

2.00 SITE ANALYSIS

2.01 PATERSON OVERVIEW

Paterson is New Jersey's third largest city and is the County seat of Passaic County. It is located in the New York Metropolitan region, just twenty-two miles west of New York City. With a land area of 8.4 square miles, Paterson boasted a 2006 population of nearly 150,000 people. Passaic County is home to nearly 500,000 people. Between 1990 and 2000, Paterson experienced more growth than in any decade in the last forty years.

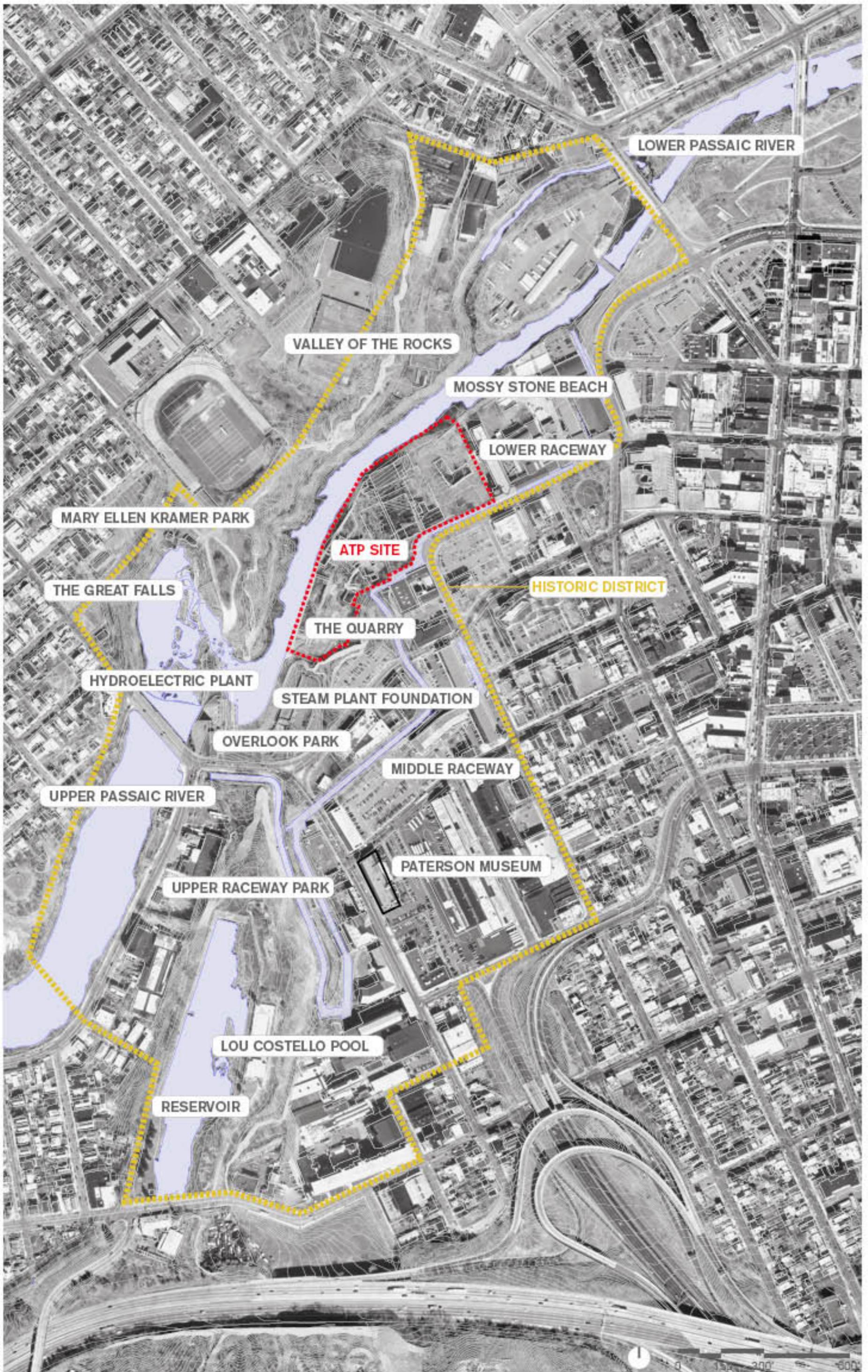
Since its inception, Paterson has fostered a culture that befits its industrial renown. In the nineteenth century, Paterson was one of America's fastest growing cities, as European immigrants streamed into its bustling factories. Today, the descendants of many of those Patersonians are still in the City. Paterson's neighborhoods today are as diverse as ever, as Latino and Asian immigrants comprise the new major immigrant groups. Their restaurants draw those throughout the New York City metropolitan area in search of Middle Eastern, South American or African American Cuisine, helping Paterson live up to its renowned status as one of America's "melting pots".

The construction of the State Park will service Paterson's diverse and proud local constituents as well as provide a new exciting amenity in this multicultural population hub.

2.02 GREAT FALLS STATE PARK EXISTING SITE OVERVIEW

The Great Falls State Park Master Plan site area covers 42 acres within the existing Great Falls/Society for the Establishment of Useful Manufacturers' National Historic District (outlined in yellow). The District is located in the western central portion of the City along the Passaic River within the First Ward. The District is west of Paterson's bustling downtown.

The Master Plan site area comprises a great variety of landscape forms, topography, historical significance and scenic value. The site also encompasses Stanley M. Levine Reservoir, Upper Raceway Park, Overlook Park, portions of the Passaic River above and below the Falls, the Great Falls, Mary Ellen Kramer Park, the Allied Textile Printing (ATP) site (outlined in red) and the Valley of the Rocks.



2.03 MASTER PLAN PROJECT BOUNDARIES

The Master Plan boundary indicates the proposed extent of the Park. From south to north, the Park begins at the southern edge of Stanley M. Levine Reservoir at Grand Street through Upper Raceway Park. Continuing north, it includes Overlook Park, the Great Falls and the Park area adjacent to Maple Street, Mary Ellen Kramer Park, the Valley of the Rocks, the ATP site and the remaining frontage on Van Houten Street to Memorial Drive.

CONNECTION TO FUTURE DEVELOPMENT



CONNECTION TO WEST SIDE PARK

CONNECTION TO PENNINGTON PARK

CONNECTION TO MARKET STREET

PATERSON MUSEUM

LOU COSTELLO POOL

- PARK ENTRANCES
- ADJACENT RELATED DEVELOPMENT
- PHASE 1 PROJECT AREA (25 ACRES)
- PARK MASTER PLAN AREA (42 ACRES)

0 125' 250' 500'

2.04 PROPERTY AND OWNERSHIP PLAN

Land within the Phase One Boundary is owned by multiple entities, as shown in the map on the following page. Most of the land in the Park boundary is owned by the City of Paterson, followed by the Municipal Utilities Authority, the Passaic Valley Water Commission, various private entities and the State of New Jersey.

