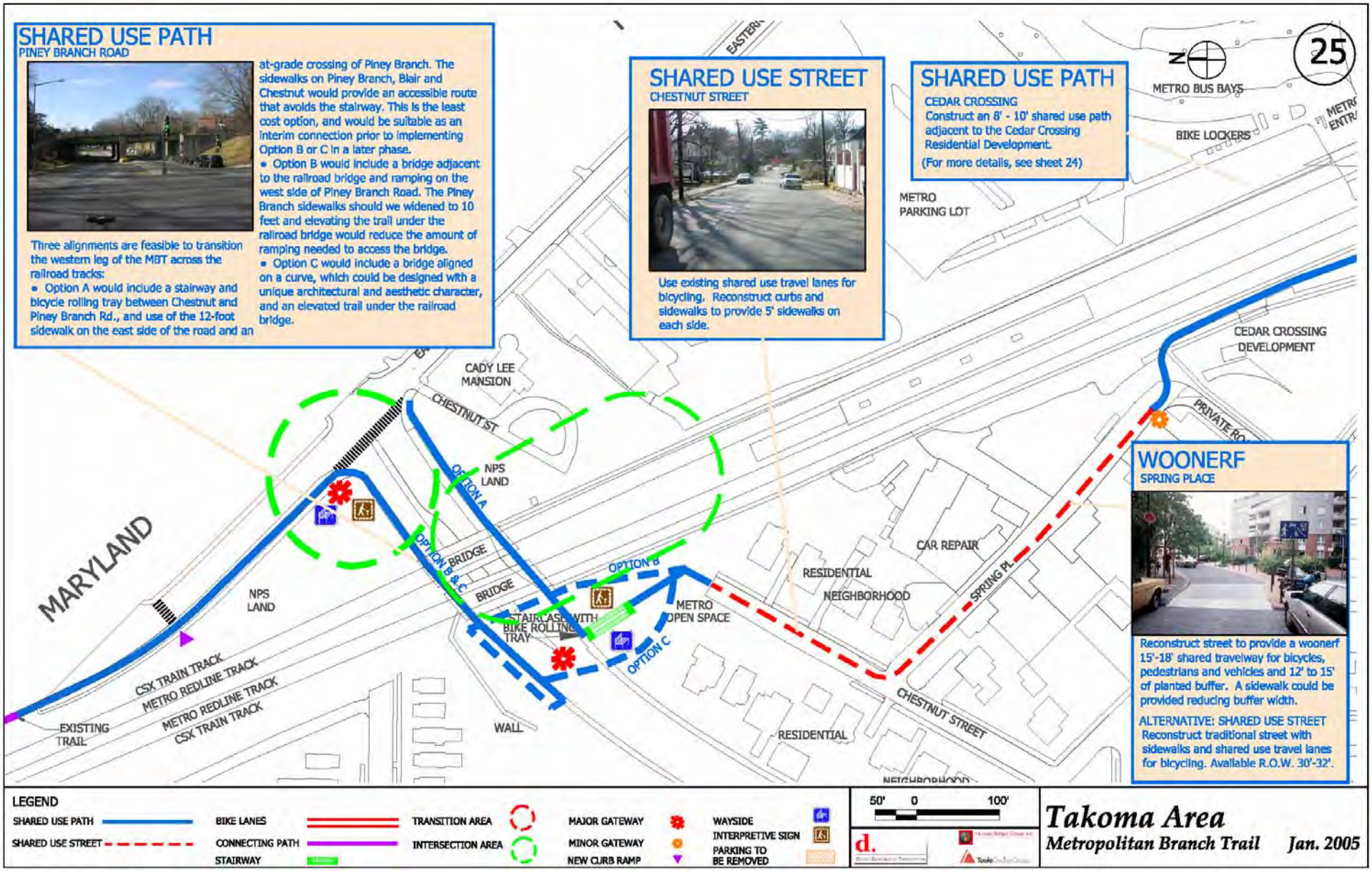
Existing conditions along these streets vary tremendously street by street, and block by block. In some locations sidewalks are provided, in other places sidewalks, curbs and gutters are not present. Streets also vary in width, parking regulations, and adjacent land uses. The park and WMATA lands are generally open areas covered with turf grass and some mature trees.

Trail Type—Shared Use Path and Shared Use Street

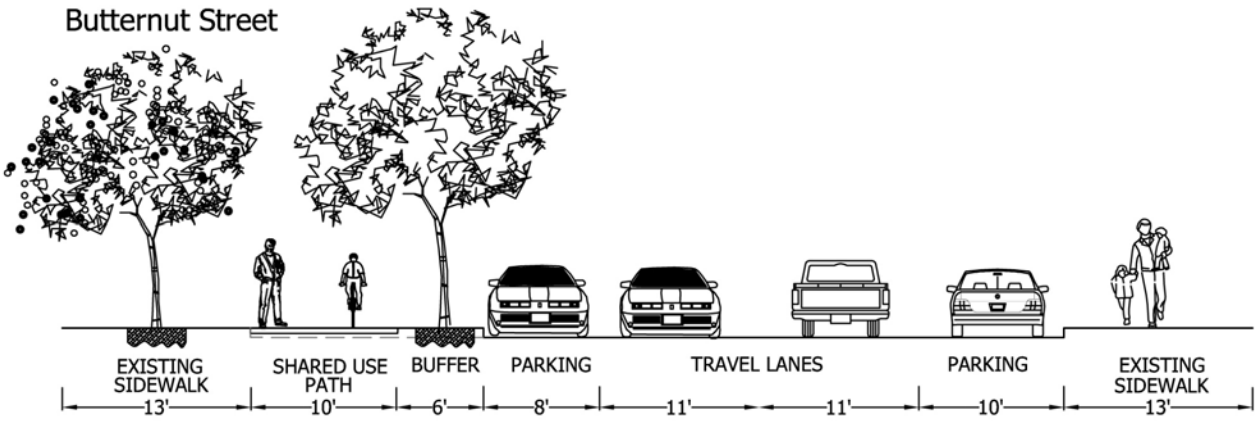
The Western Leg will be a combination of off-road shared use path and on-street bikeways with sidewalks for pedestrian. Because two MBT routes are recommended through Takoma Park, path width on the Western Leg will not need to exceed 11 feet to meet expected demand. Recommended path width varies from 8 to 11 feet, depending on available space. The sheets noted above provide a series of illustrated boxes and trail cross sections that show how the trail can be constructed through the heart of Takoma DC. In locations where new trail is constructed, the MBT will provide a significant upgrade to the existing streetscape. Where the trail uses on-street bikeway segments, the use of special pavement markings will be a key to establishing a strong visual presence for the trail.


TRANSITION INTERSECTION
4TH ST AND WHITTIER ST., NW
Provide special pavement markings to facilitate a safe transition between shared use path and shared use street. Widen 6' sidewalk to create 8-10' path along 4th St. to new DCPR Aquatic Center and existing Rec. center.
TRANSITION INTERSECTION
3RD ST & VAN BUREN ST, NW
Provide special pavement markings and curb extensions to facilitate a safe transition between shared use path and shared use street.
ALTERNATE ROUTE
SHARED USE STREET
3RD ST. NW AND NORTH DAKOTA AVE
3rd St. and North Dakota Avenue from Van Buren St. to Blair Rd could serve as an alternate route. This route is more challenging for bicydists duw to changes in topography.
SHARED USE PATH
VAN BUREN ST AT TAKOMA REC. CENTER
Provide 8-10' path along north side of Van Buren St. adjacent to the Takoma Recreation Center and playground
23
CSX TRAIN TRACK
METRO REDLINE TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
BLAIR RD
VAN BUREN ST
3RD ST.
TAKOMA RECREATION CENTER
TENNIS COURTS
BALL FIELD
PLAYGROUND
DCPR PARK
WHITTIER ST
PROPOSED REC CENTER ACCESS PATH
4TH ST, NW
NEW TAKOMA AQUATIC CENTER
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005


24
SHARED USE PATH
4TH ST. FROM CEDAR ST. TO BUTTERNUT ST.
Narrow the road, provide a 10' sidepath on the east side of 4th St. Carry sidepath through Blair Rd and Cedar St. intersections on a 10' crosswalk.
BIKE RACKS
CEDAR ST
'ELEVATION 314' APARTMENTS
METRO BUS BAYS
METRO ENTRANCE
BIKE LOCKERS
BRIDGE
BRIDGE
BLAIR RD
PARK
REAL ESTATE CO.
TAKOMA THEATER
TAKOMA CO-HOUSING
ASPEN ST
4TH ST, NW
CEDAR CROSSING DEVELOPMENT
COMMERCIAL BUILDINGS
BUTTERNUT ST
BLAIR RD
SHARED USE PATH
CEDAR CROSSING
Construct an 8'-10' shared use path adjacent to Cedar Crossing. Share the development's driveway to access sidewalk along Cedar St. Use 10' sidewalk along Cedar St. to crosswalk. Trail indicated at items 10 and 8 , in graphic, above.
INTERSECTION:
BLAIR RD, CEDAR ST. & 4TH ST.
Consider the following measures to improve crossing conditions for trail users and other bicyclists and pedestrians using this area:
Realign crosswalks and provide curb ramps the full width of the trail.
Shorten crossing distance across Cedar by narrowing travel lanes and widening the median.
Provide a trail user-activated leading pedestrian crossing interval for trail users crossing Blair Rd.
Install pedestrian safety bollards.
SHARED USE STREET
4TH ST., BUTTERNUT TO WHITTIER
Provide innovative pavement striping between Butternut and Whittier to accommodate on-street bicycling. Use existing sidewalks for pedestrians.
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005


SHARED USE PATH
PINEY BRANCH ROAD
Three alignments are feasible to transition the western leg of the MBT across the railroad tracks:
• Option A would include a stairway and bicycle rolling tray between Chestnut and Piney Branch Rd., and use of the 12-foot sidewalk on the east side of the road and an at-grade crossing of Piney Branch. The sidewalks on Piney Branch, Blair and Chestnut would provide an accessible route that avoids the stairway. This is the least cost option, and would be suitable as an interim connection prior to implementing Option B or C in a later phase.
• Option B would include a bridge adjacent to the railroad bridge and ramping on the west side of Piney Branch Road. The Piney Branch sidewalks should we widened to 10 feet and elevating the trail under the railroad bridge would reduce the amount of ramping needed to access the bridge.
• Option C would include a bridge aligned on a curve, which could be designed with a unique architectural and aesthetic character, and an elevated trail under the railroad bridge.
SHARED USE STREET
CHESTNUT STREET
Use existing shared use travel lanes for bicycling. Reconstruct curbs and sidewalks to provide 5' sidewalks on each side.
SHARED USE PATH
CEDAR CROSSING
Construct an 8' - 10' shared use path adjacent to the Cedar Crossing Residential Development.
(For more details, see sheet 24)
25
METRO BUS BAYS
BIKE LOCKERS
METRO PARKING LOT
CEDAR CROSSING DEVELOPMENT
CADY LEE MANSION
CHESTNUT ST
NPS LAND
OPTION A
OPTION B & C
BRIDGE
BRIDGE
OPTION B
STAIRCASE WITH BIKE ROLLING TRAY
OPTION C
METRO OPEN SPACE
MARYLAND
NPS LAND
CSX TRAIN TRACK
METRO REDLINE TRACK
METRO REDLINE TRACK
CSX TRAIN TRACK
EXISTING TRAIL
WALL
RESIDENTIAL
CAR REPAIR
RESIDENTIAL NEIGHBORHOOD
SPRING PL
CHESTNUT STREET
WOONERF
SPRING PLACE
Reconstruct street to provide a woonerf 15'-18' shared traveiway for bicycles, pedestrians and vehicles and 12' to 15' of planted buffer. A sidewalk could be provided reducing buffer width.
ALTERNATIVE: SHARED USE STREET
Reconstruct traditional street with sidewalks and shared use travel lanes for bicycling. Available R.O.W. 30'-32'.
LEGEND
SHARED USE PATH
SHARED USE STREET
BIKE LANES
CONNECTING PATH
STAIRWAY
TRANSITION AREA
INTERSECTION AREA
MAJOR GATEWAY
MINOR GATEWAY
NEW CURB RAMP
WAYSIDE
INTERPRETIVE SIGN
PARKING TO BE REMOVED
50' 0 100'
Takoma Area
Metropolitan Branch Trail
Jan. 2005

The trail cross section below illustrates how the trail can be constructed on 4th Street between Butternut Street and Cedar Street.



Two unique facility types are recommended for short segments on the Western Leg:

- A shared bikeway and private driveway at the Cedar Crossing Development
- A woonerf on a reconstructed and redeveloped Spring Street.

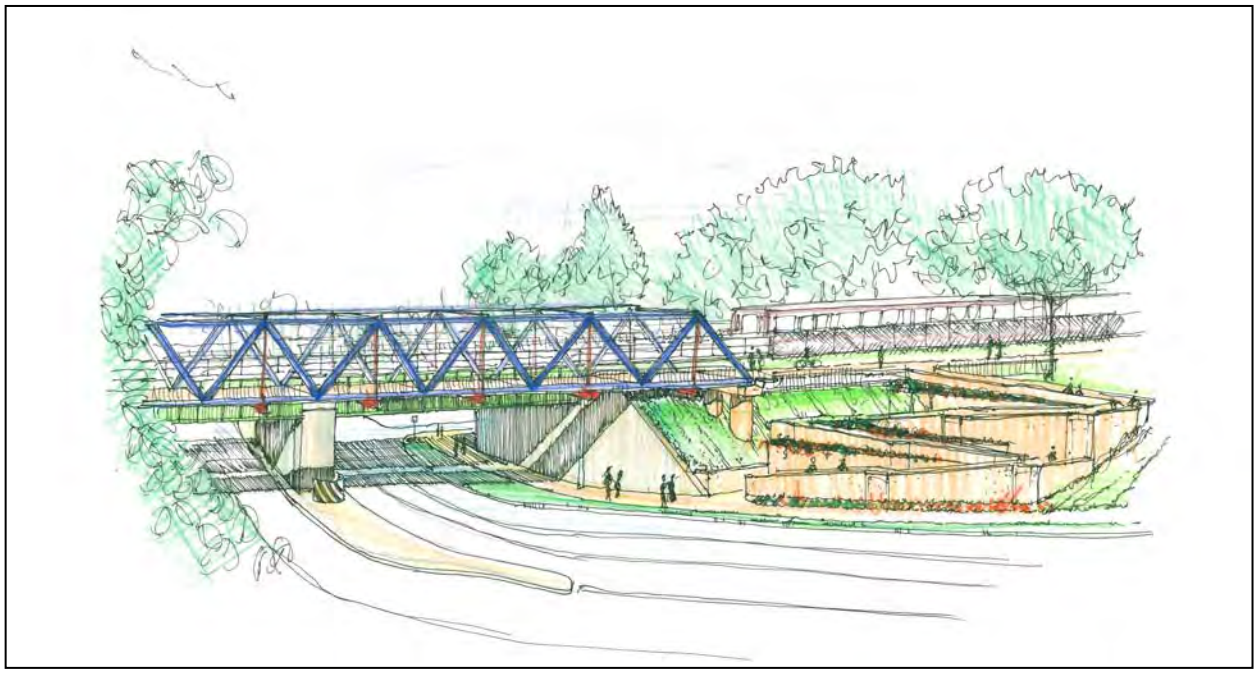
Implementation of the preferred route along the Western Leg will have no adverse affect on neighborhood or commercial parking.

Proposed Structures and Roadway Crossings

The Western Leg of the trail approaches Piney Branch Road at the elevation of the tracks, which pass over the roadway. Therefore the trail must either descend to the level of the road through switchbacks or ramps – to cross at Eastern Avenue, or could cross over Piney Branch Road by bridge and descend by ramp to the road on its northern side. The figure below shows a conceptual example of a bridge and a switchback. The bridge type is a truss, likely to have a prefabricated superstructure to reduce costs. The ramp on the northern end of the bridge would require four 85-foot legs. Provision of a staircase with a bicycle rolling tray is also recommended for the bridge option to provide access to the sidewalk along the north side of Piney Branch Road. As an interim measure or in addition to the bridge option, provision of a staircase with a bicycle rolling tray on the southern end would provide access to the sidewalk along the north side of Piney Branch Road.

Note that actual design could vary from these concepts.

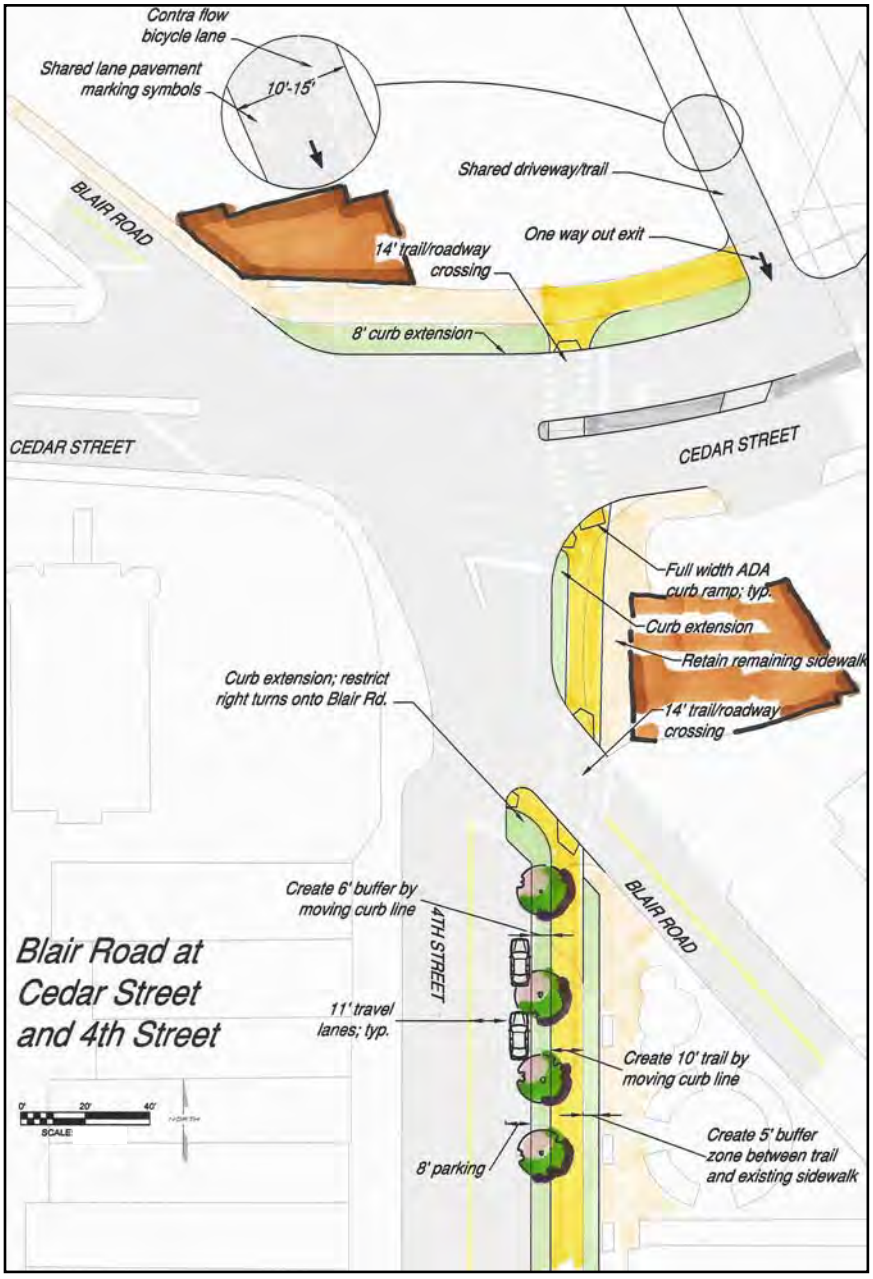
Overpass over Piney Branch Road, looking east



Following is a list of Western Leg at-grade street crossings and their recommended improvement:

- Van Buren Street, NW (see figure below for details)

- 3rd Street, NW (transition trail crossing)
- Whittier Street, NW (transition trail crossing)
- Aspen Street, NW (traditional crosswalks for pedestrians)
- Butternut (transition trail crossing)
- Blair Road and Cedar Street, NW (see figure below)



The Western Leg has no off-street trail crossings of driveways.

Signage

Sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for at-grade trail crossings. Trail identity and continuity is critical in this segment. Use of "Main Street" style banners or brass medallions with MBT logo installed in the trail treadway should be strongly considered. Signs using the MBT name and logo may also be considered.

Direction and destination signs at trail entrance and exit points are also important. Following are some example locations:

- 3rd Street: commonly used bike route to downtown DC
- 4th Street and Aspen: DC Bike Route to and from Rock Creek Park.
- 4th Street and Butternut: commonly used bike route to Walter Reed Medical Center and main trail entrance in the 4th Street Business District.
- Cedar St and Blair Road: Access to Blair Road, Takoma Metro Station; Takoma Library, Takoma Elementary School and access to Takoma Park, Maryland "Main Street" on Carroll Avenue.
- Piney Branch Road: DC Bike Route to city center and commonly used route to residential neighborhoods in Takoma Park, Sligo Creek trail and other suburban Montgomery County destinations.

Connections

The Western Leg offers connections to the parkland and various recreational facilities at the Takoma Recreation Center, including the new aquatic center. Coolidge High School is also at the south end of this leg.

In the middle section of the Western Leg are connections to the commercial district in Takoma, DC along 4th Street, NW, which includes the reactivated Takoma Theatre. There are also connections to the Takoma Metro Station, the Takoma Library, Takoma Elementary School, and Walter Reed Medical Center.

The Western Leg will directly serve the new development on the west side of the railroad tracks and provide access to the Carroll Street commercial area on the east side of the tracks, in Takoma, DC and Takoma Park, Maryland,

Gateways and Waysides

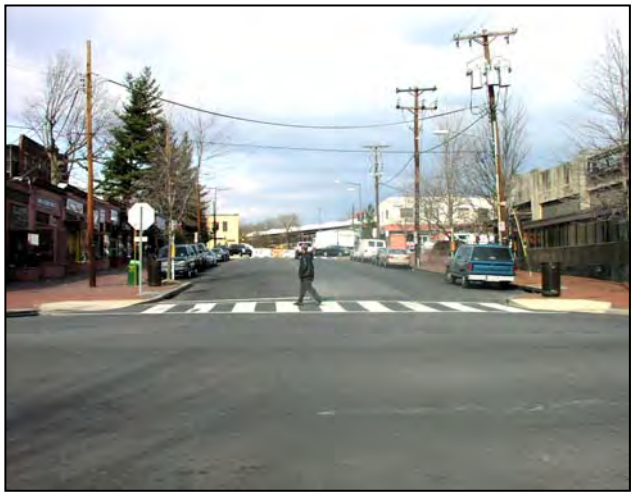
Key gateway and wayside opportunities include the following:

1. Van Buren and 3rd Street Gateway

2. Takoma Recreation Center (Van Buren and 4th St.) Gateway and Wayside

3. 4th St. from Butternut to Cedar Crossing and Takoma Metro: two gateways and a wayside

4. Metro Open Space at Piney Branch Road: Gateway and Wayside.



Intersection of 4th Street and Butternut presents an opportunity for neighborhood gateway enhancement combined with trail transition from on-street to off-street facility.

The one-block trail section on 4th Street between Butternut and Cedar Street should be featured as a major gateway to the trail. The existing public plaza at 4th and Blair Road should be enhanced to create a trail wayside. The opposite end of this segment, at Butternut, should also be enhanced by extending the curb and using landscaping, art and signage to create a trail gateway and transition intersection. Treatments to be considered in this gateway and wayside should include the following:

- For trail identity and continuity: “Main Street” style banners with MBT logo and/or brass medallions with MBT logo installed in the trail treadway.
- Distinctive treadway surface materials/design to differentiate the trail route from other sidewalks in the area.
- Street trees planted in buffer between the trail and the street.
- Bicycle parking and benches at various locations along this segment of the trail.
- An enhanced wayside with drinking fountain, interpretive signs highlighting neighborhood and transportation history, and public art.

Takoma Recreation Center park land offers an opportunity for a wayside and trail gateway across from the new Aquatic Center.

A minor trail gateway could be created near the Takoma Recreation Center in the open parkland across from the front of the new Takoma Aquatic Center, or at the corner of 3rd and Van Buren, at this transition intersection. In this area, landscaping, public art and interpretive signs should be the focal treatments.

Landscaping

In this segment of the MBT, six street crossings would occur at Van Buren Street, NW, 3rd Street, NW, Whittier Street, NW, Aspen Street, NW, Butternut, Blair Road and Cedar Street, NW, where the crossing could be marked with a symbol or feature designating the MBT alignment. This treatment would be consistent with other street crossings throughout the trail corridor.

A major gateway to the trail should be developed on 4th Street between Butternut and Cedar Streets. A trail wayside with possible native or ornamental plantings should be proposed in the existing public plaza at 4th and Blair Road. At the opposite end of the Butternut segment, landscaping, art and signage should also be developed by extending the curb to create a trail gateway and transition intersection. Street trees and curbside gardens, where appropriate, should be planted in the tree buffer between the trail and the street.

Landscape Treatments for the Takoma West Leg

Included	Treatment
X	Curbside Gardens
X	Street Crossings
	Dry Streambank
X	Indigenous Vegetation
X	Ornamental Vegetation
	Photovoltaic Lighting
	Permeable Paving
	Planter
X	Portals
	Shelters
X	Street Trees
	Terracing
X	Unusual Focal Point

Additional curbside gardens could occur within tree buffer areas where the MBT is on-street and additional street trees along on-street trail sections could be included in this segment as replacements to fill gaps in the existing street tree pattern, as appropriate.

Landscaping, public art and interpretive signs should combine for an unusual focal point near the Takoma Recreation Center in the open parkland across from the front of the new Takoma Aquatic Center, or at the corner of 3rd and Van Buren.

Art

Takoma Recreation Center, Playground, Park and Aquatic Center: Along Van Buren Avenue, between 3rd and 4th Street, the trail will pass by numerous recreation facilities and through a city-managed park. This is likely to be a major destination for trail users. Art can enhance this cluster of recreation facilities by creating a central orientation spot, perhaps at Van Buren/3rd or Van Buren/4th, that acts as a symbolic gateway and provides trail users with information, a resting place, etc.

In addition, the parkland provides an interesting opportunity for configuring an off-road section of the trail. The trail could take advantage of the contour of the land to make a dramatic swoop through the southwest corner of the site. An artist could work with a landscape designer to design the trail configuration and an artistic gateway to the recreation facilities.

4th Street: In the area of Butternut St., Blair Rd. and Cedar St., the trail would pass by the Takoma Theater and a small vest-pocket park. Both of these places are potential locations for community gathering places, as noted above. The wide sidewalk in front of the theater, or the park space itself, could be the location for community-oriented art projects.

Cedar Street and Spring Street: The nature of the area through which the trail passes will change dramatically as the trail is redeveloped. Long-run opportunities include infrastructure-related projects (should the trail involve new walls, screens or lighting) and community placemaking projects (should the overall development plans include new community spaces that are connected to the trail).

Piney Branch Road: The trail crossing over Piney Branch Road, the retaining wall west of Piney Branch Road and underpass beneath the railroad tracks, are key opportunity sites for public art. An artist could be involved in the next phase of design work to conceptualize approaches toward all these settings—designing the bridge as an artistic structure, or integrating artistic elements into it; providing an engaging (yet safe) overlook at the top of the hill; addressing retaining wall; and integrating the trail course with the underpass and gateway area northeast of the rail line. In this area, new infrastructure could embody a sense of modernity, flow and motion; sculptural elements might draw on railroad themes; landscape elements might draw on the sculptural nature of the wall and the vines that cover it.

