

SECTION 4: PROJECT RECOMMENDATIONS

Based upon research, site visits, public input and Riverfront Committee work, a series of recommendations were developed for Sleightsburgh, Freer and Lighthouse Parks along with Black Creek Preserve. There are no major recommendations being proposed for Esopus Meadows Preserve. Detailed concept plans and order of magnitude cost estimates were prepared for Freer and Lighthouse Parks. Scenic Hudson has prepared a detailed concept plan for proposed improvements. A preliminary concept plan of proposed improvements at Sleightsburgh Park is provided. Regulatory and permitting needs are included within each discussion. Cost estimates are located in **Appendix C. Project Cost Estimates**.

Sleightsburgh Park

Refer to the **Sleightsburgh Park Concept Design** on and for the following project description.

Recommendations

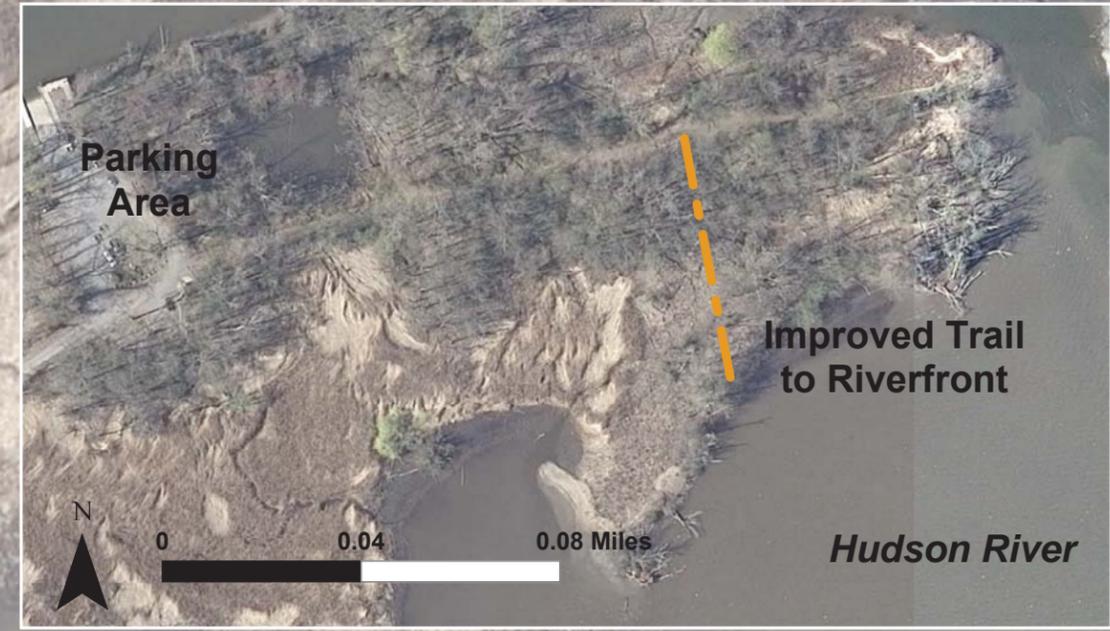
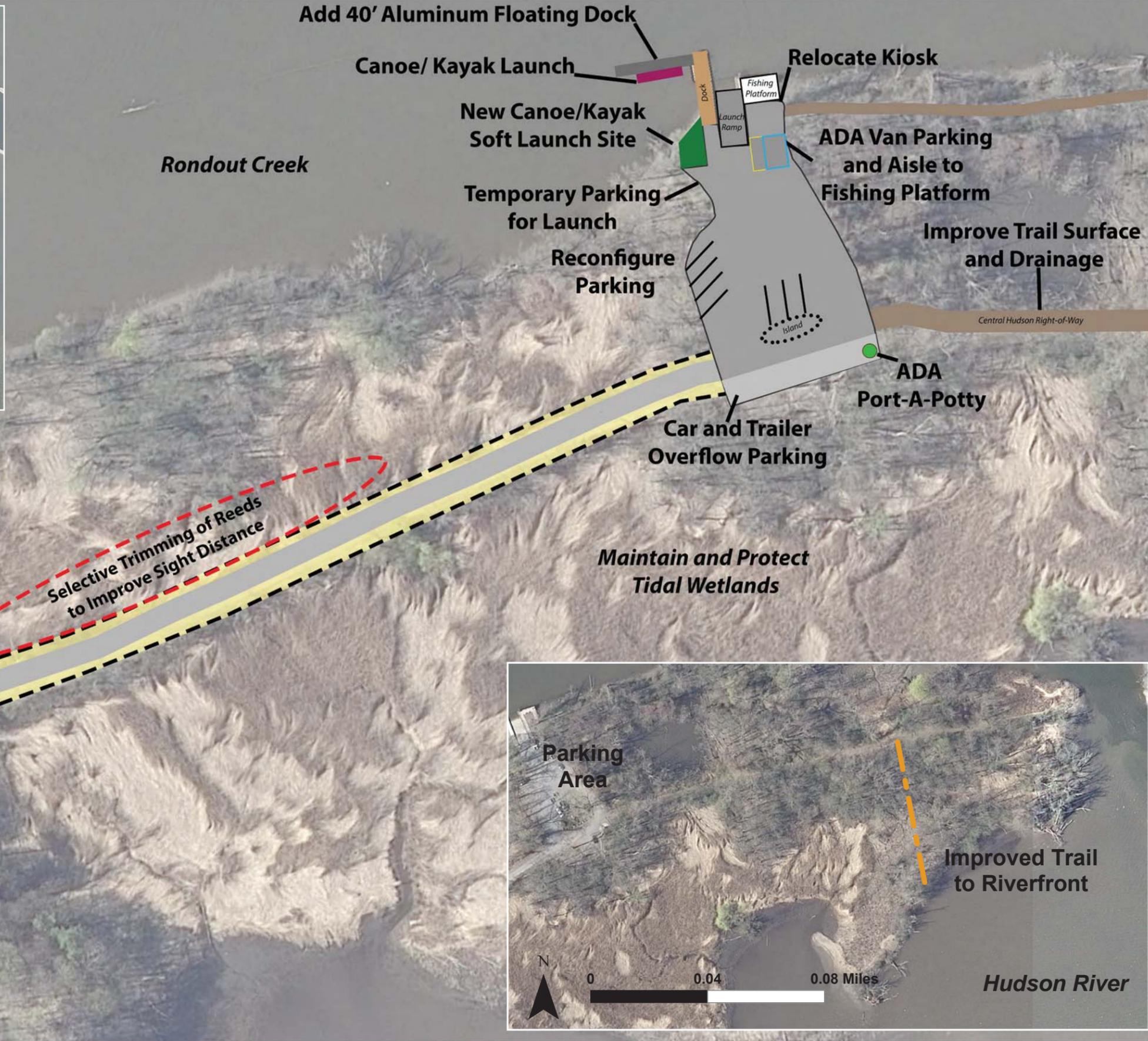
Parking Lot Improvements

SP-1: Between four and five angled boat trailer parking spaces (approximately 10 ft. by 40 ft.) are proposed along the western side of the parking lot. The spaces should be marked with concrete curb stops and/or painted lines with associated signage. Painted lines will require regular maintenance due to the gravel surface. Long-term monitoring of the circulation pattern is recommended to determine if additional spaces can be designated or if less spaces are required. With space limited, it is recommended that the Town test out the above recommendations to find an optimal parking space layout and internal circulation pattern. Once the optimal program has been identified, curb stops can be installed and the painted lines regularly maintained.



Sleightsburgh Park Lot – Angled Parking Spaces Proposed to the Left

SP-2: Designate four boat trailer parking spaces (approximately 10 ft. by 40 ft.) on the northern side of the existing center island. These spaces should also be marked with concrete curb stops and/or painted lines with associated signage. Long-term monitoring of the circulation pattern is recommended to determine the center island can support four boat trailer parking spaces. If insufficient room is available for safe circulation, it is recommended that two trailer spaces be provided on the western side and two vehicle (non-trailer parking) spaces on the eastern side. Overflow trailer and non-trailer parking spaces will remain at the southern portion of the parking lot.



A Program of the New York State Department of Environmental Conservation
 This Project has been funded in part by a grant from the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation.



Sleightburgh Park Concept Design

Esopus Riverfront - Access & Connections Study

SP-3: To improve the internal circulation of the parking lot, one-way circulation is proposed and appropriate signage is recommended to be installed.

SP-4: To improve hand launching opportunities, a temporary canoe/kayak unloading space is proposed adjacent to the proposed canoe/kayak launch (discussed below).

