Forest River Pool, Bathhouse and Associated Facilities Feasibility Study

Salem, MA

FINAL REPORT

Bargmann Hendrie + Archetype, Inc.

October 18, 2018

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PROJECT TEAM

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SECTION 1

INTRODUCTION

Forest River Park Pool

This feasibility study was commissioned by the City of Salem to explore the design feasibility of sites including the existing pool location for the construction or renovation of the Forest River Pool, Bathhouse and Associated Facilities. This complex will replace the current complex which no longer adequately serve its users. The feasibility study evaluated the existing conditions of the pool and bathhouse and developed a program for a preferred option, initial cost, and a schematic layout for the proposed facility.

The Forest River Pool is located in Forest River Park at 38 Clifton Avenue in Salem MA. The site is a wooded area park, located along Salem Harbor, with coastline along over 50% of its boundary, and residential neighborhoods abutting the remaining boundaries. The whole park is 30.37 acres, and has a baseball diamond, basketball courts, tennis courts, a playground area for children, beaches, and Pioneer Village museum (a recreated 17th century village). The park is one of the oldest parks in the city and is heavily used for active and passive recreation. This project is focused on approximately 3.5 acres of the southeastern part of the park and on the access road to the pool facility.

The existing facility is located at the southern part of Forest River Park, with stunning views to Salem Harbor and Marblehead. The facility has been at that location for over 100 years in various forms, and has provided generations of families and residents recreation, exercise, and relaxation. A recent study has determined that the existing pool can no longer be upgraded to meet current codes and is losing water continually. The bathhouse building is exhibiting signs of deterioration and as configured does not meet the needs of a modern bathhouse.

Therefore, the existing pool and bathhouse have been closed due to the complete failure of the pool filtration equipment and deteriorated conditions of the bathhouse. Given that the pool is currently closed, the project will provide a new facility to the community for general recreation and swimming activities. The existing pool has a large surface area with a lot of inefficient or under-utilized water surface. Surface area affects the bather load, number of sanitary fixtures, number of staffs, and maintenance operations. Therefore, the reconfiguration of the pool will address these issues by providing more usable water at appropriate depths than currently exists.

The reconstruction and renovation of the Forest River Pool facility will provide a unique opportunity to bring together the community in a dramatic setting while creating innovative solutions for a modern facility that preserves the character of the park. The project will focus on the following aspects:

1. Sustainability Design – Net Zero or LEED
2. Resiliency – Move the program and new infrastructure further upland
3. Education – The new pool will incorporate opportunities for education, including coastal wetlands, history, and other topics
4. Accessibility – Universal Design for pools and bathhouse
5. Historic Preservation – The new pool will restore and modernize an existing historic resource
6. Increase Usability – The program and design will allow for usage throughout the year, particularly Spring and Fall. New pools will provide more usable water at appropriate depths than existing pool
7. Long term Operations and Maintenance – Considerations of O&M will be part of the process

SECTION 2

EXECUTIVE SUMMARY

Project Site

This feasibility study investigated three sites, including the existing site which was ultimately chosen by the City of Salem, each of which had some necessary characteristics for location of the new complex. To accomplish this, a detailed comparative analysis of the sites was undertaken, conceptual site plans were designed and prepared for the purpose of enabling town officials and stakeholders to make an informed decision about the preferred site option for the pool complex.

The design documents contain herein are preliminary, intended to articulate a working program, establish a building and pool footprint for testing site feasibility, and to show sufficient detail for cost estimates. The program and building footprint will require further development and refinement in the next phase of the design when the actual site is designed in detail. This development occurs through three subsequent stages: Schematic Design, Design Development, and Construction Documents.

The Forest River Pool facility has been an iconic historic feature since the park was acquired by the City of Salem in 1907. In the early part of the 20th century, the City turned the area into a tidal bathing pool and added a bathhouse (see historic photos). The pool has undergone numerous alterations over the years, including a new bathhouse constructed in the 20's or 30's, a major renovation done in 1972 of the bathhouse with the addition of the kiddie pool; finally the pool was converted to fresh water from salt water in 1999, and other upgrades to the bathhouse. The complex has accommodated a wide of variety of activities; but the interior and exterior of the bathhouse as well as the swimming pool have deteriorated over time and are out of code compliance.

The entire complex is currently facing many challenges (significant loss of water, storm damage, deteriorating bathhouse, at end of life filtration equipment) in order to continue to operate. Consequently, the City of Salem closed the facility for the 2018 season.

Three alternatives sites were studied for a replacement facility including the current location. Various programs were also explored including different configurations for the bathhouse and the pool within the Forest River Park. These program options were analyzed from economic and functionality perspectives.

Rehabilitation of the existing site would require demolition and total reconstruction. Relocation of the pool facility on the parking lot site by the ball field would have an impact to the ball park activities, and location opposite the ball field would disturb the natural settings of the park due to required excavation to accommodate the pool and the bathhouse.

The conclusion of the feasibility study is that the existing location was the best suited for the proposed pool complex. The total cost for the facility includes construction cost and other related cost for design including restoration of the of tidal area at the end of the cove, furnishing and opening of the complex. The estimate project cost is $ 10,212,746.

Should the City of Salem agree with the findings of this Feasibility Study, and funding becomes available in 2019, design would continue through 2019 with early construction (demolition) starting in the winter of 2020; the complex can be reopened to the public in summer of 2021.

SECTION 3

PROJECT JUSTIFICATION

Responding to lack of pool or swimming facilities in Salem or in neighboring communities, the proposed project will be accessible to the people of Salem and surrounding communities. While there are beaches, the water is generally cold and there are not always lifeguards. In addition, not all beaches are accessible and many are tidal mud flats at low tide.

This project also has several other recreational components, including shoreline access trails, tidal pool access for education, indoor space for park and recreation programs, and open lawn areas for all kinds of organized and unorganized recreation.

Public access to swimming pool facilities for all ages, including people with disabilities, accessibility needs, the elderly and kids, and all swimming levels, is one of the reasons that three water elements are being provided: a combination pool, a kiddie pool with shallow water, and a splash pad. This is highly critical, as many of the beaches in Salem do not provide easy access for persons with disabilities or for those who have difficulty learning to swim in the ocean.

This facility will also provide a unique opportunity for outdoor education; with a restored tidal pool, shoreline access, and a community room, the facility can be used year-round for hands on education for area schools. The Forest River Park pool project aligns with the priorities of several master plans at the city level, including community revitalization, economic development and open space and recreation.

- The City of Salem conducted an Open Space Master Plan in 2015 that identified Forest River Park as one of the key parks for upgrades including to the pool, seawall, and other areas.
- The City has identified in the Open Space Master Plan2015 and the Salem for All Ages Plan 2017, the need for more accessibility to the community resources.
- The City of Salem conducted a Climate Vulnerability Assessment and Adaptation in 2014 (Salem's MVP). Climate change was predicted to impact Forest River Park in two significant ways. Due to its location along the ocean and in a tidal area, the first storm surge would affect both its recreational and historic assets.
- This project also supports:

a) Low and Moderate-Income residents. As Identified in "A Vision and Action Plan for the Point Neighborhood in Salem 2013-2020" the densest neighborhood in Salem with the highest percentage of low and moderate-income individuals is about 1 mile (20-minute walk) from this park.

b) The City of Salem's "Historic Salem Preservation Plan Update 2015", recognizes the importance of Forest River park and the current deteriorated condition of the building and sets a goal for Salem to restore its municipally owned historic structures

c) The City of Salem's Energy Efficiency & Conservation Strategy 2010, and 100% Clean Energy Resolution 2016

The redevelopment of the pool could transform the Park. In the past the pool was a popular place during the summer, however during the rest of the year the only use of that part of the park was for walking. The pool dominates one of the most beautiful parts of the park. This project envisions a pool that is both fun and educational. The new pool facility will be designed to respond to the peace and tranquility of the site, while incorporating elements that will extend the season of use. Along with providing recreational opportunities for the community year-round, the new community room could be a revenue source.

SECTION 4

HISTORICAL REPORT

FORM A - AREA

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Sheets	USGS Quad	Area Letter	Form Numbers in Area
33-0743-201 33-0743-202			SAL.916 SAL.GM SAL.2149

Photograph

Town/City: Salem

Place *(neighborhood or village)*: 32-38 Clifton Avenue

Name of Area: Forest River Park

Present Use: Park; recreation and culture; landscape

Construction Dates or Period: pre-1817 (Pickering House); C 1920 (Bathhouse); 1930 (Pioneer Village); pre-1938 (Garage); pre-1971 (Pool)

Overall Condition: Good to fair

Major Intrusions and Alterations: Pioneer Village partially rebuilt (1960s-1980s); Pool renovated (1971-72 and 1999); Bathhouse renovated in (1971-72)

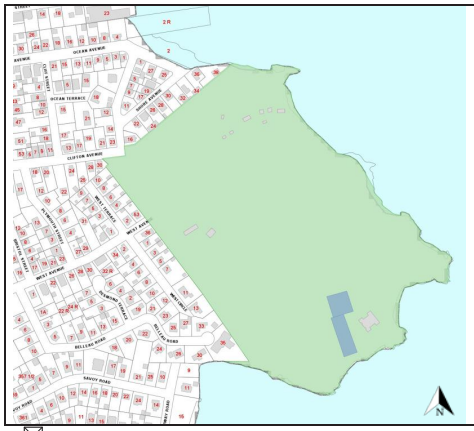
Acreage: 31.2599

Recorded by: Tonya Loveday

Organization: Epsilon Associates, Inc.

Date *(month/year):* July 2018

Locus Map



☒ *see continuation sheet*

12/12 *Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.*

ARCHITECTURAL DESCRIPTION

Forest River Park, 32-38 Clifton Avenue (SAL.916), is a public park established in 1907 by the City of Salem. The park contains over 30 acres of land and is characterized by rolling hills largely covered with mature trees and an expansive shoreline along Salem Harbor that forms the park's east and south boundaries. Forest River Park's north and west boundaries are defined by the rear property lines of the residential lots on the south side of Shore Avenue and the east side of West Terrace and West Circle (see Figures 1 and 2). The park entrance at the intersection of Clifton and Shore Avenues is demarcated by a pair of stone and concrete piers with secondary piers flanking the sidewalks that extend from the intersection (photo 1). The park is also accessible from West Avenue.

The park contains various buildings and recreational structures, including a caretaker's house and garage/restroom facility near the park entrance off West Avenue, a pool and bathhouse at the south end of the park along the harbor, and a collection of reproduction colonial buildings at Pioneer Village at the park's northernmost section. These structures are described in further detail below.

Other recreational park elements are present, including a tennis court, concrete slide, and various playground equipment (photos 41-43). A concrete slide was installed north of the Forest River Park Bathhouse by 1955. The slide features four lanes that descend from a concrete and stone platform with metal railings. A tennis court is located at the southernmost part of the park next to the Forest River Park Pool and was likely added around 1971 when the pool was renovated. Two swing sets northwest of the slide appear to date from the same period. Towards to center of Forest River Park is a playground that was installed by 1995. A basketball court and baseball diamond at the park's northwest corner have been temporarily removed as part of the City of Salem's effort to upgrade the park's drainage system.

Forest River Park also features park furniture, such as benches and picnic tables, and trash receptacles. Park pathways provide pedestrian and limited automobile access to different parts of Forest River Park. These include a combination of dirt pathways and paved asphalt drives with concrete curbing and metal guardrails at select locations. Wood bollards line the pathway that leads northwest to Pioneer Village. The beachfront next to Pioneer Village is lined with a concrete retaining wall (photo 18-19). The circular concrete retaining wall along the beach south of Pickering Point is faced with stone veneer (photo 23).

Col. Timothy Pickering House

The oldest extant building within Forest River Park is the Col. Timothy Pickering House (SAL.2149; photos 4-5 and 7-8), located at the park entrance east of where West Avenue terminates. The two-story vernacular dwelling was constructed by 1817. Based on an examination of the building's architecture and a comparison of historic atlases, it appears to have been moved and expanded between 1874 and 1887 (see Figures 3 and 4). The building's westernmost four bays seem to date to the Second Period (1725-1780) of colonial architecture. Here, the south elevation and the westernmost two chimneys form a relatively symmetrical block. Further research and an examination of the building's interior would likely yield more information on the building's construction and history.

The dwelling's gable ends are two bays wide facing east and west, while the north and south elevations are nine bays wide. The exterior is clad in painted wood shingles. Two entrances are located on the south elevation, each in the next-to-last bay. These paneled wood doors are covered with modern metal screen doors. Added later to the building are the projecting pedimented hoods above the two doors on the south elevation. A third entrance is located within the first bay of the east elevation and features a solid paneled wood door. Windows openings at the first story of the north and south elevations have six-over-six double-hung replacement sash. A single sliding window is located at the first story of the south elevation. Second story windows at the north and south elevations are set immediately under the eaves and have three-over-six double hung replacement sash. Windows on the gable ends have six-over-six double-hung replacement sash. Louvered vents are tucked beneath the gables of the east and west elevations. Asphalt shingles cover the building's gable roof. Three white-washed brick chimneys rise from the north slope of the roof. A short wood picket fence extends south from the dwelling to surround the lawn bound by the park pathways and the Forest River Park Garage on the property.

Forest River Park Garage

Immediately southeast of Col. Timothy Pickering House is the single-story concrete block Forest River Park Garage (photos 7-8), constructed at an unknown date but by 1938 based on historic aerial images. The garage functions today as a restroom with storage space. A modern multi-paneled garage door is located on the south elevation. Next to that is a pair of one-over-one pivot windows, set above a single wood sill. The building's concrete block exterior and windows sills have been uniformly painted. The same style and configuration of pivot window is found centered on the west elevation. Two pairs of such windows are also located on the north elevation. In between the north elevation windows is a narrow solid door. The east elevation features two doors that provide access to the men's and women's restrooms. Concrete steps lead to the entrances which are topped with projecting flat hoods. The asphalt shingle gable roof overhangs on the north and south elevations. The end bays have vertical wood paneling in the gables. Trees and shrubbery have been planted along the building's east elevation, shielding much of the view of the restroom entrances.

Forest River Park Bathhouse

The single-story brick and stucco Forest River Park Bathhouse (photos 23-27, 29-30, 32-40) is located at the southeast edge of Forest River Park along the Salem Harbor. The building dates to the late 1920s and has an unusual yet symmetrical shape with the centermost bays of the north, south and west elevations recessed. The corners of the building that project feature cast stone quoining. The west elevation, facing the Forest River Park Pool, is the bathhouse's primary elevation. The projecting end bays of this elevation feature paired one-over-one pivot windows set within a low arched opening. The windows share a single wood sill supported by four scrolled brackets. Centered within the recessed section of the west elevation is a hexagonal projecting center bay. Each side of the projecting bay contains three awning windows. Flanking the projecting bay on both sides is a solid door. Transoms above the doors have been infilled. Shielding the projecting bay and the two doors is a shed roof overhang with exposed rafters and simple end brackets. Next to each door is a pair of two stacked awning windows with a wood sill supported by two scrolled brackets. A plaque commemorating the work done to the bathhouse and pool in 1971-72 has been installed at the northwest corner of the west elevation. New electrical and plumbing was installed as part of the renovation.

The north elevation of the bathhouse features groups of four awning windows set within low arched openings with wood sills, supported by four scrolled brackets. These windows are in the projecting end bay at the building's northwest corner and the north elevation's centermost bay. While recessed from the end bays, the centermost bay projects slightly and features quoining. The window opening in the projecting end bay at the northeast corner of the building at this elevation has been infilled. The recessed portions of the elevation flanking the centermost bay each have two stacked awning windows with a wood sill supported by two scrolled brackets. An outdoor shower platform is within the recessed portion of the north elevation. The south elevation is nearly identical to the north with few exceptions. The projecting end bay at the southeast section of the building features a door and large round vent instead of a window. Also, the centermost bay within the recessed portion of the south elevation does not slightly project and therefore does not have quoins.

The seven-bay east elevation features a continuous arcade of large arched openings with roll-up metal sheet doors. The centermost bay has a decorative gate, providing access to the building's open central corridor and interior. Within the corridor are two doors as well as eight arched window openings that been infilled with concrete blocks. The building's timber frame roof is topped with a cast stone cornice and a low parapet wall. The bathhouse exhibits signs of deterioration. The exterior stucco is in need of repair, particularly inside the central corridor and around fenestration, and wood elements such as the window sills, decorative brackets and the shed hood overhang are deteriorating due to paint failure and exposure to the elements.

A concrete stairway descends from the west elevation of the bathhouse to the Forest River Park Pool. The north, south and west elevations are enclosed with galvanized chain link fencing. Outside of the bathhouse is a parking island containing a freestanding rusticated stone and metal plaque monument commemorating the 1999 restoration of the Forest River Pool. Two bicycle parking racks are also located outside of the bathhouse.

Forest River Park Pool

West of the bathhouse facing the Salem Harbor is the Forest River Park Pool (photos 25, 28-29, 31 and 40). Originally a tidal pool, the pool was formalized into a concrete structure at an unknown date. The pool was renovated in 1971-72, and again in 1999 when it was expanded and converted from salt water to a recirculating, fresh water pool. The current pool configuration includes two separate sections that together have a surface area of approximately 15,150 square feet and a perimeter measuring 724 linear feet. The southernmost section is rectangular in shape, 65 feet wide by 187 feet long, and ranging in depth from three to nine feet. North of that is a 50-feet by 60-feet wading pool with a maximum depth of three feet. A narrow concrete decking area surrounds the pool. Metal handrails line the concrete ramp that leads from the bathhouse to the wading pool. The pool area is surrounded by a galvanized chain link fence.

PIONEER VILLAGE

Pioneer Village (SAL.GM; photos 11-17) occupies the northernmost section of Forest River Park, bounded by the Salem Harbor to the east, park pathways and a small parking lot to the south, and wood stockade fencing to the west and north. A pond is located at the southeast corner of the village, while a mature forest characterizes the village's northern section. Originally built in 1930, resources within Pioneer Village today include eight structures and various landscape elements. The majority of the structures are small, single-story wood reproduction cottages with gable roofs either clad in wood shingles or thatch, with a single chimney. The village also features a reproduction blacksmith shop with a firepit. At the center of the village is the two-story "Governor's Mansion." The wood mansion has a steeply pitched gable roof with wood shingles and a single brick chimney. South of the mansion is a garden with period plantings, framed by rudimentary wood fencing. A reproduction English wigwam is situated to the northwest of the other village structures. West of the wigwam is a dugout shelter. (A second dugout and a cornfield were lost during a storm in March 2017.) Pioneer Village also features a pillory and two small wood bridges. A wood ticket booth is located outside of the village along the park's pathway. Many of the buildings within Pioneer Village have been rebuilt or significantly rehabilitated since 1930. Further research is necessary to determine when the work occurred and what, if any, original fabric remains.

HISTORICAL NARRATIVE

The area today known as Salem was first inhabited by members of the Pawtucket group of Native Americans commonly referred to as the Naumkeags. When the first European settlers, the "Old Planters," arrived in 1626, Salem was called Naumkeag. These early English settlers had abandoned an earlier failed settlement in Cape Ann and established themselves on the south side of the North River and on the peninsula jutting northeast into Beverly Harbor. A second wave of settlers arrived in 1628 and situated themselves further up the North River. The settlers utilized the common field system, pasturing animals and planting crops in common fields. In 1640 there were at least ten common fields in Salem, the two largest being North Field on the north side of the North River and South Field between the Forest and South Rivers. South Field, approximately 600 acres in size, contained the land on which Forest River Park is located and was reportedly used by Native Americans who referred to the Forest River as Mashabequa, meaning "Great Cove." The common field system was short lived. After about 1640 official grants of common land were less common, and in the 1660s the town(ship) and the selectmen (or proprietors) disposed of common and undivided land by sale or lease.

The Forest River Park property has avoided the dense development seen in the neighborhood areas largely because the land remained under relatively consistent private ownership until the first part of the twentieth century. The park land's earliest known private owners following the termination of the common field system were William Flint (1603-1673) and his wife, Alice Williams Flint (1608-1700). In 1699, Alice, then a widow, deeded the land to her daughter, Alice Flint Pickering (1636-1713), wife of Lieutenant John Pickering (1637-1694). The property remained in the Pickering family and was eventually under the ownership of Colonel Timothy Pickering Jr. (1745-1829), the great-grandson of John and Alice. Col. Pickering was an attorney and politician who served in the Revolutionary War. He was an aide to General George Washington and held various appointed positions including Postmaster General and Secretary of War. Col Pickering later served as the third United States Secretary of State under Presidents George Washington and John Adams. He furthered his political career by represented Massachusetts in both chambers of Congress from 1803 to 1811 as a member of the Federalist Party.

Col. Pickering provided the first reference to a building on the Forest River Park property, the Pickering House (SAL.2149), in an 1817 correspondence, referring to a cabin in the "Southfields." It is likely that the building was constructed several decades earlier, around 1750. It was not used as the Pickering family's primary residence, which was located at 18 Broad Street (SAL.1044; NRDIS 1973; LHD 1981).

Following the death of Col. Pickering in 1829, his estate sold the property to William Batchelder (b. abt. 1784), a New- Hampshire-born farmer/laborer, who then immediately sold the land to

merchant John Winn (abt. 1765-1835). Deed records from this period note an apple tree lot on the property as well as "Pickering's Point Pastures," likely the land at the easternmost part of the park known today as Pickering Point. Winn owned the property for only a few years before it was again sold in 1835, just months before his death. The property's new owner, David Pingree, served as President of the Naumkeag Bank and later worked as a merchant. During the period in which he owned the Forest River Park land, Pingree resided at 128 Essex Street, known today as the Gardner-Pingree House (SAL.2455; NHL 1970; NRDIS 1972; LHD 1977).

In 1859, the trustees of David Pingree sold the Forest River Park land to the Asiatic Bank, which subsequently sold it to Richard Lavers (abt. 1813-1887), a farmer. Lavers was married to Mehitable A. Batchelder (1818-1885), daughter of William Batchelder, and thus his acquisition of the land returned it back to the Batchelder family. The Batchelders and Lavers did not reside at the Pickering House during their ownership of the property.

In 1864, the property went into foreclosure and was taken by the Salem Savings Bank. The bank then sold it to Jay H. Moulton (1811-1895), who was married to Olive O. Batchelder (1809-1896). Both were born in New Hampshire, making it possible that Olive was related to the family of William Batchelder. As was the case with prior owners, the Moultons did not live at the Pickering House. The atlas for 1874 shows three secondary structures on the property in addition to the Pickering House, which appears to have a smaller footprint and more northern location than present (see Figure 3). The construction and demolition dates as well as the uses of these buildings are unknown.

Mary Porter Tileston Hemenway (1820-1894) purchased the property from the Moultons in 1887 for $1. Mary's late husband Augustus Hemenway (1805-1876) was a Salem native and prominent mariner and ship owner, famed for opening trade between the United States and Chile. He is thought to have been the wealthiest man in American at one point, with a wide range of commercial and real estate interests in New York and Boston, and commercial ventures abroad that involved lumber in Maine, mining in Chile, and a sugar plantation in Cuba. Originally from New York, Mary became well-known as Boston's wealthiest woman following the death of Augustus. She was a renowned philanthropist who invested both her time and financial resources supporting various causes such as the anti-slavery and suffragette movements. Mary was also an early advocate of historic preservation and is credited with saving Boston's Old South Meeting House in 1876.

Mary Hemenway had a fascination with Native American culture and invested in its study and preservation. She launched the "Hemenway Southwestern Archaeological Expedition" (1886-1894) to undertake a series of archaeological explorations in New Mexico and Arizona. In 1886, Mary appointed a board to oversee the construction of a "Pueblo Museum" in Salem where the artifact collections from the expedition would be featured. Unfortunately, Mary died before the museum materialized, and many of the Native American artifacts that had been collected were given to the Peabody Museum at Harvard University. It is rumored that Mary had a museum built on the Forest River Park land that was dismantled after her passing, however these claims could not be substantiated. Under the ownership of Mary's estate, the property contained the Pickering House and two other structures near the house (see Figure 4). It is possible that these were two of the outbuildings seen in the 1874 atlas, perhaps moved and/or altered.

In December 1907, the Board of Park Commissioners of the City of Salem took the Forest River Park land by eminent domain to establish a public park (see Figure 5). Salem's first Board of Park Commissioners was appointed in 1893, following the passage of the Park Act in 1892. The Park Act established the Metropolitan Park Commission which created the expansive Metropolitan Park System of Greater Boston by its power of eminent domain. By 1975, the Metropolitan Park System of Greater Boston contained over 7,000 acres of land across numerous municipalities around Boston. Forest River Park is an early example of a suburban municipal park outside of Boston that reflects the influence of the progressive late nineteenth century park movement.

The acquisition of Forest River Park was noted as one of the Board's most important accomplishments in the first two decades of the twentieth century, along with the acquisition of two other parks, Highland Park (known today as Salem Woods) in 1906 and Gallows Hill Park in 1912. A clubhouse at the center of the park was added shortly after the acquisition (see Figure 6). By 1911 the City had made various other improvements to the park.

The Pickering House was converted into the park caretaker's residence. A baseball field, football grounds, and pedestrian pathways were laid out. At the park entrance, ornamental walls and posts were installed. Additionally, the clubhouse was moved to the waterfront and remodeled into a public bathhouse for the salt water tidal pool that opened into the harbor (see Figures 7, 8 and 10). The following year, the City established a nursery within the park and planted 125 oak, elm, ash and maple trees. Upon maturing, these trees would be moved to Salem's streets, and the nursery replenished to maintain the supply.

On June 25, 1914, a fire broke out following an explosion at the Korn Leather Factory at 57 Boston Street in Salem. Known as the Great Salem Fire, the conflagration spread rapidly, burning 253 acres and leaving nearly half of Salem's 48,000 residents homeless. Camps, or tent cities, were quickly established in different parts of the city. The largest makeshift camp was at Forest River Park, which at that time was still very much characterized by its open pastures (see Figure 9). On June 26, 100 tents were erected at Forest River Park. Within two days, 1200 displaced people were living in the camp at Forest River Park. An additional 300 people arrived the following day. By then, there were over 400 tents and a large dining tent with the capacity to seat several hundred. National Guard soldiers managed the distribution of food and assisted with other relief efforts in conjunction with the American Red Cross and civil authorities. The tent city at Forest River Park operated for several months while the city worked to rebuild itself.

In the late 1920s, the old bathhouse was replaced with the present bathhouse (see Figures 10, 11 and 12). The construction of municipal pools peaked during the 1920s as Americans had more time for leisure and pool equipment and sanitation measures improved. It is unknown who designed the Forest River Park Bathhouse, however it is architecturally similar to the bathhouse that once stood at Smith Pool at Cat Cove near Winter Island, designed by Ambrose Walker. A formalized concrete pool replaced the tidal pool at Forest River Park, likely in the 1960s. The pool and bathhouse were renovated in 1971-72 (see Figures 18-20). The bathhouse provided restrooms, changing rooms, and concession stands for patrons. It also housed a caretaker's room, a first aid room, a lifeguard station and information stand. The last major upgrade to the pool occurred in 1999 when it was converted from salt water to fresh water.

Various other structures and park elements were added through the years. A garage was constructed east of the Pickering House by 1938. It today functions as a restroom with storage. A concrete slide and two swing sets were installed by 1955. Two tennis courts at the southernmost part of the park next to the pool was added in the early or mid-1970s. By 1995, a playground had been established towards the center of Forest River Park.

PIONEER VILLAGE

Situated in the northernmost section of Forest River Park is Pioneer Village. Created in 1930 for the Massachusetts tercentenary, Pioneer Village has the distinction of being America's first living history museum. The three-acre village contains a variety of structures intended to give visitors a glimpse into the everyday life of the colonists. It originally features twelve buildings in a designed landscaped and included a reproduction of the Arabella, the flagship of John Winthrop's fleet, in the Salem Harbor. Pioneer Village was intended to be a temporary exhibit, yet it was never dismantled. The reproduction ship was severely damaged in a hurricane in 1954 and was subsequently burned.

Pioneer Village was conceived by George Francis Dow (1868-1936), a leading historian and antiquarian in New England. He founded the Topsfield Historical Society in 1894, was a member of various other organizations including the Massachusetts Historical Society and the New England Historic Genealogical Society. Dow served as an officer of the Essex Institute of Salem, and later was elected curator of the Society of the Preservation of New England Antiquities (now Historic New England). He spent the rest of his life serving as curator, museum director, and editor of the organization's magazine, Old-Time New England. Well-versed in the architecture of New England, Dow was tasked with the restoration of several eighteenth-century homes for both private owners and historical societies. In 1935, his book Every Day Life in the Massachusetts Bay Colony was published. In it were several illustrations from the recently created Pioneer Village (see Figures 14-17).

Other advisors to the construction, arrangement and furnishing of Pioneer Village in 1930 included Rose Briggs and Donald Macdonald-Miller. Briggs worked for Pilgrim Hall in Plymouth and was responsible for designing the costumes worn by the reenactors. Macdonald-Miller was an architect and early member of the Society of the Preservation of New England

Antiquities. He provided the drawings for the Governor's Mansion at Pioneer Village.

Pioneer Village remained a popular tourist destination until the 1950s when it began to deteriorate due to deferred maintenance and vandalism. Three of the buildings were lost due to fire in the 1960s and 1970s and were replaced with similar structures. The date(s) of the losses of the wigwams and dugouts is not known. By the mid-1980s, about half of the original structures were no longer extant. The City of Salem Park Commission voted to demolish Pioneer Village in 1985. The village was saved by the Pioneer Village Associates who signed a contract with the Park Commission in 1986 agreeing to restore and manage Pioneer Village. Led by Peter LaChapelle, then chief of visitor services at the Salem Maritime National Historic Site, and Dr. K. David Goss, a career museum administration professional, the Pioneer Village Associates and their team of volunteers restored Pioneer Village. The deteriorated structures were rebuilt, and the gardens replanted. Pioneer Village reopened for the 1988 season, and a grant reopening was held in June 1990. For their roles in the restoration of Pioneer Village, Goss and LaChapelle won the American Society of Travel Writers prestigious Phoenix Award in 1991.

Despite being leased to the House of Seven Gables until 2003, Pioneer Village again suffered from deferred maintenance and vandalism, and was included in Historic Salem Inc.'s "Most Endangered Resources" list for 2003. Over the course of the next five years, Salem Preservation Inc. managed and restored Pioneer Village. Partnering with a wide range of volunteers and stakeholders, Salem Preservation Inc. made various building repairs and site improvements. In 2008, Gordon College's Institute for Public History signed a five-year lease to use both Pioneer Village and Old Town Hall to host "History Alive!," the school's interactive theatre program. Gordon College elected not to renew their lease in 2013, and the City of Salem again took over operations at Pioneer Village. Today, access to tours of Pioneer Village is limited to weekends during the months of June through September. Its remote location on the South River has left Pioneer Village subject to both flooding and vandalism. The City plans to address deferred maintenance at Pioneer Village following the completion of the drainage project that is currently underway.

Undated postcard of the old bathhouse at Forest River Park, likely ca. 1920. Source: City of Salem. Original tidal pool as designed in early 1900s

Undated photograph of the bathhouse at Forest River Park, likely dating to the late 1920s. Source: City of Salem. Summer day at the Forest River Pool on the banks of Salem

Undated photograph of the bathhouse at Forest River Park, likely dating to the late 1920s. Source: Stephen J. Schier and Kenneth C. Turino, *Images of America: Salem, Massachusetts, Volumne II* (Charleston, SC: Arcadia Publishing, 1998), pg.39.

SECTION 5

EXISTING CONDITIONS

OVERVIEW

The purpose of the building assessment is to document the current conditions of the existing bathhouse, pool and surrounding elements, to determine the need for potential upgrades of existing systems and finishes and a proposal for a new pool.

BH+A architects in conjunction with Samiotes, Kyle Zick Landscape Architecture and Structures North toured the building in the beginning of the spring, 2018. All visible items were noted for conditions and useful life. All components of the bathhouse and the pool infrastructure were reviewed including building enclosure, mechanical, electrical, and plumbing systems, pool surface and filtration systems and code and accessibilities issues.

Forest River Pool and Bathhouse

EXISTING POOL AND FILTRATION

MAIN POOL

Dimensions:	65’-0” by 187’-0”
Depth:	3 feet sloping to approximately 9 feet
Surface Area:	12,155 SF
LF Gutter:	439 LF of cast in place gutter
Bather Load:	640
Volume:	545,000 Gallons

SHALLOW POOL

Dimensions:	50’-0” by 60’-0”
Depth:	1 foot sloping to approximately 3 feet
Surface Area:	3,000 SF
LF Gutter:	155 LF of cast in place gutter
Bather Load:	200
Volume:	45,000 Gallons

POOL OBSERVATIONS

1. The “pools” are a single body of water divided by a wall at the shallow end of the main pool, A small gate is located at one end of the wall.

2. The pool tank is a painted concrete structure. The perimeter beam appears to be approximately 12 inches thick; wall and floor thickness could not be determined.

3. The pool surface requires maintenance every year to prepare it for the pool season. The main pool cannot be drained to repair for service; ground water/ sea water enters the pool tank through the bottom.

4. The pool slopes from approximately 12 to 18 inches at the entire perimeter to the maximum depth of approximately 8.4 feet.

5. The pool does not mark the transition pool depth at 5 feet. The shape of the pool does allow this marking.

6. Structured lap swimming in the pool is not possible; a consistent depth of at least 3’-6” with end walls cannot be provided.

7. A ramp was added one end of the shallow pool to provide accessible access. The main pool does not provide a second means of access that is required under the ADA requirements of 2010.

8. The pool draws water into the filtration system from the main drains and cast-in-place concrete gutter. Filtered water inlets are located around the pool perimeter at the pool beam.

9. The pool has multiple main drains. It was reported that the covers are Virginia Graham Baker Act compliant. They were not visible at the time of field investigations.

10. The surrounding water table in this area is very high and subject to tidal flooding from Salem harbor. The main drains contain pressure release valves that allow water to enter the pool when the pool is empty and the water pressure from the ground water is greater than the pool structure. It is also reported that there are significant cracks in the bottom of the pool.

11. The main pool area does not conform to a regulation swim course length. Standard courses are 75’-1” (25 yards); or 164’-1” (50 meters). USA swimming summer short courses are measured in yards, not meters.

12. The main pool appears to have adequately spaced ladders around the pool.

13. Depth markings and safety warning graphics are painted on the pool deck. Water depth markings are not clearly visible within the pool.

FILTRATION OBSERVATIONS

1. The pool is filtered by 4 vertical high rate sand filters. They appear to be Astral 96 inch diameter units.

2. The pool is treated with 2% hypochlorite solution (liquid chlorine) stored in closed plastic containers.

3. Backwash of the filters is captured in plastic holding tanks and drained/pumped to sanitary

4. There is no automatic chemical control equipment. All monitoring and adjustments are made manually.

5. The actual flow rate, turnover rate, and effective filter area were not determined. The pool water is checked throughout the pool season; pool chemistry and clarity are maintained. The calculated floor rate in accordance with current codes would be 1,650 gpm for a 6 hour turnover rate requiring 109 SF of filter area.

Filter System

Filter Location

POOL LOCATION

As discussed in the Historic Report contained in this report, the pool was originally a tidal pool that was later converted to a structured concrete pool. Significant leaks have been reported at the deep end of the pool that affect the pool chemistry and water usage.

During a significant storm event in March 2018, the pool and all of the filter equipment was flooded.

