

REVISED - 2/18/2020

**AGENDA
REGULAR MEETING OF THE MAYOR AND COUNCIL
February 25, 2020
CITY HALL
414 High Street**

- 7:00 P.M.** - Mayor David Genshaw calls the Regular Meeting to order.
- Invocation
 - Pledge of Allegiance to the Flag of the United States of America.
 - Executive Session - Personnel
 - Changes to agenda for this meeting.
 - Approval of minutes of the regular meeting on February 11, 2020.

Chief of Police Marshall Craft to introduce police recruits; Ashley Melis, Jamont Matthews, Cody Matthews and Daniel Burgos who will graduate from the 93rd DSP/89th Municipal recruit class at the Delaware State Police Academy on March 4th, 2020.

ALL ITEMS ON THIS AGENDA MAY OR MAY NOT BE VOTED ON.

CORRESPONDENCE:

PUBLIC HEARING:

1. Park Venture East LLC, located at Lot 7, Venture Dr., Tax Map and Parcel # 331-5.00-4.27 are requesting a Preliminary Site Plan Review to construct six (6) flex space units totaling 43,000 sq. ft.

NEW BUSINESS:

1. Present for approval the Master Plan for the Oyster House Park project to be located along the Nanticoke River at the South end of Cannon Street (SCTMP# 431-7.00-23.00).
2. Present for approval the recommendation of Mayor David Genshaw to appoint Mr. Scott Pickinpaugh to the Planning and Zoning Commission.
3. Present a proposal to change the practice of seasonal billing for water, sewer and electric accounts by Jeanne Sapp, Customer Service Coordinator.
4. Present for approval a proposed informational flier regarding voter registration and important dates for the upcoming Municipal Election to be held on April 18th, 2020 from 7:00 to

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3:00 to include the number of fliers provided to each candidate filed for the election.

5. Update by Katie Hickey, Superintendent of Parks and Recreation, regarding Riverfest 2020.
6. Present for approval by Bill Bennett, Director of Electric, Bids - Used Christmas Lights.

OLD BUSINESS:

- 1.

REMINDER OF MEETINGS & SETTING NEW MEETINGS:

1. DE League of Local Governments, February 27, 2020 at Maple Dale Country Club in Dover starting at 6:00 p.m.
2. SCAT Meeting, March 4, 2020 at Laurel Fire Hall starting at 6:00 p.m.
3. Planning Session, February 28, 2020 at Seaford District Library starting at 8:30 a.m.

CITY OF SEAFORD

Municipal Election – April 18, 2020

The City of Seaford Municipal Election will be held on Saturday, April 18, 2020 in the City Council Chambers, City Hall, 414 High Street, between the hours of 7:00 a.m. E.S.T. and 3:00 p.m. E.S.T.

One (1) Mayor will be elected for a (2) year term
Two (2) Council Members will be elected for a (3) year term.

All candidates must have filed by 5:00 p.m., E.S.T., February 28, 2020. Registration can be completed at City Hall, 414 High Street, Seaford, DE. Registration hours are Monday through Friday, 8 a.m. until 5:00 p.m. or by appointment if you cannot register during these normal business hours. Any candidate who withdraws his/her name must do so in writing. Any candidate who withdraws his/her name after 5:00 p.m., E.S.T., February 28, 2020 will still appear on the official ballot for election.

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Anyone eighteen (18) years of age or older who is a bona fide resident and US Citizen to be eligible to vote **must have been registered at the Seaford City Hall by 5:00 p.m., E.S.T., March 27, 2020.** A nonresident property owner to be eligible to vote must be owner of record for a period of six (6) months immediately preceding the date of the Annual Municipal Election (October 18, 2019) and shall have one vote **provided he or she is registered on the “Books of Registered Voters” maintained at the City Hall.** **Registration hours are Monday through Friday, 8 a.m. until 5 p.m. or by appointment if you cannot register during these normal business hours.**

The City of Seaford has independent registration procedures for the Annual Municipal Election. To vote, you must meet the eligibility requirements and be registered on the “Books of Registered Voters” maintained at City Hall.

A person shall be required to register only one time. You are urged to check your registration if you did not vote in the last municipal election. If you have moved out of the City after your original registration, you will need to check your registry to assure you are an eligible voter.

All voters will need to show proof of residency which may be a State of Delaware driver’s license, a State of Delaware identification card, a federal or state tax return with address, a City of Seaford utility bill or real estate property tax bill, or other acceptable proof of residency or ownership.

CANDIDATES FILED AS OF February 18, 2020:

Mayor David Genshaw has filed for re-election as Mayor
Councilman James King has filed for Mayor

Councilman Dan Henderson has filed for re-election to Council
Alan Cranston has filed for City Council
Jose Santos has filed for City Council

COMMITTEE REPORTS:

1. Police & Fire - Councilman Dan Henderson
2. Administration - Councilman Orlando Holland
3. Code, Parks and Recreation - Councilman James King
4. Public Works & WWTF - Councilman Matt MacCoy
5. Electric - Councilman William Mulvaney

Mayor Genshaw solicits a motion to hold an Executive Session for the purpose of discussing personnel.

EXECUTIVE SESSION:

1. Personnel

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REGULAR MEETING OF THE MAYOR AND COUNCIL

February 25, 2020

Mayor Genshaw solicits a motion to adjourn the Executive Session.

Mayor Genshaw reopens the regular Council meeting.

Mayor Genshaw solicits a motion to adjourn the regular Council meeting.

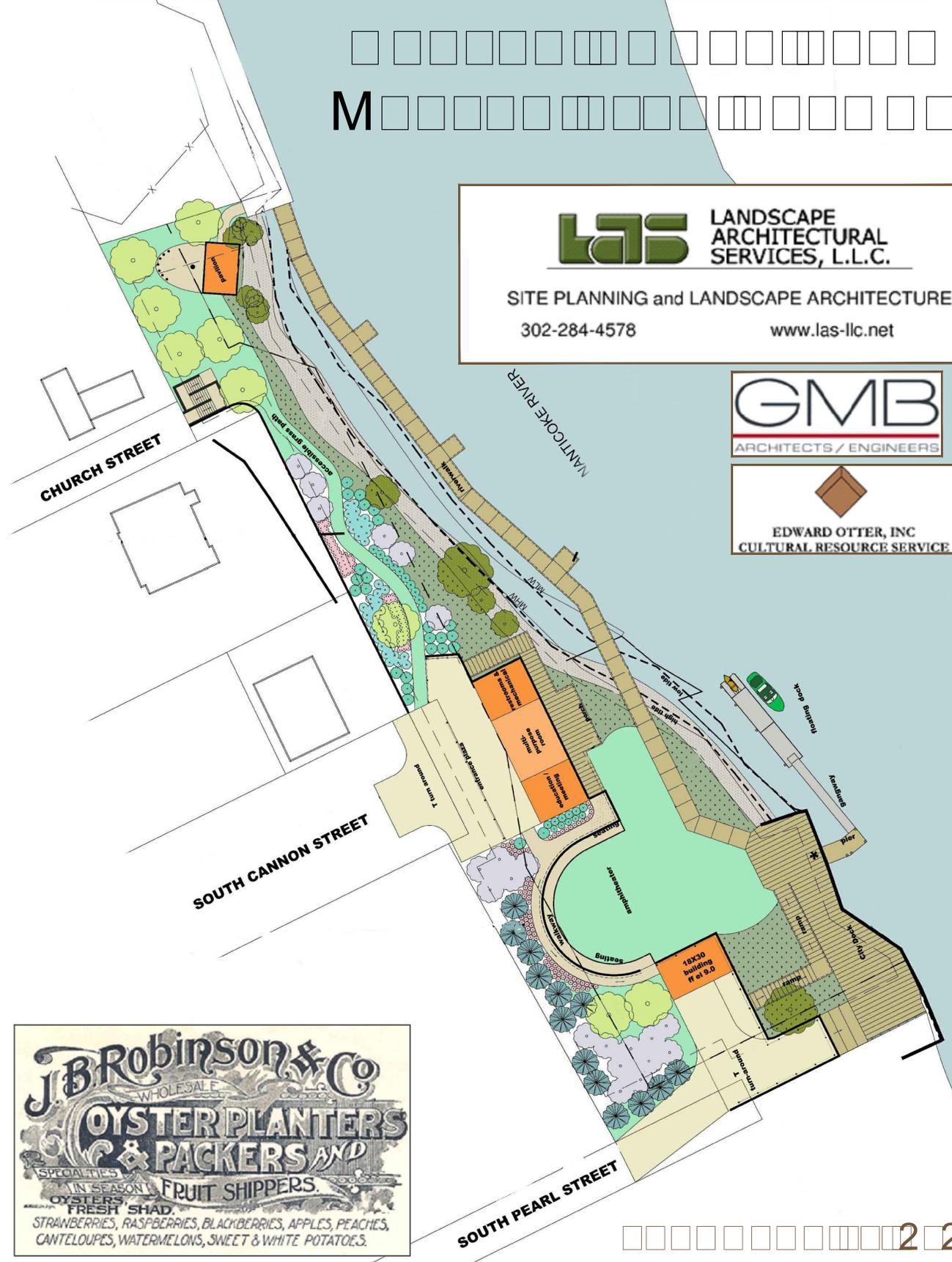
NOTE: Agenda shall be subject to change to include or delete additional items (including executive session) which arise at the time of the meeting. (29 Del. C. S1004 (e) (3))

Date Posted: 2/18/2020

Posted by: TNT



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 CANTELOUPES, WATERMELONS, SWEET & WHITE POTATOES.

2 2

OYSTER HOUSE PARK MASTER PLAN REPORT

EXECUTIVE SUMMARY

From June, 2019 until February, 2020 the Planning Team of Landscape Architectural Services, LLC and subconsultants George, Miles and Buhr and Edward Otter, Inc. worked with the City of Seaford and the Chesapeake Conservancy to prepare the attached Oyster House Park Master Plan Report. Completed tasks include establishing **Goals**, conducting **Site Analysis**, preparing several **Concept Plans** options and distilling these to a **Master Plan** that was presented for Public comment. Additionally, **Probable Costs** for construction and operation and a **Phasing Plan** were developed and potential **Funding** sources were identified. Finally, **Permitting** for all Phases were outlined and applications for the following Phase 1 Permits have been submitted to regulatory agencies for processing:

- Delaware Architectural Accessibility (Letter of No Objection received 2-14-2020)
- DNREC Subaqueous Lands and Wetlands Section (submitted 2-13-2020)
- US Army Corps of Engineers permission for Construction
(combined with DNREC permit – State Programmatic General Permit (SPGP))

The **Goals** for Oyster House Park are:

- Enhance the Gateway to downtown.
- Provide land-based visitor & water-based recreational shoreline access.
- Offer historic education and promote tourism.
- Stabilize the shoreline to protect water quality in the Nanticoke River.
- Establish a native landscape.
- Provide boat access including a Kayak Launch.
- Connect to existing Riverwalk, High Street businesses, Seaford Museum, etc. with a walkable route.
- Offer a visitor Contact Station with Interpretive Features to help educate the public about the significance of the River as a working maritime industry and the ecological significance of the River and its connection to the Chesapeake Bay.
- A Perpetual Easement prohibiting the sale of the land or changing its use is being prepared by the Nanticoke Watershed Conservancy.

Site Analysis: A full analysis of the site’s natural features, archaeological history, existing utilities, regulatory requirements and potential recreation opportunities was developed and a buildable area was delineated.

Concept Plans: Two development options were designed proposing differing schemes for site access, building locations and the Riverwalk extension, etc. These options were evaluated and a Master Plan was created using the best ideas from the Concept Plans.

Preliminary Master Plan: Features of the Master Plan are:

- Vehicular and pedestrian access to the site from Cannon and Pearl Streets, including vehicle turn-around space.
- A Visitor Contact Station with a meeting room, restrooms and display area.
- Repaired bulkhead with waterfront deck, pier and floating docks.
- Riverwalk extension and connection.
- An amphitheater.
- 2 Pavilions.
- Native Plantings.

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On August 13, 2019 a Meeting was held to present the Preliminary Master Plan Option C, dated revised 8-6-2019, to the City Council and to the Public for review and comment. The City also posted this Preliminary Master Plan on its website. The Preliminary Plan was later revised based on the community responses and feedback.

Of the 15 comments received through comment cards, emails or social media, 14 (93%) were positive and supportive of the Preliminary Master Plan Option C (see Appendix pages AP 8 – 10.) The final comment objected to eliminating the vehicle connection between Cannon Street and South Pearl Street. This connection allowed deliveries to be made to the Higgins - Lord Brothers Warehouse, as Streetscape Improvements completed in 1999 installed planting beds which limited turning radii from High Street onto Pearl Street. This issue was not addressed in the Final Master Plan Option C. Instead the City and its consulting engineer, GMB, will re-design the planting bed to allow access to Pearl Street from High Street. This will be completed as a separate project prior to construction of Oyster House Park.

The Final Master Plan, dated revised 9-23-2019, was produced based on community response and feedback. Then, in response to additional comments from the Delaware Department of Natural Resources and Environmental Control (DNREC) Wetlands and Subaqueous Lands Section review the Plan was further revised on 11-21-2019.

Probable Costs and Construction Phasing: Probable construction and operating costs were developed for each of four phases.

Phase #1 includes undergrounding utilities, constructing the Riverwalk extension, replacing bulkhead and constructing the pier and floating docks. Estimated probable construction Cost for Phase #1 is \$1,575,843. and the estimated schedule for completion is Fall 2021 pending available funding.

Phase #2 includes constructing the “T” turn around at Cannon and Pear Streets with previous paving for stormwater management and constructing the Amphitheater. Estimated probable costs for Phase #2 is \$1,021,488. Phase 2 is proposed to be completed in the summer of 2024 pending available funding. (Note: A joint Sussex County / City of Seaford upgrade of the existing Sanitary Sewer to 24” must take place prior to beginning Phase 2).

Phase #3 includes constructing the visitor contact station and pavilions and installing landscape improvements. Estimated probable cost for Phase #3 is \$840,938. and it is proposed to be completed in fall of 2025 pending available funding.

Phase #4 includes constructing a stairway access from Church Street, installing paving for “Story/Demonstration” area and installing landscape improvements. Estimated probable costs for Phase #4 is \$261,377. Construction of Phase 4 is proposed for the fall of 2026, pending available funding.

Total Probable Construction Costs to construct the Oyster House Master Plan is \$3,699,646.

Note: **Costs may vary** with time of implementation, final design and materials selections. These costs are based on recent bids and industry costs standards. True and final costs will be determined by the successful bidder based on the bidding climate at that time and on other factors over which Landscape Architectural Services, LLC and their consultants have no control.

OYSTER HOUSE PARK MASTER PLAN REPORT

Funding: Oyster House Park can be funded through several sources, both public and private. The Chesapeake Conservancy and the City of Seaford have successfully raised \$850 thousand to finance land acquisition, master planning costs and initial site improvements needed for Phase 1. Working with the other Partners have a goal to secure an additional \$800 thousand in 2020 to complete project funding for Phase 1 construction.

Permitting: Authorization from the Army Corps of Engineers (ACOE) and from the Department of Natural Resources and Environmental Control (DNREC) Wetlands and Subaqueous Lands Section is required for activities in tidal wetlands or in tidal and non-tidal waters in the State of Delaware. Permits will be required for the Oyster House Park.

Landscape Architectural Services met with DNREC staff (Subaqueous Lands & Wetlands Program Manager and Environmental Scientist) in October, 2019 and participated in a site visit with them on 12-13-2019 to discuss the Subaqueous Lands Lease. A permit for the bulkhead repair and replace and for construction of the boardwalk will be obtained through a joint DNREC and ACOE State Programmatic General Permit 20 permit. These were submitted for processing on 2-13-2020.

Landscape Architectural Services, LLC looks forward to assisting the City of Seaford, the Chesapeake Conservancy and other Team members in taking the Oyster House Park from a Plan to an exciting, usable Park.

Submitted by: Matthew T. Spong, Principal, RLA, ASLA



OYSTER HOUSE PARK MASTER PLAN REPORT

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OYSTER HOUSE PARK MASTER PLAN REPORT

BACKGROUND

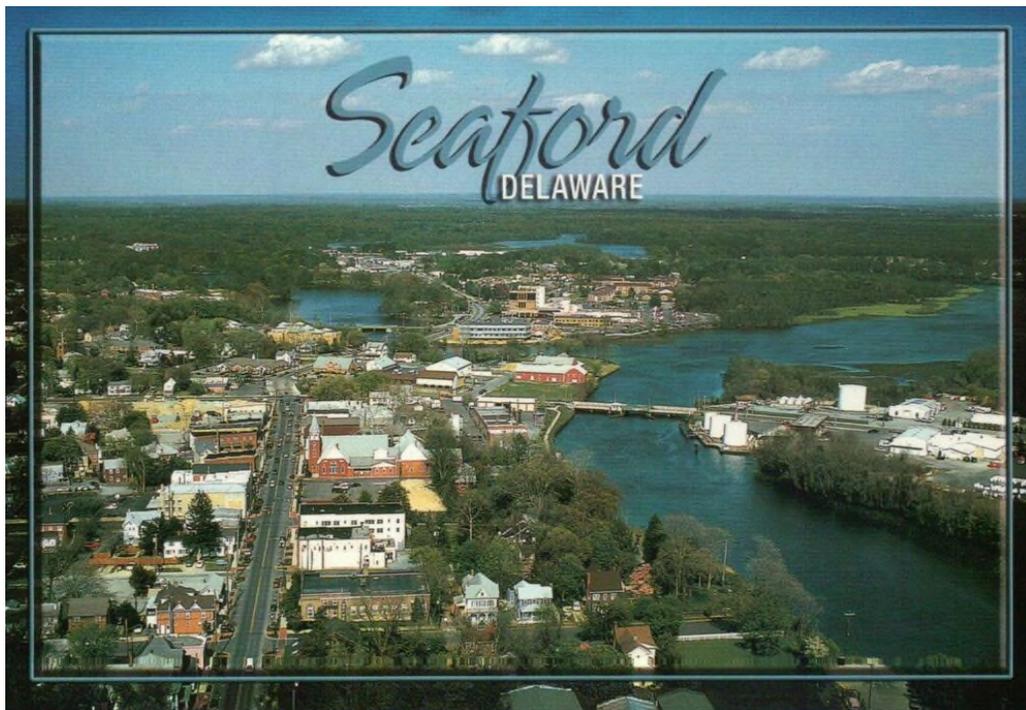
The City of Seaford is a riverside community with a quaint downtown and a lot of character to explore. Seaford's population is about 7,000 people with an anticipated growth exceeding 2%. Seaford is diverse. It offers the perfect mix of small-town quality of life with an economically sound business climate.

The City has ten Parks consisting of approximately 75 acres. This is slightly above the recommended standard of 1 acre per 100 residents. The City's Park and Recreation system includes a network of Community Parks, Pocket Parks, the Nanticoke River Walk and special use facilities. Now the City has the opportunity to expand the Riverwalk into a new Riverfront Park on the site of a historic oyster and produce packing house.

The River brings limitless recreational opportunities to the Seaford community. The new park parcel, although small, has the potential to provide water and land-based recreation, offer historic education and promote tourism. Situated along the existing Capt. John Smith Chesapeake National Historic Trail and in close proximity to the Seaford Riverwalk, it could become an exciting link that expands these important landmarks.

The City of Seaford has developed several documents to assist downtown property owners in making planning decisions. The Oyster House Park will be developed with guidance from these documents. They are listed here and included in the appendices.

- The Design Guide for the City of Seaford and Seaford Tomorrow, December 2018
www.seafordtomorrow.org/downtowndesignguide
intended to encourage and guide storefront design and development in downtown Seaford.
- The Downtown Conceptual Vision plan
www.seafordde.com
- The Downtown Development District, September 2014
www.seafordde.com/library/DDD_Seaford_Application_Summary_102314.pdf
a special planning area offering Delaware Development District Program Incentive funds and City incentives funds.



OYSTER HOUSE PARK MASTER PLAN REPORT

MASTER PLANNING

In 2018 the Chesapeake Conservancy, a non-profit based in Annapolis, MD., and the Mt. Cuba Center, based in Hockessin, DE, purchased the nearly 1-acre property, located on the Nanticoke River, in Seaford Delaware. This land was then donated to the City of Seaford to become a small, waterfront Park that will provide recreational access to the Nanticoke River. The Nanticoke River Watershed Conservancy will hold an easement on the property which specifies that the parcel will be used exclusively for recreational access.

The site is the last remaining undeveloped waterfront property in the city limits west of the Nanticoke Bridge. It offers spectacular views of the River, easy access from High Street, is close to the Seaford Museum, links to the Seaford Riverwalk and is a designated stop on the Captain John Smith National Water Trail.

The site was historically occupied by an oyster processing facility, although no structure exists on site today. The site contains critical sewer and electrical utilities, a cart way for vehicular traffic and shoreline structures in various conditions.

The City envisions creating a park that enhances the gateway to downtown providing both land- based visitors and river-based recreationalists shoreline access, improved shoreline stabilization, living shoreline, a canoe/kayak launch, a connection to the existing segment of the Nanticoke RiverWalk, a visitor contact station, reflecting the architecture of the former oyster house, and potential interpretive topics complementing those in the Seaford Museum and related to the Captain John Smith National Water Trail.



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In 2018 the City of Seaford was awarded a Delaware DNREC Parks Department Outdoor Recreation, Parks and Trails Planning grant (ORPT) to fund the preparation of a Master Plan for Oyster House Park.

REQUEST FOR PROPOSAL (RFP)

FOR PROFESSIONAL PLANNING CONSULTATION

TO COMPLETE A MASTER PLAN for OYSTER HOUSE PARK CITY OF SEAFORD, DELAWARE

Date Issued

May 9, 2019

Bid Opening

Wednesday, May 30, 2019 at 2:05 pm

Late proposals will be rejected.

Evaluation Team Review

June 6, 2019

Council Presentation/Recommendation or Rejection

June 11, 2019

In May 2019 a Request for Proposals was advertised. Landscape Architectural Services, LLC was selected to prepare the Master Plan.

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OYSTER HOUSE PARK PROJECT TEAM

- **The City of Seaford**

Charles Anderson	City Manager
Trisha Newcomer	Director Economic Development & Community Relations
Bill Bennett	Director of Electric
Berley Mears	Director Public Works
Mike Bailey	Building Official

- **The Chesapeake Conservancy**

Randall Larrimore	Board of Directors
Joel Dunn	President & CEO
Susan Shingledecker	Vice President & Director of Programs
Melissa Ehrenreich	Director of Development
Gabrielle Roffe	Project and Partnership Coordinator

- **Landscape Architectural Services, LLC**

Matt Spong, RLA, ASLA, Principal	Registered Landscape Architect
Trisha Sawicki, ASLA, Associate Principal	Designer

- **George Miles & Buhr, Inc (GMB)**

Judy Schwartz, PE, Vice President	Professional Civil Engineer
Morgan Helfrich, AIA	Architect

- **Ed Otter, Inc.**

Dr. Ed Otter, PhD	Archaeologist
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OYSTER HOUSE PARK GOALS

- Enhance the Gateway to downtown.
- Provide land-based visitor & water-based recreational shoreline access. This would link well with the Chesapeake Conservancy's goal to develop paddle-in campsites along the downstream Nanticoke River.
- Offer historic education and promote tourism.
- Stabilize the shoreline to protect water quality in the Nanticoke River.
- Establish a native landscape.
- Provide boat access including a Kayak Launch.
- Connect to existing Riverwalk, High Street businesses, Seaford Museum, etc. with a walkable route
- Offer a visitor Contact Station with Interpretive Features to help educate the public about the significance of the River as a working maritime industry and the ecological significance of the River and its connection to the Chesapeake Bay.

Oyster House Park will compliment other conservation projects along the River. U S Department of Defense Readiness and Environmental Protection Integration (REPI) program, The Conservation Funds, Mt Cuba Center and the Chesapeake Conservancy has completed 14 projects linking Vienna, MD to Seaford. DE.

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OYSTER HOUSE PARK MASTER PLAN TIMELINE

The Chesapeake Conservancy prepared several important grant applications to fund the first Phase, or multiple Phases, of construction. These applications were due in September 2019, so the project Team was on a "fast track" to develop the Preliminary Master Concept Plan, present it for Public review and comment, and revise it to be ready for City Council approval in time for these grant deadlines.

Note: At the October 17, 2019 meeting, the deadline for the Final Master Plan was revised to December, 2019.

OYSTER HOUSE PARK MASTER PLAN SCHEDULE		SEAFORD, DE 7-11-2019										
TASK		2019										
		June	July	August	Sept	Oct	Nov	Dec				
Kickoff Meeting Plan of Action	*											
Prepare Base Mapping												
Prepare Phase 1A Archaeological Analysis												
Prepare Site Analysis & Community Description Identify Opportunities and Constraints												
Prepare Preliminary Park Master Plan incl. Shoreline Stabilization & SWM options												
Prepare Preliminary Probable Costs, Possible Funding and Phasing												
Progress Meeting July 24	*											
Council Meeting, Community Workshop Present Concept Plan - August 13												
Progress Meeting	*											
Prepare Final Park Master Plan												
Prepare Final Probable Costs, Possible Funding and Phasing												
Progress Meeting Review Draft Master Plan	*											
Present to Mayor & Council and to the Public	*											
<p>* Meeting with the City of Seaford and Oyster House Park Committee representatives</p> 												

Final comments were received from the project Team on 1-30-2020 and have been incorporated into the Final Report dated 2-18-2020

OYSTER HOUSE PARK MASTER PLAN REPORT

OYSTER HOUSE PARK SITE ANALYSIS and CONSIDERATIONS

The project Team accomplished the following:

June 25, 2019 The Oyster House Planning Committee held a Kick off Meeting

Draft schedule, Base Mapping and Site Analysis were established.

- Base Mapping: Property Line survey obtained when property was purchased and additional topography, site features and high and low tides by George, Miles & Buhr.



BASE PLAN

High Tide Elevation 2.0

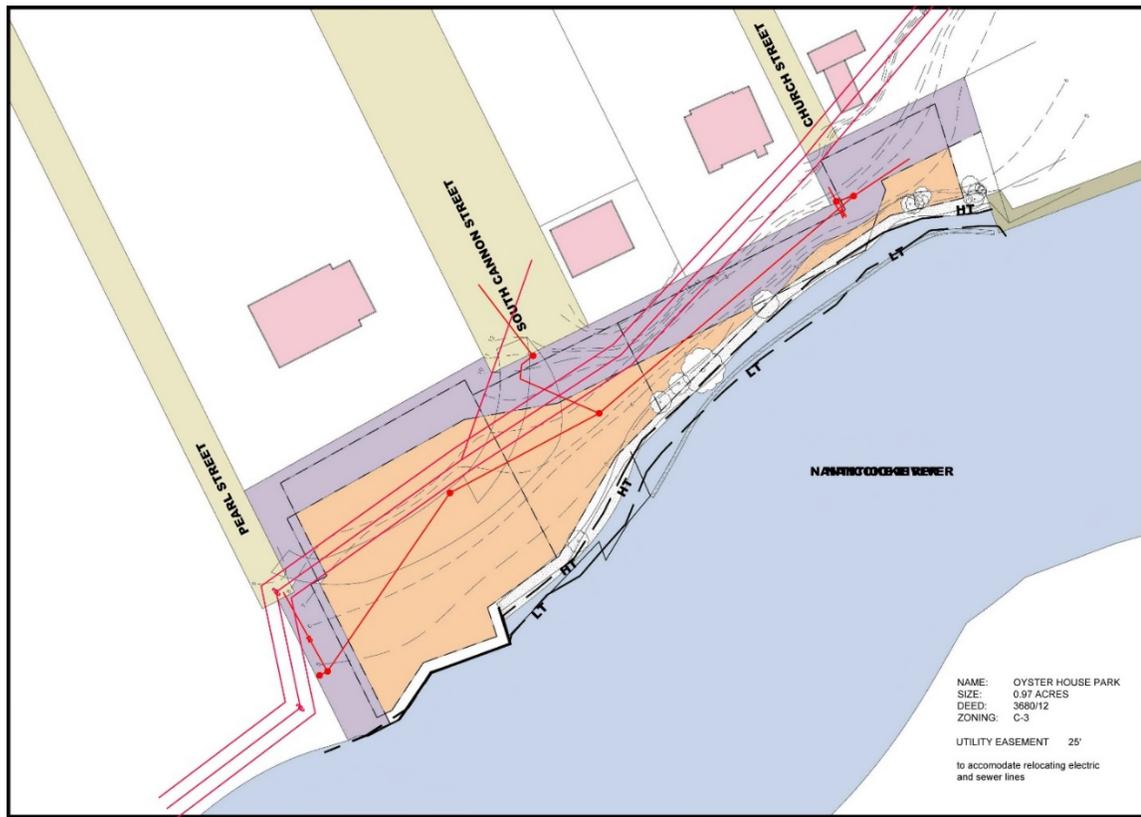
Low Tide Elevation -1.0

High High Tide Elevation 2.2

- Site Zoning: The Oyster House Park site is a C3 - Riverfront Enterprise Zone. Maximum lot Coverage is 40%. Setbacks are Front: 15', Side: 14' aggregate 6' minimum, Rear: 20'. Building Height is 35' (3 stories) maximum.
- Utilities: An 18" underground sanitary sewer interceptor line exist on site. The City of Seaford and Sussex County planned to replace and upsize this line by 2025. This line serves the Hospital, three assisted living facilities, Offices, part of the Route 13 Commercial Corridor, Downtown Seaford and City Hall. Overhead electric lines exist on site. Due to the recent closing of the substation on the River at Pine Street, this is

OYSTER HOUSE PARK MASTER PLAN REPORT

the ideal time to reroute the service away from the River and place the line underground to improve the viewshed and maximize space on site.