Lighting & Security

This segment has been provided with existing high pressure sodium (HPS) “cobra head” street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Existing illumination for this portion of the MBT is driven by requirements for the associated roadway and its location relative to the adjacent residential neighborhood. It appeared during the survey that there were a few fixtures with burnt lamps and/or ballasts in this area, which could be affecting the illumination values. If it is necessary to provide for additional illumination in this portion of the trail, it is recommended that the existing roadway lighting be supplemented or upgraded in order to meet the illumination requirements.

This portion of the MBT is routed through a residential neighborhood. Due to the close proximity to the residential neighborhood, as well as potential alignments on existing roadways, it is recommended that no additional security measures be added to this segment of the trail.

Policing

This segment of the trail is policed by MPD PSA 401, which will provide the primary patrol force. Coordination with Metro police is also important, due to the trail’s close proximity to the Metro station, and the trail’s presence on WMATA property. Traditional motor vehicle or bike-mounted patrols will be effective in this section.

Implementation

In general, implementation of this section is recommended for Phase 4. Some segments may be implemented in the near term, as part of an interim trail, and others could be timed to coincide with redevelopment of adjacent properties. The timing of property development is highly variable. As a result, it is important to maintain contact with all prospective developers and the local community to ensure that an opportunity is not missed and that severe trail design compromises can be avoided.

- Earlier implementation of the segment from 3rd Street to Whittier, through the Takoma Recreation Center, to coincide with the opening of the Takoma Aquatic Center, may be considered.

- The 2-block segment from Whittier to Butternut can be implemented as part of an interim trail route; it includes only pavement markings and signage.

- The segment along 4th Street, including two improved crossings (Blair and Cedar) can be implemented at any time; however, it may be best implemented as a part of redesign of the entire streetscape on this block. That redesign should be undertaken in consultation with the Takoma community and the owners and tenants of the commercial properties on 4th Street.

- The segments along Chestnut Street, Spring Street, and adjacent to Station Place can be implemented anytime; however, it may be desirable to undertake these segments in conjunction with redevelopment of the commercial properties adjacent to Spring Street. It is possible that the developer may be willing to fund all or a portion of the woonerf design and construction. Sidewalk and pavement improvements along Chestnut Street can be undertaken independently or in conjunction with implementing the woonerf on Spring Street; however, it should be noted that they are in very poor condition.

- Until there is a way to traverse the grade change between the end of Chestnut Street and Piney Branch Road, there is only modest benefit to be gained from implementing the other segments north of Cedar Street. However, consideration should be given to early implementation (prior to phase 4) of a staircase and bicycle rolling tray to connect Chestnut and the sidewalk on the south side of Piney Branch Road. This approach would open up the full western leg without having to build the bridge crossing, which can be included in Phase 5.

- By providing an ADA accessible western route on the sidewalks of Piney Branch and Blair Roads, and Chestnut Street, and the Eastern Leg of the MBT, a stair at the WMATA property may suffice as a long-term solution for the Western Leg. Provision of a bridge and associated ramps at this location can remain an optional upgrade, and is included in Phase 5.

Continued coordination with the Takoma community, Metropolitan Branch Trail Coalition, ANC 3B, and the City of Takoma Park is essential as any of these projects move into design and construction. Some of these segments are fairly straight forward; however, others have facility type and design options in which the community will be interested. Some of these segments are within the Takoma Historic District and should be built with design elements that reflect this fact.

MARYLAND CONNECTION: PINEY BRANCH ROAD TO DC/MD BOUNDARY

Proposed Alignment

The Eastern and Western Legs of the MBT join together on the north side of Piney Branch Road. From here there is only a short distance of trail remaining in the District of Columbia. The proposed alignment is along the existing sidewalk adjacent to Eastern Avenue to the District boundary where it will join the existing section of the MBT in Takoma Park Maryland. This segment of trail will be on DCDOT street ROW and adjacent NPS parkland.

Details about this alignment are described on Layout Sheets 22 and 25 in preceding sections.

Existing Conditions

Along Piney Branch Road the existing sidewalk is 6 feet wide and the grass buffer is 4 feet. Unrestricted and un-metered parallel parking is allowed on both sides of Eastern Avenue; it is used almost exclusively by Metrorail commuters. Adjacent NPS parkland includes a number of mature trees and grass turf.

Trail Type—Shared Use Path

Expansion of the sidewalk to a 10-11 foot width is proposed for accommodating the trail. This can be accomplished with minimum impacts to the mature tree root systems by taking one foot from the buffer strip and 2-3 feet from the NPS land.

A raised crosswalk could be installed across Takoma/Eastern Avenue at Baltimore Ave. to enhance traffic safety and access to the MBT.

Proposed Structures and Roadway Crossings

No structures are required in this area. The MBT implementation advisory committee convened by the City of Takoma Park Maryland proposed an additional speed table crosswalk across Eastern Avenue/Takoma Avenue just north of the intersection of Baltimore Avenue (one was already built at Buffalo Ave as part of the Takoma Park MBT Trail construction project). The northern end of this speed table would be in Takoma Park Maryland, but the southern end would be in the District of Columbia. To install such a facility would require the concurrence and

cooperation of the District of Columbia. At the time that trail improvements are designed for this segment North Takoma residents and the City of Takoma Park should be consulted to determine if the speed table crosswalk is still desired at this location.

Signage

Sign system recommendations should be implemented throughout this section, especially the appropriate warning and regulatory signs recommended for at-grade trail crossings. Trail identity and continuity is critical in this segment. Use brass medallions with MBT logo installed in the trail treadway should be strongly considered. Signs using the MBT name and logo may also be considered.

Direction and destination signs at trail entrance and exit points are also important. Following are some example locations:

- Baltimore Avenue, if crosswalk is installed.
- Piney Branch Road: DC Bike Route to city center and commonly used route to residential neighborhoods in Takoma Park, Sligo Creek trail and other suburban Montgomery County destinations.

Connections

This segment of trail connects to the existing MBT segment built by the City of Takoma Park, Maryland in 2003. It provides access to the North Takoma Neighborhood and the Montgomery Community College. At the college a new bicycle/pedestrian bridge has been constructed across the railroad tracks to Blair Park. This track crossing connects the MBT with the very northern portions of the District of Columbia (Shepherd Park) and the Kalmia Road route to Rock Creek Park, as well as to the southern sections of Silver Spring, Maryland.

Gateways and Waysides

The open NPS land along this segment provides an opportunity to create a major gateway treatment near the trail intersection with Piney Branch Road. This location not only marks the point at which the MBT enters the District of Columbia, but is a major visual gateway for motorists on Piney Branch Road and Eastern Avenue. The dip in Piney Branch Road, the overhead railroad bridge, and the presence of the recently rehabilitated Cady Lee Mansion (a property listed on the National Register of Historic Places), combine to create an appropriate setting to be enhanced with a trail gateway treatment. The following treatments should be considered.

MBT construction along Eastern Avenue presents an opportunity to enhance the DC side of major DC/MD community gateway.

- Feature landscaping.
- A unique trail identity sign, possibly an arch structure over the trail, or trail and roadway. Use of the phrase “Welcome to Washington, DC” and conversely Welcome to Takoma Park Maryland on the reverse.
- Painting of the CSX railroad bridge using an appropriate color and design motif to complement the Cady Lee Mansion; other appropriate dressings for the bridge abutments to improve their visual appearance.
- Distinctive treadway surface materials/design to differentiate the trail route from other sidewalks in the area.
- A small trail wayside with a bench, and interpretive signs highlighting neighborhood and transportation history.

Landscaping

In the areas where the trail continues along a road, street tree plantings, especially along Piney Branch Road and Eastern Avenue, would contribute to improving the visual quality of the corridor. Since this is a heavy-traffic corridor, trees in grates and not in grass buffers may prove to be a practical solution.

If deemed appropriate by the NPS, a portal treatment in the vicinity of the Cady Lee Mansion could improve orientation to the MBT in this urban segment of the trail. Placement of art or other gateway feature with limited plantings and wayside material focused on local history could enhance the user experience along the MBT.

Landscape Treatments for the Maryland Connection: Piney Branch Road

Included	Treatment
X	Street Crossings
	Dry Streambank
X	Indigenous Vegetation
X	Ornamental Vegetation
X	Portals
	Shelters
X	Street Trees
	Terracing
X	Unusual Focal Point

Art

The intersection of Piney Branch Road and Eastern Avenue is a major gateway into the District of Columbia. This could be the location of a wayside, interpretive elements (signage, sculpture) that mark passage into and out of the District, and new trail infrastructure that relates to the turn from Eastern onto Piney Branch and the slope of the hillside. The intersection is also marked by decorative plantings on the Takoma Park, MD. side of the street (east and north corners of the intersection), and the Cady Lee Mansion, on the south corner.

The design of this area could be considered in conjunction with the design of the elements on the other side of the railroad bridge. New infrastructure could embody a sense of modernity and flow; interpretive and sculptural elements could consider the history of the boundary between Maryland and D.C. (though there is no Bannekar marker at this point, an interpretive project could tell the story of the laying out of the federal district, or a sculpture might honor Banneker).

Special infrastructure, such as bike racks, seating, shade structures and a water element, might also complement this entryway. These could all be elements designed by an artist.

Lighting & Security

This segment has been provided with existing high pressure sodium (HPS) “cobra head” street lighting fixtures for illumination of the existing roadways. It is proposed that this existing lighting system be utilized to provide illumination of the MBT for this portion of the trail. Existing illumination for this portion of the MBT is driven by requirements for the associated roadways. It appeared during the survey that there were a few fixtures with burnt lamps and/or ballasts in this area, which could be affecting the illumination values in this segment. If it is necessary to provide for additional illumination in this portion of the trail, it is recommended that the existing roadway lighting be supplemented or upgraded in order to meet the illumination requirements.

This portion of the MBT is routed through residential neighborhoods and adjacent to significant roadways. Due to the close proximity to the residential neighborhood, as well as potential alignments on existing roadways, it is recommended that no additional security measures be added to this segment of the trail.

Policing

This segment of the trail is policed by MPD PSA 401, which will provide the primary patrol force. Because of the area’s close proximity to Takoma Park, Maryland, Takoma Park municipal police can provide some support. Moreover, coordination with Metro police is also important, due to the trail’s close proximity to the Metro station. Traditional motor vehicle or bike-mounted patrols will be effective in this section.

Implementation

Completion of the trail segment in this section is recommended for 2005 to be completed as part of implementing an interim trail route. Implementation of gateway and wayside elements, and a potential raised crosswalk to Baltimore Avenue in Maryland, can be included or undertaken independently in a later phase.

CHAPTER EIGHT

SIGNAGE, LANDSCAPING, AND LIGHTING

INTRODUCTION

The concepts for signage, landscaping, and lighting are essential components of the overall trail concept. This chapter provides details about each of these elements.

TRAIL SIGNAGE AND PAVEMENT TREATMENTS

Providing a consistent, attractive and unique sign and pavement marking system is critical for the success of the Metropolitan Branch Trail. Three issues stand out:

- **Wayfinding:** The MBT makes frequent transitions from on-street to off-street facilities and uses many back streets and previously undeveloped areas, making wayfinding extremely important. Every effort should be made to prevent users from getting lost and maintain a high level of user trust and sense of security.
- **Identity:** The trail is named for the historic rail corridor that it follows, the Metropolitan Branch of the B&O Railroad, however this reference for the corridor is not in current usage and is not widely known in the community; moreover the trail is not always in visual proximity to the rail corridor. As a result, the trail will need greater than typical levels of on-site identification and "marketing."
- **Continuity:** The MBT passes through properties under the jurisdiction of, or of interest to, a number of other government agencies that have existing signage and aesthetic protocols such as the National Park Service, WMATA, the Architect of the Capital, and Fine Arts Commission. Meeting existing standards and coordinating with existing protocols is important.

The MBT signage program will consist of four primary components: 1) Identity Logo, 2) Wayfinding Signs, 3) Regulatory Signs, 4) Trail/Street Crossings: Signs and Pavement Treatments, and 5) General Pavement Markings.

Identity Logo

Design of an MBT trail logo is the first step in developing a signage program. Use of one logo on a variety of different sign types, as well as in maps, and on brochures and websites, will provide the trail a unique identity and help the public begin to establish a connection between the name "Metropolitan Branch Trail" and the actual trail facility in their neighborhood.

Recommendations for developing a single trail logo include the following:

- Select a color scheme that will be unique in the urban landscape and highly visible to trail users, but will complement the existing visual landscape of Northeast Washington residential and commercial neighborhoods. It should also avoid conflicts with color use protocols established by the MUTCD. Initial logo color recommendations include MUTCD green and royal blue, such as those used in this document. White or black could also be used as a highlight or background.
- Develop a logo that includes a graphic image and the trail name or nickname (abbreviation), such as the following: Metropolitan Branch Trail, Met Branch Trail, or MBT.
- Develop a logo that can also be applied without using the color scheme, such as in a relief cast in a metal medallion or imbedded in a stone paver.

Wayfinding Signs and Treatments

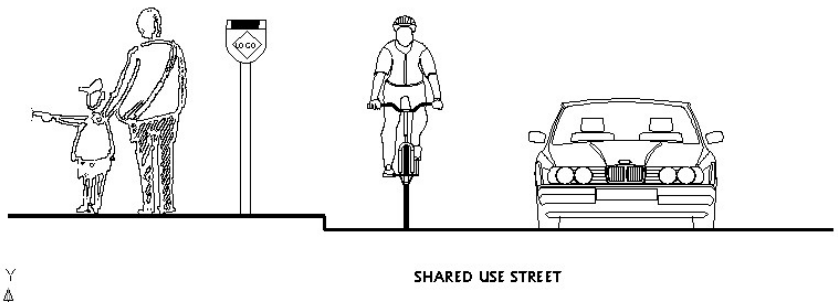
The goal of the wayfinding sign program is to ensure that trail users can use the trail effectively for transportation, as well as recreation. Users need to know where in the city the trail goes, where it turns, what destinations are nearby the trail, which is the safest and most direct route to these destinations, and how far it is to these destinations.

Secondarily, many or all of the wayfinding signs can include the trail logo, and as a result they will help establish a consistent and unique "look" for the entire trail.

Trail Identity Treatments

Three trail identity treatments are recommended, providing a variety of options for the various settings that the trail passes through. The primary purpose for trail identity signs and treatments is to provide visual confirmation to trail users that they are still following the trail. This sign serves as the "trail blaze" a typical feature of backcountry hiking trails. The trail logo will be the central feature of these signs and treatments. Sign frequency may vary from one sign per block to every .25 miles.

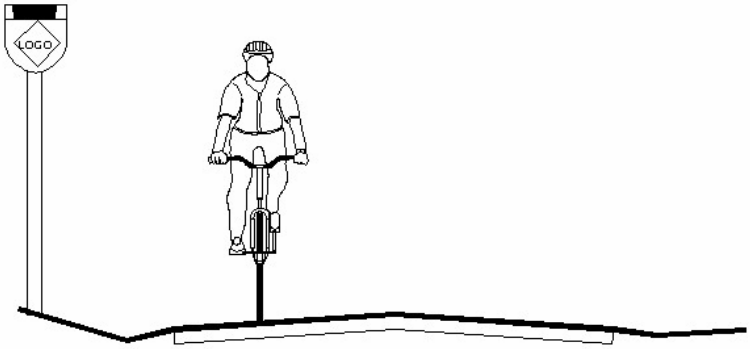
Trail Blaze Sign: This sign would be used in a variety of trail settings:



- Along **shared use streets** in residential neighborhoods, such as in Takoma Park, Manor Park and 8th Street. In

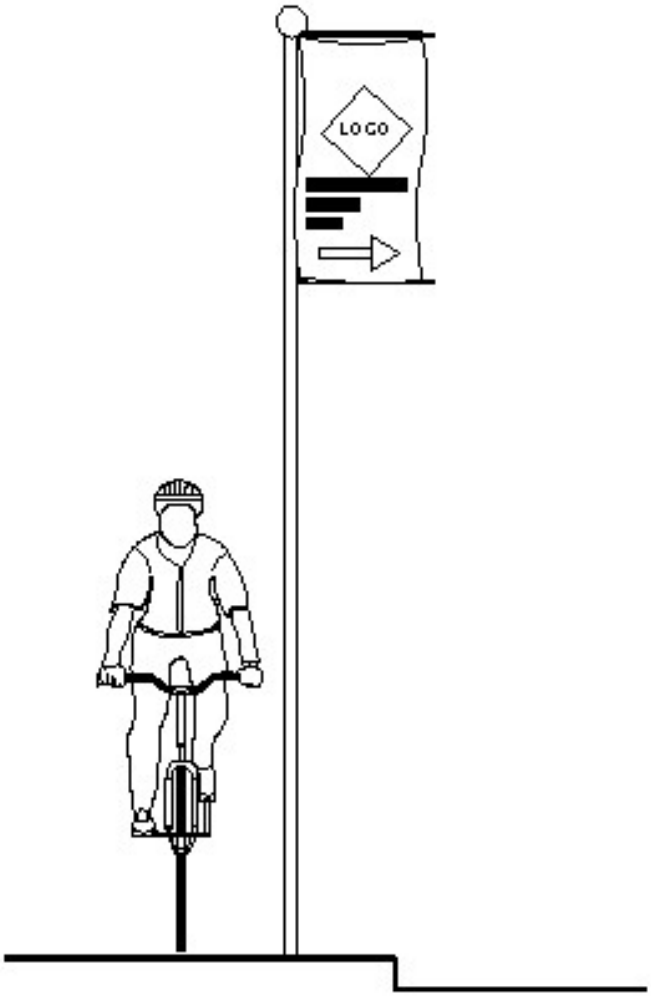
these settings the trail blaze sign will be particularly effective for the foot traffic using the trail—pedestrians, runners and skaters. This sign can incorporate a directional arrow to guide the user through turns in the trail route.

- Along the long straight stretches of **shared use path** such as along Blair Road, adjacent to the trash transfer station, along John McCormack Road, and in the Eckington Yard segment.



SHARED USE PATH

- This sign would be optional in "Main Street" type settings, such as in Takoma's CBD, along 1st Street NE and downtown settings such as Louisiana Avenue. In these areas, different wayfinding methods are likely to be more appropriate.



EXAMPLE OF BANNER TREATMENT

Banner / Gateway Sign Treatment: This sign would resemble a "Main Street" banner treatment, but would use a brightly painted, sheet metal for improved durability and consistent appearance. This sign will serve both as a trail blaze and as a way to guide users to the trail from nearby streets. The sign's higher elevation highlights the presence of the trail as well proximity to it.

This sign could be used along the trail at major and minor gateways, and in conjunction with other gateway treatments, such as landscaping or kiosks with wayfinding maps. It should be used when the trail passes through high-traffic areas such as neighborhood retail centers and office complexes. Possible examples include in Takoma along the 4th Street and Carroll/Cedar corridors, along 1st and 2nd Streets, NE next to Union Station, in Brookland between Monroe Street and the Catholic University Metro station area, and possibly near other metro stations, such as along Galloway street at

Ft. Totten, and near the Rhode Island Avenue and New York Avenue stations. This banner treatment can also be used selectively in locations just a block or two away from the trail to guide people to a trail access point; it would require the addition of a directional arrow and a phrase such as “Monroe Street Access.”

On-surface Trail Signature: A third trail identity treatment that should be considered is a bronze plaque or cast concrete paver that is embossed with the trail logo. This ground plane sculptural element would be placed or set down into the trail treadway, whether that was an asphalt pavement, brick sidewalk, or concrete path or sidewalk. This element would be used in places that require low profile visual impact, such as the areas that travel through National Park land, and areas around Union Station, along Louisiana Avenue and near the National Mall. It could be used in conjunction with the either of the sign treatments described above, or as a stand-alone blaze.

Surface signatures should be used in gateway treatment areas and at curb ramps that provide trail access.

Custom Cast Metal Plaque

Custom Concrete Paver

East Coast Greenway Blaze: The East Coast Greenway Alliance has developed a blaze signage system for use by local trail managers on designated segments of the East Coast Greenway. As sections of the MBT are designated to be part of the East Coast Greenway, this blaze should be used in conjunction with the MBT blazes described above. Two sizes of blaze are available, one is metal and one is plastic; arrows are included to indicate turns in the route. Signs with the text “Maine to Florida” are provided for the southbound direction, “Florida to Maine” for the northbound side of the trail. Detail sign drawings, mounting instructions and guidance for ordering signs in quantity are available from the District of Columbia East Coast Greenway Coordinator.

East Coast Greenway Blaze

Directional and Destination Signs

In addition to the identity signage described above, the wayfinding sign system needs to include three types of distance and destination signs.

Primary Destination Signs: A primary distance and destination sign provides the trail user with distance information for the primary

destinations along the trail, and directional arrows. For example, a primary destination sign located near Union Station, for northbound users, might say: Brookland 3.5 miles, Downtown Silver Spring 9 miles. One in Takoma for southbound users might say: Catholic University 4.5 miles, National Mall 5.1 miles.

Rock Creek Trail, Montgomery County, MD

Gateway Access Point Signs: These signs would provide the same information as described above, however they are located to face people entering the trail at gateways and access points and would include one destination, distance and arrow to the right, and one to the left.

Off-Trail Destination Sign: These signs would be found along the trail and would direct trail users to prominent destinations that are located away from the trail. They would also provide distances in blocks or miles and a directional arrow. These signs would be located at points of trail egress and access such as cross streets, connecting trails, and curb ramps. However, MBT wayfinding signs would not continue to the destination.

Intersecting Bike Route Signs: These signs would be placed along the trail where intersecting existing DC Bike Routes cross or diverge from the MBT. These signs should name a destination, provide the distance to it, and include an arrow and a small bicycle symbol. Some may provide an additional plate with text referring to a major destination that is further away or the primary destination on the route, such as “Bike Route to Rock Creek Park.” These routes will have continuing standard DC Bike Route signage along them. As bike routes that are currently proposed in the DC Bicycle Master Plan are signed, for those that cross the MBT, the appropriate signs for the MBT should be created and installed at the same time signs are installed along the route.

Street/Facility Identification Signs: In most places along the MBT route, street signs are already provide to identify cross streets at intersections. However, in some locations where the trail will be located these signs are not present. At the time that trail segments are constructed, standard city street identification signs should be added along the trail to ensure that each cross street is identified for trail users.

Additionally, signs labeling streets that pass over the trail on bridges, or under the trail (below trail bridges) should be installed to help trail users identify familiar landmarks and other

transportation facilities. CSX railroad, Amtrak and the Metro Red Line should be included, when labeling infrastructure that the trail passes under or over.

MBT System Maps/Information Kiosks: In a few locations along the MBT system maps posted in information kiosks will provide users with valuable information about the extent of the MBT and surrounding trails in the District. These types of system maps and information kiosks can take a variety of forms. For the MBT the following approaches should be considered:

- Use the graphic approach and hardware used for the DC Heritage Trail Signs
- Use graphic approach and hardware used by the National Park Service
- Develop a unique MBT kiosk design
- Include the DC Bike Map
- Develop a new MBT System Map
- Use the Overview Map provided in this plan as the MBT System Map
- Provide "Rules of the Trail" and other information useful to trail users

Key locations recommended for system maps include the following:

- East end of the National Mall
- Union Station/Bike Station
- 2nd and F Streets, NE
- New York Avenue Metro Station
- Brookland/CUA Metro Station
- Ft. Totten Metro Station
- Takoma Metro Station
- Trail Gateways at DC/MD border: 1) near Piney Branch Road and 2) along the Prince George's County Spur near the St. Ann's Home.

Regulatory Signs

The Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration, establishes regulations for the placement, size, color and symbols on signs and pavement markings. Following is a list of MUTCD bicycle and pedestrian signs that will be most commonly used along the trail (other standard MUTCD signs may be used as appropriate):

- Stop, R1-1
- Yield, R1-2
- No Parking: Bike Lane, R7-9
- Bikes Use Ped Signal, R9-5

- Bikes Yield to Peds, R9-6
- Bikes Keep Left, Peds Right, R9-7
- Yield here to Pedestrians, R1-5a (change to "Trail Users"; use bicycle and pedestrian symbols)
- In street crosswalk safety bollard, R1-6, R1-6a (use bicycle and pedestrian symbols)
- Various Pedestrians signs in the R9 and R10 series
- Right Turning Traffic Must Yield to Pedestrians (change to "Trail Users"), R10-15
- Bikeway Narrows, W5-4a (Change to "Path Narrows")
- Steep Hill Symbol, W7-5 (Add Text Plate: "Avoid Excessive Speed")
- Speed Limit signs

In addition the following custom warning signs should be designed:

Share the Trail

A "share the trail" sign should be developed for periodic use along shared use path sections of the corridor. These should be located along the path in the vicinity of major and minor gateways and other points of access. See figure at right.

Share the Road

A similar "share the road" sign should be developed for use on shared use street segments of the trail. It should include the bicycle and car symbol or bicycle, car and skater symbols. This sign can be used, in conjunction with the "sharrow," to underscore the need for motorists, bicyclists and sometimes in-line skaters, to share the street.

Trail/Street Crossings: Signs and Marking Treatments

Brick "Rumble Strips"

A series of three-five brick "rumble strips" should be placed across the shared use path prior to every at-grade trail/street crossing. This will provide a subtle but clear tactile and visual warning to trail users that a roadway crossing is being approached. This same treatment is recommended for major driveway crossings; however, three strips may be used if driveway traffic is not heavy. This treatment does not need to be used for driveways with very light traffic, such as residential driveways, gated entries, infrequently used driveways, or accesses to very small parking areas.

Series of Rumble Strips

This same treatment should be used near the top of a down hill grade where increased bicyclist/skater speed is likely to create safety issues. Rumble strips may be repeated once or

twice further down the grade depending on its steepness or length. In conjunction with "Steep Grade / Slow Down" caution signs, rumble strips emphasize the need for trail users to proceed with a greater sense of caution.

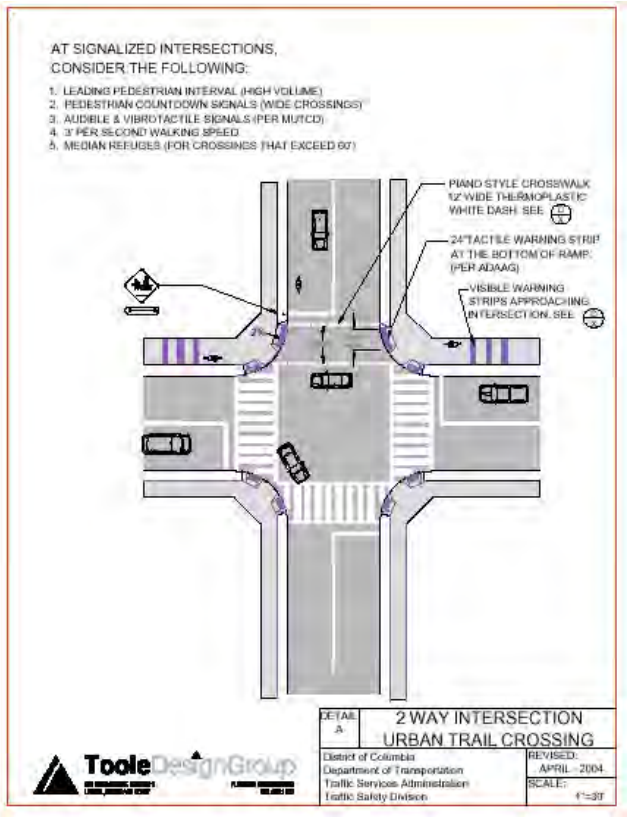
Trail/Street Crossings

The MBT has more than twenty at-grade crossings of city streets and arterials. Most are at typical 4-way intersections. The MBT is usually located in the sidewalk ROW along one of the streets. Some MBT crossings are at T-intersections and a few are mid-block crossings. To ensure user safety, special care should be taken regarding signing and crosswalk striping at these intersections. As a part of the District of Columbia Bicycle Master Plan, special crosswalk striping has been developed for trail/street crossings in the District of Columbia. See DC Bicycle Design Guide for Urban Trail Crossing Detail, (Figure). A special sign, developed by the state of Maryland, to warn motorists of a trail crossing should also be used (with certain modifications).

