

### III. EXISTING CONDITIONS, ANTICIPATED IMPACTS AND MITIGATION

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#### A. Soils and Topography

##### 1. Existing Conditions

###### a) Soils

The general soil mapping unit that composes the project study area, as listed in the *Soil Survey of Nassau County, NY (February 1987)*, is from the Urban Land-Montauk-Riverhead Association (see **Exhibit III.A-1**). This mapping unit is dominated by urban areas and very deep soils that are nearly level to strongly sloping, well drained, medium-textured to moderately coarse textured, and are found on low hills. The steeper areas of the unit occur along side-slopes or the sides of drainage-ways while the nearly level or undulating areas occur on foot slopes. Several short, intermittent streams drain some parts of this soil unit. Slopes for this unit generally range from zero to 15 percent.

The majority of the acreage of this unit is urban land, which consists of buildings, roads, driveways, parking lots or other manmade features. The Montauk soils are layered such that the surface layer is dark grayish brown silt loam, the subsoil is yellowish brown gravelly loam or sandy loam, and the substratum is light yellowish brown, firm gravelly loamy sand. Water generally moves slowly or moderately slowly through the substratum. Riverhead soils are layered such that the surface layer is brown sandy loam, the subsoil is strong brown and yellowish brown fine sandy loam, while the substratum is brownish yellow sand and gravelly sand.

Specific soils located in the study area include:

- Beaches (Bc);
- Manahawkin muck (Ma);
- Montauk fine sandy loam, 15 to 25 percent slopes (MfD);
- Scio silt loam, till substratum, 3 to 8 percent slopes (SdB);
- Udorthents, refuse substratum (Uf);
- Urban land (Ug); and
- Urban land-Montauk complex, 3 to 8 percent slopes (UnB).

###### Beaches, Bc

Beaches consist of strips of nearly level or gently sloping sand or sand and gravel. These areas are inundated twice each day with marine waters at high tide. Since the sand and gravel is moved around daily by the wind and tides, most beaches have no vegetative cover. Beaches typically are used for boating, fishing, sunbathing and other related recreational activities (however, Garvies Point Beach receives limited usage). Location and tidal flooding make most other uses impractical.

**INSERT GRAPHIC**  
**Exhibit III.A-1**  
**Soils Map**

Manahawkin muck, Ma

Manahawkin muck is very deep and very poorly drained. This soil type is primarily found in depressions along drainage-ways or in low basins such as those around Mill Pond in Pratt Park. The seasonal wetness, the low strength and frost action limits the soil use for local streets and roads without incorporating suitable fill material into the design of the project. Use for recreational development and landscaping is also very impractical without appropriate mitigation (such as those measures proposed as part of the project.) This soil type has fair suitability for wetland wildlife habitat. Manahawkin muck soils tend to pond and exhibit a very slow rate of surface runoff. Permeability is moderate or moderately rapid in the surface and subsurface layers and moderately rapid or rapid in the substratum. This soil type has a slight erosion hazard potential.

Montauk fine sandy loam, 15 to 25 percent slopes, MfD

Montauk fine sandy loam, with slopes between 15 to 25 percent, is located on the sides of hills and ridges. This soil type is very deep, moderately steep and well drained. Slope, seasonal wetness and frost action limit the soil for local streets and roads, although roadside drainage helps reduce the wetness and the potential for frost action. Erosion is also a hazard where ground cover is removed during construction; on some excavated road banks and shoulder ditches, plant cover or special structures may be required to control erosion. Slope is also a major limitation of this soil for recreation development and landscaping. While placing paths and trails on the contour or across the slope will help minimize the erosion hazard, any grading on the slope will likely expose numerous stones which could increase erosion. The soil has fair to good suitability for open land and woodland wildlife habitat but is very poorly suited as a wetland wildlife habitat. Montauk fine sandy loam soils tend to have a rapid rate of surface runoff with moderate to moderately rapid permeability in the surface layer and subsoil and slow or moderately slow permeability in the substratum.