RECOMMENDATION

The pool's physical condition, increasingly difficult maintenance, and non-code compliant features warrant the construction of a new swimming pool. The existing pool does not lend itself to renovation. A new pool will allow the City to provide ample recreational and learn to swim space, structured lap swimming, and a low maintenance, properly filtered pool tank.

Along with a new pool, a new filter system located in an above ground filter building will provide proper filtration and chemical controls that will maintain code required pool chemistry and water clarity, reduce maintenance, simplify operation, and build in operational/safety features to ensure that the pool system is running at its optimal level.

We recommend two swimming pools to segregate pool programming and use; allow for a 6 hour turnover rate in the main pool; a 4 hour turnover rate now required in pools with water features; and allow use of one pool in the event that the other pool is taken out of service for cleaning.

We also recommend constructing the pool at an elevation even with the bathhouse structure. This provides easy access for individuals with disabilities and eliminates the potential for flooding and damage by tidal surges and groundwater.

BATHHOUSE

The existing bathhouse is a single-story building located on the northeast edge of the pool and consists of a total area of approximately 4,650 S.F. The bathhouse was constructed during the 1920s and has had a few modifications and renovations during its hundred-year life. The existing building is a block and stucco structure sitting on a concrete slab on grade with a strong steel and wood joist roof structure originally designed to carry people on the terrace above. In general, the structure of the building is in good condition. However, some of the building systems are in need of substantial repair or replacement.

West Elevation with lifeguard station

Southwest corner

EXTERIOR ENVELOPE

The exterior wall is a block-brick assembly with layers of stucco, the wall runs up approximately 14' tall. The exterior wall requires some repairs and painting throughout the entire façade. There is some cracking in some of the masonry walls, arcades and columns. The flashing and gutter are either missing or show signs of deterioration. All windows and window sills will need to be replaced. The building has little 'wow" factor and the main entrance is not prominent or inviting.

East Elevation with concession and bathhouse entry at center

Central entry passage to bathhouse with blocked area drains

EXTERIOR ENVELOP (CONTINUED)

North elevation with outdoor showers


Typical historic window sills and replacement window

ROOF STRUCTURE

Roof structure is membrane roof with metal flashing around the perimeter of building. No damage or leaks were observed. Copper parapet coping flashing and gutter aling the entry passage have recently been removed.


Membrane roofing

COMMON AREAS

The reception area is painted block and floors are painted concrete. Some of the common areas need reconfiguration for better circulation and function (i.e. reception area, first aid and concession). It appears that a gap in the overhead door by the reception area allows water to go into the building.

* The building is not heated.

Reception area and lifeguard station

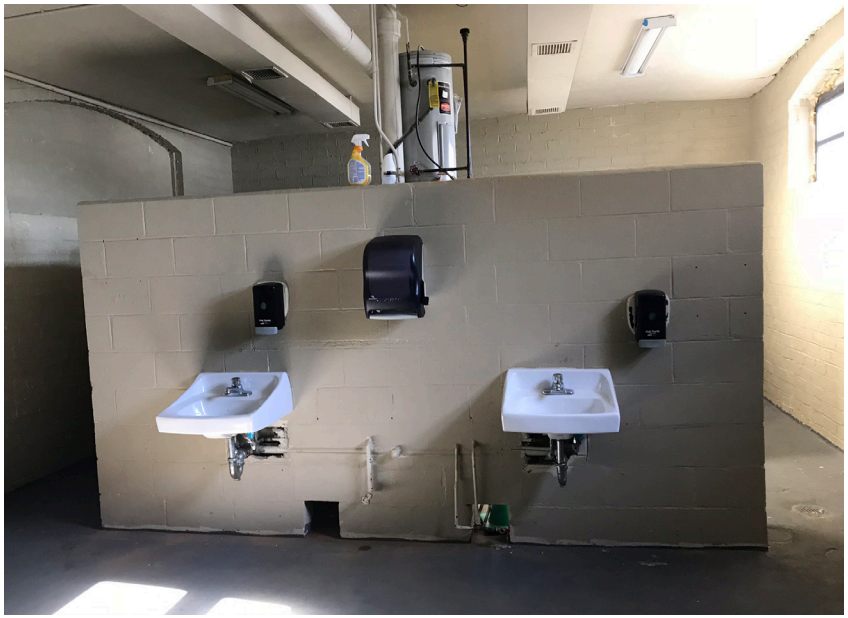
Overhead door from entry passage


Concession area

CHANGING ROOMS

These rooms are painted concrete block with a steel and wood joist framing system to support the roof above. Doors are metal and in many cases are dented and not working properly. The floors are painted concrete. The ceiling assembly is composed of two layers of lath on plasters and gypsum board. In general, the ceilings are in adequate conditions, no damages were noted. Restrooms need addressing for privacy and ADA compliance (new fixtures, shower stall, partitions, grab bars, accessories, and doors) as well as some cosmetic upgrades.

Reception area and lifeguard station



Women's restroom

Women's changing area with stalls

SECTION 7

PROGRAM IN NARRATIVE AND TABULAR FORM

PROGRAM

Program spaces for the Forest River Pool were developed by taking into consideration the needs of interested parties and stakeholders. Some groups included in the programming process were the North Shore YMCA, a stakeholder group of nearby residents, the historical commission and members of the City of Salem. The first step was to identify and document the existing program for the pool as well as current needs of the City of Salem. The complete failure of the pool has become a challenge for the city. The intent is to build a new pool above the storm flood level to prevent future damage to the pool structure.

After determining the primary programs and goals of the new facility, a series of conceptual diagram schemes were developed and oriented on each site option, as can be seen in Section 6. In further development of the preferred location, the block diagram for the pool and bathhouse were studied more in depth to create a conceptual plan which integrates the pool, the bathhouse and its surroundings. The main program areas for the complex are the 25 yards long combination lap and recreational pool, a kiddie pool with a shallow area, a spray pad for extended seasonal use, new changing rooms, a concession area, and a community space for various community events.

The combination pool has four lanes and a diving area which can be used for recreational swimming, instructional swim class for all ages, and aquatic exercise. The kiddie pool attracts kids and family for recreational use. The design of a large outdoor deck area for the pools makes the pool area desirable for birthday parties or other related events.

PRELIMINARY PROGRAM		Program area	Occupants typical day
Program Spaces			
Lap pool and Recreational pool		4,600	307
Kiddie Pool		1,600	107
	Subtotal	**6,200**	**414**
Bathhouse			
Community Room		1,000	20
Lobby Area		210	3
Office		200	2
Concessions		260	3
Janitor		100	2
Storage		120	1
	Subtotal	**1,890**	**31**
Restrooms (Bathhouse)			
Single User Restroom /Shower		55	2
Single User Restroom /Shower		55	2
Women's Locker Room/Showers		735	15
Men's Locker Room/Showers		665	14
	Subtotal	**1,510**	**33**
Support Spaces			
Lifeguard		200	2
Filtration		500	2
Electrical		50	1
Mechanical		100	1
Storage		100	1
	Subtotal	**950**	**7**
	Total Net Square Feet	**10,550**	
	Grossing Factor	1.50	
	Total Program Gross Area	**15,875**	
	Total Occupants		**485**

POOL COMPARISON (EXISTING & PROPOSED)

EXISTING MAIN POOL

Dimensions: 65’ by 187’

Depth: 3 feet sloping to approximately 9 feet

Surface Area: 12,155 SF

Bather Load: 640

Volume: 545,000 Gallons

EXISTING SHALLOW POOL

Dimensions: 50’ by 60’

Depth: 1 foot sloping to approximately 3 feet

Surface Area: 3,000 SF

Bather Load: 200

Volume: 45,000 Gallons

LAP AND RECREATIONAL POOL

Dimensions: 67’ by 75’

Depth: 3 feet sloping to approximately 13 feet

Surface Area: 4,600 SF

Bather Load: 307

Volume: 208,000 Gallons

KIDDIE POOL

Dimensions: 45’ by 45’

Depth: 0 feet sloping to approximately 3 feet

Surface Area: 1,600 SF

Bather Load: 107

Volume: 22,500 Gallons

Recreational pool and separate lap pool

Combination recreational pool and lap pool

Pool deck with seating area

Spray deck and combination pool

PROGRAM REFERENCE IMAGES FROM BH+A PROJECTS

Spray deck and water slide

Spray deck with water features

Community/ Multi-purpose room

Community/ Multi-purpose room

Shower areas

Locker Room

PROGRAM REFERENCE IMAGES FROM BH+A PROJECTS

Bathhouse restroom

Bathhouse lobby

Bathhouse restroom and changing area

SECTION 6

SITES CONSIDERED AND GENERAL DESCRIPTION

SITE ANALYSIS

Part one of the feasibility study involved an analysis of three site alternatives for the new pool and bathhouse. This analysis included site, cost and operational analysis, conceptual site plans and building diagrams for the purpose of analyzing various site characteristics to target issues and opportunities for each site option.

Three locations have been determined as potential sites. One site is the current pool location. Another site is located by the ball field of the park. Lastly, a site across the ball field by the entry of the park at the edge of the wooded park land.

Forest River Park - Site Considered

SITE 1: EXISTING POOL LOCATION

Existing Pool and Steps

Existing Pool, Tennis Courts and Parking

Existing Kids Pool and Ramp

Existing Lap Pool

Existing Bathhouse

Existing Bathhouse – Side Overlooking the Existing Lap Pool

Existing Bathhouse - Southeast Side

Existing Bathhouse - Entry and Concession Area

Expansion Opportunity for Community Room / Deck / Trail Access

Expansion Opportunity at Parking Lot by Tennis Courts

Cove Restoration Site

Cove Restoration Site

SITE 1: EXISTING POOL LOCATION

The first site studied for the new facility is the existing pool and bathhouse location. The site has amazing views, landscaping, and rock outcroppings. These amenities are also challenging, as the existing pool site is in the coastal flood zone which will require extensive permitting in order to ensure that it is restored. In addition, the ledge and historic nature of the park create challenges for design and implementation. At this location we propose the rehabilitation of the existing bathhouse and replacement of the existing pool with a combination lap and recreational pool, a separate kiddie pool with minimum depth, and a splash pad adjacent to the bathhouse. Also, the project includes the reclamation of part of the natural cove site by moving the proposed pools to higher ground (approximately 5-feet higher) and extending the shoreline walkway which will go beyond the pool area. Under–utilized tennis courts and a deteriorated parking lot to the west of the pool will be reconfigured to accommodate parking for staff and a vehicle drop-off area. A proposed lawn area by the current tennis courts would be a site for temporary activities for the summer months including a tent for summer camps. The pool access road will be upgraded and an adjacent pedestrian path will be constructed to connect with the new parking area at the entrance of the park.

Pool Information:

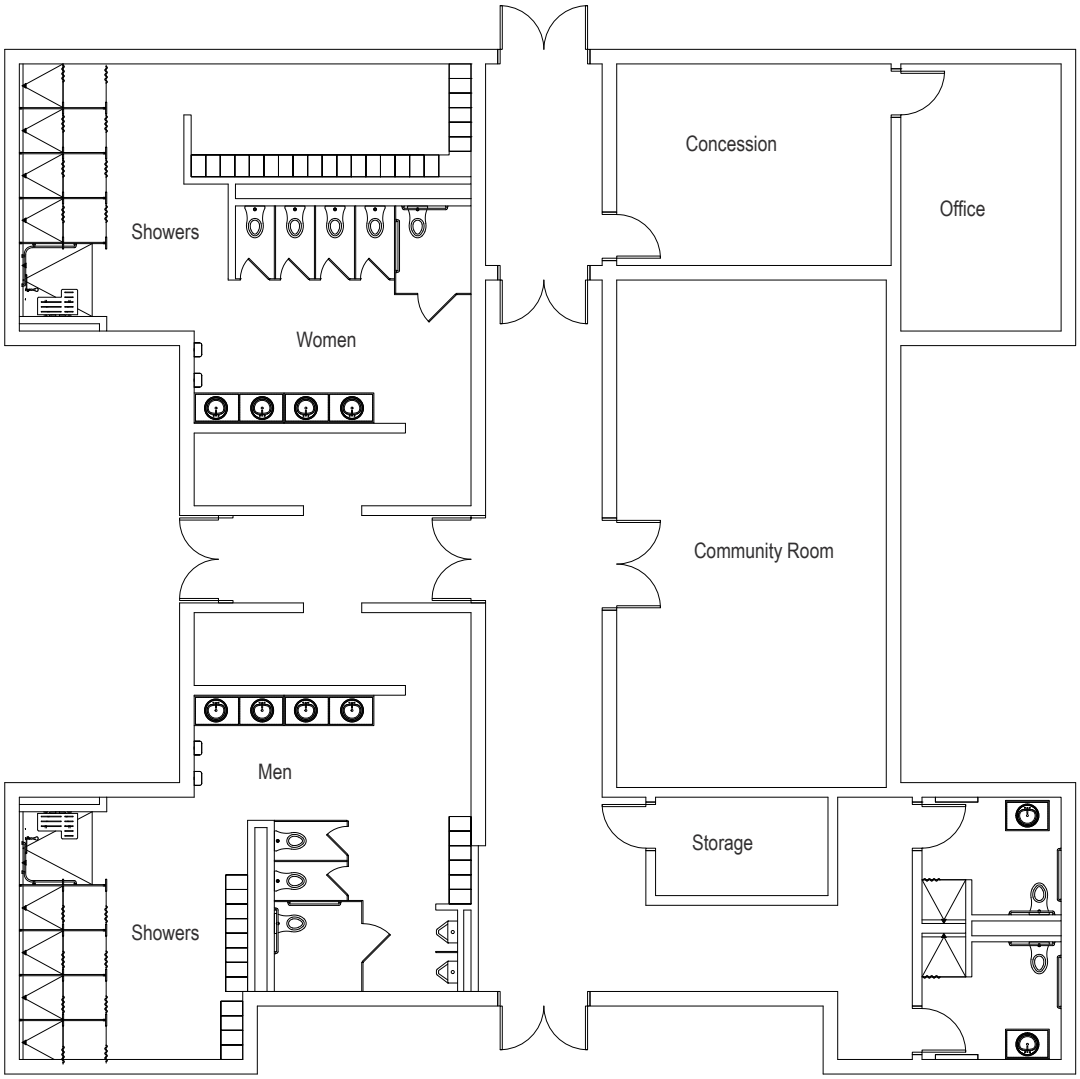
- Pool water area 4,400 SF
- Splash pad area 1,600 SF

Building Information:

- Bathhouse Building area 4,000 sSF
- 400 bathers
- Filtration room 400 SF
- Proposed deck area +/- 1,800 SF

Parking Information:

- Proposed parking count 23 spaces (staff and accessible parking)
- 2 Bus parking spaces



Preliminary Bathhouse Floor Plan

3D View

Ball Fiel reconstruction (existing project)

Ball Field and Pioneer Village

SITE 2: BALL FIELD LOCATION

The second site studied at the Forest River Park is in the parking lot site by the ball field. This site will only allow for a very small pool with a splash pad outside the pool enclosure fence. An advantage for this location, is that it would consolidate all recreational activities within the park in one location. Also, the pool will have plenty of sun without the removal of any trees. Overall accessibility, security and visibility are good.

If this site is chosen, a small pool will only be big enough for two lap lanes, 60 to 70 parking spaces will need to be removed, construction would require redoing a park area just being redone, and relocation of the newly installed batting cages. The facility might be too near the sea level and storm surge, the location would negatively impact the Pioneer Village site, and the project will still need to remove the existing pool facility and renovate or remove the existing bathhouse.

OPTION A

POOL INFORMATION:

- Pool water area 3,500 s.f.
- Splash pad area 1,500 s.f.

BUILDING INFORMATION:

- Bathhouse Building area 2,000 s.f.
- 234 bathers
- Filtration room 180 s.f.

PARKING INFORMATION:

- Planned parking count 191 spaces
- Proposed parking count 138 spaces

OPTION B

POOL INFORMATION:

- Pool water area 3,500 s.f.
- Splash pad area 1,500 s.f.

BUILDING INFORMATION:

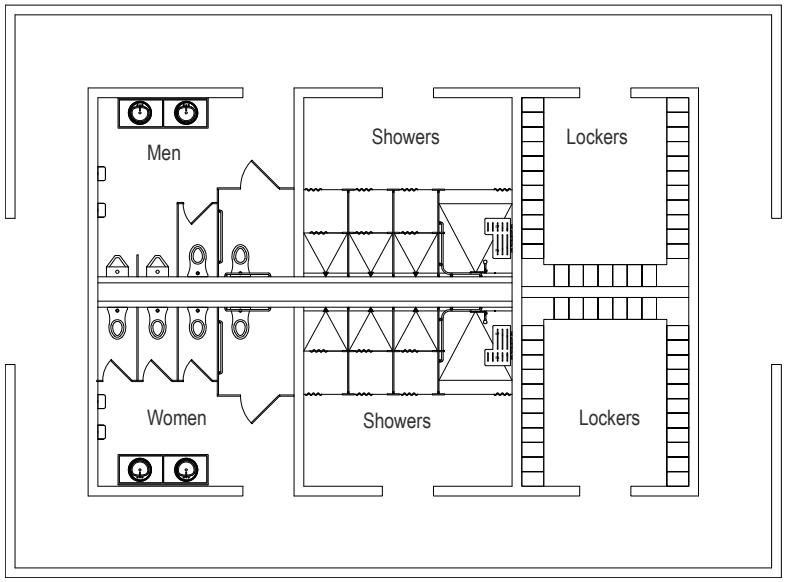
- Bathhouse Building area 4,000 s.f.
- 234
- Filtration room 180 s.f.

PARKING INFORMATION:

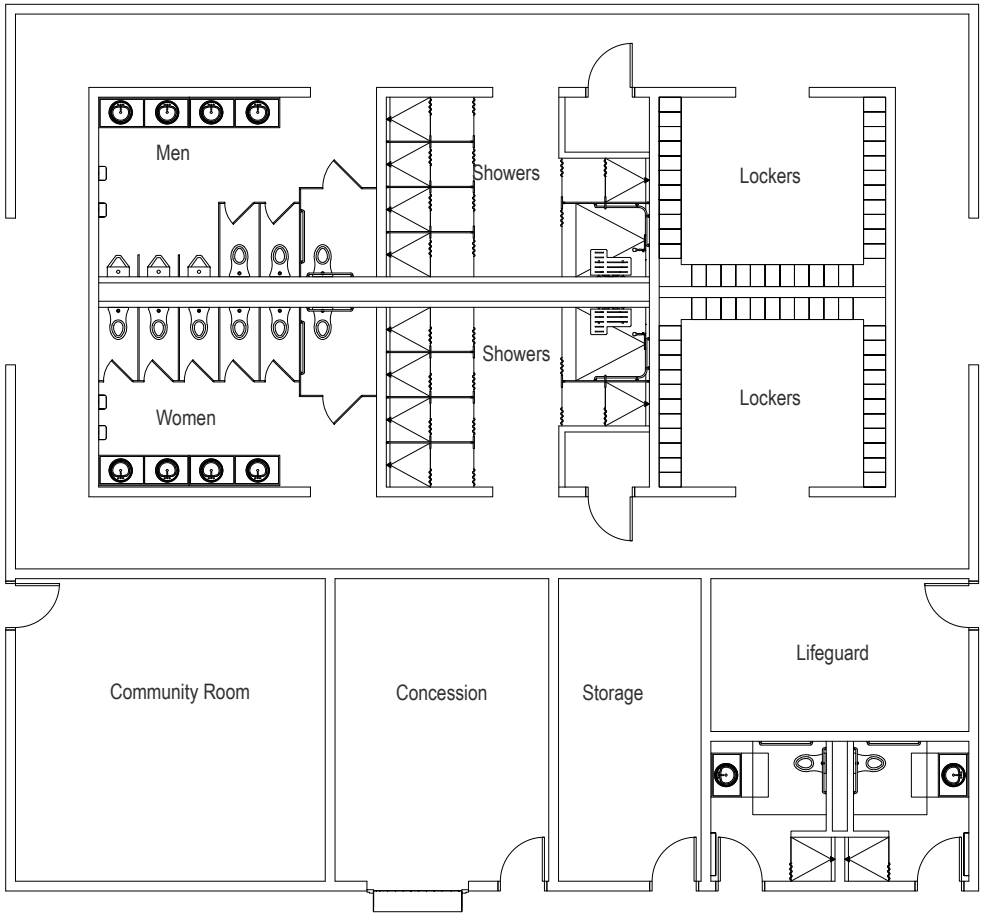
- Planned parking count 191 spaces
- Proposed parking count 116 spaces

Ball Field Location - Proposed Site Plan Option A

Ball Field Location - Proposed Site Plan Option B



Bathhouse Floor Plan Option A



Bathhouse Floor Plan Option B

Park Entry by Baseball Field

Park Land by Baseball Field

SITE 3: PARK LAND LOCATION

The third site studied at the Forest River Park is in the park land area adjacent to the access road and across from the ball field. This site can accommodate a recreational pool, kiddie pool, 4,000 SF bathhouse, and a splash pad outside the pool enclosure fence. An advantage to this location is that access to this site would keep cars out of the park, convenient location next to parking area, good visibility, more space for large pool and seating areas, shorter utility line runs needed than to the existing pool location.

A pool facility at this location would change the whole look of the park, tress will be removed for construction and the pool area will be shaded unless additional trees are removed, construction will require excavation of ledge, location would detract from Pioneer Village, and same as the Ball Field Location, the project will still need to remove the existing pool facility and renovate or remove the existing bathhouse.

POOL INFORMATION:

- Pool water area 4,400 s.f.
- Kiddie Pool water area 1,600 s.f.
- Splash pad area 2,200 s.f.

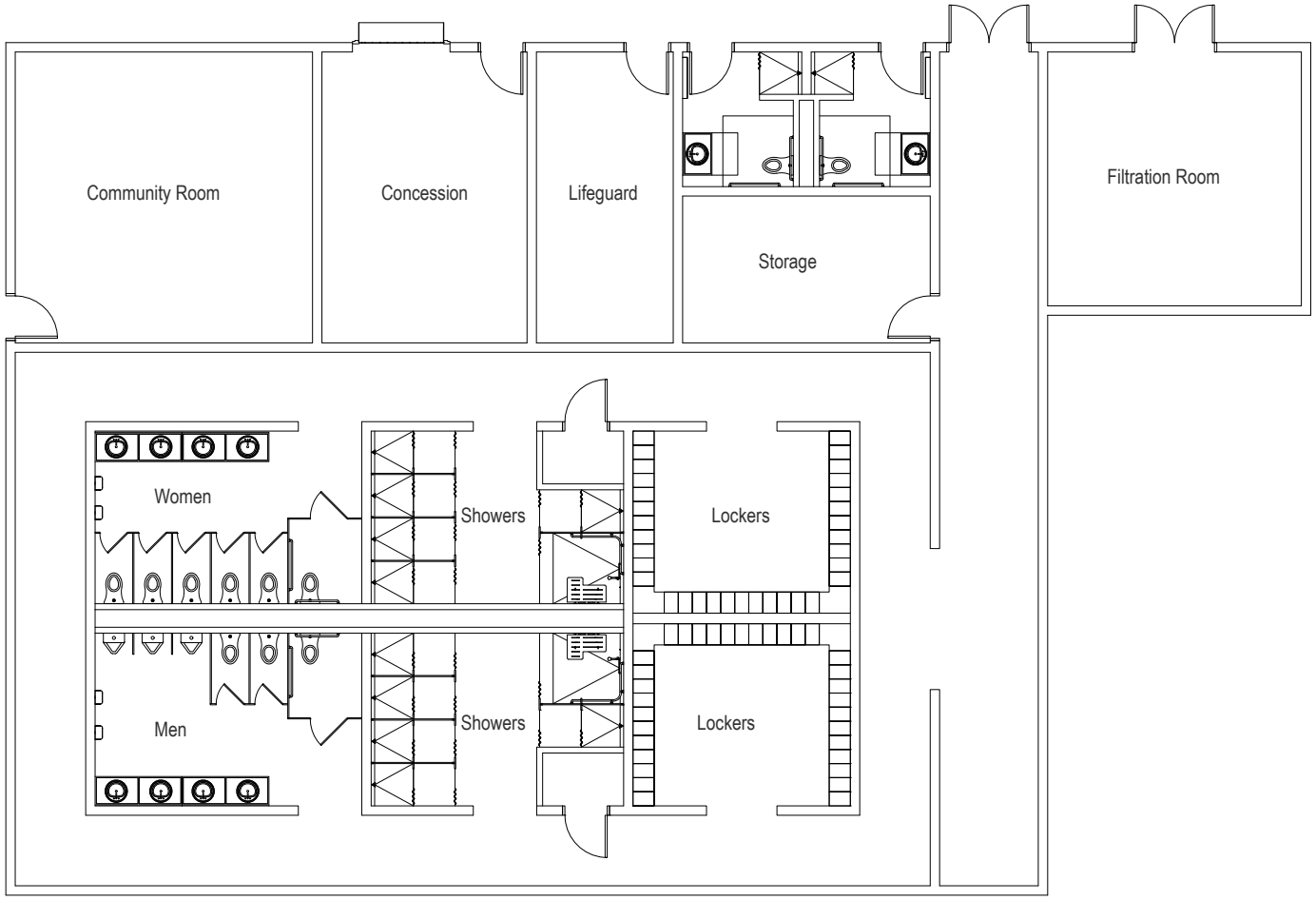
BUILDING INFORMATION:

- Bathhouse Building area 4,000 s.f.
- 400 bathers per pool water area
- Filtration room 180 s.f.

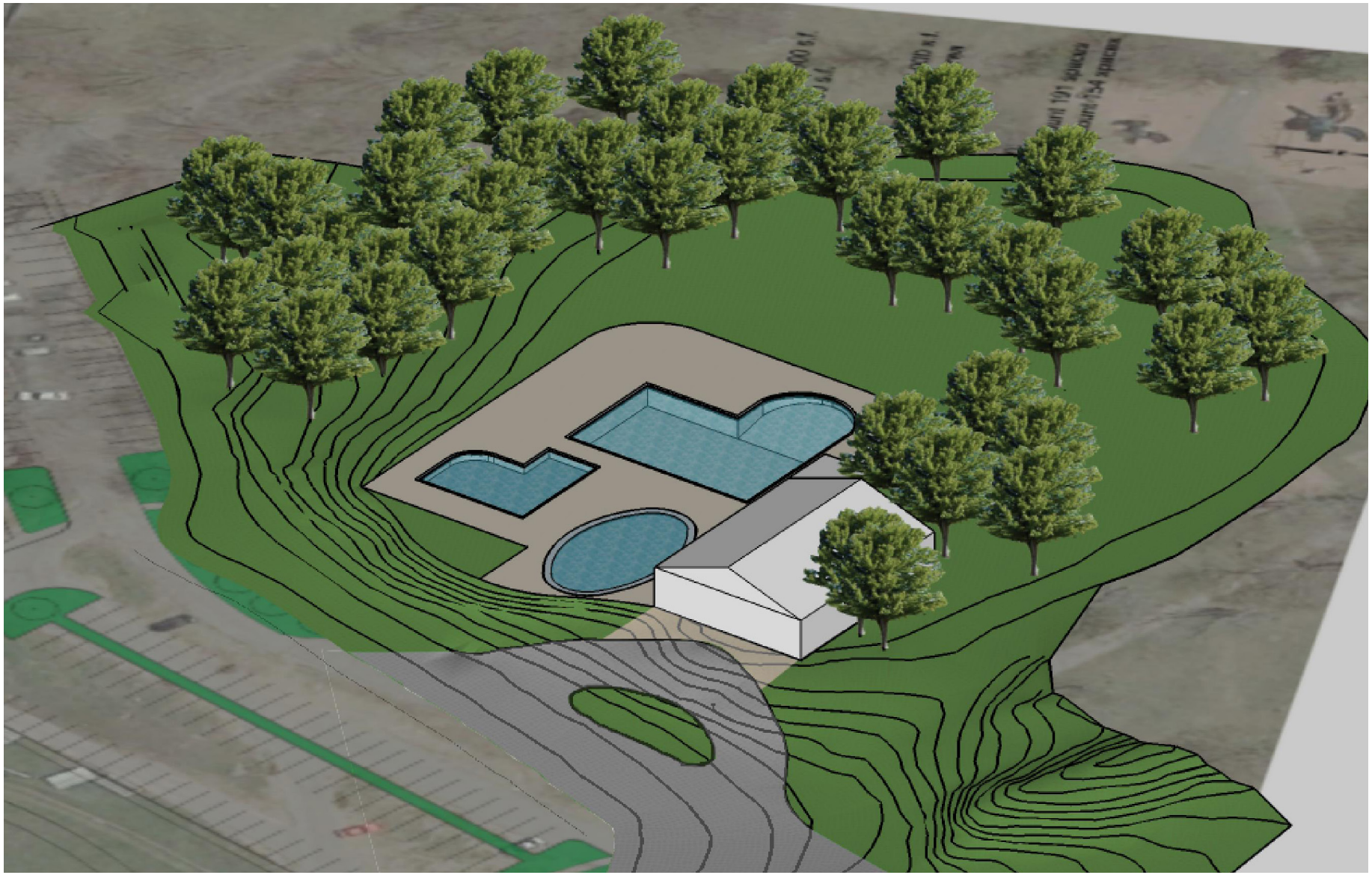
PARKING INFORMATION:

- Planned parking count 191 spaces
- Proposed parking count 154 spaces

Park Land Location - Proposed Site Plan



Bathhouse Floor Plan



3D View

SECTION 8

PREFERRED OPTION ARCHITECTURE PLAN

PART TWO

Part two of the study involved a detailed evaluation of the preferred site in order to identify development costs and operating costs for the proposed facility. The vision of the City of Salem is to find a consensus solution and cost estimate for work needed while maintaining the character of the park. Therefore, the existing pool location site has been chosen for the proposed pool complex. This selection was made by the City of Salem in agreement with a stakeholder group of nearby residents, the historical commission as well as other community organizations. The preferred option was also approved by the Park and Recreation Commission. Others interested parties like South Salem Neighborhood Association, Salem Sound Coastwatch, North Shore CDC and North Shore YMCA have shown their support for the project (see appendix for support letters). Some factors considered for the final site selection were the re-use of the historic pool location and existing bathhouse, the stunning views to the shoreline and harbor, and the opportunity to repurpose the existing tennis courts and adjacent parking area.

The existing pool and pool deck will be demolished and replace with various pool elements. The proposed design consists of a 4,400 SF combination pool for lap and recreational purposes, a kiddie pool, and splash pad. The project also includes the rehabilitation of the existing 4,000 SF bathhouse as well as related site improvements. The bathhouse building will house changing rooms, a concession area and a community room. The filtration room, electrical room and lifeguard will be located on the south side of the pool as a separate building. The project will also include the expansion of the walkway overlooking the harbor, and the existing tennis courts will be replaced with a lawn area that could be used for summer camps, picnics, or YMCA activities. In addition, a reconfiguration of the existing parking area alongside the existing tennis court sites will provide parking spaces for staff, visitors with disabilities, and school group vans.