Maryland Trail Crossing Sign

Stop Bars: At trail/roadway intersections, stop bars for trail users can be considered depending on the nature and configuration of the intersection. Trail stop bars should be located to keep trail users as visible as possible to vehicles using each of the other legs of the intersection.

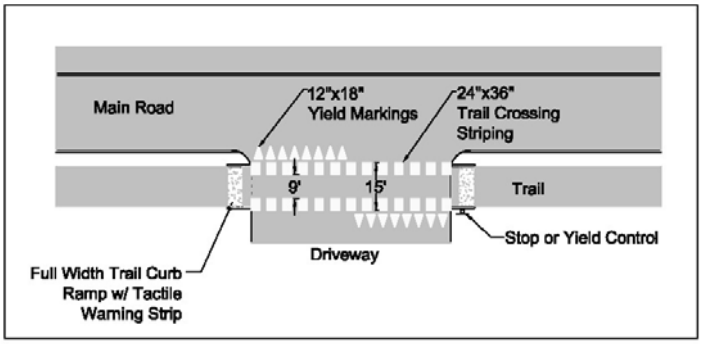
Signal Ahead / Road Xing: Signal Ahead or Road Xing pavement markings should only be considered in situations where the presence of a traffic signal or road crossing may appear as a surprise for trail users. This could result in situations where sight distances are poor, at the end of a long stretch of trail with no at grade crossings, or where the crossing approach is on a downhill slope. They can also be used where there is insufficient space to place a sign adjacent to the trail, because of the proximity of retaining walls or other conditions. Locations where they may be considered might include Piney Branch Road crossing (southbound direction), Van Buren crossing for the Blair Rd. route (northbound direction), Riggs Road crossing (southbound direction), Monroe Street crossing (southbound direction), K Street on the East Leg (northbound direction).



Special Trail Crossing Detail

Driveway Exit/Minor Road Xing

Driveway exits and crossings of very minor roads along the MBT should be striped with the unique pattern shown in the figure to the right. Regularly used driveways should also be signed to warn exiting motorists that they are crossing a shared use trail that may have bicycle or pedestrian traffic approaching from either direction. Where feasible, the driveway entrance should also be signed.

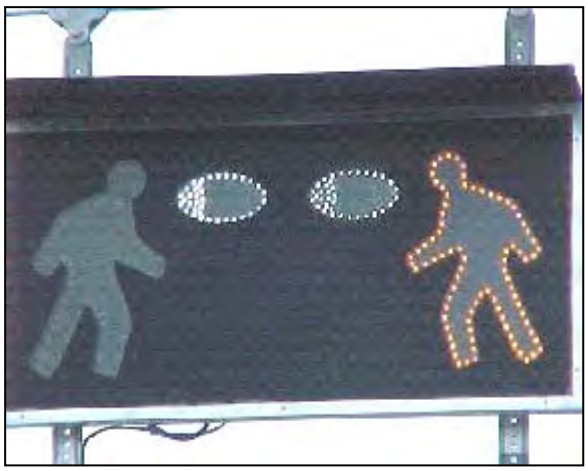


Driveway Crossing Striping Pattern

Exits that Screen Pedestrians/Cyclists Motorist's View, such as Parking Garages or Retail Exits

A particularly problematic situation for trail users is when the motorist's view is screened by typically urban obstructions such as the building features at the exits of parking garages or retail services. At such exits, it is often difficult for exiting motorists to see pedestrians using the sidewalk that crosses the exit The Transportation Research Board (TRB) has evaluated, with highly favorable results, an *animated-eyes* sign that uses directional microwave detectors to detect the presence and travel direction of pedestrians. The electronic sign evaluated in the tests indicated the presence of a pedestrian, the direction the pedestrian was crossing, and used a searching eyes display to specifically request the motorist to look for the pedestrian.

As discussed in the TRB report (Van Houton), the sign uses a pair of animated 'eyes' positioned between two pedestrian symbols to prompt the motorist to look for the pedestrian about to cross in front of their vehicle, and to provide a reference point for locating the pedestrian. When a pedestrian approaches from the right, a LED pedestrian symbol is displayed on the right side of the eyes. When a pedestrian approaches from the left, a mirror image pedestrian symbol is displayed on the left side of the eyes. When a pedestrian is detected approaching from only one side, the icon on that side is illuminated and the eyes look back and forth at a rate of 1 cycle per second. When pedestrians are detected approaching from both sides, both pedestrian icons are illuminated.



Illuminated eyes look back and forth at 1 cycle/second; the illuminated pedestrian icon (right, left or both) indicates the direction(s) from which pedestrians are approaching.

There are a number of locations along the MBT where this technology appears appropriate, and it is specifically recommended in Chapter Three for parking garage exits along 2nd Street and for the K and L Street railroad underpasses. The underpasses appear to be appropriate because they are dark, there is a considerable amount of light differential during summer daytime hours, and the trail is immediately at the edge of the RR overpasses – exactly where the dramatic light level change occurs. Given the walls that also eliminate all sight lines between cars and trail

users at these two crossings, these locations appear to provide unique locations where the animated eyes would help alert drivers who are challenged by visual issues.

General Pavement Markings

Use of standard and custom pavement markings and surface treatments is important for maintaining user safety on the MBT. The following treatments should be applied in various settings along the trail based on the guidance provided below.

Bicycle Lanes

Standard five-foot bicycle lanes will be used in a number of trail segments. Existing bicycle lane striping and complementary signage protocols should be used for the MBT. As is customary for bicycle lane striping throughout the city, modifications may be made based on the unique conditions present on each street/block where bicycle lanes are used. For MBT bicycle lanes, it is recommended that the bicyclist symbol and customized "*sharrow*" be used inside the bicycle lane (see figure).

Colored Bike Lane Panels

Colored bicycle lane panels (without white edge striping) should be considered for marking turns in the MBT route in shared use street settings. To mark left turns for a shared use street bike route, an arrow sign in the buffer strip on the right side of the street is easily missed by the bicyclists. Because trail continuity is so important for the MBT, use of colored panels, possibly in conjunction with the "sharrow" (see below) should be considered to mark turns on shared use streets. Possible locations include the following:

Colored Bike Lane Panel

- Chestnut and Spring (West Leg in Takoma)
- McDonald Place (Manor Park)
- 1st Street and Kennedy (Manor Park)
- Under the Michigan Avenue Bridge
- Franklin Street Bridge transition to 8th Street, NE
- As part of the proposed separated facility adjacent to Union Station

Bicycle and Chevron (*Sharrow*)

The bicycle and double chevron should be used as a pavement marking to identify the MBT route for bicyclists where it is located on shared use streets. The frequency and placement of the marking along the route will vary, however general guidance is one sharrow at each end of a block and one in the middle, in each direction. *Sharrows* may also be ganged in groups of two or three if the expected presence of bicyclists needs to be emphasized with motorists.

Customized Sharrow

Bicyclist and Pedestrian Symbols

The bicyclist and pedestrian symbols should be used independently in areas where bicycle and pedestrian trail traffic are separated, such as in the hybrid facility proposed for the Union Station area along 1st Street, NE and across Massachusetts Avenue. At the end of such segments, where bicycle and pedestrian traffic are brought back together in a shared use path, reduced sizes of both symbols should be placed in each trail lane side-by-side, to indicate that a shared trail ROW has been resumed.

Trail Centerline

In most locations along the MBT, a trail centerline is recommended. It should be required for segments where the shared use path width is 11 feet or narrower. The centerline should be dashed along stretches where sight distances allow safe passing of slower users, and solid where passing is discouraged or prohibited.

Edge Lines

White edge lines should be used throughout the trail to increase trail safety and visibility at night. Bicycle commuters are expected to use the facility and typically travel with headlights at night in fall, winter and early spring months. Four-inch white edge stripes will help trail users see the edge of the path.

National Park Service Signage

The National Park Service has published guidelines for signage on their parklands. These will guide signage on segments of the MBT that traverse NPS property in the Fort Totten Area and along the Prince George's County Spur. A discussion of these guidelines is in Chapter Six under *signage*.

LANDSCAPING

In general, landscape treatment includes living and static systems, such as people, plants, inanimate objects (seating, sculpture, light fixtures, pavement, etc.); activity is also a part of the landscape. To create a sense of place is to create an experience. Landscape areas will flank the trail in various locations along its alignment to create varied experiences.

To assist in understanding the language of landscape design in the text, the following terms are defined for future reference:

- **Aesthetic:** Pertaining to the appreciation of beauty or good taste
- **Balance:** The consistency of visual attraction (symmetrical design), or lack thereof (asymmetrical design).
- **Form:** The outline a plant creates, i.e. columnar, round, vase, weeping, oval, etc.
- **Hardscape:** The inanimate elements of landscape design, i.e. walls, patios, paths, decks, arbors, pergolas, etc.
- **Landscape:** An area comprised of hardscape and softscape elements, i.e., decks, walks and plants, turf, respectively, which have been designed to create an outdoor living space that is functional and visually pleasing.
- **Maintainability**: The process of creating every individual segment of a landscape to be as easy to care for as possible.
- **Softscape:** The animate, horticultural elements of landscape design.
- **Sustainable Landscape:** A landscape designed, installed, and maintained to be functional, maintainable, environmentally sound, cost effective, and visually pleasing throughout its entire life.

Landscape Concepts

Visitor Experience

Landscape treatments encompass living and static systems, which collectively create spaces that can enrich our lives. Memorable experiences bring us back to our favorite places. Vivid colors, varied textures, fragrance, interesting shapes, (see photo) relaxing niches with natural or man-made shade structures and spectacular views of important landmarks are some of the experiences visitors seek.

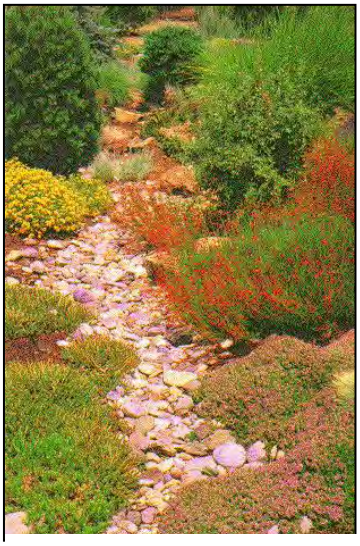
Curved Shapes

The experience for the MBT trail user (pedestrians, bikers, joggers) will vary along its seven-mile journey. When viewed from Metro, which generally parallels the MBT from the Rhode Island Avenue to the Fort Totten Metro stations, the traveler will have a bird's eye view from many vantage points. From the ground, views of surrounding landmarks, such as the Capitol Building, art pieces, the Basilica of the National Shrine of the Immaculate Conception at

Catholic University and others will distinguish the trail area from other trails in Washington D.C.

In addition to the aesthetic advantages of landscaping, there are also ecological advantages of creating a sustainable landscape that improves the quality of the urban environment.

Sustainable Landscapes



Dry Streambed

By introducing various biofiltration techniques in many segments along the trail, such as the use of bioswales, dry streambeds with percolation zones (see photo), permeable paving or retention grading, surface run-off can be captured and used on-site to nourish plants, help recharge groundwater and reduce erosion and standing water. Green design also could be accomplished through the use of drought-resistant plantings, such as use of native plants, a dry streambed which require minimum watering, weeding and replacement; the use of photovoltaic lighting which would reduce ground disturbance and the cost and need for electricity on-site; the use of recycled or reclaimed materials in site furnishings, trail pavement surfaces; and the creation of intermittent low areas in carefully selected locations aid in site filtration of water and in attracting birds.

Other Design Concepts

Plantings along the trail should vary in function and form. They can frame positive views, add color, guide circulation, screen negative views, filter existing negative environmental conditions, provide habitat for small animals, such as birds, provide shade and seating for relief from the sun, and generally improve the positive qualities of the site.

Banners with Plantings

In addition, the more the site is used, the safer it becomes for the user. Overhead lighting and pedestrian scale lighting, fencing and plants used as barriers to site access can assist to secure the site.

Along the path, there are opportunities to create landmarks that would aid in orientation of the user to the trail and to help direct activities within trail areas. This could include developing unique designs for pedestrian bridges and ramps, for the entrances to street connections (“Portals”) and for seating areas where views of special features could be captured and enjoyed.

Once on the trail, trail users are, in a sense, a captive audience. Outdoor classrooms can be created by including waysides, art and framing of views along the trail to educate and tell a story about local history, the significance of buildings and

neighborhoods and urban ecology (explaining that if you put in water, birds and other creatures will come; if you put in certain flowering plants, humming birds and butterflies will come, etc. and altogether the urban ecology story unfolds). Local history told through creation of art or waysides and various other media can enhance the experience along the trail.

Design Elements

The following design elements were discussed in Chapter Two and are the elements proposed for the MBT:

1. **Berms** or earthen mounds are used to change topography, screen unsightly views or create barriers to access. They could be employed in tight or wide areas along the trail to achieve any of the aforementioned effects. Berms could be planted as well.

2. **Bioswales**, which are vegetated drainage channels that accept, absorb and treat runoff water, graywater or effluent water, using natural biological systems and processes, can be designed into areas that receive run-off from paved areas where run-off may be laden with oil and other waste washed from roadways. Retention grading is employed to catch this type of runoff.

Boardwalk

3. **Boardwalk** or raised walkways, usually made of wood or possibly structural recycled materials, are designed to ford low-lying areas that may become inundated. Use of boardwalks may be appropriate in hilly areas instead of grading where extensive grading would be traditionally employed to bridge areas with significant grade changes.

4. **Curbside Gardens**, in former grassy areas alongside roadways, are common in many Washington D.C. neighborhoods within the MBT corridor. Curbside gardens commonly are tended by adjacent landowners; on-street trail segments through these neighborhoods may offer opportunities to increase curbside gardens along the MBT.

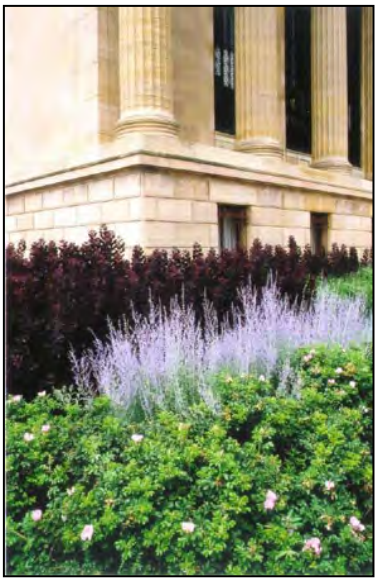
5. **Demarcation of Street Crossings** at selected street intersections would be accomplished by distinctive artwork and/or landscaping.

A Curbside Garden

6. **Dry Streambed**, an unlined continuous swale running along a natural or artificial flow line, is often filled with rounded stones of various sizes and gravel and slows runoff, allowing it to percolate into the soil. Dry streambeds can aesthetically conceal percolation under rocks while providing water infiltration and biofiltration functions.

7. **Indigenous Vegetation** or plants that are native to a geographic location could be planted throughout the MBT corridor. The advantage of planting native vegetation is lower plant maintenance overall and higher rates of survival than non-natives in extreme weather conditions while providing aesthetic interest.

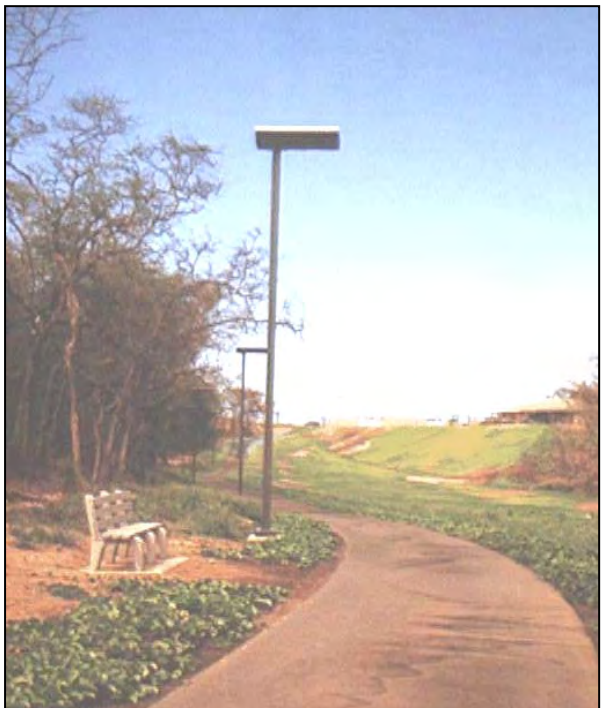
8. **Ornamental Vegetation** or plant varieties that are grown for their beauty (its end use) rather than commercial or other value would be valuable focal points throughout the MBT corridor.



Indigenous Vegetation

9. **Photovoltaic Lighting** uses solar cells, which are powered by converting sunlight into electricity, and could be installed in areas along the MBT that currently without infrastructure conduit, thus reducing installation costs and ground disturbance, especially important in protected park areas.

Pedestrian Photovoltaic Lights



Overhead Photovoltaic Lighting

10. **Permeable Paving**, a traffic-bearing surface that allows water to penetrate through it directly to the subsoil by using specialized paving materials (paving blocks, pervious concrete or asphalt, turf block, decomposed granite, crushed rock, gravel or soil pavement), could be employed as a trail surface the length of the MBT and in other hard-surfaced areas that may be used for pedestrian staging, events, etc.

11. **Planters,** structures used for growing plants for decorative purposes, could be used along the trail also as seating walls, incorporate art displays or create shady areas.

12. **Portals** or gateways at specified locations along the trail would mark trail access, serve as trailheads or landmarks and could create aesthetic interest by incorporating art or landscape elements with use of color, movement, form or sound.

A Sculptural Bench/Planter

13. **Shelter Structures**, using tensile structures or soft canopies, would provide needed shade and create visual interest along the MBT. The structures are sculptural in appearance and could be installed in proximity to "pausing places" along the trail.

14. **Street Tree Plantings** is a common streetscape feature throughout Washington D.C. Additional plantings could be appropriate where trees have died and not been replaced or in new planting areas.

15. **Terracing**, built into steep slopes to reduce erosion and water loss, could be useful in areas where slopes have been degraded. These platforms could also serve as stages for art and landscaping.

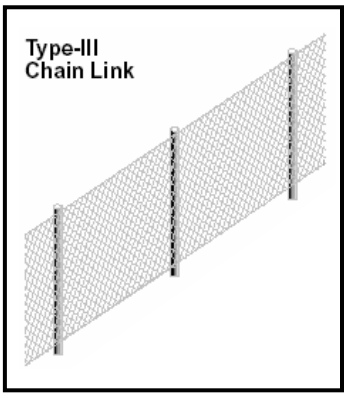
Terracing

16. **Unusual Focal Points** that would employ artistic use of planting material and structures could be sprinkled throughout the trail corridor.

17. **Screening by Fencing,** using ornamental fencing or art added to traditional fencing, can provide an aesthetic appearance.

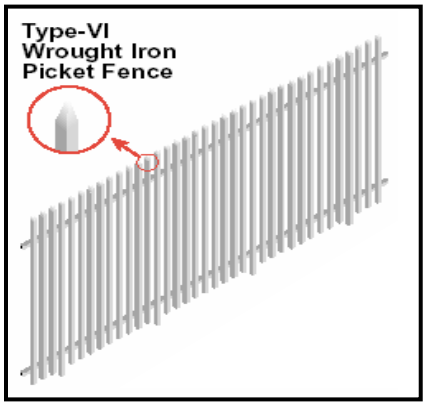
Fencing

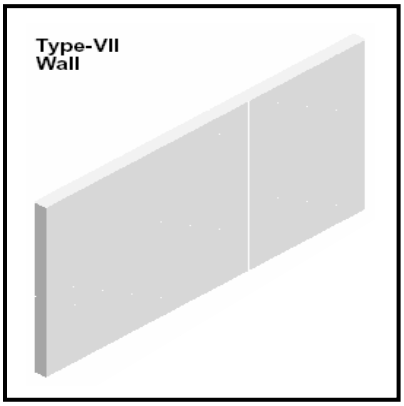
Fencing will be required at a number of locations along the MBT. The choice of fencing can greatly affect trail aesthetics and costs. Some possible choices are discussed below.



- Chain link fences have a relatively low cost and are easily maintained. However, they are easy to cut and vandalize and are not visually appealing.

- Vinyl coating over chain link fencing provides some softening of the chain link appearance with its woven appearance and provides more of a wind and visual buffer. It is a possible choice for long expanses of fencing such as in the Rhode Island Avenue Area.
- The wrought iron picket fence is the most vandal-resistant fencing and is very difficult to cut or scale. Its high cost and visual impact makes it more suitable for specific locations rather than an entire corridor. For example, this type of fencing could be considered for the area of the Rhode Island Pedestrian Bridge.





- A concrete wall is virtually indestructible and offers complete buffering and screening, with the potential to provide a canvas for public art. But it has the highest cost of the examples shown. It also can affect local drainage. On the MBT, it would be a possible choice for the track-side fencing along the encased drainage ditch between Bates Road and the NPS property at Fort Totten.

LIGHTING

General

Lighting elements of the trail serve a decorative function, accenting landscaping concepts, landmarks, artwork, etc, as well as providing for functional illumination and security of the trail during the evening hours. Through the use of appropriate lighting concepts, the trail can be a focal point that is integrated into the existing streetscape, providing an inviting transition for users from the surrounding streetscape onto the trail. By maximizing use of energy efficient and self-sufficient lighting systems, lighting elements become an integral part of the landscape concept, adding to the users overall trail experience. Aside from the decorative functions served by the lighting systems, this system also serves as a critical security element of the trial. Lighting fixtures can serve as a visual barrier to site access, and the illumination of the trail during evening hours will add to the sense of security for trial users.

Design Concepts

Many factors are considered in the development of an overall lighting system concept. The following is a brief description of parameters that will be utilized in the development of the MBT lighting system:

- **Existing Lighting Systems** can be found on much of the MBT. In many instances these systems will remain and must be incorporated/re-utilized in the design, as well as complimented by any proposed lighting systems. In areas where the MBT proposes a bikeway on existing roadways, illumination requirements for the roadways must also be kept in mind to provide for a safe, secure environment for all uses. Transitions between existing streetscape lighting and proposed trail lighting will be critical in creating an "inviting" feel for the user.

- **Illuminating Engineering Society (IES) Guidelines** are industry accepted publications defining critical elements for any lighting system. Applicable publications by IES which will affect the MBT include IES DG-5-94, "Recommended Lighting for Walkways and Class 1 Bikeways"; IES RP-8-00, "Roadway Lighting"; IES DG-13-98, "Guide for the Selection of Photocontrols for Outdoor Lighting Applications"; IES TM-11-00, "Light Trespass: Research, Results and Recommendations" and IES TM-10-00, "Addressing Obtrusive Light (Urban Sky Glow and Light Trespass) in Conjunction with Roadway Lighting.

  The following table presents an overview of critical design elements for bikeways, including average illumination and average to minimum ratios:

SUMMARY REQUIREMENTS FOR WALKWAY/BIKEWAY LIGHTING		
Application	**Average Illumination (fc)**	**Average to Minimum Illumination (fc) Ratio**
Commercial Areas	10	5:1
Intermediate Areas	5	5:1
Residential Areas	2	5:1
Park Areas	5	5:1
Pedestrian Stairways	5	5:1
Pedestrian Overpasses	2	5:1

- **Light Trespass/Urban Sky Glow** are terms used to describe additional light dissipated into the atmosphere by electric lighting fixtures. As time has progressed, this "leakage of light" has become an increasingly significant concern of astronomers and residential occupants in urban settings. In urban lighting design, such as the MBT, this design factor creates a delicate balance between providing safe, secure and well lit residential areas and minimizing the impact of electric lighting fixtures on the natural environment.

- **Maintainability** of lighting fixtures is crucial to any well designed lighting system. An easily maintained lighting system not only addresses conformance to requirements for the initial installation, but helps to ensure that the lighting system functions as originally designed throughout the systems life cycle. Alternatively, a lighting system which is difficult to maintain will often times be neglected throughout its life cycle, leading to poorer and poorer system performance.

- **Energy Efficiency/Green Design** is of additional importance in a bike trail project as the theme of such a project is very much environmentally driven. This is especially true in a project such as the MBT, where the trail itself is an environmental/landscaped element

integrated throughout an urban environment. With that in mind, the lighting system design must make every effort to incorporate energy efficient lighting systems and/or self powered lighting systems (i.e. photovoltaic – see preceding discussion under Landscaping). This design element must be considered side by side with maintenance and jurisdictional requirements to provide for a well balanced lighting system with minimal environmental impact.

- **Lighting on National Park Service Lands** will be coordinated with the NPS. To avoid impacts to wildlife on NPS property, it is NPS policy that lighting in or around natural areas should be avoided or minimized and directed downward. Requests to increase lighting on NPS land will need to be individually considered (area by area, trail segment by segment) for the overall impacts on park lands, in consideration of the general NPS policy to not light parks.

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CHAPTER NINE

IMPLEMENTATION AND MANAGEMENT

Chapter Nine addresses four aspects of trail implementation and management: 1) Recommended Implementation Phases (design and construction schedule), 2) Cost Estimates, 3) Policing and Public Safety and 4) Management and Maintenance.

Construction of the MBT began when a mile-long section of the trail was built by DCDPW as part of the John McCormack Road reconstruction project adjacent to Catholic University. Since then the District Department of Transportation (DDOT) has become lead agency responsible for trail development as well as daily operations, maintenance and management.

In more recent years additional trail segments have been built, others are under construction, and still others are in the design phase. It is recommended that the MBT continue to be built out in segments that are phased over time. Following is a framework of five phases of implementation, in addition to the projects that have been completed or are currently underway.

RECOMMENDED IMPLEMENTATION PHASES

A detailed list of trail design and construction segments is provided in Appendix B. Each segment is scheduled in a recommended phase. Additionally, the facility type is listed, along with the segment's linear distance in feet. These recommendations also include a brief scope of work, associated public involvement and agency coordination needs, and a proposed approach to project administration/procurement.

Following is a summary of the primary parts of the trail that should be implemented in each phase and a rationale for why they are recommended for the particular timeframe represented by the phase. Additionally, other key implementation actions are listed that are not segment specific, such as property acquisition, art plan implementation, sign system design, etc.

While there are many variables that must figure into the decision to undertake design and construction of a trail segment at a particular time, such as available funding, the timing of other projects in the area, engineering issues, etc., it is critical that segments should be immediately usable with seamless and convenient access at either end. No segment should be built if it results in a dead end.

Completed Segments (Prior to 2005)

- **John McCormack Road--shared use path:** ***completed.*** This concept plan recommends that this segment of trail be reconstructed in a future phase and relocated to the east side of McCormack Road, north of the CUA Athletic Center.

