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Natural
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Conservation
Service

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Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Bronx County, New York, New York County, New York, and Queens County, New York



July 14, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map


The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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MAP LEGEND


Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bronx County, New York

Survey Area Data: Version 12, Sep 10, 2022

Soil Survey Area: New York County, New York

Survey Area Data: Version 12, Sep 10, 2022

Soil Survey Area: Queens County, New York

Survey Area Data: Version 13, Sep 10, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 12, 2020—Nov 4, 2020

MAP LEGEND

MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LUB	Laguardia-Urban land complex, 3 to 8 percent slopes	1.5	10.8%
W	Water	0.2	1.2%
Subtotals for Soil Survey Area		1.7	12.0%
Totals for Area of Interest		13.9	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LUA	Laguardia-Urban land complex, 0 to 3 percent slopes	5.1	36.9%
ULA	Urban land-Laguardia complex, 0 to 3 percent slopes	1.7	12.2%
W	Water	1.2	9.0%
Subtotals for Soil Survey Area		8.0	58.1%
Totals for Area of Interest		13.9	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LUA	Laguardia-Urban land complex, 0 to 3 percent slopes	1.1	8.2%
W	Water	3.0	21.7%
Subtotals for Soil Survey Area		4.1	29.9%
Totals for Area of Interest		13.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion

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of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bronx County, New York

LUB—Laguardia-Urban land complex, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2r2yx
Elevation: 0 to 70 feet
Mean annual precipitation: 40 to 52 inches
Mean annual air temperature: 47 to 62 degrees F
Frost-free period: 216 to 234 days
Farmland classification: Not prime farmland

Map Unit Composition

Laguardia and similar soils: 60 percent
Urban land, till substratum: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Laguardia

Setting

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Base slope, side slope, crest, dip, rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear, convex
Parent material: Loamy-skeletal human-transported material

Typical profile

^Au - 0 to 8 inches: cobbly-artifactual coarse sandy loam
^BCu - 8 to 26 inches: very cobbly-artifactual coarse sandy loam
^Cu - 26 to 79 inches: very cobbly-artifactual coarse sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 19 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land, Till Substratum

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Asphalt over human-transported material

Typical profile

M - 0 to 15 inches: cemented material
2^C - 15 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Ebbets

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Base slope, side slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Greenbelt

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Base slope, crest, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Secaucus

Percent of map unit: 1 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: 2qkkp

Elevation: 0 to 310 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 47 to 61 degrees F

Frost-free period: 195 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

New York County, New York

LUA—Laguardia-Urban land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2qf9m
Elevation: 0 to 150 feet
Mean annual precipitation: 40 to 52 inches
Mean annual air temperature: 47 to 62 degrees F
Frost-free period: 216 to 234 days
Farmland classification: Not prime farmland

Map Unit Composition

Laguardia and similar soils: 60 percent
Urban land, till substratum: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Laguardia

Setting

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, base slope, crest, dip, rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear, convex
Parent material: Loamy-skeletal human-transported material

Typical profile

^Au - 0 to 8 inches: cobbly-artifactual coarse sandy loam
^BCu - 8 to 26 inches: very cobbly-artifactual coarse sandy loam
^Cu - 26 to 79 inches: very cobbly-artifactual coarse sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 19 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land, Till Substratum

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Asphalt over human-transported material

Typical profile

M - 0 to 15 inches: cemented material
2^C - 15 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Greenbelt

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Ebbets

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Secaucus

Percent of map unit: 1 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

ULA—Urban land-Laguardia complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2qf9n

Elevation: 0 to 70 feet

Mean annual precipitation: 40 to 52 inches

Mean annual air temperature: 47 to 62 degrees F

Frost-free period: 216 to 234 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land, till substratum: 75 percent

Laguardia and similar soils: 13 percent

Minor components: 12 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land, Till Substratum

Setting

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Asphalt over human-transported material

Typical profile

M - 0 to 15 inches: cemented material

2^C - 15 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Calcium carbonate, maximum content: 10 percent

Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: Unranked

Description of Laguardia

Setting

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Side slope, base slope, crest, dip, rise, talf

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Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear, convex
Parent material: Loamy-skeletal human-transported material

Typical profile

^Au - 0 to 8 inches: cobbly-artifactual coarse sandy loam
^BCu - 8 to 26 inches: very cobbly-artifactual coarse sandy loam
^Cu - 26 to 79 inches: very cobbly-artifactual coarse sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 19 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Minor Components

Greenbelt

Percent of map unit: 5 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talus
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Ebbets

Percent of map unit: 5 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talus
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Secaucus

Percent of map unit: 2 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Dip, talus
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: 2qkkp

Elevation: 0 to 310 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 47 to 61 degrees F

Frost-free period: 195 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Queens County, New York

LUA—Laguardia-Urban land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2qf9m
Elevation: 0 to 150 feet
Mean annual precipitation: 40 to 52 inches
Mean annual air temperature: 47 to 62 degrees F
Frost-free period: 216 to 234 days
Farmland classification: Not prime farmland

Map Unit Composition

Laguardia and similar soils: 60 percent
Urban land, till substratum: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Laguardia

Setting

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, base slope, crest, dip, rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear, convex
Parent material: Loamy-skeletal human-transported material

Typical profile

^Au - 0 to 8 inches: cobbly-artifactual coarse sandy loam
^BCu - 8 to 26 inches: very cobbly-artifactual coarse sandy loam
^Cu - 26 to 79 inches: very cobbly-artifactual coarse sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 19 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land, Till Substratum

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Asphalt over human-transported material

Typical profile

M - 0 to 15 inches: cemented material
2^C - 15 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Greenbelt

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Ebbets

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Secaucus

Percent of map unit: 1 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: 2qkkp

Elevation: 0 to 310 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 47 to 61 degrees F

Frost-free period: 195 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

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United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Bronx County, New York**

P8 Bronx Staging



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other


 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bronx County, New York
Survey Area Data: Version 12, Sep 10, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 12, 2020—Nov 4, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LUB	Laguardia-Urban land complex, 3 to 8 percent slopes	3.0	100.0%
W	Water	0.0	0.0%
Totals for Area of Interest		3.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bronx County, New York

LUB—Laguardia-Urban land complex, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2r2yx
Elevation: 0 to 70 feet
Mean annual precipitation: 40 to 52 inches
Mean annual air temperature: 47 to 62 degrees F
Frost-free period: 216 to 234 days
Farmland classification: Not prime farmland

Map Unit Composition

Laguardia and similar soils: 60 percent
Urban land, till substratum: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Laguardia

Setting

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Base slope, side slope, crest, dip, rise, tal
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear, convex
Parent material: Loamy-skeletal human-transported material

Typical profile

^Au - 0 to 8 inches: cobbly-artifactual coarse sandy loam
^BCu - 8 to 26 inches: very cobbly-artifactual coarse sandy loam
^Cu - 26 to 79 inches: very cobbly-artifactual coarse sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 19 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land, Till Substratum

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Asphalt over human-transported material

Typical profile

M - 0 to 15 inches: cemented material
2^C - 15 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Ebbets

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Base slope, side slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Greenbelt

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Base slope, crest, side slope, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Secaucus

Percent of map unit: 1 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: 2qkkp

Elevation: 0 to 310 feet

Mean annual precipitation: 40 to 50 inches

Mean annual air temperature: 47 to 61 degrees F

Frost-free period: 195 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

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agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Queens County, New York**

P8 Laydown Yaard



April 24, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Queens County, New York
Survey Area Data: Version 13, Sep 10, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 12, 2020—Nov 4, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LUA	Laguardia-Urban land complex, 0 to 3 percent slopes	2.1	100.0%
Totals for Area of Interest		2.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Queens County, New York

LUA—Laguardia-Urban land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2qf9m
Elevation: 0 to 150 feet
Mean annual precipitation: 40 to 52 inches
Mean annual air temperature: 47 to 62 degrees F
Frost-free period: 216 to 234 days
Farmland classification: Not prime farmland

Map Unit Composition

Laguardia and similar soils: 60 percent
Urban land, till substratum: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Laguardia

Setting

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, base slope, crest, dip, rise, talf
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, linear, convex
Parent material: Loamy-skeletal human-transported material

Typical profile

^Au - 0 to 8 inches: cobbly-artifactual coarse sandy loam
^BCu - 8 to 26 inches: very cobbly-artifactual coarse sandy loam
^Cu - 26 to 79 inches: very cobbly-artifactual coarse sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.01 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 19 percent
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F149BY100NY - Urban Site Complex
Hydric soil rating: No

Description of Urban Land, Till Substratum

Setting

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Asphalt over human-transported material

Typical profile

M - 0 to 15 inches: cemented material
2^C - 15 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Minor Components

Greenbelt

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Ebbets

Percent of map unit: 7 percent
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, base slope, crest, talf
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Secaucus

Percent of map unit: 1 percent
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

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Appendix I - Copy of the NYS Construction General Permit



Department of
Environmental
Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

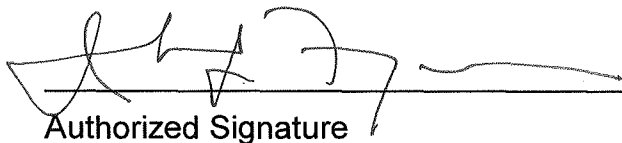
Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator



Authorized Signature

1-23-20
Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (“CWA”), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System (“NPDES”)* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of “*construction activity*”, as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM
CONSTRUCTION ACTIVITIES**

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) 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; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

- a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:
- (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;
 - (ii) Control stormwater *discharges*, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;
 - (iii) *Minimize* the amount of soil exposed during *construction activity*;
 - (iv) *Minimize* the disturbance of *steep slopes*;
 - (v) *Minimize* sediment *discharges* from the site;
 - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;
 - (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
 - (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
 - (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

- c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.
- d. **Pollution Prevention Measures.** Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
 - (i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;
 - (ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and
 - (iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.
- e. **Prohibited Discharges.** The following *discharges* are prohibited:
 - (i) Wastewater from washout of concrete;
 - (ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

- (iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;
 - (iv) Soaps or solvents used in vehicle and equipment washing; and
 - (v) Toxic or hazardous substances from a spill or other release.
- f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual (“Design Manual”), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices (“SMPs”) are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

- (i) Runoff Reduction Volume (“RRv”): Reduce the total Water Quality Volume (“WQv”) by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (“Cpv”): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site discharges directly to tidal waters, or fifth order or larger streams.
- (iv) *Overbank* Flood Control Criteria (“Qp”): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (“Qf”): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watershed

- (i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

- (ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site *discharges* directly to tidal waters, or fifth order or larger streams.
- (iv) Overbank Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

- (i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.
 - (1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
 - (2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or
 - (3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
 - (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

- (ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iii) Overbank Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity* to *surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.
2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.
3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: “Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned”; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharges* after *construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
4. *Construction activities* or *discharges* from *construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
6. *Construction activities* for residential, commercial and institutional projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.
7. *Construction activities* for linear transportation projects and linear utility projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:
- a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.
 - 1-5 acres of disturbance - 20 feet
 - 5-20 acres of disturbance - 50 feet
 - 20+ acres of disturbance - 100 feet, or
 - b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
 - (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
 - (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
 - (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
 - (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or
 - c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

- (i) No Affect
- (ii) No Adverse Affect
- (iii) Executed Memorandum of Agreement, or

d. Documentation that:

- (i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharges from construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.
2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.
3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of Owner or Operator) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4*. This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (<http://www.dec.ny.gov/>). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

**NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505**

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.
3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.
4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.
2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:
 - a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (<http://www.dec.ny.gov/>) for more information,
 - b. where required, all necessary Department permits subject to the *Uniform Procedures Act* ("UPA") (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators of construction activities* that are required to obtain UPA permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

- c. the final SWPPP has been prepared, and
 - d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.
3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:
- a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or
 - (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;
 - (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

- b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed “MS4 SWPPP Acceptance” form, or
 - (ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed “MS4 SWPPP Acceptance” form.
- 4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

- 1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (“NOT”) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.
- 2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor’s or subcontractor’s certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.
- 3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity). At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

- a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.
 - c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
 - d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.
 - e. The *owner or operator* shall include the requirements above in their SWPPP.
4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..
 5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
 6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of a *construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4*, the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.
3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.
2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:
 - a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

- b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority; and
 - d. to document the final construction conditions.
5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.
6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
 - a. Background information about the scope of the project, including the location, type and size of project

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge(s)*;
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

- j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
 - k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
 - l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

The post-construction stormwater management practice component of the SWPPP shall include the following:

- a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
- c. A Stormwater Modeling and Analysis Report that includes:
 - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;
 - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;
 - (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;
 - (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;
 - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and
 - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria*, Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators of construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators of the construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
 - Certified Professional in Erosion and Sediment Control (CPESC),
 - New York State Erosion and Sediment Control Certificate Program holder
 - Registered Landscape Architect, or
 - someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:
 - a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
 - c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and
 - d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
- a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.
 - b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice*” certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.
 - e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
 4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

- a. Date and time of inspection;
- b. Name and title of person(s) performing inspection;
- c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
- f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
- h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
- i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);
- k. Identification and status of all corrective actions that were required by previous inspection; and

- I. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.
2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:
 - a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

- b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;
 - c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.
 - d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.
3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the “*Final Stabilization*” and “Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.
4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the “MS4 Acceptance” statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) required in Part V.A.3. of this permit.
5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:
- a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator*, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:
 - a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (i) the chief executive officer of the agency, or
 - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

- c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge(s)*, the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.
4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
Cpv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - Environmental Conservation Law
EPA – U. S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State” prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for “*Commence (Commencement of) Construction Activities*” and “*Larger Common Plan of Development or Sale*” also.

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment – means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department’s rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a *combined sewer*; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer – means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the “Required Elements” sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank Flood* (Qp), and *Extreme Flood* (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls

<p>The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:</p> <ul style="list-style-type: none">• Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not directly discharging</u> to one of the 303(d) segments listed in Appendix E• Single family residential subdivisions with 25% or less impervious cover at total site build-out and <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E• Construction of a barn or other <i>agricultural building</i>, silo, stock yard or pen.
<p>The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:</p> <p>All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.</p>
<p>The following construction activities that involve soil disturbances of one (1) or more acres of land:</p> <ul style="list-style-type: none">• Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains• Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects• Pond construction• Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover• Cross-country ski trails and walking/hiking trails• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.• Slope stabilization projects• Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

**Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State", excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development conditions*
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual (“Design Manual”).

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

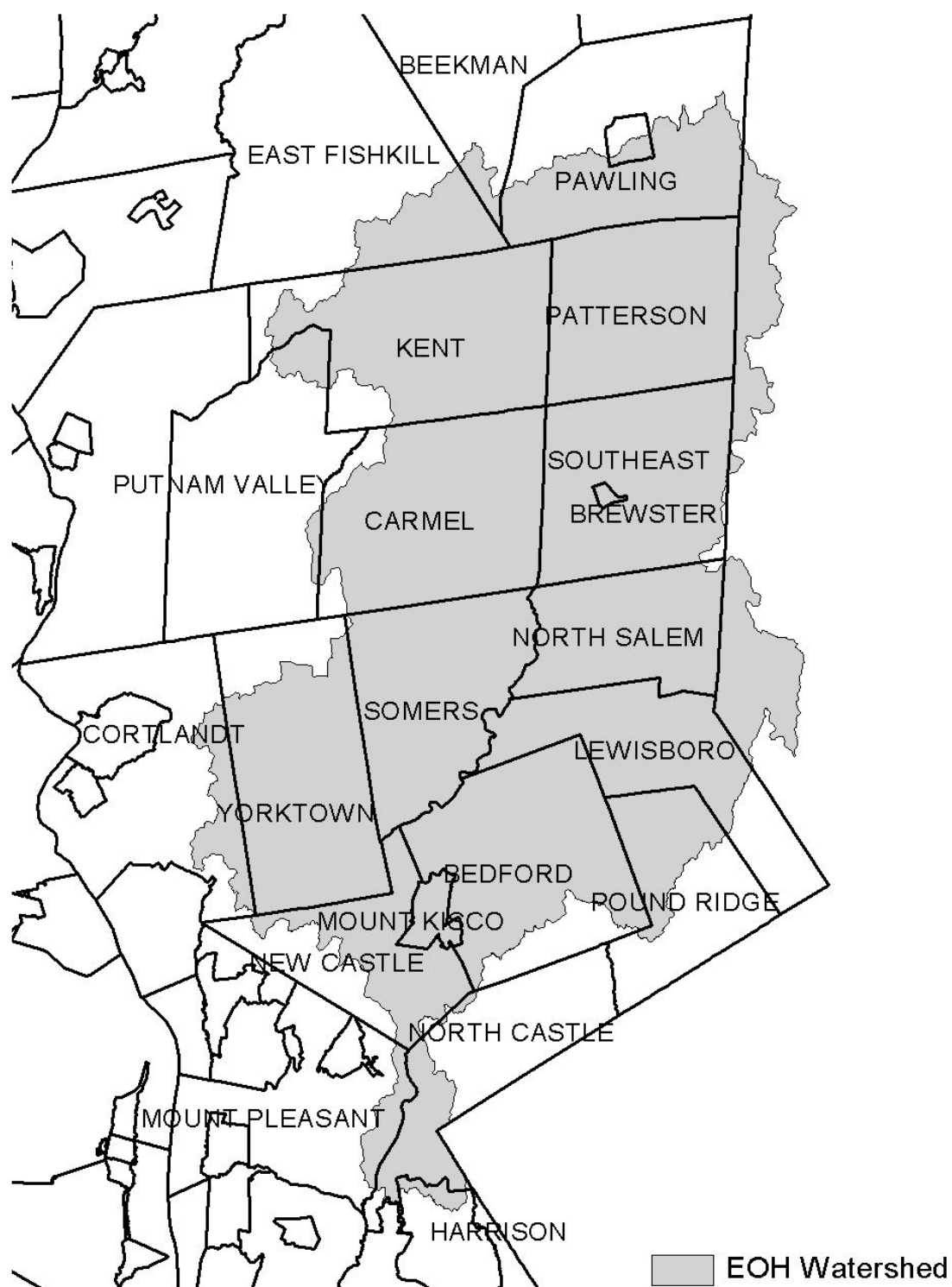
Figure 1 - New York City Watershed East of the Hudson

Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

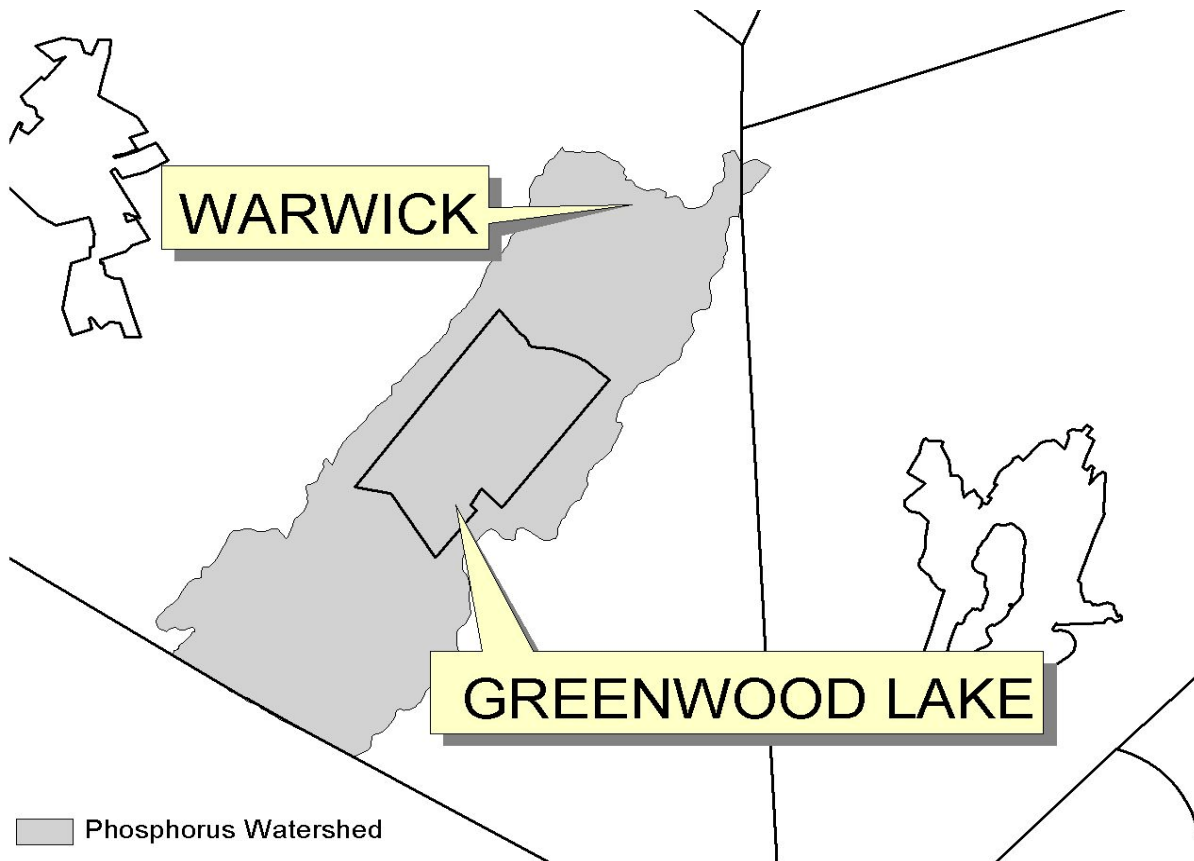


Figure 4 - Oscawana Lake Watershed

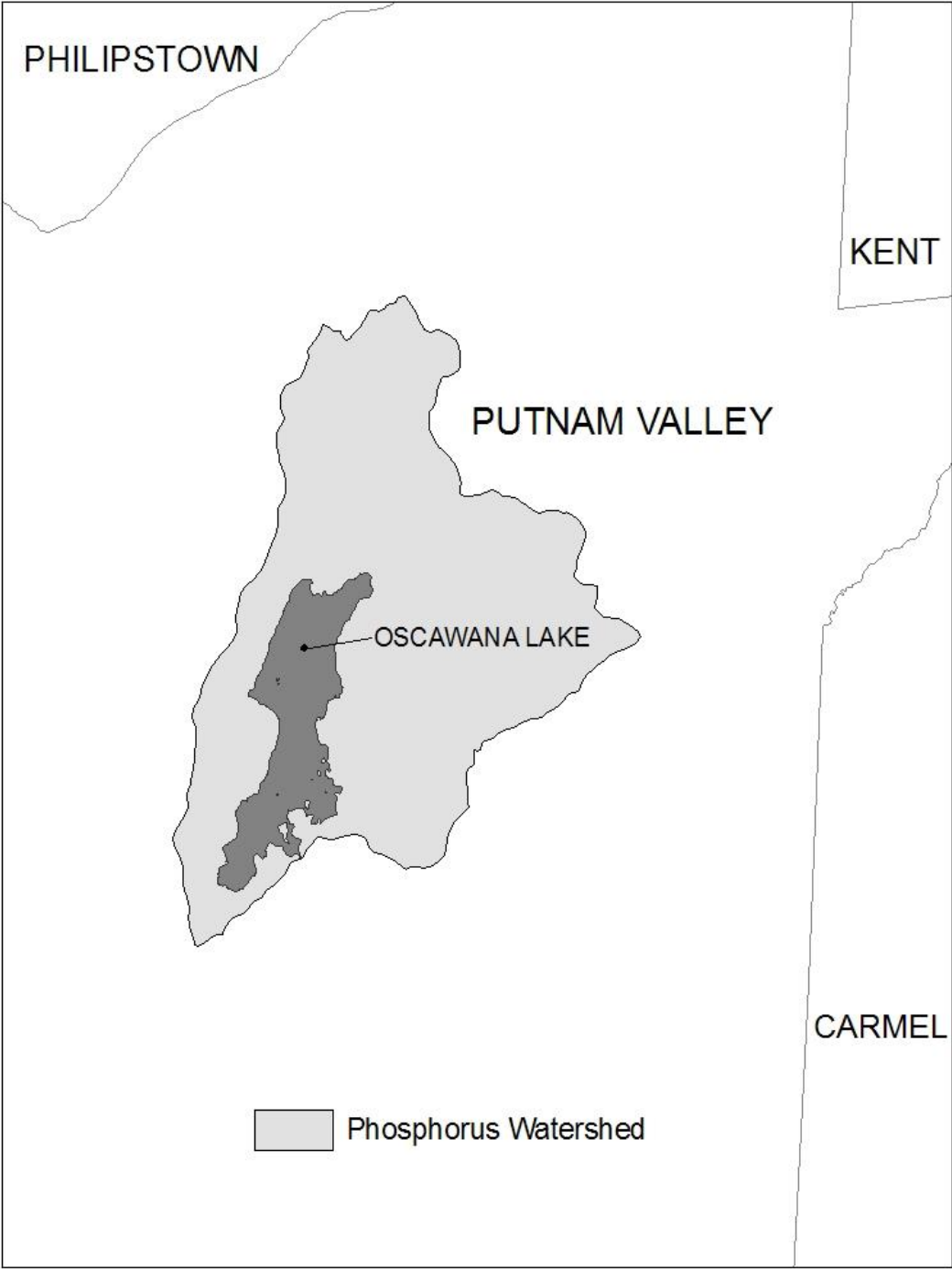
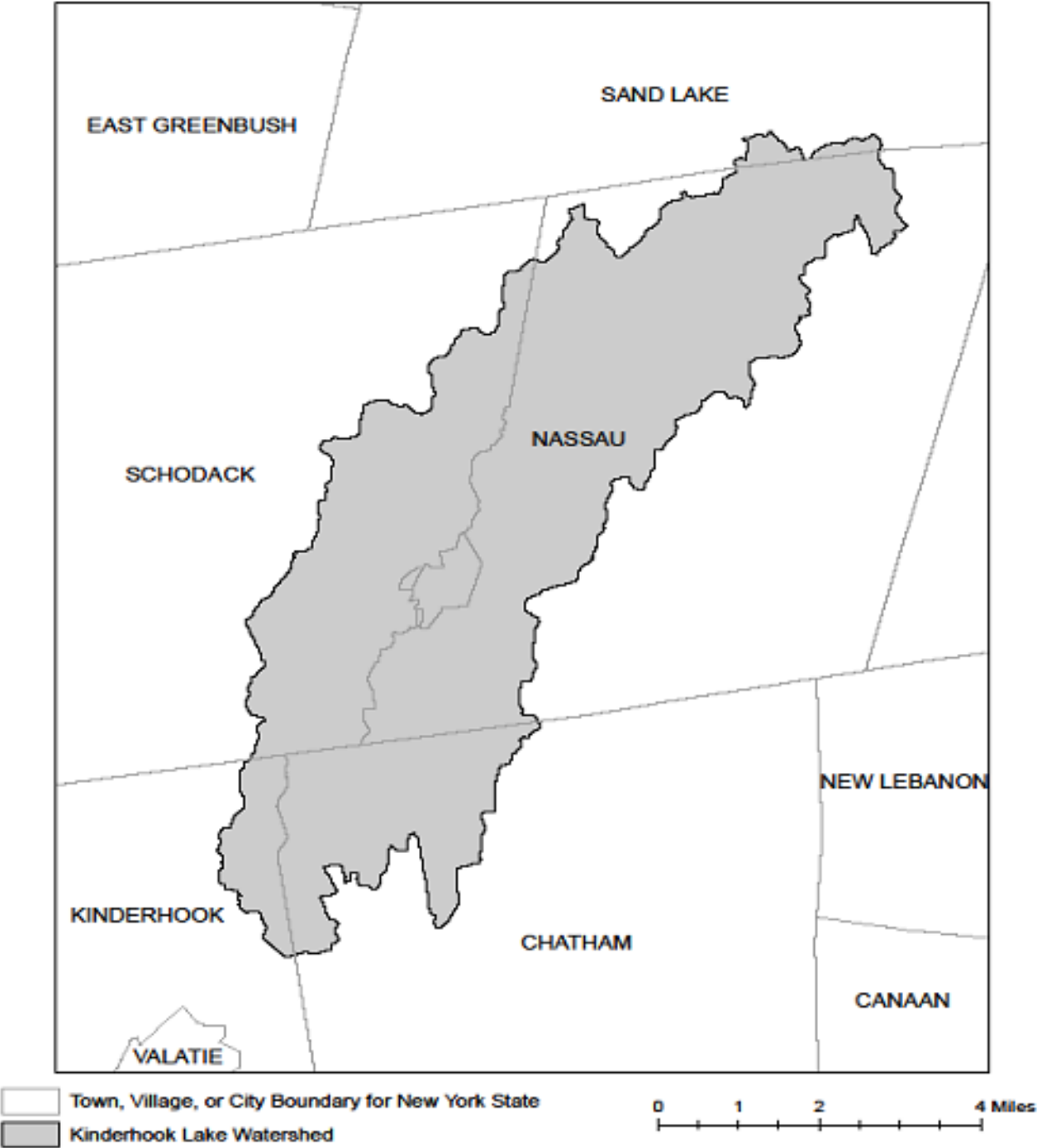


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

Appendix J – Required Drawings

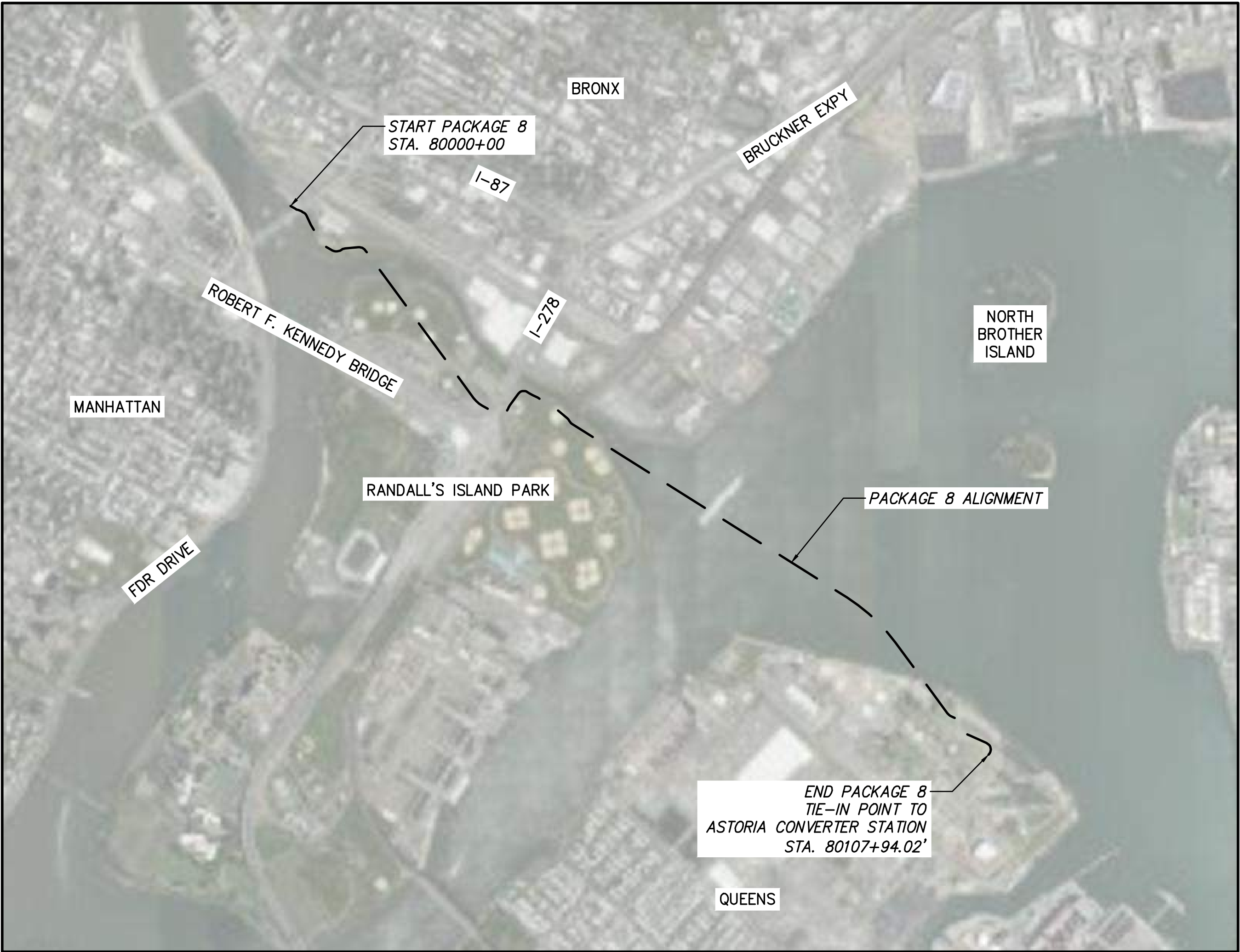
CHAMPLAIN HUDSON POWER EXPRESS

SEGMENTS 13 TO 15 - PACKAGE 8 - TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

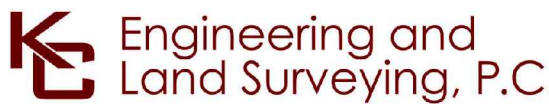
BRONX, NEW YORK AND QUEENS COUNTY, NEW YORK

ISSUED FOR CONSTRUCTION SUBMISSION

JULY 31, 2023



SITE LOCATION MAP
SCALE: 1" = 1000'



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0	07/31/2023	ISSUED FOR CONSTRUCTION SUBMISSION	MK	CV	
No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP	

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

COVER SHEET

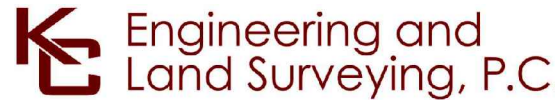
DRAWN BY: MK DESIGNED BY: MK APPROVED BY: CV
SCALE AS SHOWN
REV. NO. 0

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	G-000
DATE	07/31/2023
SH.NO.	1 OF

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SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
PACKAGE 8: GENERAL SHEETS	
G-000	COVER SHEET
G-001	SHEET INDEX
G-002	PROJECT WIDE GENERAL NOTES 01
G-003	PACKAGE 8 SPECIFIC GENERAL NOTES
G-004	PACKAGE 8 SPECIFIC RESTORATION NOTES
G-005	LEGEND & ABBREVIATIONS
G-006	PLAN AND PROFILE KEY MAP & SPLICE LOCATION TABLE
G-007	EM&CP DATA TABLES 01
G-008	EM&CP DATA TABLES 02
PACKAGE 8: PLAN AND PROFILE SHEETS	
C-101	STA. 80000+00 TO STA. 80013+00 PLAN AND PROFILE
C-102	STA. 80013+00 TO STA. 80028+00 PLAN AND PROFILE
C-103	STA. 80028+00 TO STA. 80038+00 PLAN AND PROFILE
C-104	STA. 80038+00 TO STA. 80053+00 PLAN AND PROFILE
C-105	STA. 80053+00 TO STA. 80067+00 PLAN AND PROFILE
C-106	STA. 80067+00 TO STA. 80081+00 PLAN AND PROFILE
C-107	STA. 80081+00 TO STA. 80095+00 PLAN AND PROFILE
C-108	STA. 80095+00 TO STA. 80107+94 PLAN AND PROFILE
PACKAGE 8: ACCESS AND CONSTRUCTION STAGING PLANS	
C-201	STAGING AND WORK AREA – BRONX
C-202	STAGING AND WORK AREA – ASTORIA
C-203	HDD 135 PIPE LAYDOWN AREA – RANDALL’S ISLAND
C-204	SPLICE VAULT 265 LOCATION – OUTSIDE OF RECREATION PERIOD
C-205	SPLICE VAULT 265 LOCATION – DURING RECREATION PERIOD
PACKAGE 8: HDD TRENCHLESS PLANS	
C-301	HDD #134 CROSSING, CONDUIT 1
C-302	HDD #134 CROSSING, CONDUIT 1
C-303	HDD #134 CROSSING, CONDUIT 2
C-304	HDD #134 CROSSING, CONDUIT 2
C-305	HDD #135 CROSSING, CONDUIT 1
C-306	HDD #135 CROSSING, CONDUIT 1
C-307	HDD #135 CROSSING, CONDUIT 1
C-308	HDD #135 CROSSING, CONDUIT 1
C-309	HDD #135 CROSSING, CONDUIT 2
C-310	HDD #135 CROSSING, CONDUIT 2
C-311	HDD #135 CROSSING, CONDUIT 2
C-312	HDD #135 CROSSING, CONDUIT 2
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C-400	E&SC KEY SHEET
C-401	STA. 80000+00 TO STA. 80013+00
C-402	STA. 80027+00 TO STA. 80038+00
C-403	STA. 80038+00 TO STA. 80053+50
C-404	STA. 80094+00 TO STA. 80107+94
PACKAGE 8: MAINTENANCE AND PROTECTION OF TRAFFIC PLANS	
C-501	WORK ZONE TRAFFIC CONTROL NOTES, LEGEND AND ABBREVIATIONS
C-502	WORK ZONE TRAFFIC CONTROL PLAN 01 – BRONX
C-503	WORK ZONE TRAFFIC CONTROL PLAN 02 – RANDALL’S ISLAND
C-504	WORK ZONE TRAFFIC CONTROL PLAN 02 – RANDALL’S ISLAND PROFILE AND SECTION VIEW
C-505	WORK ZONE TRAFFIC CONTROL PLAN 03 – RANDALL’S ISLAND, OUTSIDE OF RECREATION PERIOD
C-506	WORK ZONE TRAFFIC CONTROL PLAN 03 – RANDALL’S ISLAND, PEAK RECREATION PERIOD
C-507	WORK ZONE TRAFFIC CONTROL PLAN 04 – ASTORIA

PACKAGE 8: CIVIL DETAILS: ESC DETAILS	
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C-602	EROSION AND SEDIMENT CONTROL DETAILS
C-603	EROSION AND SEDIMENT CONTROL DETAILS
C-604	EROSION AND SEDIMENT CONTROL DETAILS
C-613	WETLAND WORKING SURFACE
PACKAGE 8: CIVIL DETAILS: CONSTRUCTION AND INSTALLATION DETAILS	
C-621	TRENCHING DETAILS
C-622	DETAILS
PACKAGE 8: CIVIL DETAILS: RESTORATION DETAILS	
C-631	SURFACE RESTORATION DETAILS
PACKAGE 8: STRUCTURAL DETAILS	
S-700	SPLICE VAULT PLAN AND ELEVATION
S-701	SPLICE VAULT SECTION AND DETAILS
S-702	SPLICE VAULT ANCHOR AND EMBED DETAILS
S-703	SPLICE VAULT DETAILS
S-705	STRUCTURAL GENERAL NOTES AND ABBREVIATIONS
S-720	REINFORCING TRAY STRUCTURE DETAILS I
S-721	REINFORCING TRAY STRUCTURE DETAILS II
S-730	TRANSITION VAULT PLAN AND ELEVATION
S-731	TRANSITION VAULT SECTION AND DETAILS
S-732	TRANSITION VAULT ANCHOR AND EMBED DETAILS
S-733	TRANSITION VAULT DETAILS
PACKAGE 8: ELECTRICAL DETAILS	
C-801	ABOVE GROUND MARKING DETAILS
C-802	TYPICAL VAULT SNAKING DETAILS
C-803	TYPICAL VAULT GROUNDING DETAILS
C-805	TYPICAL TRANSITION VAULT SNAKING DETAILS
C-806	TRANSITION VAULT GROUNDING DETAILS
C-807	SPLICE VAULT AND CABLE MARKING DETAILS
C-812	VAULT CONNECTION DETAILS
PACKAGE 8: COMMUNICATIONS DETAILS	
C-850	TRANSITION VAULT FIBER OPTIC DETAIL
C-852	ENCLOSED VAULT W/ FIBER OPTICS
C-855	FIBER OPTIC SPLICE DIAGRAM
C-856	FIBER OPTIC SLACK ENCLOSURE DETAIL
PACKAGE 8: OTHER DETAILS	
C-901	TYPICAL UTILITY SEPARATION DETAILS



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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENTS 13 TO 15 - PACKAGE 8

TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

SHEET INDEX

KIEWIT PROJECT NO.	
21162	
KC PROJECT NO.	
120174	
DRAWING NO.	
G-001	

DRAWN BY: MK		DESIGNED BY: MK		APPROVED BY: CV		SCALE	AS SHOWN	DATE
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GENERAL NOTES:

- THE PLANS SHOW SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES FROM FIELD LOCATION AND RECORD MAPPING, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE DIFFERENT FROM THAT SHOWN OR MAY NOT BE SHOWN, AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL, OR BLAST, CALL U.F.P.O. 1-(800)-962-7962 TOLL FREE.
- THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE ENGINEER. CHANGES TO THE PLAN SHALL BE DONE IN ACCORDANCE WITH THE EM&CP SECTION 3.2.6.
- THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD A CONDITION AS BEFORE BEING DISTURBED AS DETERMINED BY THE ENGINEER.
- THE CONTRACTOR AND/OR CERTIFICATE HOLDER SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL CONSTRUCTION PERMITS, INSPECTIONS, CERTIFICATES, ETC. AND SHALL COMPLY WITH ALL REQUIRED PERMITS.
- ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS.
- ALL PROPOSED UTILITIES AND APPURTENANCES TO BE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL MUNICIPALITIES' CODES AND REGULATIONS GOVERNING THE INSTALLATION OF SUCH UTILITIES.
- THE ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT.
- THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW YORK STATE LICENSED LAND SURVEYOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS.
- THE CONTRACTOR SHALL:
 - VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - EXAMINE THE SITE AND INCLUDE IN HIS WORK THE EFFECT OF ALL EXISTING CONDITIONS ON THE WORK.
 - PROVIDE AND INSTALL ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH RECOGNIZED GOOD STANDARD PRACTICE.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISIONS OF NEW YORK STATE INDUSTRIAL CODE RULE 23 AND OSHA REGULATIONS FOR CONSTRUCTION. SHEET PILING SHALL BE DESIGNED AND SEALED BY A NEW YORK STATE PROFESSIONAL ENGINEER. WHERE WITHIN RAIL ROAD ROW, ANY EXCAVATION AND SHORING SHALL BE DESIGNED TO MINIMUM CSX AND AREMA REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK IN CONFORMANCE WITH REFERENCE SECTION 4.4.6 DEWATERING METHODS IN THE EM&CP. CONTRACTOR SHALL MAINTAIN EXISTING SITE DRAINAGE PATTERNS THROUGHOUT CONSTRUCTION UNLESS OTHERWISE SHOWN ON THE PLANS.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
- ALL FRAMES/COVERS WITHIN PAVED AREAS SHALL HAVE THE TOPS SET FLUSH WITH THE EXISTING PAVEMENT GRADE. IN LANDSCAPED AREAS, ALL FRAMES SHALL BE 0.1' ABOVE GRADE.
- TEMPORARY PAVEMENT SHALL BE PLACED WITHIN 48 HOURS OF COMPLETION OF BACKFILL OPERATIONS WITHIN THE EXISTING PAVEMENT LIMITS.
- CONTRACTOR SHALL MAINTAIN ALL TRAFFIC IN ALL AREAS IN ACCORDANCE WITH THE NYSDOT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL EXCAVATIONS SHALL BE PROTECTED AT THE END OF EACH WORK DAY PER OSHA AND NYSDOT REQUIREMENTS.
- WITHIN NYSDOT ROW AND TOWN/COUNTY ROADS, ALL OPEN EXCAVATIONS TO BE PROTECTED BY CONCRETE BARRIERS OR BE COVERED BY A STEEL PLATE, 3/4" THICK MINIMUM. A SINGLE PLATE SHOULD COVER THE ENTIRE EXCAVATION AND HAVE ENOUGH BEARING ON SURROUNDING SURFACES TO SUPPORT A VEHICLE.
- CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO EXISTING UTILITIES. UTILITIES DAMAGED BY CONTRACTOR SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE. IF DURING EXCAVATION PREVIOUSLY DAMAGED UTILITIES ARE UNCOVERED, CONTRACTOR SHALL DOCUMENT THE DAMAGE AND REPORT DAMAGE TO THE APPROPRIATE OWNER.
- DEPTH OF BURY FOR EXISTING CABLED UTILITIES FIBER / ELECTRICAL / TELECOM AND WATERLINES UNKNOWN. ASSUMED DEPTH OF BURY FOR CABLED UTILITIES IS 30" UNLESS OTHERWISE SHOWN. ASSUMED DEPTH OF BURY FOR WATERLINES IS 5' UNLESS OTHERWISE SHOWN.
- CONTRACTOR TO COORDINATE ALL DRIVEWAY CROSSINGS WITH THE PROPERTY OWNERS PRIOR TO EXCAVATING. ACCESS TO ALL DRIVEWAYS FOR THE RESIDENTS AND COMMERCIAL PROSPERITIES, WILL NEED TO BE MAINTAINED DURING THE PROJECT. ALL EXCAVATIONS IN THE ENTRANCES/DRIVEWAYS WILL NEED TO BE BACKFILLED AT THE END OF EACH WORKDAY, OR STEEL PLATES SHALL BE INSTALLED TO ALLOW ACCESS DURING CONSTRUCTION. REFER TO THE EM&CP FOR EMERGENCY ACCESS MANAGEMENT PLAN.
- ALL WORK WITHIN AGRICULTURAL LANDS WILL BE PERFORMED IN COMPLIANCE WITH APPLICABLE NEW YORK STATE DEPARTMENT OF AGRICULTURE AND MARKETS (NYSDEM) GUIDANCE INCLUDING "NYSDEM GUIDELINES FOR CONSTRUCTION MITIGATIONS FOR AGRICULTURAL LANDS IN AGRICULTURAL AREAS". RESTORATION WORK WILL FOLLOW APPLICABLE SECTIONS OF NYSDEM GUIDANCE "FERTILIZING LIME, AND SEEDING RECOMMENDATIONS FOR RESTORATION OF CONSTRUCTION PROJECTS ON FARMLAND IN NYS".
- WORKING IN WETLANDS: IN GENERAL, STOCKPILING IN WETLANDS AND GRADING WETLAND SOILS FOR ANY ROADS, WORK AREAS, OR PADS IS PROHIBITED. IN ORDER TO ACHIEVE DESIGN GRADES FOR CONSTRUCTION OPERATIONS, EITHER 1) TIMBER MATTING WILL BE LAYERED (STACKED), OR 2) TOPSOIL WILL BE STRIPPED AND STOCKPILED OUTSIDE OF WETLAND AREAS, GEOTEXTILE FABRIC WILL BE PLACED UNDER FILL PER EM&CP REQUIREMENTS AND APPROVED DETAILS. THE CONTOURS SHOWN WITHIN WETLAND AREAS IN THESE PLANS DEPICT THE DIFFERENCE BETWEEN EXISTING AND PROPOSED ELEVATIONS AND ARE NOT INTENDED TO REPRESENT STOCKPILING IN WETLANDS OR GRADING EXISTING WETLAND SOILS. FOR SPECIFIC REQUIREMENTS FOR WORKING IN WETLAND AREAS INCLUDING REQUIREMENTS FOR EXCAVATION AND STOCKPILING, REFER TO EM&CP SECTION 4.4.3 AND 9.1.2.
- AS CONSTRUCTION, OPERATIONAL, AND SAFETY REQUIREMENTS ALLOW, THE CONTRACTOR HAS THE OPTION TO REDUCE IMPACTS (INCLUDING WITHIN WETLAND AREAS) BY 1) REDUCING THE AREA OF TIMBER MATTING, WORK AREAS, OR ACCESS ROADS DEPICTED IN THESE PLANS, AND 2) INCREASING THE LONGITUDINAL AND TRANSVERSE SLOPES OF ROADS AND WORK AREAS.
- SERVICE CONNECTIONS TO BE FIELD LOCATED PRIOR TO CONSTRUCTION.
- FENCES IMPACTED BY CONSTRUCTION WILL BE REPLACED IN KIND. IF A DIFFERENT AGREEMENT IS REACHED WITH THE FENCE OWNER, DPS WILL BE INFORMED.