POOL INFORMATION:

- 25 yards long lap pool water area 4,600 SF (including accessible ramp)
- Kiddie pool water area 1,600 SF
- Splash Pad area 2,200 SF
- 414 bathers

BUILDING INFORMATION:

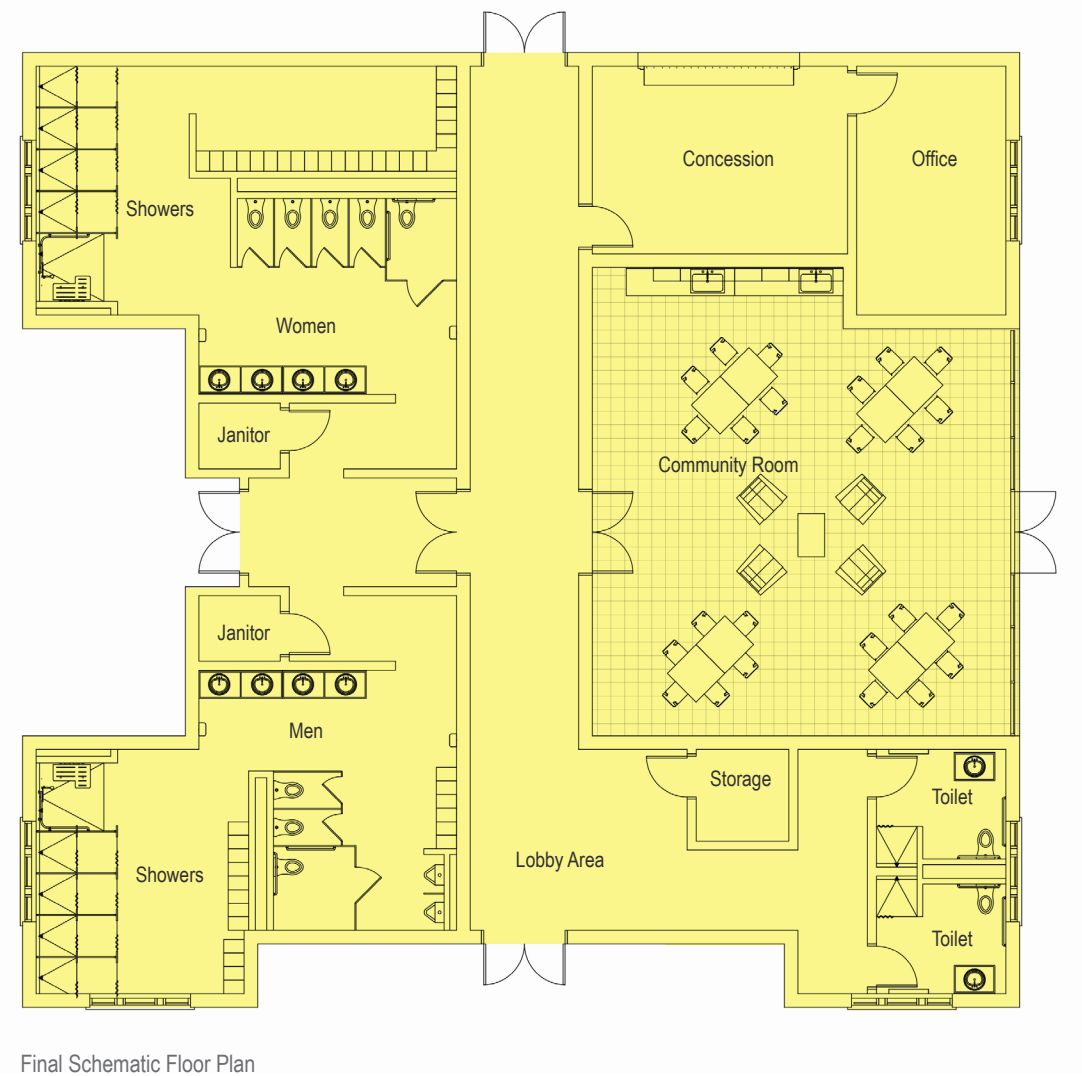
- Bathhouse building area 4,650 SF (including expansion area for community space)
- Filtration room 580 SF
- Proposed Deck Area 13,400 SF

BUILDING INFORMATION:

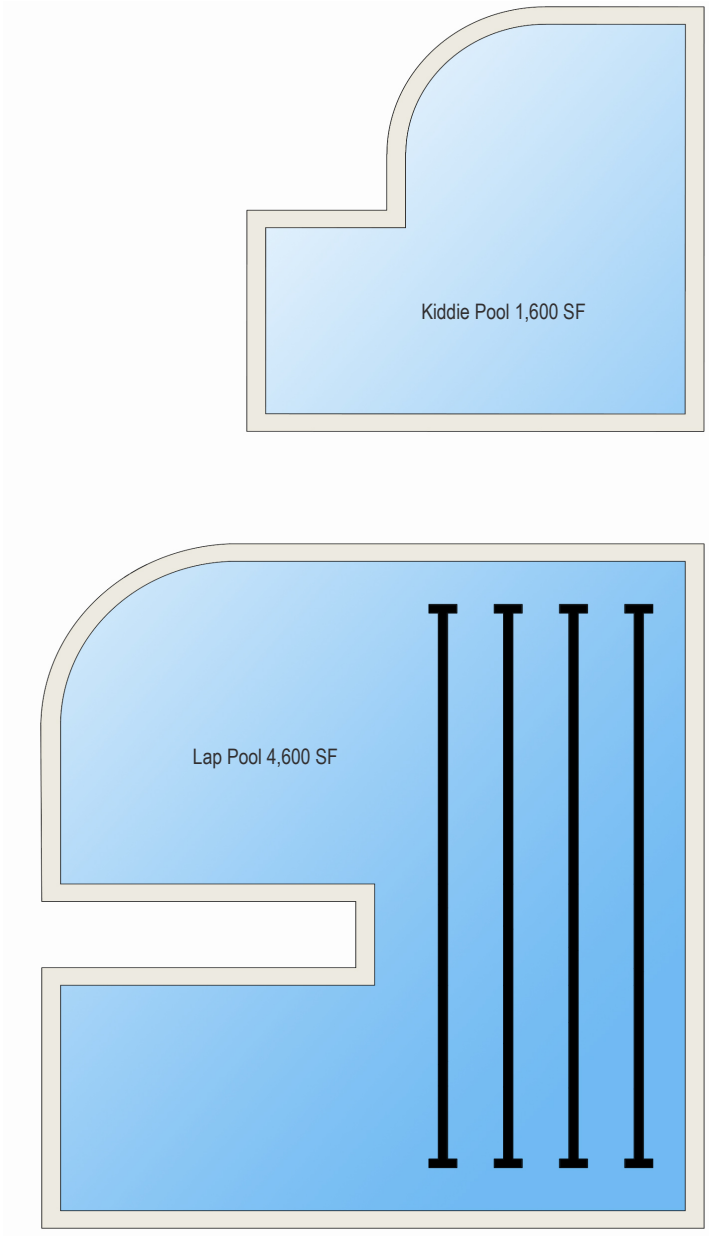
- Proposed parking count 23 spaces (staff and accesible parking)
- 2 Bus parking

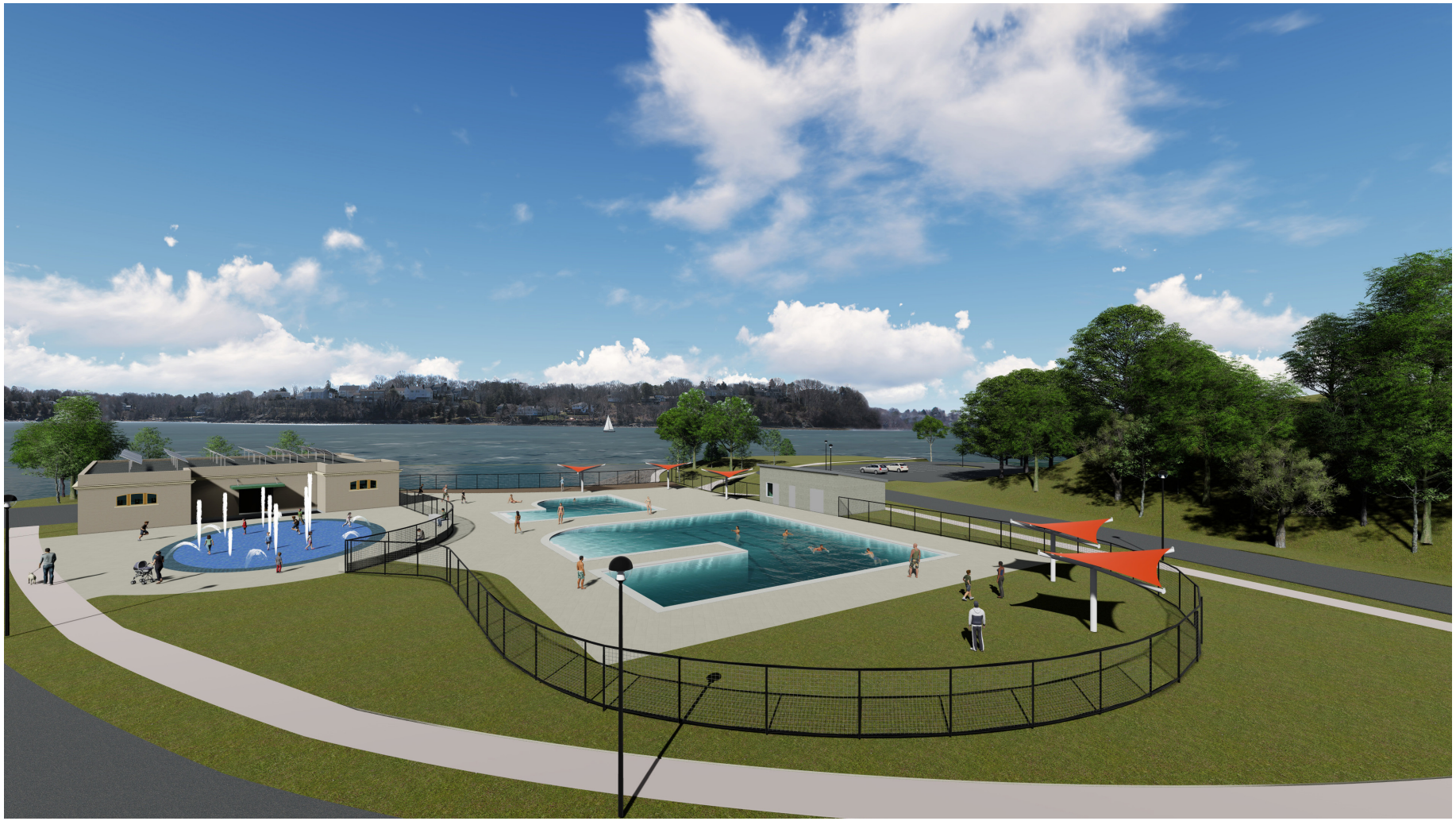
PROPOSED SITE PLAN

FLOOR PLAN DETAILS



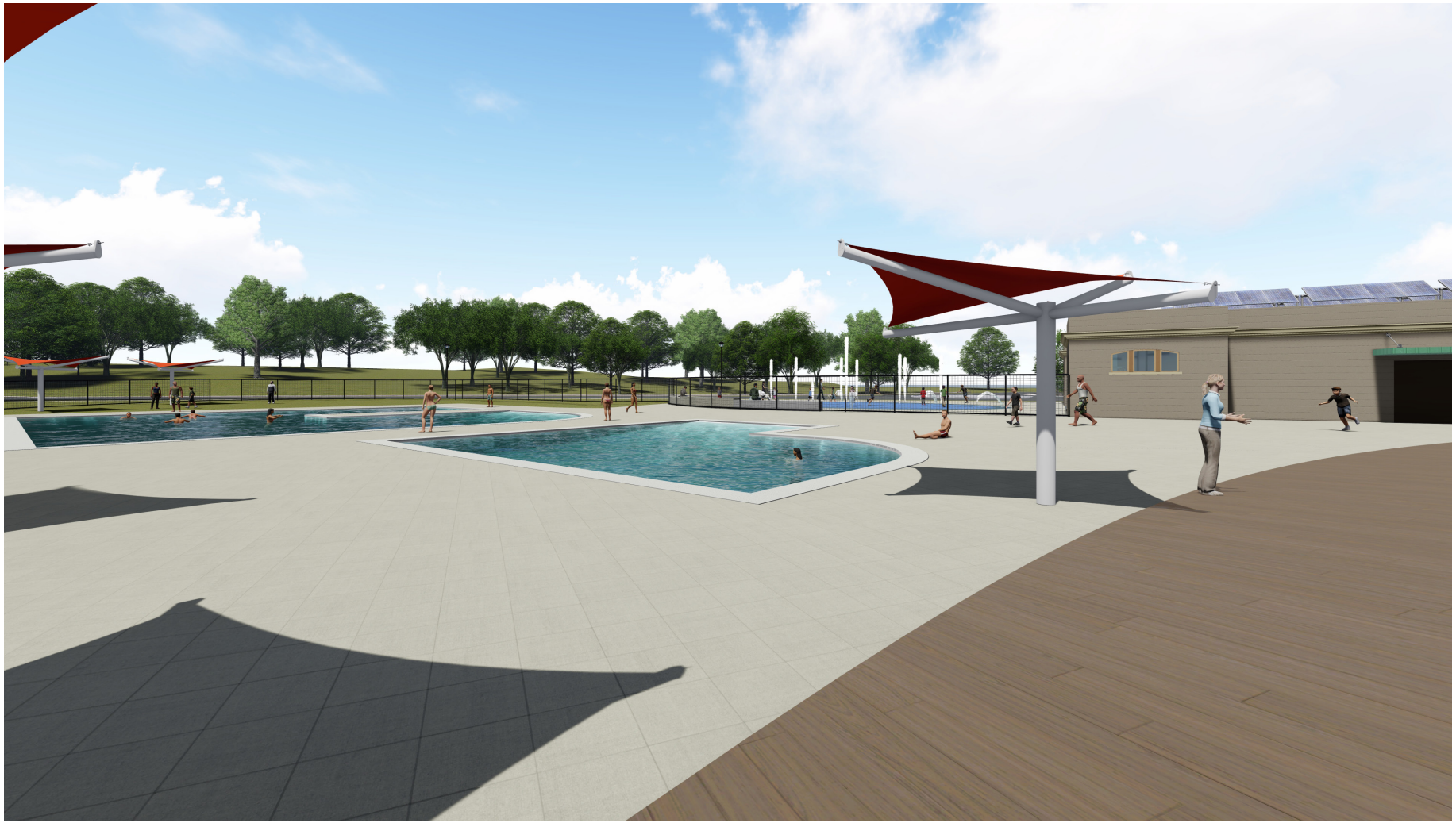
Final Schematic Floor Plan





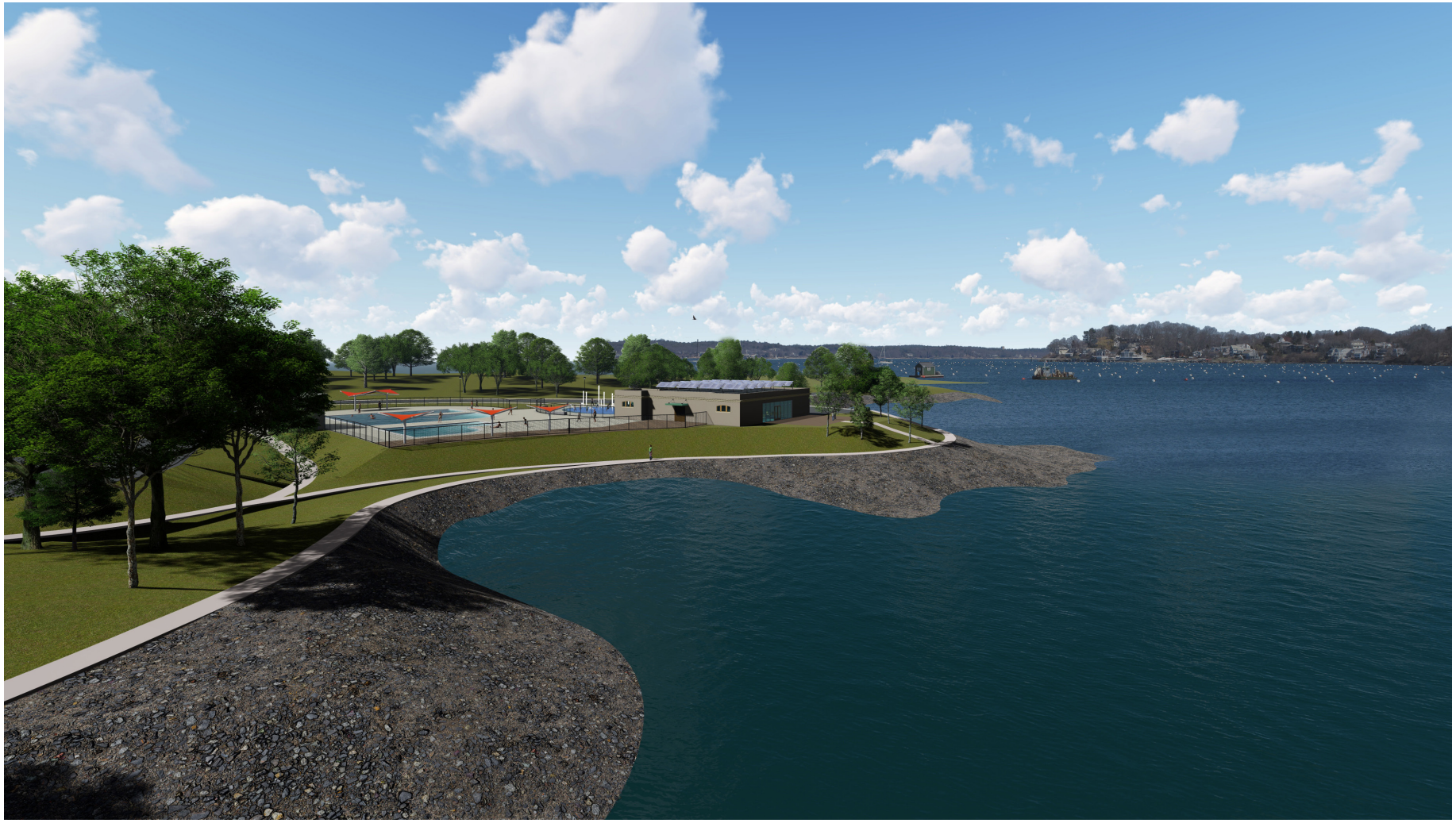
POOL 3D VIEW

POOL 3D VIEW



SPLASH PAD 3D VIEW

SHORELINE 3D VIEW



COMMUNITY ROOM 3D VIEW

SECTION 9

MEP NARRATIVE AND SUSTAINABLE DESIGN APPROACH

HVAC SYSTEMS

With the exception of the Life Guard Room and the Family Changing Rooms, the building is seasonal and not heated.

The Life Guard Room and Family Changing Rooms shall be heated and ventilated utilizing a direct vented minimum 92.5%+ high efficiency propane fired air furnace in conjunction with an energy recovery ventilator unit that will capture heat from the exhaust air stream and transfer it to outdoor air ventilation air being introduced to the air furnace. A packaged direct digital control system (DDC) with a touch screen shall operate the ventilation systems and maintain space heating temperature to its set-point.

- The Life Guard Room and Family Changing Rooms will have mechanical ventilation in conformance with the International
- Mechanical Code. Outside air intake and exhaust air exterior termination for this area shall be accomplished utilizing gable end louvers.
- Men and Women rooms will have mechanical ventilation in conformance with the International Mechanical Code and untempered make-up air from door louvers. This area shall not be provided with heat.
- The Concession area will have mechanical ventilation in conformance with the International Mechanical Code and untempered make-up air from door louvers. This area shall not be provided with heat.
- All ductwork shall be fabricated of G-60 coated galvanized steel of lock forming grade and conforming to ASTM standards A-525 and A-527, unless otherwise noted, and shall be constructed in accordance with the latest SMACNA standards.
- Bathhouse Exhaust Fans shall be energized when the lights in the spaces they serve are switched on.

Filter Area Exhaust Fan in the Filter Building shall be energized when:

a. When the carbon dioxide detector senses CO2 levels in excess of 1000 parts per million.

b. When the manual switch is put in the “ON” position.

PLUMBING SYSTEMS

The building will be designed for seasonal use with freeze protection including drain down points and a pneumatic connection to move water out of the piping and fixtures with the exception of the Mechanical Room, Life Guard Rooms and Changing Rooms. PVC waste and vent piping and pex water piping is proposed for distribution.

Domestic hot water will be provided by a Buderus “Intelligent Solar Technology System” comprising of six (6) roof mounted solar panels, pumping station and domestic hot water storage tank. The solar domestic hot water system shall be backed up by a high efficiency direct vented instantious hot water generator that shall be interfaced to it. Domestic hot water shall produce 140 degrees F for the concession area with a re-circulation line and feeds the entire building. A master anti-scald mixing valve shall be used for public hand washing lavatories to mix water to 110 degrees F.

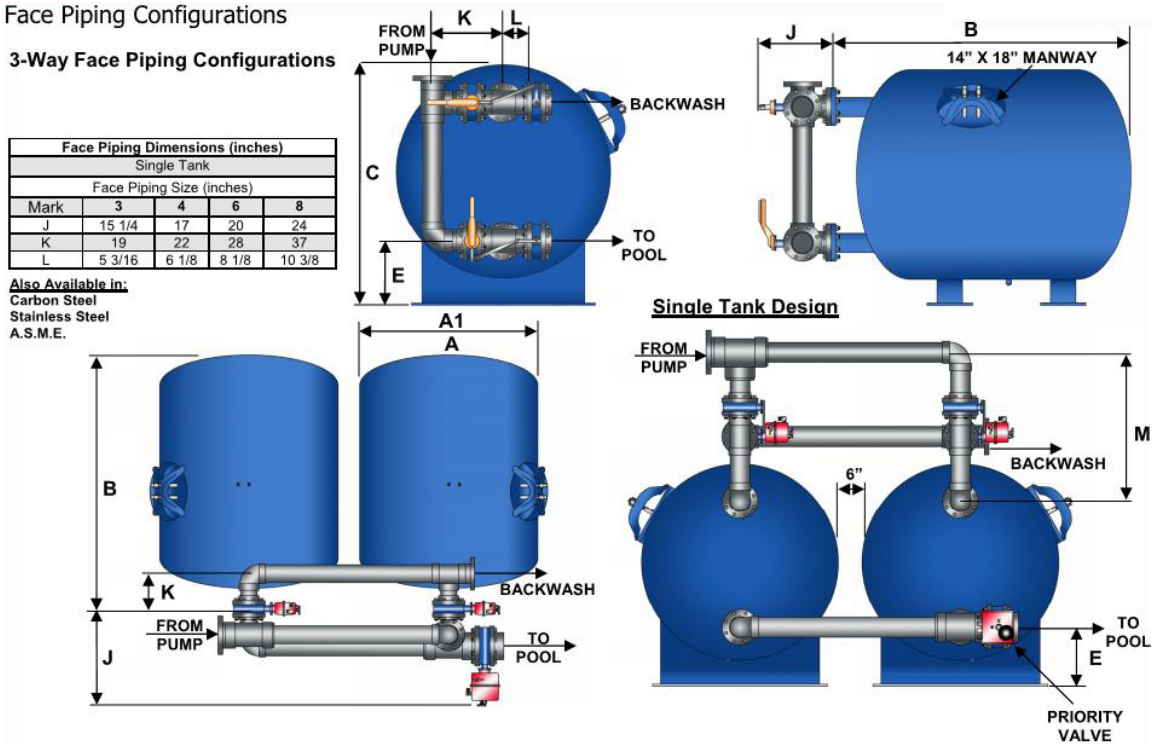
Plumbing fixture in the Bathhouse will include the following:

- **Lavatories:** Wall mounted units with time metered mixing fixtures.
- **Toilets:** Wall mounted code compliant, low gallons per flush toilets.
- **Toilet/Urinal Flush-o-meters:** Recessed sensor operated units. Hardwired installation. Exposed sensor flush-o-meters would be required for battery operation.
- **Shower Fittings:** Symmons Hyd-a-pipe System. Thru-ceiling supply, non-adjustable institutional head; push button control.
- **Shower Drain:** Standard floor drain in formed trench at grouped shower stall with; composite grating to cover trough. Individual floor units at individual showers

SWMMING POOL FILTRATION

Filters: Complete high rate sand filtration and recirculation systems including, stainless steel perimeter gutter, zero depth trench drain, balance pit, all piping and automatic chemical controls. Complete chemical treatment system that includes, but is not limited to, the following:

1. Automated backwashing control.
2. Strainer baskets
3. Recirculation pumps for pools
4. Flow meters
5. Gages
6. Filters
7. Valves
8. Sight glasses
9. All interconnecting piping for equipment within the filtration room
10. Backwash holding tanks
11. Control Panels
12. Sensors and Probes



FILTERS - HORIZONTAL FIBERGLASS SAND FILTERS

SITE UTILITIES

Deck Drainage: Small deck or trench drains will be provided. A percentage of deck drains connect to storm water system; a percentage connects into exiting storm inverts (two total) in wall of culvert. Some portions of the deck will sheet drain to the perimeter and be diffused into the ground by a French drain located at the edge of the deck.

Site Drainage: Site swale and drainage structures at foot of hill to the south of the pool complex.

1. ADA Compliant catch basin (inlets) cover and frame.
2. 4 ft. Diameter precast concrete drainage structures.
3. ADS Drainage Pipe, corrugated polyethylene pipe.

Yard drainage to connect into existing storm water connection.

Sanitary Sewer: New ASTM D 3034 SDR35 PVC gravity sewer pipe; 10 feet from face of bathhouses structures, connected into existing sanitary line located to the park entrance area.

Domestic Water: New domestic water connection, meter and backflow assembly. Underground domestic water connection between bathhouse and filter building.

Existing Overhead Power Lines: Provide new pole risers and underground ductbank meeting requirements of City of Salem and utility company service providers. Utility companies to relocate overhead laterals to below ground. Poles adjacent to park entrance area to remain.

Electrical: New 400 AMP Service into Bathhouse Building. Filter Building to be fed by underground ductbank and subpanel

Telephone: New conduit and punch down panel into Bathhouse Building. Filter Building to be fed by underground conduit.

SPRAY PAD WATER FEATURES

General: The water features are based on products by the Rain Drop Fountain manufactured by Sonar International, 2001 S Street N.W., Suite 250, Washington DC 20009

Pop jets: allow for 10 in the Spray Pad.

ELECTRICAL SYSTEMS

The building shall have a 400 amp, single phase service with distribution panel to feed lighting, power and HVAC loads. Three phase power is not required for this building.

Building mounted lighting is proposed to be LED type. Interior lighting shall be florescent type with super T-8 lamps. Code required exit signs shall mark the path of egress and battery type emergency lighting shall provide the required 90 minute duration for path of egress illumination. 35 foot candles is the targeted building interior lighting level, while site lighting level will be a minimum of 0.5 foot candles around the building. Parking lot will not be lit.

The building does not require a fire alarm system.

Telecommunication and data conduits shall be installed for Owner provided infrastructure.

Electrical service connections shall be provided for Owner special event equipment to be located on the site.

A generator shall not be provided for this project.

SECTION 10

CODE ANALYSIS

FOREST RIVER POOL CODE ANALYSIS

The building is classified as Assembly A-3 with concession and storage as accessory uses.

The building is not sprinklered and is not protected by a fire alarm system.

A. ADA AND MAAB ACCESSIBILTY REQUIREMENTS

This building may require upgrades with both ADA and MAAB under the following conditions:

- Upgrades for building code deficiencies shall be made to the 780 CMR when triggered or deemed unsafe by an inspector;
- Upgrades for accessibility will be triggered during a renovation to the work space or a renovation cost exceeding $100,000 in any 36 months;
- Renovation costs exceeding 30% of the building's assessed value will trigger full compliance for accessibility.

There are two accessibility regulations that apply to buildings in Massachusetts. The Regulations of the Massachusetts Architectural Access Board (MAAB) (521 CMR) are enforced by the local building official as part of the building permit process. The Americans with Disabilities Act (ADA) is self-enforced; violations are subject to civil lawsuit or a complaint filed with the US Department of Justice.

Each regulation consists of two distinct set of provisions; the "scoping" provisions, which outline

compliance requirements for construction and renovations projects; and "technical" provisions, which outline dimensional and technical requirements for the actual construction. The scoping provisions differ between the two regulations, while in general the dimensional and technical requirements of the ADA Architectural Guidelines are equivalent or similar to those contained within the MAAB. In any case of conflict between the two regulations, the more restrictive applies.

ADA Compliance Triggers

The ADA guidelines contain accessibility requirements, which are applicable to all buildings and cover employees in addition to the public. Under the provisions of the ADA, areas within the building are classified as either a public accommodation or a commercial space.

Public accommodations are subject to the "removal of barriers" requirement (28 CFR Section 36.102(c)). This requires public accommodations to remove architectural barriers in existing facilities, including communication barriers that are structural in nature, where removal can be accomplished without much difficulty or expense. Examples of this include adding raised markings on elevator buttons, widening doors, installing grab bars, and repositioning paper towel dispensers (28 CFR Sections 36.102(c), 36.304(a) & (b)).

Additionally, any future alterations to a building should comply with the ADA guidelines as outlined in Section 4.1.1 of the ADAAG.

MAAB Compliance Triggers

In accordance with 521CMR, only buildings undergoing renovation which meet the following dollar thresholds based on the assessed value of the building must provide access.

1. Work amounting to greater than 30% of the full and fair cash value (100% equalized assessed value) of the building. The building is required to comply with the requirements of 521 CMR in full (521 CMR 3.3.2).
2. Work amounting to less than 30% of the full and fair cash value but greater than $100,000. All new work must comply and, in addition, an accessible public entrance and accessible toilet room, telephone and drinking fountain (if public toilets, telephones and drinking fountains are provided) are required (521 CMR 3.3.1(b)).
3. Work amounting to less than $100,000. Only the work being performed is required to comply (521 CMR 3.3.1(a)).

The 30% of the full and fair cash value is assessed differently in existing buildings with multiple use groups. In these buildings the full and fair cash value threshold will be 30% of the value for each use group (521 CMR 3.6.1). When a building is occupied by two or more uses, the Regulations which apply to each use shall apply to such parts of the building within that use.

B. INTERNATIONAL EXISTING BUILDING CODE

Existing Building Code Compliance Methods The International Existing Building Code (IEBC) includes three separate methods for compliance as defined in IEBC Section 101.5. The methods include the prescriptive method, performance method and the work area method. Only one of the

three methods may be used on a building permit. Most building permit use the “work area” method, outlined below.

Work Area Compliance Method

The premise behind the three levels of work is, besides requiring that all new equipment and systems meet the code for new construction, that additional building improvements are required above and beyond the scope of work otherwise proposed.

Alterations -- Level 1: Level 1 alterations covers removal and replacement of existing materials, elements, equipment or fixtures using like materials that serve the same purpose.

Alterations – Level 2: Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration of any system, or the installation of any additional equipment.

Alterations – Level 3: Level 3 alterations apply when the work area exceeds 50 percent of the aggregate area of the building.

Analysis: Depending on the scope of work, different work levels may require additional building improvements other than the proposed work.

APPENDIX

1. MA State Building Code

When addressing conditions in an existing building, the 780CMR (IBC and IEBC) must be reviewed.

780 CMR The Massachusetts Building Code which determines when existing hazardous conditions must be corrected in existing buildings.

102.2.2 Existing Hazardous Conditions. This section shall apply to all existing buildings

102.2.2.1 Existing Non-Conforming Means of Egress. The following conditions shall be corrected in all existing buildings:

1. Less than the number of means of egress serving every space and/or story, required by Chapter 10 of the International Building Code 2009 with Massachusetts Amendments (780 CMR 10.00);
2. Any required means of egress component which is not of sufficient width to provide adequate exit capacity in accordance with section 1005.1 of the International Building Code 2009 with Massachusetts Amendments (780 CMR 1005.1);
3. Any means of egress which is not so arranged as to provide safe and adequate means of egress, including exit signage and emergency lighting in accordance with Chapter 10 of the International Building Code 2009 with Massachusetts Amendments (780 CMR 10.00); or

If not corrected, the building official shall cite each deficiency in writing as a violation. Said citation shall order the abatement of the non-conformance and shall include such a time element as the building official deems necessary for the protection of the occupants thereof, or as otherwise provided for by statute.

102.2.2.2 Exit Order for Hazardous Means of Egress. In any existing building or structure not provided with exit facilities as herein prescribed and in which the exits are deemed hazardous or dangerous to life and limb, the building official shall declare such building dangerous and unsafe in accordance with the provisions of section 116 of the International Building Code 2009 with Massachusetts Amendments (780 CMR 116). Any person served with any such order shall have the remedy prescribed in section 116 of the International Building Code 2009 with Massachusetts Amendments (780 CMR 116).

Analysis: The existing building will be required to meet the requirements for new construction if the conditions in section 102.2.2 are met, and the building official cites the conditions as unsafe and dangerous.

780 CRM, Chapter 34 Chapter 34, IEBC with Mass amendments noted when upgrades must be made to components of the building, based on when renovations or alterations occur. Following are general triggers, using the work area compliance method. Note that some of this work may also be triggered if existing systems have not been properly maintained.

Alterations -- Level 1: Level 1 alterations covers removal and replacement of existing materials, elements, equipment or fixtures using like materials that serve the same purpose.

Alterations – Level 2: Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration of any system, or the installation of any additional equipment.

Alterations – Level 3: Level 3 alterations apply when the work area exceeds 50 percent of the aggregate area of the building.

The requirements for Level 1 alterations shall apply to Level 2 alterations; and the requirements for Level 1 and 2 alterations shall apply to Level 3 alterations as well.

2. Massachusetts Architectural Access Board

When doing alterations or renovations on an existing building the section or element being updated will need to comply with the MAAB regulations.

521 CMR 3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the full and fair cash value (see 521 CMR 5.00) of the building the entire building is required to comply with 521 CMR.

a. Where the cost of constructing an addition to a building amounts to 30% or more of the full and fair cash value of the existing building, both the addition and the existing building must be fully accessible.

Analysis: The MAAB will trigger full building compliance if the cost of the work amounts to 30% of the building's fair cash value (building-only assessment). As of January 1, 2016, the building- only assessment is $2,532,500; 30% of this value is $759,750.

3. Americans with Disabilities Act

Alterations to "commercial facilities" do not trigger handrail or other upgrades, unless required for a disabled person to access their place of employment. Upgrades are required for "public accommodations" (such as the tenants on the mezzanine level), but only until the "disproportionality" trigger is met.

§ 36.403 Alterations: Path of travel.

(a) General. An alteration that affects or could affect the usability of or access to an area of a facility that contains a primary function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area and the restrooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the cost and scope of such alterations is disproportionate to the cost of the overall alteration.

(f) Disproportionality. (1) Alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20% of the cost of the alteration to the primary function area.

Analysis: Compliance must be to the maximum extent feasible, meaning that if it is not possible to make something compliant it is allowed to remain non-compliant.

4. MA State Plumbing Code

The following is a preliminary approach to determine the minimum number of toilets required for new restrooms. Actual numbers of users of the bathhouse, pool and playground may need to be confirmed by the City of Salem Park & Recreation Department.

The number of users was determined using the building code calculation value of 50 sf per person. People sitting at the pool deck area are presumed to be the same as users of the pools. Playground users were estimated on a busy day.

Plumbing Code, 248 CMR

- The Massachusetts Plumbing Code (248 CMR) determines the fixture counts required in the restrooms;
- The occupancy can be based upon the actual occupancy and is not required to be based on a building code calculated number; and
- Showers can be outdoor as their use is seasonal.

Restrooms & Showers

Potential restroom users are at the bathhouse and pools, at the playground, and transient passers-by. The assumption is that splash pad will be considered similar to a "pool" for toilet fixture requirements.

The number of users was determined using the building code calculation value of 50 sf per person. People sitting at the pool deck area are presumed to be the same as users of the pools. Playground users were estimated on a busy day.

Fixture Requirements	Actual Occupant Load, F/M	Water Closets			Lavatories (Each Sex)	Showers (Each Sex)
		Female	Male/ Urinals[1]			
Bathhouse and Pool	207/207	1 per 40	1 per 40	33%	1 per 60	1 per 40
Community Room	10/10	1 per 40	1 per 40	33%	1 per 60	
Total Required, Pool	--	**5.175**	**5.175**		**3.45**	**5.175**
Total Required, Community Room	--	**0.25**	**0.25**		**3.45**	**5.175**
Total Required	--	**6**	**6 (2)**		**4**	**12**

1. Urinals may be substituted for water closets up to the percentage shown, permitted number in ().

SECTION 11

COST ESTIMATE AND NARRATIVE

MAJOR COST DRIVERS

Swimming Pool: The preferred site for the new pool facility contains two swimming pools and a spray deck located to allow use of the spray deck while the swimming pool may be closed or being used for swimming lessons and other activities. The spray deck will expand the seasonal use of the facility to late May and possible into late September depending on the temperature and demand.

The $2.4 million dollar cost that includes the swimming pool structures, finishes, permanent equipment, and all filtration and recirculation equipment; is commensurate with the cost commercial/public swimming pool construction in Massachusetts.

Site Work: Removal of the existing swimming pool and restoring the existing coastline in a manner acceptable to various environmental regulatory authorities is a major cost for the project. This cost includes the demolition and complete removal of that part of the swimming pool closest to the shore, which will not be overbuilt by the new pool.

ESTIMATE AND BUDGET ASSUMPTIONS

A design contingency has been included in the estimate of probable construction cost for unforeseen design issues, design detail development and specification expansion during design.

General Conditions and project requirements include typical Division 1 items such as contractor's staffing, general facilities to support the project, scaffolding, staging, hoisting, temporary protections, environmental protections, cleaning and other items not attributable to the direct trade cost.

An Owner's contingency has been added to the total project cost worksheet to cover the unanticipated costs associated with the permitting, testing, and management of the project.

Access Improvement and Utilities: On top of the cost associated with the building, pools, and site work in the pool area, improvements to both the pedestrian and vehicle access from the park entrance to the pool are required to provide:

1. Access for individuals with disabilities
2. Improved access for emergency responders
3. Safe access for pedestrians and cyclists using the pool.

The existing utilities serving the pool are not adequate. The current water service is too small for a modern aquatic facility. The electrical service needs to be consolidated into one location and with good access for maintenance. The sanitary disposal of pool backwash water and building sewage in general requires upgrades to ensure sewage is properly removed from the site.

TOTAL PROJECT COST

A total project cost work sheet has been prepared to detail the hard construction costs as well as “soft costs” associated with testing, permitting, design, and management of the project.

The project is estimated using summer of 2018 unit costs and has been escalated by a multiplier to reflect bidding and construction costs in 2020.

The location of the project requires very detailed and lengthy permitting with various authorities with jurisdiction of the coastal area. This process, fees, and costs for additional preparation of applications are included in the total project coast.

The project will be bid on MGL, c 149 in Massachusetts and will require the City of Salem to engage an Owner’s project manager that is also included in the soft cost summary.