- **1st Street, NE--bike lanes and sidewalk:** ***completed.*** This segment is also recommended for reconstruction in a future phase as an exclusive, grade-separated

bikeway and sidewalk on the east side of 1st Street from G to K Street; and a shared use path to M Street.

- **L Street to New York Avenue: *completed.*** This segment, completed by WMATA, includes an elevated trail, ramp access to M Street, stair access to L Street, and an elevator, stairs and bicycle parking at the New York Avenue Metrorail station.

Segments Underway (2004-2005)

The first four trail segments below are underway because they are combined with larger street, metro and transportation center reconstruction projects taking place along public rights-of-way where the MBT is planned to be located. Design and construction of the MBT has been integrated into these pre-existing projects.

- **8th Street, NE--shared use street and sidewalks: *under construction.*** This section is projected to be completed by late 2005.
- **2nd Street, NE—shared use path: *in design.*** This project is expected to be completed in 2006.
- **Union Station/Columbus Circle—Exclusive Bicycle and Pedestrian Ways: *in design.*** This project is expected to be completed in 2006.
- **CSX right-of-way--New York Avenue to Franklin Street: *in process for acquisition.***
- **New York Ave. to Harry Thomas Way: *in design.*** This short segment is being designed in-house at DDOT and will be implemented with DDOT forces. It will connect the new section adjacent to the new metro station with the street system in the Eckington neighborhood.

Interim Trail Route, Art & Sign Design—Concurrent with Phase 1 (by September 2005)

In 2005, concurrent with Phase 1 trail segments the three other activities should be undertaken: 1) establishing an Interim Trail Route the entire length of the corridor; 2) engaging a trail art coordinator; and 3) selecting a trail logo and color scheme.

Interim Trail Route

The Interim Trail is a recommended option to increase public visibility for the project by enabling bicyclists to begin using the trail corridor by the Fall of 2005. This will also help galvanize, maintain and increase public support for the project, especially in communities that must wait until later phases for trail construction. The Interim Trail can be accomplished with a modest set of relatively easy actions

To establish an Interim MBT route very little trail construction is required. The Interim route is primarily an on-street route, but would be extremely useful for marketing the trail, building a user

constituency, and creating expectation for the preferred alignments and facility types that will come with later phases.

Following is a brief summary of the primary actions that would be necessary to create an Interim Route (a more detailed list of the route and needed actions is provided in Appendix B):

- 900 feet of widened or replaced sidewalk along Eastern Avenue and Blair Road.
- 710 feet of new hard surface trail along Blair Road.
- 475 feet of new soft surface trail in Brookland.
- 220 feet of soft or hard surface trail, and a curb ramp, to open up the P.G. Spur.
- Simple Interim Route wayfinding signs (MUTCD standard) along the on- and off-street trail route—about 8 to 9 miles.
- Four locations for spot improvements (curb ramps, one-block contra flow lane, new crosswalk striping.

Art and Signage

Initial actions related to art and the signage program would need to be taken as soon as possible, preferably no later than June 2005. The trail design and construction projects that are currently underway do not address art signage, trail gateways or waysides because this concept plan was intended to provide necessary guidance. However, for future projects to effectively include these elements, additional aesthetic and design choices need to be made. An artistic design management process would need to be established to facilitate decision-making, and a professional artist would need to be hired to provide artistic direction and to manage the process. Specifically, the following activities are recommended:

- Procure a Trail Art Coordinator.
- Expand and formalize the MBT Trail Advisory Committee.
- Develop and select a design for a trail logo and other signs, wayfinding treatments, and gateway treatments.

Segments Related to Adjacent Development (2005-2008)

A variety of short segments have been identified where implementation could be, for one or another reasons, dependent on the timing of adjacent development. They are placed in one of the five new construction phases listed below, but are also flagged as potentially occurring at an earlier or later time, depending on the scheduling of the other development.

In some cases the design of the trail could be accomplished most efficiently in conjunction with the design of the development, and the design and location of the trail could vary depending on the nature of the development. In other cases, developers have already agreed to, or could be asked/required, to provide the segment of the trail as a part of the public amenities of their project. These projects are likely to occur, if coordinated with other development, some time

between 2005 and 2008, or even later. As DDOT coordinates land acquisition for the MBT with agencies and property owners, DDOT would also establish contact with the prospective developers and monitor these development projects closely. DDOT would also work closely with the DC Office of Planning, to ensure a coordination of District interests.

Phase 1—Rhode Island Section and Key Intersection Improvements (Initiate in 2005)

Phase 1 provides the basic trail from New York Avenue to Franklin Street, connecting to the New York Avenue Metro station section with the 8th street trail, which is currently being implemented. It is conducted concurrently with the Interim Route projects discussed above.

Phase 2—Brookland Sections (Initiate in 2006)

Phase 2 elements include the bridge over the CSX tracks at the Rhode Island Avenue Metro Station and segments that will take the trail through the Brookland Area to connect to the existing John McCormack trail segment. Phase 2 also includes improvements to a number of intersections between Union Station and the National Mall.

Phase 3—Ft. Totten Sections (Initiate in 2007)

Phase 3 segments will move the trail to the eastern side of John McCormack Road as it approaches Bates Road, and will complete all Ft. Totten Area sections and the Prince George's County Spur.

Phase 4—Takoma Sections (initiate in 2008)

Phase 4 segments will complete the East and West Legs of the Takoma Section, and provide the shared use path segment along Blair Road, replacing the on-street section along 3rd Street, NW and North Dakota Avenue, NW.

Phase 5—Segment Facility Upgrades (Initiate in 2009)

Phase 5 includes trail upgrades that will improve safety, user convenience, and the aesthetic quality of the trail. The cost/effectiveness and/or necessity of these upgrades are likely to be greater in later years, when larger numbers of regular MBT users are expected.

Phasing Summary

The following pages provide trail maps that portray the implementation phases of trail construction as discussed above.


Implementation Phases
November 2004
Met Branch South
Completed by Jan. 2005
Underway (as of 2005)
Implemented as part of the Interim Trail (2005)
Phase 1 (2005)
Phase 2 (2006)
Phase 3 (2007)
Phase 4 (2008)
Phase 5 Upgrades to Existing Trail
Phase 5 Other Upgrades
Neighborhood Retail
Development Sites
Parkland-Cemeteries
NPS Lands
Takoma Historic District
Institution
Historic Sites
Rec-Facilities
Schools
Metro Stations
0 mi
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N
Brookland -CUA Stn
Rhode Island Ave Stn
New York Ave Stn
Union Station
Metro Yard
Shopping Center
Edgewood Terrace
Brentwood P.O.
Amtrak Yard
Capital City Market
Gallaudet University
Howard University
Washington Hospital Center
Children's Hospital
Veterans Hospital
Trinity College
Catholic University of America
Theological Colleges
Soldier's & Airman's Home
National Shrine of Immaculate Conception
Brooks Mansion
Moore Academy HS
St. Anthony HS
Slowe ES
Noyes ES
DC Preparatory Academy
Edgewood Recreation Center
Shaed ES
Glenwood Cemetery
McMillan Reservoir
McKinley School Center
Harry Thomas Sr. Recreation Center & Pool
Emery ES
Penn Center DCPS
Cook, J.F. ES
Dunbar HS
Dunbar Recreation Center (Indoor Pool)
New York Avenue Center
Walker-Jones ES
Terrell JH
Gonzaga HS
Woodies Warehouse
Washington Coliseum
JO Wilson Recreation Center & Pool
Wilson, J.O. ES
Ludlow Taylor Recreation Center
Stuart-Hobson MS
Hamilton Center
NPS Maintenance Yard
Postal Museum
Columbus Circle
Japanese American Memorial
Judiciary Square
Mt. Vernon Square
ML King Public Library
Taft Memorial
Senate Office Buildings
Stanton Park
Peabody ES
Supreme Court
US Capitol
Library of Congress
The National Mall
Tunnel
Turkey Thicket
Fort Bunker Hill
PERRY ST
OTIS ST
NEWTON ST
MONROE ST
LAWRENCE ST
KEARNY ST
JACKSON ST
IRVING ST
HAMLIN ST
GIRARD ST
FRANKLIN ST
EVARTS ST
DOUGLAS ST
CHANNING ST
BRYANT ST
W ST
V ST
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H ST
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F ST
E ST
D ST
C ST
PARK RD
GEORGIA AVE
WARDER ST
PARK PL
KENYON ST
COLUMBIA RD
HARVARD ST
IRVING ST
MICHIGAN AVE
HOWARD PL
MCMILLAN DR
COLLEGE ST
BARRY PL
ELM ST
RHODE ISLAND AVE
FLORIDA AVE
QUINCY PL
BATES ST
SEATON PL
RANDOLPH ST
HARRY THOMAS WAY
ECKINGTON PL
NEW YORK AVE
PATTERSON ST
PIERCE ST
PARKER ST
MASSACHUSETTS AVE
LOUISIANA AVE
PENNSYLVANIA AVE
CONSTITUTION AVE
MADISON DR NW
JEFFERSON DR SW
INDEPENDENCE AVE SE
MARYLAND AVE
DELAWARE AVE
EAST CAPITOL ST
A ST NE
A ST SE
NEW JERSEY AVE
NORTH CAPITOL ST
1ST ST
2ND ST
3RD ST
4TH ST
5TH ST
6TH ST
7TH ST
8TH ST
9TH ST
10TH ST
12TH ST
13TH ST
14TH ST
EDGEWOOD ST
BRENTWOOD RD
BRENTWOOD PKY
MOUNT OLIVET RD
WEST VIRGINIA AVE
MONTELLO AVE
JOHN MCCORMACK RD
HAREWOOD RD
MICHIGAN AVE

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Implementation Phases
November 2004
N
Met Branch North
Completed by Jan. 2005
Underway (as of 2005)
Implemented as part of the Interim Trail (2005)
Phase 1 (2005)
Phase 2 (2006)
Phase 3 (2007)
Phase 4 (2008)
Phase 5 Upgrades to Existing Trail
Phase 5 Other Upgrades
Neighborhood Retail
Development Sites
Parkland-Cemeteries
NPS Lands
Takoma Historic District
Institution
Historic Sites
Rec-Facilities
Schools
Metro Stations
0 mi
0.25
.5
Cady Lee Mansion
Takoma Historic District
Takoma Stn
Old Town Takoma Park
Public Library
Takoma Aquatic Center
Coolidge HS
Whittier ES
Lamond Rec Center
Rabaut Campus (Charter Schs)
Fort Slocum Park
Fort Circle Park
La Salle ES
Charter Sch
Mamie Lee Special Ed. School
Public Library
Backus MS
Archdiocese of Washington
St. Ann's Home
Fort Totten Stn
Concrete Plant
Trash Transfer Stn
Fort Totten Park
North Michigan Park Rec Center
Rock Creek Cemetary
John Adams Memorial
CUA Athletic Complex
St. Anselm's School
Providence Hospital
US National Cemetery
Grant Circle
President Lincoln National Monument
Carroll HS
Brookland ES
Bunker Hill ES
Howard Univ. Divinity School
Anderson House
Catholic University of America (CUA)
Turkey Thicket
Franciscan Monastery
Fort Bunker Hill
Soldier's & Airman's Home
Brookland-CUA Stn
Brooks Mansion
Stairs
TAKOMA
BALTIMORE
PINEY BRANCH
HOLLY
CEDAR
MAPLE ST
WILLOW ST
TULIP
CARROLL AVE
ETHAN ALLEN
ELM
NEW HAMPSHIRE
POPLAR
RAY RD
RIGGS RD
CHILLUM RD
EASTERN AVE
CEDAR ST
BUTTERNUT ST
ASPEN ST
WHITTIER ST
VAN BUREN ST
UNDERWOOD ST
TUCKERMAN ST
SHERIDAN ST
RITTENHOUSE ST
QUACKENBOS ST
PEABODY ST
OGLETHORPE ST
NICHOLSON ST
McDONALD PL
MILMARSON PL
MADISON ST
LONGFELLOW ST
KENNEDY ST
MISSOURI AVE
JEFFERSON ST
INGRAHAM ST
HAMILTON ST
GALLATIN ST
GALLOWAY ST
CHILLUM PL
JEFFERSON
EMERSON ST
DECATUR ST
CRITTENDEN ST
BUCHANAN ST
ALLISON ST
BATES RD
HAWAII AVE
WEBSTER ST
VARNUM ST
UPSHUR ST
TAYLOR ST
RANDOLPH ST
QUINCY ST
PERRY ST
OTIS ST
NEWTON ST
NORTH DAKOTA AVE
SOUTH DAKOTA AVE
KANSAS AVE
BLAIR RD
SANDY SPRING RD
LAUREL ST
WALNUT
WHITTIER
CHILLUM PL
SLIGO MILL RD
NEW HAMPSHIRE AVE
ROCK CREEK CHURCH RD
N CAPITOL ST
NORTH CAPITOL ST
FORT TOTTEN DR
FORT DR
PUERTO RICO AVE
JOHN McCORMACK RD
HAREWOOD RD
MICHIGAN AVE
SARGENT RD
PARK PL

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ESTIMATED COSTS

Estimated costs to construct those features of the MBT not yet completed or underway, which include interim trail elements and permanent projects in Phases 1 – 5, are summarized in the following table. The estimated costs are planning level estimates that could change as design progresses and decisions are made on features for the trail. They are based on the Phased Implementation by Segment discussed earlier in this chapter and provided in Appendix B. Design, survey, and other pre-construction activities would add to the level of required funding shown below.

MBT ESTIMATED CONSTRUCTION COSTS		
Interim Trail Elements		
Segment	**Item**	**Estimated Cost**
Mall to DC/MD Border	Signage: Edgewood, 4th, T,, H. Thomas Way, 3d, T, 4th, Edgewood, Ft Totten Rd, Old Blair, 3d St -N. Dakota, Van Buren, 4th, Blair, Piney Branch; Sandy Spring, Maple, Carroll, Cedar, Eastern, Spur.	$35,000
Blair/Peabody/Kansas Crossing	Curb Ramps & Striping	$26,000
Monroe-Michigan; Blair Road; Piney Branch-Border	Pathways	$44,000
Eastern Ave; Gallatin	Striping	$10,000
Interim Facilities Totals		**$115,000**
Phase One		
Segment	**Item**	**Estimated Cost**
NY Avenue to Franklin Street	12-Foot Path; Access Path	$560,000
NY Avenue to Franklin Street	Lighting and Call Boxes	$1,015,000
NY Avenue to Franklin Street	Signage, Fencing, Franklin St. Ramp, Waysides; Landscaping	$950,000
NY Avenue to Franklin Street	Art Elements	$120,000
Phase One Totals		**$2,645,000**
Phase Two		
Segment	**Item**	**Estimated Cost**
Mall to Columbus Circle	Crossing Improvements	$150,000
Mall to New York Avenue	Signage, Waysides	$185,000
Rhode Island Metro	Pedestrian/Bicycle Bridge	$2,650,000
8th & Monroe Street	Crossing Improvements & Signage	$155,000
Monroe Street - J. McCormack Road	Path, McCormack Crossings, Waysides, Signage	$175,000
Mall to New York Avenue	Art Elements	$90,000
Rhode Island Metro	Art Elements	$80,000
8th Street - J. McCormack Rd	Art Elements	$45,000
Phase Two Totals		**$3,530,000**
Phase Three - Preferred Option		
Segment	**Item**	**Estimated Cost**
J. McCormack Rd.-New Hampshire Ave.	Pathway: East McCormack, Drainge Ditch, Around Metro Station to Riggs, Riggs-Kennedy, Madison-NH	$880,000
Ft. Totten Metro	Stairs	$60,000
J. McCormack Rd.-New Hampshire Ave.	Lighting: Bates-Riggs-NH; Call Boxes: McCormack, Bates-Riggs	$885,000
Bates-Ft Totten Metro	Fencing along Encased Ditch	$255,000
1st Place-NH Ave.	Crossings at Riggs and NH Ave.	$350,000
McCormack Rd-Blair Road	Signage, Striping, Waysides	$265,000
Spur	Pathway, Signage, 3 Crossing Improvements	$470,000
Spur	Lighting	$590,000
McCormack Rd-Blair Road; Spur	Art Elements	$85,000
Phase Three Totals		**$3,840,000**

MBT ESTIMATED CONSTRUCTION COSTS		
Phase Four - Preferred Option		
Segment	**Item**	**Estimated Cost**
Takoma: Oglethorpe-Van Buren	Sidewalks and Boardwalks	$164,000
Takoma: Oglethorpe-Van Buren	Separated Bikeway on Blair Rd.	$220,000
Takoma: Oglethorpe-Van Buren	Crossings: Blair, Kansas, Peabody, N. Dakota, Van Buren	$125,000
Takoma: Oglethorpe-Van Buren	Waysides & Signage	$92,000
Takoma: Oglethorpe-Van Buren	Art Elements	$27,000
Takoma East: Van Buren-DC/MD Line	Pathway	$202,000
Takoma East: Van Buren-DC/MD Line	Crossings: Van Buren, Aspen, Vine, Carroll, Piney Branch, Eastern	$130,000
Takoma East: Van Buren-DC/MD Line	Waysides, Signage, Striping	$218,000
Takoma East: Van Buren-DC/MD Line	Art Elements	$50,000
Takoma West: Van Buren-Piney Branch	Pathway; Sidewalks	$145,000
Takoma West: Van Buren-Piney Branch	Piney Branch Bridge; Stairs	$720,000
Takoma West: Van Buren-Piney Branch	Crossings: 3rd, Whittier, Butternut, Blair, Cedar	$70,000
Takoma West: Van Buren-Piney Branch	Waysides, Signage, Striping	$112,000
Takoma West: Van Buren-Piney Branch	Art Elements	$50,000
Phase Four Totals		**$2,325,000**
Phase Five		
Segment	**Item**	**Estimated Cost**
First ST.: G St.-L St.	Exclusive Bikeway	$70,000
Monroe Street	Tunnel with Access Path	$710,000
J. McCormack Road	Improvements: Sitting Park-CUA Facility	$400,000
McDonald Place	Shared Use Path	$45,000
Monroe Street	Art at Tunnel	$8,000
J. McCormack Road	Art Elements	$32,000
Phase Five Totals		**$1,265,000**
Construction Cost Totals		
Interim Facilities Totals		**$115,000**
Phase One Totals		**$2,645,000**
Phase Two Totals		**$3,530,000**
Phase Three Totals		**$3,840,000**
Phase Four Totals		**$2,325,000**
Phase Five Totals		**$1,265,000**
MBT Totals		**$13,720,000**

POLICING AND PUBLIC SAFETY

As a District public right-of-way, DC Metropolitan Police (MPD) forces will be the lead agency responsible for public safety and security. However, five public police forces will have jurisdiction and share in that responsibility:

- The Metropolitan Police (DC) (PSAs 1, 4 and 5)
- The U.S. Park Police (NPS)
- The U.S. Capitol Police
- The Metro Transit Police (WMATA)
- Amtrak Police

Additionally, there are a number of private and institutional security forces that can provide support. This includes CSX railroad security, the Catholic University Campus Police, and existing and future Business Improvement District (BID) welcome staff. Currently, the southern portions of the trail are within the jurisdiction of the Downtown and Capital Hill BIDs. In the future a new BID may be formed to serve the commercial areas around the New York Avenue Metro Station.

User security can be augmented by citizen volunteers or through cooperative arrangements with other city programs, such as the DC Department of Parks and Recreation Urban Park Rangers.

The key to effective trail policing will be coordination; among the government police forces as well as with the private security operations, and civic groups. Details about existing coordination efforts, agency jurisdiction overlaps and specific PSA boundaries are provided in each Trail Section Chapter. Soon after approval of this concept plan a more detailed public safety and security plan should be developed. It should address the following issues:

Jurisdiction: Legally, the U.S. Park Police, U.S. Capitol Police, and Metro Transit Police have equal jurisdiction with MPD throughout the entire District of Columbia. Likewise, the MPD have equal jurisdiction on NPS lands, around the Capitol and at Metro Stations. However, in practice each agency focuses its patrols on the lands and facilities that are their core responsibility. However, because the trail will pass directly through WMATA lands and Metro Stations and NPS land, and near the Capitol, it is essential that police agencies coordinate and deploy their resources most effectively.

Patrols: Different patrol methods (motor vehicle, bicycle, foot) will be required along different segments of the trail. Moreover, some agencies do not have the person power or equipment to participate in each method. MPD, WMATA and US Capitol Police all have bicycle patrols and currently use them in areas where the trail will be located. The US Park Police only have patrol cars available for their properties in Northeast DC.

In general, bicycle mounted patrols will be most effective along shared use path sections of the trail, especially between Franklin Street and L Street, and in the section south of Ft. Totten. Motor vehicle patrols will be effective along the shared use street segments, along John McCormack Road and in Takoma, DC.

Call Boxes: Special emergency call boxes are recommended for select sections of the trail. Call boxes or “Blue Phones” as they are sometimes called have proved very effective for enhancing campus security at Catholic University and the University of Maryland. The following sections may have special security concerns that can be enhanced with this equipment:

- New York Avenue to Franklin Street (CSX railroad corridor)
- John McCormack Road to Ft. Totten Metro

Metrorail Train Surveillance: Select sections of the trail are plainly visible from passing Metrorail trains, especially southbound trains. These areas include the stretch adjacent to the cement plan and DPW Trash Transfer Station, at the Ft. Totten and Brookland stations, between Franklin Street and V Street, and at the New York Avenue station. Ways to take advantage of the high frequency of Redline trains in this corridor should be considered for their potential as a crime deterrent. The hundreds of rail passengers traveling on Metro add even

more public eyes watching the trail, which adds an element of security during time periods when trail users may be few and far apart.

Supplemental Forces: As noted above, a variety of options can be explored to supplement government policing with existing private security forces already present in the corridor, volunteer citizen patrols, DCDPR Urban Rangers, Campus Police or other resources. Research to identify these resources should be undertaken and a coordination protocol created.

Lighting: As described in Chapters 2 and 8, lighting will be provided along the trail. Adequate lighting will aid tremendously in creating a safer and more secure trail environment. It is critical to serve bicycle commuters who may often travel after dark in the late fall, winter and early spring months. It will also increase pedestrian use and safety along the trail, especially in the areas around the Metro stations.

Coordination: Initial discussions have been held with supervisory officers working in these agencies to alert them the existence and plans for the trail. All are interested in ensuring good public safety. These discussions have helped to identify actions that can be considered to further policing and public safety for the MBT as it moves forward:

- Coordination through the monthly interagency meeting for law enforcement agencies to provide basic information about the location of the trail and its development status.
- Coordination with a lead officer from PSA 1 or 5.
- Coordination meetings with supervisory officers from the five agencies above, including representatives from PSA 1, 4, and 5, and private agencies such as Catholic University Campus Police.
- Development of a security plan and protocol with communication to neighborhood groups along the corridor and trail user organizations active in the metro area.
- Organization of supplemental forces to assist with policing, especially during the early evening hours in the Fall, Winter and early Spring months.

MANAGEMENT AND MAINTENANCE OF TRAIL

Trail maintenance and management will involve a variety of activities. DDOT has already been administering some of these activities during trail development, however the future workload will entail some new and additional work.

Management Activities:

- Managing and strengthening an MBT Advisory Committee; and ensuring ongoing coordination and information exchange among city agencies, neighborhood groups and trail user organizations.
- Coordinating with a Friends of the Trail Group to provide maintenance and surveillance support.

- Maintaining relations with trail user organizations, neighborhood groups and adjacent property owners
- Developing promotional materials
- Managing trail operations and dealing with any user conflicts that may arise.
- Managing phased trail design and construction
- Coordinating design and installation of public art and/or heritage trail interpretive signs

Maintenance Activities:

- Regular clearing of vegetation and overgrowth
- Repairing failed sections of the trail treadway
- Trail sweeping
- Regular inspection and cleaning of catch basins, culverts and other drainage facilities
- Maintaining and replacing signs and pavement markings
- Graffiti removal, if necessary
- Inspecting structures
- Coordinating with a Friends of the Trail Group to provide maintenance support

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APPENDIX A
PUBLIC ART PLAN

I. GENERAL INTRODUCTION

Public Art Objectives

Public art can contribute to the success of the Metropolitan Branch Trail in several ways:

- Public art can attract people to the trail and make their experience of using the trail more rewarding.
- Public art can be a mechanism for involving civic and community organizations in designing the trail, thereby making it more of an asset to the neighborhoods it connects.
- Public art can be a tool for addressing broad design issues, such as wayfinding, identity and continuity, which are identified in the concept plan.
- Public art can enhance the trail's image and stature as a new public space—for bike riders and pedestrians; for commuters, casual users and the surrounding community.

Background on Public Art Planning for the Metropolitan Branch Trail

The Washington Area Bicyclists Association and trail planners have begun exploring the possibilities for public art along the trail through grants from the National Millennium Trails program / National Endowment for the Arts, and the Fannie Mae Foundation / National Parks Foundation.

Efforts have focused on creating an "Arts Garden" along 8th Street NE in the Brookland community. A final design for the project has been completed, and construction will be funded by DDOT as part of trail construction along the 8th Street corridor. The design organizes the development of the project into two phases. The first phase will involve creating a "plaza" in the project site and installing directional and interpretive signage. The "plaza" work will be done by DDOT and the signage will be developed paid for using grant funding.

The second phase will include seating, walkways and planters. A request was submitted to the DC Recreational Trails Advisory Committee to fund this phase of the work in 2005. WABA is seeking partners to execute this phase of the project.

Organizations involved in this planning so far include WABA, Dance Space, the National Park Service Rivers and Trails program, and the Presidents Committee on the Arts and Humanities.

II. PROJECT TYPES

Public Art Themes and Strands

It is important that public art that is commissioned along the trail, or incorporated into the trail design, have a special relevance or connection to the trail. One way to accomplish this is by focusing on general themes or approaches for public art, several of which will be particularly appropriate along the Metropolitan Branch Trail:

- Art that relates to the way that people experience the trail, particularly projects that create special places that are of value to both trail users and the community.
- Art that enhances functional and infrastructure elements, such as signage, pavement treatments, landscaping and lighting.
- Art that enhances the identity of the trail as a continual corridor and part of a regional network.
- Art that differentiates the character of the trail as it passes through different communities, each with its own identity.
- Art that interprets and celebrates the history of the trail corridor.

A general discussion of these themes follows. Specific opportunities are discussed in chapters of the concept plan, and are mapped in the accompanying "Public Art and Civic Design Sketchbook.," attached to this plan as Tab 1.

Implementation Notes

There are several general categories of public art projects that will be developed along the Metropolitan Branch Trail:

- Works commissioned in conjunction with the construction of the Metropolitan Branch Trial. These will be funded by DDOT through set-asides from overall project funds. The implementation can be managed by DDOT directly or by the District of Columbia Commission on the Arts and Humanities.
- Works commissioned independently of the trail, and retrofitted into landscapes or infrastructure. These would be funded from external sources and will be managed by entities other than DDOT, such as DCCAH, community arts groups, Cultural Tourism D.C., etc.
- Temporary works, such as performances and events. These would be funded from external sources and will be managed by entities other than DDOT, such as DCCAH or community arts groups.
- Works commissioned independently of the trail, and incorporated into new development along the trail. Though there is no formal public art requirement for private development

in the District of Columbia, we would urge the agencies involved with development (D.C. Office of Planning, WMATA for joint development projects) to consider how public art might satisfy objectives for creating good design and good public spaces.

Specific opportunities are discussed in the chapters of this concept plan, and summarized in the public art sketchbook in the appendix.