EROSION CONTROL NOTES:

- SEE C-400 SERIES OF SHEETS FOR EROSION AND SEDIMENT CONTROL SHEETS.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
- THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE EM&CP DOCUMENTS DURING CONSTRUCTION OPERATIONS.
- NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. (WETLAND PROTECTION FENCE, SILT FENCE, COMPOST FILTER SOCK, AND STABILIZED CONSTRUCTION ENTRANCE)
- SITE DISTURBANCE SHALL NOT EXCEED FIVE (5) ACRES OF SOIL AT ANY ONE TIME WITHOUT PRIOR WRITTEN AUTHORIZATION FROM NYSDEC DIVISION OF WATER.
- ALL EXPOSED AREAS SHALL BE SEEDED AND MULCHED AS SPECIFIED WITHIN 14 DAYS OF FINAL GRADING. "IN AREAS WHERE SOIL DISTURBANCE ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED."
- INACTIVE PORTIONS OF THE SITE ARE TO BE SEEDED AND MULCHED AS SPECIFIED WITHIN 14 DAYS. "FOR DISTURBED WETLAND AND SENSITIVE AREAS, AREA TO BE RESTORED IN ACCORDANCE WITH THE EM&CP".
- AREAS TO BE SEEDED MUST BE FREE OF LARGE ROCKS AND DEBRIS, AND SEEDED WITHIN 24 HOURS OF DISTURBANCE, OR SCARIFICATION OF THE SOIL SURFACE WILL BE NECESSARY PRIOR TO SEEDING.
- MULCH SHALL BE APPLIED IN CONJUNCTION WITH SEEDING AND APPLIED AT THE RATE OF 90 LBS PER 1000 SQUARE FEET. MULCH SHALL BE REAPPLIED AS NECESSARY.
- SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) DAYS OR MORE FREQUENTLY IF REQUIRED. ALL MAINTENANCE REQUIRED BY INSPECTION SHALL COMMENCE WITHIN 24 HOURS AND BE COMPLETED WITHIN 48 HOURS OF REPORT.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
- CONSTRUCTION ROAD STABILIZATION SHALL FOLLOW THE NEW YORK STATE STANDARDS FOR EROSION AND SEDIMENT CONTROL ("BLUE BOOK"), PAGE 2.23. CONSTRUCTION ROADS SHALL BE LOCATED TO REDUCE EROSION POTENTIAL, MINIMIZE IMPACT ON EXISTING SITE RESOURCES, AND MAINTAIN OPERATIONS IN A SAFE MANNER.
- GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY FOLLOWING SITE INSPECTION. THE SWPPP AND/OR ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES IF THE INSPECTOR DEEMS NECESSARY.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
- AT THE END OF EACH WORK DAY DISTURBED SOILS ARE TO BE REGRADED TO DRAIN INTO THE TEMPORARY DIVERSION SWALES AND DISCHARGES FROM DEWATERING ACTIVITIES ARE TO BE DIRECTED TO A VEGETATED AREA. WATER WILL BE PUMPED FROM DEWATERING OPERATIONS INTO PORTABLE SEDIMENT TANKS OR COMMERCIAL SEDIMENT FILTER BAGS TO SETTLE SUSPENDED SILT MATERIAL PRIOR TO DISCHARGE. DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO STATE AND/OR FEDERALLY REGULATED STREAMS AND STORMWATER SYSTEMS WILL BE AVOIDED.
- ONCE THE CONSTRUCTION ACTIVITIES ARE COMPLETE, ALL DISTURBED VEGETATED AREAS SHALL BE TOPSOILED, SEEDED, AND STABILIZED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. EROSION CONTROL DEVICES WILL REMAIN IN PLACE UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED. SOIL STABILIZATION MEASURES SHALL CONFORM WITH THE MOST CURRENT VERSION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL ("BLUE BOOK"). PERMANENT SEED MIX WILL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- CONCRETE WASHOUTS DEPICTED ON PLANS ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD LOCATE WASHOUTS AS NECESSARY. FIELD LOCATED WASHOUTS SHALL BE LOCATED CONSTRUCTED IN ACCORDANCE WITH THE EM&CP AND SHALL BE A MINIMUM OF 100' FROM ADJACENT WETLANDS AND 200' FROM ANY EXISTING WELLS.
- FOR SITES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY CEASE IN THE WINTER, TEMPORARY AND PERMANENT SOIL STABILIZATION MEASURES WILL BE INSTALLED WITHIN 7 DAYS FROM THE DATE THE SOIL DISTURBING ACTIVITY CEASED. IF THE GROUND IS COVERED BY SIGNIFICANT AMOUNTS OF SNOW, WINTER RYE SHOULD BE USED FOR STABILIZATION (90-LBS PER ACRE).
- MEASURES USED FOR DUST CONTROL SHALL FOLLOW THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL ("BLUE BOOK") FOR DUST CONTROL, PAGE 2.25. ONLY PLAIN WATER WILL BE USED FOR DUST SUPPRESSION.

HDD PLAN & PROFILE NOTES:

- UNLESS NOTED OTHERWISE ON C-300 SERIES HDD PLAN AND PROFILES, EACH SITE INCLUDES TWO HDD BORES. BOTH BORES INCLUDE A 10" DIAMETER HDPE OR 8" FPVC CONDUIT FOR A HVDC ELECTRICAL TRANSMISSION CABLE. ONE OF THE BORES WILL ALSO INCLUDE A 3" CONDUIT BUNDLED IN THE PULLBACK BUNDLE FOR A TELECOMMUNICATION LINE.
- MINIMUM HORIZONTAL SPACING BETWEEN CONDUIT 1 AND CONDUIT 2 SHALL BE MAINTAINED AT THE DESIGN LOCATION AND WITHIN SPECIFIED TOLERANCE AS DETERMINED BY ELECTRICAL ENGINEERING ON BEHALF OF THE OWNERS. IN CONSTRUCTION, THE HORIZONTAL SPACING SHALL BE CONTROLLED AND MAINTAINED SUCH THAT THE AS-BUILT SPACING SHALL NEVER BE CLOSER THAN THE SPECIFIED HORIZONTAL SPACING PRESENTED ON THE INDIVIDUAL HDD SHEET.
- MAXIMUM VERTICAL DEPTH OF CONDUIT 1 AND CONDUIT 2 SHALL BE MAINTAINED AT THE DESIGN LOCATION AND WITHIN SPECIFIED TOLERANCE AS DETERMINED BY ELECTRICAL ENGINEERING ON BEHALF OF THE OWNERS.
- HDD CONTRACTOR SHALL COORDINATE WITH OVERHEAD ELECTRIC OWNER/OPERATOR TO HAVE TEMPORARY PROTECTIVE SLEEVES INSTALLED ON OVERHEAD POWER LINES THAT CROSS THE ACCESS OR WORKING AREA OF THE WORK SITE.
- SPT N-VALUES SHOWN ON THE C-300 SERIES DRAWINGS ARE NOT CORRECTED FOR SAMPLER SIZE OR HAMMER ENERGY. REFERENCE BORING LOGS AND GEOTECHNICAL REPORTS FOR ADDITIONAL INFORMATION.
- HDD ENTRY PITS ARE SUBJECT TO RELOCATION WITHIN 5-FEET OF DESIGNED ENTRY POINT ON PLANS AND REMAIN WITHIN THE CONFINES OF THE SPECIFIED HDD WORK AREA.
- HDD EXIT PITS ARE SUBJECT TO RELOCATION WITHIN 10-FEET OF DESIGNED EXIT POINT ON PLANS AND REMAIN WITHIN THE CONFINES OF THE SPECIFIED HDD WORK AREA.
- HDD CONDUIT PIPE ASSEMBLY AND PULLBACK DIRECTION ARE SUBJECT TO CHANGE.
- ALL BURIED UTILITY DEPTHS ARE APPROXIMATE. PRIOR TO ANY HDD CONSTRUCTION, EXCAVATION, EXPLORATORY BORING, OR UTILITY LOCATE EXCAVATION, CONTRACTOR MUST CONTACT 811, OBTAIN A PERMIT, MAINTAIN THE PERMIT CURRENT UNTIL CONTRACTOR WORK TASK HAS BEEN COMPLETED AND ABIDE BY ALL STATE EXCAVATION REQUIREMENTS. REPORT ALL CONFLICTING UTILITIES THAT REQUIRE MODIFICATION TO THE HDD DESIGN TO THE ENGINEER WITHIN 12 HOURS OF THE DISCOVERY.
- THE MINIMUM SEPARATION DISTANCE FROM THE CLOSEST PROXIMITY OF ANY EXISTING SUBSURFACE UTILITY SHALL NOT BE LESS THAN 120 INCHES AS MEASURED FROM THE OUTSIDE EDGE OF THE UTILITY TO THE OUTSIDE EDGE OF THE FULLY CONSTRUCTED HDD BORE PATH UNLESS GREATER SEPARATION IS SHOWN ON THE C-300 SERIES DRAWINGS.
- ALL COORDINATES REFERENCE NEW YORK STATE PLANE FOR THE APPROPRIATE ZONE AND ELEVATIONS REFERENCE NAD83. MEASUREMENTS ARE IN FEET.
- SITE BOUNDRIES, ENVIRONMENTAL BARRIER LOCATION, AND ENTRY & EXIT LOCATIONS SHALL BE STAKED FOR THE HDD DRILLING TEAM TO REFERENCE DURING CONSTRUCTION.
- HDD CONTRACTOR SHALL PROVIDE AN AS-BUILT PLAN AND PROFILE OF THE PILOT BORE PATH INDICATING COMPLIANCE WITH PROJECT SPECIFICATIONS AND FOR APPROVAL PRIOR TO INITIATING REAMING OPERATIONS. PROVIDE ACTUAL ENTRY & EXIT COORDINATES AND ELEVATIONS ON THE AS-BUILT PLAN.
- HDD CONTRACTOR TO PLACE A MECHANICAL TEMPORARY CAP ON EACH END OF THE INSTALLED CONDUITS THAT WILL BE SUFFICIENT TO PROTECT THE INSTALLATION FROM DAMAGE OR INTRUSION OF WATER OR OTHER DETRITAL MATERIAL INTO THE CONDUITS. DUCT TAPE OR PLASTIC BAGS ARE NOT ACCEPTIBLE AS A MECHANICAL TEMPORARY CAP.

DISTURBANCE NOTES:

- THE PROPOSED DISTURBANCE FOR THE TRENCH WILL BE LIMITED TO THE WIDTH OF THE TRENCH SECTIONS DEPICTED ON C-621 INCLUDING THE OPTION TO BENCH OR SLOPE TRENCH WHERE SPACE IS AVAILABLE AND TRENCH IS NOT LOCATED IN A ROADWAY OR IN PAVEMENT.
- TEMPORARY ACCESS AND WORK AREAS DEPICTED IN THESE PLANS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CHARACTER TO THE EXTENT PRACTICABLE, UNLESS DOING SO WOULD INTERFERE WITH THE SAFE OR RELIABLE OPERATION AND MAINTENANCE OF THE PROJECT. RESTORATION ACTIVITIES MAY VARY WITH THE SPECIFIC AREA TO BE RESTORED BUT WILL CONSIST PREDOMINANTLY OF RESTORING TOPOGRAPHY TO ORIGINAL GRADIENTS AND RESEEDING EXCAVATED AREAS OVER THE TRENCH AS IDENTIFIED IN THE DETAIL SHEETS AND THE EMCP NARRATIVE.



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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CHAMPLAIN HUDSON POWER EXPRESS SEGMENTS 13 TO 15 - PACKAGE 8 TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION PROJECT WIDE GENERAL NOTES 01				KIEWIT PROJECT NO.	
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ADDITIONAL GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN TREE WORK PERMIT AS PER NYCDPR TREE PROTECTION PROTOCOL FOR ALL WORK TO BE PERFORMED ON OR WITHIN 50 FEET OF A TREE UNDER NEW YORK CITY JURISDICTION.
2. ALL EXISTING TREES WHICH ARE WITHIN LIMIT OF WORK AND ARE IMPACTED BY THE PROPOSED WORK SHALL BE REPLACED IN ACCORDANCE WITH APPLICABLE STANDARDS FROM NYCDOT AND NYCDPR.
3. IT IS ASSUMED THAT ALL EXISTING UTILITIES WILL REMAIN IN PLACE AND BE PROTECTED. PROPOSED CONDUIT'S ALIGNMENT SHALL BE DESIGNED TO AVOID EXISTING UTILITY RELOCATIONS.
4. ALL EXISTING LIGHT POLES WHICH ARE WITHIN LIMIT OF WORK AND ARE IMPACTED BY THE PROPOSED WORK SHALL BE REMOVED AND STORED OFF-SITE, AND RE-INSTALLED AT THE CONCLUSION OF THE PROJECT, IN ACCORDANCE WITH APPLICABLE STANDARDS FROM NYCDOT DEPARTMENT OF STREET LIGHTING AND NYCDPR. STADIUM LIGHT POLES ARE TO REMAIN IN PLACE AND BE PROTECTED. STADIUM LIGHT POLES WITHIN THE LOW ARE NOT REQUIRED TO BE REMOVED.
5. ALL EXISTING CURBS WHICH ARE WITHIN LIMIT OF WORK AND ARE IMPACTED BY THE PROPOSED WORK SHALL BE REPLACED IN ACCORDANCE WITH APPLICABLE STANDARDS FROM NYCDOT, NYCDPR AND AS PER THE DETAIL SHOWN ON C-631.
6. ALL EXISTING ROAD SIGNS WHICH ARE WITHIN LIMIT OF WORK AND ARE IMPACTED BY THE PROPOSED WORK SHALL BE REPLACED IN ACCORDANCE WITH THE APPLICABLE STANDARDS FROM NYCDOT AND MUTCD.

UTILITY NOTES

1. THE SUBSURFACE UTILITY INFORMATION SHOWN HERON IS BASED ON A FIELD INVESTIGATION COMPLETED BY BLOODHOUND UTILITY LOCATORS ON JANUARY 26, 2022 AND BY McVAC IN AUGUST 2022.
2. THE SUBSURFACE UTILITY INVESTIGATION WAS PERFORMED IN AREAS OF ANTICIPATED EXCAVATION AS SPECIFIED BY REPRESENTATIVES OF MJ ENGINEERING AND LAND SURVEYING, P.C. ADDITIONAL SUBSURFACE UTILITIES MAY EXIST BEYOND THE EXCAVATION AREA, WHICH WERE NOT INVESTIGATED.
3. SELECT STORM MANHOLES AS WELL AS CATCH BASINS WERE NOT ABLE TO BE INVESTIGATED DUE TO A LARGE AMOUNT OF DEBRIS OBSTRUCTING THE STORM LINES.
4. THE SUBSURFACE UTILITIES SHOWN HEREON ARE OF QUALITY LEVEL "B" AS DEFINED BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) IN THE "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
5. THE SUBSURFACE UTILITY INVESTIGATION WAS PERFORMED UTILIZING RADIO FREQUENCY (RF) AND GROUND PENETRATING RADAR (GPR) METHODOLOGIES. ELECTROMAGNETIC INTERFERENCE AND SUBSURFACE SOIL AND GROUNDWATER CONDITIONS IMPACT THE ABILITY TO IDENTIFY AND TRACE SUBSURFACE UTILITIES. THE SUBSURFACE UTILITIES HEREON REPRESENT THE UTILITIES THAT WERE IDENTIFIED UTILIZING THE RF AND GPR METHODOLOGIES. THE SUBSURFACE UTILITIES WERE NOT EXCAVATED TO CONFIRM THEIR PRESENCE, DEPTH, OR COMPOSITION.
6. THE UTILITY DEPTHS SHOWN HEREON WERE DERIVED USING RADIO FREQUENCY (RF) METHODOLOGIES AND ARE APPROXIMATE. IF PRECISE DEPTHS ARE REQUIRED, EXPOSING SUBSURFACE UTILITIES UTILIZING VACUUM EXCAVATION OR OTHER NON-DESTRUCTIVE TECHNIQUES SHOULD BE CONSIDERED.
7. DESIGNATED SUBSURFACE UTILITIES WERE SURVEYED UTILIZING CONVENTIONAL SURVEYING TECHNIQUES.
8. FIELD INVESTIGATED UTILITY INFORMATION SUPPLEMENTED BY PROVIDING RECORD UTILITY MAPPING.

RECORD UTILITY MAP REFERENCES

1. "TOPOGRAPHICAL SURVEY OF RANDALL'S AND WARD'S ISLANDS", CONTRACT M-T-104-131, DECEMBER 15 1994.
2. 'RANDALL'S ISLAND IMPROVEMENTS FIELD DEVELOPMENT PROJECT", OCTOBER 5 2006.
3. 'WARD'S ISLAND INTERCEPTING SEWERS RECORD DRAWING", CONTRACT 3, JUNE 30 1938.
4. "NEW 20" SUB-AQUEOUS WATER MAIN EXTENSION AND NEW 12" HIGH PRESSURE GAS MAIN FROM THE BRONX TO RANDALL'S ISLAND", PROJECT HED-568, OCTOBER 3 2014.

SURVEY NOTES

1. NORTH IS ORIENTED TO GRID NORTH FROM GPS OBSERVATIONS.
2. ELEVATIONS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IS US SURVEY FEET.
3. INFORMATION SHOWN HEREON GENERATED FROM A CONVENTIONAL FIELD SURVEY CONDUCTED BY M.J. ENGINEERING AND LAND SURVEYING, P.C. DURING DECEMBER / JANUARY 2022. .
4. UNITS ARE MEASURED IN U.S. SURVEY FEET.
5. ALL COORDINATES ARE IN NEW YORK STATE PLANE, NAD83, LONG ISLAND, US FOOT.


NYCDEP NOTES

1. THE DETAILED DESIGN SHALL COMPLY WITH NYCDEP STANDARDS AND DETAILS TO THE FULLEST EXTENT POSSIBLE AND ANY DEVIATION SHALL BE APPROVED BY NYCDEP.
2. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT MEANS AND METHODS THAT IS CROSSING UNDER AN EXISTING NYCDEP SEWER, THE SEWER IS TO BE REPLACED BETWEEN MANHOLES PER NYCDEP STANDARDS, IF REQUIRED AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR MAY PROPOSE A NEW MANHOLE LOCATION FOR CONSIDERATION BY NYCDEP. A ONE-FOOT SIX-INCH (1'-6") MINIMUM VERTICAL CLEARANCE BETWEEN THE BOTTOM OF THE NYCDEP SEWER FOUNDATION AND TOP OF THE CHPE DUCT BANK OR STRUCTURE SHALL BE ACHIEVED.
3. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT MEANS AND METHODS THAT IS CROSSING ABOVE AN EXISTING NYCDEP SEWER, A ONE-FOOT SIX-INCH (1'-6") MINIMUM VERTICAL CLEARANCE SHALL BE ACHIEVED BETWEEN THE BOTTOM OF THE CHPE DUCT BANK OR STRUCTURE AND THE TOP OF NYCDEP SEWER STRUCTURE.
4. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT MEANS AND METHODS THAT IS CROSSING UNDER AN EXISTING NYCDEP DUCTILE IRON PIPE WATER MAIN, A ONE-FOOT SIX-INCH (1'-6") MINIMUM VERTICAL CLEARANCE SHALL BE ACHIEVED BETWEEN THE BOTTOM OF THE NYCDEP DUCTILE IRON PIPE WATER MAIN STRUCTURE AND THE TOP OF THE CHPE DUCT BANK OR STRUCTURE.
5. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT MEANS AND METHODS THAT IS CROSSING UNDER AN EXISTING NYCDEP CAST IRON PIPE WATER MAIN, THE IMPACTED NYCDEP CAST IRON PIPE WATER MAIN SHALL BE REPLACED WITH A NEW DUCTILE IRON PIPE WATER MAIN IF REQUIRED AND AS DIRECTED BY THE ENGINEER, PER NYCDEP STANDARDS. A ONE-FOOT SIX-INCH (1'-6") MINIMUM VERTICAL CLEARANCE BETWEEN THE TOP OF CHPE DUCT BANK OR STRUCTURE AND THE BOTTOM OF THE NYCDEP WATER MAIN SHALL BE ACHIEVED. THE GROUND COVER FROM TOP OF FINAL GRADE TO THE TOP OF THE REPLACEMENT WATER MAIN SHALL BE THREE- FEET (3'-0") TO FOUR- FEET (4'-0").
6. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS WILL BE PARALLEL TO AN EXISTING NYCDEP CAST IRON PIPE WATER MAIN, A TWO-FOOT (2'-0") MINIMUM EDGE-TO-EDGE CLEARANCE BETWEEN THE CHPE DUCT BANK OR STRUCTURE AND NYCDEP CAST IRON PIPE WATER MAIN SHALL BE ACHIEVED.
7. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS WILL BE PARALLEL TO AN EXISTING NYCDEP DUCTILE IRON PIPE WATER MAIN, A TWO-FOOT (2'-0") MINIMUM EDGE-TO-EDGE CLEARANCE BETWEEN THE CHPE DUCT BANK OR STRUCTURE AND THE NYCDEP DUCTILE IRON PIPE WATER MAIN.
8. WHERE A CHPE DUCT BANK OR STRUCTURE THAT IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS WILL BE PARALLEL TO AN EXISTING NYCDEP, A TWO-FOOT (2'-0") MINIMUM EDGE-TO-EDGE CLEARANCE BETWEEN THE CHPE DUCT BANK OR STRUCTURE AND THE NYCDEP SEWER AND SEWER FOUNDATION STRUCTURE IS TO BE ACHIEVED.
9. WHERE A CHPE DUCT BANK OR STRUCTURE IS PLANNED FOR CONSTRUCTION VIA TRENCHLESS MEANS AND METHODS IS CROSSING UNDER AN EXISTING NYCDEP SEWER SUPPORT ON A DEEP FOUNDATION STRUCTURE, THE SEWER IS TO BE REPLACED, IF REQUIRED AND AS DIRECTED BY THE ENGINEER, PER NYCDEP STANDARDS.
10. WHERE A CHPE DUCT BANK OR STRUCTURE IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS IS CROSSING UNDER AN EXISTING NYCDEP CATCH BASIN CONNECTION, THE EXISTING CATCH BASIN CONNECTION SHALL BE REPLACED WITH A TWELVE-INCH (12") CLASS 56 DUCTILE IRON PIPE PER NYCDEP STANDARDS AND SHALL ACHIEVE A MINIMUM ONE-FOOT SIX-INCH (1'-6") VERTICAL CLEARANCE.
11. WHERE A CHPE DUCT BANK OR STRUCTURE IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS IS CROSSING UNDER AN EXISTING NYCDEP FIRE HYDRANT OR CONNECTION, THE EXISTING HYDRANT, VALVE, AND CONNECTION SHALL BE REPLACED, WITH THE CONNECTION BEING REPLACED WITH A SIX-INCH (6") CLASS 56 DUCTILE IRON PIPE PER NYCDEP STANDARDS AND SHALL ACHIEVE A MINIMUM ONE-FOOT SIX-INCH (1'-6") VERTICAL CLEARANCE FROM THE CHPE DUCT BANK OR STRUCTURE.
12. THE ELEVATION OF THE EXISTING GRADE MAY NOT BE INCREASED ABOVE AN EXISTING NYCDEP OWNED GAS MAIN, SEWER MAIN, OR WATER MAIN.
13. NYCDEP SHALL BE NOTIFIED BY THE CONTRACTOR AT LEAST THIRTY (30) DAYS PRIOR TO ANY PLANNED WORK WITHIN TWENTY- FEET (20'-0") OF ANY NYCDEP WASTEWATER TREATMENT PLANT ELECTRICAL FEEDER.
14. NYCDEP OWNS THE 12-INCH HIGH DENSITY POLYETHYLENE GAS MAIN DISTRIBUTION NETWORK ON RANDALL'S ISLAND AND CON EDISON MAINTAINS THIS GAS MAIN NETWORK. THE CONTRACTOR SHALL COORDINATE WITH NYCDEP, NYCDPR, AND CON EDISON FOR ANY ANTICIPATED SERVICE INTERRUPTIONS PRIOR TO CONSTRUCTION. WHERE A CHPE DUCT BANK OR STRUCTURE IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS WILL BE PARALLEL TO AN EXISTING NYCDEP OWNED 12-INCH HIGH DENSITY POLYETHYLENE DISTRIBUTION GAS MAIN, A TWO-FOOT (2'-0") MINIMUM EDGE-TO-EDGE CLEARANCE BETWEEN THE CHPE DUCT BANK OR STRUCTURE AND THE GAS MAIN SHALL BE ACHIEVED. WHERE A CHPE DUCT BANK OR STRUCTURE IS PLANNED FOR CONSTRUCTION VIA OPEN-CUT OR TRENCHLESS MEANS AND METHODS IS CROSSING ABOVE OR BELOW AN EXISTING NYCDEP OWNED 12-INCH HIGH DENSITY POLYETHYLENE DISTRIBUTION GAS MAIN, A ONE-FOOT AND SIX INCH (1'-6") MINIMUM VERTICAL CLEARANCE BETWEEN THE CHPE DUCT BANK OR STRUCTURE AND THE NYCDEP GAS MAIN SHALL BE ACHIEVED.
15. DETAILED DESIGN DRAWINGS FOR THE PLANNED CHPE FACILITIES WITH RESPECT TO NYCDEP INFRASTRUCTURE MUST BE SUBMITTED TO NYCDEP FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION OF CHPE. NYCDPR SHALL NOT ISSUE A CONSTRUCTION PERMIT UNTIL AFTER NYCDEP'S APPROVAL HAS BEEN GRANTED AND CONSTRUCTION PERMIT HAS BEEN ISSUED. ALL NYCDEP OWNED STRUCTURES THAT ARE REQUIRED TO BE REPLACED OR RELOCATED DUE TO CONFLICT WITH THE PROPOSED CHPE FACILITIES SHALL BE COORDINATED, DESIGNED, AND CONSTRUCTED AT NO COST TO THE CITY OF NEW YORK.