Scio silt loam, till substratum, 3 to 8 percent slopes, SdB

Scio silt loam, till substratum, located on the lower portion of long, gentle slopes adjacent to small hills or ridges, is very deep and moderately well drained. Incorporated into this soil are small areas of well drained Montauk soils and somewhat poorly drained Wallington soils. In several locations, the substratum can contain lenses of silty clay loam that is sticky when wet. Most areas of this soil are located in woodland areas while some are located in areas of grass or branch cover or around low-density housing developments. Areas that contain silty clay loam can provide low strength for foundation support and coupled with frost action, limit this soil for use as local streets and roads. However, providing a coarser grained subgrade base material and drainage can help to overcome the low strength and frost action limitations. This soil is highly susceptible to erosion along roadside ditches and cutbanks. Seasonal wetness can also limit recreational development and landscaping projects. The soil is well suited to open land and woodland wildlife habitat and is very poorly suited to wetland wildlife habitat. Scio silt loam, till

substratum soils tend to have a medium rate of surface runoff with moderate permeability in the surface layer and subsoil and moderately slow to slow permeability in the substratum. This soil type has a moderate erosion hazard potential.

Udorthents, refuse substratum, Uf

Udorthents, refuse substratum, consists of nearly level to steep, sandy soils in sanitary landfills that have been reworked by earth-moving and grading equipment to bury trash and other refuse. In some instances, the garbage is partly covered or mixed with the sandy fill material. The sides of most areas are steep with the tops nearly level to gently sloping. Slopes range from zero to 35 percent and are smooth or convex. Older or abandoned landfills have varying amounts of grasses, weeds, and shrubs as is the case with the former Glen Cove landfill (also known locally as the Captain's Cove property). Settling of the underlying material together with its instability, cause major limitations of the soil for most types of development, including local roads and streets. Landscaping is limited by the droughtiness and low natural fertility of this soil type, making the use of topsoil, fertilizers, and irrigation necessary. The erosion hazard of this soil type is moderate on sloping areas and severe on steep areas. Soil permeability is variable but generally ranges from very rapid to moderate.

Urban Land, Ug

Urban land consists of areas where at least 85 percent of the surface is covered with asphalt, concrete, or other impervious building material. These areas, which are often located as part of business centers in villages and cities, primarily include parking lots, shopping centers, industrial parks or institutional uses. They are usually nearly level to gently sloping, with the exception of a few small areas, mostly in the northern part of Nassau County, which are strongly sloping. Included in this mapping unit are small parcels that have not been appreciably altered by the surrounding development including lawns and landscaped areas. Most of these open areas include the well drained Riverhead, Hempstead or Enfield soils, as well as excessively drained Udipsamments. In many areas, rapid or very rapid runoff from intense rainstorms is prevented from being adequately discharged, and flooding may therefore occur. In addition, a few areas are located in low spots where temporary flooding may ensue and frost heaving causes the surface pavements to break up.

Urban Land - Montauk complex, 3 to 8 percent slopes, UnB

Urban land – Montauk complex, 3 to 8 percent slopes consists of urbanized areas and very deep, well drained soils. The unit, which is found on the gently sloping tops and sides of low hills and broad ridges, includes approximately 60 percent urbanized areas, 25 percent Montauk soils, and 15 percent other soils (which are so intermingled that it is not practical to map them separately). The areas on which there are no structures include lawns, gardens, small playgrounds, border strips adjacent to streets and sidewalks as well as a few vacant lots. Seasonal wetness, slow permeability, and frost action limit the soils as a site for local roads and streets or for recreation, and therefore, improved drainage

may be necessary for these uses. This soil has few limitations for landscaping, but stones should be removed from some areas prior to landscaping. Urban land – Montauk complex soils tend to have slight erosion hazard. Permeability is moderately rapid or moderate in the surface layer and subsoil and slow or moderately slow in the substratum.