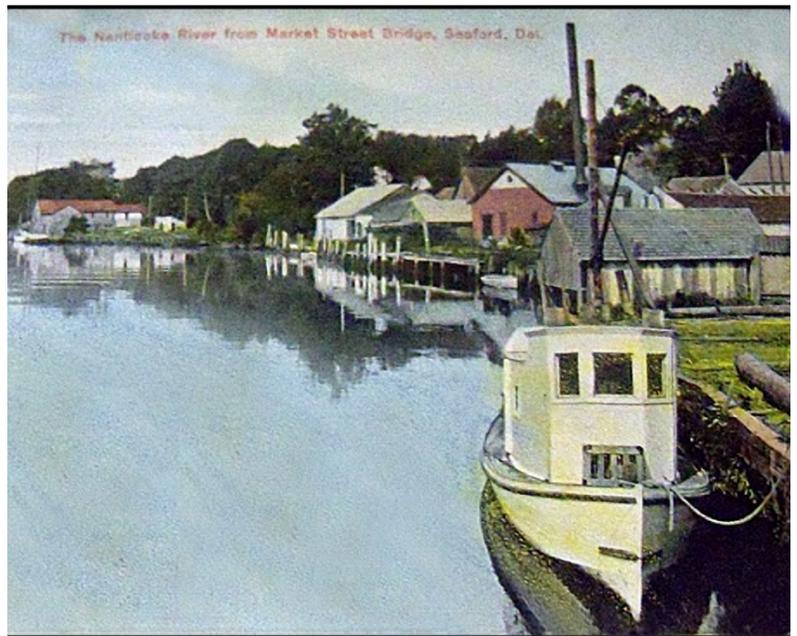
UTILITIES

EXISTING OVERHEAD ELECTRIC E — L — F — E —
 EXISTING SANITARY SEWER 18S — 18S — 18S —

- Phase I Environmental Site Assessment, completed by EMG Group, Inc. on December 17, 2009 revealed no evidence of recognized environmental issues, historical recognized environmental issues, controlled recognized environmental issues or significant data gaps or business environmental risks in connection with the site. Meets ASTM Standard 1527-13.
- Archaeological and Historic Assessment, completed by Ed Otter, Inc. in November, 2019 is an effort to understand what archaeological issues would be involved in property development. The property appears to have been created during the late 19th century by filling a portion of the Nanticoke River. There is potential for archaeological deposits within the fill including bulkheading, cribbing, buried boats, and the foundations and features of a shipyard and oyster house dating from the 20th century. Auger testing of the fill could be informative. Specific recommendations for additional archaeological work are reserved for development plans to be proposed. The 1888 deed to William Adams makes reference to two wharfs on the property. One is likely the Horsey's Wharf shown on the east end of the parcel in the 1863 Pomeroy and Beens Atlas. The second is possibly the Adams Wharf. A significant amount of filling must have occurred between 1877 and 1891. As the shoreline appears about 100 feet south of its previous location. All of the Sanborn Maps show a two-story frame building on the west end of the property in an area that had previously been water. In 1891 the building had one single story and

OYSTER HOUSE PARK MASTER PLAN REPORT

is labeled as a ship carpenter building. Just east of the building is an area marked 'shipways' which would be an area for launching ships or hauling them out of the water for repairs. On the east end of the property is a fertilizer warehouse. An undated photograph from the late 19th or early 20th century shows a two-story frame building seen left of center. This is the ship carpenter building / oyster house. This building can also be seen in a 1910 postcard photo taken from upriver.



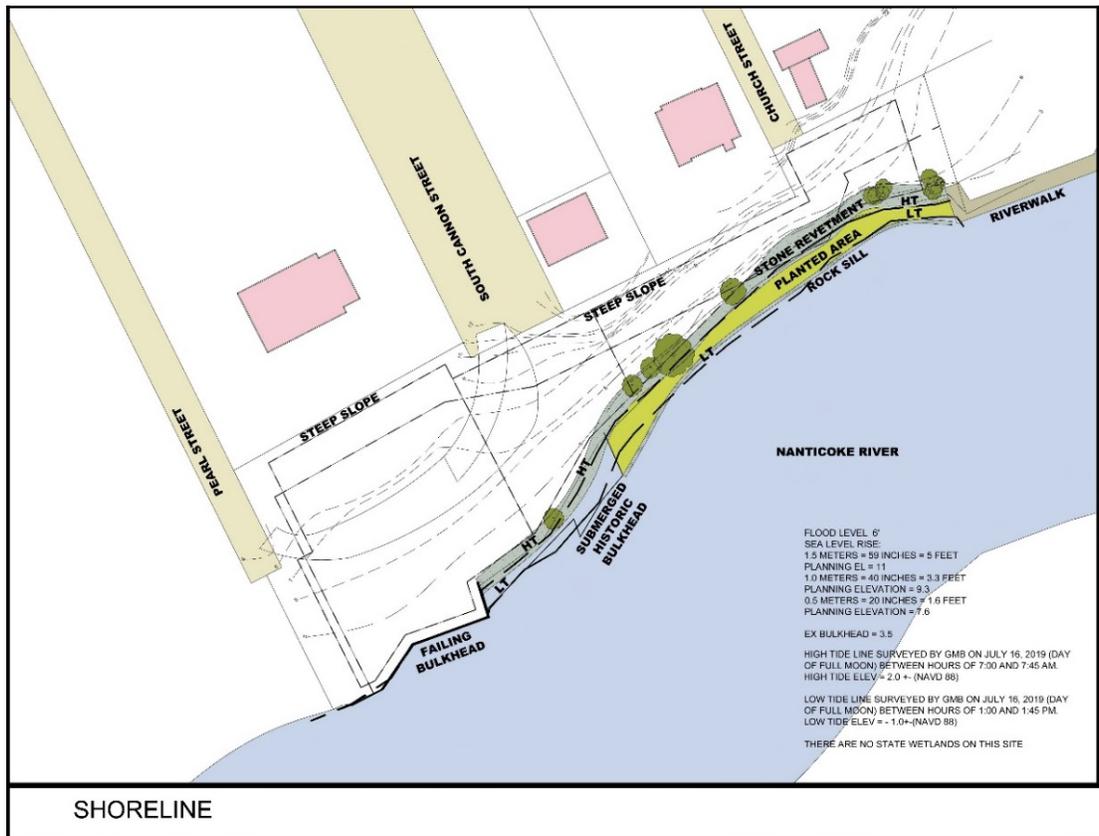
Specific archaeological recommendations for this project can be directed at specific impacts. Development plans call for creating an amphitheater, pavilion, a dock, a boardwalk, and buildings. The proposed dock would replace the existing bulkhead and add fill to the land. Assuming the existing bulkhead is not considered historic, this work would have minimal impacts to historic resources. Proposed buildings appear to be located in areas not likely to contain historic resources. Paving will occur on top of existing fill and impacts to historic resources are unlikely. Any additional filling on the property would serve to protect what lies below.

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The installation of the boardwalk, and to a lesser extent the floating dock, will require pilings. This most likely will require a federal permit and could trigger historic resource compliance under Section 106 of the National Historic Preservation Act of 1966, as amended. There may be potential for submerged cultural resources (shipwrecks) to exist within the project area. An archaeological survey for submerged resources may be required.

Considering the nature of the potential resources and proposed impacts a few recommendations are in order. It could be informative to conduct auger tests to determine the depth, nature, and stratigraphy of the fill. These tests might provide data to assess any buried materials within the fill and the sequence of filling. If there are to be deep impacts within the fill the bore hole testing by an archaeologist is recommended. It is also recommended that an underwater survey be conducted in areas where piling and other disturbances will occur. This work could be required under a section 106 permit (for the complete Archaeologic Assessment Report see Appendix page A 18 – A 68).

- **Shoreline:** The site lies along the Nanticoke River with about 475 LF of shoreline. Shoreline Stabilization has been completed for about $\frac{3}{4}$ of the shoreline, comprised of a rip-rapped bank, a stone sill at water level and wetland plantings between. The remaining $\frac{1}{4}$ of shoreline is bulkhead, which is in failing condition. This could be fixed but would need a combination DNREC and USACE SPG20 Permit. Additionally, a section of submerged, historic wood bulkhead, which should be preserved, lies just off shore.



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- State Tidal Wetlands: None on site
- Federal USACE Non-tidal Wetlands: None on site
- Flood level Elevation 6.0
- Sea level Rise: predicted to be between 1 1/2 to 5 feet. This would raise the flood level elevation to between 7 1/2 and 11 feet.
- DNREC TMDL required reductions for the Nanticoke River is: N reduction 30%, P reduction 50%, Bacterial reduction 2%.
- Soils on site are Evesboro loamy sand 5 – 15% slopes (EvD) and Henlopen Rosedale Urban Land 0 – 2% slopes (HsA). These are both excessively drained, rapidly permeable soils. Elevations rises gently landward across the site, from -1.4 at water's edge to 4.4 at the top of bank and then to 8.0. There is another bank at the back of the parcel, along the adjacent properties, that rises to about elevation 14.0.
- Vegetation on the site is predominately lawn. There are seven mature deciduous trees along the River. Additionally, the steep bank along the rear property line is grown up with native and invasive vegetation. Several large deciduous trees stand at the top of the bank.
- Stormwater Management: The proposed park site lies at the foot of the hill of Cannon St and Pearl St. The site ranges in grade from Elevation 3 to 9. At the top of the hill is High Street which has a grade of roughly Elevation 26. Stormwater runoff from Cannon and Pearl Streets, along with portions of High St and the Mt. Olivet parking lot, makes its way to the foot of the hill, where it either overland flows to the river or infiltrates.

The proposed stormwater management system for the site will need to account for the off-site drainage area from the feeder streets. The Master Plan will create a functional, attractive, natural-appearing and "model" Stormwater Management system. The park's stormwater management system is designed to promote environmental stewardship through the implementation of green infrastructure retrofits for water quality improvements.

The proposed park site borders the Nanticoke River which is listed in Section 7406 of the Delaware Natural Resources and Environmental Control (DNREC) Administrative Code, "TMDLs or Nutrients for the Nanticoke River and Broad Creek have excessively high amounts of nitrogen and phosphorus. The TMDL requires a 50% reduction from nonpoint source phosphorus and a 30% reduction in nonpoint source nitrogen. In addition, as part of the Chesapeake Bay overall watershed, the City of Seaford is included in Delaware's Phase II and draft Phase III Chesapeake Bay Watershed Implementation Plan (WIP). Finally, DNREC has recently expanded the universe of municipalities requiring NPDES Phase II MS4 permit coverage to include the City of Seaford. By incorporating a stormwater project that will address water quality runoff, the proposed project would support the City's efforts to meet the TMDL, WIP and MS4 goals, and thus be eligible for water quality improvement grants that are available through DNREC's Division of Watershed Stewardship, EPA's Green Streets and Chesapeake Bay Stewardship Funds and the National Fish and Wildlife Foundation (NFWF) Enhancement Fund.

- Buildable Area: The buildable area on site is limited by Access and turn-around from Cannon and Pearl Streets that meets State of Delaware Fire Code (see page 12). Additionally, a 25' Utility Easement for relocated Electric and Sanitary Sewer will be established where building will be prohibited. The existing interceptor sewer that crosses the proposed site is a critical transmission line that carries sewage from a large service area that includes the hospital, three assisted living facilities, four schools, several medical offices, the Route 13 corridor (restaurants and shopping centers), City Hall and downtown Seaford, The

OYSTER HOUSE PARK MASTER PLAN REPORT

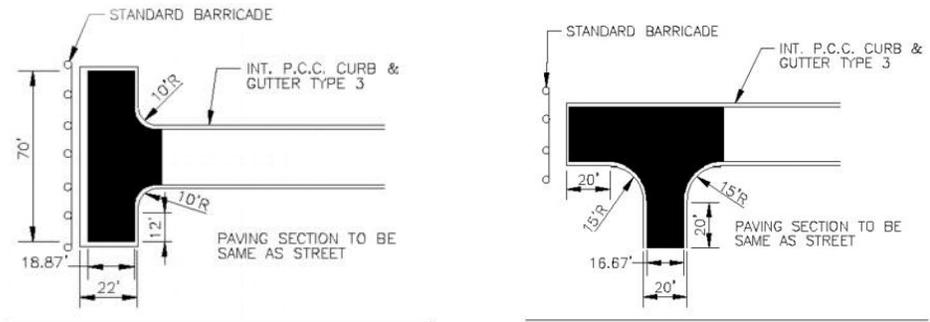
To downtown offices, shops & restaurants
To Seaford Museum
To the Nanticoke River (The site is a designated stop on the Captain John Smith National Water Trail.)



SITE ANALYSIS: PEDESTRIAN and VEHICULAR CIRCULATION

- Emergency Access for Fire and Medical: Delaware State Fire Protection Regulations, Chapter 5 Section 2.3 requires “Any dead-end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that emergency apparatus will be able to turn around by making not more than one backing maneuver. Turn-arounds shall be arranged in accordance with the two standard designs shown in.

OYSTER HOUSE PARK MASTER PLAN REPORT



OYSTER HOUSE PARK CONCEPT PLANS

July 27, 2019, the Oyster House Planning Committee held its second Meeting to review two Preliminary Concept Plans, Option A and Option B, developed by the Consultants. Features of each Concept Plan were discussed and evaluated and recommendations were received. The consensus was to prepare Option C, combining elements from both Option A and Option B (See Meeting Minutes page AP 1 – AP 7).



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 LANDSCAPE ARCHITECTS & PLANNERS
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 Judy Schwartz, P.E., LEED AP 400 High Street Seaford, Delaware 19973
 Morgan Helfrich, A.I.A., LEED AP Phone: 302.428.1421
 Email: jschwartz@gmbnet.com

LEGEND - PROPOSED

- BUILDING
- PERVIOUS PAVING - Vehicular
- PERVIOUS PAVING - Pedestrian
- TREES
- DOCK & RIVERWALK EXTENSION
- SPOT ELEVATIONS

X 10.0

7:45 AM, HIGH TIDE ELEV = 2.0 +/- (NAVD 88)

1 inch = 20 ft.

City of Seaford, Delaware logo and title block information.



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GERALDINE P. THOMAS &
ROBIN GARY BEARD
DEED: 1668 / 324

431-7.00-22.00
DANA M. SELLER, TRUSTEE
DEED: 4483 / 276

431-7.00-33.00
ROBIN G. BEARD
DEED: 3608 / 9

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RICHARD B. HEDGES, TRUSTEE
DEED: 4546 / 291

431-7.00-289.00
MY OLIVET UNITED
METHODIST
CHURCH
DEED: 2391 / 39

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THE GALLERIA AT RIVERWALK,
LLC
DEED: 4843 / 184
PLAT: 258 / 19

431-7.00-301.00
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LEGEND - PROPOSED

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PERVIOUS PAVING - Vehicular

PERVIOUS PAVING - Pedestrian

TREES

DOCK & RIVERWALK EXTENSION

SPOT ELEVATIONS

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OYSTER HOUSE PARK MASTER PLAN REPORT

August 2, 2019, the Oyster House Planning Committee held its third Meeting to review Preliminary Concept Plan C (See Meeting Minutes and Summary page A 1 - A7).

SOUTH CANNON STREET

An Entry Plaza, with an oyster shell surface, provides pedestrian access from the Mt. Olivet Church City Parking Lot (57 spaces) and High Street businesses.

A T turn-around allows Emergency and User vehicles room to maneuver and gives access to the Visitor Contact Station. A parking area with 1 accessible space is located at the Entry Plaza.

Pervious paving will channel runoff into underground storage which will manage stormwater quantity and treat stormwater quality before it is released to the River.

NATIVE PLANTINGS - CHESAPEAKE BAY & DELAWARE RIPARIAN

The existing steep hill will be regraded and a retaining wall will be used to create a gentle slope that will be planted with native, riparian woody and herbaceous species. This will offer 4-season interest and can act as a demonstration garden. Further, a Buffer between Oyster House Park and the adjacent residential use will be established. Native plantings, including a meadow, canopy and flowering trees, shrubs and flowers, will be established throughout the site.

PEARL STREET

An Entry Plaza, with an oyster shell surface, provides pedestrian access from the Seaford Museum, located 1 block away and offering 8 parking spaces, and High Street businesses.

A T turn-around allows Emergency and User vehicles room to maneuver and gives access to an Amphitheater. Additionally, a drop-off is available, with ramp and stair access to the Bulkhead City Dock.

Pervious paving will channel runoff into underground storage which will manage stormwater quantity and treat stormwater quality before it is released to the River.

SOUTH CANNON STREET

SOUTH PEARL STREET

NATIVE PLANT WALK

An accessible walk will wind through a garden featuring native pollinator species, grasses and perennials, shrubs, understory and canopy trees. Species may include Coneflower, Echinacea, Switchgrass, Fothergilla, Sweetbay Magnolia, Oaks and Maples.

CHURCH STREET

PINE STREET PARKING LOT

A public parking lot, located at the end of Pine Street, offers about 10 spaces.

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OYSTER HOUSE PARK MASTER PLAN REPORT

OPTION C

CANNON STREET

An Entry Plaza, with an oyster shell surface, provides pedestrian access from the Mt. Olivet Church City Parking Lot (57 spaces) and High Street businesses. A T turn-around allows Emergency and User vehicles room to maneuver and gives access to the Visitor Contact Station. A parking area with 1 accessible space is located at the Entry Plaza. Pervious paving will channel runoff into underground storage which will manage stormwater quantity and treat stormwater quality before it is released to the River.

NATIVE PLANTINGS - CHESAPEAKE BAY & DELAWARE RIPARIAN ENVIRONMENT

The existing steep hill will be regraded and a retaining wall will be used to create a gentle slope that will be planted with native, riparian woody and herbaceous species. This will offer 4-season interest and can act as a demonstration garden. Further, a Buffer between Oyster House Park and the adjacent residential use will be established. Native plantings, including a meadow, canopy and flowering trees, shrubs and flowers, will be established throughout the site. Additionally, a Native Plant Walk will be created to link the Visitor Contact Station at Cannon Street with the east end of the site. (See Preliminary Master Landscape Plan AP 70)

PEARL STREET

An Entry Plaza, with oyster shell paving, provides pedestrian access from the Seaford Museum, located 1 block away and offering 8 parking spaces, and High Street businesses.

A T turn-around allows Emergency and User vehicles room to maneuver and gives access to an Amphitheater. Additionally, a drop-off is available, with ramp and stair access to the Bulkhead City Dock.

Pervious paving will channel runoff into underground storage which will manage stormwater quantity and treat stormwater quality before it is released to the River.

WATERFRONT DECK

The Waterfront Deck will enhance the community's ability to access the recreational and natural resources of the Nanticoke River. The existing, failing Bulkhead will be replaced and the grade will be raised - in anticipation of sea-level rise. A fixed pier will support a gangway and floating docks to accommodate motor boats, canoes and kayaks. Kayak storage, restrooms or a rinse station could be offered at the proposed Amphitheater building. The City Dock is an ideal spot for an iconic landmark, perhaps an oysterman statue, giant tongs or oyster can labels.

AMPHITHEATER

The Amphitheater is envisioned as an outdoor gathering space to be used for community events such as the Riverfest and Summer Music Series. An 18x30 shed-type Building could be used as a stage, for a picnic shelter or for education displays. The grass amphitheater would accommodate about 35 people on each of two steps with 50 to 60 people seated on the lawn. An paved walkway provides an accessible path, rising from the Amphitheater Building at el 9 to the Visitor Contact Station at el 12.

VISITOR CONTACT STATION

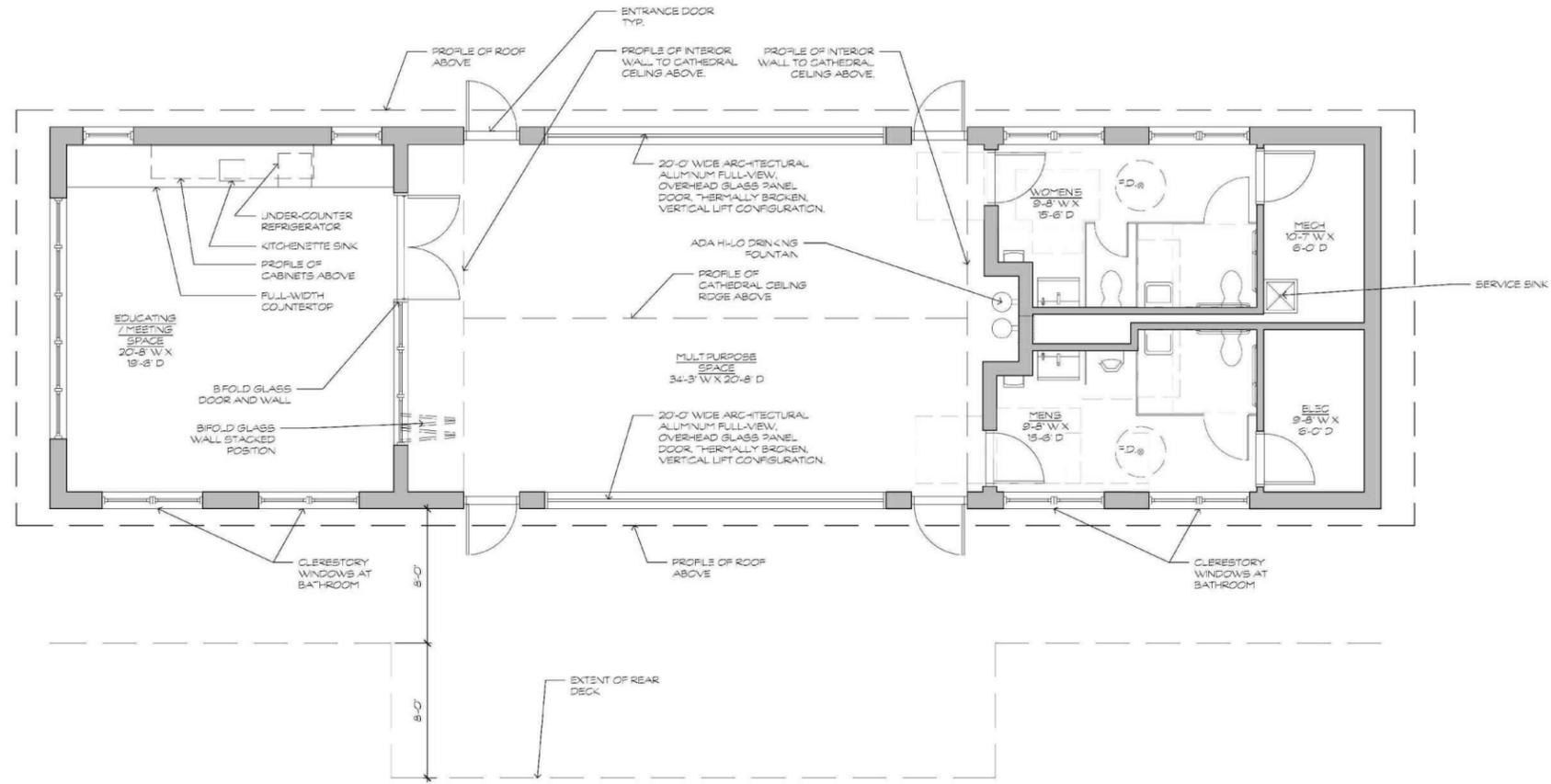
The 24x70 Building is located at the foot of Cannon Street and will allow visual and pedestrian access through to the River. An education / meeting room and restrooms will flank this central display space, which features roll-up, glass doors. A large porch on the River side will link to the Riverwalk and to the Amphitheater.

The Building will feature 3 distinct spaces that can be used independently or in conjunction for large events. They could also be offered for independent uses. A meeting room could accommodate 50-75 people for classes, meetings or other community events. The central Multi-purpose Interpretive room can be opened to Cannon Street and to the Riverfront by raising glass, garage-type doors. This room will house interpretive panels and

OYSTER HOUSE PARK MASTER PLAN REPORT

other displays designed to educate the public about the River and City's history, ecology and recreation opportunities. The final room will provide restrooms, mechanical systems and storage.

h:\Projects\2018\190127 oyster house park master plan\Drawings\current arch drawings\1.2 FLOOR PLAN.dwg, 12/16/2019 3:57 PM, Lee K. Whaley



FLOOR PLAN
1/4" = 1'-0"

las LANDSCAPE ARCHITECTURAL SERVICES, L.L.C.
 WETTER T. SPANIO, R.L.A., A.S.L.A. F.O. 804 293, Dover, Delaware 19933
 THOMAS GARDNER, R.L.A., A.S.L.A. Phone: 302.336.4633
 Email: thomas@las-net.com

GMB GEORGE MILES & BUHR, LLC ARCHITECTS & ENGINEERS
 402 W. 3rd St. Seaford, Delaware 19973
 Phone: 302.438-3415
 Email: gmb@seafordgmb.com

PROJECT #	190127
DATE	12-16-19
DESIGNER	MBH
CHECKER	MBH
DATE	12-16-19

Oyster House Park
City of Seaford, Delaware

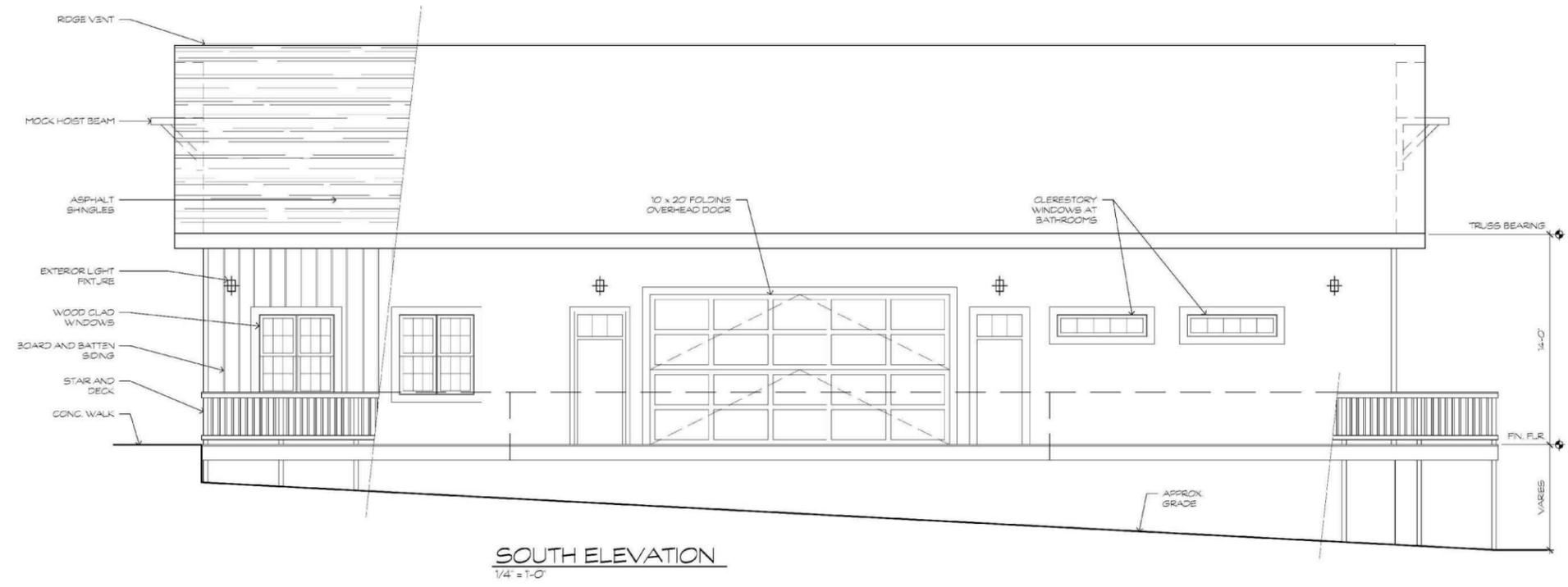
FLOOR PLAN

SHEET
A1.1

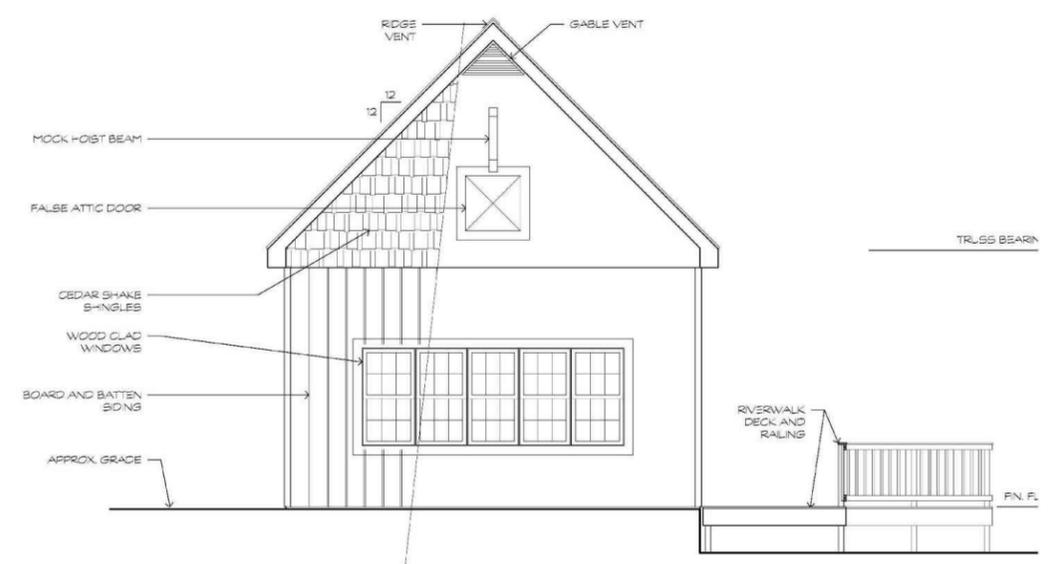
LANDSCAPE ARCHITECTURAL SERVICES, L.L.C.
GEORGE MILES & BUHR, L.L.C.
ARCHITECTS & ENGINEERS
REGISTERED PROFESSIONALS
IN THE STATE OF DELAWARE

ELEVATIONS

Oyster House Park
City of Seaford, Delaware



SOUTH ELEVATION
1/4" = 1'-0"