NYCDPR NOTES

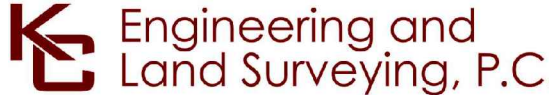
1. CHPE LLC IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING A NYCDPR CONSTRUCTION PERMIT BEFORE ANY WORK ASSOCIATED WITH THE SITE INVESTIGATION FOR OR THE INSTALLATION OF THE PLANNED CHPE FACILITIES, INCLUDING BUT NOT LIMITED TO SITE PREPARATION AND STAGING. CAN COMMENCE WITHIN RANDALL'S ISLAND PARK. THE PERMIT APPLICATION WILL REQUIRE IDENTIFICATION AND LOCATION OF ALL TREES AND PARK ASSETS WITHIN 50- FEET OF THE TRENCHING AREA, WORK ZONE, ACCESS PATHWAYS OR ROADWAYS, AND STAGING AREAS. A TREE SURVEY PREPARED BY A CERTIFIED ARBORIST WILL BE REQUIRED WITH THE APPLICATION FOR A SEPARATE NYCDPR FORESTRY PERMIT. RESTORATION OF PARK AREAS DISTURBED WILL REQUIRE RESTORATION ACCORDING TO NYCDPR REQUIREMENTS AND STANDARDS AND WILL BE SPECIFIED IN THE PERMIT.
2. IF CHPE OR ITS CONTRACTOR WILL BE PERFORMING WORK ON OR WITHIN 50- FEET OF A TREE UNDER CITY JURISDICTION, A TREE WORK PERMIT FROM NYCDPR WILL BE REQUIRED PRIOR TO THE START OF CONSTRUCTION AND ALL WORK WILL BE PERFORMED IN COMPLIANCE WITH NYCDPR TREE PROTECTION PROTOCOL AS IN EFFECT UPON A TREE WORK PERMIT APPLICATION. ANY TREES THAT ARE ENVISIONED TO BE IN CONFLICT WITH THE CABLE ROUTE SHALL BE BROUGHT TO NYCDPR'S ATTENTION FOR A PRELIMINARY EVALUATION PRIOR TO SUBMISSION OF A TREE WORK PERMIT. IN THE CASE OF TREE REMOVAL, TREE RESTITUTION VALUES SHALL BE DETERMINED AS PER THE NYC TREE VALUATION METHOD WILL BE REQUIRED.
3. NYCDPR ASSETS THAT ARE ADJACENT TO AND IN PROXIMITY WITH THE CHPE ALIGNMENT THAT WILL OR MAY REQUIRE PROTECTION, RESTORATION, OR RECONSTRUCTION SHALL INCLUDE, BUT ARE NOT LIMITED TO: CHAIN LINK FENCE, PARK SIGNAGE, PARK PATHWAY, BLEACHERS, PARK ROADWAY, GRASS LAWN, TREES, LIGHT POLES, BASEBALL FIELD FENCING, BASEBALL FIELD, AND UTILITY LINES. THESE ELEMENTS ARE DEPICTED ON THE 2010 CONSTRUCTION DRAWINGS [RANDALL'S ISLAND IMPROVEMENTS FIELD DEVELOPMENT PROJECT] PROVIDED BY NYCDPR TO CHPE LLC, AND WHICH WILL BE PROVIDED TO THE CONTRACTOR, AND ARE MADE PART OF THIS REVOCABLE CONSENT AGREEMENT.
4. RESTORATION OF AFFECTED AREAS WILL BE REQUIRED TO BE COMPLETED PER THE 2010 BALLFIELDS AND IRRIGATION PLAN SET DEPICTING THE PARK PATHWAYS AND NEARBY PARK AMENITIES. THE RESTORATION REQUIREMENTS WILL BE DETERMINED UPON APPLICATION TO NYCDPR FOR THE CONSTRUCTION PERMIT ASSOCIATED WITH PLANNED CHPE FACILITIES.


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Champlain Hudson
Power Express







STATE OF NEW YORK
CHANDRAN YADAV
105203
LICENSED PROFESSIONAL ENGINEER
C. YADAV RICE

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP

CHAMPLAIN HUDSON POWER EXPRESS

SEGMENTS 13 TO 15 - PACKAGE 8

TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

PACKAGE 8 SPECIFIC GENERAL NOTES

DRAWN BY:	MK	DESIGNED BY:	MK	APPROVED BY:	CV	SCALE	AS SHOWN
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21162	
KC PROJECT NO.	
120174	
DRAWING NO.	
G-003	
DATE	07/31/2023
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CLEANUP AND RESTORATION NOTES

PROMPT CLEANUP AND RESTORATION OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY IS A PRIORITY OF THE CONSTRUCTION SCHEDULE AND SEQUENCING. TIMELY CLEANUP AND RESTORATION WILL ASSIST IN MINIMIZING POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH THE PROJECT. PROCEDURES FOR CLEANUP AND RESTORATION ARE DESCRIBED IN THE FOLLOWING SECTIONS. IN ACCORDANCE WITH CERTIFICATE CONDITION 48, WITHIN TEN (10) DAYS OF THE COMPLETION OF FINAL RESTORATION ACTIVITIES, THE CERTIFICATE HOLDER WILL NOTIFY THE SECRETARY THAT ALL RESTORATION HAS BEEN COMPLETED IN COMPLIANCE WITH THE CERTIFICATE AND THE ORDER(S) APPROVING THE EM&CP.

CLEANUP STANDARDS AND PRACTICES

FROM THE BMPS', CLEAN-UP, RESTORATION, AND REVEGETATION PROCEDURES WILL BE ONGOING DURING CONSTRUCTION AS EACH SEGMENT IS COMPLETED. DURING CONSTRUCTION, ROAD AND CONSTRUCTION ROWS WILL BE KEPT FREE OF DEBRIS AND DISCARDED MATERIAL TO THE GREATEST EXTENT POSSIBLE. AS CONSTRUCTION CONTINUES, EACH SECTION OF THE ROWS WILL BE THOROUGHLY CLEANED AFTER CONSTRUCTION IS COMPLETED ON THAT PARTICULAR SECTION. VEGETATION TO BE CLEARED WILL BE IDENTIFIED ON A SITE-SPECIFIC BASIS ON THE EM&CP PLAN AND PROFILE DRAWINGS. CLEARED VEGETATION WILL BE DISPOSED OF IN ACCORDANCE WITH THE APPROPRIATE DISPOSAL TECHNIQUES. ALL FABRICATED DEBRIS RESULTING FROM CONSTRUCTION WILL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE IN COMPLIANCE WITH ALL APPROPRIATE ENVIRONMENTAL REGULATIONS. FABRICATED DEBRIS GENERATED DURING CONSTRUCTION INCLUDES PIPING, FENCING, WIRING, AND ANY OTHER MATERIALS USED DURING CONSTRUCTION. ALL TRUCKS LEAVING THE CONSTRUCTION AREA WILL BE LOADED AND COVERED IN ACCORDANCE WITH APPLICABLE REGULATIONS AS NEEDED AS DESCRIBED IN THE SOIL MANAGEMENT PLAN OF THE EM&CP IN APPENDIX L. NO FABRICATED DEBRIS BE BURNED OR BURIED.

RESTORATION AND PLANTING

THE FINAL STAGE OF CONSTRUCTION WILL CONSIST OF RESTORING THE ROW TO ITS ORIGINAL CONDITION AND CHARACTER TO THE EXTENT PRACTICAL, UNLESS DOING SO WOULD INTERFERE WITH THE SAFE OR RELIABLE OPERATION AND MAINTENANCE OF THE PROJECT. RESTORATION ACTIVITIES MAY VARY WITH THE SPECIFIC AREA TO BE RESTORED BUT WILL CONSIST PREDOMINANTLY OF RESTORING TOPOGRAPHY TO ORIGINAL GRADIENTS AND RESEEDING EXCAVATED AREAS OVER THE TRENCH AS IDENTIFIED HEREIN.

SITE PREPARATION FOR REVEGETATION

THE SURFACE OF THE ROAD AND CONSTRUCTION ROWS DISTURBED BY CONSTRUCTION ACTIVITIES WILL BE GRADED TO MATCH THE ORIGINAL TOPOGRAPHIC CONTOURS AND TO BE COMPATIBLE WITH SURROUNDING DRAINAGE PATTERNS WHERE APPROPRIATE OR IN ACCORDANCE WITH THE EM&CP. IT SHOULD BE NOTED THAT SUBCONTRACTORS WILL TYPICALLY LIMIT GRUBBING (THE REMOVAL OF STUMPS AND ROOTS) TO THE FOOTPRINT OF THE EXCAVATED TRENCH AND ACCESS ROADS TO ALLOW RE-SPROUTING AND ASSIST IN THE RECOVERY OF WOODY SPECIES, EXCEPT WHERE REMOVAL IS REQUIRED FOR SAFE CONSTRUCTION. WHERE NEEDED, IT MAY BE NECESSARY TO IMPORT TOPSOIL TO RETURN AN AREA TO GRADE. IMPORTED TOPSOIL WILL FOLLOW CLASSIFICATION AND CHARACTERIZATION MEASURES OUTLINED IN THE SOIL MANAGEMENT PLAN IN APPENDIX L. HDD ENTRY AND EXIT PITS WILL BE BACKFILLED AND THE DISTURBED GROUND SURFACE WILL BE SIMILARLY GRADED. TRENCHES WILL BE BACKFILLED IN ACCORDANCE WITH THE MEASURES OUTLINED IN SECTION 4.4.7 OF THE EM&CP. THE CERTIFICATE HOLDER WILL BE RESPONSIBLE FOR WILL CHECKING ALL CULVERTS AND ASSURE THAT THEY ARE NOT CRUSHED OR BLOCKED DURING CONSTRUCTION AND RESTORATION OF THIS SEGMENT AND, IF A CULVERT IS BLOCKED OR CRUSHED, TAKE IMMEDIATE STEPS TO REPLACE OR REPAIR THE CULVERT IN ACCORDANCE WITH APPLICABLE STATE OR LOCAL STANDARDS.

SEEDING AND PLANTING

SEEDING OPERATIONS WILL COMMENCE ONLY AFTER AN ACCEPTABLE SEEDBED HAS BEEN ESTABLISHED. SEED WILL BE APPLIED BY HAND, CYCLONE SEEDER, DRILL, OR CULTI-PACKER-TYPE SEEDER AT A DEPTH OF 0.25 TO 0.5 INCH. THE SEEDBED WILL BE FIRMED FOLLOWING SEEDING OPERATION WITH A ROLLER OR LIGHT DRAG, EXCEPT WHERE CULTI-PACKER-TYPE SEEDERS OR HYDROSEEDERS ARE USED. THE ENTIRE SEEDED AREA WILL BE WATERED WITH A FINE SPRAY UNTIL A UNIFORM MOISTURE DEPTH OF ONE (1) INCH HAS BEEN ACHIEVED. MULCHING AND ANCHORING OF THE MULCH MAY BE NECESSARY IN SOME AREAS UNLESS A HYDROMULCH/SEED SLURRY IS USED. ON STEEP SLOPES, JUTE NET WILL BE USED TO PROVIDE STABILIZATION. FERTILIZER WILL BE ADDED AT THE APPROPRIATE RATES AFTER SEED IS APPLIED. NO FERTILIZER WILL BE APPLIED IN WETLAND RESOURCE AREAS. SEEDING/MULCHING WILL TAKE PLACE UNDER THE SUPERVISION OF THE ENVIRONMENTAL INSPECTOR.

THE SEED MIXTURE AND RATE OF APPLICATION WILL DEPEND ON THE SOIL TYPE, LAND USE, AVAILABLE MOISTURE, AND SEASON AT THE TIME OF APPLICATION AS PER NYCDPR SPECIFICATIONS. IF APPLICABLE OR AS SPECIFIED BY THE LANDOWNER. ALL SEED MIXES WILL BE FREE OF INVASIVE SPECIES. ALL SEED BAG TAGS (EITHER ORIGINAL OR SCANNED COPIES) WILL BE PROVIDED TO THE ENVIRONMENTAL INSPECTOR EITHER ORIGINAL TAGS OR SCANNED COPIES. THE SEED MIXTURES WILL FOLLOW THE TECHNICAL SPECIFICATIONS INCLUDED ON THE PLAN AND PROFILE DRAWINGS IN APPENDIX C FOR UPLANDS AND WETLAND BUFFER ZONES. SEEDED AREAS WILL BE MONITORED FOLLOWING RESTORATION UNTIL A MINIMUM VEGETATIVE COVER OF EIGHTY (80) PERCENT IS ACHIEVED.

WHERE TREE OR SHRUB PLANTINGS ARE PRESCRIBED IN THE EM&CP, A POST-CONSTRUCTION SURVIVAL SURVEY WILL BE PERFORMED ONE YEAR AFTER THE PLANTINGS. IF ANY TREE OR SHRUB HAS NOT SURVIVED OR IS IN POOR HEALTH, THE TREE/SHRUB WILL BE REPLACED (BMP DOCUMENT SECTION 11.1.2.5).

VEGETATION THROUGHOUT THE TEMPORARY ROW WILL BE CUT TO GROUND LEVEL AND ROOT SYSTEMS WILL REMAIN INTACT TO ALLOW FOR RESPROUTING FOLLOWING CONSTRUCTION, UNLESS RESPROUTING WOULD INTERFERE WITH THE SAFE AND RELIABLE OPERATION OF THE PROJECT.

- ALL TREES OVER TWO (2) INCHES IN DIAMETER AT BREAST HEIGHT OR SHRUBS OVER FOUR (4) FEET IN HEIGHT DAMAGED OR DESTROYED BY ACTIVITIES DURING CONSTRUCTION, OPERATION, OR MAINTENANCE, REGARDLESS OF WHERE LOCATED, SHALL BE REPLACED WITHIN THE FOLLOWING YEAR BY THE CERTIFICATE HOLDERS WITH THE EQUIVALENT TYPE OF TREES OR SHRUBS EXCEPT IF:
- a)OTHER ARRANGEMENTS ARE SPECIFIED IN THE APPROVED EM&CP; OR
 - b)EQUIVALENT TYPE REPLACEMENT TREES OR SHRUBS WOULD INTERFERE WITH THE PROPER CLEARING, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE FACILITY OR WOULD BE INCONSISTENT WITH STATE-INVASIVE SPECIES POLICY; OR
 - c)REPLACEMENT WOULD BE CONTRARY TO SOUND ROW MANAGEMENT PRACTICES, OR TO ANY APPROVED LONG-RANGE ROW MANAGEMENT PLAN APPLICABLE TO THE FACILITY OR ADJOINING ROW; OR
 - d)THE OWNER OF LAND WHERE THE DAMAGED OR DESTROYED TREES OR SHRUBS WERE LOCATED (OR OTHER RECORDED EASEMENT OR LICENSE HOLDERS WITH THE RIGHT TO CONTROL REPLACEMENT) DECLINES REPLACEMENT.

RESTORATION OF WATERBODIES

UPON COMPLETION OF BACKFILLING OPERATIONS, CLEANUP AND RESTORATION OF THE STREAM CROSSING, BANKS AND BANK APPROACHES (AT LEAST 50 FEET ADJACENT TO EACH BANK) WILL BE COMPLETED. IF NEEDED, STREAM BANKS WILL BE RE-ESTABLISHED TO ORIGINAL GRADE IMMEDIATELY AFTER STREAM BANK WORK IS COMPLETED. THE BANKS WILL THEN BE PERMANENTLY STABILIZED BY SEEDING WITH NATIVE GRASSES, MULCHED AND, IF NEEDED, PLANTED WITH NATIVE OR NATURALIZED SHRUB SEEDLINGS. IF ADDITIONAL STABILIZATION IS NEEDED JUTE NETTING OR EROSION CONTROL BLANKETS WILL BE USED. RESTORATION AND PLANTING DETAILS FOR WATERBODIES ARE FURTHER DETAILED IN SECTION 14.4.1 OF THE EM&CP. MANY DIRECT IMPACTS TO STREAMS AND WATERBODIES ASSOCIATED WITH THIS SEGMENT HAVE BEEN AVOIDED BY CROSSING OVER OR UNDER EXISTING CULVERTS, AND INCORPORATING HDD METHODS. HOWEVER, WHERE IMPACTS TO WATERBODIES DO OCCUR, THE PROCEDURES FOR THE CLEANUP AND RESTORATION OF STREAMS AND WATERBODIES ARE SUMMARIZED IN SECTION 9.1 OF THE EM&CP

RESTORATION OF WETLANDS

DURING THE INITIAL RESTORATION PHASE, ALL CONSTRUCTION DEBRIS WILL BE REMOVED FROM THE RIGHT-OF-WAY. SEGREGATED TOPSOIL WILL BE REPLACED, AND WETLAND CONTOURS AND DRAINAGE PATTERNS WILL BE RESTORED TO APPROXIMATE ORIGINAL CONDITION BY MATCHING THAT WHICH EXISTS IN ADJACENT UNDISTURBED AREAS.

RESTORATION OF THE WETLAND (OTHER THAN THE TRAVEL WAY) WILL BE COMPLETED PRIOR TO CONCLUSION OF ALL WORK. THIS WILL BE DONE FOR A MINIMUM DISTANCE OF 50 FEET FROM THE WETLAND EDGE. RESTORATION OF THE WETLAND WILL INCLUDE BUT IS NOT LIMITED TO FINAL GRADING, SEEDING WITH A NATIVE WETLAND SEED MIX, FERTILIZING, AND MULCHING. HIGH ORGANIC SOILS (AS DETERMINED BY NYSDC, DPS, OR THE ENVIRONMENTAL INSPECTOR) WILL BE GRADED BACK TO ORIGINAL CONTOURS AND LEFT UNMULCHED AND UNSEEDED TO FACILITATE THE GERMINATION OF NATIVE SEEDS AND SPROUTING OF RHIZOMES FROM THE SEED BANK. FOLLOWING CLEANUP, THE WETLAND WILL BE EVALUATED FOR POSSIBLE VEGETATIVE PLANTINGS. THIS WILL BE DONE IN CONSULTATION WITH THE APPROPRIATE AGENCIES AND IN ACCORDANCE WITH THE EM&CP.

FOR WETLAND RESOURCE AREAS, EMERGENT COMMUNITIES SHOULD BE REVEGETATED WITH AN ERNST FACW WETLAND MEADOW MIX (ERNMX-122) OR EQUIVALENT, AND FOR SHADED SITES WITHIN FORESTED/SHRUB-SHRUB WETLAND COMMUNITIES, DISTURBED AREAS SHOULD BE REVEGETATED WITH ERNST SPECIALIZED WETLAND MIX FOR SHADED AREAS (ERNMX-137) OR EQUIVALENT (SHOWN ON PLAN AND PROFILE DRAWINGS, APPENDIX C) OR AS APPROVED BY NYCDPR AND OTHER PERTINENT STAKEHOLDERS.

RESTORATION OF CONSTRUCTION MATERIALS AND EQUIPMENT STAGING LOCATIONS AND TEMPORARY ACCESS ROADS

THE CONSTRUCTION MATERIALS EQUIPMENT STAGING LOCATIONS FOR THIS SEGMENT ARE SUMMARIZED IN SECTION 5.4 TABLE 5.2 OF THE EM&CP AND ARE SHOWN IN THE PLAN AND PROFILE DRAWINGS AND EROSION AND SEDIMENT CONTROL PLANS. THESE AREAS WILL BE RESTORED AS CLOSE AS PRACTICABLE TO PRE-CONSTRUCTION CONDITIONS AND CONTOURS TO THE EXTENT PRACTICABLE IN COORDINATION WITH WM, NYCDPR, CONED, AND OTHER PERTINENT STAKE HOLDERS.

ALL TEMPORARY FENCING AND EROSION CONTROLS WILL BE REMOVED AND DISPOSED OF IN AN ACCEPTABLE MANNER AT A STATE-APPROVED DISPOSAL FACILITY APPROVED BY DPS STAFF AND THE CERTIFICATE HOLDERS. ALL MOTORIZED CONSTRUCTION EQUIPMENT WILL BE TRANSPORTED TO OFF-SITE FACILITIES. ALL OTHER USABLE CONSTRUCTION EQUIPMENT AND MATERIALS WILL BE COLLECTED, PACKED, AND TRANSPORTED TO OFF-SITE STORAGE FACILITIES OR TO THE NEXT SEGMENT'S STAGING AREA AS NEEDED. ALL UNUSABLE EQUIPMENT AND MATERIALS WILL BE REMOVED FROM THE LAYDOWN YARD AND DISPOSED OF APPROPRIATELY.

PLANT INSPECTION, GUARANTEE AND MAINTENANCE

VEGETATION RESTORATION ALSO INCLUDES THE MAINTENANCE OF PLANTINGS FOR SPECIFIED TIME PERIODS AND THE REPLACEMENT OF UNSUCCESSFUL PLANTINGS. PRIOR TO PLANTING, THE ENVIRONMENTAL INSPECTOR WILL INSPECT ALL PLANTS IN CONTAINERS. PLANTINGS WILL BE PERFORMED BY A QUALIFIED LANDSCAPE OR NURSERY CONTRACTOR. THE ENVIRONMENTAL INSPECTOR WILL ALSO INSPECT ALL PLANTS AFTER COMPETITION OF PLANTING TO ENSURE PROPER PLANTING PROCEDURES AND THE CORRECT PLANT SPECIES WERE USED. ADDITIONALLY, THE ENVIRONMENTAL INSPECTOR WILL CONDUCT A FINAL INSPECTION OF ALL REVEGETATED AREAS AFTER THE END OF THE MONITORING PERIOD TO ENSURE FINAL STABILIZATION. ALL VEGETATION REPLACED WILL HAVE A MINIMUM TWO -YEAR SURVIVAL GUARANTEE (BMP DOCUMENT SECTION 11.2.2). WHERE TREE OR SHRUB PLANTINGS ARE NEEDED, A POST-CONSTRUCTION SURVIVAL SURVEY WILL BE PERFORMED ONE YEAR AFTER THE PLANTINGS. IF ANY TREE OR SHRUB HAS NOT SURVIVED OR IS IN POOR HEALTH, THE TREE/SHRUB WILL BE REPLACED (BMP DOCUMENT SECTION 11.2.1.5).

SWPPP INSPECTIONS WILL BE PERFORMED BY THE ENVIRONMENTAL INSPECTOR ON A WEEKLY BASIS UNTIL ALL DISTURBED AREAS HAVE ACHIEVED THE 80% REVEGETATION REQUIRED FOR FINAL RESTORATION, FOLLOWING FINAL RESTORATION. EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED FROM THE SITE AND DISPOSED OF APPROPRIATELY.

RESTORATION OF RECREATIONAL AREAS

FOLLOWING CONSTRUCTION, THE CERTIFICATE HOLDERS WILL RESEED THE CONSTRUCTION AREA WITHIN RECREATIONAL AREAS AND THE ATHLETIC FIELDS USING THE PROCEDURES AND METHODS SPECIFIED IN THE SECTIONS ABOVE WHERE NEEDED. IF NECESSARY, ADDITIONAL REVEGETATION AND TREE PLANTING MAY BE PERFORMED DEPENDING ON THE IMPACT OF CONSTRUCTION. RECREATIONAL AREAS ARE DESCRIBED IN SECTION 7.2 OF THE EMCP.

ROADWAY RESTORATION (STRIPPING, SIGNAGE, AUDIBLE ROADWAY

DELINEATORS)

STRIPING IMPACTED OR REMOVED FROM CONSTRUCTION WITHIN THE LIMITS OF WORK, INCLUDING AREAS OF MILL AND OVERLAYS TO BE INSTALLED PER EXISTING STRIPING PATTERNS. CONTRACTOR SHALL INVENTORY ALL STRIPING PRIOR TO WORK. WORK TO BE COMPLETED IN ACCORDANCE WITH NYSDOT STANDARD SHEETS AND SPECIFICATIONS (SEE 685 SERIES STANDARD SHEETS).

