Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

**STATE ENVIRONMENTAL QUALITY REVIEW ACT**
**DETERMINATION OF NON-SIGNIFICANCE (NEGATIVE DECLARATION)**

**FLOOD DIVERSION AND CONTROL PROJECTS**

DATE: February 25, 2020

NAME OF ACTION: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project

LOCATION: Town of Hempstead, Nassau County, NY

SEQRA CLASSIFICATION: [] Type I; [X] Unlisted
REVIEW TYPE: [] Coordinated; [X] Uncoordinated
DETERMINATION OF SIGNIFICANCE: [X] Negative Declaration; [ ] Positive Declaration

---

**The Proposed Project:**
The Town of Hempstead is requesting Community Development Block Grant – Disaster Recovery (CDBG-DR) funding to implement the design and construction of recommended drainage improvements resulting from the Town's Comprehensive Drainage Infrastructure Master Plan for the Bellmore/Merrick and Seaford/Wantagh Areas South of Merrick Road and the Oceanside Drainage Improvement Plan. The proposed project involves individual subprojects at various locations in the hamlets of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York (See **Appendix A**, Figures) and are proposed for implementation as detailed below.

*Installing Check Valves:* Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check valves. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls at the following locations, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside (See **Appendix A**, Figures):

| Check Valve Locations | |
|---|---|
| **Location** | **Hamlet** |
| Farmers Avenue at Dead End | Bellmore |
| Surf Road and Shore Road (1 OF 3) | Bellmore |
| Harbor Lane at Shore Road (2 OF 3) | Bellmore |
| Malibu Road at Shore Road (3 OF 3) | Bellmore |
| Lindenmere Drive Near Lake End Road (1 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (2 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (3 OF 3) | Merrick |

| Check Valve Locations | |
|---|---|
| **Location** | **Hamlet** |
| Lindenmere Drive and Melthew Court (1 OF 2) | Merrick |
| Lindenmere Drive and Byron Road (2 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (1 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (2 OF 2) | Merrick |
| Whaleneck Avenue and Beverly Way/Shoreham Way | Merrick |
| Bayberry Drive and Whaleneck Drive | Merrick |
| Wynsum Avenue and Brighton Way | Merrick |
| Peconic Avenue at Dead End | Seaford |
| Riverside Drive | Wantagh |
| Riverside Drive and Bayport Court | Wantagh |
| Riverside Drive and Bellaire Street (1 OF 3) | Wantagh |
| Bellaire Street (2 OF 3) | Wantagh |
| Bellaire Street (3 OF 3) | Wantagh |
| Mott Street Dead End | Oceanside |
| Lindbergh Avenue Dead End | Oceanside |
| Weidner Avenue and Reina Road | Oceanside |
| Lawson Boulevard and Powell Creek | Oceanside |
| Freeman Avenue and Balsam Street | Oceanside |
| Waukena Avenue and Bedell Creek | Oceanside |
| Lawrence Avenue and Harris Drive | Oceanside |
| W. Waukena Avenue and Grand Canal | Oceanside |
| Daly Blvd Outfall | Oceanside |

Certain existing systems have been identified to have newer, updated check valves incorporated, while others have of old flap gates that no longer work, or no check valve present. At each of these deficient locations, the project will install an in-line check valve at the upstream end of the outfall pipe, inside either an existing or proposed drainage structure, which will require a water-tight seal at each connection point to ensure proper and efficient functionality at preventing any water bypass. If the existing pipe or connecting structure does not meet the design standards, that pipe or structure will be removed and replaced.

Improvements will include removal of poor or failing structures, block and/or brick structures, and inadequately sized structures. If a new drainage structure is proposed, connecting pipes will also be replaced specific to each location with a standard 8 linear feet section of pipe replaced at the outfall/check valve side of the structure. (See **Appendix B**, Site Plans.)

*Increasing the size/capacity of drainage pipes, culverts and detention ponds:* The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one-, two-, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfall to avoid major disruptions to the property (See **Appendix A**, Figures, and **Appendix B**, Site Plans):

| Capacity Improvement Locations | | |
|---|---|---|
| **Location** | **Municipality** | **Improvement Type** |
| Derby Drive South (West) | Oceanside | Increase pipe capacity |
| Derby Drive South (East) | Oceanside | Increase pipe capacity |
| Lindbergh Avenue | Oceanside | Increase pipe capacity |
| Lawson Boulevard Upstream from W. Windsor Parkway | Oceanside | Increase pipe capacity |
| Foxhurst Road to address flooding at Seifert Court | Oceanside | Increase pipe capacity |
| Waukena Avenue to address flooding on Fourth Street | Oceanside | Increase pipe capacity |
| Tinker Drive to address flooding on Beverly Road and State Street | Oceanside | Replace pipe |
| Moore Avenue and Fulton Avenue | Oceanside | Install a detention system |
| Perry Avenue | Oceanside | Install additional inlets |
| Hampton Road | Oceanside | Install additional inlets |

*Road Raising:* Elevating a road surface can reduce the effects of flooding by providing additional hydraulic gradient to move runoff through existing pipe networks and reducing the road's susceptibility to flooding due to abnormally high tides backing up through existing drainage infrastructure with the increased elevation. Based on historical data obtained from the Town of Hempstead Department of Conservation and Waterways, tides exceed elevation 3.5 feet above sea level approximately 20 to 25 times each year, but only exceed elevation four feet above sea level approximately four to five times each year. Therefore, roads lower than elevation four feet above sea level have been considered for elevation. These include the following:

| Road Raising Locations | |
|---|---|
| **Location** | **Hamlet** |
| Shore Road | Bellmore |
| Mermaid Canal | Wantagh |
| Moreland Avenue | Oceanside |
| Royal Avenue | Oceanside |
| Carrel Boulevard | Oceanside |
| Neptune Avenue | Seaford |
| South Street | Seaford |
| Beaver Turn | Seaford |
| Helen Court | Merrick |
| George Court | Merrick |

Compliance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (URA) 49 CFR Part 24 is required for all projects that involve land acquisition (permanent and/or temporary easements, rights-of-way, and real property) for the purpose of enabling project construction. It is anticipated that installation of the check valves would not require easements, rights-of way, or real property acquisition. The other drainage improvements would not involve permanent easements or acquisition, but some locations will require temporary easements. (See **Appendix B**, Site Plans). The Town of Hempstead is responsible for obtaining all temporary easements in conformance with the regulations as directed by GOSR.

In general, construction would be restricted to one side of any roadway or intersection until that side is completely open to all vehicular traffic. The sidewalk would not be removed until the completion of the curb in that block. Trees would be protected from damage during construction, except for those that require removal. Existing concrete catch basin areas along roads that would be raised would be demolished and removed, unless it cannot be removed without damaging the remainder of the catch basin. Yard drains will be installed where the road raising leaves front yards below the sidewalk grade. A property improvement plan will be prepared for each individual private property where improvements will be required. The Town of Hempstead would acquire owners' permission before the design is finalized. Construction hours of operation would be limited to normal working hours in accordance with Hempstead Town Code.

**Purpose and Need:**
Long Island's south shore communities have had to regularly deal with flooding overwhelming the drainage infrastructure due to its low elevation above sea level. In addition to routinely experienced flooding, Hurricane Irene in 2011, followed nearly 14 months later by Superstorm Sandy, overwhelmed the south shore's stormwater drainage systems. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms.

The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure. In general, the proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, installing a detention system and new inlets, and raising the elevation of 10 roads.

**Existing Conditions:**
Due to the geography of the land, coupled with an antiquated infrastructure system, these communities are prone to chronic flooding. Flooding occurs during rainfall, storm surges, and high tide, and the flood waters discharge debris into the bays. In these low-lying areas, streets can become impassable at times from flooding, impeding transportation. The flooding stems from a combination of the area's low elevation and high groundwater table coupled with an overwhelmed drainage system's capacity.

The area consists of peninsulas fronting the Merrick and East Bays with narrow waterways. The communities are surrounded by wetlands, bays, finger canals and tributaries, making flooding a regular occurrence during heavy rainfall and/or high tide in many areas. The drainage infrastructure is not adequate. The limited provision of outflow check valves on storm drain outfalls into the canals and bays does little to mitigate backflow into the storm sewer system. Most of the outfalls do not have check valves, which creates a direct path for tidal water to inundate the drainage system and cause a reduction in the system's capacity, thereby flooding roadways with saltwater. During heavy rainfall events storm sewers are often overwhelmed, causing stormwater to accumulate and ultimately flood the area.

**Funding:**
The total Project cost is estimated at $21,566,550. GOSR proposes to allocate funding pursuant to the HUD CDBG-DR program as authorized by the Disaster Relief Appropriations Act of 2013 (Public Law 113-2,

approved January 29, 2013). The NYS Housing Trust Fund Corporation (HTFC), which administers the CDBG-DR program funds on behalf of GOSR, intends to approve funding for the proposed Project as described in this notice.

**Environmental Considerations:**

*Land Use and Zoning* – The Project conforms with current zoning designations. No changes in land use would occur as a result of Project activities. The Project sites are not located within agricultural districts or on prime and unique farmlands, or other farmland of statewide or local importance. The Project would not convert farmland to nonagricultural purposes and would not invoke the Farmland Policy Protection Act.

*Community Character and Facilities* – The boundary of the Project overview area is adjacent to an area with environmental justice populations, as defined by NYSDEC based on data from the 2000 U.S. Census. However, none of the individual project sites is within or an environmental justice area. There would be no disproportionate impacts to environmental justice populations (See **Appendix A**, Figures).

The Project sites are not in a Coastal Barrier Resources Area. The Peconic Avenue check valve and Beaver Turn/Neptune Avenue road raising location are adjacent to the western edge of the Fire Island CBRS unit. Best management practices during construction would prevent runoff that might affect off-site areas. (See **Appendix A**, Figures.)

Most of the project sites are within a coastal zone as defined by the state's Coastal Zone Management Program. (See **Appendix A**, Figures.) Only the Sieffert Court/Foxhurst Road and Moore Avenue capacity improvement locations are completely outside the coastal boundary. Portions of the Waukena Avenue and Tinker Drive capacity improvements are also outside of the coastal zone boundary. Consultation with the NYS Department of State (DOS), Division of Coastal Resources, Consistency Review Unit, was initiated on December 16, 2019, to obtain written confirmation from DOS that the proposed activities would be in compliance with general consistency concurrence criteria. On December 18, 2019, the DOS confirmed that the Project meets the Department's general consistency concurrence criteria, so the DOS has no objection to the use of HUD funds for this financial assistance activity. (See **Appendix D**, Coastal Consistency.)

*Energy Consumption and Water Utilities* – No habitable structures are proposed. The proposed action is for infrastructure improvements. The Project would not result in additional energy consumption or changes in energy infrastructure. No impacts would occur to existing nearby suppliers.

The Project site is entirely (12.49 acres) within the bounds of the Nassau-Suffolk Sole Source Aquifer (SSA) area System (see **Appendix A**, Figures). A Sole Source Aquifer Review was prepared for the Project on December 19, 2019 (see **Appendix G**, Sole Source Aquifers). This authority will not be triggered since these activities are not within a groundwater sensitive area. As documented in the review, the Proposed Project would not have the potential for an adverse effect on the Sole Source Aquifer.

*Historic and Archaeological Resources* – Consultation with the New York State Historic Preservation Office (SHPO) and the Division for Historic Preservation (DHP) in the Office of Parks, Recreation and Historic Preservation (OPRHP) in accordance with Section 106 of the National Historic Preservation Act of 1966 was initiated on October 4, 2019. SHPO evaluated the project for potential cultural and historic impacts and in an

October 8, 2019 letter, SHPO stated that no historic properties, including archaeological and/or historic resources, will be affected the proposed Project (See **Appendix F**, SHPO Correspondence). The project does not include ground disturbance in previously undisturbed areas. Therefore, Tribal coordination was not undertaken.

*Natural Resources* – None of the check valve sites are within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites extend slightly into estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands. Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands. None of the project sites is within NYSDEC freshwater wetlands, but four of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands (See **Appendix A**, Figures).

These wetlands have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The Proposed Action will result in physical disturbances to these wetland areas only during construction. The limited area of disturbance would not adversely affect the natural and beneficial values of the wetlands. Prior to construction, the appropriate permits would be obtained. Construction activities related to the Project would adhere to the requirements of these permits, which include preventing backfill from entering the wetland or protected buffer area, using clean fill, confining equipment and materials storage to upland areas, and stabilizing disturbed soil.

The US Fish and Wildlife Service (USFWS) online review process, on August 29, 2019, indicated that there are six threatened or endangered species that are potentially associated with the project area: two endangered species (roseate tern [*Sterna dougallii dougallii*] and sandplain gerardia [*Agalinis acuta*]) and four threatened species (northern long-eared bat [*Myotis septentrionalis*], piping plover [*Charadrius melodus*], red knot [*Calidris canutus rufa*], and seabeach amaranth [*Amaranthus pumilus*]). The official species list for the proposed project indicated that there is no critical habitat in the Project Area. Several migratory birds of concern that could potentially be affected by the proposed Project were also identified in the online review process (See **Appendix E**, USFWS and NYNHP Correspondence).

GOSR determined in a September 27, 2019, letter to the USFWS, that this project would have **No Effect** on critical habitats of the roseate tern, sandplain gerardia, northern long-eared bat, piping plover, red knot, or the seabeach amaranth, since the proposed project would not impact critical habitats identified in the official species list within the project area. GOSR determined that the project would have no significant adverse impact on migratory birds or their habitat, since no trees would be removed, and construction will occur within disturbed areas of existing suburban residential developments. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance. Best management practices during construction will prevent runoff that might affect off-site areas. GOSR stated in the September 27, 2019, letter, that if USFWS did not respond to the “no effect” determination within 30 days, that GOSR would conclude that USFWS concurred with the determination. GOSR received no response from the USFWS.

The New York State Natural Heritage Program (NYSDEC) Natural Heritage Program database identified rare or state-listed animals or plants that occurred in marshes and other areas 0.25 to 0.5 miles from the project sites as well as significant natural communities along the shore and salt marshes in the larger area. However,

since the project disturbance is in already developed areas (e.g., in existing roads and utility easements) these areas would not be disturbed by the project activities (See **Appendix E**, USFWS and NYNHP Correspondence, and **Appendix A**, Figures).

*Erosion, Flooding, and Drainage* – According to the September 11, 2009, Flood Insurance Rate Map (FIRM) panels, 25 of the 29 check valves are within the 100-year floodplain. Twenty-four are within the Special Flood Hazard Area (SFHA) Zone AE (1 percent annual chance flood, with base flood elevations ranging from seven to nine feet) and one is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area. (See **Appendix A**, Figures). The Project would improve the flood protection in the community by reducing the impacts of flooding to real property in the area of the drainage improvements.

An Early Notice of a Proposed Activity in a 100-Year Floodplain and Wetland was published in *The Hempstead Beacon* newspaper on November 15, 2019, with the 15-day period expiring on November 30, 2019. The notice was distributed to interested individuals and agencies on November 22, 2019, with the 15-day comment period expiring on December 9, 2019. No comments were received during either of the comment periods.

An 8-Step Floodplain and Wetland Analysis has been performed in compliance with Executive Order 11988 in accordance with HUD regulations at 24 CFR 55.20. The analysis examined the direct and indirect impacts associated with the development within the floodplain. (See **Appendix C**, Floodplains and Wetlands). The floodplain area is previously disturbed by the existing roads, drainage and other urban infrastructure, and residential, commercial, and industrial development along these roads. No change in the existing impermeable surface is anticipated as a result of the Project. Best management practices during construction would minimize disturbance of the 100-year floodplain by equipment, site runoff, sedimentation, or other construction activities.

*Hazards and Nuisances*– The Project sites are included in the most recent listing of nonattainment or maintenance areas for the 2015 8-hour ozone standard, as defined by the US Environmental Protection Agency (EPA) Green Book Nonattainment Areas for Criteria Pollutants and the NEPAssist mapping (See **Appendix A**, Figures). The Project would not require an NYS Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit. The Project activities would not substantively affect air quality. Implementation of standard best management practices (BMP) would control dust and other emissions during construction. Air quality impacts would be short term and localized during construction, so no significant adverse impacts to air quality are anticipated.

HUD regulations at 24 CFR 50.3(i) and 58.5(i)(2) require all properties to be free of contamination where a hazard could affect the health and safety of occupants or conflict with the intended use of the property. No hazardous or solid waste storage is evident on the project sites and the project sites have been disturbed and developed. The Proposed Project would not expose new populations to hazards or nuisances because the Proposed Project would not involve any occupants or residences. However, there will be construction workers in the area of the project sites.

To identify possible contamination at the sites, GOSR screened databases maintained by U.S. EPA and NYSDEC for potential on-site and off-site facilities that could pose health and safety problems and toxic clean-up sites that are presently under analysis or remediation. The project sites were not identified in available databases as being contaminated and were not used as dumps, landfills, industrial sites or other locations that contain hazardous wastes. The project sites are not listed on the EPA Superfund National Priorities List or Comprehensive Environmental Response, Compensation, and Liability Act List or equivalent State list. The project sites are not located within 3,000 feet of a toxic or solid waste landfill site and do not have underground storage tanks.

The databases identified active facilities that have the potential to release hazardous substances to the environment and are currently regulated under NYSDEC and EPA programs. The facilities operate under NYSDEC and EPA permits that require containment, monitoring, and tracking for protection of human health and the environment. Permit conditions are enforced and meet standards that protect public health and the environment by preventing releases to the environment. In cases where facilities are in violation, the facilities, with NYSDEC or EPA consultation, would achieve compliance with permit conditions. As such, the facilities do not pose a hazard that could affect the health and safety of occupants or conflict with the intended use of the Project area.

The EPA and NYSDEC databases identified numerous releases of hazardous substances to the environment (soil, groundwater, and air) in proximity to the project sites. If any contaminated soil is encountered during construction, DEC would be notified through the Spill Hotline. All work will be stopped until the appropriate agencies are consulted, and qualified personnel remediate the contamination. The releases identified are currently being remediated, however, there is the potential for the release to have migrated to the project sites and affect projects that require digging. The facilities that may pose a threat of a release to project sites are described below as are nearby bulk storage facilities.

**NYSDEC Bulk Storage Facilities**

A search of the NYSDEC Bulk Storage Program Database identified 70 facilities within one mile of the Project sites: 39 petroleum bulk storage (PBS) 23 chemical bulk storage (CBS), and eight major oil storage (MOS) facilities. (**See Appendix A, Figures**). Thirty-five of these facilities are within 3,000 feet of the project sites. These storage facilities area regulated under one of the NYSDEC Bulk Storage Programs: Petroleum Bulk Storage, Chemical Bulk Storage and Major Oil Storage. Because these facilities are regulated, the storage facilities are not considered a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Proposed Project. No releases from the facilities have been identified in available databases. However, since there are numerous petroleum storage facilities in the area, there is the potential for a release of petroleum to soil and groundwater in the project area. Work will stop if any petroleum contaminated soil or groundwater is encountered, or if there are petroleum odors and NYSDEC will be contacted to report a spill. Work will only proceed after consultation with NYSDEC.

**See Appendix A**, Bulk Storage Facilities map, for the locations of the bulk storage facilities in the vicinity of project locations. The following describes the storage facilities closest to the Project sites. The Hampton Road Project site, which includes the construction of inlets along Hampton Road, is adjacent to the former Gulf Oceanside Terminal (listed as inactive, with CBS tanks closed and removed) and across the bay inlet from the E.F. Barrett Power Station, both of which are CBS and MOS facilities. Tank information for the E.F. Barrett

Power Station is not available. A tank farm west of this power station has five very large above ground storage tanks (ASTs) and three smaller tanks. Two large ASTs are on the turbine site just east of the former Gulf Oceanside Terminal. The Camp Bauman Bus PBS facility, with six unregistered tanks, is approximately 1,100 feet from the Lawson Boulevard Project site and about 480 feet from the Royal Avenue road raising project site. The Seiffert Court/Foxhurst Road Project site is approximately 835 feet from the USA facility at 2686 Long Beach Road, which has three tanks that have been converted to a non-regulated use. The Bluewater Yacht Club PBS site is listed as unregulated/closed and is approximately 210 feet from the Bayberry Drive and Whaleneck Drive check valve project site.

**NYSDEC Remediation Site Database**

A search of the NYSDEC Remediation Site Database, containing records of the sites being addressed under one of NYSDEC's remedial programs (State Superfund, Brownfield Cleanup, Environmental Restoration and Voluntary Cleanup, the Registry of Inactive Hazardous Waste Disposal Sites, and Institutional and Engineering Controls), identified 25 remediation sites within one mile of the Project sites, 17 of which are within 3,000 feet (See Appendix A, Figures, Remediation Sites). These included nine State Superfund sites, six Brownfield Cleanup sites, and two Voluntary Cleanup sites.

**NYSDEC Superfund sites**

Of the state Superfund sites, on-going soil and groundwater contamination by solvents and chemicals including tetrachloroethene (PCE), trichloroethylene (TCE), 1,2-dichloroethylene (1,2-DCE), and vinyl chloride were reported at: Autotronic Products, Inc., Former National Loan Investors Site, Railroad Dry Cleaners, Hercules Machine Sales, Busy Bee Dry Cleaners, Former Gulf Oil Terminal, and Smart Set Cleaners. The NYSDEC factsheets for these sites are provided in **Appendix H**. The factsheets provide a comprehensive description of each remediation site including the history, location and concentrations of hazardous substances. The state Superfund sites that are close to the project sites are briefly described below: The Autotronic Products, Inc., Site Code: 130030, (approximately 240 feet east of the Royal Avenue road raising site) and Former National Loan Investors, Site Code: 130168, (adjacent to the east side of the Royal Avenue road raising site) sites were identified as not posing a significant threat to the environment or presenting low and decreasing levels of contamination.

Hercules Machine Sales, Site Code: 130083, is approximately 165 feet east of the Lawson Boulevard Project site, and the Railroad Dry Cleaners, Site Code: 130066, is approximately 225 feet southwest of the Lawson Boulevard Project site and 220 feet northwest of check valve 21 project site. Both Hercules Machine Sales and Railroad Dry Cleaners have released chlorinated volatile organic compounds such as PCE and TCE to groundwater and pose a threat through soil vapor intrusion. Subsurface construction near the sites may encounter vapors and contaminated groundwater and soil.

Busy Bee Cleansers, Site Code: 130094, is located at 1818 Merrick Road and is within 0.25 of several of the check values near Lindenmere Drive. The site released chlorinated volatile organic compounds to groundwater. Any subsurface construction on Lindenmere Drive may encounter contaminated groundwater and soil.

The Former Gulf Oil Terminal site is adjacent to the Hampton Road Project site. Petroleum-related soil impacts, at concentrations above the Protection of Groundwater limits, remain in the shallow fill unit at various

depths ranging from 4 to 11 feet below the surface along Hampton Road. Any subsurface construction at the Hampton Road site may encounter contaminated soil and groundwater.

Smart Set Cleaners, Site Code: 130194, is located within 0.75 of the Oceanside projects. The cleaners released chlorinated volatile organic compounds to groundwater and soil. Subsurface construction at the Oceanside projects may encounter vapors and contaminated groundwater and soil.

Former National Loan Investors Site, Site Code: 130168, is located near the Oceanside drainage improvement sites and check values. The state Superfund site released chlorinated volatile organic compounds to groundwater and soil. Subsurface construction in the area of the hazardous waste site may encounter vapors and contaminated groundwater and soil.

Oceanside Landfill, Site Code: 130023, is located south of the project sites and was used for the disposal of municipal solid waste. Groundwater from the landfill flows south away from the project sites and therefore, does not pose a threat of contamination to the project sites. Surface water and groundwater contamination has been documented at the landfill. There is no indication that the landfill was used for the disposal of hazardous waste. The landfill is closed.

**NYSDEC Brownfield sites**

Of the Brownfields sites identified in the NYSDEC database, remediation has been completed for Minute Man Cleaners and Oceanside Plaza. The NYSDEC factsheets for these sites are provided in **Appendix H**. The factsheets provide a comprehensive description of each site including the history, location and concentrations of hazardous substances associated with the sites. The state Brownfield sites that are close to the project sites are briefly described below:

Jay's Lucky Cleaners, Site Code: C130219, is approximately 490 feet northeast the Moore Avenue Project site, and data collected during the site Remedial Investigation (RI) identified chlorinated solvents in soil, groundwater, soil vapor, sub-slab soil vapor and indoor air. Groundwater impacts were found up to 2,400 feet west of the cleaners' site and groundwater flows southwest. Subsurface construction at the Moore Avenue Project site may encounter vapors and contaminated groundwater and oil.

Remediation at the Marina of Dreams, Inc., Site Code: V00013, Voluntary Cleanup site was completed in 1996, with no known residual environmental issues. The George Court Project site is approximately 1,955 feet southeast of this facility.

Work will stop and NYSDEC will be notified of a spill if contamination is observed or suspected and the corrective actions taken to eliminate threats to human health and the environment.

**NYSDEC Spill Database**

A review of the NYSDEC spill database revealed 49 spills within 3,000 feet of the Project area within the last year. Thirty of these spills have been closed by the NYSDEC and, therefore, are not considered a concern to the Proposed Project Property. A spill being closed means that the records and data submitted indicate that the necessary cleanup and removal actions have been completed and no further remedial activities are necessary, or the case was closed for administrative reasons (e.g., multiple reports of a single spill consolidated into a single spill number). If the case has been administratively closed and did not meet NYSDEC closure

criteria, then another spill report number would have been identified covering the case. Open spills are being addressed by NYDEC regulatory authorities. The NYSDEC Spill Hotline is be contacted if any contamination is identified during construction from the spills during construction.

**EPA-listed Facilities**

Three thousand four hundred and thirty-three EPA-listed facilities are within one mile of the Project area, 2,310 of which are within 3,000 feet. One hundred thirty-four are air emissions sites, 1,799 are state master listings, 54 are National Pollutant Discharge Elimination System (NPDES) listings, 20 are hazardous waste biennial reporters, 239 are Resource Conservation and Recovery Act (RCRA) registered generators, and four are Toxic Release Inventory System (TRIS) reporters. Forty-nine are enforcement or compliance listings. One facility is a greenhouse gas reporter, and three are electric power generators. Four listings are for response plans and spill prevention and control; one is for landfill gas recovery; and one is a fuels registration listing. The EPA facilities operate under EPA permits that require containment, monitoring, and tracking for protection of human health and the environment. Permit conditions are enforced and meet standards that protect public health and the environment by preventing releases to the environment. In cases where facilities are in violation, the facilities, with EPA consultation, would achieve compliance with permit conditions. As such, the facilities do not pose a hazard that could affect the health and safety of occupants or conflict with the intended use of the Project area.

**EPA Non-National Priority List**

There is one Superfund (Non-National Priority List) facility: A M A Div Of The Ore And Chemical Corp at 3400 Lawson Boulevard, 275 feet southeast of the southern end of the Royal Avenue Project site. This facility received a preliminary assessment in March 2013, and the last recorded activity was in August 2013. There is no other publicly available information for this site.

Temporary construction noise would be limited in accordance with local noise ordinance. No noise-sensitive receptors are present or proposed at the Project site. Temporary effects on transportation within the neighborhood could occur during construction, with an increase in construction traffic. This would be handled using BMPs, such as signage, time of day restrictions, and public notification.

**Environmental Review and Permitting:**

The proposed Project is classified as an Unlisted action, and GOSR, as a lead agency, prepared a Short Environmental Assessment Form (SEAF) under the State Environmental Quality Review Act (SEQRA). The proposed Project is funding the implementation of flood mitigation interventions, and as such is not of sufficient scale to result in adverse effects to existing air quality, surface or groundwater quality or quantity, noise levels, existing traffic patterns, solid waste production or disposal, or to create erosion or drainage problems.

The proposed Project would include the following measures to avoid or reduce environmental effects:

- Prior to construction, the appropriate permits would be obtained in accordance with 6NYCRR PART 608, Protection of Waters Program; 6NYCRR PART 661, Tidal Wetlands Permit Program, and Section 401 of the Clean Water Act.
- SPDES permit for construction activities involving soil disturbances of one or more acres
- US Army Corps of Engineers Nationwide Permit 3 – Maintenance
- Soil management plan

  - NYSDEC approval of removal and disposal if any contaminated soils are found.
- Town of Hempstead Floodplain development
- Town of Hempstead Street opening

**Standard Requirements:**
Any change to the proposed Project as described will require re-evaluation by GOSR's Certifying Officer for compliance with SEQRA and other law, regulations and policies.

This review does not address all federal, state and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.

**Additional Mitigation Measures:**
To the extent practicable, the following mitigation measures recommended by the United States EPA would be implemented by the Responsible Entity to minimize environmental impacts and create a more sustainable Project:

- Clean diesel – implement diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:
  - Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and
  - Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.
- Stormwater – utilize low impact development (LID) principles such as minimizing effective imperviousness to create site drainage, and the planting of native and non-invasive vegetation on the Project site for stormwater management purposes. Other LID practices can include bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements;
- Cost-efficient, environmentally friendly landscaping – EPA's GreenScapes program provides cost-efficient and environmentally friendly solutions for landscaping;

In addition to the factors considered above, the GOSR considered the following guidance from SEQRA and its implementing regulations and determined that the Proposed Action would:

i. Not result in "a substantial adverse change in existing air quality, ground or surface water quality or quantity, traffic or noise levels; a substantial increase in solid waste production; a substantial increase in potential for erosion, flooding, leaching or drainage problems;" (§617.7(c)(1)( i ))
ii. Not result in "the removal or destruction of large quantities of vegetation or fauna; substantial interference with the movement of any resident or migratory fish or wildlife species; impacts on a significant habitat area; or other significant adverse impacts to natural resources;" (§617.7(c)(1)(ii))
iii. Not result in "the creation of a material conflict with a community's current plans or goals as officially approved or adopted;" (§617.7(c)(1)(iv))
iv. Not result in "the creation of a hazard to human health;" (§617.7(c)(1)(vii))
v. Not result in "a substantial change in the use, or intensity of use, of land including agricultural, open space or recreational resources, or in its capacity to support existing uses;" (§617.7(c)(1)(viii))
vi. Not result in "the encouraging or attracting of a large number of people to a place or places for more than a few days, compared to the number of people who would come to such place absent the action;" (§617.7(c)(1)(ix))
vii. Not result in "the creation of a material demand for other actions that would result in one of the above consequences;" (§617.7(c)(1)(x))
viii. Not result in "changes in two or more elements of the environment, no one of which has a significant impact on the environment, but when considered together result in a substantial adverse impact on the environment; or (§617.7(c)(1)(xi))

Therefore, GOSR, acting as Lead Agency and having prepared a SEAF, has determined that the proposed action will not have a significant effect on the environment and a Draft Environmental Impact Statement will not need to be prepared.

Matt Accardi
Date: January 27, 2020
Associate General Counsel
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
25 Beaver Street, 5th Floor
New York, NY 10004 Office: (212) 480-6265

**List of Appendices (available at https://stormrecovery.ny.gov/environmental-docs)**
Appendix A – Figures
Appendix B – Site Plans
Appendix C – Floodplains and Wetlands
Appendix D – Coastal Consistency
Appendix E – USFWS and NYNHP Correspondence
Appendix F – SHPO Correspondence
Appendix G – Sole Source Aquifers
Appendix H – Fact Sheet NYSDEC Remedial Sites

A copy of this Notice and Appendices are available at the following web address:
http://www.stormrecovery.ny.gov/environmental-docs

# APPENDIX A

# FIGURES

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

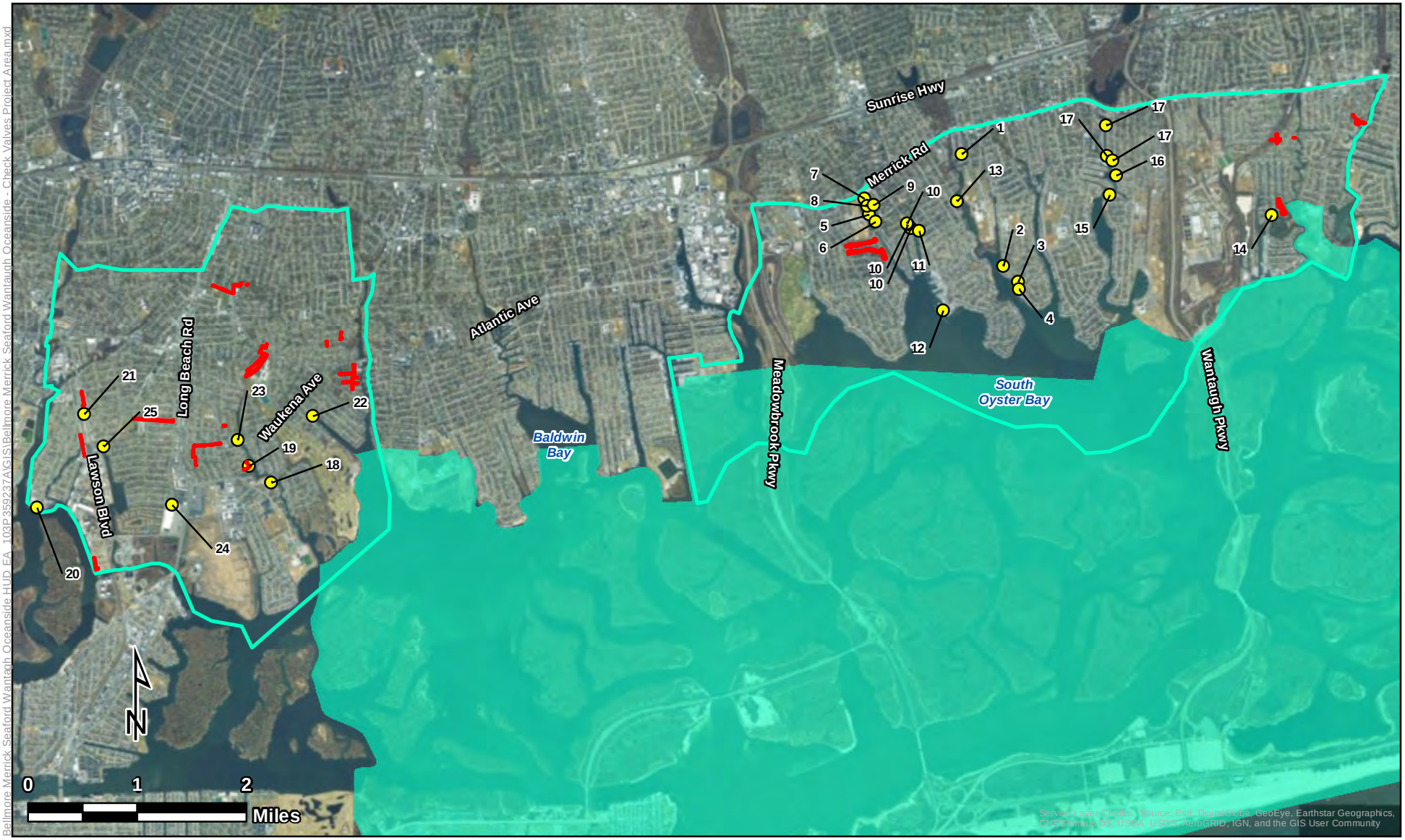
# *Project Area*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

TETRA TECH




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

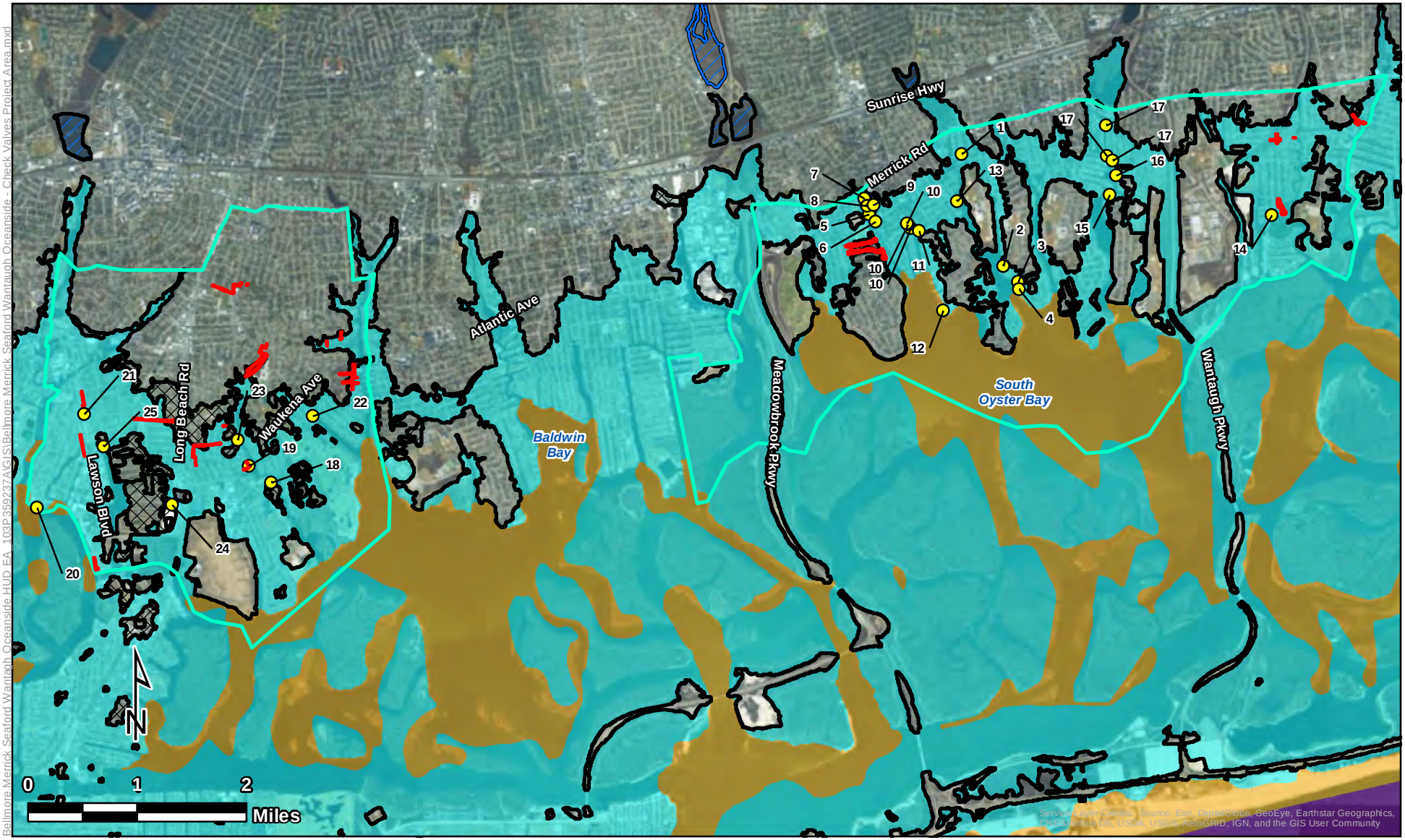
## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area
- CBRS Polygons

# *Coastal Barrier Resources*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH




# Flood Zones

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

**Flood Zones**

- Zone AE- within the 1% annual chance flood
- Zone VE- within the 1% annual chance flood: coastal flood zone with velocity hazard
- Open Water
- Zone A- within the 1% annual chance flood
- Zone X- 0.2 % annual chance flood
- Zone X- Area of minimal flood hazard

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# Nonattainment Areas

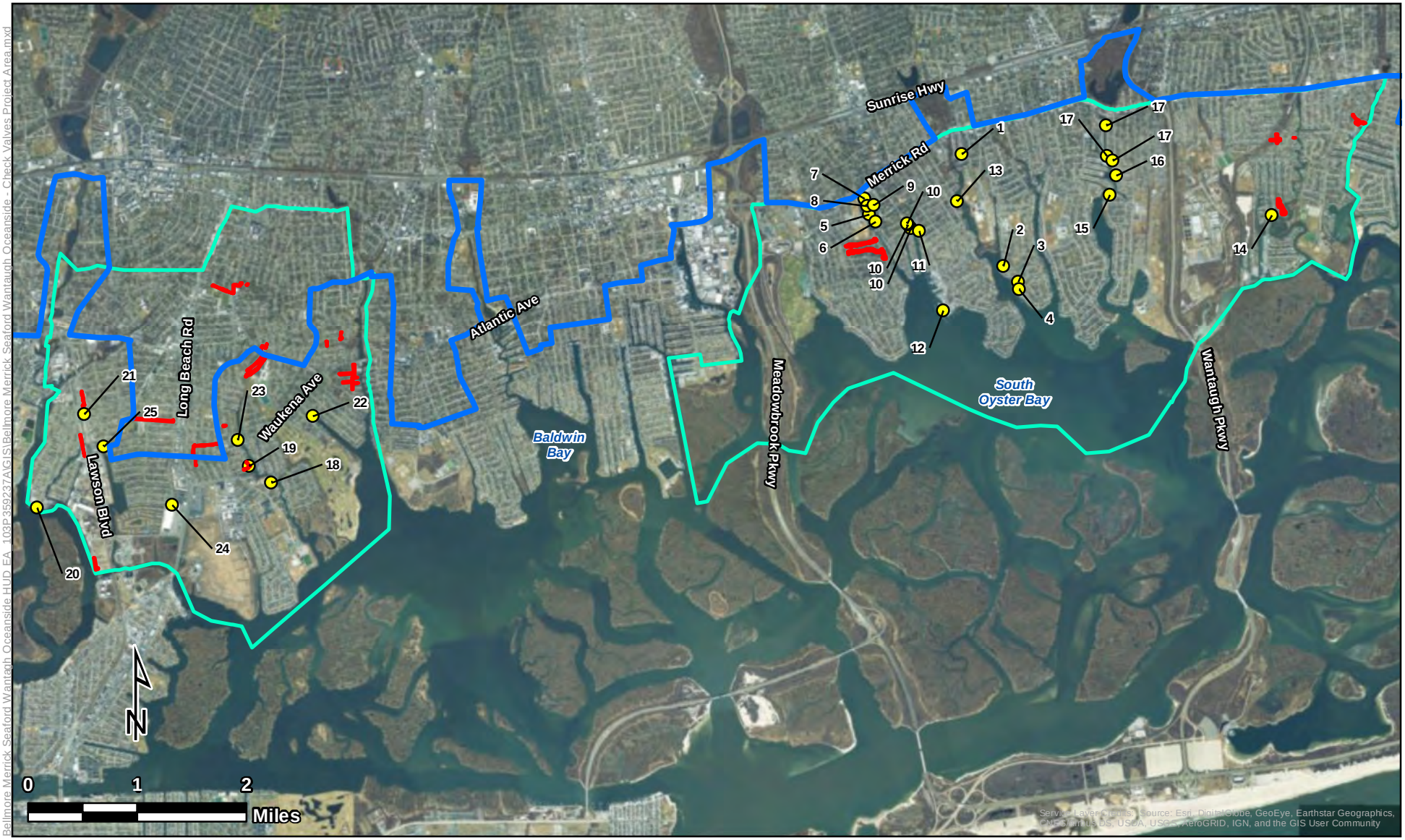
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- PM2.5 2012 NAA
- Lead 2008 NAA
- SO2 2010 NAA
- Ozone 8hr 2008 NAA

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

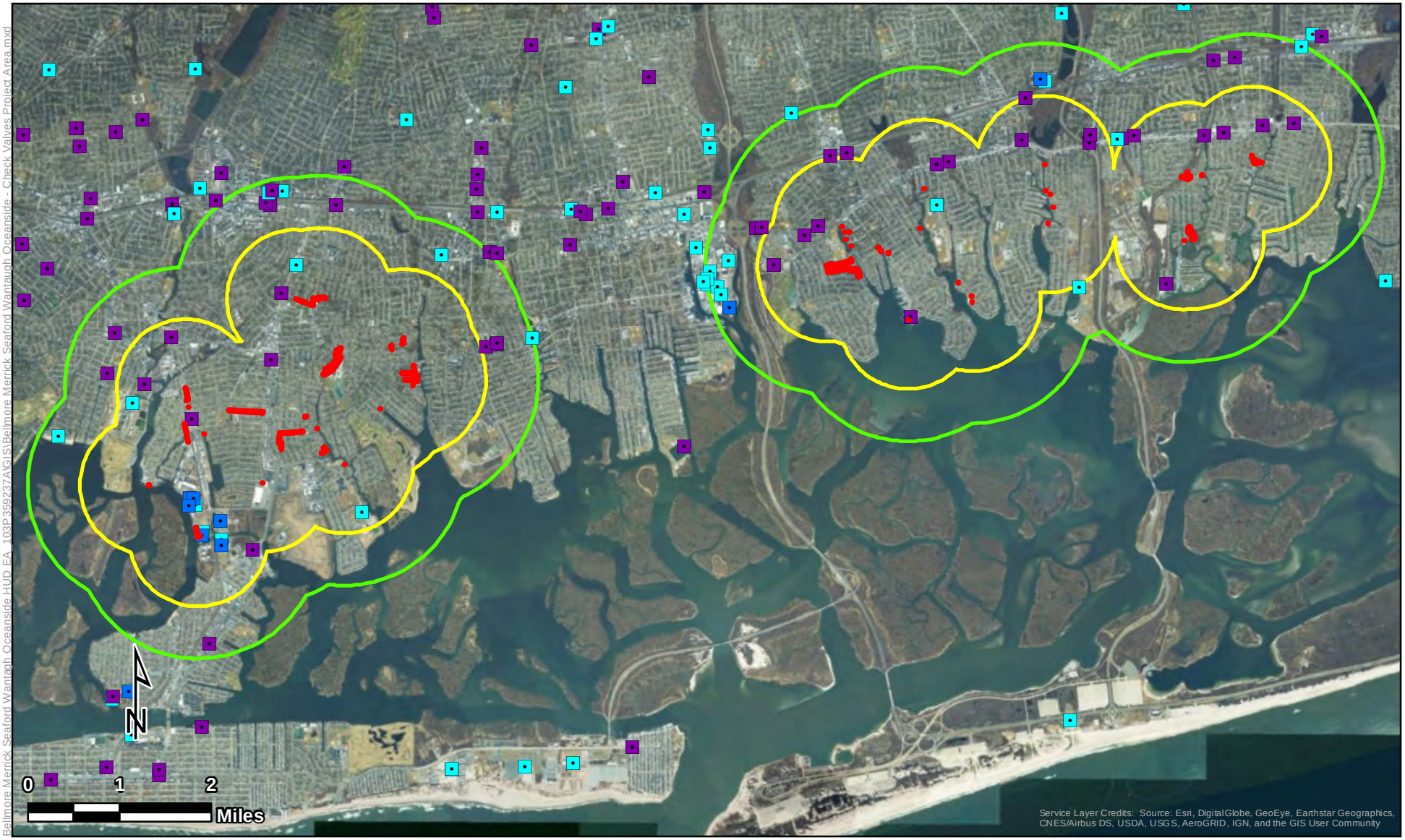
**Legend**

- Check Valves
- Landward Coastal Extent
- Drainage Improvements
- Project Overiew Area
- LWRP Communities

# *Coastal Zones*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Bulk Storage Facilities*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

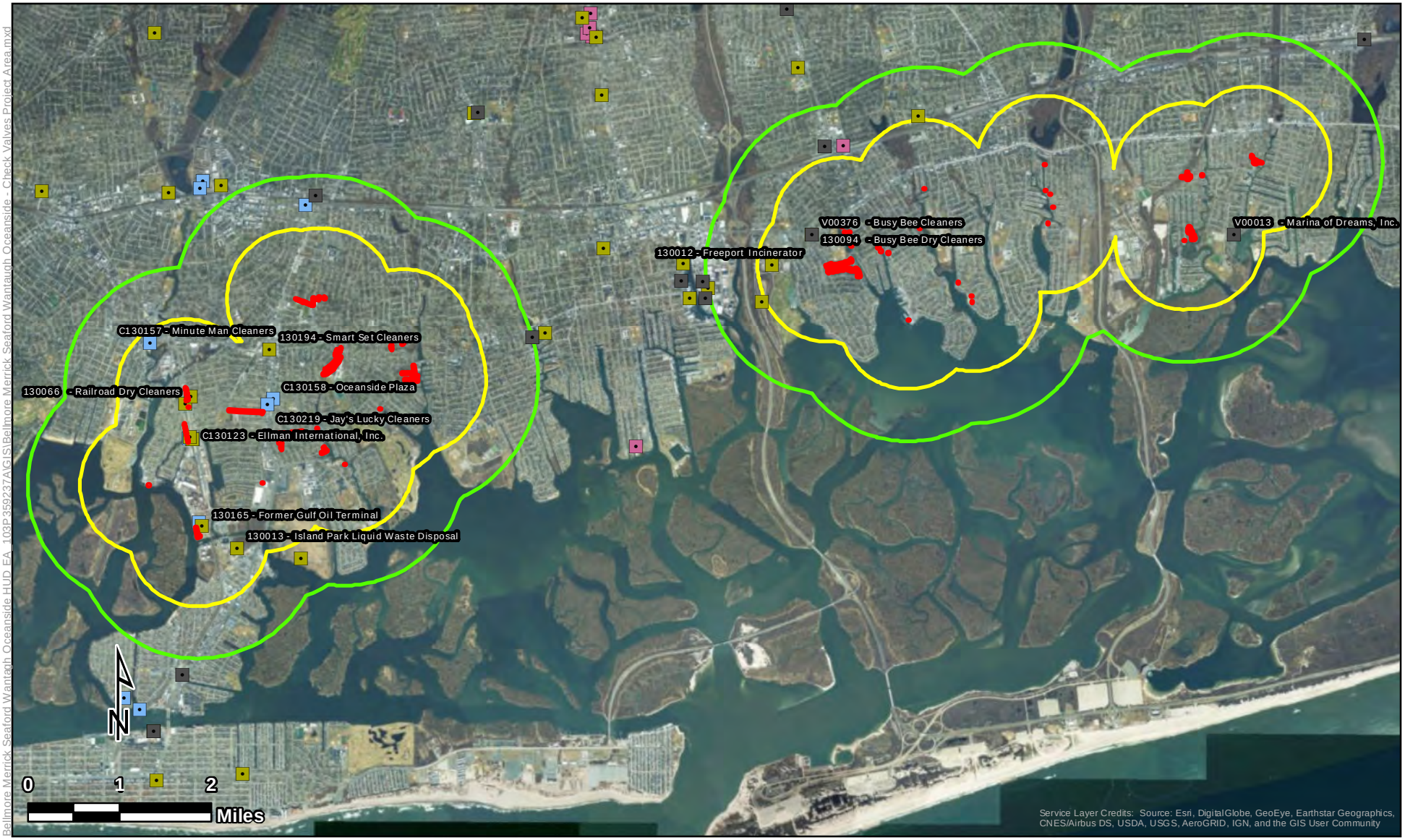
## Legend

**Bulk Storage Facilities**

- Petroleum Bulk Storage
- Chemical Bulk Storage
- Major Oil Storage Facility

- Drainage Improvements
- 3,000-Foot Project Site Buffer
- One Mile Project Site Buffer

TETRA TECH




Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# Remediation Sites

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

**Remediation Sites**

- Brownfield Cleanup Program
- Environmental Restoration Program
- State Superfund Program
- Voluntary Cleanup Program

- Drainage Improvements
- 3,000-Foot Project Site Buffer
- One Mile Project Site Buffer

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Drainage Improvements
- Project Overiew Area
- Seabeach Amaranth
- Roseate Tern
- Roseate Tern 1000M Buffer
- Piping Plover

# *Selected Protected Species*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

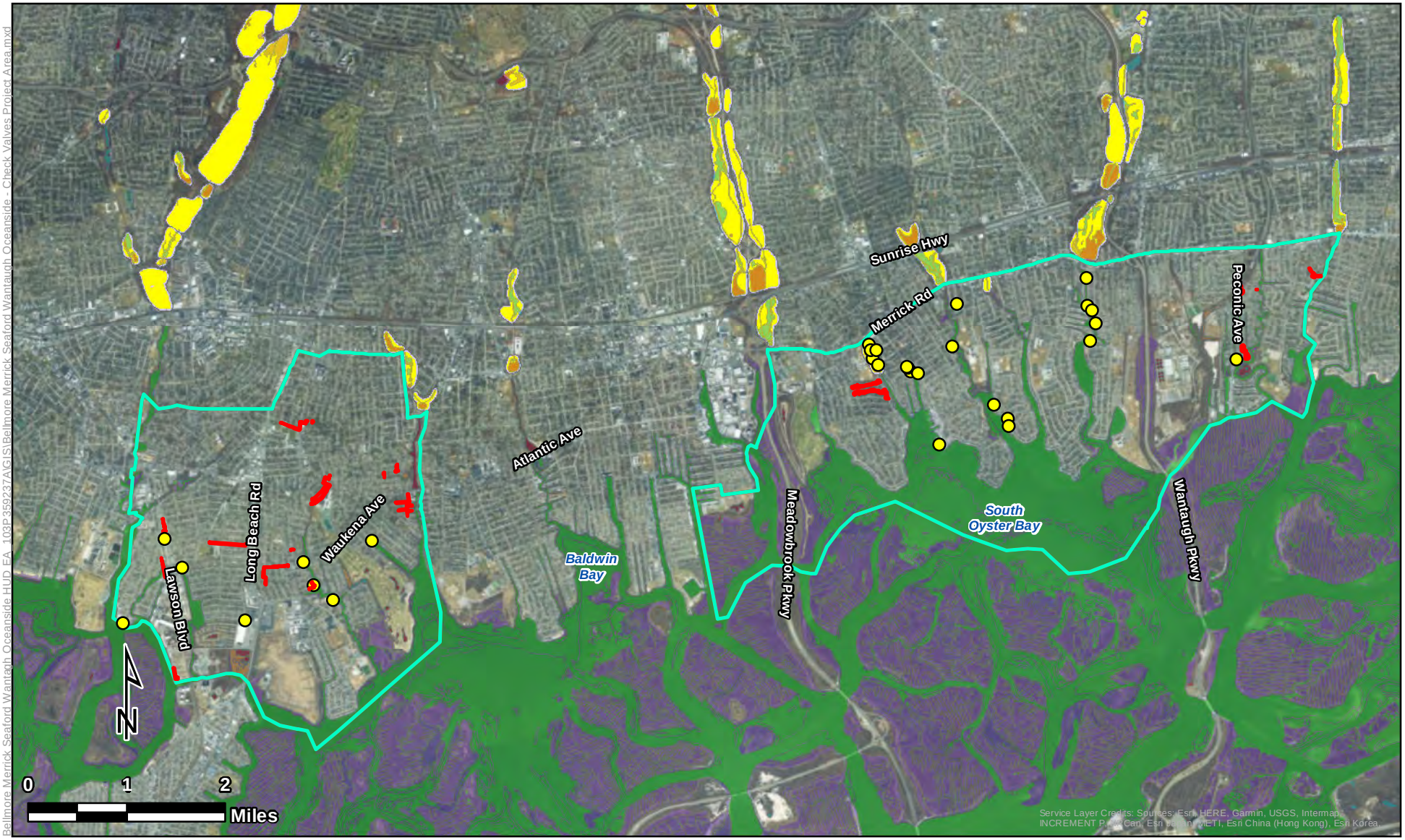
## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Nassau-Suffolk SSA

# *Sole Source Aquifers*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

**NWI Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

# *NYS Freshwater and NWI Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Tidal - Coastal Wetlands
- Tidal - Coastal Wetlands 300ft Buffer

# *Tidal-Coastal Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Environmental Justice Areas*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

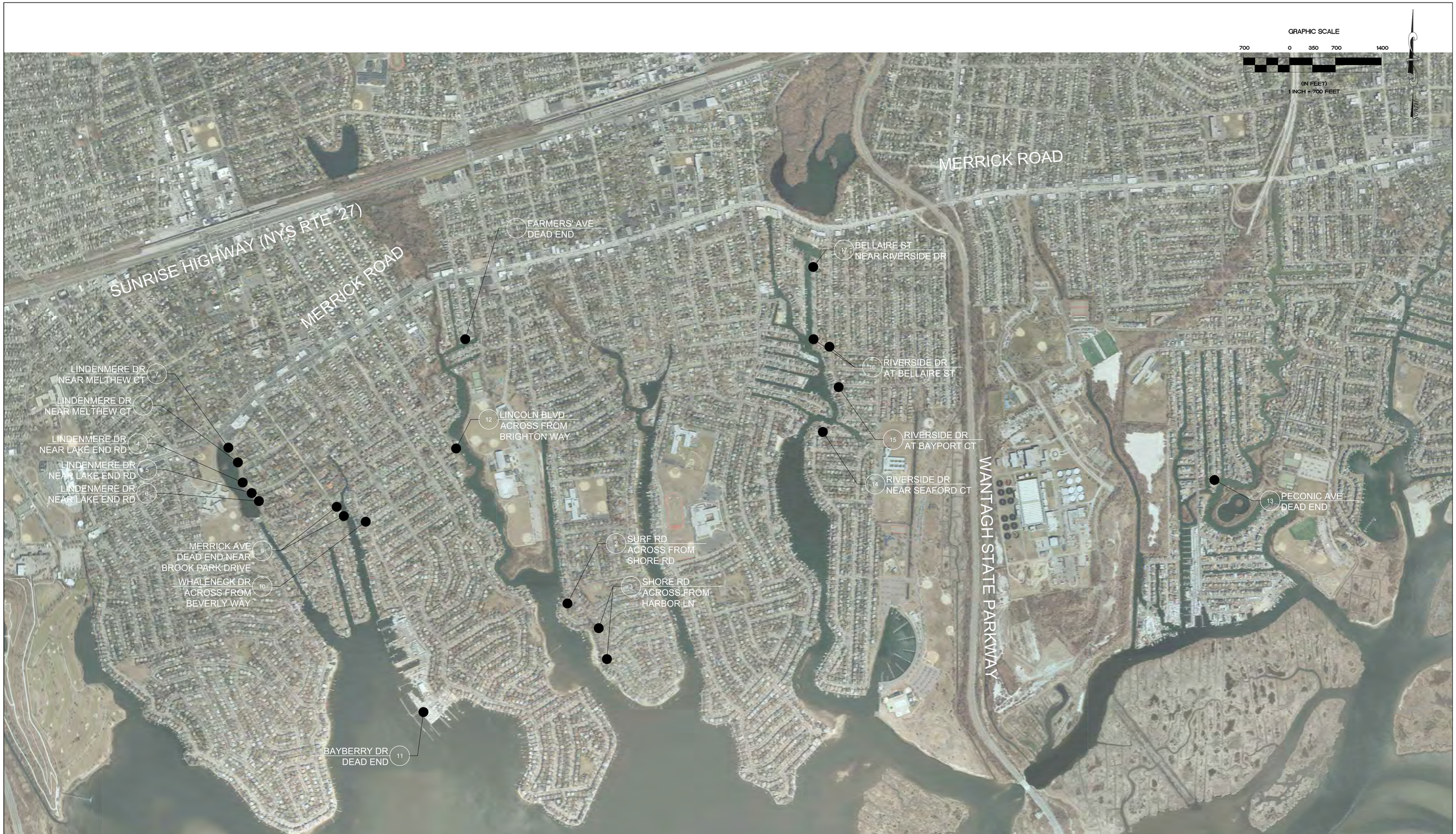
**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Environmental Justice Areas

TETRA TECH

# APPENDIX B

# SITE PLANS




| No. | DATE | REVISION | BY: |
|---|---|---|---|
| . | . | . | . |

SEAL:

THIS DOCUMENT IS THE SOLE PROPERTY OF N&P ENGINEERS & SURVEYORS, PLLC. AND HAS BEEN PREPARED AND DISSEMINATED FOR THE SOLE USE OF OUR CLIENT. THIS DOCUMENT AND ANY DATA, CALCULATIONS, ESTIMATES OR DEPICTIONS CONTAINED HEREIN, MAY NOT BE UTILIZED BY ANY THIRD-PARTY WITHOUT PRIOR WRITTEN CONSENT OF N&P ENGINEERS & SURVEYORS, PLLC, WHICH ASSUMES NO RISK OF LOSS OR LIABILITY RESULTING FROM ANY UNAUTHORIZED USE OR RELIANCE BY ANY THIRD-PARTY.

CONSULTANT:

NELSON & POPE
ENGINEERS | ARCHITECTS | SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
PHONE: 631.427.5665 • FAX: 631.427.5620 • NELSONPOPE.COM

CLIENT:

TOWN OF HEMPSTEAD
ENGINEERING DEPTARTMENT
350 FRONT STREET
HEMPSTEAD, NEW YORK 11550

| | |
|---|---|
| DWN. BY: | GF |
| CHK'D BY: | JD |
| DATE: | JULY 2019 |
| JOB No.: | 18069 |
| CADD: | 18069_OAB01_DRAINAGE_PLAN.DWG |
| SCALE: | AS SHOWN |

DRAWING TITLE:

# OVERALL DRAINAGE PLAN - 1

BELLMORE, MERRICK, SEAFORD,
WANTAGH, OCEANSIDE
DRAINAGE STUDY

DRAWING NUMBER:

ODP - 1

SHEET: 12 OF 40

| No. | DATE | REVISION | BY: |
|---|---|---|---|
| - | - | - | - |

SEAL:

THIS DOCUMENT IS THE SOLE PROPERTY OF N&P ENGINEERS & SURVEYORS, PLLC, AND HAS BEEN PREPARED AND DISSEMINATED FOR THE SOLE USE OF OUR CLIENT. THIS DOCUMENT AND ANY DATA, CALCULATIONS, ESTIMATES OR DEPICTIONS CONTAINED HEREIN, MAY NOT BE UTILIZED BY ANY THIRD-PARTY WITHOUT PRIOR WRITTEN CONSENT OF N&P ENGINEERS & SURVEYORS, PLLC, WHICH ASSUMES NO RISK OF LOSS OR LIABILITY RESULTING FROM ANY UNAUTHORIZED USE OR RELIANCE BY ANY THIRD-PARTY.

CONSULTANT:

NELSON & POPE
ENGINEERS | ARCHITECTS | SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
PHONE: 631.427.5665 • FAX: 631.427.5620 • NELSONPOPE.COM

CLIENT:

TOWN OF HEMPSTEAD
ENGINEERING DEPTARTMENT
350 FRONT STREET
HEMPSTEAD, NEW YORK 11550

| | |
|---|---|
| DWN. BY: | GF |
| CHK'D BY: | JD |
| DATE: | JULY 2019 |
| JOB No.: | 18069 |
| CADD: | 18069_ODP-1_DRAINAGE_PLAN.DWG |
| SCALE: | AS SHOWN |

DRAWING TITLE:

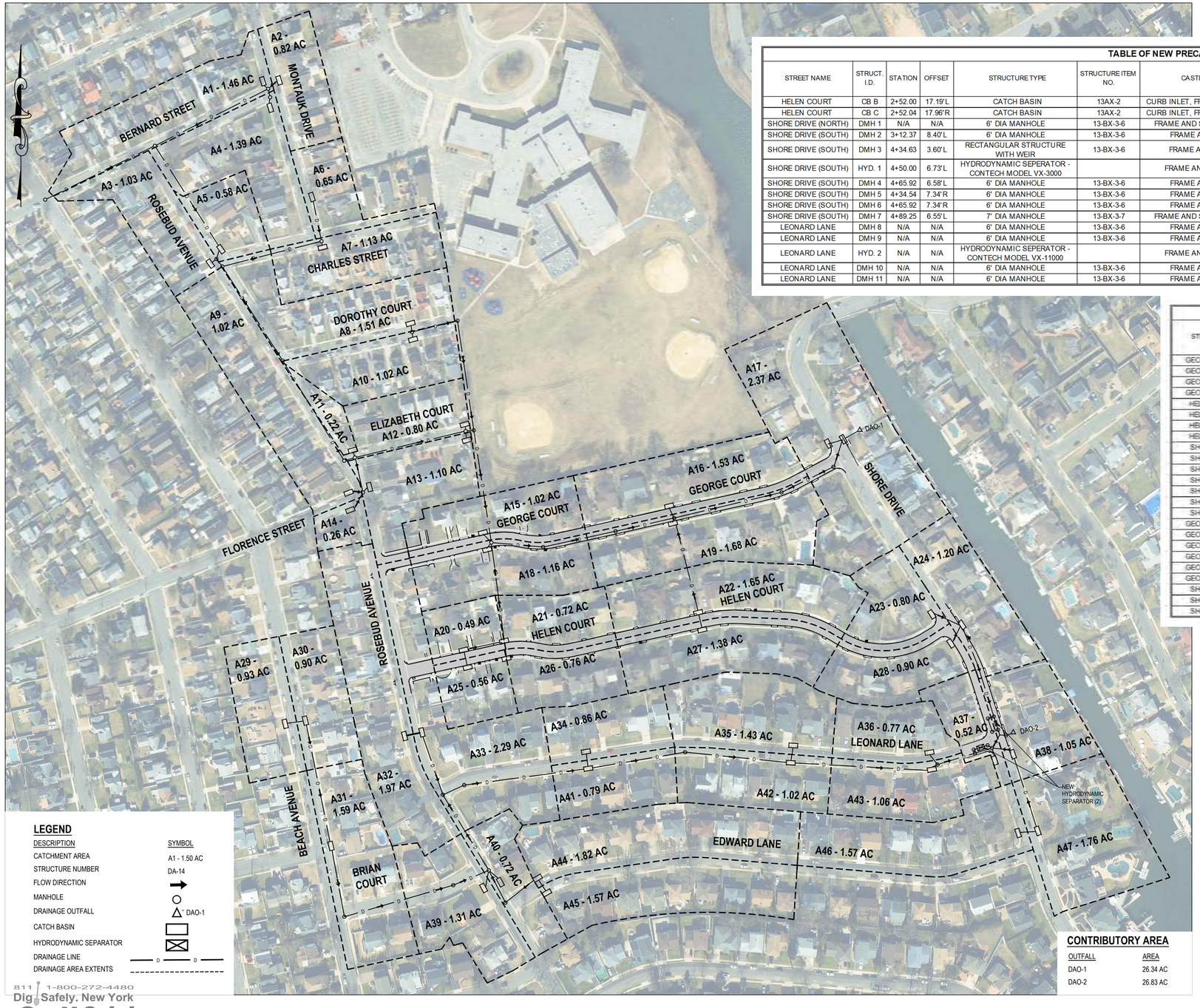
# OVERALL DRAINAGE PLAN - 2

BELLMORE, MERRICK, SEAFORD,
WANTAGH, OCEANSIDE
DRAINAGE STUDY

DRAWING NUMBER:

ODP - 2

SHEET: 13 OF 40




## TABLE OF NEW PRECAST CONCRETE STORM DRAINAGE STRUCTURES

| STREET NAME | STRUCT. I.D. | STATION | OFFSET | STRUCTURE TYPE | STRUCTURE ITEM NO. | CASTING TYPE | RIM/TOP OF CURB* ELEVATION | TOP OF SLAB/GRATE* ELEVATION | TOP OF WALL EL | INVERT ELEVATIONS | | | | SUMP EL | BOTTOM EL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | N | S | E | W | | |
| HELEN COURT | CB B | 2+52.00 | 17.19'L | CATCH BASIN | 13AX-2 | CURB INLET, FRAME AND GRATE | 4.67 | 4.00* | 3.17 | - | - | 1.10'(14") | - | -0.90 | -1.57 |
| HELEN COURT | CB C | 2+52.04 | 17.96'R | CATCH BASIN | 13AX-2 | CURB INLET, FRAME AND GRATE | 4.67 | 4.00* | 3.17 | - | - | 1.10'(14") | - | -0.90 | -1.57 |
| SHORE DRIVE (NORTH) | DMH 1 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND SPECIAL COVER | 5.46 | 4.46 | 3.21 | 1.96 (18") | -3.04 (36") | -3.24 (36") | 1.46 (15") | -5.04 | -5.71 |
| SHORE DRIVE (SOUTH) | DMH 2 | 3+12.37 | 8.40'L | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 6.18 | 5.18 | 3.93 | 0.75 (18") | 0.71 (18") | - | - | -1.25 | -1.92 |
| SHORE DRIVE (SOUTH) | DMH 3 | 4+34.63 | 3.60'L | RECTANGULAR STRUCTURE WITH WEIR | 13-BX-3-6 | FRAME AND COVER | 6.19 | - | 4.69 | 0.12 (18") | 0.12 (18") | - | WEIR 4.09<br>0.12 (18") | -1.87 | -2.54 |
| SHORE DRIVE (SOUTH) | HYD. 1 | 4+50.00 | 6.73'L | HYDRODYNAMIC SEPERATOR - CONTECH MODEL VX-3000 | | FRAME AND COVER (3) | 6.10 | - | 4.74 | 0.07 (18") | 0.07 (18") | - | - | -2.93 | -3.60 |
| SHORE DRIVE (SOUTH) | DMH 4 | 4+65.92 | 6.58'L | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.98 | 4.98 | 3.73 | -0.08 (18") | -0.58 (18") | - | -0.02 (18") | -2.58 | -3.25 |
| SHORE DRIVE (SOUTH) | DMH 5 | 4+34.54 | 7.34'R | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 6.19 | 5.19 | 3.94 | - | 0.08 (18") | 0.08 (18") | - | -1.90 | -2.57 |
| SHORE DRIVE (SOUTH) | DMH 6 | 4+65.92 | 7.34'R | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.98 | 4.98 | 3.73 | 0.05 (18") | - | 0.05 (18") | - | -1.95 | -2.62 |
| SHORE DRIVE (SOUTH) | DMH 7 | 4+89.25 | 6.55'L | 7' DIA MANHOLE | 13-BX-3-7 | FRAME AND SPECIAL COVER | 5.75 | 4.75 | 3.50 | -0.63 (18") | 0.91 (24") | -1.63 (36") | -1.61 (36") | -3.63 | -4.30 |
| LEONARD LANE | DMH 8 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.87 | 4.87 | 3.62 | -1.30 (30") | - | -1.30 (30") | -1.27 (30") | -3.30 | -3.97 |
| LEONARD LANE | DMH 9 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 6.00 | 5.00 | 3.75 | - | -1.32 (30") | -1.32 (30") | - | -3.32 | -3.99 |
| LEONARD LANE | HYD. 2 | N/A | N/A | HYDRODYNAMIC SEPERATOR - CONTECH MODEL VX-11000 | | FRAME AND COVER (3) | 5.95 | - | 3.31 | - | - | -1.36 (30") | -1.36 (30") | -4.36 | -5.03 |
| LEONARD LANE | DMH 10 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.80 | 4.80 | 3.55 | - | - | -1.40 (30") | -1.40 (30") | -3.40 | -4.07 |
| LEONARD LANE | DMH 11 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.62 | 4.62 | 3.37 | -1.49 (36") | -1.49 (30") | - | -1.49 (30") | -3.49 | -4.16 |

## TABLE OF EXISTING STORM DRAINAGE STRUCTURES

| STREET NAME | STRUCT. I.D. | STATION | OFFSET | STRUCTURE TYPE | GRATE/RIM ELEVATION | INVERT ELEVATIONS | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | S | E | W |
| GEORGE COURT | CB1 | 3+51 | 17.31'R | CATCH BASIN | R=4.23 | 1.03'(15") | - | - | - |
| GEORGE COURT | CB2 | 3+50 | 17.42'L | CATCH BASIN | R=4.17 | - | 1.07'(15") | - | - |
| GEORGE COURT | CB3 | 7+79 | 17.6'L | CATCH BASIN | R=6.16 | - | 2.16'(15") | - | - |
| GEORGE COURT | CB4 | 7+80 | 17.55'R | CATCH BASIN | R=6.26 | 1.96'(15") | - | - | - |
| HELEN COURT | CB5 | 3+42 | 18.13'R | CATCH BASIN | R=3.93 | 0.83'(12") | - | - | 0.83 (14") |
| HELEN COURT | CB6 | 3+46 | 17.38'L | CATCH BASIN | R=3.83 | 0.93(12") | 1.13'(12") | - | 0.93 (14") |
| HELEN COURT | CB7 | 7+95 | 17.79'L | CATCH BASIN | R=6.29 | 1.39'(15") | 1.99'(15") | - | - |
| HELEN COURT | CB8 | 7+95 | 17.64'R | CATCH BASIN | R=6.26 | 2.06'(15") | - | - | - |
| SHORE DRIVE | CB9 | 1+60 | 19.61'R | CATCH BASIN | R=6.35 | - | - | 2.05'(15") | - |
| SHORE DRIVE | CB10 | 2+17 | 20.05'L | CATCH BASIN | R=6.34 | 1.24'(15") | 1.24'(85") | 1.14'(15") | - |
| SHORE DRIVE | CB11 | 2+39 | 19.65'R | CATCH BASIN | R=6.15 | - | - | 1.95'(15") | - |
| SHORE DRIVE | CB12 | 5+29 | 19.74'R | CATCH BASIN | R=5.9 | 1.40'(18") | - | - | - |
| SHORE DRIVE | CB13 | 5+30 | 19.49'R | CATCH BASIN | R=6.16 | 2.18'(15") | - | - | - |
| SHORE DRIVE | CB14 | 1+03 | 19.70'R | CATCH BASIN | R=6.18 | - | - | 2.28'(15") | - |
| SHORE DRIVE | CB15 | 1+05 | 19.63'L | CATCH BASIN | R=5.85 | - | 1.75'(18") | - | - |
| GEORGE COURT | DMH1 | 3+64 | 5.98'R | MANHOLE | R=4.01 | 0.59'(36") | 0.11'(15") | -0.41'(12") | 0.11'(15") |
| GEORGE COURT | DMH2 | 4+83 | 10.50'R | MANHOLE | - | - | - | - | - |
| GEORGE COURT | DMH3 | 6+50 | 8.96'R | MANHOLE | - | - | - | - | - |
| GEORGE COURT | DMH4 | 7+86 | 8.48'R | MANHOLE | - | - | - | - | - |
| GEORGE COURT | DMH5 | 10+35 | 7.34'R | MANHOLE | R=6.32 | - | - | -2.58(36") | -2.58(36") |
| GEORGE COURT | DMH6 | 11+66 | 8.98'R | MANHOLE | R=5.56 | -2.64(36") | - | - | -2.34(36") |
| SHORE DRIVE | DMH7 | 1+10 | 13.52'L | MANHOLE | R=5.46 | - | -3.04(36") | -1.46(15") | -3.24(36") |
| SHORE DRIVE | DMH8 | 4+83 | 19.40'L | MANHOLE | R=6.23 | - | 0.93'(18") | -2.07(36") | -1.67'(36") |
| SHORE DRIVE | DMH9 | 5+01 | 19.37'R | MANHOLE | R=5.51 | -1.89'(36") | 1.11'(15") | - | -1.49(24") |

NOTE: DMH2, DMH3, DMH4 ARE INACCESSIBLE AS THEY HAVE BEEN PAVED OVER

## TABLE OF NEW STORM DRAINAGE PIPE

| STREET NAME | UP STRUCT. | UP INVERT | DN STRUCT. | DN INVERT | PIPE DIA. | APP. PIPE LENGTH | MIN. PIPE SLOPE |
|---|---|---|---|---|---|---|---|
| HELEN COURT | CB C | 1.1 | EXIST CB 5 | 0.83 | 14" | 83' | 0.33% |
| HELEN COURT | CB B | 1.10 | EXIST CB 6 | 0.93 | 14" | 87' | 0.20% |
| SHORE DRIVE | EXIST CB 10 | 1.24 | DMH 2 | 0.75 | 18" | 93' | 0.53% |
| SHORE DRIVE | DMH 2 | 0.71 | DMH 3 | 0.12 | 18" | 118' | 0.50% |
| SHORE DRIVE | DMH 3 | 0.12 | HYD. 1 | 0.07 | 18" | 7' | 0.71% |
| SHORE DRIVE | HYD. 1 | 0.07 | DMH 4 | -0.08 | 18" | 7' | 2.14% |
| SHORE DRIVE | DMH 4 | -0.58 | DMH 7 | -0.63 | 18" | 17' | 0.29% |
| SHORE DRIVE | DMH 3 | 0.12 | DMH 5 | 0.08 | 18" | 6' | 0.67% |
| SHORE DRIVE | DMH 5 | 0.08 | DMH 6 | 0.05 | 18" | 26' | 0.12% |
| SHORE DRIVE | DMH 6 | 0.05 | DMH 4 | -0.02 | 18" | 9' | 0.78% |
| LEONARD LANE | DMH 8 | -1.30 | DMH 9 | -1.32 | 30" | 3' | 0.67% |
| LEONARD LANE | DMH 9 | -1.32 | HYD. 2 | -1.36 | 30" | 6' | 0.67% |
| LEONARD LANE | HYD. 2 | -1.36 | DMH 10 | -1.40 | 30" | 6' | 0.67% |
| LEONARD LANE | DMH 10 | -1.40 | DMH 11 | -1.49 | 30" | 9' | 1.00% |
| LEONARD LANE | DMH 11 | -1.49 | DMH 7 | -1.61 | 36" | 24' | 0.50% |
| LEONARD LANE | DMH 7 | -1.63 | EXIST DMH 8 | -1.67 | 36" | 8' | 0.50% |

## LEGEND

| DESCRIPTION | SYMBOL |
|---|---|
| CATCHMENT AREA | A1 - 1.50 AC |
| STRUCTURE NUMBER | DA-14 |
| FLOW DIRECTION | |
| MANHOLE | |
| DRAINAGE OUTFALL | DAO-1 |
| CATCH BASIN | |
| HYDRODYNAMIC SEPARATOR | |
| DRAINAGE LINE | |
| DRAINAGE AREA EXTENTS | |

## CONTRIBUTORY AREA

| OUTFALL | AREA |
|---|---|
| DAO-1 | 26.34 AC |
| DAO-2 | 26.83 AC |

811 1-800-272-4480
Dig Safely. New York
Call811
before you dig
www.digsafelynewyork.com

GRAPHIC SCALE
120 0 60 120
( IN FEET )
1 inch = 120 ft.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| 2 | 07/09/19 | 95% SUBMISSION |
| 1 | 12/06/18 | 60% SUBMISSION |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

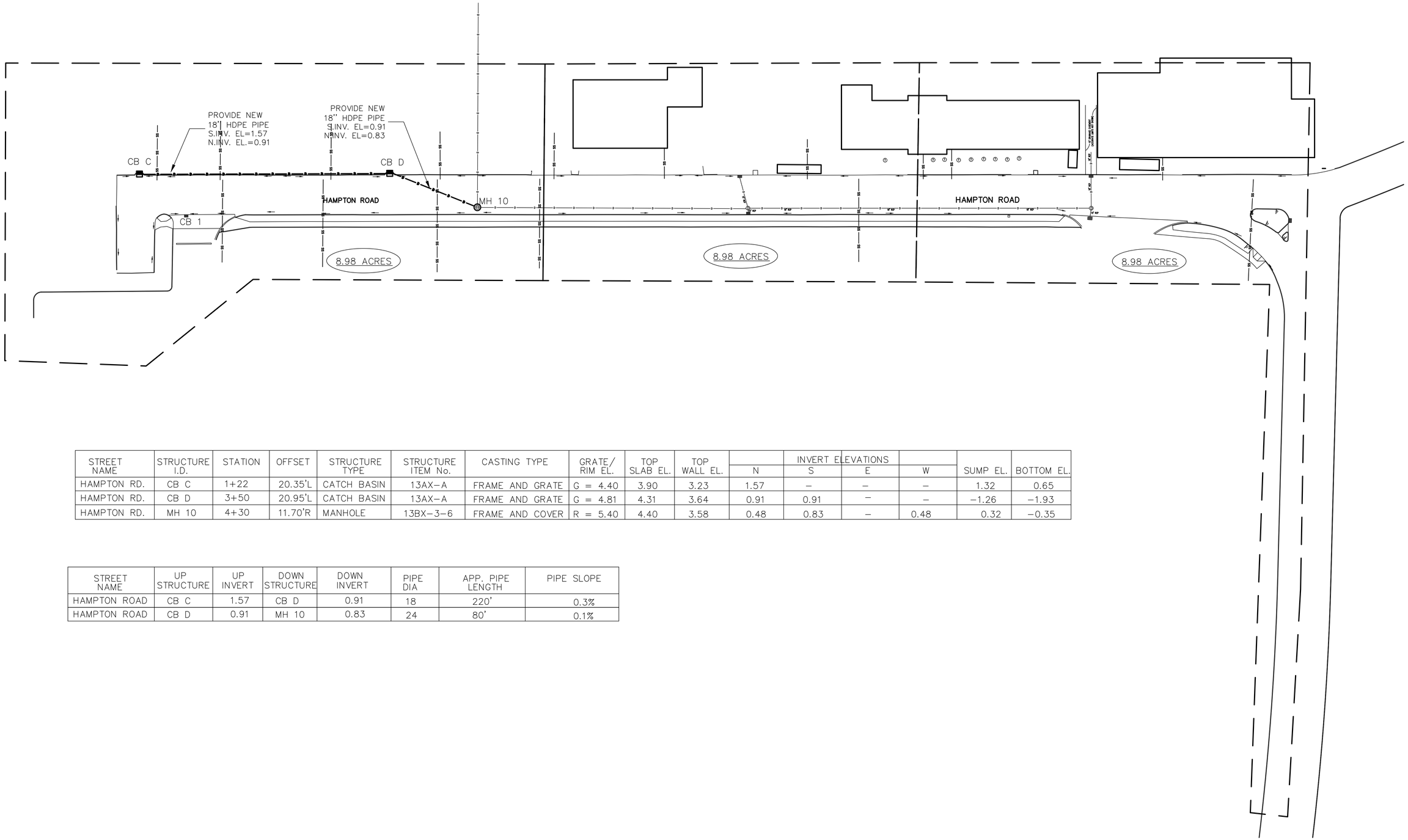
TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

**COMPREHENSIVE DRAINAGE PLAN**

STORMWATER DRAINAGE AND ROADWAY IMPROVEMENTS
HELEN COURT AND GEORGE COURT
MERRICK, N.Y.

