State Environmental Quality Review Act

Findings Statement

Hugh L. Carey Battery Park City Authority

South Battery Park City Resiliency Project

Borough of Manhattan

New York, New York

Pursuant to Article 8 of the Environmental Conservation Law (State Environmental Quality Review [SEQR] Act) and Title 6 New York Codes, Rules and Regulations ("NYCRR") Part 617, Hugh L. Carey Battery Park City Authority (BPCA), makes the following findings:

Name of Action: South Battery Park City Resiliency (SBPCR) Project

Project Location: The Proposed Action involves the construction of an integrated flood barrier alignment system in the southern portion of Battery Park City and portions of Lower Manhattan. The flood alignment runs from 1st Place and the Museum of Jewish Heritage, through Wagner Park, across Pier A Plaza, and then along the north side of the Battery Bikeway in The Battery to higher ground near the intersection of Battery Place and State Street. In addition, the following interior drainage improvements are proposed: a near surface isolation (NSI) system along West Street between Battery Place and Albany Street; tidegates at 1st Place near the Museum of Jewish Heritage, Rector Place near the Hudson River, as well as in Pier A Plaza; and two isolation valves in The Battery portion of the Project Area.

Summary of Action: In response to the devastating impact of Superstorm Sandy in Lower Manhattan and in anticipation of future severe storm activity related to climate change, the SBPCR Project has been developed as an integrated coastal flood risk management project in Lower Manhattan. The flood alignment is composed of multiple different integrated features such as flip-up deployable gates (flip-up deployables), glass-topped floodwalls, buried floodwalls underneath terraced slopes, exposed floodwalls, and bermed floodwalls. The term "flood alignment" is used to differentiate the combination of flood control measures represented by the SBPCR Project from a traditional freestanding flood wall for risk reduction. In addition, interior drainage improvements will be required for the Project. The purpose of the flood alignment is to meet the requirements for FEMA accreditation and to allow for future protection against a 100-year storm event, with adaptability for protection against a 2050's 100-year storm upon the completion of the North/West Battery Park City Resiliency Project and a tie-in between the projects.

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SEQR Classification*:* Type I

DESCRIPTION OF LEAD AGENCY ACTIONS

On March 18, 2021, BPCA issued a letter to various involved and interested agencies notifying them of its intent to assume the role of lead agency for the environmental impact review of the SBPCR Project. None of the recipients of that letter objected to BPCA acting as lead agency. BPCA determined the Proposed Action had the potential to have adverse impacts and published a Draft Scoping Document for the Draft Environmental Impact Statement (DEIS) on September 28, 2021. The public comment period for scoping began on September 28, 2021. A public meeting was held on October 13, 2021, and comments were accepted through October 29, 2021. A Final Scoping Document was published with the DEIS incorporating all comments on the Draft Scoping Document.

A Notice of Completion of the DEIS was published on May 4, 2022, which started the public comment period for the DEIS. A public hearing was held on May 19, 2022, which provided the public the opportunity to comment on the DEIS both orally and through written comments. The public comment period concluded on June 10, 2022. After the public comment period concluded, a Final EIS (FEIS) was prepared. Responses to comments are provided in the FEIS, Appendix A.3, and revisions to the DEIS were made as necessary. All substantive comments were documented in the FEIS, and copies of the comments are provided in the FEIS, Appendix A.5.

FACTS AND CONCLUSIONS IN THE FEIS RELIED UPON TO SUPPORT THE DECISION

PROJECT DESCRIPTION (PROPOSED ACTION)

1st Place

The flood alignment begins on the north side of 1st Place, where it ties into an existing, natural 11.5-foot flood contour at a point where the Design Flood Elevation (DFE) required to achieve FEMA accreditation is 11 feet.[1] It then extends south across 1st Place as a flip-up deployable, which would seal against permanent columns when deployed. The flip-up deployable across 1st Place would be installed to lie flat when not in use. 1st Place would not be altered in any material way beyond the installation of flip-up deployables in the street bed, with columns framing their edges. Grade changes to the street and right-of-way would be avoided. A stop log floodwall would be installed against the flip-up deployable permanent column on the north side of 1st Place and extend to the east running parallel to 1st Place. The stop log floodwall would be deployed only during storm events and consist of aluminum panels sealed against beams set into anchor points in the ground. When not in use, only the anchor points and their covers would be visible and lie flat against the ground. The DFE in this area is 18 feet, and the HOI is 7 feet.

Museum of Jewish Heritage

At the southwest end of 1st Place, the flood alignment runs west across the north facing landscaped courtyard of the Museum of Jewish Heritage. The DFE in this location is 18 feet, and the HOI ranges from 7 to 8 feet. Flip-up deployables are planned for this section of the flood alignment, maintaining visual and physical access to the Museum and connecting to the flip-up deployables that span 1st Place. Existing landscape planters adjacent to the north façade of the Museum would be reconstructed and replaced after the installation of the flip-up deployables.

[1] The DFE and Height of Intervention (HOI) vary across the flood alignment. The DFE is defined as the elevation of the highest flood that a project is designed to protect against. The HOI for a project location is calculated by subtracting the elevation of the existing grade from the proposed DFE.

The flood alignment then extends southeast along the west side of the Museum. This portion of the flood alignment is composed of flood-proof glass-topped floodwalls that would be integrated into terraced landscape planters. The floodwall would be screened from the existing garden pathways and lawn by rebuilding terraced planters that match the existing aesthetic of the landscape. In order to minimize visual impact and maintain views from the first floor of the building to the Hudson River, the top of the floodwall would be constructed of flood-proof glass, set within a metal frame. The glass-topped floodwall continues around the western perimeter of the Museum, until the flood alignment connects with Wagner Park. Flip-up deployables would be used to maintain egress at the existing fire exit doors.

Wagner Park

The flood alignment through Wagner Park would be constructed as a buried floodwall connecting to the glass-topped floodwall at the Museum of Jewish Heritage. The DFE for this portion of the flood alignment is +19.8 feet, and the HOI is 7.8 to 9.8 feet. To meet projected DFEs for coastal surge, Wagner Park would be elevated 10 to 12 feet, and the buried floodwall would be constructed beneath the raised park, maximizing the amount of protected open space within the park, while maintaining views to the waterfront. The buried floodwall also allows users to fully occupy the lawn, garden, and public park, in contrast to a traditional floodwall design which would bisect the space. At the connection between Wagner Park and Pier A Plaza, the flood alignment would resurface and manifest as a short segment of exposed floodwall that would extend to meet the flip-up deployables being used through Pier A Plaza.

Five design principles helped to guide the proposed plan for Wagner Park:

- Elevate the site to maximize the protected area;
- Organize the site around the central lawn and axis to the Statue of Liberty;
- Move the building closer to Battery Place to maximize continuous waterside lawn area;
- Align building and approach with allées and establish central connector space; and
- Provide universal access throughout the Park.

With the five principles shaping the redesign, key features of Wagner Park include ornamental gardens, a central lawn, a stormwater reuse cistern, an infiltration gallery underneath the Battery Park City Esplanade, and performative gardens along the waterfront pedestrian esplanade. The edges of Wagner Park would be gently sloped and terraced to allow for universal access to the raised park areas and the new Pavilion described below. Furthermore, the design of Wagner Park has been developed to comply with the Waterfront Edge Design Guidelines (WEDG) through innovative and integrated landscape, architectural, and engineering site planning. WEDG is a rating system and set of guidelines to create resilient, ecological, and accessible waterfronts. The plantings on the water side of the Wagner Park flood alignment would tolerate salt spray and temporary inundation, reduce maintenance costs and provide ecological benefits. Planting designs in some of the terraced planters that transition down to the Esplanade would serve as rain gardens for capturing and filtering precipitation. Stormwater from planters and hardscape would be routed to an infiltration gallery located underneath the Esplanade, to reduce the point source discharge of stormwater to the Hudson River. The layout reduces risk of coastal flood hazards while enhancing waterfront access and providing a newly continuous waterfront walkway experience that improves Battery Park City's connection to the Pier A Plaza and The Battery. On the "dry" side of the flood alignment, a reuse cistern would capture stormwater generated during rain events. Reuse measures include site washdown, drip irrigation, and Pavilion flush fixtures. Water captured by the cistern would be treated via a proprietary treatment system and distributed throughout the Park.

In response to concerns raised by the community and elected officials subsequent to the publication of the DEIS, in August 2022, BPCA announced that it would make changes to the design of the new Wagner Park to increase the lawn space by an additional 12,800 sf and totaling 30,050 sf of lawn area in Wagner Park. The existing lawn space in Wagner Park is 33,750 sf, so the new Wagner Park design provides a comparable amount of lawn space compared to the existing park. This revision represents a 74 percent increase in lawn space compared to the design presented in the DEIS. The additional lawn space was achieved by reducing a portion of the space allocated to gardens, as well as 6,922 sf of hardscape, while preserving universal accessibility. BPCA has also added ten more trees to within Wagner Park, for a total net increase of 126 trees.

The SBPCR Project enhances Wagner Park's programmatic diversity and provides an opportunity for a new waterfront marine habitat educational area along the Pier A inlet. The Pier A inlet design converts a concrete relieving platform and rip-rap edge to a terraced condition that improves habitat opportunities. An observation deck is proposed along the Pier A inlet. The construction of the deck would remove a portion of the relieving platform and replace it with a metal grate platform, which would allow 50 percent of available light to pass through.

The SBPCR Project's design also calls for assessing all materials including existing site stone, wood, trench drains, trees, shrubs and plants for salvage. A select amount of materials has been targeted to be reused within the SBPCR Project site. The remaining materials would be recycled or reused offsite where possible. Paving color and material selections are carefully calibrated to increase the park's solar reflectance index (SRI) reducing the park's urban heat island contribution. Site lighting carefully follows dark sky principles to reduce glare and enhance nighttime viewing of the New York Harbor and Statue of Liberty. Wagner Park's carefully designed planting plan is organized around four regional plant communities including tidal estuary, maritime meadow, maritime forest, and upland woodland. The landscape design's use of native plants reduces water consumption and reduces maintenance labor while significantly boosting local biodiversity and habitat support. The SBPCR Project's turfgrass areas make use of subsurface irrigation to reduce water consumption by more than 30 percent.

Following the Wagner Park design principles, the north and south allées of trees along Battery Place would be recreated along two ramps which connect the northern and southern arrival points of Wagner Park with the raised park and the new Pavilion. Based in part on the South BPC Study and conclusions, along with the Project Team's own analysis, the Team concurred that the existing Pavilion buildings were in need of major repair; more importantly, they are below the DFE. It was concluded that moving the existing Pavilion presented a variety of risks related to engineering, safety, and cost. Accordingly, the Project Team proposed a new Pavilion on the raised park. To accommodate the buried floodwall, as well as accessibility and functionality issues related to the elevation of the park, the existing Pavilion would be replaced with a new Pavilion in a manner that is sensitive to, and in overall harmony with, the elements of the 1995 Wagner Park design.