(1) Soil Limitations

The soils located in the project study area have severe to slight limitations depending on the specific soil type and proposed use (see **Table III.A-1**). Due to seasonal wetness, low permeability, frost action, shallow water table and/or flooding, Beaches and Manahawkin muck soils are severely limited for use as local roads and streets and lawns and landscaping. Montauk fine sandy loam, Scio silt loam, Udorthents-refuse substratum, Urban land and Urban land-Montauk complex have mostly moderate limitations for local roads and streets due to seasonal wetness or low permeability, frost action, flooding and/or low strength or settling characteristics. Most of these limitations can be overcome by providing adequate drainage or bringing in high strength fill material. Udorthents is severely limited for lawn and landscaping due to the droughtiness and low natural fertility of the soil. Both Urban land and Urban land-Montauk complex have slight limitations for use as lawns and landscaping. These limitations can be overcome by adding topsoil and adequate irrigation.

Subsurface contamination has been documented on the north side of Glen Cove Creek and is associated with many years of industrial use. A summary of sites with documented soil contamination is discussed in **Section III.B, Subsurface Environmental Conditions**.

**Table III.A-1  
Summary of Soils in the Project Study Area**

Map Symbol	Mapping Units	Slopes	Local Roads and Streets	Lawns and Landscaping	Recreational Development	Wildlife Habitat	Buildings	Water Management/ Drainage	Flooding Potential	High Water Table	Potential for Frost Action	Risk of Corrosion Uncoated Steel	Risk of Corrosion Concrete
Bc	Beaches	n/a	SE (B) (C) (D)	SE (C) (D)	SE (C) (D)	SE (C) (D)	SE (B) (C) (D) (E)	SE (C) (D)	Frequent	n/a – floods	--	--	--
Ma	Manahawkin Muck	0-1%	SE (A) (B) (C) (D)	SE (A) (D)	SE (A) (D)	SE/M/SL* (A) (B) (C) (D) (F)	SE (A) (B) (C) (D) (E)	SE (A) (B) (C) (D)	Frequent	+1.0'	High	High	High
MfD	Montauk fine sandy loam	15-25%	M (A) (B) (G)	M (G)	SE (G)	SL	SE (G)	M (A) (G)	None	2'-2.5' perched	Moderate	Low	High
SdB	Scio silt loam, till substratum	3-8%	SE (A) (B) (E)	M (A)	M (A) (G)	SL	SE (A) (C) (E) (G)	M (B) (E) (G)	None	1.5'-2'	High	Moderate	Moderate
Uf	Udorthents, refuse substratum	0-35%	M (E)	SE (F)	M (E)	SE (H)	M (E)	M (H)	None	Not available	--	--	--
Ug	Urban land	n/a	M (B) (E)	SL	SL	SE (H)	M (B) (E)	M (H)	None	Not available	--	--	--
UnB	Urban land -Montauk complex	3-8%	M (A) (B)	SL	M/SL (A)	SL (H)	M (A) (G)	M (A) (G)	None	2'-2.5' perched	Moderate	Low	High

Engineering and Planning Limitation Rating:

SL = Slight - Few or no limitations or limitations, can be overcome at little cost.

M = Moderate - Limitations are harder to correct or not possible to correct entirely.

SE = Severe - Use severely limited by some characteristics, difficulty or costly to overcome.

Reasons for Limitations:

(A) Seasonal/Wetness or Low Permeability

(B) Frost Action

(C) Shallow Water Table

(D) Flooding

(E) Low Strength or settling

(F) Droughty and Low In Natural Fertility

(G) Slope

(H) Developed/Disturbed Urban Land

**Source:** Soil Survey of Nassau County, New York (February 1987)

\*SE – Landscape Plantings

M – Wetland Wildlife

SL – Wetland Plantings

(2) Additional Available Data Regarding Subsurface Soil Conditions

Subsurface lithologic information presented in previous reports for the Captain's Cove, Gladsky/Anglers Club, and Li Tungsten sites provides additional understanding of the lithologic deposits below the land surface.