Scale: 1" = 100'
Date: JULY 2019
File No.:
Dwg No.: C0.1
Sheet No.: 2 of 15

X:\HEMP (Town of Hempstead) - 1V490\HEMP1804-Drainage Improvements for Helen and George Courts\02-BIM-CADD\Con-docs\civil\C0.1 Comprehensive Drainage Plan.dwg Last Modified: Jun 27, 2019 - 10:53am Plotted on: Jul 05, 2019 - 4:16pm By akumar




| STREET NAME | STRUCTURE I.D. | STATION | OFFSET | STRUCTURE TYPE | STRUCTURE ITEM No. | CASTING TYPE | GRATE/ RIM EL. | TOP SLAB EL. | TOP WALL EL. | INVERT ELEVATIONS N | S | E | W | SUMP EL. | BOTTOM EL. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HAMPTON RD. | CB C | 1+22 | 20.35'L | CATCH BASIN | 13AX–A | FRAME AND GRATE | G = 4.40 | 3.90 | 3.23 | 1.57 | – | – | – | 1.32 | 0.65 |
| HAMPTON RD. | CB D | 3+50 | 20.95'L | CATCH BASIN | 13AX–A | FRAME AND GRATE | G = 4.81 | 4.31 | 3.64 | 0.91 | 0.91 | – | – | –1.26 | –1.93 |
| HAMPTON RD. | MH 10 | 4+30 | 11.70'R | MANHOLE | 13BX–3–6 | FRAME AND COVER | R = 5.40 | 4.40 | 3.58 | 0.48 | 0.83 | – | 0.48 | 0.32 | –0.35 |

| STREET NAME | UP STRUCTURE | UP INVERT | DOWN STRUCTURE | DOWN INVERT | PIPE DIA | APP. PIPE LENGTH | PIPE SLOPE |
|---|---|---|---|---|---|---|---|
| HAMPTON ROAD | CB C | 1.57 | CB D | 0.91 | 18 | 220' | 0.3% |
| HAMPTON ROAD | CB D | 0.91 | MH 10 | 0.83 | 24 | 80' | 0.1% |

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1–22–19 | REVISED AS PER 60% SUBMISSION COMMENTS |

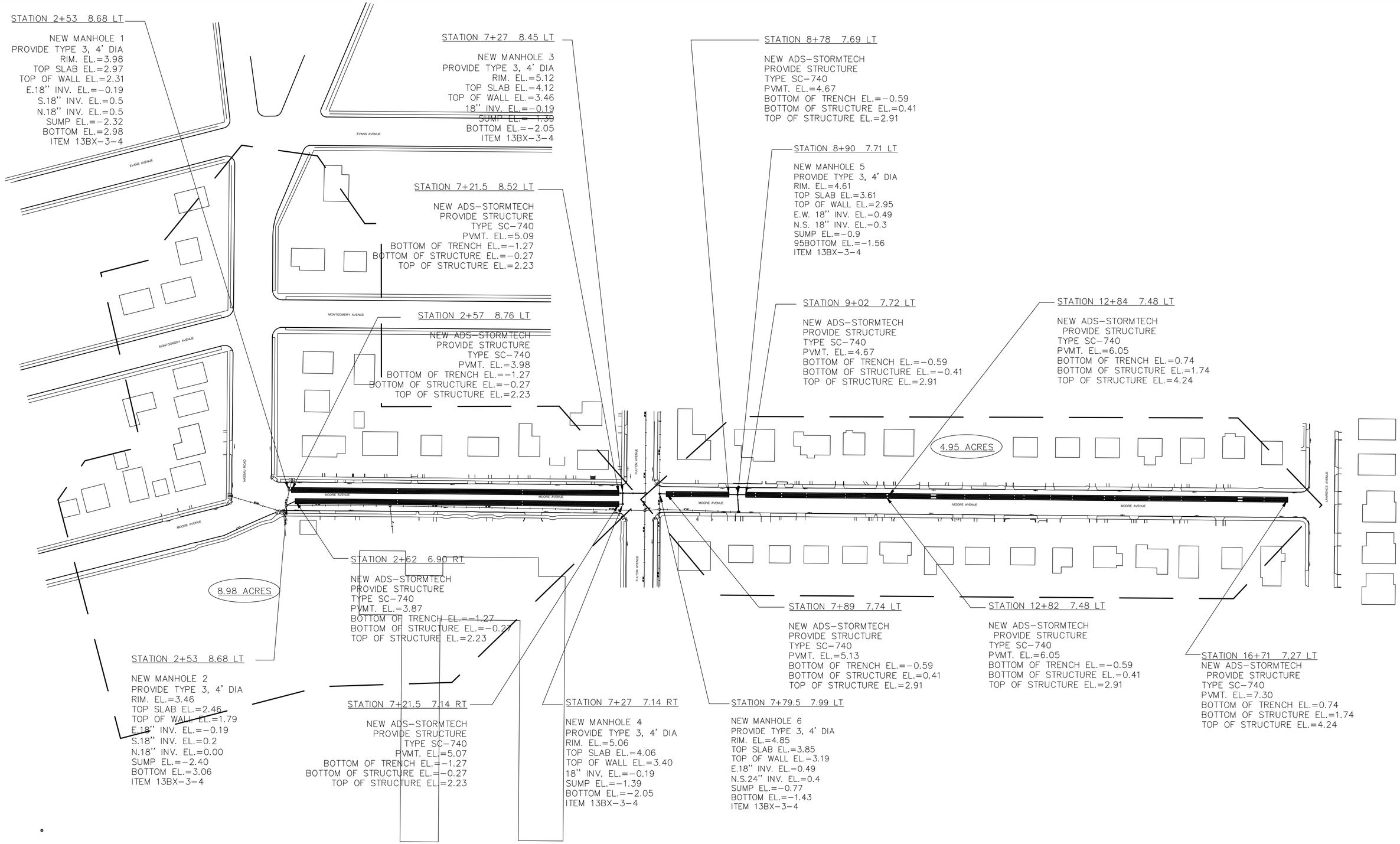
In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

COMPREHENSIVE DRAINAGE PLAN
HAMPTON ROAD

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: 1"=40'
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C501
Sheet No.: 3 of 27




| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |

| | |
|---|---|
| In Charge: - | J.A.G. |
| Compilation:- | |
| Design: - | XX |
| Drawn: - | R.J.W |
| Checked: - | J.A.G. |
| Reviewed: - | |

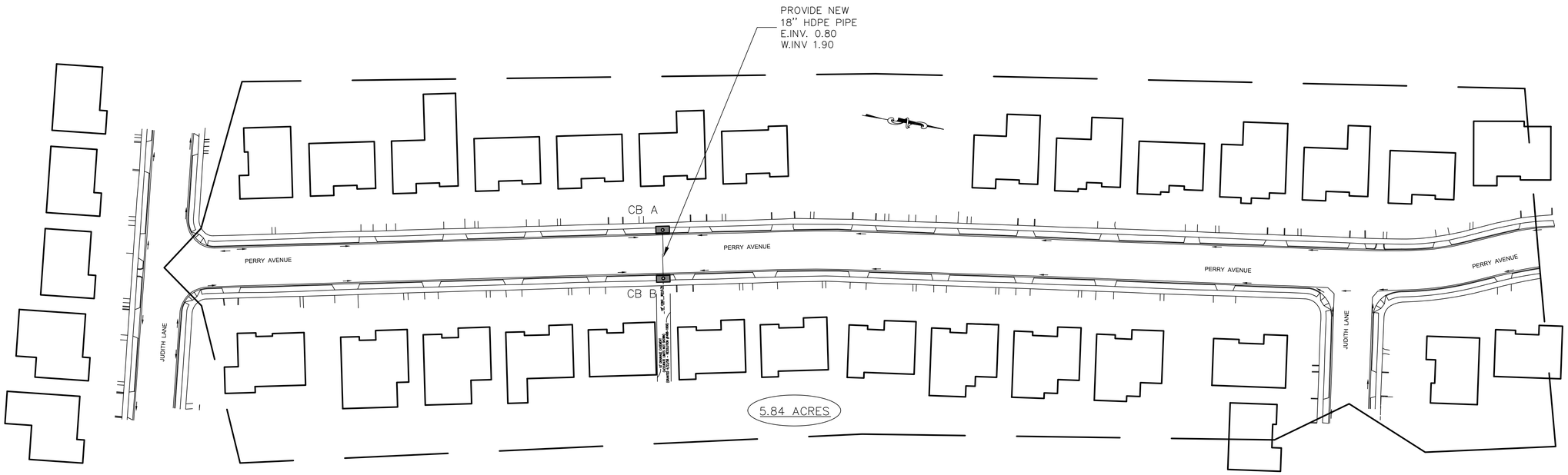
TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

COMPREHENSIVE DRAINAGE PLAN
MOORE AVE

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: 1"=60'
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C502
Sheet No.: 4 of 27




| STREET NAME | STRUCTURE I.D. | STATION | OFFSET | STRUCTURE TYPE | STRUCTURE ITEM No. | CASTING TYPE | GRATE/ RIM EL. | TOP SLAB EL. | TOP WALL EL. | INVERT ELEVATIONS N | S | E | W | SUMP EL. | BOTTOM EL. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PERRY AVE | CB A | 4+63.43 | 14.78 L | CATCH BASIN | 13AX-D-MOD | FRAME AND GRATE | G = 4.20 | 5.17 | 3.67 | – | – | 1.90 (18") | – | 1.40 | 0.73 |
| PERRY AVE | CB B | 4+62.91 | 14.87 R | CATCH BASIN | 13AX-D-MOD | FRAME AND GRATE | G = 4.10 | 5.08 | 3.58 | – | – | 0.79 (18") | 0.80 (18") | 0.11 | -0.56 |

| STREET NAME | UP STRUCTURE | UP INVERT | DOWN STRUCTURE | DOWN INVERT | PIPE DIA | APP. PIPE LENGTH | PIPE SLOPE |
|---|---|---|---|---|---|---|---|
| PERRY AVE | CB A | 1.9 | CB B | 0.80 | 18" | 30.5' | 3.6 |

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

COMPREHENSIVE DRAINAGE PLAN
PERRY AVE

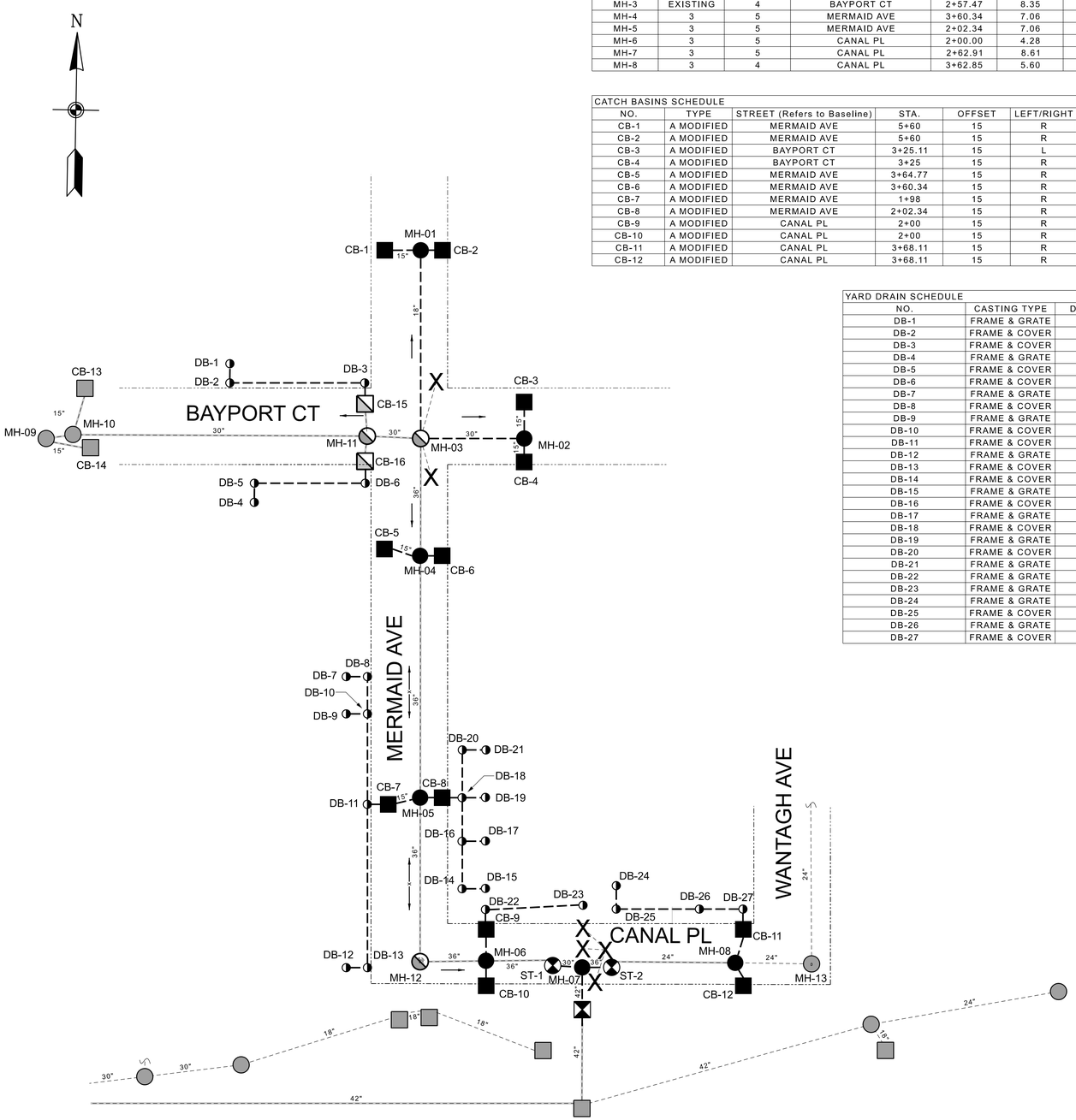
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C503
Sheet No.: 5 of 27

| MANHOLE SCHEDULE | | | | | | | | | | | | | NORTH | | EAST | | SOUTH | | WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | TYPE | DIA. | STREET (Refers to Baseline) | STA. | OFFSET | LEFT/RIGHT | RIM | CASTING | BRICK | SLAB | T/SLAB | T/WALL | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. |
| MH-1 | 3 | 4 | MERMAID AVE | 5+60.00 | 7.47 | R | 4.32 | 7 | 4 | 8 | 3.40 | 2.74 | - | - | 1.23 | 15 | 1.32 | 15 | 1.08 | 15 |
| MH-2 | 3 | 4 | BAYPORT CT | 3+25.11 | 8.36 | R | 4.33 | 7 | 4 | 8 | 3.41 | 2.75 | 1.12 | 15 | - | - | 1.27 | 15 | 1.00 | 18 |
| MH-3 | EXISTING | 4 | BAYPORT CT | 2+57.47 | 8.35 | R | 4.60 | 7 | 4 | 8 | 3.68 | 3.02 | -0.36 | 18 | - | - | - | - | 0.23 | 18 |
| MH-4 | 3 | 5 | MERMAID AVE | 3+60.34 | 7.06 | R | 4.33 | 7 | 4 | 10 | 3.41 | 2.58 | -3.01 | 36 | 1.54 | 15 | -3.01 | 36 | 1.39 | 15 |
| MH-5 | 3 | 5 | MERMAID AVE | 2+02.34 | 7.06 | R | 4.33 | 7 | 4 | 10 | 3.41 | 2.58 | -3.18 | 36 | 1.55 | 15 | -3.18 | 36 | 1.40 | 15 |
| MH-6 | 3 | 5 | CANAL PL | 2+00.00 | 4.28 | R | 4.39 | 7 | 4 | 10 | 3.47 | 2.64 | 1.12 | 15 | -3.42 | 36 | 1.2 | 15 | -3.42 | 36 |
| MH-7 | 3 | 5 | CANAL PL | 2+62.91 | 8.61 | R | 4.53 | 7 | 4 | 10 | 3.61 | 2.78 | - | - | -3.18 | 30 | -3.18 | 42 | -3.18 | 36 |
| MH-8 | 3 | 4 | CANAL PL | 3+62.85 | 5.60 | R | 4.39 | 7 | 4 | 8 | 3.47 | 2.81 | 1.39 | 15 | -1.1 | 24 | 1.49 | 15 | -1.1 | 24 |

| CATCH BASINS SCHEDULE | | | | | | | | | | | | NORTH | | EAST | | SOUTH | | WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | TYPE | STREET (Refers to Baseline) | STA. | OFFSET | LEFT/RIGHT | CURB ELEVATION | REVEAL | CASTING | BRICK | SLAB | T/WALL | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. |
| CB-1 | A MODIFIED | MERMAID AVE | 5+60 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | 1.25 | 15 | - | - | - | - |
| CB-2 | A MODIFIED | MERMAID AVE | 5+60 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | - | - | - | - | 1.25 | 15 |
| CB-3 | A MODIFIED | BAYPORT CT | 3+25.11 | 15 | L | 4.46 | 5 | 8 | 4 | 0 | 3.09 | - | - | - | - | 1.30 | 15 | - | - |
| CB-4 | A MODIFIED | BAYPORT CT | 3+25 | 15 | R | 4.46 | 5 | 8 | 4 | 0 | 3.09 | 1.30 | 15 | - | - | - | - | - | - |
| CB-5 | A MODIFIED | MERMAID AVE | 3+64.77 | 15 | R | 4.44 | 5 | 8 | 4 | 0 | 3.06 | - | - | 1.56 | 15 | - | - | - | - |
| CB-6 | A MODIFIED | MERMAID AVE | 3+60.34 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | - | - | - | - | 1.57 | 15 |
| CB-7 | A MODIFIED | MERMAID AVE | 1+98 | 15 | R | 4.44 | 5 | 8 | 4 | 0 | 3.06 | - | - | 1.57 | 15 | - | - | 1.86 | 6 |
| CB-8 | A MODIFIED | MERMAID AVE | 2+02.34 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | - | - | 1.90 | 8 | 1.57 | 15 |
| CB-9 | A MODIFIED | CANAL PL | 2+00 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | 1.00 | 6 | - | - | 1.25 | 15 | - | - |
| CB-10 | A MODIFIED | CANAL PL | 2+00 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | 1.25 | 15 | - | - | - | - | - | - |
| CB-11 | A MODIFIED | CANAL PL | 3+68.11 | 15 | R | 4.43 | 5 | 8 | 4 | 0 | 3.05 | 1.55 | 15 | - | - | 1.55 | 15 | - | - |
| CB-12 | A MODIFIED | CANAL PL | 3+68.11 | 15 | R | 4.43 | 5 | 8 | 4 | 0 | 3.05 | 1.55 | 15 | - | - | - | - | - | - |

| YARD DRAIN SCHEDULE | | | | | | | | NORTH | | EAST | | SOUTH | | WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | CASTING TYPE | DIA (IN) | STREET (Refers to Baseline) | STA. | OFFSET | LEFT/RIGHT | RIM | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. |
| DB-1 | FRAME & GRATE | 18 | BAYPORT CT | 1+33.22 | 28.47 | L | 4.22 | - | - | - | - | 2.72 | 6 | - | - |
| DB-2 | FRAME & COVER | 18 | BAYPORT CT | 1+33 | 20.64 | L | 4.34 | 2.55 | 6 | 2.72 | 8 | - | - | - | - |
| DB-3 | FRAME & COVER | 18 | BAYPORT CT | 2+21.14 | 20.64 | L | 4.75 | - | - | - | - | 1.69 | 8 | 1.69 | 8 |
| DB-4 | FRAME & GRATE | 18 | BAYPORT CT | 1+49.13 | 21.44 | R | 4.19 | 2.69 | 6 | - | - | - | - | - | - |
| DB-5 | FRAME & COVER | 18 | BAYPORT CT | 1+49 | 29.47 | R | 4.43 | - | - | 2.47 | 8 | 2.64 | 6 | - | - |
| DB-6 | FRAME & COVER | 18 | BAYPORT CT | 2+21.4 | 21.44 | R | 4.75 | 1.77 | 8 | - | - | - | - | 1.77 | 8 |
| DB-7 | FRAME & GRATE | 18 | MERMAID AVE | 2+81 | 35.00 | L | 4.44 | - | - | 2.94 | 6 | - | - | - | - |
| DB-8 | FRAME & COVER | 18 | MERMAID AVE | 2+81 | 21.01 | L | | - | - | - | - | 2.66 | 8 | 2.83 | 6 |
| DB-9 | FRAME & GRATE | 18 | MERMAID AVE | 2+56.72 | 34.98 | L | 4.28 | - | - | 2.78 | 6 | - | - | - | - |
| DB-10 | FRAME & COVER | 18 | MERMAID AVE | 1+49 | 20.99 | L | 4.83 | 2.44 | 8 | - | - | 2.44 | 8 | 2.44 | 6 |
| DB-11 | FRAME & COVER | 18 | MERMAID AVE | 1+97.97 | 21.01 | L | 4.55 | 1.73 | 8 | 1.73 | 8 | 1.73 | 8 | - | - |
| DB-12 | FRAME & GRATE | 18 | MERMAID AVE | 0+91.24 | 37.00 | L | 4.57 | - | - | 3.07 | 6 | - | - | - | - |
| DB-13 | FRAME & COVER | 18 | MERMAID AVE | 0+91.24 | 21.01 | L | | 2.77 | 8 | - | - | - | - | 2.94 | 6 |
| DB-14 | FRAME & COVER | 18 | MERMAID AVE | 1+42.47 | 21.01 | R | 4.85 | 2.49 | 8 | 2.49 | 6 | - | - | - | - |
| DB-15 | FRAME & GRATE | 18 | MERMAID AVE | 1+42.47 | 37.00 | R | 4.29 | - | - | - | - | - | - | 2.79 | 6 |
| DB-16 | FRAME & COVER | 18 | MERMAID AVE | 1+73.38 | 21.01 | R | | 2.2 | 8 | 2.2 | 6 | 2.2 | 8 | - | - |
| DB-17 | FRAME & GRATE | 18 | MERMAID AVE | 1+73.38 | 31.00 | R | 4.35 | - | - | - | - | - | - | 2.85 | 6 |
| DB-18 | FRAME & COVER | 18 | MERMAID AVE | 2+02.35 | 21.01 | R | 4.59 | 1.94 | 8 | 1.94 | 6 | 1.94 | 8 | 1.94 | 8 |
| DB-19 | FRAME & GRATE | 18 | MERMAID AVE | 2+02.35 | 31.00 | R | 4.43 | - | - | - | - | - | - | 2.93 | 6 |
| DB-20 | FRAME & COVER | 18 | MERMAID AVE | 2+32.65 | 21.01 | R | 4.72 | - | - | 2.43 | 6 | 2.41 | 8 | - | - |
| DB-21 | FRAME & GRATE | 18 | MERMAID AVE | 2+32.65 | 38.93 | R | 4.08 | - | - | - | - | - | - | 2.58 | 6 |
| DB-22 | FRAME & GRATE | 18 | CANAL PL | 1+99.96 | 29.32 | L | 4.02 | - | - | 1.46 | 6 | 1.46 | 6 | - | - |
| DB-23 | FRAME & GRATE | 18 | CANAL PL | 2+62.91 | 32.00 | L | 3.57 | | | | | | | | |
| DB-24 | FRAME & GRATE | 18 | CANAL PL | 2+85.16 | 44.81 | L | 3.83 | | | | | | | | |
| DB-25 | FRAME & COVER | 18 | CANAL PL | 2+85.16 | 26.47 | L | 4.60 | | | | | | | | |
| DB-26 | FRAME & GRATE | 18 | CANAL PL | 3+39.48 | 26.46 | L | 3.85 | | | | | | | | |
| DB-27 | FRAME & COVER | 18 | CANAL PL | 1+49 | 17.85 | L | 4.47 | | | | | | | | |




## LEGEND

| | |
|---|---|
| CB-2 | EXISTING CATCH BASIN |
| CB-3 | PROPOSED CATCH BASIN |
| DB-1 | PROPOSED DRAIN BASIN |
| MH-1 | EXISTING MANHOLE |
| MH-2 | PROPOSED MANHOLE |
| ST-1 | STORMTREATMENT UNIT |
| | ALTER CATCH BASIN |
| | ALTER MANHOLE |
| | CLEAN EXISTING SYSTEM |
| 15" | EXISTING PIPE SIZE |
| 24" | PROPOSED PIPE SIZE |
| X | DEMOLISH STRUCTURE |
| | SURFACE FLOW DIRECTION |
| TV-1 | TIDE VALVE STRUCTURE |

D- 9997 / 6152

| NO. | DATE | REVISIONS |
|---|---|---|

| | |
|---|---|
| In Charge: | RWD |
| Compilation: | AP |
| Design: | AP |
| Drawn: | SC |
| Checked: | AP |
| Reviewed: | RWD |

NOTE:

1. EXISTING CONDITIONS SHOWN AS OF OCTOBER 2018.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTER LINE AND EXISTING CENTER LINE OF ROADWAY SHOWN IN PROFILE DRAWINGS.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM.
   HORIZONTAL CONTROL INDICATED IS NAD 1983
   VERTICAL CONTROL INDICATED IS NAVD 1988

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

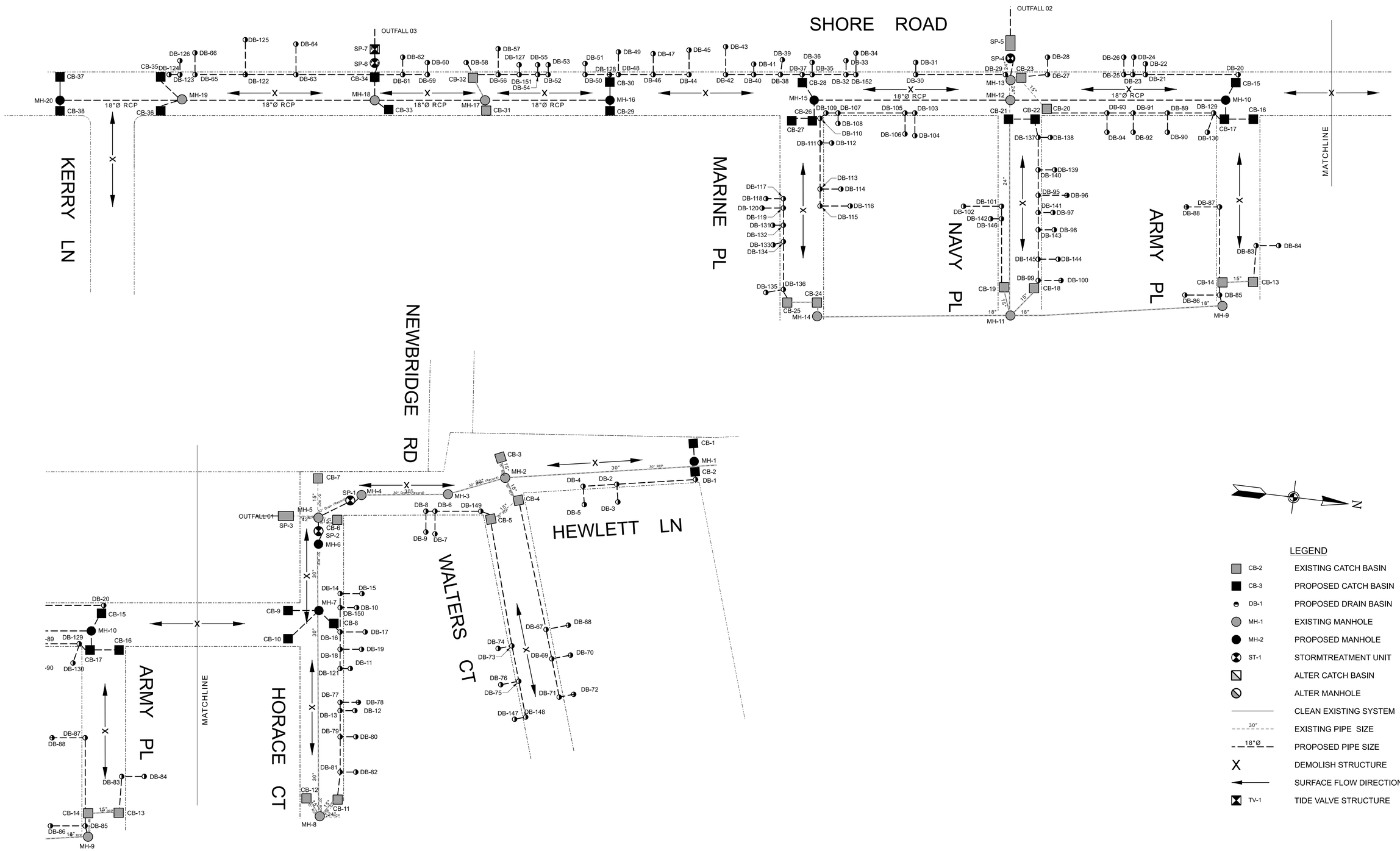
# OVERALL DRAINAGE PLAN

TOH ROAD RAISINGS

## MERMAID AVENUE AREA

WANTAGH, N.Y.

| | |
|---|---|
| Scale: | 1" = 40' |
| Date: | MAY 2019 |
| File No.: | |
| Dwg No.: | C-201 |
| Sheet No.: | XX of XX |




D- 9997 / 6152

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

| | |
|---|---|
| In Charge: | RWD |
| Compilation: | AP |
| Design: | AP |
| Drawn: | SC |
| Checked: | AP |
| Reviewed: | RWD |

NOTE:

1. EXISTING CONDITIONS SHOWN AS OF OCTOBER 2018.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTER LINE AND EXISTING CENTER LINE OF ROADWAY SHOWN IN PROFILE DRAWINGS.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM.
   HORIZONTAL CONTROL INDICATED IS NAD 1983
   VERTICAL CONTROL INDICATED IS NAVD 1988

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

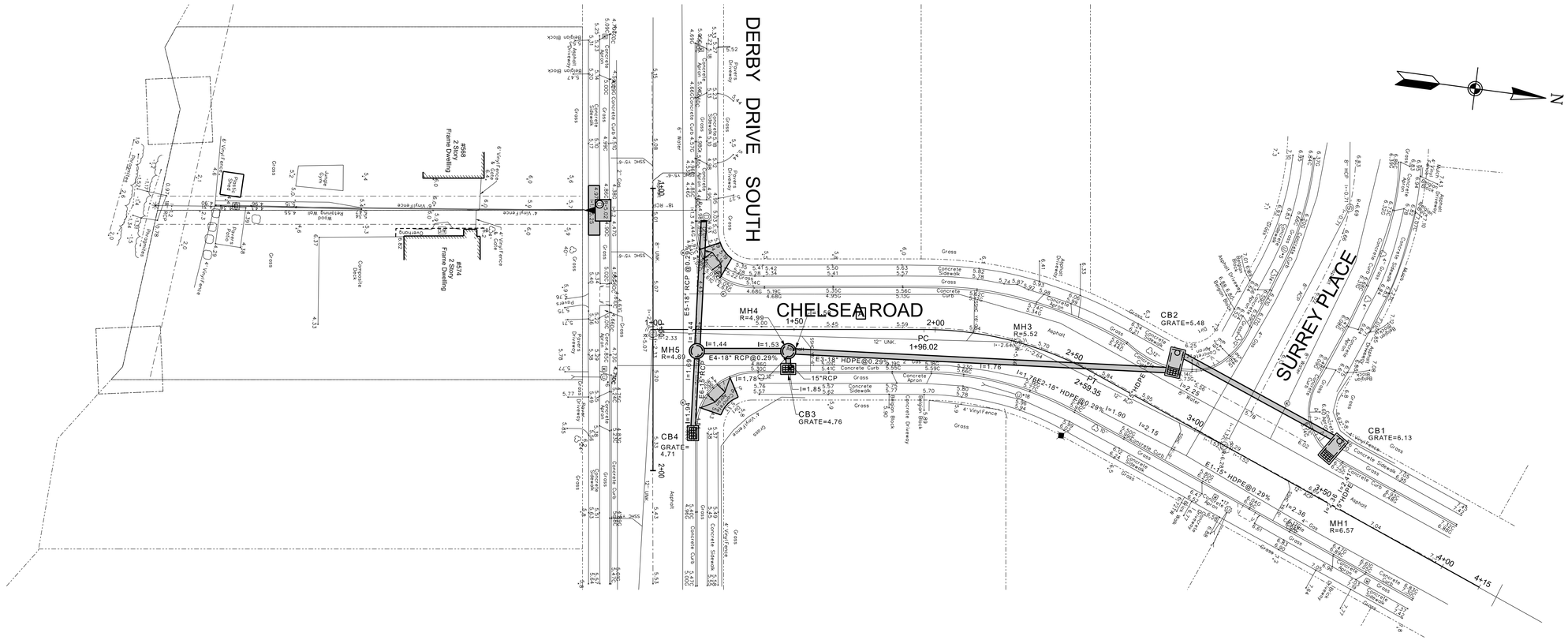
# OVERALL DRAINAGE PLAN

TOH ROAD RAISINGS

## SHORE ROAD AREA

BELLMORE, N.Y.

| | |
|---|---|
| Scale: | 1" = 50' |
| Date: | JAN 2019 |
| File No.: | 6142-01 |
| Dwg No.: | C-201 |
| Sheet No.: | XX of XX |




D- 9997 / 6152

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

SPECIAL NOTE: Vertical Datum = NAVD 88

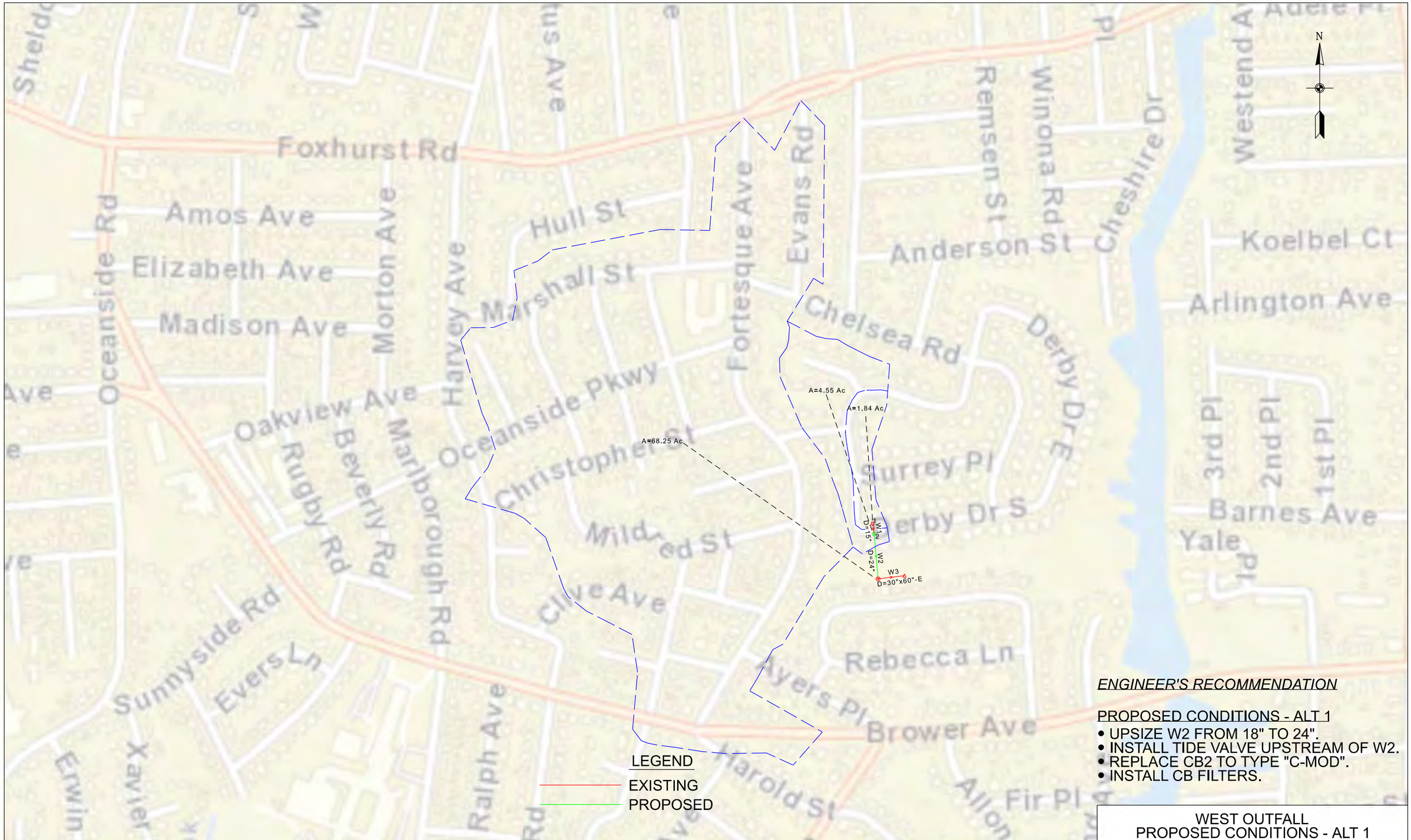
TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

LEGEND
– – – EXISTING GRADE

# EAST OUTFALL
STATION 0+00 TO 0+00

OCEANSIDE PIPES
# DERBY DRIVE SOUTH
OCEANSIDE, N.Y.

| | |
|---|---|
| Scale: | HOR. 1" = 20'<br>VERT. 1" = 2' |
| Date: | AUG 2019 |
| File No.: | 6152 |
| Dwg No.: | C-104 |
| Sheet No.: | XX of XX |




*ENGINEER'S RECOMMENDATION*

PROPOSED CONDITIONS - ALT 1

- UPSIZE W2 FROM 18" TO 24".
- INSTALL TIDE VALVE UPSTREAM OF W2.
- REPLACE CB2 TO TYPE "C-MOD".
- INSTALL CB FILTERS.

WEST OUTFALL
PROPOSED CONDITIONS - ALT 1

PREPARED BY
de Bruin
Civil Engineering & Construction Management
de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

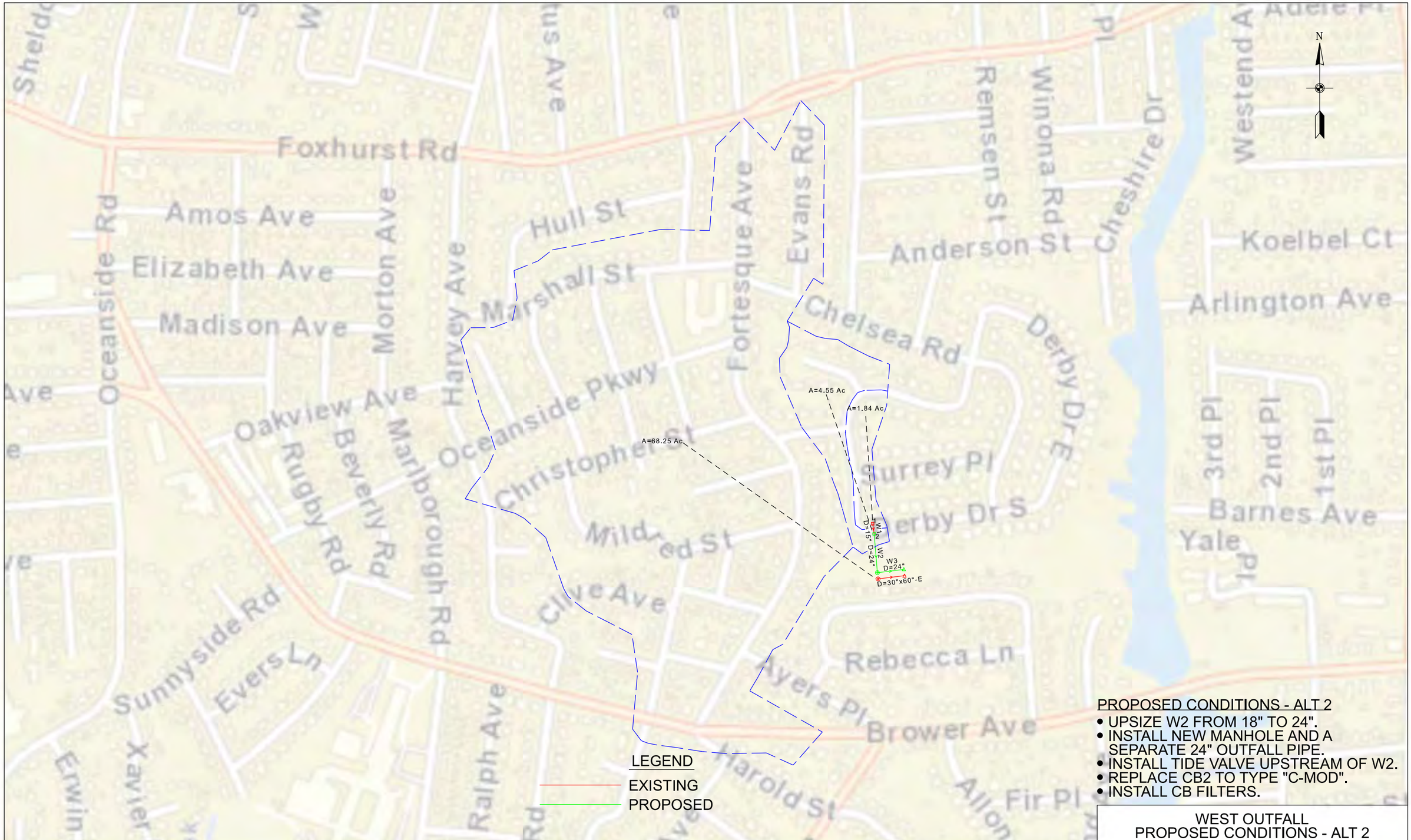
| | |
|---|---|
| Date: | 12/03/2018 |
| Job: | 6152 |
| Scale: | 1" = 400' |

Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
DERBY DRIVE SOUTH
OCEANSIDE, NY

PLAN VIEW




LEGEND

EXISTING

PROPOSED

PROPOSED CONDITIONS - ALT 2

- UPSIZE W2 FROM 18" TO 24".
- INSTALL NEW MANHOLE AND A SEPARATE 24" OUTFALL PIPE.
- INSTALL TIDE VALVE UPSTREAM OF W2.
- REPLACE CB2 TO TYPE "C-MOD".
- INSTALL CB FILTERS.

WEST OUTFALL
PROPOSED CONDITIONS - ALT 2

PREPARED BY
de Bruin
Civil Engineering & Construction Management
de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

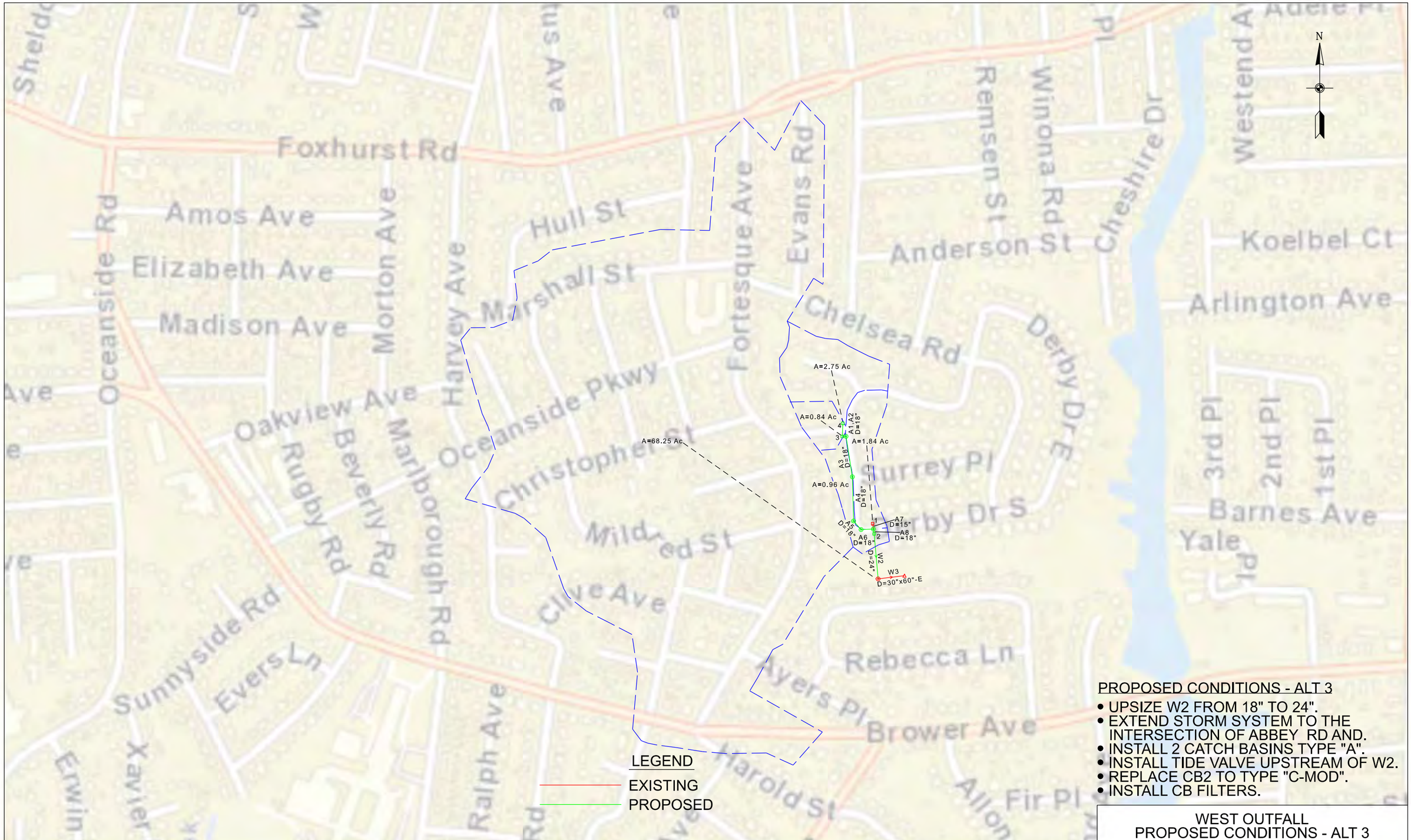
Date: 12/03/2018
Job: 6152
Scale: 1" = 400'

Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
DERBY DRIVE SOUTH
OCEANSIDE, NY

PLAN VIEW




LEGEND

EXISTING

PROPOSED

PROPOSED CONDITIONS - ALT 3

- UPSIZE W2 FROM 18" TO 24".
- EXTEND STORM SYSTEM TO THE INTERSECTION OF ABBEY RD AND.
- INSTALL 2 CATCH BASINS TYPE "A".
- INSTALL TIDE VALVE UPSTREAM OF W2.
- REPLACE CB2 TO TYPE "C-MOD".
- INSTALL CB FILTERS.

WEST OUTFALL
PROPOSED CONDITIONS - ALT 3

PREPARED BY
de Bruin
Civil Engineering & Construction Management
de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

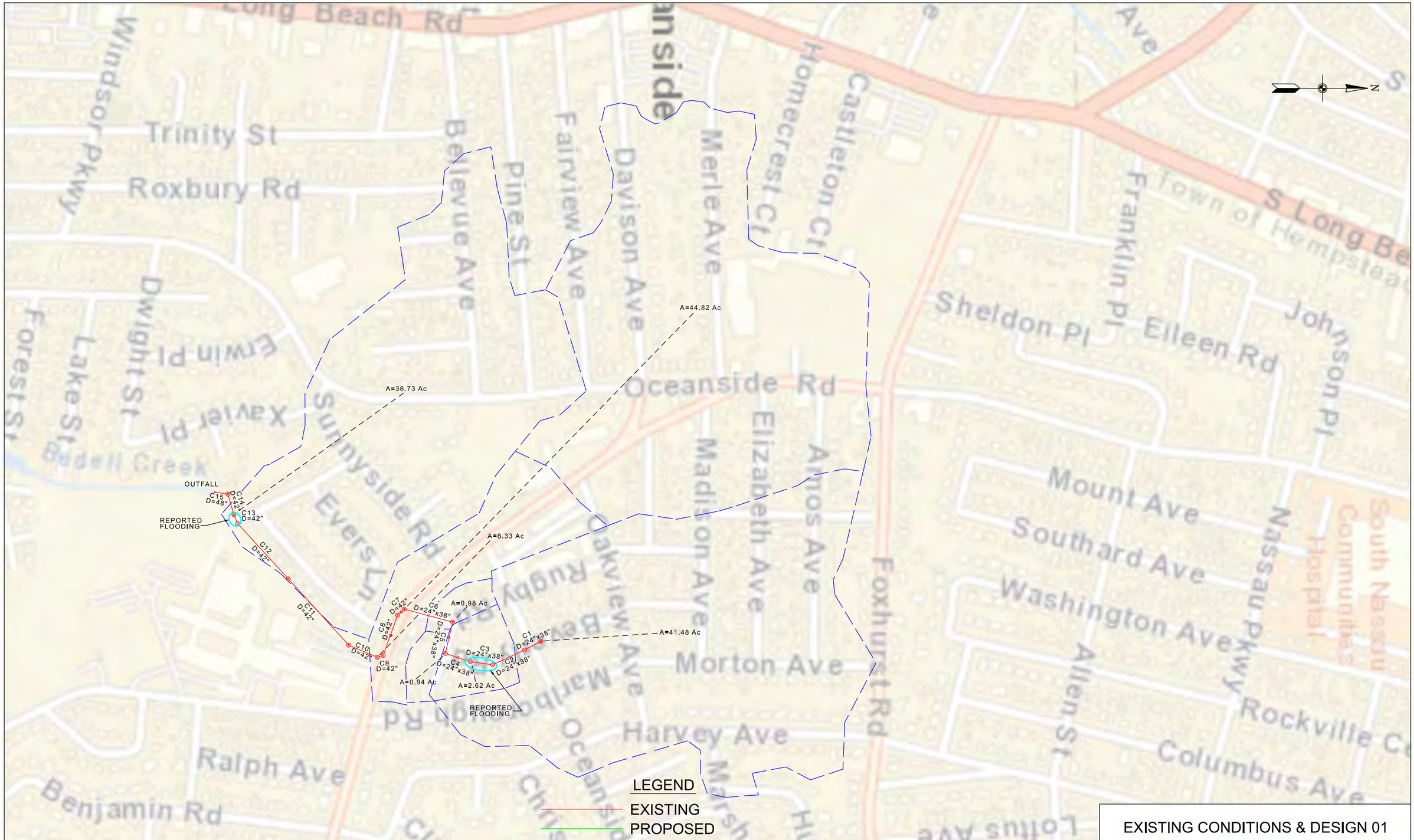
Date: 12/03/2018
Job: 6152
Scale: 1" = 400'

Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
DERBY DRIVE SOUTH
OCEANSIDE, NY

PLAN VIEW




EXISTING CONDITIONS & DESIGN 01

PREPARED BY

de Bruin
Civil Engineering & Construction Management

de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

| | |
|---|---|
| Date: | 2/05/19 |
| Job: | 6152 |
| Scale: | 1" = 200' |

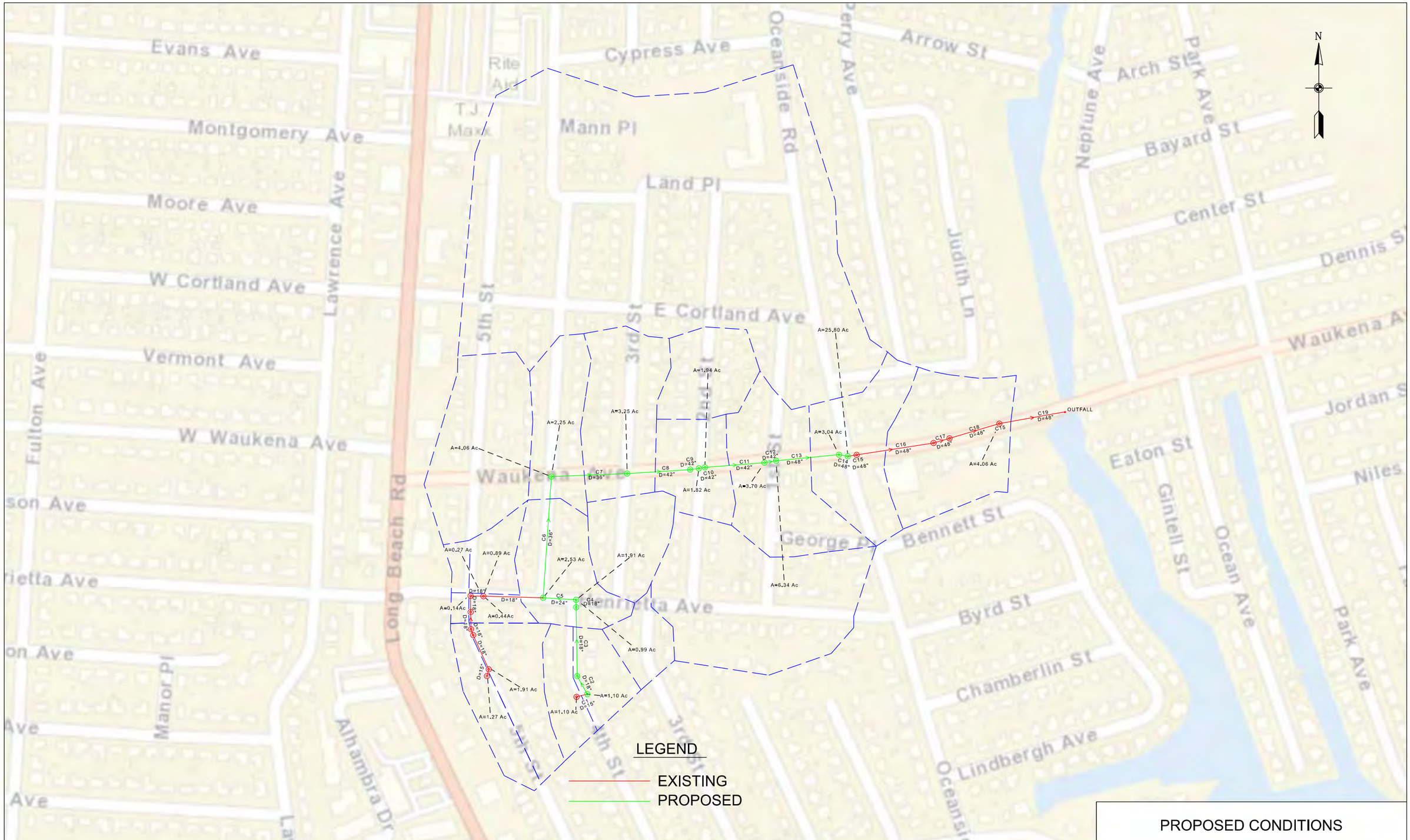
Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
BEVERLY RD
OCEANSIDE, NY

PLANVIEW

SHEET NO. 1 OF 10




PROPOSED CONDITIONS

PREPARED BY

de Bruin
Civil Engineering & Construction Management

de Bruin Engineering P.C.
1400 Old Country Road • Westbury • NY • 11590
516.513.1313

Date: 01/22/2019
Job: 6152
Scale: 1" = 300'

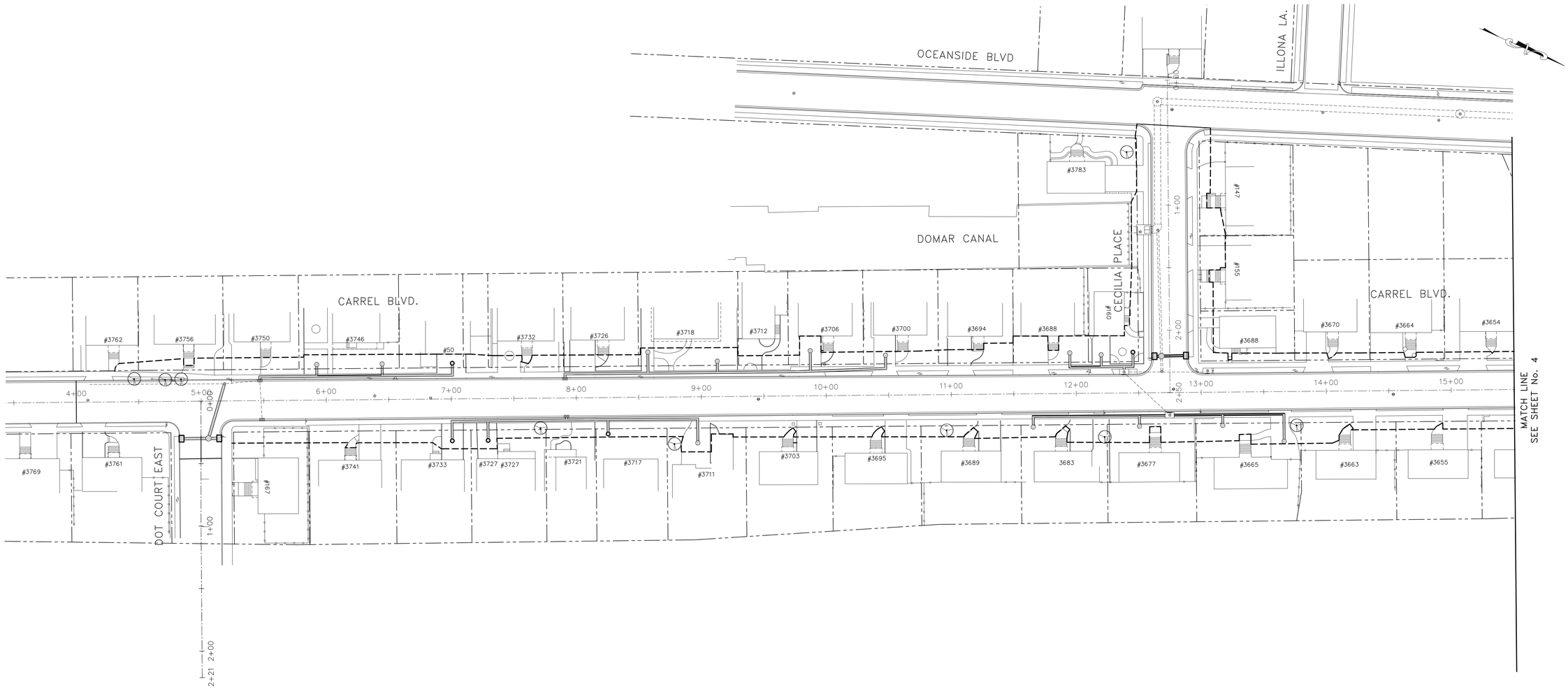
Notes: Vertical Datum = NAVD 88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
WAUKENA AVE AND 4TH ST.
OCEANSIDE, NY

PLAN VIEW

SHEET NO. 2 OF 6




| No. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| | |
|---|---|
| In Charge: | JC |
| Complilation: | |
| Design: | JC |
| Drawn: | HIK |
| Checked: | xxx |
| Reviewed: | xxx |

| | | |
|---|---|---|
| COMPREHENSIVE | Proposed Drainage System | R.C.P. C.B. M.H. |
| | Existing Drainage System | |
| | Watershed Boundary | |
| DRAINAGE | Interior Drainage Boundary | |
| | Incremental areas to CB's | |
| PLAN | R.O.W. to be fully improved | |
| | Tributary acreage to catch basin | 1.4 Ac. |
| LEGEND | Tributary acreage to manhole | 1.4 Ac. |
| | Direction of surface flow | |
| | Estab. or Prop. street elevations | 19.85 |

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

**OCEANSIDE DRAINAGE IMPROVEMENTS &**
**OCEANSIDE ROAD RAISING AT CARREL BLVD**
**OCEANSIDE, NEW YORK**

**LiRo Engineers, Inc.**
*A LiRo Group Company*
Mineola, N.Y. 516-746-2350[T]

# MASTER OVERALL DRAINAGE PLAN

Scale: 1"=40'

Date: AUGUST 2018

File No:

Sheet No. 3 OF 37

U:\Trans\18-158-1891 - Town of Hempstead - Oceanside Drainage\Engineering\Design Phase\Drawings\Wrights Landsdrawing\Master Overall Drainage (3) Last Modified: Aug 22, 2018 Plotted by Hagopian

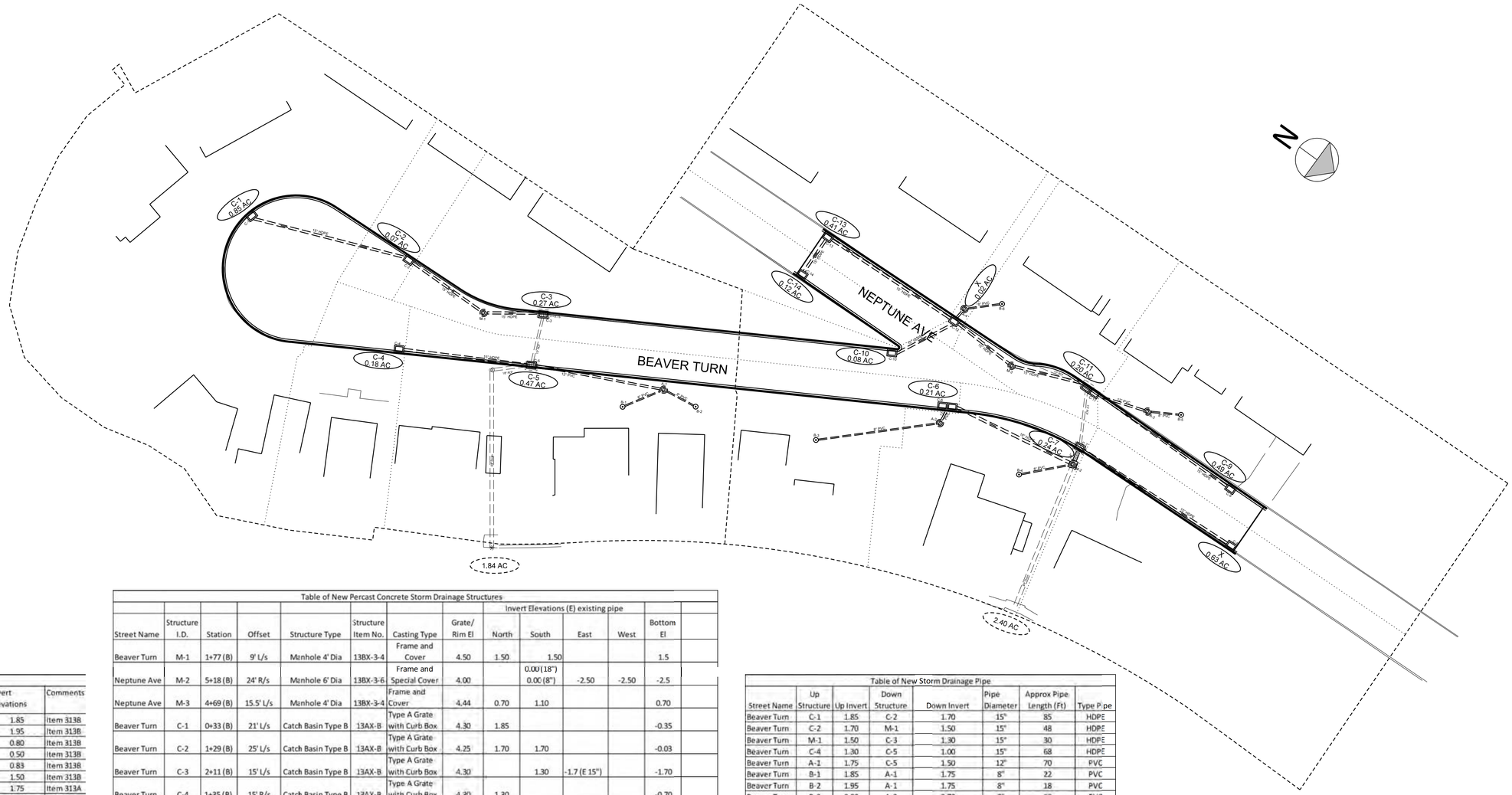



Table of New P.V.C Drainage Structures

| Struct. Number | Station | Offset | Structure Type | Casting Type | Grate/ Rim El | Invert Elevations | Comments |
|---|---|---|---|---|---|---|---|
| B-1 | 2+60 (B) | 32' R/s | 18" Drain | Surface Grate | 4.32 | 1.85 | Item 313B |
| B-2 | 3+00 (B) | 28' R/s | 18" Drain | Surface Grate | 4.62 | 1.95 | Item 313B |
| B-3 | 3+67 (B) | 39' R/s | 18" Drain | Surface Grate | 2.58 | 0.80 | Item 313B |
| B-4 | 4+88 (B) | 42' R/s | 18" Drain | Surface Grate | 3.19 | 0.50 | Item 313B |
| B-5 | 5+56 (B) | 31' L/s | 18" Drain | Surface Grate | 3.00 | 0.83 | Item 313B |
| B-6 | 1+97 (P) | 37' L/s | 18" Drain | Surface Grate | 3.67 | 1.50 | Item 313B |
| A-1 | 2+82 (B) | 21' R/s | 12" MH | MH Frame & Cover | 3.90 | 1.75 | Item 313A |
| A-2 | 4+34 (B) | 23' R/s | 12" MH | MH Frame & Cover | 3.70 | 0.70 | Item 313A |
| A-3 | 5+37 (B) | 23' L/s | 12" MH | MH Frame & Cover | 3.35 | 0.70 | Item 313A |
| A-4 | 1+83 (P) | 23' L/s | 12" MH | MH Frame & Cover | 3.90 | 1.10 | Item 313A |

Table of New Percast Concrete Storm Drainage Structures

| Street Name | Structure I.D. | Station | Offset | Structure Type | Structure Item No. | Casting Type | Grate/ Rim El | Invert Elevations (E) existing pipe North | South | East | West | Bottom El |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Beaver Turn | M-1 | 1+77 (B) | 9' L/s | Manhole 4' Dia | 13BX-3-4 | Frame and Cover | 4.50 | 1.50 | 1.50 | | | 1.5 |
| Neptune Ave | M-2 | 5+18 (B) | 24' R/s | Manhole 6' Dia | 13BX-3-6 | Frame and Special Cover | 4.00 | | 0.00 (18") 0.00 (8") | -2.50 | -2.50 | -2.5 |
| Neptune Ave | M-3 | 4+69 (B) | 15.5' L/s | Manhole 4' Dia | 13BX-3-4 | Frame and Cover | 4.44 | 0.70 | 1.10 | | | 0.70 |
| Beaver Turn | C-1 | 0+33 (B) | 21' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | 1.85 | | | | -0.35 |
| Beaver Turn | C-2 | 1+29 (B) | 25' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.25 | 1.70 | 1.70 | | | -0.03 |
| Beaver Turn | C-3 | 2+11 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | | 1.30 | -1.7 (E 15") | | -1.70 |
| Beaver Turn | C-4 | 1+35 (B) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | 1.30 | | | | -0.70 |
| Beaver Turn | C-5 | 2+09 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | 1.50 | -1.90 (E 18") 1.00 (15") | | -1.7 (E 15") | -1.70 |
| Beaver Turn | C-6 | 4+32 (B) | 15' R/s | Catch Basin Type D | 13AX-D | Type A Grate with Curb Box | 4.30 | 0.50 | | 0.60 | | -1.50 |
| Neptune Ave | C-7 | 5+15 (B) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | | | -2.50 | -2.5 (E 15") | -2.50 |
| Neptune Ave | C-8 | 6+20 (B) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.09 | | 0.00 | | | -2.00 |
| Neptune Ave | C-9 | 6+00 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.04 | | 0.60 | | | -2.00 |
| Beaver Turn | C-10 | 4+04 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.31 | | | | 1.35 | -1.65 |
| Neptune Ave | C-11 | 5+09 (B) | 17' L/s | Catch Basin Type D | 13AX-D | Type A Grate with Curb Box | 4.30 | 0.0 (15") 0.6 (12") | 0.80 | -2.3 (E 15") | | -2.30 |
| Neptune Ave | C-12 | 1+83 (P) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.25 | 1.20 | 0.20 | 1.25 | | -1.80 |
| Neptune Ave | C-13 | 1+00 (P) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.40 | 0.30 | | 0.30 | | -1.70 |
| Neptune Ave | C-14 | 1+00 (P) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.32 | | | | 0.60 | -1.40 |

(B) Baseline on Beaver Turn/Neptune Ave (P) Baseline on Private road

Table of New Storm Drainage Pipe

| Street Name | Up Structure | Up Invert | Down Structure | Down Invert | Pipe Diameter | Approx Pipe Length (Ft) | Type Pipe |
|---|---|---|---|---|---|---|---|
| Beaver Turn | C-1 | 1.85 | C-2 | 1.70 | 15" | 85 | HDPE |
| Beaver Turn | C-2 | 1.70 | M-1 | 1.50 | 15" | 48 | HDPE |
| Beaver Turn | M-1 | 1.50 | C-3 | 1.30 | 15" | 30 | HDPE |
| Beaver Turn | C-4 | 1.30 | C-5 | 1.00 | 15" | 68 | HDPE |
| Beaver Turn | A-1 | 1.75 | C-5 | 1.50 | 12" | 70 | PVC |
| Beaver Turn | B-1 | 1.85 | A-1 | 1.75 | 8" | 22 | PVC |
| Beaver Turn | B-2 | 1.95 | A-1 | 1.75 | 8" | 18 | PVC |
| Beaver Turn | B-3 | 0.80 | A-2 | 0.70 | 8" | 68 | PVC |
| Beaver Turn | A-2 | 0.70 | C-6 | 0.60 | 12" | 9 | PVC |
| Beaver Turn | C-6 | 0.50 | M-2 | 0.00 | 18" | 72 | HDPE |
| Beaver Turn | B-4 | 0.50 | M-2 | 0.00 | 8" | 28 | PVC |
| Neptune Ave | C-7 | -2.50 | M-2 | -2.50 | 24" | 10 | HDPE |
| Neptune Ave | C-8 | 0.00 | C-7 | -0.50 | 15" | 98 | HDPE |
| Neptune Ave | C-9 | 0.60 | C-11 | 0.00 | 15" | 88 | HDPE |
| Neptune Ave | A-3 | 0.70 | C-11 | 0.60 | 12" | 28 | PVC |
| Neptune Ave | B-5 | 0.83 | A-3 | 0.70 | 8" | 18 | PVC |
| Neptune Ave | M-3 | 1.10 | C-11 | 0.80 | 15" | 38 | HDPE |
| Neptune Ave | C-12 | 1.20 | M-3 | 1.10 | 15" | 36 | HDPE |
| Neptune Ave | C-10 | 1.35 | C-12 | 1.25 | 15" | 36 | HDPE |
| Neptune Ave | A-4 | 1.10 | C-12 | 0.90 | 12" | 8 | PVC |
| Neptune Ave | B-6 | 1.50 | A-4 | 1.20 | 8" | 18 | PVC |
| Neptune Ave | C-13 | 0.30 | C-12 | 0.20 | 15" | 78 | HDPE |
| Neptune Ave | C-14 | 0.60 | C-13 | 0.30 | 15" | 30 | HDPE |

(E) EXISTING MH

LKB CONSULTING ENGINEERS

LOCKWOOD KESSLER & BARTLETT, INC.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge: B.A.M.
Compilation: ___
Design: D.B.
Drawn: E.J.Z./M.M.
Checked: B.A.M.
Reviewed: ___

PLAN AND PROFILE NOTES:

1. EXISTING CONDITIONS SHOWN AS OF JANUARY 2008.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM. HORIZONTAL CONTROL INDICATED IS NAD83 (1986).US SURVEY FEET. VERTICAL CONTROL INDICATED IS NAVD (1988) FEET.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

LEGEND

PROFILE
GRADE — Proposed Centerline
Existing Centerline
LEGEND

BEAVER TURN
COMPREHENSIVE DRAINAGE PLAN

ROAD RAISING AND STORMWATER DRAINAGE IMPROVEMENTS
BEAVER TURN @ NEPTUNE AVENUE
SEAFORD, NY

Scale: H: 1" = 20' V: 1' = 2'
Date: APR. 2019
File No.:
Dwg No.: 3
Sheet No.: 3 of 15