The design of the proposed Pavilion targets International Living Future Institute (ILFI) Zero Carbon certification which requires reduction of operational and embodied carbon. In addition, the SBPCR Project is being designed to exceed the ILFI target of 25 percent reduction of energy use intensity (EUI). The SBPCR Project would exceed this target with energy reduction via a Variable Refrigerant Flow (VRF) heat recovery system, split system fan coil units, and many other energy conservation measures in the selection of building systems. Highly efficient, low carbon insulation, high recycled content rebar, low carbon

concrete, low emitting materials, triple glazing with low-E coating and bird deterrence are among the many sustainable features of the design.

The location of the proposed Pavilion would be similar to the existing structure, but with a slightly smaller footprint and elevated approximately 11 to 12 feet above ground level, and set back closer to Battery Place. The Pavilion would have three (3) levels: ground, park and roof levels. The ground level would include maintenance, programming and storage space for the BPCA Parks Department and a kitchen to support the restaurant operating at the park level. The park level would include public restrooms, a new community/educational center, and a restaurant with both indoor and outdoor seating. The roof level would feature a green roof (i.e., plantings) and provide additional public open space, while also accommodating the storage of mechanical equipment. The total square footage of the building would be 18,235.

Pier A Plaza

The Pier A Plaza (or the Plaza) is at the lowest elevation in the Project Area. The flood alignment would consist of a newly raised segment of Pier A Plaza in combination with flip-up deployables and a short section of exposed floodwall. The DFE in this area is 18.5 feet, and the HOI ranges from approximately 8.5 to 11.5 feet. Flip-up deployables would seal up against new permanent columns to be located on the upper level of the Plaza. The columns are designed to complement the materials of Pier A Plaza, and would be placed to accommodate views to the water, circulation (pedestrian, biking, and vehicular), and the programmed use of the plaza. The existing paving materials of Pier A Plaza would be retained, with new material added for seating and increased planting. The Plaza would allow for direct and universal access to Pier A and between the upper and lower levels of the Plaza, and would also maintain the bicycle connection from The Battery to the Hudson River Greenway, at the periphery of the Plaza. Provision of building-specific wet-waterproofing protection of Pier A has been previously addressed by BPCA and is not part of this Project scope.

To protect against accidental or intentional vehicle breaches of the pedestrian-oriented Plaza, physical site security measures are planned for the northern perimeter of the Pier A Plaza, adjacent to the flood alignment. A 40-inch high barrier is proposed along the southern sidewalk of Battery Place running from the end of the southern allée of trees in Wagner Park eastward along the northern line of Pier A Plaza, then turning south and terminating at the exposed floodwall above the Battery Park Underpass. This security barrier is to be supplemented with bollards at stairs and access points as needed. The exposed floodwall would also serve as a site security measure.

In order to address the greater flood vulnerability of the lower lying portions of Pier A Plaza that would be subject to daily tidal flooding in the future, the northern section of the Plaza would be raised by approximately four feet, creating a bi-level Plaza and reducing the required height of the flip-up deployables. In addition, the two-level Plaza design would allow The Battery Coastal Resilience Project, which traverses The Battery along the water's edge, to tie into the SBPCR Project. The Battery Coastal Resilience Project is being implemented by New York City Economic Development Corporation (NYCEDC) on behalf of New York City Department of Parks & Recreation (NYC Parks) and consists of rebuilding The Battery Wharf to an elevation intended to address tidal flooding impacts associated with projected sea level rise.

The Battery

As the flood alignment continues east from Pier A Plaza, it extends into the Battery Bikeway on the north side of The Battery. This section of the flood alignment is comprised of a combination of flip-up deployables, an exposed floodwall, and a floodwall beneath a landscaped berm. In this segment, the DFE ranges from 15 to 18.5 feet, and the HOI decreases from 9.5 to 0 feet, as the alignment follows the increasing natural elevation at the east end of the Project alignment. This concept reconfigures the existing bikeway and requires the relocation of the Peter Caesar Alberti Marker monument situated along the south side of the Battery Place sidewalk. This monument would be relocated as close to the current location as possible, in coordination with NYC Parks.

Although the grades in this portion of the Project Area are being elevated to meet required DFEs, the circulation, landscape architecture, use of the bikeway, and a landscaped public park edge would remain. As the flood alignment continues east towards State Street, which is on naturally higher ground, the DFEs and HOIs start to descend, affected by existing contours and increased distance from the Hudson River shoreline. Once the flood alignment reaches high ground in the easternmost section of the Project Area, which naturally aligns with the DFE, it terminates.

The physical site security measures described in the Pier A Plaza section above would terminate in this segment of the SBPCR Project at the exposed floodwall above the Battery Park Underpass. This would include the 40-inch high barrier supplemented with bollards at stairs and access points as needed.

Interior Drainage Improvements

The existing sewer infrastructure crossing underneath the SBPCR Study Area would have to be isolated to preclude the coastal surge from entering the Study Area. To accomplish this, an interior drainage management system would be implemented that includes:

- Installation of tidegates: Tidegates would be installed at two existing separate municipal storm sewer (MS4) overflows - one at 1st Place and the second at Rector Street. A third tidegate would be installed on the combined sewer overflow (CSO) line at Pier A Plaza southeast of Pier A.

- Installation of isolation valves: Two isolation valves would be installed in The Battery. One isolation valve would be installed at the 12-inch diameter storm drain that collects runoff from The Battery, approximately 50-feet east of the Battery Park Underpass structure underneath The Battery. A sanitary sewer isolation valve would be installed just north of The Battery comfort station. The valves would be installed underground, connected to existing mains, and require an excavation area of approximately four feet by four feet. The valves would remain in the open position during non-coastal storm events. Only in advance of a major coastal storm event, the valves would be closed to prevent coastal waters from surging through the stormwater drain and the sanitary lines connected to the comfort station. The Battery and the comfort station would be closed to the public during such major coastal storm events.

- Near Surface Isolation (NSI): The NSI system would consist of the installation of a gate within the existing regulator structures, M9, M8, and M7, which would be closed in a flood event to prevent the storm surge from rising through the interceptor line and reaching the street level. Additionally, four interceptor manholes along West Street between Battery Place and Albany Street would be pressure proofed and retrofitted to receive a cover that can be sealed shut and locked during a flood

event to resist the pressure resulting from the surge rising through the interceptor line and the piping connecting the manholes to the interceptor.

PURPOSE AND NEED

During Superstorm Sandy in 2012, storm and coastal surge inundated portions of Lower Manhattan on its western side through areas in or adjacent to northern Battery Park City and Pier A Plaza south of Wagner Park. Water also found its way onto One World Trade Center and the Hugh L. Carey Tunnel (formerly known as the Brooklyn-Battery Tunnel) and impacted much of Lower Manhattan's critical infrastructure.

The SBPCR Project's primary goal is risk reduction in the southern extremes of Battery Park City. This would be accomplished through implementation of integrated flood risk measures, while meeting the design criteria for a 100-year storm event, inclusive of increased intensity and frequency of rainfall, coastal surge and predicted sea level rise.

In order to be consistent with the targets of other Lower Manhattan Coastal Resiliency (LMCR) projects, SBPCR is also designed to be adaptable to provide flood risk reduction for a projected 100-year storm in the 2050s, inclusive of sea level rise, at such time as the North/West BPC Resiliency Project is constructed and a tie-in between the two systems is created. The design flood elevations necessary to meet these design objectives are determined by evaluating three factors that affect flood elevations – the projected height of water during a flood event, projected sea level rise, and wave action.

In determining the DFE that will provide the necessary protection, the project team utilized FEMA estimates of the anticipated height of the water (not including waves) that would occur during a 100-year storm, known as the stillwater level. The stillwater elevation in the Project Area has been determined to be 11.3 feet above sea level.

The modeling for the project – and all other LMCR projects -- also considers sea level rise, in accordance with values established by the New York City Panel on Climate Change (NPCC), a 20-member independent advisory body consisting of leading climate change and impact scientists, academics, and private sector practitioners. In its most recent report issued in 2019 (NPCC3), NPCC used data from National Oceanic and Atmospheric Administration (NOAA), the United States Army Corps of Engineers (USACE), and other leading climate scientists — as well as observed trends and its own scholarly work — to formulate various sea level rise projections for New York City. Among its findings, NPCC confirms both that the pace of sea level rise is quickening -- due in part to the acceleration of Arctic glacial melt -- and that, due to an array of factors, New York City sea level rise is outpacing the global average. In line with every other LMCR project, the SBPCR project team added the NPCC's 90th percentile future sea level rise projections to FEMA's current stillwater elevation definition when estimating the expected increase in stillwater elevation by 2050 — an increase of 30 inches.

The final primary consideration is wave impacts.[2] The project team used numerical wave models to determine the expected wave heights in the project area. Wave impacts in this area occur due to the study area's relative location in New York Harbor, where there is substantial "fetch," or space for waves to gain energy across open water before reaching land. After the waves break, the wave run-up on the shoreline structures and the possibility of wave "overtopping" of the flood barrier system can materially increase the projected design flood elevation.

[2] DFE formulation also considers a FEMA-required margin of error called "freeboard."

The SBPCR Project is expected to be accredited by FEMA. FEMA accreditation will remove the Project Area from the mapped flood zone. As a result, owners in the area who have a federally-backed mortgage would no longer be required to obtain flood insurance.

The purpose of the SBPCR Project is to:

- Deliver a reliable coastal flood control system to provide risk reduction to property, residents and assets within the vicinity of South Battery Park City in response to the design storm event;
- Preserve to the maximum extent practicable, open space resources and opportunities to view and interact with the Manhattan waterfront, particularly in Wagner Park, Pier A Plaza and The Battery; and,
- Avoid or minimize disruption to existing below and above-ground infrastructure (i.e., water and sewer infrastructure, subways, tunnels, utilities, etc.) from flood events.

Specific objectives of the SBPCR Project are to:

- Provide a reliable coastal flood control system that minimizes risk and the need for operational interventions by relying primarily on passive flood control technology as opposed to mechanical "deployable" flood control technology;
- Construct and operate the project in an environmentally responsible manner;
- Preserve to the greatest extent practicable the character and design aesthetic of the community and its interface with the BPC waterfront and access to coastal viewsheds, particularly views of the harbor and Statue of Liberty; and
- Utilize cost-effective solutions to maximize capital investment over the lifespan of the SBPCR Project.

ALTERNATIVES

The FEIS evaluates the alternatives considered for the SBPCR Project, identifies the alternatives eliminated from further consideration and the alternative that was selected for further analysis (the Proposed Action).

No Action Condition

Under the No Action Condition, there would be no comprehensive flood alignment within the Study Area and Battery Park City would remain vulnerable to both low inundation flooding and the 100-year storm event. Without flood protection, the Study Area including the Museum of Jewish Heritage, Wagner Park, Pier A Plaza, and The Battery would be subject to storm damage from major and minor flood events.