SP-5: One ADA van space is proposed for the area contiguous and immediately south of the fishing platform. This space will include an unobstructed ADA compliant path leading to the fishing platform. The gravel surface will need to be monitored to ensure it remains sufficiently compacted to meet ADA requirements.

SP-6: In an effort to better understand the popularity of Sleightsburgh Park, including the types of visitors (kayak, motorboat, fishing, etc.) and the most popular days and times of the season, visitor surveys are recommended. The resulting information will assist in guiding future parking lot and access improvements, among other issues. Surveys could be done by volunteers and/or could be combined with future boat inspection and cleaning operations.

New Dock and Canoe/Kayak Access

SP-7: To help alleviate congestion at the boat launch, a new 40-foot aluminum floating dock is proposed to increase the amount of temporary docking space available to boaters.

SP-8: The current gangway and dock are not ADA accessible for various reasons including the slope of the gangway and lack of toe guards on the gangway and dock. In addition, the concrete walk leading to the gangway has a 2- to 3-inch rise/step precluding ADA compliance. Additional evaluations and cost estimating are necessary to determine the feasibility of bringing the boat launch and dock into ADA compliance.

SP-9: To the west of the boat ramp, establish a small soft launch for canoes/kayaks and other small watercraft. The launch is recommended to be surfaced with crushed stone and regularly maintained.



Example of a Soft Canoe/Kayak Hand Launch



Access Drive Looking West from the Parking Lot

Access Road Site Line Improvements

SP-10: In an effort to improve sight distances along the access drive, selective trimming of wetlands reeds on the northern side of the road is proposed to occur on an annual basis, or as needed

SP-11: A small pull-off along the southern side of the access road is proposed just east of the Central Hudson natural gas infrastructure to provide additional room for vehicles to pass. Central Hudson is scheduled to make repairs to the gas equipment in this location which may assist in establishing this the pull-off area.

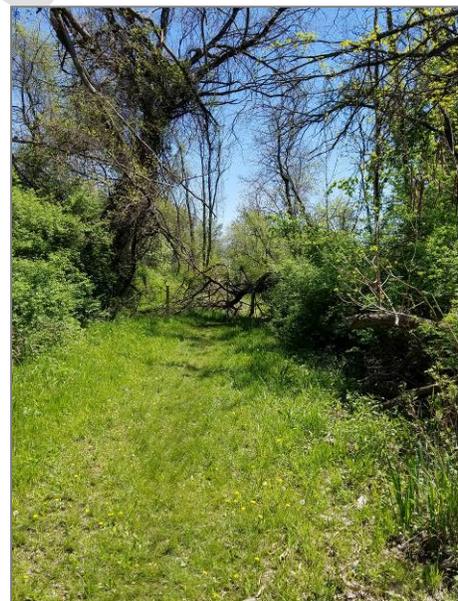
Trail Improvements

SP-12: The majority of the existing trails are overgrown as they have not been regularly maintained by the Town. It is recommended that an ongoing trail maintenance schedule be established. Initially, vegetation along the edges of trails should be cut back followed by regular maintenance be for the trails. This would include regular inspections to clear downed trees and branches and address any hanging branches or leaning trees that pose a safety hazard. Where feasible, select trails closer to the parking lot could be widened to increase access. Areas with poison ivy should be regularly cutback for the safety of park users.



Example of a Puncheon

SP-13: The Central Hudson ROW east of the parking lot also doubles as a trail and provides access to the eastern point of the Park and the southern shoreline. However, there are low-lying sections of the ROW/trail that are regularly flooded as a result of the tides along with drainage channels crossing the ROW/trail. In consultation with Central Hudson during a site visit to Sleightsburgh Park on February 11, 2020, it was determined that no ground disturbance above the gas line will likely be approved. Instead, alternatives that would not involve ground disturbance or permanent structures will need to be considered. One option includes the use of puncheons which are basically shot-span footbridges or a series of connected short-span footbridges. If approved by Central Hudson, puncheons could be a low-cost option to bridge wet areas. Puncheons could also be used to reach the southern shoreline. An existing trail connects the southern shoreline with the ROW and travels through wetlands making puncheons an ideal solution.



Central Hudson Right-of-Way and Trail



Long-term Monitoring Programs

SP-14: To assist Town of Esopus employees responsible for maintaining Sleightsburgh Park, a volunteer program is recommended for trail maintenance efforts. This group would primarily consist of volunteers and should include a representation from the Town Board and community stakeholders. The primary roles of this group would be to assist Town-employees in trail upkeep and maintenance and lead new trail improvement projects, provide regular presence at the Park and coordinate and advise long-term planning and future decision making by the Town as it relates to the Park.

SP-15: Continue to monitor the population of *Carex frankii* within the Park in accordance with 1996 management plan approved by NYSDEC and the monitoring program prepared by Scenic Hudson in February 2013. This monitoring is likely to involve volunteers and assistance by NYSDEC and Scenic Hudson. A new population survey is recommended for 2022.

Amenities

SP-16: Relocate or construct a new kiosk near the fishing platform in a location that would not impede pedestrians and individuals with mobility limitations or impact the proposed ADA van parking space

SP-17: Install a minimum of one ADA picnic table on the fishing platform.

SP-18: Install a small bike rack in the southern portion of the fishing platform, close to the parking lot and in an area that would not impede pedestrians and individuals with mobility limitations or impact the proposed ADA van parking space.

SP-19: Install an ADA portable toilet (An ADA portable toilet was installed for the Summer 2020 season.)

Proposed Rules and Regulatory Changes

SP-20: There is evidence of people cleaning fishing at the Park and on the picnic tables provided. This result in an unsanitary and unpleasant condition for other Park users. Therefore, signage is recommended clearly stating that no fish cleaning on picnic tables and no disposal of fish parts in the Rondout Creek or elsewhere in the Park is allowed. It is also recommended that the Town reach out to NYSDEC to seek advice on the types of hunting that should continue to be allowed at the Park.

SP-21: Confirm a preferred approach for allowing and monitoring access to the Park after hours and out of season. To assist in identifying potential solutions, a moderated discussion between all stakeholders is recommended. This process will allow for the presentation of all relevant existing information, including current rules and regulations regarding Park use and access. The meeting will also provide opportunities for all stakeholders to discuss their concerns, needs and recommendations related to access. Possible stakeholders include, but would not be limited to the following: Hunters, anglers, boaters, residents of Sleightsburgh, Esopus Town Board, Highway Department, and Esopus Parks and Recreation Commission,

Waterfront Advisory Board, stakeholders at City of Kingston, NYSDEC, and the Ulster County Sheriff's Office. A final list of attendees has yet to be confirmed.

SP-22: Review and consider necessary revisions to Town of Esopus Code Chapter 98, "Park Rules and Regulations" related to out of season park access and designated fishing locations. These reviews could take place during the LWRP Update scheduled to begin in during August 2020.

SP-23: A sign reading "Sleightsburgh Park Town of Esopus" has been located on the Park's fishing pier for several years. The sign, which is made up of individual letters, requires ongoing maintenance and the replacement of letters due to weathering and damage by wave action. The sign is recommended to be removed and replaced with a new sign in a location that does not impede fishing or boating access or impact views from the Park.



Sleightsburgh Park Sign

SP-24: It is recommended that Sleightsburgh Park be formally designated as a "Carry In-Carry Out" park and signage indicating this requirement should be posted. Fines for littering should also be posted. In addition, all Town Parks should be regularly cleaned of garbage and other debris that may be illegally discarded.

Alternative Waterfront Access Recommendation

SP-25: As previously noted, access to Sleightsburgh Park is expected to be negatively impacted by an increase in sea levels. The sea level increase may also impact the boat launch and parking area. In addition, Sleightsburgh Park continues to see an increase in use which can result in congested conditions at the launch and negative impacts to Hamlet of Sleightsburgh neighborhoods related to increased traffic.

Therefore, the Town should consider a future alternative site for a boat launch and waterfront access. A potentially ideal location is the former Kosco Oil Terminal and the northern terminus of North Broadway. Substantial research on this potential location is necessary, including, but not limited to subsurface environmental conditions (based on the previous use as an oil terminal), and the location of the Town's North Broadway right-of-way, among other issues to research and address.

It is recommended that the Town begin researching existing conditions and the feasibility of establishing a new boat launch at this location in the Local Waterfront Revitalization Program update scheduled to begin August 2020. The LWRP should also evaluate additional alternative waterfront-dependent uses that would be compatible at this location, including waterfront dining options

Neighborhood Traffic

SP-26: Implement traffic calming and other safety measures along North Broadway to mitigate current safety concerns related to speeding vehicles and increased traffic during the fishing/boating season. Recommendations include, but are not limited to painting a center and shoulder lines, road surface MPH signs and similar road surface traffic calming measures, radar/speed indicator sign, and proper maintenance of vegetation at intersections to ensure proper sight distances.