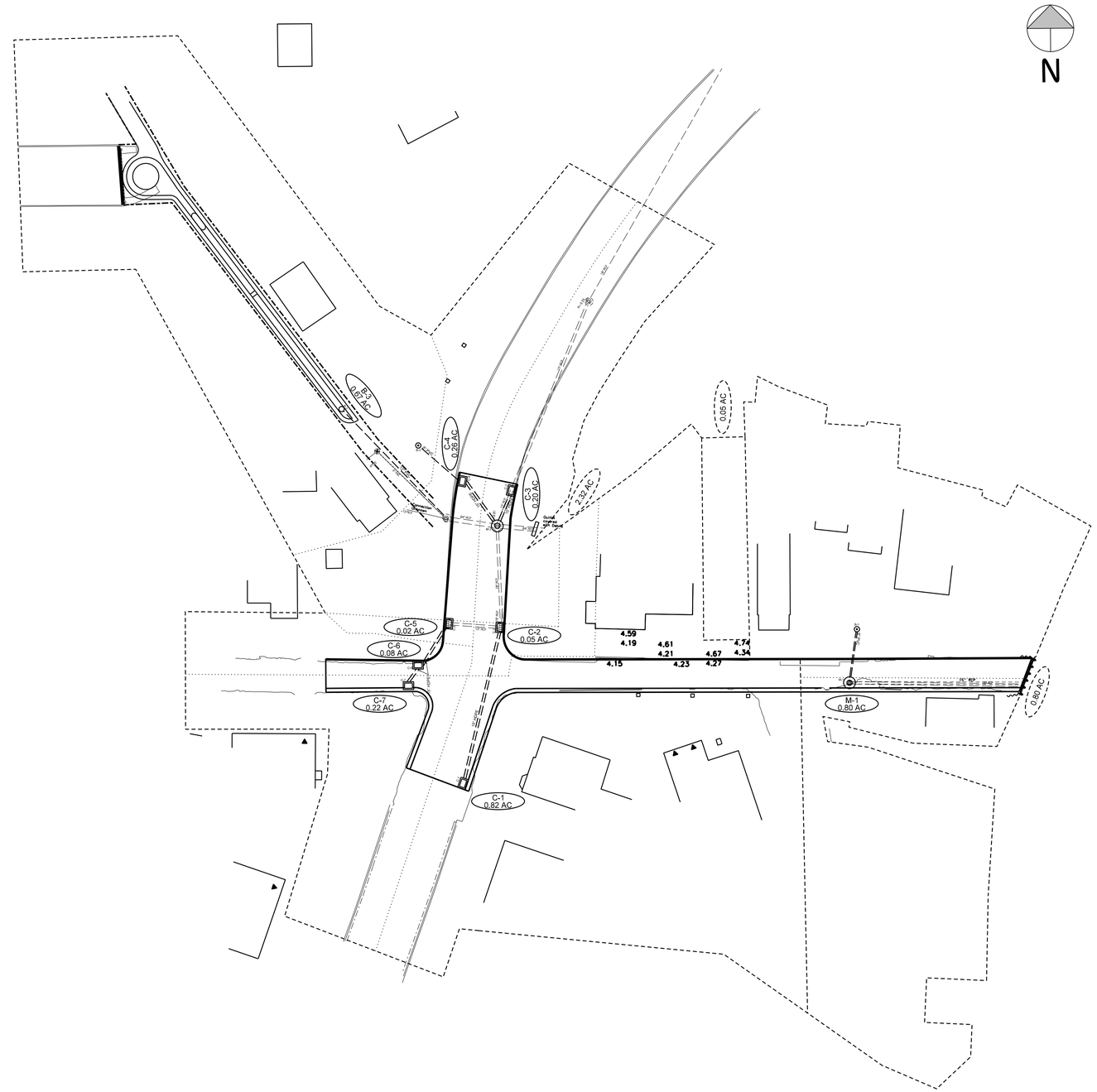
| Table of New P.V.C Drainage Structures | | | | | | | |
|---|---|---|---|---|---|---|---|
| Struct. Number | Station | Offset | Structure Type | Casting Type | Grate/ Rim El | Invert Elevations | Comments |
| B-1 | 3+33 (S ) | 25' L/s | 18" Drain | Surface Grate | 2.42 | 0.50 (S) 8" | Item 313B |
| B-2 | 2+77 (J ) | 42' L/s | 18" Drain | Surface Grate | 2.59 | 0.60 (S ) 8" | Item 313B |
| B-3 | 2+15 (J ) | 105' L/s | Overflow | Domed Grate | 3.30 | -0.85 (E ) 12" | Item ??? |

| Table of New Percast Concrete Storm Drainage Structures | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Invert Elevations (E) existing pipe | | | | |
| Street Name | Structure I.D. | Station | Offset | Structure Type | Structure Item No. | Casting Type | Grate/ Rim El | North | South | East | West | Bottom El |
| South Street | M-1 | 3+30 (S) | 4' R/s | Manhole 6' Dia | 13BX-3-6 | Frame and Special Cover | 4.10 | 0.40 | | -0.2 (E) | | -2.2 |
| Jackson Ave | M-2 | 2+50 (J ) | 9' R/s | Manhole 6' Dia. | 13BX-3-6 | Frame and Special Cover | 3.20 | -0.7 NE 0.0 NW | -0.2 (E) | -0.2 (E) | -0.2 (E) | -2.7 |
| Jackson Ave | C-1 | 1+22 (J ) | 17' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.10 | 0.42 | | | | -1.60 |
| Jackson Ave | C-2 | 1+98 (J ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | -0.3 (E) | 0.20 | | -0.3 (E) | -2.30 |
| Jackson Ave | C-3 | 2+71 (J ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 2.69 | | * Install on Existing 15" RCP pipe | | | -2.50 |
| Jackson Ave | C-4 | 2+70 (J ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 2.71 | 0.30 | 0.30 | | | -1.70 |
| Jackson Ave | C-5 | 1+98 (J ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.21 | | 1.00 | -0.4 (E) | | -2.40 |
| South Street | C-6 | 1+10 (S ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.12 | 1.30 | 1.30 | | | -0.70 |
| South Street | C-7 | 1+08 (S ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.12 | 1.44 | | | | -0.56 |

**(S) BASELINE ON SOUTH ST (J) BASELINE ON JACKSON AVE**

| Table of New Storm Drainage Pipe | | | | | | | |
|---|---|---|---|---|---|---|---|
| Street Name | Up Structure | Up Invert | Down Structure | Down Invert | Pipe Diameter | Approx Pipe Length (Ft) | Type Pipe |
| South Street | B-1 | 0.50 | M-1 | 0.40 | 8" | 27 | PVC |
| Jackson Ave | B-2 | 0.60 | C-4 | 0.30 | 8" | 32 | PVC |
| Jackson Ave | B-3 | -0.85 | MH (E ) | -1.20 | 12" | 75 | PVC |
| Jackson Ave | C-1 | 0.42 | C-2 | 0.20 | 15" | 78 | HDPE |
| Jackson Ave | C-3 | * | M-2 | -0.70 | 15" | 18 | HDPE |
| Jackson Ave | C-4 | 0.3 | M-2 | 0.00 | 15" | 27 | HDPE |
| Jackson Ave | C-6 | 1.30 | C-5 | 1.00 | 15" | 24 | HDPE |
| South Street | C-7 | 1.44 | C-6 | 1.30 | 15" | 12 | HDPE |

*** INSTALL CATCH BASIN ON EXISTING 15" RCP PIPE**
**(E) EXISTING MH**




LKB CONSULTING ENGINEERS
LOCKWOOD KESSLER & BARTLETT, INC.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge: B.A.M.
Compilation: ___
Design: D.B.
Drawn: E.J.Z./M.M.
Checked: B.A.M.
Reviewed: ___

PLAN AND PROFILE NOTES:

1. EXISTING CONDITIONS SHOWN AS OF JANUARY 2008.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM. HORIZONTAL CONTROL INDICATED IS NAD83 (1986).US SURVEY FEET. VERTICAL CONTROL INDICATED IS NAVD (1988) FEET.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

LEGEND

PROFILE
GRADE
LEGEND

Proposed Centerline
Existing Centerline

SOUTH STREET
COMPREHENSIVE DRAINAGE PLAN

ROAD RAISING AND STORMWATER DRAINAGE IMPROVEMENTS
SOUTH STREET @ JACKSON AVENUE
SEAFORD, NY

Scale: 1" = 30'
Date: APR. 2019
File No.:
Dwg No.: 3
Sheet No.: 3 of 19

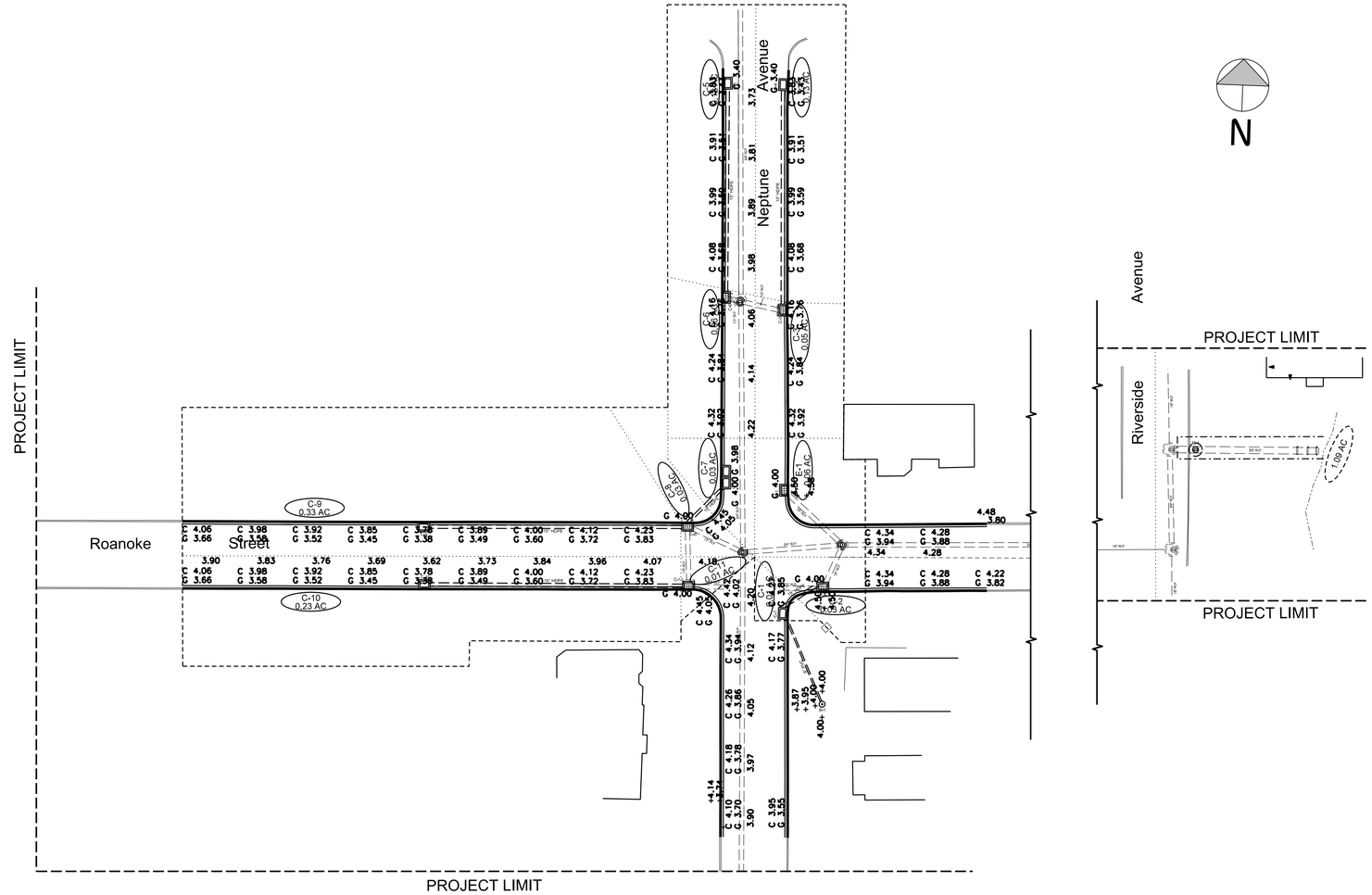
| Table of New P.V.C Drainage Structures | | | | | | | |
|---|---|---|---|---|---|---|---|
| Struct. Number | Station | Offset | Structure Type | Casting Type | Grate/ Rim El | Invert Elevations | Comments |
| B-1 | 1+83 (N ) | 32' R/s | 18" Drain | Surface Grate | 3.92' | 1.50 (NW) 8" | Item 313B |

| Table of New Percast Concrete Storm Drainage Structures | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Invert Elevations (E) existing pipe | | | | |
| Street Name | Structure I.D. | Station | Offset | Structure Type | Structure Item No. | Casting Type | Grate/ Rim El | North | South | East | West | Bottom El |
| Riverside Ave | M-1 | N/A | 8' N curb | Manhole 6' Dia | 13BX-3-6 | Frame and Special Cover | 4.10 | | | -0.1 (E) | -0.1 (E) | |
| Neptune Ave | C-1 | 2+25 (N ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.85 | 0.60 | 1.19 | | | -1.40 |
| Roanoke St | C-2 | 5+82 (R ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | -0.1 (E) | 0.30 | -0.3 (E) | | -2.10 |
| Neptune Ave | C-3 | 3+61 (N ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.73 | -0.30 | | | -0.3 (E) | -2.30 |
| Neptune Ave | C-4 | 4+65 (N ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.40 | | 0.20 | | | -1.80 |
| Neptune Ave | C-5 | 4+65 (N ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.40 | | 0.20 | | | -1.80 |
| Neptune Ave | C-6 | 3+67 (N ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.72 | -0.10 | | -0.1 (E) | | |
| Neptune Ave | C-7 | 2+87 (N ) | 15' L/s | Catch Basin Type D | 13AX-D | Type A Grate with Curb Box | 3.99 | | | | 0.40 | -1.60 |
| Roanoke St | C-8 | 5+20 (R ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | 0.30 | -0.5 (E) | -0.3 (E) | 0.30 | -1.70 |
| Roanoke St | C-9 | 4+00 (R ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.38 | | | 0.40 | | -1.60 |
| Roanoke St | C-10 | 4+00 (R ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.38 | | | 0.40 | | -1.60 |
| Roanoke St | C-11 | 5+20 (R ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | -0.5 (E) | | -0.5 (E) | 0.30 | -1.70 |

(R ) baseline on Roanoke St (N ) Baseline on Neptune Ave

| Street Name | Up Structure | Up Invert | Down Structure | Down Invert | Pipe Diameter | Approx Pipe Length (Ft) | Type Pipe |
|---|---|---|---|---|---|---|---|
| Neptune Ave | B-1 | 1.5 | C-1 | 1.19 | 8" | 42 | PVC |
| Neptune Ave | C-1 | 0.6 | C-2 | 0.3 | 15" | 25 | HDPE |
| Neptune Ave | C-4 | 0.2 | C-3 | -0.3 | 15" | 98 | HDPE |
| Neptune Ave | C-5 | 0.2 | C-6 | -0.1 | 15" | 98 | HDPE |
| Roanoke Ave | C-7 | 0.4 | C-8 | 0.3 | 15" | 25 | HDPE |
| Roanoke Ave | C-9 | 0.4 | C-8 | 0.3 | 15" | 116 | HDPE |
| Roanoke Ave | C-10 | 0.4 | C-11 | 0.3 | 15" | 116 | HDPE |

(E) EXISTING MH




LKB CONSULTING ENGINEERS

LOCKWOOD KESSLER & BARTLETT, INC.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge: B.A.M.
Compilation: ___
Design: D.B.
Drawn: E.J.Z./M.M.
Checked: B.A.M.
Reviewed: ___

PLAN AND PROFILE NOTES:

1. EXISTING CONDITIONS SHOWN AS OF JANUARY 2008.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM. HORIZONTAL CONTROL INDICATED IS NAD83 (1986).US SURVEY FEET. VERTICAL CONTROL INDICATED IS NAVD (1988) FEET.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

LEGEND

PROFILE
GRADE
LEGEND

Proposed Centerline
Existing Centerline

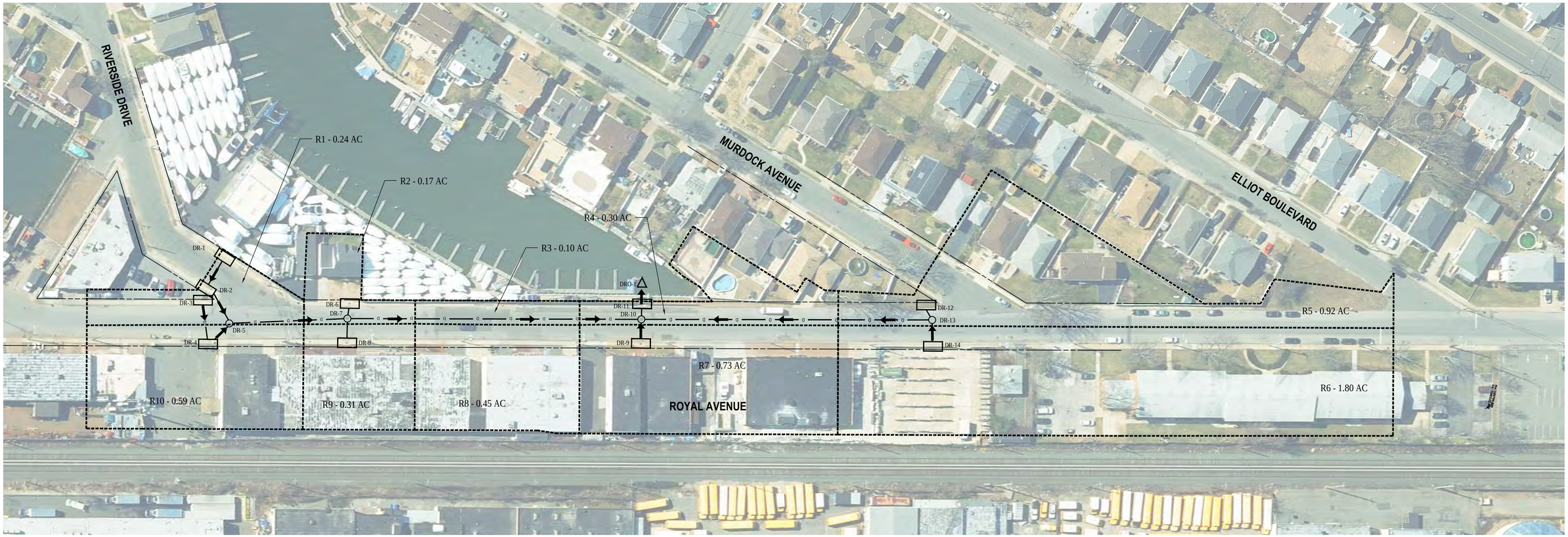
ROANOKE STREET
COMPREHENSIVE DRAINAGE PLAN

ROAD RAISING AND STORMWATER DRAINAGE IMPROVEMENTS
ROANOKE STREET @ NEPTUNE AVENUE
SEAFORD, NY

Scale: 1"=30'
Date: APR. 2019
File No.:
Dwg No.: 3
Sheet No.: 3 of 16

**LEGEND**

| DESCRIPTION | SYMBOL |
|---|---|
| CATCHMENT AREA | R1 - 2.94 AC |
| STRUCTURE NUMBER | DR-5 |
| FLOW DIRECTION | |
| MANHOLE | |
| DRAINAGE OUTFALL | DRO-1 |
| CATCH BASIN | |
| DRAINAGE LINE | |
| DRAINAGE AREA EXTENTS | |




**Royal Avenue**

SCALE: 1" = 50'

811 1-800-272-4480
Dig. Safely. New York
Call811
before you dig
www.digsafelynewyork.com

GRAPHIC SCALE

50 0 25 50

( IN FEET )
1 inch = 50 ft.

**TOTAL CONTRIBUTORY AREA**

DRO - 1: 5.95 AC

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

**COMPREHENSIVE DRAINAGE PLAN - ROYAL AVENUE**

STORMWATER DRAINAGE AND ROADWAY IMPROVEMENTS
MORELAND AVENUE AND ROYAL AVENUE
OCEANSIDE

Scale: 1" = 50'
Date: FEBRUARY 2019
File No.:
Dwg No.: C0.1
Sheet No.: 2 of 19

$USER$
$DATE$
$TIME$
$FILE$

## LEGEND

| DESCRIPTION | SYMBOL |
|---|---|
| CATCHMENT AREA | M1 - 2.94 AC |
| STRUCTURE NUMBER | DM-14 |
| FLOW DIRECTION | |
| MANHOLE | |
| DRAINAGE OUTFALL | DMO-1 |
| CATCH BASIN | |
| DRAINAGE LINE | |
| DRAINAGE AREA EXTENTS | |

GRAPHIC SCALE

60 0 30 60

( IN FEET )
1 inch = 60 ft.

811 1-800-272-4480
Dig. Safely. New York
Call811
before you dig
www.digsafelynewyork.com

**Moreland Avenue**
SCALE: 1" = 60'

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

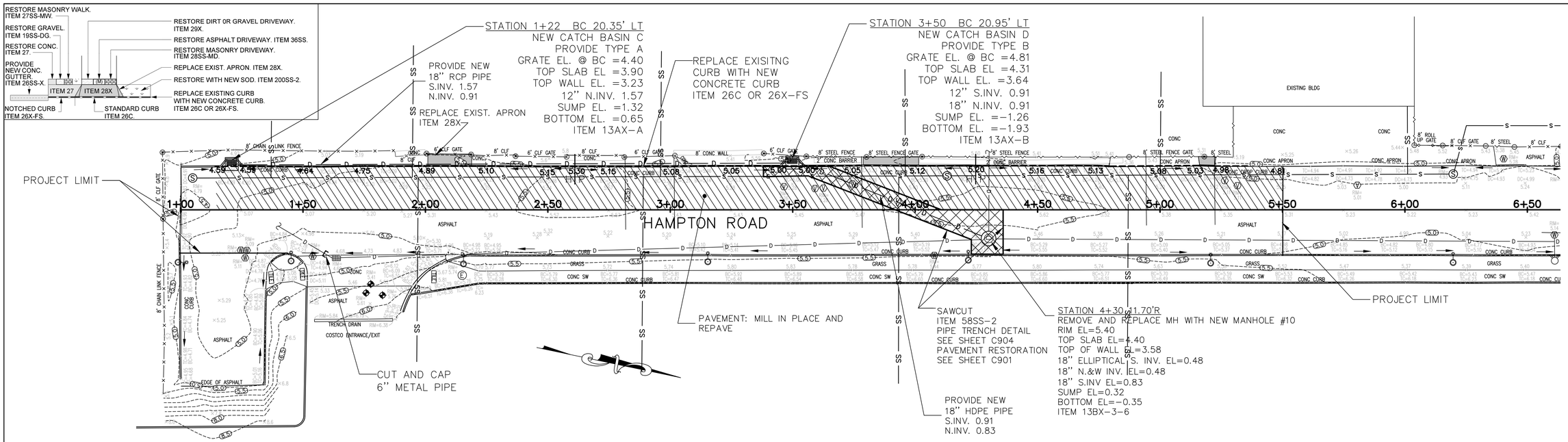
TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

**COMPREHENSIVE DRAINAGE PLAN - MORELAND AVENUE**

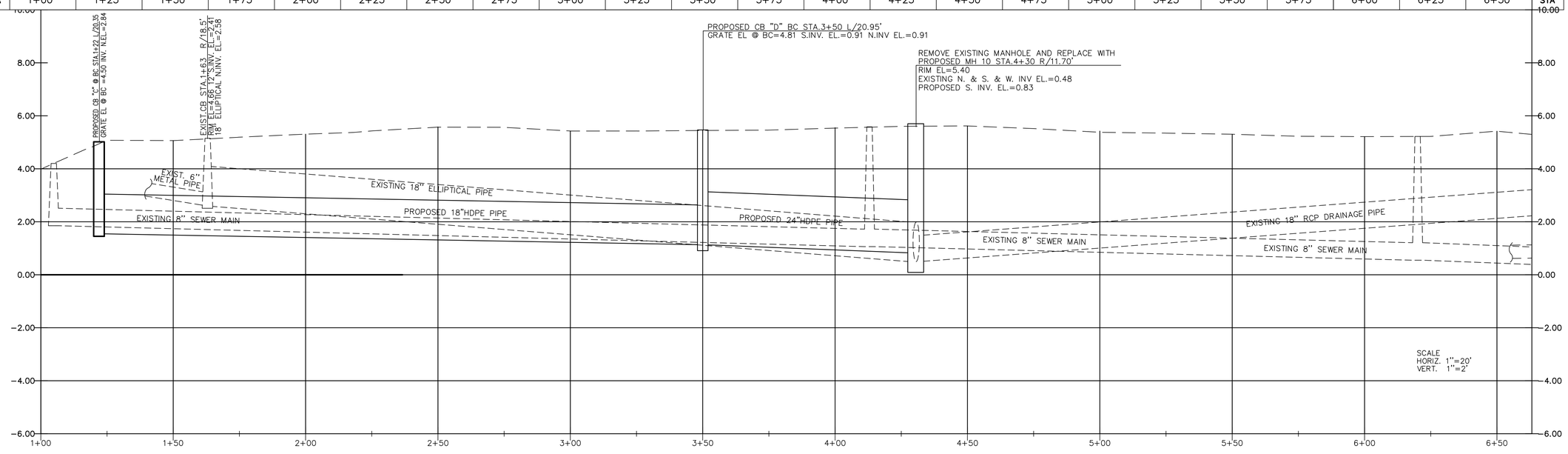
STORMWATER DRAINAGE AND ROADWAY IMPROVEMENTS
MORELAND AVENUE AND ROYAL AVENUE
OCEANSIDE

Scale: 1" = 60'
Date: FEBRUARY 2019
File No.:
Dwg No.: C0.2
Sheet No.: 3 of 19

X:\HEMP\Town of Hempstead\ - 10496\HEMP1805\Drainage Improvements for Moreland and Royal Avenues\02-BIM-CADD\Cos-docs\civil\C0.1 Drainage Maps.dwg Lars Modlin Feb 15, 2019 - 4:47pm Plotted on: Feb 18, 2019 - 8:31am By skumar




| EXISTING GRADES | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | – | 5.01 | 5.05 | 5.05 | 5.19 | 5.29 | 5.58 | 5.69 | 5.42 | 5.42 | 5.36 | 5.36 | 5.55 | 5.61 | 5.37 | 5.45 | 5.13 | 4.95 | 4.99 | 4.91 | 4.95 | 4.95 | 5.22 | TG |
| G | 4.97 | 4.89 | 4.93 | 4.98 | 5.14 | 5.29 | 5.48 | 5.54 | 5.27 | 5.15 | 5.06 | 5.21 | 5.30 | 5.41 | 5.35 | 5.26 | 5.08 | 4.87 | 4.81 | 4.73 | 4.73 | 4.76 | 4.99 | G |
| MID-CL | 4.83 | 4.93 | 5.01 | 5.12 | 5.26 | 5.37 | 5.55 | 5.56 | 5.37 | 5.31 | 5.31 | 5.36 | 5.42 | 5.51 | 5.49 | 5.43 | 5.23 | 5.16 | 5.10 | 5.06 | 5.04 | 5.13 | 5.26 | MID-CL |
| CL | 4.96 | 5.07 | 5.06 | 5.19 | 5.31 | 5.43 | 5.57 | 5.57 | 5.43 | 5.43 | 5.45 | 5.46 | 5.54 | 5.60 | 5.62 | 5.52 | 5.38 | 5.35 | 5.30 | 5.23 | 5.22 | 5.22 | 5.42 | CL |
| MID-CL | 4.92 | 5.11 | 4.99 | 5.01 | 5.14 | 5.24 | 5.34 | 5.27 | 5.25 | 5.28 | 5.29 | 5.32 | 5.43 | 5.46 | 5.48 | 5.40 | 5.28 | 5.24 | 5.20 | 5.06 | 5.03 | 5.07 | 5.27 | MID-CL |
| G | 4.87 | 5.14 | 4.77 | 4.73 | 4.88 | 4.95 | 4.99 | 5.03 | 5.08 | 5.14 | 5.16 | 5.13 | 5.19 | 5.27 | 5.28 | 5.27 | 5.09 | 5.05 | 4.98 | 4.85 | 4.81 | 4.77 | 4.93 | G |
| TG | – | – | – | – | – | 5.26 | 5.31 | 5.35 | 5.39 | 5.41 | 5.45 | 5.47 | 5.51 | 5.53 | 5.55 | 5.52 | 5.42 | 5.37 | 5.29 | 5.16 | 5.13 | 5.10 | 5.33 | TG |
| STA | 1+00 | 1+25 | 1+50 | 1+75 | 2+00 | 2+25 | 2+50 | 2+75 | 3+00 | 3+25 | 3+50 | 3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00 | 5+25 | 5+50 | 5+75 | 6+00 | 6+25 | 6+50 | STA |




| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

| | |
|---|---|
| In Charge: – | J.A.G. |
| Compilation:– | |
| Design: – | XX |
| Drawn: – | R.J.W |
| Checked: – | J.A.G. |
| Reviewed: – | |

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

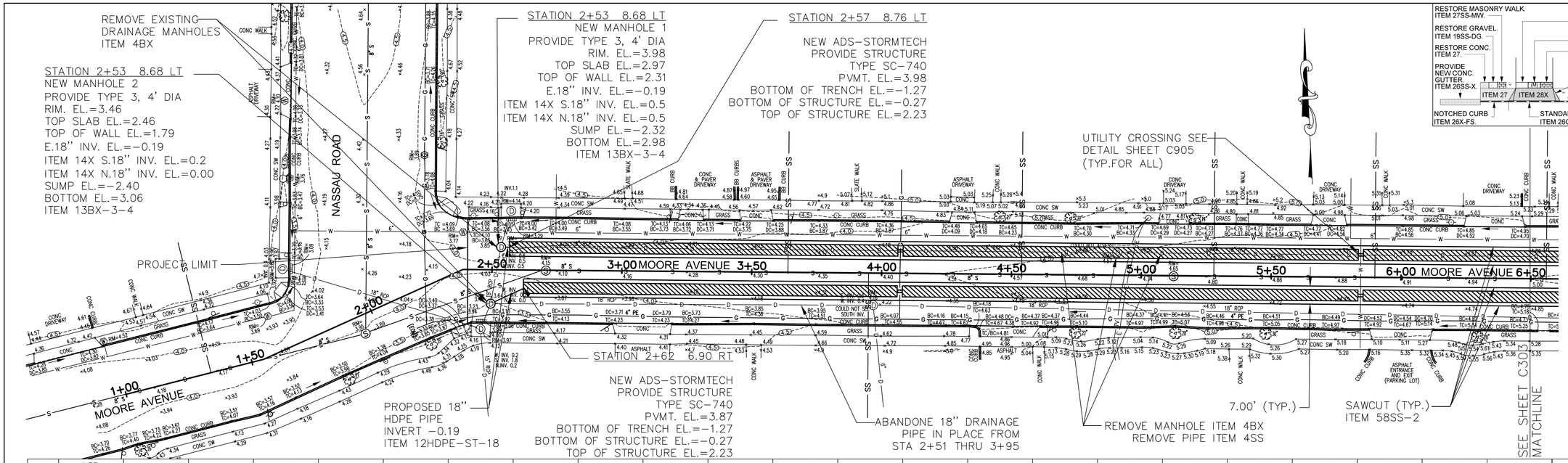
PROFILE GRADE LEGEND

PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - -

PLAN AND PROFILE
HAMPTON ROAD
STATIONS 1+00 THRU 6+50

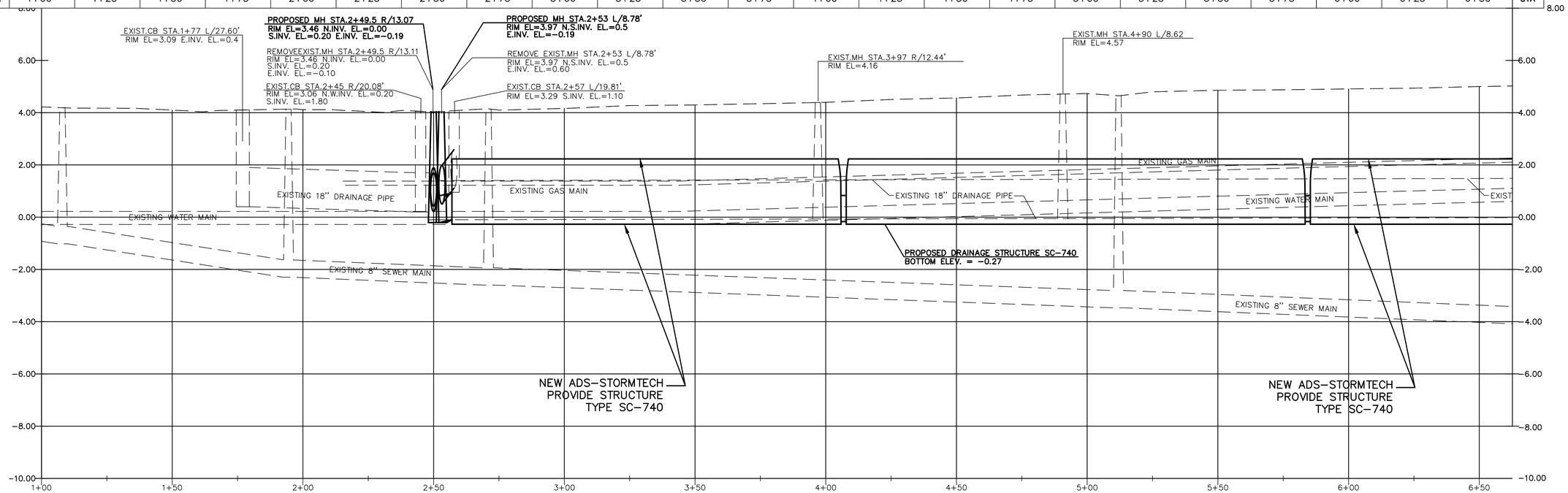
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C301
Sheet No.: 16 of 26




EXISTING GRADES

| STA | 1+00 | 1+25 | 1+50 | 1+75 | 2+00 | 2+25 | 2+50 | 2+75 | 3+00 | 3+25 | 3+50 | 3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00 | 5+25 | 5+50 | 5+75 | 6+00 | 6+25 | 6+50 | STA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | 4.33 | 4.22 | 4.13 | 3.58 | 4.24 | 4.11 | 4.07 | 4.00 | 4.08 | 3.71 | 3.80 | 4.33 | 4.36 | 4.48 | 4.65 | 4.69 | 4.71 | 4.73 | 4.77 | 4.67 | 4.85 | 4.76 | 4.96 | TG |
| G | 3.80 | 3.69 | 3.57 | 3.62 | 4.24 | 4.10 | 3.55 | 3.49 | 3.56 | 3.72 | 3.80 | 3.87 | 3.87 | 4.08 | 4.23 | 4.30 | 4.33 | 4.27 | 4.34 | 4.52 | 4.56 | 4.52 | 4.70 | G |
| MID-CL | 4.06 | 4.02 | 3.97 | 4.01 | 4.27 | 4.15 | 3.85 | 3.98 | 3.97 | 4.09 | 4.12 | 4.12 | 4.20 | 4.33 | 4.39 | 4.46 | 4.50 | 4.64 | 4.68 | 4.74 | 4.77 | 4.79 | 4.87 | MID-CL |
| CL | 4.22 | 4.17 | 4.10 | 4.10 | 4.12 | 4.04 | 4.03 | 4.10 | 4.16 | 4.27 | 4.29 | 4.34 | 4.39 | 4.50 | 4.56 | 4.67 | 4.73 | 4.80 | 4.86 | 4.87 | 4.91 | 4.94 | 5.00 | CL |
| MID-CL | 4.00 | 3.94 | 3.90 | 3.86 | 3.76 | 3.68 | 3.66 | 3.90 | 3.99 | 4.10 | 4.18 | 4.24 | 4.25 | 4.35 | 4.48 | 4.51 | 4.57 | 4.59 | 4.72 | 4.69 | 4.75 | 4.77 | 4.87 | MID-CL |
| G | 3.77 | 3.56 | 3.56 | 3.51 | 3.37 | 3.35 | 3.18 | 3.55 | 3.72 | 3.74 | 3.85 | 3.95 | 4.06 | 4.67 | 4.36 | 4.44 | 4.37 | 4.47 | 4.51 | 4.49 | 4.58 | 4.81 | 4.73 | G |
| TG | 4.40 | 4.16 | 4.16 | 4.01 | 4.00 | 3.83 | 3.92 | 4.13 | 3.94 | 4.27 | 4.35 | 4.51 | 4.55 | 4.67 | 4.47 | 5.09 | 4.98 | 4.96 | 5.05 | 4.97 | 4.70 | 5.33 | 5.24 | TG |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

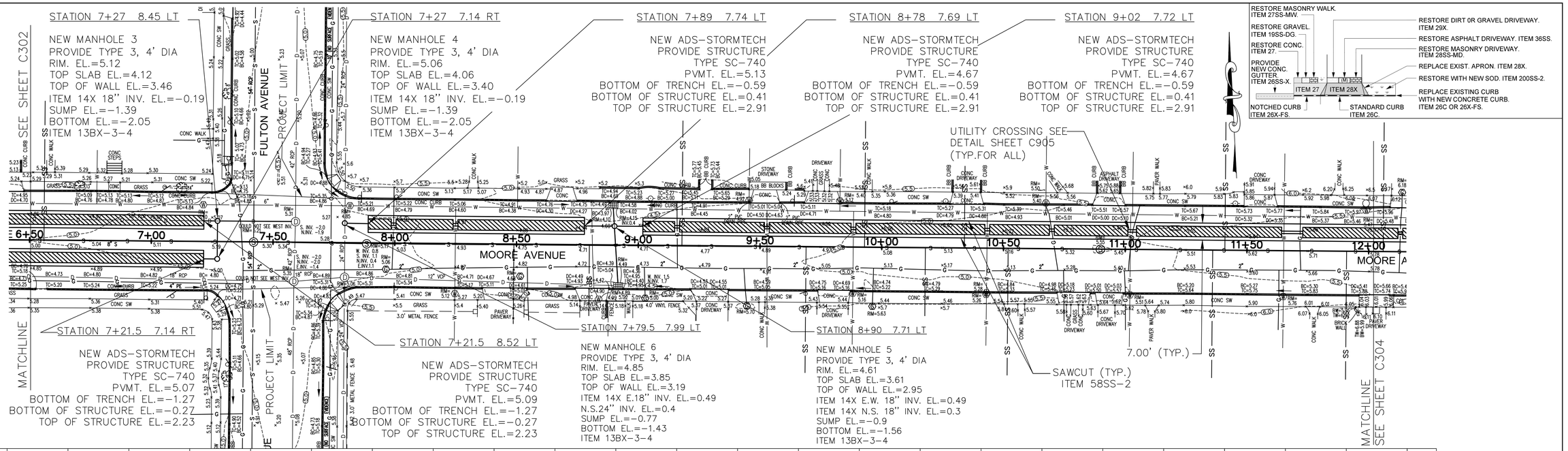
TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

PROFILE GRADE LEGEND
PROPOSED CENTERLINE ————
EXISTING CENTERLINE - - - - - - - -

PLAN AND PROFILE
MOORE AVE
STATIONS 1+00 THRU 6+50

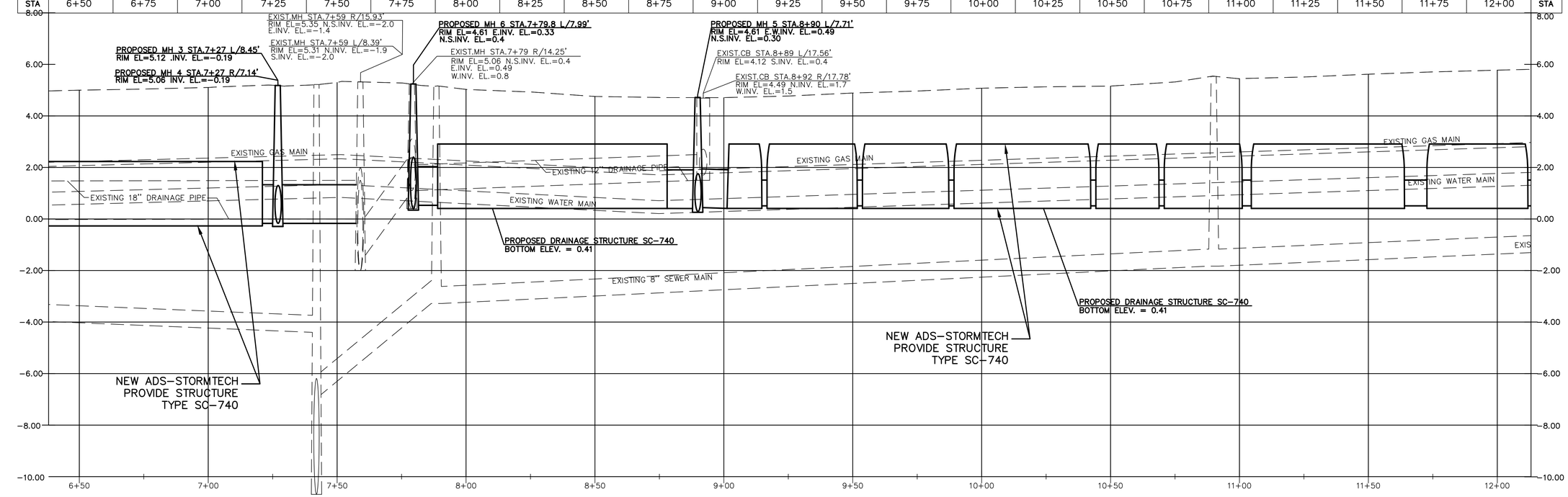
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C302
Sheet No.: 17 of 26




EXISTING GRADES

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | 4.96 | 5.09 | 5.12 | 5.13 | 5.43 | 5.00 | 5.22 | 5.05 | 4.91 | 4.75 | 4.66 | 4.91 | 4.79 | 4.86 | 5.18 | 5.26 | 5.39 | 5.46 | 5.57 | 5.67 | 5.58 | 5.84 | 5.97 | TG |
| G | 4.70 | 4.76 | 4.87 | 4.84 | 5.43 | 5.02 | 4.79 | 4.60 | 4.38 | 4.26 | 4.13 | 4.45 | 4.55 | 4.73 | 4.80 | 4.79 | 4.92 | 5.01 | 5.10 | 5.21 | 5.32 | 5.36 | 5.47 | G |
| MID-CL | 4.87 | 4.92 | 5.08 | 5.07 | 5.37 | 5.27 | 5.01 | 4.87 | 4.71 | 4.59 | 4.55 | 4.72 | 4.80 | 4.89 | 5.00 | 5.03 | 5.14 | 5.25 | 5.41 | 5.48 | 5.53 | 5.64 | 5.69 | MID-CL |
| CL | 5.00 | 5.04 | 5.10 | 5.19 | 5.30 | 5.28 | 5.03 | 4.93 | 4.76 | 4.71 | 4.71 | 4.77 | 4.89 | 4.97 | 5.08 | 5.13 | 5.16 | 5.32 | 5.45 | 5.51 | 5.62 | 5.71 | 5.78 | CL |
| MID-CL | 4.87 | 4.91 | 4.97 | 5.03 | 5.40 | 5.23 | 5.06 | 4.95 | 4.80 | 4.69 | 4.67 | 4.75 | 4.89 | 4.99 | 5.07 | 5.07 | 5.09 | 5.24 | 5.37 | 5.45 | 5.55 | 5.60 | 5.71 | MID-CL |
| G | 4.73 | 4.80 | 4.82 | 4.81 | 5.50 | 5.05 | 4.81 | 4.71 | 4.62 | 4.49 | 4.40 | 4.54 | 4.59 | 4.75 | 4.74 | 4.79 | 4.84 | 4.99 | 5.03 | 5.20 | 5.27 | 5.30 | 5.48 | G |
| TG | 5.24 | 5.24 | 5.24 | 4.79 | 5.51 | 5.03 | 5.34 | 5.17 | 4.80 | 4.82 | 4.95 | 4.77 | 5.05 | 4.75 | 5.22 | 5.29 | 5.33 | 5.23 | 5.57 | 5.64 | 5.74 | 5.83 | 5.69 | TG |
| STA | 6+50 | 6+75 | 7+00 | 7+25 | 7+50 | 7+75 | 8+00 | 8+25 | 8+50 | 8+75 | 9+00 | 9+25 | 9+50 | 9+75 | 10+00 | 10+25 | 10+50 | 10+75 | 11+00 | 11+25 | 11+50 | 11+75 | 12+00 | STA |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

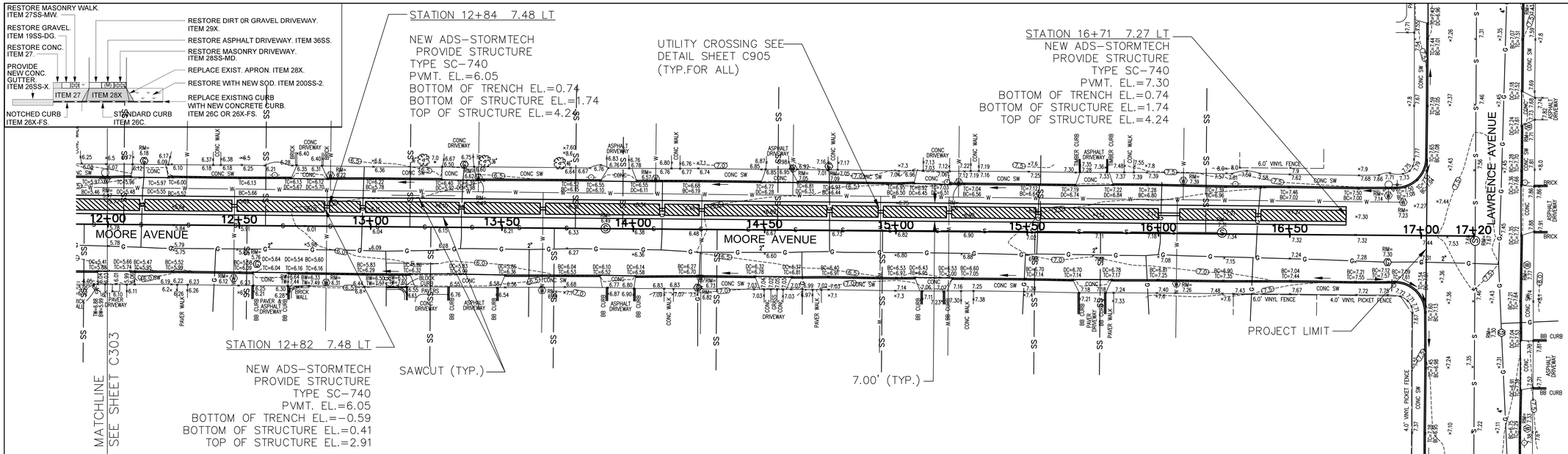
TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

PROFILE GRADE LEGEND
PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - - - - -

PLAN AND PROFILE
MOORE AVE
STATIONS 6+50 THRU 12+00

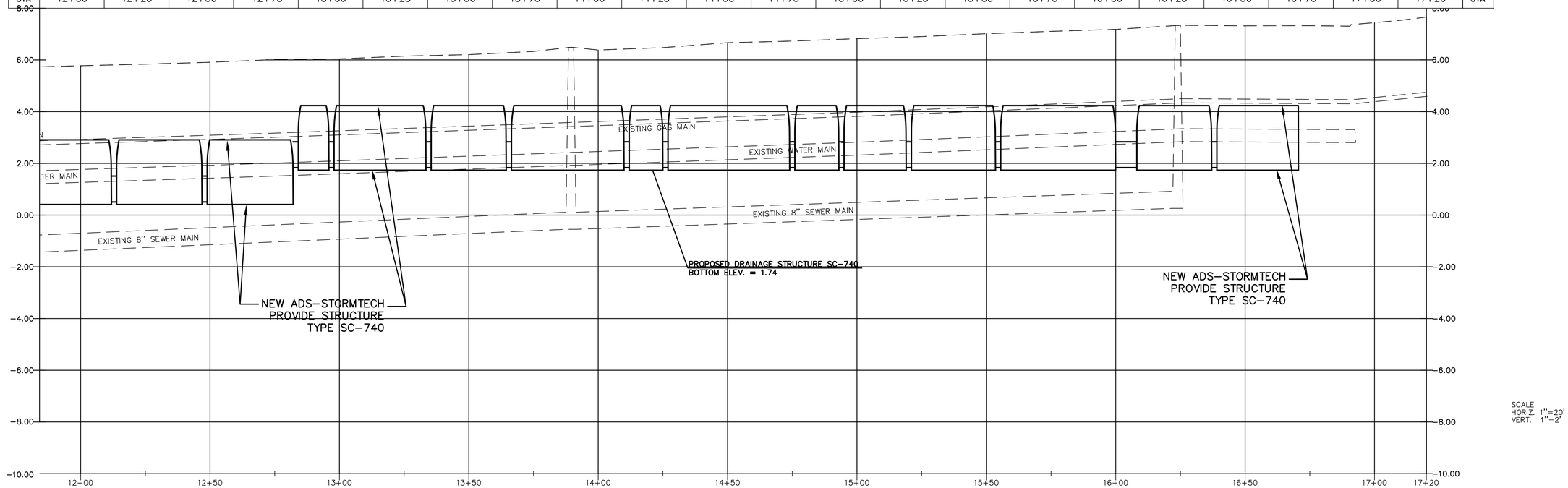
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C303
Sheet No.: 18 of 26




EXISTING GRADES

| STA | 12+00 | 12+25 | 12+50 | 12+75 | 13+00 | 13+25 | 13+50 | 13+75 | 14+00 | 14+25 | 14+50 | 14+75 | 15+00 | 15+25 | 15+50 | 15+75 | 16+00 | 16+25 | 16+50 | 16+75 | 17+00 | 17+20 | STA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | 5.97 | 6.00 | 6.13 | 5.87 | 6.22 | 6.39 | 6.46 | 6.52 | 6.43 | 6.68 | 6.58 | 6.93 | 6.95 | 7.04 | 7.12 | 7.00 | 7.29 | 7.38 | 7.46 | 7.50 | – | – | TG |
| G | 5.47 | 5.52 | 5.66 | 5.68 | 5.78 | 5.91 | 6.03 | 6.15 | 6.10 | 6.19 | 6.29 | 6.44 | 6.50 | 6.55 | 6.64 | 6.79 | 6.82 | 6.96 | 7.02 | 7.00 | – | – | G |
| MID-CL | 5.69 | 5.76 | 5.87 | 5.92 | 6.02 | 6.06 | 6.17 | 6.28 | 6.32 | 6.42 | 6.58 | 6.66 | 6.76 | 6.79 | 6.90 | 7.03 | 7.08 | 7.16 | 7.23 | 7.22 | 7.34 | 7.62 | MID-CL |
| CL | 5.78 | 5.84 | 5.91 | 6.01 | 6.04 | 6.15 | 6.21 | 6.33 | 6.38 | 6.48 | 6.67 | 6.73 | 6.82 | 6.90 | 7.02 | 7.10 | 7.18 | 7.34 | 7.32 | 7.32 | 7.44 | 7.66 | CL |
| MID-CL | 5.71 | 5.74 | 5.83 | 5.87 | 6.05 | 6.15 | 6.15 | 6.21 | 6.36 | 6.47 | 6.57 | 6.66 | 6.77 | 6.83 | 6.96 | 6.98 | 7.10 | 7.13 | 7.22 | 7.28 | 7.32 | 7.59 | MID-CL |
| G | 5.48 | 5.50 | 5.58 | 5.60 | 5.84 | 5.84 | 5.86 | 6.04 | 6.14 | 6.27 | 6.33 | 6.40 | 6.52 | 6.59 | 6.70 | 6.74 | 6.81 | 6.90 | 7.04 | 7.21 | – | – | G |
| TG | 5.69 | 6.00 | 6.09 | 6.16 | 6.30 | 6.01 | 6.28 | 6.53 | 6.43 | 6.70 | 6.51 | 6.91 | 6.97 | 7.04 | 7.14 | 6.91 | 7.25 | 7.35 | 7.44 | 7.55 | – | – | TG |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

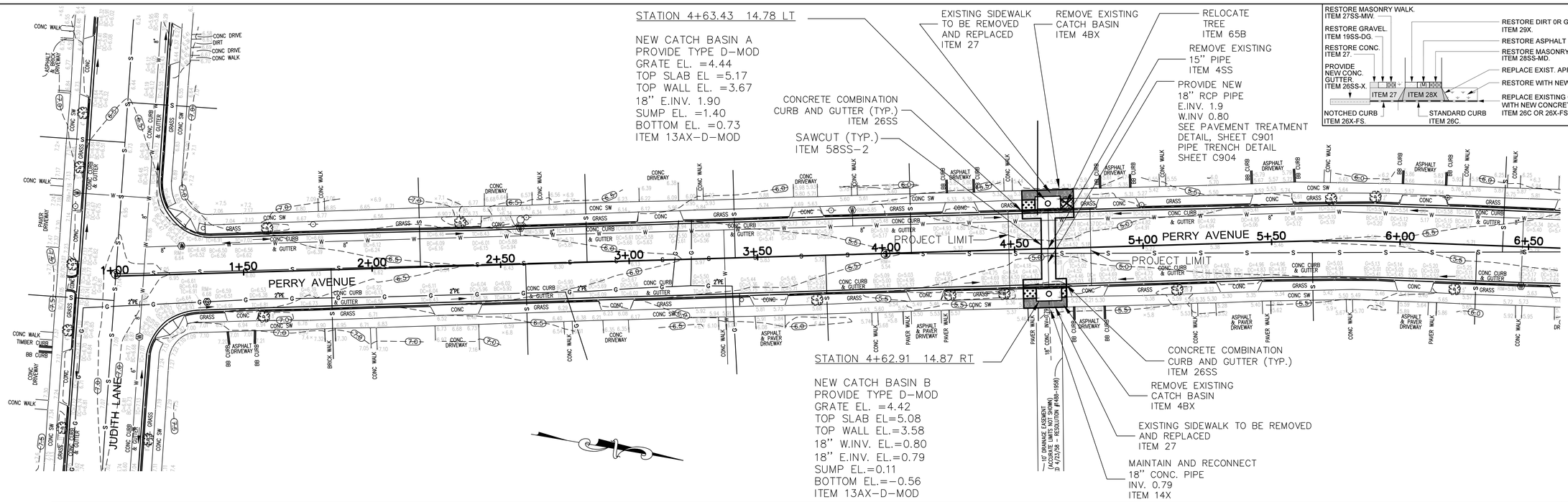
PROFILE GRADE LEGEND

PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - - - - - -

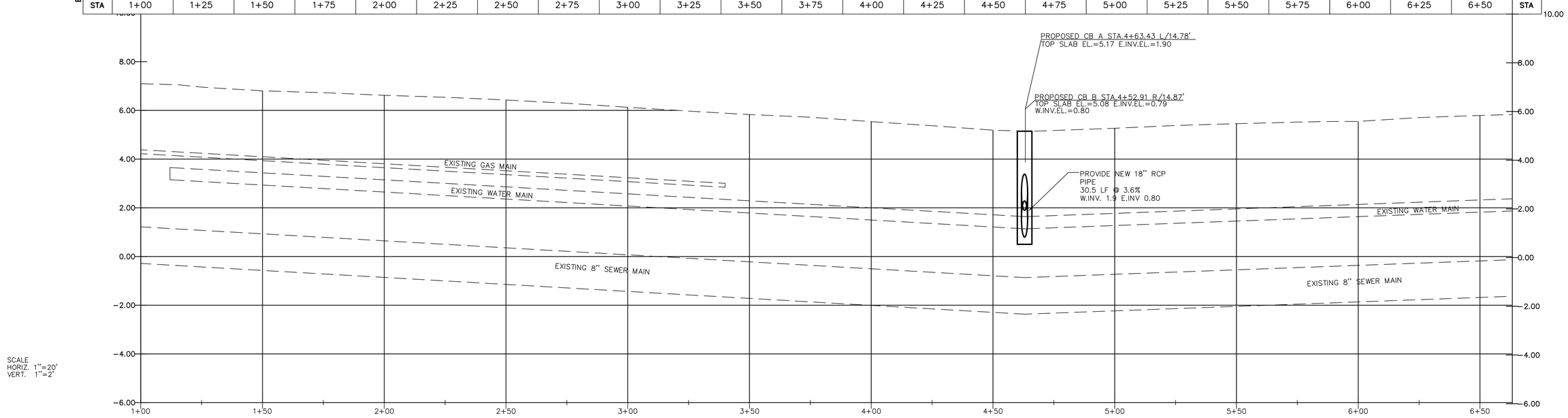
PLAN AND PROFILE
MOORE AVE
STATIONS 12+00 THRU 17+20

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C304
Sheet No.: 19 of 26




| | STA | 1+00 | 1+25 | 1+50 | 1+75 | 2+00 | 2+25 | 2+50 | 2+75 | 3+00 | 3+25 | 3+50 | 3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00 | 5+25 | 5+50 | 5+75 | 6+00 | 6+25 | 6+50 | STA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXISTING GRADES | TG | – | – | 7.01 | 6.70 | 6.51 | 6.46 | 5.99 | 6.14 | 6.00 | 5.91 | 5.79 | 5.34 | 5.49 | 4.89 | 5.11 | 5.11 | 5.23 | 5.32 | 5.09 | 5.52 | 5.29 | 5.61 | 5.70 | TG |
| | G | – | – | 6.55 | 6.29 | 6.13 | 6.09 | 5.94 | 5.71 | 5.61 | 5.48 | 5.34 | 5.25 | 5.11 | 4.88 | 4.55 | 4.56 | 4.82 | 4.92 | 5.00 | 5.10 | 5.13 | 5.17 | 5.34 | G |
| | MID-CL | 7.04 | 6.75 | 6.70 | 6.55 | 6.42 | 6.33 | 6.21 | 6.03 | 5.89 | 5.83 | 5.61 | 5.51 | 5.34 | 5.13 | 4.90 | 4.89 | 5.07 | 5.14 | 5.25 | 5.34 | 5.36 | 5.47 | 5.58 | MID-CL |
| | CL | 7.09 | 6.96 | 6.80 | 6.73 | 6.62 | 6.54 | 6.43 | 6.29 | 6.13 | 5.97 | 5.83 | 5.72 | 5.54 | 5.37 | 5.19 | 5.17 | 5.27 | 5.38 | 5.45 | 5.52 | 5.55 | 5.70 | 5.79 | CL |
| | MID-CL | 7.09 | 6.80 | 6.67 | 6.55 | 6.40 | 6.31 | 6.21 | 6.08 | 5.92 | 5.77 | 5.62 | 5.51 | 5.30 | 5.13 | 4.85 | 4.86 | 5.03 | 5.13 | 5.19 | 5.26 | 5.33 | 5.46 | 5.51 | MID-CL |
| | G | – | – | 6.44 | 6.35 | 6.13 | 6.03 | 5.92 | 5.90 | 5.57 | 5.45 | 5.34 | 5.20 | 5.01 | 4.85 | 4.51 | 4.55 | 4.73 | 4.84 | 4.87 | 4.95 | 5.03 | 5.11 | 5.17 | G |
| | TG | – | – | 6.56 | 6.73 | 6.56 | 6.09 | 6.33 | 6.17 | 5.66 | 5.85 | 5.40 | 5.64 | 5.41 | 5.24 | 5.08 | 4.72 | 5.15 | 5.27 | 5.26 | 5.31 | 5.18 | 5.53 | 5.64 | TG |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

PROFILE GRADE LEGEND
PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - - - - -

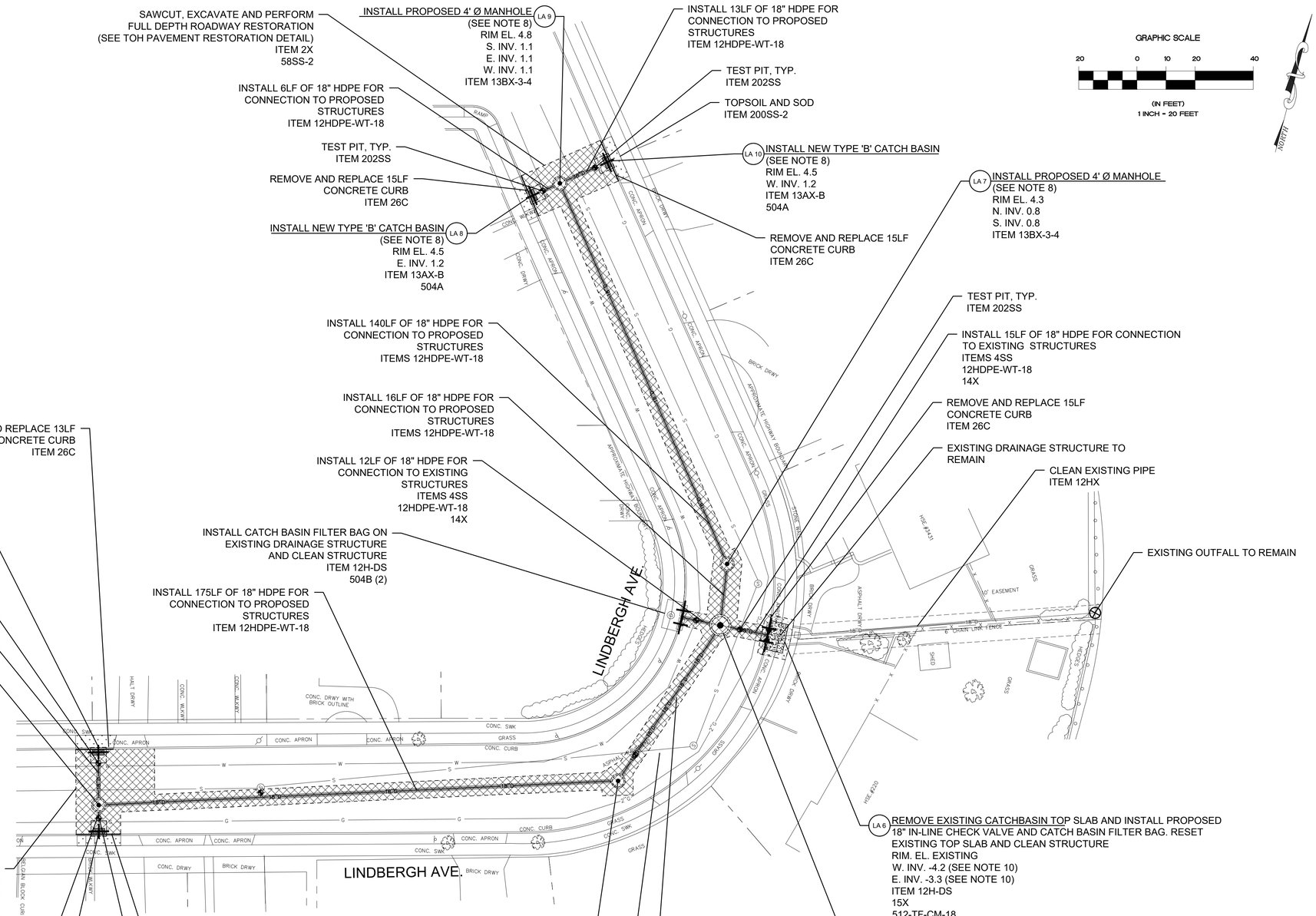
PLAN AND PROFILE
PERRY AVE
STATIONS 1+00 THRU 6+50

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C305
Sheet No.: 20 of 26

NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY POTENTIAL CONFLICTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR TEST PIT INFORMATION.
2. THE CONTRACTOR SHALL INSTALL ALL NEW CHECK VALVES IN THE STRUCTURE PRIOR TO THE OUTFALL, INSIDE OF THE DISCHARGE PIPE THAT FLOWS TOWARDS THE OUTFALL, UNLESS OTHERWISE NOTED ON THE PLANS.
3. AT THE COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL CLEAN ALL PIPES AND STRUCTURES, PAID FOR UNDER ITEMS 12H-DS AND 12HX.
4. THE CONTRACTOR SHALL REFER TO FULL DEPTH ASPHALT RESTORATION DETAIL FOR ITEMS AND THICKNESSES.
5. THE CONTRACTOR SHALL CLEAN THE EXISTING DRAINAGE PIPE BETWEEN THE STRUCTURE OF PROPOSED CONSTRUCTION WORK AND ADJACENT PRECEDING CONNECTED STRUCTURE.
6. ALL RESTORATION SHALL BE IN KIND TO THE APPROXIMATE LIMITS SHOWN ON THE CONSTRUCTION PLANS OR AS PER THE PAY LIMITS BASED ON THE CONTRACT DETAILS UNLESS OTHERWISE SPECIFIED. NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY.
7. THE CONTRACTOR SHALL REMOVE THE EXISTING PIPE TO THE NEAREST JOINT. MAX PAYMENT IS NOT TO EXCEED 10LF WITH THE INTENTION THAT SMALL SECTIONS OF PIPE (LESS THAN 3 FEET) WILL NOT BE PERMITTED TO REMAIN.
8. THE CONTRACTOR SHALL FIELD VERIFY AL STRUCTURE INVERTS PRIOR TO ORDERING NEW DRAINAGE STRUCTURES.
9. IN THE CASE WHERE AN EXISTING CHECKVALVE IS PRESENT, THE CONTRACTOR SHALL REMOVE SAID CHECKVALVE AND INSTALL A NEW CHECKVALVE AS PROPOSED IN THE CONTRACT DOCUMENTS. PAYMENT FOR THE REMOVAL SHALL BE INCLUDED IN ITEM 512-TF-CM-XX.
10. THE INVERT AT THIS LOCATION IS THE MEASURED VALUE FROM THE RIM TO THE INVERT OF THE PIPE; THIS VALUE IS NOT THE ELEVATION OF THE INVERT.




SAWCUT, EXCAVATE AND PERFORM FULL DEPTH ROADWAY RESTORATION (SEE TOH PAVEMENT RESTORATION DETAIL) ITEM 2X 58SS-2

INSTALL PROPOSED 4' Ø MANHOLE (LA 9) (SEE NOTE 8) RIM EL. 4.8 S. INV. 1.1 E. INV. 1.1 W. INV. 1.1 ITEM 13BX-3-4

INSTALL 13LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

INSTALL 6LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

TEST PIT, TYP. ITEM 202SS

TOPSOIL AND SOD ITEM 200SS-2

TEST PIT, TYP. ITEM 202SS

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

INSTALL NEW TYPE 'B' CATCH BASIN (LA 10) (SEE NOTE 8) RIM EL. 4.5 W. INV. 1.2 ITEM 13AX-B 504A

INSTALL NEW TYPE 'B' CATCH BASIN (LA 8) (SEE NOTE 8) RIM EL. 4.5 E. INV. 1.2 ITEM 13AX-B 504A

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

INSTALL PROPOSED 4' Ø MANHOLE (LA 7) (SEE NOTE 8) RIM EL. 4.3 N. INV. 0.8 S. INV. 0.8 ITEM 13BX-3-4

TEST PIT, TYP. ITEM 202SS

INSTALL 140LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEMS 12HDPE-WT-18

INSTALL 15LF OF 18" HDPE FOR CONNECTION TO EXISTING STRUCTURES ITEMS 4SS 12HDPE-WT-18 14X

INSTALL 16LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEMS 12HDPE-WT-18

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

EXISTING DRAINAGE STRUCTURE TO REMAIN

INSTALL 12LF OF 18" HDPE FOR CONNECTION TO EXISTING STRUCTURES ITEMS 4SS 12HDPE-WT-18 14X

CLEAN EXISTING PIPE ITEM 12HX

INSTALL CATCH BASIN FILTER BAG ON EXISTING DRAINAGE STRUCTURE AND CLEAN STRUCTURE ITEM 12H-DS 504B (2)

EXISTING OUTFALL TO REMAIN

REMOVE AND REPLACE 13LF CONCRETE CURB ITEM 26C

INSTALL NEW TYPE 'B' CATCH BASIN (LA 1) (SEE NOTE 8) RIM EL. 4.8 S. INV. 1.5 ITEM 13AX-B 504A

TEST PIT, TYP. ITEM 202SS

INSTALL 14LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

INSTALL 175LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

INSTALL PROPOSED 4' Ø MANHOLE (LA 3) (SEE NOTE 8) RIM EL. 5.0 N. INV. 1.5 S. INV. 1.5 E. INV. 1.5 ITEM 13BX-3-4

REMOVE EXISTING CATCHBASIN TOP SLAB AND INSTALL PROPOSED 18" IN-LINE CHECK VALVE AND CATCH BASIN FILTER BAG. RESET EXISTING TOP SLAB AND CLEAN STRUCTURE (LA 6) RIM. EL. EXISTING W. INV. -4.2 (SEE NOTE 10) E. INV. -3.3 (SEE NOTE 10) ITEM 12H-DS 15X 512-TF-CM-18 504B (2)

SAWCUT, EXCAVATE AND PERFORM FULL DEPTH ROADWAY RESTORATION (SEE TOH PAVEMENT RESTORATION DETAIL) ITEM 2X 58SS-2

INSTALL 16LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

TEST PIT, TYP. ITEM 202SS

INSTALL PROPOSED 4' Ø MANHOLE (LA 4) (SEE NOTE 8) RIM EL. 4.1 N. INV. 0.8 W. INV. 0.8 ITEM 13BX-3-4

INSTALL PROPOSED 6' Ø MANHOLE (LA 5) (SEE NOTE 8) RIM EL. 4.1 N. INV. 0.7 S. INV. 0.7 E. INV. 0.7 W. INV. 0.7 ITEM 13BX-3-6

INSTALL NEW TYPE 'B' CATCH BASIN (LA 2) (SEE NOTE 8) RIM EL. 4.8 N. INV. 1.5 ITEM 13AX-B 504A

TEST PIT, TYP. ITEM 202SS

INSTALL 60LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEMS 12HDPE-WT-18

| No. | DATE | REVISION | BY: |
|---|---|---|---|
| - | - | - | - |

SEAL:

THIS DOCUMENT IS THE SOLE PROPERTY OF N&P ENGINEERS & SURVEYORS, PLLC, AND HAS BEEN PREPARED AND DISSEMINATED FOR THE SOLE USE OF OUR CLIENT. THIS DOCUMENT AND ANY DATA, CALCULATIONS, ESTIMATES OR DEPICTIONS CONTAINED HEREIN, MAY NOT BE UTILIZED BY ANY THIRD-PARTY WITHOUT PRIOR WRITTEN CONSENT OF N&P ENGINEERS & SURVEYORS, PLLC, WHICH ASSUMES NO RISK OF LOSS OR LIABILITY RESULTING FROM ANY UNAUTHORIZED USE OR RELIANCE BY ANY THIRD-PARTY.

CONSULTANT:
NELSON & POPE
ENGINEERS · SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
(631) 427-5665 FAX (631) 427-5620
WWW.NELSONPOPE.COM

CLIENT:
TOWN OF HEMPSTEAD
ENGINEERING DEPTARTMENT
350 FRONT STREET
HEMPSTEAD, NEW YORK 11550

| | |
|---|---|
| DWN. BY: | GF/JD |
| CHK'D BY: | - |
| DATE: | JULY 2019 |
| JOB No.: | 18069 |
| CADD: | 18069CP-CV.DWG |
| SCALE: | AS SHOWN |

DRAWING TITLE:
# DRAINAGE CAPACITY IMPROVEMENTS - 1
LINDBERGH AVENUE
OCEANSIDE, NY

DRAWING NUMBER:
DC - 1

SHEET: 40 OF 40

# APPENDIX C

# FLOODPLAINS AND WETLANDS

# FLOODPLAIN AND WETLAND 8-STEP PROCESS AND DETERMINATION IN ACCORDANCE WITH EXECUTIVE ORDER 11988: FLOODPLAIN MANAGEMENT AND EXECUTIVE ORDER 11990: WETLANDS

## BELLMORE/MERRICK, SEAFORD/WANTAGH, AND OCEANSIDE DRAINAGE IMPROVEMENTS PROJECT
## TOWN OF HEMPSTEAD, NASSAU COUNTY, NEW YORK

Governor's Office of Storm Recovery
U.S. Department of Housing and Urban Development Community Development Block Grant – Disaster Recovery

### Introduction & Overview

The purpose of Executive Order (EO) 11988 Floodplain Management is "to avoid to the extent possible the long- and short-term adverse impacts associated with occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." The purpose of EO 11990 Protection of Wetlands is "to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." This report contains the analysis prescribed by 24 CFR Part 55 and documents the eight-step decision making process for the Proposed Action and pertains to activities within the Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA), or its successors, pursuant to the National Flood Insurance Program (NFIP), or a successor program, whether advisory, preliminary, or final.

The Governor's Office of Storm Recovery (GOSR), an office of the New York State Housing Trust Fund Corporation (HTFC), has received an application from the Town of Hempstead to use Community Development Block Grant – Disaster Recovery (CDBG-DR) funding from the NY Rising Community Reconstruction Program to implement the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project (hereinafter "the Proposed Action") (see **Figures 1 and 2**).

The analysis that follows focuses on the direct and indirect floodplain and wetland impacts associated with this project. The Proposed Action will result in disturbance of a previously developed and disturbed residential community, within an area identified on the National Wetland Inventory and a 100-year floodplain. Based on an analysis of the Proposed Action as described herein, it is concluded that there is a reasonable basis to proceed with funding for this Proposed Action.

### Description of Proposed Action

The Proposed Action includes installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system

pipes that need enlargement and additional structures to be installed are based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by properly-sized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick. For additional information, please see **Figure 2**.

**Step 1: Determine if the proposed action is in a 100-year floodplain or wetland.**

According to the September 11, 2009, Flood Insurance Rate Map (FIRM) panels 36059C0218G, 36059C0219G, 36059C0238G, 36059C0241G, 36059C0242G, 36059C0244G, 36059C0261G, 36059C0263G, 36059C0307G, 25 of the 29 check valves are within the 100-year floodplain, 24 of which are within Flood Zone AE (1percent annual chance flood, with base flood elevations ranging from seven to nine feet) and one of which is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area (**Figure 3**). It is important to note that all of the improvements are to existing drainage infrastructure already located within the 100-year floodplain and serving a developed residential community.

None of the check valve sites are within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites extend slightly into estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands (**Figure 4**). Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands (**Figure 5**). None of the project sites are within NYSDEC freshwater wetlands, but four of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands (**Figure 4**). Again, all improvements are to an existing drainage infrastructure system.

**Step 2: Notify the public for early review of the proposal and involve the affected and interested public in the decision-making process.**

Because the Proposed Action is located within the 100-year floodplain and wetlands, GOSR published an early notice, that allowed for the public and public agencies to provide input on the decision to provide funding for the Proposed Action. The early public notice and 15-day comment period is complete.

The "Early Notice of Proposed Activity in a 100-Year Floodplain and Wetland" was published in *The Hempstead Beacon* on November 15, 2019 with the 15-day period expiring on November 30, 2019. The notice targeted local residents, including those within the floodplain. (See the attached **Early Notice** and **Affidavit of Publication**). The same notice was distributed to interested agencies on November 22, 2019, with the 15-day comment period ending on December 9, 2019.

The National Oceanic and Atmospheric Administration responded to the Early Notice in a letter dated December 5, 2019. The letter stated that listed threatened or endangered sea turtles under its

jurisdiction are seasonally present in South Oyster Bay: the threatened Northwest Atlantic Ocean distinct population segment (DPS) of loggerhead, North Atlantic DPS of green, and the endangered Kemp's ridley and leatherback sea turtles. Sea turtles typically occur along the New York coast from May to mid-November, with the highest concentration of sea turtles present from June through October. It indicated that Atlantic sturgeon are present in the waters of South Oyster Bay and its adjacent bays and tributaries.

The letter recommended that, as project details develop, the following effects of the project on sturgeon and sea turtles be considered:

- For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work.
- For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
- Consider the related effects to water quality if any outfalls are built (i.e., will the standards still be met, will the effluent volume change, and will there be any effects to the species).
- For activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon and sea turtles.

The Proposed Action would not involve in-water work, and no new outfalls would be built. No activities that may affect underwater noise levels are proposed.

**Step 3: Identify and evaluate practicable alternatives.**

The primary alternative for the Proposed Action is the "No Action" alternative. This alternative means there would be no work undertaken to alleviate flooding due to inadequate drainage systems or help mitigate future flooding. Not undertaking the Project would be inconsistent with the goals and objectives of the Bellmore/Merrick, Seaford/Wantagh, and Barnum Island/Oceanside/the Village of Island Park/Harbor Isle, NY Rising Community Reconstruction Plan to provide storm resiliency improvements in these Long Island south shore communities. The No Action alternative would provide no mitigation and would result in the continued flooding of streets, infrastructure, homes, and businesses in this densely populated suburban area.

The New York State Rising Community Reconstruction Program is structured to provide eligible subrecipients resources and expertise to implement projects to enhance resiliency and reduce impacts on communities from future storms. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms. The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems, as described in the "Description of the Proposed Project" section. Therefore, there are no other alternative locations for the project.

Due to the nature of the Proposed Action, prohibition of this work within a floodplain is not possible. Because the repairs to the drainage systems in Bellmore, Merrick, Seaford, Wantagh, and Oceanside must occur in the location where the deficiencies have been determined to exist,

particularly the elevation of roads, the Project cannot avoid being conducted in the 100-year floodplain and wetland. The above identified alternatives will be re-evaluated in response to public comments received.

**Step 4: Identify and describe the proposed action's direct and indirect effects associated with occupying or modifying the floodplain or wetland.**

Twenty five of the 29 check valves are within the 100-year floodplain, 24 of which are within Flood Zone AE (1 percent annual chance flood, with base flood elevations ranging from seven to nine feet) and one of which is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area

The focus of floodplain evaluation should be on positive and negative impacts to lives and property, and on natural and beneficial floodplain values. According to the FEMA Report - *A Unified National Program for Floodplain Management*, two definitions commonly used in evaluating actions in a floodplain are "structural" and "non-structural" activities. Per the report, structural activity is usually intended to mean adjustments that modify the behavior of floodwaters through the use of measures such as public works dams, levees and channel work. Non-structural activity is usually intended to include all other adjustments (e.g., regulations, insurance, etc.) in the way society acts when occupying or modifying a floodplain. These definitions are used in describing impacts that may arise in association with potential advancement of the Project.

Surface disturbance in the previously developed floodplain associated with the Project includes 10.73 out of the total of 12.49 acres (**Figure 3**). The floodplain area is already disturbed by the existing roads, drainage and other urban infrastructure, and residential, commercial, and industrial development along these roads. No change in the existing impermeable surface is anticipated as a result of the Project. Elevation of the existing impermeable surfaces of roads, sidewalks, and drainage structure would be the only permanent effect on the floodplain.