2.05 HYDROLOGY

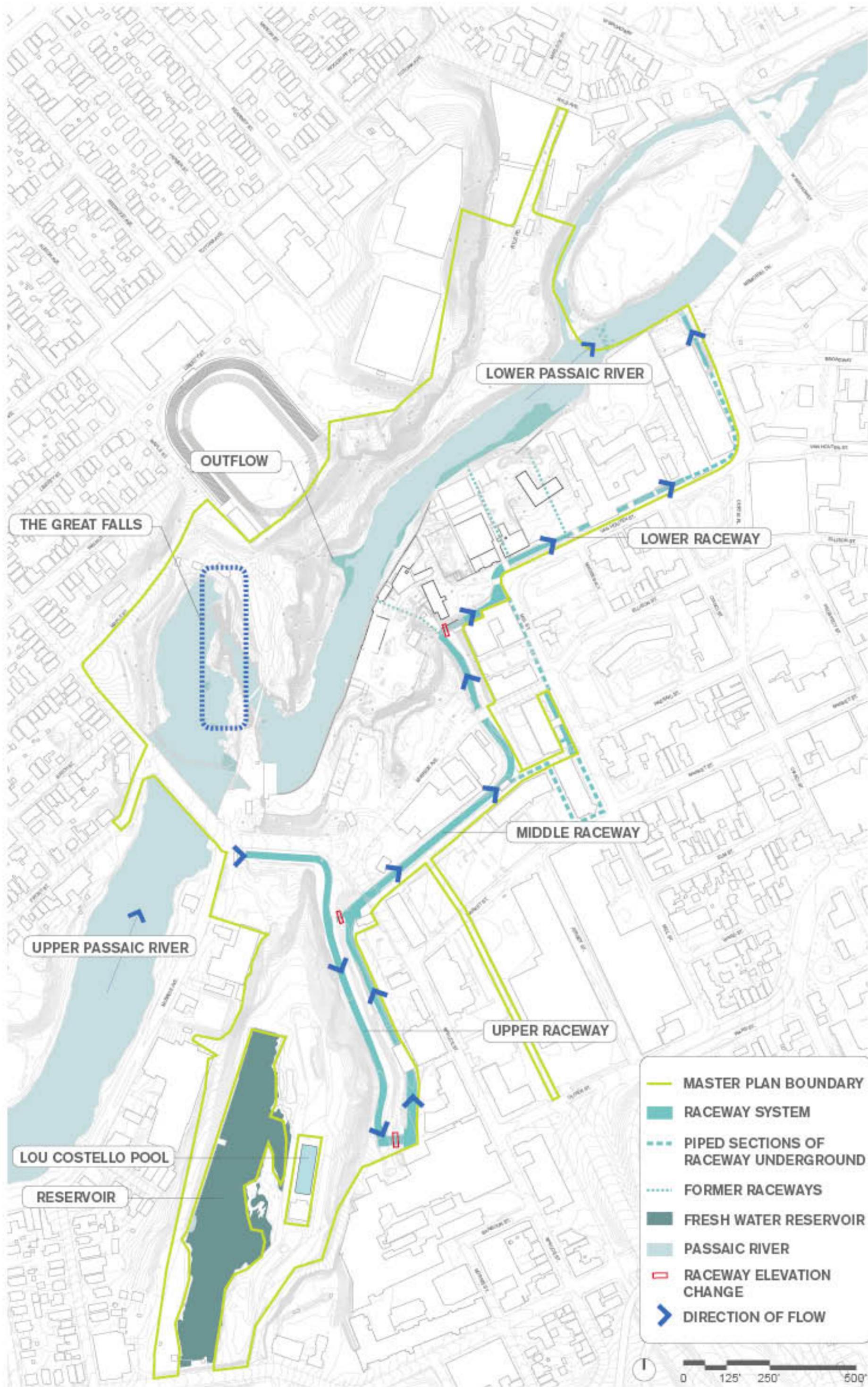
The site's unique hydrology has been credited with the foundation of Paterson as an industrial-economic center. The Great Falls are 77' tall, the second largest falls by volume and width east of the Mississippi River. Cut deep into a basalt chasm, the Falls are a spectacular sight and draw many visitors year-round.

The original raceway system was built in 1792, diverting water from above the falls through a wooden dam into a reservoir. From the reservoir the water flowed through the middle raceway into a flume at the first mill and over a water-wheel that powered the spinning machines. In 1800, the middle raceway was extended and, in 1807, the lower raceway was constructed. A two-tiered upper raceway with spillways to the middle raceway was added above Spruce Street in 1828. The reservoir was filled in 1838 due to leakage, and a dam was built above the Great Falls that diverted water through a new channel into the upper raceway.

"Scholars have concluded that Pierre L'Enfant's innovative waterpower system at the Great Falls – and many factories built later – constitute the finest remaining collection of engineering and architectural works representing each stage of America's progress from Hamilton's time to the twentieth century," Richard Moe, President of the National Trust for Historic Preservation, writes in a letter to the Director of the National Park Service.

It is important to unearth and interpret the historical significance and integrity of the water power system. Presently, the water flow in the raceways is relatively tenuous. The raceways have been in a state of deterioration and many pioneer plant species have infiltrated, creating habitat for turtles, frogs and birds; however, a multi-million dollar rehabilitation program, funded by the federal Urban History Initiative, is underway. Development of a comprehensive restoration proposal is recommended as a future step to establish an appropriate balance between the reconstruction of the raceways to their original state, rehabilitation of former industrial mills to new uses, and the creation of wetland gardens that may help to demonstrate ecological techniques and water management.