The No Action Condition consists of other planned or ongoing projects within the Study Area. These projects are often referred to as the "No Action" projects and are assumed to be constructed whether the Proposed Action is constructed or not. The Battery Coastal Resilience Project is an NYCEDC project within the Study Area and would connect to the SBPCR Project at Pier A Plaza. The Battery Park Underpass and West Street Underpass Project is an New York City Department of Transportation (NYCDOT) project that would provide protection for the Battery Park and West Street underpasses from future sea level rise and flood damage.

BPCA considered and eliminated several alternatives within each segment, as detailed in Section 2.2 Reasonable Alternatives to the Proposed Action of the FEIS, including:

1st Place

Due to the limited size of this section, the necessity for the Proposed Action to follow the 100-year floodplain contours, provide FEMA accreditation and to maintain emergency access and egress, only one alternative is feasible for 1st Place.

Museum of Jewish Heritage

- Alternative 2 (Flood mitigation built into façade of Museum) was eliminated due to potential risk and disruption to the Museum.

Wagner Park

Three alternatives were considered for Wagner Park:

- Alternative 1 (Inland Alternative) was eliminated as it does not meet the project purpose and need for the following reason: a new Pavilion at the same elevation would not achieve a sufficient DFE to provide the necessary protection; it would leave the majority of Wagner Park unprotected during a storm event, resulting in prolonged and repeated closures and considerable costs for recurrent repairs to the Park; and it would rely almost exclusively on deployables, which are subject to mechanical and human error.

- Alternative 2 (Waterfront Edge Alternative) was eliminated due to engineering complexity and the elimination of waterfront views.

Additionally, two alternatives were evaluated to replace or preserve the existing Pavilion and determined to be infeasible, while an alternative design of the shoreline along Pier A inlet was rejected in favor of the current design, which reduced fill and over-water coverage.

Pier A Plaza

- Alternative 1 (Deployable) was determined to be economically and technically infeasible.

The Battery

- Alternative 1 (Flood mitigation using a combination of raised grade with flip-up deployables and flood walls) was determined not to meet the project purpose and need in several respects.
- Alternative 2 (Freestanding sculptural floodwall) was eliminated due to engineering and design challenges.

Interior Drainage Improvements

- Alternative 1 (Interceptor Gate Chambers and Buildings) was eliminated after consultation with NYCDEP, as it was not suitable for NYCDEP's short- and long-term operations and maintenance strategies.

PROBABLE IMPACTS OF THE PROPOSED ACTION

OPERATIONAL IMPACTS

The FEIS analyzed the potential environmental impacts of the Proposed Action for the 2024 analysis year, when the SBPCR Project is expected to be completed. Of the technical analyses that were evaluated in the FEIS, socioeconomic conditions, community facilities and services, solid waste and sanitation services, and public health technical disciplines were screened out and did not require detailed analysis. The resources that were analyzed in the FEIS for long-term (operational) impacts are described in **Table 1**. Of these resources, the analyses concluded that the SBPCR Project would have no significant adverse impact on: land use, zoning and public policy, open space, shadows, neighborhood character, natural resources, water and sewer infrastructure, transportation, hazardous materials, energy, air quality, GHG emissions, noise and vibration. **Table 1** provides a brief summary of these conclusions. The analysis also concluded that the SBPCR Project would have significant adverse impacts on historical and cultural resources as well as urban design and visual resources as further described below.

Historic and Cultural Resources

The FEIS examined the potential for the Proposed Action to impact historical and cultural resources within the Study Area in accordance with the SEQR and Section 14.09 of the New York State Historic Preservation Act (SHPA) (Section 14.09). In addition, because a federal permit would be sought from the US Army Corps of Engineers (USACE), the project must also comply with Section 106 of the National Historic Preservation Act (NHPA).

Section 106 requires the identification of the Area of Potential Effects (APE) which is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if such properties exist" (36 CFR § 800.16[d]). Section 14.09 refers to this as the project impact area; however, for purposes of this FEIS, all such areas will be referred to as APEs. Archaeological and historic architectural APEs have been delineated to take into account potential direct effects of the Proposed Action on archaeological resources, and potential direct and indirect effects of the proposed flood control system on historic architectural resources.

Historic Architectural Resources

Based on research of the Historic Architectural APE and the National Register eligibility evaluation of Wagner Park undertaken for this project, 28 historic architectural resources were identified. These include National Historic Landmarks (NHLs) and National Register-listed and eligible resources, buildings and districts designated by the New York City Landmarks Preservation Commission (NYC LPC).

The impacts of the Proposed Action were analyzed in accordance with Section 14.09 on the 28 historic architectural resources in the Historic Architectural APE. The three potential findings include:

- No Impact – Undertaking would not impact National Register-listed or eligible resources.
- No Adverse Impact – Undertaking may have potential to directly or indirectly affect historic property, but would not alter characteristics that qualify it for inclusion in the National Register, and, if relevant, impacts could be reduced through design or other means prior to implementation.
- Adverse Impact – Undertaking would directly or indirectly alter characteristics that qualify a property for inclusion in the National Register.

Implementation of the Pier A Inlet Living Shoreline would require a USACE permit and necessitate review of the impacts of such work under Section 106. The proposed shoreline improvements would have No Adverse Effect, given that a Construction Protection Plan (CPP) for Pier A would be prepared, as discussed below.

Under Section 14.09, the Proposed Action would have an Adverse Impact on one resource: Wagner Park. With respect to the remaining 27 resources, the project would result in No Adverse Impact on nine resources, and No Impact on 18 resources. Section 14.09 requires that adverse impacts to National Register-listed and/or eligible resources caused by implementation of the undertaking be resolved through mitigation. Therefore, a Letter of Resolution (LOR) has been executed by BPCA and the New York State Historic Preservation Office (SHPO), dated September 15, 2022, to mitigate the Adverse Impact. Mitigation includes:

- Historic American Landscape Survey (HALS) Documentation of Wagner Park prior to construction. Documentation would include a physical description, historic overview, statement of significance, project information, high-quality digital or large-format photographs, and reproduction of select original plans and historic photographs.
- Interpretive panels installed at the new Wagner Park to describe the original park, and the reasons why it was deemed an exceptionally significant National Register-eligible resource.
- Panels will include QR codes that could be activated on-site and direct users to website describing the history of Wagner Park and the reasons why it was deemed an exceptionally significant National Register-eligible resource; the content could be similar to the panels.
- Phase IB Archaeological Monitoring Plan for archaeological monitoring during construction of the flip-up deployable gate at Pier A Plaza.

Archaeological Resources

Archaeological resources are subject to direct effects caused by subsurface disturbances to previously undisturbed soils or minimally disturbed soils associated with the execution of the Proposed Action. The Archaeological APE includes two components: the horizontal APE, which is the footprint of proposed ground disturbance; and the vertical APE, which is considered as the depth to which the proposed ground disturbance is anticipated to extend.

Archaeological resources are subject to direct effects of the Proposed Action. Subsurface disturbances associated with excavation for implementation of project components have the potential to directly impact known as well as potential archaeological resources. A Phase IA documentary study of the Project Area was requested by the NYC LPC and SHPO.

The SBPCR Project includes alterations to 1st Place, Wagner Park, Pier A Plaza, the area traversed by the Battery Bikeway in the northern portion of The Battery, and along West Street, namely through installation of the utility relocations and drainage improvements. The Proposed Action would create varying levels of ground disturbance, each of which could directly impact potential archaeological resources. The Phase IA documentary study concluded that there are two discrete areas of low to moderate and moderate potential archaeological sensitivity across portions of the APE that may be impacted by the completion of the SBPCR Project.

- The flip-up deployable portion of the flood alignment in Pier A Plaza below the line of West Street and near the west boundary of The Battery possesses moderate potential for encountering the 1857 bulkhead wall.
- Project work associated with the NSI system along the existing connector main between sanitary connection sewer chamber manhole #3 (MH #3) and the sanitary emergency overflow chamber to the west near West Thames Street has the potential to impact the 1857 and the 1871 bulkhead walls. There is low to moderate potential that intact portions of each bulkhead would exist to the north and south of the connector main, and Project actions requiring excavation in this portion of the Archaeological APE may expose these portions of the bulkheads for documentation.

As a result, AECOM proposed the preparation of a Phase IB Archaeological Monitoring Plan as the next step in the compliance process for the consideration and protection of archaeological resources. SHPO concurred with this recommendation in a letter dated January 28, 2022 and NYC LPC concurred on March 2, 2022.

Based on further design refinements, it was determined that there would not be any subsurface disturbance or excavation along the connector main between sanitary connection sewer chamber MH #3 and the sanitary emergency overflow chamber to the west near West Thames Street. Accordingly, as reflected in the LOR, this location need not be included in the Phase IB Archaeological Monitoring Plan.

A Phase IB Archaeological Monitoring Plan was prepared detailing the work plan for archaeological monitoring during construction in Pier A Plaza. NYC LPC concurred with the Phase IB Archaeological Monitoring Plan on August 24, 2022; and SHPO concurred on September 22, 2022.

Urban Design and Visual Resources

The FEIS analyzed the potential impacts to urban design and visual resources of the Study Area for existing conditions, the No Action Condition, and Proposed Action in accordance with the *CEQR Technical Manual* methodologies that define urban design as the totality of components that may affect a pedestrian's experience of public space, and visual resources as the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, or otherwise distinct buildings, and natural resources. The analysis was also prepared in compliance with the New York State Department of Environmental Conservation (NYSDEC) *Assessing and Mitigating Visual Impacts* (DEP-00-2, revised December 13, 2019), which provides guidance on assessing and mitigating effects on aesthetic and visual resources.

In compliance with NYSDEC guidelines, aesthetic resources were identified, and a visual assessment was conducted. Utilizing visual modeling techniques, the conditions that would be present for the Proposed Action were assessed as to their relative visual effects from specific viewpoints and distances. This modeling was conducted to provide some indication as to whether any specific viewpoint might be associated with obvious positive or negative visual effects.

Viewer groups are defined as viewers from the Project Area (e.g., users of Wagner Park, Pier A Plaza, and The Battery) or viewers of the Project Area (e.g., residents, pedestrians and bicyclists on local streets, and motorists on local streets). Viewers are considered in the following three ways:

- The viewer's sensitivity and view duration, with residents considered among the most sensitive viewers, because they may view the proposed visual change from a stationary viewpoint for the

most prolonged periods of time. Motorists on Battery Place and other local streets, on the other hand, could be less sensitive because they may only experience the proposed visual change for a short duration;

- The existing features in the Project Area that obstruct an observer's view of a visual resource; and,
- The distance of the observer from the visual change; as the distance increases, the ability of the viewer to see the details of an object decreases.

A detailed analysis was conducted for the Proposed Action due to the potential for significant adverse impacts on the urban design and aesthetic and visual resources in Wagner Park. According to the *CEQR Technical Manual*, a detailed analysis would be required if the preliminary assessment shows that changes to the pedestrian environment could be significant and adverse. This determination would happen if the following was determined:

- When the project partially or totally blocks a view corridor or a natural or built visual resource, and that resource is rare in the area or considered a defining feature of the neighborhood; or
- When the project changes urban design elements so that the context of a natural or built visual resource is altered.