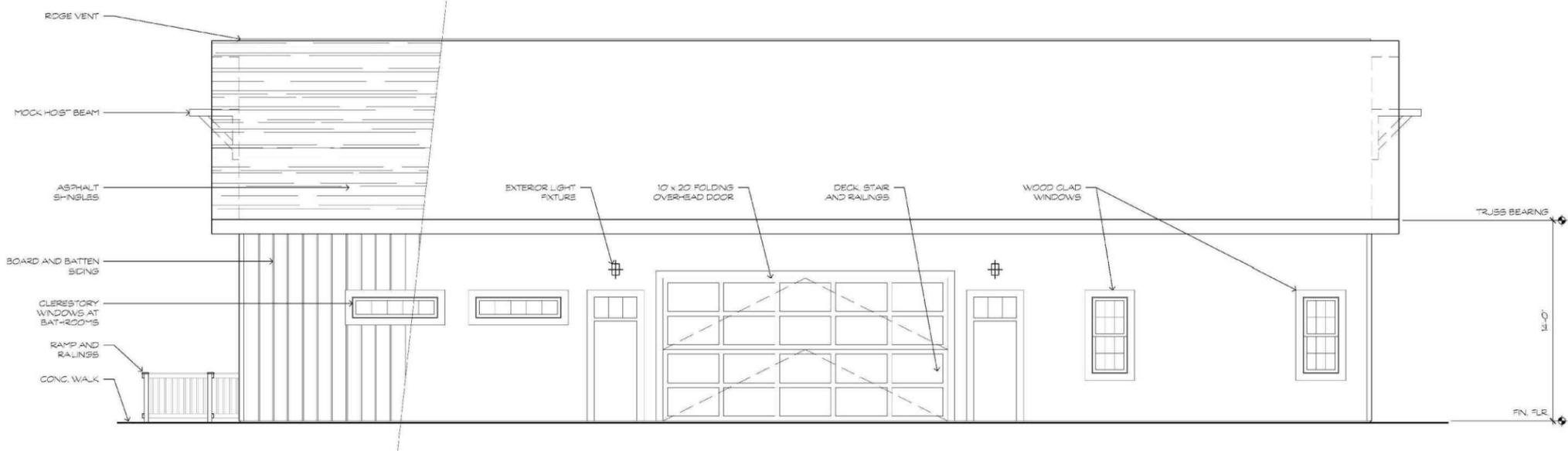
WEST ELEVATION
1/4" = 1'-0"

las LANDSCAPE ARCHITECTURAL SERVICES, L.L.C.
1000 N. STATE ST. SEAFORD, DE 19973
P.O. BOX 200 SEAFORD, DE 19973
PHONE 302.204.4676 FAX 302.204.4675
WWW.LASARCH.COM

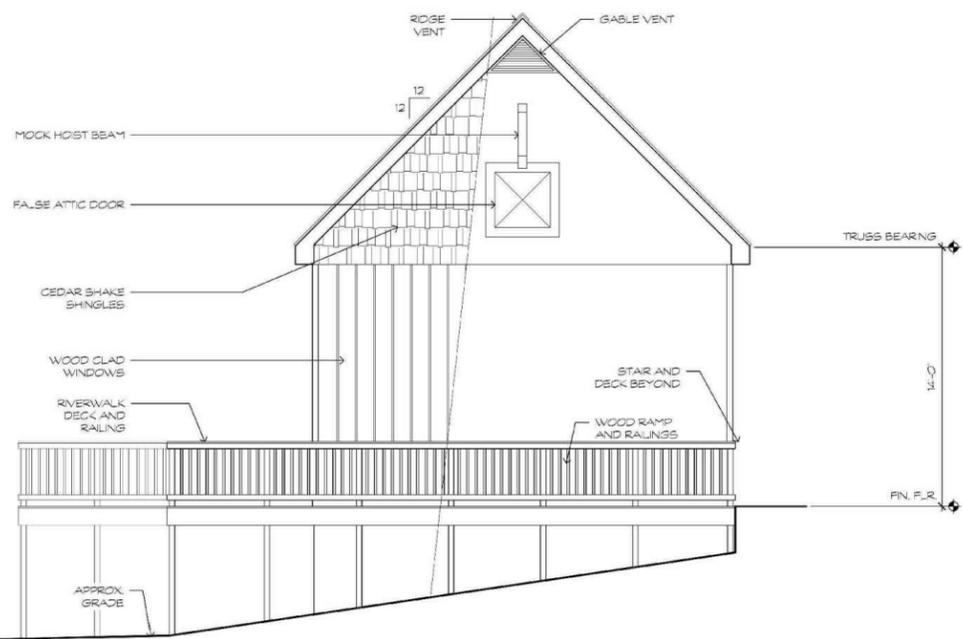
GMB GEORGE MILES & BUHR, L.L.C.
ARCHITECTS & ENGINEERS
1000 N. STATE ST. SEAFORD, DE 19973
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PHONE 302.204.4676 FAX 302.204.4675
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PROJECT # 190727	DATE 12/15/2018
DESIGNED BY JMB	CHECKED BY JMB
DRAWN BY JMB	DATE 12/15/2018
FINAL DESIGN DEVELOPMENT - 15.11.18	

H:\Projects\2018\190727 Oyster House Park master plan\Drawings\current arch drawings\A2.1 ELEVATIONS-Revised.dwg, 12/15/2018 3:57 PM, Lee R. Whaley



NORTH ELEVATION
1/4" = 1'-0"



EAST ELEVATION
1/4" = 1'-0"

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PH: 302.438.7200
EM: jswartz@gmbe.com

SHEET
A2.2

ELEVATIONS

Oyster House Park
City of Seaford, Delaware

DATE: 12.12.19
CHECKED BY: BHT
FINAL DESIGN DEVELOPMENT - 12.12.19

OYSTER HOUSE PARK MASTER PLAN REPORT

RIVERWALK

A raised boardwalk system will connect the existing Riverwalk and the proposed Visitor Contact Station and to the City Dock. It will also provide connection between downtown and the River.

NANTICOKE RIVER EVENT AREA

Access to this small-group use area is by stairs from Church Street or by an accessible path from Cannon Street, created by regrading the existing steep hill. It can also be accessed from the existing Riverwalk. This area will offer an 15x24 pavilion with a story circle, totem or other feature.

UTILITIES

The existing underground sewer main needs to be replaced. The existing overhead electric lines are no longer needed since the power station has been closed. Both of these utilities will be redesigned and relocated underground within a 25' easement along the landward property lines.

OYSTER HOUSE PARK MASTER PLAN **PRESENTATION & PUBLIC INPUT**

On August 13, 2019 a Meeting was held to present the Preliminary Concept Master Plan to the City Council and to the Public for review and comment. Twenty-six members of the public attended and signed in. **The City also posted Option C Preliminary Master Plan on its website. Comments were received by the City of Seaford until 4 pm. on August 20, 2019.**

Of the 15 comments received through comment cards, emails or social media, 14 (93%) were positive and supportive of the Final Master Plan Option C (see Appendix pages AP 8 – 10.) The final comment objected to eliminating the vehicle connection between Cannon Street and South Pearl Street. This connection allowed deliveries to be made to the Higgins - Lord Brothers Warehouse, as Streetscape Improvements completed in 1999 installed planting beds which limited turning radii from High Street onto Pearl Street. This issue was not addressed in the Final Master Plan Option C. Instead the City and its consulting engineer, GMB, will re-design the planting bed, providing a depressed curb to allow access to Pearl Street from High Street. This will be completed as a separate project prior to construction of Oyster House Park.

Landscape Architectural Services revised the Master Plan, taking all comments into consideration to prepare a Final Master Plan. Building plans & elevations were developed by our consultant George, Miles and Buhr. A probable cost estimate and a phased construction timeline were also developed (See pages 10 – 12).

The Oyster House Park Final Master Plan will be presented to City Council for approval on February 25, 2020. It is anticipated that the first Phase of construction of Oyster House Park could be completed in late 2021 depending on funding availability.

OYSTER HOUSE PARK PERMITTING

Construction of each Phase of Oyster House Park will require permits from various regulating agencies.

- Authorization from the Department of Natural Resources and Environmental Control (DNREC) Wetlands and Subaqueous Lands Section is required for activities in tidal wetlands or in tidal and non-tidal waters in the State of Delaware. **This will be required for Phase 1.**
- Authorization from the Army Corps of Engineers (ACOE) is required for activities in tidal wetlands or in tidal and non-tidal waters in the State of Delaware. **This will be required for Phase 1.**
- Permits from Sussex Conservation District for Stormwater Management and Sediment & Erosion Control will be required for **Phases 1, 2, 3 and 4.**
- Review and approval by the State Fire Marshall and the Seaford Volunteer Fire Co. is required for **Phase 2 and 3.**
- Review and approval by the State of Delaware Architectural Accessibility Board will be required for **Phases 1, 2, 3 and 4.**
- A Building Permit will be required for **Phase 3.**
- City of Seaford Water & Sanitary Sewer connection required for **Phase 3.**

On 2-13-2020, Landscape Architectural Services has submitted the permit applications required for construction of Phase 1: Construct Riverwalk, replace bulkhead, construct dock, pier gangway and floating docks. These are:

- Subaqueous Lands Lease

Construction of the Boardwalk Pier, Gangway and Floating Docks will require this permit.

- Wetlands Permit

Construction of the Boardwalk will require this permit.

- Bulkhead - Repair and Replace

Replacing the Existing Bulkhead will require this permit.

Landscape Architectural Services met with DNREC staff (Subaqueous Lands & Wetlands Program Manager and Environmental Scientist) in October, 2019 and participated in a site visit with them on 12-13-2019 to discuss the Subaqueous Lands Lease. Revisions to the Master Plan were suggested by DNREC staff. These changes are reflected in the Permit Plan dated revised 11-21-2019 (See page AP 72).

A permit for the bulkhead repair and replace and for construction of the boardwalk will be obtained through a joint DNREC and ACOE SPGP 20 permit.

Once the application is received, it is assigned to a Wetlands and Subaqueous Lands Section scientist who will review the application and visit the project site. Public notice is required for most projects.

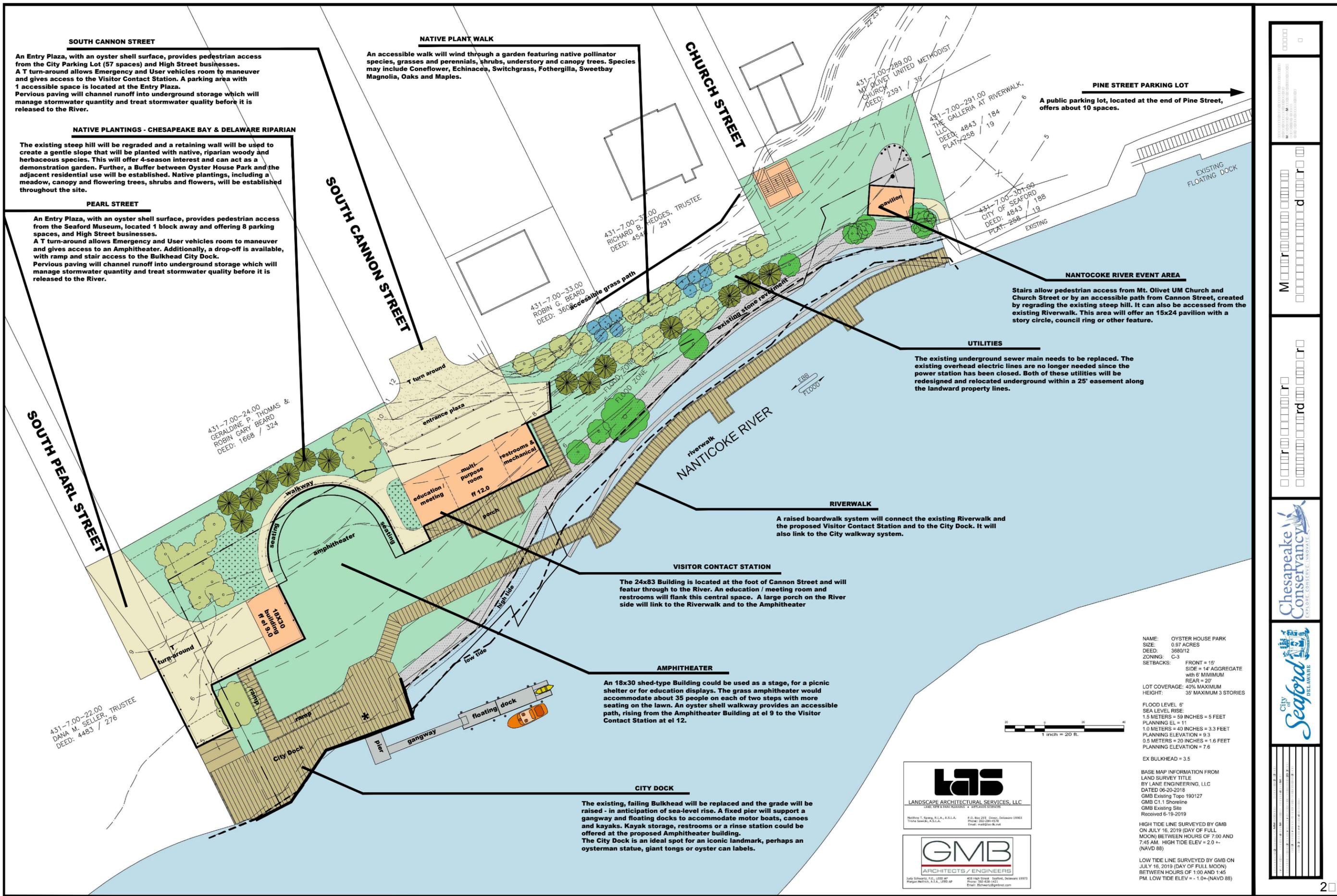
OYSTER HOUSE PARK MASTER PLAN REPORT

This consists of advertising a basic project description in the newspaper and waiting for a period of twenty days to receive public comments or requests for public hearings.

Once the 20-day comment period has passed, the project is given a final review by the staff scientist. This will include public comments and concerns the Department may have. For Subaqueous Lands Permits, a final permit decision is made and if the project is approved, the Permit and/or Certification is prepared and issued.

For projects requiring a Subaqueous Lands Lease, the lease is first sent to the applicant to be signed and notarized and is then returned to the Department for the Cabinet Secretary's signature. Once the final lease document is signed by all of the parties, it must be recorded at the Recorder of Deeds Office in the appropriate county in order to be considered valid.

The processing time required to issue authorizations that require public notice is approximately 60-90 days.



SOUTH CANNON STREET
 An Entry Plaza, with an oyster shell surface, provides pedestrian access from the City Parking Lot (57 spaces) and High Street businesses. A T turn-around allows Emergency and User vehicles room to maneuver and gives access to the Visitor Contact Station. A parking area with 1 accessible space is located at the Entry Plaza. Pervious paving will channel runoff into underground storage which will manage stormwater quantity and treat stormwater quality before it is released to the River.

NATIVE PLANTINGS - CHESAPEAKE BAY & DELAWARE RIPARIAN
 The existing steep hill will be regraded and a retaining wall will be used to create a gentle slope that will be planted with native, riparian woody and herbaceous species. This will offer 4-season interest and can act as a demonstration garden. Further, a Buffer between Oyster House Park and the adjacent residential use will be established. Native plantings, including a meadow, canopy and flowering trees, shrubs and flowers, will be established throughout the site.

PEARL STREET
 An Entry Plaza, with an oyster shell surface, provides pedestrian access from the Seaford Museum, located 1 block away and offering 8 parking spaces, and High Street businesses. A T turn-around allows Emergency and User vehicles room to maneuver and gives access to an Amphitheater. Additionally, a drop-off is available, with ramp and stair access to the Bulkhead City Dock. Pervious paving will channel runoff into underground storage which will manage stormwater quantity and treat stormwater quality before it is released to the River.

NATIVE PLANT WALK
 An accessible walk will wind through a garden featuring native pollinator species, grasses and perennials, shrubs, understory and canopy trees. Species may include Coneflower, Echinacea, Switchgrass, Fothergilla, Sweetbay Magnolia, Oaks and Maples.

PINE STREET PARKING LOT
 A public parking lot, located at the end of Pine Street, offers about 10 spaces.

NANTOCOKE RIVER EVENT AREA
 Stairs allow pedestrian access from Mt. Olivet UM Church and Church Street or by an accessible path from Cannon Street, created by regrading the existing steep hill. It can also be accessed from the existing Riverwalk. This area will offer an 15x24 pavilion with a story circle, council ring or other feature.

UTILITIES
 The existing underground sewer main needs to be replaced. The existing overhead electric lines are no longer needed since the power station has been closed. Both of these utilities will be redesigned and relocated underground within a 25' easement along the landward property lines.

RIVERWALK
 A raised boardwalk system will connect the existing Riverwalk and the proposed Visitor Contact Station and to the City Dock. It will also link to the City walkway system.

VISITOR CONTACT STATION
 The 24x83 Building is located at the foot of Cannon Street and will feature through to the River. An education / meeting room and restrooms will flank this central space. A large porch on the River side will link to the Riverwalk and to the Amphitheater

AMPHITHEATER
 An 18x30 shed-type Building could be used as a stage, for a picnic shelter or for education displays. The grass amphitheater would accommodate about 35 people on each of two steps with more seating on the lawn. An oyster shell walkway provides an accessible path, rising from the Amphitheater Building at el 9 to the Visitor Contact Station at el 12.

CITY DOCK
 The existing, failing Bulkhead will be replaced and the grade will be raised - in anticipation of sea-level rise. A fixed pier will support a gangway and floating docks to accommodate motor boats, canoes and kayaks. Kayak storage, restrooms or a rinse station could be offered at the proposed Amphitheater building. The City Dock is an ideal spot for an iconic landmark, perhaps an oysterman statue, giant tongs or oyster can labels.

431-7.00-24.00
 GERALDINE P. THOMAS &
 ROBIN GARY BEARD
 DEED: 1668 / 324

431-7.00-33.00
 ROBIN G. BEARD
 DEED: 360

431-7.00-37.00
 RICHARD B. HEDGES, TRUSTEE
 DEED: 454 / 291

431-7.00-289.00
 MT. OLIVET UNITED METHODIST
 CHURCH
 DEED: 2391 / 39

431-7.00-291.00
 THE GALLERIA AT RIVERWALK,
 LLC
 DEED: 4843 / 184
 PLAT: 258 / 19

431-7.00-301.00
 CITY OF SEAFORD
 DEED: 4843 / 188
 PLAT: 258 / 19
 EXISTING

431-7.00-22.00
 DANA M. SELLER, TRUSTEE
 DEED: 4483 / 276

NAME: OYSTER HOUSE PARK
 SIZE: 0.97 ACRES
 DEED: 3680/12
 ZONING: C-3
 SETBACKS: FRONT = 15'
 SIDE = 14' AGGREGATE
 with 6' MINIMUM
 REAR = 20'
 LOT COVERAGE: 40% MAXIMUM
 HEIGHT: 35' MAXIMUM 3 STORIES
 FLOOD LEVEL 6'
 SEA LEVEL RISE:
 1.5 METERS = 59 INCHES = 5 FEET
 PLANNING EL = 11
 1.0 METERS = 40 INCHES = 3.3 FEET
 PLANNING ELEVATION = 9.3
 0.5 METERS = 20 INCHES = 1.6 FEET
 PLANNING ELEVATION = 7.6
 EX BULKHEAD = 3.5

BASE MAP INFORMATION FROM
 LAND SURVEY TITLE
 BY LANE ENGINEERING, LLC
 DATED 06-20-2018
 GMB Existing Topo 190127
 GMB C1.1 Shoreline
 GMB Existing Site
 Received 6-19-2019
 HIGH TIDE LINE SURVEYED BY GMB
 ON JULY 16, 2019 (DAY OF FULL MOON)
 BETWEEN HOURS OF 7:00 AND
 7:45 AM. HIGH TIDE ELEV = 2.0 +/-
 (NAVD 88)
 LOW TIDE LINE SURVEYED BY GMB ON
 JULY 16, 2019 (DAY OF FULL MOON)
 BETWEEN HOURS OF 1:00 AND 1:45
 PM. LOW TIDE ELEV = -1.0 +/- (NAVD 88)

LAS
 LANDSCAPE ARCHITECTURAL SERVICES, LLC
 LAND, SITE & FARM PLANNING • SURFACE SERVICES
 Matthew T. Spang, R.L.A., A.S.L.A. P.O. Box 203 Dover, Delaware 19903
 Trisha Sawicki, A.S.L.A. Phone: 302-284-0378
 Email: mat@las-llc.com

GMB
 ARCHITECTS / ENGINEERS
 Judy Schwartz, P.E., LEED AP 408 High Street, Seaford, Delaware 19973
 Morgan Heltzel, A.S.L.A., LEED AP Phone: 302-238-1121
 Email: jschwartz@gmbinc.com

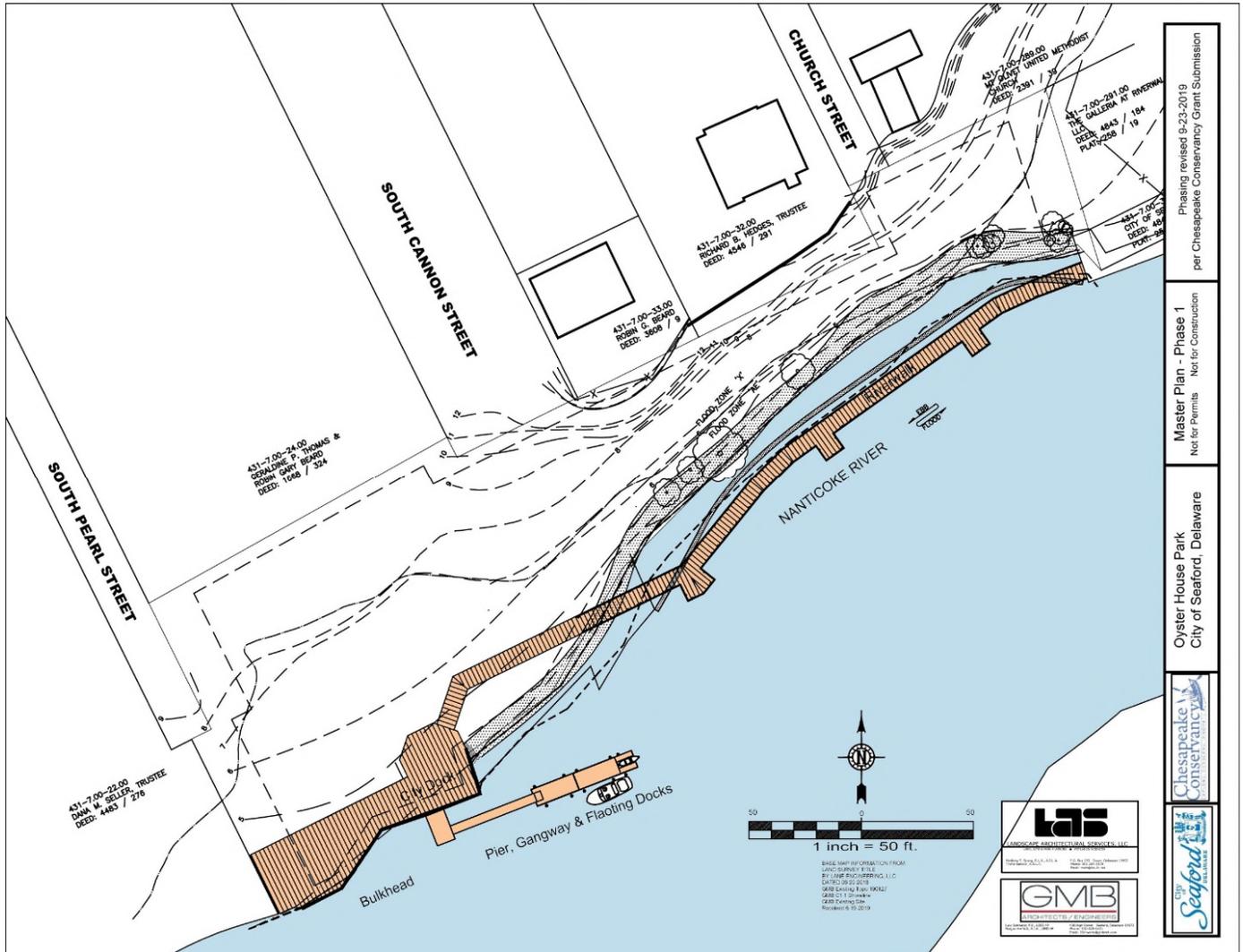
Chesapeake Conservancy
 EXPLORE. CONSERVE. INNOVATE.

City of Seaford
 DELAWARE

OYSTER HOUSE PARK MASTER PLAN REPORT

OYSTER HOUSE PARK CONSTRUCTION PROBABLE COSTS and PHASING

Landscape Architectural Services, LLC and our engineering partner, GMB, have prepared conceptual cost estimates based on the Concept Master Plan, dated “revised 8/6/19 per review concepts”. The Team has broken down the project into (4) phases. These are:



PHASE 1

Construct Riverwalk, underground electric service by the City of Seaford, replace bulkhead, construct pier, gangway and floating docks.

Estimated probable construction Cost for Phase #1, includes 15% contingency and professional fees for design development, construction documents and contract administration; \$1,575,843.

The estimated schedule for completion of Phase I is Fall of 2021 pending available funding.

OYSTER HOUSE PARK MASTER PLAN REPORT

TASK	2019				2020												2021									
	Nov	Dec	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	August	Sept	Oct		
Secure Funding																										
Obtain Permit DNREC Subaqueous Lands																										
Obtain Permit DNREC Repair and Replace Bulkhead																										
Secure Permit USACE Section 408																										
Obtain Letter of Approval USACE Construction																										
Prepare Construction Documents																										
Conduct Bidding																										
Construction																										
Phase 1 Open to the Public																										

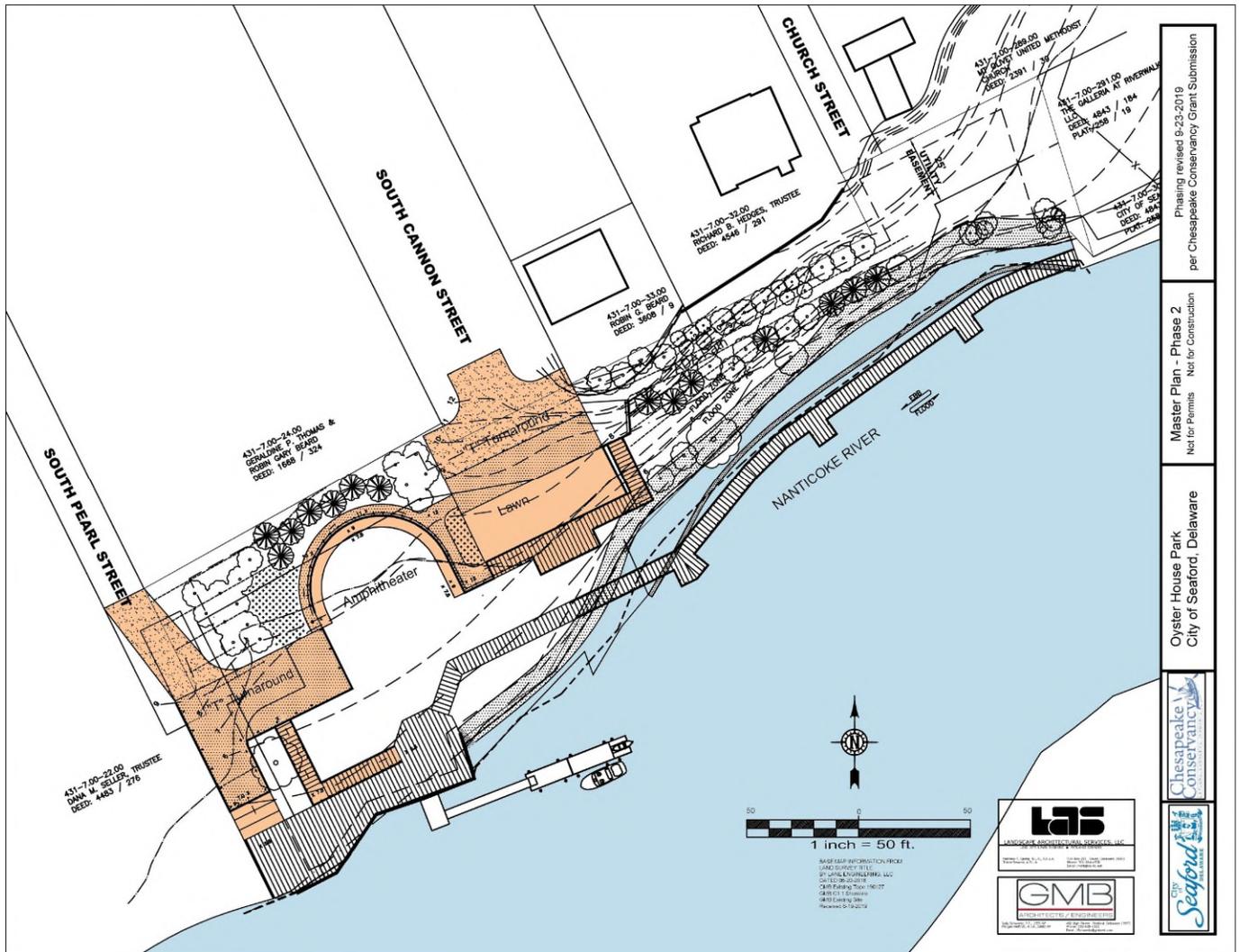


OYSTER HOUSE PARK MASTER PLAN SCHEDULE
 PHASE 1: WATERFRONT IMPROVEMENTS: Riverwalk Extension,
 Bulkhead, Pier, Gangway and Floating Docks



LANDSCAPE ARCHITECTURAL SERVICES, L.L.C.
 VETERAN OWNED BUSINESS
 Matthew T. Spring, R.L.A., A.S.L.A., Director, Delaware 19933
 Trisha Sawicki, A.S.L.A., Project Manager, Delaware 19933
 Phone: 302-366-4439 Fax: 302-366-4439
 Web: lns-arc.net

OYSTER HOUSE PARK MASTER PLAN REPORT



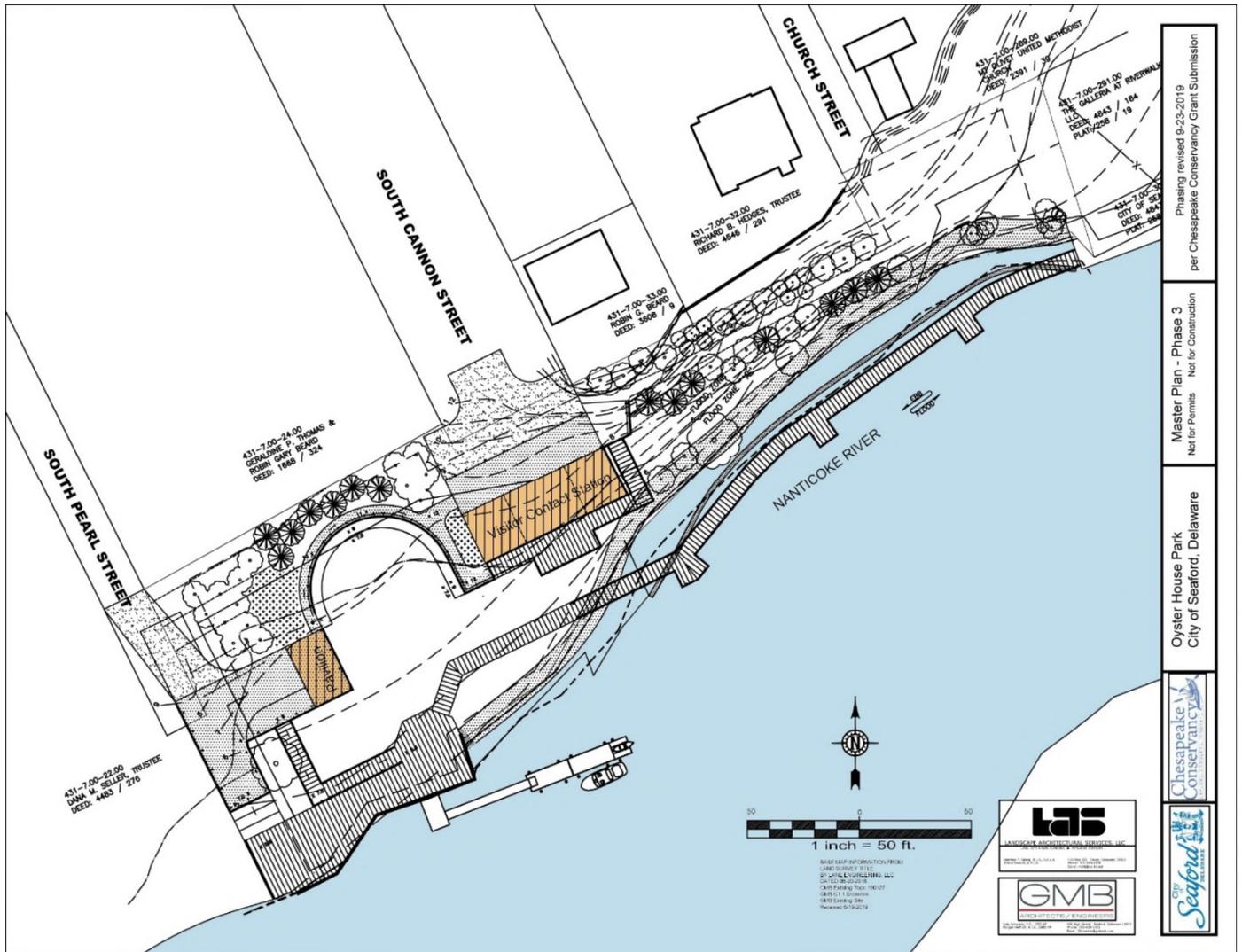
Phase 2

“T” turn around at Cannon and Pear Streets, pervious paving & stormwater management, construct Amphitheater.