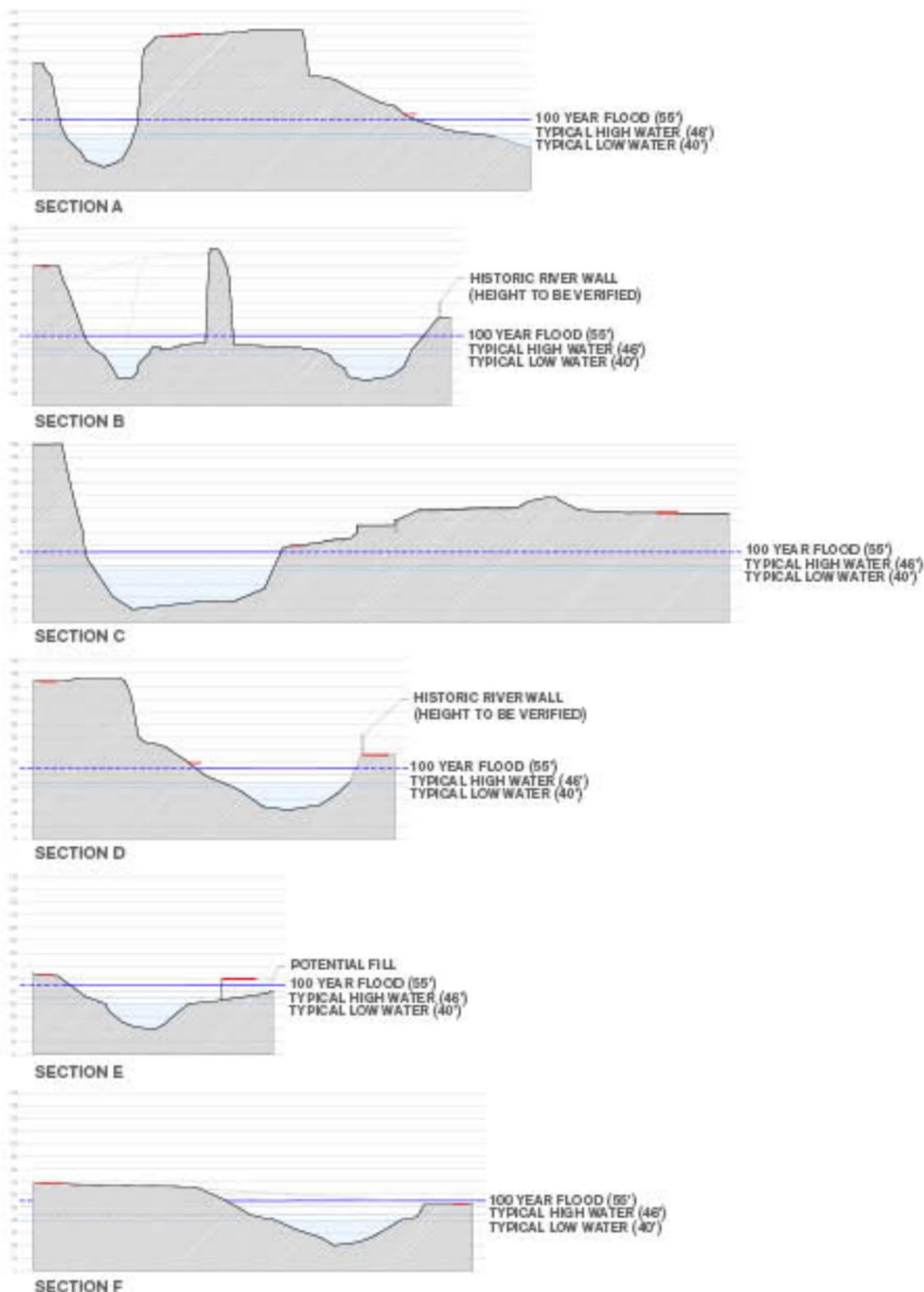


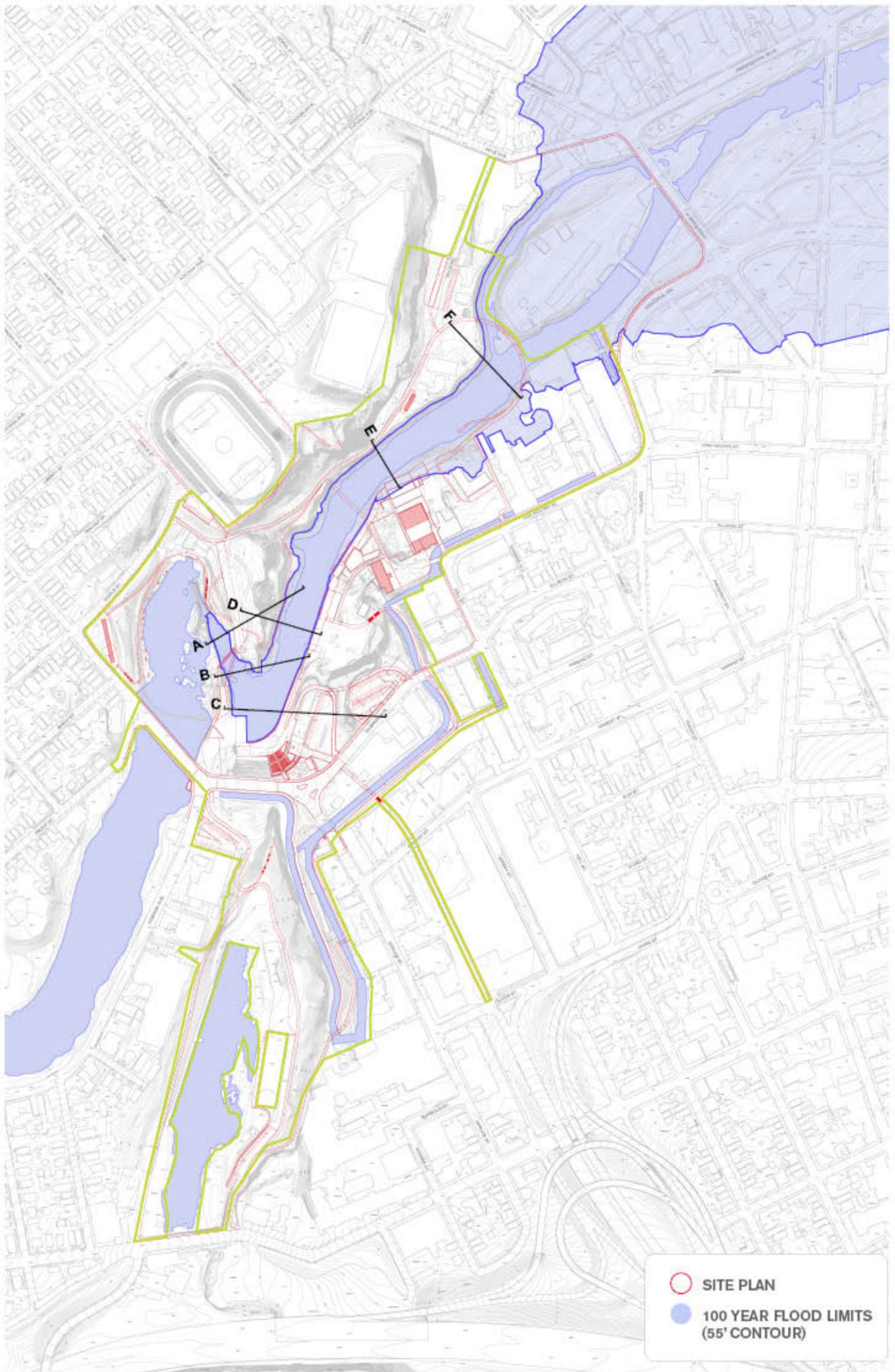
2.06 LAND USE REGULATION CONSIDERATIONS

Construction of the Great Falls State Park is happening along the Passaic River, one of the State's major waterbodies. How the land is developed and redeveloped plays an important role in drinking water quality, wildlife habitat protection, flooding potential, stream encroachment and other issues. Balancing new development with these concerns is managed through the State's Land Use Regulation Program.

Throughout the Master Planning process, strong consideration has been given to constructing sensitively within the 100 year floodplain in an effort to avoid exacerbating floods and flood damages downstream, minimize runoff, and avoid bank erosion and soil destabilization. In fact, the construction of the new State Park will help to enhance the environmental conditions of the River. In the minimal areas where the plan calls for proposals below the 100 year flood level, proposed interventions will be limited to soft surfaces and plantings only.

In advancing the State Park concept, proposals for future development will be reviewed by the Land Use Regulation Program to ensure that the Park design is in support of overall environmental protection goals.





- SITE PLAN
- 100 YEAR FLOOD LIMITS (55' CONTOUR)

0 150' 300' 600'

2.07 ADJACENT DEVELOPMENT

Several projects are under construction adjacent to the Park area. Projects and future developments that border the Park include a new housing development; the renovation and reuse of several old textile mills into mixed-use developments including residential, retail and gallery spaces; and the Passaic River Corridor Redevelopment, a new mixed-use development downstream that will include retail and residential with connections to adjacent parks. Renovations are planned for Congdon and Harmony mills.

Several of these redevelopment projects are underway under the auspices of the NJ Department of Environmental Protection's Brownfield Development Area Initiative. The City, the Paterson Environmental Revitalization Committee and the NJDEP have entered into a Memorandum of Understanding to effectuate the development of several properties consistent with the City of Paterson's 2003 Master Plan. This includes, but is not limited to, the remediation and redevelopment of Addy and Columbia Mills.

ADDY TEXTILE MILL -
NEW LOFT APARMENTS

OLD PATERSON
HOTEL RENOVATION

COLUMBIA TEXTILE MILL -
NEW LOFT APARMENTS

TOTOWA AVE PALISADE -
NEW DEVELOPMENT + HOUSING

RIVER CORRIDOR
DEVELOPMENT

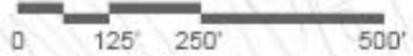
HARMONY MILL
RESIDENTIAL
DEVELOPMENT

CONGDON MILL RESIDENTIAL
DEVELOPMENT

MIXED USE DEVELOPMENT

FUTURE PARKING GARAGE

WEST SIDE PARK



2.08 ON-GOING PROJECTS IN THE PARK [BY OTHERS]

There are a few projects being developed within the Park area that predate the State Park designation including: a new Amphitheater, an improvement plan for Mary Ellen Kramer Park, the stabilization of the historic River Wall, and a proposed display area for the submarine U.S.S. Ling. These projects were integrated into the Master Plan to ensure that the final Park functions as a whole, rather than an ad hoc group of separate projects.

The Amphitheater is in its final stages of design and master plan coordination; it is nestled in the steep slopes of Overlook Park facing the Great Falls chasm. The Amphitheater is integrated into the landscape through use of materials and the latent site topography. It is recommended that the Amphitheater have a number of entry/exit points to facilitate expedient egress. The Amphitheater offers theatrical seating overlooking the Falls and provides a scenic photographic backdrop.

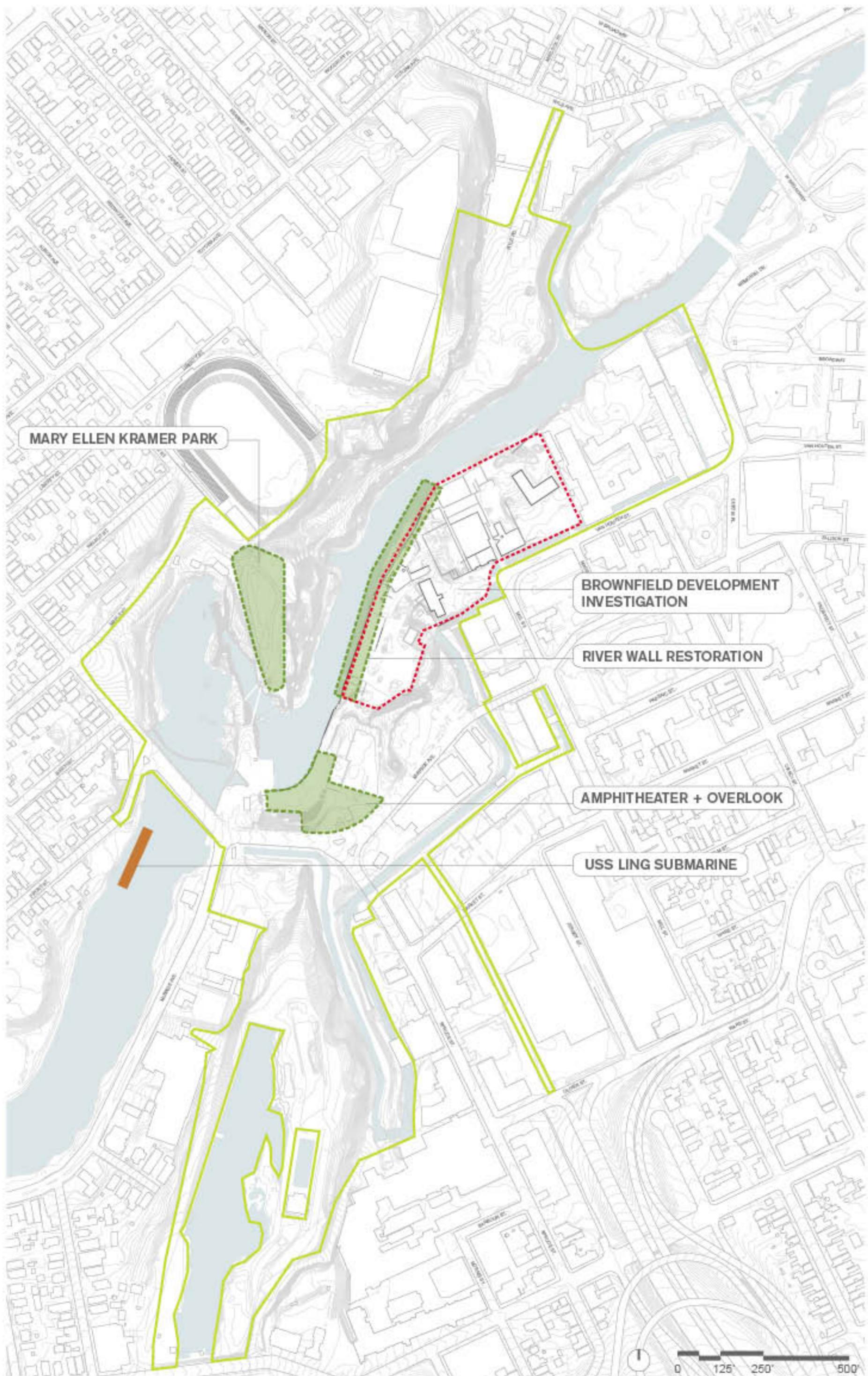
Mary Ellen Kramer Park is in the mid-phases of an improvement plan. Current plans call for the removal of a high guardrail at the southern edge and reconstruction of the old wall lower down the slope with accompanying path and planting, allowing visitors a closer look at the Falls. Other elements include a new fence instead of an existing chain link fence, selective clearing at the northern edge to open up a few vistas, as well as new paving, meadow and tree plantings and furnishings.