Regulatory Needs

Sleightsburgh Park contains portions of NYSDEC-regulated freshwater wetlands. In general, most activities in freshwater wetlands or within the 100-foot adjacent area require NYSDEC approvals. Approvals from the USACOE may also be necessary which will then require a Section 401 Water Quality Certification by NYSDEC. The Rondout Creek is class C waterbody at this location, and any disturbance to the bed or banks of the creek requires a Protection of Waters, Stream Disturbance permit. Additionally, the Rondout Creek is navigable, and therefore, any excavation or placement of fill below mean high water requires an Excavation/Placement of Fill in Navigable Waters permit. Certain State-listed species are known to be present at Sleightsburgh Park as discussed above. If these listed species are impacted, a separate permit will also be necessary. In addition, there are required timeframes for certain projects to avoid impacts.

Based on the pre-application meeting with NYSDEC, the following permits and approvals may be necessary:

- The addition of a new floating dock is expected to require a NYSDEC Protection of Waters Permit.
- The proposed trimming of the wetland reeds along the northern side the access road to improve site lines will require coordination with NYSDEC, and at a minimum, a letter of permission is required. However, NYSDEC did state that impacts to least bittern will need to be ruled out first and clarification of the process to trim the reeds must be provided.
- If the proposed pull-off will result in impacts to wetlands or is located within the 100-foot adjacent area, a NYSDEC permit will be necessary.
- The construction of a soft hand carry launch to the west of the boat launch may require NYSDEC approvals if it involves disturbance to the bed and banks of the Rondout Creek.
- The regular maintenance of trails will not require approvals, although there are recommended timeframes for any vegetation cutting, as discussed below.
- The use of puncheons to bridge wet areas within the Central Hudson ROW and to reach the southern shoreline may not require regulatory approvals. Approval from Central Hudson will be required prior to any work proposed within their ROW.
- NYSDEC coordination is necessary to obtain a jurisdictional determination for any trail work that involves wetlands, although the use of puncheons may not require a formal permit from NYSDEC.

- The preferred work window for activities that may disturb nesting birds would be outside of the nesting season, which is generally considered April 15th to August 15th. Therefore, any clearing of the wetland reeds and trail improvements should not be planned before August 15th.

DRAFT

George H. Freer Memorial Park

Refer to the Free Park Concept Plan CLA-01 for the following project description.

Recommendations

Shoreline Access Improvements

FP-1: Soft launch Improvement. The unofficial soft launch at the southern end of the park is in need of minor improvements to enhance access and formalize as a designated launching site. Minor grading and the placement of fresh gravel between the launch and the parking lot are necessary to provide a more stable surface to launch small, non-motorized trailered boats, along with hand launching of canoes, kayaks, small sailboats, paddleboards and similar small watercraft. Launching motorized boats is currently, and will remain prohibited.



Existing Soft Launch to be Improved

Signage identifying the prohibition on motorized boats should be posted. Additional signage is recommended to alert boaters to the shallow conditions, the submerged rock wall and the impact that tides will have on access to and from the launch. The improved soft launch will require regular maintenance by the Town of Esopus and should be added to Freer Park's regular maintenance schedule.

FP-2: Bulkhead Improvements. Due to the current condition of the bulkhead, a structural evaluation is scheduled for the summer of 2020 to determine if the wall can be repaired and lifespan extended or if the Town should begin planning to replace it. In addition, the current height of the wall may need to be raised in advance of anticipated sea level rise.



Shoreline Erosion and Previous Bulkhead Repairs

NYSDEC has indicated that replacing the bulkhead in its current location may not meet permit issuance requirements. Specifically, NYSDEC is of the opinion that the current bulkhead does not meet the definition of a "wall" as previously discussed. As a result, and if the replacement is proposed in the same location (within the mean high-water mark), permit approval may not be possible.

FREER PARK

Town of Esopus
 Ulster County
 State of New York
 07-01-2020

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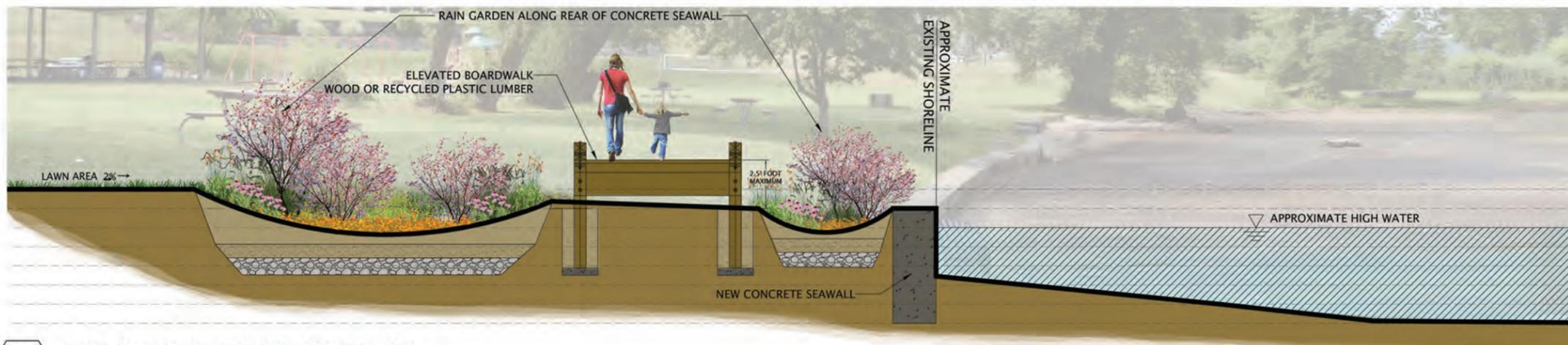
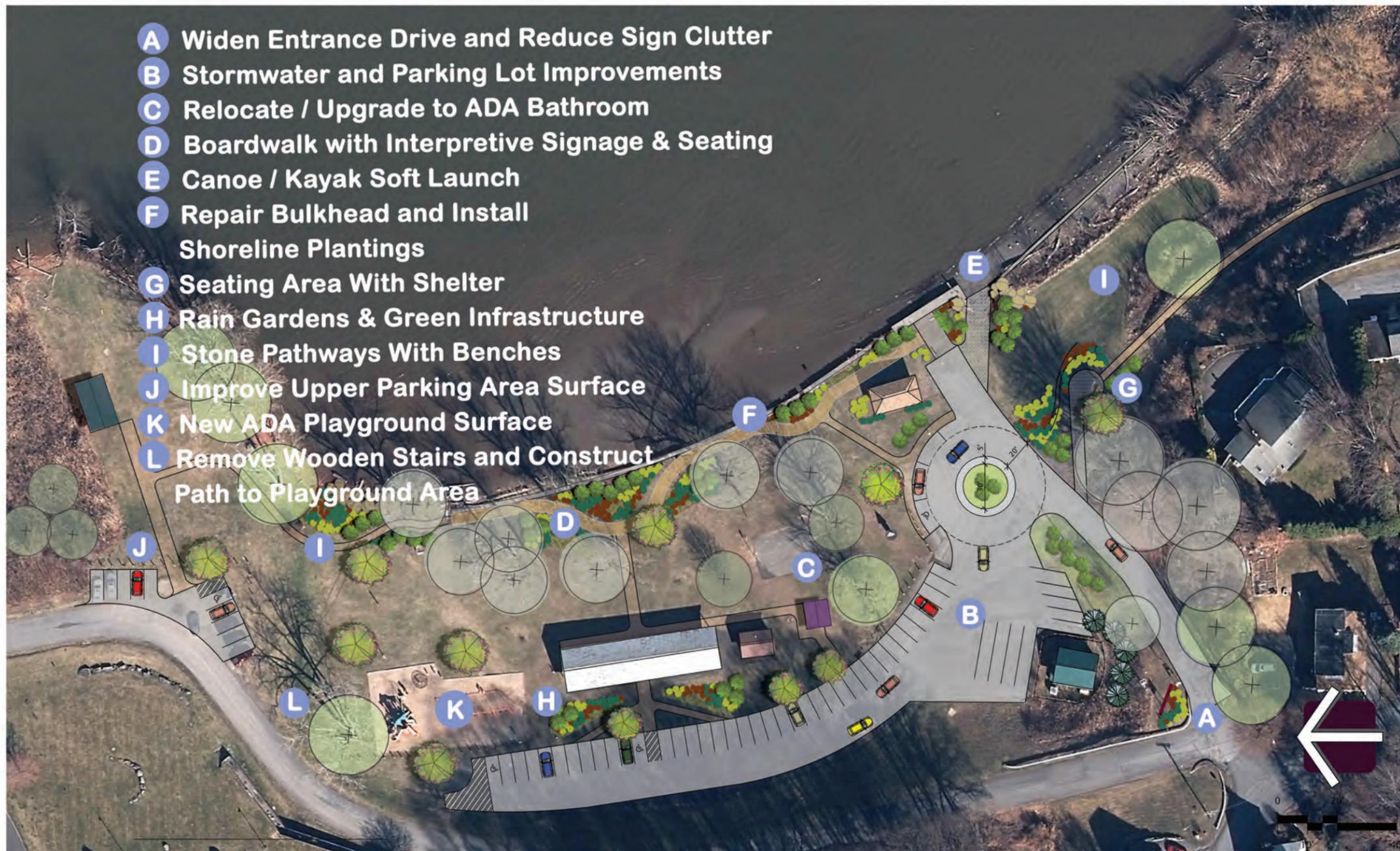