Disturbance of the floodplain would occur only during construction, which could include any of the following activities. If the existing pipe or connecting structure in which a check valve would be replaced does not meet design standards, that pipe or structure will be removed and replaced. Improvements will include removal of poor or failing structures, block and/or brick structures, and inadequately sized structures. If a new drainage structure is proposed, connecting pipes will also be replaced at each location. Trees would be protected from damage during construction, except for those that require removal. Existing concrete catch basin areas along roads that would be raised would be demolished and removed, unless it cannot be removed without damaging the remainder of the catch basin. Yard drains will be installed where the road raising leaves front yards below the sidewalk grade.

Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms. The proposed drainage improvements will build resilience against future flooding and reduce risk to public and private property and infrastructure.

None of the check valve sites is within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites extend slightly into estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands (**Figure 4**). Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands (**Figure 5**). None of the project sites are within NYSDEC freshwater wetlands, but four of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands (**Figure 4**).

Tidal wetlands and deep-water estuarine wetlands along the coast can serve to absorb the force of storm waters and tidal erosion. These areas help protect upland soil and freshwater resources. The purpose of wetland evaluation is to consider factors relevant to a proposal's effect on the survival and quality of the wetland. These factors should include public health, maintenance of natural systems, cost increases attributed to construction in wetlands, and other uses of wetlands in the public interest.

The wetland areas are previously disturbed by the existing roads, drainage and other urban infrastructure, and residential, commercial, and industrial development along these roads. No change in the existing impermeable surface or land use is anticipated as a result of the Project. No permanent conversion of wetlands would occur as a result of the Project. Construction activities that could affect wetlands include stormwater discharge from construction activities, backfill entering the wetland or protected buffer area, sedimentation resulting from soils disturbed by construction, and leakage from construction equipment entering wetlands.

The disturbance of this area would occur during project construction and would cease once construction is completed. An NYSDEC permit will be obtained for disturbance of tidal wetlands, excavation and fill in navigable waters, and discharge into the navigable waters. A State Pollutant Discharge Elimination System (SPDES) permit would be obtained for construction activities involving soil disturbances of one or more acres; including disturbances of less than one acre that are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land. A US Army Corps of Engineers Nationwide Permit 3 – Maintenance, will be obtained for the Project for the repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure, or fill, or of any currently serviceable structure of fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modifications. No long -term disturbance of tidal wetlands would occur, and the benefits and functional values of these areas would be enhanced.

Surface disturbance associated with the Project would not adversely affect the beneficial values of the floodplain, wetland or lives and property. Funding this project/ activity does constitute indirect continued support of floodplain occupancy and development.

**Step 5: Identify methods to minimize the potential adverse impacts within a floodplain and wetland and to restore and preserve the natural and beneficial values.**

Disturbance of the floodplain would occur only during construction and would cease once construction is completed. The floodplain is previously disturbed in the Project area by the existing roads, drainage and other urban infrastructure, and residential, commercial, and industrial development along these roads. No change in the existing impermeable surface or land use is anticipated as a result of the Project.

Best management practices during construction would minimize disturbance of the 100-year floodplain by equipment, site runoff, sedimentation, or other construction activities. This would not result in permanent adverse effects on the natural and beneficial values of the floodplain or lives and property.

The limited area of disturbance would not adversely affect the natural and beneficial values of wetlands or property. Prior to construction, the appropriate permits would be obtained in accordance with 6NYCRR Part 608, Protection of Waters Program; 6NYCRR Part 661, Tidal Wetlands Permit Program, NYSDEC stormwater discharge from construction activities regulations; and Section 401 of the Clean Water Act. A stormwater pollution prevention plan (SWPPP) will be prepared for the Project. It will describe the use of best management practices to control runoff during construction. This would mitigate any temporary effects on these wetland areas. A US Army Corps of Engineers Nationwide Permit 3 – Maintenance, will be obtained for the Project for the repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure, or fill, or of any currently serviceable structure of fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modifications. Requirements of the permit include using and maintaining appropriate soil erosion and sediment controls during construction and permanent stabilization of all exposed soil and other fills at the earliest practicable date. This would mitigate any temporary effects on these wetland areas. Construction activities related to the Project would adhere to the requirements of these permits, which include preventing backfill from entering the wetland or protected buffer area, using clean fill, confining equipment and materials storage to upland areas, and stabilizing disturbed soil. These measures also would address NOAA's concerns for potential impacts to sea turtles and sturgeon from increased levels of suspended sediment by applying best silt and soil management practices during construction.

No changes in land use would occur as a result of the Proposed Action. The limited area of disturbance would not adversely affect the natural and beneficial values of the floodplain, wetlands, or property. The resilience of these areas and the communities as a whole will be improved by the Project.

**Step 6: Reevaluate the proposed action to determine if it is still practicable given its floodplain effects.**

The "No Action" alternative for not funding the Project would not address the purpose and need of the proposed action. Without the proposed action, the impacted community would be left more susceptible to future flooding events in this area than it would after the implementation of the proposed action. Therefore, the "No Action" alternative examined is not considered desirable and the Proposed Action is still practicable, considering the potential for exposure to flood hazards in the floodplain, possible adverse impacts on floodplain, the extent to which it may aggravate current hazards to other floodplains, and the potential to disrupt natural and beneficial functions and values of floodplains. No changes in land use would occur as a result of the Project. Floodplain and wetland areas in the project area have been previously disturbed by existing roads, drainage and other urban infrastructure, and residential, commercial, and industrial development along these roads. Disturbance of the floodplain and wetlands would occur only during construction and would cease once construction is completed. Elevation of the existing impermeable surfaces would be the only permanent effect on the floodplain. Best management practices during construction and adhering to the requirements of the appropriate permits, including preparation of an SWPPP, would minimize construction-related impacts to the floodplain and wetlands.

The functional improvements to the drainage systems in Bellmore, Merrick, Seaford, Wantagh, and Oceanside must occur in the locations where the deficiencies have been determined to exist, so the Proposed Action cannot avoid being conducted in the 100-year floodplain and wetlands. The limited area of disturbance would not adversely affect the natural and beneficial values of the floodplain, wetlands, or property. The resilience of these areas and the communities as a whole will be improved by the Project. As a result, the proposed action is still practicable.

**Step 7: Determination of No Practicable Alternative**

It is the finding of this report that there is no practicable alternative to locating the Proposed Action in the floodplain. The repairs to the drainage systems in Bellmore, Merrick, Seaford, Wantagh, and Oceanside must occur in the location where the deficiencies have been determined to exist, much of which is within the 100-year floodplain, particularly the elevation of roads.

A combined final notice, formally known as "Final Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetland and Notice of Intent to Release Funds" (Final Notice/NOIRROF) was published in *The Hempstead Beacon* newspaper by the Governor's Office of Storm Recovery on December 26, 2019, in compliance with Executive Orders 11988 and 11990 and 24 CFR Part 55. All comments received during the comment period will be addressed prior to funds being committed to the proposed project. The comment period started with the Final Notice/NOIRROF on December 26, 2019. The comment period for the Final Notice is 7 days, which expires at 5pm on January 2, 2019.

**Step 8: The proposed action can be implemented after the above steps have been completed.**

GOSR, operating under the auspices of the New York State Homes and Community Renewal's (NYSHCR) Housing Trust Fund Corporation as the responsible entity, will ensure that the Proposed Action, as described above, is executed and necessary language will be included in all agreements with participating parties. Implementation of the proposed action may require additional local and state permits, which could place additional design modifications or mitigation requirements on the Project. It is acknowledged there is a continuing responsibility by the

responsible entity to ensure, to the extent feasible and necessary, compliance with the steps herein.

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

**Figure 1**

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Area*

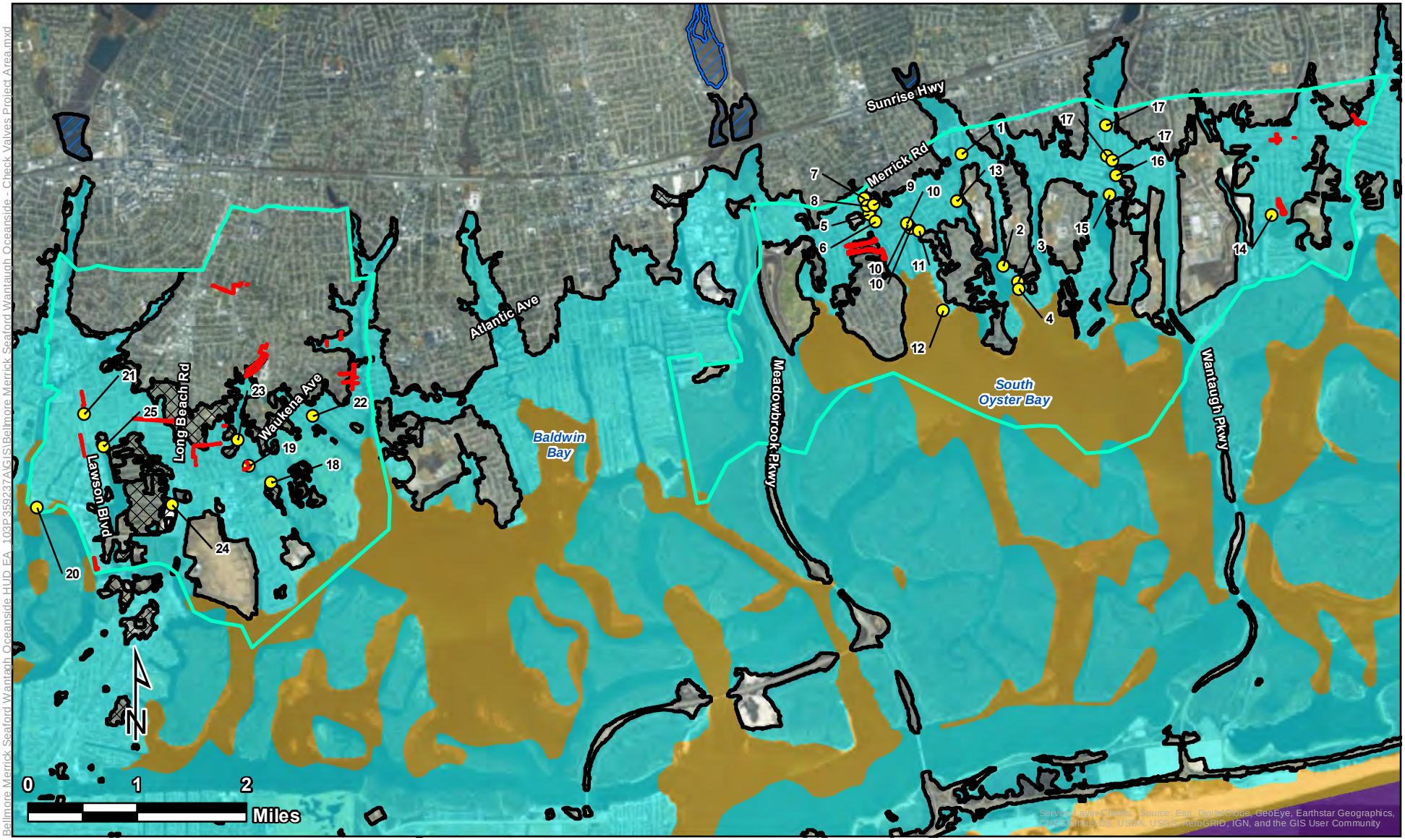
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

TETRA TECH

**Figure 2**




## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

**Flood Zones**

- Zone AE- within the 1% annual chance flood
- Zone VE- within the 1% annual chance flood: coastal flood zone with velocity hazard
- Open Water
- Zone A- within the 1% annual chance flood
- Zone X- 0.2 % annual chance flood
- Zone X- Area of minimal flood hazard

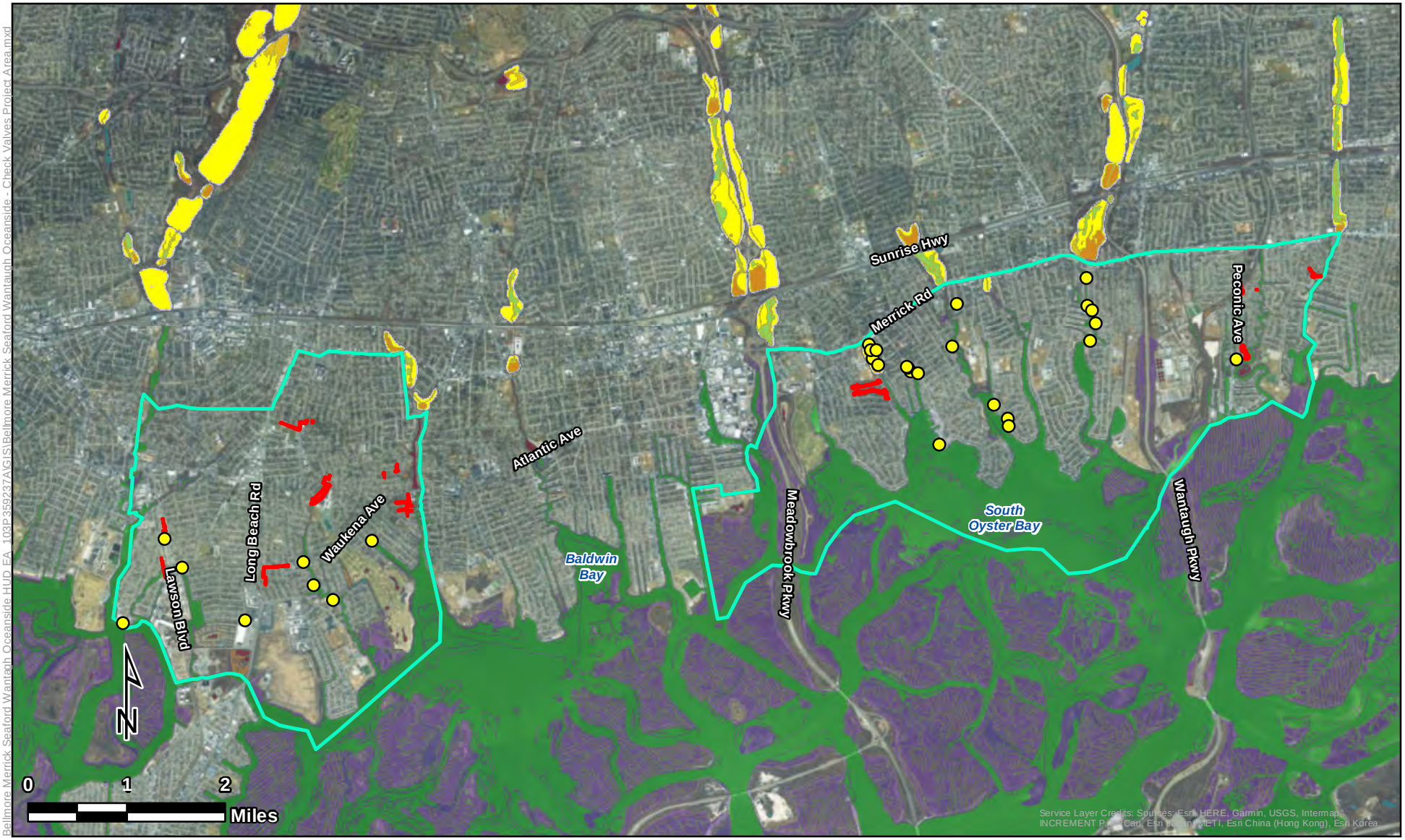
TETRA TECH

# *Flood Zones*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Figure 3**

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

**NWI Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

# *NYS Freshwater and NWI Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 4**

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Tidal - Coastal Wetlands
- Tidal - Coastal Wetlands 300ft Buffer

# *Tidal-Coastal Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 5**

# AFFIDAVIT OF PUBLICATION

EARLY NOTICE OF A PROPOSED ACTIVITY
IN A 100-YEAR FLOODPLAIN AND WETLAND
SEAFORD/WANTAGH, AND OCEANSIDE DRAINAGE IMPROVEMENTS PROJECT, TOWN OF HEMPSTEAD, NASSAU COUNTY, NEW YORK
November 15, 2019

To: All interested Agencies, Groups, and Individuals

This is to provide notice that the Governor's Office of Storm Recovery (GOSR), an office of the New York State Homes & Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), has received an application from the Town of Hempstead to provide flood reduction, through improving natural and engineered stormwater management and flood control systems in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York (hereinafter, the "Proposed Activity") and is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations (24 CFR Part 55). There are three primary purposes for this notice. First, to provide the public an opportunity to express their concerns and share information about the Proposed Activity, including alternative locations outside of the Floodplain. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances governmental efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

The Proposed Activity includes installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 in-line back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by properly-sized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick.

None of the check valve sites is within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites extend slightly into estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands. Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands. None of the project sites is within NYSDEC freshwater wetlands, but four of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands. These wetlands have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The Proposed Action will result in physical disturbances to these wetland areas only during construction.

According to the September 11, 2009, Flood Insurance Rate Map (FIRM) panels 36059C0218G, 36059C0219G, 36059C0238G, 36059C0241G, 36059C0242G, 36059C0244G, 36059C0261G, 36059C0263G, 36059C0307G, 25 of the 29 check valves are within the 100-year floodplain, 24 of which are within Flood Zone AE (1% annual chance flood, with base flood elevations ranging from seven to nine feet) and one of which is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area. Floodplain maps based on the FEMA Base Flood Elevation Maps and wetland maps have been prepared showing the locations of the Proposed Activity and are available for review with additional information at http://www.stormrecovery.ny.gov/environmental-docs.

Any individual, group, or agency may submit written comments on the Proposed Activity or request further information by contacting Lori A. Shirley, Certifying Officer, Bureau of Environmental Review and Assessment Governor's Office of Storm Recovery, 500 Bi-County Boulevard, Suite 300, Farmingdale, NY 11735; email: NYSCDBG_DR_ER@nyshcr.org. Standard office hours are 9:00 AM to 5:00 PM Monday through Friday. For more information, call: 518-474-0755. All comments received by November 30, 2019 will be considered.

11/15 (H#551)

**Affidavit of Publication**

THE BEACON

**Published in the Heart of the 6th Ranking Retail Market in the United States**

**PUBLISHED BY NASSAU COUNTY PUBLICATIONS INC.**
5 CENTRE ST. HEMPSTEAD, N.Y. 11550

(516) 481-5400

**COUNTY OF NASSAU }**
**STATE OF NEW YORK }**

Barbara Yohe of W.Hempstead, Nassau County, New York, being duly sworn, deposes and says that she is and was, at the time of publication of the annexed notice, principal clerk

Hempstead Beacon

a weekly newspaper published at Hempstead, Nassau County, New York, and that the notice of which the annexed is a true printed copy, was published in said paper in issues of the

15 day of Nov 2019
____ day of ____ 20__
____ day of ____ 20__
____ day of ____ 20__
____ day of ____ 20__
____ day of ____ 20__
____ day of ____ 20__
____ day of ____ 20__
____ day of ____ 20__

Barbara Yohe (L.S.)

Sworn to before me this 15
day of Nov, 2019

CAL FOGELMAN
NOTARY PUBLIC-STATE OF NEW YORK
No. 01FO6129751
Qualified in Nassau County
My Commission Expires 07-05-2021

Governor's Office of Storm Recovery

RECEIVED
DEC 04 2019
BY:

**ANDREW M. CUOMO**
Governor

# EARLY NOTICE OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND SEAFORD/WANTAGH, AND OCEANSIDE DRAINAGE IMPROVEMENTS PROJECT, TOWN OF HEMPSTEAD, NASSAU COUNTY, NEW YORK

**November 22, 2019**

To: All interested Agencies, Groups, and Individuals

This is to provide notice that the Governor's Office of Storm Recovery (GOSR), an office of the New York State Homes & Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), has received an application from the Town of Hempstead to provide flood reduction, through improving natural and engineered stormwater management and flood control systems in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York (hereinafter, the "Proposed Activity") and is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations (24 CFR Part 55). There are three primary purposes for this notice. First, to provide the public an opportunity to express their concerns and share information about the Proposed Activity, including alternative locations outside of the Floodplain. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances governmental efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

The Proposed Activity includes installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by properly-sized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick.

None of the check valve sites is within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites extend slightly into estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands. Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check

valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands. None of the project sites is within NYSDEC freshwater wetlands, but four of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands. These wetlands have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The Proposed Action will result in physical disturbances to these wetland areas only during construction.

According to the September 11, 2009, Flood Insurance Rate Map (FIRM) panels 36059C0218G, 36059C0219G, 36059C0238G, 36059C0241G, 36059C0242G, 36059C0244G, 36059C0261G, 36059C0263G, 36059C0307G, 25 of the 29 check valves are within the 100-year floodplain, 24 of which are within Flood Zone AE (1% annual chance flood, with base flood elevations ranging from seven to nine feet) and one of which is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area. Floodplain maps based on the FEMA Base Flood Elevation Maps and wetland maps have been prepared showing the locations of the Proposed Activity and are available for review with additional information at http://www.stormrecovery.ny.gov/environmental-docs.

Any individual, group, or agency may submit written comments on the Proposed Activity or request further information by contacting Lori A. Shirley, Certifying Officer, Bureau of Environmental Review and Assessment Governor's Office of Storm Recovery, 500 Bi-County Boulevard, Suite 300, Farmingdale, NY 11735; email: NYSCDBG_DR_ER@nyshcr.org. Standard office hours are 9:00 AM to 5:00 PM Monday through Friday. For more information, call: 518-474-0755. All comments received by December 9, 2019, will be considered.

**Early Floodplain Notice Distribution List – Seaford/Wantagh, And Oceanside Drainage Improvements Project, Town Of Hempstead, Nassau County, New York**

**By Overnight Express and Email**
Tennille Smith Parker, Director
U.S. Department of Housing and Urban Development
Disaster Recovery and Special Issues Division
451 7th Street SW, Room 7272
Washington, DC 20410

**By email only**
Mike Poetzsch
U.S. Environmental Protection Agency
poetzsch.michael@epa.gov

**By U.S. Mail**
Thomas Von Essen, Regional Administrator
U.S. Dep. of Homeland Security
Federal Emergency Management Agency, Region II
26 Federal Plaza
New York, NY 10278-0002

Ms. Therese J. Fretwell, Enviro. Officer, R 1 & 2
U.S. Dep. of Housing and Urban Development
26 Federal Plaza, Room 3541
New York, NY 10278-0068

Donna Mahon, Disaster Recovery Field Enviro. Officer R 2
U.S. Dep. of Housing and Urban Development
One Newark Center
1085 Raymond Blvd. 12th Floor
Newark, NJ 07102

Mr. John Bullard, Regional Administrator
NOAA Fisheries Service
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930-2276

Mr. Steve Papa, Fish and Wildlife Biologist
US Fish and Wildlife Service
Long Island Field Office
340 Smith Road
Shirley, NY 11967

Susan Ackerman, Regional Permit Administrator
New York State Department of Environmental Conservation, Region 1
50 Circle Rd
SUNY @ Stony Brook
Stony Brook, NY 11790

Marlene White
Supervisor, Mitigation Projects
NYS Division of Homeland Security & Emergency Services
1220 Washington Avenue, Building 7A - 4th Floor
Albany, NY 12242

Ron Rausch, Director
Environmental Management Bureau
Office of Parks, Recreation and Historic Preservation
625 Broadway, 2nd Floor
Albany, New York 12238

William T. Bruno
US Army Corps of Engineers
New York District
ATTN: Regulatory Branch, Room 1937
26 Federal Plaza
New York, NY 10278-0090
(Eastern Permit Section)

Laura A Gillen, Town Supervisor
Town of Hempstead
Hempstead Town Hall
One Washington Street
Hempstead, NY 11550

Douglas Tuman, P.E., Commissioner
Department of Engineering
Town of Hempstead
350 Front Street
Hempstead, NY 11550

Jeff Tierney, Deputy Commissioner
Department of Engineering
Town of Hempstead
350 Front Street
Hempstead, NY 11550

Sylvia A. Cabana, Town Clerk
Town of Hempstead
Hempstead Town Hall
One Washington Street
Hempstead, NY 11550

Kenneth G Arnold, P.E., Commissioner
Nassau County Department of Public Works
1194 Prospect Ave.
Westbury, NY 11590

Sean Sallie, AICP, Deputy Commissioner
Nassau County Department of Public Works
1194 Prospect Ave.
Westbury, NY 11590

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

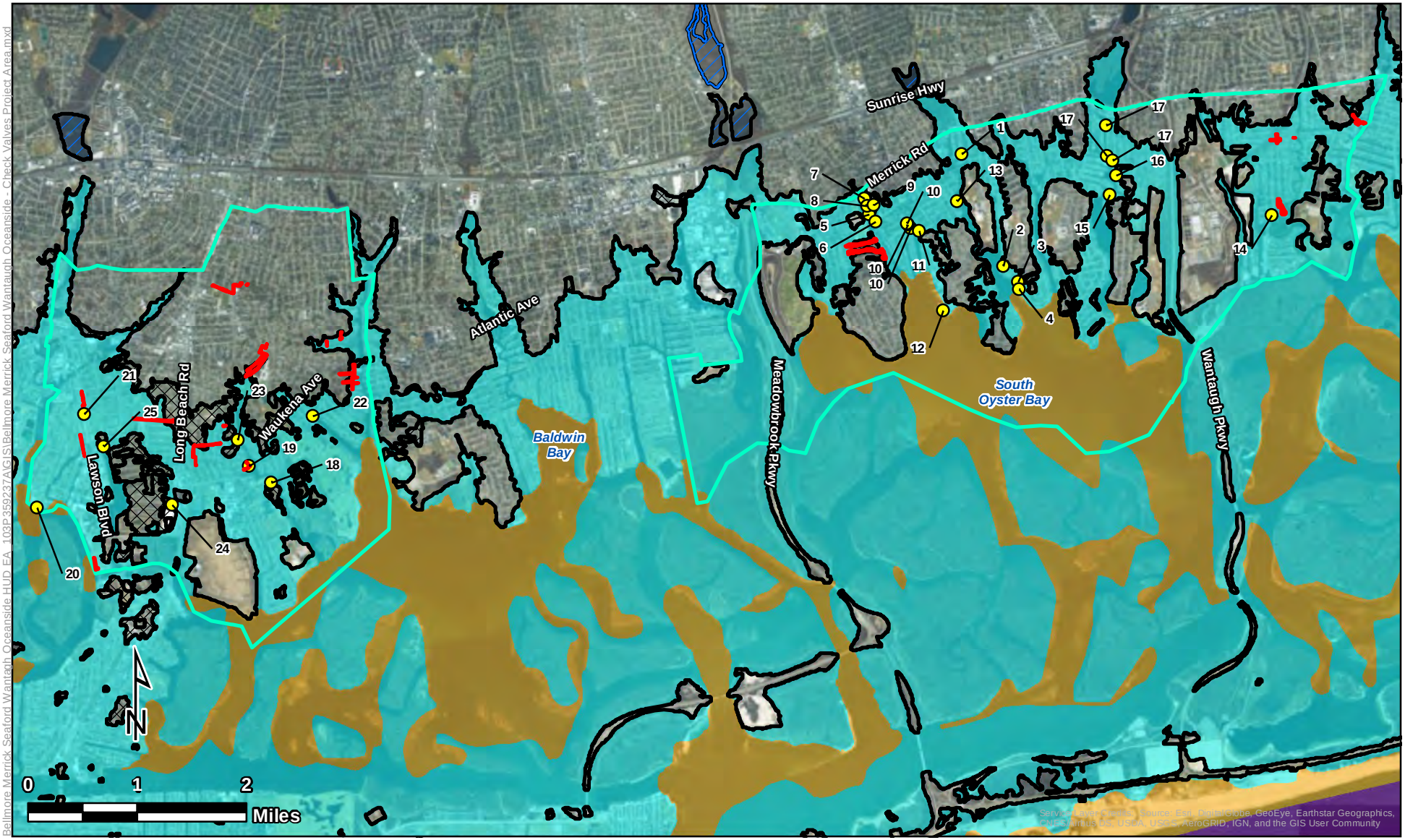
**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Tidal - Coastal Wetlands
- Tidal - Coastal Wetlands 300ft Buffer

# *Tidal-Coastal Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH




# Flood Zones

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

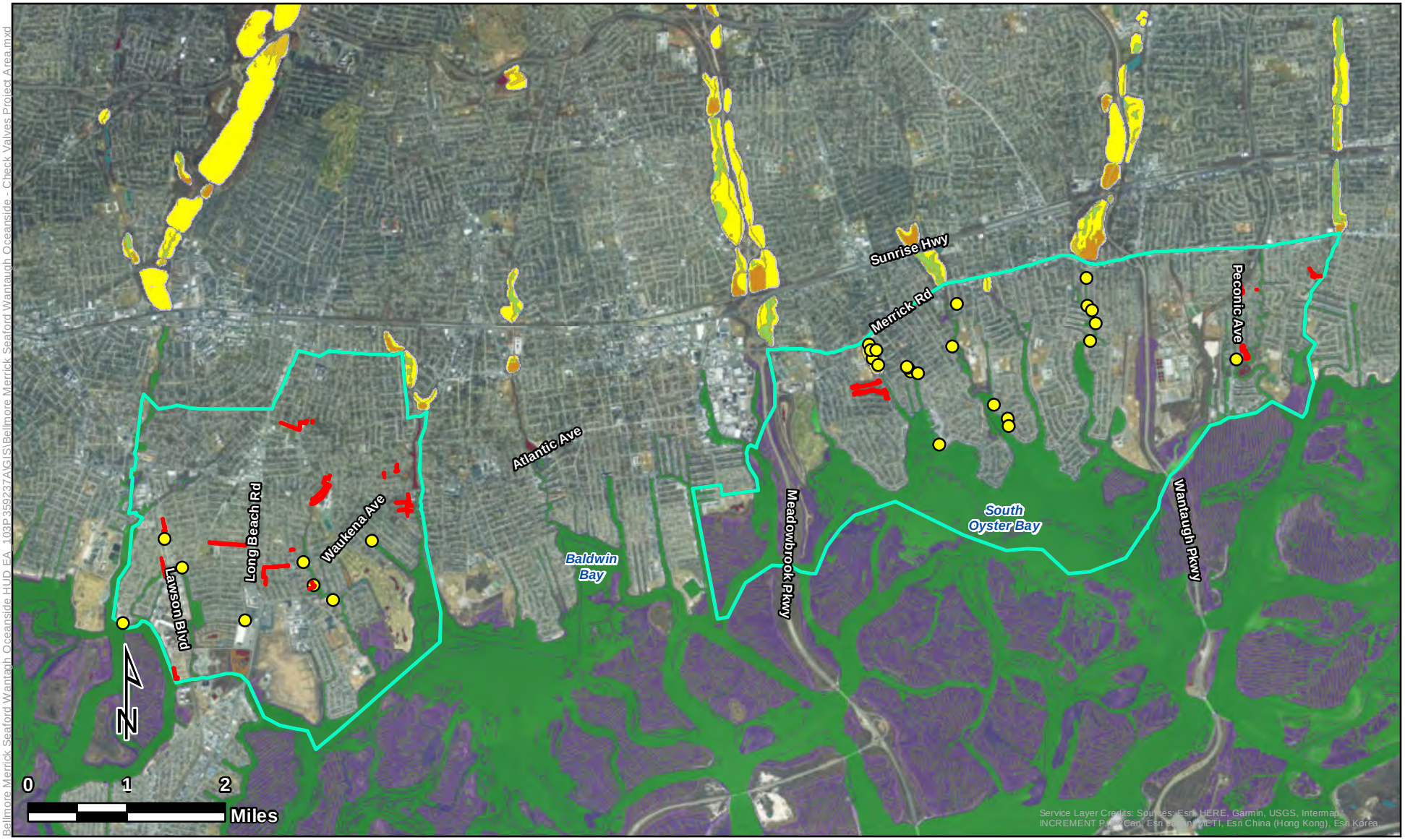
- Check Valves
- Drainage Improvements
- Project Overiew Area

**Flood Zones**

- Zone AE- within the 1% annual chance flood
- Zone VE- within the 1% annual chance flood: coastal flood zone with velocity hazard
- Open Water
- Zone A- within the 1% annual chance flood
- Zone X- 0.2 % annual chance flood
- Zone X- Area of minimal flood hazard

TETRA TECH

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

**NWI Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

# *NYS Freshwater and NWI Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**EARLY NOTICE OF A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND**

**SEAFORD/WANTAGH, AND OCEANSIDE DRAINAGE IMPROVEMENTS PROJECT, TOWN OF HEMPSTEAD, NASSAU COUNTY, NEW YORK**
**November 15, 2019**

To: All interested Agencies, Groups, and Individuals

This is to provide notice that the Governor's Office of Storm Recovery (GOSR), an office of the New York State Homes & Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), has received an application from the Town of Hempstead to provide flood reduction, through improving natural and engineered stormwater management and flood control systems in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York (hereinafter, the "Proposed Activity") and is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations (24 CFR Part 55). There are three primary purposes for this notice. First, to provide the public an opportunity to express their concerns and share information about the Proposed Activity, including alternative locations outside of the Floodplain. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances governmental efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk. Funding for the Proposed Activity will be provided by the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

The Proposed Activity includes installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by properly-sized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick.

None of the check valve sites is within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites extend slightly into estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands. Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands. None of the project sites is within

NYSDEC freshwater wetlands, but four of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands. These wetlands have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The Proposed Action will result in physical disturbances to these wetland areas only during construction.

According to the September 11, 2009, Flood Insurance Rate Map (FIRM) panels 36059C0218G, 36059C0219G, 36059C0238G, 36059C0241G, 36059C0242G, 36059C0244G, 36059C0261G, 36059C0263G, 36059C0307G, 25 of the 29 check valves are within the 100-year floodplain, 24 of which are within Flood Zone AE (1% annual chance flood, with base flood elevations ranging from seven to nine feet) and one of which is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area. Floodplain maps based on the FEMA Base Flood Elevation Maps and wetland maps have been prepared showing the locations of the Proposed Activity and are available for review with additional information at http://www.stormrecovery.ny.gov/environmental-docs.

Any individual, group, or agency may submit written comments on the Proposed Activity or request further information by contacting Lori A. Shirley, Certifying Officer, Bureau of Environmental Review and Assessment Governor's Office of Storm Recovery, 500 Bi-County Boulevard, Suite 300, Farmingdale, NY 11735; email: NYSCDBG_DR_ER@nyshcr.org. Standard office hours are 9:00 AM to 5:00 PM Monday through Friday. For more information, call: 518-474-0755. All comments received by November 30, 2019 will be considered.

# APPENDIX D
# COASTAL CONSISTENCY

STATE OF NEW YORK
**DEPARTMENT OF STATE**
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
WWW.DOS.NY.GOV

ANDREW M. CUOMO
GOVERNOR

ROSSANA ROSADO
SECRETARY OF STATE

December 18, 2019

Alicia Shultz
Senior Environmental Scientist
Governor's Office of Storm Recovery
New York State Homes & Community Renewal
38-40 State St., 408N, Hampton Plaza
Albany, New York 12207

Re: **F-2019-1173(FA)**
***Governor's Office of Storm Recovery***
***NYS Homes and Community Renewal***
*Installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads.*
Bellmore, Merrick-Seaford, Wantagh and Oceanside
Town of Hempstead, Nassau County
**General Concurrence - No Objection to Funding**

Dear Ms. Schultz,

The Department of State (DOS) received the information you submitted regarding the above proposed federal financial assistance on 12/6/2019 and has completed its review. Based on this review, the Department of State has no objection to the release of United States Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) funding in support of the proposed project.

***This concurrence pertains to the federal financial assistance activity or activities for this project only.*** If certain activities may require a federal permit or other form of federal agency authorization, the Department of State would conduct separate consistency review(s) of permit activities at the time such application(s) may be made to a federal agency.

When communicating with us regarding this matter, please contact us at (518) 474-6000 and refer to our file # F-2019-1173(FA).

Sincerely,

Matthew P. Maraglio
Supervisor, Consistency Review Unit
Office of Planning, Development and
Community Infrastructure

MM/dc

NEW YORK STATE OF OPPORTUNITY. | Department of State

Governor's Office of Storm Recovery

ANDREW M. CUOMO
Governor

December 6, 2019

Mr. Matt Maraglio
Supervisor, Consistency Review Unit
Division of Coastal Resources
New York State Department of State
One Commerce Plaza
99 Washington Avenue
Albany, New York 12231-0001

Re: **HUD CDBG-DR Program - General Consistency Concurrence for the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York**

Dear Mr. Maraglio:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the United States Department of Housing & Urban Development (HUD), is currently preparing an environmental review report for the proposed Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project. All 29 of the proposed check valves, eight of the 10 proposed capacity improvements, all 10 proposed road raising locations are within the New York State Coastal Zone Management Program (See attached Federal Consistency Assessment Form [FCAF] Addendum and **Figure 1**). GOSR is acting as HUD's non-federal representative for the purposes of compliance with the National Environmental Policy Act (NEPA).

The purpose of this letter is to provide the New York State Department of State (DOS) notice of the Proposed Action and to obtain written confirmation from DOS that the proposed activities will be in compliance with general consistency concurrence criteria.

## Project Overview

The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York. (see **Figures 1 and 2** and attached FCAF Addendum). The following tables identify the type and location of the individual improvements.

| Check Valve Locations | |
|---|---|
| **Location** | **Hamlet** |
| Farmers Avenue at Dead End | Bellmore |

| Check Valve Locations | |
|---|---|
| Surf Road and Shore Road (1 OF 3) | Bellmore |
| Harbor Lane at Shore Road (2 OF 3) | Bellmore |
| Malibu Road at Shore Road (3 OF 3) | Bellmore |
| Lindenmere Drive Near Lake End Road (1 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (2 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (3 OF 3) | Merrick |
| Lindenmere Drive and Melthew Court (1 OF 2) | Merrick |
| Lindenmere Drive and Byron Road (2 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (1 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (2 OF 2) | Merrick |
| Whaleneck Avenue and Beverly Way/Shoreham Way | Merrick |
| Bayberry Drive and Whaleneck Drive | Merrick |
| Wynsum Avenue and Brighton Way | Merrick |
| Peconic Avenue at Dead End | Seaford |
| Riverside Drive | Wantagh |
| Riverside Drive and Bayport Court | Wantagh |
| Riverside Drive and Bellaire Street (1 OF 3) | Wantagh |
| Bellaire Street (2 OF 3) | Wantagh |
| Bellaire Street (3 OF 3) | Wantagh |
| Mott Street Dead End | Oceanside |
| Lindbergh Avenue Dead End | Oceanside |
| Weidner Avenue and Reina Road | Oceanside |
| Lawson Boulevard and Powell Creek | Oceanside |
| Freeman Avenue and Balsam Street | Oceanside |
| Waukena Avenue and Bedell Creek | Oceanside |
| Lawrence Avenue and Harris Drive | Oceanside |
| W. Waukena Avenue and Grand Canal | Oceanside |
| Daly Blvd Outfall | Oceanside |

| Capacity Improvement Locations | | |
|---|---|---|
| **Location** | **Municipality** | **Improvement Type** |
| Derby Drive South (West) | Oceanside | Increase pipe capacity |
| Derby Drive South (East) | Oceanside | Increase pipe capacity |
| Lindbergh Avenue | Oceanside | Increase pipe capacity |
| Lawson Boulevard Upstream from W. Windsor Parkway | Oceanside | Increase pipe capacity |
| Foxhurst Road to address flooding at Seifert Court | Oceanside | Increase pipe capacity |
| Waukena Avenue to address flooding on Fourth Street | Oceanside | Increase pipe capacity |
| Tinker Drive to address flooding on Beverly Road and State Street | Oceanside | Replace pipe |
| Moore Avenue and Fulton Avenue | Oceanside | Install a detention system |
| Perry Avenue | Oceanside | Install additional inlets |
| Hampton Road | Oceanside | Install additional inlets |

| Road Raising Locations | |
|---|---|
| **Location** | **Hamlet** |
| Shore Road | Bellmore |
| Mermaid Canal | Wantagh |

| Road Raising Locations | |
|---|---|
| Moreland Avenue | Oceanside |
| Royal Avenue | Oceanside |
| Carrel Boulevard | Oceanside |
| Neptune Avenue | Seaford |
| South Street | Seaford |
| Beaver Turn | Seaford |
| Helen Court | Merrick |
| George Court | Merrick |

The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure.

Compliance with the Uniform Relocation Act (URA) is required for all projects that involve land acquisition (permanent and temporary easements, rights-of-way, and real property) for the purpose of enabling project construction. It is anticipated that installation of the check valves would not require easements, rights-of way, or real property acquisition. The other drainage improvements would not involve real property acquisition but are likely to require temporary and possibly permanent easements and rights-of-way.

**Compliance**

GOSR is requesting a response letter from DOS that can be included in the environmental review report to document that coordination with DOS is being completed, and general consistency concurrence criteria will be met. Attached to this letter is a Federal Consistency Assessment Form, including an addendum analyzing the consistency of the Proposed Project with the relevant policies from the State's Coastal Management Plan.

None of the activities are located within a Coastal Barrier Resource System Unit.

Please contact me at (518) 474-0647 or Alicia.Shultz@nyshcr.org. Thank you again for your assistance.

Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes and Community Renewal
Governor's Office of Storm Recovery

Attachments:
Federal Consistency Assessment Form (FCAF)
FCAF Addendum
Figure 1 - Coastal Zones
Figure 2 - Project Location

Figure 3 - Project Area
Figure 4 - Flood Zones
Figure 5 - Tidal-Coastal Wetlands
New York Natural Heritage Program (NHP) Consultation Response
United States Fish and Wildlife Service (USFWS) Consultation Letter

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Federal Consistency Assessment Form

An applicant, seeking a permit, license, waiver, certification or similar type of approval from a federal agency which is subject to the New York State Coastal Management Program (CMP), shall complete this assessment form for any proposed activity that will occur within and/or directly affect the State's Coastal Area. This form is intended to assist an applicant in certifying that the proposed activity is consistent with New York State's CMP as required by U.S. Department of Commerce regulations (15 CFR 930.57). It should be completed at the time when the federal application is prepared. The Department of State will use the completed form and accompanying information in its review of the applicant's certification of consistency.

A. **APPLICANT** (please print)

1. Name: Alicia Shultz, Senior Environmental Scientist
2. Address: New York State Homes & Community Renewal Governor's Office of Storm Re
3. Telephone: Area Code ( ) (518) 474-0647

B. **PROPOSED ACTIVITY:**

1. Brief description of activity:

The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads.

2. Purpose of activity:

The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered storm water management and flood

3. Location of activity:

| Nassau | Hempstead | Numerous in Bellmore, N |
|---|---|---|
| County | City, Town, or Village | Street or Site Description |

4. Type of federal permit/license required: CDBG-DR Funding

5. Federal application number, if known: _____

6. If a state permit/license was issued or is required for the proposed activity, identify the state agency and provide the application or permit number, if known:

_____

C. **COASTAL ASSESSMENT** Check either "YES" or "NO" for each of these questions. The numbers following each question refer to the policies described in the CMP document (see footnote on page 2) which may be affected by the proposed activity.

| 1. Will the proposed activity result in any of the following: | YES | NO |
|---|---|---|
| a. Large physical change to a site within the coastal area which will require the preparation of an environmental impact statement? (11, 22, 25, 32, 37, 38, 41, 43) | | ✔ |
| b. Physical alteration of more than two acres of land along the shoreline, land under water or coastal waters? (2, 11, 12, 20, 28, 35, 44) | | ✔ |
| c. Revitalization/redevelopment of a deteriorated or underutilized waterfront site? (1) | | ✔ |
| d. Reduction of existing or potential public access to or along coastal waters? (19, 20) | | ✔ |
| e. Adverse effect upon the commercial or recreational use of coastal fish resources? (9,10) | | ✔ |
| f. Siting of a facility essential to the exploration, development and production of energy resources in coastal waters or on the Outer Continental Shelf? (29) | | ✔ |
| g. Siting of a facility essential to the generation or transmission of energy? (27) | | ✔ |
| h. Mining, excavation, or dredging activities, or the placement of dredged or fill material in coastal waters? (15, 35) | | ✔ |
| i. Discharge of toxics, hazardous substances or other pollutants into coastal waters? (8, 15, 35) | | ✔ |
| j. Draining of stormwater runoff or sewer overflows into coastal waters? (33) | ✔ | |
| k. Transport, storage, treatment, or disposal of solid wastes or hazardous materials? (36, 39) | | ✔ |
| l. Adverse effect upon land or water uses within the State's small harbors? (4) | | ✔ |

| 2. Will the proposed activity affect or be located in, on, or adjacent to any of the following: | YES | NO |
|---|---|---|
| a. State designated freshwater or tidal wetland? (44) | ✔ | |
| b. Federally designated flood and/or state designated erosion hazard area? (11, 12, 17) | ✔ | |
| c. State designated significant fish and/or wildlife habitat? (7) | | ✔ |
| d. State designated significant scenic resource or area? (24) | | ✔ |
| e. State designated important agricultural lands? (26) | | ✔ |
| f. Beach, dune or Barrier Island? (12) | | ✔ |
| g. Major ports of Albany, Buffalo, Ogdensburg, Oswego or New York? (3) | | ✔ |
| h. State, county, or local park? (19, 20) | | ✔ |
| i. Historic resource listed on the National or State Register of Historic Places? (23) | | ✔ |

| 3. Will the proposed activity require any of the following: | YES | NO |
|---|---|---|
| a. Waterfront site? (2, 21, 22) | | ✔ |
| b. Provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (5) | | ✔ |
| c. Construction or reconstruction of a flood or erosion control structure? (13, 14, 16) | ✔ | |
| d. State water quality permit or certification? (30, 38, 40) | ✔ | |
| e. State air quality permit or certification? (41, 43) | | ✔ |

| | | |
|---|---|---|
| 4. Will the proposed activity occur within and/or affect an area covered by a State-approved local waterfront revitalization program, or State-approved regional coastal management program? (see policies in program document*) | | ✔ |

D. **ADDITIONAL STEPS**

1. If all of the questions in Section C are answered "NO", then the applicant or agency shall complete Section E and submit the documentation required by Section F.

2. If any of the questions in Section C are answered "YES", then the applicant or agent is advised to consult the CMP, or where appropriate, the local waterfront revitalization program document*. The proposed activity must be analyzed in more detail with respect to the applicable state or local coastal policies. On a separate page(s), the applicant or agent shall: (a) identify, by their policy numbers, which coastal policies are affected by the activity, (b) briefly assess the effects of the activity upon the policy; and, (c) state how the activity is consistent with each policy. Following the completion of this written assessment, the applicant or agency shall complete Section E and submit the documentation required by Section F.

E. **CERTIFICATION**

The applicant or agent must certify that the proposed activity is consistent with the State's CMP or the approved local waterfront revitalization program, as appropriate. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program, or with the applicable approved local waterfront revitalization program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Alicia Shultz, Senior Environmental Scientist

Address: New York State Homes & Community Renewal Governor's Office of Storm Recovery, 38-40 State St.,408N, Hampton Plaza, Albany, NY 12207

Telephone: Area Code ( ) (518) 474-0647

Applicant/Agent's Signature: Alicia Shultz Date: 12/06/2019

F. **SUBMISSION REQUIREMENTS**

1. The applicant or agent shall submit the following documents to the **New York State Department of State, Office of Planning and Development, Attn: Consistency Review Unit, One Commerce Plaza-Suite 1010, 99 Washington Avenue, Albany, New York 12231.**

a. Copy of original signed form.
b. Copy of the completed federal agency application.
c. Other available information which would support the certification of consistency.

2. The applicant or agent shall also submit a copy of this completed form along with his/her application to the federal agency.

3. If there are any questions regarding the submission of this form, contact the Department of State at (518) 474-6000.

*These state and local documents are available for inspection at the offices of many federal agencies, Department of environmental Conservation and Department of State regional offices, and the appropriate regional and county planning agencies. Local program documents are also available for inspection at the offices of the appropriate local government.

**Federal Consistency Assessment Form (FCAF) Addendum**
**Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project**

This document is the addendum to the Federal Consistency Assessment Form (FCAF) for the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project. All 29 of the proposed check valves, eight of the 10 proposed capacity improvements, all 10 proposed road raising locations are within the New York State Coastal Zone Management Program (**Figure 1**). After describing the Proposed Project in more detail, this document analyzes the consistency of the Proposed Project with the State's Costal Management Plan (CMP), specifically those policies that were identified as potentially applicable to this Project in the FCAF.

## PROJECT DESCRIPTION

The Town of Hempstead is proposing to implement the design and construction of recommended drainage improvements resulting from the Town's Comprehensive Drainage Infrastructure Master Plan for the Bellmore/Merrick and Seaford/Wantagh Areas South of Merrick Road and the Oceanside Drainage Improvement Plan. The projects will be implemented in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York (**Figures 2 and 3**).

Long Island's south shore communities have had to regularly deal with flooding overwhelming the drainage infrastructure due to its low elevation above sea level. In addition to routinely experienced flooding, Hurricane Irene in 2011, followed nearly 14 months later by Superstorm Sandy, overwhelmed the south shore's stormwater drainage systems. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms.

The hamlets of Bellmore, Merrick, Seaford, Wantagh, and Oceanside are located along the south shore of Long Island and border Middle Bay, Hempstead Bay, and South Oyster Bay. Many creeks and canals associated with these larger waterbodies project into these hamlets. Numerous homes are built directly on these creeks and canals. These waterfront areas and many areas in the southern portions of these hamlets are at or below elevation 5feet (NAVD 88) making them prone to flooding.

The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure. In general, the proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, installing a detention system and new inlets, and raising the elevation of 10 roads.

### Proposed Project

The proposed project involves individual subprojects at various locations in the hamlets of Bellmore, Merrick, Seaford, Wantagh, and Oceanside (**Figures 2 and 3**) and are proposed for implementation as detailed below.

**Installing Check Valves:** Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls at the following locations, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside (**Figure 3**):

| **Check Valve Locations** | |
|---|---|
| **Location** | **Hamlet** |
| Farmers Avenue at Dead End | Bellmore |
| Surf Road and Shore Road (1 OF 3) | Bellmore |
| Harbor Lane at Shore Road (2 OF 3) | Bellmore |
| Malibu Road at Shore Road (3 OF 3) | Bellmore |
| Lindenmere Drive Near Lake End Road (1 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (2 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (3 OF 3) | Merrick |
| Lindenmere Drive and Melthew Court (1 OF 2) | Merrick |
| Lindenmere Drive and Byron Road (2 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (1 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (2 OF 2) | Merrick |
| Whaleneck Avenue and Beverly Way/Shoreham Way | Merrick |
| Bayberry Drive and Whaleneck Drive | Merrick |
| WynsumAvenue and Brighton Way | Merrick |
| Peconic Avenue at Dead End | Seaford |
| Riverside Drive | Wantagh |
| Riverside Drive and Bayport Court | Wantagh |
| Riverside Drive and Bellaire Street (1 OF 3) | Wantagh |
| Bellaire Street (2 OF 3) | Wantagh |
| Bellaire Street (3 OF 3) | Wantagh |
| Mott Street Dead End | Oceanside |
| Lindbergh Avenue Dead End | Oceanside |
| Weidner Avenue and Reina Road | Oceanside |
| Lawson Boulevard and Powell Creek | Oceanside |
| Freeman Avenue and Balsam Street | Oceanside |
| Waukena Avenue and Bedell Creek | Oceanside |
| Lawrence Avenue and Harris Drive | Oceanside |
| W. Waukena Avenue and Grand Canal | Oceanside |
| Daly Blvd Outfall | Oceanside |

Certain existing systems have been identified to have newer, updated check valves incorporated, while others have of old flap gates that no longer work, or no check valve present. At each of these deficient locations, the project will install an in-line check valve at the upstream end of the outfall pipe, inside either an existing or proposed drainage structure, which will require a water-tight seal at each connection point to ensure proper and efficient functionality at preventing any

water bypass. If the existing pipe or connecting structure does not meet the design standards, that pipe or structure will be removed and replaced. Improvements will include removal of: poor or failing structures, block and/or brick structures, and inadequately sized structures. If a new drainage structure is proposed, connecting pipes will also be replaced specific to each location with a standard 8 linear feet section of pipe replaced at the outfall/check valve side of the structure.

**Increasing the size/capacity of drainage pipes, culverts and detention ponds:** The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfall to avoid major disruptions to the property (See **Figure 3**):

| **Capacity Improvement Locations** | | |
|---|---|---|
| **Location** | **Municipality** | **Improvement Type** |
| Derby Drive South (West) | Oceanside | Increase pipe capacity |
| Derby Drive South (East) | Oceanside | Increase pipe capacity |
| Lindbergh Avenue | Oceanside | Increase pipe capacity |
| Lawson Boulevard Upstream from W. Windsor Parkway | Oceanside | Increase pipe capacity |
| Foxhurst Road to address flooding at Seifert Court | Oceanside | Increase pipe capacity |
| Waukena Avenue to address flooding on Fourth Street | Oceanside | Increase pipe capacity |
| Tinker Drive to address flooding on Beverly Road and State Street | Oceanside | Replace pipe |
| Moore Avenue and Fulton Avenue | Oceanside | Install a detention system |
| Perry Avenue | Oceanside | Install additional inlets |
| Hampton Road | Oceanside | Install additional inlets |

**Road Raising:** Elevating a road surface can reduce the effects of flooding in two ways: providing additional hydraulic gradient to move runoff through existing pipe networks and reducing the road's susceptibility to flooding due to abnormally high tides backing up through existing drainage infrastructure with the increased elevation. Based on historical data obtained from the Town of Hempstead Department of Conservation and Waterways, tides exceed elevation 3.5 feet above sea level approximately 20 to 25 times each year, but only exceed elevation four feet above sea level approximately four to five times each year. Therefore, roads lower than elevation four feet above sea level have been considered for elevation. These include the following:

| **Road Raising Locations** | |
|---|---|
| **Location** | **Hamlet** |
| Shore Road | Bellmore |
| Mermaid Canal | Wantagh |

| Road Raising Locations | |
|---|---|
| Moreland Avenue | Oceanside |
| Royal Avenue | Oceanside |
| Carrel Boulevard | Oceanside |
| Neptune Avenue | Seaford |
| South Street | Seaford |
| Beaver Turn | Seaford |
| Helen Court | Merrick |
| George Court | Merrick |

Compliance with the Uniform Relocation Act (URA) is required for all projects that involve land acquisition (permanent and temporary easements, rights-of-way, and real property) for the purpose of enabling project construction. It is anticipated that installation of the check valves would not require easements, rights-of way, or real property acquisition. The other drainage improvements would not involve real property acquisition but are likely to require temporary and possibly permanent easements and rights-of-way.

In general construction would be restricted to one side of any roadway or intersection until that side is completely open to all vehicular traffic. The sidewalk in a particular block would not be removed until the completion of the curb in that block. Trees would be protected from damage during construction, except for those that require removal. Existing concrete catch basin areas along roads that would be raised would be demolished and removed, unless it cannot be removed without damaging the remainder of the catch basin. Yard drains will be installed where the road raising leaves front yards below the sidewalk grade. A property improvement plan will be prepared for each individual private property where improvements will be required. The Town of Hempstead would acquire owners' permission before the design is finalized. Construction hours of operation would be limited to normal working hours.

## CONSISTENCY WITH THE NYS COASTAL MANAGEMENT PLAN POLICIES

*Policy 7:* *Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.*

**Response:** The Project areas are in the vicinity of rare plants and animals and significant natural communities. A request was sent to the New York Natural Heritage Program (NHP) to review its records of concern for any rare or state-listed animals or plants, or significant natural communities, at this site or in its immediate vicinity. An official response from the NHP on September 19, 2019 (**attached**), provided a list of rare plants, rare animals, and significant natural communities have been documented in the Natural Heritage database within or near the project overview areas. None of the project activities would occur in the areas described in this list.

According the United State Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database two endangered species (roseate tern [*Sterna dougallii dougallii*] and sandplain gerardia [*Agalinis acuta*]) and four threatened species (northern long-eared bat [*Myotis septentrionalis*], piping plover [*Charadrius melodus*], red knot [*Calidris canutus rufa*], and seabeach amaranth [*Amaranthus pumilus*]) that are potentially associated with the project area. No

critical habit for these species was identified in IPaC. The IPaC review also indicated that there are 58 migratory birds of concern that could potentially be affected by the proposed project. Since the proposed project would not involve the removal of trees and no critical habitats were identified in the official species list within the project area, Governor's Office of Storm Recovery (GOSR) determined that this project would have No Effect on critical habitats, the roseate tern, sandplain gerardia, NLEB, piping plover, red knot, or the seabeach amaranth. GOSR determined that the project would have no significant adverse impact on migratory birds or their habitat, since no trees would be removed and construction will occur within disturbed areas of existing suburban residential developments. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance. GOSR submitted a consultation letter to USFWS on September 27, 2019 (**attached**); an official response from the USFWS has not been received to date.

The Proposed Action would disturb the individual project areas during construction. BMPs would minimize these disturbances, minimizing their effect on the natural environment. The Proposed Action is consistent with this policy.

*Policy 11:* *Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.*

**Response:** According to the September 11, 2009, Flood Insurance Rate Map (FIRM) panels 36059C0218G, 36059C0219G, 36059C0238G, 36059C0241G, 36059C0242G, 36059C0244G, 36059C0261G, 36059C0263G, 36059C0307G, 25 of the 29 check valves are within the 100-year floodplain, 24 of which are within Flood Zone AE (1% annual chance flood, with base flood elevations ranging from seven to nine feet) and one of which is within Flood Zone VE (coastal flood zone with velocity hazard). Twenty-two of the 25 proposed drainage improvements are within the 100-year floodplain: approximately 18.32 acres of which are within Flood Zone AE and 0.04 acres of which are in Flood Zone VE. Approximately 0.79 acres are within the 0.2 percent annual chance flood hazard area (**Figure 4**). There are no proposed changes to buildings or any new buildings that would require raising above flood levels. The Proposed Project is consistent with this policy.

*Policy 12:* *Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.*

**Response:** The Proposed Action would occur in areas that have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The proposed drainage improvements are designed to provide flood reduction, through improving existing natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure. The Proposed Project is consistent with this policy.

*Policy 13:* *The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.*

**Response:** The Proposed Action would occur in areas that have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The proposed drainage improvements are designed to provide flood reduction, through improving existing natural and engineered stormwater management and flood control systems. Long Island's south shore communities have had to regularly deal with flooding overwhelming the drainage infrastructure due to its low elevation above sea level. Erosion has not been an identified problem in the project areas. While not designed as an erosion protection system, the efficient drainage system proposed by the project would reduce overland sheet flow, and therefore, reduce erosion The Proposed Project is consistent with this policy.

*Policy 14:* *Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.*

**Response:** Long Island's south shore communities have had to regularly deal with flooding overwhelming the drainage infrastructure due to its low elevation above sea level. Erosion has not been an identified problem in the project areas. While not designed as an erosion protection system, the efficient drainage system proposed by the project would reduce overland sheet flow, and therefore, reduce erosion. The Proposed Project is consistent with this policy.

*Policy 16:* *Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.*

**Response:** The Proposed Action does not involve construction of erosion protective structures. The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, installing a detention system and new inlets, and raising the elevation of 10 roads. Erosion has not been an identified problem in the project areas. While not designed as an erosion protection system, the efficient drainage system proposed by the project would reduce overland sheet flow, and therefore, reduce erosion. The use of public funds for the Proposed Action is consistent with this policy.

*Policy 17:* *Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.*

**Response:** The project area is not overly susceptible to coastal erosion but is within the 100-year floodplain. The proposed drainage improvements are designed to provide

flood reduction, through improving existing natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure. The Proposed Project is consistent with this policy.

*Policy 30:* *Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to State and National water quality standards.*

**Response:** The Proposed Action involves stormwater drainage and would not involve discharge of municipal, industrial, and commercial pollutants. The Proposed Project is consistent with this policy.

*Policy 33:* *Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.*

**Response:** An New York State Department of Environmental Conservation (NYSDEC) permit will obtained for disturbance of tidal wetlands, excavation and fill in navigable waters, and discharge into the navigable waters. These activities would occur during project construction and would cease once construction is completed. The Proposed Action will adhere to the natural resource permit conditions and water quality certification specific conditions, as detailed in the NYSDEC Permit. The Proposed Action is consistent with this policy.

*Policy 38:* *The quality and quantity of surface water and groundwater supplies, will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.*

**Response:** The Proposed Action will disturb the surface during construction, and surface disturbance would cease once construction is complete. An NYSDEC permit will be obtained for disturbance of tidal wetlands. The Proposed Action will adhere to the natural resource permit conditions and water quality certification specific conditions, as detailed in the NYSDEC Permit.

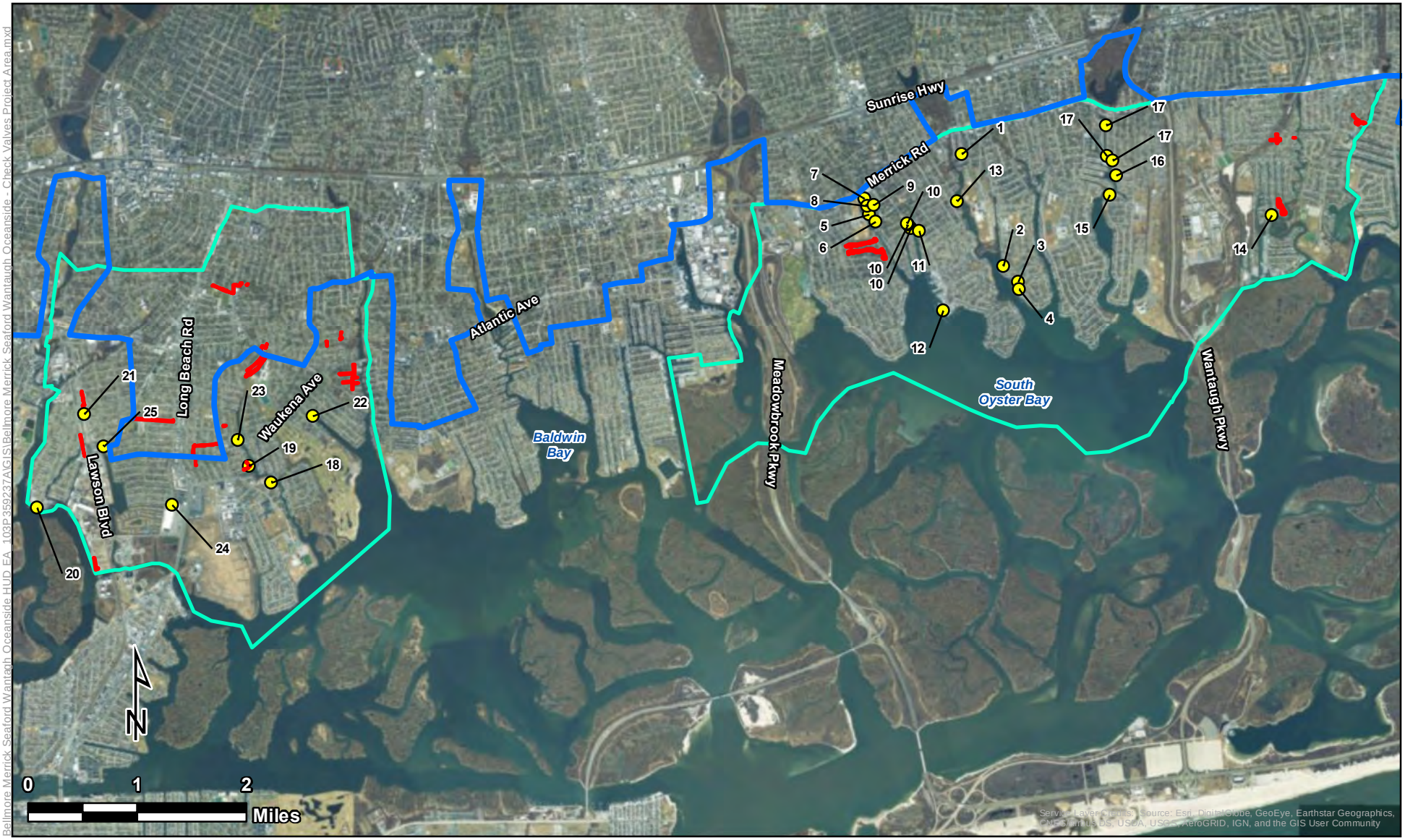
The Proposed Action is also within the boundaries of the Nassau-Suffolk Sole Source Aquifer System. In accordance with 24 C.F.R. Part 58 environmental review procedure GOSR has undertaken review of the Proposed Action for conformance with the Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300(f) et seq., and 21 U.S.C. 349) as amended, and Environmental Protection Agency ("EPA") regulations pertaining to Sole Source Aquifers found at 40 C.F.R. Part 149. The Proposed Action is consistent with this policy.

*Policy 40:* *Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.*

**Response:** No effluent will be discharged. Proposed Action is consistent with this policy.

*Policy 44:* *Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.*

**Response:** Seven of the drainage improvements are within NYSDEC tidal-coastal wetlands, and 23 of the 29 check valves and an additional nine drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands (**Figure 5**). These wetlands have been disturbed previously by residential development and infrastructure within the communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside, south of Merrick Road. The Proposed Action will result in physical disturbances to these wetland areas only during construction. An NYSDEC permit will be obtained for disturbance of tidal wetlands. The Proposed Action will adhere to the natural resource permit conditions and water quality certification specific conditions, as detailed in the NYSDEC Permit. The Proposed Action is consistent with this policy.




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Landward Coastal Extent
- Drainage Improvements
- Project Overiew Area
- LWRP Communities

# *Coastal Zones*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 1**

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

**Figure 2**

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Area*

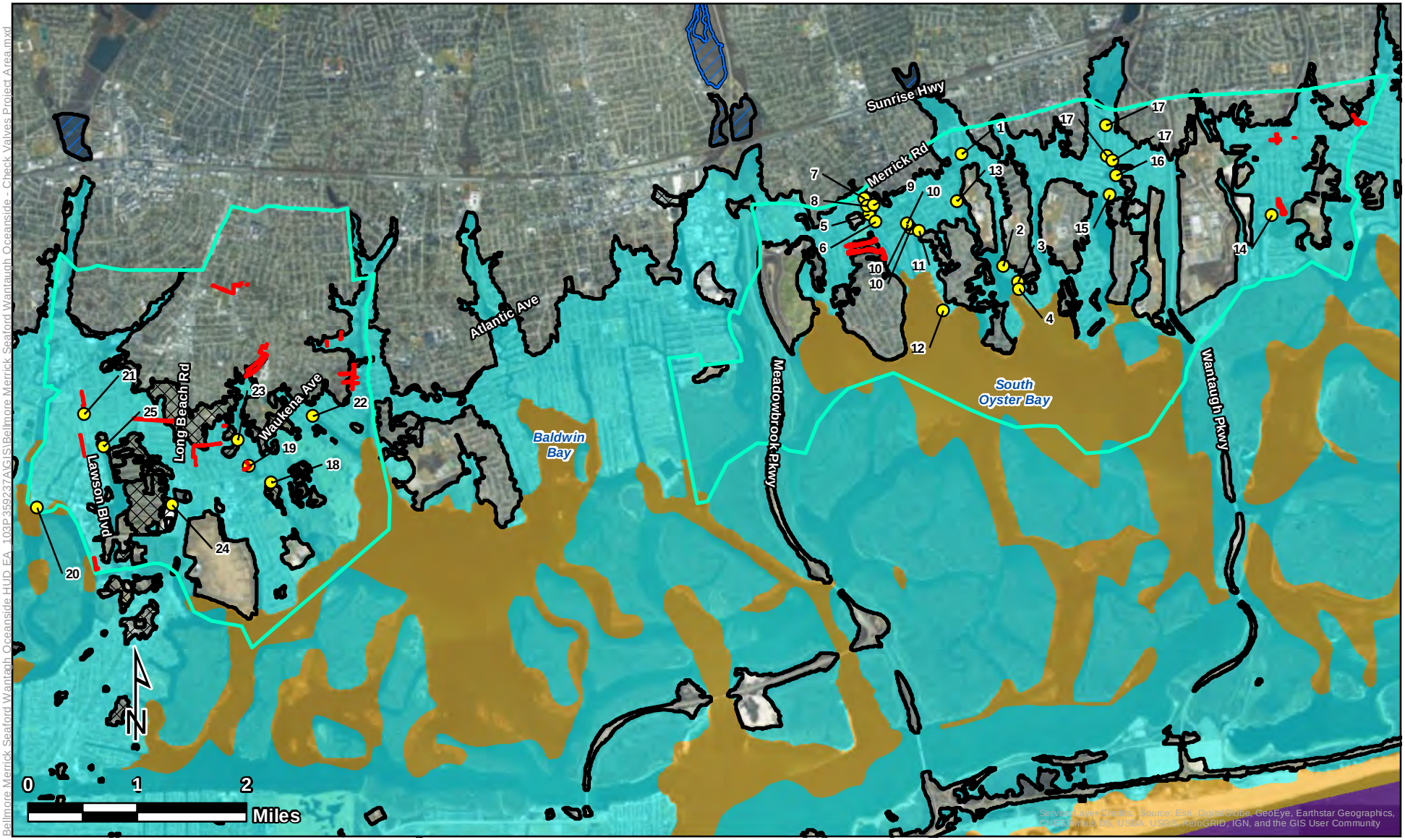
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

TETRA TECH

**Figure 3**




## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

**Flood Zones**

- Zone AE- within the 1% annual chance flood
- Zone VE- within the 1% annual chance flood: coastal flood zone with velocity hazard
- Open Water
- Zone A- within the 1% annual chance flood
- Zone X- 0.2 % annual chance flood
- Zone X- Area of minimal flood hazard

TETRA TECH

# *Flood Zones*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Figure 4**

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Tidal - Coastal Wetlands
- Tidal - Coastal Wetlands 300ft Buffer

# *Tidal-Coastal Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 5**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Fish and Wildlife, New York Natural Heritage Program**
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

September 19, 2019

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project
County: Nassau Town/City: Hempstead

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur within or near the project overview areas. Since specific locations of proposed work were not provided, we could not assess potential impacts of specific proposed activities.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 1 Office, Division of Environmental Permits, at dep.r1@dec.ny.gov, (631) 444-0365.

Sincerely,

Nick Conrad

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1089

New York Natural Heritage Program
625 Broadway, Albany, NY 12233-4757
(518) 402-8935 naturalheritage@dec.ny.gov

Report on Rare Animals, Rare Plants, and Significant Natural Communities

The following rare plants, rare animals, and significant natural communities**
have been documented in the Natural Heritage database
within or near the project overview areas of the

# Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project

September, 2019

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Bellmore/Merrick** | | | | |
| **Fighting Island (off south end of Merrick Rpad Town Park and Golf Course, along Meadowbrook Parkway)** | | | | |
| Birds (breeding) | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| **Cow Meadow County Park, 1992, in sand in a shrub thicket adjacent to salt marsh** | | | | |
| Plants | Fringed Boneset | *Eupatorium torreyanum* | Threatened | S2 |
| **Merrick County Preserve, 1985, in red maple woods along Cedar Swamp Creek, near Sunrise Highway** | | | | |
| Plants | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| **Along shoreline of Freeport Creek (including Merrick Road Town Park), Merrick Bay, Cedar Swamp Creek (including Newbridge Road Park), Newbridge Creek, and Bellmore Creek** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Seaford/Wantagh** | | | | |
| **Olivers Island (salt marsh across Flat Creek from Wantagh County Park)** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| **Cedar Creek County Park (south of Wastewater Treatment Facility)** | | | | |
| Birds (nesting) | Least Tern | *Sternula antillarum* | Threatened | S3B |
| **Wantagh Pond, 2004 (north side of Sunrise Highway between Old Mill Road and Wantagh State Parkway)** | | | | |
| Plants | Small Floating Bladderwort | *Utricularia radiata* | Threatened | S2 |
| **Tackapusha County Preserve, at pond and red maple swamp at south end near Merrick Road and Seaford Avenue, near Tackapusha Museum** | | | | |
| Plants 1989 | Weak Rush | *Juncus debilis* | Endangered | S1 |
| 1992 | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| Dragonflies 2008 | Seaside Dragonlet | *Erythrodiplax berenice* | Unlisted | S2 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Along shoreline of Flat Creek (including Wantagh County Park), Island Creek and Cedar Creek (including Cedar Creek County Park), and Seamans Creek (including Seamans Neck Park); in Seamans Neck Park, and on Olivers Island** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Along southeast shore of Seamans Creek Park, at mouths of Seamans Creek and Seaford Creek** | | | | |
| Communities | Marine Back-barrier Lagoon | | | S2 |

## Oceanside

| | | | | |
|---|---|---|---|---|
| **Salt marsh northeast of Oceanside Town Park and southwest of Middle Bay Golf Course** | | | | |
| Birds (nesting) | Seaside Sparrow | *Ammodramus maritimus* | Special Concern | S2S3B |
| **Trees in block bounded by Bayfield Boulevard, Woodward Street, Freeman Avenue, and Waukena Avenue** | | | | |
| Birds (nesting) | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| **Oceanside Town Park, 1992, in dry, sandy ground at the disturbed upper edge of saltmarsh** | | | | |
| Plants | Marsh Straw Sedge | *Carex hormathodes* | Threatened | S2S3 |
| **Along shoreline of Oceanside, Barnums Channel, Garrett Lead, Oceanside Town Park, and Parsonage Cove; and in marsh northeast of Oceanside Town Park** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

## Just south of all project overview areas

| | | | | |
|---|---|---|---|---|
| **The salt marshes and islands south of the project overview areas support the following:** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| | Gull-billed Tern | *Gelochelidon nilotica* | Unlisted | S1 |
| | Forster's Tern | *Sterna forsteri* | Unlisted | S1 |
| | Snowy Egret | *Egretta thula* | Unlisted | S2S3 |
| | Little Blue Heron | *Egretta caerulea* | Unlisted | S2 |
| | Glossy Ibis | *Plegadis falcinellus* | Unlisted | S2 |
| | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Parsonage Island, just south of Oceanside Town Park, also supports the following:** | | | | |
| Birds (wintering) | Harlequin Duck | *Histrionicus histrionicus* | Unlisted | S1N |
| **Long Creek and Woodcleft Canal, just west and south of Cow Meadow, has records of:** | | | | |
| Fish | Lake Chub | *Couesius plumbeus* | Unlisted | S2S3 |

* Conservation status in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:

S1 = Critically imperiled
S2 = Imperiled
S3 = Rare or uncommon
S4 = Abundant and apparently secure
S5 = Demonstrably abundant and secure
SNA = Status not assessed or assigned.

B after a rank indicates the status for breeding populations of that species.
N after a rank indicates the status for wintering (nonbreeding) populations of that species.

Information about many of the rare animals, rare plants, and natural communities in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org.

** Natural communities in this report are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys.

**New York Natural Heritage Program**
SUNY College of Environmental Science and Forestry
In partnership with NYS Department of Environmental Conservation
625 Broadway, Albany, NY 12233-4757, (518) 402-8935, NaturalHeritage@dec.ny.gov

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

*Via Electronic Mail*

September 27, 2019

Mr. Steve Papa
U.S. Fish and Wildlife Service
Long Island Field Office
340 Smith Road
Shirley, NY 11967

**Re: Section 7 Project Review - ESA/MBTA/BGEPA Consultation for the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York**

Dear Mr. Papa:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York (see **Figures 1 and 2**).

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) notice of the proposed project and to document compliance with Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), as well as the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703-712), and the Bald and Golden Eagle Protection Act of 1940 (BGEPA) (54 Stat. 240, as amended; 16 U.S.C. 668-668c).

Program Overview: Hurricane Irene in 2011, followed nearly 14 months later by Superstorm Sandy, overwhelmed the south shore's stormwater drainage systems. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms. The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure.

Area of Potential Effect: The projects will be implemented in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York. (see **Figures 1 and 2**). The Town of Hempstead is located along the south shore of Long Island and borders Garrett Lead, Baldwin Bay, South Oyster Bay.

Proposed Project Description: The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick. For additional information, please see **Figure 2**.

**Wetlands:** See the attached wetland map, **Figures 3 and 4**. The appropriate permits would be acquired prior to any disturbance within or near wetlands that would minimize any project-related effects on the wetlands.

- None of the check valve sites is within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites are within estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands.
- Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional 7 drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands. None of the project sites is within NYSDEC freshwater wetlands, but 4 of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands.

**ESA, Migratory Bird Treaty Act, And Bald and Golden Eagle Protection Act Species:** The New York State Natural Heritage Program (NYSNHP) database search completed on September 19, 2019, had records of 23 rare or state-listed animals or plants, or significant natural communities within or near the project overview areas (shown as a green outline on **Figure 2**) of the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project. An additional 14 records were identified just south of the project overview areas. None of the individual project sites would be on or adjacent to the areas in which these state-listed animals or plants, or significant natural communities are found. (See attached **New York Natural Heritage Program Review**.)

The USFWS, Long Island Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the project area. The attached Official Species List identifies two endangered species (roseate tern [*Sterna dougallii dougallii*] and sandplain gerardia [*Agalinis acuta*]) and four threatened species (northern long-eared bat [*Myotis septentrionalis*], piping plover [*Charadrius melodus*], red knot [*Calidris canutus rufa*], and seabeach amaranth [*Amaranthus pumilus*]) that are potentially associated with the project area. No critical

habit for these species was identified in IPaC. The IPaC review also indicated that there are 58 migratory birds of concern that could potentially be affected by the proposed project. Below is a determination of potential effects of the project on each of threatened and endangered species.

**Roseate Tern.** More than 90 percent of New York State's population of roseate terns is made up by a single colony on Great Gull Island, off Long Island's eastern end. The remainder occurs in small groups of often just one or two breeding pairs in variable locations along the south shore of eastern Long Island (Mitra 2008). During the most recent Breeding Bird Atlas, roseate terns were not documented anywhere west of Suffolk County (Mitra 2008). The potential for roseate terns to occur on the project sites is considered extremely low and limited to migrants moving through the area in route to nesting sites elsewhere in the region or to wintering grounds in the southern hemisphere. No critical habitats were identified by USFWS for this species, and migratory birds may temporarily avoid the area during construction due to noise and disturbance. Therefore, GOSR determines that this project would have **no effect on the roseate tern**.