III. DESCRIPTION OF PROJECT TYPES

This section discusses the types of projects that can be planned under each theme. Tab 2 provides a preliminary tabulation of potential projects by type and location to serve as a starting point for the development of art projects along the MBT.

Art that Relates to User Experience on the Trail

The first art public theme for the Metropolitan Branch Trail involves projects that relate to the way that people experience the trail, particularly projects that create special places that are value to both trail users and the community. This theme includes several categories of projects.

- **Thresholds and gateways** are places of passage where people move from one place to another. These include places where people enter or leave the trail, places that mark transitions between different areas of the city, or places where the character of the trail or the surrounding landscape changes. At these locations, art might mark the location of a transition, highlight the contrast between places, signal a gateway, or be incorporated into information elements that provide guidance to trail users.

- **Flows and channels** are places of motion, where the primary activity is moving along the trail or passing through a place, and where there are no connections on or off the trail, or no places to stop. These include segments such as the grade along Blair Road as the trail approaches Takoma from the south, or the stretch between Fort Totten and Catholic University that passes between the rail corridor and active heavy industrial activities.

- In places like these, art can celebrate trail users' sense of movement and motion. Projects could include kinetic devices, optical effects, dynamic shapes, or bright and shifting colors. Art projects can be designed to intrigue people using the trail or viewing it from afar.

- **Pausing places and waysides** are special locations along the trail where people might stop. These could include resting places or oases; viewing places or vantage points; welcome centers, transitions or gateways; or gathering places like parks, plazas and gardens.

  Art projects would respond to the specific nature of the place. They could serve as symbols or place markers, or could be incorporated into the design of an element that is integral to the place, but they would always focus on creating places that have civic stature, serving trail users and the community alike. Some of these projects might be developed through a participatory process.

- **Points of reference** are places that are visually prominent and serve as landmarks along the route—elements that people might use as meeting places, or to make a mental note of the distance they have traveled along the trail.

  In some cases, a "point of reference" could be an existing element that is memorable because of is architecture or engineering, its industrial or vernacular nature, or its historic value. Points of reference could also include gateways or focal points that mark important locations and are identity elements for a community. New points of reference might be incorporated into community gathering spaces or focal points along the trail. More than other art projects, these should be unique, one-of-a-kind efforts.

Trail Identity

The second art theme for the Metropolitan Branch Trail involves projects that strengthen the corridor's identity as a continuous place, and its identity as a place that is part of a larger regional network. There are several types of projects that could explore this theme.

- **Infrastructure elements**, such as retaining walls, underpasses, fences and transportation-related structures, are one of the most consistent aspects of the visual aspects of the trail. These elements can be turned into a canvas for civic design and public art.

  Existing structures could be retrofitted with many kinds of art projects—wall mounted sculptures, murals, kinetic elements, light–shadow projects, scrims or screens, and projections, to name a few. Projects like these can turn mundane elements of the cityscape into visual assets. They can also be an effective location for community-based projects.

  New infrastructure elements, such as the bridges being proposed for the area of the Rhode Island Avenue Metrorail station and the crossing of Piney Branch Road, and the underpass being considered for Monroe Street, also hold potential for art projects. These opportunities are discussed in a subsequent section.

- **Industrial elements**, particularly those related to warehousing, transportation, construction and the processing and storage of raw materials, are another consistent aspect of the trail's visual character. Artists could be encouraged to develop projects that relate closely to these elements. They could be asked to work with ideas of motion; bright, bold colors; or large-scale structures fabricated from durable materials. In addition, existing industrial sculptures, whether functioning or relics, could be embellished with paint, screens, light or other non-intrusive art projects.

- **Color** can be a powerful tool for creating a unified visual identity for a trail, particularly one like the Metropolitan Branch Trail, whose visual character changes dramatically from section to section. One color might be chosen to repeat itself in elements along the trail and act as an easily recognizable trail blaze. Alternatively, repeated color sequences, such as a spectrum or semaphore pattern, might be integrated into elements like bollards, signs, panels, flags or banners that might ornament fences, walls or poles.

- **Shapes** can also provide a visual language for the trail. The overall path of the Metropolitan Branch Trail is a gentle arc, but in some places the trail will make dramatic

curves—as it runs along the hillside at Fort Totten, for example. The sense of movement along the trail can be celebrated by using curves or swoops as a theme. Dynamic shapes could be incorporated into infrastructure, landscape or trail contours, and surface materials; or echoed in the language of sculpture.

Functional Elements

A third art theme for the Metropolitan Branch Trail involves functional elements, or trail-related infrastructure or amenities. Involving artists in the design of these elements would create an artistic presence along the length of the trail.

- **Signage, pavement, lighting, bollards and landscape treatments** are recurring elements that not only serve important safety and operational functions but also can be designed to give a unique identity to a trail. Elements like these are often designed by artists or by collaborative teams of designers that include artists. General considerations for these elements are outlined in this chapter of the concept plan.

- **New bridges, underpasses, ramps, fences and retaining walls**, which are important for providing a clear alignment for the trail, will generally be designed on an individual basis. Elements of this infrastructure, such as surfaces, colors or railings, could also be designed by artists or collaborative teams of designers. General opportunities for these elements are described in the "Public Art Sketchbook" appendix to these plans, and specific locations for opportunities are identified elsewhere.

- **Trail amenities—such as seating, mileage markers, drinking fountains, bike racks and informational signage**—will be important to the user experience of the trail. These could be designed by artists or collaborative teams.

- **Traditionally, trail blazes** are recurring markers that identify the path of a trail through the landscape. Urban bike trails can reinterpret this tradition in a way that is both whimsical and functional. Some cities have commissioned artists to create families of sculptures or signage that marks the progression of a trail, others commission a range of artists to create their own interpretations of a common theme. These blazes not only let trail users know they are on the right track, but also add to the image of the place.

Segment Character

There are several segments of the Metropolitan Branch Trail corridor that have a distinct identity. As a counterpoint to the overall trail design, these segments could be regarded as "linear galleries" for art projects that respond to the special nature of the communities, urban fabric or landscapes they are passing through.

- **In Takoma**, the trail will branch into two routes. The trail will not only be a path for commuters, but also an important community resource—a loop that connects civic places, provides a route for casual riding, and serves as a starting point for longer trips. Art projects could be related so that they form a narrative or family, literally or visually, as one travels the loop; art projects could be related to places that are important to the community as well as trail riders.

- **In Brookland**, the trail passes near a number of community, civic and cultural resources, including the Brookland neighborhood center and arts cluster, Catholic University of America, and nearby schools and recreation centers. In this area, public art should celebrate the community's spirit of creativity and provide clear links to resources that are nearby but not directly on the trail. Fanciful, colorful art in open spaces, as well as an overlay of incidental "art on the street" projects and event-related art should make this an exciting, ever-changing place for biking and walking. Special trail blazes at important community locations, such as schools and recreation center, could signal the presence of the trail a block or two away.

- **Fort Totten**. The segment of trail starting at the Fort Totten Metro station and heading north to the Blair Road/Community Gardens site will follow streets that run along wooded parkland and, for several blocks, through residential neighborhoods. Art projects here must be respectful of the areas through which the trail is passing, especially those administered by the National Park Service, which has their own stringent guidelines. Art projects could be integrated into trail elements on public roadways (such as the materials of the trail, its edges and any waysides located in this area), and as the more general concept encompassing interpretive signage and natural themes, considered for NPS lands. It could also be integrated into other elements such as benches or informational signage located here. To the extent that individual art projects are located here, they should be smaller scale and easily visible or accessible from the trail to create a sense of discovery, surprise and intimacy. Approaches might involve using and re-interpreting naturalistic materials, or creating a series of signs to provide archaeological interpretation for this historic location.

- **CSX Corridor**. The segment of the trail between Franklin Street and New York Avenue is dramatic and in transition. Once a branch of Tiber Creek and more recently a CSX rail yard, it is now a flat meadow that offers long vistas and dramatic juxtapositions of scale and movement.

- This segment, currently bracketed by a rail line on one side and light-industrial operations on the other, is isolated and littered with industrial and railroad artifacts. A sculpture garden or large-scale environmental art could be located here; projects might be assembled from found objects scavenged from the railroad corridor; retaining walls, building facades and fences might be turned into surfaces for art projects as well.

- Over time, as redevelopment occurs along this corridor, the trail could play an enhanced role. Connections to and from the trail, especially to Metro stations, will become important. The trail could be an important connection between office buildings, and a recreation resource for residents and office workers. Gateway elements, gathering places and identity markers can make the trail an attractive presence for the emerging residential and business community.

- **Union Station**. Long a terminus for rail travelers traveling north, west and south, Union Station is now the hub of rapidly transforming area of the city. It is also a major transition point for the Met Branch Trail, marking its passage into the Monumental Core and National Mall, and it will be the location of a major bicycle-oriented facility. From Union Station north, public art can both provide marking for the trail route; anchor gathering places that serve bicyclists, residents, office workers and visitors alike; and offer interpretation of the public agencies (such as the Supreme Court, the Securities and Exchange Commission, and the Government Printing Office) that are located in this

area. Like in Takoma, the trail travels along two branches, which could be envisioned as a loop.

Interpretive Strands

There are numerous opportunities for illustrating and celebrating some milestones of the city's industrial, commercial, and cultural development; the rich history of the railroads, both passenger and freight; the historic neighborhoods along the trail; and the various cultures represented by the residents of those neighborhoods. These opportunities can be organized into two main categories: place history and transportation history.

One interpretive strand would consider the cultural, social and developmental history of the places that the trail intersects. There are several neighborhoods and specific locations that would be considered, as well as several sites where the general pattern of the city could be interpreted. Art projects could include a trail-length system of interpretive markers (such as panels, pylons or medallions) or special monuments associated with aspects of the corridor's history. Special focus could be given to interpretive markers for areas like Brookland or Union Station that have a particularly dense history.

Another strand would consider the role the corridor plays in regional transportation. A system of interpretive markers or individual commemorative art projects could explore different layers of transportation history—early trails and roads; passenger and freight railroad history; freeway proposals and citizen backlash; Metrorail, Amtrak and commuter rail; and the new bike trail. Some of the projects could be located in places specific to historical events, others could be spaced in between to create a rhythm of experience.

IV. IMPLEMENTATION NOTES

The implementation of public art projects generally involves coordination among entities that bring several types of resources to the table: site control, funding, aesthetic approval, expertise in commissioning and installing projects.

Site Control

The alignment of the Metropolitan Branch Trail passes through or adjacent to properties under the jurisdiction of numerous public agencies (most notably the District Department of Transportation (DDOT), WMATA, the National Park Service, and the District Department of Parks and Recreation) as well as properties owned by institutions or private landowners. As specific sites are given more serious consideration for art projects, the agency, institution or individual that owns the property should be contacted in regard to permission, liability and maintenance requirements.

Funding

Usually, the funds available specifically for public art are limited, and public art projects proceed because they can be "piggybacked" onto some other capital project. That will be the case for

projects along the MBT, most of which will be funded by federal transportation funds and matching funds from the District of Columbia. DDOT, which is managing the project, has said that construction funding can potentially support art projects related to the trail. Art elements that could be funded through DDOT as part of the trail construction process include:

- elements of pedestrian bridges and ramps, such as railings;
- new retaining walls, particularly surfaces and tops;
- identity signs that mark the path of the trail (these can be self-standing or integrated with existing street signage);
- trail markers; lighting; trail surfaces, including inlays, edging and treatments at street crossings;
- benches or landscaping at waysides or rest stops; trailhead elements, such as bollards; screening and fencing.

The District of Columbia Commission on Arts and Humanities can provide funding for public art projects, as well as trail-related events and exhibitions, through its regular programming and competitive grants processes. Categories that could conceivably support trail related projects are “Community Arts Projects,” “Small Projects Program,” “Artist Fellowships,” and general operating support.

Aesthetic Approval

The Metropolitan Branch Trail passes through properties under the jurisdiction of a number of other public agencies that have existing aesthetic protocols, particularly the National Park Service and the Architect of the Capitol. In addition, aesthetic and capital improvements sponsored by the Government of the District of Columbia are, as a matter of course, subject to review by the Commission of Fine Arts and the National Capital Planning Commission. These entities should be contacted at the earliest appropriate moment to secure recommendations and guidance for the public art program.

Projects undertaken by DCCAH through its community arts programs involve an intensively collaborative community process, in which local communities are involved in site selection, artist selection and identifying themes and concepts for projects.

Implementation Expertise

DDOT and DCCAH are establishing a track record of collaboration on the implementation of art projects. In essence, DCCAH can act as a project manager for the art component of a DDOT infrastructure project, managing artist selection, design, fabrication and installation. In these situations, DCCAH can modify its normally intensive community process.

For community interpretive signage, DDOT has contracted with Cultural Tourism D.C., which operates primarily through a program that works intensively with communities to develop the research, texts and imagery that is used for neighborhood interpretive signage. Since a project of this nature might be impractical for the seven-mile-ling MBT, DDOT could consider

contracting a signage and cultural interpretation consultant to develop an interpretive strategy for the trail.

V. NEXT STEPS

This concept plan identifies overall directions for public art, potential locations for projects, and opportunities and constraints for implementation. Additional, more detailed planning should occur before initiating specific projects.

Public Art Projects

Future planning for the Metropolitan Branch Trail will occur at two levels. As funding is secured for future segments, specific designs will be developed, reviewed through a community process, and prepared for construction. In addition, additional design of functional elements such as signage, lighting, access controls and trail configurations will occur at a system-wide level.

An artist or art consultant should be hired to participate on the planning teams at both these levels. In planning system-wide elements, an artist could collaborate with engineers, landscape designers and graphic designers to identify opportunities for artistic intervention. It is important that these discussions occur at the earliest possible stages of the design process, so that the design team can benefit as much as possible from the guidance of the artist, and so that opportunities for artistic intervention are not foreclosed on. The specific artistic interventions could be designed by the participating artist, or through a call for proposals to other artists in the community and region.

Similarly, artists should be engaged to work on the detailed plans for future trail segments. At best, an artist or art consultant should work with the planning team as a liaison to the local community, initiating an iterative discussion about potential locations and themes for arts projects, and about the possibilities for community involvement in developing art projects.

Interpretive Signage

As part of the future study and of corridor-wide elements, DDOT should commission a system of interpretive signage. A signage consultant should be responsible for developing historical research that examines the themes describe above, narrative texts and imagery, and a graphic design approach.

Some neighborhoods along the trail, such as Brookland, could be appropriate participants in the Cultural Tourism D.C. Neighborhood Heritage Trail signage system. Future planning teams should encourage Cultural Tourism D.C. and Brookland community leaders to develop a basis for collaboration on neighborhood heritage trail and signage system, which could include points along the Metropolitan Branch Trail.

Technical Committee

Future planning teams should convene, from time to time, an informal technical committee to monitor progress of art projects along the trail and provide guidance to the project team. This committee should include representatives of DDOT, DCCAH, WMATA, Cultural Tourism D.C., DC OP, WABA, Downtown D.C. BID, and arts education and presenting arts organizations.

Metropolitan Branch Trail
Public Art / Civic Design Sketchbook

Introduction

This sketchbook imagines the ways that public art and civic design elements might be incorporated into the segment of the Metropolitan Branch Trail being built in the District of Columbia. The sketchbook is part of a concept plan that is being developed by the city's Department of Transportation.

The Metropolitan Branch Trail will run for about seven miles from Union Station in the city's monumental core, to the Maryland state line in the Takoma neighborhood. A spur will run east from Fort Totten into Maryland. The trail will be built in phases over the coming years.

The trail will be an unusual kind of civic space in the District of Columbia, different from classic spaces such as the National Mall, the circles and squares of L'Enfant's Washington, or even the rediscovered Potomac and Anacostia waterfronts. The trail can have a transforming impact, establishing new relationships between different parts of the city and creating new patterns of activity and opportunities for community reinvestment.

The trail will also be a unique kind of environment, a linear place used for getting from one place to another, for recreation or exercise, for quiet enjoyment, or for escape from the bustling city.

Along the way, the trail will create new kinds of shared civic spaces that have the potential of becoming common ground for both trail users and the adjacent communities—gathering places, resting places, viewing places, places that interpret the history of the city and region, places that stimulate people's sense of adventure, creativity and connection.

Public art and civic design can enhance the trail's stature as a new public space—for bike riders and pedestrians, for commuters and the community. It can attract people to the trail and make the experience of being there more rewarding. Already, trail planners and the communities along it have begun exploring the possibilities through a grant from the National Millennium Trails program and the National Endowment for the Arts.

This sketchbook imagines a wide range of possible public art and civic design projects. It describes four general categories of opportunities:

- art that relates to user experience of the trail,
- art that relates to functional and infrastructure elements,
- art that relates to special trail segments, each with its own identity,
- art that assists in interpreting the history of the trail corridor.

These ideas are meant to stimulate the creativity and ingenuity of the city's arts and design community, to serve as the starting point of discussing specific projects that can be implemented by public agencies or cultural organizations as the trail is developed.

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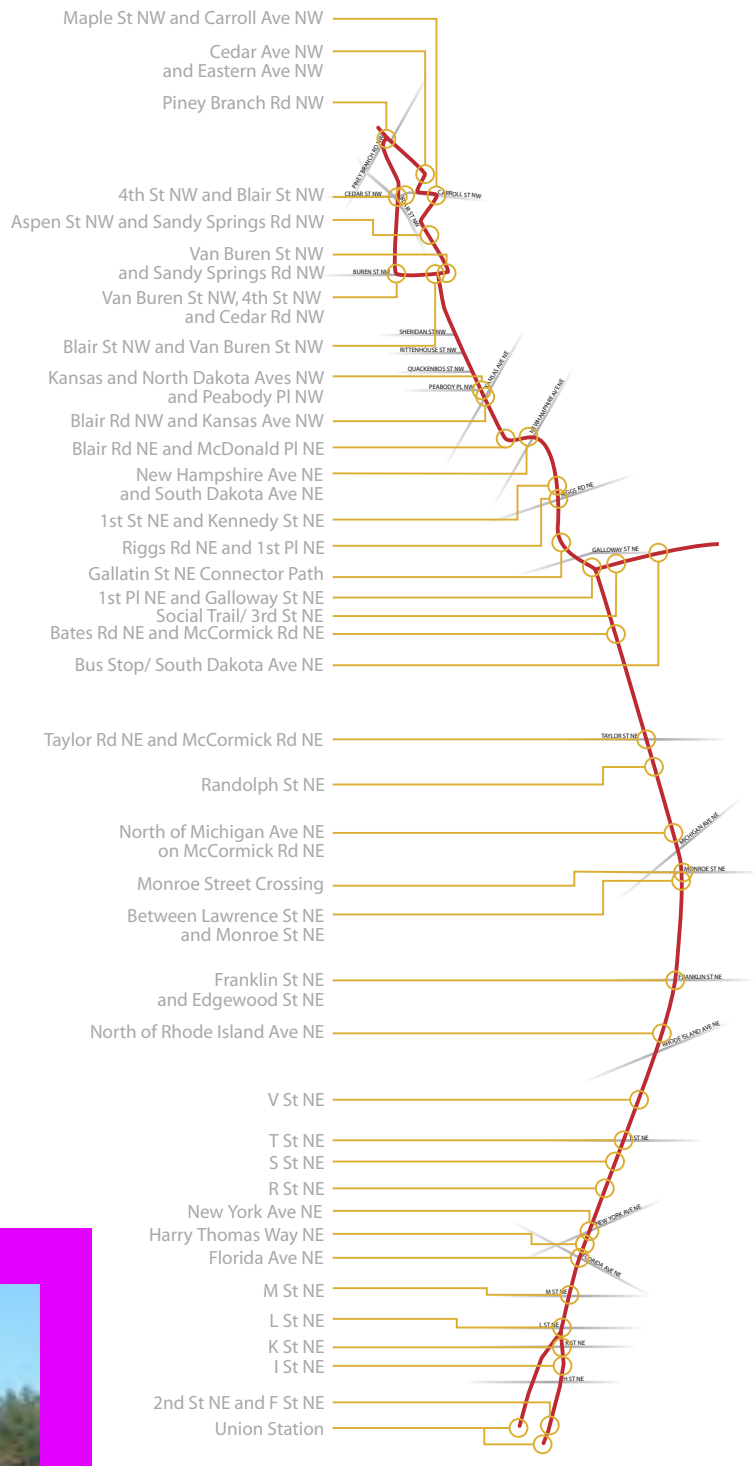
Threshholds and Gateways

Threshholds and gateways are places of passage where people move from one place to another. They are places where people enter or leave the trail, places that mark transitions between diffferent areas of the city, or places where the character of the trail or the surrounding landscape changes. At these locations, art might mark the location of a transition, highlight the contrast between places, signal a changed identity, or be incorporated into information elements that provide guidance to trail users.



A major gateway:The District–Maryland boundary at Eastern Avenue and Piney Branch Road.

Typical intersection of Met Branch trail corridor with public street.

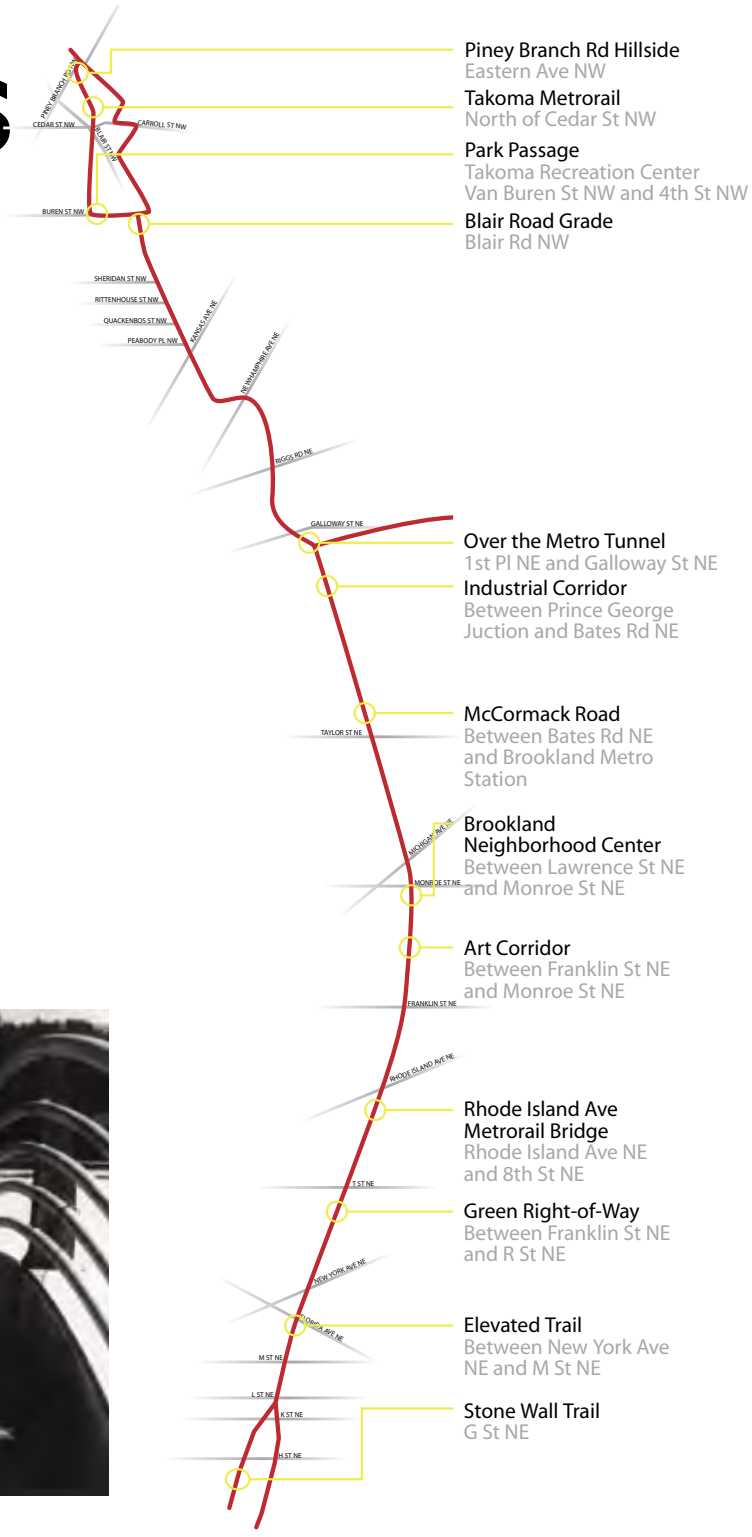
Connection between Eighth Street/Brookland and the CSX corridor.

Use specially-designed bollards at trailheads.

Highlight transitions, such as entrances to the trail, with gateway markers, insignias or projects that heighten the drama of passage.

Flows and channels

Flows and channels are places of motion, where the primary activity is moving along the trail or passing by something. In places like these, art can celebrate our sense of movement and motion, through kinetic devices, optical illusions, contoured surfaces or dynamic shapes, or bright and shifting colors. Art projects can be designed to intrigue people riding by on bikes or viewing from afar.



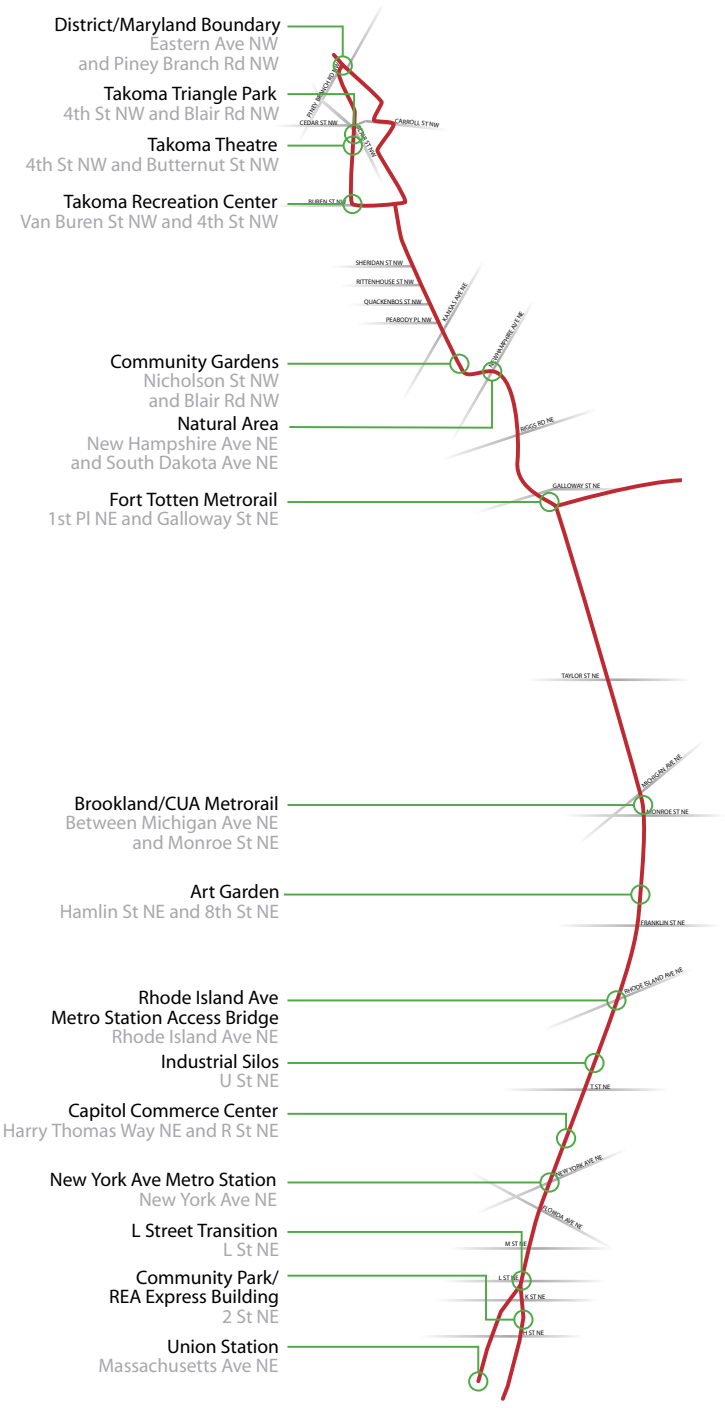
Ramps and railings

Banners and Underpasses

Trail courses

Pausing Places and Waysides

Pausing places and waysides are special locations along the trail where people might stop. These could include resting places or oases; viewing places or vantage points; welcome centers, transitions or gateways; or gathering places like parks, plazas and gardens. Art projects would respond to the specific nature of the place—they might serve as symbols or place markers, or be incorporated into the design of an element that is integral to the place—but would always focus on creating places that have civic stature, serving trail users and the community alike. Some of these projects might be developed through a participatory process.