TOTAL PROJECT COST (TPC) CALCULATION (construction plus other project costs not including bonding costs)

HARD COST			
HazMat			**$ 50,000**
	HazMat Abatement Allowance		$ 50,000
General Contractor			**$ 7,953,769**
	Construction Cost Estimate Pools and Building		$ 6,886,700
	Construction Cost Vehicular and Pedestrian Access		$ 500,000
	Utility Backcharge		$ 50,000
	Escalation : use 2021 baseline	3%	$ 517,069
Furniture, Fixtures & Equipment			**$ 250,000**
	Pool Deck and Safety Equipment		$ 100,000
	Furniture		$ 50,000
	Equipment (phones, computers, etc.)		$ 100,000
Hard Cost Subtotal			**$ 8,253,769**
SOFT COST			
Permits & Approvals			**$ 110,000**
	Site Permitting Coasts		$ 10,000
	Miscellaneous Permits		$ 100,000
Architecture & Engineering			**$ 817,302**
	Architect & Engineer: Basic Design		$ 636,302
	Schematic Design Thru Bidding		
	Construction Contract Administration		
	Envirnomental Permitting Design, Submission, Meetings		$ 75,000
	Town Reimbursables		$ 6,000
	FF&E /Technology Specification & Purchasing		$ 25,000
	Design		$ 25,000
	Procurement/Installation		
	Geotechnical Engineer		$ 30,000
	Survey & Layout		$ 20,000
Testing & Inspections			**$ 27,000**
	Hazardous Material Testing		$ 7,000
	Concrete & Steel, Soil Inspections		$ 20,000
Project Management			**$ 318,151**
	Owner's Project Manager		$ 318,151
	Owner's Project Manager Design thru Bidding		
	Owner's Project Manager: Construction Phase		
Advertising & Bidding			**$ 8,000**
	Public Bidding (Advertising & Electronic Bidding)		$ 8,000
Legal			**$ 5,000**
	Town Attorney for Contracts Review		$ 5,000
Other			**$ 95,445**
	Builders Risk/Environmental Insurance @ 0.012%		$ 95,445
Soft Cost Subtotal			**$ 1,380,898**
CONTINGENCY			
Contingency			**$ 578,080**
	Owner's Contigency on Soft Costs	6.0%	$ 578,080
PROJEC TOTAL			**$ 10,212,746**

DAEDALUS

Forest River Park
New Swimming Pool and Bathhouse
Salem, MA

August 24, 2018

Conceptual Cost Estimate

Architect:
Bargmann Hendrie Archetype Inc
9 Channel Center Street, Suite 300
Boston, MA 02210
(617) 350 0450

Cost Consultant:
Daedalus Projects Incorporated
1 Faneuil Hall Market Place
South Market Bldg, Suite 4195
Boston, MA 02109-6119
(617) 451 2717

INTRODUCTION

Project Description:

Construction of new swimming pool and bathhouse facilities in the Forest River Park, including improvements to surrounding landscape

New combination 25-yard lap pool and recreational pool, new kids' pool, new splash pad, gut renovate existing bathhouse, demolition of existing pool, removal of tennis courts, rework parking lot

New construction of bathhouse facilities
- concrete foundations, basement walls and slab on grade, steel framed structure
- CMU façade and asphalt shingle roofing
- Program includes public restrooms, showers, changing rooms, community room, concession and offices

Project Particulars:

Documents received from Bargmann Hendrie + Archetype, Inc.
- Site Plan Option Location Drawings dated June 19, 2018
- Site aerial photograph
- Existing Conditions Assessment
- Existing Bath House Plan and Sections Drawing 2 dated February 26, 1971 prepared by Robert Charles Associates Inc.
- Existing Bath House & Revisions Drawing 5 dated February 26, 1971 prepared by Robert Charles Associates Inc.

Detailed quantity takeoff from these documents where possible

Discussion, review and reconciliation with Bargmann Hendrie + Archetype, Inc and their Design Team

Daedalus Projects, Inc. experience with similar projects of this nature

Project Assumptions:

The project bid will be competitively bid amongst Open-Shop General Contractors

It has been assumed that no less than 4 bids will be received. Bids can be expected to be significantly higher if fewer bids are received

The project will be built by a General Contractor under a single prime contract

Operation during normal business hours

The Total Estimated Construction Cost reflects the fair construction value of this project in a competitive bidding market

Unit rates are based on current dollars and include an escalation allowance to cover the construction duration

Subcontractor's markups have been included in each unit rate. Markups cover the cost of field overhead, home office, overhead and subcontractor's profit

Design and Pricing Contingency markup is an allowance for unforeseen design issues, design detail development specification expansion during the design period.

General Conditions and Project Requirements includes items from Div. 01 General Requirements, staffing, general facilities to support project, scaffolding, staging and access, temporary protection, cleaning, and other items not attributable to the direct trade cost

Profit markup is calculated on a percentage basis of direct construction costs

Start of construction assumed Spring 2019

DAEDALUS

Forest River Park
New Swimming Pool and Bathhouse
Salem, MA

Project Assumptions: cont'd

Escalation at a rate of 3½% per year has been calculated from now to the start of construction, and carried in the Main Summary

Construction Cost Estimate Exclusions:

- Environmental permitting
- Architectural/Engineering; Design fees and other professional fees, testing, printing, surveying, site investigations
- Unforeseen Conditions Contingency
- Owner's site representation and project administration
- Owner's administration; legal fees, advertising, permitting, Owner's insurance, administration, interest expense
- Third Party testing and commissioning
- Project costs; utility company back charges prior to construction, construction of swing space and temporary facilities, program related phasing, relocation
- Food Service Equipment, Furnishings, Equipment, Specialties beyond what is noted in design package. Note that these costs should be carried in Owner's Budget
- Work beyond the boundary of the site
- Police details and street/sidewalk permits

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Forest River Park
New Swimming Pool and Bathhouse

MAIN SUMMARY

		PREFERRED OPTION 4,000 GSF TOTAL	COST/GSF
Direct Trade Cost Details			
Bathhouse		$1,401,445	$350
Swimming Pool		$2,416,400	$295
Sitework		$1,498,831	$13
Direct Trade Cost Subtotal		**$5,316,677**	**$1,329**
Design and Pricing Contingency	10.00%	$532,000	$133
Direct Trade Cost Total		**$5,848,677**	**$1,462**
Burdens and Markups			
General Conditions and Project Requirements	9.00%	$527,000	$132
Insurances, Bonds	2.30%	$147,000	$37
Fee	3.00%	$176,000	$44
Estimated Construction Cost Total		**$6,698,700**	**$1,675**
Escalation from now to Start of Construction	2.80%	$188,000	$47
Escalation to Mid-point of Construction		Unit Rates	
Estimated Construction Cost at Start of Construction		**$6,886,700**	**$1,722**

DAEDALUS

Forest River Park

DIRECT TRADE COST SUMMARY — New Swimming Pool and Bathhouse

	PREFERRED OPTION 4,000 GSF TOTAL	COST/GSF
Bathhouse		
02-EXISTING CONDITIONS	$197,150	$49.29
03-CONCRETE	$20,000	$5.00
04-MASONRY	$224,625	$56.16
05-METALS	$12,000	$3.00
06-WOOD AND PLASTICS	$12,700	$3.18
07-THERMAL AND MOISTURE PROTECTION	$116,000	$29.00
08-DOORS AND WINDOWS	$42,925	$10.73
09-FINISHES	$128,237	$32.06
10-SPECIALTIES	$78,600	$19.65
21 00 00 Fire Protection	$51,453	$12.86
22 00 00 Plumbing	$337,000	$84.25
23 00 00 HVAC	$77,555	$19.39
26 00 00 Electrical	$103,200	$25.80
31-EARTHWORK		
Bathhouse Total	**$1,401,445**	**$350.36**
Swimming Pool		
13-SPECIAL CONSTRUCTION	$2,416,400	$604.10
Swimming Pool Total	**$2,416,400**	**$604.10**
Site Work		
02-EXISTING CONDITIONS	$368,130	$3.29
31-EARTHWORK	$210,950	$1.88
32-EXTERIOR IMPROVEMENTS	$555,251	$4.96
33-UTILITIES	$339,500	$3.03
33 70 00 Electrical Utilities	$25,000	$0.22
Site Work Total	**$1,498,831**	**$374.71**
Direct Trade Cost Subtotal	**$5,316,677**	**$1,329.17**

DAEDALUS

Forest River Park

BATHHOUSE DIRECT TRADE COST DETAILS — Bathhouse Options

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
9	**02-EXISTING CONDITIONS**				
10					
11	Demo overhead door	OPEN	$500.00	**7**	$3,500
12	iron gate	OPEN	$275.00	**1**	$275
13	single door	LEAF	$150.00	**9**	$1,350
14	Demo toilet compartment	STALL	$175.00	**12**	$2,100
15	dressing stall	STALL	$125.00	**11**	$1,375
16	plumbing fixture	FIX	$250.00	**19**	$4,750
17	Demo partition, borrowed lite	LF	$40.00	**4,345**	$173,800
18	Miscellaneous gut demolition	GSF	$2.50	**4,000**	$10,000
19	**02-Existing Conditions Total**				**$197,150**
20					
21					
22	**03-CONCRETE**				
23					
24	Strip footing, 4' high foundation wall	LF	$275.00		
25	Spread footing, pier	EA	$1,400.00		
26	Slab on grade, vapor barrier, rigid insulation	SF	$11.15		
27	filtration pad	SF	$10.00		
28	Trench slab on grade, demo, new infills, patch	GSF	$5.00	**4,000**	$20,000
29	**03-Concrete Total**				**$20,000**
30					
31					
32	**04-MASONRY**				
33					
34	8" CMU exterior façade walls	SF	$30.00		
35	Modify existing façade openings, cut new, infill former opening	AL	$25.00	**4,930**	$123,250
36	8" CMU interior partitions	SF	$24.50	**3,100**	$75,950
37	plumbing chase	SF	$45.00	**565**	$25,425
38	**04-Masonry Total**				**$224,625**
39					
40					
41					

Preferred Option

DAEDALUS

Forest River Park

BATHHOUSE DIRECT TRADE COST DETAILS

Bathhouse Options

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
42	**05-METALS**				
43					
44	Structural steel columns and roof framing; assume 5#/sf	TNS	$4,250.00		
45	1½" 20ga. Type B galv. metal roof decking	SF	$3.75		
46	Miscellaneous metals for exterior façade	SF	$4.00	**0**	$0
47	Miscellaneous interior metals	GSF	$3.00	**4,000**	$12,000
48	**05-Metals Total**				**$12,000**
49					
50					
51	**06-WOOD AND PLASTICS**				
52					
53	Roof blocking	LF	$20.00		
54	Rough carpentry/blocking; interior partitions and doors	GSF	$1.00	**4,000**	$4,000
55	Install door, frame, hardware	OPEN	$200.00	**11**	$2,200
56	Solid-surface counter; Concession	LF	$250.00	**6**	$1,500
57	Sink counter; Restrooms	LF	$200.00	**25**	$5,000
58	**06-Wood And Plastics Total**				**$12,700**
59					
60					
61	**07-THERMAL AND MOISTURE PROTECTION**				
62					
63	Damproofing at foundation wall, rigid insulation	SF	$6.25		
64	Flat membrane roofing	SF	$40.80		
65	Remove roofing, install new	SF	$25.00	**4,000**	$100,000
66	Caulking and sealants	GSF	$3.50	**4,000**	$14,000
67	Through floor penetration firestopping & fire resistive joints	GSF	$0.50	**4,000**	$2,000
68	**07-Thermal And Moisture Protection Total**				**$116,000**
69					
70					
71					
72					
73					
74					

Preferred Option

DAEDALUS

Forest River Park

BATHHOUSE DIRECT TRADE COST DETAILS

Bathhouse Options

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
75	**08-DOORS AND WINDOWS**				
76					
77	Single exterior fiberglass door, frame, hardware	OPEN	$1,600.00		
78	Double exterior fiberglass door, frame, hardware	OPEN	$3,200.00	**3**	$9,600
79	Single interior fiberglass door, HMF frame, hardware	LEAF	$1,475.00	**5**	$7,375
80	Double interior fiberglass door	PR	$2,950.00	**3**	$8,850
81	Exterior coiling counter door, counter; Concession	EA	$7,500.00	**1**	$7,500
82	Punch window	SF	$75.00	**100**	$7,500
83	Access doors; plumbing duct, custodial	EA	$350.00	**6**	$2,100
84	**08-Doors And Windows Total**				**$42,925**
85					
86					
87	**09-FINISHES**				
88					
89	Seamless poured epoxy flooring	SF	$12.00	**4,000**	$48,000
90	wainscot x5'high	SF	$12.00	**5,095**	$61,137
91	Sealed concrete floor; filtration room	SF	$2.00		
92	CMU walls; epoxy paint	SF	$1.75	**6,115**	$10,701
93	Underside of structure; epoxy paint	SF	$2.10	**4,000**	$8,400
94	**09-Finishes Total**				**$128,237**
95					
96					
97	**10-SPECIALTIES**				
98					
99	Exterior signage	LS	$1,200.00	**1**	$1,200
100	Interior signage	GSF	$0.25	**4,000**	$1,000
101	Toilet accessories; single user	RMS	$650.00	**2**	$1,300
102	Multi-user toilet	FIX	$150.00	**6**	$900
103	Multi-user toilet, ADA compliant	FIX	$325.00	**4**	$1,300
104	Multi-user shower	FIX	$75.00	**10**	$750
105	Multi-user shower, ADA compliant	FIX	$325.00	**2**	$650
106	Multi-user sink, mirror	FIX	$225.00	**8**	$1,800
107	Multi-user paper towel/trash receptacle	FIX	$400.00	**2**	$800

Preferred Option

DAEDALUS

Forest River Park

Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
108	Phenolic-core toilet compartment	EA	$1,700.00	6	$10,200
109	ADA compliant	EA	$1,500.00	2	$3,000
110	urinal privacy screen	EA	$500.00	1	$500
111	Phenolic-core shower compartment	EA	$1,550.00	10	$15,500
112	ADA compliant	EA	$1,350.00	2	$2,700
113	Fire extinguisher cabinets	EA	$500.00	2	$1,000
114	Multi-tie personal plastic locker	EA	$900.00	40	$36,000
115	**10-Specialties Total**				**$78,600**
116					
117					
118	**21, 22, 23 - MECHANICAL**				
119					
120	**21 00 00 Fire Protection**				
121	*Fire Protection Equipment*				
122	Fire pump w/ controller	EA	$48,000.00	1	NIC
123	4" Water Service / DCVA	EA	$5,650.00	1	$5,935
124	4" Alarm Valves w/ Trim	EA	$3,450.00	1	$3,625
125	Standpipe assembly w/ FDV	EA	$1,900.00	1	$1,995
126	Dry Valve with compressor	EA	$10,800.00	1	$11,340
127	Siamese connection (FDC)	EA	$1,500.00	1	$1,575
128	*Fire Protection Distribution and Mains*				
129	Sprinkler head; concealed pendant	EA	$85.00	15	$1,338
130	Sprinkler head; upright pendant	EA	$65.00	21	$1,435
131	Branch pipe with fittings & hangers	LF	$22.00	435	$10,050
132	Main pipe with fittings & hangers	LF	$35.00	140	$5,145
133	Miscellaneous valves & accessories	LS	$900.00	1	$945
134	*Miscellaneous*				
135	Demolition work			1	N/A
136	System testing, flushing and inspection	LS	$1,300.00	1	$1,365
137	Coring, cutting, sleeves & fire stopping	LS	$500.00	1	$525
138	Seismic Restraints and Structural Steel Comp.	LS	$700.00	1	$735
139	Hydraulic lifts/rigging	LS	$2,200.00	1	$2,325
140	Shop drawings / BIM / ENG Support / As-Built	LS	$1,500.00	1	$1,575

referred Option

DAEDALUS

Forest River Park

Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
141	Commissioning Support	LS	$900.00	1	$945
142	Fees & permits	LS	$600.00	1	$600
143	**21 00 00 Fire Protection Total**				**$51,453**
144					
145	**22 00 00 Plumbing**				
146	*Plumbing Equipment*				
147	Indirect Gas Hot Water Heater	EA	$18,500.00	2	$38,900
148	Hot Water Storage Tank	EA	$10,500.00	1	$11,100
149	Expansion tank	EA	$2,800.00	1	$3,000
150	Air separator	EA	$1,250.00	1	$1,400
151	Water service w/ meter assembly	EA	$8,250.00	1	$8,700
152	Hot water circulator pump assembly	EA	$450.00	1	$500
153	Connection to gas meter (meter by others)	EA	$1,050.00	1	$1,200
154	Reduce pressure backflow preventer	EA	$2,850.00	2	$6,000
155	Mixing valve; Master	EA	$4,850.00	1	$5,100
156	Oil / Sand Separator	EA	$22,500.00	1	See Site
157	Floor drain				
158	-3"	EA	$800.00	2	$1,700
159	-2"	EA	$745.00	10	$7,900
160	-Trench Drain	LF	$85.00	35	$3,200
161	Vent through roof	EA	$375.00	2	$800
162	Wall hydrant	EA	$395.00	3	$1,300
163	Hose bibb	EA	$325.00	2	$700
164	Roof drain	EA	$1,050.00	2	$2,300
165	Rough-in & connection to concession areas (allow)	LS	$8,500.00	1	$9,000
166	*Plumbing Fixtures*				
167	Water closet	EA	$1,850.00	11	$21,400
168	Shower	EA	$1,050.00	10	$11,100
169	Shower / ADA	EA	$1,050.00	2	$2,300
170	Shower / Exterior	EA	$6,500.00	2	$13,700
171	Lavatory	EA	$990.00	10	$10,400
172	Urinal	EA	$1,320.00	3	$4,200
173	Mop sink w/ rack	EA	$1,250.00	2	$2,700

Preferred Option

DAEDALUS

Forest River Park

Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
174	Water cooler; Bi Level	EA	$3,050.00	2	$6,500
175	Stainless steel sink	EA	$1,400.00	2	$3,000
176	Outlet Box; Laundry mate	EA	$350.00	2	$800
177	Domestic Water Piping	LF	$34.50	885	$32,100
178	Valves & accessories	LS	$5,000.00	1	$5,300
179	Storm Drainage, Hubless Cast Iron Pipe	LF	$65.50	220	$15,200
180	Pipe insulation	LF	$14.50	1,000	$15,300
181	Sanitary Waste And Vent Pipe w/ Hangers	LF	$42.00	850	$37,500
182	Grease Waste System pipe with fittings & hangers	LF	$85.00	150	$13,400
183	Interior Grease Trap	EA	$4,800.00	1	$5,100
184	Valves & accessories	LS	$2,000.00	1	$2,100
185	Natural gas pipe with fittings & hangers	LF	$88.00	85	$7,900
186	Valves & accessories	LS	$1,200.00	1	$1,300
187	*Miscellaneous*				
188	Demolition work	LS		1	$3,500
189	System testing and flushing	LS	$2,600.00	1	$2,800
190	Coring, cutting, sleeves & fire stopping	LS	$1,100.00	1	$1,200
191	Seismic Restraints and Structural Steel Comp.	LS	$1,300.00	1	$1,400
192	Hydraulic lifts/rigging	LS	$3,000.00	1	$3,200
193	Shop drawings / BIM / ENG Support / As-Built	LS	$4,500.00	1	$4,800
194	Commissioning Support	LS	$2,600.00	1	$2,800
195	Fees & permits	LS	$3,200.00	1	$3,200
196	**22 00 00 Plumbing Total**				**$337,000**
197					
198	**23 00 00 HVAC**				
199	*HVAC Equipment*				
200	Electric Baseboard, 4FT Section	EA	$1,150.00	34	$41,055
201	Unit Heater	EA	$1,500.00	4	$6,300
202	*Exhaust Fans*				
203	- EF- 1,500 CFM	EA	$4,850.00	4	$20,370
204	- EF- 400 CFM	EA	$1,050.00	4	$4,410
205					
206					

DAEDALUS

Forest River Park

Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	Cost
207	*Miscellaneous*				
208	Demolition work			1	N/A
209	System testing and flushing	LS	$1,400.00	1	$1,470
210	Coring, cutting, sleeves & fire stopping	LS	$400.00	1	$420
211	Seismic Restraints and Structural Steel Comp.	LS	$700.00	1	$735
212	Hydraulic lifts/rigging	LS	$400.00	1	$420
213	Shop drawings / BIM / ENG Support / As-Built	LS	$1,100.00	1	$1,155
214	Commissioning Support	LS	$400.00	1	$420
215	Fees & permits	LS	$800.00	1	$800
216	**23 00 00 HVAC Total**				**$77,555**
217					
218					
219	**26 - 27-ELECTRICAL, COMMUNICATION**				
220					
221	**26 00 00 Electrical**				
222	*Normal power*				
223	208/120V panelboards	GSF	$2.00	4,000	$8,000
224	208/120V panelboards	GSF	$1.00	4,000	$4,000
225	*Equipment wiring:*				
226	Exhaust fan	EA	$1,000.00	8	$8,000
227	UH	EA	$1,500.00	4	$6,000
228	Hot water circulator pump	EA	$1,200.00	1	$1,200
229	Feed and connection to baseboard heat	EA	$550.00	34	$18,700
230	Pool equipment, feed and connections	EA	$3,500.00	1	$3,500
231	Misc. equipment feed and connections	EA	$3,500.00	1	$3,500
232	Lighting fixtures, including emergency & egress	GSF	$2.00	4,000	$8,000
233	Exterior building mounted fixture	EA	$850.00	6	$5,100
234	Lighting controls	GSF	$0.30	4,000	$1,200
235	Branch devices	GSF	$0.20	4,000	$800
236	Lighting & branch circuitry	GSF	$3.00	4,000	$12,000
237	Fire alarm system	GSF	$1.50	4,000	$6,000
238	Telecommunications	GSF	$0.30	4,000	$1,200
239					

Preferred Option

DAEDALUS

Forest River Park

Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 4,000 GSF Quantity	PREFERRED OPTION 4,000 GSF Cost
240	*Security Systems*				
241	Control panel, devices and circuitry	LS	$5,000.00	**1**	$5,000
242	*Miscellaneous*				
243	Fees & permits	GSF	$0.50	**4,000**	$2,000
244	Temporary lighting & power	GSF	$0.50	**4,000**	$2,000
245	Demolition work	GSF	$0.50	**4,000**	$2,000
246	Lightning protection and grounding	GSF	$1.25	**4,000**	$5,000
247	**26 00 00 Electrical Total**				**$103,200**
248					
249					
250	**31-EARTHWORK**				
251					
252	Rough and fine grade for new slab	SF	$2.00		
253	Gravel below slab	CY	$38.00		
254	Perimeter drain system	LF	$16.00		
255	*Continuous footings*	*LF*			
256	Excavation	CY	$12.00		
257	Soil remove	CY	$6.00		
258	Backfill with imported fill	CY	$25.00		
259	*Spread footings*	*EA*			
260	Excavation	CY	$12.00		
261	Soil remove	CY	$6.00		
262	Backfill with imported fill	CY	$25.00		
263	**31-Earthwork Total**				**$0**
264					
265					
266					

Preferred Option

DAEDALUS

Forest River Park

New Swimming Pool and Bathhouse

SITE DEVELOPMENT DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 165,000 GSF Quantity	PREFERRED OPTION 165,000 GSF Cost
9	**02-EXISTING CONDITIONS**				
10					
11	*Site Preparation*				
12	8' construction fence	LF	$15.00	**2,580**	$38,700
13	Double construction gate	EA	$3,000.00	**2**	$6,000
14	Stabilized construction entrance	LS	$7,500.00	**2**	$15,000
15	Shoreline protection	LF	$20.00	**1,050**	$21,000
16	Site clearing and grubbing	ACRE	$3,500.00	**4**	$14,000
17	Temporary signs	LS	$2,000.00	**1**	$2,000
18	*Erosion and Sedimentation Controls*				
19	Erosion control fence	LF	$16.00	**2,580**	$41,280
20	Inlet protection	EA	$300.00	**20**	$6,000
21	*Site Demolition*				
22	Remove existing pool assembly	GSF	$10.00	**12,275**	$122,750
23	Existing filter shed	EA	$1,000.00	**1**	$1,000
24	Demolish bathhouse building at Option 3 location	CFT	$0.35		
25	slab on grade and foundations	GSF	$6.00		
26	Miscellaneous site demolition	GSF	$0.50	**165,000**	$82,500
27	Haul off demolished materials, disposal				$10,400
28	Protect existing element to remain	LS	$7,500.00	**1**	$7,500
29	**02-Existing Conditions Total**				**$368,130**
30					
31					
32	**13-SPECIAL CONSTRUCTION**				
33					
34	Earthwork; 25-yard lap/recreational pool	LS	$100,000.00	**1**	$100,000
35	kids' pool	LS	$25,000.00	**1**	$25,000
36	water spray pad	LS	$20,000.00	**1**	$20,000
37	concrete deck	GSF	$5.00	**23,530**	$117,650
38	rock ledge premium	CY	$50.00		
39	Specialty pool construction; 25-yard lap/recreational pool	AL	$1,200,000.00	**1**	$1,200,000
40	kids' pool	AL	$500,000.00	**1**	$500,000
41	water spray pad	AL	$75,000.00	**1**	$75,000

Preferred Option

DAEDALUS

Forest River Park

SITE DEVELOPMENT DIRECT TRADE COST DETAILS — New Swimming Pool and Bathhouse

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 165,000 GSF Quantity	Cost
42	Concrete pool deck	SF	$12.50	**23,530**	$294,125
43	water spray pad surfacing	SF	$25.00	**2,185**	$54,625
44	Electrical grounding, lighting feeds and connections	LS	$30,000.00	**1**	$30,000
45	**13-Special Construction Total**				**$2,416,400**
46					
47					
48	**31-EARTHWORK**				
49					
50	Infill former pool depression	CY	$20.00	**2,850**	$57,000
51	imported fill +5' at pool deck	CY	$25.00	**380**	$9,500
52	Cuts and fills for new site grades and improvements	CY	$15.00	**9,630**	$144,450
53	**31-Earthwork Total**				**$210,950**
54					
55					
56	**32-EXTERIOR IMPROVEMENTS**				
57					
58	Driveway and parking pavement	SF	$4.00	**50,225**	$200,900
59	Parking space marking	SPACE	$35.00	**21**	$735
60	ADA compliant marking, sign	SPACE	$225.00	**2**	$450
61	bus marking, sign	SPACE	$250.00	**2**	$500
62	Boardwalk, deck	SF	$75.00	**1,860**	$139,500
63	Relocate baseball field	EA	$30,000.00		
64	tennis court	EA	$50,000.00	**2**	$100,000
65	Remainder of site improvements	LS	$25,000.00	**1**	$25,000
66	Tree, shrub, groundcover, planting soil, mulch	GSF	$15.00	**5,000**	$75,000
67	Seeding to remainder of limit of disturbance	SF	$0.15	**87,770**	$13,166
68	**32-Exterior Improvements Total**				**$555,251**
69					
70					
71					
72					
73					
74					

Preferred Option

DAEDALUS

Forest River Park

SITE DEVELOPMENT DIRECT TRADE COST DETAILS — New Swimming Pool and Bathhouse

	DESCRIPTION	UNIT	UNIT COST	PREFERRED OPTION 165,000 GSF Quantity	Cost
75	**33-UTILITIES**				
76					
77	*Water Utilities*				
78	Street connection	LS	$7,500.00	**1**	$7,500
79	CLDI main service; domestic water	LF	$75.00		
80	CLDI main service; fire protection	LF	$90.00	**1,500**	$135,000
81	Fire hydrant and gate valve	EA	$3,000.00	**1**	$3,000
82	*Sanitary Sewerage*				
83	Drain piping	LF	$65.00	**100**	$6,500
84	Oil / sand separator	EA	$22,500.00	**1**	$22,500
85	Street connection	LS	$7,500.00		
86	*Storm Drainage*				
87	Stormwater management and retention	GSF	$1.00	**165,000**	$165,000
88	*Gas Service*				
89	New gas main service	LF			Utility Co.
90	Trenching and associated install earthwork	LF	$45.00		$0
91	**33-Utilities Total**				**$339,500**
92					
93	**33 70 00 Electrical Utilities**				
94	Site lighting and circuitry	LS	$25,000.00	**1**	$25,000
95	**33 70 00 Electrical Utilities Total**				**$25,000**
96					
97					
98					

Preferred Option

SECTION 12

OPERATING COST ANALYSIS

GENERAL

An operation analysis will establish the basic parameters and approach that will be taken as a design develops in later phases. The following are the basic parameters for the project

- The complex includes a 25 yard 4 lane pool with a large zero depth area and diving board. A separate kidding pool will be provided within the secure pool enclosure.
- The existing bathhouse building will be renovated to provide pool support facilities, a multi-purpose space, and designed to allow for 3 seasons or year around use and support passive park functions. A separate spray deck will be provided outside of the pool enclosure to allow for extended aquatic programming.
- The pool will be open every day from Father's Day through mid-August (this is a typical municipal pool schedule. The pool could open weekends from Memorial Day to Father's Day, and from mid-August through Labor Day. The separate spray deck would typically operate from Memorial Day to mid-September.
- The pool components will be operated by an outside entity; existing pool was operated by the YMCA.
- The operations estimate is based on a program and basic concept plan for the pool facility only.
- Income from concessions will need to be incorporated into a business plan.
- The weather has a major impact on the use and financial performance of outdoor aquatic centers and the use and revenue numbers could be lower based on a cool/wet year.
- Operational arrangement with YMCA related to staffing, division of maintenance, use of the pool by camps, and general public swim availability will need to be established in order to create and accurate business plan.

EXPENDITURES

Expenditures will be formulated based on the costs that are typically included in the operating budget for this type of facility. The figures are based on the size of the complex, the specific components of the facility and the projected hours of operation. Actual costs will be utilized wherever possible (existing pool records and the YMCA) and estimates for other expenses based on similar facilities in the region. All expenses will be calculated as accurately as possible but the actual costs may vary based on the final design, operational philosophy, and programming considerations adopted by staff.

Not taking into consideration the role and arrangement of an outside operator, pool complexes of this size have expenditure rates in the range of $130,000 to $180,000 per year. As the design advances, actual projections will be established.

REVENUES

Revenue projections will be formulated from information on the specifics of the project and the demographics of the service area as well as comparing them to state and national statistics, other similar facilities and the competition for aquatic services in the area. Actual figures will vary based on the size and make-up of the components selected during final design, market stratification, and philosophy of operation, fees and charges policy, and priorities of use.

The goal of revenue projections from daily admissions, season passes, rentals, aquatic programs and special events is to cover the operating expenditures. As the design advances, actual projections will be established

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Table A – Service Area Comparison Chart:

	Town of Hingham
Population:	
2010 Census	22,157[1]
2017 Estimate	23,428
2022 Estimate	24,332
Households:	
2010 Census	8,465
2017 Estimate	8,909
2022 Estimate	9,238
Families:	
2010 Census	5,980
2017 Estimate	6,261
2022 Estimate	6,477
Average Household Size:	
2010 Census	2.59
2017 Estimate	2.60
2022 Estimate	2.60
Ethnicity (2017 Estimate):	
Hispanic	1.6%
White	94.9%
Black	0.8%
American Indian	0.2%
Asian	2.0%
Pacific Islander	0.04%
Other	0.4%
Multiple	1.7%
Median Age:	
2010 Census	44.4
2017 Estimate	46.1
2022 Estimate	46.5
Median Income:	
2017 Estimate	$115,240
2022 Estimate	$128,483

[1] Between the 2000-2010 Census, the Town of Hingham experienced a 11.4% increase in population.

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Swimming Participation: These activities could take place at an outdoor aquatic center.

Table G – Swimming Participation Rates for the Primary Service Area

	Age	Income	Region	Nation	Average
Swimming	16.0%	20.1%	19.8%	15.5%	17.9%
Did Not Participate[4]	23.3%	20.9%	21.5%	22.4%	22.0%

Age: Participation based on individuals ages 7 & Up of the Primary Service Area.
Income: Participation based on the 2017 estimated median household income in the Primary Service Area.
Region: Participation based on regional statistics (New England).
National: Participation based on national statistics.
Average: Average of the four columns.

Note: The NSGA does not track rates of participation, for any activity, in the ages 0-7. It is important that Town remembers that while the rate of participation is not tracked for that age group, there is a significant percentage of the swimming population in that age group.

Anticipated Swimming Participation Number: Utilizing the average percentage from Table-G above plus the 2010 census information and population estimates for 2017 and 2022 (over age 7) the following comparisons are available.

Table H – Swimming Participation Growth of Decline

	Average	2010 Population	2017 Population	2022 Population	Difference
Swimming	17.9%	3,411	3,648	3,798	+387
Did Not Participate	22.0%	4,206	4,498	4,684	+477

Note: The estimated participation numbers indicated above are for swimming and "did not participate." These figures do not necessarily translate into attendance figures for various activities or programs. The "Did Not Participate" statistics refers to all 55 activities outlined in the NSGA 2016 Survey Instrument.

[4] Did No Participate refers to all 55 activities tracked by the NSGA.

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South Shore Country Club (SSCC) – Replace Outdoor Lap Pool

The following are assumptions that B*K used while developing an operational plan for the replacement of the pool at SSCC. For purposes of this operational plan, the primary assumption is that the outdoor lap pool was replaced with an outdoor lap pool.

Hours of Operation

- Monday-Friday 12:00-7:00P
- Saturday 11:00A-7:00P
- Sunday 10:00A-7:00P

- Monday-Friday the pool is open from 7:00A-Noon to accommodate lap swimming and programming.

Compensation

- Minimum Wage in Massachusetts $11.00

- Proposed Wages
  - Lifeguard Hourly Wage $15.00
  - Lead Lifeguard Hourly Wage $17.00
  - Front Desk Attendant $13.00
  - Concessions $13.00
  - Birthday Party Attendant $13.00

Admission Free Structure

- Daily Drop-In Fees Resident Non-Resident
  - Youth $5.00 $6.00
  - Adult $7.00 $9.00
  - Senior $6.00 $7.00
  - Family $25.00 $32.00

- Lap Swim Punch Pass Fee
  - 10 Visit Punch Pass $100.00

- Annual Membership Resident Non-Resident
  - Youth $275 $350

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Pool Revenue/Expense Comparison:

Year #1	
Expenses	$994,583
Revenues	$940,796
Difference	($53,787)
Cost Recovery Percentage	95%

The following provides a 5-year comparison for the operation of the facility and is based on the best information available at the time of the report. It is important to note that the operational expenses are anticipated to increase at a rate of 2-3% per year over this 5-year span. It is also important to note that this 5-year span projects a 7% increase in revenues from year 1-2, a 5% increase in year 2-3, a 3% increase in year 3-4, and a 3% increase in year 4-5.

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Expenses	$994,583	$1,014,475	$1,044,909	$1,076,256	$1,108,544
Revenues	$940,796	$1,006,652	$1,056,984	$1,088,694	$1,121,355
Difference	($53,787)	($7,823)	$12,075	$12,437	$12,811
Recovery %	95%	99%	101%	101%	101%

Based on the work that B*K has completed across the country, most stand-alone aquatic centers can operate at a 50-75% cost recovery rate based on market and operating philosophy. The inclusion of "dry" fitness has an impact on the membership numbers.

REVENUE AND FUNDING SOURCES

Municipalities traditionally fund capital projects by direct borrowing, authorizations from a capital budget, or focused taxes directed toward a specific project. As budgets and borrowing by municipalities for capital projects become tighter, opportunities to share the cost through grants, partnerships, and fundraising has become an increasingly popular approach. Swimming pool complexes lend themselves to such opportunities.