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1 TYPICAL BOARDWALK AND RAIN GARDENS
 CLA-1 SCALE: N.T.S

CONCEPT PLAN CLA-01

Furthermore, NYSDEC strongly recommends that the bulkhead be removed and a natural shoreline be installed. Removal of the bulkhead has not been an option the Town or Riverfront Committee previously considered. There are concerns that if the wall is removed. Specifically, parkland may be lost, trees near the shoreline may be negatively impacted, and existing structures and infrastructure along with the entire Park may be at greater risk of flooding and damage. The Riverfront Committee discussed this issue and considered NYSDEC's positions. Currently, there is consensus that the existing wall remain and repaired to extend its useful life. To supplement these repairs, riprap could also be placed along the top of and slightly behind the wall and native plant species planted along the backside of the bulkhead to improve shoreline stability and habitat diversity.



Shifting Blocks and Erosion

Before a decision is made, the structural evaluation of the existing bulkhead is necessary to determine if the wall is structural sound and if repairs are possible to extend its lifespan. The costs associated with needed repairs and long-term maintenance will also need to be taken into consideration. If it is determined that the bulkhead is not structurally safe and the best course of action is to remove it, coordination with NYSDEC will be necessary to determine if replacement is feasible from a permitting perspective. More importantly, the impacts that removing the wall and establishing a natural shoreline will have on the park's open space, trees, buildings and infrastructure will need to be closely evaluated and taken into consideration before a final decision is made along with the associated costs.

FP-3: Native Shoreline Vegetation and Rain Gardens. The evaluation of the bulkhead discussed above and the resulting decision on whether to preserve, replace or remove the wall will have implications on the type and location of shoreline vegetation. If the bulkhead is not replaced, riprap could be installed on top and along the back edge of the wall along with native shoreline vegetation, including rain gardens at key intervals to assist with shoreline stabilization, provide habitat and serve as stormwater treatment for overland runoff from the Park's lawn area and parking lot. It is recommended that plant species be selected by the Waterfront Advisory and/or Environmental Boards. If the bulkhead is permanently removed, an entirely new plan for constructing a natural shoreline will be necessary.

Parking lot improvements.

FP-4: To improve the efficiency of and circulation within the existing parking lot and to enhance accessibility, approximately 52 marked parking spaces will be provided, including four ADA accessible spaces (three ADA van spaces) and four trailer parking spaces.

FP-5: The existing asphalt pavement for the entire parking lot is proposed to be milled and resurfaced, with the southern portion of the parking lot in very poor condition and should be a priority for repairs.

FP-6: The existing unimproved dirt parking area along J Rd. to the north is proposed to be surfaced with either gravel or asphalt to provide approximately 10 parking spaces, including one ADA van space. An accessible route to connect the parking lot to the existing boat storage building and the shoreline is also proposed. Locking bollards should also be installed to prohibit unofficial vehicle access to the shoreline.



Northern Parking Lot to Be Resurfaced

FP-7: An optional improvement to the parking lot is the construction of a small turnaround at the base of the access drive to improve overall traffic circulation.

Three parking spaces, including one ADA space, could be provided on the outside of the turnaround. Under this concept, the driving lane will be 20 feet wide at its narrowest points around the turnaround and will have a 5-foot-wide paver apron with mountable curbs. The center will be grassed and planted with low-profile shrubs. An initial first step to begin evaluating the effectiveness of establishing a small turnaround is to set up temporary cones or other moveable objects to represent a center island. Trailers, etc. will need to be taken into consideration. Arrows and other traffic circulation techniques may also need to be utilized. A turnaround is planned to assist in visually breaking up the expanse of asphalt at the bottom of the Park driveway, to provide additional stormwater runoff protection and help with overall traffic flow through the parking lot.

FP-8: Park Entrance Improvements. The entrance to Freer Park at Canal St., and more specifically at the gate, is not wide enough to allow two vehicles to pass and can result in congestion at an already awkward intersection. Therefore, it is recommended that a longer gate be installed to widen the entrance. Trees along the entrance drive should be regularly trimmed to avoid damaging vehicles and trailers entering and exiting the Park.

Stormwater Improvements

FP-9: Stormwater is currently captured through a series of drains within the parking lot that discharge into the River at shoreline. In addition, there is also a stormwater drain north of Freer Park and in front of the Riverview development. Together, these stormwater discharge points may be contributing to the shallow conditions in the immediate area of the shoreline. Stormwater also flows to the shoreline overland which results in shoreline erosion and degradation of the bulkhead. A comprehensive stormwater evaluation is necessary to identify options for improving overall Park drainage, water quality and reduce or eliminate associated shoreline and bulkhead erosion.

FP-10: The use of native upland and shoreline plantings along with rain gardens between the parking lot and shoreline are proposed as a key first step in controlling both parking lot runoff and overland flow that

has been undermining and damaging the bulkhead and causing shoreline erosion. In addition to the rain gardens and plantings along the shoreline, rain gardens are proposed between the parking lot and pavilion.

Park Buildings

FP-11: All buildings with the exception of the stone façade kitchen/restroom building, should be painted the same earth tone colors. The color of the new boat storage building should be considered as the desired color for all park structures.



New Boat Storage Building

FP-12: The unused lifeguard building at the southern end of Park is recommended to be removed and replaced by a small shelter with benches to create a scenic sitting area. This seating area will be linked to the existing grass surfaced trail that leads to Tilden Street. Benches should be located along the trail to Tilden.

FP-13: The small restroom located in the parking lot is proposed to be removed for safety reasons. In addition, the restroom is not ADA accessible. Therefore, a new restroom should be constructed near the existing bathroom building associated with the pavilion. Alternatively, the existing restroom could be expanded to ensure there are adequate restroom facilities to serve by regular Park users and those renting the pavilion. The parking lot will need to be patched and nearby sections repaired after the restroom is removed.



Small Bathroom in Parking Lot to be Removed

FP-14: While the park closes at dusk, lighting is recommended within the pavilion for safety reasons. A timer could be set to ensure the lighting is not left on overnight.

FP-15: Wooden stairs located at the northwestern corner of the Park, between J Road and the playground are beginning to deteriorate, lack railings and can be difficult to see. They are proposed to be removed and the area regraded and seeded. It is further recommended to construct a path from the northern parking lot (to be resurfaced) down towards the playground.



Wooden Stairs

Internal Circulation and Amenities

FP-16: Internal Trails. To interconnect the two parking lots, pavilion, playground, shoreline, boat storage building, soft launch and boardwalk (if constructed), a series of stone dust or similarly surfaced trails are

proposed. All efforts will be made to ensure these trails meet ADA accessibility requirements. The existing grassed trail connecting the Park to Tilden Street should be maintained to ensure a safe walking surface. Benches are recommended to be installed along the trail to provide resting locations and to enjoy the scenic views from this elevated location.

FP-17: Construct A Shoreline Boardwalk. In an effort to enhance Freer Park's overall accessibility and provide visitors with opportunities to walk on a stable surface along the shoreline, an elevated (2.5 ft. maximum) wood or composite (Trex® or similar product) boardwalk is proposed to be constructed along the backside of the bulkhead. The boardwalk is proposed to connect to the soft boat launch to the south and to a proposed path to the northern boat storage building along with a path to the existing pavilion. Opportunities to access the bulkhead, and at low tide, the river bed, will be provided at certain intervals along the boardwalk.



Example of Boardwalk, Interpretive Signage and Shoreline Plantings

The feasibility of the boardwalk will be dependent not only on cost and availability of grant funding, but also the status of the bulkhead. If removed, a boardwalk may not be feasible or would need to be located further from the shoreline. In addition, without the protection of a bulkhead, the boardwalk may need to be placed at grade and alternatively, may need to be a constructed out of different materials to better withstand flooding. An at-grade path as an alternative to the boardwalk may also be considered if the current design is cost-prohibitive and adequate grant funds are not secured.