Captains Cove Site (summarized from ROUX Final Remedial Investigation Report, Captain's Cove Condominium, January 1999)

Investigations at the Captain's Cove included the installation of twelve soil borings across the site. A location map and the logs for these borings are included in **Appendix R**.

In general, silt and/or sand are predominant from twelve to sixteen feet below the land surface (bls). However, these deposits have been extensively reworked by human activities, as indicated by the presence of construction and demolition debris, and municipal solid waste that was found to depths as great as fifteen feet bls. This debris comprised about 10-15 percent of the volume with the remainder being silt and sand. The reworked deposits were subsequently excavated and sorted into their various components (See **Section III.B** for a more complete description of the remedial program), some of which were transported offsite and replaced by fill when the landfill was remediated.

In some areas, especially the eastern portion of the site (soil boring SB-10), significant three to five-foot thick clay zones interbedded with silt and sand units were encountered in the upper ten feet. Peat or peaty clay units up to eight-foot thick were seen in the northern and eastern areas.

An extensive and relatively thick clay layer was also found beneath the silt and sand at a depth of from 12 to 16 feet across most of the site. This clay layer wasn't found in soil borings SB-3, SB-5, and SB-6, which were 26-feet deep. These borings were located adjacent to the creek, the tidal wetland, and Mosquito Cove, respectively. The report concluded that the absence of the clay layer indicates erosional/depositional transition zones where the clay was eroded during development of the creek and beach. Borings SB-1 and SB-2, also located adjacent to the creek and tidal wetlands, had an interbedded sequence of alternating silt, sand and clay that likely represents deposition during meandering of the creek when it was a braided stream channel prior to dredging. The distribution of clay in the other borings suggests that the layer is present at depth across the entire site.

Gladsky/Angler's Club Site (summarized from Dvirka and Bartilucci, Angler's Club/Gladsky Marine Site Garvies Point Road, December 2000)

Logs and a location map related to borings at the Gladsky/Anglers Club site are included in **Appendix R**. The maximum depth of the borings was five feet. The report concludes that the deposits in this area are similar to those at Captains Cove and Li Tungsten. The deposits above the watertable consist of silt or silt and sand. Sand is predominant below the watertable. Fill was observed at boring locations AC-P-1 and G-P-5.

Li Tungsten Site (summarized from Malcolm Pirnie, Inc. Draft Final Remedial Investigation (RI) Report)

The boring logs and location map for the soil borings and monitoring wells that were drilled as part of the report are presented in **Appendix R**. The boring logs indicate unsorted deposits of sand, silt, clay and gravel interbedded with lenses of moderately-to-well sorted sand, silt and clay. This stratigraphic profile is consistent with published sources that describe the regional area as underlain by interlayered Pleistocene deposits of till, outwash and lacustrine sediments.

The monitoring wells that were initially installed on the site were used primarily to assess shallow groundwater quality. Three wells were drilled to a depth greater than 20 feet, and only one well to more than 25 feet. As a result, except for the boring log of supply well N1917, little information was available on the deeper Site geology.

Boring logs and physical soil properties measured from samples collected during the drilling of the soil borings and monitoring well borings as part of the investigation were consistent with the previous investigation and published sources. The shallow deposits consist of well to poorly sorted sands, silt, clay, and gravel. Till deposits were observed in three monitoring well borings (MP-11D, MP-16D, and MP-4D) located on Parcel C. The shallow deposits are underlain by the Port Washington Clay. The shallow groundwater table appears to mimic the topography and does not appear to be influenced by the deeper Port Washington Clay.

b) Topography

According to the USGS topographic map, Sea Cliff Quadrangle and the site plan for the proposed development, the subject property ranges in elevation from zero feet above mean sea level ("msl") in the southwestern portion of the area adjacent to the estuarine portion of Glen Cove Creek, to approximately 95 feet above msl in the north-central portion just southeast of the Janet Lane cul-de-sac. Elevations along the beach and Captain's Cove area range from approximately zero feet to approximately ten feet above msl. The majority of this area is located immediately behind bulkheading, ranging from approximately five to ten feet above msl.