Estimated probable costs for Phase #2 including 15% contingency and professional fees for design development, construction documents and construction administration; \$1,021,488.

Phase 2 is proposed to be completed in the summer of 2024 pending available funding.

OYSTER HOUSE PARK MASTER PLAN REPORT



Phase 3

Construction visitor contact station with restrooms and (2) pavilions and landscape improvements. Estimated probable construction cost for Phase #3 includes 15% contingency and professional fees for design development, construction documents and contract administration; \$840,938. Phase 3 is proposed to be completed in fall of 2025 pending available funding.

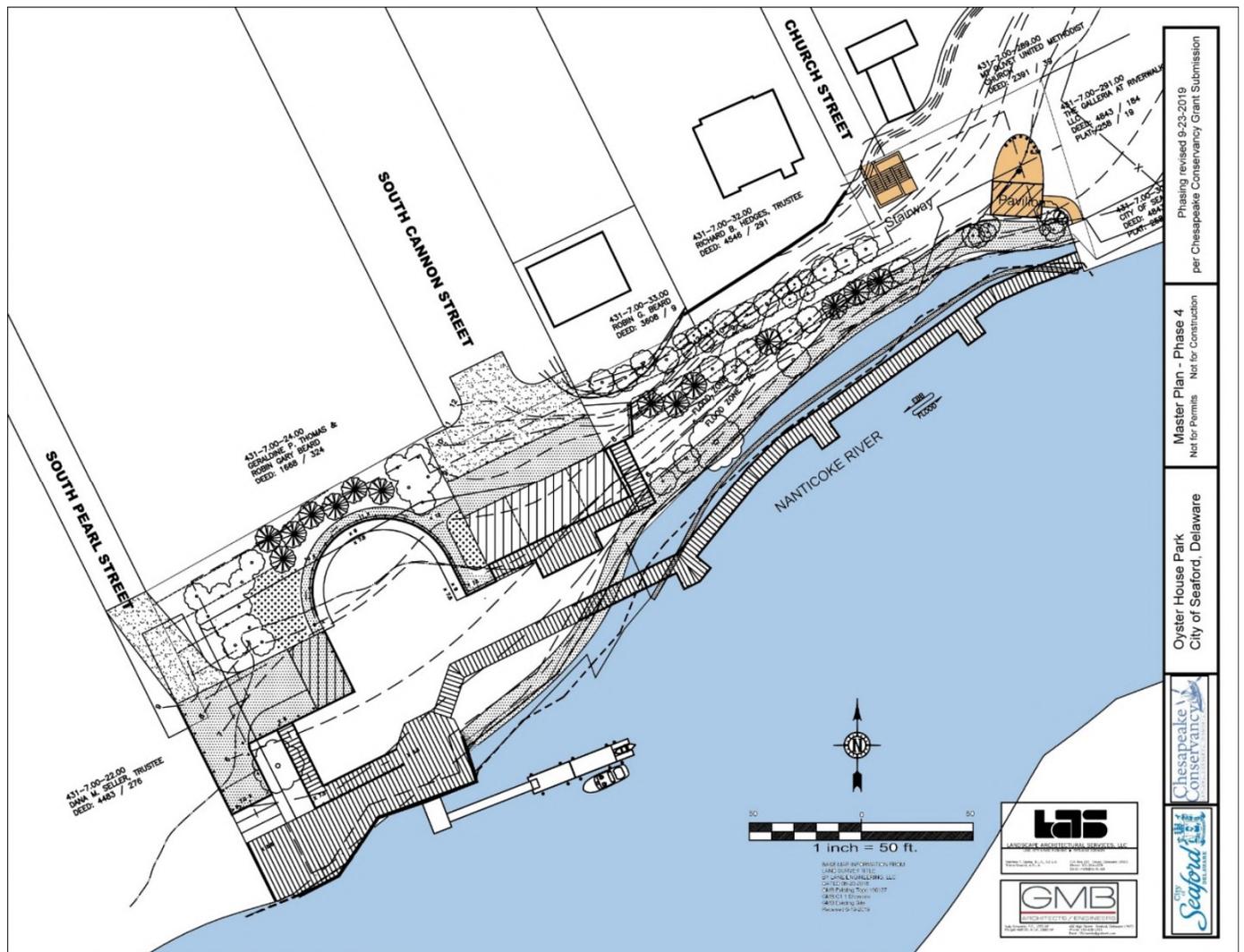


Oyster House Park - Phase 3-Contact Station
Estimated Project Schedule

December 4, 2019

TASK	Duration	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23	
Funding Acquisition	12 mos	[Solid black bar]																							
Schematic Design, Design Development & Construction Documentation		[Solid black bar]																							
Kick Off Meeting with the Design Team and Board to determine final project programming	1 day	[Solid black]																							
Architectural Floor Plans, elevations	4 weeks	[Solid black]	[Solid black]																						
Schematic Design Review by the Board	2 weeks		[Solid black]	[Solid black]																					
Incorporate revisions to the schematic design from Board Comments (30%)	1 week			[Solid black]	[Solid black]																				
Design Development Drawings (60%) Meet with the Board for review.	6 weeks			[Solid black]	[Solid black]	[Solid black]																			
Construction Documentation Including detailing and specifications (90%)	8 weeks				[Solid black]	[Solid black]	[Solid black]	[Solid black]																	
Final review & coordination by the design team and Board (100%)	2 weeks						[Solid black]	[Solid black]																	
Permitting/Approvals		[Solid black bar]																							
Office of State Fire Marshal		[Solid black bar]																							
Prepare/Submit Preliminary Architectural Design	2 weeks						[Solid black]	[Solid black]																	
Receive Review Comments and Modify as necessary	2 weeks						[Solid black]	[Solid black]																	
Submit Final Fire Marshal Permit Documents	6 weeks						[Solid black]	[Solid black]	[Solid black]																
Receive Review Comments and Modify as necessary	2 weeks						[Solid black]	[Solid black]	[Solid black]																
Receive Fire Marshal Building Approval	2 weeks							[Solid black]	[Solid black]																
City of Seaford		[Solid black bar]																							
Submit Final Building Permit Documents	2 weeks								[Solid black]	[Solid black]															
Receive Review Comments and Modify as necessary	2 weeks								[Solid black]	[Solid black]															
Receive Building Permit	1 week								[Solid black]	[Solid black]															
Bidding		[Solid black bar]																							
Advertise for Bid	2 weeks									[Solid black]	[Solid black]														
30 day Bid Period	30 days									[Solid black]	[Solid black]	[Solid black]													
Pre Bid Meeting	1 day									[Solid black]	[Solid black]	[Solid black]													
Bid Opening	1 day									[Solid black]	[Solid black]	[Solid black]													
Bid Award	2 weeks									[Solid black]	[Solid black]	[Solid black]													
Construction		[Solid black bar]																							
Contracts, Bonds and Insurance	3 weeks												[Solid black]	[Solid black]											
PreConstruction Conference/Notice to Proceed	1 day												[Solid black]	[Solid black]											
Submittals/Shop Drawings	3 weeks												[Solid black]	[Solid black]											
Contractor Mobilization	2 weeks												[Solid black]	[Solid black]											
Construction (8 months)	8 months												[Solid black]												
Testing and Inspections	3 weeks												[Solid black]	[Solid black]											
Punch List Completion	2 weeks												[Solid black]	[Solid black]											
Certificate of Occupancy	1 day												[Solid black]	[Solid black]											

OYSTER HOUSE PARK MASTER PLAN REPORT



Phase 4

Construct stairway access from Church Street and paving for “story/Demonstration” area, paving (does not include ID /Sculpture feature), & landscape improvements.

Estimated probable costs for Phase #4 includes 15% contingency, professional fees for design development, construction documentation and administration; \$261,377.

Total Probable Construction Costs to construct the Oyster House Master Plan Concept “C” phases 1-4 (revised 9/21/19) \$3,699,646.

The estimated schedule for completion of the project is Fall, 2026.

Note: costs may vary with time of implementation, final design and materials selections. These costs are based on recent bids and industry costs standards. True and final costs will be determined by the successful bidder based on the bidding climate at that time and on other factors over which Landscape Architectural Services, LLC and their consultants have no control.

ESTIMATED OPERATING COSTS

The following projected operating costs for the proposed Visitor Contact Station building and Site maintenance are probable cost estimates based on our Team's experience. Actual costs may vary based on final design and materials selections and on the time of implementation (4 Phases are estimated to be constructed 2020 through 2024 dependent on funding). A detailed life-cycle analysis for proposed site improvements and buildings are not possible since final design development and construction documents have not been prepared.

Site Maintenance of the proposed structures and landscape elements is estimated to cost \$5,000 per year based on the attached schedule. The Master Plan design selected site features that will reduce long-term maintenance. These include:

- utilizing full-thickness, 2x6 Composite Decking for the Boardwalk Riverwalk. This material has a limited warranty for 25 years and with proper maintenance should last 25 to 35 years.
- Utilizing heavy-duty aluminum safety railing and ADA railing. These have an estimated life of 25 years.
- Turf areas are limited to reduce long-term costs for mowing, fertilizing, insect and weed control, etc. Limiting turf areas also reduces pollutants entering the water.
- Utilizing native plant species reduces the demand for supplemental watering and disease and insect control. Using native plants also creates wildlife habitat and provides food sources for pollinator species and other wildlife.

Estimated probable costs for operating and maintaining the buildings are based on our Team's experience and will vary with the final design and time of implementation. Preliminary building materials selection, such as a 25-year, high-grade asphalt roofing shingles, architectural vinyl (Hardie) plank siding, energy efficient windows and extra insulation will reduce long-term operating and maintenance costs. However, final material selections will be made later, during the Design Development and Construction Documentation phase in 2023 or later depending on funding availability.

Minor operational costs, such as changing HVAC filters, janitorial services or yearly power washing have not been estimated. Long-term maintenance costs, such as repainting the interior every 10 years or replacing windows and roof every 25 years will require significant investment.

- Replace all windows - \$25,000 to 30,000
 - Replace architectural grade asphalt roof shingles and underlayment – \$15,000 to 20,000.
 - Repainting the interior - \$10,000 to 15,000
 - Replacing exterior siding - \$25,000 to 30,000
 - Replace / Upgrade HVAC System - \$25,000
- Accordingly, a long-term operational maintenance fund of \$100,000 to 120,000 should be established for this project.

OYSTER HOUSE PARK MASTER PLAN REPORT

Chesapeake Conservancy and the City of Seaford will work with local stakeholders to determine the best management structure for the Park to maximize financing options and incentives for the project and reduce overall operating and maintenance costs to the City of Seaford.

OYSTER HOUSE PARK FUNDING OPPORTUNITIES

Oyster House Park can be funded through several sources, both public and private. These are:

Delaware Department of Transportation - Transportation Alternatives Program

www.deldot.gov/Programs/tap/index.shtml

TAP is a community-driven program that facilitates the development of non-traditional transportation projects with the goal of providing choices for non-motorized users that are safe, reliable and convenient. DelDOT supports and administers the TAP for all Delaware Projects. The City of Seaford would act as sponsor and would be responsible for 20% of the project costs. The City would also assume the maintenance and legal liability for the duration of the project's useful life. The Oyster House Park would meet funding requirements under the following criteria used by DelDOT:

1. Off road trails.
2. Streetscape and Traffic calming projects.

Application for this grant is open, but it is good to apply sooner rather than later, as funding is limited and applications. The Final Master Plan and the Phase #1 cost estimate (provided in this Report) is all that is needed for the application.

Contact for TAP application: Todd Pryor, DelDOT Planning Section

Phone: 302-760-2000

Email todd.pryor@delaware.gov

Delaware Department of Natural Resources - Outdoor Recreation, Parks and Trails Program

www.dnrec.delaware.gov/parks/Services/Grants.aspx

The Outdoor Recreation, Parks and Trails (ORPT) Program, formerly known as the Delaware Land and Water Conservation Trust Fund (DTF) was established in 1986 as an investment of state monies to provide a stable source of funding for the acquisition of open space and the development of outdoor recreation projects. The ORPT Grant Program is administered by the Delaware Division of Parks and Recreation, Department of Natural Resources & Environmental Control and Trust-earned income is used to fund the competitive Program. Annually, local governments and park districts are notified of available matching funds to assist with park planning, acquisition and development.

County and municipal governments and park districts may request and receive ORPT grant assistance. Projects sponsored by municipalities and counties may receive up to fifty percent (50%) in DTF assistance of an approved project's total costs; park districts are eligible to receive up to seventy-five percent (75%) in ORPT assistance of an approved project's total costs. The balance of funding of an

OYSTER HOUSE PARK MASTER PLAN REPORT

approved project must be provided by the project Sponsor. The Sponsor may obtain its share through partnerships with other governmental agencies, non-profit organizations, and other non-traditional recreation providers. Partnerships with other agencies and organizations are encouraged however, only the municipalities and counties are eligible to apply for ORPT assistance.

Application process is open until late May each year and applications can be submitted at any time. The Final Master Plan and the Final Cost Estimate, along with DNREC's application, are sufficient for this application and could be submitted at any time.

Application for this grant is open until late May each year, but it is good to apply sooner rather than later, as funding is limited and applications. The Final Master Plan and the Phase #1 cost estimate (provided in this Report), along with DNREC's ORPT application is all that is needed for the application.

Delaware Department of Natural Resources - Community Quality Improvement Grants

www.dnrec.alpha.delaware.gov/environmental-finance/community-water-quality-improvement/

The Community Water Quality Improvement Grant is an annually-determined set aside in the Delaware Clean Water State Revolving Fund (CWSRF) Non-Federal Administrative Account. It requires a 25% cash match and must meet state insurance requirements. This grant is intended for projects to improve water quality as part of specific watershed improvement plans. It is meant for programs and projects that demonstrate innovative and sustainable methods, techniques, and/or practices for water quality improvements with cost effective and measurable results.

The Grants must support measurable improvements to surface water and ground water quality throughout the State. They must benefit public education and actions to improve Delaware's water quality. The available funding should be used to assist with project/program implementation with a priority for projects that promote community involvement, leverage additional resources, further education and outreach, demonstrate innovative science, policy, and technology, and provide a project/program approach that is both measurable and transferable in water quality improvements obtained.

Preference is given to projects involving cooperative partnerships and sponsors without a dedicated source of funds for repayment of Clean Water State Revolving Fund loans.

Delaware non-profit organizations, local conservation districts, educational institutions, community organizations, and/or homeowner's associations.

The Final Master Plan and the Phase #1 cost estimate (provided in this Report) is all that is needed for the application.

State of Delaware Bond Bill

Each legislative year, the Delaware General Assembly designates a negotiated portion of the State's fiscal budget is designated for building infrastructure projects. The amount varies depending on the State's economy, income and budgetary needs.

In years when the State's revenue income increases, the State's Delaware and Economic Financial Advisory Council (DEFAC) makes quarterly analysis and estimates funds needed for all State funded

Programs and Services. When an “excess” is estimated, part of those excess funds are dedicated to the State’s “Rainy Day Fund” and the remainder, as approved by the General Assembly, can be spent on public works projects that were not originally funded by that year’s budget. In the past two sessions, millions of dollars were available for “one-time” public works projects. To be eligible for these funds, projects must be proposed by a local government or non-profit organization. These funds are a potential source for Oyster House Park construction. Bond Bill funding has been successfully used by the City of Wilmington for projects on the Christiana Waterfront. They have also been used by Municipalities from Wilmington to Rehoboth Beach to fund construction of Greenways, Trails and Park projects.

Community Environmental Project Fund

www.dnrec.alpha.delaware.gov/community-services/environmental-project-fund/

The concept of the Community Environmental Fund was borne in the House of Representatives in 2003. Legislators sought a strategy to support the restoration of the environment in communities that were damaged by environmental pollution. For the past 10 years, the Department of Natural resources and Environmental Control had collected on average \$500,000 per year in penalties imposed on companies responsible for violations of environmental law. House and Senate Representatives were exploring legislative approaches to use penalty funds constructively and empower local organizations to address the environmental affairs of their communities.

Under HB 192, IRS tax-exempt organizations are eligible for up to \$20,000 in grant funding. These include civic and community organizations, educational institutions, counties, municipal governments, state agencies and quasi-state agencies that represent the community where the infraction or violation occurred and that resulted in a civil or administrative penalty.

HB 192 defines Community Environmental Projects as initiatives undertaken for the purpose of:

1. Pollution Mitigation – projects that eliminate, minimize or abate pollution, or improve conditions within the environment in order to eliminate or minimize risk to human health.
2. Environmental Enhancement – projects developed for the enhancement of natural resources, improvement of indigenous habitat or creation of recreational opportunities for the citizens of Delaware.

Grant applications require a 25% match in funding, volunteer support, services or supplies. Grants are generally available every other year. Eligible organizations are sent a notice when the Grant is open. LAS, LLC has assisted the Cities of Milford and Rehoboth in obtaining grants for Kayak launches.

OYSTER HOUSE PARK MASTER PLAN REPORT

APPENDIX

OYSTER HOUSE PARK TEAM MEETING MINUTES	AP 1 - 8
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**Oyster House Park Project
Kick-Off Meeting
6/25/2019 @ 1:30 p.m.**

The following individuals were in attendance:

Charles Anderson	City of Seaford
Trisha Newcomer	City of Seaford
Berley Mears	City of Seaford
Mike Bailey	City of Seaford
Judy Schwartz	GMB
Matt Spong	LAS
Trisha Sawicki	LAS
Susan White	Sussex Environmental
Cheryl Compton	Sussex Environmental
Ed Otter	Edward Otter, Inc.
Randall Larrimore	Chesapeake Conservancy
Gabrielle Roffe	Chesapeake Conservancy
Melissa Ehrenrich	Chesapeake Conservancy

A program development meeting was held in the Council Room of the Seaford City Hall. The items of discussion were as follows:

Charles opened the meeting by welcoming everyone. Charles then asked everyone to introduce themselves. He stated that the City is looking forward to working with everyone on this project.

Charles stated that Trisha Newcomer will be the Project Manager for the City regarding this project. He asked that he be included in any correspondence in case Trisha is out of the office.

Charles discussed the lines of communications for this project. He stated that any contractual issues will need to be signed by him. Matt Spong will fill that role for LAS. He added that he has executed the contract which is dated July 1st and the purchase order will be issued after July 1; since that is when the City's new fiscal year begins. He added that a separate purchase order will be issued for the \$10,000 for the permitting phase; the City and the Conservancy are collaborating to find the funding for the permitting effort.

The project scope and deliverables were discussed. Sue White will be doing the work for the phase 1 environmental study. Melissa stated that she thought that was completed prior

to the Chesapeake Conservancy purchasing the property; there was an environmental study completed. She will follow up with Joel and if there was one completed; she will provide it to Trisha for dissemination to the group and verification that it is suitable for the Master Plan.

Mr. Otter will be doing an archaeological Phase 1 A study for the property to include looking at maps and prior use of the property. He asked if there were any mapping that showed the sewer line for them to be provided to him. Trisha stated that she will send them over to Matt and he can forward them on to the team. Judy also shared that she located an easement for the property that was from 1959 that she will provide.

The project time line was discussed. Matt provided a draft schedule for the project which showed having a preliminary plan by the beginning of September. After much discussion, it was agreed that Matt will revise the schedule to move up the conceptual plan time frame to accommodate funding requests.

Charles shared that Representative Short recently reached out stating that he will be able to provide funding for some project signage and a potential boardwalk. These two projects could be done in the first phase of the project. Randy stated that he would like to see some signage on the property within the next few months if possible. Charles pointed out when the City did the signage for Kiwanis Park, JD Signs was used who did a great job. He suggested for everyone to go out on site to view the signs to see if that was something we would want for this site. He added that the sign can be moved if needed if we use a similar design. He would like for Chesapeake Conservancy representatives to provide some color pallets and suggestions of what they would like so that it can be provided to the vendor. Melissa stated that Gabby from National Park Service will be the contact for the signage. Randy asked if Representative Short provided a timeline of when he would need the information submitted to him. Charles said that he did not; but he felt the sooner the information could be submitted the better.

Charles pointed out that there is an issue with flooding that we would need to address. He would suggest to intercept the storm water flows and direct it away from the main area based on a design by Judy.

Judy asked about parking for the site. Matt stated that he would propose minimal parking and just provide ADA compliant handicapped spaces. He also suggested doing a two-story building to provide parking underneath the building and then the educational information on the next level. It was also discussed of the need to clean up Pearl Street and possibly making Cannon Street a "green street" leading down to the property. Charles added that retaining walls (or other treatments) may need to be placed to help with the erosion and site stabilization.

Judy pointed out a few things that she noticed when reviewing the site. She asked the group if raising the grade to (or above) of the flood plain would be considered. This could be done in conjunction with the stormwater provisions for the site. She added that if it remained as it currently is; it would be low and prone to inundation. It was suggested to

go this route and plan for the anticipated sea level rise. It was also suggested to install a floating dock to accommodate kayakers. It was pointed out that a living shoreline could be established and the bulkhead could be rebuilt as part of the project to help with site stabilization and elevation as well.

Judy pointed out that there is an 18-inch interceptor sewer that crosses the site that carries about 1/3 of all the sewage for the City of Seaford. This is a critical piece of infrastructure for the City that will need to be upsized to a 24-inch due to an ongoing project where the City will be taking sewage flows from Greenwood and Bridgeville. She added that it is a joint project between the City and Sussex County.

Judy pointed out the overhead electrical line that also goes through the site. She asked if this will be put underground? Charles stated that this is a distribution line that could be relocated underground. He added that the City recently eliminated the Central substation and this is a much less critical path than before.

Judy also pointed out as previously mentioned, the steep slopes (banks) that are on site that may need stabilization. Her thought was providing a retaining wall to help with erosion. She added that she feels we need a cross section through the site as part of the master plan.

Randy stated that when he has taken many people to the site; it is always mentioned about providing public restrooms. He would like to see restrooms incorporated with the plan.

Charles stated that he would like to see interconnectivity to all the amenities along the River and in the City's downtown included in the plan.

Melissa stated that she will be working on receiving lots of grant money for this project. There are various deadlines to submit for different funding options. In order to submit, she will need to provide a description of the project, preliminary scope, scale and magnitude. She added that she would include in the document that the Master Plan is ongoing. She would like to have a preliminary plan by the first week in September, if possible.

Public engagement and input were discussed. Matt felt that a concept drawing needed to be provided at the public meeting which the group also felt was needed. Matt asked if the City would be able to post anything on the website about the public meeting date and time. Trisha stated that we have a website, social media and constant contact that we can utilize to get the information out. She added that due to FOIA laws, we are required to post the public meeting notice 7 days prior, however, she would recommend giving people more notice. August 13th was suggested for a meeting with the parks and recreation committee as well as the Mayor and City Council to provide public comment on the draft plan(s). It was decided that the public date will be set at the next meeting once the progress of the concept plan is better known.

Charles asked representatives what they felt would be needed for frequency of meetings. It was decided to hold monthly meetings. Charles asked Matt if he felt it would allow enough time for him to provide a sketch drawing at next month's meeting. Matt and Trisha from LAS both agreed they thought that would allow enough time to provide a sketch based on today's discussion.

It was decided that the next meeting will be held on July 24, 2019 at 1:30 p.m. at Seaford City Hall.

With no further questions, the meeting was adjourned.

Anyone taking exception to any statements contained herein should notify the writer within 5 days.

Handwritten signature in blue ink, appearing to read "Tracy Torbrt".

Tracy Torbrt
The City of Seaford

From: Matt Spong [mailto:matt@las-llc.net]

Sent: Wednesday, July 24, 2019 5:32 PM

To: 'C. Anderson' <canderson@seafordde.com>; 'Judy A. Schwartz' <JSchwartz@gmbnet.com>; 'trisha@las-llc.net' <trisha@las-llc.net>; 'rwlarrimore@gmail.com' <rwlarrimore@gmail.com>; 'mbailey' <mbailey@seafordde.com>; 'Trisha Newcomer' <tbooth@seafordde.com>; 'groffe@chesapeakeconservancy.com' <groffe@chesapeakeconservancy.com>; 'Melissa Ehrenreich' <mehrenreich@chesapeakeconservancy.org>; Susan Shingledecker <sshingledecker@chesapeakeconservancy.org>; Morgan H. Helfrich <mhelfrich@gmbnet.com>; Deane Townsend <DTownsend@gmbnet.com>

Subject: RE: Oyster House Concept Meeting

Importance: High

Hi All great meeting today!! Attached are the documents presented today. Note the site drawings should be printed on an 18 x24 sheet. The building plans elevations, etc. on a 11x17 sheet

Lots of input and good ideas. The following is a real quick summary of the major feedback items I understood from the discussions we had .

Based on this meeting we LAS will prepare a revised concept site plan C, which combines The Amphitheater , street end turn arounds from option B ,with a modified building. The amphitheater may have a structured steps seat at the top of the slope and a grassed slope for overflow seating and blending this feature into the topography. A fire pit or council ring will be featured. Other interpretive features will be used through-out the site: native plantings for SWM , seasonal interest , Sculptures may depict an a turn of the century, oyster man/ ship, building etc. Option C will also feature a modified, cantilevered, River Walk and pavilion from Option A.

The building will be located further to the East near Cannon Street, and Oriented more South west.

The Building foot print will be revised to have a larger open central area , with glass garage type roll up doors to allow a larger “through view “to the River . The building elevation will be simplified to mimic the JH Robison Oyster Co “warehouse feel”. But for this week the elevations will not be modified just the revised foot print.

This will allow LAS to have the revised Option C Site plan and GMB to prepare modified building plan for another team meeting on Tuesday

8-6-19 at City Hall at 10 ;30 AM. To receive more team input prior to the Tuesday 8-13-19 Public Workshop / Council meeting.

I Hope the above quick summary of the input is helpful and If I misunderstood any of the major issues let me know before the close of business this Friday 7-26-19 so we can continue to move forward with option C the week of 7-29-19.

**Thanks,
Matt**

Matthew, T . Spong RLA, ASLA, Principal
Landscape Architectural Services, L.L.C.

Oyster House Park Project
Meeting # 2
8/7/2019 @ 10:30 a.m.

The following individuals were in attendance:

Charles Anderson	City of Seaford
Trisha Newcomer	City of Seaford
Berley Mears	City of Seaford
Mike Bailey	City of Seaford
Judy Schwartz	GMB
Matt Spong	LAS
Trisha Sawicki	LAS
Randall Larrimore	Chesapeake Conservancy
Melissa Ehrenrich	Chesapeake Conservancy

A program development meeting was held in the Council Room of the Seaford City Hall. The items of discussion were as follows:

Matt provided the group with an update on the archeological assessment. Ed has found that there may be some deposits on site. He added that due to a section in the historical preservation act this could mean that the site design may have to be changed to avoid the deposits. Matt also shared with the group that it may be requested to do a phase 2 assessment based on the findings of Ed. This would mean additional cost and more design work may be needed.

The Public Workshop is scheduled for August 13th at 6:00 p.m. at City Hall was then discussed. Trisha stated that she plans to post something about it prior to getting the information out in hopes to have the most people in attendance. All comments from the public hearing will be accepted until August 20th. Matt will be putting together a PowerPoint for the Public Hearing to show the timeline of the project and focus on the main concept design. Judy will provide information relating to the utility issues on the site. It was suggested to point out during the public hearing that the plans have not been through the permitting agencies yet.

The parking spots were then discussed and it was pointed out that there was only one shown on site. In order to maximize the space and amenities; parking will be limited. It was suggested to show on the map the number of parking spaces that are in the area on Cannon Street and in the public parking lot at Mt. Olivet Church.

Potential grant funding for the project was discussed. Charles pointed out that this project has been moved along quickly due to the funding deadlines. Melissa shared that for the Longwood funding, you lock yourself in with the amount of money that you request and you are not able to go back to them if you are rejected. It was discussed to wait until the next submittal period once the plans are more developed. Melissa stated that as much as she wanted to submit this time; she agrees that it would be more beneficial to wait.

Judy shared a design on the building proposed for the site. She will do an elevation design and a more detailed drawing to share with the group. It was decided to not share this at the public hearing.

It was suggested to put the project into phases that could be used to submit for funding as well as a timeline for the project. It was also added to include a public amenity in each phase.

It was decided that the next meeting will be decided after the Public Hearing is held next Tuesday.

With no further questions, the meeting was adjourned.

Anyone taking exception to any statements contained herein should notify the writer within 5 days.