**Sandplain gerardia.** The sandplain gerardia is a hemiparasitic, annual herb from 5.0 cm to 30.0 cm tall, that occurs on sites where there is a lack of competition from other species. This condition commonly results from extremely harsh habitat in soils at all sites are extremely nutrient poor and experiences regular or sporadic disturbance. The sandplain gerardia is known to occur at six sites on Long Island, ranging from small vulnerable populations to large and robust supporting nearly 2000 plants. The known locations on Long Island undergo at least occasional mowing and have experienced herbicide use, small fires, topsoil scarification, and other forms of human activity. They have been found on golf courses, near well-worn trails, grassy areas along roadsides, the Hempstead Plains grasslands, and the sandy moraine on the ocean shore. Residential, commercial and recreational development has encroached on the species community, and agricultural development and sand and gravel mining have destroyed large amounts of potential habitat (US Fish and Wildlife Service 1989). There are no known occurrences of sandplain gerardia on the project sites, but it is within the current species range. No critical habitats were identified by USFWS for this species; and the project site is in a highly developed area and construction will occur within existing rights-of-way and drainage utility systems. Therefore, GOSR determines that this project would have **no effect on the sandplain gerardia**.

**Northern Long-eared Bat (NLEB).** The NLEB is a temperate, insectivorous bat whose life cycle can be coarsely divided into two primary phases - reproduction and hibernation. NLEB hibernate in caves or mines during winter and then emerge in early spring, with males dispersing and remaining solitary until mating season at the end of the summer, and pregnant females forming maternity colonies in which to rear young. No caves or mines occur near the project sites. Summer habitat of the NLEB generally includes upland and riparian forest within heavily forested landscapes. The NLEB is sensitive to fragmentation and urbanization and requires interior forest for both foraging and breeding. Roost trees are usually in intact forest, close to the core and away from large clearings, roads, or other sharp edges. The major concern for this species in relation to this project would be the destruction of potential swarming and/or staging habitat and potential roosts through tree clearing (http://www.dec.ny.gov/animals/106090.html, https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=9045). The projects are proposed for a highly developed suburban residential community. No trees will be removed by the project, and GOSR determines that this project would have **no effect on the NLEB**.

**Piping Plover.** The piping plover is a migratory shorebird that nests on sandy beaches along the Atlantic coast and around the Great Lakes. Steep population declines, primarily due to extensive coastal development, beach engineering activities that alter natural coastal processes (e.g., jetty construction, nourishment), and disturbance

from human recreational use of nesting beaches, led to the species' listing under the federal Endangered Species Act in 1986. Intensive management actions, such as closures of nesting areas to recreation, trapping and removal of nest predators, and control of vegetation have had success, and population sizes have since more than doubled (Elliot-Smith and Haig 2004, Hecht and Melvin 2009).

The breeding range of the piping plover within New York State is limited to the coastlines of Long Island, where plovers nest from Queens to eastern Suffolk County (Wasilco 2008). Most piping plover colonies on Long Island have grown steadily in recent decades in response to protection and management (Houghton 2005, Boretti et al. 2007, Wasilco 2008, Seavey 2009) and currently represent approximately 24 percent of the total Atlantic Coast population (Hecht and Melvin 2009).

The project sites do not contain sandy beaches or dunes that are associated with piping plover breeding habitat. It is therefore unlikely that individuals or breeding pairs would be present within the project site during the breeding season (generally from March 31 to July 31[Elliot-smith and Haig 2004, Sommers 2008] within New York). Therefore, GOSR determines that this project would have **no effect on the piping plover**.

**Red Knot.** The rufa subspecies of the red knot migrates up to 30,000 miles round trip between primary wintering grounds in South America and breeding grounds in the high arctic, with conditions for refueling at staging areas along the Atlantic coast being critical determinants of migration and reproductive success and overall survival (Baker et al. 2004, Morrison et al. 2007). Delaware Bay is the most significant migration staging area for rufa red knots, which time their springtime arrival in the bay to coincide with the peak horseshoe crab spawning period (Baker et al. 2004, Niles et al. 2009). Delaware Bay is the only place in the Western Hemisphere where horseshoe crabs spawn in numbers that enable red knots to almost double their body mass and fuel the remaining leg of their migration to the high arctic (Niles 1999).

Although migrating red knots are known to occur along Long Island (e.g., Jamaica Bay [Tanacredi and Badger 1995:104, Fowle and Kerlinger 2001:81]), none of its beaches, bays, or estuaries are known to be high-use staging areas that support large concentrations of individuals. Instead, red knots are usually seen on Long Island in small groups (e.g., Wells 1996:59). Red knots are highly sensitive to human disturbance at staging sites (Burger et al. 2004, 2007).

The project area is a densely developed suburban area and does not support the horseshoe crab spawning area required for red knot staging areas. Therefore, it is unlikely that red knots would utilize the project sites. There are no transient individuals that would be present during construction that would need to avoid areas under construction. GOSR determines that this project would have **no effect on the red knot**.

**Seabeach Amaranth.** The Seabeach amaranth is a federally and state-listed threatened annual herbaceous plant that was thought to be extinct in New York State until it was rediscovered in 1990. It grows along sandy beaches of the Atlantic coast in areas of accreting shoreline, upper beach, foredune, or overwash flat, as well as beach nourishment sites. Suitable sandy beach and dune habitat for seabeach amaranth does not occur within the project area. Therefore, seabeach amaranth does not have the potential to occur on the project sites. GOSR determines that this project would have **no effect on the seabeach amaranth**.

**Migratory Bird Treaty Act.** According to the USFWS IPaC resource review, there are 58 migratory birds of conservation concern or with potential susceptibilities in offshore areas from certain types of development or activities, including the bald eagle, that could potentially be affected by the proposed project. The bald eagle

(*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) were not identified as birds of conservation concern for this area; they warrant attention because of the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act or for potential susceptibilities in offshore areas to certain types of development or activities. As with other migratory birds, foraging bald eagles may temporarily avoid the area during construction due to noise and disturbance. If USFWS has documentation of the presence of the bald or golden eagle or other migratory birds in this area, GOSR requests that this documentation be provided to GOSR for review.

**Summary and Compliance**

Since the proposed project would not involve the removal of trees and no critical habitats were identified in the official species list within the project area, GOSR determines that this project would have **No Effect** on critical habitats, the roseate tern, sandplain gerardia, NLEB, piping plover, red knot, or the seabeach amaranth. GOSR has determined that the project would have no significant adverse impact on migratory birds or their habitat, since no trees would be removed and construction will occur within disturbed areas of existing suburban residential developments. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance.

If you have questions or require additional information regarding this request, please contact me at (646) 256-9485 or James.McAllister@stormrecovery.ny.gov. Thank you for your time and consideration.

Sincerely,

James P. McAllister
Senior Environmental Project Manager
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
500 Bi-County Boulevard, Suite 300
Farmingdale, NY 11735

Attachments:
Figure 1 - Project Location
Figure 2 - Project Overview Area
Figure 3 – NWI and NYS Freshwater Wetlands
Figure 4 – NYS Tidal-Coastal Wetlands
New York Natural Heritage Program Review
USFWS Species List - Long Island Ecological Services Field Office

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

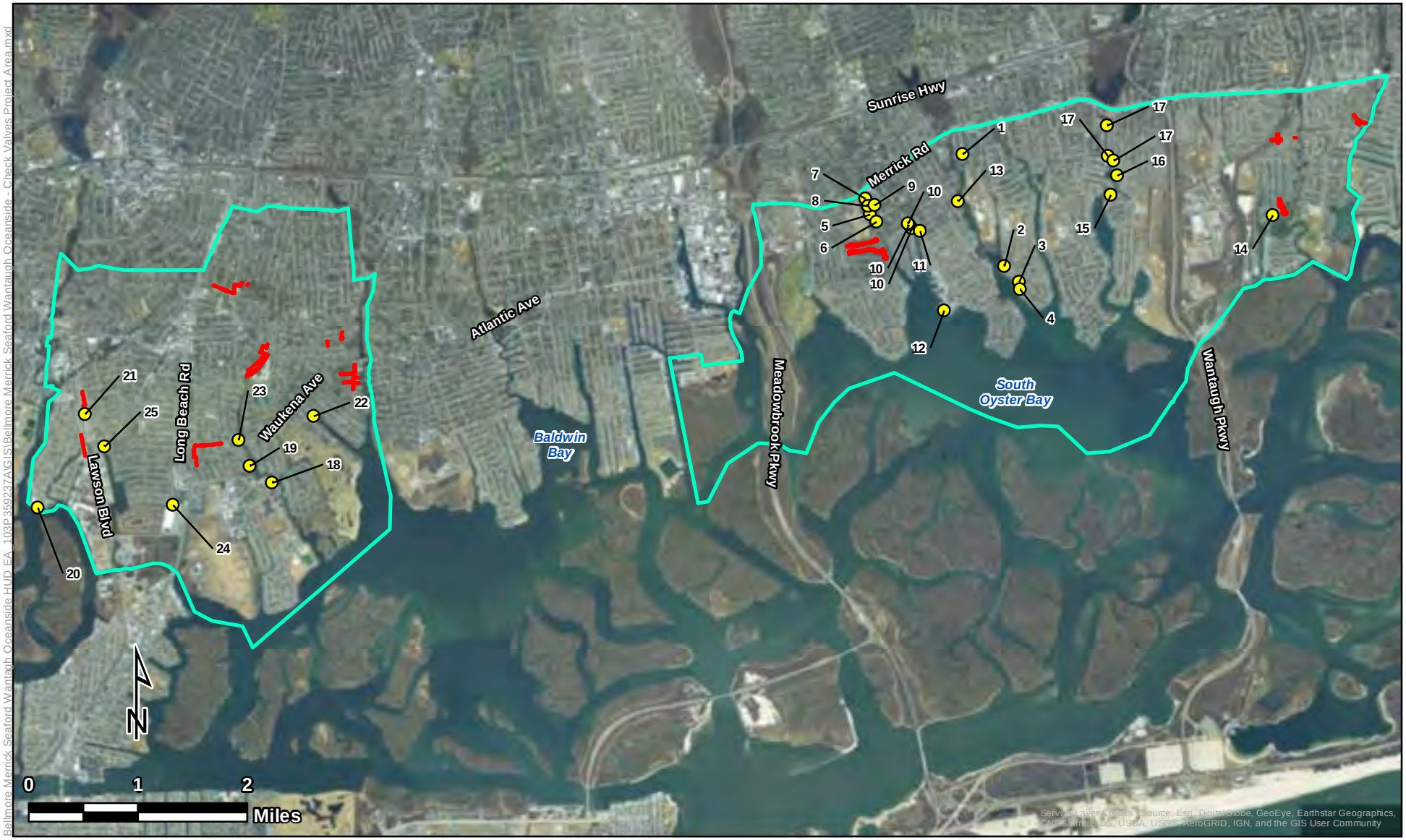
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

**Figure 1**




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Area*

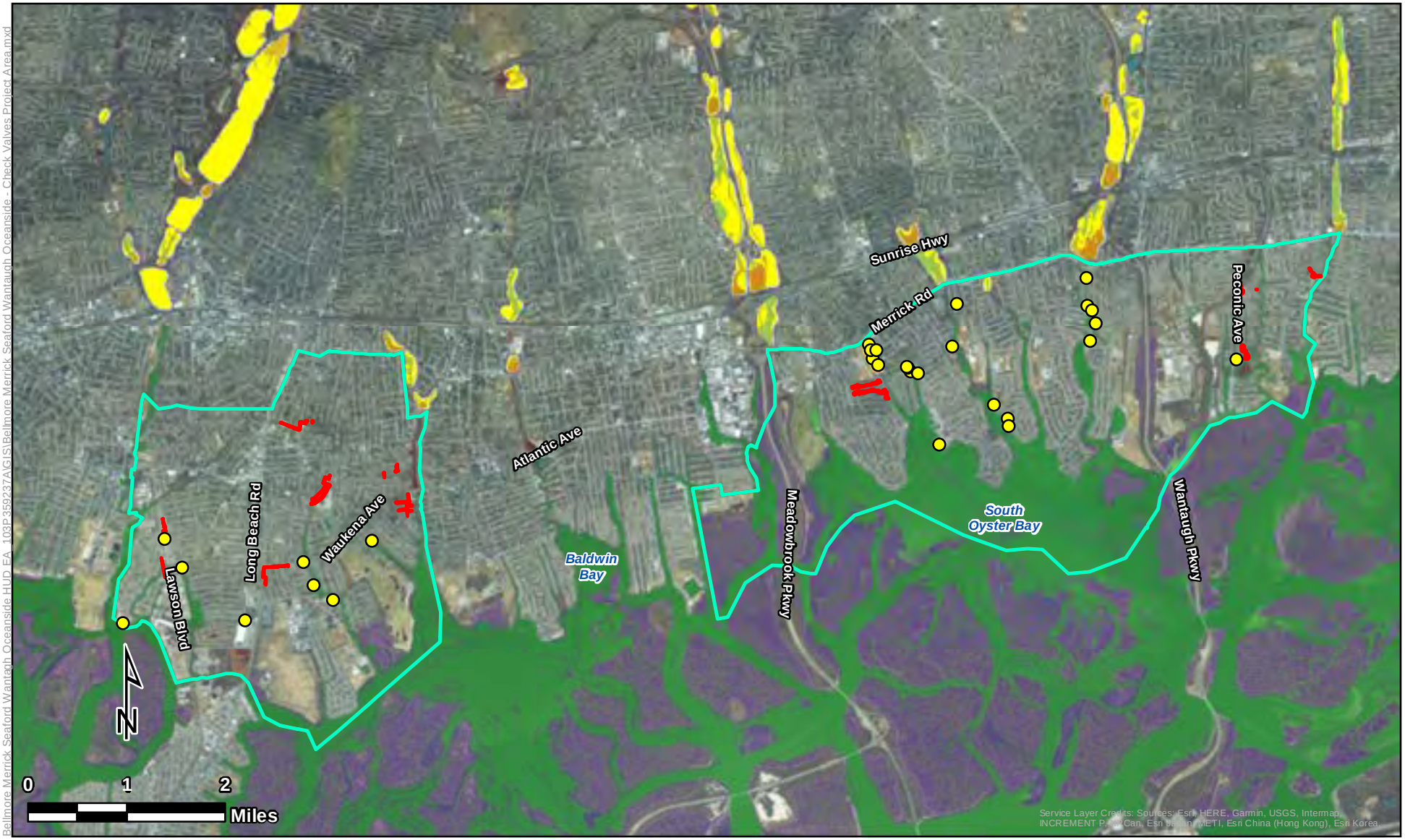
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

TETRA TECH

**Figure 2**




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

**NWI Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

# *NYS Freshwater and NWI Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 3**

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Tidal - Coastal Wetlands
- Tidal - Coastal Wetlands 300ft Buffer

# *Tidal-Coastal Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 4**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

September 19, 2019

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project
County: Nassau Town/City: Hempstead

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur within or near the project overview areas. Since specific locations of proposed work were not provided, we could not assess potential impacts of specific proposed activities.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 1 Office, Division of Environmental Permits, at dep.r1@dec.ny.gov, (631) 444-0365.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1089

New York Natural Heritage Program
625 Broadway, Albany, NY 12233-4757
(518) 402-8935 naturalheritage@dec.ny.gov

Report on Rare Animals, Rare Plants, and Significant Natural Communities

The following rare plants, rare animals, and significant natural communities**
have been documented in the Natural Heritage database
within or near the project overview areas of the

# Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project

September, 2019

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Bellmore/Merrick** | | | | |
| **Fighting Island (off south end of Merrick Rpad Town Park and Golf Course, along Meadowbrook Parkway)** | | | | |
| Birds (breeding) | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| **Cow Meadow County Park, 1992, in sand in a shrub thicket adjacent to salt marsh** | | | | |
| Plants | Fringed Boneset | *Eupatorium torreyanum* | Threatened | S2 |
| **Merrick County Preserve, 1985, in red maple woods along Cedar Swamp Creek, near Sunrise Highway** | | | | |
| Plants | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| **Along shoreline of Freeport Creek (including Merrick Road Town Park), Merrick Bay, Cedar Swamp Creek (including Newbridge Road Park), Newbridge Creek, and Bellmore Creek** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Seaford/Wantagh** | | | | |
| **Olivers Island (salt marsh across Flat Creek from Wantagh County Park)** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| **Cedar Creek County Park (south of Wastewater Treatment Facility)** | | | | |
| Birds (nesting) | Least Tern | *Sternula antillarum* | Threatened | S3B |
| **Wantagh Pond, 2004 (north side of Sunrise Highway between Old Mill Road and Wantagh State Parkway)** | | | | |
| Plants | Small Floating Bladderwort | *Utricularia radiata* | Threatened | S2 |
| **Tackapusha County Preserve, at pond and red maple swamp at south end near Merrick Road and Seaford Avenue, near Tackapusha Museum** | | | | |
| Plants 1989 | Weak Rush | *Juncus debilis* | Endangered | S1 |
| 1992 | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| Dragonflies 2008 | Seaside Dragonlet | *Erythrodiplax berenice* | Unlisted | S2 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Along shoreline of Flat Creek (including Wantagh County Park), Island Creek and Cedar Creek (including Cedar Creek County Park), and Seamans Creek (including Seamans Neck Park); in Seamans Neck Park, and on Olivers Island** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Along southeast shore of Seamans Creek Park, at mouths of Seamans Creek and Seaford Creek** | | | | |
| Communities | Marine Back-barrier Lagoon | | | S2 |

## Oceanside

| | | | | |
|---|---|---|---|---|
| **Salt marsh northeast of Oceanside Town Park and southwest of Middle Bay Golf Course** | | | | |
| Birds (nesting) | Seaside Sparrow | *Ammodramus maritimus* | Special Concern | S2S3B |
| **Trees in block bounded by Bayfield Boulevard, Woodward Street, Freeman Avenue, and Waukena Avenue** | | | | |
| Birds (nesting) | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| **Oceanside Town Park, 1992, in dry, sandy ground at the disturbed upper edge of saltmarsh** | | | | |
| Plants | Marsh Straw Sedge | *Carex hormathodes* | Threatened | S2S3 |
| **Along shoreline of Oceanside, Barnums Channel, Garrett Lead, Oceanside Town Park, and Parsonage Cove; and in marsh northeast of Oceanside Town Park** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

## Just south of all project overview areas

| | | | | |
|---|---|---|---|---|
| **The salt marshes and islands south of the project overview areas support the following:** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| | Gull-billed Tern | *Gelochelidon nilotica* | Unlisted | S1 |
| | Forster's Tern | *Sterna forsteri* | Unlisted | S1 |
| | Snowy Egret | *Egretta thula* | Unlisted | S2S3 |
| | Little Blue Heron | *Egretta caerulea* | Unlisted | S2 |
| | Glossy Ibis | *Plegadis falcinellus* | Unlisted | S2 |
| | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Parsonage Island, just south of Oceanside Town Park, also supports the following:** | | | | |
| Birds (wintering) | Harlequin Duck | *Histrionicus histrionicus* | Unlisted | S1N |
| **Long Creek and Woodcleft Canal, just west and south of Cow Meadow, has records of:** | | | | |
| Fish | Lake Chub | *Couesius plumbeus* | Unlisted | S2S3 |

* Conservation status in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:

S1 = Critically imperiled
S2 = Imperiled
S3 = Rare or uncommon
S4 = Abundant and apparently secure
S5 = Demonstrably abundant and secure
SNA = Status not assessed or assigned.

B after a rank indicates the status for breeding populations of that species.
N after a rank indicates the status for wintering (nonbreeding) populations of that species.

Information about many of the rare animals, rare plants, and natural communities in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org.

** Natural communities in this report are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys.

**New York Natural Heritage Program**
SUNY College of Environmental Science and Forestry
In partnership with NYS Department of Environmental Conservation
625 Broadway, Albany, NY 12233-4757, (518) 402-8935, NaturalHeritage@dec.ny.gov

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003


In Reply Refer To: September 26, 2019
Consultation Code: 05E1LI00-2019-SLI-0712
Event Code: 05E1LI00-2019-E-01642
Project Name: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project (Project Sites)

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Long Island Ecological Services Field Office**
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

# Project Summary

Consultation Code: 05E1LI00-2019-SLI-0712

Event Code: 05E1LI00-2019-E-01642

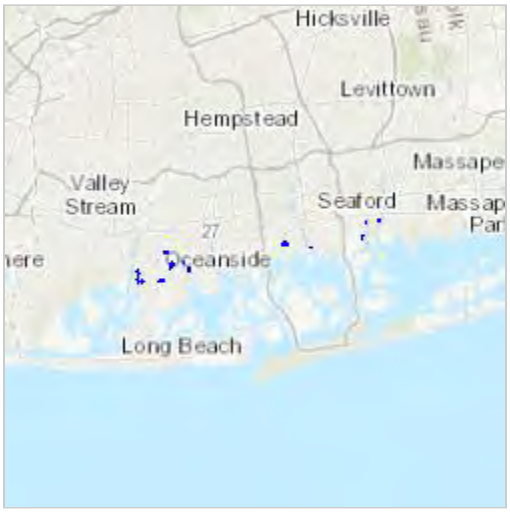
Project Name: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project (Project Sites)

Project Type: LAND - FLOODING

Project Description: The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, culverts and detention ponds; and raising several roads at several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.65006130023556N73.55017079728022W




Counties: Nassau, NY

# Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME | STATUS |
|---|---|
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |

## Birds

| NAME | STATUS |
|---|---|
| Piping Plover *Charadrius melodus*<br>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6039 | Threatened |
| Red Knot *Calidris canutus rufa*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1864 | Threatened |
| Roseate Tern *Sterna dougallii dougallii*<br>Population: Northeast U.S. nesting population<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/2083 | Endangered |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Sandplain Gerardia *Agalinis acuta*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8128 | Endangered |
| Seabeach Amaranth *Amaranthus pumilus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8549 | Threatened |

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# APPENDIX E
# USFWS AND NYNHP
# CORRESPONDENCE

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Field Office
340 Smith Road
Shirley, NY 11967
Phone: (631) 286-0485 Fax: (631) 286-4003
http://www.fws.gov/northeast/nyfo

To: James McAllister

Date: September 30, 2019

USFWS File No:

Regarding your: ☒ letter ☐ FAX ☒ E-mail dated: September 30, 2019

For project: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project,

Located:

In Town/County: Hempstead/Nassau

**Pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Fish and Wildlife Service:**

☒ Acknowledges receipt of your "no effect" determination. No further ESA coordination or consultation is required.

☐ Acknowledges receipt of your determination. Please provide copy of your determination and supporting materials to any involved Federal agency for their final ESA determination.

☐ Is taking no action pursuant to ESA or any other legislation at this time but would like to be kept informed of project developments.

As a reminder, until the proposed project is complete, we recommend that you check our website (http://www.fws.gov/northeast/nyfo/es/section7.htm) every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project area is current. Should project plans change or additional information on listed or proposed species or critical habitat become available, this determination may be reconsidered.

**Pursuant to the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*),**

☐ Requests additional time for review.

☐ Is providing FWCA comments (see attached).

☐ Will provide FWCA comments separately.

☐ Is taking no action pursuant to FWCA due to lack of funding.

☐ Has no objection pursuant to the FWCA.

☐ Is taking no action pursuant to the FWCA at this time but would like to be kept informed of project developments.

USFWS Contact(s): _____ Date 9/30/2019

Supervisor: _____ Date _____

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

*Via Electronic Mail*

September 27, 2019

Mr. Steve Papa
U.S. Fish and Wildlife Service
Long Island Field Office
340 Smith Road
Shirley, NY 11967

**Re: Section 7 Project Review - ESA/MBTA/BGEPA Consultation for the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York**

Dear Mr. Papa:

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York (see **Figures 1 and 2**).

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) notice of the proposed project and to document compliance with Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), as well as the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703-712), and the Bald and Golden Eagle Protection Act of 1940 (BGEPA) (54 Stat. 240, as amended; 16 U.S.C. 668-668c).

Program Overview: Hurricane Irene in 2011, followed nearly 14 months later by Superstorm Sandy, overwhelmed the south shore's stormwater drainage systems. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms. The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure.

Area of Potential Effect: The projects will be implemented in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York. (see **Figures 1 and 2**). The Town of Hempstead is located along the south shore of Long Island and borders Garrett Lead, Baldwin Bay, South Oyster Bay.

Proposed Project Description: The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick. For additional information, please see **Figure 2**.

**Wetlands:** See the attached wetland map, **Figures 3 and 4**. The appropriate permits would be acquired prior to any disturbance within or near wetlands that would minimize any project-related effects on the wetlands.

- None of the check valve sites is within the USFWS National Wetland Inventory (NWI) wetlands. Four of the drainage improvement sites are within estuarine and marine deepwater wetlands and freshwater forested/shrub wetlands.
- Seven of the drainage improvements are within New York State Department of Environmental Conservation (NYSDEC) tidal-coastal wetlands, and 23 of the 29 check valves and an additional 7 drainage improvement locations are within the 300-foot buffer of NYSDEC tidal-coastal wetlands. None of the project sites is within NYSDEC freshwater wetlands, but 4 of the check valve locations are within the 300-foot buffer of NYSDEC freshwater wetlands.

**ESA, Migratory Bird Treaty Act, And Bald and Golden Eagle Protection Act Species:** The New York State Natural Heritage Program (NYSNHP) database search completed on September 19, 2019, had records of 23 rare or state-listed animals or plants, or significant natural communities within or near the project overview areas (shown as a green outline on **Figure 2**) of the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project. An additional 14 records were identified just south of the project overview areas. None of the individual project sites would be on or adjacent to the areas in which these state-listed animals or plants, or significant natural communities are found. (See attached **New York Natural Heritage Program Review**.)

The USFWS, Long Island Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the project area. The attached Official Species List identifies two endangered species (roseate tern [*Sterna dougallii dougallii*] and sandplain gerardia [*Agalinis acuta*]) and four threatened species (northern long-eared bat [*Myotis septentrionalis*], piping plover [*Charadrius melodus*], red knot [*Calidris canutus rufa*], and seabeach amaranth [*Amaranthus pumilus*]) that are potentially associated with the project area. No critical

habit for these species was identified in IPaC. The IPaC review also indicated that there are 58 migratory birds of concern that could potentially be affected by the proposed project. Below is a determination of potential effects of the project on each of threatened and endangered species.

**Roseate Tern.** More than 90 percent of New York State's population of roseate terns is made up by a single colony on Great Gull Island, off Long Island's eastern end. The remainder occurs in small groups of often just one or two breeding pairs in variable locations along the south shore of eastern Long Island (Mitra 2008). During the most recent Breeding Bird Atlas, roseate terns were not documented anywhere west of Suffolk County (Mitra 2008). The potential for roseate terns to occur on the project sites is considered extremely low and limited to migrants moving through the area in route to nesting sites elsewhere in the region or to wintering grounds in the southern hemisphere. No critical habitats were identified by USFWS for this species, and migratory birds may temporarily avoid the area during construction due to noise and disturbance. Therefore, GOSR determines that this project would have **no effect on the roseate tern**.

**Sandplain gerardia.** The sandplain gerardia is a hemiparasitic, annual herb from 5.0 cm to 30.0 cm tall, that occurs on sites where there is a lack of competition from other species. This condition commonly results from extremely harsh habitat in soils at all sites are extremely nutrient poor and experiences regular or sporadic disturbance. The sandplain gerardia is known to occur at six sites on Long Island, ranging from small vulnerable populations to large and robust supporting nearly 2000 plants. The known locations on Long Island undergo at least occasional mowing and have experienced herbicide use, small fires, topsoil scarification, and other forms of human activity. They have been found on golf courses, near well-worn trails, grassy areas along roadsides, the Hempstead Plains grasslands, and the sandy moraine on the ocean shore. Residential, commercial and recreational development has encroached on the species community, and agricultural development and sand and gravel mining have destroyed large amounts of potential habitat (US Fish and Wildlife Service 1989). There are no known occurrences of sandplain gerardia on the project sites, but it is within the current species range. No critical habitats were identified by USFWS for this species; and the project site is in a highly developed area and construction will occur within existing rights-of-way and drainage utility systems. Therefore, GOSR determines that this project would have **no effect on the sandplain gerardia**.

**Northern Long-eared Bat (NLEB).** The NLEB is a temperate, insectivorous bat whose life cycle can be coarsely divided into two primary phases - reproduction and hibernation. NLEB hibernate in caves or mines during winter and then emerge in early spring, with males dispersing and remaining solitary until mating season at the end of the summer, and pregnant females forming maternity colonies in which to rear young. No caves or mines occur near the project sites. Summer habitat of the NLEB generally includes upland and riparian forest within heavily forested landscapes. The NLEB is sensitive to fragmentation and urbanization and requires interior forest for both foraging and breeding. Roost trees are usually in intact forest, close to the core and away from large clearings, roads, or other sharp edges. The major concern for this species in relation to this project would be the destruction of potential swarming and/or staging habitat and potential roosts through tree clearing (http://www.dec.ny.gov/animals/106090.html, https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=9045). The projects are proposed for a highly developed suburban residential community. No trees will be removed by the project, and GOSR determines that this project would have **no effect on the NLEB**.

**Piping Plover.** The piping plover is a migratory shorebird that nests on sandy beaches along the Atlantic coast and around the Great Lakes. Steep population declines, primarily due to extensive coastal development, beach engineering activities that alter natural coastal processes (e.g., jetty construction, nourishment), and disturbance

from human recreational use of nesting beaches, led to the species' listing under the federal Endangered Species Act in 1986. Intensive management actions, such as closures of nesting areas to recreation, trapping and removal of nest predators, and control of vegetation have had success, and population sizes have since more than doubled (Elliot-Smith and Haig 2004, Hecht and Melvin 2009).

The breeding range of the piping plover within New York State is limited to the coastlines of Long Island, where plovers nest from Queens to eastern Suffolk County (Wasilco 2008). Most piping plover colonies on Long Island have grown steadily in recent decades in response to protection and management (Houghton 2005, Boretti et al. 2007, Wasilco 2008, Seavey 2009) and currently represent approximately 24 percent of the total Atlantic Coast population (Hecht and Melvin 2009).

The project sites do not contain sandy beaches or dunes that are associated with piping plover breeding habitat. It is therefore unlikely that individuals or breeding pairs would be present within the project site during the breeding season (generally from March 31 to July 31[Elliot-smith and Haig 2004, Sommers 2008] within New York). Therefore, GOSR determines that this project would have **no effect on the piping plover**.

**Red Knot.** The rufa subspecies of the red knot migrates up to 30,000 miles round trip between primary wintering grounds in South America and breeding grounds in the high arctic, with conditions for refueling at staging areas along the Atlantic coast being critical determinants of migration and reproductive success and overall survival (Baker et al. 2004, Morrison et al. 2007). Delaware Bay is the most significant migration staging area for rufa red knots, which time their springtime arrival in the bay to coincide with the peak horseshoe crab spawning period (Baker et al. 2004, Niles et al. 2009). Delaware Bay is the only place in the Western Hemisphere where horseshoe crabs spawn in numbers that enable red knots to almost double their body mass and fuel the remaining leg of their migration to the high arctic (Niles 1999).

Although migrating red knots are known to occur along Long Island (e.g., Jamaica Bay [Tanacredi and Badger 1995:104, Fowle and Kerlinger 2001:81]), none of its beaches, bays, or estuaries are known to be high-use staging areas that support large concentrations of individuals. Instead, red knots are usually seen on Long Island in small groups (e.g., Wells 1996:59). Red knots are highly sensitive to human disturbance at staging sites (Burger et al. 2004, 2007).

The project area is a densely developed suburban area and does not support the horseshoe crab spawning area required for red knot staging areas. Therefore, it is unlikely that red knots would utilize the project sites. There are no transient individuals that would be present during construction that would need to avoid areas under construction. GOSR determines that this project would have **no effect on the red knot**.

**Seabeach Amaranth.** The Seabeach amaranth is a federally and state-listed threatened annual herbaceous plant that was thought to be extinct in New York State until it was rediscovered in 1990. It grows along sandy beaches of the Atlantic coast in areas of accreting shoreline, upper beach, foredune, or overwash flat, as well as beach nourishment sites. Suitable sandy beach and dune habitat for seabeach amaranth does not occur within the project area. Therefore, seabeach amaranth does not have the potential to occur on the project sites. GOSR determines that this project would have **no effect on the seabeach amaranth**.

**Migratory Bird Treaty Act.** According to the USFWS IPaC resource review, there are 58 migratory birds of conservation concern or with potential susceptibilities in offshore areas from certain types of development or activities, including the bald eagle, that could potentially be affected by the proposed project. The bald eagle

(*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) were not identified as birds of conservation concern for this area; they warrant attention because of the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act or for potential susceptibilities in offshore areas to certain types of development or activities. As with other migratory birds, foraging bald eagles may temporarily avoid the area during construction due to noise and disturbance. If USFWS has documentation of the presence of the bald or golden eagle or other migratory birds in this area, GOSR requests that this documentation be provided to GOSR for review.

**Summary and Compliance**

Since the proposed project would not involve the removal of trees and no critical habitats were identified in the official species list within the project area, GOSR determines that this project would have **No Effect** on critical habitats, the roseate tern, sandplain gerardia, NLEB, piping plover, red knot, or the seabeach amaranth. GOSR has determined that the project would have no significant adverse impact on migratory birds or their habitat, since no trees would be removed and construction will occur within disturbed areas of existing suburban residential developments. It is anticipated that passerine birds would temporarily leave the area during construction due to noise and disturbance.

If you have questions or require additional information regarding this request, please contact me at (646) 256-9485 or James.McAllister@stormrecovery.ny.gov. Thank you for your time and consideration.

Sincerely,

James P. McAllister
Senior Environmental Project Manager
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
500 Bi-County Boulevard, Suite 300
Farmingdale, NY 11735

Attachments:
Figure 1 - Project Location
Figure 2 - Project Overview Area
Figure 3 – NWI and NYS Freshwater Wetlands
Figure 4 – NYS Tidal-Coastal Wetlands
New York Natural Heritage Program Review
USFWS Species List - Long Island Ecological Services Field Office

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

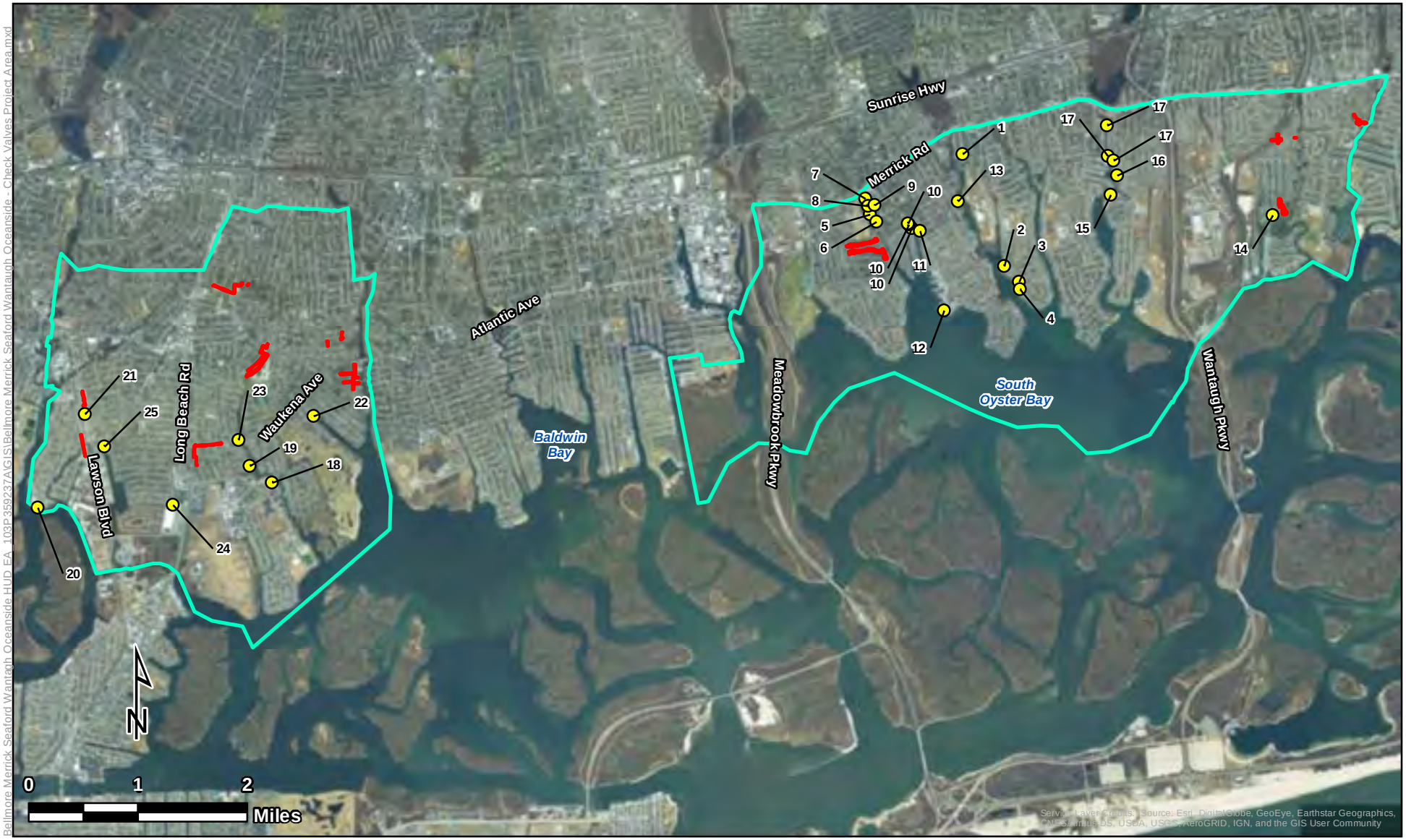
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

**Figure 1**




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Area*

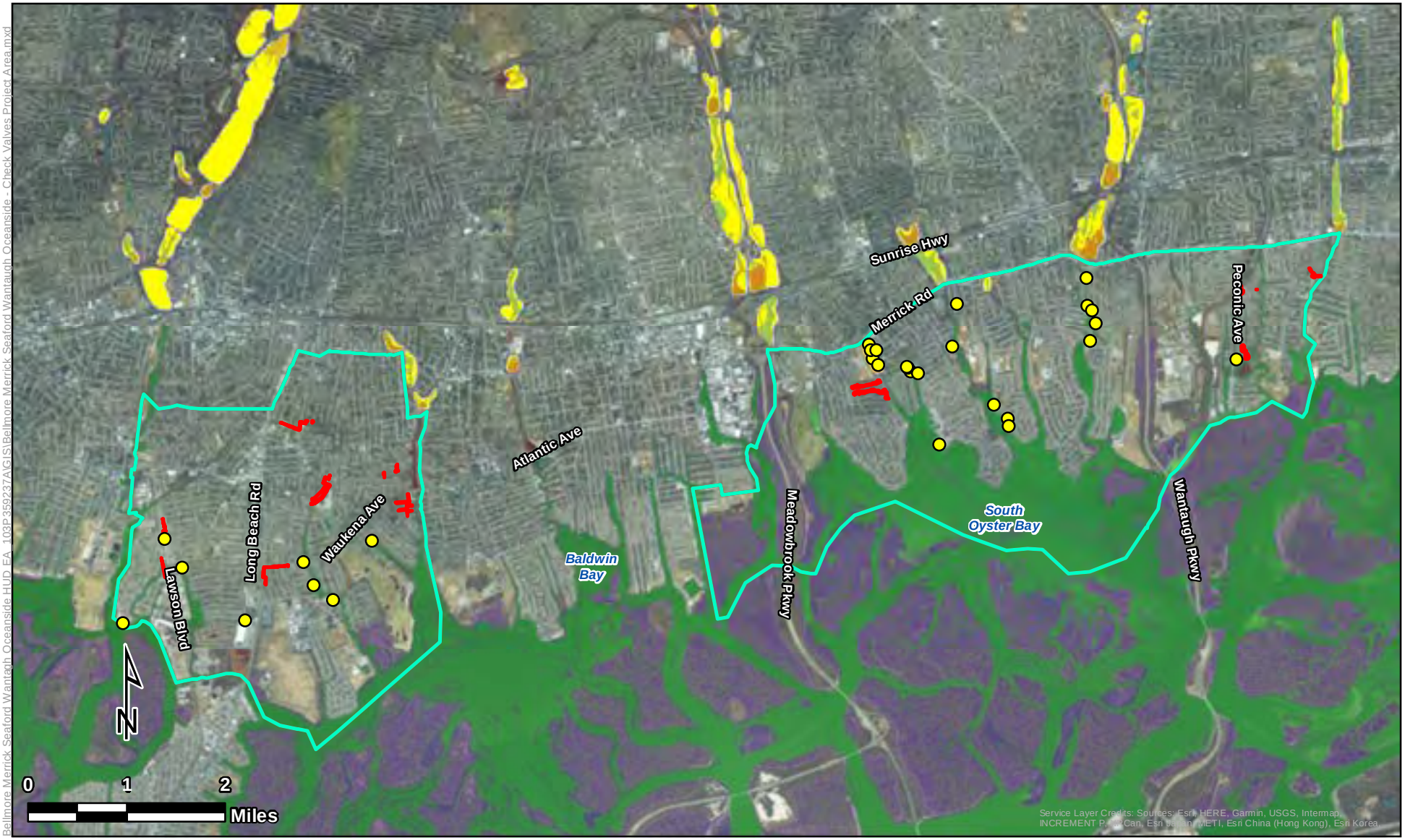
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overiew Area

TETRA TECH

**Figure 2**




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- NYS Freshwater Wetlands
- NYS Freshwater Wetlands Buffer

**NWI Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

# *NYS Freshwater and NWI Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 3**

**Legend**

- Check Valves
- Drainage Improvements
- Project Overiew Area
- Tidal - Coastal Wetlands
- Tidal - Coastal Wetlands 300ft Buffer

# *Tidal-Coastal Wetlands*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

TETRA TECH

**Figure 4**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

September 19, 2019

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project
County: Nassau Town/City: Hempstead

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur within or near the project overview areas. Since specific locations of proposed work were not provided, we could not assess potential impacts of specific proposed activities.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 1 Office, Division of Environmental Permits, at dep.r1@dec.ny.gov, (631) 444-0365.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1089

New York Natural Heritage Program
625 Broadway, Albany, NY 12233-4757
(518) 402-8935 naturalheritage@dec.ny.gov

Report on Rare Animals, Rare Plants, and Significant Natural Communities

The following rare plants, rare animals, and significant natural communities**
have been documented in the Natural Heritage database
within or near the project overview areas of the

# Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project

September, 2019

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Bellmore/Merrick** | | | | |
| **Fighting Island (off south end of Merrick Rpad Town Park and Golf Course, along Meadowbrook Parkway)** | | | | |
| Birds (breeding) | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| **Cow Meadow County Park, 1992, in sand in a shrub thicket adjacent to salt marsh** | | | | |
| Plants | Fringed Boneset | *Eupatorium torreyanum* | Threatened | S2 |
| **Merrick County Preserve, 1985, in red maple woods along Cedar Swamp Creek, near Sunrise Highway** | | | | |
| Plants | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| **Along shoreline of Freeport Creek (including Merrick Road Town Park), Merrick Bay, Cedar Swamp Creek (including Newbridge Road Park), Newbridge Creek, and Bellmore Creek** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Seaford/Wantagh** | | | | |
| **Olivers Island (salt marsh across Flat Creek from Wantagh County Park)** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| **Cedar Creek County Park (south of Wastewater Treatment Facility)** | | | | |
| Birds (nesting) | Least Tern | *Sternula antillarum* | Threatened | S3B |
| **Wantagh Pond, 2004 (north side of Sunrise Highway between Old Mill Road and Wantagh State Parkway)** | | | | |
| Plants | Small Floating Bladderwort | *Utricularia radiata* | Threatened | S2 |
| **Tackapusha County Preserve, at pond and red maple swamp at south end near Merrick Road and Seaford Avenue, near Tackapusha Museum** | | | | |
| Plants 1989 | Weak Rush | *Juncus debilis* | Endangered | S1 |
| 1992 | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| Dragonflies 2008 | Seaside Dragonlet | *Erythrodiplax berenice* | Unlisted | S2 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Along shoreline of Flat Creek (including Wantagh County Park), Island Creek and Cedar Creek (including Cedar Creek County Park), and Seamans Creek (including Seamans Neck Park); in Seamans Neck Park, and on Olivers Island** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Along southeast shore of Seamans Creek Park, at mouths of Seamans Creek and Seaford Creek** | | | | |
| Communities | Marine Back-barrier Lagoon | | | S2 |

## Oceanside

| | | | | |
|---|---|---|---|---|
| **Salt marsh northeast of Oceanside Town Park and southwest of Middle Bay Golf Course** | | | | |
| Birds (nesting) | Seaside Sparrow | *Ammodramus maritimus* | Special Concern | S2S3B |
| **Trees in block bounded by Bayfield Boulevard, Woodward Street, Freeman Avenue, and Waukena Avenue** | | | | |
| Birds (nesting) | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| **Oceanside Town Park, 1992, in dry, sandy ground at the disturbed upper edge of saltmarsh** | | | | |
| Plants | Marsh Straw Sedge | *Carex hormathodes* | Threatened | S2S3 |
| **Along shoreline of Oceanside, Barnums Channel, Garrett Lead, Oceanside Town Park, and Parsonage Cove; and in marsh northeast of Oceanside Town Park** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

## Just south of all project overview areas

| | | | | |
|---|---|---|---|---|
| **The salt marshes and islands south of the project overview areas support the following:** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| | Gull-billed Tern | *Gelochelidon nilotica* | Unlisted | S1 |
| | Forster's Tern | *Sterna forsteri* | Unlisted | S1 |
| | Snowy Egret | *Egretta thula* | Unlisted | S2S3 |
| | Little Blue Heron | *Egretta caerulea* | Unlisted | S2 |
| | Glossy Ibis | *Plegadis falcinellus* | Unlisted | S2 |
| | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Parsonage Island, just south of Oceanside Town Park, also supports the following:** | | | | |
| Birds (wintering) | Harlequin Duck | *Histrionicus histrionicus* | Unlisted | S1N |
| **Long Creek and Woodcleft Canal, just west and south of Cow Meadow, has records of:** | | | | |
| Fish | Lake Chub | *Couesius plumbeus* | Unlisted | S2S3 |

* Conservation status in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:

S1 = Critically imperiled
S2 = Imperiled
S3 = Rare or uncommon
S4 = Abundant and apparently secure
S5 = Demonstrably abundant and secure
SNA = Status not assessed or assigned.

B after a rank indicates the status for breeding populations of that species.
N after a rank indicates the status for wintering (nonbreeding) populations of that species.

Information about many of the rare animals, rare plants, and natural communities in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org.

** Natural communities in this report are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys.

**New York Natural Heritage Program**
SUNY College of Environmental Science and Forestry
In partnership with NYS Department of Environmental Conservation
625 Broadway, Albany, NY 12233-4757, (518) 402-8935, NaturalHeritage@dec.ny.gov

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003


In Reply Refer To: September 26, 2019
Consultation Code: 05E1LI00-2019-SLI-0712
Event Code: 05E1LI00-2019-E-01642
Project Name: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project (Project Sites)

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Long Island Ecological Services Field Office**
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

# Project Summary

Consultation Code: 05E1LI00-2019-SLI-0712

Event Code: 05E1LI00-2019-E-01642

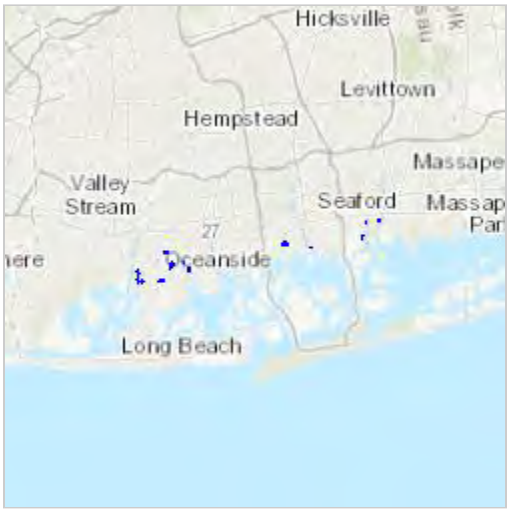
Project Name: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project (Project Sites)

Project Type: LAND - FLOODING

Project Description: The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, culverts and detention ponds; and raising several roads at several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/40.65006130023556N73.55017079728022W




Counties: Nassau, NY

# Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME | STATUS |
|---|---|
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |

## Birds

| NAME | STATUS |
|---|---|
| Piping Plover *Charadrius melodus*<br>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6039 | Threatened |
| Red Knot *Calidris canutus rufa*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1864 | Threatened |
| Roseate Tern *Sterna dougallii dougallii*<br>Population: Northeast U.S. nesting population<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/2083 | Endangered |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Sandplain Gerardia *Agalinis acuta*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8128 | Endangered |
| Seabeach Amaranth *Amaranthus pumilus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8549 | Threatened |

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**Division of Fish and Wildlife, New York Natural Heritage Program**
625 Broadway, Fifth Floor, Albany, NY 12233-4757
P: (518) 402-8935 | F: (518) 402-8925
www.dec.ny.gov

September 19, 2019

Alicia Shultz
Governor's Office of Storm Recovery
38-40 State Street
Albany, NY 12207

Re: Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project
County: Nassau Town/City: Hempstead

Dear Ms. Shultz:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur within or near the project overview areas. Since specific locations of proposed work were not provided, we could not assess potential impacts of specific proposed activities.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 1 Office, Division of Environmental Permits, at dep.r1@dec.ny.gov, (631) 444-0365.

Sincerely,

Nick Conrad

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

1089

New York Natural Heritage Program
625 Broadway, Albany, NY 12233-4757
(518) 402-8935 naturalheritage@dec.ny.gov

Report on Rare Animals, Rare Plants, and Significant Natural Communities

The following rare plants, rare animals, and significant natural communities**
have been documented in the Natural Heritage database
within or near the project overview areas of the

# Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project

September, 2019

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Bellmore/Merrick** | | | | |
| **Fighting Island (off south end of Merrick Rpad Town Park and Golf Course, along Meadowbrook Parkway)** | | | | |
| Birds (breeding) | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| **Cow Meadow County Park, 1992, in sand in a shrub thicket adjacent to salt marsh** | | | | |
| Plants | Fringed Boneset | *Eupatorium torreyanum* | Threatened | S2 |
| **Merrick County Preserve, 1985, in red maple woods along Cedar Swamp Creek, near Sunrise Highway** | | | | |
| Plants | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| **Along shoreline of Freeport Creek (including Merrick Road Town Park), Merrick Bay, Cedar Swamp Creek (including Newbridge Road Park), Newbridge Creek, and Bellmore Creek** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Seaford/Wantagh** | | | | |
| **Olivers Island (salt marsh across Flat Creek from Wantagh County Park)** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| **Cedar Creek County Park (south of Wastewater Treatment Facility)** | | | | |
| Birds (nesting) | Least Tern | *Sternula antillarum* | Threatened | S3B |
| **Wantagh Pond, 2004 (north side of Sunrise Highway between Old Mill Road and Wantagh State Parkway)** | | | | |
| Plants | Small Floating Bladderwort | *Utricularia radiata* | Threatened | S2 |
| **Tackapusha County Preserve, at pond and red maple swamp at south end near Merrick Road and Seaford Avenue, near Tackapusha Museum** | | | | |
| Plants 1989 | Weak Rush | *Juncus debilis* | Endangered | S1 |
| 1992 | Atlantic White Cedar | *Chamaecyparis thyoides* | Threatened | S2 |
| Dragonflies 2008 | Seaside Dragonlet | *Erythrodiplax berenice* | Unlisted | S2 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Along shoreline of Flat Creek (including Wantagh County Park), Island Creek and Cedar Creek (including Cedar Creek County Park), and Seamans Creek (including Seamans Neck Park); in Seamans Neck Park, and on Olivers Island** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |
| **Along southeast shore of Seamans Creek Park, at mouths of Seamans Creek and Seaford Creek** | | | | |
| Communities | Marine Back-barrier Lagoon | | | S2 |

## Oceanside

| | | | | |
|---|---|---|---|---|
| **Salt marsh northeast of Oceanside Town Park and southwest of Middle Bay Golf Course** | | | | |
| Birds (nesting) | Seaside Sparrow | *Ammodramus maritimus* | Special Concern | S2S3B |
| **Trees in block bounded by Bayfield Boulevard, Woodward Street, Freeman Avenue, and Waukena Avenue** | | | | |
| Birds (nesting) | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| **Oceanside Town Park, 1992, in dry, sandy ground at the disturbed upper edge of saltmarsh** | | | | |
| Plants | Marsh Straw Sedge | *Carex hormathodes* | Threatened | S2S3 |
| **Along shoreline of Oceanside, Barnums Channel, Garrett Lead, Oceanside Town Park, and Parsonage Cove; and in marsh northeast of Oceanside Town Park** | | | | |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

## Just south of all project overview areas

| | | | | |
|---|---|---|---|---|
| **The salt marshes and islands south of the project overview areas support the following:** | | | | |
| Birds (nesting) | Common Tern | *Sterna hirundo* | Threatened | S3B |
| | Short-eared Owl | *Asio flammeus* | Endangered | S2 |
| | Black Skimmer | *Rynchops niger* | Special Concern | S2 |
| | Gull-billed Tern | *Gelochelidon nilotica* | Unlisted | S1 |
| | Forster's Tern | *Sterna forsteri* | Unlisted | S1 |
| | Snowy Egret | *Egretta thula* | Unlisted | S2S3 |
| | Little Blue Heron | *Egretta caerulea* | Unlisted | S2 |
| | Glossy Ibis | *Plegadis falcinellus* | Unlisted | S2 |
| | Yellow-crowned Night-Heron | *Nyctanassa violacea* | Unlisted | S2 |
| Communities | Low Salt Marsh | | | S3S4 |
| | High Salt Marsh | | | S3S4 |
| | Salt Panne | | | S3 |

| | COMMON NAME | SCIENTIFIC NAME | NY STATE LISTING | NY STATE RANK* |
|---|---|---|---|---|
| **Parsonage Island, just south of Oceanside Town Park, also supports the following:** | | | | |
| Birds (wintering) | Harlequin Duck | *Histrionicus histrionicus* | Unlisted | S1N |
| **Long Creek and Woodcleft Canal, just west and south of Cow Meadow, has records of:** | | | | |
| Fish | Lake Chub | *Couesius plumbeus* | Unlisted | S2S3 |

* Conservation status in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:

S1 = Critically imperiled
S2 = Imperiled
S3 = Rare or uncommon
S4 = Abundant and apparently secure
S5 = Demonstrably abundant and secure
SNA = Status not assessed or assigned.

B after a rank indicates the status for breeding populations of that species.
N after a rank indicates the status for wintering (nonbreeding) populations of that species.

Information about many of the rare animals, rare plants, and natural communities in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org.

** Natural communities in this report are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high-quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. This information should not be substituted for on-site surveys.

**New York Natural Heritage Program**
SUNY College of Environmental Science and Forestry
In partnership with NYS Department of Environmental Conservation
625 Broadway, Albany, NY 12233-4757, (518) 402-8935, NaturalHeritage@dec.ny.gov

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

*Via Electronic Mail*

September 5, 2019

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program – Information Services
625 Broadway, 5th Floor
Albany, New York 12233-4757

**Re: Natural Heritage Compliance Process for the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York**

The Governor's Office of Storm Recovery (GOSR), acting under the auspices of New York State Homes and Community Renewal's (HCR) Housing Trust Fund Corporation (HTFC), on behalf of the Department of Housing & Urban Development (HUD), is conducting an environmental review under HUD's environmental review regulations (24 CFR Part 58) and New York State's Environmental Quality Review Act (SEQRA) for the Amityville Storm Sewer and Roadway Drainage Improvements Project, located in the Village of Amityville, Suffolk County, New York (see **Figures 1 and 2**).

The purpose of this letter is to request a search of the files of the New York Natural Heritage Program for records of the occurrence of any rare animals, plants, and natural communities and/or significant wildlife habitats in the vicinity of this project. The information we receive will be used in NEPA and SEQRA documentation and/or any permit applications. We will retain the confidentiality, as needed, of any information received.

Program Overview: Hurricane Irene in 2011, followed nearly 14 months later by Superstorm Sandy, overwhelmed the south shore's stormwater drainage systems. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms. The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure.

Area of Potential Effect: The projects will be implemented in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York. (see **Figures 1 and 2**). The Town of Hempstead is located along the south shore of Long Island and borders Garrett Lead, Baldwin Bay, South Oyster Bay.
Proposed Project Description: The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, culverts and detention ponds; and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would

be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls at the following locations, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfall to avoid major disruptions to the property. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick.

Compliance: According to information reviewed from the New York State Environmental Resource Mapper (ERM), the Project area is in the vicinity of the salt panne, high salt marsh, and low salt marsh Natural Communities (see attached **Figure 3**). It is also in the vicinity of the following rare animals: gull-billed tern, Forster's tern, laughing gull, black skimmer, and seaside sparrow (see attached **Figure 4**).
The proposed project would involve ground disturbance within areas previously disturbed for roadways and associated infrastructure. As such, GOSR respectfully requests that the New York Natural Heritage Program review its records of concern for any rare or state-listed animals or plants, or significant natural communities, at this site or in its immediate vicinity.

If you have questions or require additional information regarding this request, please contact me at (518) 817-2873 or Alicia.Shultz@stormrecovery.ny.gov. Thank you for your time and consideration.
Sincerely,

Alicia Shultz
Senior Environmental Scientist
New York State Homes & Community Renewal
Governor's Office of Storm Recovery
38-40 State St.,408N, Hampton Plaza, Albany, NY 12207
(518) 474-0647 | cell (917) 376-9003 Alicia.Shultz@nyshcr.org |

Attachments:
Figure 1 - Bellmore Merrick Seaford Wantagh Oceanside - Project Location
Figure 2 - Bellmore Merrick Seaford Wantagh Oceanside - Project Overview Area
Figure 3 - Bellmore Merrick Seaford Wantagh Oceanside - Environmental Resource Mapper Significant Natural Communities
Figure 4 - Bellmore Merrick Seaford Wantagh Oceanside - Environmental Resource Mapper Rare Plants or Animals

Bellmore Merrick Seaford Wantagh Oceanside HUD EA 103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

**Figure 1**

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Overview Area*

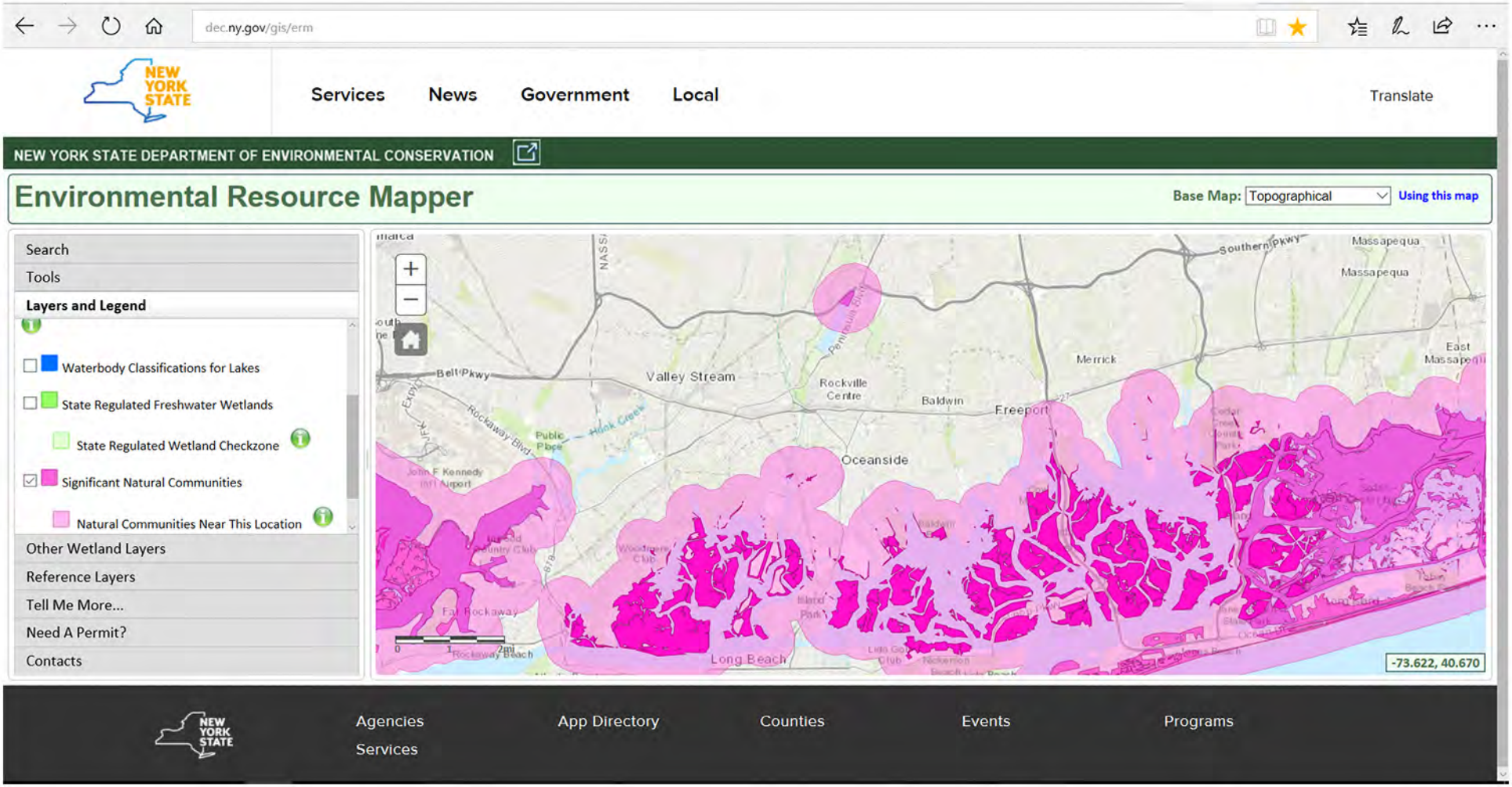
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overiew Area

TETRA TECH

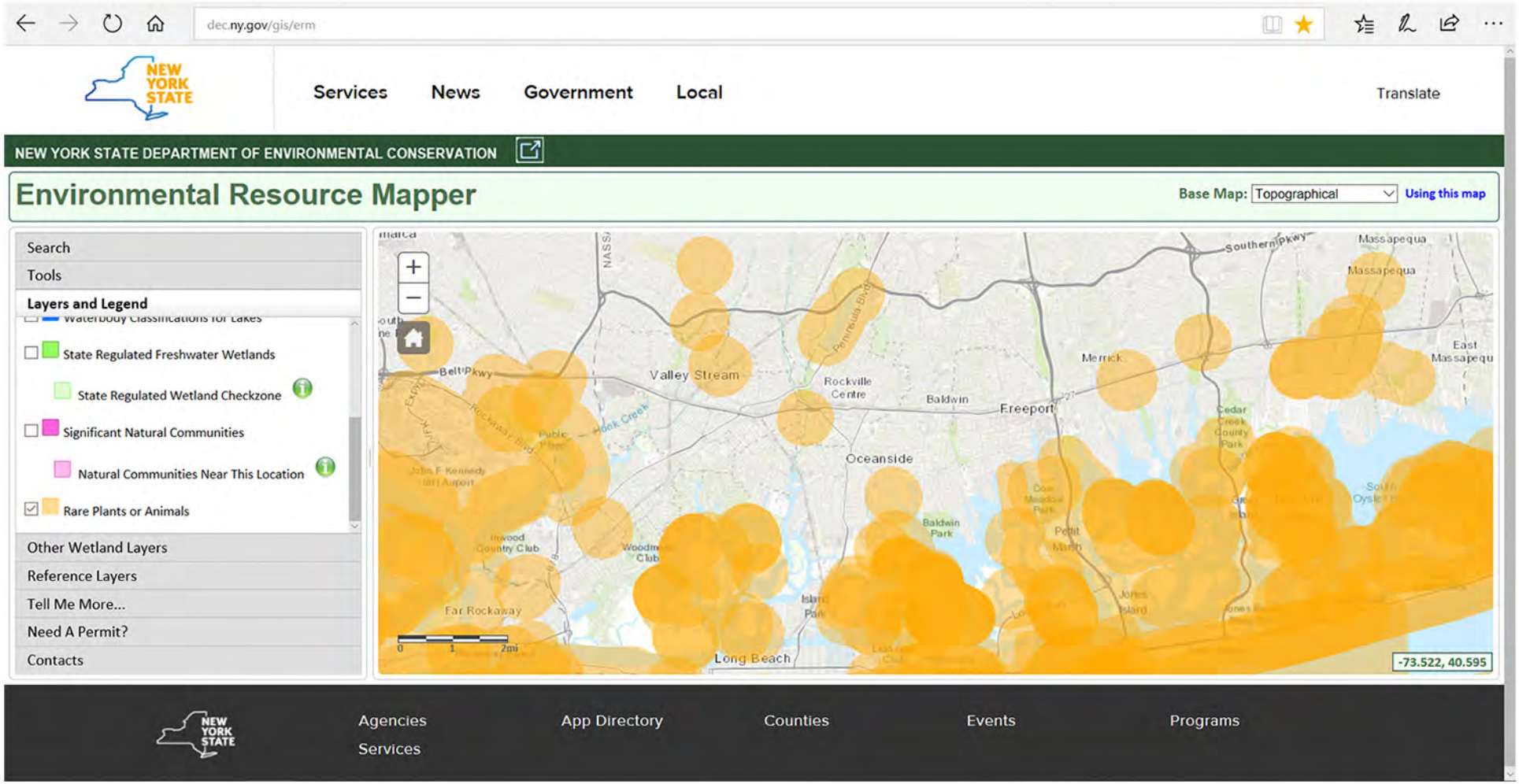
**Figure 2**




***Environmental Resource Mapper***
***Significant Natural Communities***

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Figure 3**




***Environmental Resource Mapper***
***Rare Plants or Animals***

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Figure 4**

# APPENDIX F
# SHPO CORRESPONDENCE

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

**ANDREW M. CUOMO**
Governor

**ERIK KULLESEID**
Commissioner

October 08, 2019

Mr. James McAllister
Senior Environmental Project Manager
Bureau of Environmental Review and Assessment - Governor's Office of Storm Recovery
500 Bi-County Boulevard
Suite 300
Farmingdale, NY 11735

Re: GOSR
Bellmore, Merrick, Seaford, Wantagh, Oceanside Drainage Improvements Project
19PR07010

Dear Mr. McAllister:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

Governor's Office of
Storm Recovery

ANDREW M. CUOMO
Governor

October 4, 2019

Mr. Tim Lloyd
Historic Preservation Technical Specialist
New York State Office of Parks, Recreation and Historic Preservation
Division of Historic Preservation
Peebles Island
P.O. Box 189
Waterford, New York 12188-0189

Re: Section 106 Compliance

**Project Name: Natural Heritage Compliance Process for the Bellmore/Merrick, Seaford/Wantagh, and Oceanside Drainage Improvements Project, Town of Hempstead, Nassau County, New York**

Dear Mr. Lloyd:

Pursuant to the Disaster Relief Appropriations Act, 2013 (Public Law 113-2) and the Housing and Community Development Act (42 U.S.C. § 5301 et seq.), the Governor's Office of Storm Recovery (GOSR), an office of New York State Homes and Community Renewal's Housing Trust Fund Corporation as a recipient of Community Development Block Grant – Disaster Recovery ("CDBG-DR") funds from the United States Department of Housing and Urban Development ("HUD"), is serving as the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. GOSR is acting on behalf of HUD in providing the enclosed project information and request for consultation.

GOSR processes environmental reviews for projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, this letter serves as notification of the proposed action.

**Project Description:** Hurricane Irene in 2011, followed nearly 14 months later by Superstorm Sandy, overwhelmed the south shore's stormwater drainage systems. Over 30 percent of the Bellmore, Merrick, Seaford, Wantagh, and Oceanside communities in the Town of Hempstead were impacted by the flooding. Floodwaters inundated homes, schools, municipal buildings and businesses, making roadways impassable. Surges severely hindered evacuation and emergency response efforts before, during and after the storms. The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure.

The proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, and raising several roads. Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside. The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfalls to avoid major disruptions to the properties. Ten roads are proposed for elevation to provide additional hydraulic gradient and reduce the road's susceptibility to flooding due to abnormally high tides: one in Bellmore, one in Wantagh, three in Oceanside, three in Seaford, and two in Merrick.

**Area of Potential Effects:** The projects will be implemented in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York. (see **Figures 1 and 2**). The Town of Hempstead is located along the south shore of Long Island and borders Garrett Lead, Baldwin Bay, South Oyster Bay.

**Existing Cultural Resources:** Review of the project area in NY-CRIS indicates the presence of one recorded archaeological site within one mile of the Project. The Seaford Park Site – Nassau County Museum #55 (05901.000040) is a series of three shell middens with sparse nondiagnostic lithic artifacts located near Cedar Creek in the Village of Seaford. The site is located approximately 2,363 feet west of the nearest Project element, drainage improvements at Roanoke Street and Neptune Avenue in Seaford. Nearly the entirety of the Project is situated on early twentieth century made-land from *Spartina* salt marsh (USGS, *Hempstead, NY* 1898).

Various Project elements are adjacent to recorded CRIS standing structures. None of the adjacent recorded structures are listed on the National Register of Historic Places. The NRHP-eligible Merrick Gables Historic District (USN 05901.002668) is the closest historic district to a Project element, being 1,460 feet from the check valve at Lincoln Boulevard in the Hamlet of Merrick.

**Assessment of Effects:** Because the Project is situated on twentieth century made-land and all undertakings would be conducted within existing roads and road easements, the Project is assessed as have low potential to affect previously undocumented archeological resources. Because Project activities will be at-grade or below-grade, indirect effects (visual and auditory) are considered to be marginal and will have no adverse impacts on inventoried standing structures adjacent to Project elements.

The purpose of this letter is to supplement information previously provided to OPRHP regarding the Project Description and Assessment of Effects for archaeology. If you have questions or require additional information regarding this request, please contact me at (646) 256-9485 or James.McAllister@stormrecovery.ny.gov. Thank you for your time and consideration.

Sincerely,

James P. McAllister

Senior Environmental Project Manager
Bureau of Environmental Review and Assessment
Governor's Office of Storm Recovery
500 Bi-County Boulevard, Suite 300
Farmingdale, NY 11735

Attachments:
Figure 1 - Project Location
Figure 2 - Project Overview Area

Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Location*

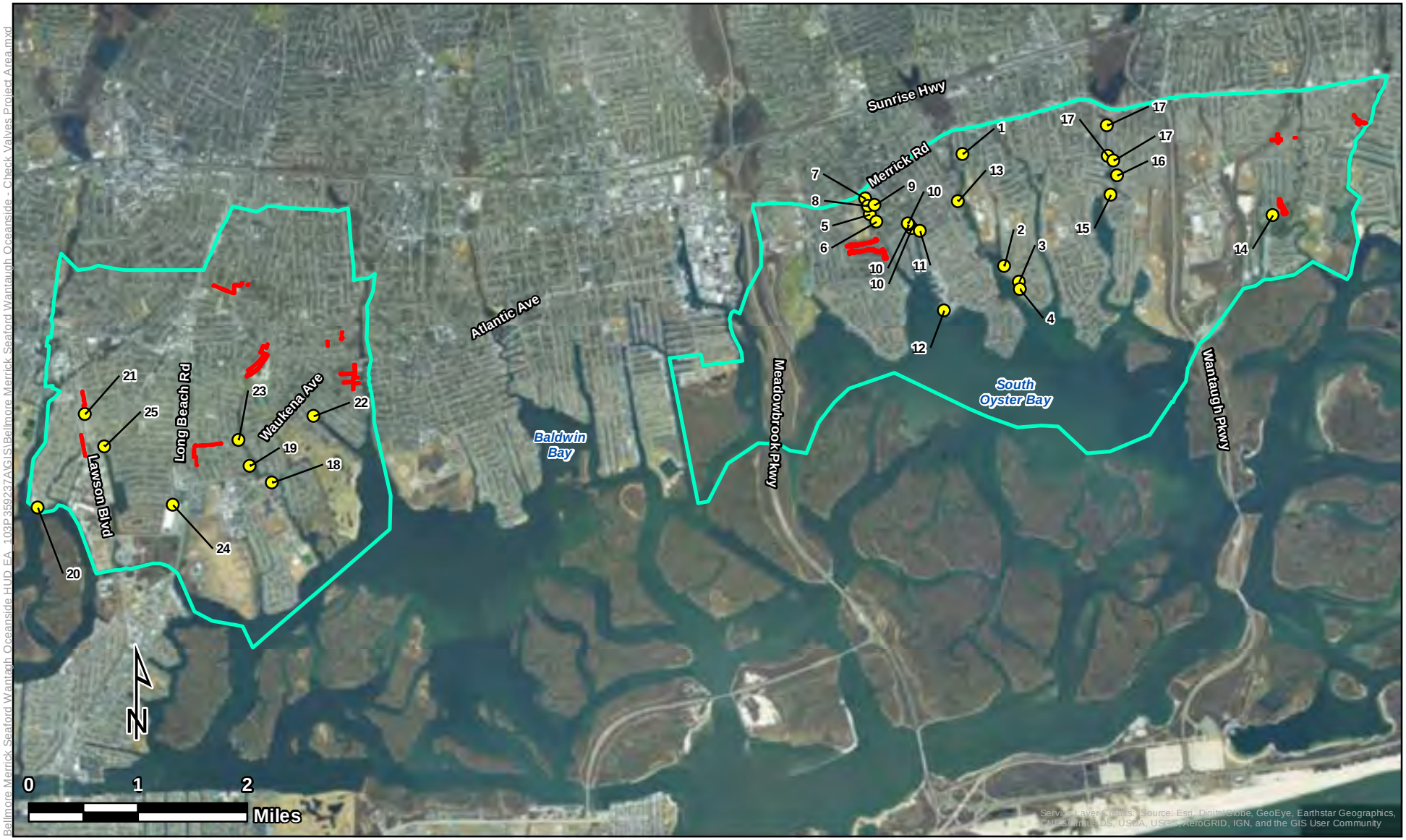
Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

**Legend**

Project Overview Area

TETRA TECH

**Figure 1**




Bellmore Merrick Seaford Wantagh Oceanside HUD_EA_103P359237A\GIS\Bellmore Merrick Seaford Wantagh Oceanside - Check Valves Project Area.mxd

# *Project Area*

Bellmore, Merrick, Seaford, Wantagh, Oceanside
Drainage Improvements Project
Town of Hempstead, Nassau County, New York

## Legend

- Check Valves
- Drainage Improvements
- Project Overview Area

TETRA TECH

**Figure 2**

# APPENDIX G

# SOLE SOURCE AQUIFERS

B. Non-Housing/Project Activity Initial Screen Criteria

ATTACHMENT 2.A

**NON-HOUSING/PROJECT ACTIVITY** INITIAL SCREEN CRITERIA

The following list of criteria questions are to be used as an initial screen to determine which **non-housing** projects/activities should be forwarded to the Environmental Protection Agency (EPA) for Preliminary Sole Source Aquifer (SSA) Review. (For housing projects/activities see Attachment 2.B) If any of the questions are answered affirmatively, Attachment 3, SSA Preliminary Review Requirements, should also be completed. The application/final statement, this Attachment, Attachment 3, and any other pertinent information should than be forwarded to EPA at the address below.