The Proposed Action would block two existing views from the east side of Wagner Park adjacent to Battery Place through Wagner Park to the Hudson River Waterfront and the Statue of Liberty. The detailed analysis for Wagner Park includes the following additional elements from the preliminary assessment.

- Visualizations of each view showing the existing view compared to the view with the Proposed Action;
- Comparison of the proposed Pavilion to the existing Pavilion;
- Description of the program and use distribution in Wagner Park;
- A cross section and visualizations along Battery Place showing the elevated Wagner Park wall heights, setbacks, and entrances to the proposed Pavilion;
- Landscape plans and visualizations of the Proposed Action in Wagner Park showing paving, planting, and seating; and
- Sections through Battery Place and other pedestrian areas showing sidewalk widths, plantings, furnishings, and other elements of pedestrian streetscape for the Proposed Action in Wagner Park.

Although the detailed analysis is focused on the potential adverse impacts in Wagner Park, visualizations of existing views compared to the views with the Proposed Action are included to provide context to the overall assessment.

The Proposed Action would have no significant adverse impact on urban design or visual resources in the vicinity of 1st Place, the Museum of Jewish Heritage or Wagner Park from viewpoints inside the Park area, Pier A Plaza, and The Battery. However, the Proposed Action would have a significant adverse impact on views along Battery Place towards the Hudson River Waterfront because of the proposed elevation of Wagner Park and the removal of the existing Pavilion.

The Proposed Action would obstruct the existing view of the Hudson River Waterfront from the Wagner Park central plaza and the area near the entrance to the north allée near the Museum of Jewish Heritage. To minimize the adverse impacts on views from Battery Place to the Hudson River Waterfront and the Statue of Liberty, the proposed Pavilion would be located further east and closer to Battery Place compared to the

existing Pavilion. This area is currently the Wagner Park central plaza. The framed and unobstructed view of the Hudson River Waterfront and Statue of Liberty that is currently viewed from the central plaza would be recreated in the proposed Pavilion (see **Figure 1**). The framed and unobstructed view through the Pavilion would be improved with the elevated Pavilion and removal of the northern and southern structures and connecting pedestrian bridge that limit the existing view of the Hudson River Waterfront.

Figure 1: Proposed view of the Hudson River Waterfront and Statue of Liberty from the Pavilion

The Proposed Action would maintain and enhance the existing entrances to Wagner Park through reconstructing the north and south allées. The proposed allées would be designed for universal access with widened 40-foot walkways, trees lining both sides, and a gentle 8 percent slope to the Pavilion. Along each allée, there would be new seating and plateaus along the walkway providing pedestrians opportunities to stop and rest. **Figure 2** and **Figure 3** show renderings of the proposed north and south allées.

The entrance to the north allée would become the vehicle drop off point for tourist buses and other vehicles dropping off park users, and the north allée entrance would be softened, or rounded, to allow for more natural pedestrian movements into Wagner Park from Battery Place (see **Figure 4**). In addition, this northern entrance would be located near the existing MTA bus stop. The Proposed Action would maintain the location of this MTA bus stop.

Figure 2: Proposed north allée leading to the Pavilion

Figure 3: Proposed south allée leading to the Pavilion

Figure 4: Proposed Action in Wagner Park along Battery Place

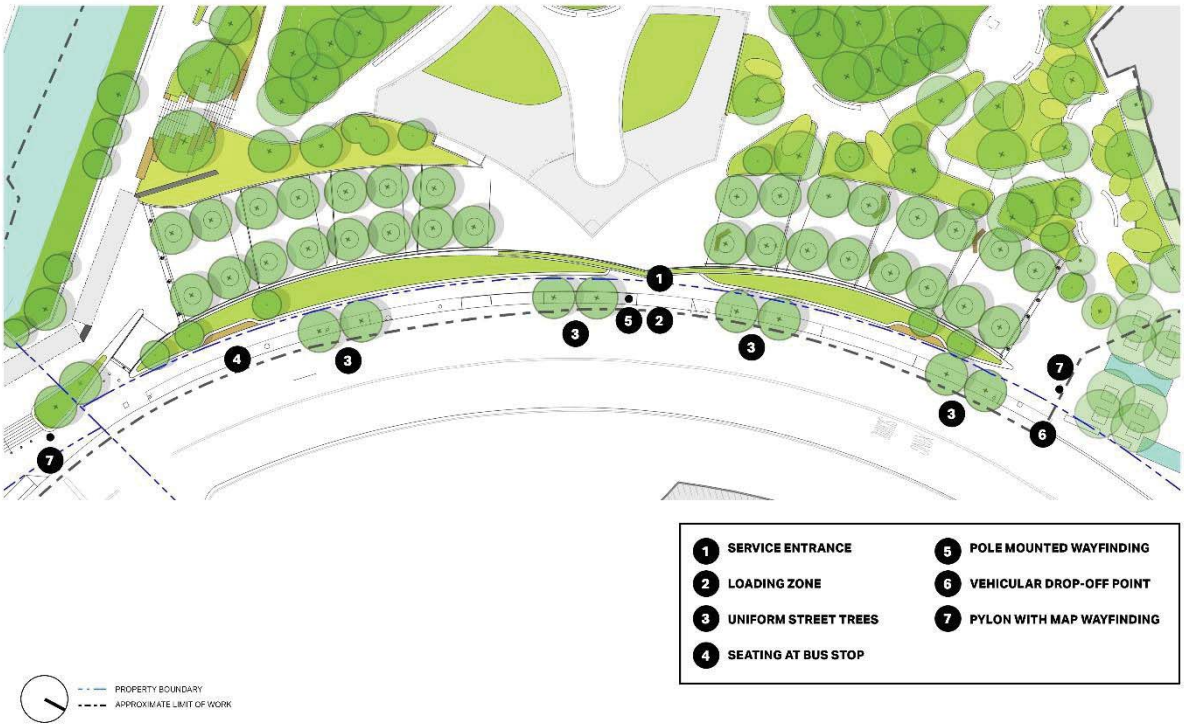


Table 1: Summary of Operational Impacts

Resource	No Action Condition	Proposed Action
Land Use, Zoning, and Public Policy	Land uses within the Study Area still subject to flooding both during minor and major storm events.	**No significant adverse impacts.** Would enhance access to the Hudson River waterfront and improve the amenities and recreational facilities within Wagner Park, Pier A Plaza, and The Battery.
Open Space	The Battery Park Underpass and West Street Underpass Project and The Battery Coastal Resilience Project would have no direct impact on open spaces in the Study Area. Open spaces within the Study Area still subject to flooding both during minor and major storm events.	**No significant adverse impacts.** Would have no direct impact on open space in the Project Area. Proposed Action would maintain open space in the Battery Park City Esplanade near the Museum of Jewish Heritage, Wagner Park, Pier A Plaza, and The Battery.
Shadows	No significant adverse shadow impacts. Pavilion would remain in its existing location, and its longest shadow cast is 159 feet covering portions of Wagner Park, a sunlight-sensitive resource. No Action Condition projects would not generate incremental shadows.	**No significant adverse impacts.** Sunlight-sensitive resources within Wagner Park, including lawn areas, gardens and tree-lined allées, would receive sufficient direct sunlight throughout growing seasons (March through October).
Historic and Cultural Resources	Historic and cultural resources subject to flooding both during minor and major storm events. Historic architectural resources in Pier A and The Battery could be impacted by the construction of The Battery Coastal Resilience Project in The Battery.	**Phase IA identifies two discrete areas of low to moderate and moderate potential archaeological sensitivity.** Recommend Phase IB archaeological survey consisting of archaeological monitoring during construction for Pier A Plaza. **Significant Adverse Impact on Wagner Park but no adverse impact or no effect on all other historic architectural resources.** LOR executed by BPCA and SHPO on September 15, 2022. Mitigation measures include: HALS documentation; Interpretive panels; QR codes on interpretive panels that could be

Resource	No Action Condition	Proposed Action
		activated on-site directing users to a website; and Phase IB Archaeological Monitoring Plan.
Urban Design and Visual Resources	No significant adverse impacts to urban design and visual resources. No changes to views or view corridors would occur. Urban open spaces and amenities in Study Area would still be subject to flooding both during minor and major storm events. The Battery Coastal Resilience Project would protect The Battery from sea level rise but not the surrounding neighborhood.	**Significant adverse impacts to views of the Hudson River Waterfront from Battery Place in the vicinity of the Pavilion and south of the Museum of Jewish Heritage. No significant adverse impacts to any other views or urban design.** Impacts minimized by reconstruction of Pavilion on elevated Wagner Park, replacement of the unobstructed view of the Statue of Liberty from the new Pavilion, wayfinding signage at Wagner Park entrances, and pedestrian and visual enhancements along Battery Place walkway.
Neighborhood Character	Neighborhood within the Study Area would still be subject to flooding both during minor and major storm events. The Battery Coastal Resilience Project would enhance the waterfront esplanade in The Battery and therefore could have beneficial effects to neighborhood character.	**No significant adverse impacts.** Potential environmental impacts related to historic and cultural resources and urban design and visual resources in Wagner Park would occur, but these impacts would be mitigated to maintain the neighborhood character.
Natural Resources	Negligible impacts on the terrestrial ecosystem, and the existing vegetation and terrestrial natural resources would remain subject to storm events and sea level rise. Negligible beneficial impacts to aquatic ecosystem as additional habitat may be created, but increased storm activity may reduce any benefits due to increased sedimentation and displacement.	**No significant adverse impacts to the terrestrial ecosystem.** To compensate for the removal of approximately 77 trees in The Battery, which is under the jurisdiction of NYC Parks, and within the NYCDOT ROW, 86 new trees would be planted, and three trees would be transplanted. The tree restitution, which is for trees on NYC Parks and NYCDOT property, is valued at approximately $5.2 million.

Resource	No Action Condition	Proposed Action
	No significant adverse impacts to threatened and Endangered species.	114 trees would be removed, and the Proposed Action would replace the removed trees and add new trees, totaling 240 trees, to achieve a net gain of 126 trees throughout the Project Area. **No significant adverse impacts to aquatic ecosystem.** Beneficial operational impacts of habitat improvements in Pier A inlet through increased sunlight, as well as the placement of intertidal and supratidal plantings to a habitat currently devoid of plants. **No significant adverse impacts to threatened and endangered species.**
Water and Sewer Infrastructure	Operation of No Action Condition projects would have negligible impacts on the Combined Sewer System (CSS) and the water infrastructure would remain unchanged. As a result, no changes in the CSS and the water infrastructure would occur.	**No significant adverse impacts.** Proposed Action is in an area entirely connected to sewer and water infrastructure and would not create any type of new development that would be associated with additional permanent water or sanitary sewer demands beyond those that would result from the reconstruction of the Pavilion, which, because it would only be slightly larger, would be negligible. Proposed Action would not create new outfalls nor result in increased impervious surfaces that would increase stormwater runoff. **No significant adverse impacts resulting from the proposed sewer valve closures in The Battery.**
Transportation	Infrastructure would continue to be subject to flooding.	**No significant adverse impacts.** Proposed Action would not generate any traffic, transit or pedestrian trips.