A portion of the historic River Wall is currently under contract for stabilization. The stabilization contract is limited to the wall section starting south at the section of what used to be Knipscher & Maass Silk Dyeing Mill to the section of wall that fronts what used to be Mallory Mill.

Lastly the City of Paterson is in the process of obtaining the submarine U.S.S. Ling. The submarine will be displayed in the original launching area off of Front Street. It is anticipated that this area will connect to Great Falls State Park as well as West Side Park for maximum visitorship.

For more specific plans of each area, please see Appendix A.

The Great Falls are also under consideration for designation as a unit of the National Park Service. A federal act, H.R. 189, "To establish the Paterson Great Falls National Park in the State of New Jersey," has already been passed by the United States House of Representatives. Sister legislation (S.148: "To establish the Paterson Great Falls National Park in the State of New Jersey") has also moved through committee review in the United States Senate. The State of New Jersey fully supports the designation of this site as a National Park Service unit. New Jersey desires to see the full potential of this magnificent site realized. The State will strive for all its efforts to be in concert with our federal Congressional delegation's pursuit of this important legislation, to reflect National Park Service management policies for units of the national Park system, and to meet the Design Guidelines for the Great Falls National Historic Landmark District and any other standards designated by the U.S. Secretary of the Interior.



MARY ELLEN KRAMER PARK

BROWNFIELD DEVELOPMENT INVESTIGATION

RIVER WALL RESTORATION

AMPHITHEATER + OVERLOOK

USS LING SUBMARINE

2.09 EXISTING CIRCULATION, PARKING AND ACCESS

In an effort to create an “outdoor living room” that is both a local and regional destination, understanding circulation, parking and access to the site and through the Park is critical.

Located in the New York metropolitan area, Paterson is located in one of the region’s busiest transportation hubs and largest population centers. There are four corridors that form a part of the national highway system, including Interstate Route 80, State Route 19, State Route 20 and Main Street-West Broadway. Other nearby major corridors include the Garden State Parkway and the New Jersey Turnpike. Regional visitors will access the proposed State Park through one of these corridors.

Within the City, there is heavy pedestrian traffic. Most of Paterson’s streets, with the exception of State highways, provide sidewalk coverage. However, the streets can be dangerous due to heavy vehicle traffic and a lack of traffic and pedestrian control devices.

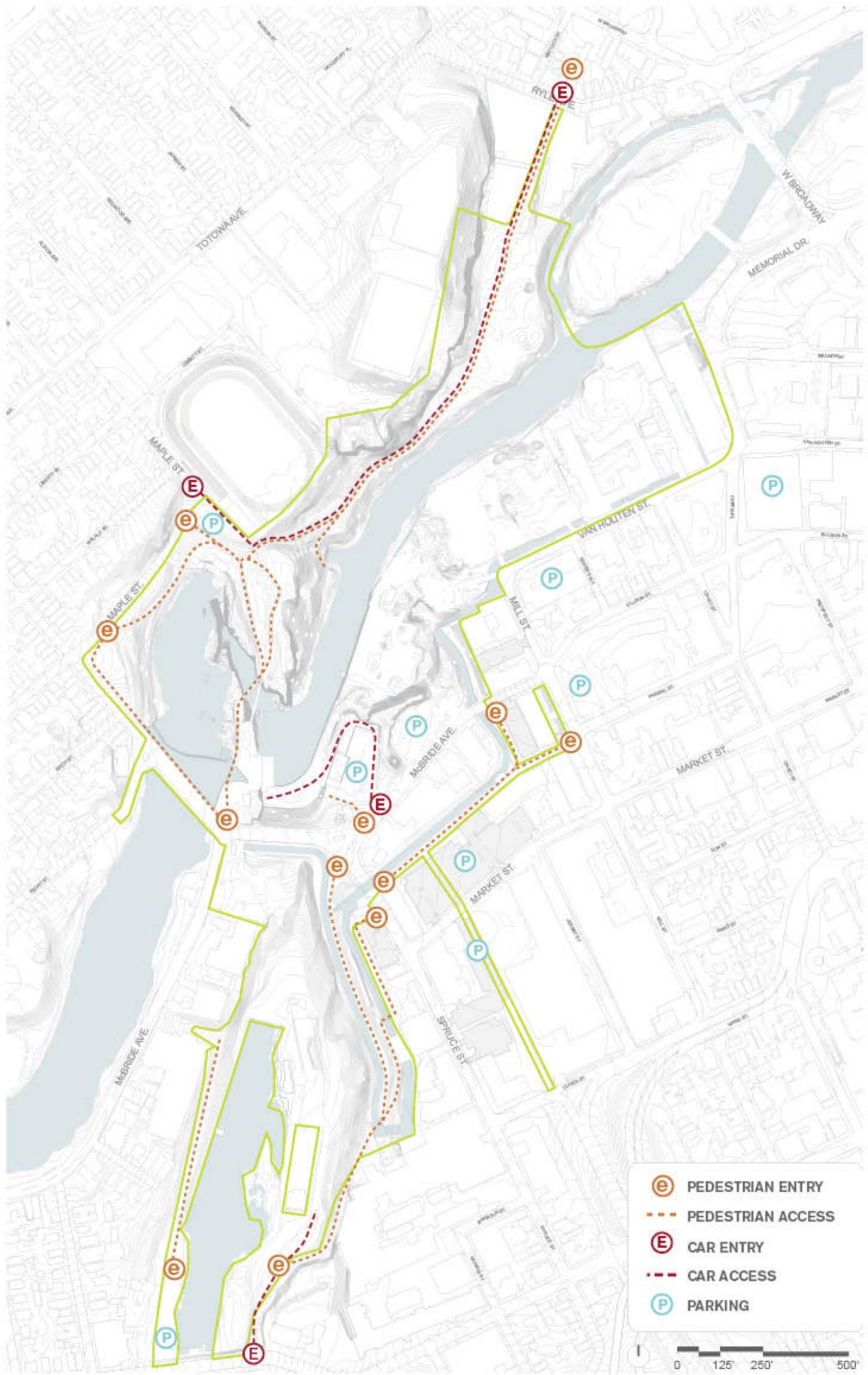
Within the Park boundary, currently there are no coherent or continuous circulation pathways through the Park. The existing circulation is comprised of ad hoc single path trajectories that do not connect with one another or with the greater network of paths, resulting in disparate and unsafe zones within the Park. Existing site access points and trails are often unmarked and obscured, and in a few instances, trails dead-end without warning.

Street crossings, which are required in order to traverse through the Park, are also unmarked and deemed unsafe due to their location in mid- blocks rather than intersections.

Visitors to the site today cannot walk very far without major detours into city streets; they have access to few discrete and often disconnected areas such as the Upper and Middle raceways, Overlook Park, the Great Falls, Mary Ellen Kramer Park and the Valley of the Rocks.

Parking, too, is undefined and disconnected from the future Park area. Most parking facilities adjacent to the Park are relatively small and will be insufficient once the Park becomes a national destination. Planned new parking facilities on Market Street may alleviate some of the pressure. Downtown parking will become available for visitors during the weekend.