Any project/activity not meeting the criteria in this Attachment, but suspected of having a potential adverse effect on the Sole Source Aquifer should also be forwarded.

| CRITERIA QUESTIONS | YES | NO | N/A |
|---|---|---|---|
| 1. Is the project/activity located within a currently designated or proposed groundwater sensitive area such as a special Ground Water Protection Area, Critical Supply Area, Wellhead Protection Area, etc.?<br>The project locations are all within the boundaries of the Nassau-Suffolk Sole Source Aquifer System. | ☐ | ☒ | ☐ |
| 2. Is the project/activity located within a one half mile radius (2640 feet) of a current or proposed public water supply well or wellfield?<br>The project area is not within a half mile radius of a current or proposed public water supply well. The Foxhurst Road pipe capacity increase site is within a half mile radius of a New York State Source Water Assessment Program (SWAP) area. The project would not affect this area. This project site would not result in a change in land use, permanent disturbance, or impermeable surfaces. | ☐ | ☒ | ☐ |

3. Will the project/activity include or directly cause (check appropriate items):

| | YES | NO | N/A |
|---|---|---|---|
| construction or expansion of solid waste disposal, recycling or conversion facilities | ☐ | ☒ | ☐ |
| construction or expansion or closure of landfills | ☐ | ☒ | ☐ |
| construction or expansion of water supply facilities | ☐ | ☒ | ☐ |
| construction or expansion of on-site wastewater treatment plants or sewage trunk lines | ☐ | ☒ | ☐ |
| construction or expansion of gas or petroleum trunk lines greater than 1320 feet | ☐ | ☒ | ☐ |
| construction or expansion of railroad spurs or similar extensions | ☐ | ☒ | ☐ |
| construction or expansion of municipal sewage treatment plants | ☐ | ☒ | ☐ |

| | | | |
|---|---|---|---|
| 4. Will the project/activity include storage or handling of any hazardous constituents as listed in Attachment 4, Hazardous Constituents | ☐ | ☒ | ☐ |
| 5. Will the project/activity include bulk storage of petroleum in underground or above ground tanks in excess of 1100 gallons? (Please give what assurance they are done in a proper manner.) | ☐ | ☒ | ☐ |
| 6. Will the project/activity require a federal or state discharge elimination permit or modification of an existing permit? | ☐ | ☒ | ☐ |

This attachment was completed by:

| | |
|---|---|
| Name: | Genevieve Kaiser |
| Title: | Senior Environmental Planner/GIS Specialist |
| Address: | 1765 Lombardy Drive |
| | Boulder, C0 80304 |
| Telephone number: | 720-273-7249 |
| Date: | 12/12/2019 |

C. SSA Preliminary Review Information Requirements

ATTACHMENT 3

SSA PRELIMINARY REVIEW INFORMATION REQUIREMENTS

Where currently available, the information in this Attachment should be provided to the Environmental Protection Agency (see address below) along with the application/final statement; Attachment 2.A, Non-Housing Initial Screen Criteria or Attachment 2.B, Housing Initial Screen Criteria; and any other information which may be pertinent to a Sole Source Aquifer review. Where applicable, indicate the source of your information.

| **I. Project/Activity Location** | **Enclosed?** | |
|---|---|---|
| | Yes | No |
| 1. Provide the geographic location and total acreage of the project/activity site. Include a site map which identifies the site in relation to the surrounding area.<br>[Examples of maps which can be used include: 1:24,000 or 1:25,000 U.S. Geological Survey quadrangle sheet, Hagstroms Street Map.]<br>Maps are included with the attached project description. The project area encompasses approximately 12.49 acres | ☒ | ☐ |
| 2. If applicable, identify which groundwater sensitive areas (Special Ground Water Protection Area, Critical Supply Area, Wellhead Protection Area, etc.) the project/activity is located within or adjacent to.<br>The project location is within the boundaries of the Nassau-Suffolk Sole Source Aquifer System. The project area is not within a half mile radius of a current or proposed public water supply well. The Foxhurst Road pipe capacity increase site is within a half mile radius of a New York State Source Water Assessment Program (SWAP) area. The project would not affect this area. This project site would not result in a change in land use, permanent disturbance, or impermeable surfaces. | ☒ | ☐ |

| **II. Nature of Project/Activity** | **Enclosed?** | |
|---|---|---|
| | Yes | No |
| 3. Provide a general narrative describing the project/activity including but not limited to: type of facility; type of activities to be conducted; number and type of units; number of residents, etc. Provide the general layout of the project/activity site and site-plan if available. | ☒ | ☐ |

| | | |
|---|---|---|
| See attached | | |

| III. Public Water Supply | Enclosed? | |
|---|---|---|
| | Yes | No |
| 4. Provide a description of plans to provide water supply.<br>There is no water supply component to this project. | ☐ | ☒ |
| 5. Provide the location of nearby existing or proposed public water supply wells or wellfields within one half mile radius (2640 feet) of the project/activity. Provide the name of the supplier(s) of those wells or wellfields. This information should be available from the local health department, State health department or the State environmental agency.<br>See attached SWAP maps. | ☒ | ☐ |

| IV. Wastewater and Sewage Disposal | Enclosed? | |
|---|---|---|
| | Yes | No |
| 6. Provide a description of plans to handle wastewater and sewage disposal. If the project/activity is to be served by existing public sanitary sewers provide the name of the sewer district.<br>There would be no water and wastewater component to this project. | ☐ | ☒ |
| 7. Provide a description of plans to handle storm water runoff.<br>The existing drainage will not be changed. Pipe capacities will be increased; check valves will be replaced, and 10 roads will be elevated.<br>See attached project description. | ☒ | ☐ |
| 8. Identify the location, design, size of any on-site recharge basins, dry wells, leaching fields, retention ponds, etc.<br>See attached project description, project area map, and site plans. | ☒ | ☐ |

| V. Use, Storage, Transport of Hazardous or Toxic Materials<br>*(Applies only to non-housing projects/activities)* | Enclosed? | |
|---|---|---|
| | Yes | No |
| 9. Identify any products listed in Attachment 4, Hazardous Constituents, of the Housing and Urban Development-Environmental Protection Agency Memorandum of Understanding which may be used, stored, transported, or released as a result of the project not related to construction<br>There are no hazardous materials in the proposed project. | ☐ | ☒ |
| | ☐ | ☒ |

| | | |
|---|---|---|
| 10. Identify the number and capacity of underground storage tanks at the project/activity site. Identify the products and volume to be stored, and the location on the site.<br>There are no current underground storage tanks (USTs) at these facilities. No USTs are proposed. | | |
| 11. Identify the number and capacity of above ground storage tanks at the project/activity site. Identify the products and volume to be stored, and the location on the site<br>There are no current aboveground storage tanks (ASTs) at these facilities. No ASTs are proposed. | ☐ | ☒ |

This form was completed by:

Name: Genevieve Kaiser

Title: Senior Environmental Planner/GIS Specialist

Address: 1765 Lombardy Drive

Boulder, C0 80304

Telephone number: 720-273-7249

Date: 12/12/2019

D. Project Description

**Description of the Proposed Project**

The Town of Hempstead is proposing to implement the design and construction of recommended drainage improvements resulting from the Town's Comprehensive Drainage Infrastructure Master Plan for the Bellmore/Merrick and Seaford/Wantagh Areas South of Merrick Road and the Oceanside Drainage Improvement Plan. The projects will be implemented in several locations in the Long Island south shore communities of Bellmore, Merrick, Seaford, Wantagh, and Oceanside in the Town of Hempstead, Nassau County, New York (See **Figures 1 and 2**).

The hamlets of Bellmore, Merrick, Seaford, Wantagh, and Oceanside are located along the south shore of Long Island and border Middle Bay, Hempstead Bay, and South Oyster Bay. Many creeks and canals associated with these larger waterbodies project into these hamlets. Numerous homes are built directly on these creeks and canals. These waterfront areas and many areas in the southern portions of these hamlets are at or below elevation 5feet (NAVD 88) making them prone to flooding.

The proposed drainage improvements are designed to provide flood reduction, through improving natural and engineered stormwater management and flood control systems. The project will build resilience against future flooding and reduce risk to public and private property and infrastructure. In general, the proposed improvements include installing and replacing check valves, increasing the size/capacity of drainage pipes, installing a detention system and new inlets, and raising the elevation of 10 roads.

**Proposed Project**

The proposed project involves individual subprojects at various locations in the hamlets of Bellmore, Merrick, Seaford, Wantagh, and Oceanside (See **Figures 1 and 2**) and are proposed for implementation as detailed below.

**Installing Check Valves:** Recurring and frequent bi-monthly flooding due to tidal backflow through the existing drainage systems would be prevented by replacing check values. The proposed project includes installation of a total of 29 inline back-flow preventive check valves at existing outfalls at the following locations, four of which are in Bellmore, 10 in Merrick, one in Seaford, five in Wantagh, and nine in Oceanside (See **Figures 1 and 2**):

| **Check Valve Locations** | |
|---|---|
| **Location** | **Hamlet** |
| Farmers Avenue at Dead End | Bellmore |
| Surf Road and Shore Road (1 OF 3) | Bellmore |
| Harbor Lane at Shore Road (2 OF 3) | Bellmore |
| Malibu Road at Shore Road (3 OF 3) | Bellmore |
| Lindenmere Drive Near Lake End Road (1 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (2 OF 3) | Merrick |
| Lindenmere Drive Near Lake End Road (3 OF 3) | Merrick |
| Lindenmere Drive and Melthew Court (1 OF 2) | Merrick |

| | |
|---|---|
| Lindenmere Drive and Byron Road (2 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (1 OF 2) | Merrick |
| Merrick Avenue and Brook Park Drive (2 OF 2) | Merrick |
| Whaleneck Avenue and Beverly Way/Shoreham Way | Merrick |
| Bayberry Drive and Whaleneck Drive | Merrick |
| WynsumAvenue and Brighton Way | Merrick |
| Peconic Avenue at Dead End | Seaford |
| Riverside Drive | Wantagh |
| Riverside Drive and Bayport Court | Wantagh |
| Riverside Drive and Bellaire Street (1 OF 3) | Wantagh |
| Bellaire Street (2 OF 3) | Wantagh |
| Bellaire Street (3 OF 3) | Wantagh |
| Mott Street Dead End | Oceanside |
| Lindbergh Avenue Dead End | Oceanside |
| Weidner Avenue and Reina Road | Oceanside |
| Lawson Boulevard and Powell Creek | Oceanside |
| Freeman Avenue and Balsam Street | Oceanside |
| Waukena Avenue and Bedell Creek | Oceanside |
| Lawrence Avenue and Harris Drive | Oceanside |
| W. Waukena Avenue and Grand Canal | Oceanside |
| Daly Blvd Outfall | Oceanside |

Certain existing systems have been identified to have newer, updated check valves incorporated, while others have of old flap gates that no longer work, or no check valve present. At each of these deficient locations, the project will install an in-line check valve at the upstream end of the outfall pipe, inside either an existing or proposed drainage structure, which will require a water-tight seal at each connection point to ensure proper and efficient functionality at preventing any water bypass. If the existing pipe or connecting structure does not meet the design standards, that pipe or structure will be removed and replaced. Improvements will include removal of: poor or failing structures, block and/or brick structures, and inadequately sized structures. If a new drainage structure is proposed, connecting pipes will also be replaced specific to each location with a standard 8 linear feet section of pipe replaced at the outfall/check valve side of the structure. (See attached **Site Plans**).

**Increasing the size/capacity of drainage pipes, culverts and detention ponds:** The capacity needs and requirements of the system pipes that need enlargement and additional structures to be installed is based on an analysis of the existing system to handle one, two, and 10-year storm events. The improvements include installation of a few upstream closed system catch basins connected by oversized pipe to the existing structures and outfalls to capture, direct and store the collected storm water underground prior to discharge. The improvements are designed to preserve the existing outfall to avoid major disruptions to the property (See **Figures 1 and 2**, and attached **Site Plans**):

| Capacity Improvement Locations | | |
|---|---|---|
| **Location** | **Municipality** | **Improvement Type** |
| Derby Drive South (West) | Oceanside | Increase pipe capacity |
| Derby Drive South (East) | Oceanside | Increase pipe capacity |
| Lindbergh Avenue | Oceanside | Increase pipe capacity |
| Lawson Boulevard Upstream from W. Windsor Parkway | Oceanside | Increase pipe capacity |
| Foxhurst Road to address flooding at Seifert Court | Oceanside | Increase pipe capacity |
| Waukena Avenue to address flooding on Fourth Street | Oceanside | Increase pipe capacity |
| Tinker Drive to address flooding on Beverly Road and State Street | Oceanside | Replace pipe |
| Moore Avenue and Fulton Avenue | Oceanside | Install a detention system |
| Perry Avenue | Oceanside | Install additional inlets |
| Hampton Road | Oceanside | Install additional inlets |

**Road Raising:** Elevating a road surface can reduce the effects of flooding in two ways: providing additional hydraulic gradient to move runoff through existing pipe networks and reducing the road's susceptibility to flooding due to abnormally high tides backing up through existing drainage infrastructure with the increased elevation. Based on historical data obtained from the Town of Hempstead Department of Conservation and Waterways, tides exceed elevation 3.5 feet above sea level approximately 20 to 25 times each year, but only exceed elevation four feet above sea level approximately four to five times each year. Therefore, roads lower than elevation four feet above sea level have been considered for elevation. These include the following:

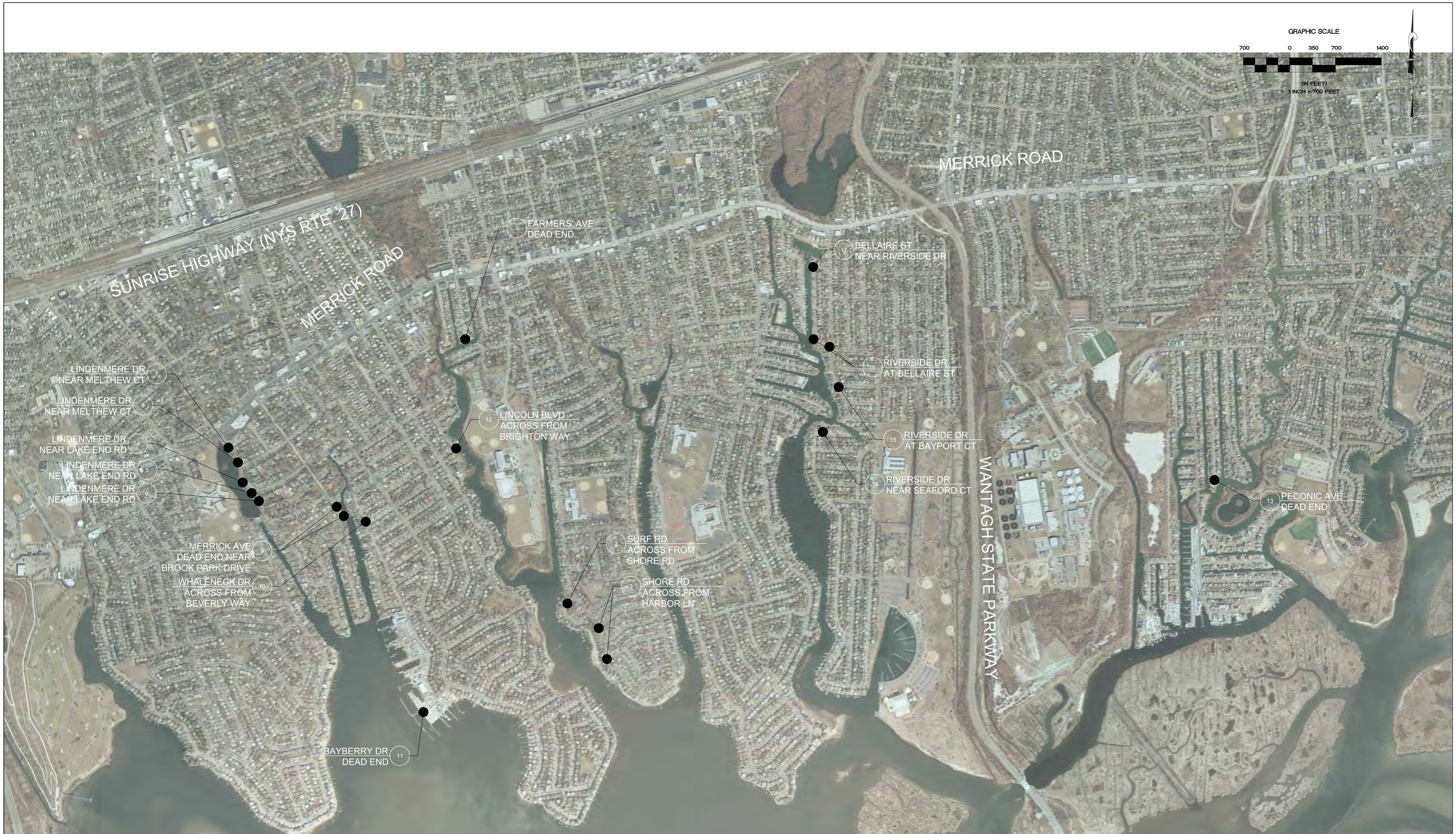
| Road Raising Locations | |
|---|---|
| **Location** | **Hamlet** |
| Shore Road | Bellmore |
| Mermaid Canal | Wantagh |
| Moreland Avenue | Oceanside |
| Royal Avenue | Oceanside |
| Carrel Boulevard | Oceanside |
| Neptune Avenue | Seaford |
| South Street | Seaford |
| Beaver Turn | Seaford |
| Helen Court | Merrick |
| George Court | Merrick |

Compliance with the Uniform Relocation Act (URA) is required for all projects that involve land acquisition (permanent and temporary easements, rights-of-way, and real property) for the purpose of enabling project construction. It is anticipated that installation of the check valves

would not require easements, rights-of way, or real property acquisition. The other drainage improvements would not involve real property acquisition but are likely to require temporary and possibly permanent easements and rights-of-way (See attached **Site Plans**).

In general construction would be restricted to one side of any roadway or intersection until that side is completely open to all vehicular traffic. The sidewalk in a particular block would not be removed until the completion of the curb in that block. Trees would be protected from damage during construction, except for those that require removal. Existing concrete catch basin areas along roads that would be raised would be demolished and removed, unless it cannot be removed without damaging the remainder of the catch basin. Yard drains will be installed where the road raising leaves front yards below the sidewalk grade. A property improvement plan will be prepared for each individual private property where improvements will be required. The Town of Hempstead would acquire owners' permission before the design is finalized. Construction hours of operation would be limited to normal working hours.

E. Design Plans




| No. | DATE | REVISION | BY: |
|---|---|---|---|
| . | . | . | . |

SEAL:

THIS DOCUMENT IS THE SOLE PROPERTY OF N&P ENGINEERS & SURVEYORS, PLLC. AND HAS BEEN PREPARED AND DISSEMINATED FOR THE SOLE USE OF OUR CLIENT. THIS DOCUMENT AND ANY DATA, CALCULATIONS, ESTIMATES OR DEPICTIONS CONTAINED HEREIN, MAY NOT BE UTILIZED BY ANY THIRD-PARTY WITHOUT PRIOR WRITTEN CONSENT OF N&P ENGINEERS & SURVEYORS, PLLC, WHICH ASSUMES NO RISK OF LOSS OR LIABILITY RESULTING FROM ANY UNAUTHORIZED USE OR RELIANCE BY ANY THIRD-PARTY.

CONSULTANT:

NELSON & POPE
ENGINEERS | ARCHITECTS | SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
PHONE: 631.427.5665 • FAX: 631.427.5620 • NELSONPOPE.COM

CLIENT:

TOWN OF HEMPSTEAD
ENGINEERING DEPTARTMENT
350 FRONT STREET
HEMPSTEAD, NEW YORK 11550

| | |
|---|---|
| DWN. BY: | GF |
| CHK'D BY: | JD |
| DATE: | JULY 2019 |
| JOB No.: | 18069 |
| CADD: | 18069_OAB01_DRAINAGE_PLAN.DWG |
| SCALE: | AS SHOWN |

DRAWING TITLE:

# OVERALL DRAINAGE PLAN - 1

BELLMORE, MERRICK, SEAFORD,
WANTAGH, OCEANSIDE
DRAINAGE STUDY

DRAWING NUMBER:

ODP - 1

SHEET: 12 OF 40

| No. | DATE | REVISION | BY: |
|---|---|---|---|
| - | - | - | - |

SEAL:

THIS DOCUMENT IS THE SOLE PROPERTY OF N&P ENGINEERS & SURVEYORS, PLLC, AND HAS BEEN PREPARED AND DISSEMINATED FOR THE SOLE USE OF OUR CLIENT. THIS DOCUMENT AND ANY DATA, CALCULATIONS, ESTIMATES OR DEPICTIONS CONTAINED HEREIN, MAY NOT BE UTILIZED BY ANY THIRD-PARTY WITHOUT PRIOR WRITTEN CONSENT OF N&P ENGINEERS & SURVEYORS, PLLC, WHICH ASSUMES NO RISK OF LOSS OR LIABILITY RESULTING FROM ANY UNAUTHORIZED USE OR RELIANCE BY ANY THIRD-PARTY.

CONSULTANT:

NELSON & POPE
ENGINEERS | ARCHITECTS | SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
PHONE: 631.427.5665 • FAX: 631.427.5620 • NELSONPOPE.COM

CLIENT:

TOWN OF HEMPSTEAD
ENGINEERING DEPTARTMENT
350 FRONT STREET
HEMPSTEAD, NEW YORK 11550

| | |
|---|---|
| DWN. BY: | GF |
| CHK'D BY: | JD |
| DATE: | JULY 2019 |
| JOB No.: | 18069 |
| CADD: | 18069_ODP-1_DRAINAGE_PLAN.DWG |
| SCALE: | AS SHOWN |

DRAWING TITLE:

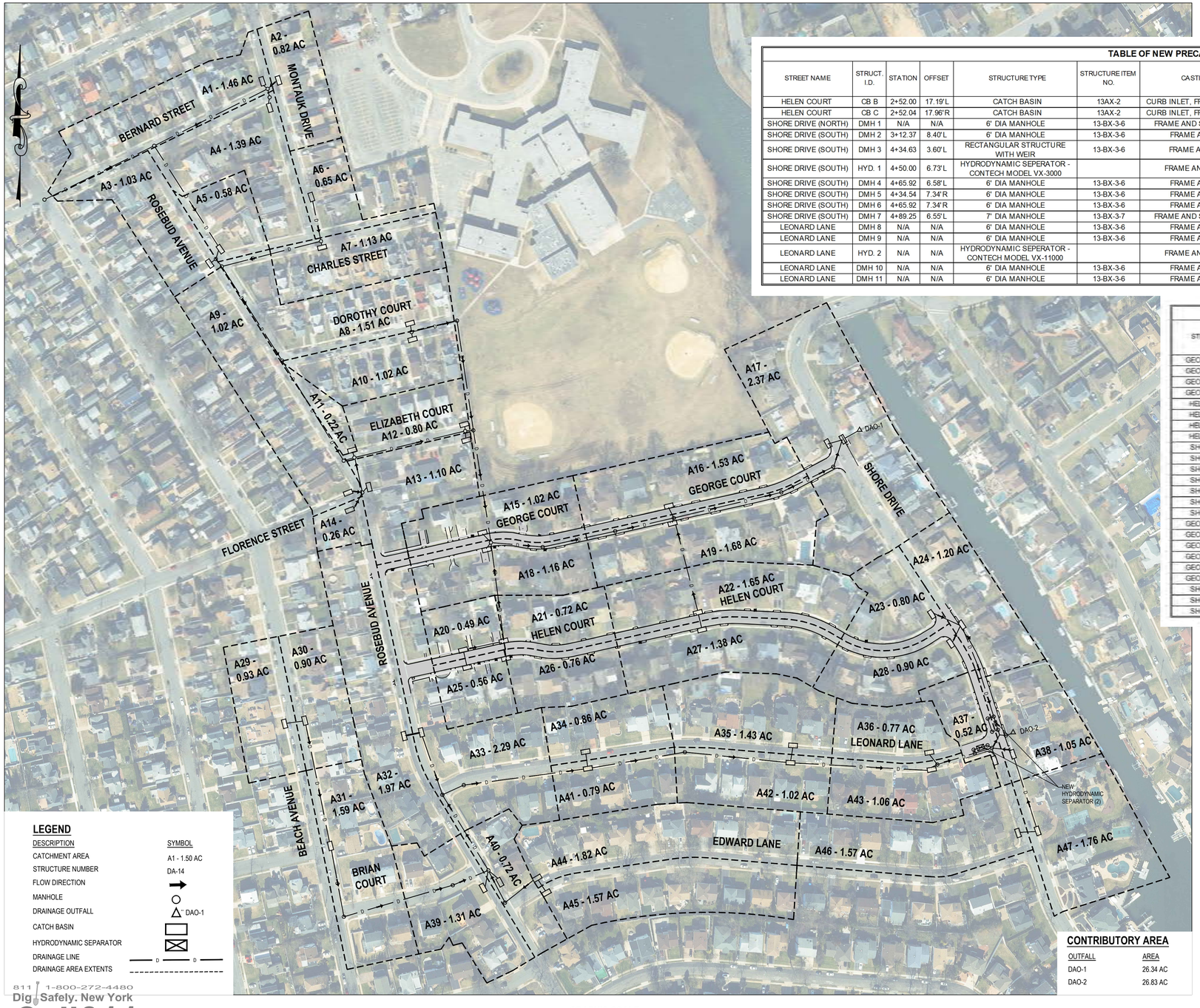
# OVERALL DRAINAGE PLAN - 2

BELLMORE, MERRICK, SEAFORD,
WANTAGH, OCEANSIDE
DRAINAGE STUDY

DRAWING NUMBER:

ODP - 2

SHEET: 13 OF 40




## TABLE OF NEW PRECAST CONCRETE STORM DRAINAGE STRUCTURES

| STREET NAME | STRUCT. I.D. | STATION | OFFSET | STRUCTURE TYPE | STRUCTURE ITEM NO. | CASTING TYPE | RIM/TOP OF CURB* ELEVATION | TOP OF SLAB/GRATE* ELEVATION | TOP OF WALL EL | INVERT ELEVATIONS | | | | SUMP EL | BOTTOM EL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | N | S | E | W | | |
| HELEN COURT | CB B | 2+52.00 | 17.19'L | CATCH BASIN | 13AX-2 | CURB INLET, FRAME AND GRATE | 4.67 | 4.00* | 3.17 | - | - | 1.10'(14") | - | -0.90 | -1.57 |
| HELEN COURT | CB C | 2+52.04 | 17.96'R | CATCH BASIN | 13AX-2 | CURB INLET, FRAME AND GRATE | 4.67 | 4.00* | 3.17 | - | - | 1.10'(14") | - | -0.90 | -1.57 |
| SHORE DRIVE (NORTH) | DMH 1 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND SPECIAL COVER | 5.46 | 4.46 | 3.21 | 1.96 (18") | -3.04 (36") | -3.24 (36") | 1.46 (15") | -5.04 | -5.71 |
| SHORE DRIVE (SOUTH) | DMH 2 | 3+12.37 | 8.40'L | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 6.18 | 5.18 | 3.93 | 0.75 (18") | 0.71 (18") | - | - | -1.25 | -1.92 |
| SHORE DRIVE (SOUTH) | DMH 3 | 4+34.63 | 3.60'L | RECTANGULAR STRUCTURE WITH WEIR | 13-BX-3-6 | FRAME AND COVER | 6.19 | - | 4.69 | 0.12 (18") | 0.12 (18") | - | WEIR 4.09<br>0.12 (18") | -1.87 | -2.54 |
| SHORE DRIVE (SOUTH) | HYD. 1 | 4+50.00 | 6.73'L | HYDRODYNAMIC SEPERATOR - CONTECH MODEL VX-3000 | | FRAME AND COVER (3) | 6.10 | - | 4.74 | 0.07 (18") | 0.07 (18") | - | - | -2.93 | -3.60 |
| SHORE DRIVE (SOUTH) | DMH 4 | 4+65.92 | 6.58'L | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.98 | 4.98 | 3.73 | -0.08 (18") | -0.58 (18") | - | -0.02 (18") | -2.58 | -3.25 |
| SHORE DRIVE (SOUTH) | DMH 5 | 4+34.54 | 7.34'R | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 6.19 | 5.19 | 3.94 | - | 0.08 (18") | 0.08 (18") | - | -1.90 | -2.57 |
| SHORE DRIVE (SOUTH) | DMH 6 | 4+65.92 | 7.34'R | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.98 | 4.98 | 3.73 | 0.05 (18") | - | 0.05 (18") | - | -1.95 | -2.62 |
| SHORE DRIVE (SOUTH) | DMH 7 | 4+89.25 | 6.55'L | 7' DIA MANHOLE | 13-BX-3-7 | FRAME AND SPECIAL COVER | 5.75 | 4.75 | 3.50 | -0.63 (18") | 0.91 (24") | -1.63 (36") | -1.61 (36") | -3.63 | -4.30 |
| LEONARD LANE | DMH 8 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.87 | 4.87 | 3.62 | -1.30 (30") | - | -1.30 (30") | -1.27 (30") | -3.30 | -3.97 |
| LEONARD LANE | DMH 9 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 6.00 | 5.00 | 3.75 | - | -1.32 (30") | -1.32 (30") | - | -3.32 | -3.99 |
| LEONARD LANE | HYD. 2 | N/A | N/A | HYDRODYNAMIC SEPERATOR - CONTECH MODEL VX-11000 | | FRAME AND COVER (3) | 5.95 | - | 3.31 | - | - | -1.36 (30") | -1.36 (30") | -4.36 | -5.03 |
| LEONARD LANE | DMH 10 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.80 | 4.80 | 3.55 | - | - | -1.40 (30") | -1.40 (30") | -3.40 | -4.07 |
| LEONARD LANE | DMH 11 | N/A | N/A | 6' DIA MANHOLE | 13-BX-3-6 | FRAME AND COVER | 5.62 | 4.62 | 3.37 | -1.49 (36") | -1.49 (30") | - | -1.49 (30") | -3.49 | -4.16 |

## TABLE OF EXISTING STORM DRAINAGE STRUCTURES

| STREET NAME | STRUCT. I.D. | STATION | OFFSET | STRUCTURE TYPE | GRATE/RIM ELEVATION | INVERT ELEVATIONS | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | N | S | E | W |
| GEORGE COURT | CB1 | 3+51 | 17.31'R | CATCH BASIN | R=4.23 | 1.03'(15") | - | - | - |
| GEORGE COURT | CB2 | 3+50 | 17.42'L | CATCH BASIN | R=4.17 | - | 1.07'(15") | - | - |
| GEORGE COURT | CB3 | 7+79 | 17.6'L | CATCH BASIN | R=6.16 | - | 2.16'(15") | - | - |
| GEORGE COURT | CB4 | 7+80 | 17.55'R | CATCH BASIN | R=6.26 | 1.96'(15") | - | - | - |
| HELEN COURT | CB5 | 3+42 | 18.13'R | CATCH BASIN | R=3.93 | 0.83'(12") | - | - | 0.83 (14") |
| HELEN COURT | CB6 | 3+46 | 17.38'L | CATCH BASIN | R=3.83 | 0.93(12") | 1.13'(12") | - | 0.93 (14") |
| HELEN COURT | CB7 | 7+95 | 17.79'L | CATCH BASIN | R=6.29 | 1.39'(15") | 1.99'(15") | - | - |
| HELEN COURT | CB8 | 7+95 | 17.64'R | CATCH BASIN | R=6.26 | 2.06'(15") | - | - | - |
| SHORE DRIVE | CB9 | 1+60 | 19.61'R | CATCH BASIN | R=6.35 | - | - | 2.05'(15") | - |
| SHORE DRIVE | CB10 | 2+17 | 20.05'L | CATCH BASIN | R=6.34 | 1.24'(15") | 1.24'(85") | 1.14'(15") | - |
| SHORE DRIVE | CB11 | 2+39 | 19.65'R | CATCH BASIN | R=6.15 | - | - | 1.95'(15") | - |
| SHORE DRIVE | CB12 | 5+29 | 19.74'R | CATCH BASIN | R=5.9 | 1.40'(18") | - | - | - |
| SHORE DRIVE | CB13 | 5+30 | 19.49'R | CATCH BASIN | R=6.16 | 2.18'(15") | - | - | - |
| SHORE DRIVE | CB14 | 1+03 | 19.70'R | CATCH BASIN | R=6.18 | - | - | 2.28'(15") | - |
| SHORE DRIVE | CB15 | 1+05 | 19.63'L | CATCH BASIN | R=5.85 | - | 1.75'(18") | - | - |
| GEORGE COURT | DMH1 | 3+64 | 5.98'R | MANHOLE | R=4.01 | 0.59'(36") | 0.11'(15") | -0.41'(12") | 0.11'(15") |
| GEORGE COURT | DMH2 | 4+83 | 10.50'R | MANHOLE | - | - | - | - | - |
| GEORGE COURT | DMH3 | 6+50 | 8.96'R | MANHOLE | - | - | - | - | - |
| GEORGE COURT | DMH4 | 7+86 | 8.48'R | MANHOLE | - | - | - | - | - |
| GEORGE COURT | DMH5 | 10+35 | 7.34'R | MANHOLE | R=6.32 | - | - | -2.58(36") | -2.58(36") |
| GEORGE COURT | DMH6 | 11+66 | 8.98'R | MANHOLE | R=5.56 | -2.64(36") | - | - | -2.34(36") |
| SHORE DRIVE | DMH7 | 1+10 | 13.52'L | MANHOLE | R=5.46 | - | -3.04(36") | -1.46(15") | -3.24(36") |
| SHORE DRIVE | DMH8 | 4+83 | 19.40'L | MANHOLE | R=6.23 | - | 0.93'(18") | -2.07(36") | -1.67'(36") |
| SHORE DRIVE | DMH9 | 5+01 | 19.37'R | MANHOLE | R=5.51 | -1.89'(36") | 1.11'(15") | - | -1.49(24") |

NOTE: DMH2, DMH3, DMH4 ARE INACCESSIBLE AS THEY HAVE BEEN PAVED OVER

## TABLE OF NEW STORM DRAINAGE PIPE

| STREET NAME | UP STRUCT. | UP INVERT | DN STRUCT. | DN INVERT | PIPE DIA. | APP. PIPE LENGTH | MIN. PIPE SLOPE |
|---|---|---|---|---|---|---|---|
| HELEN COURT | CB C | 1.1 | EXIST CB 5 | 0.83 | 14" | 83' | 0.33% |
| HELEN COURT | CB B | 1.10 | EXIST CB 6 | 0.93 | 14" | 87' | 0.20% |
| SHORE DRIVE | EXIST CB 10 | 1.24 | DMH 2 | 0.75 | 18" | 93' | 0.53% |
| SHORE DRIVE | DMH 2 | 0.71 | DMH 3 | 0.12 | 18" | 118' | 0.50% |
| SHORE DRIVE | DMH 3 | 0.12 | HYD. 1 | 0.07 | 18" | 7' | 0.71% |
| SHORE DRIVE | HYD. 1 | 0.07 | DMH 4 | -0.08 | 18" | 7' | 2.14% |
| SHORE DRIVE | DMH 4 | -0.58 | DMH 7 | -0.63 | 18" | 17' | 0.29% |
| SHORE DRIVE | DMH 3 | 0.12 | DMH 5 | 0.08 | 18" | 6' | 0.67% |
| SHORE DRIVE | DMH 5 | 0.08 | DMH 6 | 0.05 | 18" | 26' | 0.12% |
| SHORE DRIVE | DMH 6 | 0.05 | DMH 4 | -0.02 | 18" | 9' | 0.78% |
| LEONARD LANE | DMH 8 | -1.30 | DMH 9 | -1.32 | 30" | 3' | 0.67% |
| LEONARD LANE | DMH 9 | -1.32 | HYD. 2 | -1.36 | 30" | 6' | 0.67% |
| LEONARD LANE | HYD. 2 | -1.36 | DMH 10 | -1.40 | 30" | 6' | 0.67% |
| LEONARD LANE | DMH 10 | -1.40 | DMH 11 | -1.49 | 30" | 9' | 1.00% |
| LEONARD LANE | DMH 11 | -1.49 | DMH 7 | -1.61 | 36" | 24' | 0.50% |
| LEONARD LANE | DMH 7 | -1.63 | EXIST DMH 8 | -1.67 | 36" | 8' | 0.50% |

## LEGEND

| DESCRIPTION | SYMBOL |
|---|---|
| CATCHMENT AREA | A1 - 1.50 AC |
| STRUCTURE NUMBER | DA-14 |
| FLOW DIRECTION | |
| MANHOLE | |
| DRAINAGE OUTFALL | DAO-1 |
| CATCH BASIN | |
| HYDRODYNAMIC SEPARATOR | |
| DRAINAGE LINE | |
| DRAINAGE AREA EXTENTS | |

811 1-800-272-4480
Dig Safely. New York
Call811
before you dig
www.digsafelynewyork.com

## CONTRIBUTORY AREA

| OUTFALL | AREA |
|---|---|
| DAO-1 | 26.34 AC |
| DAO-2 | 26.83 AC |

GRAPHIC SCALE
120 0 60 120
( IN FEET )
1 inch = 120 ft.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| 2 | 07/09/19 | 95% SUBMISSION |
| 1 | 12/06/18 | 60% SUBMISSION |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

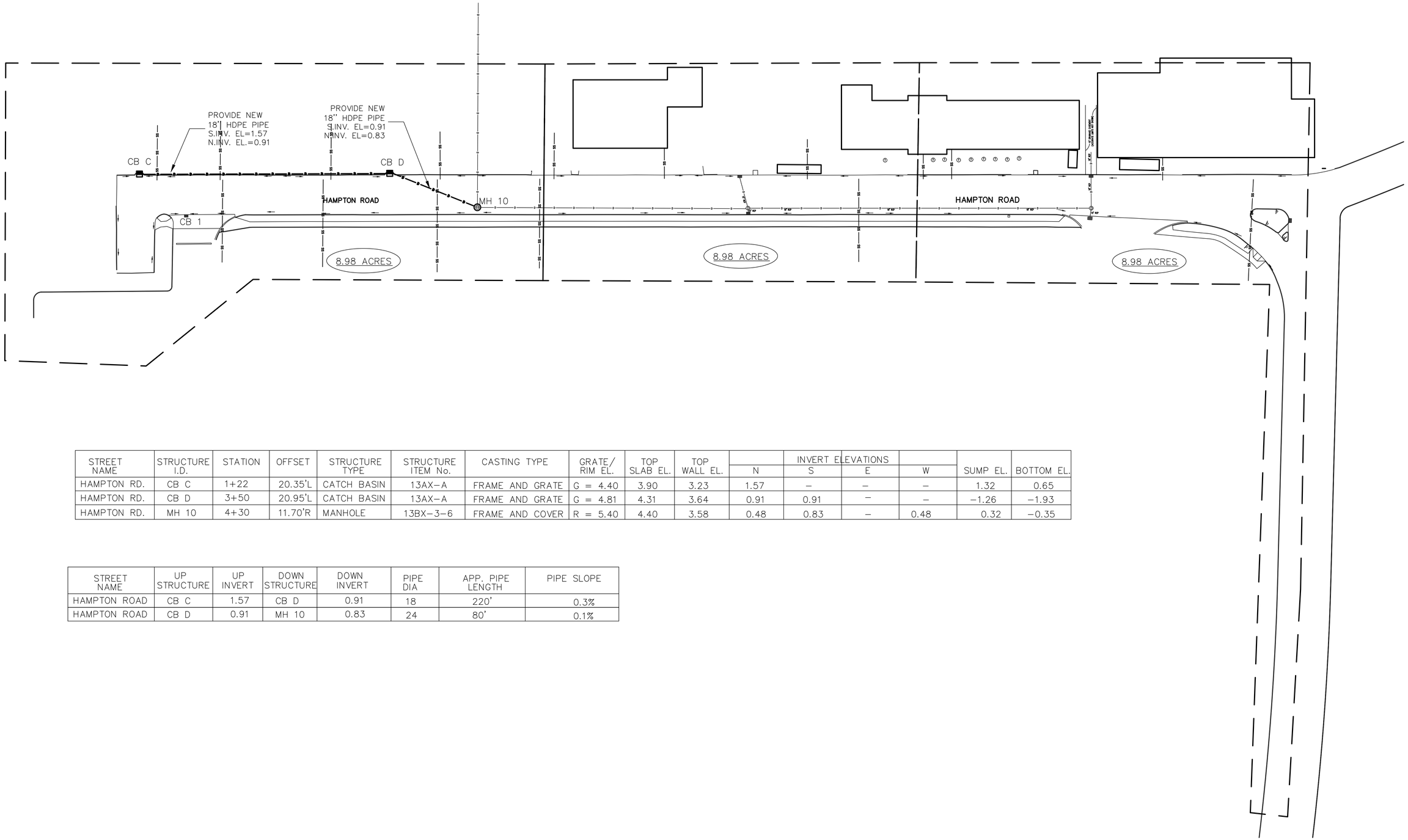
TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

**COMPREHENSIVE DRAINAGE PLAN**

STORMWATER DRAINAGE AND ROADWAY IMPROVEMENTS
HELEN COURT AND GEORGE COURT
MERRICK, N.Y.

Scale: 1" = 100'
Date: JULY 2019
File No.:
Dwg No.: C0.1
Sheet No.: 2 of 15

X:\HEMP (Town of Hempstead) - 1V490\HEMP1804-Drainage Improvements for Helen and George Courts\02-BIM-CADD\Con-docs\civil\C0.1 Comprehensive Drainage Plan.dwg Last Modified: Jun 27, 2019 - 10:53am Plotted on: Jul 05, 2019 - 4:16pm By akumar




| STREET NAME | STRUCTURE I.D. | STATION | OFFSET | STRUCTURE TYPE | STRUCTURE ITEM No. | CASTING TYPE | GRATE/ RIM EL. | TOP SLAB EL. | TOP WALL EL. | INVERT ELEVATIONS N | S | E | W | SUMP EL. | BOTTOM EL. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HAMPTON RD. | CB C | 1+22 | 20.35'L | CATCH BASIN | 13AX–A | FRAME AND GRATE | G = 4.40 | 3.90 | 3.23 | 1.57 | – | – | – | 1.32 | 0.65 |
| HAMPTON RD. | CB D | 3+50 | 20.95'L | CATCH BASIN | 13AX–A | FRAME AND GRATE | G = 4.81 | 4.31 | 3.64 | 0.91 | 0.91 | – | – | –1.26 | –1.93 |
| HAMPTON RD. | MH 10 | 4+30 | 11.70'R | MANHOLE | 13BX–3–6 | FRAME AND COVER | R = 5.40 | 4.40 | 3.58 | 0.48 | 0.83 | – | 0.48 | 0.32 | –0.35 |

| STREET NAME | UP STRUCTURE | UP INVERT | DOWN STRUCTURE | DOWN INVERT | PIPE DIA | APP. PIPE LENGTH | PIPE SLOPE |
|---|---|---|---|---|---|---|---|
| HAMPTON ROAD | CB C | 1.57 | CB D | 0.91 | 18 | 220' | 0.3% |
| HAMPTON ROAD | CB D | 0.91 | MH 10 | 0.83 | 24 | 80' | 0.1% |

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1–22–19 | REVISED AS PER 60% SUBMISSION COMMENTS |

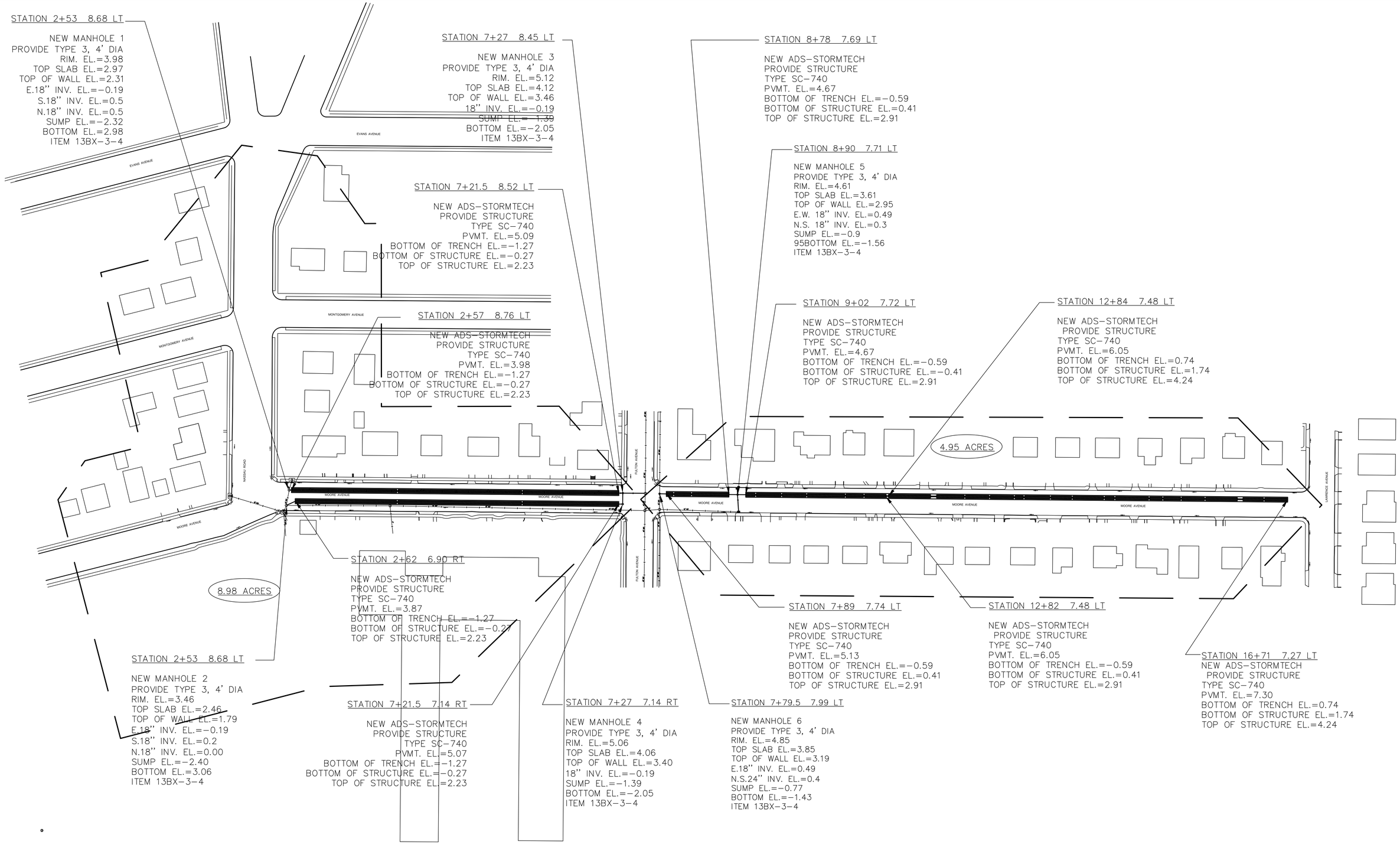
In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

COMPREHENSIVE DRAINAGE PLAN
HAMPTON ROAD

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: 1"=40'
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C501
Sheet No.: 3 of 27




| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |

| | |
|---|---|
| In Charge: - | J.A.G. |
| Compilation:- | |
| Design: - | XX |
| Drawn: - | R.J.W |
| Checked: - | J.A.G. |
| Reviewed: - | |

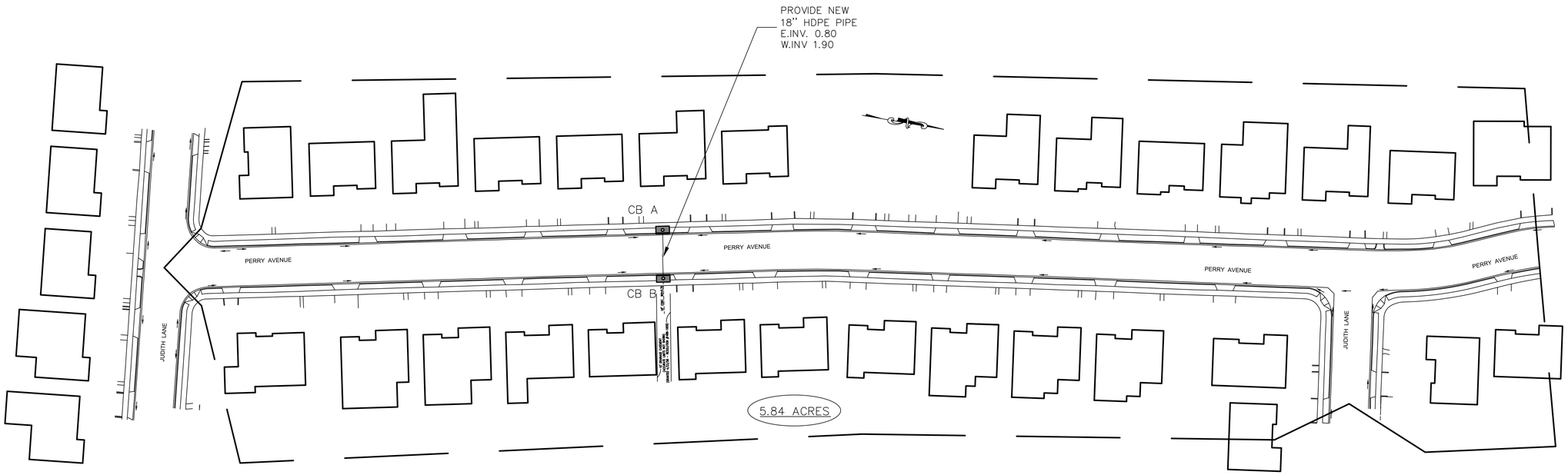
TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

COMPREHENSIVE DRAINAGE PLAN
MOORE AVE

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: 1"=60'
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C502
Sheet No.: 4 of 27




| STREET NAME | STRUCTURE I.D. | STATION | OFFSET | STRUCTURE TYPE | STRUCTURE ITEM No. | CASTING TYPE | GRATE/ RIM EL. | TOP SLAB EL. | TOP WALL EL. | INVERT ELEVATIONS N | S | E | W | SUMP EL. | BOTTOM EL. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PERRY AVE | CB A | 4+63.43 | 14.78 L | CATCH BASIN | 13AX-D-MOD | FRAME AND GRATE | G = 4.20 | 5.17 | 3.67 | – | – | 1.90 (18") | – | 1.40 | 0.73 |
| PERRY AVE | CB B | 4+62.91 | 14.87 R | CATCH BASIN | 13AX-D-MOD | FRAME AND GRATE | G = 4.10 | 5.08 | 3.58 | – | – | 0.79 (18") | 0.80 (18") | 0.11 | -0.56 |

| STREET NAME | UP STRUCTURE | UP INVERT | DOWN STRUCTURE | DOWN INVERT | PIPE DIA | APP. PIPE LENGTH | PIPE SLOPE |
|---|---|---|---|---|---|---|---|
| PERRY AVE | CB A | 1.9 | CB B | 0.80 | 18" | 30.5' | 3.6 |

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

COMPREHENSIVE DRAINAGE PLAN
PERRY AVE

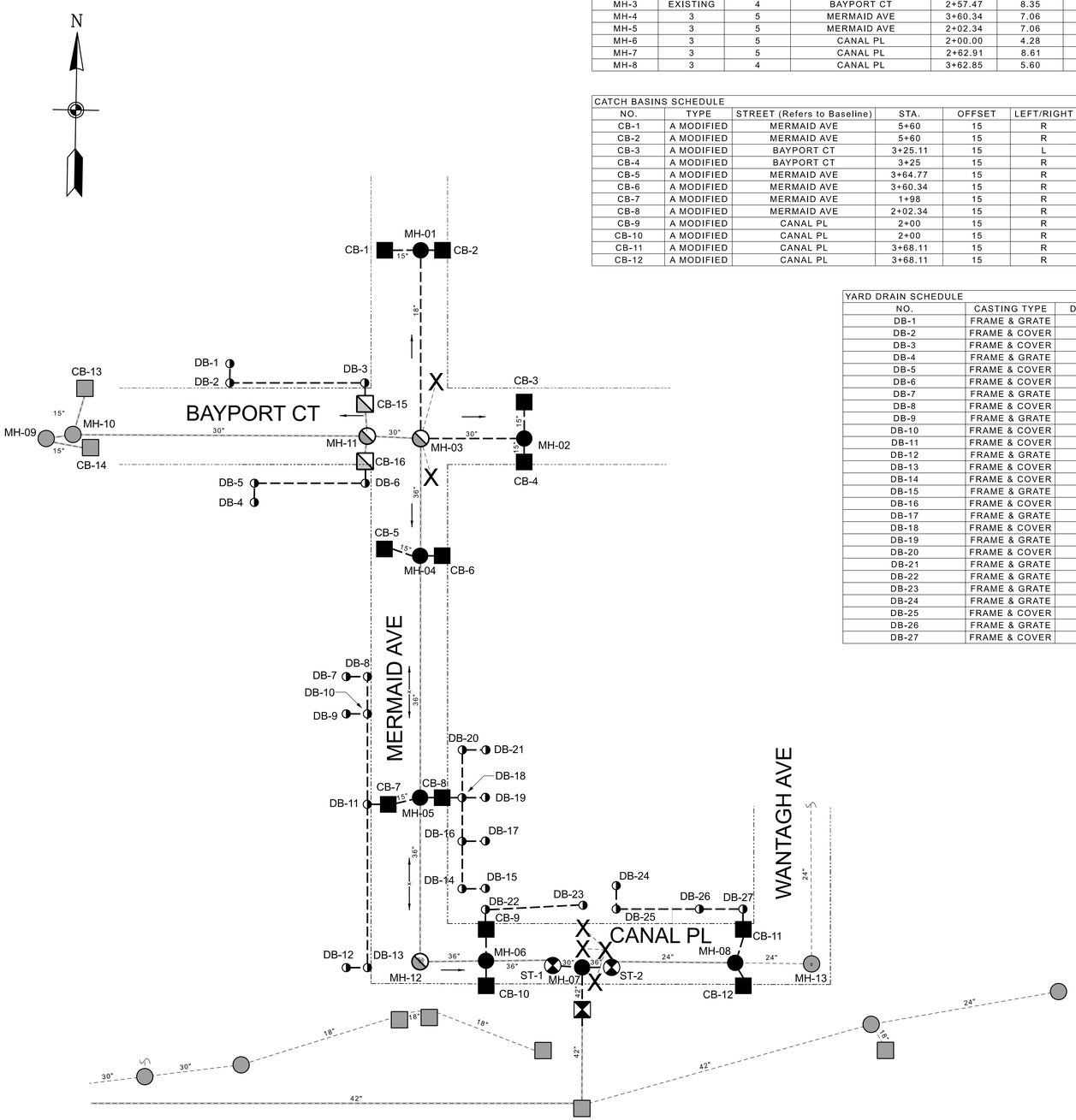
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C503
Sheet No.: 5 of 27

| MANHOLE SCHEDULE | | | | | | | | | | | | | NORTH | | EAST | | SOUTH | | WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | TYPE | DIA. | STREET (Refers to Baseline) | STA. | OFFSET | LEFT/RIGHT | RIM | CASTING | BRICK | SLAB | T/SLAB | T/WALL | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. |
| MH-1 | 3 | 4 | MERMAID AVE | 5+60.00 | 7.47 | R | 4.32 | 7 | 4 | 8 | 3.40 | 2.74 | - | - | 1.23 | 15 | 1.32 | 15 | 1.08 | 15 |
| MH-2 | 3 | 4 | BAYPORT CT | 3+25.11 | 8.36 | R | 4.33 | 7 | 4 | 8 | 3.41 | 2.75 | 1.12 | 15 | - | - | 1.27 | 15 | 1.00 | 18 |
| MH-3 | EXISTING | 4 | BAYPORT CT | 2+57.47 | 8.35 | R | 4.60 | 7 | 4 | 8 | 3.68 | 3.02 | -0.36 | 18 | - | - | - | - | 0.23 | 18 |
| MH-4 | 3 | 5 | MERMAID AVE | 3+60.34 | 7.06 | R | 4.33 | 7 | 4 | 10 | 3.41 | 2.58 | -3.01 | 36 | 1.54 | 15 | -3.01 | 36 | 1.39 | 15 |
| MH-5 | 3 | 5 | MERMAID AVE | 2+02.34 | 7.06 | R | 4.33 | 7 | 4 | 10 | 3.41 | 2.58 | -3.18 | 36 | 1.55 | 15 | -3.18 | 36 | 1.40 | 15 |
| MH-6 | 3 | 5 | CANAL PL | 2+00.00 | 4.28 | R | 4.39 | 7 | 4 | 10 | 3.47 | 2.64 | 1.12 | 15 | -3.42 | 36 | 1.2 | 15 | -3.42 | 36 |
| MH-7 | 3 | 5 | CANAL PL | 2+62.91 | 8.61 | R | 4.53 | 7 | 4 | 10 | 3.61 | 2.78 | - | - | -3.18 | 30 | -3.18 | 42 | -3.18 | 36 |
| MH-8 | 3 | 4 | CANAL PL | 3+62.85 | 5.60 | R | 4.39 | 7 | 4 | 8 | 3.47 | 2.81 | 1.39 | 15 | -1.1 | 24 | 1.49 | 15 | -1.1 | 24 |

| CATCH BASINS SCHEDULE | | | | | | | | | | | | NORTH | | EAST | | SOUTH | | WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | TYPE | STREET (Refers to Baseline) | STA. | OFFSET | LEFT/RIGHT | CURB ELEVATION | REVEAL | CASTING | BRICK | SLAB | T/WALL | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. |
| CB-1 | A MODIFIED | MERMAID AVE | 5+60 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | 1.25 | 15 | - | - | - | - |
| CB-2 | A MODIFIED | MERMAID AVE | 5+60 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | - | - | - | - | 1.25 | 15 |
| CB-3 | A MODIFIED | BAYPORT CT | 3+25.11 | 15 | L | 4.46 | 5 | 8 | 4 | 0 | 3.09 | - | - | - | - | 1.30 | 15 | - | - |
| CB-4 | A MODIFIED | BAYPORT CT | 3+25 | 15 | R | 4.46 | 5 | 8 | 4 | 0 | 3.09 | 1.30 | 15 | - | - | - | - | - | - |
| CB-5 | A MODIFIED | MERMAID AVE | 3+64.77 | 15 | R | 4.44 | 5 | 8 | 4 | 0 | 3.06 | - | - | 1.56 | 15 | - | - | - | - |
| CB-6 | A MODIFIED | MERMAID AVE | 3+60.34 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | - | - | - | - | 1.57 | 15 |
| CB-7 | A MODIFIED | MERMAID AVE | 1+98 | 15 | R | 4.44 | 5 | 8 | 4 | 0 | 3.06 | - | - | 1.57 | 15 | - | - | 1.86 | 6 |
| CB-8 | A MODIFIED | MERMAID AVE | 2+02.34 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | - | - | - | - | 1.90 | 8 | 1.57 | 15 |
| CB-9 | A MODIFIED | CANAL PL | 2+00 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | 1.00 | 6 | - | - | 1.25 | 15 | - | - |
| CB-10 | A MODIFIED | CANAL PL | 2+00 | 15 | R | 4.42 | 5 | 8 | 4 | 0 | 3.04 | 1.25 | 15 | - | - | - | - | - | - |
| CB-11 | A MODIFIED | CANAL PL | 3+68.11 | 15 | R | 4.43 | 5 | 8 | 4 | 0 | 3.05 | 1.55 | 15 | - | - | 1.55 | 15 | - | - |
| CB-12 | A MODIFIED | CANAL PL | 3+68.11 | 15 | R | 4.43 | 5 | 8 | 4 | 0 | 3.05 | 1.55 | 15 | - | - | - | - | - | - |

| YARD DRAIN SCHEDULE | | | | | | | | NORTH | | EAST | | SOUTH | | WEST | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | CASTING TYPE | DIA (IN) | STREET (Refers to Baseline) | STA. | OFFSET | LEFT/RIGHT | RIM | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. | INVERT | I.D. |
| DB-1 | FRAME & GRATE | 18 | BAYPORT CT | 1+33.22 | 28.47 | L | 4.22 | - | - | - | - | 2.72 | 6 | - | - |
| DB-2 | FRAME & COVER | 18 | BAYPORT CT | 1+33 | 20.64 | L | 4.34 | 2.55 | 6 | 2.72 | 8 | - | - | - | - |
| DB-3 | FRAME & COVER | 18 | BAYPORT CT | 2+21.14 | 20.64 | L | 4.75 | - | - | - | - | 1.69 | 8 | 1.69 | 8 |
| DB-4 | FRAME & GRATE | 18 | BAYPORT CT | 1+49.13 | 21.44 | R | 4.19 | 2.69 | 6 | - | - | - | - | - | - |
| DB-5 | FRAME & COVER | 18 | BAYPORT CT | 1+49 | 29.47 | R | 4.43 | - | - | 2.47 | 8 | 2.64 | 6 | - | - |
| DB-6 | FRAME & COVER | 18 | BAYPORT CT | 2+21.4 | 21.44 | R | 4.75 | 1.77 | 8 | - | - | - | - | 1.77 | 8 |
| DB-7 | FRAME & GRATE | 18 | MERMAID AVE | 2+81 | 35.00 | L | 4.44 | - | - | 2.94 | 6 | - | - | - | - |
| DB-8 | FRAME & COVER | 18 | MERMAID AVE | 2+81 | 21.01 | L | | - | - | - | - | 2.66 | 8 | 2.83 | 6 |
| DB-9 | FRAME & GRATE | 18 | MERMAID AVE | 2+56.72 | 34.98 | L | 4.28 | - | - | 2.78 | 6 | - | - | - | - |
| DB-10 | FRAME & COVER | 18 | MERMAID AVE | 1+49 | 20.99 | L | 4.83 | 2.44 | 8 | - | - | 2.44 | 8 | 2.44 | 6 |
| DB-11 | FRAME & COVER | 18 | MERMAID AVE | 1+97.97 | 21.01 | L | 4.55 | 1.73 | 8 | 1.73 | 8 | 1.73 | 8 | - | - |
| DB-12 | FRAME & GRATE | 18 | MERMAID AVE | 0+91.24 | 37.00 | L | 4.57 | - | - | 3.07 | 6 | - | - | - | - |
| DB-13 | FRAME & COVER | 18 | MERMAID AVE | 0+91.24 | 21.01 | L | | 2.77 | 8 | - | - | - | - | 2.94 | 6 |
| DB-14 | FRAME & COVER | 18 | MERMAID AVE | 1+42.47 | 21.01 | R | 4.85 | 2.49 | 8 | 2.49 | 6 | - | - | - | - |
| DB-15 | FRAME & GRATE | 18 | MERMAID AVE | 1+42.47 | 37.00 | R | 4.29 | - | - | - | - | - | - | 2.79 | 6 |
| DB-16 | FRAME & COVER | 18 | MERMAID AVE | 1+73.38 | 21.01 | R | | 2.2 | 8 | 2.2 | 6 | 2.2 | 8 | - | - |
| DB-17 | FRAME & GRATE | 18 | MERMAID AVE | 1+73.38 | 31.00 | R | 4.35 | - | - | - | - | - | - | 2.85 | 6 |
| DB-18 | FRAME & COVER | 18 | MERMAID AVE | 2+02.35 | 21.01 | R | 4.59 | 1.94 | 8 | 1.94 | 6 | 1.94 | 8 | 1.94 | 8 |
| DB-19 | FRAME & GRATE | 18 | MERMAID AVE | 2+02.35 | 31.00 | R | 4.43 | - | - | - | - | - | - | 2.93 | 6 |
| DB-20 | FRAME & COVER | 18 | MERMAID AVE | 2+32.65 | 21.01 | R | 4.72 | - | - | 2.43 | 6 | 2.41 | 8 | - | - |
| DB-21 | FRAME & GRATE | 18 | MERMAID AVE | 2+32.65 | 38.93 | R | 4.08 | - | - | - | - | - | - | 2.58 | 6 |
| DB-22 | FRAME & GRATE | 18 | CANAL PL | 1+99.96 | 29.32 | L | 4.02 | - | - | 1.46 | 6 | 1.46 | 6 | - | - |
| DB-23 | FRAME & GRATE | 18 | CANAL PL | 2+62.91 | 32.00 | L | 3.57 | | | | | | | | |
| DB-24 | FRAME & GRATE | 18 | CANAL PL | 2+85.16 | 44.81 | L | 3.83 | | | | | | | | |
| DB-25 | FRAME & COVER | 18 | CANAL PL | 2+85.16 | 26.47 | L | 4.60 | | | | | | | | |
| DB-26 | FRAME & GRATE | 18 | CANAL PL | 3+39.48 | 26.46 | L | 3.85 | | | | | | | | |
| DB-27 | FRAME & COVER | 18 | CANAL PL | 1+49 | 17.85 | L | 4.47 | | | | | | | | |




## LEGEND

| | |
|---|---|
| CB-2 | EXISTING CATCH BASIN |
| CB-3 | PROPOSED CATCH BASIN |
| DB-1 | PROPOSED DRAIN BASIN |
| MH-1 | EXISTING MANHOLE |
| MH-2 | PROPOSED MANHOLE |
| ST-1 | STORMTREATMENT UNIT |
| | ALTER CATCH BASIN |
| | ALTER MANHOLE |
| | CLEAN EXISTING SYSTEM |
| 15" | EXISTING PIPE SIZE |
| 24" | PROPOSED PIPE SIZE |
| X | DEMOLISH STRUCTURE |
| | SURFACE FLOW DIRECTION |
| TV-1 | TIDE VALVE STRUCTURE |

D- 9997 / 6152

| NO. | DATE | REVISIONS |
|---|---|---|

| | |
|---|---|
| In Charge: | RWD |
| Compilation: | AP |
| Design: | AP |
| Drawn: | SC |
| Checked: | AP |
| Reviewed: | RWD |

NOTE:

1. EXISTING CONDITIONS SHOWN AS OF OCTOBER 2018.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTER LINE AND EXISTING CENTER LINE OF ROADWAY SHOWN IN PROFILE DRAWINGS.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM.
   HORIZONTAL CONTROL INDICATED IS NAD 1983
   VERTICAL CONTROL INDICATED IS NAVD 1988

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

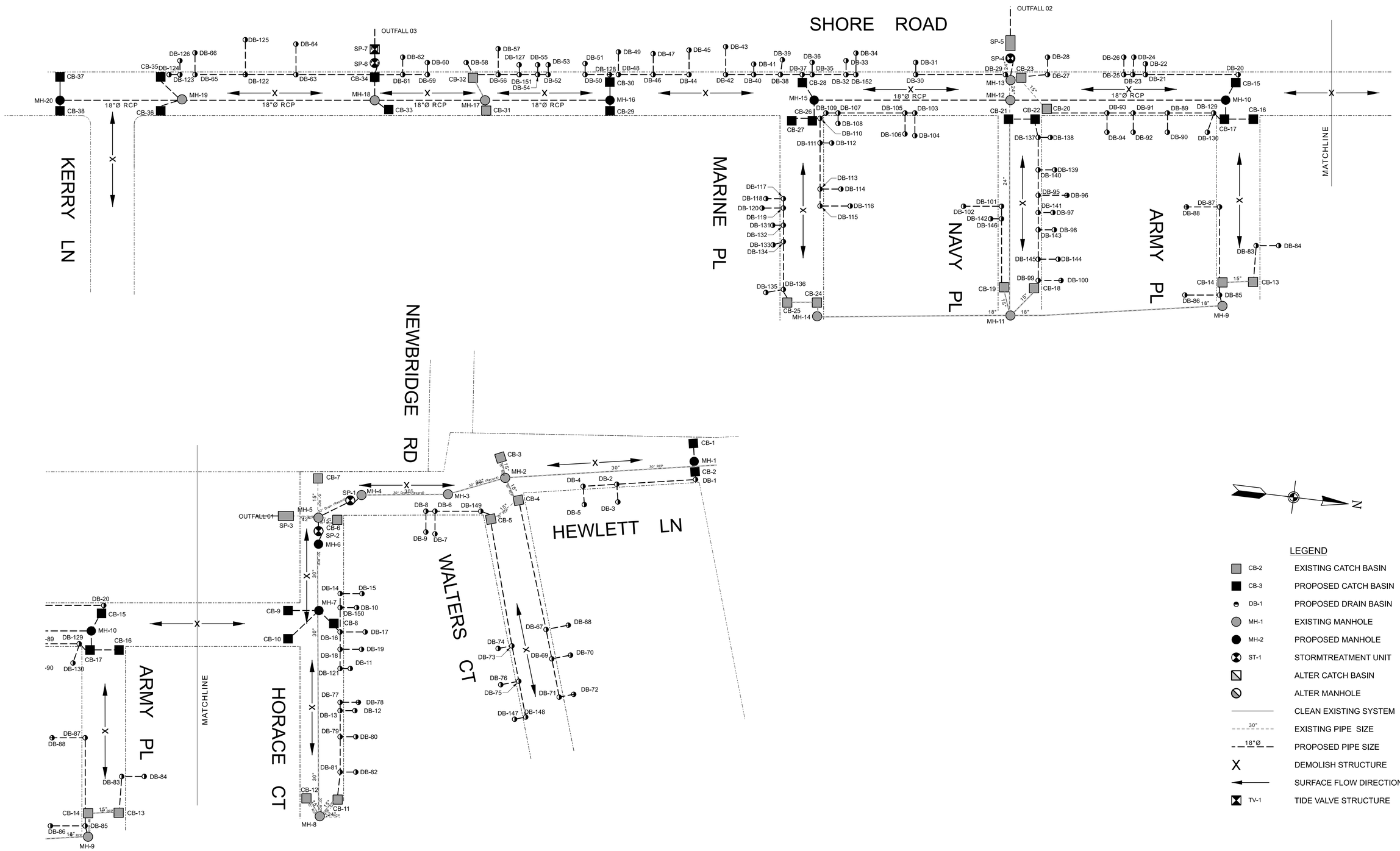
# OVERALL DRAINAGE PLAN

TOH ROAD RAISINGS

## MERMAID AVENUE AREA

WANTAGH, N.Y.

| | |
|---|---|
| Scale: | 1" = 40' |
| Date: | MAY 2019 |
| File No.: | |
| Dwg No.: | C-201 |
| Sheet No.: | XX of XX |




D- 9997 / 6152

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

| | |
|---|---|
| In Charge: | RWD |
| Compilation: | AP |
| Design: | AP |
| Drawn: | SC |
| Checked: | AP |
| Reviewed: | RWD |

NOTE:

1. EXISTING CONDITIONS SHOWN AS OF OCTOBER 2018.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTER LINE AND EXISTING CENTER LINE OF ROADWAY SHOWN IN PROFILE DRAWINGS.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM.
   HORIZONTAL CONTROL INDICATED IS NAD 1983
   VERTICAL CONTROL INDICATED IS NAVD 1988

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

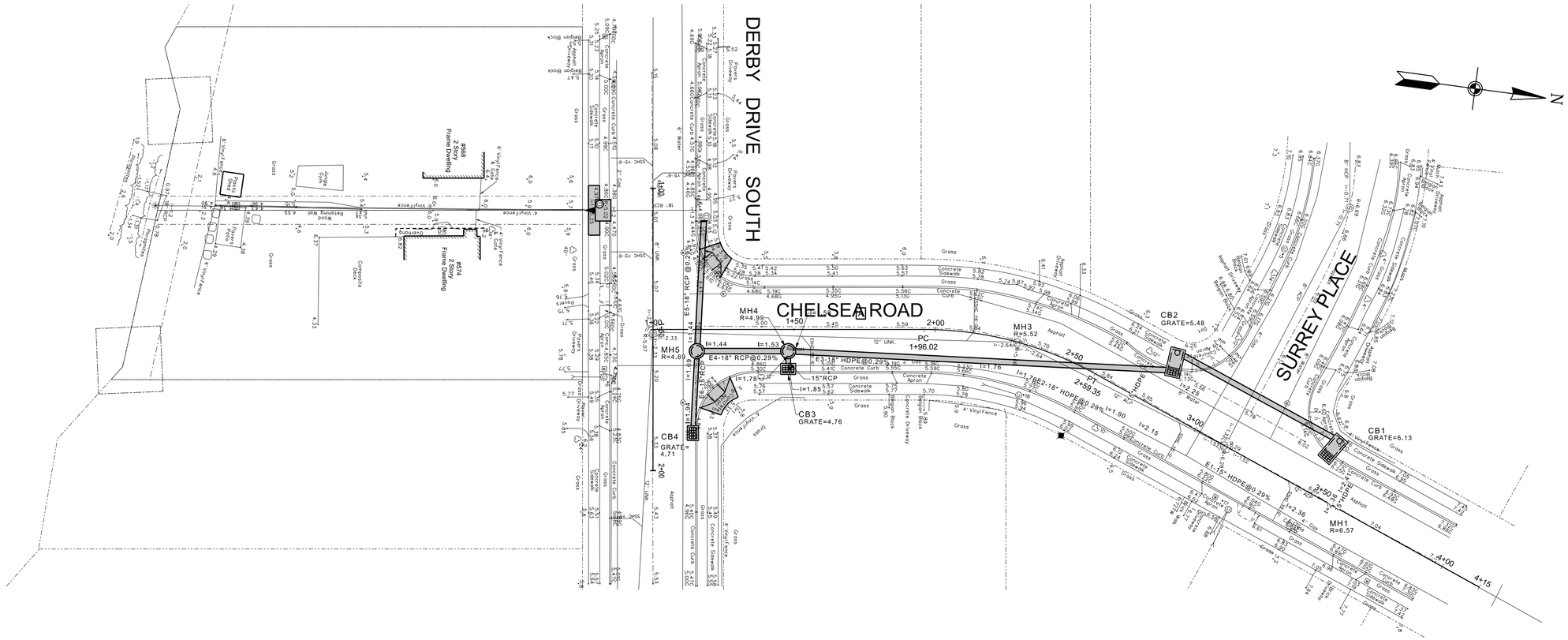
# OVERALL DRAINAGE PLAN

TOH ROAD RAISINGS

## SHORE ROAD AREA

BELLMORE, N.Y.

| | |
|---|---|
| Scale: | 1" = 50' |
| Date: | JAN 2019 |
| File No.: | 6142-01 |
| Dwg No.: | C-201 |
| Sheet No.: | XX of XX |




D- 9997 / 6152

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

SPECIAL NOTE: Vertical Datum = NAVD 88

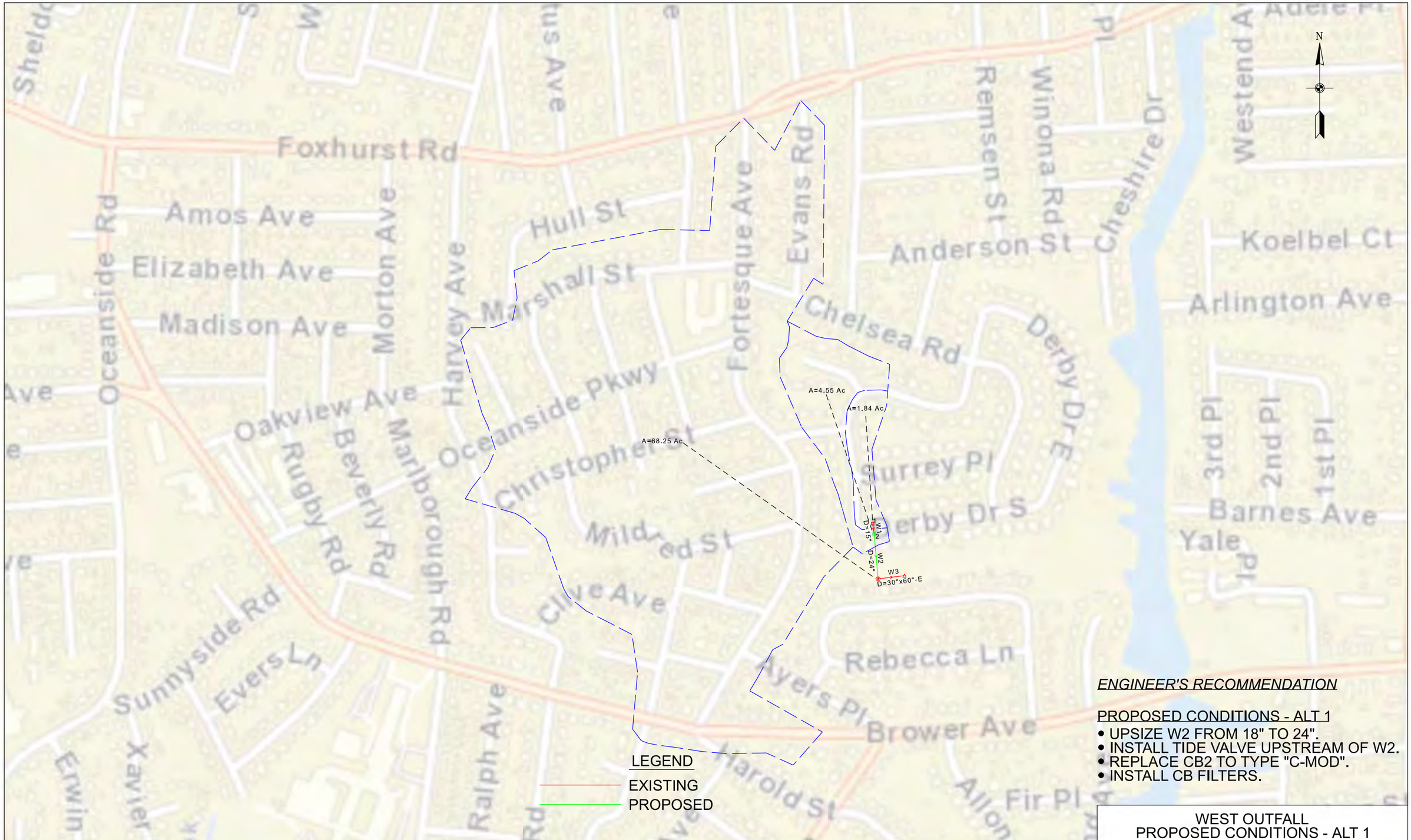
TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

LEGEND
– – – EXISTING GRADE

# EAST OUTFALL
STATION 0+00 TO 0+00

OCEANSIDE PIPES
# DERBY DRIVE SOUTH
OCEANSIDE, N.Y.

| | |
|---|---|
| Scale: | HOR. 1" = 20'<br>VERT. 1" = 2' |
| Date: | AUG 2019 |
| File No.: | 6152 |
| Dwg No.: | C-104 |
| Sheet No.: | XX of XX |




*ENGINEER'S RECOMMENDATION*

PROPOSED CONDITIONS - ALT 1

- UPSIZE W2 FROM 18" TO 24".
- INSTALL TIDE VALVE UPSTREAM OF W2.
- REPLACE CB2 TO TYPE "C-MOD".
- INSTALL CB FILTERS.