Resource	No Action Condition	Proposed Action
Hazardous Materials	No significant adverse impact. No Action Condition projects have the potential to disturb contaminated materials and increase exposure. They would need to comply with all applicable regulatory requirements and health and safety protocols such that this potential is avoided.	**No significant adverse impacts.** Proposed Action would involve demolition and excavation activities and would have the potential to disturb hazardous materials in the subsurface and existing structures. Proposed Action would also require import of a large volume of regulated clean fill that would include a final soil cover in accordance with the Remedial Action Plan approved by New York City Department of Environmental Protection (NYCDEP) as well as impervious cover (asphalt and/or concrete). This final soil/impervious cover would form a cap providing park users protection from pathways to exposure to any contaminants present below the project construction area.
Energy	No changes to energy consumption would occur.	**No significant adverse impacts.** Negligible energy consumption needed for the operation of the Proposed Action, particularly for the flip-up deployables and the net zero energy targets for the proposed Pavilion.
Air Quality	No changes to air quality would occur.	**No significant adverse impacts.** The total proposed Pavilion building size is smaller than the minimum distance screening threshold for a new building to have potential impacts to the nearest residential buildings
Greenhouse Gas Emissions and Climate Change	No changes to GHG emissions would occur.	**No significant adverse impacts.** Net zero emission targets of the proposed Pavilion would result in an overall net reduction of GHG emissions compared to the current GHG emissions, in compliance with the City's sustainability goals and initiatives and the Climate Leadership and Community Protection Act

Resource	No Action Condition	Proposed Action
		(CLCPA). Design of the proposed Pavilion targets International Living Future Institute (ILFI) Zero Carbon certification which requires the reduction of operational and embodied carbon Design also calls for assessing all materials including existing site stone, wood, trench drains, trees, shrubs and plants for salvage. A select amount of materials have been targeted to be reused. Remaining materials would be recycled or reused offsite where possible.
Noise and Vibration	No significant adverse impacts. Future noise and vibration levels for the No Action Condition would be similar to existing conditions.	**No significant adverse impacts.** No noise and vibration effects would result due to the operation of the flood alignment gates. Except during an emergency condition, the flip-up deployables would not operate. Additionally, maintenance testing is expected to occur once yearly to verify that the flip-up deployables and the underground hydraulic motors and pumps function properly.

CONSTRUCTION IMPACTS

An assessment of the construction activities on the following resources was conducted: transportation, air quality, noise, open space, socioeconomic conditions, community facilities, land use and public policy, neighborhood character, historic and cultural resources, hazardous materials, natural resources, and water and sewer infrastructure. A preliminary assessment is conducted when construction activities are anticipated to be more than two years or when construction activities would directly impact a technical resource. The Proposed Action is anticipated to have a 24-month construction schedule; as such, a preliminary assessment was conducted, summarized below.

Transportation

Based on the Level 1 screening assessment, it was determined that the traffic volume threshold of 50 vehicles per hour (vph) would not be met or exceeded at any intersection during the 6-7 AM peak arrival and 3-4 PM peak departure hours during construction. The peak construction phase would occur during the 12-month period from June 2023 through May 2024. On a typical weekday during this peak phase of construction, 35 construction worker vehicles passenger car equivalents (pces) and 83 trucks (pces) are projected to occur, for a total of 117 vehicles (pces). During both the weekday AM (6-7) and PM (3-4) peak departure hours, 38 vehicle trips are projected to occur: 33 in and 5 out during the AM peak hour; and 5 in and 33 out during the PM peak hour. In addition, all or most of the 35 daily construction worker vehicles would utilize public off-street parking facilities within and near the Project Area.

With a transit modal split of 69 percent, approximately 98 construction workers would arrive and leave *daily* by transit modes (bus and subway). During the AM and PM peak hours, approximately 78 workers would arrive and leave by transit modes, respectively. The projected increase in peak hour transit trips (78) does not meet or exceed the *CEQR* thresholds (200 peak hour transit trips) for detailed analyses, and therefore, no further transit analysis during construction was required.

In addition, with 142 construction workers expected on a typical *weekda*y during the peak construction period, the CEQR threshold of 200 pedestrian trips *per hour* would not be met or exceeded. Therefore, no further pedestrian analysis during construction was required.

Therefore, in accordance with the *CEQR Technical Manual,* this screening assessment concluded that*:*

- No further analysis of traffic was required.
- The thresholds for transit analyses (200 trips per hour) and pedestrian analyses (200 trips per hour) would not be met; therefore, no transit or pedestrian analysis was required.
- A parking shortfall would not occur; therefore, a detailed parking assessment was not required.

Air Quality

The air quality analysis for construction activities considered the following on-site emission sources:

- Trucks and non-road equipment diesel engine exhaust.
- Surface fugitive dust resulting from the movement of trucks and non-road equipment.
- Dust from material handling activities.

The on-site non-road equipment is powered by diesel engines that would generate relatively high levels of NO_2 and PM. Fugitive dust generated by construction activities is also a source of PM. Therefore, the impact assessment on potential construction air quality impacts focused on these two pollutant categories plus CO for which short-term impact standards have been established.

On-site construction activities are considered stationary source activities. Because these activities would occur for 24 months, the reasonable worst-case periods for the pollutants of concern (i.e., PM, CO, NO_2) were determined throughout the duration of construction on an 'annual average' and a 'peak day' basis for $PM_{2.5}$ as the representative pollutant. $PM_{2.5}$ was selected for determining the worst-case periods because the ratio of predicted $PM_{2.5}$ incremental concentrations due to on-site construction activities is considered higher than for the other pollutants particularly including fugitive dust component in addition to equipment engine exhausts. Generally, equipment engine exhaust emission patterns of PM_{10}, CO, and NO_2 would follow $PM_{2.5}$ emissions, since their emission rates are related to the sizes of diesel engines. The one-hour NO_2 analysis has been excluded from the construction-related air quality analysis for the following reasons:

- $PM_{2.5}$ is the critical pollutant based on emissions profiles developed, which show that the one-hour NO_2 impact would be proportionally less, and
- 1-hour NO_2 is based on a three-year averaging period, while the construction duration is less than two years.

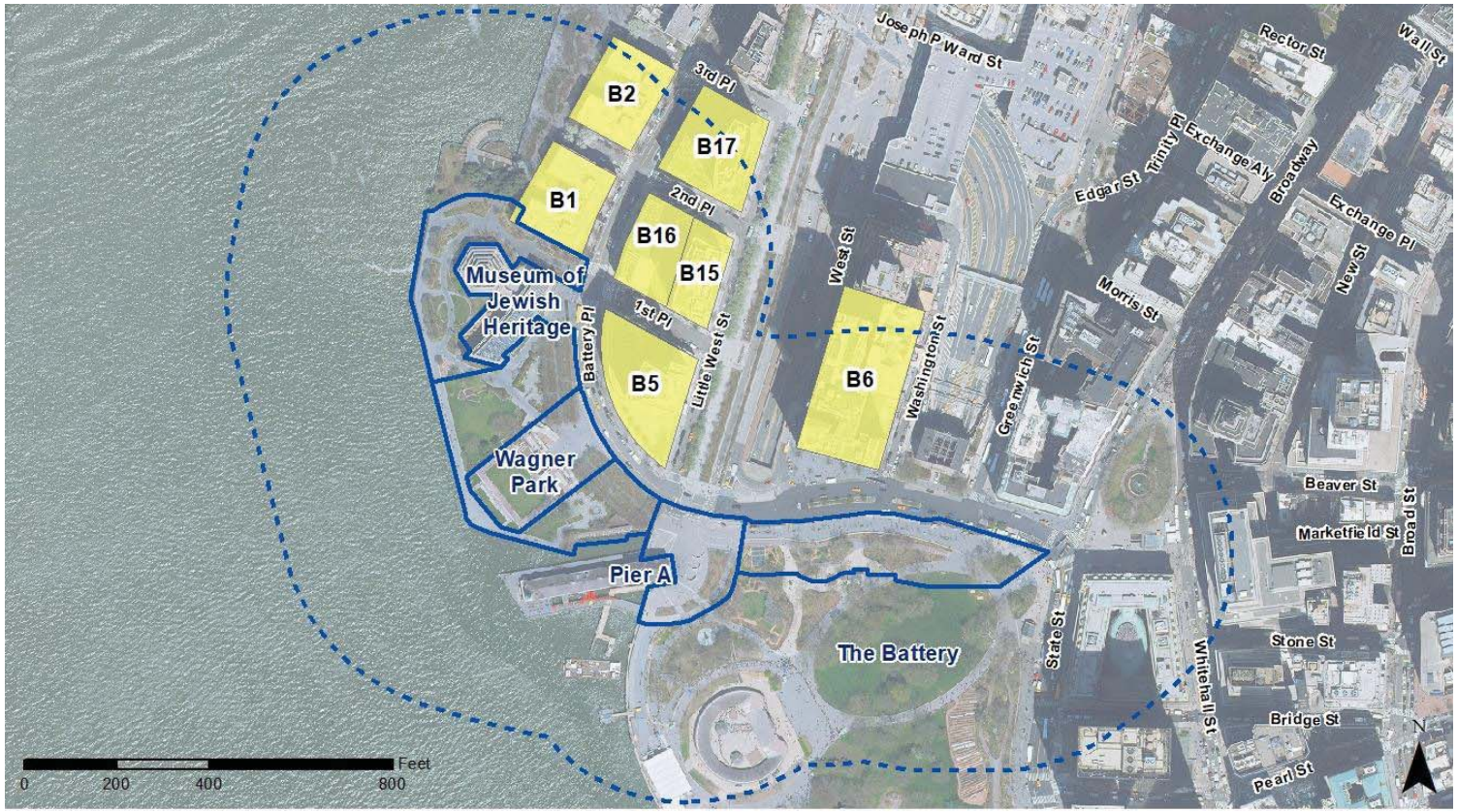
$PM_{2.5}$ emissions profiles were generated over the construction duration to determine the construction periods with the highest potential to affect air quality. The refined dispersion model (the USEPA/AMS AERMOD dispersion model) was used to predict the reasonable worst-case condition of PM, CO, and NO_2 concentrations during the construction period at the sensitive receptors located within the 400-foot radius impact area of the construction sites located within the Project Area.