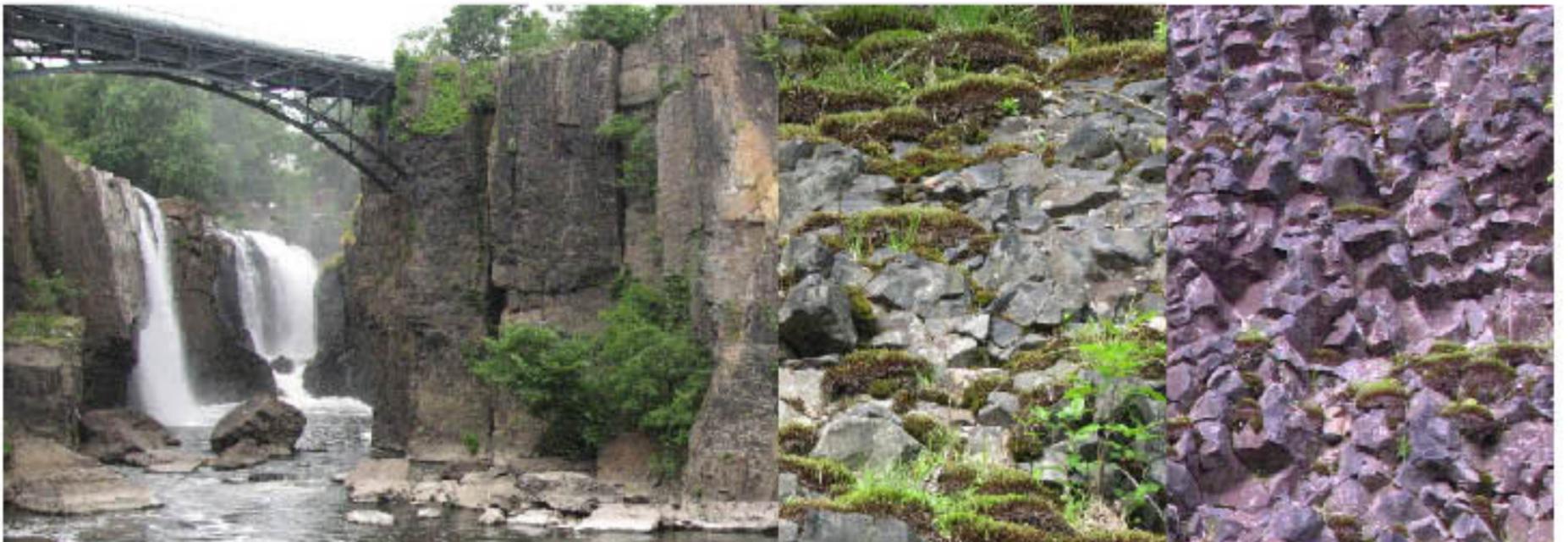
These issues will be considered as Park design and construction get underway.

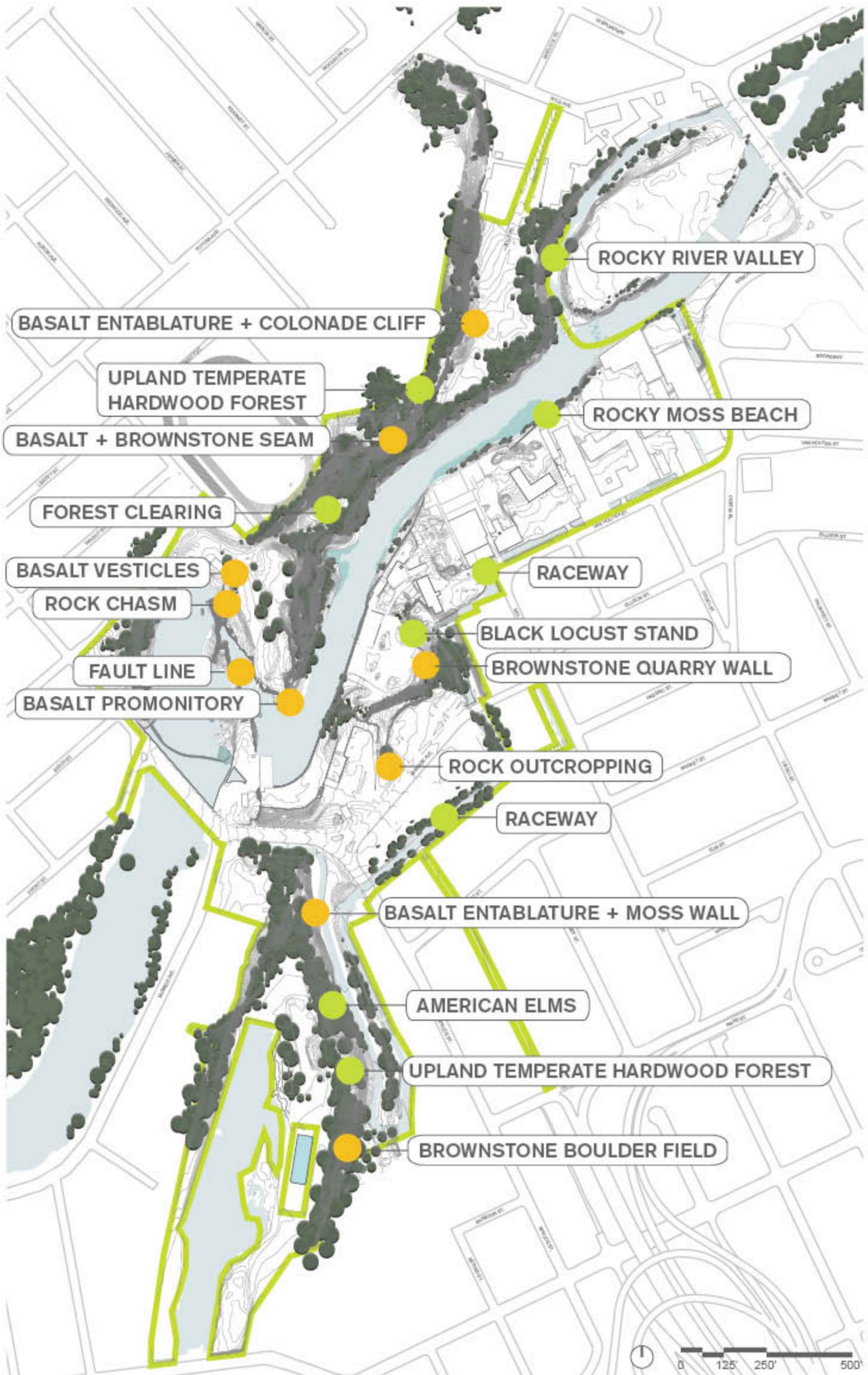


2.10 NATURAL RESOURCES

The site is filled with incredibly varied and rich natural resources. These include rare traprock formations, basalt cliffs and visible fault lines, dramatic topographical variation, mature forest in areas emerging out of rock ledges and cliffs, mossy walls, pioneer species that grow in precise straight lines following an invisible building footprint, and a mossy rock beach from which a grove of trees is growing, partially inundated by the Passaic's fast flowing waters.

Perhaps the most awe-inspiring natural feature is the Great Falls itself, a 77' drop carved in the basalt cliffs.