WEST OUTFALL
PROPOSED CONDITIONS - ALT 1

PREPARED BY
de Bruin
Civil Engineering & Construction Management
de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

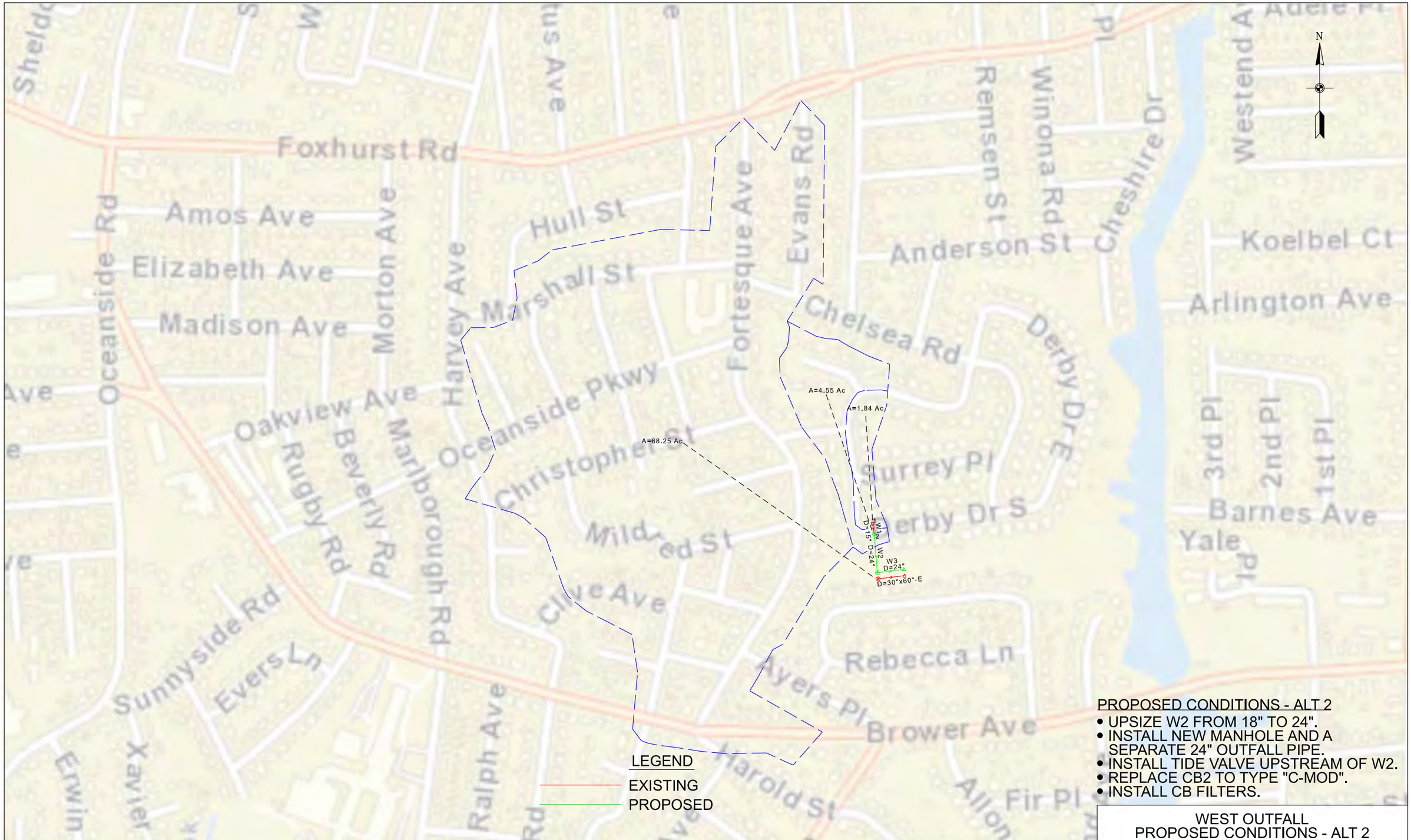
| | |
|---|---|
| Date: | 12/03/2018 |
| Job: | 6152 |
| Scale: | 1" = 400' |

Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
DERBY DRIVE SOUTH
OCEANSIDE, NY

PLAN VIEW




LEGEND

EXISTING

PROPOSED

PROPOSED CONDITIONS - ALT 2

- UPSIZE W2 FROM 18" TO 24".
- INSTALL NEW MANHOLE AND A SEPARATE 24" OUTFALL PIPE.
- INSTALL TIDE VALVE UPSTREAM OF W2.
- REPLACE CB2 TO TYPE "C-MOD".
- INSTALL CB FILTERS.

WEST OUTFALL
PROPOSED CONDITIONS - ALT 2

PREPARED BY
de Bruin
Civil Engineering & Construction Management
de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

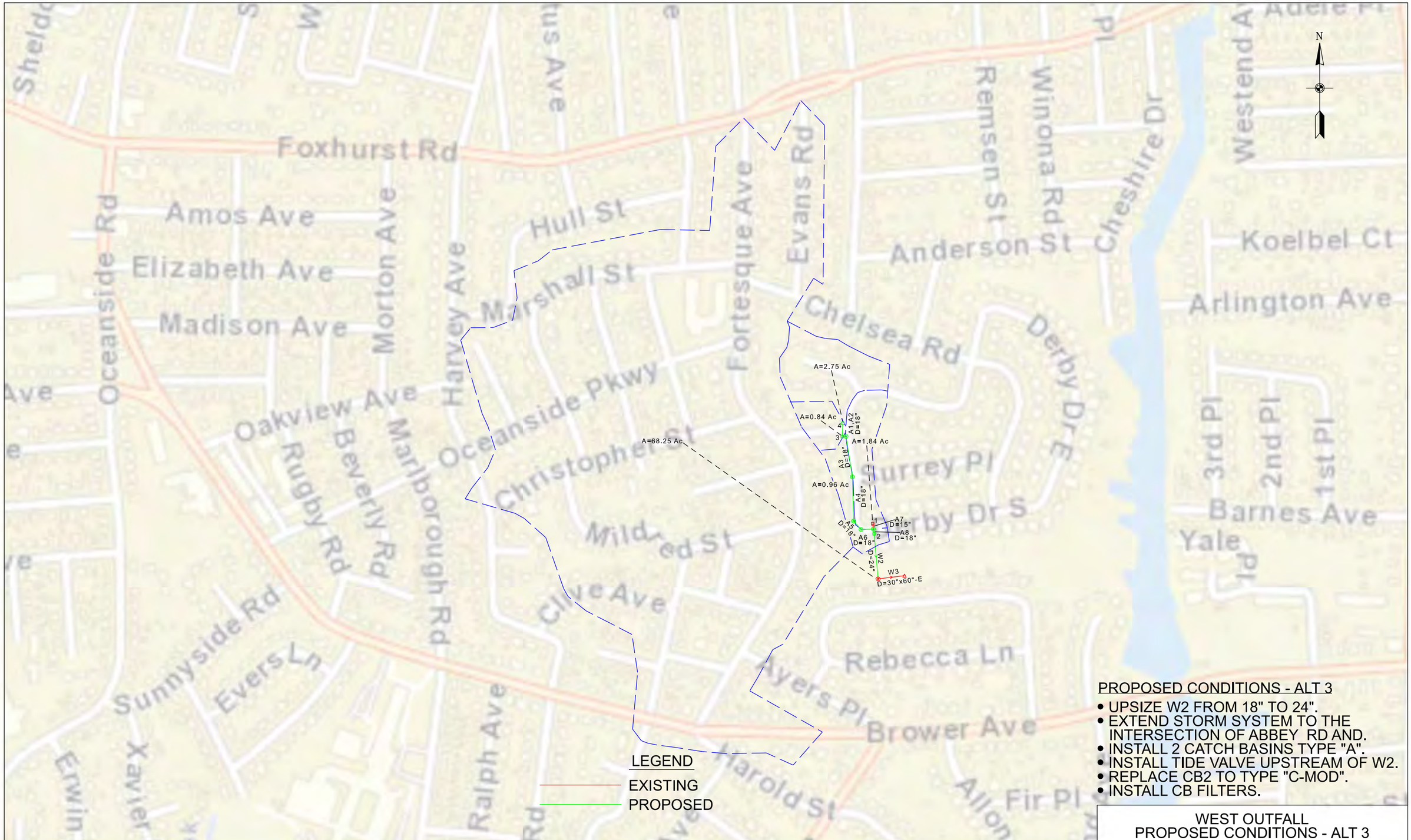
Date: 12/03/2018
Job: 6152
Scale: 1" = 400'

Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
DERBY DRIVE SOUTH
OCEANSIDE, NY

PLAN VIEW




LEGEND

EXISTING

PROPOSED

PROPOSED CONDITIONS - ALT 3

- UPSIZE W2 FROM 18" TO 24".
- EXTEND STORM SYSTEM TO THE INTERSECTION OF ABBEY RD AND.
- INSTALL 2 CATCH BASINS TYPE "A".
- INSTALL TIDE VALVE UPSTREAM OF W2.
- REPLACE CB2 TO TYPE "C-MOD".
- INSTALL CB FILTERS.

WEST OUTFALL
PROPOSED CONDITIONS - ALT 3

PREPARED BY
de Bruin
Civil Engineering & Construction Management
de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

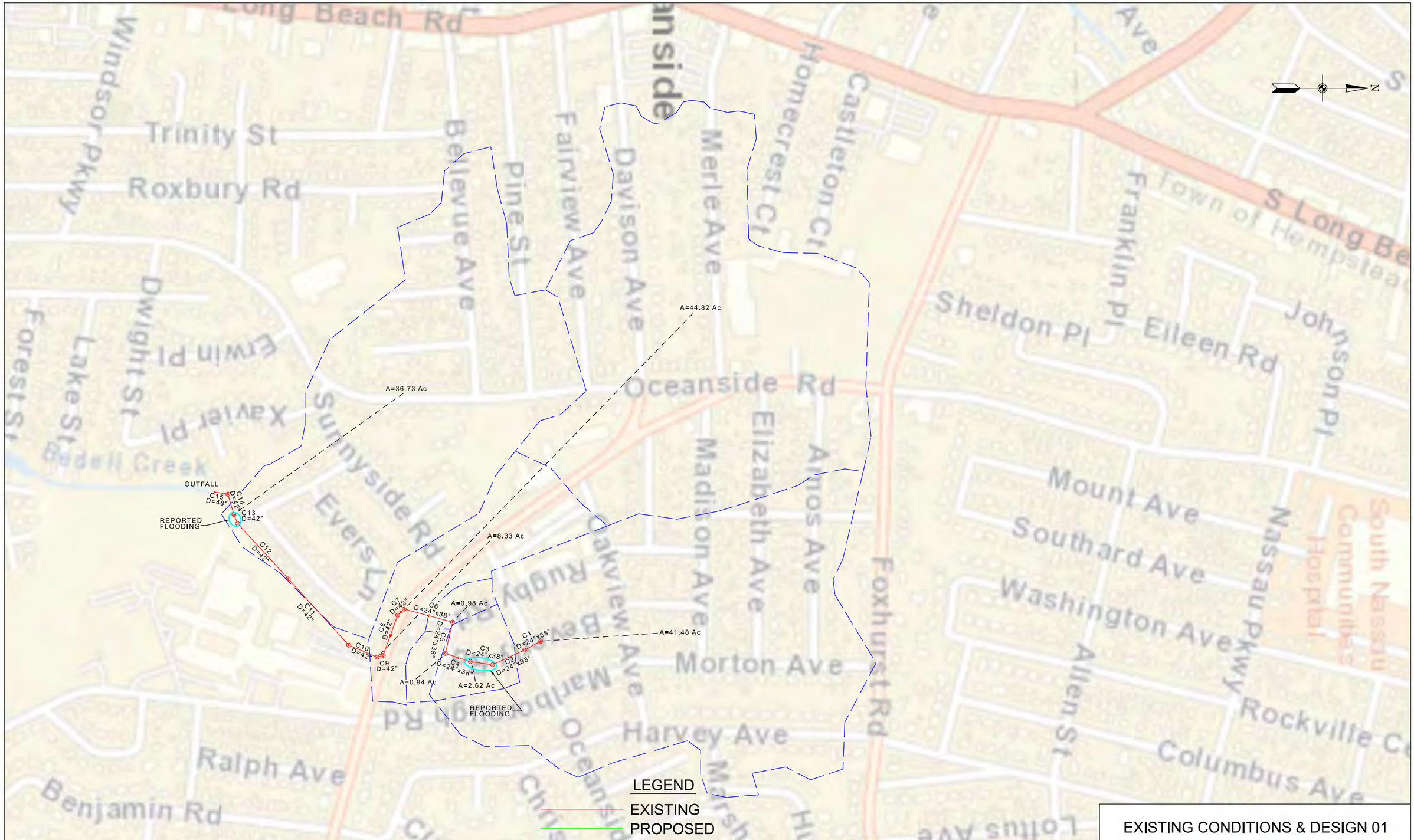
Date: 12/03/2018
Job: 6152
Scale: 1" = 400'

Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
DERBY DRIVE SOUTH
OCEANSIDE, NY

PLAN VIEW




EXISTING CONDITIONS & DESIGN 01

PREPARED BY

de Bruin
Civil Engineering & Construction Management

de Bruin Engineering P.C.
1400 Old Country Road, Suite 106
Westbury • New York • 11590
516.513.1313

| | |
|---|---|
| Date: | 2/05/19 |
| Job: | 6152 |
| Scale: | 1" = 200' |

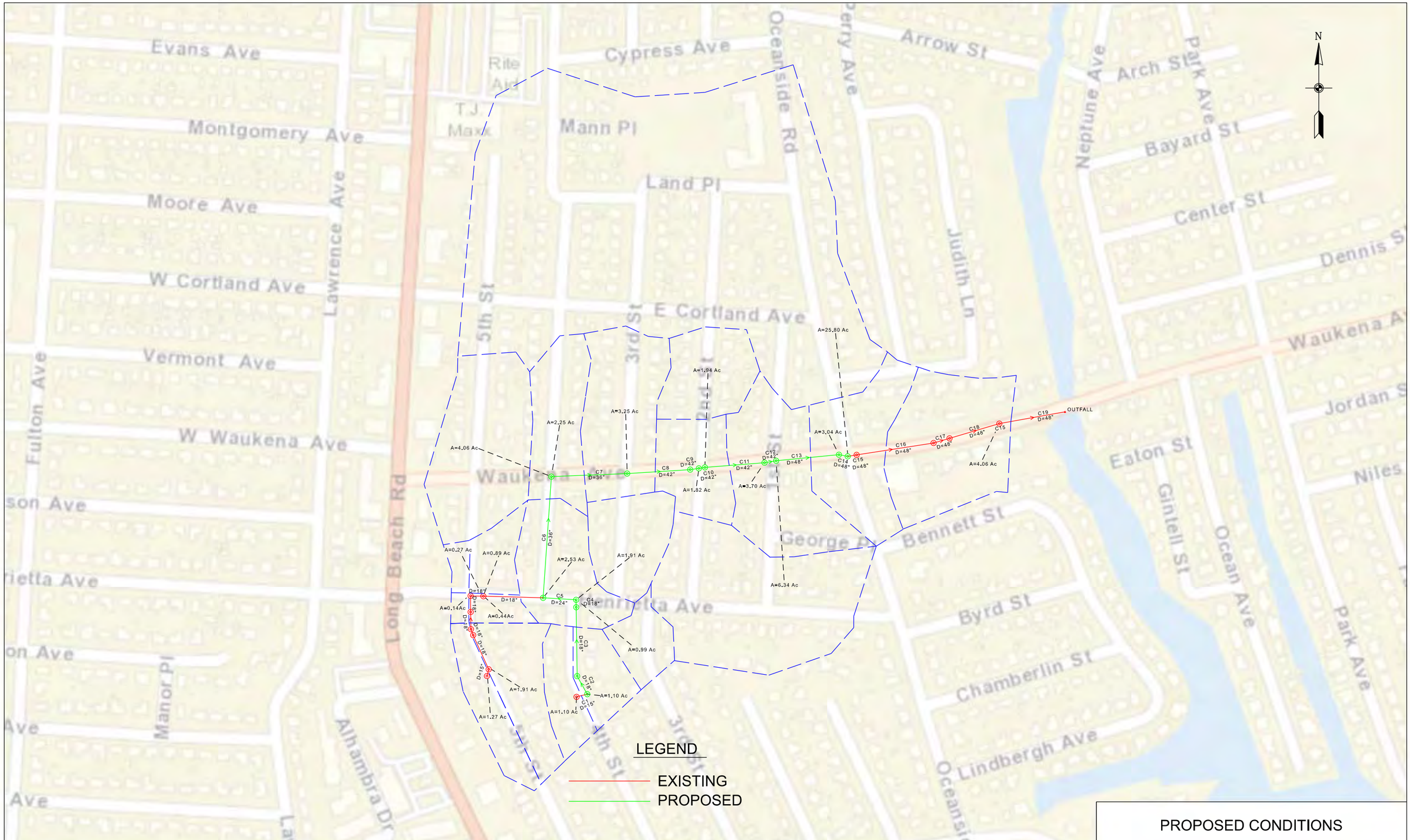
Notes: Vertical Datum = NAVD88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
BEVERLY RD
OCEANSIDE, NY

PLANVIEW

SHEET NO. 1 OF 10




PROPOSED CONDITIONS

PREPARED BY

de Bruin
Civil Engineering & Construction Management

de Bruin Engineering P.C.
1400 Old Country Road • Westbury • NY • 11590
516.513.1313

Date: 01/22/2019
Job: 6152
Scale: 1" = 300'

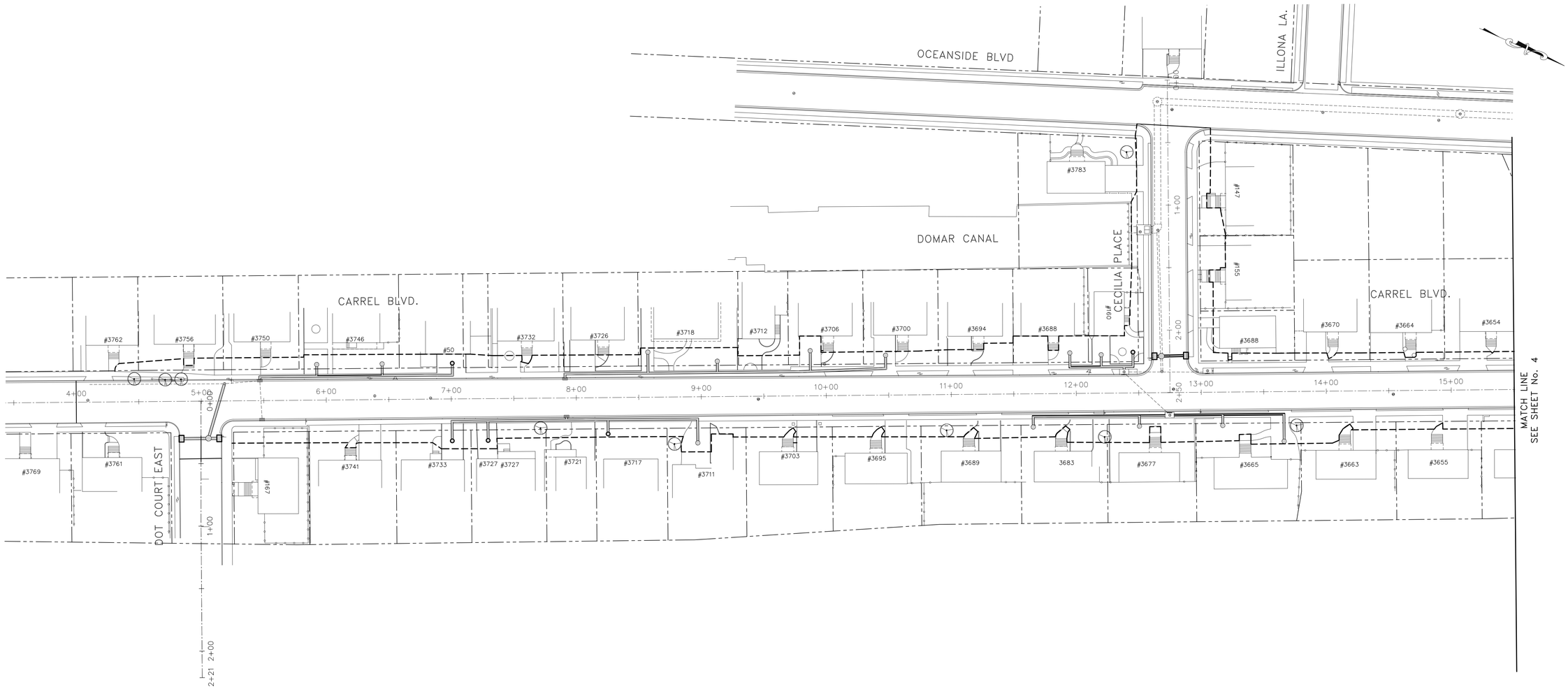
Notes: Vertical Datum = NAVD 88

OCEANSIDE PIPES

DRAINAGE IMPROVEMENT
WAUKENA AVE AND 4TH ST.
OCEANSIDE, NY

PLAN VIEW

SHEET NO. 2 OF 6




| No. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| | |
|---|---|
| In Charge: | JC |
| Complilation: | |
| Design: | JC |
| Drawn: | HIK |
| Checked: | xxx |
| Reviewed: | xxx |

| | | |
|---|---|---|
| COMPREHENSIVE | Proposed Drainage System | R.C.P. C.B. M.H. |
| | Existing Drainage System | |
| | Watershed Boundary | |
| DRAINAGE | Interior Drainage Boundary | |
| | Incremental areas to CB's | |
| PLAN | R.O.W. to be fully improved | |
| | Tributary acreage to catch basin | 1.4 Ac. |
| LEGEND | Tributary acreage to manhole | 1.4 Ac. |
| | Direction of surface flow | |
| | Estab. or Prop. street elevations | 19.85 |

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

**OCEANSIDE DRAINAGE IMPROVEMENTS &**
**OCEANSIDE ROAD RAISING AT CARREL BLVD**
**OCEANSIDE, NEW YORK**

**LiRo Engineers, Inc.**
*A LiRo Group Company*
Mineola, N.Y. 516-746-2350[T]

# MASTER OVERALL DRAINAGE PLAN

Scale: 1"=40'

Date: AUGUST 2018

File No:

Sheet No. 3 OF 37

U:\Trans\18-158-1891 - Town of Hempstead - Oceanside Drainage\Engineering\Design Phase\Drawings\Wrights Landsdrawing\Master Overall Drainage (3) Last Modified: Aug 22, 2018 Plotted by Hagopian

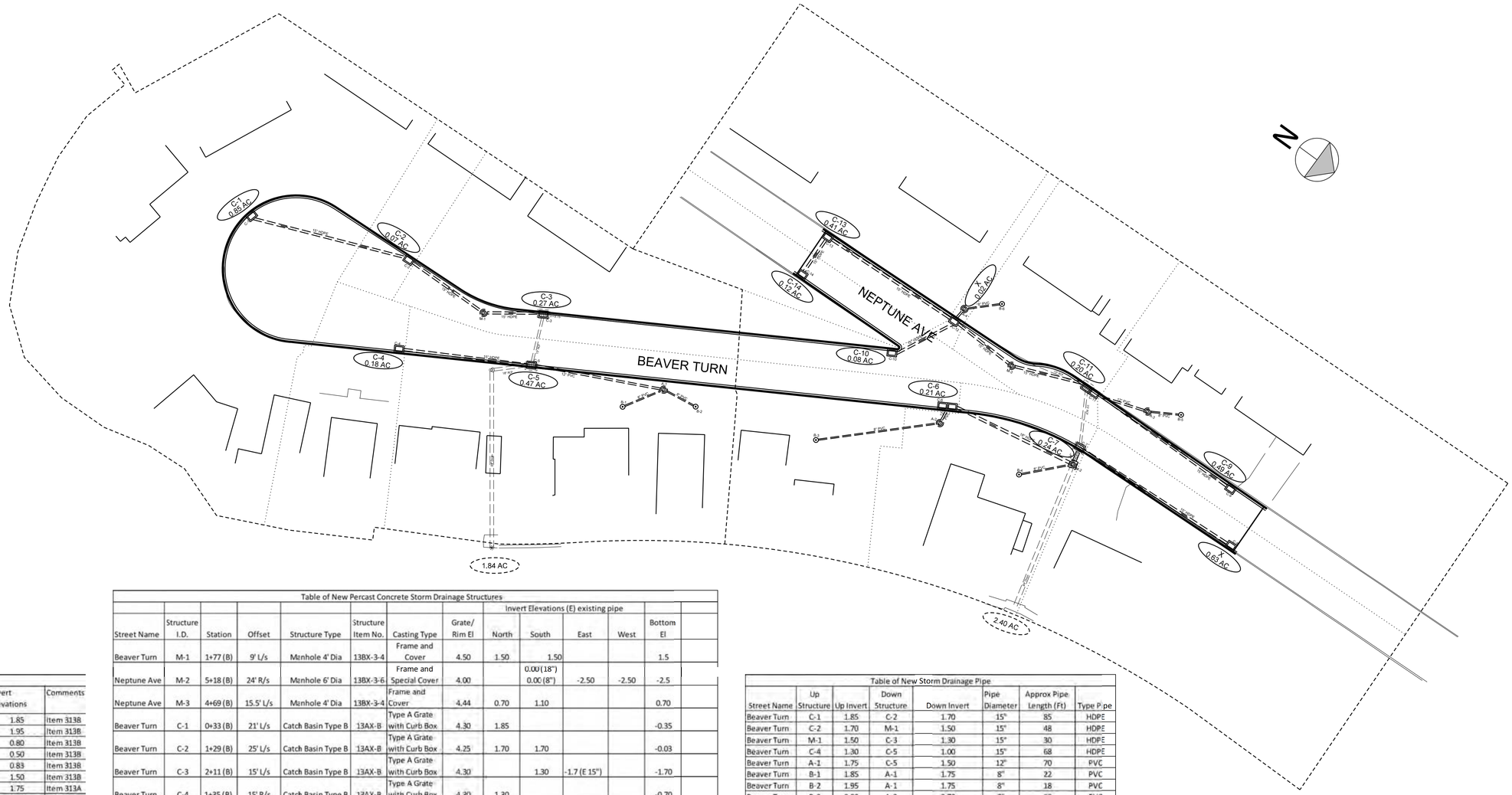



Table of New P.V.C Drainage Structures

| Struct. Number | Station | Offset | Structure Type | Casting Type | Grate/ Rim El | Invert Elevations | Comments |
|---|---|---|---|---|---|---|---|
| B-1 | 2+60 (B) | 32' R/s | 18" Drain | Surface Grate | 4.32 | 1.85 | Item 313B |
| B-2 | 3+00 (B) | 28' R/s | 18" Drain | Surface Grate | 4.62 | 1.95 | Item 313B |
| B-3 | 3+67 (B) | 39' R/s | 18" Drain | Surface Grate | 2.58 | 0.80 | Item 313B |
| B-4 | 4+88 (B) | 42' R/s | 18" Drain | Surface Grate | 3.19 | 0.50 | Item 313B |
| B-5 | 5+56 (B) | 31' L/s | 18" Drain | Surface Grate | 3.00 | 0.83 | Item 313B |
| B-6 | 1+97 (P) | 37' L/s | 18" Drain | Surface Grate | 3.67 | 1.50 | Item 313B |
| A-1 | 2+82 (B) | 21' R/s | 12" MH | MH Frame & Cover | 3.90 | 1.75 | Item 313A |
| A-2 | 4+34 (B) | 23' R/s | 12" MH | MH Frame & Cover | 3.70 | 0.70 | Item 313A |
| A-3 | 5+37 (B) | 23' L/s | 12" MH | MH Frame & Cover | 3.35 | 0.70 | Item 313A |
| A-4 | 1+83 (P) | 23' L/s | 12" MH | MH Frame & Cover | 3.90 | 1.10 | Item 313A |

Table of New Percast Concrete Storm Drainage Structures

| Street Name | Structure I.D. | Station | Offset | Structure Type | Structure Item No. | Casting Type | Grate/ Rim El | Invert Elevations (E) existing pipe North | South | East | West | Bottom El |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Beaver Turn | M-1 | 1+77 (B) | 9' L/s | Manhole 4' Dia | 13BX-3-4 | Frame and Cover | 4.50 | 1.50 | 1.50 | | | 1.5 |
| Neptune Ave | M-2 | 5+18 (B) | 24' R/s | Manhole 6' Dia | 13BX-3-6 | Frame and Special Cover | 4.00 | | 0.00 (18") 0.00 (8") | -2.50 | -2.50 | -2.5 |
| Neptune Ave | M-3 | 4+69 (B) | 15.5' L/s | Manhole 4' Dia | 13BX-3-4 | Frame and Cover | 4.44 | 0.70 | 1.10 | | | 0.70 |
| Beaver Turn | C-1 | 0+33 (B) | 21' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | 1.85 | | | | -0.35 |
| Beaver Turn | C-2 | 1+29 (B) | 25' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.25 | 1.70 | 1.70 | | | -0.03 |
| Beaver Turn | C-3 | 2+11 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | | 1.30 | -1.7 (E 15") | | -1.70 |
| Beaver Turn | C-4 | 1+35 (B) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | 1.30 | | | | -0.70 |
| Beaver Turn | C-5 | 2+09 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | 1.50 | -1.90 (E 18") 1.00 (15") | | -1.7 (E 15") | -1.70 |
| Beaver Turn | C-6 | 4+32 (B) | 15' R/s | Catch Basin Type D | 13AX-D | Type A Grate with Curb Box | 4.30 | 0.50 | | 0.60 | | -1.50 |
| Neptune Ave | C-7 | 5+15 (B) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.30 | | | -2.50 | -2.5 (E 15") | -2.50 |
| Neptune Ave | C-8 | 6+20 (B) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.09 | | 0.00 | | | -2.00 |
| Neptune Ave | C-9 | 6+00 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.04 | | 0.60 | | | -2.00 |
| Beaver Turn | C-10 | 4+04 (B) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.31 | | | | 1.35 | -1.65 |
| Neptune Ave | C-11 | 5+09 (B) | 17' L/s | Catch Basin Type D | 13AX-D | Type A Grate with Curb Box | 4.30 | 0.0 (15") 0.6 (12") | 0.80 | -2.3 (E 15") | | -2.30 |
| Neptune Ave | C-12 | 1+83 (P) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.25 | 1.20 | 0.20 | 1.25 | | -1.80 |
| Neptune Ave | C-13 | 1+00 (P) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.40 | 0.30 | | 0.30 | | -1.70 |
| Neptune Ave | C-14 | 1+00 (P) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.32 | | | | 0.60 | -1.40 |

(B) Baseline on Beaver Turn/Neptune Ave (P) Baseline on Private road

Table of New Storm Drainage Pipe

| Street Name | Up Structure | Up Invert | Down Structure | Down Invert | Pipe Diameter | Approx Pipe Length (Ft) | Type Pipe |
|---|---|---|---|---|---|---|---|
| Beaver Turn | C-1 | 1.85 | C-2 | 1.70 | 15" | 85 | HDPE |
| Beaver Turn | C-2 | 1.70 | M-1 | 1.50 | 15" | 48 | HDPE |
| Beaver Turn | M-1 | 1.50 | C-3 | 1.30 | 15" | 30 | HDPE |
| Beaver Turn | C-4 | 1.30 | C-5 | 1.00 | 15" | 68 | HDPE |
| Beaver Turn | A-1 | 1.75 | C-5 | 1.50 | 12" | 70 | PVC |
| Beaver Turn | B-1 | 1.85 | A-1 | 1.75 | 8" | 22 | PVC |
| Beaver Turn | B-2 | 1.95 | A-1 | 1.75 | 8" | 18 | PVC |
| Beaver Turn | B-3 | 0.80 | A-2 | 0.70 | 8" | 68 | PVC |
| Beaver Turn | A-2 | 0.70 | C-6 | 0.60 | 12" | 9 | PVC |
| Beaver Turn | C-6 | 0.50 | M-2 | 0.00 | 18" | 72 | HDPE |
| Beaver Turn | B-4 | 0.50 | M-2 | 0.00 | 8" | 28 | PVC |
| Neptune Ave | C-7 | -2.50 | M-2 | -2.50 | 24" | 10 | HDPE |
| Neptune Ave | C-8 | 0.00 | C-7 | -0.50 | 15" | 98 | HDPE |
| Neptune Ave | C-9 | 0.60 | C-11 | 0.00 | 15" | 88 | HDPE |
| Neptune Ave | A-3 | 0.70 | C-11 | 0.60 | 12" | 28 | PVC |
| Neptune Ave | B-5 | 0.83 | A-3 | 0.70 | 8" | 18 | PVC |
| Neptune Ave | M-3 | 1.10 | C-11 | 0.80 | 15" | 38 | HDPE |
| Neptune Ave | C-12 | 1.20 | M-3 | 1.10 | 15" | 36 | HDPE |
| Neptune Ave | C-10 | 1.35 | C-12 | 1.25 | 15" | 36 | HDPE |
| Neptune Ave | A-4 | 1.10 | C-12 | 0.90 | 12" | 8 | PVC |
| Neptune Ave | B-6 | 1.50 | A-4 | 1.20 | 8" | 18 | PVC |
| Neptune Ave | C-13 | 0.30 | C-12 | 0.20 | 15" | 78 | HDPE |
| Neptune Ave | C-14 | 0.60 | C-13 | 0.30 | 15" | 30 | HDPE |

(E) EXISTING MH

LKB CONSULTING ENGINEERS

LOCKWOOD KESSLER & BARTLETT, INC.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge: B.A.M.
Compilation: ___
Design: D.B.
Drawn: E.J.Z./M.M.
Checked: B.A.M.
Reviewed: ___

PLAN AND PROFILE NOTES:

1. EXISTING CONDITIONS SHOWN AS OF JANUARY 2008.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM. HORIZONTAL CONTROL INDICATED IS NAD83 (1986).US SURVEY FEET. VERTICAL CONTROL INDICATED IS NAVD (1988) FEET.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

LEGEND

PROFILE
GRADE — Proposed Centerline
Existing Centerline
LEGEND

BEAVER TURN
COMPREHENSIVE DRAINAGE PLAN

ROAD RAISING AND STORMWATER DRAINAGE IMPROVEMENTS
BEAVER TURN @ NEPTUNE AVENUE
SEAFORD, NY

Scale: H: 1" = 20' V: 1' = 2'
Date: APR. 2019
File No.:
Dwg No.: 3
Sheet No.: 3 of 15

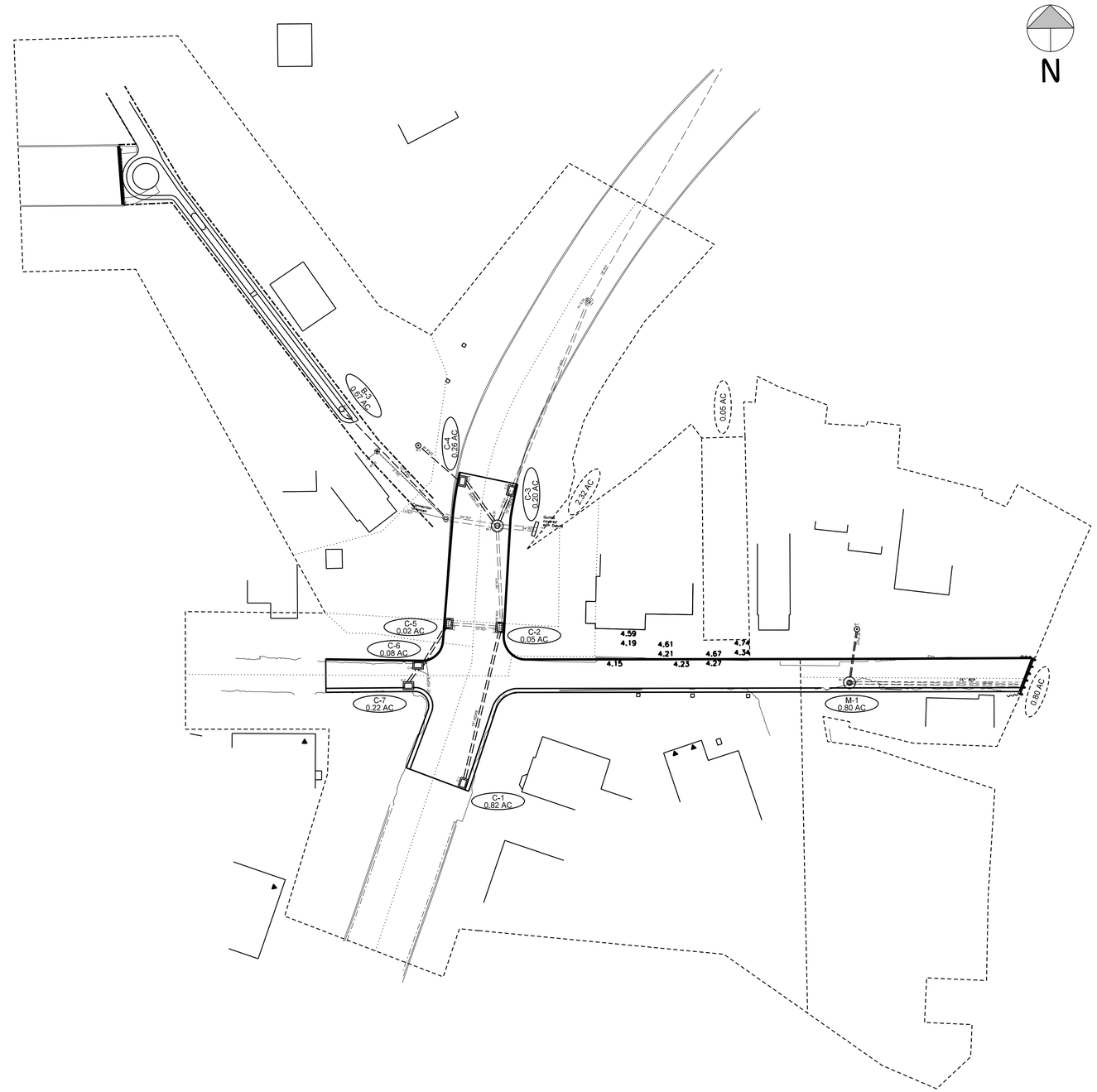
| Table of New P.V.C Drainage Structures | | | | | | | |
|---|---|---|---|---|---|---|---|
| Struct. Number | Station | Offset | Structure Type | Casting Type | Grate/ Rim El | Invert Elevations | Comments |
| B-1 | 3+33 (S ) | 25' L/s | 18" Drain | Surface Grate | 2.42 | 0.50 (S) 8" | Item 313B |
| B-2 | 2+77 (J ) | 42' L/s | 18" Drain | Surface Grate | 2.59 | 0.60 (S ) 8" | Item 313B |
| B-3 | 2+15 (J ) | 105' L/s | Overflow | Domed Grate | 3.30 | -0.85 (E ) 12" | Item ??? |

| Table of New Percast Concrete Storm Drainage Structures | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Invert Elevations (E) existing pipe | | | | |
| Street Name | Structure I.D. | Station | Offset | Structure Type | Structure Item No. | Casting Type | Grate/ Rim El | North | South | East | West | Bottom El |
| South Street | M-1 | 3+30 (S) | 4' R/s | Manhole 6' Dia | 13BX-3-6 | Frame and Special Cover | 4.10 | 0.40 | | -0.2 (E) | | -2.2 |
| Jackson Ave | M-2 | 2+50 (J ) | 9' R/s | Manhole 6' Dia. | 13BX-3-6 | Frame and Special Cover | 3.20 | -0.7 NE 0.0 NW | -0.2 (E) | -0.2 (E) | -0.2 (E) | -2.7 |
| Jackson Ave | C-1 | 1+22 (J ) | 17' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.10 | 0.42 | | | | -1.60 |
| Jackson Ave | C-2 | 1+98 (J ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | -0.3 (E) | 0.20 | | -0.3 (E) | -2.30 |
| Jackson Ave | C-3 | 2+71 (J ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 2.69 | | * Install on Existing 15" RCP pipe | | | -2.50 |
| Jackson Ave | C-4 | 2+70 (J ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 2.71 | 0.30 | 0.30 | | | -1.70 |
| Jackson Ave | C-5 | 1+98 (J ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.21 | | 1.00 | -0.4 (E) | | -2.40 |
| South Street | C-6 | 1+10 (S ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.12 | 1.30 | 1.30 | | | -0.70 |
| South Street | C-7 | 1+08 (S ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.12 | 1.44 | | | | -0.56 |

**(S) BASELINE ON SOUTH ST (J) BASELINE ON JACKSON AVE**

| Table of New Storm Drainage Pipe | | | | | | | |
|---|---|---|---|---|---|---|---|
| Street Name | Up Structure | Up Invert | Down Structure | Down Invert | Pipe Diameter | Approx Pipe Length (Ft) | Type Pipe |
| South Street | B-1 | 0.50 | M-1 | 0.40 | 8" | 27 | PVC |
| Jackson Ave | B-2 | 0.60 | C-4 | 0.30 | 8" | 32 | PVC |
| Jackson Ave | B-3 | -0.85 | MH (E ) | -1.20 | 12" | 75 | PVC |
| Jackson Ave | C-1 | 0.42 | C-2 | 0.20 | 15" | 78 | HDPE |
| Jackson Ave | C-3 | * | M-2 | -0.70 | 15" | 18 | HDPE |
| Jackson Ave | C-4 | 0.3 | M-2 | 0.00 | 15" | 27 | HDPE |
| Jackson Ave | C-6 | 1.30 | C-5 | 1.00 | 15" | 24 | HDPE |
| South Street | C-7 | 1.44 | C-6 | 1.30 | 15" | 12 | HDPE |

*** INSTALL CATCH BASIN ON EXISTING 15" RCP PIPE**
**(E) EXISTING MH**




LKB CONSULTING ENGINEERS
LOCKWOOD KESSLER & BARTLETT, INC.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge: B.A.M.
Compilation: ___
Design: D.B.
Drawn: E.J.Z./M.M.
Checked: B.A.M.
Reviewed: ___

PLAN AND PROFILE NOTES:

1. EXISTING CONDITIONS SHOWN AS OF JANUARY 2008.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM. HORIZONTAL CONTROL INDICATED IS NAD83 (1986).US SURVEY FEET. VERTICAL CONTROL INDICATED IS NAVD (1988) FEET.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

LEGEND

PROFILE
GRADE
LEGEND

Proposed Centerline
Existing Centerline

SOUTH STREET
COMPREHENSIVE DRAINAGE PLAN

ROAD RAISING AND STORMWATER DRAINAGE IMPROVEMENTS
SOUTH STREET @ JACKSON AVENUE
SEAFORD, NY

Scale: 1" = 30'
Date: APR. 2019
File No.:
Dwg No.: 3
Sheet No.: 3 of 19

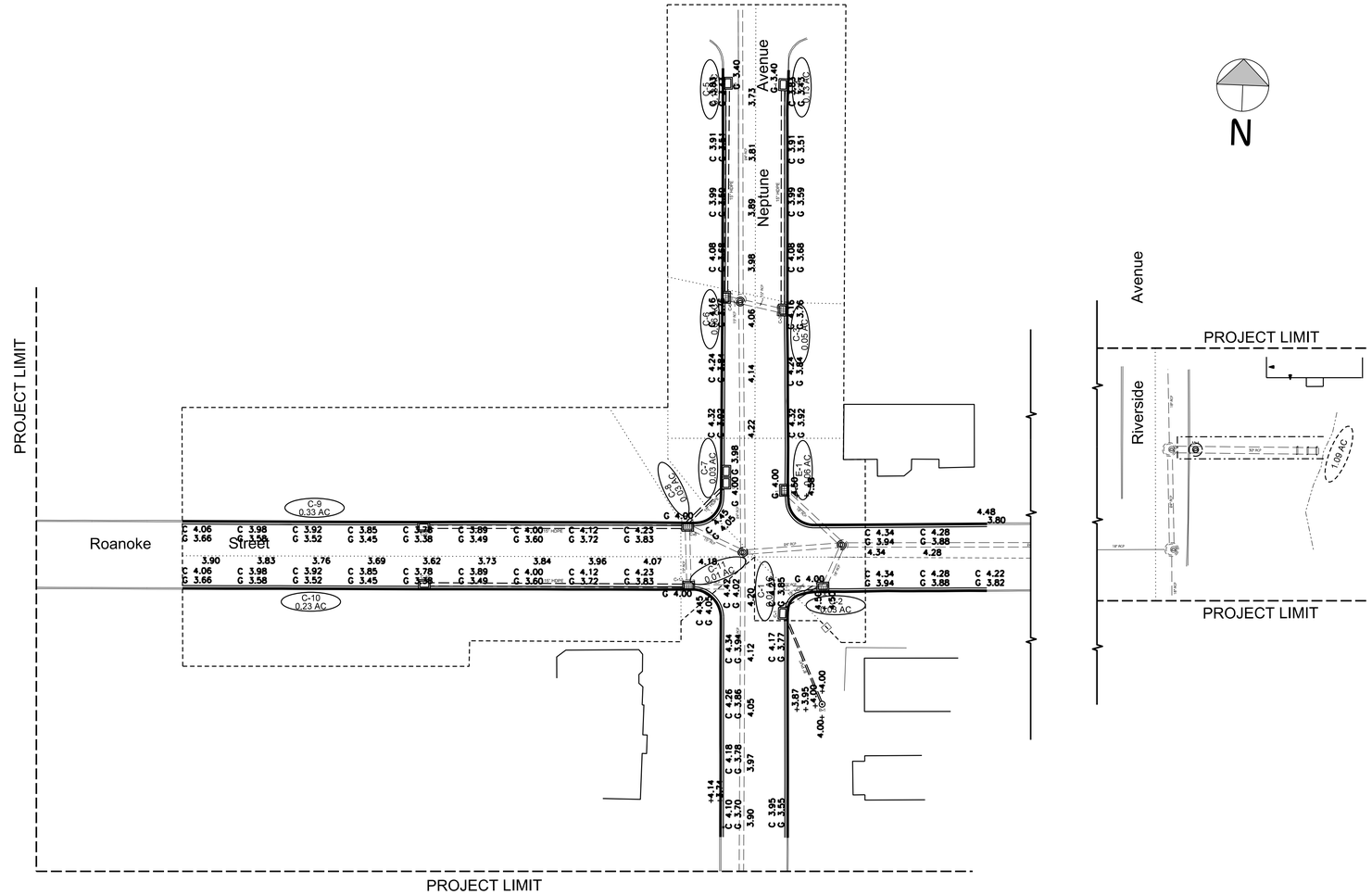
| Table of New P.V.C Drainage Structures | | | | | | | |
|---|---|---|---|---|---|---|---|
| Struct. Number | Station | Offset | Structure Type | Casting Type | Grate/ Rim El | Invert Elevations | Comments |
| B-1 | 1+83 (N ) | 32' R/s | 18" Drain | Surface Grate | 3.92' | 1.50 (NW) 8" | Item 313B |

| Table of New Percast Concrete Storm Drainage Structures | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Invert Elevations (E) existing pipe | | | | |
| Street Name | Structure I.D. | Station | Offset | Structure Type | Structure Item No. | Casting Type | Grate/ Rim El | North | South | East | West | Bottom El |
| Riverside Ave | M-1 | N/A | 8' N curb | Manhole 6' Dia | 13BX-3-6 | Frame and Special Cover | 4.10 | | | -0.1 (E) | -0.1 (E) | |
| Neptune Ave | C-1 | 2+25 (N ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.85 | 0.60 | 1.19 | | | -1.40 |
| Roanoke St | C-2 | 5+82 (R ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | -0.1 (E) | 0.30 | -0.3 (E) | | -2.10 |
| Neptune Ave | C-3 | 3+61 (N ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.73 | -0.30 | | | -0.3 (E) | -2.30 |
| Neptune Ave | C-4 | 4+65 (N ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.40 | | 0.20 | | | -1.80 |
| Neptune Ave | C-5 | 4+65 (N ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.40 | | 0.20 | | | -1.80 |
| Neptune Ave | C-6 | 3+67 (N ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.72 | -0.10 | | -0.1 (E) | | |
| Neptune Ave | C-7 | 2+87 (N ) | 15' L/s | Catch Basin Type D | 13AX-D | Type A Grate with Curb Box | 3.99 | | | | 0.40 | -1.60 |
| Roanoke St | C-8 | 5+20 (R ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | 0.30 | -0.5 (E) | -0.3 (E) | 0.30 | -1.70 |
| Roanoke St | C-9 | 4+00 (R ) | 15' L/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.38 | | | 0.40 | | -1.60 |
| Roanoke St | C-10 | 4+00 (R ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 3.38 | | | 0.40 | | -1.60 |
| Roanoke St | C-11 | 5+20 (R ) | 15' R/s | Catch Basin Type B | 13AX-B | Type A Grate with Curb Box | 4.00 | -0.5 (E) | | -0.5 (E) | 0.30 | -1.70 |

(R ) baseline on Roanoke St (N ) Baseline on Neptune Ave

| Street Name | Up Structure | Up Invert | Down Structure | Down Invert | Pipe Diameter | Approx Pipe Length (Ft) | Type Pipe |
|---|---|---|---|---|---|---|---|
| Neptune Ave | B-1 | 1.5 | C-1 | 1.19 | 8" | 42 | PVC |
| Neptune Ave | C-1 | 0.6 | C-2 | 0.3 | 15" | 25 | HDPE |
| Neptune Ave | C-4 | 0.2 | C-3 | -0.3 | 15" | 98 | HDPE |
| Neptune Ave | C-5 | 0.2 | C-6 | -0.1 | 15" | 98 | HDPE |
| Roanoke Ave | C-7 | 0.4 | C-8 | 0.3 | 15" | 25 | HDPE |
| Roanoke Ave | C-9 | 0.4 | C-8 | 0.3 | 15" | 116 | HDPE |
| Roanoke Ave | C-10 | 0.4 | C-11 | 0.3 | 15" | 116 | HDPE |

(E) EXISTING MH




LKB CONSULTING ENGINEERS

LOCKWOOD KESSLER & BARTLETT, INC.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

In Charge: B.A.M.
Compilation: ___
Design: D.B.
Drawn: E.J.Z./M.M.
Checked: B.A.M.
Reviewed: ___

PLAN AND PROFILE NOTES:

1. EXISTING CONDITIONS SHOWN AS OF JANUARY 2008.
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN NASSAU COUNTY DATUM. HORIZONTAL CONTROL INDICATED IS NAD83 (1986).US SURVEY FEET. VERTICAL CONTROL INDICATED IS NAVD (1988) FEET.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644

Department of Engineering

LEGEND

PROFILE
GRADE
LEGEND

Proposed Centerline
Existing Centerline

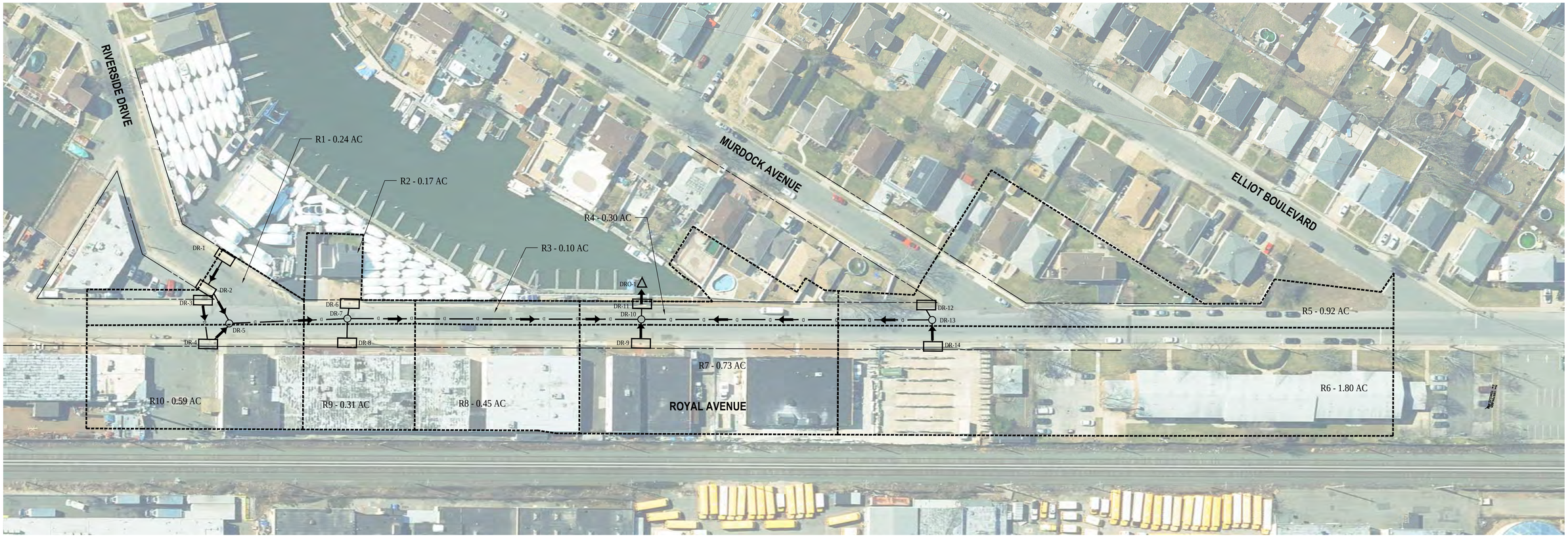
ROANOKE STREET
COMPREHENSIVE DRAINAGE PLAN

ROAD RAISING AND STORMWATER DRAINAGE IMPROVEMENTS
ROANOKE STREET @ NEPTUNE AVENUE
SEAFORD, NY

Scale: 1"=30'
Date: APR. 2019
File No.:
Dwg No.: 3
Sheet No.: 3 of 16

**LEGEND**

| DESCRIPTION | SYMBOL |
|---|---|
| CATCHMENT AREA | R1 - 2.94 AC |
| STRUCTURE NUMBER | DR-5 |
| FLOW DIRECTION | |
| MANHOLE | |
| DRAINAGE OUTFALL | DRO-1 |
| CATCH BASIN | |
| DRAINAGE LINE | |
| DRAINAGE AREA EXTENTS | |




**Royal Avenue**

SCALE: 1" = 50'

811 1-800-272-4480
Dig. Safely. New York
Call811
before you dig
www.digsafelynewyork.com

GRAPHIC SCALE

50 0 25 50

( IN FEET )
1 inch = 50 ft.

**TOTAL CONTRIBUTORY AREA**

DRO - 1: 5.95 AC

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

**COMPREHENSIVE DRAINAGE PLAN - ROYAL AVENUE**

STORMWATER DRAINAGE AND ROADWAY IMPROVEMENTS
MORELAND AVENUE AND ROYAL AVENUE
OCEANSIDE

Scale: 1" = 50'
Date: FEBRUARY 2019
File No.:
Dwg No.: C0.1
Sheet No.: 2 of 19

$USER$
$TIME$
$DATE$
$FILE$

## LEGEND

| DESCRIPTION | SYMBOL |
|---|---|
| CATCHMENT AREA | M1 - 2.94 AC |
| STRUCTURE NUMBER | DM-14 |
| FLOW DIRECTION | |
| MANHOLE | |
| DRAINAGE OUTFALL | DMO-1 |
| CATCH BASIN | |
| DRAINAGE LINE | |
| DRAINAGE AREA EXTENTS | |

GRAPHIC SCALE

60 0 30 60

( IN FEET )
1 inch = 60 ft.

811 1-800-272-4480
Dig. Safely. New York
Call811
before you dig
www.digsafelynewyork.com

**Moreland Avenue**
SCALE: 1" = 60'

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

In Charge:
Compilation:
Design:
Drawn:
Checked:
Reviewed:

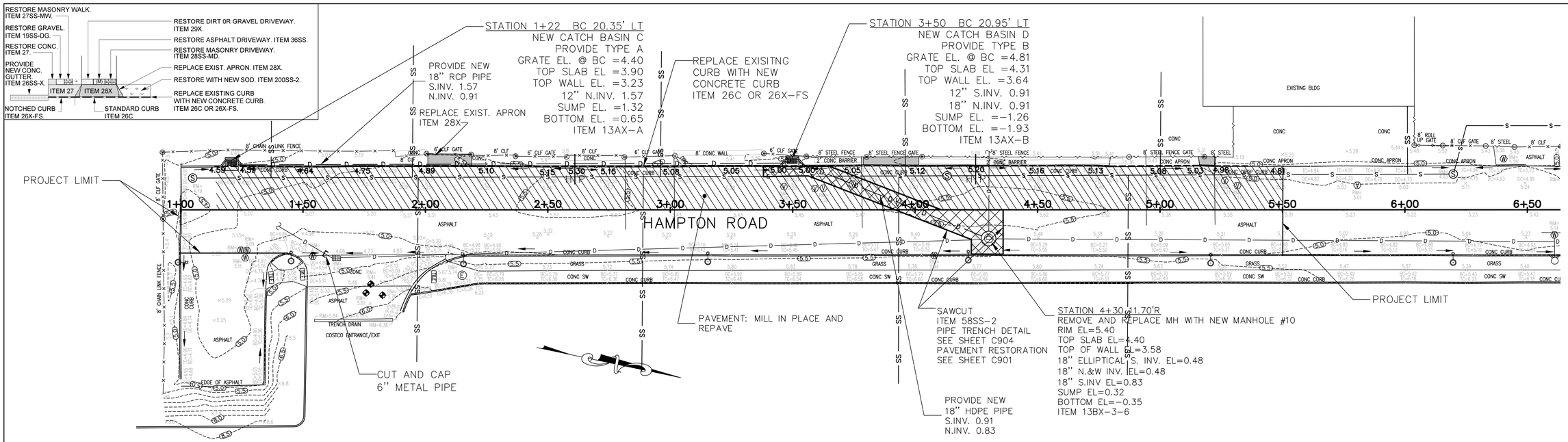
TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

**COMPREHENSIVE DRAINAGE PLAN - MORELAND AVENUE**

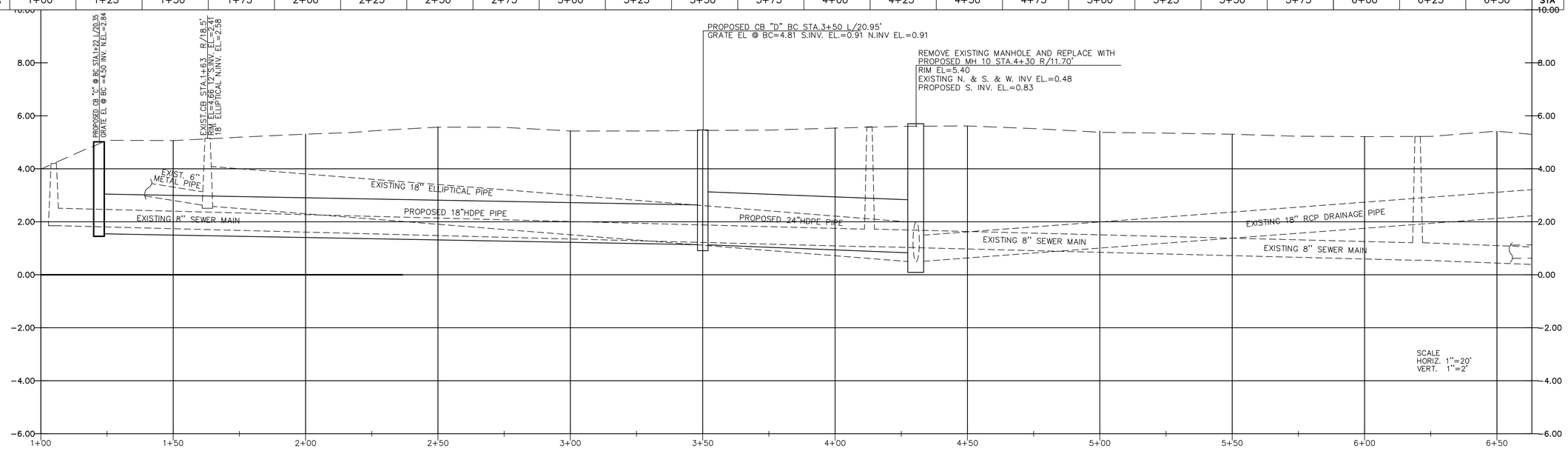
STORMWATER DRAINAGE AND ROADWAY IMPROVEMENTS
MORELAND AVENUE AND ROYAL AVENUE
OCEANSIDE

Scale: 1" = 60'
Date: FEBRUARY 2019
File No.:
Dwg No.: C0.2
Sheet No.: 3 of 19

X:\HEMP (Town of Hempstead) - 10496\HEMP1805 (Drainage Improvements for Moreland and Royal Avenues)\02-BIM-CADD\Cos-docs\civil\C0.1 Drainage Maps.dwg Lara Modified: Feb 15, 2019 - 4:47pm Plotted on: Feb 18, 2019 - 8:31am By: skumar




| EXISTING GRADES | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | – | 5.01 | 5.05 | 5.05 | 5.19 | 5.29 | 5.58 | 5.69 | 5.42 | 5.42 | 5.36 | 5.36 | 5.55 | 5.61 | 5.37 | 5.45 | 5.13 | 4.95 | 4.99 | 4.91 | 4.95 | 4.95 | 5.22 | TG |
| G | 4.97 | 4.89 | 4.93 | 4.98 | 5.14 | 5.29 | 5.48 | 5.54 | 5.27 | 5.15 | 5.06 | 5.21 | 5.30 | 5.41 | 5.35 | 5.26 | 5.08 | 4.87 | 4.81 | 4.73 | 4.73 | 4.76 | 4.99 | G |
| MID-CL | 4.83 | 4.93 | 5.01 | 5.12 | 5.26 | 5.37 | 5.55 | 5.56 | 5.37 | 5.31 | 5.31 | 5.36 | 5.42 | 5.51 | 5.49 | 5.43 | 5.23 | 5.16 | 5.10 | 5.06 | 5.04 | 5.13 | 5.26 | MID-CL |
| CL | 4.96 | 5.07 | 5.06 | 5.19 | 5.31 | 5.43 | 5.57 | 5.57 | 5.43 | 5.43 | 5.45 | 5.46 | 5.54 | 5.60 | 5.62 | 5.52 | 5.38 | 5.35 | 5.30 | 5.23 | 5.22 | 5.22 | 5.42 | CL |
| MID-CL | 4.92 | 5.11 | 4.99 | 5.01 | 5.14 | 5.24 | 5.34 | 5.27 | 5.25 | 5.28 | 5.29 | 5.32 | 5.43 | 5.46 | 5.48 | 5.40 | 5.28 | 5.24 | 5.20 | 5.06 | 5.03 | 5.07 | 5.27 | MID-CL |
| G | 4.87 | 5.14 | 4.77 | 4.73 | 4.88 | 4.95 | 4.99 | 5.03 | 5.08 | 5.14 | 5.16 | 5.13 | 5.19 | 5.27 | 5.28 | 5.27 | 5.09 | 5.05 | 4.98 | 4.85 | 4.81 | 4.77 | 4.93 | G |
| TG | – | – | – | – | – | 5.26 | 5.31 | 5.35 | 5.39 | 5.41 | 5.45 | 5.47 | 5.51 | 5.53 | 5.55 | 5.52 | 5.42 | 5.37 | 5.29 | 5.16 | 5.13 | 5.10 | 5.33 | TG |
| STA | 1+00 | 1+25 | 1+50 | 1+75 | 2+00 | 2+25 | 2+50 | 2+75 | 3+00 | 3+25 | 3+50 | 3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00 | 5+25 | 5+50 | 5+75 | 6+00 | 6+25 | 6+50 | STA |




| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

| | |
|---|---|
| In Charge: – | J.A.G. |
| Compilation:– | |
| Design: – | XX |
| Drawn: – | R.J.W |
| Checked: – | J.A.G. |
| Reviewed: – | |

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

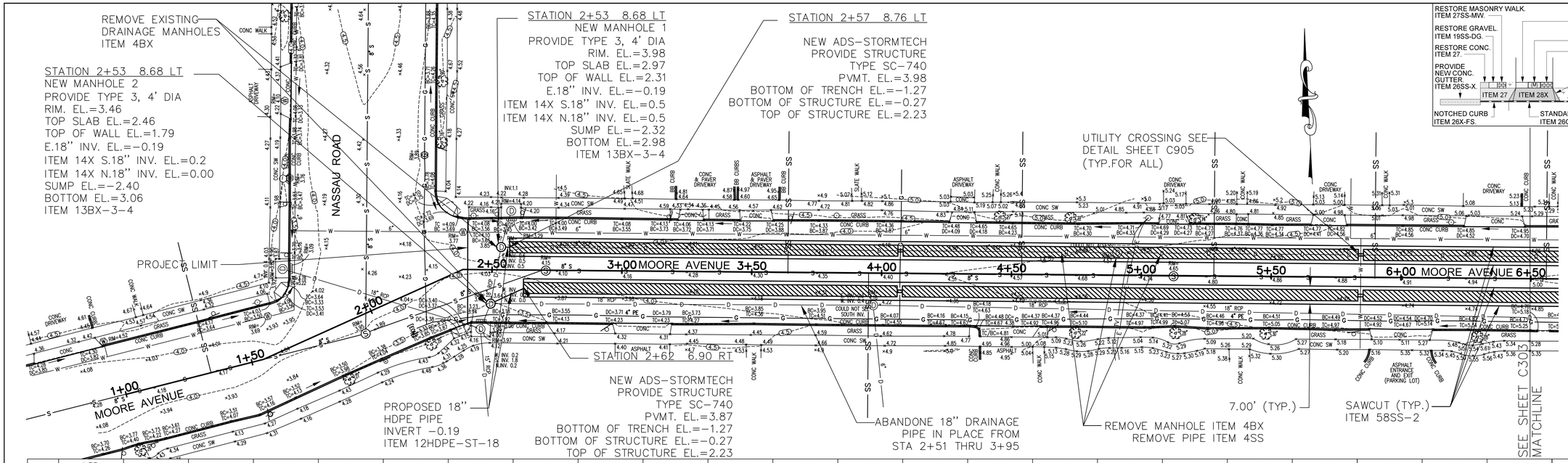
PROFILE GRADE LEGEND

PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - -

PLAN AND PROFILE
HAMPTON ROAD
STATIONS 1+00 THRU 6+50

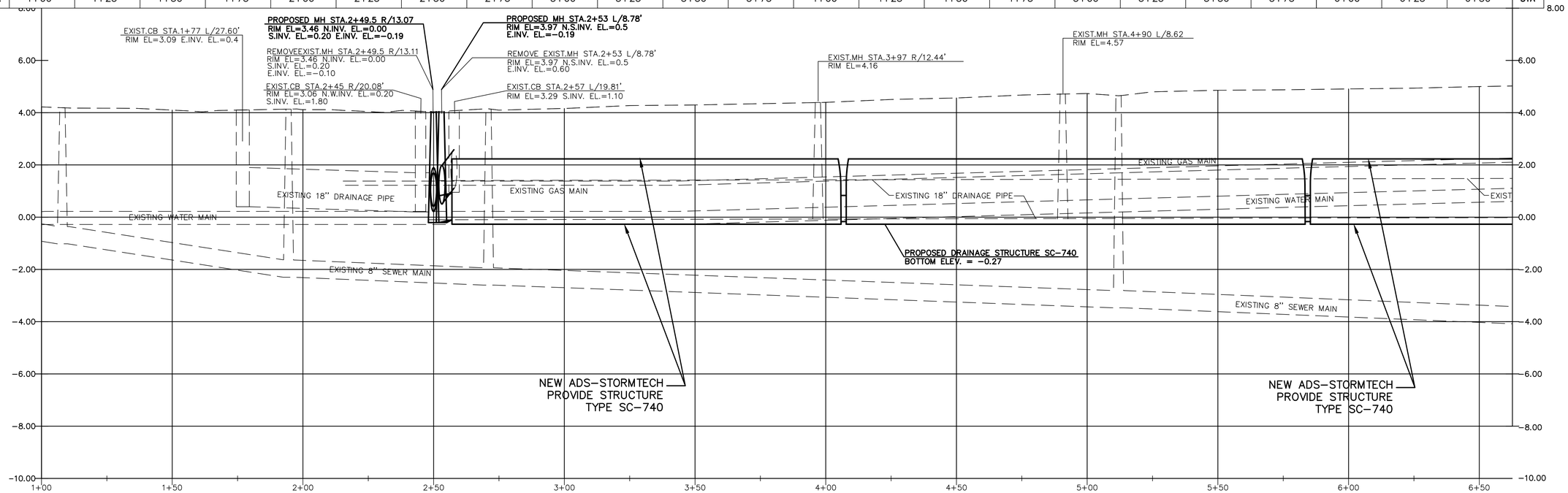
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C301
Sheet No.: 16 of 26




EXISTING GRADES

| STA | 1+00 | 1+25 | 1+50 | 1+75 | 2+00 | 2+25 | 2+50 | 2+75 | 3+00 | 3+25 | 3+50 | 3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00 | 5+25 | 5+50 | 5+75 | 6+00 | 6+25 | 6+50 | STA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | 4.33 | 4.22 | 4.13 | 3.58 | 4.24 | 4.11 | 4.07 | 4.00 | 4.08 | 3.71 | 3.80 | 4.33 | 4.36 | 4.48 | 4.65 | 4.69 | 4.71 | 4.73 | 4.77 | 4.67 | 4.85 | 4.76 | 4.96 | TG |
| G | 3.80 | 3.69 | 3.57 | 3.62 | 4.24 | 4.10 | 3.55 | 3.49 | 3.56 | 3.72 | 3.80 | 3.87 | 3.87 | 4.08 | 4.23 | 4.30 | 4.33 | 4.27 | 4.34 | 4.52 | 4.56 | 4.52 | 4.70 | G |
| MID-CL | 4.06 | 4.02 | 3.97 | 4.01 | 4.27 | 4.15 | 3.85 | 3.98 | 3.97 | 4.09 | 4.12 | 4.12 | 4.20 | 4.33 | 4.39 | 4.46 | 4.50 | 4.64 | 4.68 | 4.74 | 4.77 | 4.79 | 4.87 | MID-CL |
| CL | 4.22 | 4.17 | 4.10 | 4.10 | 4.12 | 4.04 | 4.03 | 4.10 | 4.16 | 4.27 | 4.29 | 4.34 | 4.39 | 4.50 | 4.56 | 4.67 | 4.73 | 4.80 | 4.86 | 4.87 | 4.91 | 4.94 | 5.00 | CL |
| MID-CL | 4.00 | 3.94 | 3.90 | 3.86 | 3.76 | 3.68 | 3.66 | 3.90 | 3.99 | 4.10 | 4.18 | 4.24 | 4.25 | 4.35 | 4.48 | 4.51 | 4.57 | 4.59 | 4.72 | 4.69 | 4.75 | 4.77 | 4.87 | MID-CL |
| G | 3.77 | 3.56 | 3.56 | 3.51 | 3.37 | 3.35 | 3.18 | 3.55 | 3.72 | 3.74 | 3.85 | 3.95 | 4.06 | 4.67 | 4.36 | 4.44 | 4.37 | 4.47 | 4.51 | 4.49 | 4.58 | 4.81 | 4.73 | G |
| TG | 4.40 | 4.16 | 4.16 | 4.01 | 4.00 | 3.83 | 3.92 | 4.13 | 3.94 | 4.27 | 4.35 | 4.51 | 4.55 | 4.67 | 4.47 | 5.09 | 4.98 | 4.96 | 5.05 | 4.97 | 4.70 | 5.33 | 5.24 | TG |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

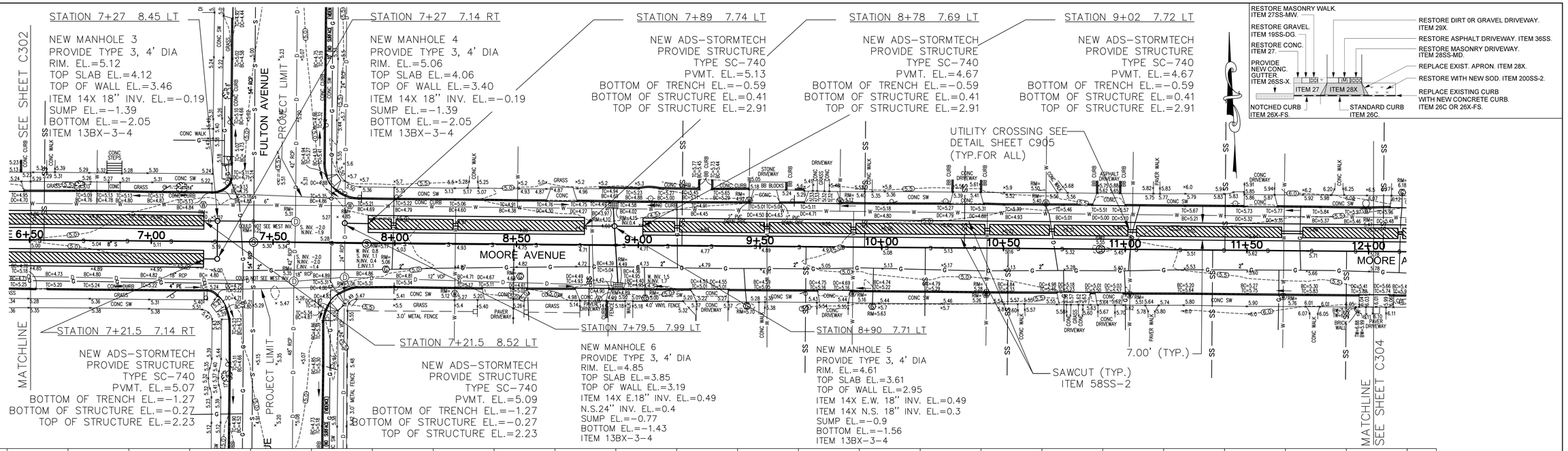
TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

PROFILE GRADE LEGEND
PROPOSED CENTERLINE ————
EXISTING CENTERLINE - - - - - - - -

PLAN AND PROFILE
MOORE AVE
STATIONS 1+00 THRU 6+50

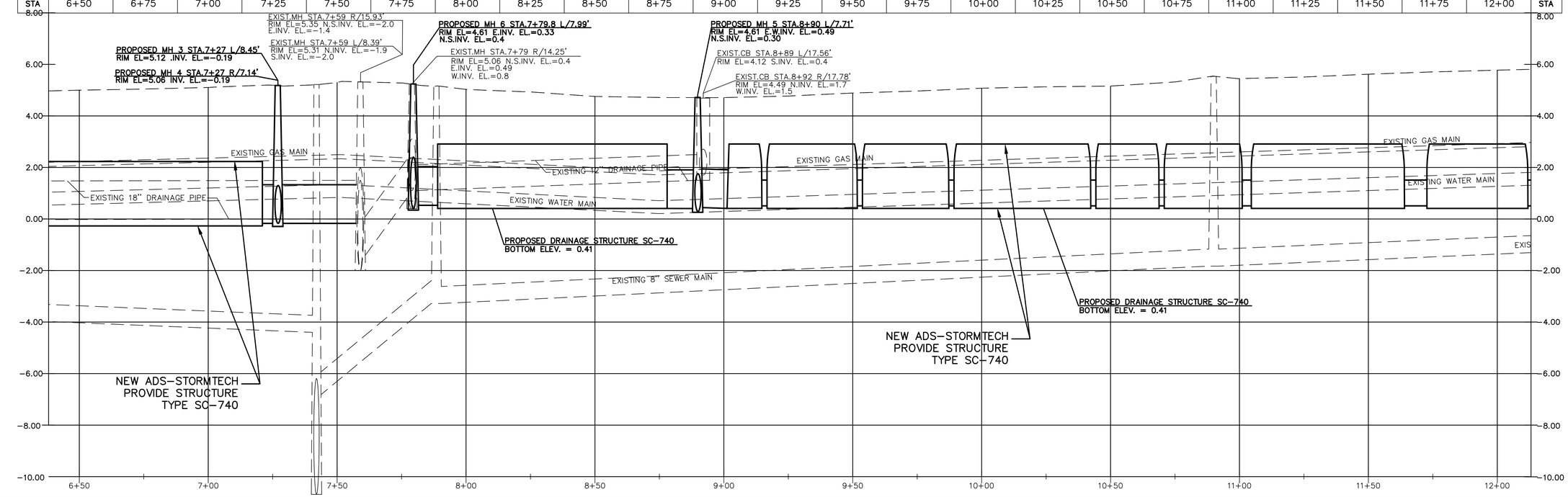
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C302
Sheet No.: 17 of 26




EXISTING GRADES

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | 4.96 | 5.09 | 5.12 | 5.13 | 5.43 | 5.00 | 5.22 | 5.05 | 4.91 | 4.75 | 4.66 | 4.91 | 4.79 | 4.86 | 5.18 | 5.26 | 5.39 | 5.46 | 5.57 | 5.67 | 5.58 | 5.84 | 5.97 | TG |
| G | 4.70 | 4.76 | 4.87 | 4.84 | 5.43 | 5.02 | 4.79 | 4.60 | 4.38 | 4.26 | 4.13 | 4.45 | 4.55 | 4.73 | 4.80 | 4.79 | 4.92 | 5.01 | 5.10 | 5.21 | 5.32 | 5.36 | 5.47 | G |
| MID-CL | 4.87 | 4.92 | 5.08 | 5.07 | 5.37 | 5.27 | 5.01 | 4.87 | 4.71 | 4.59 | 4.55 | 4.72 | 4.80 | 4.89 | 5.00 | 5.03 | 5.14 | 5.25 | 5.41 | 5.48 | 5.53 | 5.64 | 5.69 | MID-CL |
| CL | 5.00 | 5.04 | 5.10 | 5.19 | 5.30 | 5.28 | 5.03 | 4.93 | 4.76 | 4.71 | 4.71 | 4.77 | 4.89 | 4.97 | 5.08 | 5.13 | 5.16 | 5.32 | 5.45 | 5.51 | 5.62 | 5.71 | 5.78 | CL |
| MID-CL | 4.87 | 4.91 | 4.97 | 5.03 | 5.40 | 5.23 | 5.06 | 4.95 | 4.80 | 4.69 | 4.67 | 4.75 | 4.89 | 4.99 | 5.07 | 5.07 | 5.09 | 5.24 | 5.37 | 5.45 | 5.55 | 5.60 | 5.71 | MID-CL |
| G | 4.73 | 4.80 | 4.82 | 4.81 | 5.50 | 5.05 | 4.81 | 4.71 | 4.62 | 4.49 | 4.40 | 4.54 | 4.59 | 4.75 | 4.74 | 4.79 | 4.84 | 4.99 | 5.03 | 5.20 | 5.27 | 5.30 | 5.48 | G |
| TG | 5.24 | 5.24 | 5.24 | 4.79 | 5.51 | 5.03 | 5.34 | 5.17 | 4.80 | 4.82 | 4.95 | 4.77 | 5.05 | 4.75 | 5.22 | 5.29 | 5.33 | 5.23 | 5.57 | 5.64 | 5.74 | 5.83 | 5.69 | TG |
| STA | 6+50 | 6+75 | 7+00 | 7+25 | 7+50 | 7+75 | 8+00 | 8+25 | 8+50 | 8+75 | 9+00 | 9+25 | 9+50 | 9+75 | 10+00 | 10+25 | 10+50 | 10+75 | 11+00 | 11+25 | 11+50 | 11+75 | 12+00 | STA |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