PARTNERSHIPS

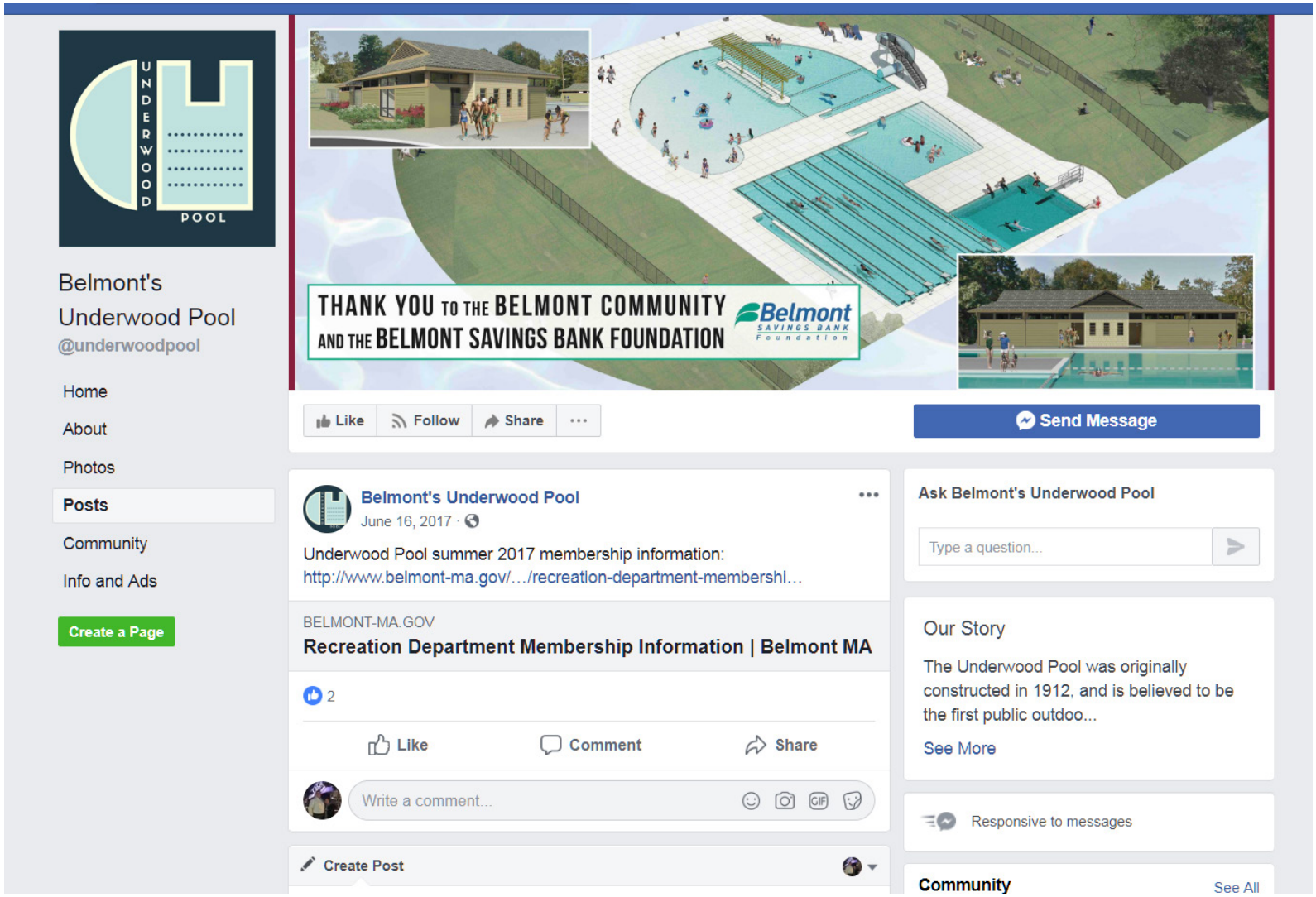
Municipal facilities that can support the needs of an outside organization or group have been able to obtain partial funding for capital and operational budgets. If a swimming pool can provide aquatic opportunities for a youth camp program, a rehabilitation facility, a private school, or similar organization. The financial support can be applied towards improvements or upgrades that may be outside of an established budget. For example, a rehabilitation facility that could use the pool for therapy might be a potential source to fund a heater for the pool.

FRIENDS GROUPS

Non-profit "Friends-Of" groups are common with many aquatic facilities. These groups are structured so they may solicit and receive donations that can be directly applied toward the construction, betterment, or continued operation of the facility. The group's membership typically includes stakeholders with a vested interest in the pool such as active users, swim teams, and individuals with a strong commitment towards aquatics.

Donations can be applied toward the initial capital cost through a directed donation to the City. Donations can also be used to purchase components directly such as starting blocks, water features, benches, and other site amenities. Continued support after the pool is opened can ensure that equipment and amenities can be added or replaced and ensure the facility continues to meet the aquatic needs of its users.

Facebook Page of Friends Group



On–Going Fundraising

SECTION 13

APPENDIX

BARGMANN HENDRIE + ARCHETYPE, INC.
Architecture | Planning | Interior Design

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meeting notes

date:	April 3, 2018	
project name and number:	Forest River Pool BH+A Project No. 3374	
subject:	Kick-Off Meeting	
present:	Jenna Ide	City of Salem jide@salem.com
	Tom Scarlata	BH+A, Inc. tscarlata@bhplus.com
	Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
	Clara Castro	BH+ A Inc. ccastro@bhplus.com
	Erik Rexford	Epsilon erexford@epsilonassociates.com
	Stephen Garvin	Samiotes Consultants sgarvin@samiotes.com
	Doug Kelleher	Epsilon Associates dkelleher@epsilonassociates.com
	Greg Nowak	Structures North gmnowak@structures-North.com
	Kyle Zick	KZLA kzick@kylezick.com
	Nick Downing	City of Salem – Traffic & Parking ndowning@salem.com
	Matt Smith	City of Salem – Traffic & Parking msmith@salem.com
	Gerry Giunta	City of Salem – Fire Department jggiunta@salem.com
	Ashley Green	City of Salem – Plng. Dept. Conservation. agreen@salem.com
	Patti Kelleher	City of Salem – Plng. Dept. Historic pkelleher@salem.com
	Josh Turiel	Ward 5 City Council jturiel@salem.com
	Ray Jodoin	City of Salem rjodoin@salem.com
by:	Tom Beddall and Tom Scarlata	
distribution:	all attendees Project file	

New Business

1.1 **Existing**: Existing building constructed about 1926. Major renovation done in 1972; pool converted to fresh water from salt water in 1999. Fencing constrains the site. Pool has now been closed. Overall a number of Forest River Park reconstruction projects are underway. Ballfield, basketball court and parking are currently being redone.

1.2 **Study Goal:** Consensus solution and cost estimate for work needed, to go forward. Maintain character of the park; parking and drive access are major issues.

1.3 **Pool Location:** Options for moving pool - slightly out of the flood plain, or closer to ballfield. Biggest challenge is probably the money - could be $5 to $7 million, one of the largest project done by City of Salem in a long time.

1.4 **Pool Size:** Pool surface will be a lot smaller than what is there now; current pools not designed like the existing.

1.5 **Building** – Did not see anything that looks un-repairable; nothing that cannot be fixed. Structures North – in Salem – they do a lot of work with historic buildings.

1.6 **Operational considerations** – Ballard King – water savings, utility costs…..look to cover operating costs. Extended uses could bring in additional revenue. Salem currently does not have many public facilities with dedicated revenue streams to cover operating costs. Parking fees are source of revenue for the City. Accessibility for bicycles – bus shuttle studies – accessibility for the handicapped is a priority.

1.7 **Existing Bathhouse/Other Use**: If pool is relocated, solution needed for existing pool area, and pool house will need to be renovated for another use; and tennis courts are not being used. Site soil studies have been done for the parking lot area, but not other parts of the park.

1.8 **Pool Filtration**: Pool turnover rate should be a maximum 6, not 8 as currently set up. Or one pool could turn over more rapidly than a second separate pool.

1.9 **Programming:** Program will be a major part of pool planning – for simultaneous use by children and adults; aquatic facilities must be multi-generational.

1.10 **Meetings:** Participation in bi-weekly meetings – most here will be at some meetings but not at others. Wednesday afternoons will work for typical meetings – at 1:30 PM Wednesdays. Goal is to get the initial report done by June; public meeting in the spring – May.

1.11 **Timeframe** – assume one year for construction. Pool needs to open in May/June, to run through the season. City budget – need numbers by fourth Tuesday in May – Park grant is due in July. Could be just for design funds.

1.12. **Budget**: When would construction spending really be going on? Completion by May 2020? Daedalus to check numbers from original study – consider parking and access road.

IMPORTANT CONSIDERATIONS

1.14 **All Inclusive Design and Costs**: Cost for owner's project manager – OK if overall number starts a little high. Permitting will take significant time – Chapter 91 will probably take 9 months. Could be faster if presented as a water dependent project. Opportunity to restore shoreline.

1.15 **Status of Existing Building**: Options for re-use or replacement of historic bathhouse, similar to another park in Salem now demolished. Community engagement – who would use the facility once it is renovated?

1.16 **Sustainability**: Salem currently does not have any LEED-Certified city-owned building. Not much energy use expected at the bathhouse building.

1.17 **Construction issues** – work will continue throughout the summer on the ballfield, and with temporary parking for Salem State.

1.18 **Operations and maintenance** – interested in dual systems. Site is somewhat remote.

1.19 **Site Logistics:** Access for emergency vehicles and fire department ladder trucks. Drop off access for school kids or the elderly.

1.20 **Operations:** Easy maintenance important for building components, resisting vandalism.

1.21 **Site Access**: Coordinate with Ray Jodoin for site access with consultants.

These notes are recorded as understood by the writer, who should be notified of any omissions or corrections. Unless notified to the, they will become the record of the meeting

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meeting notes

date:	May 2, 2018	
project name and number:	Forest River Pool BH+A Project No. 3374	
subject:	Meeting No. 02	
present:	Jenna Ide	City of Salem jide@salem.com
	Patricia O'Brien	City of Salem – Park & Recreation pobrien@salem.com
	Larry Ramdin	City of Salem – Health Agent lramdin@salem.com
	Josh Turiel	Ward 5 City Council jturiel@salem.com
	Tom Scarlata	BH+A, Inc. tscarlata@bhplus.com
	Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
	Clara Castro	BH+ A Inc. ccastro@bhplus.com
by:	Tom Beddall and Tom Scarlata	
distribution:	all attendees	
	Stephen Garvin	Samiotes Consultants sgarvin@samiotes.com
	Doug Kelleher	Epsilon Associates dkelleher@epsilonassociates.com
	Kyle Zick	KZLA kzick@kylezick.com
	Greg Nowak	Structures North gmnowak@structures-North.com
	Nick Downing	City of Salem – Traffic & Parking ndowning@salem.com
	Matt Smith	City of Salem – Traffic & Parking msmith@salem.com
	Gerry Giunta	City of Salem – Fire Department jggiunta@salem.com
	Ashley Green	City of Salem – Plng. Dept. Conservation agreen@salem.com
	Patti Kelleher	City of Salem – Plng. Dept. Historic pkelleher@salem.com

Ray Jodoin	City of Salem rjodoin@salem.com
Charity Lezama	North Shore YMCA lezamac@northshoreymca.org
David Knowlton	City of Salem dknowlton@salem.com
Mark Losolfo	City of Salem mlosolfo@salem.com
Michael Lutrzykowski	City of Salem mlutrzykowski@salem.com
Dominick Pangallo	City of Salem dpangallo@salem.com
Robert Preczewski	City of Salem rpreczewski@salem.com
Project file	

Old Business

1.10 **Meetings:** Participation in bi-weekly meetings – most here will be at some meetings but not at others. Wednesday afternoons will work for typical meetings – at 1:30 PM Wednesdays. Goal is to get the initial report done by June; public meeting in the spring – May.

1.11 **Timeframe** – assume one year for construction. Pool needs to open in May/June, to run through the season. City budget – need numbers by fourth Tuesday in May – Park grant is due in July. Could be just for design funds.

1.12. **Budget**: When would construction spending really be going on? Completion by May 2020? Daedalus to check numbers from original study – consider parking and access road.

New Business

2.1 **Tennis Courts**: No need to replace existing tennis courts; area may be used for other program functions

2.2 **Sustainability** – LEED N – O net is target

2.3 **Pool Codes:** MA Department of Public Health has published revised regulations. These will be taken into consideration during the design; regulations for basic planning and cost will be incorporated.

2.4 **Pool Size:** The existing pool has a large surface area with a lot of inefficient or under-utilized surface area. Surface area affects bather load, number of sanitary fixtures, numbers of staff, maintenance operations, all depending on size of pool.

2.5 Review meeting minutes – comments to be submitted by next Monday.

2.6 **Three Concepts/Options Presented:**

2.6A **Option 1 - Parking lot site by ball field**: 25 yard lap pool and kids' pool; 250 to 275 bathers.

Impact: relocate batting cages. Losing about 70 parking spaces; Most recent parking plan has about 270 spaces, but current reference drawing shows 191 spaces.

Comments: Josh - most people likely expecting a 50 yard lap pool. Kids pool - could be a splash pad like Frog Pond - with skating in the winter.
Josh - really thinking about 3 pool elements, not 2; can extend the season if splash pad were provided. If Pioneer Village were moved, YMCA could set up their tents at that location - this could be very positive.

Pros: overall accessibility, don't need to bring traffic through park, this end of the park is for active uses.

Cons: 60 - 70 parking spaces removed; if Pioneer Village is not moved, incongruous uses nearby; and not enough space for larger pool or adding a splash pad. Also: Safety if splash pad were not separately fenced. There is also no lawn space within the safety enclosure.

2.6B **Option 2** - **Park site by parking area** – 4000 sf bathhouse, could put splash pad separately nearby. More space to lay out facilities. Location opposite ball field; further from residential neighbors. Park users like trees; problems with nearby trees – shade in the afternoon, leaves in the fall.

Trish – park is different from other Salem parks with a more natural setting and many trees. Statutory law requires 6 ft. chain link fence. Some nearby green space could be included in the fenced area. For stakeholders meeting – extent of surrounding fence should be indicated. Outdoor rinse station and outdoor showers needed to re-enter the pool from the grassed area. But capacity of pool for lifeguards is based on number of people inside the entire fenced-in area. Fixture count based on surface area of the pool, not including adjacent deck or sunbathers.

Is there a marketing opportunity for a 50 yard pool, instead of a 25 yard pool?

Josh – Maybe better to stay with 25 yards, unlike Needham or Belmont.

Larry – This is likely to be more a recreational pool, not an exercise pool.

Tom S. – Better to divide pool lengthwise with both lap area and recreation area.

2.6B **Option 3 - Existing pool site** – 4 to 5 feet above existing kiddie pool. Tennis courts not needed, could be used for YMCA activities. Add some parking spaces for staff, school group vans; re-purpose the existing bathhouse, to get a community room that could be rented out. Concession could be outside the pool area. Could be a mobile concession and food truck situation.

Jenna – can there be a drop-off partway down the access road? Pros with this scheme – all work is in one area; removal of existing pool could otherwise be delayed; during this winter's storms, the current filtration equipment was all underwater.

2.7 For stakeholder meeting – show filtration equipment area; do not show a slide; do not show lap lanes? How many bathers? How many people can be inside the fence line? Separating out area for special features. Josh – working within the existing pool footprint is probably the best option. Trish – pool option opposite the ballfield has many advantages, separating natural and active recreational parts of the park. Show restoration at the existing pool site. Least likely – parking lot site; still possible through.

2.8 May – stakeholder meeting; June – Park and Recreation meeting. Preferred date – last week in May, after Memorial Day. Meeting will be scheduled for May 30th.

2.9 What are cost differentials between 25 yard and 50 yard pools?

2.10 Terry will be at the next meeting, to confirm programming for the bathhouse. All options include accessibility, accessible and staff parking, removal of (part of) existing pools and restoration of the shoreline. Existing bathhouse could be for public toilets, concession areas; reuse could be done later. Are there fund-raising and sponsorship opportunities? Science education facility?

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meeting notes

date:	May 16, 2018	
project name and number:	Forest River Pool BH+A Project No. 3374	
subject:	Meeting No. 03	
present:	Jenna Ide	City of Salem jide@salem.com
	Tom Scarlata	BH+A, Inc. tscarlata@bhplus.com
	Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
	Clara Castro	BH+ A Inc. ccastro@bhplus.com
	Patti Kelleher	City of Salem – Plng. Dept. Historic pkelleher@salem.com
	Ray Jodoin	City of Salem rjodoin@salem.com
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distribution:	all attendees	
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	Doug Kelleher	Epsilon Associates dkelleher@epsilonassociates.com
	Kyle Zick	KZLA kzick@kylezick.com
	Greg Nowak	Structures North gmnowak@structures-North.com
	Nick Downing	City of Salem – Traffic & Parking ndowning@salem.com
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Larry Ramdin	City of Salem – Health Agent lramdin@salem.com
Josh Turiel	Ward 5 City Council jturiel@salem.com
Charity Lezama	North Shore YMCA lezamac@northshoreymca.org
David Knowlton	City of Salem dknowlton@salem.com
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Dominick Pangallo	City of Salem dpangallo@salem.com
Robert Preczewski	City of Salem rpreczewski@salem.com
Project file	

Old Business

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Josh - really thinking about 3 pool elements, not 2; can extend the season if splash pad were provided. If Pioneer Village were moved, YMCA could set up their tents at that location - this could be very positive.

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Cons: 60 - 70 parking spaces removed; if Pioneer Village is not moved, incongruous uses nearby; and not enough space for larger pool or adding a splash pad. Also: Safety if splash pad were not separately fenced. There is also no lawn space within the safety enclosure.

2.6B **Option 2 - Park site by parking area** – 4,000 sf bathhouse, could put splash pad separately nearby. More space to lay out facilities. Location opposite ball field; further from residential neighbors. Park users like trees; problems with nearby trees – shade in the afternoon, leaves in the fall.

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2.10 All options will include accessibility, accessible and staff parking, removal of (part of) existing pools and restoration of the shoreline. Existing bathhouse could be used for public toilets, concession area; reuse could be done later but this is not preferable. Are there fund-raising and sponsorship opportunities? Could existing bathhouse be used as a science education facility?

New Business

3.01 Stakeholder Meeting: City will take lead on introduction, BH+A will present background and talk about options/concepts and constraints for three alternative sites. The goal is work to agree on a solution, to reach team consensus going forward. Also, stakeholders could help the City through the fund-raising process, looking for some private donations as well as state grants.

3.02 Current program: YMCA manages pool activities, City staff maintain the physical plant. Maintenance for the new pool facility needs to be defined.

3.03 Goal for the new facility is to accommodate camp swim and some public swim at the same time. Park & Rec. runs some summer camp programs, separate from the YMCA camp program. Additional activities could include a community room, crafts, birthday parties; need YMCA's input on program.

3.03 Food vendors could bring in food trucks, or come into a warming kitchen, or prepare food like at McGrath, where they have their own cooking equipment and a hood. The gold course has a private vendor who leases food preparation space on a seasonal basis.

3.04 Can the splash pad also be used for ice skating, to extend use of the bathhouse building and pool? To have skating work at the splash pad, refrigeration piping would need to be built in, and a portable chiller and refrigeration equipment brought in. Zamboni will be needed to maintain the ice, with a temporary building for shelter, like at the Frog Pond in Boston. Other outdoor rinks like at Prospect park in Brooklyn are associated with an indoor skating area.

3.05 **Precedents** from other pool facilities were reviewed, to give an idea of larger or smaller pools -

Rosemary Pool in Needham – a 25 yard pool with 2 lanes of 50 meter length for lap swimming; separate spray deck outside the pool enclosure. Different age groups accommodated in one body of water, and 2 pools so that some water is available if one of the pools is down due to some incident.

Underwood Pool in Belmont – split into two pools: a family pool and a lap pool. Pools were programmed to accommodate both adults and kids, and maximize swim lessons. Two bathhouses provided – one with separate individual changing stalls, and one with family changing rooms allowed by plumbing code variance. The third building on the site is the filter building.

3.06 **Three options** to be discussed at stakeholder meeting –

Ball Field Option: 2 sub-options with a combination lap and recreational pool, and a separate spray deck to be accessible when the rest of the pool area is closed. These options will have the greatest impact on the Pioneer Village site.

Parkland Option: A 50 yard pool is too large, since most people are not lap swimming. With this options as well as the Ball Field Option, getting rid of the existing restrooms and providing restrooms as part of a new bathhouse building is a potential.

Existing Location Option: BH+A to show how the existing bathhouse can be re-planned and re-used. Several options can be discussed at this site – a combination recreation and lap pool, or two separate pools; the old bathhouse building could be renovated for other uses and a new bathhouse built for the new pool. If parking is for staff and maintenance, no more than 20 parking spaces are needed.

3.07 Pros and cons to be identified for each site. If the Ball Field or Parkland Option is chosen, the existing pool needs to be removed in any case; what is to be done with the existing bathhouse?

3.08 Could the summer camp tent by the tennis courts be a more permanent wood structure? Like at Winter Island? What would this area look like?

3.09 How does the proposed pool facility compare to pools in neighboring communities? The Wenham pool is much smaller. The State has been putting in splash pads instead of pools. The splash pad at Mary Jane Park is automatic, using about 98 gallons per hour, running 7 to 8 hours per day.

3.10 There will need to be a new filtration building with any of the three options. Where does the water go that is drained or backwashed from the pool?

3.11 The character of the pool and buildings associated with it could be different if the pool is more exposed alongside the parking area, where it could be loud and colorful, versus if the pool is further into the park, with a quieter design more in tune with the natural setting. What happens during most of the year when the pool is closed?

3.12 Relative expense for the different options – order of magnitude costs – once we are more comfortable with the program and the site, a more detailed cost estimate will be possible.

3.13 Additional scopes – Land and conservation grant may be possible, for moving the existing facility out of the storm zone. The Historic Commission has asked for an evaluation of the existing building; can solar panels be added to the roof?

These notes are recorded as understood by the writer, who should be notified of any omissions or corrections. Unless notified to the, they will become the record of the meeting

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meeting notes

date:	May 30, 2018	
project name and number:	Forest River Pool BH+A Project No. 3374	
subject:	Stakeholder Meeting	
present:	Jenna Ide	City of Salem jide@salem.com
	Tom Scarlata	BH+A, Inc. tscarlata@bhplus.com
	Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
	Clara Castro	BH+ A Inc. ccastro@bhplus.com
	Catherine Marcoux	YMCA – Aquatics Director marcouxc@northshoreymca.org
	Aviva Must	Abutter & Public Health aviva.must@tufts.edu
	Emily & Scott Froeschl	Abutters/neighbors and parents emilyhussa@yahoo.com
	Steve Dibble	Ward 7 City Council sdibble@salem.com
	Barbara Warren	Salem Sound Coastwatch barbara.warren@salemsound.org
	Lisa Rosenthal	Sustainability, Energy and Resiliency Com. lrosenthal@salem.com
	Andy Knapp	Neighbor aknapp.mobile@gmail.com
by:	Tom Beddall and Tom Scarlata	
distribution:	all attendees	
	Stephen Garvin	Samiotes Consultants sgarvin@samiotes.com
	Doug Kelleher	Epsilon Associates dkelleher@epsilonassociates.com
	Kyle Zick	KZLA kzick@kylezick.com
	Greg Nowak	Structures North gmnowak@structures-North.com

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Robert Preczewski	City of Salem rpreczewski@salem.com
Project file	

Introduction / Overview

1.1 **Stakeholder Meetings:** The goal today is to develop a better idea of one or two preferred options, to move forward with initial pool and bathhouse design to replace the existing pool facility.

1.2 **Stakeholder Group Role**: There are about 25 to 30 people currently on the stakeholder list. These meetings are intended to help bring consensus and arrive at shared goals. Consensus may not be one individual's favorite solution, but a solution that everyone can live with. The preferred option will be a concept, for initial design, based on constraints, challenges, opportunities at each proposed location.

1.3 **Budget**: Final cost may be in the range of $5 million to $7 million, but has not been estimated yet.

1.4 **Design Process**: Intended to be an Integrated Design Process, not a Conventional Design Process.

New Business

2.1 **Existing Pools**: The existing rectangular lap pool and shallow kids pool were not built to specific dimensions, just what would fit on the site of the former salt water cove. The Forest River pool facility recently accommodated 300 bathers at one time. About 2,500 passes have been sold in a typical season in recent years. The goal for the new facility should be for multi-generational pool usage.

2.2 **Existing Bathhouse:** The existing bathhouse was designed in the 1920's, when the area planned for bathhouse facilities was much larger than would be designed today. There are many possibilities for the re-use of the existing bathhouse, depending on where the new pool facility is located.

2.3 **2018 Storm Surge:** Storm surge tides in January and March 2018 flooded the existing lap pool and kids pool, and submerged the filtration and pumping equipment in salt water. The concrete pool walls are leaking and the water level rises and falls with the ocean tides. The existing pool facility was still open last summer, but will stay closed this year.

2.4 **Pool Size:** A lap pool 25 yards long is now the standard competition length, and the new pool should be built to standard swim team length. For Red Cross training, an 8 foot depth is needed. Diving boards have recently become more popular features in recreational pools, but require a 13 foot depth. Additional water features can be provided; a water slide will require an attendant.

2.5 **Bathhouse Size:** Two bathhouse buildings from the Belmont pool facility were shown – one with individual lockers, toilets and showers, one with family changing rooms, now approved by the state plumbing board. Some toilets could be opened to park users at other times, or for community activities.

2.6 **Summary of Initial Comments:** Future pool facility in the park could include: Pool for fun, lessons, swim meets, diving, and water features; Bathhouse; Community space: Concessions; Splash Pad; Other Uses such as places for picnics, relaxation, shaded structures; Ice possibly included for winter.

Walking and access to the pool facility is an important consideration. Separation of ages / users is desirable. Good to have a separate kids pool areas with all shallow water.

Number of pool users and pool passes should be confirmed. Potential for regional swim meets? Need to make a comparison with length of nearby pools for regional swim competitions.

- Chain link fence is too close to current pool – no place for chairs.
- Potential to add shade structures near the pool in the future should be included.
- Stroller / bike storage is needed – strollers not allowed inside pool enclosure.
- There is funding to make the current restrooms by the parking area accessible.
- Restrooms could be combined with new bathhouse if the pool is located nearby.
- Current parking lot to be paved by the end of the summer – 270 spaces.

2.7 **Three Concepts/Options Presented:**

2.7A **Options 1A and 1B - Parking lot site by ball field**: Combined 25 yard lap pool and kids pool, with splash pad separately nearby; 235 bathers.

This site will only allow for a very small pool, with a splash pad outside the pool enclosure fence. Option 1A has a 2,000 sf bathhouse: Option 1B has a 4,000 sf bathhouse with a community room. These options keep all active uses in one area in the park, and will have plenty of sun without taking out any trees.

Pros: Overall accessibility, security and visibility are good, all recreational uses in the park are together, may be better for construction phasing given the long permitting time needed for removal of the existing pool and shoreline restoration, short utility line runs needed.

Cons: Small pool possible at this site, not big enough for swim meets, 60 - 70 parking spaces removed, construction would require redoing a park area just redone, might be too near sea level / storm surge, location would negatively impact the Pioneer Village site, and the project will still need to remove the existing pool and renovate or remove the existing bathhouse.

2.7B **Option 2** - **Park site by parking area** – 25 yard lap and recreational pool, separate kids' pool, with splash pad separately nearby; 400 bathers. 4,000 sf bathhouse. More space to lay out facilities. Location opposite ball field; some parking space removed for drop-off area. This site will require removal of many trees, and construction will require removal of ledge.

Pros: Access to this site keeps cars out of the park, convenient location next to parking area, good visibility, more space for large pool and seating areas, shorter utility line runs needed.

Cons: Pool facility at this location would change the whole look of the park, trees will be removed for construction and the pool area will be shaded unless additional trees are removed (although new trees can be planted where the existing pool is removed), construction will require excavation of ledge, location would detract from Pioneer Village, and the project will still need to remove the existing pool and renovate or remove the existing bathhouse.

2.7C **Option 3 - Existing pool site** – 25 yard lap and recreational pool, separate kids pool, with splash pad separately nearby; 400 bathers. Existing 4,000 sf bathhouse can be renovated to include a community room and patio facing the harbor; new pools will be located at least 4 to 5 feet above existing kids pool. Plan illustrates maximum area for parking, but fewer parking spaces should be provided.

Pros: A new pool facility on this site would do less damage to the main part of the park, south-facing views to the shoreline and harbor, re-use of the existing bathhouse would be easiest for permitting and less costly than demolishing and building a new bathhouse, proven popularity of this location despite the need to walk from parking area, re-use of historic pool location and bathhouse, and more possibilities for nearby programs such as a patio south of the bathhouse and new uses – a tent or shade structure, or a basketball court – at the site of the current tennis courts.

Cons: Remote location within the park, safety and vandalism concerns, need for access by service vehicles and management of access for handicapped, staff and maintenance vehicles, need to get the new pool facility above storm surge level, longer utility runs.

2.8 **Comparative costs**: Costs for all three options will probably be about the same; Options 1 and 2 need to include removal of the existing lap and kids pools, and renovation or removal of existing bathhouse, and shoreline / cove restoration at the south end of the existing pool.

2.8 **Consensus Summary**:

- Options 1A and 1B - Not worthy to be explored further.
- Option 2 – More study and images requested; hard to visualize from plan drawings
- Option 3 – Most "pros" for this option; continue to study this site.

These notes are recorded as understood by the writer, who should be notified of any omissions or corrections. Unless notified to the, they will become the record of the meeting

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meeting notes

date: June 13, 2018

project name and number: Forest River Pool
BH+A Project No. 3374

subject: Meeting No. 05

present:

Jenna Ide	City of Salem jide@salem.com
Tom Scarlata	BH+A, Inc. tscarlata@bhplus.com
Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
Clara Castro	BH+ A Inc. ccastro@bhplus.com

by: Tom Beddall and Tom Scarlata

distribution: all attendees

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Robert Preczewski	City of Salem rpreczewski@salem.com

Project file

Old Business

1.10 **Meetings:** Participation in bi-weekly meetings – most here will be at some meetings but not at others. Wednesday afternoons will work for typical meetings – at 1:30 PM Wednesdays. Goal is to get the initial report done by June; public meeting in the spring – May.

1.11 **Timeframe** – assume one year for construction. Pool needs to open in May/June, to run through the season. City budget – need numbers by fourth Tuesday in May – Park grant is due in July. Could be just for design funds.

1.12. **Budget**: When would construction spending really be going on? Completion by May 2020? May 2021? Daedalus to check numbers from original study – consider parking and access road.

2.1 **Tennis Courts**: No need to replace existing tennis courts; area may be used for other program functions.

2.2 **Sustainability** – LEED N – O net-zero is the target.

2.3 **Pool Codes:** MA Department of Public Health has published revised regulations. These will be taken into consideration during the design; regulations for basic planning and cost will be incorporated.

2.4 **Pool Size:** The existing pool has a large surface area with a lot of inefficient or under-utilized water area. Surface area affects bather load, number of sanitary fixtures, numbers of staff, maintenance operations, all depending on size of pool.

2.6 **Three Concepts/Options Presented:**

2.6A **Option 1 - Parking lot site by ball field**: 25 yard lap pool and kids' pool; 250 to 275 bathers.

Pros: overall accessibility, don't need to bring traffic through park, this end of the park is for active uses.

Cons: 60 - 70 parking spaces removed; if Pioneer Village is not moved, incongruous uses nearby; and not enough space for larger pool or adding a splash pad. Also: Safety concerns if splash pad is not separately fenced. There is also no lawn space within the safety enclosure.

2.6B **Option 2** - **Park site by parking area** – 4,000 sf bathhouse, could put splash pad separately nearby. More space to lay out facilities. Location opposite ball field; further from residential neighbors. Park users like trees; problems with nearby trees – shade in the afternoon, leaves in the fall.

Pros: Overall accessibility, don't need to bring traffic through park, this end of the park is for active uses. Larger site area allows for both a recreational and a kids' pool as well as a splash pad.

Cons: Construction will likely involve excavation into ledge. A significant number of existing park trees must be removed to allow for the pool facility. Most of the north part of the park becomes dedicated to active recreational uses and associated parking.

2.6B **Option 3 - Existing pool site** – 4 to 5 feet above existing kiddie pool. Tennis courts not needed, could be used for YMCA activities. Add some parking spaces for staff, school group vans; re-purpose the existing bathhouse, to get a community room that could be rented out. Concession could be outside the pool area. Could be a mobile concession and food truck situation.

Pros: All work is in one area; construction will include removal of the existing pool and filtration equipment which could otherwise be delayed; existing bathhouse needs to be re-purposed or removed if the new pool facility is going to be in another part of the park.

Cons: Access from the newly rebuilt parking area by the ballfield is lengthy, and access by vehicles for school groups, buses and vehicles for handicapped users must be monitored by park staff.

2.7 For stakeholder meeting – show filtration equipment area; do not show a slide; do not show lap lanes? How many bathers? How many people can be inside the fence line? Separating out an area for special features. Josh – working within the existing pool footprint is probably the best option. Trish – pool option opposite the ballfield has many advantages, separating natural and active recreational parts of the park. Show restoration at the existing pool site. Least likely – parking lot site; still possible through.

2.8 May – stakeholder meeting; Preferred date – last week in May, after Memorial Day. Meeting will be scheduled for May 30th. Mid-June – Park and Recreation meeting.

2.9 What are cost differentials between 25 yard and 50 yard pools?

2.10 All options will include accessibility, accessible and staff parking, removal of (part of) existing pools and restoration of the shoreline. Existing bathhouse could be used for public toilets, concession area; reuse could be done later but this is not preferable. Are there fund-raising and sponsorship opportunities? Could existing bathhouse be used as a science education facility?

3.02 Current program: YMCA manages pool activities, City staff maintain the physical plant. Maintenance for the new pool facility needs to be defined.

3.03 Goal for the new facility is to accommodate camp swim and some public swim at the same time. Park & Rec. runs some summer camp programs, separate from the YMCA camp program. Additional activities could include a community room, crafts, birthday parties; need YMCA's input on program.

3.03 Food vendors could bring in food trucks, or come into a warming kitchen, or prepare food like at McGrath, where they have their own cooking equipment and a hood. The golf course has a private vendor who leases food preparation space on a seasonal basis.

3.05 **Precedents** from other pool facilities were reviewed, to give an idea of larger or smaller pools -

Rosemary Pool in Needham – a 25 yard pool with 2 lanes of 50 meter length for lap swimming; separate spray deck outside the pool enclosure. Different age groups accommodated in one body of water, and 2 pools so that some water is available if one of the pools is down due to some incident.

Underwood Pool in Belmont – split into two pools: a family pool and a lap pool. Pools were programmed to accommodate both adults and kids, and maximize swim lessons. Two bathhouses were provided – one with separate individual changing stalls, and one with family changing rooms allowed by plumbing code variance. The third building on the site is the filter equipment building.

3.08 Could the summer camp tent by the tennis courts be a more permanent wood structure? Like at Winter Island? What would this area look like?

3.10 There will need to be a new filtration building with any of the three options. Where does the water go that is drained or backwashed from the pool?

3.13 Additional scopes – Land and conservation grant may be possible, for moving the existing facility out of the storm zone. The Historic Commission has asked for an evaluation of the existing building; but the existing building can be altered to include solar panels on the roof.

Forest River Pool
Meeting No 05
June 13, 2018
Page 5

New Business

5.01 **Three options** were discussed at the stakeholder meeting on May 30th –

Ball Field Option: 2 sub-options with a combination lap and recreational pool, and a separate spray deck to be accessible when the rest of the pool area is closed. This option would have the greatest impact on the Pioneer Village site, and was seen as the least preferable.

Parkland Option: A 50 yard pool is too large, since most people are not lap swimming. With this options as well as the Ball Field Option, getting rid of the existing restrooms and providing restrooms as part of a new bathhouse building is a possibility. This option was also seen as less preferable.

Existing Location Option: BH+A showed how the existing bathhouse can be re-planned and re-used. Several alternatives were discussed at this site – a combination recreation and lap pool, or two separate pools; the old bathhouse building could be renovated for other uses and a new bathhouse built for the new pool. This siting option was clearly seen as the most favorable.