The maximum predicted total concentrations of $PM_{2.5}$, PM_{10}, and CO for the peak periods are all below the applicable National Ambient Air Quality Standards (NAAQS). All maximum predicted concentrations would occur either along the sidewalk or at the residential units on the lowest floor in each residential building. Based on the dispersion modeling results, the maximum predicted 24-hour average $PM_{2.5}$ incremental concentration of 5.87 $\mu g/m^3$ would be below the NYC *de minimis* criterion, which is considered a screening threshold for temporary construction activities,. However, from a total of 1,151 discrete ground and elevated receptors modeled, exceedances of the NYC annual $PM_{2.5}$ *de minimis* criterion were predicted to occur during both 12-month rolling periods. For the first 12-month rolling period, exceedances occurred at a total of 47 receptors along the sidewalk and at the ground floor of Buildings 1 and 5 shown **Figure 5**. For the second 12-month rolling period, exceedances occurred at five receptors along the sidewalk. Since the NYC *de minimis* criterion is only a screening threshold for temporary construction activities, and the emissions would not result in a violation of the applicable NAAQS, such exceedances are not considered significant.

New York City's Local Law 77, signed in 2003, requires that all nonroad diesel-powered equipment use ultra-low sulfur diesel fuel and utilize BAT for reducing emissions. BPCA has committed to complying with Local Law 77 for the SBPCR project; therefore, construction equipment would comply with the BAT requirements further reducing potential $PM_{2.5}$ emissions. Diesel particulate filters (DPFs) and Tier 4 engines constitute BAT for purposes of this law. It is anticipated that the predicted conservative $PM_{2.5}$ impact would be substantially reduced, given that all nonroad equipment will meet the BAT requirements.

Therefore, the overall construction period air quality impacts would not be significant, and no mitigation measures are warranted.

Figure 5: Potential Affected Residential Receptors within the Study Area



Legend

- Modeled Construction Sites
- Study Area (400-Foot Buffer)
- Sensitive Use within 400 Feet

South Battery Park City Resiliency Project

Noise and Vibration

The noise assessment indicated that elevated noise levels are predicted at two receptors along Battery Place and Little West Street (The Museum of Jewish Heritage and a residential building at 50 Battery Place) during peak construction activities related to the use of impact and pounding equipment, including pile drivers and hoe rams.

With the exception of these two locations (the museum and 50 Battery Place), daytime future noise during the construction period would be nine decibels or less above the measured ambient levels for a period less than 24 months. Although elevated noise levels are predicted at these two sites, they would not persist due to the widespread use of Best Management Practices (BMPs) and the temporary or sporadic duration of impact devices such as pile drivers and hoe rams. During construction, BMPs (such as acoustical curtains or other limp mass barriers hung from temporary trusses along Battery Place or equipment enclosures that shroud stationary equipment) would minimize noise from construction activities for all residences north of the park.

The Battery Park City School (PS 276) is located on the east side of 50 Battery Place. Since it is located further away from the SBPCR Project's construction activities along 1st Place, the construction noise impacts on the school are expected to be similar or lower than those expected at 50 Battery Place. Moreover, with the proximity of residences and schools near the proposed construction at 1st Place, no traditional pile drivers will be used in this area. Instead, the contractor will use alternative means and measures such as drilled piles or press-in pile drivers (e.g. Giken) to minimize noise and vibration from construction activities.

Similarly, although noise from the construction of NSI drainage improvements within the NYCDEP sewer system along Little West Street and the installation of the tidegate at Rector Place are expected to be minimal, acoustical curtains applied to perimeter fencing would minimize any temporary noise impacts. Equipment enclosures or shrouds would also be used to eliminate or minimize noise from exposed stationary equipment.

Regarding vibration, no exceedances of the conservative damage criterion are predicted as a result of the proposed construction equipment. Although the potential for nuisance vibration effects is predicted at the building facades, these effects are temporary and would not persist throughout the construction process. Additionally, the vibration levels were assessed at the exterior building façades and are, therefore, conservative as they do not reflect the building damping and attenuation effects. Vibration impacts from pile drivers would be minimized by substituting impact devices with less vibratory equipment such as augers or press-in pile drivers. With the implementation of BMPs and the limited use of impact devices, there would be no significant adverse noise and vibration impacts during construction.

Historic and Cultural Resources

Historic Architectural Resources

BPCA will prepare CPPs in accordance with the New York City Department of Buildings (NYCDOB) "*Technical Policy and Procedure Notice 10/88: Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction When Subject to Controlled Inspection by Section 27-*

724 and for Any Existing Structure Designated by the Commissioner," which defines adjacent historic structures as resources that are located contiguous to or within a lateral distance of 90 feet from a lot under development or alteration (Polsky, June 6, 1988), for two resources:

- Pier A
- Castle Clinton National Monument

Pier A is located within 90 feet of the flip-up deployable and nuisance flooding alignment slated for construction in Pier A Plaza.

Although Castle Clinton National Monument is situated approximately 200 feet southeast of the Proposed Action in Pier A Plaza, because it is located within The Battery (Block 3/Lot 1) and contiguous to Pier A (Block 1/Lot 16, a CPP will be prepared to ensure that all measures are being undertaken to protect this National Monument during construction on the adjacent lot.

Historic Archaeological Resources

Subsurface disturbances associated with excavation, pile driving, utility removal, replacement and installation, and multiple other construction activities necessary for implementation of the SBPCR Project flood alignment and NSI system have the potential to directly impact previously identified, as well as potential, archaeological resources.

A Phase IA archaeological documentary study of the Project Area was prepared as requested by SHPO and the NYC LPC to assess the potential for encountering National Register-eligible archaeological resources within the Archaeological APE. The results of the Phase IA archaeological assessment indicate that only two discrete areas across the three sections of the Archaeological APE retain archaeological potential:

Pier A Plaza

The flip-up deployable portion of the flood alignment in Pier A Plaza below the line of West Street and near the western boundary of The Battery possesses moderate potential for encountering the 1857 bulkhead wall. Phase IB Archaeological Monitoring Plan during construction is recommended for this portion of the Project Area.

Near Surface Isolation System Locations

Given that the NSI system components would be installed within existing infrastructure connected to the South Interceptor Main, most, if not all, of this section of the Archaeological APE has previously been extensively disturbed, effectively eliminating the potential for encountering intact archaeological resources. One exception to this conclusion may be along the existing connector main between sanitary connection sewer chamber manhole #3 (MH #3) and the sanitary emergency overflow chamber to the west near West Thames Street. As noted above, intact sections of the 1857 and 1871 bulkhead walls may be exposed for documentation during improvements to the existing connector main.

As a result, AECOM proposed the preparation of a Phase IB Archaeological Monitoring Plan as the next step in the compliance process for the consideration and protection of archaeological resources at two locations within the Archaeological APE:

- The flip-up deployable portion of the flood alignment in Pier A Plaza below the line of West Street and near the western boundary of The Battery.

- The route of the existing connector main between sanitary connection sewer chamber MH #3 and the sanitary emergency overflow chamber to the west near West Thames Street.

SHPO concurred with this recommendation in a letter dated January 28, 2022 and NYC LPC concurred on March 2, 2022.

Based on further design refinements, it was determined that there would not be any subsurface disturbance or excavation along the connector main between sanitary connection sewer chamber MH #3 and the sanitary emergency overflow chamber to the west near West Thames Street. This location was not included in the Phase IB Archaeological Monitoring Plan.

The Plan was developed through consultation with BPCA, SHPO and NYC LPC. The Plan identified and mapped onto the latest design plans the sensitive portions of the Pier A Plaza recommended for monitoring during construction, and outlined all protocols to be followed. NYC LPC concurred with the Phase IB Archaeological Monitoring Plan on August 24, 2022; and SHPO concurred on September 22, 2022.

Hazardous Materials

Construction of the Proposed Action would require both demolition and disturbance of existing structures within the Project Area and subsurface disturbance that could encounter contamination within soil and/or fill.

Given the results of the subsurface investigations, hazardous materials are likely to be encountered during construction of the Proposed Action. Excavation and construction activities could disturb these materials and increase the potential pathways for human exposure if not performed with appropriate safety procedures, air monitoring, and engineering controls. Construction of the Proposed Action would require rebuilding of manholes, sewer infrastructure, and gate chambers, which, based on their ages could include asbestos containing material (ACM), lead-based paint (LBP), mercury or polychlorinated biphenyls (PCBs). Such demolition would be conducted in accordance with an approved health and safety plan. A NYCDEP-approved Remedial Action Plan (RAP) has been prepared for the planned construction activities associated with the Proposed Action and is included in Appendix D of the FEIS. The RAP describes the remedial and mitigation measures that will be performed in accordance with all local, state, and federal laws when transporting or disturbing contaminated materials.

A NYCDEP-approved Construction Health and Safety Plan (CHASP) has been prepared for implementation during construction activities and is included in Appendix D of the FEIS. The CHASP proposes measures to ensure that soil is handled appropriately to minimize human contact and to reduce airborne dust in order to protect construction workers, site employees and neighborhood residents. Further, excavated soil is suitable to be re-used on-site as fill material as long as excavated historic fill is backfilled so that it remains in historic fill areas and covered by either impervious cover or clean fill. Excavated soils may also be disposed off-site at a facility licensed to accept historic fill contaminated soils and with appropriate analytical documentation.

The Proposed Action would also require import of a large volume of regulated clean fill that would include a final soil cover in accordance with the RAP, as well as impervious cover (asphalt and/or concrete). This final soil/impervious cover would form a cap providing park users protection from pathways to exposure to any contaminants present below the project construction area. Although hazardous materials are potentially present in the subsurface (related primarily to historic fill placed along the shoreline to create the property), with the implementation of a the NYCDEP-approved RAP and CHASP, no significant

adverse impacts related to hazardous materials would occur as a result of construction of the Proposed Action.

Best Management Practices

The potential for significant adverse impacts would be avoided by ensuring that construction activities are performed in accordance with the following protocols:

- Based on the results of the Phase II Limited Site Investigation, the NYCDEP-approved RAP and CHASP will be implemented during project construction (copies are included in Appendix D of the FEIS). These plans address both the remediation of known and potential environmental conditions that may be encountered during sub-surface disturbance associated with project construction. The purpose of the RAP is to present measures for managing contaminated on-site soil and groundwater and USTs by removing any potentially unknown underground petroleum storage tanks in accordance with applicable federal, state, and local regulations. Contaminated soil management protocols include guidelines for temporary on-site stockpiling and off-site transportation and disposal. The plans incorporate safety and other measures to minimize the potential for impacts to the community and construction workers. The RAP also specifies the need for engineering controls as warranted based on the testing.

- To minimize the potential for impacts to the community and construction workers, all demolition, excavation, and construction work involving soil disturbance will be performed pursuant to the CHASP. The CHASP specifies testing and/or monitoring requirements and details appropriate health and safety measures to be implemented if underground storage tanks, soil and groundwater contamination, or other unforeseen environmental conditions are encountered (e.g., notification of regulatory agencies, dust suppression techniques, appropriate air monitoring action levels and responses, etc.).

- If dewatering is required for construction, testing would be performed to ensure compliance with applicable discharge regulatory requirements. If necessary, pre-treatment would be conducted prior to discharge.

- Unless there is labeling or test data that indicated that electrical equipment, including transformers, is not mercury- and/or PCB-containing, removal and disposal would be performed in accordance with applicable federal, state, and local regulations.