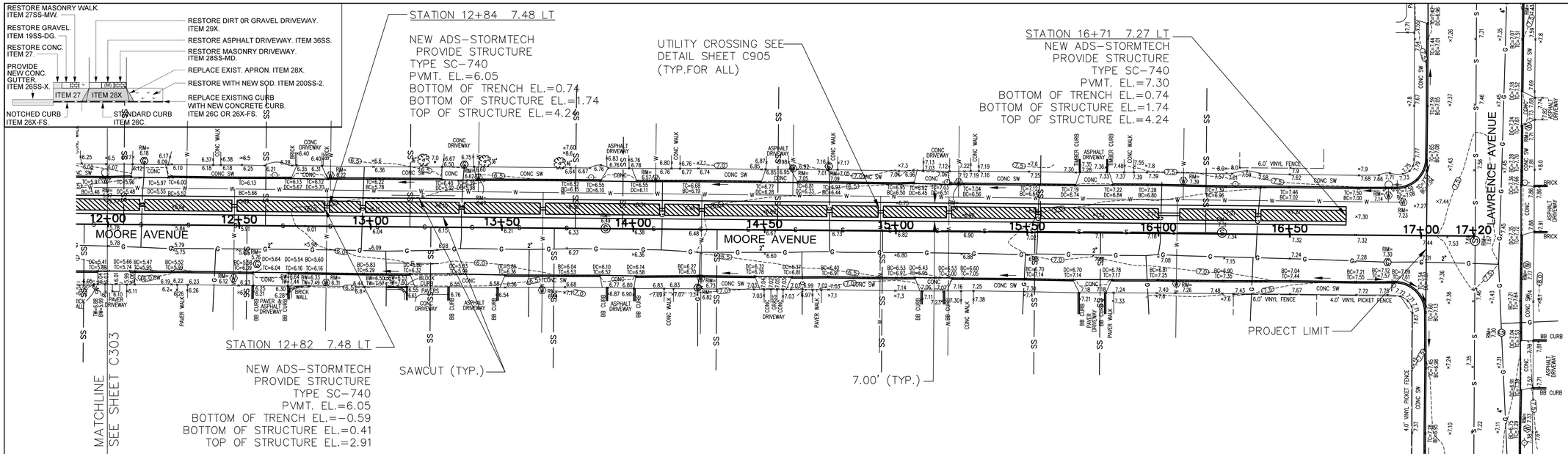
TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

PROFILE GRADE LEGEND
PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - - - - -

PLAN AND PROFILE
MOORE AVE
STATIONS 6+50 THRU 12+00

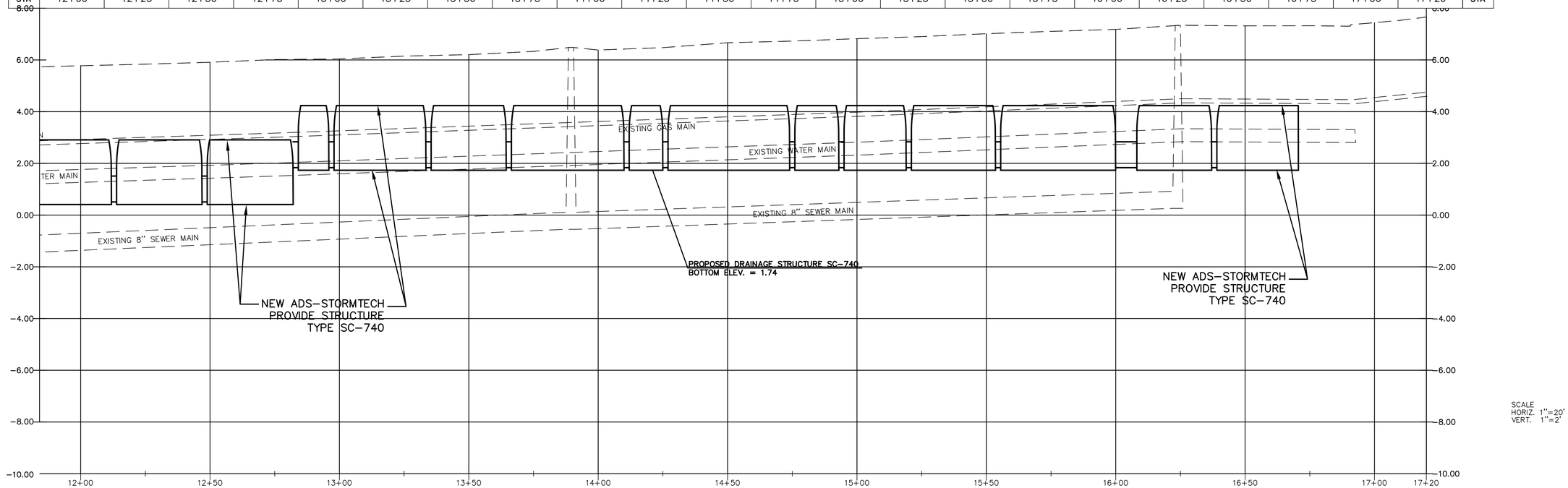
GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C303
Sheet No.: 18 of 26




EXISTING GRADES

| STA | 12+00 | 12+25 | 12+50 | 12+75 | 13+00 | 13+25 | 13+50 | 13+75 | 14+00 | 14+25 | 14+50 | 14+75 | 15+00 | 15+25 | 15+50 | 15+75 | 16+00 | 16+25 | 16+50 | 16+75 | 17+00 | 17+20 | STA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TG | 5.97 | 6.00 | 6.13 | 5.87 | 6.22 | 6.39 | 6.46 | 6.52 | 6.43 | 6.68 | 6.58 | 6.93 | 6.95 | 7.04 | 7.12 | 7.00 | 7.29 | 7.38 | 7.46 | 7.50 | – | – | TG |
| G | 5.47 | 5.52 | 5.66 | 5.68 | 5.78 | 5.91 | 6.03 | 6.15 | 6.10 | 6.19 | 6.29 | 6.44 | 6.50 | 6.55 | 6.64 | 6.79 | 6.82 | 6.96 | 7.02 | 7.00 | – | – | G |
| MID-CL | 5.69 | 5.76 | 5.87 | 5.92 | 6.02 | 6.06 | 6.17 | 6.28 | 6.32 | 6.42 | 6.58 | 6.66 | 6.76 | 6.79 | 6.90 | 7.03 | 7.08 | 7.16 | 7.23 | 7.22 | 7.34 | 7.62 | MID-CL |
| CL | 5.78 | 5.84 | 5.91 | 6.01 | 6.04 | 6.15 | 6.21 | 6.33 | 6.38 | 6.48 | 6.67 | 6.73 | 6.82 | 6.90 | 7.02 | 7.10 | 7.18 | 7.34 | 7.32 | 7.32 | 7.44 | 7.66 | CL |
| MID-CL | 5.71 | 5.74 | 5.83 | 5.87 | 6.05 | 6.15 | 6.15 | 6.21 | 6.36 | 6.47 | 6.57 | 6.66 | 6.77 | 6.83 | 6.96 | 6.98 | 7.10 | 7.13 | 7.22 | 7.28 | 7.32 | 7.59 | MID-CL |
| G | 5.48 | 5.50 | 5.58 | 5.60 | 5.84 | 5.84 | 5.86 | 6.04 | 6.14 | 6.27 | 6.33 | 6.40 | 6.52 | 6.59 | 6.70 | 6.74 | 6.81 | 6.90 | 7.04 | 7.21 | – | – | G |
| TG | 5.69 | 6.00 | 6.09 | 6.16 | 6.30 | 6.01 | 6.28 | 6.53 | 6.43 | 6.70 | 6.51 | 6.91 | 6.97 | 7.04 | 7.14 | 6.91 | 7.25 | 7.35 | 7.44 | 7.55 | – | – | TG |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

TOWN OF HEMPSTEAD, N.Y. FOUNDED 1644
Department of Engineering

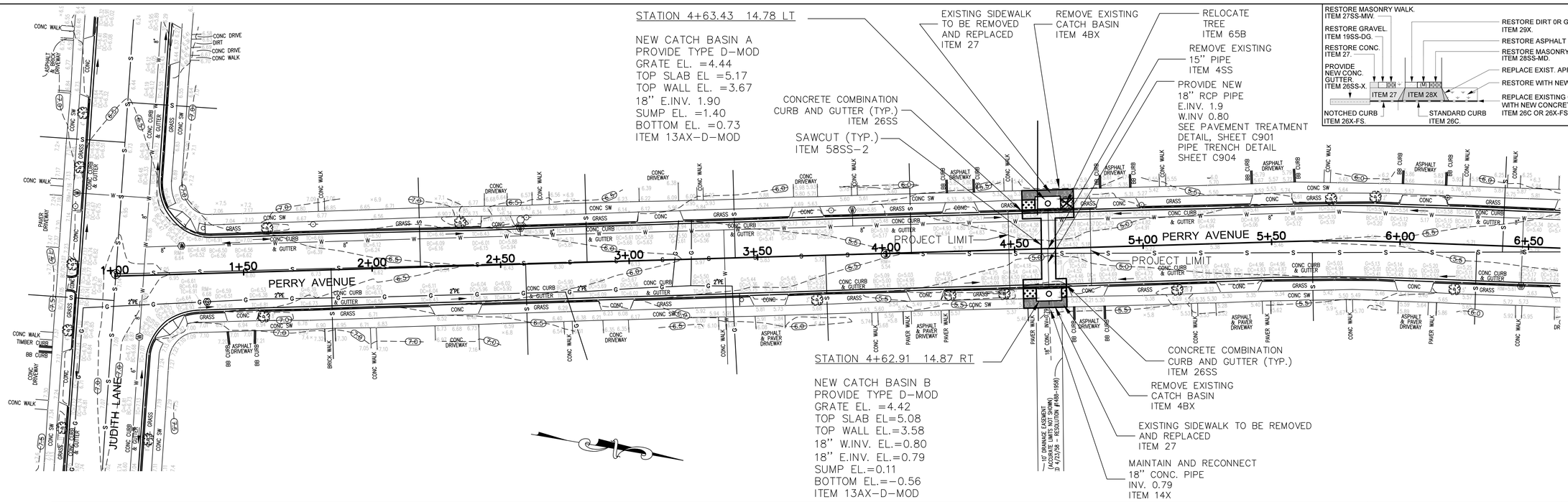
PROFILE GRADE LEGEND

PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - - - - - -

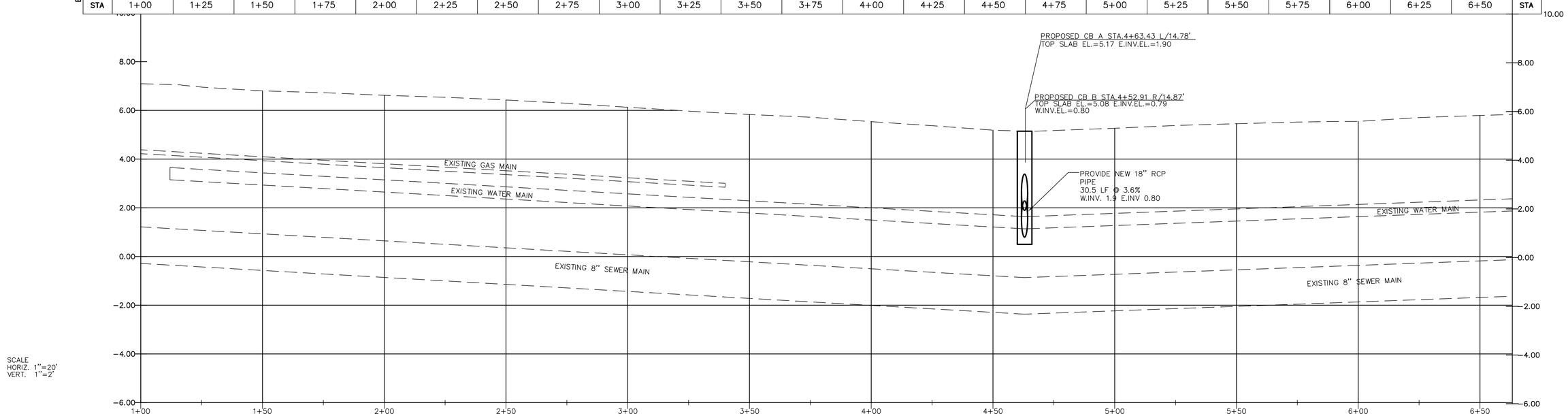
PLAN AND PROFILE
MOORE AVE
STATIONS 12+00 THRU 17+20

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C304
Sheet No.: 19 of 26




| | STA | 1+00 | 1+25 | 1+50 | 1+75 | 2+00 | 2+25 | 2+50 | 2+75 | 3+00 | 3+25 | 3+50 | 3+75 | 4+00 | 4+25 | 4+50 | 4+75 | 5+00 | 5+25 | 5+50 | 5+75 | 6+00 | 6+25 | 6+50 | STA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXISTING GRADES | TG | – | – | 7.01 | 6.70 | 6.51 | 6.46 | 5.99 | 6.14 | 6.00 | 5.91 | 5.79 | 5.34 | 5.49 | 4.89 | 5.11 | 5.11 | 5.23 | 5.32 | 5.09 | 5.52 | 5.29 | 5.61 | 5.70 | TG |
| | G | – | – | 6.55 | 6.29 | 6.13 | 6.09 | 5.94 | 5.71 | 5.61 | 5.48 | 5.34 | 5.25 | 5.11 | 4.88 | 4.55 | 4.56 | 4.82 | 4.92 | 5.00 | 5.10 | 5.13 | 5.17 | 5.34 | G |
| | MID-CL | 7.04 | 6.75 | 6.70 | 6.55 | 6.42 | 6.33 | 6.21 | 6.03 | 5.89 | 5.83 | 5.61 | 5.51 | 5.34 | 5.13 | 4.90 | 4.89 | 5.07 | 5.14 | 5.25 | 5.34 | 5.36 | 5.47 | 5.58 | MID-CL |
| | CL | 7.09 | 6.96 | 6.80 | 6.73 | 6.62 | 6.54 | 6.43 | 6.29 | 6.13 | 5.97 | 5.83 | 5.72 | 5.54 | 5.37 | 5.19 | 5.17 | 5.27 | 5.38 | 5.45 | 5.52 | 5.55 | 5.70 | 5.79 | CL |
| | MID-CL | 7.09 | 6.80 | 6.67 | 6.55 | 6.40 | 6.31 | 6.21 | 6.08 | 5.92 | 5.77 | 5.62 | 5.51 | 5.30 | 5.13 | 4.85 | 4.86 | 5.03 | 5.13 | 5.19 | 5.26 | 5.33 | 5.46 | 5.51 | MID-CL |
| | G | – | – | 6.44 | 6.35 | 6.13 | 6.03 | 5.92 | 5.90 | 5.57 | 5.45 | 5.34 | 5.20 | 5.01 | 4.85 | 4.51 | 4.55 | 4.73 | 4.84 | 4.87 | 4.95 | 5.03 | 5.11 | 5.17 | G |
| | TG | – | – | 6.56 | 6.73 | 6.56 | 6.09 | 6.33 | 6.17 | 5.66 | 5.85 | 5.40 | 5.64 | 5.41 | 5.24 | 5.08 | 4.72 | 5.15 | 5.27 | 5.26 | 5.31 | 5.18 | 5.53 | 5.64 | TG |




SCALE
HORIZ. 1"=20'
VERT. 1"=2'

| NO. | DATE | REVISIONS |
|---|---|---|
| 1 | 1-22-19 | REVISED AS PER 60% SUBMISSION COMMENTS |
| 2 | 6-15-19 | REVISED AS PER 90% SUBMISSION COMMENTS |

In Charge: – J.A.G.
Compilation:–
Design: – XX
Drawn: – R.J.W
Checked: – J.A.G.
Reviewed: –

PLAN AND PROFILE NOTES:
1. EXISTING CONDITIONS SHOWN AS OF AUGUST 2018
2. UNDERGROUND UTILITIES SHOWN ARE BASED UPON LIMITED SCHEMATIC INFORMATION PROVIDED BY OTHERS. NOT ALL EXISTING UNDERGROUND UTILITY BRANCHES AND SERVICES ARE SHOWN. PRIVATE UTILITIES, IF EXISTING, ARE NOT SHOWN OR INDICATED.
3. NEW CENTERLINE AND EXISTING CENTERLINE OF ROADWAY SHOWN IN PROFILE.
4. NEW CROSS SECTION OF ROADWAY SHALL BE PARABOLIC IN SHAPE EXCEPT WHEN WARPING TO MEET VALLEY GUTTERS AND WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT. NEW CROWN SHALL BE LOCATED AT CENTERLINE OF ROADWAY.
5. HORIZONTAL AND VERTICAL CONTROL INDICATED IS IN VERTICAL CONTROL NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) WHICH IS BASED ON THE UNITED STATES COAST & GEODETIC SURVEY MEAN SEA LEVEL AT SANDY HOOK, NEW JERSEY. HORIZONTAL CONTROL NORTH AMERICAN DATUM OF 1983 (NAD83), NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE 3104.
6. PROVIDE FILTER INSERTS AT ALL CATCH BASINS ITEM 504 A OR B.

TOWN OF HEMPSTEAD N.Y. FOUNDED 1644
Department of Engineering

PROFILE GRADE LEGEND
PROPOSED CENTERLINE ————————
EXISTING CENTERLINE - - - - - - - - - - - - -

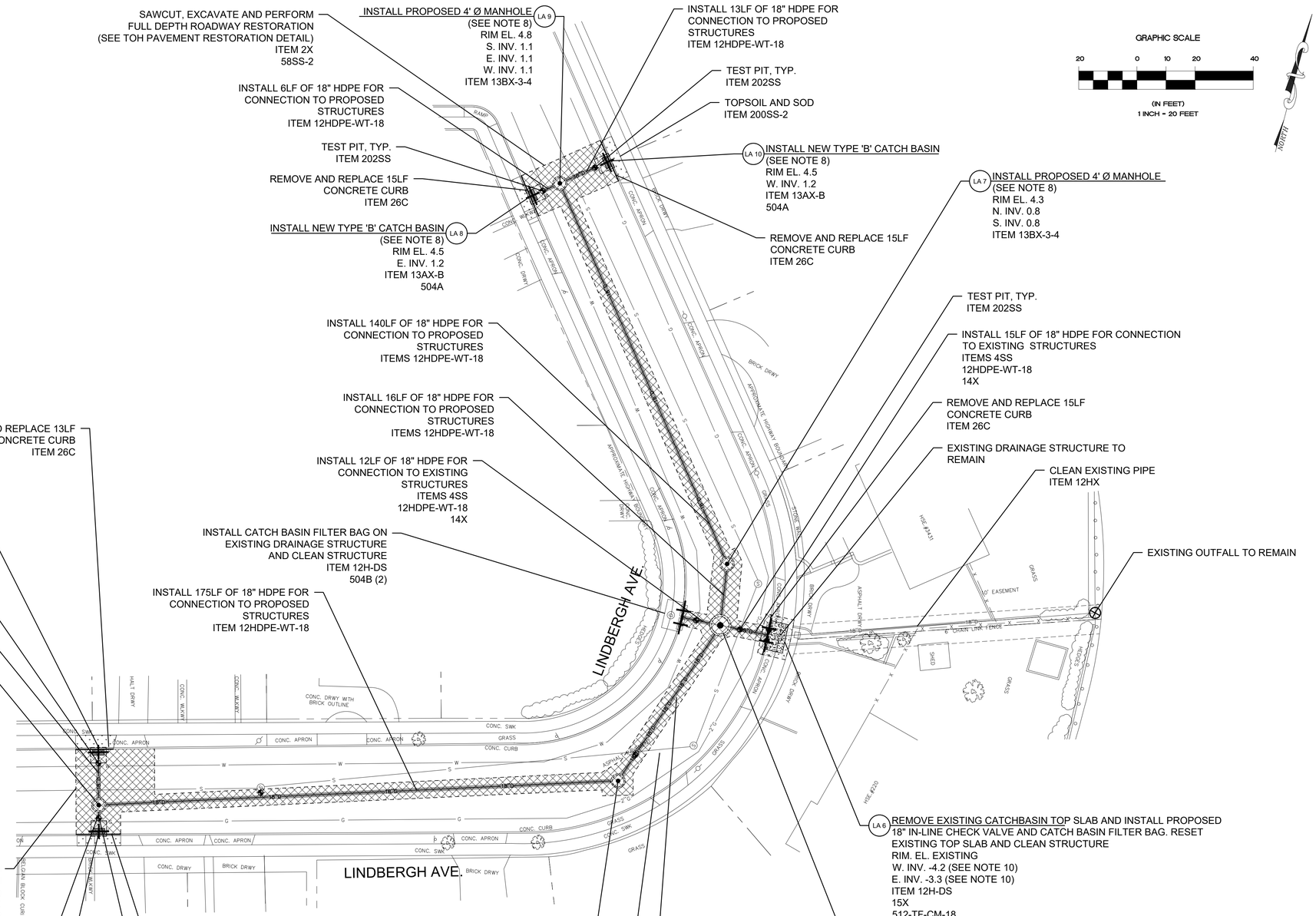
PLAN AND PROFILE
PERRY AVE
STATIONS 1+00 THRU 6+50

GOSR PROGRAM
OCEANSIDE DRAINAGE IMPROVEMENTS
HAMPTON RD. MOORE AVE. PERRY AVE.

Scale: AS NOTED
Date: SEPT. 2018
File No.: 18026.100
Dwg No.: C305
Sheet No.: 20 of 26

NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY POTENTIAL CONFLICTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR TEST PIT INFORMATION.
2. THE CONTRACTOR SHALL INSTALL ALL NEW CHECK VALVES IN THE STRUCTURE PRIOR TO THE OUTFALL, INSIDE OF THE DISCHARGE PIPE THAT FLOWS TOWARDS THE OUTFALL, UNLESS OTHERWISE NOTED ON THE PLANS.
3. AT THE COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL CLEAN ALL PIPES AND STRUCTURES, PAID FOR UNDER ITEMS 12H-DS AND 12HX.
4. THE CONTRACTOR SHALL REFER TO FULL DEPTH ASPHALT RESTORATION DETAIL FOR ITEMS AND THICKNESSES.
5. THE CONTRACTOR SHALL CLEAN THE EXISTING DRAINAGE PIPE BETWEEN THE STRUCTURE OF PROPOSED CONSTRUCTION WORK AND ADJACENT PRECEDING CONNECTED STRUCTURE.
6. ALL RESTORATION SHALL BE IN KIND TO THE APPROXIMATE LIMITS SHOWN ON THE CONSTRUCTION PLANS OR AS PER THE PAY LIMITS BASED ON THE CONTRACT DETAILS UNLESS OTHERWISE SPECIFIED. NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY.
7. THE CONTRACTOR SHALL REMOVE THE EXISTING PIPE TO THE NEAREST JOINT. MAX PAYMENT IS NOT TO EXCEED 10LF WITH THE INTENTION THAT SMALL SECTIONS OF PIPE (LESS THAN 3 FEET) WILL NOT BE PERMITTED TO REMAIN.
8. THE CONTRACTOR SHALL FIELD VERIFY AL STRUCTURE INVERTS PRIOR TO ORDERING NEW DRAINAGE STRUCTURES.
9. IN THE CASE WHERE AN EXISTING CHECKVALVE IS PRESENT, THE CONTRACTOR SHALL REMOVE SAID CHECKVALVE AND INSTALL A NEW CHECKVALVE AS PROPOSED IN THE CONTRACT DOCUMENTS. PAYMENT FOR THE REMOVAL SHALL BE INCLUDED IN ITEM 512-TF-CM-XX.
10. THE INVERT AT THIS LOCATION IS THE MEASURED VALUE FROM THE RIM TO THE INVERT OF THE PIPE; THIS VALUE IS NOT THE ELEVATION OF THE INVERT.




SAWCUT, EXCAVATE AND PERFORM FULL DEPTH ROADWAY RESTORATION (SEE TOH PAVEMENT RESTORATION DETAIL) ITEM 2X 58SS-2

INSTALL PROPOSED 4' Ø MANHOLE (LA 9) (SEE NOTE 8) RIM EL. 4.8 S. INV. 1.1 E. INV. 1.1 W. INV. 1.1 ITEM 13BX-3-4

INSTALL 13LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

INSTALL 6LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

TEST PIT, TYP. ITEM 202SS

TOPSOIL AND SOD ITEM 200SS-2

TEST PIT, TYP. ITEM 202SS

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

INSTALL NEW TYPE 'B' CATCH BASIN (LA 10) (SEE NOTE 8) RIM EL. 4.5 W. INV. 1.2 ITEM 13AX-B 504A

INSTALL NEW TYPE 'B' CATCH BASIN (LA 8) (SEE NOTE 8) RIM EL. 4.5 E. INV. 1.2 ITEM 13AX-B 504A

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

INSTALL PROPOSED 4' Ø MANHOLE (LA 7) (SEE NOTE 8) RIM EL. 4.3 N. INV. 0.8 S. INV. 0.8 ITEM 13BX-3-4

TEST PIT, TYP. ITEM 202SS

INSTALL 140LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEMS 12HDPE-WT-18

INSTALL 15LF OF 18" HDPE FOR CONNECTION TO EXISTING STRUCTURES ITEMS 4SS 12HDPE-WT-18 14X

INSTALL 16LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEMS 12HDPE-WT-18

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

EXISTING DRAINAGE STRUCTURE TO REMAIN

INSTALL 12LF OF 18" HDPE FOR CONNECTION TO EXISTING STRUCTURES ITEMS 4SS 12HDPE-WT-18 14X

CLEAN EXISTING PIPE ITEM 12HX

INSTALL CATCH BASIN FILTER BAG ON EXISTING DRAINAGE STRUCTURE AND CLEAN STRUCTURE ITEM 12H-DS 504B (2)

EXISTING OUTFALL TO REMAIN

REMOVE AND REPLACE 13LF CONCRETE CURB ITEM 26C

INSTALL NEW TYPE 'B' CATCH BASIN (LA 1) (SEE NOTE 8) RIM EL. 4.8 S. INV. 1.5 ITEM 13AX-B 504A

TEST PIT, TYP. ITEM 202SS

INSTALL 14LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

INSTALL 175LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

INSTALL PROPOSED 4' Ø MANHOLE (LA 3) (SEE NOTE 8) RIM EL. 5.0 N. INV. 1.5 S. INV. 1.5 E. INV. 1.5 ITEM 13BX-3-4

REMOVE EXISTING CATCHBASIN TOP SLAB AND INSTALL PROPOSED 18" IN-LINE CHECK VALVE AND CATCH BASIN FILTER BAG. RESET EXISTING TOP SLAB AND CLEAN STRUCTURE (LA 6) RIM. EL. EXISTING W. INV. -4.2 (SEE NOTE 10) E. INV. -3.3 (SEE NOTE 10) ITEM 12H-DS 15X 512-TF-CM-18 504B (2)

SAWCUT, EXCAVATE AND PERFORM FULL DEPTH ROADWAY RESTORATION (SEE TOH PAVEMENT RESTORATION DETAIL) ITEM 2X 58SS-2

INSTALL PROPOSED 4' Ø MANHOLE (LA 4) (SEE NOTE 8) RIM EL. 4.1 N. INV. 0.8 W. INV. 0.8 ITEM 13BX-3-4

INSTALL PROPOSED 6' Ø MANHOLE (LA 5) (SEE NOTE 8) RIM EL. 4.1 N. INV. 0.7 S. INV. 0.7 E. INV. 0.7 W. INV. 0.7 ITEM 13BX-3-6

INSTALL 16LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEM 12HDPE-WT-18

REMOVE AND REPLACE 15LF CONCRETE CURB ITEM 26C

TEST PIT, TYP. ITEM 202SS

INSTALL NEW TYPE 'B' CATCH BASIN (LA 2) (SEE NOTE 8) RIM EL. 4.8 N. INV. 1.5 ITEM 13AX-B 504A

TEST PIT, TYP. ITEM 202SS

INSTALL 60LF OF 18" HDPE FOR CONNECTION TO PROPOSED STRUCTURES ITEMS 12HDPE-WT-18

| No. | DATE | REVISION | BY: |
|---|---|---|---|
| - | - | - | - |

SEAL:

THIS DOCUMENT IS THE SOLE PROPERTY OF N&P ENGINEERS & SURVEYORS, PLLC, AND HAS BEEN PREPARED AND DISSEMINATED FOR THE SOLE USE OF OUR CLIENT. THIS DOCUMENT AND ANY DATA, CALCULATIONS, ESTIMATES OR DEPICTIONS CONTAINED HEREIN, MAY NOT BE UTILIZED BY ANY THIRD-PARTY WITHOUT PRIOR WRITTEN CONSENT OF N&P ENGINEERS & SURVEYORS, PLLC, WHICH ASSUMES NO RISK OF LOSS OR LIABILITY RESULTING FROM ANY UNAUTHORIZED USE OR RELIANCE BY ANY THIRD-PARTY.

CONSULTANT:
NELSON & POPE
ENGINEERS · SURVEYORS
572 WALT WHITMAN ROAD, MELVILLE, N.Y. 11747-2188
(631) 427-5665 FAX (631) 427-5620
WWW.NELSONPOPE.COM

CLIENT:
TOWN OF HEMPSTEAD
ENGINEERING DEPTARTMENT
350 FRONT STREET
HEMPSTEAD, NEW YORK 11550

| | |
|---|---|
| DWN. BY: | GF/JD |
| CHK'D BY: | - |
| DATE: | JULY 2019 |
| JOB No.: | 18069 |
| CADD: | 18069CP-CV.DWG |
| SCALE: | AS SHOWN |

DRAWING TITLE:
# DRAINAGE CAPACITY IMPROVEMENTS - 1
LINDBERGH AVENUE
OCEANSIDE, NY

DRAWING NUMBER:
DC - 1

SHEET: 40 OF 40

H. Fact Sheets

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Autotronic Products, Inc.
**Site Code:** 130030
**Program:** State Superfund Program
Classification: 03
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3300 Lawson Boulevard
**City:**Oceanside Zip: 11572
**County:**Nassau
**Latitude:** 40.62899921
**Longitude:** -73.65287239
**Site Type:** STRUCTURE
**Estimated Size:** 1 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** Joseph Spadafina
**Current Owner(s) Address:** 3300 Lawson Boulevard
Hempstead,NY, 11550
**Current Owner Name:** UNION CORPORATION / JOSEPH SPADAFINA
**Current Owner(s) Address:** 3300 LAWSON BLVD.
HEMPSTEAD,NY, 11550
**Owner(s) during disposal:** UNION CORPORATION / JOSEPH SPADAFINA
**Current On-Site Operator:** UNION CORPORATION / JOSEPH SPADAFINA
**Stated Operator(s) Address:**
VERONA,PA
**Current On-Site Operator:** Union Corporation/Autotronic Products
**Stated Operator(s) Address:** Corporate Headquarters
Verona,PA 15147

### Hazardous Waste Disposal Period

**From:** unknown **To:** 1983

### Site Description

The Autotronic Products site is a one story building located on a five acre industrial area in Hempstead. Autotronic Products operations involve the assembly and soldering of printed circuit boards for public distribution. The only reported violation at the site is the dumping of small amounts of tetrachloroethene on the ground behind the building. The on-site dumping of waste is believed, by the current owner, to have occurred for approximately one year from 1981 to early 1982. A small quantity of solvent was periodically dumped on the ground behind the building for a long period of time. A Phase I Investigation has been completed. This site was sampled in 1989 and soil contamination was confirmed. A state funded Preliminary Site Assessment (PSA), was completed in 1993. It revealed that 1,1,1-trichloroethane, tetrachloroethene and derivatives of the compounds existed in the groundwater beneath the site at a total concentration of 910 ppb. These elevated levels were found only in the well located closest to the waste solvent disposal. In the well further downgradient these contaminants were either undetected or at much lower concentrations. It is evident that due to the low permeability associated with the site-specific soils, and the facility's location (in a groundwater discharge zone and far from any supply wells) the site does not pose a significant threat to the environment. The site has been referred to the Oil Spill Unit.

## Contaminants of Concern (Including Materials Disposed)

| Contaminant Name/Type |
|---|
| 1,1,1-TRICHLOROETHANE {(TCA) (F001 WASTE)} |
| TETRACHLOROETHYLENE {(PCE OR "PERC.") (F001)} |

## Site Environmental Assessment

Soil and groundwater contamination by solvents has been confirmed.

## Site Health Assessment

Exposure to contaminated groundwater by ingestion is not expected because public drinking water supplies, which are updgradient of the site and not impacted, supply the area, and there are no known active private wells. Residual site contamination has been covered by clean soil, pavement, and/or buildings so public exposures to subsurface contamination are not expected. The potential for soil vapor intrusion to impact structures on or near the site has not been evaluated.

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Busy Bee Dry Cleaners
**Site Code:** 130094
**Program:** State Superfund Program
Classification: 02
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 1818 Merrick Road
**City:**Merrick Zip: 11566
**County:**Nassau
**Latitude:** 40.65344703
**Longitude:** -73.555189114
**Site Type:**
**Estimated Size:** 0.294 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** Busy Bee Cleaners
**Current Owner(s) Address:** 10090 Bocanwoods Lane
Boca Raton,FL, 33042
**Current On-Site Operator:** Busy Bee Cleaners
**Stated Operator(s) Address:** 1818 Merrick Road
Merrick,NY 11566

### Site Document Repository

**Name:** NYSDEC
**Address:** 50 Circle Road
Stony Brook,NY 11790-2356
**Name:** North Merrick Public Library
**Address:** 1691 Meadowbrook Road
North Merrick,NY 11566

### Site Description

Previous site number was V00376. Location: Busy Bee Dry Cleaners is approximately 0.294 acres in area and located in a suburban portion of Nassau County, NY. The site is located in Merrick on

Merrick Road between Montauk Ave and Beach Drive. Site Features: The main site feature is the existing one-story building that is currently used for dry cleaning operations. The building is surrounded by parking areas and has an access road on the west side. Current Zoning and Land Use: The site is zoned commercial and is located in the commercial corridor along Merrick Road. A residential neighborhood is located directly south of the Site. Past Use of the Site: Historic use as a dry cleaning facility and releases of dry cleaning wastes (tetrachloroethene - PCE) have caused soil, soil vapor, and groundwater contamination at the Site. The site was admitted into the Voluntary Cleanup Program (DEC Site No. V00376) in March 2001, but failed to complete the remedial program by the time the VCP was terminated in June 2019. The site was subsequently listed on the Registry of Inactive Hazardous Waste Disposal Sites in October 2019. Site Geology and Hydrogeology: Site contamination has impacted the groundwater of the Upper Glacial Aquifer. Groundwater is about 5 ft below the ground surface on-site and flows in a south-southeast direction. The geology of the Site consists of sand with minor amounts of fines from grade down to 47 feet. A clay-confining unit was identified at about 47 feet below land surface.

## Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**

tetrachloroethene (PCE)

## Site Environmental Assessment

Nature and Extent of Contamination: Based upon investigations conducted to date, the contaminants of concern are tetrachloroethene (PCE) and its breakdown products trichloroethene (TCE) and dichloroethene (DCE). Results indicate contaminated groundwater exists on-site and off-site exceeding standards, criteria and guidance (SCGs). Groundwater: PCE and its breakdown products TCE and DCE have impacted the groundwater in excess of SCGs. The groundwater plume appears to emanate from the rear parking area of the Busy Bee site. Groundwater contamination is present from the top of the water table down to about 47 ft deep where it is bounded by a confining clay layer. The groundwater plume has migrated off-site with the flow of groundwater to the south-southeast. The groundwater concentrations found in on-site shallow groundwater in October 2017 were PCE 5,300 ug/l, TCE 1,400 ug/l and DCE 820 ug/l. Wells screened at 45 ft bgs reported PCE 5,100 ug/l, TCE 1,600 ug/l and DCE 1,100 ug/l. The off-site groundwater concentrations found were PCE .48 ug/l, TCE 2.5 ug/l and DCE 340 ug/l. Soil: Prior soil venting remedial efforts have reduced soil concentrations at the site. Recent results are below SCGs. Soil Vapor: PCE was detected in soil vapor under the rear parking area. These results led to additional sub-slab, crawl space and indoor air analysis in off-site structures. Concentrations of contaminants of concern present in the sub-slab soil vapor samples collected from off-site structures do not represent a soil vapor intrusion concern. sampled.

## Site Health Assessment

Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the groundwater and/or soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion in the on-site building. Sampling data does not indicate a concern for soil vapor intrusion into off-site buildings.

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Former National Loan Investors Site
**Site Code:** 130168
**Program:** State Superfund Program
Classification: P *
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3333 Royal Avenue
**City:**Oceanside Zip: 11572
**County:**Nassau
**Latitude:** 40.629166667
**Longitude:** -73.653333333
**Site Type:**
**Estimated Size:** 1.08 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** Ellman International Inc.
**Current Owner(s) Address:** 400 Karin Ln
Hicksville,NY, 11801-5352

### Site Description

Site Location: The site is located at 3333 Royal Avenue in the Hamlet of Oceanside, Town of Hempstead, in southwestern Nassau County. Site Features: The site is approximately 1.08 acres in size. The site consists of a 29,000 square foot building and associated parking lot, situated on a 47,480 square foot parcel. The site is bounded by the Long Island Railroad tracks to the east, industrial/commercial buildings to the north and south, and Royal Avenue to the west. Across Royal Avenue, a boat yard/marina (Reed Channel Marine) and a car repair facility (GeeBee Motors) are situated adjacent to two tidal canals located to the west and southwest of the commercial properties. The nearest residences are located 200 to 300 feet to the west and northwest on Elliot Boulevard, on the western side of Reed Channel. Current Zoning/Use(s): The property is currently zoned for commercial/industrial use. Historical Use(s) and Source(s) of Contamination: From approximately

1979 to 2001, the site was operated by Nucraloy Corporation, a manufacturer of miscellaneous metal fittings for the U.S. Navy. Nucraloy?s operations included the use of common metals (brass, steel, copper, etc.), machining equipment with lubricating oils, and chlorinated solvents used as a degreaser. After Nucraloy vacated the site in 2001, the facility was sold to National Loan Investors as part of a portfolio of bankrupt properties. The current owner, 1135 Railroad Inc., purchased the property from National Loan Investors in 2003 and refurbished the interior and exterior of the building to house the executive and administrative offices and assembly, warehousing and product shipping operations of Ellman International. Site Geology/Hydrogeology: The soils in the area of the site consist of mostly urban land soils, which contain a mix of sand, silt, clay and fill material. The depth to groundwater at the site is between 4 to 6 feet below grade. The site specific groundwater flow direction is to the west-southwest.

## Contaminants of Concern (Including Materials Disposed)

| Contaminant Name/Type |
|---|
| tetrachloroethene (PCE) |
| 1,1-dichloroethane |
| 1,1,1-Trichloroethane(TCA) |
| vinyl chloride |
| trichloroethene (TCE) |

## Site Environmental Assessment

Nature and Extent of Contamination: Due to the historic release of spent solvents to a site storm drain, site soils, groundwater and soil vapor were impacted with chlorinated solvents, other VOCs, SVOCs and metals. Environmental sampling data collected from the storm drain located in the facility?s loading dock in 2003, reported elevated levels of Tetrachloroethane (1,627 ppm) and Trichloroethane (710 ppm), both of which are above the Commercial Use Soil Cleanup Objective (SCO) of 150 ppm and 200 ppm respectively. Levels of metal compounds, such as Copper (143,241 ppm) and Nickel ( 24,402 ppm) exceeded Commercial Use SCOs of 270 ppm and 310 ppm respectively. The dry well and surrounding soils were subsequently remediated. Hydrologic investigations conducted in 2003 and 2005 have delineated the areal and vertical extent of groundwater contamination on-site and off-site. Total VOCs in groundwater at that time ranged from 200 ppb to 500 ppb. VOCs were detected in each of the five soil gas samples collected from the Site?s parking lot in 2005.The VOCs detected at the highest levels were TCE, PCE and 1,1,1-TCA. PCE ranged from 1,000 ug/m3 to 44,000 ug/m3; TCE ranged from 1,100 ug/m3 to 8,100 ug/m3; and 1,1,1-TCA ranged from 710 ug/m3 to 1,100 ug/m3. In December 2010, groundwater samples were collected from the 16 on-site and off-site monitoring wells. The analytical data of groundwater samples collected demonstrated a decreasing trend of chlorinated solvents in groundwater. Only the upgradient well and 5 of 15 monitoring points sampled downgradient of the former storm drain exceeded AWQSGVs for VOCs, in addition to one location slightly exceeding a standard for SVOCs. The total level of VOCs detected above their

respective standards ranged from 3.1 ug/L to 48 ug/L. The highest detected CVOCs were cis-1,2-Dichloroethane at 40.0 ug/L. These levels represent a decrease of as much as two orders of magnitude from the 2005/2006 results.

## Site Health Assessment

As information for this site becomes available, it will be reviewed by the NYSDOH to determine if site contamination presents public health exposure concerns.

---

* **Class P Sites:** "DEC offers this information with the caution that it should not be used to form conclusions about site contamination beyond what is implied by the classification of this site, namely, that there is a potential for concern about site contamination. Information regarding a Class P site (potential Registry site) is by definition preliminary in nature and unverified because the DEC's investigation of the site is not yet complete. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Hercules Machine Sales Company
**Site Code:** 130083
**Program:** State Superfund Program
Classification: 02
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3188 Lawson Boulevard
**City:**Oceanside Zip: 11572
**County:**Nassau
**Latitude:** 40.63410148
**Longitude:** -73.65317187
**Site Type:** STRUCTURE
**Estimated Size:** 0.25 Acres

### Institutional And Engineering Controls

**Control Type:**
Environmental Easement

**Control Elements:**
Ground Water Use Restriction
Groundwater Treatment System
Vapor Mitigation
Soil Management Plan
Landuse Restriction
Building Use Restriction
Site Management Plan

### Site Owner(s) and Operator(s)

**Current Owner Name:** DAVID & JANICE GOLDMAN (deceased)
**Current Owner(s) Address:** 68-37 YELLOWSTONE BLVD.
FOREST HILLS,NY, 11375
**Current Owner Name:** David and Janice Goldman (deceased)
**Current Owner(s) Address:** 68-37 Yellowstone Boulevard
Forest Hills,NY, 11375
**Current Owner Name:** LND

**Current Owner(s) Address:** 3230 Lawson Blvd
Oceanside,NY, 11572
**Owner(s) during disposal:** DAVID & JANICE GOLDMAN
**Current On-Site Operator:** DAVID & JANICE GOLDMAN
**Stated Operator(s) Address:** 3188 LAWSON BLVD.
OCEANSIDE,NY 11572
**Current On-Site Operator:** Hercules Machine Sales Company
**Stated Operator(s) Address:** 3188 Lawson Boulevard
Oceanside,NY 11572

## Hazardous Waste Disposal Period

**From:** unknown **To:** present

## Site Description

Location: The Hercules Machine Sales Company site is located in a suburban area. Site Features: The main site features include a commercial building and paved parking to the west of the building. The on-site building is connected to the neighboring buildings. Current Zoning and Land Use: The site is currently used as a warehouse and is zoned for commercial use. The surrounding parcels are used for commercial use and a passenger railroad. Past Use of Site: During and prior to the 1990's, the business on this site sold and refurbished dry cleaning machines. This business operated as the Hercules Machine Sales Company part of the time. In 1995, the Nassau County Department of Health (NCDOH) found used activated carbon on the unpaved ground behind the on-site building. In 1995, the NCDOH sampled the activated carbon, soil and groundwater behind the on-site building. Tetrachloroethylene(PCE) was found in the activated carbon and in both environmental media. Site Geology and Hydrogeology: The subsurface consists of sand and gravel with discontinuous clay lenses. Groundwater was encountered at 1.5-6.0 feet below ground surface. Groundwater at the site flows west toward the East Rockaway Channel.

## Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**
tetrachloroethene (PCE)
trichloroethene (TCE)

## Site Environmental Assessment

Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminants of concern include tetrachloroethylene (PCE), trichloroethylene (TCE), 1,2-dichloroethylene (1,2-DCE), and vinyl chloride. Soil - The property owner's consultant collected several soil samples on the Hercules site. Samples located behind and beneath the on-site building contained levels of PCE exceeding the unrestricted use soil cleanup objective (USCO) of 1.3 parts-per-million (ppm). Maximum PCE concentrations behind and beneath the on-site building were 104

ppm and 13 ppm, respectively. In addition, one soil sample behind the building had a 1,2-DCE concentration of 6.36 ppm, exceeding the USCO of 0.25 ppm. Groundwater - The highest concentrations of on-site groundwater contamination were detected at the water table. Maximum PCE, TCE, and cis-1,2-DCE concentrations in the on-site groundwater were 1,300 parts-per-billion (ppb), 410 ppb, and 200 ppb, respectively. The New York State groundwater standard for each of these compounds is 5 ppb. The highest concentrations of off-site groundwater contamination were detected between 23 feet bgs and 59 feet bgs. Maximum PCE, TCE, cis-1,2-DCE and vinyl chloride concentrations in the off-site groundwater were 13,000 ppb, 1,900 ppb, 1,200 ppb, and 79 ppb, respectively. Soil Vapor & Indoor Air - PCE levels in the sub-slab vapor, indoor air and outdoor air at the site were 793 ug/m3, 52 ug/m3, and 29 ug/m3, respectively. These levels indicate the need for soil vapor mitigation. Significant Threat: The site presents a significant threat to human health associated with current and potential exposure to volatile organic compounds and a significant environmental threat associated with the current impacts of contaminants to a sole source aquifer.

## Site Health Assessment

Exposures to contaminated groundwater via drinking water are not expected because public water serves the area and there are no known users of well water in the vicinity. Exposure to contaminated soils is not expected since the site is covered by buildings and pavement. Soil vapor intrusion of volatile organic compounds is a known exposure pathway within the building on the Hercules property and will be mitigated by a soil vapor extraction system. Soil vapor intrusion is a potential exposure pathway at downgradient residential structures; the Record of Decision addresses the current and potential exposure pathways.

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Jay's Lucky Cleaners
**Site Code:** C130219
**Program:** Brownfield Cleanup Program
Classification: A
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3220 to 3224 Long Beach Road
**City:**Oceanside Zip: 11572
**County:**Nassau
**Latitude:** 40.633079
**Longitude:** -73.641031
**Site Type:**
**Estimated Size:** 0.23 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** United Properties Corp.
**Current Owner(s) Address:** 1975 Hempstead Turnpike, Suite 309
East Meadow,NY, 11554

### Site Document Repository

**Name:** NYSDEC
**Address:** 50 Circle Road
Region 1 Stony Brook,NY 11790
**Name:** Oceanside Library
**Address:** 30 Davison Ave
Oceanside,NY 11572

### Site Description

Location: Jay¿s Lucky Cleaners is located in a suburban area. The site address is 3220-3224 Long Beach Road, Oceanside, Nassau County, New York. The site is identified as Nassau County Section 43, Block 336, Lot 42. Site Features: The site consists of a retail strip buildings with three retail units and front (west) and side(south) parking lots. The site is approximately 0.23 acres in area. The

building was constructed in 1959. Prior to construction of the building, the lot was vacant. Current Zoning and Land Use: The site is currently used and zoned for commercial use. The surrounding parcels are currently used for a combination of commercial and residential purposes. The site is bordered on the north by a commercial property, on the east by Long Beach Road, on the west by residential and commercial properties, and on the south by Montgomery Avenue (with residential properties beyond). The site is predominantly covered by the pavement. Past Use of the Site: Several previous investigations were conducted at the property to assess past uses of the site, including Phase I Environmental Site Assessment investigations (November 1998, November 2004, and mostly recently in March 2014). Based on these reports, past site uses have included a convenience store, surf shop, massage parlor, and dry cleaner. A dry cleaner has occupied a unit within the 3220-3224 since at least 1959 based on the property card archive and continuously from 1983 to the present. Site Geology and Hydrogeology: The site is located within the southern portion of Nassau County, Long Island, New York. The site overlies an interconnected aquifer system consisting of the upper glacial deposits and the underlying Magothy Formation. Depth to groundwater in the underlying glacial aquifer is approximately 5-6 feet below ground surface (fbgs). The lithologic description of the sediments from soil borings installed during previous investigations at the site identifies the materials as coarse brown sand to approximately 38 fbgs, followed by clay to 40 fbgs, the total depth of exploration at the site. Groundwater beneath the property is class GA denoting potential use as potable water. Public supply wells were not within a half-mile search radius site.

## Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**

tetrachloroethene (PCE)
trichloroethene (TCE)

## Site Environmental Assessment

Nature and Extent of Contamination: Based on the environmental data collected during Remedial Investigation (RI) that was conducted at site, the primary contaminants of concern in soil, groundwater, soil vapor, sub-slab soil vapor and indoor air are chlorinated solvents including Trichlorethylene (TCE) and Tetrachloroethylene (PCE). Soil Quality Assessment: As part of the RI, 12 soil borings were completed at on-site, and select samples were submitted for analysis of Target Compound List (TCL) Volatile Organic Compounds (VOCs), Semi-VOCs, metals, and pesticides. Based on the data, Tetrachloroethylene (PCE) was detected from 0-2 feet below grade on-site at concentration of 5,200 parts per billion (ppb), which exceeds the Unrestricted Use (UU) Soil Cleanup Objective (SCO) of 1300 ppb. However, PCE was below the Restricted Use (RU) SCO for residential (5,500 ppb) and commercial (150,000 ppb) for PCE. No other VOCs were detected at concentration exceeding their respective Unrestricted Use SCOs in soil samples collected from the Site. Based on analytical results, PCE impact in soils at the Site are limited to the area in the immediate vicinity of and/or beneath the dry cleaning machine. Further, concentrations of PCE in soil do not warrant

remediation, unless soil vapor and indoor air data indicate otherwise (see Soil Vapor Intrusion Summary below). SVOCs and PCB in soil were non-detect (ND) at the Site; therefore, these contaminants are not of concern. Pesticides (4,4-DDE, 4,4-DDT, and 4,4-DDD) were detected above the UU SCOs at select boring locations, with the highest concentration of pesticide being 4,4,DDE at 377 ug/kg (SCO of 17 ug/kg). However, all concentrations of pesticides at the site are below the Restricted Use (RU) SCO for residential and commercial properties. Therefore, pesticide do not appear to be a significant concern for the site. Select metals were also detected above the Unrestricted Use SCOs and protection of groundwater SCOs at SB-10, SB-4, and SB-07 (Southeastern portion of the site) at 0-2 feet bgs. The maximum concentrations of metals of concern such as arsenic, lead, and mercury was 16 ppb(UU SCO of 13 ppb), 740 ppb (UU SCO of 63 ppb), and 0.24 ppb(UU SCO of 0.18 ppb), respectively. Arsenic and lead concentrations on-site was detected above the RU SCO at SB-04. Based on the data, the detection of arsenic and lead at one location do not indicate the presence of extensive metals contamination on-site. In the opinion of the DER, further investigation and remediation work related to the identified arsenic and lead impacts at SB-4 is not warranted. Groundwater Quality Assessment: As part of the RI, a total of 18 temporary/permanent monitoring wells were installed and sampled for VOCs, SVOCs, Metals, Pesticides and PCBs. As detailed in the soil quality section above, PCE is the primary contaminant of concern. Therefore, the focus of this assessment concerning groundwater quality is on PCE. Based on the data, PCE was detected at a concentration exceeding its NYSDEC ambient water quality standard (WQS) of 5 ppb at 8 locations, including one off-site temporary well (VP-003). The highest PCE concentrations detected (81 ppb, MW001 and MW002) were located along the western Property boundary, hydraulically downgradient (southwest) of the dry cleaning shop/machine. Based on available data, groundwater flow at the site is to the south-southwest. Based on this flow, the PCE plume is not well defined at present time off-site. With regards to the other sampled contaminants of concern, it is worth noting that chromium and lead were detected orders of magnitude above the WQS. The maximum concentration of chromium and lead were 841.7 ug/L at GW-05 (WQS of 50) and 172.3 ug/L at GW-04 (WQS of 25 ppb), respectively. Lead was detected at elevated levels in soil as well, while chromium was not analyzed in soil. In general,based on the DEC review of the site and understanding of historical operations, there appears to be no significant or widespread source of metals contamination at the site. SVOCs, pesticides, and PCBS in groundwater are generally not of concern based on available data. On-Site Soil Vapor Intrusion and Ambient Air Investigation Summary: As part of the RI, soil vapor and indoor air sampling was completed at the site. Specifically, 9 permanent soil vapor points were installed around the site (SV-1 to SV-9). Indoor air samples were also collected as well as sub-slab points. PCE was detected in each sub-slab vapor sample, indoor air sample, and ambient air sample collected from the Site. The highest concentration in the indoor air was detected at 29.4 ppb(IA-02) and sub soil vapor was detected at 69,200 ppb(SS 003). The NYSDOH ambient air guidance value for PCE is 30 ppb. Evaluating the sub-slab vapor results in comparison to associated indoor air concentrations using NYSDOH decision matrices, results for locations IA001/SS001 and IA002/SS002 fall within the¿mitigate¿ category, indicating that soil vapor intrusion is occurring and will require mitigation measures. Off-Site Vapor Intrusion Investigation: The

highest concentrations of PCE in soil vapor were detected in samples collecting along the western Property boundary. Based on these concentrations, it is possible that PCE impacted soil vapor is migrating offsite and adversely impacting the residential properties adjoining the site. The static water table elevation at the Site is approximately 6 feet below grade. Groundwater beneath the Site flows toward the southwest. The following factors were considered when determining the fate and transport of the contaminants identified on-site: the relatively small size of the Site, the concentrations and locations of soil, groundwater, and soil vapor impact within the Site, the measured groundwater flow direction towards the southwest, and the analytical data collected from off-site locations. Based upon these factors, it is possible that impacted groundwater and soil vapor are migrating off-site. The only possible exposure pathways to PCE is by inhalation due to vapor intrusion on and off-site. The entire Site is capped by impervious surfaces (existing building foundation and asphalt paved parking lot) and there appears to be no private and public supply wells in the immediate vicinity of the site; therefore, ingestion and dermal exposure of workers at the Site would be unlikely. A positive Significant Threat Determination has been made in December 2018, which will warrant an off-site investigation. Fall 2019 OGC is performing an PRP search to conduct an offsite investigation. Interim Remediation Efforts to Date: Note that as of September 2018, a sub-slab depressurization system (SSDS) was installed and began operations as part of an interim remedial measure (IRM) to mitigate soil vapor intrusion on-site. The system remains operations as of June 2019. Supplemental remedial measures to address remaining PCE soil and groundwater impacts on-site may be completed upon receipt of a remedial action work plan (RAWP) and input from the public. The tentative date for receiving the RAWP is June 2019.

## Site Health Assessment

Direct contact with contaminants in the soil is unlikely because the site is covered with buildings and pavement. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds may move into the soil vapor (air spaces within the soil), which in turn may move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Soil vapor intrusion sampling identified impacts in indoor air quality of the on?site building that represent a health concern. Furthermore, environmental sampling indicates soil vapor intrusion may be a concern for off site buildings.

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Marina of Dreams, Inc.
**Site Code:** V00013
**Program:** Voluntary Cleanup Program
Classification: C
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3900 Marina Park Drive
**City:**Seaford Zip: 11783-
**County:**Nassau
**Latitude:** 40.653470264
**Longitude:** -73.488750439
**Site Type:**
**Estimated Size:** 35.7 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** MARINA OF DREAMS, INC.
**Current Owner(s) Address:** 211 STATION PLAZA
MINEOLA,NY, 11501

### Site Description

This site is situated on the Veritys Creek Inlet which enters South Oyster Bay and is encircled by an access road. The marina was constructed in 1959 and has two areas of concern; the maintenance area and the former fuel area. The area surrounding the marina is a mix of residential and recreational uses. Remediation was completed in 1996.

### Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**

### Site Environmental Assessment

Remediation was completed in 1996; no known residual environmental issues.

## Site Health Assessment

DOH has insufficient information to evaluate the potential for human exposures.

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Oceanside Landfill
**Site Code:** 130023
**Program:** State Superfund Program
Classification: N *
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** Long Beach Road
**City:**Hempstead Zip: 11553
**County:**Nassau
**Latitude:** 40.61463366
**Longitude:** -73.63576653
**Site Type:**
**Estimated Size:** 190 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** TOWN OF HEMPSTEAD
**Current Owner(s) Address:** 1600 MERRICK RD.
MERRICK,NY, 11566
**Owner(s) during disposal:** TOWN OF HEMPSTEAD
**Current On-Site Operator:** TOWN OF HEMPSTEAD
**Stated Operator(s) Address:** TOWN OF HEMPSTEAD - 1600 MERRICK RD.
MERRICK,NY 11566

### Site Description

The Oceanside Landfill is located on the south shore of Long Island, in Oceanside, Town of Hempstead, Nassau County. Located on the coast, it is bordered on the west by a tidal creek and on the south-west and eastern side by Barnum's Channel and Domar Canal respectively. These channels are tributaries to Garret's Lead Middle Bay to the south. Operated as a municipal landfill since 1961, this irregularly shaped landfill of approximately 190 acres has a final approved elevation of 160 feet. The surrounding area is composed of both residential and commercial properties. Landfilling of putrescible waste ceased as of May 1, 1988. The town is proceeding with final closure. There have

been numerous studies and monitoring programs conducted to determine the environmental and health impacts from this landfill. It has been determined that groundwaters under the landfill discharge directly to surface water. At a minimum, class SA and SB standards/guidance values have been exceeded for cadmium, beryllium, lead, mercury, chromium, chlorobenzene, and benzene. The Community Right-to Know (CRTK) survey reported the disposal of dry filtercake from a dry cleaner. No other documentation of hazardous waste disposal has been uncovered. Finally, groundwater, surface water, sediment, and leachate sampling on or near the landfill did not provide obvious data indicating disposal of hazardous waste.

## Site Environmental Assessment

Surface water contamination. Groundwater contamination. Clamming beds in nearby bay have been impacted. Contamination is not believed to be associated with the disposal of hazardous waste.

---

* **Class N Sites:** "DEC offers this information with the caution that the amount of information provided for Class N sites is highly variable, not necessarily based on any DEC investigation, sometimes of unknown origin, and sometimes is many years old. Due to the preliminary nature of this information, significant conclusions or decisions should not be based solely upon this summary."

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Oceanside Plaza
**Site Code:** C130158
**Program:** Brownfield Cleanup Program
Classification: C
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3131-3221 Long Beach Road
**City:**Oceanside Zip: 11572
**County:**Nassau
**Latitude:** 40.63380951
**Longitude:** -73.640093093
**Site Type:** DUMP
**Estimated Size:** 7.45 Acres

### Institutional And Engineering Controls

**Control Type:**
Environmental Easement

**Control Elements:**
Ground Water Use Restriction
Vapor Mitigation
Landuse Restriction
Monitoring Plan
Site Management Plan
O&M Plan
IC/EC Plan

### Site Owner(s) and Operator(s)

**Current Owner Name:** Oceanside Plaza Associates, LLC
**Current Owner(s) Address:** 151 Irving Place
Woodmere,NY, 11598

### Site Document Repository

**Name:** Oceanside Public Library

**Address:** 30 Davison Avenue
Oceanside,NY 11572-2209

## Site Description

Location: The site is located on Long Beach Road in the Hamlet of Oceanside, Town of Hempstead, Nassau County, New York. The subject property is a commercial shopping center. One of the stores within Oceanside Plaza has been an operational dry cleaning facility since 1977. Site Features: The site is located in a commercial setting. The site is almost entirely covered by the shopping center and the asphalt parking lot. There is a strip of unpaved property to the rear of the shopping center. The entire site encompasses approximately 7.45 acres. Current Zoning/Use: The site is currently zoned for commercial use and is an active multi-tenant shopping center. Past Use of the Site: The operation of a dry cleaners which has occupied one of the stores within the strip mall since 1977 is the source of tetrachloroethylene (PCE) that has been detected in on-site soil and groundwater. In October 2005, prior to entering the BCP, the property owner undertook excavation of PCE contaminated soil from within the dry cleaners, in the vicinity of the dry cleaning machinery. Site Geology/Hydrogeology: Subsurface soil is composed of medium/coarse sands with some organic matter and urban fill. Depth to groundwater is approximately 5 feet to 7 feet below grade, depending on seasonal variation, with groundwater flowing to the south/southeast.

## Summary of Project Completion Dates

Projects associated with this site are listed in the Project Completion Dates table and are grouped by Operable Unit (OU). A site can be divided into a number of operable units depending on the complexity of the site and the number of issues associated with a site. Sites are often divided into operable units based on the media to be addressed (such as groundwater or contaminated soil), geographic area, or other factors.

Project Completion Dates

## Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**
tetrachloroethene (PCE)

## Site Environmental Assessment

Nature and Extent of Contamination: The primary contaminant of concern at the site is tetrachloroethylene (PCE). The impacted media are soil, groundwater, soil gas and indoor air. As detailed in the Final Engineering Report, dated December 2013, the selected remedy for the site is the operation of an sub-slab depressurization system with annual monitoring of sub-slab and indoor air quality. Note that as of February 2018, the SSDS was approved by the Department to be temporarily turn off to assess the residual nature of PCE based on annual sampling. A brief summary of the

historical and current environmental conditions at the property is outlined below. Soil Contamination prior to Remediation: Historically, PCE were detected in soil outside the building footprint at 1,300 ppm, which exceeded the unrestricted use and the protection of groundwater soil cleanup objective (SCO) for of 1.3 ppm. Post-Remediation PCE in Soil: In 2009, under a Department approved Interim Remedial Measure (IRM), subsurface soil was excavated from the contaminant source area. A total of 18.41 tons of contaminated soil was removed from the area and was transported off-site to a permitted disposal facility. Post excavation sampling revealed PCE levels as high as 5.7 ppm. Through the implementation of a second IRM in 2009 (soil vapor extraction), PCE levels in the former source were detected below the unrestricted use SCO. Groundwater Contamination prior to Remediation: PCE was detected at a maximum concentration of 360 parts per billion (ppb) in on-site groundwater, which exceeded the NYS Groundwater Standard of 5 ppb. Groundwater Contamination after Remediation: As previously described, in 2009 a soil vapor extraction system (SVES) was constructed in the vicinity of the former source area. From November 2005 through January 2010 the five on-site groundwater monitoring wells were sampled on a quarterly basis. During this time, PCE levels ranged from non detect (ND) to 360 ppb in the five wells. From January 2010 through March 2015, the wells have been sampled on a semi-annual basis. During this time, PCE concentrations have ranged from ND to less than 5 ppb. As a result of further remediation of the contaminant source area, PCE levels in groundwater have reached asymptotic conditions. In 2013, an Environmental Easement to restrict groundwater use and prevent future exposure to any contamination remaining at the Site was executed and recorded. Soil Gas/Vapor Intrusion prior to Remediation: In 2007, PCE was detected in sub-slab soil gas at concentrations ranging from 350 to 81,000 micrograms per cubic meter (ug/m3). In September 2009, PCE levels in indoor air ranged from 500 to 880 ug/m3. The New York State Department of Health (NYSDOH) guideline for PCE in air is 30 ug/m3. Soil Gas/Vapor Intrusion after Remediation/ Current Status: As a result of the operation of a sub-slab depressurization system (SSDS) beginning in October 2009, indoor air samples collected annually have revealed that PCE levels in indoor air have remained below 30 ug/m3. Based on the indoor air quality results, the Department approved the temporary shutdown of the SSDS to monitor sub-slab and indoor air concentration of PCE. To date, concentration of sub-slab soil vapor following the shutdown of the SSDS are increasing and at a minimum, require continued monitoring. According to the current DOH guidelines, the SSDS must be restarted if sub-slab soil vapor PCE concentrations exceed 1,000 ug/m3 and/or indoor air PCE concentrations exceed 3 ug/m3. The Department will review the next round of indoor air sampling to be conducted in 2020 and determine whether or not the SSDS must be restarted.

## Site Health Assessment

People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in soil and groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A Soil Vapor

Extraction system (a system that removes the vapor from beneath the building) installed in the on-site building prevents indoor air quality from being affected by the contaminated soil vapor under the building. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

For more Information: E-mail Us

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Railroad Dry Cleaners
**Site Code:** 130066
**Program:** State Superfund Program
Classification: 02
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 3180 Lawson Boulevard
**City:**Oceanside Zip: 11752
**County:**Nassau
**Latitude:** 40.63320094
**Longitude:** -73.65397039
**Site Type:** STRUCTURE
**Estimated Size:** 0.092 Acres

### Institutional And Engineering Controls

**Control Type:**
Environmental Easement

**Control Elements:**
Ground Water Use Restriction
Groundwater Treatment System
Vapor Mitigation
Landuse Restriction

### Site Owner(s) and Operator(s)

**Current Owner Name:** UNKNOWN
**Current Owner(s) Address:** 99 MINEOLA AVE.
ROSLYN HEIGHTS,NY, 11577
**Current Owner Name:** UNKNOWN
**Current Owner(s) Address:** 3180 LAWSON BLVD.
OCEANSIDE,NY, 11752
**Current Owner Name:** Geneva Associates
**Current Owner(s) Address:** 99 Mineola Avenue
Roslyn Heights,NY, 11577
**Current Owner Name:** Railroad Drive In Cleaners

**Current Owner(s) Address:** 3180 Lawson Boulevard
Oceanside,NY, 11752
**Current On-Site Operator:** Arba Dry Cleaners
**Stated Operator(s) Address:** 701 Newbridge Road
Levittown,NY 11756
**Current On-Site Operator:** Railroad Drive In Cleaners
**Stated Operator(s) Address:** 3180 Lawson Boulevard
Oceanside,NY 11752
**Current On-Site Operator:** UNKNOWN
**Stated Operator(s) Address:** 3180 LAWSON BLVD.
OCEANSIDE,NY 11752
**Current On-Site Operator:** UNKNOWN
**Stated Operator(s) Address:** 701 NEWBRIDGE RD.
LEVITTOWN,NY 11756

## Hazardous Waste Disposal Period

**From:** unknown **To:** unknown

## Site Description

Location: Railroad Dry Cleaners is a 0.092 acre site located in a suburban area. Site Features: The main site features include a commercial building and paved parking to the west of the building. The on-site building is connected to the neighboring building. Current Zoning and Land Use: The site is currently used as a dry cleaner and is zoned for commercial use. The surrounding parcels are used for a combination of commercial and a passenger railroad. Past Use of Site: The Railroad site has been used as a dry cleaner since the early 1960's. During this time, tetrachloroethylene(PCE) was used in the dry cleaning operations. In 1988, a 550-gallon fuel oil underground storage tank (UST) was removed from the rear of the site, purportedly about 5 feet north of the property line with the adjacent Hercules site. A soil sample in the excavation at the soil-groundwater interface contained PCE. From 1989-1990, the property owner's consultant sampled the soil and groundwater at the site under the oversight of the Nassau County Department of Health (NCDOH). PCE was found in the soil and groundwater. Site Geology and Hydrogeology: The subsurface consists of sand and gravel with discontinuous clay lenses. Groundwater was encountered at 1.5-6.0 feet below ground surface. Groundwater at the site flows west toward the East Rockaway Channel.

## Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**
trichloroethene (TCE)
tetrachloroethene (PCE)

## Site Environmental Assessment

Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminants of concern include tetrachloroethylene (PCE), trichloroethylene (TCE), 1,2-

dichloroethylene (1,2-DCE), and vinyl chloride. Soil - Samples located in front of, behind and beneath the on-site building contained levels of PCE exceeding the unrestricted use soil cleanup objective of 1.3 parts-per-million (ppm). Maximum PCE concentrations in front of, behind and beneath the on-site building were 24 ppm, 6.5 ppm and 18 ppm, respectively. Groundwater - The highest concentrations of on-site groundwater contamination were detected between the water table and 39 feet below ground surface (bgs). Maximum PCE, TCE, cis-1,2-DCE and vinyl chloride concentrations in the on-site groundwater were 6,400 parts-per-billion (ppb), 1,700 ppb, 760 ppb, and 180 ppb, respectively. The New York State groundwater standard for each of these compounds is 5 ppb, except for vinyl chloride, which has a groundwater standard of 2 ppb. The highest concentrations of off-site groundwater contamination were detected between 23 feet bgs and 59 feet bgs. Maximum PCE, TCE, cis-1,2-DCE and vinyl chloride concentrations in the off-site groundwater were 13,000 ppb, 1,900 ppb, 1,200 ppb, and 79 ppb, respectively. Significant Threat: The site presents a significant threat to human health associated with current and potential exposure to volatile organic compounds and a significant environmental threat associated with the current impacts of contaminants to a sole source aquifer.

## Site Health Assessment

Exposures to contaminated groundwater via drinking water are not expected because public water serves the area and there are no known users of well water in the vicinity. Exposure to contaminated soils is not expected since the site is covered by buildings and pavement. Soil vapor intrusion of volatile organic compounds is a known exposure pathway within the building on the Hercules property and will be mitigated by a soil vapor extraction system. Soil vapor intrusion is a potential exposure pathway at downgradient residential structures; the Record of Decision addresses the current and potential exposure pathways.

For more Information: E-mail Us

Return To Results

Refine This Search

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# Environmental Site Remediation Database Search Details

## Site Record

### Administrative Information

**Site Name:** Smart Set Cleaners
**Site Code:** 130194
**Program:** State Superfund Program
Classification: 02
**EPA ID Number:**

### Location

**DEC Region:** 1
**Address:** 16 Atlantic Avenue
**City:**Oceanside Zip: 11572
**County:**Nassau
**Latitude:** 40.639762335
**Longitude:** -73.640732043
**Site Type:** STRUCTURE
**Estimated Size:** 0.09 Acres

### Site Owner(s) and Operator(s)

**Current Owner Name:** Great Lincoln, LLC
**Current Owner(s) Address:** 488 Madison Ave, 11th floor
New York,NY, 10022

### Site Document Repository

**Name:** Oceanside Library
**Address:** 30 Davison Ave
Oceanside,NY 11572

### Site Description

Location: The Smart Set Cleaners site is located in a mixed commercial and residential area at 16 Atlantic Ave in Oceanside in Nassau County, NY . It is one tenant unit within a small shopping center and sidewalk behind the tenant unit. The strip mall is bounded by Smith Street to the north, Atlantic Avenue to the south, Lincoln Avenue to the west and Long Beach Road to the east. Site Features: The Site is one tenant unit with a basement and occupies approximately 0.09 acres. It is located in a small strip mall shopping center. The shopping center property is approximately 3.9 acres and is

covered in building or pavement. The property has two buildings, one with 15 tenant units including the site and the other with two tenant units. The strip mall was built in 1955. Current Zoning/Use(s): The site is zoned commercial. It is currently an active nail salon and spa. The surrounding building is commercial space leased for commercial purposes. The nearest residential area is 0.1 mile to the east. Past Use of the Site: The dates of operation of the dry cleaner are approximately 1956 through 2005. A routine inspection of the Smart Set Cleaners facility by the Nassau County Department of Health (NCDOH) in the mid-1990s revealed the existence of interior floor drains. These drains were considered injection wells by the United States Environmental Protection Agency (USEPA). In 1998, a groundwater sample was collected from a floor drain that showed the presence of the dry cleaning solvent tetrachloroethylene (PCE). The NCDOH in conjunction with the USEPA pursued the investigation of the source of groundwater contamination. In 2001, the NCDOH oversaw removal of contaminated soils from the rear of the facility by the owner. The owner's consultant, with oversight by the NCDOH, proceeded with a subsurface investigation that was completed in May 2001. Based on the 2001 investigation, a Soil Vapor Extraction/Air Sparge (SVE/AS) system was installed by the owner and started in 2002. That system is still in operation and reports are submitted semi-annually on its performance. This site was added to the NYS Registry of Inactive Hazardous Waste Disposal Sites in November 2008 with USEPA maintaining the lead role in regulating the owner. The lead was transferred to the NYSDECin August 2009 at the request of USEPA. Site Geology and Hydrogeology: Groundwater flow is to the west-southwest, towards the nearby Powell Creek located approximately 0.4 miles from the site. No public or private wells have been identified downgradient of the site. Depth to groundwater is approximately 10 ft below ground surface. There appears to be no clear delineation between the Upper Glacial and Magothy aquifers. The geology of the area consists predominantly of thick unconsolidated sediments.

## Contaminants of Concern (Including Materials Disposed)

**Contaminant Name/Type**

trichloroethene (TCE)
1,2-dichloroethane
dichloroethene (cis-1,2-)
tetrachloroethene (PCE)

## Site Environmental Assessment

Nature and Extent of Contamination: Based upon prior investigations only volatile organic compounds were sampled for as part of the Remedial Investigation and the primary constituent of concern is tetrachloroethene (PCE) and its breakdown products, trichloroethene (TCE) and cis-1,2-dichlorothene (DCE). Groundwater: PCE and its daughter compounds are found in the groundwater on the property and off-site to the west of the site. The latest sampling of groundwater on the property(analyzed for VOCs) found PCE at approximately 56 parts per billion (ppb) which exceeds the groundwater standard (5 ppb). PCE and its breakdown products TCE and DCE have been detected up to 800

yards to the west of the site. PCE has been observed in the off-site groundwater at a maximum concentration of 4100 ppb, approximately 87 ft below ground surface near the intersection of Lincoln Avenue and Atlantic Avenue. During the Remedial Investigation, the off-site plume was investigated and sampled only for VOCs, compounds related to dry-cleaning activities. This investigation found a maximum of 5105 ppb of chlorinated VOCs located approximately 1550 ft to the west of the site. Soil: In January 2001, the PRP excavated eight cubic yards of contaminated soil from behind the building, at the source location behind Smart Set Cleaners. Soil samples were collected from the sides and bottom of the excavation when the excavation was finished, and the soil sample collected from the east side of the excavation contained PCE at 2.9 parts per million (ppm) and the bottom contained PCE at 8.5 ppm. The excavation was backfilled with clean fill and covered with a cement sidewalk which acts as a cover for the site. Soil samples were collected from beneth the floor slab of the basements of the stores adjacent to Smart Set Cleaners, and residual contamination was found beneath those stores to the east and west. In the east store's basement PCE contamination was found to be 0.280 ppm and in the store to the west's basement contamination was found to be 0.011 ppm. Soil Samples were also collected from the leeching pools and cesspools and results were below unrestricted standard for all contaminants. A soil sample was collected from the beneath the sidewalk (0.5-1 ft bgs) during the RI. It was analyzed for VOCs, SVOCs, pesticides, PCBs, and metals and no contamination was found in this sample. However, there is still the potential for suspected inaccessible source areas beneath the existing building. Soil Vapor Intrusion: In early 2001, as part of the subsurface investigation, sub-slab vapor samples were collected from all vacant stores in the strip mall. None of the vapor samples indicated the presence of chlorinated solvents above detection limits. During the RI, sub-slab vapor and indoor air samples were collected from the on-site tenant unit and off-site buildings in the strip mall, downgradient of the site. PCE was found to exceed the mitigation guidance values in most of the tenant units within the same building as Smart Set Cleaners. The on-site tenant unit did not exceed monitoring or mitigation guidance values due to the presence of the SVE system on-site. Soil vapor samples were collected from near the property boundaries to the north and west of the property to evaluate potential for soil vapor intrusion off-site. These sampling points showed there was the potential for soil vapor intrusion in the nearest buildings. Surface Water: During the RI, surface water was sampled from five locations upstream to downstream of the off-site plume in Powell Creek which is located 2100 ft to the west of the site. Samples upstream of the plume intersection with the creek exceeded the standard for PCE (1 ppb) with 4 ppb. Samples collected in the creek near the plume exhibited the same PCE concentration as upstream, while samples collected downstream of the plume were non-detect.

## Site Health Assessment

Direct contact with contaminants in the soil is unlikely because the site is covered with buildings and pavement. People are not coming into contact with the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the soil and/or groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the

movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A soil vapor extraction system (a system that removes soil vapor from beneath the building) has been installed on-site and prevents the indoor air quality from being affected via soil vapor intrusion in the on-site tenant unit and the two adjacent off-site tenant units immediately east and west of the site. Sampling indicates the potential for soil vapor intrusion to impact indoor air quality of the rest of the tenant spaces in the strip mall and an adjacent building. Soil vapor intrusion is a concern for additional off-site buildings, however access was not granted to evaluate the potential for soil vapor intrusion to affect the indoor air of these structures.

For more Information: E-mail Us

Return To Results

Refine This Search