The area south of Garvies Point Road and Herb Hill Road, along the north side of the Creek, is nearly level to gently sloping. The area north of Herb Hill Road, east of Dickson Street, contains elevations that rise in a northerly direction from 20 feet to over 60 feet above msl. The slope gradually increases to approximately 15 percent in the vicinity of The Place (a street name). The area north of Garvies Point Road, west of Dickson Street, contains elevations that rise in a northerly direction from 20 feet to over 95 feet above msl. Currently, there are no drainage recharge mechanisms to collect and recharge any stormwater on the project site. The existing slopes within the project site are illustrated on **Exhibit III.A-2, Slope Analysis – Existing Conditions**.

**INSERT FIGURE III.A-2  
Slope Analysis – Existing Conditions**

## 2. Potential Impacts

### a) Soils

As indicated in the Existing Conditions, much of the existing soil in the project area is currently limited in its ability to support development, including buildings, parking areas, and roads. In addition, much of the property within the project area has previously been disturbed and only a few limited areas of natural soils exist.

The redevelopment of the project area, as outlined in the development plan, would include disturbance to the soils with the project area. However, such development would include design measures to accommodate soil limitations, where required. While soils would be disturbed due to construction, specific mitigation measures (e.g., filling, stabilization, etc.) may be necessary prior to construction within certain areas of the project site to overcome various limitations (e.g., slope, bearing capacity, etc.). However, given that soil remediation efforts on those various contaminated properties located throughout the area are expected to be sufficiently complete by the time the project commences, the quality of the surface and subsurface soil will be improved. Any soil disturbance or construction activities will be subject to the Site Management Plan, which is described in more detail in **Section III.B**. A Site Management Plan describes the procedures to be followed for any soil disturbance during and after construction, and the procedures related to the operation, monitoring and maintenance of any engineering controls that are put in place. In addition, a Stormwater Pollution Prevention Plan (SWPPP), detailing the soil erosion and sediment controls for the project (i.e., haybales, inlet sediment filters, etc.), will be prepared as part of the SPDES permit application and with each subsequent site plan application.

In the western portion of the project area, soil contaminants and other soil limitations are expected to be sufficiently remediated by the time the project commences. While no longer containing any structures, the former municipal landfill does contain some remaining debris scattered throughout the area. Reportedly, the City of Glen Cove, USEPA and the USACOE have completed the majority of the cleanup on the western portion of the project area (the Captain's Cove property), including removing the contaminated soil that was stockpiled on the land surfaces. See **Section III.B**, *Subsurface Environmental Conditions*.

Within this portion of the project area where the former Glen Cove Landfill existed, the soils are identified as Udorthents ("Uf"). Settling of underlying material together with its instability can cause major limitations of the soil for buildings and parking areas, as well as local roads and streets. In this area, the underlying material will be checked for bearing strength and, where necessary, coarse grained subgrade base materials, piles and/or specially designed building footings would most likely be utilized to prevent settling of structures, parking lots and roads. This soil is also subject to drought and is low in natural fertility, thereby making the use of topsoil, fertilizers and irrigation necessary in landscaped areas.

Within the eastern portion of the project area, development of the Proposed Project would necessitate the completion of the clean up of soil contamination on certain affected properties, portions of which are already being remediated, and potentially others which have not yet been fully investigated. See **Section III.B**, *Subsurface Environmental Conditions*.

In the vicinity of Dickson Street and south of Janet Lane, Montauk fine sandy loam (“MfD”), Scio silt loam (“SdB”), and Urban land-Montauk complex (“UnB”) soils exist. In these locations, slope, seasonal wetness, low bearing strength and frost action may pose limitations for buildings and parking areas, as well as local streets and roads. In these areas, erosion may also be a problem. As part of the Proposed Project, land contouring and grading, along with designing structures to conform to the natural contours, will help to overcome the slope limitations. Providing a coarser grained subgrade base material and installing improved drainage will address the seasonal wetness, low bearing strength and frost action limitations. In addition, establishing plant cover as quickly as possible on cleared and graded areas would help control erosion.