District/Maryland boundary, Eastern Avenue, a potential wayside location.

Possible gathering places in Takoma.

Blair Road crest, a potential wayside location.

Use art and civic design to create gathering places, such as gardens or community play areas ...

... and amenities, like seating, shade and water, that serve bicyclists and the community.

Pausing Places and Waysides

Potential wayside: overlooking the community gardens along Blair Road.

Existing pausing place: the Brookland / CUA seating area.

Proposed wayside: The Art Garden, Brookland, Eighth Street.

Involve artists in the design of viewing places, such as towers, platforms and stages ...

... and of places to sit.

Points of Reference

Points of reference are places that are visually prominent and serve as landmarks along the route. They could include existing elements that are memorable because of their architecture or engineering, their industrial or vernacular nature, or their historic value; as well as gateways or focal points that mark important locations and are identity elements for a community. New **points of reference** might be incorporated into community gathering spaces or focal points along the trail. More than other art projects, these should be unique, one-of-a-kind efforts.

Clock tower as place marker.

Historic places: Cady Lee Mansion.

Abandoned silos at Rhode Island Avenue.

A trail blaze and a commemorative sculpture.

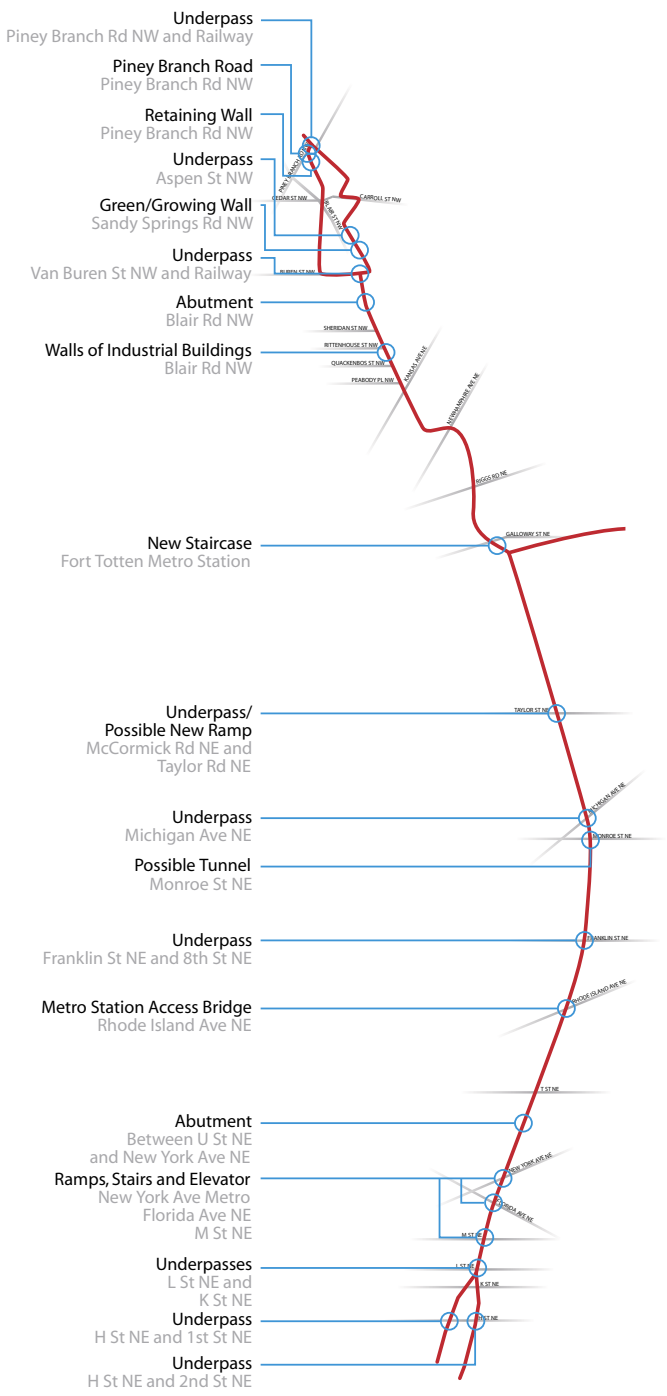
An ordinary bridge transformed by color.

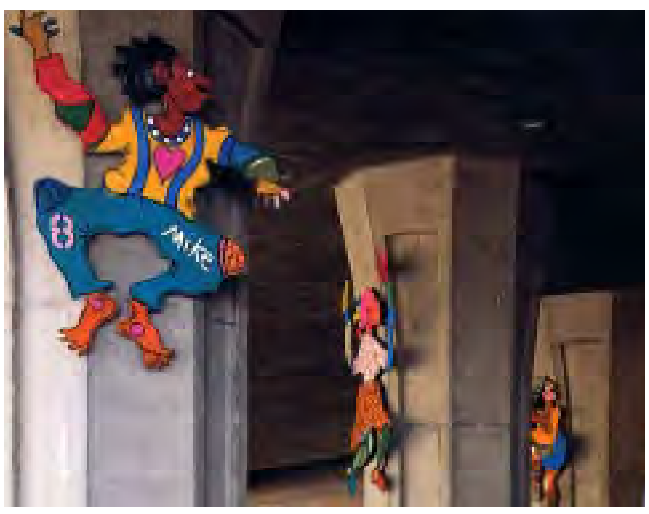
The U.S. Capitol, first visible just south of Franklin Street.

A platform that invites passersby to take advantage of a special view.

Trail Identity / Infrastructure

Infrastructure elements can be turned into a canvas for civic design and public art. Existing infrastructure elements, such as retaining walls, underpasses and fences, can be retrofitted with many kinds of art projects—wall mounted sculptures, murals, kinetic elements, light–shadow projects, scrims or screens, and projections. Projects like these can turn mundane elements of the cityscape into visual assets and are an effective location for community-based projects.





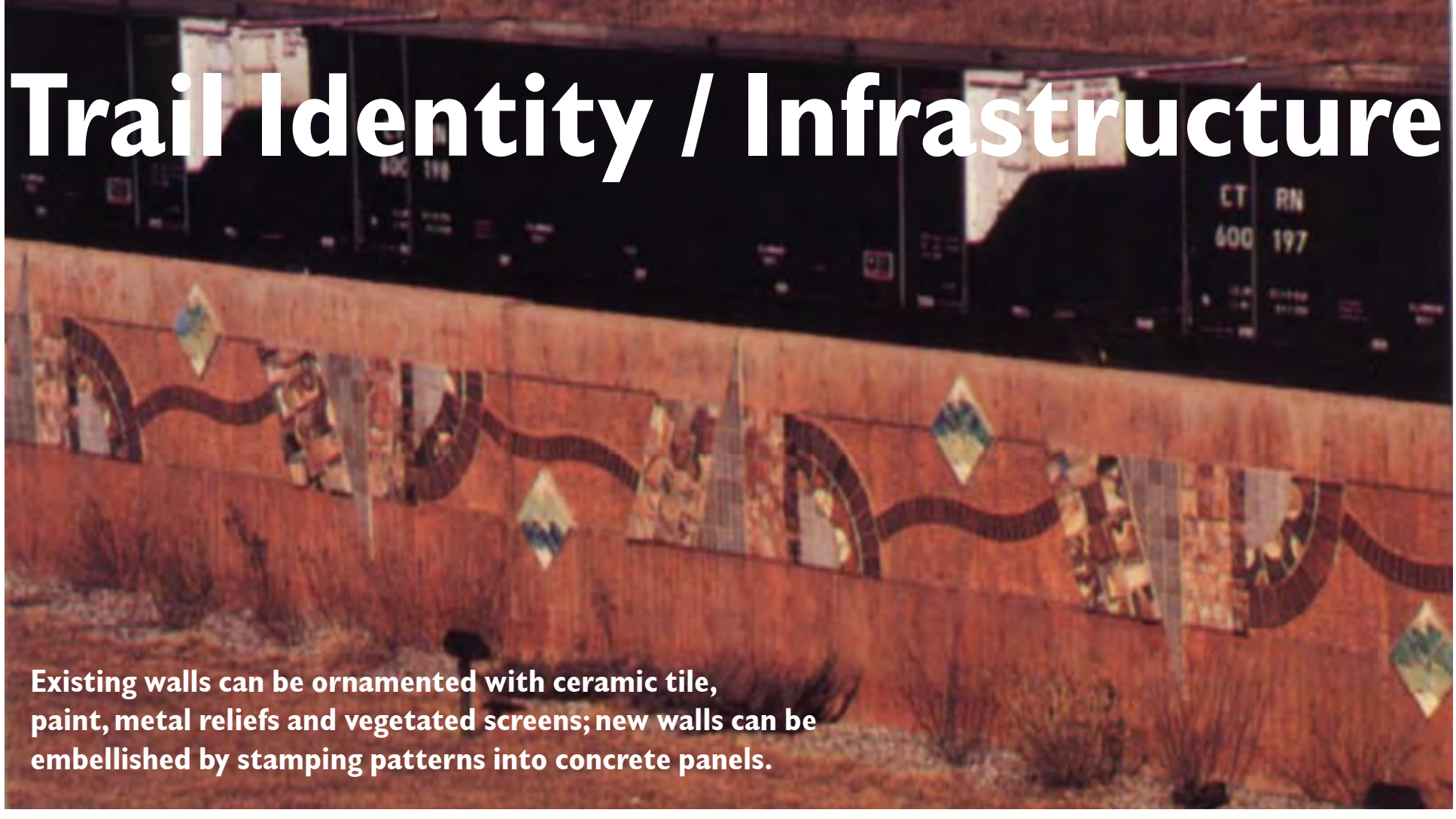
Underpasses: Locations for murals and ornamental sculptures, reliefs and paintings, maps.

Underpasses at the Brookland/CUA Metro station entrance.

Aspen Street, NW, Takoma

L Street, NE

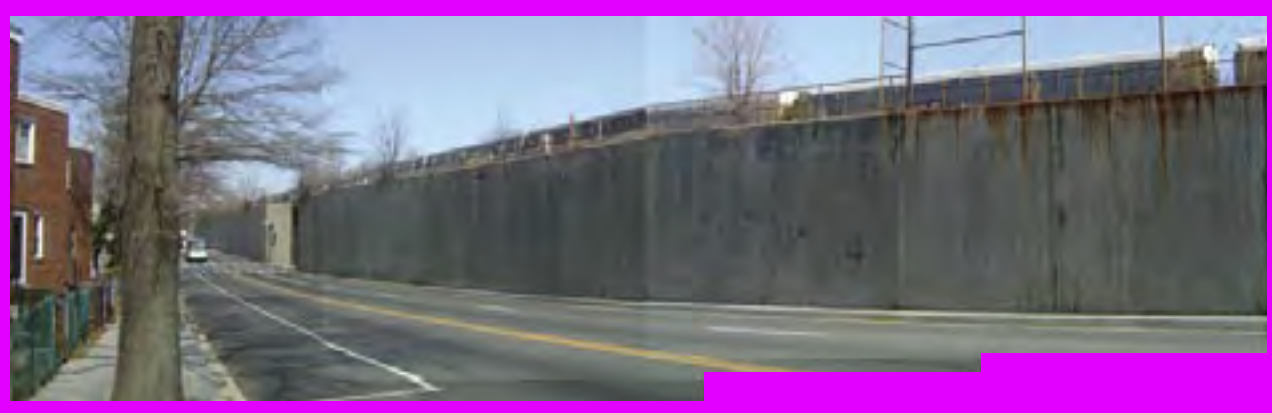
Trail Identity / Infrastructure



Existing walls can be ornamented with ceramic tile, paint, metal reliefs and vegetated screens; new walls can be embellished by stamping patterns into concrete panels.

Piney Branch Road

Blair Road



North of New York Avenue

Trail Identity / Color

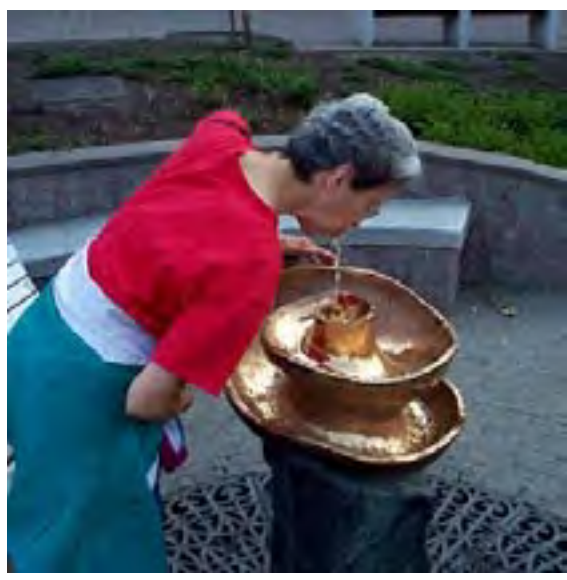
Color can be a powerful tool for creating a unified visual identity for a trail, particularly one like the Metropolitan Branch Trail, whose visual character changes dramatically from section to section. One color might be chosen to repeat itself in elements along the trail and act as an easily recognizable trail blaze. Alternatively, repeated color sequences, such as a spectrum or semaphore pattern, might be integrated into elements like bollards, signs, panels, flags or banners that might ormament fences, walls or poles.

Trail Identity / Curves

Shapes can provide a visual language for the trail. The overall path of the Metropolitan Branch Trail is a gentle arc, but in some places the trail will make dramatic curves—as it runs along the hillside at Fort Totten, for example. Artists could be asked to celebrate the sense of movement along the trail by using curves or swoops as a theme. Dynamic shapes could be incorporated into infrastructure, landscape or trail contours, and surface materials; or echoed in the language of sculpture.

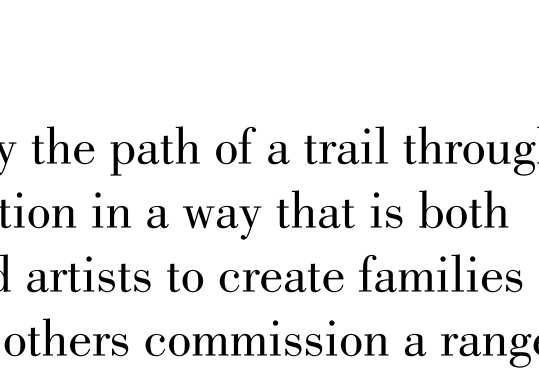
Trail Identity / Functional Elements

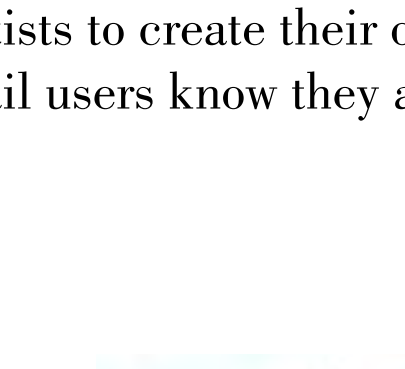
The Metropolitan Branch Trail will incorporate a range of **functional elements,** such as barriers, bollards, seating, mileage markers, drinking fountains, bike racks and signage. Involving artists in the design of these elements would create an artistic presence along the length of the trail.

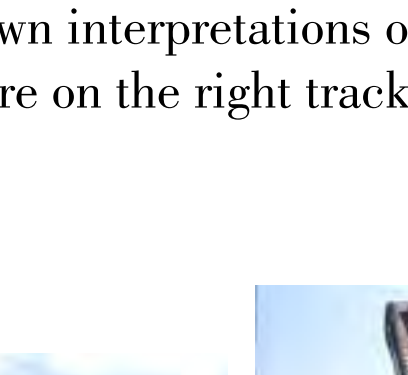


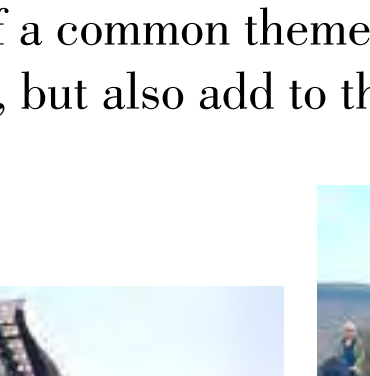
Trail Identity / Trail Blazes

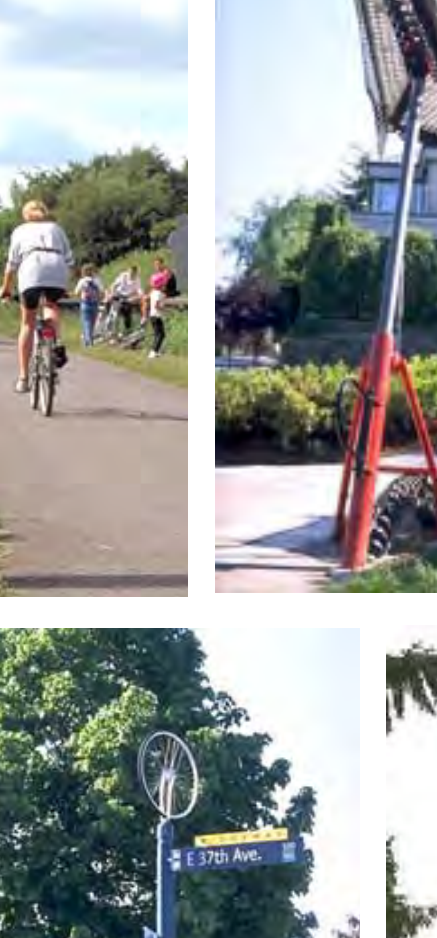
Traditionally, **trail blazes** are recurring markers that identify the path of a trail through the landscape. Urban bike trails can reinterpret this tradition in a way that is both whimsical and functional. Some cities have commissioned artists to create families of sculptures or signage that mark the progression of a trail, others commission a range of artists to create their own interpretations of a common theme. These blazes not only let trail users know they are on the right track, but also add to the image of the place.

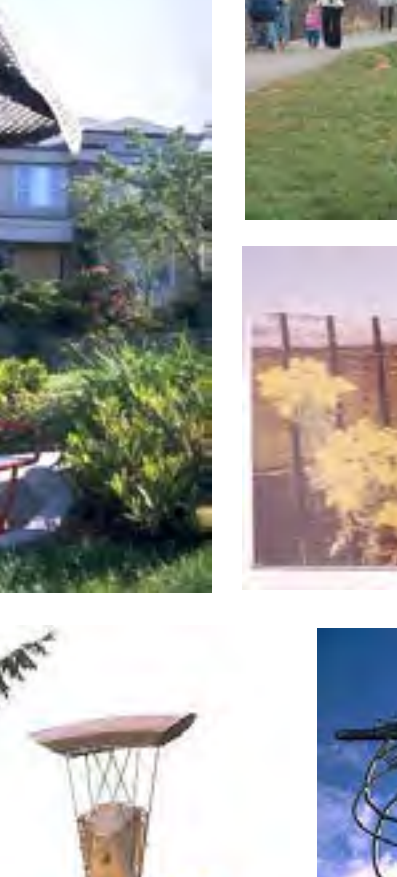


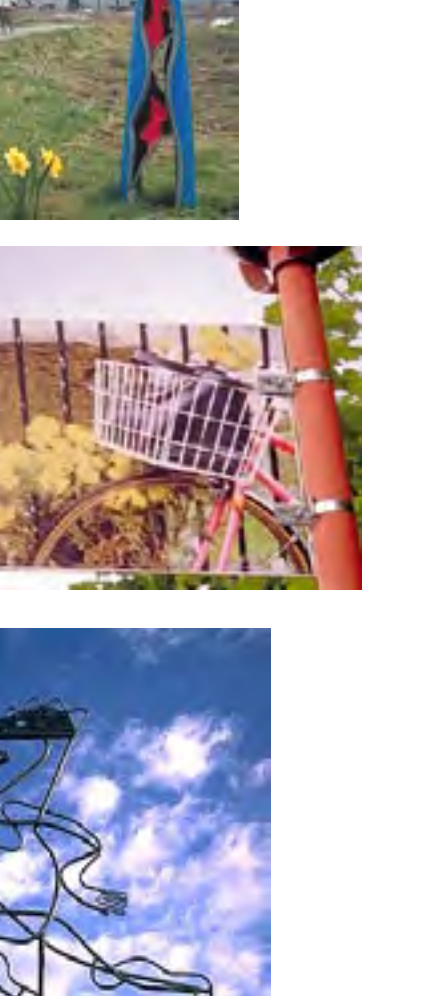






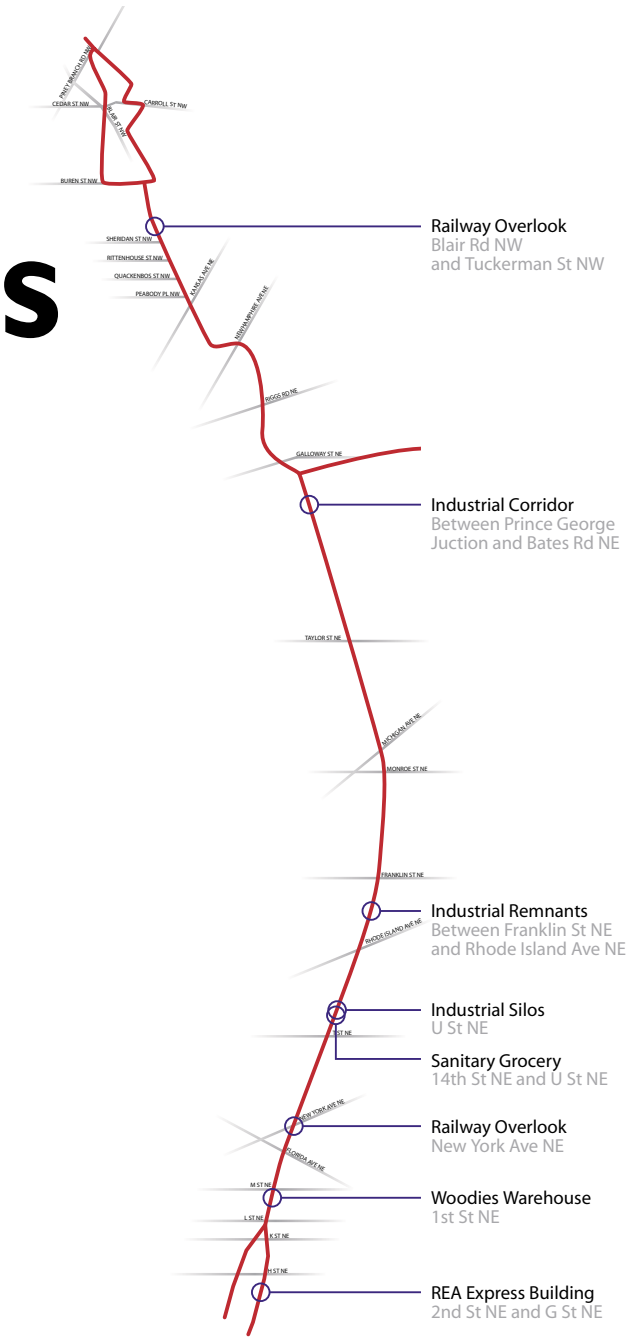






Trail Identity / Industrial Elements

Industrial elements are one of the most consistent aspects of the visual character of the trail. Artists could be encouraged to develop projects that relate closely to the corridor's industrial and transportation heritage. They could be asked to work with ideas of motion; bright, bold colors; or large-scale structures fabricated from durable materials. In addition, existing industrial sculptures, whether functioning or relics, could be embellished with paint, screens, light or other non-intrusive art projects.



A discarded cable spindle near Rhode Island Avenue.

Storage silos near Rhode Island Avenue.

PEPCO substation along Second Street.

Art integrated into electrical substations, Seattle.

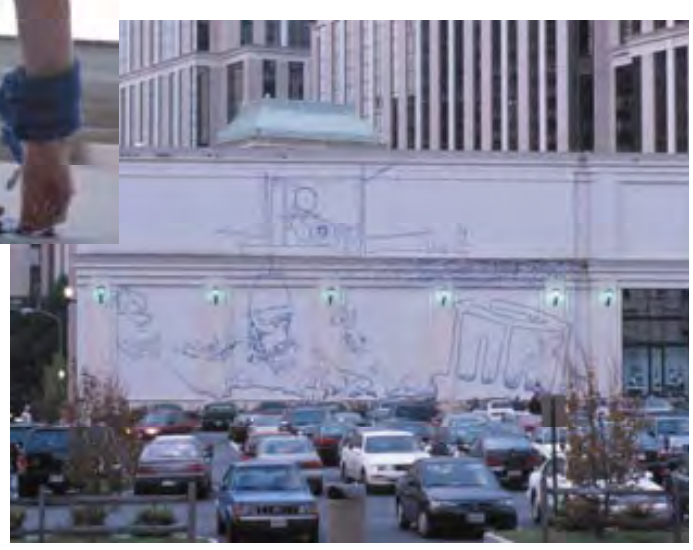
Art using wind to create motion, Seattle.

Neon ornamentation of industrial shed structure, New York City.

Segment Character
Takoma Loop

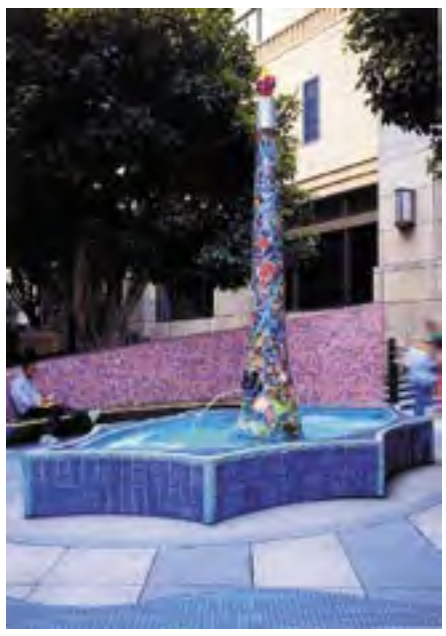
In Takoma, the trail will branch into two routes. The trail will not only be a path for commuters, but also an important community resource—a loop that connects civic places, provides a route for casual riding, and serves as a starting point for longer trips—featuring art that connects both commuters and community users. The trail can serve as an armature for art generated by the trail project itself, by private development initiatives, and by community initiatives. Art projects could be related so that they form a narrative or family, literally or visually, as one travels the loop; art projects could be related to places that are important to the community as well as trail riders.

Create community reference points.



Organize community-based projects.