5.02 BH+A will start drafting the final Conceptual Design Report – including the pool facility options, permits required, sustainability considerations, historic survey, schedule, cost estimates, operations and maintenance costs, and access control.

5.03 For next week's meeting with the Park and Recreation Commission, BH+A to summarize what has been discussed, and explain why three areas in the park were studied. The only "con" to the existing pool site is access. Regardless of which option is chosen, we still must deal with the existing pool and bathhouse building. The intent is to get feedback on the design and layout of recreational resources.

5.04 The Park and Recreation meeting will be at the 5 Broad Street community center. A draft of the PowerPoint presentation will be sent prior to the meeting for review.

5.05 BH+A to check with Woodard & Curran regarding what it would take to extend their parking lot survey information, instead of having a new survey prepared by Samiotes.

5.06 For the existing pool site, the plan is to lock up strollers and bicycles outside the building.

5.07 BH+A is to propose a fee for Schematic Design, and estimate fees for later phases.

5.08 The next task is to start the permitting process, which could really slow down the project.

5.09 Bathhouse roof solar panels could be bid as a separate item. The added roof load will be about 20 psf.

5.10 BH+A is to identify sustainable components for LEED credits.

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meeting notes

date:	June 19, 2018	
project name and number:	Forest River Pool BH+A Project No. 3374	
subject:	Park and Recreation Commission Meeting	
present:	Jenna Ide	City of Salem jide@salem.com
	Tom Scarlata	BH+A, Inc. tscarlata@bhplus.com
	Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
	Clara Castro	BH+ A Inc. ccastro@bhplus.com
by:	Tom Beddall and Tom Scarlata	
distribution:	all attendees	
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Project file	

New Business

6.01 **Three options** were presented, as discussed at the stakeholder meeting on May 30th –

Ball Field Option: 2 sub-options with a combination lap and recreational pool, and a separate spray deck to be accessible when the rest of the pool area is closed. This option would have the greatest impact on the Pioneer Village site, and was seen as the least preferable.

Parkland Option: A 50 yard pool is too large, since most people are not lap swimming. The parkland site has more space and would allow for a combination lap and recreational pool, as well as a separate kids' pool. With this option as well as the Ball Field Option, getting rid of the existing restrooms and providing restrooms as part of a new bathhouse building is a possibility. This option was also seen as less preferable.

Existing Location Option: BH+A showed how the existing bathhouse can be re-planned and re-used. Several alternatives were discussed at this site – a combination recreation and lap pool, or two separate pools, one recreational and one fro kids; the old bathhouse building could be renovated for other uses and a new bathhouse built for the new pool. This siting option was clearly seen as the most favorable.

6.02 The commission asked if the bathhouse is a historic building. It is not designated as historic, but it is over 50 years old. Some money could be available to restore the bathhouse. Structurally, it is very sound, and with about 4,000 sf can now accommodate both a new bathhouse and a community space. The proposed program includes additional uses for the bathhouse building at other seasons.

6.03 It is understood that the cost of the new pool facility is proportional to the area of water provided. Questions that affect the pool program – how many people are swimming laps? How many separate bodies of water are wanted?

6.04 The new pool and bathhouse are likely to be completed by Summer 2021 or Summer 2022, not in the next year or two. MEPA permitting will take time.

6.05 The depth of the recreational pool was discussed. For YMCA activities – 5 feet may be sufficient. For Red Cross safety training – 8 feet is needed. The new recreational pool will not include diving, which would require a deeper pool area, and will not include slides – but this will limit the popularity of the pool. If there were a slide, permission to use it could be an incentive to take swimming lessons.

6.06 Jenna Ide described the pool and bathhouse project as trying to make the experience about more than swimming, and to expand uses to other seasons, given the investment that is already being made. With the adjacent shoreline, there is an opportunity for environmental education.

6.07 In the layout of the renovated bathhouse, food could be introduced outside the fenced pool enclosure.

6.08 In other facility options that have been reviewed, if the existing bathhouse is not re-used, the empty building could be vandalized or demolished, and would need to be replaced by a new bathhouse.

6.09 The range of hard costs for this project are from $5 million to $6 million, plus shoreline/coastal rebuilding, plus the planned green area where the tennis courts are located. The tennis court area could be in a later phase, but work there is only a small percentage of the pool and bathhouse project.

6.10 Commission comments - there is just a ten week swimming season, based on the local climate and lifeguard availability. Regarding operating costs, costs could be substantial with two separate pools.

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meeting notes

date:	August 22, 2018	
project name and number:	Forest River Pool BH+A Project No. 3374	
subject:	Meeting No. 07	
present:	Jenna Ide	City of Salem jide@salem.com
	Tom Beddall	BH+A, Inc. tbeddall@bhplus.com
	Clara Castro	BH+ A Inc. ccastro@bhplus.com
	Patricia Kelleher	City of Salem – Plng. Dept. Historic pkelleher@salem.com
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by:	Tom Beddall and Clara Castro	
distribution:	all attendees	
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Project file	

New Business

7.01 A draft of the Conceptual Design Report was reviewed. Points to emphasize in the project description include –

Accessibility: The new pool facility will eliminate the existing steps and lengthy ramp between the bathhouse and the pool Accessible parking spaces will be provided adjacent to the bathhouse.

Resiliency: The new pool will be raised 5 feet to be out of the storm tide flood zone. To prepare for sea level rise, the new pool will be sufficiently higher for several decades, but at some point in the future this may not be enough, if sea levels were to rise by several feet. Materials to be used in the new pool and the bathhouse renovations will be selected to withstand coastal storms. To qualify for park grant programs, electrical wires will need to be buried.

Additional Investigations needed for the next phase: Surveys of the existing pool and bathhouse area and the access road from the main parking area have been authorized. Soil testing to verify if fill around the existing pool contains hazardous materials could also be included in the next design phase.

7.02 Operations and Maintenance of the new pool facility needs to be addressed. Are there opportunities for partnering as part of O & M funding? Sources of revenue could include bathing facility fees –

Forest River Pool
Meeting No. 07
August 22, 2018
Page 3

monthly passes for Salem residents, and day passes for non-residents. Parking passes would be difficult to administer given that the remote parking are is shared by other park users. The community room could be used for events, yoga classes, or science education programs.

7.03 Cost estimates need to include soft costs. In the main body of the report, costs should be estimated just for the preferred site. In the appendix, the construction cost estimates for all three sites that were considered should be presented. Note that for Ballfield Option 1, there is only one pool, and no separate kids' pool. For Ballfield Option 1 and Parkland Option 2, demolition of the existing pool and bathhouse and restoration of part the natural cove and shoreline must be included in project costs.

7.04 The depth of the new pool was discussed. It was noted that the existing pool is 9 feet deep, and the existing YMCA pool is 9 ½ feet deep. For teenagers jumping and diving into the new pool, 5 feet of depth is not enough – Charity Lezama.

7.05 The new recreational pool will not include diving, which would require a 12 feet deep area, and will not include slides, which would require too much supervision.

7.06 The report section on Program should summarize the program element with bullet points.

7.07 Charity Lezama of North Shore YMCA asked how the new pool and bathhouse would work for a large group of kids. She recommended including outdoor showers, and incorporating shade structures, maybe as part of the pool enclosure fence, to accommodate large groups. Shade structures could be permanent structures or tents. As an option to reduce operating costs, a fence between the recreational and kids pools (similar to the current set-up) would allow one pool to be supervised without the other, reducing the number of staff required.

7.08 Jenna Ide suggested that a glass addition to the south side of the existing bathhouse could increase educational opportunities by extending the area of the community room.

7.09 One goal of the Conceptual Design Report should be to get a 10-slide presentation which sums up the vision for the new pool, bathhouse and access road – Jenna Ide.

7.10 Renderings from eye level instead of bird's-eye views would help, and scale should be indicated by including cars, for example. Eye level renderings of the pools or sections through the new pool and bathhouse need to be included, to give people a better sense of what the new facility will be like; not just plans, which can be hard for some people to read.

These notes are recorded as understood by the writer, who should be notified of any omissions or corrections. Unless notified to the, they will become the record of the meeting

FORM A - AREA

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Sheets	USGS Quad	Area Letter	Form Numbers in Area
33-0743-201 33-0743-202			SAL.916 SAL.GM SAL.2149

Photograph

Town/City: Salem

Place *(neighborhood or village)*: 32-38 Clifton Avenue

Name of Area: Forest River Park

Present Use: Park; recreation and culture; landscape

Construction Dates or Period: pre-1817 (Pickering House); C 1920 (Bathhouse); 1930 (Pioneer Village); pre-1938 (Garage); pre-1971 (Pool)

Overall Condition: Good to fair

Major Intrusions and Alterations: Pioneer Village partially rebuilt (1960s-1980s); Pool renovated (1971-72 and 1999); Bathhouse renovated in (1971-72)

Acreage: 31.2599

Recorded by: Tonya Loveday

Organization: Epsilon Associates, Inc.

Date *(month/year):* July 2018

Locus Map

☒ *see continuation sheet*

12/12 *Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.*

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD, BOSTON, MASSACHUSETTS 02125

Area Letter | Form Nos.
SAL.916

☒ Recommended for listing in the National Register of Historic Places.
If checked, you must attach a completed National Register Criteria Statement form.

Use as much space as necessary to complete the following entries, allowing text to flow onto additional continuation sheets.

ARCHITECTURAL DESCRIPTION

Describe architectural, structural and landscape features and evaluate in terms of other areas within the community.

Forest River Park, 32-38 Clifton Avenue (SAL.916), is a public park established in 1907 by the City of Salem. The park contains over 30 acres of land and is characterized by rolling hills largely covered with mature trees and an expansive shoreline along Salem Harbor that forms the park's east and south boundaries. Forest River Park's north and west boundaries are defined by the rear property lines of the residential lots on the south side of Shore Avenue and the east side of West Terrace and West Circle (see Figures 1 and 2). The park entrance at the intersection of Clifton and Shore Avenues is demarcated by a pair of stone and concrete piers with secondary piers flanking the sidewalks that extend from the intersection (photo 1). The park is also accessible from West Avenue.

The park contains various buildings and recreational structures, including a caretaker's house and garage/restroom facility near the park entrance off West Avenue, a pool and bathhouse at the south end of the park along the harbor, and a collection of reproduction colonial buildings at Pioneer Village at the park's northernmost section. These structures are described in further detail below.

Other recreational park elements are present, including a tennis court, concrete slide, and various playground equipment (photos 41-43). A concrete slide was installed north of the **Forest River Park Bathhouse** by 1955. The slide features four lanes that descend from a concrete and stone platform with metal railings. A tennis court is located at the southernmost part of the park next to the **Forest River Park Pool** and was likely added around 1971 when the pool was renovated. Two swing sets northwest of the slide appear to date from the same period. Towards to center of Forest River Park is a playground that was installed by 1995. A basketball court and baseball diamond at the park's northwest corner have been temporarily removed as part of the City of Salem's effort to upgrade the park's drainage system.

Forest River Park also features park furniture, such as benches and picnic tables, and trash receptacles. Park pathways provide pedestrian and limited automobile access to different parts of Forest River Park. These include a combination of dirt pathways and paved asphalt drives with concrete curbing and metal guardrails at select locations. Wood bollards line the pathway that leads northwest to Pioneer Village. The beachfront next to Pioneer Village is lined with a concrete retaining wall (photo 18-19). The circular concrete retaining wall along the beach south of Pickering Point is faced with stone veneer (photo 23).

Col. Timothy Pickering House

The oldest extant building within Forest River Park is the **Col. Timothy Pickering House** (SAL.2149; photos 4-5 and 7-8), located at the park entrance east of where West Avenue terminates. The two-story vernacular dwelling was constructed by 1817. Based on an examination of the building's architecture and a comparison of historic atlases, it appears to have been moved and expanded between 1874 and 1887 (see Figures 3 and 4). The building's westernmost four bays seem to date to the Second Period (1725-1780) of colonial architecture. Here, the south elevation and the westernmost two chimneys form a relatively symmetrical block. Further research and an examination of the building's interior would likely yield more information on the building's construction and history.

The dwelling's gable ends are two bays wide facing east and west, while the north and south elevations are nine bays wide. The exterior is clad in painted wood shingles. Two entrances are located on the south elevation, each in the next-to-

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last bay. These paneled wood doors are covered with modern metal screen doors. Added later to the building are the projecting pedimented hoods above the two doors on the south elevation. A third entrance is located within the first bay of the east elevation and features a solid paneled wood door. Windows openings at the first story of the north and south elevations have six-over-six double-hung replacement sash. A single sliding window is located at the first story of the south elevation. Second story windows at the north and south elevations are set immediately under the eaves and have three-over-six double hung replacement sash. Windows on the gable ends have six-over-six double-hung replacement sash. Louvered vents are tucked beneath the gables of the east and west elevations. Asphalt shingles cover the building's gable roof. Three white-washed brick chimneys rise from the north slope of the roof. A short wood picket fence extends south from the dwelling to surround the lawn bound by the park pathways and the **Forest River Park Garage** on the property.

Forest River Park Garage

Immediately southeast of **Col. Timothy Pickering House** is the single-story concrete block **Forest River Park Garage** (photos 7-8), constructed at an unknown date but by 1938 based on historic aerial images. The garage functions today as a restroom with storage space. A modern multi-paneled garage door is located on the south elevation. Next to that is a pair of one-over-one pivot windows, set above a single wood sill. The building's concrete block exterior and windows sills have been uniformly painted. The same style and configuration of pivot window is found centered on the west elevation. Two pairs of such windows are also located on the north elevation. In between the north elevation windows is a narrow solid door. The east elevation features two doors that provide access to the men's and women's restrooms. Concrete steps lead to the entrances which are topped with projecting flat hoods. The asphalt shingle gable roof overhangs on the north and south elevations. The end bays have vertical wood paneling in the gables. Trees and shrubbery have been planted along the building's east elevation, shielding much of the view of the restroom entrances.

Forest River Park Bathhouse

The single-story brick and stucco **Forest River Park Bathhouse** (photos 23-27, 29-30, 32-40) is located at the southeast edge of Forest River Park along the Salem Harbor. The building dates to the late 1920s and has an unusual yet symmetrical shape with the centermost bays of the north, south and west elevations recessed. The corners of the building that project feature cast stone quoining. The west elevation, facing the **Forest River Park Pool**, is the bathhouse's primary elevation. The projecting end bays of this elevation feature paired one-over-one pivot windows set within a low arched opening. The windows share a single wood sill supported by four scrolled brackets. Centered within the recessed section of the west elevation is a hexagonal projecting center bay. Each side of the projecting bay contains three awning windows. Flanking the projecting bay on both sides is a solid door. Transoms above the doors have been infilled. Shielding the projecting bay and the two doors is a shed roof overhang with exposed rafters and simple end brackets. Next to each door is a pair of two stacked awning windows with a wood sill supported by two scrolled brackets. A plaque commemorating the work done to the bathhouse and pool in 1971-72 has been installed at the northwest corner of the west elevation. New electrical and plumbing was installed as part of the renovation.

The north elevation of the bathhouse features groups of four awning windows set within low arched openings with wood sills, supported by four scrolled brackets. These windows are in the projecting end bay at the building's northwest corner and the north elevation's centermost bay. While recessed from the end bays, the centermost bay projects slightly and features quoining. The window opening in the projecting end bay at the northeast corner of the building at this elevation has been infilled. The recessed portions of the elevation flanking the centermost bay each have two stacked awning windows with a wood sill supported by two scrolled brackets. An outdoor shower platform is within the recessed portion of the north elevation. The south elevation is nearly identical to the north with few exceptions. The projecting end bay at the southeast section of the building features a door and large round vent instead of a window. Also, the centermost bay within the recessed portion of the south elevation does not slightly project and therefore does not have quoins.

The seven-bay east elevation features a continuous arcade of large arched openings with roll-up metal sheet doors. The centermost bay has a decorative gate, providing access to the building's open central corridor and interior. Within the

Continuation sheet 2

corridor are two doors as well as eight arched window openings that been infilled with concrete blocks. The building's timber frame roof is topped with a cast stone cornice and a low parapet wall. The bathhouse exhibits signs of deterioration. The exterior stucco is in need of repair, particularly inside the central corridor and around fenestration, and wood elements such as the window sills, decorative brackets and the shed hood overhang are deteriorating due to paint failure and exposure to the elements.

A concrete stairway descends from the west elevation of the bathhouse to the **Forest River Park Pool**. The north, south and west elevations are enclosed with galvanized chain link fencing. Outside of the bathhouse is a parking island containing a freestanding rusticated stone and metal plaque monument commemorating the 1999 restoration of the Forest River Pool. Two bicycle parking racks are also located outside of the bathhouse.

Forest River Park Pool

West of the bathhouse facing the Salem Harbor is the **Forest River Park Pool** (photos 25, 28-29, 31 and 40). Originally a tidal pool, the pool was formalized into a concrete structure at an unknown date. The pool was renovated in 1971-72, and again in 1999 when it was expanded and converted from salt water to a recirculating, fresh water pool. The current pool configuration includes two separate sections that together have a surface area of approximately 15,150 square feet and a perimeter measuring 724 linear feet. The southernmost section is rectangular in shape, 65 feet wide by 187 feet long, and ranging in depth from three to nine feet. North of that is a 50-feet by 60-feet wading pool with a maximum depth of three feet. A narrow concrete decking area surrounds the pool. Metal handrails line the concrete ramp that leads from the bathhouse to the wading pool. The pool area is surrounded by a galvanized chain link fence.

Pioneer Village

Pioneer Village (SAL.GM; photos 11-17) occupies the northernmost section of Forest River Park, bounded by the Salem Harbor to the east, park pathways and a small parking lot to the south, and wood stockade fencing to the west and north. A pond is located at the southeast corner of the village, while a mature forest characterizes the village's northern section. Originally built in 1930, resources within Pioneer Village today include eight structures and various landscape elements. The majority of the structures are small, single-story wood reproduction cottages with gable roofs either clad in wood shingles or thatch, with a single chimney. The village also features a reproduction blacksmith shop with a firepit. At the center of the village is the two-story "Governor's Mansion." The wood mansion has a steeply pitched gable roof with wood shingles and a single brick chimney. South of the mansion is a garden with period plantings, framed by rudimentary wood fencing. A reproduction English wigwam is situated to the northwest of the other village structures. West of the wigwam is a dugout shelter. (A second dugout and a cornfield were lost during a storm in March 2017.) Pioneer Village also features a pillory and two small wood bridges. A wood ticket booth is located outside of the village along the park's pathway. Many of the buildings within Pioneer Village have been rebuilt or significantly rehabilitated since 1930. Further research is necessary to determine when the work occurred and what, if any, original fabric remains.

HISTORICAL NARRATIVE

Explain historical development of the area. Discuss how this relates to the historical development of the community.

The area today known as Salem was first inhabited by members of the Pawtucket group of Native Americans commonly referred to as the Naumkeags. When the first European settlers, the "Old Planters," arrived in 1626, Salem was called Naumkeag. These early English settlers had abandoned an earlier failed settlement in Cape Ann and established themselves on the south side of the North River and on the peninsula jutting northeast into Beverly Harbor. A second wave of settlers arrived in 1628 and situated themselves further up the North River. The settlers utilized the common field system, pasturing animals and planting crops in common fields. In 1640 there were at least ten common fields in Salem, the two largest being North Field on the north side of the North River and South Field between the Forest and South Rivers. South Field, approximately 600 acres in size, contained the land on which Forest River Park is located and was reportedly used by Native Americans who referred to the Forest River as Mashabequa, meaning "Great Cove." The

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common field system was short lived. After about 1640 official grants of common land were less common, and in the 1660s the town(ship) and the selectmen (or proprietors) disposed of common and undivided land by sale or lease.

The Forest River Park property has avoided the dense development seen in the neighborhood areas largely because the land remained under relatively consistent private ownership until the first part of the twentieth century. The park land's earliest known private owners following the termination of the common field system were William Flint (1603-1673) and his wife, Alice Williams Flint (1608-1700). In 1699, Alice, then a widow, deeded the land to her daughter, Alice Flint Pickering (1636-1713), wife of Lieutenant John Pickering (1637-1694). The property remained in the Pickering family and was eventually under the ownership of Colonel Timothy Pickering Jr. (1745-1829), the great-grandson of John and Alice. Col. Pickering was an attorney and politician who served in the Revolutionary War. He was an aide to General George Washington and held various appointed positions including Postmaster General and Secretary of War. Col Pickering later served as the third United States Secretary of State under Presidents George Washington and John Adams. He furthered his political career by represented Massachusetts in both chambers of Congress from 1803 to 1811 as a member of the Federalist Party.

Col. Pickering provided the first reference to a building on the Forest River Park property, the Pickering House (SAL.2149), in an 1817 correspondence, referring to a cabin in the "Southfields." It is likely that the building was constructed several decades earlier, around 1750. It was not used as the Pickering family's primary residence, which was located at 18 Broad Street (SAL.1044; NRDIS 1973; LHD 1981).

Following the death of Col. Pickering in 1829, his estate sold the property to William Batchelder (b. abt. 1784), a New-Hampshire-born farmer/laborer, who then immediately sold the land to merchant John Winn (abt. 1765-1835). Deed records from this period note an apple tree lot on the property as well as "Pickering's Point Pastures," likely the land at the easternmost part of the park known today as Pickering Point. Winn owned the property for only a few years before it was again sold in 1835, just months before his death. The property's new owner, David Pingree, served as President of the Naumkeag Bank and later worked as a merchant. During the period in which he owned the Forest River Park land, Pingree resided at 128 Essex Street, known today as the Gardner-Pingree House (SAL.2455; NHL 1970; NRDIS 1972; LHD 1977).

In 1859, the trustees of David Pingree sold the Forest River Park land to the Asiatic Bank, which subsequently sold it to Richard Lavers (abt. 1813-1887), a farmer. Lavers was married to Mehitable A. Batchelder (1818-1885), daughter of William Batchelder, and thus his acquisition of the land returned it back to the Batchelder family. The Batchelders and Lavers did not reside at the Pickering House during their ownership of the property.

In 1864, the property went into foreclosure and was taken by the Salem Savings Bank. The bank then sold it to Jay H. Moulton (1811-1895), who was married to Olive O. Batchelder (1809-1896). Both were born in New Hampshire, making it possible that Olive was related to the family of William Batchelder. As was the case with prior owners, the Moultons did not live at the Pickering House. The atlas for 1874 shows three secondary structures on the property in addition to the Pickering House, which appears to have a smaller footprint and more northern location than present (see Figure 3). The construction and demolition dates as well as the uses of these buildings are unknown.

Mary Porter Tileston Hemenway (1820-1894) purchased the property from the Moultons in 1887 for $1. Mary's late husband Augustus Hemenway (1805-1876) was a Salem native and prominent mariner and ship owner, famed for opening trade between the United States and Chile. He is thought to have been the wealthiest man in American at one point, with a wide range of commercial and real estate interests in New York and Boston, and commercial ventures abroad that involved lumber in Maine, mining in Chile, and a sugar plantation in Cuba. Originally from New York, Mary became well-known as Boston's wealthiest woman following the death of Augustus. She was a renowned philanthropist who invested both her time and financial resources supporting various causes such as the anti-slavery and suffragette movements. Mary was also an early advocate of historic preservation and is credited with saving Boston's Old South Meeting House in 1876.

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Mary Hemenway had a fascination with Native American culture and invested in its study and preservation. She launched the "Hemenway Southwestern Archaeological Expedition" (1886-1894) to undertake a series of archaeological explorations in New Mexico and Arizona. In 1886, Mary appointed a board to oversee the construction of a "Pueblo Museum" in Salem where the artifact collections from the expedition would be featured. Unfortunately, Mary died before the museum materialized, and many of the Native American artifacts that had been collected were given to the Peabody Museum at Harvard University. It is rumored that Mary had a museum built on the Forest River Park land that was dismantled after her passing, however these claims could not be substantiated. Under the ownership of Mary's estate, the property contained the Pickering House and two other structures near the house (see Figure 4). It is possible that these were two of the outbuildings seen in the 1874 atlas, perhaps moved and/or altered.

In December 1907, the Board of Park Commissioners of the City of Salem took the Forest River Park land by eminent domain to establish a public park (see Figure 5). Salem's first Board of Park Commissioners was appointed in 1893, following the passage of the Park Act in 1892. The Park Act established the Metropolitan Park Commission which created the expansive Metropolitan Park System of Greater Boston by its power of eminent domain. By 1975, the Metropolitan Park System of Greater Boston contained over 7,000 acres of land across numerous municipalities around Boston. Forest River Park is an early example of a suburban municipal park outside of Boston that reflects the influence of the progressive late nineteenth century park movement.

The acquisition of Forest River Park was noted as one of the Board's most important accomplishments in the first two decades of the twentieth century, along with the acquisition of two other parks, Highland Park (known today as Salem Woods) in 1906 and Gallows Hill Park in 1912. A clubhouse at the center of the park was added shortly after the acquisition (see Figure 6). By 1911 the City had made various other improvements to the park. The Pickering House was converted into the park caretaker's residence. A baseball field, football grounds, and pedestrian pathways were laid out. At the park entrance, ornamental walls and posts were installed. Additionally, the clubhouse was moved to the waterfront and remodeled into a public bathhouse for the salt water tidal pool that opened into the harbor (see Figures 7, 8 and 10). The following year, the City established a nursery within the park and planted 125 oak, elm, ash and maple trees. Upon maturing, these trees would be moved to Salem's streets, and the nursery replenished to maintain the supply.

On June 25, 1914, a fire broke out following an explosion at the Korn Leather Factory at 57 Boston Street in Salem. Known as the Great Salem Fire, the conflagration spread rapidly, burning 253 acres and leaving nearly half of Salem's 48,000 residents homeless. Camps, or tent cities, were quickly established in different parts of the city. The largest makeshift camp was at Forest River Park, which at that time was still very much characterized by its open pastures (see Figure 9). On June 26, 100 tents were erected at Forest River Park. Within two days, 1200 displaced people were living in the camp at Forest River Park. An additional 300 people arrived the following day. By then, there were over 400 tents and a large dining tent with the capacity to seat several hundred. National Guard soldiers managed the distribution of food and assisted with other relief efforts in conjunction with the American Red Cross and civil authorities. The tent city at Forest River Park operated for several months while the city worked to rebuild itself.

In the late 1920s, the old bathhouse was replaced with the present bathhouse (see Figures 10, 11 and 12). The construction of municipal pools peaked during the 1920s as Americans had more time for leisure and pool equipment and sanitation measures improved. It is unknown who designed the Forest River Park Bathhouse, however it is architecturally similar to the bathhouse that once stood at Smith Pool at Cat Cove near Winter Island, designed by Ambrose Walker. A formalized concrete pool replaced the tidal pool at Forest River Park, likely in the 1960s. The pool and bathhouse were renovated in 1971-72 (see Figures 18-20). The bathhouse provided restrooms, changing rooms, and concession stands for patrons. It also housed a caretaker's room, a first aid room, a lifeguard station and information stand. The last major upgrade to the pool occurred in 1999 when it was converted from salt water to fresh water.

Various other structures and park elements were added through the years. A garage was constructed east of the Pickering House by 1938. It today functions as a restroom with storage. A concrete slide and two swing sets were installed by 1955. Two tennis courts at the southernmost part of the park next to the pool was added in the early or mid-1970s. By 1995, a playground had been established towards the center of Forest River Park.

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Pioneer Village

Situated in the northernmost section of Forest River Park is Pioneer Village. Created in 1930 for the Massachusetts tercentenary, Pioneer Village has the distinction of being America's first living history museum. The three-acre village contains a variety of structures intended to give visitors a glimpse into the everyday life of the colonists. It originally features twelve buildings in a designed landscaped and included a reproduction of the *Arabella*, the flagship of John Winthrop's fleet, in the Salem Harbor. Pioneer Village was intended to be a temporary exhibit, yet it was never dismantled. The reproduction ship was severely damaged in a hurricane in 1954 and was subsequently burned.

Pioneer Village was conceived by George Francis Dow (1868-1936), a leading historian and antiquarian in New England. He founded the Topsfield Historical Society in 1894, was a member of various other organizations including the Massachusetts Historical Society and the New England Historic Genealogical Society. Dow served as an officer of the Essex Institute of Salem, and later was elected curator of the Society of the Preservation of New England Antiquities (now Historic New England). He spent the rest of his life serving as curator, museum director, and editor of the organization's magazine, *Old-Time New England*. Well-versed in the architecture of New England, Dow was tasked with the restoration of several eighteenth-century homes for both private owners and historical societies. In 1935, his book *Every Day Life in the Massachusetts Bay Colony* was published. In it were several illustrations from the recently created Pioneer Village (see Figures 14-17).

Other advisors to the construction, arrangement and furnishing of Pioneer Village in 1930 included Rose Briggs and Donald Macdonald-Miller. Briggs worked for Pilgrim Hall in Plymouth and was responsible for designing the costumes worn by the reenactors. Macdonald-Miller was an architect and early member of the Society of the Preservation of New England Antiquities. He provided the drawings for the Governor's Mansion at Pioneer Village.

Pioneer Village remained a popular tourist destination until the 1950s when it began to deteriorate due to deferred maintenance and vandalism. Three of the buildings were lost due to fire in the 1960s and 1970s and were replaced with similar structures. The date(s) of the losses of the wigwams and dugouts is not known. By the mid-1980s, about half of the original structures were no longer extant. The City of Salem Park Commission voted to demolish Pioneer Village in 1985. The village was saved by the Pioneer Village Associates who signed a contract with the Park Commission in 1986 agreeing to restore and manage Pioneer Village. Led by Peter LaChapelle, then chief of visitor services at the Salem Maritime National Historic Site, and Dr. K. David Goss, a career museum administration professional, the Pioneer Village Associates and their team of volunteers restored Pioneer Village. The deteriorated structures were rebuilt, and the gardens replanted. Pioneer Village reopened for the 1988 season, and a grant reopening was held in June 1990. For their roles in the restoration of Pioneer Village, Goss and LaChapelle won the American Society of Travel Writers prestigious Phoenix Award in 1991.

Despite being leased to the House of Seven Gables until 2003, Pioneer Village again suffered from deferred maintenance and vandalism, and was included in Historic Salem Inc.'s "Most Endangered Resources" list for 2003. Over the course of the next five years, Salem Preservation Inc. managed and restored Pioneer Village. Partnering with a wide range of volunteers and stakeholders, Salem Preservation Inc. made various building repairs and site improvements. In 2008, Gordon College's Institute for Public History signed a five-year lease to use both Pioneer Village and Old Town Hall to host "History Alive!," the school's interactive theatre program. Gordon College elected not to renew their lease in 2013, and the City of Salem again took over operations at Pioneer Village. Today, access to tours of Pioneer Village is limited to weekends during the months of June through September. Its remote location on the South River has left Pioneer Village subject to both flooding and vandalism. The City plans to address deferred maintenance at Pioneer Village following the completion of the drainage project that is currently underway.

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BIBLIOGRAPHY and/or REFERENCES

American Antiquarian Society. Obituary for George Francis Dow. 1936.

Ancestry.com. City Directories for the City of Salem, Massachusetts (1846-1907); United States Federal Census (1790-1900); Vital Records (Birth, Marriage & Death).

"Atlas of the City of Salem, Massachusetts." Philadelphia, PA: G. M. Hopkins & Co., 1874 and 1897.

"Atlas of the City of Salem, Massachusetts." Boston, MA: Walker Lithograph & Publishing Co., 1911.

Boehm, Bill. "Historians' Corner - A firestorm where the Guard began: Great Salem fire of 1914." *National Guard Bureau*, June 25, 2014.

City of Salem. *Annual Reports for the Year Ending December 31, 1913*. Salem, MA: Newcomb & Gauss, Printers, 1914.

City of Salem. *City Documents for 1912*. Salem, MA: Newcomb & Gauss, Printers, 1913.

City of Salem. *Historic Preservation Plan Update*. 2015.

City of Salem. Property Assessment Data for Fiscal Year 2018, parcel ID: 33-0743-201 and 33-0743-202.

Dow, George Francis. *Every Day Life in the Massachusetts Bay Colony*. Boston, MA: Society for the Preservation of New England Antiquities, 1935.

Hinsley, Curtis M. and David R. Wilcox, ed. *The Southwest in the American Imagination: The Writings of Sylvester Baxter, 1881-1889*. Tucson, AZ, the University of Arizona Press, 1996.

Historic Aerials. https://www.historicaerials.com.

Jones, Arthur B. *The Salem Fire*. Boston, MA: the Gorham Press, 1914.

Massachusetts Department of Conservation and Recreation. *Salem Reconnaissance Report.* 2005.

Massachusetts Historical Commission. Inventory of Historic Assets of the Commonwealth: Forest River Park, SAL.916 (1986, 1989); Pioneer Village, SAL.GM (1986); Col. Timothy Pickering House, SAL.2149 (1989).

Massachusetts Historical Commission. *Reconnaissance Survey Town Report: Salem.* 1985.

McAllister, Jim. "Pioneer Village, Salem 1630." http://www.salemweb.com/tales/pioneervillage.php.

National Park Service. "Metropolitan Park System of Greater Boston." https://www.nps.gov/nr/travel/massachusetts_conservation/metro_park_system_of_greater_boston.html.

Peabody Essex Museum. "Hemenway Family Papers, 1800-1954, undated," Finding Aid.

Perley, Sidney. *The History of Salem, Massachusetts: 1626-1637*. Vol. I. Salem, MA: Sidney Perley, 1924.

Robert Charles Engineering Associates. Plans for the swimming pool, Forest River Park, Salem, Massachusetts. February 1971.

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Schier, Stephen J. and Kenneth C. Turino. *Images of America: Salem, Massachusetts, Volume II*. Charleston, SC: Arcadia Publishing, 1998.

Southern Essex District Registry of Deeds: bk. 14, pg. 88 (1699); bk. 253, pg. 26-27 (1829); bk. 288, pg. 45 (1835); bk. 594, pg. 29-30 (1859); bk. 669, pgs. 84 and 125 (1864); bk. 1210, pg. 140 (1887); bk. 1903, pg. 75-77 (1907).

Tilford, Leland. Photographs taken after the Salem Fire of 1914, digitized by the Salem State University Archives and Special Collections. https://digitalcommons.salemstate.edu/fire_photos.

United States Congress. "Biographical Directory of the United States Congress, 1774 – Present." http://bioguide.congress.gov.

Weston & Sampson. *Forest River Park Pool Evaluation – draft.* June 2017.

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DATA SHEET

PHOTO NUMBER	MHC NUMBER	STRUCTURE/FEATURE NAME	CONSTRUCTION DATE	ARCHITECT/DESIGNER	STYLE
4-5, 7-8	SAL.2149	Col. Timothy Pickering House	Pre-1817	Unknown	Second Period
7-8		Forest River Park Garage	Pre-1938	Unknown	N/A
23-27, 29-30, 32-40		Forest River Park Bathhouse	C 1920	Unknown	Colonial Revival
25, 28-29, 31, 40		Forest River Park Pool	Pre-1971	Unknown; renovation:	N/A
28, 31		Tennis Court	C 1971	N/A	N/A
3		Baseball Diamond	1911; currently under reconstruction	N/A	N/A
2		Basketball Court	Pre-1955; currently under reconstruction	N/A	N/A
42		Playground	Pre-1995	Unknown	N/A
43		Swing Sets	C 1970	N/A	N/A
41		Concrete Slide	Pre-1955	Unknown	N/A
11-17	SAL.GM	Pioneer Village	1930; partial reconstruction 1960s-1980s	George Francis Dow and Donald Macdonald-Miller	First Period reproduction
4, 6, 9, 18-22, 40, 43-44		Circulation Systems	Pre-1874; post-1907	Unknown	N/A
1		Entrance Piers and Walls	Pre-1969	Unknown	N/A
18-19, 23		Waterfront Retaining Walls	Unknown	Unknown	N/A
30		Forest River Pool Restoration Monument	1999	Unknown	Boulder with plaque
22, 43		Park Benches (metal, wood)	Unknown	N/A	N/A
43		Picnic Tables (plastic, wood, metal)	Unknown	N/A	N/A

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ADDITIONAL PHOTOGRAPHS

Photograph 1. View of park entrance at the intersection of Clifton Avenue and Shore Avenue, looking northeast.