The Manahawkin muck (“Ma”) soil in the eastern portion of the proposed Turning Basin also has limitations for construction due to seasonal wetness, low bearing strength and frost action. The use of these soils for recreational development and landscaping may require appropriate mitigation such as installation of select fill material and improved drainage. Such measures will be implemented with the proposed project and are further explained in the project Site Management Plan.

See **Exhibit III.A-3** for an identification of the project components in relation to each soil type and the estimated area of disturbance by soil type.

There are also several NYSDEC permits that will most likely be required for the proposed project, including an Article 15 (Protection of Waters) permit, an Article 24 (Freshwater Wetlands) permit, and an Article 25 (Tidal Wetlands) permit, as well as a State Pollution Discharge Elimination System (“SPDES”) permit. Tidal wetlands are regulated both by NYSDEC at the state level, and the USACOE at the federal level. The Protection of Waters permit is also needed, to the extent that the development will involve excavation in Glen Cove Creek or Hempstead Harbor, and the construction of docking/mooring facilities.

b) Topography

The vast majority of the project area has already been substantially excavated, filled and altered over the years and the proposed reuse and redevelopment in accordance with the Proposed Project is not anticipated to result in significant adverse topographic impacts.

The project will require alterations to the area’s topography. The proposed design includes cutting of some areas of the site and filling of other areas of the site to achieve

the desired grades. (See Grading Plans A, B, and C on Master Site Plan Sheets nos. C-8, C-9, and C-10.) The amount of land disturbance by slope category is enumerated on **Exhibit III.A-4**. Individual site improvements involving cutting and regrading the steeper sloped areas will require erosion control and stabilization measures to be implemented. Such measures may include placement of silt fencing and/or hay bales, as well as paving and revegetating as soon as possible after disturbance. Detailed soil and erosion plans will be provided with each subsequent site plan application in conformance with the overall soil and erosion control plan.

Topographical alterations will also occur as a result of separate planned projects for the area (the Glen Cove Ferry project, Garvies Point Road Phase II and Pratt Park Improvements) Such changes would occur regardless of whether development of the project occurs. The grading and site design for the subject project has been coordinated with the proposed improvements for the Glen Cove Ferry project, the Garvies Point Road improvements and the Pratt Park improvements.

Global earthwork analyses for the project site and adjacent proposed roadways show that approximately 30,000 cubic yards of soil would be cut, or removed from the site, in order to achieve the proposed grading and design. This analysis is based upon the grid method, which averages the cuts and fills required per grid area and sums the total average net cuts and fills for each grid. The analysis includes a 12 inch deduction for pavement thickness and building slab thickness across the project site. Please note that these values do not include trenching for utilities and are subject to change based upon final design of the project. Ultimately, the volume of fill material required to be imported and/or exported for the project will be finalized once the level of soil contamination is determined within the Gateway Properties and as part of the detailed design of the project. Contaminated soils may be able to be placed within lower fill zones and capped with "certified clean fill" if approved by the regulatory agencies. (See **Section III.B**, *Subsurface Environmental Conditions*.)

### 3. Mitigation Measures

The proposed project is not anticipated to cause any significant negative impacts on either soils or topography of the project area, as the great majority of the property has previously been disturbed and only a few limited areas of natural soils still exist. While some of the existing soils on buildable sites have limitations in their ability to handle development within the study area, redevelopment of the project area would include measures, (e.g., cutting and regrading the steeper sloped areas, land contouring, erosion control and stabilization measures, etc.) where required, to overcome these soil limitations, after ongoing remediation efforts by City, State and Federal agencies are sufficiently completed.

Remediation of the property and the use of institutional or engineering controls, which must be approved by State and federal agencies, will prepare the property for its intended uses, and assure that no health risks to residents, employees or the public would occur.