- All material that needed to be disposed of (e.g., miscellaneous debris, tires, contaminated soil, and any excess fill) would be characterized and disposed off-site in accordance with applicable federal, state, and local requirements.

- An inspection of the Pavilion was conducted and no asbestos was identified; accordingly, an Asbestos Assessment Report (ACP-5) has been completed and filed with NYCDEP.

- Any disturbances that would impact below-grade elements (including underground utility lines and vaulted spaces) would be assumed to contain ACM. Construction activities would be monitored for the potential to encounter such below ground elements and sampling/analysis would be performed prior to performing work which may impact such features.

- Universal and regulated wastes including metal halide lamps, mercury (Hg) vapor containing lamps, and associated (assumed) PCB containing lighting ballasts and igniters should be properly segregated and recycled/disposed of in accordance with applicable federal, state, and local requirements.

- Construction and demolition waste management and disposal specifications will be adhered to. These include requirements for waste management goals, diversion and disposal of demolition and construction waste, and a Construction and Demolition Waste Management Plan.

With the implementation of the above protocols and compliance with all applicable federal, State and local regulations and permit programs, there would be no significant adverse impacts related to contaminated/hazardous materials.

Natural Resources

The SBPCR Project occurs at the mouth of the Hudson River close to its confluence with the East River and Upper New York Bay. The upland portions of the SBPCR Project within Wagner Park, Pier A Plaza, and The Battery support terrestrial ecosystems. The Proposed Action would remove approximately 114 trees within the Project Area, largely within Wagner Park, Pier A Plaza, and The Battery. A tree survey has been conducted, and all tree removal and replacement would be done in coordination with BPCA, NYC Parks, and The Battery Conservancy. To compensate for the removal of approximately 77 trees in The Battery, which is under the jurisdiction of NYC Parks, and within the NYCDOT ROW, 86 new trees would be planted, and three trees would be transplanted. The tree restitution, which is for trees on NYC Parks and NYCDOT property, is valued at approximately $5.2 million. An additional 154 trees will be planted as part of the Proposed Action.

In total, the Proposed Action would remove 114 existing trees, and 240 trees would be planted in the Project resulting in a net increase of 126 trees throughout the Project Area.

Construction related to naturalization of the existing rip-rap shoreline of the Pier A inlet, as well as daylighting of the existing relieving platform in this area, will be conducted in accordance with permits to be issued by the USACE and the New York State Department of Environmental Conservation (NYSDEC). The reconstruction of the existing riprap slope would: establish a series of ledges at four distinct elevations; increase the physical complexity of the site; improve the public connection to the water by way of a viewing platform; provide additional intertidal habitat; and provide increased environmental education opportunities. The three-dimensional terracing would be formed by precast concrete gravity structures clad with ECOncrete® with micro-surfacing textures that mimic natural rock/coral features and enhance biological recruitment by modifying small scale hydrodynamics and creating additional habitat complexity. Moreover, the living shoreline design with innovative terraces or benches at different elevations would allow plantings and species usage to change with the anticipated sea level rise in the future. The addition of the ledges would slow down water movement along the shoreline, reduce turbulence, allow for warming and trap sediment that in turn would harbor invertebrate fauna as a food source for marine life. The varying structure elevations with their textured structure surfaces would enhance recruitment of sessile marine organisms (e.g., mussels) and flora.

The proposed upland and in-water construction work would have no effect on any aquatic resources or threatened and endangered species. Accordingly, construction of the SBPCR Project would have no

significant adverse impact on natural resources.

Open Space

The SBPCR Project would have a temporary significant adverse impact on open space near the Museum of Jewish Heritage, Wagner Park, Pier A Plaza, and The Battery during construction. Portions of the Battery Park City Esplanade near the Museum of Jewish Heritage, the entirety of Wagner Park, portions of Pier A Plaza, and portions of The Battery within the Project Area would be closed for the entire 24-month construction duration from October 2022 to the end of September 2024.

To continue to provide public programs and events which have traditionally taken place at Wagner Park, BPCA would be temporarily relocating all of those programs and events to other parks and open space within Battery Park City for the duration of the Proposed Action's construction.

The following is a list of BPCA programs and events that would be relocated to parks and open spaces within Battery Park City during construction of the Proposed Action:

- Go Fish! (series of public fishing festivals) – relocating to South Cove and esplanade;
- Swedish Midsummer Festival – relocating to north lawn and north esplanade of Rockefeller Park;
- River & Blues (July concert series) – relocating to north esplanade and north lawn of Rockefeller Park;
- Silent Disco Dance Party (seasonal community dances) – relocating to Esplanade Plaza or Rockefeller Park;
- Sunset Singing Circle (community singing series) – relocating to park house area of Rockefeller Park;
- Public Art Tours – will feature public art installations in other locations of Battery Park City;
- The three art works currently installed in Wagner Park – *Resonating Bodies* by Tony Cragg, *Eyes* by Louise Bourgeois, and *Ape and Cat* by Jim Dine – would be relocated to alternative temporary sites within Battery Park City to keep them on public view;
- Elements of Nature Drawing (weekly adult art class) – relocating to various gardens in Rockefeller Park;
- Kindie Rock! (weekly live music performance series for toddlers) – relocating to park house area of Rockefeller Park;
- Sunset Yoga – weekly program relocating to south lawn of Rockefeller Park;
- Figure al Fresco (weekly adult figure drawing art program) – relocating to Rector Park East;
- Preschool programs – relocating to park house area of Rockefeller Park;
- Bird & Nature Walks series – will explore other parks and gardens of Battery Park City; and
- Marine education classroom visits- relocating to South Cove and esplanade.

It is anticipated that the temporary closure of Wagner Park and portions of The Battery during SBPCR Project construction would create additional demand for programmed activities in the areas of The Battery that will remain open during construction of the Proposed Action, leading to a significant adverse open

space impact during construction. BPCA has consulted with the NYC Parks regarding potential measures that would help to mitigate the added demand at the Battery during the construction phase of the Proposed Action. As a mitigation measure to address the significant impact to open space during construction, BPCA has committed to provide funding for four additional, seasonal (i.e., May-October) "Playground Associate" positions, whose roles will be to support programming activities in The Battery during construction of the Proposed Action. Such funding will continue for no less than two consecutive years, beginning with the commencement of construction of the Proposed Action.

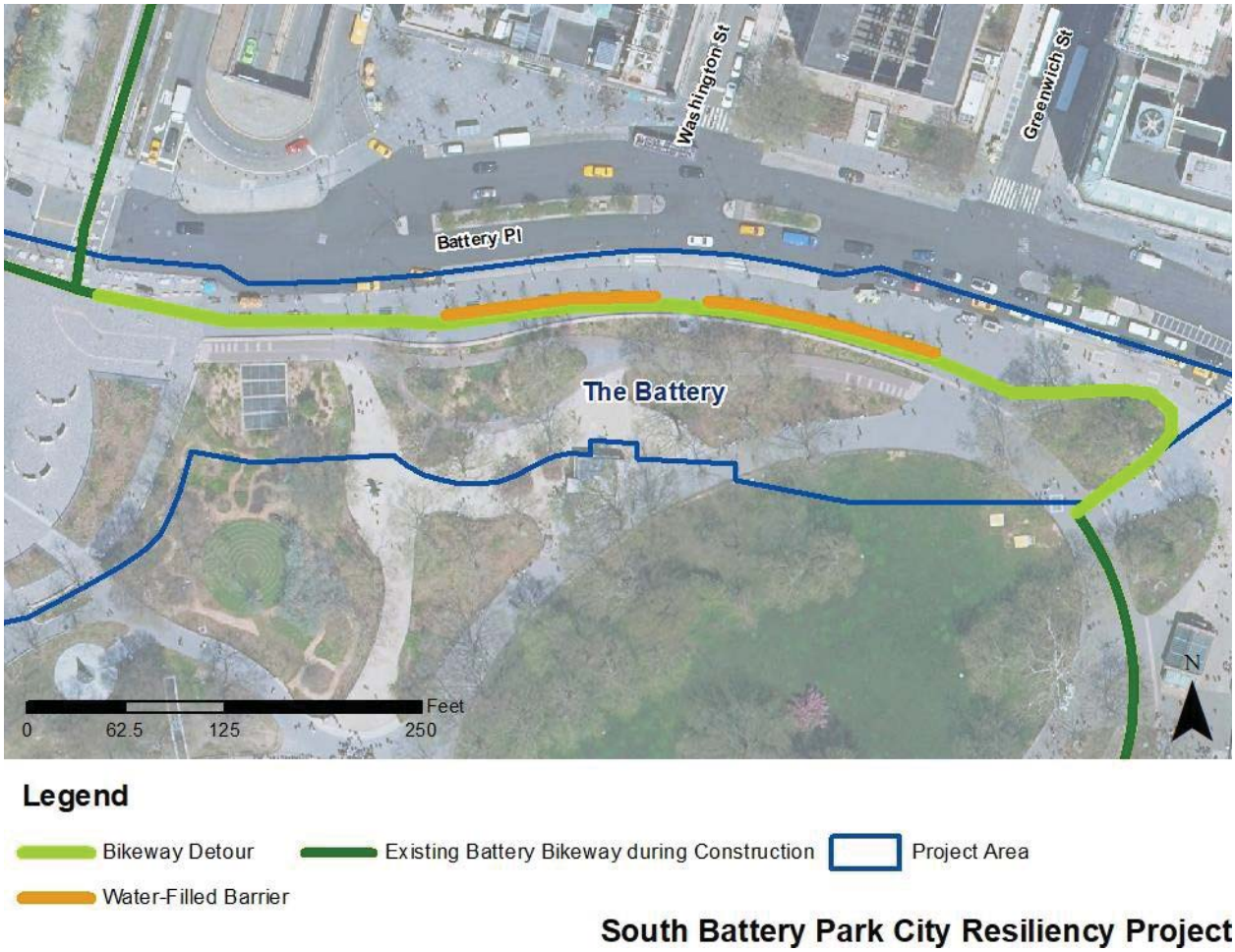
In addition, BPCA has identified approximately 24,000 square feet of space that offers an opportunity for the creation of a temporary additional alternate play space for area residents and visitors. The area in question is directly across Battery Place from the Project Area, at the southern end of the Hudson River Greenway Pedestrian Promenade, south of 3rd Place (see **Figure 6**). Although maintained by BPCA, the referenced area is not owned by BPCA. Thus, approvals will need to be sought and secured from applicable State and City agencies, and any proposed utilization of this space for the purposes outlined above are contingent upon receiving such approvals. If such approvals are granted, BPCA could expand the potential uses of the space to include the creation of a safe and inviting ground surface for play or respite, as well as play equipment and programming supplies available for use by the public. BPCA has recently conducted some preliminary outreach to community representatives to gauge their interest in pursuing this opportunity. Having received generally favorable initial feedback, BPCA will conduct further community outreach and solicit comments and suggestions, while concurrently seeking approval from the necessary agencies. If acceptable to community members and the relevant approving agencies, BPCA's objective would be to implement the improvements to the space in the spring of 2023 and to maintain improvements throughout construction of the Proposed Action.