Photograph 2. View of northwest edge of the park, currently under construction, looking northeast.

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Photograph 3. View of the former baseball diamond, currently under construction, looking northeast.

Photograph 4. View of the park entrance at the end of Wes Avenue, looking east.

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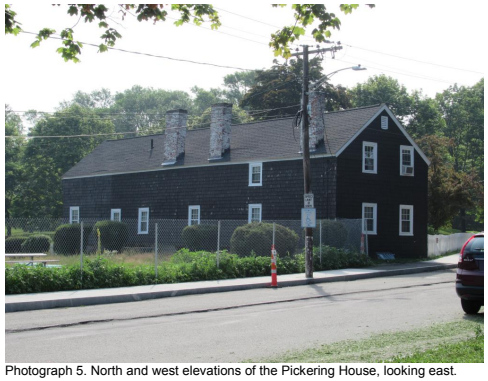

Photograph 5. North and west elevations of the Pickering House, looking east.

Photograph 6. View of the park paths along the Pickering House lawn, looking southeast.

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Photograph 7. South elevation of the Pickering House and west and south elevations of the garage, looking north.

Photograph 8. East and south elevations of the Pickering House and the garage, looking west.

Continuation sheet 13

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 9. View of the park along the centermost pathway running southwest to northeast, looking northeast.

Photograph 10. The ticket booth outside of Pioneer Village, looking north.

Continuation sheet 14

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 11. The pond south of Pioneer Village, looking west.

Photograph 12. The entrance to Pioneer Village, looking northwest.

Continuation sheet 15

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 13. The blacksmith shop and firepit at Pioneer Village, looking southeast.

Photograph 14. The Governor's Mansion and garden at Pioneer Village, looking northwest.

Continuation sheet 16

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Photograph 15. Cottage and wigwam at Pioneer Village, looking northwest.

Photograph 16. Cottage at Pioneer Village, looking west.

Continuation sheet 17

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 17. View of Pioneer Village, looking east.

Photograph 18. View of path and shoreline at northeast corner of Forest River Park, looking north.

Continuation sheet 18

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 19. View of park shoreline along Salem Harbor, looking southeast.

Photograph 20. View of park path and parking area, looking west.

Continuation sheet 19

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 21. View of Forest River Park down pathway along Salem Harbor, looking southeast.

Photograph 22. View of Pickering's Point, looking southeast.

Continuation sheet 20

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 23. View of the beach between Pickering Point and the bathhouse, looking southwest.

Photograph 24. East elevation of the bathhouse, looking southwest.

Continuation sheet 21

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 25. East and south elevations of the bathhouse, looking northwest.

Photograph 26. View of the south and west elevations of the bathhouse, looking north.

Continuation sheet 22

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Photograph 27. Partial view of the west elevation of the bathhouse, looking southeast.

Photograph 28. View of the southern end of the pool along Salem Harbor, looking south.

Continuation sheet 23

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 29. View of the pool and bathhouse, looking northwest.

Photograph 30. North elevation of the bathhouse, looking southeast.

Continuation sheet 24

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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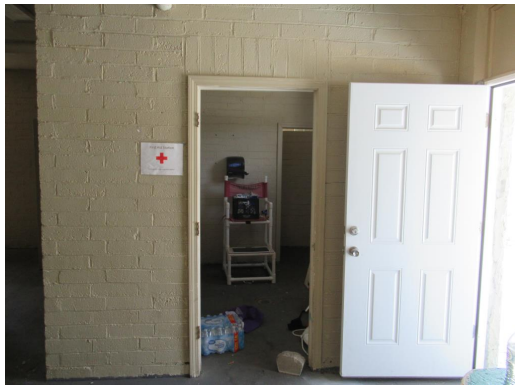
Photograph 31. View of the wading pool, looking south.



Photograph 32. First aid room adjacent to the door at the west elevation, looking southeast.

Continuation sheet 25

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 33. Interior space of the bathhouse along the west elevation, looking northwest.

Photograph 34. Entrance to the women's room, occupying the south end of the bathhouse, looking northeast.

Continuation sheet 26

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 35. View of the women's room, looking east.

Photograph 36. View of the changing stalls in the women's room, looking southeast.

Continuation sheet 27

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 37. Open central corridor between the women's and men's rooms, looking northeast.

Photograph 38. Entrance to the men's room, occupying the north end of the bathhouse, looking northeast.

Continuation sheet 28

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 39. View of the men's room, looking northeast.

Photograph 40. View of the pool and bathhouse from the paved pathway, looking southeast.

Continuation sheet 29

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 41. View of the concrete and stone slide north of the pool and bathhouse, looking north.

Photograph 42. View of the playground equipment west of the concrete slide, looking north.

Continuation sheet 30

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 43. Pair of swing sets located at the center of Forest River Park, looking northeast.

Photograph 44. View down the path along the southwest edge of the park, looking southeast.

Continuation sheet 31

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Photograph 45. View of the interior of Forest River Park, looking northeast.

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ADDITIONAL DOCUMENTATION

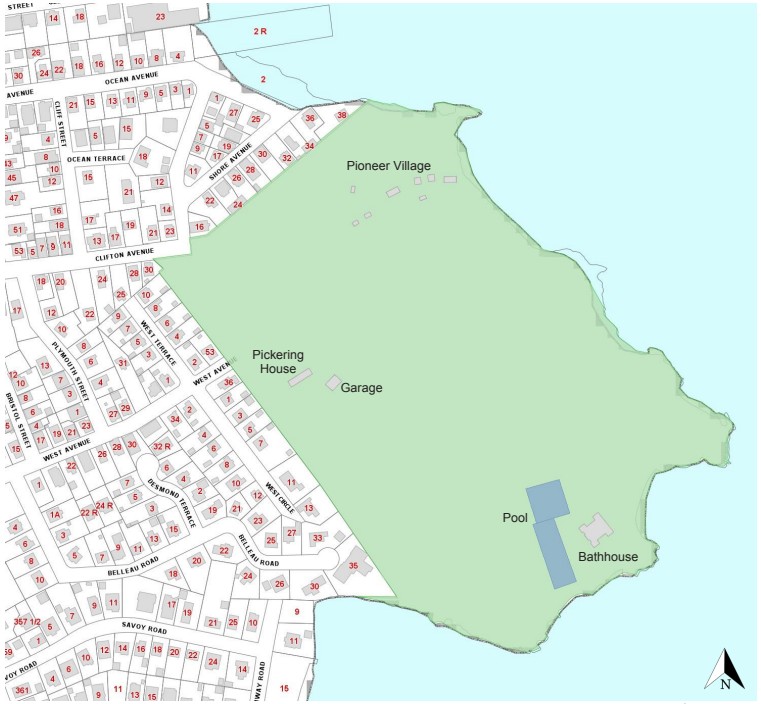

Figure 1. Locus Map showing Forest River Park (area colored green) with notable structures labeled. Building footprints are in their approximate locations and are not to scale.

Continuation sheet 33

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Figure 2. Aerial view showing Forest River Park prior to the start of the drainage improvement project. Source: Google maps (2018).

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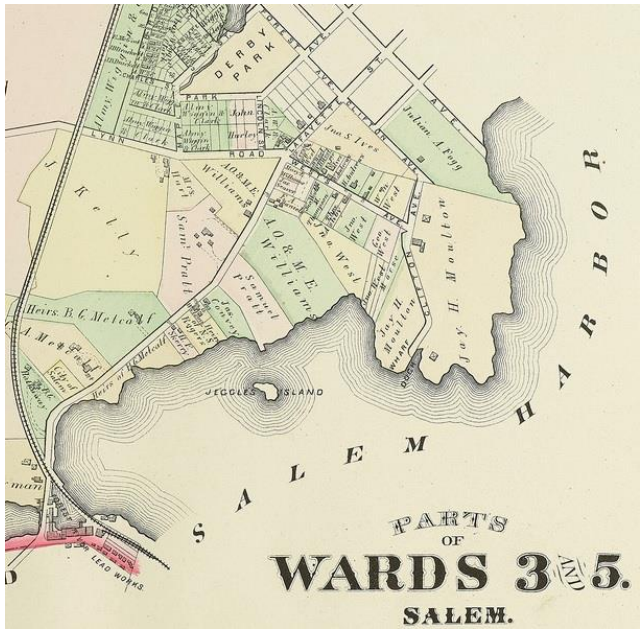

Figure 3. 1874 atlas of Salem showing the Forest Rive Park land under the ownership of Jay H. Moulton. Source: "Atlas of the City of Salem, Massachusetts" (Philadelphia, PA: G. M. Hopkins & Co., 1874), plate N.

Continuation sheet 35

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Figure 4. 1897 atlas of Salem showing the Hemenway (spelled Hemingway) property and its associated structures. Source: "Atlas of the City of Salem, Massachusetts" (Philadelphia, PA: G. M. Hopkins & Co., 1897), plate 12.

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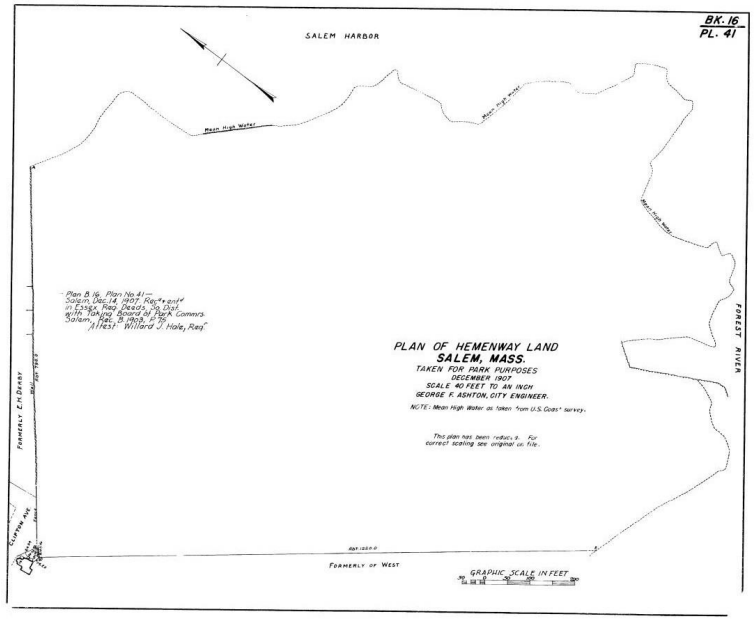

Figure 5. Plan associated with the City of Salem's taking of the Forest River Park Land. Source: Southern Essex District Registry of Deeds bk. 16, pg. 41 (1907).

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INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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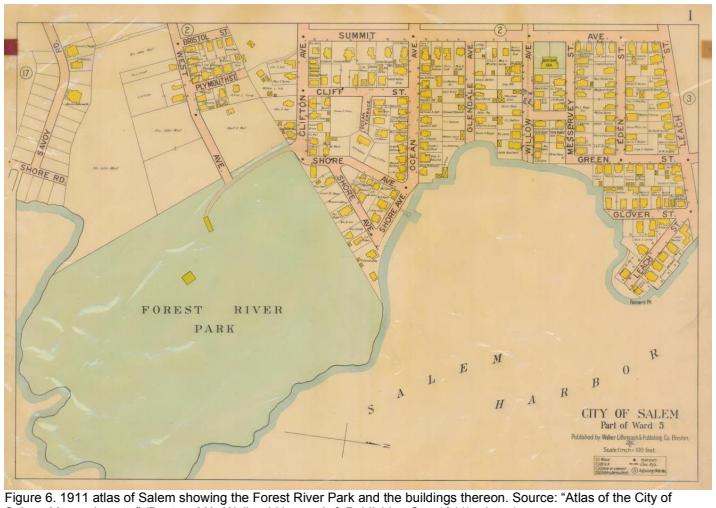

Figure 6. 1911 atlas of Salem showing the Forest River Park and the buildings thereon. Source: "Atlas of the City of Salem, Massachusetts" (Boston, MA: Walker Lithograph & Publishing Co., 1911), plate 1.

Continuation sheet 38

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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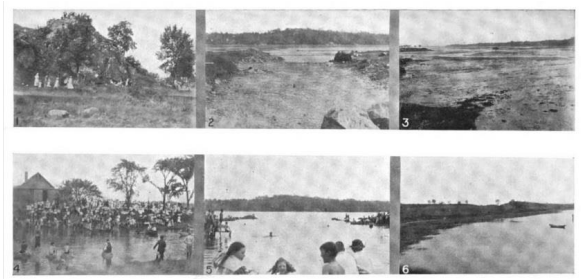
Figure 7. 1912 plan for the treatment of the tidal flats showing the Forest River Park. Source: City of Salem, *City Documents for 1912* (Salem, MA: Newcomb & Gauss, Printers, 1913), 33.



FOREST RIVER AT LOW AND HIGH TIDES, SHOWING NEED OF TIDE DAM TO KEEP MUD FLATS COVERED AND WATER AT UNIFORM LEVEL.

1. Forest River Park above Bath House. 2. Bathing Pool, usable half the time. 3. Mud Flats at Low Tide. 4. When the Tide is In. 5. Same as No. 2. with a water difference. 6. Forest River above Lead Mills at High Tide.

Cuts 1, 2, 4 and 5, courtesy of Mr. Christian Lantz.

Figure 8. Images of the coastline at Forest River Park from 1912. Source: City of Salem, *City Documents for 1912* (Salem, MA: Newcomb & Gauss, Printers, 1913), 57.

Continuation sheet 39

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Figure 9. Images of the tent city at Forest River Park, erected following the Great Salem Fire of 1914. Source: Leland Tilford, photographer, images digitized by the Salem State University Archives and Special Collections.

Continuation sheet 40

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Figure 10. Undated postcard of the old bathhouse at Forest River Park, likely ca. 1920. Source: City of Salem.

Figure 11. Undated photograph of the bathhouse at Forest River Park, likely dating to the late 1920s. Source: City of Salem.

Continuation sheet 41

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Figure 12. Undated photograph of the bathhouse at Forest River Park, likely dating to the late 1920s. Source: Stephen J. Schier and Kenneth C. Turino, *Images of America: Salem, Massachusetts, Volume II* (Charleston, SC: Arcadia Publishing, 1998), pg. 39.

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INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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Figure 13. 1924 image of visitors at Forest River Park. Source: Stephen J. Schier and Kenneth C. Turino, *Images of America: Salem, Massachusetts, Volume II* (Charleston, SC: Arcadia Publishing, 1998), pg. 39.

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Figure 14. "The Governor's 'Fayre House,' 1630 Colonial Village, Salem." Source: George Francis Dow, *Every Day Life in the Massachusetts Bay Colony* (Boston, MA: Society for the Preservation of New England Antiquities, 1935), illustration plate 1.

Figure 15. "Colonial Village of 1630, at Salem, Massachusetts." Source: George Francis Dow, *Every Day Life in the Massachusetts Bay Colony* (Boston, MA: Society for the Preservation of New England Antiquities, 1935), illustration plate 6.

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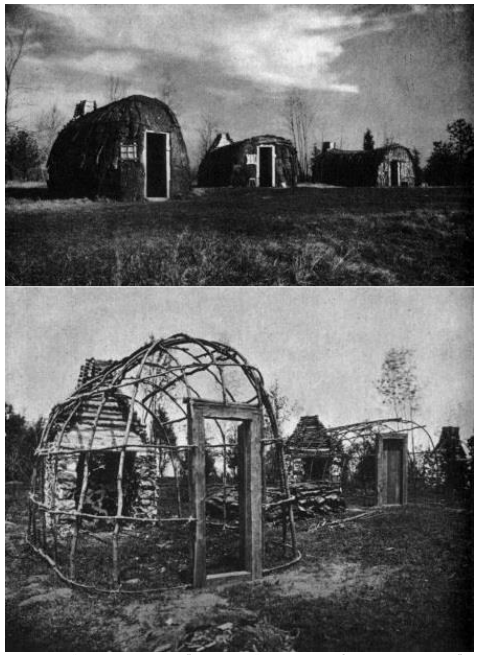

Figure 16. "English Wigwams" (top) and "Framework of English Wigwams" (bottom). Source: George Francis Dow, *Every Day Life in the Massachusetts Bay Colony* (Boston, MA: Society for the Preservation of New England Antiquities, 1935), illustration plate 7.

Continuation sheet 45

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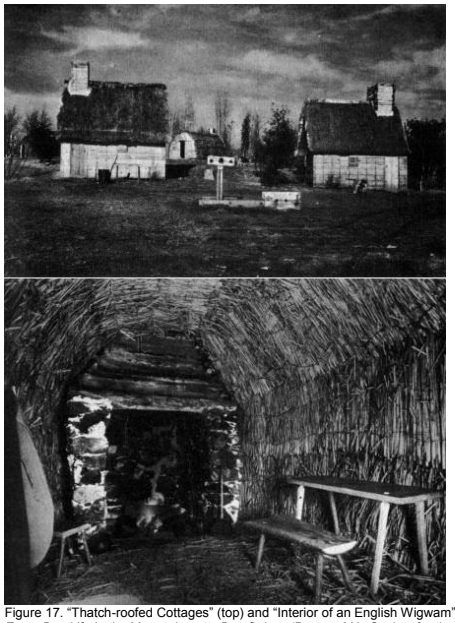

Figure 17. "Thatch-roofed Cottages" (top) and "Interior of an English Wigwam" (bottom). Source: George Francis Dow, *Every Day Life in the Massachusetts Bay Colony* (Boston, MA: Society for the Preservation of New England Antiquities, 1935), illustration plate 8.

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Figure 18. Aerial view of the Forest River Park pool and bathhouse from 1971, just prior to the renovation. Source: Historic Aerials.

Figure 19. Aerial view of the Forest River Park pool and bathhouse from 1978, after the renovation. Source: Historic Aerials.

Continuation sheet 47

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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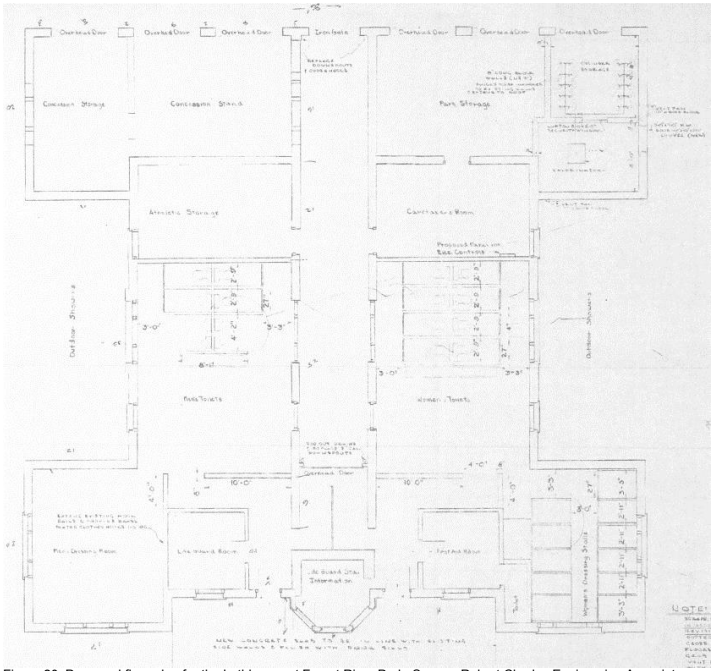

Figure 20. Proposed floor plan for the bathhouse at Forest River Park. Source: Robert Charles Engineering Associates. Plans for the swimming pool, Forest River Park (February 1971).

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INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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National Register of Historic Places Criteria Statement Form

Check all that apply:

☐ Individually eligible ☐ Eligible **only** in a historic district

☐ Contributing to a potential historic district ☒ Potential historic district

Criteria: ☒ **A** ☐ **B** ☒ **C** ☐ **D**

Criteria Considerations: ☐ **A** ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐ **F** ☐ **G**

Statement of Significance by Tonya Loveday, Epsilon Associates
The criteria that are checked in the above sections must be justified here.

Forest River Park was established as a public park after the City of Salem took the land by eminent domain in 1907. It is an early example of a suburban municipal park that reflects the influence of the progressive late nineteenth century park movement that took off following the Park Act of 1892 and the establishment of the Metropolitan Park Commission in 1893. The park was largely open pastures on rolling hills with beachfront access when it was acquired by the City of Salem. Up to that point, the land remained remarkably undeveloped from its time as a common field used by Salem's first settlers. The land was owned by several significant historical figures including Colonel Timothy Pickering Jr., a prominent Revolutionary War-era politician, David Pingree, a prominent Salem merchant, and Mary Hemenway, a wealthy philanthropist and early preservationist. Forest River Park was originally open in character and void of the many mature trees that characterize the landscape today. It served the city in a different capacity following the Great Salem Fire of 1914. Forest River Park became home of Salem's largest camp or tent city, providing a place for thousands of displaced civilians to reside and receive aid while the city rebuilt itself after the devastating event. Since then, the park has remained a popular destination for outdoor recreation. It provides a natural setting for picnicking, recreation, play, and swimming at its beaches and pool. For these reasons, the park satisfies Criterion A at the local level.

Forest River Park also satisfies Criterion C at the local level for the buildings on the property which retain historic and architectural integrity. The oldest resource within the park is the **Col. Timothy Pickering House** (SAL.2149). Built by 1817 and likely dating to the Second Period (1725-1780), this vernacular dwelling appears to have been enlarged in the late nineteenth century. The building is representative of New England colonial architecture and is associated with one of the property's earliest and most prominent owners, Colonel Timothy Pickering, Jr. Since its construction, the dwelling has seemingly been used as a cottage or second residence for its owners. The building retains its integrity and continues to function as a residence for the caretaker of Forest River Park. Other structures within Forest River Park that retain sufficient integrity and would contribute to a potential district include the purpose-built **Forest River Park Bathhouse**, dating to the late 1920s, and the **Forest River Park Garage**, constructed by 1938. These two buildings were commissioned by the City of Salem to enhance and support the park's programming and operation. Because the **Forest River Park Pool** has been reworked in several iterations, most recently in 1999, it does not retain integrity and is ineligible for inclusion in a potential district. In 1989, the Massachusetts Historical Commission found **Pioneer Village** (SAL.GM) ineligible for listing on the National Register of Historic Places due to the loss of as many as half of its original structures. Pioneer Village does not currently retain sufficient integrity and remains ineligible for listing.

Continuation sheet 49

INVENTORY FORM A CONTINUATION SHEET SALEM FOREST RIVER PARK

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It is possible that Forest River Park may satisfy Criterion D for its potential to yield important information or archaeological artifacts associated with the Naumkeags, a group of Native Americans who were known to have lived in the area prior to English colonization. Various accounts suggest that the Naumkeags used or occupied the Forest River Park property, conveniently located on the Salem Harbor. Additional study would be necessary to justify significance under Criterion D.

Continuation sheet 50

MEMORANDUM

Date: September 7, 2016

To: Tom Beddall, bh+a & Tom Scarlata, bh+a

From: Epsilon Associates, Inc.

Subject: Forest River Pool & Bathhouse, Conceptual Design/Preliminary Permitting Assessment

The following memorandum is a preliminary assessment of the environmental review processes and associated approvals anticipated for the Forest River Pool and Bathhouse replacement project as depicted on conceptual design drawings provided to Epsilon Associates by Bargmann Hendrie + Archetype (bh+a).

This memorandum identifies the following environmental review processes: 1) Massachusetts Environmental Policy Act review; 2) Massachusetts Department of Environmental Protection Chapter 91 Waterways Regulation Program licensing; 3) review by the Salem Conservation Commission under the Massachusetts Wetlands Protection Act; 4) Massachusetts Historical Commission review; 5) approval by the US Army Corps of Engineers; and, 6) Federal Consistency Review by the Massachusetts Office of Coastal Zone Management. Additional detail for each of these programs is provided below.

The memorandum also provides an estimated timeframe to complete review under each review process, not including the time necessary to prepare application materials and other documents required to initiate or complete each review process.

Epsilon typically requires three to four weeks to prepare and produce application materials for each the programs listed below. Any material changes to the project after application materials have been substantially developed or submitted will alter the review timeframe. Epsilon anticipates that the environmental review process will require 15 to 18 months to complete, including the time required to develop and produce the required documentation.

1.0 Massachusetts Environmental Policy Act Requirements

The Massachusetts Environmental Policy Act (MEPA) is administered by the Massachusetts Executive Office of Energy and Environmental Affairs (EEA). It is the primary means by which the environmental impacts of development activities are studied and reviewed prior to state agency permitting and/or approval. The MEPA review process is initiated with the filing of an Environmental Notification Form (ENF), and may include the subsequent filing of a Draft Environmental Impact Report (Draft EIR) and a Final Environmental Impact Report (Final EIR).

A project is subject to MEPA review when the following two conditions are met:
(1) the project is subject to MEPA jurisdiction; and,
(2) the project exceeds a MEPA review threshold.

Based on review of the conceptual design, MEPA jurisdiction is triggered by the need for a Chapter 91 license (described below) and MEPA review thresholds are met because the conceptual design includes new fill or structure within a velocity zone, will require alteration of coastal bank and will include the demolition of all or any exterior part of a structure included in the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

Because MEPA jurisdiction is related to a Chapter 91 license, MEPA will have full-scope jurisdiction (i.e., MEPA jurisdiction will not be limited to only the exceeded review threshold[s]).

Anticipated Timeframe: ~1 month (ENF)

2.0 Massachusetts Historical Commission Review

Projects that require licenses, permits, and/or approvals from any state agency, or utilizes state funding are subject to review by the MHC in accordance with M.G.L. Chapter 9, sections 26-27C, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71.00). Additionally, projects utilizing federal funding, or that require federal licenses, permits or approvals such as the above-referenced ACOE permits, are subject to MHC review under Section 106 of the National Historic Preservation Act.

In July 2017, the City of Salem submitted a Project Notification Form (PNF) to the MHC to initiate review of the Project. In a July 28, 2017 letter the MHC responded seeking the comments of the Salem Historical Commission and Historic Salem, Inc. We further understand that the Salem Historical Commission has requested additional information to about the Project site in the form of an updated MHC Area Form (Form A).

In that the Project will be subject to MEPA review, the MEPA ENF will serve to provide MHC with updated information about the Project. Upon receipt of the ENF, MHC will assess potential Project related impacts to historic resources on the Project site and within the vicinity.

Anticipated Timeframe: ~2-3 months (initiated with the MEPA filing)

3.0 Massachusetts Wetlands Protection Act

The Massachusetts Wetlands Protection Act (MGL c.131 § 40) (WPA) is a state statute administered by local Conservation Commissions. The WPA, and its implementing regulations at 310 CMR 10.00, require the preparation of a Notice of Intent (NOI) for work within a wetland resource area and/or work within 100 feet of certain wetland resource areas. The performance standards for work or activities occurring within each wetland resource area are identified in the WPA regulations.

The conceptual design includes activities within and/or adjacent to the resource areas including, but not limited to, Coastal Bank, Coastal Beach, Land Subject to Tidal Action and Land Subject to Coastal Storm Flowage; and the 100-foot Buffer Zone to Coastal Bank. As such, the proposed work will require the filing of a NOI with the Salem Conservation Commission.

Anticipated Timeframe: ~6 weeks (single Commission hearing).

4.0 Chapter 91

The Massachusetts Public Waterfront Act, M.G.L c. 91 (Chapter 91), provides for the protection of the public's right of waterway navigation and access to the Massachusetts shoreline. Chapter 91 is implemented through regulations (310 CMR 9.00 et seq.) administered by the Massachusetts Department of Environmental Protection (MassDEP) Waterways Regulation Program. Along the Massachusetts coastline, Chapter 91 jurisdiction includes both existing flowed tidelands and former tidelands that are now filled. Development activities within Chapter 91 jurisdiction generally require a license, permit, or other approval from MassDEP.

Areas of the Forest River Park pool are located within filled tidelands. As such, the work contemplated in the conceptual design is within Chapter 91 jurisdiction, and the proposed modifications to the pool and surrounding jurisdictional areas will require a Chapter 91 license. It is Epsilon's understanding the project will be considered a Water Dependent Use as defined by the Chapter 91 regulations.

It should be noted that MassDEP requires both the issuance of the final MEPA Certificate and the submission of a NOI to the Conservation Commission prior to commencement of its administrative review of a Chapter 91 license application. MassDEP also requires the Conservation Commission's issuance of a final Order of Conditions on the NOI as a prerequisite for obtaining a Chapter 91 license for the Project.

Anticipated Timeframe: ~10 months (Water Dependent Use).

5.0 U.S. Army Corps of Engineers

The New England District of the US Army Corps of Engineers (Corps) reviews and approves activities subject to Corps jurisdiction in waters of the US, including navigable waters, within the boundaries of, and off the coast of, Massachusetts. Jurisdictional waters extend to mean high water, which appears to include portions of the existing pool bulkhead to be removed under the conceptual design.

The removal of the bulkhead and associated backfill may be considered an "enhancement of tidal waters" under the Corps' Massachusetts General Permits regulatory program and will therefore require the submission of a Pre-Construction Notification (PCN). It should be noted that the Corps requires that the Chapter 91 application is included with the PCN.

Anticipated Timeframe: ~2 months (PCN)

6.0 Massachusetts Office of Coastal Zone Management

The project site is located within the Massachusetts Coastal Zone. Because the work identified in the conceptual design may require Corps approval, a federal action, the Massachusetts Office of Coastal Zone Management (CZM) may review the project to ensure the Corps' approval is consistent with the Massachusetts coastal program policies as part of its Federal Consistency Review process. The aforementioned Corps approval is a general permit; therefore, it is presumed that projects qualifying under the general permit authorizations are consistent with Massachusetts coastal program policies. Nonetheless, the Corps will typically coordinate review of PCNs with CZM. The Corps approval, however, is not valid until CZM concludes its review and determines the project is consistent with coastal program policies.

Anticipated Timeframe: Concurrent with US Army Corps of Engineers review.

The Commonwealth of Massachusetts
House of Representatives
State House, Boston 02133-1054

PAUL F. TUCKER
STATE REPRESENTATIVE
SERVING THE 7TH ESSEX DISTRICT
CITY OF SALEM

STATE HOUSE, ROOM 136
OFFICE: (617) 722-2396
FAX: (617) 722-2819
Paul.Tucker@MAhouse.gov

July 18, 2018

Matthew A. Beaton, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Secretary Beaton:

The City of Salem is applying for an Outdoor Recreation Legacy Partnership (ORLP) Grant for the Forest River Pool, Bathhouse and Associated facilities and I wish to convey my strong support for the project.

The Forest River Pool and Bathhouse are a historic treasure that has provided the Salem community recreation for over 100 years. The existing pool itself is over 25 years old and is need of major renovations. In addition, the pool is located in the coastal flood zone, and was inundated by recent storms. Therefore, the City decided to close the pool permanently in 2018. The City has conducted a feasibility study and engaged a diverse stakeholder group. The City has developed a plan to build a new modern pool, fully renovate the bathhouse, and rebuild supporting infrastructure. This is a unique opportunity with one project to provide several benefits that support the Commonwealth's and Salem's goals. The new facility will:

- Be universally designed to ensure access to people of all abilities and ages to learn swimming in a safe environment,
- Provide many low and moderate-income families an affordable place to swim,
- Be relocated out of the coastal flood zone, ensuring that the City's investments will be better protected from climate change impacts,
- Restore the historic bathhouse and use of the site,
- Restore tidal areas, providing wildlife and educational opportunities,
- Be zero net energy, furthering Salem's commitment to clean energy and sustainability,
- Improve shoreline and coastal access, and
- Incorporate elements such as a splash pad, food vendor access, and a community/class room that could be used during other seasons, thus providing more benefit to the community while also providing opportunities for revenue to support operations and maintenance.

The Commonwealth of Massachusetts
House of Representatives
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I strongly support Salem's application for ORLP funds because a new Forest River Pool will result in major benefits to the community and preserve and enhance a historic asset for future generations.

Thank you for your consideration. Please do not hesitate to contact me if you have any questions.

Sincerely,

Paul F. Tucker

Paul F. Tucker

north shore community development coalition

North Shore Community Development Coalition
96 Lafayette Street, Floor 2, Salem, MA 01970
ph: 978-745-8071 fax: 978-594-5965
www.northshorecdc.org
info@northshorecdc.org

July 17, 2018

Matthew A. Beaton, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Secretary Beaton:

On behalf of the North Shore Community Development Coalition (NSCDC), I am pleased to offer my support to the City of Salem's Outdoor Recreation Legacy Partnership (ORLP) Grant for the Forest River Pool, Bathhouse and Associated facilities.

NSCDC is the leading community development organization serving the North Shore, including Salem. NSCDC is able to bring our neighborhood development model into communities throughout our region. Focusing on low-income and distressed neighborhoods in need of development, NSCDC invests strategically in real estate, in community, and civic engagement and in quality, neighborhoods-based programming in order to bring opportunity to low-income residents and improve quality of life in Salem, Gloucester, Peabody and Beverly.

The Forest River Pool and Bathhouse are a historic treasure that has provided the Salem community recreation for over 100 years. The existing pool itself is over 25 years old and is need of major renovations. In addition, the pool is located in the coastal flood zone, and was inundated by recent storms. Therefore, the City decided to close the pool permanently in 2018. The City has conducted a feasibility study and engaged a diverse stakeholder group. The City has developed a plan to build a new modern pool, fully renovate the bathhouse, and rebuild supporting infrastructure. This is a unique opportunity with one project to provide several benefits that support the Commonwealth's and Salem's goals. The new facility will:

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- Be zero net energy, furthering Salem's commitment to clean energy and sustainability,
- Improve shoreline and coastal access, and

north shore community development coalition

North Shore Community Development Coalition
96 Lafayette Street, Floor 2, Salem, MA 01970
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- Incorporate elements such as a splash pad, food vendor access, and a community/class room that could be used during other seasons, thus providing more benefit to the community while also providing opportunities for revenue to support operations and maintenance.

I strongly support Salem's application for ORLP funds because a new Forest River Pool will result in major benefits to the community and preserve and enhance a historic asset for future generations.

Thank you for your consideration. Please do not hesitate to contact me if you have any questions at 978-825-4001.

Sincerely,

Mickey Northcutt
Chief Executive Officer

DAEDALUS

Forest River Park
New Swimming Pool and Bathhouse Options
Salem, MA

July 24, 2018

Conceptual Cost Estimate

Architect:
Bargmann Hendrie Archetype Inc
9 Channel Center Street, Suite 300
Boston, MA 02210
(617) 350 0450

Cost Consultant:
Daedalus Projects Incorporated
1 Faneuil Hall Market Place
South Market Bldg, Suite 4195
Boston, MA 02109-6119
(617) 451 2717

INTRODUCTION

Project Description:

Construction of new swimming pool and bathhouse facilities in the Forest River Park, including improvements to surrounding landscape

Option 1: Ball Field Location

New combination 25-yard lap pool and recreational pool, new 4,000 sf bathhouse, new splash pad, demolition of existing bathhouse and pool at Option 3 location

Option 2: Park Land Location

New combination 25-yard lap pool and recreational pool, new kids' pool, new 4,000 sf bathhouse, new splash pad, rock ledge removal, renovation/demolition of existing bathhouse, demolition of existing pool

Option 3: Existing Pool Location

New combination 25-yard lap pool and recreational pool, new kids' pool, new splash pad, gut renovate existing bathhouse, demolition of existing pool, removal of tennis courts, rework parking lot

New construction of bathhouse facilities

concrete foundations, basement walls and slab on grade, steel framed structure

CMU façade and asphalt shingle roofing

Program includes public restrooms, showers, changing rooms, community room, concession and offices

Project Particulars:

Documents received from Bargmann Hendrie + Archetype, Inc.