Soil contaminants and other limitations on the project area, and any required mitigation or engineering controls will be completely addressed as each phase of the project commences. See **Section III.B**, *Subsurface Environmental Conditions* for a detailed discussion of those mitigation measures related to soil contamination and remediation.

During the course of construction, erosion and sediment control measures will be implemented to prevent the transport of sediment to offsite areas. In addition, the following general guidelines shall be observed:

- Remaining perimeter vegetation will be protected with construction fencing and remain undisturbed.
- Grading will be carefully scheduled to minimize the size of exposed areas and the length of time that areas are exposed.
- The length of cleared slopes will be minimized to reduce potential erosion and sedimentation. The steepness of the slopes will not exceed 1 on 3 in a fill situation and 1 on 2 in a cut situation to also minimize erosion and sedimentation.
- Sediment shall be trapped on the site.

Specific control measures will include the following:

Swales will be constructed along portions of the northern side of Garvies Point Road to collect and direct runoff from the off-site areas, prior to discharging across the project site during construction. The runoff will be collected in the infiltration trenches directly below the swale and dissipated into the soil. The swales will be planted with grass, groundcover, shrubs and trees which will reduce the runoff velocities and allow the stormwater to be filtered and dissipated back into the soil. Currently, the site does not contain any stormwater drainage system and runoff flows overland directly into Glen Cove Creek or Hempstead Harbor, with the exception of several storm sewer collection systems located within Garvies Point Road. The proposed stormwater drainage system for the project is discussed in Chapter III.C, Water Resources.

Site construction activity (earthwork) will not be permitted during heavy rain, frozen conditions or excessively wet conditions. Once the building foundations are completed, other activities could be performed during inclement weather. This will facilitate the project being completed on schedule. The project schedule and overall construction activities are discussed in detail in Chapter III.N.

Sediment barriers (silt fence, hay bales or approved equal) will be installed as required along the limits of disturbance for the duration of the work in addition to a temporary construction fence. Haybales will be installed at various locations on the site, including along the water's edge, to minimize transport of soils and sediments into the adjacent tidal water bodies. In addition, a temporary 4' high construction fence with silt fencing will be installed around the entire perimeter of each phase of construction. No sediment from the site shall be permitted to wash onto adjacent properties, public streets or water bodies.

Graded and stripped areas and stockpiles, while kept to a minimum, will be kept stabilized through the use of temporary seeding or salt hay as required. Seed mixtures will be in accordance with the National Resources Conservation Service (formerly Soil Conservation Service) recommendations.

Drainage inlets installed will be protected from sediment buildup through the use of sediment barriers, sediment traps, etc., as required.

Trees to remain on the project site, as well as trees adjacent to the site, will be protected by fencing placed around the crown drip line of the trees. Construction equipment will not be permitted within this fenced area to minimize the possibility of soil compaction around the root system and damage to the existing trees. Minimum treatment will consist of each tree trunk being protected by a fence barrier.

Proper maintenance of erosion control measures will be implemented by daily and follow-up inspections after heavy or prolonged storms. Maintenance measures include, but are not limited to, cleaning of sediment basins or traps, cleaning or repair of sediment barriers, repair/replacement of damaged silt fencing, replacement of damaged haybales, cleaning and repair of berms and diversions, and cleaning and repair of inlet protection. Sediment, which has accumulated to the point of impairing the function of the above structures, will be removed. Additionally, supplemental hay bales and silt fencing will be required to be stored on-site, to be utilized if the initial hay bales and silt fencing become damaged or are not working as they were intended.

Appropriate means shall be used to control dust during construction. This may include the use of water trucks to wet down exposed surfaces, as required.

A stabilized construction entrance, located at the various site driveways, shall be maintained to minimize soil and loose debris from being tracked onto local roads. These measures will be maintained until the site is permanently stabilized.

Sediment barriers and other erosion control measures shall remain in place until disturbed areas are permanently stabilized. After permanent stabilization, drainage structures shall be cleaned and flushed as necessary. If during construction operations and routine maintenance requirements it is determined that additional erosion control measures are necessary, additional barriers/protection will be added.