/VA.

Tracy Torlsq5/
The City of Seaford

Oyster House Master Plan Public Workshop
SIGN IN SHEET
August 13, 2019

PLEASE PRINT PLAINLY. THIS LIST IS USED IN CASE NOTIFICATION IS NECESSARY.

Name	Email Address	Phone Number
1. Carson		302-841-2744
2. K Carson		302-245-8683
3. D. PERMUTSA		
4. K. King		302-629-0337
5. Kristina [unclear]		302-629-4301
6. Tom Darby	TomDarby-LPI@ATT.NET	302-448-9672
7. Marlene Merwine	MHMERWINE@AOL.COM	302-337-8847
8. L. Orla Slattery		
9. Leanne Phillips-Lue		
10. Bob Tringali		
11. MARILYN TRINGALI		
12. Brian Shannon	bgshannon@MSN.COM	745-0709
13. DON BIRCH		542-8293
14. Nan Zanorki		434-294-3736
15. Jim Blackwell		629-8806
16. Susan Shingledicker	sshingledicker@chESAPEAKECONSERVANCY.ORG	
17. Rodney Tringali	tringali3@gmail.com	(302) 745-5840
18. Teresa Dennis Blades	teresablades@comcast.net	629-5225
19. Danny & Debbie Shatt	1203 Steinhilfay	302-629-0999
20. Tammy Kearney	tammykearney333@gmail.com	
21. Karen Henderson	KHenderson1630@gmail.com	
22. Bill Bennett		
23. [unclear] French		
Alan Crocker	info@everyfibercoffee.com	
Karin Amittust		
Chris Collier	chriscatcollier@gmail.com	

Oyster House Concept Public Comments

Type	Date Received	From	Testimonial
Social Media	August 8, 2019	Alana Carver	<i>I am in love with the amphitheater area! It will make a great gathering area for caroling and such without blocking traffic and nice place to sit and eat lunch watching the river flow by!</i>
Social Media	August 7, 2019	Tara Ritchie	<i>I think it's a great thing!! Seaford has really lost it's way and I hope this new park will bring more life back into the town. I also hope once it's built that it won't become neglected after 5 or 10 years of being there. So many things come to towns and within a matter of a few years they become abandoned. I really do think this will be great for Seaford and the residence as well.</i>
Social Media	August 9, 2019	Lisa Ryan Miller	<i>I think it's a great concept but you may want to arrange for a food truck to be down there...everyone thinks they are getting a restaurant instead of a park.</i>
Social Media	August 7, 2019	Alan Jarmon	<i>Anything is a improvement. The city of Seaford needs more for people to do.</i>
Social Media	August 8, 2019	Jimmy Hitches	<i>It sounds pretty awesome!!</i>
Letter	August 11, 2019	Jim Blackwell/Seaford Museum	<i>I really enjoyed our lunch last week where you shared with Bill Comson and myself, your most recent plans for the new addition to Seaford's Riverwalk. It looks wonderful! With this Oyster House Park Project addition to Downtown Seaford's High St. attractions, I am very hopeful of having a real tourist attraction for families that like learning about Delaware's Chesapeake Bay's history. We start with the Seaford Museum that explains the waterfront, especially in the Nanticoke Maritime Gallery, and then proceed down to the new exhibit dedicated to the oyster house that used to be there in my youth. Then we walk further down the Riverwalk to where Harriet Tubman would have landed with slave, Tilly, in 1856 and walk in her footsteps up Gateway Park hill to read about the escape at the top. We cross the road to City Hall and walk back towards the starting point but stopping first at the Seaford Volunteer Fire Department Museum where two engines are on display. Then, we continue down High St. and arrive at Gallery 107 where many artists have their works displayed including beautiful works on local sites of beauty and interest. What is also wonderful about this self-guided tour is the number of great places to stop and enjoy some local food and beverage. This new site about Robinson's Oyster House will basically complete this circular walking tour and make the walk a very well done tourists' journey. Thank you and the Chesapeake Conservancy so much for your dedication to this project. Your plans are just superb.</i>

Email	August 12, 2019	Bill Hinz	<p>While I am not opposed to new parks, I am opposed to investing tax money on things which do not pay for themselves. As a former project manager for a large successful company, I know that profit is a critical factor in getting any project approved. Every significant project must have a positive cost / benefit analysis done prior to approval and must meet cost effective guidelines. Unfortunately government projects are rarely required to show tangible taxpayer benefits prior to approval and are never measured with post project reviews to insure the benefits are met and continue to be met. Seaford is a small community and this park with the scope as outlined will be expensive and will likely be underutilized by Seaford residents. I am sure the developers will say that it will be a magnet for tourists and they will spend millions on Seaford services. I think we need to be honest and admit that Seaford will never be a magnet for tourists. It is a small town with limited employment and business opportunities. There is not much here to attract tourists. Before money is spent on projects like new parks, we need strategic and tactical plans to grow the tax base. We need a plan to attract mid and upper income middle class residents who have money to spend for local services and significantly grow our local service business offerings. Once you offer such an attractive environment, you then may become attractive to tourists. I will agree that we have a considerable number of good local services to serve as a foundation but I do not think we are doing a very good job marketing what is here or what could be here given some expansion. What is missing is a good plan and the dedication to execute the plan.</p>
Email	August 12, 2019	Toby French	<p>The design looks great, obviously GMB and the designers put a lot of time in on it. In a careful review of the diagram, I could not for the life of me find an Oyster House mockup. Have we given up on that?</p>
Social Media	August 12, 2019	Lifecyce	<p>The plan looks wonderful!!</p>
Social Media	August 8, 2019	Daryl Berryman	<p>How exciting for the City of Seaford and those who live there and those of us who love to visit!</p>
Email	August 13, 2019	Lisa Wool	<p>I just wanted to mention a few things about the oyster house. The first is that, even though it is a ways away, NWA many times has DNREC funds for trees, shrubs, grass, etc. So when you are ready for landscaping let us know and we can see what kind of funds are out there to do so. There are also funds out there for swales and all kinds of things like porous pavers, so once you have the project more defined let us know and we can keep a look out for green infrastructure funding. The other thing I wanted to mention was that I loved the design for the oyster house but was hoping for one addition that would be a low lying wildflower buffer along the river. Short plants that wouldn't impede the view, but actually frame it nicely could be added. This could even be made into a "you pick" wildflower/pollinator/butterfly garden. There are some really pretty native irises, cone flowers, cardinal flower etc that would be a great addition to your plan. A few spots could be mowed to the edge for fisherman etc. The wildflower areas would just need to be mowed once a year, could lower maintenance costs, and really improve water quality. I can send you some examples if you like. Good luck tonight!</p>
Public Comment Card	August 13, 2019	Karen Henderson	<p>Please plan to build or design the largest ampitheater for this project. Thank you!</p>
Public Comment Card	August 13, 2019	Katie Hickey	<p>Extend the boardwalk further East to potentially have enterainment on the dock - facing the ampitheather (about 20 feet)</p>
Public Comment Card	August 16, 2019	Mike, Luke & Joe Higgins	<p>We are a downtown business whose loading dock is on Pearl Street. The trucks delivering wholesale products to us must access Pearl Street to keep us in business. This first became impossible when the "bump outs" on High Street, where one could turn north onto Pearl Street, were installed. All our delivery trucks were too large to turn down the narrow one lane road. This was alleviated because access to Pearl Street could be achieved by turning north on Cannon Street and coming around the loop onto Pearl Street. They could then proceed across High Street without a turn, to our receiving dock. The plans for Oyster House as presented, will block delivery access to our business. We ask that the City of Seaford work with us to find a solution to our dilemma.</p>
Social Media	August 6, 2019	Jill Weyhe Murphy	<p>Good things are happening here!</p>

Oyster House Park
Probable Cost Estimate: Phase 1

Date: 9-21-2019

Quantity	Description	Unit Cost	Total
	Demolish & Dispose existing Bulkhead	LS	40,000.
120 LF	Repair / Replace Bulkhead: Vinyl Sheetpiling with tiebacks	1,160.00	139,200.
2,877 SF	Dock Decking: Composite lumber on TSYP structure	75.00	215,775.
129 SF	Pier: Composite lumber on TSYP structure	75.00	9,675.
6	12" diam. X 45' Timber SYP 2.5 CCA Piles	1,800.00	10,800.
40 LF	Aluminum Gangway	LS	10,000.
2	8x20 Floating Aluminum Dock	10,000 EA	20,000.
1	8x20 Floating Aluminum Kayak Launch	LS	20,000.
10	12" diam. X 45' Timber SYP 2.5 CCA Piles	1,800.00	18,000.
4,000 SF	Raised Boardwalk Composite lumber on TSYP structure	75.00	300,000.
666 LF	Boardwalk Railing: Industrial Aluminum	90.00	59,940.
80	12" diam x 45' SYP 2.5 CCA Piles	1,800.00	144,000.
	City of Seaford Underground Electric	LS	99,399.
		Subtotal	1,006,780.
	Mobilization	15%	163,018.
	Contingency	15%	163,018.
	Additional Professional fees: design Development, Final Design, Engineering, Construction Documentation and Administration	15%	163,018.
	TOTAL ESTIMATED PROBABLE COST: Phase 1		1,575,843.

Oyster House Park
Probable Cost Estimate: Phase 2

Date: 9-21-2019

Quantity	Description	Unit Cost	Total
	Porous Pavement Cannon & Pearl Streets Turnaround	LS	108,760.
	Super Siltfence - S&E control	LS	10,000.
4,722 sf	Demolition & Disposal: Cannon & Pearl Streets	10.00	47,220.
14,325 sf	Grading	1.00	14,325.
1674 sf	SRW Retaining Wall: T turn-arounds 6'-7' tall	109.00	182,466.
2,388 sf	Paving	8.00	19,104.
279 lf	Barrier Fence: 4' Industrial Aluminum	100.00	27,900.
2095 cy	Select Fill	30.00	62,850.
530 cy	Topsoil	50.	26,500
257 lf	Retaining Wall: Amphitheater 1.5'-3' tall	72.00	37,800
844 sf	Sidewalk - Amphitheater	8.00	6,752.
235 lf	Railing Amphitheater	90.00	21,150.
606 sf	Boardwalk Ramp: Composite lumber on TSYP structure	75.00	45,450.
152 lf	Railing for Ramp	90.00	13,680.
6	Canopy Trees: 3" cal.	500.00	3,000.
22	Flowering Trees: 2" cal.	250.00	55,500.
30	Shrubs: 2-2 1/2'	65.00	1,950.
225	Perennials/ Grasses	20.00	4,500.

14 cy	Humus	60.00	840.
42 cy	Mulch	65.00	2,730.
1685	Lawn	1.00	1,685.
Subtotal Site			694,162.
Mobilization (15%)			104,124.
Contingency (15%)			104,124.
Professional fees: design Development, Final Design, Engineering, Construction Documentation and Administration			119,078.
TOTAL ESTIMATED PROBABLE COSTS: Phase 2			1,021,488.

**Oyster House Park
Probable Cost Estimate: Phase 3**

Date: 9-21-2019

Quantity	Description	Unit Cost	Total
1	24x75 Building: 1800 sf standard materials, standard finish, HVAC & Plumbing systems	250.00	450,000.
1	18x30 Open Pavilion: 540 sf concrete slab, wood posts & beams, metal roof	150.00	81,000.
1	15x24 Open Pavilion: 360 sf concrete slab, wood posts & beams, metal roof	150.00	54,000.
Subtotal			585,000.
Mobilization			87,750.
Contingency			87,750.
Additional Professional fees: design Development, Final Design, Engineering, Construction Documentation and Administration			168,188.
TOTAL ESTIMATED PROBABLE COST: Phase 3			840,938.

**Oyster House Park
Probable Cost Estimate Phase 4**

Date: 9-21-2019

Quantity	Description	Unit Cost	Total
385 sf	Paving	22.00	8,470.
1	Feature (Council Ring) TBD		
1700 lf	Wall for Stairs from Church Street 15' tall SRW	109.00	130,800.
65 lf	HandRailing	90.00	5,850.
360 sf	Paving – stair treads & landings	22.00	7,920.
162 lf	Risers x 6' wide	40.00	6,480.
5	Canopy Trees	500.00	2,500.
5	Flowering Trees	250.00	1,250.
10	Shrubs	65.00	650.
3 cy	Humus	60.00	180.
9 cy	Mulch	65.00	585.
Subtotal			164,685.

Mobilization	15%	24,703.
Contingency	15%	24,703.
Additional Professional fees: design Development, Final Design, Engineering, Construction Documentation and Administration	20%	32,937.
TOTAL ESTIMATED PROBABLE COST: Phase 4		247,028.

ELECTRICAL WORK FORM
PROJECT DESCRIPTION: Oyster House
DATE: 7/26/19

I. MATERIALS

STOCK NO.	NO. REQ'D.	DESCRIPTION OF ITEM	PRICE EACH	TOTAL PRICE
tran-0007	1	150 KVA transformer	\$ 6,448.96	\$ 6,448.96
metr-0038	1	pre-wired meter socket	\$ 253.82	\$ 253.82
metr-105	1	9S meter	\$ 285.77	\$ 285.77
ct-0009	3	400/5 CT	\$ 88.95	\$ 266.85
arm-0001	1	CIA bracket	\$ 61.54	\$ 61.54
lag-0001	20	3/8" drive lag	\$ 0.39	\$ 7.80
bolt-0063	2	5/8" x 12" thru bolt	\$ 1.16	\$ 2.32
bolt-0065	8	5/8" x 16" thru bolt	\$ 1.40	\$ 11.20
wash-0003	10	5/8" curved washer	\$ 1.47	\$ 14.70
bolt-0046	12	1/2" x 1 1/2" ss bolt	\$ 0.65	\$ 7.80
bolt-0048	4	1/2" x 2 1/2" ss bolt	\$ 1.65	\$ 6.60
nut-0019	20	1/2" ss nut	\$ 0.25	\$ 5.00
wash-0018	16	1/2" ss lock washer	\$ 0.16	\$ 2.56
spde-0026	4	spade adapter	\$ 14.40	\$ 57.60
rod-0002	9	5/8" ground rod	\$ 12.09	\$ 108.81
clmp-0007	9	5/8" ground rod clamp	\$ 1.03	\$ 9.27
wire-0019	500	1/0 al underground wire	\$ 2.09	\$ 1,045.00
cuto-0001	4	100 amp cut out	\$ 108.00	\$ 432.00
arre-0001	7	9KV lightning arrester	\$ 33.03	\$ 231.21
fuse-0012	4	line fuse 20 amp	\$ 3.07	\$ 12.28
sppt-0006	12	support grip for 750	\$ 12.50	\$ 150.00
clmp-0022	6	pac 7 clamp	\$ 7.19	\$ 43.14
conn-0006	6	# 2/0 copper connector	\$ 5.46	\$ 32.76
conn-0002	10	# 4 copper connector	\$ 1.55	\$ 15.50
crmp-0006	6	H-tap 450	\$ 2.65	\$ 15.90
wire-0041	1700	750 MCM underground wire	\$ 7.24	\$ 12,308.00
swch-0010	2	PMH-9 switch	\$ 12,000.00	\$ 24,000.00
swch-0003	1	GOABS	\$ 4,080.00	\$ 4,080.00
term-0008	12	750 terminator	\$ 136.16	\$ 1,633.92
pvc-0007	300	4" pvc conduit	\$ 1.65	\$ 495.00
elbo-0025	6	4" pvc elbow	\$ 8.65	\$ 51.90
coup-0015	12	4" pvc coupling	\$ 2.07	\$ 24.84
adap-0009	6	4" pvc female adapter	\$ 2.92	\$ 17.52
strp-0007	10	4" strap	\$ 2.11	\$ 21.10
elbo-0028	3	4" steel 90 degree elbow	\$ 67.74	\$ 203.22
bell-0001	9	4" pvc end bell	\$ 10.13	\$ 91.17
term-0010	9	1/0 terminator	\$ 54.05	\$ 486.45
term-0007	3	1/0 terminator elbow	\$ 31.32	\$ 93.96
brak-0015	2	terminator bracket	\$ 390.46	\$ 780.92
cap-0002	3	insulated cap	\$ 25.19	\$ 75.57
elbo-0030	12	6" 90 degree steel elbow	\$ 222.96	\$ 2,675.52
adap-0010	24	6" female threaded adapter	\$ 7.87	\$ 188.88
cond-0007	10	6" steel conduit	\$ 16.90	\$ 169.00
pvc-0008	1000	6" pvc conduit	\$ 3.12	\$ 3,120.00
coup-0005	6	6" pvc coupling	\$ 3.54	\$ 21.24
concrete	1		\$ 500.00	\$ 500.00
	1	10% contingency	\$ 9,030.82	\$ 9,030.82
MATERIALS TOTAL \$:				\$ 69,597.42

ELECTRICAL WORK FORM
PROJECT DESCRIPTION: Oyster House
DATE: 7/26/19

II. EQUIPMENT USED

	<u>NO. HRS.</u>	<u>COMMENTS</u>	<u>\$/HR</u>	<u>TOTAL PRICE</u>
LG. TRENCHER			\$ 40.00	\$ -
SM. TRENCHER			\$ 30.00	\$ -
LINE TRUCK	3		\$ 40.00	\$ 120.00
LG. BUCKET	128		\$ 40.00	\$ 5,120.00
SM. BUCKET			\$ 40.00	\$ -
PICK-UP	64		\$ 25.00	\$ 1,600.00
EXCAVATOR	40		\$ 40.00	\$ 1,600.00
OTHER		[] \$/Hr Varies According to Equipment Type	\$ -	\$ -
OTHER		[] \$/Hr Varies According to Equipment Type	\$ -	\$ -
			\$ -	\$ -
EQUIPMENT TOTAL \$:				\$ 8,440.00

III. LABOR EXPENSE

Effective 7/1/07

<u>NAME</u>	<u>NO. HRS.</u> (At 1 1/2 Time)	<u>REG. TIME</u>	<u>COMMENTS</u>	<u>\$/HR.</u>	<u>TOTAL PRICE</u>
ED T.		64		\$ 48.35	\$ 3,094.40
BILL B.		10		\$ 50.48	\$ 504.80
GREG S.		64		\$ 44.64	\$ 2,856.96
BLAKE C.		64		\$ 42.60	\$ 2,726.40
NICK S.		64		\$ 25.83	\$ 1,653.12
DANNY P.		64		\$ 36.78	\$ 2,353.92
NICK M.		64		\$ 25.83	\$ 1,653.12
JOHN H.		64		\$ 36.58	\$ 2,341.12
DANNY W.		64		\$ 35.15	\$ 2,249.60
GREG B.		64		\$ 29.19	\$ 1,868.16
LABOR TOTAL \$:					\$ 21,301.60
TOTALS FOR: MATERIALS					\$ 69,597.42
EQUIPMENT					\$ 8,440.00
LABOR					\$ 21,301.60
GRAND TOTAL:					\$ 99,339.02

ADDITIONAL COMMENTS

Oyster House Park
Contact Station & Accessory Buildings

City of Seaford
Concept Project Cost Estimate
GMB File No. R190127

Item No.	Description	Size or Depth	Unit	Est. Quantity	Unit Price	Total Price
C1	Visitor Contact Station	24' x 75'	SF	1800	\$ 250	\$ 450,000.00
C2	Shed	18' x 30'	SF	540	\$ 150	\$ 81,000.00
C3	Pavillion	15' x 24'	SF	360	\$ 150	\$ 54,000.00

Subtotal: **\$ 585,000.00**

Total: \$ 585,000.00
Construction Contingency (15%): \$ 87,750.00
Architectural/Engineering Fees (Design-CA): \$ 168,187.50

\$ 840,937.50

Archaeological Assessment Seaford Oyster House Property Seaford, Delaware

December 17, 2019

Prepared for:

City of Seaford
414 High Street
Seaford, Delaware 19973

Landscape Architectural Services LLC
PO Box 293
Dover, Delaware 19903

Prepared by:

Edward Otter, Ph.D.
Edward Otter, Inc.
1704 Camden Avenue
Salisbury, Maryland 21801

Abstract

This report presents the findings of an archaeological investigation for tax parcel 431-7.00-23.00. The land was recently acquired by the Chesapeake Conservancy and donated to the City of Seaford. The property was part of the historic Seaford waterfront and is adjacent to the Seaford Riverwalk Park. As part of the effort to incorporate this tract into the city's Riverwalk Park, this study examines past land use in order to assess the archaeological potential of the property. There is an expectation of federal funding for future work which would likely require compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. This study, prepared by Edward Otter, Inc. is an effort to understand what archaeological issues would be involved with property development.

The property appears to have been created during the late 19th century by filling a portion of the Nanticoke River. There is potential for archaeological deposits within the fill including bulkheading, cribbing, buried boats, and the foundations and features of a ship yard and oyster houses dating from the 20th century. Auger testing of the fill could be informative. Specific recommendations for additional archaeological work are reserved for development plans to be proposed.

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INTRODUCTION

This report presents the findings of an archaeological investigation for tax parcel 431-7.00-23.00. The land was recently acquired by the Chesapeake Conservancy and donated to the City of Seaford. The property was part of the historic Seaford waterfront and is adjacent to the Seaford Riverwalk Park. As part of the effort to incorporate this tract into the city's Riverwalk Park, this study examines past land use in order to assess the archaeological potential of the property. There is an expectation of federal funding for future work which would likely require compliance with Section 106 of the National Historic Preservation Act of 1966, as amended. This study, prepared by Edward Otter, Inc. is an effort to understand what archaeological issues would be involved with property development.

SETTING AND LOCATION

The project is located along the north bank of the Nanticoke River within the town limits of Seaford, Sussex County, Delaware (Figure 1). The southwest end of the parcel terminates at Pearl Street. The northeast end is east of Church Street. Elevation across the property is between three and five feet above mean sea level. On the north side, the property encounters an escarpment. Elevations at the top are about 25 feet above mean sea level. The area at first look appears to be a section of Nanticoke River floodplain. Only a small portion is within FEMA flood map limits.

The parcel is mostly maintained in grass. There is a wooden bulkhead along the river front (Figure 2). A deteriorating asphalt road links Cannon Street and Pearl Street and there is a gravel walkway toward the Riverwalk Park. A concrete pad is visible near the southern end at the base of the bluff.

SCOPE OF WORK

This investigation consists of archival research and field study. Background research and file searches were conducted via Delaware Division of Historical and Cultural Affairs CHRIS, the Seaford Historical Society, sources from the Geography and Map Division of the Library of Congress, Washington, D.C. and elsewhere via internet. Research focused on identifying known and potential archaeological resources that might exist within the project area. A prediction as to whether the site has the potential to contain prehistoric archaeological resources was based on the geographic setting and generalized knowledge of site locations based on prior archaeological works. Historic resources are predicted based on graphic references and geographic setting. Attention was given also to shore line changes through time in order to estimate whether the land included fill or is subject to erosion.

Deed research was conducted in an effort to gather information not so much about land owners but what use the property had and to locate plat maps. Time did not permit full land research back to the original land grant. As will be seen, that type of research would likely not add significant information to this study.

Members of the Seaford Historical Society opened their doors and memories to us. Jim Davis and David Givens provided images and other information useful in this study. Their materials indicate an oyster house, likely two, once stood on the property.

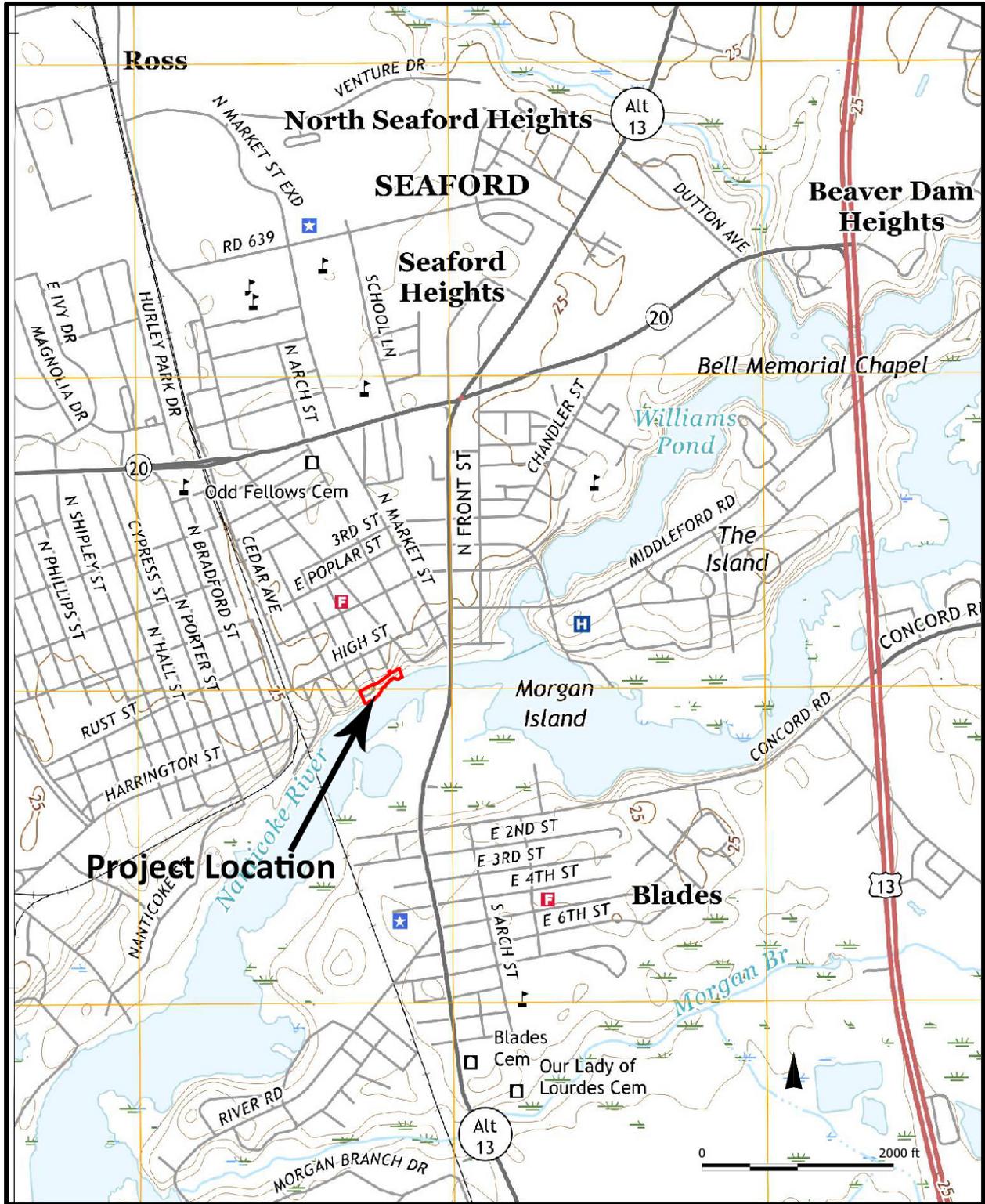


Figure 1. Project Location. 2016 U.S.G.S. Topographic Map, East Seaford Quadrangle



Figure 2. Looking northeast (upriver) from near the southwest corner

PREVIOUS INVESTIGATIONS

The current project area has not been subject to systematic archaeological investigation. No previous archaeological surveys are recorded on the Delaware CHRIS system within a half mile of the project area.

Within a one-mile radius, three archaeological projects have been performed. One survey was conducted at the Material Transfer Station at Blades (Otter 1996). An Early Woodland prehistoric archaeological site was found on the sand ridge along the river. Highway work along Stein Highway resulted in a study of Cantrell Warehouse/Enterprise Mill (O’Conner et al 1985). Archaeological survey was also conducted by the University of Delaware in the area around Seaford. One site within Soroptomist Park was further tested (Mellin 1991). Six other archaeological sites are known within a mile of the project area, including a shipwreck on the Blades side of the Nanticoke River.

CULTURAL HISTORY

Humans have occupied the North American continent for at least 15,000 years. The span of human existence is divided into two eras, prehistoric and historic. The historic era is equivalent to the time of Euro-American occupation. The prehistoric period is divided into periods and sub-periods. Delaware and Maryland use different names and dates for these divisions. Presented here is a sort of hybrid of these. This was created as an outline for Delmarva prehistory.

Prehistoric Era

Extensive research has been conducted over the last half-century providing information about the people living in the Middle Atlantic region for the last 15000 years. Recent work has raised the possibility of pushing the earliest occupation date back as far as 20,000 years ago.

Paleo I (Pre-Clovis 20000+ - 13500 B.C.)

While there was some evidence for human occupation in North America prior to 12,000 B.C., the notion was not widely accepted. More recently, sites such as Cactus Hill in Virginia (McAvoy & McAvoy 1997) and Miles River in Talbot County, Maryland (Lowery et al 2010) provide strong evidence for the sites with these early dates. This period is called Pre-Clovis and sites are still controversial.

The closest thing to a temporally diagnostic artifact for this period is the bi-point. At least eight sites from Delmarva have produced bi-points. Most of these have been from submerged contexts (Stanford et al 2014). Associated with bi-points is a tool kit including choppers, scrapers, and prismatic blades. The Miles Point site in Talbot County produced prismatic blades (Lowery 2007; Lowery et al 2010). These artifacts were recovered from a loess deposit dated between 40,000 and 20,000 years bp (Wah, Lowery & Wagner 2012).

Paleo II (13500 - 8000 BC)

On Delmarva the Paleo II can be subdivided into three periods based on projectile point forms. The oldest is Clovis, followed by mid-paleo points, and lastly Hardaway and Dalton points. Clovis and mid-paleo points are characteristically fluted and are distinguished by their size and thickness. Mid-

paleo are smaller and thinner than Clovis and at least some fit the definition of the Crowfield type. Dalton points have well defined shoulders and a deep notch in their base.

Geomorphologic analysis indicates the Clovis period is at or before the onset of the Younger Dryas. The Younger Dryas was a period in which global temperatures abruptly dropped after a period of warming. Clovis aged sites have been associated with the Tilghman paleosol (Wah, Lowery & Wagner 2012:39). This paleosol is buried under a significant loess deposit (Paw Paw Loess). The Paw Paw Loess covers a large portion of the Maryland section of Delmarva and part of Delaware with the greatest thickness on the western shoreline of the Peninsula. The source for the sediment is thought to be the ancestral Susquehanna Channel (Wah, Lowery & Wagner 2012: 37). Sediment thickness is greatest near the source and generally less than 1.8 meters. Exceptions to this are locations on the east side of confluences and major waterways, such as the Nanticoke River. Presumably these bodies contributed sediment that settled locally.