RESTORATION OF ROADWAY

THESE AREAS WILL BE RESTORED AS CLOSE AS PRACTICABLE TO PRE-CONSTRUCTION CONDITIONS AND CONTOURS. TRENCHES WILL BE BACKFILLED PER THE APPROPRIATE DETAIL, FULL WIDTH OF THE TRENCH WILL BE RESTORED TO MATCH THE EXISTING PAVEMENT SECTION, THE FULL WIDTH OF THE TRAVEL LANE TO THE CENTERLINE WILL BE MILLED AND OVERLAYED WITH A TOP COURSE OF ASPHALT. ALL TEMPORARY FENCING AND EROSION CONTROLS WILL BE REMOVED AND DISPOSED ON IN AN ACCEPTABLE MANNER AT A STATE-APPROVED DISPOSAL FACILITY APPROVED BY DPS STAFF AND THE CERTIFICATE HOLDERS.

RESTORATION OF ROADWAY SHOULDER

THESE AREAS WILL BE RESTORED AS CLOSE AS PRACTICABLE TO PRE-CONSTRUCTION CONDITIONS AND CONTOURS. TRENCHES WILL BE BACKFILLED PER THE APPROPRIATE DETAIL, FULL WDTH OF THE TRENCH WILL BE RESTORED TO MATCH THE EXISTING PAVEMENT SECTION, THE FULL WIDTH OF THE TRAVEL LANE TO THE CENTERLINE WILL BE MILLED AND OVERLAYED WITH A TOP COURSE OF ASPHALT. ALL TEMPORARY FENCING AND EROSION CONTROLS WILL BE REMOVED AND DISPOSED ON IN AN ACCEPTABLE MANNER AT A STATE-APPROVED DISPOSAL FACILITY APPROVED BY DPS STAFF AND THE CERTIFICATE HOLDERS.

PAVEMENT RESTORATION

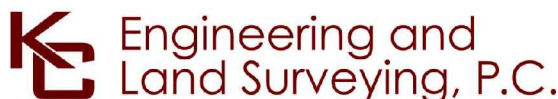
AS DESCRIBED IN THE BMP DOCUMENT AND CERTIFICATE CONDITIONS, CURBS, SIDEWALKS, AND STREETS DAMAGED BY CONSTRUCTION WILL BE RESTORED TO PRE-EXISTING CONDITION OR BETTER. FURTHER, DISTURBED AREAS, RUTS, AND RILLS ALONG ROADWAYS SHALL BE RESTORED TO ORIGINAL GRADES AND CONDITIONS WITH PERMANENT REVEGETATION AND EROSION CONTROLS APPROPRIATE FOR THOSE LOCATIONS, AS APPROPRIATE.

THE CERTIFICATE HOLDERS WILL CONSULT THE MUNICIPAL ROAD OR HIGHWAY DEPARTMENT AND/OR THE REGIONAL OFFICE OR COUNTY ENGINEER OF THE NYSDOT IN ORDER TO IDENTIFY AND INCORPORATE APPROPRIATE SPECIFICATIONS FOR CURB, SIDEWALK, OR STREET RESTORATION. ALL SURFACE RESTORATION WILL FOLLOW THE SPECIFICATIONS AND DETAILS PROVIDED IN THE PLAN AND PROFILE DRAWINGS (SHEET C-631). GUIDE RAILS WILL BE REMOVED AND REPLACED IN ACCORDANCE WITH NYSDOT STANDARD SHEET 606-01. COUNTY/LOCAL ROADS WILL BE RESTORED UNDER A DIFFERENT COUNTY RESTORATION REQUIREMENT AS SHOWN IN THE PLAN AND PROFILE DRAWINGS (SHEET C-631).

SEED MIXES

- A. GENERAL SEED:
- 1. PIPELINE MIX W/SWITCHGRASS (ERNMX-102-1)
 - 2. MIX COMPOSITION
 - 33.0% PANICUM VIRGATUM, 'SHAWNEE' (SWITCHGRASS, 'SHAWNEE')
 - 25.0% FESTUCA RUBRA (CREEPING RED FESCUE)
 - 18.0% LOLIUM MULTIFLORUM (ANNUAL RYEGRASS)
 - 16.0% PHLEUM PRATENSE, CLIMAX (TIMOTHY, CLIMAX)
 - 5.0% TRIFOLIUM HYBRIDUM (ALSIKE CLOVER)
 - 3.0% AGROSTIS ALBA (REDTOP)
 - 3. APPLIED AT A RATE OF 40 LBS/ACRE.
- B. SPECIALIZED WETLAND MIX FOR SHADED OBL-FACW AREAS (ERNMX-137)
- 2. MIX COMPOSITION
 - 35.0% CAREX VULPINOIDEA, PA ECOTYPE (FOX SEDGE, PA ECOTYPE)
 - 20.0% ELYMUS VIRGINICUS, MADISON-NY ECOTYPE (VIRGINIA WILDRYE, MADISON-NY ECOTYPE)
 - 15.0% CAREX SCOPARIA, PA ECOTYPE (BLUNT BROOM SEDGE, PA ECOTYPE)
 - 12.8% CAREX LURIDA, PA ECOTYPE (LURID SEDGE, PA ECOTYPE)
 - 5.0% CAREX LUPULINA, PA ECOTYPE (HOP SEDGE, PA ECOTYPE)
 - 4.0% VERBENA HASTATA, PA ECOTYPE (BLUE VERVAIN, PA ECOTYPE)
 - 2.0% HELIOPSIS HELIANTHOIDES, PA ECOTYPE (OXEYE SUNFLOWER, PA ECOTYPE)
 - 1.0% CAREX INTUMESCENS, PA ECOTYPE (STAR SEDGE, PA ECOTYPE)
 - 1.0% SPARGANIUM AMERICANUM (EASTERN BUR REED)
 - 0.7% IRIS VERSICOLOR (BLUEFLAG)
 - 0.5% BIDENS CERNUA, PA ECOTYPE (NODDING BUR MARIGOLD, PA ECOTYPE)
 - 0.5% CAREX CRINITA, PA ECOTYPE (FRINGED SEDGE, PA ECOTYPE)
 - 0.5% CAREX STIPATA, PA ECOTYPE (AWL SEDGE, PA ECOTYPE)
 - 0.5% EUPATORIUM PERFOLIATUM, PA ECOTYPE (BONESET, PA ECOTYPE)
 - 0.5% SCIRPUS CYPERINUS, PA ECOTYPE (WOOLGRASS, PA ECOTYPE)
 - 0.5% VERNONIA NOVEBORACENSIS, PA ECOTYPE (NEW YORK IRONWEED, PA ECOTYPE)
 - 0.3% LOBELIA SIPHILITICA, PA ECOTYPE (GREAT BLUE LOBELIA, PA ECOTYPE)
 - 0.2% PENTHORUM SEDOIDES, PA ECOTYPE (DITCH STONECROP, PA ECOTYPE)
 - 3. APPLIED AT A RATE OF APPROXIMATELY 20 LBS/ACRE, ALONG WITH THE COVER CROP.
 - 4. COVER CROP SHOULD BE APPLIED AT A RATE OF 60-80 LBS/ACRE. COVER CROP TO BE AN ANNUAL RYE. COVER CROP BASED ON SEASON OF RESTORATION AN ANNUAL RYE THROUGH SPRING AND SUMMER AND WINTER RYE FOR LATE FALL.
- C. FACW WETLAND MEADOW MIX (ERNMX-122)
- 1. MIX COMPOSITION
 - 21.0% CAREX VULPINOIDEA, PA ECOTYPE (FOX SEDGE, PA ECOTYPE)
 - 20.0% ELYMUS VIRGINICUS, PA ECOTYPE (VIRGINIA WILDRYE, PA ECOTYPE)
 - 16.0% CAREX LURIDA, PA ECOTYPE (LURID SEDGE, PA ECOTYPE)
 - 12.0% CAREX LUPULINA, PA ECOTYPE (HOP SEDGE, PA ECOTYPE)
 - 12.0% CAREX SCOPARIA, PA ECOTYPE (BLUNT BROOM SEDGE, PA ECOTYPE)
 - 3.0% VERBENA HASTATA, PA ECOTYPE (BLUE VERVAIN, PA ECOTYPE)
 - 2.4% ASCLEPIAS INCARNATA, PA ECOTYPE (SWAMP MILKWEED, PA ECOTYPE)
 - 2.0% JUNCUS EFFUSUS (SOFT RUSH)
 - 2.0% ZIZIA AUREA, PA ECOTYPE (GOLDEN ALEXANDERS, PA ECOTYPE)
 - 1.6% ASTER NOVAE-ANGLIAE, PA ECOTYPE (NEW ENGLAND ASTER, PA ECOTYPE)
 - 1.3% CAREX STIPATA, PA ECOTYPE (AWL SEDGE, PA ECOTYPE)
 - 1.0% BIDENS CERNUA, PA ECOTYPE (NODDING BUR MARIGOLD, PA ECOTYPE)
 - 1.0% JUNCUS TENUIS, PA ECOTYPE (PATH RUSH, PA ECOTYPE)
 - 0.8% SOLIDAGO RUGOSA, PA ECOTYPE (WRINKLELEAF GOLDENROD, PA ECOTYPE)
 - 0.6% VERBENA URTICIFOLIA, PA ECOTYPE (WHITE VERVAIN, PA ECOTYPE)
 - 0.5% CAREX CRINITA, PA ECOTYPE (FRINGED SEDGE, PA ECOTYPE)
 - 0.5% EUPATORIUM PERFOLIATUM, PA ECOTYPE (BONESET, PA ECOTYPE)
 - 0.5% HELENIUM AUTUMNALE, PA ECOTYPE (COMMON SNEEZEWEED, PA ECOTYPE)
 - 0.5% MIMULUS RINGENS, PA ECOTYPE (SQUARE STEMMED MONKEYFLOWER, PA ECOTYPE)
 - 0.3% LOBELIA SIPHILITICA, PA ECOTYPE (GREAT BLUE LOBELIA, PA ECOTYPE)
 - 0.3% SCIRPUS CYPERINUS, PA ECOTYPE (WOOLGRASS, PA ECOTYPE)
 - 0.2% ALISMA SUBCORDATUM, PA ECOTYPE (MUD PLANTAIN, PA ECOTYPE)
 - 0.2% ASTER PUNICEUS, PA ECOTYPE (PURPLESTEM ASTER, PA ECOTYPE)
 - 0.2% ASTER UMBELLATUS, PA ECOTYPE (FLAT TOPPED WHITE ASTER, PA ECOTYPE)
 - 0.1% PENTHORUM SEDOIDES, PA ECOTYPE (DITCH STONECROP, PA ECOTYPE)
 - 2. APPLIED AT A RATE OF APPROXIMATELY 20 LBS/ACRE, ALONG WITH THE COVER CROP.
 - 3. COVER CROP SHOULD BE APPLIED AT A RATE OF 60-80 LBS/ACRE. COVER CROP TO BE AN ANNUAL RYE. COVER CROP BASED ON SEASON OF RESTORATION AN ANNUAL RYE THROUGH SPRING AND SUMMER AND WINTER RYE FOR LATE FALL.
- E. LAWN MIX: USE AN ERNST SEED MIX, SUCH AS ATHLETIC FIELD MIX OR SIMILAR.

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FOR INFORMATION, SEE ENVIRONMENTAL AND CONSTRUCTION PLAN NARRATIVE.

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

PACKAGE 8 SPECIFIC RESTORATION NOTES

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						REV. NO.	0

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	G-004
DATE	07/31/2023
SH.NO.	5 OF

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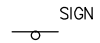

























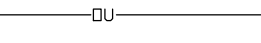
































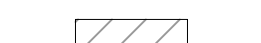



















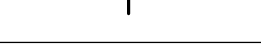

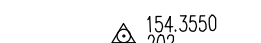



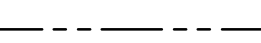





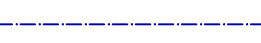














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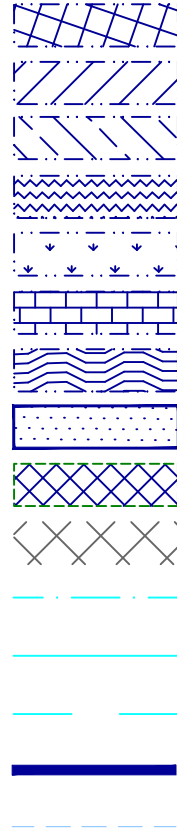
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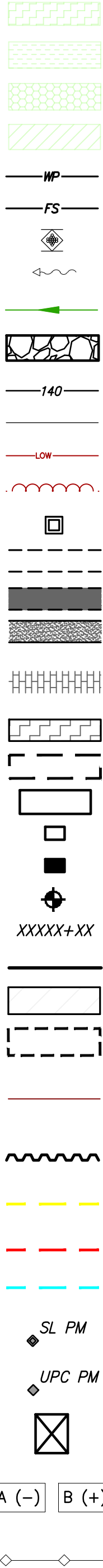
LEGEND & ABBREVIATIONS

	EXIST. FIBER OPTIC LINE HANDHOLE		EXISTING SIGN
	EXIST. FIBER OPTIC LINE PEDESTAL		EXIST. STRUCTURE POST
	EXIST. FIBER OPTIC LINE DOGHOUSE		EXIST. STRUCTURE MAILBOX
	EXIST. FIBER OPTIC LINE MANHOLE		EXIST. GAS LINE
	EXIST. FIBER OPTIC LINE VAULT		EXIST. UNDERGROUND TELE.
	EXIST. FIBER OPTIC LINE BORE PIT		EXIST. FIBER OPTIC
	EXIST. FIBER OPTIC LOCK BOX		EXIST. OVERHEAD TELE.
	EXIST. GROUND ROD		EXIST. UNDERGROUND ELEC.
	EXIST. FIBER OPTIC MARKER POST		EXIST. OVERHEAD ELEC.
	EXIST. FIBER OPTIC BOX		EXIST. CULVERT
	EXIST. FIBER STORAGE		EXIST. SANITARY SEWER
	EXIST. FIRE HYDRANT		EXIST. STORM SEWER
	EXIST. WATER VALVE		EXIST. POTABLE WATER LINE
	EXIST. WATER MANHOLE		EXIST. FUEL LINE
	EXIST. WATER MARKER		EXIST. OVERHEAD UNKNOWN UTILITY
	EXIST. SANITARY SEWER MANHOLE		EXIST. RAILROAD TRACK
	EXIST. SANITARY SEWER VENT		CERTIFIED ROUTE PROVIDED BY CHPE KMZ
	EXIST. STORM SEWER MANHOLE		RANDALL PREFERRED PROVIDED BY CHPE KMZ
	EXIST. STORM SEWER CATCH BASIN		INFRASTRUCTURE RIGHT-OF-WAY BY CHPE KMZ
	EXIST. CULVERT INVERT		EXIST. CONTOUR, INDEX
	EXIST. GAS MANHOLE		EXIST. CONTOUR, DEPRESSION INDEX
	EXIST. GAS VALVE		EXIST. CONTOUR, INTERMEDIATE
	EXIST. GAS MARKER		EXIST. CONTOUR, DEPRESSION INTERMEDIATE
	EXIST. GAS PIPELINE VENT		EXIST. SPOT ELEVATION
	EXIST. LIGHT POLE		EXIST. DEBRIS
	EXIST. UTILITY POLE		EXIST. FIELD LINE
	EXIST. ELEC. POLE		EXIST. LANDSCAPE AREA
	EXIST. ELEC. TOWER		EXIST. PILE
	EXIST. TRAFFIC LIGHT		EXIST. STORAGE AREA
	EXIST. ELEC. METER		EXIST. NATURAL BOULDER
	EXIST. ELEC. MANHOLE		EXIST. NATURAL SHRUB LINE
	EXIST. ELEC. TRANSFORMER		EXIST. NATURAL TREE LINE
	EXIST. ELEC. VAULT		EXIST. NATURAL SINGLE TREE/BUSH
	EXIST. ELEC. HANDHOLE		EXIST. STRUCTURAL BUILDING
	EXIST. ELEC. PEDESTAL/BOX		EXIST. PAVED DRIVE
	EXIST. ELEC. MARKER POST		EXIST. PAVED ROAD
	EXIST. ELEC. GUY ANCHOR/WIRE		EXIST. PAVED SHOULDER
	EXIST. TELE. RISER/BOX		EXIST. PAVED SIDEWALK
	EXIST. TELE. MANHOLE		EXIST. GUARDRAIL
	EXIST. TELE. HANDHOLE		EXIST. TRAIL
	EXIST. TELE. VAULT		EXIST. FENCE
	EXIST. TELE. PEDESTAL		EXIST. WALL
	EXIST. TELE. DOGHOUSE		EXIST. RETAINING WALL
	EXIST. TELE. MARKER POST		EXIST. MILEPOST NUMBER
	EXIST. TELE. JUNCTION BOX		EXIST. MAPPING BOUNDARY
	EXIST. TELE. SIGNAL BOX		EXIST. GROUND CONTROL
	EXIST. CELL TOWER		EXIST. RIGHT-OF-WAY
	EXIST. CABLE BOX		EXIST. ABUTTER
	EXISTING MANHOLE UNKNOWN		EXIST. WETLAND FLAG
	EXISTING UTILITY BOX UNKNOWN		EXIST. WETLANDS
	EXISTING ANTENNA		EXIST. WATERBODY, STREAM, OR STREAM BANK
	EXISTING CAPPED IRON ROD		
	EXISTING IRON PIPE		
	EXISTING CONCRETE MONUMENT		
	EXISTING POST		
	EXISTING REFLECTOR MARKER		
	EXISTING SYMBOL		

- NOTES:
1. LIMIT OF WORK (LOW) -- THE BOUNDARY IN WHICH ALL CONSTRUCTION ACTIVITIES, STOCKPILES MATERIAL, EQUIPMENT STORAGE, ACCESS, PARKING, GRADING, LANDSCAPING, RESTORATION, AND ANY OTHER CONSTRUCTION RELATED ACTIVITIES SHALL OCCUR. ADDITIONALLY, THE LOW IS THE BOUNDARY FOR ALL POTENTIAL DISTURBANCE DURING CONSTRUCTION. UNLESS OTHERWISE SPECIFIED, WHEN THE LIMIT OF CLEARING AND GRUBBING IS SHOWN ON THE PLANS, IT SHALL ALSO BE THE LOW. THE LOW INCLUDES THE AREA THAT WOULD BE CONSIDERED THE LIMIT OF DISTURBANCE (LOD).

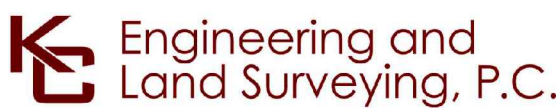


PEM -- PALUSTRINE EMERGENT
PSS -- PALUSTRINE SCRUB-SHRUB
PFO -- PALUSTRINE FORESTED
PUB -- PALUSTRINE UNCONSOLIDATED BOTTOM
L1 -- LACUSTRINE LIMNETIC
L2 -- LACUSTRINE LITTORAL
E2EM -- ESTUARINE INTERTIDAL EMERGENT
NYSDEC FWW 100-FOOT ADJACENT BUFFER AREA
ESTIMATED WETLAND BOUNDARY
ESTIMATED AGRICULTURAL LAND BOUNDARY
FLOODWAY BOUNDARY
1% ANNUAL CHANCE FLOODPLAIN BOUNDARY
0.2% ANNUAL CHANCE FLOODPLAIN BOUNDARY
JD BOUNDARY
APPROX. USACE FEDERAL CHANNEL BOUNDARY (TYP.)



VEG. CLEARING -- TYPE I -- HAND CUTTING
VEG. CLEARING -- TYPE II -- MECHANICAL CLEARING
VEG. CLEARING -- TYPE III -- MOWING
VEG. CLEARING -- TYPE IV -- MECHANICAL WHOLE-TREE FELLING
PROP. WETLAND PROTECTION FENCE
PROP. COMPOST FILTER SOCK (OR SILT SOCK)
CHECK DAM
SURFACE WATER FLOW
PROP. TEMPORARY SWALE
STABILIZED CONSTRUCTION ENTRANCE (TYP.)
PROP. TEMP MAJOR CONTOUR
PROP. TEMP MINOR CONTOUR
PROP. LIMITS OF WORK/DISTURBANCE
PROP. LIMITS OF CLEARING/LIMITS OF WORK IN CLEARING AREAS
PROP. CONCRETE WASHOUT
PROP. TEMP ACCESS ROAD RTE (EXISTING ROAD OR SURFACE)
PROP. TEMP REFURBISHED ACCESS ROAD
PROP. TEMP ACCESS ROAD OR OFF SITE ACCESS ROAD
PROP. WETLAND OR AGRICULTURAL LAND* WORKING SURFACE (SEE SHEET C-613) (*AGRICULTURAL LANDS MAY USE WETLAND WORKING SURFACE OR OTHER APPROVED MITIGATION METHODS)
PROP. MILLING & RESURFACING
PROP. SPLICE LOCATION
PROP. SPLICE VAULT
PROP. LINK BOX HANDHOLE
PROP. FIBER SPLICE HANDHOLE
PROP. BORING LOCATION
PROP. ALIGNMENT STATIONING
PROP. ALIGNMENT CENTERLINE
PROP. LAYDOWN YARDS, PARKING, STORAGE & MUSTER AREA
PROP. WORK AREAS
7' FOUL ZONE: NO VEHICLES, MATERIALS, DISTURBANCE, PERSONNEL, OR WORK SHALL ENCROACH THE ZONE WITHIN 7FT OF THE NEAREST RAIL WITHOUT CSX COORDINATION AND APPROVAL
PROP. SHORING/SHEETING
PROP. TEMP EASEMENT
PROP. PERM EASEMENT
PROP. TEMP ACCESS EASEMENT
SPLICE LOCATION POLE MARKER
UNDERGROUND POWER CABLE POLE MARKER
PROP. TRANSITION BOX MANHOLE
DC CABLE IDENTIFICATION TAGS. SEE SHEET C-807 FOR MORE DETAILS
TURBIDITY BARRIER

APP	APPROVED
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
DB	DESIGNED BY
DEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DEG	DEGREES
DR	DRIVE
DZ	DEVIATION ZONE
E	EASTING
ELECTRIC	ELECTRIC CABLE
ELEV	ELEVATION
EQNAHD	STATION EQUATION AHEAD
EQNBK	STATION EQUATION BACK
EXIST	EXISTING
FIBER	FIBER OPTIC CABLE
FT	FEET
GAS	GAS PIPE
H	HORIZONTAL
HDD	HORIZONTAL DIRECTIONAL DRILLING
HVDC	HIGH-VOLTAGE DIRECT CURRENT TRANSMISSION LINE
INV	INVERT ELEVATION
LOW	LIMITS OF WORK
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
N	NORTHING
NO	NUMBER
NY	NEW YORK
NYCDEP	NEW YORK CITY DEPT. OF ENVIRONMENT PROTECTION
NYCDOT	NEW YORK CITY DEPT. OF TRANSPORTATION
NYDPR	NEW YORK CITY DEPT. OF PARKS AND RECREATION
P#	PACKAGE #
PERM	PERMANENT
PROP.	PROPOSED
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REV	REVISION
ROW	RIGHT-OF-WAY
RT	RIGHT
RTE	ROUTE
SEWER	SANITARY SEWER PIPE
SH	SHEET
ST	STREET
STA	STATION
STORM	STORM DRAIN PIPE
TELECOM	TELECOMMUNICATIONS CABLE
TEMP	TEMPORARY
TR	THERMAL RESISTIVITY
TYP	TYPICAL
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
V	VERTICAL
WATER	WATERLINE