Consider projects that are human-scaled or reflect the life of the community.



Use art to integrate trail amenities, such as resting places, with community spaces.

Integrate art with community facilities.

Segment Character / Brookland

In Brookland, the trail passes near a number of community, civic and cultural resources, including the Brookland neighborhood center and arts cluster, Catholic Univeristy of America, Galladuet University and nearby schools and recreation centers. In this area, public art should celebrate the community's spirit of creativity and provide clear links to resources that are nearby but not directly on the trail. Fanciful, colorful art in open spaces, as well as an overlay of incidental "art on the street" projects and event-related art should make this an exciting, everchanging place for biking and walking. Special trail blazes at important community locations, such as schools and recreation center, could signal the presence of the trail a block or two away.

A pausing place: seating at the Brookland/CUA Metro station entrance.

How to mark a neighborhood: In Chicago, a plaque was placed at the gateway to the Bronzeville neighborhood, and artist-designed benches were placed along streets.

Artist workspaces along Eighth Street.

In Miami, a colorful concrete walkway links a transit station to the adjacent community.

In Los Angeles, colorful art was designed in collaboration with the community.

Segment Character / CSX Corridor

Industrial material can be turned into whimsical forms; wind can be harnessed in dynamic sculptures or to create temporary performances.

The segment of the trail between Franklin Street and New York Avenue is perhaps the most dramatic. Once a branch of Tiber Creek and more recently a CSX railyard, it is now a flat meadow that offers long vistas and dramatic juxtapositions of scale and movement.

This segment, currently bracketed by a rail line on one side and light-industrial operations on the other, is isolated and littered with industrial and railroad artifacts. A sculpture garden or large-scale environmental art could be located here; projects might be assembled from found objects scavenged from the railroad corridor; retaining walls, building facades and fences might be turned into surfaces for art projects as well.

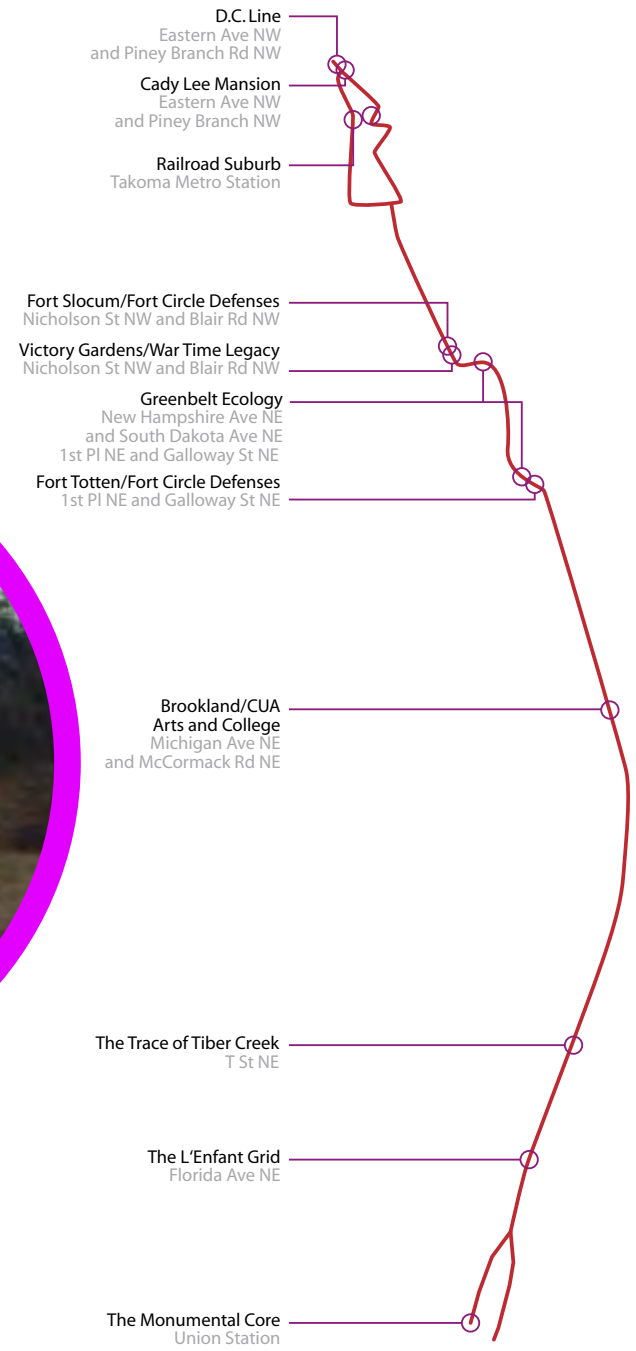
Over time, as redevelopment occurs along this corridor, the trail could play an enhanced role. Connections to and from the trail, especially to Metro stations, will become important. The trail could be an important connection between office buildings, and a recreation resource for residents and office workers.

Rail corridor segment, north of New York Avenue.

Used rail ties, south of Edgewood Street.

Interpretive Braids Place History

Cady Lee Mansion, Capitol view, historic Ft. Totten.



This interpretive strand would consider the cultural, social and developmental history of the places that the trail intersects. There are several neighborhoods and specific locations that would be considered, as well as several sites where the general pattern of the city could be interpreted. Art projects could include a trail-length system of interpretive markers (such as panels, pylons or medallions) or special monuments associated with aspects of the corridor's history. Special focus could be given to interpretive markers for areas like Brookland or Union Station that have a particularly dense history.

D.C. Line / Banneker Survey, Monuments
Piney Branch Road / Cady Lee Mansion
Takoma / Railroad Suburb
Community Gardens / Wartime Legacy
Fort Slocum / Fort Circle Defenses
Woodlands / Greenbelt Ecology
Fort Totten / Fort Circle Defenses
Brookland CUA / Arts and College
Florida Avenue / The L'Enfant Grid

Sculpture honoring Harlem resident Ralph Ellison; mural depicting scene from England's military history; sculpture commemorating industrial history; marker honoring Chicago musician Louis Armstrong.

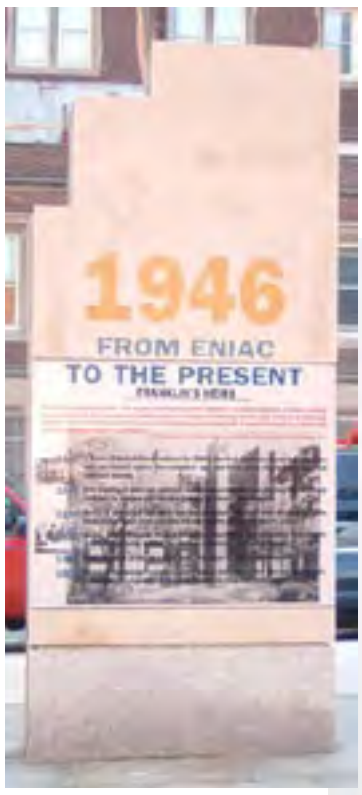
Interpretive Braids Transportation

The Metropolitan Branch Trail corridor has long been defined by the role it plays in regional transportation. Along the route, a system of interpretive markers or individual commemorative art projects could explore different layers of transportation history—early trails and roads; passenger and freight railroad history; freeway proposals and citizen backlash; Metro, Amtrak and commuter rail; and the new bike trail. Some of the projects could be located in places specific to historical events, others could be spaced in between to create a rhythm of experience.

Union Station
The B+O Reaches to Harper's Ferry
Freeways or Not?
Metropolitan Corridor
Metrorail
Biking and Hiking in the City

Memorial sculpture interpreting the history of the wartime shipbuilding industry in Richmond, Calif.

Mural depicting views of historical Manayunk, Philadelphia

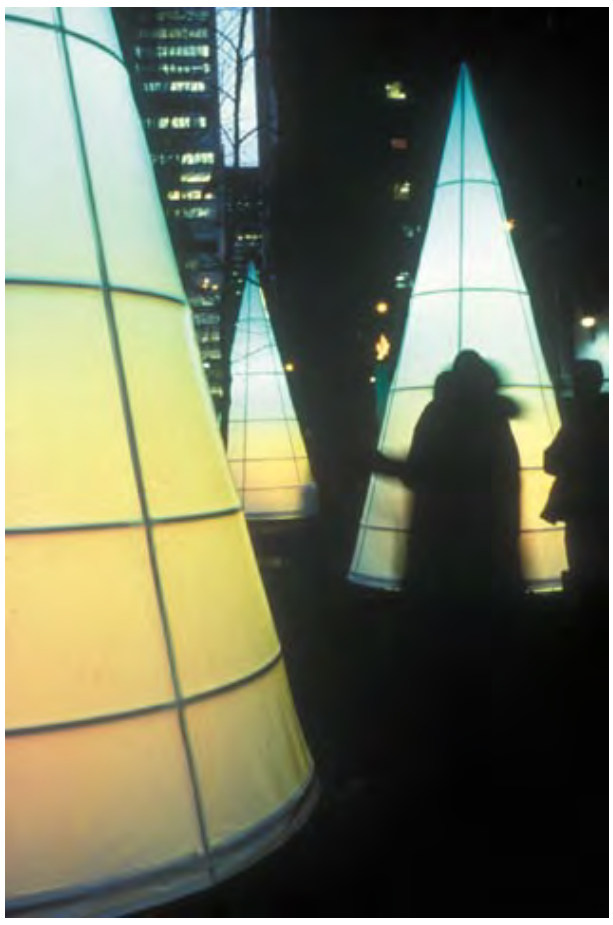


Interpretive signage from Germany, Philadelphia, Indianapolis, downtown Washington and Los Angeles.

Metropolitan Branch Trail
Public Art/Civic Design Sketchbook

Temporary Projects / Special Events

Urban places are always changing, and public art can contribute to that dynamic. The Metropolitan Branch Trail and the spaces it connects might be considered as a linear gallery for art that comes and goes, such as temporary installations. Artists can also be involved in designing special events, either to commemorate special threshholds in the evolution of the trail (groundbreakings, ribbon cuttings) or celebrations and activities (such as races and festivals) that become traditions for the trail.



Clockwise from upper right: Wintertime lighting in Lower Manhattan; temporary sculpture exhibition in Midtown Manhattan; Mardi Gras festival in Arlington; construction wall in Philadelphia; Waterfire cultural event in Providence; temporary exhibition in Arlington.

Community Involvement

Community involvement is a cornerstone of the public art process in Washington, D.C. Community involvement can take a variety of forms—from participation in the artist selection process; to collaborating with artists in the gathering of materials, themes and motifs; to hands-on involvement in creating sculpture, mosaics or murals; to temporary projects that involve intensive bursts of community creation. Each project along the trail can have its own approach.

Top to bottom: Community street art festival in Santa Monica; "tape art" project in Arlington; community tile project in Corpus Christi; community photo project in Philadelphia.

MBT Concept Plan - TAB 2 to Appendix A: Public Art Plan Recommendations

Topic	Project Site	Street Location	Area	Recommendation
Interpretive History: Places	The Monumental Core	National Mall	1. Nat'l Mal - NY Ave.	Interpretive signage
Interpretive History: Places	The Monumental Core	Union Station	1. Nat'l Mal - NY Ave.	Interpretive signage
Thresholds: Entries/Exits	Gateway	Union Station	1. Nat'l Mal - NY Ave.	No significant art because of stature of existing architecture
Movement & Rest: Pausing Places	Union Station	Massachusetts Ave NE	1. Nat'l Mal - NY Ave.	Seating
Thresholds: Transitions	Monumental Core Gateway	Union Station/Delaware Ave NE and Massachusetts Ave NE	1. Nat'l Mal - NY Ave.	Trail blaze
Interpretation: Union Station Loop	Thurgood Marshall Bldg.	Massachusetts Ave NE	1. Nat'l Mal - NY Ave.	Interpretive signage, emblematic sculpture
Interpretive History: Transportation	Union Station	Massachusetts Ave NE and Louisiana Ave NE	1. Nat'l Mal - NY Ave.	Interpretive signage
Interpretation: Union Station Loop	Securities Exchange Commission	F St NE	1. Nat'l Mal - NY Ave.	Interpretive signage, emblematic sculpture
Interpretation: Union Station Loop	Smithsonian National Postal Museum/Old Post Office	1st St NE, Massachusetts Ave NE	1. Nat'l Mal - NY Ave.	Interpretive signage, emblematic sculpture
Thresholds: Entries/Exits	Metrorail	1st St NE, south of G St	1. Nat'l Mal - NY Ave.	Trail blaze; major icon that marks Metro access
Interpretation: Union Station Loop	U.S. Govt Printing Office	1st St NE, G St	1. Nat'l Mal - NY Ave.	Interpretive signage
Thresholds: Entries/Exits	Street connection	1st St NE, G St	1. Nat'l Mal - NY Ave.	Trail blaze
Thresholds: Entries/Exits	Street connection	2nd St NE, F St NE	1. Nat'l Mal - NY Ave.	Trail blaze; major icon that marks entry to trail from Capitol Hill
Movement & Rest: Flows	First Street Curve	1st St NE, G St/K St	1. Nat'l Mal - NY Ave.	Use banners, lighting, sidewalk elements to reinforce swoop of street
Trail Identity: Infrastructure	Abutment	1st St NE, G St/K St	1. Nat'l Mal - NY Ave.	Wall treatment; lighting, color, panels, greenery
Interpretation: Union Station Loop	School/Police Training Facility	2nd St NE, F St/G St NE	1. Nat'l Mal - NY Ave.	Interpretive signage
Trail Identity: Infrastructure	Police Training Facility Fence	2nd St NE, F St/G St NE	1. Nat'l Mal - NY Ave.	Replace chain link with artist-designed fence
Thresholds: Entries/Exits	Street connection	1st St NE, G Pl	1. Nat'l Mal - NY Ave.	Trail blaze
Trail Identity: Infrastructure	Underpass	1st St NE, G Pl	1. Nat'l Mal - NY Ave.	Lighting, wall treatment; color, mosaic
Trail Identity: Infrastructure	Underpass	1st St NE, H St	1. Nat'l Mal - NY Ave.	Column treatment; mosaic, mural, panels
Movement & Rest: Pausing Places	Office plazas	1st St NE, I St NE passage	1. Nat'l Mal - NY Ave.	Seating, lighting, shade, bike rack

MBT Concept Plan - TAB 2 to Appendix A: Public Art Plan Recommendations

Topic	Project Site	Street Location	Area	Recommendation
Thresholds: Entries/Exits	Office plazas	1st St NE, I St NE passage	1. Nat'l Mal - NY Ave.	Trail blaze
Thresholds: Entries/Exits	Street connection	I St NE	1. Nat'l Mal - NY Ave.	Entry elements
Movement & Rest: Pausing Places	District DMV	1st St NE, K St NE	1. Nat'l Mal - NY Ave.	Seating, lighting, info, shade, landscaping, bike rack
Thresholds: Entries/Exits	Street connection	1st St NE, K St NE	1. Nat'l Mal - NY Ave.	Trail blaze
Thresholds: Entries/Exits	Street connection	K St NE	1. Nat'l Mal - NY Ave.	Entry elements
Trail Identity: Infrastructure	Underpass	K St NE	1. Nat'l Mal - NY Ave.	Lighting, wall treatment; color
Trail Identity: Infrastructure	Underpasses	L St NE and K St NE	1. Nat'l Mal - NY Ave.	Wall treatment; color, mosaic
Thresholds: Entries/Exits	Greyhound Bus Station	L St NE, 1st St NE	1. Nat'l Mal - NY Ave.	Trail blaze, major icon that marks intermodal connection
Thresholds: Entries/Exits	Street connection	L St NE, 1st St NE	1. Nat'l Mal - NY Ave.	Trail blaze
Thresholds: Entries/Exits	Trail junction, stair connection	L St NE	1. Nat'l Mal - NY Ave.	Trail blaze; major icon that marks entry to trail
Thresholds: Transitions	Elevated Trail Entry/Exit	L St NE	1. Nat'l Mal - NY Ave.	Trail blaze; major icon that marks Metro access and trail junction
Trail Identity: Infrastructure	Underpass	L St NE	1. Nat'l Mal - NY Ave.	Lighting, color; spans, columns, walls
Trail Identity: Infrastructure	Stairway to elevated trail	L St NE	1. Nat'l Mal - NY Ave.	Lighting, railing, stair risers, platforms
Movement & Rest: Pausing Places	L Street Transition	L St NE	1. Nat'l Mal - NY Ave.	Seating, lighting, info, shade, landscaping
Trail Identity: Industrial Elements	Woodies Warehouse	1st St NE	1. Nat'l Mal - NY Ave.	Light that highlights industrial architecture
Movement & Rest: Flows	2nd Street Development	2nd St NE, Massachusetts Ave Ave to G St	1. Nat'l Mal - NY Ave.	Artist-designed lighting; art elements in trail surface /sidewalk surface
Movement & Rest: Flows	Stone Wall	2nd St NE, G St NE	1. Nat'l Mal - NY Ave.	Wall treatment: Paint, mosaic, color panel, vegetation
Trail Identity: Infrastructure	Underpass	2nd St NE, H St NE	1. Nat'l Mal - NY Ave.	Lighting, wall treatment; color, mosaic
Trail Identity: Industrial Elements	REA Express Building	2nd St NE, H St / I St NE	1. Nat'l Mal - NY Ave.	Light that highlights industrial architecture
Movement & Rest: Pausing Places	Back of Old Children's Museum/Condo to be	2nd St NE, H St/I St	1. Nat'l Mal - NY Ave.	Seating, lighting, arts-related element
Trail Identity: Infrastructure	Green/Growing Wall	2nd St NE, H St / K St	1. Nat'l Mal - NY Ave.	Wall treatment; lighting, color, panels, greenery

MBT Concept Plan - TAB 2 to Appendix A: Public Art Plan Recommendations

Topic	Project Site	Street Location	Area	Recommendation
Interpretation: Union Station Loop	REA Express	2nd St NE, I St	1. Nat'l Mal - NY Ave.	Interpretive signage, emblematic sculpture
Trail Identity: Industrial Elements	Electrical equipment	2nd St NE, I St/K St	1. Nat'l Mal - NY Ave.	Paint electrical element; lighting
Trail Identity: Infrastructure	Green/Growing Wall	2nd St NE, K St/L St	1. Nat'l Mal - NY Ave.	Wall treatment; lighting, color, panels, greenery
Thresholds: Entries/Exits	Street connection	2nd St NE, L St NE	1. Nat'l Mal - NY Ave.	Trail blaze
Interpretive History: Places	First Beatles Concert in America: Washington Coliseum	3rd St NE, M St.	1. Nat'l Mal - NY Ave.	Interpretive signage, emblematic sculpture
Thresholds: Entries/Exits	Street connection	M St NE	1. Nat'l Mal - NY Ave.	Entry elements
Movement & Rest: Flows	Elevated Trail	Between New York Ave NE and M St NE	1. Nat'l Mal - NY Ave.	Retrofitted art integrated with railings, supports, safety fences.
Interpretive History: Places	The L'Enfant Grid	Florida Ave NE	1. Nat'l Mal - NY Ave.	Interpretive signage
Movement & Rest: Pausing Places	New York Ave Metro Station	New York Ave NE	1. Nat'l Mal - NY Ave.	Seating, lighting, info, shade, landscaping, bike rack
Thresholds: Entries/Exits	Stair and Elevator to Trail	New York Ave Metro/Florida Ave NE/M St NE	1. Nat'l Mal - NY Ave.	Trail blaze; major icon that marks Metro access
Trail Identity: Infrastructure	Stair and Elevator to Trail	New York Ave Metro/Florida Ave NE/M St NE	1. Nat'l Mal - NY Ave.	Art integrated with railings, supports, safety fencing
Thresholds: Transitions	Elevated Trail Entry/Exit	New York Ave Metro Station	1. Nat'l Mal - NY Ave.	Trail blaze; major icon that marks Metro access
Interpretive History: Transportation	Eckington Yard, B & O RR in Washington	Capital Commerce Center	2. RI Ave. (CSX Corridor)	Interpretive signage
Thresholds: Entries/Exits	Street connection (future)	Harry Thomas Way NE	2. RI Ave. (CSX Corridor)	Entry elements
Movement & Rest: Pausing Places	Capitol Commerce Center	Harry Thomas Way NE and R St NE	2. RI Ave. (CSX Corridor)	Seating, lighting, info, shade, landscaping, bike rack
Trail Identity: Infrastructure	Retaining Wall	Between U St NE and New York Ave NE	2. RI Ave. (CSX Corridor)	Wall treatment; color, tile, panels, greenery
Thresholds: Entries/Exits	Street connection (future)	R St NE	2. RI Ave. (CSX Corridor)	Entry elements
Movement & Rest: Flows	Green Right-of-Way	Between R St NE and Franklin St NE	2. RI Ave. (CSX Corridor)	Sculptures using natural themes; temporary or permanent
Thresholds: Entries/Exits	Street connection (future)	S St NE	2. RI Ave. (CSX Corridor)	Entry elements
Interpretive History: Places	The Trace of Tiber Creek	T St NE	2. RI Ave. (CSX Corridor)	Interpretive signage
Interpretive History: Transportation	Metropolitan Corridor	T St NE	2. RI Ave. (CSX Corridor)	Interpretive signage
Thresholds: Entries/Exits	Street connection (future)	T St NE	2. RI Ave. (CSX Corridor)	Entry elements

Topic	Project Site	Street Location	Area	Recommendation
Trail Identity: Industrial Elements	Sanitary Grocery	4th St NE and U St NE	2. RI Ave. (CSX Corridor)	Light that highlights industrial architecture
Thresholds: Entries/Exits	Street connection (future)	V St NE	2. RI Ave. (CSX Corridor)	Entry elements
Movement & Rest: Pausing Places	Industrial Silos	RI Ave, NE	2. RI Ave. (CSX Corridor)	Seating, landscaping, play area
Trail Identity: Industrial Elements	Industrial Silos	RI Ave, NE	2. RI Ave. (CSX Corridor)	Color and light that highlight industrial architecture
Thresholds: Entries/Exits	Metro Station Access Bridge	North of Rhode Island Ave NE	2. RI Ave. (CSX Corridor)	Trail blaze; major icon that marks Metro access
Thresholds: Transitions	Elevated Trail Entry/Exit	Rhode Island Ave Metro Station	2. RI Ave. (CSX Corridor)	Trail blaze; major icon that marks Metro access
Interpretive History: Transportation	Metrorail	Rhode Island Ave NE	2. RI Ave. (CSX Corridor)	Interpretive signage
Movement & Rest: Pausing Places	Rhode Island Ave Metro Station Access Bridge	Rhode Island Ave NE	2. RI Ave. (CSX Corridor)	Seating, lighting, shade, bike rack
Trail Identity: Infrastructure	Metro Station Access Bridge	Rhode Island Ave NE	2. RI Ave. (CSX Corridor)	Art integrated with railings, supports, safety fencing
Movement & Rest: Flows	Rhode Island Ave Metrorail Bridge	Rhode Island Ave NE and 8th St NE	2. RI Ave. (CSX Corridor)	Art integrated with railings, supports, safety fencing
Trail Identity: Industrial Elements	Industrial Remnants	Between Rhode Island Ave NE and Franklin St NE	2. RI Ave. (CSX Corridor)	Rework found elements into sculpture
Thresholds: Transitions	Underpass	Franklin St NE and 8th St NE	3a. Brookland	Trail blaze; major icon that marks transition
Trail Identity: Infrastructure	Underpass	Franklin St NE and 8th St NE	3a. Brookland	Column treatment; mosaic, mural, panels; trail blaze location
Thresholds: Entries/Exits	Off-street/on-street transition	Franklin St NE and Edgewood St NE	3a. Brookland	Trail blaze
Movement & Rest: Flows	Art Corridor	8th St NE between Franklin and Monroe	3a. Brookland	Repeated or linear element, such as colored paving or edging, or poles, banners or panels
Movement & Rest: Pausing Places	Art Garden	Kearney St NE and 8th St NE	3a. Brookland	Mural, seating area, garden design
Movement & Rest: Flows	Brookland Neighborhood Center	Between Lawrence St NE and Monroe St NE	3a. Brookland	Place marking element
Thresholds: Entries/Exits	Off-street/on-street transition	Between Lawrence St NE and Monroe St NE	3a. Brookland	Trail blaze
Interpretive History: Places	Brooks Mansion/Brookland Neighborhood	Monroe St NE	3a. Brookland	Interpretive signage
Trail Identity: Infrastructure	Underpass (proposed)	Monroe St NE	3a. Brookland	Wall treatment; color, mosaic

Topic	Project Site	Street Location	Area	Recommendation
Thresholds: Entries/Exits	Ramp connection	Monroe Street Crossing	3a. Brookland	Trail blaze
Thresholds: Transitions	Off-street/on-street transition	Between Monroe St NE and Michigan Ave NE	3b. Brookland	Trail blaze
Trail Identity: Infrastructure	Underpass	Michigan Ave NE	3b. Brookland	Wall and column treatment; mosaic, mural, panels
Interpretive History: Places	Fort Circle/Fort Bunker Hill	Michigan Ave NE	3b. Brookland	Interpretive signage
Movement & Rest: Pausing Places	Brookland/CUA Metrorail	Between Michigan Ave NE and Sitting Park	3b. Brookland	Permanent or temporary sculpture at existing seating area
Interpretive History: Places	CUA Arts and College	Michigan Ave NE-J. McCormack Rd NE	3b. Brookland	Interpretive signage
Interpretive History: Transportation	CUA Station on Metro Branch	Michigan Ave NE-J. McCormack Rd NE	3b. Brookland	Interpretive signage
Thresholds: Entries/Exits	Brookland/CUA Metrorail	North of Michigan Ave NE on McCormick Rd NE	3b. Brookland	Trail blaze; major icon that marks Metro access
Movement & Rest: Flows	J. McCormack Road	Between Bates Rd NE and Brookland Metro Station	3c. Brookland	Repeated or linear element, such as colored paving or edging, or poles, banners or panels
Trail Identity: Infrastructure	Underpass/Possible New Ramp	McCormick Rd NE and Taylor Rd NE	3c. Brookland	Wall treatment; color, mosaic
Thresholds: Entries/Exits	Ramp connection	Taylor Rd NE and McCormick Rd NE	3c. Brookland	Trail blaze
Thresholds: Entries/Exits	Off-street/on-street transition	Bates Rd NE and McCormick Rd NE	3c. Brookland	Trail blaze
Thresholds: Transitions	Greened Industrial Channel	Bates Rd NE and McCormick Rd NE	4a. Fort Totten	Trail blaze
Movement & Rest: Flows	Industrial Corridor	Between Bates Rd NE and Fort Totten Metro	4a. Fort Totten	Art integrated with fencing, or linear element in paving; consider need for screening, color, motion; consider shapes, color, light, abstract motifs
Trail Identity: Industrial Elements	Industrial Corridor	Between Bates Rd NE and Fort Totten Metro	4a. Fort Totten	Color and light that highlight industrial architecture
Trail Identity: Infrastructure	New Staircase	Fort Totten Metro Station	4b. Fort Totten	Distinctive railings, supports, safety fencing
Movement & Rest: Pausing Places	Fort Totten Metrorail	1st Pl and Galloway St NE	4b. Fort Totten	Seating, lighting, info, shade, landscaping, bike rack
Interpretive History: Places	Fort Circle/Fort Totten Defenses	1st Pl NE and Galloway St NE	4b. Fort Totten	Interpretive signage