Across Delmarva, the different types of paleo points are found together on the same sites. This suggests a similarity in subsistence/settlement patterns. Geographic settings have changed significantly since Paleo II times with large amounts of aeolian deposition and stream modifications so that present conditions may not reflect what the setting once was. Many of these sites are found eroding from the shoreline and it is likely that the Paw Paw loess deposits conceal a number of these sites.

Within the Nanticoke Drainage, Paleoindian points have been found on the shoreline at the mouth on Elliotts Island, and along the Marshyhope near Eldorado and another on the Nanticoke itself near Riverton. In Delaware, a point find was made on the upper reach of the Nanticoke in the Seaford area and there is a cluster on the upper portion of the Marshyhope west of Greenwood (Custer 1989:94). The numbers of points found in the interior of the peninsula may be related to the lack of Paw Paw loess leaving Paleoindian age soils closer to the surface.

Most stone tools found from the Paleo-Indian Period are associated with the processing of foods and other raw materials acquired through these activities. The tool kit typically contained projectile points for the killing and butchering of animals, biface blades for butchering and for the manufacture of other multi-purpose bifacial tools, and flaked tools for various purposes such as working bone, antler, or hide (Raber 1985; Custer 1989, 1996).

Paleo-Indian culture is interpreted as consisting of small mobile groups subsisting through hunting, fishing, and gathering. A correlation has been noted between paleoindian site locations and specific resource areas, notably quarries (Gardner 1974, 1977; Raber 1985; Kraft 1986; Ritchie 1969). There are no primary outcrops of lithics on Delmarva only cobble deposits. These include high quality material and are peppered across the region. On Delmarva, there appears to be a correlation with spring heads and streams (Lowery 2002: 67). These, too, are spread across Delmarva. The low relief of much of Delmarva results in a uniform mosaic of environmental niches. Small changes in elevation result in differences between dry and wet soils and this factor, in conjunction with proximity to flowing surface water are seen as the major predictors of site locations for this and subsequent periods.

Archaic Period (8000 - 1000 BC)

Around 7,000 B.C., evolving Holocene environments continued to change with a gradual warming of the climate melting ice caps and raising the sea level. Spruce woodland gave way to mixed coniferous/deciduous forests establishing essentially modern floral and faunal patterns (Carbone 1976; Custer 1989). These environmental changes spurred a shift in human adaptation hunter-gatherer strategies producing new settlement-subsistence patterns based around exploitation of new seasonally rich environments including acorns, nuts, berries, and tubers with abundant fauna resources of fish, shellfish, deer, elk, bear, and a variety of small mammals.

Early Archaic Period (7000 BC – 5000 BC)

The most commonly found points of this period are Kirk and Palmer types. Amos and Charleston are less frequently found. The Early Archaic tool kit is much like that from the Paleo-Indian period (Dent, 1995; Raber *et al* 1998). The most notable change was in the form of scrapers which changed at this time. The remainder of the tools appear the same as those from the Paleo-Indian period.

Early Archaic site locations are generally the same as for Paleo-Indian sites, based on the current databases for site locations on Delmarva. The Crane Site assemblage from Dorchester County is characteristic of this with Dalton/Hardaway points and Kirk/Palmers. Local stone resources, such as quartz and rhyolite, were preferred for tool manufacture instead of exotic mineral types formerly obtained from distant sources.

The Archaic people are interpreted living in small, egalitarian and mobile hunter-gatherer groups. Their economy was based on hunting, fishing, and gathering utilizing a wide range of plants. The flora and fauna became much more like that we see today although sea level was still significantly lower than the present. Salt and brackish water, or tides, were not present in most of the Nanticoke drainage at this time.

The Middle Archaic Period (5000 B.C. - 3000 B.C.)

The Middle Archaic Period is poorly documented and understood. This period is marked archaeologically by the appearance of bifurcated projectile points in the earlier portion. In the later part of the period Stanly and Morrow Mountain points are found. A significant change at this time is the appearance of ground stone objects. Plant processing tools, axes and mortars appear during this period suggesting more use of plant resources. Pollen studies indicate an increase in nut producing trees, including oaks. Pollen studies also indicate a warming period across the middle Atlantic with a continued rise in sea level resulting in the inland expansion of tides and saline water.

Archaeological work has been done on relatively few sites of this period. Middle archaic sites tend to not be where early archaic sites are suggesting a shift in either environmental setting or settlement preference. The interpretation is that settlement changes are related to environmental factors. Settlements that have been recognized are small and contain few artifacts. Only stone artifacts have been found, mostly waste flakes. The size of the sites and the relatively few artifacts suggest these were short-term camps with a small number of inhabitants (Barse & Marston 2007).

Late Archaic Period (3,000 B.C. - 800 B.C.)

In Delaware, this portion of prehistory is identified as the earlier portion of the Woodland I (Custer 1984). Two complexes are recognized, the Clyde Farm complex to the north and Barkers Landing to the south. The sites around the Nanticoke fall into the Barkers Landing Complex (Custer 1989).

Projectile points characteristic of the Late Archaic period include the Otter Creek, Lamoka, Brewerton, Savannah River, Halifax, and Susquehanna and Perkiomen broadspear types. Soapstone bowls were manufactured and used during this period and are a good temporal diagnostic for the later part of the period. Lithic materials were procured locally and from distant sources. Rhyolite and argillite from piedmont areas is common and nearly all ground stone objects are produced of foreign stone such as slate or basalt.

Climatic changes, about 2,600 B.C., produced the warmest and driest conditions of the current post-glacial period, with oak and hickory emerging as the dominant tree species in the Middle Atlantic region. These nuts provide important food sources for many species including deer and turkey. Sea level rise was slowing and the Chesapeake and Delaware estuaries were becoming more stable. This allowed for an increase in estuarine resources, shellfish in particular.

Increases in population and sedentism (and decreased foraging territory) are suggested by the new archaeological visibility of sites (Dent 1995). Sites are found in a variety of locations with larger sites found along major waterways. Areas with well drained soils along bodies of water, especially in association with freshwater springs or freshettes and bay basin features are good locations for small sites of this period.

During the beginning of the Late Archaic, there is evidence for long-distance trade/exchange, exploitation of local nuts and seeds, a wide variety of lithic resources, and new riverine focus giving rise to large settlements along fertile major waterways (possibly in response to dryer climate).

At the end of the Late Archaic period pottery technology developed with the continuation of some projectile point types. Traditionally, pottery is used to mark the beginning of the Woodland Period. Over the years research has revealed that except for the introduction of pottery the Late Archaic and the earliest part of the Woodland Period are very much alike. In Pennsylvania the term Transitional is used to refer to this period. The first pottery vessels (Marcey Creek ware) were tempered with steatite. The shape of these vessels, with flat bottoms and lug handles, suggests an imitation of earlier steatite bowls. Steatite bowl fragments have been recovered from sites on the Nanticoke including Red Bank I (18DO7) and Willin (18DO1). For this reason, the earliest ceramic wares are here included as part of the Late Archaic.

Along the Nanticoke, Marcey Creek is found as are other recognized types of similar form. Dames Quarter is probably the second most common. It is tempered with crushed black rock, probably gneiss making it distinctive. Marcey Creek pottery is flat bottomed as are some of the Dames Quarter vessels. Ware plain, another early type is also flat bottomed.

Late Archaic site locations on Delmarva are more often not where Middle Archaic sites are found although sites of the Late Archaic are more numerous than any of the previous periods. While this is at least partly attributable to environmental change, fundamental changes in subsistence were

occurring at this time. Small wild seeds, roots, and squash, were likely important components of the diet.

In Delaware, and the greater Middle Atlantic region, early varieties of cultigens and cultivars have been found in archaeological context (Adavasio & Johnson 1981; Hart & Scarry 1999; Gremillion 1997). Cultivation appears to have started during the later part of the Late Archaic as cultivars have been found in terminal Archaic contexts elsewhere in the Eastern United States (Ison 1987; Purrington 1983). Tobacco may have been cultivated at this time. The presence of pipes during this cultural period suggest its use. However, there is no evidence for beans or maize at this period.

A species of setaria, *S. parviflora*, has been found in dated contexts 4000 – 3500 B.C. in the southwest (Austin, 2006) and within a similar time frame from southwestern Mexico (Callen 1963:237). Other relatives in this family have been domesticated in Asia. Austin claims that *Setaria* was the dominant grain prior to maize domestication (Austin 2006:149) noting that setaria has been recovered from sites across the United States (Austin 2006:151).

Analysis of residue on Marcey Creek ceramics recovered from the Gray Farm (7K-F-11 & 7K-F-169) resulted in the identification of plant starch grains and phytoliths. Bristlegrass (*Setaria* sp) and little barley grass (*Hordeum* sp), were recovered as was arrowhead, sometimes called indian potato or duck potato (*sagittaria* sp) and sedge (*scirpus* sp). Arrowhead and sedge are both aquatic plants. Both have been found in prehistoric contexts (Hart 2008) and there is a claim from British Columbia of a purposefully built potato garden (Wade 2016). Given the emphasis often given to *Chenopodium* and Knotweed (Smith 1992), it is perhaps surprising these plants were not identified.

Squash may have been the first truly domesticated plants in North America (Smith & Yarnall 2009). Squash remains have been identified on sites of this time frame from across the eastern United States including New York, Michigan, and elsewhere (Hart 2008). Squash remains have been dated in Pennsylvania to about 5400 B.C. (McConaughy 2008). The hard skinned winter varieties of squash can be stored for months. Leaves and flowers, available in the early spring can be eaten and fruit can be harvested green or mature. These plants can provide food for over six months of a year. They are versatile and easy to grow.

The development of horticulture and agriculture from this time to contact is poorly understood. True farming may not have taken place but simple encouragement of key plants can have an impact on plant communities. For example, removing competing plants or burning may have been used to encourage wild plant growth.

Two technological advances are seen as indicators of more sedentary lives and the use of storable surplus food supplies. These are pottery and pits. Pits appear first and are occasionally reported from non-ceramic sites such as 18TA424 near Easton, Maryland (Otter 2012). Pits are believed to have been used to store surplus foods for later use. Pottery provided a new means of preparing and storing food and, because of their fragile nature, suggest a more sedentary life. These changes continued into the Woodland Period.

Woodland Period (800 BC - A.D. 1550)

About 2,000 years before present the shorelines and landforms similar to those of today began to emerge as warm and dry climatic conditions gave way to a cooler, moister modern climate. The

dominant oak-hickory forest was also superseded by oak and chestnut vegetation. The Woodland period is marked by the introduction of agriculture, intensive pottery production, and transition from spear to hunting with a bow concurrent with the progression from hunting and gathering to horticulture and eventually full agricultural-based societies with complex social structures.

Shifts in settlement pattern, and the creation of long distance trade networks begin at this time and continue through the Early Woodland. The intensive trade and exchange network noted during the Late Archaic fades from the archaeological record, although increasing evidence of sedentism is manifested in the expanded use of storage facilities and the development of long-term residential architecture and permanent villages. Increased harvesting of plants reflects an intensification of food procurement, generally acknowledged as being spurred by population growth. Material culture of the Woodland period is typified by distinctive ceramic forms, small triangular projectile points reflective of bow-and-arrow technology.

Early Woodland Period (800 B.C. - A. D. 100)

Across the Middle Atlantic conoidal shaped ceramics with sand or crushed quartz temper spread quickly. These appear to derive possibly from Vinette I centered in lower New York and northern Pennsylvania. On Delmarva the wares are crushed quartz tempered Wolf Neck ceramics and sand tempered Accokeek ware. Analogous ceramic types spread across the eastern United States by about 500 B.C. forming a good horizon marker. In Delaware, this period is termed the Wolfe Neck complex. Radiocarbon dates on Wolfe Neck associated features range from around 800 BC to 100 BC (Bastian 1975; Griffith 2010).

Wolfe Neck pottery is a recognized pottery type found across the Delmarva Peninsula at this time. This ware is seen as homologous to other pottery types across the Middle Atlantic region including Popes Creek in southern Maryland, Bushkill in Pennsylvania, and Prince George ware in Virginia. A riverain or maritime orientation is indicated by site settings along waterways. Numerous shell middens exist along the bay shores and brackish waterways. Settlement patterns seem very similar to the Late Archaic.

Wolfe neck pottery is often found on sites with stemmed points with Rossville being the most recognized (Custer 1989:250). Sites of this period might also contain Accokeek pottery which similarly contains crushed quartz temper and cord or net marked exteriors. Sites of the Early Woodland often coincide with sites of the Late Archaic.

With the more fully developed estuaries, shellfish are used more often. Shell deposits are found in coastal areas beginning at this period. Some are many feet thick. These are often described as trash deposits but little effort has been given to alternative explanations. In the American southeast shell deposits have been recognized as ceremonial sites. The use of wild plants and some domesticated, or semi-domesticated plants continued. Squash almost certainly was grown at this time.

During this period a distinctive projectile point type known as Meadowood is found. This is associated with the Meadowood culture from New York. These points are not common and do not appear on all sites of this period. They are not as rare as once thought with a distribution that covers the entire Delmarva Peninsula.

One of the characteristics associated with Meadowood in New York are elaborate burials with exotic goods referred to as Middlesex (Ritchie 1969). Tubular stone pipes, birdstones, and other exotic artifacts are found in these burials. Similar items have been found on Delmarva (Lowery 2005). Materials for these items cannot be procured locally and there can be no doubt long distance trade was taking place.

However, the presence of these items might indicate something more than trade. It is possible this represents an influx of people from the north. Another possible explanation is that this material represents a stratification of society where elites possessed these exotic goods (Tache 2011). Such a society is often cited as being based on food surplus. Historically archaeologists have claimed abundant fish resources were involved. It is possible that this interpretation reflects a bias toward protein sources in the diet, on the part of archaeologists, and that the surpluses could have come from other resources such as agricultural surplus. The presence of these items spread sparsely across the region without the ceremonial burial sites found in New York suggests that whatever was going on here wasn't quite the same.

Slightly later than Meadowood, is the Delmarva Adena. Like Meadowood, there are exotic artifacts produced from materials obtained in Ohio and New York. Elaborate burials with these exotic artifacts have been found in Delaware and the Maryland coastal plain. Besides the exotic materials, other artifacts associated with Adena are Coulbourn ceramics (Custer 1984: 89; Wise, Clark & Dunn 1989:45) and Adena points. Sites such as Sandy Hill in Dorchester County, Maryland and the Frederica Site in Kent County, Delaware have produced spectacular artifacts.

Unlike the Meadowood, these are more closely associated with burial sites. Using Tache's (2011) approach, these would be more ceremonial items than trade goods. This remains a poorly understood aspect of Delmarva archaeology with no sites identifiable as Adena habitations. The major sites that have been identified mostly were found by accident and artifacts collected without the benefit of scientific archaeology.

Middle Woodland Period (A.D. 100 - A.D. 1000)

Around A.D. 100 Mockley ceramics became dominant on Delmarva and continued until about 1000 A.D (Griffith 2010). This ceramic contains crushed shell temper. Vessels are either cord marked or net marked. Sites are often defined by the presence of large amounts of oyster shell refuse. Selby Bay/Fox Creek projectiles are typically found with Mockley pottery. These are frequently made from rhyolite which must be imported from the piedmont.

Middle Woodland sites indicate the most intense maritime exploitation of all prehistoric cultures. Sites are usually located along streams and include oyster or mussel shells, fish bones, and terrestrial animals. Reptile bones are common. Sites seem to be associated with marsh areas and are generally located in settings which would provide food throughout the year including seed crops such as amaranth and chenopodium (Custer, Stiner & Watson 1983:28). Evidence exists, in the form of more numerous pit features, for increased sedentism over the Early Woodland period.

Economic changes are possibly related to environmental conditions. The period was warmer and dryer. Oyster bearing sites are found further upstream than at any other time possibly indicating an intrusion of salt water. The Taft Site in Fairfax County Virginia has a Middle Woodland component

with oyster shells and a Late Woodland component of fresh water mussel. Such an intrusion would have affected all of the major streams on Delmarva.

The drastic change in pottery technology is seen as an indication of an abrupt social transformation. Site locations change with an increased focus on estuarine resources. A majority of Middle Woodland sites do not overlay Early Woodland sites. It has been proposed that changes seen in the archaeological record indicate Algonquian speakers entering the area (Luckenbach, Clark & Levy 1987).

Jacks Reef points are another type found during this time frame and are a trait of the Webb Phase (Thomas & Warren 1970; Custer 1984). These points are widely spread over Delmarva and have a date range between 500 AD and 1000 AD. They are sometimes found in association with Hell Island pottery which is tempered with finely crushed quartz. Hell Island Pottery appears to be more northerly with only minor amounts found in the Nanticoke drainage. Jacks Reef points are more widespread and have been found across Delmarva (Lowery 2013).

The most studied Webb Phase site in Delaware is the Island Field Site which contained a large cemetery. Exotic goods such as platform pipes were recovered. Similarities have been noted with Kipp Island sites of New England in the types of artifacts recovered (Custer et al 1990:58). Similar pipes and Jacks Reef points have been recovered from the Riverton site along the Nanticoke (Wicomico County) which was destroyed by sand mining.

Late Woodland Period (1000 AD -1650 AD)

The last prehistoric period, known as the Late Woodland Period (1000 AD -1650 AD), lasted until the first contacts with European cultures. The Late Woodland was marked by settled life supported by agriculture although much of the diet continued to be drawn from wild food resources. Site locations are often the same as Middle Woodland sites suggesting a continuation of lifeways. There are more Late Woodland sites than Middle Woodland suggesting a population increase.

This is the first period where maize agriculture is known through archaeological samples in the Middle Atlantic (Thomas Point Site, St. Marys County and Rosenstock Site). Ethnographic data from the eastern shore indicate corn was grown at the time of European contact (Smith 1844). However, recent studies at Gray Farm found bristlegrass (*Setaria* sp), little barley (*Hordeum* sp) and possibly wild rye (*Elymus* sp) and maize remains on late woodland pottery shards (Hay et al 2012). The presence of these starch grains and phytoliths indicates the diet of Native Americans during the Late Woodland was not focused on the “three sisters” corn, beans, and squash. Likely these were components of the diet but a variety of native plants would have also been consumed.

Soil type would be an important factor in site location with sites located at the most productive soil. The cooler conditions during the Little Ice Age may have increased the availability of surface water by reducing evaporation rates. Thus sites might be found in places that presently do not have reliable water sources.

Late Woodland settlements were not dense concentrations of houses but were more dispersed. John Smith’s description seems appropriate: “Their houses are in the midst of their fields or gardens, which are small plots of ground. Some 20 acres, some 40, some 100, some 200. Some more, some less. In some places from 2 to 5 houses together, or but a little separated by groves of trees” (Smith 1608). It

seems that the prehistoric village at Lewes, included a number of dwellings that were spread along the courses of Pagan Branch and Pothooks creek where fresh water was available.

An account by Henry Norwood in 1649 provides a glimpse of dispersed housing on the lower portion of Delmarva. Individual houses were spread across the landscape (Norwood 1649). In his travels, Norwood visits a fisherman's house, then a Queen's house and a King's house a half mile away. Work at the Chicone Reservation in Dorchester County seems to show a similar pattern with house sites along Chicone Creek and a King's house identified as having more material (Busby 2010). This explains the lack of an easily identifiable Indian town at the Broad Creek Reservation or elsewhere along the Nanticoke. Palisaded villages are not found on Delmarva except in the far north western portion. Those villages were in areas of conflict with groups from the north.

In general, Late Woodland sites yield fewer flaked and ground stone tools than earlier periods but now include more artifacts of pottery, bone, and shell. Triangular, un-stemmed, projectile points of various shapes are characteristic of the Late Woodland Period throughout the Middle Atlantic States. Along the Nanticoke, Townsend/Rappahannock pottery and Killens pottery are typical for this period.

During the Late Woodland, there is a greater use of local stone material (cobbles). There is also regionalization of ceramic technology. Across the Middle Atlantic regional ceramic types such as Minquanan, Killens, Moyoane, Yeowicomico, and others have been identified. These factors suggest populations with more established territories and a reduction in long distance trade.

This is not to say trade or contact with outside groups ceased. Small amounts of non-local ceramics have been found on sites along the Nanticoke. Clemson Island pottery has been noted at sites on the Nanticoke drainage at Middleford (Mellin personal communication; Mellin 1991), at Prickly Pear Island (Archaeological files, Delaware State Museums) and near Portsville at site 7S-H-104 (Custer & Mellin 1989). This pottery type dates to the early part of the Late Woodland. Early ethnographic reports record contact between Delmarva groups and those in Pennsylvania and New York. It is uncertain how much of that contact is a result of the impact of European contact and trade.

Ossuary burials are known from this period but single burials are also known. The reason for the two styles is unknown. Dog burials have also been found. Burials have been found in and near habitation sites and lack exotic goods seen in the earlier Adena and Webb Phase burials. True ossuary burials appear to be a late manifestation, after c. 1450 AD, with some containing European goods (Curry 1999).

Historic Period

Native lifeways of the Late Woodland continued as Europeans made their presence felt. As time went on the European disruptions increased forever changing how the Native Americans lived. Changes came about through disease, importation of new goods and foods, alterations in trade networks and inter-group relations. As the Dutch in New York and the French in Canada expanded their trade networks and conducted war with the English, the natives were drawn into these conflicts. Iroquoians raided into the south and expanded their trade influence in furs.

European settlement of Delmarva has three origins, Cape Charles, Lewes and New Castle, and Kent Island. Cape Charles was firmly established in the 1630's as was Kent Island. Lewes was permanently settled in 1657. The settlements expanded from their initial points. Virginians expanded north up the

peninsula into what is now southern Maryland and lower Delaware. Marylanders from Kent Island moved south, north, and east up the Nanticoke, Choptank, and Chester rivers spreading into what is now Delaware. Lewes and New Castle settlers moved west. These movements pushed the native populations toward the center of the Peninsula.

European Disruption

In June 1608 Captain John Smith sailed from Jamestown to explore the Chesapeake Bay. His journey included a stop at the Kuskarawaok (Nanticoke) River. In one passage he mentions they visited two or three little houses each with a fire (Smith 1608). Being June, it is likely these were cooking fires and not for warmth. Smith mentions four groups along the river, the Sarapingh, Nause, Arseek, and Nantiquake. He refers to the Nantiquake as the best merchants of all other savages.

Smith further mentions the rivers Kuskarawack (Nanticoke) and Wighocomomoc (Pocomoke) and claims the inhabitants of these rivers speak a different language from others on Delmarva. Those on the eastern shore of Virginia, the Accomack and Accohonack, he claims, speak the language of Powhatan. There has been some discussion about the placement of villages seen on Smith's map. There are some who place Kuskarowack at Chicone Creek (Scott 2004) and others who interpret the location as near Broad Creek (Griffith & Busby 2011). A third interpretation places Kuskarowack on Marshyhope Creek (Scott 2004).

The Maryland government declared war on the Nanticokes, and others in 1642 and 1647 although little fighting occurred. European settlement reached the Nanticoke in the 1670s. By 1670 Maryland claimed all of the Nanticoke drainage and issued land patents. A series of reservations were created in 1678 including Tundotank, Askiminikansen, Parahawkin, Puckamee and Chickone. The latter two were opposite each other across the Nanticoke River and were established for the Nanticoke nation. Chickone became known as the residence of the Chief of the Nanticoke and trade with Europeans took place here. Mentions of Puckamee are short-lived in the records (Roundtree & Davidson 1997). The Chickone reservation was along the north side of the Nanticoke from Chicacone Creek to the Marshyhope (Figure 3).

By an act of General Assembly in Maryland, the Broad Creek Reservation was set aside for the Nanticokes in 1711 (Maryland Archives Online). The reservation was created near an existing Nanticoke town that had been occupied for at least one hundred years (Roundtree and Davidson 1997). The three thousand acre reservation included land on the north and south sides of Broad Creek including where the town of Laurel is now located (Figure 4). Although the Nanticoke now had land set aside for their sole use, the English continued to disregard boundaries and tensions escalated (Busby 2010). At this same time a roughly 1000 acre reservation, Askekesky, was created on the south side of Shiles Branch of the Indian River east and south of present day Millsboro.

In 1742 Maryland's Lord Proprietor entered into new treaties with the lower Eastern Shore tribes. Indian people would not be allowed to possess hunting rifles unless they were licensed. No relatives or groups from outside of the reservation were permitted to visit. Native people were not permitted to enter an English town without a prior appointment or announcement. Separate treaties were made with the groups across the shore including the Chickone, and Broad Creek groups (Maryland Archives 1883A). These treaties forbade the groups from combining their leadership (Maryland Archives 1883A).

After 1742 there was a continued disintegration of the native communities (Roundtree & Davidson 1997:155). There was continual encroachment and harassment by European settlers and individuals were moving between reservations. Many Broad Creek Reservation inhabitants went to live with the Susquehannas. Some removed to the Six Nations area where they were assimilated into the Iroquois. Others left the reservation and acculturated within English society. Because of the depopulation of the Native groups, the reservations of Chicone and Broad Creek were reclaimed by Maryland and sold off between 1768 and 1785 (Roundtree & Davidson 1997:159). Askekesky lands were apparently sold off by the native inhabitants by 1741 (Roundtree & Davidson 1997:156).

Those Native Americans that did not leave Delmarva bought land, and adopted European style living. They maintained their social ties and developed closed communities. In 1881 the Nanticoke incorporated and were recognized by the state of Delaware as a legal entity. The Nanticoke were recognized by social scientists as a remnant population worthy of study (Babcock 1899; Speck 1915). There exists today a tribal organization and there is a conscious effort to rebuild their identity.

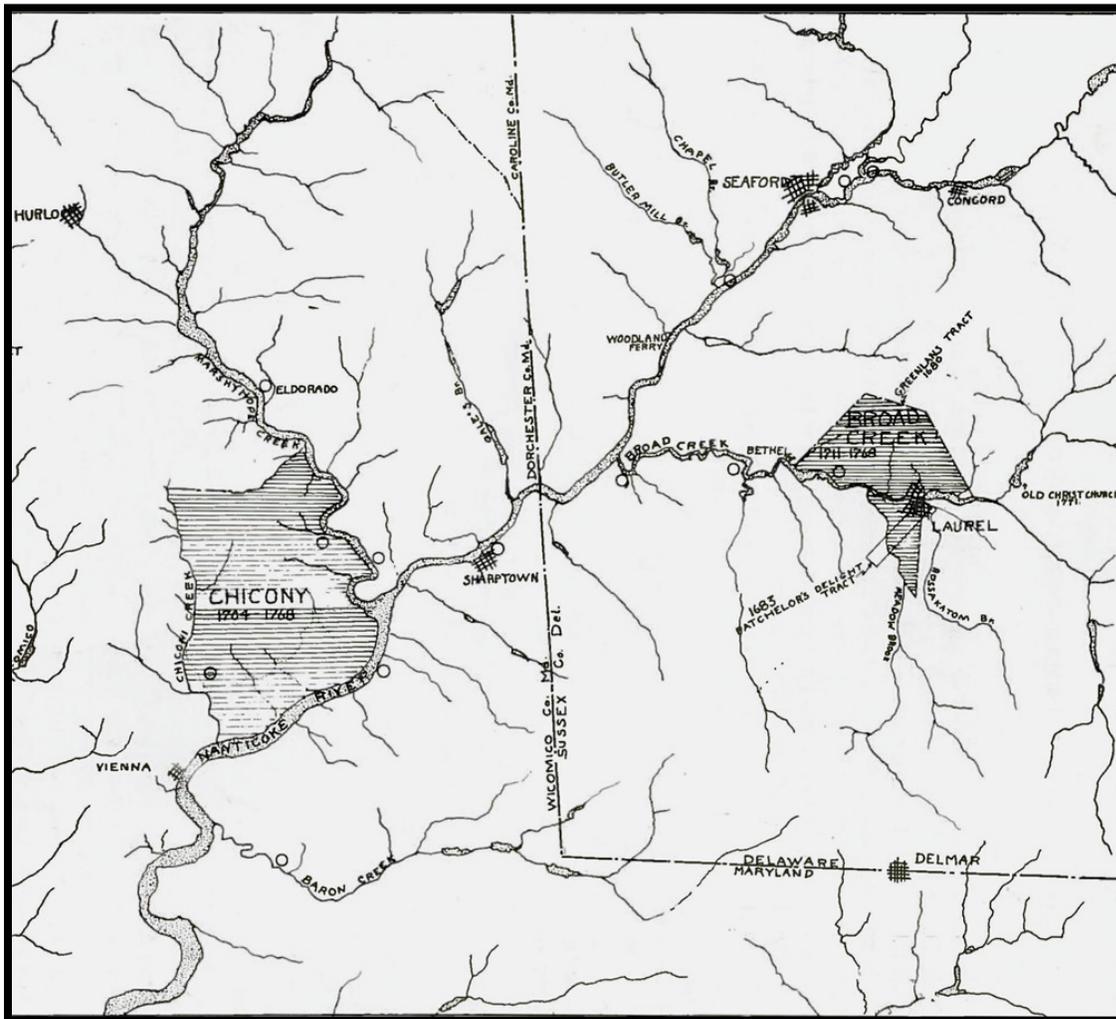


Figure 3. Reservations on the Nanticoke (Hutchinson 1961)

Intensified and Durable Occupation (1730 - 1770)

The population of lower Delmarva grew steadily during this period. Life was based on agrarian pursuits. Will inventories often include evidence for the production of corn, cattle, hogs and grain. Settlements were located along navigable streams. Most early historic sites are located within 300 feet of a navigable stream (De Cunzo & Catts 1990:36). Farm products reached foreign markets through ports on the Delaware and the Chesapeake. The rivers in western Delaware provided easier access to the Chesapeake than did many land routes to the Delaware. The border was not firmly established between Maryland and Delaware until 1760.

Iron forges came into existence in southern and central Delaware about 1760 and were largely gone by the Revolution. The iron and timber resources of the region sustained a sizeable boat building industry. Road networks were expanded and settlers moved further inland. Milling operations grew in areas where streams could support mill ponds. Small hamlets developed mostly along river crossings (De Cunzo & Catts 1990:44).

Transformation from Colony to State (1770 - 1830)

The Revolution altered foreign markets. Food produced on Delmarva was sold in Baltimore and Philadelphia instead of Europe or the West Indies. These economic ties continued until the Civil War. Rapid population growth after the Revolution led to the clearing and tilling of marginal lands (De Cunzo & Catts 1990:53). By the 1820s many were heading west for better land. There was also an increase in industrialization. In 1810 more than 70% of the textile mills of Delaware were in Sussex County. Flax and wool were major farm products in the county.