As proposed, the boardwalk will be ADA accessible at 4 ft. in width along with toe guards. Due to the fact that the boardwalk is proposed to be over 200 ft. in length, at least one passing space of 4.9 ft. in width will be provided in accordance with ADA requirements. Hand rails will not be required provided the boardwalk surface to grade elevation does not exceed 30 inches, as currently proposed.

Interpretive signage and seating areas is proposed along the boardwalk. The content of the interpretive signage is recommended to be developed by the Town of Esopus Waterfront Advisory and Environmental Boards.

FP-18: Install bike racks – one near the playground/pavilion and one near the southern end of the Park to provide sufficient options for bicyclists.

FP-19: To provide more accessible opportunities for children at Freer Park, ADA accessible playground equipment is recommended. Coordination with the Resource Center for Accessible Living is recommended to identify appropriate ADA accessible equipment. The installation of an ADA accessible rubber surface is also proposed to replace the existing non-ADA compliant wood chip surface. The new surface could be installed in phases and in coordination with the installation of new ADA accessible playground equipment.



Example of ADA Accessible Playground Surface



Existing Freer Park Kiosk

FP-20: Repair or replace the existing kiosk.

Shoreline Vegetation

FP-21: Establish a long-term shoreline vegetation and tree replacement program. Adequate vegetation is required at Freer Park for shade and to aid in stabilizing the shoreline. Dead, dying or diseased trees were removed in the spring of 2019 and at least one tree came down during a storm. To ensure there are sufficient shade trees and vegetation to protect the shoreline from erosion, a long-term shoreline vegetation and tree replacement and maintenance program is proposed. Engaging an arborist to establish this plan is recommended. Alternatively, seeking out a cooperative agreement with a local college to provide these services could be considered.



Northern Shoreline Vegetation – Spring 2019

FP-22: Designate the southern shoreline area (south of the current unimproved hand launch site) off-limits to future shoreline improvements. Natural shoreline vegetation is beginning to be re-established and should not be disturbed – a recommendation from NYSDEC. With natural shoreline vegetation, this area of the Park is becoming important to the Park’s flood protection and should be allowed to grow untouched.



Southern Shoreline to be Preserved

Proposed Rules and Regulatory Changes

FP-23: Review and consider necessary revisions to Town of Esopus Code Chapter 98, “Park Rules and Regulations” related to out of season park access and designated fishing locations. These reviews could take place during the LWRP Update scheduled to begin August 2020.

FP-24: Motor boats are not permitted to be launched at Freer Park and there is consensus among the RPC that Freer Park should be only allow for the launching of non-motorized/zero emission boats. Signage indicating this should be provided. No fish cleaning on picnic tables and no disposal of fish parts in the Hudson River or elsewhere in the Park is permitted and should be indicated in the park rules. Signage is also recommended that alerts boaters to the shallow conditions, the submerged rock wall and the impact that tides will have on access to and from the launch and docks. All park rules and important information should be installed at the pavilion and on the repaired or new kiosk

Regulatory Needs

The Hudson River is a Class A waterbody in this location, and any disturbance to the bed or banks of the River requires a Protection of Waters, Stream Disturbance Permit. In addition, any excavation or placement of fill below the mean high-water mark requires an Excavation/Placement of Fill in Navigable Waters Permit. USACOE approvals may also be necessary and if the bed of the River is proposed to be disturbed, signoff from OGS may also be necessary. Therefore, replacing the bulkhead will require these regulatory approvals, although NYSDEC has indicated that approvals for replacing the bulkhead may not be possible if the bulkhead does not meet their definition of a wall, as previously discussed.

Prior to repairing the wall, coordination with NYSDEC and other agencies is advisable to obtain a jurisdictional determination, and provided work is not conducted below the MHWM or impacts the bed or banks, regulatory approvals may not be necessary. The MHWM is scheduled to be surveyed in 2020.

The proposed improvements to the soft launch are not anticipated to require regulatory approvals, provided work does not involve disturbance to the bed or banks or excavation below the MHWM. A



request for a jurisdictional determination should be submitted to NYSDEC to confirm regulatory requirements.

Any proposed modifications to the Park's stormwater collection system and/or the outflow pipes along the shoreline are anticipated require regulatory approvals. The parking lot improvements may require approvals if within 100-feet of jurisdictional wetlands or will result in other disturbances noted above or modifies stormwater discharge.

The proposed boardwalk and stone dust trails may not need approvals if work is proposed more than 100-feet from jurisdictional wetlands and does not involve disturbances noted above. Likewise, shoreline plantings are not anticipated to require regulatory approvals.

All other work proposed projects are not anticipated to require regulatory approvals. However, it is strongly advisable for the Town to request jurisdictional determinations from NYSDEC prior to moving forward with projects that will result in ground or shoreline disturbance.

Freer Park is located in close proximity to Indian bat, northern long-eared bat, shortnose sturgeon, and least bittern. Impacts to these species or habitats may also require a permit, although NYSDEC stated that due to a lack of habitat for least bittern on-site and the distance to known habitats, the Department has determined that no impacts are anticipated at this time (See **Appendix D. NYSDEC Pre-Application Meeting Summary**). Any proposed removal of trees, three inches or larger at breast height, must take place from November 1st to March 31st to avoid impacts to both Indian bat and northern long eared bat. NYSDEC will review any proposed impacts to the shortnose sturgeon when an application has been submitted for review.

Proper mitigation measures and best management practices will be necessary for all proposed work. Refer to the NYSDEC Pre-Application Meeting Summary found in **Appendix D. NYSDEC Pre-Application Meeting Summary**, for additional regulatory information related to Freer Park, including certain permit approval criteria.

Lighthouse Park

Refer to the Lighthouse Park Concept Plan CLA-02 for the following project description.

Recommendations

Shoreline and Access Improvements

LP-1: To stabilize and repair the eroding shoreline, a combination of large boulders (to be relocated from the intertidal zone), coir (coconut fiber) logs or similar geo-textile material along with native shoreline vegetation plantings are proposed. An unspecified number of boulders that are located within the inter-tidal zone (placed there as part of a previous art installation) are proposed to be removed to increase access to the river and to assist in stabilizing the shoreline. These boulders were originally located on the shoreline and helped with stabilization. Once they were removed from the shoreline as part of the art installation, the shoreline conditions began to deteriorate. Coordination with NYSDEC will be required to confirm which ones and the total number of boulders that can be relocated out of the inter-tidal zone.



Example of Coir Logs

LP-2: A new crushed stone access ramp (soft launch) will be constructed at the southern portion of the shoreline to provide river access for small, non-motorized watercraft.



Soft Launch Example

(Existing launch at Esopus Meadows Point)

LP-3: The existing unimproved shoreline access path at the northern part of the park will be preserved and a gentler slope established to improve access. Surrounding vegetation will also be more regularly maintained and poison ivy will be removed where feasible.

- A** Shoreline Remediation
- B** Canoe / Kayak Launch
- C** Kiosk and Pavilion (Optional)
- D** Parking Improvements
- E** Reconfigured Picnic Area
- F** Preserve and Enhance Existing Shoreline Trail
- G** Green Infrastructure
- H** Stone Pathway
- I** Relocated Memorials
- J** Selective Tree Thinning to Open Views to Esopus Meadows Pavilion



LIGHTHOUSE PARK

Town of Esopus
Ulster County
State of New York

October 18, 2019

PREPARED FOR:

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NYS Hudson River Estuary Program
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CONSULTANT TEAM:

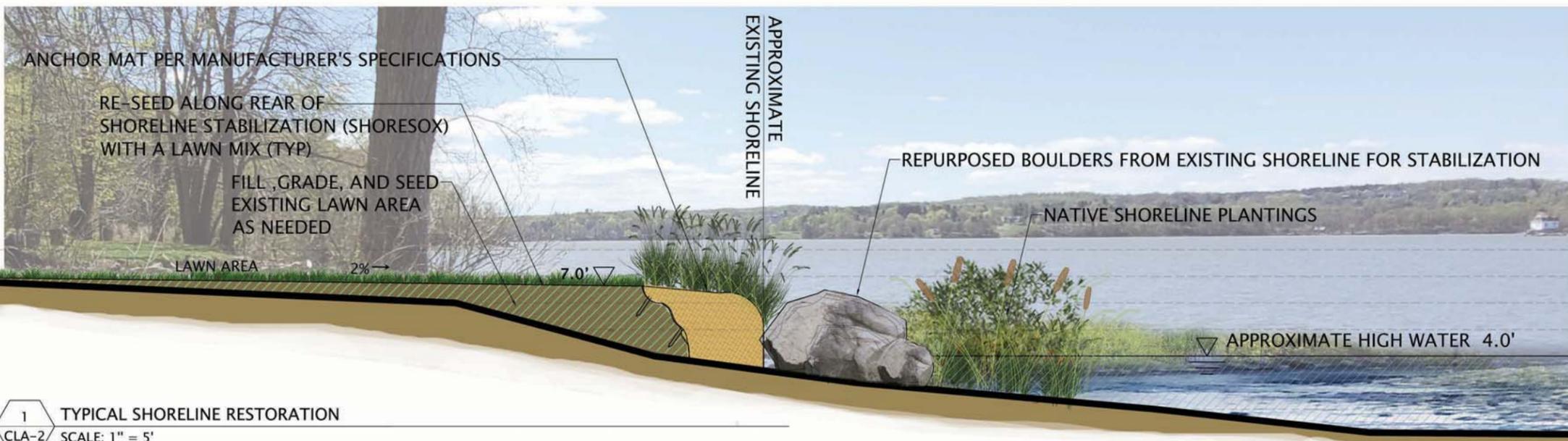
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CONCEPT PLAN CLA-02



1 TYPICAL SHORELINE RESTORATION
CLA-2 SCALE: 1" = 5'

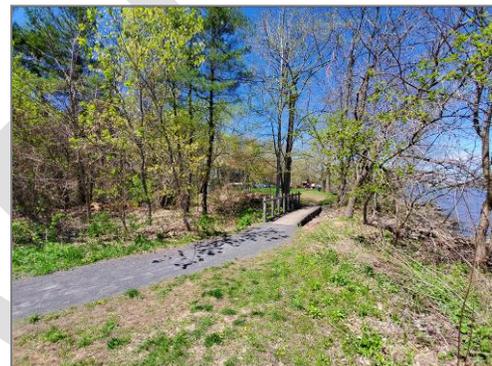
Parking Lot and Internal Access Improvements

LP-4: The existing parking lot is proposed to be expanded by approximately 3,503 SF to create six additional parking spaces for a total of 15, including one ADA van space. The parking lot will either be asphalt pavement or gravel. If gravel, the ADA van space will be sufficiently compacted to ADA compliant standards. The enlarged parking lot will not only provide additional spaces for visitors to Lighthouse Park, but will also increase parking opportunities to visit Esopus Meadows. The ADA accessible trail connecting the two Parks is a key improvement. The parking lot access point will be widened to improve ingress/egress safety and the existing pothole will be repaired.



Area of Proposed Parking Lot Expansion

The existing unused raised leach field may need to be removed to allow for the expansion of the parking lot. The location of the leach field will need determined by the property survey scheduled to be conducted in 2020. Coordination with Scenic Hudson will be required prior to any disturbance to the leach field along with a review of the site plan of the proposed improvements for conformance with the conservation easement.



Existing ADA Accessible Path at Esopus Meadows Preserve

LP-5: A stone dust path is proposed to be constructed from the parking lot to access the shoreline and the adjoining Esopus Meadows Preserve. The goal is to provide an ADA accessible path from the parking lot to areas by the shoreline that offer views of the River and to connect with an existing ADA accessible stone dust path in Esopus Meadows Preserve.

LP-6: Rain garden/bioswales are proposed to be installed along the eastern side of the parking lot (between the parking lot and shoreline) to provide natural stormwater treatment.



Rain Garden/Bio Swale Example

Amenities

LP-7: The existing informational kiosk is in poor shape and should be replaced. It is recommended that the Town coordinate with a local Boy Scout Troop to install a new kiosk as was done with the existing one. The new kiosk should be located in the same location.

LP-8: A small bike rack is also recommended to provide a safe place for visitors to lock their bikes while enjoying Lighthouse Park and Esopus Meadows Preserve.

LP-9: A minimum of one ADA accessible picnic table should be provided and accessible from the ADA van parking space.



Existing Kiosk

LP-10: There is no shelter at Lighthouse Park, although visitors could walk to the pavilion at the adjacent Esopus Meadows Preserve. While not currently a priority, a small gazebo or pavilion is recommended for the southern end of the Park to provide shelter from the elements. The exact location of the shelter has yet to be determined, except that it should not be visible from the River and should not block views of the River from the Park of River Road. Coordination with Scenic Hudson will be required to review conformance with the conservation easement.

LP-11: The existing trees and shrubs between Lighthouse Park and Esopus Meadows Preserve are proposed to be selectively thinned to open filtered views between the two recreational areas. This recommendation is also intended to establish some synergy between these parks and encourage visitors to freely travel between them.

Proposed Rules/Signage/Future Planning

LP-12: Motor boats are not permitted to be launched at Lighthouse Park and signage indicating this should be provided. No fish cleaning on picnic tables and no disposal of fish parts in the Hudson River or elsewhere in the Park are permitted and should be indicated in the park rules.

LP-13: Lighthouse Park is a small and there may be occasions when boaters and anglers are in close proximity. As a result, signage is recommended that encourages all Park users to be cognizant of each other. In addition, it is recommended that signage indicate that no fishing be permitted near the proposed soft. The northern section of the Park could be designated for fishing.

LP-14: Review and consider necessary revisions to Town of Esopus Code Chapter 98, “Park Rules and Regulations” related to out of season park access and designated fishing locations. These reviews could begin during the LWRP Update scheduled to begin August 2020.



LP-15: River Road was previously designated as a Scenic Road, although the status of that designation is not able to be confirmed at this time and is currently being investigated. Looking ahead, the Town would benefit more from a Scenic Byway designation and should actively seek this designation.

LP-16: Conduct an initial feasibility study in partnership with Central Hudson Gas and Electric to determine the possibility of incorporating sections of their ROW into a trail connecting Lighthouse Park and Esopus Meadows Preserve with Black Creek Preserve to the south and to Highbanks Preserve and Port Ewen to the north. In addition to utilizing the ROW for improved Park connections, improvements to US Rte. 9W and other roads will be necessary to enhance bicycle and pedestrian safety. Sharrows and appropriate signage should be considered in select locations. Where there is adequate room, designated bike lanes should be installed. The shoulder of all roads should be properly maintained, by the repair of potholes and removal of debris that presents hazards to pedestrians and bicyclists.

LP-17: It is recommended that Lighthouse Park be formally designated as a “Carry In-Carry Out” park and signage indicating this requirement should be posted. Fines for littering should also be posted. Each Town Park should be regularly monitored and cleaned of garbage and other debris that may be illegally discarded.

Future Nearby Waterfront Access

LP-18: A preliminary feasibility evaluation to repurpose the Town’s water treatment plant site as a new waterfront park should be conducted during the LWRP Update. In addition, the Town should consider retaining the site if the treatment plant is relocated and utilizing it for recreational purposes or leasing for compatible uses. The Town’s water treatment plant is located on River Road, approximately 1.3 miles north of Lighthouse Park. The location of the treatment plant was identified in the 2019 Comprehensive Plan as a potential future waterfront access site if the plant is no longer needed. Due to anticipated sea level rise, the treatment plant may require upgrades or need to be relocated.

Regulatory Needs

The Hudson River is a Class A waterbody at this location and any disturbance to the bed or banks will require a NYSDEC Protection of Waters, Stream Disturbance permit. Any excavation or placement of fill below the MHWL will require a NYSDEC Excavation/Placement of Fill in Navigable Waters permit. USACOE approvals may also be necessary.

The proposed relocation of the boulders within the inter-tidal zone and below the MHWL is expected to require prior approvals from NYSDEC, especially if machinery is proposed to be used within the River. In addition, NYSDEC has previously expressed concern that the boulders (placed in the River as part of an art installation) have become habitat. Therefore, initial coordination with NYSDEC will be required for them to make a determination on habitat concerns.



Riverfront Access and Connections Study

The proposed shoreline stabilization improvements may require regulatory approvals if located below the MHW, the location of which is scheduled to be surveyed in the summer of 2020. The proposed soft launch will likely be located within the MHW and is anticipated to require regulatory approvals.

Proposed stone dust paths, provided they remain outside of the MHW (as proposed) will not require regulatory approvals.

The proposed parking lot expansion is not expected to require regulatory approvals provided it does not result in discharge to the River. If the raised leach field needs to be removed as part of the expansion, signoff from Scenic Hudson will be required as they hold a second easement on it.