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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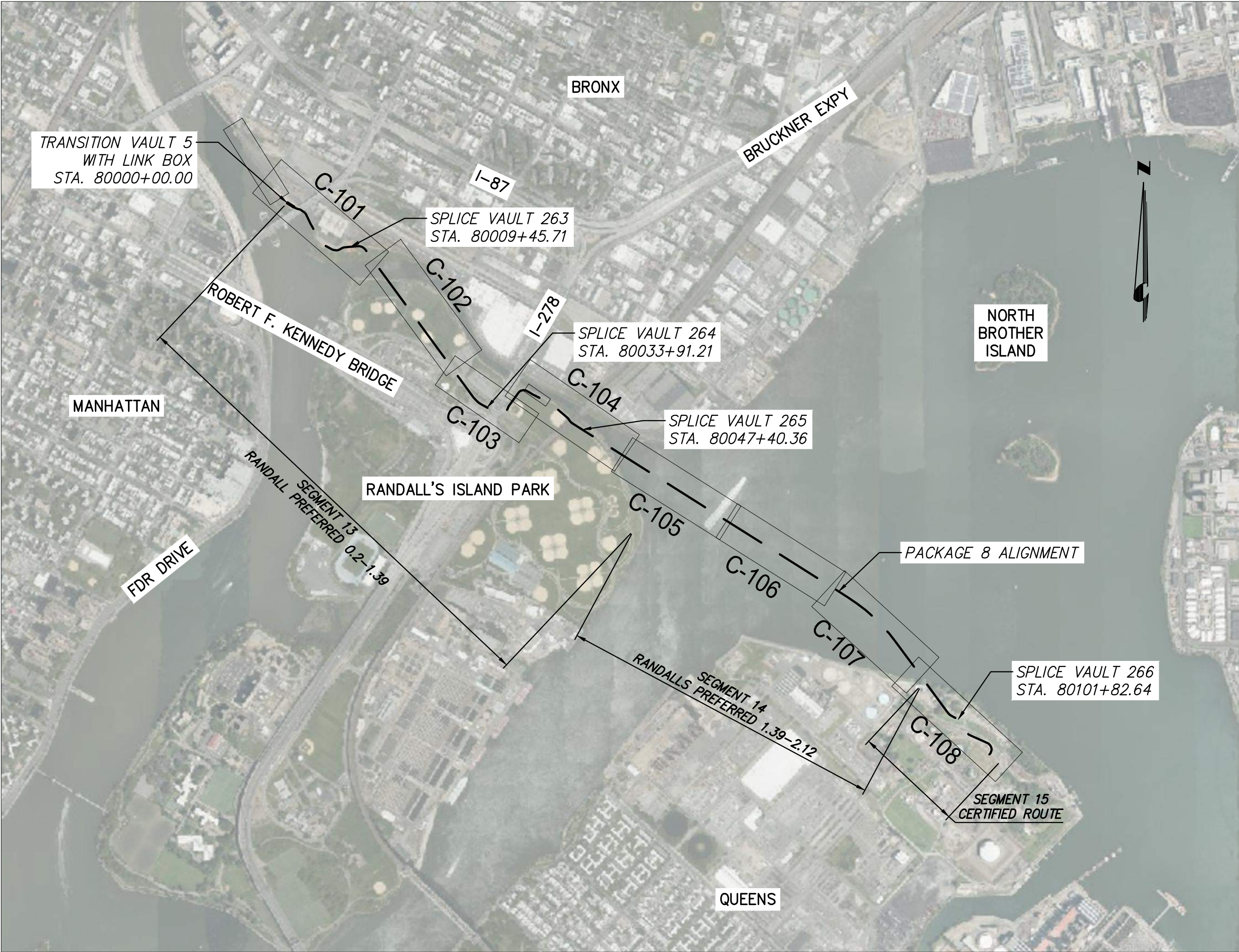
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

LEGEND & ABBRIVIATIONS

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						REV. NO.	0	SH.NO.	6 OF

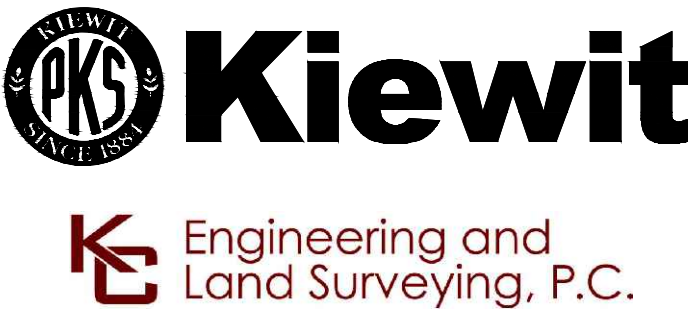
KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	G-005

SPlice LOCATION TABLE				
STRUCTURE NAME	STATION	FINISHED GRADE	BOTTOM OF STRUCTURE	DIFFERENCE
TRANSITION VAULT 5 WITH LINK BOX (WITH WALL MOUNTED FIBER SPLICE)	80000+00.00	9.52	-3.00	12.52
SPLICE VAULT 263	80009+45.71	10.05	-3.21	13.26
SPLICE VAULT 264	80033+91.21	11.40	-2.05	13.45
SPLICE VAULT 265	80047+40.36	8.50	-4.83	13.33
SPLICE VAULT 266	80101+82.64	13.81	0.90	12.91



PLAN AND PROFILE KEY MAP
SCALE: 1" = 1000'

CO-SEALING NOTE:
THE ELECTRICAL ENGINEER OF RECORD, MICHAEL REHIS WHEELER, IS SEALING FOR THE ELECTRICAL DESIGN AND ACCEPTABILITY OF THE LOCATIONS OF ELECTRICAL APPURTENANCES DEPICTED ON THIS PLAN SHEET.
THE CIVIL ENGINEER OF RECORD, CHAKRADHAR VALLABH, IS SEALING FOR THE ACCURACY OF THE LOCATIONS OF ELECTRICAL APPURTENANCES DEPICTED ON THIS PLAN SHEET. SEE CIVIL NOTES ON GENERAL NOTES 2 OF 2, SHEET G-003, FOR LIMITATIONS OF THE CIVIL ENGINEER OF RECORD'S SCOPE OF DESIGN.



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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION
PLAN AND PROFILE KEY PLAN & SPLICE LOCATION TABLE

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SCALE: AS SHOWN
REV. NO. 0

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	G-006
DATE	07/31/2023
SH.NO.	7 OF

SEGMENTS 13, 14 & 15 – CONSTRUCTION METHODS

CHAPTER 4 –CONSTRUCTION METHODS	
TOPIC	SECTION OF EM&CP
CABLE INSTALLATION REQUIREMENTS	4.2
HORIZONTAL DIRECTIONAL DRILLING	4.3
INSTALLATION AND PERFORMANCE CONTROLS	4.3.1
BUILDINGS AND STRUCTURES WITHIN 100–FT OF HDD	4.3.2
INADVERTANT RELEASE CONTINGENCY PLAN AND DRILLING FLUID MANAGEMENT	4.3.3, APPENDIX J
ROAD CROSSING METHODS	4.3.4
TRENCHING	4.4
TRENCHING IN AGRICULTURAL LANDS	NOT APPLICABLE FOR THIS SEGMENT
TRENCHING IN ROADWAYS	4.4.2
TRENCHING IN RECREATIONAL AREAS	4.4.3
TRENCHING IN WETLANDS	4.4.4
LENGTH OF OPEN TRENCH	4.4.5
SPLICING AND JOINTING	4.4.6
DEWATERING METHODS	4.4.7
BEDDING AND BACKFILLING METHODS	4.4.8
DREDGING	NOT APPLICABLE FOR THIS SEGMENT
CONVERTER STATION AND SUBSTATION REQUIREMENTS	NOT APPLICABLE FOR THIS SEGMENT
RIGHT OF WAYS AND EASEMENTS	4.7
RIGHT OF WAY CLEARING	4.8 (SEE ALSO SECTION 8)
BUILDING AND STRUCTURE REMOVAL	4.9
ACCESS ROADS	4.10
DRIVEWAY ACCESS DURING CONSTRUCTION	4.10.1
ACCESS THROUGH WETLANDS OR STREAMS	4.10.2
ACCESS THROUGH AGRICULTURAL LANDS	NOT APPLICABLE FOR THIS SEGMENT
DRAIN LINES AND UNDER DRAINS WITHIN AGRICULTURAL LANDS	NOT APPLICABLE FOR THIS SEGMENT
SOIL MANAGEMENT PLAN	4.11 AND APPENDIX L
CULVERT REPLACEMENT	4.12
BLASTING	4.13

NOTE:
TABLE 4 SUMMARIZES THE CONSTRUCTION METHODS AND ASSOCIATED SUBSECTIONS THAT SUMMARIZE THE MEASURES AND STANDARDS THAT WILL BE FOLLOWED WITHIN SEGMENTS 13, 14, AND 15.

SEGMENTS 13, 14 & 15 – HDD INFORMATION

TABLE 4–1 – SEGMENTS 13, 14, AND 15 HDD LOCATIONS						
CONSTRUCTION SEGMENT	HDD #	LENGTH (FEET)	DRIVE DEPTH (VERTICAL FEET)	PURPOSE	SHEET	LOCATION (APPROXIMATE – SEE DRAWINGS FOR DETAILS)
13	134	2,088	45	BRONX KILL AND RANDALL’S ISLAND	C–101 – C–103	STA 80013+75 TO 80034+25
14	135	5,265	130	EAST RIVER CROSSING	C–104 – C–108	STA 80050+50 TO 80102+75

TABLE 4–2 – PARCELS WITHIN 100 FEET OF HDD OPERATIONS			
HDD #	PARCEL	SHEET	LOCATION (APPROXIMATE –SEE DRAWINGS FOR DETAILS)
134	BLOCK 2260, LOT 62	C–101	STA 80009+00
134 / 135	BLOCK 1819, LOT 203	C–104	STA 80047+00
135	BLOCK 850, LOT 1	C–108	STA 80100+00
135	BLOCK 850, LOT 100	C–108	STA 80100+00
135	BLOCK 850, LOT 300	C–108	STA 80101+00
135	BLOCK 850, LOT 310	C–108	STA 80107+00

SEGMENTS 13, 14 & 15 – BUILDING AND STRUCTURE REMOVAL

TABLE 4–5. SUMMARY OF BUILDING AND STRUCTURE REMOVAL WITHIN SEGMENTS 13, 14, AND 15				
STRUCTURE OR BUILDING TO BE REMOVED	SHEET	APPROXIMATE LOCATION (SEE APPENDIX C FOR DETAILS)	JUSTIFICATION FOR REMOVAL	CONSULTATION WITH STRUCTURE OWNER

SEGMENTS 13, 14 & 15 – ACCESS ROADS

TABLE 4–5 – ACCESS ROADS			
TYPE OF ACCESS ROAD	SHEET #	LOCATION (APPROXIMATE –SEE DRAWINGS FOR DETAILS)	LOCATION (APPROXIMATE –SEE DRAWINGS FOR DETAILS)
TEMPORARY CONSTRUCTION ACCESS ROAD (15–FT–WIDE)	C–101	STA 80009+00	NONE
TEMPORARY CONSTRUCTION ACCESS ROAD (16–FT–WIDE)	C–103, C–104, C–631	STA 80038+50 TO 80048	RANDALL’S ISLAND PARK
TEMPORARY BUILT PEDESTRIAN/BIKE DETOUR USING EXISTING WALKWAY AND PAVEMENT	C–509	STA 80050+00	RANDALL’S ISLAND PARK BASEBALL FIELD

TABLE 4.5 SUMMARIZES THE ACCESS ROADS IN THIS PACKAGE AND THEIR ASSOCIATED IMPACTS ON ENVIRONMENTALLY SENSITIVE AREAS AND AGRICULTURAL LANDS IF APPLICABLE. SECTION 4.8 OF THE EM&CP SUMMARIZES THE PROCEDURES THAT WILL BE FOLLOWED FOR THE CONSTRUCTION OF ALL ACCESS ROADS. ALL ACCESS ROADS WILL BE TEMPORARY AND RESTORED ACCORDING TO SECTION 14.2.4 AND 14.4.1 OF THE EM&CP AS APPLICABLE.

SEGMENTS 13, 14 & 15 – RECREATIONAL AREAS

TABLE 7–1 –RECREATIONAL AREAS			
RECREATIONAL AREA	PLAN AND PROFILE (APPENDIX C) SHEET NUMBER	STATION (APPROXIMATE –SEE APPENDIX C FOR DETAILS)	ANTICIPATED IMPACTS TO RECREATIONAL AREA
RANDALL’S ISLAND PARK	C–102 TO C–104	80017+00 TO 80051+00	TEMPORARY GROUND DISTURBANCE DUE TO TRENCHING OF THE CABLE AND LOCALIZED TREE REMOVAL. SOME AREAS OF THE PARK WILL BE AVOIDED THROUGH HDD INSTALLATION.

SEGMENTS 13, 14 & 15 – EM&CP EROSION AND SEDIMENT CONTROL NOTES

NOTES:
1. THE STORMWATER POLLUTION PREVENTION PLAN INCLUDED IN APPENDIX G OF THE EM&CP DESCRIBES THE EROSION AND SEDIMENT CONTROLS THAT WILL BE FOLLOWED FOR THIS SEGMENT.
2. THE EROSION AND SEDIMENT CONTROL PLANS CAN BE FOUND ON SHEETS C–401 TO SHEET C–404 FOR THIS SEGMENT.

SEGMENTS 13, 14 & 15 – EM&CP NOISE SENSITIVE AREAS NOTE

NOTE:
1. THE NOISE RECEPTORS THAT MAY OCCUR NEAR THE SEGMENT 1 AT VARIOUS POINTS INCLUDE RESIDENCES AND BUSINESSES. SECTION 9.2 OF THE EM&CP DESCRIBES THE NOISE CONTROL MEASURES THAT WILL BE EMPLOYED THROUGHOUT THIS SEGMENT.

SEGMENTS 13, 14 & 15 – FEMA

NOTE:
1. FEMA FIRM MAPS ARE PROVIDED IN APPENDIX D OF THE STORMWATER POLLUTION PREVENTION PLAN WHICH IS INCLUDED IN APPENDIX G OF THE EM&CP.

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FOR INFORMATION, SEE ENVIRONMENTAL AND CONSTRUCTION PLAN NARRATIVE.

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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

EM&CP DATA TABLES 01

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DRAWING NO.	G-007
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SEGMENTS 13, 14 & 15 – TERMS AND DEFINITIONS FROM BMP DOCUMENT SECTION 5.2

TABLE 8.1. TERMS AND DEFINITIONS FROM BMP DOCUMENT SECTION 5.2	
TERM	DEFINITION
CLEARING	THE CUTTING AND PHYSICAL REMOVAL, EITHER BY HAND OR MECHANICAL MEANS, OF ALL VEGETATION FROM THE WORK AREA
GRUBBING	THE MECHANICAL REMOVAL OF THE STUMP AND ROOT MASS OF FELLED WOODY VEGETATION
SLASH	SHRUBS, SAPLINGS, AND TOPS OF TREES 4 INCHES IN DIAMETER OR LESS AT THE LARGE END FOR HARDWOOD AND 6 INCHES IN DIAMETER OR LESS AT THE LARGE END FOR SOFTWOODS.
STUMPS	THE WOODY STEM AND FIBROUS ROOT MASS LEFT IN THE SOIL AFTER REMOVING THE TRUNK AT THE BUTT.
TIMBER/LOGS	TRUNKS AND LIMBS GREATER THAN 6 INCHES IN DIAMETER AT THE SMALL END, WITH A MINIMUM 8-FOOT LENGTH.

SEGMENTS 13, 14 & 15 – TREE AND VEGETATION CLEARING METHODS

TABLE 8.2 –TREE AND VEGETATION CLEARING METHODS		
METHOD TYPE	METHOD TITLE	METHOD DESCRIPTION
TYPE I	HAND CUTTING (HC)*	THIS METHOD EMPLOYS A HAND-HELD CHAIN SAW. IT IS SELECTIVE BUT IS SLOWER AND MORE EXPENSIVE THAN MOTORIZED MECHANICAL DEVICES. RESIDENTIAL AREAS, BUFFER ZONES, WETLANDS, AND HIGHWAY SCREENS ARE AREAS WHERE HAND CUTTING IS TYPICALLY PRESCRIBED. *MECHANIZED TREE CLEARING WILL BE UTILIZED IN SELECT SCENARIOS WHERE HAND CLEARING IS DEEMED UNSAFE OR UNFEASIBLE. ALL MECHANIZED CLEARING IN WETLANDS WILL BE DONE UTILIZING APPROVED TEMPORARY WETLAND ACCESS METHODS (SEE SECTION 4.10.2).
TYPE II	MECHANICAL CLEARING MACHINE (HA)	THIS TERM USUALLY REFERS TO A MACHINE KNOWN AS THE HYDRO-AX OR KERSHAW MOWER. THIS MACHINE CAN CUT TREES UP TO TEN (10) INCHES IN DIAMETER AT THE RATE OF SEVERAL ACRES A DAY, DEPENDING ON STEM DENSITY AND TERRAIN. IT IS ESSENTIALLY NONSELECTIVE AND A GOOD DEVICE FOR CLEARING RIGHTS-OF-WAY THAT ARE COMPOSED OF YOUNG UNDESIRABLE SPECIES IN A RELATIVELY UNIFORM STAND.
TYPE III	MOWING	THIS TECHNIQUE IS PRIMARILY USED IN AREAS OF HERBACEOUS VEGETATION. TERRAIN MUST BE RELATIVELY FLAT WITH NO GULLIES OR ROCKS.
TYPE IV	MECHANICAL WHOLE-TREE FELLING EQUIPMENT	THIS METHOD ALLOWS CONTROLLED FELLING AND LOADING OF WHOLE TREES WHILE MINIMIZING DAMAGE TO ADJACENT TREES. WHERE VEGETATION IS CLEARED, EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED AND MONITORED UNTIL THE TOPSOIL IS STABILIZED AND CAN SUPPORT GRASSY VEGETATION.

NOTE: TABLE 8.4.1 SUMMARIZES THE LOCATION AND CLEARING TYPE THAT WILL OCCUR WITHIN THIS PACKAGE. SECTION 8.0 AND 8.1 OF THE EM&CP SUMMARIZES THE CLEARING METHODS AND PROCEDURES FOR VEGETATION AND TREE CLEARING AND REMOVAL INCLUDING STANDARDS AND SPECIFICATIONS FOR CLEARING IN ENVIRONMENTALLY SENSITIVE AREAS.

1. WETLANDS: SECTION 8.2.1 AND SECTION 9.1 OF THE EM&CP
2. STREAM CROSSING: SECTION 8.2.1 AND SECTION 9.1 OF THE EM&CP.
3. VISUALLY SENSITIVE AREAS SECTION 8.3.2 OF THE EM&CP
4. AGRICULTURAL LANDS: SECTION 8.2.2 OF THE EM&CP.

SEGMENTS 13, 14 & 15 – TREE AND VEGETATION DISPOSAL METHODS

TABLE 8.3 –TREE AND VEGETATION DISPOSAL METHODS		
METHOD TYPE	METHOD TITLE	METHOD DESCRIPTION
TYPE A	CONSTRUCTION USE	LOGS MAY BE UTILIZED AS NEEDED DURING CONSTRUCTION FOR WETLAND ACCESS, CRIBBING, RETAINING WALLS, OR OTHER USES. FOLLOWING USE, ANY LOGS UNSUITABLE FOR FIREWOOD, SAW LOGS, OR CHIPPING WILL BE TRANSPORTED OFF THE RIGHT-OF-WAY TO AN APPROVED DISPOSAL SITE.
TYPE B	LOG PILES	LOGS NOT NEEDED FOR CONSTRUCTION WILL BE REMOVED FROM THE RIGHT-OF-WAY TO AN APPROVED DISPOSAL AREA.
TYPE C	SALE	WHERE SUFFICIENT MERCHANTABLE VOLUME EXISTS ON THE SITE, LOGS MAY BE SOLD TO A THIRD PARTY, WHERE APPROPRIATE AND PRACTICAL, AND WITH THE AGREEMENT OF LANDOWNERS, UNSOLD LOGS WILL BE HAULED TO ACCESSIBLE LOCATIONS FOR SALVAGE BY THE GENERAL PUBLIC IN ACCORDANCE WITH THE SUBSTANTIVE REQUIREMENTS OF 6 NYCRR PART 192.5, FIREWOOD RESTRICTIONS TO PROTECT FORESTS FROM INVASIVE SPECIES.
TYPE D	TREE/LOG CHIPPING	WHEN LOGS CANNOT BE REUSED OR SOLD, THEY WILL BE CHIPPED ON SITE. THE RESULTING WOOD CHIPS WILL BE PILED IN UPLAND AREAS WITHIN THE RIGHT-OF-WAY OR TRANSPORTED OFF RIGHT-OF-WAY TO AN APPROVED DISPOSAL SITE. WOOD CHIPS WILL BE SPREAD THREE (3) TO FIVE (5) INCHES THICK WITH FERTILIZER SPREAD OVER THE CHIPS TO MINIMIZE SOIL NITROGEN DEPLETION DUE TO CELLULOSE DECOMPOSITION.
TYPE E	VEGETATION CHIPPING	VEGETATION MAY BE CHIPPED TO REDUCE DEBRIS VOLUME.
TYPE F	VEGETATION HAULING	VEGETATION AND STUMPS MAY BE HAULED TO A NYSDEC APPROVED LANDFILL OR OTHER SUITABLE OFF-SITE LOCATION WITH THE APPROVAL OF THE LANDOWNER AND ALL APPLICABLE PERMITTING AGENCIES.
TYPE G	VEGETATION BURIAL	STUMPS MAY BE BURIED ON THE RIGHT-OF-WAY WITH LANDOWNER AGREEMENT. THE BURIAL AREAS WILL BE SUFFICIENTLY COMPACTED AND MONITORED AFTER CONSTRUCTION TO ASSURE THAT SETTLING DOES NOT OCCUR. WHERE SIGNIFICANT SETTLING AFTER CONSTRUCTION HAS BEEN IDENTIFIED BY THE CONSTRUCTION INSPECTOR ET. AL., FINISHED GRADE WILL BE RE-ESTABLISHED USING LOCALLY OBTAINED RUN-OF-BANK MATERIAL AND/OR TOPSOIL AND RE-SEEDED AS APPROPRIATE AS SPECIFIED IN SECTIONS 14.2. AREAS WHERE SIGNIFICANT AMOUNTS OF STUMP BURIAL OCCURS WILL BE NOTED ON AS-BUILT DRAWINGS, AND MONITORED FOR SETTLING DURING ROW CONDITION SURVEYS AND MAINTENANCE ACTIVITIES.

NOTE: SECTION 8.4 OF THE EM&CP SUMMARIZES THE TREE AND VEGETATION DISPOSAL PROCEDURES FOR THIS SEGMENT. NO BURNING OF ANY VEGETATIVE OR TREE DEBRIS IS PERMITTED WITHIN THE WORK AREAS OF THIS SEGMENT. ALL APPLICABLE NYSDEC REGULATIONS REGARDING INVASIVE SPECIES WILL BE FOLLOWED WHEN DISPOSING OF VEGETATION.

SEGMENTS 13, 14 & 15 – TREE AND CLEARING LOCATIONS

TABLE 8.4 VEGETATION AND TREE CLEARING LOCATIONS			
SHEET	LOCATION (APPROXIMATE – SEE DRAWINGS FOR DETAILS)	VEGETATION/TREE CLEARING METHOD TYPE	ENVIRONMENTALLY SENSITIVE AREA(S)
C-101	80008+00 TO 80012+00	II	NONE
C-102 TO C-104	80017+00 TO 80050+00	I	RECREATIONAL AREA
C-108	80099+00 TO 80103+00	II	NONE

SEGMENTS 13, 14 & 15 – CULTURAL RESOURCES

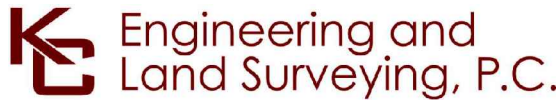
Table 11.1. Segments 13, 14, and 15 Cultural Resources			
CULTURAL RESOURCE NAME	LOCATION	IMPACT	PROTECTION MEASURE
WILLIS AVENUE BRIDGE, BIN 2-24005-9 (00501.000887)	LOCAL STREET BRIDGE. STATION 80001+50. ELIGIBLE FOR THE NATIONAL REGISTER. REPLACED BETWEEN 2006 AND 2010.	FORMER BRIDGE IS NO LONGER EXTANT. CURRENT BRIDGE IS NOT ELIGIBLE FOR THE NATIONAL REGISTER. UNDER THE BRIDGE, NO DIRECT IMPACTS ANTICIPATED.	NONE.
TRIBOROUGH BRIDGE,AKA RFK BRIDGE. (00501.000964)	HIGHWAY BRIDGE COMPLEX. STATION 80035+00. ELIGIBLE FOR THE NATIONAL REGISTER.	UNDER BRIDGE, NO DIRECT IMPACTS ANTICIPATED.	NONE.
BRONX KILL BRIDGE, NEW YORK CONNECTING RAILROAD. (06101.007336)	RAILROAD BRIDGE. STATION 80046+00. ELIGIBLE FOR THE NATIONAL REGISTER.	UNDER RAILROAD BRIDGE, NO DIRECT IMPACTS ANTICIPATED.	NONE.
NYSM SITE 4539	---	PROJECT IS WITHIN THE SITE, BUT THE SITE IS LIKELY MIS-MAPPED AS THIS PORTION OF QUEENS IS MADE-LAND CREATED AFTER 1898.	NONE.