However, even with this replacement programming, the impacts to open space during construction would not be fully mitigated.

During construction in The Battery, the Battery Bikeway would remain in service; however, a portion of the existing Battery Bikeway would be rerouted to maintain connectivity along the City's bikeway network in Lower Manhattan. The Battery Bikeway would be rerouted along The Battery's northern boundary from State Street to West Street, see **Figure 7**. The temporary bikeway would be located to the north of the fixed wall separating The Battery from the sidewalk along Battery Place. To provide separation and safety between bicyclists and pedestrians, water-filled barriers would be installed to the north of the temporary bikeway along the Battery Place sidewalk.

Figure 6: Proposed Temporary Alternate Play Space

Figure 7: Battery Bikeway Detour



Socioeconomic Conditions

As the Proposed Action results in no residential, employee or business displacements, includes no retail development, does not create land uses markedly different from existing conditions and does not affect a specific industry, significant adverse impacts of construction activities on socioeconomic conditions would not occur.

Community Facilities

The Proposed Action would not physically impact or displace any community resources, nor result in any increases in resident population. It would not have any impact on public schools, healthcare facilities, publicly funded group early childhood programs, libraries or local police and fire facilities. Accordingly, significant adverse impacts of construction activities on community facilities would not occur.

Land Use, Public Policy, and Neighborhood Character

Construction activities related to the SBPCR Project would not result in the permanent change of the use of the Museum of Jewish Heritage, Wagner Park, Pier A Plaza, or The Battery within the Study Area.

In terms of neighborhood character, construction activities would temporarily take place and impact the neighborhood in terms of visual resources, access to Wagner Park, Pier A Plaza, and The Battery, and a measurable, but temporary increase in vehicle traffic. However, overall, these activities would not result in any significant adverse impacts to land use and neighborhood character from construction-related activities.

Water and Sewer Infrastructure

The disruption of existing surface conditions and excavation/pile driving for NSI system construction would have the potential to affect underground infrastructure by direct physical impact. However, such effects would be avoided through BMPs that include One Call mark-outs just prior to construction as well as extensive utility survey and plotting during design. Accordingly, no significant adverse impacts to water and sewer infrastructure would occur during construction activities.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

SEQR requires that an EIS include the identification and assessment of impacts that cannot be avoided or adequately mitigated. Unavoidable significant adverse impacts resulting from the Proposed Action have been identified in the areas historic architectural resources, urban design and visual resources under operational conditions, and to open space during construction.

Historic Architectural Resources

The SBPCR Project would result in an unavoidable adverse impact on National Register-eligible Wagner Park. The Proposed Action would redesign and reconfigure Wagner Park at a higher elevation and would alter the characteristics of the property that qualify it for inclusion in the National Register. SEQR and CEQR require that adverse impacts to National Register-listed and/or eligible resources be resolved through mitigation. Therefore, an LOR has been executed by SHPO and BPCA on September 15, 2022 which requires the following:

- HALS Documentation of Wagner Park prior to construction. Documentation would include a physical description, historic overview, statement of significance, project information, high-quality digital or large-format photographs, and reproduction of select original plans and historic photographs.
- Interpretive panels installed at the new Wagner Park to describe the original park, and the reasons why it was deemed an exceptionally significant National Register-eligible resource.
- Panels will include QR codes that could be activated on-site and direct users to website describing the history of Wagner Park and the reasons why it was deemed an exceptionally significant National Register-eligible resource; the content could be similar to the panels.
- Phase IB Archaeological Monitoring Plan for archaeological monitoring during construction of the flip-up deployable gate at Pier A Plaza.

Urban Design and Visual Resources

The SBPCR Project would have a significant adverse impact on Wagner Park for views along Battery Place towards the Hudson River Waterfront because of the proposed elevation of Wagner Park. In order to meet the SBPCR Project purpose and need, Wagner Park would have to be elevated and redesigned. To minimize the adverse impacts on views from Battery Place to the Hudson River Waterfront and the Statue of Liberty, the Proposed Action would redesign Wagner Park between Battery Place and the Battery Park City Esplanade, construct a new Pavilion on the plateau of the elevated Wagner Park, recreate the framed and

unobstructed view of the Hudson River Waterfront and the Statue of Liberty through the new Pavilion, reconstruct and enhance the northern and southern entrances to Wagner Park, and improve the pedestrian experience on the walkway along Battery Place.

Open Space During Construction

The SBPCR Project would have a temporary significant adverse impact on open space near the Museum of Jewish Heritage, Wagner Park, Pier A Plaza, and The Battery during construction. Portions of the Battery Park City Esplanade near the Museum of Jewish Heritage, the entirety of Wagner Park, portions of Pier A Plaza, and portions of The Battery within the Project Area would be closed for the entire 24-month construction duration from October 2022 to the end of September 2024.

Construction of the Proposed Action would occur concurrently with construction of the Battery Park Underpass and West Street Underpass Project in 2024 and the Battery Park Coastal Resilience Project from 2023 through 2024. During this period, the Proposed Action would displace a minimum of 5.87 acres and a maximum of 6.04 acres of open space in the Project Area. The Proposed Action would have an open space ratio of a minimum of 4.12 acres and a maximum of 4.41 acres per every 1,000 residents, and it would decrease the amount of open space during construction from 11.89 percent to 12.31 percent. A decrease of open space greater than five percent would constitute a substantial change according to the *CEQR Technical Manual*.

To continue to provide public programs and events which have traditionally taken place at Wagner Park, BPCA would temporarily relocate all of the programs and events from Wagner Park to other parks and open spaces within Battery Park City for the duration of the Proposed Action's construction.

It is anticipated that the temporary closure of Wagner Park and portions of The Battery during SBPCR Project construction would create additional demand for programmed activities in the areas of The Battery that will remain open during construction of the Proposed Action, leading to a significant adverse open space impact during construction. BPCA has consulted with the NYC Parks regarding potential measures that would help to mitigate the added demand at the Battery during the construction phase of the Proposed Action. As a mitigation measure to address the significant impact to open space during construction, BPCA is committing to provide funding for four additional, seasonal (i.e., May-October) "Playground Associate" positions, whose roles will be to support programming activities in The Battery during construction of the Proposed Action. Such funding will continue for no less than two consecutive years, beginning with the commencement of construction of the Proposed Action.

In addition, BPCA has identified approximately 24,000 square feet of space that offers an opportunity for the creation of a temporary additional alternate play space for area residents and visitors. The area in question is directly across Battery Place from the Project Area, at the southern end of the Hudson River Greenway Pedestrian Promenade, south of 3rd Place (see **Figure 6)**. Although maintained by BPCA, the referenced area is not owned by BPCA. Thus, approvals will need to be sought and secured from applicable State and City agencies, and any proposed utilization of this space for the purposes outlined above are contingent upon receiving such approvals. If such approvals are granted, BPCA could expand the potential uses of the space to include the creation of a safe and inviting ground surface for play or respite, as well as play equipment and programming supplies available for use by the public. BPCA has recently conducted some preliminary outreach to community representatives to gauge their interest in pursuing this opportunity. Having received generally favorable initial feedback, BPCA will conduct further community outreach and solicit comments and suggestions, while concurrently seeking approval from the necessary

agencies. If acceptable to community members and the relevant approving agencies, BPCA's objective would be to implement the improvements to the space in the spring of 2023 and to maintain improvements throughout construction of the Proposed Action.

However, even with this replacement programming, the impacts to open space during construction would not be fully mitigated.

During construction in The Battery, the existing Battery Bikeway would remain in service; however, a portion of the existing Battery Bikeway would be rerouted to maintain connectivity along the City's bikeway network in Lower Manhattan. The Battery Bikeway would be rerouted along The Battery's northern boundary from State Street to West Street. The temporary bikeway would be located to the north of the fixed wall separating The Battery from the sidewalk along Battery Place (see **Figure *7***). To provide separation and safety between bicyclists and pedestrians, water-filled barriers would be installed to the north of the temporary bikeway along the Battery Place sidewalk.

GROWTH INDUCING ASPECTS OF THE PROPOSED ACTION

This section focuses on whether the Proposed Action has the potential to induce new development within the study area by supporting or encouraging such development. Typically, growth induced impacts occur when a project:

- Attracts significant increases in local population by creating or relocating employment or by providing support facilities or services; and/or
- Increases development potential of an area due to the introduction of roads, water and sewer infrastructure, or other utilities.

The SBPCR Project would provide flood control measures that will safeguard the area from the 100-year storm event. While the landscape of the Study Area would be changed by the flood technology implemented (buried floodwall, flip-up deployables, etc.), the use of the Study Area would not be altered. After the SBPCR Project is constructed, 1st Place, the Museum of Jewish Heritage, Wagner Park, Pier A Plaza and The Battery would all continue to function as they currently do. This important lower Manhattan waterfront resource already attracts a consistent and large volume of residents and visitors, which would not change after the SBPCR Project is implemented.

As a highly developed urban area, there is limited, if any, space available for future development. Nonetheless, the SBPCR Project would not incorporate new roads, water or sewer infrastructure, or other utilities that would increase the development potential of the area.

As such, the SBPCR Project does not have the potential to induce future growth within the Study Area.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

This section provides identification of whether the Proposed Action would cause permanent loss of one or more environmental resources including natural or manmade resources. Such resources would be made unavailable for further use due to construction or operation of the Proposed Action.

Both natural and manmade resources would be expended in the construction and operation of the SBPCR Project, including:

- building materials used for construction;

- energy through consumption of gas and electricity during construction activities; and,
- human labor needed to construct and operate the flood protection system.

These are considered irretrievable commitments because their reuse for another purpose is not likely. The SBPCR Project also constitutes a long-term commitment of land, thereby rendering this land unusable for other purposes. Lastly, funds committed to the design, construction, and operation of the Proposed Action would be unavailable to other projects.

These commitments of resources and materials are weighed against the Proposed Action's purpose and need/goals and objectives, as identified in the Purpose and Need section of this Findings Statement. The Proposed Action's fulfillment of the project purpose and need and goals/objectives outweighs the irreversible and irretrievable commitment of resources.

CERTIFICATION OF FINDINGS

Having considered the draft and final Environmental Impact Statement and having considered the preceding written facts and conclusions relied on to meet the requirements of 6 NYCRR Part 617.11, BPCA finds and certifies that:

1. The requirements of 6 NYCRR Part 617 have been met; and
2. Consistent with social, economic and other essential considerations from among the reasonable alternatives available, the action is the one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable.
3. The Proposed Action is consistent with the coastal policies of the State of New York and is consistent to the maximum extent practicable with New York City's Local Waterfront Revitalization Program. .

Name of Agency: Hugh L. Carey Battery Park City Authority

Signature of Responsible Officer: DocuSigned by: 879FAFDA6A5A4D8...

Name/Title of Responsible Officer: Benjamin Jones, President & CEO

Date: 10/27/2022