The nearby town of Bethel lies along the north bank of Broad Creek and is located in Broad Creek Hundred. Lewis Wharf, later Lewisville then Bethel is known for early ship building. Forests along the Nanticoke supplied the pine, oak and cypress needed for construction of ships. Ship carpenters settled the area, constructing their homes as well as sailing vessels in the village. The Chesapeake sailing ram originated at Bethel.

Industrialization and Capitalization (1830 - 1880)

The rise of Baltimore as an important overseas port siphoned Delmarva goods away from Philadelphia. Railroads reached the lower peninsula around 1850 and improved transportation. This allowed farmers to raise more perishable and lucrative crops such as peaches. Canning, developed after the Civil War, became an important industry. Corn and wheat remained the major crops. Rams were used for transporting freight on the Chesapeake. As many as thirty rams were built at Bethel during the 19th century.

Saw and grist mills were owned and operated at Portsville in 1825 by James Phillips, who at his death left them to his sons Isaac G. and Thomas J. Phillips. Isaac purchased his brother's half share of the land, mill, and miller's house in January 1854 (Delaware Land Records).

The project area was owned by Isaac Giles Phillips in 1868 (Figure 5). It is possible Isaac inherited the landing after the death of his father along with land, a sawmill and a miller's house at Portsville. The Phillips Family cemetery is located within the tract about 650 feet southeast of the project location. Those interred within this burial ground are Isaac G. Phillips, his wife Emiline and others. Grave

markers are visible and the most recent burials are circa 1960. Because archival research was not conducted as part of this project, a complete and more detailed land history remains unknown.

Urbanization and Sub-urbanization (1880 - 1940)

The term for this period is somewhat misleading for central and southern Delaware. Little urbanization occurred. The most significant changes of this period in southern Delaware were improvements in transportation and a shift to truck crops and poultry as major farm products. This reduced the use of water transportation and ship building declined. Some industry related to the wars, in particular the establishment of airfields, did occur. The modern poultry industry that quickly raises and markets chickens was developed in Sussex County. The need to satisfy feeding requirements of the birds shifted crops from truck items to feed crops. The small mills such as at Portsville also declined as roads allowed for easier shipment of raw materials and finished products to and from the major production centers.

Recent Times

Since World War II there has been a significant increase in population in eastern Sussex County, not as much in the west. Development occurred earliest within coastal resort areas. More central regions remained farm land. Seaford was an exception with the DuPont Nylon plant which resulted in an influx of workers.

During the past 20 years, however, the pace of residential development has increased dramatically and new single-family homes have supplanted farms, again primarily in the east. Increased population has led to better and bigger roads and additional commercial development. Seaford has seen a decrease as the nylon plant has reduced output and nearly closing in the early 21st century.

PROPERTY HISTORY

The City of Seaford took possession of the property in 2018 from Geraldine P. Thomas and Robin G. Beard (deed book 4913 page 151). This transaction was facilitated by the Chesapeake Conservancy. A modern survey identifies the parcel as containing .9180 acres of land. This is the same land that Geraldine Thomas acquired from the estate of William Donoho Robinson; through various deeds and the will of William Donoho Robinson (will book 176 page 261).

William Donoho Robinson's will divided his land into 16ths with heirs receiving undivided interests. Geraldine Thomas was willed six sixteenths. John Robinson sold his five sixteenths interest to Geraldine Thomas (deed book 2284 page 84). Samuel Robinson sold his three sixteenths interest (deed book 2284 page 80) and Iris Scott Robinson sold here two sixteenths (deed book 2284 page 76). This is the same tract of land that Waller Donoho and James B. Robinson purchased from the estate of William R. Adams in 1908 (Deed book 165 page 195).

William R. Adams acquired the property from the Farmers Bank of Delaware. The land had belonged to a Nathaniel Horsey and his wife Arcadia. Nathaniel died in 1885 owing a lot of money and the water front was part of Arcadia's dower (deed book 85 page 523). Farmers Bank of Delaware sold lots 17, 18, and 19 to William R. Adams in 1874. Adams also acquired other nearby tracts. His total holdings included the current parcel, the lot adjacent between Pearl and Cannon Streets, and other land on High Street.

In 1869 these lands had been exposed to auction by the Sheriff to cover debts. The Farmers Bank of Delaware bought the property (deed book 79 page 200). Mentioned in the deed are two wharfs and a granary standing on the property.

Time did not permit thorough research into all of the land holdings of Nathaniel Horsey or how he came to own this land. By 1864 Nathaniel had subdivided the property and it was known as Horsey's Addition. Lot numbers to this day relate to the original plat of Horsey's Addition (Figure 4). Based on that map, most of the current parcel is within the Nanticoke River (Figure 5). The 1868 Beers Atlas is consistent in that it too shows much of the parcel in the river (Figure 6) as does Gray's map from 1877 (Figure 7). It is for this reason that further land research back in time would likely not provide additional information. The parcel was within the Nanticoke River.

The 1888 deed to William Adams makes reference to two wharfs on the property. One is likely Horsey's Wharf shown on the east end of the parcel in the 1868 Pomeroy and Beers Atlas. The second is possibly the Adams Wharf shown in the 1908 plat (Figure 8).

Sanborn Fire Insurance Maps are available from 1891, 1897, 1907, and 1923. These are detailed maps showing buildings and their construction. A significant amount of filling must have occurred between 1877 and 1891 as the shoreline appears about 100 feet south of its previous location. All of the Sanborn maps show a two-story frame building on the west end of the property in an area that had previously been water. In 1891 the building had one single story addition and is labeled as a ship carpenter building (Figure 9). Just east of the building is an area marked ship ways which would be an area for launching ships or hauling them out of the water for repair. On the east end of the property is a fertilizer warehouse.

The 1897 Sanborn Map was updated from the 1891 map and refers to the ship carpenter building as an oyster house (Figure 10). This 1897 map predates the 1908 purchase of the property by Robinson. Either Adams converted the boat yard into an oyster house or he rented the land out. The ship ways remain on the maps through 1907 (Figure 11) and are absent on the 1923 Sanborn Map (Figure 12).

An undated photograph from the late 19th or early 20th century shows a two-story frame building; seen left of center. This is the ship carpenter building/oyster house (Figure 13). The building can also be seen in a 1910 postcard taken from up-river (Figure 14). A 1926 image shows this building and a newer building (not shown on the 1923 Sanborn Map) toward the east (Figure 15).

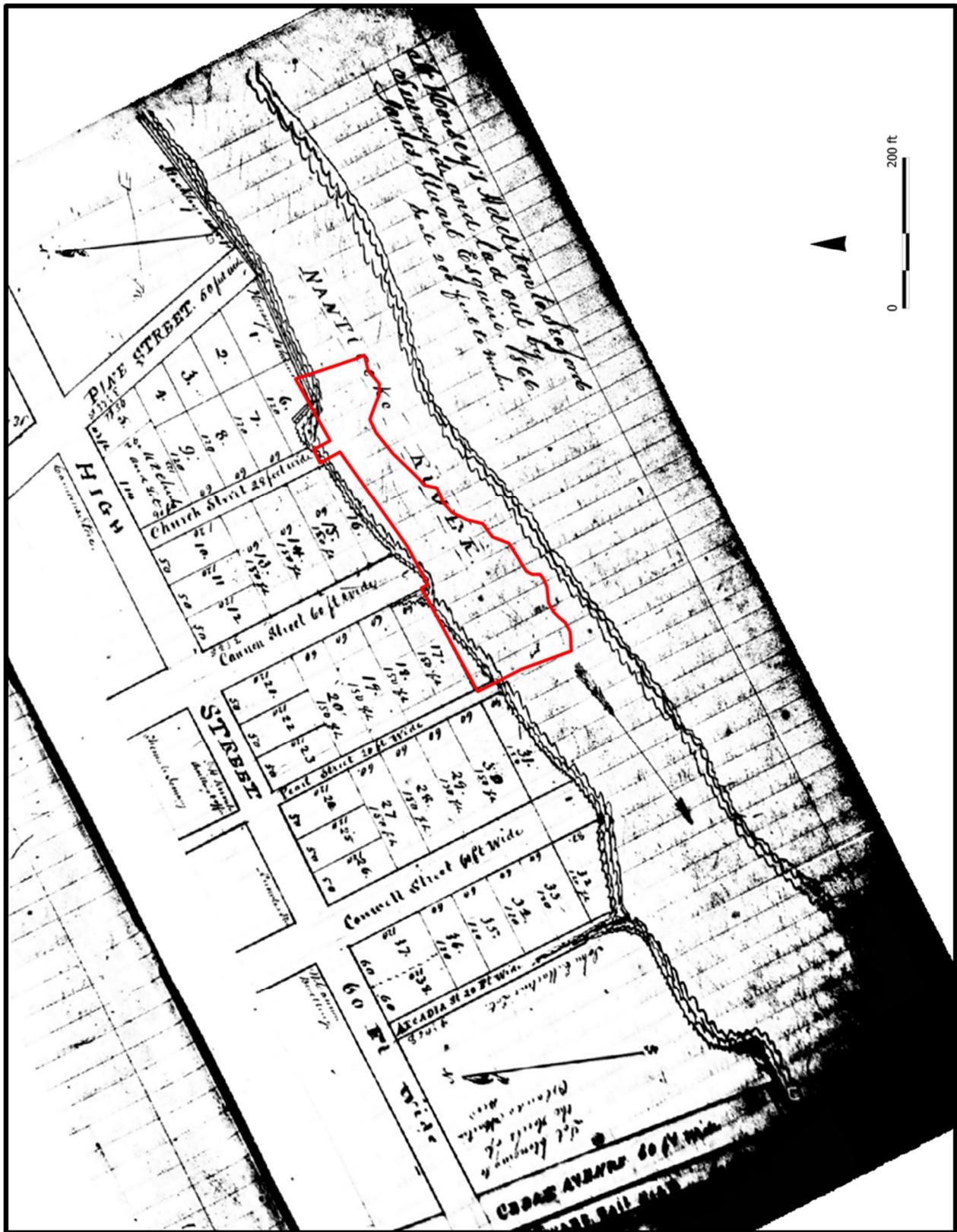


Figure 5. Horsey's Addition with Modern Parcel Boundary



Figure 6. 1868 Pomeroy & Beers Atlas

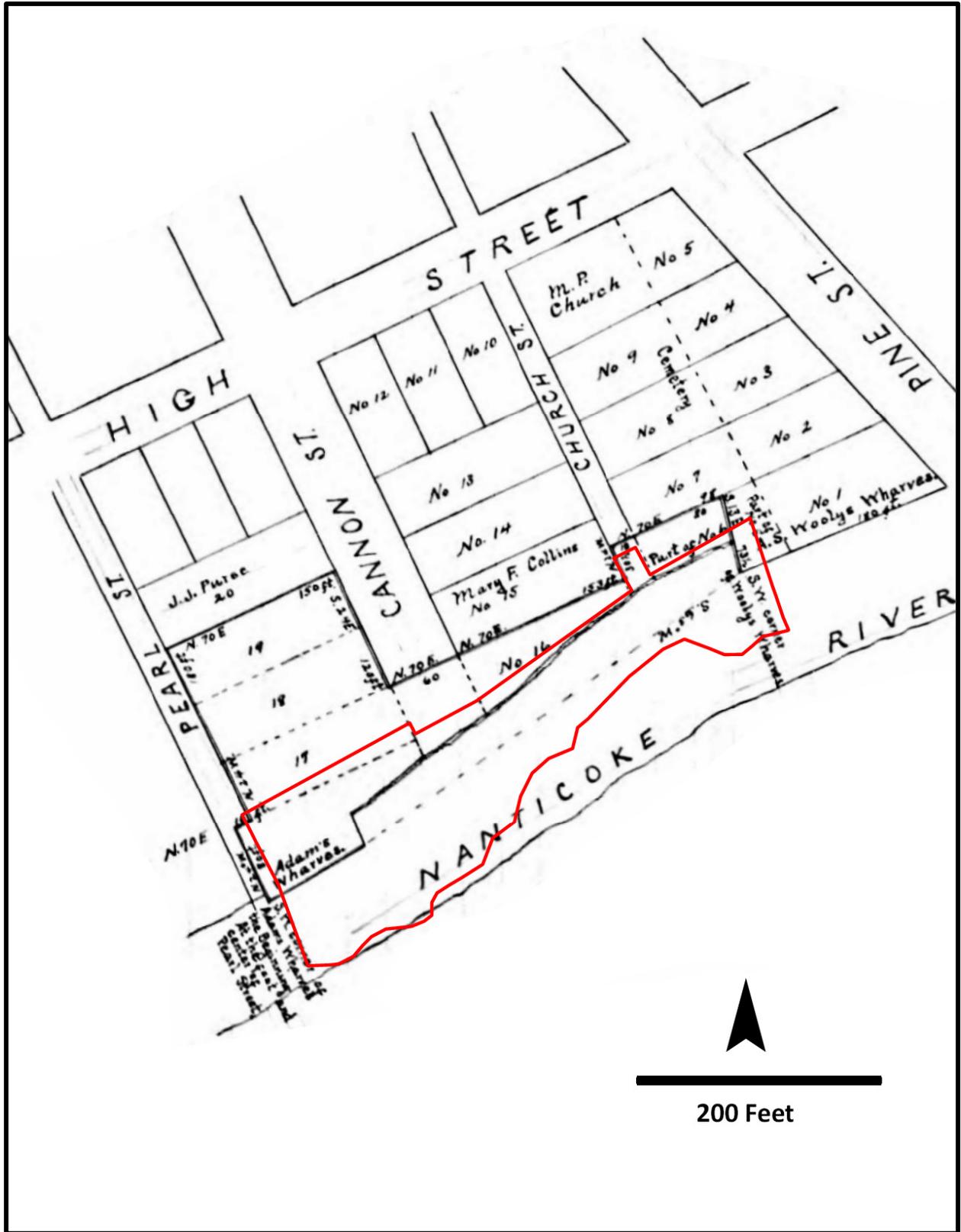


Figure 8. 1908 Plat, Land of William R. Adams (deceased) Deed Book 165 page 198.

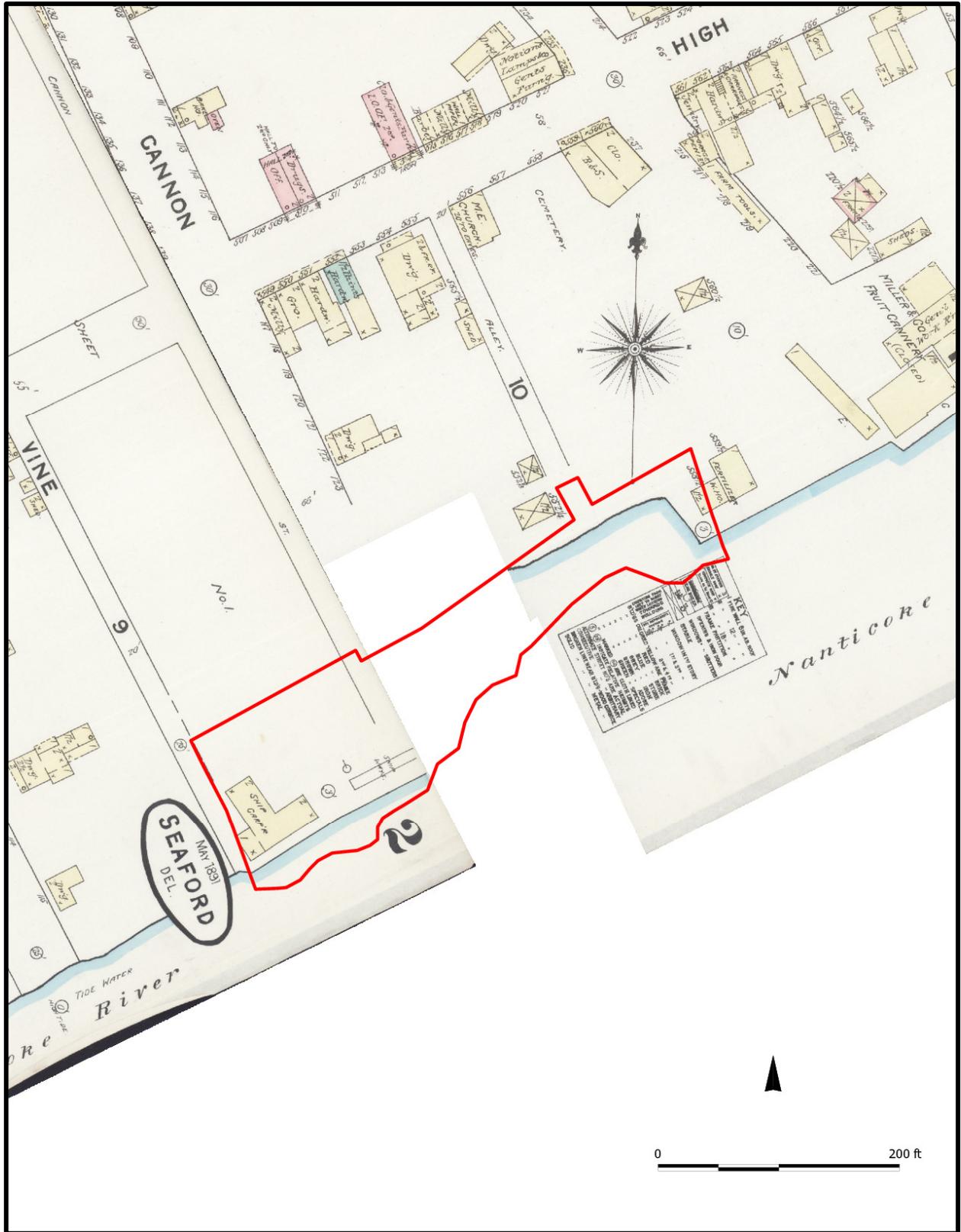


Figure 9. 1891 Sanborn Fire Insurance Map

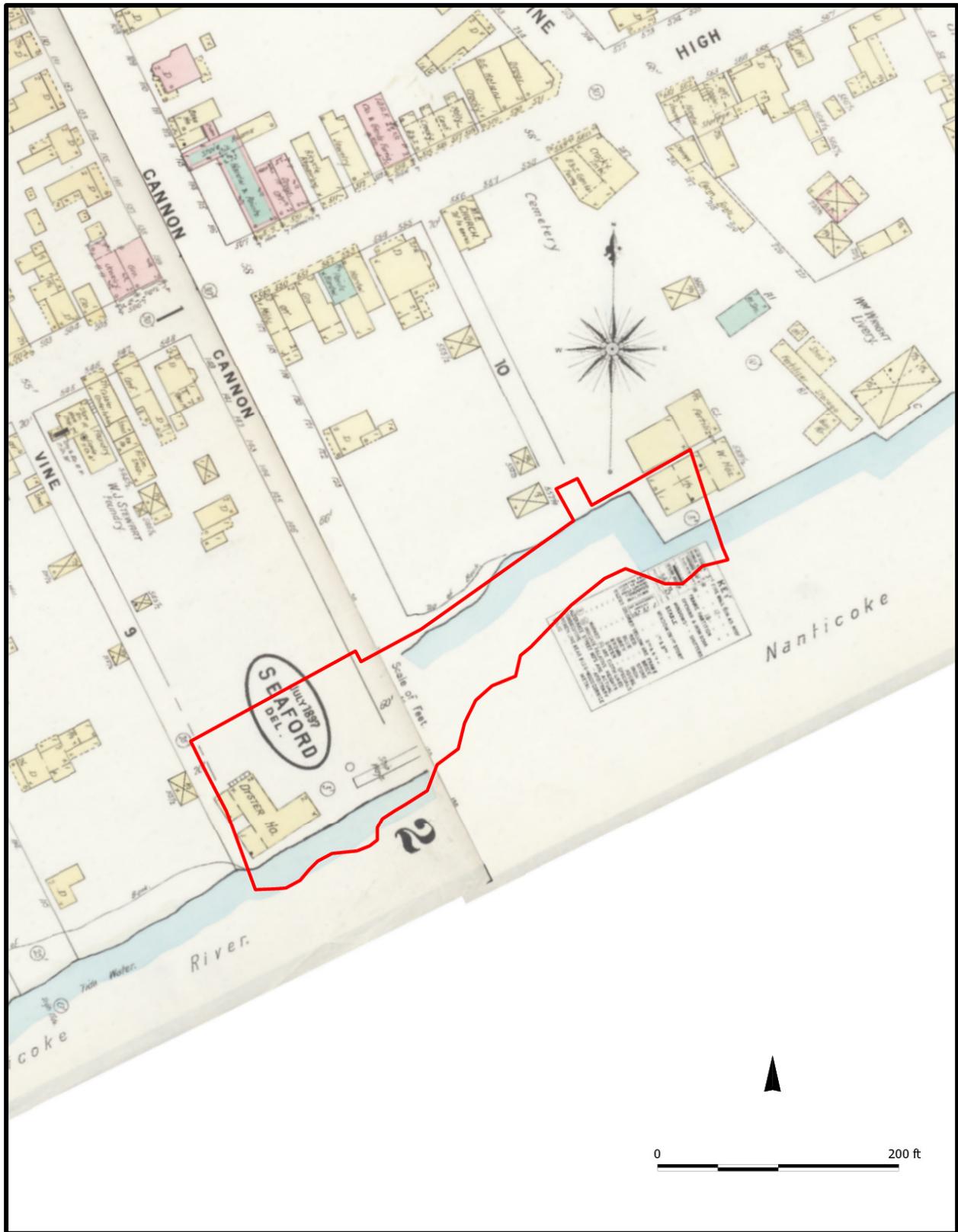


Figure 10. 1897 Sanborn Fire Insurance Map



Figure 11. 1904 Sanborn Fire Insurance Map

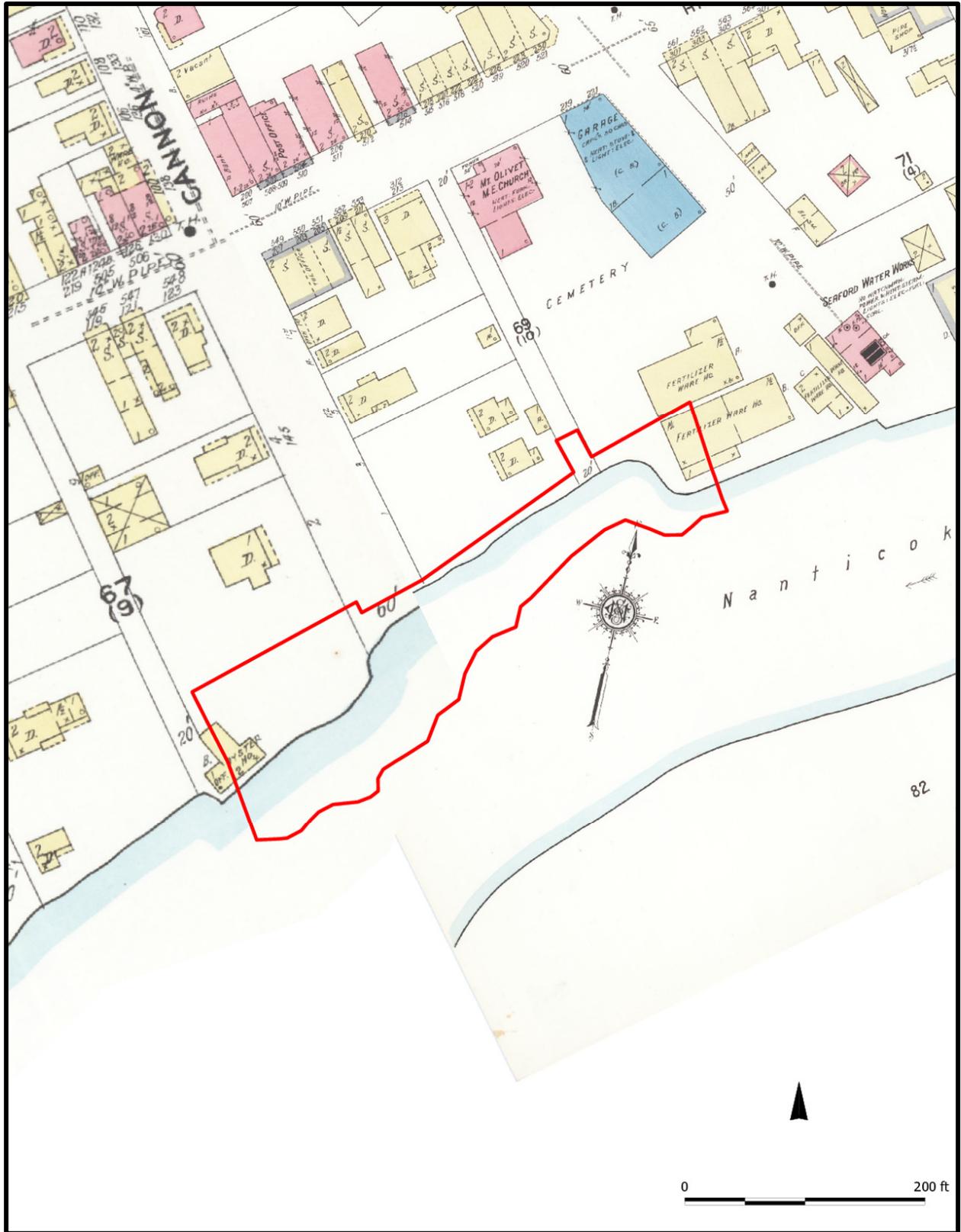


Figure 12. 1923 Sanborn Fire Insurance Map

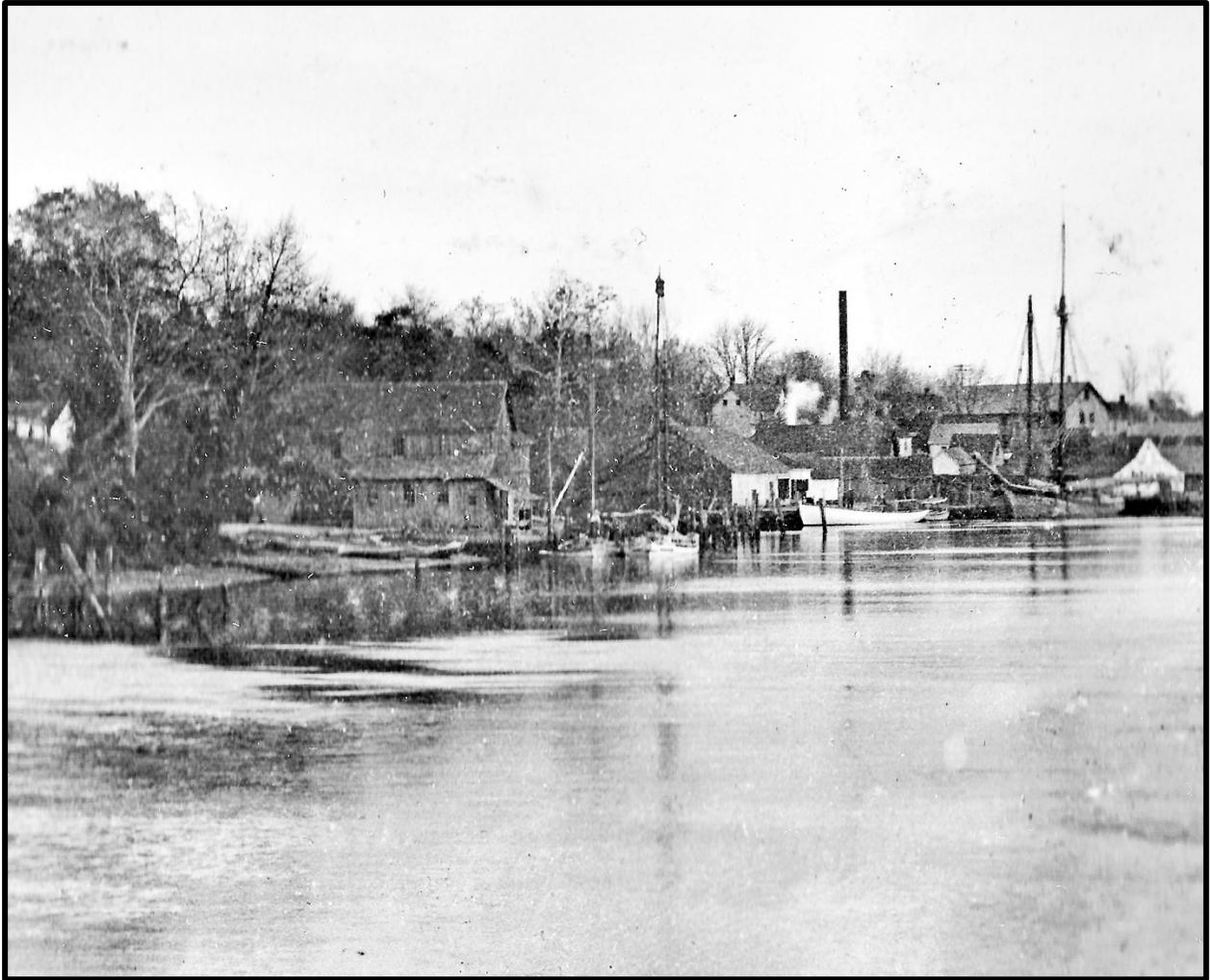


Figure 13. Adams Wharf



Figure 14. 1910 Postcard (courtesy Seaford Historical Society)



Figure 15. 1926 Aerial Photograph, Dallin Aerial Co.

Aerial photography from 1937 exists but the image is too dark to read. Imagery from 1947 is grainy making it difficult to see buildings. However, in the 1947 image, the older building to the west is gone. The newer building, believed to be Donoho's Oyster House, is largely obscured by either trees or shadows (Figure 16). The 1954 aerial photograph is more clear on the placement of the building (Figure 17).

These early aerial photographs show the shoreline a bit north of the current parcel line. This is believed to be evidence that the current shoreline is a product of 20th century filling. The existing bulkhead was added and filled behind with rocks and soil. A portion of the bulkhead that has failed is visible in the water upstream from the intact portion (Figure 18). There are timbers at the surface about 20 feet inland from the current water front (Figure 19). These may be remnants of the 19th century bulkhead. Aerial photography from the 1960s is poor quality but the Donoho Oyster House appears to have been removed in the 1960s. It does not appear in the 1973 aerial photograph (Figure 20).

There were two late 20th century alterations to this parcel worth noting. In 1959 a sewer line was constructed through the property (Figure 21). More recently a significant amount of filling and rip-rap were added on the east side of the property as a shoreline protection project. This can be seen on the 2010 Google earth image (Figure 22) complete with a piece of equipment on site.