NOTE: THERE WERE NO CULTURAL RESOURCES IDENTIFIED WITHIN SEGMENT 13, 14, 15. SECTION 10.0 OF THE EM&CP AND THE CULTURAL RESOURCE MANAGEMENT PLAN IN APPENDIX O OF THE EM&CP DESCRIBE THE PROCEDURES THAT SHOULD BE FOLLOWED DURING THE UNANTICIPATED DISCOVERY OF ARCHEOLOGICAL RESOURCES DURING CONSTRUCTIONS.

SEGMENTS 13, 14 & 15 – RESTORATION METHODS

TABLE 14 --- RESTORATION METHODS	
LAND USE DESCRIPTION	SECTION OF EM&CP
CONSTRUCTION MATERIALS AND EQUIPMENT STAGING LOCATIONS AND TEMPORARY ACCESS ROADS	14.2.2
PAVEMENT	14.2.2
RAILWAY BALLAST	N/A
RECREATIONAL AREAS	14.2.4
LANDSCAPING	14.3
STREAMS AND WATERBODIES	N/A
ACCESS ROADS AND LAYDOWN AREAS WITHIN AGRICULTURAL LANDS	N/A
DRAINAGE FEATURES	N/A
GENERAL AGRICULTURAL LANDS	N/A

NOTE: SECTION 14.0 OF THE EM&CP DESCRIBES THE CLEANUP STANDARDS AND PRACTICES THAT WILL BE FOLLOWED THROUGHOUT PACKAGE 8. TABLE 14 SUMMARIZES THE APPROPRIATE SUBSECTION WITHIN SECTION 14 THAT INCLUDES THE RESTORATION PROCEDURES FOR EACH TYPE OF LAND USE.



FOR INFORMATION, SEE ENVIRONMENTAL AND CONSTRUCTION PLAN NARRATIVE.

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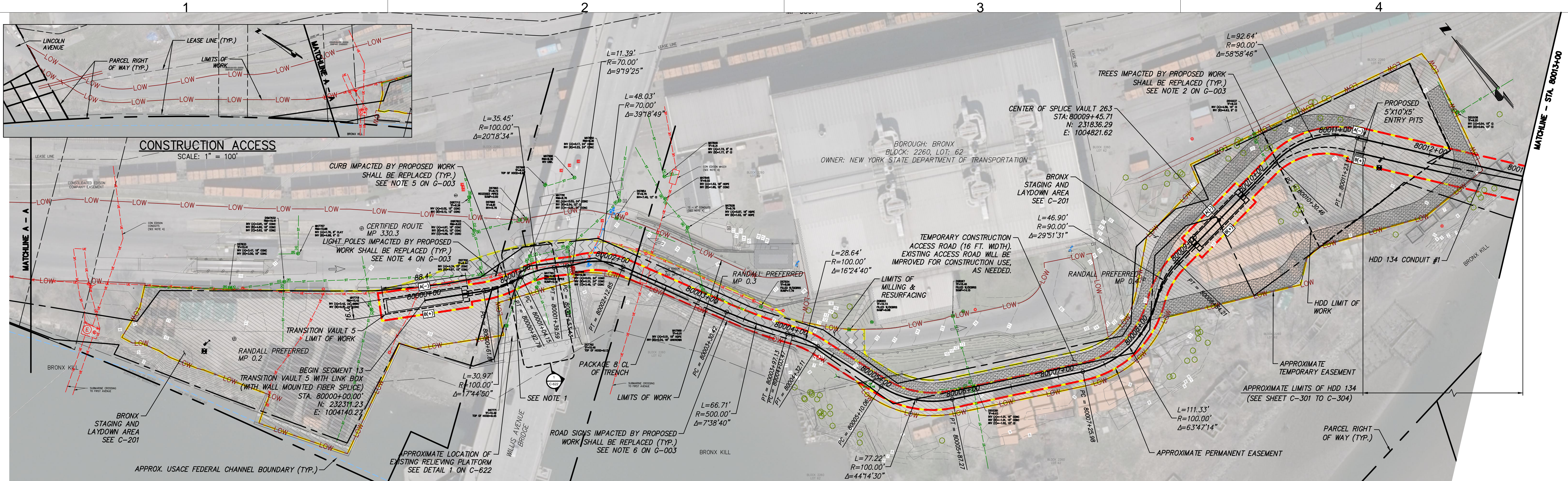
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SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

EM&CP DATA TABLES 02

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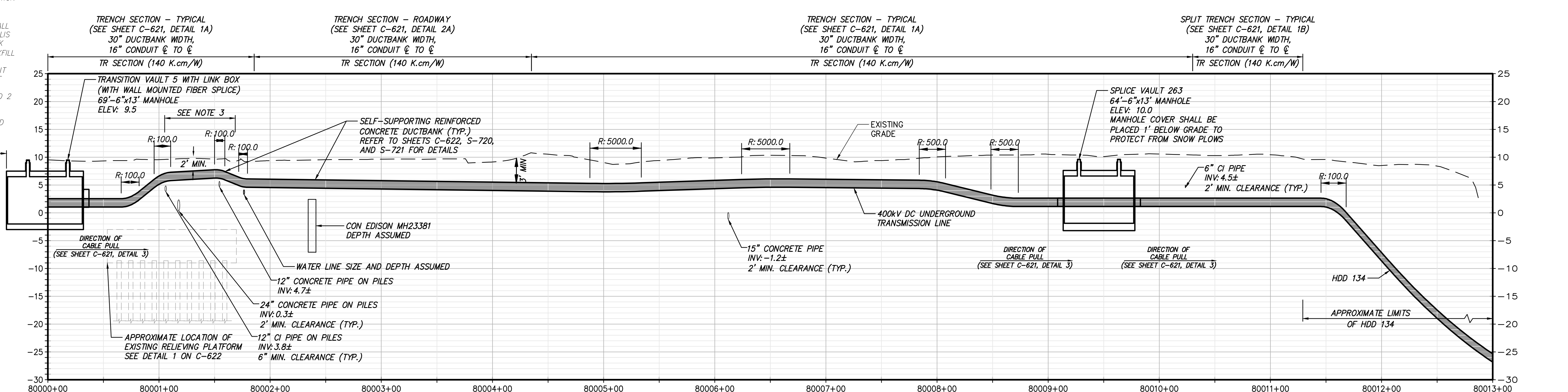
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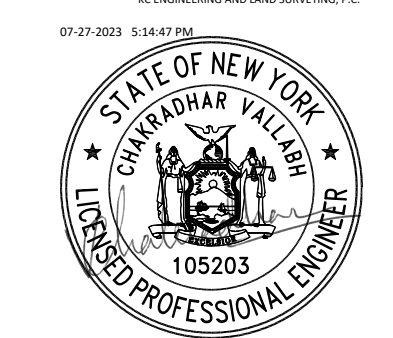
NOTES:

- CONTRACTOR SHOULD BE AWARE THAT WILLIS AVENUE BRIDGE DRAINAGE PIPE ADJACENT TO THE TRENCH MAY CAUSE FLOODING IN THE EVENT OF HEAVY RAIN
- LOCATION OF TRANSITION VAULT 5 PENDING COORDINATION WITH CM/NKT MARINE TRANSITION DESIGN.
- MINIMUM 12" OF LIGHTWEIGHT CONCRETE BACKFILL SHALL BE INSTALLED BENEATH DUCT BANK BENEATH THE WILLIS AVENUE BRIDGE AND WHEN THE PROPOSED DUCT BANK COVER IS LESS THAN 3". LIGHTWEIGHT CONCRETE BACKFILL CONFORMING TO SECTION 6.10 OF NYC DEP GENERAL SPECIFICATIONS 11 - CONCRETE. MAXIMUM 75 PCF UNIT WEIGHT FOR LIGHTWEIGHT FILL. REDUCED THICKNESS OF LIGHTWEIGHT FILL IS ALLOWED FOR LOCATIONS WHERE UTILITIES ARE ENCOUNTERED. REFER TO DETAILS 1 AND 2 ON C622.
- ALL CON EDISON CONDUITS AND MANHOLES NEED FIELD VERIFICATION.



STA. 80000+00 TO STA. 80013+00 PROFILE
SCALE: H:1" = 50' V:1" = 10'





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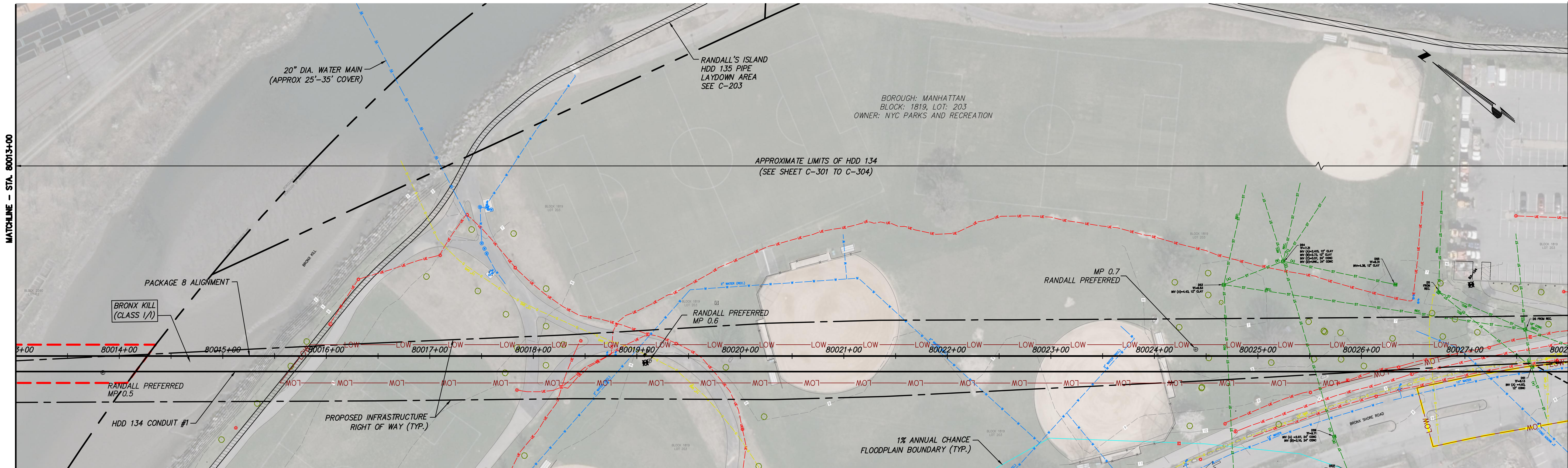
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION
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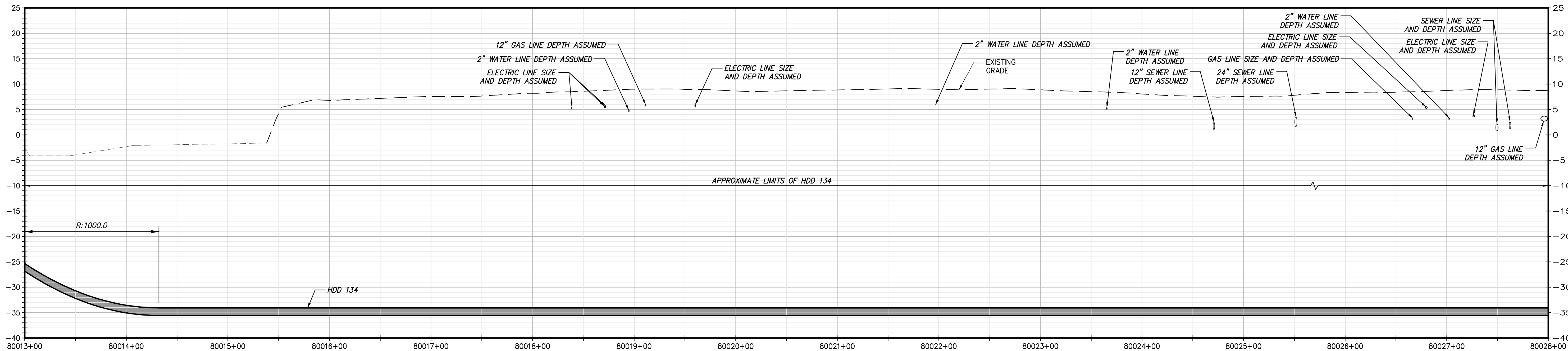
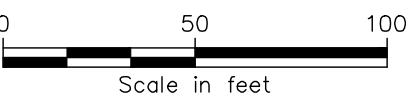
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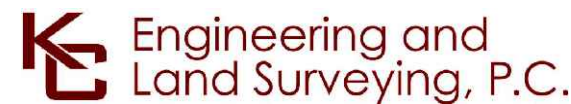
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SCALE: 1" = 50'



STA. 80013+00 TO STA. 80028+00 PROFILE
SCALE: H: 1" = 50' V: 1" = 10'



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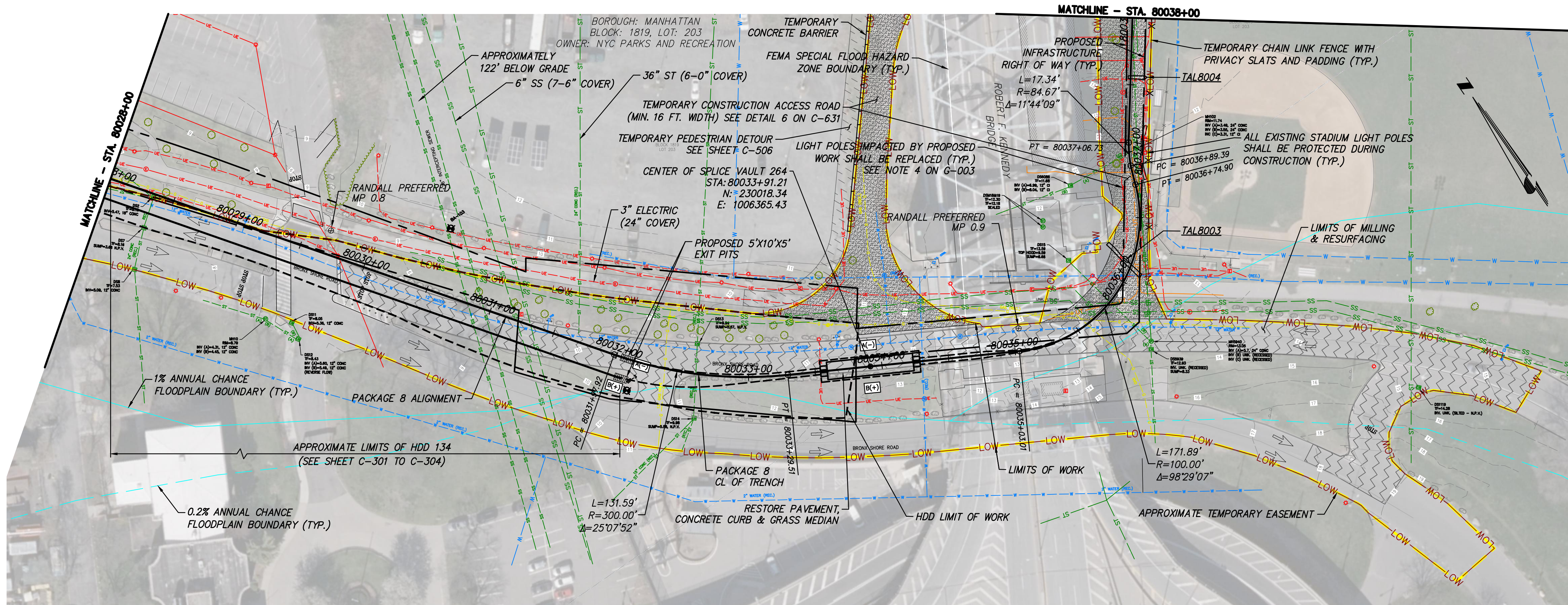
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SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

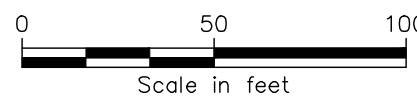
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120174
DRAWING NO.
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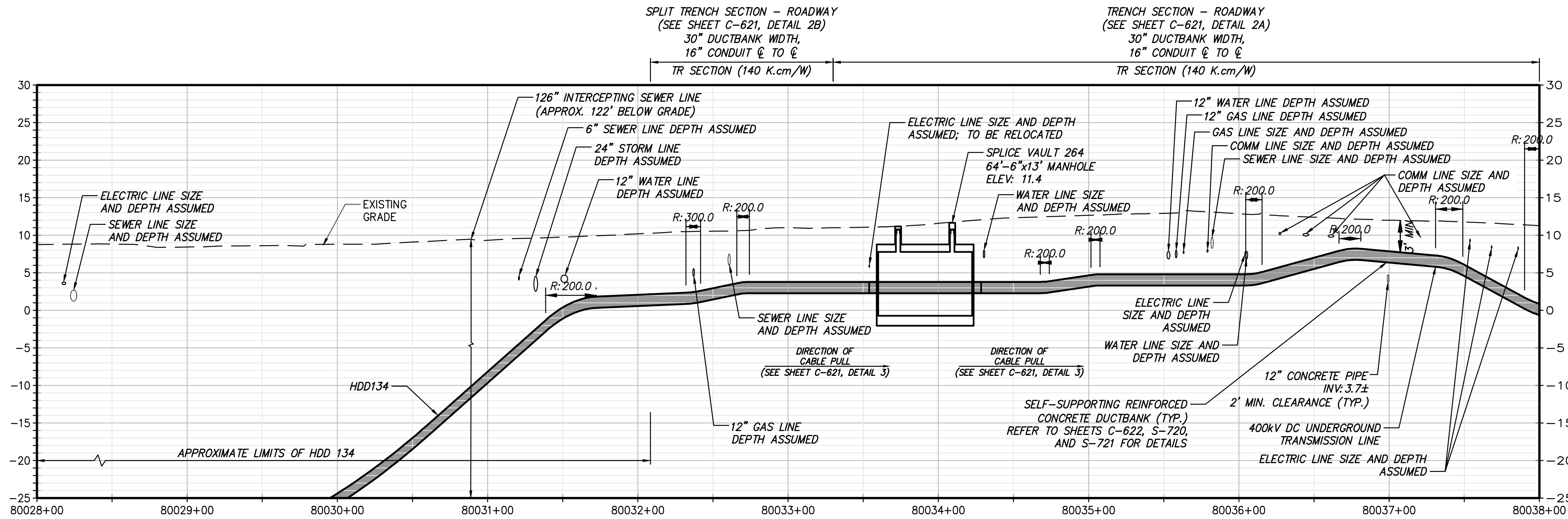


STA. 80028+00 TO STA. 80038+00 PLAN VIEW
SCALE: 1" = 50'



NOTES:

1. CONTRACTOR SHALL RESTORE ALL AFFECTED ASPHALT AND GREEN AREAS TO ORIGINAL CONDITION TO THE SATISFACTION OF NYC PARKS.
2. ALL WORK SHALL BE CONTAINED WITHIN LOW SHOWN.
3. SEE DETAIL 3 ON SHEET C-622 FOR CROSS SECTION FROM APPROX. STA. 80035+50 TO STA. 80036+50.
4. SEE DETAIL 4 ON SHEET C-622 FOR CROSS SECTION FROM APPROX. STA. 80036+50 TO STA. 80037+50.



STA. 80028+00 TO STA. 80038+00 PROFILE
SCALE: H:1" = 50' V:1" = 10'



Engineering and
Land Surveying, P.C.



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

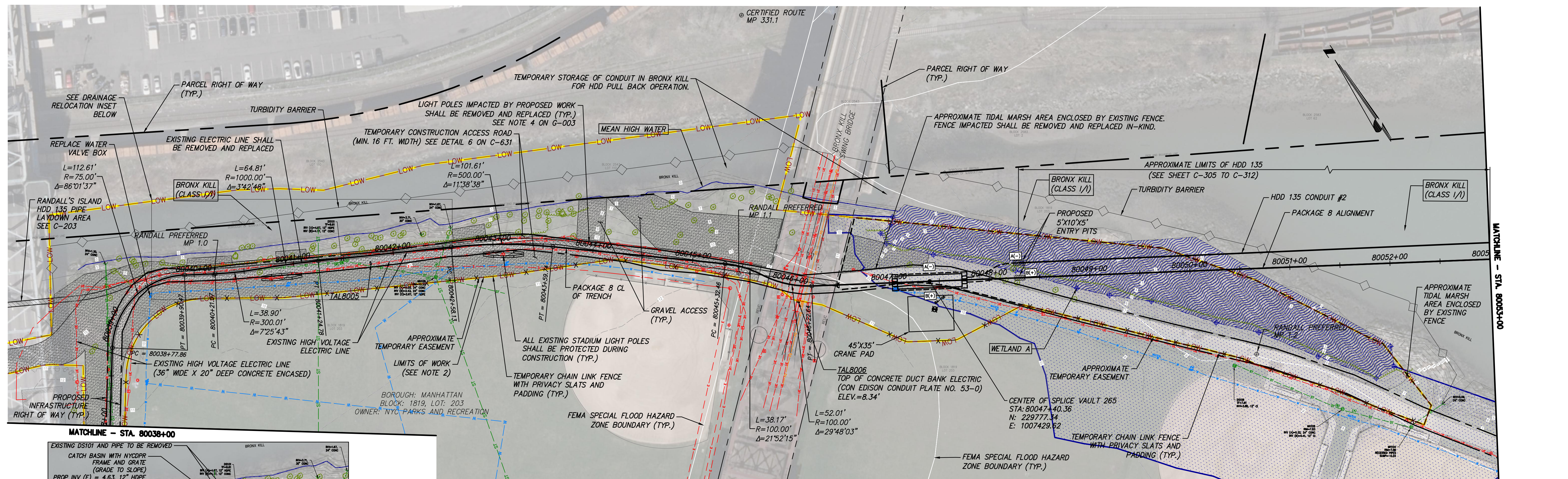
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0	07/31/2023	ISSUED FOR CONSTRUCTION SUBMISSION		MK	CV
No.	DATE	SUBMITTAL / REVISION DESCRIPTION		DB	APP

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

STA. 80028+00 TO STA. 80038+00

DRAWN BY: MK DESIGNED BY: MK APPROVED BY: CV
SCALE: AS SHOWN REV. NO. 0

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	C-103
DATE	07/31/2023
SH.NO.	12 OF

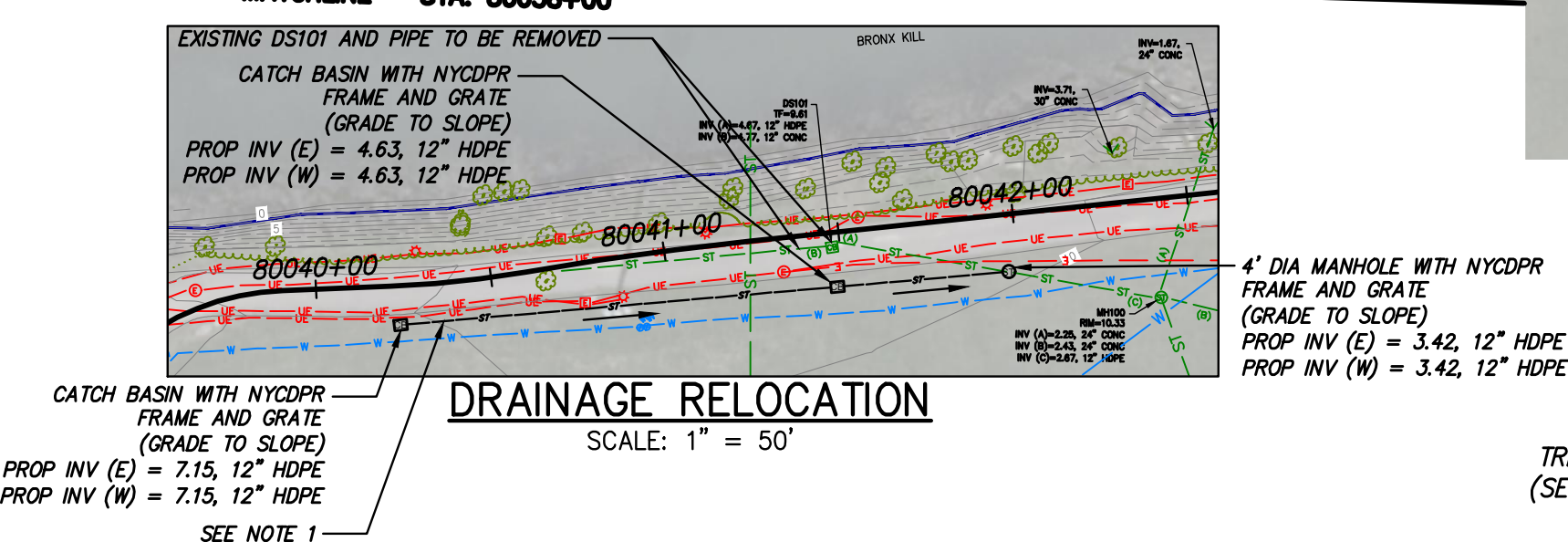


STA. 80038+00 TO STA. 80053+00 PLAN VIEW

SCALE: 1" = 50'