BASALT ENTABLATURE + COLONADE CLIFF

**UPLAND TEMPERATE
HARDWOOD FOREST**

BASALT + BROWNSTONE SEAM

FOREST CLEARING

BASALT VESTICLES

ROCK CHASM

FAULT LINE

BASALT PROMONITORY

ROCKY RIVER VALLEY

ROCKY MOSS BEACH

RACEWAY

BLACK LOCUST STAND

BROWNSTONE QUARRY WALL

ROCK OUTCROPPING

RACEWAY

BASALT ENTABLATURE + MOSS WALL

AMERICAN ELMS

UPLAND TEMPERATE HARDWOOD FOREST

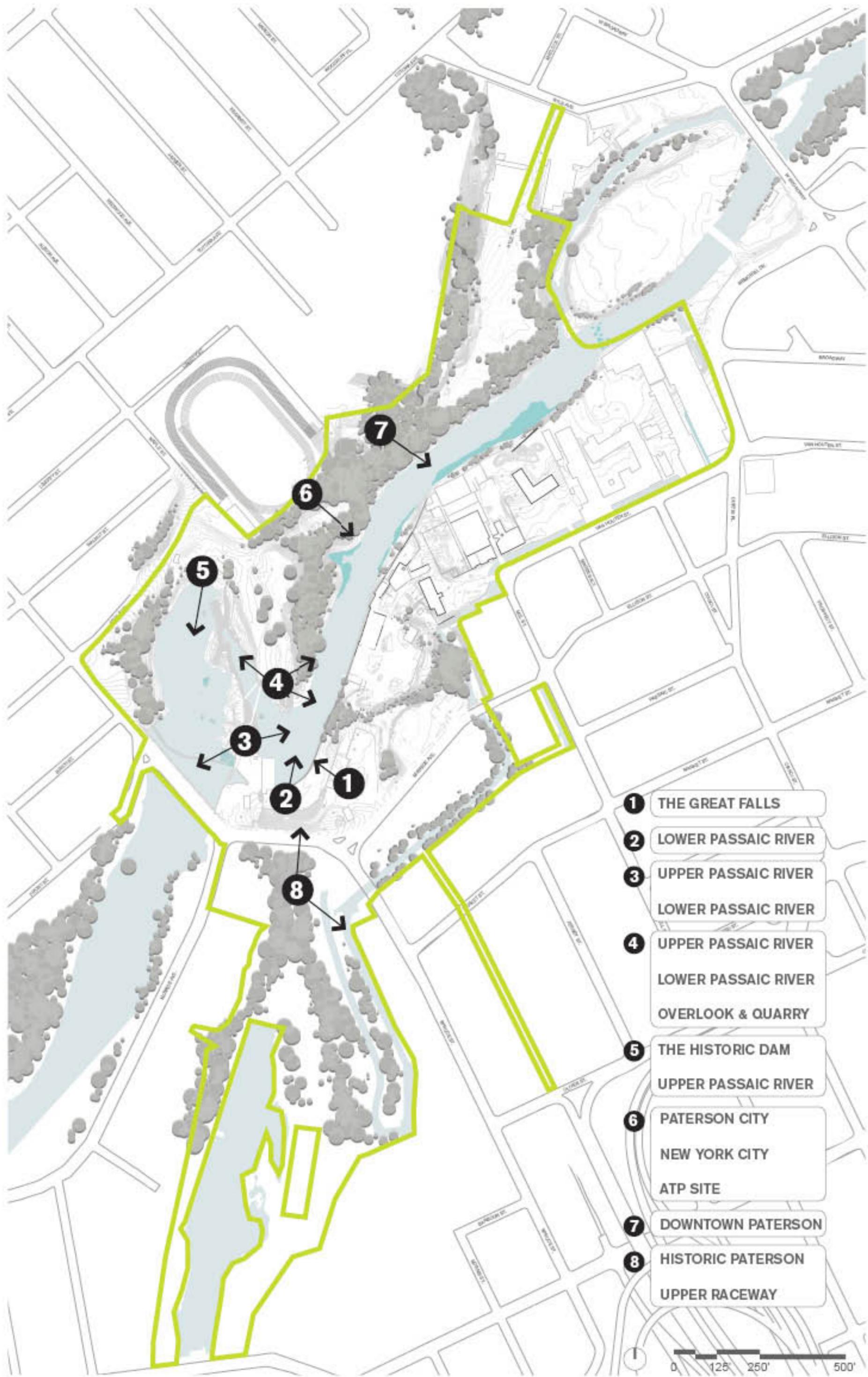
BROWNSTONE BOULDER FIELD



2.11 VIEWSHEDS

The Park topography is drastically varied from one area to the next; within a 30' span there may be a drop as great as 90'. This affords the Park fantastic views from many vantage points. Especially worth noting is the view from Palisade Heights and Hinchliffe Stadium that overlook the City of Paterson and on clear days, New York City is visible beyond. The plateau-like terrain of Mary Ellen Kramer Park overlooks the upper Passaic River, the Great Falls and the Historic District. The Landing provides views to the upper Passaic River and top of the Falls on one side and the lower Passaic River, bottom of the Falls and the Hydroelectric Plant on the other. The Overlook Plaza and Amphitheater offer sweeping views of the basalt cliffs, the pedestrian bridge, the rushing white water deep in the basalt chasm, the turbulent Passaic river and the Hydroelectric plant. The Upper Raceway Park outlook faces northward with views encompassing the Great Falls State Park and the ATP site beyond.





- 1** THE GREAT FALLS
- 2** LOWER PASSAIC RIVER
- 3** UPPER PASSAIC RIVER
LOWER PASSAIC RIVER
- 4** UPPER PASSAIC RIVER
LOWER PASSAIC RIVER
OVERLOOK & QUARRY
- 5** THE HISTORIC DAM
UPPER PASSAIC RIVER
- 6** PATERSON CITY
NEW YORK CITY
ATP SITE
- 7** DOWNTOWN PATERSON
- 8** HISTORIC PATERSON
UPPER RACEWAY

0 125' 250' 500'

2.12 EXISTING SITE GEOLOGY

The Great Falls, located within Garrett Mountain, holds the designation of a National Natural Landmark from the National Park Service. This is in large part, due to the site's remarkable geologic features. According to the National Park Service, together the Great Falls and Garrett Mountain "provide an excellent illustration of the jointed basaltic lava flow which began a period of extrusion and intrusion throughout eastern North America in the early Mesozoic, influencing present day landforms in this region."

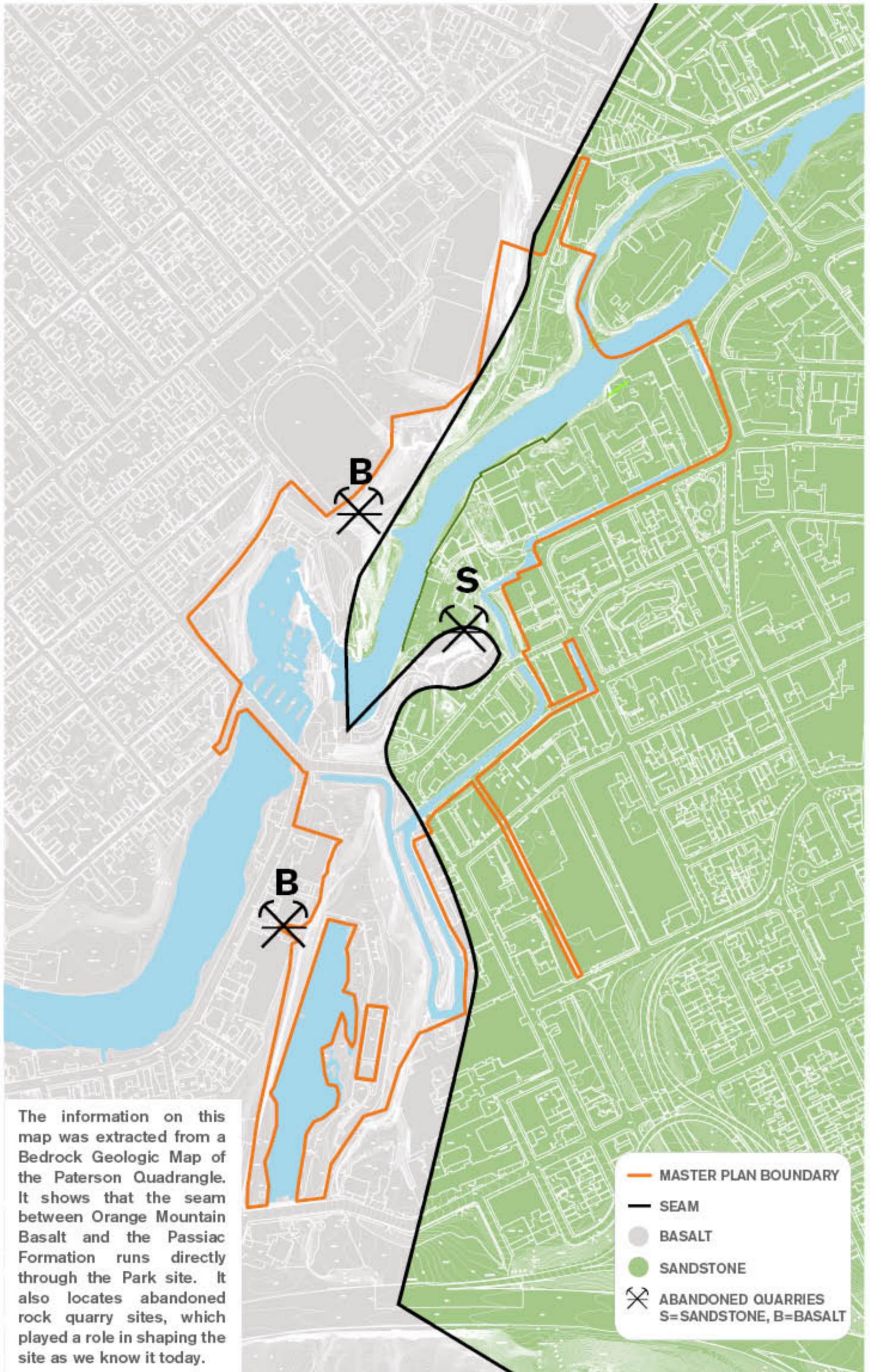
The two rock formations present on the Great Falls site are principally basalt (known as Orange Mountain Basalt) and brown sandstone (Passaic Formation). Both rock types are utilized locally as building materials. The basalt, or traprock, is generally crushed and used as aggregate for roadbeds and railroad ballast. The brownstone is commonly used for foundations and fascia on buildings. The seam between the basalt and brownstone run directly down the middle of the site, slightly angled into the earth, with brownstone beneath basalt. At the Great Falls, only the basalt layer is visible, while further to the east where Ryle Rd. begins, the brownstone layer is exposed at the base of the cliff. The Falls spill over the harder, more resistant ridge of basalt etching deeper into the chasm over time.