ARCHAEOLOGICAL POTENTIAL

Based on the research of the Oyster House parcel some statements about the archaeological potential of the property can be made. Historic maps have been an important component of this research and shed light on the early history of the property that might otherwise remain unknown. The east end of the property appears to be all recently made land with little potential for archaeological deposits. The west end, however does have archaeological potential.

Based on the early maps, the potential for prehistoric archaeological resources on this tract is considered non-existent. This is due to the belief that the land itself was largely non-existent. During the last two decades of the 19th century and first decade of the 20th century, it appears that the land was created by filling in a section of the Nanticoke River. It is estimated that about 100 feet of new land was created.

Various techniques were employed in filling waterfronts. Bulkheads or cribbing might have been employed to hold the fill. Another method was to sink obsolete vessels and then cover them with fill. Buried ships have been found in many port cities including Alexandria, Virginia and under the World Trade Center in New York City. Thus, the fill itself may have archaeological materials within it. It is likely there are successive layers of fill on the property.

Archaeological evidence of the boat yard, including the ships ways, and the later oyster houses might remain on the property, possibly beneath layers of fill. The timbers exposed at the surface might be architectural, either part of the Donoho oyster house or a bulkhead.

The only major disturbance to potential archaeological deposits is the sewer line. Installation of the line might have intercepted archaeological materials. Those excavations would have destroyed any deposits encountered but only within the pipeline trench. Other areas would remain.



Figure 16. 1947 Aerial Photograph

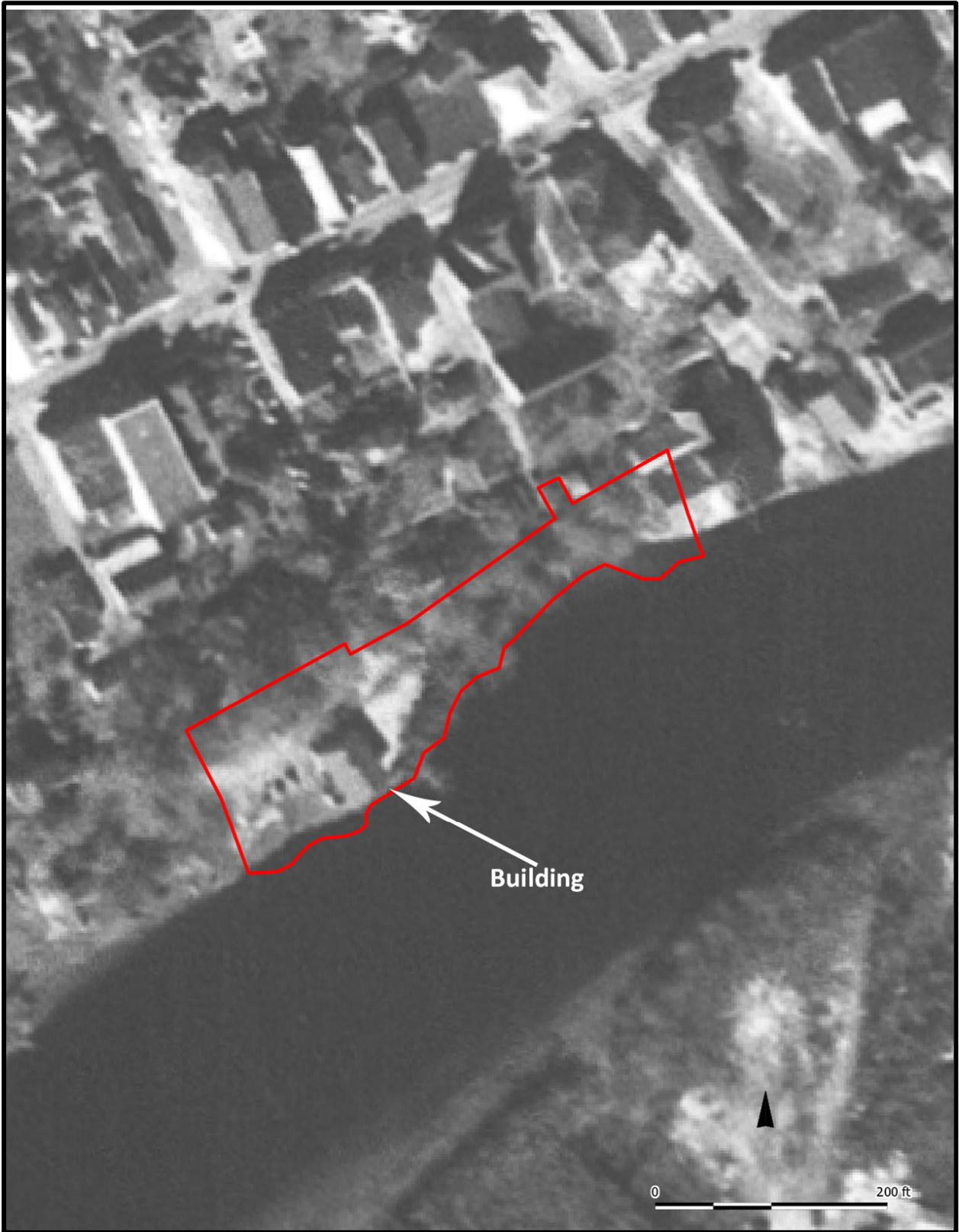


Figure 17. 1954 Aerial Photograph



Figure 18. Failed Bulkhead



Figure 19. Timbers exposed at Surface

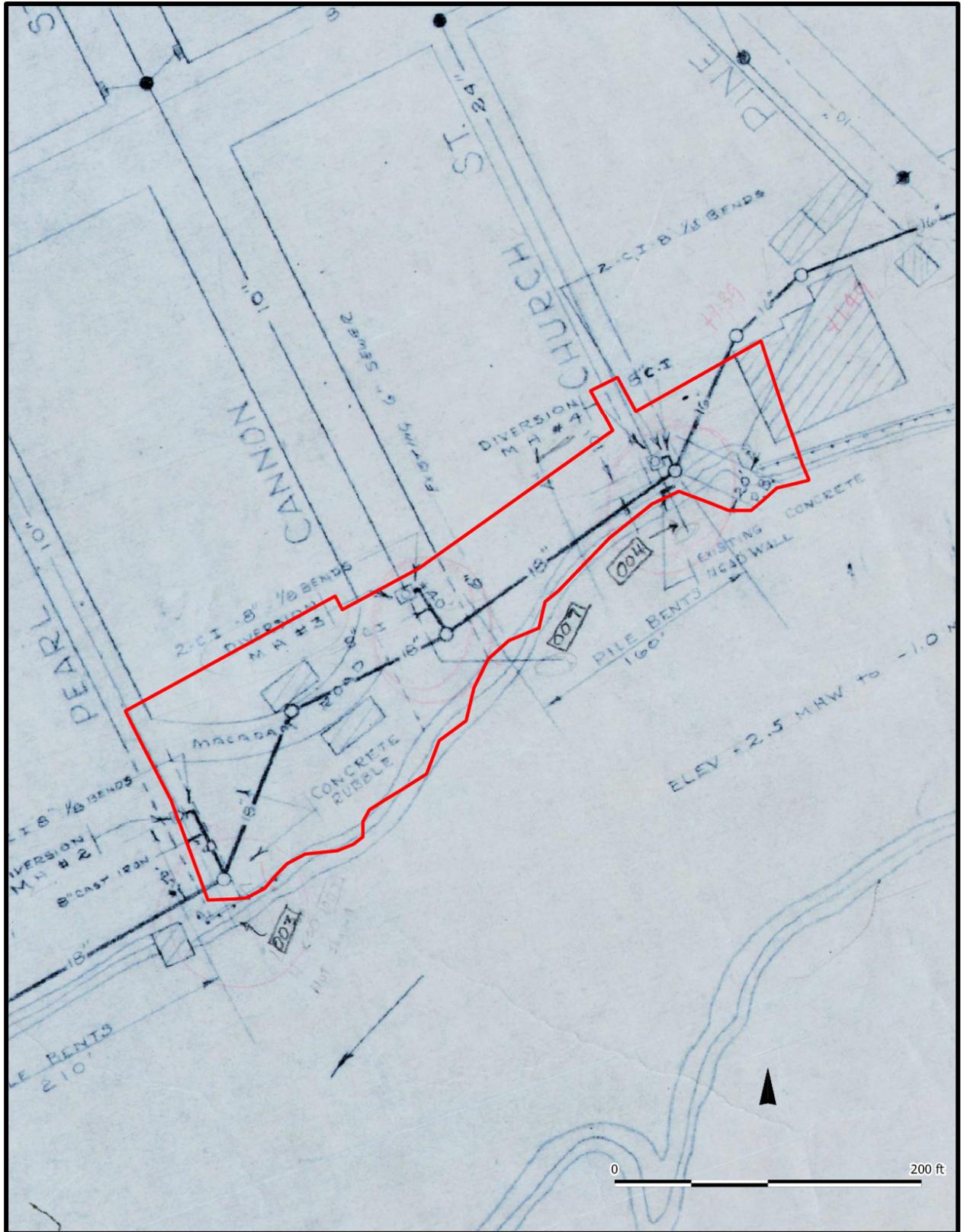


Figure 21. 1959 Plans for Sewer Alignment

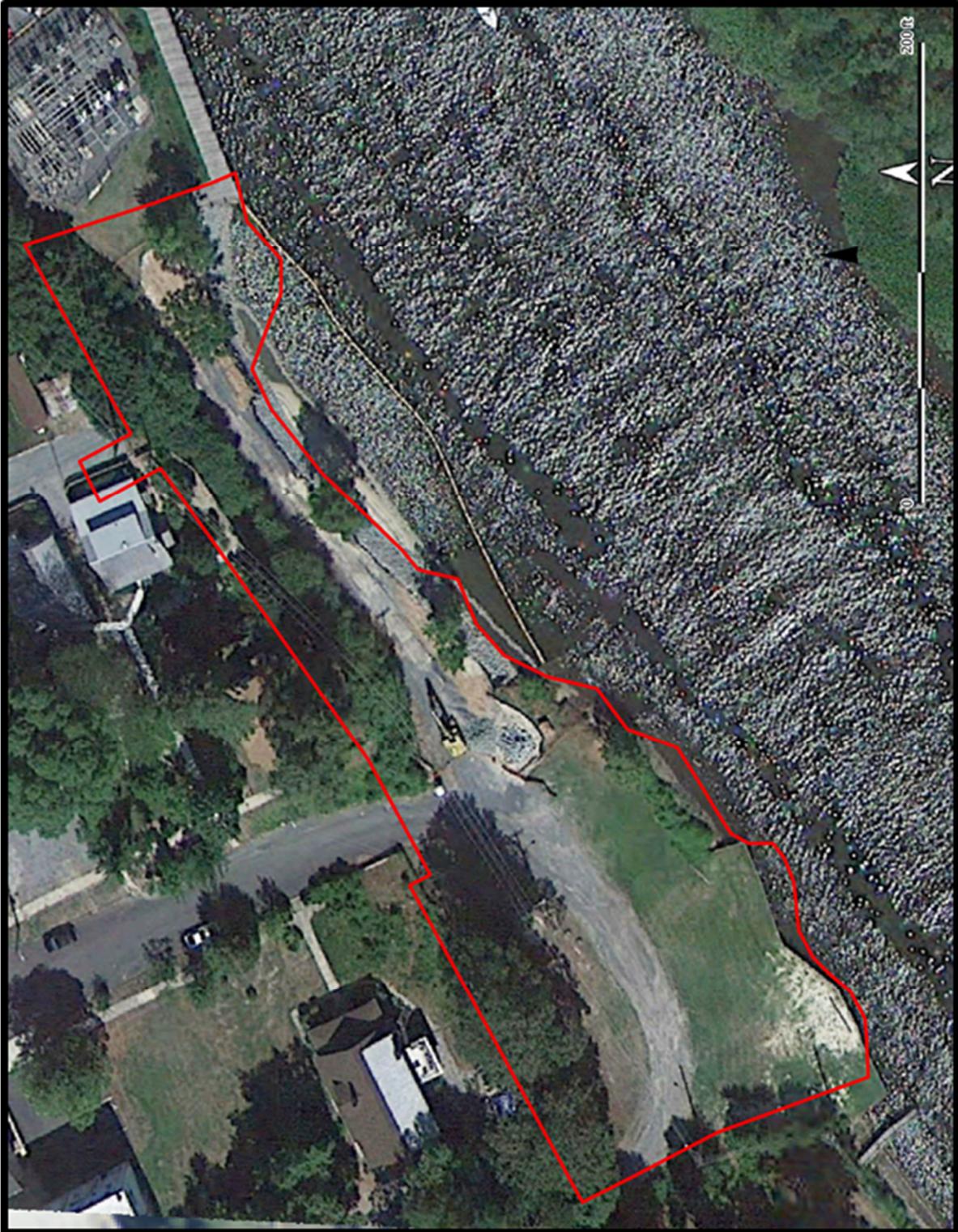


Figure 22. 2010 Google Earth Image

CONCLUSION AND RECOMMENDATIONS

In short, there are, potentially, the following archaeological manifestations: cribbing/bulkheading for land creation, foundations and features associated with a late 19th century boatyard, and foundations and features of early 20th century oyster packing operations. The potential for archaeological deposits predating the late 19th century appears very low as the land is believed to have been created between 1877 and 1908.

The State Historic Preservation Office concerns itself with all man-made sites, buildings and structures over 50 years old. The late 19th and early 20th century deposits and structures could be of interest to them. However, in Delaware, there are no state level preservation laws for anything other than cemeteries. All other requirements come through federal permits or actions.

In general, rebuilding the existing bulkhead would likely not be an issue as it is not very old. Filling can be seen as a preservative. Driving pilings for a building through the sediments might be an issue as it is unknown what is buried there. Poured slab foundations on the fill might be a less intrusive option.

Specific archaeological recommendations for this project can be directed at specific impacts. Development plans call for creating an amphitheatre, pavilion, a dock, a boardwalk, and buildings (Figure 23). The proposed dock would replace the existing bulkhead and add fill to the land. Assuming the existing bulkhead is not considered historic, this work would have minimal impacts to historic resources. Proposed buildings appear to be located in areas not likely to contain historic resources. Paving will occur on top of existing fill and impacts to historic resources are unlikely. Any additional filling on the property would serve to protect what lies below.

The installation of the boardwalk, and to a lesser extent the floating dock, will require pilings. This most likely will require a federal permit and could trigger historic resource compliance under Section 106 of the National Historic Preservation Act of 1966, as amended. There may be potential for submerged cultural resources (shipwrecks) to exist within the project area. An archaeological survey for submerged resources may be required.

Considering the nature of the potential resources and proposed impacts a few recommendations are in order. It could be informative to conduct auger tests to determine the depth, nature, and stratigraphy of the fill. These tests might provide data to assess any buried materials within the fill and the sequence of filling. If there are to be deep impacts within the fill the bore hole testing by an archaeologist is recommended. It is also recommended that an underwater survey be conducted in areas where piling and other disturbances will occur. This work could be required under a section 106 permit.

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APPENDIX I: QUALIFICATIONS OF PRINCIPAL INVESTIGATOR
Edward Otter, Ph.D. President and Principal of Edward Otter, Inc.

Education

- 2002 Ph.D., Anthropology/Archaeology
Catholic University of America, Washington D.C.
- 1989 Master of Arts in Anthropology/Archaeology
Catholic University of America, Washington D.C.
- 1980 Bachelor of Arts in Anthropology
University of Delaware, Newark, Delaware

Capabilities

Over 40 years experience in archaeology in the Middle Atlantic United States. Work during this period has involved prehistoric and historic sites at all levels of expertise from Field Crewmember to Principal Investigator. Responsibilities have included project design and implementation, field and laboratory supervision, artifact analysis, archival research, report writing, site interpretation to the public, field and classroom instruction, and faunal analysis.

Select Recent Projects

- 2018 Phase I Survey, Weatherstone Sewer Project, Kent County, Delaware
- 2018 Phase I Survey, Eastville Health, Eastville, Northampton County, Va.
- 2017 Phase I Survey Jones Farm, Millington, Maryland
- 2016 - 2017 Phase I and Phase II Archaeological Survey. Plain Dealing, Denton, Caroline County, Maryland
- 2016 Phase I and Phase II Archaeological Survey. Estuary, Sussex County, Delaware.
- 2015 Phase II Study. Prehistoric Site MBS-9, Millville, Sussex County, Delaware.
- 2014/2015 Historic Cemetery Removal. Lewes, Sussex County, Delaware.
- 2014 Phase I Survey. Milford Delaware Water Facility, Milford, Sussex County, Delaware.
- 2013 Phase II Study. ECI Biogas project, Princess Anne, Somerset County, Maryland.
- 2013 Phase I Survey. Fusco Property, New Castle County, Delaware.
- 2003- 2017 Phase IA, Phase I, Phase II and Monitoring. Over 400 cell tower locations in New Jersey, New York, Maryland, Delaware, Pennsylvania and Virginia.
- 2011 - 2012 Phase I and Phase II Archaeological Survey. Proposed Hospital Location Shore Health, Easton, Talbot County, Maryland.

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updates or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (CBFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was State Plane Delaware zone (FIPSZONE 0700). The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NAD83/29
National Geodetic Survey
SSM-C-3, #202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FIRM was provided in digital format by Delaware Geospatial Data Exchange. The base map features were compiled at a scale of 1:24,000 from aerial photography dated 2011.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

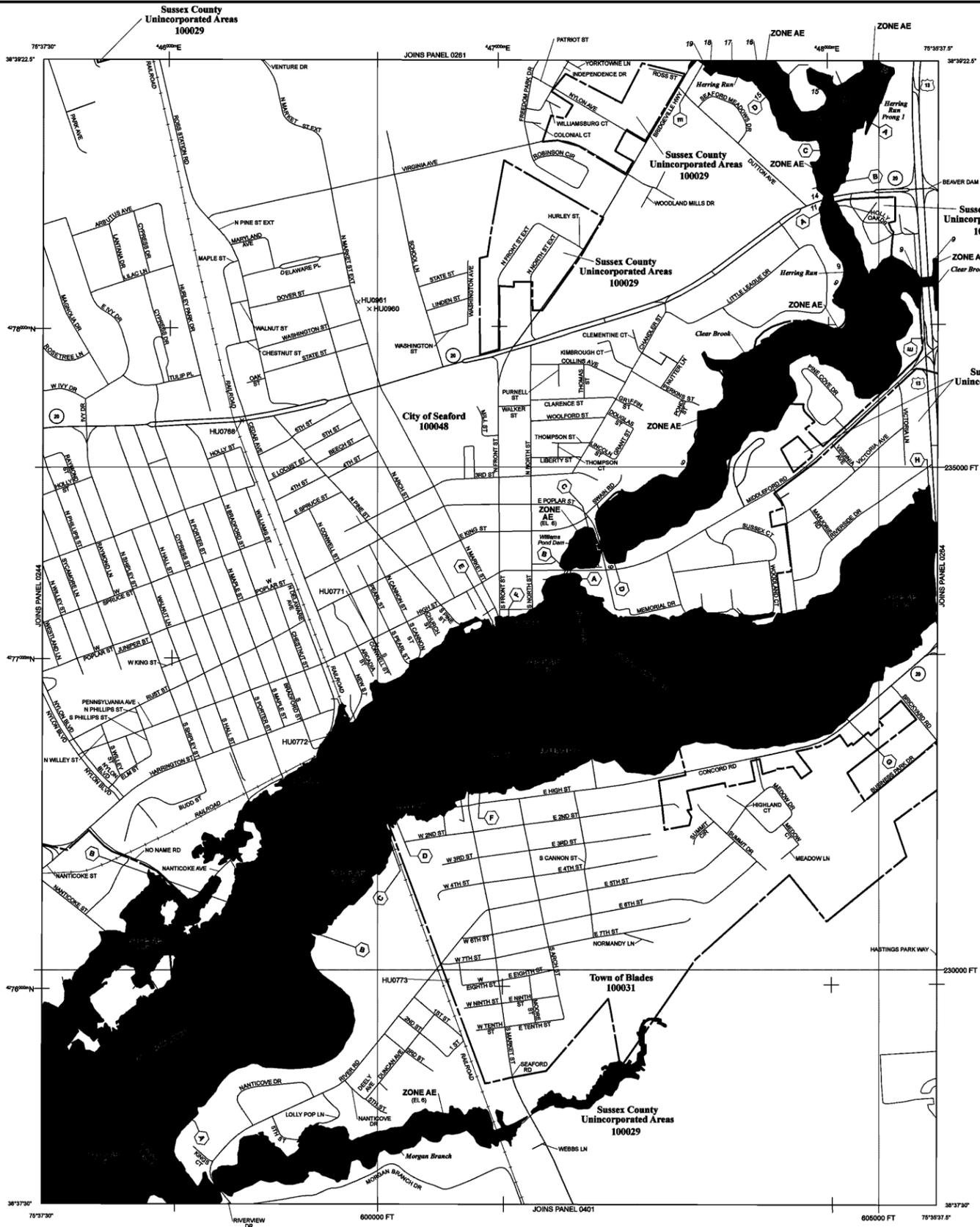
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Information eXchange may also be reached by Fax at 1-800-368-6620 and its website at <http://maps.fema.gov/>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/natcats/firm/>.

The "profile base lines" depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the "profile base line", in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, AV, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of allowed fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently determined. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE AV** Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood height.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

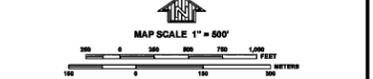
- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- Base Flood Elevation line and value, elevation in feet* (EL 887)
- Base Flood Elevation value where uniform within zone, elevation in feet
- * Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid ticks, zone 18
- 5000-foot grid values: Delaware State Plane coordinate system (FIPSZONE = 700), Transverse Mercator projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- Water table
- MAP REPOSITORIES
- Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP: JUNE 16, 1995

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL: June 20, 2018 - To incorporate new approximate and limited detailed flood hazard analyses, to add Base Flood Elevations and Special Flood Hazard Areas, to change zone designations and Special Flood Hazard Areas, and to reflect updated topographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0263L

FIRM

FLOOD INSURANCE RATE MAP

SUSSEX COUNTY, DELAWARE AND INCORPORATED AREAS

PANEL 263 OF 660
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

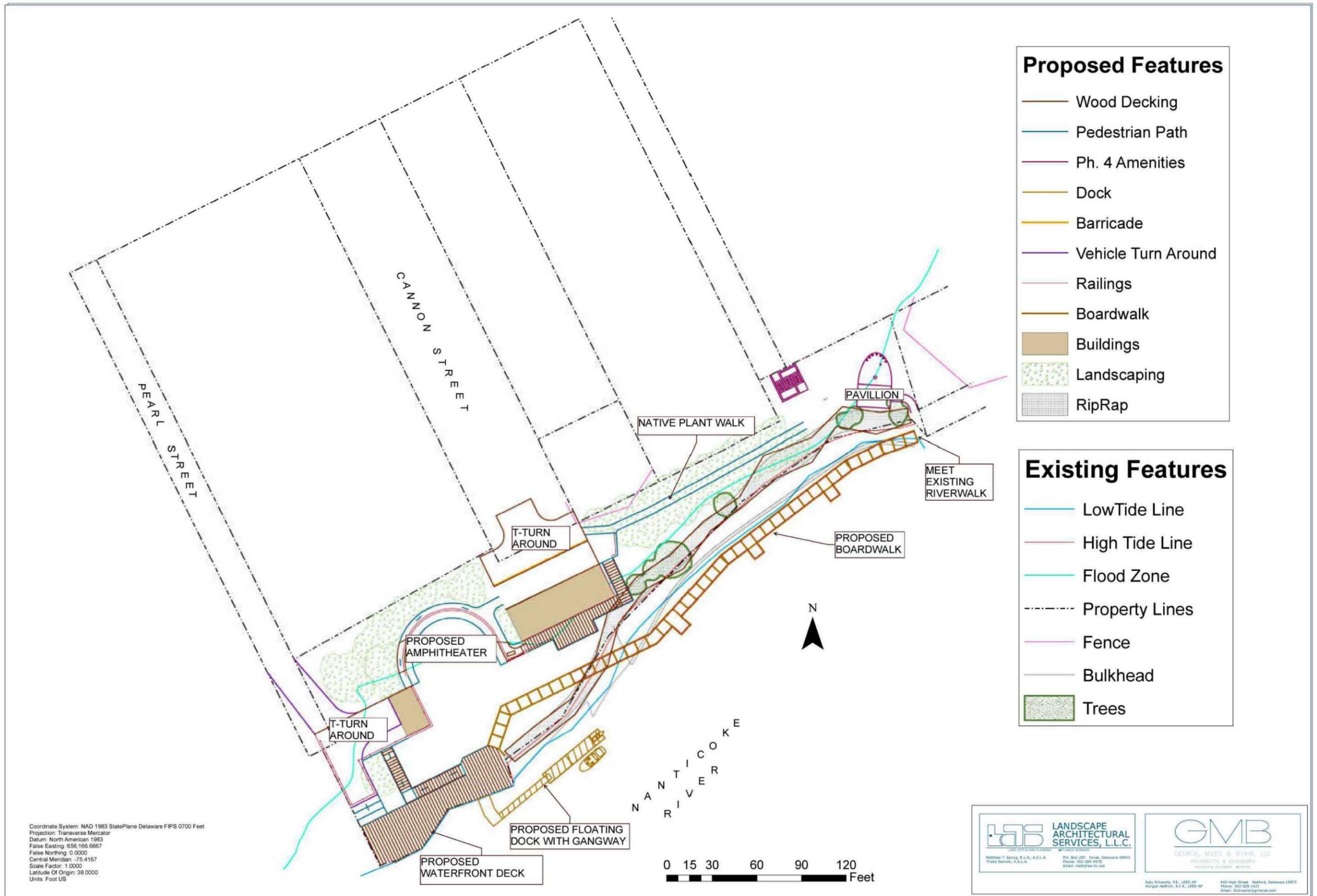
COMMUNITY	NUMBER	PANEL	SUFFIX
BLADES, TOWN OF	100091	0263	L
SEAFORD, CITY OF	100048	0263	L
SUSSEX COUNTY	100029	0263	L

In Use: The Map Worksheet shown below should be used when plotting map orders. The Community Number shown above should be used in Worksheet applications for the subject community.

MAP NUMBER
10005C0263L

MAP REVISED
JUNE 20, 2018

Federal Emergency Management Agency



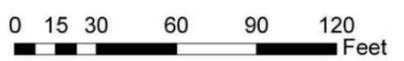
Proposed Features

- Wood Decking
- Pedestrian Path
- Ph. 4 Amenities
- Dock
- Barricade
- Vehicle Turn Around
- Railings
- Boardwalk
- Buildings
- Landscaping
- RipRap

Existing Features

- LowTide Line
- High Tide Line
- Flood Zone
- - - Property Lines
- Fence
- Bulkhead
- Trees

Coordinate System: NAD 1983 StatePlane Delaware FIPS 0700 Feet
 Projection: Transverse Mercator
 Datum: North American 1983
 False Easting: 656,166.6667
 False Northing: 0.0000
 Central Meridian: -75.4167
 Scale Factor: 1.0000
 Latitude Of Origin: 38.0000
 Units: Foot US



LAS LANDSCAPE ARCHITECTURAL SERVICES, L.L.C.
 Matthew T. Spang, R.L.A., A.S.L.A. P.O. Box 203 Dover, Delaware 19903
 Trade Service, A.S.L.A. Phone: 302-344-4838
 Fax: 302-344-4838 Email: mspang@lasland.com

GMB GEORGE, MILES & BUHR, LLC
 ARCHITECTS & ENGINEERS
 INCORPORATED
 July Schwartz, P.E., LEED AP 400 High Street, Seaford, Delaware 19973
 Morgan Heflich, A.S.L.A., LEED AP Phone: 302-422-1421
 Email: jschwartz@gmbarc.com



414 High Street | PO Box 1100
Seaford, DE 19973
302.629.9173 fax 302.629.9307
www.seafordde.com

NB#3
2-25-21

DATE: February 14, 2020

TO: Mayor & Council

CC: Charles Anderson, City Manager
June Merritt, Director of Finance & HR

FROM: Jeanne Sapp, Customer Service Coordinator

RE: Seasonal Accounts Billing Practice

The City's practice for billing seasonal accounts varies for each account. During the non-bill periods the utility service is still available and these accounts are monitored for consumption. For months there is more than minimal usage, the account must be activated or bill code units changed and a bill calculated. Once billing for that period is complete, the services must be inactivated or the bill code units changed again. Also, when billing begins, readings must be reviewed and reset to capture months of less than minimal consumptions since the last billed period.

Our policy for non-seasonal accounts is to bill a minimal bill for services that are available to our customers. A non-seasonal account is billed until such time the customer requests the service disconnected through the work order process and payment of fees, if applicable. The billing of seasonal accounts year-round would assist in recovering our fixed costs and maintain a consistent utility billing practice.

I recommend billing our seasonal accounts every month the service is available, until the customer requests the service disconnected or connected through the work order process. If this billing practice is approved, these customers would be notified in writing of the billing practice change and its effective start date.

Thank you in advance for your consideration.

The Perfect Place to Start.



414 High Street | PO BOX 1100
Seaford, DE 19973
302.629.9173
302.629.9307 fax
www.seafordde.com

To: Mayor & City Council

Cc: Charles Anderson, City Manager

From: Tracy Torbert, City Clerk

RE: Voter Registration Informational Flier

NB#4
2-25-20

At the regular City Council meeting on February 11, 2020, an informational flier was discussed regarding the upcoming Municipal Election. A quote was provided by Media Choice to print 500 double sided fliers as shown for a cost of \$150.00. The information will be translated to Spanish and French-Creole by staff at the police department and those fliers will be printed internally by staff as needed.

Staff is proposing to provide the PDF of the document to each candidate running for office. We would also stipulate that the information that we provide could not be changed or manipulated in any way if used by the candidate.

If you have any questions, please contact me.

MEMORANDUM

NR # 6
2/25/20

To: Mayor & City Council Members
Charles Anderson, City Manager

Fr: Bill Bennett, Director of Electric

Re: Christmas Light Disposal

Dt: 2/19/20

At the request of the City Council; we offered the 22 old Christmas Lights for sale by sealed bid.

We didn't receive any bid responses for the lights.

I would like to offer them to sale to the general public at \$50 a light on a first come basis until April 15th, 2020. Any of the lights remaining after that date would be salvaged for the scrap value.

Anyone interested in purchasing a light can contact Tracy Torbert to pay for the light and I will work with her on scheduling the pick up. I will bring the 22 lights out to the utility building until they are sold or scrapped.

To get the word out to the public, we can advertise this on social media, constant contact and run one ad in the paper.

Should you have any additional questions please contact me.

Thank you.