The Park is located in close proximity to Indiana bat, northern long-eared bat, shortnose sturgeon, and breeding bald eagles. Any proposed removal of trees, three-inches or larger at breast height (not currently proposed), shall be restricted from November 1st to March 31st to avoid impacts to both Indian bats and northern long-eared bats. NYSDEC determined that the project will not likely impact bald eagles and no further review on this issue is necessary at this time. However, information on eagle nest locations represents NYSDEC's current knowledge of these resources. New eagle nests could be documented with each breeding season and potential impacts would, at that point, need to be addressed. Therefore, NYSDEC must be kept in the loop prior to any cutting of trees indicated above. NYSDEC stated that a review of impacts to the shortnose sturgeon will occur when any future application is submitted for review.

All work at Lighthouse Park will require coordination with and signoff from Scenic Hudson as they continue to hold the conservation easement for the property.

Esopus Meadows Preserve

Recommendations

EMP-1: Consider expanding hiking trails into the adjacent Scenic Hudson-owned land to increase recreational opportunities. This project is a great opportunity for a partnership between Scenic Hudson, the Town of Esopus and other partners to assist in constructing the trails and related amenities such as benches and trail markers.

EMP-2: Add picnic tables adjacent to the existing pavilion to provide additional locations for park visitors to rest, picnic and enjoy views of the Hudson River.

EMP-3: Consistent with the recommendation for Lighthouse Park, thin the vegetation and remove vines and other scraggly vegetation between the two Parks to open filtered views, improve vistas and the visual connection between Esopus Meadows Preserve and Lighthouse Park. This effort may also encourage visitors to more freely travel between the two parks



Vegetation between Parks to be thinned

Regulatory Needs

The construction of new hiking trails may require approvals from NYSDEC and/or the US Army Corps of Engineers if wetlands and surface water resources subject to their jurisdiction are impacted. Trail construction projects, however, are generally able to avoid requiring permits through proper planning and design.

Black Creek Preserve

Refer to the Black Creek Preserve Riverfront Access Improvements Concept Plan for the following project description.

Recommendations

Shoreline and Access Improvements

BCP-1: Bulkhead and boat ramp improvements. In-kind replacement of the western portion of bulkhead's sheet piling structure is recommended to stabilize the eroding condition and prevent sudden failure of the structure. This area has been used as a viewpoint with an excellent vantage of the mouth and of the creek and of the Hudson River towards the north.



Bulkhead Section to be Repaired

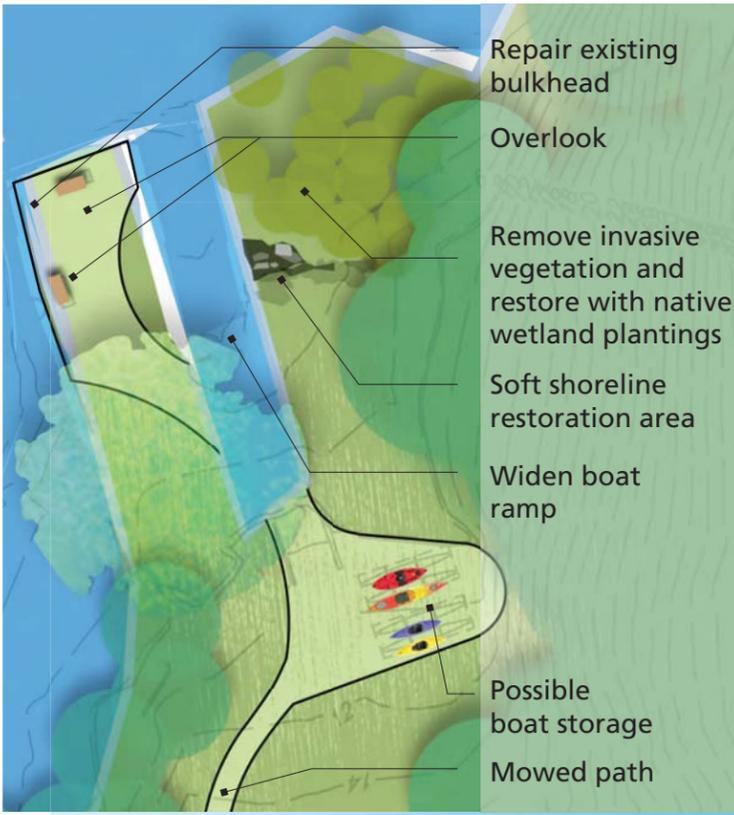
The eastern side of the bulkhead is lower in elevation and frequently overtopped by high tides. This structure is stable, but may need to be monitored for future undermining should

no improvements be made. Replacement of the portion of the bulkhead structure along the boat ramp would allow for an opportunity to widen the narrow boat ramp slip, decline the slope, and utilize natural materials for stabilization including boulders and rip rap that would reduce the forces of wave action.

It is unlikely that the eastern 'upland' zone can be reclaimed because it is frequently overtopped at the bulkhead edge during high tides. However, removal of invasives and new native plantings can establish a small pocket wetland that could provide beneficial habitat for wildlife while stabilizing the soil and altogether, creating a new opportunity for education about estuarine marsh habitats and their vulnerabilities to sea level rise.

In review of this area, NYSDEC preferred that any soft shoreline improvements began from the edge of the original bulkhead and transitioned inland. NYSDEC would not consider gradient changes that would add material towards the water from the face of the bulkhead wall.

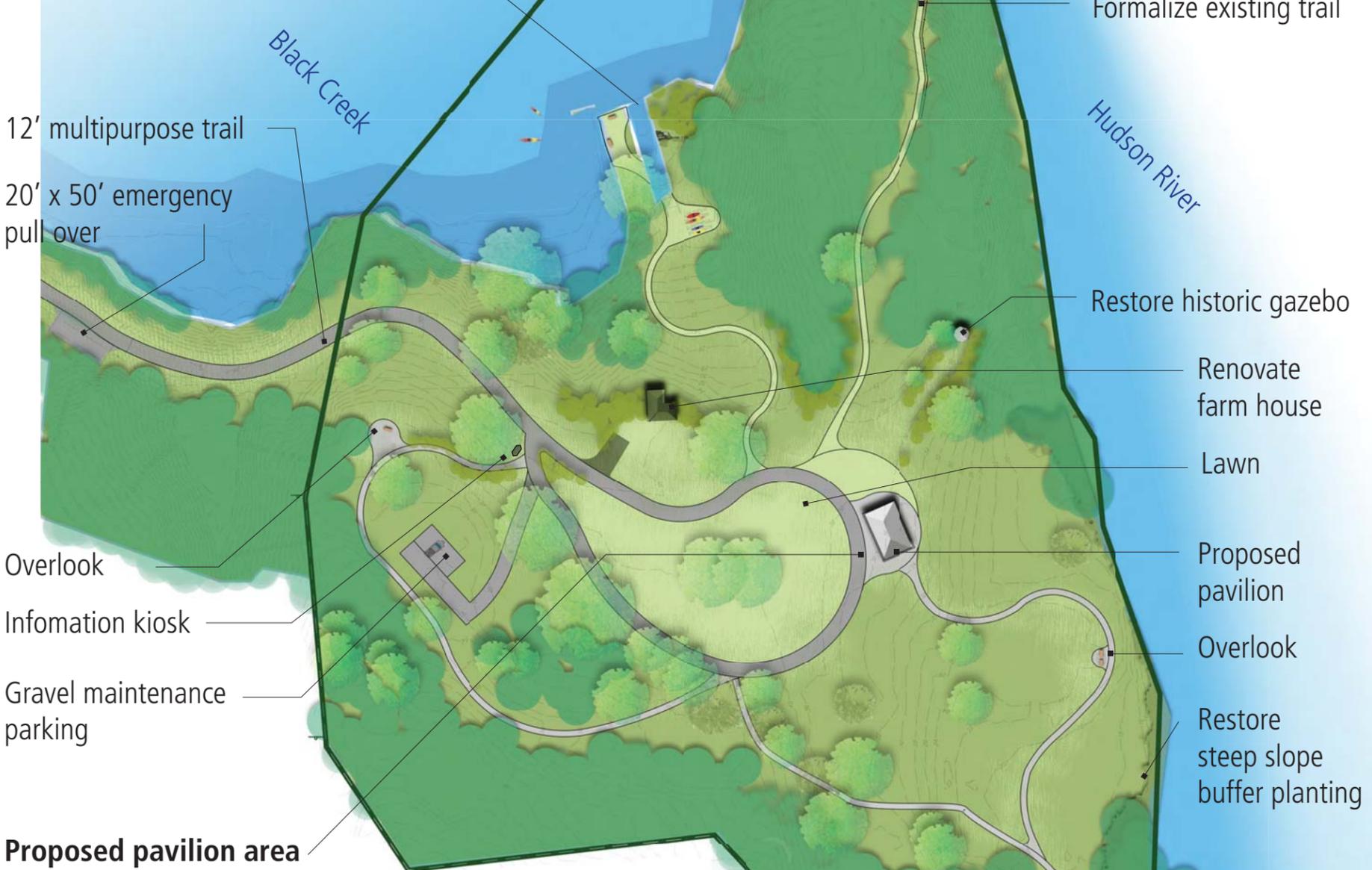
Preliminary estimated costs of the alternatives indicate that a full replacement of the bulkhead with a soft shoreline launch is cost prohibitive. Full abandonment of the bulkhead to the elements may create additional safety and liability costs and is not recommended.