Site Plan Option Location Drawings dated June 19, 2018

Site aerial photograph

Existing Conditions Assessment

Existing Bath House Plan and Sections Drawing 2 dated February 26, 1971 prepared by Robert Charles Associates Inc.

Existing Bath House & Revisions Drawing 5 dated February 26, 1971 prepared by Robert Charles Associates Inc.

Detailed quantity takeoff from these documents where possible

Discussion, review and reconciliation with Bargmann Hendrie + Archetype, Inc and their Design Team

Daedalus Projects, Inc. experience with similar projects of this nature

Project Assumptions:

The project bid will be competitively bid amongst Open-Shop General Contractors

It has been assumed that no less than 4 bids will be received. Bids can be expected to be significantly higher if fewer bids are received

The project will be built by a General Contractor under a single prime contract

Operation during normal business hours

The Total Estimated Construction Cost reflects the fair construction value of this project in a competitive bidding market

Unit rates are based on current dollars and include an escalation allowance to cover the construction duration

Subcontractor's markups have been included in each unit rate. Markups cover the cost of field overhead, home office, overhead and subcontractor's profit

Forest River Park
New Swimming Pool and Bathhouse Options
Salem, MA

Project Assumptions: cont'd

Design and Pricing Contingency markup is an allowance for unforeseen design issues, design detail development specification expansion during the design period.

General Conditions and Project Requirements includes items from Div. 01 General Requirements, staffing, general facilities to support project, scaffolding, staging and access, temporary protection, cleaning, and other items not attributable to the direct trade cost

Profit markup is calculated on a percentage basis of direct construction costs

Start of construction assumed Spring 2019

Escalation at a rate of 3½% per year has been calculated from now to the start of construction, and carried in the Main Summary

Construction Cost Estimate Exclusions:

Environmental permitting

Architectural/Engineering; Design fees and other professional fees, testing, printing, surveying, site investigations

Unforeseen Conditions Contingency

Owner's site representation and project administration

Owner's administration; legal fees, advertising, permitting, Owner's insurance, administration, interest expense

Third Party testing and commissioning

Project costs; utility company back charges prior to construction, construction of swing space and temporary facilities, program related phasing, relocation

Food Service Equipment, Furnishings, Equipment, Specialties beyond what is noted in design package. Note that these costs should be carried in Owner's Budget

Work beyond the boundary of the site

Police details and street/sidewalk permits

Forest River Park

MAIN SUMMARY

New Swimming Pool and Bathhouse Options

		OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
		TOTAL	COST/GSF	TOTAL	COST/GSF	TOTAL	COST/GSF
Direct Trade Cost Details							
Bathhouse		$1,536,374	$384	$1,562,628	$391	$1,401,445	$350
Swimming Pool		$1,650,250	$330	$2,364,000	$288	$2,416,400	$295
Sitework		$1,175,291	$10	$1,315,172	$12	$1,498,831	$13
Direct Trade Cost Subtotal		**$4,361,915**	**$1,090**	**$5,241,800**	**$1,310**	**$5,316,677**	**$1,329**
Design and Pricing Contingency	10.00%	$437,000	$109	$524,000	$131	$532,000	$133
Direct Trade Cost Total		**$4,798,915**	**$1,200**	**$5,765,800**	**$1,441**	**$5,848,677**	**$1,462**
Burdens and Markups							
General Conditions and Project Requirements	9.00%	$432,000	$108	$519,000	$130	$527,000	$132
Insurances, Bonds	2.30%	$121,000	$30	$145,000	$36	$147,000	$37
Fee	3.00%	$144,000	$36	$173,000	$43	$176,000	$44
Estimated Construction Cost Total		**$5,496,000**	**$1,374**	**$6,602,800**	**$1,651**	**$6,698,700**	**$1,675**
Escalation from now to Start of Construction	2.80%	$154,000	$39	$185,000	$46	$188,000	$47
Escalation to Mid-point of Construction		Unit Rates		Unit Rates		Unit Rates	
Estimated Construction Cost at Start of Construction		**$5,650,000**	**$1,413**	**$6,787,800**	**$1,697**	**$6,886,700**	**$1,722**

Forest River Park

DIRECT TRADE COST SUMMARY

New Swimming Pool and Bathhouse Options

	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
	TOTAL	COST/GSF	TOTAL	COST/GSF	TOTAL	COST/GSF
Bathhouse						
02-EXISTING CONDITIONS					$197,150	$49.29
03-CONCRETE	$142,975	$35.74	$147,900	$36.98	$20,000	$5.00
04-MASONRY	$256,775	$64.19	$275,040	$68.76	$224,625	$56.16
05-METALS	$86,020	$21.51	$86,860	$21.72	$12,000	$3.00
06-WOOD AND PLASTICS	$18,200	$4.55	$18,500	$4.63	$12,700	$3.18
07-THERMAL AND MOISTURE PROTECTION	$186,575	$46.64	$186,950	$46.74	$116,000	$29.00
08-DOORS AND WINDOWS	$30,425	$7.61	$30,425	$7.61	$42,925	$10.73
09-FINISHES	$139,255	$34.81	$145,294	$36.32	$128,237	$32.06
10-SPECIALTIES	$116,950	$29.24	$112,450	$28.11	$78,600	$19.65
21 00 00 Fire Protection	$49,010	$12.25	$49,010	$12.25	$51,453	$12.86
22 00 00 Plumbing	$315,643	$78.91	$315,643	$78.91	$337,000	$84.25
23 00 00 HVAC	$73,900	$18.48	$73,900	$18.48	$77,555	$19.39
26 00 00 Electrical	$97,200	$24.30	$97,200	$24.30	$103,200	$25.80
31-EARTHWORK	$23,447	$5.86	$23,457	$5.86		
Bathhouse Total	**$1,536,374**	**$384.09**	**$1,562,628**	**$390.66**	**$1,401,445**	**$350.36**
Swimming Pool						
13-SPECIAL CONSTRUCTION	$1,650,250	$412.56	$2,364,000	$591.00	$2,416,400	$604.10
Swimming Pool Total	**$1,650,250**	**$412.56**	**$2,364,000**	**$591.00**	**$2,416,400**	**$604.10**
Site Work						
02-EXISTING CONDITIONS	$371,140	$3.31	$373,825	$3.34	$368,130	$3.29
31-EARTHWORK	$122,400	$1.09	$103,350	$0.92	$210,950	$1.88
32-EXTERIOR IMPROVEMENTS	$435,501	$3.89	$499,996	$4.46	$555,251	$4.96
33-UTILITIES	$221,250	$1.98	$313,000	$2.79	$339,500	$3.03
33 70 00 Electrical Utilities	$25,000	$0.22	$25,000	$0.22	$25,000	$0.22
Site Work Total	**$1,175,291**	**$293.82**	**$1,315,172**	**$328.79**	**$1,498,831**	**$374.71**
Direct Trade Cost Subtotal	**$4,361,915**	**$1,090.48**	**$5,241,800**	**$1,310.45**	**$5,316,677**	**$1,329.17**

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
9	**02-EXISTING CONDITIONS**								
10									
11	Demo overhead door	OPEN	$500.00					7	$3,500
12	iron gate	OPEN	$275.00					1	$275
13	single door	LEAF	$150.00					9	$1,350
14	Demo toilet compartment	STALL	$175.00					12	$2,100
15	dressing stall	STALL	$125.00					11	$1,375
16	plumbing fixture	FIX	$250.00					19	$4,750
17	Demo partition, borrowed lite	LF	$40.00					4,345	$173,800
18	Miscellaneous gut demolition	GSF	$2.50					4,000	$10,000
19	**02-Existing Conditions Total**				**$0**		**$0**		**$197,150**
20									
21									
22	**03-CONCRETE**								
23									
24	Strip footing, 4' high foundation wall	LF	$275.00	295	$81,125	310	$85,250		
25	Spread footing, pier	EA	$1,400.00	10	$14,000	10	$14,000		
26	Slab on grade, vapor barrier, rigid insulation	SF	$11.15	4,000	$44,600	4,000	$44,600		
27	filtration pad	SF	$10.00	325	$3,250	405	$4,050		
28	Trench slab on grade, demo, new infills, patch	GSF	$5.00					4,000	$20,000
29	**03-Concrete Total**				**$142,975**		**$147,900**		**$20,000**
30									
31									
32	**04-MASONRY**								
33									
34	8" CMU exterior façade walls	SF	$30.00	4,130	$123,900	4,340	$130,200		
35	Modify existing façade openings, cut new, infill former opening	AL	$25.00					4,930	$123,250
36	8" CMU interior partitions	SF	$24.50	4,450	$109,025	4,920	$120,540	3,100	$75,950
37	plumbing chase	SF	$45.00	530	$23,850	540	$24,300	565	$25,425
38	**04-Masonry Total**				**$256,775**		**$275,040**		**$224,625**
39									
40									
41									

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
42	**05-METALS**								
43									
44	Structural steel columns and roof framing; assume 5#/sf	TNS	$4,250.00	**10**	$42,500	**10**	$42,500		
45	1½" 20ga. Type B galv. metal roof decking	SF	$3.75	**4,000**	$15,000	**4,000**	$15,000		
46	Miscellaneous metals for exterior façade	SF	$4.00	**4,130**	$16,520	**4,340**	$17,360	**0**	$0
47	Miscellaneous interior metals	GSF	$3.00	**4,000**	$12,000	**4,000**	$12,000	**4,000**	$12,000
48	**05-Metals Total**				**$86,020**		**$86,860**		**$12,000**
49									
50									
51	**06-WOOD AND PLASTICS**								
52									
53	Roof blocking	LF	$20.00	**295**	$5,900	**310**	$6,200		
54	Rough carpentry/blocking; interior partitions and doors	GSF	$1.00	**4,000**	$4,000	**4,000**	$4,000	**4,000**	$4,000
55	Install door, frame, hardware	OPEN	$200.00	**9**	$1,800	**9**	$1,800	**11**	$2,200
56	Solid-surface counter; Concession	LF	$250.00	**6**	$1,500	**6**	$1,500	**6**	$1,500
57	Sink counter; Restrooms	LF	$200.00	**25**	$5,000	**25**	$5,000	**25**	$5,000
58	**06-Wood And Plastics Total**				**$18,200**		**$18,500**		**$12,700**
59									
60									
61	**07-THERMAL AND MOISTURE PROTECTION**								
62									
63	Damproofing at foundation wall, rigid insulation	SF	$6.25	**1,180**	$7,375	**1,240**	$7,750		
64	Flat membrane roofing	SF	$40.80	**4,000**	$163,200	**4,000**	$163,200		
65	Remove roofing, install new	SF	$25.00					**4,000**	$100,000
66	Caulking and sealants	GSF	$3.50	**4,000**	$14,000	**4,000**	$14,000	**4,000**	$14,000
67	Through floor penetration firestopping & fire resistive joints	GSF	$0.50	**4,000**	$2,000	**4,000**	$2,000	**4,000**	$2,000
68	**07-Thermal And Moisture Protection Total**				**$186,575**		**$186,950**		**$116,000**
69									
70									
71									
72									
73									
74									

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
75	**08-DOORS AND WINDOWS**								
76									
77	Single exterior fiberglass door, frame, hardware	OPEN	$1,600.00	**6**	$9,600	**6**	$9,600		
78	Double exterior fiberglass door, frame, hardware	OPEN	$3,200.00					**3**	$9,600
79	Single interior fiberglass door, HMF frame, hardware	LEAF	$1,475.00	**3**	$4,425	**3**	$4,425	**5**	$7,375
80	Double interior fiberglass door	PR	$2,950.00					**3**	$8,850
81	Exterior coiling counter door, counter; Concession	EA	$7,500.00	**1**	$7,500	**1**	$7,500	**1**	$7,500
82	Punch window	SF	$75.00	**100**	$7,500	**100**	$7,500	**100**	$7,500
83	Access doors; plumbing duct, custodial	EA	$350.00	**4**	$1,400	**4**	$1,400	**6**	$2,100
84	**08-Doors And Windows Total**				**$30,425**		**$30,425**		**$42,925**
85									
86									
87	**09-FINISHES**								
88									
89	Seamless poured epoxy flooring	SF	$12.00	**4,000**	$48,000	**4,000**	$48,000	**4,000**	$48,000
90	wainscot x5'high	SF	$12.00	**5,830**	$69,963	**6,305**	$75,655	**5,095**	$61,137
91	Sealed concrete floor; filtration room	SF	$2.00	**325**	$650		$0		
92	CMU walls; epoxy paint	SF	$1.75	**6,995**	$12,242	**7,565**	$13,240	**6,115**	$10,701
93	Underside of structure; epoxy paint	SF	$2.10	**4,000**	$8,400	**4,000**	$8,400	**4,000**	$8,400
94	**09-Finishes Total**				**$139,255**		**$145,294**		**$128,237**
95									
96									
97	**10-SPECIALTIES**								
98									
99	Exterior signage	LS	$1,200.00	**1**	$1,200	**1**	$1,200	**1**	$1,200
100	Interior signage	GSF	$0.25	**4,000**	$1,000	**4,000**	$1,000	**4,000**	$1,000
101	Toilet accessories; single user	RMS	$650.00	**2**	$1,300	**2**	$1,300	**2**	$1,300
102	Multi-user toilet	FIX	$150.00	**7**	$1,050	**7**	$1,050	**6**	$900
103	Multi-user toilet, ADA compliant	FIX	$325.00	**4**	$1,300	**4**	$1,300	**4**	$1,300
104	Multi-user shower	FIX	$75.00	**10**	$750	**10**	$750	**10**	$750
105	Multi-user shower, ADA compliant	FIX	$325.00	**2**	$650	**2**	$650	**2**	$650
106	Multi-user sink, mirror	FIX	$225.00	**8**	$1,800	**8**	$1,800	**8**	$1,800
107	Multi-user paper towel/trash receptacle	FIX	$400.00	**2**	$800	**2**	$800	**2**	$800

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
108	Phenolic-core toilet compartment	EA	$1,700.00	7	$11,900	7	$11,900	6	$10,200
109	ADA compliant	EA	$1,500.00	2	$3,000	2	$3,000	2	$3,000
110	urinal privacy screen	EA	$500.00	2	$1,000	2	$1,000	1	$500
111	Phenolic-core shower compartment	EA	$1,550.00	10	$15,500	10	$15,500	10	$15,500
112	ADA compliant	EA	$1,350.00	2	$2,700	2	$2,700	2	$2,700
113	Fire extinguisher cabinets	EA	$500.00	2	$1,000	2	$1,000	2	$1,000
114	Multi-tie personal plastic locker	EA	$900.00	80	$72,000	75	$67,500	40	$36,000
115	**10-Specialties Total**				**$116,950**		**$112,450**		**$78,600**
116									
117									
118	**21, 22, 23 - MECHANICAL**								
119									
120	**21 00 00 Fire Protection**								
121	*Fire Protection Equipment*								
122	Fire pump w/ controller	EA	$48,000.00	1	NIC	1	NIC	1	NIC
123	4" Water Service / DCVA	EA	$5,650.00	1	$5,650	1	$5,650	1	$5,935
124	4" Alarm Valves w/ Trim	EA	$3,450.00	1	$3,450	1	$3,450	1	$3,625
125	Standpipe assembly w/ FDV	EA	$1,900.00	1	$1,900	1	$1,900	1	$1,995
126	Dry Valve with compressor	EA	$10,800.00	1	$10,800	1	$10,800	1	$11,340
127	Siamese connection (FDC)	EA	$1,500.00	1	$1,500	1	$1,500	1	$1,575
128	*Fire Protection Distribution and Mains*								
129	Sprinkler head; concealed pendant	EA	$85.00	15	$1,275	15	$1,275	15	$1,338
130	Sprinkler head; upright pendant	EA	$65.00	21	$1,365	21	$1,365	21	$1,435
131	Branch pipe with fittings & hangers	LF	$22.00	435	$9,570	435	$9,570	435	$10,050
132	Main pipe with fittings & hangers	LF	$35.00	140	$4,900	140	$4,900	140	$5,145
133	Miscellaneous valves & accessories	LS	$900.00	1	$900	1	$900	1	$945
134	*Miscellaneous*								
135	Demolition work							1	N/A
136	System testing, flushing and inspection	LS	$1,300.00	1	$1,300	1	$1,300	1	$1,365
137	Coring, cutting, sleeves & fire stopping	LS	$500.00	1	$500	1	$500	1	$525
138	Seismic Restraints and Structural Steel Comp.	LS	$700.00	1	$700	1	$700	1	$735
139	Hydraulic lifts/rigging	LS	$2,200.00	1	$2,200	1	$2,200	1	$2,325
140	Shop drawings / BIM / ENG Support / As-Built	LS	$1,500.00	1	$1,500	1	$1,500	1	$1,575

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
141	Commissioning Support	LS	$900.00	1	$900	1	$900	1	$945
142	Fees & permits	LS	$600.00	1	$600	1	$600	1	$600
143	**21 00 00 Fire Protection Total**				**$49,010**		**$49,010**		**$51,453**
144									
145	**22 00 00 Plumbing**								
146	*Plumbing Equipment*								
147	Indirect Gas Hot Water Heater	EA	$18,500.00	2	$37,000	2	$37,000	2	$38,900
148	Hot Water Storage Tank	EA	$10,500.00	1	$10,500	1	$10,500	1	$11,100
149	Expansion tank	EA	$2,800.00	1	$2,800	1	$2,800	1	$3,000
150	Air separator	EA	$1,250.00	1	$1,250	1	$1,250	1	$1,400
151	Water service w/ meter assembly	EA	$8,250.00	1	$8,250	1	$8,250	1	$8,700
152	Hot water circulator pump assembly	EA	$450.00	1	$450	1	$450	1	$500
153	Connection to gas meter (meter by others)	EA	$1,050.00	1	$1,050	1	$1,050	1	$1,200
154	Reduce pressure backflow preventer	EA	$2,850.00	2	$5,700	2	$5,700	2	$6,000
155	Mixing valve; Master	EA	$4,850.00	1	$4,850	1	$4,850	1	$5,100
156	Oil / Sand Separator	EA	$22,500.00	1	See Site	1	See Site	1	See Site
157	Floor drain								
158	-3"	EA	$800.00	2	$1,600	2	$1,600	2	$1,700
159	-2"	EA	$745.00	10	$7,450	10	$7,450	10	$7,900
160	-Trench Drain	LF	$85.00	35	$2,975	35	$2,975	35	$3,200
161	Vent through roof	EA	$375.00	2	$750	2	$750	2	$800
162	Wall hydrant	EA	$395.00	3	$1,185	3	$1,185	3	$1,300
163	Hose bibb	EA	$325.00	2	$650	2	$650	2	$700
164	Roof drain	EA	$1,050.00	2	$2,100	2	$2,100	2	$2,300
165	Rough-in & connection to concession areas (allow)	LS	$8,500.00	1	$8,500	1	$8,500	1	$9,000
166	*Plumbing Fixtures*								
167	Water closet	EA	$1,850.00	11	$20,350	11	$20,350	11	$21,400
168	Shower	EA	$1,050.00	10	$10,500	10	$10,500	10	$11,100
169	Shower / ADA	EA	$1,050.00	2	$2,100	2	$2,100	2	$2,300
170	Shower / Exterior	EA	$6,500.00	2	$13,000	2	$13,000	2	$13,700
171	Lavatory	EA	$990.00	10	$9,900	10	$9,900	10	$10,400
172	Urinal	EA	$1,320.00	3	$3,960	3	$3,960	3	$4,200
173	Mop sink w/ rack	EA	$1,250.00	2	$2,500	2	$2,500	2	$2,700

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
174	Water cooler; Bi Level	EA	$3,050.00	2	$6,100	2	$6,100	2	$6,500
175	Stainless steel sink	EA	$1,400.00	2	$2,800	2	$2,800	2	$3,000
176	Outlet Box; Laundry mate	EA	$350.00	2	$700	2	$700	2	$800
177	Domestic Water Piping	LF	$34.50	885	$30,533	885	$30,533	885	$32,100
178	Valves & accessories	LS	$5,000.00	1	$5,000	1	$5,000	1	$5,300
179	Storm Drainage, Hubless Cast Iron Pipe	LF	$65.50	220	$14,410	220	$14,410	220	$15,200
180	Pipe insulation	LF	$14.50	1,000	$14,500	1,000	$14,500	1,000	$15,300
181	Sanitary Waste And Vent Pipe w/ Hangers	LF	$42.00	850	$35,700	850	$35,700	850	$37,500
182	Grease Waste System pipe with fittings & hangers	LF	$85.00	150	$12,750	150	$12,750	150	$13,400
183	Interior Grease Trap	EA	$4,800.00	1	$4,800	1	$4,800	1	$5,100
184	Valves & accessories	LS	$2,000.00	1	$2,000	1	$2,000	1	$2,100
185	Natural gas pipe with fittings & hangers	LF	$88.00	85	$7,480	85	$7,480	85	$7,900
186	Valves & accessories	LS	$1,200.00	1	$1,200	1	$1,200	1	$1,300
187	*Miscellaneous*								
188	Demolition work	LS						1	$3,500
189	System testing and flushing	LS	$2,600.00	1	$2,600	1	$2,600	1	$2,800
190	Coring, cutting, sleeves & fire stopping	LS	$1,100.00	1	$1,100	1	$1,100	1	$1,200
191	Seismic Restraints and Structural Steel Comp.	LS	$1,300.00	1	$1,300	1	$1,300	1	$1,400
192	Hydraulic lifts/rigging	LS	$3,000.00	1	$3,000	1	$3,000	1	$3,200
193	Shop drawings / BIM / ENG Support / As-Built	LS	$4,500.00	1	$4,500	1	$4,500	1	$4,800
194	Commissioning Support	LS	$2,600.00	1	$2,600	1	$2,600	1	$2,800
195	Fees & permits	LS	$3,200.00	1	$3,200	1	$3,200	1	$3,200
196	**22 00 00 Plumbing Total**				**$315,643**		**$315,643**		**$337,000**
197									
198	**23 00 00 HVAC**								
199	*HVAC Equipment*								
200	Electric Baseboard, 4FT Section	EA	$1,150.00	34	$39,100	34	$39,100	34	$41,055
201	Unit Heater	EA	$1,500.00	4	$6,000	4	$6,000	4	$6,300
202	*Exhaust Fans*								
203	- EF- 1,500 CFM	EA	$4,850.00	4	$19,400	4	$19,400	4	$20,370
204	- EF- 400 CFM	EA	$1,050.00	4	$4,200	4	$4,200	4	$4,410
205									
206									

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
207	*Miscellaneous*								
208	Demolition work							1	N/A
209	System testing and flushing	LS	$1,400.00	1	$1,400	1	$1,400	1	$1,470
210	Coring, cutting, sleeves & fire stopping	LS	$400.00	1	$400	1	$400	1	$420
211	Seismic Restraints and Structural Steel Comp.	LS	$700.00	1	$700	1	$700	1	$735
212	Hydraulic lifts/rigging	LS	$400.00	1	$400	1	$400	1	$420
213	Shop drawings / BIM / ENG Support / As-Built	LS	$1,100.00	1	$1,100	1	$1,100	1	$1,155
214	Commissioning Support	LS	$400.00	1	$400	1	$400	1	$420
215	Fees & permits	LS	$800.00	1	$800	1	$800	1	$800
216	**23 00 00 HVAC Total**				**$73,900**		**$73,900**		**$77,555**
217									
218									
219	**26 - 27-ELECTRICAL, COMMUNICATION**								
220									
221	**26 00 00 Electrical**								
222	*Normal power*								
223	208/120V panelboards	GSF	$2.00	4,000	$8,000	4,000	$8,000	4,000	$8,000
224	208/120V panelboards	GSF	$1.00					4,000	$4,000
225	*Equipment wiring:*								
226	Exhaust fan	EA	$1,000.00	8	$8,000	8	$8,000	8	$8,000
227	UH	EA	$1,500.00	4	$6,000	4	$6,000	4	$6,000
228	Hot water circulator pump	EA	$1,200.00	1	$1,200	1	$1,200	1	$1,200
229	Feed and connection to baseboard heat	EA	$550.00	34	$18,700	34	$18,700	34	$18,700
230	Pool equipment, feed and connections	EA	$3,500.00	1	$3,500	1	$3,500	1	$3,500
231	Misc. equipment feed and connections	EA	$3,500.00	1	$3,500	1	$3,500	1	$3,500
232	Lighting fixtures, including emergency & egress	GSF	$2.00	4,000	$8,000	4,000	$8,000	4,000	$8,000
233	Exterior building mounted fixture	EA	$850.00	6	$5,100	6	$5,100	6	$5,100
234	Lighting controls	GSF	$0.30	4,000	$1,200	4,000	$1,200	4,000	$1,200
235	Branch devices	GSF	$0.20	4,000	$800	4,000	$800	4,000	$800
236	Lighting & branch circuitry	GSF	$3.00	4,000	$12,000	4,000	$12,000	4,000	$12,000
237	Fire alarm system	GSF	$1.50	4,000	$6,000	4,000	$6,000	4,000	$6,000
238	Telecommunications	GSF	$0.30	4,000	$1,200	4,000	$1,200	4,000	$1,200
239									

Forest River Park
Bathhouse Options

BATHHOUSE DIRECT TRADE COST DETAILS

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 4,000 GSF		OPTION 2: Park Land 4,000 GSF		OPTION 3: Existing Pool 4,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
240	*Security Systems*								
241	Control panel, devices and circuitry	LS	$5,000.00	**1**	$5,000	**1**	$5,000	**1**	$5,000
242	*Miscellaneous*								
243	Fees & permits	GSF	$0.50	**4,000**	$2,000	**4,000**	$2,000	**4,000**	$2,000
244	Temporary lighting & power	GSF	$0.50	**4,000**	$2,000	**4,000**	$2,000	**4,000**	$2,000
245	Demolition work	GSF	$0.50					**4,000**	$2,000
246	Lightning protection and grounding	GSF	$1.25	**4,000**	$5,000	**4,000**	$5,000	**4,000**	$5,000
247	**26 00 00 Electrical Total**				**$97,200**		**$97,200**		**$103,200**
248									
249									
250	**31-EARTHWORK**								
251									
252	Rough and fine grade for new slab	SF	$2.00	**4,325**	$8,650	**4,405**	$8,810		
253	Gravel below slab	CY	$38.00	**176**	$6,696	**163**	$6,200		
254	Perimeter drain system	LF	$16.00	**325**	$5,192	**341**	$5,456		
255	*Continuous footings*	*LF*		***295***		***310***			
256	Excavation	CY	$12.00	**82**	$983	**86**	$1,033		
257	Soil remove	CY	$6.00	**82**	$492	**86**	$517		
258	Backfill with imported fill	CY	$25.00	**5**	$137	**6**	$144		
259	*Spread footings*	*EA*		***10***		***10***			
260	Excavation	CY	$12.00	**36**	$427	**36**	$427		
261	Soil remove	CY	$6.00	**36**	$213	**36**	$213		
262	Backfill with imported fill	CY	$25.00	**26**	$657	**26**	$657		
263	**31-Earthwork Total**				**$23,447**		**$23,457**		**$0**
264									
265									
266									

Forest River Park

SITE DEVELOPMENT DIRECT TRADE COST DETAILS

New Swimming Pool and Bathhouse Options

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 112,000 GSF		OPTION 2: Park Land 132,000 GSF		OPTION 3: Existing Pool 165,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
9	**02-EXISTING CONDITIONS**								
10									
11	*Site Preparation*								
12	8' construction fence	LF	$15.00	**2,890**	$43,350	**2,525**	$37,875	**2,580**	$38,700
13	Double construction gate	EA	$3,000.00	**2**	$6,000	**2**	$6,000	**2**	$6,000
14	Stabilized construction entrance	LS	$7,500.00	**2**	$15,000	**2**	$15,000	**2**	$15,000
15	Shoreline protection	LF	$20.00					**1,050**	$21,000
16	Site clearing and grubbing	ACRE	$3,500.00	**3**	$10,500	**4**	$14,000	**4**	$14,000
17	Temporary signs	LS	$2,000.00	**1**	$2,000	**1**	$2,000	**1**	$2,000
18	*Erosion and Sedimentation Controls*								
19	Erosion control fence	LF	$16.00	**2,890**	$46,240	**2,525**	$40,400	**2,580**	$41,280
20	Inlet protection	EA	$300.00	**20**	$6,000	**20**	$6,000	**20**	$6,000
21	*Site Demolition*								
22	Remove existing pool assembly	GSF	$10.00	**12,275**	$122,750	**12,275**	$122,750	**12,275**	$122,750
23	Existing filter shed	EA	$1,000.00	**1**	$1,000	**1**	$1,000	**1**	$1,000
24	Demolish bathhouse building at Option 3 location	CFT	$0.35	**56,000**	$19,600	**56,000**	$19,600		
25	slab on grade and foundations	GSF	$6.00	**4,000**	$24,000	**4,000**	$24,000		
26	Miscellaneous site demolition	GSF	$0.50	**112,000**	$56,000	**132,000**	$66,000	**165,000**	$82,500
27	Haul off demolished materials, disposal				$11,200		$11,700		$10,400
28	Protect existing element to remain	LS	$7,500.00	**1**	$7,500	**1**	$7,500	**1**	$7,500
29	**02-Existing Conditions Total**				**$371,140**		**$373,825**		**$368,130**
30									
31									
32	**13-SPECIAL CONSTRUCTION**								
33									
34	Earthwork; 25-yard lap/recreational pool	LS	$100,000.00	**1**	$100,000	**1**	$100,000	**1**	$100,000
35	kids' pool	LS	$25,000.00			**1**	$25,000	**1**	$25,000
36	water spray pad	LS	$20,000.00	**1**	$20,000	**1**	$20,000	**1**	$20,000
37	concrete deck	GSF	$5.00	**10,700**	$53,500	**11,700**	$58,500	**23,530**	$117,650
38	rock ledge premium	CY	$50.00			**3,100**	$155,000		
39	Specialty pool construction; 25-yard lap/recreational pool	AL	$1,200,000.00	**1**	$1,200,000	**1**	$1,200,000	**1**	$1,200,000
40	kids' pool	AL	$500,000.00			**1**	$500,000	**1**	$500,000
41	water spray pad	AL	$75,000.00	**1**	$75,000	**1**	$75,000	**1**	$75,000

Forest River Park

SITE DEVELOPMENT DIRECT TRADE COST DETAILS

New Swimming Pool and Bathhouse Options

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 112,000 GSF		OPTION 2: Park Land 132,000 GSF		OPTION 3: Existing Pool 165,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
42	Concrete pool deck	SF	$12.50	**10,700**	$133,750	**11,700**	$146,250	**23,530**	$294,125
43	water spray pad surfacing	SF	$25.00	**1,520**	$38,000	**2,170**	$54,250	**2,185**	$54,625
44	Electrical grounding, lighting feeds and connections	LS	$30,000.00	**1**	$30,000	**1**	$30,000	**1**	$30,000
45	**13-Special Construction Total**				**$1,650,250**		**$2,364,000**		**$2,416,400**
46									
47									
48	**31-EARTHWORK**								
49									
50	Infill former pool depression	CY	$20.00	**2,850**	$57,000	**2,850**	$57,000	**2,850**	$57,000
51	imported fill +5' at pool deck	CY	$25.00					**380**	$9,500
52	Cuts and fills for new site grades and improvements	CY	$15.00	**4,360**	$65,400	**3,090**	$46,350	**9,630**	$144,450
53	**31-Earthwork Total**				**$122,400**		**$103,350**		**$210,950**
54									
55									
56	**32-EXTERIOR IMPROVEMENTS**								
57									
58	Driveway and parking pavement	SF	$4.00	**53,550**	$214,200	**65,470**	$261,880	**50,225**	$200,900
59	Parking space marking	SPACE	$35.00	**186**	$6,510	**186**	$6,510	**21**	$735
60	ADA compliant marking, sign	SPACE	$225.00	**5**	$1,125	**5**	$1,125	**2**	$450
61	bus marking, sign	SPACE	$250.00					**2**	$500
62	Boardwalk, deck	SF	$75.00	**1,040**	$78,000	**1,255**	$94,125	**1,860**	$139,500
63	Relocate baseball field	EA	$30,000.00	**1**	$30,000	**1**	$30,000		
64	tennis court	EA	$50,000.00					**2**	$100,000
65	Remainder of site improvements	LS	$25,000.00	**1**	$25,000	**1**	$25,000	**1**	$25,000
66	Tree, shrub, groundcover, planting soil, mulch	GSF	$15.00	**5,000**	$75,000	**5,000**	$75,000	**5,000**	$75,000
67	Seeding to remainder of limit of disturbance	SF	$0.15	**37,775**	$5,666	**42,375**	$6,356	**87,770**	$13,166
68	**32-Exterior Improvements Total**				**$435,501**		**$499,996**		**$555,251**
69									
70									
71									
72									
73									
74									

Forest River Park

SITE DEVELOPMENT DIRECT TRADE COST DETAILS

New Swimming Pool and Bathhouse Options

	DESCRIPTION	UNIT	UNIT COST	OPTION 1: Ball Field 112,000 GSF		OPTION 2: Park Land 132,000 GSF		OPTION 3: Existing Pool 165,000 GSF	
				Quantity	Cost	Quantity	Cost	Quantity	Cost
75	**33-UTILITIES**								
76									
77	*Water Utilities*								
78	Street connection	LS	$7,500.00	**1**	$7,500	**1**	$7,500	**1**	$7,500
79	CLDI main service; domestic water	LF	$75.00	**250**	$18,750	**500**	$37,500		
80	CLDI main service; fire protection	LF	$90.00	**250**	$22,500	**500**	$45,000	**1,500**	$135,000
81	Fire hydrant and gate valve	EA	$3,000.00	**1**	$3,000	**2**	$6,000	**1**	$3,000
82	*Sanitary Sewerage*								
83	Drain piping	LF	$65.00	**250**	$16,250	**500**	$32,500	**100**	$6,500
84	Oil / sand separator	EA	$22,500.00	**1**	$22,500	**1**	$22,500	**1**	$22,500
85	Street connection	LS	$7,500.00	**1**	$7,500	**1**	$7,500		
86	*Storm Drainage*								
87	Stormwater management and retention	GSF	$1.00	**112,000**	$112,000	**132,000**	$132,000	**165,000**	$165,000
88	*Gas Service*								
89	New gas main service	LF			Utility Co.		Utility Co.		Utility Co.
90	Trenching and associated install earthwork	LF	$45.00	**250**	$11,250	**500**	$22,500		$0
91	**33-Utilities Total**				**$221,250**		**$313,000**		**$339,500**
92									
93	**33 70 00 Electrical Utilities**								
94	Site lighting and circuitry	LS	$25,000.00	**1**	$25,000	**1**	$25,000	**1**	$25,000
95	**33 70 00 Electrical Utilities Total**				**$25,000**		**$25,000**		**$25,000**
96									
97									
98									

END OF REPORT