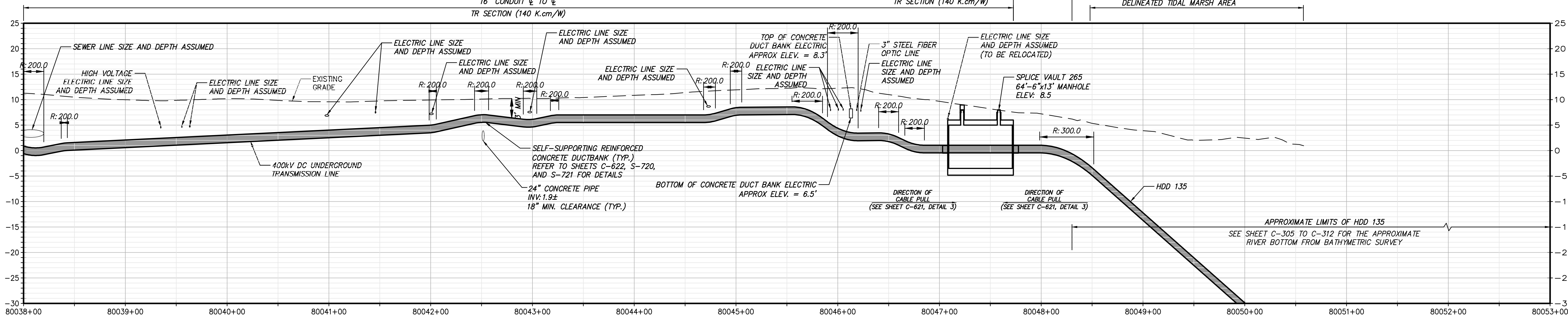
NOTES:

- NEW STORM/SANITARY SEWER MAINS INSTALLED PARALLEL TO WATER MAINS SHALL HAVE A MINIMUM OF 10' HORIZONTAL SEPARATION (MEASURED EDGE OF PIPE TO EDGE OF PIPE OR EDGE OF STRUCTURE) WHEN EVER POSSIBLE. WHEN 10' HORIZONTAL SEPARATION CANNOT BE MAINTAINED A VERTICAL SEPARATION OF AT LEAST 1'-6" BETWEEN BOTTOM OF WATER MAIN AND TOP OF SANITARY SEWER PIPE SHALL BE MAINTAINED AND ALL JOINTS MUST BE CONCRETE ENCASED IN ACCORDANCE TO NYSDOT STD. DETAIL SHEET 663-04. INSTALLATION SHALL BE IN ACCORDANCE TO NYSDOT STANDARD SHEET 664-01.
- LIMIT OF WORK SHOWN IS COMBINATION OF WORKSPACES REQUIRED DURING PEAK AND OFF-PEAK SEASONS OF SUMMER AND WINTER MONTHS. SEE SHEETS C-505 AND C-506 FOR ADDITIONAL DETAILS.
- SEE DETAIL 5 ON SHEET C-622 FOR CROSS SECTION AT APPROX. STA. 80041+15.



TRENCH SECTION - ROADWAY
(SEE SHEET C-621, DETAIL 2A)
30" DUCTBANK WIDTH,
16" CONDUIT ϕ TO ϕ
TR SECTION (140 K.cm/W)

SPLIT TRENCH SECTION - ROADWAY
(SEE SHEET C-621, DETAIL 2B)
30" DUCTBANK WIDTH,
16" CONDUIT ϕ TO ϕ
TR SECTION (140 K.cm/W)

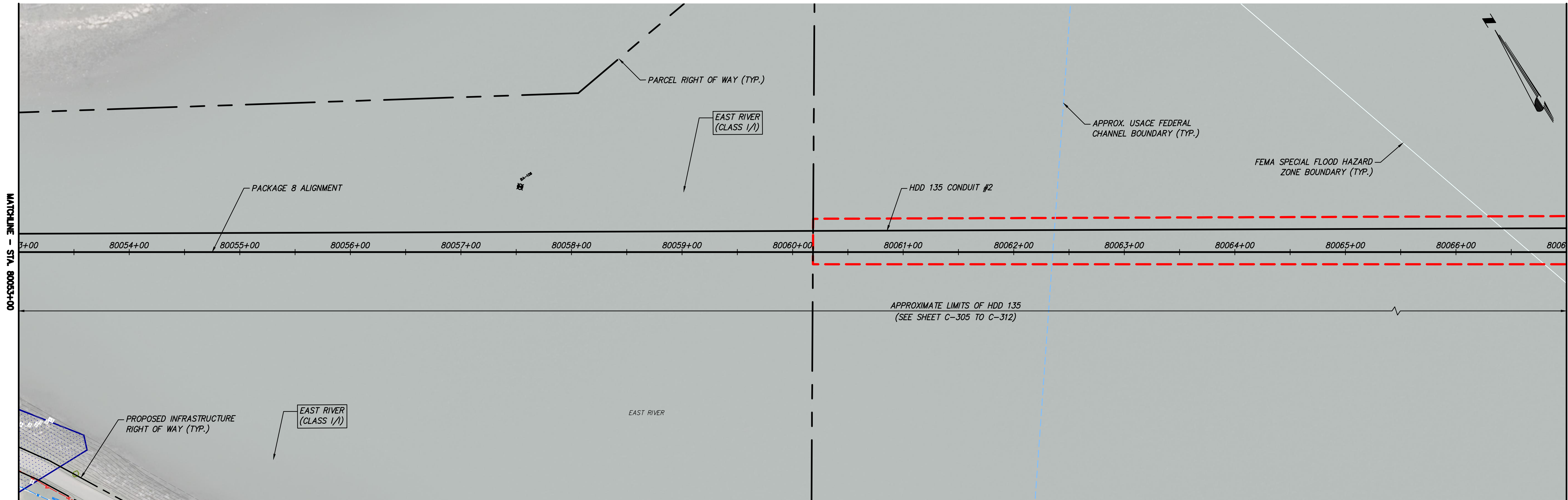


STA. 80038+00 TO STA. 80053+00 PROFILE

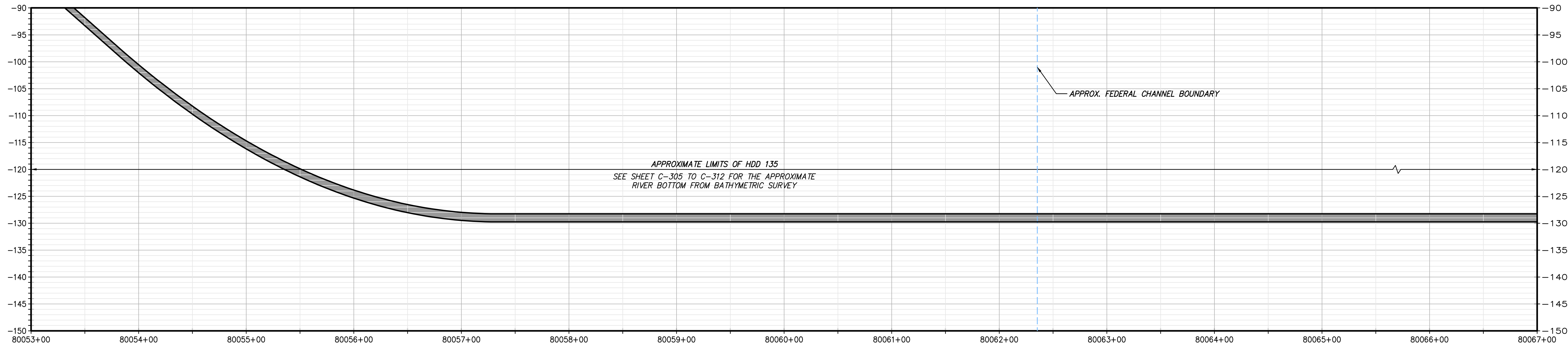
SCALE: H: 1" = 50' V: 1" = 10'

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP

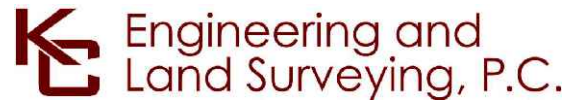
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STA. 80053+00 TO STA. 80067+00 PLAN VIEW
SCALE: 1" = 50'



STA. 80053+00 TO STA. 80067+00 PROFILE
SCALE: H:1" = 50' V:1" = 10'



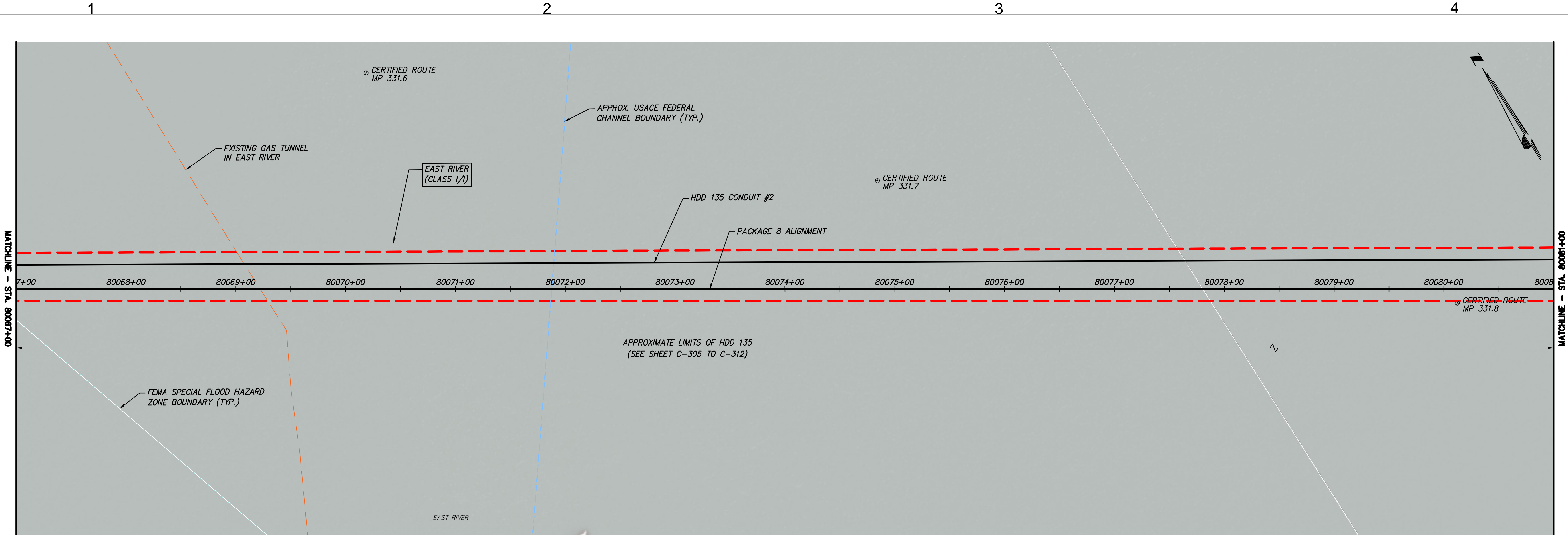
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP

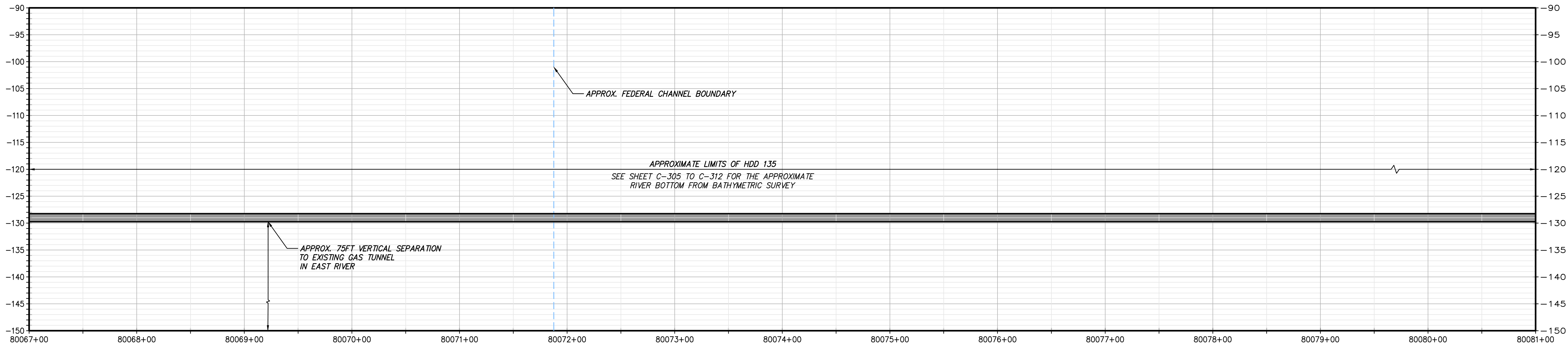
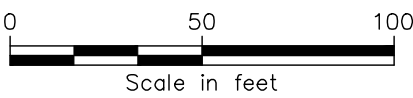
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION
STA. 80053+00 TO STA. 80067+00

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	C-105
DATE	07/31/2023
SH.NO.	14 OF

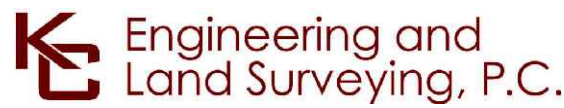
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STA. 80067+00 TO STA. 80081+00 PLAN VIEW
SCALE: 1" = 50'



STA. 80067+00 TO STA. 80081+00 PROFILE
SCALE: H:1" = 50' V:1" = 10'



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

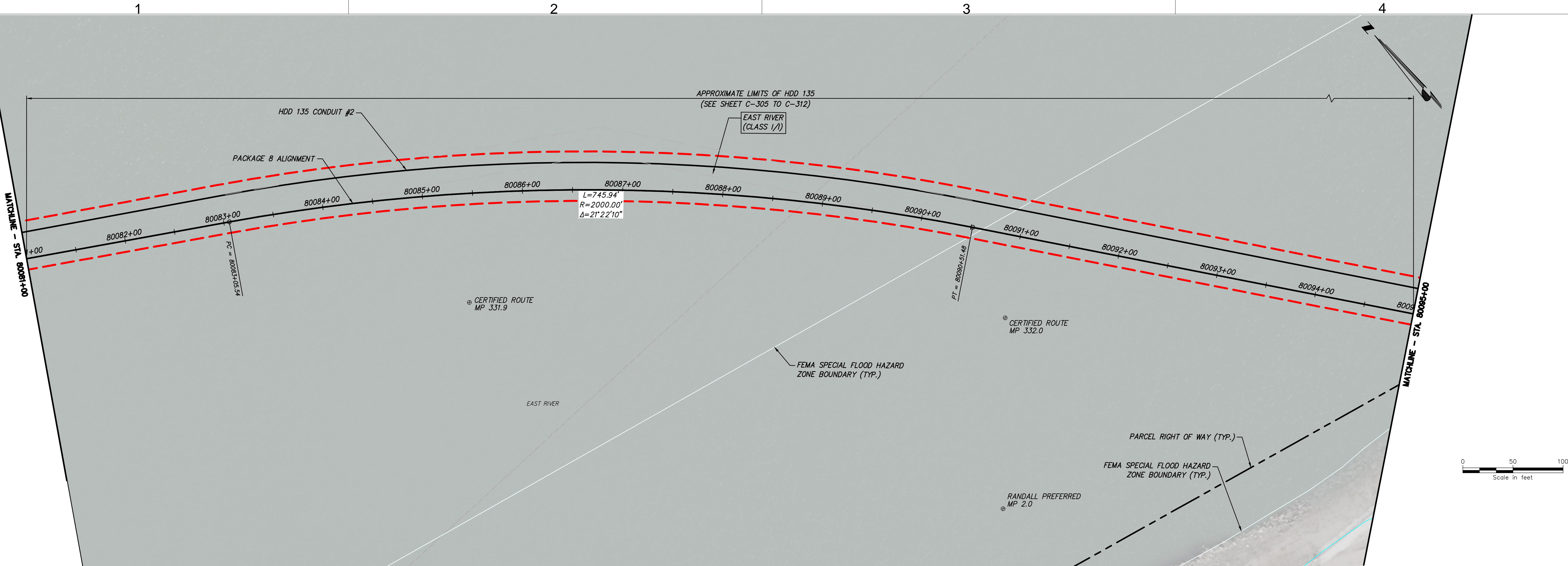
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION
STA. 80067+00 TO STA. 80081+00

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	C-106
DATE	07/31/2023
SH.NO.	15 OF

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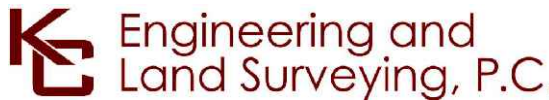
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STA. 80081+00 TO STA. 80095+00 PLAN VIEW
SCALE: 1" = 50'



STA. 80081+00 TO STA. 80095+00 PROFILE
SCALE: H:1" = 50' V:1" = 10'



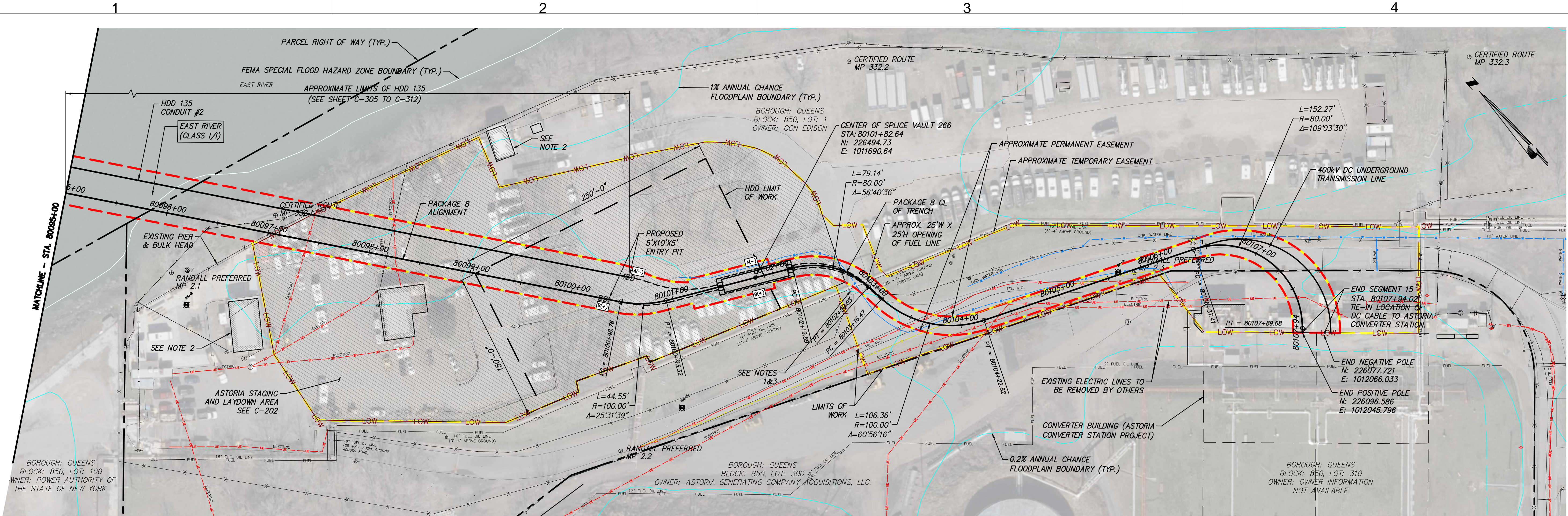
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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION
STA. 80081+00 TO STA. 80095+00

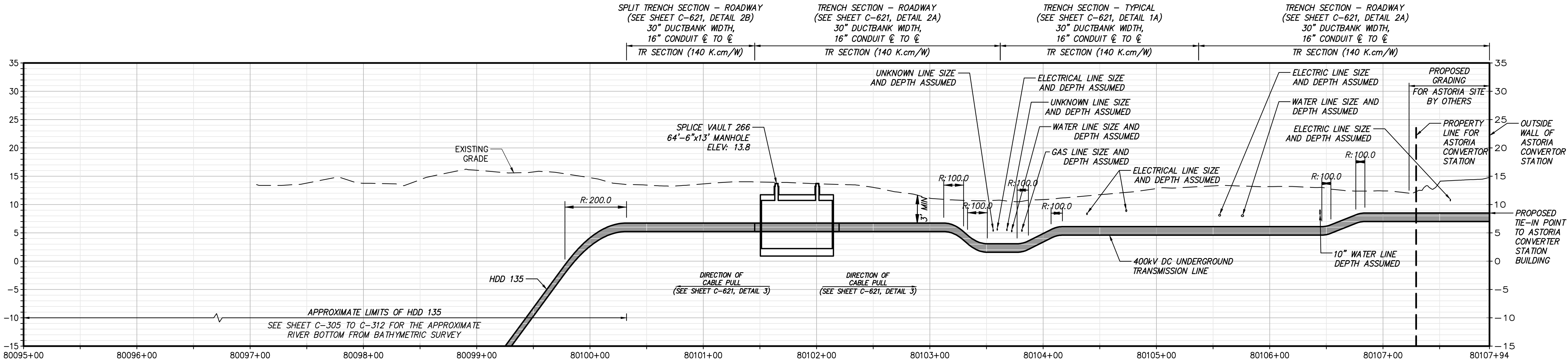
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DRAWING NO.	C-107
DATE	07/31/2023
SH.NO.	16 OF

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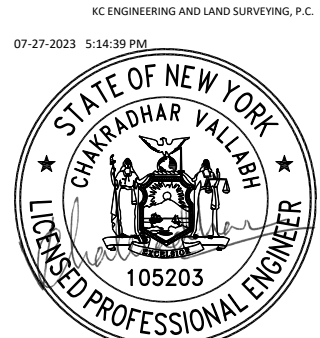
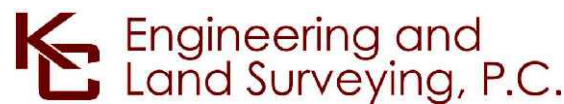


STA. 80095+00 TO STA. 80107+94 PLAN VIEW
SCALE: 1" = 50'

- NOTES:
- CONTRACTOR SHALL PROVIDE PROTECTION TO ABOVE GROUND FUEL OIL PIPELINE (TYP.).
 - ACCESS TO THIS STRUCTURE MUST BE MAINTAINED AT ALL TIMES.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO THE DRIVING SCHOOL AT ALL TIMES.
 - SIZE, DEPTH, AND LOCATION OF EXISTING UTILITIES SHOWN ON THE PLAN ARE PENDING VERIFICATION.



STA. 80095+00 TO STA. 80107+94 PROFILE
SCALE: H:1" = 50' V:1" = 10'



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CHAMPLAIN HUDSON POWER EXPRESS
SEGMENTS 13 TO 15 - PACKAGE 8
TRANSITION VAULT 5 TO ASTORIA CONVERTER STATION

STA. 80095+00 TO STA. 80107+94

DRAWN BY:	MK	DESIGNED BY:	MK	APPROVED BY:	CV	SCALE:	AS SHOWN	DATE:	07/31/2023
						REV. NO.	0	SH. NO.	17 OF

KIEWIT PROJECT NO.
21162
KC PROJECT NO.
120174
DRAWING NO.
C-108