LEGEND

- Existing deciduous tree
- Existing evergreen tree
- Multi-use trail
- Stonedust trail
- Mowed path
- Wetland
- Tree
- Lawn
- Shrub
- Proposed shrub

Proposed Water Trail Site



Proposed pavilion area



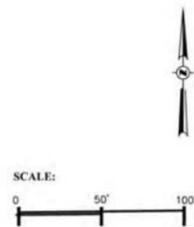
Pavilion Concept



Riverfront Access Improvements

Black Creek Preserve

Esopus, NY
February 20, 2020



BCP-2: Hudson River shoreline improvements. The shoreline of Black Creek Preserve is generally protected by natural rock outcrop formations and inclines at a slope that pushes the location of trails at elevations out of the tidal zone and flood plain.

An existing trail, but not yet formalized, connects the new riverfront area of the preserve to the existing trail system. As it approaches the junction with the blue trail, it comes very close to the shoreline and is likely to erode away in the near future with increased foot traffic. It is recommended that the vulnerable portion of this trail be re-located upland to allow for a vegetative buffer to the river's edge.



View from Open Lawn (April 2019)

Taller bluffs at the riverfront area elevate the open lawn areas to wide scenic vistas of the Hudson River, Esopus Island and Mills Norrie State Park. However, the lawn has been maintained up to the edge of the bluff edge and is subject to erosion where surface water flows are more concentrated. Reducing the expanse of short mow areas to taller managed meadows or allowing for shrubs to re-vegetate in low areas will allow for improved soil and bank stabilization while also providing a new habitat for both birds and pollinators. The development of a prescriptive mowing and management plan is recommended for the riverfront area.

BCP-3: Black Creek shoreline improvements. A trail currently begins at the informational kiosk and across the private road (Winding Brook Road) where it follows along the top of a steep bank of Black Creek until it reaches the pedestrian suspension bridge. This bank is constantly eroding due to bank scouring during extreme precipitation and flooding events impacting the volume and velocity of the creek waters. Many efforts have been made to reinforce the bank with new tree seedlings and pre-emptive cutting of dying trees to avoid the destruction created from dislocated tree roots. Continued foot traffic also wears away the bank surface, prohibiting the growth of vegetative root systems that can stabilize the soil in place. Ultimately, continued erosion could threaten the integrity of the park road. Therefore, it is recommended this portion of the trail be abandoned and re-stabilized with coir logs and shade tolerant riparian vegetation. A more direct trail to the suspension bridge will be built from the driveway.

Park Entrance and Parking Improvements

BCP-4: Park Entrance Improvement. The park entrance is wide and provides good sight distance in both directions for vehicles turning onto US Route 9W. Two driveway legs at this road edge often create confusion for traffic entering the park and it is recommended that the island creating the split is re-

constructed as asphalt pavement to meet NYDOT specifications for curb cuts. The outer edges of the entranceway should be cut to reduce the overall width to minimize the amount of pervious pavement.

BCP-5: Parking Lot Expansion: The current parking lot is relatively small with a capacity of 12-15 vehicles, none of which are ADA designated, and the dead-end parking lot configuration increases the difficulty of navigating a turn-around. School buses previously turned around at the end of the road, but this maneuver is no longer an option.



Black Creek Entrance on US Rte. 9W

It is recommended the parking lot be expanded to at least twice its size and that it is re-configured as a pull through loop back onto the park entrance road. The portion of the road that will accommodate two-way vehicular traffic will need to be widened to at least 14 feet.

A small stream that flows under the park road limits the area of expansion, but expanding over and beyond the stream would allow for significant expansion. In either alternative, the existing trailhead kiosk would be relocated for better access.

Internal Access Improvements

BCP-6: Multi-use trail conversion. Previous feasibility studies of the preserve's paved roadway indicated that public vehicular use would require widening improvements that would heavily impact the natural rock ledges and adjacent forest and dramatically impact the appearance and micro-climate of the creek corridor. It would also eliminate the potential use of the roadway for recreation. Re-purposing the road as a multi-use trail with new resting points will provide an entirely new recreational opportunity and experience of Black Creek that has been restricted from the public. Some road improvements, minor safety enhancements and added resting points can add a level of access to the river for individuals with limited mobility where none was available before.

BCP-7: Stormwater improvements. In coordination with the parking lot expansion, the entire system of stream culverts should be upgraded to accommodate more intense storm events and to incorporate green infrastructure practices to infiltrate runoff from increased areas of semi-permeable surfaces. This will require NYSDEC an ACOE review where culverts intersect with the flood and tidal zones of Black Creek. Scenic Hudson received a grant from the NYSDEC Hudson River Estuary Program to replace one major culvert to create a natural stream bottom and allow new migration opportunities for eels and herring into a sizeable tributary of Black Creek. Improvements are expected to commence in the fall of 2020.

BCP-8: Additional foot trails. At the new riverfront area of the preserve, the multi-use trail will end in a loop that accommodates both pedestrians and emergency/ maintenance vehicles. Smaller social trails can be formalized and lead to viewpoints at the peninsula and the boat ramp. Currently, lawn areas are wide open providing little direction to where the connection trail is, but with increased meadow areas at the bluff edge, a wide mowed path can lead the visitors to the shoreline trail.

Park Buildings and Structures

BCP-9: Existing historic structures. The riverfront area features two historic structures including a small farm house circa early 1800's and an octagonal gazebo typical of the Victorian Era.

Improvements are needed to renovate the gazebo for public use, including painting and possibly re-roofing. It is recommended that some of the surrounding vegetation be removed or pruned below the railing height to restore river views

The historic significance of the farm house is unknown, but its small size and simple architecture help to identify where more modern additions were added to expand the functionality of the dwelling. Due to the limited capacity of the existing septic system connected to the house, the building could not be utilized as a seasonal bathroom. The building could be used for a writer in residency program in partnership with the John Burroughs Association and as a meaningful connection to the legacy of John Burroughs. The cost to renovate the building for continued residential use by a caretaker may outweigh its benefit to the preserve and should be evaluated more closely before any further decisions are made.

BCP-10: New pavilion. The installation of a new accessible pavilion overlooking the river and Black Creek confluence is highly recommended for the riverfront area. This structure would provide shelter from the elements and serve as a gathering place for families or kayak groups coming off the Hudson to spend extended time together within the picturesque setting.

Site Amenities and Signage

BCP-11: Existing Kiosk update. The existing trailhead kiosk provides park rules and information about the site's ecology and other nearby attractions. Scenic Hudson intends to update the information when the kiosk is re-located to a new trailhead location.

BCP-12: New Kiosk, wayfinding, and interpretive panels. As the preserve roadway will be open for recreational use, a new opportunity presents itself to inform visitors about the American Eel and other migratory fish in the creek along the way to the riverfront.

At the riverfront, a second informational kiosk will inform visitors of rules and facts about the riverfront, including points of interest across the river. As the northern terminus of the John Burroughs Black Creek Trail (JBBCT), additional trail blazes will be added to follow a route designated for the through-trail to the



mouth of the Black Creek. These and any new interpretive signs will follow the signage style designed for the JBBCT for clear wayfinding and consistency.

BCP-13: Additional amenities. The planned improvements for the preserve include additional benches or other seating options, a bike rack at the riverfront area, removable bollards across the roadway, an enclosure for a seasonal/ portable restroom and possibly a small boat rack for temporary storage.

Regulatory

Many of the regulatory requirements by NYSDEC and USACOE, previously discussed in the Freer Park section, would apply to any major changes or improvements at the boat ramp in Black Creek Preserve.

A full masterplan with detailed construction documents will need to be submitted to the Town of Esopus Planning Board for review and approval of a Special Use Permit and any property lot line adjustments (if included) before the Town's Building Department would be able to issue a building permit for construction.

The short EAF form that is generated automatically is likely to trigger some review by NYSDEC regarding the site's proximity to known eagle nesting sites and bat hibernaculum. Restrictions to construction may include limiting any tree removal to winter months and may require monitoring of ambient noise levels during certain periods of the construction related to eagle nesting seasons.