Topic	Project Site	Street Location	Area	Recommendation
Movement & Rest: Flows	Over the Metro Tunnel	Fort Totten Park	4b. Fort Totten	Trail configuration and materials; consider NPS consistent shapes and colors
Thresholds: Entries/Exits	Street Connection	Riggs Rd NE and 1st Pl NE	4b. Fort Totten	Entry elements
Thresholds: Transitions	Fort Totten Junction	Riggs Rd NE	4b. Fort Totten	Trail blaze; major icon that marks junction
Thresholds: Transitions	Fort Totten Entry	1st Pl NE and Galloway St NE	4b. Ft Totten.	Trail blaze
Thresholds: Entries/Exits	Street connection	1st St NE and Kennedy St NE	4c. Fort Totten	Entry elements
Interpretive History: Places	Greenbelt Ecology	New Hampshire Ave NE and South Dakota Ave NE/1st Pl NE and Galloway St NE	4d. Fort Totten	Interpretive signage
Thresholds: Entries/Exits	Street connection	Bus Stop/South Dakota Ave NE	4d. Fort Totten	Entry elements
Movement & Rest: Pausing Places	Natural Area	New Hampshire Ave NE and South Dakota Ave NE	4d. Fort Totten	Seating, landscaping
Thresholds: Entries/Exits	Street connection	New Hampshire Ave NE and South Dakota Ave NE	4d. Fort Totten	Trail blaze
Thresholds: Transitions	Neighborhood to natural area transition	New Hampshire Ave NE and South Dakota Ave NE	4d. Fort Totten	Trail blaze
Interpretive History: Places	Community Gardens/Wartime Legacy	Nicholson St NW and Blair Rd NW	4d. Fort Totten	Interpretive signage
Interpretive History: Places	Fort Slocum/Fort Circle Defenses	Nicholson St NW and Blair Rd NW	4d. Fort Totten	Interpretive signage
Movement & Rest: Pausing Places	Community Gardens	Nicholson St NW and Blair Rd NW	4d. Fort Totten	Seating, landscaping
Thresholds: Entries/Exits	Street connection	Blair Rd NE and McDonald Pl NE	4f. Fort Totten	Entry elements
Interpretive History: Transportation	Hiking in the City/East Coast Greenway	MBT Spur Between Galloway St NE and Gallatin St NE	4f. Fort Totten	Interpretive signage
Thresholds: Entries/Exits	Trail junction	Gallatin St NE Connector Path	4f. Fort Totten	Trail blaze; major icon that marks junction
Trail Identity: Infrastructure	Walls of Industrial Buildings	Blair Rd NW	5a. Takoma	Murals
Movement & Rest: Flows	Blair Road Grade	Blair Rd NW	5a. Takoma	Wall treatment: Paint, mosaic, color panel, vegetation
Trail Identity: Infrastructure	Retaining Wall	Blair Rd NW	5a. Takoma	Wall treatment; color, mosaic
Thresholds: Entries/Exits	Street connection	Kansas and North Dakota Aves NW and Peabody Pl NW	5a. Takoma	Trail blaze; major icon that marks entry to trail
Interpretive History: Transportation	Biking in the City	Blair Rd NW and Tuckerman St NW	5a. Takoma	Interpretive signage

Topic	Project Site	Street Location	Area	Recommendation
Movement & Rest: Pausing Places	Grassy Knoll Overlook	Blair Rd NW and Tuckerman St NW	5a. Takoma	Seating, landscaping, play area, bike rack, sculptures using natural themes
Thresholds: Transitions	Grassy Knoll Overlook	Blair Rd NW and Tuckerman St NW	5a. Takoma	Trail blaze
Trail Identity: Industrial Elements	Railway Overlook	Blair Rd NW and Tuckerman St NW	5a. Takoma	Light that highlights industrial architecture
Thresholds: Entries/Exits	Trail junction	Blair St NW and Van Buren St NW	5a. Takoma	Trail blaze; major icon that marks junction
Trail Identity: Infrastructure	Underpass	Van Buren St NW and Railway	5a. Takoma	Wall and column treatment; mosaic, mural, panels
Thresholds: Entries/Exits	Street connection	Van Buren St NW and Sandy Spring Rd NW	5b. Takoma	Trail blaze
Trail Identity: Infrastructure	Green/Growing Wall	Sandy Spring Rd NW	5b. Takoma	Wall treatment; color, mosaic, panels, greenery
Thresholds: Entries/Exits	Street connection	Aspen St NW and Sandy Spring Rd NW	5b. Takoma	Trail blaze
Interpretive History: Transportation	Freeway or Not?	Sandy Spring Rd NW and Aspen Rd NW	5b. Takoma	Interpretive signage
Thresholds: Entries/Exits	Street connection	Maple St NW and Carroll Ave NW	5b. Takoma	Trail blaze
Movement & Rest: Pausing Places	Public Park	Carroll Ave and Cedar St	5b. Takoma	Seating, landscaping, play area, bike rack
Thresholds: Transitions	Takoma Metro Station	Cedar St NW and Carroll Ave NW	5b. Takoma	Trail blaze; major icon that marks Metro access
Thresholds: Entries/Exits	Street connection	Cedar Ave NW and Eastern Ave NW	5b. Takoma	Trail blaze
Movement & Rest: Flows	Takoma Metrorail	North of Cedar St NW	5b. Takoma	Repeated or linear element, such as colored paving or edging, or poles, banners or panels; integrate with new development
Interpretive History: Places	Railroad Suburb	Takoma Metro Station	5b. Takoma	Interpretive signage
Interpretive History: Transportation	Metropolitan Corridor	Takoma Metro Station	5b. Takoma	Interpretive signage
Interpretive History: Places	Cady Lee Mansion	Eastern Ave NW and Piney Branch Rd NW	5b. Takoma	Interpretive signage
Interpretive History: Places	D.C. Line	Eastern Ave NW and Piney Branch Rd NW	5b. Takoma	Interpretive signage

Topic	Project Site	Street Location	Area	Recommendation
Thresholds: Entries/Exits	Street connection and on-street/off-street transition	3rd St NW, Van Buren St NW	5c. Takoma	Trail blaze, landscaping, icon fitting for DCPR park site.
Movement & Rest: Flows	Park Passage	Takoma Recreation Center Van Buren St NW and 4th St NW	5c. Takoma	Art integrated with trail configuration and materials; consider shapes and colors
Movement & Rest: Pausing Places	Takoma Recreation Center	Van Buren St NW and 4th St NW	5c. Takoma	Seating, landscaping, play area, bike rack
Thresholds: Transitions	On street to off-street transition.	4th and Whittier	5c. Takoma	Trail blaze; Landscaping, icon fitting for DCPR park site
Trail Identity: Infrastructure	Underpass	Aspen St NW	5c. Takoma	Wall treatment; color, mosaic
Thresholds: Transitions	On-street to Off-Street transition	4th and Butternut	5c. Takoma	Trail blaze; Landscaping, major icon that marks takoma 4th St. Business District
Movement & Rest: Pausing Places	Takoma Theatre	4th St NW and Butternut St NW	5c. Takoma	Seating, lighting, arts-related element
Movement & Rest: Pausing Places	Takoma Triangle Park	4th St NW and Blair Rd NW	5c. Takoma	Seating, lighting, shade
Thresholds: Entries/Exits	Street connection	4th St NW and Blair Rd NW	5c. Takoma	Trail blaze
Trail Identity: Infrastructure	Underpass	Piney Branch Rd NW and Railway	5c. Takoma	Wall treatment; color, mosaic
Trail Identity: Infrastructure	Green/Growing Wall	Piney Branch Rd NW	5c. Takoma	Wall treatment; color, mosaic, panels, greenery
Movement & Rest: Flows	Piney Branch Rd Hillside	Eastern Ave NW	5d. Takoma	Artist/engineer/landscape collaboration on trail contour and bridge design. Wall treatment: Paint, mosaic, color panel, vegetation
Movement & Rest: Pausing Places	District/Maryland Boundary	Eastern Ave NW and Piney Branch Rd NW	5d. Takoma	Seating, lighting, info, shade, landscaping, bike rack
Thresholds: Entries/Exits	District/Maryland Boundary	Piney Branch Rd NW	5d. Takoma	Trail blaze; major icon that marks entry to trail
Thresholds: Transitions	District/Maryland Boundary	Eastern Ave NW and Piney Branch Rd NW	5d. Takoma	Trail blaze; major icon that marks entry to District

MBT Concept Plan - Appendix B: Phased Implementation By Segment

			Facility Type Implemented					
Phase	**Map Sheet Number**	**Segment**	**Interim**	**Ultimate**	**Segment Length (linear feet)**	**Scope**	**Issues**	**Approach**
Completed	**3 & 4**	L Street to New York Ave.		Shared Use Path and Access Facilities	2600	Elevated Trail, Ramp access to M St., Stair access to L St., elevator, stair and bike parking at station.	Connection to Harry Thomas Way.	Constructed by WMATA in conjunction with Metro Station.
Completed	**3 & 4**	First Street, NE (G St. to K St.)	Bike Lanes & Sidewalks	replace bike lanes with separated bikeway	1300	Bike Lanes and Sidewalks with Buffer	Recommended ultimate facility type is Exclusive Bikeway on east side of 1st St. from G St. to K St., and shared use path to M St.--Phase 4	DDOT Project
Underway--In Design, 2004-05	**3**	First Street, NE (K St. to M St.)	Bike Lanes & Sidewalks	replace bike lanes and sidewalk with shared use path	1700	Extend Bike Lanes from K Street to M Street, and along M Street to MBT at Metro Station.	Recommended ultimate facility type is Exclusive Bikeway on east side of 1st St. from G St. to K St., and shared use path to M St.--Phase 4	Bike Lane striping to be completed in conjunction with DDOT repaving of 1st Street, NE
Underway--In Design, 2004-05	**2**	Columbus Circle/Union Station Area		Separated Bike and Pedestrian Ways	1200	Intersection Improvements; separated facility design, wayside, gateway treatments, etc.	Use of innovative facility design, coordination with Bike Station and expanding scope to G St. NE.	DDOT Project--Columbus Plaza Circulation
Underway--In Design; construction expected in 2005	**3**	Second St. (F St. to L St.)		Shared Use Path	2600	Shared Use Path and lighting, intersection improvements.	Current design of intersections, lighting, curb ramps are not appropriate for MBT and trail safety.	DDOT Street Reconstruction Project.
Underway--Under Construction, 2004-2005	**10**	8th Street, NE (Franklin to Monroe)	Shared Use Street & Sidewalks		2450	Street Reconstruction, including new sidewalk on west side of 8th St.	Striping Plan, Curb Ramp Locations, and Transitions at each end.	DDOT Project--8th Street, NE Reconstruction
Initial interim trail by 2005	**13**	Bunker Hill to Monroe St.	Interim Shared Use Path	Replace with permanent path	475	Acquire an easement and construct interim unpaved path between Monroe St. and Bunker Hill Road. New curb ramps required under Michigan Ave. Br.	Right-of-Way. Coordinate with Pizza Hut property owner, WMATA and CUA.	DDOT Project
Initial interim trail by 2005	**15, 16**	P.G. Spur--Ft. Totten Metro to Prince George's County	Shared Use Street & Sidewalks	Replace with path	5600	Provide signage and striping on Gallatin; shared use sidewalks to Galloway along South Dakota; and shared use street on Galloway to metro station.	Coordinate with NPS, WMATA and neighborhood. When PG County trail is built, construct connecting 220-foot path between DC/MD boundary and Eastern Avenue.	DDOT Project
Initial interim trail by 2005	**18**	Blair Road (McDonald Place to Oglethorpe)	Shared Use Path	Retain - permanent	550	Design and construct trail segment and wayside. Construct or stripe contra-flow lane on one block of Blair Road, south of McDonald Place.	Coordination with NPS and community gardeners.	DDOT Project
Initial interim trail by 2005	**19**	Blair Road (Oglethorpe to Peabody)	Shared Use Path	Retain - permanent	560	Replace missing sidewalk in this segment. Widen entire sidewalk. Replace 1 curb ramp at N. Dakota and Peabody.	Coordinate with adjacent businesses.	DDOT Project
Initial interim trail by 2005	**23, 24**	Fourth St. (Whittier to Butternut)	Shared Use Street & Sidewalks	Retain-permanent	900	Implement signing and striping; improve any curb ramps that are not ADA compliant.	Coordinate with neighborhood.	DDOT Project
Initial interim trail by 2005	**22**	Eastern Ave. Holly to Piney Branch	Shared Use Street & Sidewalks	Replace with path	450	Remove Parking, adjust center line and install edge lines and signs	Coordinate with City of Takoma Park. Further public involvement is recommended. Elimination of on-street parking and provision of a shared use street should be implemented on an interim bases.	DDOT Project
Initial interim trail by 2005	**22/25**	Eastern Ave. Piney Branch to Takoma Park, Maryland	Shared Use Path	Replace intersection / retain path	540	Design and construct path and minimal intersection improvements for Piney Branch Rd. crossing.	Coordination with NPS and City of Takoma Park, and N. Takoma community.	DDOT Project
Phase 1	**5, 6, 7**	New York Ave. to V St. Access		Shared Use Path	3700	Design and construct shared use path with landscaping, lighting and a number of gateways and waysides.	Inclusion of art, personal security measures.	DDOT Project
Phase 1	**8, 9**	V St. Access to Franklin St.		Shared Use Path	3000	Design and construct shared use path with landscaping, lighting, a number of gateways and waysides; Design bridge across the railroad tracks to the Metro Station.	Drainage. Bridge and ramp design. Design of Franklin St. transition. Inclusion of art and personal security measures. Coordination with WMATA.	DDOT Project

MBT Concept Plan - Appendix B: Phased Implementation By Segment

			Facility Type Implemented					
Phase	**Map Sheet Number**	**Segment**	**Interim**	**Ultimate**	**Segment Length (linear feet)**	**Scope**	**Issues**	**Approach**
Phase 2	**1, 2**	National Mall to Columbus Circle		Improved Xing's	3500	Major Improvements to six intersections; minor treadway reconstruction	Coordination with NPS and Architect of Capitol	DDOT Project
Phase 2	**3**	1st & 2nd St; L St-NY Ave.		Art Elements		Waysides, entry elements, banner treatments	Public vs private funding	DDOT Project for 1st&2nd St; L St-NY Ave. is potentially WMATA
Phase 2	**9**	RI Bridge		Bridge	120	Construct bridge across the railroad tracks to the Metro Station.	Inclusion of art and personal security measures. Coordination with WMATA.	DDOT Project
Phase 2	**11**	Monroe Street Crossing		Improved Xing	380	Safety Improvements for At-Grade Crossing, combined with Bike Lanes On Monroe St. from 12th to Michigan	Alignment around CUA property; intersection design. Additional community involvement is recommended.	DDOT Project
Phase 2 or later with CUA dev.	**11**	Metro Property/CUA Site		Shared Use Path	475	Construct path between Monroe St. and Bunker Hill Road.	Right-of-Way, slopes, nature of future development of CUA site. Coordinate with WMATA and CUA.	In conjunction with Redevelopment of CUA property.
Phase 2	**11**	Bunker Hill to CUA Sitting Park		Shared Use Path	340	Construct path between Bunker Hill Road and existing Sitting Park, including wayside and gateway treatments.	Right-of-Way, wayside and gateway treatment design, public art design. Coordinate with WMATA and CUA. Conduct additional public involvement meetings.	DDOT Project
Phase 2 or earlier w/Taylor St. bridge proj.	**11, 12**	McCormack Road CUA Sitting Park to CUA Athletic Center		Access to Existing Path	0	Add curb ramps and high visibility crosswalks and trail signs.	Funding and administration.	Execute through the Taylor Street Bridge Project, as mitigation, at the end of the project.
Phase 3	**12, 13**	McCormack Road CUA Athletic Center to Bates Road		Shared Use Path	1400	Construct trail on east side of street.	Drainage	DDOT Project--Design and construct in conjunction with segment adjacent to cement plant.
Phase 3	**13, 14**	Bates Road to Ft. Totten Metro		Shared Use Path	3000	Design and Construct trail and replacement drainage system to Gallatin St. Connector Trail.	Drainage, slopes, coordination with NPS and WMATA, screening, integration of Public Art.	DDOT Project
Phase 3	**14, 15**	1st Place NE and Riggs Road Crossing to Kennedy		Shared Use Path and Improved Xing	1400	Design and Construct trail adjacent to 1st Place, NE and across Riggs Road to Kennedy and 1st St. NE	Intersection design and coordination with NPS. Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**17**	1st Street, NE: Kennedy to Madison		Shared Use Street & Sidewalks	780	Design and install trail pavement marking and signs.	Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**17**	Madison NE to New Hampshire Ave.		Shared Use Path	650	Design and construct trail adjacent to 1st St., NE	Requires coordination with NPS; public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**18**	Riggs Road to New Hampshire along tracks		Shared Use Path	2500	Design and construct path along tracks from Riggs to Madison, then back to parallel 1st Street from Madison to New Hampshire.	This an alternative to 1st Street alignment above. Requires coordination with NPS; public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**18**	New Hampshire Ave. Crossing Improvement		Improved Xing	200	Design and Construct improved crossing including signals, median refuge, curb extensions, street narrowing and high visibility crosswalks.	Intersection design and coordination with NPS. Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**18**	McDonald Place	Shared Use Street & Sidewalks		500	Design and install trail pavement marking and signs.	Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**18**	S. Dakota / Oglethorpe Option		Shared Use Path, Shared Use Street & Sidewalk	1300	Design and construct shared use path along S. Dakota and service road. Design and install trail pavement marking and signs and construct sidewalk along Ogletorpe.	This an alternative to McDonald Place alignment above. Requires coordination with NPS; public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 3	**15, 16**	P.G. Spur--Ft. Totten Metro to Prince George's County		Shared Use Path	6000	Design and construct trail, wayside, and gateway treatments and connection to 6th Place	Coordinate with NPS and neighborhood.	DDOT Project

MBT Concept Plan - Appendix B: Phased Implementation By Segment

			Facility Type Implemented					
Phase	**Map Sheet Number**	**Segment**	**Interim**	**Ultimate**	**Segment Length (linear feet)**	**Scope**	**Issues**	**Approach**
Phase 4	**19**	Blair Road (Kansas/Peabody Xing)		Improved Xing	300	Improve crossing at Kansas and Peabody	None	DDOT Project
Phase 4	**19**	Blair Road (Peabody to Tuckerman)		Shared Use Path	1900	Widen sidewalk and sign driveways, consider changing traffic pattern on Blair Road, design and construct boardwalk sections.	Safety coordination with local businesses, coordination with WMATA. Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 4	**19, 20**	Blair Road (Tuckerman to Van Buren)		Shared Use Path and Improved Xing	1400	Design and construct trail to replace a travel lane, improve intersection, sign and stripe Van Buren to 3rd St.	Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 4 or earlier with street repaving	**20, 21**	Van Buren St. to Carroll Ave.-- Takoma East Leg		Shared Use Path and Improved Xings	2300	Design and construct trail, including raised crosswalk at Aspen St., and crossing of Van Buren at Sandy Spring.	Coordinate with neighborhood, address on-street parking issues.	DDOT Project
Phase 4 or earlier with adjacent dev.	**21**	Carroll Ave.		Shared Use Path	430	Design and construct trail, including intersection improvements at Carroll and Cedar St.	Coordinate with adjacent property redevelopment. Further public involvement is recommended.	DDOT Project--Time in relation to adjacent redevelopment.
Phase 4 or earlier with Metro Station dev.	**21**	Cedar St./Eastern Ave.		Shared Use Path	1000	Design and construct trail, wayside, and gateway treatments.	Coordinate with WMATA and developer. Further public involvement is recommended with Takoma community, residents in the area and the City of Takoma park.	To be designed and constructed in conjunction with redevelopment of Takoma Metro Station property (WMATA)
Phase 4 or earlier with Metro Station dev.	**22**	Eastern Ave. Holly to Piney Branch		Shared Use Path	450	Design and construct shared use path.	Coordinate with City of Takoma Park. Further public involvement is recommended. Elimination of on-street parking and provision of a shared use street should be implemented on an interim bases.	DDOT Project--Time in conjunction with segment above.
Phase 4 or earlier if DDOT improves street or intersection earlier	**22**	Eastern Ave./ Piney Branch Intersection		Improved Xing	160	Design and construct major intersection improvements for Piney Branch Rd. Xing. Also additional raised crosswalk at Baltimore Ave.	Coordination with NPS and City of Takoma Park, and N. Takoma community.	Could be scheduled in conjunction with any street or intersection improvements
Phase 4 or earlier with opening of Takoma Aquatic Center	**23**	Takoma Recreation Center		Shared Use Path and Improved Xing	900	Design and construct shared use path and wayside and gateway treatments; improve transition intersection at 3rd and Van Buren St.	Coordinate with neighborhood and DCPR	Earlier implementation could be considered to coincide with the opening of the Takoma Aquatic Center
Phase 4	**24, 25**	Butternut St. to Spring St.		Shared Use Path and Improved Xings	850	Design and construct shared use path, wayside, gateway treatments and intersection improvements for two crossings and transition intersection at 4th and Butternut.	Coordinate with Station Place developer, WMATA and 4th Street businesses. Further public involvement with Takoma community is recommended.	DDOT Project
Phase 4 or earlier with Spring St. dev.	**25**	Spring St. and Chestnut		Woonerf	820	Design and reconstruct Spring Street as a Woonerf, repave Chestnut and replace sidewalks along 230' of Chestnut.	Further public involvement is recommended with Takoma community, property owners and tenants in the area.	In conjunction with redevelopment of commercial properties on Spring St.
Phase 4 or earlier if other western leg segments are earlier	**25**	Chestnut to Piney Br. Rd.		Stair with Bicycle Rolling Tray or Ramps	170	Design and construct 170' of path, stairs with rolling trays/ADA routing via Blair - or switchback - to Piney Branch Rd.	Coordinate with WMATA. Further public involvement is recommended with Takoma community, residents in the area and the City of Takoma park.	Staircase could open western leg and be considered earlier

MBT Concept Plan - Appendix B: Phased Implementation By Segment

			Facility Type Implemented					
Phase	**Map Sheet Number**	**Segment**	**Interim**	**Ultimate**	**Segment Length (linear feet)**	**Scope**	**Issues**	**Approach**
Phase 5	**3**	First Street, NE (G St. to M St.)		Shared Use Path	2250	Eliminate bike lanes and extend exclusive bikeway from G St. to K and Shared Use Path to M Street.	Recommended ultimate facility type is Exclusive Bikeway on east side of 1st St. from G St. to K St., and shared use path to M St.--Phase 5	DDOT Project
Phase 5 or earlier w/NOMA Station dev.	**3**	L Street Transition--West Leg		Shared Use Path	400	Shared Use Path/Ramp Construction from 1st St. along north side of L St. to trail grade level adjacent to railroad.	Design, Right-of-way, Funding source, Coordination with DCOP and developer.	In conjunction with development of NOMA Station site.
Phase 5 or earlier w/NOMA Station dev.	**3**	L Street Transition--East Leg		Shared Use Path	180	Shared Use Path/Ramp construction from 2nd St. along north side of L St. (in the underpass) to trail grade level adjacent to railroad.	Design, Funding source, Coordination with developer.	Possibly in conjunction with development of NOMA Station site, or Underpass Improvement Project associated with the opening of New York Ave. Metro Station.
Phase 5	**11**	Monroe Street Tunnel		Shared Use Path and Tunnel	320	Build a tunnel through the Monroe St. bridge abutment, and required trail transitions and approaches.	Property acquisition, engineering drawings of current structure, and funding.	DDOT Project
Phase 5	**11**	McCormack Road Sitting Park to CUA Athletic Center		Shared Use Path	3450	Reconstruct Trail, widen and improve aesthetics/landscaping.	Guardrail, slopes, landscaping, buffer.	DDOT Project
Phase 5	**18**	McDonald Place		Shared Use Path	500	Design and install shared use path.	Public outreach and consultation with the neighborhood is recommended.	DDOT Project
Phase 5	**25**	Chestnut to Eastern Ave.		Shared Use Path, Ramps and Bridge	900	Design and construct ramps, bridge and path over Piney Branch Rd.	Coordinate with WMATA and NPS. Further public involvement is recommended with Takoma community, residents in the area and the City of Takoma park.	DDOT Project

Appendix B - Tab 1: Metropolitan Branch Trail--Interim Route

Key actions to establish an interim MBT bicycle route by September 2005.

Signs Would be Provided Throughout

Street Name	Bicycle Facility Type	Pedestrian Facility Type	Improvements	Level of Effort
Actions Requiring Some Construction				
Eastern Ave	Path	Path	Widen Sidewalk to path Width	Minimal Construction
Blair/Peabody/Kansas Xing	Crosswalk	Crosswalk	Improve curb ramps and	Minimal Construction
Blair	Path	Path	Build path where sidewalk is	Minimal Construction
Blair Community Garden	Path	Path	Construct path adjacent to Community Garden	Minimal Construction, NPS Permission
Old Blair	On-Street	Route pedestrians on N. Capitol	Construct/stripe one block contra flow lane	Minimal Construction
Bates Transition	Path	Path	Improve entry point	Spot Improvement
CUA Metro	On-Street	Sidewalk	Install ramp under Michigan Ave.	Minimal Construction
CUA Property by Pizza Hut	Path	Path	gravel path	Action
Actions w/o Construction				
Piney Branch Xing	Crosswalk	Crosswalk	Restripe Crosswalk	Install Signs and/or Striping
Eastern Ave	On-Street	Sidewalk	Eliminate Parking temporarily; restripe centerline, bike	Install Signs and/or Striping
Cedar St	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
Carroll Ave.	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
Maple St.	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
Sandy Spring	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
Van Buren	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
3rd St.	On-Street	Sidewalk	bike lanes	Install Signs and/or Striping
N. Dakota	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
Old Blair	On-Street	Pedestrians use N. Capitol, Riggs Rd.	bike pavement markings	Install Signs and/or Striping
Ft. Totten Dr.	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
John McCormack Rd.	Path	Path	Cut back vegetation	Regular Maintenance
Bunker Hill Rd.	On-Street	Sidewalk	Adjust Traffic control, bike pavement markings	Install Signs and/or Striping
Monroe Xing	Crosswalk	Crosswalk	Curb ramps and restripe	Install Signs and/or Striping
8th St.	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
Edgewood	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
4th St.	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
T St.	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
3rd St.	On-Street	Sidewalk	Establish contraflow bicycling	Install Signs and/or Striping
Harry Thomas Way	On-Street	Sidewalk	bike pavement markings	Install Signs and/or Striping
New MBT thru NY Ave. Station	Path	Path	none	Install Signs
Stair at L or Ramp at M and 1st St. to K St.	On-Street	Sidewalk	none	Install Signs
1st St, NE	Bike lanes	Sidewalk	none	Install Signs
Union Station Area	On-Street	Sidewalk	Restripe contraflow lane	Install Signs and/or Striping
Louisiana to Mall	Path	Path	Change policy to allow bicycling on sidewalk.	Administrative Action
Takoma West Side Route				
Piney Branch	None	Sidewalk	Pedestrian route only, no	Install Signs
Blair	None	Sidewalk	Pedestrian route only, no	Install Signs
5 way intersection	Crosswalk	Crosswalk	Restripe Crosswalks, Begin Bike Route southbound; Northbound: route bikes to Metro, pedestrians	Install Signs and/or Striping
4th St.	On-street	Sidewalk	bike pavement markings	Install Signs and/or Striping
4th St. Aspen to Van Buren	On-street	Sidewalk	none	Install Signs
Van Buren	On-street/Side	Sidewalk	Establish sidewalk bikeway on north side of street.	Install Signs