The Orange Mountain Basalt is a dark greenish gray to black, fine grained, dense, hard basalt composed mostly of calcic plagioclase and clinopyroxene. Basalt is a volcanic rock that contains spherical to tubular gas-escape vesicles near the rock surface, some filled by zeolite minerals, quartz, or calcite. As basalt lava erupts from volcanic vents and cools, it shrinks and cracks. As a result, vertical, polygonal columns form. A feature commonly seen in basalt flows from throughout the world, these columnar structures are visible across the basalt cliffs surrounding the Great Falls, making the site a unique geologic destination.

In addition to the columnar joints this site also exhibits tectonic joints in the basalt. Tectonic joints are commonly obscured by the more pervasive cooling joints, however at the Great Falls the tectonic joints are very pronounced. Tectonic joints are typically planar, well formed, smooth to slightly irregular, and variably spaced from 2'-10' apart. Movement along the tectonic joints through geologic forces has produced wide gaps in the basalt known as faults. The cliff forming the back wall of the Hydro-electric power plant is the most pronounced example of a tectonic fault on the site.

For more site geology information see Appendix D.





2.13 EXISTING SITE ECOLOGY AND HABITAT

The Paterson Great Falls and surrounding area house a variety of natural habitats as well as a great deal of natural beauty, making it an ideal site for ecological restoration. Remnants of native upland temperate hardwood forest, as well as riparian, wetland and cliff communities occur within the Great Falls site, providing the basis for exceptional wildlife habitat as well as valuable and diverse native plant communities. Currently, however, the site contains several introduced and invasive species, as well as areas of degraded forest with little under-story for regeneration. Thus, the site presently offers little habitat structure and poor wildlife resources. With management and the addition of native herb, tree and shrub species, the area has the potential to be an excellent ecological resource.

While there are a fair amount of canopy trees at the site, there are no signs of native spring ephemeral wildflowers present. There are no rare or valuable species growing on the site as of June 2007.

The map shown on the opposite page inventories the existing site vegetation, locating the various natural habitats present on the site today. Appendix B gives a complete list of plant species and more ecology information for each room of the Park.



VALLEY OF THE ROCKS

- TREES**
- WHITE OAK
- SYCAMORE
- NORWAY MAPLE
- RED MAPLE
- WHITE ASH
- WHITE MULBERRY
- SHRUBS**
- BOXELDER
- HACKBERRY
- ALLEGHENY BLACKBERRY
- HERBACEOUS**
- AMERICAN ALUMROOT
- WHITE WOOD ASTER
- WHITE SNAKEROOT
- CROWN VETCH
- WILD GARLIC
- BIRDFOOT TREFOIL
- VINES**
- VIRGINIA CREEPER

GREAT FALLS

- TREES**
- WHITE MULBERRY
- TREE OF HEAVEN
- VINES**
- VIRGINIA CREEPER
- BOSTON IVY
- GRASSES**
- BROME GRASS

RIVER BANK + SUM ISLAND

- TREES**
- NORWAY MAPLE
- SYCAMORE
- WHITE MULBERRY
- TREE OF HEAVEN

THE QUARRY + ATP SITE

- TREES**
- COTTONWOOD
- QUAKING ASPEN
- BIGTOOTH ASPEN
- SYCAMORE
- SILVER MAPLE
- WHITE ASH
- WHITE MULBERRY
- BALCK WILLOW
- AMERICAN ELM
- SHRUBS**
- HACKBERRY
- ALLEGHENY BLACKBERRY
- HERBACEOUS**
- AMERICAN ALUMROOT
- WHITE SNAKEROOT
- WILD WOOD ASTER
- DAISY FLEABANE

MIDDLE + LOWER RACEWAY

- TREES**
- RIVER WILLOW
- PIN OAK
- WETLAND**
- JEWELWEED
- ARROW ARUM
- DUCKWEED

OVERLOOK PARK

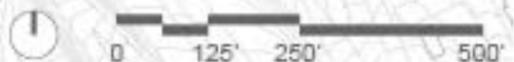
- TREES**
- JAPANESE MAPLE
- SHRUBS**
- YEW

UPPER RACEWAY

- TREES**
- AMERICAN ELM
- GRAY BIRCH
- PIGNOT HICKORY
- SYCAMORE
- PIN OAK
- BLACK OAK
- SMOOTH SUMAC
- SHRUBS**
- SERVICEBERRY
- ARROWWOOD
- BLACKHAW
- ELDERBERRY
- HERBACEOUS**
- AMERICAN ALUMROOT
- INDIAN HEMP
- VENUS'S LOOKING GLASS
- WREATH GOLDENROD
- CANADA GOLDENROD

RIVER EDGE

- TREES**
- SILVER MAPLE
- SYCAMORE
- WHITE MULBERRY
- WHITE OAK
- HERBACEOUS**
- WHITE SNAKEROOT
- COMMON BLUE VIOLET



2.14 SITE REMEDIATION CONSIDERATIONS

The multi-layered industrial uses that took place on the site, and the ATP site in particular, have left behind many traces, some of which are significantly visible and others that are hidden. It is important and necessary to conduct a thorough Brownfield site investigation in accordance with DEP regulations to ensure the safety and health of the Park's future users.

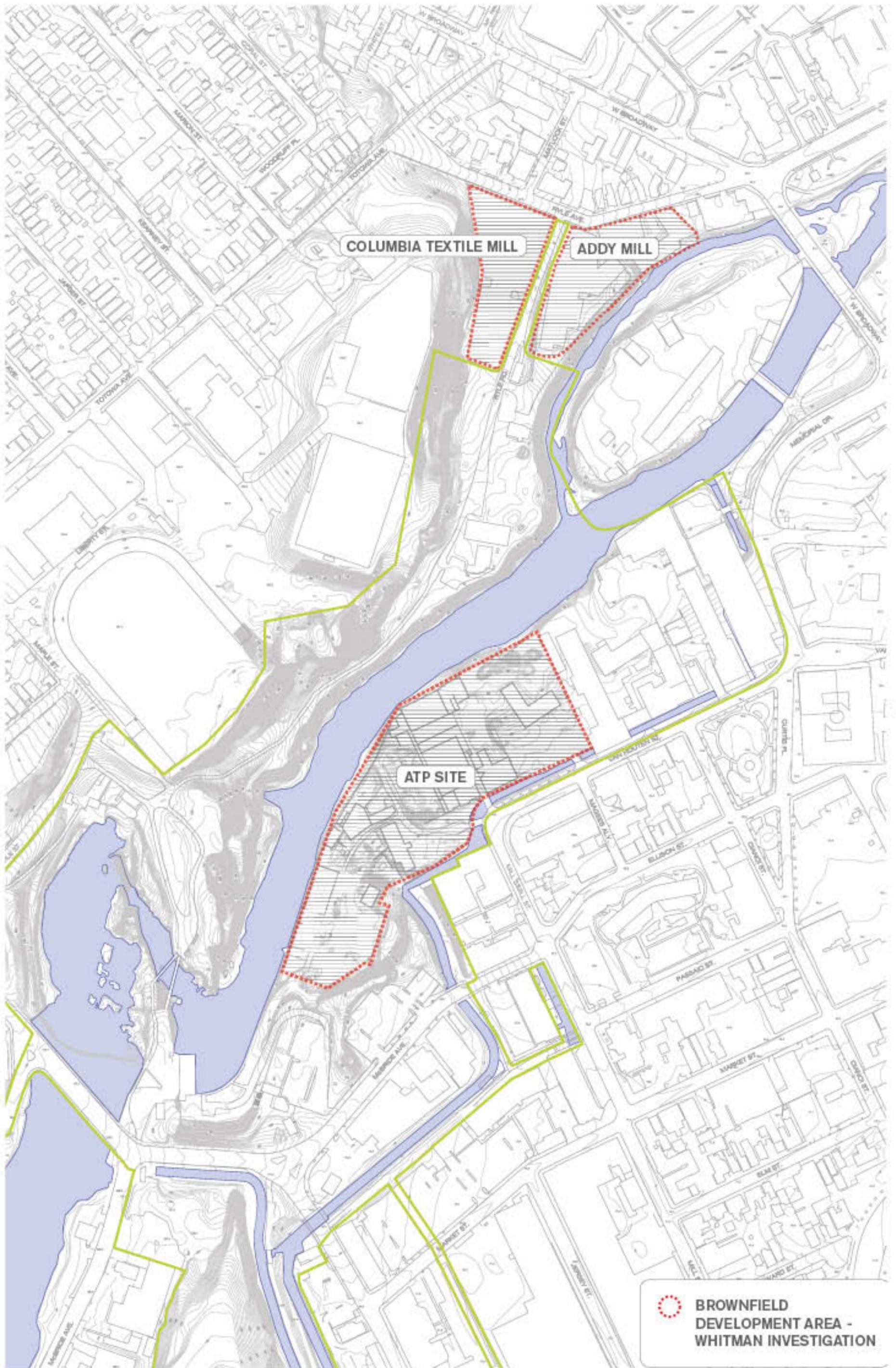
Through a competitive application process, the Great Falls Historic District was selected to participate in the NJDEP's Brownfield Development Area (BDA) Initiative. In January 2006, the City of Paterson, the Paterson Environmental Revitalization Committee (PERC) and the NJDEP entered into a Memorandum of Understanding (MOU), which established the roles and responsibilities for the participants involved in this remediation/ revitalization process. The initial BDA included eight brownfield sites for investigation, remediation and redevelopment. These former industrial sites will be remediated and redeveloped consistent with the City's vision contained within the 2003 Master Plan. Some of these former sites fall within and outside the Park boundary. Moving forward, consideration is being given to expanding the BDA boundary to include the entire State Park area. This expansion would result in a further streamlining of staff and resources.

Considering the historic significance of this site, all site remediation efforts must occur in concert with the stabilization of significant buildings, remains and archaeological resources. This may be the primary challenge facing the redevelopment of this site. The architectural remains of historical buildings - many which are unstable, have partially open basements, haphazard protrusions and badly deteriorating ceilings.

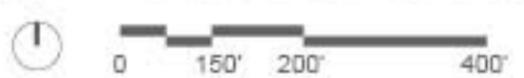
To expedite the Brownfield investigation process two critical tasks will take place simultaneously:

1. Representatives from the Historic Preservation Office (HPO) together with Paterson Historic Preservation Commission (PHPC) and the National Park Service (NPS) will put together a team of archaeologists and historians who will assess and determine the contributing value of each structure in order to begin the structural stabilization process;
2. Office of Brownfield Remediation (OBR) will divide the investigation work in two parts: 1. Open spaces investigation; 2. Interior spaces investigation. This division will enable the immediate start of investigation work in the open spaces while the interior spaces undergo Cultural Resource assessment.

Other areas that require additional research and probable investigation are the Columbia Textile (also known as the former National Silk Dyeing) and the Addy Textile Mills on Ryle Avenue, The Valley of the Rocks across the river from the ATP site, the former steam plant foundation and adjacent future amphitheater site. The Valley of the Rocks has been quarried and housed a few smaller, lesser known mills and structures that no longer exist today.



 **BROWNFIELD DEVELOPMENT AREA - WHITMAN INVESTIGATION**



2.15 CULTURAL RESOURCES

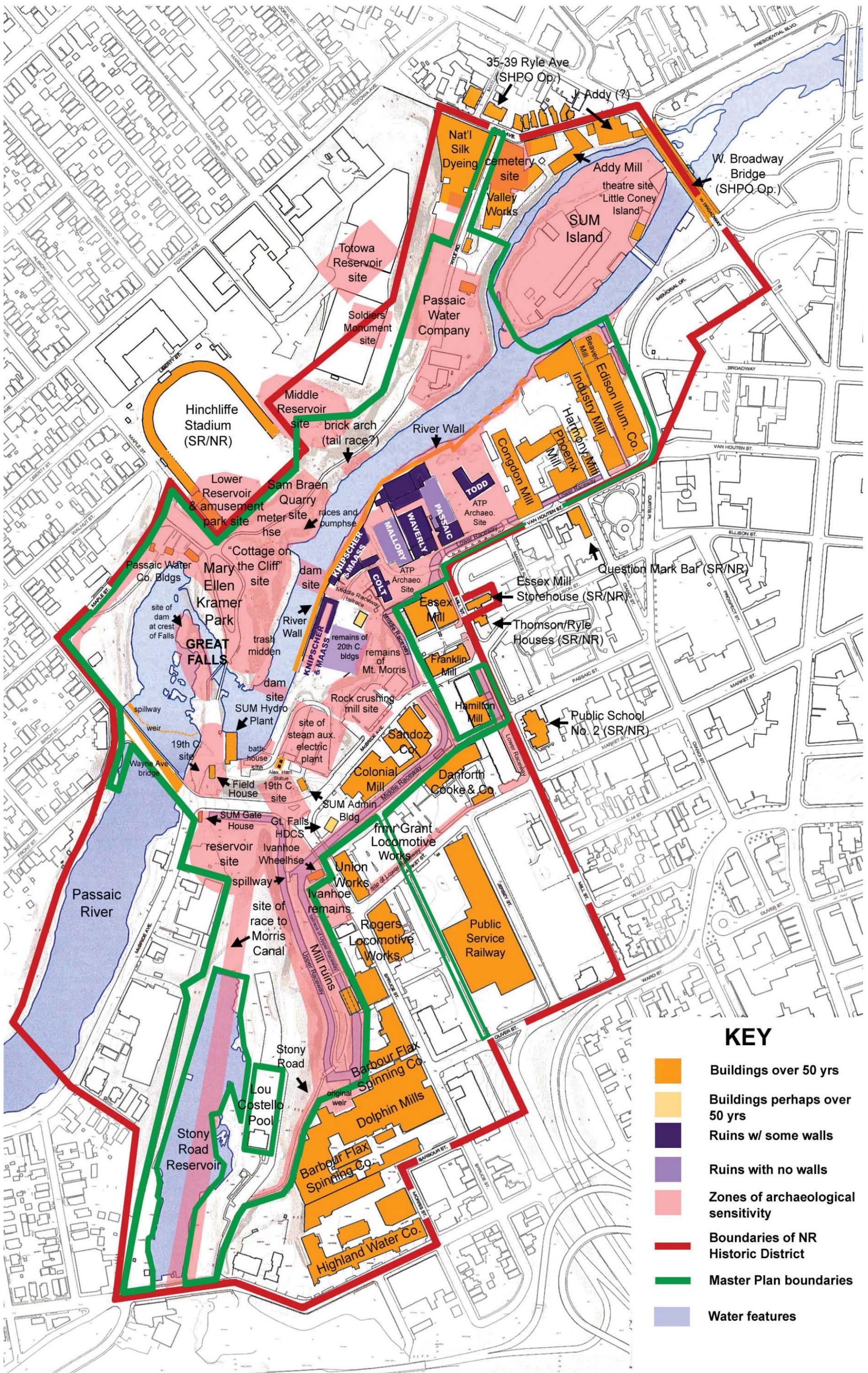
The torrential power and natural beauty of the remarkable Great Falls is inextricably entwined with an industrial history where water power was paramount.

The Great Falls Historic District is filled with cultural resources, many of which are located within the boundaries of the future Park. The Allied Textile Printing (ATP) site – a complex of mills and raceways that witnessed a rich complex history in the development of technology, of the labor movement, and of manufacturing techniques that spanned more than two centuries is located at the heart of the site along the Passaic River.

For several years, the New Jersey Historic Preservation Office (NJHPO) has worked with the National Park Service and industrial archaeologists from the firm of Historic Conservation & Interpretation, Inc. to develop a comprehensive Research Design for a Phase 1 Cultural Resource Survey of the ATP Site. Over the course of two decades, a number of other studies have been conducted. A subchapter of the Master Plan document (see Appendix C) prepared by Mary Delany Krugman Associates (MDKA), outlines research that has been completed and resources that have been identified over the course of the past decade.

During the Design and Construction phase, the Field Operations team will work with NJHPO to respond to and incorporate the Cultural Resources Survey findings into future Park uses.

The comprehensive Cultural Resources Subchapter and Inventory can be found in Appendix C, Maps and historical images are located on the CD attached to the back cover.



KEY

- Buildings over 50 yrs
- Buildings perhaps over 50 yrs
- Ruins w/ some walls
- Ruins with no walls
- Zones of archaeological sensitivity
- Boundaries of NR Historic District
- Master Plan boundaries
- Water features